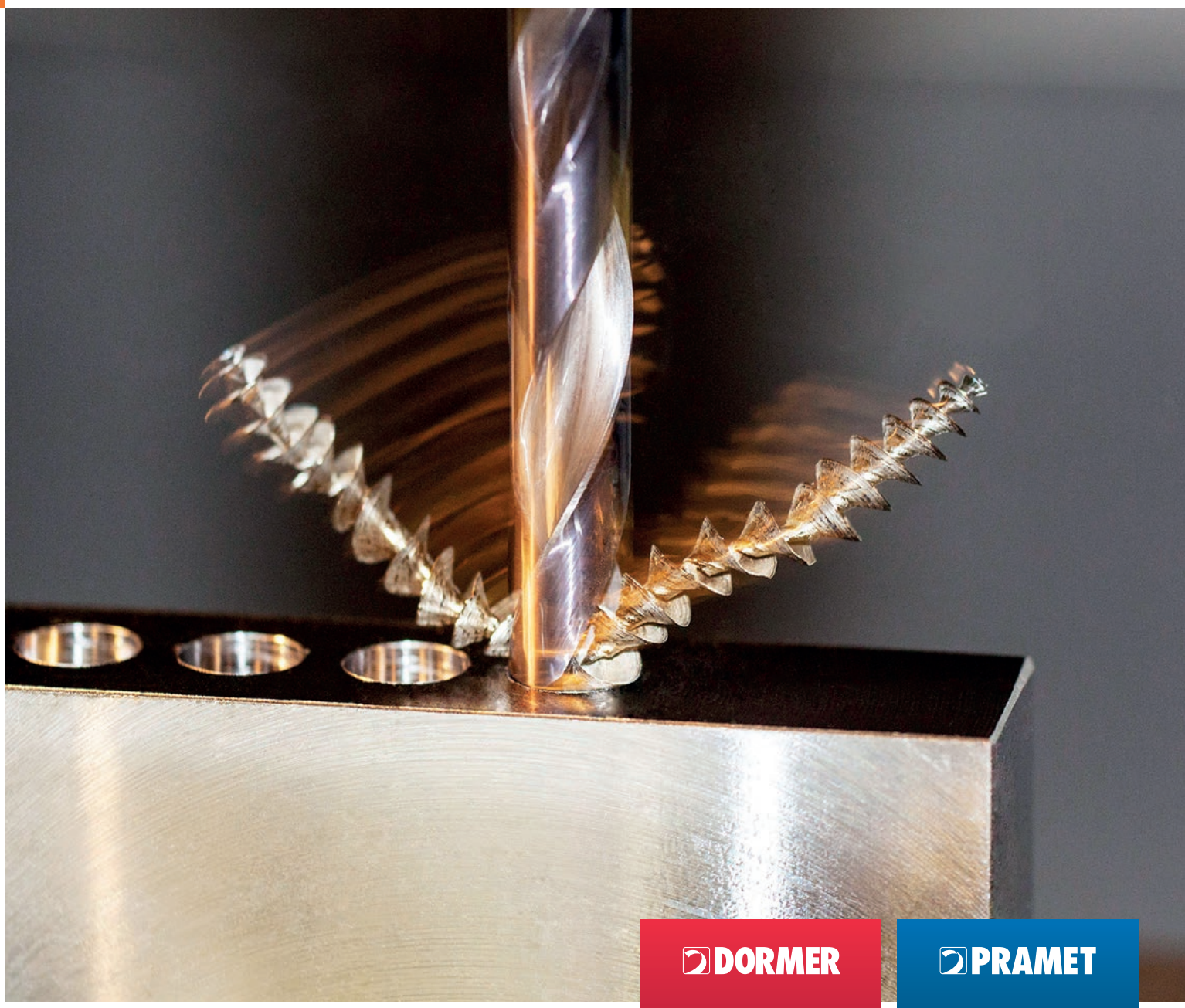
DORMER PRAMET

HOLEMAKING 2021 – 2022



DORMER PRAMET

📖 6		WMG & ISO 13399
📖 12	DRILLS	INSTRUCTIONS
📖 15		SOLID CARBIDE DRILLS
📖 66		HSS DRILLS
📖 176		TECHNICAL INFORMATION
📖 186		CUTTING FLUIDS
📖 190		REAMERS AND COUNTERSINKS
📖 264	INDEXABLE DRILLS	INSTRUCTIONS
📖 271		HYDRA DRILLS
📖 297		TECHNICAL INFORMATION
📖 307		INDEXABLE DRILLS
📖 327		TECHNICAL INFORMATION
📖 350	BORING SYSTEMS	INSTRUCTIONS
📖 359		BORING HEADS
📖 376		BORING ACCESSORIES
📖 381		INSERTS
📖 404		ARBORS
📖 418		BORING KITS
📖 429		TECHNICAL INFORMATION

PRODUCT FAMILY	🕮
A	
A002	96
A002S	98
A022	82
A080	169
A087	166
A088	165
A089	167
A094	166
A095	165
A099	168
A100	99
A101	103
A108	104
A110	122
A117	86
A119	77
A120	80
A122	78
A123	79
A124	90
A125	128
A130	134
A147	106
A160	110
A166	143
A170	118
A188	172
A190	170
A191	171
A199	169
A200	155
A201	160
A205	156
A206	157
A210	159
A225	161
A237	162
A238	163
A242	164
A243	120
A244	121
A266	158
A295	172
A296	173
A345	146
A350	144
A400	150
A402	151
A405	152
A412	153
A413	154
A510	111
A520	88
A530	140
A553	113
A620	84
A720	91
A723	76
A730	141
A777	108
A900	114
A901	116
A920	92
A921	94
A940	124
A941	126
A951	148
A952	149
A976	130
A977	132
A978	133
B	
B100	206
B101	222
B121	224
B122	214
B157	220
B161	221
B170	218
B180	216
B301	211
B334	208
B335	209
B400	200
B411	204
B441	203
B442	205
B481	201
B901	210
B903	212
B952	213
B953	215
B954	225
B955	226
B956	227
B957	228
G	
G106	238
G107	242
G125	249
G129	234
G132	244
G135	230
G136	236
G137	232
G138	245
G142	240
G149	235
G154	233
G171	247
G236	250
G314	248
G335	231
G338	246
G400	229
G506	239
G560	237
G570	241
G600	243
H	
H851	287
H8512	294
H853	289
H855	291
H858	293
H860	295
H861	296
M	
M150	173
M151	174
M152	174
M200-1	187
M200-2	187
M200-3	188
R	
R100	34
R120	32
R122	27
R123	28
R125	29
R200	26
R453	52
R454	48
R457	44
R458	40
R459	56
R463	62
R467	59
R510	38
R520	36
R6011	30
R7131	31
R950	281
R960	283
R970	285

INDEXABLE TOOLS – CONTENT (ALPHABETICAL)

PRODUCT FAMILY	
2	
2080-BS	411
69871-BS	406
802D	313
803D	315
804D	318
805D	320
B	
BS 54 KIT RC 8-043	420
BS 54 KIT RC 8-100	421
BS 54 KIT RC 8-170	422
BS 54 KIT RC 8-210	423
BS 54 KIT TC 8-043	424
BS 54 KIT TC 8-100	425
BS 54 KIT TC 8-170	426

PRODUCT FAMILY	
BS 54 KIT TC 8-210	427
BT-BS	408
C	
CART-BS-SPC	378
CART-BS-STD	379
D	
D75	361
D75-BB	363
D75-C	362
D90	364
D90-BB	366
D90-C	365
E	
EP	322
EXT-BS	415

PRODUCT FAMILY	
F	
F75	367
F75-BB	369
F75-C	368
F90	370
F90-BB	372
F90-C	371
H	
HSK-BS	410
CH	
CHAM-BS	380
I	
ISO BARS	374
ISO BARS A042	375

PRODUCT FAMILY	
L	
LA-BS	417
M	
MB-H	373
MOR-BS	413
R	
RED-BS	416
W	
WEL-BS	414

INDEXABLE INSERTS – CONTENT (ALPHABETICAL)

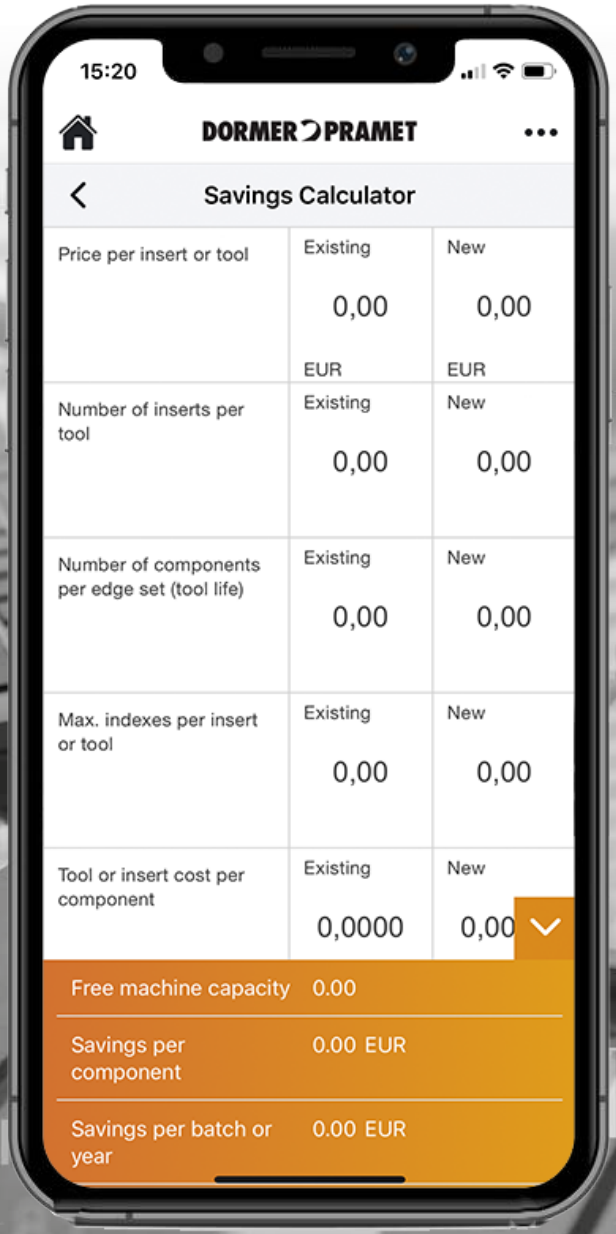
PRODUCT FAMILY	
C	
CCGT	388
CCGW CBN	390
CCMT	390
CCMW	393
CNGA CBN	394
CNGG	395
CNMA	395
CNMG	396
D	
DCMT	398
DCMW	399
DCMW PCD	399
E	
EPGX	400
EPMT	400

PRODUCT FAMILY	
S	
SCET	323
T	
TCGT	401
TCMT	402
TCMW	403
W	
WCMT-ID	325
WCMX	326
X	
XPET	324

DORMER PRAMET

POCKET SAVER

Our machining calculator allows you to measure the savings based on different products and applications. A useful pocket-sized tool, which will help keep cash in your pockets! **Simply Reliable.**



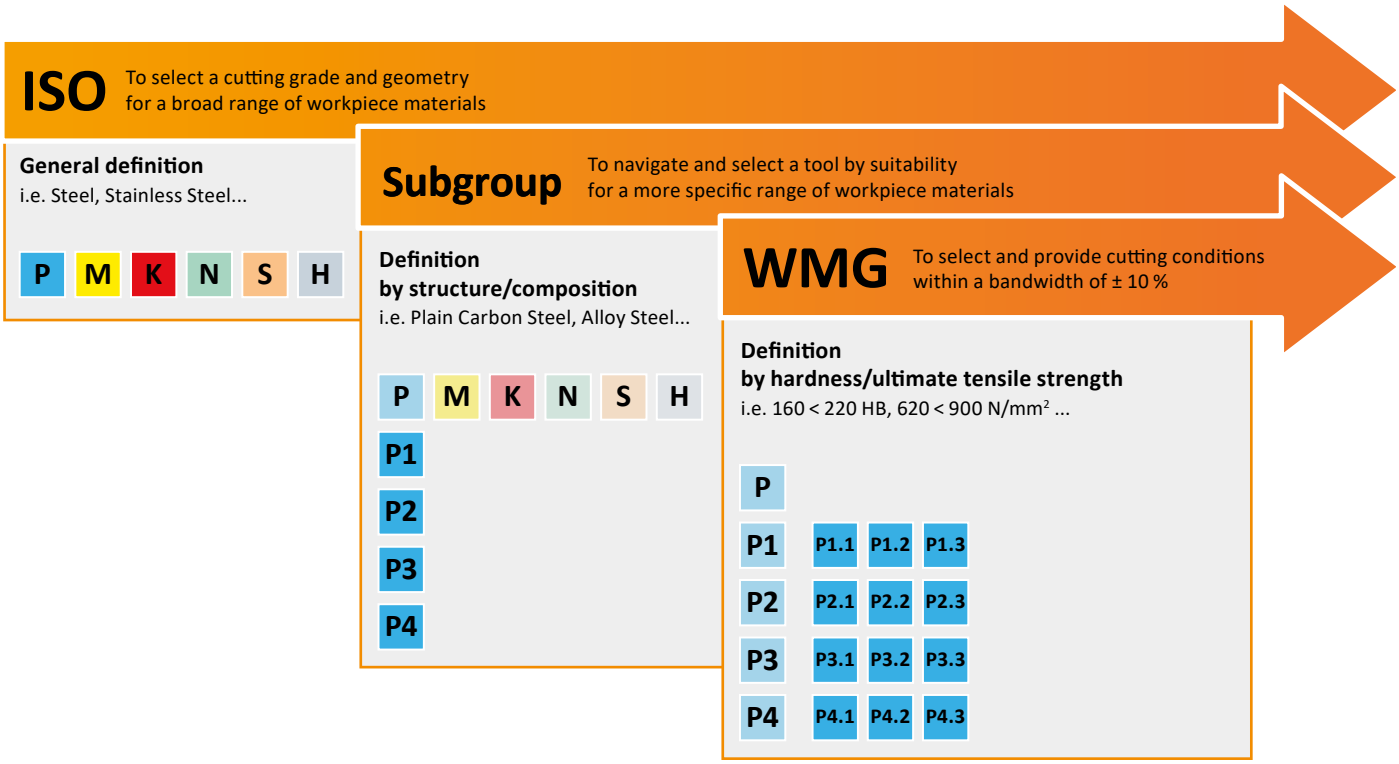
Download on the App Store

GET IT ON Google Play

Download on AppGallery

6		WMG & ISO 13399
12	DRILLS	INSTRUCTIONS
15		SOLID CARBIDE DRILLS
66		HSS DRILLS
176		TECHNICAL INFORMATION
186		CUTTING FLUIDS
190		REAMERS AND COUNTERSINKS
264	INDEXABLE DRILLS	INSTRUCTIONS
271		HYDRA DRILLS
297		TECHNICAL INFORMATION
307		INDEXABLE DRILLS
327		TECHNICAL INFORMATION
350	BORING SYSTEMS	INSTRUCTIONS
359		BORING HEADS
376		BORING ACCESSORIES
381		INSERTS
404		ARBORS
418		BORING KITS
429		TECHNICAL INFORMATION

WORKPIECE MATERIAL GROUPS (WMG)



ABOUT DORMER PRAMET'S WORKPIECE MATERIAL CLASSIFICATION

Workpiece **M**aterial **G**roups (**WMG**) are used to support easy and reliable selection of the right cutting tool and starting values for machining conditions in particular applications.
Dormer Pramet classifies workpiece materials into six different coloured groups;

- **Blue**: Steel and cast steel (P-group)
- **Yellow**: Stainless steel (M-group)
- **Red**: Cast iron (K-group)
- **Green**: Non-ferrous metals (N-group)
- **Brown**: High-temperature alloys (S-group)
- **Grey**: Hardened materials (H-group)

Each of these are divided into subgroups on the basis of their structure and/or composition. For example, P-group steel and cast steel is split into four subgroups, namely;

- **P1** – Free machining steel
- **P2** – Plain carbon steel
- **P3** – Alloy steel
- **P4** – Tool steel

A final division includes material properties, such as hardness and ultimate tensile strength. This is to provide our customers with a complete tool recommendation, including starting values for cutting speed and feed.
The table on the next page includes a description of each workpiece material group, as well as examples of commonly used designations.

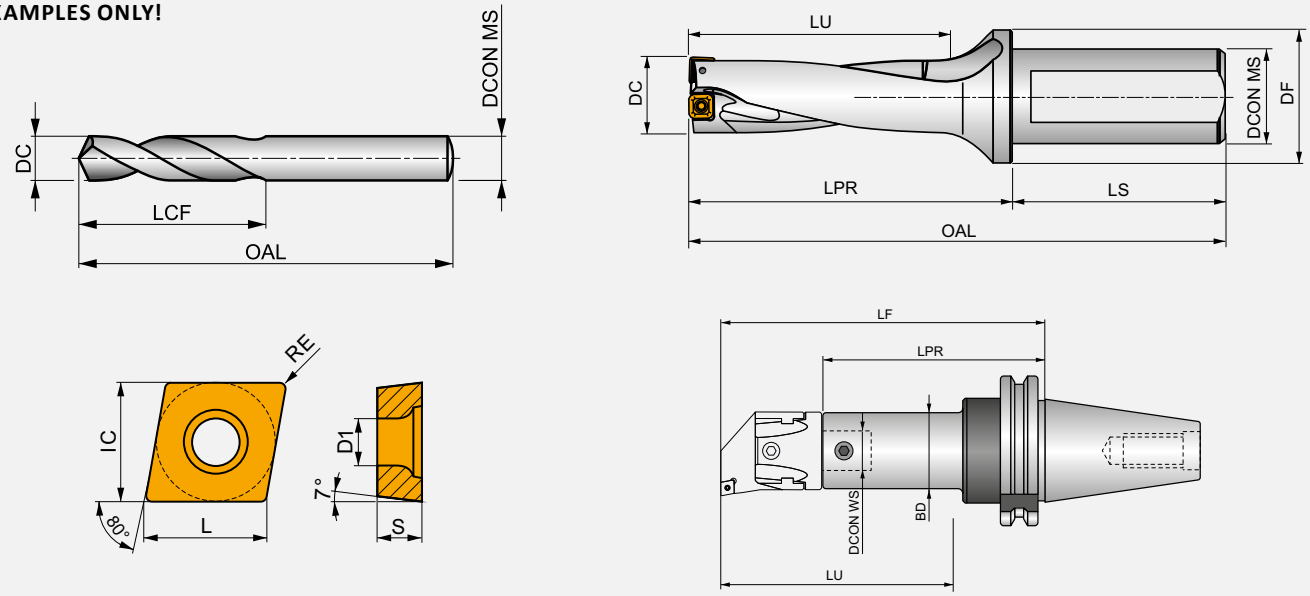
ISO group		WMG (Work Material Group)			Hardness (HB or HRC)	Ultimate Tensile Strength (MPa)
P	P1	P1.1	Free machining steel (carbon steels with increased machinability)	Sulfurized	< 240 HB	≤ 830
		P1.2		Sulfurized and phosphorized	< 180 HB	≤ 620
		P1.3		Sulfurized/phosphorized and leaded	< 180 HB	≤ 620
	P2	P2.1	Plain carbon steel (steels comprised of mainly iron and carbon)	Containing <0.25 % C	< 180 HB	≤ 620
		P2.2		Containing <0.55 % C	< 240 HB	≤ 830
		P2.3		Containing >0.55 % C	< 300 HB	≤ 1030
	P3	P3.1	Alloy steel (carbon steels with an alloying content ≤ 10%)	Annealed	< 180 HB	≤ 620
		P3.2		Hardened and tempered	180 – 260 HB	> 620 ≤ 900
		P3.3			260 – 360 HB	> 900 ≤ 1240
	P4	P4.1	Tool steel (special alloy steel for tools, dies and molds)	Annealed	< 26 HRC	≤ 900
		P4.2		Hardened and tempered	26 – 39 HRC	> 900 ≤ 1240
		P4.3			39 – 45 HRC	> 1240 ≤ 1450
M	M1	M1.1	Ferritic stainless steel (straight chromium non-hardenable alloys)		< 160 HB	≤ 520
		M1.2			160 – 220 HB	> 520 ≤ 700
	M2	M2.1	Martensitic stainless steel (straight chromium hardenable alloys)	Annealed	< 200 HB	≤ 670
		M2.2		Quenched and tempered	200 – 280 HB	> 670 ≤ 950
		M2.3		Precipitation-hardened	280 – 380 HB	> 950 ≤ 1300
	M3	M3.1	Austenitic stainless steel (chromium-nickel and chromium-nickel-manganese alloys)		< 200 HB	≤ 750
		M3.2			200 – 260 HB	> 750 ≤ 870
		M3.3			260 – 300 HB	> 870 ≤ 1040
	M4	M4.1	Austenitic-ferritic (DUPLEX) or super-austenitic stainless steel		< 300 HB	≤ 990
		M4.2	Precipitation hardening austenitic stainless steel		300 – 380 HB	≤ 1320
K	K1	K1.1	Gray iron or Automotive Gray iron (GG) (iron-carbon castings with a lamellar graphite microstructure)	Ferritic or ferritic-pearlitic	< 180 HB	≤ 190
		K1.2		Ferritic-pearlictic or pearlitic	180 – 240 HB	> 190 ≤ 310
		K1.3		Pearlitic	240 – 280 HB	> 310 ≤ 390
	K2	K2.1	Malleable iron (GTS/GTW) (iron-carbon castings with a graphite-free microstructure)	Ferritic	< 160 HB	≤ 400
		K2.2		Ferritic or pearlitic	160 – 200 HB	> 400 ≤ 550
		K2.3		Pearlitic	200 – 240 HB	> 550 ≤ 660
	K3	K3.1	Ductile iron (GGG) (iron-carbon castings with a nodular graphite microstructure)	Ferritic	< 180 HB	≤ 560
		K3.2		Ferritic or pearlitic	180 – 220 HB	> 560 ≤ 680
		K3.3		Pearlitic	220 – 260 HB	> 680 ≤ 800
	K4	K4.1	Austenitic gray iron (ASTM A436) (iron-carbon alloy castings with an austenitic lamellar graphite microstructure)		< 180 HB	≤ 190
		K4.2	Austenitic ductile iron (ASTM A439 or ASTM A571) (iron-carbon alloy castings with an austenitic nodular graphite microstructure)		< 240 HB	≤ 740
		K4.3	Austempered ductile iron (ASTM A897) (iron-carbon alloy castings with an ausferrite microstructure)		< 280 HB	> 840 ≤ 980
		K4.4			280 – 320 HB	> 980 ≤ 1130
		K4.5			320 – 360 HB	> 1130 ≤ 1280
	K5	K5.1	Compacted graphite iron CGI (ASTM A842) (iron-carbon castings with a vermicular graphite structure)	Ferritic	< 180 HB	≤ 400
		K5.2		Ferritic-pearlitic	180 – 220 HB	> 400 ≤ 450
		K5.3		Pearlitic	220 – 260 HB	> 450 ≤ 500
N	N1	N1.1	Commercially pure wrought aluminium		< 60 HB	≤ 240
		N1.2	Wrought aluminium alloys	Half hard tempered	60 – 100 HB	> 240 ≤ 400
		N1.3		Full hard tempered	100 – 150 HB	> 400 ≤ 590
	N2	N2.1	Cast aluminium alloys		< 75 HB	≤ 240
		N2.2			75 – 90 HB	> 240 ≤ 270
		N2.3			90 – 140 HB	> 270 ≤ 440
	N3	N3.1	Free-cutting copper-alloys materials with excellent machining properties		–	–
		N3.2	Short-chip copper-alloys with good to moderate machining properties		–	–
		N3.3	Electrolytic copper and long-chip copper-alloys with moderate to poor machining properties		–	–
	N4	N4.1	Thermoplastic polymers		–	–
		N4.2	Thermosetting polymers		–	–
		N4.3	Reinforced polymers or composites		–	–
	N5	N5.1	Graphite		–	–
S	S1	S1.1	Titanium or titanium alloys		< 200 HB	≤ 660
		S1.2			200 – 280 HB	> 660 ≤ 950
		S1.3			280 – 360 HB	> 950 ≤ 1200
	S2	S2.1	Fe-based high-temperature alloys		< 200 HB	≤ 690
		S2.2			200 – 280 HB	> 690 ≤ 970
	S3	S3.1	Ni-based high-temperature alloys		< 280 HB	≤ 940
		S3.2			280 – 360 HB	> 940 ≤ 1200
	S4	S4.1	Co-based high-temperature alloys		< 240 HB	≤ 800
		S4.2			240 – 320 HB	> 800 ≤ 1070
H	H1	H1.1	Chilled cast iron		< 440 HB	–
	H2	H2.1	Hardened cast iron		< 55 HRC	–
		H2.2			> 55 HRC	–
	H3	H3.1	Hardened steel <55 HRC		< 51 HRC	–
		H3.2			51 – 55 HRC	–
	H4	H4.1	Hardened steel >55 HRC		55 – 59 HRC	–
		H4.2			> 59 HRC	–

CUTTING TOOL PARAMETERS ACCORDING TO ISO 13399

All cutting tools are defined by a number of parameters according to the standard ISO 13399. This list contains all the parameters used in this catalogue and their definitions.

ISO 13399 is an international cutting tool information standard. It provides dimensions and parameters in a neutral format that is independent of any particular system or company nomenclature. When cutting tools are clearly defined according to a global standard, all types of software can process the electronic data more quickly, improving the quality of communication and helping to make the exchange of information run smoothly. Supporting a common language in our cutting tool descriptions this will assist system to system communication. It will save you a significant amount of time, providing an easier gathering of high-quality data across our 40,000 solid and indexable tools. By using an ISO 13399 compliant system, there will be no need to manually interpret data and key-enter it into your system.

EXAMPLES ONLY!



ISO 13399	description
BD	Body diameter
BDX	Body diameter maximum
CZC MS	Connection size code machine side
D1	Fixing hole diameter
DC	Cutting diameter
DCN	Cutting diameter minimum
DCON MS	Connection diameter machine side
DCON WS	Connection diameter workpiece side
DCX	Cutting diameter maximum
DHUB	Hub diameter
FLGT	Flange thickness
IC	Inscribed circle diameter
L	Cutting edge length
LB	Body length
LF	Functional length
LPR	Protruding length
LU	Usable length
OAL	Overall length
RE	Corner radius
S	Insert thickness
WF	Functional width
APMX	Depth of cut maximum
D1	Fixing hole diameter
DC_1	Cutting diameter first cutting step
DC_2	Cutting diameter second cutting step

ISO 13399	description
DF	Flange diameter
DH	Head diameter
GPD	Guide pilot diameter
GPL	Guide pilot length
H	Shank height
HSD	Size of drive part
IC	Inscribed circle diameter
LCF	Length chip flute
LCOL	Collet length
LDC	Distance reference point PK
LH	Head length
LS	Shank length
LSC	Clamping length
NOF	Number of flutes
PLGL	Plug length
RCSK	Radius countersunk
RE	Corner radius
SDI	Step diameter increments
SDL	Step diameter length
SDL_1	Step diameter length first cutting step
SDL_2	Step diameter length second cutting step
TDZ	Thread diameter size
THLGTH	Thread length
WSC	Clamping width

DORMER PRAMET

YOUR PERSONAL LIBRARY

Always revisiting the same sections of our publications? Our library app allows you to save key pages that you can revert back to again and again, whenever you need to. Simply Reliable. **Simply Reliable.**

SOLID CARBIDE DRILLS
HSS DRILLS

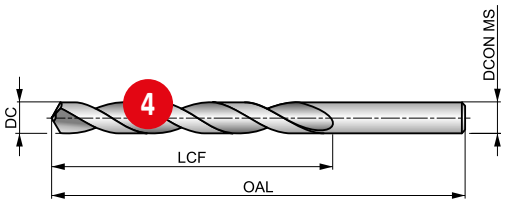
6		WMG & ISO 13399
12	DRILLS	INSTRUCTIONS
15	DRILLS	SOLID CARBIDE DRILLS
66	DRILLS	HSS DRILLS
176	DRILLS	TECHNICAL INFORMATION
186	DRILLS	CUTTING FLUIDS
190		REAMERS AND COUNTERSINKS
264	INDEXABLE DRILLS	INSTRUCTIONS
271	INDEXABLE DRILLS	HYDRA DRILLS
295	INDEXABLE DRILLS	TECHNICAL INFORMATION
307	INDEXABLE DRILLS	INDEXABLE DRILLS
327	INDEXABLE DRILLS	TECHNICAL INFORMATION
350	BORING SYSTEMS	INSTRUCTIONS
359	BORING SYSTEMS	BORING HEADS
376	BORING SYSTEMS	BORING ACCESSORIES
381	BORING SYSTEMS	INSERTS
404	BORING SYSTEMS	ARBORS
418	BORING SYSTEMS	BORING KITS
429	BORING SYSTEMS	TECHNICAL INFORMATION

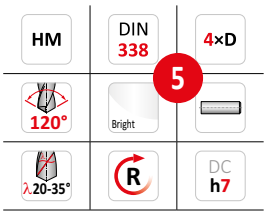
1 **R100**

DORMER

Solid Carbide Jobber Drill, Bright Finish

Improved wear resistance for increased productivity an[2]ded tool life. A 120°, 4-facet point helps with self-centering and reduces cutting forces. Can be used with all CNC machine applications.





Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page XY.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	K1.1	K1.2
◪99 S	◪111 S	◪115 S	◪85 S	◪75 S	◪66 S	◪66 S	◪53 S	◪45 S	◪40 S	◪34 S	◪27 S	◪75 T	◪56 T
K1.3	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**
◪42 T	◪68 T	◪55 T	◪44 T	◪60 T	◪46 T	◪37	6 ◪55 T	◪42 T	◪31 T	◪26 T	◪22 T	◪63 T	◪47 T
K5.3	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N4.1**	**N4.2**	**H1.1**	**H2.1**	**H2.2**
◪37 T	◪200 V	◪150 V	◪100 V	◪172 V	◪155 V	◪112 V	■423 V	■250 V	■60 X	■100 V	◪56 S	◪33 S	◪36 S
H3.1	**H3.2**												
◪37 S	◪30 S												

Product	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
R1001.0	1.00	0.0394	12.0	34.0	1.00
R1001.1	1.10	0.0433	14.0	36.0	1.10
R1001.2	1.20	0.0472	16.0	38.0	1.20
R1001.3	1.30	0.0512	16.0	38.0	1.30
R1001.4	1.40	0.0551	18.0	40.0	1.40
R1001.5	1.50	0.0591	18.0	40.0	1.50
R1001.6	1.60	0.0630	20.0	43.0	1.60
R1 7	1.70	0.0669	20 8	43.0	1.70
R1	1.80	0.0709	22.	46.0	1.80
R1001.9	1.90	0.0748	22.0	46.0	1.90
R1002.0	2.00	0.0787	24.0	49.0	2.00

Product	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
R1003.6	3.60	0.1417	39.0	70.0	3.60
R1003.7	3.70	0.1457	39.0	70.0	3.70
R1003.8	3.80	0.1496	43.0	75.0	3.80
R1003.9	3.90	0.1535	43.0	75.0	3.90
R1004.0	4.00	0.1575	43.0	75.0	4.00
R1004.1	4.10	0.1614	43.0	75.0	4.10
R1004.2	4.20	0.1654	43.0	75.0	4.20
R1004.3	4.30	0.1693	47.0	80.0	4.30
R1004.4	4.40	0.1732	47.0	80.0	4.40
R1004.5	4.50	0.1772	47.0	80.0	4.50
R1004.6	4.60	0.1811	47.0	80.0	4.60

Pos.	Description
1	Designation of drill
2	Product description
3	Illustrative picture
4	Schematic drawing of tool

Pos.	Description
5	Product features
6	Material group recommendations incl. speed and feed guidance
7	Product code
8	Product dimensions

Typical page with drills displayed – specific page details will differ.

SOLID CARBIDE & HSS DRILLS – ICONS OVERVIEW

General Icons

■	Primary use
◪	Possible use

Application Angle

60°	60° Countersink Centre Drill
118°	Drill Point 118°
120°	Drill Point 120°
122°	Drill Point 122°
130°	Drill Point 130°
135°	Drill Point 135°
R	Radius Countersink Centre Drill
90°/120°	Spot Drill Point 90°/120°
180°	Spot-weld Drill Point 180°
180°	Step-drill (for fasteners) 180° Counterbore
90°	Step-drill (for fasteners) 90° Counterbore
140°	Drill Point 140°
90°	Pre-Drill with 90° Chamfer (for tapping)
150°	Spot Drill Point 150°
90°	Spot Drill Point 90°
120°	Spot Drill Point 120°

Basic Standard Group (BSG)

BS 328	BS 328 – Drills and Reamers Standards
DIN 1869-1	DIN 1869 / 1 – Straight Shank Extra Long Drill Standards
DIN 1869-2	DIN 1869 / 2 – Straight Shank Extra Long Drill Standards
DIN 1869-3	DIN 1869 / 3 – Straight Shank Extra Long Drill Standards
DIN 1870(1)	DIN 1870 (1) – Morse Taper Shank Extra Long Drill Standards
DIN 1870(2)	DIN 1870 (2) – Morse Taper Shank Extra Long Drill Standards
DIN 1897	DIN 1897 – Stub Drill Standards
DIN 1899	DIN 1899 – Micro Drill Standards
DIN 333A	DIN 333A – Centre Drill Standards
DIN 333R	DIN 333R – Straight Shank Countersink Standards
DIN 338	DIN 338 – Straight Shank Drill Standards
DIN 340	DIN 340 – Taper Length Drill Standards
DIN 341	DIN 341 – Morse Taper Shank Long Drill Standards
DIN 345	DIN 345 – Morse Taper Shank Drill Standards
DIN 8037	DIN 8037 – Carbide Tipped Drill Standards
DIN 8374	DIN 8374 – Subland Drill Standards
DIN 8376	DIN 8376 – Step Drill Standards
DIN 8377	DIN 8377 – Subland Drill Standards
DIN ANSI	DIN/ANSI Standards
DORMER	Dormer Standards
NAS 907	NAS907 – Aerospace Drill Standards

Coating

Alcrona Top	Aluminium Chromium Nitride (with smoothing process)
Bright	Bright (uncoated)
TiN-Tip	Bright and TiN (Tip Coating)
Bronze	Bronze Tempered (Bronze Oxide) Surface Treatment
Bright ST	Combination Bright and Steam Tempered
ST	Steam Tempered (Steam Oxide) Surface Treatment
TiAlN Top	Titanium Aluminium Nitride (with smoothing process)
TiAlN	Titanium Aluminium Nitride Coating
TiN	Titanium Nitride Coating

SOLID CARBIDE & HSS DRILLS – ICONS OVERVIEW

Coolant Supply Property (CSP)

	Through Tool Coolant

Cutting Direction

	Left Hand Rotation / Cutting
	Right Hand Rotation / Cutting

Cutting Diameter Tolerance Zone Class (TCDC)

DC h8	h8 – Industry Standard Tool Tolerance Zone (based on diameter range)
DC h6	h6 – Industry Standard Tool Tolerance Zone (based on diameter range)
DC h7	h7 – Industry Standard Tool Tolerance Zone (based on diameter range)
DC m7	m7 – Industry Standard Tool Tolerance Zone (based on diameter range)

Material Code (BMC)

HM	Hard Material (Solid Carbide)
HSS-E	High Speed Cobalt Steel Tool Material
HSS HM	High Speed Steel (tool body) with Solid Carbide (cutting tool material)
HSS	High Speed Steel Tool Material

Shank

	Cylindrical Shank / Straight Shank
	Cylindrical Shank with Flat
	Cylindrical Shank with Tang
	DIN 6535 HA Cylindrical Shank
	Morse Taper Shank
	Reduced Cylindrical Shank

Spiral Form

	Quick Spiral Flute Design
	Slow Spiral Flute Design
	Standard Spiral Flute Design
	Quick Spiral Flute Design
	Continuously Thinned Web Flute Design
VA	Special Point Thinning Design

Usable Length Diameter Ratio (ULDR)

1.25×D	1.25×D Usable Tool Depth to Diameter Ratio
1.5×D	1.5×D Usable Tool Depth to Diameter Ratio
10×D	10×D Usable Tool Depth to Diameter Ratio
15×D	15×D Usable Tool Depth to Diameter Ratio
1×D	1×D Usable Tool Depth to Diameter Ratio
2.5×D	2.5×D Usable Tool Depth to Diameter Ratio
20×D	20×D Usable Tool Depth to Diameter Ratio
25×D	25×D Usable Tool Depth to Diameter Ratio
3×D	3×D Usable Tool Depth to Diameter Ratio
4×D	4×D Usable Tool Depth to Diameter Ratio
5×D	5×D Usable Tool Depth to Diameter Ratio
6×D	6×D Usable Tool Depth to Diameter Ratio
8×D	8×D Usable Tool Depth to Diameter Ratio

SOLID CARBIDE DRILLS

FORCE X

HIGH PERFORMANCE CARBIDE DRILLS

VERSATILE PRODUCTION DRILLS FOR A WIDE RANGE OF MATERIALS

FORCE X carbide drills are developed for high performance machining applications in a wide variety of work-materials such as Carbon and Alloy Steels up to 1500 MPa and Cast-Iron. FORCE X drills also perform well in Stainless Steel and Aluminium making them an ideal first choice for subcontract machining companies.

FEATURES AND BENEFITS

- CTW – Unique Flute Construction with a continuously thinned web and rolled heel design.
- Modified 4-Facet Split Point with large secondary chisel edge angle.
- Premium micrograin carbide substrate with TiAlN coating.
- 3×D and 5×D options available in solid and coolant-feed variants.
- 8×D with coolant-feed.

COMPARED TO CONVENTIONAL DRILLS FORCE X ARE:

- **Outstandingly economical** – Able to be re-ground multiple times, this significantly increases total tool life.
- **Consistently high quality and performance** – with excellent positional accuracy and swarf control, ensuring a superior quality hole tolerance and surface finish.
- **More productive** – with high drilling speeds and prolonged tool-life.

RANGE DETAILS

3×D

R457
Coolant-feed

R458
Solid

- 3.00 – 20.00 mm
- 1/8 – 3/4 inch, N30 – N1, A – Z

5×D

R453
Coolant-feed

R454
Solid

- 3.00 – 20.00 mm
- 1/8 – 3/4 inch, N30 – N1, A – Z

8×D

R459
Coolant-feed

- 3.00 – 16.00 mm
- 1/8 – 5/8 inch

FORCE X

HIGH PERFORMANCE CARBIDE DRILLS

MACHINING EXAMPLE

			Free Machining Steel P1.3	Alloy Steel P3.3	Gray Iron K1.2
Workpiece			1.0718 (11SMnPb30)	1.6582 (34CrNiMo6)	0.6025 (GG-25)
Hardness		HB	180	325	215
Tensile strength		MPa	620	1120	260
Diameter		mm	8 (R4578.0)	8 (R4598.0)	8 (R4538.0)
Hole depth		mm	3×D (24)	8×D (64)	5×D (40)
Cutting speed	v_c	m/min	207	73	77
Feed	f	mm/rev	0.26	0.14	0.26
Coolant			Emulsion 8 % through coolant	Emulsion 8 % through coolant	Emulsion 8 % through coolant

FORCE M

HIGH PERFORMANCE CARBIDE DRILLS

HIGH VOLUME PRODUCTION DRILLS FOR STAINLESS STEEL

FORCE M carbide drills have been engineered to provide the highest performance and process reliability when drilling Stainless steels and Heat resistant super alloys. FORCE M drills are ideal for applications where it is necessary to drill a large number of holes with high and constant accuracy.

FEATURES AND BENEFITS

- CTW – Unique Flute Construction with a continuously thinned web and rolled heel design.
- S-Shape 4-Facet Split Point with precise thin edge honing and strong outer corner design.
- Premium micrograin carbide substrate with TiAlN coating.
- 3×D and 5×D with coolant-feed.
- 8×D with coolant-feed available upon request.

COMPARED TO CONVENTIONAL DRILLS FORCE M PROVIDE:

- **Reliable performance** – with a smooth cutting action to prevent onset of work-hardening and built up edge.
- **Optimized productivity** – with excellent chip-management and a better force distribution to allow high penetration rates.
- **Exceptional tool life** – with stronger corner and cutting edges to withstand deformation wear.

RANGE DETAILS

3×D

R467

Coolant-feed

- 3.00 – 16.00 mm
- 1/8 – 5/8 inch

5×D

R463

Coolant-feed

- 3.00 – 16.00 mm
- 1/8 – 5/8 inch

8×D

R469

Coolant-feed

Available upon request

- 3.00 – 16.00 mm
- 1/8 – 5/8 inch

FORCE M

HIGH PERFORMANCE CARBIDE DRILLS

MACHINING EXAMPLE

			Ferritic SST M1.2	Austenitic SST M3.2	High Strength SST M4.1
Workpiece			1.4104 (AISI 430F)	1.4401 (AISI 316)	1.4501 (Super DUPLEX)
Hardness		HB	220	200	240
Tensile strength		MPa	700	750	770
Diameter		mm	8 (R4678.0)	8 (S-R4698.0)	8 (R4638.0)
Hole depth		mm	3×D (24)	8×D (64)	5×D (40)
Cutting speed	v_c	m/min	99	74	57
Feed	f	mm/rev	0.16	0.14	0.12
Coolant			Emulsion 8 % through coolant	Emulsion 8 % through coolant	Emulsion 8% through coolant

FORCE N

HIGH PENETRATION RATE DRILLS FOR ALUMINIUM

FORCE N carbide drills are recommended for high speed drilling operations in wrought and cast aluminium alloys. The flute and cutting geometry are specifically designed to break the swarf into small manageable chips to enhance chip-evacuation. FORCE N drills provide superior performance and tool life for mid-high volume manufacturing companies.

FEATURES AND BENEFITS

- Special web thinning with higher than standard helix angle.
- Unique geometry with convex cutting edges and 4-facet self-centering point.
- Premium micrograin carbide substrate with bright finish.
- 5×D and 8×D with coolant-feed available upon request.

COMPARED TO CONVENTIONAL DRILLS FORCE N DELIVER:

- **Superior performance** – with high drilling speeds and long tool life.
- **Economical solution** – which can be used across all types of aluminium from soft through to abrasive grades.
- **Optimized process** – designed to reduce thrust force improving hole quality and reducing exit burr which occurs when drilling soft materials.

RANGE DETAILS

5×D

R445

Coolant-feed

Available upon request

- 3.00 – 16.00 mm
- 1/8 – 5/8 inch

8×D

R448

Coolant-feed

Available upon request

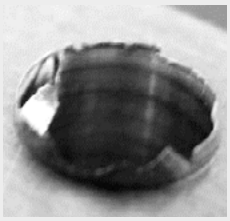
- 3.00 – 16.00 mm
- 1/8 – 5/8 inch

Up to 12×D

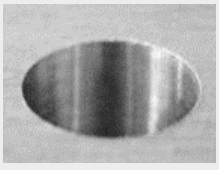
Longer lengths available upon request

MACHINING EXAMPLE

			Wrought Aluminium N1.2	Cast Aluminium N2.2
Workpiece			AW 2024-O (3.1355)	A242.0
Hardness		HB	50	75
Tensile strength		MPa	200	220
Diameter		mm	8 mm (R4458.0)	8 mm (S-R4488.0)
Hole depth		mm	5×D (40)	8×D (64)
Cutting speed	v_c	m/min	357	374
Feed	f	mm/rev	0.80	0.33
Coolant			Emulsion 8 % through coolant	Emulsion 8 % through coolant



Exit burr with conventional drill



Exit burr with FORCE N drill

DORMER PRAMET

FOLLOW US

SHARE

LIKE

COMMENT

TAG

RE-TWEET

Carbide materials

Carbide Materials (or Hard Materials)	HM	A sintered powder metallurgy substrate, consisting of a metallic carbide composite with binder metal. The most central raw material is tungsten carbide (WC). Tungsten carbide contributes to the hardness of the material. Tantalum carbide (TaC), titanium carbide (TiC) and niobium carbide (NbC) complements WC and adjusts the properties to what is desired. These three materials are called cubic carbides. Cobalt (Co) acts as a binder and keeps the material together. Carbide materials are often characterised by high compression strength, high hardness and therefore high wear resistance, but also by limited flexural strength and toughness. Carbide is used in taps, reamers, milling cutters, drills and thread milling cutters.

Surface Coatings

Bright (uncoated)		Bright finish (uncoated surface) improves chip flow in soft or non-ferrous materials, plastics and composites while maintaining sharp cutting edges.
Titanium Nitride coating (TiN)		Titanium Nitride is a gold coloured ceramic coating applied by physical vapor deposition (PVD). High hardness combined with low friction properties ensures longer tool life and/or better cutting performance from tools which have not been coated.
Titanium Aluminium Nitride coatings (TiAlN)		Titanium Aluminium Nitride is a multi layer ceramic coating applied by PVD coating technology, which exhibits high toughness and oxidation stability. These properties make it ideal for higher speeds and feeds, while at the same time improving tool life. TiAlN is used in drilling, tapping, and milling applications and can be suitable for use when machining without coolant. TiAlN-Top coating is the same as TiAlN but with a post-coating process designed to smooth out imperfections, enhance chip flow and reduce built up edge.

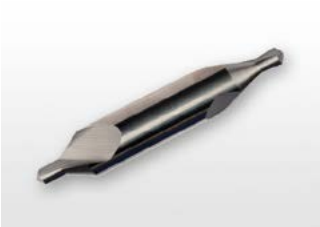
Material code (BMC)		HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM
Basic standard group (BSG)		DIN 333A	DORMER	DORMER	DORMER	DORMER	DORMER	DIN 6539	DIN 338	DIN 6539	DIN 338	DIN 6537K	DIN 6537K	DIN 6537L
Usable length (ULDR)		1×D	1×D	1×D	1×D	1×D	3×D	2.5×D	4×D	2.5×D	4×D	3×D	3×D	5×D
Application angle		60°	120°	90°	150°	90°	90°	120°	120°	130°	130°	140°	140°	140°
Coating		Bright	Bright	Bright	TiAlN	TiAlN	TiAlN	Bright	Bright	TiN	TiN	TiAlN	TiAlN	TiAlN
Shank						DIN 6535HA	DIN 6535HA					DIN 6535HA	DIN 6535HA	DIN 6535HA
Spiral form			λ 20-35°	λ 20-35°	λ 20-35°	λ 20-35°	λ 20-35°	λ 20-35°	λ 20-35°	λ 20-35°	λ 20-35°	CTW	CTW	CTW
Hand (Cutting direction)		R	R	R	R	R	R	R	R	R	R	R	R	R
Cooling (CSP)														
										CDX	CDX	FORCE X	FORCE X	FORCE X
Product Family Code		R200	R122	R123	R125	R6011	R7131	R120	R100	R520	R510	R458	R457	R454
		1.00 - 5.00	5.00 - 20.00	5.00 - 20.00	6.00 - 16.00	6.00 - 16.00	3.30 - 10.40	1.00 - 12.00	1.00 - 14.00	3.00 - 16.50	3.00 - 14.25	3.00 - 20.00	3.00 - 20.00	3.00 - 20.00
		26	27	28	29	30	31	32	34	36	38	40	44	48
P	P1	■	■	■	■	■	■	◪	◪	■	■	■	■	■
	P2	■	■	■	■	■	■	◪	◪	■	■	■	■	■
	P3	■	■	■	■	■	■	◪	◪	■	■	■	■	■
	P4	■	■	■	■	■	■	◪	◪	■	■	■	■	■
M	M1		■	■	■	■	■			◪	◪	◪	◪	◪
	M2		■	■	■	■	■			◪	◪	◪	◪	◪
	M3		■	■	■	■	■					◪	◪	◪
	M4						■					◪	◪	◪
K	K1	■	■	■	■	■	■	◪	◪	■	■	■	■	■
	K2	■	■	■	■	■	■	◪	◪	■	■	■	■	■
	K3	■	■	■	■	■	■	◪	◪	■	■	■	■	■
	K4	■	■	■	■	■	■	◪	◪	■	■	■	■	■
	K5	■	■	■	■	■	■	◪	◪	■	■	■	■	■
N	N1	■	■	■	■	■	■	■	◪	■	■	■	■	■
	N2	■	■	■	■	■	■	◪	◪	■	■	■	■	■
	N3	■	■	■	■	■	■	◪	■			■	■	■
	N4		■	■	■	■		■	■	■	■			
	N5													
S	S1		■	■	■	■		◪		◪	◪	◪	■	◪
	S2		■	■	■	■		◪						
	S3		■	■	■	■		◪						
	S4		■	■	■	■		◪						
H	H1		■	■	■	■		◪	◪	◪	◪	■	■	■
	H2		◪	◪	◪	◪		◪	◪	◪	◪	◪	◪	◪
	H3		◪	◪	◪	◪		◪	◪	◪	◪	◪	◪	◪
	H4													

■ Primary use ◪ Possible use

	HM	HM	HM	HM
	DIN 6537L	DORMER	DIN 6537K	DIN 6537L
	5×D	8×D	3×D	5×D
	140°	140°	140°	140°
	TiAlN	TiAlN	TiAlN	TiAlN
	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA
	CTW	CTW	CTW	CTW
	R	R	R	R
	FORCE X	FORCE X	FORCE M	FORCE M
	R453	**R459**	**R467**	**R463**
	3.00 - 20.00	3.00 - 16.00	3.00 - 16.00	3.00 - 16.00
	52	56	59	62
P1	■	■		
P2	■	■		
P3	■	■		
P4	■	■		
M1	◪	◪	■	■
M2	◪	◪	■	■
M3	◪	◪	■	■
M4	◪	◪	■	■
K1	■	■		
K2	■	■		
K3	■	■		
K4	■	■		
K5	■	■		
N1	■	◪		
N2	■	■		
N3	■	◪		
N4				
N5				
S1	■		■	■
S2			◪	◪
S3			◪	◪
S4			◪	◪
H1	■			
H2	◪			
H3	◪			
H4				

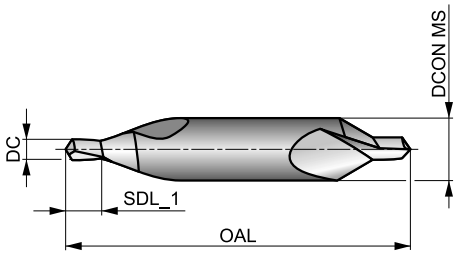
■ Primary use ◪ Possible use

R200



Solid Carbide Center Drill with 118° Point and 60° Countersink, Bright Finish

Recommended for starting a precise hole in the end of a shaft so it can be securely held prior to machining. Suitable to machine a number of materials and has two drilling ends to give increased productivity per tool. Includes a 118° point angle and 60° countersink. Suitable for all CNC machines.



HM	DIN 333A	1×D
60°	Bright	
R		

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 65.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	K1.1	K1.2
■ 60 H	■ 67 H	■ 69 H	■ 51 H	■ 45 F	■ 40 D	■ 44 E	■ 36 E	■ 30 D	■ 26 E	■ 22 D	■ 18 C	■ 40 H	■ 30 E
K1.3	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**
■ 22 E	■ 37 D	■ 30 D	■ 24 D	■ 33 D	■ 25 D	■ 20 D	■ 30 D	■ 23 D	■ 17 D	■ 14 D	■ 12 D	■ 34 D	■ 26 D
K5.3	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**				
■ 20 D	■ 120 I	■ 90 I	■ 60 H	■ 154 G	■ 138 G	■ 100 G	■ 169 G	■ 100 H	■ 50 F				

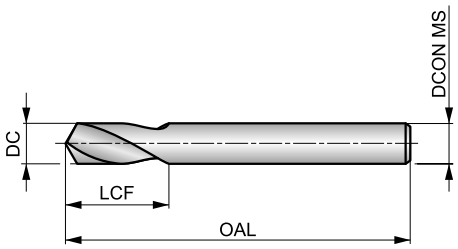
Product	DC [mm]	DC [inch]	SDL_1 [mm]	OAL [mm]	DCON MS [mm]
R2001.0X3.15	1.00	0.0394	1.7 - 1.3	31.0	3.15
R2001.25X3.15	1.25	0.0492	2.0 - 1.6	31.0	3.15
R2001.6X4.0	1.60	0.0630	2.6 - 2.0	35.0	4.00
R2002.0X5.0	2.00	0.0787	3.1 - 2.5	40.0	5.00
R2002.5X6.3	2.50	0.0984	3.8 - 3.1	45.0	6.30
R2003.15X8.0	3.15	0.1240	4.6 - 3.9	50.0	8.00
R2004.0X10.0	4.00	0.1575	5.9 - 5.0	55.0	10.00
R2005.0X12.5	5.00	0.1969	7.2 - 6.3	63.0	12.50

R122

DORMER

Solid Carbide Spotting Drill, 120° Point

The precision engineered point angle provides an accurate guide to help with centering of follow-up drilling of the hole. A 120° point angle helps with self-centering and reduces cutting forces when drilling a variety of materials.



HM	DORMER	1×D
120°	Bright	
λ 20-35°	R	DC h6

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 65.

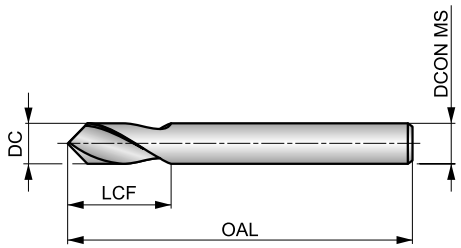
P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 99 S	■ 111 S	■ 115 S	■ 85 S	■ 75 S	■ 66 S	■ 66 S	■ 53 S	■ 45 S	■ 40 S	■ 34 S	■ 27 S	■ 73 S	■ 61 S
M2.1	M2.2	M3.1	M3.2	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	K3.3	K4.1
■ 65 S	■ 53 S	■ 52 S	■ 45 S	■ 75 T	■ 56 T	■ 42 T	■ 68 T	■ 55 T	■ 44 T	■ 60 T	■ 46 T	■ 37 T	■ 55 T
K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1
■ 42 T	■ 31 T	■ 26 T	■ 22 T	■ 63 T	■ 47 T	■ 37 T	■ 200 V	■ 150 V	■ 100 V	■ 172 V	■ 155 V	■ 112 V	■ 423 V
N3.2	N3.3	N4.1	N4.2	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2	S4.1	S4.2	H1.1
■ 250 V	■ 125 V	■ 60 X	■ 100 V	■ 45 T	■ 35 T	■ 25 S	■ 40 S	■ 28 S	■ 30 S	■ 20 S	■ 23 S	■ 16 S	■ 56 S
H2.1	H2.2	H3.1	H3.2										
◪ 33 S	◪ 36 S	◪ 37 S	◪ 30 S										

Product	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
R1225.0	5.00	0.1969	16.0	62.0	5.00
R1226.0	6.00	0.2362	17.0	66.0	6.00
R1228.0	8.00	0.3150	22.0	79.0	8.00
R12210.0	10.00	0.3937	26.0	89.0	10.00
R12212.0	12.00	0.4724	30.0	102.0	12.00
R12216.0	16.00	0.6299	34.0	115.0	16.00
R12220.0	20.00	0.7874	40.0	131.0	20.00

R123

Solid Carbide Spotting Drill, 90° Point

The precision engineered point angle provides an accurate guide to help with centering of follow-up drilling of the hole. A 90° point helps with self-centering and reduces cutting forces when drilling into a variety of materials.



HM	DORMER	1×D
90°	Bright	
λ 20-35°	R	DC h6

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 65.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 99 S	■ 111 S	■ 115 S	■ 85 S	■ 75 S	■ 66 S	■ 66 S	■ 53 S	■ 45 S	■ 40 S	■ 34 S	■ 27 S	■ 73 S	■ 61 S
M2.1	M2.2	M3.1	M3.2	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	K3.3	K4.1
■ 65 S	■ 53 S	■ 52 S	■ 45 S	■ 75 T	■ 56 T	■ 42 T	■ 68 T	■ 55 T	■ 44 T	■ 60 T	■ 46 T	■ 37 T	■ 55 T
K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1
■ 42 T	■ 31 T	■ 26 T	■ 22 T	■ 63 T	■ 47 T	■ 37 T	■ 200 V	■ 150 V	■ 100 V	■ 172 V	■ 155 V	■ 112 V	■ 423 V
N3.2	N3.3	N4.1	N4.2	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2	S4.1	S4.2	H1.1
■ 250 V	■ 125 V	■ 60 X	■ 100 V	■ 45 T	■ 35 T	■ 25 S	■ 40 S	■ 28 S	■ 30 S	■ 20 S	■ 23 S	■ 16 S	■ 56 S
H2.1	H2.2	H3.1	H3.2										
◪ 33 S	◪ 36 S	◪ 37 S	◪ 30 S										

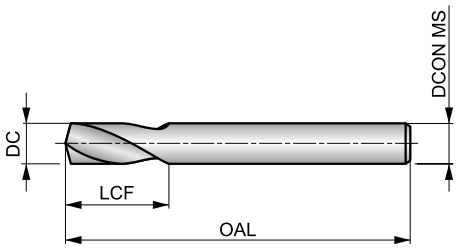
Product	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
R1235.0	5.00	0.1969	16.0	62.0	5.00
R1236.0	6.00	0.2362	17.0	66.0	6.00
R1238.0	8.00	0.3150	22.0	79.0	8.00
R12310.0	10.00	0.3937	26.0	89.0	10.00
R12312.0	12.00	0.4724	30.0	102.0	12.00
R12316.0	16.00	0.6299	34.0	115.0	16.00
R12320.0	20.00	0.7874	40.0	131.0	20.00

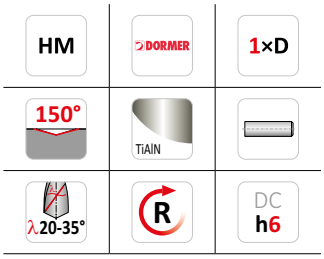
R125

DORMER

Solid Carbide Spotting Drill, 150° Point, TiAlN Coated

The precision engineered point angle provides an accurate guide to help with centering of follow-up drilling of the hole. A 150° point helps with self-centering and reduces cutting forces when drilling into the material. TiAlN coating improves performance and extends the tool life. Suitable for drilling many materials.





Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 65.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 119 S	■ 134 S	■ 138 S	■ 102 S	■ 90 S	■ 80 S	■ 81 S	■ 65 S	■ 55 S	■ 48 S	■ 41 S	■ 34 S	■ 82 S	■ 70 S
M2.1	**M2.2**	**M3.1**	**M3.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**
■ 73 S	■ 60 S	■ 58 S	■ 50 S	■ 80 T	■ 59 T	■ 44 T	■ 86 T	■ 70 T	■ 56 T	■ 76 T	■ 58 T	■ 47 T	■ 71 T
K4.2	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**
■ 53 T	■ 39 T	■ 33 T	■ 28 T	■ 80 T	■ 60 T	■ 46 T	■ 200 V	■ 150 V	■ 100 V	■ 172 V	■ 155 V	■ 112 V	■ 423 V
N3.2	**N3.3**	**N4.1**	**N4.2**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**	**H1.1**
■ 250 V	■ 125 V	■ 60 X	■ 100 V	■ 55 T	■ 45 T	■ 35 S	■ 53 S	■ 42 S	■ 40 S	■ 30 S	■ 31 S	■ 24 S	■ 56 S
H2.1	**H2.2**	**H3.1**	**H3.2**										
◪ 33 S	◪ 36 S	◪ 37 S	◪ 30 S										

DCON MS tolerance h6.

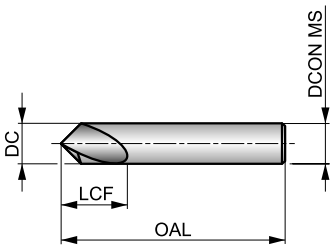
Product	DC [mm]	LCF [mm]	OAL [mm]	DCON MS [mm]
R1255.0	5.00	16.0	62.0	5.00
R1256.0	6.00	17.0	66.0	6.00
R1258.0	8.00	22.0	79.0	8.00
R12510.0	10.00	26.0	89.0	10.00
R12512.0	12.00	30.0	102.0	12.00
R12516.0	16.00	34.0	115.0	16.00

R6011

DORMER

Solid Carbide Spotting Drill, 90° Point, TiAlN Coated

The precision engineered point angle provides an accurate guide to help with centering of follow-up drilling of the hole. A 90° point helps with self-centering and reduces cutting forces when drilling into the material. TiAlN coating improves performance and extends the tool life. Suitable for drilling many materials.



HM	DORMER	1×D
90°	TiAlN	DIN 6535HA
λ20-35°	R	DC h6

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 65.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■119 S	■134 S	■138 S	■102 S	■90 S	■80 S	■81 S	■65 S	■55 S	■48 S	■41 S	■34 S	■82 S	■70 S
M2.1	**M2.2**	**M3.1**	**M3.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**
■73 S	■60 S	■58 S	■50 S	■80 T	■59 T	■44 T	■86 T	■70 T	■56 T	■76 T	■58 T	■47 T	■71 T
K4.2	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**
■53 T	■39 T	■33 T	■28 T	■80 T	■60 T	■46 T	■200 V	■150 V	■100 V	■172 V	■155 V	■112 V	■423 V
N3.2	**N3.3**	**N4.1**	**N4.2**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**	**H1.1**
■250 V	■125 V	■60 X	■100 V	■55 T	■45 T	■35 S	■53 S	■42 S	■40 S	■30 S	■31 S	■24 S	■56 S
H2.1	**H2.2**	**H3.1**	**H3.2**										
◪33 S	◪36 S	◪37 S	◪30 S										

DCON MS tolerance h6.

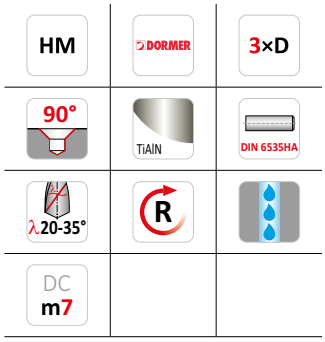
Product	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
R60116.0	6.00	0.2362	16.0	50.0	6.00
R601110.0	10.00	0.3937	25.0	70.0	10.00
R601116.0	16.00	0.6299	26.0	90.0	16.00

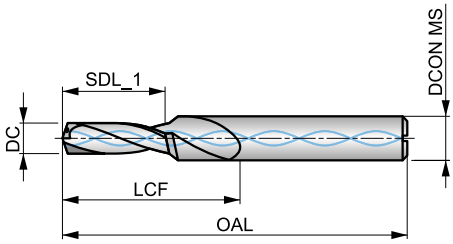
R7131

DORMER

Solid Carbide Step Drill, TiAlN Coated with Coolant Feed

Versatile, with specific Pilot diameters and lengths for achieving hole size and depth for metric threads. Drill and chamfer in one operation reduces cycle time and tooling inventory. A 140° point angle and 90° countersink. TiAlN coating improves performance and extends the tool life. Suitable for drilling many materials.





Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 65.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■ 139 W	■ 156 W	■ 161 W	■ 119 W	■ 105 W	■ 93 V	■ 96 V	■ 77 V	■ 65 V	■ 57 V	■ 48 V	■ 62 V	■ 52 V	■ 55 V
M2.2	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**
■ 45 V	■ 47 V	■ 40 V	■ 36 U	■ 35 U	■ 90 W	■ 67 W	■ 50 W	■ 92 V	■ 75 V	■ 60 V	■ 82 V	■ 62 V	■ 50 V
K4.1	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**
■ 76 V	■ 57 V	■ 42 V	■ 36 V	■ 30 V	■ 86 V	■ 64 V	■ 50 V	■ 250 W	■ 188 W	■ 125 W	■ 308 V	■ 277 V	■ 200 V
N3.1	**N3.2**	**N3.3**											
■ 373 W	■ 220 W	■ 110 W											

DCON MS tolerance h6.

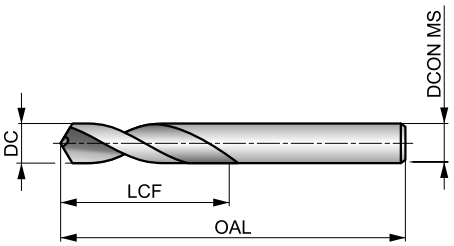
Product	DC [mm]	DC [inch]	SDL_1 [mm]	LCF [mm]	OAL [mm]	DCON MS [mm]	TDZ
R71313.3	3.30	0.1299	11.40	20.0	66.0	6.00	M4
R71314.2	4.20	0.1654	13.60	24.0	66.0	6.00	M5
R71315.0	5.00	0.1969	16.50	28.0	79.0	8.00	M6
R71316.8	6.80	0.2677	21.00	34.0	89.0	10.00	M8
R71318.5	8.50	0.3346	25.50	47.0	102.0	12.00	M10
R713110.2	10.20	0.4016	30.00	55.0	107.0	14.00	M12
R713110.4	10.40	0.4094	30.00	55.0	107.0	14.00	M12

R120

DORMER

Solid Carbide Stub Drill, Bright Finish

Improved wear resistance for increased productivity and extended tool life. A 120°, 4-facet point helps with self-centering and reduces cutting forces. Suitable for drilling hard and abrasive materials and can be used with all CNC machine applications.



HM	DIN 6539	2.5×D
120°	Bright	
λ 20-35°	R	DC h7

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 65.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	K1.1	K1.2
◪99 S	◪111 S	◪115 S	◪85 S	◪75 S	◪66 S	◪66 S	◪53 S	◪45 S	◪40 S	◪34 S	◪27 S	◪75 U	◪56 U
K1.3	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**
◪42 U	◪68 U	◪55 U	◪44 U	◪60 U	◪46 U	◪37 U	◪55 U	◪42 U	◪31 U	◪26 U	◪22 U	◪63 U	◪47 U
K5.3	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**S1.1**	**S1.2**
◪37 U	■200 W	■150 W	◪100 W	◪172 W	◪155 W	◪112 W	◪466 W	◪275 W	■138 W	■60 U	■100 U	■45 T	◪35 T
S1.3	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**	**H1.1**	**H2.1**	**H2.2**	**H3.1**	**H3.2**		
◪25 T	◪40 T	◪28 T	◪30 T	◪20 T	◪23 T	◪16 T	◪56 S	◪33 S	◪36 S	◪37 S	◪30 S		

Product	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
R1201.0	1.00	0.0394	6.0	26.0	1.00
R1201.1	1.10	0.0433	7.0	28.0	1.10
R1201.2	1.20	0.0472	8.0	30.0	1.20
R1201.3	1.30	0.0512	8.0	30.0	1.30
R1201.4	1.40	0.0551	9.0	32.0	1.40
R1201.5	1.50	0.0591	9.0	32.0	1.50
R1201.6	1.60	0.0630	10.0	34.0	1.60
R1201.7	1.70	0.0669	10.0	34.0	1.70
R1201.8	1.80	0.0709	11.0	36.0	1.80
R1201.9	1.90	0.0748	11.0	36.0	1.90
R1202.0	2.00	0.0787	12.0	38.0	2.00
R1202.1	2.10	0.0827	12.0	38.0	2.10
R1202.2	2.20	0.0866	13.0	40.0	2.20
R1202.3	2.30	0.0906	13.0	40.0	2.30
R1202.4	2.40	0.0945	14.0	43.0	2.40
R1202.5	2.50	0.0984	14.0	43.0	2.50
R1202.6	2.60	0.1024	14.0	43.0	2.60
R1202.7	2.70	0.1063	16.0	46.0	2.70
R1202.8	2.80	0.1102	16.0	46.0	2.80
R1202.9	2.90	0.1142	16.0	46.0	2.90
R1203.0	3.00	0.1181	16.0	46.0	3.00
R1203.1	3.10	0.1220	18.0	49.0	3.10
R1203.2	3.20	0.1260	18.0	49.0	3.20
R1203.3	3.30	0.1299	18.0	49.0	3.30
R1203.4	3.40	0.1339	20.0	52.0	3.40
R1203.5	3.50	0.1378	20.0	52.0	3.50

Product	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
R1203.6	3.60	0.1417	20.0	52.0	3.60
R1203.7	3.70	0.1457	20.0	52.0	3.70
R1203.8	3.80	0.1496	22.0	55.0	3.80
R1203.9	3.90	0.1535	22.0	55.0	3.90
R1204.0	4.00	0.1575	22.0	55.0	4.00
R1204.1	4.10	0.1614	22.0	55.0	4.10
R1204.2	4.20	0.1654	22.0	55.0	4.20
R1204.3	4.30	0.1693	24.0	58.0	4.30
R1204.4	4.40	0.1732	24.0	58.0	4.40
R1204.5	4.50	0.1772	24.0	58.0	4.50
R1204.6	4.60	0.1811	24.0	58.0	4.60
R1204.7	4.70	0.1850	24.0	58.0	4.70
R1204.8	4.80	0.1890	26.0	62.0	4.80
R1204.9	4.90	0.1929	26.0	62.0	4.90
R1205.0	5.00	0.1969	26.0	62.0	5.00
R1205.1	5.10	0.2008	26.0	62.0	5.10
R1205.2	5.20	0.2047	26.0	62.0	5.20
R1205.3	5.30	0.2087	26.0	62.0	5.30
R1205.4	5.40	0.2126	28.0	66.0	5.40
R1205.5	5.50	0.2165	28.0	66.0	5.50
R1205.6	5.60	0.2205	28.0	66.0	5.60
R1205.7	5.70	0.2244	28.0	66.0	5.70
R1205.8	5.80	0.2283	28.0	66.0	5.80
R1205.9	5.90	0.2323	28.0	66.0	5.90
R1206.0	6.00	0.2362	28.0	66.0	6.00
R1206.1	6.10	0.2402	31.0	70.0	6.10

Product	DC	DC	LCF	OAL	DCON MS
	[mm]	[inch]	[mm]	[mm]	[mm]
R1206.2	6.20	0.2441	31.0	70.0	6.20
R1206.3	6.30	0.2480	31.0	70.0	6.30
R1206.4	6.40	0.2520	31.0	70.0	6.40
R1206.5	6.50	0.2559	31.0	70.0	6.50
R1206.6	6.60	0.2598	31.0	70.0	6.60
R1206.7	6.70	0.2638	31.0	70.0	6.70
R1206.8	6.80	0.2677	34.0	74.0	6.80
R1206.9	6.90	0.2717	34.0	74.0	6.90
R1207.0	7.00	0.2756	34.0	74.0	7.00
R1207.1	7.10	0.2795	34.0	74.0	7.10
R1207.2	7.20	0.2835	34.0	74.0	7.20
R1207.3	7.30	0.2874	34.0	74.0	7.30
R1207.4	7.40	0.2913	34.0	74.0	7.40
R1207.5	7.50	0.2953	34.0	74.0	7.50
R1207.6	7.60	0.2992	37.0	79.0	7.60
R1207.7	7.70	0.3031	37.0	79.0	7.70
R1207.8	7.80	0.3071	37.0	79.0	7.80
R1207.9	7.90	0.3110	37.0	79.0	7.90
R1208.0	8.00	0.3150	37.0	79.0	8.00
R1208.1	8.10	0.3189	37.0	79.0	8.10
R1208.2	8.20	0.3228	37.0	79.0	8.20
R1208.3	8.30	0.3268	37.0	79.0	8.30

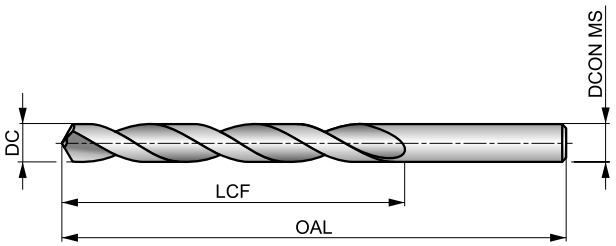
Product	DC	DC	LCF	OAL	DCON MS
	[mm]	[inch]	[mm]	[mm]	[mm]
R1208.4	8.40	0.3307	37.0	79.0	8.40
R1208.5	8.50	0.3346	37.0	79.0	8.50
R1208.6	8.60	0.3386	40.0	84.0	8.60
R1208.7	8.70	0.3425	40.0	84.0	8.70
R1208.8	8.80	0.3465	40.0	84.0	8.80
R1208.9	8.90	0.3504	40.0	84.0	8.90
R1209.0	9.00	0.3543	40.0	84.0	9.00
R1209.1	9.10	0.3583	40.0	84.0	9.10
R1209.2	9.20	0.3622	40.0	84.0	9.20
R1209.3	9.30	0.3661	40.0	84.0	9.30
R1209.4	9.40	0.3701	40.0	84.0	9.40
R1209.5	9.50	0.3740	40.0	84.0	9.50
R1209.6	9.60	0.3780	43.0	89.0	9.60
R1209.7	9.70	0.3819	43.0	89.0	9.70
R1209.8	9.80	0.3858	43.0	89.0	9.80
R1209.9	9.90	0.3898	43.0	89.0	9.90
R12010.0	10.00	0.3937	43.0	89.0	10.00
R12010.2	10.20	0.4016	43.0	89.0	10.20
R12010.5	10.50	0.4134	43.0	89.0	10.50
R12011.0	11.00	0.4331	47.0	95.0	11.00
R12011.5	11.50	0.4528	47.0	95.0	11.50
R12012.0	12.00	0.4724	51.0	102.0	12.00

R100

DORMER

Solid Carbide Jobber Drill, Bright Finish

Improved wear resistance for increased productivity and extended tool life. A 120°, 4-facet point helps with self-centering and reduces cutting forces. Can be used with all CNC machine applications.



HM	DIN 338	4×D
120°	Bright	
λ20-35°	R	DC h7

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 65.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	K1.1	K1.2
◪99 S	◪111 S	◪115 S	◪85 S	◪75 S	◪66 S	◪66 S	◪53 S	◪45 S	◪40 S	◪34 S	◪27 S	◪75 T	◪56 T
K1.3	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**
◪42 T	◪68 T	◪55 T	◪44 T	◪60 T	◪46 T	◪37 T	◪55 T	◪42 T	◪31 T	◪26 T	◪22 T	◪63 T	◪47 T
K5.3	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N4.1**	**N4.2**	**H1.1**	**H2.1**	**H2.2**
◪37 T	◪200 V	◪150 V	◪100 V	◪172 V	◪155 V	◪112 V	■423 V	■250 V	■60 X	■100 V	◪56 S	◪33 S	◪36 S
H3.1	**H3.2**												
◪37 S	◪30 S												

Product	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
R1001.0	1.00	0.0394	12.0	34.0	1.00
R1001.1	1.10	0.0433	14.0	36.0	1.10
R1001.2	1.20	0.0472	16.0	38.0	1.20
R1001.3	1.30	0.0512	16.0	38.0	1.30
R1001.4	1.40	0.0551	18.0	40.0	1.40
R1001.5	1.50	0.0591	18.0	40.0	1.50
R1001.6	1.60	0.0630	20.0	43.0	1.60
R1001.7	1.70	0.0669	20.0	43.0	1.70
R1001.8	1.80	0.0709	22.0	46.0	1.80
R1001.9	1.90	0.0748	22.0	46.0	1.90
R1002.0	2.00	0.0787	24.0	49.0	2.00
R1002.1	2.10	0.0827	24.0	49.0	2.10
R1002.2	2.20	0.0866	27.0	53.0	2.20
R1002.3	2.30	0.0906	27.0	53.0	2.30
R1002.4	2.40	0.0945	30.0	57.0	2.40
R1002.5	2.50	0.0984	30.0	57.0	2.50
R1002.6	2.60	0.1024	30.0	57.0	2.60
R1002.7	2.70	0.1063	33.0	61.0	2.70
R1002.8	2.80	0.1102	33.0	61.0	2.80
R1002.9	2.90	0.1142	33.0	61.0	2.90
R1003.0	3.00	0.1181	33.0	61.0	3.00
R1003.1	3.10	0.1220	36.0	65.0	3.10
R1003.2	3.20	0.1260	36.0	65.0	3.20
R1003.3	3.30	0.1299	36.0	65.0	3.30
R1003.4	3.40	0.1339	39.0	70.0	3.40
R1003.5	3.50	0.1378	39.0	70.0	3.50

Product	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
R1003.6	3.60	0.1417	39.0	70.0	3.60
R1003.7	3.70	0.1457	39.0	70.0	3.70
R1003.8	3.80	0.1496	43.0	75.0	3.80
R1003.9	3.90	0.1535	43.0	75.0	3.90
R1004.0	4.00	0.1575	43.0	75.0	4.00
R1004.1	4.10	0.1614	43.0	75.0	4.10
R1004.2	4.20	0.1654	43.0	75.0	4.20
R1004.3	4.30	0.1693	47.0	80.0	4.30
R1004.4	4.40	0.1732	47.0	80.0	4.40
R1004.5	4.50	0.1772	47.0	80.0	4.50
R1004.6	4.60	0.1811	47.0	80.0	4.60
R1004.7	4.70	0.1850	47.0	80.0	4.70
R1004.8	4.80	0.1890	52.0	86.0	4.80
R1004.9	4.90	0.1929	52.0	86.0	4.90
R1005.0	5.00	0.1969	52.0	86.0	5.00
R1005.1	5.10	0.2008	52.0	86.0	5.10
R1005.2	5.20	0.2047	52.0	86.0	5.20
R1005.3	5.30	0.2087	52.0	86.0	5.30
R1005.4	5.40	0.2126	57.0	93.0	5.40
R1005.5	5.50	0.2165	57.0	93.0	5.50
R1005.6	5.60	0.2205	57.0	93.0	5.60
R1005.7	5.70	0.2244	57.0	93.0	5.70
R1005.8	5.80	0.2283	57.0	93.0	5.80
R1005.9	5.90	0.2323	57.0	93.0	5.90
R1006.0	6.00	0.2362	57.0	93.0	6.00
R1006.1	6.10	0.2402	63.0	101.0	6.10

Product	DC	DC	LCF	OAL	DCON MS
	[mm]	[inch]	[mm]	[mm]	[mm]
R1006.2	6.20	0.2441	63.0	101.0	6.20
R1006.3	6.30	0.2480	63.0	101.0	6.30
R1006.4	6.40	0.2520	63.0	101.0	6.40
R1006.5	6.50	0.2559	63.0	101.0	6.50
R1006.6	6.60	0.2598	63.0	101.0	6.60
R1006.7	6.70	0.2638	63.0	101.0	6.70
R1006.8	6.80	0.2677	69.0	109.0	6.80
R1006.9	6.90	0.2717	69.0	109.0	6.90
R1007.0	7.00	0.2756	69.0	109.0	7.00
R1007.1	7.10	0.2795	69.0	109.0	7.10
R1007.2	7.20	0.2835	69.0	109.0	7.20
R1007.3	7.30	0.2874	69.0	109.0	7.30
R1007.4	7.40	0.2913	69.0	109.0	7.40
R1007.5	7.50	0.2953	69.0	109.0	7.50
R1007.6	7.60	0.2992	75.0	117.0	7.60
R1007.7	7.70	0.3031	75.0	117.0	7.70
R1007.8	7.80	0.3071	75.0	117.0	7.80
R1007.9	7.90	0.3110	75.0	117.0	7.90
R1008.0	8.00	0.3150	75.0	117.0	8.00
R1008.1	8.10	0.3189	75.0	117.0	8.10
R1008.2	8.20	0.3228	75.0	117.0	8.20
R1008.3	8.30	0.3268	75.0	117.0	8.30
R1008.4	8.40	0.3307	75.0	117.0	8.40

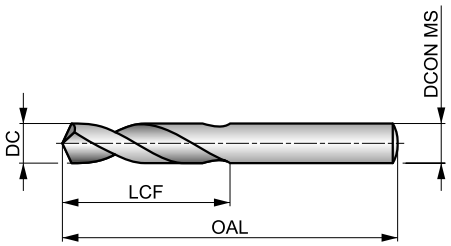
Product	DC	DC	LCF	OAL	DCON MS
	[mm]	[inch]	[mm]	[mm]	[mm]
R1008.5	8.50	0.3346	75.0	117.0	8.50
R1008.6	8.60	0.3386	81.0	125.0	8.60
R1008.7	8.70	0.3425	81.0	125.0	8.70
R1008.8	8.80	0.3465	81.0	125.0	8.80
R1008.9	8.90	0.3504	81.0	125.0	8.90
R1009.0	9.00	0.3543	81.0	125.0	9.00
R1009.1	9.10	0.3583	81.0	125.0	9.10
R1009.2	9.20	0.3622	81.0	125.0	9.20
R1009.3	9.30	0.3661	81.0	125.0	9.30
R1009.4	9.40	0.3701	81.0	125.0	9.40
R1009.5	9.50	0.3740	81.0	125.0	9.50
R1009.6	9.60	0.3780	87.0	133.0	9.60
R1009.7	9.70	0.3819	87.0	133.0	9.70
R1009.8	9.80	0.3858	87.0	133.0	9.80
R1009.9	9.90	0.3898	87.0	133.0	9.90
R10010.0	10.00	0.3937	87.0	133.0	10.00
R10010.2	10.20	0.4016	87.0	133.0	10.20
R10010.5	10.50	0.4134	87.0	133.0	10.50
R10011.0	11.00	0.4331	94.0	142.0	11.00
R10011.5	11.50	0.4528	94.0	142.0	11.50
R10012.0	12.00	0.4724	101.0	151.0	12.00
R10013.0	13.00	0.5118	101.0	151.0	13.00
R10014.0	14.00	0.5512	108.0	160.0	14.00

R520

CDX Solid Carbide Stub Drill, TiN Coated

High performance Stub Drill, able to produce high quality and accurate holes at high speeds and feeds (H8 hole tolerance). The 130° point angle helps with self-centering and reduces cutting forces. TiN coating improves performance and extends the tool life. Suitable for all CNC machines and many materials.

CDX



HM	DIN 6539	2.5×D
130°	TiN	
λ 20-35°	R	DC h7

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 65.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 119 X	■ 134 X	■ 138 X	■ 102 X	■ 90 X	■ 80 X	■ 81 X	■ 65 X	■ 55 X	■ 48 X	■ 41 X	■ 34 W	◪ 69 W	◪ 58 W
M2.1	**M2.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**
◪ 61 W	◪ 50 W	■ 90 Y	■ 67 Y	■ 50 Y	■ 80 X	■ 65 X	■ 52 X	■ 71 X	■ 54 X	■ 44 X	■ 66 X	■ 49 X	■ 36 X
K4.4	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N4.1**	**N4.2**	**S1.1**
■ 31 X	■ 26 X	■ 74 X	■ 56 X	■ 43 X	■ 225 Z	■ 169 Z	■ 113 Z	■ 231 Y	■ 208 Y	■ 150 Y	■ 75 Z	■ 115 V	◪ 60 W
S1.2	**S1.3**	**H1.1**	**H2.1**	**H2.2**	**H3.1**	**H3.2**							
◪ 45 V	◪ 35 U	◪ 65 U	◪ 38 U	◪ 36 T	◪ 43 U	◪ 35 U							

DCON MS tolerance h7.

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
R5203.0	–	3.00	0.1181	16.0	46.0	3.00
R5203.1	–	3.10	0.1220	18.0	49.0	3.10
R5201/8	1/8	3.18	0.1252	18.0	49.0	3.18
R5203.2	–	3.20	0.1260	18.0	49.0	3.20
R5203.3	–	3.30	0.1299	18.0	49.0	3.30
R5203.4	–	3.40	0.1339	20.0	52.0	3.40
R5203.5	–	3.50	0.1378	20.0	52.0	3.50
R5203.6	–	3.60	0.1417	20.0	52.0	3.60
R5203.7	–	3.70	0.1457	20.0	52.0	3.70
R5203.8	–	3.80	0.1496	22.0	55.0	3.80
R5203.9	–	3.90	0.1535	22.0	55.0	3.90
R5204.0	–	4.00	0.1575	22.0	55.0	4.00
R5204.1	–	4.10	0.1614	22.0	55.0	4.10
R5204.2	–	4.20	0.1654	22.0	55.0	4.20
R5204.3	–	4.30	0.1693	24.0	58.0	4.30
R5204.4	–	4.40	0.1732	24.0	58.0	4.40
R5204.5	–	4.50	0.1772	24.0	58.0	4.50
R5204.6	–	4.60	0.1811	24.0	58.0	4.60
R5204.7	–	4.70	0.1850	24.0	58.0	4.70
R5204.8	–	4.80	0.1890	26.0	62.0	4.80
R5204.9	–	4.90	0.1929	26.0	62.0	4.90
R5205.0	–	5.00	0.1969	26.0	62.0	5.00
R5205.1	–	5.10	0.2008	26.0	62.0	5.10
R5205.2	–	5.20	0.2047	26.0	62.0	5.20
R5205.3	–	5.30	0.2087	26.0	62.0	5.30

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
R5205.4	–	5.40	0.2126	28.0	66.0	5.40
R5205.5	–	5.50	0.2165	28.0	66.0	5.50
R5205.6	–	5.60	0.2205	28.0	66.0	5.60
R5205.7	–	5.70	0.2244	28.0	66.0	5.70
R5205.8	–	5.80	0.2283	28.0	66.0	5.80
R5205.9	–	5.90	0.2323	28.0	66.0	5.90
R5206.0	–	6.00	0.2362	28.0	66.0	6.00
R5206.1	–	6.10	0.2402	31.0	70.0	6.10
R5206.2	–	6.20	0.2441	31.0	70.0	6.20
R5206.3	–	6.30	0.2480	31.0	70.0	6.30
R5201/4	1/4	6.35	0.2500	31.0	70.0	6.35
R5206.4	–	6.40	0.2520	31.0	70.0	6.40
R5206.5	–	6.50	0.2559	31.0	70.0	6.50
R5206.6	–	6.60	0.2598	31.0	70.0	6.60
R5206.7	–	6.70	0.2638	31.0	70.0	6.70
R5206.8	–	6.80	0.2677	34.0	74.0	6.80
R5206.9	–	6.90	0.2717	34.0	74.0	6.90
R5207.0	–	7.00	0.2756	34.0	74.0	7.00
R5207.1	–	7.10	0.2795	34.0	74.0	7.10
R5207.2	–	7.20	0.2835	34.0	74.0	7.20
R5207.3	–	7.30	0.2874	34.0	74.0	7.30
R5207.4	–	7.40	0.2913	34.0	74.0	7.40
R5207.5	–	7.50	0.2953	34.0	74.0	7.50
R5207.6	–	7.60	0.2992	37.0	79.0	7.60
R5207.7	–	7.70	0.3031	37.0	79.0	7.70

Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
R5207.8	–	7.80	0.3071	37.0	79.0	7.80
R5207.9	–	7.90	0.3110	37.0	79.0	7.90
R5205/16	5/16	7.94	0.3126	37.0	79.0	7.94
R5208.0	–	8.00	0.3150	37.0	79.0	8.00
R5208.1	–	8.10	0.3189	37.0	79.0	8.10
R5208.2	–	8.20	0.3228	37.0	79.0	8.20
R5208.3	–	8.30	0.3268	37.0	79.0	8.30
R5208.4	–	8.40	0.3307	37.0	79.0	8.40
R5208.5	–	8.50	0.3346	37.0	79.0	8.50
R5208.6	–	8.60	0.3386	40.0	84.0	8.60
R5208.7	–	8.70	0.3425	40.0	84.0	8.70
R5208.8	–	8.80	0.3465	40.0	84.0	8.80
R5208.9	–	8.90	0.3504	40.0	84.0	8.90
R5209.0	–	9.00	0.3543	40.0	84.0	9.00
R5209.1	–	9.10	0.3583	40.0	84.0	9.10
R5209.2	–	9.20	0.3622	40.0	84.0	9.20
R5209.3	–	9.30	0.3661	40.0	84.0	9.30
R5209.4	–	9.40	0.3701	40.0	84.0	9.40
R5209.5	–	9.50	0.3740	40.0	84.0	9.50
R5203/8	3/8	9.52	0.3748	43.0	89.0	9.52
R5209.6	–	9.60	0.3780	43.0	89.0	9.60
R5209.7	–	9.70	0.3819	43.0	89.0	9.70
R5209.8	–	9.80	0.3858	43.0	89.0	9.80
R5209.9	–	9.90	0.3898	43.0	89.0	9.90

Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
R52010.0	–	10.00	0.3937	43.0	89.0	10.00
R52010.1	–	10.10	0.3976	43.0	89.0	10.10
R52010.2	–	10.20	0.4016	43.0	89.0	10.20
R52010.3	–	10.30	0.4055	43.0	89.0	10.30
R52010.4	–	10.40	0.4094	43.0	89.0	10.40
R52010.5	–	10.50	0.4134	43.0	89.0	10.50
R52011.0	–	11.00	0.4331	47.0	95.0	11.00
R5207/16	7/16	11.11	0.4374	47.0	95.0	11.11
R52011.2	–	11.20	0.4409	47.0	95.0	11.20
R52011.5	–	11.50	0.4528	47.0	95.0	11.50
R52012.0	–	12.00	0.4724	51.0	102.0	12.00
R52012.5	–	12.50	0.4921	51.0	102.0	12.50
R5201/2	1/2	12.70	0.5000	51.0	102.0	12.70
R52013.0	–	13.00	0.5118	51.0	102.0	13.00
R52013.5	–	13.50	0.5315	54.0	107.0	13.50
R52014.0	–	14.00	0.5512	54.0	107.0	14.00
R52014.2	–	14.20	0.5591	56.0	111.0	14.20
R52014.25	–	14.25	0.5610	56.0	111.0	14.25
R52014.5	–	14.50	0.5709	56.0	111.0	14.50
R52015.0	–	15.00	0.5906	56.0	111.0	15.00
R52015.1	–	15.10	0.5945	58.0	115.0	15.10
R5205/8	5/8	15.88	0.6252	58.0	115.0	15.88
R52016.0	–	16.00	0.6299	58.0	115.0	16.00
R52016.5	–	16.50	0.6496	60.0	119.0	16.50

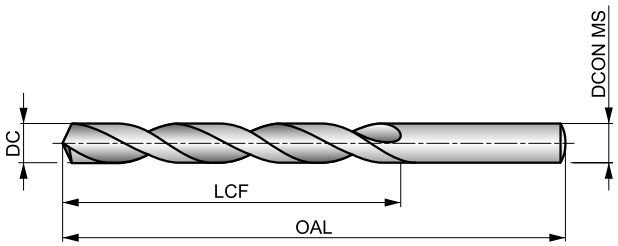
R510

DORMER

CDX Solid Carbide Jobber Drill, TiN Coated

High performance drill, able to produce high quality and accurate holes at high speeds and feeds (H8 hole tolerance). The 130° point helps with self-centering and reduces cutting forces. TiN coating improves performance and extends the life of the tool. Suitable for all CNC machines and many materials.

CDX



HM	DIN 338	4×D
130°	TiN	
λ20-35°	R	DC h7

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 65.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■119 W	■134 W	■138 W	■102 W	■90 W	■80 V	■81 W	■65 W	■55 V	■48 W	■41 V	■34 V	◪69 V	◪58 V
M2.1	**M2.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**
◪61 V	◪50 V	■90 X	■67 X	■50 X	■80 W	■65 W	■52 W	■71 W	■54 W	■44 W	■66 W	■49 W	■36 W
K4.4	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N4.1**	**N4.2**	**S1.1**
■31 W	■26 W	■74 W	■56 W	■43 W	■225 Y	■169 Y	■113 Y	■231 X	■208 X	■150 X	■75 X	■115 V	◪45 V
H1.1	**H2.1**	**H2.2**	**H3.1**	**H3.2**									
◪65 T	◪38 T	◪36 S	◪43 T	◪35 T									

DCON MS tolerance h7.

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
R5103.0	–	3.00	0.1181	33.0	61.0	3.00
R5101/8	1/8	3.18	0.1252	36.0	65.0	3.18
R5103.2	–	3.20	0.1260	36.0	65.0	3.20
R5103.3	–	3.30	0.1299	36.0	65.0	3.30
R5103.4	–	3.40	0.1339	39.0	70.0	3.40
R5103.5	–	3.50	0.1378	39.0	70.0	3.50
R5103.7	–	3.70	0.1457	39.0	70.0	3.70
R5103.9	–	3.90	0.1535	43.0	75.0	3.90
R5104.0	–	4.00	0.1575	43.0	75.0	4.00
R5104.1	–	4.10	0.1614	43.0	75.0	4.10
R5104.2	–	4.20	0.1654	43.0	75.0	4.20
R5104.3	–	4.30	0.1693	47.0	80.0	4.30
R5104.5	–	4.50	0.1772	47.0	80.0	4.50
R5104.6	–	4.60	0.1811	47.0	80.0	4.60
R5104.7	–	4.70	0.1850	47.0	80.0	4.70
R5103/16	3/16	4.76	0.1874	52.0	86.0	4.76
R5104.9	–	4.90	0.1929	52.0	86.0	4.90
R5105.0	–	5.00	0.1969	52.0	86.0	5.00
R5105.1	–	5.10	0.2008	52.0	86.0	5.10
R5105.5	–	5.50	0.2165	57.0	93.0	5.50
R5105.6	–	5.60	0.2205	57.0	93.0	5.60
R5105.7	–	5.70	0.2244	57.0	93.0	5.70
R5106.0	–	6.00	0.2362	57.0	93.0	6.00
R5101/4	1/4	6.35	0.2500	63.0	101.0	6.35
R5106.5	–	6.50	0.2559	63.0	101.0	6.50

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
R5106.6	–	6.60	0.2598	63.0	101.0	6.60
R5106.8	–	6.80	0.2677	69.0	109.0	6.80
R5106.9	–	6.90	0.2717	69.0	109.0	6.90
R5107.0	–	7.00	0.2756	69.0	109.0	7.00
R5107.3	–	7.30	0.2874	69.0	109.0	7.30
R5107.4	–	7.40	0.2913	69.0	109.0	7.40
R5107.5	–	7.50	0.2953	69.0	109.0	7.50
R5107.8	–	7.80	0.3071	75.0	117.0	7.80
R5107.9	–	7.90	0.3110	75.0	117.0	7.90
R5105/16	5/16	7.94	0.3126	75.0	117.0	7.94
R5108.0	–	8.00	0.3150	75.0	117.0	8.00
R5108.5	–	8.50	0.3346	75.0	117.0	8.50
R5108.7	–	8.70	0.3425	81.0	125.0	8.70
R5108.8	–	8.80	0.3465	81.0	125.0	8.80
R5109.0	–	9.00	0.3543	81.0	125.0	9.00
R5109.2	–	9.20	0.3622	81.0	125.0	9.20
R5109.3	–	9.30	0.3661	81.0	125.0	9.30
R5109.4	–	9.40	0.3701	81.0	125.0	9.40
R5109.5	–	9.50	0.3740	81.0	125.0	9.50
R5103/8	3/8	9.52	0.3748	87.0	133.0	9.52
R5109.9	–	9.90	0.3898	87.0	133.0	9.90
R51010.0	–	10.00	0.3937	87.0	133.0	10.00
R51010.2	–	10.20	0.4016	87.0	133.0	10.20
R51010.3	–	10.30	0.4055	87.0	133.0	10.30
R51010.4	–	10.40	0.4094	87.0	133.0	10.40

Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
R51010.5	–	10.50	0.4134	87.0	133.0	10.50
R51010.8	–	10.80	0.4252	94.0	142.0	10.80
R51011.0	–	11.00	0.4331	94.0	142.0	11.00
R5107/16	7/16	11.11	0.4374	94.0	142.0	11.11
R51011.2	–	11.20	0.4409	94.0	142.0	11.20
R51011.5	–	11.50	0.4528	94.0	142.0	11.50

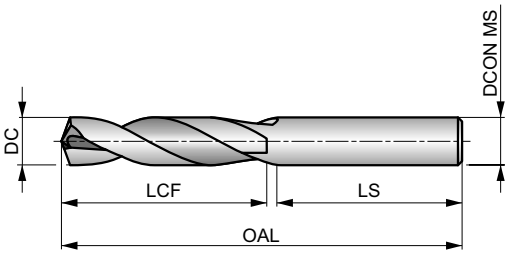
Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
R51012.0	–	12.00	0.4724	101.0	151.0	12.00
R5101/2	1/2	12.70	0.5000	101.0	151.0	12.70
R51013.0	–	13.00	0.5118	101.0	151.0	13.00
R51014.0	–	14.00	0.5512	108.0	160.0	14.00
R51014.25	–	14.25	0.5610	114.0	169.0	14.25

R458

FORCE X Solid Carbide 3XD Drill, TiAlN Coated

High performance drill, able to produce high quality and accurate holes at high speeds and feeds (H9 hole tolerance). Self centering 140°, 4-facet split point and CTW flute construction for enhanced penetration rates. TiAlN coating increases surface hardness and improves tool life.

FORCE X



HM	DIN 6537K	3×D
140°	TiAlN	DIN 6535HA
CTW	DC m7	

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 65.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 143 W	■ 160 W	■ 166 W	■ 122 W	■ 108 W	■ 95 V	■ 106 V	■ 86 V	■ 72 V	■ 63 V	■ 54 V	■ 44 U	◪ 60 U	◪ 51 U
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
◪ 54 U	◪ 44 U	◪ 37 T	◪ 33 T	◪ 28 T	◪ 26 T	◪ 24 T	◪ 21 T	■ 88 W	■ 65 W	■ 49 W	■ 78 V	■ 64 V	■ 51 V
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■ 70 V	■ 54 V	■ 43 V	■ 65 V	■ 49 V	■ 36 V	■ 30 V	■ 26 V	■ 73 V	■ 55 V	■ 42 V	■ 200 W	■ 150 W	■ 100 W
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**S1.1**	**S1.2**	**S1.3**	**H1.1**	**H2.1**	**H2.2**	**H3.1**	**H3.2**
■ 246 V	■ 222 V	■ 160 V	■ 298 V	■ 176 V	■ 88 V	◪ 44 U	◪ 36 U	◪ 32 T	■ 45 U	◪ 26 U	◪ 24 U	◪ 30 U	◪ 24 U

DCON MS tolerance h6.

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	LS [mm]	DCON MS [mm]
R4583.0	–	3.00	0.1181	20.0	62.0	36.0	6.00
R4583.1	–	3.10	0.1220	20.0	62.0	36.0	6.00
R4581/8	1/8	3.18	0.1250	20.0	62.0	36.0	6.00
R4583.2	–	3.20	0.1260	20.0	62.0	36.0	6.00
R458N30	N30	3.26	0.1283	20.0	62.0	36.0	6.00
R4583.3	–	3.30	0.1299	20.0	62.0	36.0	6.00
R4583.4	–	3.40	0.1339	20.0	62.0	36.0	6.00
R458N29	N29	3.45	0.1360	20.0	62.0	36.0	6.00
R4583.5	–	3.50	0.1378	20.0	62.0	36.0	6.00
R458N28	N28	3.57	0.1406	20.0	62.0	36.0	6.00
R4589/64	9/64	3.57	0.1406	20.0	62.0	36.0	6.00
R4583.6	–	3.60	0.1417	20.0	62.0	36.0	6.00
R458N27	N27	3.66	0.1441	20.0	62.0	36.0	6.00
R4583.7	–	3.70	0.1457	20.0	62.0	36.0	6.00
R4583.73	–	3.73	0.1469	24.0	66.0	36.0	6.00
R458N26	N26	3.73	0.1469	24.0	66.0	36.0	6.00
R458N25	N25	3.80	0.1496	24.0	66.0	36.0	6.00
R4583.8	–	3.80	0.1496	24.0	66.0	36.0	6.00
R458N24	N24	3.86	0.1520	24.0	66.0	36.0	6.00
R4583.9	–	3.90	0.1535	24.0	66.0	36.0	6.00
R458N23	N23	3.91	0.1539	24.0	66.0	36.0	6.00
R4585/32	5/32	3.97	0.1563	24.0	66.0	36.0	6.00
R458N22	N22	3.99	0.1571	24.0	66.0	36.0	6.00
R4584.0	–	4.00	0.1575	24.0	66.0	36.0	6.00
R458N21	N21	4.04	0.1591	24.0	66.0	36.0	6.00

Product	DC	DC	DC	LCF	OAL	LS	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]	[mm]
R458N20	N20	4.09	0.1610	24.0	66.0	36.0	6.00
R4584.1	–	4.10	0.1614	24.0	66.0	36.0	6.00
R4584.2	–	4.20	0.1654	24.0	66.0	36.0	6.00
R458N19	N19	4.22	0.1661	24.0	66.0	36.0	6.00
R4584.3	–	4.30	0.1693	24.0	66.0	36.0	6.00
R458N18	N18	4.31	0.1697	24.0	66.0	36.0	6.00
R45811/64	11/64	4.37	0.1719	24.0	66.0	36.0	6.00
R458N17	N17	4.39	0.1728	24.0	66.0	36.0	6.00
R4584.4	–	4.40	0.1732	24.0	66.0	36.0	6.00
R4584.5	–	4.50	0.1772	24.0	66.0	36.0	6.00
R458N16	N16	4.50	0.1772	24.0	66.0	36.0	6.00
R458N15	N15	4.57	0.1799	24.0	66.0	36.0	6.00
R4584.6	–	4.60	0.1811	24.0	66.0	36.0	6.00
R458N14	N14	4.62	0.1819	24.0	66.0	36.0	6.00
R458N13	N13	4.70	0.1850	24.0	66.0	36.0	6.00
R4584.7	–	4.70	0.1850	24.0	66.0	36.0	6.00
R4583/16	3/16	4.76	0.1875	28.0	66.0	36.0	6.00
R4584.8	–	4.80	0.1890	28.0	66.0	36.0	6.00
R458N12	N12	4.80	0.1890	28.0	66.0	36.0	6.00
R458N11	N11	4.85	0.1909	28.0	66.0	36.0	6.00
R4584.9	–	4.90	0.1929	28.0	66.0	36.0	6.00
R458N10	N10	4.92	0.1937	28.0	66.0	36.0	6.00
R458N9	N9	4.98	0.1961	28.0	66.0	36.0	6.00
R4585.0	–	5.00	0.1969	28.0	66.0	36.0	6.00
R458N8	N8	5.06	0.1992	28.0	66.0	36.0	6.00
R4585.1	–	5.10	0.2008	28.0	66.0	36.0	6.00
R458N7	N7	5.11	0.2010	28.0	66.0	36.0	6.00
R45813/64	13/64	5.16	0.2031	28.0	66.0	36.0	6.00
R458N6	N6	5.18	0.2039	28.0	66.0	36.0	6.00
R4585.2	–	5.20	0.2047	28.0	66.0	36.0	6.00
R458N5	N5	5.22	0.2055	28.0	66.0	36.0	6.00
R4585.3	–	5.30	0.2087	28.0	66.0	36.0	6.00
R458N4	N4	5.31	0.2091	28.0	66.0	36.0	6.00
R4585.4	–	5.40	0.2126	28.0	66.0	36.0	6.00
R458N3	N3	5.41	0.2130	28.0	66.0	36.0	6.00
R4585.5	–	5.50	0.2165	28.0	66.0	36.0	6.00
R4587/32	7/32	5.56	0.2188	28.0	66.0	36.0	6.00
R4585.6	–	5.60	0.2205	28.0	66.0	36.0	6.00
R458N2	N2	5.61	0.2209	28.0	66.0	36.0	6.00
R4585.7	–	5.70	0.2244	28.0	66.0	36.0	6.00
R458N1	N1	5.79	0.2280	28.0	66.0	36.0	6.00
R4585.8	–	5.80	0.2283	28.0	66.0	36.0	6.00
R4585.9	–	5.90	0.2323	28.0	66.0	36.0	6.00
R458A	A	5.94	0.2339	28.0	66.0	36.0	6.00
R45815/64	15/64	5.95	0.2344	28.0	66.0	36.0	6.00
R4586.0	–	6.00	0.2362	28.0	66.0	36.0	6.00
R458B	B	6.05	0.2380	34.0	79.0	36.0	8.00
R4586.1	–	6.10	0.2402	34.0	79.0	36.0	8.00
R458C	C	6.15	0.2421	34.0	79.0	36.0	8.00
R4586.2	–	6.20	0.2441	34.0	79.0	36.0	8.00
R458D	D	6.25	0.2461	34.0	79.0	36.0	8.00
R4586.3	–	6.30	0.2480	34.0	79.0	36.0	8.00
R4581/4	1/4	6.35	0.2500	34.0	79.0	36.0	8.00
R458E	E	6.35	0.2500	34.0	79.0	36.0	8.00
R4586.4	–	6.40	0.2520	34.0	79.0	36.0	8.00
R4586.5	–	6.50	0.2559	34.0	79.0	36.0	8.00
R458F	F	6.53	0.2571	34.0	79.0	36.0	8.00
R4586.6	–	6.60	0.2598	34.0	79.0	36.0	8.00
R458G	G	6.63	0.2610	34.0	79.0	36.0	8.00
R4586.7	–	6.70	0.2638	34.0	79.0	36.0	8.00
R45817/64	17/64	6.75	0.2656	34.0	79.0	36.0	8.00
R458H	H	6.76	0.2661	34.0	79.0	36.0	8.00
R4586.8	–	6.80	0.2677	34.0	79.0	36.0	8.00
R4586.9	–	6.90	0.2717	34.0	79.0	36.0	8.00
R458I	I	6.91	0.2720	34.0	79.0	36.0	8.00

Product	DC	DC	DC	LCF	OAL	LS	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]	[mm]
R4587.0	–	7.00	0.2756	34.0	79.0	36.0	8.00
R458J	J	7.04	0.2772	34.0	79.0	36.0	8.00
R4587.1	–	7.10	0.2795	41.0	79.0	36.0	8.00
R458K	K	7.14	0.2811	41.0	79.0	36.0	8.00
R4589/32	9/32	7.14	0.2813	41.0	79.0	36.0	8.00
R4587.2	–	7.20	0.2835	41.0	79.0	36.0	8.00
R4587.3	–	7.30	0.2874	41.0	79.0	36.0	8.00
R458L	L	7.37	0.2902	41.0	79.0	36.0	8.00
R4587.4	–	7.40	0.2913	41.0	79.0	36.0	8.00
R458M	M	7.49	0.2949	41.0	79.0	36.0	8.00
R4587.5	–	7.50	0.2953	41.0	79.0	36.0	8.00
R45819/64	19/64	7.54	0.2969	41.0	79.0	36.0	8.00
R4587.6	–	7.60	0.2992	41.0	79.0	36.0	8.00
R458N	N	7.67	0.3020	41.0	79.0	36.0	8.00
R4587.7	–	7.70	0.3031	41.0	79.0	36.0	8.00
R4587.8	–	7.80	0.3071	41.0	79.0	36.0	8.00
R4587.9	–	7.90	0.3110	41.0	79.0	36.0	8.00
R4585/16	5/16	7.94	0.3125	41.0	79.0	36.0	8.00
R4588.0	–	8.00	0.3150	41.0	79.0	36.0	8.00
R458O	O	8.03	0.3161	47.0	89.0	40.0	10.00
R4588.1	–	8.10	0.3189	47.0	89.0	40.0	10.00
R4588.2	–	8.20	0.3228	47.0	89.0	40.0	10.00
R458P	P	8.20	0.3228	47.0	89.0	40.0	10.00
R4588.3	–	8.30	0.3268	47.0	89.0	40.0	10.00
R45821/64	21/64	8.33	0.3281	47.0	89.0	40.0	10.00
R4588.4	–	8.40	0.3307	47.0	89.0	40.0	10.00
R458Q	Q	8.43	0.3319	47.0	89.0	40.0	10.00
R4588.5	–	8.50	0.3346	47.0	89.0	40.0	10.00
R4588.6	–	8.60	0.3386	47.0	89.0	40.0	10.00
R458R	R	8.61	0.3390	47.0	89.0	40.0	10.00
R4588.7	–	8.70	0.3425	47.0	89.0	40.0	10.00
R45811/32	11/32	8.73	0.3438	47.0	89.0	40.0	10.00
R4588.8	–	8.80	0.3465	47.0	89.0	40.0	10.00
R458S	S	8.84	0.3480	47.0	89.0	40.0	10.00
R4588.9	–	8.90	0.3504	47.0	89.0	40.0	10.00
R4589.0	–	9.00	0.3543	47.0	89.0	40.0	10.00
R458T	T	9.09	0.3579	47.0	89.0	40.0	10.00
R4589.1	–	9.10	0.3583	47.0	89.0	40.0	10.00
R45823/64	23/64	9.13	0.3594	47.0	89.0	40.0	10.00
R4589.2	–	9.20	0.3622	47.0	89.0	40.0	10.00
R4589.3	–	9.30	0.3661	47.0	89.0	40.0	10.00
R458U	U	9.35	0.3681	47.0	89.0	40.0	10.00
R4589.4	–	9.40	0.3701	47.0	89.0	40.0	10.00
R4589.5	–	9.50	0.3740	47.0	89.0	40.0	10.00
R4583/8	3/8	9.53	0.3750	47.0	89.0	40.0	10.00
R458V	V	9.58	0.3772	47.0	89.0	40.0	10.00
R4589.6	–	9.60	0.3780	47.0	89.0	40.0	10.00
R4589.7	–	9.70	0.3819	47.0	89.0	40.0	10.00
R4589.8	–	9.80	0.3858	47.0	89.0	40.0	10.00
R458W	W	9.80	0.3858	47.0	89.0	40.0	10.00
R4589.9	–	9.90	0.3898	47.0	89.0	40.0	10.00
R45825/64	25/64	9.92	0.3906	47.0	89.0	40.0	10.00
R45810.0	–	10.00	0.3937	47.0	89.0	40.0	10.00
R458X	X	10.08	0.3969	55.0	102.0	45.0	12.00
R45810.1	–	10.10	0.3976	55.0	102.0	45.0	12.00
R45810.2	–	10.20	0.4016	55.0	102.0	45.0	12.00
R458Y	Y	10.26	0.4039	55.0	102.0	45.0	12.00
R45810.3	–	10.30	0.4055	55.0	102.0	45.0	12.00
R45813/32	13/32	10.32	0.4063	55.0	102.0	45.0	12.00
R45810.4	–	10.40	0.4094	55.0	102.0	45.0	12.00
R458Z	Z	10.49	0.4130	55.0	102.0	45.0	12.00
R45810.5	–	10.50	0.4134	55.0	102.0	45.0	12.00
R45810.6	–	10.60	0.4173	55.0	102.0	45.0	12.00
R45810.7	–	10.70	0.4213	55.0	102.0	45.0	12.00
R45827/64	27/64	10.72	0.4219	55.0	102.0	45.0	12.00

Product	DC	DC	DC	LCF	OAL	LS	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]	[mm]
R45810.8	–	10.80	0.4252	55.0	102.0	45.0	12.00
R45810.9	–	10.90	0.4291	55.0	102.0	45.0	12.00
R45811.0	–	11.00	0.4331	55.0	102.0	45.0	12.00
R45811.1	–	11.10	0.4370	55.0	102.0	45.0	12.00
R4587/16	7/16	11.11	0.4375	55.0	102.0	45.0	12.00
R45811.2	–	11.20	0.4409	55.0	102.0	45.0	12.00
R45811.3	–	11.30	0.4449	55.0	102.0	45.0	12.00
R45811.4	–	11.40	0.4488	55.0	102.0	45.0	12.00
R45811.5	–	11.50	0.4528	55.0	102.0	45.0	12.00
R45829/64	29/64	11.51	0.4531	55.0	102.0	45.0	12.00
R45811.6	–	11.60	0.4567	55.0	102.0	45.0	12.00
R45811.7	–	11.70	0.4606	55.0	102.0	45.0	12.00
R45811.8	–	11.80	0.4646	55.0	102.0	45.0	12.00
R45811.9	–	11.90	0.4685	55.0	102.0	45.0	12.00
R45815/32	15/32	11.91	0.4688	55.0	102.0	45.0	12.00
R45812.0	–	12.00	0.4724	55.0	102.0	45.0	12.00
R45812.1	–	12.10	0.4764	60.0	107.0	45.0	14.00
R45812.2	–	12.20	0.4803	60.0	107.0	45.0	14.00
R45831/64	31/64	12.30	0.4844	60.0	107.0	45.0	14.00
R45812.5	–	12.50	0.4921	60.0	107.0	45.0	14.00
R45812.7	–	12.70	0.5000	60.0	107.0	45.0	14.00
R4581/2	1/2	12.70	0.5000	60.0	107.0	45.0	14.00
R45812.8	–	12.80	0.5039	60.0	107.0	45.0	14.00
R45813.0	–	13.00	0.5118	60.0	107.0	45.0	14.00
R45833/64	33/64	13.10	0.5156	60.0	107.0	45.0	14.00
R45813.3	–	13.30	0.5236	60.0	107.0	45.0	14.00
R45817/32	17/32	13.49	0.5313	60.0	107.0	45.0	14.00
R45813.5	–	13.50	0.5315	60.0	107.0	45.0	14.00
R45813.8	–	13.80	0.5433	60.0	107.0	45.0	14.00
R45835/64	35/64	13.89	0.5469	60.0	107.0	45.0	14.00
R45814.0	–	14.00	0.5512	60.0	107.0	45.0	14.00
R45814.25	–	14.25	0.5610	65.0	115.0	48.0	16.00
R4589/16	9/16	14.29	0.5625	65.0	115.0	48.0	16.00
R45814.5	–	14.50	0.5709	65.0	115.0	48.0	16.00
R45837/64	37/64	14.68	0.5781	65.0	115.0	48.0	16.00
R45814.8	–	14.80	0.5827	65.0	115.0	48.0	16.00
R45815.0	–	15.00	0.5906	65.0	115.0	48.0	16.00
R45819/32	19/32	15.08	0.5938	65.0	115.0	48.0	16.00
R45815.1	–	15.10	0.5945	65.0	115.0	48.0	16.00
R45815.3	–	15.30	0.6024	65.0	115.0	48.0	16.00
R45839/64	39/64	15.48	0.6094	65.0	115.0	48.0	16.00
R45815.5	–	15.50	0.6102	65.0	115.0	48.0	16.00
R45815.8	–	15.80	0.6220	65.0	115.0	48.0	16.00
R4585/8	5/8	15.88	0.6250	65.0	115.0	48.0	16.00
R45816.0	–	16.00	0.6299	65.0	115.0	48.0	16.00
R45841/64	41/64	16.27	0.6406	73.0	123.0	48.0	18.00
R45816.5	–	16.50	0.6496	73.0	123.0	48.0	18.00
R45821/32	21/32	16.67	0.6563	73.0	123.0	48.0	18.00
R45817.0	–	17.00	0.6693	73.0	123.0	48.0	18.00
R45843/64	43/64	17.07	0.6720	73.0	123.0	48.0	18.00
R45811/16	11/16	17.46	0.6874	73.0	123.0	48.0	18.00
R45817.5	–	17.50	0.6890	73.0	123.0	48.0	18.00
R45817.8	–	17.80	0.7008	73.0	123.0	48.0	18.00
R45845/64	45/64	17.86	0.7031	73.0	123.0	48.0	18.00
R45818.0	–	18.00	0.7087	73.0	123.0	48.0	18.00
R45823/32	23/32	18.26	0.7189	79.0	131.0	50.0	20.00
R45818.5	–	18.50	0.7283	79.0	131.0	50.0	20.00
R45847/64	47/64	18.65	0.7343	79.0	131.0	50.0	20.00
R45819.0	–	19.00	0.7480	79.0	131.0	50.0	20.00
R4583/4	–	19.05	0.7500	79.0	131.0	50.0	20.00
R45819.5	–	19.50	0.7677	79.0	131.0	50.0	20.00
R45819.8	–	19.80	0.7795	79.0	131.0	50.0	20.00
R45820.0	–	20.00	0.7874	79.0	131.0	50.0	20.00

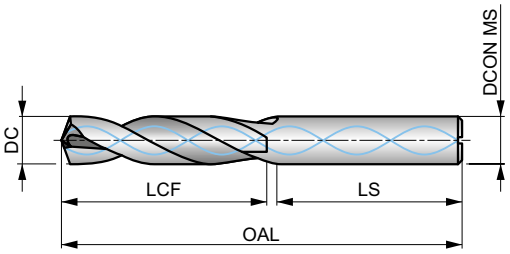
R457

DORMER

FORCE X Solid Carbide 3XD Drill with Coolant Feed, TiAlN Coated

High performance drill, able to produce high quality and accurate holes at high speeds and feeds (H9 hole tolerance). Self centering 140°, 4-facet split point and CTW flute construction for enhanced penetration rates. Coolant holes to enhance chip evacuation. TiAlN coating increases surface hardness and improves tool life.

FORCE X



HM	DIN 6537K	3×D
140°	TiAlN	DIN 6535HA
CTW		DC m7

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 65.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 179 W	■ 200 W	■ 207 W	■ 153 W	■ 135 W	■ 119 V	■ 133 V	■ 107 V	■ 90 V	■ 79 V	■ 67 V	■ 55 U	◪ 75 V	◪ 64 V
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
◪ 67 V	◪ 55 V	◪ 46 U	◪ 41 V	◪ 35 V	◪ 32 V	◪ 30 U	◪ 26 U	■ 110 W	■ 81 W	■ 61 W	■ 98 V	■ 80 V	■ 64 V
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■ 87 V	■ 67 V	■ 54 V	■ 81 V	■ 61 V	■ 45 V	■ 38 V	■ 32 V	■ 91 V	■ 69 V	■ 53 V	■ 250 W	■ 188 W	■ 125 W
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**S1.1**	**S1.2**	**S1.3**	**H1.1**	**H2.1**	**H2.2**	**H3.1**	**H3.2**
■ 308 V	■ 277 V	■ 200 V	■ 373 W	■ 220 W	■ 110 W	■ 55 V	■ 45 V	■ 40 U	■ 56 U	◪ 33 U	◪ 30 U	◪ 37 U	◪ 30 U

DCON MS tolerance h6.

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	LS [mm]	DCON MS [mm]
R4573.0	–	3.00	0.1181	20.0	62.0	36.0	6.00
R4573.1	–	3.10	0.1220	20.0	62.0	36.0	6.00
R4571/8	1/8	3.18	0.1250	20.0	62.0	36.0	6.00
R4573.2	–	3.20	0.1260	20.0	62.0	36.0	6.00
R457N30	N30	3.26	0.1283	20.0	62.0	36.0	6.00
R4573.3	–	3.30	0.1299	20.0	62.0	36.0	6.00
R4573.4	–	3.40	0.1339	20.0	62.0	36.0	6.00
R457N29	N29	3.45	0.1360	20.0	62.0	36.0	6.00
R4573.5	–	3.50	0.1378	20.0	62.0	36.0	6.00
R457N28	N28	3.57	0.1406	20.0	62.0	36.0	6.00
R4579/64	9/64	3.57	0.1406	20.0	62.0	36.0	6.00
R4573.6	–	3.60	0.1417	20.0	62.0	36.0	6.00
R457N27	N27	3.66	0.1441	20.0	62.0	36.0	6.00
R4573.7	–	3.70	0.1457	20.0	62.0	36.0	6.00
R457N26	N26	3.73	0.1469	24.0	66.0	36.0	6.00
R457N25	N25	3.80	0.1496	24.0	66.0	36.0	6.00
R4573.8	–	3.80	0.1496	24.0	66.0	36.0	6.00
R457N24	N24	3.86	0.1520	24.0	66.0	36.0	6.00
R4573.9	–	3.90	0.1535	24.0	66.0	36.0	6.00
R457N23	N23	3.91	0.1539	24.0	66.0	36.0	6.00
R4575/32	5/32	3.97	0.1563	24.0	66.0	36.0	6.00
R457N22	N22	3.99	0.1571	24.0	66.0	36.0	6.00
R4574.0	–	4.00	0.1575	24.0	66.0	36.0	6.00
R457N21	N21	4.04	0.1591	24.0	66.0	36.0	6.00
R4574.05	–	4.05	0.1594	24.0	66.0	36.0	6.00

Product	DC	DC	DC	LCF	OAL	LS	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]	[mm]
R457N20	N20	4.09	0.1610	24.0	66.0	36.0	6.00
R4574.1	–	4.10	0.1614	24.0	66.0	36.0	6.00
R4574.2	–	4.20	0.1654	24.0	66.0	36.0	6.00
R457N19	N19	4.22	0.1661	24.0	66.0	36.0	6.00
R4574.3	–	4.30	0.1693	24.0	66.0	36.0	6.00
R457N18	N18	4.31	0.1697	24.0	66.0	36.0	6.00
R45711/64	11/64	4.37	0.1719	24.0	66.0	36.0	6.00
R457N17	N17	4.39	0.1728	24.0	66.0	36.0	6.00
R4574.4	–	4.40	0.1732	24.0	66.0	36.0	6.00
R4574.5	–	4.50	0.1772	24.0	66.0	36.0	6.00
R457N16	N16	4.50	0.1772	24.0	66.0	36.0	6.00
R457N15	N15	4.57	0.1799	24.0	66.0	36.0	6.00
R4574.6	–	4.60	0.1811	24.0	66.0	36.0	6.00
R457N14	N14	4.62	0.1819	24.0	66.0	36.0	6.00
R457N13	N13	4.70	0.1850	24.0	66.0	36.0	6.00
R4574.7	–	4.70	0.1850	24.0	66.0	36.0	6.00
R4573/16	3/16	4.76	0.1875	28.0	66.0	36.0	6.00
R4574.8	–	4.80	0.1890	28.0	66.0	36.0	6.00
R457N12	N12	4.80	0.1890	28.0	66.0	36.0	6.00
R457N11	N11	4.85	0.1909	28.0	66.0	36.0	6.00
R4574.9	–	4.90	0.1929	28.0	66.0	36.0	6.00
R457N10	N10	4.92	0.1937	28.0	66.0	36.0	6.00
R457N9	N9	4.98	0.1961	28.0	66.0	36.0	6.00
R4575.0	–	5.00	0.1969	28.0	66.0	36.0	6.00
R4575.05	–	5.05	0.1988	28.0	66.0	36.0	6.00
R457N8	N8	5.06	0.1992	28.0	66.0	36.0	6.00
R4575.1	–	5.10	0.2008	28.0	66.0	36.0	6.00
R457N7	N7	5.11	0.2010	28.0	66.0	36.0	6.00
R45713/64	13/64	5.16	0.2031	28.0	66.0	36.0	6.00
R457N6	N6	5.18	0.2039	28.0	66.0	36.0	6.00
R4575.2	–	5.20	0.2047	28.0	66.0	36.0	6.00
R457N5	N5	5.22	0.2055	28.0	66.0	36.0	6.00
R4575.3	–	5.30	0.2087	28.0	66.0	36.0	6.00
R457N4	N4	5.31	0.2091	28.0	66.0	36.0	6.00
R4575.4	–	5.40	0.2126	28.0	66.0	36.0	6.00
R457N3	N3	5.41	0.2130	28.0	66.0	36.0	6.00
R4575.5	–	5.50	0.2165	28.0	66.0	36.0	6.00
R4577/32	7/32	5.56	0.2188	28.0	66.0	36.0	6.00
R4575.6	–	5.60	0.2205	28.0	66.0	36.0	6.00
R457N2	N2	5.61	0.2209	28.0	66.0	36.0	6.00
R4575.7	–	5.70	0.2244	28.0	66.0	36.0	6.00
R457N1	N1	5.79	0.2280	28.0	66.0	36.0	6.00
R4575.8	–	5.80	0.2283	28.0	66.0	36.0	6.00
R4575.9	–	5.90	0.2323	28.0	66.0	36.0	6.00
R457A	A	5.94	0.2339	28.0	66.0	36.0	6.00
R45715/64	15/64	5.95	0.2344	28.0	66.0	36.0	6.00
R4576.0	–	6.00	0.2362	28.0	66.0	36.0	6.00
R457B	B	6.05	0.2380	34.0	79.0	36.0	8.00
R4576.05	–	6.05	0.2382	34.0	79.0	36.0	8.00
R4576.1	–	6.10	0.2402	34.0	79.0	36.0	8.00
R457C	C	6.15	0.2421	34.0	79.0	36.0	8.00
R4576.2	–	6.20	0.2441	34.0	79.0	36.0	8.00
R457D	D	6.25	0.2461	34.0	79.0	36.0	8.00
R4576.3	–	6.30	0.2480	34.0	79.0	36.0	8.00
R4571/4	1/4	6.35	0.2500	34.0	79.0	36.0	8.00
R457E	E	6.35	0.2500	34.0	79.0	36.0	8.00
R4576.4	–	6.40	0.2520	34.0	79.0	36.0	8.00
R4576.5	–	6.50	0.2559	34.0	79.0	36.0	8.00
R457F	F	6.53	0.2571	34.0	79.0	36.0	8.00
R4576.6	–	6.60	0.2598	34.0	79.0	36.0	8.00
R457G	G	6.63	0.2610	34.0	79.0	36.0	8.00
R4576.7	–	6.70	0.2638	34.0	79.0	36.0	8.00
R45717/64	17/64	6.75	0.2656	34.0	79.0	36.0	8.00
R457H	H	6.76	0.2661	34.0	79.0	36.0	8.00
R4576.8	–	6.80	0.2677	34.0	79.0	36.0	8.00

Product	DC	DC	DC	LCF	OAL	LS	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]	[mm]
R4576.9	–	6.90	0.2717	34.0	79.0	36.0	8.00
R457I	I	6.91	0.2720	34.0	79.0	36.0	8.00
R4577.0	–	7.00	0.2756	34.0	79.0	36.0	8.00
R457J	J	7.04	0.2772	41.0	79.0	36.0	8.00
R4577.1	–	7.10	0.2795	41.0	79.0	36.0	8.00
R457K	K	7.14	0.2811	41.0	79.0	36.0	8.00
R4579/32	9/32	7.14	0.2813	41.0	79.0	36.0	8.00
R4577.2	–	7.20	0.2835	41.0	79.0	36.0	8.00
R4577.3	–	7.30	0.2874	41.0	79.0	36.0	8.00
R457L	L	7.37	0.2902	41.0	79.0	36.0	8.00
R4577.4	–	7.40	0.2913	41.0	79.0	36.0	8.00
R457M	M	7.49	0.2949	41.0	79.0	36.0	8.00
R4577.5	–	7.50	0.2953	41.0	79.0	36.0	8.00
R45719/64	19/64	7.54	0.2969	41.0	79.0	36.0	8.00
R4577.6	–	7.60	0.2992	41.0	79.0	36.0	8.00
R457N	N	7.67	0.3020	41.0	79.0	36.0	8.00
R4577.7	–	7.70	0.3031	41.0	79.0	36.0	8.00
R4577.8	–	7.80	0.3071	41.0	79.0	36.0	8.00
R4577.9	–	7.90	0.3110	41.0	79.0	36.0	8.00
R4575/16	5/16	7.94	0.3125	41.0	79.0	36.0	8.00
R4578.0	–	8.00	0.3150	41.0	79.0	36.0	8.00
R457O	O	8.03	0.3161	47.0	89.0	40.0	10.00
R4578.05	–	8.05	0.3169	47.0	89.0	40.0	10.00
R4578.1	–	8.10	0.3189	47.0	89.0	40.0	10.00
R4578.2	–	8.20	0.3228	47.0	89.0	40.0	10.00
R457P	P	8.20	0.3228	47.0	89.0	40.0	10.00
R4578.3	–	8.30	0.3268	47.0	89.0	40.0	10.00
R45721/64	21/64	8.33	0.3281	47.0	89.0	40.0	10.00
R4578.4	–	8.40	0.3307	47.0	89.0	40.0	10.00
R457Q	Q	8.43	0.3319	47.0	89.0	40.0	10.00
R4578.5	–	8.50	0.3346	47.0	89.0	40.0	10.00
R4578.6	–	8.60	0.3386	47.0	89.0	40.0	10.00
R457R	R	8.61	0.3390	47.0	89.0	40.0	10.00
R4578.7	–	8.70	0.3425	47.0	89.0	40.0	10.00
R45711/32	11/32	8.73	0.3438	47.0	89.0	40.0	10.00
R4578.8	–	8.80	0.3465	47.0	89.0	40.0	10.00
R457S	S	8.84	0.3480	47.0	89.0	40.0	10.00
R4578.9	–	8.90	0.3504	47.0	89.0	40.0	10.00
R4579.0	–	9.00	0.3543	47.0	89.0	40.0	10.00
R457T	T	9.09	0.3579	47.0	89.0	40.0	10.00
R4579.1	–	9.10	0.3583	47.0	89.0	40.0	10.00
R45723/64	23/64	9.13	0.3594	47.0	89.0	40.0	10.00
R4579.2	–	9.20	0.3622	47.0	89.0	40.0	10.00
R4579.3	–	9.30	0.3661	47.0	89.0	40.0	10.00
R457U	U	9.35	0.3681	47.0	89.0	40.0	10.00
R4579.4	–	9.40	0.3701	47.0	89.0	40.0	10.00
R4579.5	–	9.50	0.3740	47.0	89.0	40.0	10.00
R4573/8	3/8	9.53	0.3750	47.0	89.0	40.0	10.00
R457V	V	9.58	0.3772	47.0	89.0	40.0	10.00
R4579.6	–	9.60	0.3780	47.0	89.0	40.0	10.00
R4579.7	–	9.70	0.3819	47.0	89.0	40.0	10.00
R4579.8	–	9.80	0.3858	47.0	89.0	40.0	10.00
R457W	W	9.80	0.3858	47.0	89.0	40.0	10.00
R4579.9	–	9.90	0.3898	47.0	89.0	40.0	10.00
R45725/64	25/64	9.92	0.3906	47.0	89.0	40.0	10.00
R45710.0	–	10.00	0.3937	47.0	89.0	40.0	10.00
R45710.05	–	10.05	0.3957	55.0	102.0	45.0	12.00
R457X	X	10.08	0.3969	55.0	102.0	45.0	12.00
R45710.1	–	10.10	0.3976	55.0	102.0	45.0	12.00
R45710.2	–	10.20	0.4016	55.0	102.0	45.0	12.00
R457Y	Y	10.26	0.4039	55.0	102.0	45.0	12.00
R45710.3	–	10.30	0.4055	55.0	102.0	45.0	12.00
R45713/32	13/32	10.32	0.4063	55.0	102.0	45.0	12.00
R45710.4	–	10.40	0.4094	55.0	102.0	45.0	12.00
R457Z	Z	10.49	0.4130	55.0	102.0	45.0	12.00

Product	DC	DC	DC	LCF	OAL	LS	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]	[mm]
R45710.5	–	10.50	0.4134	55.0	102.0	45.0	12.00
R45710.6	–	10.60	0.4173	55.0	102.0	45.0	12.00
R45727/64	27/64	10.72	0.4219	55.0	102.0	45.0	12.00
R45710.8	–	10.80	0.4252	55.0	102.0	45.0	12.00
R45711.0	–	11.00	0.4331	55.0	102.0	45.0	12.00
R4577/16	7/16	11.11	0.4375	55.0	102.0	45.0	12.00
R45711.2	–	11.20	0.4409	55.0	102.0	45.0	12.00
R45711.3	–	11.30	0.4449	55.0	102.0	45.0	12.00
R45711.4	–	11.40	0.4488	55.0	102.0	45.0	12.00
R45711.5	–	11.50	0.4528	55.0	102.0	45.0	12.00
R45729/64	29/64	11.51	0.4531	55.0	102.0	45.0	12.00
R45711.6	–	11.60	0.4567	55.0	102.0	45.0	12.00
R45711.8	–	11.80	0.4646	55.0	102.0	45.0	12.00
R45715/32	15/32	11.91	0.4688	55.0	102.0	45.0	12.00
R45712.0	–	12.00	0.4724	55.0	102.0	45.0	12.00
R45712.05	–	12.05	0.4744	60.0	107.0	45.0	14.00
R45712.1	–	12.10	0.4764	60.0	107.0	45.0	14.00
R45712.2	–	12.20	0.4803	60.0	107.0	45.0	14.00
R45731/64	31/64	12.30	0.4844	60.0	107.0	45.0	14.00
R45712.5	–	12.50	0.4921	60.0	107.0	45.0	14.00
R45712.7	–	12.70	0.5000	60.0	107.0	45.0	14.00
R4571/2	1/2	12.70	0.5000	60.0	107.0	45.0	14.00
R45712.8	–	12.80	0.5039	60.0	107.0	45.0	14.00
R45713.0	–	13.00	0.5118	60.0	107.0	45.0	14.00
R45733/64	33/64	13.10	0.5156	60.0	107.0	45.0	14.00
R45713.3	–	13.30	0.5236	60.0	107.0	45.0	14.00
R45717/32	17/32	13.49	0.5313	60.0	107.0	45.0	14.00
R45713.5	–	13.50	0.5315	60.0	107.0	45.0	14.00
R45713.8	–	13.80	0.5433	60.0	107.0	45.0	14.00
R45735/64	35/64	13.89	0.5469	60.0	107.0	45.0	14.00
R45714.0	–	14.00	0.5512	60.0	107.0	45.0	14.00
R45714.25	–	14.25	0.5610	65.0	115.0	48.0	16.00
R4579/16	9/16	14.29	0.5625	65.0	115.0	48.0	16.00
R45714.5	–	14.50	0.5709	65.0	115.0	48.0	16.00
R45737/64	37/64	14.68	0.5781	65.0	115.0	48.0	16.00
R45714.8	–	14.80	0.5827	65.0	115.0	48.0	16.00
R45715.0	–	15.00	0.5906	65.0	115.0	48.0	16.00
R45719/32	19/32	15.08	0.5938	65.0	115.0	48.0	16.00
R45715.1	–	15.10	0.5945	65.0	115.0	48.0	16.00
R45715.3	–	15.30	0.6024	65.0	115.0	48.0	16.00
R45739/64	39/64	15.48	0.6094	65.0	115.0	48.0	16.00
R45715.5	–	15.50	0.6102	65.0	115.0	48.0	16.00
R45715.8	–	15.80	0.6220	65.0	115.0	48.0	16.00
R4575/8	5/8	15.88	0.6250	65.0	115.0	48.0	16.00
R45716.0	–	16.00	0.6299	65.0	115.0	48.0	16.00
R45741/64	41/64	16.27	0.6406	73.0	123.0	48.0	18.00
R45716.5	–	16.50	0.6496	73.0	123.0	48.0	18.00
R45721/32	21/32	16.67	0.6563	73.0	123.0	48.0	18.00
R45717.0	–	17.00	0.6693	73.0	123.0	48.0	18.00
R45743/64	43/64	17.07	0.6720	73.0	123.0	48.0	18.00
R45711/16	11/16	17.46	0.6874	73.0	123.0	48.0	18.00
R45717.5	–	17.50	0.6890	73.0	123.0	48.0	18.00
R45745/64	45/64	17.86	0.7031	73.0	123.0	48.0	18.00
R45718.0	–	18.00	0.7087	73.0	123.0	48.0	18.00
R45723/32	23/32	18.26	0.7189	79.0	131.0	50.0	20.00
R45718.5	–	18.50	0.7283	79.0	131.0	50.0	20.00
R45747/64	47/64	18.65	0.7343	79.0	131.0	50.0	20.00
R45718.8	–	18.80	0.7402	79.0	131.0	50.0	20.00
R45719.0	–	19.00	0.7480	79.0	131.0	50.0	20.00
R4573/4	3/4	19.05	0.7500	79.0	131.0	50.0	20.00
R45719.5	–	19.50	0.7677	79.0	131.0	50.0	20.00
R45719.8	–	19.80	0.7795	79.0	131.0	50.0	20.00
R45720.0	–	20.00	0.7874	79.0	131.0	50.0	20.00

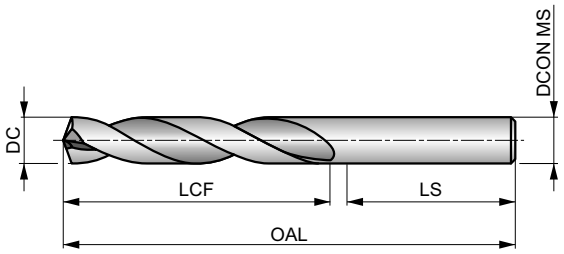
R454

DORMER

FORCE X Solid Carbide 5XD Drill, TiAlN Coated

High performance drill, able to produce high quality and accurate holes at high speeds and feeds (H9 hole tolerance). Self centering 140°, 4-facet split point and CTW flute construction for enhanced penetration rates. TiAlN coating increases surface hardness and improves tool life.

FORCE X



HM	DIN 6537L	5×D
140°	TiAlN	DIN 6535HA
CTW	DC m7	

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 65.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 134 V	■ 150 V	■ 155 V	■ 115 V	■ 101 V	■ 89 V	■ 100 V	■ 80 V	■ 68 V	■ 59 V	■ 50 V	■ 41 U	◪ 56 U	◪ 48 U
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
◪ 50 U	◪ 41 U	◪ 35 T	◪ 31 T	◪ 26 T	◪ 24 T	◪ 23 T	◪ 20 T	■ 83 W	■ 61 W	■ 46 W	■ 74 V	■ 60 V	■ 48 V
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■ 65 V	■ 50 V	■ 41 V	■ 61 V	■ 46 V	■ 34 V	■ 29 V	■ 24 V	■ 68 V	■ 52 V	■ 40 V	■ 188 W	■ 141 W	■ 94 W
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**S1.1**	**S1.2**	**S1.3**	**H1.1**	**H2.1**	**H2.2**	**H3.1**	**H3.2**
■ 231 V	■ 208 V	■ 150 V	■ 280 V	■ 165 V	■ 83 V	◪ 41 U	◪ 34 U	◪ 30 T	■ 42 U	◪ 25 U	◪ 23 U	◪ 28 U	◪ 23 U

DCON MS tolerance h6.

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	LS [mm]	DCON MS [mm]
R4543.0	–	3.00	0.1181	28.0	66.0	36.0	6.00
R4543.1	–	3.10	0.1220	28.0	66.0	36.0	6.00
R4541/8	1/8	3.18	0.1250	28.0	66.0	36.0	6.00
R4543.2	–	3.20	0.1260	28.0	66.0	36.0	6.00
R454N30	N30	3.26	0.1283	28.0	66.0	36.0	6.00
R4543.3	–	3.30	0.1299	28.0	66.0	36.0	6.00
R4543.4	–	3.40	0.1339	28.0	66.0	36.0	6.00
R454N29	N29	3.45	0.1360	28.0	66.0	36.0	6.00
R4543.5	–	3.50	0.1378	28.0	66.0	36.0	6.00
R454N28	N28	3.57	0.1406	28.0	66.0	36.0	6.00
R4549/64	9/64	3.57	0.1406	28.0	66.0	36.0	6.00
R4543.6	–	3.60	0.1417	28.0	66.0	36.0	6.00
R454N27	N27	3.66	0.1441	28.0	66.0	36.0	6.00
R4543.7	–	3.70	0.1457	28.0	66.0	36.0	6.00
R454N26	N26	3.73	0.1469	36.0	74.0	36.0	6.00
R454N25	N25	3.80	0.1496	36.0	74.0	36.0	6.00
R4543.8	–	3.80	0.1496	36.0	74.0	36.0	6.00
R454N24	N24	3.86	0.1520	36.0	74.0	36.0	6.00
R4543.9	–	3.90	0.1535	36.0	74.0	36.0	6.00
R454N23	N23	3.91	0.1539	36.0	74.0	36.0	6.00
R4545/32	5/32	3.97	0.1563	36.0	74.0	36.0	6.00
R454N22	N22	3.99	0.1571	36.0	74.0	36.0	6.00
R4544.0	–	4.00	0.1575	36.0	74.0	36.0	6.00
R454N21	N21	4.04	0.1591	36.0	74.0	36.0	6.00
R454N20	N20	4.09	0.1610	36.0	74.0	36.0	6.00

Product	DC	DC	DC	LCF	OAL	LS	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]	[mm]
R4544.1	–	4.10	0.1614	36.0	74.0	36.0	6.00
R4544.2	–	4.20	0.1654	36.0	74.0	36.0	6.00
R454N19	N19	4.22	0.1661	36.0	74.0	36.0	6.00
R4544.3	–	4.30	0.1693	36.0	74.0	36.0	6.00
R454N18	N18	4.31	0.1697	36.0	74.0	36.0	6.00
R45411/64	11/64	4.37	0.1719	36.0	74.0	36.0	6.00
R454N17	N17	4.39	0.1728	36.0	74.0	36.0	6.00
R4544.4	–	4.40	0.1732	36.0	74.0	36.0	6.00
R4544.5	–	4.50	0.1772	36.0	74.0	36.0	6.00
R454N16	N16	4.50	0.1772	36.0	74.0	36.0	6.00
R454N15	N15	4.57	0.1799	36.0	74.0	36.0	6.00
R4544.6	–	4.60	0.1811	36.0	74.0	36.0	6.00
R454N14	N14	4.62	0.1819	36.0	74.0	36.0	6.00
R454N13	N13	4.70	0.1850	36.0	74.0	36.0	6.00
R4544.7	–	4.70	0.1850	36.0	74.0	36.0	6.00
R4543/16	3/16	4.76	0.1875	44.0	82.0	36.0	6.00
R454N12	N12	4.80	0.1890	44.0	82.0	36.0	6.00
R4544.8	–	4.80	0.1890	44.0	82.0	36.0	6.00
R454N11	N11	4.85	0.1909	44.0	82.0	36.0	6.00
R4544.9	–	4.90	0.1929	44.0	82.0	36.0	6.00
R454N10	N10	4.92	0.1937	44.0	82.0	36.0	6.00
R454N9	N9	4.98	0.1961	44.0	82.0	36.0	6.00
R4545.0	–	5.00	0.1969	44.0	82.0	36.0	6.00
R454N8	N8	5.06	0.1992	44.0	82.0	36.0	6.00
R4545.1	–	5.10	0.2008	44.0	82.0	36.0	6.00
R454N7	N7	5.11	0.2010	44.0	82.0	36.0	6.00
R45413/64	13/64	5.16	0.2031	44.0	82.0	36.0	6.00
R454N6	N6	5.18	0.2039	44.0	82.0	36.0	6.00
R4545.2	–	5.20	0.2047	44.0	82.0	36.0	6.00
R454N5	N5	5.22	0.2055	44.0	82.0	36.0	6.00
R454N4	N4	5.31	0.2091	44.0	82.0	36.0	6.00
R454N3	N3	5.41	0.2130	44.0	82.0	36.0	6.00
R4545.5	–	5.50	0.2165	44.0	82.0	36.0	6.00
R4547/32	7/32	5.56	0.2188	44.0	82.0	36.0	6.00
R4545.6	–	5.60	0.2205	44.0	82.0	36.0	6.00
R454N2	N2	5.61	0.2209	44.0	82.0	36.0	6.00
R4545.7	–	5.70	0.2244	44.0	82.0	36.0	6.00
R454N1	N1	5.79	0.2280	44.0	82.0	36.0	6.00
R4545.8	–	5.80	0.2283	44.0	82.0	36.0	6.00
R454A	A	5.94	0.2339	44.0	82.0	36.0	6.00
R45415/64	15/64	5.95	0.2344	44.0	82.0	36.0	6.00
R4546.0	–	6.00	0.2362	44.0	82.0	36.0	6.00
R454B	B	6.05	0.2380	53.0	91.0	36.0	8.00
R4546.1	–	6.10	0.2402	53.0	91.0	36.0	8.00
R454C	C	6.15	0.2421	53.0	91.0	36.0	8.00
R4546.2	–	6.20	0.2441	53.0	91.0	36.0	8.00
R454D	D	6.25	0.2461	53.0	91.0	36.0	8.00
R4546.3	–	6.30	0.2480	53.0	91.0	36.0	8.00
R4541/4	1/4	6.35	0.2500	53.0	91.0	36.0	8.00
R454E	E	6.35	0.2500	53.0	91.0	36.0	8.00
R4546.4	–	6.40	0.2520	53.0	91.0	36.0	8.00
R4546.5	–	6.50	0.2559	53.0	91.0	36.0	8.00
R454F	F	6.53	0.2571	53.0	91.0	36.0	8.00
R4546.6	–	6.60	0.2598	53.0	91.0	36.0	8.00
R454G	G	6.63	0.2610	53.0	91.0	36.0	8.00
R4546.7	–	6.70	0.2638	53.0	91.0	36.0	8.00
R45417/64	17/64	6.75	0.2656	53.0	91.0	36.0	8.00
R454H	H	6.76	0.2661	53.0	91.0	36.0	8.00
R4546.8	–	6.80	0.2677	53.0	91.0	36.0	8.00
R4546.9	–	6.90	0.2717	53.0	91.0	36.0	8.00
R454I	I	6.91	0.2720	53.0	91.0	36.0	8.00
R4547.0	–	7.00	0.2756	53.0	91.0	36.0	8.00

Product	DC	DC	DC	LCF	OAL	LS	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]	[mm]
R454J	J	7.04	0.2772	53.0	91.0	36.0	8.00
R4547.1	–	7.10	0.2795	53.0	91.0	36.0	8.00
R454K	K	7.14	0.2811	53.0	91.0	36.0	8.00
R4549/32	9/32	7.14	0.2813	53.0	91.0	36.0	8.00
R4547.3	–	7.30	0.2874	53.0	91.0	36.0	8.00
R454L	L	7.37	0.2902	53.0	91.0	36.0	8.00
R4547.4	–	7.40	0.2913	53.0	91.0	36.0	8.00
R454M	M	7.49	0.2949	53.0	91.0	36.0	8.00
R4547.5	–	7.50	0.2953	53.0	91.0	36.0	8.00
R45419/64	19/64	7.54	0.2969	53.0	91.0	36.0	8.00
R4547.6	–	7.60	0.2992	53.0	91.0	36.0	8.00
R454N	N	7.67	0.3020	53.0	91.0	36.0	8.00
R4547.7	–	7.70	0.3031	53.0	91.0	36.0	8.00
R4547.8	–	7.80	0.3071	53.0	91.0	36.0	8.00
R4547.9	–	7.90	0.3110	53.0	91.0	36.0	8.00
R4545/16	5/16	7.94	0.3125	53.0	91.0	36.0	8.00
R4548.0	–	8.00	0.3150	53.0	91.0	36.0	8.00
R454O	O	8.03	0.3161	61.0	103.0	40.0	10.00
R4548.1	–	8.10	0.3189	61.0	103.0	40.0	10.00
R4548.2	–	8.20	0.3228	61.0	103.0	40.0	10.00
R454P	P	8.20	0.3228	61.0	103.0	40.0	10.00
R45421/64	21/64	8.33	0.3281	61.0	103.0	40.0	10.00
R4548.4	–	8.40	0.3307	61.0	103.0	40.0	10.00
R454Q	Q	8.43	0.3319	61.0	103.0	40.0	10.00
R4548.5	–	8.50	0.3346	61.0	103.0	40.0	10.00
R4548.6	–	8.60	0.3386	61.0	103.0	40.0	10.00
R454R	R	8.61	0.3390	61.0	103.0	40.0	10.00
R4548.7	–	8.70	0.3425	61.0	103.0	40.0	10.00
R45411/32	11/32	8.73	0.3438	61.0	103.0	40.0	10.00
R4548.8	–	8.80	0.3465	61.0	103.0	40.0	10.00
R454S	S	8.84	0.3480	61.0	103.0	40.0	10.00
R4548.9	–	8.90	0.3504	61.0	103.0	40.0	10.00
R4549.0	–	9.00	0.3543	61.0	103.0	40.0	10.00
R454T	T	9.09	0.3579	61.0	103.0	40.0	10.00
R4549.1	–	9.10	0.3583	61.0	103.0	40.0	10.00
R45423/64	23/64	9.13	0.3594	61.0	103.0	40.0	10.00
R4549.3	–	9.30	0.3661	61.0	103.0	40.0	10.00
R454U	U	9.35	0.3681	61.0	103.0	40.0	10.00
R4549.4	–	9.40	0.3701	61.0	103.0	40.0	10.00
R4549.5	–	9.50	0.3740	61.0	103.0	40.0	10.00
R4543/8	3/8	9.53	0.3750	61.0	103.0	40.0	10.00
R454V	V	9.58	0.3772	61.0	103.0	40.0	10.00
R4549.6	–	9.60	0.3780	61.0	103.0	40.0	10.00
R4549.7	–	9.70	0.3819	61.0	103.0	40.0	10.00
R4549.8	–	9.80	0.3858	61.0	103.0	40.0	10.00
R4549.9	–	9.90	0.3898	61.0	103.0	40.0	10.00
R454W	W	9.80	0.3858	61.0	103.0	40.0	10.00
R45425/64	25/64	9.92	0.3906	61.0	103.0	40.0	10.00
R45410.0	–	10.00	0.3937	61.0	103.0	40.0	10.00
R454X	X	10.08	0.3969	70.0	118.0	45.0	12.00
R45410.1	–	10.10	0.3976	70.0	118.0	45.0	12.00
R45410.2	–	10.20	0.4016	70.0	118.0	45.0	12.00
R454Y	Y	10.26	0.4039	70.0	118.0	45.0	12.00
R45410.3	–	10.30	0.4055	70.0	118.0	45.0	12.00
R45413/32	13/32	10.32	0.4063	70.0	118.0	45.0	12.00
R45410.4	–	10.40	0.4094	70.0	118.0	45.0	12.00
R454Z	Z	10.49	0.4130	70.0	118.0	45.0	12.00
R45410.5	–	10.50	0.4134	70.0	118.0	45.0	12.00
R45410.6	–	10.60	0.4173	70.0	118.0	45.0	12.00
R45427/64	27/64	10.72	0.4219	70.0	118.0	45.0	12.00
R45411.0	–	11.00	0.4331	70.0	118.0	45.0	12.00
R4547/16	7/16	11.11	0.4375	70.0	118.0	45.0	12.00

Product	DC	DC	DC	LCF	OAL	LS	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]	[mm]
R45411.2	–	11.20	0.4409	70.0	118.0	45.0	12.00
R45411.4	–	11.40	0.4488	70.0	118.0	45.0	12.00
R45411.5	–	11.50	0.4528	70.0	118.0	45.0	12.00
R45429/64	29/64	11.51	0.4531	70.0	118.0	45.0	12.00
R45411.6	–	11.60	0.4567	70.0	118.0	45.0	12.00
R45411.8	–	11.80	0.4646	70.0	118.0	45.0	12.00
R45415/32	15/32	11.91	0.4688	70.0	118.0	45.0	12.00
R45412.0	–	12.00	0.4724	70.0	118.0	45.0	12.00
R45412.1	–	12.10	0.4764	76.0	124.0	45.0	14.00
R45412.2	–	12.20	0.4803	76.0	124.0	45.0	14.00
R45431/64	31/64	12.30	0.4844	76.0	124.0	45.0	14.00
R45412.5	–	12.50	0.4921	76.0	124.0	45.0	14.00
R45412.7	–	12.70	0.5000	76.0	124.0	45.0	14.00
R4541/2	1/2	12.70	0.5000	76.0	124.0	45.0	14.00
R45412.8	–	12.80	0.5039	76.0	124.0	45.0	14.00
R45413.0	–	13.00	0.5118	76.0	124.0	45.0	14.00
R45433/64	33/64	13.10	0.5156	76.0	124.0	45.0	14.00
R45417/32	17/32	13.49	0.5313	76.0	124.0	45.0	14.00
R45413.5	–	13.50	0.5315	76.0	124.0	45.0	14.00
R45413.8	–	13.80	0.5433	76.0	124.0	45.0	14.00
R45435/64	35/64	13.89	0.5469	76.0	124.0	45.0	14.00
R45414.0	–	14.00	0.5512	76.0	124.0	45.0	14.00
R45414.25	–	14.25	0.5610	82.0	133.0	48.0	16.00
R4549/16	9/16	14.29	0.5625	82.0	133.0	48.0	16.00
R45414.5	–	14.50	0.5709	82.0	133.0	48.0	16.00
R45437/64	37/64	14.68	0.5781	82.0	133.0	48.0	16.00
R45414.8	–	14.80	0.5827	82.0	133.0	48.0	16.00
R45415.0	–	15.00	0.5906	82.0	133.0	48.0	16.00
R45419/32	19/32	15.08	0.5938	82.0	133.0	48.0	16.00
R45415.1	–	15.10	0.5945	82.0	133.0	48.0	16.00
R45439/64	39/64	15.48	0.6094	82.0	133.0	48.0	16.00
R45415.5	–	15.50	0.6102	82.0	133.0	48.0	16.00
R45415.8	–	15.80	0.6220	82.0	133.0	48.0	16.00
R4545/8	5/8	15.88	0.6250	82.0	133.0	48.0	16.00
R45416.0	–	16.00	0.6299	82.0	133.0	48.0	16.00
R45441/64	41/64	16.27	0.6406	91.0	143.0	48.0	18.00
R45416.5	–	16.50	0.6496	91.0	143.0	48.0	18.00
R45421/32	21/32	16.67	0.6563	91.0	143.0	48.0	18.00
R45417.0	–	17.00	0.6693	91.0	143.0	48.0	18.00
R45443/64	43/64	17.07	0.6720	91.0	143.0	48.0	18.00
R45411/16	11/16	17.46	0.6874	91.0	143.0	48.0	18.00
R45417.5	–	17.50	0.6890	91.0	143.0	48.0	18.00
R45417.8	–	17.80	0.7008	91.0	143.0	48.0	18.00
R45445/64	45/64	17.86	0.7031	91.0	143.0	48.0	18.00
R45418.0	–	18.00	0.7087	91.0	143.0	48.0	18.00
R45423/32	23/32	18.26	0.7189	99.0	153.0	50.0	20.00
R45418.5	–	18.50	0.7283	99.0	153.0	50.0	20.00
R45447/64	47/64	18.65	0.7343	99.0	153.0	50.0	20.00
R45419.0	–	19.00	0.7480	99.0	153.0	50.0	20.00
R4543/4	3/4	19.05	0.7500	99.0	153.0	50.0	20.00
R45419.5	–	19.50	0.7677	99.0	153.0	50.0	20.00
R45419.8	–	19.80	0.7795	99.0	153.0	50.0	20.00
R45420.0	–	20.00	0.7874	99.0	153.0	50.0	20.00

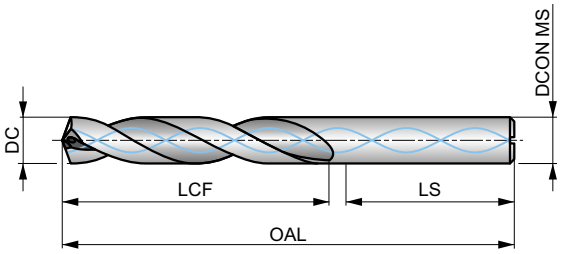
R453

DORMER

FORCE X Solid Carbide 5XD Drill with Coolant Feed, TiAlN Coated

High performance drill, able to produce high quality and accurate holes at high speeds and feeds (H9 hole tolerance). Self centering 140°, 4-facet split point and CTW flute construction for enhanced penetration rates. Coolant holes to enhance chip evacuation. TiAlN coating increases surface hardness and improves tool life.

FORCE X



HM	DIN 6537L	5×D
140°	TiAlN	DIN 6535HA
CTW		DC m7

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 65.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 170 V	■ 190 V	■ 197 V	■ 145 V	■ 128 V	■ 113 V	■ 126 V	■ 102 V	■ 86 V	■ 75 V	■ 64 V	■ 52 U	◪ 71 V	◪ 61 V
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
◪ 64 V	◪ 52 V	◪ 44 U	◪ 39 V	◪ 33 V	◪ 30 V	◪ 29 U	◪ 25 U	■ 105 W	■ 77 W	■ 58 W	■ 93 V	■ 76 V	■ 61 V
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■ 83 V	■ 64 V	■ 51 V	■ 77 V	■ 58 V	■ 43 V	■ 36 V	■ 30 V	■ 86 V	■ 66 V	■ 50 V	■ 238 W	■ 179 W	■ 119 W
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**S1.1**	**S1.2**	**S1.3**	**H1.1**	**H2.1**	**H2.2**	**H3.1**	**H3.2**
■ 293 V	■ 263 V	■ 190 V	■ 354 W	■ 209 W	■ 105 W	■ 52 V	■ 43 V	■ 38 U	■ 53 U	◪ 31 U	◪ 29 U	◪ 35 U	◪ 29 U

DCON MS tolerance h6.

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	LS [mm]	DCON MS [mm]
R4533.0	–	3.00	0.1181	28.0	66.0	36.0	6.00
R4533.1	–	3.10	0.1220	28.0	66.0	36.0	6.00
R4531/8	1/8	3.18	0.1250	28.0	66.0	36.0	6.00
R4533.2	–	3.20	0.1260	28.0	66.0	36.0	6.00
R453N30	N30	3.26	0.1283	28.0	66.0	36.0	6.00
R4533.3	–	3.30	0.1299	28.0	66.0	36.0	6.00
R4533.4	–	3.40	0.1339	28.0	66.0	36.0	6.00
R453N29	N29	3.45	0.1360	28.0	66.0	36.0	6.00
R4533.5	–	3.50	0.1378	28.0	66.0	36.0	6.00
R453N28	N28	3.57	0.1406	28.0	66.0	36.0	6.00
R4539/64	9/64	3.57	0.1406	28.0	66.0	36.0	6.00
R4533.6	–	3.60	0.1417	28.0	66.0	36.0	6.00
R453N27	N27	3.66	0.1441	28.0	66.0	36.0	6.00
R4533.7	–	3.70	0.1457	28.0	66.0	36.0	6.00
R453N26	N26	3.73	0.1469	36.0	74.0	36.0	6.00
R453N25	N25	3.80	0.1496	36.0	74.0	36.0	6.00
R4533.8	–	3.80	0.1496	36.0	74.0	36.0	6.00
R453N24	N24	3.86	0.1520	36.0	74.0	36.0	6.00
R4533.9	–	3.90	0.1535	36.0	74.0	36.0	6.00
R453N23	N23	3.91	0.1539	36.0	74.0	36.0	6.00
R4535/32	5/32	3.97	0.1563	36.0	74.0	36.0	6.00
R453N22	N22	3.99	0.1571	36.0	74.0	36.0	6.00
R4534.0	–	4.00	0.1575	36.0	74.0	36.0	6.00
R453N21	N21	4.04	0.1591	36.0	74.0	36.0	6.00
R4534.05	–	4.05	0.1594	36.0	74.0	36.0	6.00

Product	DC	DC	DC	LCF	OAL	LS	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]	[mm]
R453N20	N20	4.09	0.1610	36.0	74.0	36.0	6.00
R4534.1	–	4.10	0.1614	36.0	74.0	36.0	6.00
R4534.2	–	4.20	0.1654	36.0	74.0	36.0	6.00
R453N19	N19	4.22	0.1661	36.0	74.0	36.0	6.00
R4534.3	–	4.30	0.1693	36.0	74.0	36.0	6.00
R453N18	N18	4.31	0.1697	36.0	74.0	36.0	6.00
R45311/64	11/64	4.37	0.1719	36.0	74.0	36.0	6.00
R453N17	N17	4.39	0.1728	36.0	74.0	36.0	6.00
R4534.4	–	4.40	0.1732	36.0	74.0	36.0	6.00
R4534.5	–	4.50	0.1772	36.0	74.0	36.0	6.00
R453N16	N16	4.50	0.1772	36.0	74.0	36.0	6.00
R453N15	N15	4.57	0.1799	36.0	74.0	36.0	6.00
R4534.6	–	4.60	0.1811	36.0	74.0	36.0	6.00
R453N14	N14	4.62	0.1819	36.0	74.0	36.0	6.00
R453N13	N13	4.70	0.1850	36.0	74.0	36.0	6.00
R4534.7	–	4.70	0.1850	36.0	74.0	36.0	6.00
R4533/16	3/16	4.76	0.1875	44.0	82.0	36.0	6.00
R4534.8	–	4.80	0.1890	44.0	82.0	36.0	6.00
R453N12	N12	4.80	0.1890	44.0	82.0	36.0	6.00
R453N11	N11	4.85	0.1909	44.0	82.0	36.0	6.00
R4534.9	–	4.90	0.1929	44.0	82.0	36.0	6.00
R453N10	N10	4.92	0.1937	44.0	82.0	36.0	6.00
R453N9	N9	4.98	0.1961	44.0	82.0	36.0	6.00
R4535.0	–	5.00	0.1969	44.0	82.0	36.0	6.00
R4535.05	–	5.05	0.1988	44.0	82.0	36.0	6.00
R453N8	N8	5.06	0.1992	44.0	82.0	36.0	6.00
R4535.1	–	5.10	0.2008	44.0	82.0	36.0	6.00
R453N7	N7	5.11	0.2010	44.0	82.0	36.0	6.00
R45313/64	13/64	5.16	0.2031	44.0	82.0	36.0	6.00
R453N6	N6	5.18	0.2039	44.0	82.0	36.0	6.00
R4535.2	–	5.20	0.2047	44.0	82.0	36.0	6.00
R453N5	N5	5.22	0.2055	44.0	82.0	36.0	6.00
R4535.3	–	5.30	0.2087	44.0	82.0	36.0	6.00
R453N4	N4	5.31	0.2091	44.0	82.0	36.0	6.00
R4535.4	–	5.40	0.2126	44.0	82.0	36.0	6.00
R453N3	N3	5.41	0.2130	44.0	82.0	36.0	6.00
R4535.5	–	5.50	0.2165	44.0	82.0	36.0	6.00
R4537/32	7/32	5.56	0.2188	44.0	82.0	36.0	6.00
R4535.6	–	5.60	0.2205	44.0	82.0	36.0	6.00
R453N2	N2	5.61	0.2209	44.0	82.0	36.0	6.00
R4535.7	–	5.70	0.2244	44.0	82.0	36.0	6.00
R453N1	N1	5.79	0.2280	44.0	82.0	36.0	6.00
R4535.8	–	5.80	0.2283	44.0	82.0	36.0	6.00
R4535.9	–	5.90	0.2323	44.0	82.0	36.0	6.00
R453A	A	5.94	0.2339	44.0	82.0	36.0	6.00
R45315/64	15/64	5.95	0.2344	44.0	82.0	36.0	6.00
R4536.0	–	6.00	0.2362	44.0	82.0	36.0	6.00
R453B	B	6.05	0.2380	53.0	91.0	36.0	8.00
R4536.05	–	6.05	0.2382	53.0	91.0	36.0	8.00
R4536.1	–	6.10	0.2402	53.0	91.0	36.0	8.00
R453C	C	6.15	0.2421	53.0	91.0	36.0	8.00
R4536.2	–	6.20	0.2441	53.0	91.0	36.0	8.00
R453D	D	6.25	0.2461	53.0	91.0	36.0	8.00
R4536.3	–	6.30	0.2480	53.0	91.0	36.0	8.00
R4531/4	1/4	6.35	0.2500	53.0	91.0	36.0	8.00
R453E	E	6.35	0.2500	53.0	91.0	36.0	8.00
R4536.4	–	6.40	0.2520	53.0	91.0	36.0	8.00
R4536.5	–	6.50	0.2559	53.0	91.0	36.0	8.00
R453F	F	6.53	0.2571	53.0	91.0	36.0	8.00
R4536.6	–	6.60	0.2598	53.0	91.0	36.0	8.00
R453G	G	6.63	0.2610	53.0	91.0	36.0	8.00
R4536.7	–	6.70	0.2638	53.0	91.0	36.0	8.00
R45317/64	17/64	6.75	0.2656	53.0	91.0	36.0	8.00
R453H	H	6.76	0.2661	53.0	91.0	36.0	8.00
R4536.8	–	6.80	0.2677	53.0	91.0	36.0	8.00

Product	DC	DC	DC	LCF	OAL	LS	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]	[mm]
R4536.9	–	6.90	0.2717	53.0	91.0	36.0	8.00
R453I	I	6.91	0.2720	53.0	91.0	36.0	8.00
R4537.0	–	7.00	0.2756	53.0	91.0	36.0	8.00
R453J	J	7.04	0.2772	53.0	91.0	36.0	8.00
R4537.1	–	7.10	0.2795	53.0	91.0	36.0	8.00
R453K	K	7.14	0.2811	53.0	91.0	36.0	8.00
R4539/32	9/32	7.14	0.2813	53.0	91.0	36.0	8.00
R4537.2	–	7.20	0.2835	53.0	91.0	36.0	8.00
R4537.3	–	7.30	0.2874	53.0	91.0	36.0	8.00
R453L	L	7.37	0.2902	53.0	91.0	36.0	8.00
R4537.4	–	7.40	0.2913	53.0	91.0	36.0	8.00
R453M	M	7.49	0.2949	53.0	91.0	36.0	8.00
R4537.5	–	7.50	0.2953	53.0	91.0	36.0	8.00
R45319/64	19/64	7.54	0.2969	53.0	91.0	36.0	8.00
R4537.6	–	7.60	0.2992	53.0	91.0	36.0	8.00
R453N	N	7.67	0.3020	53.0	91.0	36.0	8.00
R4537.7	–	7.70	0.3031	53.0	91.0	36.0	8.00
R4537.8	–	7.80	0.3071	53.0	91.0	36.0	8.00
R4537.9	–	7.90	0.3110	53.0	91.0	36.0	8.00
R4535/16	5/16	7.94	0.3125	53.0	91.0	36.0	8.00
R4538.0	–	8.00	0.3150	53.0	91.0	36.0	8.00
R453O	O	8.03	0.3161	61.0	103.0	40.0	10.00
R4538.05	–	8.05	0.3169	61.0	103.0	40.0	10.00
R4538.1	–	8.10	0.3189	61.0	103.0	40.0	10.00
R4538.2	–	8.20	0.3228	61.0	103.0	40.0	10.00
R453P	P	8.20	0.3228	61.0	103.0	40.0	10.00
R4538.3	–	8.30	0.3268	61.0	103.0	40.0	10.00
R45321/64	21/64	8.33	0.3281	61.0	103.0	40.0	10.00
R4538.4	–	8.40	0.3307	61.0	103.0	40.0	10.00
R453Q	Q	8.43	0.3319	61.0	103.0	40.0	10.00
R4538.5	–	8.50	0.3346	61.0	103.0	40.0	10.00
R4538.6	–	8.60	0.3386	61.0	103.0	40.0	10.00
R453R	R	8.61	0.3390	61.0	103.0	40.0	10.00
R4538.7	–	8.70	0.3425	61.0	103.0	40.0	10.00
R45311/32	11/32	8.73	0.3438	61.0	103.0	40.0	10.00
R4538.8	–	8.80	0.3465	61.0	103.0	40.0	10.00
R453S	S	8.84	0.3480	61.0	103.0	40.0	10.00
R4538.9	–	8.90	0.3504	61.0	103.0	40.0	10.00
R4539.0	–	9.00	0.3543	61.0	103.0	40.0	10.00
R453T	T	9.09	0.3579	61.0	103.0	40.0	10.00
R4539.1	–	9.10	0.3583	61.0	103.0	40.0	10.00
R45323/64	23/64	9.13	0.3594	61.0	103.0	40.0	10.00
R4539.2	–	9.20	0.3622	61.0	103.0	40.0	10.00
R4539.3	–	9.30	0.3661	61.0	103.0	40.0	10.00
R453U	U	9.35	0.3681	61.0	103.0	40.0	10.00
R4539.4	–	9.40	0.3701	61.0	103.0	40.0	10.00
R4539.5	–	9.50	0.3740	61.0	103.0	40.0	10.00
R4533/8	3/8	9.53	0.3750	61.0	103.0	40.0	10.00
R453V	V	9.58	0.3772	61.0	103.0	40.0	10.00
R4539.6	–	9.60	0.3780	61.0	103.0	40.0	10.00
R4539.7	–	9.70	0.3819	61.0	103.0	40.0	10.00
R4539.8	–	9.80	0.3858	61.0	103.0	40.0	10.00
R453W	W	9.80	0.3858	61.0	103.0	40.0	10.00
R4539.9	–	9.90	0.3898	61.0	103.0	40.0	10.00
R45325/64	25/64	9.92	0.3906	61.0	103.0	40.0	10.00
R45310.0	–	10.00	0.3937	61.0	103.0	40.0	10.00
R45310.05	–	10.05	0.3957	70.0	118.0	45.0	12.00
R453X	X	10.08	0.3969	70.0	118.0	45.0	12.00
R45310.1	–	10.10	0.3976	70.0	118.0	45.0	12.00
R45310.2	–	10.20	0.4016	70.0	118.0	45.0	12.00
R453Y	Y	10.26	0.4039	70.0	118.0	45.0	12.00
R45310.3	–	10.30	0.4055	70.0	118.0	45.0	12.00
R45313/32	13/32	10.32	0.4063	70.0	118.0	45.0	12.00
R45310.4	–	10.40	0.4094	70.0	118.0	45.0	12.00
R453Z	Z	10.49	0.4130	70.0	118.0	45.0	12.00

Product	DC	DC	DC	LCF	OAL	LS	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]	[mm]
R45310.5	–	10.50	0.4134	70.0	118.0	45.0	12.00
R45310.6	–	10.60	0.4173	70.0	118.0	45.0	12.00
R45327/64	27/64	10.72	0.4219	70.0	118.0	45.0	12.00
R45310.8	–	10.80	0.4252	70.0	118.0	45.0	12.00
R45311.0	–	11.00	0.4331	70.0	118.0	45.0	12.00
R4537/16	7/16	11.11	0.4375	70.0	118.0	45.0	12.00
R45311.2	–	11.20	0.4409	70.0	118.0	45.0	12.00
R45311.3	–	11.30	0.4449	70.0	118.0	45.0	12.00
R45311.4	–	11.40	0.4488	70.0	118.0	45.0	12.00
R45311.5	–	11.50	0.4528	70.0	118.0	45.0	12.00
R45329/64	29/64	11.51	0.4531	70.0	118.0	45.0	12.00
R45311.6	–	11.60	0.4567	70.0	118.0	45.0	12.00
R45311.8	–	11.80	0.4646	70.0	118.0	45.0	12.00
R45315/32	15/32	11.91	0.4688	70.0	118.0	45.0	12.00
R45312.0	–	12.00	0.4724	70.0	118.0	45.0	12.00
R45312.05	–	12.05	0.4744	76.0	124.0	45.0	14.00
R45312.2	–	12.20	0.4803	76.0	124.0	45.0	14.00
R45331/64	31/64	12.30	0.4844	76.0	124.0	45.0	14.00
R45312.5	–	12.50	0.4921	76.0	124.0	45.0	14.00
R45312.7	–	12.70	0.5000	76.0	124.0	45.0	14.00
R4531/2	1/2	12.70	0.5000	76.0	124.0	45.0	14.00
R45312.8	–	12.80	0.5039	76.0	124.0	45.0	14.00
R45313.0	–	13.00	0.5118	76.0	124.0	45.0	14.00
R45333/64	33/64	13.10	0.5156	76.0	124.0	45.0	14.00
R45313.3	–	13.30	0.5236	76.0	124.0	45.0	14.00
R45317/32	17/32	13.49	0.5313	76.0	124.0	45.0	14.00
R45313.5	–	13.50	0.5315	76.0	124.0	45.0	14.00
R45313.8	–	13.80	0.5433	76.0	124.0	45.0	14.00
R45335/64	35/64	13.89	0.5469	76.0	124.0	45.0	14.00
R45314.0	–	14.00	0.5512	76.0	124.0	45.0	14.00
R45314.25	–	14.25	0.5610	82.0	133.0	48.0	16.00
R4539/16	9/16	14.29	0.5625	82.0	133.0	48.0	16.00
R45314.5	–	14.50	0.5709	82.0	133.0	48.0	16.00
R45337/64	37/64	14.68	0.5781	82.0	133.0	48.0	16.00
R45314.8	–	14.80	0.5827	82.0	133.0	48.0	16.00
R45315.0	–	15.00	0.5906	82.0	133.0	48.0	16.00
R45319/32	19/32	15.08	0.5938	82.0	133.0	48.0	16.00
R45315.1	–	15.10	0.5945	82.0	133.0	48.0	16.00
R45315.3	–	15.30	0.6024	82.0	133.0	48.0	16.00
R45339/64	39/64	15.48	0.6094	82.0	133.0	48.0	16.00
R45315.5	–	15.50	0.6102	82.0	133.0	48.0	16.00
R45315.8	–	15.80	0.6220	82.0	133.0	48.0	16.00
R4535/8	5/8	15.88	0.6250	82.0	133.0	48.0	16.00
R45316.0	–	16.00	0.6299	82.0	133.0	48.0	16.00
R45341/64	41/64	16.27	0.6406	91.0	143.0	48.0	18.00
R45316.5	–	16.50	0.6496	91.0	143.0	48.0	18.00
R45321/32	21/32	16.67	0.6563	91.0	143.0	48.0	18.00
R45317.0	–	17.00	0.6693	91.0	143.0	48.0	18.00
R45343/64	43/64	17.07	0.6720	91.0	143.0	48.0	18.00
R45311/16	11/16	17.46	0.6874	91.0	143.0	48.0	18.00
R45317.5	–	17.50	0.6890	91.0	143.0	48.0	18.00
R45317.8	–	17.80	0.7008	91.0	143.0	48.0	18.00
R45345/64	45/64	17.86	0.7031	91.0	143.0	48.0	18.00
R45318.0	–	18.00	0.7087	91.0	143.0	48.0	18.00
R45323/32	23/32	18.26	0.7189	99.0	143.0	48.0	20.00
R45318.5	–	18.50	0.7283	99.0	153.0	50.0	20.00
R45347/64	47/64	18.65	0.7343	99.0	153.0	50.0	20.00
R45319.0	–	19.00	0.7480	99.0	153.0	50.0	20.00
R4533/4	3/4	19.05	0.7500	99.0	153.0	50.0	20.00
R45319.5	–	19.50	0.7677	99.0	153.0	50.0	20.00
R45319.8	–	19.80	0.7795	99.0	153.0	50.0	20.00
R45320.0	–	20.00	0.7874	99.0	153.0	50.0	20.00

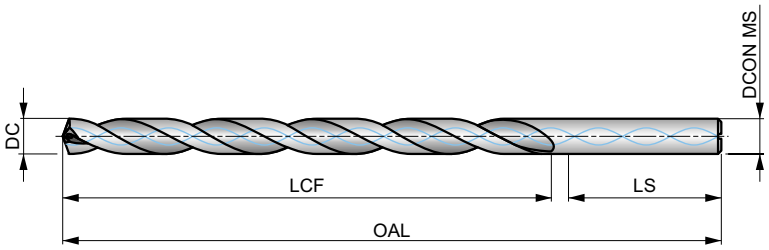
R459

DORMER

FORCE X Solid Carbide 8XD Drill with Coolant Feed, TiAlN Coated

High performance drill, able to produce high quality and accurate holes at high speeds and feeds (H9 hole tolerance). Self centering 140°, 4-facet split point and CTW flute construction for enhanced penetration rates. Coolant holes to enhance chip evacuation. TiAlN coating increases surface hardness and improves tool life.

FORCE X



HM	DORMER	8×D
140°	TiAlN	DIN 6535HA
CTW		DC m7

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 65.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 143 V	■ 160 V	■ 166 V	■ 122 V	■ 108 U	■ 95 U	■ 106 U	■ 86 U	■ 72 U	■ 63 U	■ 54 U	■ 44 T	◪ 60 V	◪ 51 V
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
◪ 54 V	◪ 44 V	◪ 37 U	◪ 33 V	◪ 28 V	◪ 26 V	◪ 24 U	◪ 21 U	■ 88 W	■ 65 W	■ 49 W	■ 78 V	■ 64 V	■ 51 V
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■ 70 V	■ 54 V	■ 43 V	■ 65 V	■ 49 V	■ 36 V	■ 30 V	■ 26 V	■ 73 V	■ 55 V	■ 42 V	◪ 200 W	◪ 150 W	■ 100 W
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**								
■ 246 V	■ 222 V	■ 160 V	◪ 298 V	◪ 176 V	◪ 88 V								

DCON MS tolerance h6.

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	LS [mm]	DCON MS [mm]
R4593.0	–	3.00	0.1181	37.0	79.0	36.0	6.00
R4593.1	–	3.10	0.1220	37.0	79.0	36.0	6.00
R4591/8	1/8	3.18	0.1250	37.0	79.0	36.0	6.00
R4593.2	–	3.20	0.1260	37.0	79.0	36.0	6.00
R4593.3	–	3.30	0.1299	37.0	79.0	36.0	6.00
R4593.4	–	3.40	0.1339	37.0	79.0	36.0	6.00
R4593.5	–	3.50	0.1378	37.0	79.0	36.0	6.00
R4599/64	9/64	3.57	0.1406	37.0	79.0	36.0	6.00
R4593.6	–	3.60	0.1417	37.0	79.0	36.0	6.00
R4593.7	–	3.70	0.1457	37.0	79.0	36.0	6.00
R4593.8	–	3.80	0.1496	48.0	90.0	36.0	6.00
R4593.9	–	3.90	0.1535	48.0	90.0	36.0	6.00
R4595/32	5/32	3.97	0.1563	48.0	90.0	36.0	6.00
R4594.0	–	4.00	0.1575	48.0	90.0	36.0	6.00
R4594.1	–	4.10	0.1614	48.0	90.0	36.0	6.00
R4594.2	–	4.20	0.1654	48.0	90.0	36.0	6.00
R4594.3	–	4.30	0.1693	48.0	90.0	36.0	6.00
R45911/64	11/64	4.37	0.1719	48.0	90.0	36.0	6.00
R4594.4	–	4.40	0.1732	48.0	90.0	36.0	6.00
R4594.5	–	4.50	0.1772	48.0	90.0	36.0	6.00
R4594.6	–	4.60	0.1811	48.0	90.0	36.0	6.00
R4594.7	–	4.70	0.1850	62.0	104.0	36.0	6.00
R4593/16	3/16	4.76	0.1875	62.0	104.0	36.0	6.00
R4594.8	–	4.80	0.1890	62.0	104.0	36.0	6.00
R4594.9	–	4.90	0.1929	62.0	104.0	36.0	6.00

Product	DC	DC	DC	LCF	OAL	LS	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]	[mm]
R4595.0	–	5.00	0.1969	62.0	104.0	36.0	6.00
R4595.1	–	5.10	0.2008	62.0	104.0	36.0	6.00
R45913/64	13/64	5.16	0.2031	62.0	104.0	36.0	6.00
R4595.2	–	5.20	0.2047	62.0	104.0	36.0	6.00
R4595.3	–	5.30	0.2087	62.0	104.0	36.0	6.00
R4595.4	–	5.40	0.2126	62.0	104.0	36.0	6.00
R4595.5	–	5.50	0.2165	62.0	104.0	36.0	6.00
R4597/32	7/32	5.56	0.2188	62.0	104.0	36.0	6.00
R4595.6	–	5.60	0.2205	62.0	104.0	36.0	6.00
R4595.7	–	5.70	0.2244	62.0	104.0	36.0	6.00
R4595.8	–	5.80	0.2283	62.0	104.0	36.0	6.00
R4595.9	–	5.90	0.2323	62.0	104.0	36.0	6.00
R45915/64	15/64	5.95	0.2344	62.0	104.0	36.0	6.00
R4596.0	–	6.00	0.2362	62.0	104.0	36.0	6.00
R4596.1	–	6.10	0.2402	84.0	126.0	36.0	8.00
R4596.2	–	6.20	0.2441	84.0	126.0	36.0	8.00
R4596.3	–	6.30	0.2480	84.0	126.0	36.0	8.00
R4591/4	1/4	6.35	0.2500	84.0	126.0	36.0	8.00
R4596.4	–	6.40	0.2520	84.0	126.0	36.0	8.00
R4596.5	–	6.50	0.2559	84.0	126.0	36.0	8.00
R4596.6	–	6.60	0.2598	84.0	126.0	36.0	8.00
R4596.7	–	6.70	0.2638	84.0	126.0	36.0	8.00
R45917/64	17/64	6.75	0.2656	84.0	126.0	36.0	8.00
R4596.8	–	6.80	0.2677	84.0	126.0	36.0	8.00
R4596.9	–	6.90	0.2717	84.0	126.0	36.0	8.00
R4597.0	–	7.00	0.2756	84.0	126.0	36.0	8.00
R4597.1	–	7.10	0.2795	84.0	126.0	36.0	8.00
R4599/32	9/32	7.14	0.2813	84.0	126.0	36.0	8.00
R4597.2	–	7.20	0.2835	84.0	126.0	36.0	8.00
R4597.3	–	7.30	0.2874	84.0	126.0	36.0	8.00
R4597.4	–	7.40	0.2913	84.0	126.0	36.0	8.00
R4597.5	–	7.50	0.2953	84.0	126.0	36.0	8.00
R45919/64	19/64	7.54	0.2969	84.0	126.0	36.0	8.00
R4597.6	–	7.60	0.2992	84.0	126.0	36.0	8.00
R4597.7	–	7.70	0.3031	84.0	126.0	36.0	8.00
R4597.8	–	7.80	0.3071	84.0	126.0	36.0	8.00
R4597.9	–	7.90	0.3110	84.0	126.0	36.0	8.00
R4595/16	5/16	7.94	0.3125	84.0	126.0	36.0	8.00
R4598.0	–	8.00	0.3150	84.0	126.0	36.0	8.00
R4598.1	–	8.10	0.3189	106.0	152.0	40.0	10.00
R4598.2	–	8.20	0.3228	106.0	152.0	40.0	10.00
R4598.3	–	8.30	0.3268	106.0	152.0	40.0	10.00
R45921/64	21/64	8.33	0.3281	106.0	152.0	40.0	10.00
R4598.4	–	8.40	0.3307	106.0	152.0	40.0	10.00
R4598.5	–	8.50	0.3346	106.0	152.0	40.0	10.00
R4598.6	–	8.60	0.3386	106.0	152.0	40.0	10.00
R4598.7	–	8.70	0.3425	106.0	152.0	40.0	10.00
R45911/32	11/32	8.73	0.3438	106.0	152.0	40.0	10.00
R4598.8	–	8.80	0.3465	106.0	152.0	40.0	10.00
R4598.9	–	8.90	0.3504	106.0	152.0	40.0	10.00
R4599.0	–	9.00	0.3543	106.0	152.0	40.0	10.00
R4599.1	–	9.10	0.3583	106.0	152.0	40.0	10.00
R45923/64	23/64	9.13	0.3594	106.0	152.0	40.0	10.00
R4599.2	–	9.20	0.3622	106.0	152.0	40.0	10.00
R4599.3	–	9.30	0.3661	106.0	152.0	40.0	10.00
R4599.4	–	9.40	0.3701	106.0	152.0	40.0	10.00
R4599.5	–	9.50	0.3740	106.0	152.0	40.0	10.00
R4593/8	3/8	9.53	0.3750	106.0	152.0	40.0	10.00
R4599.6	–	9.60	0.3780	106.0	152.0	40.0	10.00
R4599.7	–	9.70	0.3819	106.0	152.0	40.0	10.00
R4599.8	–	9.80	0.3858	106.0	152.0	40.0	10.00
R4599.9	–	9.90	0.3898	106.0	152.0	40.0	10.00

Product	DC	DC	DC	LCF	OAL	LS	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]	[mm]
R45925/64	25/64	9.92	0.3906	106.0	152.0	40.0	10.00
R45910.0	–	10.00	0.3937	106.0	152.0	40.0	10.00
R45910.2	–	10.20	0.4016	128.0	180.0	45.0	12.00
R45910.3	–	10.30	0.4055	128.0	180.0	45.0	12.00
R45913/32	13/32	10.32	0.4063	128.0	180.0	45.0	12.00
R45910.4	–	10.40	0.4094	128.0	180.0	45.0	12.00
R45910.5	–	10.50	0.4134	128.0	180.0	45.0	12.00
R45927/64	27/64	10.72	0.4219	128.0	180.0	45.0	12.00
R45910.8	–	10.80	0.4252	128.0	180.0	45.0	12.00
R45911.0	–	11.00	0.4331	128.0	180.0	45.0	12.00
R4597/16	7/16	11.11	0.4375	128.0	180.0	45.0	12.00
R45911.2	–	11.20	0.4409	128.0	180.0	45.0	12.00
R45911.3	–	11.30	0.4449	128.0	180.0	45.0	12.00
R45911.5	–	11.50	0.4528	128.0	180.0	45.0	12.00
R45929/64	29/64	11.51	0.4531	128.0	180.0	45.0	12.00
R45911.8	–	11.80	0.4646	128.0	180.0	45.0	12.00
R45915/32	15/32	11.91	0.4688	128.0	180.0	45.0	12.00
R45912.0	–	12.00	0.4724	128.0	180.0	45.0	12.00
R45912.2	–	12.20	0.4803	151.0	202.0	48.0	14.00
R45931/64	31/64	12.30	0.4844	151.0	202.0	48.0	14.00
R45912.5	–	12.50	0.4921	151.0	202.0	48.0	14.00
R4591/2	1/2	12.70	0.5000	151.0	202.0	48.0	14.00
R45912.8	–	12.80	0.5039	151.0	202.0	48.0	14.00
R45913.0	–	13.00	0.5118	151.0	202.0	48.0	14.00
R45933/64	33/64	13.10	0.5156	151.0	202.0	48.0	14.00
R45917/32	17/32	13.49	0.5313	151.0	202.0	48.0	14.00
R45913.5	–	13.50	0.5315	151.0	202.0	48.0	14.00
R45935/64	35/64	13.89	0.5469	151.0	202.0	48.0	14.00
R45914.0	–	14.00	0.5512	151.0	202.0	48.0	14.00
R45914.25	–	14.25	0.5610	172.0	227.0	48.0	16.00
R4599/16	9/16	14.29	0.5625	172.0	227.0	48.0	16.00
R45914.5	–	14.50	0.5709	172.0	227.0	48.0	16.00
R45937/64	37/64	14.68	0.5781	172.0	227.0	48.0	16.00
R45915.0	–	15.00	0.5906	172.0	227.0	48.0	16.00
R45919/32	19/32	15.08	0.5938	172.0	227.0	48.0	16.00
R45915.1	–	15.10	0.5945	172.0	227.0	48.0	16.00
R45939/64	39/64	15.48	0.6094	172.0	227.0	48.0	16.00
R45915.5	–	15.50	0.6102	172.0	227.0	48.0	16.00
R4595/8	5/8	15.88	0.6250	172.0	227.0	48.0	16.00
R45916.0	–	16.00	0.6299	172.0	227.0	48.0	16.00

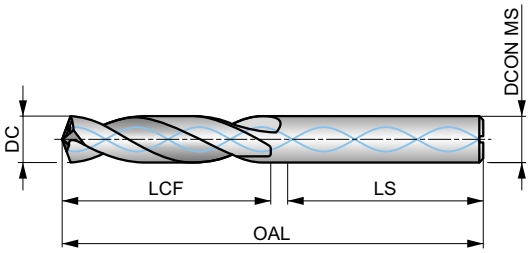
R467

DORMER

FORCE M Solid Carbide 3XD Drill with Coolant Feed, TiAlN Coated

High performance drill, able to produce high quality and accurate holes at high speeds and feeds (H9 hole tolerance in stainless steel and heat resistant materials). A 140°, 4-facet split point and CTW flute construction. Coolant holes enhance chip evacuation. TiAlN coating increases surface hardness and improves tool life.

FORCE M



HM	DIN 6537K	3×D
140°	TiAlN	DIN 6535HA
CTW		DC m7

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 65.

M1.1	M1.2	M2.1	M2.2	M2.3	M3.1	M3.2	M3.3	M4.1	M4.2	S1.1	S1.2	S1.3	S2.1
■117 G	■99 G	■104 G	■85 G	■71 E	■87 G	■75 G	■68 F	■60 F	■52 E	■55 V	■45 V	■40 U	◪60 U

S2.2	S3.1	S3.2	S4.1	S4.2
◪56 U	◪45 U	◪40 U	◪35 U	◪32 U

DCON MS tolerance h6.

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	LS [mm]	DCON MS [mm]
R4673.0	–	3.00	0.1181	20.0	62.0	36.0	6.00
R4673.1	–	3.10	0.1220	20.0	62.0	36.0	6.00
R4671/8	1/8	3.18	0.1250	20.0	62.0	36.0	6.00
R4673.2	–	3.20	0.1260	20.0	62.0	36.0	6.00
R4673.3	–	3.30	0.1299	20.0	62.0	36.0	6.00
R4673.4	–	3.40	0.1339	20.0	62.0	36.0	6.00
R467N29	N29	3.45	0.1360	20.0	62.0	36.0	6.00
R4673.5	–	3.50	0.1378	20.0	62.0	36.0	6.00
R4679/64	9/64	3.57	0.1406	20.0	62.0	36.0	6.00
R4673.6	–	3.60	0.1417	20.0	62.0	36.0	6.00
R4673.7	–	3.70	0.1457	20.0	62.0	36.0	6.00
R4673.8	–	3.80	0.1496	24.0	66.0	36.0	6.00
R4673.9	–	3.90	0.1535	24.0	66.0	36.0	6.00
R4675/32	5/32	3.97	0.1563	24.0	66.0	36.0	6.00
R4674.0	–	4.00	0.1575	24.0	66.0	36.0	6.00
R4674.05	–	4.05	0.1594	24.0	66.0	36.0	6.00
R4674.1	–	4.10	0.1614	24.0	66.0	36.0	6.00
R4674.2	–	4.20	0.1654	24.0	66.0	36.0	6.00
R4674.3	–	4.30	0.1693	24.0	66.0	36.0	6.00
R46711/64	11/64	4.37	0.1719	24.0	66.0	36.0	6.00
R4674.4	–	4.40	0.1732	24.0	66.0	36.0	6.00
R4674.5	–	4.50	0.1772	24.0	66.0	36.0	6.00
R4674.6	–	4.60	0.1811	24.0	66.0	36.0	6.00
R4674.7	–	4.70	0.1850	24.0	66.0	36.0	6.00
R4673/16	3/16	4.76	0.1875	28.0	66.0	36.0	6.00
R4674.8	–	4.80	0.1890	28.0	66.0	36.0	6.00
R4674.9	–	4.90	0.1929	28.0	66.0	36.0	6.00
R4675.0	–	5.00	0.1969	28.0	66.0	36.0	6.00
R4675.05	–	5.05	0.1988	28.0	66.0	36.0	6.00

Product	DC	DC	DC	LCF	OAL	LS	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]	[mm]
R4675.1	–	5.10	0.2008	28.0	66.0	36.0	6.00
R467N7	N7	5.11	0.2010	28.0	66.0	36.0	6.00
R46713/64	13/64	5.16	0.2031	28.0	66.0	36.0	6.00
R4675.2	–	5.20	0.2047	28.0	66.0	36.0	6.00
R467N5	N5	5.22	0.2055	28.0	66.0	36.0	6.00
R4675.3	–	5.30	0.2087	28.0	66.0	36.0	6.00
R4675.4	–	5.40	0.2126	28.0	66.0	36.0	6.00
R4675.5	–	5.50	0.2165	28.0	66.0	36.0	6.00
R4677/32	7/32	5.56	0.2188	28.0	66.0	36.0	6.00
R4675.6	–	5.60	0.2205	28.0	66.0	36.0	6.00
R4675.7	–	5.70	0.2244	28.0	66.0	36.0	6.00
R4675.8	–	5.80	0.2283	28.0	66.0	36.0	6.00
R4675.9	–	5.90	0.2323	28.0	66.0	36.0	6.00
R46715/64	15/64	5.95	0.2344	28.0	66.0	36.0	6.00
R4676.0	–	6.00	0.2362	28.0	66.0	36.0	6.00
R4676.05	–	6.05	0.2382	34.0	79.0	36.0	8.00
R4676.1	–	6.10	0.2402	34.0	79.0	36.0	8.00
R4676.2	–	6.20	0.2441	34.0	79.0	36.0	8.00
R4676.3	–	6.30	0.2480	34.0	79.0	36.0	8.00
R4671/4	1/4	6.35	0.2500	34.0	79.0	36.0	8.00
R4676.4	–	6.40	0.2520	34.0	79.0	36.0	8.00
R4676.5	–	6.50	0.2559	34.0	79.0	36.0	8.00
R4676.6	–	6.60	0.2598	34.0	79.0	36.0	8.00
R4676.7	–	6.70	0.2638	34.0	79.0	36.0	8.00
R46717/64	17/64	6.75	0.2656	34.0	79.0	36.0	8.00
R4676.8	–	6.80	0.2677	34.0	79.0	36.0	8.00
R4676.9	–	6.90	0.2717	34.0	79.0	36.0	8.00
R4677.0	–	7.00	0.2756	34.0	79.0	36.0	8.00
R4677.1	–	7.10	0.2795	41.0	79.0	36.0	8.00
R4679/32	9/32	7.14	0.2813	41.0	79.0	36.0	8.00
R4677.2	–	7.20	0.2835	41.0	79.0	36.0	8.00
R4677.3	–	7.30	0.2874	41.0	79.0	36.0	8.00
R4677.4	–	7.40	0.2913	41.0	79.0	36.0	8.00
R4677.5	–	7.50	0.2953	41.0	79.0	36.0	8.00
R46719/64	19/64	7.54	0.2969	41.0	79.0	36.0	8.00
R4677.6	–	7.60	0.2992	41.0	79.0	36.0	8.00
R4677.7	–	7.70	0.3031	41.0	79.0	36.0	8.00
R4677.8	–	7.80	0.3071	41.0	79.0	36.0	8.00
R4677.9	–	7.90	0.3110	41.0	79.0	36.0	8.00
R4675/16	5/16	7.94	0.3125	41.0	79.0	36.0	8.00
R4678.0	–	8.00	0.3150	41.0	79.0	36.0	8.00
R4678.05	–	8.05	0.3169	47.0	89.0	40.0	10.00
R4678.1	–	8.10	0.3189	47.0	89.0	40.0	10.00
R4678.2	–	8.20	0.3228	47.0	89.0	40.0	10.00
R4678.3	–	8.30	0.3268	47.0	89.0	40.0	10.00
R46721/64	21/64	8.33	0.3281	47.0	89.0	40.0	10.00
R4678.4	–	8.40	0.3307	47.0	89.0	40.0	10.00
R4678.5	–	8.50	0.3346	47.0	89.0	40.0	10.00
R4678.6	–	8.60	0.3386	47.0	89.0	40.0	10.00
R4678.7	–	8.70	0.3425	47.0	89.0	40.0	10.00
R46711/32	11/32	8.73	0.3438	47.0	89.0	40.0	10.00
R4678.8	–	8.80	0.3465	47.0	89.0	40.0	10.00
R4678.9	–	8.90	0.3504	47.0	89.0	40.0	10.00
R4679.0	–	9.00	0.3543	47.0	89.0	40.0	10.00
R4679.1	–	9.10	0.3583	47.0	89.0	40.0	10.00
R46723/64	23/64	9.13	0.3594	47.0	89.0	40.0	10.00
R4679.2	–	9.20	0.3622	47.0	89.0	40.0	10.00
R4679.3	–	9.30	0.3661	47.0	89.0	40.0	10.00
R4679.4	–	9.40	0.3701	47.0	89.0	40.0	10.00
R4679.5	–	9.50	0.3740	47.0	89.0	40.0	10.00
R4673/8	3/8	9.53	0.3750	47.0	89.0	40.0	10.00
R4679.6	–	9.60	0.3780	47.0	89.0	40.0	10.00

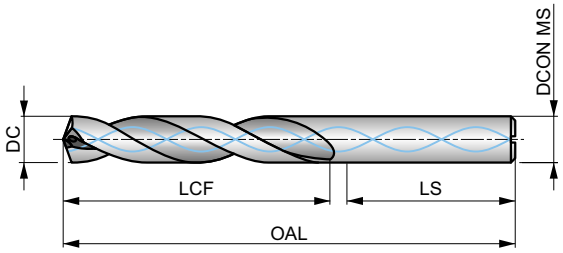
Product	DC	DC	DC	LCF	OAL	LS	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]	[mm]
R4679.7	–	9.70	0.3819	47.0	89.0	40.0	10.00
R4679.8	–	9.80	0.3858	47.0	89.0	40.0	10.00
R4679.9	–	9.90	0.3898	47.0	89.0	40.0	10.00
R46725/64	25/64	9.92	0.3906	47.0	89.0	40.0	10.00
R46710.0	–	10.00	0.3937	47.0	89.0	40.0	10.00
R46710.05	–	10.05	0.3957	55.0	102.0	45.0	12.00
R46710.1	–	10.10	0.3976	55.0	102.0	45.0	12.00
R46710.2	–	10.20	0.4016	55.0	102.0	45.0	12.00
R46710.3	–	10.30	0.4055	55.0	102.0	45.0	12.00
R46713/32	13/32	10.32	0.4063	55.0	102.0	45.0	12.00
R46710.4	–	10.40	0.4094	55.0	102.0	45.0	12.00
R46710.5	–	10.50	0.4134	55.0	102.0	45.0	12.00
R46710.6	–	10.60	0.4173	55.0	102.0	45.0	12.00
R46727/64	27/64	10.72	0.4219	55.0	102.0	45.0	12.00
R46710.8	–	10.80	0.4252	55.0	102.0	45.0	12.00
R46710.9	–	10.90	0.4291	55.0	102.0	45.0	12.00
R46711.0	–	11.00	0.4331	55.0	102.0	45.0	12.00
R4677/16	7/16	11.11	0.4375	55.0	102.0	45.0	12.00
R46711.2	–	11.20	0.4409	55.0	102.0	45.0	12.00
R46711.3	–	11.30	0.4449	55.0	102.0	45.0	12.00
R46711.4	–	11.40	0.4488	55.0	102.0	45.0	12.00
R46711.5	–	11.50	0.4528	55.0	102.0	45.0	12.00
R46729/64	29/64	11.51	0.4531	55.0	102.0	45.0	12.00
R46711.6	–	11.60	0.4567	55.0	102.0	45.0	12.00
R46711.8	–	11.80	0.4646	55.0	102.0	45.0	12.00
R46715/32	15/32	11.91	0.4688	55.0	102.0	45.0	12.00
R46712.0	–	12.00	0.4724	55.0	102.0	45.0	12.00
R46712.05	–	12.05	0.4744	60.0	107.0	45.0	14.00
R46712.1	–	12.10	0.4764	60.0	107.0	45.0	14.00
R46712.2	–	12.20	0.4803	60.0	107.0	45.0	14.00
R46731/64	31/64	12.30	0.4844	60.0	107.0	45.0	14.00
R46712.5	–	12.50	0.4921	60.0	107.0	45.0	14.00
R46712.7	–	12.70	0.5000	60.0	107.0	45.0	14.00
R4671/2	1/2	12.70	0.5000	60.0	107.0	45.0	14.00
R46712.8	–	12.80	0.5039	60.0	107.0	45.0	14.00
R46713.0	–	13.00	0.5118	60.0	107.0	45.0	14.00
R46733/64	33/64	13.10	0.5156	60.0	107.0	45.0	14.00
R46713.3	–	13.30	0.5236	60.0	107.0	45.0	14.00
R46717/32	17/32	13.49	0.5313	60.0	107.0	45.0	14.00
R46713.5	–	13.50	0.5315	60.0	107.0	45.0	14.00
R46713.8	–	13.80	0.5433	60.0	107.0	45.0	14.00
R46735/64	35/64	13.89	0.5469	60.0	107.0	45.0	14.00
R46714.0	–	14.00	0.5512	60.0	107.0	45.0	14.00
R46714.25	–	14.25	0.5610	65.0	115.0	48.0	16.00
R4679/16	9/16	14.29	0.5625	65.0	115.0	48.0	16.00
R46714.5	–	14.50	0.5709	65.0	115.0	48.0	16.00
R46737/64	37/64	14.68	0.5781	65.0	115.0	48.0	16.00
R46714.8	–	14.80	0.5827	65.0	115.0	48.0	16.00
R46715.0	–	15.00	0.5906	65.0	115.0	48.0	16.00
R46719/32	19/32	15.08	0.5938	65.0	115.0	48.0	16.00
R46715.1	–	15.10	0.5945	65.0	115.0	48.0	16.00
R46715.3	–	15.30	0.6024	65.0	115.0	48.0	16.00
R46739/64	39/64	15.48	0.6094	65.0	115.0	48.0	16.00
R46715.5	–	15.50	0.6102	65.0	115.0	48.0	16.00
R46715.8	–	15.80	0.6220	65.0	115.0	48.0	16.00
R4675/8	5/8	15.88	0.6250	65.0	115.0	48.0	16.00
R46716.0	–	16.00	0.6299	65.0	115.0	48.0	16.00

R463

FORCE M Solid Carbide 5XD Drill with Coolant Feed. TiAlN Coated

High performance drill, able to produce high quality and accurate holes at high speeds and feeds (H9 hole tolerance in stainless steel and heat resistant materials). A 140°, 4-facet split point and CTW flute construction. Coolant holes enhance chip evacuation. TiAlN coating increases surface hardness and improves tool life.

FORCE M



HM	DIN 6537L	5×D
140°	TiAlN	DIN 6535HA
CTW		DC m7

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 65.

M1.1	M1.2	M2.1	M2.2	M2.3	M3.1	M3.2	M3.3	M4.1	M4.2	S1.1	S1.2	S1.3	S2.1
■111 G	■94 G	■99 G	■81 G	■67 E	■83 G	■71 G	■65 F	■57 F	■49 E	■52 V	■43 V	■38 U	◪57 U

S2.2	S3.1	S3.2	S4.1	S4.2
◪53 U	◪43 U	◪38 U	◪33 U	◪30 U

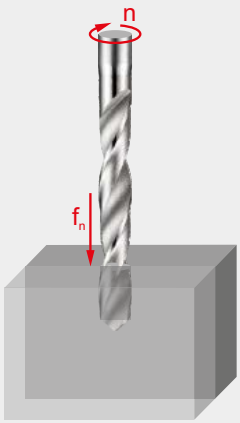
DCON MS tolerance h6.

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	LS [mm]	DCON MS [mm]
R4633.0	–	3.00	0.1181	28.0	66.0	36.0	6.00
R4633.1	–	3.10	0.1220	28.0	66.0	36.0	6.00
R4631/8	1/8	3.18	0.1250	28.0	66.0	36.0	6.00
R4633.2	–	3.20	0.1260	28.0	66.0	36.0	6.00
R4633.3	–	3.30	0.1299	28.0	66.0	36.0	6.00
R4633.4	–	3.40	0.1339	28.0	66.0	36.0	6.00
R463N29	N29	3.45	0.1360	28.0	66.0	36.0	6.00
R4633.5	–	3.50	0.1378	28.0	66.0	36.0	6.00
R4639/64	9/64	3.57	0.1406	28.0	66.0	36.0	6.00
R4633.6	–	3.60	0.1417	28.0	66.0	36.0	6.00
R4633.7	–	3.70	0.1457	28.0	66.0	36.0	6.00
R4633.8	–	3.80	0.1496	36.0	74.0	36.0	6.00
R4633.9	–	3.90	0.1535	36.0	74.0	36.0	6.00
R4635/32	5/32	3.97	0.1563	36.0	74.0	36.0	6.00
R4634.0	–	4.00	0.1575	36.0	74.0	36.0	6.00
R4634.05	–	4.05	0.1594	36.0	74.0	36.0	6.00
R4634.1	–	4.10	0.1614	36.0	74.0	36.0	6.00
R4634.2	–	4.20	0.1654	36.0	74.0	36.0	6.00
R4634.3	–	4.30	0.1693	36.0	74.0	36.0	6.00
R46311/64	11/64	4.37	0.1719	36.0	74.0	36.0	6.00
R4634.4	–	4.40	0.1732	36.0	74.0	36.0	6.00
R4634.5	–	4.50	0.1772	36.0	74.0	36.0	6.00
R4634.6	–	4.60	0.1811	36.0	74.0	36.0	6.00
R4634.7	–	4.70	0.1850	36.0	74.0	36.0	6.00
R4633/16	3/16	4.76	0.1875	44.0	82.0	36.0	6.00
R4634.8	–	4.80	0.1890	44.0	82.0	36.0	6.00
R4634.9	–	4.90	0.1929	44.0	82.0	36.0	6.00
R4635.0	–	5.00	0.1969	44.0	82.0	36.0	6.00
R4635.05	–	5.05	0.1988	44.0	82.0	36.0	6.00

Product	DC	DC	DC	LCF	OAL	LS	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]	[mm]
R4635.1	–	5.10	0.2008	44.0	82.0	36.0	6.00
R463N7	N7	5.11	0.2010	44.0	82.0	36.0	6.00
R46313/64	13/64	5.16	0.2031	44.0	82.0	36.0	6.00
R4635.2	–	5.20	0.2047	44.0	82.0	36.0	6.00
R463N5	N5	5.22	0.2055	44.0	82.0	36.0	6.00
R4635.3	–	5.30	0.2087	44.0	82.0	36.0	6.00
R4635.4	–	5.40	0.2126	44.0	82.0	36.0	6.00
R4635.5	–	5.50	0.2165	44.0	82.0	36.0	6.00
R4637/32	7/32	5.56	0.2188	44.0	82.0	36.0	6.00
R4635.6	–	5.60	0.2205	44.0	82.0	36.0	6.00
R4635.7	–	5.70	0.2244	44.0	82.0	36.0	6.00
R4635.8	–	5.80	0.2283	44.0	82.0	36.0	6.00
R4635.9	–	5.90	0.2323	44.0	82.0	36.0	6.00
R46315/64	15/64	5.95	0.2344	44.0	82.0	36.0	6.00
R4636.0	–	6.00	0.2362	44.0	82.0	36.0	6.00
R4636.05	–	6.05	0.2382	53.0	91.0	36.0	8.00
R4636.1	–	6.10	0.2402	53.0	91.0	36.0	8.00
R4636.2	–	6.20	0.2441	53.0	91.0	36.0	8.00
R4636.3	–	6.30	0.2480	53.0	91.0	36.0	8.00
R4631/4	1/4	6.35	0.2500	53.0	91.0	36.0	8.00
R4636.4	–	6.40	0.2520	53.0	91.0	36.0	8.00
R4636.5	–	6.50	0.2559	53.0	91.0	36.0	8.00
R4636.6	–	6.60	0.2598	53.0	91.0	36.0	8.00
R4636.7	–	6.70	0.2638	53.0	91.0	36.0	8.00
R46317/64	17/64	6.75	0.2656	53.0	91.0	36.0	8.00
R4636.8	–	6.80	0.2677	53.0	91.0	36.0	8.00
R4636.9	–	6.90	0.2717	53.0	91.0	36.0	8.00
R4637.0	–	7.00	0.2756	53.0	91.0	36.0	8.00
R4637.1	–	7.10	0.2795	53.0	91.0	36.0	8.00
R4639/32	9/32	7.14	0.2813	53.0	91.0	36.0	8.00
R4637.2	–	7.20	0.2835	53.0	91.0	36.0	8.00
R4637.3	–	7.30	0.2874	53.0	91.0	36.0	8.00
R4637.4	–	7.40	0.2913	53.0	91.0	36.0	8.00
R4637.5	–	7.50	0.2953	53.0	91.0	36.0	8.00
R46319/64	19/64	7.54	0.2969	53.0	91.0	36.0	8.00
R4637.6	–	7.60	0.2992	53.0	91.0	36.0	8.00
R4637.7	–	7.70	0.3031	53.0	91.0	36.0	8.00
R4637.8	–	7.80	0.3071	53.0	91.0	36.0	8.00
R4637.9	–	7.90	0.3110	53.0	91.0	36.0	8.00
R4635/16	5/16	7.94	0.3125	53.0	91.0	36.0	8.00
R4638.0	–	8.00	0.3150	53.0	91.0	36.0	8.00
R4638.05	–	8.05	0.3169	61.0	103.0	40.0	10.00
R4638.1	–	8.10	0.3189	61.0	103.0	40.0	10.00
R4638.2	–	8.20	0.3228	61.0	103.0	40.0	10.00
R4638.3	–	8.30	0.3268	61.0	103.0	40.0	10.00
R46321/64	21/64	8.33	0.3281	61.0	103.0	40.0	10.00
R4638.4	–	8.40	0.3307	61.0	103.0	40.0	10.00
R4638.5	–	8.50	0.3346	61.0	103.0	40.0	10.00
R4638.6	–	8.60	0.3386	61.0	103.0	40.0	10.00
R4638.7	–	8.70	0.3425	61.0	103.0	40.0	10.00
R46311/32	11/32	8.73	0.3438	61.0	103.0	40.0	10.00
R4638.8	–	8.80	0.3465	61.0	103.0	40.0	10.00
R4638.9	–	8.90	0.3504	61.0	103.0	40.0	10.00
R4639.0	–	9.00	0.3543	61.0	103.0	40.0	10.00
R4639.1	–	9.10	0.3583	61.0	103.0	40.0	10.00
R46323/64	23/64	9.13	0.3594	61.0	103.0	40.0	10.00
R4639.2	–	9.20	0.3622	61.0	103.0	40.0	10.00
R4639.3	–	9.30	0.3661	61.0	103.0	40.0	10.00
R4639.4	–	9.40	0.3701	61.0	103.0	40.0	10.00
R4639.5	–	9.50	0.3740	61.0	103.0	40.0	10.00
R4633/8	3/8	9.53	0.3750	61.0	103.0	40.0	10.00
R4639.6	–	9.60	0.3780	61.0	103.0	40.0	10.00

Product	DC	DC	DC	LCF	OAL	LS	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]	[mm]
R4639.7	–	9.70	0.3819	61.0	103.0	40.0	10.00
R4639.8	–	9.80	0.3858	61.0	103.0	40.0	10.00
R4639.9	–	9.90	0.3898	61.0	103.0	40.0	10.00
R46325/64	25/64	9.92	0.3906	61.0	103.0	40.0	10.00
R46310.0	–	10.00	0.3937	61.0	103.0	40.0	10.00
R46310.05	–	10.05	0.3957	70.0	118.0	45.0	12.00
R46310.1	–	10.10	0.3976	70.0	118.0	45.0	12.00
R46310.2	–	10.20	0.4016	70.0	118.0	45.0	12.00
R46310.3	–	10.30	0.4055	70.0	118.0	45.0	12.00
R46313/32	13/32	10.32	0.4063	70.0	118.0	45.0	12.00
R46310.4	–	10.40	0.4094	70.0	118.0	45.0	12.00
R46310.5	–	10.50	0.4134	70.0	118.0	45.0	12.00
R46310.6	–	10.60	0.4173	70.0	118.0	45.0	12.00
R46327/64	27/64	10.72	0.4219	70.0	118.0	45.0	12.00
R46310.8	–	10.80	0.4252	70.0	118.0	45.0	12.00
R46310.9	–	10.90	0.4291	70.0	118.0	45.0	12.00
R46311.0	–	11.00	0.4331	70.0	118.0	45.0	12.00
R4637/16	7/16	11.11	0.4375	70.0	118.0	45.0	12.00
R46311.2	–	11.20	0.4409	70.0	118.0	45.0	12.00
R46311.3	–	11.30	0.4449	70.0	118.0	45.0	12.00
R46311.4	–	11.40	0.4488	70.0	118.0	45.0	12.00
R46311.5	–	11.50	0.4528	70.0	118.0	45.0	12.00
R46329/64	29/64	11.51	0.4531	70.0	118.0	45.0	12.00
R46311.6	–	11.60	0.4567	70.0	118.0	45.0	12.00
R46311.8	–	11.80	0.4646	70.0	118.0	45.0	12.00
R46315/32	15/32	11.91	0.4688	70.0	118.0	45.0	12.00
R46312.0	–	12.00	0.4724	70.0	118.0	45.0	12.00
R46312.05	–	12.05	0.4744	76.0	124.0	45.0	14.00
R46312.2	–	12.20	0.4803	76.0	124.0	45.0	14.00
R46331/64	31/64	12.30	0.4844	76.0	124.0	45.0	14.00
R46312.5	–	12.50	0.4921	76.0	124.0	45.0	14.00
R46312.7	–	12.70	0.5000	76.0	124.0	45.0	14.00
R4631/2	1/2	12.70	0.5000	76.0	124.0	45.0	14.00
R46312.8	–	12.80	0.5039	76.0	124.0	45.0	14.00
R46313.0	–	13.00	0.5118	76.0	124.0	45.0	14.00
R46333/64	33/64	13.10	0.5156	76.0	124.0	45.0	14.00
R46313.3	–	13.30	0.5236	76.0	124.0	45.0	14.00
R46317/32	17/32	13.49	0.5313	76.0	124.0	45.0	14.00
R46313.5	–	13.50	0.5315	76.0	124.0	45.0	14.00
R46313.8	–	13.80	0.5433	76.0	124.0	45.0	14.00
R46335/64	35/64	13.89	0.5469	76.0	124.0	45.0	14.00
R46314.0	–	14.00	0.5512	76.0	124.0	45.0	14.00
R46314.25	–	14.25	0.5610	82.0	133.0	48.0	16.00
R4639/16	9/16	14.29	0.5625	82.0	133.0	48.0	16.00
R46314.5	–	14.50	0.5709	82.0	133.0	48.0	16.00
R46337/64	37/64	14.68	0.5781	82.0	133.0	48.0	16.00
R46314.8	–	14.80	0.5827	82.0	133.0	48.0	16.00
R46315.0	–	15.00	0.5906	82.0	133.0	48.0	16.00
R46319/32	19/32	15.08	0.5938	82.0	133.0	48.0	16.00
R46315.1	–	15.10	0.5945	82.0	133.0	48.0	16.00
R46315.3	–	15.30	0.6024	82.0	133.0	48.0	16.00
R46339/64	39/64	15.48	0.6094	82.0	133.0	48.0	16.00
R46315.5	–	15.50	0.6102	82.0	133.0	48.0	16.00
R46315.8	–	15.80	0.6220	82.0	133.0	48.0	16.00
R4635/8	5/8	15.88	0.6250	82.0	133.0	48.0	16.00
R46316.0	–	16.00	0.6299	82.0	133.0	48.0	16.00

DRILLING FEED RATE CHART



Feed per revolution (f_n in mm/rev)
Depending on the working conditions it might be necessary to adjust these values ± 25 %.

How to use this table to find the feed per revolution (f_n):

1. Find your Alpha Code on the product page (example: 46J, "J" is the Alpha Code).
2. Find the closest diameter for your cutting application in the top row of the table.
3. Find your Alpha Code in the left column of the table.
4. The intersection (cell) of the Diameter and Alpha Code is the feed per revolution (f_n).

		ø DC [mm]																	
		0.15	0.50	1.00	2.00	3.00	4.00	5.00	6.00	8.00	10.00	12.00	15.00	16.00	20.00	25.00	30.00	40.00	50.00	100.00
Feed rates	A	0.003	0.006	0.012	0.023	0.029	0.032	0.036	0.042	0.054	0.062	0.069	0.082	0.086	0.110	0.125	0.135	0.155	0.175	0.263
	B	0.004	0.007	0.014	0.028	0.037	0.041	0.046	0.053	0.067	0.080	0.090	0.103	0.108	0.135	0.153	0.165	0.188	0.208	0.312
	C	0.004	0.008	0.015	0.032	0.044	0.050	0.056	0.064	0.080	0.098	0.110	0.125	0.130	0.160	0.180	0.195	0.220	0.240	0.360
	D	0.004	0.008	0.016	0.038	0.053	0.060	0.068	0.078	0.098	0.119	0.130	0.149	0.155	0.188	0.210	0.228	0.253	0.275	0.413
	E	0.004	0.009	0.017	0.043	0.062	0.071	0.080	0.092	0.115	0.140	0.150	0.173	0.180	0.215	0.240	0.260	0.285	0.310	0.465
	F	0.005	0.009	0.018	0.050	0.073	0.084	0.095	0.109	0.138	0.165	0.178	0.202	0.210	0.248	0.275	0.295	0.320	0.343	0.515
	G	0.005	0.010	0.019	0.056	0.084	0.096	0.109	0.126	0.160	0.190	0.205	0.231	0.240	0.280	0.310	0.330	0.355	0.375	0.563
	H	0.005	0.010	0.020	0.066	0.102	0.116	0.130	0.150	0.190	0.228	0.243	0.271	0.280	0.320	0.355	0.375	0.398	0.418	0.627
	I	0.005	0.011	0.021	0.076	0.119	0.134	0.150	0.173	0.220	0.265	0.280	0.310	0.320	0.360	0.400	0.420	0.440	0.460	0.690
	J	0.006	0.012	0.024	0.084	0.135	0.152	0.170	0.197	0.250	0.298	0.315	0.349	0.360	0.405	0.445	0.465	0.485	0.503	0.755
	K	0.007	0.013	0.026	0.092	0.150	0.170	0.190	0.220	0.280	0.330	0.350	0.388	0.400	0.450	0.490	0.510	0.530	0.545	0.818
	L	0.007	0.014	0.028	0.101	0.165	0.186	0.208	0.240	0.305	0.360	0.385	0.419	0.430	0.485	0.525	0.545	0.568	0.588	0.882
	M	0.008	0.015	0.030	0.110	0.180	0.202	0.225	0.260	0.330	0.390	0.420	0.450	0.460	0.520	0.560	0.580	0.605	0.630	0.945
	N	0.008	0.016	0.032	0.119	0.195	0.218	0.242	0.280	0.355	0.420	0.455	0.481	0.490	0.555	0.595	0.615	0.642	0.672	1.008
	S	0.002	0.004	0.008	0.014	0.020	0.025	0.030	0.037	0.050	0.080	0.100	0.123	0.130	0.150	0.170	0.190	0.220	0.240	–
	T	0.004	0.008	0.015	0.028	0.040	0.050	0.060	0.070	0.090	0.110	0.130	0.160	0.170	0.190	0.210	0.230	0.260	0.275	–
	U	0.007	0.013	0.026	0.048	0.070	0.080	0.090	0.107	0.140	0.170	0.200	0.223	0.230	0.240	0.270	0.300	0.360	0.375	–
	V	0.010	0.019	0.038	0.069	0.100	0.115	0.130	0.153	0.200	0.250	0.280	0.310	0.320	0.340	0.400	0.440	0.510	0.530	–
	W	0.012	0.025	0.049	0.089	0.130	0.150	0.170	0.200	0.260	0.330	0.380	0.418	0.430	0.450	0.470	0.490	0.520	0.540	–
	X	0.014	0.028	0.056	0.103	0.150	0.180	0.210	0.250	0.330	0.420	0.480	0.533	0.550	0.580	–	–	–	–	–
	Y	0.017	0.034	0.068	0.124	0.180	0.220	0.260	0.317	0.430	0.550	0.700	0.700	0.700	0.740	–	–	–	–	–
	Z	0.024	0.047	0.094	0.172	0.250	0.325	0.400	0.533	0.800	1.000	1.100	1.175	1.200	1.200	–	–	–	–	–

HSS DRILLS

Tool materials

High Speed Steel	HSS	A medium-alloyed high speed steel that has good machinability and good performance. HSS exhibits hardness, toughness and wear resistance characteristics that make it attractive in a wide range of applications, for example in drills and taps.
Cobalt High Speed Steel	HSS-E	This high speed steel contains cobalt for increased hot hardness. The composition of HSCo is a good combination of toughness and hardness. It has good machinability and good wear resistance, which makes it usable for drills, taps, milling cutters and reamers.

Carbide materials

Carbide and High Speed Steel	HSS HM	Combined carbide and high speed steel materials typically joined together with high temperature braze alloy as the interface. This brazed combination of tool materials offers a solid carbide cutting portion which provides high compression strength, hardness and wear resistance attached to a high speed steel body which provides flexural strength and toughness in the tool body.

Surface Treatments

Bright (uncoated)		Bright finish (uncoated surface) improves chip flow in soft or non-ferrous materials, plastics and composites while maintaining sharp cutting edges.
Combination Bright and Steam Tempered		Combination of bright and steam tempering can be effective as the blue oxide more porous surface acts to retain and pull cutting fluid into the hole while the bright surface assists in chip evacuation. This combination is achieved by grinding the bright surface after tempering.
Steam Tempering		Steam tempering gives a strongly adhering blue oxide surface that acts to retain cutting fluid and prevent chip to tool welding, thereby counteracting the formation of a built-up edge. Steam tempering can be applied to any bright tool but is most effective on drills and taps.
Bronze Tempering		Bronze tempering creates a smooth thin bronze oxide layer on the tool surface. Similar to Steam Tempering it helps to prevent chip to tool welding and aids in chip evacuation. Bronze tempering can be applied to any bright tool and can also be applied in combination with Steam Tempering on some tools.

Surface Coatings

Bright and TiN (Tip Coating)		Titanium Nitride is a gold coloured ceramic coating applied by physical vapor deposition (PVD). High hardness combined with low friction properties ensures longer tool life and/or better cutting performance over tools which have not been coated.
Titanium Nitride (TiN)		Titanium Nitride is a gold coloured ceramic coating applied by physical vapor deposition (PVD). High hardness combined with low friction properties ensures longer tool life and/or better cutting performance over tools which have not been coated.
Titanium Aluminium Nitride coatings (TiAlN, TiAlN-Top & X-CEED)		Titanium Aluminium Nitride is a multi layer ceramic coating applied by PVD coating technology, which exhibits high toughness and oxidation stability. These properties make it ideal for higher speeds and feeds, while at the same time improving tool life. TiAlN is used in drilling, tapping, and milling applications and can be suitable for use when machining without coolant. TiAlN-Top coating is the same as TiAlN but with a post-coating process designed to smooth out imperfections, enhance chip flow and reduce built up edge.
Alcrona coatings (Alcrona-Top)		The Alcrona (AlCrN) family of coatings are aluminium chromium nitride coatings mostly used for milling cutters. The two unique properties of these coatings are high hot hardness and high oxidation resistance. When used on tools for machining applications involving heavy mechanical and thermal stresses, these properties translate into superior wear resistance. Multiple levels or specific versions of these coatings are available and specific for various tools and applications.

Material code (BMC)		HSS-E	HSS	HSS	HSS	HSS	HSS	HSS-E	HSS-E	HSS	HSS HM	HSS-E	HSS-E	HSS-E
Basic standard group (BSG)		DORMER	DIN 1897	DIN 1897	DIN 1897	DIN 1897	DIN ANSI	DIN 1897	DIN 1897	DIN 1897	DIN 8037	DIN 1899	DIN ANSI	DIN ANSI
Usable length (ULDR)		1×D	1.25×D	1×D	1.5×D	2.5×D	2.5×D	2.5×D	2.5×D	2.5×D	2.5×D	2.5×D	3×D	3×D
Application angle		180°	120°	90°/120°	120°	135°	135°	130°	135°	130°	118°	118°	130°	130°
Coating		Bronze	ST	Bright	ST	ST	TiN-Tip	Bronze	Bronze	TiN	Bright ST	Bright	Bright	Alcrona Top
Shank														
Spiral form		λ 20-35°	λ 20-35°	λ 20-35°	λ 20-35°	λ 20-35°	λ 20-35°	λ 20-35°	λ 20-35°	λ 32-40°	λ 10-20°	λ 20-35°	λ >35°	λ >35°
Hand (Cutting direction)		R	R	R	R	R	R	R	R	R	R	R	R	R
Cooling (CSP)														
										ADX			PFX	PFX
Product Family Code		A723	A119	A122	A123	A120	A022	A620	A117	A520	A124	A720	A920	A921
		6.00 - 8.00	3.30 - 5.10	6.00 - 20.00	3/32 - 1/4	0.50 - 25.00	0.50 - 16.00	2.50 - 13.00	1.00 - 13.00	3.00 - 13.00	3.00 - 16.00	0.15 - 1.40	1.00 - 20.00	2.50 - 16.00
		76	77	78	79	80	82	84	86	88	90	91	92	94
P	P1	■	■	■	■	■	■	◪	◪	■		■	■	■
	P2	◪	◪	■	■	■	■	◪	◪	■	◪	■	■	■
	P3	◪	◪	◪	◪	■	■	◪	◪	■	◪	■	■	■
	P4	◪	◪	◪	◪	◪	■	◪	■	■	◪	◪	■	■
M	M1		◪	◪	◪	■	■	■	■	■		◪	■	■
	M2		◪	◪	◪	■	■	■	■	■		◪	■	■
	M3		◪	◪	◪	◪	◪	■	■	■	◪	◪	■	■
	M4		◪	◪	◪	◪	◪	■	■	■	◪	◪	■	■
K	K1			◪		■	■	◪	◪	■	■	■	◪	■
	K2			◪		■	■	◪	◪	■	■	◪	◪	■
	K3			◪		■	■	◪	◪	■	■	◪	◪	■
	K4			◪		◪	◪	◪	■	■	■	◪	◪	■
	K5			◪		■	■	◪	◪	■	■	◪	◪	■
N	N1		◪	■	■	◪	■	◪	◪	◪		◪	◪	
	N2		◪	◪	◪	◪	■	◪	◪	■		◪	◪	
	N3		◪	■	■	◪	◪	◪	◪	■	◪	◪	◪	
	N4		◪	◪	◪	◪	◪	◪	◪	■	◪	◪	◪	
	N5													
S	S1		◪	◪	◪	◪	◪	◪	■	■	◪	◪	■	◪
	S2		◪	◪	◪	◪	◪	◪	■	◪	◪	◪	■	◪
	S3		◪	◪	◪	◪	◪	◪	■	◪	◪	◪	■	◪
	S4		◪	◪	◪	◪	◪	◪	■	◪	◪	◪	■	◪
H	H1													
	H2													
	H3													
	H4													

■ Primary use ◪ Possible use

	A002	A002S	A100	A101	A108	A147	A777	A160	A510	A553	A900	A901	A170	A243	A244
	HSS	HSS	HSS	HSS	HSS	HSS-E	HSS-E	HSS HM	HSS	HSS-E	HSS-E	HSS-E	HSS	HSS	HSS
	DIN 338	DIN 338	DIN 338	DIN 338	DIN 338	DIN 338	DIN 338	DIN 338	DIN 338	DORMER	DIN ANSI	DIN ANSI	DORMER	NAS 907	NAS 907
	4×D	4×D	4×D	4×D	4×D	4×D	4×D	4×D	4×D	5×D	6×D	6×D	4×D	4×D	4×D
	118°	118°	118°	118°	135°	130°	135°	118°	130°	130°	130°	130°	118°	135°	118°
	TiN-Tip	TiN-Tip	ST	ST	ST	Bright	Bronze	Bright ST	TiN	TiAlN Top	Bright	Alcrona Top	ST	Bright	Bright
										DIN 6535HA					
	λ 20-35°	λ 20-35°	λ 20-35°	λ 20-35°	λ >35°	VA	λ 20-35°	λ 20-35°	λ 32-40°	λ >35°	λ >35°	λ >35°	λ 20-35°	λ 20-35°	λ 20-35°
	R	R	R	L	R	R	R	R	R	R	R	R	R	R	R
									ADX	ADX	PFX	PFX			
	1.00 - 16.00	2.00 - 13.00	0.20 - 20.00	1.00 - 12.00	1.00 - 16.00	0.30 - 15.0	0.30 - 16.00	4.00 - 16.00	3.00 - 14.00	5.00 - 20.00	1.00 - 20.00	1.50 - 16.00	13.00 - 1.1/2	3/32 - 1/4	1/8 - 1/4
	96	98	99	103	104	106	108	110	111	113	114	116	118	120	121
P1	■	■	■	■	◪	◪	◪	◪	■	■	■	■	■		
P2	■	■	■	■	◪	◪	◪	◪	■	■	■	■	■	◪	◪
P3	■	■	■	■	◪	◪	◪	◪	■	■	■	■	◪	◪	◪
P4	◪	◪	◪	◪	◪	◪	■	◪	■	■	■	■	◪	■	■
M1	◪	◪	◪	◪	◪	■	◪	◪	■	■	■	■	◪	◪	◪
M2	◪	◪	◪	◪	◪	■	◪	◪	■	■	■	■	◪	◪	◪
M3	◪	◪	◪	◪	■	■	◪	◪	■	■	■	■	◪	■	■
M4	◪	◪	◪	◪	■	◪	◪	◪	◪	◪	■	■	◪	■	■
K1	■	■	■	■	◪	◪	◪	■	■	■	◪	■	◪	◪	◪
K2	◪	◪	◪	◪	◪	◪	◪	■	■	■	◪	■	◪	◪	◪
K3	◪	◪	◪	◪	◪	◪	◪	■	■	■	◪	■	◪	◪	◪
K4	◪	◪	◪	◪	◪	◪	■	■	■	■	◪	■	◪	■	■
K5	◪	◪	◪	◪	◪	◪	◪	■	■	■	◪	■	◪	◪	◪
N1	■	■	◪	◪	◪	◪	◪	◪	◪	◪	◪		◪		
N2	◪	◪	◪	◪	◪	◪	◪	◪	■	■	◪		◪		
N3	◪	◪	◪	◪	◪	◪	◪	◪	■	■	◪		◪	◪	◪
N4	■	■	◪	◪	◪	◪		◪	■	■	◪		◪		
N5															
S1	◪	◪	◪	◪	■	■	■	◪	◪	◪	■	◪	◪	■	■
S2	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	■	◪	◪	◪	◪
S3	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	■	◪	◪	◪	◪
S4	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	■	◪	◪	◪	◪
H1															
H2															
H3															
H4															

■ Primary use ◪ Possible use

Material code (BMC)		HSS	HSS-E	HSS-E	HSS	HSS-E	HSS-E	HSS-E	HSS	HSS	HSS-E	HSS HM	HSS	HSS
Basic standard group (BSG)		DIN 340	DIN ANSI	DIN ANSI	BS 328	DIN 1869-1	DIN 1869-2	DIN 1869-3	DIN 345	DIN 345	DIN 345	DIN 345	DIN 341	DIN 1870(1)
Usable length (ULDR)		6×D	10×D	10×D	10×D	15×D	20×D	25×D	4×D	4×D	4×D	4×D	6×D	10×D
Application angle		118°	130°	130°	118°	130°	130°	130°	118°	118°	118°	118°	118°	118°
Coating		ST	Bright	Alcrona Top	ST	Bright	Bright	Bright	ST	TiN	Bronze	Bright ST	ST	ST
Shank														
Spiral form		λ 20-35°	λ >35°	λ >35°	λ 20-35°	λ >35°	λ >35°	λ >35°	λ 20-35°	λ 20-35°	λ 20-35°	λ 20-35°	λ 20-35°	λ 20-35°
Hand (Cutting direction)		R	R	R	R	R	R	R	R	R	R	R	R	R
Cooling (CSP)														
			PFX	PFX		PFX	PFX	PFX						
Product Family Code		A110	A940	A941	A125	A976	A977	A978	A130	A530	A730	A166	A350	A345
		0.50 - 1"	1.00 - 20.00	1.00 - 16.00	1.40 - 1"	1.50 - 14.00	1.50 - 14.00	3.00 - 10.00	3.00 - 50.80	8.50 - 40.00	10.00 - 32.00	10.00 - 33.00	5.00 - 50.00	8.00 - 50.00
		122	124	126	128	130	132	133	134	140	141	143	144	146
P	P1	■	■	■	■	◪	◪	◪	■	■	◪	◪	■	■
	P2	■	■	■	◪	■	■	■	■	■	◪	◪	◪	◪
	P3	◪	■	■	◪	■	■	■	■	■	◪	◪	◪	◪
	P4	◪	■	■	◪	■	■	■	◪	◪	■	◪	◪	◪
M	M1	◪	■	■	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪
	M2	◪	■	■	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪
	M3	◪	■	■	◪	◪	◪	◪	◪	◪	■	◪	◪	◪
	M4	◪	■	■	◪	◪	◪	◪	◪	◪	■	◪	◪	◪
K	K1	◪		■	◪				■	■	◪	■	◪	◪
	K2	◪	◪	■	◪	◪	◪	◪	◪	■	◪	■	◪	◪
	K3	◪	◪	■	◪	◪	◪	◪	◪	■	◪	■	◪	◪
	K4	◪	◪	■	◪	◪	◪	◪	◪	◪	■	■	◪	◪
	K5	◪	◪	■	◪	◪	◪	◪	◪	■	◪	■	◪	◪
N	N1	◪	◪		◪				◪	◪	◪	◪	◪	◪
	N2	◪	◪		◪				◪	◪	◪	◪	◪	◪
	N3	◪	◪		◪	◪	◪	◪	◪	◪	◪	◪	◪	◪
	N4	◪	◪		◪				◪	◪	◪	◪	◪	◪
	N5													
S	S1	◪	■	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪
	S2	◪			◪				◪	◪	◪	◪	◪	◪
	S3	◪			◪				◪	◪	◪	◪	◪	◪
	S4	◪			◪				◪	◪	◪	◪	◪	◪
H	H1													
	H2													
	H3													
	H4													

■ Primary use ◪ Possible use

	A951	A952	A400	A402	A405	A412	A413	A200	A205	A206	A266	A210	A201	A225	A237
	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS-E	HSS-E	HSS	HSS	HSS	HSS-E
	DIN 1870(1)	DIN 1870(2)	DIN 8374	DIN 8376	DIN 8377	DORMER	DORMER	DIN 333A	DIN 333A	DIN 333A	DIN 333A	DIN 333R	DORMER	BS 328	DIN 333A
	15×D	20×D	4×D	4×D	4×D	2.5×D	2.5×D	1×D	1×D	1×D	1×D	1×D	1×D	1×D	1×D
	130°	130°	90°	180°	180°	90°	180°	60°	60°	60°	60°	R	60°	60°	60°
	Bright ST	Bright ST	ST	ST	ST	ST	ST	Bright	TiN	Bright	TiAlN	Bright	Bright	Bright	Bright
															H
	λ >35°	λ >35°	λ 20-35°	λ 20-35°	λ 20-35°										
	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
	10.00 - 30.00	8.00 - 40.00	M3 - M10	M3 - M10	M6 - M18	M3 - M10	M3 - M10	0.50 - 12.50	1.00 - 5.00	1.00 - 5.00	1.00 - 5.00	0.50 - 10.00	0.63 - 6.00	3/64 - 5/16	1.60 - 10.00
	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162
P1	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
P2	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
P3	◪	◪	■	■	■	■	■	■	■	■	■	■	■	■	■
P4	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪
M1	◪	◪	◪	◪	◪	■	■	◪	◪	◪	◪	◪	◪	◪	◪
M2	◪	◪	◪	◪	◪	■	■	◪	◪	◪	◪	◪	◪	◪	◪
M3	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪
M4	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪
K1	◪	◪	■	■	■	■	■	■	■	■	■	■	■	■	■
K2	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪
K3	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪
K4	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪
K5	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪
N1	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪
N2	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪
N3	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪
N4	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪
N5															
S1	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪
S2	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪
S3	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪
S4	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪
H1															
H2															
H3															
H4															

■ Primary use ◪ Possible use

Material code (BMC)	HSS-E	HSS-E	HSS	HSS	HSS	HSS	HSS	
Basic standard group (BSG)	DIN 333R	DORMER	DIN ANSI	DIN 338	DIN 338	DIN 338	DIN 338	
Usable length (ULDR)	1×D	1×D	2.5×D	4×D	4×D	4×D	4×D	
Application angle	R	60°	135°	118°	118°	118°	118°	
Coating	Bright	Bright	TiN-Tip	TiN-Tip	TiN-Tip	TiN-Tip	TiN-Tip	
Shank	H							
Spiral form			λ 20-35°	λ 20-35°	λ 20-35°	λ 20-35°	λ 20-35°	
Hand (Cutting direction)	R	R	R	R	R	R	R	
Cooling (CSP)								
Product Family Code	A238	A242	A088	A095	A087	A094	A089	
	1.60 - 8.00	1.00 - 5.00	Set	Set	Set	Set	Set	
	163	164	165	165	166	166	167	
P	P1	■	■					
	P2	■	■					
	P3	■	■					
	P4	◪	◪					
M	M1	◪	◪					
	M2	◪	◪					
	M3	◪	◪					
	M4	◪	◪					
K	K1	■	■					
	K2	◪	◪					
	K3	◪	◪					
	K4	◪	◪					
	K5	◪	◪					
N	N1	◪	◪					
	N2	◪	◪					
	N3	◪	◪					
	N4	◪	◪					
	N5							
S	S1	◪	◪					
	S2	◪	◪					
	S3	◪	◪					
	S4	◪	◪					
H	H1							
	H2							
	H3							
	H4							

■ Primary use ◪ Possible use

	HSS DIN 338 4×D 118° TiN-Tip λ 20-35° R	HSS DIN 338 4×D 118° TiN-Tip λ 20-35° R	HSS DIN 338 4×D 118° ST λ 20-35° R		HSS DIN 338 4×D 118° ST λ 20-35° R	
	A099	**A099**	**A199**	**A080**	**A190**	
	Set	Drillboy	Set	Set	Set	
	168	168	169	169	170	
P1						
P2						
P3						
P4						
M1						
M2						
M3						
M4						
K1						
K2						
K3						
K4						
K5						
N1						
N2						
N3						
N4						
N5						
S1						
S2						
S3						
S4						
H1						
H2						
H3						
H4						

■ Primary use ◪ Possible use

Material code (BMC)	HSS	HSS	HSS	HSS-E			
Basic standard group (BSG)	DIN 338	DIN 338	DIN 338	DIN 338			
Usable length (ULDR)	4×D	4×D	4×D	4×D			
Application angle	118°	118°	135°	135°	60°		
Coating	ST	ST	ST	Bronze			
Shank							
Spiral form	λ 20-35°	λ 20-35°	λ >35°	λ 20-35°			
Hand (Cutting direction)	R	R	R	R			
Cooling (CSP)							
Product Family Code	A191	A191	A188	A295	A296	M150	M151
	Set	Set	Set	Set	Set		
	171	171	172	172	173	173	174
P	P1							
	P2							
	P3							
	P4							
M	M1							
	M2							
	M3							
	M4							
K	K1							
	K2							
	K3							
	K4							
	K5							
N	N1							
	N2							
	N3							
	N4							
	N5							
S	S1							
	S2							
	S3							
	S4							
H	H1							
	H2							
	H3							
	H4							

■ Primary use ◪ Possible use

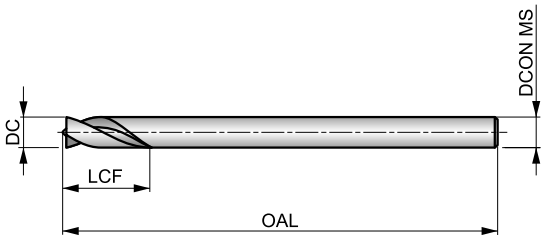
	M152
	174
P1	
P2	
P3	
P4	
M1	
M2	
M3	
M4	
K1	
K2	
K3	
K4	
K5	
N1	
N2	
N3	
N4	
N5	
S1	
S2	
S3	
S4	
H1	
H2	
H3	
H4	

■ Primary use ◪ Possible use

A723

HSS-E (5% Cobalt) Spot Weld Drill, Bronze Tempered Finish

Drill with specially designed lip and spur point to remove or "drill out" spot welded areas, commonly for removing welds in a vehicle repair shop. Short flute length makes it more sturdy and less prone to shattering when being used in a hand-held device. The bronze finish is a thin oxide layer and an indication for Cobalt.



HSS-E	DORMER	1×D
Bronze		λ 20-35°
R	DC h8	

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	P4.1
■ 33 D	■ 37 D	■ 38 D	■ 28 D	◪ 25 C	◪ 20 C	◪ 20 C	◪ 20 C

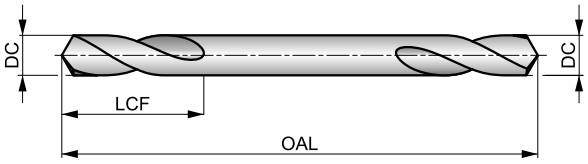
Product	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A7236.0X66	6.00	0.2362	18.0	66.0	6.00
A7236.0X93	6.00	0.2362	18.0	93.0	6.00
A7238.0X79	8.00	0.3150	24.0	79.0	8.00
A7238.0X117	8.00	0.3150	24.0	117.0	8.00

A119

DORMER

HSS Double Ended Stub Drill, Steam Tempered Finish

A short double-ended drill designed for drilling holes through sheet metal. Possible to use both ends, giving twice the tool life. A 120° conventional point to aid self-centering. Suitable for drilling in many materials. Steam tempered finish retains cutting fluid and prevents chip to tool welding.



HSS	DIN 1897	1.25×D
120°	ST	
λ 20-35°	R	DC h8

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■31 C	■34 C	■35 C	■26 C	◪23 C	◪20 C	◪12 C	◪9 C	◪8 C	◪7 C	◪6 C	◪5 A	◪21 A	◪17 A
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**
◪18 A	◪15 A	◪8 C	◪7 C	◪6 C	◪10 A	◪33 C	◪25 C	◪17 C	◪46 C	◪42 C	◪30 C	◪56 C	◪33 C
N3.3	**N4.1**	**N4.2**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**		
◪17 A	◪30 I	◪35 C	◪27 A	◪12 A	◪7 A	◪5 C	◪4 C	◪4 C	◪3 C	◪3 C	◪2 C		

Sheet Metal Drill.

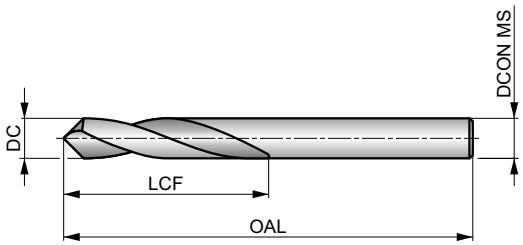
Product	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A1193.3	3.30	0.1299	11.0	49.0	3.30
A1193.6	3.60	0.1417	12.0	52.0	3.60
A1194.1	4.10	0.1614	14.0	55.0	4.10
A1194.2	4.20	0.1654	14.0	55.0	4.20
A1194.9	4.90	0.1929	17.0	62.0	4.90
A1195.1	5.10	0.2008	17.0	62.0	5.10

A122

DORMER

HSS Spotting Drill, Bright Finish

Used to create a hole in the material to be drilled to ensure the start point is accurate. Comes with either a 90° or 120° point angle, giving you two options of countersink. Bright surface finish. Suitable for drilling in many materials.



HSS	DIN 1897	1×D
90°/120°	Bright	
λ 20-35°	R	DC h8

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■36 E	■40 E	■41 E	■31 E	■27 C	◪24 C	◪21 C	◪17 C	◪14 C	◪12 C	◪10 C	◪9 B	◪22 C	◪19 C
M2.1	M2.2	M3.1	M3.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2
◪20 C	◪16 C	◪10 D	◪9 D	◪8 D	◪10 B	◪32 E	◪24 C	◪18 C	◪25 C	◪20 C	◪16 B	◪22 C	◪17 C
K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3	N2.1	N2.2
◪13 B	◪20 C	◪15 C	◪11 B	◪10 B	◪8 B	◪23 C	◪17 C	◪13 B	■33 E	■25 E	■17 E	◪46 D	◪42 D
N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	N4.3	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2
◪30 D	■56 D	■33 E	■17 D	◪30 F	◪35 E	◪17 D	◪27 C	◪12 B	◪7 A	◪11 C	◪6 A	◪8 C	◪4 A
S4.1	S4.2												
◪6 C	◪3 A												

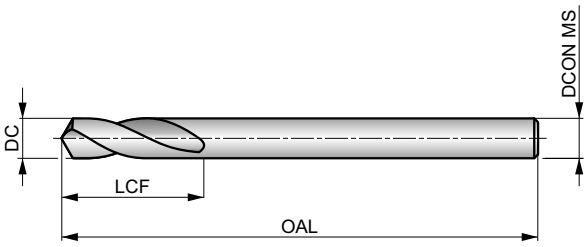
Product	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A1226.0X90	6.00	0.2362	30.0	66.0	6.00
A1226.0X120	6.00	0.2362	30.0	66.0	6.00
A1228.0X90	8.00	0.3150	33.0	79.0	8.00
A1228.0X120	8.00	0.3150	33.0	79.0	8.00
A12210.0X90	10.00	0.3937	35.0	89.0	10.00
A12210.0X120	10.00	0.3937	35.0	89.0	10.00
A12212.0X90	12.00	0.4724	40.0	102.0	12.00
A12212.0X120	12.00	0.4724	40.0	102.0	12.00
A12216.0X90	16.00	0.6299	40.0	115.0	16.00
A12216.0X120	16.00	0.6299	40.0	115.0	16.00
A12220.0X90	20.00	0.7874	55.0	131.0	20.00
A12220.0X120	20.00	0.7874	55.0	131.0	20.00

A123

DORMER

HSS Stub Drill, Steam Tempered Finish, for Sheet Metal

Specially designed for drilling thin materials and sheet metal. A 120° point and a steam tempered finish which stops workpiece material from sticking to the cutting edge, giving a better hole finish and more accurate diameter. Suitable for drilling in many materials.



HSS	DIN 1897	1.5×D
120°	ST	
λ 20-35°	R	DC h8

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 36 E	■ 40 E	■ 41 E	■ 31 E	■ 27 C	◪ 24 C	◪ 21 C	◪ 17 C	◪ 14 C	◪ 12 C	◪ 10 C	◪ 9 B	◪ 22 C	◪ 19 C
M2.1	M2.2	M3.1	M3.2	M3.3	M4.1	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2
◪ 20 C	◪ 16 C	◪ 10 D	◪ 9 D	◪ 8 D	◪ 10 B	■ 33 E	■ 25 E	■ 17 E	◪ 46 D	◪ 42 D	◪ 30 D	■ 56 D	■ 33 E
N3.3	N4.1	N4.2	N4.3	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2	S4.1	S4.2	
■ 17 D	◪ 30 F	◪ 35 E	◪ 17 D	◪ 27 C	◪ 12 B	◪ 7 A	◪ 11 C	◪ 6 A	◪ 8 C	◪ 4 A	◪ 6 C	◪ 3 A	

Sheet Metal Drill.

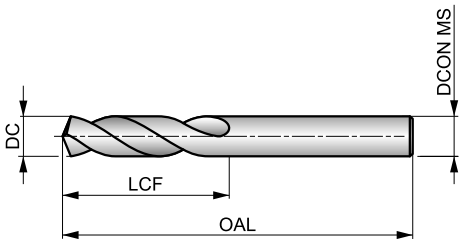
Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A1233/32S	3/32	2.38	0.0937	14.0	43.0	2.38
A1232.5S	–	2.50	0.0984	14.0	43.0	2.50
A1233.0S	–	3.00	0.1181	16.0	46.0	3.00
A1231/8S	1/8	3.18	0.1252	18.0	49.0	3.18
A1233.2S	–	3.20	0.1260	18.0	49.0	3.20
A1233.3S	–	3.30	0.1299	18.0	49.0	3.30
A1233.5S	–	3.50	0.1378	18.0	52.0	3.50
A1233.7S	–	3.70	0.1457	18.0	52.0	3.70
A1235/32S	5/32	3.97	0.1563	18.0	55.0	3.97
A1234.0S	–	4.00	0.1575	18.0	55.0	4.00
A1234.1S	–	4.10	0.1614	18.0	55.0	4.10
A1234.2S	–	4.20	0.1654	18.0	55.0	4.20
A1234.5S	–	4.50	0.1772	18.0	58.0	4.50
A1233/16S	3/16	4.76	0.1875	18.0	62.0	4.76
A1234.8S	–	4.80	0.1890	18.0	62.0	4.80
A1234.9S	–	4.90	0.1929	18.0	62.0	4.90
A1235.0S	–	5.00	0.1969	18.0	62.0	5.00
A1235.5S	–	5.50	0.2165	18.0	66.0	5.50
A1237/32S	7/32	5.56	0.2188	18.0	66.0	5.56
A1236.0S	–	6.00	0.2362	18.0	66.0	6.00
A1231/4S	1/4	6.35	0.2500	19.0	70.0	6.35

A120

DORMER

HSS Stub Drill, Steam Tempered Finish

Versatile drill with Steam tempered finish. A 135° split point reduces the forces when drilling and prevents the drill from wandering over the surface of the material. Steam tempered finish retains cutting fluid and prevents chip to tool welding. Suitable for hand-held and machine drilling of many materials.



HSS	DIN 1897	2.5×D
135°	ST	
λ20-35°	R	DC h8

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■36 J	■40 J	■41 J	■31 J	■27 G	◪24 F	■21 G	■17 G	◪14 F	■12 G	◪10 F	◪9 E	■22 F	■19 F
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
■20 F	■16 F	◪10 H	◪9 H	◪8 H	◪10 D	■32 J	■24 G	■18 G	■25 F	■20 F	◪16 F	■22 F	■17 F
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪13 F	■20 F	■15 F	◪11 F	◪10 F	◪8 F	■23 F	■17 F	◪13 F	◪33 K	◪25 K	◪17 J	◪46 I	◪42 I
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**
◪30 I	◪64 I	◪38 J	◪19 H	◪30 K	◪35 I	◪17 G	■27 G	◪16 E	◪8 C	◪11 F	◪6 B	◪8 F	◪4 B
S4.1	**S4.2**												
◪6 F	◪3 B												

DC <= 1mm Bright; 2.9mm => DC >= 13.0mm 118° Point.

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A120.5	–	0.50	0.0197	3.0	20.0	0.50
A120.6	–	0.60	0.0236	3.5	21.0	0.60
A120.7	–	0.70	0.0276	4.5	23.0	0.70
A1201/32	1/32	0.79	0.0313	5.0	24.0	0.79
A120.8	–	0.80	0.0315	5.0	24.0	0.80
A120.9	–	0.90	0.0354	5.5	25.0	0.90
A1201.0	–	1.00	0.0394	6.0	26.0	1.00
A1201.1	–	1.10	0.0433	7.0	28.0	1.10
A1203/64	3/64	1.19	0.0469	8.0	30.0	1.19
A1201.2	–	1.20	0.0472	8.0	30.0	1.20
A1201.3	–	1.30	0.0512	8.0	30.0	1.30
A1201.4	–	1.40	0.0551	9.0	32.0	1.40
A1201.5	–	1.50	0.0591	9.0	32.0	1.50
A1201/16	1/16	1.59	0.0625	10.0	34.0	1.59
A1201.6	–	1.60	0.0630	10.0	34.0	1.60
A1201.7	–	1.70	0.0669	10.0	34.0	1.70
A1201.8	–	1.80	0.0709	11.0	36.0	1.80
A1201.9	–	1.90	0.0748	11.0	36.0	1.90
A1205/64	5/64	1.98	0.0781	12.0	38.0	1.98
A1202.0	–	2.00	0.0787	12.0	38.0	2.00
A1202.1	–	2.10	0.0827	12.0	38.0	2.10
A1202.2	–	2.20	0.0866	13.0	40.0	2.20
A1202.25	–	2.25	0.0886	13.0	40.0	2.25

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A1202.3	–	2.30	0.0906	13.0	40.0	2.30
A1203/32	3/32	2.38	0.0938	14.0	43.0	2.38
A1202.4	–	2.40	0.0945	14.0	43.0	2.40
A1202.5	–	2.50	0.0984	14.0	43.0	2.50
A1202.6	–	2.60	0.1024	14.0	43.0	2.60
A1202.65	–	2.65	0.1043	14.0	43.0	2.65
A1202.7	–	2.70	0.1063	16.0	46.0	2.70
A1207/64	7/64	2.78	0.1094	16.0	46.0	2.78
A1202.8	–	2.80	0.1102	16.0	46.0	2.80
A1202.9	–	2.90	0.1142	16.0	46.0	2.90
A1203.0	–	3.00	0.1181	16.0	46.0	3.00
A1203.1	–	3.10	0.1220	18.0	49.0	3.10
A1201/8	1/8	3.18	0.1252	18.0	49.0	3.18
A1203.2	–	3.20	0.1260	18.0	49.0	3.20
A1203.25	–	3.25	0.1280	18.0	49.0	3.25
A1203.3	–	3.30	0.1299	18.0	49.0	3.30
A1203.4	–	3.40	0.1339	20.0	52.0	3.40
A1203.5	–	3.50	0.1378	20.0	52.0	3.50
A1209/64	9/64	3.57	0.1406	20.0	52.0	3.57
A1203.6	–	3.60	0.1417	20.0	52.0	3.60
A1203.7	–	3.70	0.1457	20.0	52.0	3.70
A1203.8	–	3.80	0.1496	22.0	55.0	3.80
A1203.9	–	3.90	0.1535	22.0	55.0	3.90

Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A1205/32	5/32	3.97	0.1563	22.0	55.0	3.97
A1204.0	–	4.00	0.1575	22.0	55.0	4.00
A1204.1	–	4.10	0.1614	22.0	55.0	4.10
A1204.2	–	4.20	0.1654	22.0	55.0	4.20
A1204.3	–	4.30	0.1693	24.0	58.0	4.30
A12011/64	11/64	4.37	0.1719	24.0	58.0	4.37
A1204.4	–	4.40	0.1732	24.0	58.0	4.40
A1204.5	–	4.50	0.1772	24.0	58.0	4.50
A1204.6	–	4.60	0.1811	24.0	58.0	4.60
A1204.7	–	4.70	0.1850	24.0	58.0	4.70
A1203/16	3/16	4.76	0.1875	26.0	62.0	4.76
A1204.8	–	4.80	0.1890	26.0	62.0	4.80
A1204.9	–	4.90	0.1929	26.0	62.0	4.90
A1205.0	–	5.00	0.1969	26.0	62.0	5.00
A1205.1	–	5.10	0.2008	26.0	62.0	5.10
A12013/64	13/64	5.16	0.2031	26.0	62.0	5.16
A1205.2	–	5.20	0.2047	26.0	62.0	5.20
A1205.3	–	5.30	0.2087	26.0	62.0	5.30
A1205.4	–	5.40	0.2126	28.0	66.0	5.40
A1205.5	–	5.50	0.2165	28.0	66.0	5.50
A1207/32	7/32	5.56	0.2188	28.0	66.0	5.56
A1205.6	–	5.60	0.2205	28.0	66.0	5.60
A1205.7	–	5.70	0.2244	28.0	66.0	5.70
A1205.8	–	5.80	0.2283	28.0	66.0	5.80
A1205.9	–	5.90	0.2323	28.0	66.0	5.90
A12015/64	15/64	5.95	0.2344	28.0	66.0	5.95
A1206.0	–	6.00	0.2362	28.0	66.0	6.00
A1206.1	–	6.10	0.2402	31.0	70.0	6.10
A1206.2	–	6.20	0.2441	31.0	70.0	6.20
A1206.3	–	6.30	0.2480	31.0	70.0	6.30
A1201/4	1/4	6.35	0.2500	31.0	70.0	6.35
A1206.4	–	6.40	0.2520	31.0	70.0	6.40
A1206.5	–	6.50	0.2559	31.0	70.0	6.50
A1206.6	–	6.60	0.2598	31.0	70.0	6.60
A1206.7	–	6.70	0.2638	31.0	70.0	6.70
A1206.8	–	6.80	0.2677	34.0	74.0	6.80
A1206.9	–	6.90	0.2717	34.0	74.0	6.90
A1207.0	–	7.00	0.2756	34.0	74.0	7.00
A1207.1	–	7.10	0.2795	34.0	74.0	7.10
A1209/32	9/32	7.14	0.2813	34.0	74.0	7.14
A1207.2	–	7.20	0.2835	34.0	74.0	7.20
A1207.3	–	7.30	0.2874	34.0	74.0	7.30
A1207.4	–	7.40	0.2913	34.0	74.0	7.40
A1207.5	–	7.50	0.2953	34.0	74.0	7.50
A1207.6	–	7.60	0.2992	37.0	79.0	7.60
A1207.7	–	7.70	0.3031	37.0	79.0	7.70
A1207.8	–	7.80	0.3071	37.0	79.0	7.80
A1207.9	–	7.90	0.3110	37.0	79.0	7.90
A1205/16	5/16	7.94	0.3125	37.0	79.0	7.94
A1208.0	–	8.00	0.3150	37.0	79.0	8.00
A1208.1	–	8.10	0.3189	37.0	79.0	8.10
A1208.2	–	8.20	0.3228	37.0	79.0	8.20
A1208.3	–	8.30	0.3268	37.0	79.0	8.30
A1208.4	–	8.40	0.3307	37.0	79.0	8.40
A1208.5	–	8.50	0.3346	37.0	79.0	8.50
A1208.6	–	8.60	0.3386	40.0	84.0	8.60
A1208.7	–	8.70	0.3425	40.0	84.0	8.70
A12011/32	11/32	8.73	0.3438	40.0	84.0	8.73
A1208.8	–	8.80	0.3465	40.0	84.0	8.80
A1208.9	–	8.90	0.3504	40.0	84.0	8.90
A1209.0	–	9.00	0.3543	40.0	84.0	9.00
A1209.1	–	9.10	0.3583	40.0	84.0	9.10
A1209.2	–	9.20	0.3622	40.0	84.0	9.20
A1209.3	–	9.30	0.3661	40.0	84.0	9.30
A1209.4	–	9.40	0.3701	40.0	84.0	9.40

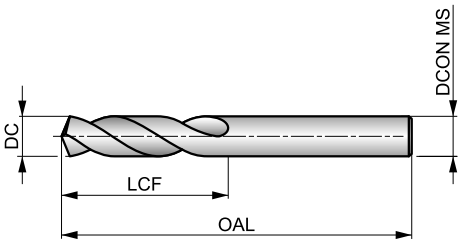
Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A1209.5	–	9.50	0.3740	40.0	84.0	9.50
A1203/8	3/8	9.52	0.3750	43.0	89.0	9.52
A1209.6	–	9.60	0.3780	43.0	89.0	9.60
A1209.7	–	9.70	0.3819	43.0	89.0	9.70
A1209.8	–	9.80	0.3858	43.0	89.0	9.80
A1209.9	–	9.90	0.3898	43.0	89.0	9.90
A12010.0	–	10.00	0.3937	43.0	89.0	10.00
A12010.1	–	10.10	0.3976	43.0	89.0	10.10
A12010.2	–	10.20	0.4016	43.0	89.0	10.20
A12010.3	–	10.30	0.4055	43.0	89.0	10.30
A12013/32	13/32	10.32	0.4063	43.0	89.0	10.32
A12010.4	–	10.40	0.4094	43.0	89.0	10.40
A12010.5	–	10.50	0.4134	43.0	89.0	10.50
A12010.6	–	10.60	0.4173	43.0	89.0	10.60
A12010.7	–	10.70	0.4213	47.0	95.0	10.70
A12010.8	–	10.80	0.4252	47.0	95.0	10.80
A12010.9	–	10.90	0.4291	47.0	95.0	10.90
A12011.0	–	11.00	0.4331	47.0	95.0	11.00
A12011.1	–	11.10	0.4370	47.0	95.0	11.10
A1207/16	7/16	11.11	0.4375	47.0	95.0	11.11
A12011.2	–	11.20	0.4409	47.0	95.0	11.20
A12011.3	–	11.30	0.4449	47.0	95.0	11.30
A12011.5	–	11.50	0.4528	47.0	95.0	11.50
A12011.6	–	11.60	0.4567	47.0	95.0	11.60
A12011.7	–	11.70	0.4606	47.0	95.0	11.70
A12011.8	–	11.80	0.4646	47.0	95.0	11.80
A12011.9	–	11.90	0.4685	51.0	102.0	11.90
A12012.0	–	12.00	0.4724	51.0	102.0	12.00
A12012.1	–	12.10	0.4764	51.0	102.0	12.10
A12012.2	–	12.20	0.4803	51.0	102.0	12.20
A12012.5	–	12.50	0.4921	51.0	102.0	12.50
A1201/2	1/2	12.70	0.5000	51.0	102.0	12.70
A12013.0	–	13.00	0.5118	51.0	102.0	13.00
A12013.5	–	13.50	0.5315	54.0	107.0	13.50
A12014.0	–	14.00	0.5512	54.0	107.0	14.00
A1209/16	9/16	14.29	0.5625	56.0	111.0	14.29
A12014.5	–	14.50	0.5709	56.0	111.0	14.50
A12015.0	–	15.00	0.5906	56.0	111.0	15.00
A12015.5	–	15.50	0.6102	58.0	115.0	15.50
A1205/8	5/8	15.88	0.6250	58.0	115.0	15.88
A12016.0	–	16.00	0.6299	58.0	115.0	16.00
A12016.5	–	16.50	0.6496	60.0	119.0	16.50
A12017.0	–	17.00	0.6693	60.0	119.0	17.00
A12011/16	11/16	17.46	0.6875	62.0	123.0	17.46
A12017.5	–	17.50	0.6890	62.0	123.0	17.50
A12018.0	–	18.00	0.7087	62.0	123.0	18.00
A12018.5	–	18.50	0.7283	64.0	127.0	18.50
A12019.0	–	19.00	0.7480	64.0	127.0	19.00
A1203/4	3/4	19.05	0.7500	66.0	131.0	19.05
A12019.5	–	19.50	0.7677	66.0	131.0	19.50
A12020.0	–	20.00	0.7874	66.0	131.0	20.00
A12020.5	–	20.50	0.8071	68.0	136.0	20.50
A12013/16	13/16	20.64	0.8125	68.0	136.0	20.64
A12021.0	–	21.00	0.8268	68.0	136.0	21.00
A12022.0	–	22.00	0.8661	70.0	141.0	22.00
A1207/8	7/8	22.22	0.8750	70.0	141.0	22.22
A12023.0	–	23.00	0.9055	72.0	146.0	23.00
A12015/16	15/16	23.81	0.9375	75.0	151.0	23.81
A12024.0	–	24.00	0.9449	75.0	151.0	24.00
A12025.0	–	25.00	0.9843	75.0	151.0	25.00

A022

DORMER

HSS Stub Drill, TiN-Tip Coated

Versatile drill with a specially designed 135° split point which helps self-centering when drilling by hand and in machines provides a more accurate hole with a better quality of finish. Suitable for drilling many materials. TiN-Tip coating improves performance and extends the tool life.



HSS	DIN ANSI	2.5×D
135°	TiN-Tip	
λ20-35°	R	DC h8

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■33 K	■37 K	■38 K	■28 K	■25 I	■22 G	■24 H	■19 H	■16 G	■14 H	■12 G	◪10 E	■21 G	■17 G
M2.1	M2.2	M3.1	M3.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2
■18 G	■15 G	◪9 I	◪8 I	◪7 I	◪9 E	■32 K	■24 I	■18 I	■25 G	■20 G	◪16 G	■22 G	■17 G
K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3	N2.1	N2.2
◪13 G	■20 G	■15 G	◪11 G	◪10 G	◪8 G	■23 G	■17 G	◪13 G	■40 F	■30 F	■20 K	■49 J	■44 J
N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	N4.3	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2
■32 J	◪64 I	◪38 K	◪19 H	◪30 K	◪35 I	◪17 G	■25 I	◪14 F	◪8 C	◪11 F	◪6 B	◪8 F	◪4 B
S4.1	S4.2												
◪6 F	◪3 B												

DC < 2mm Bright; DC >= 2mm TiN Tipped and Split Point.
Products from this series are also available in set. Please see A088.

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A022.5	–	0.50	0.0197	3.0	20.0	0.50
A022.6	–	0.60	0.0236	3.5	21.0	0.60
A022.7	–	0.70	0.0276	4.5	23.0	0.70
A0221/32	1/32	0.79	0.0313	13.0	35.0	0.79
A022.8	–	0.80	0.0315	5.0	24.0	0.80
A022.9	–	0.90	0.0354	5.5	25.0	0.90
A0221.0	–	1.00	0.0394	6.0	26.0	1.00
A0221.1	–	1.10	0.0433	7.0	28.0	1.10
A0223/64	3/64	1.19	0.0469	13.0	35.0	1.19
A0221.2	–	1.20	0.0472	8.0	30.0	1.20
A0221.3	–	1.30	0.0512	8.0	30.0	1.30
A0221.4	–	1.40	0.0551	9.0	32.0	1.40
A0221.5	–	1.50	0.0591	9.0	32.0	1.50
A0221/16	1/16	1.59	0.0625	16.0	41.0	1.59
A0221.6	–	1.60	0.0630	10.0	34.0	1.60
A0221.7	–	1.70	0.0669	10.0	34.0	1.70
A0221.8	–	1.80	0.0709	11.0	36.0	1.80
A0221.9	–	1.90	0.0748	11.0	36.0	1.90
A0225/64	5/64	1.98	0.0781	17.0	43.0	1.98
A0222.0	–	2.00	0.0787	12.0	38.0	2.00
A0222.1	–	2.10	0.0827	12.0	38.0	2.10
A0222.2	–	2.20	0.0866	13.0	40.0	2.20

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A0222.25	–	2.25	0.0886	13.0	40.0	2.25
A0222.3	–	2.30	0.0906	13.0	40.0	2.30
A0223/32	3/32	2.38	0.0938	20.0	45.0	2.38
A0222.4	–	2.40	0.0945	14.0	43.0	2.40
A0222.5	–	2.50	0.0984	14.0	43.0	2.50
A0222.6	–	2.60	0.1024	14.0	43.0	2.60
A0222.65	–	2.65	0.1043	14.0	43.0	2.65
A0222.7	–	2.70	0.1063	16.0	46.0	2.70
A0227/64	7/64	2.78	0.1094	22.0	47.0	2.78
A0222.8	–	2.80	0.1102	16.0	46.0	2.80
A0222.9	–	2.90	0.1142	16.0	46.0	2.90
A0223.0	–	3.00	0.1181	16.0	46.0	3.00
A0223.1	–	3.10	0.1220	18.0	49.0	3.10
A0221/8	1/8	3.18	0.1250	23.0	49.0	3.18
A0223.2	–	3.20	0.1260	18.0	49.0	3.20
A0223.25	–	3.25	0.1280	18.0	49.0	3.25
A0223.3	–	3.30	0.1299	18.0	49.0	3.30
A0223.4	–	3.40	0.1339	20.0	52.0	3.40
A0223.5	–	3.50	0.1378	20.0	52.0	3.50
A0229/64	9/64	3.57	0.1406	25.0	50.0	3.57
A0223.6	–	3.60	0.1417	20.0	52.0	3.60
A0223.7	–	3.70	0.1457	20.0	52.0	3.70

Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A0223.8	–	3.80	0.1496	22.0	55.0	3.80
A0223.9	–	3.90	0.1535	22.0	55.0	3.90
A0225/32	5/32	3.97	0.1563	26.0	53.0	3.97
A0224.0	–	4.00	0.1575	22.0	55.0	4.00
A0224.1	–	4.10	0.1614	22.0	55.0	4.10
A0224.2	–	4.20	0.1654	22.0	55.0	4.20
A0224.3	–	4.30	0.1693	24.0	58.0	4.30
A02211/64	11/64	4.37	0.1719	28.0	55.0	4.37
A0224.4	–	4.40	0.1732	24.0	58.0	4.40
A0224.5	–	4.50	0.1772	24.0	58.0	4.50
A0224.6	–	4.60	0.1811	24.0	58.0	4.60
A0224.7	–	4.70	0.1850	24.0	58.0	4.70
A0223/16	3/16	4.76	0.1875	30.0	57.0	4.76
A0224.8	–	4.80	0.1890	26.0	62.0	4.80
A0224.9	–	4.90	0.1929	26.0	62.0	4.90
A0225.0	–	5.00	0.1969	26.0	62.0	5.00
A0225.1	–	5.10	0.2008	26.0	62.0	5.10
A02213/64	13/64	5.16	0.2031	31.0	58.0	5.16
A0225.2	–	5.20	0.2047	26.0	62.0	5.20
A0225.3	–	5.30	0.2087	26.0	62.0	5.30
A0225.4	–	5.40	0.2126	28.0	66.0	5.40
A0225.5	–	5.50	0.2165	28.0	66.0	5.50
A0227/32	7/32	5.56	0.2188	33.0	61.0	5.56
A0225.6	–	5.60	0.2205	28.0	66.0	5.60
A0225.7	–	5.70	0.2244	28.0	66.0	5.70
A0225.8	–	5.80	0.2283	28.0	66.0	5.80
A0225.9	–	5.90	0.2323	28.0	66.0	5.90
A02215/64	15/64	5.95	0.2344	34.0	63.0	5.95
A0226.0	–	6.00	0.2362	28.0	66.0	6.00
A0226.1	–	6.10	0.2402	31.0	70.0	6.10
A0226.2	–	6.20	0.2441	31.0	70.0	6.20
A0226.3	–	6.30	0.2480	31.0	70.0	6.30
A0221/4	1/4	6.35	0.2500	36.0	65.0	6.35
A0226.4	–	6.40	0.2520	31.0	70.0	6.40
A0226.5	–	6.50	0.2559	31.0	70.0	6.50
A0226.6	–	6.60	0.2598	31.0	70.0	6.60
A0226.7	–	6.70	0.2638	31.0	70.0	6.70
A0226.8	–	6.80	0.2677	34.0	74.0	6.80
A0226.9	–	6.90	0.2717	34.0	74.0	6.90
A0227.0	–	7.00	0.2756	34.0	74.0	7.00
A0227.1	–	7.10	0.2795	34.0	74.0	7.10
A0229/32	9/32	7.14	0.2813	40.0	70.0	7.14
A0227.2	–	7.20	0.2835	34.0	74.0	7.20
A0227.3	–	7.30	0.2874	34.0	74.0	7.30
A0227.4	–	7.40	0.2913	34.0	74.0	7.40
A0227.5	–	7.50	0.2953	34.0	74.0	7.50
A0227.6	–	7.60	0.2992	37.0	79.0	7.60
A0227.7	–	7.70	0.3031	37.0	79.0	7.70
A0227.8	–	7.80	0.3071	37.0	79.0	7.80
A0227.9	–	7.90	0.3110	37.0	79.0	7.90
A0225/16	5/16	7.94	0.3125	43.0	73.0	7.94
A0228.0	–	8.00	0.3150	37.0	79.0	8.00
A0228.1	–	8.10	0.3189	37.0	79.0	8.10
A0228.2	–	8.20	0.3228	37.0	79.0	8.20

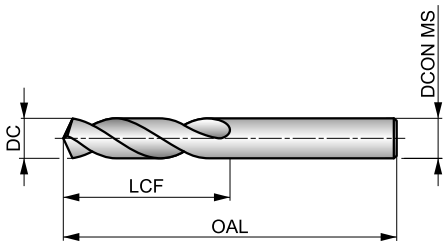
Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A0228.3	–	8.30	0.3268	37.0	79.0	8.30
A0228.4	–	8.40	0.3307	37.0	79.0	8.40
A0228.5	–	8.50	0.3346	37.0	79.0	8.50
A0228.6	–	8.60	0.3386	40.0	84.0	8.60
A0228.7	–	8.70	0.3425	40.0	84.0	8.70
A02211/32	11/32	8.73	0.3438	45.0	78.0	8.73
A0228.8	–	8.80	0.3465	40.0	84.0	8.80
A0228.9	–	8.90	0.3504	40.0	84.0	8.90
A0229.0	–	9.00	0.3543	40.0	84.0	9.00
A0229.1	–	9.10	0.3583	40.0	84.0	9.10
A0229.2	–	9.20	0.3622	40.0	84.0	9.20
A0229.3	–	9.30	0.3661	40.0	84.0	9.30
A0229.4	–	9.40	0.3701	40.0	84.0	9.40
A0229.5	–	9.50	0.3740	40.0	84.0	9.50
A0223/8	3/8	9.52	0.3750	48.0	81.0	9.52
A0229.6	–	9.60	0.3780	43.0	89.0	9.60
A0229.7	–	9.70	0.3819	43.0	89.0	9.70
A0229.8	–	9.80	0.3858	43.0	89.0	9.80
A0229.9	–	9.90	0.3898	43.0	89.0	9.90
A02210.0	–	10.00	0.3937	43.0	89.0	10.00
A02210.1	–	10.10	0.3976	43.0	89.0	10.10
A02210.2	–	10.20	0.4016	43.0	89.0	10.20
A02210.3	–	10.30	0.4055	43.0	89.0	10.30
A02213/32	13/32	10.32	0.4063	51.0	86.0	10.32
A02210.4	–	10.40	0.4094	43.0	89.0	10.40
A02210.5	–	10.50	0.4134	43.0	89.0	10.50
A02210.6	–	10.60	0.4173	43.0	89.0	10.60
A02210.7	–	10.70	0.4213	47.0	95.0	10.70
A02210.8	–	10.80	0.4252	47.0	95.0	10.80
A02210.9	–	10.90	0.4291	47.0	95.0	10.90
A02211.0	–	11.00	0.4331	47.0	95.0	11.00
A02211.1	–	11.10	0.4370	47.0	95.0	11.10
A0227/16	7/16	11.11	0.4375	54.0	89.0	11.11
A02211.2	–	11.20	0.4409	47.0	95.0	11.20
A02211.3	–	11.30	0.4449	47.0	95.0	11.30
A02211.5	–	11.50	0.4528	47.0	95.0	11.50
A02211.6	–	11.60	0.4567	47.0	95.0	11.60
A02211.7	–	11.70	0.4606	47.0	95.0	11.70
A02211.8	–	11.80	0.4646	47.0	95.0	11.80
A02211.9	–	11.90	0.4685	51.0	102.0	11.90
A02212.0	–	12.00	0.4724	51.0	102.0	12.00
A02212.1	–	12.10	0.4764	51.0	102.0	12.10
A02212.2	–	12.20	0.4803	51.0	102.0	12.20
A02212.5	–	12.50	0.4921	51.0	102.0	12.50
A0221/2	1/2	12.70	0.5000	60.0	98.0	12.70
A02213.0	–	13.00	0.5118	51.0	102.0	13.00
A02213.5	–	13.50	0.5315	54.0	107.0	13.50
A02214.0	–	14.00	0.5512	54.0	107.0	14.00
A0229/16	9/16	14.29	0.5625	67.0	105.0	14.29
A02214.5	–	14.50	0.5709	56.0	111.0	14.50
A02215.0	–	15.00	0.5906	56.0	111.0	15.00
A02215.5	–	15.50	0.6102	58.0	115.0	15.50
A0225/8	5/8	15.88	0.6250	73.0	111.0	15.88
A02216.0	–	16.00	0.6299	58.0	115.0	16.00

A620

DORMER

HSS-E (5% Cobalt) Stub Drill, Bronze Tempered Finish

Drill with 130° point angle which helps self-centering and reduces the cutting forces. The bronze finish is a thin oxide layer and it is an indication for Cobalt. Suitable for drilling in many materials. Should not be used in hand-held devices.



HSS-E	DIN 1897	2.5×D
130°	Bronze	
λ20-35°	R	DC h8

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
◪40 H	◪45 H	◪46 H	◪34 H	◪30 G	◪27 F	◪27 G	◪21 G	◪18 F	◪16 G	◪13 F	◪11 E	■30 F	■26 F
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
■27 F	■22 F	■13 H	■11 H	■10 H	■15 D	◪34 K	◪25 F	◪19 F	◪27 F	◪22 F	◪18 F	◪24 F	◪18 F
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪15 F	◪22 F	◪17 F	◪12 F	◪11 F	◪9 F	◪25 F	◪19 F	◪15 F	◪40 K	◪30 K	◪20 J	◪49 I	◪44 I
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**
◪32 I	◪68 J	◪40 K	◪20 I	◪40 L	◪32 K	◪18 I	◪30 G	◪18 F	◪10 C	◪12 F	◪8 C	◪9 F	◪6 C
S4.1	**S4.2**												
◪7 F	◪5 C												

Product	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A6202.5	2.50	0.0984	14.0	43.0	2.50
A6202.6	2.60	0.1024	14.0	43.0	2.60
A6202.7	2.70	0.1063	16.0	46.0	2.70
A6202.8	2.80	0.1102	16.0	46.0	2.80
A6202.9	2.90	0.1142	16.0	46.0	2.90
A6203.0	3.00	0.1181	16.0	46.0	3.00
A6203.1	3.10	0.1220	18.0	49.0	3.10
A6203.2	3.20	0.1260	18.0	49.0	3.20
A6203.3	3.30	0.1299	18.0	49.0	3.30
A6203.4	3.40	0.1339	20.0	52.0	3.40
A6203.5	3.50	0.1378	20.0	52.0	3.50
A6203.6	3.60	0.1417	20.0	52.0	3.60
A6203.7	3.70	0.1457	20.0	52.0	3.70
A6203.8	3.80	0.1496	22.0	55.0	3.80
A6203.9	3.90	0.1535	22.0	55.0	3.90
A6204.0	4.00	0.1575	22.0	55.0	4.00
A6204.1	4.10	0.1614	22.0	55.0	4.10
A6204.2	4.20	0.1654	22.0	55.0	4.20
A6204.3	4.30	0.1693	24.0	58.0	4.30
A6204.4	4.40	0.1732	24.0	58.0	4.40
A6204.5	4.50	0.1772	24.0	58.0	4.50
A6204.6	4.60	0.1811	24.0	58.0	4.60
A6204.7	4.70	0.1850	24.0	58.0	4.70
A6204.8	4.80	0.1890	26.0	62.0	4.80

Product	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A6204.9	4.90	0.1929	26.0	62.0	4.90
A6205.0	5.00	0.1969	26.0	62.0	5.00
A6205.1	5.10	0.2008	26.0	62.0	5.10
A6205.2	5.20	0.2047	26.0	62.0	5.20
A6205.3	5.30	0.2087	26.0	62.0	5.30
A6205.4	5.40	0.2126	28.0	66.0	5.40
A6205.5	5.50	0.2165	28.0	66.0	5.50
A6205.6	5.60	0.2205	28.0	66.0	5.60
A6205.7	5.70	0.2244	28.0	66.0	5.70
A6205.8	5.80	0.2283	28.0	66.0	5.80
A6205.9	5.90	0.2323	28.0	66.0	5.90
A6206.0	6.00	0.2362	28.0	66.0	6.00
A6206.1	6.10	0.2402	31.0	70.0	6.10
A6206.2	6.20	0.2441	31.0	70.0	6.20
A6206.3	6.30	0.2480	31.0	70.0	6.30
A6206.4	6.40	0.2520	31.0	70.0	6.40
A6206.5	6.50	0.2559	31.0	70.0	6.50
A6206.6	6.60	0.2598	31.0	70.0	6.60
A6206.7	6.70	0.2638	31.0	70.0	6.70
A6206.8	6.80	0.2677	34.0	74.0	6.80
A6206.9	6.90	0.2717	34.0	74.0	6.90
A6207.0	7.00	0.2756	34.0	74.0	7.00
A6207.1	7.10	0.2795	34.0	74.0	7.10
A6207.2	7.20	0.2835	34.0	74.0	7.20

Product	DC	DC	LCF	OAL	DCON MS
	[mm]	[inch]	[mm]	[mm]	[mm]
A6207.3	7.30	0.2874	34.0	74.0	7.30
A6207.4	7.40	0.2913	34.0	74.0	7.40
A6207.5	7.50	0.2953	34.0	74.0	7.50
A6207.6	7.60	0.2992	37.0	79.0	7.60
A6207.7	7.70	0.3031	37.0	79.0	7.70
A6207.8	7.80	0.3071	37.0	79.0	7.80
A6207.9	7.90	0.3110	37.0	79.0	7.90
A6208.0	8.00	0.3150	37.0	79.0	8.00
A6208.1	8.10	0.3189	37.0	79.0	8.10
A6208.2	8.20	0.3228	37.0	79.0	8.20
A6208.3	8.30	0.3268	37.0	79.0	8.30
A6208.4	8.40	0.3307	37.0	79.0	8.40
A6208.5	8.50	0.3346	37.0	79.0	8.50
A6208.6	8.60	0.3386	40.0	84.0	8.60
A6208.7	8.70	0.3425	40.0	84.0	8.70
A6208.8	8.80	0.3465	40.0	84.0	8.80
A6208.9	8.90	0.3504	40.0	84.0	8.90
A6209.0	9.00	0.3543	40.0	84.0	9.00
A6209.1	9.10	0.3583	40.0	84.0	9.10
A6209.2	9.20	0.3622	40.0	84.0	9.20

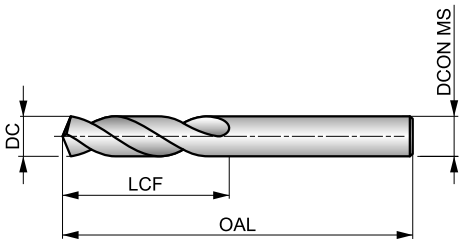
Product	DC	DC	LCF	OAL	DCON MS
	[mm]	[inch]	[mm]	[mm]	[mm]
A6209.3	9.30	0.3661	40.0	84.0	9.30
A6209.4	9.40	0.3701	40.0	84.0	9.40
A6209.5	9.50	0.3740	40.0	84.0	9.50
A6209.6	9.60	0.3780	43.0	89.0	9.60
A6209.7	9.70	0.3819	43.0	89.0	9.70
A6209.8	9.80	0.3858	43.0	89.0	9.80
A6209.9	9.90	0.3898	43.0	89.0	9.90
A62010.0	10.00	0.3937	43.0	89.0	10.00
A62010.2	10.20	0.4016	43.0	89.0	10.20
A62010.3	10.30	0.4055	43.0	89.0	10.30
A62010.4	10.40	0.4094	43.0	89.0	10.40
A62010.5	10.50	0.4134	43.0	89.0	10.50
A62010.8	10.80	0.4252	47.0	95.0	10.80
A62011.0	11.00	0.4331	47.0	95.0	11.00
A62011.5	11.50	0.4528	47.0	95.0	11.50
A62012.0	12.00	0.4724	51.0	102.0	12.00
A62012.2	12.20	0.4803	51.0	102.0	12.20
A62012.5	12.50	0.4921	51.0	102.0	12.50
A62012.8	12.80	0.5039	51.0	102.0	12.80
A62013.0	13.00	0.5118	51.0	102.0	13.00

A117

DORMER

HSS-E (5% Cobalt) Stub Drill, Bronze Tempered Finish

Drill recommended for use in difficult materials and applications. A 135° split point makes self-centering easier and also reduces the cutting forces. Can be relied on to produce a precise hole and quality finish. The bronze finish is a thin oxide layer and it is an indication for Cobalt.



HSS-E	DIN 1897	2.5×D
135°	Bronze	
λ20-35°	R	DC h8

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
◪40 H	◪45 H	◪46 H	◪34 H	◪30 G	■27 F	◪27 G	◪21 G	■18 F	◪16 G	■13 F	■11 E	■30 F	■26 F
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
■27 F	■22 F	■13 H	■11 H	■10 H	■15 D	◪34 K	◪25 F	◪19 F	◪27 F	◪22 F	■18 F	◪24 F	◪18 F
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
■15 F	◪22 F	◪17 F	■12 F	■11 F	■9 F	◪25 F	◪19 F	■15 F	◪35 K	◪26 K	◪18 J	◪48 I	◪43 I
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**
◪31 I	◪68 J	◪40 K	◪20 I	◪35 M	◪28 K	◪17 I	■30 G	■18 F	■10 C	■12 F	■8 C	■9 F	■6 C
S4.1	**S4.2**												
■7 F	■5 C												

DC <= 1.5mm 118° point.

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A1171.0	–	1.00	0.0394	6.0	26.0	1.00
A1171.1	–	1.10	0.0433	7.0	28.0	1.10
A1171.2	–	1.20	0.0472	8.0	30.0	1.20
A1171.3	–	1.30	0.0512	8.0	30.0	1.30
A1171.4	–	1.40	0.0551	9.0	32.0	1.40
A1171.5	–	1.50	0.0591	9.0	32.0	1.50
A1171.6	–	1.60	0.0630	10.0	34.0	1.60
A1171.7	–	1.70	0.0669	10.0	34.0	1.70
A1171.8	–	1.80	0.0709	11.0	36.0	1.80
A1171.9	–	1.90	0.0748	11.0	36.0	1.90
A1172.0	–	2.00	0.0787	12.0	38.0	2.00
A1172.1	–	2.10	0.0827	12.0	38.0	2.10
A1172.2	–	2.20	0.0866	13.0	40.0	2.20
A1172.3	–	2.30	0.0906	13.0	40.0	2.30
A1172.4	–	2.40	0.0945	14.0	43.0	2.40
A1172.5	–	2.50	0.0984	14.0	43.0	2.50
A1172.6	–	2.60	0.1024	14.0	43.0	2.60
A1172.7	–	2.70	0.1063	16.0	46.0	2.70
A1172.8	–	2.80	0.1102	16.0	46.0	2.80
A1172.9	–	2.90	0.1142	16.0	46.0	2.90
A1173.0	–	3.00	0.1181	16.0	46.0	3.00
A1173.1	–	3.10	0.1220	18.0	49.0	3.10
A1171/8	1/8	3.18	0.1250	18.0	49.0	3.18

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A1173.2	–	3.20	0.1260	18.0	49.0	3.20
A1173.3	–	3.30	0.1299	18.0	49.0	3.30
A1173.4	–	3.40	0.1339	20.0	52.0	3.40
A1173.5	–	3.50	0.1378	20.0	52.0	3.50
A1173.6	–	3.60	0.1417	20.0	52.0	3.60
A1173.7	–	3.70	0.1457	20.0	52.0	3.70
A1173.8	–	3.80	0.1496	22.0	55.0	3.80
A1173.9	–	3.90	0.1535	22.0	55.0	3.90
A1175/32	5/32	3.97	0.1563	22.0	55.0	3.97
A1174.0	–	4.00	0.1575	22.0	55.0	4.00
A1174.1	–	4.10	0.1614	22.0	55.0	4.10
A1174.2	–	4.20	0.1654	22.0	55.0	4.20
A1174.3	–	4.30	0.1693	24.0	58.0	4.30
A1174.4	–	4.40	0.1732	24.0	58.0	4.40
A1174.5	–	4.50	0.1772	24.0	58.0	4.50
A1174.6	–	4.60	0.1811	24.0	58.0	4.60
A1174.7	–	4.70	0.1850	24.0	58.0	4.70
A1173/16	3/16	4.76	0.1875	26.0	62.0	4.76
A1174.8	–	4.80	0.1890	26.0	62.0	4.80
A1174.9	–	4.90	0.1929	26.0	62.0	4.90
A1175.0	–	5.00	0.1969	26.0	62.0	5.00
A1175.1	–	5.10	0.2008	26.0	62.0	5.10
A1175.2	–	5.20	0.2047	26.0	62.0	5.20

Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A1175.3	–	5.30	0.2087	26.0	62.0	5.30
A1175.4	–	5.40	0.2126	28.0	66.0	5.40
A1175.5	–	5.50	0.2165	28.0	66.0	5.50
A1175.6	–	5.60	0.2205	28.0	66.0	5.60
A1175.7	–	5.70	0.2244	28.0	66.0	5.70
A1175.8	–	5.80	0.2283	28.0	66.0	5.80
A1175.9	–	5.90	0.2323	28.0	66.0	5.90
A1176.0	–	6.00	0.2362	28.0	66.0	6.00
A1176.1	–	6.10	0.2402	31.0	70.0	6.10
A1176.2	–	6.20	0.2441	31.0	70.0	6.20
A1176.3	–	6.30	0.2480	31.0	70.0	6.30
A1171/4	1/4	6.35	0.2500	31.0	70.0	6.35
A1176.4	–	6.40	0.2520	31.0	70.0	6.40
A1176.5	–	6.50	0.2559	31.0	70.0	6.50
A1176.6	–	6.60	0.2598	31.0	70.0	6.60
A1176.7	–	6.70	0.2638	31.0	70.0	6.70
A1176.8	–	6.80	0.2677	34.0	74.0	6.80
A1176.9	–	6.90	0.2717	34.0	74.0	6.90
A1177.0	–	7.00	0.2756	34.0	74.0	7.00
A1177.1	–	7.10	0.2795	34.0	74.0	7.10
A1177.2	–	7.20	0.2835	34.0	74.0	7.20
A1177.3	–	7.30	0.2874	34.0	74.0	7.30
A1177.4	–	7.40	0.2913	34.0	74.0	7.40
A1177.5	–	7.50	0.2953	34.0	74.0	7.50
A1177.6	–	7.60	0.2992	37.0	79.0	7.60
A1177.7	–	7.70	0.3031	37.0	79.0	7.70
A1177.8	–	7.80	0.3071	37.0	79.0	7.80
A1177.9	–	7.90	0.3110	37.0	79.0	7.90
A1175/16	5/16	7.94	0.3125	37.0	79.0	7.94

Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A1178.0	–	8.00	0.3150	37.0	79.0	8.00
A1178.1	–	8.10	0.3189	37.0	79.0	8.10
A1178.2	–	8.20	0.3228	37.0	79.0	8.20
A1178.3	–	8.30	0.3268	37.0	79.0	8.30
A1178.4	–	8.40	0.3307	37.0	79.0	8.40
A1178.5	–	8.50	0.3346	37.0	79.0	8.50
A1178.6	–	8.60	0.3386	40.0	84.0	8.60
A1178.7	–	8.70	0.3425	40.0	84.0	8.70
A1178.8	–	8.80	0.3465	40.0	84.0	8.80
A1178.9	–	8.90	0.3504	40.0	84.0	8.90
A1179.0	–	9.00	0.3543	40.0	84.0	9.00
A1179.1	–	9.10	0.3583	40.0	84.0	9.10
A1179.2	–	9.20	0.3622	40.0	84.0	9.20
A1179.3	–	9.30	0.3661	40.0	84.0	9.30
A1179.4	–	9.40	0.3701	40.0	84.0	9.40
A1179.5	–	9.50	0.3740	40.0	84.0	9.50
A1173/8	3/8	9.52	0.3750	43.0	89.0	9.52
A1179.6	–	9.60	0.3780	43.0	89.0	9.60
A1179.7	–	9.70	0.3819	43.0	89.0	9.70
A1179.8	–	9.80	0.3858	43.0	89.0	9.80
A1179.9	–	9.90	0.3898	43.0	89.0	9.90
A11710.0	–	10.00	0.3937	43.0	89.0	10.00
A11710.2	–	10.20	0.4016	43.0	89.0	10.20
A11710.5	–	10.50	0.4134	43.0	89.0	10.50
A11711.0	–	11.00	0.4331	47.0	95.0	11.00
A11711.5	–	11.50	0.4528	47.0	95.0	11.50
A11712.0	–	12.00	0.4724	51.0	102.0	12.00
A1171/2	1/2	12.70	0.5000	51.0	102.0	12.70
A11713.0	–	13.00	0.5118	51.0	102.0	13.00

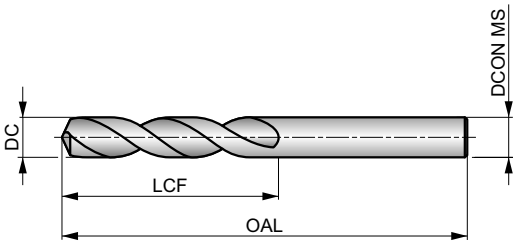
A520

DORMER

ADX HSS Stub Drill, TiN Coated

High performance drill, able to produce high quality and accurate holes at high speeds and feeds (H9 hole tolerance). A 130° thinned point which helps with self-centering and reduces cutting forces. This drill should be used in machines with constant feed only. TiN coating extends the tool life.

ADX



HSS	DIN 1897	2.5×D
130°	TiN	
λ32-40°	R	DC h8

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■53 M	■59 M	■61 M	■45 M	■40 K	■35 G	■31 I	■25 I	■21 G	■19 I	■16 G	◪13 E	■41 I	■35 I
M2.1	M2.2	M3.1	M3.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2
■37 I	■30 I	■19 I	■16 I	■14 I	■20 G	■48 M	■36 K	■27 K	■37 J	■30 J	■24 F	■33 J	■25 J
K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3	N2.1	N2.2
■20 F	■30 J	■23 J	■17 F	■14 F	■12 F	■34 J	■26 J	■20 F	◪55 I	◪41 I	■28 M	■57 K	■51 K
N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	N4.3	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2
■37 K	■85 K	■50 I	◪25 E	◪65 G	■50 G	■35 F	■34 I	■20 G	◪4 B	◪15 G	◪10 E	◪11 G	◪7 E
S4.1	S4.2												
◪9 G	◪6 E												

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A5203.0	–	3.00	0.1181	16.0	46.0	3.00
A5203.1	–	3.10	0.1220	18.0	49.0	3.10
A5201/8	1/8	3.18	0.1250	18.0	49.0	3.18
A5203.2	–	3.20	0.1260	18.0	49.0	3.20
A5203.3	–	3.30	0.1299	18.0	49.0	3.30
A5203.4	–	3.40	0.1339	20.0	52.0	3.40
A5203.5	–	3.50	0.1378	20.0	52.0	3.50
A5209/64	9/64	3.57	0.1406	20.0	52.0	3.57
A5203.6	–	3.60	0.1417	20.0	52.0	3.60
A5203.7	–	3.70	0.1457	20.0	52.0	3.70
A5203.8	–	3.80	0.1496	22.0	55.0	3.80
A5203.9	–	3.90	0.1535	22.0	55.0	3.90
A5205/32	5/32	3.97	0.1563	22.0	55.0	3.97
A5204.0	–	4.00	0.1575	22.0	55.0	4.00
A5204.1	–	4.10	0.1614	22.0	55.0	4.10
A5204.2	–	4.20	0.1654	22.0	55.0	4.20
A5204.3	–	4.30	0.1693	24.0	58.0	4.30
A52011/64	11/64	4.37	0.1719	24.0	58.0	4.37
A5204.4	–	4.40	0.1732	24.0	58.0	4.40
A5204.5	–	4.50	0.1772	24.0	58.0	4.50
A5204.6	–	4.60	0.1811	24.0	58.0	4.60
A5204.7	–	4.70	0.1850	24.0	58.0	4.70
A5203/16	3/16	4.76	0.1875	26.0	62.0	4.76
A5204.8	–	4.80	0.1890	26.0	62.0	4.80

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A5204.9	–	4.90	0.1929	26.0	62.0	4.90
A5205.0	–	5.00	0.1969	26.0	62.0	5.00
A5205.1	–	5.10	0.2008	26.0	62.0	5.10
A52013/64	13/64	5.16	0.2031	26.0	62.0	5.16
A5205.2	–	5.20	0.2047	26.0	62.0	5.20
A5205.3	–	5.30	0.2087	26.0	62.0	5.30
A5205.4	–	5.40	0.2126	28.0	66.0	5.40
A5205.5	–	5.50	0.2165	28.0	66.0	5.50
A5207/32	7/32	5.56	0.2188	28.0	66.0	5.56
A5205.6	–	5.60	0.2205	28.0	66.0	5.60
A5205.7	–	5.70	0.2244	28.0	66.0	5.70
A5205.8	–	5.80	0.2283	28.0	66.0	5.80
A5205.9	–	5.90	0.2323	28.0	66.0	5.90
A52015/64	15/64	5.95	0.2344	28.0	66.0	5.95
A5206.0	–	6.00	0.2362	28.0	66.0	6.00
A5206.1	–	6.10	0.2402	31.0	70.0	6.10
A5206.2	–	6.20	0.2441	31.0	70.0	6.20
A5206.3	–	6.30	0.2480	31.0	70.0	6.30
A5201/4	1/4	6.35	0.2500	31.0	70.0	6.35
A5206.4	–	6.40	0.2520	31.0	70.0	6.40
A5206.5	–	6.50	0.2559	31.0	70.0	6.50
A5206.6	–	6.60	0.2598	31.0	70.0	6.60
A5206.7	–	6.70	0.2638	31.0	70.0	6.70
A52017/64	17/64	6.75	0.2656	34.0	74.0	6.75

Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A5206.8	–	6.80	0.2677	34.0	74.0	6.80
A5206.9	–	6.90	0.2717	34.0	74.0	6.90
A5207.0	–	7.00	0.2756	34.0	74.0	7.00
A5207.1	–	7.10	0.2795	34.0	74.0	7.10
A5209/32	9/32	7.14	0.2813	34.0	74.0	7.14
A5207.2	–	7.20	0.2835	34.0	74.0	7.20
A5207.3	–	7.30	0.2874	34.0	74.0	7.30
A5207.4	–	7.40	0.2913	34.0	74.0	7.40
A5207.5	–	7.50	0.2953	34.0	74.0	7.50
A52019/64	19/64	7.54	0.2969	37.0	79.0	7.54
A5207.6	–	7.60	0.2992	37.0	79.0	7.60
A5207.7	–	7.70	0.3031	37.0	79.0	7.70
A5207.8	–	7.80	0.3071	37.0	79.0	7.80
A5207.9	–	7.90	0.3110	37.0	79.0	7.90
A5205/16	5/16	7.94	0.3125	37.0	79.0	7.94
A5208.0	–	8.00	0.3150	37.0	79.0	8.00
A5208.1	–	8.10	0.3189	37.0	79.0	8.10
A5208.2	–	8.20	0.3228	37.0	79.0	8.20
A5208.3	–	8.30	0.3268	37.0	79.0	8.30
A52021/64	21/64	8.33	0.3281	37.0	79.0	8.33
A5208.4	–	8.40	0.3307	37.0	79.0	8.40
A5208.5	–	8.50	0.3346	37.0	79.0	8.50
A5208.6	–	8.60	0.3386	40.0	84.0	8.60
A5208.7	–	8.70	0.3425	40.0	84.0	8.70
A52011/32	11/32	8.73	0.3438	40.0	84.0	8.73
A5208.8	–	8.80	0.3465	40.0	84.0	8.80
A5208.9	–	8.90	0.3504	40.0	84.0	8.90
A5209.0	–	9.00	0.3543	40.0	84.0	9.00
A5209.1	–	9.10	0.3583	40.0	84.0	9.10
A52023/64	23/64	9.13	0.3594	40.0	84.0	9.13
A5209.2	–	9.20	0.3622	40.0	84.0	9.20
A5209.3	–	9.30	0.3661	40.0	84.0	9.30
A5209.4	–	9.40	0.3701	40.0	84.0	9.40
A5209.5	–	9.50	0.3740	40.0	84.0	9.50
A5203/8	3/8	9.52	0.3750	43.0	89.0	9.52
A5209.6	–	9.60	0.3780	43.0	89.0	9.60
A5209.7	–	9.70	0.3819	43.0	89.0	9.70
A5209.8	–	9.80	0.3858	43.0	89.0	9.80
A5209.9	–	9.90	0.3898	43.0	89.0	9.90

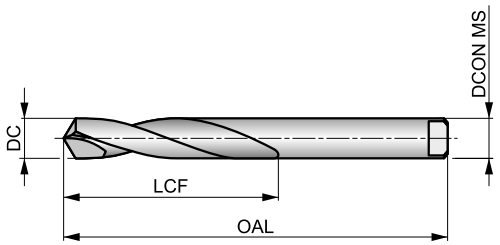
Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A52025/64	25/64	9.92	0.3906	43.0	89.0	9.92
A52010.0	–	10.00	0.3937	43.0	89.0	10.00
A52010.1	–	10.10	0.3976	43.0	89.0	10.10
A52010.2	–	10.20	0.4016	43.0	89.0	10.20
A52010.3	–	10.30	0.4055	43.0	89.0	10.30
A52013/32	13/32	10.32	0.4063	43.0	89.0	10.32
A52010.4	–	10.40	0.4094	43.0	89.0	10.40
A52010.5	–	10.50	0.4134	43.0	89.0	10.50
A52010.6	–	10.60	0.4173	43.0	89.0	10.60
A52010.7	–	10.70	0.4213	47.0	95.0	10.70
A52027/64	27/64	10.72	0.4219	47.0	95.0	10.72
A52010.8	–	10.80	0.4252	47.0	95.0	10.80
A52010.9	–	10.90	0.4291	47.0	95.0	10.90
A52011.0	–	11.00	0.4331	47.0	95.0	11.00
A52011.1	–	11.10	0.4370	47.0	95.0	11.10
A5207/16	7/16	11.11	0.4375	47.0	95.0	11.11
A52011.2	–	11.20	0.4409	47.0	95.0	11.20
A52011.3	–	11.30	0.4449	47.0	95.0	11.30
A52011.4	–	11.40	0.4488	47.0	95.0	11.40
A52011.5	–	11.50	0.4528	47.0	95.0	11.50
A52029/64	29/64	11.51	0.4531	47.0	95.0	11.51
A52011.6	–	11.60	0.4567	47.0	95.0	11.60
A52011.7	–	11.70	0.4606	47.0	95.0	11.70
A52011.8	–	11.80	0.4646	47.0	95.0	11.80
A52011.9	–	11.90	0.4685	51.0	102.0	11.90
A52015/32	15/32	11.91	0.4688	51.0	102.0	11.91
A52012.0	–	12.00	0.4724	51.0	102.0	12.00
A52012.1	–	12.10	0.4764	51.0	102.0	12.10
A52012.2	–	12.20	0.4803	51.0	102.0	12.20
A52012.3	–	12.30	0.4843	51.0	102.0	12.30
A52031/64	31/64	12.30	0.4844	51.0	102.0	12.30
A52012.4	–	12.40	0.4882	51.0	102.0	12.40
A52012.5	–	12.50	0.4921	51.0	102.0	12.50
A52012.6	–	12.60	0.4961	51.0	102.0	12.60
A52012.7	–	12.70	0.5000	51.0	102.0	12.70
A5201/2	1/2	12.70	0.5000	51.0	102.0	12.70
A52012.8	–	12.80	0.5039	51.0	102.0	12.80
A52012.9	–	12.90	0.5079	51.0	102.0	12.90
A52013.0	–	13.00	0.5118	51.0	102.0	13.00

A124

DORMER

HSS Stub Drill, Steam Tempered Finish, with Brazed Carbide Point

Brazed carbide tip gives the high performance of a carbide drill with a strong and less brittle HSS body. A 118°, 4-facet point, helps with self-centering making it an economical choice. It can be used in both conventional and CNC machines. Steam tempered finish retains cutting fluid.



HSS HM	DIN 8037	2.5×D
118°	Bright ST	
λ10-20°	R	

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P2.3	P3.3	P4.2	P4.3	M3.1	M3.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3
◪40 C	◪40 C	◪30 C	◪24 A	◪41 C	◪35 C	◪32 C	◪35 C	■55 C	■41 C	■31 C	■49 C	■40 C	■32 A
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N3.1**	**N3.2**	**N4.2**
■44 C	■33 C	■27 A	■40 C	■30 C	■22 A	■19 A	■16 A	■46 C	■34 C	■27 A	◪119 E	◪70 G	◪60 E
S1.1	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**					
◪40 A	◪35 A	◪25 A	◪33 A	◪28 A	◪25 A	◪20 A	◪20 A	◪16 A					

Tang to DIN 1809.

Product	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A1243.0	3.00	0.1181	20.0	50.0	3.00
A1243.2	3.20	0.1260	25.0	56.0	3.20
A1243.5	3.50	0.1378	25.0	56.0	3.50
A1244.0	4.00	0.1575	25.0	56.0	4.00
A1244.2	4.20	0.1654	28.0	63.0	4.20
A1244.5	4.50	0.1772	28.0	63.0	4.50
A1244.8	4.80	0.1890	28.0	63.0	4.80
A1245.0	5.00	0.1969	28.0	63.0	5.00
A1245.2	5.20	0.2047	32.0	71.0	5.20
A1245.5	5.50	0.2165	32.0	71.0	5.50
A1245.8	5.80	0.2283	32.0	71.0	5.80
A1246.0	6.00	0.2362	32.0	71.0	6.00
A1246.5	6.50	0.2559	32.0	71.0	6.50
A1246.8	6.80	0.2677	40.0	80.0	6.80
A1247.0	7.00	0.2756	40.0	80.0	7.00

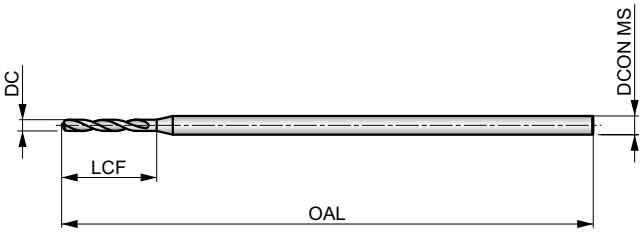
Product	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A1247.5	7.50	0.2953	40.0	80.0	7.50
A1248.0	8.00	0.3150	40.0	80.0	8.00
A1248.5	8.50	0.3346	50.0	90.0	8.50
A1249.0	9.00	0.3543	50.0	90.0	9.00
A1249.5	9.50	0.3740	50.0	90.0	9.50
A12410.0	10.00	0.3937	56.0	100.0	10.00
A12410.5	10.50	0.4134	56.0	100.0	10.50
A12411.0	11.00	0.4331	56.0	100.0	11.00
A12411.5	11.50	0.4528	63.0	112.0	11.50
A12412.0	12.00	0.4724	63.0	112.0	12.00
A12413.0	13.00	0.5118	63.0	112.0	13.00
A12414.0	14.00	0.5512	71.0	125.0	14.00
A12415.0	15.00	0.5906	71.0	125.0	15.00
A12416.0	16.00	0.6299	80.0	140.0	16.00

A720

DORMER

HSS-E (5% Cobalt) Micro Drill, Bright Finish

Micro drill in very small diameters ranging from 0.15 mm to 1.40 mm. To make tool holding easier, all drills have either a 1.00 mm or 1.50 mm shank diameter. The drills all have a 118°, 4-facet point which is a great aid to self-centering and reduces the cutting forces.



HSS-E	DIN 1899	2.5×D
118°	Bright	
λ 20-35°	R	

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■36 A	■40 A	■41 A	■31 A	■27 A	◪24 A	■25 A	■20 A	◪17 A	■15 A	◪13 A	◪10 A	◪30 A	◪26 A
M2.1	M2.2	M3.1	M3.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2
◪27 A	◪22 A	◪12 A	◪10 A	◪9 A	◪15 A	■30 A	■22 A	■17 A	◪25 A	◪20 A	◪16 A	◪22 A	◪17 A
K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3	N2.1	N2.2
◪13 A	◪20 A	◪15 A	◪11 A	◪10 A	◪8 A	◪23 A	◪17 A	◪13 A	◪35 A	◪26 A	◪18 A	◪42 A	◪37 A
N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2	S4.1
◪27 A	◪68 A	◪40 A	◪20 A	◪48 A	◪25 A	◪23 A	◪17 A	◪8 A	◪9 A	◪6 A	◪7 A	◪4 A	◪5 A
S4.2													
◪3 A													

Product	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A720.15	0.15	0.0059	1.0	25.0	1.00
A720.16	0.16	0.0063	1.4	25.0	1.00
A720.17	0.17	0.0067	1.4	25.0	1.00
A720.18	0.18	0.0070	1.4	25.0	1.00
A720.2	0.20	0.0079	1.8	25.0	1.00
A720.22	0.22	0.0087	1.8	25.0	1.00
A720.25	0.25	0.0098	2.2	25.0	1.00
A720.27	0.27	0.0106	2.2	25.0	1.00
A720.28	0.28	0.0110	2.2	25.0	1.00
A720.3	0.30	0.0118	2.2	25.0	1.00
A720.35	0.35	0.0138	2.8	25.0	1.00
A720.38	0.38	0.0150	2.8	25.0	1.00
A720.39	0.39	0.0154	3.6	25.0	1.00
A720.4	0.40	0.0157	3.6	25.0	1.00
A720.45	0.45	0.0177	3.6	25.0	1.00
A720.5	0.50	0.0197	4.0	25.0	1.00

Product	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A720.55	0.55	0.0217	4.5	25.0	1.00
A720.6	0.60	0.0236	4.5	25.0	1.00
A720.62	0.62	0.0244	5.0	25.0	1.00
A720.65	0.65	0.0256	5.0	25.0	1.00
A720.7	0.70	0.0276	5.6	25.0	1.00
A720.75	0.75	0.0295	5.6	25.0	1.00
A720.8	0.80	0.0315	6.3	25.0	1.50
A720.85	0.85	0.0335	6.3	25.0	1.50
A720.9	0.90	0.0354	7.1	25.0	1.50
A720.95	0.95	0.0374	7.1	25.0	1.50
A7201.0	1.00	0.0394	8.0	25.0	1.50
A7201.05	1.05	0.0413	8.0	25.0	1.50
A7201.1	1.10	0.0433	9.0	25.0	1.50
A7201.2	1.20	0.0472	10.0	25.0	1.50
A7201.3	1.30	0.0512	10.0	25.0	1.50
A7201.4	1.40	0.0551	11.2	25.0	1.50

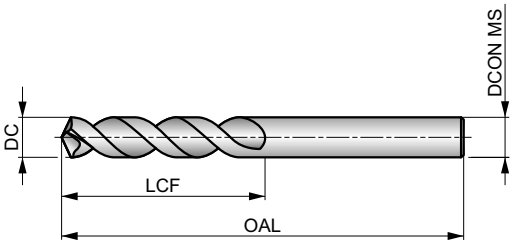
A920

DORMER

PFX HSS-E (5% Cobalt) Stub Drill, Bright Finish

High performance drill, able to produce high quality and accurate holes at high speeds and feeds (H10 hole tolerance). Self-centering 130° point angle and special parabolic flute design help to drill deep holes in a single pass. Suitable for many materials.

PFX



HSS-E	DIN ANSI	3×D
130°	Bright	
λ>35°	R	DC h8

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■42 J	■47 J	■49 J	■36 J	■32 I	■28 E	■34 I	■27 I	■23 E	■20 I	■17 E	■14 E	■21 F	■17 F
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
■18 F	■15 F	■8 F	■7 F	■6 F	■9 D	◪34 L	◪25 L	◪19 L	◪32 L	◪26 L	◪21 J	◪28 L	◪22 L
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪17 J	◪26 L	◪20 L	◪14 J	◪12 J	◪10 J	◪30 L	◪22 L	◪17 J	◪75 L	◪56 L	■38 N	◪62 N	◪55 N
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**
◪40 N	◪112 J	◪66 J	◪33 H	◪55 J	◪40 H	■30 G	■18 G	■10 C	■12 G	■8 E	■9 G	■6 E	■7 G
S4.2													
■5 E													

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A9201.0	–	1.00	0.0394	6.0	26.0	1.00
A9201.1	–	1.10	0.0433	7.0	28.0	1.10
A9203/64	3/64	1.19	0.0469	13.0	35.0	1.19
A9201.2	–	1.20	0.0472	8.0	30.0	1.20
A9201.25	–	1.25	0.0492	8.0	30.0	1.25
A9201.3	–	1.30	0.0512	8.0	30.0	1.30
A9201.35	–	1.35	0.0531	9.0	32.0	1.35
A9201.4	–	1.40	0.0551	9.0	32.0	1.40
A9201.5	–	1.50	0.0591	9.0	32.0	1.50
A9201.55	–	1.55	0.0610	10.0	34.0	1.55
A9201/16	1/16	1.59	0.0625	16.0	41.0	1.59
A9201.6	–	1.60	0.0630	10.0	34.0	1.60
A9201.7	–	1.70	0.0669	10.0	34.0	1.70
A9201.75	–	1.75	0.0689	11.0	36.0	1.75
A9201.8	–	1.80	0.0709	11.0	36.0	1.80
A9201.9	–	1.90	0.0748	11.0	36.0	1.90
A9205/64	5/64	1.98	0.0781	17.0	43.0	1.98
A9202.0	–	2.00	0.0787	12.0	38.0	2.00
A9202.1	–	2.10	0.0827	12.0	38.0	2.10
A9202.15	–	2.15	0.0846	13.0	40.0	2.15
A9202.2	–	2.20	0.0866	13.0	40.0	2.20
A9202.3	–	2.30	0.0906	13.0	40.0	2.30
A9202.35	–	2.35	0.0925	14.0	43.0	2.35
A9203/32	3/32	2.38	0.0938	19.0	41.0	2.38

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A9202.4	–	2.40	0.0945	14.0	43.0	2.40
A9202.5	–	2.50	0.0984	14.0	43.0	2.50
A9202.6	–	2.60	0.1024	14.0	43.0	2.60
A9202.7	–	2.70	0.1063	16.0	46.0	2.70
A9207/64	7/64	2.78	0.1094	21.0	46.0	2.78
A9202.8	–	2.80	0.1102	16.0	46.0	2.80
A9202.9	–	2.90	0.1142	16.0	46.0	2.90
A9203.0	–	3.00	0.1181	16.0	46.0	3.00
A9203.1	–	3.10	0.1220	18.0	49.0	3.10
A9201/8	1/8	3.18	0.1250	22.0	48.0	3.18
A9203.2	–	3.20	0.1260	18.0	49.0	3.20
A9203.3	–	3.30	0.1299	18.0	49.0	3.30
A9203.4	–	3.40	0.1339	20.0	52.0	3.40
A9203.5	–	3.50	0.1378	20.0	52.0	3.50
A9209/64	9/64	3.57	0.1406	24.0	49.0	3.57
A9203.6	–	3.60	0.1417	20.0	52.0	3.60
A9203.7	–	3.70	0.1457	20.0	52.0	3.70
A9203.8	–	3.80	0.1496	22.0	55.0	3.80
A9203.9	–	3.90	0.1535	22.0	55.0	3.90
A9205/32	5/32	3.97	0.1563	25.0	52.0	3.97
A9204.0	–	4.00	0.1575	22.0	55.0	4.00
A9204.1	–	4.10	0.1614	22.0	55.0	4.10
A9204.2	–	4.20	0.1654	22.0	55.0	4.20
A9204.3	–	4.30	0.1693	24.0	58.0	4.30

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A92011/64	11/64	4.37	0.1719	27.0	54.0	4.37
A9204.4	–	4.40	0.1732	24.0	58.0	4.40
A9204.5	–	4.50	0.1772	24.0	58.0	4.50
A9204.6	–	4.60	0.1811	24.0	58.0	4.60
A9204.7	–	4.70	0.1850	24.0	58.0	4.70
A9203/16	3/16	4.76	0.1875	29.0	56.0	4.76
A9204.8	–	4.80	0.1890	26.0	62.0	4.80
A9204.9	–	4.90	0.1929	26.0	62.0	4.90
A9205.0	–	5.00	0.1969	26.0	62.0	5.00
A9205.1	–	5.10	0.2008	26.0	62.0	5.10
A92013/64	13/64	5.16	0.2031	30.0	57.0	5.16
A9205.2	–	5.20	0.2047	26.0	62.0	5.20
A9205.3	–	5.30	0.2087	26.0	62.0	5.30
A9205.4	–	5.40	0.2126	28.0	66.0	5.40
A9205.5	–	5.50	0.2165	28.0	66.0	5.50
A9207/32	7/32	5.56	0.2188	32.0	60.0	5.56
A9205.6	–	5.60	0.2205	28.0	66.0	5.60
A9205.7	–	5.70	0.2244	28.0	66.0	5.70
A9205.8	–	5.80	0.2283	28.0	66.0	5.80
A9205.9	–	5.90	0.2323	28.0	66.0	5.90
A92015/64	15/64	5.95	0.2344	33.0	62.0	5.95
A9206.0	–	6.00	0.2362	28.0	66.0	6.00
A9206.1	–	6.10	0.2402	31.0	70.0	6.10
A9206.2	–	6.20	0.2441	31.0	70.0	6.20
A9206.3	–	6.30	0.2480	31.0	70.0	6.30
A9201/4	1/4	6.35	0.2500	35.0	64.0	6.35
A9206.4	–	6.40	0.2520	31.0	70.0	6.40
A9206.5	–	6.50	0.2559	31.0	70.0	6.50
A9206.6	–	6.60	0.2598	31.0	70.0	6.60
A9206.7	–	6.70	0.2638	31.0	70.0	6.70
A92017/64	17/64	6.75	0.2656	37.0	67.0	6.75
A9206.8	–	6.80	0.2677	34.0	74.0	6.80
A9206.9	–	6.90	0.2717	34.0	74.0	6.90
A9207.0	–	7.00	0.2756	34.0	74.0	7.00
A9207.1	–	7.10	0.2795	34.0	74.0	7.10
A9209/32	9/32	7.14	0.2813	38.0	68.0	7.14
A9207.2	–	7.20	0.2835	34.0	74.0	7.20
A9207.3	–	7.30	0.2874	34.0	74.0	7.30
A9207.4	–	7.40	0.2913	34.0	74.0	7.40
A9207.5	–	7.50	0.2953	34.0	74.0	7.50
A92019/64	19/64	7.54	0.2969	40.0	70.0	7.54
A9207.6	–	7.60	0.2992	37.0	79.0	7.60
A9207.7	–	7.70	0.3031	37.0	79.0	7.70
A9207.8	–	7.80	0.3071	37.0	79.0	7.80
A9207.9	–	7.90	0.3110	37.0	79.0	7.90
A9205/16	5/16	7.94	0.3125	41.0	71.0	7.94
A9208.0	–	8.00	0.3150	37.0	79.0	8.00
A9208.1	–	8.10	0.3189	37.0	79.0	8.10
A9208.2	–	8.20	0.3228	37.0	79.0	8.20
A9208.3	–	8.30	0.3268	37.0	79.0	8.30
A92021/64	21/64	8.33	0.3281	43.0	75.0	8.33
A9208.4	–	8.40	0.3307	37.0	79.0	8.40
A9208.5	–	8.50	0.3346	37.0	79.0	8.50
A9208.6	–	8.60	0.3386	40.0	84.0	8.60
A9208.7	–	8.70	0.3425	40.0	84.0	8.70
A92011/32	11/32	8.73	0.3438	43.0	76.0	8.73
A9208.8	–	8.80	0.3465	40.0	84.0	8.80
A9208.9	–	8.90	0.3504	40.0	84.0	8.90
A9209.0	–	9.00	0.3543	40.0	84.0	9.00
A9209.1	–	9.10	0.3583	40.0	84.0	9.10
A92023/64	23/64	9.13	0.3594	44.0	78.0	9.13
A9209.2	–	9.20	0.3622	40.0	84.0	9.20

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A9209.3	–	9.30	0.3661	40.0	84.0	9.30
A9209.4	–	9.40	0.3701	40.0	84.0	9.40
A9209.5	–	9.50	0.3740	40.0	84.0	9.50
A9203/8	3/8	9.52	0.3750	46.0	79.0	9.52
A9209.6	–	9.60	0.3780	43.0	89.0	9.60
A9209.7	–	9.70	0.3819	43.0	89.0	9.70
A9209.8	–	9.80	0.3858	43.0	89.0	9.80
A9209.9	–	9.90	0.3898	43.0	89.0	9.90
A92025/64	25/64	9.92	0.3906	48.0	83.0	9.92
A92010.0	–	10.00	0.3937	43.0	89.0	10.00
A92010.2	–	10.20	0.4016	43.0	89.0	10.20
A92010.3	–	10.30	0.4055	43.0	89.0	10.30
A92013/32	13/32	10.32	0.4063	49.0	84.0	10.32
A92010.5	–	10.50	0.4134	43.0	89.0	10.50
A92027/64	27/64	10.72	0.4219	51.0	86.0	10.72
A92010.8	–	10.80	0.4252	47.0	95.0	10.80
A92011.0	–	11.00	0.4331	47.0	95.0	11.00
A9207/16	7/16	11.11	0.4375	52.0	87.0	11.11
A92011.5	–	11.50	0.4528	47.0	95.0	11.50
A92029/64	29/64	11.51	0.4531	54.0	90.0	11.51
A92011.8	–	11.80	0.4646	47.0	95.0	11.80
A92015/32	15/32	11.91	0.4688	54.0	92.0	11.91
A92012.0	–	12.00	0.4724	51.0	102.0	12.00
A92012.2	–	12.20	0.4803	51.0	102.0	12.20
A92031/64	31/64	12.30	0.4844	56.0	94.0	12.30
A92012.5	–	12.50	0.4921	51.0	102.0	12.50
A9201/2	1/2	12.70	0.5000	57.0	95.0	12.70
A92013.0	–	13.00	0.5118	51.0	102.0	13.00
A92033/64	33/64	13.10	0.5156	60.0	98.0	13.10
A92013.5	–	13.50	0.5315	54.0	107.0	13.50
A92035/64	35/64	13.89	0.5469	64.0	102.0	13.89
A92014.0	–	14.00	0.5512	54.0	107.0	14.00
A9209/16	9/16	14.29	0.5625	64.0	102.0	14.29
A92014.5	–	14.50	0.5709	56.0	111.0	14.50
A92037/64	37/64	14.68	0.5781	67.0	105.0	14.68
A92014.75	–	14.75	0.5807	56.0	111.0	14.75
A92015.0	–	15.00	0.5906	56.0	111.0	15.00
A92019/32	19/32	15.08	0.5938	67.0	105.0	15.08
A92039/64	39/64	15.48	0.6094	70.0	108.0	15.48
A92015.5	–	15.50	0.6102	58.0	115.0	15.50
A9205/8	5/8	15.88	0.6250	70.0	108.0	15.88
A92016.0	–	16.00	0.6299	58.0	115.0	16.00
A92041/64	41/64	16.27	0.6406	73.0	114.0	16.27
A92016.5	–	16.50	0.6496	60.0	119.0	16.50
A92021/32	21/32	16.67	0.6563	73.0	114.0	16.67
A92016.75	–	16.75	0.6594	60.0	119.0	16.75
A92017.0	–	17.00	0.6693	60.0	119.0	17.00
A92043/64	43/64	17.07	0.6719	73.0	117.0	17.07
A92011/16	11/16	17.46	0.6875	73.0	117.0	17.46
A92017.5	–	17.50	0.6890	62.0	123.0	17.50
A92045/64	45/64	17.86	0.7031	76.0	121.0	17.86
A92018.0	–	18.00	0.7087	62.0	123.0	18.00
A92023/32	23/32	18.26	0.7188	76.0	121.0	18.26
A92018.5	–	18.50	0.7283	64.0	127.0	18.50
A92047/64	47/64	18.65	0.7344	79.0	127.0	18.65
A92019.0	–	19.00	0.7480	64.0	127.0	19.00
A9203/4	3/4	19.05	0.7500	79.0	127.0	19.05
A92049/64	49/64	19.45	0.7656	83.0	130.0	19.45
A92019.5	–	19.50	0.7677	66.0	131.0	19.50
A92025/32	25/32	19.84	0.7813	83.0	130.0	19.84
A92020.0	–	20.00	0.7874	66.0	131.0	20.00

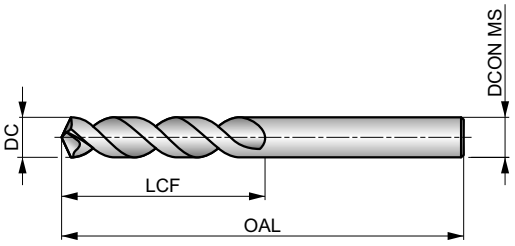
A921

DORMER

PFX HSS-E (5% Cobalt) Stub Drill, Alcrona Top Coated

High performance drill, able to produce high quality and accurate holes at high speeds and feeds (H10 hole tolerance). Self-centering 130° point angle and special parabolic flute design. Suitable for many materials. Alcrona-TOP coating improves performance and extends the tool life.

PFX



HSS-E	DIN ANSI	3×D
130°	Alcrona Top	
λ>35°	R	DC h8

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■70 M	■79 M	■81 M	■60 M	■53 J	■47 G	■56 J	■45 J	■38 G	■33 J	■28 G	■23 G	■23 F	■20 F
M2.1	M2.2	M3.1	M3.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2
■21 F	■17 F	■10 F	■9 F	■8 F	■11 D	■53 L	■39 L	■29 L	■52 L	■42 L	■33 J	■46 L	■35 L
K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	S1.1	S1.2	S1.3	S2.1	S2.2
■28 J	■42 L	■32 L	■23 J	■20 J	■17 J	■48 L	■36 L	■28 J	◪48 I	◪29 I	◪16 E	◪19 I	◪14 G
S3.1	S3.2	S4.1	S4.2										
◪14 I	◪10 G	◪11 I	◪8 G										

Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A9212.5	–	2.50	0.0984	14.0	43.0	2.50
A9212.6	–	2.60	0.1024	14.0	43.0	2.60
A9212.7	–	2.70	0.1063	16.0	46.0	2.70
A9217/64	7/64	2.78	0.1094	21.0	46.0	2.78
A9212.9	–	2.90	0.1142	16.0	46.0	2.90
A9213.0	–	3.00	0.1181	16.0	46.0	3.00
A9213.1	–	3.10	0.1220	18.0	49.0	3.10
A9211/8	1/8	3.18	0.1250	22.0	48.0	3.18
A9213.2	–	3.20	0.1260	18.0	49.0	3.20
A9213.3	–	3.30	0.1299	18.0	49.0	3.30
A9213.4	–	3.40	0.1339	20.0	52.0	3.40
A9213.5	–	3.50	0.1378	20.0	52.0	3.50
A9219/64	9/64	3.57	0.1406	24.0	49.0	3.57
A9213.6	–	3.60	0.1417	20.0	52.0	3.60
A9213.7	–	3.70	0.1457	20.0	52.0	3.70
A9213.8	–	3.80	0.1496	22.0	55.0	3.80
A9213.9	–	3.90	0.1535	22.0	55.0	3.90
A9215/32	5/32	3.97	0.1563	25.0	52.0	3.97
A9214.0	–	4.00	0.1575	22.0	55.0	4.00
A9214.1	–	4.10	0.1614	22.0	55.0	4.10
A9214.2	–	4.20	0.1654	22.0	55.0	4.20
A9214.3	–	4.30	0.1693	24.0	58.0	4.30
A92111/64	11/64	4.37	0.1719	27.0	54.0	4.37
A9214.4	–	4.40	0.1732	24.0	58.0	4.40
A9214.5	–	4.50	0.1772	24.0	58.0	4.50
A9214.6	–	4.60	0.1811	24.0	58.0	4.60

Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A9214.7	–	4.70	0.1850	24.0	58.0	4.70
A9213/16	3/16	4.76	0.1875	29.0	56.0	4.76
A9214.8	–	4.80	0.1890	26.0	62.0	4.80
A9214.9	–	4.90	0.1929	26.0	62.0	4.90
A9215.0	–	5.00	0.1969	26.0	62.0	5.00
A9215.1	–	5.10	0.2008	26.0	62.0	5.10
A92113/64	13/64	5.16	0.2031	30.0	57.0	5.16
A9215.2	–	5.20	0.2047	26.0	62.0	5.20
A9215.3	–	5.30	0.2087	26.0	62.0	5.30
A9215.4	–	5.40	0.2126	28.0	66.0	5.40
A9215.5	–	5.50	0.2165	28.0	66.0	5.50
A9217/32	7/32	5.56	0.2188	32.0	60.0	5.56
A9215.6	–	5.60	0.2205	28.0	66.0	5.60
A9215.7	–	5.70	0.2244	28.0	66.0	5.70
A9215.8	–	5.80	0.2283	28.0	66.0	5.80
A9215.9	–	5.90	0.2323	28.0	66.0	5.90
A92115/64	15/64	5.95	0.2344	33.0	62.0	5.95
A9216.0	–	6.00	0.2362	28.0	66.0	6.00
A9216.1	–	6.10	0.2402	31.0	70.0	6.10
A9216.2	–	6.20	0.2441	31.0	70.0	6.20
A9216.3	–	6.30	0.2480	31.0	70.0	6.30
A9211/4	1/4	6.35	0.2500	35.0	64.0	6.35
A9216.4	–	6.40	0.2520	31.0	70.0	6.40
A9216.5	–	6.50	0.2559	31.0	70.0	6.50
A9216.6	–	6.60	0.2598	31.0	70.0	6.60
A9216.7	–	6.70	0.2638	31.0	70.0	6.70

Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A92117/64	17/64	6.75	0.2656	37.0	67.0	6.75
A9216.8	–	6.80	0.2677	34.0	74.0	6.80
A9216.9	–	6.90	0.2717	34.0	74.0	6.90
A9217.0	–	7.00	0.2756	34.0	74.0	7.00
A9217.1	–	7.10	0.2795	34.0	74.0	7.10
A9219/32	9/32	7.14	0.2813	38.0	68.0	7.14
A9217.2	–	7.20	0.2835	34.0	74.0	7.20
A9217.3	–	7.30	0.2874	34.0	74.0	7.30
A9217.4	–	7.40	0.2913	34.0	74.0	7.40
A9217.5	–	7.50	0.2953	34.0	74.0	7.50
A92119/64	19/64	7.54	0.2969	40.0	70.0	7.54
A9217.6	–	7.60	0.2992	37.0	79.0	7.60
A9217.7	–	7.70	0.3031	37.0	79.0	7.70
A9217.8	–	7.80	0.3071	37.0	79.0	7.80
A9217.9	–	7.90	0.3110	37.0	79.0	7.90
A9215/16	5/16	7.94	0.3125	41.0	71.0	7.94
A9218.0	–	8.00	0.3150	37.0	79.0	8.00
A9218.1	–	8.10	0.3189	37.0	79.0	8.10
A9218.2	–	8.20	0.3228	37.0	79.0	8.20
A9218.3	–	8.30	0.3268	37.0	79.0	8.30
A92121/64	21/64	8.33	0.3281	43.0	75.0	8.33
A9218.4	–	8.40	0.3307	37.0	79.0	8.40
A9218.5	–	8.50	0.3346	37.0	79.0	8.50
A9218.6	–	8.60	0.3386	40.0	84.0	8.60
A9218.7	–	8.70	0.3425	40.0	84.0	8.70
A92111/32	11/32	8.73	0.3438	43.0	76.0	8.73
A9218.8	–	8.80	0.3465	40.0	84.0	8.80
A9218.9	–	8.90	0.3504	40.0	84.0	8.90
A9219.0	–	9.00	0.3543	40.0	84.0	9.00
A9219.1	–	9.10	0.3583	40.0	84.0	9.10
A92123/64	23/64	9.13	0.3594	44.0	78.0	9.13
A9219.2	–	9.20	0.3622	40.0	84.0	9.20
A9219.3	–	9.30	0.3661	40.0	84.0	9.30
A9219.4	–	9.40	0.3701	40.0	84.0	9.40
A9219.5	–	9.50	0.3740	40.0	84.0	9.50
A9213/8	3/8	9.52	0.3750	46.0	79.0	9.52
A9219.6	–	9.60	0.3780	43.0	89.0	9.60

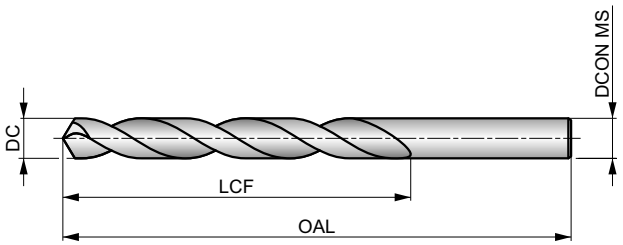
Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A9219.7	–	9.70	0.3819	43.0	89.0	9.70
A9219.8	–	9.80	0.3858	43.0	89.0	9.80
A9219.9	–	9.90	0.3898	43.0	89.0	9.90
A92125/64	25/64	9.92	0.3906	48.0	83.0	9.92
A92110.0	–	10.00	0.3937	43.0	89.0	10.00
A92110.2	–	10.20	0.4016	43.0	89.0	10.20
A92110.3	–	10.30	0.4055	43.0	89.0	10.30
A92113/32	13/32	10.32	0.4063	49.0	84.0	10.32
A92110.5	–	10.50	0.4134	43.0	89.0	10.50
A92127/64	27/64	10.72	0.4219	51.0	86.0	10.72
A92110.8	–	10.80	0.4252	47.0	95.0	10.80
A92111.0	–	11.00	0.4331	47.0	95.0	11.00
A9217/16	7/16	11.11	0.4375	52.0	87.0	11.11
A92111.5	–	11.50	0.4528	47.0	95.0	11.50
A92129/64	29/64	11.51	0.4531	54.0	90.0	11.51
A92111.8	–	11.80	0.4646	47.0	95.0	11.80
A92115/32	15/32	11.91	0.4688	54.0	92.0	11.91
A92112.0	–	12.00	0.4724	51.0	102.0	12.00
A92131/64	31/64	12.30	0.4844	56.0	94.0	12.30
A92112.5	–	12.50	0.4921	51.0	102.0	12.50
A9211/2	1/2	12.70	0.5000	57.0	95.0	12.70
A92113.0	–	13.00	0.5118	51.0	102.0	13.00
A92133/64	33/64	13.10	0.5156	60.0	98.0	13.10
A92113.5	–	13.50	0.5315	54.0	107.0	13.50
A92135/64	35/64	13.89	0.5469	64.0	102.0	13.89
A92114.0	–	14.00	0.5512	54.0	107.0	14.00
A9219/16	9/16	14.29	0.5625	64.0	102.0	14.29
A92114.5	–	14.50	0.5709	56.0	111.0	14.50
A92137/64	37/64	14.68	0.5781	67.0	105.0	14.68
A92114.75	–	14.75	0.5807	56.0	111.0	14.75
A92115.0	–	15.00	0.5906	56.0	111.0	15.00
A92119/32	19/32	15.08	0.5938	67.0	105.0	15.08
A92139/64	39/64	15.48	0.6094	70.0	108.0	15.48
A92115.5	–	15.50	0.6102	58.0	115.0	15.50
A9215/8	5/8	15.88	0.6250	70.0	108.0	15.88
A92116.0	–	16.00	0.6299	58.0	115.0	16.00

A002

DORMER

HSS Jobber Drill, TiN-Tip Coated

Versatile drill for both hand-held and machine drilling. A specially designed 118° split point which helps to self-center the drill when drilling by hand and provides more accurate sized holes. Suitable for many materials. TiN-Tip coating improves performance and extends tool life.



HSS	DIN 338	4×D
118°	TiN-Tip	
λ20-35°	R	DC h8

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■46 J	■52 J	■54 J	■40 J	■35 F	◪31 F	■27 F	■21 F	◪18 F	■16 F	◪13 F	◪11 E	◪27 F	◪23 F
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
◪24 F	◪20 F	◪14 G	◪12 G	◪11 G	◪16 C	■40 J	■30 E	■22 E	◪34 E	◪28 E	◪22 E	◪30 E	◪23 E
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪19 E	◪28 E	◪21 E	◪16 E	◪13 E	◪11 E	◪32 E	◪24 E	◪19 E	■41 K	■31 K	■21 J	◪51 I	◪46 I
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**
◪33 I	◪56 H	◪33 I	◪17 G	■30 I	■50 H	◪35 F	◪23 F	◪13 D	◪7 B	◪9 E	◪4 A	◪7 E	◪3 A
S4.1	**S4.2**												
◪5 E	◪2 A												

DC < 2mm Bright; DC >= 2mm TiN Tipped and Split Point.
Products from this series are also available in set. Please see A087, A089 A094, A095 or A099.

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A0021.0	–	1.00	0.0394	12.0	34.0	1.00
A0021.1	–	1.10	0.0433	14.0	36.0	1.10
A0023/64	3/64	1.19	0.0469	16.0	38.0	1.19
A0021.2	–	1.20	0.0472	16.0	38.0	1.20
A0021.3	–	1.30	0.0512	16.0	38.0	1.30
A0021.4	–	1.40	0.0551	18.0	40.0	1.40
A0021.5	–	1.50	0.0591	18.0	40.0	1.50
A0021/16	1/16	1.59	0.0625	20.0	43.0	1.59
A0021.6	–	1.60	0.0630	20.0	43.0	1.60
A0021.7	–	1.70	0.0669	20.0	43.0	1.70
A0021.8	–	1.80	0.0709	22.0	46.0	1.80
A0021.9	–	1.90	0.0748	22.0	46.0	1.90
A0025/64	5/64	1.98	0.0781	24.0	49.0	1.98
A0022.0	–	2.00	0.0787	24.0	49.0	2.00
A0022.1	–	2.10	0.0827	24.0	49.0	2.10
A0022.2	–	2.20	0.0866	27.0	53.0	2.20
A0022.3	–	2.30	0.0906	27.0	53.0	2.30
A0023/32	3/32	2.38	0.0938	30.0	57.0	2.38
A0022.4	–	2.40	0.0945	30.0	57.0	2.40
A0022.5	–	2.50	0.0984	30.0	57.0	2.50
A0022.6	–	2.60	0.1024	30.0	57.0	2.60
A0022.7	–	2.70	0.1063	33.0	61.0	2.70
A0027/64	7/64	2.78	0.1094	33.0	61.0	2.78
A0022.8	–	2.80	0.1102	33.0	61.0	2.80

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A0022.9	–	2.90	0.1142	33.0	61.0	2.90
A0023.0	–	3.00	0.1181	33.0	61.0	3.00
A0023.1	–	3.10	0.1220	36.0	65.0	3.10
A0021/8	1/8	3.18	0.1250	36.0	65.0	3.18
A0023.2	–	3.20	0.1260	36.0	65.0	3.20
A0023.25	–	3.25	0.1280	36.0	65.0	3.25
A0023.3	–	3.30	0.1299	36.0	65.0	3.30
A0023.4	–	3.40	0.1339	39.0	70.0	3.40
A0023.5	–	3.50	0.1378	39.0	70.0	3.50
A0029/64	9/64	3.57	0.1406	39.0	70.0	3.57
A0023.6	–	3.60	0.1417	39.0	70.0	3.60
A0023.7	–	3.70	0.1457	39.0	70.0	3.70
A0023.8	–	3.80	0.1496	43.0	75.0	3.80
A0023.9	–	3.90	0.1535	43.0	75.0	3.90
A0025/32	5/32	3.97	0.1563	43.0	75.0	3.97
A0024.0	–	4.00	0.1575	43.0	75.0	4.00
A0024.1	–	4.10	0.1614	43.0	75.0	4.10
A0024.2	–	4.20	0.1654	43.0	75.0	4.20
A0024.3	–	4.30	0.1693	47.0	80.0	4.30
A00211/64	11/64	4.37	0.1719	47.0	80.0	4.37
A0024.4	–	4.40	0.1732	47.0	80.0	4.40
A0024.5	–	4.50	0.1772	47.0	80.0	4.50
A0024.6	–	4.60	0.1811	47.0	80.0	4.60
A0024.7	–	4.70	0.1850	47.0	80.0	4.70

Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A0023/16	3/16	4.76	0.1875	52.0	86.0	4.76
A0024.8	–	4.80	0.1890	52.0	86.0	4.80
A0024.9	–	4.90	0.1929	52.0	86.0	4.90
A0025.0	–	5.00	0.1969	52.0	86.0	5.00
A0025.1	–	5.10	0.2008	52.0	86.0	5.10
A00213/64	13/64	5.16	0.2031	52.0	86.0	5.16
A0025.2	–	5.20	0.2047	52.0	86.0	5.20
A0025.3	–	5.30	0.2087	52.0	86.0	5.30
A0025.4	–	5.40	0.2126	57.0	93.0	5.40
A0025.5	–	5.50	0.2165	57.0	93.0	5.50
A0027/32	7/32	5.56	0.2188	57.0	93.0	5.56
A0025.6	–	5.60	0.2205	57.0	93.0	5.60
A0025.7	–	5.70	0.2244	57.0	93.0	5.70
A0025.8	–	5.80	0.2283	57.0	93.0	5.80
A0025.9	–	5.90	0.2323	57.0	93.0	5.90
A00215/64	15/64	5.95	0.2344	57.0	93.0	5.95
A0026.0	–	6.00	0.2362	57.0	93.0	6.00
A0026.1	–	6.10	0.2402	63.0	101.0	6.10
A0026.2	–	6.20	0.2441	63.0	101.0	6.20
A0026.3	–	6.30	0.2480	63.0	101.0	6.30
A0021/4	1/4	6.35	0.2500	63.0	101.0	6.35
A0026.4	–	6.40	0.2520	63.0	101.0	6.40
A0026.5	–	6.50	0.2559	63.0	101.0	6.50
A0026.6	–	6.60	0.2598	63.0	101.0	6.60
A0026.7	–	6.70	0.2638	63.0	101.0	6.70
A00217/64	17/64	6.75	0.2656	69.0	109.0	6.75
A0026.8	–	6.80	0.2677	69.0	109.0	6.80
A0026.9	–	6.90	0.2717	69.0	109.0	6.90
A0027.0	–	7.00	0.2756	69.0	109.0	7.00
A0027.1	–	7.10	0.2795	69.0	109.0	7.10
A0029/32	9/32	7.14	0.2813	69.0	109.0	7.14
A0027.2	–	7.20	0.2835	69.0	109.0	7.20
A0027.3	–	7.30	0.2874	69.0	109.0	7.30
A0027.4	–	7.40	0.2913	69.0	109.0	7.40
A0027.5	–	7.50	0.2953	69.0	109.0	7.50
A00219/64	19/64	7.54	0.2969	75.0	117.0	7.54
A0027.6	–	7.60	0.2992	75.0	117.0	7.60
A0027.7	–	7.70	0.3031	75.0	117.0	7.70
A0027.8	–	7.80	0.3071	75.0	117.0	7.80
A0027.9	–	7.90	0.3110	75.0	117.0	7.90
A0025/16	5/16	7.94	0.3125	75.0	117.0	7.94
A0028.0	–	8.00	0.3150	75.0	117.0	8.00
A0028.1	–	8.10	0.3189	75.0	117.0	8.10
A0028.2	–	8.20	0.3228	75.0	117.0	8.20
A0028.3	–	8.30	0.3268	75.0	117.0	8.30
A00221/64	21/64	8.33	0.3281	75.0	117.0	8.33
A0028.4	–	8.40	0.3307	75.0	117.0	8.40
A0028.5	–	8.50	0.3346	75.0	117.0	8.50
A0028.6	–	8.60	0.3386	81.0	125.0	8.60
A0028.7	–	8.70	0.3425	81.0	125.0	8.70
A00211/32	11/32	8.73	0.3438	81.0	125.0	8.73
A0028.8	–	8.80	0.3465	81.0	125.0	8.80
A0028.9	–	8.90	0.3504	81.0	125.0	8.90
A0029.0	–	9.00	0.3543	81.0	125.0	9.00
A0029.1	–	9.10	0.3583	81.0	125.0	9.10
A00223/64	23/64	9.13	0.3594	81.0	125.0	9.13
A0029.2	–	9.20	0.3622	81.0	125.0	9.20
A0029.3	–	9.30	0.3661	81.0	125.0	9.30
A0029.4	–	9.40	0.3701	81.0	125.0	9.40
A0029.5	–	9.50	0.3740	81.0	125.0	9.50
A0023/8	3/8	9.52	0.3750	87.0	133.0	9.52
A0029.6	–	9.60	0.3780	87.0	133.0	9.60
A0029.7	–	9.70	0.3819	87.0	133.0	9.70
A0029.8	–	9.80	0.3858	87.0	133.0	9.80
A0029.9	–	9.90	0.3898	87.0	133.0	9.90
A00225/64	25/64	9.92	0.3906	87.0	133.0	9.92
A00210.0	–	10.00	0.3937	87.0	133.0	10.00

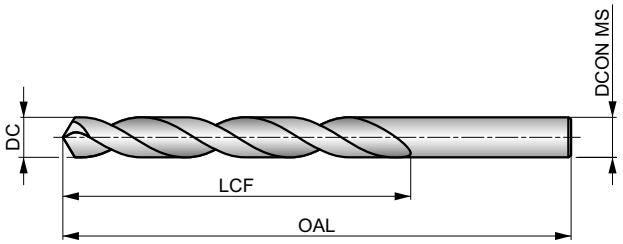
Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A00210.1	–	10.10	0.3976	87.0	133.0	10.10
A00210.2	–	10.20	0.4016	87.0	133.0	10.20
A00210.3	–	10.30	0.4055	87.0	133.0	10.30
A00213/32	13/32	10.32	0.4063	87.0	133.0	10.32
A00210.4	–	10.40	0.4094	87.0	133.0	10.40
A00210.5	–	10.50	0.4134	87.0	133.0	10.50
A00210.6	–	10.60	0.4173	87.0	133.0	10.60
A00210.7	–	10.70	0.4213	94.0	142.0	10.70
A00227/64	27/64	10.72	0.4219	94.0	142.0	10.72
A00210.8	–	10.80	0.4252	94.0	142.0	10.80
A00210.9	–	10.90	0.4291	94.0	142.0	10.90
A00211.0	–	11.00	0.4331	94.0	142.0	11.00
A00211.1	–	11.10	0.4370	94.0	142.0	11.10
A0027/16	7/16	11.11	0.4375	94.0	142.0	11.11
A00211.2	–	11.20	0.4409	94.0	142.0	11.20
A00211.3	–	11.30	0.4449	94.0	142.0	11.30
A00211.4	–	11.40	0.4488	94.0	142.0	11.40
A00211.5	–	11.50	0.4528	94.0	142.0	11.50
A00229/64	29/64	11.51	0.4531	94.0	142.0	11.51
A00211.6	–	11.60	0.4567	94.0	142.0	11.60
A00211.7	–	11.70	0.4606	94.0	142.0	11.70
A00211.8	–	11.80	0.4646	94.0	142.0	11.80
A00211.9	–	11.90	0.4685	101.0	151.0	11.90
A00215/32	15/32	11.91	0.4688	101.0	151.0	11.91
A00212.0	–	12.00	0.4724	101.0	151.0	12.00
A00212.1	–	12.10	0.4764	101.0	151.0	12.10
A00212.2	–	12.20	0.4803	101.0	151.0	12.20
A00212.3	–	12.30	0.4843	101.0	151.0	12.30
A00231/64	31/64	12.30	0.4844	101.0	151.0	12.30
A00212.4	–	12.40	0.4882	101.0	151.0	12.40
A00212.5	–	12.50	0.4921	101.0	151.0	12.50
A00212.6	–	12.60	0.4961	101.0	151.0	12.60
A00212.7	–	12.70	0.5000	101.0	151.0	12.70
A0021/2	1/2	12.70	0.5000	101.0	151.0	12.70
A00212.8	–	12.80	0.5039	101.0	151.0	12.80
A00212.9	–	12.90	0.5079	101.0	151.0	12.90
A00213.0	–	13.00	0.5118	101.0	151.0	13.00
A00233/64	33/64	13.10	0.5156	101.0	151.0	13.10
A00213.1	–	13.10	0.5157	101.0	151.0	13.10
A00213.2	–	13.20	0.5197	101.0	151.0	13.20
A00213.25	–	13.25	0.5217	108.0	160.0	13.25
A00213.3	–	13.30	0.5236	108.0	160.0	13.30
A00213.4	–	13.40	0.5276	108.0	160.0	13.40
A00217/32	17/32	13.49	0.5313	108.0	160.0	13.49
A00213.5	–	13.50	0.5315	108.0	160.0	13.50
A00213.6	–	13.60	0.5354	108.0	160.0	13.60
A00213.7	–	13.70	0.5394	108.0	160.0	13.70
A00213.75	–	13.75	0.5413	108.0	160.0	13.75
A00213.8	–	13.80	0.5433	108.0	160.0	13.80
A00235/64	35/64	13.89	0.5469	108.0	160.0	13.89
A00213.9	–	13.90	0.5472	108.0	160.0	13.90
A00214.0	–	14.00	0.5512	108.0	160.0	14.00
A00214.25	–	14.25	0.5610	114.0	169.0	14.25
A0029/16	9/16	14.29	0.5625	114.0	169.0	14.29
A00214.5	–	14.50	0.5709	114.0	169.0	14.50
A00237/64	37/64	14.68	0.5781	114.0	169.0	14.68
A00214.75	–	14.75	0.5807	114.0	169.0	14.75
A00215.0	–	15.00	0.5906	114.0	169.0	15.00
A00219/32	19/32	15.08	0.5938	120.0	178.0	15.08
A00215.25	–	15.25	0.6004	120.0	178.0	15.25
A00239/64	39/64	15.48	0.6094	120.0	178.0	15.48
A00215.5	–	15.50	0.6102	120.0	178.0	15.50
A00215.75	–	15.75	0.6201	120.0	178.0	15.75
A0025/8	5/8	15.88	0.6250	120.0	178.0	15.88
A00216.0	–	16.00	0.6299	120.0	178.0	16.00

A002S

DORMER

HSS Jobber Drill, TiN-Tip Coated

Versatile drill for both hand-held and machine drilling. A specially designed 118° split point which helps to self-center the drill when drilling by hand and provides more accurate sized hole. Suitable for many materials. TiN-Tip coating improves performance and extends tool life.



HSS	DIN 338	4×D
118°	TiN-Tip	
λ 20-35°	R	DC h8

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 46 J	■ 52 J	■ 54 J	■ 40 J	■ 35 F	◪ 31 F	■ 27 F	■ 21 F	◪ 18 F	■ 16 F	◪ 13 F	◪ 11 E	◪ 27 F	◪ 23 F
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
◪ 24 F	◪ 20 F	◪ 14 G	◪ 12 G	◪ 11 G	◪ 16 C	■ 40 J	■ 30 E	■ 22 E	◪ 34 E	◪ 28 E	◪ 22 E	◪ 30 E	◪ 23 E
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪ 19 E	◪ 28 E	◪ 21 E	◪ 16 E	◪ 13 E	◪ 11 E	◪ 32 E	◪ 24 E	◪ 19 E	■ 41 K	■ 31 K	■ 21 J	◪ 51 I	◪ 46 I
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**
◪ 33 I	◪ 56 H	◪ 33 I	◪ 17 G	■ 30 I	■ 50 H	◪ 35 F	◪ 23 F	◪ 13 D	◪ 7 B	◪ 9 E	◪ 4 A	◪ 7 E	◪ 3 A
S4.1	**S4.2**												
◪ 5 E	◪ 2 A												

DC <= 5mm Sold in packs of 2.

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A002S2.0	–	2.00	0.0787	24.0	49.0	2.00
A002S2.5	–	2.50	0.0984	30.0	57.0	2.50
A002S3.0	–	3.00	0.1181	33.0	61.0	3.00
A002S1/8	1/8	3.18	0.1250	36.0	65.0	3.18
A002S3.2	–	3.20	0.1260	36.0	65.0	3.20
A002S3.3	–	3.30	0.1299	36.0	65.0	3.30
A002S3.5	–	3.50	0.1378	39.0	70.0	3.50
A002S5/32	5/32	3.97	0.1563	43.0	75.0	3.97
A002S4.0	–	4.00	0.1575	43.0	75.0	4.00
A002S4.1	–	4.10	0.1614	43.0	75.0	4.10
A002S4.2	–	4.20	0.1654	43.0	75.0	4.20
A002S4.5	–	4.50	0.1772	47.0	80.0	4.50
A002S3/16	3/16	4.76	0.1875	52.0	86.0	4.76
A002S5.0	–	5.00	0.1969	52.0	86.0	5.00
A002S13/64	13/64	5.16	0.2031	52.0	86.0	5.16
A002S5.5	–	5.50	0.2165	57.0	93.0	5.50
A002S7/32	7/32	5.56	0.2188	57.0	93.0	5.56
A002S6.0	–	6.00	0.2362	57.0	93.0	6.00
A002S1/4	1/4	6.35	0.2500	63.0	101.0	6.35
A002S6.5	–	6.50	0.2559	63.0	101.0	6.50

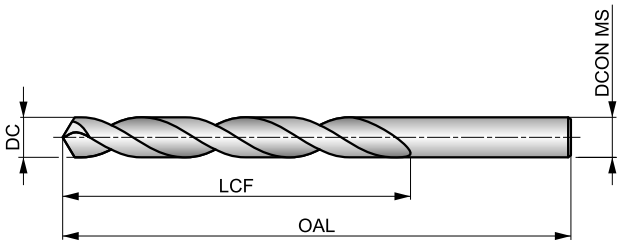
Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A002S17/64	17/64	6.75	0.2656	69.0	109.0	6.75
A002S6.8	–	6.80	0.2677	69.0	109.0	6.80
A002S7.0	–	7.00	0.2756	69.0	109.0	7.00
A002S7.5	–	7.50	0.2953	69.0	109.0	7.50
A002S5/16	5/16	7.94	0.3125	75.0	117.0	7.94
A002S8.0	–	8.00	0.3150	75.0	117.0	8.00
A002S8.2	–	8.20	0.3228	75.0	117.0	8.20
A002S8.5	–	8.50	0.3346	75.0	117.0	8.50
A002S9.0	–	9.00	0.3543	81.0	125.0	9.00
A002S9.5	–	9.50	0.3740	81.0	125.0	9.50
A002S3/8	3/8	9.52	0.3750	87.0	133.0	9.52
A002S10.0	–	10.00	0.3937	87.0	133.0	10.00
A002S10.2	–	10.20	0.4016	87.0	133.0	10.20
A002S10.5	–	10.50	0.4134	87.0	133.0	10.50
A002S11.0	–	11.00	0.4331	94.0	142.0	11.00
A002S11.5	–	11.50	0.4528	94.0	142.0	11.50
A002S12.0	–	12.00	0.4724	101.0	151.0	12.00
A002S12.5	–	12.50	0.4921	101.0	151.0	12.50
A002S1/2	1/2	12.70	0.5000	101.0	151.0	12.70
A002S13.0	–	13.00	0.5118	101.0	151.0	13.00

A100

DORMER

HSS Jobber Drill, Steam Tempered Finish

A great and versatile all-around drill with a 118° conventional point, which provides strength and is easy to regrind, making it very cost-effective. Usable for hand-held and machine drilling. Steam tempered finish retains cutting fluid and prevents chip tool welding. Suitable for many materials.



HSS	DIN 338	4×D
118°	ST	
λ 20-35°	R	DC h8

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■33 H	■37 H	■38 H	■28 H	■25 F	◪22 E	■19 F	■15 F	◪13 E	■11 F	◪10 E	◪8 D	◪21 E	◪17 E
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
◪18 E	◪15 E	◪9 G	◪8 G	◪7 G	◪9 C	■30 H	■22 F	■17 F	◪25 E	◪20 E	◪16 E	◪22 E	◪17 E
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪13 E	◪20 E	◪15 E	◪11 E	◪10 E	◪8 E	◪23 E	◪17 E	◪13 E	◪33 J	◪25 J	◪17 I	◪42 H	◪37 H
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**
◪27 H	◪59 H	◪35 I	◪18 G	◪30 J	◪28 H	◪14 F	◪23 E	◪12 D	◪6 B	◪8 E	◪4 A	◪6 E	◪3 A
S4.1	**S4.2**												
◪5 E	◪2 A												

DC <= 1mm; 3/64"; N60. Bright.
Products from this series are also available in set. Please see A190, A191 or A199.

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A100.2	–	0.20	0.0079	2.5	19.0	0.20
A100.25	–	0.25	0.0098	3.0	19.0	0.25
A100.3	–	0.30	0.0118	3.0	19.0	0.30
A100.32	–	0.32	0.0126	4.0	19.0	0.32
A100N80	N80	0.34	0.0135	4.0	19.0	0.34
A100.35	–	0.35	0.0138	4.0	19.0	0.35
A100N79	N79	0.37	0.0145	4.0	19.0	0.37
A100.38	–	0.38	0.0150	4.0	19.0	0.38
A1001/64	1/64	0.40	0.0156	5.0	20.0	0.40
A100.4	–	0.40	0.0157	5.0	20.0	0.40
A100N78	N78	0.41	0.0160	5.0	20.0	0.41
A100.42	–	0.42	0.0165	5.0	20.0	0.42
A100.45	–	0.45	0.0177	5.0	20.0	0.45
A100N77	N77	0.46	0.0180	5.0	20.0	0.46
A100.48	–	0.48	0.0189	5.0	20.0	0.48
A100.5	–	0.50	0.0197	6.0	22.0	0.50
A100N76	N76	0.51	0.0200	6.0	22.0	0.51
A100.52	–	0.52	0.0205	6.0	22.0	0.52
A100N75	N75	0.53	0.0210	6.0	22.0	0.53
A100.55	–	0.55	0.0217	7.0	24.0	0.55
A100N74	N74	0.57	0.0225	7.0	24.0	0.57
A100.58	–	0.58	0.0228	7.0	24.0	0.58

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A100.6	–	0.60	0.0236	7.0	24.0	0.60
A100N73	N73	0.61	0.0240	8.0	26.0	0.61
A100.62	–	0.62	0.0244	8.0	26.0	0.62
A100N72	N72	0.64	0.0250	8.0	26.0	0.64
A100.65	–	0.65	0.0256	8.0	26.0	0.65
A100N71	N71	0.66	0.0260	8.0	26.0	0.66
A100.68	–	0.68	0.0268	9.0	28.0	0.68
A100.7	–	0.70	0.0276	9.0	28.0	0.70
A100N70	N70	0.71	0.0280	9.0	28.0	0.71
A100.72	–	0.72	0.0283	9.0	28.0	0.72
A100N69	N69	0.74	0.0292	9.0	28.0	0.74
A100.75	–	0.75	0.0295	9.0	28.0	0.75
A100.78	–	0.78	0.0307	10.0	30.0	0.78
A1001/32	1/32	0.79	0.0313	10.0	30.0	0.79
A100N68	N68	0.79	0.0310	10.0	30.0	0.79
A100.8	–	0.80	0.0315	10.0	30.0	0.80
A100N67	N67	0.81	0.0320	10.0	30.0	0.81
A100.82	–	0.82	0.0323	10.0	30.0	0.82
A100N66	N66	0.84	0.0330	10.0	30.0	0.84
A100.85	–	0.85	0.0335	10.0	30.0	0.85
A100.88	–	0.88	0.0346	11.0	32.0	0.88
A100N65	N65	0.89	0.0350	11.0	32.0	0.89

Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A100.9	–	0.90	0.0354	11.0	32.0	0.90
A100N64	N64	0.91	0.0360	11.0	32.0	0.91
A100.92	–	0.92	0.0362	11.0	32.0	0.92
A100N63	N63	0.94	0.0370	11.0	32.0	0.94
A100.95	–	0.95	0.0374	11.0	32.0	0.95
A100N62	N62	0.97	0.0380	12.0	34.0	0.97
A100.98	–	0.98	0.0386	12.0	34.0	0.98
A100N61	N61	0.99	0.0390	12.0	34.0	0.99
A1001.0	–	1.00	0.0394	12.0	34.0	1.00
A100N60	N60	1.02	0.0400	12.0	34.0	1.02
A100N59	N59	1.04	0.0410	12.0	34.0	1.04
A1001.05	–	1.05	0.0413	12.0	34.0	1.05
A100N58	N58	1.07	0.0420	14.0	36.0	1.07
A100N57	N57	1.09	0.0430	14.0	36.0	1.09
A1001.1	–	1.10	0.0433	14.0	36.0	1.10
A1001.15	–	1.15	0.0453	14.0	36.0	1.15
A100N56	N56	1.18	0.0465	14.0	36.0	1.18
A1003/64	3/64	1.19	0.0469	16.0	38.0	1.19
A1001.2	–	1.20	0.0472	16.0	38.0	1.20
A1001.25	–	1.25	0.0492	16.0	38.0	1.25
A1001.3	–	1.30	0.0512	16.0	38.0	1.30
A100N55	N55	1.32	0.0520	16.0	38.0	1.32
A1001.35	–	1.35	0.0531	18.0	40.0	1.35
A1001.4	–	1.40	0.0551	18.0	40.0	1.40
A100N54	N54	1.40	0.0550	18.0	40.0	1.40
A1001.45	–	1.45	0.0571	18.0	40.0	1.45
A1001.5	–	1.50	0.0591	18.0	40.0	1.50
A100N53	N53	1.51	0.0595	20.0	43.0	1.51
A1001.55	–	1.55	0.0610	20.0	43.0	1.55
A1001/16	1/16	1.59	0.0625	20.0	43.0	1.59
A1001.6	–	1.60	0.0630	20.0	43.0	1.60
A100N52	N52	1.61	0.0635	20.0	43.0	1.61
A1001.65	–	1.65	0.0650	20.0	43.0	1.65
A1001.7	–	1.70	0.0669	20.0	43.0	1.70
A100N51	N51	1.70	0.0670	22.0	46.0	1.70
A1001.75	–	1.75	0.0689	22.0	46.0	1.75
A100N50	N50	1.78	0.0700	22.0	46.0	1.78
A1001.8	–	1.80	0.0709	22.0	46.0	1.80
A1001.85	–	1.85	0.0728	22.0	46.0	1.85
A100N49	N49	1.85	0.0730	22.0	46.0	1.85
A1001.9	–	1.90	0.0748	22.0	46.0	1.90
A100N48	N48	1.93	0.0760	24.0	49.0	1.93
A1001.95	–	1.95	0.0768	24.0	49.0	1.95
A1005/64	5/64	1.98	0.0781	24.0	49.0	1.98
A100N47	N47	1.99	0.0785	24.0	49.0	1.99
A1002.0	–	2.00	0.0787	24.0	49.0	2.00
A1002.05	–	2.05	0.0807	24.0	49.0	2.05
A100N46	N46	2.06	0.0810	24.0	49.0	2.06
A100N45	N45	2.08	0.0820	24.0	49.0	2.08
A1002.1	–	2.10	0.0827	24.0	49.0	2.10
A1002.15	–	2.15	0.0846	27.0	53.0	2.15
A100N44	N44	2.18	0.0860	27.0	53.0	2.18
A1002.2	–	2.20	0.0866	27.0	53.0	2.20
A1002.25	–	2.25	0.0886	27.0	53.0	2.25
A100N43	N43	2.26	0.0890	27.0	53.0	2.26
A1002.3	–	2.30	0.0906	27.0	53.0	2.30
A1002.35	–	2.35	0.0925	27.0	53.0	2.35
A1003/32	3/32	2.38	0.0938	30.0	57.0	2.38
A100N42	N42	2.38	0.0935	30.0	57.0	2.38
A1002.4	–	2.40	0.0945	30.0	57.0	2.40
A100N41	N41	2.44	0.0960	30.0	57.0	2.44
A1002.45	–	2.45	0.0965	30.0	57.0	2.45

Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A100N40	N40	2.49	0.0980	30.0	57.0	2.49
A1002.5	–	2.50	0.0984	30.0	57.0	2.50
A100N39	N39	2.53	0.0995	30.0	57.0	2.53
A1002.55	–	2.55	0.1004	30.0	57.0	2.55
A100N38	N38	2.58	0.1015	30.0	57.0	2.58
A1002.6	–	2.60	0.1024	30.0	57.0	2.60
A100N37	N37	2.64	0.1040	30.0	57.0	2.64
A1002.65	–	2.65	0.1043	30.0	57.0	2.65
A1002.7	–	2.70	0.1063	33.0	61.0	2.70
A100N36	N36	2.71	0.1065	33.0	61.0	2.71
A1002.75	–	2.75	0.1083	33.0	61.0	2.75
A1007/64	7/64	2.78	0.1094	33.0	61.0	2.78
A100N35	N35	2.79	0.1100	33.0	61.0	2.79
A1002.8	–	2.80	0.1102	33.0	61.0	2.80
A100N34	N34	2.82	0.1110	33.0	61.0	2.82
A1002.85	–	2.85	0.1122	33.0	61.0	2.85
A100N33	N33	2.87	0.1130	33.0	61.0	2.87
A1002.9	–	2.90	0.1142	33.0	61.0	2.90
A1002.95	–	2.95	0.1161	33.0	61.0	2.95
A100N32	N32	2.95	0.1160	33.0	61.0	2.95
A1003.0	–	3.00	0.1181	33.0	61.0	3.00
A100N31	N31	3.05	0.1200	36.0	65.0	3.05
A1003.1	–	3.10	0.1220	36.0	65.0	3.10
A1003.15	–	3.15	0.1240	36.0	65.0	3.15
A1001/8	1/8	3.18	0.1250	36.0	65.0	3.18
A1003.2	–	3.20	0.1260	36.0	65.0	3.20
A1003.25	–	3.25	0.1280	36.0	65.0	3.25
A100N30	N30	3.26	0.1285	36.0	65.0	3.26
A1003.3	–	3.30	0.1299	36.0	65.0	3.30
A1003.4	–	3.40	0.1339	39.0	70.0	3.40
A100N29	N29	3.45	0.1360	39.0	70.0	3.45
A1003.5	–	3.50	0.1378	39.0	70.0	3.50
A1009/64	9/64	3.57	0.1406	39.0	70.0	3.57
A100N28	N28	3.57	0.1405	39.0	70.0	3.57
A1003.6	–	3.60	0.1417	39.0	70.0	3.60
A100N27	N27	3.66	0.1440	39.0	70.0	3.66
A1003.7	–	3.70	0.1457	39.0	70.0	3.70
A100N26	N26	3.73	0.1470	39.0	70.0	3.73
A1003.75	–	3.75	0.1476	39.0	70.0	3.75
A1003.8	–	3.80	0.1496	43.0	75.0	3.80
A100N25	N25	3.80	0.1495	43.0	75.0	3.80
A100N24	N24	3.86	0.1520	43.0	75.0	3.86
A1003.9	–	3.90	0.1535	43.0	75.0	3.90
A100N23	N23	3.91	0.1540	43.0	75.0	3.91
A1005/32	5/32	3.97	0.1563	43.0	75.0	3.97
A100N22	N22	3.99	0.1570	43.0	75.0	3.99
A1004.0	–	4.00	0.1575	43.0	75.0	4.00
A100N21	N21	4.04	0.1590	43.0	75.0	4.04
A100N20	N20	4.09	0.1610	43.0	75.0	4.09
A1004.1	–	4.10	0.1614	43.0	75.0	4.10
A1004.2	–	4.20	0.1654	43.0	75.0	4.20
A100N19	N19	4.22	0.1660	43.0	75.0	4.22
A1004.25	–	4.25	0.1673	43.0	75.0	4.25
A1004.3	–	4.30	0.1693	47.0	80.0	4.30
A100N18	N18	4.31	0.1695	47.0	80.0	4.31
A10011/64	11/64	4.37	0.1719	47.0	80.0	4.37
A100N17	N17	4.39	0.1730	47.0	80.0	4.39
A1004.4	–	4.40	0.1732	47.0	80.0	4.40
A1004.5	–	4.50	0.1772	47.0	80.0	4.50
A100N16	N16	4.50	0.1770	47.0	80.0	4.50
A100N15	N15	4.57	0.1800	47.0	80.0	4.57
A1004.6	–	4.60	0.1811	47.0	80.0	4.60

Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A100N14	N14	4.62	0.1820	47.0	80.0	4.62
A1004.7	–	4.70	0.1850	47.0	80.0	4.70
A100N13	N13	4.70	0.1850	47.0	80.0	4.70
A1004.75	–	4.75	0.1870	47.0	80.0	4.75
A1003/16	3/16	4.76	0.1875	52.0	86.0	4.76
A1004.8	–	4.80	0.1890	52.0	86.0	4.80
A100N12	N12	4.80	0.1890	52.0	86.0	4.80
A100N11	N11	4.85	0.1910	52.0	86.0	4.85
A1004.9	–	4.90	0.1929	52.0	86.0	4.90
A100N10	N10	4.92	0.1935	52.0	86.0	4.92
A100N9	N9	4.98	0.1960	52.0	86.0	4.98
A1005.0	–	5.00	0.1969	52.0	86.0	5.00
A100N8	N8	5.06	0.1990	52.0	86.0	5.06
A1005.1	–	5.10	0.2008	52.0	86.0	5.10
A100N7	N7	5.11	0.2010	52.0	86.0	5.11
A10013/64	13/64	5.16	0.2031	52.0	86.0	5.16
A100N6	N6	5.18	0.2040	52.0	86.0	5.18
A1005.2	–	5.20	0.2047	52.0	86.0	5.20
A100N5	N5	5.22	0.2055	52.0	86.0	5.22
A1005.25	–	5.25	0.2067	52.0	86.0	5.25
A1005.3	–	5.30	0.2087	52.0	86.0	5.30
A100N4	N4	5.31	0.2090	57.0	93.0	5.31
A1005.4	–	5.40	0.2126	57.0	93.0	5.40
A100N3	N3	5.41	0.2130	57.0	93.0	5.41
A1005.5	–	5.50	0.2165	57.0	93.0	5.50
A1007/32	7/32	5.56	0.2188	57.0	93.0	5.56
A1005.6	–	5.60	0.2205	57.0	93.0	5.60
A100N2	N2	5.61	0.2210	57.0	93.0	5.61
A1005.7	–	5.70	0.2244	57.0	93.0	5.70
A1005.75	–	5.75	0.2264	57.0	93.0	5.75
A100N1	1	5.79	0.2280	57.0	93.0	5.79
A1005.8	–	5.80	0.2283	57.0	93.0	5.80
A1005.9	–	5.90	0.2323	57.0	93.0	5.90
A100A	A	5.94	0.2340	57.0	93.0	5.94
A10015/64	15/64	5.95	0.2344	57.0	93.0	5.95
A1006.0	–	6.00	0.2362	57.0	93.0	6.00
A100B	B	6.03	0.2380	63.0	101.0	6.03
A1006.1	–	6.10	0.2402	63.0	101.0	6.10
A100C	C	6.15	0.2420	63.0	101.0	6.15
A1006.2	–	6.20	0.2441	63.0	101.0	6.20
A1006.25	–	6.25	0.2461	63.0	101.0	6.25
A100D	D	6.25	0.2460	63.0	101.0	6.25
A1006.3	–	6.30	0.2480	63.0	101.0	6.30
A1001/4	1/4	6.35	0.2500	63.0	101.0	6.35
A100E	E	6.35	0.2500	63.0	101.0	6.35
A1006.4	–	6.40	0.2520	63.0	101.0	6.40
A1006.5	–	6.50	0.2559	63.0	101.0	6.50
A100F	F	6.53	0.2570	63.0	101.0	6.53
A1006.6	–	6.60	0.2598	63.0	101.0	6.60
A100G	G	6.63	0.2610	63.0	101.0	6.63
A1006.7	–	6.70	0.2638	63.0	101.0	6.70
A10017/64	17/64	6.75	0.2656	69.0	109.0	6.75
A1006.75	–	6.75	0.2657	69.0	109.0	6.75
A100H	H	6.76	0.2660	69.0	109.0	6.76
A1006.8	–	6.80	0.2677	69.0	109.0	6.80
A1006.9	–	6.90	0.2717	69.0	109.0	6.90
A100I	I	6.91	0.2720	69.0	109.0	6.91
A1007.0	–	7.00	0.2756	69.0	109.0	7.00
A100J	J	7.04	0.2770	69.0	109.0	7.04
A1007.1	–	7.10	0.2795	69.0	109.0	7.10
A1009/32	9/32	7.14	0.2813	69.0	109.0	7.14
A100K	K	7.14	0.2810	69.0	109.0	7.14

Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A1007.2	–	7.20	0.2835	69.0	109.0	7.20
A1007.25	–	7.25	0.2854	69.0	109.0	7.25
A1007.3	–	7.30	0.2874	69.0	109.0	7.30
A100L	L	7.37	0.2900	69.0	109.0	7.37
A1007.4	–	7.40	0.2913	69.0	109.0	7.40
A100M	M	7.49	0.2949	69.0	109.0	7.49
A1007.5	–	7.50	0.2953	69.0	109.0	7.50
A10019/64	19/64	7.54	0.2969	75.0	117.0	7.54
A1007.6	–	7.60	0.2992	75.0	117.0	7.60
A100N	N	7.67	0.3020	75.0	117.0	7.67
A1007.7	–	7.70	0.3031	75.0	117.0	7.70
A1007.75	–	7.75	0.3051	75.0	117.0	7.75
A1007.8	–	7.80	0.3071	75.0	117.0	7.80
A1007.9	–	7.90	0.3110	75.0	117.0	7.90
A1005/16	5/16	7.94	0.3125	75.0	117.0	7.94
A1008.0	–	8.00	0.3150	75.0	117.0	8.00
A100O	O	8.03	0.3160	75.0	117.0	8.03
A1008.1	–	8.10	0.3189	75.0	117.0	8.10
A1008.2	–	8.20	0.3228	75.0	117.0	8.20
A100P	P	8.20	0.3230	75.0	117.0	8.20
A1008.25	–	8.25	0.3248	75.0	117.0	8.25
A1008.3	–	8.30	0.3268	75.0	117.0	8.30
A10021/64	21/64	8.33	0.3281	75.0	117.0	8.33
A1008.4	–	8.40	0.3307	75.0	117.0	8.40
A100Q	Q	8.43	0.3320	75.0	117.0	8.43
A1008.5	–	8.50	0.3346	75.0	117.0	8.50
A1008.6	–	8.60	0.3386	81.0	125.0	8.60
A100R	R	8.61	0.3390	81.0	125.0	8.61
A1008.7	–	8.70	0.3425	81.0	125.0	8.70
A10011/32	11/32	8.73	0.3438	81.0	125.0	8.73
A1008.75	–	8.75	0.3445	81.0	125.0	8.75
A1008.8	–	8.80	0.3465	81.0	125.0	8.80
A100S	S	8.84	0.3480	81.0	125.0	8.84
A1008.9	–	8.90	0.3504	81.0	125.0	8.90
A1009.0	–	9.00	0.3543	81.0	125.0	9.00
A100T	T	9.09	0.3580	81.0	125.0	9.09
A1009.1	–	9.10	0.3583	81.0	125.0	9.10
A10023/64	23/64	9.13	0.3594	81.0	125.0	9.13
A1009.2	–	9.20	0.3622	81.0	125.0	9.20
A1009.25	–	9.25	0.3642	81.0	125.0	9.25
A1009.3	–	9.30	0.3661	81.0	125.0	9.30
A100U	U	9.35	0.3680	81.0	125.0	9.35
A1009.4	–	9.40	0.3701	81.0	125.0	9.40
A1009.5	–	9.50	0.3740	81.0	125.0	9.50
A1003/8	3/8	9.52	0.3750	87.0	133.0	9.52
A100V	V	9.58	0.3770	87.0	133.0	9.58
A1009.6	–	9.60	0.3780	87.0	133.0	9.60
A1009.7	–	9.70	0.3819	87.0	133.0	9.70
A1009.75	–	9.75	0.3839	87.0	133.0	9.75
A1009.8	–	9.80	0.3858	87.0	133.0	9.80
A100W	W	9.80	0.3860	87.0	133.0	9.80
A1009.9	–	9.90	0.3898	87.0	133.0	9.90
A10025/64	25/64	9.92	0.3906	87.0	133.0	9.92
A10010.0	–	10.00	0.3937	87.0	133.0	10.00
A100X	X	10.08	0.3970	87.0	133.0	10.08
A10010.1	–	10.10	0.3976	87.0	133.0	10.10
A10010.2	–	10.20	0.4016	87.0	133.0	10.20
A10010.25	–	10.25	0.4035	87.0	133.0	10.25
A100Y	Y	10.26	0.4040	87.0	133.0	10.26
A10010.3	–	10.30	0.4055	87.0	133.0	10.30
A10013/32	13/32	10.32	0.4063	87.0	133.0	10.32
A10010.4	–	10.40	0.4094	87.0	133.0	10.40

Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A100Z	Z	10.49	0.4130	87.0	133.0	10.49
A10010.5	–	10.50	0.4134	87.0	133.0	10.50
A10010.6	–	10.60	0.4173	87.0	133.0	10.60
A10010.7	–	10.70	0.4213	94.0	142.0	10.70
A10027/64	27/64	10.72	0.4219	94.0	142.0	10.72
A10010.75	–	10.75	0.4232	94.0	142.0	10.75
A10010.8	–	10.80	0.4252	94.0	142.0	10.80
A10010.9	–	10.90	0.4291	94.0	142.0	10.90
A10011.0	–	11.00	0.4331	94.0	142.0	11.00
A10011.1	–	11.10	0.4370	94.0	142.0	11.10
A1007/16	7/16	11.11	0.4375	94.0	142.0	11.11
A10011.2	–	11.20	0.4409	94.0	142.0	11.20
A10011.25	–	11.25	0.4429	94.0	142.0	11.25
A10011.3	–	11.30	0.4449	94.0	142.0	11.30
A10011.4	–	11.40	0.4488	94.0	142.0	11.40
A10011.5	–	11.50	0.4528	94.0	142.0	11.50
A10029/64	29/64	11.51	0.4531	94.0	142.0	11.51
A10011.6	–	11.60	0.4567	94.0	142.0	11.60
A10011.7	–	11.70	0.4606	94.0	142.0	11.70
A10011.75	–	11.75	0.4626	94.0	142.0	11.75
A10011.8	–	11.80	0.4646	94.0	142.0	11.80
A10011.9	–	11.90	0.4685	101.0	151.0	11.90
A10015/32	15/32	11.91	0.4688	101.0	151.0	11.91
A10012.0	–	12.00	0.4724	101.0	151.0	12.00
A10012.1	–	12.10	0.4764	101.0	151.0	12.10
A10012.2	–	12.20	0.4803	101.0	151.0	12.20
A10012.25	–	12.25	0.4823	101.0	151.0	12.25
A10012.3	–	12.30	0.4843	101.0	151.0	12.30
A10031/64	31/64	12.30	0.4844	101.0	151.0	12.30
A10012.4	–	12.40	0.4882	101.0	151.0	12.40
A10012.5	–	12.50	0.4921	101.0	151.0	12.50
A10012.6	–	12.60	0.4961	101.0	151.0	12.60
A10012.7	–	12.70	0.5000	101.0	151.0	12.70
A1001/2	1/2	12.70	0.5000	101.0	151.0	12.70
A10012.75	–	12.75	0.5020	101.0	151.0	12.75
A10012.8	–	12.80	0.5039	101.0	151.0	12.80
A10012.9	–	12.90	0.5079	101.0	151.0	12.90
A10013.0	–	13.00	0.5118	101.0	151.0	13.00
A10033/64	33/64	13.10	0.5156	101.0	151.0	13.10

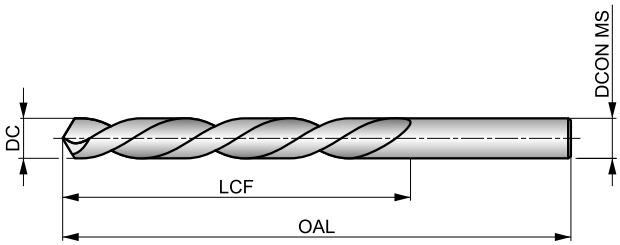
Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A10013.1	–	13.10	0.5157	101.0	151.0	13.10
A10013.2	–	13.20	0.5197	101.0	151.0	13.20
A10013.25	–	13.25	0.5217	108.0	160.0	13.25
A10013.3	–	13.30	0.5236	108.0	160.0	13.30
A10013.4	–	13.40	0.5276	108.0	160.0	13.40
A10017/32	17/32	13.49	0.5313	108.0	160.0	13.49
A10013.5	–	13.50	0.5315	108.0	160.0	13.50
A10013.6	–	13.60	0.5354	108.0	160.0	13.60
A10013.7	–	13.70	0.5394	108.0	160.0	13.70
A10013.75	–	13.75	0.5413	108.0	160.0	13.75
A10013.8	–	13.80	0.5433	108.0	160.0	13.80
A10035/64	35/64	13.89	0.5469	108.0	160.0	13.89
A10013.9	–	13.90	0.5472	108.0	160.0	13.90
A10014.0	–	14.00	0.5512	108.0	160.0	14.00
A10014.25	–	14.25	0.5610	114.0	169.0	14.25
A1009/16	9/16	14.29	0.5625	114.0	169.0	14.29
A10014.5	–	14.50	0.5709	114.0	169.0	14.50
A10037/64	37/64	14.68	0.5781	114.0	169.0	14.68
A10014.75	–	14.75	0.5807	114.0	169.0	14.75
A10015.0	–	15.00	0.5906	114.0	169.0	15.00
A10019/32	19/32	15.08	0.5938	120.0	178.0	15.08
A10015.25	–	15.25	0.6004	120.0	178.0	15.25
A10039/64	39/64	15.48	0.6094	120.0	178.0	15.48
A10015.5	–	15.50	0.6102	120.0	178.0	15.50
A10015.75	–	15.75	0.6201	120.0	178.0	15.75
A1005/8	5/8	15.88	0.6250	120.0	178.0	15.88
A10016.0	–	16.00	0.6299	120.0	178.0	16.00
A10041/64	41/64	16.27	0.6406	125.0	184.0	16.27
A10016.5	–	16.50	0.6496	125.0	184.0	16.50
A10021/32	21/32	16.67	0.6563	125.0	184.0	16.67
A10017.0	–	17.00	0.6693	125.0	184.0	17.00
A10043/64	43/64	17.07	0.6719	130.0	191.0	17.07
A10011/16	11/16	17.46	0.6875	130.0	191.0	17.46
A10017.5	–	17.50	0.6890	130.0	191.0	17.50
A10018.0	–	18.00	0.7087	130.0	191.0	18.00
A10018.5	–	18.50	0.7283	135.0	198.0	18.50
A10019.0	–	19.00	0.7480	135.0	198.0	19.00
A10019.5	–	19.50	0.7677	140.0	205.0	19.50
A10020.0	–	20.00	0.7874	140.0	205.0	20.00

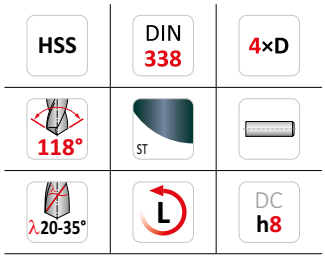
A101

DORMER

HSS Left-Hand Jobber Drill, Steam Tempered Finish

Versatile left-handed drill with steam tempered finish for hand-held and machine drilling. Conventional 118° point provides strength and is easy to regrind, making it very cost-effective. Steam tempered finish retains cutting fluid and prevents chip to tool welding. Suitable for drilling many materials.





Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■33 H	■37 H	■38 H	■28 H	■25 F	◪22 E	■19 F	■15 F	◪13 E	■11 F	◪10 E	◪8 D	◪21 E	◪17 E
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
◪18 E	◪15 E	◪9 G	◪8 G	◪7 G	◪9 C	■30 H	■22 F	■17 F	◪25 E	◪20 E	◪16 E	◪22 E	◪17 E
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪13 E	◪20 E	◪15 E	◪11 E	◪10 E	◪8 E	◪23 E	◪17 E	◪13 E	◪33 J	◪25 J	◪17 I	◪42 H	◪37 H
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**
◪27 H	◪59 H	◪35 I	◪18 G	◪30 J	◪28 H	◪14 F	◪23 E	◪12 D	◪6 B	◪8 E	◪4 A	◪6 E	◪3 A
S4.1	**S4.2**												
◪5 E	◪2 A												

DC <= 3mm Bright.

Product	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A1011.0	1.00	0.0394	12.0	34.0	1.00
A1011.1	1.10	0.0433	14.0	36.0	1.10
A1011.2	1.20	0.0472	16.0	38.0	1.20
A1011.25	1.25	0.0492	16.0	38.0	1.25
A1011.3	1.30	0.0512	16.0	38.0	1.30
A1011.4	1.40	0.0551	18.0	40.0	1.40
A1011.5	1.50	0.0591	18.0	40.0	1.50
A1011.6	1.60	0.0630	20.0	43.0	1.60
A1011.7	1.70	0.0669	20.0	43.0	1.70
A1011.8	1.80	0.0709	22.0	46.0	1.80
A1011.9	1.90	0.0748	22.0	46.0	1.90
A1012.0	2.00	0.0787	24.0	49.0	2.00
A1012.1	2.10	0.0827	24.0	49.0	2.10
A1012.2	2.20	0.0866	27.0	53.0	2.20
A1012.3	2.30	0.0906	27.0	53.0	2.30
A1012.4	2.40	0.0945	30.0	57.0	2.40
A1012.5	2.50	0.0984	30.0	57.0	2.50
A1012.6	2.60	0.1024	30.0	57.0	2.60
A1012.7	2.70	0.1063	33.0	61.0	2.70
A1012.8	2.80	0.1102	33.0	61.0	2.80
A1012.9	2.90	0.1142	33.0	61.0	2.90
A1013.0	3.00	0.1181	33.0	61.0	3.00

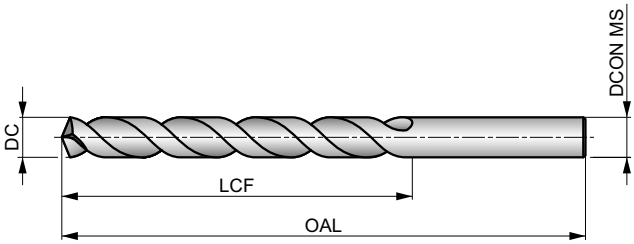
Product	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A1013.2	3.20	0.1260	36.0	65.0	3.20
A1013.3	3.30	0.1299	36.0	65.0	3.30
A1013.5	3.50	0.1378	39.0	70.0	3.50
A1013.8	3.80	0.1496	43.0	75.0	3.80
A1014.0	4.00	0.1575	43.0	75.0	4.00
A1014.2	4.20	0.1654	43.0	75.0	4.20
A1014.5	4.50	0.1772	47.0	80.0	4.50
A1014.8	4.80	0.1890	52.0	86.0	4.80
A1015.0	5.00	0.1969	52.0	86.0	5.00
A1015.1	5.10	0.2008	52.0	86.0	5.10
A1015.2	5.20	0.2047	52.0	86.0	5.20
A1015.5	5.50	0.2165	57.0	93.0	5.50
A1016.0	6.00	0.2362	57.0	93.0	6.00
A1016.5	6.50	0.2559	63.0	101.0	6.50
A1017.0	7.00	0.2756	69.0	109.0	7.00
A1017.5	7.50	0.2953	69.0	109.0	7.50
A1018.0	8.00	0.3150	75.0	117.0	8.00
A1018.5	8.50	0.3346	75.0	117.0	8.50
A1019.0	9.00	0.3543	81.0	125.0	9.00
A10110.0	10.00	0.3937	87.0	133.0	10.00
A10111.0	11.00	0.4331	94.0	142.0	11.00
A10112.0	12.00	0.4724	101.0	151.0	12.00

A108

DORMER

HSS Jobber Drill, Steam Tempered Finish (Designed for Stainless Steel)

First choice when drilling stainless steel with hand-held applications, but can also be used effectively in machines. The 135° split point helps to self-center and reduces the cutting forces. Steam tempered finish helps stop workpiece material from sticking to the cutting edge.



HSS	DIN 338	4×D
135°	ST	
λ>35°	R	DC h8

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
◪33 I	◪37 I	◪38 I	◪28 I	◪25 G	◪22 E	◪19 F	◪15 F	◪13 E	◪11 F	◪10 E	◪8 D	◪21 E	◪17 E
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
◪18 E	◪15 E	■10 G	■9 G	■8 G	■10 D	◪30 H	◪22 F	◪17 F	◪25 E	◪20 E	◪16 E	◪22 E	◪17 E
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪13 E	◪20 E	◪15 E	◪11 E	◪10 E	◪8 E	◪23 E	◪17 E	◪13 E	◪33 J	◪25 J	◪17 I	◪42 H	◪37 H
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**
◪27 H	◪59 H	◪35 I	◪18 G	◪30 J	◪28 H	◪14 F	■25 G	■16 E	◪7 B	◪9 G	◪8 E	◪7 G	◪6 E
S4.1	**S4.2**												
◪5 G	◪5 E												

DC > 1.5mm (1/16") Split Point.
Products from this series are also available in set. Please see A188.

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A1081.0	–	1.00	0.0394	12.0	34.0	1.00
A1081.1	–	1.10	0.0433	14.0	36.0	1.10
A1081.2	–	1.20	0.0472	16.0	38.0	1.20
A1081.3	–	1.30	0.0512	16.0	38.0	1.30
A1081.4	–	1.40	0.0551	18.0	40.0	1.40
A1081.5	–	1.50	0.0591	18.0	40.0	1.50
A1081/16	1/16	1.59	0.0625	20.0	43.0	1.59
A1081.6	–	1.60	0.0630	20.0	43.0	1.60
A1081.7	–	1.70	0.0669	20.0	43.0	1.70
A1081.8	–	1.80	0.0709	22.0	46.0	1.80
A1081.9	–	1.90	0.0748	22.0	46.0	1.90
A1085/64	5/64	1.98	0.0781	24.0	49.0	1.98
A1082.0	–	2.00	0.0787	24.0	49.0	2.00
A1082.1	–	2.10	0.0827	24.0	49.0	2.10
A1082.2	–	2.20	0.0866	27.0	53.0	2.20
A1082.3	–	2.30	0.0906	27.0	53.0	2.30
A1083/32	3/32	2.38	0.0938	30.0	57.0	2.38
A1082.4	–	2.40	0.0945	30.0	57.0	2.40
A1082.5	–	2.50	0.0984	30.0	57.0	2.50
A1082.6	–	2.60	0.1024	30.0	57.0	2.60
A1082.7	–	2.70	0.1063	33.0	61.0	2.70
A1087/64	7/64	2.78	0.1094	33.0	61.0	2.78

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A1082.8	–	2.80	0.1102	33.0	61.0	2.80
A1082.9	–	2.90	0.1142	33.0	61.0	2.90
A1083.0	–	3.00	0.1181	33.0	61.0	3.00
A1083.1	–	3.10	0.1220	36.0	65.0	3.10
A1081/8	1/8	3.18	0.1250	36.0	65.0	3.18
A1083.2	–	3.20	0.1260	36.0	65.0	3.20
A1083.3	–	3.30	0.1299	36.0	65.0	3.30
A1083.4	–	3.40	0.1339	39.0	70.0	3.40
A1083.5	–	3.50	0.1378	39.0	70.0	3.50
A1089/64	9/64	3.57	0.1406	39.0	70.0	3.57
A1083.6	–	3.60	0.1417	39.0	70.0	3.60
A1083.7	–	3.70	0.1457	39.0	70.0	3.70
A1083.8	–	3.80	0.1496	43.0	75.0	3.80
A1083.9	–	3.90	0.1535	43.0	75.0	3.90
A1085/32	5/32	3.97	0.1563	43.0	75.0	3.97
A1084.0	–	4.00	0.1575	43.0	75.0	4.00
A1084.1	–	4.10	0.1614	43.0	75.0	4.10
A1084.2	–	4.20	0.1654	43.0	75.0	4.20
A1084.3	–	4.30	0.1693	47.0	80.0	4.30
A10811/64	11/64	4.37	0.1719	47.0	80.0	4.37
A1084.4	–	4.40	0.1732	47.0	80.0	4.40
A1084.5	–	4.50	0.1772	47.0	80.0	4.50

Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A1084.6	–	4.60	0.1811	47.0	80.0	4.60
A1084.7	–	4.70	0.1850	47.0	80.0	4.70
A1083/16	3/16	4.76	0.1875	52.0	86.0	4.76
A1084.8	–	4.80	0.1890	52.0	86.0	4.80
A1084.9	–	4.90	0.1929	52.0	86.0	4.90
A108N10	N10	4.92	0.1935	52.0	86.0	4.92
A1085.0	–	5.00	0.1969	52.0	86.0	5.00
A1085.1	–	5.10	0.2008	52.0	86.0	5.10
A10813/64	13/64	5.16	0.2031	52.0	86.0	5.16
A1085.2	–	5.20	0.2047	52.0	86.0	5.20
A1085.3	–	5.30	0.2087	52.0	86.0	5.30
A1085.4	–	5.40	0.2126	57.0	93.0	5.40
A1085.5	–	5.50	0.2165	57.0	93.0	5.50
A1087/32	7/32	5.56	0.2188	57.0	93.0	5.56
A1085.6	–	5.60	0.2205	57.0	93.0	5.60
A1085.7	–	5.70	0.2244	57.0	93.0	5.70
A1085.8	–	5.80	0.2283	57.0	93.0	5.80
A1085.9	–	5.90	0.2323	57.0	93.0	5.90
A10815/64	15/64	5.95	0.2344	57.0	93.0	5.95
A1086.0	–	6.00	0.2362	57.0	93.0	6.00
A1086.1	–	6.10	0.2402	63.0	101.0	6.10
A1086.2	–	6.20	0.2441	63.0	101.0	6.20
A1086.3	–	6.30	0.2480	63.0	101.0	6.30
A1081/4	1/4	6.35	0.2500	63.0	101.0	6.35
A1086.4	–	6.40	0.2520	63.0	101.0	6.40
A1086.5	–	6.50	0.2559	63.0	101.0	6.50
A1086.6	–	6.60	0.2598	63.0	101.0	6.60
A1086.7	–	6.70	0.2638	63.0	101.0	6.70
A10817/64	17/64	6.75	0.2656	69.0	109.0	6.75
A1086.8	–	6.80	0.2677	69.0	109.0	6.80
A1086.9	–	6.90	0.2717	69.0	109.0	6.90
A1087.0	–	7.00	0.2756	69.0	109.0	7.00
A1087.1	–	7.10	0.2795	69.0	109.0	7.10
A1089/32	9/32	7.14	0.2813	69.0	109.0	7.14
A1087.2	–	7.20	0.2835	69.0	109.0	7.20
A1087.3	–	7.30	0.2874	69.0	109.0	7.30
A1087.4	–	7.40	0.2913	69.0	109.0	7.40
A1087.5	–	7.50	0.2953	69.0	109.0	7.50
A10819/64	19/64	7.54	0.2969	75.0	117.0	7.54
A1087.6	–	7.60	0.2992	75.0	117.0	7.60
A1087.7	–	7.70	0.3031	75.0	117.0	7.70
A1087.8	–	7.80	0.3071	75.0	117.0	7.80
A1087.9	–	7.90	0.3110	75.0	117.0	7.90
A1085/16	5/16	7.94	0.3125	75.0	117.0	7.94
A1088.0	–	8.00	0.3150	75.0	117.0	8.00
A1088.1	–	8.10	0.3189	75.0	117.0	8.10
A1088.2	–	8.20	0.3228	75.0	117.0	8.20
A1088.3	–	8.30	0.3268	75.0	117.0	8.30

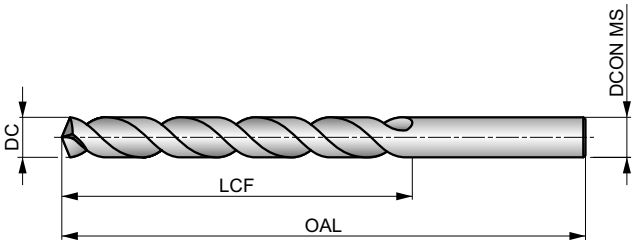
Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A10821/64	21/64	8.33	0.3281	75.0	117.0	8.33
A1088.4	–	8.40	0.3307	75.0	117.0	8.40
A1088.5	–	8.50	0.3346	75.0	117.0	8.50
A1088.6	–	8.60	0.3386	81.0	125.0	8.60
A1088.7	–	8.70	0.3425	81.0	125.0	8.70
A10811/32	11/32	8.73	0.3438	81.0	125.0	8.73
A1088.8	–	8.80	0.3465	81.0	125.0	8.80
A1088.9	–	8.90	0.3504	81.0	125.0	8.90
A1089.0	–	9.00	0.3543	81.0	125.0	9.00
A1089.1	–	9.10	0.3583	81.0	125.0	9.10
A10823/64	23/64	9.13	0.3594	81.0	125.0	9.13
A1089.2	–	9.20	0.3622	81.0	125.0	9.20
A1089.3	–	9.30	0.3661	81.0	125.0	9.30
A1089.4	–	9.40	0.3701	81.0	125.0	9.40
A1089.5	–	9.50	0.3740	81.0	125.0	9.50
A1083/8	3/8	9.52	0.3750	87.0	133.0	9.52
A1089.6	–	9.60	0.3780	87.0	133.0	9.60
A1089.7	–	9.70	0.3819	87.0	133.0	9.70
A1089.8	–	9.80	0.3858	87.0	133.0	9.80
A1089.9	–	9.90	0.3898	87.0	133.0	9.90
A10825/64	25/64	9.92	0.3906	87.0	133.0	9.92
A10810.0	–	10.00	0.3937	87.0	133.0	10.00
A10810.2	–	10.20	0.4016	87.0	133.0	10.20
A10813/32	13/32	10.32	0.4063	87.0	133.0	10.32
A10810.5	–	10.50	0.4134	87.0	133.0	10.50
A10827/64	27/64	10.72	0.4219	94.0	142.0	10.72
A10810.8	–	10.80	0.4252	94.0	142.0	10.80
A10811.0	–	11.00	0.4331	94.0	142.0	11.00
A1087/16	7/16	11.11	0.4375	94.0	142.0	11.11
A10811.5	–	11.50	0.4528	94.0	142.0	11.50
A10829/64	29/64	11.51	0.4531	94.0	142.0	11.51
A10811.8	–	11.80	0.4646	94.0	142.0	11.80
A10815/32	15/32	11.91	0.4688	101.0	151.0	11.91
A10812.0	–	12.00	0.4724	101.0	151.0	12.00
A10812.2	–	12.20	0.4803	101.0	151.0	12.20
A10831/64	31/64	12.30	0.4844	101.0	151.0	12.30
A10812.5	–	12.50	0.4921	101.0	151.0	12.50
A1081/2	1/2	12.70	0.5000	101.0	151.0	12.70
A10812.8	–	12.80	0.5039	101.0	151.0	12.80
A10812.9	–	12.90	0.5079	101.0	151.0	12.90
A10813.0	–	13.00	0.5118	101.0	151.0	13.00
A10813.5	–	13.50	0.5315	108.0	160.0	13.50
A10814.0	–	14.00	0.5512	108.0	160.0	14.00
A10814.5	–	14.50	0.5709	114.0	169.0	14.50
A10815.0	–	15.00	0.5906	114.0	169.0	15.00
A10815.25	–	15.25	0.6004	120.0	178.0	15.25
A10815.5	–	15.50	0.6102	120.0	178.0	15.50
A10816.0	–	16.00	0.6299	120.0	178.0	16.00

A147

DORMER

HSS-E (5% Cobalt) Jobber Drill, Bright Finish (Designed for Stainless Steel)

Versatile and hard-working drill which satisfies all machine drilling requirements in stainless steels, but can also be used for hand-held operations. A 130° split point helps to self-center the drill and reduces the cutting forces. Bright finish.



HSS-E	DIN 338	4×D
130°	Bright	
VA	R	DC h8

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
◪33 I	◪37 I	◪38 I	◪28 I	◪25 G	◪22 E	◪19 F	◪15 F	◪13 E	◪11 F	◪10 E	◪8 D	■21 E	■17 E
M2.1	M2.2	M2.3	M3.1	M3.2	M3.3	M4.1	M4.2	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3
■18 E	■15 E	◪13 B	■10 G	■9 G	■8 G	■10 D	◪9 B	◪30 H	◪22 F	◪17 F	◪25 E	◪20 E	◪16 E
K3.1	K3.2	K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3
◪22 E	◪17 E	◪13 E	◪20 E	◪15 E	◪11 E	◪10 E	◪8 E	◪23 E	◪17 E	◪13 E	◪33 J	◪25 J	◪17 I
N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	N4.3	S1.1	S1.2	S1.3	S2.1	S2.2
◪42 H	◪37 H	◪27 H	◪59 H	◪35 I	◪18 G	◪30 J	◪28 H	◪14 F	■25 G	■16 E	◪7 B	◪9 G	◪8 E
S3.1	S3.2	S4.1	S4.2										
◪7 G	◪6 E	◪5 G	◪5 E										

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A147.3	–	0.30	0.0118	3.0	19.0	0.30
A147.4	–	0.40	0.0157	5.0	20.0	0.40
A147.5	–	0.50	0.0197	6.0	22.0	0.50
A147.6	–	0.60	0.0236	7.0	24.0	0.60
A147.7	–	0.70	0.0276	9.0	28.0	0.70
A147.8	–	0.80	0.0315	10.0	30.0	0.80
A147.9	–	0.90	0.0354	11.0	32.0	0.90
A1471.0	–	1.00	0.0394	12.0	34.0	1.00
A1471.1	–	1.10	0.0433	14.0	36.0	1.10
A1471.2	–	1.20	0.0472	16.0	38.0	1.20
A1471.3	–	1.30	0.0512	16.0	38.0	1.30
A1471.4	–	1.40	0.0551	18.0	40.0	1.40
A1471.5	–	1.50	0.0591	18.0	40.0	1.50
A1471/16	1/16	1.59	0.0625	20.0	43.0	1.59
A1471.6	–	1.60	0.0630	20.0	43.0	1.60
A1471.7	–	1.70	0.0669	20.0	43.0	1.70
A1471.8	–	1.80	0.0709	22.0	46.0	1.80
A1471.9	–	1.90	0.0748	22.0	46.0	1.90
A1472.0	–	2.00	0.0787	24.0	49.0	2.00
A1472.1	–	2.10	0.0827	24.0	49.0	2.10
A1472.2	–	2.20	0.0866	27.0	53.0	2.20
A1472.3	–	2.30	0.0906	27.0	53.0	2.30
A1473/32	3/32	2.38	0.0938	30.0	57.0	2.38
A1472.4	–	2.40	0.0945	30.0	57.0	2.40

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A1472.5	–	2.50	0.0984	30.0	57.0	2.50
A1472.6	–	2.60	0.1024	30.0	57.0	2.60
A1472.7	–	2.70	0.1063	33.0	61.0	2.70
A1472.8	–	2.80	0.1102	33.0	61.0	2.80
A1472.9	–	2.90	0.1142	33.0	61.0	2.90
A1473.0	–	3.00	0.1181	33.0	61.0	3.00
A1473.1	–	3.10	0.1220	36.0	65.0	3.10
A1471/8	1/8	3.18	0.1250	36.0	65.0	3.18
A1473.2	–	3.20	0.1260	36.0	65.0	3.20
A1473.3	–	3.30	0.1299	36.0	65.0	3.30
A1473.4	–	3.40	0.1339	39.0	70.0	3.40
A1473.5	–	3.50	0.1378	39.0	70.0	3.50
A1473.6	–	3.60	0.1417	39.0	70.0	3.60
A1473.7	–	3.70	0.1457	39.0	70.0	3.70
A1473.8	–	3.80	0.1496	43.0	75.0	3.80
A1473.9	–	3.90	0.1535	43.0	75.0	3.90
A1475/32	5/32	3.97	0.1563	43.0	75.0	3.97
A1474.0	–	4.00	0.1575	43.0	75.0	4.00
A1474.1	–	4.10	0.1614	43.0	75.0	4.10
A1474.2	–	4.20	0.1654	43.0	75.0	4.20
A1474.3	–	4.30	0.1693	47.0	80.0	4.30
A1474.4	–	4.40	0.1732	47.0	80.0	4.40
A1474.5	–	4.50	0.1772	47.0	80.0	4.50
A1474.6	–	4.60	0.1811	47.0	80.0	4.60

Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A1474.7	–	4.70	0.1850	47.0	80.0	4.70
A1473/16	3/16	4.76	0.1875	52.0	86.0	4.76
A1474.8	–	4.80	0.1890	52.0	86.0	4.80
A1474.9	–	4.90	0.1929	52.0	86.0	4.90
A1475.0	–	5.00	0.1969	52.0	86.0	5.00
A1475.1	–	5.10	0.2008	52.0	86.0	5.10
A1475.2	–	5.20	0.2047	52.0	86.0	5.20
A1475.3	–	5.30	0.2087	52.0	86.0	5.30
A1475.4	–	5.40	0.2126	57.0	93.0	5.40
A1475.5	–	5.50	0.2165	57.0	93.0	5.50
A1475.6	–	5.60	0.2205	57.0	93.0	5.60
A1475.7	–	5.70	0.2244	57.0	93.0	5.70
A1475.8	–	5.80	0.2283	57.0	93.0	5.80
A1475.9	–	5.90	0.2323	57.0	93.0	5.90
A1476.0	–	6.00	0.2362	57.0	93.0	6.00
A1476.1	–	6.10	0.2402	63.0	101.0	6.10
A1476.2	–	6.20	0.2441	63.0	101.0	6.20
A1476.3	–	6.30	0.2480	63.0	101.0	6.30
A1471/4	1/4	6.35	0.2500	63.0	101.0	6.35
A1476.4	–	6.40	0.2520	63.0	101.0	6.40
A1476.5	–	6.50	0.2559	63.0	101.0	6.50
A1476.6	–	6.60	0.2598	63.0	101.0	6.60
A1476.7	–	6.70	0.2638	63.0	101.0	6.70
A1476.8	–	6.80	0.2677	69.0	109.0	6.80
A1476.9	–	6.90	0.2717	69.0	109.0	6.90
A1477.0	–	7.00	0.2756	69.0	109.0	7.00
A1477.1	–	7.10	0.2795	69.0	109.0	7.10
A1477.2	–	7.20	0.2835	69.0	109.0	7.20
A1477.3	–	7.30	0.2874	69.0	109.0	7.30
A1477.4	–	7.40	0.2913	69.0	109.0	7.40
A1477.5	–	7.50	0.2953	69.0	109.0	7.50
A1477.6	–	7.60	0.2992	75.0	117.0	7.60
A1477.7	–	7.70	0.3031	75.0	117.0	7.70
A1477.8	–	7.80	0.3071	75.0	117.0	7.80

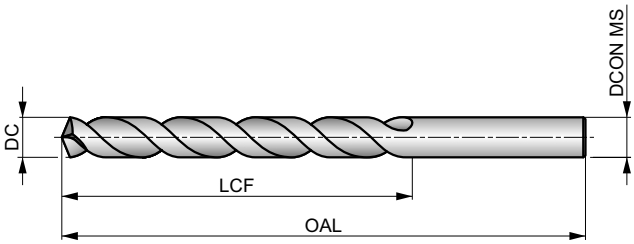
Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A1477.9	–	7.90	0.3110	75.0	117.0	7.90
A1478.0	–	8.00	0.3150	75.0	117.0	8.00
A1478.1	–	8.10	0.3189	75.0	117.0	8.10
A1478.2	–	8.20	0.3228	75.0	117.0	8.20
A1478.3	–	8.30	0.3268	75.0	117.0	8.30
A1478.4	–	8.40	0.3307	75.0	117.0	8.40
A1478.5	–	8.50	0.3346	75.0	117.0	8.50
A1478.6	–	8.60	0.3386	81.0	125.0	8.60
A1478.7	–	8.70	0.3425	81.0	125.0	8.70
A1478.8	–	8.80	0.3465	81.0	125.0	8.80
A1478.9	–	8.90	0.3504	81.0	125.0	8.90
A1479.0	–	9.00	0.3543	81.0	125.0	9.00
A1479.1	–	9.10	0.3583	81.0	125.0	9.10
A1479.2	–	9.20	0.3622	81.0	125.0	9.20
A1479.3	–	9.30	0.3661	81.0	125.0	9.30
A1479.4	–	9.40	0.3701	81.0	125.0	9.40
A1479.5	–	9.50	0.3740	81.0	125.0	9.50
A1479.6	–	9.60	0.3780	87.0	133.0	9.60
A1479.7	–	9.70	0.3819	87.0	133.0	9.70
A1479.8	–	9.80	0.3858	87.0	133.0	9.80
A1479.9	–	9.90	0.3898	87.0	133.0	9.90
A14710.0	–	10.00	0.3937	87.0	133.0	10.00
A14710.2	–	10.20	0.4016	87.0	133.0	10.20
A14710.5	–	10.50	0.4134	87.0	133.0	10.50
A14711.0	–	11.00	0.4331	94.0	142.0	11.00
A14711.2	–	11.20	0.4409	94.0	142.0	11.20
A14711.5	–	11.50	0.4528	94.0	142.0	11.50
A14712.0	–	12.00	0.4724	101.0	151.0	12.00
A14712.5	–	12.50	0.4921	101.0	151.0	12.50
A14713.0	–	13.00	0.5118	101.0	151.0	13.00
A14713.5	–	13.50	0.5315	108.0	160.0	13.50
A14714.0	–	14.00	0.5512	108.0	160.0	14.00
A14714.5	–	14.50	0.5709	114.0	169.0	14.50
A14715.0	–	15.00	0.5906	114.0	169.0	15.00

A777

DORMER

HSS-E (8% Cobalt) Jobber Drill, Bronze Tempered Finish

A top performer, producing accurate sized holes with a quality finish in high strength materials. The 135° split point helps to self-center. The bronze finish is a thin oxide layer formed on the tool surface and is an indication for 8% Cobalt HSS-E Drill.



HSS-E	DIN 338	4×D
135°	Bronze	
λ20-35°	R	DC h8

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
◪36 H	◪40 H	◪41 H	◪31 H	◪27 G	■24 E	◪25 F	◪20 F	■17 E	◪15 F	■13 E	■10 D	◪30 E	◪26 E
M2.1	M2.2	M3.1	M3.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2
◪27 E	◪22 E	◪13 G	◪11 G	◪10 G	◪15 C	◪35 H	◪26 D	◪19 D	◪27 E	◪22 E	■18 E	◪24 E	◪18 E
K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3	N2.1	N2.2
■15 E	◪22 E	◪17 E	■12 E	■11 E	■9 E	◪25 E	◪19 E	■15 E	◪33 J	◪25 J	◪17 I	◪46 H	◪42 H
N2.3	N3.1	N3.2	N3.3	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2	S4.1	S4.2	
◪30 H	◪68 H	◪40 F	◪20 H	■28 F	■20 D	■11 C	■9 E	◪8 B	■7 E	◪6 B	■5 E	◪5 B	

NAS907J. DC <= 1.4mm 4 Facet Point.
Products from this series are also available in set. Please see A295.

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A777.3	–	0.30	0.0118	3.0	19.0	0.30
A777.35	–	0.35	0.0138	4.0	19.0	0.35
A777.4	–	0.40	0.0157	5.0	20.0	0.40
A777.45	–	0.45	0.0177	5.0	20.0	0.45
A777.5	–	0.50	0.0197	6.0	22.0	0.50
A777.55	–	0.55	0.0217	7.0	24.0	0.55
A777.6	–	0.60	0.0236	7.0	24.0	0.60
A777.65	–	0.65	0.0256	8.0	26.0	0.65
A777.7	–	0.70	0.0276	9.0	28.0	0.70
A777.8	–	0.80	0.0315	10.0	30.0	0.80
A777.9	–	0.90	0.0354	11.0	32.0	0.90
A777.95	–	0.95	0.0374	11.0	32.0	0.95
A7771.0	–	1.00	0.0394	12.0	34.0	1.00
A7771.1	–	1.10	0.0433	14.0	36.0	1.10
A7771.2	–	1.20	0.0472	16.0	38.0	1.20
A7771.3	–	1.30	0.0512	16.0	38.0	1.30
A7771.4	–	1.40	0.0551	18.0	40.0	1.40
A7771.5	–	1.50	0.0591	18.0	40.0	1.50
A7771/16	1/16	1.59	0.0625	20.0	43.0	1.59
A7771.6	–	1.60	0.0630	20.0	43.0	1.60
A7771.7	–	1.70	0.0669	20.0	43.0	1.70
A7771.8	–	1.80	0.0709	22.0	46.0	1.80
A7771.9	–	1.90	0.0748	22.0	46.0	1.90
A7775/64	5/64	1.98	0.0781	24.0	49.0	1.98

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A7772.0	–	2.00	0.0787	24.0	49.0	2.00
A7772.1	–	2.10	0.0827	24.0	49.0	2.10
A7772.2	–	2.20	0.0866	27.0	53.0	2.20
A7772.3	–	2.30	0.0906	27.0	53.0	2.30
A7773/32	3/32	2.38	0.0938	30.0	57.0	2.38
A7772.4	–	2.40	0.0945	30.0	57.0	2.40
A7772.5	–	2.50	0.0984	30.0	57.0	2.50
A7772.6	–	2.60	0.1024	30.0	57.0	2.60
A7772.7	–	2.70	0.1063	33.0	61.0	2.70
A7777/64	7/64	2.78	0.1094	33.0	61.0	2.78
A7772.8	–	2.80	0.1102	33.0	61.0	2.80
A7772.9	–	2.90	0.1142	33.0	61.0	2.90
A7773.0	–	3.00	0.1181	33.0	61.0	3.00
A7773.1	–	3.10	0.1220	36.0	65.0	3.10
A7771/8	1/8	3.18	0.1250	36.0	65.0	3.18
A7773.2	–	3.20	0.1260	36.0	65.0	3.20
A7773.3	–	3.30	0.1299	36.0	65.0	3.30
A7773.4	–	3.40	0.1339	39.0	70.0	3.40
A7773.5	–	3.50	0.1378	39.0	70.0	3.50
A7779/64	9/64	3.57	0.1406	39.0	70.0	3.57
A7773.6	–	3.60	0.1417	39.0	70.0	3.60
A7773.7	–	3.70	0.1457	39.0	70.0	3.70
A7773.8	–	3.80	0.1496	43.0	75.0	3.80
A7773.9	–	3.90	0.1535	43.0	75.0	3.90

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A7775/32	5/32	3.97	0.1563	43.0	75.0	3.97
A7774.0	–	4.00	0.1575	43.0	75.0	4.00
A7774.1	–	4.10	0.1614	43.0	75.0	4.10
A7774.2	–	4.20	0.1654	43.0	75.0	4.20
A7774.3	–	4.30	0.1693	47.0	80.0	4.30
A77711/64	11/64	4.37	0.1719	47.0	80.0	4.37
A7774.4	–	4.40	0.1732	47.0	80.0	4.40
A7774.5	–	4.50	0.1772	47.0	80.0	4.50
A7774.6	–	4.60	0.1811	47.0	80.0	4.60
A7774.7	–	4.70	0.1850	47.0	80.0	4.70
A7773/16	3/16	4.76	0.1875	52.0	86.0	4.76
A7774.8	–	4.80	0.1890	52.0	86.0	4.80
A7774.9	–	4.90	0.1929	52.0	86.0	4.90
A7775.0	–	5.00	0.1969	52.0	86.0	5.00
A7775.1	–	5.10	0.2008	52.0	86.0	5.10
A77713/64	13/64	5.16	0.2031	52.0	86.0	5.16
A7775.2	–	5.20	0.2047	52.0	86.0	5.20
A7775.3	–	5.30	0.2087	52.0	86.0	5.30
A7775.4	–	5.40	0.2126	57.0	93.0	5.40
A7775.5	–	5.50	0.2165	57.0	93.0	5.50
A7777/32	7/32	5.56	0.2188	57.0	93.0	5.56
A7775.6	–	5.60	0.2205	57.0	93.0	5.60
A7775.7	–	5.70	0.2244	57.0	93.0	5.70
A7775.8	–	5.80	0.2283	57.0	93.0	5.80
A7775.9	–	5.90	0.2323	57.0	93.0	5.90
A77715/64	15/64	5.95	0.2344	57.0	93.0	5.95
A7776.0	–	6.00	0.2362	57.0	93.0	6.00
A7776.1	–	6.10	0.2402	63.0	101.0	6.10
A7776.2	–	6.20	0.2441	63.0	101.0	6.20
A7776.3	–	6.30	0.2480	63.0	101.0	6.30
A7771/4	1/4	6.35	0.2500	63.0	101.0	6.35
A7776.4	–	6.40	0.2520	63.0	101.0	6.40
A7776.5	–	6.50	0.2559	63.0	101.0	6.50
A7776.6	–	6.60	0.2598	63.0	101.0	6.60
A7776.7	–	6.70	0.2638	63.0	101.0	6.70
A77717/64	17/64	6.75	0.2656	69.0	109.0	6.75
A7776.8	–	6.80	0.2677	69.0	109.0	6.80
A7776.9	–	6.90	0.2717	69.0	109.0	6.90
A7777.0	–	7.00	0.2756	69.0	109.0	7.00
A7777.1	–	7.10	0.2795	69.0	109.0	7.10
A7779/32	9/32	7.14	0.2813	69.0	109.0	7.14
A7777.2	–	7.20	0.2835	69.0	109.0	7.20
A7777.3	–	7.30	0.2874	69.0	109.0	7.30
A7777.4	–	7.40	0.2913	69.0	109.0	7.40
A7777.5	–	7.50	0.2953	69.0	109.0	7.50
A77719/64	19/64	7.54	0.2969	75.0	117.0	7.54
A7777.6	–	7.60	0.2992	75.0	117.0	7.60
A7777.7	–	7.70	0.3031	75.0	117.0	7.70
A7777.8	–	7.80	0.3071	75.0	117.0	7.80
A7777.9	–	7.90	0.3110	75.0	117.0	7.90
A7775/16	5/16	7.94	0.3125	75.0	117.0	7.94
A7778.0	–	8.00	0.3150	75.0	117.0	8.00

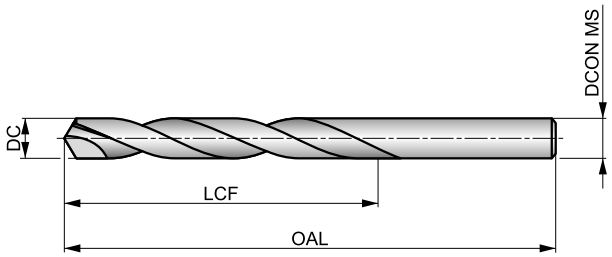
Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A7778.1	–	8.10	0.3189	75.0	117.0	8.10
A7778.2	–	8.20	0.3228	75.0	117.0	8.20
A7778.3	–	8.30	0.3268	75.0	117.0	8.30
A77721/64	21/64	8.33	0.3281	75.0	117.0	8.33
A7778.4	–	8.40	0.3307	75.0	117.0	8.40
A7778.5	–	8.50	0.3346	75.0	117.0	8.50
A7778.6	–	8.60	0.3386	81.0	125.0	8.60
A7778.7	–	8.70	0.3425	81.0	125.0	8.70
A77711/32	11/32	8.73	0.3438	81.0	125.0	8.73
A7778.8	–	8.80	0.3465	81.0	125.0	8.80
A7778.9	–	8.90	0.3504	81.0	125.0	8.90
A7779.0	–	9.00	0.3543	81.0	125.0	9.00
A7779.1	–	9.10	0.3583	81.0	125.0	9.10
A77723/64	23/64	9.13	0.3594	81.0	125.0	9.13
A7779.2	–	9.20	0.3622	81.0	125.0	9.20
A7779.3	–	9.30	0.3661	81.0	125.0	9.30
A7779.4	–	9.40	0.3701	81.0	125.0	9.40
A7779.5	–	9.50	0.3740	81.0	125.0	9.50
A7773/8	3/8	9.52	0.3750	87.0	133.0	9.52
A7779.6	–	9.60	0.3780	87.0	133.0	9.60
A7779.7	–	9.70	0.3819	87.0	133.0	9.70
A7779.8	–	9.80	0.3858	87.0	133.0	9.80
A7779.9	–	9.90	0.3898	87.0	133.0	9.90
A77725/64	25/64	9.92	0.3906	87.0	133.0	9.92
A77710.0	–	10.00	0.3937	87.0	133.0	10.00
A77710.1	–	10.10	0.3976	87.0	133.0	10.10
A77710.2	–	10.20	0.4016	87.0	133.0	10.20
A77713/32	13/32	10.32	0.4063	87.0	133.0	10.32
A77710.5	–	10.50	0.4134	87.0	133.0	10.50
A77727/64	27/64	10.72	0.4219	94.0	142.0	10.72
A77710.8	–	10.80	0.4252	94.0	142.0	10.80
A77711.0	–	11.00	0.4331	94.0	142.0	11.00
A7777/16	7/16	11.11	0.4375	94.0	142.0	11.11
A77711.2	–	11.20	0.4409	94.0	142.0	11.20
A77711.5	–	11.50	0.4528	94.0	142.0	11.50
A77729/64	29/64	11.51	0.4531	94.0	142.0	11.51
A77711.8	–	11.80	0.4646	94.0	142.0	11.80
A77715/32	15/32	11.91	0.4688	101.0	151.0	11.91
A77712.0	–	12.00	0.4724	101.0	151.0	12.00
A77712.2	–	12.20	0.4803	101.0	151.0	12.20
A77731/64	31/64	12.30	0.4844	101.0	151.0	12.30
A77712.5	–	12.50	0.4921	101.0	151.0	12.50
A7771/2	1/2	12.70	0.5000	101.0	151.0	12.70
A77712.8	–	12.80	0.5039	101.0	151.0	12.80
A77713.0	–	13.00	0.5118	101.0	151.0	13.00
A77713.5	–	13.50	0.5315	108.0	160.0	13.50
A77714.0	–	14.00	0.5512	108.0	160.0	14.00
A77714.5	–	14.50	0.5709	114.0	169.0	14.50
A77715.0	–	15.00	0.5906	114.0	169.0	15.00
A77715.5	–	15.50	0.6102	120.0	178.0	15.50
A77716.0	–	16.00	0.6299	120.0	178.0	16.00

A160

DORMER

HSS Jobber Drill, Steam Tempered Finish, with Brazed Carbide Point

HSS body with a brazed carbide tip, giving the performance of a carbide drill with a strong and flexible body. It has a 118°, 4-facet self-centering point making it an economical choice when drilling cast iron materials. It can be used in both conventional and CNC machines.



HSS HM	DIN 338	4×D
118°	Bright ST	
λ 20-35°	R	DC h8

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
◪73 E	◪82 E	◪85 E	◪63 E	◪55 D	◪49 C	◪59 D	◪47 D	◪40 C	◪35 D	◪30 C	◪24 A	◪55 B	◪46 B
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
◪49 B	◪40 B	◪41 C	◪35 C	◪32 C	◪35 A	■50 C	■37 A	■28 A	■43 A	■35 A	■28 A	■38 A	■29 A
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
■24 A	■35 A	■27 A	■20 A	■17 A	■14 A	■40 A	■30 A	■23 A	◪50 I	◪38 I	◪25 H	◪62 G	◪55 G
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.2**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**
◪40 G	◪119 C	◪70 G	◪35 D	◪60 E	◪35 A	◪35 A	◪25 A	◪33 A	◪28 A	◪25 A	◪20 A	◪20 A	◪16 A

Product	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A1604.0	4.00	0.1575	43.0	75.0	4.00
A1604.5	4.50	0.1772	47.0	80.0	4.50
A1605.0	5.00	0.1969	52.0	86.0	5.00
A1605.5	5.50	0.2165	57.0	93.0	5.50
A1606.0	6.00	0.2362	57.0	93.0	6.00
A1606.5	6.50	0.2559	63.0	101.0	6.50
A1606.8	6.80	0.2677	69.0	109.0	6.80
A1607.0	7.00	0.2756	69.0	109.0	7.00
A1607.5	7.50	0.2953	69.0	109.0	7.50
A1608.0	8.00	0.3150	75.0	117.0	8.00
A1608.5	8.50	0.3346	75.0	117.0	8.50
A1609.0	9.00	0.3543	81.0	125.0	9.00
A1609.5	9.50	0.3740	81.0	125.0	9.50
A16010.0	10.00	0.3937	87.0	133.0	10.00
A16010.2	10.20	0.4016	87.0	133.0	10.20
A16010.5	10.50	0.4134	87.0	133.0	10.50
A16011.0	11.00	0.4331	94.0	142.0	11.00
A16011.5	11.50	0.4528	94.0	142.0	11.50
A16012.0	12.00	0.4724	101.0	151.0	12.00
A16013.0	13.00	0.5118	101.0	151.0	13.00
A16014.0	14.00	0.5512	108.0	160.0	14.00
A16015.0	15.00	0.5906	114.0	169.0	15.00
A16016.0	16.00	0.6299	120.0	178.0	16.00

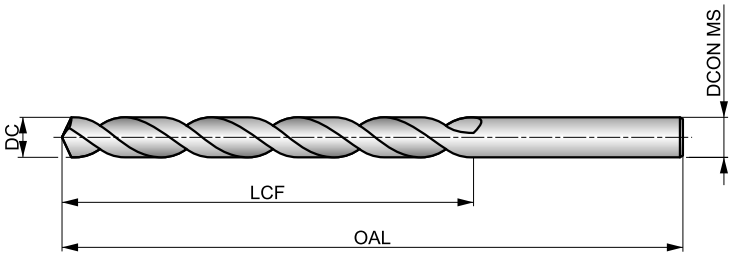
A510

DORMER

ADX HSS Jobber Drill, TiN Coated

High performance drill, able to produce high quality and accurate holes at high speeds and feeds (H9 hole tolerance). A 130° thinned point aids self-centering. This drill should be used in machines with constant feed only. TiN coating improves performance and extends the tool life. Suitable for drilling many materials.

ADX



HSS	DIN 338	4×D
130°	TiN	
λ 32-40°	R	DC h8

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■53 M	■59 M	■61 M	■45 M	■40 K	■35 F	■31 H	■25 H	■21 F	■19 H	■16 F	◪13 D	■38 G	■32 G
M2.1	M2.2	M3.1	M3.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2
■34 G	■28 G	■16 I	■14 I	◪13 I	◪19 G	■42 K	■31 J	■23 J	■34 J	■28 J	■22 F	■30 J	■23 J
K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3	N2.1	N2.2
■19 F	■28 J	■21 J	■16 F	■13 F	■11 F	■32 J	■24 J	■19 F	◪50 G	◪38 G	■25 M	■48 I	■43 I
N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	N4.3	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2
■31 I	■85 I	■50 I	◪25 D	■65 G	■50 G	■35 F	◪32 G	◪20 H	◪4 B	◪12 E	◪8 E	◪9 E	◪6 E
S4.1	S4.2												
◪7 E	◪5 E												

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A5103.0	–	3.00	0.1181	33.0	61.0	3.00
A5103.1	–	3.10	0.1220	36.0	65.0	3.10
A5101/8	1/8	3.18	0.1250	36.0	65.0	3.18
A5103.2	–	3.20	0.1260	36.0	65.0	3.20
A5103.3	–	3.30	0.1299	36.0	65.0	3.30
A5103.4	–	3.40	0.1339	39.0	70.0	3.40
A5103.5	–	3.50	0.1378	39.0	70.0	3.50
A5109/64	9/64	3.57	0.1406	39.0	70.0	3.57
A5103.6	–	3.60	0.1417	39.0	70.0	3.60
A5103.7	–	3.70	0.1457	39.0	70.0	3.70
A5103.8	–	3.80	0.1496	43.0	75.0	3.80
A5103.9	–	3.90	0.1535	43.0	75.0	3.90
A5105/32	5/32	3.97	0.1563	43.0	75.0	3.97
A5104.0	–	4.00	0.1575	43.0	75.0	4.00
A5104.1	–	4.10	0.1614	43.0	75.0	4.10
A5104.2	–	4.20	0.1654	43.0	75.0	4.20
A5104.3	–	4.30	0.1693	47.0	80.0	4.30
A51011/64	11/64	4.37	0.1719	47.0	80.0	4.37
A5104.4	–	4.40	0.1732	47.0	80.0	4.40
A5104.5	–	4.50	0.1772	47.0	80.0	4.50
A5104.6	–	4.60	0.1811	47.0	80.0	4.60
A5104.7	–	4.70	0.1850	47.0	80.0	4.70
A5103/16	3/16	4.76	0.1875	52.0	86.0	4.76
A5104.8	–	4.80	0.1890	52.0	86.0	4.80

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A5104.9	–	4.90	0.1929	52.0	86.0	4.90
A5105.0	–	5.00	0.1969	52.0	86.0	5.00
A5105.1	–	5.10	0.2008	52.0	86.0	5.10
A51013/64	13/64	5.16	0.2031	52.0	86.0	5.16
A5105.2	–	5.20	0.2047	52.0	86.0	5.20
A5105.3	–	5.30	0.2087	52.0	86.0	5.30
A5105.4	–	5.40	0.2126	57.0	93.0	5.40
A5105.5	–	5.50	0.2165	57.0	93.0	5.50
A5107/32	7/32	5.56	0.2188	57.0	93.0	5.56
A5105.6	–	5.60	0.2205	57.0	93.0	5.60
A5105.7	–	5.70	0.2244	57.0	93.0	5.70
A5105.8	–	5.80	0.2283	57.0	93.0	5.80
A5105.9	–	5.90	0.2323	57.0	93.0	5.90
A51015/64	15/64	5.95	0.2344	57.0	93.0	5.95
A5106.0	–	6.00	0.2362	57.0	93.0	6.00
A5106.1	–	6.10	0.2402	63.0	101.0	6.10
A5106.2	–	6.20	0.2441	63.0	101.0	6.20
A5106.3	–	6.30	0.2480	63.0	101.0	6.30
A5101/4	1/4	6.35	0.2500	63.0	101.0	6.35
A5106.4	–	6.40	0.2520	63.0	101.0	6.40
A5106.5	–	6.50	0.2559	63.0	101.0	6.50
A5106.6	–	6.60	0.2598	63.0	101.0	6.60
A5106.7	–	6.70	0.2638	63.0	101.0	6.70
A51017/64	17/64	6.75	0.2656	69.0	109.0	6.75

Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A5106.8	–	6.80	0.2677	69.0	109.0	6.80
A5106.9	–	6.90	0.2717	69.0	109.0	6.90
A5107.0	–	7.00	0.2756	69.0	109.0	7.00
A5107.1	–	7.10	0.2795	69.0	109.0	7.10
A5109/32	9/32	7.14	0.2813	69.0	109.0	7.14
A5107.2	–	7.20	0.2835	69.0	109.0	7.20
A5107.3	–	7.30	0.2874	69.0	109.0	7.30
A5107.4	–	7.40	0.2913	69.0	109.0	7.40
A5107.5	–	7.50	0.2953	69.0	109.0	7.50
A51019/64	19/64	7.54	0.2969	75.0	117.0	7.54
A5107.6	–	7.60	0.2992	75.0	117.0	7.60
A5107.7	–	7.70	0.3031	75.0	117.0	7.70
A5107.8	–	7.80	0.3071	75.0	117.0	7.80
A5107.9	–	7.90	0.3110	75.0	117.0	7.90
A5105/16	5/16	7.94	0.3125	75.0	117.0	7.94
A5108.0	–	8.00	0.3150	75.0	117.0	8.00
A5108.1	–	8.10	0.3189	75.0	117.0	8.10
A5108.2	–	8.20	0.3228	75.0	117.0	8.20
A5108.3	–	8.30	0.3268	75.0	117.0	8.30
A51021/64	21/64	8.33	0.3281	75.0	117.0	8.33
A5108.4	–	8.40	0.3307	75.0	117.0	8.40
A5108.5	–	8.50	0.3346	75.0	117.0	8.50
A5108.6	–	8.60	0.3386	81.0	125.0	8.60
A5108.7	–	8.70	0.3425	81.0	125.0	8.70
A51011/32	11/32	8.73	0.3438	81.0	125.0	8.73
A5108.8	–	8.80	0.3465	81.0	125.0	8.80
A5108.9	–	8.90	0.3504	81.0	125.0	8.90
A5109.0	–	9.00	0.3543	81.0	125.0	9.00
A5109.1	–	9.10	0.3583	81.0	125.0	9.10
A51023/64	23/64	9.13	0.3594	81.0	125.0	9.13
A5109.2	–	9.20	0.3622	81.0	125.0	9.20
A5109.3	–	9.30	0.3661	81.0	125.0	9.30
A5109.4	–	9.40	0.3701	81.0	125.0	9.40
A5109.5	–	9.50	0.3740	81.0	125.0	9.50
A5103/8	3/8	9.52	0.3750	87.0	133.0	9.52
A5109.6	–	9.60	0.3780	87.0	133.0	9.60
A5109.7	–	9.70	0.3819	87.0	133.0	9.70
A5109.8	–	9.80	0.3858	87.0	133.0	9.80
A5109.9	–	9.90	0.3898	87.0	133.0	9.90
A51025/64	25/64	9.92	0.3906	87.0	133.0	9.92

Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A51010.0	–	10.00	0.3937	87.0	133.0	10.00
A51010.1	–	10.10	0.3976	87.0	133.0	10.10
A51010.2	–	10.20	0.4016	87.0	133.0	10.20
A51010.3	–	10.30	0.4055	87.0	133.0	10.30
A51013/32	13/32	10.32	0.4063	87.0	133.0	10.32
A51010.4	–	10.40	0.4094	87.0	133.0	10.40
A51010.5	–	10.50	0.4134	87.0	133.0	10.50
A51010.6	–	10.60	0.4173	87.0	133.0	10.60
A51010.7	–	10.70	0.4213	94.0	142.0	10.70
A51027/64	27/64	10.72	0.4219	94.0	142.0	10.72
A51010.8	–	10.80	0.4252	94.0	142.0	10.80
A51010.9	–	10.90	0.4291	94.0	142.0	10.90
A51011.0	–	11.00	0.4331	94.0	142.0	11.00
A51011.1	–	11.10	0.4370	94.0	142.0	11.10
A5107/16	7/16	11.11	0.4375	94.0	142.0	11.11
A51011.2	–	11.20	0.4409	94.0	142.0	11.20
A51011.3	–	11.30	0.4449	94.0	142.0	11.30
A51011.4	–	11.40	0.4488	94.0	142.0	11.40
A51011.5	–	11.50	0.4528	94.0	142.0	11.50
A51029/64	29/64	11.51	0.4531	94.0	142.0	11.51
A51011.6	–	11.60	0.4567	94.0	142.0	11.60
A51011.7	–	11.70	0.4606	94.0	142.0	11.70
A51011.8	–	11.80	0.4646	94.0	142.0	11.80
A51011.9	–	11.90	0.4685	101.0	151.0	11.90
A51015/32	15/32	11.91	0.4688	101.0	151.0	11.91
A51012.0	–	12.00	0.4724	101.0	151.0	12.00
A51012.1	–	12.10	0.4764	101.0	151.0	12.10
A51012.2	–	12.20	0.4803	101.0	151.0	12.20
A51012.3	–	12.30	0.4843	101.0	151.0	12.30
A51031/64	31/64	12.30	0.4844	101.0	151.0	12.30
A51012.4	–	12.40	0.4882	101.0	151.0	12.40
A51012.5	–	12.50	0.4921	101.0	151.0	12.50
A51012.6	–	12.60	0.4961	101.0	151.0	12.60
A51012.7	–	12.70	0.5000	101.0	151.0	12.70
A5101/2	1/2	12.70	0.5000	101.0	151.0	12.70
A51012.8	–	12.80	0.5039	101.0	151.0	12.80
A51012.9	–	12.90	0.5079	101.0	151.0	12.90
A51013.0	–	13.00	0.5118	101.0	151.0	13.00
A51014.0	–	14.00	0.5512	108.0	160.0	14.00

A553

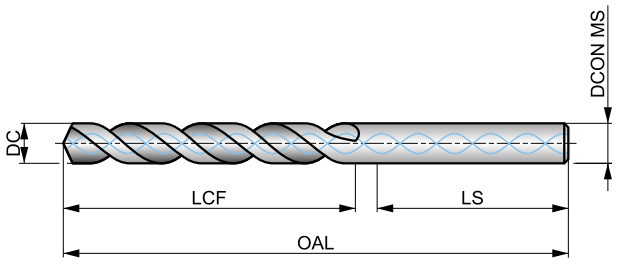
DORMER

ADX HSS-E (5% Cobalt) Jobber Drill, TiALN Top Coated with Coolant Feed

High performance drill, able to produce high quality, accurate holes at high speeds and feeds (H9 hole tolerance). A 130° thinned point and TiAlN Top coating improves performance and extends the tool life. This drill should be used in CNC machines only. Suitable for drilling many materials.

ADX

HSS-E	DORMER	5×D
130°	TiAlN Top	DIN 6535HA
λ>35°	R	
DC h8		



Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■80 L	■89 L	■92 L	■68 L	■60 L	■53 F	■41 H	■33 H	■28 F	■25 H	■21 F	■17 D	■55 G	■46 G
M2.1	M2.2	M3.1	M3.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2
■49 G	■40 G	■22 I	■19 I	◪17 I	◪27 G	■70 K	■52 J	■39 J	■55 J	■45 J	■36 F	■49 J	■37 J
K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3	N2.1	N2.2
■30 F	■45 J	■34 J	■25 F	■22 F	■18 F	■51 J	■39 J	■30 F	◪70 H	◪53 H	■35 M	■85 I	■76 I
N2.3	N3.1	N3.2	N3.3	N4.1	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2	S4.1	S4.2
■55 I	■144 I	■85 I	◪43 G	■90 G	■45 G	◪30 E	◪8 C	◪20 E	◪14 G	◪15 E	◪10 G	◪12 E	◪8 G

DCON MS tolerance h6.

Product	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	LS [mm]	DCON MS [mm]
A5535.0	5.00	0.1969	36.0	79.0	36.0	6.00
A5535.2	5.20	0.2047	38.0	79.0	36.0	6.00
A5535.5	5.50	0.2165	40.0	79.0	36.0	6.00
A5536.0	6.00	0.2362	43.0	79.0	36.0	6.00
A5536.3	6.30	0.2480	46.0	87.0	36.0	8.00
A5536.5	6.50	0.2559	47.0	87.0	36.0	8.00
A5536.8	6.80	0.2677	48.0	87.0	36.0	8.00
A5536.9	6.90	0.2717	48.0	87.0	36.0	8.00
A5537.0	7.00	0.2756	48.0	87.0	36.0	8.00
A5537.4	7.40	0.2913	54.0	94.0	36.0	8.00
A5537.5	7.50	0.2953	54.0	94.0	36.0	8.00
A5538.0	8.00	0.3150	58.0	94.0	36.0	8.00
A5538.5	8.50	0.3346	75.0	130.0	40.0	10.00
A5538.7	8.70	0.3425	75.0	130.0	40.0	10.00
A5539.0	9.00	0.3543	75.0	130.0	40.0	10.00
A5539.5	9.50	0.3740	75.0	130.0	40.0	10.00
A55310.0	10.00	0.3937	75.0	130.0	40.0	10.00
A55310.2	10.20	0.4016	87.0	150.0	45.0	12.00
A55310.3	10.30	0.4055	87.0	150.0	45.0	12.00
A55310.5	10.50	0.4134	87.0	150.0	45.0	12.00
A55311.0	11.00	0.4331	94.0	150.0	45.0	12.00

Product	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	LS [mm]	DCON MS [mm]
A55311.3	11.30	0.4449	94.0	150.0	45.0	12.00
A55311.5	11.50	0.4528	94.0	150.0	45.0	12.00
A55312.0	12.00	0.4724	94.0	150.0	45.0	12.00
A55312.5	12.50	0.4921	101.0	160.0	45.0	14.00
A55313.0	13.00	0.5118	101.0	160.0	45.0	14.00
A55313.5	13.50	0.5315	101.0	160.0	45.0	14.00
A55314.0	14.00	0.5512	101.0	160.0	45.0	14.00
A55314.25	14.25	0.5610	108.0	170.0	48.0	16.00
A55314.5	14.50	0.5709	108.0	170.0	48.0	16.00
A55315.0	15.00	0.5906	108.0	170.0	48.0	16.00
A55315.25	15.25	0.6004	108.0	170.0	48.0	16.00
A55315.5	15.50	0.6102	108.0	170.0	48.0	16.00
A55316.0	16.00	0.6299	108.0	170.0	48.0	16.00
A55316.5	16.50	0.6496	125.0	190.0	48.0	18.00
A55317.0	17.00	0.6693	125.0	190.0	48.0	18.00
A55317.5	17.50	0.6890	130.0	190.0	48.0	18.00
A55317.75	17.75	0.6988	130.0	190.0	48.0	18.00
A55318.0	18.00	0.7087	130.0	190.0	48.0	18.00
A55319.0	19.00	0.7480	135.0	200.0	50.0	20.00
A55319.25	19.25	0.7579	140.0	200.0	50.0	20.00
A55320.0	20.00	0.7874	140.0	200.0	50.0	20.00

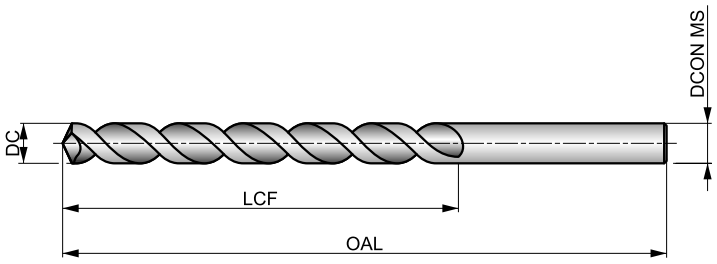
A900

DORMER

PFX HSS-E (5% Cobalt) Jobber Drill, Bright Finish

High performance drill, able to produce high quality and accurate holes at high speeds and feeds (H10 hole tolerance). Self-centering 130° point angle and special parabolic flute design help to drill deep holes in a single pass. Suitable for many materials.

PFX



HSS-E	DIN ANSI	6×D
130°	Bright	
λ>35°	R	DC h8

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■34 H	■39 H	■40 H	■30 H	■26 H	■23 E	■31 H	■25 H	■21 E	■19 H	■16 E	■13 E	■21 E	■17 E
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
■18 E	■15 E	■8 E	■7 E	■6 E	■9 C	◪24 J	◪18 J	◪13 J	◪23 J	◪19 J	◪15 I	◪21 J	◪16 J
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪13 I	◪19 J	◪14 J	◪11 I	◪9 I	◪8 I	◪22 J	◪16 J	◪13 I	◪60 J	◪45 J	■30 N	◪62 N	◪55 N
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**
◪40 N	◪90 H	◪53 I	◪27 G	◪55 I	◪40 G	■22 E	■15 E	■6 C	■9 G	■8 C	■7 G	■6 C	■5 G
S4.2													
■5 C													

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A9001.0	–	1.00	0.0394	12.0	34.0	1.00
A9001.1	–	1.10	0.0433	14.0	36.0	1.10
A9003/64	3/64	1.19	0.0469	19.0	44.0	1.19
A9001.2	–	1.20	0.0472	16.0	38.0	1.20
A9001.25	–	1.25	0.0492	16.0	36.0	1.25
A9001.3	–	1.30	0.0512	16.0	38.0	1.30
A9001.4	–	1.40	0.0551	18.0	40.0	1.40
A9001.5	–	1.50	0.0591	18.0	40.0	1.50
A9001.55	–	1.55	0.0610	20.0	43.0	1.55
A9001/16	1/16	1.59	0.0625	22.0	48.0	1.59
A9001.6	–	1.60	0.0630	20.0	43.0	1.60
A9001.7	–	1.70	0.0669	20.0	43.0	1.70
A9001.75	–	1.75	0.0689	22.0	46.0	1.75
A9001.8	–	1.80	0.0709	22.0	46.0	1.80
A9001.9	–	1.90	0.0748	22.0	46.0	1.90
A9005/64	5/64	1.98	0.0781	25.0	51.0	1.98
A9002.0	–	2.00	0.0787	24.0	49.0	2.00
A9002.1	–	2.10	0.0827	24.0	49.0	2.10
A9002.15	–	2.15	0.0846	27.0	53.0	2.15
A9002.2	–	2.20	0.0866	27.0	53.0	2.20
A9002.3	–	2.30	0.0906	27.0	53.0	2.30
A9003/32	3/32	2.38	0.0937	32.0	57.0	2.38
A9002.4	–	2.40	0.0945	30.0	57.0	2.40
A9002.5	–	2.50	0.0984	30.0	57.0	2.50

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A9002.6	–	2.60	0.1024	30.0	57.0	2.60
A9002.7	–	2.70	0.1063	33.0	61.0	2.70
A9007/64	7/64	2.78	0.1094	38.0	67.0	2.78
A9002.8	–	2.80	0.1102	33.0	61.0	2.80
A9002.9	–	2.90	0.1142	33.0	61.0	2.90
A9003.0	–	3.00	0.1181	33.0	61.0	3.00
A9003.1	–	3.10	0.1220	36.0	65.0	3.10
A9001/8	1/8	3.18	0.1250	41.0	70.0	3.18
A9003.2	–	3.20	0.1260	36.0	65.0	3.20
A9003.3	–	3.30	0.1299	36.0	65.0	3.30
A9003.4	–	3.40	0.1339	39.0	70.0	3.40
A9003.5	–	3.50	0.1378	39.0	70.0	3.50
A9009/64	9/64	3.57	0.1406	44.0	73.0	3.57
A9003.6	–	3.60	0.1417	39.0	70.0	3.60
A9003.7	–	3.70	0.1457	39.0	70.0	3.70
A9003.8	–	3.80	0.1496	43.0	75.0	3.80
A9003.9	–	3.90	0.1535	43.0	75.0	3.90
A9005/32	5/32	3.97	0.1563	51.0	79.0	3.97
A9004.0	–	4.00	0.1575	43.0	75.0	4.00
A9004.1	–	4.10	0.1614	43.0	75.0	4.10
A9004.2	–	4.20	0.1654	43.0	75.0	4.20
A9004.3	–	4.30	0.1693	47.0	80.0	4.30
A90011/64	11/64	4.37	0.1719	54.0	83.0	4.37
A9004.4	–	4.40	0.1732	47.0	80.0	4.40

Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A9004.5	–	4.50	0.1772	47.0	80.0	4.50
A9004.6	–	4.60	0.1811	47.0	80.0	4.60
A9004.7	–	4.70	0.1850	47.0	80.0	4.70
A9003/16	3/16	4.76	0.1875	59.0	89.0	4.76
A9004.8	–	4.80	0.1890	52.0	86.0	4.80
A9004.9	–	4.90	0.1929	52.0	86.0	4.90
A9005.0	–	5.00	0.1969	52.0	86.0	5.00
A9005.1	–	5.10	0.2008	52.0	86.0	5.10
A90013/64	13/64	5.16	0.2031	62.0	92.0	5.16
A9005.2	–	5.20	0.2047	52.0	86.0	5.20
A9005.3	–	5.30	0.2087	52.0	86.0	5.30
A9005.4	–	5.40	0.2126	57.0	93.0	5.40
A9005.5	–	5.50	0.2165	57.0	93.0	5.50
A9007/32	7/32	5.56	0.2188	64.0	95.0	5.56
A9005.6	–	5.60	0.2205	57.0	93.0	5.60
A9005.7	–	5.70	0.2244	57.0	93.0	5.70
A9005.8	–	5.80	0.2283	57.0	93.0	5.80
A9005.9	–	5.90	0.2323	57.0	93.0	5.90
A90015/64	15/64	5.95	0.2344	67.0	98.0	5.95
A9006.0	–	6.00	0.2362	57.0	93.0	6.00
A9006.1	–	6.10	0.2402	63.0	101.0	6.10
A9006.2	–	6.20	0.2441	63.0	101.0	6.20
A9006.3	–	6.30	0.2480	63.0	101.0	6.30
A9001/4	1/4	6.35	0.2500	70.0	102.0	6.35
A9006.4	–	6.40	0.2520	63.0	101.0	6.40
A9006.5	–	6.50	0.2559	63.0	101.0	6.50
A9006.6	–	6.60	0.2598	63.0	101.0	6.60
A9006.7	–	6.70	0.2638	63.0	101.0	6.70
A90017/64	17/64	6.75	0.2656	73.0	105.0	6.75
A9006.8	–	6.80	0.2677	69.0	109.0	6.80
A9006.9	–	6.90	0.2717	69.0	109.0	6.90
A9007.0	–	7.00	0.2756	69.0	109.0	7.00
A9007.1	–	7.10	0.2795	69.0	109.0	7.10
A9009/32	9/32	7.14	0.2813	75.0	108.0	7.14
A9007.2	–	7.20	0.2835	69.0	109.0	7.20
A9007.3	–	7.30	0.2874	69.0	109.0	7.30
A9007.4	–	7.40	0.2913	69.0	109.0	7.40
A9007.5	–	7.50	0.2953	69.0	109.0	7.50
A90019/64	19/64	7.54	0.2969	78.0	111.0	7.54
A9007.6	–	7.60	0.2992	75.0	117.0	7.60
A9007.7	–	7.70	0.3031	75.0	117.0	7.70
A9007.8	–	7.80	0.3071	75.0	117.0	7.80
A9007.9	–	7.90	0.3110	75.0	117.0	7.90
A9005/16	5/16	7.94	0.3125	81.0	114.0	7.94
A9008.0	–	8.00	0.3150	75.0	117.0	8.00
A9008.1	–	8.10	0.3189	75.0	117.0	8.10
A9008.2	–	8.20	0.3228	75.0	117.0	8.20
A9008.3	–	8.30	0.3268	75.0	117.0	8.30
A90021/64	21/64	8.33	0.3281	84.0	117.0	8.33
A9008.4	–	8.40	0.3307	75.0	117.0	8.40
A9008.5	–	8.50	0.3346	75.0	117.0	8.50
A9008.6	–	8.60	0.3386	81.0	125.0	8.60
A9008.7	–	8.70	0.3425	81.0	125.0	8.70
A90011/32	11/32	8.73	0.3438	87.0	121.0	8.73
A9008.8	–	8.80	0.3465	81.0	125.0	8.80
A9008.9	–	8.90	0.3504	81.0	125.0	8.90
A9009.0	–	9.00	0.3543	81.0	125.0	9.00
A9009.1	–	9.10	0.3583	81.0	125.0	9.10
A90023/64	23/64	9.13	0.3594	89.0	124.0	9.13
A9009.2	–	9.20	0.3622	81.0	125.0	9.20

Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A9009.3	–	9.30	0.3661	81.0	125.0	9.30
A9009.4	–	9.40	0.3701	81.0	125.0	9.40
A9009.5	–	9.50	0.3740	81.0	125.0	9.50
A9003/8	3/8	9.52	0.3750	92.0	127.0	9.52
A9009.6	–	9.60	0.3780	87.0	133.0	9.60
A9009.7	–	9.70	0.3819	87.0	133.0	9.70
A9009.8	–	9.80	0.3858	87.0	133.0	9.80
A9009.9	–	9.90	0.3898	87.0	133.0	9.90
A90025/64	25/64	9.92	0.3906	95.0	130.0	9.92
A90010.0	–	10.00	0.3937	87.0	133.0	10.00
A90010.2	–	10.20	0.4016	87.0	133.0	10.20
A90010.3	–	10.30	0.4055	87.0	133.0	10.30
A90013/32	13/32	10.32	0.4063	98.0	133.0	10.32
A90010.4	–	10.40	0.4094	87.0	133.0	10.40
A90010.5	–	10.50	0.4134	87.0	133.0	10.50
A90027/64	27/64	10.72	0.4219	100.0	137.0	10.72
A90010.8	–	10.80	0.4252	94.0	142.0	10.80
A90011.0	–	11.00	0.4331	94.0	142.0	11.00
A9007/16	7/16	11.11	0.4375	103.0	140.0	11.11
A90011.5	–	11.50	0.4528	94.0	142.0	11.50
A90029/64	29/64	11.51	0.4531	106.0	143.0	11.51
A90011.8	–	11.80	0.4646	94.0	142.0	11.80
A90015/32	15/32	11.91	0.4688	110.0	146.0	11.91
A90012.0	–	12.00	0.4724	101.0	151.0	12.00
A90031/64	31/64	12.30	0.4844	111.0	149.0	12.30
A90012.5	–	12.50	0.4921	101.0	151.0	12.50
A9001/2	1/2	12.70	0.5000	101.0	151.0	12.70
A90013.0	–	13.00	0.5118	101.0	151.0	13.00
A90033/64	33/64	13.10	0.5156	122.0	168.0	13.10
A90013.5	–	13.50	0.5315	108.0	160.0	13.50
A90035/64	35/64	13.89	0.5469	122.0	168.0	13.89
A90014.0	–	14.00	0.5512	108.0	160.0	14.00
A9009/16	9/16	14.29	0.5625	122.0	168.0	14.29
A90014.5	–	14.50	0.5709	114.0	169.0	14.50
A90037/64	37/64	14.68	0.5781	122.0	168.0	14.68
A90015.0	–	15.00	0.5906	114.0	169.0	15.00
A90019/32	19/32	15.08	0.5938	132.0	181.0	15.08
A90039/64	39/64	15.48	0.6094	132.0	181.0	15.48
A90015.5	–	15.50	0.6102	120.0	178.0	15.50
A9005/8	5/8	15.88	0.6250	132.0	181.0	15.88
A90016.0	–	16.00	0.6299	120.0	178.0	16.00
A90041/64	41/64	16.27	0.6406	132.0	181.0	16.27
A90016.5	–	16.50	0.6496	125.0	184.0	16.50
A90021/32	21/32	16.67	0.6563	132.0	181.0	16.67
A90017.0	–	17.00	0.6693	125.0	184.0	17.00
A90043/64	43/64	17.07	0.6719	143.0	194.0	17.07
A90011/16	11/16	17.46	0.6875	143.0	194.0	17.46
A90017.5	–	17.50	0.6890	130.0	191.0	17.50
A90045/64	45/64	17.86	0.7031	130.0	191.0	17.86
A90018.0	–	18.00	0.7087	130.0	191.0	18.00
A90023/32	23/32	18.26	0.7188	130.0	191.0	18.26
A90018.5	–	18.50	0.7283	135.0	198.0	18.50
A90047/64	47/64	18.65	0.7344	135.0	198.0	18.65
A90019.0	–	19.00	0.7480	135.0	198.0	19.00
A9003/4	3/4	19.05	0.7500	135.0	198.0	19.05
A90049/64	49/64	19.45	0.7656	135.0	198.0	19.45
A90019.5	–	19.50	0.7677	140.0	205.0	19.50
A90025/32	25/32	19.84	0.7813	140.0	205.0	19.84
A90020.0	–	20.00	0.7874	140.0	205.0	20.00

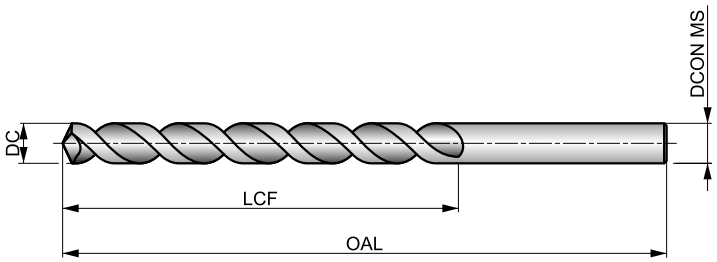
A901

DORMER

PFX HSS-E (5% Cobalt) Jobbler Drill, Alcrona Top Coated

High performance drill, able to produce high quality and accurate holes at high speeds and feeds (H10 hole tolerance). A 130° point angle and special parabolic flute design. Suitable for many materials. Alcrona-TOP coating improves performance and extends the tool life.

PFX



HSS-E	DIN ANSI	6×D
130°	Alcrona Top	
λ>35°	R	DC h8

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■58 J	■65 J	■68 J	■50 J	■44 I	■39 G	■49 I	■39 I	■33 G	■29 I	■25 G	■20 G	■23 E	■20 E
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
■21 E	■17 E	■10 E	■9 E	■8 E	■11 C	■58 I	■43 I	■32 I	■42 J	■34 J	■27 I	■37 J	■28 J
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**
■23 I	■34 J	■26 J	■19 I	■16 I	■14 I	■39 J	■29 J	■23 I	◪35 G	◪24 G	◪10 E	◪15 I	◪14 E
S3.1	**S3.2**	**S4.1**	**S4.2**										
◪11 I	◪10 E	◪9 I	◪8 E										

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A9011.5	–	1.50	0.0591	18.0	40.0	1.50
A9011.55	–	1.55	0.0610	20.0	43.0	1.55
A9011/16	1/16	1.59	0.0625	22.0	48.0	1.59
A9011.6	–	1.60	0.0630	20.0	43.0	1.60
A9011.75	–	1.75	0.0689	22.0	46.0	1.75
A9011.8	–	1.80	0.0709	22.0	46.0	1.80
A9011.9	–	1.90	0.0748	22.0	46.0	1.90
A9015/64	5/64	1.98	0.0781	25.0	51.0	1.98
A9012.0	–	2.00	0.0787	24.0	49.0	2.00
A9012.1	–	2.10	0.0827	24.0	49.0	2.10
A9012.15	–	2.15	0.0846	27.0	53.0	2.15
A9013/32	3/32	2.38	0.0937	32.0	57.0	2.38
A9012.4	–	2.40	0.0945	30.0	57.0	2.40
A9012.5	–	2.50	0.0984	30.0	57.0	2.50
A9012.6	–	2.60	0.1024	30.0	57.0	2.60
A9012.7	–	2.70	0.1063	33.0	61.0	2.70
A9017/64	7/64	2.78	0.1094	38.0	67.0	2.78
A9012.9	–	2.90	0.1142	33.0	61.0	2.90
A9013.0	–	3.00	0.1181	33.0	61.0	3.00
A9013.1	–	3.10	0.1220	36.0	65.0	3.10
A9011/8	1/8	3.18	0.1250	41.0	70.0	3.18
A9013.2	–	3.20	0.1260	36.0	65.0	3.20
A9013.3	–	3.30	0.1299	36.0	65.0	3.30
A9013.4	–	3.40	0.1339	39.0	70.0	3.40
A9013.5	–	3.50	0.1378	39.0	70.0	3.50
A9013.6	–	3.60	0.1417	39.0	70.0	3.60

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A9019/64	9/64	3.57	0.1406	44.0	73.0	3.57
A9013.7	–	3.70	0.1457	39.0	70.0	3.70
A9013.8	–	3.80	0.1496	43.0	75.0	3.80
A9013.9	–	3.90	0.1535	43.0	75.0	3.90
A9015/32	5/32	3.97	0.1563	51.0	79.0	3.97
A9014.0	–	4.00	0.1575	43.0	75.0	4.00
A9014.1	–	4.10	0.1614	43.0	75.0	4.10
A9014.2	–	4.20	0.1654	43.0	75.0	4.20
A9014.3	–	4.30	0.1693	47.0	80.0	4.30
A90111/64	11/64	4.37	0.1719	54.0	83.0	4.37
A9014.4	–	4.40	0.1732	47.0	80.0	4.40
A9014.5	–	4.50	0.1772	47.0	80.0	4.50
A9014.6	–	4.60	0.1811	47.0	80.0	4.60
A9014.7	–	4.70	0.1850	47.0	80.0	4.70
A9013/16	3/16	4.76	0.1875	59.0	89.0	4.76
A9014.8	–	4.80	0.1890	52.0	86.0	4.80
A9014.9	–	4.90	0.1929	52.0	86.0	4.90
A9015.0	–	5.00	0.1969	52.0	86.0	5.00
A9015.1	–	5.10	0.2008	52.0	86.0	5.10
A90113/64	13/64	5.16	0.2031	62.0	92.0	5.16
A9015.2	–	5.20	0.2047	52.0	86.0	5.20
A9015.3	–	5.30	0.2087	52.0	86.0	5.30
A9015.4	–	5.40	0.2126	57.0	93.0	5.40
A9015.5	–	5.50	0.2165	57.0	93.0	5.50
A9017/32	7/32	5.56	0.2188	64.0	95.0	5.56
A9015.6	–	5.60	0.2205	57.0	93.0	5.60

Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A9015.7	–	5.70	0.2244	57.0	93.0	5.70
A9015.8	–	5.80	0.2283	57.0	93.0	5.80
A9015.9	–	5.90	0.2323	57.0	93.0	5.90
A90115/64	15/64	5.95	0.2344	67.0	98.0	5.95
A9016.0	–	6.00	0.2362	57.0	93.0	6.00
A9016.1	–	6.10	0.2402	63.0	101.0	6.10
A9016.2	–	6.20	0.2441	63.0	101.0	6.20
A9016.3	–	6.30	0.2480	63.0	101.0	6.30
A9011/4	1/4	6.35	0.2500	70.0	102.0	6.35
A9016.4	–	6.40	0.2520	63.0	101.0	6.40
A9016.5	–	6.50	0.2559	63.0	101.0	6.50
A9016.6	–	6.60	0.2598	63.0	101.0	6.60
A9016.7	–	6.70	0.2638	63.0	101.0	6.70
A90117/64	17/64	6.75	0.2656	73.0	105.0	6.75
A9016.8	–	6.80	0.2677	69.0	109.0	6.80
A9016.9	–	6.90	0.2717	69.0	109.0	6.90
A9017.0	–	7.00	0.2756	69.0	109.0	7.00
A9017.1	–	7.10	0.2795	69.0	109.0	7.10
A9019/32	9/32	7.14	0.2813	75.0	108.0	7.14
A9017.2	–	7.20	0.2835	69.0	109.0	7.20
A9017.3	–	7.30	0.2874	69.0	109.0	7.30
A9017.4	–	7.40	0.2913	69.0	109.0	7.40
A9017.5	–	7.50	0.2953	69.0	109.0	7.50
A90119/64	19/64	7.54	0.2969	78.0	111.0	7.54
A9017.6	–	7.60	0.2992	75.0	117.0	7.60
A9017.7	–	7.70	0.3031	75.0	117.0	7.70
A9017.8	–	7.80	0.3071	75.0	117.0	7.80
A9017.9	–	7.90	0.3110	75.0	117.0	7.90
A9015/16	5/16	7.94	0.3125	81.0	114.0	7.94
A9018.0	–	8.00	0.3150	75.0	117.0	8.00
A9018.1	–	8.10	0.3189	75.0	117.0	8.10
A9018.2	–	8.20	0.3228	75.0	117.0	8.20
A9018.3	–	8.30	0.3268	75.0	117.0	8.30
A90121/64	21/64	8.33	0.3281	84.0	117.0	8.33
A9018.4	–	8.40	0.3307	75.0	117.0	8.40
A9018.5	–	8.50	0.3346	75.0	117.0	8.50
A9018.6	–	8.60	0.3386	81.0	125.0	8.60
A9018.7	–	8.70	0.3425	81.0	125.0	8.70
A90111/32	11/32	8.73	0.3438	87.0	121.0	8.73
A9018.8	–	8.80	0.3465	81.0	125.0	8.80
A9018.9	–	8.90	0.3504	81.0	125.0	8.90
A9019.0	–	9.00	0.3543	81.0	125.0	9.00
A9019.1	–	9.10	0.3583	81.0	125.0	9.10

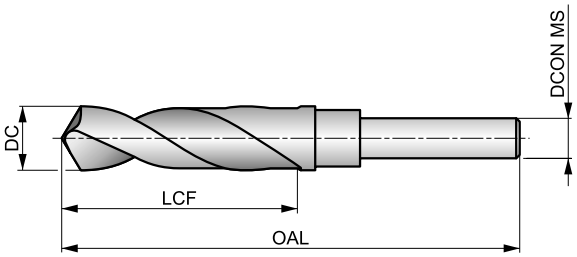
Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A90123/64	23/64	9.13	0.3594	89.0	124.0	9.13
A9019.2	–	9.20	0.3622	81.0	125.0	9.20
A9019.3	–	9.30	0.3661	81.0	125.0	9.30
A9019.4	–	9.40	0.3701	81.0	125.0	9.40
A9019.5	–	9.50	0.3740	81.0	125.0	9.50
A9013/8	3/8	9.52	0.3750	92.0	127.0	9.52
A9019.6	–	9.60	0.3780	87.0	133.0	9.60
A9019.7	–	9.70	0.3819	87.0	133.0	9.70
A9019.8	–	9.80	0.3858	87.0	133.0	9.80
A9019.9	–	9.90	0.3898	87.0	133.0	9.90
A90125/64	25/64	9.92	0.3906	95.0	130.0	9.92
A90110.0	–	10.00	0.3937	87.0	133.0	10.00
A90110.2	–	10.20	0.4016	87.0	133.0	10.20
A90110.3	–	10.30	0.4055	87.0	133.0	10.30
A90113/32	13/32	10.32	0.4063	98.0	133.0	10.32
A90110.4	–	10.40	0.4094	87.0	133.0	10.40
A90110.5	–	10.50	0.4134	87.0	133.0	10.50
A90127/64	27/64	10.72	0.4219	100.0	137.0	10.72
A90110.8	–	10.80	0.4252	94.0	142.0	10.80
A90111.0	–	11.00	0.4331	94.0	142.0	11.00
A9017/16	7/16	11.11	0.4375	103.0	140.0	11.11
A90111.5	–	11.50	0.4528	94.0	142.0	11.50
A90129/64	29/64	11.51	0.4531	106.0	143.0	11.51
A90111.8	–	11.80	0.4646	94.0	142.0	11.80
A90115/32	15/32	11.91	0.4688	110.0	146.0	11.91
A90112.0	–	12.00	0.4724	101.0	151.0	12.00
A90131/64	31/64	12.30	0.4844	111.0	149.0	12.30
A90112.5	–	12.50	0.4921	101.0	151.0	12.50
A9011/2	1/2	12.70	0.5000	101.0	151.0	12.70
A90113.0	–	13.00	0.5118	101.0	151.0	13.00
A90133/64	33/64	13.10	0.5156	122.0	168.0	13.10
A90113.5	–	13.50	0.5315	108.0	160.0	13.50
A90135/64	35/64	13.89	0.5469	122.0	168.0	13.89
A90114.0	–	14.00	0.5512	108.0	160.0	14.00
A9019/16	9/16	14.29	0.5625	122.0	168.0	14.29
A90114.5	–	14.50	0.5709	114.0	169.0	14.50
A90137/64	37/64	14.68	0.5781	122.0	168.0	14.68
A90115.0	–	15.00	0.5906	114.0	169.0	15.00
A90119/32	19/32	15.08	0.5938	132.0	181.0	15.08
A90139/64	39/64	15.48	0.6094	132.0	181.0	15.48
A90115.5	–	15.50	0.6102	120.0	178.0	15.50
A9015/8	5/8	15.88	0.6250	132.0	181.0	15.88
A90116.0	–	16.00	0.6299	120.0	178.0	16.00

A170

DORMER

HSS Reduced Shank Drill, Steam Tempered Finish

A ½ inch parallel shank allows this drill, even with a large cutting diameter, to be clamped in conventional, hand-held power tools. A 118° point makes regrinding easy. Steam tempered finish retains cutting fluid and prevents chip to tool welding. Suitable for drilling many materials.



HSS	DORMER	4×D
118°	ST	
λ 20-35°	R	DC h8

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■33 H	■37 H	■38 H	■28 H	■25 F	◪22 D	◪19 E	◪15 E	◪13 D	◪11 E	◪10 D	◪8 C	◪21 D	◪17 D
M2.1	M2.2	M3.1	M3.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2
◪18 D	◪15 D	◪8 F	◪7 F	◪6 F	◪7 B	◪27 H	◪20 E	◪15 E	◪23 D	◪19 D	◪15 D	◪21 D	◪16 D
K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3	N2.1	N2.2
◪13 D	◪19 D	◪14 D	◪11 D	◪9 D	◪8 D	◪22 D	◪16 D	◪13 D	◪33 I	◪25 I	◪17 H	◪42 G	◪37 G
N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	N4.3	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2
◪27 G	◪56 G	◪33 H	◪17 F	◪30 I	◪28 G	◪14 E	◪17 E	◪9 C	◪5 A	◪5 D	◪4 A	◪4 D	◪3 A
S4.1	S4.2												
◪3 D	◪2 A												

Product	DC [inch]	DC [mm]	DC [inch]	LCF [inch]	OAL [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A17013.0	–	13.00	0.5118	–	–	83.0	156.0	13.00
A17033/64	33/64	13.10	0.5156	3.1/8	6″	–	–	13.10
A17017/32	17/32	13.49	0.5313	3.1/8	6″	–	–	13.49
A17013.5	–	13.50	0.5315	–	–	83.0	156.0	13.50
A17035/64	35/64	13.89	0.5469	3.1/8	6″	–	–	13.89
A17014.0	–	14.00	0.5512	–	–	83.0	156.0	14.00
A1709/16	9/16	14.29	0.5625	3.1/8	6″	–	–	14.29
A17014.5	–	14.50	0.5709	–	–	83.0	156.0	14.50
A17037/64	37/64	14.68	0.5781	3.1/8	6″	–	–	14.68
A17015.0	–	15.00	0.5906	–	–	83.0	156.0	15.00
A17019/32	19/32	15.08	0.5938	3.1/8	6″	–	–	15.08
A17039/64	39/64	15.48	0.6094	3.1/8	6″	–	–	15.48
A17015.5	–	15.50	0.6102	–	–	83.0	156.0	15.50
A1705/8	5/8	15.88	0.6250	3.1/8	6″	–	–	15.88
A17016.0	–	16.00	0.6299	–	–	84.0	157.0	16.00
A17041/64	41/64	16.27	0.6406	3.1/8	6″	–	–	16.27
A17016.5	–	16.50	0.6496	–	–	84.0	157.0	16.50
A17021/32	21/32	16.67	0.6563	3.1/8	6″	–	–	16.67
A17017.0	–	17.00	0.6693	–	–	84.0	157.0	17.00
A17043/64	43/64	17.07	0.6719	3.1/8	6″	–	–	17.07
A17011/16	11/16	17.46	0.6875	3.1/8	6″	–	–	17.46
A17017.5	–	17.50	0.6890	–	–	84.0	157.0	17.50
A17045/64	45/64	17.86	0.7031	3.1/8	6″	–	–	17.86
A17018.0	–	18.00	0.7087	–	–	84.0	157.0	18.00

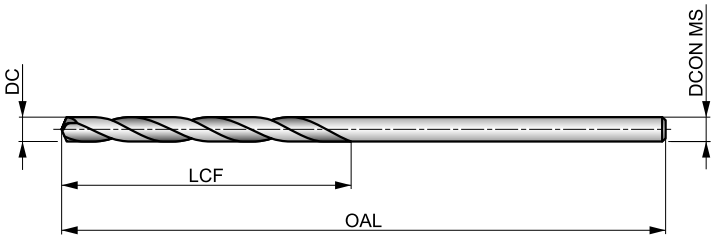
Product	DC	DC	DC	LCF	OAL	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[inch]	[inch]	[mm]	[mm]	[mm]
A17023/32	23/32	18.26	0.7188	3.1/8	6″	–	–	18.26
A17018.5	–	18.50	0.7283	–	–	84.0	157.0	18.50
A17047/64	47/64	18.65	0.7344	3.1/8	6″	–	–	18.65
A17019.0	–	19.00	0.7480	–	–	84.0	157.0	19.00
A1703/4	3/4	19.05	0.7500	3.1/8	6″	–	–	19.05
A17049/64	49/64	19.45	0.7656	3″	6″	–	–	19.45
A17019.5	–	19.50	0.7677	–	–	81.0	158.0	19.50
A17025/32	25/32	19.84	0.7813	3″	6″	–	–	19.84
A17020.0	–	20.00	0.7874	–	–	81.0	158.0	20.00
A17051/64	51/64	20.24	0.7969	3″	6″	–	–	20.24
A17013/16	13/16	20.64	0.8125	3″	6″	–	–	20.64
A17021.0	–	21.00	0.8268	–	–	82.0	158.0	21.00
A17053/64	53/64	21.03	0.8281	3″	6″	–	–	21.03
A17027/32	27/32	21.43	0.8437	3″	6″	–	–	21.43
A17055/64	55/64	21.83	0.8594	3″	6″	–	–	21.83
A17022.0	–	22.00	0.8661	–	–	82.0	158.0	22.00
A1707/8	7/8	22.22	0.8750	3″	6″	–	–	22.22
A17057/64	57/64	22.62	0.8906	3″	6″	–	–	22.62
A17023.0	–	23.00	0.9055	–	–	82.0	158.0	23.00
A17029/32	29/32	23.02	0.9063	3″	6″	–	–	23.02
A17059/64	59/64	23.42	0.9219	3″	6″	–	–	23.42
A17015/16	15/16	23.81	0.9375	3″	6″	–	–	23.81
A17024.0	–	24.00	0.9449	–	–	83.0	159.0	24.00
A17061/64	61/64	24.21	0.9531	3″	6″	–	–	24.21
A17031/32	31/32	24.61	0.9688	3″	6″	–	–	24.61
A17025.0	–	25.00	0.9843	–	–	83.0	159.0	25.00
A17063/64	63/64	25.00	0.9844	3″	6″	–	–	25.00
A1701	1″	25.40	1.0000	3″	6″	–	–	25.40
A1701.1/32	1.1/32	26.19	1.0313	3″	6″	–	–	26.19
A1701.1/16	1.1/16	26.99	1.0625	3″	6″	–	–	26.99
A1701.7/64	1.7/64	28.18	1.1094	3″	6″	–	–	28.18
A1701.1/8	1.1/8	28.58	1.1250	3″	6″	–	–	28.58
A1701.9/64	1.9/64	28.97	1.1406	3″	6″	–	–	28.97
A1701.5/32	1.5/32	29.37	1.1563	3″	6″	–	–	29.37
A1701.3/16	1.3/16	30.16	1.1875	3″	6″	–	–	30.16
A1701.7/32	1.7/32	30.96	1.2188	3″	6″	–	–	30.96
A1701.1/4	1.1/4	31.75	1.2500	3″	6″	–	–	31.75
A1701.5/16	1.5/16	33.34	1.3125	3″	6″	–	–	33.34
A1701.3/8	1.3/8	34.93	1.3750	3″	6″	–	–	34.93
A1701.7/16	1.7/16	36.51	1.4375	3″	6″	–	–	36.51
A1701.1/2	1.1/2	38.10	1.5000	3″	6″	–	–	38.10

A243

DORMER

HSS Long Series Aircraft Extension Drill, Bright Finish

NAS907 standard with a 135° split point which helps with self-centering, preventing the point of the drill from skidding over the surface of the material. Long overall length combined with a short flute length makes it ideal for drilling in difficult to reach areas and is suitable for many materials.



HSS	NAS 907	4×D
135°	Bright	
λ 20-35°	R	DC h8

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2
◪25 F	■22 E	◪19 F	◪15 F	■13 E	◪11 F	■10 E	■8 D	◪21 E	◪17 E	◪18 E	◪15 E	■9 G	■8 G
M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	K3.3	K4.1	K4.2	K4.3
■7 G	■9 C	◪30 I	◪22 F	◪17 F	◪25 E	◪20 E	■16 E	◪22 E	◪17 E	■13 E	◪20 E	◪15 E	■11 E
K4.4	K4.5	K5.1	K5.2	K5.3	N3.1	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2	S4.1
■10 E	■8 E	◪23 E	◪17 E	■13 E	◪27 H	■23 F	■12 D	■6 B	◪8 E	◪4 A	◪6 E	◪3 A	◪5 E
S4.2													
◪2 A													

6″ OAL.

Product	DC	DC	LCF	OAL	DCON MS
	[inch]	[inch]	[inch]	[inch]	[inch]
A2433/32X6	3/32	0.0938	1.1/4	6″	0.0938
A243N40X6	N40	0.0980	1.3/8	6″	0.0980
A2431/8X6	1/8	0.1250	1.5/8	6″	0.1250
A243N30X6	N30	0.1285	1.5/8	6″	0.1285
A2435/32X6	5/32	0.1563	2″	6″	0.1563
A243N21X6	N21	0.1590	2.1/8	6″	0.1590

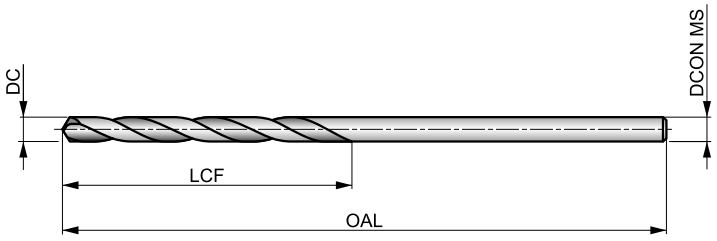
Product	DC	DC	LCF	OAL	DCON MS
	[inch]	[inch]	[inch]	[inch]	[inch]
A243N20X6	N20	0.1610	2.1/8	6″	0.1610
A2433/16X6	3/16	0.1875	2.5/16	6″	0.1875
A243N11X6	N11	0.1910	2.5/16	6″	0.1910
A243N10X6	N10	0.1935	2.7/16	6″	0.1935
A2431/4X6	1/4	0.2500	2.3/4	6″	0.2500

A244

DORMER

HSS Long Series Aircraft Extension Drill, Bright Finish

NAS907 standard with a 118° split point which helps with self-centering, stopping the point of the drill from skidding over the surface of the material. Long overall length combined with a short flute length makes it ideal for drilling in difficult to reach areas and is suitable for many materials.



HSS	NAS 907	4×D
118°	Bright	
λ 20-35°	R	DC h8

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2
◪25 F	■22 E	◪19 F	◪15 F	■13 E	◪11 F	■10 E	■8 D	◪21 E	◪17 E	◪18 E	◪15 E	■9 G	■8 G
M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	K3.3	K4.1	K4.2	K4.3
■7 G	■9 C	◪30 I	◪22 F	◪17 F	◪25 E	◪20 E	■16 E	◪22 E	◪17 E	■13 E	◪20 E	◪15 E	■11 E
K4.4	K4.5	K5.1	K5.2	K5.3	N3.1	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2	S4.1
■10 E	■8 E	◪23 E	◪17 E	■13 E	◪27 H	■23 F	■12 D	■6 B	◪8 E	◪4 A	◪6 E	◪3 A	◪5 E
S4.2													
◪2 A													

6" OAL.

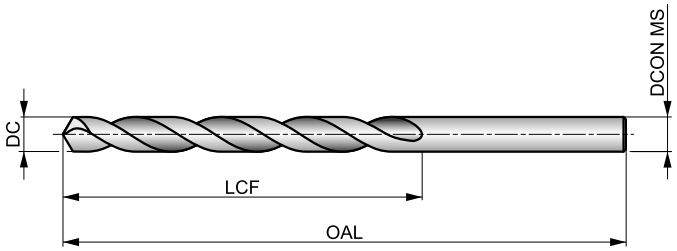
Product	DC [inch]	DC [inch]	LCF [inch]	OAL [inch]	DCON MS [inch]
A2441/8X6	1/8	0.1250	1.5/8	6"	0.1250
A2445/32X6	5/32	0.1563	2"	6"	0.1563
A2443/16X6	3/16	0.1875	2.5/16	6"	0.1875
A2441/4X6	1/4	0.2500	2.3/4	6"	0.2500

A110

DORMER

HSS Long Series Drill, Steam Tempered Finish

For drilling deeper holes. Conventional 118° point provides strength and means an easy point to regrind, making it very cost-effective. Suitable for drilling many materials. Steam tempered finish retains cutting fluid and prevents chip to tool welding. For hand-held and machine drilling.



HSS	DIN 340	6×D
118°	ST	
λ20-35°	R	DC h8

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■27 G	■30 G	■31 G	■23 G	■20 E	◪18 D	◪13 E	◪11 E	◪9 D	◪8 E	◪7 D	◪5 B	◪14 D	◪12 D
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
◪12 D	◪10 D	◪7 F	◪6 F	◪5 F	◪4 B	◪28 H	◪21 E	◪16 E	◪18 D	◪15 D	◪12 D	◪16 D	◪12 D
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪10 D	◪15 D	◪11 D	◪8 D	◪7 D	◪6 D	◪17 D	◪13 D	◪10 D	◪32 I	◪24 I	◪16 H	◪42 G	◪37 G
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**
◪27 G	◪54 G	◪32 H	◪16 E	◪35 I	◪26 G	◪12 E	◪17 E	◪9 C	◪4 A	◪5 D	◪4 A	◪4 D	◪3 A
S4.1	**S4.2**												
◪3 D	◪2 A												

DC <= 1mm; 1/16" Bright.

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A110.5	–	0.50	0.0197	12.0	32.0	0.50
A110.6	–	0.60	0.0236	15.0	35.0	0.60
A110.7	–	0.70	0.0276	21.0	42.0	0.70
A1101/32	1/32	0.79	0.0313	25.0	46.0	0.79
A110.8	–	0.80	0.0315	25.0	46.0	0.80
A110.9	–	0.90	0.0354	29.0	51.0	0.90
A1101.0	–	1.00	0.0394	33.0	56.0	1.00
A1101.1	–	1.10	0.0433	37.0	60.0	1.10
A1101.2	–	1.20	0.0472	41.0	65.0	1.20
A1101.3	–	1.30	0.0512	41.0	65.0	1.30
A1101.4	–	1.40	0.0551	45.0	70.0	1.40
A1101.5	–	1.50	0.0591	45.0	70.0	1.50
A1101/16	1/16	1.59	0.0625	50.0	76.0	1.59
A1101.6	–	1.60	0.0630	50.0	76.0	1.60
A1101.7	–	1.70	0.0669	50.0	76.0	1.70
A1101.75	–	1.75	0.0689	53.0	80.0	1.75
A1101.8	–	1.80	0.0709	53.0	80.0	1.80
A1101.9	–	1.90	0.0748	53.0	80.0	1.90
A1105/64	5/64	1.98	0.0781	56.0	85.0	1.98
A1102.0	–	2.00	0.0787	56.0	85.0	2.00
A1102.05	–	2.05	0.0807	56.0	85.0	2.05
A1102.1	–	2.10	0.0827	56.0	85.0	2.10
A1102.2	–	2.20	0.0866	59.0	90.0	2.20
A1102.25	–	2.25	0.0886	59.0	90.0	2.25

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A1102.3	–	2.30	0.0906	59.0	90.0	2.30
A1103/32	3/32	2.38	0.0938	62.0	95.0	2.38
A1102.4	–	2.40	0.0945	62.0	95.0	2.40
A1102.5	–	2.50	0.0984	62.0	95.0	2.50
A1102.6	–	2.60	0.1024	62.0	95.0	2.60
A1102.7	–	2.70	0.1063	66.0	100.0	2.70
A1107/64	7/64	2.78	0.1094	66.0	100.0	2.78
A1102.8	–	2.80	0.1102	66.0	100.0	2.80
A1102.9	–	2.90	0.1142	66.0	100.0	2.90
A1103.0	–	3.00	0.1181	66.0	100.0	3.00
A1103.1	–	3.10	0.1220	69.0	106.0	3.10
A1101/8	1/8	3.18	0.1250	69.0	106.0	3.18
A1103.2	–	3.20	0.1260	69.0	106.0	3.20
A1103.25	–	3.25	0.1280	69.0	106.0	3.25
A1103.3	–	3.30	0.1299	69.0	106.0	3.30
A1103.4	–	3.40	0.1339	73.0	112.0	3.40
A1103.5	–	3.50	0.1378	73.0	112.0	3.50
A1109/64	9/64	3.57	0.1406	73.0	112.0	3.57
A1103.6	–	3.60	0.1417	73.0	112.0	3.60
A1103.7	–	3.70	0.1457	73.0	112.0	3.70
A1103.75	–	3.75	0.1476	73.0	112.0	3.75
A1103.8	–	3.80	0.1496	78.0	119.0	3.80
A1103.9	–	3.90	0.1535	78.0	119.0	3.90
A1105/32	5/32	3.97	0.1563	78.0	119.0	3.97

Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A1104.0	–	4.00	0.1575	78.0	119.0	4.00
A1104.1	–	4.10	0.1614	78.0	119.0	4.10
A1104.2	–	4.20	0.1654	78.0	119.0	4.20
A1104.25	–	4.25	0.1673	78.0	119.0	4.25
A1104.3	–	4.30	0.1693	82.0	126.0	4.30
A11011/64	11/64	4.37	0.1719	82.0	126.0	4.37
A1104.4	–	4.40	0.1732	82.0	126.0	4.40
A1104.5	–	4.50	0.1772	82.0	126.0	4.50
A1104.6	–	4.60	0.1811	82.0	126.0	4.60
A1104.7	–	4.70	0.1850	82.0	126.0	4.70
A1104.75	–	4.75	0.1870	82.0	126.0	4.75
A1103/16	3/16	4.76	0.1875	87.0	132.0	4.76
A1104.8	–	4.80	0.1890	87.0	132.0	4.80
A1104.9	–	4.90	0.1929	87.0	132.0	4.90
A1105.0	–	5.00	0.1969	87.0	132.0	5.00
A1105.1	–	5.10	0.2008	87.0	132.0	5.10
A11013/64	13/64	5.16	0.2031	87.0	132.0	5.16
A1105.2	–	5.20	0.2047	87.0	132.0	5.20
A1105.25	–	5.25	0.2067	87.0	132.0	5.25
A1105.3	–	5.30	0.2087	87.0	132.0	5.30
A1105.4	–	5.40	0.2126	91.0	139.0	5.40
A1105.5	–	5.50	0.2165	91.0	139.0	5.50
A1107/32	7/32	5.56	0.2188	91.0	139.0	5.56
A1105.6	–	5.60	0.2205	91.0	139.0	5.60
A1105.7	–	5.70	0.2244	91.0	139.0	5.70
A1105.75	–	5.75	0.2264	91.0	139.0	5.75
A1105.8	–	5.80	0.2283	91.0	139.0	5.80
A1105.9	–	5.90	0.2323	91.0	139.0	5.90
A11015/64	15/64	5.95	0.2344	91.0	139.0	5.95
A1106.0	–	6.00	0.2362	91.0	139.0	6.00
A1106.1	–	6.10	0.2402	97.0	148.0	6.10
A1106.2	–	6.20	0.2441	97.0	148.0	6.20
A1106.25	–	6.25	0.2461	97.0	148.0	6.25
A1106.3	–	6.30	0.2480	97.0	148.0	6.30
A1101/4	1/4	6.35	0.2500	97.0	148.0	6.35
A1106.4	–	6.40	0.2520	97.0	148.0	6.40
A1106.5	–	6.50	0.2559	97.0	148.0	6.50
A1106.6	–	6.60	0.2598	97.0	148.0	6.60
A1106.7	–	6.70	0.2638	97.0	148.0	6.70
A11017/64	17/64	6.75	0.2656	102.0	156.0	6.75
A1106.75	–	6.75	0.2657	102.0	156.0	6.75
A1106.8	–	6.80	0.2677	102.0	156.0	6.80
A1106.9	–	6.90	0.2717	102.0	156.0	6.90
A1107.0	–	7.00	0.2756	102.0	156.0	7.00
A1107.1	–	7.10	0.2795	102.0	156.0	7.10
A1109/32	9/32	7.14	0.2813	102.0	156.0	7.14
A1107.2	–	7.20	0.2835	102.0	156.0	7.20
A1107.25	–	7.25	0.2854	102.0	156.0	7.25
A1107.3	–	7.30	0.2874	102.0	156.0	7.30
A1107.4	–	7.40	0.2913	102.0	156.0	7.40
A1107.5	–	7.50	0.2953	102.0	156.0	7.50
A1107.6	–	7.60	0.2992	109.0	165.0	7.60
A1107.7	–	7.70	0.3031	109.0	165.0	7.70
A1107.75	–	7.75	0.3051	109.0	165.0	7.75
A1107.8	–	7.80	0.3071	109.0	165.0	7.80
A1107.9	–	7.90	0.3110	109.0	165.0	7.90
A1105/16	5/16	7.94	0.3125	109.0	165.0	7.94
A1108.0	–	8.00	0.3150	109.0	165.0	8.00
A1108.1	–	8.10	0.3189	109.0	165.0	8.10
A1108.2	–	8.20	0.3228	109.0	165.0	8.20
A1108.25	–	8.25	0.3248	109.0	165.0	8.25
A1108.3	–	8.30	0.3268	109.0	165.0	8.30
A1108.4	–	8.40	0.3307	109.0	165.0	8.40
A1108.5	–	8.50	0.3346	109.0	165.0	8.50
A1108.6	–	8.60	0.3386	115.0	175.0	8.60

Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A1108.7	–	8.70	0.3425	115.0	175.0	8.70
A11011/32	11/32	8.73	0.3438	115.0	175.0	8.73
A1108.75	–	8.75	0.3445	115.0	175.0	8.75
A1108.8	–	8.80	0.3465	115.0	175.0	8.80
A1108.9	–	8.90	0.3504	115.0	175.0	8.90
A1109.0	–	9.00	0.3543	115.0	175.0	9.00
A1109.1	–	9.10	0.3583	115.0	175.0	9.10
A1109.2	–	9.20	0.3622	115.0	175.0	9.20
A1109.25	–	9.25	0.3642	115.0	175.0	9.25
A1109.3	–	9.30	0.3661	115.0	175.0	9.30
A1109.4	–	9.40	0.3701	115.0	175.0	9.40
A1109.5	–	9.50	0.3740	115.0	175.0	9.50
A1103/8	3/8	9.52	0.3750	121.0	184.0	9.52
A1109.6	–	9.60	0.3780	121.0	184.0	9.60
A1109.7	–	9.70	0.3819	121.0	184.0	9.70
A1109.75	–	9.75	0.3839	121.0	184.0	9.75
A1109.8	–	9.80	0.3858	121.0	184.0	9.80
A1109.9	–	9.90	0.3898	121.0	184.0	9.90
A11010.0	–	10.00	0.3937	121.0	184.0	10.00
A11010.1	–	10.10	0.3976	121.0	184.0	10.10
A11010.2	–	10.20	0.4016	121.0	184.0	10.20
A11010.25	–	10.25	0.4035	121.0	184.0	10.25
A11010.3	–	10.30	0.4055	121.0	184.0	10.30
A11013/32	13/32	10.32	0.4063	121.0	184.0	10.32
A11010.5	–	10.50	0.4134	121.0	184.0	10.50
A11010.75	–	10.75	0.4232	128.0	195.0	10.75
A11010.8	–	10.80	0.4252	128.0	195.0	10.80
A11011.0	–	11.00	0.4331	128.0	195.0	11.00
A1107/16	7/16	11.11	0.4375	128.0	195.0	11.11
A11011.25	–	11.25	0.4429	128.0	195.0	11.25
A11011.4	–	11.40	0.4488	128.0	195.0	11.40
A11011.5	–	11.50	0.4528	128.0	195.0	11.50
A11011.75	–	11.75	0.4626	128.0	195.0	11.75
A11012.0	–	12.00	0.4724	134.0	205.0	12.00
A11012.1	–	12.10	0.4764	134.0	205.0	12.10
A11012.25	–	12.25	0.4823	134.0	205.0	12.25
A11012.5	–	12.50	0.4921	134.0	205.0	12.50
A1101/2	1/2	12.70	0.5000	134.0	205.0	12.70
A11013.0	–	13.00	0.5118	134.0	205.0	13.00
A11017/32	17/32	13.49	0.5313	140.0	214.0	13.49
A11013.5	–	13.50	0.5315	140.0	214.0	13.50
A11014.0	–	14.00	0.5512	140.0	214.0	14.00
A1109/16	9/16	14.29	0.5625	144.0	220.0	14.29
A11014.5	–	14.50	0.5709	144.0	220.0	14.50
A11015.0	–	15.00	0.5906	144.0	220.0	15.00
A11015.5	–	15.50	0.6102	149.0	227.0	15.50
A1105/8	5/8	15.88	0.6250	149.0	227.0	15.88
A11016.0	–	16.00	0.6299	149.0	227.0	16.00
A11016.5	–	16.50	0.6496	154.0	235.0	16.50
A11017.0	–	17.00	0.6693	154.0	235.0	17.00
A11011/16	11/16	17.46	0.6875	158.0	241.0	17.46
A11017.5	–	17.50	0.6890	158.0	241.0	17.50
A11018.0	–	18.00	0.7087	158.0	241.0	18.00
A11018.5	–	18.50	0.7283	162.0	247.0	18.50
A11019.0	–	19.00	0.7480	162.0	247.0	19.00
A1103/4	3/4	19.05	0.7500	166.0	254.0	19.05
A11019.5	–	19.50	0.7677	166.0	254.0	19.50
A11020.0	–	20.00	0.7874	166.0	254.0	20.00
A11021.0	–	21.00	0.8268	171.0	261.0	21.00
A11022.0	–	22.00	0.8661	176.0	268.0	22.00
A1107/8	7/8	22.22	0.8750	176.0	268.0	22.22
A11015/16	15/16	23.81	0.9375	185.0	282.0	23.81
A1101	1″	25.40	1.0000	190.0	290.0	25.40

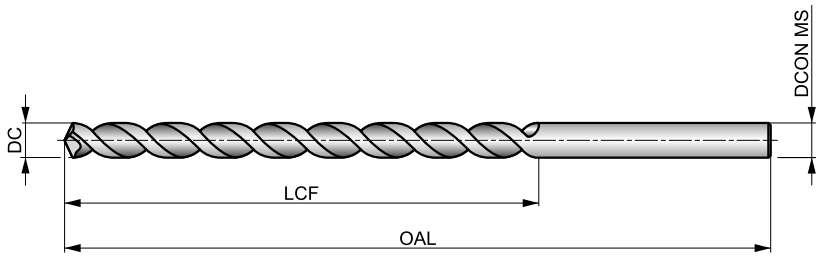
A940

DORMER

PFX HSS-E (5% Cobalt) Long Series Drill, Bright Finish

High performance drill, able to produce high quality and accurate holes at high speeds and feeds (H10 hole tolerance). Self-centering 130° point angle and special parabolic flute design help to drill extra deep holes in a single pass. Suitable for many materials.

PFX



HSS-E	DIN ANSI	10×D
130°	Bright	
λ>35°	R	DC h8

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■29 F	■33 F	■34 F	■25 F	■22 G	■19 C	■25 G	■20 G	■17 C	■15 G	■13 C	■10 C	■21 C	■17 C
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**
■18 C	■15 C	■8 E	■7 E	■6 E	■9 B	◪20 I	◪16 I	◪13 H	◪17 I	◪13 I	◪11 H	◪16 I	◪12 I
K4.3	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**
◪9 H	◪8 H	◪6 H	◪18 I	◪14 I	◪11 H	◪53 H	◪40 H	■27 N	◪62 N	◪55 N	◪40 N	◪119 G	◪70 F
N3.3	**N4.1**	**N4.2**	**S1.1**	**S1.2**	**S1.3**								
◪35 F	◪55 H	◪40 F	■18 E	■13 C	■6 C								

DC >= 9.6mm less than 10xD.

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A9401.0	–	1.00	0.0394	33.0	56.0	1.00
A9401.1	–	1.10	0.0433	37.0	60.0	1.10
A9403/64	3/64	1.19	0.0469	29.0	57.0	1.19
A9401.2	–	1.20	0.0472	41.0	65.0	1.20
A9401.3	–	1.30	0.0512	41.0	65.0	1.30
A9401.4	–	1.40	0.0551	45.0	70.0	1.40
A9401.5	–	1.50	0.0591	45.0	70.0	1.50
A9401/16	1/16	1.59	0.0625	44.0	76.0	1.59
A9401.6	–	1.60	0.0630	50.0	76.0	1.60
A9401.7	–	1.70	0.0669	50.0	76.0	1.70
A9401.8	–	1.80	0.0709	53.0	80.0	1.80
A9401.9	–	1.90	0.0748	53.0	80.0	1.90
A9405/64	5/64	1.98	0.0781	51.0	95.0	1.98
A9402.0	–	2.00	0.0787	56.0	85.0	2.00
A9402.1	–	2.10	0.0827	56.0	85.0	2.10
A9402.2	–	2.20	0.0866	59.0	90.0	2.20
A9402.3	–	2.30	0.0906	59.0	90.0	2.30
A9403/32	3/32	2.38	0.0938	57.0	108.0	2.38
A9402.4	–	2.40	0.0945	62.0	95.0	2.40
A9402.5	–	2.50	0.0984	62.0	95.0	2.50
A9402.6	–	2.60	0.1024	62.0	95.0	2.60
A9402.7	–	2.70	0.1063	66.0	100.0	2.70
A9407/64	7/64	2.78	0.1094	64.0	117.0	2.78
A9402.8	–	2.80	0.1102	66.0	100.0	2.80
A9402.9	–	2.90	0.1142	66.0	100.0	2.90

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A9403.0	–	3.00	0.1181	66.0	100.0	3.00
A9403.1	–	3.10	0.1220	69.0	106.0	3.10
A9401/8	1/8	3.18	0.1250	70.0	130.0	3.18
A9403.2	–	3.20	0.1260	69.0	106.0	3.20
A9403.3	–	3.30	0.1299	69.0	106.0	3.30
A9403.4	–	3.40	0.1339	73.0	112.0	3.40
A9403.5	–	3.50	0.1378	73.0	112.0	3.50
A9409/64	9/64	3.57	0.1406	76.0	137.0	3.57
A9403.6	–	3.60	0.1417	73.0	112.0	3.60
A9403.7	–	3.70	0.1457	73.0	112.0	3.70
A9403.8	–	3.80	0.1496	78.0	119.0	3.80
A9403.9	–	3.90	0.1535	78.0	119.0	3.90
A9405/32	5/32	3.97	0.1563	76.0	137.0	3.97
A9404.0	–	4.00	0.1575	78.0	119.0	4.00
A9404.1	–	4.10	0.1614	78.0	119.0	4.10
A9404.2	–	4.20	0.1654	78.0	119.0	4.20
A9404.3	–	4.30	0.1693	82.0	126.0	4.30
A94011/64	11/64	4.37	0.1719	86.0	146.0	4.37
A9404.4	–	4.40	0.1732	82.0	126.0	4.40
A9404.5	–	4.50	0.1772	82.0	126.0	4.50
A9404.6	–	4.60	0.1811	82.0	126.0	4.60
A9404.7	–	4.70	0.1850	82.0	126.0	4.70
A9403/16	3/16	4.76	0.1875	86.0	146.0	4.76
A9404.8	–	4.80	0.1890	87.0	132.0	4.80
A9404.9	–	4.90	0.1929	87.0	132.0	4.90

Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A9405.0	–	5.00	0.1969	87.0	132.0	5.00
A9405.1	–	5.10	0.2008	87.0	132.0	5.10
A94013/64	13/64	5.16	0.2031	92.0	152.0	5.16
A9405.2	–	5.20	0.2047	87.0	132.0	5.20
A9405.3	–	5.30	0.2087	87.0	132.0	5.30
A9405.4	–	5.40	0.2126	91.0	139.0	5.40
A9405.5	–	5.50	0.2165	91.0	139.0	5.50
A9407/32	7/32	5.56	0.2188	92.0	152.0	5.56
A9405.6	–	5.60	0.2205	91.0	139.0	5.60
A9405.7	–	5.70	0.2244	91.0	139.0	5.70
A9405.8	–	5.80	0.2283	91.0	139.0	5.80
A9405.9	–	5.90	0.2323	91.0	139.0	5.90
A94015/64	15/64	5.95	0.2344	95.0	156.0	5.95
A9406.0	–	6.00	0.2362	91.0	139.0	6.00
A9406.1	–	6.10	0.2402	97.0	148.0	6.10
A9406.2	–	6.20	0.2441	97.0	148.0	6.20
A9406.3	–	6.30	0.2480	97.0	148.0	6.30
A9401/4	1/4	6.35	0.2500	95.0	156.0	6.35
A9406.4	–	6.40	0.2520	97.0	148.0	6.40
A9406.5	–	6.50	0.2559	97.0	148.0	6.50
A9406.6	–	6.60	0.2598	97.0	148.0	6.60
A9406.7	–	6.70	0.2638	97.0	148.0	6.70
A94017/64	17/64	6.75	0.2656	98.0	159.0	6.75
A9406.8	–	6.80	0.2677	102.0	156.0	6.80
A9406.9	–	6.90	0.2717	102.0	156.0	6.90
A9407.0	–	7.00	0.2756	102.0	156.0	7.00
A9407.1	–	7.10	0.2795	102.0	156.0	7.10
A9409/32	9/32	7.14	0.2813	98.0	159.0	7.14
A9407.2	–	7.20	0.2835	102.0	156.0	7.20
A9407.3	–	7.30	0.2874	102.0	156.0	7.30
A9407.4	–	7.40	0.2913	102.0	156.0	7.40
A9407.5	–	7.50	0.2953	102.0	156.0	7.50
A94019/64	19/64	7.54	0.2969	102.0	162.0	7.54
A9407.6	–	7.60	0.2992	109.0	165.0	7.60
A9407.7	–	7.70	0.3031	109.0	165.0	7.70
A9407.8	–	7.80	0.3071	109.0	165.0	7.80
A9407.9	–	7.90	0.3110	109.0	165.0	7.90
A9405/16	5/16	7.94	0.3125	102.0	162.0	7.94
A9408.0	–	8.00	0.3150	109.0	165.0	8.00
A9408.1	–	8.10	0.3189	109.0	165.0	8.10
A9408.2	–	8.20	0.3228	109.0	165.0	8.20
A9408.3	–	8.30	0.3268	109.0	165.0	8.30
A94021/64	21/64	8.33	0.3281	105.0	165.0	8.33
A9408.4	–	8.40	0.3307	109.0	165.0	8.40
A9408.5	–	8.50	0.3346	109.0	165.0	8.50
A9408.6	–	8.60	0.3386	115.0	175.0	8.60
A9408.7	–	8.70	0.3425	115.0	175.0	8.70
A94011/32	11/32	8.73	0.3438	105.0	165.0	8.73
A9408.8	–	8.80	0.3465	115.0	175.0	8.80
A9408.9	–	8.90	0.3504	115.0	175.0	8.90
A9409.0	–	9.00	0.3543	115.0	175.0	9.00
A9409.1	–	9.10	0.3583	115.0	175.0	9.10
A94023/64	23/64	9.13	0.3594	108.0	171.0	9.13
A9409.2	–	9.20	0.3622	115.0	175.0	9.20
A9409.3	–	9.30	0.3661	115.0	175.0	9.30
A9409.4	–	9.40	0.3701	115.0	175.0	9.40

Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A9409.5	–	9.50	0.3740	115.0	175.0	9.50
A9403/8	3/8	9.52	0.3750	108.0	171.0	9.52
A9409.6	–	9.60	0.3780	121.0	184.0	9.60
A9409.7	–	9.70	0.3819	121.0	184.0	9.70
A9409.8	–	9.80	0.3858	121.0	184.0	9.80
A9409.9	–	9.90	0.3898	121.0	184.0	9.90
A94025/64	25/64	9.92	0.3906	111.0	178.0	9.92
A94010.0	–	10.00	0.3937	121.0	184.0	10.00
A94010.2	–	10.20	0.4016	121.0	184.0	10.20
A94010.3	–	10.30	0.4055	121.0	184.0	10.30
A94013/32	13/32	10.32	0.4063	111.0	178.0	10.32
A94010.5	–	10.50	0.4134	121.0	184.0	10.50
A94027/64	27/64	10.72	0.4219	117.0	184.0	10.72
A94011.0	–	11.00	0.4331	128.0	195.0	11.00
A9407/16	7/16	11.11	0.4375	117.0	184.0	11.11
A94011.2	–	11.20	0.4409	128.0	195.0	11.20
A94011.5	–	11.50	0.4528	128.0	195.0	11.50
A94029/64	29/64	11.51	0.4531	121.0	190.0	11.51
A94011.8	–	11.80	0.4646	128.0	195.0	11.80
A94015/32	15/32	11.91	0.4688	121.0	190.0	11.91
A94012.0	–	12.00	0.4724	134.0	205.0	12.00
A94012.2	–	12.20	0.4803	134.0	205.0	12.20
A94031/64	31/64	12.30	0.4844	121.0	197.0	12.30
A94012.5	–	12.50	0.4921	134.0	205.0	12.50
A9401/2	1/2	12.70	0.5000	121.0	197.0	12.70
A94013.0	–	13.00	0.5118	134.0	205.0	13.00
A94033/64	33/64	13.10	0.5156	121.0	203.0	13.10
A94017/32	17/32	13.49	0.5313	121.0	203.0	13.49
A94013.5	–	13.50	0.5315	140.0	214.0	13.50
A94035/64	35/64	13.89	0.5469	124.0	210.0	13.89
A94014.0	–	14.00	0.5512	140.0	214.0	14.00
A9409/16	9/16	14.29	0.5625	124.0	210.0	14.29
A94014.5	–	14.50	0.5709	144.0	220.0	14.50
A94037/64	37/64	14.68	0.5781	124.0	222.0	14.68
A94015.0	–	15.00	0.5906	144.0	220.0	15.00
A94019/32	19/32	15.08	0.5938	124.0	222.0	15.08
A94039/64	39/64	15.48	0.6094	124.0	222.0	15.48
A94015.5	–	15.50	0.6102	149.0	227.0	15.50
A9405/8	5/8	15.88	0.6250	124.0	222.0	15.88
A94016.0	–	16.00	0.6299	149.0	227.0	16.00
A94041/64	41/64	16.27	0.6406	130.0	229.0	16.27
A94016.5	–	16.50	0.6496	154.0	235.0	16.50
A94021/32	21/32	16.67	0.6563	130.0	229.0	16.67
A94017.0	–	17.00	0.6693	154.0	235.0	17.00
A94043/64	43/64	17.07	0.6719	137.0	235.0	17.07
A94011/16	11/16	17.46	0.6875	137.0	235.0	17.46
A94017.5	–	17.50	0.6890	158.0	241.0	17.50
A94045/64	45/64	17.86	0.7031	143.0	241.0	17.86
A94018.0	–	18.00	0.7087	158.0	241.0	18.00
A94023/32	23/32	18.26	0.7188	143.0	241.0	18.26
A94047/64	47/64	18.65	0.7344	149.0	248.0	18.65
A94019.0	–	19.00	0.7480	162.0	247.0	19.00
A9403/4	3/4	19.05	0.7500	149.0	248.0	19.05
A94049/64	49/64	19.45	0.7656	152.0	251.0	19.45
A94025/32	25/32	19.84	0.7813	152.0	251.0	19.84
A94020.0	–	20.00	0.7874	166.0	254.0	20.00

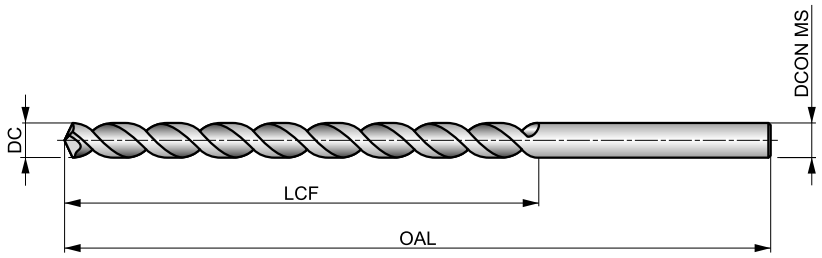
A941

DORMER

PFX HSS-E (5% Cobalt) Long Series Drill, Alcrona Top Coated

High performance drill, able to produce high quality and accurate holes at high speeds and feeds (H10 hole tolerance). Self-centering 130° point angle and special parabolic flute design. Suitable for many materials. Alcrona-TOP coating improves performance and extends the tool life.

PFX



HSS-E	DIN ANSI	10×D
130°	Alcrona Top	
λ>35°	R	DC h8

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■48 G	■53 G	■55 G	■41 G	■36 G	■32 D	■34 G	■27 G	■23 D	■20 G	■17 D	■14 D	■23 C	■20 C
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
■21 C	■17 C	■10 E	■9 E	■8 E	■11 B	■36 I	■27 I	■20 I	■37 I	■30 I	■24 H	■33 I	■25 I
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.1**	**S1.2**	**S1.3**		
■20 H	■30 I	■23 I	■17 H	■14 H	■12 H	■34 I	■26 I	■20 H	◪25 F	◪18 D	◪8 D		

DC >= 9.6mm less than 10xD.

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A9411.0	–	1.00	0.0394	33.0	56.0	1.00
A9413/64	3/64	1.19	0.0469	29.0	57.0	1.19
A9411.5	–	1.50	0.0591	45.0	70.0	1.50
A9411/16	1/16	1.59	0.0625	44.0	76.0	1.59
A9415/64	5/64	1.98	0.0781	51.0	95.0	1.98
A9412.0	–	2.00	0.0787	56.0	85.0	2.00
A9413/32	3/32	2.38	0.0938	57.0	108.0	2.38
A9412.5	–	2.50	0.0984	62.0	95.0	2.50
A9417/64	7/64	2.78	0.1094	64.0	117.0	2.78
A9413.0	–	3.00	0.1181	66.0	100.0	3.00
A9413.1	–	3.10	0.1220	69.0	106.0	3.10
A9411/8	1/8	3.18	0.1250	70.0	130.0	3.18
A9413.2	–	3.20	0.1260	69.0	106.0	3.20
A9413.3	–	3.30	0.1299	69.0	106.0	3.30
A9413.4	–	3.40	0.1339	73.0	112.0	3.40
A9413.5	–	3.50	0.1378	73.0	112.0	3.50
A9419/64	9/64	3.57	0.1406	76.0	137.0	3.57
A9413.6	–	3.60	0.1417	73.0	112.0	3.60
A9413.7	–	3.70	0.1457	73.0	112.0	3.70
A9413.8	–	3.80	0.1496	78.0	119.0	3.80
A9413.9	–	3.90	0.1535	78.0	119.0	3.90
A9415/32	5/32	3.97	0.1563	76.0	137.0	3.97
A9414.0	–	4.00	0.1575	78.0	119.0	4.00
A9414.1	–	4.10	0.1614	78.0	119.0	4.10
A9414.2	–	4.20	0.1654	78.0	119.0	4.20
A9414.3	–	4.30	0.1693	82.0	126.0	4.30
A94111/64	11/64	4.37	0.1719	86.0	146.0	4.37

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A9414.4	–	4.40	0.1732	82.0	126.0	4.40
A9414.5	–	4.50	0.1772	82.0	126.0	4.50
A9414.6	–	4.60	0.1811	82.0	126.0	4.60
A9414.7	–	4.70	0.1850	82.0	126.0	4.70
A9413/16	3/16	4.76	0.1875	86.0	146.0	4.76
A9414.8	–	4.80	0.1890	87.0	132.0	4.80
A9414.9	–	4.90	0.1929	87.0	132.0	4.90
A9415.0	–	5.00	0.1969	87.0	132.0	5.00
A9415.1	–	5.10	0.2008	87.0	132.0	5.10
A94113/64	13/64	5.16	0.2031	92.0	152.0	5.16
A9415.2	–	5.20	0.2047	87.0	132.0	5.20
A9415.3	–	5.30	0.2087	87.0	132.0	5.30
A9415.4	–	5.40	0.2126	91.0	139.0	5.40
A9415.5	–	5.50	0.2165	91.0	139.0	5.50
A9417/32	7/32	5.56	0.2188	92.0	152.0	5.56
A9415.6	–	5.60	0.2205	91.0	139.0	5.60
A9415.7	–	5.70	0.2244	91.0	139.0	5.70
A9415.8	–	5.80	0.2283	91.0	139.0	5.80
A9415.9	–	5.90	0.2323	91.0	139.0	5.90
A94115/64	15/64	5.95	0.2344	95.0	156.0	5.95
A9416.0	–	6.00	0.2362	91.0	139.0	6.00
A9416.1	–	6.10	0.2402	97.0	148.0	6.10
A9416.2	–	6.20	0.2441	97.0	148.0	6.20
A9416.3	–	6.30	0.2480	97.0	148.0	6.30
A9411/4	1/4	6.35	0.2500	95.0	156.0	6.35
A9416.4	–	6.40	0.2520	97.0	148.0	6.40
A9416.5	–	6.50	0.2559	97.0	148.0	6.50

Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A9416.6	–	6.60	0.2598	97.0	148.0	6.60
A9416.7	–	6.70	0.2638	97.0	148.0	6.70
A94117/64	17/64	6.75	0.2656	98.0	159.0	6.75
A9416.8	–	6.80	0.2677	102.0	156.0	6.80
A9416.9	–	6.90	0.2717	102.0	156.0	6.90
A9417.0	–	7.00	0.2756	102.0	156.0	7.00
A9417.1	–	7.10	0.2795	102.0	156.0	7.10
A9419/32	9/32	7.14	0.2813	98.0	159.0	7.14
A9417.2	–	7.20	0.2835	102.0	156.0	7.20
A9417.3	–	7.30	0.2874	102.0	156.0	7.30
A9417.4	–	7.40	0.2913	102.0	156.0	7.40
A9417.5	–	7.50	0.2953	102.0	156.0	7.50
A94119/64	19/64	7.54	0.2969	102.0	162.0	7.54
A9417.6	–	7.60	0.2992	109.0	165.0	7.60
A9417.7	–	7.70	0.3031	109.0	165.0	7.70
A9417.8	–	7.80	0.3071	109.0	165.0	7.80
A9417.9	–	7.90	0.3110	109.0	165.0	7.90
A9415/16	5/16	7.94	0.3125	102.0	162.0	7.94
A9418.0	–	8.00	0.3150	109.0	165.0	8.00
A9418.1	–	8.10	0.3189	109.0	165.0	8.10
A9418.2	–	8.20	0.3228	109.0	165.0	8.20
A9418.3	–	8.30	0.3268	109.0	165.0	8.30
A94121/64	21/64	8.33	0.3281	105.0	165.0	8.33
A9418.4	–	8.40	0.3307	109.0	165.0	8.40
A9418.5	–	8.50	0.3346	109.0	165.0	8.50
A9418.6	–	8.60	0.3386	115.0	175.0	8.60
A9418.7	–	8.70	0.3425	115.0	175.0	8.70
A94111/32	11/32	8.73	0.3438	105.0	165.0	8.73
A9418.8	–	8.80	0.3465	115.0	175.0	8.80
A9418.9	–	8.90	0.3504	115.0	175.0	8.90
A9419.0	–	9.00	0.3543	115.0	175.0	9.00
A9419.1	–	9.10	0.3583	115.0	175.0	9.10
A94123/64	23/64	9.13	0.3594	108.0	171.0	9.13
A9419.2	–	9.20	0.3622	115.0	175.0	9.20
A9419.3	–	9.30	0.3661	115.0	175.0	9.30
A9419.4	–	9.40	0.3701	115.0	175.0	9.40
A9419.5	–	9.50	0.3740	115.0	175.0	9.50
A9413/8	3/8	9.52	0.3750	108.0	171.0	9.52

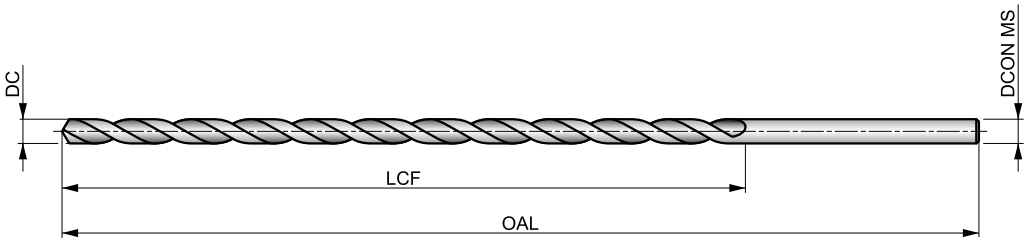
Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A9419.6	–	9.60	0.3780	121.0	184.0	9.60
A9419.7	–	9.70	0.3819	121.0	184.0	9.70
A9419.8	–	9.80	0.3858	121.0	184.0	9.80
A9419.9	–	9.90	0.3898	121.0	184.0	9.90
A94125/64	25/64	9.92	0.3906	111.0	178.0	9.92
A94110.0	–	10.00	0.3937	121.0	184.0	10.00
A94110.2	–	10.20	0.4016	121.0	184.0	10.20
A94110.3	–	10.30	0.4055	121.0	184.0	10.30
A94113/32	13/32	10.32	0.4063	111.0	178.0	10.32
A94110.5	–	10.50	0.4134	121.0	184.0	10.50
A94127/64	27/64	10.72	0.4219	117.0	184.0	10.72
A94111.0	–	11.00	0.4331	128.0	195.0	11.00
A9417/16	7/16	11.11	0.4375	117.0	184.0	11.11
A94111.2	–	11.20	0.4409	128.0	195.0	11.20
A94111.5	–	11.50	0.4528	128.0	195.0	11.50
A94129/64	29/64	11.51	0.4531	121.0	190.0	11.51
A94111.8	–	11.80	0.4646	128.0	195.0	11.80
A94115/32	15/32	11.91	0.4688	121.0	190.0	11.91
A94112.0	–	12.00	0.4724	134.0	205.0	12.00
A94112.2	–	12.20	0.4803	134.0	205.0	12.20
A94131/64	31/64	12.30	0.4844	121.0	197.0	12.30
A94112.5	–	12.50	0.4921	134.0	205.0	12.50
A9411/2	1/2	12.70	0.5000	121.0	197.0	12.70
A94113.0	–	13.00	0.5118	134.0	205.0	13.00
A94133/64	33/64	13.10	0.5156	121.0	203.0	13.10
A94113.5	–	13.50	0.5315	140.0	214.0	13.50
A94135/64	35/64	13.89	0.5469	124.0	210.0	13.89
A94114.0	–	14.00	0.5512	140.0	214.0	14.00
A9419/16	9/16	14.29	0.5625	124.0	210.0	14.29
A94114.5	–	14.50	0.5709	144.0	220.0	14.50
A94137/64	37/64	14.68	0.5781	124.0	222.0	14.68
A94115.0	–	15.00	0.5906	144.0	220.0	15.00
A94119/32	19/32	15.08	0.5938	124.0	222.0	15.08
A94139/64	39/64	15.48	0.6094	124.0	222.0	15.48
A94115.5	–	15.50	0.6102	149.0	227.0	15.50
A9415/8	5/8	15.88	0.6250	124.0	222.0	15.88
A94116.0	–	16.00	0.6299	149.0	227.0	16.00

A125

DORMER

HSS Extra Long Series Drill, Steam Tempered Finish

With Steam tempered finish and recommended for very deep or difficult to reach holes. Conventional 118° point, providing strength and saving money on easy regrinds. Suitable for many materials. Steam tempered finish retains cutting fluid and prevents chip to tool welding. Less suitable for hand-held drilling.



HSS	BS 328	10×D
118°	ST	
λ20-35°	R	DC h8

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■21 E	■24 E	■25 E	■18 E	◪16 C	◪14 A	◪9 C	◪7 C	◪6 A	◪5 C	◪4 A	◪4 A	◪12 C	◪10 C
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
◪11 C	◪9 C	◪5 E	◪4 E	◪4 E	◪8 A	◪22 G	◪16 D	◪12 D	◪16 C	◪13 C	◪10 C	◪14 C	◪11 C
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪9 C	◪13 C	◪10 C	◪7 C	◪6 C	◪5 C	◪15 C	◪11 C	◪9 C	◪24 H	◪18 H	◪12 G	◪34 F	◪30 F
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**
◪22 F	◪56 F	◪33 G	◪17 D	◪30 H	◪26 F	◪10 D	◪11 D	◪9 B	◪5 A	◪5 C	◪4 A	◪4 C	◪3 A
S4.1	**S4.2**												
◪3 C	◪2 A												

DC <= 2.2mm; 5/64" Bright.

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A1251.4X160	–	1.40	0.0551	100.0	160.0	1.40
A1251.5X125	–	1.50	0.0591	80.0	125.0	1.50
A1251.5X160	–	1.50	0.0591	100.0	160.0	1.50
A1251/16X125	1/16	1.59	0.0625	80.0	125.0	1.59
A1251/16X160	1/16	1.59	0.0625	100.0	160.0	1.59
A1251.8X160	–	1.80	0.0709	100.0	160.0	1.80
A1255/64X125	5/64	1.98	0.0781	80.0	125.0	1.98
A1255/64X160	5/64	1.98	0.0781	100.0	160.0	1.98
A1252.0X125	–	2.00	0.0787	80.0	125.0	2.00
A1252.0X160	–	2.00	0.0787	100.0	160.0	2.00
A1252.2X160	–	2.20	0.0866	100.0	160.0	2.20
A1253/32X125	3/32	2.38	0.0938	80.0	125.0	2.38
A1253/32X160	3/32	2.38	0.0938	100.0	160.0	2.38
A1252.5X125	–	2.50	0.0984	80.0	125.0	2.50
A1252.5X160	–	2.50	0.0984	100.0	160.0	2.50
A1257/64X125	7/64	2.78	0.1094	80.0	125.0	2.78
A1257/64X160	7/64	2.78	0.1094	100.0	160.0	2.78
A1253.0X160	–	3.00	0.1181	100.0	160.0	3.00
A1253.0X200	–	3.00	0.1181	150.0	200.0	3.00
A1253.0X250	–	3.00	0.1181	200.0	250.0	3.00
A1251/8X160	1/8	3.18	0.1252	100.0	160.0	3.18
A1251/8X200	1/8	3.18	0.1252	150.0	200.0	3.18
A1251/8X250	1/8	3.18	0.1252	200.0	250.0	3.18
A1251/8X315	1/8	3.18	0.1252	250.0	310.0	3.18
A1253.3X160	–	3.30	0.1299	100.0	160.0	3.30
A1253.5X160	–	3.50	0.1378	100.0	160.0	3.50

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A1253.5X200	–	3.50	0.1378	150.0	200.0	3.50
A1253.5X250	–	3.50	0.1378	200.0	250.0	3.50
A1259/64X160	9/64	3.57	0.1406	100.0	160.0	3.57
A1259/64X200	9/64	3.57	0.1406	150.0	200.0	3.57
A1259/64X315	9/64	3.57	0.1406	250.0	310.0	3.57
A1255/32X160	5/32	3.97	0.1563	100.0	160.0	3.97
A1255/32X200	5/32	3.97	0.1563	150.0	200.0	3.97
A1255/32X250	5/32	3.97	0.1563	200.0	250.0	3.97
A1255/32X315	5/32	3.97	0.1563	250.0	310.0	3.97
A1254.0X160	–	4.00	0.1575	100.0	160.0	4.00
A1254.0X200	–	4.00	0.1575	150.0	200.0	4.00
A1254.0X250	–	4.00	0.1575	200.0	250.0	4.00
A1254.0X315	–	4.00	0.1575	250.0	310.0	4.00
A12511/64X160	11/64	4.37	0.1719	100.0	160.0	4.37
A12511/64X200	11/64	4.37	0.1719	150.0	200.0	4.37
A12511/64X315	11/64	4.37	0.1719	250.0	310.0	4.37
A1254.5X160	–	4.50	0.1772	100.0	160.0	4.50
A1254.5X200	–	4.50	0.1772	150.0	200.0	4.50
A1254.5X250	–	4.50	0.1772	200.0	250.0	4.50
A1254.5X315	–	4.50	0.1772	250.0	310.0	4.50
A1253/16X160	3/16	4.76	0.1875	100.0	160.0	4.76
A1253/16X200	3/16	4.76	0.1875	150.0	200.0	4.76
A1253/16X250	3/16	4.76	0.1875	200.0	250.0	4.76
A1253/16X315	3/16	4.76	0.1875	250.0	310.0	4.76
A1253/16X400	3/16	4.76	0.1875	300.0	400.0	4.76
A1255.0X160	–	5.00	0.1969	100.0	160.0	5.00

Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A1255.0X200	–	5.00	0.1969	150.0	200.0	5.00
A1255.0X250	–	5.00	0.1969	200.0	250.0	5.00
A1255.0X315	–	5.00	0.1969	250.0	310.0	5.00
A1255.0X400	–	5.00	0.1969	300.0	400.0	5.00
A12513/64X200	13/64	5.16	0.2031	150.0	200.0	5.16
A12513/64X250	13/64	5.16	0.2031	200.0	250.0	5.16
A12513/64X315	13/64	5.16	0.2031	250.0	310.0	5.16
A1255.5X200	–	5.50	0.2165	150.0	200.0	5.50
A1255.5X250	–	5.50	0.2165	200.0	250.0	5.50
A1255.5X315	–	5.50	0.2165	250.0	310.0	5.50
A1257/32X200	7/32	5.56	0.2188	150.0	200.0	5.56
A1257/32X250	7/32	5.56	0.2188	200.0	250.0	5.56
A1257/32X315	7/32	5.56	0.2188	250.0	310.0	5.56
A12515/64X200	15/64	5.95	0.2344	150.0	200.0	5.95
A12515/64X250	15/64	5.95	0.2344	200.0	250.0	5.95
A12515/64X315	15/64	5.95	0.2344	250.0	310.0	5.95
A1256.0X200	–	6.00	0.2362	150.0	200.0	6.00
A1256.0X250	–	6.00	0.2362	200.0	250.0	6.00
A1256.0X315	–	6.00	0.2362	250.0	310.0	6.00
A1256.0X400	–	6.00	0.2362	300.0	400.0	6.00
A1251/4X200	1/4	6.35	0.2500	150.0	200.0	6.35
A1251/4X250	1/4	6.35	0.2500	200.0	250.0	6.35
A1251/4X315	1/4	6.35	0.2500	250.0	310.0	6.35
A1251/4X400	1/4	6.35	0.2500	300.0	400.0	6.35
A1251/4X500	1/4	6.35	0.2500	400.0	460.0	6.35
A1256.5X200	–	6.50	0.2559	150.0	200.0	6.50
A1256.5X250	–	6.50	0.2559	200.0	250.0	6.50
A1256.5X315	–	6.50	0.2559	250.0	310.0	6.50
A12517/64X200	17/64	6.75	0.2656	150.0	200.0	6.75
A12517/64X250	17/64	6.75	0.2656	200.0	250.0	6.75
A12517/64X500	17/64	6.75	0.2656	400.0	460.0	6.75
A1257.0X200	–	7.00	0.2756	150.0	200.0	7.00
A1257.0X250	–	7.00	0.2756	200.0	250.0	7.00
A1257.0X315	–	7.00	0.2756	250.0	310.0	7.00
A1259/32X200	9/32	7.14	0.2813	150.0	200.0	7.14
A1259/32X250	9/32	7.14	0.2813	200.0	250.0	7.14
A1259/32X315	9/32	7.14	0.2813	250.0	310.0	7.14
A1259/32X500	9/32	7.14	0.2813	400.0	460.0	7.14
A1257.5X200	–	7.50	0.2953	150.0	200.0	7.50
A1257.5X250	–	7.50	0.2953	200.0	250.0	7.50
A1257.5X315	–	7.50	0.2953	250.0	310.0	7.50
A12519/64X315	19/64	7.54	0.2969	250.0	310.0	7.54
A12519/64X500	19/64	7.54	0.2969	400.0	460.0	7.54
A1255/16X200	5/16	7.94	0.3125	150.0	200.0	7.94
A1255/16X250	5/16	7.94	0.3125	200.0	250.0	7.94
A1255/16X315	5/16	7.94	0.3125	250.0	310.0	7.94
A1255/16X400	5/16	7.94	0.3125	300.0	400.0	7.94
A1255/16X500	5/16	7.94	0.3125	400.0	460.0	7.94
A1258.0X250	–	8.00	0.3150	200.0	250.0	8.00
A1258.0X315	–	8.00	0.3150	250.0	310.0	8.00
A1258.0X400	–	8.00	0.3150	300.0	400.0	8.00
A12521/64X315	21/64	8.33	0.3281	250.0	310.0	8.33
A12521/64X500	21/64	8.33	0.3281	400.0	460.0	8.33
A1258.5X250	–	8.50	0.3346	200.0	250.0	8.50
A1258.5X315	–	8.50	0.3346	250.0	310.0	8.50
A12511/32X250	11/32	8.73	0.3438	200.0	250.0	8.73
A12511/32X315	11/32	8.73	0.3438	250.0	310.0	8.73
A12511/32X400	11/32	8.73	0.3438	300.0	400.0	8.73
A12511/32X500	11/32	8.73	0.3438	400.0	460.0	8.73
A1259.0X250	–	9.00	0.3543	200.0	250.0	9.00
A1259.0X315	–	9.00	0.3543	250.0	310.0	9.00
A1259.0X400	–	9.00	0.3543	300.0	400.0	9.00
A12523/64X315	23/64	9.13	0.3594	250.0	310.0	9.13
A12523/64X500	23/64	9.13	0.3594	400.0	460.0	9.13
A1259.5X250	–	9.50	0.3740	200.0	250.0	9.50
A1259.5X315	–	9.50	0.3740	250.0	310.0	9.50
A1253/8X250	3/8	9.52	0.3750	200.0	250.0	9.52
A1253/8X315	3/8	9.52	0.3750	250.0	310.0	9.52
A1253/8X400	3/8	9.52	0.3750	300.0	400.0	9.52

Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A1253/8X500	3/8	9.52	0.3750	400.0	460.0	9.52
A12525/64X315	25/64	9.92	0.3906	250.0	310.0	9.92
A12525/64X500	25/64	9.92	0.3906	400.0	460.0	9.92
A12510.0X250	–	10.00	0.3937	200.0	250.0	10.00
A12510.0X315	–	10.00	0.3937	250.0	310.0	10.00
A12510.0X400	–	10.00	0.3937	300.0	400.0	10.00
A12513/32X250	13/32	10.32	0.4063	200.0	250.0	10.32
A12513/32X315	13/32	10.32	0.4063	250.0	310.0	10.32
A12513/32X500	13/32	10.32	0.4063	400.0	460.0	10.32
A12510.5X250	–	10.50	0.4134	200.0	250.0	10.50
A12510.5X315	–	10.50	0.4134	250.0	310.0	10.50
A12510.5X400	–	10.50	0.4134	300.0	400.0	10.50
A12527/64X315	27/64	10.72	0.4219	250.0	310.0	10.72
A12511.0X250	–	11.00	0.4331	200.0	250.0	11.00
A12511.0X315	–	11.00	0.4331	250.0	310.0	11.00
A12511.0X400	–	11.00	0.4331	300.0	400.0	11.00
A1257/16X250	7/16	11.11	0.4375	200.0	250.0	11.11
A1257/16X315	7/16	11.11	0.4375	250.0	310.0	11.11
A1257/16X400	7/16	11.11	0.4375	300.0	400.0	11.11
A1257/16X500	7/16	11.11	0.4375	400.0	460.0	11.11
A12529/64X315	29/64	11.51	0.4531	250.0	310.0	11.51
A12529/64X500	29/64	11.51	0.4531	400.0	460.0	11.51
A12515/32X250	15/32	11.91	0.4688	200.0	250.0	11.91
A12515/32X315	15/32	11.91	0.4688	250.0	310.0	11.91
A12515/32X500	15/32	11.91	0.4688	400.0	460.0	11.91
A12512.0X250	–	12.00	0.4724	200.0	250.0	12.00
A12512.0X315	–	12.00	0.4724	250.0	310.0	12.00
A12512.0X400	–	12.00	0.4724	300.0	400.0	12.00
A12531/64X315	31/64	12.30	0.4844	250.0	310.0	12.30
A12531/64X500	31/64	12.30	0.4844	400.0	460.0	12.30
A1251/2X250	1/2	12.70	0.5000	200.0	250.0	12.70
A1251/2X315	1/2	12.70	0.5000	250.0	310.0	12.70
A1251/2X400	1/2	12.70	0.5000	300.0	400.0	12.70
A1251/2X500	1/2	12.70	0.5000	400.0	460.0	12.70
A12513.0X315	–	13.00	0.5118	250.0	310.0	13.00
A12513.0X400	–	13.00	0.5118	300.0	400.0	13.00
A12533/64X315	33/64	13.10	0.5156	250.0	310.0	13.10
A12533/64X500	33/64	13.10	0.5156	400.0	460.0	13.10
A12517/32X315	17/32	13.49	0.5313	250.0	310.0	13.49
A12517/32X500	17/32	13.49	0.5313	400.0	460.0	13.49
A12535/64X315	35/64	13.89	0.5469	250.0	310.0	13.89
A12535/64X500	35/64	13.89	0.5469	400.0	460.0	13.89
A12514.0X315	–	14.00	0.5512	250.0	310.0	14.00
A12514.0X400	–	14.00	0.5512	300.0	400.0	14.00
A1259/16X315	9/16	14.29	0.5625	250.0	310.0	14.29
A1259/16X500	9/16	14.29	0.5625	400.0	460.0	14.29
A12537/64X315	37/64	14.68	0.5781	250.0	310.0	14.68
A12519/32X315	19/32	15.08	0.5938	250.0	310.0	15.08
A12519/32X500	19/32	15.08	0.5938	400.0	460.0	15.08
A12539/64X315	39/64	15.48	0.6094	250.0	310.0	15.48
A12539/64X500	39/64	15.48	0.6094	400.0	460.0	15.48
A1255/8X315	5/8	15.88	0.6250	250.0	310.0	15.88
A1255/8X500	5/8	15.88	0.6250	400.0	460.0	15.88
A12521/32X315	21/32	16.67	0.6563	250.0	310.0	16.67
A12521/32X500	21/32	16.67	0.6563	400.0	460.0	16.67
A12511/16X315	11/16	17.46	0.6875	250.0	310.0	17.46
A12511/16X500	11/16	17.46	0.6875	400.0	460.0	17.46
A12523/32X315	23/32	18.26	0.7188	250.0	310.0	18.26
A12523/32X500	23/32	18.26	0.7188	400.0	460.0	18.26
A1253/4X315	3/4	19.05	0.7500	250.0	310.0	19.05
A1253/4X500	3/4	19.05	0.7500	400.0	460.0	19.05
A12525/32X500	25/32	19.84	0.7813	400.0	460.0	19.84
A12513/16X500	13/16	20.64	0.8125	400.0	460.0	20.64
A1257/8X500	7/8	22.22	0.8750	400.0	460.0	22.22
A12515/16X500	15/16	23.81	0.9375	400.0	460.0	23.81
A1251X500	1″	25.40	1.0000	400.0	460.0	25.40

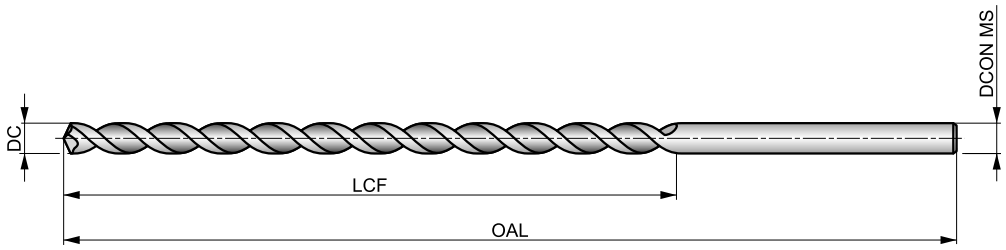
A976

DORMER

PFX HSS-E (5% Cobalt) Extra Long Series Drill (DIN 1869 Series 1), Bright Finish

Recommended for drilling very deep holes or for applications where extra reach is needed. Specially designed parabolic flutes eliminate the need to drill deep holes in short steps (pecking). A 130° point. Centering with a short 3xD PFX drill is recommended (to keep same DC tolerance). Suitable for drilling many materials.

PFX



HSS-E	DIN 1869-1	15×D
130°	Bright	
λ>35°	R	DC h8

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
◪29 C	◪33 C	◪34 C	◪25 C	■22 C	■19 A	■18 C	■14 C	■12 A	■11 C	■9 A	■7 A	◪16 B	◪14 B
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**
◪15 B	◪12 B	◪8 C	◪7 C	◪6 C	◪8 A	◪20 C	◪16 C	◪13 A	◪17 C	◪13 C	◪11 A	◪16 C	◪12 C
K4.3	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N3.1**	**S1.1**	**S1.2**	**S1.3**				
◪9 A	◪8 A	◪6 A	◪18 C	◪14 C	◪11 A	◪30 D	◪15 C	◪11 A	◪5 A				

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A9761.5	–	1.50	0.0591	75.0	115.0	1.50
A9762.0X125	–	2.00	0.0787	85.0	125.0	2.00
A9762.1X125	–	2.10	0.0827	85.0	125.0	2.10
A9762.2X135	–	2.20	0.0866	90.0	135.0	2.20
A9762.3X135	–	2.30	0.0906	90.0	135.0	2.30
A9762.4X140	–	2.40	0.0945	95.0	140.0	2.40
A9762.5X140	–	2.50	0.0984	95.0	140.0	2.50
A9762.6X140	–	2.60	0.1024	95.0	140.0	2.60
A9762.7X150	–	2.70	0.1063	100.0	150.0	2.70
A9762.8X150	–	2.80	0.1102	100.0	150.0	2.80
A9762.9X150	–	2.90	0.1142	100.0	150.0	2.90
A9763.0X150	–	3.00	0.1181	100.0	150.0	3.00
A9763.1X155	–	3.10	0.1220	105.0	155.0	3.10
A9761/8	1/8	3.18	0.1252	105.0	155.0	3.18
A9763.2X155	–	3.20	0.1260	105.0	155.0	3.20
A9763.3X155	–	3.30	0.1299	105.0	155.0	3.30
A9763.4X165	–	3.40	0.1339	115.0	165.0	3.40
A9763.5X165	–	3.50	0.1378	115.0	165.0	3.50
A9763.6X165	–	3.60	0.1417	115.0	165.0	3.60
A9763.7X165	–	3.70	0.1457	115.0	165.0	3.70
A9763.8X175	–	3.80	0.1496	120.0	175.0	3.80
A9763.9X175	–	3.90	0.1535	120.0	175.0	3.90
A9765/32	5/32	3.97	0.1563	120.0	175.0	3.97
A9764.0X175	–	4.00	0.1575	120.0	175.0	4.00
A9764.1X175	–	4.10	0.1614	120.0	175.0	4.10
A9764.2X175	–	4.20	0.1654	120.0	175.0	4.20
A9764.3X185	–	4.30	0.1693	125.0	185.0	4.30
A9764.4X185	–	4.40	0.1732	125.0	185.0	4.40

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A9764.5X185	–	4.50	0.1772	125.0	185.0	4.50
A9764.6X185	–	4.60	0.1811	125.0	185.0	4.60
A9764.7X185	–	4.70	0.1850	125.0	185.0	4.70
A9763/16	3/16	4.76	0.1875	135.0	195.0	4.76
A9764.8X195	–	4.80	0.1890	135.0	195.0	4.80
A9764.9X195	–	4.90	0.1929	135.0	195.0	4.90
A9765.0X195	–	5.00	0.1969	135.0	195.0	5.00
A9765.1X195	–	5.10	0.2008	135.0	195.0	5.10
A9765.2X195	–	5.20	0.2047	135.0	195.0	5.20
A9765.3X195	–	5.30	0.2087	135.0	195.0	5.30
A9765.4X205	–	5.40	0.2126	140.0	205.0	5.40
A9765.5X205	–	5.50	0.2165	140.0	205.0	5.50
A9765.6X205	–	5.60	0.2205	140.0	205.0	5.60
A9765.7X205	–	5.70	0.2244	140.0	205.0	5.70
A9765.8X205	–	5.80	0.2283	140.0	205.0	5.80
A9765.9X205	–	5.90	0.2323	140.0	205.0	5.90
A9766.0X205	–	6.00	0.2362	140.0	205.0	6.00
A9766.1X215	–	6.10	0.2402	150.0	215.0	6.10
A9766.2X215	–	6.20	0.2441	150.0	215.0	6.20
A9766.3X215	–	6.30	0.2480	150.0	215.0	6.30
A9761/4	1/4	6.35	0.2500	150.0	215.0	6.35
A9766.4X215	–	6.40	0.2520	150.0	215.0	6.40
A9766.5X215	–	6.50	0.2559	150.0	215.0	6.50
A9766.6X215	–	6.60	0.2598	150.0	215.0	6.60
A9766.7X215	–	6.70	0.2638	150.0	215.0	6.70
A9766.8X225	–	6.80	0.2677	155.0	225.0	6.80
A9766.9X225	–	6.90	0.2717	155.0	225.0	6.90
A9767.0X225	–	7.00	0.2756	155.0	225.0	7.00

Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A9767.5X225	–	7.50	0.2953	155.0	225.0	7.50
A9765/16	5/16	7.94	0.3125	165.0	240.0	7.94
A9768.0X240	–	8.00	0.3150	165.0	240.0	8.00
A9768.5X240	–	8.50	0.3346	165.0	240.0	8.50
A97611/32	11/32	8.73	0.3438	175.0	250.0	8.73
A9769.0X250	–	9.00	0.3543	175.0	250.0	9.00
A9769.5X250	–	9.50	0.3740	175.0	250.0	9.50
A9763/8	3/8	9.52	0.3750	185.0	265.0	9.52
A97610.0X265	–	10.00	0.3937	185.0	265.0	10.00

[1] Dormer Standard.

Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A97610.5	–	10.50	0.4134	185.0	265.0	10.50
A97611.0	–	11.00	0.4331	195.0	280.0	11.00
A9767/16	7/16	11.11	0.4375	195.0	280.0	11.11
A97611.5	–	11.50	0.4528	195.0	280.0	11.50
A97612.0	–	12.00	0.4724	205.0	295.0	12.00
A97612.5	–	12.50	0.4921	205.0	295.0	12.50
A9761/2	1/2	12.70	0.5000	205.0	295.0	12.70
A97613.0	–	13.00	0.5118	205.0	295.0	13.00
A97614.0 [1]	–	14.00	0.5512	215.0	310.0	14.00

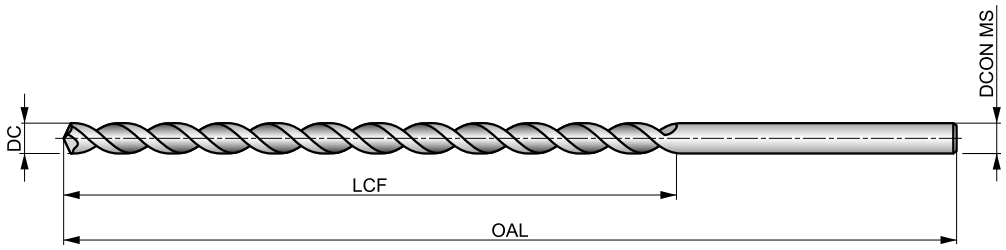
A977

DORMER

PFX HSS-E (5% Cobalt) Extra Long Drill (DIN 1869 Series 2), Bright Finish

Recommended for drilling very deep holes and in applications where extra reach is needed. Specially designed parabolic flutes eliminate the need to drill deep holes in short steps (pecking). A 130° point. Centering with a short 3xD PFX drill is recommended (to keep same DC tolerance). Suitable for drilling many materials.

PFX



HSS-E	DIN 1869-2	20×D
130°	Bright	
λ>35°	R	DC h8

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
◪29 B	◪33 B	◪34 B	◪25 B	■22 B	■19 A	■18 B	■14 B	■12 A	■11 B	■9 A	■7 A	◪16 B	◪14 B
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**
◪15 B	◪12 B	◪8 B	◪7 B	◪6 B	◪8 A	◪20 B	◪16 B	◪13 A	◪17 B	◪13 B	◪11 A	◪16 B	◪12 B
K4.3	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N3.1**	**S1.1**	**S1.2**	**S1.3**				
◪9 A	◪8 A	◪6 A	◪18 B	◪14 B	◪11 A	◪30 C	◪15 B	◪11 A	◪5 A				

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A9771.5 [1]	–	1.50	0.0591	100.0	150.0	1.50
A9771/16 [1]	1/16	1.59	0.0625	100.0	150.0	1.59
A9772.0 [1]	–	2.00	0.0787	110.0	160.0	2.00
A9773/32 [1]	3/32	2.38	0.0938	115.0	170.0	2.38
A9773.0X190	–	3.00	0.1181	130.0	190.0	3.00
A9771/8	1/8	3.18	0.1250	135.0	200.0	3.18
A9773.5X210	–	3.50	0.1378	145.0	210.0	3.50
A9774.0X220	–	4.00	0.1575	150.0	220.0	4.00
A9774.5X235	–	4.50	0.1772	160.0	235.0	4.50
A9773/16	3/16	4.76	0.1875	170.0	245.0	4.76
A9775.0X245	–	5.00	0.1969	170.0	245.0	5.00
A9775.5X260	–	5.50	0.2165	180.0	260.0	5.50
A9776.0X260	–	6.00	0.2362	180.0	260.0	6.00
A9771/4	1/4	6.35	0.2500	190.0	275.0	6.35
A9776.5X275	–	6.50	0.2559	190.0	275.0	6.50

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A9777.0X290	–	7.00	0.2756	200.0	290.0	7.00
A9777.5X290	–	7.50	0.2953	200.0	290.0	7.50
A9778.0X305	–	8.00	0.3150	210.0	305.0	8.00
A9778.5X305	–	8.50	0.3346	210.0	305.0	8.50
A97711/32	11/32	8.73	0.3438	220.0	320.0	8.73
A9779.0X320	–	9.00	0.3543	220.0	320.0	9.00
A9779.5X320	–	9.50	0.3740	220.0	320.0	9.50
A97710.0X340	–	10.00	0.3937	235.0	340.0	10.00
A97710.5	–	10.50	0.4134	235.0	340.0	10.50
A97711.0	–	11.00	0.4331	250.0	365.0	11.00
A97711.5	–	11.50	0.4528	250.0	365.0	11.50
A97712.0	–	12.00	0.4724	260.0	375.0	12.00
A97712.5	–	12.50	0.4921	260.0	375.0	12.50
A97713.0	–	13.00	0.5118	260.0	375.0	13.00
A97714.0 [1]	–	14.00	0.5512	270.0	390.0	14.00

[1] Dormer Standard.

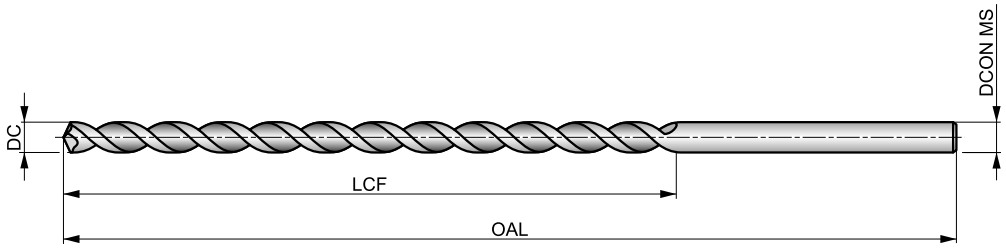
A978

DORMER

PFX HSS-E (5% Cobalt) Extra Long Drill (DIN 1869 Series 3), Bright Finish

Recommended for extra deep holes and in applications where extra reach is needed. Specially designed parabolic flutes eliminate the need to drill deep holes in short steps (pecking). A 130° point. Centering with a short 3xD PFX drill is recommended (to keep same DC tolerance). Suitable for drilling many materials.

PFX



HSS-E	DIN 1869-3	25×D
130°	Bright	
λ>35°	R	DC h8

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
◪29 A	◪33 A	◪34 A	◪25 A	■22 A	■19 A	■18 A	■14 A	■12 A	■11 A	■9 A	■7 A	◪16 A	◪14 A
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**
◪15 A	◪12 A	◪8 A	◪7 A	◪6 A	◪8 A	◪20 A	◪16 A	◪13 A	◪17 A	◪13 A	◪11 A	◪16 A	◪12 A
K4.3	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N3.1**	**S1.1**	**S1.2**	**S1.3**				
◪9 A	◪8 A	◪6 A	◪18 A	◪14 A	◪11 A	◪30 B	◪15 A	◪11 A	◪5 A				

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	DCON MS [mm]
A9783.0 [1]	–	3.00	0.1181	160.0	240.0	3.00
A9783.5X265	–	3.50	0.1378	180.0	265.0	3.50
A9784.0X280	–	4.00	0.1575	190.0	280.0	4.00
A9784.5X295	–	4.50	0.1772	200.0	295.0	4.50
A9785.0X315	–	5.00	0.1969	210.0	315.0	5.00
A9785.5X330	–	5.50	0.2165	225.0	330.0	5.50
A9786.0X330	–	6.00	0.2362	225.0	330.0	6.00
A9781/4	1/4	6.35	0.2500	235.0	350.0	6.35
A9786.5X350	–	6.50	0.2559	235.0	350.0	6.50
A9787.0X370	–	7.00	0.2756	250.0	370.0	7.00
A9787.5X370	–	7.50	0.2953	250.0	370.0	7.50
A9788.0X390	–	8.00	0.3150	265.0	390.0	8.00
A9788.5X390	–	8.50	0.3346	265.0	390.0	8.50
A9789.0X410	–	9.00	0.3543	280.0	410.0	9.00
A9789.5X410	–	9.50	0.3740	280.0	410.0	9.50
A97810.0X430	–	10.00	0.3937	295.0	430.0	10.00

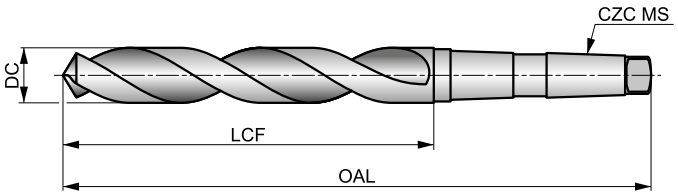
[1] Dormer Standard.

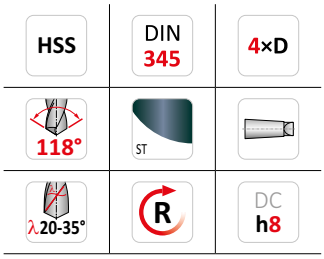
A130

DORMER

HSS Taper Shank Drill, Steam Tempered Finish

Versatile drill with larger diameters - up to 50.80mm (2 inches). Tapered shank provides a better grip for holding it in the machine. Conventional 118° point provides strength and makes it easy to regrind. Steam tempered finish retains cutting fluid and prevents chip to tool welding. Suitable for drilling many materials.





Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■33 I	■37 I	■38 I	■28 I	■25 F	◪22 E	■18 F	■14 F	◪12 E	■11 F	◪9 E	◪7 D	◪21 E	◪17 E
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
◪18 E	◪15 E	◪10 G	◪9 G	◪8 G	◪10 C	■30 I	■22 E	■17 E	◪25 E	◪20 E	◪16 E	◪22 E	◪17 E
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪13 E	◪20 E	◪15 E	◪11 E	◪10 E	◪8 E	◪23 E	◪17 E	◪13 E	◪26 J	◪20 J	◪13 I	◪43 H	◪39 H
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**
◪28 H	◪59 H	◪35 I	◪18 F	◪30 K	◪28 J	◪14 H	◪23 F	◪13 D	◪7 B	◪9 E	◪6 A	◪7 E	◪4 A
S4.1	**S4.2**												
◪5 E	◪3 A												

DC > 14mm Point Thinned.

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	CZC MS
A1303.0	–	3.00	0.1181	33.0	114.0	MK 1
A1301/8	1/8	3.18	0.1252	36.0	117.0	MK 1
A1303.2	–	3.20	0.1260	36.0	117.0	MK 1
A1303.25	–	3.25	0.1280	36.0	117.0	MK 1
A1303.3	–	3.30	0.1299	36.0	117.0	MK 1
A1303.5	–	3.50	0.1378	39.0	120.0	MK 1
A1309/64	9/64	3.57	0.1406	39.0	120.0	MK 1
A1303.75	–	3.75	0.1476	39.0	120.0	MK 1
A1305/32	5/32	3.97	0.1563	43.0	124.0	MK 1
A1304.0	–	4.00	0.1575	43.0	124.0	MK 1
A1304.1	–	4.10	0.1614	43.0	124.0	MK 1
A1304.2	–	4.20	0.1654	43.0	124.0	MK 1
A1304.25	–	4.25	0.1673	43.0	124.0	MK 1
A13011/64	11/64	4.37	0.1719	47.0	128.0	MK 1
A1304.5	–	4.50	0.1772	47.0	128.0	MK 1
A1304.75	–	4.75	0.1870	52.0	128.0	MK 1
A1303/16	3/16	4.76	0.1875	52.0	133.0	MK 1
A1304.8	–	4.80	0.1890	52.0	133.0	MK 1
A1304.9	–	4.90	0.1929	52.0	133.0	MK 1
A1305.0	–	5.00	0.1969	52.0	133.0	MK 1
A1305.1	–	5.10	0.2008	52.0	133.0	MK 1
A13013/64	13/64	5.16	0.2031	52.0	133.0	MK 1
A1305.2	–	5.20	0.2047	52.0	133.0	MK 1

Product	DC	DC	DC	LCF	OAL	CZC MS
	[inch]	[mm]	[inch]	[mm]	[mm]	
A1305.25	–	5.25	0.2067	52.0	133.0	MK 1
A1305.4	–	5.40	0.2126	57.0	138.0	MK 1
A1305.5	–	5.50	0.2165	57.0	138.0	MK 1
A1307/32	7/32	5.56	0.2188	57.0	138.0	MK 1
A1305.7	–	5.70	0.2244	57.0	138.0	MK 1
A1305.75	–	5.75	0.2264	57.0	138.0	MK 1
A1305.8	–	5.80	0.2283	57.0	138.0	MK 1
A1305.9	–	5.90	0.2323	57.0	138.0	MK 1
A13015/64	15/64	5.95	0.2344	57.0	138.0	MK 1
A1306.0	–	6.00	0.2362	57.0	138.0	MK 1
A1306.1	–	6.10	0.2402	63.0	144.0	MK 1
A1306.2	–	6.20	0.2441	63.0	144.0	MK 1
A1306.25	–	6.25	0.2461	63.0	144.0	MK 1
A1306.3	–	6.30	0.2480	63.0	144.0	MK 1
A1301/4	1/4	6.35	0.2500	63.0	144.0	MK 1
A1306.4	–	6.40	0.2520	63.0	144.0	MK 1
A1306.5	–	6.50	0.2559	63.0	144.0	MK 1
A1306.6	–	6.60	0.2598	63.0	144.0	MK 1
A1306.7	–	6.70	0.2638	63.0	144.0	MK 1
A13017/64	17/64	6.75	0.2656	69.0	150.0	MK 1
A1306.75	–	6.75	0.2657	69.0	150.0	MK 1
A1306.8	–	6.80	0.2677	69.0	150.0	MK 1
A1306.9	–	6.90	0.2717	69.0	150.0	MK 1
A1307.0	–	7.00	0.2756	69.0	150.0	MK 1
A1309/32	9/32	7.14	0.2813	69.0	150.0	MK 1
A1307.2	–	7.20	0.2835	69.0	150.0	MK 1
A1307.25	–	7.25	0.2854	69.0	150.0	MK 1
A1307.3	–	7.30	0.2874	69.0	150.0	MK 1
A1307.4	–	7.40	0.2913	69.0	150.0	MK 1
A1307.5	–	7.50	0.2953	69.0	150.0	MK 1
A13019/64	19/64	7.54	0.2969	75.0	156.0	MK 1
A1307.7	–	7.70	0.3031	75.0	156.0	MK 1
A1307.75	–	7.75	0.3051	75.0	156.0	MK 1
A1307.8	–	7.80	0.3071	75.0	156.0	MK 1
A1307.9	–	7.90	0.3110	75.0	156.0	MK 1
A1305/16	5/16	7.94	0.3125	75.0	156.0	MK 1
A1308.0	–	8.00	0.3150	75.0	156.0	MK 1
A1308.1	–	8.10	0.3189	75.0	156.0	MK 1
A1308.2	–	8.20	0.3228	75.0	156.0	MK 1
A1308.25	–	8.25	0.3248	75.0	156.0	MK 1
A1308.3	–	8.30	0.3268	75.0	156.0	MK 1
A13021/64	21/64	8.33	0.3281	75.0	156.0	MK 1
A1308.4	–	8.40	0.3307	75.0	156.0	MK 1
A1308.5	–	8.50	0.3346	75.0	156.0	MK 1
A1308.6	–	8.60	0.3386	81.0	162.0	MK 1
A1308.7	–	8.70	0.3425	81.0	162.0	MK 1
A13011/32	11/32	8.73	0.3438	81.0	162.0	MK 1
A1308.75	–	8.75	0.3445	81.0	162.0	MK 1
A1308.8	–	8.80	0.3465	81.0	162.0	MK 1
A1308.9	–	8.90	0.3504	81.0	162.0	MK 1
A1309.0	–	9.00	0.3543	81.0	162.0	MK 1
A1309.1	–	9.10	0.3583	81.0	162.0	MK 1
A13023/64	23/64	9.13	0.3594	81.0	162.0	MK 1
A1309.2	–	9.20	0.3622	81.0	162.0	MK 1
A1309.25	–	9.25	0.3642	81.0	162.0	MK 1
A1309.3	–	9.30	0.3661	81.0	162.0	MK 1
A1309.5	–	9.50	0.3740	81.0	162.0	MK 1
A1303/8	3/8	9.52	0.3750	87.0	168.0	MK 1
A1309.6	–	9.60	0.3780	87.0	168.0	MK 1
A1309.7	–	9.70	0.3819	87.0	168.0	MK 1
A1309.75	–	9.75	0.3839	87.0	168.0	MK 1
A1309.8	–	9.80	0.3858	87.0	168.0	MK 1

Product	DC	DC	DC	LCF	OAL	CZC MS
	[inch]	[mm]	[inch]	[mm]	[mm]	
A1309.9	–	9.90	0.3898	87.0	168.0	MK 1
A13025/64	25/64	9.92	0.3906	87.0	168.0	MK 1
A13010.0	–	10.00	0.3937	87.0	168.0	MK 1
A13010.1	–	10.10	0.3976	87.0	168.0	MK 1
A13010.2	–	10.20	0.4016	87.0	168.0	MK 1
A13010.25	–	10.25	0.4035	87.0	168.0	MK 1
A13010.3	–	10.30	0.4055	87.0	168.0	MK 1
A13013/32	13/32	10.32	0.4063	87.0	168.0	MK 1
A13010.5	–	10.50	0.4134	87.0	168.0	MK 1
A13027/64	27/64	10.72	0.4219	94.0	175.0	MK 1
A13010.75	–	10.75	0.4232	94.0	175.0	MK 1
A13010.8	–	10.80	0.4252	94.0	175.0	MK 1
A13010.9	–	10.90	0.4291	94.0	175.0	MK 1
A13011.0	–	11.00	0.4331	94.0	175.0	MK 1
A13011.1	–	11.10	0.4370	94.0	175.0	MK 1
A1307/16	7/16	11.11	0.4375	94.0	175.0	MK 1
A13011.2	–	11.20	0.4409	94.0	175.0	MK 1
A13011.25	–	11.25	0.4429	94.0	175.0	MK 1
A13011.3	–	11.30	0.4449	94.0	175.0	MK 1
A13011.4	–	11.40	0.4488	94.0	175.0	MK 1
A13011.5	–	11.50	0.4528	94.0	175.0	MK 1
A13029/64	29/64	11.51	0.4531	94.0	175.0	MK 1
A13011.6	–	11.60	0.4567	94.0	175.0	MK 1
A13011.7	–	11.70	0.4606	94.0	175.0	MK 1
A13011.75	–	11.75	0.4626	94.0	175.0	MK 1
A13011.8	–	11.80	0.4646	94.0	175.0	MK 1
A13011.9	–	11.90	0.4685	101.0	182.0	MK 1
A13015/32	15/32	11.91	0.4688	101.0	182.0	MK 1
A13012.0	–	12.00	0.4724	101.0	182.0	MK 1
A13012.1	–	12.10	0.4764	101.0	182.0	MK 1
A13012.2	–	12.20	0.4803	101.0	182.0	MK 1
A13012.25	–	12.25	0.4823	101.0	182.0	MK 1
A13031/64	31/64	12.30	0.4844	101.0	182.0	MK 1
A13012.3	–	12.30	0.4843	101.0	182.0	MK 1
A13012.4	–	12.40	0.4882	101.0	182.0	MK 1
A13012.5	–	12.50	0.4921	101.0	182.0	MK 1
A13012.6	–	12.60	0.4961	101.0	182.0	MK 1
A13012.7	–	12.70	0.5000	101.0	182.0	MK 1
A1301/2	1/2	12.70	0.5000	101.0	182.0	MK 1
A13012.75	–	12.75	0.5020	101.0	182.0	MK 1
A13012.8	–	12.80	0.5039	101.0	182.0	MK 1
A13012.9	–	12.90	0.5079	101.0	182.0	MK 1
A13013.0	–	13.00	0.5118	101.0	182.0	MK 1
A13033/64	33/64	13.10	0.5156	101.0	182.0	MK 1
A13013.2	–	13.20	0.5197	101.0	182.0	MK 1
A13013.25	–	13.25	0.5217	108.0	189.0	MK 1
A13017/32	17/32	13.49	0.5313	108.0	189.0	MK 1
A13013.5	–	13.50	0.5315	108.0	189.0	MK 1
A13013.6	–	13.60	0.5354	108.0	189.0	MK 1
A13013.7	–	13.70	0.5394	108.0	189.0	MK 1
A13013.75	–	13.75	0.5413	108.0	189.0	MK 1
A13013.8	–	13.80	0.5433	108.0	189.0	MK 1
A13035/64	35/64	13.89	0.5469	108.0	189.0	MK 1
A13013.9	–	13.90	0.5472	108.0	189.0	MK 1
A13014.0	–	14.00	0.5512	108.0	189.0	MK 1
A13014.1	–	14.10	0.5551	114.0	212.0	MK 2
A13014.2	–	14.20	0.5591	114.0	212.0	MK 2
A13014.25	–	14.25	0.5610	114.0	212.0	MK 2
A1309/16	9/16	14.29	0.5625	114.0	212.0	MK 2
A13014.3	–	14.30	0.5630	114.0	212.0	MK 2
A13014.4	–	14.40	0.5669	114.0	212.0	MK 2
A13014.5	–	14.50	0.5709	114.0	212.0	MK 2

Product	DC	DC	DC	LCF	OAL	CZC MS
	[inch]	[mm]	[inch]	[mm]	[mm]	
A13014.6	–	14.60	0.5748	114.0	212.0	MK 2
A13037/64	37/64	14.68	0.5781	114.0	212.0	MK 2
A13014.7	–	14.70	0.5787	114.0	212.0	MK 2
A13014.75	–	14.75	0.5807	114.0	212.0	MK 2
A13014.8	–	14.80	0.5827	114.0	212.0	MK 2
A13014.9	–	14.90	0.5866	114.0	212.0	MK 2
A13015.0	–	15.00	0.5906	114.0	212.0	MK 2
A13019/32	19/32	15.08	0.5938	120.0	218.0	MK 2
A13015.1	–	15.10	0.5945	120.0	218.0	MK 2
A13015.2	–	15.20	0.5984	120.0	218.0	MK 2
A13015.25	–	15.25	0.6004	120.0	218.0	MK 2
A13039/64	39/64	15.48	0.6094	120.0	218.0	MK 2
A13015.5	–	15.50	0.6102	120.0	218.0	MK 2
A13015.7	–	15.70	0.6181	120.0	218.0	MK 2
A13015.75	–	15.75	0.6201	120.0	218.0	MK 2
A13015.8	–	15.80	0.6220	120.0	218.0	MK 2
A1305/8	5/8	15.88	0.6250	120.0	218.0	MK 2
A13015.9	–	15.90	0.6260	120.0	218.0	MK 2
A13016.0	–	16.00	0.6299	120.0	218.0	MK 2
A13016.1	–	16.10	0.6339	125.0	223.0	MK 2
A13016.2	–	16.20	0.6378	125.0	223.0	MK 2
A13016.25	–	16.25	0.6398	125.0	223.0	MK 2
A13041/64	41/64	16.27	0.6406	125.0	223.0	MK 2
A13016.5	–	16.50	0.6496	125.0	223.0	MK 2
A13021/32	21/32	16.67	0.6563	125.0	223.0	MK 2
A13016.75	–	16.75	0.6594	125.0	223.0	MK 2
A13017.0	–	17.00	0.6693	125.0	223.0	MK 2
A13043/64	43/64	17.07	0.6719	130.0	228.0	MK 2
A13017.25	–	17.25	0.6791	130.0	228.0	MK 2
A13011/16	11/16	17.46	0.6875	130.0	228.0	MK 2
A13017.5	–	17.50	0.6890	130.0	228.0	MK 2
A13017.75	–	17.75	0.6988	130.0	228.0	MK 2
A13045/64	45/64	17.86	0.7031	130.0	228.0	MK 2
A13018.0	–	18.00	0.7087	130.0	228.0	MK 2
A13018.25	–	18.25	0.7185	135.0	233.0	MK 2
A13023/32	23/32	18.26	0.7188	135.0	233.0	MK 2
A13018.5	–	18.50	0.7283	135.0	233.0	MK 2
A13047/64	47/64	18.65	0.7344	135.0	233.0	MK 2
A13018.75	–	18.75	0.7382	135.0	233.0	MK 2
A13019.0	–	19.00	0.7480	135.0	233.0	MK 2
A1303/4	3/4	19.05	0.7500	140.0	238.0	MK 2
A13019.25	–	19.25	0.7579	140.0	238.0	MK 2
A13049/64	49/64	19.45	0.7656	140.0	238.0	MK 2
A13019.5	–	19.50	0.7677	140.0	238.0	MK 2
A13019.75	–	19.75	0.7776	140.0	238.0	MK 2
A13025/32	25/32	19.84	0.7813	140.0	238.0	MK 2
A13020.0	–	20.00	0.7874	140.0	238.0	MK 2
A13051/64	51/64	20.24	0.7969	145.0	243.0	MK 2
A13020.25	–	20.25	0.7972	145.0	243.0	MK 2
A13020.4	–	20.40	0.8031	145.0	243.0	MK 2
A13020.5	–	20.50	0.8071	145.0	243.0	MK 2
A13013/16	13/16	20.64	0.8125	145.0	243.0	MK 2
A13020.75	–	20.75	0.8169	145.0	243.0	MK 2
A13021.0	–	21.00	0.8268	145.0	243.0	MK 2
A13053/64	53/64	21.03	0.8281	145.0	243.0	MK 2
A13021.25	–	21.25	0.8366	150.0	248.0	MK 2
A13027/32	27/32	21.43	0.8437	150.0	248.0	MK 2
A13021.5	–	21.50	0.8465	150.0	248.0	MK 2
A13021.75	–	21.75	0.8563	150.0	248.0	MK 2
A13055/64	55/64	21.83	0.8594	150.0	248.0	MK 2
A13022.0	–	22.00	0.8661	150.0	248.0	MK 2
A1307/8	7/8	22.22	0.8750	150.0	248.0	MK 2

Product	DC	DC	DC	LCF	OAL	CZC MS
	[inch]	[mm]	[inch]	[mm]	[mm]	
A13022.25	–	22.25	0.8760	150.0	248.0	MK 2
A13022.5	–	22.50	0.8858	155.0	253.0	MK 2
A13057/64	57/64	22.62	0.8906	155.0	253.0	MK 2
A13022.75	–	22.75	0.8957	155.0	253.0	MK 2
A13023.0	–	23.00	0.9055	155.0	253.0	MK 2
A13029/32	29/32	23.02	0.9063	155.0	253.0	MK 2
A13023.25	–	23.25	0.9154	155.0	276.0	MK 3
A13059/64	59/64	23.42	0.9219	155.0	276.0	MK 3
A13023.5	–	23.50	0.9252	155.0	276.0	MK 3
A13023.75	–	23.75	0.9350	160.0	281.0	MK 3
A13015/16	15/16	23.81	0.9375	160.0	281.0	MK 3
A13024.0	–	24.00	0.9449	160.0	281.0	MK 3
A13061/64	61/64	24.21	0.9531	160.0	281.0	MK 3
A13024.25	–	24.25	0.9547	160.0	281.0	MK 3
A13024.5	–	24.50	0.9646	160.0	281.0	MK 3
A13031/32	31/32	24.61	0.9688	160.0	281.0	MK 3
A13024.75	–	24.75	0.9744	160.0	281.0	MK 3
A13025.0	–	25.00	0.9843	160.0	281.0	MK 3
A13063/64	63/64	25.00	0.9844	160.0	286.0	MK 3
A13025.25	–	25.25	0.9941	165.0	286.0	MK 3
A1301	1″	25.40	1.0000	165.0	286.0	MK 3
A13025.5	–	25.50	1.0039	165.0	286.0	MK 3
A13025.75	–	25.75	1.0138	165.0	286.0	MK 3
A13026.0	–	26.00	1.0236	165.0	286.0	MK 3
A13026.25	–	26.25	1.0335	165.0	286.0	MK 3
A13026.5	–	26.50	1.0433	165.0	286.0	MK 3
A13026.75	–	26.75	1.0531	170.0	291.0	MK 3
A1301.1/16	1.1/16	26.99	1.0625	170.0	291.0	MK 3
A13027.0	–	27.00	1.0630	170.0	291.0	MK 3
A13027.25	–	27.25	1.0728	170.0	291.0	MK 3
A13027.5	–	27.50	1.0827	170.0	291.0	MK 3
A13027.75	–	27.75	1.0925	170.0	291.0	MK 3
A13028.0	–	28.00	1.1024	170.0	291.0	MK 3
A13028.25	–	28.25	1.1122	175.0	296.0	MK 3
A13028.5	–	28.50	1.1220	175.0	296.0	MK 3
A1301.1/8	1.1/8	28.58	1.1250	175.0	296.0	MK 3
A13028.75	–	28.75	1.1319	175.0	296.0	MK 3
A13029.0	–	29.00	1.1417	175.0	296.0	MK 3
A13029.25	–	29.25	1.1516	175.0	296.0	MK 3
A1301.5/32	1.5/32	29.37	1.1563	175.0	296.0	MK 3
A13029.5	–	29.50	1.1614	175.0	296.0	MK 3
A13029.75	–	29.75	1.1713	175.0	296.0	MK 3
A13030.0	–	30.00	1.1811	175.0	296.0	MK 3
A1301.3/16	1.3/16	30.16	1.1875	180.0	301.0	MK 3
A13030.25	–	30.25	1.1909	180.0	301.0	MK 3
A13030.5	–	30.50	1.2008	180.0	301.0	MK 3
A13030.75	–	30.75	1.2106	180.0	301.0	MK 3
A1301.7/32	1.7/32	30.96	1.2188	180.0	301.0	MK 3
A13031.0	–	31.00	1.2205	180.0	301.0	MK 3
A13031.25	–	31.25	1.2303	180.0	301.0	MK 3
A13031.5	–	31.50	1.2402	180.0	301.0	MK 3
A13031.75	–	31.75	1.2500	185.0	306.0	MK 3
A1301.1/4	1.1/4	31.75	1.2500	185.0	306.0	MK 3
A13032.0	–	32.00	1.2598	185.0	334.0	MK 4
A13032.5	–	32.50	1.2795	185.0	334.0	MK 4
A1301.9/32	1.9/32	32.54	1.2813	185.0	334.0	MK 4
A13033.0	–	33.00	1.2992	185.0	334.0	MK 4
A1301.5/16	1.5/16	33.34	1.3125	185.0	334.0	MK 4
A13033.5	–	33.50	1.3189	185.0	334.0	MK 4
A13034.0	–	34.00	1.3386	190.0	339.0	MK 4
A1301.11/32	1.11/32	34.13	1.3438	190.0	339.0	MK 4
A13034.5	–	34.50	1.3583	190.0	339.0	MK 4

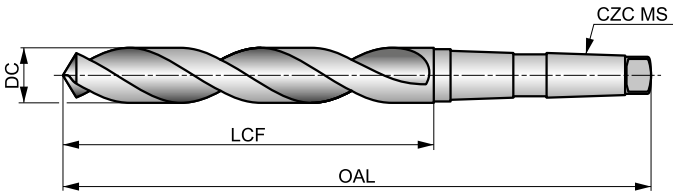
Product	DC	DC	DC	LCF	OAL	CZC MS
	[inch]	[mm]	[inch]	[mm]	[mm]	
A1301.3/8	1.3/8	34.93	1.3750	190.0	339.0	MK 4
A13035.0	–	35.00	1.3780	190.0	339.0	MK 4
A13035.5	–	35.50	1.3976	190.0	339.0	MK 4
A1301.13/32	1.13/32	35.72	1.4063	195.0	344.0	MK 4
A13036.0	–	36.00	1.4173	195.0	344.0	MK 4
A13036.5	–	36.50	1.4370	195.0	344.0	MK 4
A1301.7/16	1.7/16	36.51	1.4375	195.0	344.0	MK 4
A13037.0	–	37.00	1.4567	195.0	344.0	MK 4
A13037.5	–	37.50	1.4764	195.0	344.0	MK 4
A13038.0	–	38.00	1.4961	200.0	349.0	MK 4
A1301.1/2	1.1/2	38.10	1.5000	200.0	349.0	MK 4
A13038.5	–	38.50	1.5157	200.0	349.0	MK 4
A13039.0	–	39.00	1.5354	200.0	349.0	MK 4
A13039.5	–	39.50	1.5551	200.0	349.0	MK 4
A1301.9/16	1.9/16	39.69	1.5625	200.0	349.0	MK 4
A13040.0	–	40.00	1.5748	200.0	349.0	MK 4
A13040.5	–	40.50	1.5945	205.0	354.0	MK 4
A13041.0	–	41.00	1.6142	205.0	354.0	MK 4
A1301.5/8	1.5/8	41.28	1.6250	205.0	354.0	MK 4
A13041.5	–	41.50	1.6339	205.0	354.0	MK 4
A13042.0	–	42.00	1.6535	205.0	354.0	MK 4
A13042.5	–	42.50	1.6732	205.0	354.0	MK 4
A1301.11/16	1.11/16	42.86	1.6875	210.0	359.0	MK 4
A13043.0	–	43.00	1.6929	210.0	359.0	MK 4
A13043.5	–	43.50	1.7126	210.0	359.0	MK 4
A13044.0	–	44.00	1.7323	210.0	359.0	MK 4
A1301.3/4	1.3/4	44.45	1.7500	210.0	359.0	MK 4
A13044.5	–	44.50	1.7520	210.0	359.0	MK 4
A13045.0	–	45.00	1.7717	210.0	359.0	MK 4
A13045.5	–	45.50	1.7913	215.0	364.0	MK 4
A13046.0	–	46.00	1.8110	215.0	364.0	MK 4
A13046.5	–	46.50	1.8307	215.0	364.0	MK 4
A13047.0	–	47.00	1.8504	215.0	364.0	MK 4
A13047.5	–	47.50	1.8701	215.0	364.0	MK 4
A13048.0	–	48.00	1.8898	220.0	369.0	MK 4
A13048.5	–	48.50	1.9094	220.0	369.0	MK 4
A13049.0	–	49.00	1.9291	220.0	369.0	MK 4
A13049.5	–	49.50	1.9488	220.0	369.0	MK 4
A13050.0	–	50.00	1.9685	220.0	369.0	MK 4
A1302	2″	50.80	2.0000	225.0	374.0	MK 4

A530

DORMER

HSS Taper Shank Drill, TiN Coated

A strong 118° conventional point which is easy to regrind and the robust design provides increased performance when used on conventional machines. Suitable for drilling many materials. TiN coating improves performance and extends the tool life.



HSS	DIN 345	4×D
118°	TiN	
λ20-35°	R	DC h8

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■40 I	■45 I	■46 I	■34 I	■30 F	◪27 E	■29 F	■24 F	◪20 E	■18 F	◪15 E	◪12 D	◪33 E	◪28 E
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
◪29 E	◪24 E	◪15 G	◪13 G	◪12 G	◪20 C	◪36 I	■27 E	■20 E	■33 E	■27 E	◪22 E	■29 E	■22 E
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪18 E	■27 E	■21 E	◪15 E	◪13 E	◪11 E	■31 E	■23 E	◪18 E	◪55 I	◪41 I	◪28 I	◪54 G	◪48 G
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**
◪35 G	■93 G	◪55 I	◪28 G	◪50 J	◪50 H	◪35 F	◪32 F	◪18 D	◪13 B	◪8 E	◪4 A	◪6 E	◪3 A
S4.1	**S4.2**												
◪5 E	◪2 A												

DC >= 14mm Point Thinned.

Product	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	CZC MS
A5308.5	8.50	0.3346	75.0	156.0	MK 1
A5309.0	9.00	0.3543	81.0	162.0	MK 1
A53010.0	10.00	0.3937	87.0	168.0	MK 1
A53010.2	10.20	0.4016	87.0	168.0	MK 1
A53010.5	10.50	0.4134	87.0	168.0	MK 1
A53011.0	11.00	0.4331	94.0	175.0	MK 1
A53011.5	11.50	0.4528	94.0	175.0	MK 1
A53011.75	11.75	0.4626	94.0	175.0	MK 1
A53012.0	12.00	0.4724	101.0	182.0	MK 1
A53012.5	12.50	0.4921	101.0	182.0	MK 1
A53013.0	13.00	0.5118	101.0	182.0	MK 1
A53013.5	13.50	0.5315	108.0	189.0	MK 1
A53014.0	14.00	0.5512	108.0	189.0	MK 1
A53014.5	14.50	0.5709	114.0	212.0	MK 2
A53015.0	15.00	0.5906	114.0	212.0	MK 2
A53015.25	15.25	0.6004	120.0	218.0	MK 2
A53015.5	15.50	0.6102	120.0	218.0	MK 2
A53016.0	16.00	0.6299	120.0	218.0	MK 2
A53016.5	16.50	0.6496	125.0	223.0	MK 2
A53017.0	17.00	0.6693	125.0	223.0	MK 2
A53017.5	17.50	0.6890	130.0	228.0	MK 2
A53018.0	18.00	0.7087	130.0	228.0	MK 2
A53018.5	18.50	0.7283	135.0	233.0	MK 2
A53019.0	19.00	0.7480	135.0	233.0	MK 2
A53019.5	19.50	0.7677	140.0	238.0	MK 2
A53020.0	20.00	0.7874	140.0	238.0	MK 2

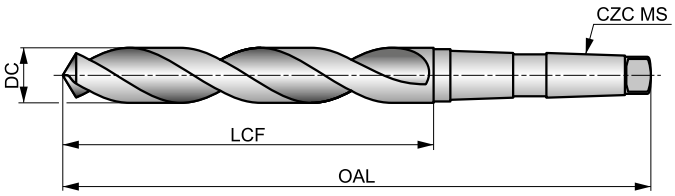
Product	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	CZC MS
A53020.5	20.50	0.8071	145.0	243.0	MK 2
A53021.0	21.00	0.8268	145.0	243.0	MK 2
A53021.5	21.50	0.8465	150.0	248.0	MK 2
A53022.0	22.00	0.8661	150.0	248.0	MK 2
A53022.5	22.50	0.8858	155.0	253.0	MK 2
A53023.0	23.00	0.9055	155.0	253.0	MK 2
A53023.5	23.50	0.9252	155.0	276.0	MK 3
A53024.0	24.00	0.9449	160.0	281.0	MK 3
A53024.5	24.50	0.9646	160.0	281.0	MK 3
A53025.0	25.00	0.9843	160.0	281.0	MK 3
A53025.5	25.50	1.0039	165.0	286.0	MK 3
A53026.0	26.00	1.0236	165.0	286.0	MK 3
A53026.5	26.50	1.0433	165.0	286.0	MK 3
A53027.0	27.00	1.0630	170.0	291.0	MK 3
A53027.5	27.50	1.0827	170.0	291.0	MK 3
A53028.0	28.00	1.1024	170.0	291.0	MK 3
A53028.5	28.50	1.1220	175.0	296.0	MK 3
A53029.0	29.00	1.1417	175.0	296.0	MK 3
A53029.5	29.50	1.1614	175.0	296.0	MK 3
A53030.0	30.00	1.1811	175.0	296.0	MK 3
A53031.0	31.00	1.2205	180.0	301.0	MK 3
A53032.0	32.00	1.2598	185.0	334.0	MK 4
A53033.0	33.00	1.2992	185.0	334.0	MK 4
A53035.0	35.00	1.3780	190.0	339.0	MK 4
A53040.0	40.00	1.5748	200.0	349.0	MK 4

A730

DORMER

HSS-E (8% Cobalt) Taper Shank Drill, Bronze Tempered Finish

Recommended for difficult materials and applications. The 118° point provides a strong point which is easy to regrind. Suitable for drilling many materials. The bronze finish is a thin oxide layer and it is an indication for Cobalt.



HSS-E	DIN 345	4×D
118°	Bronze	
λ 20-35°	R	DC h8

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
◪36 H	◪40 H	◪41 H	◪31 H	◪27 G	■24 E	◪25 F	◪20 F	■17 E	◪15 F	■13 E	■10 D	◪33 E	◪28 E
M2.1	M2.2	M3.1	M3.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2
◪29 E	◪24 E	■13 G	■11 G	■10 G	■17 C	◪35 J	◪26 G	◪19 G	◪27 E	◪22 E	■18 E	◪24 E	◪18 E
K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3	N2.1	N2.2
■15 E	◪22 E	◪17 E	■12 E	■11 E	■9 E	◪25 E	◪19 E	■15 E	◪33 J	◪25 J	◪17 I	◪46 H	◪42 H
N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	N4.3	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2
◪30 H	◪68 H	◪40 J	◪20 L	◪35 K	◪28 J	◪20 H	◪28 G	◪20 D	◪11 C	◪9 E	◪8 B	◪7 E	◪6 B
S4.1	S4.2												
◪5 E	◪5 B												

DC >= 14mm Point Thinned.

Product	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	CZC MS
A73010.0	10.00	0.3937	87.0	168.0	MK 1
A73010.2	10.20	0.4016	87.0	168.0	MK 1
A73010.5	10.50	0.4134	87.0	168.0	MK 1
A73010.8	10.80	0.4252	94.0	175.0	MK 1
A73011.0	11.00	0.4331	94.0	175.0	MK 1
A73011.5	11.50	0.4528	94.0	175.0	MK 1
A73011.8	11.80	0.4646	94.0	175.0	MK 1
A73012.0	12.00	0.4724	101.0	182.0	MK 1
A73012.2	12.20	0.4803	101.0	182.0	MK 1
A73012.5	12.50	0.4921	101.0	182.0	MK 1
A73012.8	12.80	0.5039	101.0	182.0	MK 1
A73013.0	13.00	0.5118	101.0	182.0	MK 1
A73013.5	13.50	0.5315	108.0	189.0	MK 1
A73013.8	13.80	0.5433	108.0	189.0	MK 1
A73014.0	14.00	0.5512	108.0	189.0	MK 1
A73014.25	14.25	0.5610	114.0	212.0	MK 2
A73014.5	14.50	0.5709	114.0	212.0	MK 2
A73014.75	14.75	0.5807	114.0	212.0	MK 2
A73015.0	15.00	0.5906	114.0	212.0	MK 2
A73015.25	15.25	0.6004	120.0	218.0	MK 2
A73015.5	15.50	0.6102	120.0	218.0	MK 2
A73015.75	15.75	0.6201	120.0	218.0	MK 2
A73016.0	16.00	0.6299	120.0	218.0	MK 2

Product	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	CZC MS
A73016.25	16.25	0.6398	120.0	218.0	MK 2
A73016.5	16.50	0.6496	125.0	223.0	MK 2
A73017.0	17.00	0.6693	125.0	223.0	MK 2
A73017.25	17.25	0.6791	130.0	228.0	MK 2
A73017.5	17.50	0.6890	130.0	228.0	MK 2
A73017.75	17.75	0.6988	130.0	228.0	MK 2
A73018.0	18.00	0.7087	130.0	228.0	MK 2
A73018.25	18.25	0.7185	135.0	233.0	MK 2
A73018.5	18.50	0.7283	135.0	233.0	MK 2
A73018.75	18.75	0.7382	135.0	233.0	MK 2
A73019.0	19.00	0.7480	135.0	233.0	MK 2
A73019.25	19.25	0.7579	140.0	238.0	MK 2
A73019.5	19.50	0.7677	140.0	238.0	MK 2
A73019.75	19.75	0.7776	140.0	238.0	MK 2
A73020.0	20.00	0.7874	140.0	238.0	MK 2
A73020.25	20.25	0.7972	145.0	243.0	MK 2
A73020.5	20.50	0.8071	145.0	243.0	MK 2
A73020.75	20.75	0.8169	145.0	243.0	MK 2
A73021.0	21.00	0.8268	145.0	243.0	MK 2
A73021.5	21.50	0.8465	150.0	248.0	MK 2
A73022.0	22.00	0.8661	150.0	248.0	MK 2
A73022.5	22.50	0.8858	155.0	253.0	MK 2
A73023.0	23.00	0.9055	155.0	253.0	MK 2

Product	DC	DC	LCF	OAL	CZC MS
	[mm]	[inch]	[mm]	[mm]	
A73023.5	23.50	0.9252	155.0	276.0	MK 3
A73024.0	24.00	0.9449	160.0	281.0	MK 3
A73024.5	24.50	0.9646	160.0	281.0	MK 3
A73025.0	25.00	0.9843	160.0	281.0	MK 3
A73025.5	25.50	1.0039	165.0	286.0	MK 3
A73026.0	26.00	1.0236	165.0	286.0	MK 3
A73026.5	26.50	1.0433	165.0	286.0	MK 3
A73027.0	27.00	1.0630	170.0	291.0	MK 3

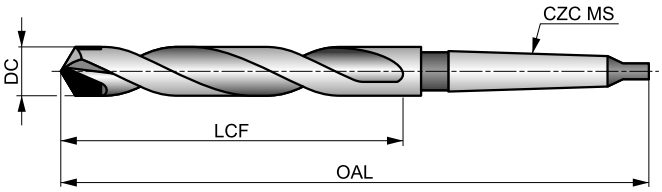
Product	DC	DC	LCF	OAL	CZC MS
	[mm]	[inch]	[mm]	[mm]	
A73027.5	27.50	1.0827	170.0	291.0	MK 3
A73028.0	28.00	1.1024	170.0	291.0	MK 3
A73028.5	28.50	1.1220	175.0	296.0	MK 3
A73029.0	29.00	1.1417	175.0	296.0	MK 3
A73030.0	30.00	1.1811	175.0	296.0	MK 3
A73031.0	31.00	1.2205	180.0	301.0	MK 3
A73032.0	32.00	1.2598	185.0	334.0	MK 4

A166

DORMER

HSS Taper Shank Drill, Steam Tempered Finish, with Brazed Carbide Point

Brazed carbide tip gives the high performance of a carbide drill with a strong and less brittle HSS body. It has a 118°, four-facet point which helps with self-centering and is easy to regrind, making it an economical choice when drilling cast iron materials.



HSS HM	DIN 345	4×D
118°	Bright ST	
λ 20-35°	R	DC h8

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
◪73 E	◪82 E	◪85 E	◪63 E	◪55 D	◪49 C	◪59 D	◪47 D	◪40 C	◪35 D	◪30 C	◪24 A	◪55 B	◪46 B
M2.1	M2.2	M3.1	M3.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2
◪49 B	◪40 B	◪41 C	◪35 C	◪32 C	◪35 A	■50 C	■37 C	■28 C	■43 C	■35 C	■28 A	■38 C	■29 C
K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3	N2.1	N2.2
■24 A	■35 C	■27 C	■20 A	■17 A	■14 A	■40 C	■30 C	■23 A	◪50 I	◪38 I	◪25 H	◪62 G	◪55 G
N2.3	N3.1	N3.2	N3.3	N4.2	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2	S4.1	S4.2
◪40 G	◪127 C	◪75 G	◪38 D	◪60 E	◪35 A	◪35 A	◪25 A	◪33 A	◪28 A	◪25 A	◪20 A	◪20 A	◪16 A

Product	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	CZC MS
A16610.0	10.00	0.3937	87.0	168.0	MK 1
A16610.5	10.50	0.4134	87.0	168.0	MK 1
A16611.0	11.00	0.4331	94.0	175.0	MK 1
A16611.5	11.50	0.4528	94.0	175.0	MK 1
A16612.0	12.00	0.4724	101.0	182.0	MK 1
A16613.0	13.00	0.5118	101.0	182.0	MK 1
A16613.5	13.50	0.5315	108.0	189.0	MK 1
A16614.0	14.00	0.5512	108.0	189.0	MK 1
A16615.0	15.00	0.5906	114.0	212.0	MK 2
A16616.0	16.00	0.6299	120.0	218.0	MK 2
A16617.0	17.00	0.6693	125.0	223.0	MK 2
A16617.5	17.50	0.6890	130.0	228.0	MK 2
A16618.0	18.00	0.7087	130.0	228.0	MK 2
A16619.0	19.00	0.7480	135.0	233.0	MK 2

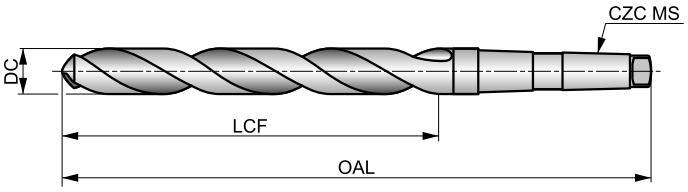
Product	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	CZC MS
A16620.0	20.00	0.7874	140.0	238.0	MK 2
A16621.0	21.00	0.8268	145.0	243.0	MK 2
A16622.0	22.00	0.8661	150.0	248.0	MK 2
A16622.5	22.50	0.8858	155.0	253.0	MK 2
A16623.0	23.00	0.9055	155.0	253.0	MK 2
A16624.0	24.00	0.9449	160.0	281.0	MK 3
A16625.0	25.00	0.9843	160.0	281.0	MK 3
A16626.0	26.00	1.0236	165.0	286.0	MK 3
A16627.0	27.00	1.0630	170.0	291.0	MK 3
A16628.0	28.00	1.1024	170.0	291.0	MK 3
A16629.0	29.00	1.1417	175.0	296.0	MK 3
A16630.0	30.00	1.1811	175.0	296.0	MK 3
A16632.0	32.00	1.2598	185.0	334.0	MK 4
A16633.0	33.00	1.2992	185.0	334.0	MK 4

A350

DORMER

HSS Long Series Taper Shank Drill, Steam Tempered Finish

Recommended for drilling deep holes or for applications where increased reach is required. Steam tempered finish retains cutting fluid and prevents chip to tool welding. A 118° point angle is easy to regrind and provides strength. Suitable for drilling many materials.



HSS	DIN 341	6×D
118°	ST	
λ 20-35°	R	DC h8

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■27 I	■30 I	■31 I	■23 I	◪20 G	◪18 E	◪15 F	◪12 F	◪10 E	◪9 F	◪7 E	◪6 D	◪18 E	◪15 E
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
◪16 E	◪13 E	◪5 G	◪4 G	◪4 G	◪8 C	◪26 I	◪19 F	◪14 F	◪22 E	◪18 E	◪14 E	◪20 E	◪15 E
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪12 E	◪18 E	◪14 E	◪10 E	◪9 E	◪7 E	◪21 E	◪15 E	◪12 E	◪33 J	◪25 J	◪17 I	◪42 H	◪37 H
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**
◪27 H	◪59 H	◪35 I	◪18 F	◪35 L	◪26 J	◪12 H	◪16 F	◪9 D	◪5 B	◪5 E	◪4 A	◪4 E	◪3 A
S4.1	**S4.2**												
◪3 E	◪2 A												

Product	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	CZC MS
A3505.0	5.00	0.1969	74.0	155.0	MK 1
A3505.5	5.50	0.2165	80.0	161.0	MK 1
A3506.0	6.00	0.2362	80.0	161.0	MK 1
A3506.7	6.70	0.2638	86.0	167.0	MK 1
A3506.8	6.80	0.2677	93.0	174.0	MK 1
A3507.0	7.00	0.2756	93.0	174.0	MK 1
A3507.5	7.50	0.2953	93.0	174.0	MK 1
A3508.0	8.00	0.3150	100.0	181.0	MK 1
A3508.4	8.40	0.3307	100.0	181.0	MK 1
A3508.5	8.50	0.3346	100.0	181.0	MK 1
A3508.75	8.75	0.3445	107.0	188.0	MK 1
A3509.0	9.00	0.3543	107.0	188.0	MK 1
A3509.5	9.50	0.3740	107.0	188.0	MK 1
A3509.8	9.80	0.3858	116.0	197.0	MK 1
A35010.0	10.00	0.3937	116.0	197.0	MK 1
A35010.2	10.20	0.4016	116.0	197.0	MK 1
A35010.5	10.50	0.4134	116.0	197.0	MK 1
A35010.7	10.70	0.4213	125.0	206.0	MK 1
A35011.0	11.00	0.4331	125.0	206.0	MK 1
A35011.5	11.50	0.4528	125.0	206.0	MK 1
A35011.75	11.75	0.4626	125.0	206.0	MK 1
A35011.8	11.80	0.4646	125.0	206.0	MK 1
A35012.0	12.00	0.4724	134.0	215.0	MK 1
A35012.5	12.50	0.4921	134.0	215.0	MK 1

Product	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	CZC MS
A35013.0	13.00	0.5118	134.0	215.0	MK 1
A35013.5	13.50	0.5315	142.0	223.0	MK 1
A35014.0	14.00	0.5512	142.0	223.0	MK 1
A35014.25	14.25	0.5610	147.0	245.0	MK 2
A35014.5	14.50	0.5709	147.0	245.0	MK 2
A35014.75	14.75	0.5807	147.0	245.0	MK 2
A35015.0	15.00	0.5906	147.0	245.0	MK 2
A35015.25	15.25	0.6004	153.0	251.0	MK 2
A35015.5	15.50	0.6102	153.0	251.0	MK 2
A35015.75	15.75	0.6201	153.0	251.0	MK 2
A35016.0	16.00	0.6299	153.0	251.0	MK 2
A35016.25	16.25	0.6398	159.0	257.0	MK 2
A35016.5	16.50	0.6496	159.0	257.0	MK 2
A35016.75	16.75	0.6594	159.0	257.0	MK 2
A35017.0	17.00	0.6693	159.0	257.0	MK 2
A35017.25	17.25	0.6791	165.0	263.0	MK 2
A35017.5	17.50	0.6890	165.0	263.0	MK 2
A35018.0	18.00	0.7087	165.0	263.0	MK 2
A35018.5	18.50	0.7283	171.0	269.0	MK 2
A35019.0	19.00	0.7480	171.0	269.0	MK 2
A35019.5	19.50	0.7677	177.0	275.0	MK 2
A35019.75	19.75	0.7776	177.0	275.0	MK 2
A35020.0	20.00	0.7874	177.0	275.0	MK 2
A35020.25	20.25	0.7972	184.0	282.0	MK 2

Product	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	CZC MS
A35020.5	20.50	0.8071	184.0	282.0	MK 2
A35021.0	21.00	0.8268	184.0	282.0	MK 2
A35021.5	21.50	0.8465	191.0	289.0	MK 2
A35022.0	22.00	0.8661	191.0	289.0	MK 2
A35022.5	22.50	0.8858	198.0	296.0	MK 2
A35023.0	23.00	0.9055	198.0	296.0	MK 2
A35023.5	23.50	0.9252	198.0	319.0	MK 3
A35024.0	24.00	0.9449	206.0	327.0	MK 3
A35024.5	24.50	0.9646	206.0	327.0	MK 3
A35025.0	25.00	0.9843	206.0	327.0	MK 3
A35025.5	25.50	1.0039	214.0	335.0	MK 3
A35026.0	26.00	1.0236	214.0	335.0	MK 3
A35026.5	26.50	1.0433	214.0	335.0	MK 3
A35027.0	27.00	1.0630	222.0	343.0	MK 3
A35027.5	27.50	1.0827	222.0	343.0	MK 3
A35028.0	28.00	1.1024	222.0	343.0	MK 3
A35029.0	29.00	1.1417	230.0	351.0	MK 3
A35030.0	30.00	1.1811	230.0	351.0	MK 3
A35030.5	30.50	1.2008	239.0	360.0	MK 3
A35031.0	31.00	1.2205	239.0	360.0	MK 3

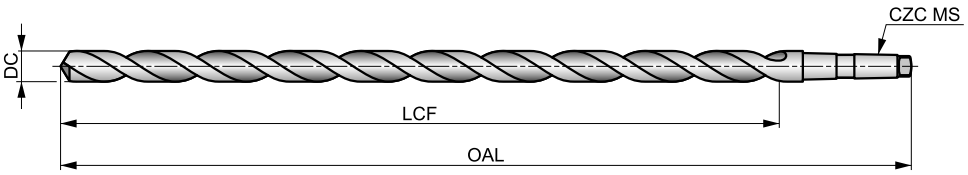
Product	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	CZC MS
A35031.5	31.50	1.2402	239.0	360.0	MK 3
A35032.0	32.00	1.2598	248.0	397.0	MK 4
A35033.0	33.00	1.2992	248.0	397.0	MK 4
A35034.0	34.00	1.3386	257.0	406.0	MK 4
A35035.0	35.00	1.3780	257.0	406.0	MK 4
A35036.0	36.00	1.4173	267.0	416.0	MK 4
A35037.0	37.00	1.4567	267.0	416.0	MK 4
A35038.0	38.00	1.4961	277.0	426.0	MK 4
A35039.0	39.00	1.5354	277.0	426.0	MK 4
A35040.0	40.00	1.5748	277.0	426.0	MK 4
A35041.0	41.00	1.6142	287.0	436.0	MK 4
A35042.0	42.00	1.6535	287.0	436.0	MK 4
A35043.0	43.00	1.6929	298.0	447.0	MK 4
A35044.0	44.00	1.7323	298.0	447.0	MK 4
A35045.0	45.00	1.7717	298.0	447.0	MK 4
A35046.0	46.00	1.8110	310.0	459.0	MK 4
A35047.0	47.00	1.8504	310.0	459.0	MK 4
A35048.0	48.00	1.8898	321.0	470.0	MK 4
A35050.0	50.00	1.9685	321.0	470.0	MK 4

A345

DORMER

HSS Long Series Taper Shank Drill (DIN 1870 Series 1), Steam Tempered Finish

Recommended for drilling very deep holes or for applications where increased reach is required. A 118° point angle is easy to regrind and provides strength. Steam tempered finish retains cutting fluid and prevents chip to tool welding. Suitable for drilling many materials.



HSS	DIN 1870(1)	10×D
118°	ST	
λ 20-35°	R	DC h8

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 23 G	■ 25 G	■ 26 G	■ 19 G	◪ 17 E	◪ 15 C	◪ 9 D	◪ 7 D	◪ 6 C	◪ 5 D	◪ 4 C	◪ 4 B	◪ 16 C	◪ 14 C
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
◪ 15 C	◪ 12 C	◪ 5 E	◪ 4 E	◪ 4 E	◪ 8 A	◪ 22 G	◪ 16 D	◪ 12 D	◪ 16 C	◪ 13 C	◪ 10 C	◪ 14 C	◪ 11 C
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪ 9 C	◪ 13 C	◪ 10 C	◪ 7 C	◪ 6 C	◪ 5 C	◪ 15 C	◪ 11 C	◪ 9 C	◪ 33 H	◪ 25 H	◪ 17 G	◪ 42 F	◪ 37 F
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**
◪ 27 F	◪ 56 F	◪ 33 G	◪ 17 D	◪ 30 J	◪ 30 H	◪ 10 F	◪ 15 D	◪ 9 B	◪ 5 A	◪ 5 C	◪ 4 A	◪ 4 C	◪ 3 A
S4.1	**S4.2**												
◪ 3 C	◪ 2 A												

DC > 25.4mm less than 10xD.

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	CZC MS
A3458.0	–	8.00	0.3150	165.0	265.0	MK 1
A3458.5	–	8.50	0.3346	165.0	265.0	MK 1
A3459.0	–	9.00	0.3543	175.0	275.0	MK 1
A3459.5	–	9.50	0.3740	175.0	275.0	MK 1
A3453/8	3/8	9.52	0.3750	185.0	285.0	MK 1
A34510.0	–	10.00	0.3937	185.0	285.0	MK 1
A34513/32	13/32	10.32	0.4063	185.0	285.0	MK 1
A34510.5	–	10.50	0.4134	185.0	285.0	MK 1
A34511.0	–	11.00	0.4331	195.0	300.0	MK 1
A3457/16	7/16	11.11	0.4375	195.0	300.0	MK 1
A34511.5	–	11.50	0.4528	195.0	300.0	MK 1
A34529/64	29/64	11.51	0.4531	205.0	310.0	MK 1
A34512.0	–	12.00	0.4724	205.0	310.0	MK 1
A34512.5	–	12.50	0.4921	205.0	310.0	MK 1
A3451/2	1/2	12.70	0.5000	205.0	310.0	MK 1
A34513.0	–	13.00	0.5118	205.0	310.0	MK 1
A34517/32	17/32	13.49	0.5313	220.0	325.0	MK 1
A34513.5	–	13.50	0.5315	220.0	325.0	MK 1
A34514.0	–	14.00	0.5512	220.0	325.0	MK 1
A3459/16	9/16	14.29	0.5625	220.0	340.0	MK 2
A34537/64	37/64	14.68	0.5781	220.0	340.0	MK 2
A34515.0	–	15.00	0.5906	220.0	340.0	MK 2
A34539/64	39/64	15.48	0.6094	230.0	355.0	MK 2

Product	DC [inch]	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	CZC MS
A34515.5	–	15.50	0.6102	230.0	355.0	MK 2
A3455/8	5/8	15.88	0.6250	230.0	355.0	MK 2
A34516.0	–	16.00	0.6299	230.0	355.0	MK 2
A34541/64	41/64	16.27	0.6406	230.0	355.0	MK 2
A34516.5	–	16.50	0.6496	230.0	355.0	MK 2
A34521/32	21/32	16.67	0.6563	230.0	355.0	MK 2
A34517.0	–	17.00	0.6693	230.0	355.0	MK 2
A34511/16	11/16	17.46	0.6875	245.0	370.0	MK 2
A34517.5	–	17.50	0.6890	245.0	370.0	MK 2
A34518.0	–	18.00	0.7087	245.0	370.0	MK 2
A34518.5	–	18.50	0.7283	245.0	370.0	MK 2
A34519.0	–	19.00	0.7480	245.0	370.0	MK 2
A3453/4	3/4	19.05	0.7500	260.0	385.0	MK 2
A34519.5	–	19.50	0.7677	260.0	385.0	MK 2
A34520.0	–	20.00	0.7874	260.0	385.0	MK 2
A34520.5	–	20.50	0.8071	260.0	385.0	MK 2
A34521.0	–	21.00	0.8268	260.0	385.0	MK 2
A34521.5	–	21.50	0.8465	270.0	405.0	MK 2
A34522.0	–	22.00	0.8661	270.0	405.0	MK 2
A3457/8	7/8	22.22	0.8750	270.0	405.0	MK 2
A34522.5	–	22.50	0.8858	270.0	405.0	MK 3
A34523.0	–	23.00	0.9055	270.0	405.0	MK 3
A34523.5	–	23.50	0.9252	270.0	425.0	MK 3

Product	DC	DC	DC	LCF	OAL	CZC MS
	[inch]	[mm]	[inch]	[mm]	[mm]	
A34524.0	–	24.00	0.9449	290.0	440.0	MK 3
A34524.5	–	24.50	0.9646	290.0	440.0	MK 3
A34525.0	–	25.00	0.9843	290.0	440.0	MK 3
A3451	1″	25.40	1.0000	290.0	440.0	MK 3
A34525.5	–	25.50	1.0039	290.0	440.0	MK 3
A34526.0	–	26.00	1.0236	290.0	440.0	MK 3
A34526.5	–	26.50	1.0433	290.0	440.0	MK 3
A34527.0	–	27.00	1.0630	305.0	460.0	MK 3
A34528.0	–	28.00	1.1024	305.0	460.0	MK 3
A34529.0	–	29.00	1.1417	305.0	460.0	MK 3
A34530.0	–	30.00	1.1811	305.0	460.0	MK 3
A3451.1/4	1.1/4	31.75	1.2500	320.0	480.0	MK 3

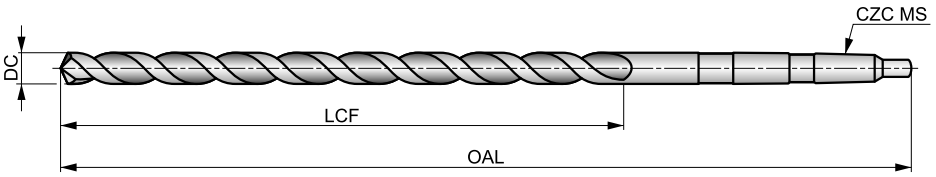
Product	DC	DC	DC	LCF	OAL	CZC MS
	[inch]	[mm]	[inch]	[mm]	[mm]	
A34531.0	–	31.00	1.2205	320.0	480.0	MK 3
A34532.0	–	32.00	1.2598	320.0	505.0	MK 4
A34533.0	–	33.00	1.2992	320.0	505.0	MK 4
A34534.0	–	34.00	1.3386	340.0	530.0	MK 4
A34535.0	–	35.00	1.3780	340.0	530.0	MK 4
A34536.0	–	36.00	1.4173	340.0	530.0	MK 4
A34537.0	–	37.00	1.4567	340.0	530.0	MK 4
A34538.0	–	38.00	1.4961	360.0	555.0	MK 4
A3451.1/2	1.1/2	38.10	1.5000	360.0	555.0	MK 4
A34539.0	–	39.00	1.5354	360.0	555.0	MK 4
A34540.0	–	40.00	1.5748	360.0	555.0	MK 4

A951

DORMER

HSS PFX Extra Long Series Taper Shank Drill (DIN 1870 Series 1), Bright Finish

A versatile drill with a special parabolic flute design for drilling deep holes in a single pass. The drill has a self-centering 130° point (centering with a short PFX Drill is recommended) so the force needed to drill the hole is reduced. Suitable for drilling many materials.



HSS	DIN 1870(1)	15×D
130°	Bright ST	
λ>35°	R	DC h8

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■25 G	■28 G	■29 G	■22 G	■19 E	◪17 C	◪12 D	◪9 D	◪8 C	◪7 D	◪6 C	◪5 B	◪16 C	◪14 C
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
◪15 C	◪12 C	◪7 E	◪6 E	◪5 E	◪12 A	◪22 G	◪16 D	◪12 D	◪16 C	◪13 C	◪10 C	◪14 C	◪11 C
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪9 C	◪13 C	◪10 C	◪7 C	◪6 C	◪5 C	◪15 C	◪11 C	◪9 C	◪30 H	◪23 H	◪15 G	◪37 F	◪33 F
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**
◪24 F	◪56 F	◪33 G	◪17 D	◪30 J	◪30 H	◪10 F	◪18 D	◪10 B	◪6 A	◪7 C	◪4 A	◪5 C	◪3 A
S4.1	**S4.2**												
◪4 C	◪2 A												

DC >= 14.5mm less than 15xD; DC > 23mm Bright.

Product	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	CZC MS
A95110.0	10.00	0.3937	185.0	285.0	MK 1
A95111.0	11.00	0.4331	195.0	300.0	MK 1
A95112.0	12.00	0.4724	205.0	310.0	MK 1
A95112.5	12.50	0.4921	205.0	310.0	MK 1
A95113.0	13.00	0.5118	205.0	310.0	MK 1
A95113.5	13.50	0.5315	220.0	325.0	MK 1
A95114.0	14.00	0.5512	220.0	325.0	MK 1
A95114.5	14.50	0.5709	220.0	340.0	MK 2
A95115.0	15.00	0.5906	220.0	340.0	MK 2
A95115.5	15.50	0.6102	230.0	355.0	MK 2
A95116.0	16.00	0.6299	230.0	355.0	MK 2
A95116.5	16.50	0.6496	230.0	355.0	MK 2
A95117.0	17.00	0.6693	230.0	355.0	MK 2
A95117.5	17.50	0.6890	245.0	370.0	MK 2
A95118.0	18.00	0.7087	245.0	370.0	MK 2

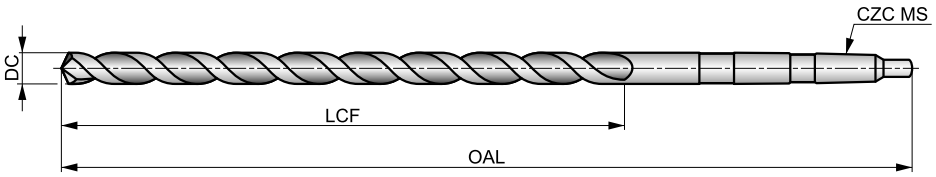
Product	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	CZC MS
A95118.5	18.50	0.7283	245.0	370.0	MK 2
A95119.0	19.00	0.7480	245.0	370.0	MK 2
A95119.5	19.50	0.7677	260.0	385.0	MK 2
A95120.0	20.00	0.7874	260.0	385.0	MK 2
A95121.0	21.00	0.8268	260.0	385.0	MK 2
A95122.0	22.00	0.8661	270.0	405.0	MK 2
A95123.0	23.00	0.9055	270.0	405.0	MK 2
A95124.0	24.00	0.9449	290.0	440.0	MK 3
A95125.0	25.00	0.9843	290.0	440.0	MK 3
A95126.0	26.00	1.0236	290.0	440.0	MK 3
A95127.0	27.00	1.0630	305.0	460.0	MK 3
A95128.0	28.00	1.1024	305.0	460.0	MK 3
A95129.0	29.00	1.1417	305.0	460.0	MK 3
A95130.0	30.00	1.1811	305.0	460.0	MK 3

A952

DORMER

HSS PFX Extra Long Series Taper Shank Drill (DIN 1870 Series 2), Bright Finish

A versatile drill with a special parabolic flute design for drilling deep holes in a single pass. The drill has a self-centering 130° point (centering with a short PFX Drill is recommended) so the force needed to drill the hole is reduced. Suitable for drilling many materials.



HSS	DIN 1870(2)	20×D
130°	Bright ST	
λ>35°	R	DC h8

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■25 G	■28 G	■29 G	■22 G	■19 E	◪17 C	◪12 D	◪9 D	◪8 C	◪7 D	◪6 C	◪5 B	◪16 C	◪14 C
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
◪15 C	◪12 C	◪7 E	◪6 E	◪5 E	◪12 A	◪22 G	◪16 D	◪12 D	◪16 C	◪13 C	◪10 C	◪14 C	◪11 C
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪9 C	◪13 C	◪10 C	◪7 C	◪6 C	◪5 C	◪15 C	◪11 C	◪9 C	◪30 H	◪23 H	◪15 G	◪37 F	◪33 F
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**
◪24 F	◪56 F	◪33 G	◪17 D	◪30 J	◪30 H	◪10 F	◪18 D	◪10 B	◪6 A	◪7 C	◪4 A	◪5 C	◪3 A
S4.1	**S4.2**												
◪4 C	◪2 A												

DC >= 14.5mm less than 20xD; DC > 23mm Bright.

Product	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	CZC MS
A9528.0	8.00	0.3150	210.0	330.0	MK 1
A9528.5	8.50	0.3346	210.0	330.0	MK 1
A9529.0	9.00	0.3543	220.0	345.0	MK 1
A95210.0	10.00	0.3937	235.0	360.0	MK 1
A95210.5	10.50	0.4134	235.0	360.0	MK 1
A95211.0	11.00	0.4331	250.0	375.0	MK 1
A95211.5	11.50	0.4528	250.0	375.0	MK 1
A95212.0	12.00	0.4724	260.0	395.0	MK 1
A95212.5	12.50	0.4921	260.0	395.0	MK 1
A95213.0	13.00	0.5118	260.0	395.0	MK 1
A95213.5	13.50	0.5315	275.0	410.0	MK 1
A95214.0	14.00	0.5512	275.0	410.0	MK 1
A95214.5	14.50	0.5709	275.0	425.0	MK 2
A95215.0	15.00	0.5906	275.0	425.0	MK 2
A95215.5	15.50	0.6102	295.0	445.0	MK 2
A95216.0	16.00	0.6299	295.0	445.0	MK 2
A95216.5	16.50	0.6496	295.0	445.0	MK 2
A95217.0	17.00	0.6693	295.0	445.0	MK 2
A95217.5	17.50	0.6890	310.0	465.0	MK 2
A95218.0	18.00	0.7087	310.0	465.0	MK 2
A95218.5	18.50	0.7283	310.0	465.0	MK 2

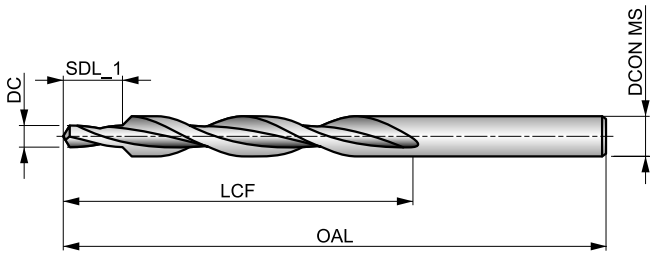
Product	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	CZC MS
A95219.0	19.00	0.7480	310.0	465.0	MK 2
A95219.5	19.50	0.7677	325.0	490.0	MK 2
A95220.0	20.00	0.7874	325.0	490.0	MK 2
A95221.0	21.00	0.8268	325.0	490.0	MK 2
A95222.0	22.00	0.8661	345.0	515.0	MK 2
A95223.0	23.00	0.9055	345.0	515.0	MK 2
A95224.0	24.00	0.9449	365.0	555.0	MK 3
A95225.0	25.00	0.9843	365.0	555.0	MK 3
A95226.0	26.00	1.0236	365.0	555.0	MK 3
A95227.0	27.00	1.0630	385.0	580.0	MK 3
A95228.0	28.00	1.1024	385.0	580.0	MK 3
A95229.0	29.00	1.1417	385.0	580.0	MK 3
A95230.0	30.00	1.1811	385.0	580.0	MK 3
A95231.0	31.00	1.2205	410.0	610.0	MK 3
A95232.0	32.00	1.2598	410.0	635.0	MK 4
A95233.0	33.00	1.2992	410.0	635.0	MK 4
A95234.0	34.00	1.3386	430.0	665.0	MK 4
A95235.0	35.00	1.3780	430.0	665.0	MK 4
A95238.0	38.00	1.4961	460.0	695.0	MK 4
A95240.0	40.00	1.5748	460.0	695.0	MK 4

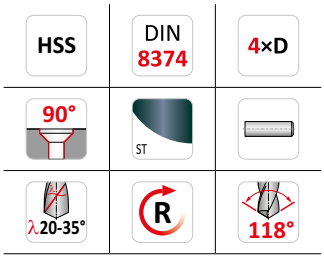
A400

DORMER

HSS Subland Drill, Steam Tempered Finish

A versatile tool, designed to drill chamfered clearance holes for standard metric screws. A 118° point angle on the drill Pilot and a 90° Countersink. Suitable for both CNC and conventional machines. Steam tempered finish retains cutting fluid and prevents chip to tool welding. Suitable for drilling many materials.





Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■29 G	■33 G	■34 G	■25 G	■22 E	◪19 C	■15 E	■12 E	◪10 C	■9 E	◪7 C	◪6 C	◪22 E	◪19 E
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
◪20 E	◪16 E	◪10 G	◪9 G	◪8 G	◪12 C	■30 G	■22 E	■17 E	◪23 E	◪19 E	◪15 C	◪21 E	◪16 E
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪13 C	◪19 E	◪14 E	◪11 C	◪9 C	◪8 C	◪22 E	◪16 E	◪13 C	◪45 E	◪34 E	◪23 E	◪49 E	◪44 E
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**
◪32 E	◪68 E	◪40 E	◪20 E	◪30 I	◪23 E	◪14 C	◪8 A	◪8 C	◪6 A	◪6 C	◪4 A	◪5 C	◪3 A

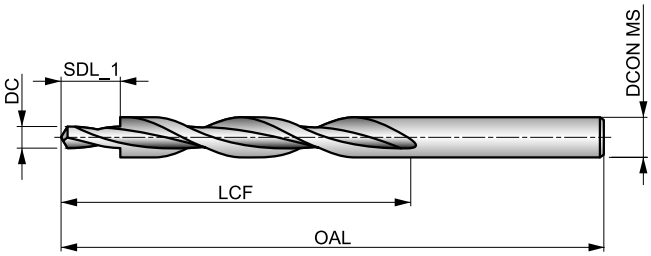
Product	TDZ	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	SDL_1 [mm]	DCON MS [mm]
A400M3	M3	3.20	0.1260	57.0	93.0	9.00	6.00
A400M4	M4	4.30	0.1693	75.0	117.0	11.00	8.00
A400M5	M5	5.30	0.2087	87.0	133.0	13.00	10.00
A400M6	M6	6.40	0.2520	94.0	142.0	15.00	11.50
A400M8	M8	8.40	0.3307	114.0	169.0	19.00	15.00
A400M10	M10	10.50	0.4134	135.0	198.0	23.00	19.00

A402

DORMER

HSS Subland Drill, Steam Tempered Finish

Includes a 118° Pilot and 180° counterbore with specific Pilot diameter and length, recommended for creating counterbored clearance holes for standard metric screws. Steam tempered finish retains cutting fluid and prevents chip to tool welding. Suitable for drilling many materials.



HSS	DIN 8376	4×D
180°	ST	
λ 20-35°	R	118°

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

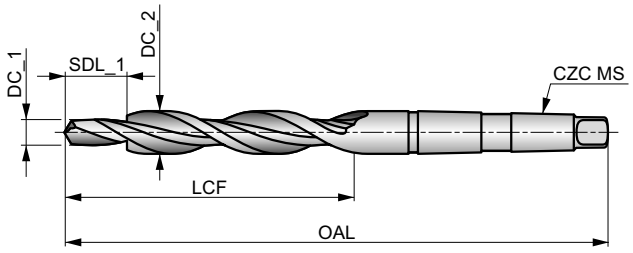
P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■29 G	■33 G	■34 G	■25 G	■22 E	◪19 C	■15 E	■12 E	◪10 C	■9 E	◪7 C	◪6 C	◪22 E	◪19 E
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
◪20 E	◪16 E	◪10 G	◪9 G	◪8 G	◪12 C	■30 G	■22 E	■17 E	◪23 E	◪19 E	◪15 C	◪21 E	◪16 E
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪13 C	◪19 E	◪14 E	◪11 C	◪9 C	◪8 C	◪22 E	◪16 E	◪13 C	◪45 E	◪34 E	◪23 E	◪49 E	◪44 E
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**
◪32 E	◪68 E	◪40 E	◪20 E	◪30 I	◪23 E	◪14 C	◪8 A	◪8 C	◪6 A	◪6 C	◪4 A	◪5 C	◪3 A

Product	TDZ	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	SDL_1 [mm]	DCON MS [mm]
A402M3	M3	3.40	0.1339	57.0	93.0	9.00	6.00
A402M4	M4	4.50	0.1772	75.0	117.0	11.00	8.00
A402M5	M5	5.50	0.2165	87.0	133.0	13.00	10.00
A402M6	M6	6.60	0.2598	94.0	142.0	15.00	11.00
A402M8	M8	9.00	0.3543	114.0	169.0	19.00	15.00
A402M10	M10	11.00	0.4331	130.0	191.0	23.00	18.00

A405

HSS Taper Shank Subland Drill, Steam Tempered Finish

A versatile tool recommended for creating counterbored clearance holes for standard metric screws. A 118° Pilot and 180° counterbore. Suitable for both CNC and conventional machines. Steam tempered finish retains cutting fluid and prevents chip to tool welding. Suitable for drilling many materials.



HSS	DIN 8377	4×D
180°	ST	
λ20-35°	R	118°

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■29 G	■33 G	■34 G	■25 G	■22 E	◪19 C	■15 E	■12 E	◪10 C	■9 E	◪7 C	◪6 C	◪22 E	◪19 E
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
◪20 E	◪16 E	◪10 G	◪9 G	◪8 G	◪12 C	■30 G	■22 E	■17 E	◪23 E	◪19 E	◪15 C	◪21 E	◪16 E
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪13 C	◪19 E	◪14 E	◪11 C	◪9 C	◪8 C	◪22 E	◪16 E	◪13 C	◪45 E	◪34 E	◪23 E	◪49 E	◪44 E
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**
◪32 E	◪68 E	◪40 E	◪20 E	◪30 I	◪23 E	◪14 C	◪8 A	◪8 C	◪6 A	◪6 C	◪4 A	◪5 C	◪3 A

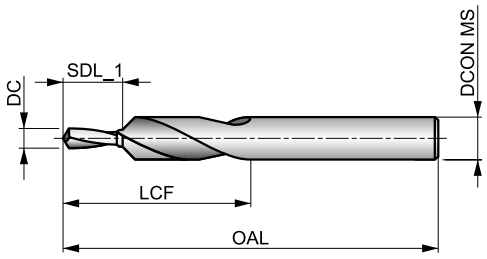
Product	TDZ	DC_1 [mm]	DC_1 [inch]	DC_2 [mm]	LCF [mm]	OAL [mm]	SDL_1 [mm]	CZC MS
A405M6	M6	6.60	0.2598	11.00	94.0	175.0	15.00	MK 1
A405M8	M8	9.00	0.3543	15.00	114.0	212.0	19.00	MK 2
A405M10	M10	11.00	0.4331	18.00	130.0	228.0	23.00	MK 2
A405M12	M12	13.50	0.5315	20.00	140.0	238.0	27.00	MK 2
A405M14	M14	15.50	0.6102	24.00	160.0	281.0	31.00	MK 3
A405M16	M16	17.50	0.6890	26.00	165.0	286.0	35.00	MK 3
A405M18	M18	20.00	0.7874	30.00	175.0	296.0	39.00	MK 3

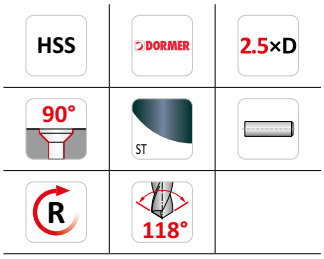
A412

DORMER

HSS Step Drill, Steam Tempered Finish

Designed to drill chamfered clearance holes for standard metric screws. A 118° point angle on the drill Pilot with a 90° chamfer. Steam tempered finish retains cutting fluid and prevents chip to tool welding. Suitable for drilling many materials. It is suitable for both CNC and conventional machines.





Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

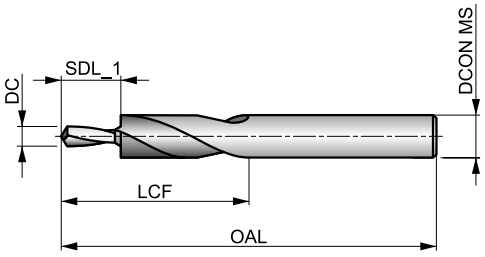
P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■29 I	■33 I	■34 I	■25 I	■22 G	◪19 E	■15 G	■12 G	◪10 E	■9 G	◪7 E	◪6 C	■22 G	■19 G
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
■20 G	■16 G	◪10 I	◪9 I	◪8 I	◪12 E	■30 G	■22 E	■17 E	◪23 E	◪19 E	◪15 E	◪21 E	◪16 E
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪13 E	◪19 E	◪14 E	◪11 E	◪9 E	◪8 E	◪22 E	◪16 E	◪13 E	◪45 G	◪34 G	◪23 G	◪42 G	◪37 G
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**
◪27 G	◪68 G	◪40 G	◪20 G	◪30 I	◪27 G	◪16 E	◪8 C	◪11 G	◪6 C	◪8 G	◪4 C	◪6 G	◪3 C

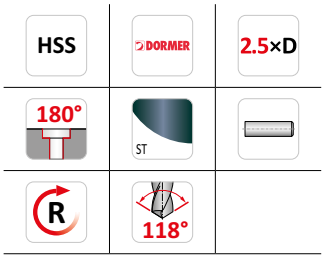
Product	TDZ	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	SDL_1 [mm]	DCON MS [mm]
A412M3	M3	3.40	0.1339	31.0	70.0	9.00	6.60
A412M4	M4	4.50	0.1772	40.0	84.0	11.00	9.00
A412M5	M5	5.50	0.2165	47.0	95.0	13.00	11.00
A412M6	M6	6.60	0.2598	51.0	102.0	15.00	13.00
A412M8	M8	9.00	0.3543	62.0	123.0	19.00	17.20
A412M10	M10	11.00	0.4331	70.0	141.0	23.00	21.50

A413

HSS Step Drill, Steam Tempered Finish

A versatile tool recommended for creating counterbored clearance holes for standard metric screws. A 118° Pilot and 180° counterbore. Steam tempered finish retains cutting fluid and prevents chip to tool welding. Suitable for both CNC and conventional machines. Suitable for drilling many materials.





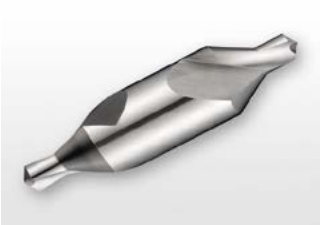
Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 29 I	■ 33 I	■ 34 I	■ 25 I	■ 22 G	◪ 19 E	■ 15 G	■ 12 G	◪ 10 E	■ 9 G	◪ 7 E	◪ 6 C	■ 22 G	■ 19 G
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
■ 20 G	■ 16 G	◪ 10 I	◪ 9 I	◪ 8 I	◪ 12 E	■ 30 G	■ 22 E	■ 17 E	◪ 23 E	◪ 19 E	◪ 15 E	◪ 21 E	◪ 16 E
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪ 13 E	◪ 19 E	◪ 14 E	◪ 11 E	◪ 9 E	◪ 8 E	◪ 22 E	◪ 16 E	◪ 13 E	◪ 45 G	◪ 34 G	◪ 23 G	◪ 42 G	◪ 37 G
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**
◪ 27 G	◪ 68 G	◪ 40 G	◪ 20 G	◪ 30 I	◪ 27 G	◪ 16 E	◪ 8 C	◪ 11 G	◪ 6 C	◪ 8 G	◪ 4 C	◪ 6 G	◪ 3 C

Product	TDZ	DC [mm]	DC [inch]	LCF [mm]	OAL [mm]	SDL_1 [mm]	DCON MS [mm]
A413M3	M3	3.40	0.1339	28.0	66.0	9.00	6.00
A413M4	M4	4.50	0.1772	37.0	79.0	11.00	8.00
A413M5	M5	5.50	0.2165	43.0	89.0	13.00	10.00
A413M6	M6	6.60	0.2598	47.0	95.0	15.00	11.00
A413M8	M8	9.00	0.3543	56.0	111.0	19.00	15.00
A413M10	M10	11.00	0.4331	62.0	123.0	23.00	18.00

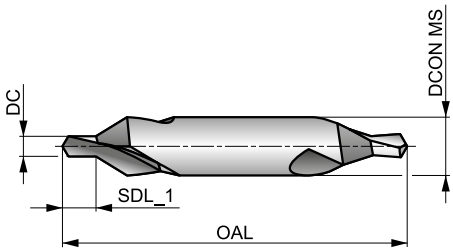
A200

DORMER



HSS Centre Drill with 118° Point angle and 60° Countersink, Bright Finish

Recommended for starting a precise hole in the end of a shaft so it can be securely held prior to machining. The two drilling ends give increased productivity per tool. Suitable for many materials.



HSS	DIN 333A	1×D
60°	Bright	
R	118°	

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■33 I	■37 I	■38 I	■28 I	■25 G	◪22 E	■19 F	■15 F	◪13 E	■11 F	◪10 E	◪8 D	◪21 E	◪17 E
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
◪18 E	◪15 E	◪9 G	◪8 G	◪7 G	◪10 C	■30 I	■22 F	■17 F	◪25 E	◪20 E	◪16 E	◪22 E	◪17 E
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪13 E	◪20 E	◪15 E	◪11 E	◪10 E	◪8 E	◪23 E	◪17 E	◪13 E	◪33 J	◪25 J	◪17 I	◪42 H	◪37 H
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**
◪27 H	◪56 H	◪33 I	◪17 G	◪30 J	◪28 H	◪14 F	◪24 F	◪13 D	◪7 B	◪7 E	◪6 A	◪5 E	◪4 A
S4.1	**S4.2**												
◪4 E	◪3 A												

Products from this series are also available in set. Please see A296.

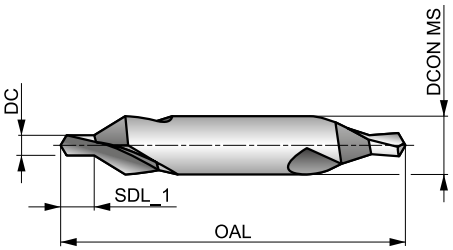
Product	DC [mm]	DC [inch]	SDL_1 [mm]	OAL [mm]	DCON MS [mm]
A200.5X3.15 [1]	0.50	0.0197	0.9 - 0.6	25.0	3.15
A200.8X3.15 [1]	0.80	0.0315	1.3 - 1.0	25.0	3.15
A2001.0X3.15	1.00	0.0394	1.7 - 1.3	31.0	3.15
A2001.25X3.15	1.25	0.0492	2.0 - 1.6	31.0	3.15
A2001.6X4.0	1.60	0.0630	2.6 - 2.0	35.0	4.00
A2002.0X5.0	2.00	0.0787	3.1 - 2.5	40.0	5.00
A2002.5X6.3	2.50	0.0984	3.8 - 3.1	45.0	6.30
A2003.15X8.0	3.15	0.1240	4.6 - 3.9	50.0	8.00
A2004.0X10.0	4.00	0.1575	5.9 - 5.0	55.0	10.00
A2005.0X12.5	5.00	0.1969	7.2 - 6.3	63.0	12.50
A2006.3X16.0	6.30	0.2480	8.9 - 8.0	71.0	16.00
A2008.0X20.0	8.00	0.3150	11.1 - 10.1	80.0	20.00
A20010.0X25.0	10.00	0.3937	13.8 - 12.8	100.0	25.00
A20012.5X31.5	12.50	0.4921	17.5 - 16.5	125.0	31.50

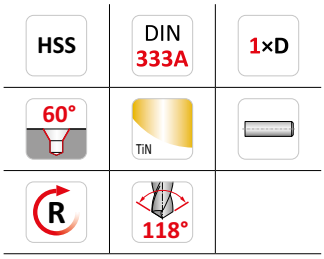
[1] Single Ended Only.

A205

HSS Centre Drill with 118° Point angle and 60° Countersink, TiN Coated

Recommended for starting a precise hole in the end of a shaft so it can be securely held prior to machining. The two drilling ends give increased productivity per tool. TiN coating improves performance and extends tool life. Suitable for drilling many materials.





Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 40 I	■ 45 I	■ 46 I	■ 34 I	■ 30 G	◪ 27 E	■ 24 F	■ 19 F	◪ 16 E	■ 14 F	◪ 12 E	◪ 10 D	◪ 25 E	◪ 21 E
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
◪ 22 E	◪ 18 E	◪ 12 G	◪ 10 G	◪ 9 G	◪ 12 C	■ 36 I	■ 27 F	■ 20 F	◪ 30 E	◪ 24 E	◪ 19 E	◪ 26 E	◪ 20 E
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪ 16 E	◪ 24 E	◪ 18 E	◪ 13 E	◪ 11 E	◪ 10 E	◪ 27 E	◪ 21 E	◪ 16 E	◪ 40 J	◪ 30 J	◪ 20 I	◪ 49 H	◪ 44 H
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**
◪ 32 H	◪ 68 H	◪ 40 I	◪ 20 G	◪ 36 J	◪ 34 H	◪ 17 F	◪ 29 F	◪ 16 D	◪ 8 B	◪ 8 E	◪ 7 A	◪ 6 E	◪ 5 A
S4.1	**S4.2**												
◪ 5 E	◪ 4 A												

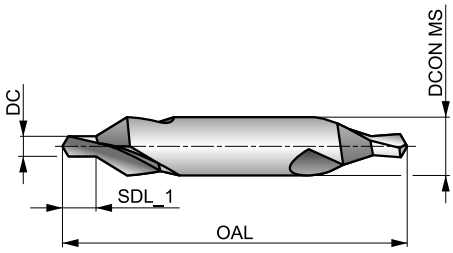
Product	DC [mm]	DC [inch]	SDL_1 [mm]	OAL [mm]	DCON MS [mm]
A2051.0X3.15	1.00	0.0394	1.7 - 1.3	31.0	3.15
A2051.25X3.15	1.25	0.0492	2.0 - 1.6	31.0	3.15
A2051.6X4.0	1.60	0.0630	2.6 - 2.0	35.0	4.00
A2052.0X5.0	2.00	0.0787	3.1 - 2.5	40.0	5.00
A2052.5X6.3	2.50	0.0984	3.8 - 3.1	45.0	6.30
A2053.15X8.0	3.15	0.1240	4.6 - 3.9	50.0	8.00
A2054.0X10.0	4.00	0.1575	5.9 - 5.0	55.0	10.00
A2055.0X12.5	5.00	0.1969	7.2 - 6.3	63.0	12.50

A206

DORMER

HSS-E Centre Drill with 118° Point angle and 60° Countersink, Bright Finish

Recommended for starting a precise hole in the end of a shaft so it can be securely held prior to machining. The two drilling ends give increased productivity per tool. Suitable for drilling many materials.



HSS-E	DIN 333A	1×D
60°	Bright	
R	118°	

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■40 I	■45 I	■46 I	■34 I	■30 G	◪27 E	■24 F	■19 F	◪16 E	■14 F	◪12 E	◪10 D	◪25 E	◪21 E
M2.1	M2.2	M3.1	M3.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2
◪22 E	◪18 E	◪12 G	◪10 G	◪9 G	◪12 C	■36 I	■27 F	■20 F	◪30 E	◪24 E	◪19 E	◪26 E	◪20 E
K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3	N2.1	N2.2
◪16 E	◪24 E	◪18 E	◪13 E	◪11 E	◪10 E	◪27 E	◪21 E	◪16 E	◪40 J	◪30 J	◪20 I	◪49 H	◪44 H
N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	N4.3	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2
◪32 H	◪68 H	◪40 I	◪20 G	◪36 J	◪34 H	◪17 F	◪29 F	◪16 D	◪8 B	◪8 E	◪7 A	◪6 E	◪5 A
S4.1	S4.2												
◪5 E	◪4 A												

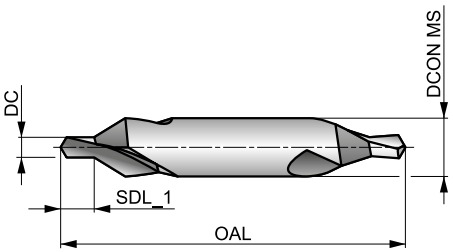
Product	DC [mm]	DC [inch]	SDL_1 [mm]	OAL [mm]	DCON MS [mm]
A2061.0X3.15	1.00	0.0394	1.7 - 1.3	31.0	3.15
A2061.25X3.15	1.25	0.0492	2.0 - 1.6	31.0	3.15
A2061.6X4.0	1.60	0.0630	2.6 - 2.0	35.0	4.00
A2062.0X5.0	2.00	0.0787	3.1 - 2.5	40.0	5.00
A2062.5X6.3	2.50	0.0984	3.8 - 3.1	45.0	6.30
A2063.15X8.0	3.15	0.1240	4.6 - 3.9	50.0	8.00
A2064.0X10.0	4.00	0.1575	5.9 - 5.0	55.0	10.00
A2065.0X12.5	5.00	0.1969	7.2 - 6.3	63.0	12.50

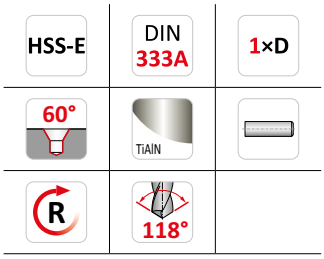
A266

DORMER

HSS-E Centre Drill with 118° Pilot and 60° Countersink, TiALN Coated

Recommended for starting a precise hole in the end of a shaft so it can be securely held prior to machining. The two drilling ends give increased productivity per tool. TiAlN coating improves performance and extends tool life. Suitable for drilling many materials.





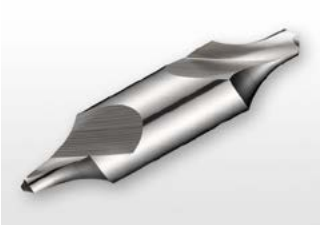
Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■40 I	■45 I	■46 I	■34 I	■30 G	◪27 E	■24 F	■19 F	◪16 E	■14 F	◪12 E	◪10 D	◪25 E	◪21 E
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
◪22 E	◪18 E	◪12 G	◪10 G	◪9 G	◪12 C	■36 I	■27 F	■20 F	◪30 E	◪24 E	◪19 E	◪26 E	◪20 E
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪16 E	◪24 E	◪18 E	◪13 E	◪11 E	◪10 E	◪27 E	◪21 E	◪16 E	◪40 J	◪30 J	◪20 I	◪49 H	◪44 H
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**
◪32 H	◪68 H	◪40 I	◪20 G	◪36 J	◪34 H	◪17 F	◪29 F	◪16 D	◪8 B	◪8 E	◪7 A	◪6 E	◪5 A
S4.1	**S4.2**												
◪5 E	◪4 A												

Product	DC [mm]	DC [inch]	SDL_1 [mm]	OAL [mm]	DCON MS [mm]
A2661.0X3.15	1.00	0.0394	1.7 - 1.3	31.0	3.15
A2661.25X3.15	1.25	0.0492	2.0 - 1.6	31.0	3.15
A2661.6X4.0	1.60	0.0630	2.6 - 2.0	35.0	4.00
A2662.0X5.0	2.00	0.0787	3.1 - 2.5	40.0	5.00
A2662.5X6.3	2.50	0.0984	3.8 - 3.1	45.0	6.30
A2663.15X8.0	3.15	0.1240	4.6 - 3.9	50.0	8.00
A2664.0X10.0	4.00	0.1575	5.9 - 5.0	55.0	10.00
A2665.0X12.5	5.00	0.1969	7.2 - 6.3	63.0	12.50

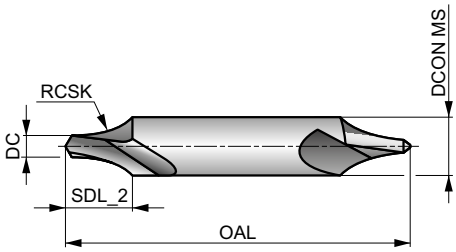
A210

DORMER



HSS Center Drill, 118° Point angle and Concave Countersink, Bright Finish

Recommended for starting a precise hole in the end of a shaft so it can be securely held prior to machining. The two drilling ends give increased productivity per tool. Can be used to machine a number of materials.



HSS	DIN 333R	1×D
R	Bright	
R	118°	

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■33 I	■37 I	■38 I	■28 I	■25 G	◪22 E	■19 F	■15 F	◪13 E	■11 F	◪10 E	◪8 D	◪21 E	◪17 E
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
◪18 E	◪15 E	◪9 G	◪8 G	◪7 G	◪10 C	■30 I	■22 F	■17 F	◪25 E	◪20 E	◪16 E	◪22 E	◪17 E
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪13 E	◪20 E	◪15 E	◪11 E	◪10 E	◪8 E	◪23 E	◪17 E	◪13 E	◪33 J	◪25 J	◪17 I	◪42 H	◪37 H
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**
◪27 H	◪56 H	◪33 I	◪17 G	◪30 J	◪28 H	◪14 F	◪24 F	◪13 D	◪7 B	◪7 E	◪6 A	◪5 E	◪4 A
S4.1	**S4.2**												
◪4 E	◪3 A												

Product	DC [mm]	DC [inch]	SDL_2 [mm]	OAL [mm]	RCSK [mm]	DCON MS [mm]
A210.5X3.15 [1]	0.50	0.0197	2.6 - 2.3	25.0	2.50 - 2.00	3.15
A210.8X3.15 [1]	0.80	0.0315	2.9 - 2.6	25.0	3.15 - 2.50	3.15
A2101.0X3.15	1.00	0.0394	3.3 - 3.0	31.0	3.65 - 2.90	3.15
A2101.25X3.15	1.25	0.0492	3.6 - 3.3	31.0	3.95 - 3.15	3.15
A2101.6X4.0	1.60	0.0630	4.7 - 4.2	35.0	5.00 - 4.00	4.00
A2102.0X5.0	2.00	0.0787	5.4 - 5.0	40.0	6.25 - 5.00	5.00
A2102.5X6.3	2.50	0.0984	6.8 - 6.3	45.0	7.88 - 6.30	6.30
A2103.15X8.0	3.15	0.1240	8.5 - 8.0	50.0	10.00 - 8.00	8.00
A2104.0X10.0	4.00	0.1575	10.6 - 10.0	55.0	12.50 - 10.00	10.00
A2105.0X12.5	5.00	0.1969	13.1 - 12.5	63.0	15.63 - 12.50	12.50
A2106.3X16.0	6.30	0.2480	16.6 - 16.0	71.0	20.00 - 16.00	16.00
A2108.0X20.0	8.00	0.3150	20.7 - 20.0	80.0	25.00 - 20.00	20.00
A21010.0X25.0	10.00	0.3937	25.7 - 25.0	100.0	31.25 - 25.00	25.00

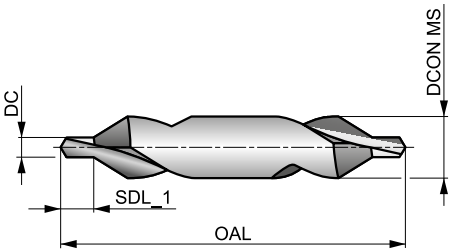
[1] Single Ended Only.

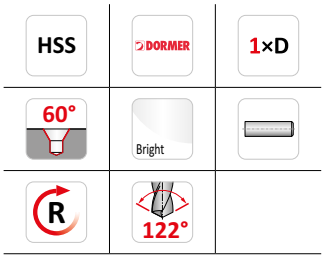
A201

DORMER

HSS Centre Drill with 122° Point angle and 60° Countersink, Bright Finish

Recommended for starting a precise hole in the end of a shaft so it can be securely held prior to machining. The two drilling ends give increased productivity per tool. Suitable for drilling many materials.





Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 33 I	■ 37 I	■ 38 I	■ 28 I	■ 25 G	◪ 22 E	■ 19 F	■ 15 F	◪ 13 E	■ 11 F	◪ 10 E	◪ 8 D	◪ 21 E	◪ 17 E
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
◪ 18 E	◪ 15 E	◪ 9 G	◪ 8 G	◪ 7 G	◪ 10 C	■ 30 I	■ 22 F	■ 17 F	◪ 25 E	◪ 20 E	◪ 16 E	◪ 22 E	◪ 17 E
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪ 13 E	◪ 20 E	◪ 15 E	◪ 11 E	◪ 10 E	◪ 8 E	◪ 23 E	◪ 17 E	◪ 13 E	◪ 33 J	◪ 25 J	◪ 17 I	◪ 42 H	◪ 37 H
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**
◪ 27 H	◪ 56 H	◪ 33 I	◪ 17 G	◪ 30 J	◪ 28 H	◪ 14 F	◪ 24 F	◪ 13 D	◪ 7 B	◪ 7 E	◪ 6 A	◪ 5 E	◪ 4 A
S4.1	**S4.2**												
◪ 4 E	◪ 3 A												

Product	DC	DC	SDL_1	OAL	DCON MS
	[mm]	[inch]	[mm]	[mm]	[mm]
A201.63X3.15 [1]	0.63	0.0248	1.2 - 0.9	20.0	3.15
A201.75X3.5	0.75	0.0295	1.3 - 1.0	35.0	3.50
A2011.0X4.0	1.00	0.0394	2.1 - 1.5	35.0	4.00
A2011.5X5.0	1.50	0.0591	2.8 - 2.0	40.0	5.00
A2011.6X5.0	1.60	0.0630	2.4 - 2.0	40.0	5.00
A2012.0X6.0	2.00	0.0787	4.0 - 3.0	45.0	6.00
A2012.0X6.3	2.00	0.0787	2.9 - 2.5	45.0	6.30
A2012.5X8.0	2.50	0.0984	4.5 - 3.5	50.0	8.00
A2013.0X8.0	3.00	0.1181	4.4 - 3.9	50.0	8.00
A2013.0X10.0	3.00	0.1181	5.0 - 4.0	56.0	10.00
A2013.15X10.0	3.15	0.1240	4.4 - 3.9	56.0	10.00
A2014.0X12.0	4.00	0.1575	6.2 - 5.0	66.0	12.00
A2015.0X14.0	5.00	0.1969	7.7 - 6.5	78.0	14.00
A2016.0X18.0	6.00	0.2362	9.2 - 8.0	90.0	18.00

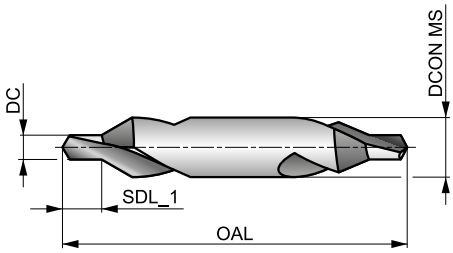
[1] Single Ended Only.

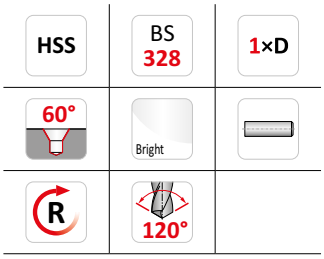
A225

DORMER

HSS Centre Drill with 120° Point angle and 60° Countersink, Bright Finish

Recommended for starting a precise hole in the end of a shaft so it can be securely held prior to machining. British Standard 328. The two drilling ends give increased productivity per tool. Suitable for drilling many materials.





Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■33 I	■37 I	■38 I	■28 I	■25 G	◪22 E	■19 F	■15 F	◪13 E	■11 F	◪10 E	◪8 D	◪21 E	◪17 E
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
◪18 E	◪15 E	◪9 G	◪8 G	◪7 G	◪10 C	■30 I	■22 F	■17 F	◪25 E	◪20 E	◪16 E	◪22 E	◪17 E
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪13 E	◪20 E	◪15 E	◪11 E	◪10 E	◪8 E	◪23 E	◪17 E	◪13 E	◪33 J	◪25 J	◪17 I	◪42 H	◪37 H
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**
◪27 H	◪56 H	◪33 I	◪17 G	◪30 J	◪28 H	◪14 F	◪24 F	◪13 D	◪7 B	◪7 E	◪6 A	◪5 E	◪4 A
S4.1	**S4.2**												
◪4 E	◪3 A												

Products from this series are also available in set. Please see A296.

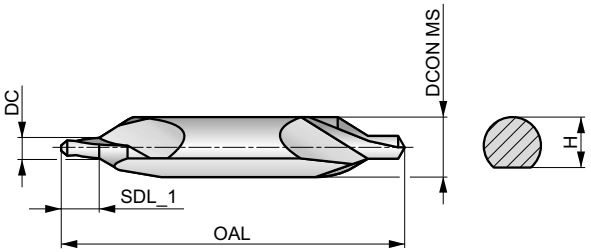
Product	Nr.	DC [inch]	DC [inch]	SDL_1 [inch]	OAL [inch]	DCONMS [inch]
A225BS1	BS1	3/64	0.0469	5/64 - 1/16	1.1/2	1/8
A225BS2	BS2	1/16	0.0625	3/32 - 5/64	1.3/4	3/16
A225BS3	BS3	3/32	0.0938	5/32 - 1/8	2″	1/4
A225BS4	BS4	1/8	0.1250	3/16 - 5/32	2.1/4	5/16
A225BS5	BS5	3/16	0.1875	9/32 - 1/4	2.1/2	7/16
A225BS5A	BS5A	7/32	0.2188	5/16 - 9/32	2.3/4	1/2
A225BS6	BS6	1/4	0.2500	3/8 - 5/16	3″	5/8
A225BS7	BS7	5/16	0.3125	15/32 - 13/32	3.1/2	3/4

A237

DORMER

HSS-E (5% Cobalt) Center Drill, 118° Point, 60° Countersink, Bright Finish

Designed to start a precise hole in the end of a shaft so it can be securely held prior to machining. The two drilling ends give increased productivity per tool. It has a bright finish. Suitable for drilling many materials.



HSS-E	DIN 333A	1×D
60°	Bright	H
R	118°	

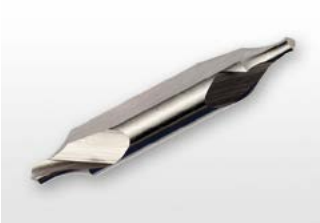
Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 33 I	■ 37 I	■ 38 I	■ 28 I	■ 25 G	◪ 22 E	■ 19 F	■ 15 F	◪ 13 E	■ 11 F	◪ 10 E	◪ 8 D	◪ 21 E	◪ 17 E
M2.1	M2.2	M3.1	M3.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2
◪ 18 E	◪ 15 E	◪ 9 G	◪ 8 G	◪ 7 G	◪ 10 C	■ 30 I	■ 22 F	■ 17 F	◪ 25 E	◪ 20 E	◪ 16 E	◪ 22 E	◪ 17 E
K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3	N2.1	N2.2
◪ 13 E	◪ 20 E	◪ 15 E	◪ 11 E	◪ 10 E	◪ 8 E	◪ 23 E	◪ 17 E	◪ 13 E	◪ 33 J	◪ 25 J	◪ 17 I	◪ 42 H	◪ 37 H
N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	N4.3	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2
◪ 27 H	◪ 56 H	◪ 33 I	◪ 17 G	◪ 30 J	◪ 28 H	◪ 14 F	◪ 24 F	◪ 13 D	◪ 7 B	◪ 7 E	◪ 6 A	◪ 5 E	◪ 4 A
S4.1	S4.2												
◪ 4 E	◪ 3 A												

Product	DC [mm]	DC [inch]	SDL_1 [mm]	OAL [mm]	DCON MS [mm]	H [mm]
A2371.6X4.0	1.60	0.0630	2.6 - 2.0	35.0	4.00	3.25 - 3.15
A2372.0X5.0	2.00	0.0787	3.1 - 2.5	40.0	5.00	4.20 - 4.10
A2372.5X6.3	2.50	0.0984	3.8 - 3.1	45.0	6.30	5.35 - 5.25
A2373.15X8.0	3.15	0.1240	4.6 - 3.9	50.0	8.00	6.95- 6.85
A2374.0X10.0	4.00	0.1575	5.9 - 5.0	55.0	10.00	8.40 - 8.30
A2375.0X12.5	5.00	0.1969	7.2 - 6.3	63.0	12.50	10.95 - 10.85
A2376.3X16.0	6.30	0.2480	8.9 - 8.0	71.0	16.00	14.00 -13.90
A2378.0X20.0	8.00	0.3150	11.1 - 10.1	80.0	20.00	17.90 - 17.80
A23710.0X25.0	10.00	0.3937	13.8 - 12.8	100.0	25.00	22.50 -22.40

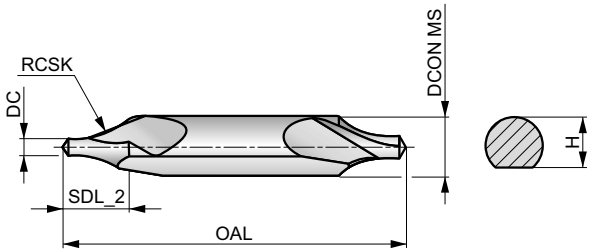
A238

DORMER



HSS-E (5% Co) Center Drill, 118° Point, Concave Countersink, Bright Finish

Designed to start a precise hole in the end of a shaft so it can be securely held prior to machining. The two drilling ends give increased productivity per tool. Suitable for drilling many materials. Bright finish and can be used with special chamfering adaptors.



HSS-E	DIN 333R	1×D
R	Bright	H
R	118°	

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■33 I	■37 I	■38 I	■28 I	■25 G	◪22 E	■19 F	■15 F	◪13 E	■11 F	◪10 E	◪8 D	◪21 E	◪17 E
M2.1	M2.2	M3.1	M3.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2
◪18 E	◪15 E	◪9 G	◪8 G	◪7 G	◪10 C	■30 I	■22 F	■17 F	◪25 E	◪20 E	◪16 E	◪22 E	◪17 E
K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3	N2.1	N2.2
◪13 E	◪20 E	◪15 E	◪11 E	◪10 E	◪8 E	◪23 E	◪17 E	◪13 E	◪33 J	◪25 J	◪17 I	◪42 H	◪37 H
N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	N4.3	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2
◪27 H	◪56 H	◪33 I	◪17 G	◪30 J	◪28 H	◪14 F	◪24 F	◪13 D	◪7 B	◪7 E	◪6 A	◪5 E	◪4 A
S4.1	S4.2												
◪4 E	◪3 A												

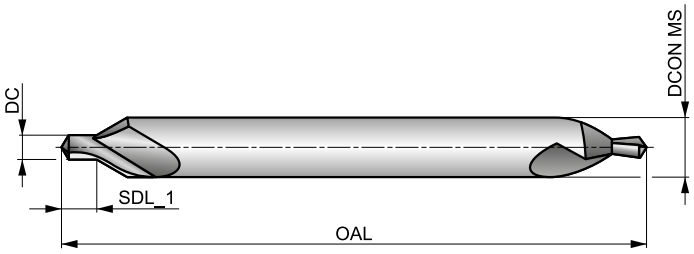
Product	DC [mm]	DC [inch]	SDL_2 [mm]	OAL [mm]	RCSK [mm]	DCON MS [mm]	H [mm]
A2381.6X4.0	1.60	0.0630	4.7 - 4.2	35.0	5.00 - 4.00	4.00	3.25 - 3.15
A2382.0X5.0	2.00	0.0787	5.4 - 5.0	40.0	6.25 - 5.00	5.00	4.20 - 4.10
A2382.5X6.3	2.50	0.0984	6.8 - 6.3	45.0	7.88 - 6.30	6.30	5.35 - 5.25
A2383.15X8.0	3.15	0.1240	8.5 - 8.0	50.0	10.00 - 8.00	8.00	6.95 - 6.85
A2384.0X10.0	4.00	0.1575	10.6 - 10.0	55.0	12.50 - 10.00	10.00	8.40 - 8.30
A2385.0X12.5	5.00	0.1969	13.1 - 12.5	63.0	15.63 - 12.50	12.50	10.95 - 10.85
A2386.3X16.0	6.30	0.2480	16.6 - 16.0	71.0	20.00 - 16.00	16.00	14.00 - 13.90
A2388.0X20.0	8.00	0.3150	20.7 - 20.0	80.0	25.00 - 20.00	20.00	17.90 - 17.80

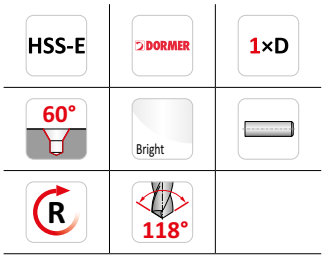
A242

DORMER

HSS-E (5% Co) Long Center Drill, 118° Point, 60° Countersink, Bright Finish

Designed to start a precise hole in the end of a shaft so it can be securely held prior to machining. The two drilling ends give increased productivity per tool. Suitable for drilling many materials.





Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 33 I	■ 37 I	■ 38 I	■ 28 I	■ 25 G	◪ 22 E	■ 19 F	■ 15 F	◪ 13 E	■ 11 F	◪ 10 E	◪ 8 D	◪ 21 E	◪ 17 E
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
◪ 18 E	◪ 15 E	◪ 9 G	◪ 8 G	◪ 7 G	◪ 10 C	■ 30 I	■ 22 F	■ 17 F	◪ 25 E	◪ 20 E	◪ 16 E	◪ 22 E	◪ 17 E
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪ 13 E	◪ 20 E	◪ 15 E	◪ 11 E	◪ 10 E	◪ 8 E	◪ 23 E	◪ 17 E	◪ 13 E	◪ 33 J	◪ 25 J	◪ 17 I	◪ 42 H	◪ 37 H
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**
◪ 27 H	◪ 56 H	◪ 33 I	◪ 17 G	◪ 30 J	◪ 28 H	◪ 14 F	◪ 24 F	◪ 13 D	◪ 7 B	◪ 7 E	◪ 6 A	◪ 5 E	◪ 4 A
S4.1	**S4.2**												
◪ 4 E	◪ 3 A												

Product	DC [mm]	DC [inch]	SDL_1 [mm]	OAL [mm]	DCON MS [mm]
A2421.0X4.0	1.00	0.0394	1.7 - 1.3	100.0	4.00
A2421.5X5.0	1.50	0.0591	2.6 - 2.0	100.0	5.00
A2422.0X6.0	2.00	0.0787	3.1 - 2.5	100.0	6.00
A2422.5X8.0	2.50	0.0984	3.8 - 3.1	100.0	8.00
A2423.0X8.0	3.00	0.1181	4.6 - 3.9	100.0	8.00
A2423.0X10.0	3.00	0.1181	4.6 - 3.9	100.0	10.00
A2424.0X10.0	4.00	0.1575	5.9 - 5.0	100.0	10.00
A2424.0X12.0	4.00	0.1575	5.9 - 5.0	100.0	12.00
A2425.0X12.0	5.00	0.1969	7.2 - 6.3	100.0	12.00

A088

DORMER

HSS Stub Drill Set with A022 Drills, TiN-Tip Coated

A set containing 24 different diameters of the A022 stub drill in a sturdy case, for a wide range of hole sizes covered with a single purchase. The drills are suitable for use both in machines and hand-held drilling in many applications. TiN-Tip coating improves performance and extends tool life.

HSS	DIN ANSI	2.5×D
135°	TiN-Tip	
λ20-35°	R	DC h8

A=Styles in Set, B=No. in Set, C=Diameters in Set.

Product	Nr.	A	B	C
A088200S	200S	A022	24	1.0 mm - 10.5 mm x 0.5 mm + 3.3 mm, 4.2 mm, 6.8 mm, 10.2 mm

A095

DORMER

HSS Jobber Drill Set with A002 Drills, TiN-Tip Coated

Different sets in metric or fractional sizes of our A002 drills in a useful plastic storage case. The set keeps all drills together, with sizes clearly displayed for easy selection. The drills are suitable for use in both machines and hand-held applications. TiN-Tip coating improves performance and extends tool life.

HSS	DIN 338	4×D
118°	TiN-Tip	
λ20-35°	R	DC h8

1.0mm =< DC >= 2.9mm 118° 4 Facet Point. A=Styles in Set, B=No. in Set, C=Diameters in Set.

Product	Nr.	A	B	C
A09518	18	A002	29	1/16 inch - 1/2 inch x 1/64 inch
A09520	20	A002	15	1/16 inch - 1/2 inch x 1/32 inch
A095200	200	A002	24	1.0 mm - 10.5 mm x 0.5 mm + 3.3 mm, 4.2 mm, 6.8 mm, 10.2 mm
A095201	201	A002	19	1.0 mm - 10.0 mm x 0.5 mm
A095202	202	A002	51	1.0 mm - 6.0 mm x 0.1 mm
A095203	203	A002	41	6.0 mm - 10.0 mm x 0.1 mm
A095204	204	A002	25	1.0 mm - 13.0 mm x 0.5 mm
A095206	206	A002	29	1.0 mm - 13.0 mm x 0.5 mm + 3.3 mm, 4.2 mm, 6.8 mm, 10.2 mm
A095209	209	A002	91	1.0 mm - 10.0 mm x 0.1 mm

A087

DORMER

HSS Jobber Drill Set with A002 Drills, TiN-Tip Coated

A set containing 19 different diameters of the popular A002 drill in an easy to carry compact case, with sizes clearly displayed for easy selection. The drills are suitable for use both in machines and hand-held drilling, and in many applications. TiN-Tip coating improves performance and extends tool life.

HSS	DIN 338	4×D
118°	TiN-Tip	
λ20-35°	R	DC h8

A=Styles in Set, B=No. in Set, C=Diameters in Set. 1.0mm =< DC >= 2.9mm 118° 4 Facet Point.

Product	Nr.	A	B	C
A087201	201	A002	19	1.0 mm - 10.0 mm x 0.5 mm

A094

DORMER

HSS Jobber Drill Set with A002 Drills, TiN-Tip Coated

A set containing A002 drills of different metric diameters in a cleverly designed rotating dispenser which makes selecting the required size very simple. Rotate the clear plastic top, until the required size is highlighted by the hole in the case, and turn the set upside down to remove the drill.

HSS	DIN 338	4×D
118°	TiN-Tip	
λ20-35°	R	DC h8

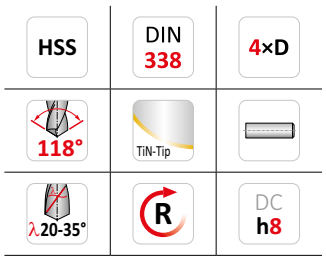
A=Styles in Set, B=No. in Set, C=Diameters in Set. 1.0mm =< DC >= 2.9mm 118° 4 Facet Point.

Product	Nr.	A	B	C
A094413	413	A002	13	1.5 mm - 6.5 mm x 0.5 mm + 3.3 mm, 4.2 mm
A094419	419	A002	19	1.0 mm - 10.0 mm x 0.5 mm

A089

HSS Jobber Drill Set with A002 Drills, TiN-Tip Coated

A set containing 5 different diameters of the popular A002 drill in a handy container, covering many diameters with a single purchase. The drills are suitable for use both in machines and hand-held drilling in many applications. TiN-Tip coating improves performance and extends tool life.



A=Styles in Set, B=No. in Set, C=Diameters in Set.

Product	Nr.	A	B	C
A08910	10	A002	5	A0024.0, A0025.0, A0026.0, A0028.0, A00210.0

A099

DORMER

Counter Dispenser Display with HSS Jobber A002 Drills, TiN-Tip Coated

A free standing counter top dispenser containing a wide range of sizes of A002 drills. Designed to stand on a counter top or other suitable flat surface for a prominent display and where the drills can be easily removed as and when needed. Easy to refill with further A002 drills, it will give years of service.

HSS	DIN 338	4×D
118°	TiN-Tip	
λ20-35°	R	DC h8

1.0mm =< DC >= 2.9mm 118° 4 Facet Point. A=Styles in Set, B=No. in Set, C=Diameters in Set.

Product	Nr.	A	B	C
A099F1	F1	A002	380	5 x (13/32, 7/16, 15/32, 1/2) inch; 10 x (5/64, 7/64, 9/64, 11/64, 13/64, 15/64, 17/64, 9/32, 19/64, 5/16, 21/64, 11/32, 23/64, 3/8) inch; 20 x (1/16, 7/32, 1/4) inch; 30 x 3/32 inch; 40 x (5/32, 3/16) inch; 50 x 1/8 inch
A099M1	M1	A002	340	5 x (10.50, 11.00, 11.50, 12.00, 12.50, 13.00) mm; 10 x (1.50, 2.50, 3.50, 4.50, 5.50, 6.50, 7.00, 7.50, 8.00, 8.50, 9.00, 9.50, 10.00) mm; 20 x (1.00, 5.00, 6.00) mm; 30 x 2.00 mm; 40 x 4.00 mm; 50 x 3.00 mm

A099

DORMER

Drillboy with HSS Jobber A002 Drills, TiN-Tip Coated

A free standing counter top dispenser containing a wide range of sizes of A002 drills. Designed to stand on a counter top or other suitable flat surface for a prominent display and where the drills can be easily removed as and when needed. Easy to refill with further A002 drills, it will give years of service.

HSS	DIN 338	4×D
118°	TiN-Tip	
λ20-35°	R	DC h8

1.0mm =< DC >= 2.9mm 118° 4 Facet Point. A=Styles in Set, B=No. in Set, C=Diameters in Set.

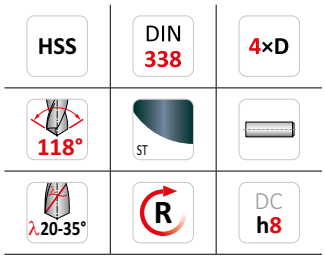
Product	Nr.	A	B	C
A099DRILLBOY	DRILLBOY	A002	43	3 x (3.0 mm, 3.3 mm, 3.5 mm, 4.0 mm) + 2 x (4.2 mm, 4.5 mm, 5.0 mm, 5.5 mm, 6.0 mm, 6.5 mm, 6.8 mm, 7.0 mm, 7.5 mm, 8.0 mm) + 8.5 mm, 9.0 mm, 9.5 mm, 10.0 mm, 10.2 mm, 10.5 mm, 11.0 mm, 11.5 mm, 12.0 mm, 12.5 mm, 13.0 mm

A199

DORMER

Counter Dispenser Display with HSS A100 Jobber Drills

A free standing counter top dispenser containing a wide range of sizes of A100 drills. Designed to stand on a counter top or other suitable flat surface for a prominent display and where the drills can be easily removed when needed. Easy to refill with further A100 drills, it will give years of service.



A=Styles in Set, B=No. in Set, C=Diameters in Set.

Product	Nr.	A	B	C
A199F1	F1	A100	380	5 x (13/32, 7/16, 15/32, 1/2) inch; 10 x (5/64, 7/64, 9/64, 11/64, 13/64, 15/64, 17/64, 9/32, 19/64, 5/16, 21/64, 11/32, 23/64, 3/8) inch; 20 x (1/16, 7/32, 1/4) inch; 30 x 3/32 inch; 40 x (5/32, 3/16) inch; 50 x 1/8 inch
A199M1	M1	A100	340	5 x (10.50, 11.00, 11.50, 12.00, 12.50, 13.00) mm; 10 x (1.50, 2.50, 3.50, 4.50, 5.50, 6.50, 7.00, 7.50, 8.00, 8.50, 9.00, 9.50, 10.00) mm; 20 x (1.00, 5.00, 6.00) mm; 30 x 2.00 mm; 40 x 4.00 mm; 50 x 3.00mm

A080

DORMER

Empty Dispenser

The dispenser is supplied empty so the drills can be purchased separately, choosing quantities to suit counter sales. It comes in red plastic, marked with a Dormer logo and an image of various Dormer drills. Metric or Fractional drill diameters are marked on the three shelves.

Empty Dispenser.

Product	Nr.	C
A080M1EMPTY	M1EMPTY	(1.00, 1.50, 2.00, 2.50, 3.00, 3.50, 4.00, 4.50, 5.00, 5.50, 6.00, 6.50, 7.00, 7.50, 8.00, 8.50, 9.00, 9.50, 10.00, 10.50, 11.00, 11.50, 12.00) mm
A080F1EMPTY	F1EMPTY	(1/16, 5/64, 3/32, 7/64, 1/8, 9/64, 5/32, 11/64, 3/16, 13/64, 7/32, 15/64, 1/4, 17/64, 9/32, 19/64, 5/16, 21/64, 11/32, 3/8, 13/32, 7/16, 1/2) inch

A190

HSS Jobber Drill Set with A100 Drills, Steam Tempered Finish

Drill set containing A100 jobber drills with conventional 118° point. Provided in metric or fractional size sets in a handy plastic case which makes selecting the required drill size very simple.

HSS	DIN 338	4×D
118°	ST	
λ20-35°	R	DC h8

A=Styles in Set, B=No. in Set, C=Diameters in Set. DC <= 1mm; 3/64"; N60 Bright.

Product	Nr.	A	B	C
A1903	3	A100	21	1/16 inch - 3/8 inch x 1/64 inch
A19012	12	A100	60	No.1 - No.60
A19018	18	A100	29	1/16 inch - 1/2 inch x 1/64 inch
A19020	20	A100	15	1/16 inch - 1/2 inch x 1/32 inch
A190201	201	A100	19	1.0 mm - 10.0 mm x 0.5 mm
A190202	202	A100	51	1.0 mm - 6.0 mm x 0.1 mm
A190203	203	A100	41	6.0 mm - 10.0 mm x 0.1 mm
A190204	204	A100	25	1.0 mm - 13.0 mm x 0.5 mm
A190206	206	A100	29	1.0 mm - 13.0 mm x 0.5 mm + 3.3 mm, 4.2 mm, 6.8 mm, 10.2 mm
A190209 [1)]	209	A100	91	1.0 mm - 10.0 mm x 0.1 mm

[1)] Sold in 2 boxes: box 1 contains sizes (1.0-5.9 x 0.1mm); box 2 contains sizes (6.0-10.0 x 0.1mm).

A191

DORMER

HSS Jobber Drill Set with A100 Drills, Steam Tempered Finish

A set containing A100 drills of different metric diameters in an easy to carry compact case with sizes clearly displayed and easy drill selection. A100 jobber drills with Conventional 118° point. Provided in metric or wire size sets in a handy plastic case which makes selecting the required drill size very simple.

HSS	DIN 338	4×D
118°	ST	
λ 20-35°	R	DC h8

A=Styles in Set, B=No. in Set, C=Diameters in Set. DC <= 1mm; 3/64"; N60 Bright.

Product	Nr.	A	B	C
A19131M	31M	A100	20	0.3 mm - 1.0 mm x 0.05 mm + 0.38 mm, 0.52 mm, 0.58 mm, 0.78 mm, 0.82 mm
A19161-80	61-80	A100	20	No.61 - No. 80

A191

DORMER

HSS Jobber Drill Set with A100 Drills, Steam Tempered Finish

A set containing A100 drills of different metric diameters in a cleverly designed rotating dispenser which makes selecting the required size very simple. Rotate the clear plastic top, until the required size is highlighted by the hole in the case, and turn the set upside down to remove the drill.

HSS	DIN 338	4×D
118°	ST	
λ 20-35°	R	DC h8

A=Styles in Set, B=No. in Set, C=Diameters in Set. DC <= 1mm; 3/64"; N60 Bright.

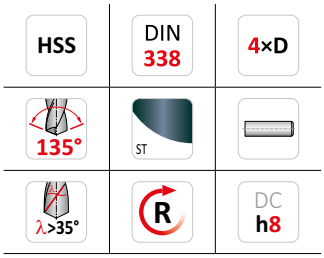
Product	Nr.	A	B	C
A191413	413	A100	13	1.5 mm - 6.5 mm x 0.5 mm + 3.3 mm, 4.2 mm
A191419	419	A100	19	1.0 mm - 10.0 mm x 0.5 mm

A188

DORMER

HSS Jobber Drill Set with A108 Drills, Steam Tempered Finish

A set of different fractional sizes of our A108 drills in a useful plastic storage case. Can be used in many different machine and hand-held applications.



A=Styles in Set, B=No. in Set, C=Diameters in Set. DC > 1.5mm; 1/16" Split Point

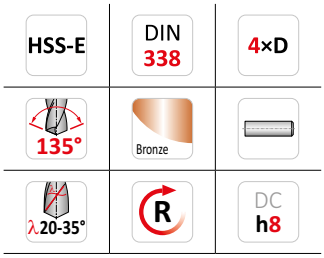
Product	Nr.	A	B	C
A188201	201	A108	19	1.0 mm - 10.0 mm x 0.5 mm
A188204	204	A108	25	1.0 mm - 13.0 mm x 0.5 mm

A295

DORMER

HSS-E (8% Cobalt) Jobber Drill Set with A777 Drills, Bronze Surface Finish

A set of different fractional sizes of our A777 drills in a useful plastic storage case. The set keeps all of the drills together in order, with sizes clearly displayed for easy selection. The A777 drills are designed with a 135° split point to help self-center the drill and reduce the cutting forces.



A=Styles in Set, B=No. in Set, C=Diameters in Set. DC <= 1.4mm 4 Facet Point.

Product	Nr.	A	B	C
A295219	219	A777	19	1.0 mm - 10.0 mm x 0.5 mm
A295225	225	A777	25	1.0 mm - 13.0 mm x 0.5 mm

A296

HSS Centre Drill Set

A set of five center drills which come in a handy plastic case to keep all your drills together. Recommended for starting a precise hole in the end of a shaft it can be securely held prior to machining. The two drilling ends gives increased productivity per tool.

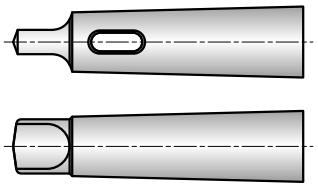
A296200 - 118° point DIN333A, A296225 - 120° point BS328. A=Styles in Set, B=No. in Set, C=Diameters in Set.

Product	Nr.	A	B	C
A296200	200	A200	5	1.00 mm, 2.00 mm, 2.50 mm, 3.15 mm, 4.00 mm
A296225	225	A225	5	BS1, BS2, BS3, BS4, BS5

M150

Morse Tapered Sleeve, Oil Toughened

Adaptor used to enable drills with smaller taper shanks to be held in machine spindles with larger morse tapers.



K= External Morse Cone; K1=Internal Morse Cone.

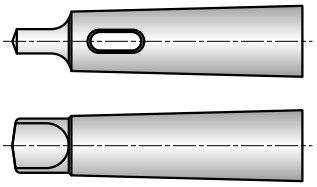
Product	Nr.	K = Nr.	K1 = Nr.
M1501-0	10	Nr. 1	Nr. 0
M1502-1	21	Nr. 2	Nr. 1
M1503-1	31	Nr. 3	Nr. 1
M1504-1	41	Nr. 4	Nr. 1
M1503-2	32	Nr. 3	Nr. 2
M1504-2	42	Nr. 4	Nr. 2
M1505-2	52	Nr. 5	Nr. 2
M1504-3	43	Nr. 4	Nr. 3
M1505-3	53	Nr. 5	Nr. 3
M1505-4	54	Nr. 5	Nr. 4
M1506-5	65	Nr. 6	Nr. 5

M151

DORMER

Morse Tapered Sleeve, Hardened and Ground

Adaptor used to enable drills with smaller taper shanks to be held in machine spindles with larger morse tapers.



K= External Morse Cone; K1=Internal Morse Cone.

Product	Nr.	K = Nr.	K1 = Nr.
M1511-0	10	Nr. 1	Nr. 0
M1512-1	21	Nr. 2	Nr. 1
M1513-1	31	Nr. 3	Nr. 1
M1514-1	41	Nr. 4	Nr. 1
M1513-2	32	Nr. 3	Nr. 2
M1514-2	42	Nr. 4	Nr. 2
M1515-2	52	Nr. 5	Nr. 2
M1514-3	43	Nr. 4	Nr. 3
M1515-3	53	Nr. 5	Nr. 3
M1515-4	54	Nr. 5	Nr. 4
M1516-5	65	Nr. 6	Nr. 5

M152

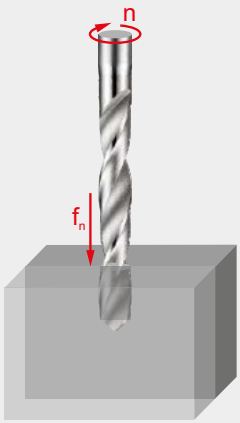
DORMER

Drill Drift

Used to eject taper shank drills from machine spindles and morse taper sleeves.

Product	Nr.
M1520	Nr. 0
M15212	Nr. 1 + 2
M15234	Nr. 3 + 4
M15245	Nr 4 + 5
M1526	Nr 6

DRILLING FEED RATE CHART



Feed per revolution (f_n in mm/rev)
Depending on the working conditions it might be necessary to adjust these values ± 25 %.

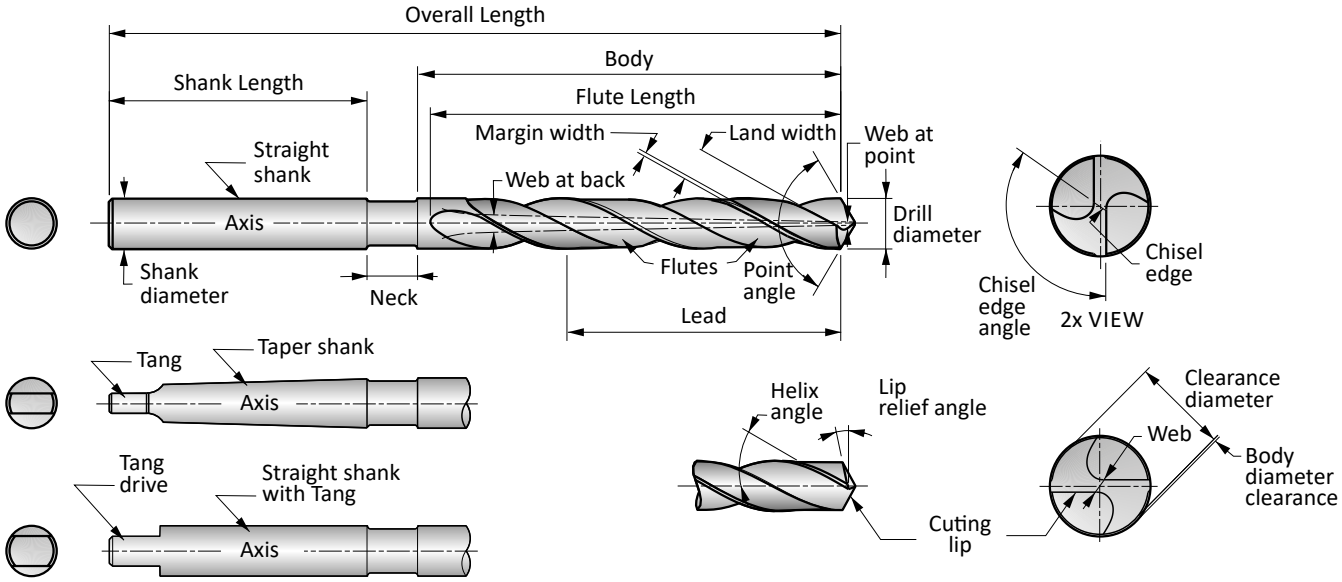
How to use this table to find the feed per revolution (f_n):

1. Find your Alpha Code on the product page (example: 46J, "J" is the Alpha Code).
2. Find the closest diameter for your cutting application in the top row of the table.
3. Find your Alpha Code in the left column of the table.
4. The intersection (cell) of the Diameter and Alpha Code is the feed per revolution (f_n).

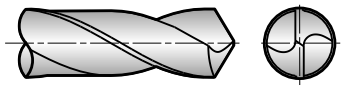
		ø DC [mm]																		
		0.15	0.50	1.00	2.00	3.00	4.00	5.00	6.00	8.00	10.00	12.00	15.00	16.00	20.00	25.00	30.00	40.00	50.00	100.00
Feed rates	A	0.003	0.006	0.012	0.023	0.029	0.032	0.036	0.042	0.054	0.062	0.069	0.082	0.086	0.110	0.125	0.135	0.155	0.175	0.263
	B	0.004	0.007	0.014	0.028	0.037	0.041	0.046	0.053	0.067	0.080	0.090	0.103	0.108	0.135	0.153	0.165	0.188	0.208	0.312
	C	0.004	0.008	0.015	0.032	0.044	0.050	0.056	0.064	0.080	0.098	0.110	0.125	0.130	0.160	0.180	0.195	0.220	0.240	0.360
	D	0.004	0.008	0.016	0.038	0.053	0.060	0.068	0.078	0.098	0.119	0.130	0.149	0.155	0.188	0.210	0.228	0.253	0.275	0.413
	E	0.004	0.009	0.017	0.043	0.062	0.071	0.080	0.092	0.115	0.140	0.150	0.173	0.180	0.215	0.240	0.260	0.285	0.310	0.465
	F	0.005	0.009	0.018	0.050	0.073	0.084	0.095	0.109	0.138	0.165	0.178	0.202	0.210	0.248	0.275	0.295	0.320	0.343	0.515
	G	0.005	0.010	0.019	0.056	0.084	0.096	0.109	0.126	0.160	0.190	0.205	0.231	0.240	0.280	0.310	0.330	0.355	0.375	0.563
	H	0.005	0.010	0.020	0.066	0.102	0.116	0.130	0.150	0.190	0.228	0.243	0.271	0.280	0.320	0.355	0.375	0.398	0.418	0.627
	I	0.005	0.011	0.021	0.076	0.119	0.134	0.150	0.173	0.220	0.265	0.280	0.310	0.320	0.360	0.400	0.420	0.440	0.460	0.690
	J	0.006	0.012	0.024	0.084	0.135	0.152	0.170	0.197	0.250	0.298	0.315	0.349	0.360	0.405	0.445	0.465	0.485	0.503	0.755
	K	0.007	0.013	0.026	0.092	0.150	0.170	0.190	0.220	0.280	0.330	0.350	0.388	0.400	0.450	0.490	0.510	0.530	0.545	0.818
	L	0.007	0.014	0.028	0.101	0.165	0.186	0.208	0.240	0.305	0.360	0.385	0.419	0.430	0.485	0.525	0.545	0.568	0.588	0.882
	M	0.008	0.015	0.030	0.110	0.180	0.202	0.225	0.260	0.330	0.390	0.420	0.450	0.460	0.520	0.560	0.580	0.605	0.630	0.945
	N	0.008	0.016	0.032	0.119	0.195	0.218	0.242	0.280	0.355	0.420	0.455	0.481	0.490	0.555	0.595	0.615	0.642	0.672	1.008
	S	0.002	0.004	0.008	0.014	0.020	0.025	0.030	0.037	0.050	0.080	0.100	0.123	0.130	0.150	0.170	0.190	0.220	0.240	–
	T	0.004	0.008	0.015	0.028	0.040	0.050	0.060	0.070	0.090	0.110	0.130	0.160	0.170	0.190	0.210	0.230	0.260	0.275	–
	U	0.007	0.013	0.026	0.048	0.070	0.080	0.090	0.107	0.140	0.170	0.200	0.223	0.230	0.240	0.270	0.300	0.360	0.375	–
	V	0.010	0.019	0.038	0.069	0.100	0.115	0.130	0.153	0.200	0.250	0.280	0.310	0.320	0.340	0.400	0.440	0.510	0.530	–
	W	0.012	0.025	0.049	0.089	0.130	0.150	0.170	0.200	0.260	0.330	0.380	0.418	0.430	0.450	0.470	0.490	0.520	0.540	–
	X	0.014	0.028	0.056	0.103	0.150	0.180	0.210	0.250	0.330	0.420	0.480	0.533	0.550	0.580	–	–	–	–	–
	Y	0.017	0.034	0.068	0.124	0.180	0.220	0.260	0.317	0.430	0.550	0.700	0.700	0.700	0.740	–	–	–	–	–
	Z	0.024	0.047	0.094	0.172	0.250	0.325	0.400	0.533	0.800	1.000	1.100	1.175	1.200	1.200	–	–	–	–	–

DRILLS
TECHNICAL INFORMATION

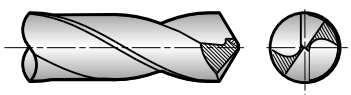
Drill Nomenclature



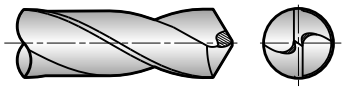
- **Axis** — The imaginary straight line which forms the longitudinal centre line of a drill.
- **Backtaper** — A slight decrease in diameter from front to back in the body of a drill.
- **Body** — The portion of a drill extending from the shank or neck to the outer corners of the cutting lips.
- **Body Clearance Diameter** — The portion of the land that has been cut away so it will not bind against the walls of the hole.
- **Chisel-Edge** — The edge at the end of the web that connects the cutting lips.
- **Chisel-Edge Angle** — The included angle between the chisel-edge and cutting lip, as viewed from the end of a drill.
- **Clearance Diameter** — The diameter over the cut away portion of the drill lands.
- **Drill** — A rotary end cutting tool having one or more cutting lips, and having one or more helical or straight flutes for the passage of chips and the admission of a cutting fluid.
- **Drill Diameter** — The diameter over the margins of a drill measured at the point.
- **Flute Length** — The length from the outer corners of the cutting lips to the extreme back of the flutes. Includes the sweep of the tool used to generate the flutes and therefore does not indicate the usable length of flutes.
- **Flutes** — Helical or straight grooves cut or formed in the body of a drill to provide cutting lips, permit removal of chips, and allow cutting fluid to reach the cutting lips.
- **Helix Angle** — The angle formed by the leading edge of the land with a plane containing the axis of a drill.
- **Land** — The peripheral portion of the body between adjacent flutes.
- **Land Width** — The distance between the leading edge and heel of the land; measured at a right angle to the leading edge.
- **Lead** — The axial advance of a leading edge of the land in one turn around the circumference.
- **Lip Relief Angle** — The axial relief angle at the outer corner of the lip; measured by projection to a plane tangent to the periphery at the outer corner of the lip.
- **Lips** — The cutting edges of a two flute drill extending from the chisel- edge to the periphery.
- **Margin** — The cylindrical portion of the land, which is not cut away, to provide clearance.
- **Neck** — The section of reduced diameter between the body and the shank of a drill.
- **Overall Length** — The length from the extreme end of the shank to the outer corners of the cutting lip. It does not include the conical shank end often used on straight shank drills, nor the conical cutting point used on both straight and taper shank drills.
- **Point** — The cutting end of a drill, made up of the ends of the lands and the web. In form, it resembles a cone, but departs from a true cone to furnish clearance behind the cutting lips.
- **Conventional** — Conventional Points with 118° included point angles are the most commonly used because they provide satisfactory results in a wide variety of materials. A possible limitation is that the straight chisel edge contributes to wandering at the drill point, often making it necessary to spot the hole for improved accuracy.



- **Split** — Split-Points (commonly called Crankshaft Points) were originally developed for use on drills designed for deep oil holes in automotive crankshafts. Since its inception, the split-point has gained widespread use and is applied to both 118° and 135° included point angles. Its main advantages are the ability to reduce thrust and eliminate wandering at the drill point. This is a distinct advantage when the drill is used in a portable drill or in drilling applications where bushings cannot be used. The split-point also has two positive rake cutting edges extending to the centre of the drill, which can assist as a chipbreaker to produce small chips which can readily be ejected.



- **Notched** — Notched Points were developed for drilling tough alloys. Commonly incorporated on heavy web drills, which allow the point to withstand the higher thrust loads required in drilling these materials. As with the split-point, the Notched Point contains two additional positive rake cutting edges extending toward the centre of the drill. These secondary cutting lips, which extend no further than half the original cutting lip, can assist in chip control and reduce the torque required in drilling tough materials. Notched Points can be incorporated on both 118° and 135° included point angles, making them suitable for drilling a wide variety of materials.



- **Point Angle** — The included angle between the cutting lips projected upon a plane parallel to the drill axis and parallel to the two cutting lips.
- **Relative Lip Height** — The difference in indicator reading between the cutting lips of a drill. Measured at a right angle to the cutting lip at a specific distance from the axis of the tool.
- **Shank** — The part of a drill by which it is held and driven.
- **Tang** — The flattened end of a taper shank, intended to fit into a driving slot in a socket.
- **Tang Drive** — Two opposite parallel driving flats on the extreme end of a straight shank.
- **Taper Shank** — Drills having conical shanks suitable for direct fitting in machine spindles, driving sleeves, or sockets. Tapered shanks generally have a tang.
- **Web** — The central portion of the body that joins the lands. The extreme end of the web forms the chisel-edge on a two flute drill.
- **Web Thickness** — The thickness of the web at the point, unless another specific location is indicated.

General hints on drilling

1. Select the most appropriate drill for the application, bearing in mind the material to be machined, the capability of the machine tool and the coolant to be used.

2. Flexibility within the component and machine tool spindle can cause damage to the drill as well as the component and machine - ensure maximum stability at all times. This can be improved by selecting the shortest possible drill for the application.

3. Tool holding is an important aspect of the drilling operation and the drill cannot be allowed to slip or move in the tool holder.

4. The correct use of Morse Taper Shank drills relies on an efficient fit between the taper surfaces of the tool and the tool holder. The use of a soft-faced hammer should be used to drive the drill into the holder.

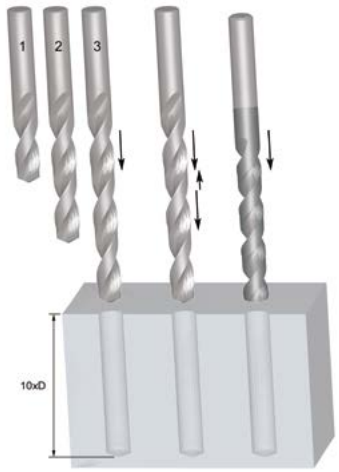
5. The use of suitable coolants and lubricants are recommended as required by the particular drilling operation. When using coolants and lubricants, ensure a copious supply, especially at the drill point.

6. Swarf evacuation whilst drilling is essential in ensuring the correct drilling procedure. Never allow the swarf to become stationary in the flute.

7. When regrinding a drill, always make sure that the correct point geometry is produced and that any wear has been removed.

Deep hole drilling strategy

When drilling deep holes, several methods can be adopted to achieve the depth required. The example below shows four ways of drilling a hole with 10× the diameter of the drill.



	Series Drilling	Series Drilling
No of drills	3 (2.5×D, 6×D,10×D)	2 (2.5×D,10×D)
Type of drill	Standard geometry, general purpose	Standard geometry, general purpose
+ / -	Expensive Time consuming	More cost effective Quick

	Peck Drilling	Single Pass Drilling
No of drills	1 (10×D)	1 (10×D)
Type of drill	Standard geometry, general purpose	Purpose specific tools
+ / -	Time consuming	Cost effective Fast

Trouble shooting when drilling

Problem	Cause	Remedy
Broken or twisted tangs	Bad fit between shank and socket	Ensure the shank and socket are clean and free from damage
Splitting of the web	Feed too high	Reduce feed to optimum rate
	Insufficient initial clearance	Regrind to correct specification
	Excessive web thinning	Regrind to correct specification
	Heavy impact at point of drill	Avoid impact at the point of drill. Take care with taper shank drills when inserting/ ejecting from spindle
Worn outer corner	Excessive speed	Reduce speed to optimum - may be able to increase feed
Broken outer corners	Unstable component set up	Reduce movement in the component
Chipped cutting lips	Excessive initial clearance	Regrind to correct specification
Breakage at flute run out	Choking of flutes	Adopt a peck/series drilling concept
	Drill slipping	Ensure the drill is held securely in the chuck and spindle
Spiral finish in hole	Insufficient feed	Increase feed
	Bad positional accuracy	Use a spot drill before drilling
Hole size too large	Incorrect point geometry	Check point geometry
	Ineffective swarf clearance	Adjust speed, feed and peck length to achieve more manageable swarf

Hole Size / Achievable Hole Tolerances

As geometric, substrate and coating configurations become more advanced, the ability of a drill to produce a more accurate hole size increases. In general, a standard geometry tool will achieve a hole size to H12. However as the configuration of the drill becomes more complex the achievable hole size, under favorable conditions, can be as good as H8.

To offer a better insight, listed below are the product types and their achievable hole tolerances:

HSS General Purpose drills – H12
HSS / HSCo Parabolic Flute Deep Hole Drills (PFX) – H10
HSS / HSCo High performance TiN/ TiALN coated (ADX) – H9
Solid Carbide High Performance TiN / TiALN coated (CDX, Force) – H8

Nominal Hole Diameter (mm)

∅ [mm]	H8	H9	H10	H12
≤ 3	0 / +0.014	0 / +0.025	0 / +0.040	0 / +0.100
> 3 ≤ 6	0 / +0.018	0 / +0.030	0 / +0.048	0 / +0.120
> 6 ≤ 10	0 / +0.022	0 / +0.036	0 / +0.058	0 / +0.150
> 10 ≤ 18	0 / +0.027	0 / +0.043	0 / +0.070	0 / +0.180
> 18 ≤ 30	0 / +0.033	0 / +0.052	0 / +0.084	0 / +0.210

Nominal Hole Diameter (inches)

∅ [inch]	H8	H9	H10	H12
≤ .1181	0 / +0.0006“	0 / +0.0010“	0 / +0.0016“	0 / +0.0040“
>.1181≤.2362	0 / +0.0007“	0 / +0.0012“	0 / +0.0019“	0 / +0.0048“
>.2362 ≤.3937	0 / +0.0009“	0 / +0.0015“	0 / +0.0023“	0 / +0.0059“
>.3937≤.7087	0 / +0.0011“	0 / +0.0017“	0 / +0.0028“	0 / +0.0071“
>.7087≤1.1811	0 / +0.0013“	0 / +0.0021“	0 / +0.0033“	0 / +0.0083“

In view of the ability of some drills to produce a much tighter hole tolerance, due consideration should be given to drilled holes which are subject to secondary operations, eg. tapping, reaming. The diameter of the drill will need to be increased from what is recommended to account for the fact that the hole size produced will be smaller.

Optimizing the Drilling Operation / Troubleshooting

Drill Selection
Use the shortest drill the application will permit in order to achieve maximum tool rigidity.

Holders
Tool holders and collets must provide good concentricity between the drill and the machine spindle. Use a positive back stop to prevent the tool from backing up into the holder. Never clamp the tool over the flutes or over-tighten the holder. Static runout in the tool assembly must be accurately checked and maintained.

Workpiece
A secure and rigid workpiece to minimize deflection is needed, particularly on through-hole applications.

Coolants
Coolants are recommended when drilling mild steel and high temperature alloys. The purpose of the coolant media is to direct the chips away from the cutting tool and workpiece. Excessive coolant pressure and/or too much volume can negatively affect performance. When using coolant fed drills, the coolant pressure that is required should be higher than normal. Suggested pressure for coolant fed drills is minimally 10.3 bar or 150 PSI. As the diameter of the drill is reduced, the higher the pressure. This is to assist the chip in evacuating from a more confined area.

Drilling Troubleshooting Guide

Problem	Solution
Wear on Outer Corners	Reduce cutting speed
	Increase feed (IPR)
	Improve direction of coolant flow
	Increase coolant pressure
	Add corner break
Chipping of Chisel Edge	Check accuracy of drill runout
	Check workpiece clamping accuracy and movement
	Check point centrality and lip height
	Increase feed rate
Chipping of Cutting Lips	Check accuracy of drill runout
	Check workpiece clamping accuracy and movement
	Reduce speed
	Reduce point clearance
	Increase hone
Cracking of Lands	Check movement of workpiece
	Increase back taper
	Check accuracy of drill runout
	Chip packing; increase flute form opening or peck drill (HSS or HSCO only)
	Slow down helix, horizontal drilling
	Increase feed
	When spot drilling, reduce feed
	Improve direction of coolant flow
	Increase coolant pressure
Oversize Hole	Increase speed, reduce feed
	Check workpiece clamping accuracy and movement
	Check accuracy of drill runout
	Chip packing, increase flute form opening or peck drill (HSS or HSCO only)
	Check point centrality and lip height
Undersize Hole	Improve direction of coolant flow
	Reduce cutting speed, increase feed
	Check drill diameter
Hole Not Round	Check accuracy of drill runout
	Check workpiece clamping accuracy and movement
	Check point centrality and lip height
	Chip packing, increase flute form opening or peck drill (HSS or HSCO only)
Drill Breakage	Chip packing, increase flute form opening or peck drill (HSS or HSCO only)
	Check workpiece clamping accuracy and movement
	Check accuracy of drill runout
	Reduce feed rate, increase feed rate
	Improve direction of coolant flow
	Increase coolant pressure

	Grade	Hardness (HV10)	C %	W %	Mo %	Cr %	V %	Co %	Tool Material
HSS	M2	810 – 850	0.9	6.4	5.0	4.2	1.8	–	HSS
HSS-E	M35	830 – 870	0.93	6.4	5.0	4.2	1.8	4.8	HSCO
	M42	870 – 960	1.08	1.5	9.4	3.9	1.2	8.0	

Properties	HSS materials	Carbide materials	K10/30F (often used for solid tools)
Hardness [HV30]	800-950	1300 – 1800	1600
Density [g/cm³]	8.0 – 9.0	7.2 – 15	14.45
Compressive strength [N/mm²[	3000 – 4000	3000 – 8000	6250
Flexural strength, (bending) [N/mm²[	2500 – 4000	1000 – 4700	4300
Heat resistance [°C]	550	1000	900
E-module [KN/mm²]	260 – 300	460 – 630	580
Grain size [µm]	–	0.2 – 10	0.8

The combination of hard particle (WC) and binder metal (Co) give the following changes in characteristics.

Characteristic	Higher WC content give	Higher Co content give
Hardness	Higher hardness	Lower hardness
Compressive strength [CS]	Higher CS	Lower CS
Bending strength [BS]	Lower BS	Higher BS

Grain size also influences the material properties. Small grain sizes means higher hardness and coarse grains give more toughness.

Surface treatment / Coating properties examples

Surface Treaments	Colour	Coating material	Hardness [HV]	Thickness [µm]	Coating structure	Frict. coeff. against steel	Max. appl. temp. [°C]
ST	Dark grey	Fe_3O_4	400	Max. 5	Conversion into the surface	–	550
Bronze	Bronze	Fe_3O_4	400	Max. 5	Conversion into the surface	–	550
TiN	Gold	TiN	2300	1 – 4	Mono-layer	0.4	600
TiAlN	Black grey	TiAlN	3300	3	Nano structured	0.3 – 0.35	900

Industry Standard tolerancess For Shafts & Holes

Tolerance values are shown in Microns (µm)

Formula for Microns ...1 µm = 0.001 mm / 0.000039 "

Tolerance	**Diameter** [mm]							
	> 1 ≤ 3	> 3 ≤ 6	> 6 ≤ 10	> 10 ≤ 18	> 18 ≤ 30	> 30 ≤ 50	> 50 ≤ 80	> 80 ≤ 120
	Diameter [inch]							
	> 0.039" ≤ 0.118"	> 0.118" ≤ 0.236"	> 0.236" ≤ 0.394"	> 0.394" ≤ 0.709"	> 0.709" ≤ 1.181"	> 1.181" ≤1.968"	>1.968" ≤ 3.149"	> 3.149" ≤ 4.724"
	Tolerance values [µm]							
e8	-14 / -28	-20 / -38	-25 / -47	-32 / -59	-40 / -73	-50 / -89	-60 / -106	-72 / -126
f6	-6 / -12	-10 / -18	-13 / -22	-16 / -27	-20 / -33	-25 / -41	-30 / -49	-36 / -58
f7	-6 / -16	-10 / -22	-13 / -28	-16 / -34	-20 / -41	-25 / -50	-30 / -60	-36 / -71
h6	0 / -6	0 / -8	0 / -9	0 / -11	0 / -13	0 / -16	0 / -19	0 / -22
h7	0 / -10	0 / -12	0 / -15	0 / -18	0 / -21	0 / -25	0 / -30	0 / -35
h8	0 / -14	0 / -18	0 / -22	0 / -27	0 / -33	0 / -39	0 / -46	0 / -54
h9	0 / -25	0 / -30	0 / -36	0 / -43	0 / -52	0 / -62	0 / -74	0 / -87
h10	0 / -40	0 / -48	0 / -58	0 / -70	0 / -84	0 / -100	0 / -120	0 / -140
h11	0 / -60	0 / -75	0 / -90	0 / -110	0 / -130	0 / -160	0 / -190	0 / -220
h12	0 / -100	0 / -120	0 / -150	0 / -180	0 / -210	0 / -250	0 / -300	0 / -350
k10	+40 / 0	+48 / 0	+58 / 0	+70 / 0	+84 / 0	+100 / 0	+120 / 0	+140 / 0
k12	+100 / 0	+120 / 0	+150 / 0	+180 / 0	+210 / 0	+250 / 0	+300 / 0	+350 / 0
m7	+2 / +12	+4 / +16	+6 / +21	+7 / +25	+8 / +29	+9 / +34	+11 / +41	+13 / +48
js14	+/ -125	+/ -150	+/ -180	+/ -215	+/ -260	+/ -310	+/ -370	+/ -435
js16	+/ -300	+/ - 375	+/ -450	+/ -550	+/ -650	+/ -800	+/ -950	+/ -1100
H7	+10 / 0	+12 / 0	+15 / 0	+18 / 0	+21 / 0	+25 / 0	+30 / 0	+35 / 0
H8	+14 / 0	+18 / 0	+22 / 0	+27 / 0	+ 33 / 0	+39 / 0	+46 / 0	+54 / 0
H9	+25 / 0	+30 / 0	+36 / 0	+43 / 0	+52 / 0	+62 / 0	+74 / 0	+87 / 0
H12	+100 / 0	+120 / 0	+150 / 0	+180 / 0	+210 / 0	+250 / 0	+300 / 0	+350 / 0
P9	-6 / -31	-12 / -42	-15 / -51	-18 / -61	-22 / -74	-26 / -86	-32 / -106	-37 / -124
S7	-13 / -22	-15 / -27	-17 / -32	-21 / -39	-27 / -48	-34 / -59	-42 / -72	-58 / -93

Table of Cutting Speeds

		Vc															
m/min.		5	8	10	15	20	25	30	40	50	60	70	80	90	100	110	150
SFM (feet/min.)		16	26	32	50	66	82	98	130	165	197	230	262	296	330	362	495
Ø		RPM															
mm	inch																
1.00	–	1592	2546	3183	4775	6366	7958	9549	12732	15916	19099	22282	25465	28648	31831	35014	47747
1.50	–	1061	1698	2122	3183	4244	5305	6366	8488	10610	12732	14854	16977	19099	21221	23343	31831
2.00	–	796	1273	1592	2387	3183	3979	4775	6366	7958	9549	11141	12732	14324	15916	17507	23873
2.50	–	637	1019	1273	1910	2546	3183	3820	5093	6366	7639	8913	10186	11459	12732	14006	19099
3.00	–	531	849	1061	1592	2122	2653	3183	4244	5305	6366	7427	8488	9549	10610	11671	15916
3.18	1/8	500	801	1001	1501	2002	2502	3003	4004	5005	6006	7007	8008	9009	10010	11011	15015
3.50	–	455	728	909	1364	1819	2274	2728	3638	4547	5457	6366	7276	8185	9095	10004	13642
4.00	–	398	637	796	1194	1592	1989	2387	3183	3979	4775	5570	6366	7162	7958	8754	11937
4.50	–	354	566	707	1061	1415	1768	2122	2829	3537	4244	4951	5659	6366	7074	7781	10610
4.76	3/16	334	535	669	1003	1337	1672	2006	2675	3344	4012	4681	5350	6018	6687	7356	10031
5.00	–	318	509	637	955	1273	1592	1910	2546	3183	3820	4456	5093	5730	6366	7003	9549
6.00	–	265	424	531	796	1061	1326	1592	2122	2653	3183	3714	4244	4775	5305	5836	7958
6.35	1/4	251	401	501	752	1003	1253	1504	2005	2506	3008	3509	4010	4511	5013	5514	7519
7.00	–	227	364	455	682	909	1137	1364	1819	2274	2728	3183	3638	4093	4547	5002	6821
7.94	5/16	200	321	401	601	802	1002	1203	1604	2004	2405	2806	3207	3608	4009	4410	6013
8.00	–	199	318	398	597	796	995	1194	1592	1989	2387	2785	3183	3581	3979	4377	5968
9.00	–	177	283	354	531	707	884	1061	1415	1768	2122	2476	2829	3183	3537	3890	5305
9.53	3/8	167	267	334	501	668	835	1002	1336	1670	2004	2338	2672	3006	3340	3674	5010
10.00		159	255	318	477	637	796	955	1273	1592	1910	2228	2546	2865	3183	3501	4775
11.11	7/16	143	229	287	430	573	716	860	1146	1433	1719	2006	2292	2579	2865	3152	4298
12.00		133	212	265	398	531	663	796	1061	1326	1592	1857	2122	2387	2653	2918	3979
12.70	1/2	125	201	251	376	501	627	752	1003	1253	1504	1754	2005	2256	2506	2757	3760
14.00		114	182	227	341	455	568	682	909	1137	1364	1592	1819	2046	2274	2501	3410
14.29	9/16	111	178	223	334	446	557	668	891	1114	1337	1559	1782	2005	2228	2450	3341
15.00	–	106	170	212	318	424	531	637	849	1061	1273	1485	1698	1910	2122	2334	3183
15.88	5/8	100	160	200	301	401	501	601	802	1002	1203	1403	1604	1804	2004	2205	3007
16.00	–	99	159	199	298	398	497	597	796	995	1194	1393	1592	1790	1989	2188	2984
17.46	11/16	91	146	182	273	365	456	547	729	912	1094	1276	1458	1641	1823	2005	2735
18.00	–	88	141	177	265	354	442	531	707	884	1061	1238	1415	1592	1768	1945	2653
19.05	3/4	84	134	167	251	334	418	501	668	835	1003	1170	1337	1504	1671	1838	2506
20.00	–	80	127	159	239	318	398	477	637	796	955	1114	1273	1432	1592	1751	2387
24.00	–	66	106	133	199	265	332	398	531	663	796	928	1061	1194	1326	1459	1989
25.00	–	64	102	127	191	255	318	382	509	637	764	891	1019	1146	1273	1401	1910
27.00	–	59	94	118	177	236	295	354	472	589	707	825	943	1061	1179	1297	1768
30.00	–	53	85	106	159	212	265	318	424	531	637	743	849	955	1061	1167	1592
32.00	–	50	80	99	149	199	249	298	398	497	597	696	796	895	995	1094	1492
36.00	–	44	71	88	133	177	221	265	354	442	531	619	707	796	884	973	1326
40.00	–	40	64	80	119	159	199	239	318	398	477	557	637	716	796	875	1194
50.00	–	32	51	64	95	127	159	191	255	318	382	446	509	573	637	700	955

Hardness and Tensile Strength

HV	HRC	HB	Tensile Strength	
Vickers	Rockwell	Brinell	[N/mm²]	[Tons/ sq. in.]
940	68	–	–	–
900	67	–	–	–
864	66	–	–	–
829	65	–	–	–
800	64	–	–	–
773	63	–	–	–
745	62	–	–	–
720	61	–	–	–
698	60	–	–	–
675	59	–	–	–
655	58	–	2200	142
650	–	618	2180	141
640	–	608	2145	139
639	57	607	2140	138
630	–	599	2105	136
620	–	589	2070	134
615	56	584	2050	133
610	–	580	2030	131
600	–	570	1995	129
596	55	567	1980	128
590	–	561	1955	126
580	–	551	1920	124
578	54	549	1910	124
570	–	542	1880	122
560	53	532	1845	119
550	–	523	1810	117
544	52	517	1790	116
540	–	513	1775	115
530	–	504	1740	113
527	51	501	1730	112
520	–	494	1700	110
514	50	488	1680	109
510	–	485	1665	108
500	–	475	1630	105
497	49	472	1620	105
490	–	466	1595	103
484	48	460	1570	102
480	–	456	1555	101
473	47	449	1530	99
470	–	447	1520	98
460	–	437	1485	96
458	46	435	1480	96
450	–	428	1455	94
446	45	424	1440	93
440	–	418	1420	92

HV	HRC	HB	Tensile Strength	
Vickers	Rockwell	Brinell	[N/mm²]	[Tons/ sq. in.]
434	44	413	1400	91
423	43	402	1360	88
413	42	393	1330	86
403	41	383	1300	84
392	40	372	1260	82
382	39	363	1230	80
373	38	354	1200	78
364	37	346	1170	76
355	36	337	1140	74
350	–	333	1125	73
345	35	328	1110	72
340	–	323	1095	71
336	34	319	1080	70
330	–	314	1060	69
327	33	311	1050	68
320	–	304	1030	67
317	32	301	1020	66
310	31	295	995	64
302	30	287	970	63
300	–	285	965	62
295	–	280	950	61
293	29	278	940	61
290	–	276	930	60
287	28	273	920	60
285	–	271	915	59
280	27	266	900	58
275	–	261	880	57
272	26	258	870	56
270	–	257	865	56
268	25	255	860	56
265	–	252	850	55
260	24	247	835	54
255	23	242	820	53
250	22	238	800	52
245	–	233	785	51
243	21	231	780	50
240	–	228	770	50
235	–	223	755	49
230	–	219	740	48
225	–	214	720	47
220	–	209	705	46
215	–	204	690	45
210	–	199	675	44
205	–	195	660	43
200	–	190	640	41

CUTTING FLUIDS

M200-1

M200 no. 1 Blue, Cutting Fluid for Heavy Machining

A high performance cutting oil for difficult operations, such as tapping, broaching and drilling by hand or with a pillar drill. For increased tool life and improved surface finishes. First choice recommendation for high strength steel, stainless steel and super alloys.

Product	Nr.
M2000.25NR.1BLUE	1/4 Ltr. 12x
M2001.0NR.1BLUE	1 Ltr.
M2005.0NR.1BLUE	5 Ltr.
M20020.0NR.1BLUE	20 Ltr.

M200-2

M200 no. 2 Red, Cutting Fluid for Non-Ferrous Metals

A neat oil for machining operations requiring chip removal in aluminium and its alloys. For lubrication and cooling to promote long tool life and ensure excellent surface finish. Low impact on the environment due to excellent anti-mist properties, high oxidation stability and low odours.

Product	Nr.
M2000.25NR.2RED	1/4 Ltr. 12x
M2001.0NR.2RED	1 Ltr.
M2005.0NR.2RED	5 Ltr.

M200-3

M200 no. 3 Green, Cutting Fluid for General Purpose Machining

A high performance cutting oil with extreme pressure (EP) additives to provide longer tool life. For general cutting or forming operations, such as tapping, broaching and drilling in steel or cast steel and stainless steel.

Product	Nr.
M2000.25NR.3GREEN	1/4 Ltr. 12x
M2001.0NR.3GREEN	1 Ltr.
M2005.0NR.3GREEN	5 Ltr.

DORMER PRAMET

REACH FOR THE SKIES

We've added hundreds of new products to our global assortment of cutting tools, with a specific focus on airframe and assembly applications. All are featured in a new publication, which is now available to download. **Simply Reliable.**

Download on the App Store

GET IT ON Google Play

Download on AppGallery

AIRFRAME & ASSEMBLY

REAMERS
AND COUNTERSINKS

6		WMG & ISO 13399
12	DRILLS	INSTRUCTIONS
15	DRILLS	SOLID CARBIDE DRILLS
66	DRILLS	HSS DRILLS
176	DRILLS	TECHNICAL INFORMATION
186	DRILLS	CUTTING FLUIDS
190		**REAMERS AND COUNTERSINKS**
264	INDEXABLE DRILLS	INSTRUCTIONS
271	INDEXABLE DRILLS	HYDRA DRILLS
297	INDEXABLE DRILLS	TECHNICAL INFORMATION
307	INDEXABLE DRILLS	INDEXABLE DRILLS
327	INDEXABLE DRILLS	TECHNICAL INFORMATION
350	BORING SYSTEMS	INSTRUCTIONS
359	BORING SYSTEMS	BORING HEADS
376	BORING SYSTEMS	BORING ACCESSORIES
381	BORING SYSTEMS	INSERTS
404	BORING SYSTEMS	ARBORS
418	BORING SYSTEMS	BORING KITS
429	BORING SYSTEMS	TECHNICAL INFORMATION

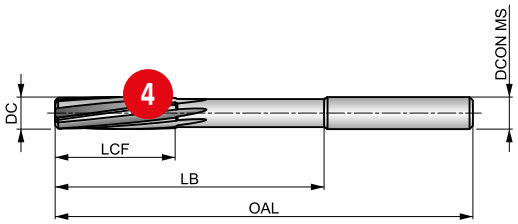
1 **B400**

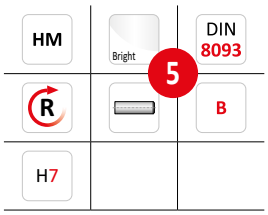
DORMER

3

Carbide Straight Shank Machine Reamer with H7 Accuracy, Bright Finish

2 Designed to provide a finish within the limits of H7 [illegible]rance. For superior performance and extended tool life when reaming hard and abrasive materials. The spiral flute design, with extremely unequal spacing between the flutes, reduces vibration and improves hole roundness, size and surface finish.





Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page XY.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 23 B	■ 26 B	■ 27 B	■ 20 B	■ 18 B	■ 16 C	■ 16 B	■ 13 B	■ 11 C	■ 10 B	■ 8 C	■ 7 C	◪ 10 C	◪ 8 C
M2.1	**M2.2**	**M2.3**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K5.1**	**K5.2**
◪ 9 C	◪ 7 C	◪ 6 B	■ 20 D	■ 15 D	■ 11 D	■ 2[illegible]	■ 17 D	■ 14 D	■ 18 D	■ 14 D	■ 11 D	■ 19 D	■ 15 D
K5.3	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**		
■ 11 D	◪ 60 D	■ 45 D	■ 30 D	■ 38 D	■ 35 D	■ 25 D	■ 64 E	■ 38 E	◪ 19 E	◪ 35 C	◪ 30 C		

6

DCON MS tolerance h6; DC>= 14 mm Carbide Tipped.

Product	DC [mm]	OAL [mm]	LCF [mm]	LB [mm]	NOF	DCON MS [mm]
B4001.0	1.00	34.0	5.5	15.00	3	1.00
B4001.2	1.20	38.0	7.5	16.50	3	1.20
B4001.4	1.40	40.0	8.0	18.00	3	1.50
B4001.5	1.50	40.0	8.0	18.00	3	1.50
B4001.6	1.60	43.0	9.0	20.00	3	1.60
B4001.8	1.80	46.0	10.0	22.00	4	1.80
B4002.0	2.00	49.0	11.0	24.00	4	2.00
B4002.2	2.20	53.0	12.0	25.00	4	2.20
B[illegible]	2.50	57.0	14.0	[illegible]00	4	2.50
B[illegible]	2.80	61.0	15.0	[illegible]00	6	3.00
B4003.0	3.00	61.0	15.0	33.00	6	3.00
B4003.2	3.20	65.0	16.0	37.00	6	3.20

7 8

Product	DC [mm]	OAL [mm]	LCF [mm]	LB [mm]	NOF	DCON MS [mm]
B4004.5	4.50	80.0	21.0	52.00	6	4.50
B4005.0	5.00	86.0	23.0	58.00	6	5.00
B4005.5	5.50	93.0	26.0	57.00	6	5.60
B4006.0	6.00	93.0	26.0	57.00	6	5.60
B4006.5	6.50	101.0	28.0	65.00	6	6.30
B4007.0	7.00	109.0	31.0	73.00	6	7.10
B4008.0	8.00	117.0	33.0	81.00	6	8.00
B4009.0	9.00	125.0	36.0	85.00	6	9.00
B40010.0	10.00	133.0	38.0	93.00	6	10.00
B40012.0	12.00	151.0	44.0	111.00	6	10.00
B40014.0	14.00	160.0	47.0	115.00	6	12.50
B40016.0	16.00	170.0	52.0	125.00	6	12.50

Pos.	Description
1	Designation of drill
2	Product description
3	Illustrative picture
4	Schematic drawing of tool

Pos.	Description
5	Product features
6	Material group recommendations incl. speed and feed guidance
7	Product code
8	Product dimensions

Typical page with reamers/countersinks displayed – specific page details will differ.

REAMERS AND COUNTERSINKS – ICONS OVERVIEW

General icons

■	Primary use
◪	Possible use

Achievable Hole Tolerance Zone (TCHA)

H7	H7 – Industry Standard Hole Tolerance Zone (based on diameter range)
ø.95-5.5 +0.004 / ø5.51-12 +0.005	High Precision Hole Tolerance Zone (based on diameter range)
k11	k11 – Industry Standard Tool Tolerance Zone (based on diameter range)

Application Angle

100°	100° Countersink
180°	180° Counterbore
20°	20° Conical Drill
60°	60° Countersink
82°	82° Countersink
90°	90° Countersink

Basic Standard Group (BSG)

ANSI	ANSI – Tap Standards
BS 328	BS 328 – Drills and Reamers Standards
DIN 206	DIN 206 – Hand Reamer Standards
DIN 208	DIN 208 – Morse Taper Shank Chucking Reamer Standards
DIN 212	DIN 212 – Machine Reamer Standards
DIN 217	DIN 217 – Shell Reamer Arbor Standards
DIN 2179	DIN 2179 – Parallel Shank Taper Pin Reamer Standards
DIN 2180	DIN 2180 – Morse Taper Shank Taper Pin Reamer Standards
DIN 219	DIN 219 – Shell Reamer Standards
DIN 311	DIN 311 – Morse Taper Shank Bridge Reamer Standards
DIN 334C	DIN 334 C – Straight Shank Countersink Standards
DIN 334D	DIN 334 D – Morse Taper Shank Countersink Standards
DIN 335A	DIN 335 A – Straight Shank Countersink Standards
DIN 335C	DIN 335 C – Straight Shank Countersink Standards
DIN 335D	DIN 335 D – Morse Taper Shank Countersink Standards
DIN 373	DIN 373 – Counterbore Standards
DIN 8050	DIN 8050 – Parallel Shank Reamer Standards
DIN 8051	DIN 8051 – Morse Taper Shank Reamer Standards
DIN 8093	DIN 8093 – Straight Shank Reamer Standards
DIN 8094	DIN 8094 – Morse Taper Shank Reamer Standards
DIN 9	DIN 9 – Taper Pin Reamer Standards
DORMER	Dormer Standards

Coating

AlTiCN	Aluminium Titanium Carbon Nitride Coating
Bright	Bright (uncoated)
Bright ST	Combination Bright and Steam Oxide
ST Bronze	Steam and Bronze Oxide Surface Treatment
TiAlN	Titanium Aluminium Nitride Coating
TiN	Titanium Nitride Coated

Cutting Direction

R	Right Hand Rotation / Cutting

Material Code (BMC)

HM	Hard Material (Solid Carbide)
HSS-E	High Speed Cobalt Steel Tool Material
HSS	High Speed Steel Tool Material

REAMERS AND COUNTERSINKS – ICONS OVERVIEW

Reamer Form

A	DIN Form A – Straight Flute ≤ Ø3.5mm
B	DIN Form B – Spiral Flute ≤ Ø3.5mm
E	DIN Form C – Straight Flute ≥ Ø4.0mm

Shank

	Cylindrical Shank / Straight Shank
	Cylindrical Shank with 3flat
	Cylindrical Shank with Hex
	Cylindrical Shank with Square

	Cylindrical Shank with Tang
	DIN 6535 HA Cylindrical Shank
	Morse Taper Shank

Taper Gradient (Rate of Taper)

1:48	Taper Gradient (1/4" per foot taper)

1:50	Taper Gradient (1 mm per 50 mm taper)

Tool materials

High Speed Steel	HSS	A medium-alloyed high speed steel that has good machinability and good performance. HSS exhibits hardness, toughness and wear resistance characteristics that make it attractive in a wide range of applications, for example in drills and taps.
Cobalt High Speed Steel	HSS-E	This high speed steel contains cobalt for increased hot hardness. The composition of HSCo is a good combination of toughness and hardness. It has good machinability and good wear resistance, which makes it usable for drills, taps, milling cutters and reamers.

Carbide materials

Carbide Materials (or Hard Materials)	HM	A sintered powder metallurgy substrate, consisting of a metallic carbide composite with binder metal. The most central raw material is tungsten carbide (WC). Tungsten carbide contributes to the hardness of the material. Tantalum carbide (TaC), titanium carbide (TiC) and niobium carbide (NbC) complements WC and adjusts the properties to what is desired. These three materials are called cubic carbides. Cobalt (Co) acts as a binder and keeps the material together. Carbide materials are often characterised by high compression strength, high hardness and therefore high wear resistance, but also by limited flexural strength and toughness. Carbide is used in taps, reamers, milling cutters, drills and thread milling cutters.

Surface Coatings

Titanium Nitride (TiN)		Titanium Nitride is a gold coloured ceramic coating applied by physical vapour deposition (PVD). High hardness combined with low friction properties ensures considerably longer tool life, or alternatively, better cutting performance from tools which have not been coated. TiN coating is used mainly for drills and taps.
Aluminium Titanium Carbon Nitride (AlTiCN)		Aluminium Titanium Carbon-Nitride (AlTiCN) is a PVD coating which was specifically engineered to meet the rigorous requirements of the medical device industry. It is however equally applicable to certain cutting tool operations due to a high quality thin-film technology, with excellent micro-hardness and adhesion characteristics.
Titanium Aluminium Nitride coatings (TiAlN)		Titanium Aluminium Nitride is a multi layer ceramic coating applied by PVD coating technology, which exhibits high toughness and oxidation stability. These properties make it ideal for higher speeds and feeds, while at the same time improving tool life. TiAlN is used in drilling, tapping, and milling applications and can be suitable for use when machining without coolant.
Bright (uncoated)		Bright finish (uncoated surface) improves chip flow in soft or non-ferrous materials while maintaining sharp cutting edges.
Combination Bright and Steam Tempered		Combination of bright and steam tempering can be effective, as the blue oxide more porous surface acts to retain and pull cutting fluid into the hole while the bright surface assists in chip evacuation. This combination is achieved by grinding the bright surface after tempering.
Combination Steam and Bronze Tempered Surface Treatment		Combination of steam and bronze tempering can be effective, as the blue oxide more porous surface acts to retain and pull cutting fluid into the hole while the bronze surface assists in chip evacuation. Both surface treatments add a degree of surface protection to the tool. These combinations are achieved by using two different tempering cycles.

Material code (BMC)		HM	HM	HM	HM	HM	HSS	HSS	HSS	HSS-E	HSS	HSS	HSS	HSS
Coating		Bright	Bright	Bright	Bright	Bright	Bright ST	Bright		Bright ST	Bright ST	Bright ST	Bright	ST Bronze
Basic standard group (BSG)		DIN 8093	DIN 8093	DIN 8050	DIN 8094	DIN 8051	DIN 206	DORMER	DORMER	BS 328	BS 328	DIN 9	DIN 9	ANSI
Hand (Cutting direction)		R	R	R	R	R	R	R		R	R	R	R	R
Shank			DIN 6535HA											
Application angle														
Reamer form		B	B	A	B	A	B			B	A	A	B	
Achievable hole tolerance (TCHA)		H7	ø.95-5.5 +0.004 ø5.51-12 +0.005	H7	H7	H7	H7			H7				
Taper gradient - millimeter (Rate of taper)											1:48	1:50	1:50	
Product Family Code		B400	B481	B441	B411	B442	B100	B334	B335	B901	B301	B903	B952	B122
		1.00 - 20.00	0.98 - 12.05	10.00 - 20.00	5.00 - 30.00	10.00 - 20.00	1.50 - 50.00	N000 - N16	N000BLADES - N16NUT	1.50 - 1/2	1/16 - 1/2	1.50 - 20.00	1.20 - 50.00	3/8 - 1.1/16
		200	201	203	204	205	206	208	209	210	211	212	213	214
P	P1	■	■	■	■	■	■	■		■	■	■	■	■
	P2	■	■	■	■	■	■	■		■	■	■	■	■
	P3	■	■	■	■	■	◪	■		■	■	■	■	◪
	P4	■	■	■	■	■	◪	◪		◪	◪	◪	◪	
M	M1	◪	◪	◪	◪	◪	◪	◪		◪	◪	◪	◪	◪
	M2	◪	◪	◪	◪	◪	◪	◪		◪	◪	◪	◪	◪
	M3													
	M4													
K	K1	■	■	■	■	■	■	■		■	■	◪	◪	
	K2	■	■	■	■	■	◪	■		■	■	■	■	
	K3	■	■	■	■	■	■	◪		◪	◪	◪	◪	
	K4													
	K5	■	■	■	■	■								
N	N1	■	■	■	■	■	■	■		■	■	■	■	◪
	N2	■	■	■	■	■	■	■		■	■	■	■	◪
	N3	■	■	■	■	■	■	■		■	■	■	■	■
	N4	◪	◪	◪	◪	◪	◪	◪		◪	◪	◪	◪	◪
	N5													
S	S1													
	S2													
	S3													
	S4													
H	H1													
	H2													
	H3													
	H4													

■ Primary use ◪ Possible use

	B953	B180	B170	B157	B161	B101	B121	B954	B955	B956	B957	G400	G135	G335
	HSS-E Bright DIN 2179 R 1:50	HSS-E Bright DIN 212 R DIN 6535HA B H7	HSS-E Bright DIN 212 R B ø.95-5.5 +0.004 ø5.51-12 +0.005	HSS-E Bright DIN 212 R E H7	HSS-E Bright DIN 208 R B H7	HSS-E Bright ST BS 328 R B H7	HSS Bright ST DIN 311 R k11	HSS-E Bright DIN 2180 R 1:50	HSS-E Bright ST DIN 219 R B H7	HSS-E Bright DIN 217		HM Bright DIN 335C R 90°	HSS Bright DIN 334C R 60°	HSS TiN DIN 334C R 60°
	1.00 - 12.00	1.50 - 20.00	0.98 - 12.00	2.00 - 20.00	3.00 - 50.00	3.00 - 2"	10.00 - 30.00	5.00 - 30.00	25.00 - 80.00	13.00 - 40.00	N3DRIVER - N9WASHER	6.30 - 31.00	6.30 - 25.00	6.30 - 25.00
	215	216	218	220	221	222	224	225	226	227	228	229	230	231
P1	■	■	■	■	■	■	■	■	■			■	■	■
P2	■	■	■	■	■	■	■	■	■			■	■	■
P3	◪	■	■	◪	■	■	■	◪	■			■	◪	■
P4	◪	◪	◪		◪	◪	◪	◪	◪			■	◪	■
M1	◪	◪	◪	◪	◪	◪		◪	◪			■	◪	◪
M2	◪	◪	◪	◪	◪			◪	◪			◪	◪	◪
M3												◪		◪
M4												◪		
K1	■	■	■		■	■	■	■	■			■	◪	■
K2	■	■	■		■	■	■	■	■			■	◪	■
K3	◪	◪	◪		◪	◪	◪	◪	◪			■	◪	■
K4												■		◪
K5												■	◪	■
N1	◪	■	■	■	■	■	■	■	■			■	◪	■
N2	■	■	■	■	■	■	■	■	■			■	■	■
N3	◪	■	■		■	■	■	■	■			■	■	■
N4	◪	◪	◪		◪	◪	◪	◪	◪			■	◪	◪
N5														
S1												■		
S2												◪		
S3												◪		
S4												◪		
H1												■		
H2												■		
H3												◪		
H4												◪		

■ Primary use ◪ Possible use

Material code (BMC)		HSS	HSS	HSS	HSS-E	HSS	HSS	HSS	HSS	HSS	HSS-E	HSS-E	HSS
Coating		Bright	Bright	Bright	Bright	Bright	TiAlN	Bright	TiAlN	Bright	AlTiCN	Bright	Bright
Basic standard group (BSG)		DIN 334D	DIN 335C	DORMER	DORMER	DIN 335C	DIN 335C	DIN 335C	DIN 335C	DIN 335C	DIN 335C	DORMER	DORMER
Hand (Cutting direction)		R	R	R	R	R	R	R	R	R	R	R	R
Shank													
Application angle		60°	82°	90°	90°	90°	90°	90°	90°	90°	90°	90°	90°
Reamer form													
Achievable hole tolerance (TCHA)													
Taper gradient - millimeter (Rate of taper)													
Product Family Code		G137	G154	G129	G149	G136	G560	G106	G506	G142	G570	G107	G600
		16.00 - 80.00	6.30 - 25.00	6.00 - 31.50	5.00 - 50.00	4.30 - 31.00	6.30 - 31.00	6.30 - 50.00	6.30 - 50.00	4.80 - 31.00	6.30 - 31.00	6.30 - 20.50	6.30 - 25.00
		232	233	234	235	236	237	238	239	240	241	242	243
P	P1	■	■	■	■	■	■	■	■	■	◪	■	■
	P2	■	■	■	■	■	■	■	■	■	◪	■	■
	P3	◪	■	◪	■	■	■	■	■	■	■	■	■
	P4	◪	◪			◪	■	◪	■	◪	■	■	◪
M	M1	◪	◪	◪	◪	◪	◪	◪	◪	■	■	◪	◪
	M2	◪	◪	◪	◪	◪	◪	◪	◪	◪	■	◪	◪
	M3									◪	■		
	M4									◪	◪		
K	K1	◪	◪	◪	◪	◪	■	■	■		■	◪	◪
	K2	◪	◪	◪	◪	◪	■	◪	■		■	◪	◪
	K3	◪	◪	◪	◪	◪	■	◪	■		■	◪	◪
	K4						◪		◪		◪	◪	
	K5	◪	◪		◪	◪	■	◪	■		■	◪	◪
N	N1	◪	◪	■	■	◪	◪	◪	◪	■	◪	◪	◪
	N2	◪	◪	◪	◪	◪	■	◪	■	◪	◪	◪	◪
	N3	■	■	■	■	■	■	■	■	■	◪	■	◪
	N4	◪	◪	◪	◪	◪	◪	◪	◪	■		◪	
	N5												
S	S1												
	S2												
	S3												
	S4												
H	H1												
	H2												
	H3												
	H4												

■ Primary use ◪ Possible use

	G132	G138	G338	G171	G314	G125	G236							
	HSS	HSS	HSS	HSS	HSS	HSS								
	Bright	Bright	TiN	TiAlN	Bright	Bright								
	DIN 335A	DIN 335D	DIN 335D	DIN 335C	DORMER	DIN 373								
	R	R	R	R	R	R								
	90°	90°	90°	100°	20°	180°	90°							
	8.00 - 20.00	25.00 - 80.00	25.00 - 63.00	6.30 - 25.00	4.00 - 9.00	6.50 - 20.00	Set							
	244	245	246	247	248	249	250							
P1		■	■	■	■	■								
P2	◪	■	■	■	◪	■								
P3	◪	◪	■	■	◪	◪								
P4	■	◪	■	■		◪								
M1		◪	◪	◪	◪	◪								
M2		◪	◪	◪	◪	◪								
M3	◪													
M4	◪													
K1	■	◪	■	■	◪	◪								
K2	◪	◪	■	■		◪								
K3	◪	◪	■	■		◪								
K4	◪		◪	◪		◪								
K5	◪	◪	■	■		◪								
N1	◪	◪	■	◪	■	■								
N2	■	◪	■	■	◪	◪								
N3	◪	■	■	■	■	■								
N4	◪	◪	◪	◪	■	◪								
N5														
S1														
S2														
S3														
S4														
H1														
H2														
H3														
H4														

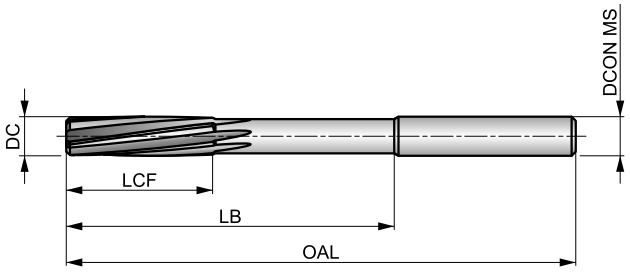
■ Primary use ◪ Possible use

B400

DORMER

Carbide Straight Shank Machine Reamer with H7 Accuracy, Bright Finish

Designed to provide a finish within the limits of H7 hole tolerance. For superior performance and extended tool life when reaming hard and abrasive materials. The spiral flute design, with extremely unequal spacing between the flutes, reduces vibration and improves hole roundness, size and surface finish.



HM	Bright	DIN 8093
R		B
H7		

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■23 B	■26 B	■27 B	■20 B	■18 B	■16 C	■16 B	■13 B	■11 C	■10 B	■8 C	■7 C	◪10 C	◪8 C
M2.1	**M2.2**	**M2.3**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K5.1**	**K5.2**
◪9 C	◪7 C	◪6 B	■20 D	■15 D	■11 D	■21 D	■17 D	■14 D	■18 D	■14 D	■11 D	■19 D	■15 D
K5.3	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**		
■11 D	◪60 D	■45 D	■30 D	■38 D	■35 D	■25 D	■64 E	■38 E	◪19 E	◪35 C	◪30 C		

DCON MS tolerance h6; DC>= 14 mm Carbide Tipped.

Product	DC [mm]	OAL [mm]	LCF [mm]	LB [mm]	NOF	DCON MS [mm]
B4001.0	1.00	34.0	5.5	15.00	3	1.00
B4001.2	1.20	38.0	7.5	16.50	3	1.20
B4001.4	1.40	40.0	8.0	18.00	3	1.50
B4001.5	1.50	40.0	8.0	18.00	3	1.50
B4001.6	1.60	43.0	9.0	20.00	3	1.60
B4001.8	1.80	46.0	10.0	22.00	4	1.80
B4002.0	2.00	49.0	11.0	24.00	4	2.00
B4002.2	2.20	53.0	12.0	25.00	4	2.20
B4002.5	2.50	57.0	14.0	29.00	4	2.50
B4002.8	2.80	61.0	15.0	33.00	6	3.00
B4003.0	3.00	61.0	15.0	33.00	6	3.00
B4003.2	3.20	65.0	16.0	37.00	6	3.20
B4003.5	3.50	70.0	18.0	42.00	6	3.50
B4004.0	4.00	75.0	19.0	47.00	6	4.00

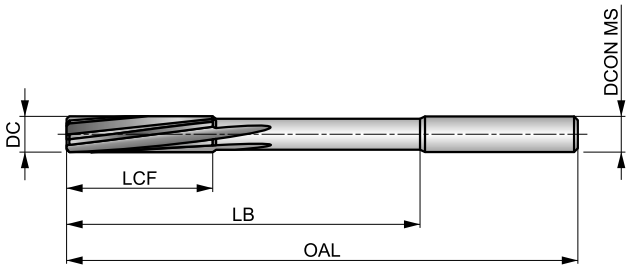
Product	DC [mm]	OAL [mm]	LCF [mm]	LB [mm]	NOF	DCON MS [mm]
B4004.5	4.50	80.0	21.0	52.00	6	4.50
B4005.0	5.00	86.0	23.0	58.00	6	5.00
B4005.5	5.50	93.0	26.0	57.00	6	5.60
B4006.0	6.00	93.0	26.0	57.00	6	5.60
B4006.5	6.50	101.0	28.0	65.00	6	6.30
B4007.0	7.00	109.0	31.0	73.00	6	7.10
B4008.0	8.00	117.0	33.0	81.00	6	8.00
B4009.0	9.00	125.0	36.0	85.00	6	9.00
B40010.0	10.00	133.0	38.0	93.00	6	10.00
B40012.0	12.00	151.0	44.0	111.00	6	10.00
B40014.0	14.00	160.0	47.0	115.00	6	12.50
B40016.0	16.00	170.0	52.0	125.00	6	12.50
B40018.0	18.00	182.0	56.0	137.00	6	14.00
B40020.0	20.00	195.0	60.0	147.00	6	16.00

B481

DORMER

Carbide Straight Shank Machine Reamer - 0.01 mm Increments, Bright Finish

Straight shank for high performance on CNC machining. Different increment sizes allows to produce accurate hole sizes and tolerances. Premium carbide tips gives greatly improved performance and extended tool life when reaming hard and abrasive materials. Extremely unequal spacing on the flutes to reduce vibration.



HM	Bright	DIN 8093
R	DIN 6535HA	B
ø.95-5.5 +0.004 ø5.51-12 +0.005		

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 23 B	■ 26 B	■ 27 B	■ 20 B	■ 18 B	■ 16 C	■ 16 B	■ 13 B	■ 11 C	■ 10 B	■ 8 C	■ 7 C	◪ 10 C	◪ 8 C
M2.1	**M2.2**	**M2.3**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K5.1**	**K5.2**
◪ 9 C	◪ 7 C	◪ 6 B	■ 20 D	■ 15 D	■ 11 D	■ 21 D	■ 17 D	■ 14 D	■ 18 D	■ 14 D	■ 11 D	■ 19 D	■ 15 D
K5.3	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**		
■ 11 D	◪ 60 D	■ 45 D	■ 30 D	■ 38 D	■ 35 D	■ 25 D	■ 64 E	■ 38 E	◪ 19 E	◪ 35 C	◪ 30 C		

DCON MS tolerance h6.

Product	DC [mm]	OAL [mm]	LCF [mm]	LB [mm]	NOF	DCON MS [mm]
B4810.98	0.98	50.0	6.0	28.00	3	3.00
B4810.99	0.99	50.0	6.0	28.00	3	3.00
B4811.00	1.00	50.0	6.0	28.00	3	3.00
B4811.01	1.01	50.0	6.0	28.00	3	3.00
B4811.02	1.02	50.0	6.0	28.00	3	3.00
B4811.03	1.03	50.0	6.0	28.00	3	3.00
B4811.48	1.48	50.0	9.0	28.00	3	3.00
B4811.49	1.49	50.0	9.0	28.00	3	3.00
B4811.50	1.50	50.0	9.0	28.00	3	3.00
B4811.51	1.51	50.0	10.0	28.00	3	3.00
B4811.52	1.52	50.0	10.0	28.00	3	3.00
B4811.53	1.53	50.0	10.0	28.00	3	3.00
B4811.98	1.98	50.0	12.0	28.00	4	3.00
B4811.99	1.99	50.0	12.0	28.00	4	3.00
B4812.00	2.00	50.0	12.0	28.00	4	3.00
B4812.01	2.01	50.0	12.0	28.00	4	3.00
B4812.02	2.02	50.0	12.0	28.00	4	3.00
B4812.03	2.03	50.0	12.0	28.00	4	3.00
B4812.48	2.48	60.0	16.0	28.00	4	3.00
B4812.49	2.49	60.0	16.0	28.00	4	3.00
B4812.50	2.50	60.0	16.0	28.00	4	3.00
B4812.51	2.51	60.0	16.0	28.00	4	3.00
B4812.52	2.52	60.0	16.0	28.00	4	3.00
B4812.53	2.53	60.0	16.0	28.00	4	3.00
B4812.97	2.97	65.0	17.0	28.00	6	4.00
B4812.98	2.98	65.0	17.0	28.00	6	4.00
B4812.99	2.99	65.0	17.0	28.00	6	4.00

Product	DC [mm]	OAL [mm]	LCF [mm]	LB [mm]	NOF	DCON MS [mm]
B4813.00	3.00	65.0	17.0	28.00	6	4.00
B4813.01	3.01	65.0	17.0	28.00	6	4.00
B4813.02	3.02	65.0	17.0	28.00	6	4.00
B4813.03	3.03	65.0	17.0	28.00	6	4.00
B4813.97	3.97	75.0	19.0	28.00	6	4.00
B4813.98	3.98	75.0	19.0	28.00	6	4.00
B4813.99	3.99	75.0	19.0	28.00	6	4.00
B4814.00	4.00	75.0	19.0	28.00	6	4.00
B4814.01	4.01	75.0	19.0	28.00	6	4.00
B4814.02	4.02	75.0	19.0	28.00	6	4.00
B4814.03	4.03	75.0	19.0	28.00	6	4.00
B4814.97	4.97	93.0	23.0	36.00	6	6.00
B4814.98	4.98	93.0	23.0	36.00	6	6.00
B4814.99	4.99	93.0	23.0	36.00	6	6.00
B4815.00	5.00	93.0	23.0	36.00	6	6.00
B4815.01	5.01	93.0	23.0	36.00	6	6.00
B4815.02	5.02	93.0	23.0	36.00	6	6.00
B4815.03	5.03	93.0	23.0	36.00	6	6.00
B4815.97	5.97	93.0	26.0	36.00	6	6.00
B4815.98	5.98	93.0	26.0	36.00	6	6.00
B4815.99	5.99	93.0	26.0	36.00	6	6.00
B4816.00	6.00	93.0	26.0	36.00	6	6.00
B4816.01	6.01	93.0	26.0	36.00	6	6.00
B4816.02	6.02	93.0	26.0	36.00	6	6.00
B4816.03	6.03	93.0	26.0	36.00	6	6.00
B4817.97	7.97	117.0	33.0	36.00	6	8.00
B4817.98	7.98	117.0	33.0	36.00	6	8.00

Product	DC	OAL	LCF	LB	NOF	DCON MS
	[mm]	[mm]	[mm]	[mm]		[mm]
B4817.99	7.99	117.0	33.0	36.00	6	8.00
B4818.00	8.00	117.0	33.0	36.00	6	8.00
B4818.01	8.01	117.0	33.0	36.00	6	8.00
B4818.02	8.02	117.0	33.0	36.00	6	8.00
B4818.03	8.03	117.0	33.0	36.00	6	8.00
B4818.04	8.04	117.0	33.0	36.00	6	8.00
B4819.97	9.97	133.0	38.0	40.00	6	10.00
B4819.98	9.98	133.0	38.0	40.00	6	10.00
B4819.99	9.99	133.0	38.0	40.00	6	10.00
B48110.00	10.00	133.0	38.0	40.00	6	10.00
B48110.01	10.01	133.0	38.0	40.00	6	10.00
B48110.02	10.02	133.0	38.0	40.00	6	10.00

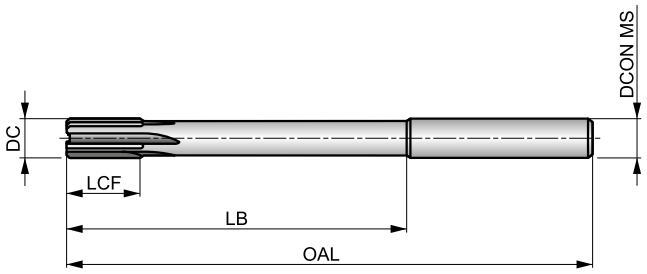
Product	DC	OAL	LCF	LB	NOF	DCON MS
	[mm]	[mm]	[mm]	[mm]		[mm]
B48110.03	10.03	133.0	38.0	40.00	6	10.00
B48110.04	10.04	133.0	38.0	40.00	6	10.00
B48110.05	10.05	133.0	38.0	40.00	6	10.00
B48111.97	11.97	151.0	44.0	45.00	6	12.00
B48111.98	11.98	151.0	44.0	45.00	6	12.00
B48111.99	11.99	151.0	44.0	45.00	6	12.00
B48112.00	12.00	151.0	44.0	45.00	6	12.00
B48112.01	12.01	151.0	44.0	45.00	6	12.00
B48112.02	12.02	151.0	44.0	45.00	6	12.00
B48112.03	12.03	151.0	44.0	45.00	6	12.00
B48112.04	12.04	151.0	44.0	45.00	6	12.00
B48112.05	12.05	151.0	44.0	45.00	6	12.00

B441

DORMER

Carbide Tipped Straight Shank Machine Reamer, H7 Accuracy, Bright Finish

The brazed carbide tip will give extended tool life and a superior performance, when reaming holes within the limits of H7 hole tolerance. The extremely unequal design of the flutes reduces vibration and improves hole roundness, surface finish and size. The tool offers great performance in CNC machines.



HM	Bright	DIN 8050
R		A
H7		

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 23 B	■ 26 B	■ 27 B	■ 20 B	■ 18 B	■ 16 C	■ 16 B	■ 13 B	■ 11 C	■ 10 B	■ 8 C	■ 7 C	◪ 10 C	◪ 8 C
M2.1	**M2.2**	**M2.3**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K5.1**	**K5.2**
◪ 9 C	◪ 7 C	◪ 6 B	■ 20 D	■ 15 D	■ 11 D	■ 21 D	■ 17 D	■ 14 D	■ 18 D	■ 14 D	■ 11 D	■ 19 D	■ 15 D
K5.3	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**		
■ 11 D	◪ 60 D	■ 45 D	■ 30 D	■ 38 D	■ 35 D	■ 25 D	■ 64 E	■ 38 E	◪ 19 E	◪ 35 C	◪ 30 C		

DCON MS tolerance h9; Carbide Tipped.

Product	DC	OAL	LCF	LB	NOF	DCON MS
	[mm]	[mm]	[mm]	[mm]		[mm]
B44110.0	10.00	133.0	19.0	87.00	6	10.00
B44111.0	11.00	142.0	19.0	96.00	6	10.00
B44112.0	12.00	151.0	19.0	105.00	6	10.00
B44113.0	13.00	151.0	19.0	105.00	6	10.00
B44114.0	14.00	160.0	19.0	110.00	6	12.50
B44115.0	15.00	162.0	19.0	112.00	6	12.50
B44116.0	16.00	170.0	22.0	120.00	6	12.50
B44117.0	17.00	175.0	22.0	123.00	6	14.00
B44118.0	18.00	182.0	22.0	130.00	6	14.00
B44119.0	19.00	189.0	22.0	131.00	6	16.00
B44120.0	20.00	195.0	22.0	137.00	6	16.00

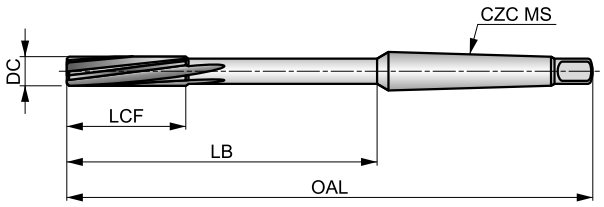
B411

DORMER

Carbide Tipped Taper Shank Machine Reamer with H7 Accuracy, Bright Finish

The brazed carbide tips gives significant improvements in performance and a longer tool life when you are reaming hard and abrasive materials. The spiral flutes have unequal spacing between them which effectively reduces vibration and improves hole symmetry, size and finish.

HM	Bright	DIN 8094
R		B
H7		



Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■23 B	■26 B	■27 B	■20 B	■18 B	■16 C	■16 B	■13 B	■11 C	■10 B	■8 C	■7 C	◪10 C	◪8 C
M2.1	**M2.2**	**M2.3**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K5.1**	**K5.2**
◪9 C	◪7 C	◪6 B	■20 D	■15 D	■11 D	■21 D	■17 D	■14 D	■18 D	■14 D	■11 D	■19 D	■15 D
K5.3	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**		
■11 D	◪60 D	■45 D	■30 D	■38 D	■35 D	■25 D	■64 E	■38 E	◪19 E	◪35 C	◪30 C		

DC <= 16mm Carbide head; DC > 16mm Carbide Tipped.

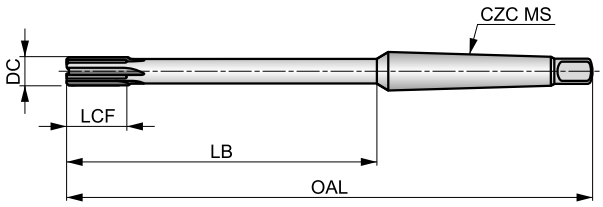
Product	DC [mm]	OAL [mm]	LCF [mm]	LB [mm]	NOF	CZC MS
B4115.0	5.00	133.0	23.0	67.50	6	MK 1
B4116.0	6.00	138.0	26.0	72.50	6	MK 1
B4117.0	7.00	150.0	31.0	84.50	6	MK 1
B4118.0	8.00	156.0	33.0	90.50	6	MK 1
B4119.0	9.00	162.0	36.0	96.50	6	MK 1
B41110.0	10.00	168.0	38.0	102.50	6	MK 1
B41112.0	12.00	182.0	44.0	116.50	6	MK 1
B41114.0	14.00	189.0	47.0	123.50	8	MK 1
B41115.0	15.00	204.0	50.0	124.00	8	MK 2
B41116.0	16.00	210.0	52.0	130.00	8	MK 2
B41117.0	17.00	214.0	54.0	134.00	6	MK 2
B41118.0	18.00	219.0	56.0	139.00	6	MK 2
B41119.0	19.00	223.0	58.0	143.00	6	MK 2
B41120.0	20.00	228.0	60.0	148.00	6	MK 2
B41122.0	22.00	237.0	64.0	157.00	6	MK 2
B41124.0	24.00	268.0	68.0	169.00	8	MK 3
B41125.0	25.00	268.0	68.0	169.00	8	MK 3
B41126.0	26.00	273.0	70.0	174.00	8	MK 3
B41130.0	30.00	281.0	73.0	182.00	8	MK 3

B442

DORMER

Carbide Tipped Taper Shank Machine Reamer with H7 Accuracy, Bright Finish

Designed with extremely unequal flutes to reduce vibration and improve hole size, roundness and surface finish. The 45° bevel lead ensures accurate location and centering to give you improved hole quality and performance. The brazed carbide tip provides extended tool life and a superior performance.



HM	Bright	DIN 8051
R		A
H7		

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 23 B	■ 26 B	■ 27 B	■ 20 B	■ 18 B	■ 16 C	■ 16 B	■ 13 B	■ 11 C	■ 10 B	■ 8 C	■ 7 C	◪ 10 C	◪ 8 C
M2.1	**M2.2**	**M2.3**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K5.1**	**K5.2**
◪ 9 C	◪ 7 C	◪ 6 B	■ 20 D	■ 15 D	■ 11 D	■ 21 D	■ 17 D	■ 14 D	■ 18 D	■ 14 D	■ 11 D	■ 19 D	■ 15 D
K5.3	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**		
■ 11 D	◪ 60 D	■ 45 D	■ 30 D	■ 38 D	■ 35 D	■ 25 D	■ 64 E	■ 38 E	◪ 19 E	◪ 35 C	◪ 30 C		

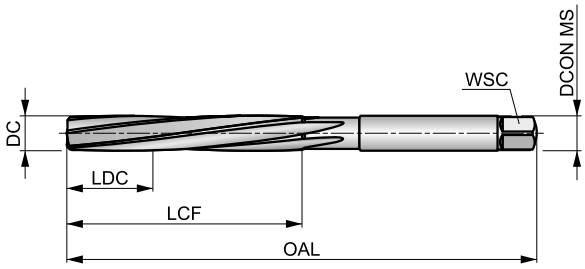
Product	DC [mm]	OAL [mm]	LCF [mm]	LB [mm]	NOF	CZC MS
B44210.0	10.00	168.0	19.0	102.50	6	MK 1
B44212.0	12.00	182.0	19.0	116.50	6	MK 1
B44214.0	14.00	189.0	19.0	123.50	6	MK 1
B44215.0	15.00	204.0	19.0	124.00	6	MK 2
B44216.0	16.00	210.0	22.0	130.00	6	MK 2
B44217.0	17.00	214.0	22.0	134.00	6	MK 2
B44218.0	18.00	219.0	22.0	139.00	6	MK 2
B44219.0	19.00	223.0	22.0	143.00	6	MK 2
B44220.0	20.00	228.0	22.0	148.00	6	MK 2

B100

DORMER

HSS Straight Shank Hand Reamer with H7 Accuracy, Bright and ST Finish

Primarily designed for reaming by hand. It has a precision ground, left-hand helix with right-hand (clockwise) cutting for smooth reaming, creating a more accurate hole size and good surface finish. Suitable for reaming many materials, including steels.



HSS	Bright ST	DIN 206
R		B
H7		

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■	■	■	■	■	◪	■	◪	◪	◪	◪	◪	◪	◪
M2.1	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪	■	■	◪	■	■	◪	■	◪	◪	■	■	■	■
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**								
◪	■	■	◪	◪	◪								

DCON MS tolerance e9.

Product	DC [inch]	DC [mm]	OAL [mm]	LCF [mm]	LDC [mm]	NOF	WSC [mm]	DCON MS [mm]
B1001.5	–	1.50	41.0	20.0	5.00	3	1.12	1.50
B1001/16	1/16	1.59	41.0	20.0	5.00	3	1.12	1.59
B1001.6	–	1.60	44.0	21.0	5.00	3	1.25	1.60
B1005/64	5/64	1.98	47.0	23.0	6.00	4	1.40	1.98
B1002.0	–	2.00	50.0	25.0	6.00	4	1.60	2.00
B1003/32	3/32	2.38	54.0	27.0	7.00	4	1.80	2.38
B1002.5	–	2.50	58.0	29.0	7.00	4	2.10	2.50
B1007/64	7/64	2.78	62.0	31.0	8.00	6	2.10	2.78
B1003.0	–	3.00	62.0	31.0	8.00	6	2.40	3.00
B1001/8	1/8	3.18	66.0	33.0	8.00	6	2.40	3.18
B1003.2	–	3.20	66.0	33.0	8.00	6	2.40	3.20
B1003.5	–	3.50	71.0	35.0	9.00	6	2.70	3.50
B1009/64	9/64	3.57	71.0	35.0	9.00	6	2.70	3.57
B1005/32	5/32	3.97	76.0	38.0	10.00	6	3.00	3.97
B1004.0	–	4.00	76.0	38.0	10.00	6	3.00	4.00
B10011/64	11/64	4.37	81.0	41.0	10.00	6	3.40	4.37
B1004.5	–	4.50	81.0	41.0	10.00	6	3.40	4.50
B1003/16	3/16	4.76	87.0	44.0	11.00	6	3.80	4.76
B1005.0	–	5.00	87.0	44.0	11.00	6	3.80	5.00
B10013/64	13/64	5.16	87.0	44.0	11.00	6	3.80	5.16
B1005.5	–	5.50	93.0	47.0	12.00	6	4.30	5.50
B1007/32	7/32	5.56	93.0	47.0	12.00	6	4.30	5.56
B10015/64	15/64	5.95	93.0	47.0	12.00	6	4.90	5.95
B1006.0	–	6.00	93.0	47.0	12.00	6	4.90	6.00
B1001/4	1/4	6.35	100.0	50.0	13.00	6	4.90	6.35
B1006.5	–	6.50	100.0	50.0	13.00	6	4.90	6.50
B10017/64	17/64	6.75	107.0	54.0	14.00	6	5.50	6.75

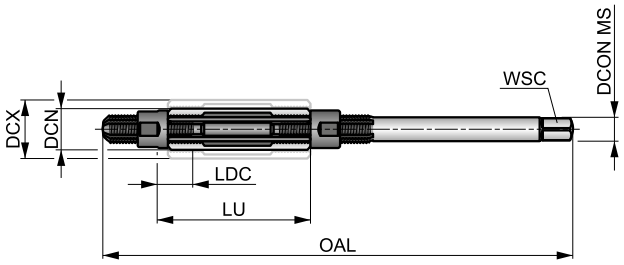
Product	DC	DC	OAL	LCF	LDC	NOF	WSC	DCON MS
	[inch]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
B1007.0	–	7.00	107.0	54.0	14.00	6	5.50	7.00
B1009/32	9/32	7.14	107.0	54.0	14.00	6	6.20	7.14
B1007.5	–	7.50	107.0	54.0	14.00	6	6.20	7.50
B10019/64	19/64	7.54	115.0	58.0	15.00	6	6.20	7.54
B1005/16	5/16	7.94	115.0	58.0	15.00	6	6.20	7.94
B1008.0	–	8.00	115.0	58.0	15.00	6	6.20	8.00
B10021/64	21/64	8.33	115.0	58.0	15.00	6	7.00	8.33
B1008.5	–	8.50	115.0	58.0	15.00	6	7.00	8.50
B10011/32	11/32	8.73	124.0	62.0	16.00	6	7.00	8.73
B1009.0	–	9.00	124.0	62.0	16.00	6	7.00	9.00
B10023/64	23/64	9.13	124.0	62.0	16.00	6	8.00	9.13
B1009.5	–	9.50	124.0	62.0	16.00	6	8.00	9.50
B1003/8	3/8	9.52	124.0	62.0	17.00	6	8.00	9.52
B10025/64	25/64	9.92	133.0	66.0	17.00	6	8.00	9.92
B10010.0	–	10.00	133.0	66.0	17.00	6	8.00	10.00
B10013/32	13/32	10.32	133.0	66.0	17.00	6	8.00	10.32
B10010.5	–	10.50	133.0	66.0	17.00	6	8.00	10.50
B10011.0	–	11.00	142.0	71.0	18.00	6	9.00	11.00
B1007/16	7/16	11.11	142.0	71.0	18.00	6	9.00	11.11
B10011.5	–	11.50	142.0	71.0	18.00	6	9.00	11.50
B10012.0	–	12.00	152.0	76.0	19.00	6	9.00	12.00
B10012.5	–	12.50	152.0	76.0	19.00	6	10.00	12.50
B1001/2	1/2	12.70	152.0	76.0	19.00	6	10.00	12.70
B10013.0	–	13.00	152.0	76.0	19.00	6	10.00	13.00
B10017/32	17/32	13.49	163.0	81.0	20.00	8	11.00	13.49
B10013.5	–	13.50	163.0	81.0	20.00	8	11.00	13.50
B10014.0	–	14.00	163.0	81.0	20.00	8	11.00	14.00
B1009/16	9/16	14.29	163.0	81.0	20.00	8	11.00	14.29
B10014.5	–	14.50	163.0	81.0	20.00	8	11.00	14.50
B10015.0	–	15.00	163.0	81.0	20.00	8	12.00	15.00
B10019/32	19/32	15.08	163.0	81.0	22.00	8	12.00	15.08
B1005/8	5/8	15.88	175.0	87.0	22.00	8	12.00	15.88
B10016.0	–	16.00	175.0	87.0	22.00	8	12.00	16.00
B10017.0	–	17.00	175.0	87.0	22.00	8	13.00	17.00
B10011/16	11/16	17.46	188.0	93.0	23.00	8	14.50	17.46
B10018.0	–	18.00	188.0	93.0	23.00	8	14.50	18.00
B10019.0	–	19.00	188.0	93.0	23.00	8	14.50	19.00
B1003/4	3/4	19.05	188.0	93.0	25.00	8	14.50	19.05
B10020.0	–	20.00	201.0	100.0	25.00	8	16.00	20.00
B10013/16	13/16	20.64	201.0	100.0	25.00	8	16.00	20.64
B10021.0	–	21.00	201.0	100.0	25.00	8	16.00	21.00
B10022.0	–	22.00	215.0	107.0	27.00	8	18.00	22.00
B1007/8	7/8	22.22	215.0	107.0	27.00	8	18.00	22.22
B10023.0	–	23.00	215.0	107.0	27.00	8	18.00	23.00
B10024.0	–	24.00	231.0	115.0	29.00	8	18.00	24.00
B10025.0	–	25.00	231.0	115.0	29.00	8	20.00	25.00
B1001	1″	25.40	231.0	115.0	29.00	8	20.00	25.40
B10026.0	–	26.00	231.0	115.0	29.00	8	20.00	26.00
B10027.0	–	27.00	247.0	124.0	31.00	10	22.00	27.00
B10028.0	–	28.00	247.0	124.0	31.00	10	22.00	28.00
B10029.0	–	29.00	247.0	124.0	31.00	10	22.00	29.00
B10030.0	–	30.00	247.0	124.0	31.00	10	24.00	30.00
B10031.0	–	31.00	265.0	133.0	33.00	10	24.00	31.00
B10032.0	–	32.00	265.0	133.0	33.00	10	24.00	32.00
B10033.0	–	33.00	265.0	133.0	33.00	10	26.00	33.00
B10034.0	–	34.00	284.0	142.0	36.00	10	26.00	34.00
B10035.0	–	35.00	284.0	142.0	36.00	10	29.00	35.00
B10036.0	–	36.00	284.0	142.0	36.00	10	29.00	36.00
B10037.0	–	37.00	284.0	142.0	36.00	10	29.00	37.00
B10038.0	–	38.00	305.0	152.0	38.00	10	29.00	38.00
B10039.0	–	39.00	305.0	152.0	38.00	10	32.00	39.00
B10040.0	–	40.00	305.0	152.0	38.00	10	32.00	40.00
B10045.0	–	45.00	326.0	163.0	41.00	12	35.00	45.00
B10050.0	–	50.00	347.0	174.0	44.00	12	39.00	50.00

B334

DORMER

HSS Straight Shank Adjustable Hand Reamer

This hand reamer is easily adjustable, helping to finish many different diameter holes with a single reamer. With precision ground blades and straight flute geometry, smooth reaming and improved hole size and surface finish are achieved. Suitable for reaming in many materials.



HSS | Bright | DORMER

R

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■	■	■	■	■	◪	■	◪	◪	◪	◪	◪	◪	◪

M2.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	N1.1	N1.2	N1.3	N2.1	N2.2
◪	■	■	◪	■	■	◪	■	◪	◪	■	■	■	■

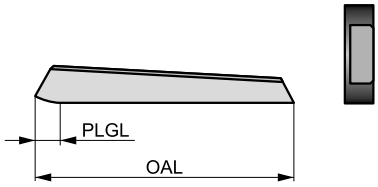
N2.3	N3.1	N3.2	N3.3	N4.1	N4.2
◪	■	■	◪	◪	◪

Product	Nr.	DCN [mm]	DCX [mm]	OAL [mm]	LU [mm]	LDC [mm]	NOF	WSC [mm]
B334000	000	6.40	7.20	110.0	32.00	7.00	4	3.00
B33400	00	7.20	8.00	110.0	32.00	7.00	4	3.40
B3340	0	8.00	9.00	115.0	34.00	9.00	5	3.80
B3341	1	9.00	10.00	115.0	34.00	9.00	5	4.30
B3342	2	10.00	11.00	115.0	34.00	9.00	5	4.90
B3343	3	11.00	12.00	125.0	35.00	9.00	5	4.90
B3344	4	12.00	13.50	135.0	41.00	9.00	5	6.20
B3345	5	13.50	15.50	146.0	50.00	12.00	5	7.00
B3346	6	15.50	18.00	166.0	60.00	12.00	5	8.00
B3347	7	18.00	21.00	178.0	65.00	15.00	5	9.00
B3348	8	21.00	24.00	195.0	76.00	15.00	5	11.00
B3349	9	24.00	27.50	218.0	82.00	18.00	5	12.00
B33410	10	27.50	31.50	245.0	86.00	18.00	5	14.50
B33411	11	31.50	37.00	280.0	98.00	18.00	6	18.00
B33412	12	37.00	45.00	325.0	108.00	20.00	6	20.00
B33413	13	45.00	55.00	370.0	118.00	20.00	6	26.00
B33414	14	55.00	67.00	400.0	125.00	20.00	6	32.00
B33415	15	67.00	80.00	435.0	140.00	23.00	8	39.00
B33416	16	80.00	95.00	475.0	155.00	23.00	8	49.00

B335

Replacement Blades and Nuts for Use in the Adjustable Hand Reamer, B334

The nut and blades can be purchased separately and are each available in 19 sizes.



Product	Nr.	PLGL [mm]	OAL [mm]
B335000BLADES	000	7.00	32.0
B335000NUT	000	–	–
B33500BLADES	00	7.00	32.0
B33500NUT	00	–	–
B3350BLADES	0	9.00	34.0
B3350NUT	0	–	–
B3351BLADES	1	9.00	34.0
B3351NUT	1	–	–
B3352BLADES	2	9.00	34.0
B3352NUT	2	–	–
B3353BLADES	3	9.00	35.0
B3353NUT	3	–	–
B3354BLADES	4	9.00	41.0
B3354NUT	4	–	–
B3355BLADES	5	12.00	50.0
B3355NUT	5	–	–
B3356BLADES	6	12.00	60.0
B3356NUT	6	–	–
B3357BLADES	7	15.00	65.0

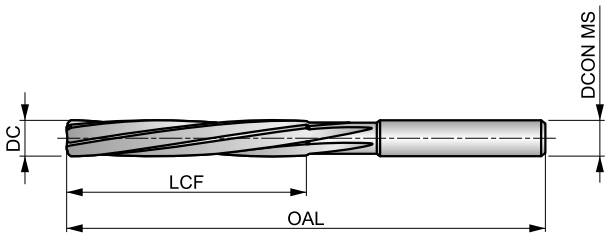
Product	Nr.	PLGL [mm]	OAL [mm]
B3357NUT	7	–	–
B3358BLADES	8	15.00	76.0
B3358NUT	8	–	–
B3359BLADES	9	18.00	82.0
B3359NUT	9	–	–
B33510BLADES	10	18.00	86.0
B33510NUT	10	–	–
B33511BLADES	11	18.00	98.0
B33511NUT	11	–	–
B33512BLADES	12	20.00	108.0
B33512NUT	12	–	–
B33513BLADES	13	20.00	118.0
B33513NUT	13	–	–
B33514BLADES	14	20.00	125.0
B33514NUT	14	–	–
B33515BLADES	15	23.00	140.0
B33515NUT	15	–	–
B33516BLADES	16	23.00	155.0
B33516NUT	16	–	–

B901

DORMER

HSS-E Straight Shank Machine Reamer, H7 Accuracy, Bright and ST Finish

The precision ground geometry, with left-hand helix and right-hand cutting, improves hole size and surface finish. The reamer has a straight shank for high performance machine reaming. Suitable for reaming in many materials.



HSS-E	Bright ST	BS 328
R		B
H7		

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 15 C	■ 16 C	■ 17 C	■ 13 C	■ 11 C	◪ 10 B	■ 7 B	■ 6 B	◪ 5 B	■ 4 B	◪ 4 B	◪ 3 A	◪ 10 C	◪ 8 C
M2.1	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪ 9 C	■ 14 E	■ 10 D	◪ 8 D	■ 12 C	■ 10 C	◪ 8 C	◪ 11 C	◪ 8 C	◪ 23 F	■ 17 F	■ 12 F	■ 25 E	■ 22 E
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**								
◪ 14 E	■ 34 D	■ 20 E	■ 10 D	◪ 22 B	◪ 21 B								

Product	DC [inch]	DC [mm]	OAL [mm]	LCF [mm]	NOF	DCON MS [mm]
B9011.5	–	1.50	44.0	21.0	4	1.50
B9011/16	1/16	1.59	44.0	21.0	4	1.59
B9012.0	–	2.00	50.0	25.0	4	2.00
B9013/32	3/32	2.38	58.0	29.0	4	2.38
B9012.5	–	2.50	58.0	29.0	4	2.50
B9013.0	–	3.00	62.0	31.0	4	3.00
B9011/8	1/8	3.18	66.0	33.0	4	3.18
B9013.5	–	3.50	71.0	35.0	4	3.50
B9015/32	5/32	3.97	76.0	38.0	6	3.97
B9014.0	–	4.00	76.0	38.0	6	4.00
B9014.5	–	4.50	81.0	41.0	6	4.50
B9013/16	3/16	4.76	87.0	44.0	6	4.76
B9015.0	–	5.00	87.0	44.0	6	5.00
B90113/64	13/64	5.16	87.0	44.0	6	5.16
B9015.5	–	5.50	93.0	47.0	6	5.50

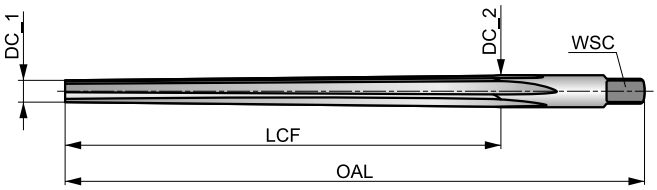
Product	DC [inch]	DC [mm]	OAL [mm]	LCF [mm]	NOF	DCON MS [mm]
B9017/32	7/32	5.56	93.0	47.0	6	5.56
B90115/64	15/64	5.95	93.0	47.0	6	5.95
B9016.0	–	6.00	93.0	47.0	6	6.00
B9011/4	1/4	6.35	100.0	50.0	6	6.35
B9017.0	–	7.00	107.0	54.0	6	7.00
B9019/32	9/32	7.14	107.0	54.0	6	7.14
B9015/16	5/16	7.94	115.0	58.0	6	7.94
B9018.0	–	8.00	115.0	58.0	6	8.00
B9019.0	–	9.00	124.0	62.0	6	9.00
B9013/8	3/8	9.52	133.0	66.0	6	9.52
B90110.0	–	10.00	133.0	66.0	6	10.00
B90111.0	–	11.00	142.0	71.0	6	11.00
B9017/16	7/16	11.11	142.0	71.0	6	11.11
B90112.0	–	12.00	152.0	76.0	6	12.00
B9011/2	1/2	12.70	152.0	76.0	6	12.70

B301

DORMER

HSS Straight Shank Taper Pin Hand Reamer 1:48 Taper, Bright and ST Finish

Designed to finish tapered holes to accept standard 1 to 48 ratio imperial taper pins. With a reduced small diameter, the tool easily locates and centers in the pre-drilled hole to improve accuracy and performance. Suitable for reaming in many materials.



HSS	Bright ST	BS 328
R		A
1:48		

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■	■	■	■	■	◪	■	◪	◪	◪	◪	◪	◪	◪

M2.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	N1.1	N1.2	N1.3	N2.1	N2.2
◪	■	■	◪	■	■	◪	■	◪	◪	■	■	■	■

N2.3	N3.1	N3.2	N3.3	N4.1	N4.2
◪	■	■	◪	◪	◪

DC <= 1/4 limit of tolerance +0.0030; DC >=9/32 limit of tolerance +0.0050.

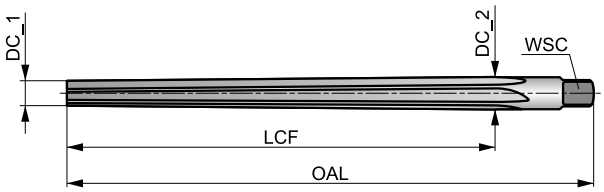
Product	nom d	DC_1	DC_2	OAL	LCF	NOF	WSC	DCON MS
		[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
B3011/16	1/16	1.10	1.63	51.0	25.0	4	1.20	1.63
B3015/64	5/64	1.50	2.03	51.0	25.0	4	1.60	2.03
B3013/32	3/32	1.75	2.41	57.0	32.0	4	2.00	2.41
B3017/64	7/64	2.03	2.82	64.0	38.0	4	2.20	2.82
B3011/8	1/8	2.30	3.23	70.0	44.0	4	2.50	3.23
B3019/64	9/64	2.64	3.63	73.0	48.0	4	2.80	3.63
B3015/32	5/32	2.95	4.01	76.0	51.0	4	3.10	4.01
B30111/64	11/64	3.23	4.42	89.0	57.0	4	3.60	4.42
B3013/16	3/16	3.50	4.95	102.0	70.0	4	4.00	4.95
B3017/32	7/32	4.13	5.59	102.0	70.0	6	4.50	5.59
B3011/4	1/4	4.64	6.43	117.0	86.0	6	5.00	6.43
B3019/32	9/32	5.23	7.42	143.0	105.0	6	5.60	7.42
B3015/16	5/16	5.84	8.03	143.0	105.0	6	6.30	8.03
B30111/32	11/32	6.43	8.81	152.0	114.0	6	7.10	8.81
B3013/8	3/8	7.03	9.68	165.0	127.0	6	8.00	9.68
B30113/32	13/32	7.42	10.46	191.0	146.0	6	8.00	10.46
B3017/16	7/16	8.21	11.25	191.0	146.0	6	9.00	11.25
B3011/2	1/2	9.41	12.85	210.0	165.0	6	10.00	12.85

B903

DORMER

HSS Straight Shank Taper Pin Hand Reamer 1:50 Taper, Bright and ST Finish

Designed to finish tapered holes to accept standard 1 to 50 ratio metric taper pins. The diameter of the small end is reduced to make it easier to locate and center the reamer in the hole. Suitable for reaming in many materials.



HSS	Bright ST	DIN 9
R		A
1:50		

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■	■	■	■	■	◪	■	◪	◪	◪	◪	◪	◪	◪
M2.1	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪	■	■	◪	■	■	◪	■	◪	◪	■	■	■	■
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**								
◪	■	■	◪	◪	◪								

DCON MS tolerance h11; DC <= 5mm limmit of tolerance +0.0750; DC < 5mm limmit of tolerance +0.1250.

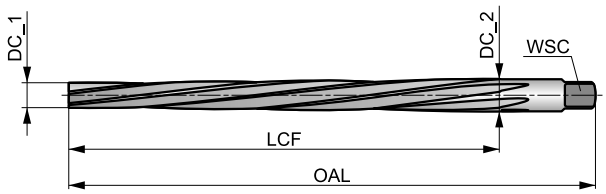
Product	nom d	DC_1	DC_2	OAL	LCF	NOF	WSC	DCON MS
		[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
B9031.5	1.5	1.40	2.14	57.0	37.0	4	1.80	2.14
B9032.0	2.0	1.90	2.86	68.0	48.0	4	2.24	2.86
B9032.5	2.5	2.40	3.36	68.0	48.0	4	2.80	3.36
B9033.0	3.0	2.90	4.06	80.0	58.0	4	3.15	4.00
B9034.0	4.0	3.90	5.26	93.0	68.0	4	4.00	5.00
B9035.0	5.0	4.90	6.36	100.0	73.0	4	5.00	6.30
B9036.0	6.0	5.90	8.00	135.0	105.0	6	6.30	7.90
B9038.0	8.0	7.90	10.80	180.0	145.0	6	8.00	10.50
B90310.0	10.0	9.90	13.40	215.0	175.0	6	10.00	13.30
B90312.0	12.0	11.80	16.00	255.0	210.0	8	11.20	16.00
B90313.0	13.0	12.86	16.74	255.0	210.0	8	12.50	16.74
B90314.0	14.0	13.86	17.74	255.0	210.0	8	12.50	17.74
B90316.0	16.0	15.80	20.40	280.0	230.0	8	14.00	20.40
B90320.0	20.0	19.80	24.80	310.0	250.0	8	18.00	24.80

B952

DORMER

HSS Straight Shank Taper Pin Hand Reamer 1:50 Taper, Bright Finish

With left-hand helix and right-hand cutting, gives smooth reaming for a more accurate hole size and better finish. The small end diameter has been reduced, making it easier to locate and center the reamer in the hole. Suitable for reaming in many materials.



HSS	Bright	DIN 9
R		B
1:50		

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■	■	■	■	■	◪	■	◪	◪	◪	◪	◪	◪	◪

M2.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	N1.1	N1.2	N1.3	N2.1	N2.2
◪	■	■	◪	■	■	◪	■	◪	◪	■	■	■	■

N2.3	N3.1	N3.2	N3.3	N4.1	N4.2
◪	■	■	◪	◪	◪

DCON MS tolerance h11; DC <= 2.5mm Straight flute, form A.

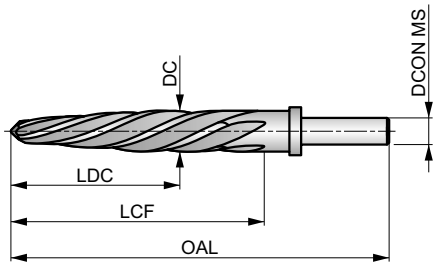
Product	nom d	DC_1	DC_2	OAL	LCF	NOF	WSC	DCON MS
		[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
B9521.2	1.2	1.10	1.74	50.0	32.0	3	2.40	3.15
B9521.5	1.5	1.40	2.14	57.0	37.0	3	2.40	3.15
B9522.0	2.0	1.90	2.86	68.0	48.0	3	2.40	3.15
B9522.5	2.5	2.40	3.36	68.0	48.0	4	2.40	3.15
B9523.0	3.0	2.90	4.06	80.0	58.0	5	3.00	4.00
B9523.5	3.5	3.40	4.66	87.0	63.0	5	3.40	4.50
B9524.0	4.0	3.90	5.26	93.0	68.0	5	3.80	5.00
B9524.5	4.5	4.40	5.80	95.0	70.0	5	4.30	5.60
B9525.0	5.0	4.90	6.36	100.0	73.0	5	4.90	6.30
B9525.5	5.5	5.40	7.20	118.0	90.0	6	5.50	7.10
B9526.0	6.0	5.90	8.00	135.0	105.0	6	6.20	8.00
B9526.5	6.5	6.40	8.60	140.0	110.0	6	6.20	8.00
B9527.0	7.0	6.90	9.40	160.0	125.0	6	7.00	9.00
B9528.0	8.0	7.90	10.80	180.0	145.0	6	8.00	10.00
B9529.0	9.0	8.90	12.10	195.0	160.0	6	9.00	11.20
B95210.0	10.0	9.90	13.40	215.0	175.0	6	10.00	12.50
B95212.0	12.0	11.80	16.00	255.0	210.0	8	11.00	14.00
B95213.0	13.0	12.80	17.00	255.0	210.0	8	12.00	16.00
B95214.0	14.0	13.80	18.00	255.0	210.0	8	12.00	16.00
B95216.0	16.0	15.80	20.40	280.0	230.0	8	14.50	18.00
B95220.0	20.0	19.80	24.80	310.0	250.0	8	18.00	22.40
B95225.0	25.0	24.70	30.70	370.0	300.0	10	22.00	28.00
B95230.0	30.0	29.70	36.10	400.0	320.0	10	24.00	31.50
B95240.0	40.0	39.70	46.50	430.0	340.0	12	32.00	40.00
B95250.0	50.0	49.70	56.90	460.0	360.0	12	39.00	50.00

B122

DORMER

HSS Reduced Shank Hand Car Reamer, Steam and Bronze Tempered Finish

Designed to re-align holes in thin walled sheets of steel, prior to bolting or riveting them together. It is designed to be used by hand. The small Pilot diameter makes it easy to locate and align the tool into pre-drilled holes. Suitable in many materials.



HSS | ST Bronze | ANSI

R

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	M1.1	M1.2	M2.1	N1.1	N1.2	N2.1	N2.2	N3.1
■ 15 C	■ 16 C	■ 17 C	■ 13 C	◪ 11 C	◪ 7 B	◪ 11 C	◪ 10 B	◪ 9 B	◪ 23 F	◪ 17 F	◪ 23 E	◪ 21 E	■ 34 D

N3.2	N4.1	N4.2
■ 20 E	◪ 22 B	◪ 21 B

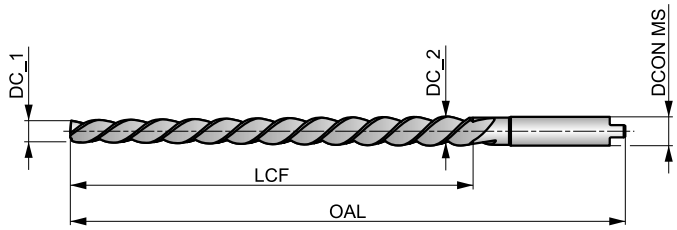
Product	DC	DC	OAL	LCF	NOF	DCONMS
	[inch]	[inch]	[inch]	[inch]		[inch]
B1223/8	3/8	0.3750	4.5/8	2.1/2	4	3/8
B1221/2	1/2	0.5000	5.7/8	3.3/4	5	1/2
B1229/16	9/16	0.5625	5.7/8	3.3/4	5	1/2
B1225/8	5/8	0.6250	6.3/8	4.1/4	5	1/2
B12211/16	11/16	0.6875	6.3/8	4.1/4	5	1/2
B1223/4	3/4	0.7500	6.7/8	4.1/2	5	1/2
B12213/16	13/16	0.8125	6.7/8	4.1/2	5	1/2
B1227/8	7/8	0.8750	6.7/8	4.1/2	5	1/2
B12215/16	15/16	0.9375	6.7/8	4.1/2	5	1/2
B1221	1″	1.0000	6.7/8	4.1/2	5	1/2
B1221.1/16	1.1/16	1.0625	6.7/8	4.1/2	5	1/2

B953

DORMER

HSS-E Straight Shank Taper Pin Hand Reamer 1:50 Taper, Bright Finish

With a high spiral, left-hand helix and right-hand cutting. The taper on the reamer is designed to finish tapered holes to take standard 1 to 50 ratio metric taper pins, while the taper point has a reduced diameter to improve performance. Suitable for reaming in many materials.



HSS-E	Bright	DIN 2179
R		1:50

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 10 B	■ 12 B	■ 13 B	■ 9 B	■ 8 B	◪ 6 A	■ 7 A	◪ 6 A	◪ 3 A	■ 4 A	◪ 3 A	◪ 2 A	◪ 11 C	◪ 10 B
M2.1	**M2.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**N1.1**	**N1.2**	**N1.3**	**N2.1**
◪ 9 B	◪ 8 B	■ 10 C	■ 6 B	◪ 4 B	■ 8 A	■ 6 A	◪ 4 A	■ 7 A	◪ 4 A	◪ 14 D	■ 12 D	■ 9 D	■ 16 C
N2.2	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**								
■ 14 C	◪ 10 C	■ 22 B	■ 14 C	◪ 6 B	◪ 22 B								

DCON MS tolerance h9.

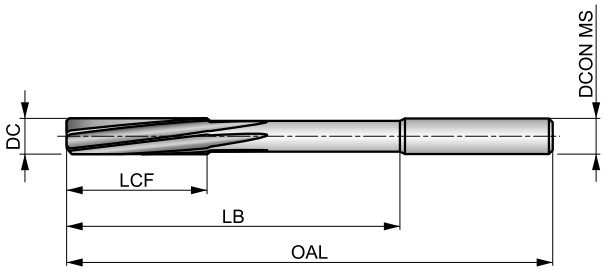
Product	nom d	DC_1	DC_2	OAL	LCF	NOF	DCON MS
		[mm]	[mm]	[mm]	[mm]		[mm]
B9531.0	1.0	0.80	1.46	60.0	33.0	2	1.40
B9531.5	1.5	1.40	2.14	70.0	37.0	2	2.10
B9532.0	2.0	1.90	2.86	86.0	48.0	3	3.15
B9532.5	2.5	2.40	3.36	86.0	48.0	3	3.15
B9533.0	3.0	2.90	4.06	100.0	58.0	3	4.00
B9534.0	4.0	3.90	5.26	112.0	68.0	3	5.00
B9535.0	5.0	4.90	6.36	122.0	73.0	3	6.30
B9536.0	6.0	5.90	8.00	160.0	105.0	3	8.00
B9536.5	6.5	6.40	8.78	188.0	119.0	3	8.50
B9538.0	8.0	7.90	10.80	207.0	145.0	3	10.00
B95310.0	10.0	9.90	13.40	245.0	175.0	3	12.50
B95312.0	12.0	11.80	16.00	290.0	210.0	3	16.00

B180

DORMER

HSS-E Straight Shank Machine Reamer with H7 Accuracy, Bright Finish

High performance reamer for CNC machines and held in high accuracy tool holders or chucks. The precision ground left-hand helix and right-hand cutting action ensures smooth reaming and improved surface finish and hole size. Suitable for reaming in many materials.



HSS-E	Bright	DIN 212
R	DIN 6535HA	B
H7		

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■21 C	■24 C	■25 C	■18 C	■16 C	◪14 B	■13 B	■11 B	◪9 B	■8 B	◪7 B	◪5 A	◪11 C	◪10 B
M2.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	N1.1	N1.2	N1.3	N2.1	N2.2
◪9 B	■16 E	■12 D	◪9 D	■16 C	■13 C	◪10 C	■14 C	◪11 C	◪24 F	■18 F	■11 F	◪27 E	■24 E
N2.3	N3.1	N3.2	N3.3	N4.1									
■16 E	■47 D	■28 E	◪14 D	◪30 B									

DCON MS tolerance h6.

Product	DC [mm]	OAL [mm]	LCF [mm]	LB [mm]	NOF	DCON MS [mm]
B1801.5	1.50	40.0	8.0	18.00	3	2.00
B1801.6	1.60	43.0	9.0	20.00	3	2.00
B1801.7	1.70	43.0	9.0	20.00	3	2.00
B1801.8	1.80	46.0	10.0	22.00	4	2.00
B1801.9	1.90	46.0	10.0	22.00	4	2.00
B1802.0	2.00	49.0	11.0	24.00	4	2.00
B1802.1	2.10	49.0	11.0	24.00	4	2.00
B1802.2	2.20	53.0	12.0	26.00	4	3.00
B1802.3	2.30	53.0	12.0	26.00	4	3.00
B1802.4	2.40	57.0	14.0	28.00	4	3.00
B1802.5	2.50	57.0	14.0	28.00	4	3.00
B1802.6	2.60	57.0	14.0	28.00	4	3.00
B1802.7	2.70	61.0	15.0	32.00	6	3.00
B1802.8	2.80	61.0	15.0	32.00	6	3.00
B1802.9	2.90	61.0	15.0	32.00	6	3.00
B1803.0	3.00	61.0	15.0	32.00	6	3.00
B1803.1	3.10	65.0	16.0	35.00	6	4.00
B1803.2	3.20	65.0	16.0	35.00	6	4.00
B1803.3	3.30	65.0	16.0	35.00	6	4.00
B1803.4	3.40	70.0	18.0	40.00	6	4.00
B1803.5	3.50	70.0	18.0	40.00	6	4.00
B1803.6	3.60	70.0	18.0	40.00	6	4.00
B1803.7	3.70	70.0	18.0	40.00	6	4.00
B1803.8	3.80	75.0	19.0	43.00	6	4.00
B1803.9	3.90	75.0	19.0	43.00	6	4.00
B1804.0	4.00	75.0	19.0	43.00	6	4.00
B1804.1	4.10	75.0	19.0	43.00	6	4.00

Product	DC [mm]	OAL [mm]	LCF [mm]	LB [mm]	NOF	DCON MS [mm]
B1804.2	4.20	75.0	19.0	43.00	6	4.00
B1804.3	4.30	80.0	21.0	47.00	6	5.00
B1804.4	4.40	80.0	21.0	47.00	6	5.00
B1804.5	4.50	80.0	21.0	47.00	6	5.00
B1804.6	4.60	80.0	21.0	47.00	6	5.00
B1804.7	4.70	80.0	21.0	47.00	6	5.00
B1804.8	4.80	86.0	23.0	52.00	6	5.00
B1804.9	4.90	86.0	23.0	52.00	6	5.00
B1805.0	5.00	86.0	23.0	52.00	6	5.00
B1805.1	5.10	86.0	23.0	52.00	6	5.00
B1805.2	5.20	86.0	23.0	52.00	6	5.00
B1805.3	5.30	86.0	23.0	52.00	6	5.00
B1805.4	5.40	93.0	26.0	57.00	6	6.00
B1805.5	5.50	93.0	26.0	57.00	6	6.00
B1805.6	5.60	93.0	26.0	57.00	6	6.00
B1805.7	5.70	93.0	26.0	57.00	6	6.00
B1805.8	5.80	93.0	26.0	57.00	6	6.00
B1805.9	5.90	93.0	26.0	57.00	6	6.00
B1806.0	6.00	93.0	26.0	57.00	6	6.00
B1806.1	6.10	101.0	28.0	63.00	6	6.00
B1806.2	6.20	101.0	28.0	63.00	6	6.00
B1806.3	6.30	101.0	28.0	63.00	6	6.00
B1806.4	6.40	101.0	28.0	63.00	6	6.00
B1806.5	6.50	101.0	28.0	63.00	6	6.00
B1806.6	6.60	101.0	28.0	63.00	6	6.00
B1806.7	6.70	101.0	28.0	63.00	6	6.00
B1806.8	6.80	109.0	31.0	69.00	6	8.00

Product	DC	OAL	LCF	LB	NOF	DCON MS
	[mm]	[mm]	[mm]	[mm]		[mm]
B1806.9	6.90	109.0	31.0	69.00	6	8.00
B1807.0	7.00	109.0	31.0	69.00	6	8.00
B1807.1	7.10	109.0	31.0	69.00	6	8.00
B1807.2	7.20	109.0	31.0	69.00	6	8.00
B1807.3	7.30	109.0	31.0	69.00	6	8.00
B1807.4	7.40	109.0	31.0	69.00	6	8.00
B1807.5	7.50	109.0	31.0	69.00	6	8.00
B1807.6	7.60	117.0	33.0	75.00	6	8.00
B1807.7	7.70	117.0	33.0	75.00	6	8.00
B1807.8	7.80	117.0	33.0	75.00	6	8.00
B1807.9	7.90	117.0	33.0	75.00	6	8.00
B1808.0	8.00	117.0	33.0	75.00	6	8.00
B1808.1	8.10	117.0	33.0	75.00	6	8.00
B1808.2	8.20	117.0	33.0	75.00	6	8.00
B1808.3	8.30	117.0	33.0	75.00	6	8.00
B1808.4	8.40	117.0	33.0	75.00	6	8.00
B1808.5	8.50	117.0	33.0	75.00	6	8.00
B1808.6	8.60	125.0	36.0	81.00	6	10.00
B1808.7	8.70	125.0	36.0	81.00	6	10.00
B1808.8	8.80	125.0	36.0	81.00	6	10.00
B1808.9	8.90	125.0	36.0	81.00	6	10.00

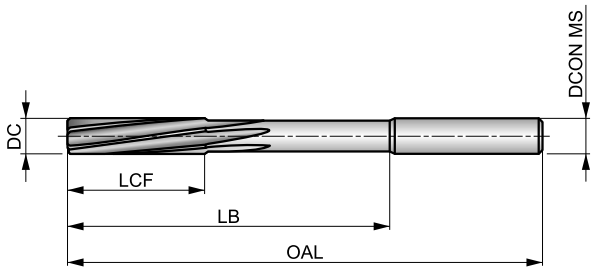
Product	DC	OAL	LCF	LB	NOF	DCON MS
	[mm]	[mm]	[mm]	[mm]		[mm]
B1809.0	9.00	125.0	36.0	81.00	6	10.00
B1809.1	9.10	125.0	36.0	81.00	6	10.00
B1809.2	9.20	125.0	36.0	81.00	6	10.00
B1809.3	9.30	125.0	36.0	81.00	6	10.00
B1809.4	9.40	125.0	36.0	81.00	6	10.00
B1809.5	9.50	125.0	36.0	81.00	6	10.00
B1809.6	9.60	133.0	38.0	87.00	6	10.00
B1809.7	9.70	133.0	38.0	87.00	6	10.00
B1809.8	9.80	133.0	38.0	87.00	6	10.00
B1809.9	9.90	133.0	38.0	87.00	6	10.00
B18010.0	10.00	133.0	38.0	87.00	6	10.00
B18011.0	11.00	142.0	41.0	96.00	6	10.00
B18012.0	12.00	151.0	44.0	105.00	6	10.00
B18013.0	13.00	151.0	44.0	105.00	6	10.00
B18014.0	14.00	160.0	47.0	110.00	8	14.00
B18015.0	15.00	162.0	50.0	112.00	8	14.00
B18016.0	16.00	170.0	52.0	120.00	8	14.00
B18017.0	17.00	175.0	54.0	123.00	8	14.00
B18018.0	18.00	182.0	56.0	130.00	8	14.00
B18019.0	19.00	189.0	58.0	131.00	8	16.00
B18020.0	20.00	195.0	60.0	137.00	8	16.00

B170

DORMER

HSS-E Straight Shank Machine Reamer - 0.01mm Increments, Bright Finish

Different increment sizes allows you to produce accurate hole sizes and additional hole tolerances. With a left-hand helix and right-hand cutting action, the precision ground geometry provides smooth reaming and improves hole size and surface finish. Suitable for reaming in many materials.



HSS-E	Bright	DIN 212
R		B
ø.95-5.5 +0.004 ø5.51-12 +0.005		

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■21 C	■24 C	■25 C	■18 C	■16 C	◪14 B	■13 B	■11 B	◪9 B	■8 B	◪7 B	◪5 A	◪11 C	◪10 B
M2.1	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪9 B	■16 E	■12 D	◪9 D	■16 C	■13 C	◪10 C	■14 C	◪11 C	◪24 D	■18 F	■11 F	◪27 E	■24 E
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**									
■16 E	■47 D	■28 E	◪14 D	◪30 B									

DCON MS tolerance h9.

Product	DC [mm]	OAL [mm]	LCF [mm]	LB [mm]	NOF	DCON MS [mm]
B170.98	0.98	34.0	5.5	15.00	3	1.00
B170.99	0.99	34.0	5.5	15.00	3	1.00
B1701.0	1.00	34.0	5.5	15.00	3	1.00
B1701.01	1.01	34.0	5.5	15.00	3	1.00
B1701.02	1.02	34.0	5.5	15.00	3	1.00
B1701.03	1.03	34.0	5.5	15.00	3	1.00
B1701.04	1.04	34.0	5.5	15.00	3	1.00
B1701.05	1.05	34.0	5.5	15.00	3	1.00
B1701.49	1.49	40.0	8.0	18.00	3	1.50
B1701.5	1.50	40.0	8.0	18.00	3	1.50
B1701.51	1.51	43.0	9.0	20.00	3	1.60
B1701.52	1.52	43.0	9.0	20.00	3	1.60
B1701.98	1.98	49.0	11.0	24.00	4	2.00
B1701.99	1.99	49.0	11.0	24.00	4	2.00
B1702.0	2.00	49.0	11.0	24.00	4	2.00
B1702.01	2.01	49.0	11.0	24.00	4	2.00
B1702.02	2.02	49.0	11.0	24.00	4	2.00
B1702.03	2.03	49.0	11.0	24.00	4	2.00
B1702.04	2.04	49.0	11.0	24.00	4	2.00
B1702.05	2.05	49.0	11.0	24.00	4	2.00
B1702.49	2.49	57.0	14.0	28.00	4	2.50
B1702.5	2.50	57.0	14.0	28.00	4	2.50
B1702.51	2.51	57.0	14.0	28.00	4	2.50
B1702.52	2.52	57.0	14.0	28.00	4	2.50
B1702.98	2.98	61.0	15.0	32.00	6	3.00
B1702.99	2.99	61.0	15.0	32.00	6	3.00
B1703.0	3.00	61.0	15.0	32.00	6	3.00

Product	DC [mm]	OAL [mm]	LCF [mm]	LB [mm]	NOF	DCON MS [mm]
B1703.01	3.01	65.0	16.0	35.00	6	3.20
B1703.02	3.02	65.0	16.0	35.00	6	3.20
B1703.03	3.03	65.0	16.0	35.00	6	3.20
B1703.04	3.04	65.0	16.0	35.00	6	3.20
B1703.05	3.05	65.0	16.0	35.00	6	3.20
B1703.49	3.49	70.0	18.0	40.00	6	3.50
B1703.5	3.50	70.0	18.0	40.00	6	3.50
B1703.51	3.51	70.0	18.0	40.00	6	3.50
B1703.52	3.52	70.0	18.0	40.00	6	3.50
B1703.98	3.98	75.0	19.0	43.00	6	4.00
B1703.99	3.99	75.0	19.0	43.00	6	4.00
B1704.0	4.00	75.0	19.0	43.00	6	4.00
B1704.01	4.01	75.0	19.0	43.00	6	4.00
B1704.02	4.02	75.0	19.0	43.00	6	4.00
B1704.03	4.03	75.0	19.0	43.00	6	4.00
B1704.04	4.04	75.0	19.0	43.00	6	4.00
B1704.05	4.05	75.0	19.0	43.00	6	4.00
B1704.49	4.49	80.0	21.0	47.00	6	4.50
B1704.5	4.50	80.0	21.0	47.00	6	4.50
B1704.51	4.51	80.0	21.0	47.00	6	4.50
B1704.52	4.52	80.0	21.0	47.00	6	4.50
B1704.98	4.98	86.0	23.0	52.00	6	5.00
B1704.99	4.99	86.0	23.0	52.00	6	5.00
B1705.0	5.00	86.0	23.0	52.00	6	5.00
B1705.01	5.01	86.0	23.0	52.00	6	5.00
B1705.02	5.02	86.0	23.0	52.00	6	5.00
B1705.03	5.03	86.0	23.0	52.00	6	5.00

Product	DC	OAL	LCF	LB	NOF	DCON MS
	[mm]	[mm]	[mm]	[mm]		[mm]
B1705.04	5.04	86.0	23.0	52.00	6	5.00
B1705.05	5.05	86.0	23.0	52.00	6	5.00
B1705.49	5.49	93.0	26.0	57.00	6	5.60
B1705.5	5.50	93.0	26.0	57.00	6	5.60
B1705.51	5.51	93.0	26.0	57.00	6	5.60
B1705.52	5.52	93.0	26.0	57.00	6	5.60
B1705.98	5.98	93.0	26.0	57.00	6	5.60
B1705.99	5.99	93.0	26.0	57.00	6	5.60
B1706.0	6.00	93.0	26.0	57.00	6	5.60
B1706.01	6.01	101.0	28.0	63.00	6	6.30
B1706.02	6.02	101.0	28.0	63.00	6	6.30
B1706.03	6.03	101.0	28.0	63.00	6	6.30
B1706.04	6.04	101.0	28.0	63.00	6	6.30
B1706.05	6.05	101.0	28.0	63.00	6	6.30
B1706.49	6.49	101.0	28.0	63.00	6	6.30
B1706.5	6.50	101.0	28.0	63.00	6	6.30
B1706.51	6.51	101.0	28.0	63.00	6	6.30
B1706.52	6.52	101.0	28.0	63.00	6	6.30
B1706.98	6.98	109.0	31.0	69.00	6	7.10
B1706.99	6.99	109.0	31.0	69.00	6	7.10
B1707.0	7.00	109.0	31.0	69.00	6	7.10
B1707.01	7.01	109.0	31.0	69.00	6	7.10
B1707.02	7.02	109.0	31.0	69.00	6	7.10
B1707.03	7.03	109.0	31.0	69.00	6	7.10
B1707.04	7.04	109.0	31.0	69.00	6	7.10
B1707.05	7.05	109.0	31.0	69.00	6	7.10
B1707.49	7.49	109.0	31.0	69.00	6	7.10
B1707.5	7.50	109.0	31.0	69.00	6	7.10
B1707.51	7.51	117.0	33.0	75.00	6	8.00
B1707.52	7.52	117.0	33.0	75.00	6	8.00
B1707.98	7.98	117.0	33.0	75.00	6	8.00
B1707.99	7.99	117.0	33.0	75.00	6	8.00
B1708.0	8.00	117.0	33.0	75.00	6	8.00
B1708.01	8.01	117.0	33.0	75.00	6	8.00
B1708.02	8.02	117.0	33.0	75.00	6	8.00
B1708.03	8.03	117.0	33.0	75.00	6	8.00
B1708.04	8.04	117.0	33.0	75.00	6	8.00
B1708.05	8.05	117.0	33.0	75.00	6	8.00
B1708.49	8.49	117.0	33.0	75.00	6	8.00
B1708.5	8.50	117.0	33.0	75.00	6	8.00

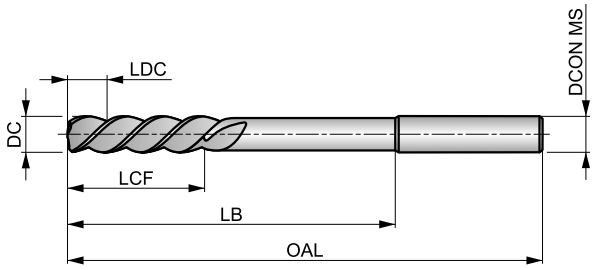
Product	DC	OAL	LCF	LB	NOF	DCON MS
	[mm]	[mm]	[mm]	[mm]		[mm]
B1708.51	8.51	125.0	36.0	81.00	6	9.00
B1708.52	8.52	125.0	36.0	81.00	6	9.00
B1708.98	8.98	125.0	36.0	81.00	6	9.00
B1708.99	8.99	125.0	36.0	81.00	6	9.00
B1709.0	9.00	125.0	36.0	81.00	6	9.00
B1709.01	9.01	125.0	36.0	81.00	6	9.00
B1709.02	9.02	125.0	36.0	81.00	6	9.00
B1709.03	9.03	125.0	36.0	81.00	6	9.00
B1709.04	9.04	125.0	36.0	81.00	6	9.00
B1709.05	9.05	125.0	36.0	81.00	6	9.00
B1709.49	9.49	125.0	36.0	81.00	6	9.00
B1709.5	9.50	125.0	36.0	81.00	6	9.00
B1709.51	9.51	133.0	38.0	87.00	6	10.00
B1709.52	9.52	133.0	38.0	87.00	6	10.00
B1709.98	9.98	133.0	38.0	87.00	6	10.00
B1709.99	9.99	133.0	38.0	87.00	6	10.00
B17010.0	10.00	133.0	38.0	87.00	6	10.00
B17010.01	10.01	133.0	38.0	87.00	6	10.00
B17010.02	10.02	133.0	38.0	87.00	6	10.00
B17010.03	10.03	133.0	38.0	87.00	6	10.00
B17010.04	10.04	133.0	38.0	87.00	6	10.00
B17010.05	10.05	133.0	38.0	87.00	6	10.00
B17010.49	10.49	133.0	38.0	87.00	6	10.00
B17010.51	10.51	133.0	38.0	87.00	6	10.00
B17010.52	10.52	133.0	38.0	87.00	6	10.00
B17010.98	10.98	142.0	41.0	96.00	6	10.00
B17010.99	10.99	142.0	41.0	96.00	6	10.00
B17011.0	11.00	142.0	41.0	96.00	6	10.00
B17011.01	11.01	142.0	41.0	96.00	6	10.00
B17011.02	11.02	142.0	41.0	96.00	6	10.00
B17011.03	11.03	142.0	41.0	96.00	6	10.00
B17011.04	11.04	142.0	41.0	96.00	6	10.00
B17011.05	11.05	142.0	41.0	96.00	6	10.00
B17011.49	11.49	142.0	41.0	96.00	6	10.00
B17011.5	11.50	142.0	41.0	96.00	6	10.00
B17011.51	11.51	142.0	41.0	96.00	6	10.00
B17011.52	11.52	142.0	41.0	96.00	6	10.00
B17011.98	11.98	151.0	44.0	105.00	6	10.00
B17011.99	11.99	151.0	44.0	105.00	6	10.00
B17012.0	12.00	151.0	44.0	105.00	6	10.00

B157

DORMER

HSS-E Straight Shank Quick Helix Machine Reamer, H7 Accuracy, Bright Finish

The high spiral left-hand helix and right-hand cutting action gives great performance, particularly when machining non-ferrous materials, such as aluminium. It is also suitable for reaming other materials. The tapered lead makes it easy to locate and centre, ensuring better performance and hole quality.



HSS-E	Bright	DIN 212
R		E
H7		

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	M1.1	M1.2	M2.1	M2.2	M2.3	N1.1	N1.2
■21 C	■24 C	■25 C	■18 C	◪16 C	■13 B	◪11 B	◪11 C	◪10 C	◪9 C	◪8 B	◪7 B	■28 F	■21 F

N1.3	N2.1	N2.2	N2.3
◪14 F	■31 E	■28 E	◪20 E

DCON MS tolerance h9.

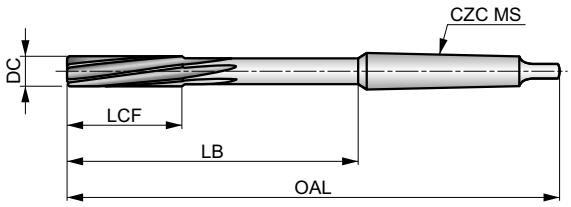
Product	DC [mm]	OAL [mm]	LCF [mm]	LDC [mm]	LB [mm]	NOF	DCON MS [mm]
B1572.0	2.00	49.0	11.0	3.50	24.00	3	2.00
B1573.0	3.00	61.0	15.0	4.00	32.00	3	3.00
B1574.0	4.00	75.0	19.0	4.00	43.00	3	4.00
B1575.0	5.00	86.0	23.0	4.50	52.00	3	5.00
B1576.0	6.00	93.0	26.0	6.00	57.00	3	5.60
B1577.0	7.00	109.0	31.0	7.00	69.00	3	7.10
B1578.0	8.00	117.0	33.0	9.00	75.00	3	8.00
B1579.0	9.00	125.0	36.0	9.50	81.00	3	9.00
B15710.0	10.00	133.0	38.0	10.00	87.00	3	10.00
B15711.0	11.00	142.0	41.0	10.50	96.00	3	10.00
B15712.0	12.00	151.0	44.0	11.00	105.00	3	10.00
B15713.0	13.00	151.0	44.0	11.50	105.00	3	10.00
B15714.0	14.00	160.0	47.0	12.00	110.00	3	12.50
B15715.0	15.00	162.0	50.0	12.50	112.00	3	12.50
B15716.0	16.00	170.0	52.0	13.00	120.00	3	12.50
B15717.0	17.00	175.0	54.0	13.50	123.00	3	14.00
B15718.0	18.00	182.0	56.0	14.00	130.00	3	14.00
B15719.0	19.00	189.0	58.0	14.50	131.00	3	16.00
B15720.0	20.00	195.0	60.0	15.00	137.00	3	16.00

B161

DORMER

HSS-E Taper Shank Machine Reamer with H7 Accuracy, Bright Finish

The precision ground left-hand helix and right-hand cutting action, ensures smooth reaming and improved surface finish and hole size. Suitable for reaming in many materials.



HSS-E	Bright	DIN 208
R		B
H7		

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■21 C	■24 C	■25 C	■18 C	■16 C	◪14 B	■13 B	■11 B	◪9 B	■8 B	◪7 B	◪5 A	◪11 C	◪10 B
M2.1	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪9 B	■16 E	■12 D	◪9 D	■16 C	■13 C	◪10 C	■14 C	◪11 C	◪24 F	■18 F	■11 F	◪27 E	■24 E
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**									
■16 E	■47 D	■28 E	◪14 D	◪30 B									

Product	DC [mm]	OAL [mm]	LCF [mm]	LB [mm]	NOF	CZC MS
B1613.0	3.00	113.0	15.0	47.50	6	MK 1
B1614.0	4.00	124.0	19.0	58.50	6	MK 1
B1615.0	5.00	133.0	23.0	67.50	6	MK 1
B1616.0	6.00	138.0	26.0	72.50	6	MK 1
B1617.0	7.00	150.0	31.0	84.50	6	MK 1
B1618.0	8.00	156.0	33.0	90.50	6	MK 1
B1619.0	9.00	162.0	36.0	96.50	6	MK 1
B16110.0	10.00	168.0	38.0	102.50	6	MK 1
B16111.0	11.00	175.0	41.0	109.50	6	MK 1
B16112.0	12.00	182.0	44.0	116.50	6	MK 1
B16113.0	13.00	182.0	44.0	116.50	6	MK 1
B16114.0	14.00	189.0	47.0	123.50	8	MK 1
B16115.0	15.00	204.0	50.0	124.00	8	MK 2
B16116.0	16.00	210.0	52.0	130.00	8	MK 2
B16117.0	17.00	214.0	54.0	134.00	8	MK 2
B16118.0	18.00	219.0	56.0	139.00	8	MK 2
B16119.0	19.00	223.0	58.0	143.00	8	MK 2
B16120.0	20.00	228.0	60.0	148.00	8	MK 2
B16121.0	21.00	232.0	62.0	152.00	8	MK 2
B16122.0	22.00	237.0	64.0	157.00	8	MK 2
B16123.0	23.00	241.0	66.0	161.00	8	MK 2
B16124.0	24.00	268.0	68.0	169.00	8	MK 3

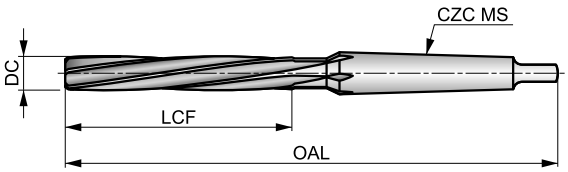
Product	DC [mm]	OAL [mm]	LCF [mm]	LB [mm]	NOF	CZC MS
B16125.0	25.00	268.0	68.0	169.00	8	MK 3
B16126.0	26.00	273.0	70.0	174.00	8	MK 3
B16127.0	27.00	277.0	71.0	178.00	10	MK 3
B16128.0	28.00	277.0	71.0	178.00	10	MK 3
B16129.0	29.00	281.0	73.0	182.00	10	MK 3
B16130.0	30.00	281.0	73.0	182.00	10	MK 3
B16131.0	31.00	285.0	75.0	186.00	10	MK 3
B16132.0	32.00	317.0	77.0	193.00	10	MK 4
B16133.0	33.00	317.0	77.0	193.00	10	MK 4
B16134.0	34.00	321.0	78.0	197.00	10	MK 4
B16135.0	35.00	321.0	78.0	197.00	10	MK 4
B16136.0	36.00	325.0	79.0	201.00	10	MK 4
B16138.0	38.00	329.0	81.0	205.00	10	MK 4
B16140.0	40.00	329.0	81.0	205.00	10	MK 4
B16142.0	42.00	333.0	82.0	209.00	12	MK 4
B16144.0	44.00	336.0	83.0	212.00	12	MK 4
B16145.0	45.00	336.0	83.0	212.00	12	MK 4
B16146.0	46.00	340.0	84.0	216.00	12	MK 4
B16147.0	47.00	340.0	84.0	216.00	12	MK 4
B16148.0	48.00	344.0	86.0	220.00	12	MK 4
B16150.0	50.00	344.0	86.0	220.00	12	MK 4

B101

DORMER

HSS-E Taper Shank Machine Reamer with H7 Accuracy

Taper Shank machine reamer according to BS 328. The precision ground left-hand helix and right-hand cutting action, ensures smooth reaming and improved surface finish and hole size. Suitable for reaming in many materials.



HSS-E	Bright ST	BS 328
R		B
H7		

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 15 C	■ 16 C	■ 17 C	■ 13 C	■ 11 C	◪ 10 B	■ 7 B	■ 6 B	◪ 5 B	■ 4 B	◪ 4 B	◪ 3 A	◪ 7 B	◪ 6 A
K1.1	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**
■ 14 E	■ 10 D	◪ 8 D	■ 12 C	■ 10 C	◪ 8 C	■ 11 C	◪ 8 C	◪ 23 F	■ 17 F	■ 9 F	◪ 25 E	■ 18 E	■ 14 E
N3.1	**N3.2**	**N3.3**	**N4.1**										
■ 34 D	■ 20 E	◪ 10 D	◪ 22 B										

Product	DC [inch]	DC [mm]	OAL [mm]	LCF [mm]	NOF	CZC MS
B1013.0	–	3.00	112.0	33.0	4	MK 1
B1011/8	1/8	3.18	112.0	33.0	4	MK 1
B1013.5	–	3.50	115.0	35.0	6	MK 1
B1014.0	–	4.00	117.0	38.0	6	MK 1
B1014.5	–	4.50	120.0	41.0	6	MK 1
B1013/16	3/16	4.76	124.0	44.0	6	MK 1
B1015.0	–	5.00	124.0	44.0	6	MK 1
B1015.5	–	5.50	127.0	47.0	6	MK 1
B1016.0	–	6.00	127.0	47.0	6	MK 1
B1011/4	1/4	6.35	130.0	50.0	6	MK 1
B1016.5	–	6.50	130.0	50.0	6	MK 1
B1017.0	–	7.00	134.0	54.0	6	MK 1
B1015/16	5/16	7.94	138.0	58.0	6	MK 1
B1018.0	–	8.00	138.0	58.0	6	MK 1
B1018.5	–	8.50	138.0	58.0	6	MK 1
B1019.0	–	9.00	142.0	62.0	6	MK 1
B1019.5	–	9.50	142.0	62.0	6	MK 1
B1013/8	3/8	9.52	146.0	66.0	6	MK 1
B10110.0	–	10.00	146.0	66.0	6	MK 1
B10110.5	–	10.50	146.0	66.0	6	MK 1
B10111.0	–	11.00	151.0	71.0	6	MK 1
B1017/16	7/16	11.11	151.0	71.0	6	MK 1
B10112.0	–	12.00	156.0	76.0	6	MK 1
B10112.5	–	12.50	156.0	76.0	6	MK 1
B1011/2	1/2	12.70	156.0	76.0	6	MK 1
B10113.0	–	13.00	156.0	76.0	6	MK 1
B10113.5	–	13.50	161.0	81.0	6	MK 1
B10114.0	–	14.00	161.0	81.0	8	MK 1

Product	DC [inch]	DC [mm]	OAL [mm]	LCF [mm]	NOF	CZC MS
B1019/16	9/16	14.29	181.0	81.0	8	MK 2
B10114.5	–	14.50	181.0	81.0	8	MK 2
B10115.0	–	15.00	181.0	81.0	8	MK 2
B10115.5	–	15.50	187.0	87.0	8	MK 2
B1015/8	5/8	15.88	187.0	87.0	8	MK 2
B10116.0	–	16.00	187.0	87.0	8	MK 2
B10116.5	–	16.50	187.0	87.0	8	MK 2
B10117.0	–	17.00	187.0	87.0	8	MK 2
B10118.0	–	18.00	193.0	93.0	8	MK 2
B10119.0	–	19.00	193.0	93.0	8	MK 2
B1013/4	3/4	19.05	200.0	100.0	8	MK 2
B10120.0	–	20.00	200.0	100.0	8	MK 2
B10113/16	13/16	20.64	200.0	100.0	8	MK 2
B10121.0	–	21.00	200.0	100.0	8	MK 2
B10122.0	–	22.00	207.0	107.0	8	MK 2
B1017/8	7/8	22.22	207.0	107.0	8	MK 2
B10123.0	–	23.00	207.0	107.0	8	MK 2
B10124.0	–	24.00	242.0	115.0	8	MK 3
B10125.0	–	25.00	242.0	115.0	10	MK 3
B1011	1″	25.40	242.0	115.0	10	MK 3
B10126.0	–	26.00	242.0	115.0	10	MK 3
B10127.0	–	27.00	251.0	124.0	10	MK 3
B10128.0	–	28.00	251.0	124.0	10	MK 3
B1011.1/8	1.1/8	28.58	251.0	124.0	10	MK 3
B10129.0	–	29.00	251.0	124.0	10	MK 3
B10130.0	–	30.00	251.0	124.0	10	MK 3
B10131.0	–	31.00	260.0	133.0	10	MK 3
B1011.1/4	1.1/4	31.75	260.0	133.0	10	MK 3

Product	DC	DC	OAL	LCF	NOF	CZC MS
	[inch]	[mm]	[mm]	[mm]		
B10132.0	–	32.00	293.0	133.0	10	MK 4
B10134.0	–	34.00	302.0	142.0	10	MK 4
B1011.3/8	1.3/8	34.93	302.0	142.0	10	MK 4
B10135.0	–	35.00	302.0	142.0	10	MK 4
B10136.0	–	36.00	302.0	142.0	10	MK 4
B10137.0	–	37.00	302.0	142.0	10	MK 4
B10138.0	–	38.00	312.0	152.0	10	MK 4
B1011.1/2	1.1/2	38.10	312.0	152.0	10	MK 4
B10139.0	–	39.00	312.0	152.0	10	MK 4
B10140.0	–	40.00	312.0	152.0	10	MK 4
B10141.0	–	41.00	312.0	152.0	10	MK 4

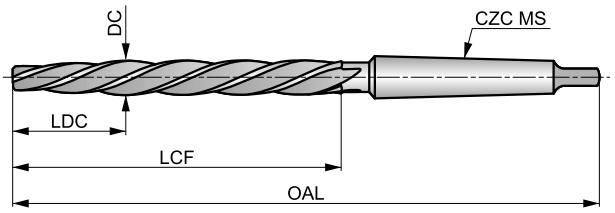
Product	DC	DC	OAL	LCF	NOF	CZC MS
	[inch]	[mm]	[mm]	[mm]		
B10142.0	–	42.00	312.0	152.0	10	MK 4
B10143.0	–	43.00	323.0	163.0	10	MK 4
B10144.0	–	44.00	323.0	163.0	10	MK 4
B1011.3/4	1.3/4	44.45	323.0	163.0	10	MK 4
B10145.0	–	45.00	323.0	163.0	12	MK 4
B10146.0	–	46.00	323.0	163.0	12	MK 4
B10147.0	–	47.00	323.0	163.0	12	MK 4
B10148.0	–	48.00	334.0	174.0	12	MK 4
B10150.0	–	50.00	334.0	174.0	12	MK 4
B1012	2″	50.80	334.0	174.0	12	MK 4

B121

DORMER

HSS Taper Shank Machine Bridge Reamer

Designed to re-align holes in large fabrications, where two or more workpieces are joined, before bolting or riveting them. The small Pilot diameter from the 1 to 10 ratio taper lead simplifies the need to locate and align the tool in pre-drilled holes. Suitable for reaming in many materials.



HSS	Bright ST	DIN 311
R		k11

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	K1.1	K1.2
■ 15 C	■ 16 C	■ 17 C	■ 13 C	■ 11 C	◪ 10 B	■ 7 B	■ 6 B	◪ 5 B	■ 4 B	◪ 4 B	◪ 3 A	■ 14 E	■ 10 D
K1.3	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**
◪ 8 D	■ 12 C	■ 10 C	◪ 8 C	◪ 11 C	◪ 8 C	◪ 23 F	■ 17 F	■ 9 F	◪ 21 E	■ 18 E	◪ 14 E	■ 34 D	■ 20 E
N3.3	**N4.1**												
◪ 10 D	◪ 21 B												

With 1:10 starting taper (LDC).

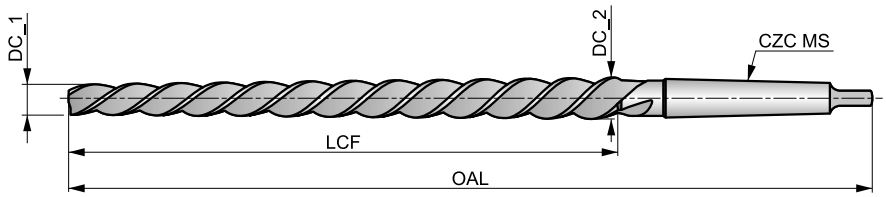
Product	DC [mm]	OAL [mm]	LCF [mm]	LDC [mm]	NOF	CZC MS
B12110.0	10.00	171.0	95.0	30.00	4	MK 1
B12111.0	11.00	176.0	100.0	33.00	4	MK 1
B12112.0	12.00	199.0	105.0	39.00	4	MK 2
B12113.0	13.00	199.0	105.0	39.00	4	MK 2
B12114.0	14.00	209.0	115.0	42.00	4	MK 2
B12115.0	15.00	219.0	125.0	45.00	4	MK 2
B12116.0	16.00	229.0	135.0	48.00	4	MK 2
B12117.0	17.00	251.0	135.0	51.00	4	MK 3
B12118.0	18.00	261.0	145.0	58.00	4	MK 3
B12119.0	19.00	261.0	145.0	58.00	4	MK 3
B12120.0	20.00	271.0	155.0	62.00	4	MK 3
B12121.0	21.00	271.0	155.0	62.00	4	MK 3
B12122.0	22.00	281.0	165.0	66.00	4	MK 3
B12123.0	23.00	281.0	165.0	66.00	4	MK 3
B12124.0	24.00	296.0	180.0	72.00	4	MK 3
B12125.0	25.00	296.0	180.0	72.00	4	MK 3
B12126.0	26.00	296.0	180.0	72.00	4	MK 3
B12130.0	30.00	311.0	195.0	78.00	5	MK 3

B954

DORMER

HSS-E Taper Shank Taper Pin Machine Reamer 1:50 Taper

Smooth reaming with improved accuracy and performance is achieved through the specially designed high spiral left-hand helix and right-hand cutting. Designed to finish tapered holes and accepts standard 1 to 50 ratio metric taper pins. Suitable for reaming in many materials.



HSS-E	Bright	DIN 2180
R		1:50

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 10 B	■ 12 B	■ 13 B	■ 9 B	■ 8 B	◪ 6 A	■ 7 A	■ 6 A	◪ 3 A	■ 4 A	◪ 3 A	◪ 2 A	◪ 11 C	◪ 10 B
M2.1	**M2.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**N1.1**	**N1.2**	**N1.3**	**N2.1**
◪ 9 B	◪ 8 B	■ 10 C	■ 6 B	◪ 4 B	■ 8 A	■ 6 A	◪ 4 A	■ 11 A	◪ 8 A	◪ 14 F	■ 12 F	■ 9 F	■ 16 E
N2.2	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**								
■ 14 E	◪ 10 E	■ 22	■ 14 E	◪ 6	◪ 22 B								

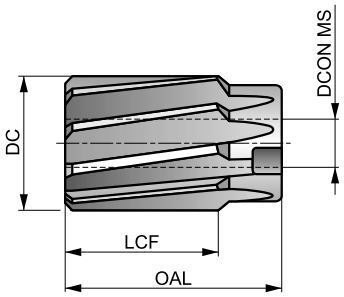
Product	nom d	DC_1	DC_2	OAL	LCF	NOF	CZC MS
		[mm]	[mm]	[mm]	[mm]		
B9545.0	5.0	4.90	6.36	155.0	73.0	3	MK 1
B9546.0	6.0	5.90	8.00	187.0	105.0	3	MK 1
B9548.0	8.0	7.90	10.80	227.0	145.0	3	MK 1
B95410.0	10.0	9.90	13.40	257.0	175.0	3	MK 1
B95412.0	12.0	11.80	16.00	315.0	210.0	3	MK 2
B95413.0	13.0	12.86	16.74	295.0	194.0	3	MK 2
B95414.0	14.0	13.86	17.74	295.0	194.0	3	MK 2
B95416.0	16.0	15.80	20.40	335.0	230.0	3	MK 2
B95420.0	20.0	19.80	24.80	377.0	250.0	3	MK 3
B95425.0	25.0	24.70	30.70	427.0	300.0	3	MK 3
B95430.0	30.0	29.70	36.10	475.0	320.0	4	MK 4

B955

DORMER

HSS-E Shell Reamer with H7 Accuracy, Bright and Steam Tempered

Shell reamers to be used with an arbor that fits the hole in the reamer. They are precision ground with a left-hand helix and right-hand cutting to provide smooth reaming. With a 45° bevel lead for accurate location and centering in the hole to improve performance and hole quality. Suitable for reaming in many materials.



HSS-E	Bright ST	DIN 219
R	B	H7

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 15 C	■ 16 C	■ 17 C	■ 13 C	■ 11 C	◪ 10 B	■ 7 B	■ 6 B	◪ 5 B	■ 4 B	◪ 4 B	◪ 3 A	◪ 11 C	◪ 10 B
M2.1	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪ 9 B	■ 10 E	■ 8 D	◪ 7 D	■ 10 C	■ 9 C	◪ 6 C	◪ 10 C	◪ 7 C	◪ 17 F	■ 17 F	■ 10 F	◪ 23 E	■ 21 E
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**									
■ 13 E	■ 34 D	■ 20 E	◪ 10 D	◪ 24 C									

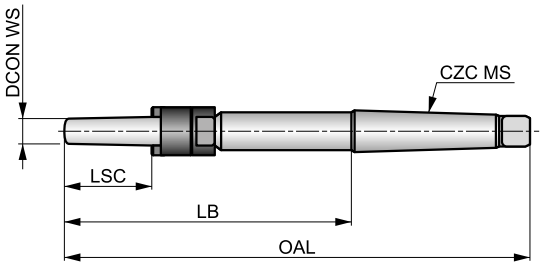
Product	DC [mm]	OAL [mm]	LCF [mm]	NOF	DCON MS [mm]
B95525.0	25.00	45.0	32.0	8	13.00
B95526.0	26.00	45.0	32.0	8	13.00
B95527.0	27.00	45.0	32.0	8	13.00
B95528.0	28.00	45.0	32.0	8	13.00
B95529.0	29.00	45.0	32.0	8	13.00
B95530.0	30.00	45.0	32.0	8	13.00
B95531.0	31.00	50.0	36.0	10	16.00
B95532.0	32.00	50.0	36.0	10	16.00
B95534.0	34.00	50.0	36.0	10	16.00
B95535.0	35.00	50.0	36.0	10	16.00
B95536.0	36.00	56.0	40.0	10	19.00
B95537.0	37.00	56.0	40.0	10	19.00
B95538.0	38.00	56.0	40.0	10	19.00
B95540.0	40.00	56.0	40.0	10	19.00

Product	DC [mm]	OAL [mm]	LCF [mm]	NOF	DCON MS [mm]
B95542.0	42.00	56.0	40.0	10	19.00
B95544.0	44.00	63.0	45.0	12	22.00
B95545.0	45.00	63.0	45.0	12	22.00
B95548.0	48.00	63.0	45.0	12	22.00
B95550.0	50.00	63.0	45.0	12	22.00
B95552.0	52.00	71.0	50.0	12	27.00
B95555.0	55.00	71.0	50.0	12	27.00
B95558.0	58.00	71.0	50.0	12	27.00
B95560.0	60.00	71.0	50.0	12	27.00
B95565.0	65.00	80.0	56.0	14	32.00
B95570.0	70.00	80.0	56.0	14	32.00
B95575.0	75.00	90.0	63.0	14	40.00
B95580.0	80.00	90.0	63.0	14	40.00

B956

Shell Reamer Arbor for B955

Arbor used to hold shell reamers in machine applications. It has a taper shank to be held directly in the machine spindle. For arbor spare parts (drivers, nuts and washers) please see Dormer's B957 range for availability.



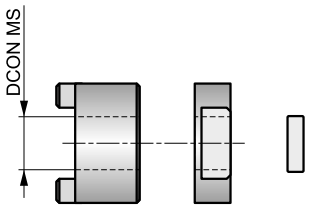
HSS-E	Bright	DIN 217

Product	DCON WS [mm]	OAL [mm]	LSC [mm]	LB [mm]	CZC MS
B95613.0	13.00	250.0	45	151.00	MK 3
B95616.0	16.00	261.0	50	162.00	MK 3
B95619.0	19.00	298.0	56	174.00	MK 4
B95622.0	22.00	312.0	63	188.00	MK 4
B95627.0	27.00	359.0	71	203.00	MK 5
B95632.0	32.00	376.0	80	220.00	MK 5
B95640.0	40.00	396.0	90	240.00	MK 5

B957

Spare Parts for B956 Arbors

The B957 range of spare parts for B956 arbors consist of drivers, nuts and washers. They can be purchased individually by size, ensuring continued use safely and securely. The B957 drivers, nuts and washers are manufactured to required standards.



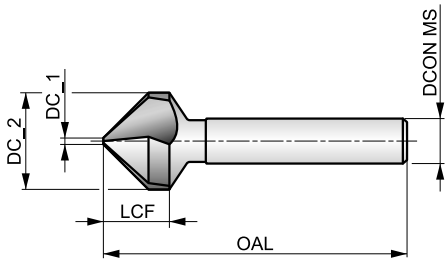
Product	Nr.	DCON MS [mm]
B957N3DRIVER	3	13.00
B957N3NUT	3	–
B957N3WASHER	3	–
B957N4DRIVER	4	16.00
B957N4NUT	4	–
B957N4WASHER	4	–
B957N5DRIVER	5	19.00
B957N5NUT	5	–
B957N5WASHER	5	–
B957N6DRIVER	6	22.00
B957N6NUT	6	–
B957N6WASHER	6	–
B957N7DRIVER	7	27.00
B957N7NUT	7	–
B957N7WASHER	7	–
B957N8DRIVER	8	32.00
B957N8NUT	8	–
B957N8WASHER	8	–
B957N9DRIVER	9	40.00
B957N9NUT	9	–
B957N9WASHER	9	–

G400

DORMER

Carbide Straight Shank 90° Countersink, Bright Finish

High performance 90° countersink with bright finish, designed for use with CNC machines where high productivity and quality are required. Can be used for chamfering holes in hard and abrasive materials. A 90° angle is designed to chamfer holes for standard fasteners with 90° heads.



HM	Bright	DIN 335C
R	90°	

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■64 E	■72 E	■74 E	■55 E	■48 D	■43 B	■45 D	■36 D	■30 B	■26 D	■23 B	■18 A	■24 C	■21 C
M2.1	M2.2	M2.3	M3.1	M3.2	M3.3	M4.1	M4.2	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3
■22 C	◪18 C	◪15 B	■20 B	◪17 B	◪15 B	◪15 A	◪13 A	■45 F	■33 D	■25 D	■46 C	■37 C	◪30 C
K3.1	K3.2	K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3
■41 C	■31 C	◪25 C	■38 C	■28 C	■21 C	◪18 C	◪15 C	■43 C	■32 C	■25 C	◪75 G	■55 G	■40 F
N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.3	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2
■40 F	■36 F	■26 F	■42 F	■25 F	◪13 D	■17 E	■12 C	■10 A	◪9 A	■8 B	◪7 A	■6 B	◪5 A
S4.1	S4.2	H1.1	H2.1	H2.2	H3.1	H3.2	H4.1	H4.2					
■5 B	◪4 A	■12 A	■7 A	◪6 B	■8 A	◪7 B	■5 A	◪4 B					

DCON MS tolerance h6.

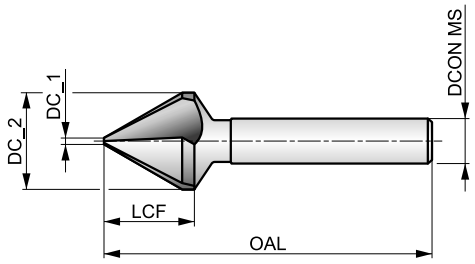
Product	DC_2 [mm]	DC_1 [mm]	LCF [mm]	OAL [mm]	DCON MS [mm]	NOF
G4006.3	6.30	1.50	5.0	45.0	5.00	3
G4008.3	8.30	2.00	6.0	50.0	6.00	3
G40010.4	10.40	2.50	7.1	50.0	6.00	3
G40012.4	12.40	2.80	8.0	56.0	8.00	3
G40016.5	16.50	3.20	10.0	60.0	10.00	3
G40020.5	20.50	3.50	12.5	63.0	10.00	3
G40025.0	25.00	3.80	15.0	67.0	10.00	3
G40031.0	31.00	4.20	18.0	71.0	12.00	3

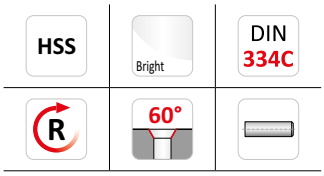
G135

DORMER

HSS Straight Shank 60° Countersink, Bright Finish

With a 60° angle to chamfer holes for special fasteners and removing burrs from drilled holes in diameters up to 25.0 mm. For use in both machine and hand-held operations. Suitable to chamfer holes in many materials.





Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■ 23 E	■ 26 E	■ 27 E	■ 20 E	■ 18 D	◪ 16 B	■ 16 D	◪ 13 D	◪ 11 B	■ 10 D	◪ 8 B	◪ 8 C	◪ 6 C	◪ 7 C
M2.2	**K1.1**	**K1.2**	**K2.1**	**K2.2**	**K3.1**	**K3.2**	**K5.1**	**K5.2**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪ 6 C	◪ 20 F	◪ 15 D	◪ 21 C	◪ 17 C	◪ 18 C	◪ 14 C	◪ 19 C	◪ 15 C	◪ 40 G	■ 30 G	◪ 20 F	■ 20 F	◪ 18 F
N3.1	**N3.2**	**N3.3**	**N4.1**	**N4.2**									
■ 21 F	■ 12 F	◪ 6 D	◪ 40 G	◪ 35 G									

DCON MS tolerance h9.

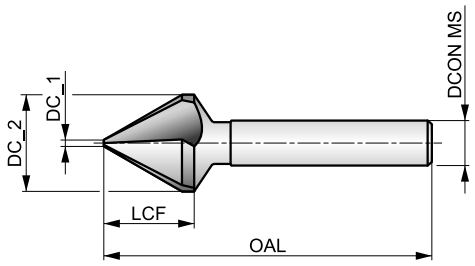
Product	DC_2 [mm]	DC_1 [mm]	LCF [mm]	OAL [mm]	DCON MS [mm]	NOF
G1356.3	6.30	1.60	6.8	45.0	5.00	3
G1358.0	8.00	2.00	8.5	50.0	6.00	3
G13510.0	10.00	2.50	7.6	50.0	6.00	3
G13512.5	12.50	3.20	11.7	56.0	8.00	3
G13516.0	16.00	4.00	14.5	63.0	10.00	3
G13520.0	20.00	5.00	17.5	67.0	10.00	3
G13525.0	25.00	6.30	20.5	71.0	10.00	3

G335

DORMER

HSS Straight Shank 60° Countersink, TiN Coated

For 60° countersink chamfer holes to accommodate special fasteners and removing burrs from drilled holes. TiN coating improves performance and extends tool life. Versatile tool that can be used in both hand-held and machine applications. Suitable to chamfer holes in many materials.



HSS | TiN | DIN 334C | R | 60° | —

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■33 E	■37 E	■38 E	■28 E	■25 D	■22 B	■23 D	■18 D	■15 B	■13 D	■11 B	◪9 B	◪10 C	◪8 C
M2.1	**M3.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**
◪9 C	◪8 B	■34 F	■25 D	◪19 D	■35 C	■28 C	◪23 C	■31 C	■24 C	◪19 C	◪29 C	◪22 C	◪16 C
K5.1	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**
■32 C	■24 C	◪19 C	■53 G	■40 G	■27 F	■27 F	■24 F	■17 F	■28 F	■16 F	◪8 D	◪58 G	◪50 G

DCON MS tolerance h9.

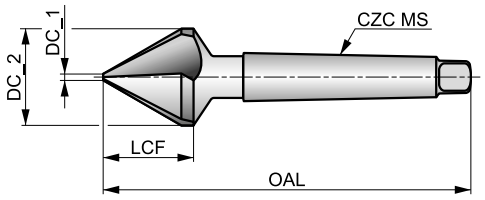
Product	DC_2 [mm]	DC_1 [mm]	LCF [mm]	OAL [mm]	DCON MS [mm]	NOF
G3356.3	6.30	1.60	6.8	45.0	5.00	3
G3358.0	8.00	2.00	8.5	50.0	6.00	3
G33510.0	10.00	2.50	7.6	50.0	6.00	3
G33512.5	12.50	3.20	11.7	56.0	8.00	3
G33516.0	16.00	4.00	14.5	63.0	10.00	3
G33520.0	20.00	5.00	17.5	67.0	10.00	3
G33525.0	25.00	6.30	20.5	71.0	10.00	3

G137

DORMER

HSS Taper Shank 60° Countersink, Bright Finish

Countersinks with bright finish and a 60° angle to chamfer holes for special fasteners and removing burrs from drilled holes. Taper shank design allows the tool to be used in machine applications where it is held directly in the spindle. Suitable to chamfer holes in many materials.



HSS	Bright	DIN 334D
R	60°	

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■ 23 E	■ 26 E	■ 27 E	■ 20 E	■ 18 D	◪ 16 B	■ 16 D	◪ 13 D	◪ 11 B	■ 10 D	◪ 8 B	◪ 8 C	◪ 6 C	◪ 7 C
M2.2	**K1.1**	**K1.2**	**K2.1**	**K2.2**	**K3.1**	**K3.2**	**K5.1**	**K5.2**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪ 6 C	◪ 20 F	◪ 15 D	◪ 21 C	◪ 17 C	◪ 18 C	◪ 14 C	◪ 19 C	◪ 15 C	◪ 40 G	■ 30 G	◪ 20 F	■ 20 F	◪ 18 F
N3.1	**N3.2**	**N3.3**	**N4.1**	**N4.2**									
■ 21 F	■ 12 F	◪ 6 D	◪ 40 G	◪ 35 G									

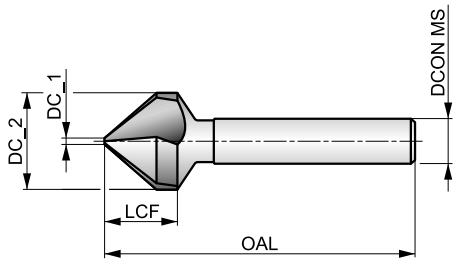
Product	DC_2 [mm]	DC_1 [mm]	LCF [mm]	OAL [mm]	CZC MS	NOF
G13716.0	16.00	4.00	14.5	90.0	MK 1	3
G13720.0	20.00	5.00	17.5	106.0	MK 2	3
G13725.0	25.00	6.30	20.0	112.0	MK 2	3
G13731.5	31.50	10.00	23.0	118.0	MK 2	3
G13740.0	40.00	12.50	28.5	150.0	MK 3	3
G13750.0	50.00	16.00	36.0	160.0	MK 3	3
G13763.0	63.00	20.00	43.0	190.0	MK 4	3
G13780.0	80.00	25.00	54.0	200.0	MK 4	3

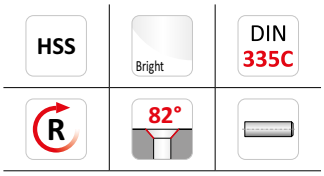
G154

DORMER

HSS Straight Shank 82° Countersink, Bright Finish

An 82° Countersink for flat head cap screws and to chamfer holes. Versatile tool that can be used in both hand-held and machine applications. Suitable to chamfer holes in many materials.





Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■ 23 E	■ 26 E	■ 27 E	■ 20 E	■ 18 D	◪ 16 B	■ 16 D	■ 13 D	◪ 11 B	■ 10 D	◪ 8 B	◪ 8 C	◪ 6 C	◪ 7 C
M2.2	**K1.1**	**K1.2**	**K2.1**	**K2.2**	**K3.1**	**K3.2**	**K5.1**	**K5.2**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪ 6 C	◪ 20 F	◪ 15 D	◪ 21 C	◪ 17 C	◪ 18 C	◪ 14 C	◪ 14 C	◪ 10 C	◪ 40 G	■ 30 G	◪ 20 F	■ 20 F	◪ 18 F
N3.1	**N3.2**	**N3.3**	**N4.1**	**N4.2**									
■ 21 F	■ 12 F	◪ 6 D	◪ 40 G	◪ 35 G									

DCON MS tolerance h9.

Product	DC_2	DC_1	LCF	OAL	DCON MS	NOF
	[mm]	[mm]	[mm]	[mm]	[mm]	
G1546.3	6.30	1.50	5.5	45.0	5.00	3
G1548.3	8.30	2.00	6.5	50.0	6.00	3
G15410.4	10.40	2.50	7.6	50.0	6.00	3
G15412.4	12.40	2.80	8.5	56.0	8.00	3
G15416.5	16.50	3.20	10.5	60.0	10.00	3
G15420.5	20.50	3.50	13.0	63.0	10.00	3
G15425.0	25.00	3.80	15.5	67.0	10.00	3

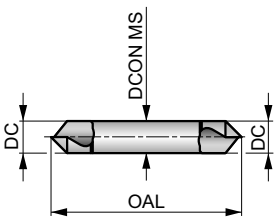
G129

DORMER

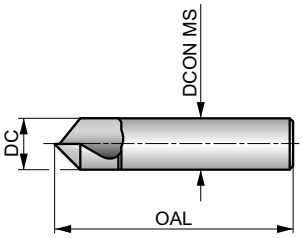
HSS Straight Shank Single Flute 90° Countersink, Bright Finish

A 90° Countersink with bright finish to chamfer and for removing burrs from drilled holes. The single-flute design reduces vibration and chatter for a smooth chamfering operation. Suitable to chamfer holes in mild steels and medium strength non-ferrous materials, such as aluminium.

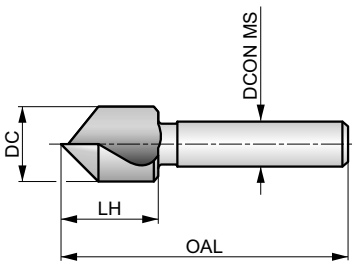
DC = 6 mm

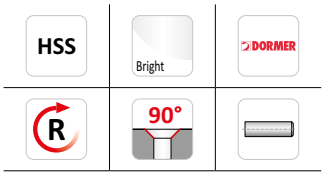


DC = 8 mm



DC ≥ 10 mm





Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	M1.1	M1.2	M2.1	K1.1	K1.2	K2.1
■ 21 D	■ 24 D	■ 25 D	■ 18 D	■ 16 C	◪ 14 A	■ 13 B	◪ 11 B	◪ 8 B	◪ 6 B	◪ 7 B	◪ 18 D	◪ 13 C	◪ 19 A

K2.2	K3.1	K3.2	N1.1	N1.2	N1.3	N2.1	N2.2	N3.1	N3.2	N3.3	N4.1	N4.2
◪ 15 A	◪ 16 A	◪ 12 A	■ 34 D	■ 25 D	◪ 16 C	◪ 16 C	◪ 14 C	■ 17 C	■ 9 C	◪ 5 B	◪ 35 D	◪ 30 D

DCON MS tolerance h9.

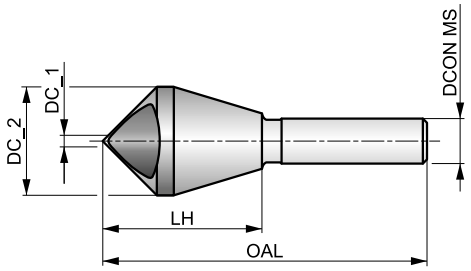
Product	DC [mm]	LH [mm]	OAL [mm]	DCON MS [mm]	NOF
G1296.0	6.00	–	45.0	6.00	1
G1298.0	8.00	–	50.0	8.00	1
G12910.0	10.00	17.0	49.0	8.00	1
G12912.5	12.50	17.0	49.0	8.00	1
G12916.0	16.00	20.0	56.0	10.00	1
G12920.0	20.00	24.0	60.0	10.00	1
G12925.0	25.00	25.0	75.0	12.00	1
G12931.5	31.50	29.0	80.0	12.00	1

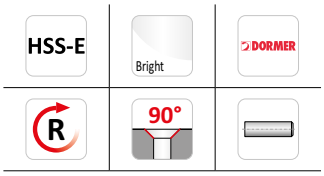
G149

DORMER

HSS-E Straight Shank Cross-Hole 90° Countersink, Bright Finish

A 90° Countersink designed to chamfer holes and for removing burrs from drilled holes. The special cross-hole design directs chips away from the cutting edge to give a smooth chamfering operation. Suitable to chamfer holes in many materials.





Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	M1.1	M1.2	M2.1	K1.1	K2.1	K3.1
◪21 D	■24 D	■25 D	■18 D	■16 C	◪14 A	■16 B	◪13 B	◪8 B	◪6 B	◪7 B	◪18 D	◪19 A	◪16 A

K5.1	N1.1	N1.2	N1.3	N2.1	N2.2	N3.1	N3.2	N3.3	N4.1	N4.2
◪14 A	■34 D	■25 D	■16 C	◪16 C	◪14 C	■17 C	■9 C	■5 B	◪17 D	◪5 D

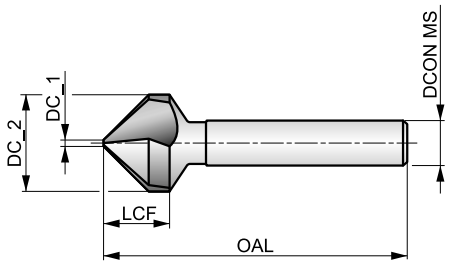
Product	DC_2	DC_1	LH	OAL	DCON MS	DC	NOF
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	
G1495	5.00	2.00	19.0	45.0	6.00	10.00	1
G14910	10.00	5.00	23.0	48.0	8.00	14.00	1
G14915	15.00	10.00	34.0	65.0	10.00	21.00	1
G14920	20.00	15.00	43.0	84.0	12.00	28.00	1
G14925	25.00	20.00	48.0	102.0	15.00	35.00	1
G14930	30.00	25.00	61.0	115.0	15.00	44.00	1
G14935	35.00	30.00	65.0	127.0	15.00	48.00	1
G14940	40.00	35.00	66.0	136.0	15.00	53.00	1
G14950	50.00	40.00	85.0	166.0	20.00	60.00	1

G136

DORMER

HSS Straight Shank 90° Countersink, Bright Finish

A 90° Countersink designed to chamfer holes and for removing burrs from drilled holes. Reduced shank allows larger diameter countersinks in standard holders and chucks. Versatile tool, which can be used in hand-held and machine applications. Suitable to chamfer holes in many materials.



HSS | Bright | DIN 335C

R | 90°

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■ 23 E	■ 26 E	■ 27 E	■ 20 E	■ 18 D	◪ 16 B	■ 16 D	■ 13 D	◪ 11 B	■ 10 D	◪ 8 B	◪ 8 C	◪ 6 C	◪ 7 C

M2.2	K1.1	K1.2	K2.1	K2.2	K3.1	K3.2	K5.1	K5.2	N1.1	N1.2	N1.3	N2.1	N2.2
◪ 6 C	◪ 20 F	◪ 15 D	◪ 21 C	◪ 17 C	◪ 18 C	◪ 14 C	◪ 19 C	◪ 15 C	◪ 40 G	■ 30 G	◪ 20 F	■ 20 F	◪ 18 F

N3.1	N3.2	N3.3	N4.1	N4.2
■ 21 F	■ 12 F	◪ 6 D	◪ 40 G	◪ 35 G

DCON MS tolerance h9.
Products from this series are also available in set. Please see G236.

Product	DC_2 [mm]	DC_1 [mm]	LCF [mm]	OAL [mm]	DCON MS [mm]	NOF
G1364.3	4.30	1.30	4.0	40.0	4.00	3
G1365.0	5.00	1.50	4.5	40.0	4.00	3
G1365.3	5.30	1.50	4.5	40.0	4.00	3
G1365.8	5.80	1.50	5.0	45.0	5.00	3
G1366.0	6.00	1.50	5.0	45.0	5.00	3
G1366.3	6.30	1.50	5.5	45.0	5.00	3
G1367.0	7.00	1.80	5.5	50.0	6.00	3
G1367.3	7.30	1.80	6.1	50.0	6.00	3
G1368.0	8.00	2.00	6.1	50.0	6.00	3
G1368.3	8.30	2.00	6.5	50.0	6.00	3
G1369.4	9.40	2.20	7.2	50.0	6.00	3
G13610.0	10.00	2.50	7.6	50.0	6.00	3
G13610.4	10.40	2.50	7.6	50.0	6.00	3

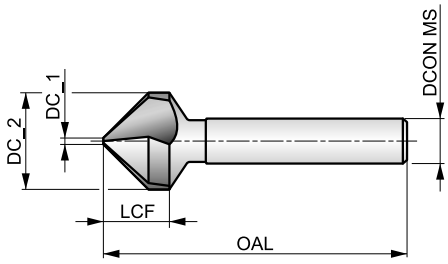
Product	DC_2 [mm]	DC_1 [mm]	LCF [mm]	OAL [mm]	DCON MS [mm]	NOF
G13611.5	11.50	2.80	8.0	56.0	8.00	3
G13612.4	12.40	2.80	8.5	56.0	8.00	3
G13613.4	13.40	2.90	9.0	56.0	8.00	3
G13615.0	15.00	3.20	9.5	60.0	10.00	3
G13616.5	16.50	3.20	10.5	60.0	10.00	3
G13619.0	19.00	3.50	11.7	63.0	10.00	3
G13620.5	20.50	3.50	13.0	63.0	10.00	3
G13623.0	23.00	3.80	13.7	67.0	10.00	3
G13625.0	25.00	3.80	15.5	67.0	10.00	3
G13626.0	26.00	3.80	15.5	67.0	10.00	3
G13628.0	28.00	4.00	16.5	71.0	12.00	3
G13630.0	30.00	4.20	18.5	71.0	12.00	3
G13631.0	31.00	4.20	18.5	71.0	12.00	3

G560

DORMER

HSS Straight Shank 90° Countersink, TiAlN Coated

A 90° Countersink designed for chamfering standard fastener holes and removing burrs from drilled holes. Reduced shank allows larger diameter countersinks in standard holders and chucks. Versatile tool, which can be used in hand-held and machine applications. TiAlN coating improves performance and extends tool life.



HSS | TiAlN | DIN 335C | R | 90°

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■40 E	■45 E	■46 E	■34 E	■30 D	■27 B	■28 D	■22 D	■19 B	■16 D	■14 B	◪11 B	◪11 C	◪9 C
M2.1	**M2.2**	**M2.3**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**
◪10 C	◪9 C	◪8 B	■41 F	■30 D	◪23 D	■42 C	■34 C	◪27 C	■37 C	■28 C	◪23 C	◪34 C	◪26 C
K4.3	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**
◪19 C	■39 C	■29 C	◪23 C	◪60 G	◪45 G	■30 F	■30 F	■27 F	■19 F	■32 F	■18 F	◪9 D	◪62 G
N4.2													
◪55 G													

DCON MS tolerance h9.
Products from this series are also available in set. Please see G236.

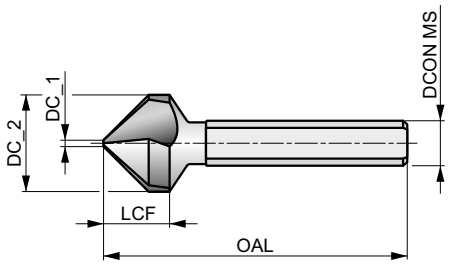
Product	DC_2 [mm]	DC_1 [mm]	LCF [mm]	OAL [mm]	DCON MS [mm]	NOF
G5606.3	6.30	1.50	5.5	45.0	5.00	3
G5608.0	8.00	2.00	6.1	50.0	6.00	3
G5608.3	8.30	2.00	6.5	50.0	6.00	3
G56010.0	10.00	2.50	7.6	50.0	6.00	3
G56010.4	10.40	2.50	7.6	50.0	6.00	3
G56012.4	12.40	2.80	8.5	56.0	8.00	3
G56016.5	16.50	3.20	10.5	60.0	10.00	3
G56020.5	20.50	3.50	13.0	63.0	10.00	3
G56025.0	25.00	3.80	15.5	67.0	10.00	3
G56031.0	31.00	4.20	18.5	71.0	12.00	3

G106

DORMER

HSS Tri-Flat Straight Shank 90° Countersink, Bright Finish

A 90° Countersink designed for chamfering standard fastener holes and removing burrs from drilled holes. Shank with three ground flats gives improved holding in three jaw chucks. Suitable to chamfer holes in many materials.



HSS | Bright | DIN 335C

R | 90°

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■ 23 E	■ 26 E	■ 27 E	■ 20 E	■ 18 D	◪ 16 B	■ 16 D	■ 13 D	◪ 11 B	■ 10 D	◪ 8 B	◪ 8 C	◪ 6 C	◪ 7 C

M2.2	K1.1	K1.2	K2.1	K2.2	K3.1	K3.2	K5.1	K5.2	N1.1	N1.2	N1.3	N2.1	N2.2
◪ 6 C	■ 20 F	■ 15 D	◪ 21 C	◪ 17 C	◪ 18 C	◪ 14 C	◪ 19 C	◪ 15 C	◪ 40 G	■ 30 G	◪ 20 F	◪ 20 F	◪ 18 F

N3.1	N3.2	N3.3	N4.1	N4.2
■ 21 F	◪ 12 F	◪ 6 D	◪ 40 G	◪ 35 G

DCON MS tolerance h9.
Products from this series are also available in set. Please see G236.

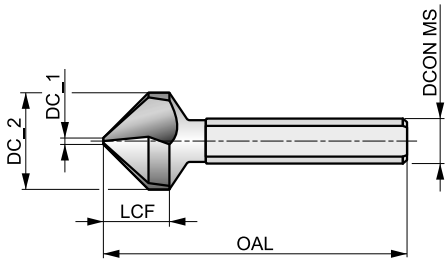
Product	DC_2 [mm]	DC_1 [mm]	LCF [mm]	OAL [mm]	DCON MS [mm]	NOF
G1066.3	6.30	1.50	5.6	45.0	5.00	3
G1068.3	8.30	2.00	6.9	50.0	6.00	3
G10610.4	10.40	2.50	7.8	50.0	6.00	3
G10612.4	12.40	2.80	8.6	56.0	8.00	3
G10616.5	16.50	3.20	11.1	60.0	10.00	3
G10620.5	20.50	3.50	12.9	63.0	10.00	3
G10625.0	25.00	3.80	15.7	67.0	10.00	3
G10631.0	31.00	4.20	18.5	71.0	12.00	3
G10634.0	34.00	4.50	19.0	103.0	16.00	3
G10637.0	37.00	4.50	21.2	118.0	16.00	3
G10640.0	40.00	4.50	20.0	118.0	16.00	3
G10650.0	50.00	5.00	23.6	126.0	16.00	3

G506

DORMER

HSS Tri-Flat Straight Shank 90° Countersink, TiAlN Coated

A 90° Countersink designed for chamfering standard fastener holes and removing burrs from drilled holes. Shank with three ground flats gives improved holding in three jaw chucks, especially when using in hand-held power tools. TiAlN coating extends tool life. Suitable to chamfer holes in many materials.



HSS	TiAlN	DIN 335C
R	90°	

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■40 E	■45 E	■46 E	■34 E	■30 D	■27 B	■28 D	■22 D	■19 B	■16 D	■14 B	◪11 B	◪11 C	◪9 C
M2.1	**M2.2**	**M2.3**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**
◪10 C	◪9 C	◪8 B	■41 F	■30 D	◪23 D	■42 C	■34 C	◪27 C	■37 C	■28 C	◪23 C	◪34 C	◪26 C
K4.3	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**
◪19 C	■39 C	■29 C	◪23 C	◪60 G	◪45 G	■30 F	■30 F	■27 F	■19 F	■32 F	■18 F	◪9 D	◪62 G
N4.2													
◪55 G													

DCON MS tolerance h9.
Products from this series are also available in set. Please see G236.

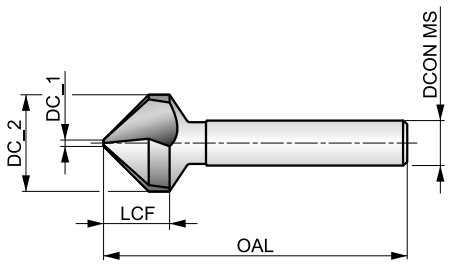
Product	DC_2 [mm]	DC_1 [mm]	LCF [mm]	OAL [mm]	DCON MS [mm]	NOF
G50663.3	6.30	1.50	5.6	45.0	5.00	3
G50683.3	8.30	2.00	6.9	50.0	6.00	3
G506104.0	10.40	2.50	7.8	50.0	6.00	3
G506124.0	12.40	2.80	8.6	56.0	8.00	3
G506165.0	16.50	3.20	11.1	60.0	10.00	3
G506205.0	20.50	3.50	12.9	63.0	10.00	3
G506250.0	25.00	3.80	15.7	67.0	10.00	3
G506310.0	31.00	4.20	18.5	71.0	12.00	3
G506340.0	34.00	4.50	19.0	103.0	16.00	3
G506370.0	37.00	4.50	21.2	118.0	16.00	3
G506400.0	40.00	4.50	20.0	118.0	16.00	3
G506500.0	50.00	5.00	23.6	126.0	16.00	3

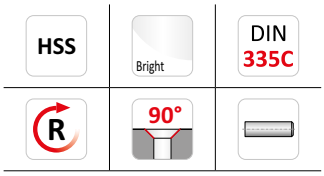
G142

DORMER

HSS Straight Shank, 90° Countersink, Bright Finish, for Stainless Steel

A 90° Countersink designed for chamfering holes for standard fasteners and to clean burrs from drilled holes. Increased relief to provide a sharper edge, which improves performance when machining sticky materials, such as stainless steels and non-ferrous materials. Can be used in hand-held and machine applications.





Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■ 23 E	■ 26 E	■ 27 E	■ 20 E	■ 18 D	◪ 16 B	■ 16 D	■ 13 D	◪ 11 B	■ 10 D	◪ 8 B	■ 11 C	■ 9 C	■ 10 C

M2.2	M3.1	M3.2	M4.1	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1
◪ 8 C	■ 7 B	◪ 6 B	◪ 4 A	■ 40 G	■ 30 G	◪ 20 F	◪ 20 F	◪ 18 F	◪ 20 F	■ 34 F	■ 20 F	■ 10 D	■ 40 G

N4.2
■ 35 G

DCON MS tolerance h9.

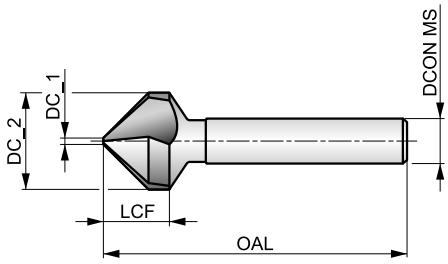
Product	DC_2 [mm]	DC_1 [mm]	LCF [mm]	OAL [mm]	DCON MS [mm]	NOF
G1424.8	4.80	1.30	4.5	40.0	4.00	3
G1425.0	5.00	1.50	4.5	40.0	4.00	3
G1426.0	6.00	1.50	5.0	45.0	5.00	3
G1426.3	6.30	1.50	5.5	45.0	5.00	3
G1427.0	7.00	1.80	5.5	50.0	6.00	3
G1427.3	7.30	1.80	6.1	50.0	6.00	3
G1428.0	8.00	2.00	6.1	50.0	6.00	3
G1428.3	8.30	2.00	6.5	50.0	6.00	3
G14210.0	10.00	2.50	7.6	50.0	6.00	3
G14210.4	10.40	2.50	7.6	50.0	6.00	3
G14211.5	11.50	2.80	8.0	56.0	8.00	3
G14212.4	12.40	2.80	8.5	56.0	8.00	3
G14215.0	15.00	3.20	9.5	60.0	10.00	3
G14216.5	16.50	3.20	10.5	60.0	10.00	3
G14219.0	19.00	3.50	11.7	63.0	10.00	3
G14220.5	20.50	3.50	13.0	63.0	10.00	3
G14223.0	23.00	3.80	13.7	67.0	10.00	3
G14225.0	25.00	3.80	15.5	67.0	10.00	3
G14231.0	31.00	4.20	18.5	71.0	12.00	3

G570

DORMER

HSS-E Straight Shank 90° Countersink, AlTiCN Coated

A 90° Countersink designed for chamfering holes to accommodate standard fasteners and clean burrs from drilled holes. Can be used in machine and hand-held applications. Particularly suited to chamfering holes in hard and abrasive materials. AlTiCN coating improves performance and extends tool life.



HSS-E | AlTiCN | DIN 335C | R | 90°

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
◪40 E	◪45 E	◪46 E	◪34 E	◪30 D	■27 B	■28 D	■22 D	■19 B	■16 D	■14 B	◪11 B	■23 C	■20 C
M2.1	M2.2	M2.3	M3.1	M3.2	M3.3	M4.1	M4.2	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3
■21 C	■17 C	◪14 A	■14 B	■12 B	◪11 B	■15 A	◪13 A	■41 C	■30 C	◪23 C	■42 C	■34 C	◪27 C
K3.1	K3.2	K3.3	K4.1	K4.2	K4.3	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3	N2.1	N2.2
■37 C	■28 C	◪23 C	◪34 C	◪26 C	◪19 C	■39 C	■29 C	◪23 C	◪60 G	◪45 G	◪30 F	◪30 F	◪27 F
N2.3	N3.1	N3.2	N3.3										
◪19 F	◪32 F	◪18 F	◪9 D										

DCON MS tolerance h9.

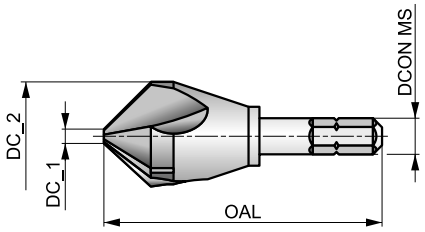
Product	DC_2 [mm]	DC_1 [mm]	LCF [mm]	OAL [mm]	DCON MS [mm]	NOF
G5706.3	6.30	1.50	6.5	45.0	5.00	3
G5708.3	8.30	2.00	8.2	50.0	6.00	3
G57010.4	10.40	2.50	9.7	50.0	6.00	3
G57012.4	12.40	2.80	10.6	56.0	8.00	3
G57016.5	16.50	3.20	13.9	60.0	10.00	3
G57020.5	20.50	3.50	17.1	63.0	10.00	3
G57025.0	25.00	3.80	21.4	67.0	10.00	3
G57031.0	31.00	4.20	24.4	71.0	12.00	3

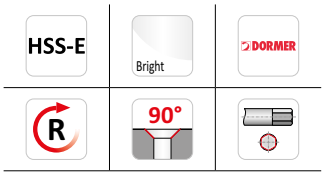
G107

DORMER

HSS-E Hexagon Drive 90° Countersink, Bright Finish

A versatile countersink with a hexagonal shank which makes it easier to hold with electric screwdriver adaptors. The 90° countersink produces chamfers for standard fasteners and clean burrs from drilled holes. Suitable to chamfer holes in many materials.





Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■ 23 E	■ 26 E	■ 27 E	■ 20 E	■ 18 D	◪ 16 B	■ 16 D	■ 13 D	◪ 11 B	■ 10 D	◪ 8 B	◪ 11 C	◪ 9 C	◪ 10 C
M2.2	**M2.3**	**K1.1**	**K1.2**	**K2.1**	**K2.2**	**K3.1**	**K3.2**	**K4.1**	**K5.1**	**K5.2**	**N1.1**	**N1.2**	**N1.3**
◪ 9 C	◪ 8 B	■ 20 F	◪ 15 D	■ 21 C	◪ 17 C	■ 18 C	◪ 14 C	◪ 15 C	■ 19 C	◪ 15 C	◪ 40 G	■ 30 G	◪ 20 F
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**						
◪ 20 F	◪ 18 F	◪ 20 F	■ 21 F	◪ 12 F	◪ 6 D	◪ 40 G	◪ 35 G						

6.35; 1/4" hex shank; DIN 74.

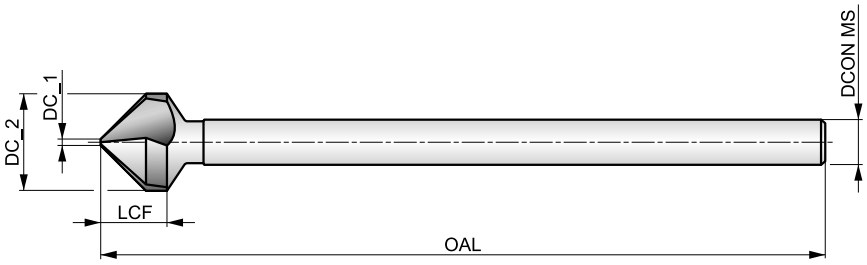
Product	DC_2 [mm]	DC_1 [mm]	OAL [mm]	DCONMS [inch]	CZC MS	NOF
G1076.3	6.30	1.50	50.0	1/4"	M2-M3	3
G1078.3	8.30	2.00	50.0	1/4"	M4	3
G10710.4	10.40	2.50	50.0	1/4"	M5	3
G10712.4	12.40	2.80	50.0	1/4"	M6	3
G10716.5	16.50	3.20	50.0	1/4"	M8	3
G10720.5	20.50	3.50	50.0	1/4"	M10	3

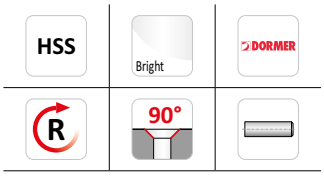
G600

DORMER

HSS Straight Shank Long Reach 90° Countersink, Bright Finish

The extended shank gives the ability to chamfer holes in areas which are difficult to reach. The 90° countersink produces chamfers for standard fasteners and clean burrs from drilled holes. Suitable to chamfer holes in many materials.





Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■ 20 E	■ 22 E	■ 23 E	■ 17 E	■ 15 D	◪ 13 B	■ 12 D	■ 9 D	◪ 8 B	■ 7 D	◪ 6 B	◪ 8 C	◪ 6 C	◪ 7 C
M2.2	**K1.1**	**K1.2**	**K2.1**	**K2.2**	**K3.1**	**K3.2**	**K5.1**	**K5.2**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪ 6 C	■ 17 E	◪ 12 C	◪ 18 B	◪ 14 B	◪ 15 B	◪ 11 B	◪ 16 B	◪ 12 B	◪ 35 G	◪ 25 G	◪ 15 F	◪ 15 F	◪ 13 F
N3.1	**N3.2**	**N3.3**											
■ 16 E	◪ 10 E	◪ 5 C											

DCON MS tolerance h9.

Product	DC_2	DC_1	LCF	OAL	DCON MS	NOF
	[mm]	[mm]	[mm]	[mm]	[mm]	
G6006.3	6.30	1.30	5.6	154.0	5.00	3
G6008.3	8.30	1.80	6.9	155.0	6.00	3
G60010.4	10.40	2.20	7.8	157.0	6.00	3
G60012.4	12.40	2.50	8.6	158.0	8.00	3
G60015.0	15.00	2.80	10.3	159.0	10.00	3
G60016.5	16.50	2.80	11.1	161.0	10.00	3
G60020.5	20.50	3.00	12.9	164.0	10.00	3
G60025.0	25.00	3.20	15.7	168.0	10.00	3

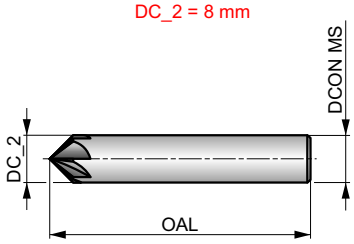
G132

DORMER

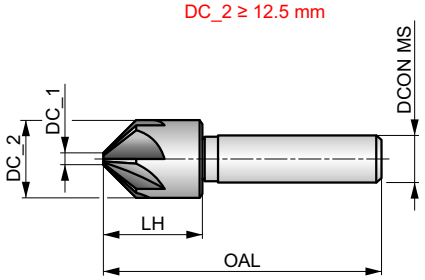
HSS Straight Shank Multi-Flute 90° Countersink, Bright Finish

A 90° Countersink designed for chamfering holes to accommodate standard fasteners and clean burrs from drilled holes. Multiple flutes to reduce chatter and vibration, giving a smooth chamfering operation. Versatile tool for use in hand-held and machine applications. Suitable to chamfer holes in many materials.

DC_2 = 8 mm



DC_2 ≥ 12.5 mm



HSS	Bright	DIN 335A
R	90°	

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P2.2	P2.3	P3.2	P3.3	P4.1	P4.2	P4.3	M3.3	M4.1	K1.1	K1.2	K1.3	K2.2	K2.3
◪ 18 E	■ 16 D	◪ 13 D	■ 11 B	◪ 10 D	■ 8 C	■ 7 B	◪ 3 A	◪ 4 A	◪ 20 F	■ 15 D	■ 11 D	◪ 17 C	■ 14 D

K3.1	K3.2	K3.3	K4.1	K4.2	K5.1	K5.2	K5.3	N1.3	N2.3	N3.2	N4.3
■ 18 E	◪ 14 E	◪ 11 D	◪ 17 C	◪ 13 C	◪ 19	◪ 15	■ 11 D	◪ 20 F	■ 13 F	◪ 12 F	◪ 5 G

DCON MS tolerance h9.

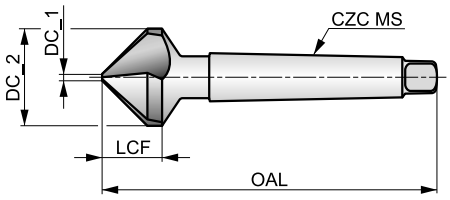
Product	DC_2 [mm]	DC_1 [mm]	LH [mm]	OAL [mm]	DCON MS [mm]	NOF
G1328.0	8.00	–	–	48.0	8.00	5
G13212.5	12.50	2.00	15.5	48.0	8.00	5
G13216.0	16.00	3.20	19.5	56.0	10.00	7
G13220.0	20.00	5.00	23.0	60.0	10.00	7

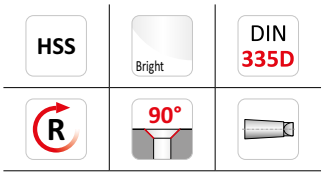
G138

DORMER

HSS Taper Shank 90° Countersink, Bright Finish

A 90° Countersink designed for chamfering standard fastener holes and removing burrs from drilled holes. Taper shank design allows the tool to be used in machine applications where it is held directly in the spindle. Suitable to chamfer holes in many materials.





Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■ 23 E	■ 26 E	■ 27 E	■ 20 E	■ 18 D	◪ 16 B	■ 16 D	◪ 13 D	◪ 11 B	■ 10 D	◪ 8 B	◪ 8	◪ 6	◪ 7
M2.2	**K1.1**	**K1.2**	**K2.1**	**K2.2**	**K3.1**	**K3.2**	**K5.1**	**K5.2**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
◪ 6	◪ 20 F	◪ 15 D	◪ 21 C	◪ 17 C	◪ 18 C	◪ 14 C	◪ 19 C	◪ 15 C	◪ 40 G	■ 30 G	◪ 20 F	■ 20 F	◪ 18 F
N3.1	**N3.2**	**N3.3**	**N4.1**	**N4.2**									
■ 21 F	■ 12 F	◪ 6 D	◪ 40 G	◪ 35 G									

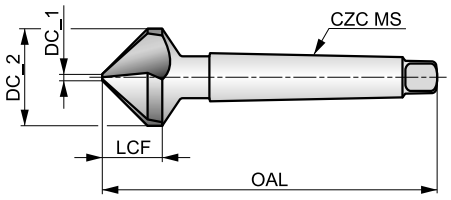
Product	DC_2 [mm]	DC_1 [mm]	LCF [mm]	OAL [mm]	CZC MS	NOF
G13825.0	25.00	3.80	15.5	106.0	MK 2	3
G13830.0	30.00	4.20	18.5	112.0	MK 2	3
G13831.0	31.00	4.20	20.0	112.0	MK 2	3
G13834.0	34.00	4.50	19.5	118.0	MK 2	3
G13837.0	37.00	4.80	21.7	118.0	MK 2	3
G13840.0	40.00	10.00	20.5	140.0	MK 3	3
G13850.0	50.00	14.00	24.1	150.0	MK 3	3
G13863.0	63.00	16.00	28.5	180.0	MK 4	3
G13880.0	80.00	22.00	36.0	190.0	MK 4	3

G338

DORMER

HSS Taper Shank 90° Countersink, TiN Coated

A 90° Countersink designed for chamfering standard fastener holes and removing burrs. Improved performance when machining for long periods at high speed. Taper shank design allows it to be held directly in the spindle. TiN Coating improves performance and extends tool life. Suitable for many materials.



HSS | TiN | DIN 335D | R | 90°

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 33 E	■ 37 E	■ 38 E	■ 28 E	■ 25 D	■ 22 B	■ 23 D	■ 18 D	■ 15 B	■ 13 D	■ 11 B	◪ 9 B	◪ 11 C	◪ 9 C
M2.1	**M2.2**	**M2.3**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**
◪ 10 C	◪ 9 C	◪ 8 B	■ 34 F	■ 25 D	◪ 19 D	■ 35 C	■ 28 C	◪ 23 C	■ 31 C	■ 24 C	◪ 19 C	◪ 29 C	◪ 22 C
K4.3	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**
◪ 16 C	■ 32 C	■ 24 C	◪ 19 C	■ 53 G	■ 40 G	■ 27 F	■ 27 F	■ 24 F	■ 17 F	■ 28 F	■ 16 F	◪ 8 D	◪ 58 G
N4.2													
◪ 50 G													

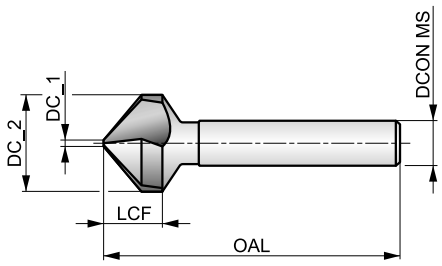
Product	DC_2 [mm]	DC_1 [mm]	LCF [mm]	OAL [mm]	CZC MS	NOF
G33825.0	25.00	3.80	15.5	106.0	MK 2	3
G33831.0	31.00	4.20	20.0	112.0	MK 2	3
G33837.0	37.00	4.80	21.7	118.0	MK 2	3
G33840.0	40.00	10.00	20.5	140.0	MK 3	3
G33850.0	50.00	14.00	24.1	150.0	MK 3	3
G33863.0	63.00	16.00	28.5	180.0	MK 4	3

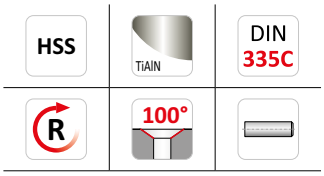
G171

DORMER

HSS Straight Shank 100° Countersink, TiAlN Coated

A 100° Countersink designed for chamfering standard fastener holes and removing burrs. A versatile tool with a TiAlN coating which improves performance and extends tool life. Versatile tool that can be used in both hand-held and machine applications. Suitable to chamfer holes in many materials.





Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■40 E	■45 E	■46 E	■34 E	■30 D	■27 B	■28 D	■22 D	■19 B	■16 D	■14 B	◪11 B	◪11 C	◪9 C
M2.1	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K5.1**
◪10 C	■41 F	■30 D	◪23 D	■42 C	■34 C	◪27 C	■37 C	■28 C	◪23 C	◪34 C	◪26 C	◪19 C	■39 C
K5.2	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	
■29 C	◪23 C	◪60 G	◪45 G	■30 F	■30 F	■27 F	■19 F	■32 F	■18 F	◪9 D	◪62 G	◪55 G	

DCON MS tolerance h9.

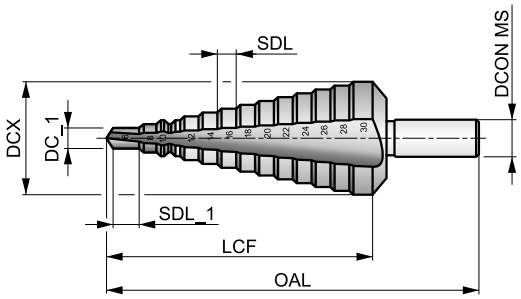
Product	DC_2 [mm]	DC_1 [mm]	LCF [mm]	OAL [mm]	DCON MS [mm]	NOF
G1716.3	6.30	1.50	4.5	44.0	5.00	3
G1718.3	8.30	2.00	5.5	49.0	6.00	3
G17110.4	10.40	2.50	6.6	49.0	6.00	3
G17112.4	12.40	2.80	7.0	53.0	8.00	3
G17116.5	16.50	3.20	9.0	56.0	10.00	3
G17120.5	20.50	3.50	11.0	61.0	10.00	3
G17125.0	25.00	3.80	13.5	65.0	10.00	3

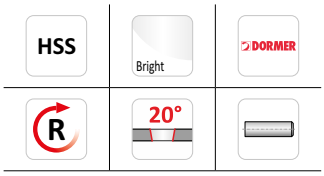
G314

DORMER

HSS Cone Cut Step Drill for Thin Sheet Materials, Bright Finish

Cone cut step drills have a multi-step design which allows for gradual enlargement of holes to the diameter required. The reduced plain shank means all diameters can be held in a standard chuck and holder. Suitable to enlarge holes in many materials.





Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	M1.1	M1.2	M2.1	K1.1	N1.1	N1.2
■ 20	■ 22	■ 23	■ 17	◪ 15	◪ 13	■ 12	◪ 9	◪ 8	◪ 6	◪ 7	◪ 17	■ 30	■ 23

N1.3	N2.1	N2.2	N3.1	N3.2	N3.3	N4.1	N4.2
◪ 15	◪ 31	◪ 28	■ 34	■ 20	◪ 10	■ 30	■ 20

SDI = Step diameter increments.

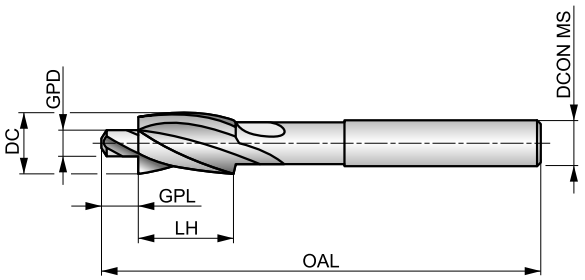
Product	Nr.	DC_1 [mm]	DCX [mm]	SDL [mm]	SDI [mm]	SDL_1 [mm]	LCF [mm]	OAL [mm]	DCON MS [mm]
G314412	412	4.00	12.00	5.00	4 - 5 - 6 - 7 - 8 - 9 - 10 - 11 - 12	5.00	61.0	80.0	6.00
G3141220	1220	12.00	20.00	4.00	12 - 13 - 14 - 15 - 16 - 17 - 18 - 19 - 20	4.00	55.0	76.0	9.00
G3142030	2030	20.00	30.00	4.00	20 - 21 - 22 - 23 - 24 - 25 - 26 - 27 - 28 - 29 - 30	4.00	67.0	88.0	12.00
G3143040	3040	30.00	40.00	4.00	30 - 31 - 32 - 33 - 34 - 35 - 36 - 37 - 38 - 39 - 40	4.00	74.0	98.0	13.00
G314420	420	4.00	20.00	4.00	4 - 6 - 8 - 10 - 12 - 14 - 16 - 18 - 20	4.00	48.0	76.0	8.00
G314630	630	6.00	30.00	4.00	6 - 8 - 10 - 12 - 14 - 16 - 18 - 20 - 22 - 24 - 26 - 28 - 30	4.00	73.0	98.0	10.00
G314M	M	9.00	36.00	3.00	9 - 12 - 15 - 18 - 21 - 24 - 27 - 30 - 33 - 36	3.00	57.0	86.0	12.00

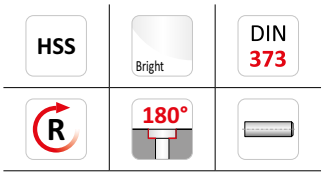
G125

DORMER

HSS Straight Shank 180° Counterbore, Bright Finish

Counterbore with a 180° angle designed to create holes for standard socket head and cap screws. It has a solid Pilot (available for different pre-machined hole size tolerances), which helps to accurately guide the counterbore in standard metric sized holes. Suitable to counterbore holes in many materials.





Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■ 20 E	■ 22 E	■ 23 E	■ 17 E	■ 15 D	◪ 13 C	■ 12 D	◪ 9 D	◪ 8 C	◪ 7 D	◪ 6 C	◪ 8 D	◪ 6 D	◪ 7 D
M2.2	**M2.3**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K4.1**	**K4.2**	**K5.1**	**K5.2**
◪ 6 D	◪ 5 C	■ 17 E	◪ 12 E	◪ 11 E	■ 15 D	◪ 12 D	◪ 10 C	◪ 13 D	◪ 10 D	◪ 12 D	◪ 9 D	■ 14 D	◪ 10 D
N1.1	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**			
◪ 30 G	■ 23 G	■ 15 G	◪ 31 G	◪ 28 G	◪ 20 G	■ 34 C	■ 20 C	◪ 10 C	■ 30 C	◪ 20 C			

DCON MS tolerance h9.

Product	DC	GPD	CZC MS	GPL	OAL	LH	DCON MS	NOF
	[mm]	[mm]		[mm]	[mm]	[mm]	[mm]	
G1256.5X2.5 [3]	6.50	2.50	M 3 t	4.50	71.0	14.0	5.00	3
G1256.5X3.2 [1]	6.50	3.20	M 3 f	4.50	71.0	14.0	5.00	3
G1256.5X3.4 [2]	6.50	3.40	M 3 m	4.50	71.0	14.0	5.00	3
G1258.0X3.3 [3]	8.00	3.30	M 4 t	5.00	71.0	14.0	5.00	3
G1258.0X4.3 [1]	8.00	4.30	M 4 f	5.00	71.0	14.0	5.00	3
G1258.0X4.5 [2]	8.00	4.50	M 4 m	5.00	71.0	14.0	5.00	3
G12510.0X4.2 [3]	10.00	4.20	M 5 t	5.50	80.0	18.0	8.00	3
G12510.0X5.3 [1]	10.00	5.30	M 5 f	5.50	80.0	18.0	8.00	3
G12510.0X5.5 [2]	10.00	5.50	M 5 m	5.50	80.0	18.0	8.00	3
G12511.0X5.0 [3]	11.00	5.00	M 6 t	6.00	80.0	18.0	8.00	3
G12511.0X6.4 [1]	11.00	6.40	M 6 f	6.00	80.0	18.0	8.00	3
G12511.0X6.6 [2]	11.00	6.60	M 6 m	6.00	80.0	18.0	8.00	3
G12515.0X6.8 [3]	15.00	6.80	M 8 t	8.00	100.0	22.0	12.50	3
G12515.0X8.4 [1]	15.00	8.40	M 8 f	8.00	100.0	22.0	12.50	3
G12515.0X9.0 [2]	15.00	9.00	M 8 m	8.00	100.0	22.0	12.50	3
G12518.0X8.5 [3]	18.00	8.50	M 10 t	10.00	100.0	22.0	12.50	3
G12518.0X10.5 [1]	18.00	10.50	M 10 f	10.00	100.0	22.0	12.50	3
G12518.0X11.0 [2]	18.00	11.00	M 10 m	10.00	100.0	22.0	12.50	3
G12520.0X10.2 [3]	20.00	10.20	M 12 t	10.00	100.0	22.0	12.50	3
G12520.0X13.0 [1]	20.00	13.00	M 12 f	10.00	100.0	22.0	12.50	3
G12520.0X13.5 [2]	20.00	13.50	M 12 m	10.00	100.0	22.0	12.50	3

[1] f= for through hole fine.
[2] m= for through hole medium.
[3] t= for tap hole.

G236

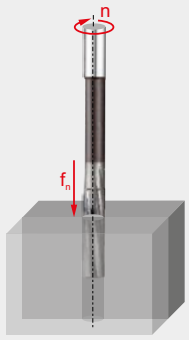
Sets of Countersink in a Cylindrical Plastic Drum

Sets containing a variety of sizes of different 90° countersinks. There are 5 different sets filled either with G106, G136 or G560 available. Suitable for many materials.

A=Styles in Set, B=No. in Set, C=Diameters in Set.

Product	Nr.	A	B	C
G2361	1	G136	6	6.30 mm, 8.30 mm, 10.40 mm, 12.40 mm, 16.50 mm, 20.50 mm
G2362	2	G136	4	6.30 mm, 10.40 mm, 16.50 mm, 20.50 mm
G2363	3	G560	6	6.30 mm, 8.30 mm, 10.40 mm, 12.40 mm, 16.50 mm, 20.50 mm
G2364	4	G106	6	6.30 mm, 8.30 mm, 10.40 mm, 12.40 mm, 16.50 mm, 20.50 mm
G2365	5	G506	6	6.30 mm, 8.30 mm, 10.40 mm, 12.40 mm, 16.50 mm, 20.50 mm

REAMERS FEED RATE CHART

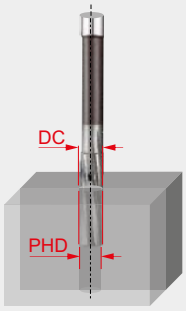


Feed per revolution (f_n in mm/rev)
Depending on the working conditions it might be necessary to adjust these values ± 15 %.

How to use this table to find the feed per revolution (f_n):

1. Find your Alpha Code on the product page (example: 21C, "C" is the Alpha Code).
2. Find the closest diameter for your cutting application in the top row of the table.
3. Find your Alpha Code in the left column of the table.
4. The intersection (cell) of the Diameter and Alpha Code is the feed per revolution (f_n).

		ø DC [mm]																		
		1.00	1.50	2.00	3.00	4.00	5.00	6.00	7.00	8.00	10.00	12.00	15.00	16.00	20.00	25.00	30.00	40.00	50.00	80.00
Feed rates	A	0.030	0.045	0.055	0.078	0.090	0.100	0.125	0.137	0.150	0.170	0.185	0.210	0.220	0.250	0.280	0.320	0.390	0.440	0.500
	B	0.035	0.055	0.072	0.110	0.130	0.150	0.165	0.172	0.180	0.210	0.240	0.270	0.280	0.310	0.360	0.400	0.500	0.550	0.600
	C	0.040	0.065	0.085	0.135	0.160	0.185	0.200	0.210	0.220	0.260	0.285	0.325	0.335	0.390	0.440	0.480	0.600	0.680	0.750
	D	0.050	0.080	0.110	0.160	0.180	0.200	0.235	0.253	0.270	0.320	0.360	0.400	0.410	0.470	0.540	0.600	0.730	0.850	0.950
	E	0.065	0.100	0.140	0.180	0.215	0.250	0.300	0.325	0.350	0.390	0.430	0.485	0.500	0.530	0.640	0.750	0.910	1.100	1.200
	F	0.090	0.140	0.180	0.260	0.305	0.350	0.395	0.417	0.440	0.500	0.550	0.610	0.630	0.700	0.800	0.930	1.200	1.500	1.650



Machining allowance when using a **machine reamer** (MA in mm)
Premachined hole diameter
PHD = DC – MA.

How to use this table to get to the right premachined hole diameter (PHD):

1. Find the diameter range for your cutting application in the top row of the table.
2. Find your ISO Group Code in the left column of the table (example: For Stainless Steel the ISO Group Code is "M")
3. The intersection (cell) of the Diameter Range and ISO Group Code is the Machining Allowance (MA)
4. Subtract the Machining Allowance from the reaming diameter to get to the premachined hole diameter (PHD).

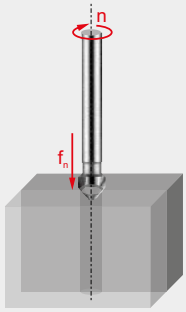
(example: for a 6mm hole in steel (P) the PHD is 5.85mm)

		ø DC [mm]									
		1.00 – 5.00		5.00 – 8.00		8.00 – 12.00		12.00 – 16.00		16.00 – 30.00		30.00 – 80.00	
ISO group	P	0.10		0.15		0.20		0.20		0.30		0.30	
	M	0.08		0.10		0.10		0.20		0.20		0.30	
	K	0.10		0.15		0.20		0.20		0.30		0.30	
	N	0.10		0.15		0.20		0.20		0.30		0.30	
	S	0.05		0.10		0.10		0.15		0.20		0.20	
	H	0.05		0.05		0.10		0.10		0.15		0.20	

Be cautious with the machining tolerances of drills, the tool diameter is not the same as the hole diameter produced!

Note: The recommended allowance when using a hand reamer is 0.05 to 0.10 mm.

COUNTERSINKS FEED RATE CHART



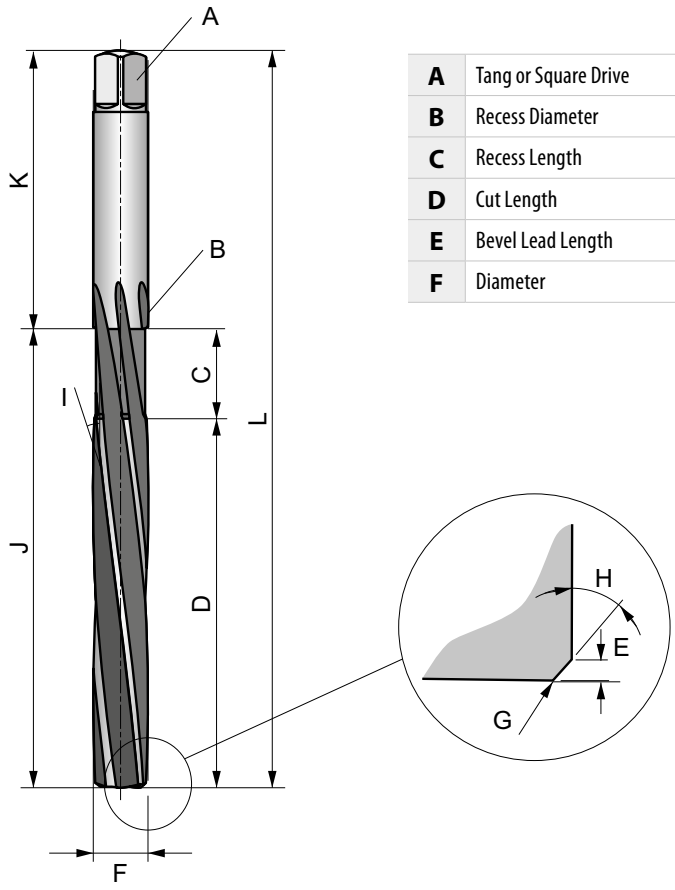
Feed per revolution (f_n in mm/rev)
Depending on the working conditions it might be necessary to adjust these values ± 15 %.

How to use this table to find the feed per revolution (f_n):

1. Find your Alpha Code on the product page (example: 23E, "E" is the Alpha Code).
2. Find the closest diameter for your cutting application in the top row of the table.
3. Find your Alpha Code in the left column of the table.
4. The intersection (cell) of the Diameter and Alpha Code is the feed per revolution (fn).

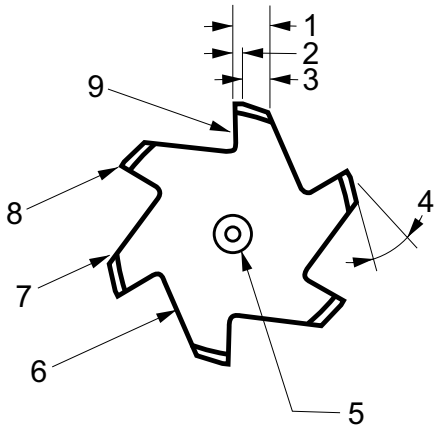
		ø DC [mm]									
		6.00	**8.00**	**10.00**	**16.00**	**20.00**	**25.00**	**32.00**	**40.00**	**60.00**	**80.00**
Feed rates	**A**	0.030	0.040	0.050	0.060	0.080	0.090	0.100	0.120	0.140	0.160
	B	0.040	0.050	0.060	0.080	0.100	0.120	0.140	0.160	0.180	0.200
	C	0.050	0.060	0.080	0.100	0.120	0.140	0.160	0.180	0.200	0.220
	D	0.060	0.080	0.100	0.120	0.150	0.180	0.200	0.220	0.250	0.280
	E	0.080	0.100	0.120	0.150	0.180	0.200	0.250	0.270	0.300	0.320
	F	0.090	0.110	0.130	0.160	0.190	0.210	0.260	0.290	0.330	0.360
	G	0.100	0.120	0.150	0.180	0.200	0.220	0.280	0.320	0.360	0.400
	H	0.120	0.150	0.180	0.200	0.220	0.250	0.300	0.350	0.400	0.450

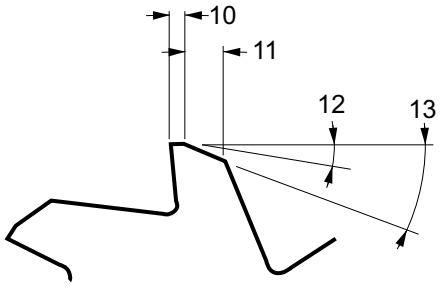
Reamer Definitions / Nomenclature



A	Tang or Square Drive
B	Recess Diameter
C	Recess Length
D	Cut Length
E	Bevel Lead Length
F	Diameter

G	Bevel Lead
H	Bevel Lead Angle
I	Helix Angle
J	Body Length
K	Shank Length
L	Overall Length





1	Width of Land
2	Circular Land
3	Clearance
4	Clearance Angle
5	Centre Hole
6	Flute
7	Heel
8	Cutting Edge
9	Face

10	Width of Primary Clearance
11	Width of Secondary Clearance
12	Primary Clearance Angle
13	Secondary Clearance Angle

Reaming

To obtain the best results when using reamers it is essential to make them 'work'. It is a common fault to prepare holes for reaming with too little stock left in the starting hole diameter. If insufficient stock is left in the hole before reaming, the reamer will rub, quickly show wear and will result in loss of diameter. It is equally important for performance not to leave too much stock in the hole. (See Stock removal below).

1. Select the optimum type of reamer and the optimum speeds and feeds for the application. Ensure that pre-drilled holes are the correct diameter.
2. The workpiece must be held rigid and the machine spindle should have no play.
3. The chuck for straight shank reamers must be of good quality and in good working condition. If the reamer slips in the chuck and the feed is automatic, breakage of the reamer may occur.
4. Keep tool overhang from machine spindle to a minimum.
5. Use recommended lubricants to enhance the life of the reamer and ensure the fluid reaches the cutting edges. As reaming is not a heavy cutting operation, soluble oil 40:1 dilution is normally satisfactory. Air blasting may be used with grey cast iron, if dry machining.
6. Do not allow the flutes of a reamer to become blocked with chips. Retract if necessary to empty the flutes, this can help to prevent poor hole quality and breakage of the tool.
7. Before the reamer is reground, check concentricity between centres. In most instances only the bevel lead will need regrinding.
8. Keep reamers sharp. Frequent regrinding is good economy, but it is important to understand that reamers cut only on the bevel and taper leads and not on the lands. Consequently only these leads need regrinding. Accuracy of regrinding is important to hole quality and tool life.

Stock removal

The recommended stock removal in reaming is dependent on the application material and the surface finish of the pre-drilled hole. General guidelines for stock removal are shown in the following tables:

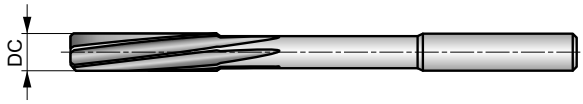
Size of reamed hole [mm]	**When pre-drilled**	**When pre-core-drilled**
Below 4	0.1	0.1
Over 4 to 11	0.2	0.15
Over 11 to 39	0.3	0.2
Over 39 to 50	0.4	0.3

Size of reamed hole [inches]	**When pre-drilled**	**When pre-core-drilled**
Below 3/16"	0.004"	0.004"
3/16 to ½"	0.008"	0.006"
½ to 1.½"	0.010"	0.008"
1.½ to 2"	0.016"	0.010"

Hand/Machine reaming

Although both hand and machine reamers offer the same capability regarding finished hole size, the use of each must be considered according to the application. A hand reamer, for reasons of alignment, has a long taper lead, whereas a machine reamer has only a 45 degree bevel lead. A machine reamer cuts only on the bevel lead while a hand reamer cuts on the bevel lead as well as the taper lead.

Tolerance limits



1. On the cutting diameter of standard reamers
   The diameter (DC) is measured across the circular land immediately behind the bevel or taper lead. The tolerance is in accordance with DIN 1420 and is intended to produce H7 holes.

Reamer tolerance			
Diameter [mm]		**Tolerance Limit** [mm]	
Over	Up to and including	High +	Low +
–	3	0.008	0.004
3	6	0.010	0.005
6	10	0.012	0.006
10	18	0.015	0.008

Reamer tolerance			
Diameter [mm]		**Tolerance Limit** [mm]	
Over	Up to and including	High +	Low +
18	30	0.017	0.009
30	50	0.021	0.012
50	80	0.025	0.014

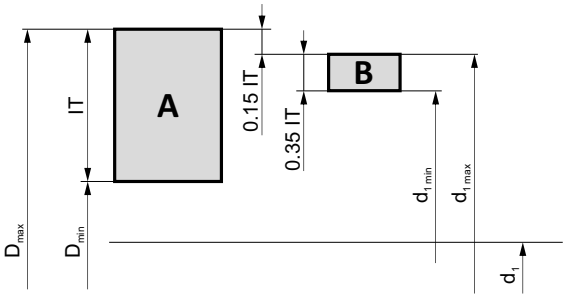
2. H7 hole tolerance
   The most common tolerance on a finished hole is H7 (see table below). For any other tolerance the figure and table below (in Note 3) can be used to calculate the reamers tolerance location and width

Hole tolerance			
Diameter [mm]		**Tolerance Limit** [mm]	
Over	Up to and including	High +	Low +
–	3	0.010	0
3	6	0.012	0
6	10	0.015	0
10	18	0.018	0

Hole tolerance			
Diameter [mm]		**Tolerance Limit** [mm]	
Over	Up to and including	High +	Low +
18	30	0.021	0
30	50	0.025	0
50	80	0.030	0

3. Other hole tolerances when it is necessary to define the dimensions of a special reamer intended to cut to a specific tolerance, e.g. D8, this well proven guide can be used.

Diameter tolerance width [µm]								
Tolerance width (microns)	over 1 incl. 3	over 3 incl. 6	over 6 incl. 10	over 10 incl. 18	over 18 incl. 30	over 30 incl. 50	over 50 incl. 80	over 80 incl. 120
IT5	4	5	6	8	9	11	13	15
IT6	6	8	9	11	13	16	19	22
IT7	10	12	15	18	21	25	30	35
IT8	14	18	22	27	33	39	46	54
IT9	25	30	36	43	52	62	74	87
IT10	40	48	58	70	84	100	120	140
IT11	60	75	90	110	130	160	190	220
IT12	100	120	150	180	210	250	300	350



A = Hole tolerance
B = Reamer tolerance
IT = Tolerance width
D_{max} = Max. diameter of hole
D_{min} = Min. diameter of hole
d_1 = Nominal diameter
$d_{1\,max}$ = Max. diameter of reamer
$d_{1\,min}$ = Min. diameter of reamer

e.g. 10 mm hole with tolerance D8, Max dia = 10.062, Min dia = 10.040, Hole tolerance (IT8) = 0.022

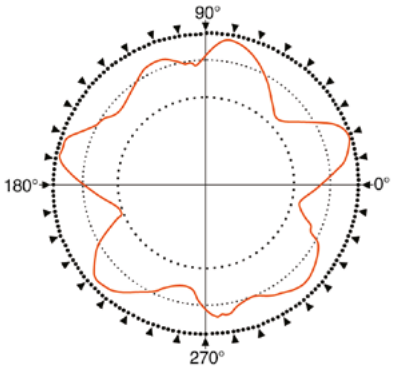
Maximum limit: 0.15 × hole tolerance (IT8) = 0.0033, rounded up = 0.004
Minimum limit: 0.35 × hole tolerance (IT8) = 0.0077, rounded up = 0.008
Maximum limit for reamer = 10.062 – 0.004 = 10.058
Minimum limit for reamer = 10.058 – 0.008 = 10.050

Applications – Reamer Selection

The most common types of reamers have a left-hand spiral because the main applications involve through holes requiring chips to be pushed forward. For blind holes, reamers with straight flutes or right hand spirals are recommended.
The most efficient reaming conditions depend on the application, material, quality of hole required, stock removal, lubrication and other factors. A general guide to surface speeds and feeds for machine reamers is shown in the reamer WMG and feed charts (see Product Selector) and stock removal tables.
Extremely unequal spacing on reamers means that the divide is not the same for each tooth. As there are no two teeth diametrically opposite each other, the reamer produces a hole with a roundness variance of between 1 and 2 µm. This compared with a variance of up to 10µm with conventional unequal spacing.

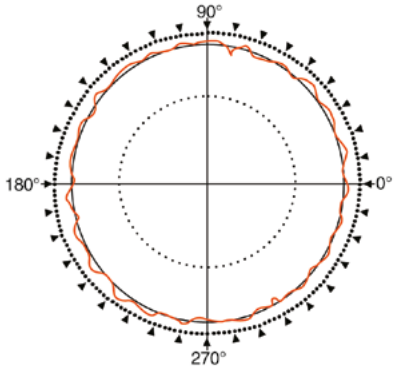
Carbide Reamers – Comparison spacing / EU spacing

Unequal spacing
Roundness error up to 10 µm



Results of roundness

Extremely unequal spacing
Roundness error up to 1 – 2 µm



Results of roundness

Trouble shooting when reaming

Problem	Cause	Remedy
Broken or twisted tangs	Incorrect fit between shank and socket	Ensure the shank and socket are clean and free from damage
Rapid tool wear	Insufficient stock to remove	Increase the amount of stock to be removed (smaller hole)
Oversize hole	Excessive lip height variation	Regrind to correct specification
	Displacement in the machine spindle	Repair and rectify spindle displacement
	Defects on the tool holder	Replace tool holder
	Tool shank is damaged	Replace or regrind the shank
	Ovality of the tool	Replace or regrind the tool
	Asymmetric bevel lead angle	Regrind to correct specification
	Too high feed or cutting speed	Adjust cutting conditions in accordance with Catalogue
Undersize hole	Insufficient stock to remove	Increase the amount of stock to be removed (smaller hole)
	Too much heat generated while reaming. The hole widens and shrinks	Increase coolant flow
	The tool diameter is worn and is undersize	Regrind to correct specification or replace tool
	Too low feed or cutting speed	Adjust cutting conditions in accordance with the Catalogue
	Pre-drilled hole is too small	Decrease the amount of stock to be removed (larger hole)
Oval and conical holes	Displacement in the machine spindle	Repair and rectify spindle displacement
	Misalignment between tool and hole	Use a bridge reamer
	Asymmetric bevel lead angle	Regrind to correct specification
Bad hole finish	Excessive stock to remove	Decrease the amount of stock to be removed (larger hole)
	Worn out tool	Regind to correct specification
	Undersize cutting rake angle	Regind to correct specification
	Too diluted emulsion or cutting oil	Increase % concentration
	Feed and/or speed too low	Adjust cutting conditions in accordance with Catalogue
	Cutting speed too high	Adjust cutting conditions in accordance with Catalogue
The tool clamps and breaks	Worn out tool	Regind to correct specification
	Back taper of the tool is too small	Check and replace/modify the tool
	The width of the land is too wide	Check and replace/modify the tool
	Workpiece material tend to squeeze	Use an adjustable reamer to compensate for the displacement
	Pre-drilled hole is too small	Decrease the amount of stock to be removed (larger hole)
	Heterogeneous material with hard inclusions	Use solid carbide reamer

	Grade	Hardness (HV10)	C %	W %	Mo %	Cr %	V %	Co %	Tool Material
HSS	M2	810 – 850	0.9	6.4	5.0	4.2	1.8	–	HSS
HSS-E	M35	830 – 870	0.93	6.4	5.0	4.2	1.8	4.8	HSCO
	M42	870 – 960	1.08	1.5	9.4	3.9	1.2	8.0	

Properties	HSS materials	Carbide materials	K10/30F (often used for solid tools)
Hardness [HV30]	800-950	1300 – 1800	1600
Density [g/cm³]	8.0 – 9.0	7.2 – 15	14.45
Compressive strength [N/mm²[	3000 – 4000	3000 – 8000	6250
Flexural strength, (bending) [N/mm²[	2500 – 4000	1000 – 4700	4300
Heat resistance [°C]	550	1000	900
E-module [KN/mm²]	260 – 300	460 – 630	580
Grain size [µm]	–	0.2 – 10	0.8

The combination of hard particle (WC) and binder metal (Co) give the following changes in characteristics.

Characteristic	Higher WC content give	Higher Co content give
Hardness	Higher hardness	Lower hardness
Compressive strength [CS]	Higher CS	Lower CS
Bending strength [BS]	Lower BS	Higher BS

Grain size also influences the material properties. Small grain sizes means higher hardness and coarse grains give more toughness.

Surface treatment / Coating properties examples

Surface Treaments	Colour	Coating material	Hardness [HV]	Thickness [µm]	Coating structure	Frict. coeff. against steel	Max. appl. temp. [°C]
TiN	Gold	TiN	2300	1-4	Mono-layer	0.4	600
TiAlN	Black grey	TiAlN	3300	3	Nano structured	0.3-0.35	900

Industry Standard tolerancess For Shafts & Holes

Tolerance values are shown in Microns (µm)

Formula for Microns ...1 µm = 0.001 mm / 0.000039 "

Tolerance	**Diameter** [mm]							
	> 1 ≤ 3	> 3 ≤ 6	> 6 ≤ 10	> 10 ≤ 18	> 18 ≤ 30	> 30 ≤ 50	> 50 ≤ 80	> 80 ≤ 120
	Diameter [inch]							
	> 0.039" ≤ 0.118"	> 0.118" ≤ 0.236"	> 0.236" ≤ 0.394"	> 0.394" ≤ 0.709"	> 0.709" ≤ 1.181"	> 1.181" ≤1.968"	>1.968" ≤ 3.149"	> 3.149" ≤ 4.724"
	Tolerance values [µm]							
e8	-14 / -28	-20 / -38	-25 / -47	-32 / -59	-40 / -73	-50 / -89	-60 / -106	-72 / -126
f6	-6 / -12	-10 / -18	-13 / -22	-16 / -27	-20 / -33	-25 / -41	-30 / -49	-36 / -58
f7	-6 / -16	-10 / -22	-13 / -28	-16 / -34	-20 / -41	-25 / -50	-30 / -60	-36 / -71
h6	0 / -6	0 / -8	0 / -9	0 / -11	0 / -13	0 / -16	0 / -19	0 / -22
h7	0 / -10	0 / -12	0 / -15	0 / -18	0 / -21	0 / -25	0 / -30	0 / -35
h8	0 / -14	0 / -18	0 / -22	0 / -27	0 / -33	0 / -39	0 / -46	0 / -54
h9	0 / -25	0 / -30	0 / -36	0 / -43	0 / -52	0 / -62	0 / -74	0 / -87
h10	0 / -40	0 / -48	0 / -58	0 / -70	0 / -84	0 / -100	0 / -120	0 / -140
h11	0 / -60	0 / -75	0 / -90	0 / -110	0 / -130	0 / -160	0 / -190	0 / -220
h12	0 / -100	0 / -120	0 / -150	0 / -180	0 / -210	0 / -250	0 / -300	0 / -350
k10	+40 / 0	+48 / 0	+58 / 0	+70 / 0	+84 / 0	+100 / 0	+120 / 0	+140 / 0
k12	+100 / 0	+120 / 0	+150 / 0	+180 / 0	+210 / 0	+250 / 0	+300 / 0	+350 / 0
m7	+2 / +12	+4 / +16	+6 / +21	+7 / +25	+8 / +29	+9 / +34	+11 / +41	+13 / +48
js14	+/ -125	+/ -150	+/ -180	+/ -215	+/ -260	+/ -310	+/ -370	+/ -435
js16	+/ -300	+/ - 375	+/ -450	+/ -550	+/ -650	+/ -800	+/ -950	+/ -1100
H7	+10 / 0	+12 / 0	+15 / 0	+18 / 0	+21 / 0	+25 / 0	+30 / 0	+35 / 0
H8	+14 / 0	+18 / 0	+22 / 0	+27 / 0	+ 33 / 0	+39 / 0	+46 / 0	+54 / 0
H9	+25 / 0	+30 / 0	+36 / 0	+43 / 0	+52 / 0	+62 / 0	+74 / 0	+87 / 0
H12	+100 / 0	+120 / 0	+150 / 0	+180 / 0	+210 / 0	+250 / 0	+300 / 0	+350 / 0
P9	-6 / -31	-12 / -42	-15 / -51	-18 / -61	-22 / -74	-26 / -86	-32 / -106	-37 / -124
S7	-13 / -22	-15 / -27	-17 / -32	-21 / -39	-27 / -48	-34 / -59	-42 / -72	-58 / -93

Table of Cutting Speeds

		Vc															
m/min.		5	8	10	15	20	25	30	40	50	60	70	80	90	100	110	150
SFM (feet/min.)		16	26	32	50	66	82	98	130	165	197	230	262	296	330	362	495
Ø		RPM															
mm	inch																
1.00	–	1592	2546	3183	4775	6366	7958	9549	12732	15916	19099	22282	25465	28648	31831	35014	47747
1.50	–	1061	1698	2122	3183	4244	5305	6366	8488	10610	12732	14854	16977	19099	21221	23343	31831
2.00	–	796	1273	1592	2387	3183	3979	4775	6366	7958	9549	11141	12732	14324	15916	17507	23873
2.50	–	637	1019	1273	1910	2546	3183	3820	5093	6366	7639	8913	10186	11459	12732	14006	19099
3.00	–	531	849	1061	1592	2122	2653	3183	4244	5305	6366	7427	8488	9549	10610	11671	15916
3.18	1/8	500	801	1001	1501	2002	2502	3003	4004	5005	6006	7007	8008	9009	10010	11011	15015
3.50	–	455	728	909	1364	1819	2274	2728	3638	4547	5457	6366	7276	8185	9095	10004	13642
4.00	–	398	637	796	1194	1592	1989	2387	3183	3979	4775	5570	6366	7162	7958	8754	11937
4.50	–	354	566	707	1061	1415	1768	2122	2829	3537	4244	4951	5659	6366	7074	7781	10610
4.76	3/16	334	535	669	1003	1337	1672	2006	2675	3344	4012	4681	5350	6018	6687	7356	10031
5.00	–	318	509	637	955	1273	1592	1910	2546	3183	3820	4456	5093	5730	6366	7003	9549
6.00	–	265	424	531	796	1061	1326	1592	2122	2653	3183	3714	4244	4775	5305	5836	7958
6.35	1/4	251	401	501	752	1003	1253	1504	2005	2506	3008	3509	4010	4511	5013	5514	7519
7.00	–	227	364	455	682	909	1137	1364	1819	2274	2728	3183	3638	4093	4547	5002	6821
7.94	5/16	200	321	401	601	802	1002	1203	1604	2004	2405	2806	3207	3608	4009	4410	6013
8.00	–	199	318	398	597	796	995	1194	1592	1989	2387	2785	3183	3581	3979	4377	5968
9.00	–	177	283	354	531	707	884	1061	1415	1768	2122	2476	2829	3183	3537	3890	5305
9.53	3/8	167	267	334	501	668	835	1002	1336	1670	2004	2338	2672	3006	3340	3674	5010
10.00		159	255	318	477	637	796	955	1273	1592	1910	2228	2546	2865	3183	3501	4775
11.11	7/16	143	229	287	430	573	716	860	1146	1433	1719	2006	2292	2579	2865	3152	4298
12.00		133	212	265	398	531	663	796	1061	1326	1592	1857	2122	2387	2653	2918	3979
12.70	1/2	125	201	251	376	501	627	752	1003	1253	1504	1754	2005	2256	2506	2757	3760
14.00		114	182	227	341	455	568	682	909	1137	1364	1592	1819	2046	2274	2501	3410
14.29	9/16	111	178	223	334	446	557	668	891	1114	1337	1559	1782	2005	2228	2450	3341
15.00	–	106	170	212	318	424	531	637	849	1061	1273	1485	1698	1910	2122	2334	3183
15.88	5/8	100	160	200	301	401	501	601	802	1002	1203	1403	1604	1804	2004	2205	3007
16.00	–	99	159	199	298	398	497	597	796	995	1194	1393	1592	1790	1989	2188	2984
17.46	11/16	91	146	182	273	365	456	547	729	912	1094	1276	1458	1641	1823	2005	2735
18.00	–	88	141	177	265	354	442	531	707	884	1061	1238	1415	1592	1768	1945	2653
19.05	3/4	84	134	167	251	334	418	501	668	835	1003	1170	1337	1504	1671	1838	2506
20.00	–	80	127	159	239	318	398	477	637	796	955	1114	1273	1432	1592	1751	2387
24.00	–	66	106	133	199	265	332	398	531	663	796	928	1061	1194	1326	1459	1989
25.00	–	64	102	127	191	255	318	382	509	637	764	891	1019	1146	1273	1401	1910
27.00	–	59	94	118	177	236	295	354	472	589	707	825	943	1061	1179	1297	1768
30.00	–	53	85	106	159	212	265	318	424	531	637	743	849	955	1061	1167	1592
32.00	–	50	80	99	149	199	249	298	398	497	597	696	796	895	995	1094	1492
36.00	–	44	71	88	133	177	221	265	354	442	531	619	707	796	884	973	1326
40.00	–	40	64	80	119	159	199	239	318	398	477	557	637	716	796	875	1194
50.00	–	32	51	64	95	127	159	191	255	318	382	446	509	573	637	700	955

Hardness and Tensile Strength

HV	HRC	HB	Tensile Strength	
Vickers	Rockwell	Brinell	[N/mm²]	[Tons/ sq. in.]
940	68	–	–	–
900	67	–	–	–
864	66	–	–	–
829	65	–	–	–
800	64	–	–	–
773	63	–	–	–
745	62	–	–	–
720	61	–	–	–
698	60	–	–	–
675	59	–	–	–
655	58	–	2200	142
650	–	618	2180	141
640	–	608	2145	139
639	57	607	2140	138
630	–	599	2105	136
620	–	589	2070	134
615	56	584	2050	133
610	–	580	2030	131
600	–	570	1995	129
596	55	567	1980	128
590	–	561	1955	126
580	–	551	1920	124
578	54	549	1910	124
570	–	542	1880	122
560	53	532	1845	119
550	–	523	1810	117
544	52	517	1790	116
540	–	513	1775	115
530	–	504	1740	113
527	51	501	1730	112
520	–	494	1700	110
514	50	488	1680	109
510	–	485	1665	108
500	–	475	1630	105
497	49	472	1620	105
490	–	466	1595	103
484	48	460	1570	102
480	–	456	1555	101
473	47	449	1530	99
470	–	447	1520	98
460	–	437	1485	96
458	46	435	1480	96
450	–	428	1455	94
446	45	424	1440	93
440	–	418	1420	92

HV	HRC	HB	Tensile Strength	
Vickers	Rockwell	Brinell	[N/mm²]	[Tons/ sq. in.]
434	44	413	1400	91
423	43	402	1360	88
413	42	393	1330	86
403	41	383	1300	84
392	40	372	1260	82
382	39	363	1230	80
373	38	354	1200	78
364	37	346	1170	76
355	36	337	1140	74
350	–	333	1125	73
345	35	328	1110	72
340	–	323	1095	71
336	34	319	1080	70
330	–	314	1060	69
327	33	311	1050	68
320	–	304	1030	67
317	32	301	1020	66
310	31	295	995	64
302	30	287	970	63
300	–	285	965	62
295	–	280	950	61
293	29	278	940	61
290	–	276	930	60
287	28	273	920	60
285	–	271	915	59
280	27	266	900	58
275	–	261	880	57
272	26	258	870	56
270	–	257	865	56
268	25	255	860	56
265	–	252	850	55
260	24	247	835	54
255	23	242	820	53
250	22	238	800	52
245	–	233	785	51
243	21	231	780	50
240	–	228	770	50
235	–	223	755	49
230	–	219	740	48
225	–	214	720	47
220	–	209	705	46
215	–	204	690	45
210	–	199	675	44
205	–	195	660	43
200	–	190	640	41

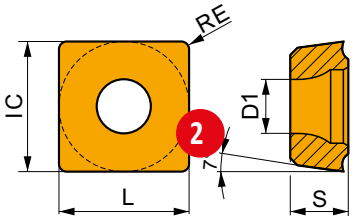
EXCHANGEABLE HEAD INDEXABLE DRILLS

6		WMG & ISO 13399
12	DRILLS	INSTRUCTIONS
15	DRILLS	SOLID CARBIDE DRILLS
66	DRILLS	HSS DRILLS
176	DRILLS	CUTTING FLUIDS
186	DRILLS	TECHNICAL INFORMATION
190		REAMERS AND COUNTERSINKS
264	INDEXABLE DRILLS	INSTRUCTIONS
271	INDEXABLE DRILLS	HYDRA DRILLS
297	INDEXABLE DRILLS	TECHNICAL INFORMATION
307	INDEXABLE DRILLS	INDEXABLE DRILLS
327	INDEXABLE DRILLS	TECHNICAL INFORMATION
350	BORING SYSTEMS	INSTRUCTIONS
359	BORING SYSTEMS	BORING HEADS
376	BORING SYSTEMS	BORING ACCESSORIES
381	BORING SYSTEMS	INSERTS
404	BORING SYSTEMS	ARBORS
418	BORING SYSTEMS	BORING KITS
429	BORING SYSTEMS	TECHNICAL INFORMATION

PRAMET

1 SCET

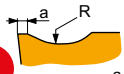
	IC [mm]	D1 [mm]	L [mm]	S [mm]
0502	5.556	2.40	5.56	2.38
0602	6.350	2.90	6.35	2.38
0703	7.937	3.50	7.94	3.18
09T3	9.525	4.50	9.53	3.97
1204	12.700	5.60	12.70	4.76
1505	15.875	5.60	15.88	5.56



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product	RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc	M f	M ap	K vc	K f	K ap	N vc	N f	N ap	S vc	S f	S ap	H vc	H f	H ap
SCET 050204-UD	**D8330**	0.4	■ 165	0.08	–	–	–	–	–	–	■ 155	0.08	–	–	–	–	–	–	–	–	–	–	–	–
	D9335	0.4	■ 240	0.08	–	–	–	–	–	–	■ 225	0.08	–	–	–	–	–	–	–	–	–	–	–	–
SCET 060204-UD	**D8330**	0.4	■ 165	0.11	–	–	–	–	–	–	■ 155	0.11	–	–	–	–	–	–	–	–	–	–	–	–
	D9335	0.4	■ 240	0.11	–	–	–	–	–	–	■ 225	0.11	–	–	–	–	–	–	–	–	–	–	–	–
SCET 070308-UD	**D8330**	0.8	■ 165	0.13	–	–	–	–	–	–	■ 155	0.13	–	–	–	–	–	–	–	–	–	–	–	–
	D9335	0.8	■ 240	0.13	–	–	–	–	–	–	■ 225	0.13	–	–	–	–	–	–	–	–	–	–	–	–
SCET 09T308-UD	**D8330**	0.8	■ 165	0.14	–	–	–	–	–	–	■ 155	0.14	–	–	–	–	–	–	–	–	–	–	–	–
	D9335	0.8	■ 240	0.14	–	–	–	–	–	–	■ 225	0.14	–	–	–	–	–	–	–	–	–	–	–	–
SCET 120408-UD	**D8330**	0.8	■ 165	0.16	–	–	–	–	–	–	■ 155	0.16	–	–	–	–	–	–	–	–	–	–	–	–
	D9335	0.8	■ 240	0.16	–	–	–	–	–	–	■ 225	0.16	–	–	–	–	–	–	–	–	–	–	–	–
SCET 150512-UD	**D8330**	1.2	■ 165	0.18	–	–	–	–	–	–	■ 155	0.18	–	–	–	–	–	–	–	–	–	–	–	–
	D9335	1.2	■ 240	0.18	–	–	–	–	–	–	■ 225	0.18	–	–	–	–	–	–	–	–	–	–	–	–

4

5 

	a
SCET 050204-UD	0,12
SCET 060204-UD	0,15
SCET 070308-UD	0,15
SCET 09T308-UD	0,15
SCET 120408-UD	0,20
SCET 150512-UD	0,20

6

UD geometry with universal design for periphery inserts.

10

7 8 9 11

SCET120408-UD:D9335 Use full insert specification code when ordering!

Grade

Include colon

ISO insert code

Typical page with drilling inserts displayed – specific page details will differ.

INSERTS – PAGE OVERVIEW

Pos.	Description
1	Designation of insert
2	Schematic drawing of insert
3	Table with insert sizes [mm]
4	Picture of representative insert
5	Profile of main cutting edge
6	Icons – specific features and cutting edge type

Pos.	Description
7	ISO insert code
8	Grade
9	Insert radii [mm]
10	Geometry description
11	Application area of insert

1 **802D**

P M K N S 2 H

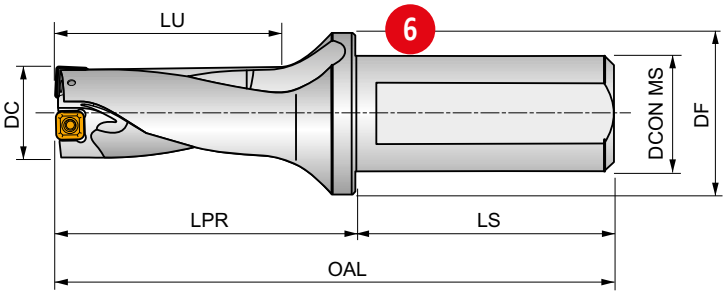
PRAMET 3 S

5

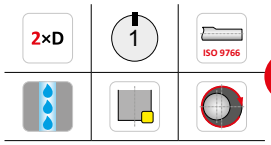
2xD 802D Indexable Insert Drill body with Internal Coolant Feed

High performance indexable insert drill body for drilling blind and through holes. Also, potentially cross hole, off center and stack drilling, helical interpolation, plunging, drilling on concave or angled surfaces, drilling with interrupted cuts, chamfer drilling and boring. Available from Ø15 up to Ø40 mm in 2xD.

4



6



7

8

	Product	DC [mm]	APMX [mm]	OAL [mm]	LPR [mm]	LS [mm]	LU [mm]	DCON MS [mm]	DF [mm]	-D [mm]	D+ [mm]				kg	
	802D-15-30-S25	15	30.00	121	65	56	34.5	25	35	0.25	0.35	EP253253	GI300	GI313	0.30	HM001
	802D-16-32-S25	16	32.00	123	67	56	37	25	35	0.25	0.45	EP253253	GI300	GI313	0.30	HM001
	802D-17-34-S25	17	34.00	125	69	56	39.5	25	35	0.25	0.50	EP253253	GI301	GI314	0.31	HM002
	802D-18-36-S25	18	36.00	127	71	56	42	25	35	0.35	0.25	EP253253	GI301	GI314	0.31	HM002
	802D-19-38-S25	19	38.00	129	73	56	44.5	25	35	0.15	0.45	EP253253	GI301	GI314	0.32	HM002

9 10 11 12 13 14 15 16

GI300	XPET 0502AP	SCET 050204-UD
GI301	XPET 0602AP	SCET 050204-UD
GI302	XPET 0602AP	SCET 060204-UD
GI303	XPET 0703AP	SCET 060204-UD
GI304	XPET 0703AP	SCET 070308-UD
GI305	XPET 0903AP	SCET 070308-UD
GI306	XPET 0903AP	SCET 09T308-UD
GI307	XPET 11T3AP	SCET 09T308-UD
GI308	XPET 11T3AP	SCET 120408-UD
GI309	XPET 12T3AP	SCET 120408-UD
GI313	XPET 0502AP-SD	SCET 050204-SD
GI314	XPET 0602AP-SD	SCET 050204-SD
GI315	XPET 0602AP-SD	SCET 060204-SD
GI316	XPET 0703AP-SD	SCET 060204-SD
GI317	XPET 0703AP-SD	SCET 070308-SD
GI318	XPET 0903AP-SD	SCET 070308-SD
GI319	XPET 0903AP-SD	SCET 09T308-SD
GI320	XPET 11T3AP-SD	SCET 09T308-SD
GI321	XPET 11T3AP-SD	SCET 120408-SD
GI322	XPET 12T3AP-SD	SCET 120408-SD

17

18

GI300	XPET 0502AP	SCET 050204-UD
GI301	XPET 0602AP	SCET 050204-UD
GI302	XPET 0602AP	SCET 060204-UD
GI303	XPET 0703AP	SCET 060204-UD

19

Typical page with drilling holder displayed – specific page details will differ.

Pos.	Description
1	Designation of drill
2	Material group recommendations
3	Clamping system of insert
4	Tool description
5	Illustrative picture
6	Schematic drawing of tool
7	Product features
8	Product applications
9	Tool code
10	Tool dimensions

Pos.	Description
11	Radial setting [mm]
12	Adjustable sleeve
13	Group of compatible inserts with chip breaker UD [1), 2)]
14	Group of compatible inserts with chip breaker SD [1), 2)]
15	Weight [kg]
16	Group of spare parts [1)]
17	Compatible inserts with chip breaker UD
18	Compatible inserts with chip breaker SD
19	Spare parts

1) Code of Group of compatible inserts and spare parts is used only for purposes of this catalogue. It cannot be used for orders.

2) External (SCET) and internal (XPET) inserts must always have the same chip breaker (please note: UD chip breaker is not visibly included in designation of XPET inserts – e.g. XPET 0502AP); info needed for correct choice of chip breaker (UD vs SD) can be found on the insert packaging.

1 **H851**

DORMER

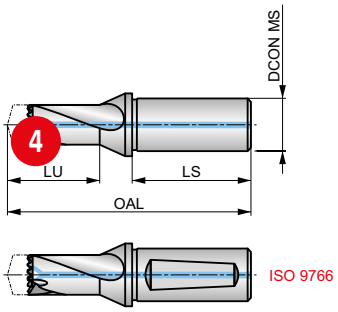
3

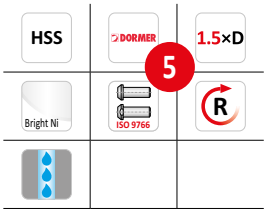
HYDRA Body 1.5XD, with Coolant Feed, Bright Nickel Plating

Used with R950, R960 and R970 HYDRA heads. A range of diameters can be used with the same body. Coolant holes aligned with the heads offer efficient cooling. Flanged shank prevents the drill from wandering in the holder. Nickel Plated surface protects from rust and corrosion, and improves chip evacuation.

2

HYDRA





Four (4) screws and one (1) screwdriver are included with a drill body, DCON MS tolerance h6.

Product	DCONMS [inch]	DCON MS [mm]	LU [mm]	OAL [mm]	LS [mm]	ADINTMS
H85131/64	5/8	15.88	25.50	88.5	47.6	Cylindrical
H8511/2	5/8	15.88	25.80	88.8	47.6	Cylindrical
H85117/32	5/8	15.88	30.90	93.9	47.6	Cylindrical
H85112.0	–	16.00	25.50	88.5	48.0	ISO 9766
H85112.5	–	16.00	25.80	88.8	48.0	ISO 9766
H85113.0	–	16.00	27.00	90.0	48.0	ISO 9766
H85114.0	–	16.00	30.90	93.9	48.0	ISO 9766
H8519/16	3/4	19.05	30.30	93.9	50.8	Cylindrical
H85139/64	3/4	19.05	32.30	97.3	50.8	Cylindrical
H[illegible]/64	3/4	19.05	7	99.9	50.8	Cylindrical
H[illegible]/16	3/4	19.05	[illegible]	101.4	50.8	Cylindrical
H85123/32	3/4	19.05	39.00	104.0	50.8	Cylindrical
H85115.0	–	20.00	32.30	97.3	50.0	ISO 9766
H85116.0	–	20.00	34.90	99.9	50.0	ISO 9766
H85117.0	–	20.00	36.40	101.4	50.0	ISO 9766
H85118.0	–	20.00	39.00	104.0	50.0	ISO 9766
H85119.0	–	25.00	40.40	111.4	56.0	ISO 9766
H85120.0	–	25.00	43.00	114.0	56.0	ISO 9766
H85121.0		25.00	44.50	115.5	56.0	ISO 9766

6

Pos.	Description
1	Designation of drill
2	Product description
3	Illustrative picture
4	Schematic drawing of tool

Pos.	Description
5	Product features
6	Product code
7	Product dimensions

Typical page with drilling holder displayed – specific page details will differ.

EXCHANGEABLE HEAD & INDEXABLE DRILLS – ICONS OVERVIEW

General Icons

- Primary use
- Possible use

Application Angle

- Drill Point 140°

Basic Standard Group (BSG)

- Dormer Standards

Clamping Designation

- S – Screw clamp

Coating

- Bright Nickel Plating
- Special TiAlN Coating (+ Silicon + Chromium)

Coolant Supply Property (CSP)

- Through Tool Coolant

Cutting Diameter Tolerance Zone Class (TCDC)

- h7 – Industry Standard Tool Tolerance Zone (based on diameter range)

Cutting Direction

- Right Hand Rotation / Cutting

General Features of Tools

- 1 effective tooth per revolution
- Monoblock design
- Possibility of use for eccentric machining
- Universal shank

Insert cutting Edge

- Rounded edge with facet

Insert Features

- For tough machined materials (long chip)
- Heavy working conditions
- Universal wide range option

Material Code (BMC)

- Hard Material (Solid Carbide)
- High Speed Steel Tool Material

Operations Drilling

- Blind hole boring
- Blind hole drilling
- Boring
- Boring through cross holes
- Boring up to a shoulder
- Drill exit on inclined surface
- Drilling across an existing hole
- Drilling of stacked materials
- Drilling onto curved surface
- Drilling onto inclined surface
- Helical interpolation boring
- Helical interpolation drilling
- Chamfering (beveling)
- Interrupted cut
- Through hole boring
- Through hole drilling
- Welded joint drilling

EXCHANGEABLE HEAD & INDEXABLE DRILLS – ICONS OVERVIEW

Other Icons

Nm	Clamping torque of screw [Nm]

Shank

	Cylindrical Shank with Flange
DIN 6535HB DIN 6535HE	DIN 6535 – HB (Weldon) or HE (Whistle Notch) Shank
ISO 9766	ISO 9766 Cylindrical Shanks (with or without Flat)

Technical Pages

f	Feed [mm/rev]
	Very high cutting speed, excellent system rigidity (stable working conditions)
	High cutting speed, high system rigidity (stable working conditions)
	High cutting speed, system rigidity slightly limited (depth of cut changing)
	Medium cutting speed, system rigidity limited (slightly interrupted cut)
	Low cutting speed, low system rigidity (interrupted cut)
	Very low cutting speed, very low system rigidity (very unstable working conditions)

Usable Length Diameter Ratio (ULDR)

1.5×D	1.5×D Usable Tool Depth to Diameter Ratio
12×D	12×D Usable Tool Depth to Diameter Ratio
3×D	3×D Usable Tool Depth to Diameter Ratio
5×D	5×D Usable Tool Depth to Diameter Ratio
8×D	8×D Usable Tool Depth to Diameter Ratio
2×D	2×D Usable Tool Depth to Diameter Ratio
4×D	4×D Usable Tool Depth to Diameter Ratio

HYDRA DRILLS

HYDRA

HIGH PERFORMANCE REPLACEABLE HEAD DRILLS

Interchangeable solid carbide head drills for high performance machining of steels, stainless steels and cast iron. Fail-safe head location can be changed without ejecting the drill from the machine. Available with coolant feed and a choice of HSS bodies from 1.5×D for improved rigidity in shallow hole and plate drilling, through to 12×D for deeper hole applications.

FEATURES AND BENEFITS

- **Consistently high performance**, even after numerous head changes.
- **Reduction in inventory costs** – one body can fit multiple solid carbide head sizes.
- **Versatile** – cylindrical shank with flat allows use in multiple types of holder.
- **Easy and quick head changes** with minimal interruptions to the production process. Heads can be changed without removing the body from the machine.
- Exact fit of head to body maximises tool rigidity for **superior hole accuracy** and precise tolerances.

MATERIAL

PREMIUM MICROGRAIN CARBIDE (Heads)

- Micrograin carbide provides an excellent combination of hardness and toughness, resulting in high wear resistance and longer tool life.

HARDENED STEEL (Body)

- Hardened steel with high gloss nickel plating for high resistance to wear and corrosion.

COATING

TITANIUM ALUMINIUM NITRIDE BASED COATING PROVIDES:

- High toughness and oxidisation resistance.
- Outstanding wear protection in abrasive materials like Cast Iron.
- High hardness at high temperatures created when drilling Cast Irons.
- Increased tool life and productivity.

HEAD TYPES

R950

STEEL

R960

STAINLESS STEEL

R970

CAST IRON

HYDRA

HIGH PERFORMANCE REPLACEABLE HEAD DRILLS

GEOMETRY

CORNER DESIGN

- A strong corner design increases stability during drilling and reduces the forces encountered during breakthrough of the exit surface.
- This improves the quality of the exit surface and helps prevent “exit burst” which can occur when drilling granular materials.

POINT GEOMETRY

- 140 degree split point geometry provides good centering capabilities and low thrust forces when drilling most materials.

A COMPLETE RANGE

- Available in 1.5×D, 3×D, 5×D, 8×D and 12×D lengths incorporating coolant holes to improve cutting efficiency and swarf evacuation, resulting in higher productivity.
- Metric: 12.00 mm to 42.00 mm.
- Fractional: 15/32 inch to 1.5/8 inch.
- Best results are obtained using hydraulic holders. Can also be held in ER and Weldon type toolholders.

BODY LENGTHS

1.5×D

3×D

5×D

8×D

12×D

Tool materials

High Speed Steel	HSS	A medium-alloyed high speed steel that has good machinability and good performance. HSS exhibits hardness, toughness and wear resistance characteristics that make it attractive in a wide range of applications, for example in drills and taps.

Carbide materials

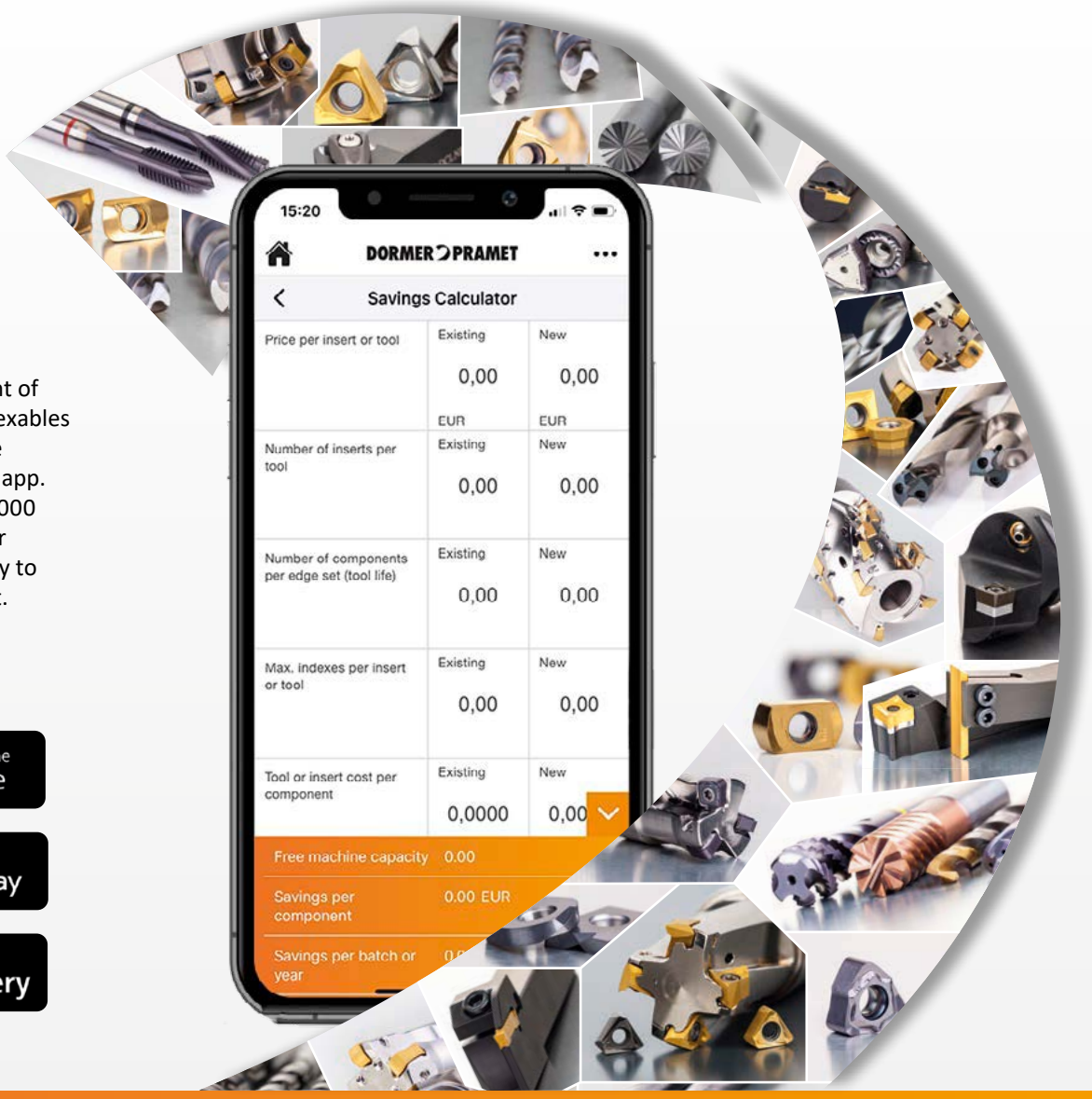
Carbide Materials (or Hard Materials)	HM	A sintered powder metallurgy substrate, consisting of a metallic carbide composite with binder metal. The most central raw material is tungsten carbide (WC). Tungsten carbide contributes to the hardness of the material. Tantalum carbide (TaC), titanium carbide (TiC) and niobium carbide (NbC) complements WC and adjusts the properties to what is desired. These three materials are called cubic carbides. Cobalt (Co) acts as a binder and keeps the material together. Carbide materials are often characterised by high compression strength, high hardness and therefore high wear resistance, but also by limited flexural strength and toughness. Carbide is used in taps, reamers, milling cutters, drills and thread milling cutters.

Surface Coatings

Bright Nickel Plating		Bright Nickel Plated surface protects hardened steel body from rust, corrosion and also improves chip evacuation.
Ti-phon (TiAlCrSiN)		Ti-phon Coating is a coating similar to TiAlN but with the addition of Chromium (Cr) and Silicon (Si) which is specially formulated for Hydra Heads to prevent edge build-up and greatly improve chip flow. This coating exhibits high hot hardness, high oxidation resistance and superior lubricity when used on tools for machining applications involving heavy mechanical and thermal stresses, high speeds and high feed rates. These coating properties translate into superior wear resistance and edge strength.

DORMER PRAMET

ALL TOOLS TOGETHER



Our entire assortment of rounds tools and indexables is included within the machining calculator app. That‘s more than 40,000 items! Whatever your machining we‘re likely to have something for it.

Simply Reliable.

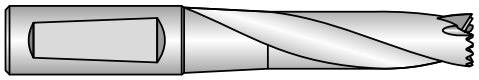
Download on the App Store

GET IT ON Google Play

Download on AppGallery

Material code (BMC)		HM	HM	HM	HSS	HSS	HSS	HSS	HSS					
Basic standard group (BSG)		DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER					
Usable length (ULDR)					1.5×D	3×D	5×D	8×D	12×D					
Application angle		140°	140°	140°										
Coating		Ti-phon	Ti-phon	Ti-phon	Bright Ni	Bright Ni	Bright Ni	Bright Ni	Bright Ni					
Shank					DIN 6535HB DIN 6535HE ISO 9766	DIN 6535HB DIN 6535HE	DIN 6535HB DIN 6535HE	DIN 6535HB DIN 6535HE						
Hand (Cutting direction)		R	R	R	R	R	R	R	R					
Cooling (CSP)														
		HYDRA	HYDRA	HYDRA	HYDRA	HYDRA	HYDRA	HYDRA	HYDRA	HYDRA	HYDRA			
Product Family Code		R950	R960	R970	H851	H853	H855	H858	H8512	H860	H861			
		12.00 - 42.00, 15/32 - 1.5/8	12.00 - 30.50, 15/32 - 1.3/16	12.00 - 42.00, 15/32 - 1.5/8	12.00 - 30.50, 15/32 - 1.3/16	12.00 - 42.50, 15/32 - 1.5/8	12.00 - 42.50, 15/32 - 1.5/8	13.50 - 42.50, 35/64 - 1.5/8	13.50 - 25.65, 35/64 - 1.1/64	N1 - N7	N1 - N6			
		281	283	285	287	289	291	293	294	295	296			
P	P1	◪	■											
	P2	■	◪											
	P3	■												
	P4	■												
M	M1		■											
	M2		■											
	M3		■											
	M4		■											
K	K1		■	■										
	K2	■	◪	■										
	K3	■	◪	■										
	K4	■	◪	■										
	K5	■	◪	■										
N	N1													
	N2													
	N3													
	N4													
	N5													
S	S1		◪											
	S2		◪											
	S3		◪											
	S4		◪											
H	H1													
	H2													
	H3													
	H4													

■ Primary use ◪ Possible use

SetUp										
DC	**H851** 1.5×D	**H853** 3×D	**H855** 5×D	**H858** 8×D	**H8512** 12×D	**R950**	**R960**	**R970**	**H860**	**H861**
Range	12.00 – 30.50 15/32″ – 1.3/16″	12.00 – 42.50 15/32″ – 1.5/8″	12.00 – 42.50 15/32″ – 1.5/8″	13.50 – 42.50 35/64″ – 1.5/8″	13.50 – 25.65 35/64″ – 1.1/64″	12.00 – 42.00 15/32″ – 1.5/8″	12.00 – 30.50 15/32″ – 1.3/16″	12.00 – 42.00 15/32″ – 1.5/8″	N1 – N7	N1 – N6
Pages	287	289	291	293	294	281	283	285	295	296

DC	H851 1.5×D	H853 3×D	H855 5×D	H858 8×D	H8512 12×D	R950	R960	R970	H860	H861
15/32″	H85112.0 H85131/64	H85312.0 H85331/64	H85512.0 H85531/64	–	–	R95015/32	R96015/32	R97015/32	H860N1	H861N1
12.0						R95012.0	R96012.0	R97012.0		
12.1						R95012.1	R96012.1	R97012.1		
12.2						R95012.2	R96012.2	R97012.2		
31/64″						R95031/64	R96031/64	R97031/64		
12.5	H85112.5 H8511/2	H85312.5 H8531/2	H85512.5 H8551/2	–	–	R95012.5	R96012.5	R97012.5		
12.6						R95012.6	R96012.6	R97012.6		
1/2″						R9501/2	R9601/2	R9701/2		
12.8						R95012.8	R96012.8	R97012.8		
12.9						R95012.9	R96012.9	R97012.9		
13.0	H85113.0 H85117/32	H85313.0 H85317/32	H85513.0 H85517/32	–	–	R95013.0	R96013.0	R97013.0		
33/64″						R95033/64	R96033/64	R97033/64		
13.2						R95013.2	R96013.2	R97013.2		
17/32″						R95017/32	R96017/32	R97017/32		
13.5	H85114.0 H8519/16	H85314.0 H8539/16	H85514.0 H8559/16	H85814.0	H851214.0	R95013.5	R96013.5	R97013.5		
13.6						R95013.6	R96013.6	R97013.6		
13.7						R95013.7	R96013.7	R97013.7		
13.8						R95013.8	R96013.8	R97013.8		
35/64″						R95035/64	R96035/64	R97035/64		
14.0						R95014.0	R96014.0	R97014.0		
14.1						R95014.1	R96014.1	R97014.1		
14.2						R95014.2	R96014.2	R97014.2		
9/16″						R9509/16	R9609/16	R9709/16		
14.5						R95014.5	R96014.5	R97014.5		
14.6	H85115.0 H85139/64	H85315.0 H85339/64	H85515.0 H85539/64	H85815.0	H851215.0	R95014.6	R96014.6	R97014.6		
37/64″						R95037/64	R96037/64	R97037/64		
14.7						R95014.7	R96014.7	R97014.7		
14.8						R95014.8	R96014.8	R97014.8		
15.0						R95015.0	R96015.0	R97015.0		
19/32″						R95019/32	R96019/32	R97019/32		
15.1						R95015.1	R96015.1	R97015.1		
15.2						R95015.2	R96015.2	R97015.2		
15.24						R95015.24	R96015.24	R97015.24		
39/64″						R95039/64	R96039/64	R97039/64		
15.5						R95015.5	R96015.5	R97015.5		

DC	H851 1.5×D	H853 3×D	H855 5×D	H858 8×D	H8512 12×D	R950	R960	R970	H860	H861
15.6	H85116.0 H85141/64	H85316.0 H85341/64	H85516.0 H85541/64	H85816.0	H851216.0	R95015.6	R96015.6	R97015.6	H860N2	H861N2
15.7						R95015.7	R96015.7	R97015.7		
5/8″						R9505/8	R9605/8	R9705/8		
16.0						R95016.0	R96016.0	R97016.0		
16.08						R95016.08	R96016.08	R97016.08		
16.1						R95016.1	R96016.1	R97016.1		
16.2						R95016.2	R96016.2	R97016.2		
16.3						R95016.3	R96016.3	R97016.3		
41/64″						R95041/64	R96041/64	R97041/64		
16.5						R95016.5	R96016.5	R97016.5		
16.6	H85117.0 H85111/16	H85317.0 H85311/16	H85517.0 H85511/16	H85817.0	H851217.0	R95016.6	R96016.6	R97016.6		
21/32″						R95021/32	R96021/32	R97021/32		
16.7						R95016.7	R96016.7	R97016.7		
17.0						R95017.0	R96017.0	R97017.0		
43/64″						R95043/64	R96043/64	R97043/64		
17.1						R95017.1	R96017.1	R97017.1		
17.2						R95017.2	R96017.2	R97017.2		
11/16″						R95011/16	R96011/16	R97011/16		
17.5						R95017.5	R96017.5	R97017.5		
17.6	H85118.0 H85123/32	H85318.0 H85323/32	H85518.0 H85523/32	H85818.0	H851218.0	R95017.6	R96017.6	R97017.6		
17.7						R95017.7	R96017.7	R97017.7		
45/64″						R95045/64	R96045/64	R97045/64		
18.0						R95018.0	R96018.0	R97018.0		
18.1						R95018.1	R96018.1	R97018.1		
18.2						R95018.2	R96018.2	R97018.2		
23/32″						R95023/32	R96023/32	R97023/32		
18.5						R95018.5	R96018.5	R97018.5		
18.6	H85119.0 H85149/64	H85319.0 H85349/64	H85519.0 H85549/64	H85819.0	H851219.0	R95018.6	R96018.6	R97018.6	H860N3	H861N3
47/64″						R95047/64	R96047/64	R97047/64		
18.7						R95018.7	R96018.7	R97018.7		
18.9						R95018.9	R96018.9	R97018.9		
19.0						R95019.0	R96019.0	R97019.0		
3/4″						R9503/4	R9603/4	R9703/4		
19.1						R95019.1	R96019.1	R97019.1		
19.2						R95019.2	R96019.2	R97019.2		
19.25						R95019.25	R96019.25	R97019.25		
19.3						R95019.3	R96019.3	R97019.3		
19.35						R95019.35	R96019.35	R97019.35		
49/64″						R95049/64	R96049/64	R97049/64		
19.5						R95019.5	R96019.5	R97019.5		
19.6	H85120.0 H85151/64	H85320.0 H85351/64	H85520.0 H85551/64	H85820.0	H851220.0	R95019.6	R96019.6	R97019.6		
19.7						R95019.7	R96019.7	R97019.7		
25/32″						R95025/32	R96025/32	R97025/32		
20.0						R95020.0	R96020.0	R97020.0		
51/64″						R95051/64	R96051/64	R97051/64		
20.5						R95020.5	R96020.5	R97020.5		
13/16″	H85121.0 H85127/32	H85321.0 H85327/32	H85521.0 H85527/32	H85821.0	H851221.0	R95013/16	R96013/16	R97013/16		
21.0						R95021.0	R96021.0	R97021.0		
53/64″						R95053/64	R96053/64	R97053/64		
27/32″						R95027/32	R96027/32	R97027/32		
21.5						R95021.5	R96021.5	R97021.5		
55/64″	H85122.0 H85157/64	H85322.0 H85357/64	H85522.0 H85557/64	H85822.0	H851222.0	R95055/64	R96055/64	R97055/64	H860N4	
22.0						R95022.0	R96022.0	R97022.0		
7/8″						R9507/8	R9607/8	R9707/8		
22.5						R95022.5	R96022.5	R97022.5		
57/64″						R95057/64	R96057/64	R97057/64		
22.7						R95022.7	R96022.7	R97022.7		
23.0	H85123.0 H85159/64	H85323.0 H85359/64	H85523.0 H85559/64	H85823.0	H851223.0	R95023.0	R96023.0	R97023.0		
29/32″						R95029/32	R96029/32	R97029/32		
59/64″						R95059/64	R96059/64	R97059/64		
23.5						R95023.5	R96023.5	R97023.5		

DC	H851 1.5×D	H853 3×D	H855 5×D	H858 8×D	H8512 12×D	R950	R960	R970	H860	H861
15/16	H85124.0 H85131/32	H85324.0 H85331/32	H85524.0 H85531/32	H85824.0	H851224.0	R95015/16	R96015/16	R97015/16	H860N4	H861N3
24.0						R95024.0	R96024.0	R97024.0		
61/64						R95061/64	R96061/64	R97061/64		
24.5						R95024.5	R96024.5	R97024.5		
31/32″						R95031/32	R96031/32	R97031/32		
25.0	H85125.0 H8511.1/64	H85325.0 H8531.1/64	H85525.0 H8551.1/64	H85825.0	H851225.0	R95025.0	R96025.0	R97025.0	H860N5	H861N4
63/64″						R95063/64	R96063/64	R97063/64		
1″						R9501	R9601	R9701		
25.5						R95025.5	R96025.5	R97025.5		
25.6						R95025.6	–	–		
25.65						R95025.65	R96025.65	R97025.65		
1.1/64″						R9501.1/64	R9601.1/64	R9701.1/64		
26.0	H85126.0 H8511.3/64	H85326.0 H8531.3/64	H85526.0 H8551.3/64	H85826.0	–	R95026.0	R96026.0	R97026.0		
1.1/32″						R9501.1/32	R9601.1/32	R9701.1/32		
26.5						R95026.5	R96026.5	R97026.5		
1.3/64						R9501.3/64	R9601.3/64	R9701.3/64		
1.1/16″	H85127.0 H8511.3/32	H85327.0 H8531.3/32	H85527.0 H8551.3/32	H85827.0	–	R9501.1/16	R9601.1/16	R9701.1/16		
27.0						R95027.0	R96027.0	R97027.0		
1.5/64″						R9501.5/64	R9601.5/64	R9701.5/64		
27.5						R95027.5	R96027.5	R97027.5		
1.3/32″						R9501.3/32	R9601.3/32	R9701.3/32		
28.0	H85128.0 H8511.1/8	H85328.0 H8531.1/8	H85528.0 H8551.1/8	H85828.0	–	R95028.0	R96028.0	R97028.0	H860N6	H861N5
1.7/64″						R9501.7/64	R9601.7/64	R9701.7/64		
28.5						R95028.5	R96028.5	R97028.5		
1.1/8″						R9501.1/8	R9601.1/8	R9701.1/8		
1.9/64″	H85129.0 H8511.11/64	H85329.0 H8531.11/64	H85529.0 H8551.11/64	H85829.0	–	R9501.9/64	R9601.9/64	R9701.9/64		
29.0						R95029.0	R96029.0	R97029.0		
1.5/32″						R9501.5/32	R9601.5/32	R9701.5/32		
29.5						R95029.5	R96029.5	R97029.5		
1.11/64″						R9501.11/64	R9601.11/64	R9701.11/64		
30.0	H85130.0 H8511.3/16	H85330.0 H8531.3/16	H85530.0 H8551.3/16	H85830.0	–	R95030.0	R96030.0	R97030.0		
1.3/16″						R9501.3/16	R9601.3/16	R9701.3/16		
30.5						R95030.5	R96030.5	R97030.5		
1.7/32″	–	H85332.0	H85532.0	H85832.0	–	R9501.7/32	–	R9701.7/32		
31.0						R95031.0	–	R97031.0		
1.1/4″						R9501.1/4	–	R9701.1/4		
32.0						R95032.0	–	R97032.0		
32.5	–	H85333.5	H85533.5	H85833.5	–	R95032.5	–	R97032.5		
1.19/64″						R9501.19/64	–	R9701.19/64		
33.0						R95033.0	–	R97033.0		
33.5						R95033.5	–	R97033.5		
34.0	–	H85335.0	H85535.0	H85835.0	–	R95034.0	–	R97034.0	H860N7	H861N6
1.11/32″						R9501.11/32	–	R9701.11/32		
34.5						R95034.5	–	R97034.5		
1.3/8″						R9501.3/8	–	R9701.3/8		
35.0						R95035.0	–	R97035.0		
36.0	–	H85336.5	H85536.5	H85836.5	–	R95036.0	–	R97036.0		
1.27/64″						R9501.27/64	–	R9701.27/64		
36.5						R95036.5	–	R97036.5		
37.0	–	H85338.0	H85538.0	H85838.0	–	R95037.0	–	R97037.0		
1.15/32″						R9501.15/32	–	R9701.15/32		
37.5						R95037.5	–	R97037.5		
38.0						R95038.0	–	R97038.0		
1.1/2″	–	H85339.5	H85539.5	H85839.5	–	R9501.1/2	–	R9701.1/2		
38.5						R95038.5	–	R97038.5		
1.17/32″						R9501.17/32	–	R9701.17/32		
39.0						R95039.0	–	R97039.0		
39.5						R95039.5	–	R97039.5		
1.9/16″	–	H85341.0	H85541.0	H85841.0	–	R9501.9/16	–	R9701.9/16		
40.0						R95040.0	–	R97040.0		
41.0						R95041.0	–	R97041.0		

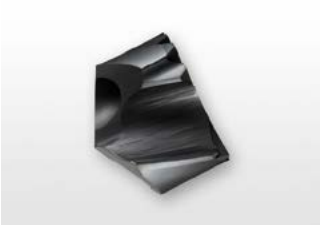
DC	H851 1.5×D	H853 3×D	H855 5×D	H858 8×D	H8512 12×D	R950	R960	R970	H860	H861
1.5/8"	–	H85342.5	H85542.5	H85842.5	–	R9501.5/8	–	R9701.5/8	H860N7	H861N6
42.0						R95042.0	–	R97042.0		

Accessories

H860	H861	Hydra Head DC range			Wrench Size / Bit
		Metric (min. – max.)	Fractional (min. – max.)	Decimal (min. – max.)	
H860N1	H861N1	12.0 mm – 15.5 mm	15/32" – 39/64"	0.4688" – 0.6102"	8IP
H860N2	H861N2	15.6 mm – 18.5 mm	5/8" – 23/32"	0.6142" – 0.7283"	10IP
H860N3	H861N3	18.6 mm – 21.5 mm	47/64" – 27/32"	0.7323" – 0.8465"	15IP
H860N4	H861N3	22.0 mm – 24.5 mm	55/64" – 31/32"	0.8594" – 0.9688"	15IP
H860N5	H861N4	25.0 mm – 27.5 mm	63/64" – 1-3/32"	0.9843" – 1.0938"	20IP
H860N6	H861N5	28.0 mm – 33.5 mm	1-7/64" – 1-19/64"	1.1024" – 1.3189"	25IP
H860N7	H861N6	34.0 mm – 42.0 mm	1-11/32" – 1-5/8"	1.3386" – 1.6535"	4 mm

R950

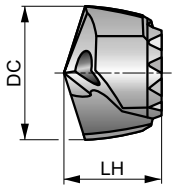
DORMER



HYDRA Drill Head for Steels, Ti-phon Coated

Highly cost-effective and accurate design replaceable head for high performance in steels and harder materials. A 140° split point helps with self-centering and reduces cutting forces. Ti-phon coating prevents edge build-up and greatly improves chip flow, with superior wear resistance and edge strength.

HYDRA



HM | DORMER | 140°

Ti-phon | R

DC h7

H851	Apply starting values for speed and feed with a correction factor of **1.10**
H853	Apply starting values for speed and feed with a correction factor of **1.00**
H855	Apply starting values for speed and feed with a correction factor of **0.95**
H858	Apply starting values for speed and feed with a correction factor of **0.90**
H8512	Apply starting values for speed and feed with a correction factor of **0.80**

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M2.3	M4.2
◪ 133 W	◪ 148 W	◪ 154 W	◪ 114 W	■ 100 W	■ 88 W	■ 125 W	■ 101 W	■ 85 W	■ 75 W	■ 63 W	■ 52 T	◪ 41 T	◪ 35 T

K2.1	K2.2	K2.3	K3.1	K3.2	K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3
■ 108 V	■ 88 V	■ 70 V	■ 96 V	■ 73 V	■ 59 V	■ 89 V	■ 67 V	■ 49 V	■ 42 V	■ 35 V	■ 100 V	■ 76 V	■ 58 V

Product	DC [inch]	DC [mm]	DC [inch]	LH [mm]
R95015/32	15/32	11.91	0.4688	9.1
R95012.0	–	12.00	0.4724	9.1
R95012.1	–	12.10	0.4764	9.1
R95012.2	–	12.20	0.4803	9.1
R95031/64	31/64	12.30	0.4844	9.1
R95012.5	–	12.50	0.4921	9.4
R95012.6	–	12.60	0.4961	9.4
R9501/2	1/2	12.70	0.5000	9.4
R95012.8	–	12.80	0.5039	9.4
R95012.9	–	12.90	0.5079	9.4
R95013.0	–	13.00	0.5118	9.7
R95033/64	33/64	13.10	0.5156	9.7
R95013.2	–	13.20	0.5197	9.7
R95017/32	17/32	13.49	0.5313	9.7
R95013.5	–	13.50	0.5315	10.3
R95013.6	–	13.60	0.5354	10.3
R95013.7	–	13.70	0.5394	10.3
R95013.8	–	13.80	0.5433	10.3
R95035/64	35/64	13.89	0.5469	10.3
R95014.0	–	14.00	0.5512	10.3
R95014.1	–	14.10	0.5551	10.3
R95014.2	–	14.20	0.5591	10.3
R9509/16	9/16	14.29	0.5625	10.3
R95014.5	–	14.50	0.5709	10.3
R95014.6	–	14.60	0.5748	11.0
R95037/64	37/64	14.68	0.5781	11.0
R95014.7	–	14.70	0.5787	11.0
R95014.8	–	14.80	0.5827	11.0
R95015.0	–	15.00	0.5906	11.0
R95019/32	19/32	15.08	0.5938	11.0

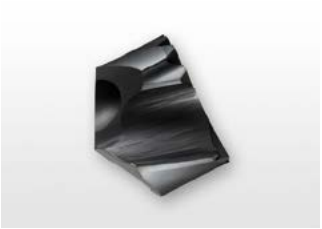
Product	DC [inch]	DC [mm]	DC [inch]	LH [mm]
R95015.1	–	15.10	0.5945	11.0
R95015.2	–	15.20	0.5984	11.0
R95015.24	–	15.24	0.6000	11.0
R95039/64	39/64	15.48	0.6094	11.0
R95015.5	–	15.50	0.6102	11.0
R95015.6	–	15.60	0.6142	11.6
R95015.7	–	15.70	0.6181	11.6
R9505/8	5/8	15.88	0.6250	11.6
R95016.0	–	16.00	0.6299	11.6
R95016.08	–	16.08	0.6331	11.6
R95016.1	–	16.10	0.6339	11.6
R95016.2	–	16.20	0.6378	11.6
R95041/64	41/64	16.27	0.6406	11.6
R95016.3	–	16.30	0.6417	11.6
R95016.5	–	16.50	0.6496	11.6
R95016.6	–	16.60	0.6535	12.2
R95021/32	21/32	16.67	0.6563	12.2
R95016.7	–	16.70	0.6575	12.2
R95017.0	–	17.00	0.6693	12.2
R95043/64	43/64	17.07	0.6719	12.2
R95017.1	–	17.10	0.6732	12.2
R95017.2	–	17.20	0.6772	12.2
R95011/16	11/16	17.46	0.6875	12.2
R95017.5	–	17.50	0.6890	12.2
R95017.6	–	17.60	0.6929	12.9
R95017.7	–	17.70	0.6969	12.9
R95045/64	45/64	17.86	0.7031	12.9
R95018.0	–	18.00	0.7087	12.9
R95018.1	–	18.10	0.7126	12.9
R95018.2	–	18.20	0.7165	12.9

Product	DC	DC	DC	LH
	[inch]	[mm]	[inch]	[mm]
R95023/32	23/32	18.26	0.7188	12.9
R95018.5	–	18.50	0.7283	12.9
R95018.6	–	18.60	0.7323	13.5
R95047/64	47/64	18.65	0.7344	13.5
R95018.7	–	18.70	0.7362	13.5
R95018.9	–	18.90	0.7441	13.5
R95019.0	–	19.00	0.7480	13.5
R9503/4	3/4	19.05	0.7500	13.5
R95019.1	–	19.10	0.7520	13.5
R95019.2	–	19.20	0.7559	13.5
R95019.25	–	19.25	0.7579	13.5
R95019.3	–	19.30	0.7598	13.5
R95019.35	–	19.35	0.7618	13.5
R95049/64	49/64	19.45	0.7656	13.5
R95019.5	–	19.50	0.7677	13.5
R95019.6	–	19.60	0.7717	14.1
R95019.7	–	19.70	0.7756	14.1
R95025/32	25/32	19.84	0.7813	14.1
R95020.0	–	20.00	0.7874	14.1
R95051/64	51/64	20.24	0.7969	14.1
R95020.5	–	20.50	0.8071	14.1
R95013/16	13/16	20.64	0.8125	14.8
R95021.0	–	21.00	0.8268	14.8
R95053/64	53/64	21.03	0.8281	14.8
R95027/32	27/32	21.43	0.8438	14.8
R95021.5	–	21.50	0.8465	14.8
R95055/64	55/64	21.83	0.8594	15.0
R95022.0	–	22.00	0.8661	15.0
R9507/8	7/8	22.22	0.8750	15.0
R95022.5	–	22.50	0.8858	15.0
R95057/64	57/64	22.62	0.8906	15.0
R95022.7	–	22.70	0.8937	15.0
R95023.0	–	23.00	0.9055	15.1
R95029/32	29/32	23.02	0.9063	15.1
R95059/64	59/64	23.42	0.9219	15.1
R95023.5	–	23.50	0.9252	15.1
R95015/16	15/16	23.81	0.9375	15.4
R95024.0	–	24.00	0.9449	15.4
R95061/64	61/64	24.21	0.9531	15.4
R95024.5	–	24.50	0.9646	15.4
R95031/32	31/32	24.61	0.9688	15.4
R95025.0	–	25.00	0.9844	15.8
R95063/64	63/64	25.00	0.9844	15.8
R9501	1″	25.40	1.0000	15.8
R95025.5	–	25.50	1.0039	15.8
R95025.6	–	25.60	1.0079	15.8
R95025.65	–	25.65	1.0098	15.8
R9501.1/64	1.1/64	25.80	1.0156	15.8
R95026.0	–	26.00	1.0236	16.4
R9501.1/32	1.1/32	26.19	1.0313	16.4

Product	DC	DC	DC	LH
	[inch]	[mm]	[inch]	[mm]
R95026.5	–	26.50	1.0433	16.4
R9501.3/64	1.3/64	26.59	1.0469	16.4
R9501.1/16	1.1/16	26.99	1.0625	17.1
R95027.0	–	27.00	1.0630	17.1
R9501.5/64	1.5/64	27.38	1.0781	17.1
R95027.5	–	27.50	1.0827	17.1
R9501.3/32	1.3/32	27.78	1.0938	17.1
R95028.0	–	28.00	1.1024	17.7
R9501.7/64	1.7/64	28.18	1.1094	17.7
R95028.5	–	28.50	1.1220	17.7
R9501.1/8	1.1/8	28.58	1.1250	17.7
R9501.9/64	1.9/64	28.97	1.1406	18.3
R95029.0	–	29.00	1.1417	18.3
R9501.5/32	1.5/32	29.37	1.1563	18.3
R95029.5	–	29.50	1.1614	18.3
R9501.11/64	1.11/64	29.77	1.1719	18.3
R95030.0	–	30.00	1.1811	19.0
R9501.3/16	1.3/16	30.16	1.1875	19.0
R95030.5	–	30.50	1.2008	19.0
R9501.7/32	1.7/32	30.96	1.2188	21.0
R95031.0	–	31.00	1.2205	21.0
R9501.1/4	1.1/4	31.75	1.2500	21.0
R95032.0	–	32.00	1.2598	21.0
R95032.5	–	32.50	1.2795	21.0
R9501.19/64	1.19/64	32.94	1.2969	21.0
R95033.0	–	33.00	1.2992	21.0
R95033.5	–	33.50	1.3189	21.0
R95034.0	–	34.00	1.3386	23.0
R9501.11/32	1.11/32	34.13	1.3438	23.0
R95034.5	–	34.50	1.3583	23.0
R9501.3/8	1.3/8	34.93	1.3750	23.0
R95035.0	–	35.00	1.3780	23.0
R95036.0	–	36.00	1.4173	23.0
R9501.27/64	1.27/64	36.12	1.4219	23.0
R95036.5	–	36.50	1.4370	23.0
R95037.0	–	37.00	1.4567	25.0
R9501.15/32	1.15/32	37.31	1.4688	25.0
R95037.5	–	37.50	1.4764	25.0
R95038.0	–	38.00	1.4961	25.0
R9501.1/2	1.1/2	38.10	1.5000	25.0
R95038.5	–	38.50	1.5157	25.0
R9501.17/32	1.17/32	38.89	1.5313	25.0
R95039.0	–	39.00	1.5354	25.0
R95039.5	–	39.50	1.5551	25.0
R9501.9/16	1.9/16	39.69	1.5625	27.0
R95040.0	–	40.00	1.5748	27.0
R95041.0	–	41.00	1.6142	27.0
R9501.5/8	1.5/8	41.28	1.6250	27.0
R95042.0	–	42.00	1.6535	27.0

R960

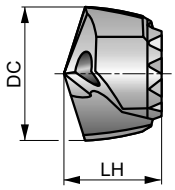
DORMER



HYDRA Drill Head for Stainless Steels, Ti-phon Coated

Highly cost-effective and accurate design replaceable head for high performance in stainless steels. A 140° split point helps with self-centering and reduces cutting forces. Ti-phon coating prevents edge build-up and greatly improves chip flow, with superior wear resistance and edge strength.

HYDRA



HM | DORMER | 140°

Ti-phon | R

DC h7

H851	Apply starting values for speed and feed with a correction factor of **1.10**
H853	Apply starting values for speed and feed with a correction factor of **1.00**
H855	Apply starting values for speed and feed with a correction factor of **0.95**
H858	Apply starting values for speed and feed with a correction factor of **0.90**
H8512	Apply starting values for speed and feed with a correction factor of **0.80**

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code.

P1.1	P1.2	P1.3	P2.1	M1.1	M1.2	M2.1	M2.2	M2.3	M3.1	M3.2	M3.3	M4.1	M4.2
■ 133 W	■ 148 W	■ 154 W	■ 114 W	■ 82 V	■ 70 V	■ 73 V	■ 60 V	◪ 50 T	■ 58 T	■ 50 T	■ 45 T	■ 40 T	◪ 34 T
K1.1	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**
■ 120 V	■ 89 V	■ 67 V	◪ 108 V	◪ 88 V	◪ 70 V	◪ 96 V	◪ 73 V	◪ 59 V	◪ 89 V	◪ 67 V	◪ 49 V	◪ 42 V	◪ 35 V
K5.1	**K5.2**	**K5.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**		
◪ 100 V	◪ 76 V	◪ 58 V	◪ 45 T	◪ 35 T	◪ 30 S	◪ 40 S	◪ 35 S	◪ 30 S	◪ 25 S	◪ 23 S	◪ 20 S		

Product	DC [inch]	DC [mm]	DC [inch]	LH [mm]
R96015/32	15/32	11.91	0.4688	9.1
R96012.0	–	12.00	0.4724	9.1
R96012.1	–	12.10	0.4764	9.1
R96012.2	–	12.20	0.4803	9.1
R96031/64	31/64	12.30	0.4844	9.1
R96012.5	–	12.50	0.4921	9.4
R96012.6	–	12.60	0.4961	9.4
R9601/2	1/2	12.70	0.5000	9.4
R96012.8	–	12.80	0.5039	9.4
R96012.9	–	12.90	0.5079	9.4
R96013.0	–	13.00	0.5118	9.7
R96033/64	33/64	13.10	0.5156	9.7
R96013.2	–	13.20	0.5197	9.7
R96017/32	17/32	13.49	0.5313	9.7
R96013.5	–	13.50	0.5315	10.3
R96013.6	–	13.60	0.5354	10.3
R96013.7	–	13.70	0.5394	10.3
R96013.8	–	13.80	0.5433	10.3
R96035/64	35/64	13.89	0.5469	10.3
R96014.0	–	14.00	0.5512	10.3
R96014.1	–	14.10	0.5551	10.3
R96014.2	–	14.20	0.5591	10.3
R9609/16	9/16	14.29	0.5625	10.3
R96014.5	–	14.50	0.5709	10.3
R96014.6	–	14.60	0.5748	11.0
R96037/64	37/64	14.68	0.5781	11.0
R96014.7	–	14.70	0.5787	11.0
R96014.8	–	14.80	0.5827	11.0

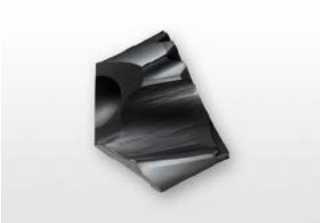
Product	DC [inch]	DC [mm]	DC [inch]	LH [mm]
R96015.0	–	15.00	0.5906	11.0
R96019/32	19/32	15.08	0.5938	11.0
R96015.1	–	15.10	0.5945	11.0
R96015.2	–	15.20	0.5984	11.0
R96015.24	–	15.24	0.6000	11.0
R96039/64	39/64	15.48	0.6094	11.0
R96015.5	–	15.50	0.6102	11.0
R96015.6	–	15.60	0.6142	11.6
R96015.7	–	15.70	0.6181	11.6
R9605/8	5/8	15.88	0.6250	11.6
R96016.0	–	16.00	0.6299	11.6
R96016.08	–	16.08	0.6331	11.6
R96016.1	–	16.10	0.6339	11.6
R96016.2	–	16.20	0.6378	11.6
R96041/64	41/64	16.27	0.6406	11.6
R96016.3	–	16.30	0.6417	11.6
R96016.5	–	16.50	0.6496	11.6
R96016.6	–	16.60	0.6535	12.2
R96021/32	21/32	16.67	0.6563	12.2
R96016.7	–	16.70	0.6575	12.2
R96017.0	–	17.00	0.6693	12.2
R96043/64	43/64	17.07	0.6719	12.2
R96017.1	–	17.10	0.6732	12.2
R96017.2	–	17.20	0.6772	12.2
R96011/16	11/16	17.46	0.6875	12.2
R96017.5	–	17.50	0.6890	12.2
R96017.6	–	17.60	0.6929	12.9
R96017.7	–	17.70	0.6969	12.9

Product	DC	DC	DC	LH
	[inch]	[mm]	[inch]	[mm]
R96045/64	45/64	17.86	0.7031	12.9
R96018.0	–	18.00	0.7087	12.9
R96018.1	–	18.10	0.7126	12.9
R96018.2	–	18.20	0.7165	12.9
R96023/32	23/32	18.26	0.7188	12.9
R96018.5	–	18.50	0.7283	12.9
R96018.6	–	18.60	0.7323	13.5
R96047/64	47/64	18.65	0.7344	13.5
R96018.7	–	18.70	0.7362	13.5
R96018.9	–	18.90	0.7441	13.5
R96019.0	–	19.00	0.7480	13.5
R9603/4	3/4	19.05	0.7500	13.5
R96019.1	–	19.10	0.7520	13.5
R96019.2	–	19.20	0.7559	13.5
R96019.25	–	19.25	0.7579	13.5
R96019.3	–	19.30	0.7598	13.5
R96019.35	–	19.35	0.7618	13.5
R96049/64	49/64	19.45	0.7656	13.5
R96019.5	–	19.50	0.7677	13.5
R96019.6	–	19.60	0.7717	14.1
R96019.7	–	19.70	0.7756	14.1
R96025/32	25/32	19.84	0.7813	14.1
R96020.0	–	20.00	0.7874	14.1
R96051/64	51/64	20.24	0.7969	14.1
R96020.5	–	20.50	0.8071	14.1
R96013/16	13/16	20.64	0.8125	14.8
R96021.0	–	21.00	0.8268	14.8
R96053/64	53/64	21.03	0.8281	14.8
R96027/32	27/32	21.43	0.8438	14.8
R96021.5	–	21.50	0.8465	14.8
R96055/64	55/64	21.83	0.8594	15.0
R96022.0	–	22.00	0.8661	15.0
R9607/8	7/8	22.22	0.8750	15.0
R96022.5	–	22.50	0.8858	15.0
R96057/64	57/64	22.62	0.8906	15.0
R96022.7	–	22.70	0.8937	15.0

Product	DC	DC	DC	LH
	[inch]	[mm]	[inch]	[mm]
R96023.0	–	23.00	0.9055	15.1
R96029/32	29/32	23.02	0.9063	15.1
R96059/64	59/64	23.42	0.9219	15.1
R96023.5	–	23.50	0.9252	15.1
R96015/16	15/16	23.81	0.9375	15.4
R96024.0	–	24.00	0.9449	15.4
R96061/64	61/64	24.21	0.9531	15.4
R96024.5	–	24.50	0.9646	15.4
R96031/32	31/32	24.61	0.9688	15.4
R96025.0	–	25.00	0.9844	15.8
R96063/64	63/64	25.00	0.9844	15.8
R9601	1″	25.40	1.0000	15.8
R96025.5	–	25.50	1.0039	15.8
R96025.65	–	25.65	1.0098	15.8
R9601.1/64	1.1/64	25.80	1.0156	15.8
R96026.0	–	26.00	1.0236	16.4
R9601.1/32	1.1/32	26.19	1.0313	16.4
R96026.5	–	26.50	1.0433	16.4
R9601.3/64	1.3/64	26.59	1.0469	16.4
R9601.1/16	1.1/16	26.99	1.0625	17.1
R96027.0	–	27.00	1.0630	17.1
R9601.5/64	1.5/64	27.38	1.0781	17.1
R96027.5	–	27.50	1.0827	17.1
R9601.3/32	1.3/32	27.78	1.0938	17.1
R96028.0	–	28.00	1.1024	17.7
R9601.7/64	1.7/64	28.18	1.1094	17.7
R96028.5	–	28.50	1.1220	17.7
R9601.1/8	1.1/8	28.58	1.1250	17.7
R9601.9/64	1.9/64	28.97	1.1406	18.3
R96029.0	–	29.00	1.1417	18.3
R9601.5/32	1.5/32	29.37	1.1563	18.3
R96029.5	–	29.50	1.1614	18.3
R9601.11/64	1.11/64	29.77	1.1719	18.3
R96030.0	–	30.00	1.1811	19.0
R9601.3/16	1.3/16	30.16	1.1875	19.0
R96030.5	–	30.50	1.2008	19.0

R970

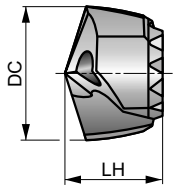
DORMER



HYDRA Drill Head for Cast Irons, Ti-phon Coated

Highly cost-effective and accurate design replaceable head for high performance in cast irons. A 140° split point helps with self-centering and reduces cutting forces. Ti-phon coating prevents edge build-up and greatly improves chip flow, with superior wear resistance and edge strength.

HYDRA



HM | DORMER | 140° | Ti-phon | R | DC h7

H851	Apply starting values for speed and feed with a correction factor of **1.10**
H853	Apply starting values for speed and feed with a correction factor of **1.00**
H855	Apply starting values for speed and feed with a correction factor of **0.95**
H858	Apply starting values for speed and feed with a correction factor of **0.90**
H8512	Apply starting values for speed and feed with a correction factor of **0.80**

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code.

K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	K3.3	K4.1	K4.2	K4.3	K4.4	K4.5
120 V	89 V	67 V	98 V	80 V	64 V	97 V	67 V	54 V	81 V	61 V	45 V	38 V	32 V

K5.1	K5.2	K5.3
91 V	69 V	53 V

Product	DC [inch]	DC [mm]	DC [inch]	LH [mm]
R97015/32	15/32	11.91	0.4688	9.1
R97012.0	–	12.00	0.4724	9.1
R97012.1	–	12.10	0.4764	9.1
R97012.2	–	12.20	0.4803	9.1
R97031/64	31/64	12.30	0.4844	9.1
R97012.5	–	12.50	0.4921	9.4
R97012.6	–	12.60	0.4961	9.4
R9701/2	1/2	12.70	0.5000	9.4
R97012.8	–	12.80	0.5039	9.4
R97012.9	–	12.90	0.5079	9.4
R97013.0	–	13.00	0.5118	9.7
R97033/64	33/64	13.10	0.5156	9.7
R97013.2	–	13.20	0.5197	9.7
R97017/32	17/32	13.49	0.5313	9.7
R97013.5	–	13.50	0.5315	10.3
R97013.6	–	13.60	0.5354	10.3
R97013.7	–	13.70	0.5394	10.3
R97013.8	–	13.80	0.5433	10.3
R97035/64	35/64	13.89	0.5469	10.3
R97014.0	–	14.00	0.5512	10.3
R97014.1	–	14.10	0.5551	10.3
R97014.2	–	14.20	0.5591	10.3
R9709/16	9/16	14.29	0.5625	10.3
R97014.5	–	14.50	0.5709	10.3
R97014.6	–	14.60	0.5748	11.0
R97037/64	37/64	14.68	0.5781	11.0
R97014.7	–	14.70	0.5787	11.0
R97014.8	–	14.80	0.5827	11.0
R97015.0	–	15.00	0.5906	11.0
R97019/32	19/32	15.08	0.5938	11.0

Product	DC [inch]	DC [mm]	DC [inch]	LH [mm]
R97015.1	–	15.10	0.5945	11.0
R97015.2	–	15.20	0.5984	11.0
R97015.24	–	15.24	0.6000	11.0
R97039/64	39/64	15.48	0.6094	11.0
R97015.5	–	15.50	0.6102	11.0
R97015.6	–	15.60	0.6142	11.6
R97015.7	–	15.70	0.6181	11.6
R9705/8	5/8	15.88	0.6250	11.6
R97016.0	–	16.00	0.6299	11.6
R97016.08	–	16.08	0.6331	11.6
R97016.1	–	16.10	0.6339	11.6
R97016.2	–	16.20	0.6378	11.6
R97041/64	41/64	16.27	0.6406	11.6
R97016.3	–	16.30	0.6417	11.6
R97016.5	–	16.50	0.6496	11.6
R97016.6	–	16.60	0.6535	12.2
R97021/32	21/32	16.67	0.6563	12.2
R97016.7	–	16.70	0.6575	12.2
R97017.0	–	17.00	0.6693	12.2
R97043/64	43/64	17.07	0.6719	12.2
R97017.1	–	17.10	0.6732	12.2
R97017.2	–	17.20	0.6772	12.2
R97011/16	11/16	17.46	0.6875	12.2
R97017.5	–	17.50	0.6890	12.2
R97017.6	–	17.60	0.6929	12.9
R97017.7	–	17.70	0.6969	12.9
R97045/64	45/64	17.86	0.7031	12.9
R97018.0	–	18.00	0.7087	12.9
R97018.1	–	18.10	0.7126	12.9
R97018.2	–	18.20	0.7165	12.9

Product	DC	DC	DC	LH
	[inch]	[mm]	[inch]	[mm]
R97023/32	23/32	18.26	0.7188	12.9
R97018.5	–	18.50	0.7283	12.9
R97018.6	–	18.60	0.7323	13.5
R97047/64	47/64	18.65	0.7344	13.5
R97018.7	–	18.70	0.7362	13.5
R97018.9	–	18.90	0.7441	13.5
R97019.0	–	19.00	0.7480	13.5
R9703/4	3/4	19.05	0.7500	13.5
R97019.1	–	19.10	0.7520	13.5
R97019.2	–	19.20	0.7559	13.5
R97019.25	–	19.25	0.7579	13.5
R97019.3	–	19.30	0.7598	13.5
R97019.35	–	19.35	0.7618	13.5
R97049/64	49/64	19.45	0.7656	13.5
R97019.5	–	19.50	0.7677	13.5
R97019.6	–	19.60	0.7717	14.1
R97019.7	–	19.70	0.7756	14.1
R97025/32	25/32	19.84	0.7813	14.1
R97020.0	–	20.00	0.7874	14.1
R97051/64	51/64	20.24	0.7969	14.1
R97020.5	–	20.50	0.8071	14.1
R97013/16	13/16	20.64	0.8125	14.8
R97021.0	–	21.00	0.8268	14.8
R97053/64	53/64	21.03	0.8281	14.8
R97027/32	27/32	21.43	0.8438	14.8
R97021.5	–	21.50	0.8465	14.8
R97055/64	55/64	21.83	0.8594	15.0
R97022.0	–	22.00	0.8661	15.0
R9707/8	7/8	22.22	0.8750	15.0
R97022.5	–	22.50	0.8858	15.0
R97057/64	57/64	22.62	0.8906	15.0
R97022.7	–	22.70	0.8937	15.0
R97023.0	–	23.00	0.9055	15.1
R97029/32	29/32	23.02	0.9063	15.1
R97059/64	59/64	23.42	0.9219	15.1
R97023.5	–	23.50	0.9252	15.1
R97015/16	15/16	23.81	0.9375	15.4
R97024.0	–	24.00	0.9449	15.4
R97061/64	61/64	24.21	0.9531	15.4
R97024.5	–	24.50	0.9646	15.4
R97031/32	31/32	24.61	0.9688	15.4
R97025.0	–	25.00	0.9844	15.8
R97063/64	63/64	25.00	0.9844	15.8
R9701	1″	25.40	1.0000	15.8
R97025.5	–	25.50	1.0039	15.8
R97025.65	–	25.65	1.0098	15.8
R9701.1/64	1.1/64	25.80	1.0156	15.8
R97026.0	–	26.00	1.0236	16.4
R9701.1/32	1.1/32	26.19	1.0313	16.4

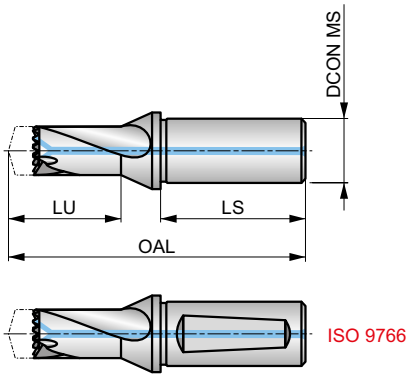
Product	DC	DC	DC	LH
	[inch]	[mm]	[inch]	[mm]
R97026.5	–	26.50	1.0433	16.4
R9701.3/64	1.3/64	26.59	1.0469	16.4
R9701.1/16	1.1/16	26.99	1.0625	17.1
R97027.0	–	27.00	1.0630	17.1
R9701.5/64	1.5/64	27.38	1.0781	17.1
R97027.5	–	27.50	1.0827	17.1
R9701.3/32	1.3/32	27.78	1.0938	17.1
R97028.0	–	28.00	1.1024	17.7
R9701.7/64	1.7/64	28.18	1.1094	17.7
R97028.5	–	28.50	1.1220	17.7
R9701.1/8	1.1/8	28.58	1.1250	17.7
R9701.9/64	1.9/64	28.97	1.1406	18.3
R97029.0	–	29.00	1.1417	18.3
R9701.5/32	1.5/32	29.37	1.1563	18.3
R97029.5	–	29.50	1.1614	18.3
R9701.11/64	1.11/64	29.77	1.1719	18.3
R97030.0	–	30.00	1.1811	19.0
R9701.3/16	1.3/16	30.16	1.1875	19.0
R97030.5	–	30.50	1.2008	19.0
R9701.7/32	1.7/32	30.96	1.2188	21.0
R97031.0	–	31.00	1.2205	21.0
R9701.1/4	1.1/4	31.75	1.2500	21.0
R97032.0	–	32.00	1.2598	21.0
R97032.5	–	32.50	1.2795	21.0
R9701.19/64	1.19/64	32.94	1.2969	21.0
R97033.0	–	33.00	1.2992	21.0
R97033.5	–	33.50	1.3189	21.0
R97034.0	–	34.00	1.3386	23.0
R9701.11/32	1.11/32	34.13	1.3438	23.0
R97034.5	–	34.50	1.3583	23.0
R9701.3/8	1.3/8	34.93	1.3750	23.0
R97035.0	–	35.00	1.3780	23.0
R97036.0	–	36.00	1.4173	23.0
R9701.27/64	1.27/64	36.12	1.4219	23.0
R97036.5	–	36.50	1.4370	23.0
R97037.0	–	37.00	1.4567	25.0
R9701.15/32	1.15/32	37.31	1.4688	25.0
R97037.5	–	37.50	1.4764	25.0
R97038.0	–	38.00	1.4961	25.0
R9701.1/2	1.1/2	38.10	1.5000	25.0
R97038.5	–	38.50	1.5157	25.0
R9701.17/32	1.17/32	38.89	1.5313	25.0
R97039.0	–	39.00	1.5354	25.0
R97039.5	–	39.50	1.5551	25.0
R9701.9/16	1.9/16	39.69	1.5625	27.0
R97040.0	–	40.00	1.5748	27.0
R97041.0	–	41.00	1.6142	27.0
R9701.5/8	1.5/8	41.28	1.6250	27.0
R97042.0	–	42.00	1.6535	27.0

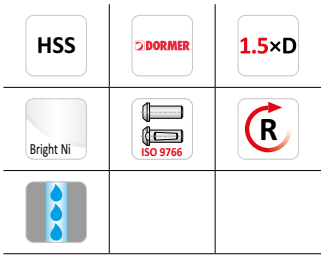
H851

HYDRA Body 1.5XD, with Coolant Feed, Bright Nickel Plating

Used with R950, R960 and R970 HYDRA heads. A range of head diameters can be used with the same body. Coolant holes aligned with the heads offer efficient cooling. Flanged shank prevents the drill from wandering in the holder. Nickel Plated surface protects from rust and corrosion, and improves chip evacuation.

HYDRA





Four (4) screws and one (1) screwdriver are included with a drill body, DCON MS tolerance h6.

Product	DCONMS [inch]	DCON MS [mm]	LU [mm]	OAL [mm]	LS [mm]	ADINTMS
H85131/64	5/8	15.88	25.50	88.5	47.6	Cylindrical
H8511/2	5/8	15.88	25.80	88.8	47.6	Cylindrical
H85117/32	5/8	15.88	30.90	93.9	47.6	Cylindrical
H85112.0	–	16.00	25.50	88.5	48.0	ISO 9766
H85112.5	–	16.00	25.80	88.8	48.0	ISO 9766
H85113.0	–	16.00	27.00	90.0	48.0	ISO 9766
H85114.0	–	16.00	30.90	93.9	48.0	ISO 9766
H8519/16	3/4	19.05	30.30	93.9	50.8	Cylindrical
H85139/64	3/4	19.05	32.30	97.3	50.8	Cylindrical
H85141/64	3/4	19.05	34.90	99.9	50.8	Cylindrical
H85111/16	3/4	19.05	36.40	101.4	50.8	Cylindrical
H85123/32	3/4	19.05	39.00	104.0	50.8	Cylindrical
H85115.0	–	20.00	32.30	97.3	50.0	ISO 9766
H85116.0	–	20.00	34.90	99.9	50.0	ISO 9766
H85117.0	–	20.00	36.40	101.4	50.0	ISO 9766
H85118.0	–	20.00	39.00	104.0	50.0	ISO 9766
H85119.0	–	25.00	40.40	111.4	56.0	ISO 9766
H85120.0	–	25.00	43.00	114.0	56.0	ISO 9766
H85121.0	–	25.00	44.50	115.5	56.0	ISO 9766
H85122.0	–	25.00	46.10	117.1	56.0	ISO 9766
H85123.0	–	25.00	47.00	118.0	56.0	ISO 9766
H85149/64	1″	25.40	40.40	111.4	57.1	Cylindrical
H85151/64	1″	25.40	43.00	114.0	57.1	Cylindrical
H85127/32	1″	25.40	44.50	115.5	57.1	Cylindrical
H85157/64	1″	25.40	46.10	117.1	57.1	Cylindrical
H85159/64	1″	25.40	47.00	118.0	57.1	Cylindrical
H85131/32	1″	25.40	49.30	124.3	57.1	Cylindrical
H8511.1/64	1.1/4	31.75	49.70	124.7	60.3	Cylindrical
H8511.3/64	1.1/4	31.75	52.30	127.3	60.3	Cylindrical
H8511.3/32	1.1/4	31.75	52.80	127.8	60.3	Cylindrical
H8511.1/8	1.1/4	31.75	54.40	129.4	60.3	Cylindrical
H8511.11/64	1.1/4	31.75	55.80	130.8	60.3	Cylindrical
H8511.3/16	1.1/4	31.75	58.40	133.4	60.3	Cylindrical
H85124.0	–	32.00	49.30	124.3	60.0	ISO 9766

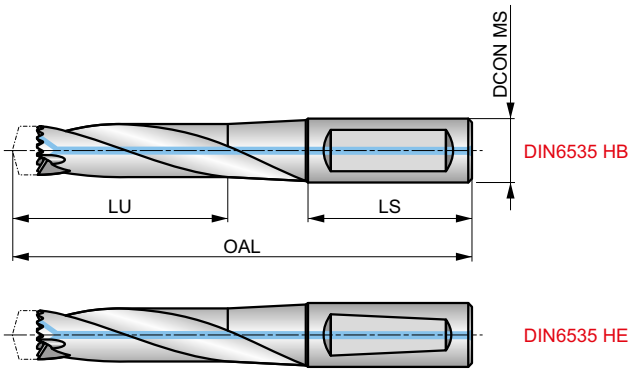
Product	DCONMS	DCON MS	LU	OAL	LS	ADINTMS
	[inch]	[mm]	[mm]	[mm]	[mm]	
H85125.0	–	32.00	49.70	124.7	60.0	ISO 9766
H85126.0	–	32.00	52.30	127.3	60.0	ISO 9766
H85127.0	–	32.00	52.80	127.8	60.0	ISO 9766
H85128.0	–	32.00	54.40	129.4	60.0	ISO 9766
H85129.0	–	32.00	55.80	130.8	60.0	ISO 9766
H85130.0	–	32.00	58.40	133.4	60.0	ISO 9766

H853

HYDRA Body 3XD, with Coolant Feed, Bright Nickel Plating

Used with R950, R960 and R970 HYDRA heads. A range of head diameters can be used with the same body. Coolant holes aligned with the heads offer efficient cooling. Bright Nickel Plated surface protects from rust and corrosion, and improves chip evacuation.

HYDRA



HSS	DORMER	3×D
Bright Ni	DIN 6535HB DIN 6535HE	R

Four (4) screws and one (1) screwdriver are included with a drill body, DCON MS tolerance h6.

Product	DCONMS [inch]	DCON MS [mm]	LU [mm]	OAL [mm]	LS [mm]	ADINTMS
H85312.0	–	16.00	44.00	105.0	48.0	DIN6535HE
H85331/64	5/8	15.88	44.00	105.0	48.0	DIN6535HB
H85312.5	–	16.00	44.00	105.0	48.0	DIN6535HE
H8531/2	5/8	15.88	44.00	105.0	48.0	DIN6535HB
H85313.0	–	16.00	47.00	110.0	48.0	DIN6535HE
H85317/32	5/8	15.88	47.00	110.0	48.0	DIN6535HB
H85314.0	–	16.00	52.50	116.5	48.0	DIN6535HE
H8539/16	3/4	19.05	52.50	116.5	48.0	DIN6535HB
H85315.0	–	20.00	55.50	126.5	50.0	DIN6535HE
H85339/64	3/4	19.05	55.50	126.5	50.0	DIN6535HB
H85316.0	–	20.00	59.50	131.5	50.0	DIN6535HE
H85341/64	3/4	19.05	59.50	131.5	50.0	DIN6535HB
H85317.0	–	20.00	62.50	136.5	50.0	DIN6535HE
H85311/16	3/4	19.05	62.50	136.5	50.0	DIN6535HB
H85318.0	–	20.00	66.50	141.5	50.0	DIN6535HE
H85323/32	3/4	19.05	66.50	141.5	50.0	DIN6535HB
H85319.0	–	25.00	69.50	156.5	56.0	DIN6535HE
H85349/64	1″	25.40	69.50	156.5	56.0	DIN6535HB
H85320.0	–	25.00	73.50	156.5	56.0	DIN6535HE
H85351/64	1″	25.40	73.50	156.5	56.0	DIN6535HB
H85321.0	–	25.00	76.50	156.5	56.0	DIN6535HE
H85327/32	1″	25.40	76.50	156.5	56.0	DIN6535HB
H85322.0	–	25.00	80.10	161.5	56.0	DIN6535HE
H85357/64	1″	25.40	80.10	161.5	56.0	DIN6535HB
H85323.0	–	25.00	82.50	160.5	56.0	DIN6535HE
H85359/64	1″	25.40	82.50	160.5	56.0	DIN6535HB
H85324.0	–	32.00	86.20	170.2	60.0	DIN6535HE
H85331/32	1″	25.40	86.20	170.2	60.0	DIN6535HB
H85325.0	–	32.00	88.00	170.0	60.0	DIN6535HE
H8531.1/64	1.1/4	31.75	88.00	170.0	60.0	DIN6535HB
H85326.0	–	32.00	92.00	175.0	60.0	DIN6535HE
H8531.3/64	1.1/4	31.75	92.00	175.0	60.0	DIN6535HB
H85327.0	–	32.00	94.00	175.0	60.0	DIN6535HE
H8531.3/32	1.1/4	31.75	94.00	175.0	60.0	DIN6535HB

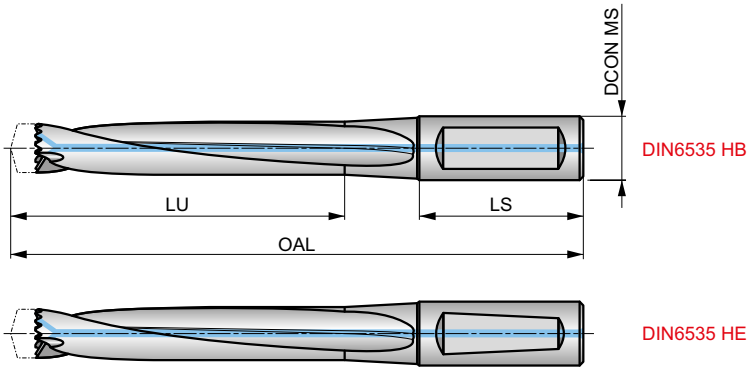
Product	DCONMS	DCON MS	LU	OAL	LS	ADINTMS
	[inch]	[mm]	[mm]	[mm]	[mm]	
H85328.0	–	32.00	97.00	180.0	60.0	DIN6535HE
H8531.1/8	1.1/4	31.75	97.00	180.0	60.0	DIN6535HB
H85329.0	–	32.00	100.00	185.0	60.0	DIN6535HE
H8531.11/64	1.1/4	31.75	100.00	185.0	60.0	DIN6535HB
H85330.0	–	32.00	104.00	185.0	60.0	DIN6535HE
H8531.3/16	1.1/4	31.75	104.00	185.0	60.0	DIN6535HB
H85332.0	–	32.00	111.50	196.5	60.0	DIN6535HE
H85333.5	–	32.00	116.50	201.5	60.0	DIN6535HE
H85335.0	–	40.00	121.50	216.5	70.0	DIN6535HB
H85336.5	–	40.00	125.50	221.5	70.0	DIN6535HB
H85338.0	–	40.00	131.50	226.5	70.0	DIN6535HB
H85339.5	–	40.00	136.50	231.5	70.0	DIN6535HB
H85341.0	–	40.00	146.50	246.5	70.0	DIN6535HB
H85342.5	–	40.00	151.60	251.6	70.0	DIN6535HB

H855

HYDRA Body 5XD, with Coolant Feed, Bright Nickel Plating

Used with R950, R960 and R970 HYDRA heads. A range of head diameters can be used with the same body. Coolant holes aligned with the heads offer efficient cooling. Bright Nickel Plated surface protects from rust and corrosion, and improves chip evacuation.

HYDRA



HSS	DORMER	5×D
Bright Ni	DIN 6535HB DIN 6535HE	R

Four (4) screws and one (1) screwdriver are included with a drill body, DCON MS tolerance h6.

Product	DCONMS [inch]	DCON MS [mm]	LU [mm]	OAL [mm]	LS [mm]	ADINTMS
H85512.0	–	16.00	69.00	130.0	48.0	DIN6535HE
H85531/64	5/8	15.88	69.00	130.0	48.0	DIN6535HB
H85512.5	–	16.00	69.00	130.0	48.0	DIN6535HE
H8551/2	5/8	15.88	69.00	130.0	48.0	DIN6535HB
H85513.0	–	16.00	74.00	140.0	48.0	DIN6535HE
H85517/32	5/8	15.88	74.00	140.0	48.0	DIN6535HB
H85514.0	–	16.00	81.50	146.5	48.0	DIN6535HE
H8559/16	3/4	19.05	81.50	146.5	48.0	DIN6535HB
H85515.0	–	20.00	86.50	156.5	50.0	DIN6535HE
H85539/64	3/4	19.05	86.50	156.5	50.0	DIN6535HB
H85516.0	–	20.00	92.50	166.5	50.0	DIN6535HE
H85541/64	3/4	19.05	92.50	166.5	50.0	DIN6535HB
H85517.0	–	20.00	97.50	171.5	50.0	DIN6535HE
H85511/16	3/4	19.05	97.50	171.5	50.0	DIN6535HB
H85518.0	–	20.00	103.50	176.5	50.0	DIN6535HE
H85523/32	3/4	19.05	103.50	176.5	50.0	DIN6535HB
H85519.0	–	25.00	108.50	191.5	56.0	DIN6535HE
H85549/64	1″	25.40	108.50	191.5	56.0	DIN6535HB
H85520.0	–	25.00	114.50	196.5	56.0	DIN6535HE
H85551/64	1″	25.40	114.50	196.5	56.0	DIN6535HB
H85521.0	–	25.00	119.50	196.5	56.0	DIN6535HE
H85527/32	1″	25.40	119.50	196.5	56.0	DIN6535HB
H85522.0	–	25.00	125.10	201.1	56.0	DIN6535HE
H85557/64	1″	25.40	125.10	201.1	56.0	DIN6535HB
H85523.0	–	25.00	129.50	210.5	56.0	DIN6535HE
H85559/64	1″	25.40	129.50	210.5	56.0	DIN6535HB
H85524.0	–	32.00	135.20	220.2	60.0	DIN6535HE
H85531/32	1″	25.40	135.20	220.2	60.0	DIN6535HB
H85525.0	–	32.00	140.00	225.0	60.0	DIN6535HE
H8551.1/64	1.1/4	31.75	140.00	225.0	60.0	DIN6535HB
H85526.0	–	32.00	146.00	230.0	60.0	DIN6535HE
H8551.3/64	1.1/4	31.75	146.00	230.0	60.0	DIN6535HB
H85527.0	–	32.00	151.00	235.0	60.0	DIN6535HE
H8551.3/32	1.1/4	31.75	151.00	235.0	60.0	DIN6535HB

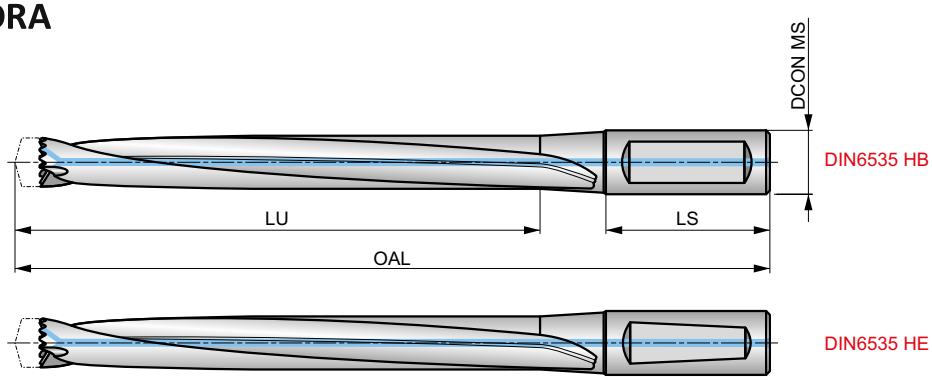
Product	DCONMS	DCON MS	LU	OAL	LS	ADINTMS
	[inch]	[mm]	[mm]	[mm]	[mm]	
H85528.0	–	32.00	157.00	240.0	60.0	DIN6535HE
H8551.1/8	1.1/4	31.75	157.00	240.0	60.0	DIN6535HB
H85529.0	–	32.00	162.00	245.0	60.0	DIN6535HE
H8551.11/64	1.1/4	31.75	162.00	245.0	60.0	DIN6535HB
H85530.0	–	32.00	167.00	255.0	60.0	DIN6535HE
H8551.3/16	1.1/4	31.75	167.00	255.0	60.0	DIN6535HB
H85532.0	–	32.00	176.50	261.5	60.0	DIN6535HE
H85533.5	–	32.00	186.50	271.5	60.0	DIN6535HE
H85535.0	–	40.00	196.50	291.5	70.0	DIN6535HB
H85536.5	–	40.00	201.50	296.5	70.0	DIN6535HB
H85538.0	–	40.00	211.50	306.5	70.0	DIN6535HB
H85539.5	–	40.00	221.50	316.5	70.0	DIN6535HB
H85541.0	–	40.00	226.50	325.6	70.0	DIN6535HB
H85542.5	–	40.00	236.50	336.5	70.0	DIN6535HB

H858

HYDRA Body 8XD, with Coolant Feed, Bright Nickel Plating

Used with R950, R960 and R970 HYDRA heads. A range of head diameters can be used with the same body. Coolant holes aligned with the heads offer efficient cooling. Bright Nickel Plated surface protects from rust and corrosion, and improves chip evacuation.

HYDRA



HSS	DORMER	8×D
Bright Ni	DIN 6535HB DIN 6535HE	R

Four (4) screws and one (1) screwdriver are included with a drill body, DCON MS tolerance h6.

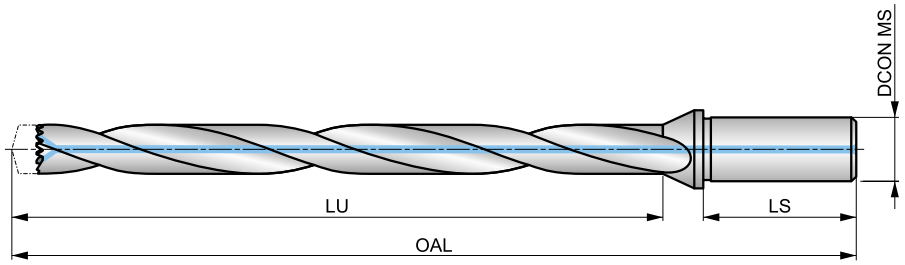
Product	DCON MS [mm]	LU [mm]	OAL [mm]	LS [mm]	ADINTMS
H85814.0	16.00	124.50	191.5	48.0	DIN6535HE
H85815.0	20.00	133.50	201.5	50.0	DIN6535HE
H85816.0	20.00	141.50	211.5	50.0	DIN6535HE
H85817.0	20.00	150.50	221.5	50.0	DIN6535HE
H85818.0	20.00	158.50	226.5	50.0	DIN6535HE
H85819.0	25.00	167.50	251.5	56.0	DIN6535HE
H85820.0	25.00	175.50	264.5	56.0	DIN6535HE
H85821.0	25.00	184.50	266.5	56.0	DIN6535HE
H85822.0	25.00	192.10	271.1	56.0	DIN6535HE
H85823.0	25.00	200.50	280.5	56.0	DIN6535HE
H85824.0	32.00	208.20	295.2	60.0	DIN6535HE
H85825.0	32.00	217.00	300.0	60.0	DIN6535HE
H85826.0	32.00	225.00	310.0	60.0	DIN6535HE
H85827.0	32.00	234.00	320.0	60.0	DIN6535HE
H85828.0	32.00	242.00	325.0	60.0	DIN6535HE
H85829.0	32.00	251.00	335.0	60.0	DIN6535HE
H85830.0	32.00	259.00	345.0	60.0	DIN6535HE
H85832.0	32.00	271.50	356.5	60.0	DIN6535HE
H85833.5	32.00	286.50	371.5	60.0	DIN6535HE
H85835.0	40.00	301.50	396.5	70.0	DIN6535HB
H85836.5	40.00	311.50	406.5	70.0	DIN6535HB
H85838.0	40.00	326.50	421.5	70.0	DIN6535HB
H85839.5	40.00	336.50	431.5	70.0	DIN6535HB
H85841.0	40.00	351.50	451.5	70.0	DIN6535HB
H85842.5	40.00	361.50	461.5	70.0	DIN6535HB

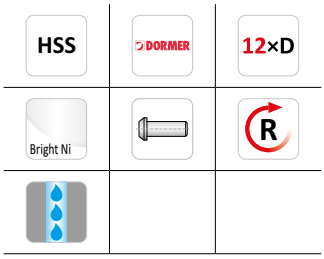
H8512

HYDRA Body 12XD, with Coolant Feed, Bright Nickel Plating

Used with R950, R960 and R970 HYDRA heads. A range of head diameters can be used with the same body. Coolant holes aligned with the heads offer efficient cooling. Flanged shank prevents the drill from wandering in the holder. Nickel Plated surface protects from rust and corrosion, and improves chip evacuation.

HYDRA





Four (4) screws and one (1) screwdriver are included with a drill body, DCON MS tolerance h6.

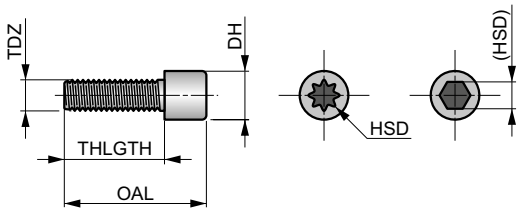
Product	DCON MS [mm]	LU [mm]	OAL [mm]	LS [mm]
H851214.0	16.00	168.00	236.0	48.0
H851215.0	20.00	180.00	250.3	50.0
H851216.0	20.00	192.00	262.6	50.0
H851217.0	20.00	204.00	275.0	50.0
H851218.0	20.00	216.00	287.2	50.0
H851219.0	25.00	228.00	305.6	56.0
H851220.0	25.00	240.00	317.8	56.0
H851221.0	25.00	252.00	330.1	56.0
H851222.0	25.00	264.00	343.0	56.0
H851223.0	25.00	276.00	354.8	56.0
H851224.0	32.00	288.00	371.7	60.0
H851225.0	32.00	300.00	383.8	60.0

H860

HYDRA Screws

Replacement screws used to securely hold HYDRA heads in place.

HYDRA



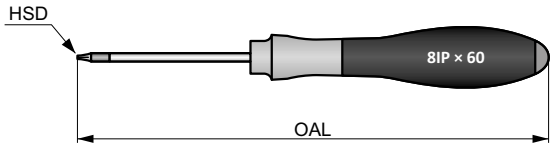
Product	Nr.	TDZ	OAL [mm]	THLGTH [mm]	DH [mm]	HSD
H860N1	1	M2.2	7.5	5.70	3.5	8IP
H860N2	2	M2.5	9.0	7.00	4.1	10IP
H860N3	3	M3.0	10.5	8.00	4.9	15IP
H860N4	4	M3.5	11.5	8.80	5.5	15IP
H860N5	5	M4.0	12.5	9.50	6.0	20IP
H860N6	6	M4.5	14.3	10.80	6.8	25IP
H860N7	7	M5.0	20.0	15.00	8.5	4

H861

HYDRA Screw Driver

Screwdrivers used to tighten HYDRA screws.

HYDRA



Product	Nr.	HSD	OAL [mm]
H861N1	N1	8IP	164.0
H861N2	N2	10IP	191.0
H861N3	N3	15IP	191.0
H861N4	N4	20IP	218.0
H861N5	N5	25IP	218.0
H861N6	N6	4	186.0

CUTTING CONDITIONS CORRECTION FACTORS (BASED ON HYDRA BODY LENGTHS)

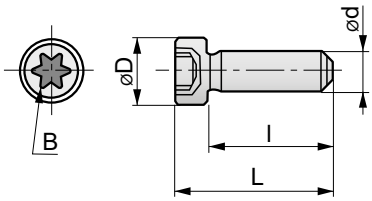
H851	Apply starting values for speed and feed with a correction factor of **1.10**
H853	Apply starting values for speed and feed with a correction factor of **1.00**
H855	Apply starting values for speed and feed with a correction factor of **0.95**
H858	Apply starting values for speed and feed with a correction factor of **0.90**
H8512	Apply starting values for speed and feed with a correction factor of **0.80**

HYDRA
TECHNICAL INFORMATION

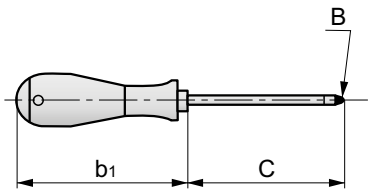
Torque table

H860	H861	Hydra Head ø Metric Range	Hydra Head ø Fractional Range	Hydra Head ø Decimal Size Range (min. / max.)	Torque Values Nm (Metric System)	Torque Values in/lbs (Inch System)
H860N1	**H861N1**	12.0 mm – 15.5 mm	15/32“ – 39/64“	0.4688“ – 0.6102“	0.75 – 0.99	6.6 – 8.8
H860N2	**H861N2**	15.6 mm – 18.5 mm	5/8“ – 23/32“	0.6142“ – 0.7283v	0.93 – 1.24	8.2 – 11.0
H860N3	**H861N3**	18.6 mm – 21.5 mm	47/64“ – 27/32“	0.7323“ – 0.8465“	1.84 – 2.44	16.3 – 21.6
H860N4	**H861N3**	22.0 mm – 24.5 mm	55/64“ – 31/32“	0.8594“ – 0.9688“	2.73 – 3.72	24.2 – 32.9
H860N5	**H861N4**	25.0 mm – 27.5 mm	63/64“ – 1-3/32“	0.9843“ – 1.0938“	4.14 – 5.52	36.6 – 48.8
H860N6	**H861N5**	28.0 mm – 33.5 mm	1-7/64“ – 1-19/64“	1.1024“ – 1.3189“	4.97 – 6.63	44.0 – 58.7
H860N7	**H861N6**	34.0 mm – 42.0 mm	1-11/32“ – 1-5/8“	1.3386“ – 1.6535“	7.2	63.7

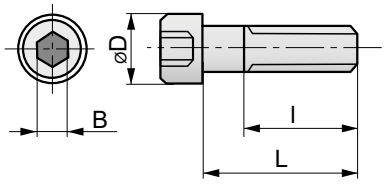
Screws and screw-driver data



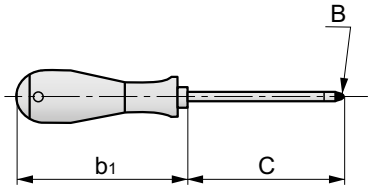
e-code	d	Pitch	L [mm]	l [mm]	D [mm]	B
H860N1	M2.2	0.45	7.5	5.7	3.5	8IP
H860N2	M2.5	0.45	9.0	7.0	4.1	10IP
H860N3	M3.0	0.50	10.5	8.0	4.9	15IP
H860N4	M3.5	0.60	11.5	8.8	5.5	15IP
H860N5	M4.0	0.70	12.5	9.5	6.0	20IP
H860N6	M4.5	0.75	14.3	10.8	6.8	25IP



e-code	B	C	b_1
H861N1	8IP	60	104
H861N2	10IP	80	111
H861N3	15IP	80	111
H861N4	20IP	100	118
H861N5	25IP	100	118

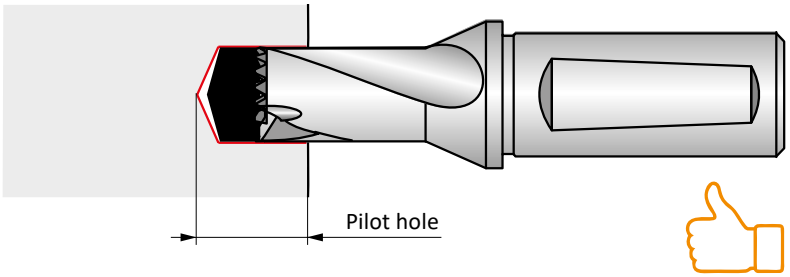


e-code	d	Pitch	L [mm]	l [mm]	D [mm]	B
H860N7	M5.0	0.8	15	full	8.5	4

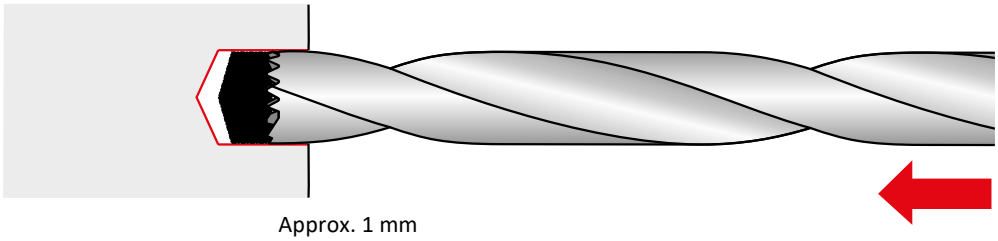


e-code	B	C	b_1
H861N6	4	75	111

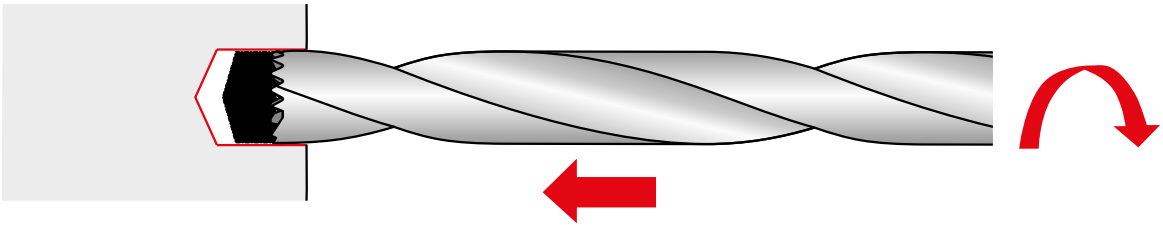
Apply special programming for 8×D and 12xD drilling



Drill a pilot hole (1.5×D to 3×D depth) with the same HYDRA head diameter (if needed check the runout of the drill max. +/ 0.05 mm).

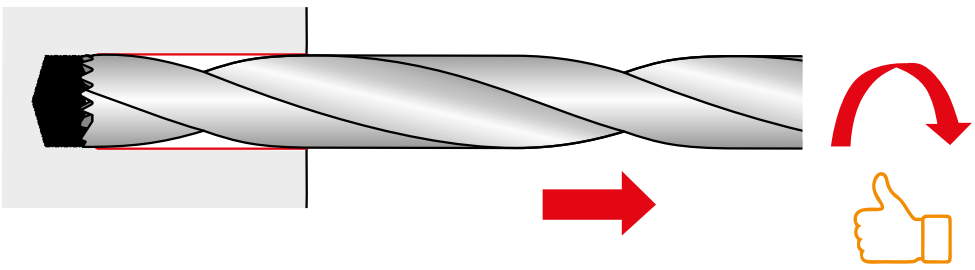


Enter the pilot hole with the 8×D or 12×D Body running a maximum of 500 rpm, to approximately 1mm above the pre-drilled pilot hole depth.



Start coolant flow and increase the rotational speed up to the recommended RPM.
Note: Apply a short dwell time don't start the feed before recommended RPM is reached.

Drill without pecking to the required depth.



When the required depth is reached, retract the drill by approximately 0.1 mm to 0.5 mm and reduce to 500 rpm followed by a complete retraction with normal feed.**Note: retracting the drill with a higher spindle speed may cause a shoulder damage from run out or destroy the hole surface and tolerance.**

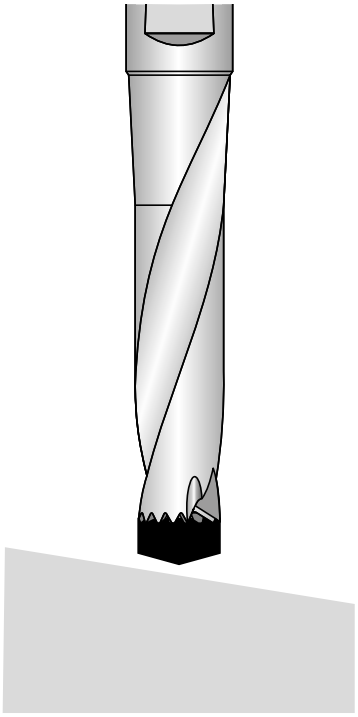
Drilling hints & tips with the hydra drill

Coolants
For maximum chip evacuation and tool performance, coolant use is recommended. Emulsion coolant concentration of 6 – 8% is recommended for most applications, with a coolant pressure of 20 bar (290 PSI) or higher. For high strength steel, stainless steels and tougher drilling applications, use a higher concentration of 10 – 12%. In these applications, particularly in stainless steels, it is recommended to use the maximum coolant pressure on the machine. The Hydradrill coolant holes provide improved web strength and reduce heat at the cutting edges for increased productivity and longer tool life.

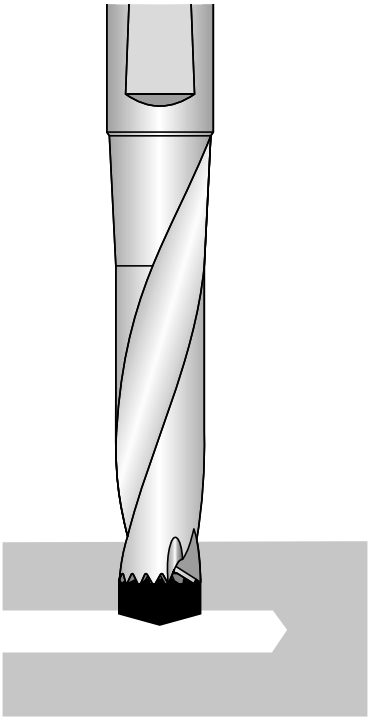
Holders
Always use tool holders and collets that provide good concentricity between the drill and the machine spindle. Use a positive stop to prevent the tool from backing up into the holder. Radial runout in the tool assembly must be accurately checked and maintained.

Workpiece
A secure and rigid workpiece will minimise deflection, and allow for better accuracy and true position of the hole.

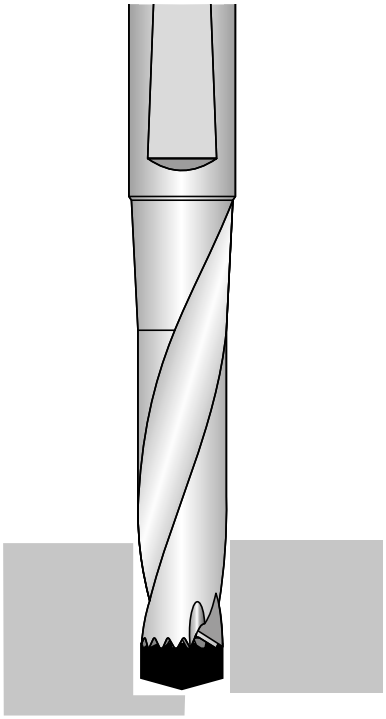
Feeds
It is important not to underfeed the drill which will cause it to dwell and dull. This is particularly true in work hardening materials. Feed rates should be high enough for proper chip formation.



Entrance or exit on an angular surface



Drilling through cross holes



Interrupted at exit

In these drilling scenarios, reducing feed rate to 1/3 (33%) is generally recommended. Drilling into an entry angle of more than 10° is NOT recommended – surface should be milled flat first.

	Grade	Hardness (HV10)	C %	W %	Mo %	Cr %	V %	Co %	Tool Material
HSS	M2	810 – 850	0.9	6.4	5.0	4.2	1.8	–	HSS

Properties	HSS materials	Carbide materials	K10/30F (often used for solid tools)
Hardness [HV30]	800 – 950	1300 – 1800	1600
Density [g/cm^3]	8.0 – 9.0	7.2 – 15	14.45
Compressive strength [N/mm^2]	3000 – 4000	3000 – 8000	6250
Flexural strength, (bending) [N/mm^2]	2500 – 4000	1000 – 4700	4300
Heat resistance [°C]	550	1000	900
E-module [KN/mm^2]	260 – 300	460 – 630	580
Grain size [µm]	–	0.2 – 10	0.8

The combination of hard particle (WC) and binder metal (Co) give the following changes in characteristics.

Characteristic	Higher WC content give	Higher Co content give
Hardness	Higher hardness	Lower hardness
Compressive strength (CS)	Higher CS	Lower CS
Bending strength (BS)	Lower BS	Higher BS

Grain size also influences the material properties. Small grain sizes means higher hardness and coarse grains give more toughness.

Industry Standard tolerancess For Shafts & Holes

Tolerance values are shown in Microns (µm)

Formula for Microns ...1 µm = 0.001 mm / 0.000039 "

Tolerance	**Diameter** [mm]							
	> 1 ≤ 3	> 3 ≤ 6	> 6 ≤ 10	> 10 ≤ 18	> 18 ≤ 30	> 30 ≤ 50	> 50 ≤ 80	> 80 ≤ 120
	Diameter [inch]							
	> 0.039" ≤ 0.118"	> 0.118" ≤ 0.236"	> 0.236" ≤ 0.394"	> 0.394" ≤ 0.709"	> 0.709" ≤ 1.181"	> 1.181" ≤1.968"	>1.968" ≤ 3.149"	> 3.149" ≤ 4.724"
	Tolerance values [µm]							
e8	-14 / -28	-20 / -38	-25 / -47	-32 / -59	-40 / -73	-50 / -89	-60 / -106	-72 / -126
f6	-6 / -12	-10 / -18	-13 / -22	-16 / -27	-20 / -33	-25 / -41	-30 / -49	-36 / -58
f7	-6 / -16	-10 / -22	-13 / -28	-16 / -34	-20 / -41	-25 / -50	-30 / -60	-36 / -71
h6	0 / -6	0 / -8	0 / -9	0 / -11	0 / -13	0 / -16	0 / -19	0 / -22
h7	0 / -10	0 / -12	0 / -15	0 / -18	0 / -21	0 / -25	0 / -30	0 / -35
h8	0 / -14	0 / -18	0 / -22	0 / -27	0 / -33	0 / -39	0 / -46	0 / -54
h9	0 / -25	0 / -30	0 / -36	0 / -43	0 / -52	0 / -62	0 / -74	0 / -87
h10	0 / -40	0 / -48	0 / -58	0 / -70	0 / -84	0 / -100	0 / -120	0 / -140
h11	0 / -60	0 / -75	0 / -90	0 / -110	0 / -130	0 / -160	0 / -190	0 / -220
h12	0 / -100	0 / -120	0 / -150	0 / -180	0 / -210	0 / -250	0 / -300	0 / -350
k10	+40 / 0	+48 / 0	+58 / 0	+70 / 0	+84 / 0	+100 / 0	+120 / 0	+140 / 0
k12	+100 / 0	+120 / 0	+150 / 0	+180 / 0	+210 / 0	+250 / 0	+300 / 0	+350 / 0
m7	+2 / +12	+4 / +16	+6 / +21	+7 / +25	+8 / +29	+9 / +34	+11 / +41	+13 / +48
js14	+/ -125	+/ -150	+/ -180	+/ -215	+/ -260	+/ -310	+/ -370	+/ -435
js16	+/ -300	+/ - 375	+/ -450	+/ -550	+/ -650	+/ -800	+/ -950	+/ -1100
H7	+10 / 0	+12 / 0	+15 / 0	+18 / 0	+21 / 0	+25 / 0	+30 / 0	+35 / 0
H8	+14 / 0	+18 / 0	+22 / 0	+27 / 0	+ 33 / 0	+39 / 0	+46 / 0	+54 / 0
H9	+25 / 0	+30 / 0	+36 / 0	+43 / 0	+52 / 0	+62 / 0	+74 / 0	+87 / 0
H12	+100 / 0	+120 / 0	+150 / 0	+180 / 0	+210 / 0	+250 / 0	+300 / 0	+350 / 0
P9	-6 / -31	-12 / -42	-15 / -51	-18 / -61	-22 / -74	-26 / -86	-32 / -106	-37 / -124
S7	-13 / -22	-15 / -27	-17 / -32	-21 / -39	-27 / -48	-34 / -59	-42 / -72	-58 / -93

Table of Cutting Speeds

		Vc															
m/min.		5	8	10	15	20	25	30	40	50	60	70	80	90	100	110	150
SFM (feet/min.)		16	26	32	50	66	82	98	130	165	197	230	262	296	330	362	495
Ø		RPM															
mm	inch																
1.00	–	1592	2546	3183	4775	6366	7958	9549	12732	15916	19099	22282	25465	28648	31831	35014	47747
1.50	–	1061	1698	2122	3183	4244	5305	6366	8488	10610	12732	14854	16977	19099	21221	23343	31831
2.00	–	796	1273	1592	2387	3183	3979	4775	6366	7958	9549	11141	12732	14324	15916	17507	23873
2.50	–	637	1019	1273	1910	2546	3183	3820	5093	6366	7639	8913	10186	11459	12732	14006	19099
3.00	–	531	849	1061	1592	2122	2653	3183	4244	5305	6366	7427	8488	9549	10610	11671	15916
3.18	1/8	500	801	1001	1501	2002	2502	3003	4004	5005	6006	7007	8008	9009	10010	11011	15015
3.50	–	455	728	909	1364	1819	2274	2728	3638	4547	5457	6366	7276	8185	9095	10004	13642
4.00	–	398	637	796	1194	1592	1989	2387	3183	3979	4775	5570	6366	7162	7958	8754	11937
4.50	–	354	566	707	1061	1415	1768	2122	2829	3537	4244	4951	5659	6366	7074	7781	10610
4.76	3/16	334	535	669	1003	1337	1672	2006	2675	3344	4012	4681	5350	6018	6687	7356	10031
5.00	–	318	509	637	955	1273	1592	1910	2546	3183	3820	4456	5093	5730	6366	7003	9549
6.00	–	265	424	531	796	1061	1326	1592	2122	2653	3183	3714	4244	4775	5305	5836	7958
6.35	1/4	251	401	501	752	1003	1253	1504	2005	2506	3008	3509	4010	4511	5013	5514	7519
7.00	–	227	364	455	682	909	1137	1364	1819	2274	2728	3183	3638	4093	4547	5002	6821
7.94	5/16	200	321	401	601	802	1002	1203	1604	2004	2405	2806	3207	3608	4009	4410	6013
8.00	–	199	318	398	597	796	995	1194	1592	1989	2387	2785	3183	3581	3979	4377	5968
9.00	–	177	283	354	531	707	884	1061	1415	1768	2122	2476	2829	3183	3537	3890	5305
9.53	3/8	167	267	334	501	668	835	1002	1336	1670	2004	2338	2672	3006	3340	3674	5010
10.00		159	255	318	477	637	796	955	1273	1592	1910	2228	2546	2865	3183	3501	4775
11.11	7/16	143	229	287	430	573	716	860	1146	1433	1719	2006	2292	2579	2865	3152	4298
12.00		133	212	265	398	531	663	796	1061	1326	1592	1857	2122	2387	2653	2918	3979
12.70	1/2	125	201	251	376	501	627	752	1003	1253	1504	1754	2005	2256	2506	2757	3760
14.00		114	182	227	341	455	568	682	909	1137	1364	1592	1819	2046	2274	2501	3410
14.29	9/16	111	178	223	334	446	557	668	891	1114	1337	1559	1782	2005	2228	2450	3341
15.00	–	106	170	212	318	424	531	637	849	1061	1273	1485	1698	1910	2122	2334	3183
15.88	5/8	100	160	200	301	401	501	601	802	1002	1203	1403	1604	1804	2004	2205	3007
16.00	–	99	159	199	298	398	497	597	796	995	1194	1393	1592	1790	1989	2188	2984
17.46	11/16	91	146	182	273	365	456	547	729	912	1094	1276	1458	1641	1823	2005	2735
18.00	–	88	141	177	265	354	442	531	707	884	1061	1238	1415	1592	1768	1945	2653
19.05	3/4	84	134	167	251	334	418	501	668	835	1003	1170	1337	1504	1671	1838	2506
20.00	–	80	127	159	239	318	398	477	637	796	955	1114	1273	1432	1592	1751	2387
24.00	–	66	106	133	199	265	332	398	531	663	796	928	1061	1194	1326	1459	1989
25.00	–	64	102	127	191	255	318	382	509	637	764	891	1019	1146	1273	1401	1910
27.00	–	59	94	118	177	236	295	354	472	589	707	825	943	1061	1179	1297	1768
30.00	–	53	85	106	159	212	265	318	424	531	637	743	849	955	1061	1167	1592
32.00	–	50	80	99	149	199	249	298	398	497	597	696	796	895	995	1094	1492
36.00	–	44	71	88	133	177	221	265	354	442	531	619	707	796	884	973	1326
40.00	–	40	64	80	119	159	199	239	318	398	477	557	637	716	796	875	1194
50.00	–	32	51	64	95	127	159	191	255	318	382	446	509	573	637	700	955

Hardness and Tensile Strength

HV	HRC	HB	Tensile Strength	
Vickers	Rockwell	Brinell	[N/mm²]	[Tons/ sq. in.]
940	68	–	–	–
900	67	–	–	–
864	66	–	–	–
829	65	–	–	–
800	64	–	–	–
773	63	–	–	–
745	62	–	–	–
720	61	–	–	–
698	60	–	–	–
675	59	–	–	–
655	58	–	2200	142
650	–	618	2180	141
640	–	608	2145	139
639	57	607	2140	138
630	–	599	2105	136
620	–	589	2070	134
615	56	584	2050	133
610	–	580	2030	131
600	–	570	1995	129
596	55	567	1980	128
590	–	561	1955	126
580	–	551	1920	124
578	54	549	1910	124
570	–	542	1880	122
560	53	532	1845	119
550	–	523	1810	117
544	52	517	1790	116
540	–	513	1775	115
530	–	504	1740	113
527	51	501	1730	112
520	–	494	1700	110
514	50	488	1680	109
510	–	485	1665	108
500	–	475	1630	105
497	49	472	1620	105
490	–	466	1595	103
484	48	460	1570	102
480	–	456	1555	101
473	47	449	1530	99
470	–	447	1520	98
460	–	437	1485	96
458	46	435	1480	96
450	–	428	1455	94
446	45	424	1440	93
440	–	418	1420	92

HV	HRC	HB	Tensile Strength	
Vickers	Rockwell	Brinell	[N/mm²]	[Tons/ sq. in.]
434	44	413	1400	91
423	43	402	1360	88
413	42	393	1330	86
403	41	383	1300	84
392	40	372	1260	82
382	39	363	1230	80
373	38	354	1200	78
364	37	346	1170	76
355	36	337	1140	74
350	–	333	1125	73
345	35	328	1110	72
340	–	323	1095	71
336	34	319	1080	70
330	–	314	1060	69
327	33	311	1050	68
320	–	304	1030	67
317	32	301	1020	66
310	31	295	995	64
302	30	287	970	63
300	–	285	965	62
295	–	280	950	61
293	29	278	940	61
290	–	276	930	60
287	28	273	920	60
285	–	271	915	59
280	27	266	900	58
275	–	261	880	57
272	26	258	870	56
270	–	257	865	56
268	25	255	860	56
265	–	252	850	55
260	24	247	835	54
255	23	242	820	53
250	22	238	800	52
245	–	233	785	51
243	21	231	780	50
240	–	228	770	50
235	–	223	755	49
230	–	219	740	48
225	–	214	720	47
220	–	209	705	46
215	–	204	690	45
210	–	199	675	44
205	–	195	660	43
200	–	190	640	41

DORMER PRAMET

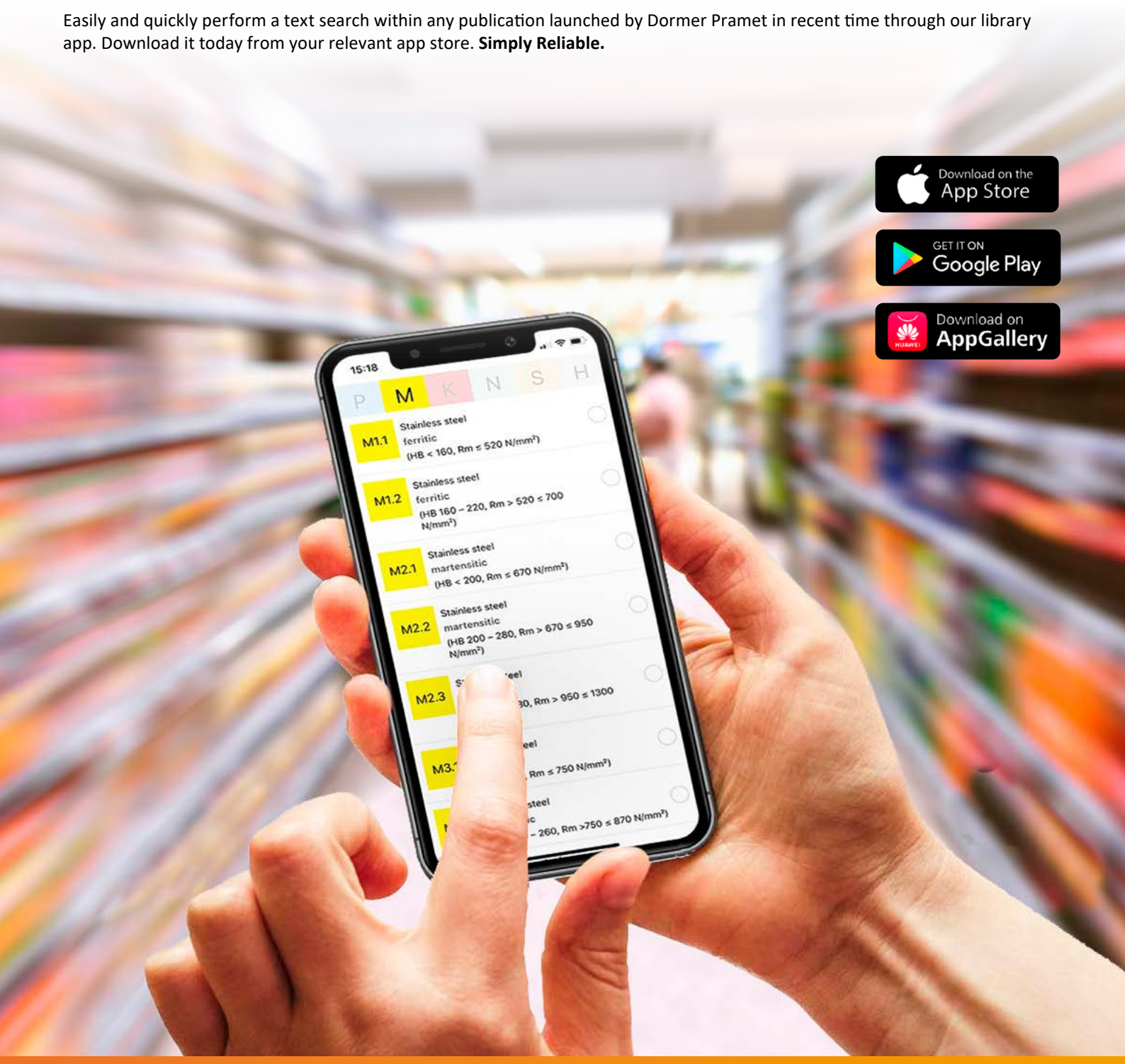
QUICK SEARCH

Easily and quickly perform a text search within any publication launched by Dormer Pramet in recent time through our library app. Download it today from your relevant app store. **Simply Reliable.**

Download on the App Store

GET IT ON Google Play

Download on AppGallery



INDEXABLE DRILLS

Working length	2×D	3×D	4×D	5×D	XPET..AP	SCET..-UD	XPET..AP-SD	SCET..-SD
Picture								
Coolant	■	■	■	■	–	–	–	–
🕮	313	315	318	320	324	323	324	323
Drill type	802D	803D	804D	805D	–	–	–	–
Drill tolerance	± 0.05	± 0.05	± 0.05	± 0.05	–	–	–	–
Hole tolerance *	0 / +0.2	0 / +0.3	0 / +0.4	0 / +0.5	–	–	–	–
Surface finish *	R_a 2 – 6 µm	R_a 2 – 6 µm	R_a 2 – 6 µm	R_a 2 – 6 µm	–	–	–	–
Diameter range	15.0 – 40.0	15.0 – 58.0	17.0 – 58.0	19.0 – 31.0	–	–	–	–
Application areas	P1				■	■	■	■
	P2				■	■	■	■
	P3				■	■	■	■
	P4				■	■	■	■
	M1						■	■
	M2						■	■
	M3						■	■
	M4						■	■
	K1				◪	■	◪	◪
	K2				◪	■	◪	◪
	K3				◪	■	◪	◪
	K4				◪	■	◪	◪
	K5				◪	■	◪	◪
	S1						◪	◪
	S2						◪	◪
	S3						◪	◪
	S4						◪	◪

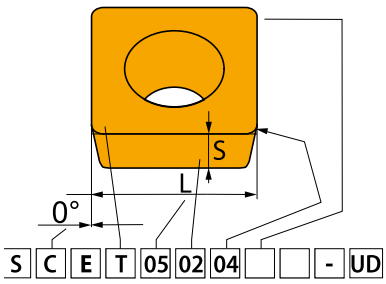
* The tolerance of drilled hole and surface finish are heavily dependent on machining conditions.

Grade Identification	Area of Application	Application	Feed	Cutting speed	Resistance to adverse Working Conditions	Coating	Colour	Substrate	Coolant benefit	Grade description
D9335	P20 - P35 M15 - M30 K15 - K35 S10 - S20	■ ■ ■ ◪				MT-CVD		FGM	+ + +	This grade is recommended for the peripheral insert in indexable drills, it is more suited to higher cutting speeds and feeds.
D8330	P20 - P35 M15 - M30 K15 - K35 S10 - S20	■ ■ ■ ◪				PVD		submicron H	+ + +	This is a universal grade for the peripheral insert in indexable drills, it can be used for most materials and stands out for it's operational reliability.
D8345	P30 - P50 M20 - M40 K30 - K40 S20 - S30	■ ■ ■ ◪				PVD		submicron H	+ + +	This grade is a universal grade for the central insert in indexable drills, it is an extremely tough suited to most materials.

Substrat	
submicron H	WC-Co based substrate fine grained (< 1 µm)
FGM	Functionally graded substrate

Coating	
MT-CVD	Medium-temperature chemical method of coating
PVD	Low-temperature physical method of coating

Benefits of Cutting Fluid	
+ + +	Use of coolant is essential



	1	2	3	4
ISO	S	C	E	T
ANSI	S	C	E	T

1 Insert shape

H	O	P	R
S	T	C 80°	D 55°
E 75°	M 86°	V 35°	W 80°
L	A 85°	B 82°	K 55°

2 Insert clearance angle

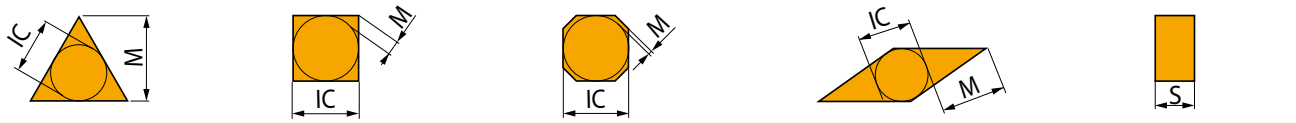
A	3°	B	5°
C	7°	D	15°
E	20°	F	25°
G	30°	N	0°
P	11°	O	Special

4 Insert type

N	
R	
F	
A	
M	
G	
W	40° – 60°
T	
Q	
U	
B	70° – 90°
H	
C	
J	
X	Special

3 Tolerances

	[mm]			[″]		
	M (±)	S (±)	IC (±)	M (±)	S (±)	IC (±)
A	0.005	0.025	0.025	.0002″	.001″	.0010″
F	0.005	0.025	0.013	.0002″	.001″	.0005″
C	0.013	0.025	0.025	.0005″	.001″	.0010″
H	0.013	0.025	0.013	.0005″	.001″	.0005″
E	0.025	0.025	0.025	.0010″	.001″	.0010″
G	0.025	0.130	0.025	.0010″	.005″	.0010″
J	0.005	0.025	0.05 – 0.13	.0002″	.001″	.002 – 0.005″
K	0.013	0.025	0.05 – 0.13	.0005″	.001″	.002 – 0.005″
L	0.025	0.025	0.05 – 0.13	.0010″	.001″	.002 – 0.005″
M	0.08 – 0.18	0.130	0.05 – 0.13	.003 – 0.007″	.005″	.002 – 0.005″
N	0.08 – 0.18	0.025	0.05 – 0.13	.003 – 0.007″	.001″	.002 – 0.005″
U	0.05 – 0.38	0.130	0.05 – 0.13	.005 – 0.015″	.005″	.003 – 0.010″

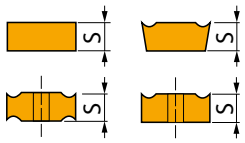


5	6	7	8	9		10
05	02	04			-	UD
1.8	1.5	1			-	UD

5 – Insert cutting edge length (insert size)

d=IC [mm]	[in]	H	O	P	S	T	C	D	E	M	V	W	R	K
3.97					03	06		04			06	02		
	5/32"	1.2												
4.76					04	08	04	05	04	04	08	L3		
	3/16"	1.5												
5.56					05	09	05	06	05	05	09	03		
	7/32"	1.8												
6.35		03	02	04	08	11	06	07	08	08	11	04	06	
	1/4"	2												
7.94		04	03	05	07	13	08	09	06	07	13	05	07	
	5/16"	2.5												
9.525		05	04	07	09	16	09	11	09	09	16	06	09	16
	3/8"	3												
12.7		07	05	09	12	22	12	15	13	12	22	08	12	
	1/2"	4												
15.875		09	06	11	15	27	16	19	16	15	27	10	15	
	5/8"	5												
19.05		11	07	13	19	33	19	23	19	19	33	13	19	
	3/4"	6												
25.40		14	10	18	25	44	25	31	26	25	44	17	25	
	1"	8												
31.75		18	13	23	31	54	32	38	32	31	54	21	31	
	1 1/4"	10												

6 – Insert thickness



	S [mm]	S ["]
01	1.59	1/16"
T1	1.98	5/64"
02	2.38	3/32"
03	3.18	1/8"
T3	3.97	5.32"
04	4.76	3/16"
05	5.56	7/32"
06	6.35	1/4"
07	7.94	5/16"
09	9.52	3/8"

7 – Insert nose radius

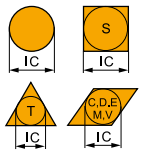
	RE [mm]	RE ["]
00	0	0"
02	0.2	1/128"
04	0.4	1/64"
08	0.8	1/32"
12	1.2	3/64"
16	1.6	1/16"
24	2.4	3/32"
32	3.2	1/8"

Round inserts

d=I.C.	
["]	00
[mm]	M0

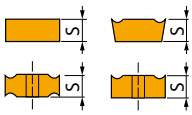
ANSI

5 – Inscribed circle



Symbol	d=I.C. [mm]	d=I.C. ["]
1	3.175	1/8"
1.2	3.969	5/32"
1.5	4.763	3/16"
1.8	5.556	7/32"
2	6.350	1/4"
2.5	7.938	5/16"
3	9.525	3/8"
4	12.700	1/2"
5	15.875	5/8"
6	19.050	3/4"
7	22.225	7/8"
8	25.400	1"
10	31.750	5/4"
12	38.100	6/4"

6 – Insert thickness



Symbol	S [mm]	S ["]
1	1.588	1/16"
1.2	1.984	5/64"
1.5	2.381	3/32"
2	3.175	1/8"
2.5	3.969	5/32"
3	4.763	3/16"
3.5	5.556	7/32"
4	6.350	1/4"
5	7.938	5/16"
6	9.525	3/8"
7	11.113	7/16"
8	12.700	1/2"
9	14.288	9/16"
10	15.875	5/8"

7 – Insert nose radius

Symbol	RE [mm]	RE ["]
0	0	0"
0.2	0.099	1/256"
0.5	0.198	1/128"
1	0.397	1/64"
2	0.794	1/32"
3	1.191	3/64"
4	1.588	1/16"
5	1.984	5/64"
6	2.381	3/32"
7	2.778	7/64"
8	3.175	1/8"
10	3.969	5/32"
12	4.763	3/16"
14	5.556	7/32"
16	6.350	1/4"

8 – Insert cutting edge design

F Sharp edges	E Rounded edges
T Edges with facet	S Rounded edges with facet
K Edges with double facet	P Rounded edges with double facet

9 – Feed direction

10 – Chip breaker designation

INDEXABLE DRILLS – CODE KEY

1	2	3		4		5		6	7
8	05	D	–	19	–	95	–	S	25

*Marking is valid for types produced from 2011

Indexable drill*

1	
Tool type	
8	Indexable drill

2	
Approximate length	
02	2 × DC
03	3 × DC
04	4 × DC
05	5 × DC

3	
Variant	
D	Drill

4	
Cutting diameter	
15.5	DC = 15.5 mm
19	DC = 19 mm

5	
Max. drilling depth	
35	35 mm
95	95 mm
140	140 mm

6	
Type of shank	
E	Whistle Notch
S	ISO 9766

7	
Shank diameter	
25	DCON MS = 25 mm
32	DCON MS = 32 mm
40	DCON MS = 40 mm

802D

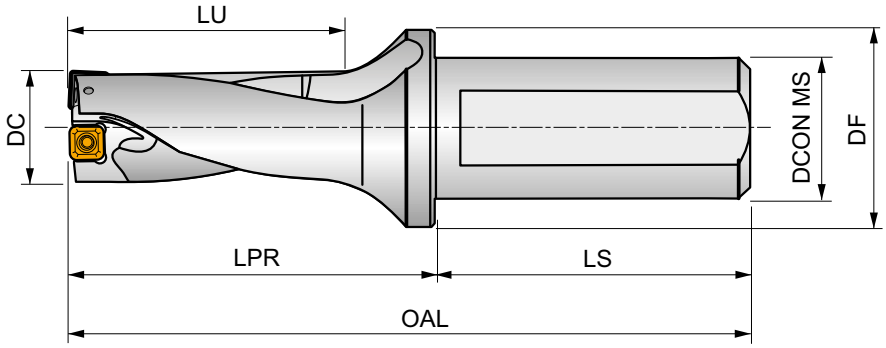
P M K N S H

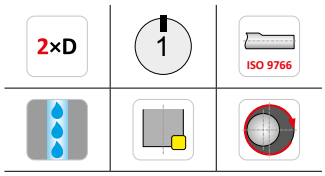
PRAMET

S

2xD 802D Indexable Insert Drill body with Internal Coolant Feed

High performance indexable insert drill body for drilling blind and through holes. Also, potentially cross hole, off center and stack drilling, helical interpolation, plunging, drilling on concave or angled surfaces, drilling with interrupted cuts, chamfer drilling and boring. Available from Ø15 up to Ø40 mm in 2xD.





Product	DC [mm]	APMX [mm]	OAL [mm]	LPR [mm]	LS [mm]	LU [mm]	DCON MS [mm]	DF [mm]	-D [mm]	D+ [mm]				kg	
802D-15-30-S25	15	30.00	121	65	56	34.5	25	35	0.25	0.35	EP253253	GI300	GI313	0.30	HM001
802D-16-32-S25	16	32.00	123	67	56	37	25	35	0.15	0.45	EP253253	GI300	GI313	0.30	HM001
802D-17-34-S25	17	34.00	125	69	56	39.5	25	35	0.10	0.50	EP253253	GI300	GI313	0.31	HM001
802D-18-36-S25	18	36.00	127	71	56	42	25	35	0.35	0.25	EP253253	GI301	GI314	0.31	HM002
802D-19-38-S25	19	38.00	129	73	56	44.5	25	35	0.15	0.45	EP253253	GI301	GI314	0.32	HM002
802D-20-40-S25	20	40.00	131	75	56	47	25	35	0.10	0.45	EP253253	GI302	GI315	0.33	HM003
802D-21-42-S25	21	42.00	133	77	56	49.5	25	35	0.10	0.50	EP253253	GI302	GI315	0.34	HM003
802D-22-44-S25	22	44.00	135	79	56	52	25	35	0.45	0.50	EP253253	GI303	GI316	0.35	HM004
802D-23-46-S25	23	46.00	137	81	56	54.5	25	35	0.35	0.50	EP253253	GI304	GI317	0.36	HM005
802D-24-48-S25	24	48.00	139	83	56	57	25	35	0.15	0.50	EP253253	GI304	GI317	0.37	HM005
802D-25-50-S32	25	50.00	145	85	60	57	32	42	0.15	0.50	EP324058	GI304	GI317	0.57	HM005
802D-26-52-S32	26	52.00	147	87	60	59.5	32	42	0.10	0.50	EP324058	GI304	GI317	0.58	HM005
802D-27-54-S32	27	54.00	149	89	60	62	32	42	0.50	0.30	EP324058	GI305	GI318	0.59	HM006
802D-28-56-S32	28	56.00	151	91	60	64.5	32	42	0.30	0.50	EP324058	GI306	GI319	0.61	HM007
802D-29-58-S32	29	58.00	153	93	60	67	32	42	0.20	0.50	EP324058	GI306	GI319	0.62	HM007
802D-30-60-S32	30	60.00	155	95	60	69.5	32	42	0.15	0.50	EP324058	GI306	GI319	0.67	HM007
802D-32-64-S32	32	64.00	159	99	60	70	32	42	0.50	0.35	EP324058	GI307	GI320	0.68	HM008
802D-32-64-S40	32	64.00	167	99	68	70	40	50	0.50	0.35	–	GI307	GI320	1.03	HM008
802D-34-68-S32	34	68.00	163	103	60	75	32	42	0.25	0.50	EP324058	GI307	GI320	0.73	HM008
802D-34-68-S40	34	68.00	171	103	68	75	40	50	0.25	0.50	–	GI307	GI320	1.07	HM008
802D-36-72-S32	36	72.00	167	107	60	80	32	42	0.10	0.50	EP324058	GI308	GI321	0.76	HM009
802D-36-72-S40	36	72.00	173	105	68	77.5	40	50	0.10	0.50	–	GI308	GI321	1.11	HM009
802D-38-76-S32	38	76.00	171	111	60	85	32	42	0.50	0.50	EP324058	GI308	GI321	0.83	HM009
802D-38-76-S40	38	76.00	179	111	68	85	40	50	0.50	0.50	–	GI308	GI321	1.17	HM009
802D-40-80-S32	40	80.00	175	115	60	90	32	42	0.20	0.50	EP324058	GI309	GI322	0.91	HM009
802D-40-80-S40	40	80.00	183	115	68	90	40	50	0.20	0.50	–	GI309	GI322	1.25	HM009

GI300	XPET 0502AP	SCET 050204-UD
GI301	XPET 0602AP	SCET 050204-UD
GI302	XPET 0602AP	SCET 060204-UD
GI303	XPET 0703AP	SCET 060204-UD
GI304	XPET 0703AP	SCET 070308-UD
GI305	XPET 0903AP	SCET 070308-UD
GI306	XPET 0903AP	SCET 09T308-UD
GI307	XPET 11T3AP	SCET 09T308-UD
GI308	XPET 11T3AP	SCET 120408-UD
GI309	XPET 12T3AP	SCET 120408-UD
GI313	XPET 0502AP-SD	SCET 050204-SD
GI314	XPET 0602AP-SD	SCET 050204-SD
GI315	XPET 0602AP-SD	SCET 060204-SD
GI316	XPET 0703AP-SD	SCET 060204-SD
GI317	XPET 0703AP-SD	SCET 070308-SD
GI318	XPET 0903AP-SD	SCET 070308-SD
GI319	XPET 0903AP-SD	SCET 09T308-SD
GI320	XPET 11T3AP-SD	SCET 09T308-SD
GI321	XPET 11T3AP-SD	SCET 120408-SD
GI322	XPET 12T3AP-SD	SCET 120408-SD

HM001	US 2245-T07P	0.9	US 2245-T07P	0.9	FLAG T07P
HM002	US 2205-T07P	0.9	US 2245-T07P	0.9	FLAG T07P
HM003	US 2205-T07P	0.9	US 2205-T07P	0.9	FLAG T07P
HM004	US 2506-T07P	1.2	US 2506-T07P	1.2	FLAG T07P
HM005	US 2507-T08P	1.2	US 3007-T08P	2.0	FLAG T08P
HM006	US 3007-T09P	2.0	US 3007-T09P	2.0	FLAG T09P
HM007	US 3007-T09P	2.0	US 3009-T09P	2.0	FLAG T09P
HM008	US 3510-T15P	3.0	US 3508-T15P	3.0	FLAG T15P
HM009	US 3510-T15P	3.0	US 5012-T15P	5.0	FLAG T15P

803D

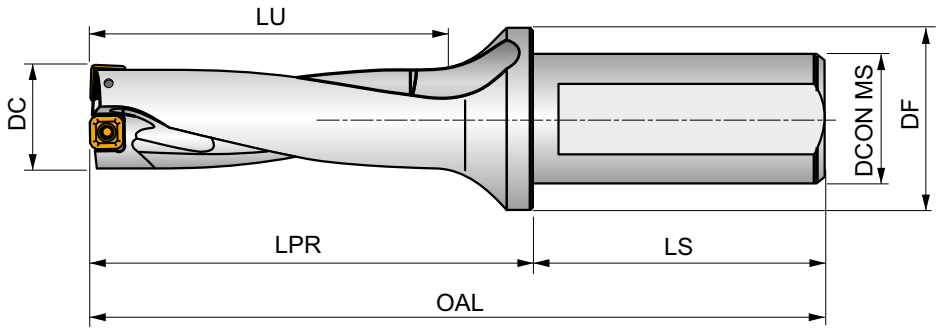
P M K N S H

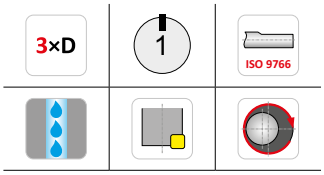
PRAMET

S

3xD 803D Indexable Insert Drill body with Internal Coolant Feed

High performance indexable insert drill body for drilling blind and through holes. Also, potentially cross hole, off center and stack drilling, helical interpolation, plunging, drilling on concave or angled surfaces, drilling with interrupted cuts, chamfer drilling and boring. Available from Ø15 up to Ø58 mm in 3xD.





Product	DC [mm]	APMX [mm]	OAL [mm]	LPR [mm]	LS [mm]	LU [mm]	DCON MS [mm]	DF [mm]	-D [mm]	D+ [mm]				kg	
803D-15-45-S25	15	45.00	136	80	56	49.5	25	35	0.25	0.35	EP253253	GI300	GI313	0.31	HM001
803D-15,5-46,5-S25	15.5	47.00	137.5	81.5	56	51.2	25	35	0.30	0.35	EP253253	GI300	GI313	0.31	HM001
803D-16-48-S25	16	48.00	139	83	56	53	25	35	0.15	0.45	EP253253	GI300	GI313	0.32	HM001
803D-16,5-49,5-S25	16.5	50.00	140.5	84.5	56	54.7	25	35	0.15	0.40	EP253253	GI300	GI313	0.32	HM001
803D-17-51-S25	17	51.00	142	86	56	56.5	25	35	0.10	0.50	EP253253	GI300	GI313	0.32	HM001
803D-17,5-52,5-S25	17.5	53.00	143.5	87.5	56	58.2	25	35	0.50	0.50	EP253253	GI301	GI314	0.32	HM002
803D-18-54-S25	18	54.00	145	89	56	60	25	35	0.35	0.25	EP253253	GI301	GI314	0.33	HM002
803D-18,5-55,5-S25	18.5	56.00	146.5	90.5	56	61.2	25	35	0.35	0.25	EP253253	GI301	GI314	0.34	HM002
803D-19-57-S25	19	57.00	148	92	56	63.5	25	35	0.15	0.45	EP253253	GI301	GI314	0.34	HM002
803D-19,5-58,5-S25	19.5	59.00	149.5	93.5	56	63.7	25	35	0.25	0.40	EP253253	GI302	GI315	0.34	HM003
803D-20-60-S25	20	60.00	151	95	56	67	25	35	0.10	0.45	EP253253	GI302	GI315	0.35	HM003
803D-20,5-61,5-S25	20.5	62.00	152.5	96.5	56	67.2	25	35	0.10	0.50	EP253253	GI302	GI315	0.36	HM003
803D-21-63-S25	21	63.00	154	98	56	70.5	25	35	0.10	0.50	EP253253	GI302	GI315	0.36	HM003
803D-21,5-64,5-S25	21.5	65.00	155.5	99.5	56	70.8	25	35	0.35	0.50	EP253253	GI303	GI316	0.37	HM004
803D-22-66-S25	22	66.00	157	101	56	74	25	35	0.45	0.50	EP253253	GI303	GI316	0.38	HM004
803D-22,5-67,5-S25	22.5	68.00	158.5	102.5	56	74.3	25	35	0.35	0.50	EP253253	GI304	GI317	0.39	HM005
803D-23-69-S25	23	69.00	160	104	56	77.5	25	35	0.35	0.50	EP253253	GI304	GI317	0.40	HM005
803D-23,5-70,5-S25	23.5	71.00	161.5	105.5	56	77.6	25	35	0.10	0.50	EP253253	GI304	GI317	0.40	HM005
803D-24-72-S25	24	72.00	163	107	56	81	25	35	0.15	0.50	EP253253	GI304	GI317	0.41	HM005
803D-24,5-73,5-S25	24.5	74.00	168.5	108.5	60	78.7	25	35	0.10	0.50	EP253253	GI304	GI317	0.42	HM005
803D-25-75-S32	25	75.00	170	110	60	82	32	42	0.15	0.50	EP324058	GI304	GI317	0.62	HM005
803D-25,5-76,5-S32	25.5	77.00	171.5	111.5	60	82.2	32	42	0.50	0.10	EP324058	GI304	GI317	0.63	HM005
803D-26-78-S32	26	78.00	173	113	60	85.5	32	42	0.10	0.50	EP324058	GI304	GI317	0.64	HM005
803D-26,5-79,5-S32	26.5	80.00	174.5	114.5	60	85.7	32	42	0.50	0.10	EP324058	GI305	GI318	0.65	HM006
803D-27-81-S32	27	81.00	176	116	60	89	32	42	0.50	0.30	EP324058	GI305	GI318	0.65	HM006
803D-28-84-S32	28	84.00	179	119	60	92.5	32	42	0.30	0.50	EP324058	GI306	GI319	0.68	HM007
803D-29-87-S32	29	87.00	182	122	60	96	32	42	0.20	0.50	EP324058	GI306	GI319	0.70	HM007

Product	DC [mm]	APMX [mm]	OAL [mm]	LPR [mm]	LS [mm]	LU [mm]	DCON MS [mm]	DF [mm]	-D [mm]	D+ [mm]				kg	
803D-30-90-S32	30	90.00	185	125	60	99.5	32	42	0.15	0.50	EP324058	GI306	GI319	0.73	HM007
803D-31-93-S32	31	93.00	188	128	60	103	32	42	0.15	0.50	EP324058	GI306	GI319	0.76	HM007
803D-32-96-S32	32	96.00	191	131	60	102	32	42	0.50	0.30	EP324058	GI307	GI320	0.79	HM008
803D-32-96-S40	32	96.00	199	131	68	102	40	50	0.50	0.30	–	GI307	GI320	1.14	HM008
803D-33-99-S32	33	99.00	194	134	60	105.5	32	42	0.50	0.50	EP324058	GI307	GI320	0.83	HM008
803D-33-99-S40	33	99.00	202	134	68	105.5	40	50	0.50	0.50	–	GI307	GI320	1.18	HM008
803D-34-102-S32	34	102.00	197	137	60	109	32	42	0.25	0.50	EP324058	GI307	GI320	0.86	HM008
803D-34-102-S40	34	102.00	205	137	68	109	40	50	0.25	0.50	–	GI307	GI320	1.12	HM008
803D-35-105-S32	35	105.00	200	140	60	112.5	32	42	0.25	0.50	EP324058	GI308	GI321	0.90	HM009
803D-35-105-S40	35	105.00	208	140	68	112.5	40	50	0.25	0.50	–	GI308	GI321	1.24	HM009
803D-36-108-S32	36	108.00	203	143	60	116	32	42	0.10	0.50	EP324058	GI308	GI321	0.91	HM009
803D-36-108-S40	36	108.00	211	143	68	116	40	50	0.10	0.50	–	GI308	GI321	1.25	HM009
803D-37-111-S32	37	111.00	206	146	60	119.5	32	42	0.10	0.50	EP324058	GI308	GI321	0.95	HM009
803D-37-111-S40	37	111.00	214	146	68	119.5	40	50	0.10	0.50	–	GI308	GI321	1.29	HM009
803D-38-114-S32	38	114.00	199	139	60	124.5	32	42	0.50	0.50	EP324058	GI308	GI321	1.00	HM009
803D-38-114-S40	38	114.00	217	149	68	123	40	50	0.50	0.50	–	GI308	GI321	1.34	HM009
803D-39-117-S32	38	114.00	209	149	60	123	32	42	0.40	0.50	EP324058	GI309	GI322	1.06	HM009
803D-39-117-S40	39	117.00	220	152	68	126.5	40	50	0.40	0.50	–	GI309	GI322	1.40	HM009
803D-40-120-S32	40	120.00	215	155	60	130	32	42	0.20	0.50	EP324058	GI309	GI322	1.12	HM009
803D-40-120-S40	40	120.00	223	155	68	130	40	50	0.20	0.50	–	GI309	GI322	1.46	HM009
803D-41-123-S40	41	123.00	219	149	70	133	40	50	0.20	0.50	–	GI309	GI322	1.48	HM009
803D-42-126-S40	42	126.00	221.5	152	70	136	40	50	0.15	0.50	–	GI309	GI322	1.52	HM009
803D-43-129-S40	43	129.00	224	154	70	139	40	50	0.10	0.50	–	GI309	GI322	1.58	HM009
803D-44-132-S40	44	132.00	226.5	157	70	142	40	50	0.50	0.50	–	GI310	GI323	1.63	HM010
803D-45-135-S40	45	135.00	230.5	161	70	144	40	55	0.50	0.50	–	GI311	GI324	1.73	HM010
803D-46-138-S40	46	138.00	235	165	70	148	40	55	0.50	0.50	–	GI311	GI324	1.82	HM010
803D-47-141-S40	47	141.00	237.5	168	70	151	40	55	0.50	0.50	–	GI311	GI324	1.90	HM010
803D-48-144-S40	48	144.00	240	170	70	154	40	55	0.50	0.50	–	GI311	GI324	1.98	HM010
803D-49-147-S40	49	147.00	242.5	173	70	157	40	55	0.30	0.50	–	GI311	GI324	2.06	HM010
803D-50-150-S40	50	150.00	246.5	177	70	160	40	58	0.15	0.50	–	GI311	GI324	2.18	HM010
803D-51-153-S40	51	153.00	249	179	70	163	40	58	0.15	0.50	–	GI311	GI324	2.24	HM010
803D-52-156-S40	52	156.00	251.5	182	70	166	40	58	0.50	0.50	–	GI312	GI325	2.20	HM010
803D-53-159-S40	53	159.00	254	184	70	169	40	58	0.50	0.50	–	GI312	GI325	2.29	HM010
803D-54-162-S40	54	162.00	257.5	188	70	173	40	58	0.50	0.50	–	GI312	GI325	2.39	HM010
803D-55-165-S40	55	165.00	260	190	70	176	40	58	0.50	0.50	–	GI312	GI325	2.46	HM010
803D-56-168-S40	56	168.00	264	194	70	179	40	58	0.50	0.50	–	GI312	GI325	2.59	HM010
803D-57-171-S40	57	171.00	266.5	197	70	182	40	58	0.35	0.50	–	GI312	GI325	2.70	HM010
803D-58-174-S40	58	174.00	270	200	70	186	40	58	0.15	0.50	–	GI312	GI325	2.83	HM010

GI300	XPET 0502AP	SCET 050204-UD
GI301	XPET 0602AP	SCET 050204-UD
GI302	XPET 0602AP	SCET 060204-UD
GI303	XPET 0703AP	SCET 060204-UD
GI304	XPET 0703AP	SCET 070308-UD
GI305	XPET 0903AP	SCET 070308-UD
GI306	XPET 0903AP	SCET 09T308-UD
GI307	XPET 11T3AP	SCET 09T308-UD
GI308	XPET 11T3AP	SCET 120408-UD
GI309	XPET 12T3AP	SCET 120408-UD
GI310	XPET 1504AP	SCET 120408-UD
GI311	XPET 1504AP	SCET 150512-UD
GI312	XPET 1904AP	SCET 150512-UD
GI313	XPET 0502AP-SD	SCET 050204-SD
GI314	XPET 0602AP-SD	SCET 050204-SD
GI315	XPET 0602AP-SD	SCET 060204-SD
GI316	XPET 0703AP-SD	SCET 060204-SD
GI317	XPET 0703AP-SD	SCET 070308-SD
GI318	XPET 0903AP-SD	SCET 070308-SD
GI319	XPET 0903AP-SD	SCET 09T308-SD

GI320	XPET 11T3AP-SD	SCET 09T308-SD
GI321	XPET 11T3AP-SD	SCET 120408-SD
GI322	XPET 12T3AP-SD	SCET 120408-SD
GI323	XPET 1504AP-SD	SCET 120408-SD
GI324	XPET 1504AP-SD	SCET 150512-SD
GI325	XPET 1904AP-SD	SCET 150512-SD

HM001	US 2245-T07P	0.9	US 2245-T07P	0.9	FLAG T07P
HM002	US 2205-T07P	0.9	US 2245-T07P	0.9	FLAG T07P
HM003	US 2205-T07P	0.9	US 2205-T07P	0.9	FLAG T07P
HM004	US 2506-T07P	1.2	US 2506-T07P	1.2	FLAG T07P
HM005	US 2507-T08P	1.2	US 3007-T08P	2.0	FLAG T08P
HM006	US 3007-T09P	2.0	US 3007-T09P	2.0	FLAG T09P
HM007	US 3007-T09P	2.0	US 3009-T09P	2.0	FLAG T09P
HM008	US 3510-T15P	3.0	US 3508-T15P	3.0	FLAG T15P
HM009	US 3510-T15P	3.0	US 5012-T15P	5.0	FLAG T15P
HM010	US 4011-T15P	3.5	US 5012-T15P	5.0	FLAG T15P

804D

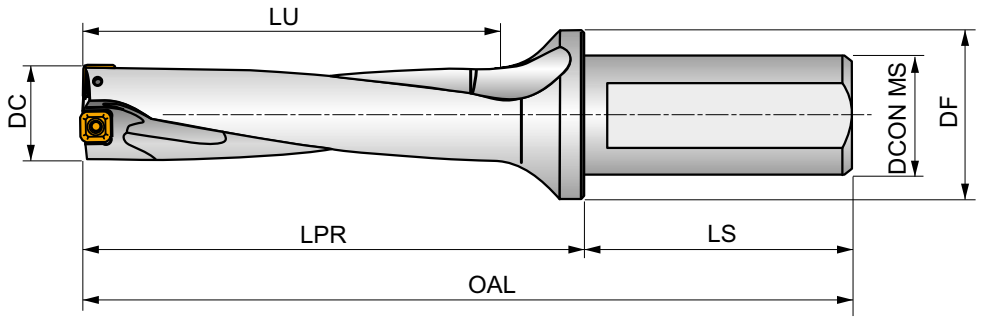
P M K N S H

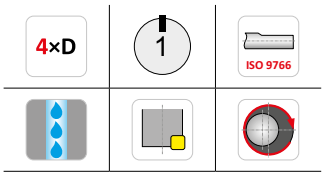
PRAMET

S

4xD 804D Indexable Insert Drill body with Internal Coolant Feed

High performance indexable insert drill body for drilling blind and through holes. Also, potentially cross hole, off center and stack drilling, helical interpolation, plunging, drilling on concave or angled surfaces, drilling with interrupted cuts, chamfer drilling and boring. Available from Ø17 up to Ø58 mm in 4xD.





Product	DC [mm]	APMX [mm]	OAL [mm]	LPR [mm]	LS [mm]	LU [mm]	DCON MS [mm]	DF [mm]	-D [mm]	D+ [mm]				kg	
804D-17-68-S25	17	68.00	149	93	56	73	25	35	0.10	0.50	–	GI300	GI313	0.34	HM001
804D-18-72-S25	18	72.00	153	97	56	77	25	35	0.35	0.25	–	GI301	GI314	0.35	HM002
804D-19-76-S25	19	76.00	157	101	56	81.5	25	35	0.15	0.45	–	GI301	GI314	0.36	HM002
804D-20-80-S25	20	80.00	161	105	56	85	25	35	0.10	0.45	–	GI302	GI315	0.37	HM003
804D-21-84-S25	21	84.00	165	109	56	89.5	25	35	0.10	0.50	–	GI302	GI315	0.39	HM003
804D-22-88-S25	22	88.00	169	113	56	94	25	35	0.45	0.50	–	GI303	GI316	0.41	HM004
804D-23-92-S25	23	92.00	173	117	56	98.5	25	35	0.35	0.50	–	GI304	GI317	0.44	HM005
804D-24-96-S25	24	96.00	177	121	56	103	25	35	0.15	0.50	–	GI304	GI317	0.45	HM005
804D-25-100-S32	25	100.00	185	125	60	105	32	42	0.15	0.50	–	GI304	GI317	0.67	HM005
804D-26-104-S32	26	104.00	189	129	60	109.5	32	42	0.10	0.50	–	GI304	GI317	0.70	HM005
804D-27-108-S32	27	108.00	193	133	60	114	32	42	0.50	0.30	–	GI305	GI318	0.71	HM006
804D-28-112-S32	28	112.00	197	137	60	118.5	32	42	0.30	0.50	–	GI306	GI319	0.75	HM007
804D-29-116-S32	29	116.00	201	141	60	123	32	42	0.20	0.50	–	GI306	GI319	0.78	HM007
804D-30-120-S32	30	120.00	205	145	60	127.5	32	42	0.15	0.50	–	GI306	GI319	0.82	HM007
804D-31-124-S32	31	124.00	209	149	60	132	32	42	0.15	0.50	–	GI306	GI319	0.85	HM007
804D-32-128-S32	32	128.00	213	153	60	136.5	32	42	0.50	0.30	–	GI307	GI320	0.90	HM008
804D-33-132-S32	33	132.00	217	157	60	141	32	42	0.50	0.50	–	GI307	GI320	0.95	HM008
804D-34-136-S32	34	136.00	221	161	60	145.5	32	42	0.25	0.50	–	GI307	GI320	0.99	HM008
804D-35-140-S32	35	140.00	225	165	60	149	32	42	0.25	0.50	–	GI308	GI321	1.04	HM009
804D-36-144-S32	36	144.00	229	169	60	153.5	32	42	0.10	0.50	–	GI308	GI321	1.05	HM009
804D-37-148-S32	37	148.00	233	173	60	158	32	42	0.10	0.50	–	GI308	GI321	1.11	HM009
804D-38-152-S32	38	152.00	237	177	60	162.5	32	42	0.50	0.50	–	GI308	GI321	1.18	HM009
804D-39-156-S32	39	156.00	241	181	60	167	32	42	0.40	0.50	–	GI309	GI322	1.25	HM009
804D-40-160-S32	40	160.00	245	185	60	171.5	32	42	0.20	0.50	–	GI309	GI322	1.33	HM009
804D-41-164-S40	41	164.00	259	189	70	172	40	50	0.20	0.50	–	GI309	GI322	1.68	HM009
804D-42-168-S40	42	168.00	263	193	70	176.5	40	50	0.15	0.50	–	GI309	GI322	1.76	HM009
804D-43-172-S40	43	172.00	267	197	70	181	40	50	0.10	0.50	–	GI309	GI322	1.83	HM009

Product	DC [mm]	APMX [mm]	OAL [mm]	LPR [mm]	LS [mm]	LU [mm]	DCON MS [mm]	DF [mm]	-D [mm]	D+ [mm]				kg	
804D-44-176-S40	44	176.00	271	201	70	185.5	40	50	0.50	0.50	–	GI310	GI323	1.91	HM010
804D-45-180-S40	45	180.00	275	205	70	187.5	40	55	0.50	0.50	–	GI311	GI324	2.02	HM010
804D-46-184-S40	46	184.00	279	209	70	192	40	55	0.50	0.50	–	GI311	GI324	2.12	HM010
804D-47-188-S40	47	188.00	283	213	70	196.5	40	55	0.50	0.50	–	GI311	GI324	2.22	HM010
804D-48-192-S40	48	192.00	287	217	70	201	40	55	0.50	0.50	–	GI311	GI324	2.33	HM010
804D-49-196-S40	49	196.00	291	221	70	205.5	40	55	0.30	0.50	–	GI311	GI324	2.45	HM010
804D-50-200-S40	50	200.00	295	225	70	208.5	40	58	0.15	0.50	–	GI311	GI324	2.58	HM010
804D-51-204-S40	51	204.00	299	229	70	213	40	58	0.15	0.50	–	GI311	GI324	2.68	HM010
804D-52-208-S40	52	208.00	303	233	70	217.5	40	58	0.50	0.50	–	GI312	GI325	2.64	HM010
804D-53-212-S40	53	212.00	307	237	70	222	40	58	0.50	0.50	–	GI312	GI325	2.76	HM010
804D-54-216-S40	54	216.00	311	241	70	226.5	40	58	0.50	0.50	–	GI312	GI325	2.90	HM010
804D-55-220-S40	55	220.00	315	245	70	231	40	58	0.50	0.50	–	GI312	GI325	3.00	HM010
804D-56-224-S40	56	224.00	319	249	70	235.5	40	58	0.50	0.50	–	GI312	GI325	3.15	HM010
804D-57-228-S40	57	228.00	323	253	70	240	40	58	0.35	0.50	–	GI312	GI325	3.30	HM010
804D-58-232-S40	58	232.00	327	257	70	244.5	40	58	0.15	0.50	–	GI312	GI325	3.46	HM010

GI300	XPET 0502AP	SCET 050204-UD
GI301	XPET 0602AP	SCET 050204-UD
GI302	XPET 0602AP	SCET 060204-UD
GI303	XPET 0703AP	SCET 060204-UD
GI304	XPET 0703AP	SCET 070308-UD
GI305	XPET 0903AP	SCET 070308-UD
GI306	XPET 0903AP	SCET 09T308-UD
GI307	XPET 11T3AP	SCET 09T308-UD
GI308	XPET 11T3AP	SCET 120408-UD
GI309	XPET 12T3AP	SCET 120408-UD
GI310	XPET 1504AP	SCET 120408-UD
GI311	XPET 1504AP	SCET 150512-UD
GI312	XPET 1904AP	SCET 150512-UD
GI313	XPET 0502AP-SD	SCET 050204-SD
GI314	XPET 0602AP-SD	SCET 050204-SD
GI315	XPET 0602AP-SD	SCET 060204-SD
GI316	XPET 0703AP-SD	SCET 060204-SD
GI317	XPET 0703AP-SD	SCET 070308-SD
GI318	XPET 0903AP-SD	SCET 070308-SD
GI319	XPET 0903AP-SD	SCET 09T308-SD
GI320	XPET 11T3AP-SD	SCET 09T308-SD
GI321	XPET 11T3AP-SD	SCET 120408-SD
GI322	XPET 12T3AP-SD	SCET 120408-SD
GI323	XPET 1504AP-SD	SCET 120408-SD
GI324	XPET 1504AP-SD	SCET 150512-SD
GI325	XPET 1904AP-SD	SCET 150512-SD

		Nm		Nm	
HM001	US 2245-T07P	0.9	US 2245-T07P	0.9	FLAG T07P
HM002	US 2205-T07P	0.9	US 2245-T07P	0.9	FLAG T07P
HM003	US 2205-T07P	0.9	US 2205-T07P	0.9	FLAG T07P
HM004	US 2506-T07P	1.2	US 2506-T07P	1.2	FLAG T07P
HM005	US 2507-T08P	1.2	US 3007-T08P	2.0	FLAG T08P
HM006	US 3007-T09P	2.0	US 3007-T09P	2.0	FLAG T09P
HM007	US 3007-T09P	2.0	US 3009-T09P	2.0	FLAG T09P
HM008	US 3510-T15P	3.0	US 3508-T15P	3.0	FLAG T15P
HM009	US 3510-T15P	3.0	US 5012-T15P	5.0	FLAG T15P
HM010	US 4011-T15P	3.5	US 5012-T15P	5.0	FLAG T15P

805D

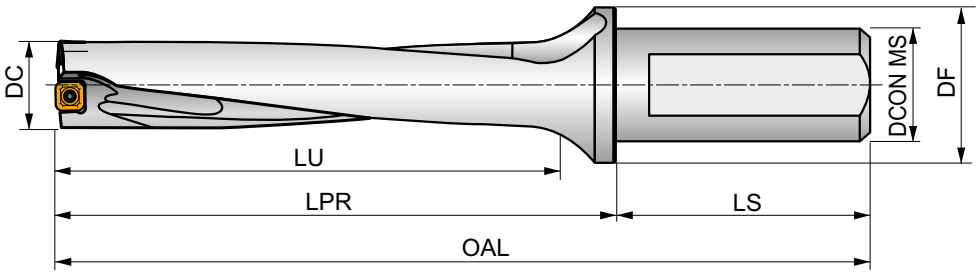
P M K N S H

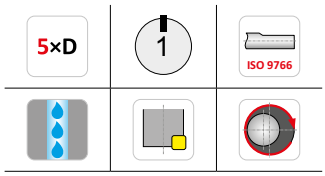
PRAMET

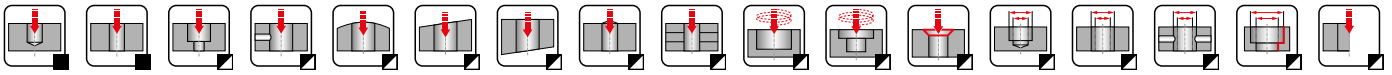
S

5xD 805D Indexable Insert Drill body with Internal Coolant Feed

High performance indexable insert drill body for drilling blind and through holes. Also, potentially cross hole, off center and stack drilling, helical interpolation, plunging, drilling on concave or angled surfaces, drilling with interrupted cuts, chamfer drilling and boring. Available from Ø19 up to Ø31 mm in 5xD.







	Product	DC [mm]	APMX [mm]	OAL [mm]	LPR [mm]	LS [mm]	LU [mm]	DCON MS [mm]	DF [mm]	-D [mm]	D+ [mm]				kg	
	805D-19-95-S25	19	95.00	176	120	56	100.5	25	35	0.15	0.45	–	GI301	GI314	0.38	HM002
	805D-20-100-S25	20	100.00	181	125	56	105	25	35	0.10	0.45	–	GI302	GI315	0.40	HM003
	805D-21-105-S25	21	105.00	186	130	56	110.5	25	35	0.10	0.50	–	GI302	GI315	0.42	HM003
	805D-22-110-S25	22	110.00	191	135	56	116	25	35	0.45	0.50	–	GI303	GI316	0.45	HM004
	805D-23-115-S25	23	115.00	196	140	56	121.5	25	35	0.35	0.50	–	GI304	GI317	0.48	HM005
	805D-24-120-S25	24	120.00	201	145	56	127	25	35	0.15	0.50	–	GI304	GI317	0.49	HM005
	805D-25-125-S32	25	125.00	210	150	60	130	32	42	0.15	0.50	–	GI304	GI317	0.72	HM005
	805D-26-130-S32	26	130.00	215	155	60	135.5	32	42	0.10	0.50	–	GI304	GI317	0.75	HM005
	805D-27-135-S32	27	135.00	220	160	60	141	32	42	0.50	0.30	–	GI305	GI318	0.78	HM006
	805D-28-140-S32	28	140.00	225	165	60	146.5	32	42	0.30	0.50	–	GI306	GI319	0.82	HM007
	805D-29-145-S32	29	145.00	230	170	60	152	32	42	0.20	0.50	–	GI306	GI319	0.86	HM007
	805D-30-150-S32	30	150.00	235	175	60	157.5	32	42	0.15	0.50	–	GI306	GI319	0.90	HM007
	805D-31-155-S32	31	155.00	240	180	60	163	32	42	0.15	0.50	–	GI306	GI319	0.95	HM007

GI301	XPET 0602AP	SCET 050204-UD
GI302	XPET 0602AP	SCET 060204-UD
GI303	XPET 0703AP	SCET 060204-UD
GI304	XPET 0703AP	SCET 070308-UD
GI305	XPET 0903AP	SCET 070308-UD
GI306	XPET 0903AP	SCET 09T308-UD
GI314	XPET 0602AP-SD	SCET 050204-SD
GI315	XPET 0602AP-SD	SCET 060204-SD
GI316	XPET 0703AP-SD	SCET 060204-SD
GI317	XPET 0703AP-SD	SCET 070308-SD
GI318	XPET 0903AP-SD	SCET 070308-SD

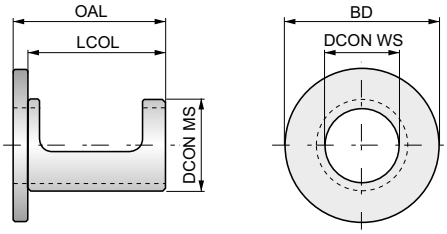
GI319	XPET 0903AP-SD	SCET 09T308-SD

HM002	US 2205-T07P	0.9	US 2245-T07P	0.9	FLAG T07P
HM003	US 2205-T07P	0.9	US 2205-T07P	0.9	FLAG T07P
HM004	US 2506-T07P	1.2	US 2506-T07P	1.2	FLAG T07P
HM005	US 2507-T08P	1.2	US 3007-T08P	2.0	FLAG T08P
HM006	US 3007-T09P	2.0	US 3007-T09P	2.0	FLAG T09P
HM007	US 3007-T09P	2.0	US 3009-T09P	2.0	FLAG T09P

EP

EP - Indexable Insert Drill Adjustment Sleeve

Sleeve to adjust indexable insert drill diameter. Can be used in Ø32 or Ø40 mm weldon tool holders. The outside drill diameter is adjusted by rotating the sleeve.

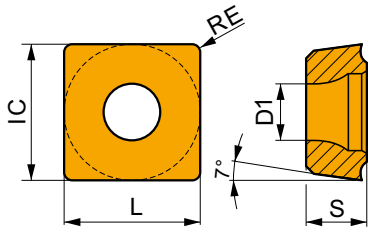


Diameter adjustment range is 0.4 – -0.2; center height adjustment range is 0.2 – -0.15.

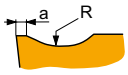
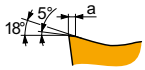
Product	DCON WS	DCON MS	BD	OAL	LCOL	kg
	[mm]	[mm]	[mm]	[mm]	[mm]	
EP253253	25.00	32.00	53.00	53.0	48	0.15
EP324058	32.00	40.00	58.00	58.0	53	0.20

SCET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
0502	5.556	2.40	5.56	2.38
0602	6.350	2.90	6.35	2.38
0703	7.937	3.50	7.94	3.18
09T3	9.525	4.50	9.53	3.97
1204	12.700	5.60	12.70	4.76
1505	15.875	5.60	15.88	5.56



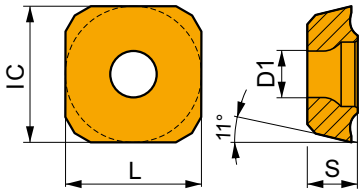
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
																				
		a	UD geometry with universal design for periphery inserts.																	
		SCET 050204-UD 0,12																		
		SCET 060204-UD 0,15																		
		SCET 070308-UD 0,15																		
		SCET 09T308-UD 0,15																		
		SCET 120408-UD 0,20																		
		SCET 150512-UD 0,20																		
SCET 050204-UD	**D8330**	0.4	■ 165	0.08	–	■ –	–	–	■ 155	0.08	–	–	–	–	–	–	–	–	–	–
	D9335	0.4	■ 240	0.08	–	■ –	–	–	■ 225	0.08	–	–	–	–	–	–	–	–	–	–
SCET 060204-UD	**D8330**	0.4	■ 165	0.11	–	■ –	–	–	■ 155	0.11	–	–	–	–	–	–	–	–	–	–
	D9335	0.4	■ 240	0.11	–	■ –	–	–	■ 225	0.11	–	–	–	–	–	–	–	–	–	–
SCET 070308-UD	**D8330**	0.8	■ 165	0.13	–	■ –	–	–	■ 155	0.13	–	–	–	–	–	–	–	–	–	–
	D9335	0.8	■ 240	0.13	–	■ –	–	–	■ 225	0.13	–	–	–	–	–	–	–	–	–	–
SCET 09T308-UD	**D8330**	0.8	■ 165	0.14	–	■ –	–	–	■ 155	0.14	–	–	–	–	–	–	–	–	–	–
	D9335	0.8	■ 240	0.14	–	■ –	–	–	■ 225	0.14	–	–	–	–	–	–	–	–	–	–
SCET 120408-UD	**D8330**	0.8	■ 165	0.16	–	■ –	–	–	■ 155	0.16	–	–	–	–	–	–	–	–	–	–
	D9335	0.8	■ 240	0.16	–	■ –	–	–	■ 225	0.16	–	–	–	–	–	–	–	–	–	–
SCET 150512-UD	**D8330**	1.2	■ 165	0.18	–	■ –	–	–	■ 155	0.18	–	–	–	–	–	–	–	–	–	–
	D9335	1.2	■ 240	0.18	–	■ –	–	–	■ 225	0.18	–	–	–	–	–	–	–	–	–	–
																				
		a	SD geometry with positive design for periphery inserts.																	
		SCET 050204-SD 0,04																		
		SCET 060204-SD 0,06																		
		SCET 070308-SD 0,08																		
		SCET 09T308-SD 0,10																		
		SCET 120408-SD 0,10																		
		SCET 150512-SD 0,10																		
SCET 050204-SD	**D8330**	0.4	■ 165	0.08	–	■ 95	0.07	–	◪ 155	0.08	–	–	–	–	◪ 40	0.06	–	–	–	–
	D9335	0.4	■ 240	0.08	–	■ 140	0.07	–	◪ 225	0.08	–	–	–	–	◪ 60	0.06	–	–	–	–
SCET 060204-SD	**D8330**	0.4	■ 165	0.11	–	■ 95	0.09	–	◪ 155	0.11	–	–	–	–	◪ 40	0.07	–	–	–	–
	D9335	0.4	■ 240	0.11	–	■ 140	0.09	–	◪ 225	0.11	–	–	–	–	◪ 60	0.07	–	–	–	–
SCET 070308-SD	**D8330**	0.8	■ 165	0.13	–	■ 95	0.11	–	◪ 155	0.13	–	–	–	–	◪ 40	0.09	–	–	–	–
	D9335	0.8	■ 240	0.13	–	■ 140	0.11	–	◪ 225	0.13	–	–	–	–	◪ 60	0.09	–	–	–	–
SCET 09T308-SD	**D8330**	0.8	■ 165	0.14	–	■ 95	0.13	–	◪ 155	0.14	–	–	–	–	◪ 40	0.10	–	–	–	–
	D9335	0.8	■ 240	0.14	–	■ 140	0.13	–	◪ 225	0.14	–	–	–	–	◪ 60	0.10	–	–	–	–
SCET 120408-SD	**D8330**	0.8	■ 165	0.16	–	■ 95	0.14	–	◪ 155	0.16	–	–	–	–	◪ 40	0.11	–	–	–	–
	D9335	0.8	■ 240	0.16	–	■ 140	0.14	–	◪ 225	0.16	–	–	–	–	◪ 60	0.11	–	–	–	–
SCET 150512-SD	**D8330**	1.2	■ 165	0.18	–	■ 95	0.16	–	◪ 155	0.18	–	–	–	–	◪ 40	0.12	–	–	–	–
	D9335	1.2	■ 240	0.18	–	■ 140	0.16	–	◪ 225	0.18	–	–	–	–	◪ 60	0.12	–	–	–	–

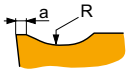
XPET

PRAMET

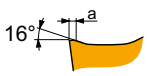
	IC [mm]	D1 [mm]	L [mm]	S [mm]
0502	5.556	2.40	5.56	2.38
0602	6.350	2.60	6.35	2.38
0703	7.937	2.90	7.94	3.18
0903	9.525	3.50	9.53	3.18
11T3	11.509	3.90	11.50	3.97
12T3	12.700	3.90	12.70	3.97
1504	15.875	4.50	15.88	4.76
1904	19.050	4.50	19.05	4.76



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
																				
		a																		
XPET 0502AP	D8345	0,10	■ 165	0.08	–	–	–	–	■ 155	0.08	–	–	–	–	–	–	–	–	–	–
XPET 0602AP	D8345	0,10	■ 165	0.11	–	–	–	–	■ 155	0.11	–	–	–	–	–	–	–	–	–	–
XPET 0703AP	D8345	0,15	■ 165	0.13	–	–	–	–	■ 155	0.13	–	–	–	–	–	–	–	–	–	–
XPET 0903AP	D8345	0,25	■ 165	0.14	–	–	–	–	■ 155	0.14	–	–	–	–	–	–	–	–	–	–
XPET 11T3AP	D8345	0,25	■ 165	0.16	–	–	–	–	■ 155	0.16	–	–	–	–	–	–	–	–	–	–
XPET 12T3AP	D8345	0,25	■ 165	0.16	–	–	–	–	■ 155	0.16	–	–	–	–	–	–	–	–	–	–
XPET 1504AP	D8345	0,25	■ 165	0.18	–	–	–	–	■ 155	0.18	–	–	–	–	–	–	–	–	–	–
XPET 1904AP	D8345	0,25	■ 165	0.18	–	–	–	–	■ 155	0.18	–	–	–	–	–	–	–	–	–	–

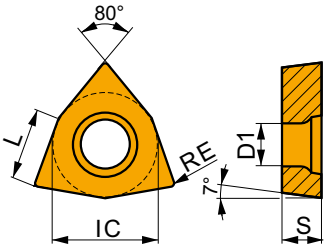
Geometry with universal design for central inserts.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
																				
		a																		
XPET 0502AP-SD	D8345	0,04	■ 165	0.08	–	■ 95	0.07	–	◪ 155	0.08	–	–	–	–	◪ 40	0.06	–	–	–	–
XPET 0602AP-SD	D8345	0,05	■ 165	0.11	–	■ 95	0.09	–	◪ 155	0.11	–	–	–	–	◪ 40	0.07	–	–	–	–
XPET 0703AP-SD	D8345	0,08	■ 165	0.13	–	■ 95	0.11	–	◪ 155	0.13	–	–	–	–	◪ 40	0.09	–	–	–	–
XPET 0903AP-SD	D8345	0,10	■ 165	0.14	–	■ 95	0.13	–	◪ 155	0.14	–	–	–	–	◪ 40	0.10	–	–	–	–
XPET 11T3AP-SD	D8345	0,10	■ 165	0.16	–	■ 95	0.14	–	◪ 155	0.16	–	–	–	–	◪ 40	0.11	–	–	–	–
XPET 12T3AP-SD	D8345	0,10	■ 165	0.16	–	■ 95	0.14	–	◪ 155	0.16	–	–	–	–	◪ 40	0.11	–	–	–	–
XPET 1504AP-SD	D8345	0,10	■ 165	0.18	–	■ 95	0.16	–	◪ 155	0.18	–	–	–	–	◪ 40	0.12	–	–	–	–
XPET 1904AP-SD	D8345	0,12	■ 165	0.18	–	■ 95	0.16	–	◪ 155	0.18	–	–	–	–	◪ 40	0.12	–	–	–	–

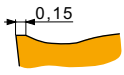
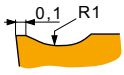
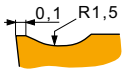
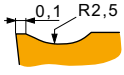
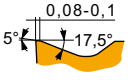
SD geometry with positive design for central inserts.

WCMT-ID

	IC [mm]	D1 [mm]	L [mm]	S [mm]
0402	6.350	2.90	4.30	2.38
0503	7.938	3.50	5.40	3.18
06T3	9.525	4.40	6.50	3.97
0804	12.700	5.50	8.70	4.76

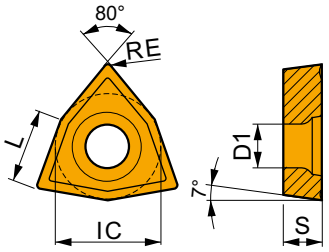


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

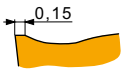
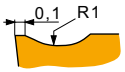
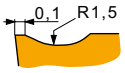
Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
																				
			Geometry 45 for finish to rough machining, and continuous to interrupted cuts.																	
WCMT 06T308E-45	**D8330**	0.8	■ 165	0.15	–	◪ 95	0.14	–	■ 155	0.15	–	–	–	–	–	–	–	–	–	–
																				
			Geometry 46 for fine to finish machining, and continuous to interrupted cuts.																	
WCMT 040208E-46	**D8330**	0.8	■ 165	0.15	–	◪ 95	0.14	–	■ 155	0.15	–	–	–	–	–	–	–	–	–	–
																				
			Geometry 47 for finish to semi-rough machining, and continuous to interrupted cuts.																	
WCMT 050308E-47	**D8330**	0.8	■ 165	0.20	–	◪ 95	0.18	–	■ 155	0.20	–	–	–	–	–	–	–	–	–	–
																				
			Geometry 48 for finish to semi-rough machining, and continuous to interrupted cuts.																	
WCMT 080412E-48	**D8330**	1.2	■ 165	0.22	–	◪ 95	0.22	–	■ 155	0.22	–	–	–	–	–	–	–	–	–	–
																				
			Geometry UM for finish to semi-rough machining, and continuous to slightly interrupted cuts.																	
WCMT 040208E-UM	**D8330**	0.8	■ 165	0.20	–	◪ 95	0.18	–	■ 155	0.20	–	–	–	–	–	–	–	–	–	–
WCMT 050308E-UM	**D8330**	0.8	■ 165	0.20	–	◪ 95	0.18	–	■ 155	0.20	–	–	–	–	–	–	–	–	–	–

WCMX

	IC [mm]	D1 [mm]	L [mm]	S [mm]
0302	5.556	2.85	3.80	2.38
0402	6.350	3.15	4.30	2.38
0503	7.938	3.20	5.40	3.18
06T3	9.525	3.72	6.50	3.97
0804	12.700	4.30	8.70	4.76

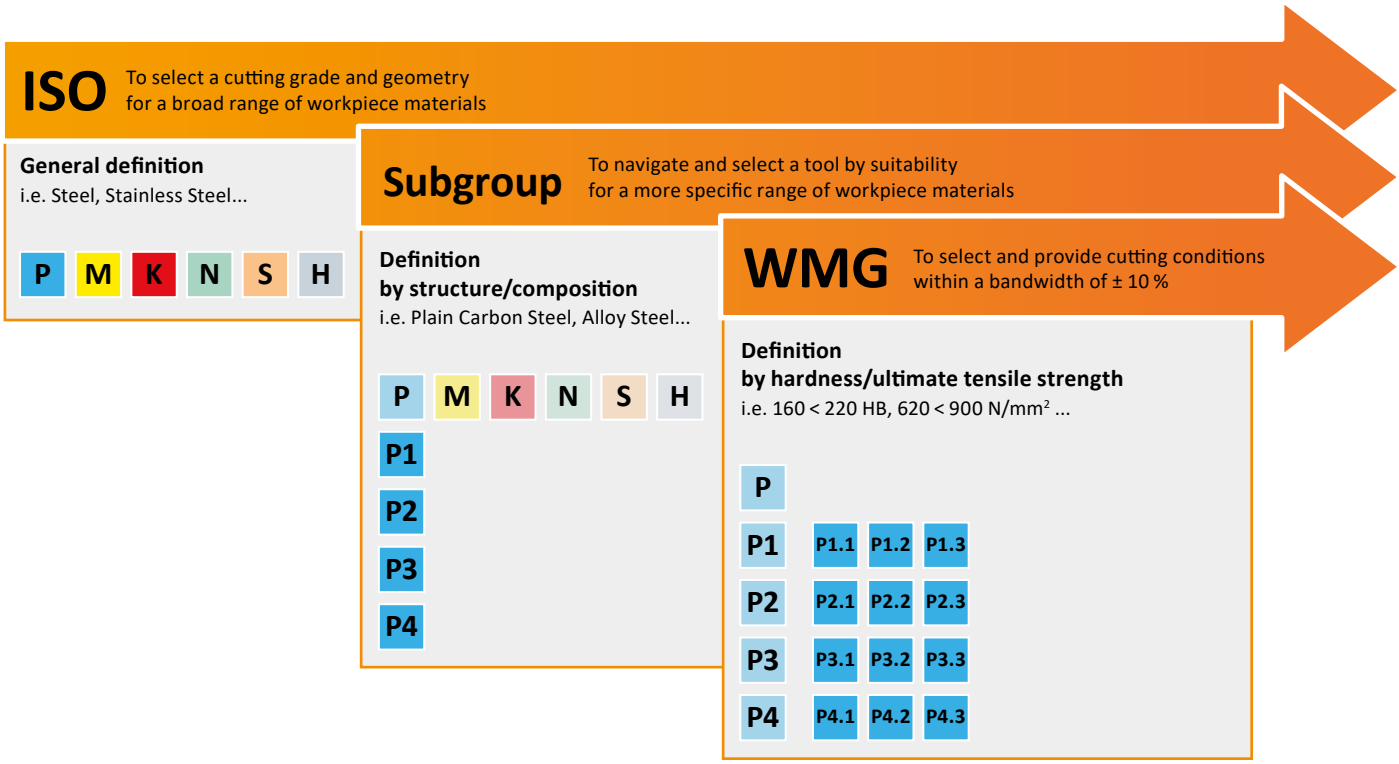


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
																				
Geometry 45 for finish to rough machining, and continuous to interrupted cuts.																				
WCMX 06T308E-45	**D8330**	0.8	■ 165	0.15	–	◪ 95	0.14	–	■ 155	0.15	–	–	–	–	–	–	–	–	–	–
																				
Geometry 46 for fine to finish machining, and continuous to interrupted cuts.																				
WCMX 030208E-46	**D8330**	0.8	■ 165	0.15	–	◪ 95	0.14	–	■ 155	0.15	–	–	–	–	–	–	–	–	–	–
WCMX 040208E-46	**D8330**	0.8	■ 165	0.15	–	◪ 95	0.14	–	■ 155	0.15	–	–	–	–	–	–	–	–	–	–
																				
Geometry 47 for finish to semi-rough machining, and continuous to interrupted cuts.																				
WCMX 050308E-47	**D8330**	0.8	■ 165	0.20	–	◪ 95	0.18	–	■ 155	0.20	–	–	–	–	–	–	–	–	–	–
Geometry 48 for finish to semi-rough machining, and continuous to interrupted cuts.																				
WCMX 080412E-48	**D8330**	1.2	■ 165	0.22	–	◪ 95	0.20	–	■ 155	0.22	–	–	–	–	–	–	–	–	–	–

INDEXABLE DRILLS
TECHNICAL INFORMATION

WORKPIECE MATERIAL GROUP (WMG)



ABOUT DORMER PRAMET'S WORKPIECE MATERIAL CLASSIFICATION

Workpiece **M**aterial **G**roups (**WMG**) are used to support easy and reliable selection of the right cutting tool and starting values for machining conditions in particular applications.
Dormer Pramet classifies workpiece materials into six different coloured groups;

- **Blue**: Steel and cast steel (P-group)
- **Yellow**: Stainless steel (M-group)
- **Red**: Cast iron (K-group)
- **Green**: Non-ferrous metals (N-group)
- **Brown**: High-temperature alloys (S-group)
- **Grey**: Hardened materials (H-group)

Each of these are divided into subgroups on the basis of their structure and/or composition. For example, P-group steel and cast steel is split into four subgroups, namely;

- **P1** – Free machining steel
- **P2** – Plain carbon steel
- **P3** – Alloy steel
- **P4** – Tool steel

A final division includes material properties, such as hardness and ultimate tensile strength. This is to provide our customers with a complete tool recommendation, including starting values for cutting speed and feed.
The table on the next page includes a description of each workpiece material group, as well as examples of commonly used designations.

ISO group		Subgroup		WMG (Work Material Group)		k_{vg}	Examples of material (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
P	**Steel and cast steel** (steels with alloy content ≤ 10 % and a hardness of < 45 HRC)	P1	Free machining steel (carbon steels with increased machinability)	P1.1	Free machining sulfurized carbon steel with a hardness of < 220 HB	1.33	AISI **1108,** EN **15S22,** DIN **1.0723,** SS **1922,** ČSN **11120,** BS **210A15,** UNE **F.210F,** GB **Y15,** AFNOR **10F1,** GOST **A30,** UNI **CF10S20**
				P1.2	Free machining sulfurized and phosphorized carbon steel with a hardness of < 180 HB	1.49	AISI **1211,** EN **11SMn30,** DIN **1.0715,** SS **1912,** ČSN **11109,** BS **230M7,** UNE **F.2111,** GB **Y15,** AFNOR **S250,** GOST **A40G,** UNI **CF9SMn28**
				P1.3	Free machining sulfurized/phosphorized and leaded carbon steel with a hardness of < 160 HB	1.53	AISI **12L13,** EN **11SMnPb30,** DIN **1.0718,** SS **1914,** ČSN **12110,** BS **210M16,** UNE **F.2114,** GB **Y15Pb,** AFNOR **S250Pb,** GOST **AS35G2,** UNI **CF10SPb20**
		P2	Plain carbon steel (steels comprised of mainly iron and carbon)	P2.1	Plain low carbon steel containing < 0.25 % C with a hardness of < 180 HB	1.14	AISI **1015,** EN **C15,** DIN **1.0401,** SS **1350,** ČSN **11301 ,** BS **080A15,** UNE **F.111,** GB **15,** AFNOR **C18RR,** GOST **St2ps,** UNI **Fe360**
				P2.2	Plain medium carbon steel containing < 0.55 %C with a hardness of < 240 HB	1.00	AISI **1030,** EN **C30,** DIN **1.0528,** SS **1550,** ČSN **12031,** BS **080M32,** UNE **F.1130,** GB **30,** AFNOR **AF50C30,** GOST **30G,** UNI **Fe590**
				P2.3	Plain high carbon steel containing > 0.55 % C, with a hardness of < 300 HB	0.89	AISI **1060,** EN **C60,** DIN **1.0601,** SS **1655,** ČSN **12061,** BS **080A62,** UNE **F513,** GB **60,** AFNOR **1C60,** GOST **60G,** UNI **C60**
		P3	Alloy steel (carbon steels with an alloying content ≤ 10 %)	P3.1	Alloy steel with a hardness of < 180 HB	0.92	AISI **5015,** EN **16Mo3,** DIN **1.5415,** SS **2912,** ČSN **15020,** BS **1501-240,** UNE **F.2601,** GB **16Mo,** AFNOR **15D3,** GOST **15M,** UNI **16Mo3KW**
				P3.2	Alloy steel with a hardness of 180 – 260 HB	0.74	AISI **4140,** EN **42CrMo4,** DIN **1.7225,** SS **2244,** ČSN **15142,** BS **708M40,** UNE **F.8232,** GB **42CrMo,** AFNOR **42CD4,** GOST **40ChFA,** UNI **42CrMo4**
				P3.3	Alloy steel with a hardness of 260 – 360 HB	0.63	AISI **4140,** EN **42CrMo4,** DIN **1.7225,** SS **2244,** ČSN **15142,** BS **708M40,** UNE **F.8232,** GB **42CrMo,** AFNOR **42CD4,** GOST **40ChFA,** UNI **42CrMo4**
		P4	Tool steel (special alloy steel for tools, dies and molds)	P4.1	Tool steel with a hardness of < 26 HRC	0.55	AISI **D2,** EN **X155CrVMo12-1,** DIN **1.2370,** SS **2736,** ČSN **19573,** BS **BD2,** UNE **F.520A,** GB **Cr12Mo1V1,** AFNOR **Z160CDV12,** GOST **Ch12MF,** UNI **X155CrVMo121KU**
				P4.2	Tool steel with a hardness of 26 – 39 HRC	0.47	AISI **D2,** EN **X155CrVMo12-1,** DIN **1.2370,** SS **2736,** ČSN **19573,** BS **BD2,** UNE **F.520A,** GB **Cr12Mo1V1,** AFNOR **Z160CDV12,** GOST **Ch12MF,** UNI **X155CrVMo121KU**
				P4.3	Tool steel with a hardness of 39 – 45 HRC	0.38	AISI **D2,** EN **X155CrVMo12-1,** DIN **1.2370,** SS **2736,** ČSN **19573,** BS **BD2,** UNE **F.520A,** GB **Cr12Mo1V1,** AFNOR **Z160CDV12,** GOST **Ch12MF,** UNI **X155CrVMo121KU**

ISO group		Subgroup		WMG (Work Material Group)		k_{vG}	Examples of material (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
M	**Stainless steel** (corrosion resistant steels with ≥ 11 % chromium content)	**M1**	Ferritic stainless steel (straight chromium non-hardenable alloys)	**M1.1**	Stainless steel, ferritic with a hardness of < 160 HB	**1.22**	AISI **S429,** EN **X7Cr14,** DIN **1.4001,** SS **2326,** BS **434S17,** UNE **F.3401,** AFNOR **Z8C12,** GOST **08Ch13,** UNI **X6CrTi12**
				M1.2	Stainless steel, ferritic with a hardness of 160 – 220 HB	**1.03**	AISI **446,** EN **X10CrAl24,** DIN **1.4762,** SS **2322,** ČSN **17113,** BS **430S17,** UNE **F.3154,** GB **10Cr17,** AFNOR **Z10CAS24,** GOST **12Ch17,** UNI **X16Cr26**
		M2	Martensitic stainless steel (straight chromium hardenable alloys)	**M2.1**	Stainless steel, martensitic with a hardness of < 200 HB	**1.08**	AISI **430F,** EN **X14CrMoS17,** DIN **1.4104,** SS **2383,** ČSN **17140,** BS **410S21,** UNE **F.3117,** AFNOR **Z10CF17,** UNI **X10CrS17**
				M2.2	Stainless steel, martensitic with a hardness of 200 – 280 HB	**0.89**	AISI **440C,** EN **X105CrMo17,** DIN **1.4125,** SS **2385,** ČSN **17023,** BS **425C11,** UNE **F.3402,** GB **102Cr17Mo,** AFNOR **Z100CD17,** GOST **95Ch18,** UNI **GX6CrNi 13 04**
				M2.3	Stainless steel, martensitic with a hardness of 280 – 380 HB	**0.75**	AISI **420,** EN **X45Cr13,** DIN **1.4034,** ČSN **17029,** BS **425C11,** UNE **F.3405,** AFNOR **Z44C14,** GOST **20X17H12,** UNI **X30Cr13**
		M3	Austenitic stainless steel (chromium-nickel and chromium-nickel-manganese alloys)	**M3.1**	Stainless steel, austenitic with a hardness of < 200 HB	**1.00**	AISI **304,** EN **X5CrNi18-12,** DIN **1.4303,** SS **2352,** ČSN **17249,** BS **305S17,** UNE **F.3513,** GB **10Cr18Ni12,** AFNOR **Z8CN18.12,** UNI **X7CrNi18 10**
				M3.2	Stainless steel, austenitic with a hardness of 200 – 260 HB	**0.86**	AISI **309,** EN **X15CrNiSi20-12,** DIN **1.4828,** ČSN **17251,** BS **309S24,** UNE **F.3312,** GB **1Cr23Ni13,** AFNOR **Z15CNS20.12,** GOST **20Ch20N14S2,** UNI **16CrNi23 14**
				M3.3	Stainless steel, austenitic with a hardness of 260 – 300 HB	**0.77**	AISI **5848,** EN **X45CrNiW18-9,** DIN **1.4873,** BS **331S40,** UNE **F.3211,** AFNOR **Z35CNWS14-4,** UNI **X45CrNiW 18 9**
		M4	Super-austenitic, Duplex or Precipitation Hardening stainless steel (austenitic alloys with > 20 % Ni, austenitic-ferritic microstructure or precipitation hardened)	**M4.1**	Stainless steel, austenitic-ferritic or super-austenitic with a hardness of < 300 HB	**0.75**	AISI **329,** EN **X1-NiCrMoCU25-20-5,** DIN **1.4539,** SS **2562,** ČSN **17265,** BS **318S13,** UNE **F.3552,** GB **022Cr25NiMo2N,** AFNOR **Z1NCDU25.20**
				M4.2	Stainless steel, precipitation hardening austenitic with a hardness of 300 – 380 HB	**0.64**	AISI **631 (17-7PH),** EN **X7CrNiAL17-7,** DIN **1.4568,** SS **2388,** ČSN **17465 ,** BS **301S13,** UNE **F.3217,** GB **07Cr17Ni7Al,** AFNOR **29CNA17-07,** GOST **09Ch17N7Ju1,** UNI **X53CrMnNiN21 9**

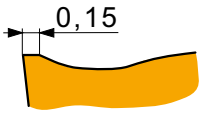
ISO group		Subgroup		WMG (Work Material Group)		k_{vG}	Examples of material (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
K	**Cast Iron** (castings of iron and carbon alloys with > 2 % carbon content)	**K1**	Gray iron (GG) (iron-carbon castings with a lamellar graphite microstructure)	**K1.1**	Gray iron, ferritic or ferritic-pearlitic with a hardness of < 180 HB	**1.35**	ASTM **A48 Grade 20 (F11401),** EN-**JL-100,** DIN **GG-10 (0.6010),** SS **0110,** STN **422410,** BS **Grade 150,** UNE **FG10,** GB **HAT 100,** AFNOR **Ft10D,** GOST **SC 10,** UNI **G10**
				K1.2	Gray iron, ferritic-pearlitic or pearlitic with a hardness of 180 – 240 HB	**1.00**	ASTM **A48 Grade 30 (F12101),** EN-**JL-1030,** DIN **GG-20 (0.6020),** SS **0120,** STN **422420,** BS **Grade 220,** UNE **FG20,** GB **HT200,** AFNOR **Ft20D,** GOST **СЧ20,** UNI **G20**
				K1.3	Gray iron, pearlitic with a hardness of 240 – 280 HB	**0.75**	ASTM **A48 Grade 50 (F13501),** EN-**JL-1060,** DIN **GG-35 (0.6035),** SS **0135,** STN **422435,** BS **Grade 350,** UNE **FG35,** GB **HAT300,** AFNOR **Ft35D,** GOST **SC35,** UNI **G35**
		K2	Malleable iron (GTS/GTW) (heat-treated iron-carbon castings with a graphite-free microstructure)	**K2.1**	Malleable iron, ferritic with a hardness of < 160 HB	**1.39**	ASTM **A602 Grade M3210 (F20000),** EN-**JM-1130,** DIN **GTS-35 (0.8135),** SS **0815,** BS **B340/12,** UNE **Type A,** AFNOR **MN 35-10,** GOST **КЧ35-10**
				K2.2	Malleable iron, ferritic or pearlitic with a hardness of 160 – 200 HB	**1.13**	ASTM **A602 Grade M4504 (F20001),** EN-**JM-1040,** DIN **GTS-50-05 (0.8045),** BS **P50-05,** AFNOR **MB 45-7**
				K2.3	Malleable iron, pearlitic with a hardness of 200 – 240 HB	**0.90**	ASTM **A602 Grade M7002 (F20004),** EN-**JM-1140,** DIN **GTS-45 (0.8145),** SS **0854,** STN **422540,** BS **P 45-06,** UNE **Typ B,** AFNOR **MP 50-5,** GOST **КЧ45-7,** UNI **GMN 45**
		K3	Ductile iron (GGG) (iron-carbon castings with a nodular graphite microsturcture)	**K3.1**	Ductile (nodular/spheriodal) iron, ferritic with a hardness of < 180 HB	**1.23**	ASTM **A536 Grade 60-40-18 (F32800),** EN-**JS-1030,** DIN **GGG-40 (0.7040),** SS **0717,** STN **422304,** BS **420/12,** UNE **FGE 42-12,** GB **QT 400,** AFNOR **FGS 400-12,** GOST **ВЧ40**
				K3.2	Ductile (nodular/spheriodal) iron, ferritic or pearlitic with a hardness of 180 – 220 HB	**0.94**	ASTM **A536 Grade 80-55-06 (F33800),** EN-**JS-1050,** DIN **GGG-50 (0.7050),** SS **0727,** STN **422305,** BS **500/7,** UNE **FGE 50-7,** GB **QT 500-7,** AFNOR **FGS 500-7,** GOST **ВЧ50**
				K3.3	Ductile (nodular/spheriodal) iron, pearlitic with a hardness of 220 – 260 HB	**0.76**	ASTM **A536 Grade 100-70-03 (F34800),** EN-**JS-1060,** DIN **GGG-60 (0.7060),** SS **0732,** STN **422306,** BS **600/3,** UNE **FG70-2,** GB **QT 600-3,** AFNOR **FGS 600-3,** GOST **ВЧ60**
		K4	Austenitic or austempered ductile iron (Ni-Resist/ADI) (iron-carbon alloy castings with an austenitic or ausferrite microstructure)	**K4.1**	Austenitic cast iron with a hardness of < 180 HB	**1.14**	ASTM **A436 Type 1 (L-NiCuCr 15 6 2, F41000),** EN-**JL-3011,** DIN **GGL-NiMn 13 7 (0.6652),** SS **0523,** BS **Grade F1,** AFNOR **FGL-Ni13Mn7,** GOST **S-NiMn 13 7**
				K4.2	Austenitic cast iron with a hardness of 180 – 240 HB	**0.86**	ASTM **A439 Type D-2B (S-NiCr 20 3, F43001),** EN-**JS-3021,** DIN **GGG-NiMn 23 4,** SS **0776,** BS **Grade S2M,** AFNOR **FGS Ni23 Mn4,** GOST **ЧН19Х3Ш**
				K4.3	Austempered ductile iron with a hardness of 240 – 280 HB	**0.63**	ASTM **A897 Grade 110-70-11**
				K4.4	Austempered ductile iron with a hardness of 280 – 320 HB	**0.54**	ASTM **A897 Grade 125-80-10,** EN-**JS-1100,** DIN **GGG-90 (5.3400)**
				K4.5	Austempered ductile iron with a hardness of 320 – 360 HB	**0.45**	ASTM **A897 Grade 2 (150-110-07),** EN-**JS-1110,** DIN **GGG-100 (5.3403)**
		K5	Compacted graphite iron (CGI) (iron-carbon castings with a vermicular graphite structure)	**K5.1**	Vermicular, compacted graphite iron with a hardness of < 180 HB	**1.29**	ASTM **A842 Grade 300,** EN-**GJV-300,** DIN **GGV 30,** GOST **ЧВГ30,**
				K5.2	Vermicular, compacted graphite iron with a hardness of 180 – 220 HB	**0.97**	ASTM **A842 Grade 350,** EN-**GJV-350,** DIN **GGV 35 (5.2200),** GOST **ЧВГ30,**
				K5.3	Vermicular, compacted graphite iron with a hardness of 220 – 260 HB	**0.75**	ASTM **A842 Grade 450,** EN-**GJV-450,** DIN **GGV 45,** GOST **ЧВГ45,**

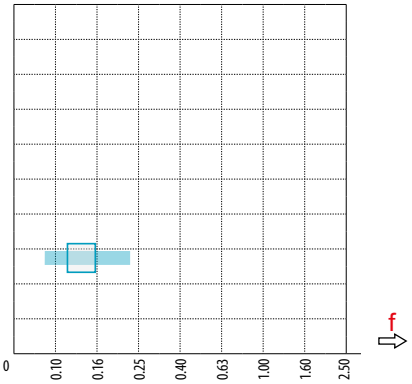
ISO group		Subgroup		WMG (Work Material Group)		k_{vG}	Examples of material (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
N	**Non-ferrous metals** (metals including alloys without an appreciable amount of iron)	**N1**	Wrought aluminium	**N1.1**	Pure aluminium and wrought aluminium alloys with a hardness of < 60 HB	1.33	UNS **A91200,** EN **AL99.6,** DIN **3.0205,** SS **4010,** STN **424009,** BS **1C,** UNE **L-3001,** GB **L5,** AFNOR **A4,** GOST **АДС,** UNI **3567**
				N1.2	Wrought aluminium alloys with a hardness of 60 – 100 HB	1.00	UNS **A93004,** EN **AlMn0.5Mg0.5,** DIN **3.0505,** SS **4054,** STN **424432,** BS **N31,** UNE **L-3831,** GB **LF2,** AFNOR **A-M1,** GOST **АМц,** UNI **3568**
				N1.3	Wrought aluminium alloys with a hardness of 100 – 150 HB	0.67	UNS **A95083,** EN **AlMg4.5Mn0.7,** DIN **3.3547,** SS **4140,** STN **424415,** BS **N8,** UNE **L-3321,** GB **AlMg4.5Mn,** AFNOR **A-G4.5Mn,** GOST **Amg 4.5,** UNI **P-AlMg4.4**
		N2	Cast aluminium	**N2.1**	Cast aluminium alloys with a hardness of < 75 HB	0.67	UNS **A02080,** EN **AlCu4S,** BS **LM11,** STN **424331,** UNE **Al Si1Cu,** GOST **AMg5K,** UNI **G-AlSi7Mg**
				N2.2	Cast aluminium alloys with a hardness of 75 – 90 HB	0.60	UNS **A02420,** EN **AlCu4Ni2Mg2,** SS **AlSi7MgFe,** BS **LM6,** STN **424519,** UNE **Al-7SiMg,** AFNOR **A-S7G,** GOST **АК7,** UNI **G-AlSi7Mg**
				N2.3	Cast aluminium alloys with a hardness of 90 < 140 HB	0.43	UNS **A03360,** EN **G-ALCu4NiMg2,** SS **ALSi10Mg,** STN **424336,** BS **LM 30,** AFNOR **A-S10G,** UNI **G-AlSi9Mg**
		N3	Copper or copper alloys	**N3.1**	Free-cutting copper-alloys materials with excellent machining properties	0.70	UNS **C14700,** EN **CuPb1P,** DIN **2.1498,** STN **423214,** BS **C111,** AFNOR **CuZn35Pb2,** GOST **L63-3,** UNI **CuS(P0.01)**
				N3.2	Short-chip copper-alloys with good to moderate machining properties	0.41	UNS **C81540,** EN **CuNi2SiCr,** DIN **2.0857,** STN **423220,** BS **NS113,** UNE **CuSn12,** AFNOR **CuZn40,** GOST **L60,** UNI **P-CuZn-40**
				N3.3	Electrolytic copper and long-chip copper-alloys with moderate to poor machining properties	0.21	UNS **C10100,** EN **CuAg0.1,** DIN **2.1203,** SS **5010,** UNE **CUSi3Mn1,** AFNOR **Cu-C2,** GOST **М1f,** UNI **Cu-OF**
		N4	Polymers (synthetic or semi-synthetic materials)	**N4.1**	Thermoplastic polymers	0.70	ABS, Acryl, Duraplast, Elastomer, EP, Epoxid, FEP, Fluor, Gummi, Kautschuk, Latex, MF, MPF, PA, PAI, PC, PE, PEEK, PEI, PES, PET, PF, Phenolharze, PI, PMMA, Polyamide, Polyester, Polyolefine, Polysulfon, POM, PP, PPE, PPS, PS, PSU, PTFE, PU, PUR, PVDF, SAN, SI, Styrol, UF, Ureol
				N4.2	Thermosetting polymers	0.27	Aramid, Epoxy, Fluoropolymer, Mehacrylate, Melamine, Phenolic, Polyester, Polyimide, Polymethacrylimide, Polyurethane
				N4.3	Reinforced polymers or composites	0.29	CFK, GFK, GMT, Honeycomb, Kevlar, LFT, Organo, SMC
		N5	Graphite	**N5.1**		1.0	CGM-1, CM-00, GM-10, GM-11, GR030, GR030PI, GR060, GR060PI, GR125, MC-01, MC-01RO, MC-03, MC-03M, IG11, IG-15, IG-32, IG-43, IG-45, IG-70, ISEM-1, ISEM-2, ISEM-3, R8340, R8500X, Technograph 15, Technograph 30, ISO-63, EDM C-3, EDM1, EDM3, ISO-90, ISO-93, ISO-95, R8510, R8650,

ISO group		Subgroup		WMG (Work Material Group)		k_{vG}	Examples of material (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
S	**High-temperature alloys** (superalloys with high temperature stength and corrosion resistant surpassing that of stainless steel)	**S1**	Titanium or titanium alloys	**S1.1**	Titanium or titanium alloys, with a hardness of <200 HB	1.94	UNS **R50250 (Grade 1),** EN **Ti 99.6,** DIN **3.7035,** BS **TA.2,** UNE **Ti-Po2,** AFNOR **T-40,** GOST **BT1-00,** AISI **R50250, 3.7025, T35, 2TA1, R50400, 3.7035, 2TA2,**
				S1.2	Titanium alloys, with a hardness of 200 – 280 HB	1.72	UNS **R56404 (Grade 29),** EN **Ti2Cu,** DIN **3.7124,** BS **TA.21,** UNE **Ti-P11,** AFNOR **T-U2 ,** AISI **TA6V, Ti-6Al-4V, Ti 10.2.3, Ti5553**
				S1.3	Titanium alloys, a hardness of 280 – 360 HB	1.44	UNS **R54250 (Grade 38),** EN **TiAl6V4,** DIN **3.7165,** ČSN **TiAl6VELI,** BS **TA. 13,** UNE **Ti-P63,** AFNOR **T-A6V,** GOST **BT6,** AISI **TA6V, Ti-6Al-4V, Ti 10.2.3, Ti5553**
		S2	Fe-based high-temperature alloys	**S2.1**	High-temperature Fe-based alloys with a hardness of <200 HB	1.33	UNS **N08801 (Incoloy 801),** EN **X8 NiCrAlTi31-21,** DIN **1.4959,** BS **NA 15,** AFNOR **Z8NC33-21,** AISI **A-286, Discaloy, Haynes 556, Iconel 909, Greek Ascolloy**
				S2.2	High-temperature Fe-based alloys with a hardness of 200 – 280 HB	1.17	UNS **N19907,** EN **X6NiCrTiMoVB25-15-2,** DIN **1.4980,** SS **2570,** BS **HR52,** AFNOR **Z6NCTDV25.15B,** GOST **36НХТЮ,** AISI **A-286, Discaloy, Haynes 556, Iconel 909, Greek Ascolloy**
		S3	Ni-based high-temperature alloys	**S3.1**	High-temperature Ni-based alloys with a hardness of <280 HB	1.00	UNS **A09706 (Inconel 706),** EN **NiCr25FeAl,** DIN **2.4856,** BS **HR 6,** ČSN **Inconel 625,** UNE **F.3313,** GB **1Cr16Ni35,** AFNOR **NC22FeDNB,** GOST **ХН38ВТ,** AISI **Inconel 718, 706 Waspalloy, Udimet 720, Inconel 625**
				S3.2	High-temperature Ni-based alloys with a hardness of 280 – 360 HB	0.83	UNS **N07001,** EN **NiCr20Co13Mo4Ti3Al,** DIN **2.4654,** BS **HR 2,** ČSN **Waspaloy,** AFNOR **NCKD 20ATV,** GOST **ХН80ТБЮ,** AISI **Inconel 718, 706 Waspalloy, Udimet 720, Inconel 625**
		S4	Co-based high-temperature alloys	**S4.1**	High-temperature Co-based alloys with a hardness of <240 HB	0.78	UNS **R30016 (Stellite 6b),** EN **CoCr20W15Ni,** DIN **2.4964,** AFNOR **KC 20 WN,** GOST **ЛК52,** AISI **Haynes 25, Stellite 21, 31**
				S4.2	High-temperature Co-based alloys with a hardness of 240 – 320 HB	0.67	UNS **R30016 (Stellite 6b),** EN **CoCr20W15Ni,** DIN **2.4964,** AFNOR **KC 20 WN,** GOST **ЛК52,** AISI **Haynes 25, Stellite 21, 31**

ISO group		Subgroup		WMG (Work Material Group)		k_{vG}	Examples of material (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
H	**Hardened materials** (any engineering metal with a hardness > 45 HRC)	**H1**	Chilled cast iron	**H1.1**	Chilled cast iron with a hardness of < 440 HB	**1.52**	UNS **F45001,** EN-**GJS-1050-6,** DIN **5.3406,** SS **0512,** BS **Grade 2A**
		H2	Hardened cast iron	**H2.1**	Hardened cast iron with a hardness < 55 HRC	**0.90**	UNS **F45003,** EN-**GJS-1400-1,** DIN **5.3405,** SS **0457,** BS **Grade 3D**
				H2.2	Hardened cast iron with a hardness > 55 HRC	**0.77**	UNS **F45003,** EN **G-X260NiCr4-2,** DIN **0.9620,** SS **0466,** BS **Grade S**
		H3	Hardened steel < 55 HRC	**H3.1**	Hardened steel with a hardness of < 51 HRC	**1.00**	AISI **4135,** EN **34CrMo4,** DIN **1.7220,** SS **2234,** STN **415131,** BS **198,** UNE **F.1250,** GB **35CrMo,** AFNOR **35CD4,** GOST **АС38ХГМ,** UNI **35CrMo4KB**
				H3.2	Hardened steel with a hardness of 51 – 55 HRC	**0.82**	AISI **4135,** EN **34CrMo4,** DIN **1.7220,** SS **2234,** STN **415131,** BS **198,** UNE **F.1250,** GB **35CrMo,** AFNOR **35CD4,** GOST **АС38ХГМ,** UNI **35CrMo4KB**
		H4	Hardened steel > 55 HRC	**H4.1**	Hardened steel with a hardness of 55 – 59 HRC	**0.64**	UNS **T31501,** EN **100MnCrW4,** DIN **1.2510,** SS **2140,** STN **419413,** BS **BO1,** UNE **F.5220,** GB **9CrWMn,** AFNOR **90MWCrV5,** GOST **9ХВГ,** UNI **95MNWCr5KU**
				H4.2	Hardened steel with a hardness of > 59 HRC	**0.54**	UNS **T31501,** EN **100MnCrW4,** DIN **1.2510,** SS **2140,** STN **419413,** BS **BO1,** UNE **F.5220,** GB **9CrWMn,** AFNOR **90MWCrV5,** GOST **9ХВГ,** UNI **95MNWCr5KU**

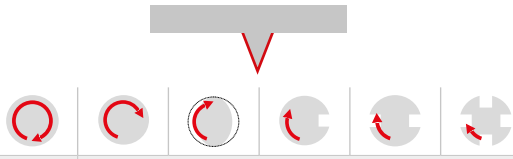
45





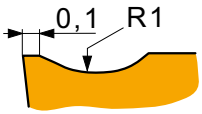
P	M	K	N	S	H
■	◪	■			

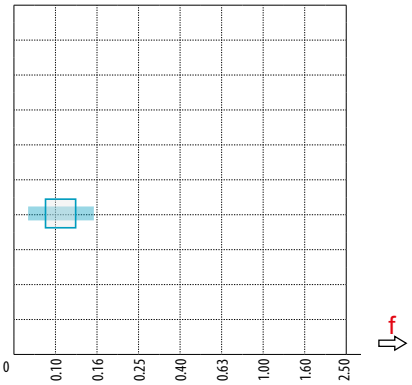
f ⇨ See diagram



? **WCMT 06, WCMX 06**

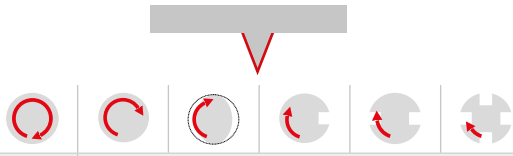
46





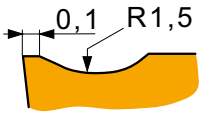
P	M	K	N	S	H
■	◪	■			

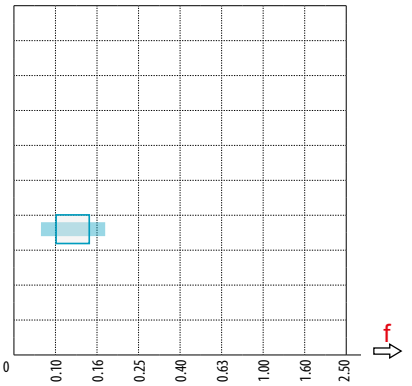
f ⇨ See diagram



? **WCMT 04, WCMX 03, WCMX 04**

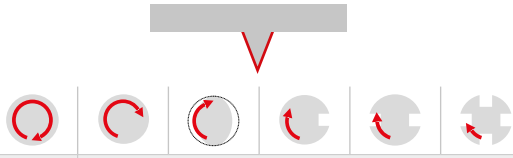
47





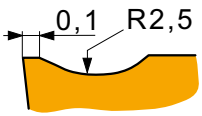
P	M	K	N	S	H
■	◪	■			

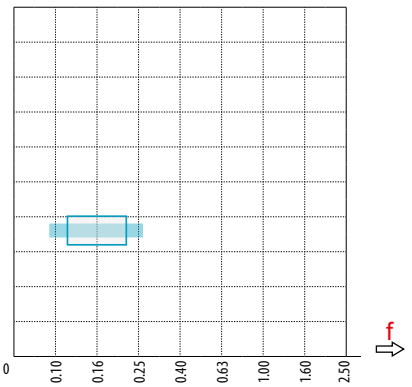
f ⇨ See diagram



? **WCMT 05, WCMX 05**

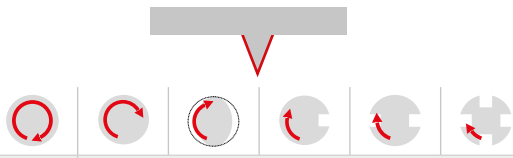
48





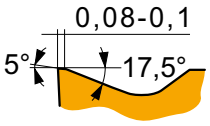
P	M	K	N	S	H
■	◪	■			

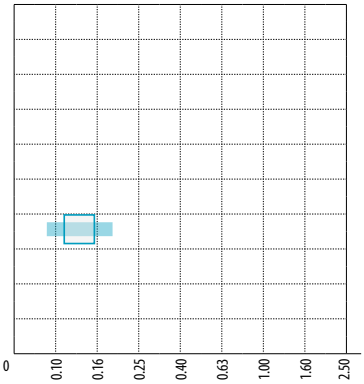
f ⇨ See diagram



? **WCMT 08, WCMX 08**

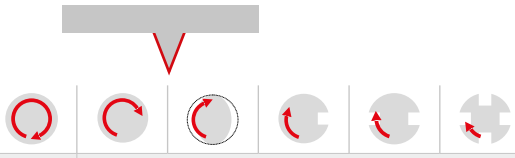
UM





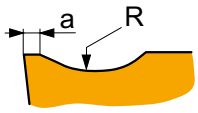
P	M	K	N	S	H
■	◪	■			

f ⇨ See diagram

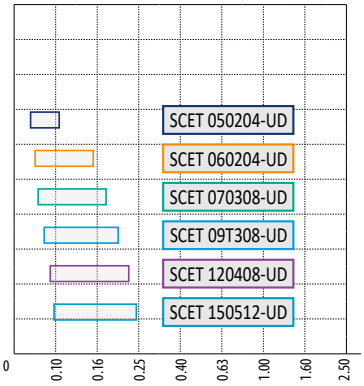


? **WCMT 04, WCMT 05**

SCET . . . . . – UD

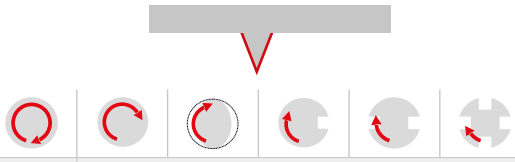


	a
SCET 050204-UD	0,12
SCET 060204-UD	0,15
SCET 070308-UD	0,15
SCET 09T308-UD	0,15
SCET 120408-UD	0,20
SCET 150512-UD	0,20



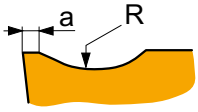
P	M	K	N	S	H
■		■			

f ⇨ See diagram

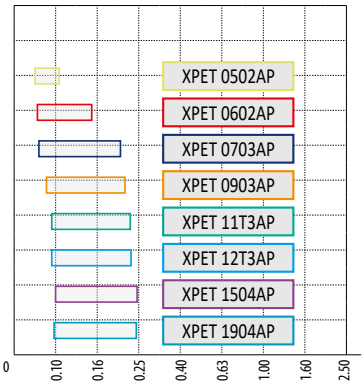


? **SCET . . . . . – UD**

XPET . . . . AP

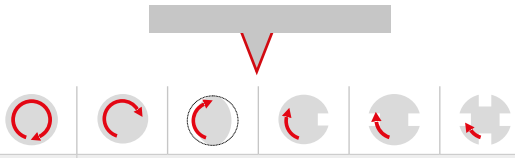


	a
XPET 0502AP	0,10
XPET 0602AP	0,10
XPET 0703AP	0,15
XPET 0903AP	0,25
XPET 11T3AP	0,25
XPET 12T3AP	0,25
XPET 1504AP	0,25
XPET 1904AP	0,25



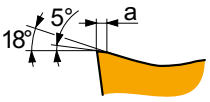
P	M	K	N	S	H
■		■			

f ⇨ See diagram

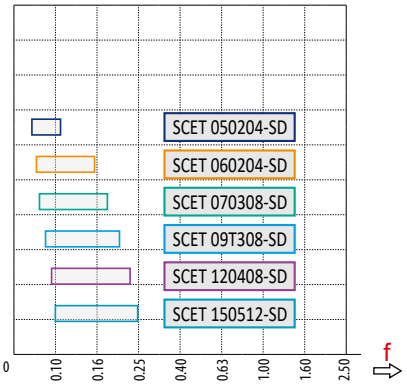


? **XPET . . . . AP**

SCET . . . . . – SD

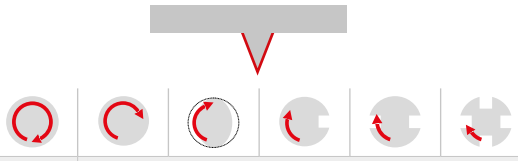


	a
SCET 050204-SD	0,04
SCET 060204-SD	0,06
SCET 070308-SD	0,08
SCET 09T308-SD	0,10
SCET 120408-SD	0,10
SCET 150512-SD	0,10



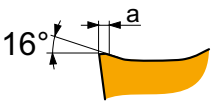
P	M	K	N	S	H
■	■	◪		◪	

f ⇨ See diagram

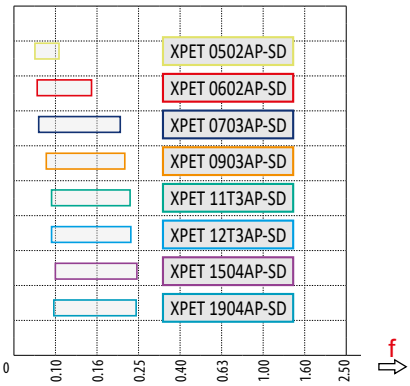


? **SCET . . . . . – SD**

XPET . . . .AP- SD

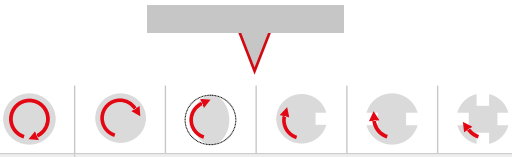


	a
XPET 0502AP-SD	0,04
XPET 0602AP-SD	0,05
XPET 0703AP-SD	0,08
XPET 0903AP-SD	0,10
XPET 11T3AP-SD	0,10
XPET 12T3AP-SD	0,10
XPET 1504AP-SD	0,10
XPET 1904AP-SD	0,12



P	M	K	N	S	H
■	■	◪		◪	

f ⇨ See diagram



? **XPET . . . . AP – SD**

D	8	3	3	0
Operation	Coating/Substrate	Generation	ISO range	

D	Drilling
M	Milling
T	Turning
G	Grooving and Parting off

0 PVD 1 CVD	Special application
2 PVD 3 CVD	Free
4 PVD 5 CVD	Group K, H
6 PVD 7 CVD	Group M, S
8 PVD 9 CVD	Universal
B	CBN
C	Ceramic
D	PCD
T	Cermet

1 – 9

01 – 50	
	01 – 05
	05 – 10
	10 – 20
	20 – 30
	30 – 40
	40 – 50

Grade Identification	Area of Application	Application	Feed	Cutting speed	Resistance to adverse Working Conditions	Coating	Colour	Substrate	Coolant benefit	Grade description
D9335	P20 - P35 M15 - M30 K15 - K35 S10 - S20	■ ■ ■ ◪				MT-CVD		FGM	+ + +	This grade is recommended for the peripheral insert in indexable drills, it is more suited to higher cutting speeds and feeds.
D8330	P20 - P35 M15 - M30 K15 - K35 S10 - S20	■ ■ ■ ◪				PVD		submicron H	+ + +	This is a universal grade for the peripheral insert in indexable drills, it can be used for most materials and stands out for it's operational reliability.
D8345	P30 - P50 M20 - M40 K30 - K40 S20 - S30	■ ■ ■ ◪				PVD		submicron H	+ + +	This grade is a universal grade for the central insert in indexable drills, it is an extremely tough suited to most materials.

Substrate	
submicron H	WC-Co based substrate fine grained (< 1 µm)
FGM	Functionally graded substrate

Coating	
MT-CVD	Medium-temperature chemical method of coating
PVD	Low-temperature physical method of coating

Benefits of cutting fluid	
+ + +	Use of coolant is essential

802D, 803D (XPET..AP, SCET..-UD)

f ⇨

	D9335	D8330	D8345	ø 15	ø 20	ø 25	ø 30	ø 40	ø 58
P1	■	■	■	0.07	0.08	0.09	0.10	0.12	0.16
P2	■	■	■	0.11	0.13	0.15	0.17	0.21	0.28
P3	■	■	■	0.13	0.15	0.18	0.20	0.24	0.32
P4	■	■	■	0.12	0.14	0.16	0.18	0.22	0.30
K1	■	■	■	0.14	0.16	0.19	0.21	0.26	0.34
K2	■	■	■	0.14	0.16	0.19	0.21	0.26	0.34
K3	■	■	■	0.14	0.16	0.19	0.21	0.26	0.34
K4	■	■	■	0.14	0.16	0.19	0.21	0.26	0.34
K5	■	■	■	0.14	0.16	0.19	0.21	0.26	0.34

802D, 803D (XPET..AP-SD, SCET..-SD)

f ⇨

	D9335	D8330	D8345	ø 15	ø 20	ø 25	ø 30	ø 40	ø 58
P1	■	■	■	0.08	0.09	0.10	0.11	0.14	0.18
P2	■	■	■	0.11	0.13	0.15	0.17	0.21	0.28
P3	■	■	■	0.13	0.15	0.18	0.20	0.24	0.32
P4	■	■	■	–	–	–	–	–	–
K1	◪	◪	◪	0.08	0.09	0.10	0.11	0.14	0.18
K2	◪	◪	◪	0.11	0.13	0.15	0.17	0.21	0.28
K3	◪	◪	◪	0.12	0.14	0.16	0.18	0.22	0.24
K4	◪	◪	◪	0.13	0.15	0.18	0.20	0.24	0.32
K5	◪	◪	◪	0.14	0.16	0.19	0.21	0.25	0.33
M1	■	■	■	0.12	0.14	0.16	0.18	0.22	0.30
M2	■	■	■	0.11	0.13	0.15	0.17	0.21	0.28
M3	■	■	■	0.07	0.08	0.09	0.10	0.12	0.16
M4	■	■	■	0.07	0.08	0.09	0.10	0.12	0.16
S1	◪	◪	◪	0.08	0.09	0.10	0.11	0.14	0.18
S2	◪	◪	◪	0.08	0.09	0.10	0.11	0.14	0.18
S3	◪	◪	◪	0.07	0.08	0.09	0.10	0.12	0.16
S4	◪	◪	◪	0.07	0.08	0.09	0.10	0.12	0.16

804D (XPET..AP, SCET..-UD)

f ⇨

	D9335	D8330	D8345	ø 15	ø 20	ø 25	ø 30	ø 40	ø 58
P1	■	■	■	0.06	0.07	0.08	0.09	0.10	0.14
P2	■	■	■	0.10	0.12	0.14	0.16	0.19	0.25
P3	■	■	■	0.12	0.14	0.16	0.18	0.22	0.30
P4	■	■	■	0.11	0.13	0.15	0.17	0.21	0.28
K1	■	■	■	0.13	0.15	0.18	0.20	0.24	0.32
K2	■	■	■	0.13	0.15	0.18	0.20	0.24	0.32
K3	■	■	■	0.13	0.15	0.18	0.20	0.24	0.32
K4	■	■	■	0.13	0.15	0.18	0.20	0.24	0.32
K5	■	■	■	0.13	0.15	0.18	0.20	0.24	0.32

804D (XPET..AP-SD, SCET..-SD)

f ⇨

	D9335	D8330	D8345	ø 15	ø 20	ø 25	ø 30	ø 40	ø 58
P1	■	■	■	0.07	0.08	0.09	0.10	0.12	0.16
P2	■	■	■	0.10	0.12	0.14	0.16	0.19	0.25
P3	■	■	■	0.12	0.14	0.16	0.18	0.22	0.30
P4	■	■	■	–	–	–	–	–	–
K1	◪	◪	◪	0.07	0.08	0.09	0.10	0.12	0.16
K2	◪	◪	◪	0.10	0.12	0.14	0.16	0.19	0.25
K3	◪	◪	◪	0.11	0.13	0.15	0.17	0.20	0.27
K4	◪	◪	◪	0.12	0.14	0.16	0.18	0.22	0.30
K5	◪	◪	◪	0.14	0.16	0.19	0.21	0.25	0.33
M1	■	■	■	0.11	0.13	0.15	0.17	0.21	0.28
M2	■	■	■	0.10	0.12	0.14	0.16	0.19	0.25
M3	■	■	■	0.06	0.07	0.08	0.09	0.10	0.14
M4	■	■	■	0.06	0.07	0.08	0.09	0.10	0.14
S1	◪	◪	◪	0.07	0.08	0.09	0.10	0.12	0.16
S2	◪	◪	◪	0.07	0.08	0.09	0.10	0.12	0.16
S3	◪	◪	◪	0.06	0.07	0.08	0.09	0.10	0.14
S4	◪	◪	◪	0.06	0.07	0.08	0.09	0.10	0.14

805D (XPET..AP, SCET..-UD)

f ⇨

	D9335	D8330	D8345	ø 15	ø 20	ø 25	ø 30	ø 40	ø 58
P1	■	■	■	0.06	0.07	0.08	0.09	0.10	0.14
P2	■	■	■	0.10	0.12	0.14	0.16	0.19	0.25
P3	■	■	■	0.12	0.14	0.16	0.18	0.22	0.30
P4	■	■	■	0.11	0.13	0.15	0.17	0.21	0.28
K1	■	■	■	0.13	0.15	0.18	0.20	0.24	0.32
K2	■	■	■	0.13	0.15	0.18	0.20	0.24	0.32
K3	■	■	■	0.13	0.15	0.18	0.20	0.24	0.32
K4	■	■	■	0.13	0.15	0.18	0.20	0.24	0.32
K5	■	■	■	0.13	0.15	0.18	0.20	0.24	0.32

805D (XPET..AP-SD, SCET..-SD)

f ⇨

	D9335	D8330	D8345	ø 15	ø 20	ø 25	ø 30	ø 40	ø 58
P1	■	■	■	0.07	0.08	0.09	0.10	0.12	0.16
P2	■	■	■	0.10	0.12	0.14	0.16	0.19	0.25
P3	■	■	■	0.12	0.14	0.16	0.18	0.22	0.30
P4	■	■	■	–	–	–	–	–	–
K1	◪	◪	◪	0.07	0.08	0.09	0.10	0.12	0.16
K2	◪	◪	◪	0.10	0.12	0.14	0.16	0.19	0.25
K3	◪	◪	◪	0.11	0.13	0.15	0.17	0.20	0.27
K4	◪	◪	◪	0.12	0.14	0.16	0.18	0.22	0.30
K5	◪	◪	◪	0.12	0.14	0.16	0.18	0.22	0.30
M1	■	■	■	0.11	0.13	0.15	0.17	0.21	0.28
M2	■	■	■	0.10	0.12	0.14	0.16	0.19	0.25
M3	■	■	■	0.06	0.07	0.08	0.09	0.10	0.14
M4	■	■	■	0.06	0.07	0.08	0.09	0.10	0.14
S1	◪	◪	◪	0.07	0.08	0.09	0.10	0.12	0.16
S2	◪	◪	◪	0.07	0.08	0.09	0.10	0.12	0.16
S3	◪	◪	◪	0.06	0.07	0.08	0.09	0.10	0.14
S4	◪	◪	◪	0.06	0.07	0.08	0.09	0.10	0.14

FORMULA FOR CALCULATION OF CUTTING PARAMETERS

Nomenclature and formula

Parameter	Formula	Unit
RPM	$n = \frac{v_c \,.\, 1000}{DC \,.\, \pi}$	[rev/min]
Cutting speed	$v_c = \frac{\pi \,.\, DC \,.\, n}{1000}$	[m/min]
Table feed	$v_f = n \,.\, f$	[mm/min]
Cross section area of the hole	$A = \frac{\pi \,.\, DC^2}{4}$	[mm^2]
Metal removal rate	$Q = \frac{v_f \,.\, A}{1000}$	[cm^3/min]
Machining time	$T_c = \frac{L + h}{v_f}$	[min/pcs]

DC	Diameter of drill	[mm]	h	Distance from drill point to workpiece before feeding	[mm]
f	Feed per revolution	[mm/rev]	L	Depth of hole	[mm]

RECOMMENDED TIGHTENING TORQUES FOR SCREWS

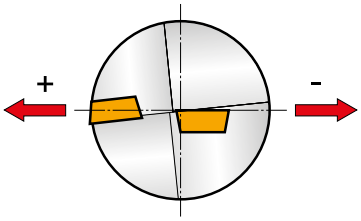
	Nm					
US 2245-T07P	0.9	FLAG T07P	M 2.2	5.3	D-T7P	MR-0.8-2.0 vario
US 2205-T07P	0.9	FLAG T07P	M2.2	5.4	D-T7P	MR-0.8-2.0 vario
US 2506-T07P	1.2	FLAG T07P	M 2.5	6	D-T7P	MR-0.8-2.0 vario
US 2507-T08P	1.2	FLAG T08P	M 2.5	7	D-T8P	MR-0.8-2.0 vario
US 3007-T08P	2.0	FLAG T08P	M 3	7	D-T8P	MR-1.0-5.0 vario
US 3007-T09P	2.0	FLAG T09P	M 3	7.4	D-T9P	MR-1.0-5.0 vario
US 3009-T09P	2.0	FLAG T09P	M 3	8.7	D-T9P	MR-1.0-5.0 vario
US 3508-T15P	3.0	FLAG T15P	M 3.5	8.3	D-T15P	MR-1.0-5.0 vario
US 3510-T15P	3.0	FLAG T15P	M 3.5	10.6	D-T15P	MR-1.0-5.0 vario
US 4011-T15P	3.5	FLAG T15P	M 4	10.7	D-T15P	MR-1.0-5.0 vario
US 5012-T15P	5.0	FLAG T15P	M 5	12.2	D-T15P	MR-1.0-5.0 vario

Radial adjustment

Hole diameter adjustment and set-up recommendation
Radial adjustment is possible with indexable drills to achieve a smaller or larger hole diameter than the actual drill.
Radial adjustment values are available in the main drill data tables.

Rotating tool
For drilling holes with accuracy IT10 and higher, adjustable holders are recommended when using 802D, 803D, 804D and 805D drills.

Stationary tool
When mounting the drill make sure the drill centre line and workpiece centre are aligned. To achieve a larger hole diameter displace the drill so that the peripheral
insert moves in a + away from the workpiece centre line (see diagram below).



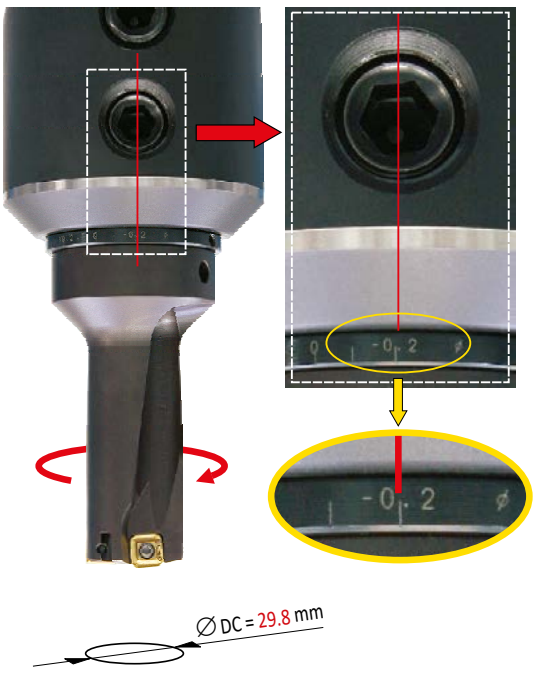
Tool life
Inserts should be changed when flank wear measures 0.2 – 0.4 mm at the largest point.
Cutting data recommendations in this catalogue are aimed at achieving tool life of 7 metres drilling depth on the peripheral insert. (20 – 30 mins contact).

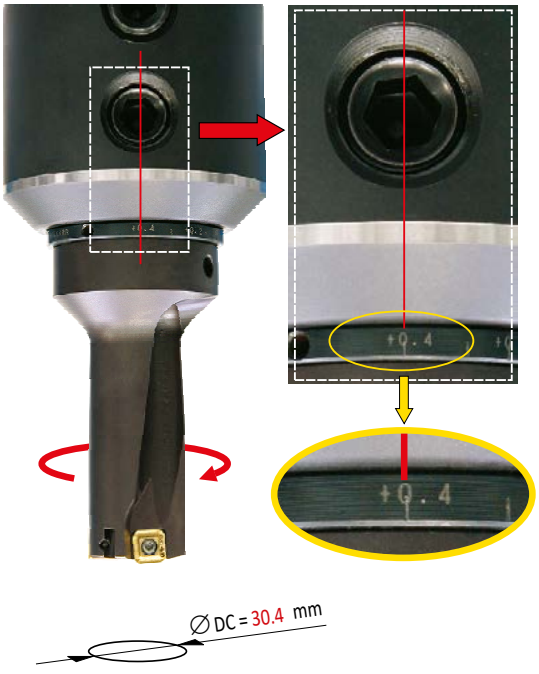
EP — ADJUSTABLE SLEEVE

Shank diameter	Drill diameter	Range
25	15 – 24	0.4 – -0.2
32	24.5 – 40	0.4 – -0.2

For Milling Machines

Diameter adjustment range





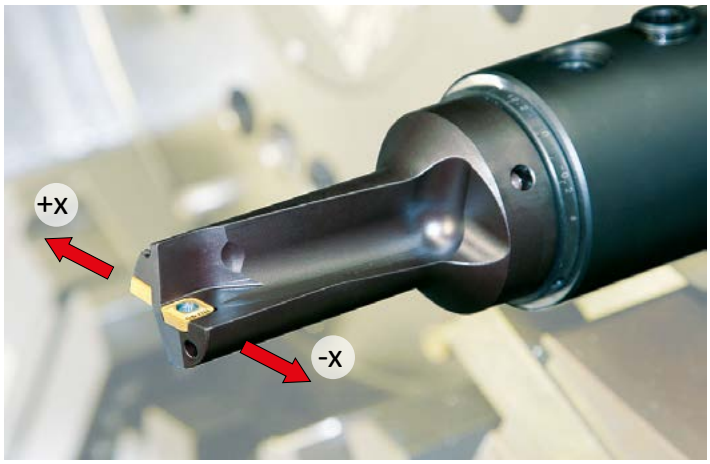
EP

ADJUSTABLE SLEEVE

Shank diameter	Drill diameter	Range
25	15 – 24	0.2 – -0.15
32	24.5 – 40	0.2 – -0.15

Centre height adjustment
– for lathe operation

Centre height adjustment range



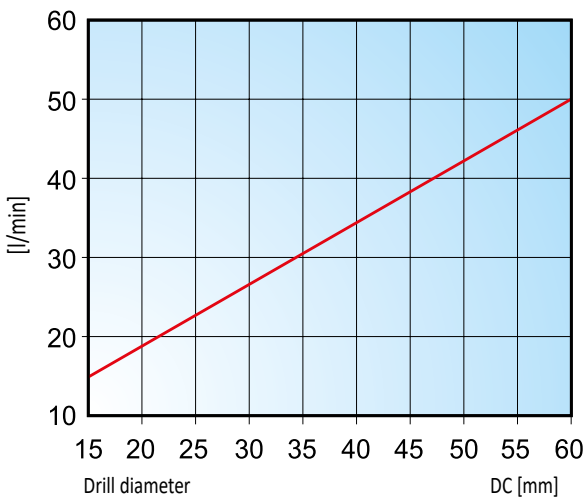
MACHINING DATA FOR INDEXABLE DRILLS

Recommended pressure of supplied cutting fluid

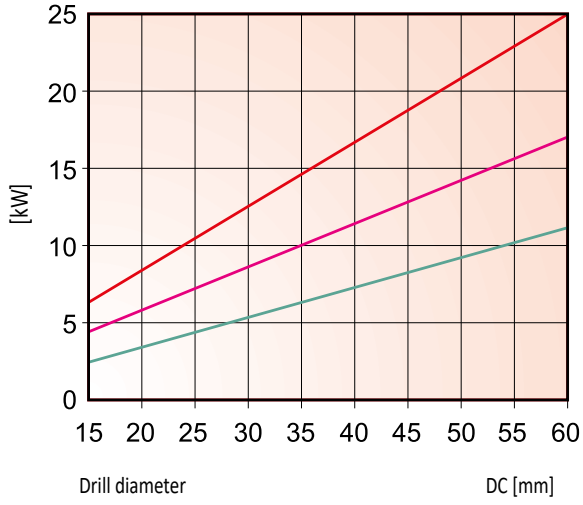
Drill diameter DC [mm]	Pressure of cutting fluid	
	Drill length	
	2.0 – 2.5 DC	3.0 – 5.0 DC
15 – 25	6 bar	12 bar
26 – 40	4.5 bar	9 bar
> 40	3 bar	6 bar

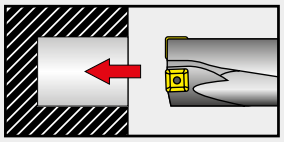
Coolant volume requirement

DRY DRILLING
Pressurised air through the drill is recommended when drilling without coolant in cast iron and steel

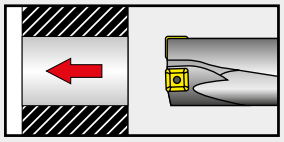


Net power consumption

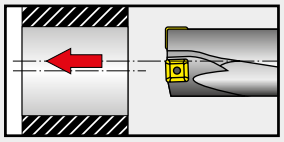




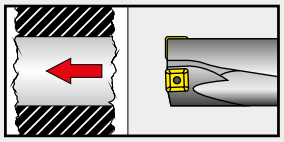
BLIND HOLE DRILLING
For drilling holes deeper than 1×DC internal cooling is necessary.



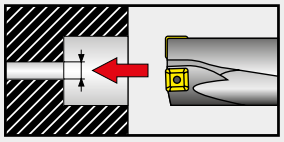
THROUGH HOLE DRILLING
A disc can be produced when the indexable drill exits the material. This disc can be ejected at high speed when the workpiece is rotating. It is essential that the machine is adequately guarded to ensure operator safety



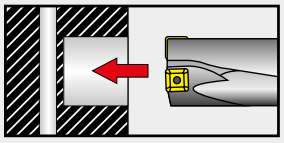
OFF-CENTRE DRILLING
Decrease the feed to lower recommended values for particular inserts. See inserts description pages for indexable drills.
Do not exceed radial adjustment values.



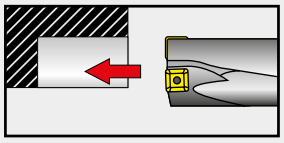
STARTING ON UNEVEN AND CAST SURFACES
Decrease the feed by 50% on entrance for indexable drills until both inserts are engaged.



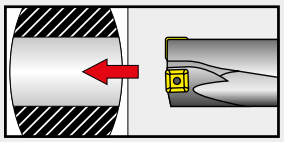
BORING AND DRILLING INTO PILOT HOLES
If a pre-drilled hole is larger than 1/4 drill diameter, decrease the feed.



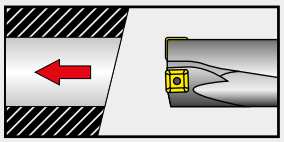
DRILLING CROSS HOLES
Decrease the feed by 50% when drilling across an existing hole.
The diameter of existing hole should not be larger than 0.25 x DC.



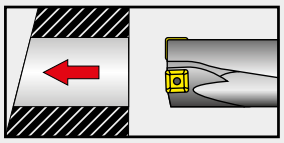
INTERRUPTED CUT AND PLUNGING
Decrease the feed to lower recommended feed values for particular insert. See inserts description site for indexable drills.



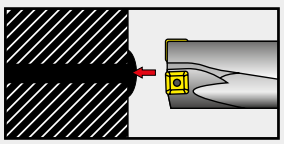
DRILLING ON CURVED SURFACE
Drilling on the centre line can be done with reduced feed rate down to 50 % during entrance and exit.



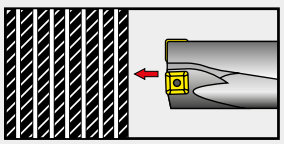
DRILLING ON ANGLED SURFACES
Decrease the feed by 50% on entrance for indexable drills until both inserts are engaged if the angle of entry is more than 5°.



EXIT ON ANGLED SURFACE
Decrease the feed by 50% on exit if angle of exit is more than 5°.



STARTING ON A WELDED SEAM
Facing is recommended before drilling.
Decrease the feed by 50 % during drilling of the welded material.



DRILLING OF STACKED MATERIALS
Avoid spaces larger than 0.2 mm between layers. The component must be securely fixed. If necessary reduce the feed.

TROUBLESHOOTING FOR INDEXABLE DRILLS

LOW PERFORMANCE OF DRIVING MOTOR (LOW SPINDLE POWER)	a) reduce cutting speed = reduction of spindle RPM b) reduce feed rate
EXCESSIVE WEAR OF PERIPHERAL INSERT	a) reduce cutting speed = reduction of spindle RPM b) choose a more wear resistant grade c) increase coolant volume and pressure
CHIPPING OF PERIPHERAL INSERT	a) reduce feed rate until peripheral insert is fully engaged b) choose a tougher insert grade c) reduce cutting speed
CHIPPING OF CENTRE INSERT	a) reduce feed rate during entry b) check the drill and workpiece clamping
CONTINUOUS, BADLY FORMED CHIP	a) adjust feed rate b) increase cutting speed and simultaneously reduce feed rate
SWARF CONGESTION IN THE FLUTES	a) increase coolant volume and pressure b) reduce cutting speed c) adjust feed rate

RECOMMENDED DRILL SIZES FOR TAPPING

Metric ISO threads		Recommended drill diameter for	
Thread	Pitch	Cutting tap	Fluteless tap
M16 × 1.0	1.00	15.0	15.5
M16 × 0.75	0.75	15.3	–
M17 × 1.0	1.00	16.0	–
M18	2.50	15.5	16.8
M18 × 2.0	2.00	16.0	–
M18 × 1.5	1.50	16.5	17.3
M18 × 1.0	1.00	17.0	–
M20	2.50	17.5	18.8
M20 × 2.0	2.00	18.0	–
M20 × 1.5	1.50	18.5	19.3
M20 × 1.0	1.00	19.0	–
M22	2.50	19.5	20.8
M22 × 2.0	2.00	20.0	–
M22 × 1.5	1.50	20.5	21.3
M22 × 1.0	1.00	21.0	–
M24	3.00	21.0	22.5
M24 × 2.0	2.00	22.0	–
M24 × 1.5	1.50	22.5	23.3
M27	3.00	24.0	–
M27 × 2.0	2.00	25.0	–
M30	3.50	26.5	–
M30 × 2.0	2.00	28.0	–
M33	3.50	29.5	–
M36	4.00	32.0	–
M36 × 3.0	3.00	33.0	–
M39	4.00	35.0	–
M42	4.50	37.5	–
M42 × 3.0	3.00	39.0	–
M45	4.50	40.5	–
M48	5.00	43.0	–
M48 × 3.0	3.00	45.0	–
M52	5.00	47.0	–
M52 × 3.0	3.00	48.0	–

Inch threads UNF		Recommended drill diameter for	
Thread	Pitch	Cutting tap	Fluteless tap
3/4“	16	17.5	18.3
7/8“	14	20.5	21.3
1“	12	23.4	24.3
1 1/8“	12	26.5	–
1 1/4“	12	29.8	–
1 3/8“	12	33.0	–
1 1/2“	12	36.0	–

Inch threads UNC		Recommended drill diameter for	
Thread	Pitch	Cutting tap	Fluteless tap
3/4“	10	16.7	17.8
7/8“	9	19.5	20.8
1“	8	22.2	23.8
1 1/8“	7	25.0	–
1 1/4“	7	28.2	–
1 3/8“	6	31.0	–
1 1/2“	6	34.0	–
1 3/4“	5	39.5	–
2“	4 1/2	45.2	–
2 1/4“	4 1/2	51.6	–
2 1/2“	4	57.2	–

Whitworth pipe threads		Recommended drill diameter for	
Thread	Pitch	Cutting tap	Fluteless tap
G 3/8“	19	15.3	16.0
G 1/2“	14	19.0	20.0
G 5/8“	14	21.0	22.0
G 3/4“	14	24.5	25.5
G 7/8“	14	28.3	29.3
G 1“	11	30.8	32.0
G 1 1/8“	11	35.5	–
G 1 1/4“	11	39.5	–
G 1 3/8“	11	41.8	–
G 1 1/2“	11	45.3	–
G 1 3/4“	11	51.0	–
G 2“	11	57.0	–

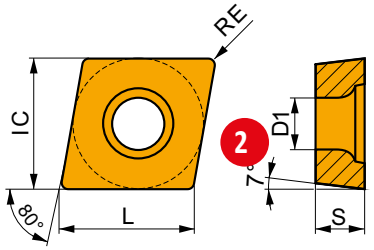
BORING SYSTEMS

6		WMG & ISO 13399
12	DRILLS	INSTRUCTIONS
15	DRILLS	SOLID CARBIDE DRILLS
66	DRILLS	HSS DRILLS
176	DRILLS	CUTTING FLUIDS
186	DRILLS	TECHNICAL INFORMATION
190		REAMERS AND COUNTERSINKS
264	INDEXABLE DRILLS	INSTRUCTIONS
271	INDEXABLE DRILLS	HYDRA DRILLS
297	INDEXABLE DRILLS	TECHNICAL INFORMATION
307	INDEXABLE DRILLS	INDEXABLE DRILLS
327	INDEXABLE DRILLS	TECHNICAL INFORMATION
350	BORING SYSTEMS	INSTRUCTIONS
359	BORING SYSTEMS	BORING HEADS
376	BORING SYSTEMS	BORING ACCESSORIES
381	BORING SYSTEMS	INSERTS
404	BORING SYSTEMS	ARBORS
418	BORING SYSTEMS	BORING KITS
429	BORING SYSTEMS	TECHNICAL INFORMATION

1 CCGT

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
0602	6.350	2.80	6.40	2.38
0602-SF3	6.350	2.80	6.40	2.58
0803-AL	7.940	3.40	8.10	3.43
0803-SF3	7.940	3.40	8.10	3.43
09T3	9.525	4.40	9.70	3.97
09T3-SF3	9.525	4.40	9.70	4.22
1204	12.700	5.50	12.90	4.76
1204-SF3	12.700	5.50	12.90	5.01



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product	RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
4 5 6 F																			
AL geometry with highly positive design for fine-fi… rough machining, continuous to slightly interrupted cuts. 10																			
CCGT 060202F-AL	HF7	0.2	–	–	–	–	–	–	–	–	–	–	–	360	0.12	1.0	–	–	–	–	–	–
7	8	9	–	–	–	–	–	–	–	–	–	–	–	360	0.12	1.0	–	–	–	–	–	–
CCGT 060204F-AL			–	–	–	–	–	–	–	–	11	–	–	300	0.24	1.0	–	–	–	–	–	–
	T0315	0.4	–	–	–	–	–	–	–	–	–	–	–	300	0.24	1.0	–	–	–	–	–	–
CCGT 080302F-AL	T0315	0.2	–	–	–	–	–	–	–	–	–	–	–	360	0.12	1.0	–	–	–	–	–	–
CCGT 080304F-AL	HF7	0.4	–	–	–	–	–	–	–	–	–	–	–	300	0.24	1.0	–	–	–	–	–	–
	T0315	0.4	–	–	–	–	–	–	–	–	–	–	–	300	0.24	1.0	–	–	–	–	–	–
CCGT 09T302F-AL	HF7	0.2	–	–	–	–	–	–	–	–	–	–	–	360	0.12	1.0	–	–	–	–	–	–
	T0315	0.2	–	–	–	–	–	–	–	–	–	–	–	360	0.12	1.0	–	–	–	–	–	–
CCGT 09T304F-AL	HF7	0.4	–	–	–	–	–	–	–	–	–	–	–	300	0.24	1.5	–	–	–	–	–	–
	T0315	0.4	–	–	–	–	–	–	–	–	–	–	–	300	0.24	1.5	–	–	–	–	–	–
CCGT 09T308F-AL	HF7	0.8	–	–	–	–	–	–	–	–	–	–	–	200	0.48	1.5	–	–	–	–	–	–
	T0315	0.8	–	–	–	–	–	–	–	–	–	–	–	200	0.48	1.5	–	–	–	–	–	–
CCGT 120404F-AL	HF7	0.4	–	–	–	–	–	–	–	–	–	–	–	300	0.24	2.4	–	–	–	–	–	–
	T0315	0.4	–	–	–	–	–	–	–	–	–	–	–	300	0.24	2.4	–	–	–	–	–	–
CCGT 120408F-AL	HF7	0.8	–	–	–	–	–	–	–	–	–	–	–	200	0.48	2.4	–	–	–	–	–	–
	T0315	0.8	–	–	–	–	–	–	–	–	–	–	–	200	0.48	2.4	–	–	–	–	–	–

CCGT120404F-AL:T0315 Use full insert specification code when ordering!

Grade

Include colon

ISO insert code

Typical page with boring inserts – specific page details will differ.

INSERTS – PAGE OVERVIEW

Pos.	Description
1	Designation of insert
2	Schematic drawing of insert
3	Table with insert sizes [mm]
4	Picture of representative insert
5	Profile of main cutting edge
6	Icons – specific features and cutting edge type

Pos.	Description
7	ISO insert code
8	Grade
9	Insert radii [mm]
10	Geometry description
11	Application area of insert

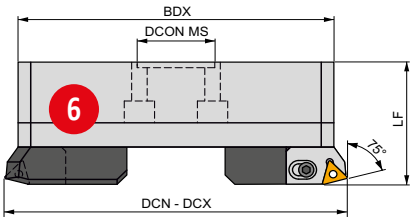
1 D75-BB

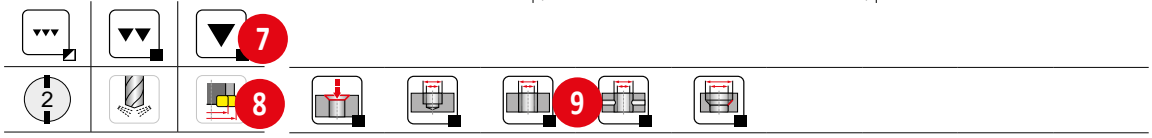
P M K N S H 2

PRAMET 3 S(P)

75° Roughing Boring Head, Large Bore - Ø220 up to Ø500 mm

High performance 75° small boring head for roughing. Suited for through, blind and cross hole boring and chamfering. Available to utilise CC.., TC.. or CN.. type inserts and for hole diameter range Ø220 up 5 mm with arbor sizes from 300 up to 500 mm. High accuracy and repeatability.





Product	CZC MS	DCN [mm]	DCX [mm]	BDX [mm]	DCON MS [mm]	LF [mm]									kg
D 30075 300	300	220.00	320.00	202	60.00	90.00	3CT 75 300	US 0625	HXK 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXK 5	HXK 4	9.40
D 30075 402	300	220.00	320.00	202	60.00	90.00	3CT 75 402	US 0625	HXK 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXK 5	HXK 4	9.37
D 30075 402N	300	220.00	320.00	202	60.00	90.00	3CT 75 402 N	US 0625	HXK 5	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 5	HXK 4	9.37
D 4 00		290.00	400	272	60.00	90.00	300			16T	0415-T	SDR T			
D 4 02		290.00	400	272	60.00	90.00	402			120	0513-	SDR T			
D 40075 402N	400	290.00	400.00	272	60.00	90.00	3CT 75 402 N	US 0625	HXK 5	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 5	HXK 4	12.98

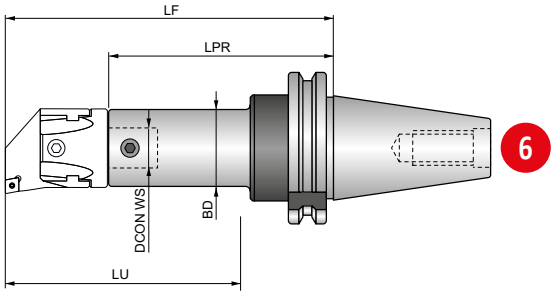
10 11 12 13 14 15 16 17 18 19 20 21

1 69871-BS

PRAMET

DIN 69871 Shank Tool Holder for Boring Heads

DIN 69871 highly rigid tool holder (for ATC) for boring heads, ble in 30, 40 and 50 tapers. Different length arbors available. Coupling sizes 22-160 mm can be used with EXT-BS extenders, RED-BS reduc LA-BS enlargers. Internal coolant available. For applications requiring high accuracy and repeatability.



Product		CZC MS	BD [mm]	DCON WS [mm]	LF [mm]	LPR [mm]	LU [mm]			kg
AS 330 022 100 R	30	22	22.00	12.00	138.00	104	100.00	✓	US 0608	0.72
AS 330 027 055 R	30	27	27.00	15.00	90.00	48	55.00	✓	US 0609	0.56
AS 330 027 100 R	30	27	27.00	15.00	138.00	96	100.00	✓	US 0609	0.68
AS 33 060 R			32.00	20.00		51	60.00			
AS 3 100 R			32.00	20.00		93	100.00			
AS 340 022 080 R	40	22	22.00	12.00	118.00	84	80.00	✓	US 0608	1.14

10 24 12 12 22 23 21

Typical page with boring heads and arbors displayed – specific page details will differ.

BORING TOOLS AND ARBORS – PAGE OVERVIEW

Pos.	Designation
1	Designation of boring head/arbor
2	Material group recommendations
3	Clamping system of insert
4	Illustrative picture
5	Tool description
6	Schematic drawing of tool
7	Achievable quality of surface
8	Product features
9	Product applications
10	Tool code [1]
11	Size code of head/arbor [2]
12	Tool dimensions

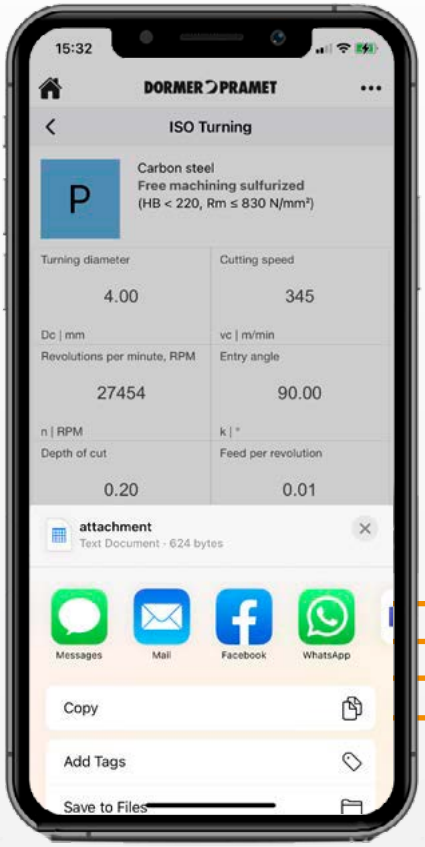
Pos.	Designation
13	Cartridge
14	Cartridge screw
15	Key for cartridge screw
16	Group of compatible inserts
17	Insert screw
18	Key for insert screw
19	Adjusting key for head
20	Locking key for head
21	Weight [kg]
22	Internal supply of coolant
23	Clamping screw for head
24	Arbor size [3]

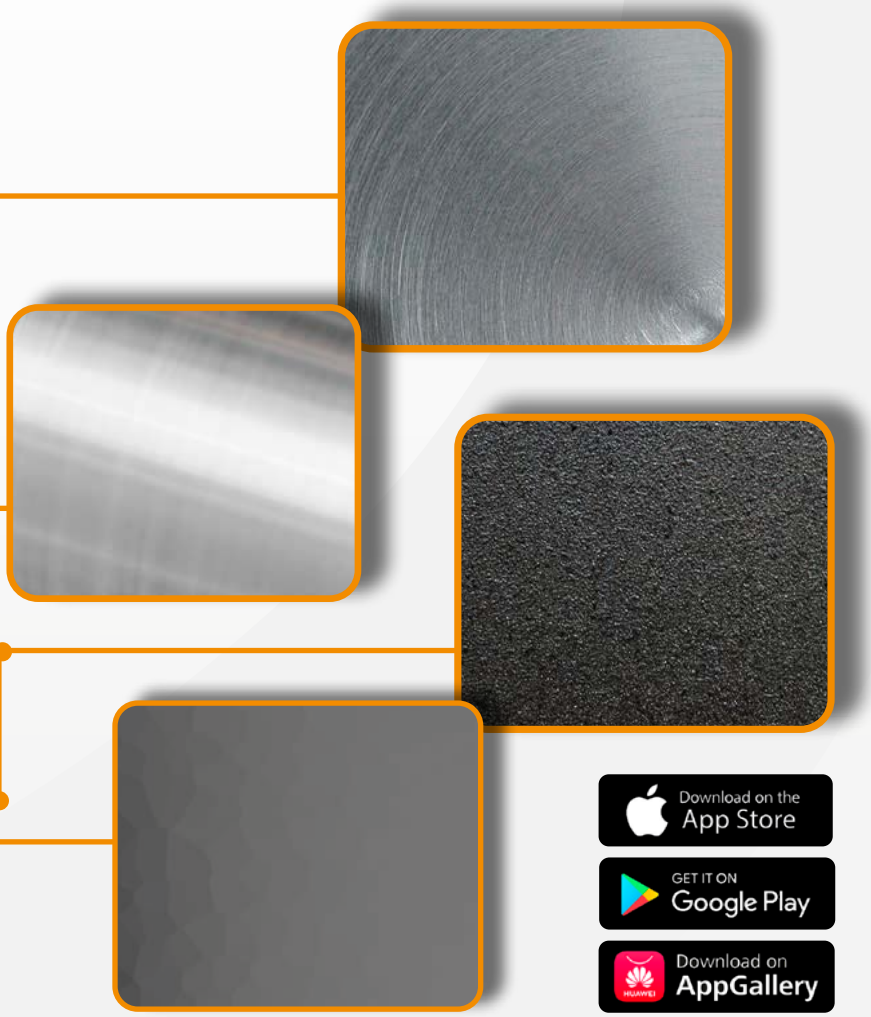
[1] Tool code designation is included in product pages
[2] Boring head and arbor have to have the same size code to guarantee compatibility.
[3] See schematic drawing for type of arbor.

DORMER PRAMET

EVERY MATERIAL

Machining steel, stainless steel, cast iron, super-alloys or non-ferrous materials, all are covered within our calculator app. Download it from your app store today. **Simply Reliable.**





Download on the App Store

GET IT ON Google Play

Download on AppGallery

BORING – ICONS OVERVIEW

General Icons

- Primary use
- Possible use
- Finishing – very good surface quality
- Medium machining – good surface quality
- Roughing – unlimited surface roughness

General Features of Tools

- 1 effective tooth per revolution
- 2 effective teeth per revolution
- Adjustable diameter of tool

Operations Drilling

- Blind hole boring
- Boring through cross holes
- Boring up to a shoulder
- Chamfering (beveling)
- Chamfering (beveling) in hole
- Through hole boring

Features

- First choice
- For short chipping materials
- For tough materials (long chipping)
- Heavy working conditions
- High Speed Cutting
- Large overhang
- Thin-walled and slim workpieces
- Universal wide range option
- Edge with facet
- Rounded edge
- Rounded edge with double facet
- Rounded edge with facet
- Sharp edge

Other

- Taper size

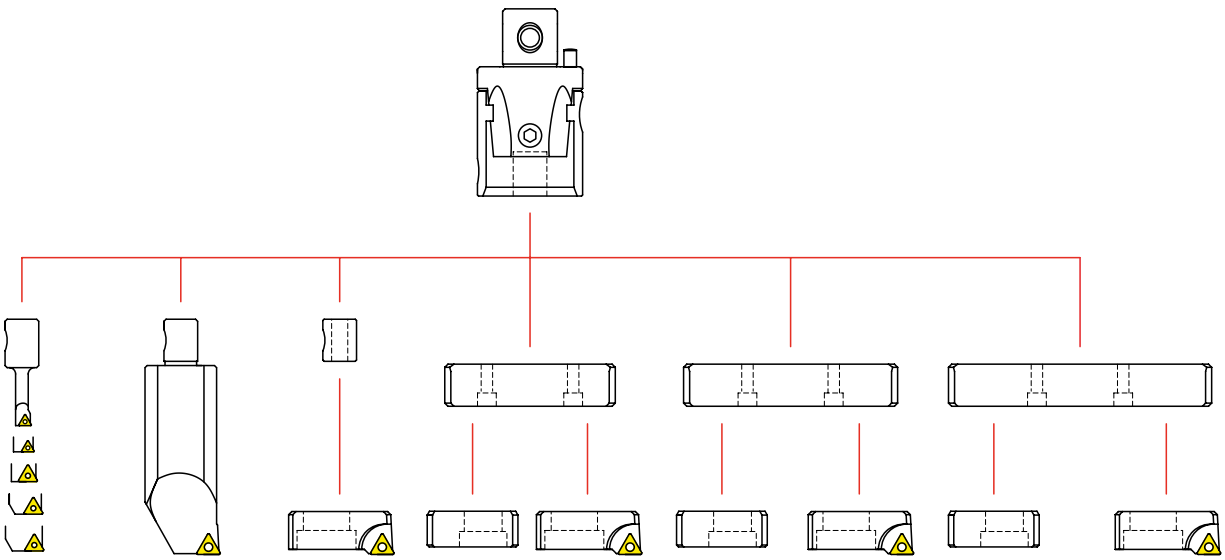
Technical Pages

- Feed [mm/rev]
- Very high cutting speed, excellent system rigidity (stable working conditions)
- High cutting speed, high system rigidity (stable working conditions)
- High cutting speed, system rigidity slightly limited (depth of cut changing)
- Medium cutting speed, system rigidity limited (slightly interrupted cut)
- Low cutting speed, low system rigidity (interrupted cut)
- Very low cutting speed, very low system rigidity (very unstable working conditions)

BORING SYSTEMS – NAVIGATOR

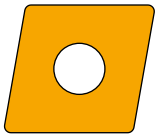
	ROUGHING HEADS		
Description	**D75 / D90**	**D75-C/D90-C**	**D75-BB/D90-BB**
Boring diameter	24 – 82	80 – 220	220 – 500
Hole tolerance	IT9	IT9	IT9
Max. Boring depth	5×D	4×D	–
Entry angle	75° / 90°	75° / 90°	75° / 90°
Adjustment precision (mm/Ø)	–	–	–
🕮	361, 364	362, 365	363, 366

BORING KITS – 🕮 420 – 427



FINISHING HEADS			MICRO BORING HEADS
F75/F90	**F75-C/F90-C**	**F75-BB/F90-BB**	**MB-H**
24 – 82	80 – 220	220 – 500	8 – 38
IT7	IT7	IT7	IT6
5×D	4×D	–	–
75° / 90°	75° / 90°	75° / 90°	–
0.002	0.002	0.002	0.002
367, 370	368, 371	369, 372	373

BORING BARS

ISO BARS	ISO BARS A042	CHAM-BS	CART-BS	INSERTS
📖 374	📖 375	📖 380	📖 378	📖 388
				

BORING SYSTEMS – NAVIGATOR

ARBORS

69871-BS ISO 30, 40, 50	BT-BS ISO 30, 40, 50	HSK-BS 50A, 63A, 100A	2080-BS ISO 40, 50	MOR-BS MORSE	WEL-BS WELDON
406	408	410	411	413	414

ACCESSORIES

EXT-BS	RED-BS	LA-BS
415	416	417

BORING KITS – 420 – 427

BORING HEADS

BORING HEAD DESCRIPTION

1	2	3	4
D	042	75	402N

1		2	3	4	
Type of tool		Size	Cutting edge angle	Inserts pocket code	
D	Roughing Head	022	75	300	TC..16T3.
		027	90	400	CC..0602..
		032		401	CC..0803..
		042		402	CC..1204..
A	Finishing Head	054		409	CC..09T3..
		068		402N	CN..1204..
		085			
		100			
		200			
		300			
		400			
		500			

D75

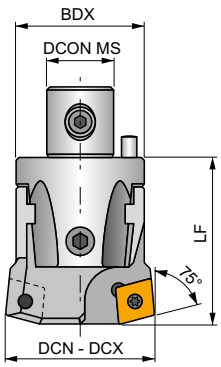
P M K N S H

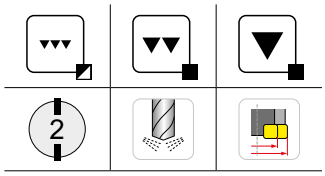
PRAMET

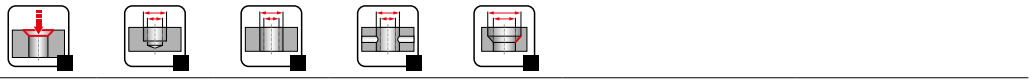
S(P)

75° Roughing Boring Head, Small Bore - Ø24 up to Ø82 mm

High performance 75° small boring head for roughing. Suited for through, blind and cross hole boring and chamfering. Available to utilise CC.., TC.. or CN.. type inserts and for hole diameter range Ø24 up to Ø82 mm with arbor sizes from 22 up to 54 mm. High accuracy and repeatability.







Product	CZC MS	DCN [mm]	DCX [mm]	BDX [mm]	DCON MS [mm]	LF [mm]						kg
D 02275 400	22	24.00	30.00	22	12.00	34.00	CC.. 0602..	US 0206-T08P	SDR T08P	HXK 2	HXK 3	0.10
D 02775 401	27	29.00	40.00	27	15.00	42.00	CC.. 0803..	US 0307-T10P	SDR T10P	HXK 2	HXK 4	0.17
D 02775 409	27	29.00	40.00	27	15.00	42.00	CC.. 09T3..	US 0408-T15P	SDR T15P	HXK 2	HXK 4	0.17
D 03275 401	32	39.00	50.00	32	20.00	45.00	CC.. 0803..	US 0307-T10P	SDR T10P	HXK 2.5	HXK 4	0.27
D 03275 409	32	39.00	50.00	32	20.00	45.00	CC.. 09T3..	US 0408-T15P	SDR T15P	HXK 2.5	HXK 4	0.27
D 04275 300	42	49.00	65.00	42	24.00	56.00	TC.. 16T3..	US 0415-T15P	SDR T15P	HXK 3	HXK 5	0.54
D 04275 402	42	49.00	65.00	42	24.00	56.00	CC.. 1204..	US 0513-T20P	SDR T20P	HXK 3	HXK 5	0.54
D 04275 402N	42	53.00	65.00	42	24.00	56.00	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 3	HXK 5	0.53
D 05475 300	54	63.00	82.00	54	28.00	66.00	TC.. 16T3..	US 0415-T15P	SDR T15P	HXK 3	HXK 6	1.07
D 05475 402	54	63.00	82.00	54	28.00	66.00	CC.. 1204..	US 0513-T20P	SDR T20P	HXK 3	HXK 6	1.07
D 05475 402N	54	63.00	82.00	54	28.00	66.00	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 3	HXK 6	1.03

D75-C

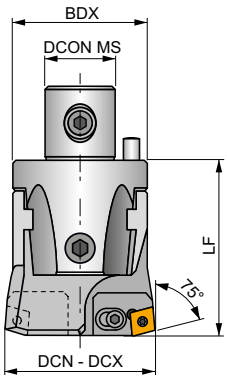
P M K N S H

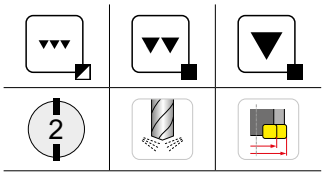
PRAMET

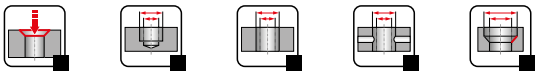
S(P)

75° Roughing Boring Head, Medium Bore - Ø80 up to Ø220 mm

High performance 75° medium boring head for roughing. Suited for through, blind and cross hole boring and chamfering. Available to utilise CC.., TC.. or CN.. type inserts and for hole diameter range Ø80 up to Ø220 mm with arbor sizes from 68 up to 200 mm. High accuracy and repeatability.







Product	CZC MS	DCN [mm]	DCX [mm]	BDX [mm]	DCON MS [mm]	LF [mm]									kg
D 06875 300	68	80.00	102.00	68	36.00	86.00	2CT 75 300	US 0616	HXK 5	TC.. 16T3..	US 0408-T15P	SDR T15P	HXK 4	HXK 8	2.16
D 06875 402	68	80.00	102.00	68	36.00	86.00	2CT 75 402	US 0616	HXK 5	CC.. 1204..	US 0509-T20P	SDR T20P	HXK 4	HXK 8	2.15
D 06875 402N	68	80.00	102.00	68	36.00	86.00	2CT 75 402 N	US 0616	HXK 5	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 4	HXK 8	2.21
D 08575 300	85	100.00	125.00	85	50.00	100.00	3CT 75 300	US 0625	HXK 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXK 5	HXK 8	4.16
D 08575 402	85	100.00	125.00	85	50.00	100.00	3CT 75 402	US 0625	HXK 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXK 5	HXK 8	4.13
D 08575 402N	85	100.00	125.00	85	50.00	100.00	3CT 75 402 N	US 0625	HXK 5	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 5	HXK 8	4.23
D 10075 300	100	125.00	160.00	110	60.00	100.00	3CT 75 300	US 0625	HXK 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXK 5	HXK 8	6.57
D 10075 402	100	125.00	160.00	110	60.00	100.00	3CT 75 402	US 0625	HXK 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXK 5	HXK 8	6.55
D 10075 402N	100	125.00	160.00	110	60.00	100.00	3CT 75 402 N	US 0625	HXK 5	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 5	HXK 8	6.57
D 20075 300	200	160.00	220.00	145	60.00	100.00	3CT 75 300	US 0625	HXK 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXK 5	HXK 8	8.87
D 20075 402	200	160.00	220.00	145	60.00	100.00	3CT 75 402	US 0625	HXK 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXK 5	HXK 8	8.88
D 20075 402N	200	160.00	220.00	145	60.00	100.00	3CT 75 402 N	US 0625	HXK 5	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 5	HXK 8	8.95

D75-BB

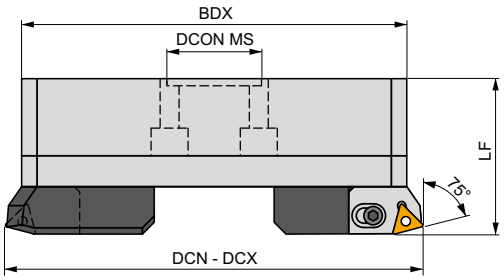
P M K N S H

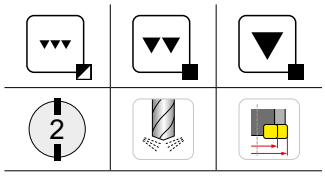
PRAMET

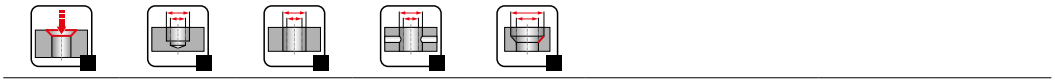
S(P)

75° Roughing Boring Head, Large Bore - Ø220 up to Ø500 mm

High performance 75° large boring head for roughing. Suited for through, blind and cross hole boring and chamfering. Available to utilise CC.., TC.. or CN.. type inserts and for hole diameter range Ø220 up to Ø500 mm with arbor sizes from 300 up to 500 mm. High accuracy and repeatability.







Product	CZC MS	DCN [mm]	DCX [mm]	BDX [mm]	DCON MS [mm]	LF [mm]									kg
D 30075 300	300	220.00	320.00	202	60.00	90.00	3CT 75 300	US 0625	HXK 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXK 5	HXK 4	9.40
D 30075 402	300	220.00	320.00	202	60.00	90.00	3CT 75 402	US 0625	HXK 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXK 5	HXK 4	9.37
D 30075 402N	300	220.00	320.00	202	60.00	90.00	3CT 75 402 N	US 0625	HXK 5	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 5	HXK 4	9.37
D 40075 300	400	290.00	400.00	272	60.00	90.00	3CT 75 300	US 0625	HXK 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXK 5	HXK 4	12.92
D 40075 402	400	290.00	400.00	272	60.00	90.00	3CT 75 402	US 0625	HXK 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXK 5	HXK 4	12.95
D 40075 402N	400	290.00	400.00	272	60.00	90.00	3CT 75 402 N	US 0625	HXK 5	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 5	HXK 4	12.98
D 50075 300	500	370.00	500.00	352	60.00	90.00	3CT 75 300	US 0625	HXK 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXK 5	HXK 4	16.74
D 50075 402	500	370.00	500.00	352	60.00	90.00	3CT 75 402	US 0625	HXK 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXK 5	HXK 4	16.74
D 50075 402N	500	370.00	500.00	352	60.00	90.00	3CT 75 402 N	US 0625	HXK 5	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 5	HXK 4	16.74

D90

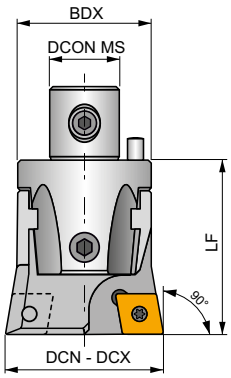
P M K N S H

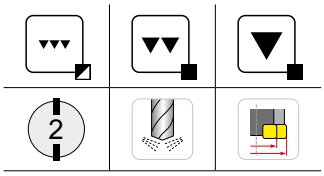
PRAMET

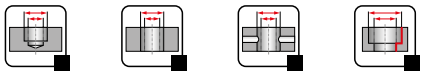
S(P)

90° Roughing Boring Head, Small Bore - Ø24 up to Ø82 mm

High performance 90° small boring head for roughing. Suited for through, blind hole and cross hole boring. Available to utilise CC.., TC.., CN.. type inserts and for hole diameter range Ø24 up to Ø82 mm with arbor sizes from 22 up to 54 mm. High accuracy and repeatability.







Product	CZC MS	DCN [mm]	DCX [mm]	BDX [mm]	DCON MS [mm]	LF [mm]						kg
D 02290 400	22	24.00	30.00	22	12.00	34.00	CC.. 0602..	US 0206-T08P	SDT T08P	HXK 2	HXK 3	0.10
D 02790 401	27	29.00	40.00	27	15.00	42.00	CC.. 0803..	US 0307-T10P	SDR T10P	HXK 2	HXK 4	0.17
D 02790 409	27	29.00	40.00	27	15.00	42.00	CC.. 09T3..	US 0408-T15P	SDR T15P	HXK 2	HXK 4	0.17
D 03290 401	32	39.00	50.00	32	20.00	45.00	CC.. 0803..	US 0307-T10P	SDR T10P	HXK 2.5	HXK 4	0.03
D 03290 409	32	39.00	50.00	32	20.00	45.00	CC.. 09T3..	US 0408-T15P	SDR T15P	HXK 2.5	HXK 4	0.27
D 04290 300	42	49.00	65.00	42	24.00	56.00	TC.. 16T3..	US 0415-T15P	SDR T15P	HXK 3	HXK 5	0.54
D 04290 402	42	49.00	65.00	42	24.00	56.00	CC.. 1204..	US 0513-T20P	SDR T20P	HXK 3	HXK 5	0.54
D 04290 402N	42	53.00	65.00	42	24.00	56.00	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 3	HXK 5	0.53
D 05490 300	54	63.00	82.00	54	28.00	66.00	TC.. 16T3..	US 0415-T15P	SDR T15P	HXK 3	HXK 6	1.06
D 05490 402	54	63.00	82.00	54	28.00	66.00	CC.. 1204..	US 0513-T20P	SDR T20P	HXK 3	HXK 6	1.06
D 05490 402N	54	63.00	82.00	54	28.00	66.00	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 3	HXK 6	1.06

D90-C

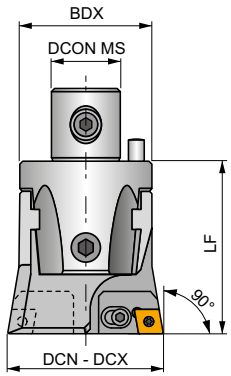
P M K N S H

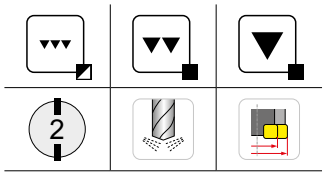
PRAMET

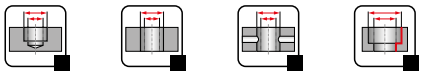
S(P)

90° Roughing Boring Head, Medium Bore - Ø80 up to Ø220 mm

High performance 90° medium boring head for roughing. Suited for through, blind hole and cross hole boring. Available to utilise CC.., TC.., CN.. type inserts and for hole diameter range Ø80 up to Ø220 mm with arbor sizes from 68 up to 200 mm. High accuracy and repeatability.







Product	CZC MS	DCN [mm]	DCX [mm]	BDX [mm]	DCON MS [mm]	LF [mm]									kg
D 06890 300	68	80.00	102.00	68	36.00	86.00	2CT 90 300	US 0616	HXK 5	TC.. 16T3..	US 0408-T15P	SDR T15P	HXK 4	HXK 8	2.17
D 06890 402	68	80.00	102.00	68	36.00	86.00	2CT 90 402	US 0616	HXK 5	CC.. 1204..	US 0509-T20P	SDR T20P	HXK 4	HXK 8	2.15
D 06890 402N	68	80.00	102.00	68	36.00	86.00	2CT 90 402 N	US 0616	HXK 5	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 4	HXK 8	2.18
D 08590 300	85	100.00	125.00	85	50.00	100.00	3CT 90 300	US 0625	HXK 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXK 5	HXK 8	4.52
D 08590 402	85	100.00	125.00	85	50.00	100.00	3CT 90 402	US 0625	HXK 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXK 5	HXK 8	4.12
D 08590 402 N	85	100.00	125.00	85	50.00	100.00	3CT 90 402 N	US 0625	HXK 5	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 5	HXK 8	4.17
D 10090 300	100	125.00	160.00	110	60.00	100.00	3CT 90 300	US 0625	HXK 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXK 5	HXK 8	6.54
D 10090 402	100	125.00	160.00	110	60.00	100.00	3CT 90 402	US 0625	HXK 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXK 5	HXK 8	6.56
D 10090 402 N	100	125.00	160.00	110	60.00	100.00	3CT 90 402 N	US 0625	HXK 5	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 5	HXK 8	6.40
D 20090 300	200	160.00	220.00	145	60.00	100.00	3CT 90 300	US 0625	HXK 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXK 5	HXK 8	8.90
D 20090 402	200	160.00	220.00	145	60.00	100.00	3CT 90 402	US 0625	HXK 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXK 5	HXK 8	8.89
D 20090 402 N	200	160.00	220.00	145	60.00	100.00	3CT 90 402 N	US 0625	HXK 5	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 5	HXK 8	8.91

D90-BB

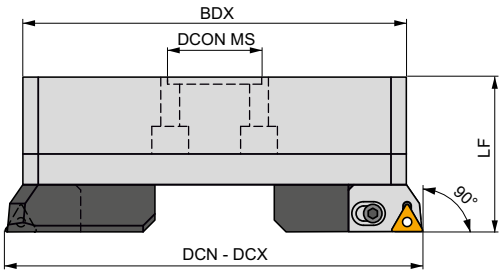
P M K N S H

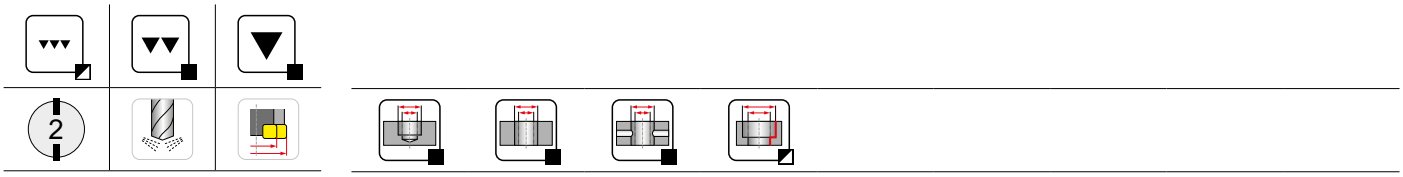
PRAMET

S(P)

90° Roughing Boring Head, Large Bore - Ø220 up to Ø500 mm

High performance 90° large boring head for roughing. Suited for through, blind hole and cross hole boring. Available to utilise CC.., TC.., CN.. type inserts and for hole diameter range Ø80 up to Ø220 mm with arbor sizes from 68 up to 200 mm. High accuracy and repeatability.





Product	CZC MS	DCN [mm]	DCX [mm]	BDX [mm]	DCON MS [mm]	LF [mm]									kg
D 30090 300	300	220.00	320.00	202	60.00	90.00	3CT 90 300	US 0625	HXK 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXK 5	HXK 4	9.45
D 30090 402	300	220.00	320.00	202	60.00	90.00	3CT 90 402	US 0625	HXK 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXK 5	HXK 4	9.47
D 30090 402 N	300	220.00	320.00	202	60.00	90.00	3CT 90 402 N	US 0625	HXK 5	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 5	HXK 4	9.56
D 40090 300	400	290.00	400.00	272	60.00	90.00	3CT 90 300	US 0625	HXK 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXK 5	HXK 4	12.98
D 40090 402	400	290.00	400.00	272	60.00	90.00	3CT 90 402	US 0625	HXK 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXK 5	HXK 4	12.98
D 40090 402 N	400	290.00	400.00	272	60.00	90.00	3CT 90 402 N	US 0625	HXK 5	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 5	HXK 4	12.98
D 50090 300	500	370.00	500.00	352	60.00	90.00	3CT 90 300	US 0625	HXK 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXK 5	HXK 4	16.58
D 50090 402	500	370.00	500.00	352	60.00	90.00	3CT 90 402	US 0625	HXK 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXK 5	HXK 4	16.74
D 50090 402 N	500	370.00	500.00	352	60.00	90.00	3CT 90 402 N	US 0625	HXK 5	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 5	HXK 4	16.63

F75

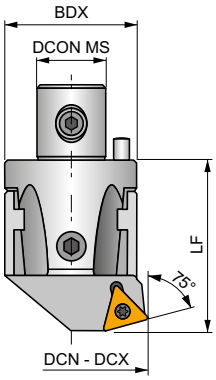
P M K N S H

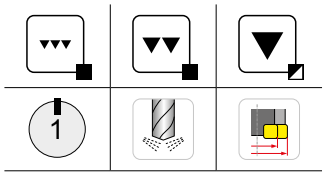
PRAMET

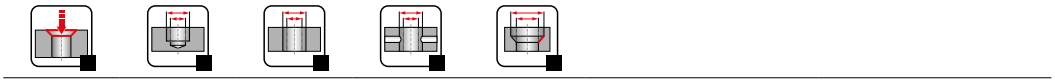
S

75° Finishing Boring Head, Small Bore - Ø24 up to Ø82 mm

High performance 75° small boring head for finishing. Suited for through and blind hole boring, chamfering by helical interpolation and cross hole boring. Available in CC.. and TC.. type inserts. Available for hole diameter range Ø24 up to Ø82 mm in sizes from 22 up to 42 mm. High accuracy and repeatability.







Product	CZC MS	DCN [mm]	DCX [mm]	BDX [mm]	DCON MS [mm]	LF [mm]						kg
A 02275 400	22	24.00	30.00	22	12.00	34.00	CC.. 0602..	US 0206-T08P	SDR T08P	HXK 2	HXK 3	0.10
A 02775 401	27	29.00	40.00	27	15.00	42.00	CC.. 0803..	US 0307-T10P	SDR T10P	HXK 2	HXK 4	0.17
A 02775 409	27	29.00	40.00	27	15.00	42.00	CC.. 09T3..	US 0408-T15P	SDR T15P	HXK 2	HXK 4	0.17
A 03275 401	32	39.00	50.00	32	20.00	45.00	CC.. 0803..	US 0307-T10P	SDR T10P	HXK 2.5	HXK 4	0.26
A 03275 409	32	39.00	50.00	32	20.00	45.00	CC.. 09T3..	US 0408-T15P	SDR T15P	HXK 2.5	HXK 4	0.26
A 04275 300	42	49.00	65.00	42	24.00	56.00	TC.. 16T3..	US 0307-T10P	SDR T10P	HXK 3	HXK 5	0.51
A 05475 300	54	63.00	82.00	54	28.00	66.00	TC.. 16T3..	US 0415-T15P	SDR T15P	HXK 3	HXK 6	1.01

F75-C

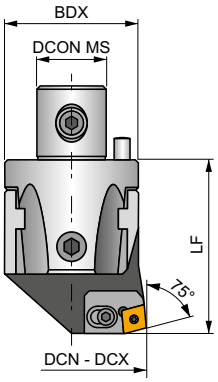
P M K N S H

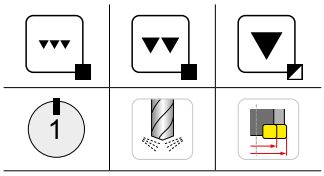
PRAMET

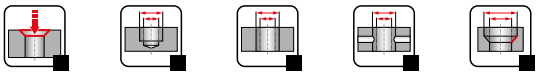
S(P)

75° Finishing Boring Head, Medium Bore - Ø80 up to Ø220 mm

High performance 75° medium boring head for finishing. Suited for through and blind hole boring, chamfering by helical interpolation and cross hole boring. Available in CC.., TC.., CN.. type inserts. Available for hole diameter range Ø80 up to Ø220 mm in sizes from 68 up to 200 mm. High accuracy and repeatability.







Product	CZC MS	DCN [mm]	DCX [mm]	BDX [mm]	DCON MS [mm]	LF [mm]									kg
A 06875 300	68	80.00	102.00	68	36.00	86.00	2CT 75 300	US 0616	HXK 5	TC.. 16T3..	US 0408-T15P	SDR T15P	HXK 5	HXK 8	2.02
A 06875 402	68	80.00	102.00	68	36.00	86.00	2CT 75 402	US 0616	HXK 5	CC.. 1204..	US 0509-T20P	SDR T20P	HXK 5	HXK 8	2.03
A 06875 402 N	68	80.00	102.00	68	36.00	86.00	2CT 75 402 N	US 0616	HXK 5	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 5	HXK 8	2.04
A 08575 300	85	100.00	125.00	85	50.00	100.00	3CT 75 300	US 0625	HXK 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXK 6	HXK 8	3.89
A 08575 402	85	100.00	125.00	85	50.00	100.00	3CT 75 402	US 0625	HXK 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXK 6	HXK 8	3.88
A 08575 402 N	85	100.00	125.00	85	50.00	100.00	3CT 75 402 N	US 0625	HXK 5	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 6	HXK 8	3.90
A 10075 300	100	125.00	160.00	110	60.00	100.00	3CT 75 300	US 0625	HXK 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXK 6	HXK 8	6.22
A 10075 402	100	125.00	160.00	110	60.00	100.00	3CT 75 402	US 0625	HXK 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXK 6	HXK 8	6.24
A 10075 402 N	100	125.00	160.00	110	60.00	100.00	3CT 75 402 N	US 0625	HXK 5	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 6	HXK 8	6.25
A 20075 300	200	160.00	220.00	145	60.00	100.00	3CT 75 300	US 0625	HXK 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXK 6	HXK 8	8.30
A 20075 402	200	160.00	220.00	145	60.00	100.00	3CT 75 402	US 0625	HXK 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXK 6	HXK 8	8.33
A 20075 402 N	200	160.00	220.00	145	60.00	100.00	3CT 75 402 N	US 0625	HXK 5	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 6	HXK 8	8.33

F75-BB

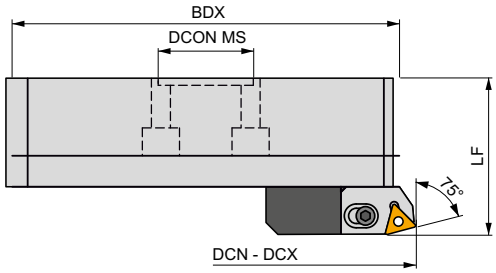
P M K N S H

PRAMET

S(P)

75° Finishing Boring Head, Large Bore - Ø220 up to Ø500 mm

High performance 75° large boring head for finishing. Suited for through and blind hole boring, chamfering by helical interpolation and cross hole boring. Available in CC.., TC.., CN.. type inserts. Available for hole diameter range Ø220 up to Ø500 mm in sizes from 300 up to 500 mm. High accuracy and repeatability.



Product	CZC MS	DCN [mm]	DCX [mm]	BDX [mm]	DCON MS [mm]	LF [mm]										kg
A 30075 300	300	220.00	320.00	202	60.00	90.00	3CT 75 300	US 0625	HXK 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXK 5	HXK 4	8.75
A 30075 402	300	220.00	320.00	202	60.00	90.00	3CT 75 402	US 0625	HXK 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXK 5	HXK 4	8.75
A 30075 402 N	300	220.00	320.00	202	60.00	90.00	3CT 75 402 N	US 0625	HXK 5	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 5	HXK 4	8.30
A 40075 300	400	290.00	400.00	272	60.00	90.00	3CT 75 300	US 0625	HXK 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXK 5	HXK 4	12.20
A 40075 402	400	290.00	400.00	272	60.00	90.00	3CT 75 402	US 0625	HXK 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXK 5	HXK 4	12.20
A 40075 402 N	400	290.00	400.00	272	60.00	90.00	3CT 75 402 N	US 0625	HXK 5	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 5	HXK 4	12.15
A 50075 300	500	370.00	500.00	352	60.00	90.00	3CT 75 300	US 0625	HXK 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXK 5	HXK 4	16.31
A 50075 402	500	370.00	500.00	352	60.00	90.00	3CT 75 402	US 0625	HXK 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXK 5	HXK 4	16.31
A 50075 402 N	500	370.00	500.00	352	60.00	90.00	3CT 75 402 N	US 0625	HXK 5	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 5	HXK 4	16.00

F90

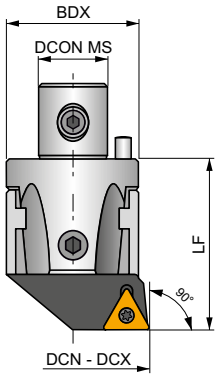
P M K N S H

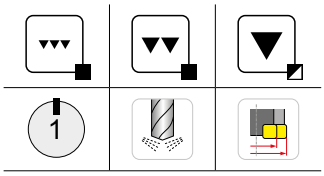
PRAMET

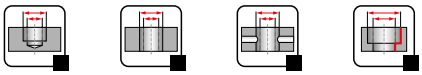
S(P)

90° Finishing Boring Head, Small Bore - Ø24 up to Ø82 mm

High performance 90° small boring head for finishing. Suited for through, blind hole and cross hole boring. Available in CC.., TC.., CN.. type inserts. Available for hole diameter range Ø24 up to Ø82 mm in sizes from 22 up to 54 mm. High accuracy and repeatability.







Product	CZC MS	DCN [mm]	DCX [mm]	BDX [mm]	DCON MS [mm]	LF [mm]						kg
A 02290 400	22	24.00	30.00	22	12.00	34.00	CC.. 0602..	US 0206-T08P	SDR T08P	HXK 2	HXK 3	0.10
A 02790 401	27	29.00	40.00	27	15.00	42.00	CC.. 0803..	US 0307-T10P	SDR T10P	HXK 2	HXK 4	0.17
A 02790 409	27	29.00	40.00	27	15.00	42.00	CC.. 09T3..	US 0408-T15P	SDR T15P	HXK 2	HXK 4	0.16
A 03290 300	32	39.00	50.00	32	20.00	45.00	TC.. 16T3..	US 0408-T15P	SDR T15P	HXK 2.5	HXK 4	0.26
A 03290 401	32	39.00	50.00	32	20.00	45.00	CC.. 0803..	US 0206-T08P	SDR T08P	HXK 2.5	HXK 4	0.26
A 03290 409	32	39.00	50.00	32	20.00	45.00	CC.. 09T3..	US 0408-T15P	SDR T15P	HXK 2.5	HXK 4	0.26
A 04290 300	42	49.00	65.00	42	24.00	56.00	TC.. 16T3..	US 0415-T15P	SDR T15P	HXK 3	HXK 5	0.51
A 04290 402	42	49.00	65.00	42	24.00	56.00	CC.. 1204..	US 0513-T20P	SDR T20P	HXK 3	HXK 5	0.51
A 04290 402 N	42	49.00	65.00	42	24.00	56.00	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 3	HXK 5	0.50
A 05490 300	54	63.00	82.00	54	28.00	66.00	TC.. 16T3..	US 0415-T15P	SDR T15P	HXK 3	HXK 6	1.01
A 05490 402	54	63.00	82.00	54	28.00	66.00	CC.. 1204..	US 0513-T20P	SDR T20P	HXK 3	HXK 6	1.03
A 05490 402 N	54	63.00	82.00	54	28.00	66.00	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 3	HXK 6	1.01

F90-C

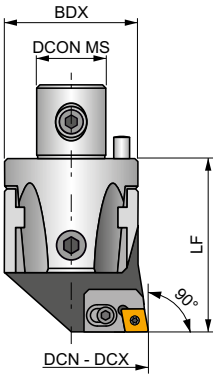
P M K N S H

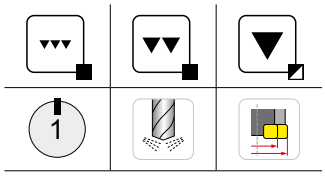
PRAMET

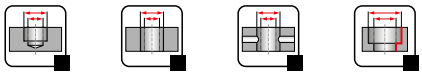
S(P)

90° Finishing Boring Head, Medium Bore - Ø80 up to Ø220 mm

High performance 90° medium boring head for finishing. Suited for through, blind hole and cross hole boring. Available in CC.., TC.., CN.. type inserts. Available for hole diameter range Ø80 up to Ø220 mm in sizes from 68 up to 200 mm. High accuracy and repeatability.







Product	CZC MS	DCN [mm]	DCX [mm]	BDX [mm]	DCON MS [mm]	LF [mm]										kg
A 06890 300	68	80.00	102.00	68	36.00	86.00	2CT 90 300	US 0616	HXK 5	TC.. 16T3..	US 0408-T15P	SDR T15P	HXK 5	HXK 8	2.03
A 06890 402	68	80.00	102.00	68	36.00	86.00	2CT 90 402	US 0616	HXK 5	CC.. 1204..	US 0509-T15P	SDR T15P	HXK 5	HXK 8	2.03
A 06890 402 N	68	80.00	102.00	68	36.00	86.00	2CT 90 402 N	US 0616	HXK 5	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 5	HXK 8	2.60
A 08590 300	85	100.00	125.00	85	50.00	100.00	3CT 90 300	US 0625	HXK 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXK 6	HXK 8	3.90
A 08590 402	85	100.00	125.00	85	50.00	100.00	3CT 90 402	US 0625	HXK 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXK 6	HXK 8	3.88
A 08590 402 N	85	100.00	125.00	85	50.00	100.00	3CT 90 402 N	US 0625	HXK 5	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 6	HXK 8	4.04
A 10090 300	100	125.00	160.00	100	60.00	100.00	3CT 90 300	US 0625	HXK 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXK 6	HXK 8	6.24
A 10090 402	100	125.00	160.00	100	60.00	100.00	3CT 90 402	US 0625	HXK 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXK 6	HXK 8	6.24
A 10090 402 N	100	125.00	160.00	100	60.00	100.00	3CT 90 402 N	US 0625	HXK 5	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 6	HXK 8	6.26
A 20090 300	200	160.00	220.00	200	60.00	100.00	3CT 90 300	US 0625	HXK 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXK 6	HXK 8	8.30
A 20090 402	200	160.00	220.00	200	60.00	100.00	3CT 90 402	US 0625	HXK 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXK 6	HXK 8	8.29
A 20090 402 N	200	160.00	220.00	200	60.00	100.00	3CT 90 402 N	US 0625	HXK 5	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 6	HXK 8	8.33

F90-BB

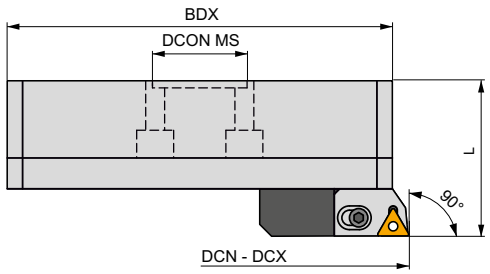
P M K N S H

PRAMET

S(P)

90˚ Finishing Boring Head, Large Bore - Ø220 up to Ø500 mm

High performance 90˚ large boring head for finishing. Suited for through, blind hole and cross hole boring. Available in CC.., TC.., CN.. type inserts. Available for hole diameter range Ø220 up to Ø500 mm in sizes from 300 up to 500 mm. High accuracy and repeatability.



Product	CZC MS	DCN [mm]	DCX [mm]	BDX [mm]	DCON MS [mm]	LF [mm]									kg
A 30090 300	300	220.00	320.00	300	60.00	90.00	3CT 90 300	US 0625	HXK 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXK 5	HXK 4	8.74
A 30090 402	300	220.00	320.00	300	60.00	90.00	3CT 90 402	US 0625	HXK 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXK 5	HXK 4	8.82
A 30090 402 N	300	220.00	320.00	300	60.00	90.00	3CT 90 402 N	US 0625	HXK 5	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 5	HXK 4	8.75
A 40090 300	400	290.00	400.00	400	60.00	90.00	3CT 90 300	US 0625	HXK 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXK 5	HXK 4	12.19
A 40090 402	400	290.00	400.00	400	60.00	90.00	3CT 90 402	US 0625	HXK 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXK 5	HXK 4	12.50
A 40090 402 N	400	290.00	400.00	400	60.00	90.00	3CT 90 402 N	US 0625	HXK 5	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 5	HXK 4	12.20
A 50090 300	500	370.00	500.00	500	60.00	90.00	3CT 90 300	US 0625	HXK 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXK 5	HXK 4	16.08
A 50090 402	500	370.00	500.00	500	60.00	90.00	3CT 90 402	US 0625	HXK 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXK 5	HXK 4	16.20
A 50090 402 N	500	370.00	500.00	500	60.00	90.00	3CT 90 402 N	US 0625	HXK 5	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 5	HXK 4	16.00

MB-H

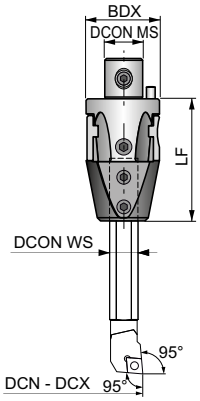
P M K N S H

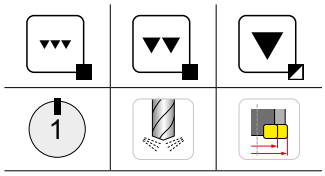
PRAMET

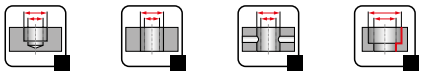
S

Micro Boring Head, Ultra Small Bore - Ø8 up to Ø38 mm

High performance, high accuracy micro boring head with high repeatability. Suited for through, blind, shoulder and cross hole boring. Head size can carry boring tools from Ø6.0 up to Ø16.0 mm. Available in sizes from 27 up to 42 mm.



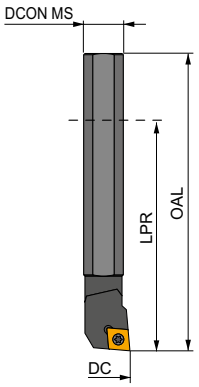




Product	CZC MS	DCN	DCX	BDX	DCON MS	DCON WS	LB			kg
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]			
A 027 006	27	8.00	20.00	27	15.00	6.00	50.00	HXK 2	HXK 4	0.20
A 027 008	27	10.00	21.00	27	15.00	8.00	50.00	HXK 2	HXK 4	0.19
A 032 008	32	10.00	21.00	32	20.00	8.00	58.00	HXK 2.5	HXK 4	0.32
A 032 010	32	13.00	25.00	32	20.00	10.00	58.00	HXK 2.5	HXK 4	0.32
A 042 010	42	13.00	29.00	42	24.00	10.00	70.00	HXK 3	HXK 5	0.64
A 042 012	42	16.00	34.00	42	24.00	12.00	70.00	HXK 3	HXK 5	0.64
A 042 016	42	20.00	38.00	42	24.00	16.00	70.00	HXK 3	HXK 5	0.62

Boring Bars for Micro Boring Head - Shank Diameter Ø6 up to Ø20 mm

Suited for blind, through, shoulder and cross hole boring. Available in EP.., TC.. and CC.. type inserts.

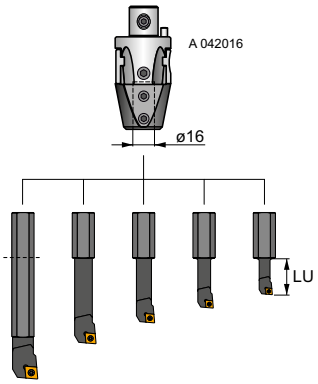


Product	DCON MS [mm]	DC [mm]	OAL [mm]	LPR [mm]				Carbide	kg
S06E SELPR 05-B	6.00	8.00	70.0	46	EP.. 0502..	US 0205-T07P	SDR T07P	–	0.04
S08F SCLCR 06-B	8.00	10.00	80.0	50	CC.. 0602..	US 0205-T08P	SDR T08P	–	0.04
S10G SCLCR 06-B	10.00	13.00	90.0	54	CC.. 0602..	US 0206-T08P	SDR T08P	–	0.06
S12H SCLCR 06-B	12.00	16.00	100.0	64	CC.. 0602..	US 0206-T08P	SDR T08P	–	0.11
S16J SCLCR 09-B	16.00	20.00	110.0	74	CC.. 09T3..	US 0408-T15P	SDR T15P	–	0.18
S16J STFCR 09-B	16.00	20.00	110.0	74	TC.. 0902..	US 0206-T07P	SDR T07P	–	0.18
S16J STFCR 16-B	16.00	20.00	110.0	74	TC.. 16T3..	US 0408-T15P	SDR T15P	–	0.18
C08G SCLCR 06	8.00	10.00	90.0	60	CC.. 0602..	US 0205-T08P	SDR T08P	✓	1.00
C10J SCLCR 06	10.00	13.00	110.0	74	CC.. 0602..	US 0206-T08P	SDR T08P	✓	0.13
C12K SCLCR 06	12.00	16.00	125.0	89	CC.. 0602..	US 0206-T08P	SDR T08P	✓	0.20
C16L SCLCR 09	16.00	20.00	140.0	104	CC.. 09T3..	US 0408-T15P	SDR T15P	✓	0.38

ISO BARS A042

Boring Bars for Micro A042 Micro Boring Head

Boring bars with oversized shank diameter Ø16 mm. Suited for blind, through, shoulder and cross hole boring. Available in EP.., TC.. and CC.. type inserts.



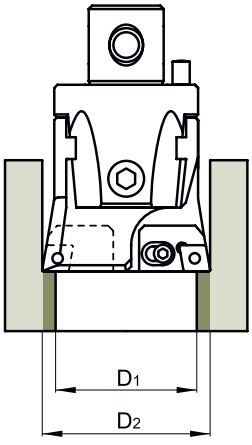
Product	DCN [mm]	DCX [mm]	LU [mm]				kg
S06/16 SELPR 05	8.00	26.00	25.00	EP.. 0502..	US 0205-T07P	SDR T07P	0.08
S06/16 STFCR 06	8.00	26.00	25.00	TC.. 06T1..	US 0405-T06P	SDR T06P	0.08
S08/16 SCLCR 06	10.00	28.00	35.00	CC.. 0602..	US 0205-T08P	SDR T08P	0.09
S08/16 STFCR 06	10.00	28.00	35.00	TC.. 06T1..	US 0405-T06P	SDR T06P	0.07
S10/16 SCLCR 06	13.00	31.00	45.00	CC.. 0602..	US 0206-T08P	SDR T08P	0.10
S10/16 STFCR 09	13.00	31.00	45.00	TC.. 0902..	US 0206-T07P	SDR T07P	0.10
S12/16 SCLCR 06	16.00	34.00	57.00	CC.. 0602..	US 0206-T08P	SDR T08P	0.13
S12/16 STFCR 09	16.00	34.00	57.00	TC.. 0902..	US 0206-T07P	SDR T07P	0.13
S16/16 SCLCR 09	20.00	38.00	73.00	CC.. 09T3..	US 0408-T15P	SDR T15P	0.18
S16/16 STFCR 09	20.00	38.00	73.00	TC.. 0902..	US 0206-T07P	SDR T07P	0.18
S16/16 STFCR 16	20.00	38.00	73.00	TC.. 0902..	US 0408-T15P	SDR T15P	0.18

BORING ACCESSORIES

1	2	3	4
2CT	90	402 N	S

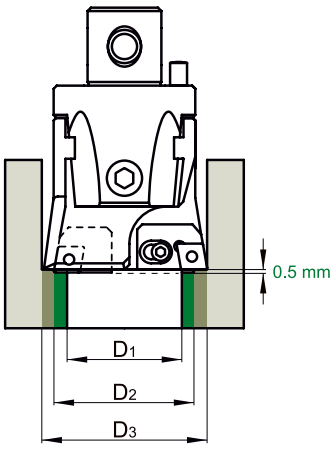
1	2	3		4	
Type of tool	Cutting edge angle	Inserts pocket code		Variant	
2CT	30	300	TC..16T3.	S	Staggered
3CT	45	402	CC..1204..		
	75	402N	CN..1204..		
	90				

Symmetrical boring



2CT □□ □□□ + 2CT □□ □□□
3CT □□ □□□ + 3CT □□ □□□

Staggered boring

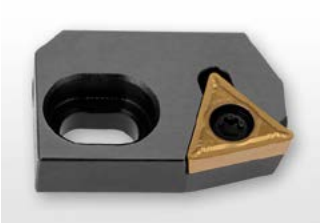


2CT □□ □□□S + 2CT □□ □□□
3CT □□ □□□S + 3CT □□ □□□

CART-BS-SPC

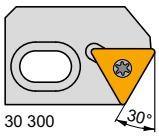
P M K N S H

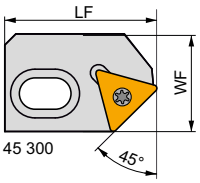
PRAMET



Special Boring Head 2CT and 3CT Cartridges

Special boring head cartridges, sizes 2CT and 3CT available in different approach angles 30° or 45°. Suited for TC.., CC.., CN.. inserts for rough and finishing boring applications.



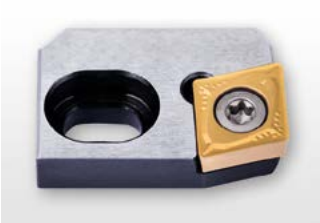


Product	WF [mm]	LF [mm]								kg
2CT 30 300	22.5	35.00	US 0616	HXK 5	US 0430	HXK 2	TC.. 16T3..	US 0408-T15P	SDR T15P	0.59
2CT 45 300	22.5	35.00	US 0616	HXK 5	US 0430	HXK 2	TC.. 16T3..	US 0408-T15P	SDR T15P	0.05
2CT 90 300 S	23	33.00	US 0616	HXK 5	US 0430	HXK 2	TC.. 16T3..	US 0408-T15P	SDR T15P	0.05
2CT 90 402 N S	23	33.00	US 0616	HXK 5	US 0430	HXK 2	CN.. 1204.. L	US 0613-H25	HXK 2.5	0.07
2CT 90 402 S	23	33.00	US 0616	HXK 5	US 0430	HXK 2	CC.. 1204..	US 0509-T20P	SDR T20P	0.05
3CT 30 300	28	39.00	US 0625	HXK 5	US 0635	HXK 3	TC.. 16T3..	US 0415-T15P	SDR T15P	0.10
3CT 45 300	28	39.00	US 0625	HXK 5	US 0635	HXK 3	TC.. 16T3..	US 0415-T15P	SDR T15P	0.10
3CT 90 300 S	28.5	37.00	US 0625	HXK 5	US 0635	HXK 3	TC.. 16T3..	US 0415-T15P	SDR T15P	0.10
3CT 90 402 N S	28.5	37.00	US 0625	HXK 5	US 0635	HXK 3	CN.. 1204.. L	US 0613-H25	HXK 2.5	0.11
3CT 90 402 S	28.5	37.00	US 0625	HXK 5	US 0635	HXK 3	CC.. 1204..	US 0513-T20P	SDR T20P	0.09

CART-BS-STD

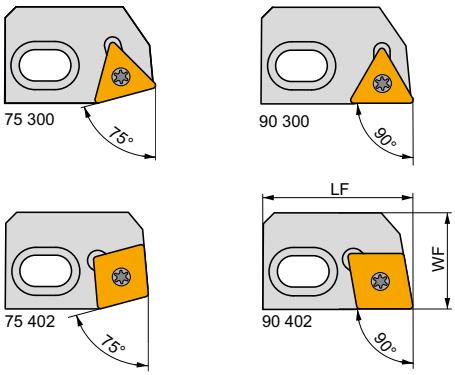
P M K N S H

PRAMET



Standard Boring Head 2CT and 3CT Cartridges

Standard boring head cartridges, sizes 2CT and 3CT available in different approach angles 75° or 90°. Suited for TC.., CC.., CN.. inserts for rough and finishing boring applications.



Product	WF [mm]	LF [mm]								kg
2CT 75 300	22.5	35.00	US 0616	HXK 5	US 0430	HXK 2	TC.. 16T3..	US 0408-T15P	SDR T15P	0.06
2CT 75 402	22.5	35.00	US 0616	HXK 5	US 0430	HXK 2	CC.. 1204..	US 0509-T20P	SDR T20P	0.06
2CT 75 402 N	22.5	35.00	US 0616	HXK 5	US 0430	HXK 2	CN.. 1204.. R	US 0613-H25	HXK 2.5	0.07
2CT 90 300	22.5	35.00	US 0616	HXK 5	US 0430	HXK 2	TC.. 16T3..	US 0408-T15P	SDR T15P	0.05
2CT 90 402	22.5	35.00	US 0616	HXK 5	US 0430	HXK 2	CC.. 1204..	US 0509-T20P	SDR T20P	0.05
2CT 90 402 N	22.5	35.00	US 0616	HXK 5	US 0430	HXK 2	CN.. 1204.. L	US 0613-H25	HXK 2.5	0.07
3CT 75 300	28	39.00	US 0625	HXK 5	US 0635	HXK 3	TC.. 16T3..	US 0415-T15P	SDR T15P	0.10
3CT 75 402	28	39.00	US 0625	HXK 5	US 0635	HXK 3	CC.. 1204..	US 0509-T20P	SDR T20P	0.10
3CT 75 402 N	28	39.00	US 0625	HXK 5	US 0635	HXK 3	CN.. 1204.. R	US 0613-H25	HXK 2.5	0.12
3CT 90 300	28	39.00	US 0625	HXK 5	US 0635	HXK 3	TC.. 16T3..	US 0415-T15P	SDR T15P	0.11
3CT 90 402	28	39.00	US 0625	HXK 5	US 0635	HXK 3	CC.. 1204..	US 0509-T20P	SDR T20P	0.10
3CT 90 402 N	28	39.00	US 0625	HXK 5	US 0635	HXK 3	CN.. 1204.. L	US 0613-H25	HXK 2.5	0.12

CHAM-BS

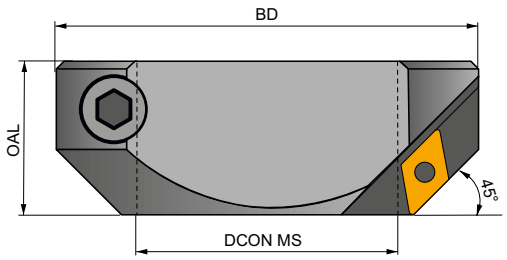
P M K N S H

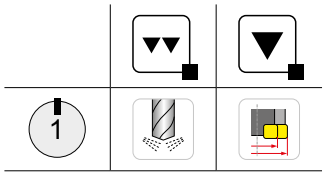
PRAMET

S

CH-BS Chamfering Ring for Boring Heads

45° chamfering ring for boring head system, sizes from 22 up to 42 mm to hold DC.. 11T3.. Inserts, and sizes from 54 up to 200 mm to hold DC.. 1504.. inserts.





Product	CZC MS	DCON MS [mm]	BD [mm]	OAL [mm]					kg
CH 022	22	22.00	43.00	24.0	DC.. 11T3..	US 0408-T15P	SDR T15P	HXK 4	0.11
CH 027	27	27.00	48.00	24.0	DC.. 11T3..	US 0408-T15P	SDR T15P	HXK 4	0.13
CH 032	32	32.00	62.00	30.0	DC.. 11T3..	US 0408-T15P	SDR T15P	HXK 5	0.29
CH 042	42	42.00	72.00	30.0	DC.. 11T3..	US 0408-T15P	SDR T15P	HXK 5	0.38
CH 054	54	54.00	94.00	40.0	DC.. 1504..	US 0513-T20P	SDR T20P	HXK 6	0.89
CH 068	68	68.00	110.00	40.0	DC.. 1504..	US 0513-T20P	SDR T20P	HXK 8	1.23
CH 085	85	85.00	145.00	55.0	DC.. 1504..	US 0513-T20P	SDR T20P	HXK 10	2.70
CH 100	100	100.00	170.00	60.0	DC.. 1504..	US 0513-T20P	SDR T20P	HXK 14	4.14
CH 200	200	200.00	200.00	60.0	DC.. 1504..	US 0513-T20P	SDR T20P	HXK 14	5.80

BORING INSERTS

CCGT

388

CCGW CBN

390

CCMT

390

CCMW

393

CNGA CBN

394

CNGG

395

CNMA

395

CNMG

396

DCMT

398

DCMW

399

DCMW PCD

399

EPGX

400

EPMT

400

TCGT

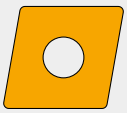
401

TCMT

402

TCMW

403

Shape	Pocket designation	ISO code
	300	TC.. 16T3..
	400 401 402 409	CC.. 0602.. CC.. 0803.. CC.. 1204.. CC.. 09T3..
	402N	CN.. 1204..
		EP.. 0502..
		DC..11T3.. DC..1504..

More options on inserts can be found in catalogue turning. Details about geometries can also be found in boring insert section.

Grade Identification	Area of Application	Application	Feed	Cutting speed	Resistance to adverse Working Conditions	Coating	Colour	Substrate	Coolant benefit	Grade description
T9315	P05 - P25 K05 - K25 H10 - H20	■ ◪ ◪				MT-CVD		FGM	+ +	A versatile grade with excellent wear resistance properties even under intense cutting conditions. It can also be used for operations with interrupted cuts. With it's well balanced properties this grade can be first choice for a wide range of turning operations. Not suited to low cutting speeds.
T9325	P15 - P35 M10 - M30 K15 - K35 S10 - S20	■ ■ ◪ ◪				MT-CVD		FGM	+ +	From a technological perspective this is an extremely versatile grade with high resistance to mechanical damage in adverse cutting conditions and retains excellent wear resistance. The correct application of this material requires high cutting speeds.
T9335	P20 - P45 M15 - M40 S15 - S25	■ ■ ◪				MT-CVD		FGM	+ + +	One of the toughest grades which is especially suitable for adverse cutting conditions at medium to high feed rates and medium cutting speeds. Compared to its predecessors, M15 – M40 it is not only tougher, but also more abrasion resistant which will be useful when using intensive cutting conditions.
T7325	P15 - P35 M10 - M25 S10 - S25	◪ ■ ■				MT-CVD		FGM	+ + +	One of the most universal turning grades. Especially designed for stainless steel machining. Optimal balance between wear resistance and performance reliability. Suitable for broad variety of application in turning operations.
T7335	P20 - P40 M20 - M40 S15 - S25	◪ ■ ■				MT-CVD		FGM	+ + +	Grade with functionally graded substrate, featuring very high operational reliability and very good wear-resistance. It is best suited to use in the machining of very tough M20 – M40 materials.
T5305	P05 - P15 K01 - K15 H05 - H15	◪ ■ ◪				MT-CVD		H	+	Grade with very high resistance to chemical wear; suitable for finishing operations using high cutting speeds. With its high abrasion resistance, it is also suitable for productive K01 – K15, machining of hardened and treated materials.
T5315	P10 - P25 K10 - K25 H15 - H25	◪ ■ ◪				MT-CVD		H	+	Grade intended primarily for productive machining which has high abrasion resistance and good operational reliability. Due to its properties, this material is particularly suitable for roughing and finishing operations for good or slightly adverse cutting conditions.
T8315	P05 - P20 M05 - M20 K05 - K25 N05 - N25 S05 - S15 H05 - H15	◪ ■ ■ ■ ◪ ■				PVD		submicron H	+ +	Grade featuring excellent abrasion resistance while maintaining above average operational reliability, it is suitable for machining at medium to high cutting speeds in short chipping harder materials.
T8330	P25 - P40 M20 - M35 K20 - K40 N15 - N30 S15 - S25 H15 - H25	■ ■ ■ ◪ ◪ ◪				PVD		submicron H	+ + +	Undoubtedly the most versatile cutting material, this is useful for machining of all types of machined materials and is practically applicable in almost all types of turning operations. Its main benefits are its high operational reliability and very good frictional properties; it is therefore suitable for applications at medium and lower cutting speeds.
T6310	P01 - P15 M01 - M15 K05 - K20 N05 - N20 S01 - S15 H01 - H15	■ ■ ■ ■ ■ ■				PVD		ultra submicron H	+ + +	High wear resistant turning grade with top PVD coating. Suitable for finishing operation and applications, where sharp cutting edge together with high flank wear resistance is of high importance

BORING GRADES – NAVIGATOR

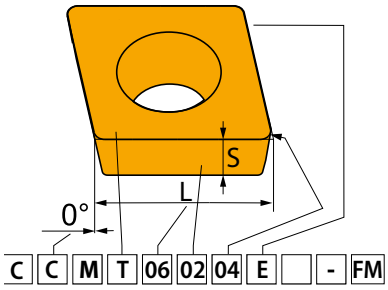
Grade Identification	Area of Application	Application	Feed	Cutting speed	Resistance to adverse Working Conditions	Coating	Colour	Substrate	Coolant benefit	Grade description
T0315	N05 - N20	■				PVD			+ +	Submicron grade for turning non-ferrous metals and their alloys with a balance of wear resistance and toughness. It is provided with a unique coating with excellent friction properties.
HF7	M10 - M20	◪				×		submicron H	+ +	Uncoated grade which is primarily designed for machining non-ferrous metals; but can also be used for other machined materials (except steel). This material can be used in turning, milling, and even boring.
	K10 - K25	■								
	N10 - N25	■								
H07	M05 - M15	◪				×		submicron H	+ +	Uncoated turning grade suitable for machining applications where oxidation resistance is not dominating criterion of tool life. Designed for machining of Ti-based alloys. Grade exhibits high strength of cutting edge together with good wear resistance.
	K10 - K25	■								
	N10 - N30	■								
	S01 - S20	■								
TT310	P10 - P25	■				PVD		cermet	+ / –	Coated cermet used for fine and finish turning of carbon and alloy steels (including stainless). Its excellent friction properties are further improved by the coating applied using the PVD technique.
	M15 - M25	◪								
TT010	P01 - P10	■				×		cermet	+ / –	Uncoated cermet, which is suitable for fine machining of all types of steel (including stainless) at very low feed rates. Its main advantage is the minimal radius of the cutting edge and its high resistance to physical and chemical wear mechanisms.
	M01 - M10	◪								
PD1	N05 - N25	■				×		PKD	-	PKD grade for turning non-ferrous materials. Ideal choice for working with high cutting speed and small feeds at stable conditions.
TB310	K01 - K10	■				×		CBN	– -	CBN grade for machining of hardened materials. Suitable for machining with high cutting speed and small feeds at stable conditions.
	S05 - S10	◪								
	H01 - H10	◪								

Substrat	
H	WC-Co based substrate
submicron H	WC-Co based substrate fine grained (< 1 µm)
ultra submicron H	WC-Co based substrate very fine grained (< 0.5 µm)
FGM	Functionally graded substrate
Cermet	Cemented carbide without WC
PCD	Polycrystalline Diamond
CBN	Cubic Boron Nitride

Coating	
MT-CVD	Medium-temperature chemical method of coating
PVD	Low-temperature physical method of coating
×	Uncoated grade

Benefits of cutting fluid	
+ + +	Use of coolant is essential
+ +	Highly recommended
+ / –	Optional
– -	Do not use coolant

ISO CODE DESIGNATION – INSERTS



	1	2	3	4
ISO	C	C	M	T
ANSI	C	C	M	T

1 Insert shape

H	O	P	R
S	T	C 80°	D 55°
E 75°	M 86°	V 35°	W 80°
L	A 85°	B 82°	K 55°

2 Insert clearance angle

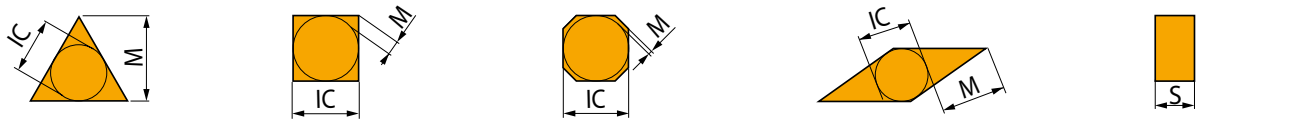
A	3°	B	5°
C	7°	D	15°
E	20°	F	25°
G	30°	N	0°
P	11°	O	Special

4 Insert type

N	
R	
F	
A	
M	
G	
W	40° – 60°
T	
Q	
U	
B	70° – 90°
H	
C	
J	
X	Special

3 Tolerances

	[mm]			[″]		
	M (±)	S (±)	IC (±)	M (±)	S (±)	IC (±)
A	0.005	0.025	0.025	.0002″	.001″	.0010″
F	0.005	0.025	0.013	.0002″	.001″	.0005″
C	0.013	0.025	0.025	.0005″	.001″	.0010″
H	0.013	0.025	0.013	.0005″	.001″	.0005″
E	0.025	0.025	0.025	.0010″	.001″	.0010″
G	0.025	0.130	0.025	.0010″	.005″	.0010″
J	0.005	0.025	0.05 – 0.13	.0002″	.001″	.002 – 0.005″
K	0.013	0.025	0.05 – 0.13	.0005″	.001″	.002 – 0.005″
L	0.025	0.025	0.05 – 0.13	.0010″	.001″	.002 – 0.005″
M	0.08 – 0.18	0.130	0.05 – 0.13	.003 – 0.007″	.005″	.002 – 0.005″
N	0.08 – 0.18	0.025	0.05 – 0.13	.003 – 0.007″	.001″	.002 – 0.005″
U	0.05 – 0.38	0.130	0.05 – 0.13	.005 – 0.015″	.005″	.003 – 0.010″

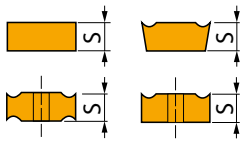


5	6	7	8	9		10
06	02	04	E		-	FM
2	1.5	1	E		-	FM

5 Insert cutting edge length (insert size)

d=IC [mm]	[in]	H	O	P	S	T	C	D	E	M	V	W	R	K
3.97					03	06		04			06	02		
	5/32"	1.2												
4.76					04	08	04	05	04	04	08	L3		
	3/16"	1.5												
5.56					05	09	05	06	05	05	09	03		
	7/32"	1.8												
6.35		03	02	04	08	11	06	07	08	08	11	04	06	
	1/4"	2												
7.94		04	03	05	07	13	08	09	06	07	13	05	07	
	5/16"	2.5												
9.525		05	04	07	09	16	09	11	09	09	16	06	09	16
	3/8"	3												
12.7		07	05	09	12	22	12	15	13	12	22	08	12	
	1/2"	4												
15.875		09	06	11	15	27	16	19	16	15	27	10	15	
	5/8"	5												
19.05		11	07	13	19	33	19	23	19	19	33	13	19	
	3/4"	6												
25.40		14	10	18	25	44	25	31	26	25	44	17	25	
	1"	8												
31.75		18	13	23	31	54	32	38	32	31	54	21	31	
	1 1/4"	10												

6 Insert thickness



	S [mm]	S ["]
01	1.59	1/16"
T1	1.98	5/64"
02	2.38	3/32"
03	3.18	1/8"
T3	3.97	5.32"
04	4.76	3/16"
05	5.56	7/32"
06	6.35	1/4"
07	7.94	5/16"
09	9.52	3/8"

7 Insert nose radius

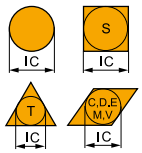
	RE [mm]	RE ["]
00	0	0"
02	0.2	1/128"
04	0.4	1/64"
08	0.8	1/32"
12	1.2	3/64"
16	1.6	1/16"
24	2.4	3/32"
32	3.2	1/8"

Round inserts

d=I.C.	
["]	00
[mm]	M0

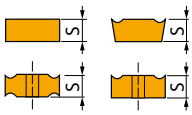
ANSI

5 Inscribed circle



Symbol	d=I.C. [mm]	d=I.C. ["]
1	3.175	1/8"
1.2	3.969	5/32"
1.5	4.763	3/16"
1.8	5.556	7/32"
2	6.350	1/4"
2.5	7.938	5/16"
3	9.525	3/8"
4	12.700	1/2"
5	15.875	5/8"
6	19.050	3/4"
7	22.225	7/8"
8	25.400	1"
10	31.750	5/4"
12	38.100	6/4"

6 Insert thickness



Symbol	S [mm]	S ["]
1	1.588	1/16"
1.2	1.984	5/64"
1.5	2.381	3/32"
2	3.175	1/8"
2.5	3.969	5/32"
3	4.763	3/16"
3.5	5.556	7/32"
4	6.350	1/4"
5	7.938	5/16"
6	9.525	3/8"
7	11.113	7/16"
8	12.700	1/2"
9	14.288	9/16"
10	15.875	5/8"

7 Insert nose radius

Symbol	RE [mm]	RE ["]
0	0	0"
0.2	0.099	1/256"
0.5	0.198	1/128"
1	0.397	1/64"
2	0.794	1/32"
3	1.191	3/64"
4	1.588	1/16"
5	1.984	5/64"
6	2.381	3/32"
7	2.778	7/64"
8	3.175	1/8"
10	3.969	5/32"
12	4.763	3/16"
14	5.556	7/32"
16	6.350	1/4"

8 Insert cutting edge design

F Sharp edges	E Rounded edges
T Edges with facet	S Rounded edges with facet
K Edges with double facet	P Rounded edges with double facet

9 Feed direction

R Feed

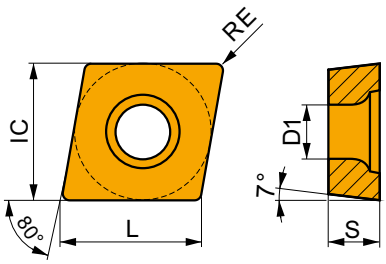
L Feed

N Feed Feed

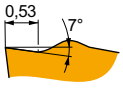
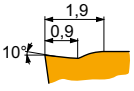
10 Chip breaker designation

CCGT

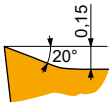
	IC [mm]	D1 [mm]	L [mm]	S [mm]
0602	6.350	2.80	6.40	2.38
0602-SF3	6.350	2.80	6.40	2.58
0803-AL	7.940	3.40	8.10	3.43
0803-SF3	7.940	3.40	8.10	3.43
09T3	9.525	4.40	9.70	3.97
09T3-SF3	9.525	4.40	9.70	4.22
1204	12.700	5.50	12.90	4.76
1204-SF3	12.700	5.50	12.90	5.01



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			F																	
AL geometry with highly positive design for fine-finish to rough machining, continuous to slightly interrupted cuts.																				
CCGT 060202F-AL	**HF7**	0.2	–	–	–	–	–	–	–	–	–	360	0.12	1.0	–	–	–	–	–	–
	T0315	0.2	–	–	–	–	–	–	–	–	–	360	0.12	1.0	–	–	–	–	–	–
CCGT 060204F-AL	**HF7**	0.4	–	–	–	–	–	–	–	–	–	300	0.24	1.0	–	–	–	–	–	–
	T0315	0.4	–	–	–	–	–	–	–	–	–	300	0.24	1.0	–	–	–	–	–	–
CCGT 080302F-AL	**T0315**	0.2	–	–	–	–	–	–	–	–	–	360	0.12	1.0	–	–	–	–	–	–
CCGT 080304F-AL	**HF7**	0.4	–	–	–	–	–	–	–	–	–	300	0.24	1.0	–	–	–	–	–	–
	T0315	0.4	–	–	–	–	–	–	–	–	–	300	0.24	1.0	–	–	–	–	–	–
CCGT 09T302F-AL	**HF7**	0.2	–	–	–	–	–	–	–	–	–	360	0.12	1.0	–	–	–	–	–	–
	T0315	0.2	–	–	–	–	–	–	–	–	–	360	0.12	1.0	–	–	–	–	–	–
CCGT 09T304F-AL	**HF7**	0.4	–	–	–	–	–	–	–	–	–	300	0.24	1.5	–	–	–	–	–	–
	T0315	0.4	–	–	–	–	–	–	–	–	–	300	0.24	1.5	–	–	–	–	–	–
CCGT 09T308F-AL	**HF7**	0.8	–	–	–	–	–	–	–	–	–	200	0.48	1.5	–	–	–	–	–	–
	T0315	0.8	–	–	–	–	–	–	–	–	–	200	0.48	1.5	–	–	–	–	–	–
CCGT 120404F-AL	**HF7**	0.4	–	–	–	–	–	–	–	–	–	300	0.24	2.4	–	–	–	–	–	–
	T0315	0.4	–	–	–	–	–	–	–	–	–	300	0.24	2.4	–	–	–	–	–	–
CCGT 120408F-AL	**HF7**	0.8	–	–	–	–	–	–	–	–	–	200	0.48	2.4	–	–	–	–	–	–
	T0315	0.8	–	–	–	–	–	–	–	–	–	200	0.48	2.4	–	–	–	–	–	–
																				
			U		E															
FF2 geometry with positive design for fine-finish to finish machining, continuous to slightly interrupted cuts.																				
CCGT 09T302E-FF2	**T7325**	0.2	150	0.05	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.2	150	0.05	1.0	–	–	–	115	0.05	1.0	–	–	–	–	–	–	–	–	–
																				
			U		E															
NF1 geometry with positive design for fine-finish to medium machining and continuous cuts.																				
CCGT 060204E-NF1	**T6310**	0.4	140	0.10	0.8	110	0.09	0.8	–	–	–	360	0.12	0.8	38	0.07	0.6	25	0.15	1.0
	T7325	0.4	140	0.10	0.8	110	0.09	0.8	–	–	–	–	–	–	45	0.07	0.6	–	–	–
CCGT 060208E-NF1	**T6310**	0.8	140	0.12	0.8	110	0.11	0.8	–	–	–	360	0.14	0.8	45	0.11	0.6	30	0.15	1.0
	T7325	0.8	140	0.12	0.8	110	0.11	0.8	–	–	–	–	–	–	45	0.11	0.6	–	–	–
CCGT 09T304E-NF1	**T6310**	0.4	140	0.10	1.2	110	0.09	1.2	–	–	–	360	0.12	1.2	38	0.07	1.0	25	0.15	1.0
	T7325	0.4	140	0.10	1.2	110	0.09	1.2	–	–	–	–	–	–	45	0.07	1.0	–	–	–
CCGT 09T308E-NF1	**T6310**	0.8	140	0.14	1.2	100	0.13	1.2	–	–	–	330	0.17	1.2	41	0.13	1.0	25	0.15	1.0
	T7325	0.8	140	0.14	1.2	100	0.13	1.2	–	–	–	–	–	–	45	0.13	1.0	–	–	–

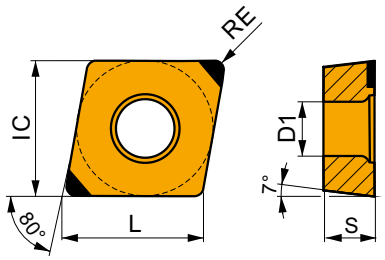
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
SF3 geometry with highly positive design for fine to finish machining, and continuous cuts.																				
CCGT 060202E-SF3	**H07**	0.2		–	–	–	110	0.05	0.8	115	0.05	0.8	360	0.06	0.8	45	0.04	0.6	–	–	–
	T6310	0.2		150	0.05	0.8	110	0.05	0.8	115	0.05	0.8	360	0.06	0.8	45	0.04	0.6	30	0.15	1.0
	T8315	0.2		150	0.05	0.8	110	0.05	0.8	115	0.05	0.8	360	0.06	0.8	38	0.04	0.6	30	0.15	1.0
CCGT 060204E-SF3	**H07**	0.4		–	–	–	95	0.09	0.8	115	0.10	0.8	360	0.12	0.8	34	0.07	0.6	–	–	–
	T6310	0.4		140	0.10	0.8	110	0.09	0.8	115	0.10	0.8	360	0.12	0.8	38	0.07	0.6	26	0.15	1.0
	T8315	0.4		140	0.10	0.8	110	0.09	0.8	115	0.10	0.8	360	0.12	0.8	34	0.07	0.6	26	0.15	1.0
CCGT 080302E-SF3	**T6310**	0.2		150	0.05	0.8	110	0.05	0.8	115	0.05	0.8	360	0.06	0.8	45	0.04	0.6	30	0.15	1.0
	T8315	0.2		150	0.05	0.8	110	0.05	0.8	115	0.05	0.8	360	0.06	0.8	38	0.04	0.6	30	0.15	1.0
CCGT 080304E-SF3	**H07**	0.4		–	–	–	95	0.09	1.0	115	0.10	1.0	360	0.12	1.0	34	0.07	0.8	–	–	–
	T6310	0.4		140	0.10	1.0	110	0.09	1.0	115	0.10	1.0	360	0.12	1.0	38	0.07	0.8	26	0.15	1.0
	T8315	0.4		140	0.10	1.0	110	0.09	1.0	115	0.10	1.0	360	0.12	1.0	34	0.07	0.8	26	0.15	1.0
CCGT 09T302E-SF3	**H07**	0.2		–	–	–	110	0.05	0.8	115	0.05	0.8	360	0.06	0.8	45	0.04	0.6	–	–	–
	T6310	0.2		150	0.05	0.8	110	0.05	0.8	115	0.05	0.8	360	0.06	0.8	45	0.04	0.6	30	0.15	1.0
	T8315	0.2		150	0.05	0.8	110	0.05	0.8	115	0.05	0.8	360	0.06	0.8	38	0.04	0.6	30	0.15	1.0
CCGT 09T304E-SF3	**H07**	0.4		–	–	–	95	0.09	1.0	115	0.10	1.0	360	0.12	1.0	34	0.07	0.8	–	–	–
	T6310	0.4		140	0.10	1.0	110	0.09	1.0	115	0.10	1.0	360	0.12	1.0	38	0.07	0.8	26	0.15	1.0
	T8315	0.4		140	0.10	1.0	110	0.09	1.0	115	0.10	1.0	360	0.12	1.0	34	0.07	0.8	26	0.15	1.0
CCGT 09T308E-SF3	**H07**	0.8		–	–	–	110	0.09	1.0	115	0.10	1.0	360	0.12	1.0	41	0.08	0.8	–	–	–
	T6310	0.8		140	0.10	1.0	110	0.09	1.0	115	0.10	1.0	360	0.12	1.0	45	0.08	0.8	30	0.15	1.0
	T8315	0.8		140	0.10	1.0	110	0.09	1.0	115	0.10	1.0	360	0.12	1.0	41	0.08	0.8	34	0.15	1.0
CCGT 120408E-SF3	**H07**	0.8		–	–	–	105	0.12	1.0	110	0.12	1.0	360	0.14	1.0	38	0.11	0.8	–	–	–
	T6310	0.8		140	0.12	1.0	110	0.12	1.0	110	0.12	1.0	360	0.14	1.0	45	0.11	0.8	30	0.15	1.0
	T8315	0.8		140	0.12	1.0	110	0.12	1.0	110	0.12	1.0	360	0.14	1.0	38	0.11	0.8	30	0.15	1.0
EL-SI geometry with positive left-handed design for fine-finish machining, and continuous cuts.																				
CCGT 060202EL-SI	**T8330**	0.2		140	0.10	0.8	110	0.09	0.8	115	0.10	0.8	–	–	–	38	0.08	0.6	–	–	–
	T8430	0.2		140	0.10	0.8	110	0.09	0.8	115	0.10	0.8	–	–	–	38	0.08	0.6	–	–	–
CCGT 060204EL-SI	**T8315**	0.4		140	0.12	0.8	110	0.11	0.8	110	0.12	0.8	–	–	–	41	0.10	0.6	–	–	–
	T8330	0.4		140	0.12	0.8	110	0.11	0.8	110	0.12	0.8	–	–	–	38	0.10	0.6	–	–	–
	T8430	0.4		140	0.12	0.8	110	0.11	0.8	110	0.12	0.8	–	–	–	38	0.10	0.6	–	–	–
CCGT 09T304EL-SI	**T8315**	0.4		130	0.17	0.8	100	0.15	0.8	105	0.17	0.8	–	–	–	38	0.15	0.6	–	–	–
	T8330	0.4		130	0.17	0.8	100	0.15	0.8	105	0.17	0.8	–	–	–	34	0.15	0.6	–	–	–
	T8430	0.4		130	0.17	0.8	100	0.15	0.8	105	0.17	0.8	–	–	–	34	0.15	0.6	–	–	–
CCGT 120408EL-SI	**T8330**	0.8		130	0.23	1.0	95	0.21	1.0	95	0.23	1.0	–	–	–	38	0.21	0.8	–	–	–
	T8430	0.8		130	0.24	1.0	95	0.22	1.0	95	0.24	1.0	–	–	–	34	0.22	0.8	–	–	–

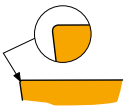
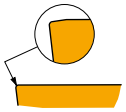
CCGW CBN

PRAMET

	IC	D1	L	S
	[mm]	[mm]	[mm]	[mm]
0602	6.350	2.80	6.50	2.38
09T3	9.525	4.50	9.70	3.97



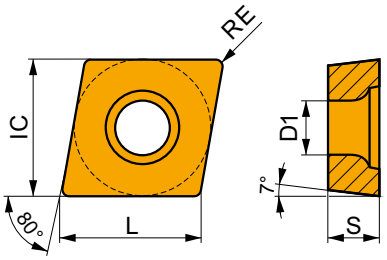
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
			HSC E																	
			For finish machining.																	
CCGW 060204E-B	**TB310**	0.4	–	–	–	–	–	–	115	0.10	0.4	–	–	–	90	0.07	0.3	70	0.15	1.0
CCGW 09T304E-B	**TB310**	0.4	–	–	–	–	–	–	115	0.10	0.4	–	–	–	90	0.07	0.3	70	0.15	1.0
			HSC S																	
			For finish machining.																	
CCGW 060204S01020B	**TB310**	0.4	–	–	–	–	–	–	115	0.10	0.4	–	–	–	90	0.07	0.3	70	0.15	1.0
CCGW 09T304S01020B	**TB310**	0.4	–	–	–	–	–	–	115	0.10	0.4	–	–	–	90	0.07	0.3	70	0.15	1.0

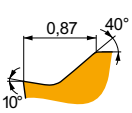
CCMT

PRAMET

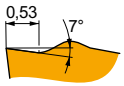
	IC	D1	L	S
	[mm]	[mm]	[mm]	[mm]
0602	6.350	2.80	6.40	2.38
0803	7.940	3.40	8.10	3.18
09T3	9.525	4.40	9.70	3.97
1204	12.700	5.50	12.90	4.76



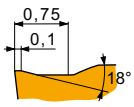
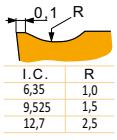
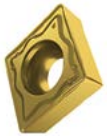
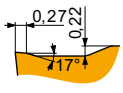
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
			U E																	
			FF geometry with positive design for fine-finish to finish machining, and continuous to slightly interrupted cuts.																	
CCMT 060202E-FF	**T8330**	0.2	140	0.10	1.0	110	0.09	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8430	0.2	140	0.10	1.0	110	0.09	1.0	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 060204E-FF	**T8330**	0.4	140	0.12	1.0	110	0.11	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8430	0.4	140	0.12	1.0	110	0.11	1.0	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 09T304E-FF	**T8330**	0.4	140	0.12	1.2	110	0.11	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8430	0.4	140	0.12	1.2	110	0.11	1.2	–	–	–	–	–	–	–	–	–	–	–	–

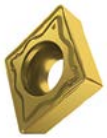
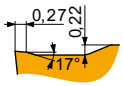
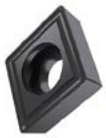
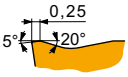
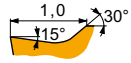
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
			U		E															
FF2 geometry with positive design for fine-finish to finish machining, and continuous to slightly interrupted cuts.																				
CCMT 060202E-FF2	**T8330**	0.2	■	150	0.05	0.8	–	–	–	■	115	0.05	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.2	■	150	0.05	0.8	–	–	–	◪	115	0.05	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.2	■	150	0.05	0.8	–	–	–	◪	115	0.05	0.8	–	–	–	–	–	–	–	–	–
	TT010	0.2	■	150	0.05	0.5	–	–	–		–	–	–	–	–	–	–	–	–	–	–	–
CCMT 060204E-FF2	**T8330**	0.4	■	140	0.12	1.0	–	–	–	■	110	0.12	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.4	■	140	0.12	1.0	–	–	–	◪	110	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.4	■	140	0.12	1.0	–	–	–	◪	110	0.12	1.0	–	–	–	–	–	–	–	–	–
	TT010	0.4	■	140	0.12	0.5	–	–	–		–	–	–	–	–	–	–	–	–	–	–	–
CCMT 080302E-FF2	**T8330**	0.2	■	150	0.05	0.8	–	–	–	■	115	0.05	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.2	■	150	0.05	0.8	–	–	–	◪	115	0.05	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.2	■	150	0.05	0.8	–	–	–	◪	115	0.05	0.8	–	–	–	–	–	–	–	–	–
	TT010	0.2	■	150	0.05	0.5	–	–	–		–	–	–	–	–	–	–	–	–	–	–	–
CCMT 080304E-FF2	**T8330**	0.4	■	140	0.12	1.0	–	–	–	■	110	0.12	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.4	■	140	0.12	1.0	–	–	–	◪	110	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.4	■	140	0.12	1.0	–	–	–	◪	110	0.12	1.0	–	–	–	–	–	–	–	–	–
	TT010	0.4	■	150	0.06	0.5	–	–	–		–	–	–	–	–	–	–	–	–	–	–	–
CCMT 080308E-FF2	**T8330**	0.8	■	130	0.17	1.0	–	–	–	■	105	0.17	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.8	■	130	0.17	1.0	–	–	–	◪	105	0.17	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	■	130	0.17	1.0	–	–	–	◪	105	0.17	1.0	–	–	–	–	–	–	–	–	–
CCMT 09T304E-FF2	**T8330**	0.4	■	140	0.12	1.2	–	–	–	■	110	0.12	1.2	–	–	–	–	–	–	–	–	–
	T8430	0.4	■	140	0.12	1.2	–	–	–	◪	110	0.12	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.4	■	140	0.12	1.2	–	–	–	◪	110	0.12	1.2	–	–	–	–	–	–	–	–	–
	TT010	0.4	■	150	0.06	0.5	–	–	–		–	–	–	–	–	–	–	–	–	–	–	–
CCMT 09T308E-FF2	**T8330**	0.8	■	130	0.17	1.2	–	–	–	■	105	0.17	1.2	–	–	–	–	–	–	–	–	–
	T8430	0.8	■	130	0.17	1.2	–	–	–	◪	105	0.17	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.8	■	130	0.17	1.2	–	–	–	◪	105	0.17	1.2	–	–	–	–	–	–	–	–	–
	TT010	0.8	■	140	0.10	0.8	–	–	–		–	–	–	–	–	–	–	–	–	–	–	–
			1		E															
FM geometry for finish to semi-rough machining, and continuous to slightly interrupted cuts.																				
CCMT 060202E-FM	**T8330**	0.2	■	140	0.10	1.0	■	110	0.09	1.0	◪	115	0.10	1.0	◪	360	0.12	1.0	–	–	–	–	–	–
	T8430	0.2	■	140	0.10	1.0	■	110	0.09	1.0	◪	115	0.10	1.0	◪	360	0.12	1.0	–	–	–	–	–	–
	T9325	0.2	■	140	0.10	1.0	■	110	0.09	1.0	◪	115	0.10	1.0		–	–	–	–	–	–	–	–	–
CCMT 060204E-FM	**T8330**	0.4	■	140	0.15	1.0	■	100	0.14	1.0	◪	110	0.15	1.0	◪	330	0.18	1.0	–	–	–	–	–	–
	T8430	0.4	■	140	0.15	1.0	■	100	0.14	1.0	◪	110	0.15	1.0	◪	330	0.18	1.0	–	–	–	–	–	–
	T9325	0.4	■	140	0.15	1.0	■	100	0.15	1.0	◪	110	0.15	1.0		–	–	–	–	–	–	–	–	–
CCMT 060208E-FM	**T8330**	0.8	■	130	0.20	1.0	■	100	0.18	1.0	◪	100	0.20	1.0	◪	300	0.24	1.0	–	–	–	–	–	–
	T8430	0.8	■	130	0.20	1.0	■	100	0.18	1.0	◪	100	0.20	1.0	◪	300	0.24	1.0	–	–	–	–	–	–
	T9325	0.8	■	130	0.20	1.0	■	100	0.18	1.0	◪	100	0.20	1.0		–	–	–	–	–	–	–	–	–
CCMT 09T302E-FM	**T8330**	0.2	■	140	0.10	1.2	■	105	0.09	1.2	◪	115	0.10	1.2	◪	360	0.12	1.2	–	–	–	–	–	–
	T8430	0.2	■	140	0.10	1.2	■	110	0.09	1.2	◪	115	0.10	1.2	◪	360	0.12	1.2	–	–	–	–	–	–
	T9325	0.2	■	140	0.10	1.2	■	110	0.09	1.2	◪	115	0.10	1.2		–	–	–	–	–	–	–	–	–
CCMT 09T304E-FM	**T8330**	0.4	■	140	0.15	1.2	■	100	0.14	1.2	◪	110	0.15	1.2	◪	330	0.18	1.2	–	–	–	–	–	–
	T8430	0.4	■	140	0.15	1.2	■	100	0.14	1.2	◪	110	0.15	1.2	◪	330	0.18	1.2	–	–	–	–	–	–
	T9325	0.4	■	140	0.15	1.2	■	100	0.15	1.2	◪	110	0.15	1.2		–	–	–	–	–	–	–	–	–
CCMT 09T308E-FM	**T8330**	0.8	■	130	0.20	1.2	■	100	0.18	1.2	◪	100	0.20	1.2	◪	300	0.24	1.2	–	–	–	–	–	–
	T8430	0.8	■	130	0.20	1.2	■	100	0.18	1.2	◪	100	0.20	1.2	◪	300	0.24	1.2	–	–	–	–	–	–
	T9325	0.8	■	130	0.20	1.2	■	100	0.18	1.2	◪	100	0.20	1.2		–	–	–	–	–	–	–	–	–
CCMT 120404E-FM	**T8330**	0.4	■	140	0.15	1.7	■	95	0.14	1.7	◪	110	0.15	1.7	◪	330	0.18	1.7	–	–	–	–	–	–
	T8430	0.4	■	140	0.15	1.7	■	100	0.14	1.7	◪	110	0.15	1.7	◪	330	0.18	1.7	–	–	–	–	–	–
	T9325	0.4	■	140	0.15	1.7	■	100	0.15	1.7	◪	110	0.15	1.7		–	–	–	–	–	–	–	–	–
CCMT 120408E-FM	**T8330**	0.8	■	130	0.20	1.7	■	100	0.18	1.7	◪	100	0.20	1.7	◪	300	0.24	1.7	–	–	–	–	–	–
	T8430	0.8	■	130	0.20	1.7	■	100	0.18	1.7	◪	100	0.20	1.7	◪	300	0.24	1.7	–	–	–	–	–	–
	T9325	0.8	■	130	0.20	1.7	■	100	0.18	1.7	◪	100	0.20	1.7		–	–	–	–	–	–	–	–	–

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
FM2 geometry for finish to medium machining, and continuous to interrupted cuts.																				
CCMT 080304E-FM2	**T8330**	0.4	■ 140	0.12	1.0	◪ 95	0.11	1.0	■ 110	0.12	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.4	■ 140	0.12	1.0	◪ 105	0.11	1.0	◪ 110	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 140	0.12	1.0	◪ 110	0.11	1.0	◪ 110	0.12	1.0	–	–	–	–	–	–	–	–	–
CCMT 080308E-FM2	**T8330**	0.8	■ 130	0.17	1.0	◪ 100	0.15	1.0	■ 105	0.17	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.8	■ 130	0.17	1.0	◪ 100	0.15	1.0	◪ 105	0.17	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 130	0.17	1.0	◪ 100	0.15	1.0	◪ 105	0.17	1.0	–	–	–	–	–	–	–	–	–
CCMT 09T304E-FM2	**T8330**	0.4	■ 140	0.12	1.0	◪ 95	0.11	1.0	■ 110	0.12	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.4	■ 140	0.12	1.0	◪ 105	0.11	1.0	◪ 110	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 140	0.12	1.0	◪ 110	0.11	1.0	◪ 110	0.12	1.0	–	–	–	–	–	–	–	–	–
CCMT 09T308E-FM2	**T8330**	0.8	■ 130	0.17	1.0	◪ 100	0.15	1.0	■ 105	0.17	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.8	■ 130	0.17	1.0	◪ 100	0.15	1.0	◪ 105	0.17	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 130	0.17	1.0	◪ 100	0.15	1.0	◪ 105	0.17	1.0	–	–	–	–	–	–	–	–	–
CCMT 120408E-FM2	**T8330**	0.8	■ 130	0.20	1.5	◪ 95	0.18	1.5	■ 100	0.20	1.5	–	–	–	–	–	–	–	–	–
	T8430	0.8	■ 130	0.20	1.5	◪ 95	0.18	1.5	◪ 100	0.20	1.5	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 130	0.20	1.5	◪ 100	0.18	1.5	◪ 100	0.20	1.5	–	–	–	–	–	–	–	–	–
NF2 geometry with positive design for fine-finish to semi-rough machining, and continuous cuts.																				
CCMT 060202E-NF2	**T6310**	0.2	◪ 140	0.10	0.8	■ 110	0.09	0.8	◪ 115	0.10	0.8	◪ 360	0.12	0.8	■ 38	0.08	0.6	–	–	–
	T9325	0.2	◪ 140	0.10	0.8	■ 110	0.09	0.8	◪ 115	0.10	0.8	–	–	–	◪ 41	0.08	0.6	–	–	–
CCMT 060204E-NF2	**H07**	0.4	–	–	–	◪ 85	0.11	0.8	◪ 110	0.12	0.8	◪ 360	0.14	0.8	■ 34	0.11	0.6	–	–	–
	T6310	0.4	◪ 140	0.12	0.8	■ 110	0.11	0.8	◪ 110	0.12	0.8	◪ 360	0.14	0.8	■ 38	0.11	0.6	–	–	–
	T9325	0.4	◪ 140	0.12	0.8	■ 110	0.11	0.8	◪ 110	0.12	0.8	–	–	–	◪ 41	0.11	0.6	–	–	–
CCMT 080304E-NF2	**T9325**	0.4	◪ 140	0.12	1.0	■ 110	0.11	1.0	◪ 110	0.12	1.0	–	–	–	◪ 41	0.11	0.8	–	–	–
CCMT 080308E-NF2	**T9325**	0.8	◪ 130	0.17	1.0	■ 100	0.15	1.0	◪ 105	0.17	1.0	–	–	–	◪ 41	0.14	0.8	–	–	–
CCMT 09T304E-NF2	**H07**	0.4	–	–	–	◪ 85	0.11	1.2	◪ 110	0.12	1.2	◪ 360	0.14	1.2	■ 30	0.11	1.0	–	–	–
	T6310	0.4	◪ 140	0.12	1.2	■ 110	0.11	1.2	◪ 110	0.12	1.2	◪ 360	0.14	1.2	■ 34	0.11	1.0	–	–	–
	T9325	0.4	◪ 140	0.12	1.2	■ 110	0.11	1.2	◪ 110	0.12	1.2	–	–	–	◪ 41	0.11	1.0	–	–	–
CCMT 09T308E-NF2	**T6310**	0.8	◪ 140	0.14	1.2	■ 100	0.13	1.2	◪ 110	0.14	1.2	◪ 330	0.17	1.2	■ 41	0.13	1.0	–	–	–
	T9325	0.8	◪ 140	0.14	1.2	■ 100	0.13	1.2	◪ 110	0.14	1.2	–	–	–	◪ 45	0.13	1.0	–	–	–
																				
	I.C. / R: 6,35 / 1,0; 9,525 / 1,5; 12,7 / 2,5																			
RF geometry for semi-rough to rough machining, and continuous to interrupted cuts.																				
CCMT 060202E-RF	**T7335**	0.2	◪ 140	0.15	1.0	◪ 100	0.14	1.0	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 060204E-RF	**T5315**	0.4	◪ 140	0.15	1.0	–	–	–	■ 110	0.15	1.0	–	–	–	–	–	–	◪ 35	0.15	1.0
	T7335	0.4	◪ 140	0.15	1.0	◪ 100	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 09T304E-RF	**T7335**	0.4	◪ 130	0.20	1.5	◪ 100	0.18	1.5	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 09T308E-RF	**T5315**	0.8	◪ 130	0.20	1.5	–	–	–	■ 100	0.20	1.5	–	–	–	–	–	–	◪ 35	0.15	1.0
	T7335	0.8	◪ 130	0.20	1.5	◪ 100	0.18	1.5	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 120408E-RF	**T5315**	0.8	◪ 130	0.22	2.2	–	–	–	■ 100	0.22	2.2	–	–	–	–	–	–	◪ 35	0.15	1.0
	T7335	0.8	◪ 130	0.22	2.2	◪ 95	0.22	2.2	–	–	–	–	–	–	–	–	–	–	–	–
																				
RM geometry for semi-rough machining, and continuous to interrupted cuts.																				
CCMT 09T304E-RM	**T8330**	0.4	■ 120	0.27	2.2	■ 80	0.24	2.2	■ 95	0.27	2.2	–	–	–	◪ 26	0.19	1.8	◪ 20	0.15	1.0
	T8430	0.4	■ 120	0.27	2.2	■ 75	0.24	2.2	◪ 95	0.27	2.2	–	–	–	◪ 23	0.19	1.8	◪ 19	0.15	1.0
	T9325	0.4	■ 120	0.27	2.2	■ 95	0.24	2.2	◪ 95	0.27	2.2	–	–	–	◪ 30	0.19	1.8	–	–	–
CCMT 09T308E-RM	**T8330**	0.8	■ 120	0.30	2.2	■ 90	0.27	2.2	■ 90	0.30	2.2	–	–	–	◪ 30	0.24	1.8	◪ 23	0.15	1.0
	T8430	0.8	■ 120	0.30	2.2	■ 90	0.27	2.2	◪ 90	0.30	2.2	–	–	–	◪ 26	0.24	1.8	◪ 23	0.15	1.0
	T9325	0.8	■ 120	0.30	2.2	■ 90	0.27	2.2	◪ 90	0.30	2.2	–	–	–	◪ 34	0.24	1.8	–	–	–

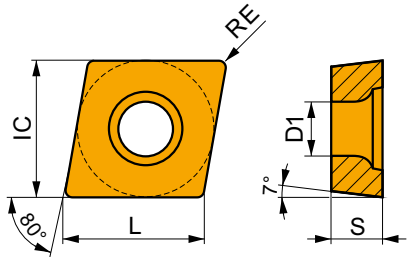
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
		[mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]
																				
			RM geometry for semi-rough machining, and continuous to interrupted cuts.																	
CCMT 120408E-RM	**T8330**	0.8	■ 120	0.30	2.7	■ 90	0.27	2.7	■ 90	0.30	2.7	–	–	–	◪ 30	0.24	2.2	◪ 23	0.15	1.0
	T8430	0.8	■ 120	0.30	2.7	■ 90	0.27	2.7	◪ 90	0.30	2.7	–	–	–	◪ 26	0.24	2.2	◪ 23	0.15	1.0
	T9325	0.8	■ 120	0.30	2.7	■ 90	0.27	2.7	◪ 90	0.30	2.7	–	–	–	◪ 34	0.24	2.2	–	–	–
																				
			RM3 geometry for semi-rough to rough machining, and continuous to interrupted cuts.																	
CCMT 120404E-RM3	**T9325**	0.4	■ 120	0.25	2.5	◪ 95	0.25	2.5	◪ 95	0.25	2.5	–	–	–	–	–	–	–	–	–
CCMT 120408E-RM3	**T6310**	0.8	■ 120	0.27	2.5	◪ 90	0.27	2.5	■ 95	0.27	2.5	–	–	–	–	–	–	◪ 19	0.15	1.0
	T9325	0.8	■ 120	0.27	2.5	◪ 90	0.27	2.5	◪ 95	0.27	2.5	–	–	–	–	–	–	–	–	–
																				
			UR geometry for fine to finish machining, and continuous to slightly interrupted cuts.																	
CCMT 060202E-UR	**T8330**	0.2	■ 140	0.10	0.8	◪ 95	0.09	0.8	■ 115	0.10	0.8	–	–	–	–	–	–	–	–	–
	TT310	0.2	■ 140	0.10	0.5	◪ 110	0.09	0.5	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 060204E-UR	**T8330**	0.4	■ 140	0.15	1.0	◪ 90	0.14	1.0	■ 110	0.15	1.0	–	–	–	–	–	–	–	–	–
	TT310	0.4	■ 140	0.15	0.5	◪ 100	0.14	0.5	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 060208E-UR	**T8330**	0.8	■ 130	0.20	1.0	◪ 95	0.18	1.0	■ 100	0.20	1.0	–	–	–	–	–	–	–	–	–
CCMT 09T302E-UR	**TT310**	0.2	■ 140	0.10	1.0	◪ 110	0.09	1.0	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 09T304E-UR	**T8330**	0.4	■ 140	0.15	1.2	◪ 90	0.14	1.2	■ 110	0.15	1.2	–	–	–	–	–	–	–	–	–
	TT310	0.4	■ 140	0.15	1.2	◪ 100	0.14	1.2	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 09T308E-UR	**T8330**	0.8	■ 130	0.20	1.2	◪ 95	0.18	1.2	■ 100	0.20	1.2	–	–	–	–	–	–	–	–	–
	TT310	0.8	■ 130	0.20	1.2	◪ 100	0.18	1.2	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 120404E-UR	**T8330**	0.4	■ 140	0.15	1.7	◪ 80	0.14	1.7	■ 110	0.15	1.7	–	–	–	–	–	–	–	–	–
CCMT 120408E-UR	**T8330**	0.8	■ 130	0.20	1.7	◪ 90	0.18	1.7	■ 100	0.20	1.7	–	–	–	–	–	–	–	–	–

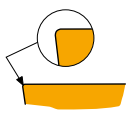
CCMW

PRAMET

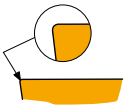
	IC [mm]	D1 [mm]	L [mm]	S [mm]
0602	6.350	2.80	6.40	2.38
09T3	9.525	4.40	9.70	3.97
1204	12.700	5.50	12.90	4.76



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
		[mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]
																				
			For fine-finish to semi-rough machining, and continuous to slightly interrupted cuts.																	
CCMW 060204	**T5315**	0.4	–	–	–	–	–	–	■ 115	0.10	2.0	–	–	–	–	–	–	◪ 30	0.15	1.0
CCMW 09T304	**T5315**	0.4	–	–	–	–	–	–	■ 115	0.10	3.0	–	–	–	–	–	–	◪ 30	0.15	1.0
CCMW 09T308	**T5315**	0.8	–	–	–	–	–	–	■ 100	0.20	3.0	–	–	–	–	–	–	◪ 26	0.15	1.0

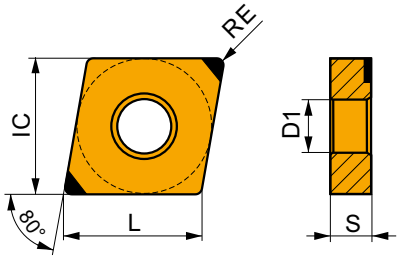
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
			E																	
For fine-finish to semi-rough machining, and continuous to slightly interrupted cuts.																				
CCMW 120404	**T5315**	0.4	–	–	–	–	–	–	■ 115	0.10	4.0	–	–	–	–	–	–	◪ 26	0.15	1.0
CCMW 120408	**T5315**	0.8	–	–	–	–	–	–	■ 100	0.20	4.0	–	–	–	–	–	–	◪ 26	0.15	1.0

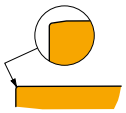
CNGA CBN

PRAMET

	IC	D1	L	S
	[mm]	[mm]	[mm]	[mm]
1204	12.700	5.16	12.90	4.76

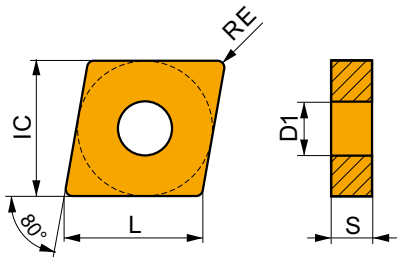


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
			HSC		S															
For finish machining and continuous cuts.																				
CNGA 120404S01020B	**TB310**	0.4	–	–	–	–	–	–	◪ 115	0.10	0.4	–	–	–	◪ 100	0.07	0.3	■ 80	0.15	1.0
CNGA 120408S01020B	**TB310**	0.8	–	–	–	–	–	–	◪ 110	0.15	0.6	–	–	–	◪ 100	0.11	0.5	■ 85	0.15	1.0

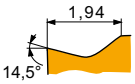
CNGG

	IC [mm]	D1 [mm]	L [mm]	S [mm]
1204	12.700	5.16	12.90	4.76



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

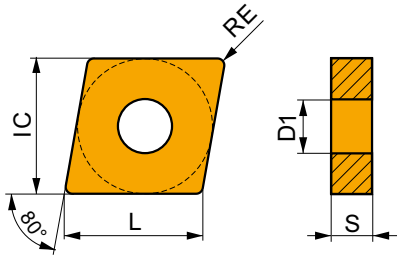
Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
CNGG 120402E-SF	**H07**	0.2	–	–	–	105	0.09	1.0	115	0.10	1.0	360	0.12	1.0	38	0.08	0.8	–	–	–
	T6310	0.2	140	0.10	1.0	110	0.09	1.0	115	0.10	1.0	360	0.12	1.0	41	0.08	0.8	26	0.15	1.0
	T8330	0.2	140	0.10	1.0	110	0.09	1.0	115	0.10	1.0	360	0.12	1.0	34	0.08	0.8	26	0.15	1.0
	T8430	0.2	140	0.10	1.0	110	0.09	1.0	115	0.10	1.0	360	0.12	1.0	34	0.08	0.8	30	0.15	1.0



SF geometry with positive design for fine-finish machining of thin walls in continuous cuts.

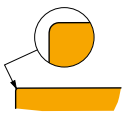
CNMA

	IC [mm]	D1 [mm]	L [mm]	S [mm]
1204	12.700	5.16	12.90	4.76



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

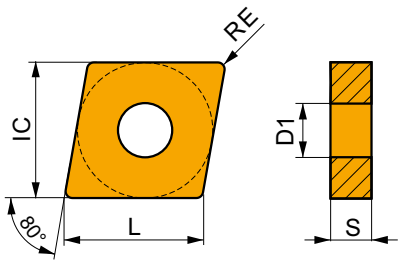
Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
CNMA 120404	**T5315**	0.4	–	–	–	–	–	–	115	0.10	4.0	–	–	–	–	–	–	30	0.15	1.0
CNMA 120408	**T5315**	0.8	–	–	–	–	–	–	100	0.20	4.0	–	–	–	–	–	–	30	0.15	1.0
CNMA 120412	**T5315**	1.2	–	–	–	–	–	–	90	0.30	4.0	–	–	–	–	–	–	25	0.15	1.0



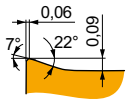
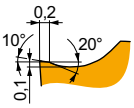
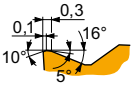
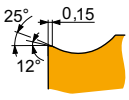
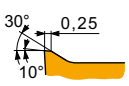
For fine-finish to semi-rough machining, and continuous to slightly interrupted cuts.

CNMG

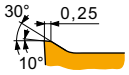
	IC	D1	L	S
	[mm]	[mm]	[mm]	[mm]
1204	12.700	5.16	12.90	4.76



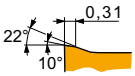
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
			FF geometry with highly positive design for fine-finish machining, and continuous to slightly interrupted cuts.																	
CNMG 120404E-FF	**T7325**	0.4	◪ 140	0.12	1.0	■ 110	0.11	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	◪ 140	0.12	1.0	■ 110	0.11	1.0	◪ 110	0.12	1.0	–	–	–	–	–	–	–	–	–
CNMG 120408E-FF	**T7325**	0.8	◪ 140	0.15	1.0	■ 100	0.14	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	◪ 140	0.15	1.0	■ 100	0.14	1.0	◪ 110	0.15	1.0	–	–	–	–	–	–	–	–	–
			FM geometry with positive design for finish to semi-rough machining, and continuous to slightly interrupted cuts.																	
CNMG 120404E-FM	**T9325**	0.4	■ 130	0.20	2.1	◪ 100	0.18	2.1	◪ 100	0.20	2.1	–	–	–	◪ 38	0.16	1.7	–	–	–
	TT310	0.4	■ 130	0.20	2.1	◪ 100	0.18	2.1	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 120408E-FM	**T9325**	0.8	■ 130	0.20	2.1	◪ 100	0.18	2.1	◪ 100	0.20	2.1	–	–	–	◪ 45	0.16	1.7	–	–	–
	TT310	0.8	■ 130	0.20	2.1	◪ 100	0.18	2.1	–	–	–	–	–	–	–	–	–	–	–	–
			M geometry for finish to semi-rough machining, and continuous to interrupted cuts.																	
CNMG 120404E-M	**T5315**	0.4	◪ 130	0.20	2.1	–	–	–	■ 100	0.20	2.1	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9325	0.4	■ 130	0.20	2.1	–	–	–	◪ 100	0.20	2.1	–	–	–	–	–	–	–	–	–
CNMG 120408E-M	**T5315**	0.8	◪ 120	0.32	2.1	–	–	–	■ 90	0.32	2.1	–	–	–	–	–	–	◪ 38	0.15	1.0
	T9325	0.8	■ 120	0.32	2.1	–	–	–	◪ 90	0.32	2.1	–	–	–	–	–	–	–	–	–
			NF geometry with highly positive design for fine-finish to medium machining, and continuous cuts.																	
CNMG 120404E-NF	**T7325**	0.4	◪ 130	0.18	1.7	■ 100	0.16	1.7	–	–	–	–	–	–	◪ 45	0.16	1.4	–	–	–
	T8330	0.4	■ 130	0.17	1.7	■ 100	0.15	1.7	◪ 105	0.17	1.7	◪ 330	0.20	1.7	◪ 34	0.14	1.4	–	–	–
	T8430	0.4	■ 130	0.17	1.7	■ 100	0.15	1.7	◪ 105	0.17	1.7	◪ 330	0.20	1.7	◪ 30	0.14	1.4	–	–	–
CNMG 120408E-NF	**T7325**	0.8	◪ 130	0.19	1.7	■ 100	0.17	1.7	–	–	–	–	–	–	◪ 45	0.15	1.4	–	–	–
	T8330	0.8	■ 130	0.19	1.7	■ 100	0.17	1.7	◪ 100	0.19	1.7	◪ 300	0.23	1.7	◪ 38	0.15	1.4	–	–	–
	T8430	0.8	■ 130	0.19	1.7	■ 100	0.17	1.7	◪ 100	0.19	1.7	◪ 300	0.23	1.7	◪ 34	0.15	1.4	–	–	–
			NM geometry with highly positive design for fine-finish, medium and rough machining, with continuous cuts.																	
CNMG 120404E-NM	**T7325**	0.4	◪ 130	0.20	2.1	■ 100	0.18	2.1	–	–	–	–	–	–	■ 45	0.16	1.7	–	–	–
	T8330	0.4	■ 130	0.20	2.1	■ 100	0.18	2.1	–	–	–	◪ 300	0.24	2.1	◪ 30	0.16	1.7	–	–	–
	T8430	0.4	■ 130	0.20	2.1	■ 100	0.18	2.1	–	–	–	◪ 300	0.24	2.1	◪ 30	0.16	1.7	–	–	–

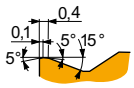
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
		[mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]
																				

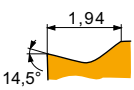
NM geometry with highly positive design for fine-finish, medium and rough machining, with continuous cuts.

CNMG 120408E-NM	**T7325**	0.8	◪ 120	0.25	2.1	■ 95	0.23	2.1	–	–	–	–	–	–	■ 45	0.20	1.7	–	–	–
	T8330	0.8	■ 120	0.25	2.1	■ 95	0.23	2.1	–	–	–	◪ 270	0.30	2.1	◪ 34	0.20	1.7	–	–	–
	T8430	0.8	■ 120	0.25	2.1	■ 95	0.23	2.1	–	–	–	◪ 270	0.30	2.1	◪ 30	0.20	1.7	–	–	–
																				

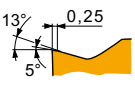
NMR geometry with positive design for medium to rough machining, and continuous cuts.

CNMG 120404E-NMR	**T7325**	0.4	◪ 120	0.25	2.7	■ 95	0.23	2.7	–	–	–	–	–	–	■ 38	0.20	2.2	–	–	–
	T8330	0.4	■ 120	0.25	2.0	■ 80	0.23	2.0	–	–	–	–	–	–	◪ 26	0.20	1.6	–	–	–
	T8430	0.4	■ 120	0.25	2.7	■ 75	0.23	2.7	–	–	–	–	–	–	◪ 23	0.20	2.2	–	–	–
CNMG 120408E-NMR	**T7325**	0.8	◪ 120	0.35	2.7	■ 90	0.32	2.7	–	–	–	–	–	–	■ 41	0.25	2.2	–	–	–
	T8330	0.8	■ 120	0.35	2.7	■ 90	0.32	2.7	–	–	–	–	–	–	◪ 26	0.25	2.2	–	–	–
	T8430	0.8	■ 120	0.35	2.7	■ 80	0.32	2.7	–	–	–	–	–	–	◪ 23	0.25	2.2	–	–	–
																				

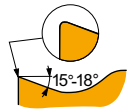
R geometry for semi-rough to rough machining, and continuous to interrupted cuts.

CNMG 120408E-R	**T5315**	0.8	◪ 120	0.40	4.0	–	–	–	■ 80	0.40	4.0	–	–	–	–	–	–	◪ 30	0.15	1.0
	T9325	0.8	■ 120	0.40	4.0	–	–	–	◪ 80	0.40	4.0	–	–	–	–	–	–	–	–	–
																				

SF geometry with positive design for fine-finish machining of thin walls and continuous cuts.

CNMG 120404E-SF	**H07**	0.4	–	–	–	◪ 90	0.14	1.0	■ 110	0.15	1.0	◪ 330	0.18	1.0	■ 34	0.12	0.8	–	–	–
	T6310	0.4	■ 140	0.15	1.0	■ 100	0.14	1.0	■ 110	0.15	1.0	◪ 330	0.18	1.0	■ 38	0.12	0.8	■ 26	0.15	1.0
CNMG 120408E-SF	**H07**	0.8	–	–	–	◪ 95	0.18	1.0	■ 100	0.20	1.0	◪ 300	0.24	1.0	■ 38	0.14	0.8	–	–	–
	T6310	0.8	■ 130	0.20	1.0	■ 100	0.18	1.0	■ 100	0.20	1.0	◪ 300	0.24	1.0	■ 45	0.14	0.8	■ 30	0.15	1.0
																				

SM geometry with positive design for medium machining, and continuous to interrupted cuts.

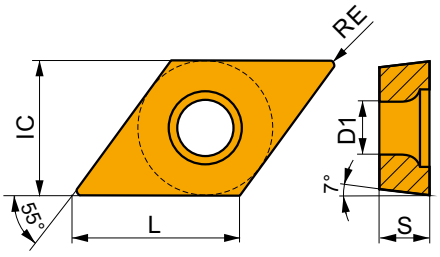
CNMG 120404E-SM	**T6310**	0.4	■ 130	0.22	2.0	■ 95	0.20	2.0	■ 100	0.22	2.0	◪ 300	0.26	2.0	■ 34	0.20	1.6	◪ 23	0.15	1.0
	T7325	0.4	◪ 130	0.22	2.0	■ 95	0.20	2.0	–	–	–	–	–	–	■ 41	0.20	1.6	–	–	–
CNMG 120408E-SM	**T6310**	0.8	■ 120	0.25	2.0	■ 95	0.23	2.0	■ 95	0.25	2.0	◪ 270	0.30	2.0	■ 38	0.20	1.6	◪ 26	0.15	1.0
	T7325	0.8	◪ 120	0.25	2.0	■ 95	0.23	2.0	–	–	–	–	–	–	■ 45	0.20	1.6	–	–	–
																				

EL-SI geometry with positive left-handed design for fine-finish to semi-rough machining, and continuous cuts.

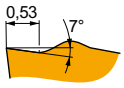
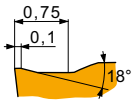
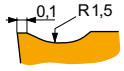
CNMG 120404EL-SI	**T7325**	0.4	◪ 130	0.20	1.7	■ 100	0.18	1.7	–	–	–	–	–	–	◪ 45	0.18	1.4	–	–	–
	T8330	0.4	■ 130	0.20	1.7	■ 100	0.18	1.7	–	–	–	◪ 300	0.24	1.7	◪ 34	0.18	1.4	–	–	–
	T8430	0.4	■ 130	0.20	1.7	■ 100	0.18	1.7	–	–	–	◪ 300	0.24	1.7	◪ 34	0.18	1.4	–	–	–
CNMG 120408EL-SI	**T7325**	0.8	◪ 120	0.35	1.7	■ 90	0.32	1.7	–	–	–	–	–	–	◪ 45	0.25	1.4	–	–	–
	T8330	0.8	■ 120	0.35	1.7	■ 90	0.32	1.7	–	–	–	◪ 220	0.42	1.7	◪ 34	0.25	1.4	–	–	–
	T8430	0.8	■ 120	0.35	1.7	■ 90	0.32	1.7	–	–	–	◪ 220	0.42	1.7	◪ 30	0.25	1.4	–	–	–

DCMT

	IC	D1	L	S
	[mm]	[mm]	[mm]	[mm]
11T3	9.525	4.40	11.60	3.97
1504	12.700	5.50	15.50	4.76

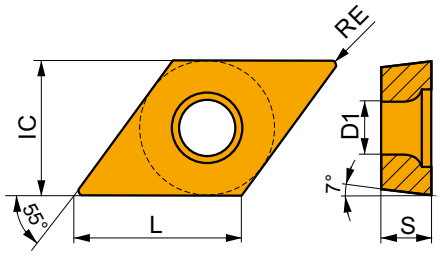


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

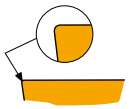
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
FF2 geometry with positive design for fine-finish to finish machining, and continuous to slightly interrupted cuts.																				
DCMT 11T308E-FF2	**T7325**	0.8	130	0.17	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	130	0.17	0.8	–	–	–	105	0.17	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.8	130	0.17	0.8	–	–	–	105	0.17	0.8	–	–	–	–	–	–	–	–	–
																				
FM2 geometry for finish to medium machining, and continuous to interrupted cuts.																				
DCMT 150408E-FM2	**T9325**	0.8	130	0.20	1.5	100	0.18	1.5	100	0.20	1.5	–	–	–	–	–	–	–	–	–
	T9335	0.8	130	0.20	1.5	95	0.18	1.5	–	–	–	–	–	–	–	–	–	–	–	–
																				
RF geometry for semi-rough to rough machining, and continuous to interrupted cuts.																				
DCMT 11T308E-RF	**T5315**	0.8	130	0.20	0.8	–	–	–	100	0.20	0.8	–	–	–	–	–	–	30	0.15	1.0
	T7335	0.8	130	0.20	0.8	100	0.18	0.8	–	–	–	–	–	–	–	–	–	–	–	–

DCMW

	IC	D1	L	S
	[mm]	[mm]	[mm]	[mm]
11T3	9.525	4.40	11.60	3.97

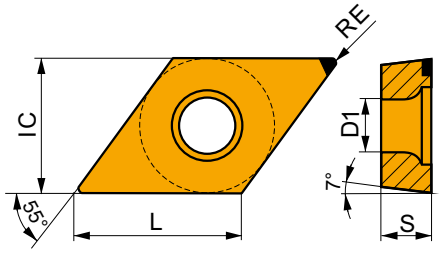


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

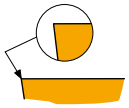
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
			E																	
			For fine-finish to semi-rough machining, and continuous to slightly interrupted cuts.																	
DCMW 11T304	**T5315**	0.4	–	–	–	–	–	–	■ 115	0.10	1.2	–	–	–	–	–	–	◪ 26	0.15	1.0
	T6310	0.4	–	–	–	–	–	–	■ 80	0.10	1.2	–	–	–	–	–	–	◪ 15	0.15	1.0
DCMW 11T308	**T5315**	0.8	–	–	–	–	–	–	■ 105	0.18	1.2	–	–	–	–	–	–	◪ 23	0.15	1.0
	T6310	0.8	–	–	–	–	–	–	■ 80	0.18	1.2	–	–	–	–	–	–	◪ 15	0.15	1.0

DCMW PCD

	IC	D1	L	S
	[mm]	[mm]	[mm]	[mm]
11T3	9.525	4.40	11.60	3.97



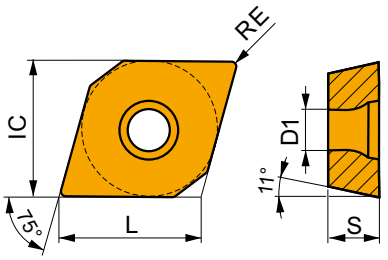
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
			HSC	F																
			For finish machining, high speeds and stable cutting conditions.																	
DCMW 11T304FN	**PD1**	0.4	–	–	–	–	–	–	–	–	–	■ 360	0.12	0.5	–	–	–	–	–	–
DCMW 11T308FN	**PD1**	0.8	–	–	–	–	–	–	–	–	–	■ 360	0.12	1.0	–	–	–	–	–	–

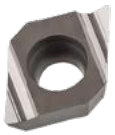
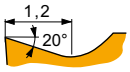
EPGX

PRAMET

	IC	D1	L	S
	[mm]	[mm]	[mm]	[mm]
0502	5.560	2.50	5.70	2.38



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				

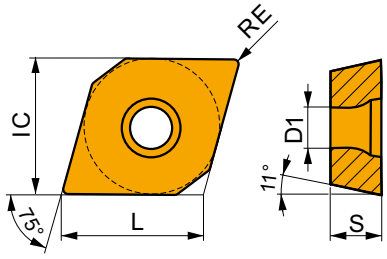
FL-JZ geometry with positive left-handed design for fine-finish machining, and continuous cuts.

EPGX 050202FL-JZ	**TT010**	0.2	■	150	0.06	0.5	◪	110	0.05	0.5		–	–	–		–	–	–		–	–	–		–	–	–

EPMT

PRAMET

	IC	D1	L	S
	[mm]	[mm]	[mm]	[mm]
0502	5.560	2.50	5.70	2.38



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]

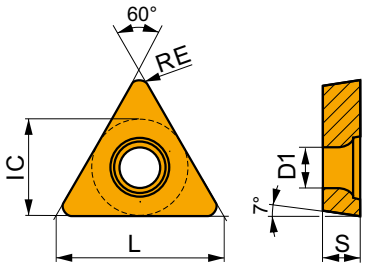
NF2 geometry with positive design for fine-finish to semi-rough machining, and continuous cuts.

EPMT 050202E-NF2	**H07**	0.2		–	–	–	◪	80	0.09	0.8	◪	115	0.10	0.8	◪	360	0.12	0.8	■	30	0.07	0.6		–	–	–
	T7325	0.2	◪	150	0.07	0.8	■	110	0.06	0.8		–	–	–		–	–	–	■	45	0.06	0.6		–	–	–
	T7335	0.2	◪	150	0.07	0.8	■	110	0.06	0.8		–	–	–		–	–	–	■	45	0.06	0.6		–	–	–
	T9315	0.2	◪	150	0.05	0.8		–	–	–	◪	115	0.05	0.8		–	–	–		–	–	–		–	–	–
	T9325	0.2	◪	150	0.07	0.8	■	110	0.06	0.8	◪	115	0.07	0.8		–	–	–	◪	45	0.06	0.6		–	–	–
	T9335	0.2	◪	140	0.10	0.8	■	110	0.09	0.8		–	–	–		–	–	–	◪	34	0.07	0.6		–	–	–
	TT010	0.2	◪	150	0.05	0.5	◪	110	0.05	0.5		–	–	–		–	–	–		–	–	–		–	–	–

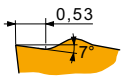
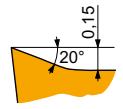
TCGT

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
06T1	3.970	2.20	6.90	1.98
0902	5.560	2.50	9.60	2.38
1102-SF3	6.350	2.80	11.00	2.58
16T3	9.525	4.40	16.50	3.97
16T3-SF3	9.525	4.40	16.50	4.22



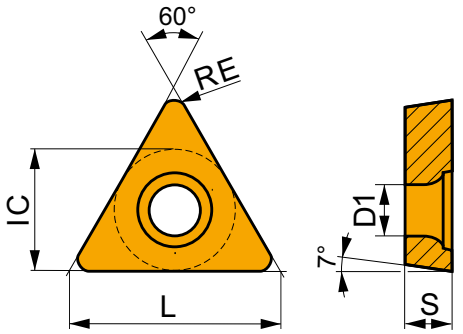
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			F																	
AL geometry with highly positive design for fine-finish to rough machining, and continuous to slightly interrupted cuts.																				
TCGT 090202F-AL	**HF7**	0.2	–	–	–	–	–	–	–	–	–	■ 360	0.12	1.0	–	–	–	–	–	–
	T0315	0.2	–	–	–	–	–	–	–	–	–	■ 360	0.12	1.0	–	–	–	–	–	–
TCGT 090204F-AL	**HF7**	0.4	–	–	–	–	–	–	–	–	–	■ 300	0.24	1.0	–	–	–	–	–	–
	T0315	0.4	–	–	–	–	–	–	–	–	–	■ 300	0.24	1.0	–	–	–	–	–	–
TCGT 16T304F-AL	**HF7**	0.4	–	–	–	–	–	–	–	–	–	■ 300	0.24	2.4	–	–	–	–	–	–
	T0315	0.4	–	–	–	–	–	–	–	–	–	■ 300	0.24	2.4	–	–	–	–	–	–
TCGT 16T308F-AL	**HF7**	0.8	–	–	–	–	–	–	–	–	–	■ 200	0.48	2.4	–	–	–	–	–	–
	T0315	0.8	–	–	–	–	–	–	–	–	–	■ 200	0.48	2.4	–	–	–	–	–	–
			U		E															
FF2 geometry with positive design for fine-finish to finish machining, and continuous to slightly interrupted cuts.																				
TCGT 06T102E-FF2	**T8330**	0.2	■ 150	0.05	0.8	–	–	–	■ 115	0.05	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.2	■ 150	0.05	0.8	–	–	–	◪ 115	0.05	0.8	–	–	–	–	–	–	–	–	–
	TT010	0.2	■ 150	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
TCGT 090202E-FF2	**TT010**	0.2	■ 150	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			E																	
SF3 geometry with highly positive design for fine to finish machining, and continuous cuts.																				
TCGT 110204E-SF3	**H07**	0.4	–	–	–	◪ 80	0.09	0.8	◪ 115	0.10	0.8	■ 360	0.12	0.8	■ 30	0.07	0.6	–	–	–
	T6310	0.4	◪ 140	0.10	0.8	■ 110	0.09	0.8	◪ 115	0.10	0.8	■ 360	0.12	0.8	■ 34	0.07	0.6	◪ 23	0.15	1.0
TCGT 16T308E-SF3	**H07**	0.8	–	–	–	◪ 90	0.09	1.2	◪ 115	0.10	1.2	■ 360	0.12	1.2	■ 34	0.08	1.0	–	–	–
	T6310	0.8	◪ 140	0.10	1.2	■ 110	0.09	1.2	◪ 115	0.10	1.2	■ 360	0.12	1.2	■ 38	0.08	1.0	◪ 26	0.15	1.0

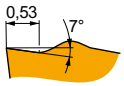
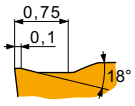
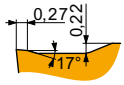
TCMT

PRAMET

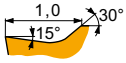
	IC	D1	L	S
	[mm]	[mm]	[mm]	[mm]
06T1	3.970	2.20	6.90	1.98
0902	5.560	2.50	9.60	2.38
16T3	9.525	4.40	16.50	3.97



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
			FF2 geometry with positive design for fine-finish to finish machining, and continuous to slightly interrupted cuts.																	
TCMT 06T102E-FF2	**T8330**	0.2	150	0.05	0.8	–	–	–	115	0.05	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.2	150	0.05	0.8	–	–	–	115	0.05	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.2	150	0.05	0.8	–	–	–	115	0.05	0.8	–	–	–	–	–	–	–	–	–
TCMT 06T104E-FF2	**T8330**	0.4	140	0.12	0.8	–	–	–	110	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	140	0.12	0.8	–	–	–	110	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	140	0.12	0.8	–	–	–	110	0.12	0.8	–	–	–	–	–	–	–	–	–
TCMT 090204E-FF2	**T8330**	0.4	140	0.12	1.0	–	–	–	110	0.12	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.4	140	0.12	1.0	–	–	–	110	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.4	140	0.12	1.0	–	–	–	110	0.12	1.0	–	–	–	–	–	–	–	–	–
TCMT 16T304E-FF2	**T8330**	0.4	140	0.12	0.8	–	–	–	110	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	140	0.12	0.8	–	–	–	110	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	140	0.12	0.8	–	–	–	110	0.12	0.8	–	–	–	–	–	–	–	–	–
	TT010	0.4	150	0.06	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
TCMT 16T308E-FF2	**T8330**	0.8	130	0.17	0.8	–	–	–	105	0.17	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.8	130	0.17	0.8	–	–	–	105	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.8	130	0.17	0.8	–	–	–	105	0.17	0.8	–	–	–	–	–	–	–	–	–
			FM geometry for finish to semi-rough machining, and continuous to slightly interrupted cuts.																	
TCMT 16T304E-FM	**T7325**	0.4	130	0.19	1.7	100	0.17	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	140	0.12	1.7	90	0.11	1.7	110	0.12	1.7	360	0.14	1.7	–	–	–	–	–	–
	T8430	0.4	140	0.12	1.7	90	0.11	1.7	110	0.12	1.7	360	0.14	1.7	–	–	–	–	–	–
																				
			FM2 geometry for finish to medium machining, and continuous to interrupted cuts.																	
TCMT 16T308E-FM2	**T8330**	0.8	130	0.20	1.0	85	0.18	1.0	100	0.20	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.8	130	0.20	1.0	85	0.18	1.0	100	0.20	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	130	0.20	1.0	100	0.18	1.0	100	0.20	1.0	–	–	–	–	–	–	–	–	–
																				
			RM geometry for semi-rough machining, and continuous to interrupted cuts.																	
TCMT 16T308E-RM	**T5315**	0.8	120	0.27	1.9	–	–	–	95	0.27	1.9	–	–	–	–	–	–	35	0.15	1.0
	T8330	0.8	120	0.27	1.9	85	0.24	1.9	95	0.27	1.9	–	–	–	26	0.19	1.5	20	0.15	1.0
	T8430	0.8	120	0.27	1.9	85	0.24	1.9	95	0.27	1.9	–	–	–	23	0.19	1.5	19	0.15	1.0

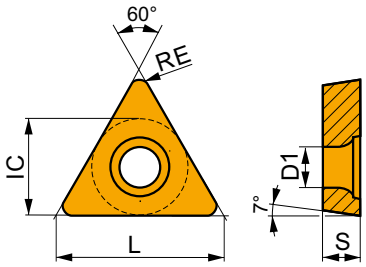
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
			UR geometry for fine to finish machining, and continuous to slightly interrupted cuts.																	
TCMT 16T304E-UR	**T8330**	0.4	■ 135	0.12	0.8	◪ 80	0.11	0.8	■ 110	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	■ 140	0.12	0.8	◪ 85	0.11	0.8	◪ 110	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 130	0.18	0.8	◪ 100	0.16	0.8	◪ 105	0.18	0.8	–	–	–	–	–	–	–	–	–
	TT310	0.4	■ 140	0.12	0.8	◪ 110	0.11	0.8	–	–	–	–	–	–	–	–	–	–	–	–
TCMT 16T308E-UR	**T8330**	0.8	■ 130	0.17	0.8	◪ 90	0.15	0.8	■ 105	0.17	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.8	■ 130	0.17	0.8	◪ 90	0.15	0.8	◪ 105	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 130	0.17	0.8	◪ 100	0.15	0.8	◪ 105	0.17	0.8	–	–	–	–	–	–	–	–	–

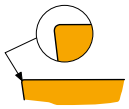
TCMW

PRAMET

	IC	D1	L	S
	[mm]	[mm]	[mm]	[mm]
16T3	9.525	4.40	16.50	3.97



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
			For fine-finish to semi-rough machining, and continuous to slightly interrupted cuts.																	
TCMW 16T304	**T5305**	0.4	–	–	–	–	–	–	■ 115	0.10	1.5	–	–	–	–	–	–	◪ 30	0.15	1.0
	T5315	0.4	–	–	–	–	–	–	■ 115	0.10	1.5	–	–	–	–	–	–	◪ 26	0.15	1.0
	T6310	0.4	–	–	–	–	–	–	■ 85	0.10	1.5	–	–	–	–	–	–	◪ 15	0.15	1.0
TCMW 16T308	**T5305**	0.8	–	–	–	–	–	–	■ 105	0.18	1.5	–	–	–	–	–	–	◪ 30	0.15	1.0
	T5315	0.8	–	–	–	–	–	–	■ 105	0.18	1.5	–	–	–	–	–	–	◪ 26	0.15	1.0
	T6310	0.8	–	–	–	–	–	–	■ 85	0.18	1.5	–	–	–	–	–	–	◪ 15	0.15	1.0

BORING ARBORS

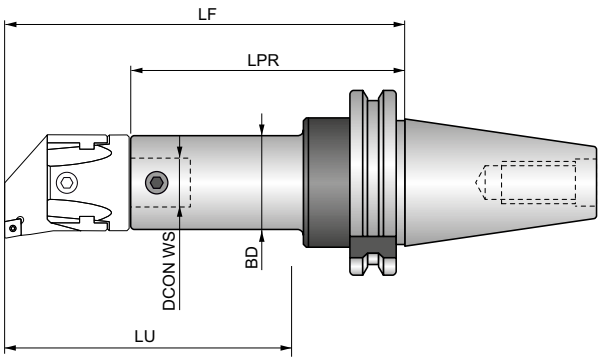
1	2	3	4	5
AS 3	30	022	100	R

1		2	3	4		5	
Arbor type		Cone	Size	Length LU		Variant	
AS 3	DIN 69871	30	022	055	55 mm	R	Internal coolant
BT 3	MAS BT	40	027	100	100 mm		
HSK	HSK	63A	032				
OTT 3	DIN 2080	50	042				
3	MORSE	05	054				
B	WELDON	25	068				
P	EXTENSION		085				
R	REDUCTION		100				
ADT	ADAPTOR		200				
			300				
			400				
			500				

69871-BS

DIN 69871 Shank Tool Holder for Boring Heads

DIN 69871 highly rigid tool holder (for ATC) for boring heads, available in 30, 40 and 50 tapers. Different length arbors available. Coupling sizes 22-160 mm can be used with EXT-BS extenders, RED-BS reducers and LA-BS enlargers. Internal coolant available. For applications requiring high accuracy and repeatability.



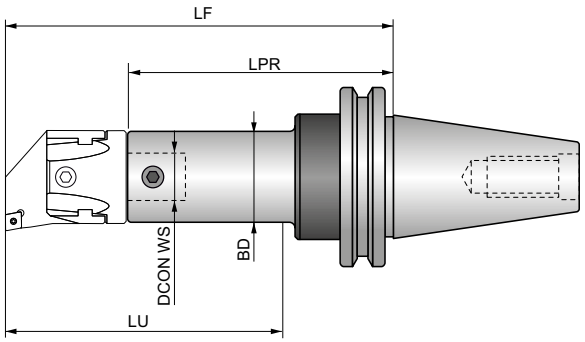
Product		CZC MS	BD	DCON WS	LF	LPR	LU			kg
			[mm]	[mm]	[mm]	[mm]	[mm]			
AS 330 022 100 R	30	22	22.00	12.00	138.00	104	100.00	✓	US 0608	0.72
AS 330 027 055 R	30	27	27.00	15.00	90.00	48	55.00	✓	US 0609	0.56
AS 330 027 100 R	30	27	27.00	15.00	138.00	96	100.00	✓	US 0609	0.68
AS 330 032 060 R	30	32	32.00	20.00	96.00	51	60.00	✓	US 0810	0.51
AS 330 032 100 R	30	32	32.00	20.00	138.00	93	100.00	✓	US 0810	0.74
AS 340 022 080 R	40	22	22.00	12.00	118.00	84	80.00	✓	US 0608	1.14
AS 340 022 100 R	40	22	22.00	12.00	138.00	104	100.00	✓	US 0608	1.24
AS 340 027 055 R	40	27	27.00	15.00	90.00	48	55.00	✓	US 0609	1.05
AS 340 027 100 R	40	27	27.00	15.00	138.00	96	100.00	✓	US 0609	1.30
AS 340 027 130 R	40	27	27.00	15.00	168.00	126	130.00	✓	US 0609	1.43
AS 340 032 060 R	40	32	32.00	20.00	96.00	51	60.00	✓	US 0810	1.10
AS 340 032 100 R	40	32	32.00	20.00	138.00	93	100.00	✓	US 0810	1.35
AS 340 032 130 R	40	32	32.00	20.00	168.00	123	130.00	✓	US 0810	1.52
AS 340 042 075 R	40	42	42.00	24.00	112.00	56	75.00	✓	US 1014	1.16
AS 340 042 160 R	40	42	42.00	24.00	182.00	126	160.00	✓	US 1014	1.90
AS 340 042 200 R	40	42	42.00	24.00	222.00	166	200.00	✓	US 1014	2.37
AS 340 054 120 R	40	54	54.00	28.00	142.00	76	120.00	✓	US 1219	1.58
AS 340 054 160 R	40	54	54.00	28.00	182.00	116	160.00	✓	US 1219	2.28
AS 340 054 200 R	40	54	54.00	28.00	222.00	156	200.00	✓	US 1219	2.93
AS 340 068 160 R	40	68	68.00	36.00	183.00	97	160.00	✓	US 1625	2.36
AS 340 068 200 R	40	68	68.00	36.00	223.00	137	200.00	✓	US 1625	3.50
AS 340 085 200 R	40	85	85.00	50.00	224.00	124	200.00	✓	US 1630	3.96
AS 340 100 200 R	40	100, 200	100.00	60.00	224.00	124	200.00	✓	US 2032	5.21
AS 350 022 080 R	50	22	22.00	12.00	118.00	84	80.00	✓	US 0608	3.43
AS 350 022 100 R	50	22	22.00	12.00	138.00	104	100.00	✓	US 0608	3.40
AS 350 027 055 R	50	27	27.00	15.00	90.00	48	55.00	✓	US 0609	3.30
AS 350 027 100 R	50	27	27.00	15.00	138.00	96	100.00	✓	US 0609	3.48
AS 350 027 130 R	50	27	27.00	15.00	168.00	126	130.00	✓	US 0609	3.48
AS 350 032 060 R	50	32	32.00	20.00	96.00	51	60.00	✓	US 0810	2.98
AS 350 032 130 R	50	32	32.00	20.00	168.00	123	130.00	✓	US 0810	3.71
AS 350 032 160 R	50	32	32.00	20.00	198.00	153	160.00	✓	US 0810	3.95
AS 350 042 075 R	50	42	42.00	24.00	112.00	56	75.00	✓	US 1014	3.32
AS 350 042 160 R	50	42	42.00	24.00	198.00	142	160.00	✓	US 1014	4.26
AS 350 042 200 R	50	42	42.00	24.00	238.00	182	200.00	✓	US 1014	4.74

Product		CZC MS	BD	DCON WS	LF	LPR	LU			kg
			[mm]	[mm]	[mm]	[mm]	[mm]			
AS 350 054 090 R	50	54	54.00	28.00	128.00	62	90.00	✓	US 1219	3.39
AS 350 054 160 R	50	54	54.00	28.00	198.00	132	160.00	✓	US 1219	4.74
AS 350 054 200 R	50	54	54.00	28.00	238.00	172	200.00	✓	US 1219	5.48
AS 350 068 115 R	50	68	68.00	36.00	151.00	65	115.00	✓	US 1625	3.66
AS 350 068 200 R	50	68	68.00	36.00	223.00	137	200.00	✓	US 1625	5.81
AS 350 068 260 R	50	68	68.00	36.00	283.00	197	260.00	✓	US 1625	7.48
AS 350 085 200 R	50	85	85.00	50.00	224.00	124	200.00	✓	US 1630	6.21
AS 350 085 260 R	50	85	85.00	50.00	284.00	184	260.00	✓	US 1630	8.91
AS 350 085 320 R	50	85	85.00	50.00	344.00	244	320.00	✓	US 1630	11.50
AS 350 100 190 R	50	100, 200	100.00	60.00	214.00	114	190.00	✓	US 2032	6.52
AS 350 100 260 R	50	100, 200	100.00	60.00	284.00	184	260.00	✓	US 2032	10.85
AS 350 100 320 R	50	100, 200	100.00	60.00	344.00	244	320.00	✓	US 2032	14.47
AS 550 160	50	300, 400, 500	100.00	60.00	160.00	70	125.00	–	US 1240	5.55

BT-BS

MAS 403-BT Shank Tool Holder for Boring Heads

MAS 403-BT highly rigid tool holder (for ATC) for boring heads, available in 30, 40 and 50 tapers. Different length arbors available. Coupling sizes 22-160 mm can be used with EXT-BS extenders, RED-BS reducers and LA-BS enlargers. Internal coolant available. For applications requiring high accuracy and repeatability.



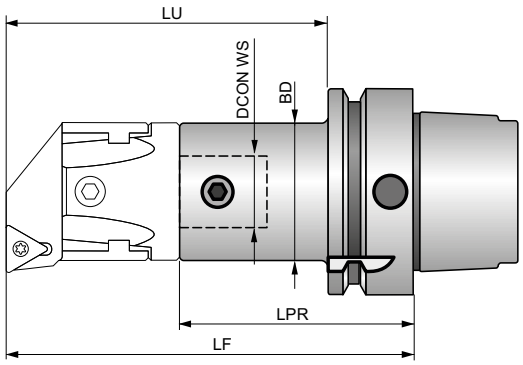
Product		CZC MS	BD [mm]	DCON WS [mm]	LF [mm]	LPR [mm]	LU [mm]			kg
BT 330 022 100 R	30	22	22.00	12.00	125.00	91	100.00	✓	US 0608	0.56
BT 330 027 055 R	30	27	27.00	15.00	77.00	35	55.00	✓	US 0609	0.41
BT 330 027 100 R	30	27	27.00	15.00	125.00	83	100.00	✓	US 0609	0.69
BT 330 032 060 R	30	32	32.00	20.00	83.00	38	60.00	✓	US 0810	0.47
BT 330 032 100 R	30	32	32.00	20.00	125.00	80	100.00	✓	US 0810	0.70
BT 330 042 075 R	30	42	42.00	24.00	100.00	44	75.00	✓	US 1014	0.56
BT 340 022 050 R	40	22	22.00	12.00	80.00	46	50.00	✓	US 0608	1.02
BT 340 022 080 R	40	22	22.00	12.00	110.00	76	80.00	✓	US 0608	1.16
BT 340 022 100 R	40	22	22.00	12.00	130.00	96	100.00	✓	US 0608	1.14
BT 340 027 055 R	40	27	27.00	15.00	82.00	40	55.00	✓	US 0609	1.06
BT 340 027 100 R	40	27	27.00	15.00	130.00	88	100.00	✓	US 0609	1.26
BT 340 027 130 R	40	27	27.00	15.00	160.00	118	130.00	✓	US 0609	1.39
BT 340 032 060 R	40	32	32.00	20.00	88.00	43	60.00	✓	US 0810	1.00
BT 340 032 100 R	40	32	32.00	20.00	130.00	85	100.00	✓	US 0810	1.31
BT 340 032 130 R	40	32	32.00	20.00	160.00	115	130.00	✓	US 0810	1.50
BT 340 042 075 R	40	42	42.00	24.00	104.00	48	75.00	✓	US 1014	1.14
BT 340 042 160 R	40	42	42.00	24.00	190.00	134	160.00	✓	US 1014	2.05
BT 340 042 200 R	40	42	42.00	24.00	230.00	174	200.00	✓	US 1014	2.39
BT 340 054 090 R	40	54	54.00	28.00	120.00	54	90.00	✓	US 1219	1.13
BT 340 054 160 R	40	54	54.00	28.00	190.00	124	160.00	✓	US 1219	2.55
BT 340 054 200 R	40	54	54.00	28.00	230.00	164	200.00	✓	US 1219	3.10
BT 340 068 160 R	40	68	68.00	36.00	181.00	95	160.00	✓	US 1625	2.46
BT 340 068 200 R	40	68	68.00	36.00	221.00	135	200.00	✓	US 1625	3.64
BT 340 085 200 R	40	85	85.00	50.00	220.00	120	200.00	✓	US 1630	4.04
BT 340 100 200 R	40	100	100.00	60.00	220.00	120	200.00	✓	US 2032	4.95
BT 350 022 080 R	50	22	22.00	12.00	121.00	87	80.00	✓	US 0608	3.95
BT 350 022 100 R	50	22	22.00	12.00	141.00	107	100.00	✓	US 0608	3.50
BT 350 027 055 R	50	27	27.00	15.00	93.00	51	55.00	✓	US 0609	3.68
BT 350 027 100 R	50	27	27.00	15.00	141.00	99	100.00	✓	US 0609	4.00
BT 350 027 130 R	50	27	27.00	15.00	171.00	129	130.00	✓	US 0609	4.14
BT 350 032 060 R	50	32	32.00	20.00	99.00	54	60.00	✓	US 0810	3.67
BT 350 032 130 R	50	32	32.00	20.00	171.00	126	130.00	✓	US 0810	4.24
BT 350 032 160 R	50	32	32.00	20.00	201.00	156	160.00	✓	US 0810	4.56
BT 350 042 075 R	50	42	42.00	24.00	115.00	59	75.00	✓	US 1014	3.84

Product		CZC MS	BD	DCON WS	LF	LPR	LU			kg
			[mm]	[mm]	[mm]	[mm]	[mm]			
BT 350 042 160 R	50	42	42.00	24.00	201.00	145	160.00	✓	US 1014	4.89
BT 350 042 200 R	50	42	42.00	24.00	241.00	185	200.00	✓	US 1014	5.25
BT 350 054 090 R	50	54	54.00	28.00	131.00	65	90.00	✓	US 1219	3.90
BT 350 054 160 R	50	54	54.00	28.00	201.00	135	160.00	✓	US 1219	5.39
BT 350 054 200 R	50	54	54.00	28.00	241.00	175	200.00	✓	US 1219	5.98
BT 350 068 115 R	50	68	68.00	36.00	154.00	68	115.00	✓	US 1625	4.09
BT 350 068 200 R	50	68	68.00	36.00	242.00	156	200.00	✓	US 1625	6.66
BT 350 068 260 R	50	68	68.00	36.00	302.00	216	260.00	✓	US 1625	8.18
BT 350 085 200 R	50	85	85.00	50.00	242.00	142	200.00	✓	US 1630	7.40
BT 350 085 260 R	50	85	85.00	50.00	302.00	202	260.00	✓	US 1630	9.89
BT 350 085 320 R	50	85	85.00	50.00	362.00	262	320.00	✓	US 1630	12.76
BT 350 100 170 R	50	100, 200	100.00	60.00	195.00	95	170.00	✓	US 2032	5.71
BT 350 100 260 R	50	100, 200	100.00	60.00	302.00	202	260.00	✓	US 2032	12.34
BT 350 100 320 R	50	100, 200	100.00	60.00	362.00	262	320.00	✓	US 2032	14.50
BT 550 160	50	300, 400, 500	100.00	60.00	160.00	70	125.00	–	US 1240	6.05

HSK-BS

HSK Shank Tool Holder for Boring Heads

HSK highly rigid tool holder (for ATC) for boring heads, available in 50A, 63A or 100A taper. Coupling sizes 22 up to 160 mm can be used in combination with EXT-BS extenders, RED-BS reducers and LA-BS enlargers. Internal coolant available. For applications requiring high accuracy and repeatability.

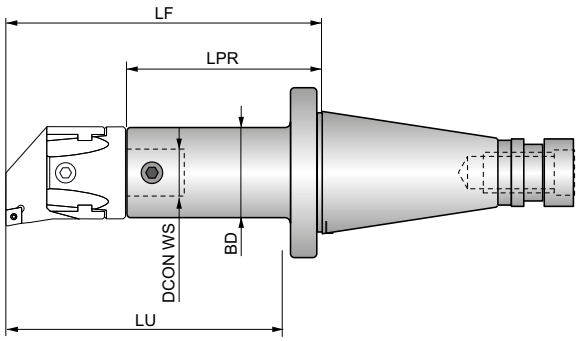


Product		CZC MS	BD	DCON WS	LF	LPR	LU			kg
			[mm]	[mm]	[mm]	[mm]	[mm]			
HSK 050A 022 055	50	22	22.00	12.00	81.00	47	55.00	–	US 0608	0.49
HSK 050A 027 065	50	27	27.00	15.00	91.00	49	65.00	–	US 0609	0.49
HSK 050A 032 075	50	32	32.00	20.00	101.00	56	75.00	–	US 0810	0.66
HSK 050A 042 090	50	42	42.00	24.00	116.00	60	90.00	–	US 1014	0.71
HSK 063A 022 055	63	22	22.00	12.00	81.00	47	55.00	–	US 0608	0.07
HSK 063A 027 065	63	27	27.00	15.00	91.00	49	65.00	–	US 0609	0.76
HSK 063A 032 075	63	32	32.00	20.00	101.00	56	75.00	–	US 0810	0.82
HSK 063A 042 090	63	42	42.00	24.00	116.00	60	90.00	–	US 1014	0.96
HSK 063A 054 110	63	54	54.00	28.00	136.00	70	110.00	–	US 1219	1.26
HSK 063A 068 145	63	68	68.00	36.00	171.00	85	145.00	–	US 1625	1.81
HSK 100A 022 055	100	22	22.00	12.00	89.00	55	55.00	–	US 0608	2.28
HSK 100A 027 065	100	27	27.00	15.00	99.00	57	65.00	–	US 0609	2.34
HSK 100A 032 075	100	32	32.00	20.00	104.00	59	75.00	–	US 0810	2.73
HSK 100A 042 090	100	42	42.00	24.00	119.00	63	90.00	–	US 1014	2.45
HSK 100A 054 110	100	54	54.00	28.00	139.00	73	110.00	–	US 1219	2.79
HSK 100A 068 145	100	68	68.00	36.00	174.00	88	145.00	–	US 1625	3.52
HSK 100A 085 165	100	85	85.00	50.00	194.00	94	165.00	–	US 1630	4.15
HSK 100A 100 185	100	100, 200	100.00	60.00	214.00	114	185.00	–	US 2032	5.63
HSK 550 160	100	300, 400, 500	100.00	60.00	170.00	80	140.00	–	US 1240	5.24

2080-BS

DIN 2080 Shank Tool Holder for Boring Heads

DIN 2080 highly rigid tool holder (for MTC) for boring heads in 40 and 50 taper. Different length arbors available. Coupling sizes 22 - 160 mm can be used in combination with EXT-BS extenders, RED-BS reducers and LA-BS enlargers. Internal coolant available. For applications requiring high accuracy and repeatability.



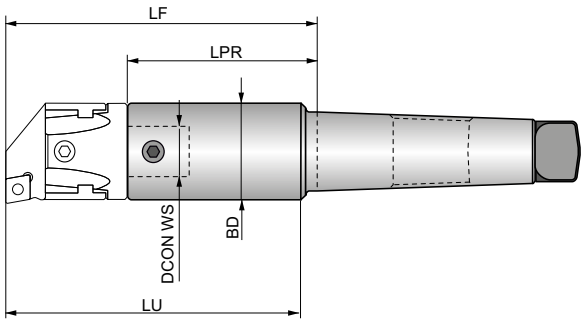
Product		CZC MS	BD	DCON WS	LF	LPR	LU			kg
			[mm]	[mm]	[mm]	[mm]	[mm]			
OTT 340 022 080 R	40	22	22.00	12.00	95.00	61	80.00	✓	US 0608	0.88
OTT 340 022 100 R	40	22	22.00	12.00	115.00	81	100.00	✓	US 0608	0.94
OTT 340 027 055 R	40	27	27.00	15.00	67.00	25	55.00	✓	US 0609	0.86
OTT 340 027 100 R	40	27	27.00	15.00	115.00	73	100.00	✓	US 0609	1.00
OTT 340 027 130 R	40	27	27.00	15.00	145.00	103	130.00	✓	US 0609	1.12
OTT 340 032 060 R	40	32	32.00	20.00	73.00	28	60.00	✓	US 0810	0.90
OTT 340 032 100 R	40	32	32.00	20.00	115.00	70	100.00	✓	US 0810	1.10
OTT 340 032 130 R	40	32	32.00	20.00	145.00	100	130.00	✓	US 0810	1.22
OTT 340 042 075 R	40	42	42.00	24.00	89.00	33	75.00	✓	US 1014	0.89
OTT 340 042 160 R	40	42	42.00	24.00	175.00	119	160.00	✓	US 1014	1.73
OTT 340 042 200 R	40	42	42.00	24.00	215.00	159	200.00	✓	US 1014	2.30
OTT 340 054 090 R	40	54	54.00	28.00	105.00	39	90.00	✓	US 1219	1.08
OTT 340 054 160 R	40	54	54.00	28.00	175.00	109	160.00	✓	US 1219	2.23
OTT 340 054 200 R	40	54	54.00	28.00	215.00	149	200.00	✓	US 1219	3.06
OTT 340 068 160 R	40	68	68.00	36.00	175.00	90	160.00	✓	US 1625	2.40
OTT 340 068 200 R	40	68	68.00	36.00	216.00	130	200.00	✓	US 1625	3.73
OTT 340 085 200 R	40	85	85.00	50.00	211.00	111	200.00	✓	US 1630	4.03
OTT 340 100 200 R	40	100, 200	100.00	60.00	211.00	111	200.00	✓	US 2032	5.05
OTT 350 022 080 R	50	22	22.00	12.00	99.00	65	80.00	✓	US 0608	2.98
OTT 350 022 100 R	50	22	22.00	12.00	119.00	85	100.00	✓	US 0608	2.97
OTT 350 027 055 R	50	27	27.00	15.00	71.00	29	55.00	✓	US 0609	2.93
OTT 350 027 100 R	50	27	27.00	15.00	119.00	77	100.00	✓	US 0609	3.01
OTT 350 027 130 R	50	27	27.00	15.00	149.00	107	130.00	✓	US 0609	3.10
OTT 350 032 060 R	50	32	32.00	20.00	77.00	32	60.00	✓	US 0810	2.81
OTT 350 032 130 R	50	32	32.00	20.00	149.00	104	130.00	✓	US 0810	3.24
OTT 350 032 160 R	50	32	32.00	20.00	179.00	134	160.00	✓	US 0810	3.26
OTT 350 042 075 R	50	42	42.00	24.00	93.00	37	75.00	✓	US 1014	2.74
OTT 350 042 160 R	50	42	42.00	24.00	179.00	123	160.00	✓	US 1014	3.64
OTT 350 042 200 R	50	42	42.00	24.00	219.00	163	200.00	✓	US 1014	4.05
OTT 350 054 090 R	50	54	54.00	28.00	109.00	43	90.00	✓	US 1219	3.02
OTT 350 054 160 R	50	54	54.00	28.00	179.00	113	160.00	✓	US 1219	4.15
OTT 350 054 200 R	50	54	54.00	28.00	219.00	153	200.00	✓	US 1219	5.08
OTT 350 068 115 R	50	68	68.00	36.00	132.00	46	115.00	✓	US 1625	3.20
OTT 350 068 200 R	50	68	68.00	36.00	220.00	134	200.00	✓	US 1625	5.54

Product		CZC MS	BD	DCON WS	LF	LPR	LU			kg
			[mm]	[mm]	[mm]	[mm]	[mm]			
OTT 350 068 260 R	50	68	68.00	36.00	280.00	194	260.00	✓	US 1625	7.22
OTT 350 085 200 R	50	85	85.00	50.00	221.00	121	200.00	✓	US 1630	6.21
OTT 350 085 260 R	50	85	85.00	50.00	281.00	181	260.00	✓	US 1630	9.07
OTT 350 085 320 R	50	85	85.00	50.00	341.00	241	320.00	✓	US 1630	11.84
OTT 350 100 170 R	50	100, 200	100.00	60.00	193.00	93	170.00	✓	US 2032	5.60
OTT 350 100 260 R	50	100, 200	100.00	60.00	281.00	181	260.00	✓	US 2032	10.78
OTT 350 100 320 R	50	100, 200	100.00	60.00	341.00	241	320.00	✓	US 2032	15.10
OTT 550 160	50	300, 400, 500	100.00	60.00	160.00	70	125.00	–	US 1240	5.90

MOR-BS

Morse Taper Shank Tool Holder for Boring Heads

5 Morse Taper highly rigid tool holder for boring heads. Different length arbors available. Coupling sizes 22 up to 160 mm can be used in combination with EXT-BS extenders, RED-BS reducers and LA-BS coupling enlargers. Internal coolant available. For applications requiring high accuracy and repeatability.

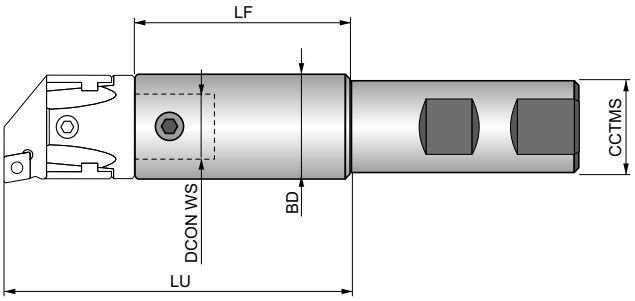


Product	CCTMS	CZC MS	BD [mm]	DCON WS [mm]	LF [mm]	LPR [mm]	LU [mm]			kg
305 022 100	5	22	22.00	12.00	112.00	78	100.00	–	US 0608	1.64
305 022 130	5	22	22.00	12.00	142.00	108	130.00	–	US 0608	1.76
305 027 055	5	27	27.00	15.00	65.00	23	55.00	–	US 0609	1.58
305 027 100	5	27	27.00	15.00	113.00	71	100.00	–	US 0609	1.69
305 027 130	5	27	27.00	15.00	143.00	101	130.00	–	US 0609	1.84
305 032 060	5	32	32.00	20.00	70.00	25	60.00	–	US 0810	1.54
305 032 130	5	32	32.00	20.00	143.00	98	130.00	–	US 0810	1.95
305 032 160	5	32	32.00	20.00	173.00	128	160.00	–	US 0810	2.13
305 042 075	5	42	42.00	24.00	83.00	27	75.00	–	US 1014	1.50
305 042 130	5	42	42.00	24.00	188.00	86	130.00	–	US 1014	2.18
305 042 160	5	42	42.00	24.00	218.00	116	160.00	–	US 1014	2.51
305 054 160	5	54	54.00	28.00	172.00	106	160.00	–	US 1219	3.00
305 054 200	5	54	54.00	28.00	212.00	146	200.00	–	US 1219	3.63
305 068 140	5	68	68.00	36.00	146.00	60	140.00	–	US 1625	2.53
305 068 200	5	68	68.00	36.00	212.00	126	200.00	–	US 1625	4.47
305 068 260	5	68	68.00	36.00	272.00	186	260.00	–	US 1625	6.20
305 085 200	5	85	85.00	50.00	216.00	116	200.00	–	US 1630	5.40
305 085 260	5	85	85.00	50.00	276.00	176	260.00	–	US 1630	8.45
305 085 320	5	85	85.00	50.00	336.00	236	320.00	–	US 1630	0.01
305 100 260	5	100, 200	100.00	60.00	276.00	176	260.00	–	US 2032	7.95
305 100 320	5	100, 200	100.00	60.00	336.00	236	320.00	–	US 2032	11.39
505 160	5	300, 400, 500	100.00	60.00	146.00	56	140.00	–	US 2032	4.70

WEL-BS

WELDON Shank Tool Holder for Boring Heads

Weldon highly rigid tool holders for boring heads, shank diameters from 20 up to 40 mm. Different length arbors available. Coupling sizes 22 up to 42 mm can be used in combination with EXT-BS extenders and RED-BS reducers. Internal coolant available. For applications requiring high accuracy and repeatability.

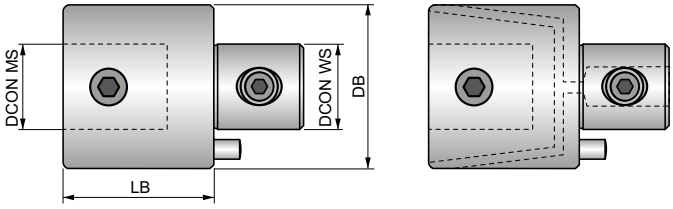


Product	CCTMS	CZC MS	BD [mm]	DCON WS [mm]	LU [mm]			kg
B 020 022 050	20	22	22.00	12.00	50.00	–	US 0608	0.17
B 020 022 100	20	22	22.00	12.00	100.00	–	US 0608	0.34
B 025 027 055	25	27	27.00	15.00	55.00	–	US 0609	0.17
B 025 027 100	25	27	27.00	15.00	95.00	–	US 0609	0.46
B 032 032 060	32	32	32.00	20.00	60.00	–	US 0810	0.43
B 032 032 100	32	32	32.00	20.00	100.00	–	US 0810	0.69
B 032 032 160	32	32	32.00	20.00	160.00	–	US 0810	1.11
B 032 042 090	32	32	32.00	24.00	90.00	–	US 0810	0.71
B 040 042 090	40	42	42.00	24.00	90.00	–	US 1014	0.98
B 040 042 160	40	42	42.00	24.00	160.00	–	US 1014	1.79

EXT-BS

EXT-BS Boring Head Extension Arbor

Boring head extension adaptor. Coupling sizes from 22 up to 200 mm and different lengths available. Internal and external coolant options available. Suited for all applications requiring high accuracy and repeatability.

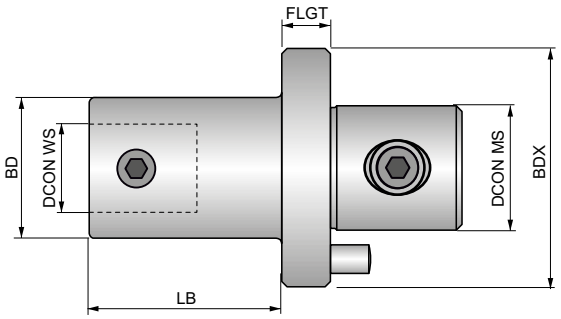


Product	CZC MS	BD [mm]	DCON MS [mm]	DCON WS [mm]	LB [mm]			kg
P 022 030 R	22	22.00	12.00	12.00	30.00	✓	US 0608	0.09
P 027 030 R	27	27.00	15.00	15.00	30.00	✓	US 0609	0.13
P 032 035 R	32	32.00	20.00	20.00	35.00	✓	US 0810	0.20
P 042 040 R	42	42.00	24.00	24.00	40.00	✓	US 1014	0.40
P 054 050 R	54	54.00	28.00	28.00	50.00	✓	US 1219	0.85
P 068 060 R	68	68.00	36.00	36.00	60.00	✓	US 1625	1.61
P 085 070 R	85	85.00	50.00	50.00	70.00	✓	US 1630	2.88
P 100 080 R	100, 200	100.00	60.00	60.00	80.00	✓	US 2032	4.48
P 022 020	22	22.00	12.00	12.00	20.00	–	US 0608	0.06
P 022 030	22	22.00	12.00	12.00	30.00	–	US 0608	0.09
P 027 030	27	27.00	15.00	15.00	30.00	–	US 0609	0.13
P 027 045	27	27.00	15.00	15.00	45.00	–	US 0609	0.19
P 032 035	32	32.00	20.00	20.00	35.00	–	US 0810	0.20
P 032 052	32	32.00	20.00	20.00	52.00	–	US 0810	0.30
P 042 040	42	42.00	24.00	24.00	40.00	–	US 1014	0.40
P 042 060	42	42.00	24.00	24.00	60.00	–	US 1014	0.60
P 054 050	54	54.00	28.00	28.00	50.00	–	US 1219	0.87
P 054 075	54	54.00	28.00	28.00	75.00	–	US 1219	1.30
P 068 060	68	68.00	36.00	36.00	60.00	–	US 1625	1.63
P 068 090	68	68.00	36.00	36.00	90.00	–	US 1625	2.44
P 085 070	85	85.00	50.00	50.00	70.00	–	US 1630	2.86
P 085 105	85	85.00	50.00	50.00	105.00	–	US 1630	4.46
P 100 080	100, 200	100.00	60.00	60.00	80.00	–	US 2032	4.44
P 100 120	100, 200	100.00	60.00	60.00	120.00	–	US 2032	6.91

RED-BS

RED-BS Boring Head Reducer Arbor

Boring head reducer adaptor. Coupling sizes from 27 up to 100 mm and in different lengths available. External coolant only. Suited for all applications requiring high accuracy and repeatability.

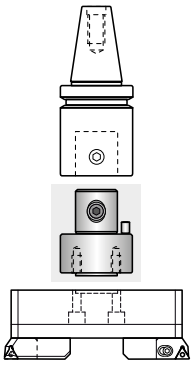


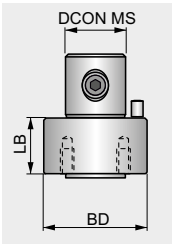
Product	CZC MS	BD	DCON MS	DHUB	DCON WS	LB	FLGT			kg
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]			
R 027 022 036	22	27.00	15.00	22	12.00	26.00	10	–	US 0608	0.11
R 042 022 058	22	42.00	24.00	22	12.00	48.00	10	–	US 0608	0.31
R 032 022 040	22	32.00	20.00	22	12.00	30.00	10	–	US 0608	0.17
R 054 022 086	22	54.00	28.00	22	12.00	76.00	10	–	US 0608	0.51
R 068 022 102	22	68.00	36.00	22	12.00	90.00	12	–	US 0608	0.90
R 054 027 080	27	54.00	28.00	27	15.00	70.00	10	–	US 0609	0.63
R 032 027 034	27	32.00	20.00	27	15.00	24.00	10	–	US 0609	0.18
R 042 027 050	27	42.00	24.00	27	15.00	40.00	10	–	US 0609	0.33
R 068 027 095	27	68.00	36.00	27	15.00	83.00	12	–	US 0609	0.97
R 042 032 046	32	42.00	24.00	32	20.00	36.00	10	–	US 0810	0.36
R 054 032 076	32	54.00	28.00	32	20.00	66.00	10	–	US 0810	0.63
R 068 032 090	32	68.00	36.00	32	20.00	78.00	12	–	US 0810	1.08
R 054 042 070	42	54.00	28.00	42	24.00	60.00	10	–	US 1014	0.81
R 068 042 082	42	68.00	36.00	42	24.00	70.00	12	–	US 1014	1.26
R 085 042 095	42	85.00	50.00	42	24.00	83.00	12	–	US 1014	2.06
R 068 054 072	54	68.00	36.00	54	28.00	60.00	12	–	US 1219	1.51
R 085 054 090	54	85.00	50.00	54	28.00	78.00	12	–	US 1219	2.44
R 085 068 100	68	85.00	50.00	68	36.00	88.00	12	–	US 1625	3.32
R 100 085 100	85	100.00	60.00	85	50.00	88.00	12	–	US 1630	5.05

LA-BS

LA-BS Boring Head Enlarger Adaptor

Boring head enlarger adaptor. Available in coupling size 100 mm and in different lengths to increase versatility. External coolant only. Suited for all applications requiring high accuracy and repeatability.



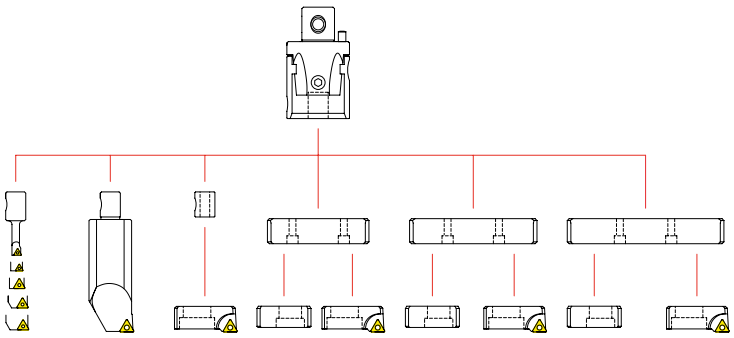


Product	CZC MS	BD [mm]	DCON MS [mm]	LB [mm]			kg
ADT 100 050	300, 400, 500	100.00	60.00	50.00	–	US 1240	4.35

BORING KITS

1	2	3	4	5
BS	54	KIT	RC	8-43

1		2	3		4		5
Type of tool		Size	Type		ISO BARS type		Hole diameter range
BS	Boring systems	54	KIT	Set of tools	RC	for insert shape C κ = 95°	8 – 43 [mm] 8 – 100 [mm]
					TC	for insert shape T κ = 90°	8 – 170 [mm] 8 – 210 [mm]



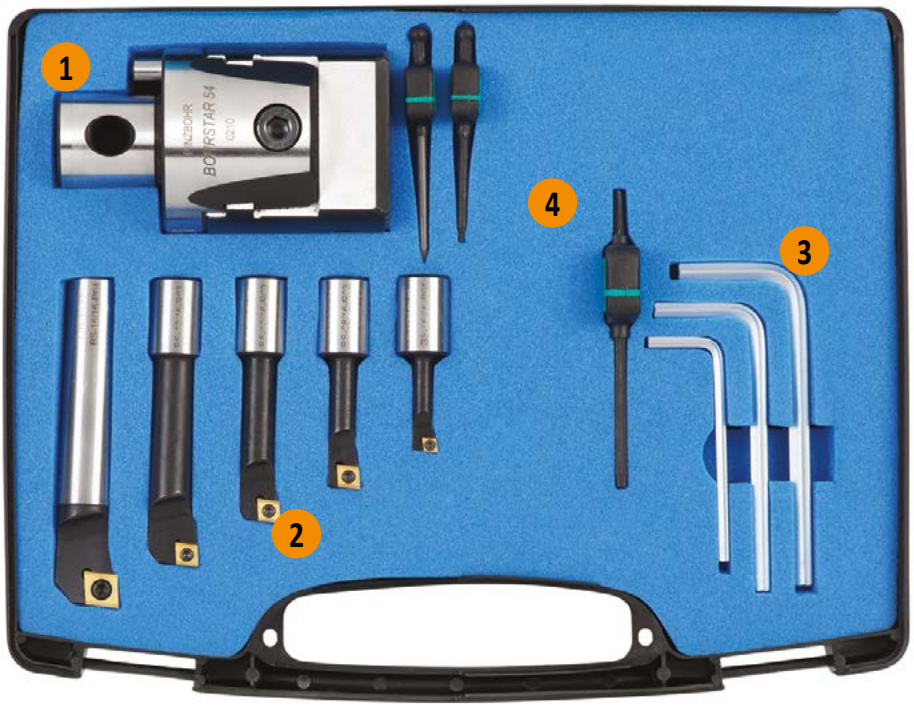
from	Ø 8	Ø 38	Ø 56	Ø 85	Ø 125	Ø 165
to	Ø 43	Ø 59	Ø 100	Ø 130	Ø 170	Ø 210

Range	Components	Order reference	
Ø 8 ~ Ø 43		BS 54 KIT RC 8-043	420
		BS 54 KIT TC 8-043	424
Ø 8 ~ Ø 100		BS 54 KIT RC 8-100	421
		BS 54 KIT TC 8-100	425
Ø 8 ~ Ø 170		BS 54 KIT RC 8-170	422
		BS 54 KIT TC 8-170	426
Ø 8 ~ Ø 210		BS 54 KIT RC 8-210	423
		BS 54 KIT TC 8-210	427

BS 54 KIT RC 8-043

ORDER REFERENCE:

Ø 8 – 43



	Description	Marking	Insert	pcs.
1	Boring head	**BS 054 16**	–	1
2	Boring bar 6 mm	**BS 06 16 R02**	EP.. 0502..	1
	Boring bar 8 mm	**BS 08 16 R03**	CC.. 0602..	1
	Boring bar 10 mm	**BS 10 16 R03**	CC.. 0602..	1
	Boring bar 12 mm	**BS 12 16 R03**	CC.. 0602..	1
	Boring bar 16 mm	**BS 16 16 R04**	CC.. 09T3..	1
3	Hexagonal key 3	**HK 03**	–	1
	Hexagonal key 5	**HK 05**	–	1
	Hexagonal key 6	**HK 06**	–	1
4	Torx key 7	**TK07**	–	1
	Torx key 8	**TK08**	–	1
	Torx key 15	**TK15**	–	1
	–			

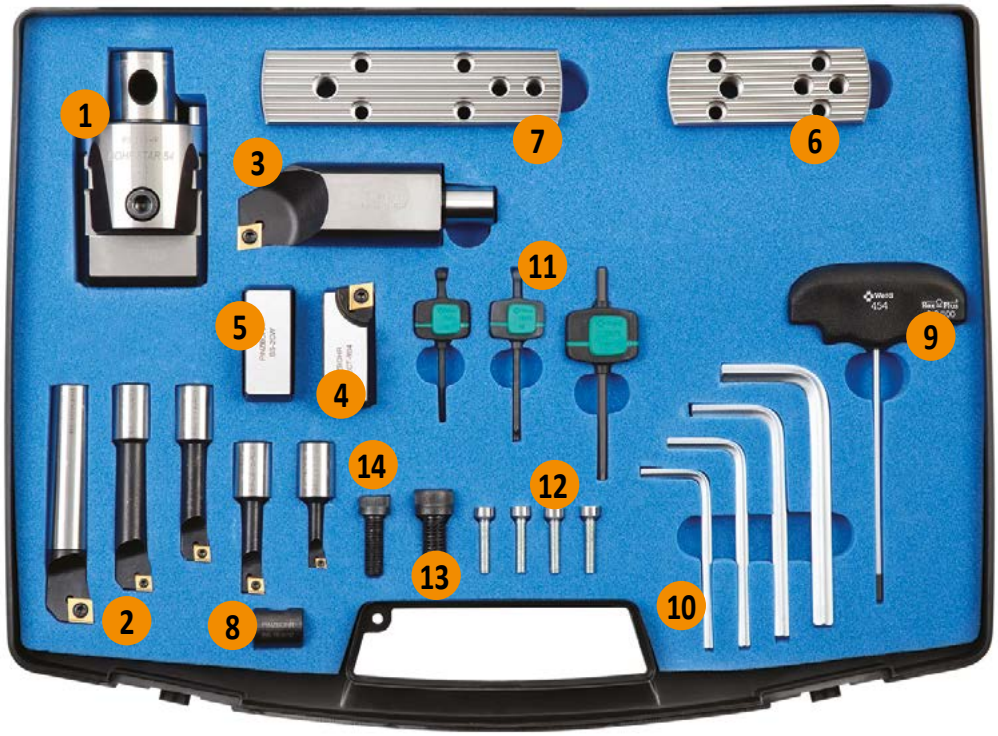
ORDER REFERENCE:

Ø 8 – 100

	Description	Marking	Insert	pcs.
1	Boring head	**BS 054 16**	–	1
2	Boring bar 6 mm	**BS 06 16 R02**	EP.. 0502..	1
	Boring bar 8 mm	**BS 08 16 R03**	CC.. 0602..	1
	Boring bar 10 mm	**BS 10 16 R03**	CC.. 0602..	1
	Boring bar 12 mm	**BS 12 16 R03**	CC.. 0602..	1
	Boring bar 16 mm	**BS 16 16 R04**	CC.. 09T3..	1
3	Boring bar 34 mm	**BS 34 16 R04**	CC.. 09T3..	2
4	Cartridge	**BS 2CT R04**	CC.. 09T3..	1
5	Location sleeve	**BS 16 M10**	–	1
6	Hexagonal key 3	**HK 03**	–	1
	Hexagonal key 5	**HK 05**	–	1
	Hexagonal key 6	**HK 06**	–	1
	Hexagonal key 8	**HK 08**	–	1
7	Torx key 7	**TK07**	–	1
	Torx key 8	**TK08**	–	1
	Torx key 15	**TK15**	–	1
8	Cartridge screw	**CS 10 25**	–	1

ORDER REFERENCE:

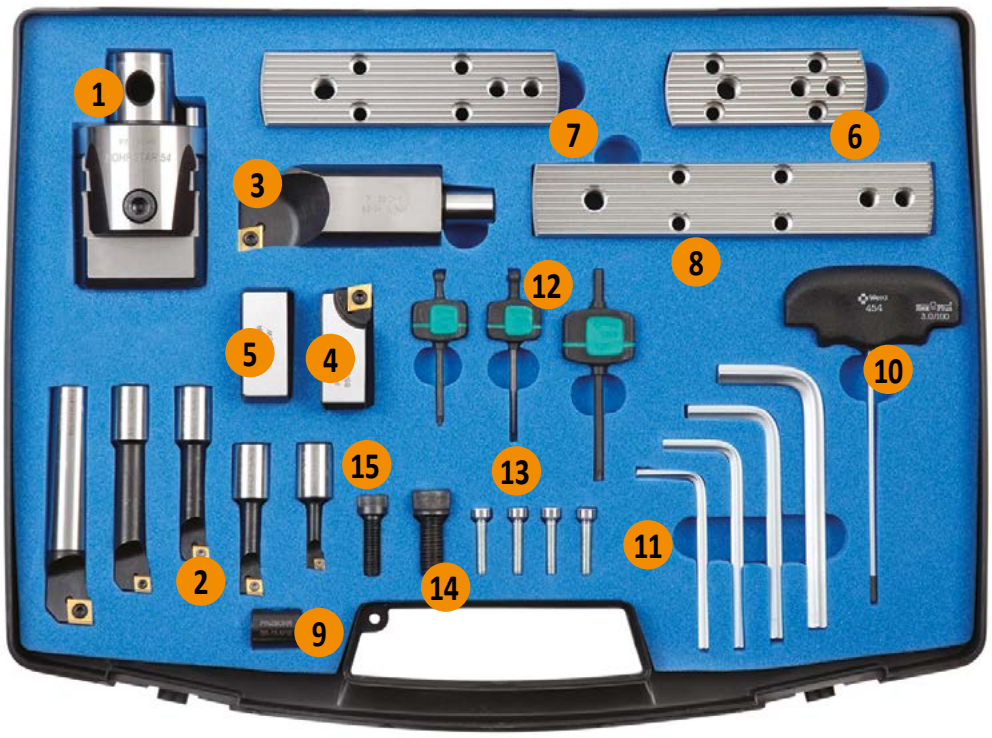
Ø 8 – 170



	Description	Marking	Insert	pcs.
1	Boring head	**BS 054 16**	–	1
2	Boring bar 6 mm	**BS 06 16 R02**	EP.. 0502..	1
	Boring bar 8 mm	**BS 08 16 R03**	CC.. 0602..	1
	Boring bar 10 mm	**BS 10 16 R03**	CC.. 0602..	1
	Boring bar 12 mm	**BS 12 16 R03**	CC.. 0602..	1
	Boring bar 16 mm	**BS 16 16 R04**	CC.. 09T3..	1
3	Boring bar 34 mm	**BS 34 16 R04**	CC.. 09T3..	2
4	Cartridge	**BS 2CT R04**	CC.. 09T3..	1
5	Counterweight	**BS 2CW**	–	1
6	Small plate	**BS SP 85 130**	–	1
7	Medium plate	**BS SP 125 170**	–	1
8	Location sleeve	**BS 16 M10**	–	1
9	Adjusting key	**AK 03**	–	1
10	Hexagonal key 4	**HK 04**	–	1
	Hexagonal key 5	**HK 05**	–	1
	Hexagonal key 6	**HK 06**	–	1
	Hexagonal key 8	**HK 08**	–	1
11	Torx key 7	**TK07**	–	1
	Torx key 8	**TK08**	–	1
	Torx key 15	**TK15**	–	1
12	Insert fixing screws	**D 27 21**	–	4
13	Cartridge screw	**CS 10 25**	–	1
14	Counterweight screw	**CS 08 25**	–	1

ORDER REFERENCE:

Ø 8 – 210

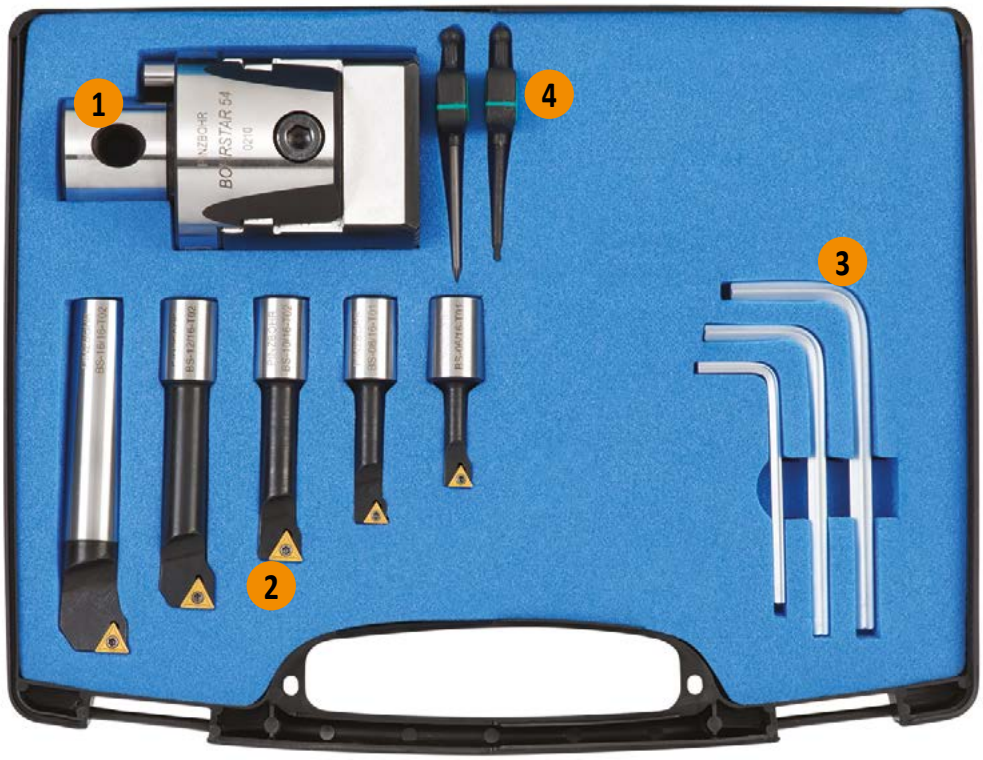


	Description	Marking	Insert	pcs.
1	Boring head	**BS 054 16**	–	1
2	Boring bar 6 mm	**BS 06 16 R02**	EP.. 0502..	1
	Boring bar 8 mm	**BS 08 16 R03**	CC.. 0602..	1
	Boring bar 10 mm	**BS 10 16 R03**	CC.. 0602..	1
	Boring bar 12 mm	**BS 12 16 R03**	CC.. 0602..	1
	Boring bar 16 mm	**BS 16 16 R04**	CC.. 09T3..	1
3	Boring bar 34 mm	**BS 34 16 R04**	CC.. 09T3..	2
4	Cartridge	**BS 2CT R04**	CC.. 09T3..	1
5	Counterweight	**BS 2CW**	–	1
6	Small plate	**BS SP 85 130**	–	1
7	Medium plate	**BS SP 125 170**	–	1
8	Large plate	**BS SP 165 210**	–	1
9	Location sleeve	**BS 16 M10**	–	1
10	Adjusting key	**AK 03**	–	1
11	Hexagonal key 4	**HK 04**	–	1
	Hexagonal key 5	**HK 05**	–	1
	Hexagonal key 6	**HK 06**	–	1
	Hexagonal key 8	**HK 08**	–	1
12	Torx key 7	**TK07**	–	1
	Torx key 8	**TK08**	–	1
	Torx key 15	**TK15**	–	1
13	Insert fixing screws	**D 27 21**	–	4
14	Cartridge screw	**CS 10 25**	–	1
15	Counterweight screw	**CS 08 25**	–	1

BS 54 KIT TC 8-043

ORDER REFERENCE:

Ø 8 – 43



	Description	Marking	Insert	pcs.
1	Boring head	**BS 054 16**	–	1
2	Boring bar 6 mm	**BS 06 16 T01**	TC.. 06T1..	1
	Boring bar 8 mm	**BS 08 16 T01**	TC.. 06T1..	1
	Boring bar 10 mm	**BS 10 16 T02**	TC.. 0902..	1
	Boring bar 12 mm	**BS 12 16 T02**	TC.. 0902..	1
	Boring bar 16 mm	**BS 16 16 T02**	TC.. 0902..	1
3	Hexagonal key 3	**HK 03**	–	1
	Hexagonal key 5	**HK 05**	–	1
	Hexagonal key 6	**HK 06**	–	1
4	Torx key 6	**TK06**	–	1
	Torx key 7	**TK07**	–	1

BS 54 KIT TC 8-100

ORDER REFERENCE:

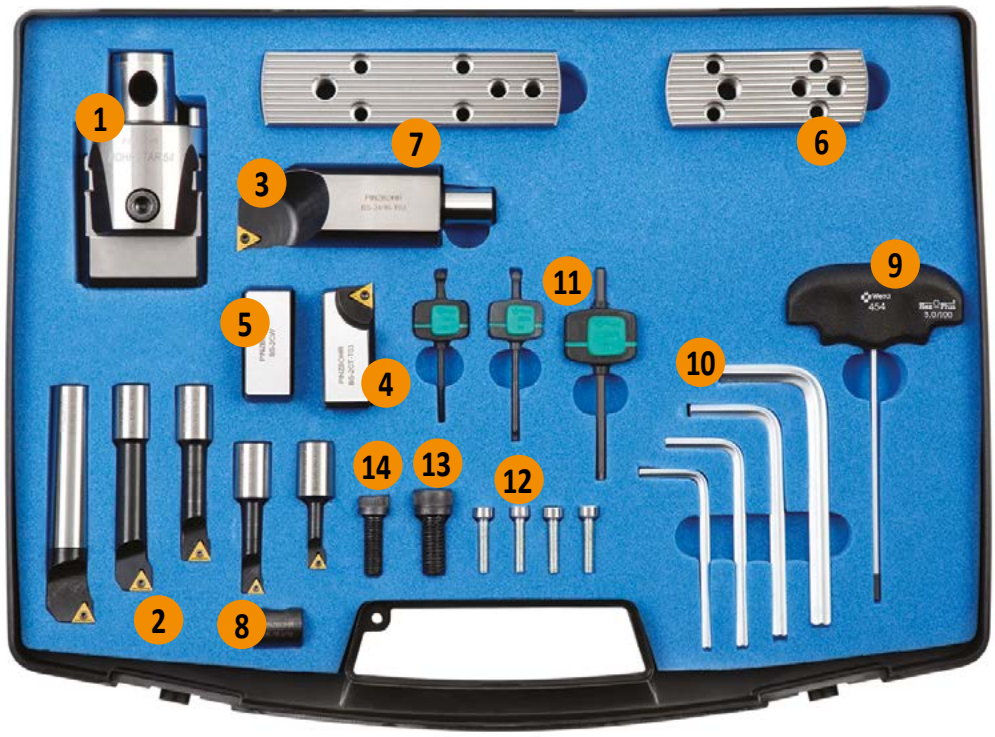
Ø 8 – 100

	Description	Marking	Insert	pcs.
1	Boring head	**BS 054 16**	–	1
2	Boring bar 6 mm	**BS 06 16 T01**	TC.. 06T1..	1
	Boring bar 8 mm	**BS 08 16 T01**	TC.. 06T1..	1
	Boring bar 10 mm	**BS 10 16 T02**	TC.. 0902..	1
	Boring bar 12 mm	**BS 12 16 T02**	TC.. 0902..	1
	Boring bar 16 mm	**BS 16 16 T02**	TC.. 0902..	1
3	Boring bar 34 mm	**BS 34 16 T04**	TC.. 16T3..	1
4	Cartridge	**BS 2CT T04**	TC.. 16T3..	1
5	Location sleeve	**BS 16 M10**	–	1
6	Hexagonal key 3	**HK 03**	–	1
	Hexagonal key 5	**HK 05**	–	1
	Hexagonal key 6	**HK 06**	–	1
	Hexagonal key 8	**HK 08**	–	1
7	Torx key 6	**TK06**	–	1
	Torx key 7	**TK07**	–	1
	Torx key 15	**TK15**	–	1
8	Cartridge screw	**CS 10 25**	–	1

BS 54 KIT TC 8-170

ORDER REFERENCE:

Ø 8 – 170

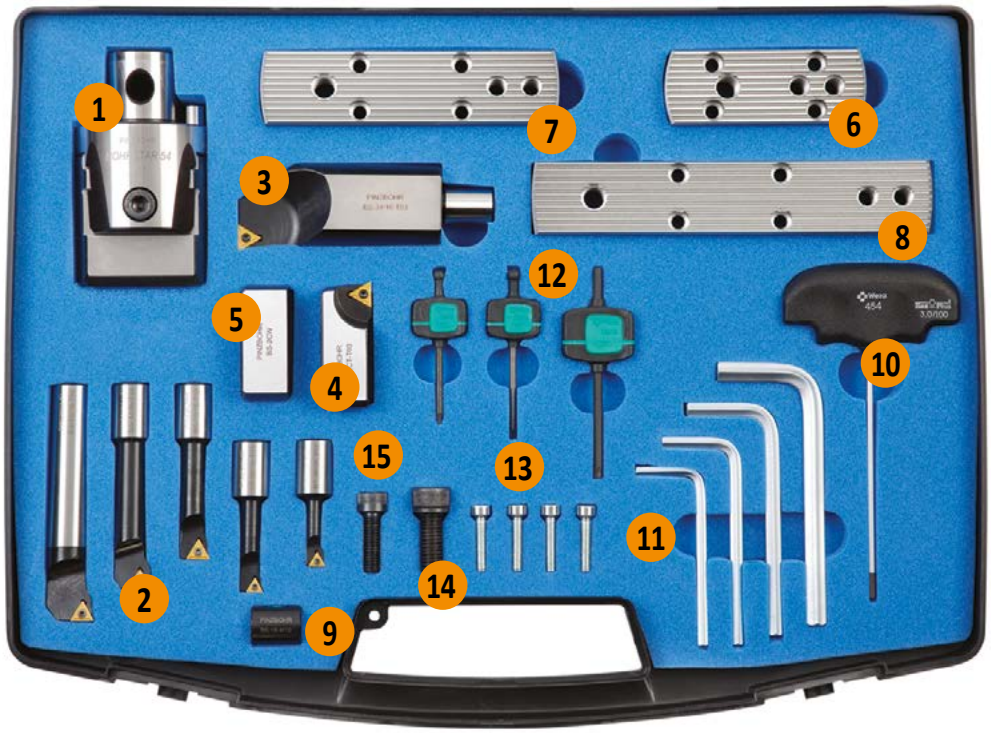


	Description	Marking	Insert	pcs.
1	Boring head	**BS 054 16**	–	1
2	Boring bar 6 mm	**BS 06 16 T01**	TC.. 06T1..	1
	Boring bar 8 mm	**BS 08 16 T01**	TC.. 06T1..	1
	Boring bar 10 mm	**BS 10 16 T02**	TC.. 0902..	1
	Boring bar 12 mm	**BS 12 16 T02**	TC.. 0902..	1
	Boring bar 16 mm	**BS 16 16 T02**	TC.. 0902..	1
3	Boring bar 34 mm	**BS 34 16 T04**	TC.. 16T3..	1
4	Cartridge	**BS 2CT T04**	TC.. 16T3..	1
5	Counterweight	**BS 2CW**	–	1
6	Small plate	**BS SP 85 130**	–	1
7	Medium plate	**BS SP 125 170**	–	1
8	Location sleeve	**BS 16 M10**	–	1
9	Adjusting key	**AK 03**	–	1
10	Hexagonal key 4	**HK 04**	–	1
	Hexagonal key 5	**HK 05**	–	1
	Hexagonal key 6	**HK 06**	–	1
	Hexagonal key 8	**HK 08**	–	1
11	Torx key 6	**TK06**	–	1
	Torx key 7	**TK07**	–	1
	Torx key 15	**TK15**	–	1
12	Insert fixing screws	**D 27 21**	–	4
13	Cartridge screw	**CS 10 25**	–	1
14	Counterweight screw	**CS 08 25**	–	1

BS 54 KIT TC 8-210

Ø 8 – 210

ORDER REFERENCE:



	Description	Marking	Insert	pcs.
1	Boring head	**BS 054 16**	–	1
2	Boring bar 6 mm	**BS 06 16 T01**	TC.. 06T1..	1
	Boring bar 8 mm	**BS 08 16 T01**	TC.. 06T1..	1
	Boring bar 10 mm	**BS 10 16 T02**	TC.. 0902..	1
	Boring bar 12 mm	**BS 12 16 T02**	TC.. 0902..	1
	Boring bar 16 mm	**BS 16 16 T02**	TC.. 0902..	1
3	Boring bar 34 mm	**BS 34 16 T04**	TC.. 16T3..	1
4	Cartridge	**BS 2CT T04**	TC.. 16T3..	1
5	Counterweight	**BS 2CW**	–	1
6	Small plate	**BS SP 85 130**	–	1
7	Medium plate	**BS SP 125 170**	–	1
8	Large plate	**BS SP 165 210**	–	1
9	Location sleeve	**BS 16 M10**	–	1
10	Adjusting key	**AK 03**	–	1
11	Hexagonal key 4	**HK 04**	–	1
	Hexagonal key 5	**HK 05**	–	1
	Hexagonal key 6	**HK 06**	–	1
	Hexagonal key 8	**HK 08**	–	1
12	Torx key 6	**TK06**	–	1
	Torx key 7	**TK07**	–	1
	Torx key 15	**TK15**	–	1
13	Insert fixing screws	**D 27 21**	–	4
14	Cartridge screw	**CS 10 25**	–	1
15	Counterweight screw	**CS 08 25**	–	1

DORMER PRAMET

ALWAYS CONNECT

No wifi or internet connection? The machining calculator works perfectly even when you are offline, making sure it's always available when you need it. **Simply Reliable.**

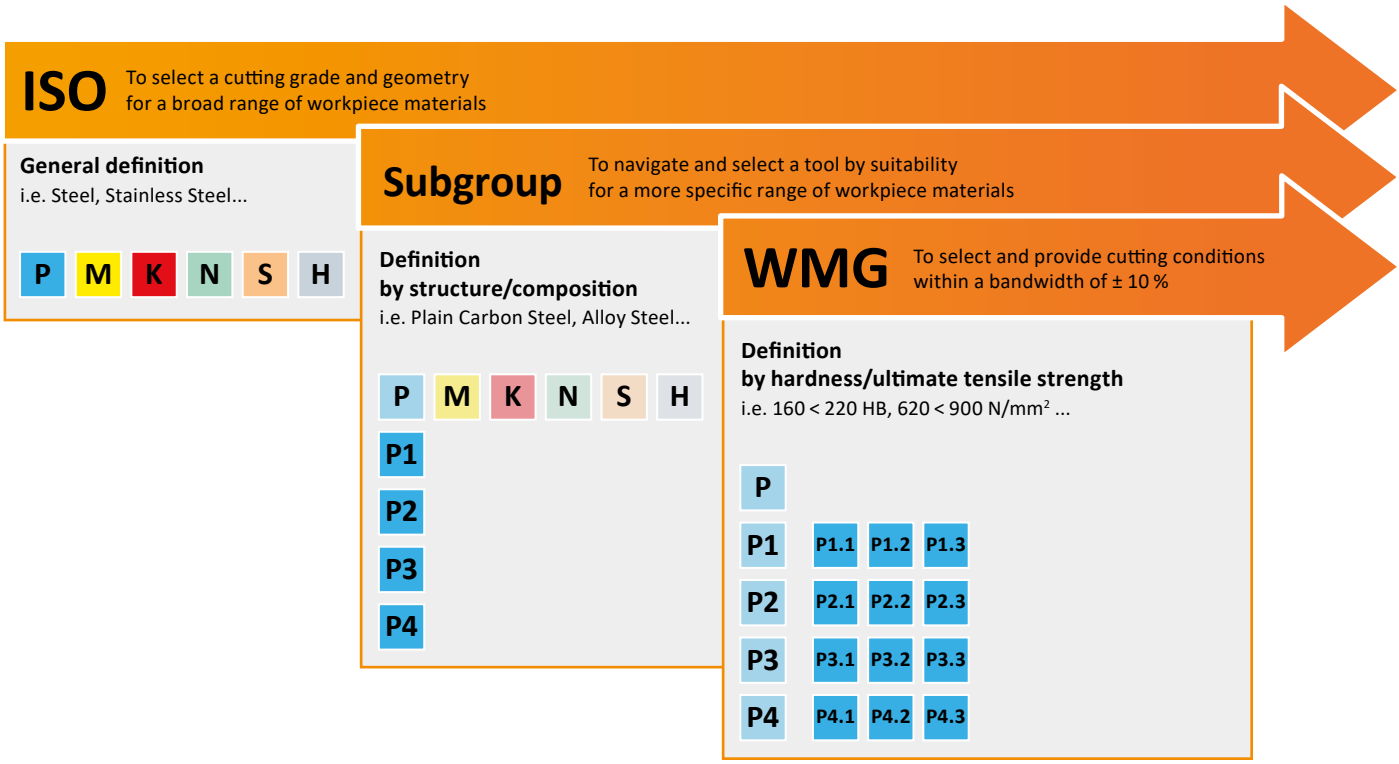
Download on the App Store

GET IT ON Google Play

Download on AppGallery

BORING
TECHNICAL INFORMATION

WORKPIECE MATERIAL GROUP (WMG)



ABOUT DORMER PRAMET'S WORKPIECE MATERIAL CLASSIFICATION

Workpiece **M**aterial **G**roups (**WMG**) are used to support easy and reliable selection of the right cutting tool and starting values for machining conditions in particular applications.
Dormer Pramet classifies workpiece materials into six different coloured groups;

- **Blue**: Steel and cast steel (P-group)
- **Yellow**: Stainless steel (M-group)
- **Red**: Cast iron (K-group)
- **Green**: Non-ferrous metals (N-group)
- **Brown**: High-temperature alloys (S-group)
- **Grey**: Hardened materials (H-group)

Each of these are divided into subgroups on the basis of their structure and/or composition. For example, P-group steel and cast steel is split into four subgroups, namely;

- **P1** – Free machining steel
- **P2** – Plain carbon steel
- **P3** – Alloy steel
- **P4** – Tool steel

A final division includes material properties, such as hardness and ultimate tensile strength. This is to provide our customers with a complete tool recommendation, including starting values for cutting speed and feed.
The table on the next page includes a description of each workpiece material group, as well as examples of commonly used designations.

ISO group		Subgroup		WMG (Work Material Group)		k_{vg}	Examples of material (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
P	**Steel and cast steel** (steels with alloy content ≤ 10 % and a hardness of < 45 HRC)	P1	Free machining steel (carbon steels with increased machinability)	P1.1	Free machining sulfurized carbon steel with a hardness of < 220 HB	1.33	AISI **1108,** EN **15S22,** DIN **1.0723,** SS **1922,** ČSN **11120,** BS **210A15,** UNE **F.210F,** GB **Y15,** AFNOR **10F1,** GOST **A30,** UNI **CF10S20**
				P1.2	Free machining sulfurized and phosphorized carbon steel with a hardness of < 180 HB	1.49	AISI **1211,** EN **11SMn30,** DIN **1.0715,** SS **1912,** ČSN **11109,** BS **230M7,** UNE **F.2111,** GB **Y15,** AFNOR **S250,** GOST **A40G,** UNI **CF9SMn28**
				P1.3	Free machining sulfurized/phosphorized and leaded carbon steel with a hardness of < 160 HB	1.53	AISI **12L13,** EN **11SMnPb30,** DIN **1.0718,** SS **1914,** ČSN **12110,** BS **210M16,** UNE **F.2114,** GB **Y15Pb,** AFNOR **S250Pb,** GOST **AS35G2,** UNI **CF10SPb20**
		P2	Plain carbon steel (steels comprised of mainly iron and carbon)	P2.1	Plain low carbon steel containing < 0.25 % C with a hardness of < 180 HB	1.14	AISI **1015,** EN **C15,** DIN **1.0401,** SS **1350,** ČSN **11301 ,** BS **080A15,** UNE **F.111,** GB **15,** AFNOR **C18RR,** GOST **St2ps,** UNI **Fe360**
				P2.2	Plain medium carbon steel containing < 0.55 %C with a hardness of < 240 HB	1.00	AISI **1030,** EN **C30,** DIN **1.0528,** SS **1550,** ČSN **12031,** BS **080M32,** UNE **F.1130,** GB **30,** AFNOR **AF50C30,** GOST **30G,** UNI **Fe590**
				P2.3	Plain high carbon steel containing > 0.55 % C, with a hardness of < 300 HB	0.89	AISI **1060,** EN **C60,** DIN **1.0601,** SS **1655,** ČSN **12061,** BS **080A62,** UNE **F513,** GB **60,** AFNOR **1C60,** GOST **60G,** UNI **C60**
		P3	Alloy steel (carbon steels with an alloying content ≤ 10 %)	P3.1	Alloy steel with a hardness of < 180 HB	0.92	AISI **5015,** EN **16Mo3,** DIN **1.5415,** SS **2912,** ČSN **15020,** BS **1501-240,** UNE **F.2601,** GB **16Mo,** AFNOR **15D3,** GOST **15M,** UNI **16Mo3KW**
				P3.2	Alloy steel with a hardness of 180 – 260 HB	0.74	AISI **4140,** EN **42CrMo4,** DIN **1.7225,** SS **2244,** ČSN **15142,** BS **708M40,** UNE **F.8232,** GB **42CrMo,** AFNOR **42CD4,** GOST **40ChFA,** UNI **42CrMo4**
				P3.3	Alloy steel with a hardness of 260 – 360 HB	0.63	AISI **4140,** EN **42CrMo4,** DIN **1.7225,** SS **2244,** ČSN **15142,** BS **708M40,** UNE **F.8232,** GB **42CrMo,** AFNOR **42CD4,** GOST **40ChFA,** UNI **42CrMo4**
		P4	Tool steel (special alloy steel for tools, dies and molds)	P4.1	Tool steel with a hardness of < 26 HRC	0.55	AISI **D2,** EN **X155CrVMo12-1,** DIN **1.2370,** SS **2736,** ČSN **19573,** BS **BD2,** UNE **F.520A,** GB **Cr12Mo1V1,** AFNOR **Z160CDV12,** GOST **Ch12MF,** UNI **X155CrVMo121KU**
				P4.2	Tool steel with a hardness of 26 – 39 HRC	0.47	AISI **D2,** EN **X155CrVMo12-1,** DIN **1.2370,** SS **2736,** ČSN **19573,** BS **BD2,** UNE **F.520A,** GB **Cr12Mo1V1,** AFNOR **Z160CDV12,** GOST **Ch12MF,** UNI **X155CrVMo121KU**
				P4.3	Tool steel with a hardness of 39 – 45 HRC	0.38	AISI **D2,** EN **X155CrVMo12-1,** DIN **1.2370,** SS **2736,** ČSN **19573,** BS **BD2,** UNE **F.520A,** GB **Cr12Mo1V1,** AFNOR **Z160CDV12,** GOST **Ch12MF,** UNI **X155CrVMo121KU**

ISO group		Subgroup		WMG (Work Material Group)		k_{vG}	Examples of material (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
M	**Stainless steel** (corrosion resistant steels with ≥ 11 % chromium content)	**M1**	Ferritic stainless steel (straight chromium non-hardenable alloys)	**M1.1**	Stainless steel, ferritic with a hardness of < 160 HB	**1.22**	AISI **S429,** EN **X7Cr14,** DIN **1.4001,** SS **2326,** BS **434S17,** UNE **F.3401,** AFNOR **Z8C12,** GOST **08Ch13,** UNI **X6CrTi12**
				M1.2	Stainless steel, ferritic with a hardness of 160 – 220 HB	**1.03**	AISI **446,** EN **X10CrAl24,** DIN **1.4762,** SS **2322,** ČSN **17113,** BS **430S17,** UNE **F.3154,** GB **10Cr17,** AFNOR **Z10CAS24,** GOST **12Ch17,** UNI **X16Cr26**
		M2	Martensitic stainless steel (straight chromium hardenable alloys)	**M2.1**	Stainless steel, martensitic with a hardness of < 200 HB	**1.08**	AISI **430F,** EN **X14CrMoS17,** DIN **1.4104,** SS **2383,** ČSN **17140,** BS **410S21,** UNE **F.3117,** AFNOR **Z10CF17,** UNI **X10CrS17**
				M2.2	Stainless steel, martensitic with a hardness of 200 – 280 HB	**0.89**	AISI **440C,** EN **X105CrMo17,** DIN **1.4125,** SS **2385,** ČSN **17023,** BS **425C11,** UNE **F.3402,** GB **102Cr17Mo,** AFNOR **Z100CD17,** GOST **95Ch18,** UNI **GX6CrNi 13 04**
				M2.3	Stainless steel, martensitic with a hardness of 280 – 380 HB	**0.75**	AISI **420,** EN **X45Cr13,** DIN **1.4034,** ČSN **17029,** BS **425C11,** UNE **F.3405,** AFNOR **Z44C14,** GOST **20X17H12,** UNI **X30Cr13**
		M3	Austenitic stainless steel (chromium-nickel and chromium-nickel-manganese alloys)	**M3.1**	Stainless steel, austenitic with a hardness of < 200 HB	**1.00**	AISI **304,** EN **X5CrNi18-12,** DIN **1.4303,** SS **2352,** ČSN **17249,** BS **305S17,** UNE **F.3513,** GB **10Cr18Ni12,** AFNOR **Z8CN18.12,** UNI **X7CrNi18 10**
				M3.2	Stainless steel, austenitic with a hardness of 200 – 260 HB	**0.86**	AISI **309,** EN **X15CrNiSi20-12,** DIN **1.4828,** ČSN **17251,** BS **309S24,** UNE **F.3312,** GB **1Cr23Ni13,** AFNOR **Z15CNS20.12,** GOST **20Ch20N14S2,** UNI **16CrNi23 14**
				M3.3	Stainless steel, austenitic with a hardness of 260 – 300 HB	**0.77**	AISI **5848,** EN **X45CrNiW18-9,** DIN **1.4873,** BS **331S40,** UNE **F.3211,** AFNOR **Z35CNWS14-4,** UNI **X45CrNiW 18 9**
		M4	Super-austenitic, Duplex or Precipitation Hardening stainless steel (austenitic alloys with > 20 % Ni, austenitic-ferritic microstructure or precipitation hardened)	**M4.1**	Stainless steel, austenitic-ferritic or super-austenitic with a hardness of < 300 HB	**0.75**	AISI **329,** EN **X1-NiCrMoCU25-20-5,** DIN **1.4539,** SS **2562,** ČSN **17265,** BS **318S13,** UNE **F.3552,** GB **022Cr25NiMo2N,** AFNOR **Z1NCDU25.20**
				M4.2	Stainless steel, precipitation hardening austenitic with a hardness of 300 – 380 HB	**0.64**	AISI **631 (17-7PH),** EN **X7CrNiAL17-7,** DIN **1.4568,** SS **2388,** ČSN **17465 ,** BS **301S13,** UNE **F.3217,** GB **07Cr17Ni7Al,** AFNOR **29CNA17-07,** GOST **09Ch17N7Ju1,** UNI **X53CrMnNiN21 9**

ISO group		Subgroup		WMG (Work Material Group)		k_{vG}	Examples of material (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
K	**Cast Iron** (castings of iron and carbon alloys with > 2 % carbon content)	**K1**	Gray iron (GG) (iron-carbon castings with a lamellar graphite microstructure)	**K1.1**	Gray iron, ferritic or ferritic-pearlitic with a hardness of < 180 HB	**1.35**	ASTM **A48 Grade 20 (F11401),** EN-**JL-100,** DIN **GG-10 (0.6010),** SS **0110,** STN **422410,** BS **Grade 150,** UNE **FG10,** GB **HAT 100,** AFNOR **Ft10D,** GOST **SC 10,** UNI **G10**
				K1.2	Gray iron, ferritic-pearlitic or pearlitic with a hardness of 180 – 240 HB	**1.00**	ASTM **A48 Grade 30 (F12101),** EN-**JL-1030,** DIN **GG-20 (0.6020),** SS **0120,** STN **422420,** BS **Grade 220,** UNE **FG20,** GB **HT200,** AFNOR **Ft20D,** GOST **СЧ20,** UNI **G20**
				K1.3	Gray iron, pearlitic with a hardness of 240 – 280 HB	**0.75**	ASTM **A48 Grade 50 (F13501),** EN-**JL-1060,** DIN **GG-35 (0.6035),** SS **0135,** STN **422435,** BS **Grade 350,** UNE **FG35,** GB **HAT300,** AFNOR **Ft35D,** GOST **SC35,** UNI **G35**
		K2	Malleable iron (GTS/GTW) (heat-treated iron-carbon castings with a graphite-free microstructure)	**K2.1**	Malleable iron, ferritic with a hardness of < 160 HB	**1.39**	ASTM **A602 Grade M3210 (F20000),** EN-**JM-1130,** DIN **GTS-35 (0.8135),** SS **0815,** BS **B340/12,** UNE **Type A,** AFNOR **MN 35-10,** GOST **КЧ35-10**
				K2.2	Malleable iron, ferritic or pearlitic with a hardness of 160 – 200 HB	**1.13**	ASTM **A602 Grade M4504 (F20001),** EN-**JM-1040,** DIN **GTS-50-05 (0.8045),** BS **P50-05,** AFNOR **MB 45-7**
				K2.3	Malleable iron, pearlitic with a hardness of 200 – 240 HB	**0.90**	ASTM **A602 Grade M7002 (F20004),** EN-**JM-1140,** DIN **GTS-45 (0.8145),** SS **0854,** STN **422540,** BS **P 45-06,** UNE **Typ B,** AFNOR **MP 50-5,** GOST **КЧ45-7,** UNI **GMN 45**
		K3	Ductile iron (GGG) (iron-carbon castings with a nodular graphite microsturcture)	**K3.1**	Ductile (nodular/spheriodal) iron, ferritic with a hardness of < 180 HB	**1.23**	ASTM **A536 Grade 60-40-18 (F32800),** EN-**JS-1030,** DIN **GGG-40 (0.7040),** SS **0717,** STN **422304,** BS **420/12,** UNE **FGE 42-12,** GB **QT 400,** AFNOR **FGS 400-12,** GOST **ВЧ40**
				K3.2	Ductile (nodular/spheriodal) iron, ferritic or pearlitic with a hardness of 180 – 220 HB	**0.94**	ASTM **A536 Grade 80-55-06 (F33800),** EN-**JS-1050,** DIN **GGG-50 (0.7050),** SS **0727,** STN **422305,** BS **500/7,** UNE **FGE 50-7,** GB **QT 500-7,** AFNOR **FGS 500-7,** GOST **ВЧ50**
				K3.3	Ductile (nodular/spheriodal) iron, pearlitic with a hardness of 220 – 260 HB	**0.76**	ASTM **A536 Grade 100-70-03 (F34800),** EN-**JS-1060,** DIN **GGG-60 (0.7060),** SS **0732,** STN **422306,** BS **600/3,** UNE **FG70-2,** GB **QT 600-3,** AFNOR **FGS 600-3,** GOST **ВЧ60**
		K4	Austenitic or austempered ductile iron (Ni-Resist/ADI) (iron-carbon alloy castings with an austenitic or ausferrite microstructure)	**K4.1**	Austenitic cast iron with a hardness of < 180 HB	**1.14**	ASTM **A436 Type 1 (L-NiCuCr 15 6 2, F41000),** EN-**JL-3011,** DIN **GGL-NiMn 13 7 (0.6652),** SS **0523,** BS **Grade F1,** AFNOR **FGL-Ni13Mn7,** GOST **S-NiMn 13 7**
				K4.2	Austenitic cast iron with a hardness of 180 – 240 HB	**0.86**	ASTM **A439 Type D-2B (S-NiCr 20 3, F43001),** EN-**JS-3021,** DIN **GGG-NiMn 23 4,** SS **0776,** BS **Grade S2M,** AFNOR **FGS Ni23 Mn4,** GOST **ЧН19Х3Ш**
				K4.3	Austempered ductile iron with a hardness of 240 – 280 HB	**0.63**	ASTM **A897 Grade 110-70-11**
				K4.4	Austempered ductile iron with a hardness of 280 – 320 HB	**0.54**	ASTM **A897 Grade 125-80-10,** EN-**JS-1100,** DIN **GGG-90 (5.3400)**
				K4.5	Austempered ductile iron with a hardness of 320 – 360 HB	**0.45**	ASTM **A897 Grade 2 (150-110-07),** EN-**JS-1110,** DIN **GGG-100 (5.3403)**
		K5	Compacted graphite iron (CGI) (iron-carbon castings with a vermicular graphite structure)	**K5.1**	Vermicular, compacted graphite iron with a hardness of < 180 HB	**1.29**	ASTM **A842 Grade 300,** EN-**GJV-300,** DIN **GGV 30,** GOST **ЧВГ30,**
				K5.2	Vermicular, compacted graphite iron with a hardness of 180 – 220 HB	**0.97**	ASTM **A842 Grade 350,** EN-**GJV-350,** DIN **GGV 35 (5.2200),** GOST **ЧВГ30,**
				K5.3	Vermicular, compacted graphite iron with a hardness of 220 – 260 HB	**0.75**	ASTM **A842 Grade 450,** EN-**GJV-450,** DIN **GGV 45,** GOST **ЧВГ45,**

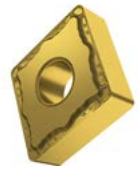
ISO group		Subgroup		WMG (Work Material Group)		k_{vG}	Examples of material (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
N	Non-ferrous metals (metals including alloys without an appreciable amount of iron)	N1	Wrought aluminium	N1.1	Pure aluminium and wrought aluminium alloys with a hardness of < 60 HB	1.33	UNS **A91200**, EN **AL99.6**, DIN **3.0205**, SS **4010**, STN **424009**, BS **1C**, UNE **L-3001**, GB **L5**, AFNOR **A4**, GOST **АДС**, UNI **3567**
				N1.2	Wrought aluminium alloys with a hardness of 60 – 100 HB	1.00	UNS **A93004**, EN **AlMn0.5Mg0.5**, DIN **3.0505**, SS **4054**, STN **424432**, BS **N31**, UNE **L-3831**, GB **LF2**, AFNOR **A-M1**, GOST **АМц**, UNI **3568**
				N1.3	Wrought aluminium alloys with a hardness of 100 – 150 HB	0.67	UNS **A95083**, EN **AlMg4.5Mn0.7**, DIN **3.3547**, SS **4140**, STN **424415**, BS **N8**, UNE **L-3321**, GB **AlMg4.5Mn**, AFNOR **A-G4.5Mn**, GOST **Amg 4.5**, UNI **P-AlMg4.4**
		N2	Cast aluminium	N2.1	Cast aluminium alloys with a hardness of < 75 HB	0.67	UNS **A02080**, EN **AlCu4S**, BS **LM11**, STN **424331**, UNE **Al Si1Cu**, GOST **AMg5K**, UNI **G-AlSi7Mg**
				N2.2	Cast aluminium alloys with a hardness of 75 – 90 HB	0.60	UNS **A02420**, EN **AlCu4Ni2Mg2**, SS **AlSi7MgFe**, BS **LM6**, STN **424519**, UNE **Al-7SiMg**, AFNOR **A-S7G**, GOST **АК7**, UNI **G-AlSi7Mg**
				N2.3	Cast aluminium alloys with a hardness of 90 < 140 HB	0.43	UNS **A03360**, EN **G-ALCu4NiMg2**, SS **ALSi10Mg**, STN **424336**, BS **LM 30**, AFNOR **A-S10G**, UNI **G-AlSi9Mg**
		N3	Copper or copper alloys	N3.1	Free-cutting copper-alloys materials with excellent machining properties	0.70	UNS **C14700**, EN **CuPb1P**, DIN **2.1498**, STN **423214**, BS **C111**, AFNOR **CuZn35Pb2**, GOST **L63-3**, UNI **CuS(P0.01)**
				N3.2	Short-chip copper-alloys with good to moderate machining properties	0.41	UNS **C81540**, EN **CuNi2SiCr**, DIN **2.0857**, STN **423220**, BS **NS113**, UNE **CuSn12**, AFNOR **CuZn40**, GOST **L60**, UNI **P-CuZn-40**
				N3.3	Electrolytic copper and long-chip copper-alloys with moderate to poor machining properties	0.21	UNS **C10100**, EN **CuAg0.1**, DIN **2.1203**, SS **5010**, UNE **CUSi3Mn1**, AFNOR **Cu-C2**, GOST **M1f**, UNI **Cu-OF**
		N4	Polymers (synthetic or semi-synthetic materials)	N4.1	Thermoplastic polymers	0.70	ABS, Acryl, Duraplast, Elastomer, EP, Epoxid, FEP, Fluor, Gummi, Kautschuk, Latex, MF, MPF, PA, PAI, PC, PE, PEEK, PEI, PES, PET, PF, Phenolharze, PI, PMMA, Polyamide, Polyester, Polyolefine, Polysulfon, POM, PP, PPE, PPS, PS, PSU, PTFE, PU, PUR, PVDF, SAN, SI, Styrol, UF, Ureol
				N4.2	Thermosetting polymers	0.27	Aramid, Epoxy, Fluoropolymer, Mehacrylate, Melamine, Phenolic, Polyester, Polyimide, Polymethacrylimide, Polyurethane
				N4.3	Reinforced polymers or composites	0.29	CFK, GFK, GMT, Honeycomb, Kevlar, LFT, Organo, SMC
		N5	Graphite	N5.1		1.0	CGM-1, CM-00, GM-10, GM-11, GR030, GR030PI, GR060, GR060PI, GR125, MC-01, MC-01RO, MC-03, MC-03M, IG11, IG-15, IG-32, IG-43, IG-45, IG-70, ISEM-1, ISEM-2, ISEM-3, R8340, R8500X, Technograph 15, Technograph 30, ISO-63, EDM C-3, EDM1, EDM3, ISO-90, ISO-93, ISO-95, R8510, R8650,

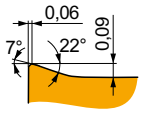
ISO group		Subgroup		WMG (Work Material Group)		k_{vG}	Examples of material (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
S	**High-temperature alloys** (superalloys with high temperature stength and corrosion resistant surpassing that of stainless steel)	**S1**	Titanium or titanium alloys	**S1.1**	Titanium or titanium alloys, with a hardness of <200 HB	1.94	UNS **R50250 (Grade 1),** EN **Ti 99.6,** DIN **3.7035,** BS **TA.2,** UNE **Ti-Po2,** AFNOR **T-40,** GOST **BT1-00,** AISI **R50250, 3.7025, T35, 2TA1, R50400, 3.7035, 2TA2,**
				S1.2	Titanium alloys, with a hardness of 200 – 280 HB	1.72	UNS **R56404 (Grade 29),** EN **Ti2Cu,** DIN **3.7124,** BS **TA.21,** UNE **Ti-P11,** AFNOR **T-U2 ,** AISI **TA6V, Ti-6Al-4V, Ti 10.2.3, Ti5553**
				S1.3	Titanium alloys, a hardness of 280 – 360 HB	1.44	UNS **R54250 (Grade 38),** EN **TiAl6V4,** DIN **3.7165,** ČSN **TiAl6VELI,** BS **TA. 13,** UNE **Ti-P63,** AFNOR **T-A6V,** GOST **BT6,** AISI **TA6V, Ti-6Al-4V, Ti 10.2.3, Ti5553**
		S2	Fe-based high-temperature alloys	**S2.1**	High-temperature Fe-based alloys with a hardness of <200 HB	1.33	UNS **N08801 (Incoloy 801),** EN **X8 NiCrAlTi31-21,** DIN **1.4959,** BS **NA 15,** AFNOR **Z8NC33-21,** AISI **A-286, Discaloy, Haynes 556, Iconel 909, Greek Ascolloy**
				S2.2	High-temperature Fe-based alloys with a hardness of 200 – 280 HB	1.17	UNS **N19907,** EN **X6NiCrTiMoVB25-15-2,** DIN **1.4980,** SS **2570,** BS **HR52,** AFNOR **Z6NCTDV25.15B,** GOST **36HXTЮ,** AISI **A-286, Discaloy, Haynes 556, Iconel 909, Greek Ascolloy**
		S3	Ni-based high-temperature alloys	**S3.1**	High-temperature Ni-based alloys with a hardness of <280 HB	1.00	UNS **A09706 (Inconel 706),** EN **NiCr25FeAl,** DIN **2.4856,** BS **HR 6,** ČSN **Inconel 625,** UNE **F.3313,** GB **1Cr16Ni35,** AFNOR **NC22FeDNB,** GOST **XH38BT,** AISI **Inconel 718, 706 Waspalloy, Udimet 720, Inconel 625**
				S3.2	High-temperature Ni-based alloys with a hardness of 280 – 360 HB	0.83	UNS **N07001,** EN **NiCr20Co13Mo4Ti3Al,** DIN **2.4654,** BS **HR 2,** ČSN **Waspaloy,** AFNOR **NCKD 20ATV,** GOST **XH80TБЮ,** AISI **Inconel 718, 706 Waspalloy, Udimet 720, Inconel 625**
		S4	Co-based high-temperature alloys	**S4.1**	High-temperature Co-based alloys with a hardness of <240 HB	0.78	UNS **R30016 (Stellite 6b),** EN **CoCr20W15Ni,** DIN **2.4964,** AFNOR **KC 20 WN,** GOST **ЛК52,** AISI **Haynes 25, Stellite 21, 31**
				S4.2	High-temperature Co-based alloys with a hardness of 240 – 320 HB	0.67	UNS **R30016 (Stellite 6b),** EN **CoCr20W15Ni,** DIN **2.4964,** AFNOR **KC 20 WN,** GOST **ЛК52,** AISI **Haynes 25, Stellite 21, 31**

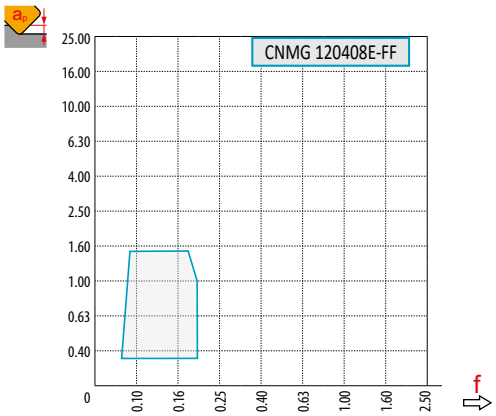
ISO group		Subgroup		WMG (Work Material Group)		k_{vG}	Examples of material (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
H	**Hardened materials** (any engineering metal with a hardness > 45 HRC)	**H1**	Chilled cast iron	**H1.1**	Chilled cast iron with a hardness of < 440 HB	**1.52**	UNS **F45001,** EN-**GJS-1050-6,** DIN **5.3406,** SS **0512,** BS **Grade 2A**
		H2	Hardened cast iron	**H2.1**	Hardened cast iron with a hardness < 55 HRC	**0.90**	UNS **F45003,** EN-**GJS-1400-1,** DIN **5.3405,** SS **0457,** BS **Grade 3D**
				H2.2	Hardened cast iron with a hardness > 55 HRC	**0.77**	UNS **F45003,** EN **G-X260NiCr4-2,** DIN **0.9620,** SS **0466,** BS **Grade S**
		H3	Hardened steel < 55 HRC	**H3.1**	Hardened steel with a hardness of < 51 HRC	**1.00**	AISI **4135,** EN **34CrMo4,** DIN **1.7220,** SS **2234,** STN **415131,** BS **198,** UNE **F.1250,** GB **35CrMo,** AFNOR **35CD4,** GOST **АС38ХГМ,** UNI **35CrMo4KB**
				H3.2	Hardened steel with a hardness of 51 – 55 HRC	**0.82**	AISI **4135,** EN **34CrMo4,** DIN **1.7220,** SS **2234,** STN **415131,** BS **198,** UNE **F.1250,** GB **35CrMo,** AFNOR **35CD4,** GOST **АС38ХГМ,** UNI **35CrMo4KB**
		H4	Hardened steel > 55 HRC	**H4.1**	Hardened steel with a hardness of 55 – 59 HRC	**0.64**	UNS **T31501,** EN **100MnCrW4,** DIN **1.2510,** SS **2140,** STN **419413,** BS **BO1,** UNE **F.5220,** GB **9CrWMn,** AFNOR **90MWCrV5,** GOST **9ХВГ,** UNI **95MNWCr5KU**
				H4.2	Hardened steel with a hardness of > 59 HRC	**0.54**	UNS **T31501,** EN **100MnCrW4,** DIN **1.2510,** SS **2140,** STN **419413,** BS **BO1,** UNE **F.5220,** GB **9CrWMn,** AFNOR **90MWCrV5,** GOST **9ХВГ,** UNI **95MNWCr5KU**

GEOMETRY OF CUTTING NEGATIVE INSERTS – CLAMPING DESIGNATION ISO P, M, D

FF







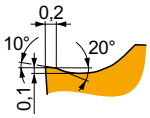
P	M	K	N	S	H
■	■	◪			

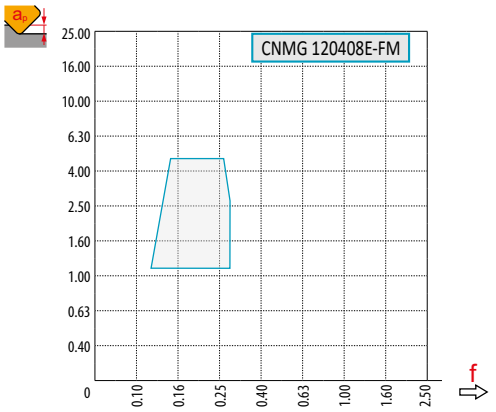
f ⇨ 0.06 – 0.25

a_p 0.2 – 1.6

CNMG, DNMG, TNMG, VNMG, WNMG

FM





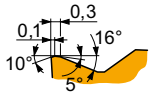
P	M	K	N	S	H
■	◪	■		◪	

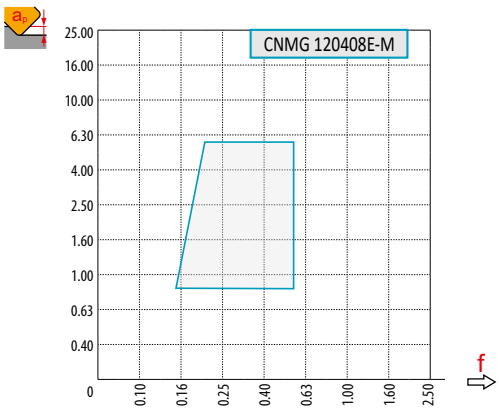
f ⇨ 0.1 – 0.5

a_p 0.4 – 5.0

CNMG, DNMG, SNMG, TNMG, VNMG, WNMG

M





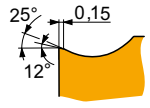
P	M	K	N	S	H
■		■			◪

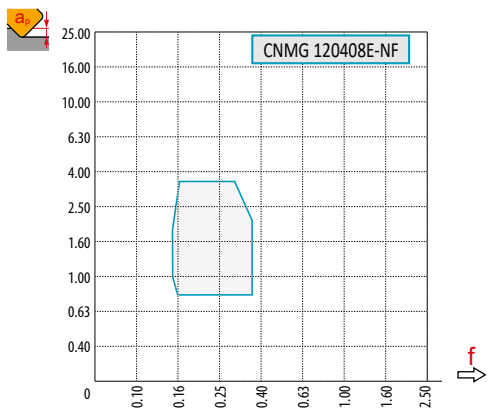
f ⇨ 0.17 – 0.80

a_p 0.8 – 8.0

CNMG, DNMG, SNMG, TNMG, VNMG, WNMG

NF





P	M	K	N	S	H
■	■	◪	◪	◪	

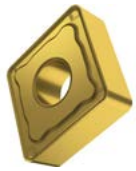
f ⇨ 0.1 – 0.35

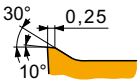
a_p 0.4 – 4.0

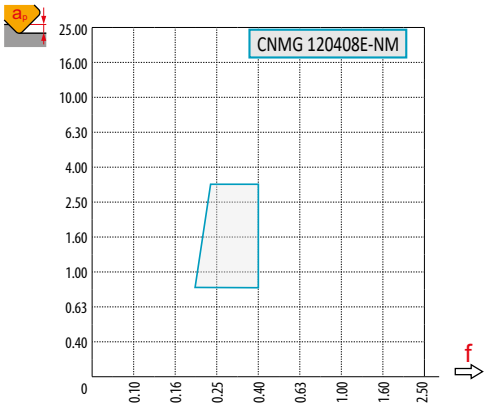
CNMG, DNMG, SNMG, TNMG, VNMG, WNMG

GEOMETRY OF CUTTING NEGATIVE INSERTS – CLAMPING DESIGNATION ISO P, M, D

NM







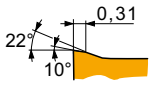
P	M	K	N	S	H
■	■		◪	■	

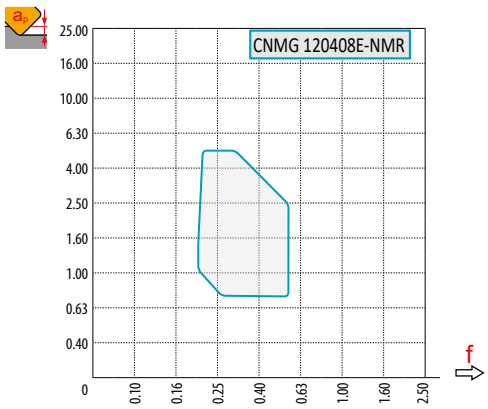
f ⇨ 0.15 – 0.55

a_p 0.5 – 8.0

CNMG, DNMG, TNMG, VNMG, WNMG

NMR





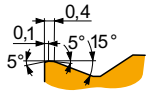
P	M	K	N	S	H
■	■			■	

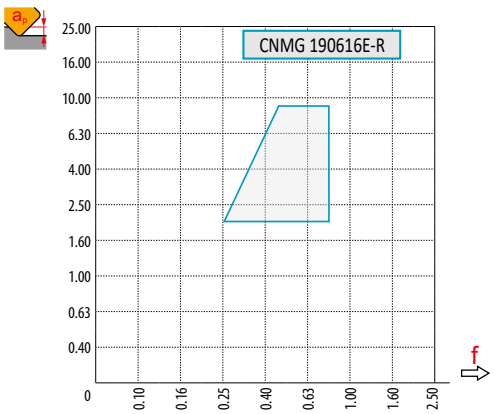
f ⇨ 0.18 – 0.70

a_p 0.4 – 8.0

CNMG, DNMG, SNMG, TNMG, VNMG, WNMG

R





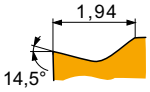
P	M	K	N	S	H
■		■			◪

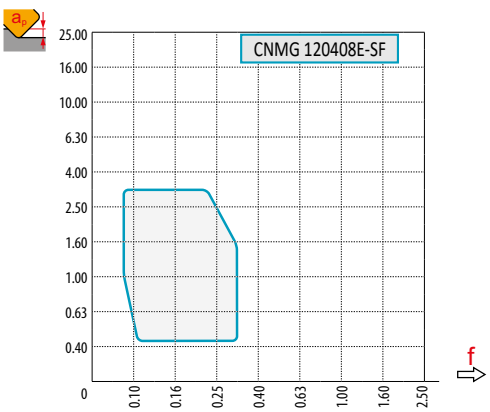
f ⇨ 0.25 – 0.80

a_p 2.0 – 9.0

CNMG, DNMG, SNMG, TNMG, WNMG

SF





P	M	K	N	S	H
■	■	■	◪	■	■

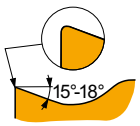
f ⇨ 0.08 – 0.35

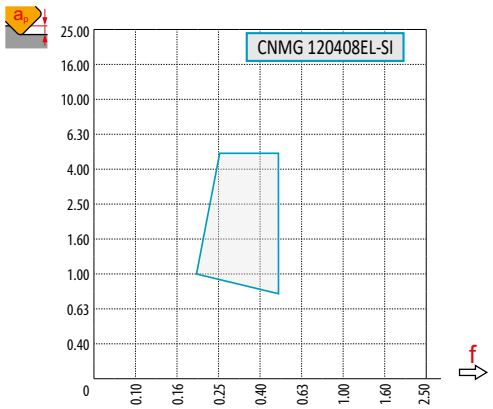
a_p 0.2 – 3.5

CNGG, CNMG, DNMG, SNMG, TNMG, VNMG, WNMG

GEOMETRY OF CUTTING NEGATIVE INSERTS – CLAMPING DESIGNATION ISO P, M, D

SI





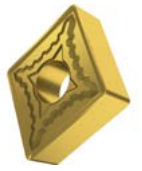
P	M	K	N	S	H
■	■		◪	◪	

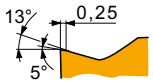
f ⇨ 0.20 – 0.50

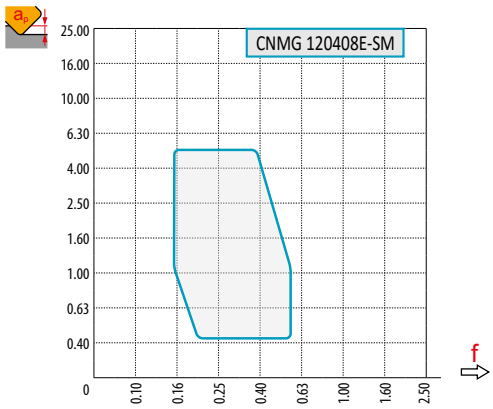
a_p 0.8 – 5.0

CNMG, DNMG, TNMG, WNMG

SM



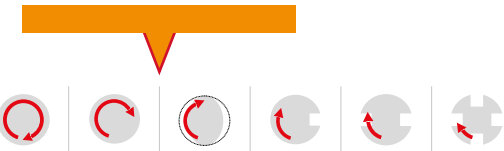




P	M	K	N	S	H
■	■	■	◪	■	◪

f ⇨ 0.15 – 0.55

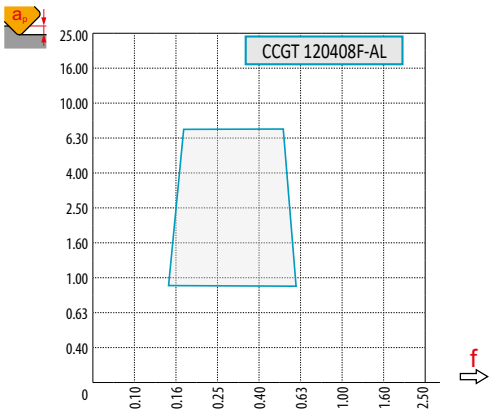
a_p 0.4 – 6.0



CNMG, DNMG, SNMG, TNMG, VNMG, WNMG

GEOMETRY OF CUTTING POSITIVE INSERTS – CLAMPING DESIGNATION ISO S

AL



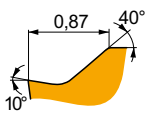
P	M	K	N	S	H
■			■	◪	

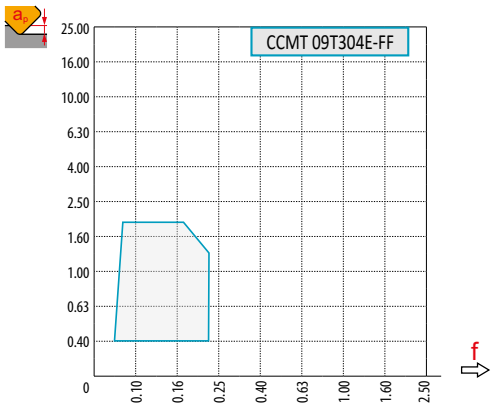
f 0.05 – 0.60

a_p 0.2 – 7.0

CCGT, DCGT, SCGT, RCGT, TCGT, VCGT, WCGT

FF





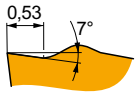
P	M	K	N	S	H
■	◪				

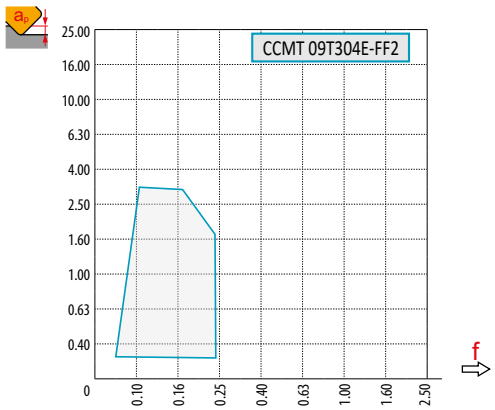
f 0.05 – 0.23

a_p 0.2 – 2.0

CCMT, DCMT

FF2





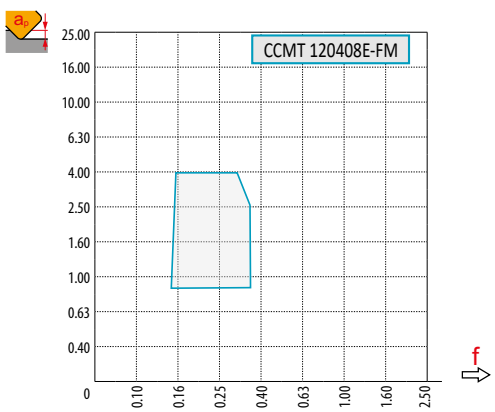
P	M	K	N	S	H
■		■			

f 0.02 – 0.28

a_p 0.20 – 3.0

CCMT, CCGT, DCGT, DCMT, SCMT, TCGT, TCMT, VBMT, VCGT, VCGX, WCGT

FM



P	M	K	N	S	H
■	■	◪	◪		

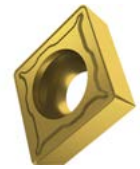
f 0.05 – 0.45

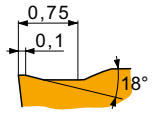
a_p 0.2 – 4.0

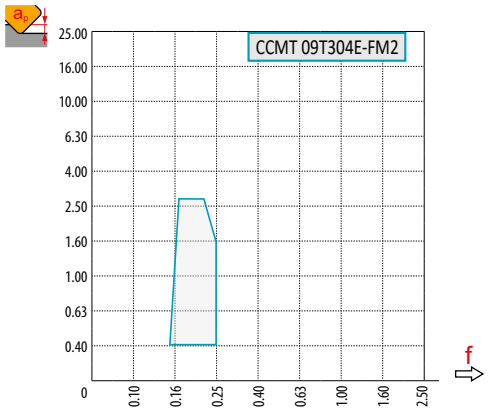
CCMT, DCMT, SCMT, TCMT, VBMT, WCMT

GEOMETRY OF CUTTING POSITIVE INSERTS – CLAMPING DESIGNATION ISO S

FM2







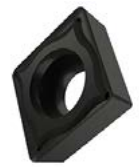
P	M	K	N	S	H
■	◪	■			

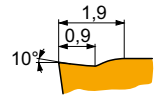
f 0.04 – 0.4

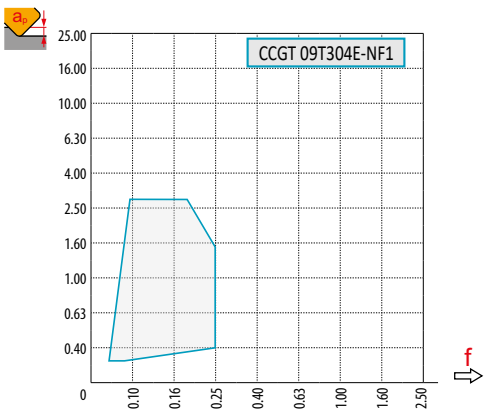
a_p 0.2 – 4.0

CCMT, DCMT, ECMT, SCMT, TCMT, VBMT, VCGT

NF1







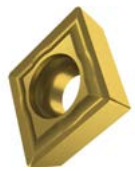
P	M	K	N	S	H
■	■		◪	■	◪

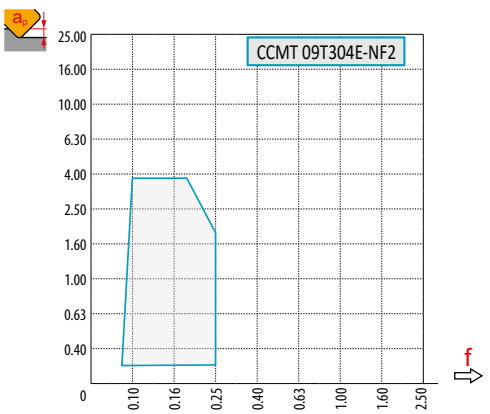
f 0.04 – 0.35

a_p 0.3 – 3.5

CCGT, DCGT, SCGT, TCGT

NF2





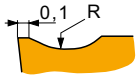
P	M	K	N	S	H
◪	■	◪	◪	■	

f 0.05 – 0.45

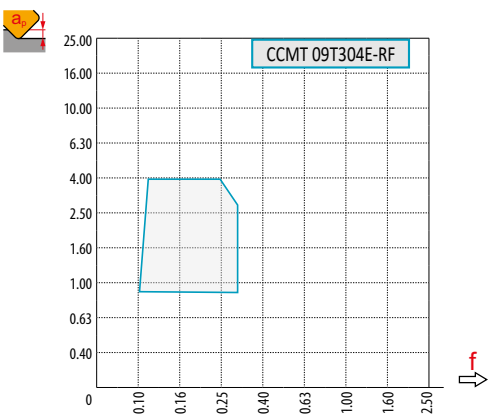
a_p 0.2 – 4.0

CCMT, EPMT, SCMT, TCMT, VCGT

RF



I.C.	R
6,35	1,0
9,525	1,5
12,7	2,5



P	M	K	N	S	H
■	◪	■			◪

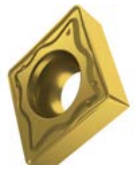
f 0.10 – 0.60

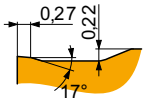
a_p 0.8 – 8.0

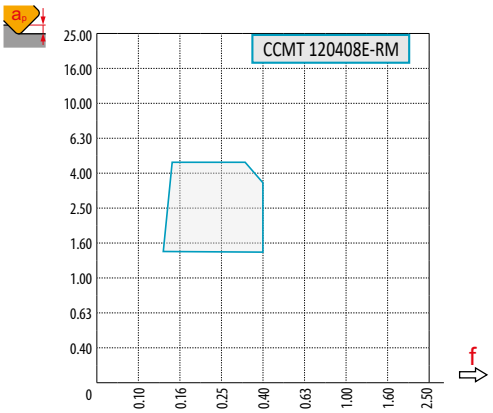
CCMT, DCMT, SCMT, TCMT, WCMT

GEOMETRY OF CUTTING POSITIVE INSERTS – CLAMPING DESIGNATION ISO S

RM







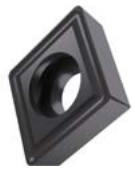
P	M	K	N	S	H
■	■	■		◪	◪

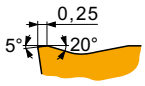
f ⇨ 0.10 – 0.50

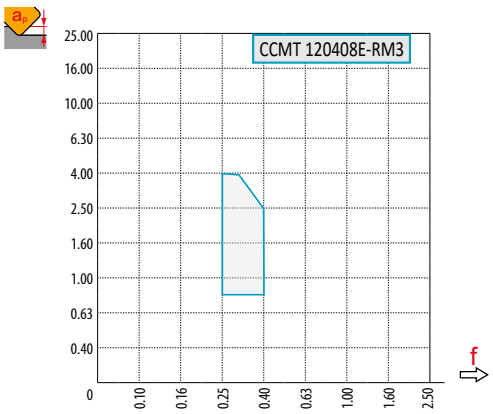
a_p 0.8 – 4.5

CCMT, DCMT, SCMT, TCMT, VBMT

RM3







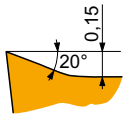
P	M	K	N	S	H
■	◪	■			◪

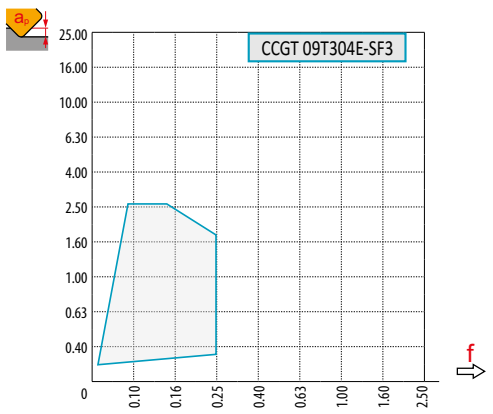
f ⇨ 0.15 – 0.90

a_p 0.4 – 6.00

CCMT, SCMT, TCMT, RCMT

SF3





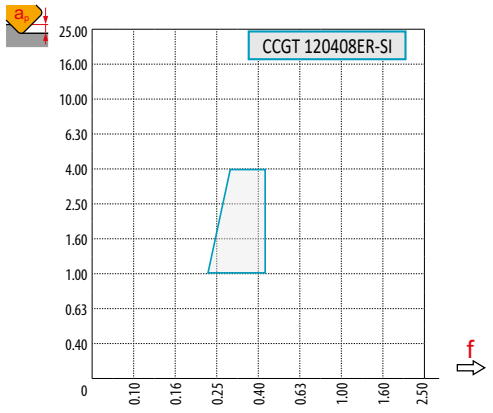
P	M	K	N	S	H
◪	■	◪	■	■	◪

f ⇨ 0.02 – 0.35

a_p 0.2 – 4.00

CCGT, DCGT, ECGT, SCGT, TCGT, VCGT

SI



P	M	K	N	S	H
■	■	◪		■	

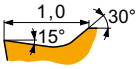
f ⇨ 0.08 – 0.45

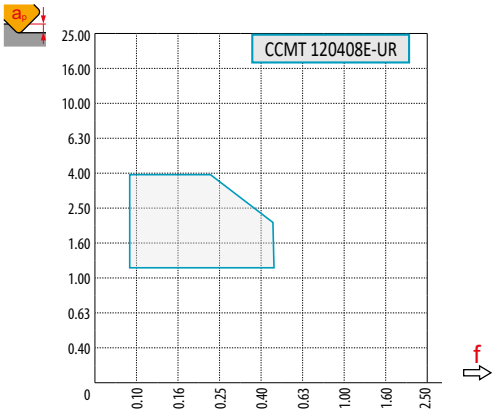
a_p 0.4 – 4.0

CCGT, TCGT

GEOMETRY OF CUTTING POSITIVE INSERTS – CLAMPING DESIGNATION ISO S

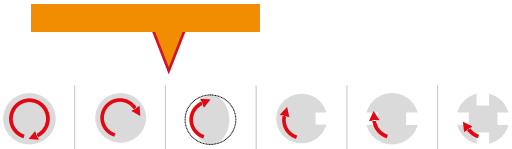
UR





P	M	K	N	S	H
■	◪	■			

f ⇨	0.10 – 0.40
a_p	1.0 – 4.0



?	CCMT, DCMT, RCMT, SCMT, TCMT, VCMT, VBMT, WCMT

T	8	3	3	0
Operation	Coating/Substrate	Generation	ISO range	

D	Drilling
M	Milling
T	Turning
G	Grooving and Parting off

0 PVD 1 CVD	Special application
2 PVD 3 CVD	Free
4 PVD 5 CVD	Group K, H
6 PVD 7 CVD	Group M, S
8 PVD 9 CVD	Universal
B	CBN
C	Ceramic
D	PCD
T	Cermet

1 – 9

01 – 50	
	01 – 05
	05 – 10
	10 – 20
	20 – 30
	30 – 40
	40 – 50

Grade Identification	Area of Application	Application	Feed	Cutting speed	Resistance to adverse Working Conditions	Coating	Colour	Substrate	Coolant benefit	Grade description
T9315	P05 - P25 K05 - K25 H10 - H20	■ ◪ ◪				MT-CVD		FGM	+ +	A versatile grade with excellent wear resistance properties even under intense cutting conditions. It can also be used for operations with interrupted cuts. With it's well balanced properties this grade can be first choice for a wide range of turning operations. Not suited to low cutting speeds.
T9325	P15 - P35 M10 - M30 K15 - K35 S10 - S20	■ ■ ◪ ◪				MT-CVD		FGM	+ +	From a technological perspective this is an extremely versatile grade with high resistance to mechanical damage in adverse cutting conditions and retains excellent wear resistance. The correct application of this material requires high cutting speeds.
T9335	P20 - P45 M15 - M40 S15 - S25	■ ■ ◪				MT-CVD		FGM	+ + +	One of the toughest grades which is especially suitable for adverse cutting conditions at medium to high feed rates and medium cutting speeds. Compared to its predecessors, M15 – M40 it is not only tougher, but also more abrasion resistant which will be useful when using intensive cutting conditions.
T7325	P15 - P35 M10 - M25 S10 - S25	◪ ■ ■				MT-CVD		FGM	+ + +	One of the most universal turning grades. Especially designed for stainless steel machining. Optimal balance between wear resistance and performance reliability. Suitable for broad variety of application in turning operations.
T7335	P20 - P40 M20 - M40 S15 - S25	◪ ■ ■				MT-CVD		FGM	+ + +	Grade with functionally graded substrate, featuring very high operational reliability and very good wear-resistance. It is best suited to use in the machining of very tough M20 – M40 materials.
T5305	P05 - P15 K01 - K15 H05 - H15	◪ ■ ◪				MT-CVD		H	+	Grade with very high resistance to chemical wear; suitable for finishing operations using high cutting speeds. With its high abrasion resistance, it is also suitable for productive K01 – K15, machining of hardened and treated materials.
T5315	P10 - P25 K10 - K25 H15 - H25	◪ ■ ◪				MT-CVD		H	+	Grade intended primarily for productive machining which has high abrasion resistance and good operational reliability. Due to its properties, this material is particularly suitable for roughing and finishing operations for good or slightly adverse cutting conditions.
T0315	N05 - N20	■				PVD			+ +	Submicron grade for turning non-ferrous metals and their alloys with a balance of wear resistance and toughness. It is provided with a unique coating with excellent friction properties.
T6310	P01 - P15 M01 - M15 K05 - K20 N05 - N20 S01 - S15 H01 - H15	■ ■ ■ ■ ■ ■				PVD		ultra submicron H	+ + +	High wear resistant turning grade with top PVD coating. Suitable for finishing operation and applications, where sharp cutting edge together with high flank wear resistance is of high importance
T8315	P05 - P20 M05 - M20 K05 - K25 N05 - N25 S05 - S15 H05 - H15	◪ ■ ■ ■ ◪ ■				PVD		submicron H	+ +	Grade featuring excellent abrasion resistance while maintaining above average operational reliability, it is suitable for machining at medium to high cutting speeds in short chipping harder materials.

BORING GRADES

Grade Identification	Area of Application	Application	Feed	Cutting speed	Resistance to adverse Working Conditions	Coating	Colour	Substrate	Coolant benefit	Grade description
T8330	P25 - P40 M20 - M35 K20 - K40 N15 - N30 S15 - S25 H15 - H25	■ ■ ■ ◪ ◪ ◪				PVD		submicron H	+ + +	Undoubtedly the most versatile cutting material, this is useful for machining of all types of machined materials and is practically applicable in almost all types of turning operations. Its main benefits are its high operational reliability and very good frictional properties; it is therefore suitable for applications at medium and lower cutting speeds.
T8430	**P20 - P40** **M20 - M35** **K25 - K40** N15 - N30 S15 - S25 H15 - H25	■ ■ ◪ ◪ ◪ ◪				PVD		submicron H	+ + +	Undoubtedly the most versatile cutting material, this is useful for machining of all types of machined materials and is practically applicable in almost all types of turning operations. Its main benefits are its high operational reliability and very good frictional properties; it is therefore suitable for applications at medium and lower cutting speeds.
HF7	M10 - M20 K10 - K25 N10 - N25	◪ ■ ■				×		submicron H	+ +	Uncoated grade which is primarily designed for machining non-ferrous metals; but can also be used for other machined materials (except steel). This material can be used in turning, milling, and even boring.
H07	M05 - M15 K10 - K25 N10 - N30 S01 - S20	◪ ■ ■ ■				×		submicron H	+ +	Uncoated turning grade suitable for machining applications where oxidation resistance is not dominating criterion of tool life. Designed for machining of Ti-based alloys. Grade exhibits high strength of cutting edge together with good wear resistance.
TT310	P10 - P25 M15 - M25	■ ◪				PVD		Cermet	+ / –	Coated cermet used for fine and finish turning of carbon and alloy steels (including stainless). Its excellent friction properties are further improved by the coating applied using the PVD technique.
TT010	P01 - P10 M01 - M10	■ ◪				×		Cermet	+ / –	Uncoated cermet, which is suitable for fine machining of all types of steel (including stainless) at very low feed rates. Its main advantage is the minimal radius of the cutting edge and its high resistance to physical and chemical wear mechanisms.
PD1	N05 - N25	■				×		PCD	-	PKD grade for turning non-ferrous materials. Ideal choice for working with high cutting speed and small feeds at stable conditions.
TB310	K01 - K10 S05 - S10 H01 - H10	◪ ◪ ■				×		CBN	– -	CBN grade for machining of hardened materials. Suitable for machining with high cutting speed and small feeds at stable conditions.

Substrat	
H	WC-Co baserat substrat
submicron H	WC-Co baserat substrat, finkornigt (< 1 µm)
ultra submicron H	WC-Co baserat substrat, mycket finkornigt (< 0.5 µm)
FGM	Functionally graded substrate
Cermet	Cemented carbide without WC
PCD	Polycrystalline Diamond
CBN	Cubic Boron Nitride

Coating	
MT-CVD	Medium-temperature chemical method of coating
PVD	Low-temperature physical method of coating
×	Uncoated grade

Benefits of cutting fluid	
+ + +	Use of coolant is essential
+ +	Highly recommended
+ / –	Optional
– -	Do not use coolant

TABLE OF CUTTING CONDITIONS FOR BORING

The standard turning inserts are used in the boring tools, but the conditions recommended for turning do not apply here (data given on the boxes), so please select the cutting conditions according to the following table.

WMG	Finish boring (with single insert)				Rough boring (with double inserts)			
	Diameter	Cutting speed v_c	Feed f_z	Cutting depth a_p	Diameter	Cutting speed v_c	Feed f_z	Max. cutting depth a_p max
P	24 – 30	110 – 140	0.05 – 0.15	0.05 – 0.30	24 – 30	110 – 140	0.15 – 0.25	4.2
	29 – 40	115 – 150			29 – 40	105 – 140	0.15 – 0.30	5.7
	39 – 50			0.06 – 0.35	39 – 50	105 – 150	0.20 – 0.30	
	49 – 102		0.10 – 0.20		49 – 102		0.25 – 0.35	6.3
	100 – 220			0.07 – 0.50	100 – 220		0.30 – 0.40	
	220 – 500				220 – 500			
M	24 – 30	70 – 110	0.07 – 0.15	0.12 – 0.35	24 – 30	69 – 90	0.12 – 0.20	4.2
	29 – 40	80 – 110			29 – 40	70 – 100	0.15 – 0.25	5.7
	39 – 50			0.20 – 0.50	39 – 50			
	49 – 102		0.10 – 0.20		49 – 102		0.20 – 0.30	6.3
	100 – 220		0.12 – 0.20	0.25 – 0.75	100 – 220		0.25 – 0.35	
	220 – 500				220 – 500			
K	24 – 30	70 – 110	0.07 – 0.15	0.12 – 0.35	24 – 30	60 – 110	0.20 – 0.30	4.2
	29 – 40	80 – 115			29 – 40		0.25 – 0.35	5.7
	39 – 50			0.20 – 0.50	39 – 50			
	49 – 102		0.12 – 0.20		49 – 102		0.30 – 0.40	6.3
	100 – 220			0.25 – 0.75	100 – 220		0.30 – 0.45	
	220 – 500				220 – 500			
N	24 – 30	150 – 300	0.05 – 0.15	0.12 – 0.35	24 – 30	120 – 300	0.20 – 0.30	4.2
	29 – 40	150 – 360	0.10 – 0.20		29 – 40	150 – 370	0.25 – 0.35	5.7
	39 – 50			0.20 – 0.50	39 – 50			
	49 – 102				49 – 102		0.30 – 0.40	6.3
	100 – 220		0.10 – 0.25	0.25 – 0.75	100 – 220		0.30 – 0.45	
	220 – 500				220 – 500		0.30 – 0.40	
S	24 – 30	30 – 40	0.07 – 0.15	0.12 – 0.35	24 – 30	25 – 35	0.12 – 0.20	4.2
	29 – 40	30 – 45			29 – 40	30 – 40	0.15 – 0.25	5.7
	39 – 50			0.20 – 0.50	39 – 50			
	49 – 102		0.10 – 0.20		49 – 102		0.20 – 0.30	6.3
	100 – 220			0.25 – 0.75	100 – 220		0.20 – 0.35	
	220 – 500				220 – 500			
H	24 – 30	30 – 40	0.07 – 0.15	0.12 – 0.35	24 – 30	25 – 35	0.12 – 0.20	4.2
	29 – 40	30 – 45			29 – 40	30 – 40	0.15 – 0.25	5.7
	39 – 50			0.20 – 0.50	39 – 50			
	49 – 102		30 – 45		49 – 102		0.20 – 0.30	6.3
	100 – 220			0.25 – 0.75	100 – 220		0.20 – 0.35	
	220 – 500				220 – 500			

Adjustment instructions – roughing heads

- Mount new inserts into pockets.
- Loosen slide block locking screw(s) and tighten very lightly.
- Turn adjusting screw to move slide blocks to smaller than required diameter.
- Reverse rotation on adjusting screw and set slide blocks to required diameter.
- Setting can be done with head and holder mounted in machine, out of machine or in a tool pre-setter.
- Tighten locking screw(s) in a tool pre-setter.

For heads sizes 68 and larger (cartridge style)

- Cartridges have individual radial adjusting screws.
- Loosen the lock screw of one of the two cartridges.
- By turning the adjusting (socket head set) screw, set the cartridge until both inserts are centre. (R1 = R2)˝.

Adjustment instructions – finishing heads

- All Finish and Micro heads have micrometer adjustment with 0.002 mm graduation.
- Mount new inserts into pockets.
- Setting should be done preferably in comparator or tool pre-setter
- Loosen slide block locking screw(s) and tighten very lightly.
- Turn adjusting screw to move slide block to smaller than required diameter.
- Reverse rotation on adjusting screw and set slide block to required diameter by lining up insert O.D. corner with cross hair.
- Tighten locking screw(s).
- On applications which may present a challenge to holding a specified hole tolerance, we recommend to set the head initially to a smaller diameter, bore a hole and measure. Then adjust by the appropriate amount using the micrometer dial on the head and make another pass.

Lead angle choice

75°

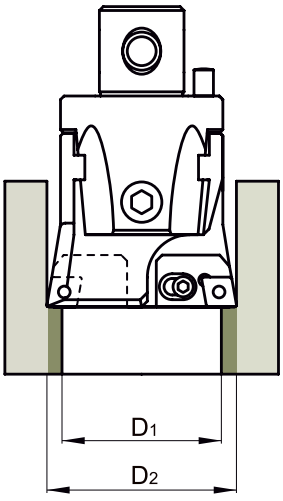
- Through holes.
- Heavy roughing at elevated feed rates.
- Tendency to follow existing hole (core shift, out of location?).
- Deep holes – long boring tools (self-centering effect helps on entry!).

90°

- Blind holes.
- Step bores with 90° shoulder.
- Shallow holes – short boring tools (straightening and re-locating shifted holes).
- Boring with staggered cartridges (size 68 and larger).

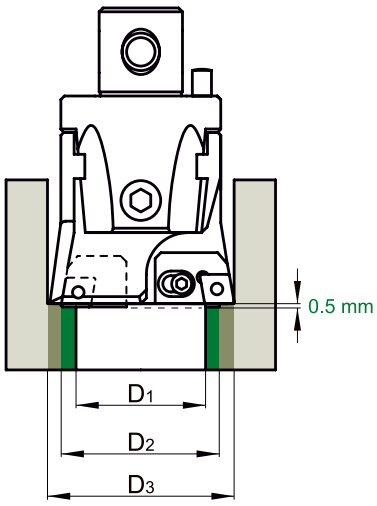
These types of boring heads can be equipped with one symmetrical cartridge and one staggered cartridge. Note that staggered cartridges have a letter “S“ at the end of the description.
Examples: 2CT 90 402 N S; 2CT 90 300 S; 2CT 90 402 S.

Symmetrical boring



2CT □□ □□□ + 2CT □□ □□□
3CT □□ □□□ + 3CT □□ □□□

Staggered boring



2CT □□ □□□S + 2CT □□ □□□
3CT □□ □□□S + 3CT □□ □□□

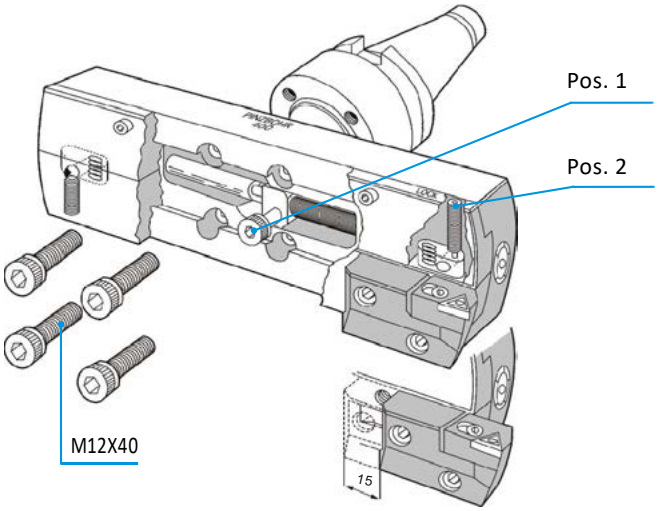
Staggered boring allows an increase in metal removal rate between D1 and D3 during one pass, approximately 4 to 6 mm compared with symmetrical boring. Be aware that for staggered boring the feed per minute should be calculated as for a **single tooth tool.**

Attention: During the entire mounting process the brake screw (pos. 2) must be released.

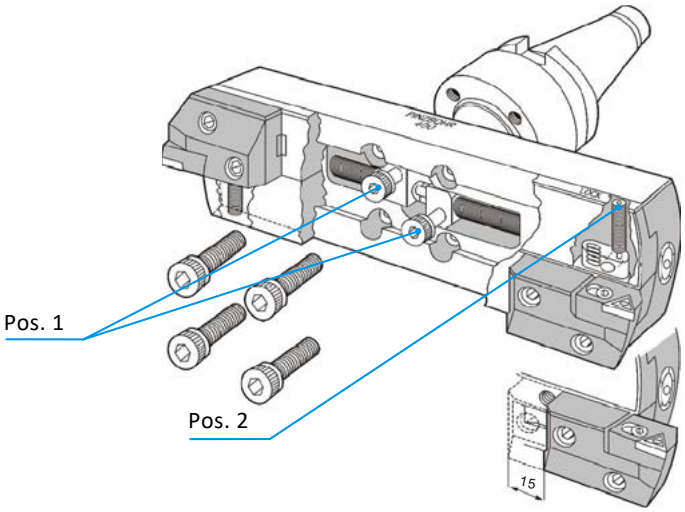
How to fit the large diameter boring head on the taper
Remove the position screws (pos. 1) and push along the slides until the four coupling screw sockets appear. Put together the taper face with the four screw sockets over the head's back end, then fit and tighten the 4 coupling screws.

Mounting the slides on the head
Insert both slides into the V guides, push them along until they face the nut thread holes. Fit the screws (pos. 1) and tight them lightly. The function of these screws is dual, fixing the slide into the V guides and linking both the slide with the bronze lead nut. Finally check that the slide (slides in roughing) glides smoothly.

FINISHING



ROUGHING



Speeds and feeds
Ultimate or optimum speeds and feeds will depend upon material, machine and setup conditions, as well as tool overhang.

Boring depth – tool overhang for roughing and finishing
Under conditions suited for carbide tooling depths of 5× Ø for rough boring and 3× Ø for finish boring are achievable. With the increasing overhang, the mechanical stability of the tool body decreases. Overlength tools will have a tendency for deflections as well as harmonic (high pitch) chatter. Harmonic chatter can cause movement of adjusting components inside the boring head leading to off-size or tapered holes.
In many cases the high pitch harmonic chatter can be dampened by increasing the feed and (or) lowering the cutting speed.
Please note that the cutting behavior will also change with the amount of slide block (insert holder) extension from the boring head requiring adjustments regarding speeds and feeds.

Boring depth – tool overhang for micro boring heads
The maximum boring depth with steel boring bars should not exceed 5× bar diameter and 7× bar diameter with solid carbide bars. We recommend to shorten the bars to the shortest overhang necessary according to the required boring depth.
For heavy duty roughing applications the largest available corner radius should be selected unless otherwise specified. For finish boring with very little stock removal the smallest available corner radius is most advantageous to minimize lateral tool deflection. This can be especially important on applications involving long overhangs.

Rough boring head 75° vs. 90°
The 75° rough boring head should be used whenever a lot of stock is being removed and no square shoulder is required inside blind or stepped bores. The 75° lead has a tendency to self-centre to the pre-existing hole and therefore are very stable. If this pre-existing hole is off-centre, shifted or off-angle then it is recommended to use the 90° boring head since the 90° lead angle will have less tendency to follow the pre-existing hole.

Amount of stock removal
The maximum stock removal for rough boring may have to be decreased on very tough materials, extended overhangs as well as for extended slide blocks.

Insert corner radius
For heavy duty roughing applications the largest available corner radius should be selected unless otherwise specified. For finish boring with very little stock removal the smallest available corner radius is most advantageous to minimize lateral tool deflection. This can be especially important on applications involving long overhangs.

4 Cutting edges per insert
The 80° diamond shaped insert normally provides two cutting edges. However, all four cutting edges can be used if a 75° and a 90° rough boring head within the same size range is utilized. The same is possible between a 75° rough boring head and a 90° finish boring head.

NOTES

NOTES

SIMPLY RELIABLE

As a professional you can judge the quality of work by just looking at the chip. Our chip is a clean and uncomplicated shape that in itself tells a story. It is a clear and consistent signal and that's why we use it as a symbol for being **Simply Reliable**.

DORMER PRAMET

Austria
T: +31 10 2080 240
info.at@dormerpramet.com

Belgium & Luxembourg
T: +32 3 440 59 01
info.be@dormerpramet.com

Brazil
T: +55 11 5660 3000
info.br@dormerpramet.com

Canada
T: (888) 336 7637
En Français: (888) 368 8457
cs.canada@dormerpramet.com

China
T: +86 21 2416 0508
info.cn@dormerpramet.com

Croatia
T: +385 98 407 489
info.hr@dormerpramet.com

Czech Republic
T: +420 583 381 111
info.cz@dormerpramet.com

Denmark
T: 808 82106
info.se@dormerpramet.com

Finland
T: 0205 44 7003
info.fi@dormerpramet.com

France
T: +33 (0)2 47 62 57 01
info.fr@dormerpramet.com

Germany
T: +49 9131 933 08 70
info.de@dormerpramet.com

Hungary
T: +36-96 / 522-846
info.hu@dormerpramet.com

India
T: +91 11 4601 5686
info.in@dormerpramet.com

Italy
T: +39 02 30 70 54 44
info.it@dormerpramet.com

Kazakhstan
T: +7 771 305 11 45
info.kz@dormerpramet.com

Mexico
T: +52 (555) 7293981
cs.mexico@dormerpramet.com

Netherlands
T: +31 10 2080 240
info.nl@dormerpramet.com

Norway
T: 800 10 113
info.se@dormerpramet.com

Poland
T: +48 32 78-15-890
info.pl@dormerpramet.com

Portugal
T: +351 21 424 54 21
info.pt@dormerpramet.com

Romania
T: +4(0)730 015 885
info.ro@dormerpramet.com

Russia
T: +7 (495) 775 10 28
info.ru@dormerpramet.com

Slovakia
T: +421 (41) 764 54 60
info.sk@dormerpramet.com

Slovenia
T: +385 98 407 489
info.si@dormerpramet.com

Spain
T: +34 935717722
info.es@dormerpramet.com

Sweden
responsible for Iceland
T: +46 35 16 52 96
info.se@dormerpramet.com

Switzerland
T: +31 10 2080 240
info.ch@dormerpramet.com

Turkey
T: +90 533 212 45 47
info.tr@dormerpramet.com

Ukraine
T: +38 067 566 38 80
T: +38 067 566 81 51
info.ua@dormerpramet.com

United Kingdom
responsible for Ireland
T: 0870 850 4466
info.uk@dormerpramet.com

United States of America
T: (800) 877-3745
cs@dormerpramet.com

Other countries

South America
T: +55 11 5660 3000
info.br@dormerpramet.com

Adria
T: +420 583 381 527
info.rcee@dormerpramet.com

Rest of the World
Dormer Pramet International UK
T: +44 1246 571338
info.int@dormerpramet.com

Dormer Pramet International CZ
T: +420 583 381 520
info.int.cz@dormerpramet.com

DP-CAT-HOLEMAKING-2021-EN

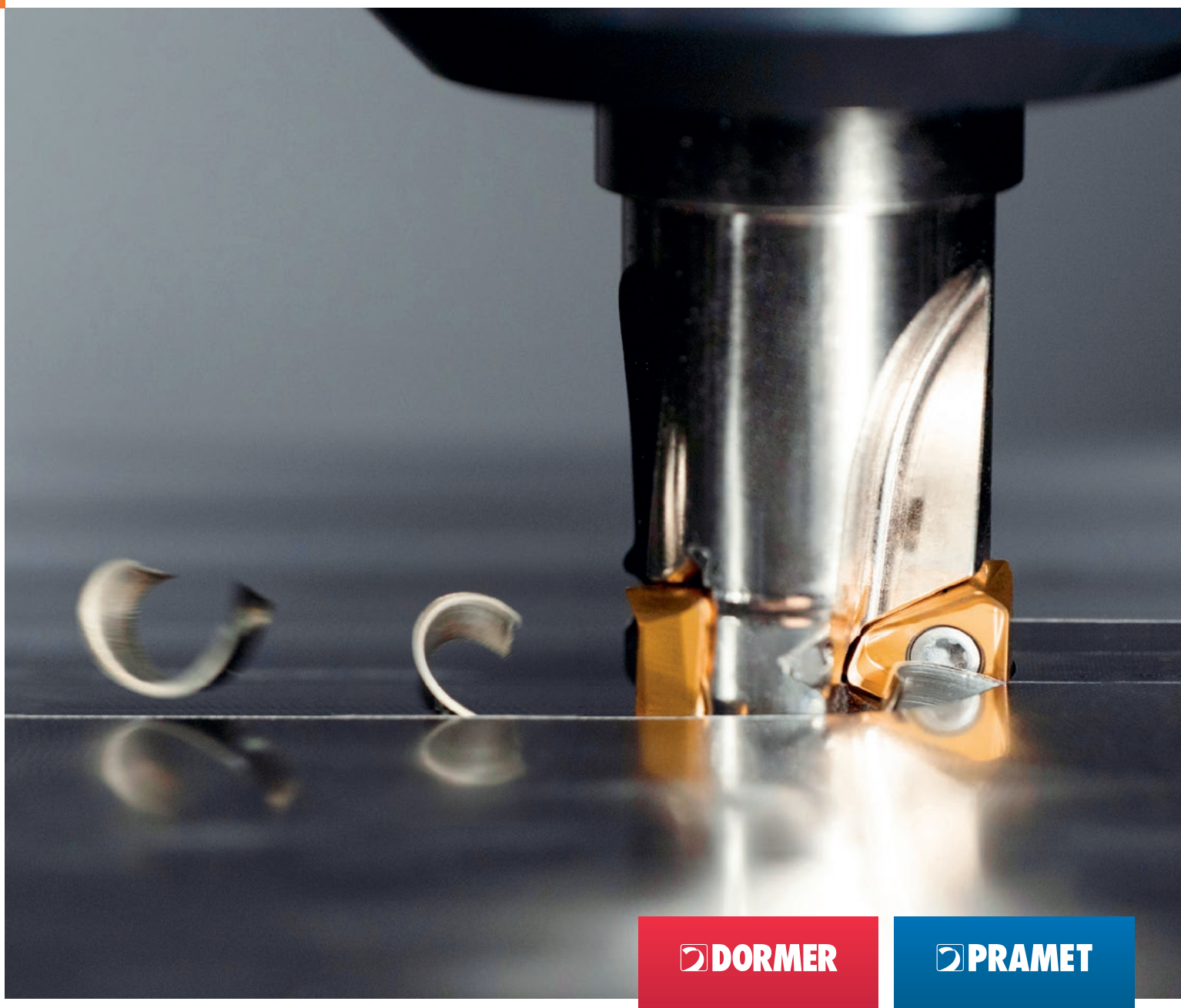
FOLLOW US...

www.dormerpramet.com
youtube.com/dormerpramet
facebook.com/dormerprametsocial
linkedin.com/company/dormerpramet
instagram.com/dormerprametsocial
twitter.com/dormerpramet

DORMER PRAMET

MILLING

2021 – 2022



DORMER PRAMET

		MILLING – GENERAL CONTENT
📖 6		WMG & ISO 13399
📖 10	SOLID MILLS	INSTRUCTIONS
📖 19		HM MILLS
📖 117		HSS-E-PM, HSS-E, HSS MILLS
📖 201		TECHNICAL INFORMATION
📖 212		ROTARY BURRS
📖 292		THREAD MILLS
📖 314	INDEXABLE MILLS	INSTRUCTIONS
📖 328		NAVIGATORS
📖 349		FACE MILLS
📖 409		SQUARE SHOULDER MILLS
📖 479		DEEP SHOULDER MILLS
📖 508		SLOT MILLS
📖 521		COPY MILLS
📖 613		HIGH FEED MILLS (HFC)
📖 645		CHAMFER & T-SLOT MILLS
📖 667		OTHER INSERTS
📖 691		TECHNICAL INFORMATION

PRODUCT FAMILY	🕮
C	
C110	126
C122	144
C123	130
C126	128
C135	133
C139	132
C159	141
C167	143
C246	151
C247	149
C273	152
C295	154
C299	146
C305	138
C306	134
C333	155
C336	142
C346	145
C352	140
C353	135
C367	137
C400	162
C403	164
C407	159
C413	163
C428	157
C492	158
C500	165
C505	166
C700	176
C710	175
C800	167
C801	170
C810	168
C820	178
C822	177
C825	169
C830	173
C831	174
C835	172
C837	171
C907	147
C908	160
C920	148
C922	156
C948	161
D	
D200	180
D400	190
D402	192
D420	191
D422	193
D745	182
D747	184
D750	188
D751	189
D752	186
D753	187
D763	181

PRODUCT FAMILY	🕮
J	
J200	299
J205	300
J210	301
J215	302
J220	303
J225	304
J235	305
J245	306
J260	308
J280	307
P	
P100	285
P101	286
P501	274
P505	275
P507	276
P509	277
P511	278
P513	279
P515	280
P521	281
P523	282
P601	260
P605	261
P607	262
P609	263
P611	264
P613	265
P615	266
P621	267
P701	251
P703	252
P705	253
P707	254
P709	255
P711	256
P713	257
P715	258
P721	259
P801	230
P801C	231
P803	232
P803C	233
P805	234
P805C	235
P807	236
P807C	237
P809	238
P811	239
P811C	240
P813	241
P813C	242
P815	243
P815C	244
P817	245
P819	246
P821	247
P821C	248
P823	249
P825	250

PRODUCT FAMILY	🕮
P831	268
P833	269
P835	270
P837	271
P841	272
P842	273
P843	283
P844	284
P880	287
P890	288
S	
S216	50
S217	51
S218	52
S219	53
S225	54
S226	55
S227	56
S229	57
S231	58
S233	59
S260	60
S262	61
S264	63
S501	102
S511	103
S521	64
S523	65
S524	67
S525	68
S526	69
S527	70
S529	71
S531	72
S533	73
S534	74
S535	75
S536	76
S561	77
S610	79
S611	80
S612	87
S614	81
S629	82
S637	78
S638	83
S650	84
S654	85
S662	86
S710	28
S713	29
S714	30
S715	31
S716	32
S717	33
S718	34
S722HB	35
S739	48
S740	49
S761	36
S763	37

PRODUCT FAMILY	🕮
S765	38
S765HB	39
S766	40
S767	41
S768	42
S770HB	43
S771HB	44
S772HB	45
S773HB	46
S791	47
S802HA	88
S802HB	89
S803HA	93
S803HB	94
S804HA	98
S804HB	99
S812HA	90
S812HB	91
S813HA	95
S813HB	96
S814HA	100
S814HB	101
S822	92
S823	97
S902	104
S903	106
S904	108
S922	105
S933	107
S944	109
S991	110

PRODUCT FAMILY	📖
2	
2516	654
2636	657
C	
CHN09	401
FSB22X	405
F-SCC	664
FTB27X	475
J	
J(T)-2416	503
J(T)-CSD12X	505
J(T)-SAD11E	482
J(T)-SAD16E	488
J(T)-SLSN	494
J(T)-SSAP	498
J(T)-SXP16	660
K	
K2-PPH	592
K2-SLC	588
K2-SRC	579
K3-CXP	575
L	
L2-SZP	568
N	
N-SSO09	651
S	
S90CN(XN)	516
S90SN	510
SAD07D	413
SAD11E	420
SAD16E	429
SAP10D	438
SAP16D	441
SBN10	616
SCN05C	610
SHN06C	352
SHN09C	356
SLN12	455
SLN16	461
SOD05	360
SOD06D	370
SOE06Z	376
SOE09Z	383
SPD09	627
SPN13	397
SRC10	526
SRC12	530
SRC16	534
SRC20	538
SRD05	542
SRD07	545
SRD10	550
SRD12	556
SRD16	562
SSD09	648
SSD12	472
SSE09	389
SSN11	622
SSN12Z	393
SSO050	466
SSO09	469

PRODUCT FAMILY	📖
STN10	446
STN16	450
SVC22C	604
SWN04C	607
SZD07	633
SZD09	637
SZD12	641

PRODUCT FAMILY	🕮
A	
ADEX 07-FA	416
ADEX 07-HF	415
ADEX 11-FA	425, 485
ADEX 11-HF	424
ADEX 16	432, 491
ADEX 16-FA	434, 491
ADEX 16-HF	433
ADKT 15	670
ADKX 15	670
ADMX 07	414
ADMX 11	422, 483
ADMX 16	430, 489
ANHX 10	618
APET 15	499
APET 16-FA	443
APEW 15	499
APKT 10	439
APKT 10-FA	439
APKT 16	442
APMT 16	671
B	
BNGX 10	617
C	
CCMX	665
CNHQ	518
CNHX 05	611
CNM	672
H	
HNEF 09	402
HNGX 06	353
HNGX 09	357
HNMF 09	403
L	
LC	581, 589
LC 12-CH	582
LC 12-RE	583
LNET 16	495
LNGU 12	458
LNGU 16	463
LNGU 16-FA	464
LNGX 12	456
LNGX 12-FA	458
LNMU 16	462
O	
ODEW 06	371
ODKT 05IM	361
ODMT 05	672
ODMT 05IM	362
ODMT 06	371
ODMX 06	372
OEHT 06	377
OEHT 06-FA	378
OEHT 09	384
OFKR 07	673
P	
PDKT 09	630
PDKX 09	628
PDMW 09	630
PDMX 09	629
PNMQ 13	398

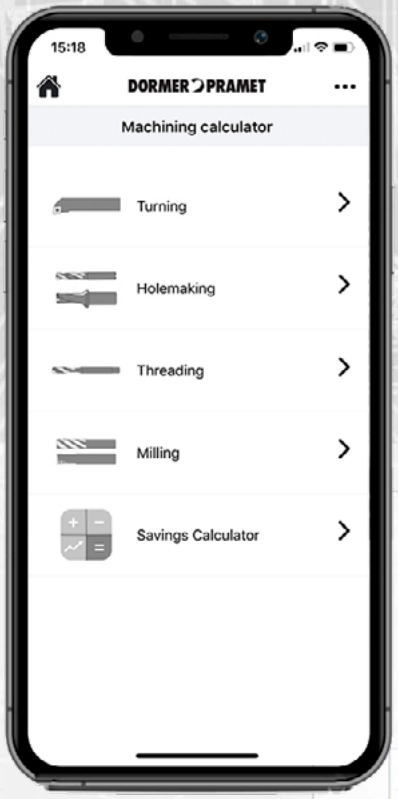
PRODUCT FAMILY	🕮
PNMU 13	398
PPH	594
PPHF	595
PPHT	595
R	
RC	580
RCMT 10	527
RCMT 12	531
RCMT 16	535
RCMT 20	539
RDET	673
RDEX	674
RDGT 07	546
RDGT 10	552
RDGT 12	558
RDGT 12IM	362
RDGT 16	564
RDHT 07-FA	547
RDHT 10-FA	552
RDHT 12-FA	558
RDHT 16-FA	564
RDHX 05	543
RDHX 07	546
RDHX 10	551
RDHX 12	557
RDHX 16	563
RDHX 20	674
RDMT 07	547
RDMT 10	553
RDMT 12	559
RDMT 12IM	363
RDMT 16	565
RDMX 10	551
RDMX 12	557
RDMX 16	563
REHT 16	379
REHT 24	385
RPET 12	675
RPET 15	372
RPEW 12	675
RPEW 15	373
RPEX	676
S	
SBKX 22	406
SBMR 22	406
SDEW 09	649
SDEX 09	649
SDGX 12	506
SDKT 12IM	364
SDMT 12	473
SDMT 12IM	364
SDMX 12	506
SEEN	676
SEER	677
SEET 09	390
SEET 12	678
SEET 12-FA	678
SEET 12-PM	679
SEEW 12	679
SEMT 09	391
SFCN	680

PRODUCT FAMILY	🕮
SNET 13	496
SNGX 11	623
SNGX 13	495
SNHF	680
SNHN	681
SNHQ AZ	512
SNHQ TRL	513
SNKT 12	395
SNKX	681
SNMT 12	394
SNUN	682
SOMT 05	467
SOMT 09	470, 652
SPET 12	500
SPET 12 AD	500
SPEW 12 AD	501
SPGN	682
SPGN 25 DZ	683
SPKN	683
SPKR	684
SPKX	685
SPUN	685
T	
TBMR 27	476
TCMT	655, 658
TNGX 10	447
TNGX 10-FA	448
TNGX 16	451
TNGX 16-FA	452
TNJF	686
TPCN 16	687
TPKN	687
TPKR	688
TPUN	689
V	
VCGT 22-FA	611, 690
W	
WNHX 04	608
X	
XDHW	690
XEHT 06	378
XEHT 09	385
XNGX 06	354
XNGX 09	358
XNGX 13	399
XNHQ	518
XP	576
XPHT 16	661
XPHT 16-FA	662
Z	
ZDCW 07	634
ZDCW 09	638
ZDEW 12	642
ZP	570

DORMER PRAMET

EVERY APPLICATION

Whether you are hole-making, milling, turning or threading, every application is covered within our machining calculator app. Download it today from your relevant app store. **Simply Reliable.**

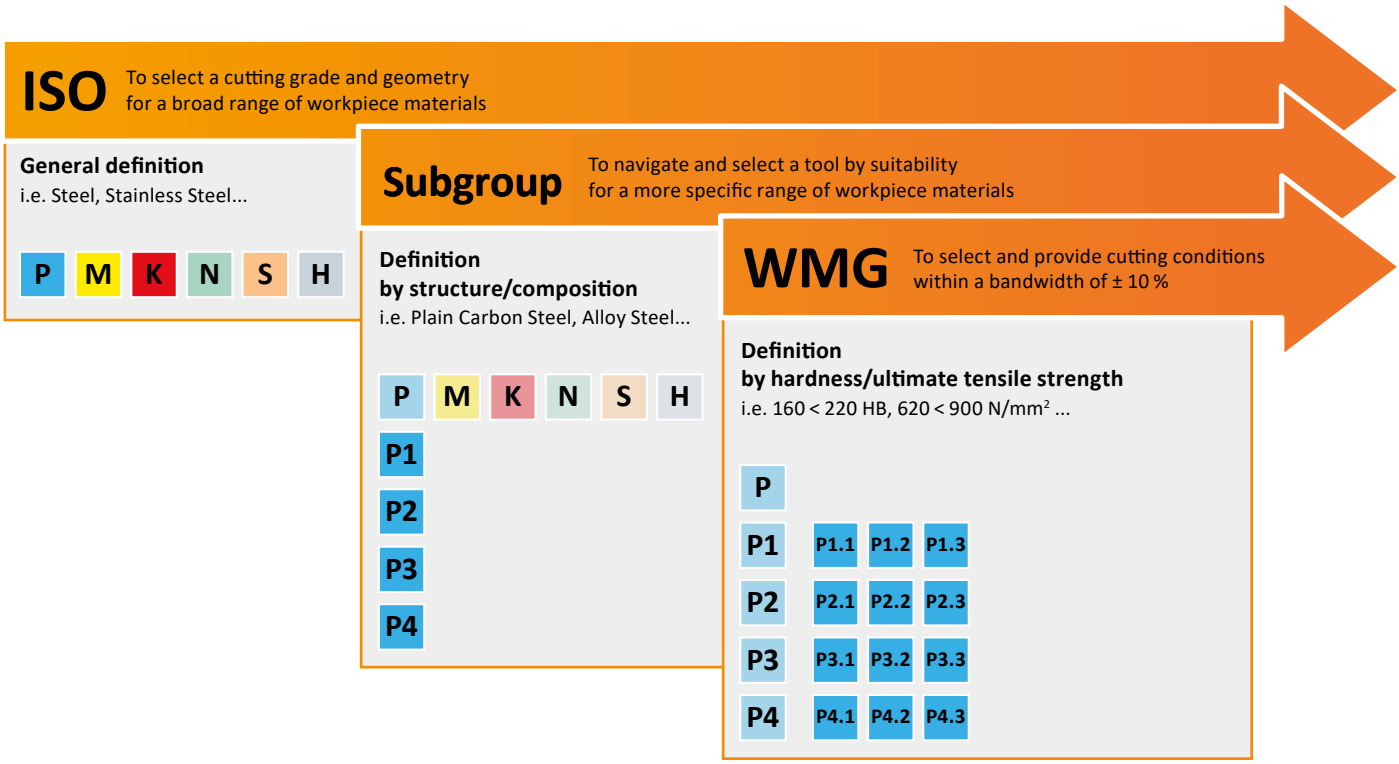


Download on the App Store

GET IT ON Google Play

Download on AppGallery

WORKPIECE MATERIAL GROUPS (WMG)



ABOUT DORMER PRAMET'S WORKPIECE MATERIAL CLASSIFICATION

Workpiece **M**aterial **G**roups (**WMG**) are used to support easy and reliable selection of the right cutting tool and starting values for machining conditions in particular applications.
Dormer Pramet classifies workpiece materials into six different coloured groups;

- **Blue**: Steel and cast steel (P-group)
- **Yellow**: Stainless steel (M-group)
- **Red**: Cast iron (K-group)
- **Green**: Non-ferrous metals (N-group)
- **Brown**: High-temperature alloys (S-group)
- **Grey**: Hardened materials (H-group)

Each of these are divided into subgroups on the basis of their structure and/or composition. For example, P-group steel and cast steel is split into four subgroups, namely;

- **P1** – Free machining steel
- **P2** – Plain carbon steel
- **P3** – Alloy steel
- **P4** – Tool steel

A final division includes material properties, such as hardness and ultimate tensile strength. This is to provide our customers with a complete tool recommendation, including starting values for cutting speed and feed.
The table on the next page includes a description of each workpiece material group, as well as examples of commonly used designations.

WMG (WORK MATERIAL GROUP)

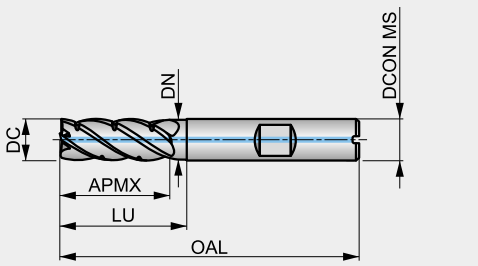
ISO group		WMG (Work Material Group)			Hardness (HB or HRC)	Ultimate Tensile Strength (MPa)
P	P1	P1.1	Free machining steel (carbon steels with increased machinability)	Sulfurized	< 240 HB	≤ 830
		P1.2		Sulfurized and phosphorized	< 180 HB	≤ 620
		P1.3		Sulfurized/phosphorized and leaded	< 180 HB	≤ 620
	P2	P2.1	Plain carbon steel (steels comprised of mainly iron and carbon)	Containing <0.25 % C	< 180 HB	≤ 620
		P2.2		Containing <0.55 % C	< 240 HB	≤ 830
		P2.3		Containing >0.55 % C	< 300 HB	≤ 1030
	P3	P3.1	Alloy steel (carbon steels with an alloying content ≤ 10%)	Annealed	< 180 HB	≤ 620
		P3.2		Hardened and tempered	180 – 260 HB	> 620 ≤ 900
		P3.3			260 – 360 HB	> 900 ≤ 1240
	P4	P4.1	Tool steel (special alloy steel for tools, dies and molds)	Annealed	< 26 HRC	≤ 900
		P4.2		Hardened and tempered	26 – 39 HRC	> 900 ≤ 1240
		P4.3			39 – 45 HRC	> 1240 ≤ 1450
M	M1	M1.1	Ferritic stainless steel (straight chromium non-hardenable alloys)		< 160 HB	≤ 520
		M1.2			160 – 220 HB	> 520 ≤ 700
	M2	M2.1	Martensitic stainless steel (straight chromium hardenable alloys)	Annealed	< 200 HB	≤ 670
		M2.2		Quenched and tempered	200 – 280 HB	> 670 ≤ 950
		M2.3		Precipitation-hardened	280 – 380 HB	> 950 ≤ 1300
	M3	M3.1	Austenitic stainless steel (chromium-nickel and chromium-nickel-manganese alloys)		< 200 HB	≤ 750
		M3.2			200 – 260 HB	> 750 ≤ 870
		M3.3			260 – 300 HB	> 870 ≤ 1040
	M4	M4.1	Austenitic-ferritic (DUPLEX) or super-austenitic stainless steel		< 300 HB	≤ 990
		M4.2	Precipitation hardening austenitic stainless steel		300 – 380 HB	≤ 1320
K	K1	K1.1	Gray iron or Automotive Gray iron (GG) (iron-carbon castings with a lamellar graphite microstructure)	Ferritic or ferritic-pearlitic	< 180 HB	≤ 190
		K1.2		Ferritic-pearlictic or pearlitic	180 – 240 HB	> 190 ≤ 310
		K1.3		Pearlitic	240 – 280 HB	> 310 ≤ 390
	K2	K2.1	Malleable iron (GTS/GTW) (iron-carbon castings with a graphite-free microstructure)	Ferritic	< 160 HB	≤ 400
		K2.2		Ferritic or pearlitic	160 – 200 HB	> 400 ≤ 550
		K2.3		Pearlitic	200 – 240 HB	> 550 ≤ 660
	K3	K3.1	Ductile iron (GGG) (iron-carbon castings with a nodular graphite microstructure)	Ferritic	< 180 HB	≤ 560
		K3.2		Ferritic or pearlitic	180 – 220 HB	> 560 ≤ 680
		K3.3		Pearlitic	220 – 260 HB	> 680 ≤ 800
	K4	K4.1	Austenitic gray iron (ASTM A436) (iron-carbon alloy castings with an austenitic lamellar graphite microstructure)		< 180 HB	≤ 190
		K4.2	Austenitic ductile iron (ASTM A439 or ASTM A571) (iron-carbon alloy castings with an austenitic nodular graphite microstructure)		< 240 HB	≤ 740
		K4.3	Austempered ductile iron (ASTM A897) (iron-carbon alloy castings with an ausferrite microstructure)		< 280 HB	> 840 ≤ 980
		K4.4			280 – 320 HB	> 980 ≤ 1130
		K4.5			320 – 360 HB	> 1130 ≤ 1280
	K5	K5.1	Compacted graphite iron CGI (ASTM A842) (iron-carbon castings with a vermicular graphite structure)	Ferritic	< 180 HB	≤ 400
		K5.2		Ferritic-pearlitic	180 – 220 HB	> 400 ≤ 450
		K5.3		Pearlitic	220 – 260 HB	> 450 ≤ 500
N	N1	N1.1	Commercially pure wrought aluminium		< 60 HB	≤ 240
		N1.2	Wrought aluminium alloys	Half hard tempered	60 – 100 HB	> 240 ≤ 400
		N1.3		Full hard tempered	100 – 150 HB	> 400 ≤ 590
	N2	N2.1	Cast aluminium alloys		< 75 HB	≤ 240
		N2.2			75 – 90 HB	> 240 ≤ 270
		N2.3			90 – 140 HB	> 270 ≤ 440
	N3	N3.1	Free-cutting copper-alloys materials with excellent machining properties		–	–
		N3.2	Short-chip copper-alloys with good to moderate machining properties		–	–
		N3.3	Electrolytic copper and long-chip copper-alloys with moderate to poor machining properties		–	–
	N4	N4.1	Thermoplastic polymers		–	–
		N4.2	Thermosetting polymers		–	–
		N4.3	Reinforced polymers or composites		–	–
	N5	N5.1	Graphite		–	–
S	S1	S1.1	Titanium or titanium alloys		< 200 HB	≤ 660
		S1.2			200 – 280 HB	> 660 ≤ 950
		S1.3			280 – 360 HB	> 950 ≤ 1200
	S2	S2.1	Fe-based high-temperature alloys		< 200 HB	≤ 690
		S2.2			200 – 280 HB	> 690 ≤ 970
	S3	S3.1	Ni-based high-temperature alloys		< 280 HB	≤ 940
		S3.2			280 – 360 HB	> 940 ≤ 1200
	S4	S4.1	Co-based high-temperature alloys		< 240 HB	≤ 800
		S4.2			240 – 320 HB	> 800 ≤ 1070
H	H1	H1.1	Chilled cast iron		< 440 HB	–
	H2	H2.1	Hardened cast iron		< 55 HRC	–
		H2.2			> 55 HRC	–
	H3	H3.1	Hardened steel <55 HRC		< 51 HRC	–
		H3.2			51 – 55 HRC	–
	H4	H4.1	Hardened steel >55 HRC		55 – 59 HRC	–
		H4.2			> 59 HRC	–

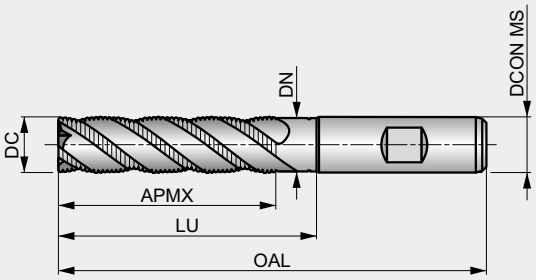
CUTTING TOOL PARAMETERS ACCORDING TO ISO 13399

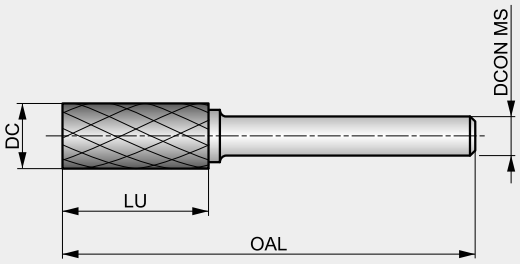
All cutting tools are defined by a number of parameters according to the standard ISO 13399. This list contains all the parameters used in this catalogue and their definitions.

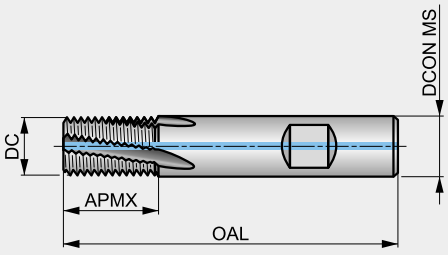
ISO 13399 is an international cutting tool information standard. It provides dimensions and parameters in a neutral format that is independent of any particular system or company nomenclature. When cutting tools are clearly defined according to a global standard, all types of software can process the electronic data more quickly, improving the quality of communication and helping to make the exchange of information run smoothly. Supporting a common language in our cutting tool descriptions this will assist system to system communication. It will save you a significant amount of time, providing an easier gathering of high-quality data across our 40,000 solid and indexable tools. By using an ISO 13399 compliant system, there will be no need to manually interpret data and key-enter it into your system.

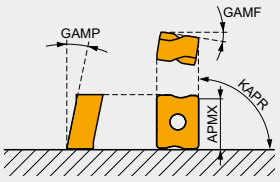
EXAMPLES ONLY!

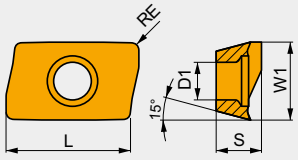


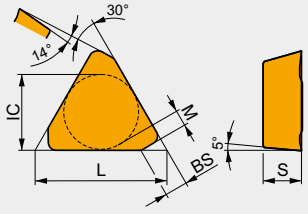


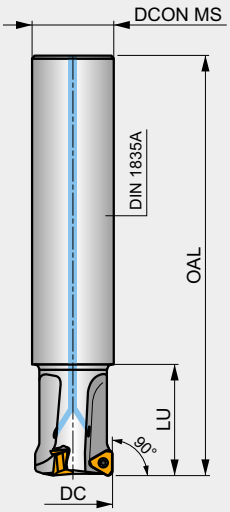


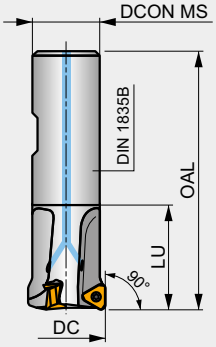


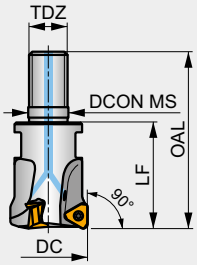


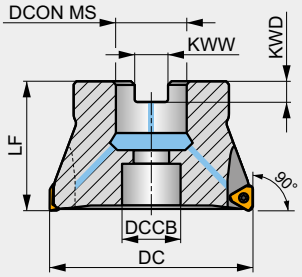












CUTTING TOOL PARAMETERS ACCORDING TO ISO 13399

ISO 13399 code	Description
APMX	Depth of cut maximum
BD	Body diameter
BDX	Body diameter maximum
BCH	Corner chamfer length
BS	Wiper edge length
CBDP	Connection bore depth
CDI	Insert cutting diameter
CDX	Cutting depth maximum
CW	Cutting width
CZC MS	Connection size code machine side
D1	Fixing hole diameter
DAH4	Diameter access hole
DAH5	Diameter access hole
DAH6	Diameter access hole
DBC1	Diameter bolt circle 1
DBC2	Diameter bolt circle 2
DBC4	Diameter bolt circle
DBC5	Diameter bolt circle
DBC6	Diameter bolt circle
DC	Cutting diameter
DCB	Connection bore diameter
DCCB	Counterbore diameter connection bore
DCN	Cutting diameter minimum
DCON MS	Connection diameter
DCX	Cutting diameter maximum
DHUB	Hub diameter
DN	Neck diameter
GAMF	Radial rake angle
GAMP	Axial rake angle

ISO 13399 code	Description
CHW	Corner chamfer width
IC	Inscribed circle diameter
INSD	Insert diameter
INSL	Insert length
KAPR	Tool cutting edge angle
KWD	Keyway depth
KWW	Keyway width
L	Cutting edge length
LB	Body length
LE	Cutting edge effective length
LF	Functional length
LH	Head length
LU	Usable length
LUX	Usable length maximum
M	M-dimension
NOF	Number of flutes
OAL	Overall length
P	Pitch of the blade
PRFA	Profile angle
PRFRAD(2)	Profile radius
RE	Radius
S	Insert thickness
S1	Insert thickness total
TDZ	Thread diameter size
TP	Thread pitch
TPI	Threads per inch
W1	Insert width
ZNP	Number of peripheral edges in the tool

SOLID
HM & HSS MILLS

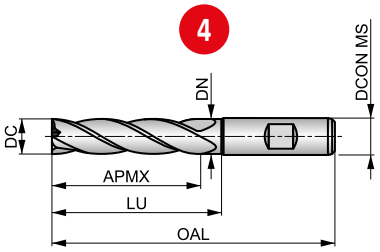
		MILLING – GENERAL CONTENT
📖 6		WMG & ISO 13399
📖 10	SOLID MILLS	**INSTRUCTIONS**
📖 19		**HM MILLS**
📖 117		**HSS-E-PM, HSS-E, HSS MILLS**
📖 201		**TECHNICAL INFORMATION**
📖 212		ROTARY BURRS
📖 292		THREAD MILLS
📖 314	INDEXABLE MILLS	INSTRUCTIONS
📖 328		NAVIGATORS
📖 349		FACE MILLS
📖 409		SQUARE SHOULDER MILLS
📖 479		DEEP SHOULDER MILLS
📖 508		SLOT MILLS
📖 521		COPY MILLS
📖 613		HIGH FEED MILLS (HFC)
📖 645		CHAMFER & T-SLOT MILLS
📖 667		OTHER INSERTS
📖 691		TECHNICAL INFORMATION

1 C273

DORMER

Multi-Flute HSS-E-PM Long Series End Mill, Bright Finish

Long cut length, 4, 5 or 6 flute design provides high rigidity fo[2]ng deep profiles in mild steels and non-ferrous materials, such as aluminium and medium strength titanium alloys.



HSS-E PM	N	NOF 4-6
	λ 30°	γ 12°
DIN 1835B	Bright	DC k10
	DIN 844L	

5

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	K1.1	K1.2
■ 46 C	■ 52 C	■ 54 C	■ 40 C	■ 35 C	◪ 32 C	◪ 26 B	◪ 19 B	◪ 14 C	◪ 12 C	◪ 12 C	◪ 10 B	◪ 25 C	◪ 19 C
K1.3	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**
◪ 14 C	◪ 49 C	◪ 40 C	◪ 32 B	◪ 44 C	◪ 33 C	◪ 27 A	◪ 40 B	◪ 30 B	◪ 22 B	◪ 19 A	◪ 16 A	◪ 46 B	◪ 34 B
K5.3	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**S1.1**	**S1.2**	**S2.1**
◪ 27 B	◪ 81 E	◪ 60 D	◪ 41 D	◪ 41 C	◪ 37 C	◪ 26 C	■ 43 C	■ 25 C	■ 13 C	◪ 43 C	■ 25 B	◪ 20 B	◪ 13 A
S3.1	**S4.1**												
◪ 10 A	◪ 8 A												

7

DCON MS tolerance h6.

Product	DC [inch]	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
8					9			
C2732.0	–	2.00	6.00	10.00	54.0	4	–	–
C2732.5	–	2.50	6.00	12.00	56.0	4	–	–
C2733.0	–	3.00	6.00	12.00	56.0	4	–	–
C2731/8 [2]	1/8	3.18	6.00	15.00	59.0	4	–	–
C2733.5	–	3.50	6.00	15.00	59.0	4	–	–
C2734.0	–	4.00	6.00	19.00	63.0	4	–	–
C2734.5	–	4.50	6.00	19.00	63.0	4	–	–
C2733/16 [2]	3/16	4.76	6.00	24.00	68.0	4	–	–
C2735.0	–	5.00	6.00	24.00	68.0	4	–	–
C2735.5	–	5.50	6.00	24.00	68.0	4	–	–
C2736.0	–	6.00	6.00	24.00	68.0	4	–	–
C2731/4 [2]	1/4	6.35	10.00	30.00	80.0	4	–	–
C2737.0	–	7.00	10.00	30.00	80.0	4	–	–
C2738.0	–	8.00	10.00	38.00	88.0	4	–	–
C2739.0	–	9.00	10.00	38.00	88.0	4	–	–
C2733/8 [2]	3/8	9.52	10.00	45.00	95.0	4	54.50	9.50
C27310.0	–	10.00	10.00	45.00	95.0	4	54.50	9.50
C27311.0	–	11.00	12.00	45.00	102.0	4	–	–
C27312.0	–	12.00	12.00	53.00	110.0	4	64.50	11.50
C2731/2 [2]	1/2	12.70	12.00	53.00	110.0	4	64.50	11.50
C27313.0	–	13.00	12.00	53.00	110.0	4	64.50	11.50
C27314.0	–	14.00	12.00	53.00	110.0	4	64.50	11.50
C27315.0	–	15.00	12.00	53.00	110.0	4	64.50	11.50
C2735/8 [2]	5/8	15.88	16.00	63.00	123.0	4	74.50	15.50
C27316.0	–	16.00	16.00	63.00	123.0	4	74.50	15.50

Typical page with solid mill displayed – specific page details will differ.

SOLID MILLS – PAGE OVERVIEW

Pos.	Description
1	Designation of solid mills
2	Product description
3	Illustrative picture
4	Schematic drawing of tool
5	Product features

Pos.	Description
6	Milling operations
7	Material group recommendations incl. speed and feed guidance
8	Product code
9	Product dimensions

SOLID HM & HSS MILLS – ICONS OVERVIEW

General icons

■	Primary use
◪	Possible use

Material code (BMC)

HM	Hard Material (Solid Carbide)
HSS-E PM	High Speed Cobalt Powder Metal Tool Material
HSS-E	High Speed Cobalt Steel Tool Material
HSS	High Speed Steel Tool Material

Mill Profile

N	General Purpose Cutter Type for Low to High Resistance Materials
W	Non-ferrous Cutter Type for Soft Malleable Materials
FS	Semi-finishing Profile Chipbreaker
NF	Coarse Pitch Flat Profile Chipbreaker
NR	Coarse Pitch Rounded Profile Chipbreaker
HRA	Fine Pitch Asymmetrical Rounded Profile Chipbreaker
NRA	Coarse Pitch Asymmetrical Rounded Profile Chipbreaker
W | NRA	Non-ferrous Cutter Type with Coarse Pitch Asymmetrical Rounded Profile Chipbreaker
	Coarse Pitch
	Fine Pitch

Number of flutes (NOF)

NOF 1	Number of Flutes = 1 (single tooth)
NOF 2	Number of Flutes = 2 (teeth)
NOF 3	Number of Flutes = 3 (teeth)
NOF 3≠	Number of Flutes = 3 (differential pitch)
NOF 3-4	Number of Flutes = 3 – 4 (teeth)
NOF 3-5	Number of Flutes = 3 – 5 (teeth)
NOF 3-6	Number of Flutes = 3 – 6 (teeth)
NOF 4	Number of Flutes = 4 (teeth)
NOF 4≠	Number of Flutes = 4 (differential pitch)
NOF 4-5	Number of Flutes = 4 – 5 (teeth)
NOF 5	Number of Flutes = 5 (teeth)
NOF 4-6	Number of Flutes = 4 – 6 (teeth)
NOF 4-8	Number of Flutes = 4 – 8 (teeth)
NOF 6-8	Number of Flutes = 6 – 8 (teeth)
NOF 6-12	Number of Flutes = 6 – 12 (teeth)
NOF 8	Number of Flutes = 8 (teeth)
NOF 8-12	Number of Flutes = 8 – 12 (teeth)
NOF 10-12	Number of Flutes = 10 – 12 (teeth)
NOF 16-24	Number of Flutes = 16 – 24 (teeth)
28-44 NOF	Number of Teeth = 28 – 44 (teeth)
32-100 NOF	Number of Teeth = 32 – 100 (teeth)
48-200 NOF	Number of Teeth = 48 – 200 (teeth)
100-140 NOF	Number of Teeth = 100 – 140 (teeth)
110-180 NOF	Number of Teeth = 110 – 180 (teeth)
130-220 NOF	Number of Teeth = 130 – 220 (teeth)
160-350 NOF	Number of Teeth = 160 – 350 (teeth)

SOLID HM & HSS MILLS – ICONS OVERVIEW

Cut length

	Cut Length, Extra Short		Cut Length, Medium		Cut Length, Extra long
	Cut Length, Short		Cut Length, Long		

Flute Helix (FHA)

λ ≠	Unequal (Variable) Helix	λ 25°	25° Helix Angle (Flute)	λ 40°	40° Helix Angle (Flute)
λ 0°	0° Helix Angle (Straight Flute)	λ 28°	28° Helix Angle (Flute)	λ 45°	45° Helix Angle (Flute)
λ 10°	10° Helix Angle (Flute)	λ 30°	30° Helix Angle (Flute)	λ 50°	50° Helix Angle (Flute)
λ 12°	12° Helix Angle (Flute)	λ 34°	34° Helix Angle (Flute)		
λ 15°	15° Helix Angle (Flute)	λ 35°	35° Helix Angle (Flute)		

Radial rake angle (GAMF)

γ -26°	-26° Radial Rake Angle (cutting)	γ 5°	5° Radial Rake Angle (cutting)	γ 13°	13° Radial Rake Angle (cutting)
γ -10°	-10° Radial Rake Angle (cutting)	γ 7°	7° Radial Rake Angle (cutting)	γ 15°	15° Radial Rake Angle (cutting)
γ -6°	-6° Radial Rake Angle (cutting)	γ 8°	8° Radial Rake Angle (cutting)	γ 18°	18° Radial Rake Angle (cutting)
γ 0°	0° Radial Rake Angle (Neutral)	γ 9°	9° Radial Rake Angle (cutting)	γ 20°	20° Radial Rake Angle (cutting)
γ 3°	3° Radial Rake Angle (cutting)	γ 10°	10° Radial Rake Angle (cutting)	γ 25°	25° Radial Rake Angle (cutting)
γ 4°	4° Radial Rake Angle (cutting)	γ 12°	12° Radial Rake Angle (cutting)		

Shank

	DIN 1835A Cylindrical Shank		DIN 1835D Threaded Shank		DIN 6535 HA Cylindrical Shank
	DIN 1835 – B (Weldon) or D (Threaded) Shank		DIN 1835B Weldon Shank		DIN 6535 HB Weldon Shank

SOLID HM & HSS MILLS – ICONS OVERVIEW

Coating

Alcrona	Aluminium Chromium Nitride Coating
Bright	Bright (uncoated)
ST	Steam Tempered (Steam Oxide) Surface Treatment
TiCN	Titanium Carbonitride Coating
AlCrN	Aluminium Chromium Nitride Coating
AlTiN	Aluminium Titanium Nitride Coating
Hi	Polished Bright Surface Finish
TiAlN	Titanium Aluminium Nitride Coating
TiSiN	Titanium Silicon Nitride Coating
X-CEED	Special AlTiN Coating (with highest oxidation resistance)
Diamond	Diamond Like Coating

Cutting Diameter Tolerance Class (TCDC)

DC d11	d11 – Industry Standard Tool Tolerance Zone (based on diameter range)
DC e8	e8 – Industry Standard Tool Tolerance Zone (based on diameter range)
DC h9	h9 – Industry Standard Tool Tolerance Zone (based on diameter range)
DC h10	h10 – Industry Standard Tool Tolerance Zone (based on diameter range)
DC h11	h11 – Industry Standard Tool Tolerance Zone (based on diameter range)
DC h12	h12 – Industry Standard Tool Tolerance Zone (based on diameter range)
DC js14	js14 – Industry Standard Tool Tolerance Zone (based on diameter range)
DC js16	js16 – Industry Standard Tool Tolerance Zone (based on diameter range)
DC k10	k10 – Industry Standard Tool Tolerance Zone (based on diameter range)
DC k12	k12 – Industry Standard Tool Tolerance Zone (based on diameter range)

Cutting Direction

	Radial
	Radial, Diagonal
	Radial, Diagonal, Axial
	Radial

Basic Standard Group (BSG)

BS 122/4	BS 122/4 – Screwed Shank End Mill Standards
DIN 1833C	DIN 1833 C – Dovetail Cutter Standards
DIN 1833D	DIN 1833 D – Inverted Dovetail Cutter Standards
DIN 1837	DIN 1837 – Fine Slitting Saw Standards
DIN 1838	DIN 1838 – Coarse Slitting Saw Standards
DIN 1880	DIN 1880 – Shell Mill Standards
DIN 327D	DIN 327 D – Slot Drill Standards
DIN 844K	DIN 844 K – End Mill Standards
DIN 844L	DIN 844 L – HSS End Mills Standards
DIN 850	DIN 850 – Keyseat Cutter Standards
DIN 851	DIN 851 – T-Slot Cutter Standards
DIN 885A	DIN 885 A – Side & Face Mill Standards
DIN 6527K	DIN 6527 K – Carbide End Mill Standards
DIN 6527L	DIN 6527 L – Carbide End Mill Standards
DORMER	DORMER Standards

SOLID HM & HSS MILLS – ICONS OVERVIEW

Cooling (CSP)

Through Tool Coolant

Operations Milling

Deep Shoulder Milling

Deep Slot Milling

Shallow Slot Milling

Shallow Shoulder Milling

P9 Slotting (Keyway)

Ramping

Plunge Milling

Trochoidal Milling

Progressive Plunging

Drilling

Helical Interpolation

Turn Milling

Contoured Surfaces (Copy Milling)

Face Milling

Chamfer Milling

Rear Face Milling

T-Slot Milling

Dovetail Milling

Inverse Dovetail Milling

Woodruff Slot Milling

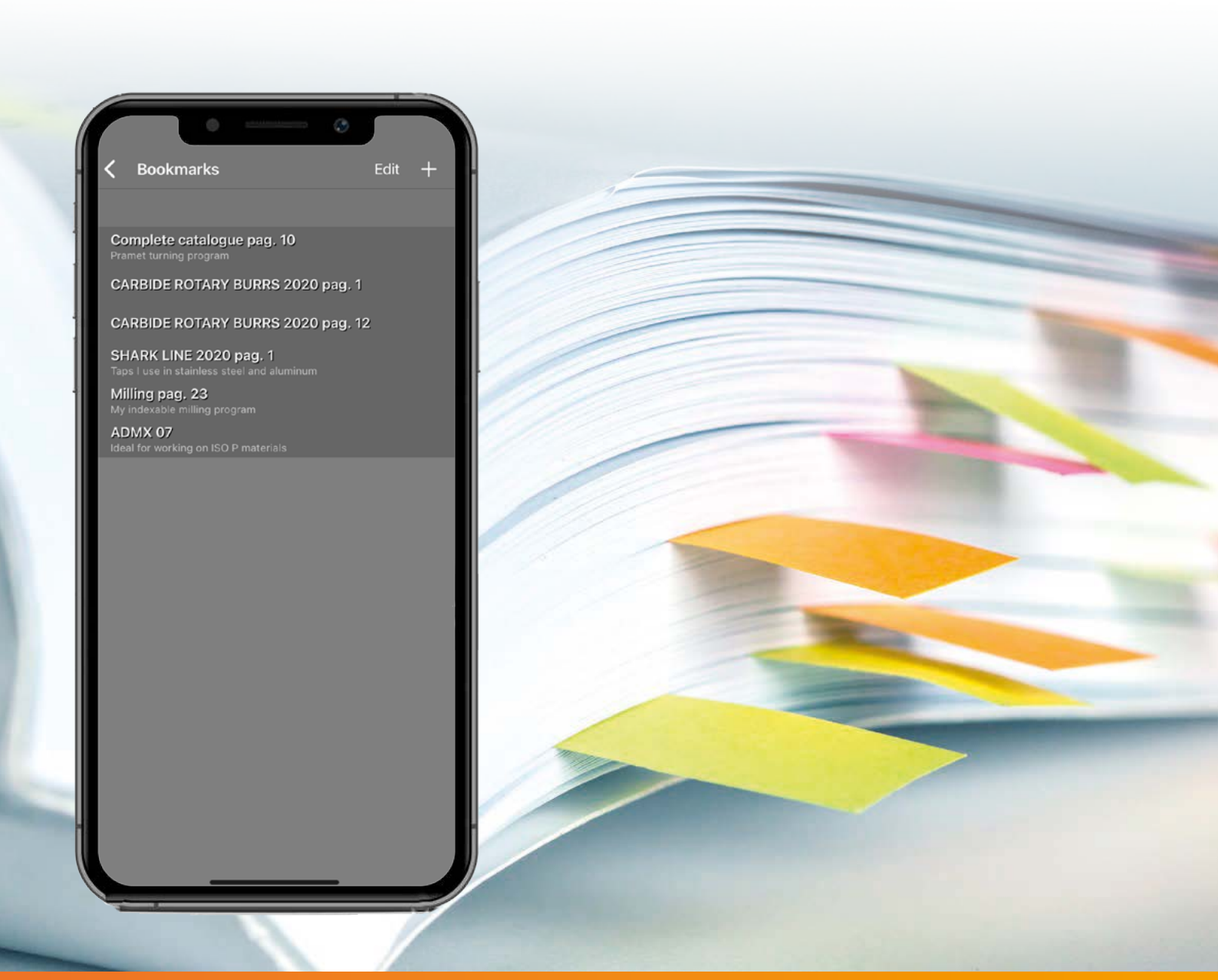
Milling – Tube Sawing

Milling – Cut-off Sawing

DORMER PRAMET

YOUR PERSONAL LIBRARY

Always revisiting the same sections of our publications? Our library app allows you to save key pages that you can revert back to again and again, whenever you need to. Simply Reliable. **Simply Reliable.**



SOLID HM MILLS

SOLID HM MILLS – TOOL MATERIALS AND SURFACE COATINGS NAVIGATOR

HM materials

Carbide Materials (or Hard Materials)	HM	A sintered powder metallurgy substrate, consisting of a metallic carbide composite with binder metal. The most central raw material is tungsten carbide (WC). Tungsten carbide contributes to the hardness of the material. Tantalum carbide (TaC), titanium carbide (TiC) and niobium carbide (NbC) complements WC and adjusts the properties to what is desired. These three materials are called cubic carbides. Cobalt (Co) acts as a binder and keeps the material together. Carbide materials are often characterised by high compression strength, high hardness and therefore high wear resistance, but also by limited flexural strength and toughness. Carbide is used in taps, reamers, milling cutters, drills and thread milling cutters.

Surface Treatments

Bright (uncoated)		Bright finish (uncoated surface) improves chip flow in soft or non-ferrous materials and maintains sharp cutting edges in abrasive materials.
Polished Bright Surface Finish		Bright polished surface finish greatly improves chip flow in soft or gummy non-ferrous materials. Polishing facilitates chip evacuation and prevents material from sticking to cutting edges and in flutes.

Surface Coatings

Aluminium Chromium Nitride Coating (AlCrN)		The Alcrona (AlCrN) family of coatings are aluminum chromium nitride coatings mostly used for milling cutters. The two unique properties of these coatings are high hot hardness and high oxidation resistance. When used on tools for machining applications involving heavy mechanical and thermal stresses, these properties translate into superior wear resistance. Multiple levels or specific versions of these coatings are available and specific for various tools and applications.
Titanium Silicon Nitride Coating (TiSiN)		TiSiN is designed for extreme cutting conditions and high speed machining of hard materials. This multi-layered coating has a nano-composite outer layer with Si_3N_4 nano-crystallites in a crystalline TiN matrix and is engineered to protect the cutting edge from heat transfer, oxidation and abrasion. TiSiN coatings can perform well at minimum to zero lubrication conditions.
Titanium Aluminium Nitride Coating (TiAlN)		Titanium Aluminium Nitride is a multi layer ceramic coating applied by PVD coating technology, which exhibits high toughness and oxidation stability. These properties make it ideal for higher speeds and feeds, while at the same time improving tool life. TiAlN is used in drilling, tapping, and milling applications and can be suitable for use when machining without coolant.
Titanium Aluminium Nitride Coatings (X-CEED)		X-CEED type TiAlN coating, also known as Futura-Nano coating is a nanolayered coating designed for higher hot hardness and higher stress applications.
Aluminium Titanium Nitride (AlTiN)		Aluminium Titanium Nitride (AlTiN) is a nanolayered broad based coating technology which is an upgrade to the conventional TiAlN coatings and can offer superior toughness, high hot hardness and oxidation resistance.
Diamond Like Coating (DLC)		Diamond Like Coating, also known as Diamond Like Carbon (DLC) provides the highest lubricity when used on carbide tools and avoids built up edge when machining graphite or soft non-ferrous materials.

SOLID HM MILLS – FAMILIES

With our assortment of Solid HM Mills we can offer solutions to machine material for practically any WMG.

Our Solid HM Mills families:

Line	Description
S7xx	With rake angle value from 7° to 10° offers a wide usage in medium strength steel and cast steels, medium strength stainless steels, cast irons and medium strength high temperature alloys.
S2xx	With rake angle value from 3° to 4° suits best for high alloyed steels >1200 to 1620 N/mm^2, medium strength stainless steels >850 N/mm^2 and medium to high strength super alloys >900 N/mm^2.
S5xx	With an negative rake angle is suited for hardened materials above 54 HRC (S501 – S511 are not in).
S6xx	With high rake angle are ideal for non-ferrous materials with one exception: S612 is only for abrasive materials such as graphite.
S8xx **S501** **S511**	Rake angle 10° suit for a multiapplication usage in mild up to medium strength steel and cast steels, mild to medium strength stainless steels, cast irons and non-ferrous materials such as aluminium and cooper and its alloys.
S9xx	Rake angle 12° makes the cutter ideal for general purposes use for softer materials, such as free machining up to medium strength steel and cast steels, cast irons, non-ferrous materials and pure titanium.

Material code (BMC)		HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM
Mill Profile		N	N	N	N	N	N	N	N	N	N	NRA	NRA	N
Number of flutes (NOF)		NOF 2	NOF 3	NOF 3	NOF 3	NOF 4	NOF 4	NOF 4	NOF 4≠	NOF 4≠	NOF 4≠	NOF 4≠	NOF 4≠	NOF 4≠
Cut length														
Flute Helix (FHA)		λ 40°	λ 40°	λ 40°	λ 40°	λ 40°	λ 40°	λ 40°	λ 40°	λ 40°	λ 40°	λ 40°	λ 40°	λ ≠
Radial rake angle (GAMF)		γ 10°	γ 10°	γ 10°	γ 10°	γ 10°	γ 10°	γ 10°	γ 7°	γ 10°	γ 10°	γ 10°	γ 10°	γ 10°
Shank		DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HB	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HB	DIN 6535HA
Coating		AlCrN	AlCrN	AlCrN	AlCrN	AlCrN	AlCrN	AlCrN	AlCrN	AlCrN	AlCrN	AlCrN	AlCrN	TiSiN
Cutting diameter tolerance class (TCDC)		DC h9	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9
Direction														
Basic standard group (BSG)		DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER
Cooling (CSP)														
		NEW							NEW					
Product Family Code		S710	S713	S714	S715	S716	S717	S718	S722HB	S761	S763	S765	S765HB	S766
		1.00 - 20.00	1.50 - 20.00	3.00 - 20.00	3.00 - 20.00	2.00 - 20.00	3.00 - 20.00	3.00 - 20.00	3.00 - 20.00	3.00 - 20.00	3.00 - 20.00	6.00 - 20.00	6.00 - 20.00	4.00 - 20.00
		28	29	30	31	32	33	34	35	36	37	38	39	40
P	P1	■	■	■	■	■	■	■	■	■	■	■	■	■
	P2	■	■	■	■	■	■	■	■	■	■	■	■	■
	P3	■	■	■	■	■	■	■	■	■	■	■	■	■
	P4	■	■	■	■	■	■	■	■	■	■	■	■	■
M	M1	■	■	■	■	■	■	■	■	■	■	■	■	■
	M2	■	■	■	■	■	■	■	■	■	■	■	■	■
	M3	■	■	■	■	■	■	■	■	■	■	■	■	■
	M4													
K	K1	■	■	■	■	■	■	■	■	■	■	■	■	■
	K2	■	■	■	■	■	■	■	■	■	■	■	■	■
	K3	■	■	■	■	■	■	■	■	■	■	■	■	■
	K4	■	■	■	■	■	■	■	■	■	■	■	■	■
	K5	■	■	■	■	■	■	■	■	■	■	■	■	■
N	N1			◪	◪		◪	◪						
	N2			◪	◪		◪	◪						
	N3			◪	◪		◪	◪						
	N4													
	N5													
S	S1	■	■	■	■	■	■	■	■	■	■	■	■	■
	S2	■	■	■	■	■	■	■	■	■	■	■	■	■
	S3	■	■	■	■	■	■	■	■	■	■	■	■	■
	S4	■	■	■	■	■	■	■	■	■	■	■	■	■
H	H1													
	H2													
	H3													
	H4													

■ Primary use ◪ Possible use

	S767	S768	S770HB	S771HB	S772HB	S773HB	S791	S739	S740	S216	S217	S218	S219	S225	S226
	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM
	N	N	N	FS	N	FS	N	N	N	N	N	N	N	N	N
	NOF 4≠	NOF 4≠	NOF 5	NOF 5	NOF 5	NOF 5	NOF 3-4	NOF 2	NOF 2	NOF 4	NOF 4	NOF 4	NOF 4	NOF 6-8	NOF 6-8
	λ ≠	λ ≠	λ ≠	λ ≠	λ ≠	λ ≠	λ 30°	λ 40°	λ 40°	λ 40°	λ 40°	λ 40°	λ 40°	λ 50°	λ 50°
	γ 10°	γ 10°	γ 10°	γ 10°	γ 10°	γ 10°	γ 8°	γ 10°	γ 10°	γ 3°	γ 3°	γ 3°	γ 3°	γ 3°	γ 3°
	DIN 6535HA	DIN 6535HA	DIN 6535HB	DIN 6535HB	DIN 6535HB	DIN 6535HB	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA
	TiSiN	TiSiN	AlCrN	AlCrN	AlCrN	AlCrN	AlCrN	AlTiN	AlTiN	AlTiN	AlTiN	AlTiN	AlTiN	AlTiN	AlTiN
	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9		DC h9	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9
	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER
		NEW	NEW	NEW	NEW	NEW	NEW								
	4.00 - 20.00	4.00 - 20.00	10.00 - 20.00	10.00 - 20.00	10.00 - 20.00	10.00 - 20.00	6.00 - 16.00	3.00 - 20.00	3.00 - 20.00	2.00 - 20.00	3.00 - 20.00	3.00 - 20.00	3.00 - 20.00	3.00 - 20.00	3.00 - 20.00
	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
P1	■	■	■	■	■	■	■	■	■						
P2	■	■	■	■	■	■	■	■	■						
P3	■	■	■	■	■	■	■	■	■						
P4	■	■	■	■	■	■	■	■	■	◪	◪	◪	◪	◪	◪
M1	■	■	■	■	■	■	■	■	■						
M2	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
M3	■	■	■	■	■	■	◪	■	■	■	■	■	■	■	■
M4							◪			■	■	■	■	■	■
K1	■	■	■	■	■	■	■	■	■						
K2	■	■	■	■	■	■	■	■	■						
K3	■	■	■	■	■	■	■	■	■						
K4	■	■	■	■	■	■	■	■	■						
K5	■	■	■	■	■	■	■	■	■						
N1							◪	■	■						
N2							◪	■	■						
N3							■	■	■						
N4							◪								
N5															
S1	■	■	■	■	■	■	◪	■	■	■	■	■	■	■	■
S2	■	■	■	■	■	■	◪	■	■	■	■	■	■	■	■
S3	■	■	■	■	■	■	◪	■	■	■	■	■	■	■	■
S4	■	■	■	■	■	■	◪	■	■	■	■	■	■	■	■
H1															
H2															
H3															
H4															

■ Primary use ◪ Possible use

Material code (BMC)	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM
Mill Profile	N	N	N	N	N	N	HRA	N	N	N	N	N	N
Number of flutes (NOF)	NOF 6-8	NOF 2	NOF 2	NOF 2	NOF 4≠	NOF 4≠	NOF 4≠	NOF 4	NOF 4	NOF 4	NOF 6-8	NOF 6-8	NOF 6-8
Cut length													
Flute Helix (FHA)	λ 50°	λ 30°	λ 30°	λ 30°	λ 40°	λ 40°	λ 40°	λ 45°	λ 40°	λ 40°	λ 50°	λ 50°	λ 50°
Radial rake angle (GAMF)	γ 3°	γ 3°	γ 3°	γ 3°	γ 4°	γ 4°	γ 4°	γ -10°	γ -6°	γ -6°	γ -26°	γ -26°	γ -26°
Shank	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HB	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA
Coating	AlTiN	TiSiN	TiSiN	TiSiN	AlCrN	AlCrN	AlCrN	TiSiN	TiSiN	TiSiN	TiSiN	TiSiN	TiSiN
Cutting diameter tolerance class (TCDC)	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9
Direction													
Basic standard group (BSG)	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER
Cooling (CSP)													
Product Family Code	S227	S229	S231	S233	S260	S262	S264	S521	S523	S524	S525	S526	S527
	6.00 - 20.00	1.50 - 16.00	1.50 - 16.00	2.00 - 16.00	3.00 - 20.00	3.00 - 20.00	6.00 - 20.00	3.00 - 16.00	1.50 - 16.00	3.00 - 16.00	3.00 - 20.00	3.00 - 20.00	3.00 - 20.00
	56	57	58	59	60	61	63	64	65	67	68	69	70
P	P1													
	P2													
	P3													
	P4	◪	◪	◪	◪									
M	M1													
	M2	■	■	■	■	■	■	■						
	M3	■	■	■	■	■	■	■						
	M4	■	■	■	■	■	■	■						
K	K1													
	K2													
	K3													
	K4													
	K5													
N	N1													
	N2													
	N3													
	N4													
	N5													
S	S1	■	■	■	■	■	■	■						
	S2	■	■	■	■	■	■	■						
	S3	■	■	■	■	■	■	■						
	S4	■	■	■	■	■	■	■						
H	H1					■	■	■	■	■	■	■	■	■
	H2					■	■	■	■	■	■	■	■	■
	H3					■	■	■	■	■	■	■	■	■
	H4								■	■	■	■	■	■

■ Primary use ◪ Possible use

	S529	S531	S533	S534	S535	S536	S561	S637	S610	S611	S614	S629	S638	S650	S654
	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM
	N	N	N	N	N	N	N	W	W	W	W	W	W	W	W NRA
	NOF 2	NOF 2	NOF 2	NOF 4	NOF 4	NOF 4-6	NOF 4≠	NOF 1	NOF 2	NOF 2	NOF 3	NOF 2	NOF 2	NOF 3≠	NOF 3≠
	λ 30°	λ 30°	λ 30°	λ 30°	λ 30°	λ 25°	λ 40°	λ 25°	λ 30°	λ 30°	λ 40°	λ 30°	λ 30°	λ 40°	λ 40°
	γ -10°	γ -10°	γ -10°	γ -10°	γ -10°	γ 0°	γ -6°	γ 20°	γ 20°	γ 20°	γ 13°	γ 15°	γ 20°	γ 13°	γ 15°
	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA
	TiSiN	TiSiN	TiSiN	TiSiN	TiSiN	TiSiN	TiSiN	Hi	Hi	Hi	Bright	Bright	Hi	Bright	Bright
	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9
	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER
							NEW				NEW			NEW	NEW
	1.50 - 16.00	1.50 - 16.00	2.00 - 16.00	3.00 - 16.00	3.00 - 16.00	6.00 - 12.00	1.00 - 20.00	2.00 - 12.00	2.00 - 20.00	3.00 - 20.00	3.00 - 16.00	1.00 - 20.00	6.20 - 20.30	1.00 - 20.00	6.00 - 20.00
	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85
P1															
P2															
P3															
P4															
M1															
M2															
M3															
M4															
K1															
K2															
K3															
K4															
K5															
N1								■	■	■	■	■	■	■	■
N2								■	■	■	■	■	■	■	■
N3								■	■	■	■	■	■	■	■
N4								■	■	■	■	■	■	■	■
N5															
S1															
S2															
S3															
S4															
H1	■	■	■	■	■	■	■								
H2	■	■	■	■	■	■	■								
H3	■	■	■	■	■	■	■								
H4	■	■	■	■	■	■	■								

■ Primary use ◪ Possible use

Material code (BMC)	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM
Mill Profile	W	N	N	N	N	N	N	N	N	N	N	N	N	N
Number of flutes (NOF)	NOF 4≠	NOF 4	NOF 2	NOF 2	NOF 2	NOF 2	NOF 2	NOF 3	NOF 3	NOF 3	NOF 3	NOF 3	NOF 4	
Cut length														
Flute Helix (FHA)	λ 40°	λ 40°	λ 28°	λ 28°	λ 28°	λ 28°	λ 28°	λ 28°	λ 28°	λ 28°	λ 28°	λ 28°	λ 34°	
Radial rake angle (GAMF)	γ 10°	γ 10°	γ 9°	γ 9°	γ 9°	γ 9°	γ 9°	γ 9°	γ 9°	γ 9°	γ 9°	γ 9°	γ 9°	
Shank	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HB	DIN 6535HA	DIN 6535HB	DIN 6535HA	DIN 6535HA	DIN 6535HB	DIN 6535HA	DIN 6535HB	DIN 6535HA	DIN 6535HA	
Coating	Bright	Diamond	AlCrN	AlCrN	AlCrN	AlCrN	AlCrN	AlCrN	AlCrN	AlCrN	AlCrN	AlCrN	AlCrN	
Cutting diameter tolerance class (TCDC)	DC h9	DC h9											DC h10	
Direction														
Basic standard group (BSG)	DORMER	DORMER	DIN 6527K	DIN 6527K	DIN 6527L	DIN 6527L	DORMER	DIN 6527K	DIN 6527K	DIN 6527L	DIN 6527L	DORMER	DIN 6527K	
Cooling (CSP)														
Product Family Code	NEW S662	S612	S802HA	S802HB	S812HA	S812HB	S822	S803HA	S803HB	S813HA	S813HB	S823	S804HA	
	3.00 - 20.00	1.00 - 12.00	1.00 - 20.00	2.00 - 20.00	2.00 - 20.00	2.00 - 20.00	2.00 - 20.00	1.00 - 20.00	2.00-20.00	2.00 - 20.00	2.00 - 20.00	2.00 - 20.00	2.00 - 25.00	
	86	87	88	89	90	91	92	93	94	95	96	97	98	
P	P1			■	■	■	■	■	■	■	■	■	■	■
	P2			■	■	■	■	■	■	■	■	■	■	■
	P3			■	■	■	■	■	■	■	■	■	■	■
	P4			■	■	■	■	■	■	■	■	■	■	■
M	M1			■	■	■	■	■	■	■	■	■	■	■
	M2			■	■	■	■	■	■	■	■	■	■	■
	M3			■	■	■	■	■	■	■	◪	◪	◪	■
	M4			◪	◪	■	■	■	◪	◪	◪	◪	◪	◪
K	K1			■	■	■	■	■	■	■	■	■	■	■
	K2			■	■	■	■	■	■	■	■	■	■	■
	K3			■	■	■	■	■	■	■	■	■	■	■
	K4			■	■	■	■	■	■	■	■	■	■	■
	K5			■	■	■	■	■	■	■	■	■	■	■
N	N1	■		◪	◪	■	■	■	◪	◪	◪	◪	◪	◪
	N2	■		■	■	■	■	■	■	■	■	■	■	◪
	N3	■		■	■	■	■	■	■	■	■	■	■	■
	N4	■		◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪
	N5		■											
S	S1			◪	◪	■	■	■	◪	◪	◪	◪	◪	◪
	S2			◪	◪	■	■	■	◪	◪	◪	◪	◪	◪
	S3			◪	◪	■	■	■	◪	◪	◪	◪	◪	◪
	S4			◪	◪	■	■	■	◪	◪	◪	◪	◪	◪
H	H1													
	H2													
	H3													
	H4													

■ Primary use ◪ Possible use

	S804HB	S814HA	S814HB	S501	S511	S902	S922	S903	S933	S904	S944	S991		
	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM			
	N	N	N	N	N	N	N	N	N	N	N			
	NOF 4	NOF 4	NOF 4	NOF 2	NOF 4	NOF 2	NOF 2	NOF 3	NOF 3	NOF 4	NOF 4			
	λ 34°	λ 34°	λ 34°	λ 30°	λ 30°	λ 30°	λ 30°	λ 30°	λ 30°	λ 30°	λ 30°			
	γ 9°	γ 9°	γ 9°	γ 10°	γ 10°	γ 12°	γ 12°	γ 12°	γ 12°	γ 12°	γ 12°			
	DIN 6535HB	DIN 6535HA	DIN 6535HB	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HB	DIN 6535HA	DIN 6535HB	DIN 6535HA	DIN 6535HB			
	AlCrN	AlCrN	AlCrN	X-CEED	X-CEED	Bright	TiAlN	Bright	TiAlN	Bright	TiAlN			
	DC h10	DC h10	DC h10	DC h9	DC h9	DC h10	DC h10	DC h10	DC h10	DC h12	DC h12			
	DIN 6527K	DIN 6527L	DIN 6527L	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER			
	2.00 - 25.00	2.00 - 25.00	2.00 - 25.00	1.00 - 16.00	3.00 - 16.00	2.00 - 20.00	2.00 - 20.00	2.00 - 20.00	2.00 - 20.00	2.00 - 20.00	2.00 - 20.00	Set		
	99	100	101	102	103	104	105	106	107	108	109	110		
P1	■	■	■	■	■	■	■	■	■	■	■			
P2	■	■	■	■	■	■	■	■	■	■	■			
P3	■	■	■	■	■	■	■	■	■	■	■			
P4	■	■	■	■	■	◪	■	◪	■	◪	■			
M1	■	■	■	■	■									
M2	■	■	■	■	■									
M3	■	◪	◪	◪	◪									
M4	◪	◪	◪	◪	◪									
K1	■	■	■	■	■	◪	■	◪	■	◪	■			
K2	■	■	■	■	■	■	■	■	■	■	■			
K3	■	■	■	■	■	■	■	■	■	■	■			
K4	■	■	■	■	■	◪	■	◪	■	◪	■			
K5	■	■	■	■	■	■	■	■	■	■	■			
N1	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪			
N2	◪	◪	◪	◪	◪	◪	■	◪	■	◪	■			
N3	■	■	■	■	■	■	■	■	■	■	■			
N4	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪			
N5														
S1	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪			
S2	◪	◪	◪	◪	◪					◪	◪			
S3	◪	◪	◪	◪	◪					◪	◪			
S4	◪	◪	◪	◪	◪					◪	◪			
H1														
H2														
H3														
H4														

■ Primary use ◪ Possible use

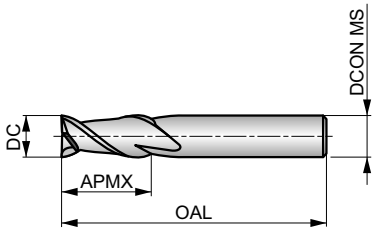
S710

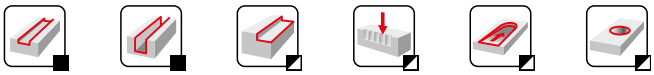
DORMER

2-Flute Solid Carbide End Mill

Short cut length, 2-flute design with 40° helix provides high rigidity for milling standard slots. AlCrN coating improves performance and extends the tool life.

HM	N	NOF 2
	λ 40°	γ 10°
DIN 6535HA	AlCrN	DC h9
	DORMER	





Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■ 199 K	■ 223 K	■ 230 K	■ 170 K	■ 150 K	■ 133 J	■ 138 K	■ 111 J	■ 94 J	■ 82 J	■ 70 J	■ 115 K	■ 97 K	■ 102 K
M2.2	**M3.1**	**M3.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**
■ 84 J	■ 94 J	■ 81 J	■ 196 K	■ 145 K	■ 109 K	■ 202 K	■ 164 K	■ 131 J	■ 178 K	■ 136 K	■ 110 J	■ 165 J	■ 125 J
K4.3	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.2**	**S2.1**	**S3.1**	**S4.1**				
■ 91 J	■ 78 J	■ 65 J	■ 187 J	■ 141 J	■ 109 J	■ 69 J	■ 53 J	■ 40 J	■ 31 J				

DCON MS tolerance h6.

Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S7101.0	1.00	3.00	3.00	40.0	2
S7101.5	1.50	3.00	4.50	40.0	2
S7102.0	2.00	3.00	6.50	40.0	2
S7102.5	2.50	3.00	6.50	40.0	2
S7103.0	3.00	6.00	9.00	50.0	2
S7104.0	4.00	6.00	12.00	50.0	2
S7105.0	5.00	6.00	15.00	50.0	2
S7106.0	6.00	6.00	20.00	60.0	2
S7108.0	8.00	8.00	20.00	64.0	2
S71010.0	10.00	10.00	22.00	75.0	2
S71012.0	12.00	12.00	25.00	75.0	2
S71016.0	16.00	16.00	32.00	90.0	2
S71020.0	20.00	20.00	38.00	100.0	2

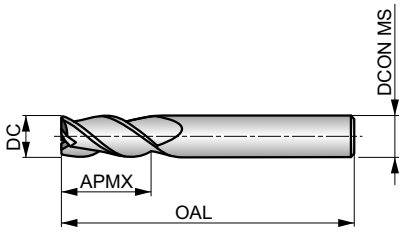
S713

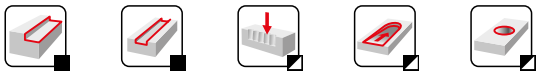
DORMER

3-Flute Solid Carbide End Mill

Short cut length, 3-flute design with 40° helix provides high rigidity for milling standard slots. AlCrN coating improves performance and extends the tool life.

HM	N	NOF 3
	λ 40°	γ 10°
DIN 6535HA	AlCrN	DC h9
	DORMER	





Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■199 J	■223 J	■230 J	■170 J	■150 J	■133 I	■138 J	■111 I	■94 I	■82 I	■70 I	■115 J	■97 J	■102 J
M2.2	**M3.1**	**M3.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**
■84 I	■94 I	■81 I	■196 J	■145 J	■109 J	■202 J	■164 J	■131 I	■178 J	■136 J	■110 I	■165 I	■125 I
K4.3	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.2**	**S2.1**	**S3.1**	**S4.1**				
■91 I	■78 I	■65 I	■187 I	■141 I	■109 I	■69 I	■53 I	■40 I	■31 I				

DCON MS tolerance h6.

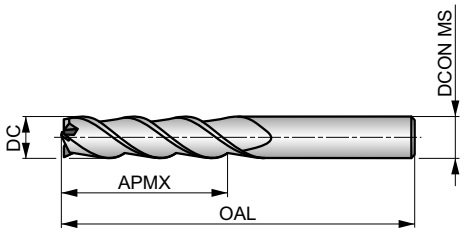
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S7131.5	1.50	4.00	4.50	40.0	3
S7132.0	2.00	4.00	6.50	40.0	3
S7133.0	3.00	3.00	9.00	40.0	3
S7134.0	4.00	4.00	12.00	50.0	3
S7135.0	5.00	5.00	15.00	50.0	3
S7136.0	6.00	6.00	16.00	50.0	3
S7138.0	8.00	8.00	20.00	64.0	3
S71310.0	10.00	10.00	22.00	70.0	3
S71312.0	12.00	12.00	25.00	75.0	3
S71314.0	14.00	14.00	32.00	90.0	3
S71316.0	16.00	16.00	32.00	90.0	3
S71318.0	18.00	18.00	38.00	100.0	3
S71320.0	20.00	20.00	38.00	100.0	3

S714

DORMER

3-Flute Solid Carbide End Mill, Long Series

Long cut length, 3-flute design with 40° helix provides high rigidity for profile milling deep walls. AlCrN coating improves performance and extends the tool life.



HM	N	NOF 3
	λ 40°	γ 10°
DIN 6535HA	AlCrN	DC h9
	DORMER	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■140 J	■157 J	■162 J	■120 J	■106 J	■94 I	■97 J	■78 I	■66 I	■58 I	■49 I	■81 J	■68 J	■71 J
M2.2	M3.1	M3.2	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	K3.3	K4.1	K4.2
■59 I	■66 I	■57 I	■138 J	■102 J	■77 J	■142 J	■115 J	■92 I	■125 J	■96 J	■78 I	■116 I	■88 I
K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2
■64 I	■55 I	■46 I	■132 I	■99 I	■77 I	◪249 K	◪187 K	◪125 K	◪125 J	◪112 J	◪81 J	◪131 J	◪76 J
N3.3	S1.2	S2.1	S3.1	S4.1									
◪39 J	■49 I	■37 I	■28 I	■22 I									

DCON MS tolerance h6.

Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S7143.0	3.00	3.00	19.00	60.0	3
S7144.0	4.00	4.00	19.00	60.0	3
S7145.0	5.00	5.00	19.00	60.0	3
S7146.0	6.00	6.00	31.00	75.0	3
S7148.0	8.00	8.00	31.00	75.0	3
S71410.0	10.00	10.00	31.00	75.0	3
S71412.0	12.00	12.00	50.00	100.0	3
S71414.0	14.00	14.00	57.00	125.0	3
S71416.0	16.00	16.00	57.00	125.0	3
S71418.0	18.00	18.00	57.00	125.0	3
S71420.0	20.00	20.00	57.00	125.0	3

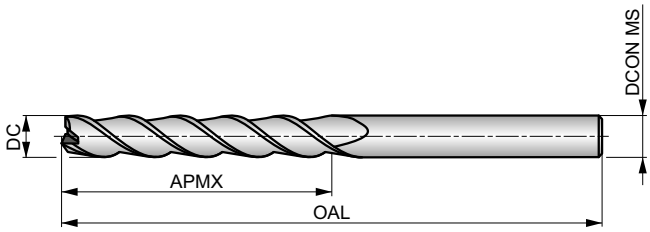
S715

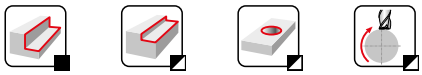
DORMER

3-Flute Solid Carbide End Mill, Extra Long Series

Extra long cut length, 3-flute design with 40° helix provides high rigidity for profile milling extra deep walls. AlCrN coating improves performance and extends the tool life.

HM	N	NOF 3
	λ 40°	γ 10°
DIN 6535HA	AlCrN	DC h9
	DORMER	





Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■88 J	■98 J	■101 J	■75 J	■66 J	■59 I	■61 J	■49 I	■41 I	■36 I	■31 I	■50 J	■42 J	■44 J
M2.2	**M3.1**	**M3.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**
■36 I	■41 I	■35 I	■86 J	■64 J	■48 J	■89 J	■72 J	■58 I	■79 J	■60 J	■49 I	■73 I	■55 I
K4.3	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**
■40 I	■35 I	■29 I	■83 I	■62 I	■48 I	◪178 K	◪134 K	◪90 K	◪90 J	◪80 J	◪58 J	◪94 J	◪55 J
N3.3	**S1.2**	**S2.1**	**S3.1**	**S4.1**									
◪28 J	■30 I	■23 I	■18 I	■14 I									

DCON MS tolerance h6.

Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S7153.0	3.00	3.00	25.00	100.0	3
S7154.0	4.00	4.00	31.00	100.0	3
S7155.0	5.00	5.00	31.00	100.0	3
S7156.0	6.00	6.00	38.00	100.0	3
S7158.0	8.00	8.00	41.00	100.0	3
S71510.0	10.00	10.00	57.00	125.0	3
S71512.0	12.00	12.00	75.00	150.0	3
S71514.0	14.00	14.00	75.00	150.0	3
S71516.0	16.00	16.00	75.00	150.0	3
S71518.0	18.00	18.00	75.00	150.0	3
S71520.0	20.00	20.00	75.00	150.0	3

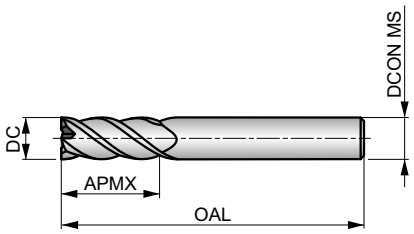
S716

DORMER

4-Flute Solid Carbide End Mill

Short cut length, 4-flute design with 40° helix provides high rigidity for standard profile milling. AlCrN coating improves performance and extends the tool life.

HM	N	NOF 4
	λ 40°	γ 10°
DIN 6535HA	AlCrN	DC h9
	DORMER	



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■199 J	■223 J	■230 J	■170 J	■150 J	■133 I	■138 J	■111 I	■94 I	■82 I	■70 I	■115 J	■97 J	■102 J
M2.2	**M3.1**	**M3.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**
■84 I	■94 I	■81 I	■196 J	■145 J	■109 J	■202 J	■164 J	■131 I	■178 J	■136 J	■110 I	■165 I	■125 I
K4.3	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.2**	**S2.1**	**S3.1**	**S4.1**				
■91 I	■78 I	■65 I	■187 I	■141 I	■109 I	■69 I	■53 I	■40 I	■31 I				

DCON MS tolerance h6.

Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S7162.0	2.00	4.00	6.50	40.0	4
S7163.0	3.00	3.00	9.00	40.0	4
S7164.0	4.00	4.00	12.00	50.0	4
S7165.0	5.00	5.00	15.00	50.0	4
S7166.0	6.00	6.00	16.00	50.0	4
S7168.0	8.00	8.00	20.00	64.0	4
S71610.0	10.00	10.00	22.00	70.0	4
S71612.0	12.00	12.00	25.00	75.0	4
S71614.0	14.00	14.00	32.00	90.0	4
S71616.0	16.00	16.00	32.00	90.0	4
S71618.0	18.00	18.00	38.00	100.0	4
S71620.0	20.00	20.00	38.00	100.0	4

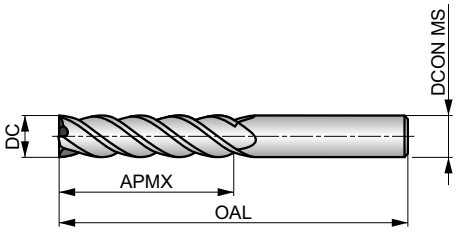
S717

DORMER

4-Flute Solid Carbide End Mill, Long Series

Long cut length, 4-flute design with 40° helix provides high rigidity for profile milling deep walls. AlCrN coating improves performance and extends the tool life.

HM	N	NOF 4
	λ 40°	γ 10°
DIN 6535HA	AlCrN	DC h9
	DORMER	



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■140 J	■157 J	■162 J	■120 J	■106 J	■94 I	■97 J	■78 I	■66 I	■58 I	■49 I	■81 J	■68 J	■71 J
M2.2	**M3.1**	**M3.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**
■59 I	■66 I	■57 I	■138 J	■102 J	■77 J	■142 J	■115 J	■92 I	■125 J	■96 J	■78 I	■116 I	■88 I
K4.3	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**
■64 I	■55 I	■46 I	■132 I	■99 I	■77 I	◪249 K	◪187 K	◪125 K	◪125 J	◪112 J	◪81 J	◪131 J	◪76 J
N3.3	**S1.2**	**S2.1**	**S3.1**	**S4.1**									
◪39 J	■49 I	■37 I	■28 I	■22 I									

DCON MS tolerance h6.

Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S7173.0	3.00	3.00	19.00	60.0	4
S7174.0	4.00	4.00	19.00	60.0	4
S7175.0	5.00	5.00	19.00	60.0	4
S7176.0	6.00	6.00	31.00	75.0	4
S7178.0	8.00	8.00	31.00	75.0	4
S71710.0	10.00	10.00	31.00	75.0	4
S71712.0	12.00	12.00	50.00	100.0	4
S71714.0	14.00	14.00	57.00	125.0	4
S71716.0	16.00	16.00	57.00	125.0	4
S71718.0	18.00	18.00	57.00	125.0	4
S71720.0	20.00	20.00	57.00	125.0	4

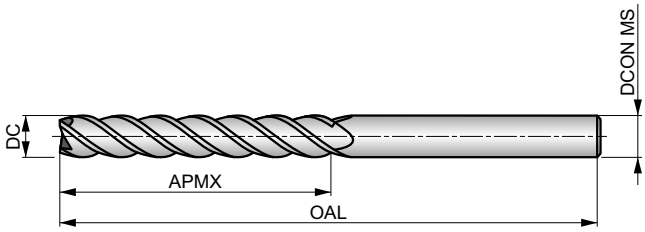
S718

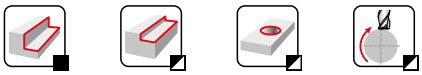
DORMER

4-Flute Solid Carbide End Mill, Extra Long Series

Extra long cut length, 4-flute design with 40° helix provides high rigidity for profile milling extra deep walls. AlCrN coating improves performance and extends the tool life.

HM	N	NOF 4
	λ 40°	γ 10°
DIN 6535HA	AlCrN	DC h9
	DORMER	





Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■88 J	■98 J	■101 J	■75 J	■66 J	■59 I	■61 J	■49 I	■41 I	■36 I	■31 I	■50 J	■42 J	■44 J
M2.2	**M3.1**	**M3.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**
■36 I	■41 I	■35 I	■86 J	■64 J	■48 J	■89 J	■72 J	■58 I	■79 J	■60 J	■49 I	■73 I	■55 I
K4.3	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**
■40 I	■35 I	■29 I	■83 I	■62 I	■48 I	◪178 K	◪134 K	◪90 K	◪90 J	◪80 J	◪58 J	◪94 J	◪55 J
N3.3	**S1.2**	**S2.1**	**S3.1**	**S4.1**									
◪28 J	■30 I	■23 I	■18 I	■14 I									

DCON MS tolerance h6.

Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S7183.0	3.00	3.00	25.00	100.0	4
S7184.0	4.00	4.00	31.00	100.0	4
S7185.0	5.00	5.00	31.00	100.0	4
S7186.0	6.00	6.00	38.00	100.0	4
S7188.0	8.00	8.00	41.00	100.0	4
S71810.0	10.00	10.00	57.00	125.0	4
S71812.0	12.00	12.00	75.00	150.0	4
S71814.0	14.00	14.00	75.00	150.0	4
S71816.0	16.00	16.00	75.00	150.0	4
S71818.0	18.00	18.00	75.00	150.0	4
S71820.0	20.00	20.00	75.00	150.0	4

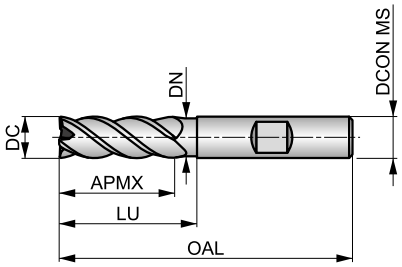
S722HB

DORMER

4-Flute Solid Carbide End Mill

Medium cut length, 4-flute design with 40° helix, differential pitch and Weldon shank provides high rigidity for profile milling deep walls. Neck recess to avoid work contact with the wall and extend reach. AlCrN coating improves performance and extends the tool life.

HM	N	NOF 4
	λ 40°	γ 7°
DIN 6535HB	AlCrN	DC h9
	DORMER	



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■199 J	■223 J	■230 J	■170 J	■150 J	■133 I	■138 J	■111 I	■94 I	■82 I	■70 I	■115 J	■97 J	■102 J
M2.2	**M3.1**	**M3.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**
■84 I	■94 I	■81 I	■196 J	■145 J	■109 J	■202 J	■164 J	■131 I	■178 J	■136 J	■110 I	■165 I	■125 I
K4.3	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.2**	**S2.1**	**S3.1**	**S4.1**				
■91 I	■78 I	■65 I	■187 I	■141 I	■109 I	■69 I	■53 I	■40 I	■31 I				

DCON MS tolerance h6; RE ±0.02 mm.

Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S722HB3.0	3.00	0.10	6.00	9.00	50.0	4	15.00	2.80
S722HB4.0	4.00	0.10	6.00	11.00	57.0	4	20.00	3.70
S722HB5.0	5.00	0.10	6.00	13.00	57.0	4	20.00	4.60
S722HB6.0	6.00	0.10	6.00	20.00	60.0	4	25.00	5.50
S722HB8.0	8.00	0.20	8.00	20.00	64.0	4	26.00	7.40
S722HB10.0	10.00	0.20	10.00	27.00	70.0	4	32.00	9.20
S722HB12.0	12.00	0.20	12.00	26.00	83.0	4	37.00	11.00
S722HB14.0	14.00	0.20	14.00	26.00	83.0	4	37.00	13.00
S722HB16.0	16.00	0.20	16.00	32.00	92.0	4	42.00	15.00
S722HB18.0	18.00	0.20	18.00	32.00	92.0	4	42.00	17.00
S722HB20.0	20.00	0.20	20.00	38.00	104.0	4	50.00	19.00

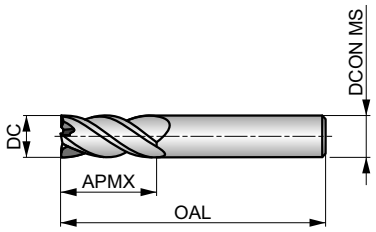
S761

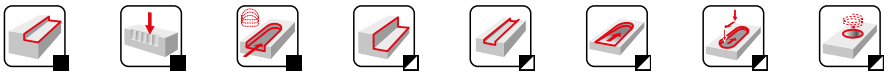
DORMER

4-Flute Solid Carbide End Mill

Short cut length, 4-flute design with 40° helix and differential pitch to reduce vibrations and improve surface finish in profile milling. AlCrN coating improves performance and extends the tool life. Also suited for plunging, ramping and trochoidal milling.

HM	N	NOF 4
	λ 40°	γ 10°
DIN 6535HA	AlCrN	DC h9
	DORMER	





Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■211 J	■236 J	■243 J	■180 J	■158 J	■140 I	■146 J	■117 I	■99 I	■86 I	■74 I	■122 J	■103 J	■108 J
M2.2	**M3.1**	**M3.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**
■89 I	■100 I	■86 I	■208 J	■154 J	■116 J	■214 J	■174 J	■139 I	■189 J	■145 J	■117 I	■176 I	■132 I
K4.3	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.2**	**S2.1**	**S3.1**	**S4.1**				
■97 I	■83 I	■69 I	■199 I	■149 I	■116 I	■72 I	■56 I	■42 I	■33 I				

DCON MS tolerance h6.

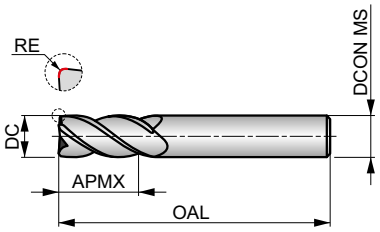
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S7613.0	3.00	6.00	9.00	57.0	4
S7614.0	4.00	6.00	12.00	57.0	4
S7615.0	5.00	6.00	13.00	57.0	4
S7616.0	6.00	6.00	13.00	57.0	4
S7618.0	8.00	8.00	20.00	64.0	4
S76110.0	10.00	10.00	22.00	72.0	4
S76112.0	12.00	12.00	26.00	83.0	4
S76114.0	14.00	14.00	32.00	83.0	4
S76116.0	16.00	16.00	32.00	92.0	4
S76120.0	20.00	20.00	38.00	104.0	4

S763

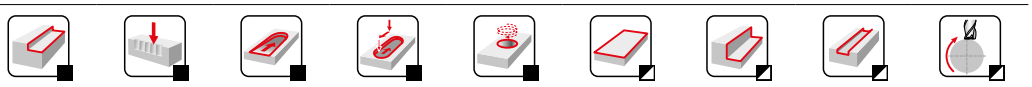
DORMER

4-Flute Solid Carbide Corner Radius End Mill

Short cut length, 4-flute design with different corner radius available, 40° helix with differential pitch to reduce vibrations and improve surface finish, when milling contours where a corner radius is required. AlCrN coating improves performance. Also suited for plunging, ramping, z-level roughing and helical interpolation.



HM	N	NOF 4
	λ 40°	γ 10°
DIN 6535HA	AlCrN	DC h9
	DORMER	



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■211 J	■236 J	■243 J	■180 J	■158 J	■140 I	■146 J	■117 I	■99 I	■86 I	■74 I	■122 J	■103 J	■108 J
M2.2	M3.1	M3.2	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	K3.3	K4.1	K4.2
■89 I	■100 I	■86 I	■208 J	■154 J	■116 J	■214 J	■174 J	■139 I	■189 J	■145 J	■117 I	■176 I	■132 I
K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	S1.2	S2.1	S3.1	S4.1				
■97 I	■83 I	■69 I	■199 I	■149 I	■116 I	■72 I	■56 I	■42 I	■33 I				

DCON MS tolerance h6; RE ±0.01 mm.

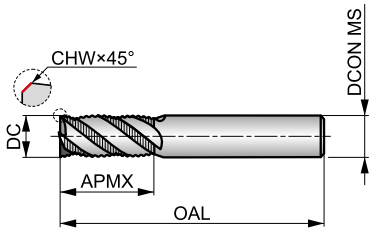
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S7633.0XR0.3	3.00	0.30	3.00	9.00	40.0	4
S7634.0XR0.3	4.00	0.30	4.00	12.00	50.0	4
S7634.0XR0.5	4.00	0.50	4.00	12.00	50.0	4
S7635.0XR0.3	5.00	0.30	5.00	15.00	50.0	4
S7635.0XR0.5	5.00	0.50	5.00	15.00	50.0	4
S7636.0XR0.5	6.00	0.50	6.00	16.00	50.0	4
S7636.0XR1.0	6.00	1.00	6.00	16.00	50.0	4
S7638.0XR0.5	8.00	0.50	8.00	20.00	64.0	4
S7638.0XR1.0	8.00	1.00	8.00	20.00	64.0	4
S76310.0XR0.5	10.00	0.50	10.00	22.00	70.0	4
S76310.0XR1.0	10.00	1.00	10.00	22.00	70.0	4
S76310.0XR2.0	10.00	2.00	10.00	22.00	70.0	4
S76312.0XR1.0	12.00	1.00	12.00	25.00	75.0	4
S76312.0XR2.0	12.00	2.00	12.00	25.00	75.0	4
S76312.0XR3.0	12.00	3.00	12.00	25.00	75.0	4
S76314.0XR1.5	14.00	1.50	14.00	32.00	90.0	4
S76316.0XR1.0	16.00	1.00	16.00	32.00	90.0	4
S76316.0XR2.0	16.00	2.00	16.00	32.00	90.0	4
S76316.0XR3.0	16.00	3.00	16.00	32.00	90.0	4
S76318.0XR2.0	18.00	2.00	18.00	38.00	100.0	4
S76320.0XR3.0	20.00	3.00	20.00	38.00	100.0	4

S765

DORMER

4-Flute Solid Carbide Roughing End Mill, DIN 6535 HA Shank

Short cut length, 4-flute design with 40° helix and differential pitch to reduce vibrations. The NRA profile is designed to break chips for efficient roughing applications. AlCrN coating improves performance and extends the tool life. Also suited for slotting and trochoidal roughing operation.



HM	NRA	NOF 4≠
	λ 40°	γ 10°
DIN 6535HA	AlCrN	DC h9
	DORMER	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■211 J	■236 J	■243 J	■180 J	■158 J	■140 J	■146 J	■117 J	■99 J	■86 J	■74 J	■122 J	■103 J	■108 J
M2.2	**M3.1**	**M3.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**
■89 J	■100 J	■86 J	■208 J	■154 J	■116 J	■214 J	■174 J	■139 J	■189 J	■145 J	■117 J	■176 J	■132 J
K4.3	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.2**	**S2.1**	**S3.1**	**S4.1**				
■97 J	■83 I	■69 I	■199 J	■149 J	■116 J	■72 J	■56 I	■42 I	■33 I				

DCON MS tolerance h6; CHW ± 0.02X45° mm.

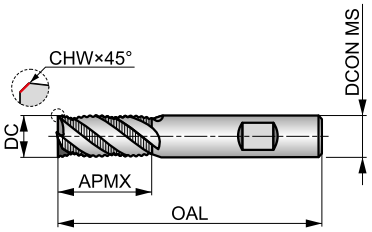
Product	DC	CHW	DCON MS	APMX	OAL	NOF
	[mm]	[mm]	[mm]	[mm]	[mm]	
S7656.0	6.00	0.10	6.00	16.00	50.0	4
S7658.0	8.00	0.20	8.00	20.00	64.0	4
S76510.0	10.00	0.20	10.00	22.00	70.0	4
S76512.0	12.00	0.20	12.00	26.00	75.0	4
S76514.0	14.00	0.30	14.00	32.00	90.0	4
S76516.0	16.00	0.30	16.00	32.00	90.0	4
S76518.0	18.00	0.30	18.00	38.00	100.0	4
S76520.0	20.00	0.40	20.00	38.00	100.0	4

S765HB

DORMER

4-Flute Solid Carbide Roughing End Mill, DIN 6535 HB Shank

Short cut length, 4-flute design with 40° helix and differential pitch to reduce vibrations. The NRA profile is designed to break chips for efficient roughing applications. The Weldon shank prevents the end mill from slipping in the toolholder. AlCrN coating. Also suited for slotting and trochoidal roughing operation.



HM	NRA	NOF 4
	λ 40°	γ 10°
DIN 6535HB	AlCrN	DC h9
	DORMER	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■211 J	■236 J	■243 J	■180 J	■158 J	■140 J	■146 J	■117 J	■99 J	■86 J	■74 J	■122 J	■103 J	■108 J
M2.2	**M3.1**	**M3.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**
■89 J	■100 J	■86 J	■208 J	■154 J	■116 J	■214 J	■174 J	■139 J	■189 J	■145 J	■117 J	■176 J	■132 J
K4.3	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.2**	**S2.1**	**S3.1**	**S4.1**				
■97 J	■83 I	■69 I	■199 J	■149 J	■116 J	■72 J	■56 I	■42 I	■33 I				

DCON MS tolerance h6; CHW ± 0.02X45° mm.

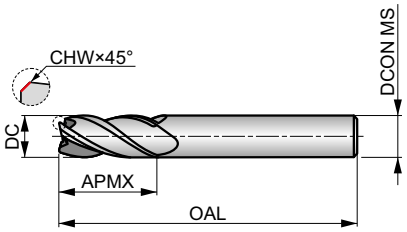
Product	DC	CHW	DCON MS	APMX	OAL	NOF
	[mm]	[mm]	[mm]	[mm]	[mm]	
S765HB6.0	6.00	0.10	6.00	16.00	50.0	4
S765HB8.0	8.00	0.20	8.00	20.00	64.0	4
S765HB10.0	10.00	0.20	10.00	22.00	70.0	4
S765HB12.0	12.00	0.20	12.00	26.00	75.0	4
S765HB14.0	14.00	0.30	14.00	32.00	90.0	4
S765HB16.0	16.00	0.30	16.00	32.00	90.0	4
S765HB18.0	18.00	0.30	18.00	38.00	100.0	4
S765HB20.0	20.00	0.40	20.00	38.00	100.0	4

S766

DORMER

4-Flute Solid Carbide End Mill

Short cut length, 4-flute design with unequal helix and differential pitch to reduce vibrations and improve surface finish in profile milling. TiSiN coating increases tool life and improves performance. Also suited for plunging, ramping and trochoidal milling.



HM	N	NOF 4 ≠
	λ ≠	γ 10°
DIN 6535HA	TiSiN	DC h9
	DORMER	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■ 211 J	■ 236 J	■ 243 J	■ 180 J	■ 158 J	■ 140 I	■ 146 J	■ 117 I	■ 99 I	■ 86 I	■ 74 I	■ 122 J	■ 103 J	■ 108 J
M2.2	**M3.1**	**M3.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**
■ 89 I	■ 100 I	■ 86 I	■ 208 J	■ 154 J	■ 116 J	■ 214 J	■ 174 J	■ 139 I	■ 189 J	■ 145 J	■ 117 I	■ 176 I	■ 132 I
K4.3	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.2**	**S2.1**	**S3.1**	**S4.1**				
■ 97 I	■ 83 I	■ 69 I	■ 199 I	■ 149 I	■ 116 I	■ 72 I	■ 56 I	■ 42 I	■ 33 I				

DCON MS tolerance h6; CHW ± 0.02X45° mm.

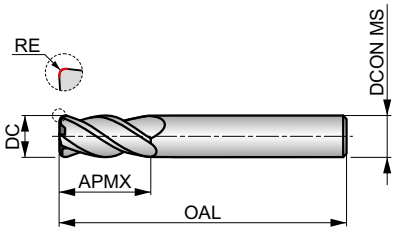
Product	DC [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S7664.0	4.00	0.10	6.00	11.00	57.0	4
S7665.0	5.00	0.10	6.00	13.00	57.0	4
S7666.0	6.00	0.10	6.00	13.00	57.0	4
S7668.0	8.00	0.20	8.00	20.00	64.0	4
S76610.0	10.00	0.20	10.00	22.00	72.0	4
S76612.0	12.00	0.20	12.00	26.00	83.0	4
S76614.0	14.00	0.30	14.00	26.00	83.0	4
S76616.0	16.00	0.30	16.00	32.00	92.0	4
S76620.0	20.00	0.40	20.00	38.00	104.0	4

S767

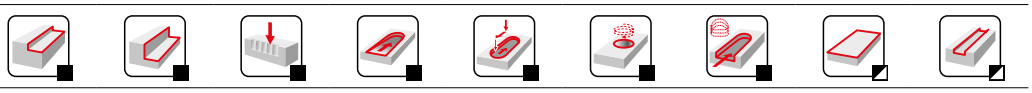
DORMER

4-Flute Solid Carbide Corner Radius End Mill

Short cut length, 4-flute design with different corner radius available, unequal helix and differential pitch to reduce vibrations and improve surface finish when milling contours where a corner radius is required. TiSiN coating improves performance. Also suited for plunging, ramping and trochoidal milling.



HM	N	NOF 4 ≠
	λ ≠	γ 10°
DIN 6535HA	TiSiN	DC h9
	DORMER	



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■211 J	■236 J	■243 J	■180 J	■158 J	■140 I	■146 J	■117 I	■99 I	■86 I	■74 I	■122 J	■103 J	■108 J
M2.2	**M3.1**	**M3.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**
■89 I	■100 I	■86 I	■208 J	■154 J	■116 J	■214 J	■174 J	■139 I	■189 J	■145 J	■117 I	■176 I	■132 I
K4.3	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.2**	**S2.1**	**S3.1**	**S4.1**				
■97 I	■83 I	■69 I	■199 I	■149 I	■116 I	■72 I	■56 I	■42 I	■33 I				

DCON MS tolerance h6; RE ±0.01 mm.

Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S7674.0XR0.3	4.00	0.30	6.00	11.00	57.0	4
S7674.0XR0.5	4.00	0.50	6.00	11.00	57.0	4
S7675.0XR0.3	5.00	0.30	6.00	13.00	57.0	4
S7675.0XR0.5	5.00	0.50	6.00	13.00	57.0	4
S7676.0XR0.3	6.00	0.30	6.00	13.00	57.0	4
S7676.0XR0.5	6.00	0.50	6.00	13.00	57.0	4
S7676.0XR1.0	6.00	1.00	6.00	13.00	57.0	4
S7678.0XR0.3	8.00	0.30	8.00	20.00	64.0	4
S7678.0XR0.5	8.00	0.50	8.00	20.00	64.0	4
S7678.0XR1.0	8.00	1.00	8.00	20.00	64.0	4
S76710.0XR0.3	10.00	0.30	10.00	22.00	72.0	4
S76710.0XR0.5	10.00	0.50	10.00	22.00	72.0	4
S76710.0XR1.0	10.00	1.00	10.00	22.00	72.0	4
S76712.0XR0.3	12.00	0.30	12.00	26.00	83.0	4
S76712.0XR0.5	12.00	0.50	12.00	26.00	83.0	4
S76712.0XR1.0	12.00	1.00	12.00	26.00	83.0	4
S76712.0XR2.0	12.00	2.00	12.00	26.00	83.0	4
S76716.0XR0.3	16.00	0.30	16.00	32.00	92.0	4
S76716.0XR0.5	16.00	0.50	16.00	32.00	92.0	4
S76716.0XR1.0	16.00	1.00	16.00	32.00	92.0	4
S76716.0XR2.0	16.00	2.00	16.00	32.00	92.0	4
S76720.0XR0.3	20.00	0.30	20.00	38.00	104.0	4
S76720.0XR0.5	20.00	0.50	20.00	38.00	104.0	4
S76720.0XR1.0	20.00	1.00	20.00	38.00	104.0	4
S76720.0XR2.0	20.00	2.00	20.00	38.00	104.0	4

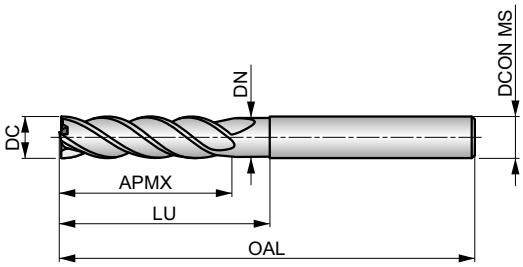
S768

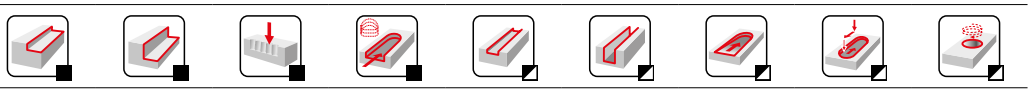
DORMER

4-Flute Solid Carbide End Mill, Long Series

Long cut length, 4-flute design with unequal helix and differential pitch to reduce vibrations and improve surface finish when milling deep walls in profile milling. Neck recess to avoid work contact with the wall and extend reach. TiSiN coating increases tool life and improves performance.

HM	N	NOF 4 ≠
	λ ≠	γ 10°
DIN 6535HA	TiSiN	DC h9
	DORMER	





Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■148 I	■165 I	■170 I	■126 I	■111 I	■98 G	■102 I	■82 G	■69 G	■60 G	■52 G	■85 I	■72 I	■76 I
M2.2	**M3.1**	**M3.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**
■62 I	■70 I	■60 I	■146 I	■108 I	■81 I	■150 I	■122 I	■97 G	■132 I	■102 I	■82 G	■123 G	■92 G
K4.3	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.2**	**S2.1**	**S3.1**	**S4.1**				
■68 G	■58 I	■48 I	■139 G	■104 G	■81 G	■50 I	■39 G	■29 G	■23 G				

DCON MS tolerance h6; RE ±0.01 mm.

Product	DC	RE	DCON MS	APMX	OAL	NOF	LU	DN
	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
S7684.0	4.00	0.10	6.00	19.00	75.0	4	32.00	3.70
S7685.0	5.00	0.10	6.00	19.00	75.0	4	32.00	4.60
S7686.0	6.00	0.10	6.00	25.00	75.0	4	32.00	5.50
S7688.0	8.00	0.20	8.00	30.00	75.0	4	38.00	7.40
S76810.0	10.00	0.20	10.00	40.00	100.0	4	50.00	9.20
S76812.0	12.00	0.30	12.00	45.00	100.0	4	55.00	11.00
S76816.0	16.00	0.30	16.00	65.00	125.0	4	75.00	15.00
S76820.0	20.00	0.30	20.00	65.00	125.0	4	75.00	19.00

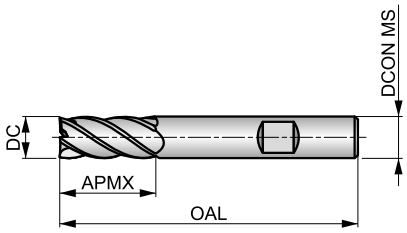
S770HB

DORMER

5-Flute Solid Carbide End Mill

Short cut length, 5-flute design with unequal helix to reduce vibrations especially when using the cutter in dynamic milling strategies. AlCrN coating improves performance and extends the tool life. Suited for trochoidal and shoulder milling, ramping and helicoidal interpolation milling.

HM	N	NOF 5
	λ ≠	γ 10°
DIN 6535HB	AlCrN	DC h9
	DORMER	



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■211 I	■236 I	■243 I	■180 I	■158 I	■140 I	■146 I	■117 I	■99 I	■86 I	■74 I	■122 I	■103 I	■108 I
M2.2	M3.1	M3.2	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	K3.3	K4.1	K4.2
■89 I	■100 I	■86 I	■208 I	■154 I	■116 I	■214 I	■174 I	■139 I	■189 I	■145 I	■117 I	■176 I	■132 I
K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	S1.2	S2.1	S3.1	S4.1				
■97 I	■83 G	■69 G	■199 I	■149 I	■116 I	■72 I	■56 G	■42 G	■33 G				

DCON MS tolerance h6; RE ±0.01 mm.

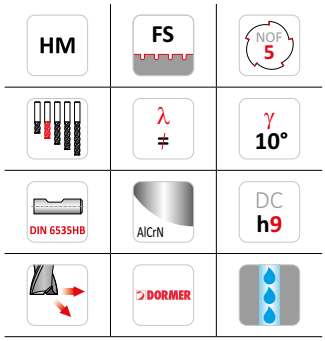
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S770HB10.0	10.00	0.20	10.00	22.00	72.0	5
S770HB12.0	12.00	0.30	12.00	26.00	83.0	5
S770HB16.0	16.00	0.30	16.00	32.00	92.0	5
S770HB20.0	20.00	0.30	20.00	38.00	104.0	5

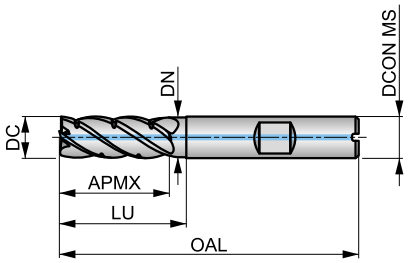
S771HB

DORMER

5-Flute Solid Carbide End Mill, Chip Dividers and Through Coolant

Short cut length, 5-flute design with neck recess and unequal helix helps to reduce vibrations especially when using the cutter in dynamic milling strategies. AlCrN coating improves performance and extends the tool life. Chip divider and through coolant improve chip evacuation in pocketing operation.





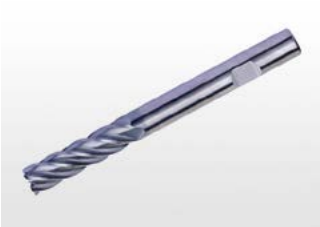
Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■222 J	■248 J	■255 J	■189 J	■166 J	■147 I	■153 J	■123 I	■104 I	■90 I	■78 I	■128 I	■108 I	■113 I
M2.2	**M3.1**	**M3.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**
■93 I	■105 I	■90 I	■218 J	■162 J	■122 J	■225 J	■183 J	■146 I	■198 J	■152 I	■123 I	■185 I	■139 I
K4.3	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.2**	**S2.1**	**S3.1**	**S4.1**				
■102 I	■87 I	■72 I	■209 I	■156 I	■122 I	■76 I	■59 I	■44 G	■35 G				

DCON MS tolerance h6; RE ±0.01 mm.

Product	DC	RE	DCON MS	APMX	OAL	NOF	LU	DN
	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
S771HB10.0	10.00	0.20	10.00	25.00	72.0	5	30.00	9.70
S771HB12.0	12.00	0.20	12.00	30.00	83.0	5	38.00	11.70
S771HB16.0	16.00	0.30	16.00	39.00	92.0	5	44.00	15.70
S771HB20.0	20.00	0.30	20.00	48.00	104.0	5	54.00	19.70

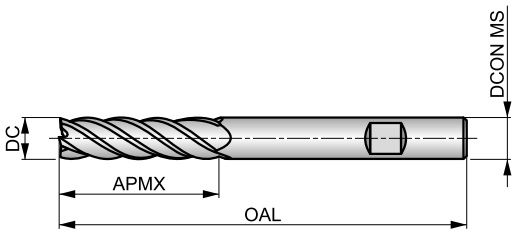
S772HB



5-Flute Solid Carbide End Mill, Long Series

Long cut length, 5-flute design with unequal helix to reduce vibrations especially when using the cutter in dynamic milling strategies. AlCrN coating improves performance and extends the tool life. Suited for trochoidal and shoulder milling, ramping and helicoidal interpolation milling.

HM	N	NOF 5
	λ ≠	γ 10°
DIN 6535HB	AlCrN	DC h9
	DORMER	



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■148 G	■165 G	■170 G	■126 G	■111 G	■98 F	■102 G	■82 F	■69 F	■60 F	■52 F	■85 G	■72 G	■76 G
M2.2	**M3.1**	**M3.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**
■62 G	■70 G	■60 G	■146 G	■108 G	■81 G	■150 G	■122 G	■97 F	■132 G	■102 G	■82 F	■123 F	■92 F
K4.3	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.2**	**S2.1**	**S3.1**	**S4.1**				
■68 F	■58 G	■48 G	■139 F	■104 F	■81 F	■50 F	■39 F	■29 F	■23 F				

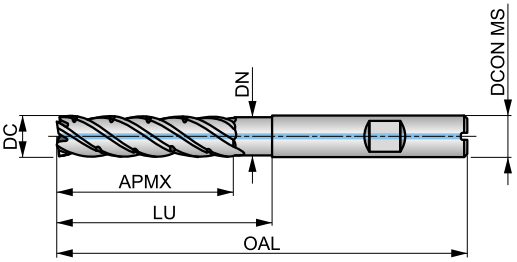
DCON MS tolerance h6; RE ±0.01 mm.

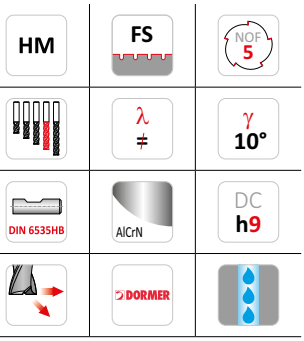
Product	DC	RE	DCON MS	APMX	OAL	NOF
	[mm]	[mm]	[mm]	[mm]	[mm]	
S772HB10.0	10.00	0.20	10.00	38.00	100.0	5
S772HB12.0	12.00	0.30	12.00	45.00	100.0	5
S772HB16.0	16.00	0.30	16.00	55.00	125.0	5
S772HB20.0	20.00	0.30	20.00	65.00	125.0	5

S773HB

5-Flute Solid Carbide End Mill, Chip Dividers, Through Coolant, Long Series

Long cut length, 5-flute design with neck recess and unequal helix helps to reduce vibrations especially when using the cutter in dynamic milling strategies. AlCrN coating improves performance and extends the tool life. Chip divider and through coolant improve chip evacuation in pocketing operations.





Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■155 G	■173 G	■179 G	■132 G	■117 G	■103 F	■107 G	■86 F	■72 F	■63 F	■55 F	■89 F	■76 F	■80 F
M2.2	**M3.1**	**M3.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**
■65 F	■74 F	■63 F	■153 G	■113 G	■85 G	■158 G	■128 G	■102 F	■139 G	■107 G	■86 F	■129 F	■97 F
K4.3	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.2**	**S2.1**	**S3.1**	**S4.1**				
■71 F	■61 F	■50 F	■146 F	■109 F	■85 F	■53 F	■41 F	■30 F	■24 F				

DCON MS tolerance h6; RE ±0.01 mm.

Product	DC	RE	DCON MS	APMX	OAL	NOF	LU	DN
	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
S773HB10.0	10.00	0.20	10.00	42.00	100.0	5	52.00	9.70
S773HB12.0	12.00	0.20	12.00	42.00	100.0	5	54.00	11.70
S773HB16.0	16.00	0.30	16.00	60.00	125.0	5	68.00	15.70
S773HB20.0	20.00	0.30	20.00	67.00	125.0	5	75.00	19.70

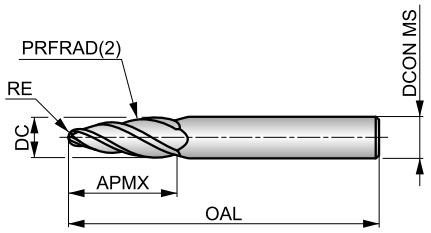
S791

DORMER

3-4 Flute Solid Carbide Barrel-Shape End Mill

Medium cut length, 3 or 4 flute design with large tangential radius and ball nosed to increase contact with workpiece to reduce cycle time and improve surface finish of steep walls. AlCrN coating improves performance and extends the tool life. For semi-finishing and finishing operation.

HM	N	NOF 3-4
	λ 30°	γ 8°
DIN 6535HA	AlCrN	
DORMER		



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■161 F	■181 F	■186 F	■138 F	■121 F	■108 E	■112 F	■90 E	■76 E	■66 E	■57 E	◪46 E	■94 F	■79 F
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
■83 F	■69 E	◪77 E	◪66 E	◪59 E	◪58 E	■161 F	■119 F	■89 F	■165 F	■134 F	■107 E	■146 F	■112 F
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
■90 E	■136 E	■102 E	■75 E	■64 E	■54 E	■154 E	■115 E	■89 E	◪355 I	◪267 I	◪179 I	◪179 F	◪160 F
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**S1.1**	**S1.2**	**S2.1**	**S3.1**	**S4.1**			
◪115 F	■187 F	■109 F	◪56 F	◪187 F	◪72 F	◪58 E	◪56 E	◪43 E	◪33 E	◪26 E			

DCON MS tolerance h6; RE ±0.01 mm; PRFRAD(2) ±0.01 mm.

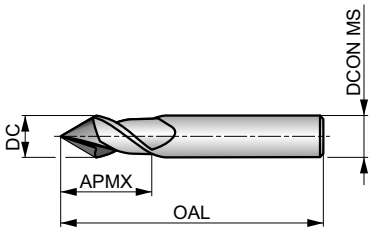
Product	DC [mm]	RE [mm]	PRFRAD(2) [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S7916.0	6.00	1.00	95.0	6.00	22.00	67.0	3
S7918.0	8.00	1.00	90.0	8.00	25.00	75.0	3
S79110.0	10.00	2.00	85.0	10.00	26.00	75.0	4
S79112.0	12.00	2.00	80.0	12.00	28.00	83.0	4
S79116.0	16.00	3.00	75.0	16.00	31.00	90.0	4

S739

DORMER

2-Flute Solid Carbide Chamfering End Mill, 60°

Short cut length, 2-flute design provides high rigidity and reduces vibrations. The 60° point is designed for chamfer milling on CNC machines. AlTiN coating increases tool life and improves performance.



HM	N	NOF 2
	λ 40°	γ 10°
DIN 6535HA	AlTiN	DC h9
	DORMER	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■ 199 K	■ 223 K	■ 230 K	■ 170 K	■ 150 K	■ 133 J	■ 138 K	■ 111 J	■ 94 J	■ 82 J	■ 70 J	■ 115 K	■ 97 K	■ 102 K
M2.2	M3.1	M3.2	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	K3.3	K4.1	K4.2
■ 84 J	■ 94 J	■ 81 J	■ 196 K	■ 145 K	■ 109 K	■ 202 K	■ 164 K	■ 131 J	■ 178 K	■ 136 K	■ 110 J	■ 165 J	■ 125 J
K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2
■ 91 J	■ 78 J	■ 65 J	■ 187 J	■ 141 J	■ 109 J	◪ 355 N	■ 267 N	■ 179 N	■ 179 K	■ 160 K	■ 115 K	■ 187 K	■ 109 K
N3.3	S1.2	S2.1	S3.1	S4.1									
◪ 56 K	■ 69 J	■ 53 J	■ 40 J	■ 31 J									

DCON MS tolerance h6.

Product	KAPR [°]	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S7393.0	60	3.00	3.00	9.00	40.0	2
S7394.0	60	4.00	4.00	12.00	50.0	2
S7395.0	60	5.00	5.00	15.00	50.0	2
S7396.0	60	6.00	6.00	16.00	50.0	2
S7398.0	60	8.00	8.00	20.00	64.0	2
S73910.0	60	10.00	10.00	22.00	70.0	2
S73912.0	60	12.00	12.00	25.00	75.0	2
S73916.0	60	16.00	16.00	32.00	90.0	2
S73920.0	60	20.00	20.00	38.00	100.0	2

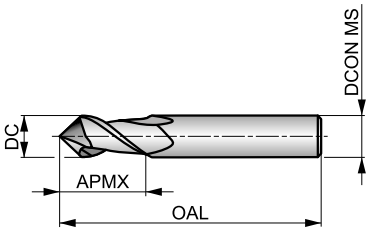
S740

DORMER

2-Flute Solid Carbide Chamfering End Mill, 90°

Short cut length, 2-flute design provides high rigidity and reduces vibrations. The 90° point is designed for chamfer milling on CNC machines. AlTiN coating increases tool life and improves performance.

HM	N	NOF 2
	λ 40°	γ 10°
DIN 6535HA	AlTiN	DC h9
	DORMER	



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■ 199 K	■ 223 K	■ 230 K	■ 170 K	■ 150 K	■ 133 J	■ 138 K	■ 111 J	■ 94 J	■ 82 J	■ 70 J	■ 115 K	■ 97 K	■ 102 K
M2.2	**M3.1**	**M3.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**
■ 84 J	■ 94 J	■ 81 J	■ 196 K	■ 145 K	■ 109 K	■ 202 K	■ 164 K	■ 131 J	■ 178 K	■ 136 K	■ 110 J	■ 165 J	■ 125 J
K4.3	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**
■ 91 J	■ 78 J	■ 65 J	■ 187 J	■ 141 J	■ 109 J	◪ 355 N	■ 267 N	■ 179 N	■ 179 K	■ 160 K	■ 115 K	■ 187 K	■ 109 K
N3.3	**S1.2**	**S2.1**	**S3.1**	**S4.1**									
◪ 56 K	■ 69 J	■ 53 J	■ 40 J	■ 31 J									

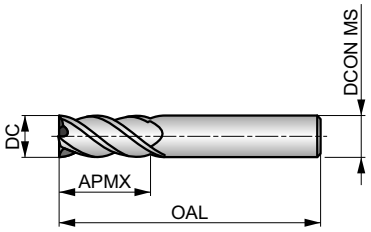
DCON MS tolerance h6.

Product	KAPR [°]	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S7403.0	90	3.00	3.00	9.00	40.0	2
S7404.0	90	4.00	4.00	12.00	50.0	2
S7405.0	90	5.00	5.00	15.00	50.0	2
S7406.0	90	6.00	6.00	16.00	50.0	2
S7408.0	90	8.00	8.00	20.00	64.0	2
S74010.0	90	10.00	10.00	22.00	70.0	2
S74012.0	90	12.00	12.00	25.00	75.0	2
S74016.0	90	16.00	16.00	32.00	90.0	2
S74020.0	90	20.00	20.00	38.00	100.0	2

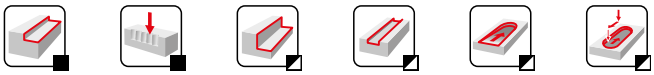
S216

4-Flute Solid Carbide End Mill

Short cut length, 4-flute design provides high rigidity for standard profile milling. AlTiN coating increases tool life and improves performance when milling difficult to machine materials. The 40° helix is designed for high performance machining.



HM	N	NOF 4
	λ 40°	γ 3°
DIN 6535HA	AlTiN	DC h9
	DORMER	



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P4.3	M2.3	M3.3	M4.1	M4.2	S1.3	S2.2	S3.2	S4.2
■ 80 J	■ 80 J	■ 82 I	■ 80 I	■ 68 I	■ 58 I	■ 47 I	■ 33 I	■ 27 I

DCON MS tolerance h6.

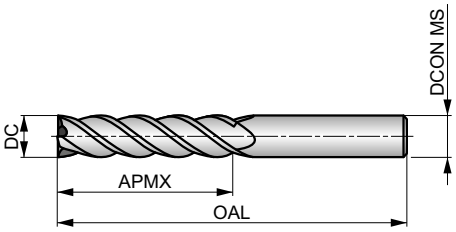
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S2162.0	2.00	4.00	6.50	40.0	4
S2163.0XD3	3.00	3.00	9.00	40.0	4
S2163.0XD6	3.00	6.00	9.00	50.0	4
S2164.0XD4	4.00	4.00	12.00	50.0	4
S2164.0XD6	4.00	6.00	12.00	50.0	4
S2165.0	5.00	5.00	15.00	50.0	4
S2166.0	6.00	6.00	16.00	50.0	4
S2168.0	8.00	8.00	20.00	64.0	4
S21610.0	10.00	10.00	22.00	70.0	4
S21612.0	12.00	12.00	25.00	75.0	4
S21614.0	14.00	14.00	32.00	90.0	4
S21616.0	16.00	16.00	32.00	90.0	4
S21618.0	18.00	18.00	38.00	100.0	4
S21620.0	20.00	20.00	38.00	100.0	4

S217

DORMER

4-Flute Solid Carbide End Mill, Long Series

Long cut length, 4-flute design provides high rigidity for profile milling deep walls. AlTiN coating increases tool life and improves performance when milling difficult to machine materials. The 40° helix is designed for high performance machining.



HM	N	NOF 4
	λ 40°	γ 3°
DIN 6535HA	AlTiN	DC h9
	DORMER	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P4.3	M2.3	M3.3	M4.1	M4.2	S1.3	S2.2	S3.2	S4.2
■64 J	■64 J	■65 I	■64 I	■54 I	■46 I	■38 I	■26 I	■22 I

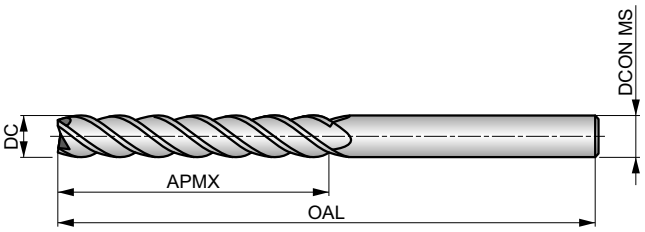
DCON MS tolerance h6.

Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S2173.0XD3	3.00	3.00	19.00	60.0	4
S2173.0XD6	3.00	6.00	19.00	75.0	4
S2174.0XD4	4.00	4.00	19.00	60.0	4
S2174.0XD6	4.00	6.00	19.00	75.0	4
S2175.0	5.00	5.00	19.00	60.0	4
S2176.0	6.00	6.00	31.00	75.0	4
S2178.0	8.00	8.00	31.00	75.0	4
S21710.0	10.00	10.00	31.00	75.0	4
S21712.0	12.00	12.00	50.00	100.0	4
S21714.0	14.00	14.00	57.00	125.0	4
S21716.0	16.00	16.00	57.00	125.0	4
S21718.0	18.00	18.00	57.00	125.0	4
S21720.0	20.00	20.00	57.00	125.0	4

S218

4-Flute Solid Carbide End Mill, Extra Long Series

Extra long cut length, 4-flute design provides high rigidity for profile milling extra deep walls. AlTiN coating increases tool life and improves performance when milling difficult to machine materials. The 40° helix is designed for high performance machining.



HM	N	NOF 4
	λ 40°	γ 3°
DIN 6535HA	AlTiN	DC h9
	DORMER	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P4.3	M2.3	M3.3	M4.1	M4.2	S1.3	S2.2	S3.2	S4.2
40 J	40 J	41 I	40 I	34 I	29 I	24 I	17 I	14 I

DCON MS tolerance h6.

Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S2183.0	3.00	3.00	25.00	100.0	4
S2184.0	4.00	4.00	31.00	100.0	4
S2185.0	5.00	5.00	31.00	100.0	4
S2186.0	6.00	6.00	38.00	100.0	4
S2188.0	8.00	8.00	41.00	100.0	4
S21810.0	10.00	10.00	57.00	125.0	4
S21812.0	12.00	12.00	75.00	150.0	4
S21814.0	14.00	14.00	75.00	150.0	4
S21816.0	16.00	16.00	75.00	150.0	4
S21818.0	18.00	18.00	75.00	150.0	4
S21820.0	20.00	20.00	75.00	150.0	4

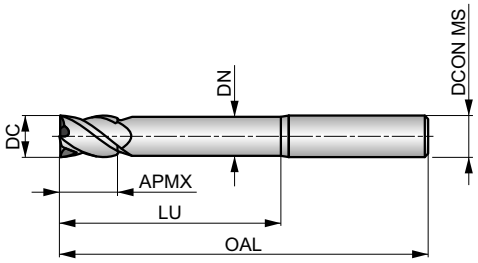
S219

DORMER

4-Flute Solid Carbide End Mill, Long Reach

Extra short cut length, 4-flute design provides high rigidity for milling and profiling in hard to reach areas. Neck recess to avoid work contact with the wall. AlTiN coating increases tool life and improves performance when milling difficult to machine materials. The 40° helix is designed for high performance machining.

HM	N	NOF 4
	λ 40°	γ 3°
DIN 6535HA	AlTiN	DC h9
	DORMER	



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P4.3	M2.3	M3.3	M4.1	M4.2	S1.3	S2.2	S3.2	S4.2
64 J	64 J	65 I	64 I	54 I	46 I	38 I	26 I	22 I

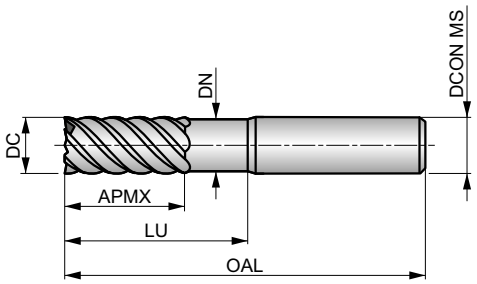
DCON MS tolerance h6.

Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S2193.0	3.00	3.00	5.00	60.0	4	30.00	2.80
S2194.0	4.00	4.00	8.00	60.0	4	32.00	3.70
S2195.0	5.00	5.00	9.00	60.0	4	32.00	4.60
S2196.0	6.00	6.00	10.00	75.0	4	40.00	5.50
S2198.0	8.00	8.00	12.00	75.0	4	40.00	7.40
S21910.0	10.00	10.00	14.00	75.0	4	40.00	9.20
S21912.0	12.00	12.00	16.00	100.0	4	60.00	11.00
S21914.0	14.00	14.00	22.00	125.0	4	85.00	13.00
S21916.0	16.00	16.00	22.00	125.0	4	85.00	15.00
S21918.0	18.00	18.00	26.00	125.0	4	85.00	17.00
S21920.0	20.00	20.00	26.00	125.0	4	85.00	19.00

S225

Multi-Flute Solid Carbide Finishing End Mill

Short cut length, 6 or 8 flute design provides high rigidity for profile finishing of deep walls. Neck recess to avoid work contact with the wall and extend reach. AlTiN coating increases tool life and improves performance when milling difficult to machine materials. The 50° helix is designed for high surface finish quality.



HM	N	NOF 6-8
	λ 50°	γ 3°
DIN 6535HA	AlTiN	DC h9
	DORMER	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P4.3	M2.3	M3.3	M4.1	M4.2	S1.3	S2.2	S3.2	S4.2
80 G	80 G	82 F	80 F	68 F	58 F	47 F	33 F	27 F

DCON MS tolerance h6.

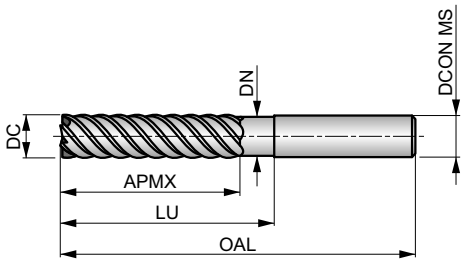
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S2253.0	3.00	6.00	8.00	50.0	6	20.00	2.80
S2254.0	4.00	6.00	11.00	50.0	6	20.00	3.70
S2256.0	6.00	6.00	15.00	50.0	6	20.00	5.50
S2258.0	8.00	8.00	20.00	64.0	6	30.00	7.40
S22510.0	10.00	10.00	22.00	70.0	6	32.00	9.20
S22512.0	12.00	12.00	25.00	75.0	6	37.00	11.00
S22514.0	14.00	14.00	30.00	90.0	6	44.00	13.00
S22516.0	16.00	16.00	30.00	90.0	8	46.00	15.00
S22518.0	18.00	18.00	35.00	100.0	8	53.00	17.00
S22520.0	20.00	20.00	38.00	100.0	8	58.00	19.00

S226

DORMER

Multi-Flute Solid Carbide Finishing End Mill, Long Series

Long cut length, 6 or 8 flute design provides high rigidity for finishing of deeper walls. Neck recess to avoid work contact with the wall and extend reach. AlTiN coating increases service life and improves performance when milling difficult to machine materials. The 50° helix is designed for high surface finish quality.



HM	N	NOF 6-8
	λ 50°	γ 3°
DIN 6535HA	AlTiN	DC h9
	DORMER	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P4.3	M2.3	M3.3	M4.1	M4.2	S1.3	S2.2	S3.2	S4.2
64 G	64 G	65 F	64 F	54 F	46 F	38 F	26 F	22 F

DCON MS tolerance h6.

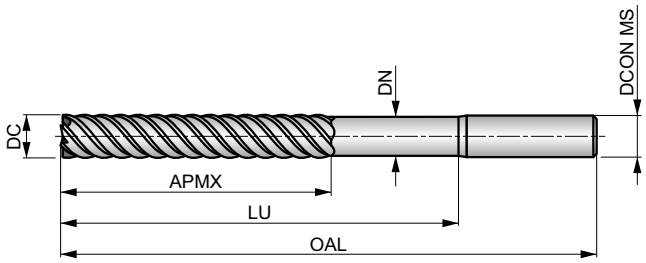
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S2263.0	3.00	6.00	19.00	75.0	6	30.00	2.80
S2264.0	4.00	6.00	19.00	75.0	6	32.00	3.70
S2266.0	6.00	6.00	31.00	75.0	6	40.00	5.50
S2268.0	8.00	8.00	31.00	75.0	6	40.00	7.40
S22610.0	10.00	10.00	45.00	100.0	6	60.00	9.20
S22612.0	12.00	12.00	50.00	100.0	6	60.00	11.00
S22614.0	14.00	14.00	57.00	125.0	6	85.00	13.00
S22616.0	16.00	16.00	57.00	125.0	8	85.00	15.00
S22618.0	18.00	18.00	57.00	125.0	8	85.00	17.00
S22620.0	20.00	20.00	57.00	125.0	8	85.00	19.00

S227

DORMER

Multi-Flute Solid Carbide Finishing End Mill, Extra Long Series

Extra long cut length, 6 or 8 flute design provides high rigidity for finishing of extra deep walls. Neck recess to avoid work contact with the wall and extend reach. AlTiN coating increases tool life and improves performance when milling difficult to machine materials. The 50° helix is designed for high surface finish quality.



HM	N	NOF 6-8
	λ 50°	γ 3°
DIN 6535HA	AlTiN	DC h9
	DORMER	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P4.3	M2.3	M3.3	M4.1	M4.2	S1.3	S2.2	S3.2	S4.2
40 G	40 G	41 F	40 F	34 F	29 F	24 F	17 F	14 F

DCON MS tolerance h6.

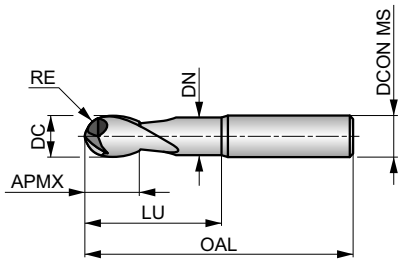
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S2276.0	6.00	6.00	38.00	100.0	6	60.00	5.50
S2278.0	8.00	8.00	41.00	100.0	6	60.00	7.40
S22710.0	10.00	10.00	57.00	125.0	6	85.00	9.20
S22712.0	12.00	12.00	75.00	150.0	6	110.00	11.00
S22714.0	14.00	14.00	75.00	150.0	6	110.00	13.00
S22716.0	16.00	16.00	75.00	150.0	8	110.00	15.00
S22718.0	18.00	18.00	75.00	150.0	8	110.00	17.00
S22720.0	20.00	20.00	75.00	150.0	8	110.00	19.00

S229

DORMER

2-Flute Solid Carbide Ball-Nosed End Mill

Extra short cut length, 2-flute design with neck recess reduces vibrations and provides high rigidity. Ball nosed geometry is designed for high performance contouring of complex surfaces. TiSiN coating increases service life of the milling cutter and improves performance when milling difficult to machine materials.



HM	N	NOF 2
	λ 30°	γ 3°
DIN 6535HA	TiSiN	DC h9
	DORMER	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P4.3	M2.3	M3.3	M4.1	M4.2	S1.3	S2.2	S3.2	S4.2
80 F	80 F	82 F	80 F	68 F	58 F	47 F	33 F	27 F

DCON MS tolerance h6; RE +0/-0.02 mm.

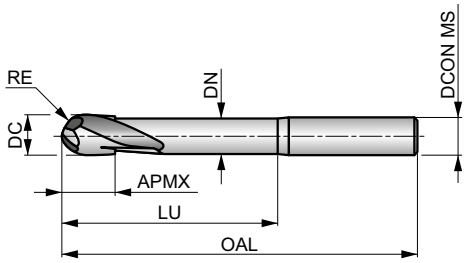
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S2291.5XD4	1.50	0.75	4.00	3.00	50.0	2	6.00	1.40
S2292.0XD3	2.00	1.00	3.00	4.00	50.0	2	8.00	1.90
S2292.0XD4	2.00	1.00	4.00	4.00	50.0	2	8.00	1.90
S2293.0XD3	3.00	1.50	3.00	5.00	50.0	2	14.00	2.80
S2293.0XD6	3.00	1.50	6.00	5.00	50.0	2	14.00	2.80
S2294.0XD4	4.00	2.00	4.00	8.00	50.0	2	20.00	3.70
S2294.0XD6	4.00	2.00	6.00	8.00	50.0	2	20.00	3.70
S2295.0XD5	5.00	2.50	5.00	9.00	50.0	2	20.00	4.60
S2295.0XD6	5.00	2.50	6.00	9.00	50.0	2	20.00	4.60
S2296.0	6.00	3.00	6.00	10.00	50.0	2	20.00	5.50
S2298.0	8.00	4.00	8.00	12.00	64.0	2	30.00	7.40
S22910.0	10.00	5.00	10.00	14.00	70.0	2	32.00	9.20
S22912.0	12.00	6.00	12.00	16.00	75.0	2	38.00	11.00
S22914.0	14.00	7.00	14.00	32.00	90.0	2	44.00	13.00
S22916.0	16.00	8.00	16.00	32.00	90.0	2	46.00	15.00

S231

DORMER

2-Flute Solid Carbide Ball-Nosed End Mill, Long Reach

Extra short cut length, long reach, 2-flute design with neck recess provides high rigidity and reduces vibrations. Ball nosed geometry is designed for high performance contouring of complex surfaces. TiSiN coating increases tool life and improves performance when milling difficult to machine materials.



HM	N	NOF 2
	λ 30°	γ 3°
DIN 6535HA	TiSiN	DC h9
	DORMER	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P4.3	M2.3	M3.3	M4.1	M4.2	S1.3	S2.2	S3.2	S4.2
64 F	64 F	65 F	64 F	54 F	46 F	38 F	26 F	22 F

DCON MS tolerance h6; RE +0/-0.02 mm.

Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S2311.5XD4	1.50	0.75	4.00	3.00	75.0	2	10.00	1.40
S2312.0XD3	2.00	1.00	3.00	4.00	60.0	2	14.00	1.90
S2312.0XD4	2.00	1.00	4.00	4.00	75.0	2	14.00	1.90
S2313.0XD3	3.00	1.50	3.00	5.00	60.0	2	21.00	2.80
S2313.0XD6	3.00	1.50	6.00	5.00	75.0	2	21.00	2.80
S2314.0XD4	4.00	2.00	4.00	8.00	60.0	2	28.00	3.70
S2314.0XD6	4.00	2.00	6.00	8.00	75.0	2	28.00	3.70
S2315.0	5.00	2.50	5.00	9.00	60.0	2	32.00	4.60
S2316.0	6.00	3.00	6.00	10.00	75.0	2	40.00	5.50
S2318.0	8.00	4.00	8.00	10.00	75.0	2	40.00	7.40
S23110.0	10.00	5.00	10.00	12.00	75.0	2	40.00	9.20
S23112.0	12.00	6.00	12.00	16.00	100.0	2	60.00	11.00
S23116.0	16.00	8.00	16.00	32.00	125.0	2	80.00	15.00

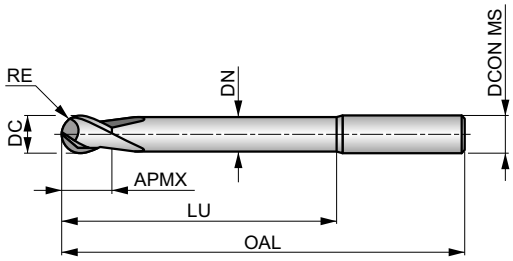
S233

DORMER

2-Flute Solid Carbide Ball-Nosed End Mill, Extra Long Reach

Extra short cut length, extra long reach, 2-flute design with neck recess provides high rigidity and reduces vibrations. Ball nosed geometry is designed for high performance contouring of complex surfaces. TiSiN coating increases tool life and improves performance when milling difficult to machine materials.

HM	N	NOF 2
	λ 30°	γ 3°
DIN 6535HA	TiSiN	DC h9
	DORMER	



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P4.3	M2.3	M3.3	M4.1	M4.2	S1.3	S2.2	S3.2	S4.2
■ 40 F	■ 40 F	■ 41 F	■ 40 F	■ 34 F	■ 29 F	■ 24 F	■ 17 F	■ 14 F

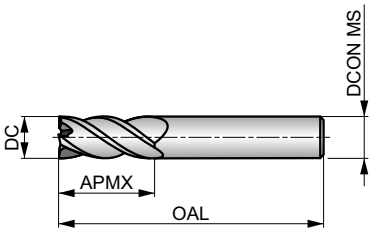
DCON MS tolerance h6; RE +0/-0.02 mm.

Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S2332.0XD3	2.00	1.00	3.00	4.00	100.0	2	20.00	1.90
S2332.0XD4	2.00	1.00	4.00	4.00	100.0	2	20.00	1.90
S2333.0XD3	3.00	1.50	3.00	5.00	100.0	2	30.00	2.80
S2333.0XD6	3.00	1.50	6.00	5.00	100.0	2	30.00	2.80
S2334.0XD4	4.00	2.00	4.00	8.00	100.0	2	40.00	3.70
S2334.0XD6	4.00	2.00	6.00	8.00	100.0	2	40.00	3.70
S2335.0	5.00	2.50	5.00	9.00	100.0	2	50.00	4.60
S2336.0	6.00	3.00	6.00	10.00	100.0	2	60.00	5.50
S2338.0	8.00	4.00	8.00	12.00	100.0	2	60.00	7.40
S23310.0	10.00	5.00	10.00	14.00	125.0	2	85.00	9.20
S23312.0	12.00	6.00	12.00	16.00	125.0	2	85.00	11.00
S23314.0	14.00	7.00	14.00	32.00	150.0	2	110.00	13.00
S23316.0	16.00	8.00	16.00	32.00	150.0	2	110.00	15.00

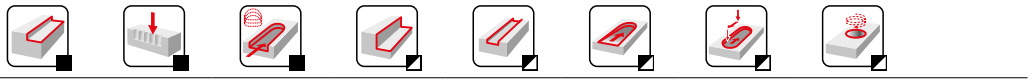
S260

4-Flute Solid Carbide End Mill

Short cut length, 4-flute design provides high rigidity for standard profile milling. AlCrN coating improves performance and extends the tool life when milling difficult to machine materials. The 40° helix with differential pitch reduces vibrations and maximizes productivity and tool life.



HM	N	NOF 4
	λ 40°	γ 4°
DIN 6535HA	AlCrN	DC h9
	DORMER	



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P4.3	M2.3	M3.3	M4.1	M4.2	S1.3	S2.2	S3.2	S4.2	H1.1	H2.1	H3.1	H3.2
■ 97 J	■ 97 J	■ 99 I	■ 97 I	■ 83 I	■ 70 I	■ 56 I	■ 40 I	■ 32 I	■ 179 I	■ 106 G	■ 118 G	■ 97 G

DCON MS tolerance h6.

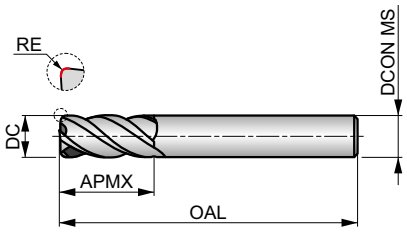
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S2603.0	3.00	6.00	9.00	57.0	4
S2604.0	4.00	6.00	12.00	57.0	4
S2605.0	5.00	6.00	13.00	57.0	4
S2606.0	6.00	6.00	13.00	57.0	4
S2608.0	8.00	8.00	20.00	64.0	4
S26010.0	10.00	10.00	22.00	72.0	4
S26012.0	12.00	12.00	26.00	83.0	4
S26014.0	14.00	14.00	32.00	83.0	4
S26016.0	16.00	16.00	32.00	92.0	4
S26018.0	18.00	18.00	38.00	92.0	4
S26020.0	20.00	20.00	38.00	104.0	4

S262

DORMER

4-Flute Solid Carbide Corner Radius End Mill

Short cut length, 4-flute design with different corner radius available provides high rigidity for standard profile milling when corner radius is required. AlCrN coating improves performance when milling difficult to machine materials. The 40° helix with differential pitch reduces vibrations and maximizes productivity.



HM	N	NOF 4
	λ 40°	γ 4°
DIN 6535HA	AlCrN	DC h9
	DORMER	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P4.3	M2.3	M3.3	M4.1	M4.2	S1.3	S2.2	S3.2	S4.2	H1.1	H2.1	H3.1	H3.2
■97 J	■97 J	■99 I	■97 I	■83 I	■70 I	■56 I	■40 I	■32 I	■179 I	■106 G	■118 G	■97 G

DCON MS tolerance h6; RE ±0.01 mm.

Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S2623.0XR0.3	3.00	0.30	6.00	9.00	50.0	4
S2623.0XR0.5	3.00	0.50	6.00	9.00	50.0	4
S2624.0XR0.3	4.00	0.30	6.00	12.00	57.0	4
S2624.0XR0.5	4.00	0.50	6.00	12.00	57.0	4
S2624.0XR1.0	4.00	1.00	6.00	12.00	57.0	4
S2625.0XR0.3	5.00	0.30	6.00	15.00	57.0	4
S2625.0XR0.5	5.00	0.50	6.00	15.00	57.0	4
S2626.0XR0.3	6.00	0.30	6.00	16.00	57.0	4
S2626.0XR0.5	6.00	0.50	6.00	16.00	57.0	4
S2626.0XR1.0	6.00	1.00	6.00	16.00	57.0	4
S2628.0XR0.3	8.00	0.30	8.00	20.00	64.0	4
S2628.0XR0.5	8.00	0.50	8.00	20.00	64.0	4
S2628.0XR1.0	8.00	1.00	8.00	20.00	64.0	4
S2628.0XR1.5	8.00	1.50	8.00	20.00	64.0	4
S2628.0XR2.0	8.00	2.00	8.00	20.00	64.0	4
S26210.0XR0.3	10.00	0.30	10.00	22.00	72.0	4
S26210.0XR0.5	10.00	0.50	10.00	22.00	72.0	4
S26210.0XR1.0	10.00	1.00	10.00	22.00	72.0	4
S26210.0XR1.5	10.00	1.50	10.00	22.00	72.0	4
S26210.0XR2.0	10.00	2.00	10.00	22.00	72.0	4
S26212.0XR0.3	12.00	0.30	12.00	26.00	83.0	4
S26212.0XR0.5	12.00	0.50	12.00	26.00	83.0	4
S26212.0XR1.0	12.00	1.00	12.00	26.00	83.0	4
S26212.0XR2.0	12.00	2.00	12.00	26.00	83.0	4
S26212.0XR2.5	12.00	2.50	12.00	26.00	83.0	4
S26212.0XR3.0	12.00	3.00	12.00	26.00	83.0	4
S26214.0XR0.3	14.00	0.30	14.00	32.00	83.0	4
S26214.0XR0.5	14.00	0.50	14.00	32.00	83.0	4
S26214.0XR1.0	14.00	1.00	14.00	32.00	83.0	4
S26214.0XR2.0	14.00	2.00	14.00	32.00	83.0	4
S26214.0XR3.0	14.00	3.00	14.00	32.00	83.0	4

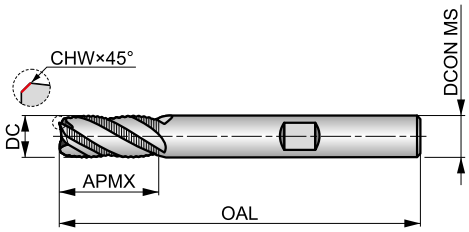
Product	DC	RE	DCON MS	APMX	OAL	NOF
	[mm]	[mm]	[mm]	[mm]	[mm]	
S26216.0XR0.3	16.00	0.30	16.00	32.00	92.0	4
S26216.0XR0.5	16.00	0.50	16.00	32.00	92.0	4
S26216.0XR1.0	16.00	1.00	16.00	32.00	92.0	4
S26216.0XR2.0	16.00	2.00	16.00	32.00	92.0	4
S26216.0XR2.5	16.00	2.50	16.00	32.00	92.0	4
S26216.0XR3.0	16.00	3.00	16.00	32.00	92.0	4
S26216.0XR4.0	16.00	4.00	16.00	32.00	92.0	4
S26218.0XR0.3	18.00	0.30	18.00	38.00	92.0	4
S26218.0XR0.5	18.00	0.50	18.00	38.00	92.0	4
S26218.0XR1.0	18.00	1.00	18.00	38.00	92.0	4
S26218.0XR2.0	18.00	2.00	18.00	38.00	92.0	4
S26218.0XR3.0	18.00	3.00	18.00	38.00	92.0	4
S26220.0XR0.3	20.00	0.30	20.00	38.00	104.0	4
S26220.0XR0.5	20.00	0.50	20.00	38.00	104.0	4
S26220.0XR1.0	20.00	1.00	20.00	38.00	104.0	4
S26220.0XR2.0	20.00	2.00	20.00	38.00	104.0	4
S26220.0XR2.5	20.00	2.50	20.00	38.00	104.0	4
S26220.0XR3.0	20.00	3.00	20.00	38.00	104.0	4
S26220.0XR4.0	20.00	4.00	20.00	38.00	104.0	4

S264

DORMER

4-Flute Solid Carbide Roughing End Mill

Short cut length, 4-flute with HRA profile to break-up the chips for efficient roughing applications. AlCrN coating improves performance and and extends the tool life when milling difficult to machine materials. The 40° helix with differential pitch reduces vibrations and maximizes productivity and tool life.



HM	HRA	NOF 4
	λ 40°	γ 4°
DIN 6535HB	AlCrN	DC h9
	DORMER	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P4.3	M2.3	M3.3	M4.1	M4.2	S1.3	S2.2	S3.2	S4.2	H1.1	H2.1	H3.1	H3.2
■97 J	■97 J	■99 I	■97 I	■83 I	■70 I	■56 I	■40 I	■32 I	■179 I	■106 G	■118 G	■97 G

DCON MS tolerance h6; CHW ± 0.02X45° mm.

Product	DC [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S2646.0	6.00	0.10	6.00	13.00	57.0	4
S2648.0	8.00	0.20	8.00	20.00	64.0	4
S26410.0	10.00	0.20	10.00	22.00	72.0	4
S26412.0	12.00	0.20	12.00	26.00	83.0	4
S26414.0	14.00	0.30	14.00	26.00	83.0	4
S26416.0	16.00	0.30	16.00	32.00	92.0	4
S26418.0	18.00	0.30	18.00	32.00	92.0	4
S26420.0	20.00	0.40	20.00	38.00	104.0	4

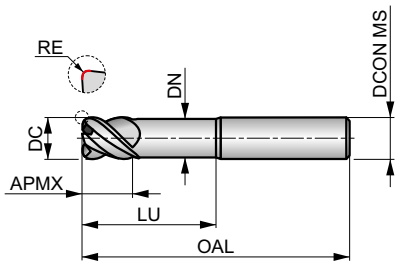
S521

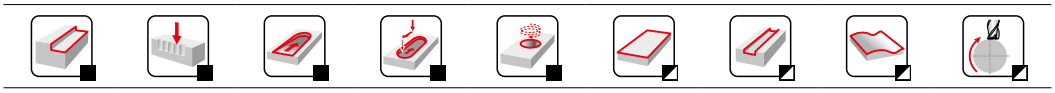
DORMER

4-Flute Solid Carbide Corner Radius End Mill

Extra short cut length, 4-flute design with different corner radius available and neck recess provides high rigidity for milling contours when corner radius is required. TiSiN coating improves performance and 45° helix is designed for high performance machining in hardened materials up to 63HRC.

HM	N	NOF 4
	λ 45°	γ -10°
DIN 6535HA	TiSiN	DC h9
	DORMER	





Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

H1.1	H2.1	H2.2	H3.1	H3.2	H4.1	H4.2
119 I	70 G	60 E	78 G	64 G	50 E	42 B

DCON MS tolerance h6; RE ±0.01 mm.

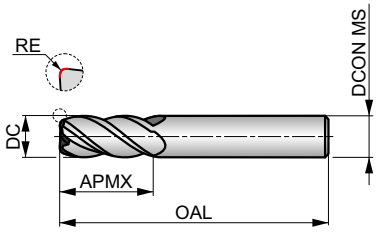
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S5213.0XR0.3	3.00	0.30	6.00	4.00	60.0	4	14.00	2.80
S5214.0XR0.3	4.00	0.30	6.00	5.00	60.0	4	16.00	3.70
S5214.0XR0.5	4.00	0.50	6.00	5.00	60.0	4	16.00	3.70
S5215.0XR0.3	5.00	0.30	6.00	6.00	60.0	4	18.00	4.60
S5215.0XR0.5	5.00	0.50	6.00	6.00	60.0	4	18.00	4.60
S5216.0XR0.5	6.00	0.50	6.00	7.00	60.0	4	20.00	5.50
S5216.0XR1.0	6.00	1.00	6.00	7.00	60.0	4	20.00	5.50
S5218.0XR0.5	8.00	0.50	8.00	9.00	64.0	4	26.00	7.40
S5218.0XR1.0	8.00	1.00	8.00	9.00	64.0	4	26.00	7.40
S52110.0XR1.0	10.00	1.00	10.00	11.00	70.0	4	31.00	9.20
S52110.0XR2.0	10.00	2.00	10.00	11.00	70.0	4	31.00	9.20
S52112.0XR1.0	12.00	1.00	12.00	13.00	75.0	4	37.00	11.00
S52112.0XR2.0	12.00	2.00	12.00	13.00	75.0	4	37.00	11.00
S52116.0XR1.0	16.00	1.00	16.00	17.00	90.0	4	43.00	15.00
S52116.0XR2.0	16.00	2.00	16.00	17.00	90.0	4	43.00	15.00
S52116.0XR3.0	16.00	3.00	16.00	17.00	90.0	4	43.00	15.00

S523

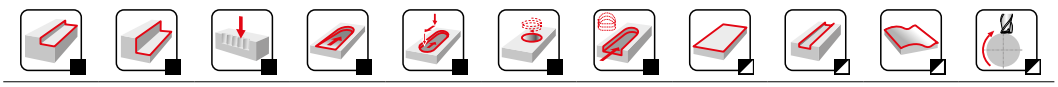
DORMER

4-Flute Solid Carbide Corner Radius End Mill

Short cut length, 4-flute design with different corner radius available provides high rigidity for standard profile milling where a corner radius is required. TiSiN coating improves performance and 40° helix is designed for high performance machining in hardened materials up to 63HRC.



HM	N	NOF 4
	λ 40°	γ -6°
DIN 6535HA	TiSiN	DC h9
	DORMER	



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

H1.1	H2.1	H2.2	H3.1	H3.2	H4.1	H4.2
119 I	70 G	60 E	78 G	64 G	50 E	42 B

DCON MS tolerance h6; RE ±0.01 mm.

Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S5231.5XR0.2	1.50	0.20	6.00	4.50	50.0	4
S5232.0XR0.2	2.00	0.20	6.00	6.50	50.0	4
S5233.0XR0.2XD3	3.00	0.20	3.00	9.00	50.0	4
S5233.0XR0.3XD3	3.00	0.30	3.00	9.00	50.0	4
S5233.0XR0.2XD6	3.00	0.20	6.00	9.00	50.0	4
S5233.0XR0.3XD6	3.00	0.30	6.00	9.00	50.0	4
S5233.0XR0.5XD6	3.00	0.50	6.00	9.00	50.0	4
S5234.0XR0.3XD4	4.00	0.30	4.00	12.00	50.0	4
S5234.0XR0.5XD4	4.00	0.50	4.00	12.00	50.0	4
S5234.0XR0.3XD6	4.00	0.30	6.00	12.00	50.0	4
S5234.0XR0.5XD6	4.00	0.50	6.00	12.00	50.0	4
S5235.0XR0.3XD5	5.00	0.30	5.00	15.00	50.0	4
S5235.0XR0.5XD5	5.00	0.50	5.00	15.00	50.0	4
S5235.0XR0.3XD6	5.00	0.30	6.00	15.00	50.0	4
S5235.0XR0.5XD6	5.00	0.50	6.00	15.00	50.0	4
S5236.0XR0.3	6.00	0.30	6.00	16.00	50.0	4
S5236.0XR0.5	6.00	0.50	6.00	16.00	50.0	4
S5236.0XR1.0	6.00	1.00	6.00	16.00	50.0	4
S5238.0XR0.3	8.00	0.30	8.00	20.00	64.0	4
S5238.0XR0.5	8.00	0.50	8.00	20.00	64.0	4
S5238.0XR1.0	8.00	1.00	8.00	20.00	64.0	4
S5238.0XR2.0	8.00	2.00	8.00	20.00	64.0	4
S52310.0XR0.5	10.00	0.50	10.00	22.00	70.0	4
S52310.0XR1.0	10.00	1.00	10.00	22.00	70.0	4
S52310.0XR1.5	10.00	1.50	10.00	22.00	70.0	4
S52310.0XR2.0	10.00	2.00	10.00	22.00	70.0	4
S52312.0XR0.5	12.00	0.50	12.00	25.00	75.0	4
S52312.0XR1.0	12.00	1.00	12.00	25.00	75.0	4
S52312.0XR2.0	12.00	2.00	12.00	25.00	75.0	4
S52312.0XR3.0	12.00	3.00	12.00	25.00	75.0	4
S52316.0XR0.5	16.00	0.50	16.00	32.00	90.0	4

Product	DC	RE	DCON MS	APMX	OAL	NOF
	[mm]	[mm]	[mm]	[mm]	[mm]	
S52316.0XR1.0	16.00	1.00	16.00	32.00	90.0	4
S52316.0XR2.0	16.00	2.00	16.00	32.00	90.0	4
S52316.0XR3.0	16.00	3.00	16.00	32.00	90.0	4

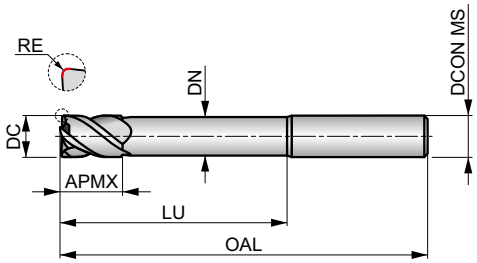
S524

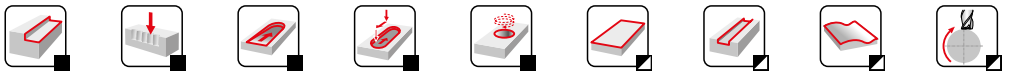
DORMER

4-Flute Solid Carbide Corner Radius End Mill, Long Reach

Extra short cut length, 4-flute design with different corner radius available and 40° helix provides high rigidity for profile milling in hard to reach areas where a corner radius is required. Neck recess to avoid work contact with the wall. TiSiN coating improves performance machining in hardened materials up to 63HRC.

HM	N	NOF 4
	λ 40°	γ -6°
DIN 6535HA	TiSiN	DC h9
	DORMER	





Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

H1.1	H2.1	H2.2	H3.1	H3.2	H4.1	H4.2
119 I	70 G	60 E	78 G	64 G	50 E	42 B

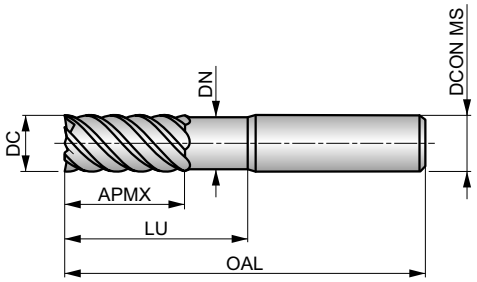
DCON MS tolerance h6; RE ±0.01 mm.

Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S5243.0XR0.3	3.00	0.30	6.00	5.00	75.0	4	30.00	2.80
S5244.0XR0.3	4.00	0.30	6.00	8.00	75.0	4	32.00	3.70
S5244.0XR0.5	4.00	0.50	6.00	8.00	75.0	4	32.00	3.70
S5245.0XR0.3	5.00	0.30	6.00	9.00	75.0	4	32.00	4.60
S5245.0XR0.5	5.00	0.50	6.00	9.00	75.0	4	32.00	4.60
S5246.0XR0.3	6.00	0.30	6.00	10.00	75.0	4	40.00	5.50
S5246.0XR0.5	6.00	0.50	6.00	10.00	75.0	4	40.00	5.50
S5246.0XR1.0	6.00	1.00	6.00	10.00	75.0	4	40.00	5.50
S5248.0XR0.3	8.00	0.30	8.00	12.00	75.0	4	40.00	7.40
S5248.0XR0.5	8.00	0.50	8.00	12.00	75.0	4	40.00	7.40
S5248.0XR1.0	8.00	1.00	8.00	12.00	75.0	4	40.00	7.40
S52410.0XR0.5	10.00	0.50	10.00	14.00	75.0	4	40.00	9.20
S52410.0XR1.0	10.00	1.00	10.00	14.00	75.0	4	40.00	9.20
S52410.0XR2.0	10.00	2.00	10.00	14.00	75.0	4	40.00	9.20
S52412.0XR0.5	12.00	0.50	12.00	16.00	100.0	4	60.00	11.00
S52412.0XR1.0	12.00	1.00	12.00	16.00	100.0	4	60.00	11.00
S52412.0XR2.0	12.00	2.00	12.00	16.00	100.0	4	60.00	11.00
S52416.0XR0.5	16.00	0.50	16.00	22.00	125.0	4	85.00	15.00
S52416.0XR1.0	16.00	1.00	16.00	22.00	125.0	4	85.00	15.00
S52416.0XR2.0	16.00	2.00	16.00	22.00	125.0	4	85.00	15.00
S52416.0XR3.0	16.00	3.00	16.00	22.00	125.0	4	85.00	15.00

S525

Multi-Flute Solid Carbide Finishing End Mill

Short cut length, 6 or 8 flute design with 50° helix provides high rigidity for finishing of deep walls. Neck recess to avoid work contact with the wall and extend reach. TiSiN coating increases tool life and improves performance when milling hardened materials up to 63HRC.



HM	N	NOF 6-8
	λ 50°	γ -26°
DIN 6535HA	TiSiN	DC h9
	DORMER	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

H1.1	H2.1	H2.2	H3.1	H3.2	H4.1	H4.2
119 G	70 G	60 E	78 G	64 G	50 E	42 A

DCON MS tolerance h6.

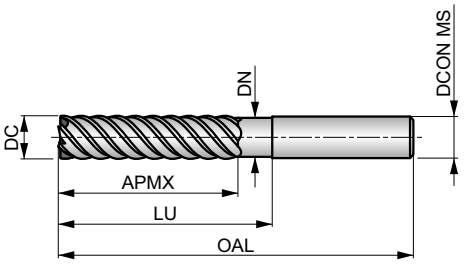
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S5253.0	3.00	6.00	8.00	50.0	6	20.00	2.80
S5254.0	4.00	6.00	11.00	50.0	6	20.00	3.70
S5256.0	6.00	6.00	15.00	50.0	6	20.00	5.50
S5258.0	8.00	8.00	20.00	64.0	6	30.00	7.40
S52510.0	10.00	10.00	22.00	70.0	6	32.00	9.20
S52512.0	12.00	12.00	25.00	75.0	6	37.00	11.00
S52514.0	14.00	14.00	30.00	90.0	6	44.00	13.00
S52516.0	16.00	16.00	30.00	90.0	8	46.00	15.00
S52518.0	18.00	18.00	35.00	100.0	8	53.00	17.00
S52520.0	20.00	20.00	38.00	100.0	8	58.00	19.00

S526

DORMER

Multi-Flute Solid Carbide Finishing End Mill, Long Series

Long cut length, 6 or 8 flute design with 50° helix provides high rigidity for finishing of deeper walls. Neck recess to avoid work contact with the wall and extend reach. TiSiN coating increases tool life and improves performance when milling hardened materials up to 63HRC.



HM	N	NOF 6-8
	λ 50°	γ -26°
DIN 6535HA	TiSiN	DC h9
	DORMER	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

H1.1	H2.1	H2.2	H3.1	H3.2	H4.1	H4.2
96 G	57 G	49 E	63 G	52 G	40 E	34 A

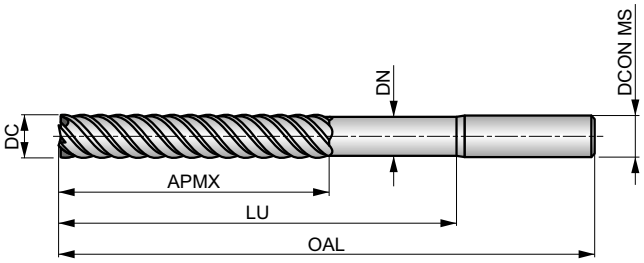
DCON MS tolerance h6.

Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S5263.0	3.00	6.00	19.00	75.0	6	30.00	2.80
S5264.0	4.00	6.00	19.00	75.0	6	32.00	3.70
S5266.0	6.00	6.00	31.00	75.0	6	40.00	5.50
S5268.0	8.00	8.00	31.00	75.0	6	40.00	7.40
S52610.0	10.00	10.00	45.00	100.0	6	60.00	9.20
S52612.0	12.00	12.00	50.00	100.0	6	60.00	11.00
S52614.0	14.00	14.00	57.00	125.0	6	85.00	13.00
S52616.0	16.00	16.00	57.00	125.0	8	85.00	15.00
S52618.0	18.00	18.00	57.00	125.0	8	85.00	17.00
S52620.0	20.00	20.00	57.00	125.0	8	85.00	19.00

S527

Multi-Flute Solid Carbide Finishing End Mill, Extra Long Series

Extra long cut length, 6 or 8 flute design with 50° helix provides high rigidity for finishing of extra deep walls. Neck recess to avoid work contact with the wall and extend reach. TiSiN coating increases service life and improves performance when milling hardened materials up to 63HRC.



HM	N	NOF 6-8
	λ 50°	γ -26°
DIN 6535HA	TiSiN	DC h9
	DORMER	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

H1.1	H2.1	H2.2	H3.1	H3.2	H4.1	H4.2
59 G	35 G	30 E	39 G	32 G	25 E	21 A

DCON MS tolerance h6.

Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S5273.0	3.00	6.00	25.00	100.0	6	60.00	2.80
S5274.0	4.00	6.00	31.00	100.0	6	60.00	3.70
S5276.0	6.00	6.00	38.00	100.0	6	60.00	5.50
S5278.0	8.00	8.00	41.00	100.0	6	60.00	7.40
S52710.0	10.00	10.00	57.00	125.0	6	85.00	9.20
S52712.0	12.00	12.00	75.00	150.0	6	110.00	11.00
S52716.0	16.00	16.00	75.00	150.0	8	110.00	15.00
S52720.0	20.00	20.00	75.00	150.0	8	110.00	19.00

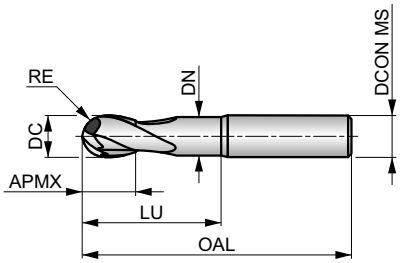
S529

DORMER

2-Flute Solid Carbide Ball-Nosed End Mill

Extra short cut length, 2-flute design with neck recess provides high rigidity and reduces vibrations. Ball nosed geometry is designed for high performance contouring of complex surfaces. TiSiN coating increases tool life and improves performance when machining hardened materials up to 63HRC.

HM	N	NOF 2
	λ 30°	γ -10°
DIN 6535HA	TiSiN	DC h9
	DORMER	



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

H1.1	H2.1	H2.2	H3.1	H3.2	H4.1	H4.2
119 F	70 E	60 D	78 E	64 E	50 D	42 A

DCON MS tolerance h6; RE +0/-0.02 mm.

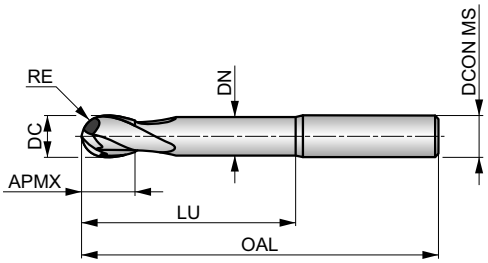
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S5291.5	1.50	0.75	6.00	3.00	50.0	2	6.00	1.40
S5292.0XD4	2.00	1.00	4.00	4.00	50.0	2	8.00	1.90
S5292.0XD6	2.00	1.00	6.00	4.00	50.0	2	8.00	1.90
S5293.0XD3	3.00	1.50	3.00	5.00	50.0	2	14.00	2.80
S5293.0XD6	3.00	1.50	6.00	5.00	50.0	2	14.00	2.80
S5294.0XD4	4.00	2.00	4.00	8.00	50.0	2	20.00	3.70
S5294.0XD6	4.00	2.00	6.00	8.00	50.0	2	20.00	3.70
S5295.0XD5	5.00	2.50	5.00	9.00	50.0	2	20.00	4.60
S5295.0XD6	5.00	2.50	6.00	9.00	50.0	2	20.00	4.60
S5296.0	6.00	3.00	6.00	10.00	50.0	2	20.00	5.50
S5298.0	8.00	4.00	8.00	12.00	64.0	2	30.00	7.40
S52910.0	10.00	5.00	10.00	14.00	70.0	2	32.00	9.20
S52912.0	12.00	6.00	12.00	16.00	75.0	2	38.00	11.00
S52916.0	16.00	8.00	16.00	32.00	90.0	2	46.00	15.00

S531

DORMER

2-Flute Solid Carbide Ball-Nosed End Mill, Long Reach

Extra short cut length, long reach, 2-flute design with neck recess provides high rigidity and reduces vibrations. Ball nosed geometry is designed for high performance contouring of complex surfaces. TiSiN coating increases tool life and improves performance when machining hardened materials up to 63HRC.



HM	N	NOF 2
	λ 30°	γ -10°
DIN 6535HA	TiSiN	DC h9
	DORMER	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

H1.1	H2.1	H2.2	H3.1	H3.2	H4.1	H4.2
96 F	57 E	49 D	63 E	52 E	40 D	34 A

DCON MS tolerance h6; RE +0/-0.02 mm.

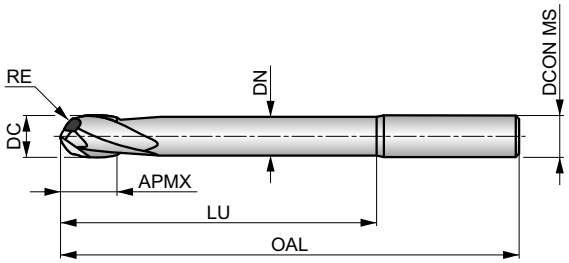
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S5311.5	1.50	0.75	6.00	3.00	75.0	2	10.00	1.40
S5312.0XD4	2.00	1.00	4.00	4.00	75.0	2	14.00	1.90
S5312.0XD6	2.00	1.00	6.00	4.00	75.0	2	14.00	1.90
S5313.0XD3	3.00	1.50	3.00	5.00	60.0	2	21.00	2.80
S5313.0XD6	3.00	1.50	6.00	5.00	75.0	2	21.00	2.80
S5314.0XD4	4.00	2.00	4.00	8.00	60.0	2	28.00	3.70
S5314.0XD6	4.00	2.00	6.00	8.00	75.0	2	28.00	3.70
S5315.0XD5	5.00	2.50	5.00	9.00	60.0	2	32.00	4.60
S5315.0XD6	5.00	2.50	6.00	9.00	75.0	2	32.00	4.60
S5316.0	6.00	3.00	6.00	10.00	75.0	2	40.00	5.50
S5318.0	8.00	4.00	8.00	12.00	75.0	2	40.00	7.40
S53110.0	10.00	5.00	10.00	14.00	75.0	2	40.00	9.20
S53112.0	12.00	6.00	12.00	16.00	100.0	2	60.00	11.00
S53116.0	16.00	8.00	16.00	32.00	125.0	2	80.00	15.00

S533

DORMER

2-Flute Solid Carbide Ball-Nosed End Mill, Extra Long Reach

Extra short cut length, extra long reach, 2-flute design with neck recess provides high rigidity and reduces vibrations. Ball nosed geometry is designed for high performance contouring of complex surfaces. TiSiN coating increases tool life and improves performance when machining hardened materials up to 63HRC.



HM	N	NOF 2
	λ 30°	γ -10°
DIN 6535HA	TiSiN	DC h9
	DORMER	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

H1.1	H2.1	H2.2	H3.1	H3.2	H4.1	H4.2
59 F	35 E	30 D	39 E	32 E	25 D	21 A

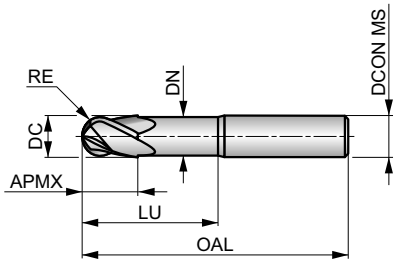
DCON MS tolerance h6; RE +0/-0.02 mm.

Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S5332.0XD4	2.00	1.00	4.00	4.00	100.0	2	20.00	1.90
S5332.0XD6	2.00	1.00	6.00	4.00	100.0	2	20.00	1.90
S5333.0XD4	3.00	1.50	4.00	5.00	100.0	2	30.00	2.80
S5333.0XD6	3.00	1.50	6.00	5.00	100.0	2	30.00	2.80
S5334.0XD4	4.00	2.00	4.00	8.00	100.0	2	40.00	3.70
S5334.0XD6	4.00	2.00	6.00	8.00	100.0	2	40.00	3.70
S5335.0XD5	5.00	2.50	5.00	9.00	100.0	2	50.00	4.60
S5335.0XD6	5.00	2.50	6.00	9.00	100.0	2	50.00	4.60
S5336.0	6.00	3.00	6.00	10.00	100.0	2	60.00	5.50
S5338.0	8.00	4.00	8.00	12.00	100.0	2	60.00	7.40
S53310.0	10.00	5.00	10.00	14.00	125.0	2	85.00	9.20
S53312.0	12.00	6.00	12.00	16.00	125.0	2	85.00	11.00
S53314.0	14.00	7.00	14.00	32.00	150.0	2	110.00	13.00
S53316.0	16.00	8.00	16.00	32.00	150.0	2	110.00	15.00

S534

4-Flute Solid Carbide Ball-Nosed End Mill

Extra short cut length, 4-flute design with neck recess reduces vibrations and provides high rigidity. Ball nosed geometry is designed for high performance contouring of complex surfaces. TiSiN coating increases tool life and improves performance when machining hardened materials up to 63HRC.



HM	N	NOF 4
	λ 30°	γ -10°
DIN 6535HA	TiSiN	DC h9
	DORMER	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

H1.1	H2.1	H2.2	H3.1	H3.2	H4.1	H4.2
119 E	70 D	60 C	78 D	64 D	50 C	42 A

DCON MS tolerance h6; RE +0/-0.02 mm.

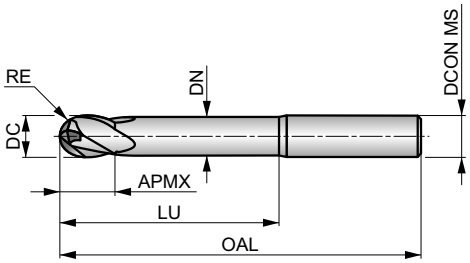
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S5343.0	3.00	1.50	6.00	5.00	50.0	4	14.00	2.80
S5344.0	4.00	2.00	6.00	8.00	50.0	4	20.00	3.70
S5345.0	5.00	2.50	6.00	9.00	50.0	4	20.00	4.60
S5346.0	6.00	3.00	6.00	10.00	50.0	4	20.00	5.50
S5348.0	8.00	4.00	8.00	12.00	64.0	4	30.00	7.40
S53410.0	10.00	5.00	10.00	14.00	70.0	4	32.00	9.20
S53412.0	12.00	6.00	12.00	16.00	75.0	4	38.00	11.00
S53414.0	14.00	7.00	14.00	32.00	90.0	4	44.00	13.00
S53416.0	16.00	8.00	16.00	32.00	90.0	4	46.00	15.00

S535

DORMER

4-Flute Solid Carbide Ball-Nosed End Mill, Long Reach

Extra short cut length, long reach, 4-flute design with neck recess reduces vibrations and provides high rigidity. Ball nosed geometry is designed for high performance contouring of complex surfaces. TiSiN coating increases tool life and improves performance when machining hardened materials up to 63HRC.



HM	N	NOF 4
	λ 30°	γ -10°
DIN 6535HA	TiSiN	DC h9
	DORMER	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

H1.1	H2.1	H2.2	H3.1	H3.2	H4.1	H4.2
96 E	57 D	49 C	63 D	52 D	40 C	34 A

DCON MS tolerance h6; RE +0/-0.02 mm.

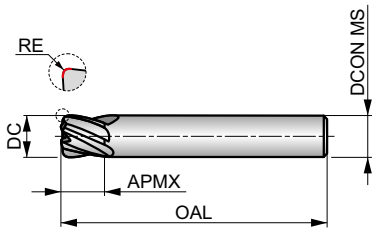
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S5353.0	3.00	1.50	6.00	5.00	75.0	4	21.00	2.80
S5354.0	4.00	2.00	6.00	8.00	75.0	4	28.00	3.70
S5355.0	5.00	2.50	6.00	9.00	75.0	4	32.00	4.60
S5356.0	6.00	3.00	6.00	10.00	75.0	4	40.00	5.50
S5358.0	8.00	4.00	8.00	12.00	75.0	4	40.00	7.40
S53510.0	10.00	5.00	10.00	14.00	75.0	4	40.00	9.20
S53512.0	12.00	6.00	12.00	16.00	100.0	4	60.00	11.00
S53514.0	14.00	7.00	14.00	32.00	125.0	4	80.00	13.00
S53516.0	16.00	8.00	16.00	32.00	125.0	4	80.00	15.00

S536

DORMER

High Feed, Multi-Flute Solid Cabide Corner Radius End Mill

Extra short cut length, 4 or 6 flute design with corner radius, 25° helix and specific geometry for high feed machining in hardened materials up to 63HRC. TiSiN coating increases tool life and improves performance.



HM	N	NOF 4-6
	λ 25°	γ 0°
DIN 6535HA	TiSiN	DC h9
	DORMER	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

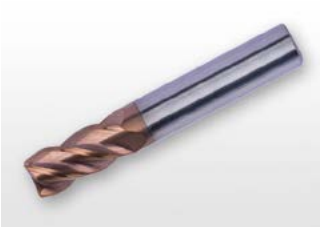
H1.1	H2.1	H2.2	H3.1	H3.2	H4.1	H4.2
205 E	122 E	104 D	135 E	111 E	86 D	73 D

DCON MS tolerance h6; RE ±0.01 mm.

Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S5366.0XR1.0	6.00	1.00	6.00	6.00	60.0	4
S5368.0XR2.0	8.00	2.00	8.00	8.00	64.0	6
S53610.0XR2.0	10.00	2.00	10.00	10.00	75.0	6
S53612.0XR2.0	12.00	2.00	12.00	12.00	75.0	6

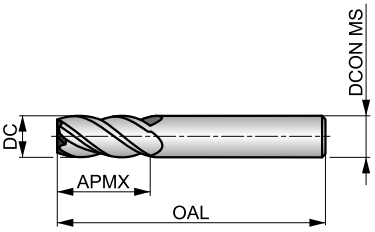
S561

DORMER

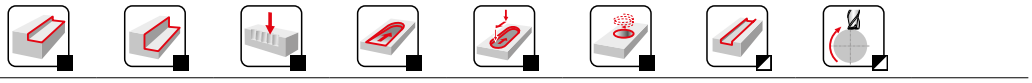


4-Flute Solid Carbide End Mill

Medium cut length, 4-flute design with 40° helix and gash-land to enable milling hard materials up to 70HRC. TiSiN coating improves performance and the differential pitch reduces vibrations, maximizing productivity and tool life. Square end design to produce sharp corners.



HM	N	NOF 4
	λ 40°	γ -6°
DIN 6535HA	TiSiN	DC h9
	DORMER	



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

H1.1	H2.1	H2.2	H3.1	H3.2	H4.1	H4.2
119 I	70 G	60 E	78 G	64 G	50 E	42 B

DCON MS tolerance h6.

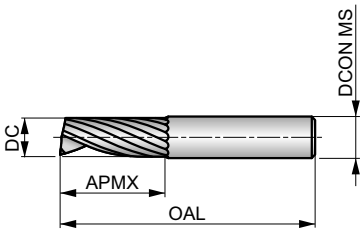
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S5611.0	1.00	6.00	3.00	50.0	4
S5611.5	1.50	6.00	4.50	50.0	4
S5612.0	2.00	6.00	6.50	50.0	4
S5612.5	2.50	6.00	6.50	50.0	4
S5613.0	3.00	6.00	9.00	50.0	4
S5614.0	4.00	6.00	12.00	50.0	4
S5615.0	5.00	6.00	15.00	50.0	4
S5616.0	6.00	6.00	20.00	60.0	4
S5618.0	8.00	8.00	20.00	64.0	4
S56110.0	10.00	10.00	22.00	70.0	4
S56112.0	12.00	12.00	25.00	75.0	4
S56114.0	14.00	14.00	32.00	90.0	4
S56116.0	16.00	16.00	32.00	90.0	4
S56118.0	18.00	18.00	38.00	100.0	4
S56120.0	20.00	20.00	38.00	100.0	4

S637

DORMER

Single-Flute Solid Carbide End Mill

Short cut length, 1-flute design provides high performance when slotting and routing. The S637, with high hook geometry, is designed for high speed routing in thin walled non-ferrous materials. Polished surface prevents workpiece material from sticking to the cutting edge.



HM	W	NOF 1
	λ 25°	γ 20°
DIN 6535HA	Hi	DC h9
	DORMER	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2
■709 R	■533 R	■357 R	■357 P	■320 P	■229 P	■373 P	■219 P	■112 P	■373 S	■144 S

DCON MS tolerance h6.

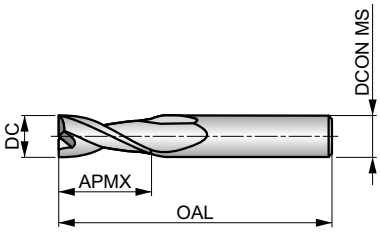
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S6372.0	2.00	2.00	10.00	40.0	1
S6373.0	3.00	3.00	12.00	40.0	1
S6374.0	4.00	4.00	15.00	50.0	1
S6375.0	5.00	5.00	16.00	50.0	1
S6376.0	6.00	6.00	20.00	60.0	1
S6378.0	8.00	8.00	22.00	63.0	1
S63710.0	10.00	10.00	25.00	72.0	1
S63712.0	12.00	12.00	30.00	83.0	1

S610

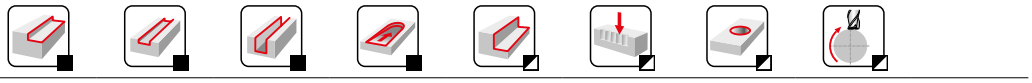
DORMER

2-Flute Solid Carbide End Mill

Short cut length, 2-flute design provides high rigidity for milling standard slots and profiling. The S610, with high hook geometry, is designed for high performance machining in non-ferrous materials. Polished surface prevents workpiece material from sticking to the cutting edge.



HM	W	NOF 2
	λ 30°	γ 20°
DIN 6535HA	Hi	DC h9
	DORMER	



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2
709 P	533 P	357 P	357 O	320 O	229 O	373 O	219 O	112 O	373 R	144 R

DCON MS tolerance h6; RE ±0.02 mm.

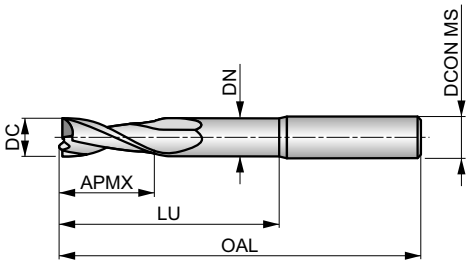
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S6102.0	2.00	0.10	4.00	6.50	40.0	2
S6103.0XD3	3.00	0.10	3.00	9.00	40.0	2
S6103.0XD6	3.00	0.10	6.00	9.00	50.0	2
S6104.0XD4	4.00	0.10	4.00	12.00	50.0	2
S6104.0XD6	4.00	0.10	6.00	12.00	50.0	2
S6105.0	5.00	0.10	6.00	15.00	50.0	2
S6106.0	6.00	0.10	6.00	20.00	50.0	2
S6108.0	8.00	0.10	8.00	20.00	64.0	2
S61010.0	10.00	0.10	10.00	22.00	75.0	2
S61012.0	12.00	0.10	12.00	25.00	75.0	2
S61014.0	14.00	0.10	14.00	32.00	90.0	2
S61016.0	16.00	0.10	16.00	32.00	90.0	2
S61020.0	20.00	0.10	20.00	38.00	100.0	2

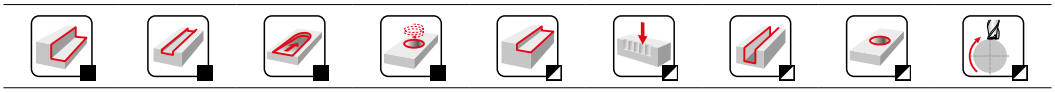
S611

2-Flute Solid Carbide End Mill, Extra Long Reach

Short cut length, 2-flute design with neck recess provides high rigidity for milling and profiling in hard to reach areas. The S611, with high hook geometry, is designed for high performance machining in non-ferrous materials. Polished surface prevents workpiece material from sticking to the cutting edge.

HM	W	NOF 2
	λ 30°	γ 20°
DIN 6535HA	Hi	DC h9
	DORMER	





Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2
638 P	480 P	321 P	321 0	288 0	206 0	336 0	197 0	101 0	336 R	130 R

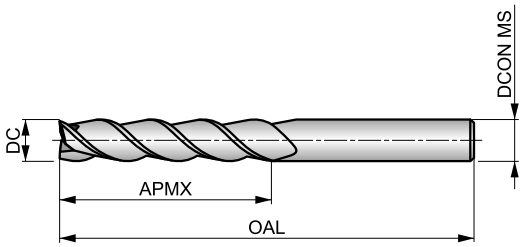
DCON MS tolerance h6; RE ±0.02 mm.

Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S6113.0XD3	3.00	0.10	3.00	9.00	40.0	2	15.00	2.80
S6113.0XD6	3.00	0.10	6.00	9.00	50.0	2	15.00	2.80
S6114.0XD4	4.00	0.10	4.00	12.00	50.0	2	20.00	3.70
S6114.0XD6	4.00	0.10	6.00	12.00	50.0	2	20.00	3.70
S6115.0	5.00	0.10	6.00	15.00	50.0	2	20.00	4.60
S6116.0	6.00	0.10	6.00	16.00	80.0	2	40.00	5.50
S6118.0	8.00	0.10	8.00	20.00	80.0	2	40.00	7.40
S61110.0	10.00	0.10	10.00	22.00	100.0	2	60.00	9.20
S61112.0	12.00	0.10	12.00	25.00	100.0	2	60.00	11.00
S61114.0	14.00	0.10	14.00	32.00	125.0	2	75.00	13.00
S61116.0	16.00	0.10	16.00	32.00	125.0	2	75.00	15.00
S61120.0	20.00	0.10	20.00	38.00	125.0	2	75.00	19.00

S614

3-Flute Solid Carbide End Mill, Extra Long Series

Extra long cut length, 3-flute design for light profiling applications in hard to reach areas. The S614, with high hook geometry, is designed for high performance machining in non-ferrous materials.



HM	W	NOF 3
	λ 40°	γ 13°
DIN 6535HA	Bright	DC h9
	DORMER	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2
638 G	480 G	321 G	321 F	288 F	206 F	336 F	197 F	101 F	336 I	130 I

DCON MS tolerance h6.

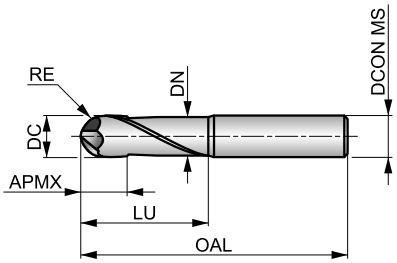
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S6143.0XD3	3.00	3.00	19.00	60.0	3
S6143.0XD6	3.00	6.00	19.00	75.0	3
S6144.0XD4	4.00	4.00	19.00	60.0	3
S6144.0XD6	4.00	6.00	19.00	75.0	3
S6145.0	5.00	6.00	19.00	75.0	3
S6146.0	6.00	6.00	31.00	75.0	3
S6148.0	8.00	8.00	41.00	100.0	3
S61410.0	10.00	10.00	50.00	100.0	3
S61412.0	12.00	12.00	50.00	100.0	3
S61414.0	14.00	14.00	57.00	125.0	3
S61416.0	16.00	16.00	57.00	125.0	3

S629

DORMER

2-Flute Solid Carbide Ball-Nosed End Mill

Extra short cut length, 2-flute design with neck recess reduces vibrations and provides high rigidity. Ball nosed geometry is designed for high performance contouring of complex surfaces in non-ferrous materials.



HM	W	NOF 2
	λ 30°	γ 15°
DIN 6535HA	Bright	DC h9
	DORMER	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2
709 N	533 N	357 N	357 N	320 N	229 N	373 N	219 N	112 N	373 O	144 O

DCON MS tolerance h6; RE +0/-0.02 mm.

Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S6291.0 [1]	1.00	0.50	4.00	0.80	50.0	2	10.00	0.90
S6291.5 [1]	1.50	0.75	4.00	1.20	50.0	2	12.00	1.40
S6292.0 [1]	2.00	1.00	4.00	1.60	60.0	2	18.00	1.90
S6293.0	3.00	1.50	6.00	5.00	57.0	2	20.00	2.80
S6294.0	4.00	2.00	6.00	6.00	57.0	2	20.00	3.70
S6295.0	5.00	2.50	6.00	7.00	57.0	2	20.00	4.60
S6296.0	6.00	3.00	6.00	8.00	57.0	2	20.00	5.50
S6298.0	8.00	4.00	8.00	10.00	64.0	2	25.00	7.40
S62910.0	10.00	5.00	10.00	12.00	75.0	2	35.00	9.20
S62912.0	12.00	6.00	12.00	14.00	75.0	2	35.00	11.00
S62916.0	16.00	8.00	16.00	18.00	90.0	2	45.00	15.00
S62920.0	20.00	10.00	20.00	22.00	100.0	2	50.00	19.00

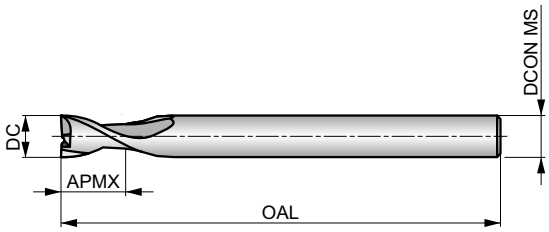
[1] rake angle 11°.

S638

2-Flute Solid Carbide End Mill, Extra Long Reach

Extra short cut length, 2-flute reduced shank provides clearance when machining against deep walls. The S638, with high hook geometry, is designed for high speed machining in non-ferrous materials. Polished surface prevents workpiece material from sticking to the cutting edge.

HM	W	NOF 2
	λ 30°	γ 20°
DIN 6535HA	Hi	DC h9
	DORMER	



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2
709 N	533 N	357 N	357 N	320 N	229 N	373 N	219 N	112 N	373 O	144 O

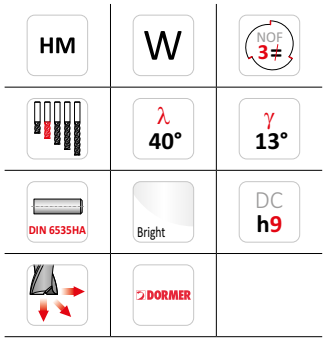
Reduced shank; DCON MS tolerance h6; RE ±0.02 mm.

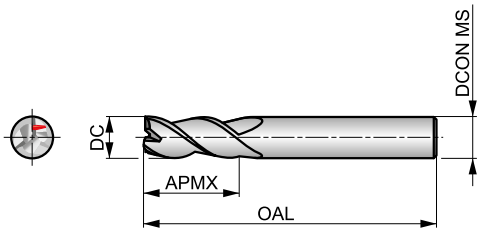
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S6386.2	6.20	0.10	6.00	8.00	100.0	2
S6388.2	8.20	0.10	8.00	10.00	100.0	2
S63810.3	10.30	0.10	10.00	14.00	125.0	2
S63812.3	12.30	0.10	12.00	16.00	125.0	2
S63816.3	16.30	0.10	16.00	20.00	125.0	2
S63820.3	20.30	0.10	20.00	25.00	125.0	2

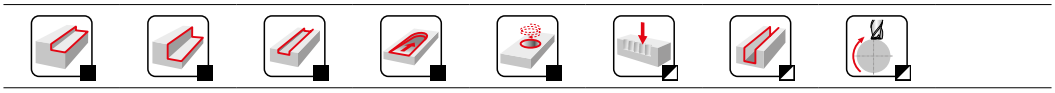
S650

3-Flute Solid Carbide End Mill

Short cut length, 3-flute with differential pitch is designed to reduce vibrations, spindle load and improve surface finish when milling. The single chip divider helps to break swarf into manageable pieces for a better evacuation in non-ferrous materials.







Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2
■780 O	■608 O	■393 O	■393 N	■352 N	■252 N	■410 N	■241 N	■123 N	■410 P	■158 P

DCON MS tolerance h6.

Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S6501.0	1.00	4.00	3.00	40.0	3
S6501.5	1.50	4.00	4.50	40.0	3
S6502.0	2.00	4.00	6.50	40.0	3
S6502.5	2.50	4.00	6.50	40.0	3
S6503.0XD3	3.00	3.00	9.00	40.0	3
S6503.0XD6	3.00	6.00	9.00	50.0	3
S6504.0XD4	4.00	4.00	12.00	50.0	3
S6504.0XD6	4.00	6.00	12.00	50.0	3
S6505.0	5.00	6.00	15.00	50.0	3
S6506.0	6.00	6.00	16.00	50.0	3
S6508.0	8.00	8.00	20.00	64.0	3
S65010.0	10.00	10.00	22.00	70.0	3
S65012.0	12.00	12.00	25.00	75.0	3
S65014.0	14.00	14.00	32.00	90.0	3
S65016.0	16.00	16.00	32.00	90.0	3
S65020.0 [1]	20.00	20.00	38.00	100.0	3

[1] No differential pitch and chip divider.

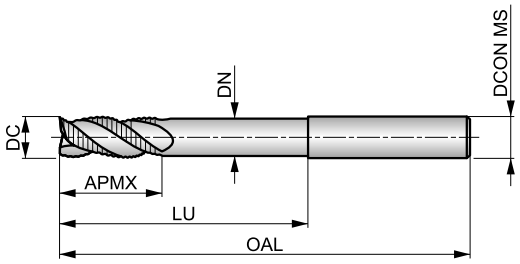
S654

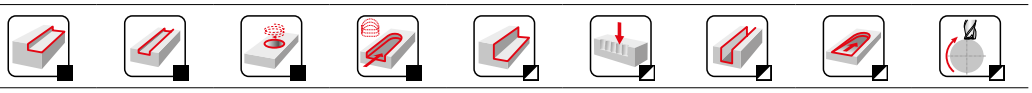
DORMER

3-Flute Solid Carbide Roughing End Mill, Long Reach

Short cut length, 3-flute roughing design with neck recess and differential pitch to reduce vibrations and maximize productivity and tool life. The S654, with NRA profile, breaks the swarf into small manageable pieces. It is designed for high performance roughing in non-ferrous materials.

HM	W NRA	NOF 3
	λ 40°	γ 15°
DIN 6535HA	Bright	DC h9
	DORMER	





Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2
709 O	533 O	357 O	357 N	320 N	229 N	373 N	219 N	112 N	373 P	144 P

DCON MS tolerance h6; RE ±0.02 mm.

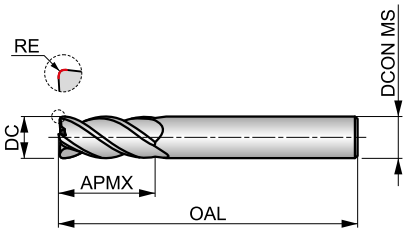
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S6546.0	6.00	0.10	6.00	13.00	75.0	3	40.00	5.50
S6548.0	8.00	0.10	8.00	20.00	75.0	3	40.00	7.40
S65410.0	10.00	0.10	10.00	22.00	100.0	3	60.00	9.20
S65412.0	12.00	0.12	12.00	26.00	100.0	3	60.00	11.00
S65416.0	16.00	0.16	16.00	32.00	125.0	3	75.00	15.00
S65420.0	20.00	0.20	20.00	40.00	150.0	3	100.00	19.00

S662

DORMER

4-Flute Solid Carbide Corner Radius End Mill

Short cut length, 4-flute design with differential pitch and different corner radius available, for profile milling where a corner radius is required. The S662, with high hook geometry, is designed for high performance machining in non-ferrous materials.



HM	W	NOF 4≠
	λ 40°	γ 10°
DIN 6535HA	Bright	DC h9
	DORMER	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2
■709 O	■533 O	■357 O	■357 N	■320 N	■229 N	■373 N	■219 N	■112 N	■373 P	■144 P

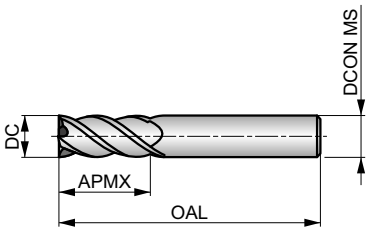
DCON MS tolerance h6; RE ±0.01 mm.

Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S6623.0XR0.3	3.00	0.30	6.00	9.00	57.0	4
S6624.0XR0.3	4.00	0.30	6.00	12.00	57.0	4
S6624.0XR0.5	4.00	0.50	6.00	12.00	57.0	4
S6625.0XR0.3	5.00	0.30	6.00	15.00	57.0	4
S6625.0XR0.5	5.00	0.50	6.00	15.00	57.0	4
S6626.0XR0.5	6.00	0.50	6.00	16.00	57.0	4
S6626.0XR1.0	6.00	1.00	6.00	16.00	57.0	4
S6626.0XR2.0	6.00	2.00	6.00	16.00	57.0	4
S6628.0XR0.5	8.00	0.50	8.00	20.00	64.0	4
S6628.0XR1.0	8.00	1.00	8.00	20.00	64.0	4
S6628.0XR2.0	8.00	2.00	8.00	20.00	64.0	4
S66210.0XR0.5	10.00	0.50	10.00	22.00	72.0	4
S66210.0XR1.0	10.00	1.00	10.00	22.00	72.0	4
S66210.0XR2.0	10.00	2.00	10.00	22.00	72.0	4
S66212.0XR1.0	12.00	1.00	12.00	26.00	83.0	4
S66212.0XR2.0	12.00	2.00	12.00	26.00	83.0	4
S66212.0XR2.5	12.00	2.50	12.00	26.00	83.0	4
S66212.0XR3.0	12.00	3.00	12.00	26.00	83.0	4
S66216.0XR1.0	16.00	1.00	16.00	32.00	92.0	4
S66216.0XR2.0	16.00	2.00	16.00	32.00	92.0	4
S66216.0XR3.0	16.00	3.00	16.00	32.00	92.0	4
S66216.0XR4.0	16.00	4.00	16.00	32.00	92.0	4
S66220.0XR2.0	20.00	2.00	20.00	38.00	104.0	4
S66220.0XR4.0	20.00	4.00	20.00	38.00	104.0	4

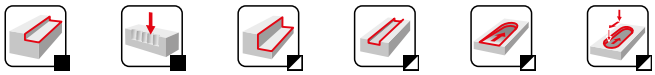
S612

4-Flute Solid Carbide End Mill

Short cut length, 4-flute design provides high rigidity for standard profile milling. Diamond like coating increases service life and improves performance. For milling abrasive materials.



HM	N	NOF 4
	λ 40°	γ 10°
DIN 6535HA	Diamond	DC h9
	DORMER	



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

N5.1

■ 350 G

DCON MS tolerance h6.

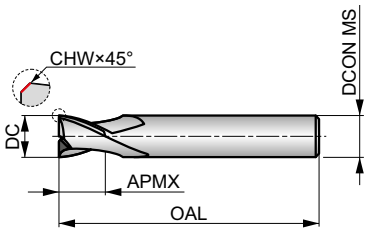
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S6121.0	1.00	3.00	3.00	50.0	4
S6121.5	1.50	3.00	4.50	50.0	4
S6122.0	2.00	3.00	6.50	50.0	4
S6122.5	2.50	3.00	6.50	50.0	4
S6123.0	3.00	3.00	9.00	50.0	4
S6124.0	4.00	4.00	12.00	50.0	4
S6125.0	5.00	5.00	15.00	50.0	4
S6126.0	6.00	6.00	20.00	60.0	4
S6128.0	8.00	8.00	20.00	64.0	4
S61210.0	10.00	10.00	22.00	70.0	4
S61212.0	12.00	12.00	25.00	75.0	4

S802HA

DORMER

2-Flute Solid Carbide Slot End Mill, DIN 6535 HA Shank

Extra short cut length, 2-flute design provides high rigidity for milling shallow slots to a P9 tolerance and ramping operation. AlCrN coating improves performance and extends the tool life.



HM	N	NOF 2
	λ 28°	γ 9°
DIN 6535HA	AlCrN	
DIN 6527K		

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 206 K	■ 230 K	■ 238 K	■ 176 K	■ 155 K	■ 137 J	■ 143 K	■ 114 J	■ 97 J	■ 84 J	■ 72 J	■ 58 J	■ 121 K	■ 102 K
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
■ 107 K	■ 89 J	◪ 75 J	■ 99 J	■ 85 J	◪ 76 J	◪ 75 J	◪ 63 J	■ 205 K	■ 152 K	■ 114 K	■ 210 K	■ 171 K	■ 137 J
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■ 186 K	■ 143 K	■ 115 J	■ 173 J	■ 131 J	■ 95 J	■ 82 J	■ 68 J	■ 196 J	■ 147 J	■ 114 J	◪ 408 K	◪ 307 K	■ 206 K
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**S1.1**	**S1.2**	**S2.1**	**S3.1**	**S4.1**	
■ 206 K	■ 184 K	■ 132 K	■ 215 K	■ 125 K	◪ 64 K	◪ 215 K	◪ 83 K	◪ 81 J	◪ 71 J	◪ 55 J	◪ 41 J	◪ 32 J	

DCON MS tolerance h6; DC≤7.75 mm: CHW ± 0.03X45° mm; DC>7.75 mm: CHW ± 0.05X45° mm.

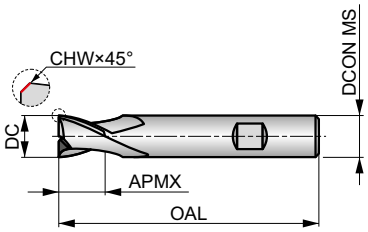
Product	DC [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S802HA1.0	1.00	–	3.00	3.00	38.0	2
S802HA1.5	1.50	–	3.00	3.00	38.0	2
S802HA2.0	2.00	–	6.00	3.00	50.0	2
S802HA2.5	2.50	0.08	6.00	3.00	50.0	2
S802HA3.0	3.00	0.08	6.00	4.00	50.0	2
S802HA3.5	3.50	0.08	6.00	4.00	50.0	2
S802HA4.0	4.00	0.13	6.00	5.00	54.0	2
S802HA4.5	4.50	0.13	6.00	5.00	54.0	2
S802HA5.0	5.00	0.13	6.00	6.00	54.0	2
S802HA6.0	6.00	0.13	6.00	7.00	54.0	2
S802HA7.0	7.00	0.13	8.00	8.00	58.0	2
S802HA8.0	8.00	0.20	8.00	9.00	58.0	2
S802HA9.0	9.00	0.20	10.00	10.00	66.0	2
S802HA10.0	10.00	0.20	10.00	11.00	66.0	2
S802HA12.0	12.00	0.20	12.00	12.00	73.0	2
S802HA14.0	14.00	0.20	14.00	14.00	75.0	2
S802HA16.0	16.00	0.20	16.00	16.00	82.0	2
S802HA18.0	18.00	0.20	18.00	18.00	84.0	2
S802HA20.0	20.00	0.30	20.00	20.00	92.0	2

S802HB

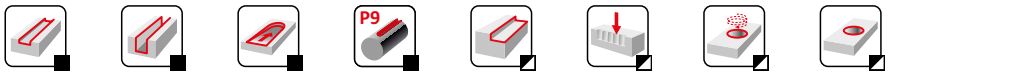
DORMER

2-Flute Solid Carbide Slot End Mill, DIN 6535 HB Shank

Extra short cut length, 2-flute design provides high rigidity for milling shallow slots to a P9 tolerance and ramping operation. The Weldon shank prevents the end mill from slipping in the toolholder. AlCrN coating improves performance and extends the tool life.



HM	N	NOF 2
	λ 28°	γ 9°
DIN 6535HB	AlCrN	
DIN 6527K		



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 206 K	■ 230 K	■ 238 K	■ 176 K	■ 155 K	■ 137 J	■ 143 K	■ 114 J	■ 97 J	■ 84 J	■ 72 J	■ 58 J	■ 121 K	■ 102 K
M2.1	M2.2	M2.3	M3.1	M3.2	M3.3	M4.1	M4.2	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3
■ 107 K	■ 89 J	◪ 75 J	■ 99 J	■ 85 J	◪ 76 J	◪ 75 J	◪ 63 J	■ 205 K	■ 152 K	■ 114 K	■ 210 K	■ 171 K	■ 137 J
K3.1	K3.2	K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3
■ 186 K	■ 143 K	■ 115 J	■ 173 J	■ 131 J	■ 95 J	■ 82 J	■ 68 J	■ 196 J	■ 147 J	■ 114 J	◪ 408 K	◪ 307 K	■ 206 K
N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	S1.1	S1.2	S2.1	S3.1	S4.1	
■ 206 K	■ 184 K	■ 132 K	■ 215 K	■ 125 K	◪ 64 K	◪ 215 K	◪ 83 K	◪ 81 J	◪ 71 J	◪ 55 J	◪ 41 J	◪ 32 J	

DCON MS tolerance h6; DC≤7.75 mm: CHW ± 0.03X45° mm; DC>7.75 mm: CHW ± 0.05X45° mm.

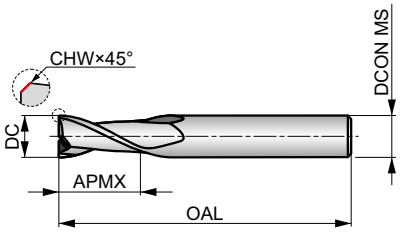
Product	DC [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S802HB2.0	2.00	–	6.00	3.00	50.0	2
S802HB2.5	2.50	0.08	6.00	3.00	50.0	2
S802HB3.0	3.00	0.08	6.00	4.00	50.0	2
S802HB3.5	3.50	0.08	6.00	4.00	50.0	2
S802HB4.0	4.00	0.13	6.00	5.00	54.0	2
S802HB4.5	4.50	0.13	6.00	5.00	54.0	2
S802HB5.0	5.00	0.13	6.00	6.00	54.0	2
S802HB6.0	6.00	0.13	6.00	7.00	54.0	2
S802HB7.0	7.00	0.13	8.00	8.00	58.0	2
S802HB8.0	8.00	0.20	8.00	9.00	58.0	2
S802HB9.0	9.00	0.20	10.00	10.00	66.0	2
S802HB10.0	10.00	0.20	10.00	11.00	66.0	2
S802HB12.0	12.00	0.20	12.00	12.00	73.0	2
S802HB14.0	14.00	0.20	14.00	14.00	75.0	2
S802HB16.0	16.00	0.20	16.00	16.00	82.0	2
S802HB18.0	18.00	0.20	18.00	18.00	84.0	2
S802HB20.0	20.00	0.30	20.00	20.00	92.0	2

S812HA

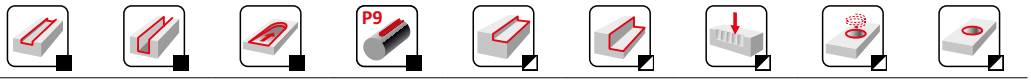
DORMER

2-Flute Solid Carbide Slot End Mill, DIN 6535 HA Shank

Short cut length, 2-flute design provides high rigidity for milling standard slots to a P9 tolerance and ramping operation. AlCrN coating improves performance and extends the tool life.



HM	N	NOF 2
	λ 28°	γ 9°
DIN 6535HA	AlCrN	
DIN 6527L		



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■166 K	■186 K	■192 K	■142 K	■125 K	■111 J	■115 K	■93 J	■78 J	■68 J	■59 J	■47 J	■97 K	■81 K
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
■85 K	■71 J	■79 J	■68 J	■61 J	■60 J	■166 K	■123 K	■92 K	■170 K	■138 K	■110 J	■150 K	■115 K
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
■93 J	■140 J	■105 J	■77 J	■66 J	■56 J	■159 J	■118 J	■92 J	◪330 K	◪247 K	■166 K	■166 K	■148 K
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**S1.1**	**S1.2**	**S2.1**	**S3.1**	**S4.1**			
■107 K	■173 K	■101 K	◪52 K	◪173 K	◪67 K	■72 J	■64 J	■49 J	■38 J	■30 J			

DCON MS tolerance h6; DC≤7.00 mm: CHW ± 0.03X45° mm; DC>7.00 mm: CHW ± 0.05X45° mm.

Product	DC [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S812HA2.0	2.00	–	6.00	6.00	57.0	2
S812HA2.5	2.50	0.08	6.00	7.00	57.0	2
S812HA3.0	3.00	0.08	6.00	7.00	57.0	2
S812HA3.5	3.50	0.08	6.00	7.00	57.0	2
S812HA4.0	4.00	0.13	6.00	8.00	57.0	2
S812HA4.5	4.50	0.13	6.00	8.00	57.0	2
S812HA5.0	5.00	0.13	6.00	10.00	57.0	2
S812HA6.0	6.00	0.13	6.00	10.00	57.0	2
S812HA7.0	7.00	0.13	8.00	13.00	63.0	2
S812HA8.0	8.00	0.20	8.00	16.00	63.0	2
S812HA9.0	9.00	0.20	10.00	16.00	72.0	2
S812HA10.0	10.00	0.20	10.00	19.00	72.0	2
S812HA12.0	12.00	0.20	12.00	22.00	83.0	2
S812HA14.0	14.00	0.20	14.00	22.00	83.0	2
S812HA16.0	16.00	0.20	16.00	26.00	92.0	2
S812HA18.0	18.00	0.20	18.00	26.00	92.0	2
S812HA20.0	20.00	0.30	20.00	32.00	104.0	2

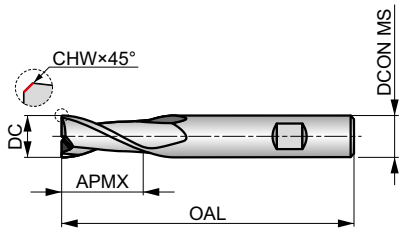
S812HB

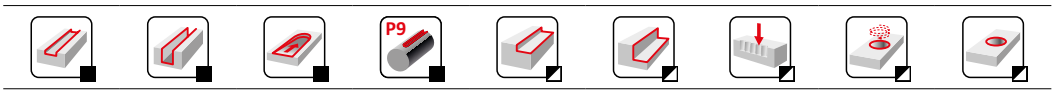
DORMER

2-Flute Solid Carbide Slot End Mill, DIN 6535 HB Shank

Short cut length, 2-flute design provides high rigidity for milling standard slots to a P9 tolerance and ramping operation. The Weldon shank prevents the end mill from slipping in the toolholder. AlCrN coating improves performance and extends the tool life.

HM	N	NOF 2
	λ 28°	γ 9°
DIN 6535HB	AlCrN	
DIN 6527L		





Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■166 K	■186 K	■192 K	■142 K	■125 K	■111 J	■115 K	■93 J	■78 J	■68 J	■59 J	■47 J	■97 K	■81 K
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
■85 K	■71 J	■79 J	■68 J	■61 J	■60 J	■166 K	■123 K	■92 K	■170 K	■138 K	■110 J	■150 K	■115 K
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
■93 J	■140 J	■105 J	■77 J	■66 J	■56 J	■159 J	■118 J	■92 J	◪330 K	◪247 K	■166 K	■166 K	■148 K
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**S1.1**	**S1.2**	**S2.1**	**S3.1**	**S4.1**			
■107 K	■173 K	■101 K	◪52 K	◪173 K	◪67 K	■72 J	■64 J	■49 J	■38 J	■30 J			

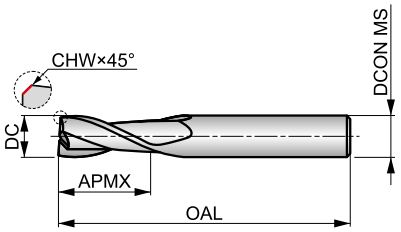
DCON MS tolerance h6; DC≤7.00 mm: CHW ± 0.03X45° mm; DC>7.00 mm: CHW ± 0.05X45° mm.

Product	DC [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S812HB2.0	2.00	0.00	6.00	6.00	57.0	2
S812HB2.5	2.50	0.08	6.00	7.00	57.0	2
S812HB3.0	3.00	0.08	6.00	7.00	57.0	2
S812HB3.5	3.50	0.08	6.00	7.00	57.0	2
S812HB4.0	4.00	0.13	6.00	8.00	57.0	2
S812HB4.5	4.50	0.13	6.00	8.00	57.0	2
S812HB5.0	5.00	0.13	6.00	10.00	57.0	2
S812HB6.0	6.00	0.13	6.00	10.00	57.0	2
S812HB7.0	7.00	0.13	8.00	13.00	63.0	2
S812HB8.0	8.00	0.20	8.00	16.00	63.0	2
S812HB9.0	9.00	0.20	10.00	16.00	72.0	2
S812HB10.0	10.00	0.20	10.00	19.00	72.0	2
S812HB12.0	12.00	0.20	12.00	22.00	83.0	2
S812HB14.0	14.00	0.20	14.00	22.00	83.0	2
S812HB16.0	16.00	0.20	16.00	26.00	92.0	2
S812HB18.0	18.00	0.20	18.00	26.00	92.0	2
S812HB20.0	20.00	0.30	20.00	32.00	104.0	2

S822

2-Flute Solid Carbide Slot End Mill

Medium cut length, 2-flute design provides high rigidity for milling standard slots to a P9 tolerance and ramping operation. AlCrN coating improves performance and extends the tool life.



HM	N	NOF 2
	λ 28°	γ 9°
DIN 6535HA	AlCrN	
DORMER		

P9

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■146 K	■164 K	■169 K	■125 K	■110 K	■98 J	■101 K	■82 J	■69 J	■61 J	■52 J	■41 J	■85 K	■72 K
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
■76 K	■62 J	■70 J	■60 J	■54 J	■53 J	■145 K	■108 K	■81 K	■150 K	■122 K	■97 J	■133 K	■102 K
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
■82 J	■123 J	■93 J	■68 J	■59 J	■48 J	■139 J	■105 J	■81 J	◪287 K	◪216 K	■144 K	■144 K	■129 K
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**S1.1**	**S1.2**	**S2.1**	**S3.1**	**S4.1**			
■93 K	■152 K	■88 K	◪45 K	◪152 K	◪59 K	■58 J	■51 J	■39 J	■29 J	■23 J			

DCON MS tolerance h6; DC≤7.00 mm: CHW ± 0.03X45° mm; DC>7.00 mm: CHW ± 0.05X45° mm.

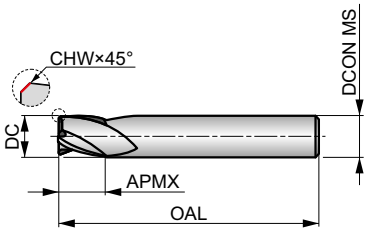
Product	DC [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S8222.0	2.00	–	6.00	8.00	57.0	2
S8222.5	2.50	0.08	6.00	12.00	57.0	2
S8223.0	3.00	0.08	6.00	12.00	57.0	2
S8224.0	4.00	0.13	6.00	14.00	57.0	2
S8225.0	5.00	0.13	6.00	16.00	57.0	2
S8226.0	6.00	0.13	6.00	19.00	57.0	2
S8227.0	7.00	0.13	8.00	19.00	63.0	2
S8228.0	8.00	0.20	8.00	19.00	63.0	2
S8229.0	9.00	0.20	10.00	21.00	72.0	2
S82210.0	10.00	0.20	10.00	22.00	72.0	2
S82212.0	12.00	0.20	12.00	25.00	83.0	2
S82214.0	14.00	0.20	14.00	30.00	83.0	2
S82216.0	16.00	0.20	16.00	32.00	92.0	2
S82218.0	18.00	0.20	18.00	32.00	92.0	2
S82220.0	20.00	0.30	20.00	38.00	104.0	2

S803HA

DORMER

3-Flute Solid Carbide Slot End Mill, DIN 6535 HA Shank

Extra short cut length, 3-flute design provides high rigidity for milling shallow slots to a P9 tolerance. AlCrN coating increases service life and improves performance. Also suited for plunging and ramping milling.



HM	N	NOF 3
	λ 28°	γ 9°
DIN 6535HA	AlCrN	
DIN 6527K		

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■206 J	■230 J	■238 J	■176 J	■155 J	■137 I	■143 J	■114 I	■97 I	■84 I	■72 I	■58 I	■121 J	■102 J
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
■107 J	■89 I	◪75 I	■99 I	■85 I	◪76 I	◪75 I	◪63 I	■205 J	■152 J	■114 J	■210 J	■171 J	■137 I
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■186 J	■143 J	■115 I	■173 I	■131 I	■95 I	■82 I	■68 I	■196 I	■147 I	■114 I	◪408 K	◪307 K	■206 K
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**S1.1**	**S1.2**	**S2.1**	**S3.1**	**S4.1**	
■206 J	■184 J	■132 J	■215 J	■125 J	◪64 J	◪215 J	◪83 J	◪81 I	◪71 I	◪55 I	◪41 I	◪32 I	

DCON MS tolerance h6; DC≤7.75 mm: CHW ± 0.03X45° mm; DC>7.75 mm: CHW ± 0.05X45° mm.

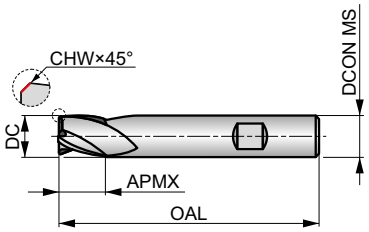
Product	DC [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S803HA1.0	1.00	–	3.00	3.00	38.0	3
S803HA1.5	1.50	–	3.00	3.00	38.0	3
S803HA2.0	2.00	–	6.00	3.00	50.0	3
S803HA2.5	2.50	0.08	6.00	3.00	50.0	3
S803HA2.8	2.80	0.08	6.00	4.00	50.0	3
S803HA3.0	3.00	0.08	6.00	4.00	50.0	3
S803HA3.5	3.50	0.08	6.00	4.00	50.0	3
S803HA3.8	3.80	0.08	6.00	5.00	54.0	3
S803HA4.0	4.00	0.13	6.00	5.00	54.0	3
S803HA4.5	4.50	0.13	6.00	5.00	54.0	3
S803HA4.8	4.80	0.13	6.00	6.00	54.0	3
S803HA5.0	5.00	0.13	6.00	6.00	54.0	3
S803HA6.0	6.00	0.13	6.00	7.00	54.0	3
S803HA7.0	7.00	0.13	8.00	8.00	58.0	3
S803HA8.0	8.00	0.20	8.00	9.00	58.0	3
S803HA9.0	9.00	0.20	10.00	10.00	66.0	3
S803HA10.0	10.00	0.20	10.00	11.00	66.0	3
S803HA12.0	12.00	0.20	12.00	12.00	73.0	3
S803HA14.0	14.00	0.20	14.00	14.00	75.0	3
S803HA16.0	16.00	0.20	16.00	16.00	82.0	3
S803HA18.0	18.00	0.20	18.00	18.00	84.0	3
S803HA20.0	20.00	0.30	20.00	20.00	92.0	3

S803HB

DORMER

3-Flute Solid Carbide Slot End Mill, DIN 6535 HB Shank

Extra short cut length, 3-flute design provides high rigidity for milling shallow slots to a P9 tolerance. AlCrN coating increases service life and improves performance. Also suited for plunging and ramping milling.



HM	N	NOF 3
	λ 28°	γ 9°
DIN 6535HB	AlCrN	
DIN 6527K		

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■206 J	■230 J	■238 J	■176 J	■155 J	■137 I	■143 J	■114 I	■97 I	■84 I	■72 I	■58 I	■121 J	■102 J
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
■107 J	■89 I	◪75 I	■99 I	■85 I	◪76 I	◪75 I	◪63 I	■205 J	■152 J	■114 J	■210 J	■171 J	■137 I
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■186 J	■143 J	■115 I	■173 I	■131 I	■95 I	■82 I	■68 I	■196 I	■147 I	■114 I	◪408 K	◪307 K	■206 K
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**S1.1**	**S1.2**	**S2.1**	**S3.1**	**S4.1**	
■206 J	■184 J	■132 J	■215 J	■125 J	◪64 J	◪215 J	◪83 J	◪81 I	◪71 I	◪55 I	◪41 I	◪32 I	

DCON MS tolerance h6; DC≤7.75 mm: CHW ± 0.03X45° mm; DC>7.75 mm: CHW ± 0.05X45° mm.

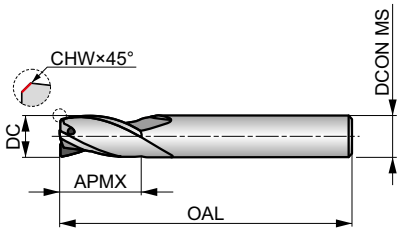
Product	DC [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S803HB2.0	2.00	–	6.00	3.00	50.0	3
S803HB2.5	2.50	0.08	6.00	3.00	50.0	3
S803HB2.8	2.80	0.08	6.00	4.00	50.0	3
S803HB3.0	3.00	0.08	6.00	4.00	50.0	3
S803HB3.5	3.50	0.08	6.00	4.00	50.0	3
S803HB3.8	3.80	0.08	6.00	5.00	54.0	3
S803HB4.0	4.00	0.13	6.00	5.00	54.0	3
S803HB4.5	4.50	0.13	6.00	5.00	54.0	3
S803HB4.8	4.80	0.13	6.00	6.00	54.0	3
S803HB5.0	5.00	0.13	6.00	6.00	54.0	3
S803HB5.75	5.75	0.13	6.00	7.00	54.0	3
S803HB6.0	6.00	0.13	6.00	7.00	54.0	3
S803HB6.75	6.75	0.13	8.00	8.00	58.0	3
S803HB7.0	7.00	0.13	8.00	8.00	58.0	3
S803HB7.75	7.75	0.13	8.00	9.00	58.0	3
S803HB8.0	8.00	0.20	8.00	9.00	58.0	3
S803HB9.0	9.00	0.20	10.00	10.00	66.0	3
S803HB9.7	9.70	0.20	10.00	11.00	66.0	3
S803HB10.0	10.00	0.20	10.00	11.00	66.0	3
S803HB11.7	11.70	0.20	12.00	12.00	73.0	3
S803HB12.0	12.00	0.20	12.00	12.00	73.0	3
S803HB14.0	14.00	0.20	14.00	14.00	75.0	3
S803HB16.0	16.00	0.20	16.00	16.00	82.0	3
S803HB18.0	18.00	0.20	18.00	18.00	84.0	3
S803HB20.0	20.00	0.30	20.00	20.00	92.0	3

S813HA

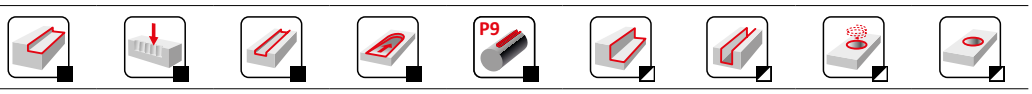
DORMER

3-Flute Solid Carbide Slot End Mill, DIN 6535 HA Shank

Short cut length, 3-flute design provides high rigidity for milling standard slots to a P9 tolerance. AlCrN coating increases service life and improves performance. Also suited for plunging and ramping milling.



HM	N	NOF 3
	λ 28°	γ 9°
DIN 6535HA	AlCrN	
DIN 6527L		



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■166 J	■186 J	■192 J	■142 J	■125 J	■111 I	■115 J	■93 I	■78 I	■68 I	■59 I	◪47 I	■97 J	■81 J
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
■85 J	■71 I	◪79 I	◪68 I	◪61 I	◪60 I	■166 J	■123 J	■92 J	■170 J	■138 J	■110 I	■150 J	■115 J
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
■93 I	■140 I	■105 I	■77 I	■66 I	■56 I	■159 I	■118 I	■92 I	◪330 K	◪247 K	■166 K	■166 J	■148 J
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**S1.1**	**S1.2**	**S2.1**	**S3.1**	**S4.1**			
■107 J	■173 J	■101 J	◪52 J	◪173 J	◪67 J	◪72 I	◪64 I	◪49 I	◪38 I	◪30 I			

DCON MS tolerance h6; DC≤7.00 mm: CHW ± 0.03X45° mm; DC>7.00 mm: CHW ± 0.05X45° mm.

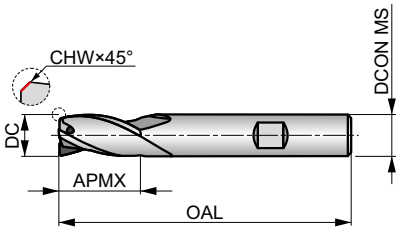
Product	DC [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S813HA2.0	2.00	0.00	6.00	6.00	57.0	3
S813HA2.5	2.50	0.08	6.00	7.00	57.0	3
S813HA3.0	3.00	0.08	6.00	7.00	57.0	3
S813HA3.5	3.50	0.08	6.00	7.00	57.0	3
S813HA4.0	4.00	0.13	6.00	8.00	57.0	3
S813HA4.5	4.50	0.13	6.00	8.00	57.0	3
S813HA5.0	5.00	0.13	6.00	10.00	57.0	3
S813HA6.0	6.00	0.13	6.00	10.00	57.0	3
S813HA7.0	7.00	0.13	8.00	13.00	63.0	3
S813HA8.0	8.00	0.20	8.00	16.00	63.0	3
S813HA9.0	9.00	0.20	10.00	16.00	72.0	3
S813HA10.0	10.00	0.20	10.00	19.00	72.0	3
S813HA12.0	12.00	0.20	12.00	22.00	83.0	3
S813HA14.0	14.00	0.20	14.00	22.00	83.0	3
S813HA16.0	16.00	0.20	16.00	26.00	92.0	3
S813HA18.0	18.00	0.20	18.00	26.00	92.0	3
S813HA20.0	20.00	0.30	20.00	32.00	104.0	3

S813HB

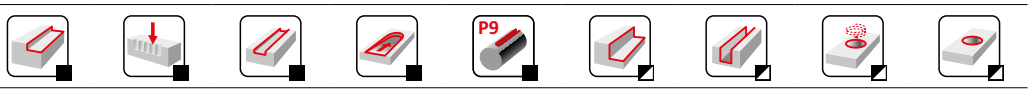
DORMER

3-Flute Solid Carbide Slot End Mill, DIN 6535 HB Shank

Short cut length, 3-flute design provides high rigidity for milling standard slots to a P9 tolerance. The Weldon shank prevents the end mill from slipping in the toolholder. AlCrN coating improves performance and extends the tool life. Also suited for plunging and ramping milling.



HM	N	NOF 3
	λ 28°	γ 9°
DIN 6535HB	AlCrN	
DIN 6527L		



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■166 J	■186 J	■192 J	■142 J	■125 J	■111 I	■115 J	■93 I	■78 I	■68 I	■59 I	◪47 I	■97 J	■81 J
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
■85 J	■71 I	◪79 I	◪68 I	◪61 I	◪60 I	■166 J	■123 J	■92 J	■170 J	■138 J	■110 I	■150 J	■115 J
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
■93 I	■140 I	■105 I	■77 I	■66 I	■56 I	■159 I	■118 I	■92 I	◪330 K	◪247 K	■166 K	■166 J	■148 J
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**S1.1**	**S1.2**	**S2.1**	**S3.1**	**S4.1**			
■107 J	■173 J	■101 J	◪52 J	◪173 J	◪67 J	◪72 I	◪64 I	◪49 I	◪38 I	◪30 I			

DCON MS tolerance h6; DC≤7.00 mm: CHW ± 0.03X45° mm; DC>7.00 mm: CHW ± 0.05X45° mm.

Product	DC [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S813HB2.0	2.00	0.00	6.00	6.00	57.0	3
S813HB2.5	2.50	0.08	6.00	7.00	57.0	3
S813HB3.0	3.00	0.08	6.00	7.00	57.0	3
S813HB3.5	3.50	0.08	6.00	7.00	57.0	3
S813HB4.0	4.00	0.13	6.00	8.00	57.0	3
S813HB4.5	4.50	0.13	6.00	8.00	57.0	3
S813HB5.0	5.00	0.13	6.00	10.00	57.0	3
S813HB6.0	6.00	0.13	6.00	10.00	57.0	3
S813HB7.0	7.00	0.13	8.00	13.00	63.0	3
S813HB8.0	8.00	0.20	8.00	16.00	63.0	3
S813HB9.0	9.00	0.20	10.00	16.00	72.0	3
S813HB10.0	10.00	0.20	10.00	19.00	72.0	3
S813HB12.0	12.00	0.20	12.00	22.00	83.0	3
S813HB14.0	14.00	0.20	14.00	22.00	83.0	3
S813HB16.0	16.00	0.20	16.00	26.00	92.0	3
S813HB18.0	18.00	0.20	18.00	26.00	92.0	3
S813HB20.0	20.00	0.30	20.00	32.00	104.0	3

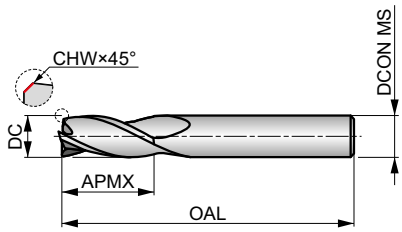
S823

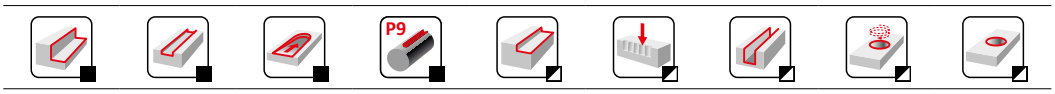
DORMER

3-Flute Solid Carbide Slot End Mill

Medium cut length, 3-flute design provides high rigidity for milling standard slots to a P9 tolerance and ramping operation. AlCrN coating improves performance and extends the tool life.

HM	N	NOF 3
	λ 28°	γ 9°
DIN 6535HA	AlCrN	
DORMER		





Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■145 J	■162 J	■167 J	■124 J	■109 J	■97 I	■100 J	■81 I	■68 I	■60 I	■51 I	◪41 I	■84 J	■71 J
M2.1	M2.2	M3.1	M3.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2
■75 J	■61 I	◪69 I	◪59 I	◪53 I	◪52 I	■144 J	■107 J	■80 J	■149 J	■121 J	■96 I	■132 J	■101 J
K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3	N2.1	N2.2
■81 I	■122 I	■92 I	■67 I	■58 I	■48 I	■138 I	■104 I	■80 I	◪284 K	◪214 K	■143 K	■143 J	■128 J
N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	S1.1	S1.2	S2.1	S3.1	S4.1			
■92 J	■150 J	■87 J	◪45 J	◪150 J	◪58 J	◪113 I	◪100 I	◪77 I	◪58 I	◪45 I			

DCON MS tolerance h6; DC≤7.00 mm: CHW ± 0.03X45° mm; DC>7.00 mm: CHW ± 0.05X45° mm.

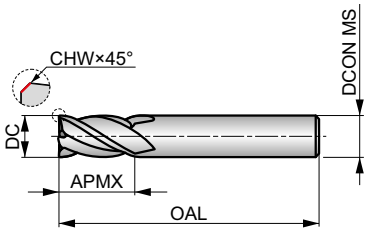
Product	DC [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S8232.0	2.00	–	6.00	8.00	57.0	3
S8232.5	2.50	0.08	6.00	12.00	57.0	3
S8233.0	3.00	0.08	6.00	12.00	57.0	3
S8234.0	4.00	0.13	6.00	14.00	57.0	3
S8235.0	5.00	0.13	6.00	16.00	57.0	3
S8236.0	6.00	0.13	6.00	19.00	57.0	3
S8237.0	7.00	0.13	8.00	19.00	63.0	3
S8238.0	8.00	0.20	8.00	19.00	63.0	3
S8239.0	9.00	0.20	10.00	21.00	72.0	3
S82310.0	10.00	0.20	10.00	22.00	72.0	3
S82312.0	12.00	0.20	12.00	25.00	83.0	3
S82314.0	14.00	0.20	14.00	30.00	83.0	3
S82316.0	16.00	0.20	16.00	32.00	92.0	3
S82318.0	18.00	0.20	18.00	32.00	92.0	3
S82320.0	20.00	0.30	20.00	38.00	104.0	3

S804HA

DORMER

4-Flute Solid Carbide End Mill, DIN 6535 HA Shank

Extra short cut length, 4-flute design provides high rigidity for shallow profile and plunge milling applications. AlCrN coating increases service life and improves performance.



HM	N	NOF 4
	λ 34°	γ 9°
DIN 6535HA	AlCrN	DC h10
	DIN 6527K	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■206 J	■230 J	■238 J	■176 J	■155 J	■137 I	■143 J	■114 I	■97 I	■84 I	■72 I	■58 I	■121 J	■102 J
M2.1	M2.2	M2.3	M3.1	M3.2	M3.3	M4.1	M4.2	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3
■107 J	■89 I	◪75 I	■99 I	■85 I	◪76 I	◪75 I	◪63 I	■205 J	■152 J	■114 J	■210 J	■171 J	■137 I
K3.1	K3.2	K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3
■186 J	■143 J	■115 I	■173 I	■131 I	■95 I	■82 I	■68 I	■196 I	■147 I	■114 I	◪408 J	◪307 J	◪206 J
N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	S1.1	S1.2	S2.1	S3.1	S4.1	
◪206 J	◪184 J	◪132 J	■215 J	■125 J	◪64 J	◪215 J	◪83 J	◪81 I	◪71 I	◪55 I	◪41 I	◪32 I	

DCON MS tolerance h6; DC≤8.00 mm: CHW ± 0.03X45° mm; DC>8.00 mm: CHW ± 0.05X45° mm.

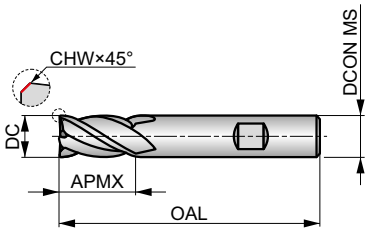
Product	DC [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S804HA2.0	2.00	–	6.00	4.00	50.0	4
S804HA3.0	3.00	0.08	6.00	5.00	50.0	4
S804HA4.0	4.00	0.13	6.00	8.00	54.0	4
S804HA5.0	5.00	0.13	6.00	9.00	54.0	4
S804HA6.0	6.00	0.13	6.00	10.00	54.0	4
S804HA8.0	8.00	0.13	8.00	12.00	58.0	4
S804HA10.0	10.00	0.20	10.00	14.00	66.0	4
S804HA12.0	12.00	0.20	12.00	16.00	73.0	4
S804HA16.0	16.00	0.20	16.00	22.00	82.0	4
S804HA20.0	20.00	0.30	20.00	26.00	92.0	4
S804HA25.0	25.00	0.30	25.00	32.00	121.0	4

S804HB

DORMER

4-Flute Solid Carbide End Mill, DIN 6535 HB Shank

Extra short cut length, 4-flute design provides high rigidity for shallow profile and plunge milling applications. The Weldon shank prevents the end mill from slipping in the toolholder. AlCrN coating increases service life and improves performance.



HM	N	NOF 4
	λ 34°	γ 9°
DIN 6535HB	AlCrN	DC h10
	DIN 6527K	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■206 J	■230 J	■238 J	■176 J	■155 J	■137 I	■143 J	■114 I	■97 I	■84 I	■72 I	■58 I	■121 J	■102 J
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
■107 J	■89 I	◪75 I	■99 I	■85 I	◪76 I	◪75 I	◪63 I	■205 J	■152 J	■114 J	■210 J	■171 J	■137 I
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■186 J	■143 J	■115 I	■173 I	■131 I	■95 I	■82 I	■68 I	■196 I	■147 I	■114 I	◪408 J	◪307 J	◪206 J
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**S1.1**	**S1.2**	**S2.1**	**S3.1**	**S4.1**	
◪206 J	◪184 J	◪132 J	■215 J	■125 J	◪64 J	◪215 J	◪83 J	◪81 I	◪71 I	◪55 I	◪41 I	◪32 I	

DCON MS tolerance h6; DC≤8.00 mm: CHW ± 0.03X45° mm; DC>8.00 mm: CHW ± 0.05X45° mm.

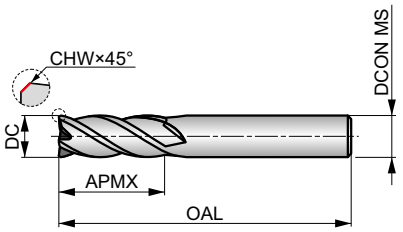
Product	DC [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S804HB2.0	2.00	–	6.00	4.00	50.0	4
S804HB3.0	3.00	0.08	6.00	5.00	50.0	4
S804HB4.0	4.00	0.13	6.00	8.00	54.0	4
S804HB5.0	5.00	0.13	6.00	9.00	54.0	4
S804HB6.0	6.00	0.13	6.00	10.00	54.0	4
S804HB8.0	8.00	0.13	8.00	12.00	58.0	4
S804HB10.0	10.00	0.20	10.00	14.00	66.0	4
S804HB12.0	12.00	0.20	12.00	16.00	73.0	4
S804HB16.0	16.00	0.20	16.00	22.00	82.0	4
S804HB20.0	20.00	0.30	20.00	26.00	92.0	4
S804HB25.0	25.00	0.30	25.00	32.00	121.0	4

S814HA

DORMER

4-Flute Solid Carbide End Mill, DIN 6535 HA Shank

Short cut length, 4-flute design provides high rigidity for general profile and plunge milling applications. AlCrN coating improves performance and extends the tool life.



HM	N	NOF 4
	λ 34°	γ 9°
DIN 6535HA	AlCrN	
DIN 6527L	DC h10	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■166 J	■186 J	■192 J	■142 J	■125 J	■111 I	■115 J	■93 I	■78 I	■68 I	■59 I	◪47 I	■97 J	■81 J
M2.1	M2.2	M3.1	M3.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2
■85 J	■71 I	◪79 I	◪68 I	◪61 I	◪60 I	■166 J	■123 J	■92 J	■170 J	■138 J	■110 I	■150 J	■115 J
K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3	N2.1	N2.2
■93 I	■140 I	■105 I	■77 I	■66 I	■56 I	■159 I	■118 I	■92 I	◪330 J	◪247 J	◪166 J	◪166 J	◪148 J
N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	S1.1	S1.2	S2.1	S3.1	S4.1			
◪107 J	■173 J	■101 J	◪52 J	◪173 J	◪67 J	◪72 I	◪64 I	◪49 I	◪38 I	◪30 I			

DCON MS tolerance h6; DC≤8.00 mm: CHW ± 0.03X45° mm; DC>8.00 mm: CHW ± 0.05X45° mm.

Product	DC [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S814HA2.0	2.00	0.00	6.00	7.00	57.0	4
S814HA3.0	3.00	0.08	6.00	8.00	57.0	4
S814HA4.0	4.00	0.13	6.00	11.00	57.0	4
S814HA5.0	5.00	0.13	6.00	13.00	57.0	4
S814HA6.0	6.00	0.13	6.00	13.00	57.0	4
S814HA8.0	8.00	0.13	8.00	19.00	63.0	4
S814HA10.0	10.00	0.20	10.00	22.00	72.0	4
S814HA12.0	12.00	0.20	12.00	26.00	83.0	4
S814HA16.0	16.00	0.20	16.00	32.00	92.0	4
S814HA20.0	20.00	0.30	20.00	38.00	104.0	4
S814HA25.0	25.00	0.30	25.00	45.00	121.0	4

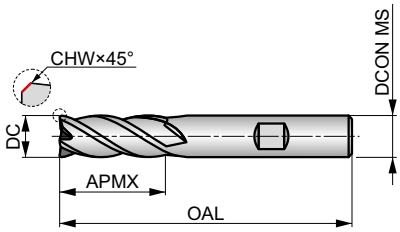
S814HB

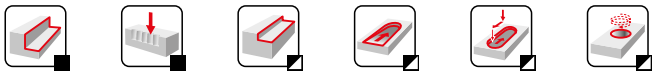
DORMER

4-Flute Solid Carbide End Mill, DIN 6535 HB Shank

Short cut length, 4-flute design provides high rigidity for general profile and plunge milling applications. The Weldon shank prevents the end mill from slipping in the toolholder. AlCrN coating improves performance and extends the tool life.

HM	N	NOF 4
	λ 34°	γ 9°
DIN 6535HB	AlCrN	DC h10
	DIN 6527L	





Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■166 J	■186 J	■192 J	■142 J	■125 J	■111 I	■115 J	■93 I	■78 I	■68 I	■59 I	◪47 I	■97 J	■81 J
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
■85 J	■71 I	◪79 I	◪68 I	◪61 I	◪60 I	■166 J	■123 J	■92 J	■170 J	■138 J	■110 I	■150 J	■115 J
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
■93 I	■140 I	■105 I	■77 I	■66 I	■56 I	■159 I	■118 I	■92 I	◪330 J	◪247 J	◪166 J	◪166 J	◪148 J
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**S1.1**	**S1.2**	**S2.1**	**S3.1**	**S4.1**			
◪107 J	■173 J	■101 J	◪52 J	◪173 J	◪67 J	◪72 I	◪64 I	◪49 I	◪38 I	◪30 I			

DCON MS tolerance h6; DC≤8.00 mm: CHW ± 0.03X45° mm; DC>8.00 mm: CHW ± 0.05X45° mm.

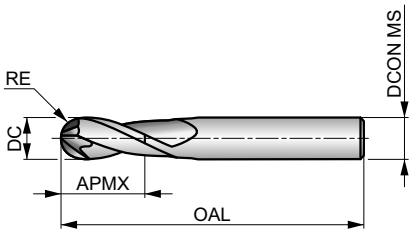
Product	DC [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S814HB2.0	2.00	0.00	6.00	7.00	57.0	4
S814HB3.0	3.00	0.08	6.00	8.00	57.0	4
S814HB4.0	4.00	0.13	6.00	11.00	57.0	4
S814HB5.0	5.00	0.13	6.00	13.00	57.0	4
S814HB6.0	6.00	0.13	6.00	13.00	57.0	4
S814HB8.0	8.00	0.13	8.00	19.00	63.0	4
S814HB10.0	10.00	0.20	10.00	22.00	72.0	4
S814HB12.0	12.00	0.20	12.00	26.00	83.0	4
S814HB16.0	16.00	0.20	16.00	32.00	92.0	4
S814HB20.0	20.00	0.30	20.00	38.00	104.0	4
S814HB25.0	25.00	0.30	25.00	45.00	121.0	4

S501

DORMER

2-Flute Solid Carbide Ball-Nosed End Mill

Short cut length, 2-flute design reduces vibrations and provides increased strength. Ball nosed geometry is designed for high performance contouring of complex surfaces. The X-CEED coating provides improved performance for milling difficult to machine materials.



HM	N	NOF 2
	λ 30°	γ 10°
DIN 6535HA	X-CEED	DC h9
	DORMER	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■161 F	■181 F	■186 F	■138 F	■121 F	■108 F	■112 F	■90 F	■76 F	■66 F	■57 F	◪46 F	■94 F	■79 F
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
■83 F	■69 F	◪77 F	◪66 F	◪59 E	◪58 E	■161 F	■119 F	■89 F	■165 F	■134 F	■107 F	■146 F	■112 F
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
■90 F	■136 F	■102 F	■75 F	■64 E	■54 E	■154 F	■115 F	■89 F	◪355 G	◪267 G	◪179 G	◪179 F	◪160 F
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**S1.1**	**S1.2**	**S2.1**	**S3.1**	**S4.1**			
◪115 F	■187 F	■109 F	◪56 F	◪187 F	◪72 F	◪126 F	◪112 F	◪86 E	◪65 E	◪51 E			

DCON MS tolerance h6; RE ±0.01 mm.

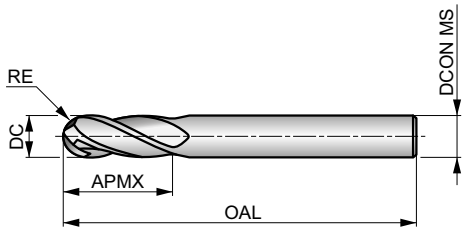
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S5011.0	1.00	0.50	3.00	3.00	38.0	2
S5011.5	1.50	0.75	3.00	3.00	38.0	2
S5012.0	2.00	1.00	3.00	6.00	38.0	2
S5012.5	2.50	1.25	3.00	7.00	38.0	2
S5013.0	3.00	1.50	3.00	7.00	38.0	2
S5014.0	4.00	2.00	6.00	8.00	57.0	2
S5015.0	5.00	2.50	6.00	10.00	57.0	2
S5016.0	6.00	3.00	6.00	10.00	57.0	2
S5017.0	7.00	3.50	8.00	13.00	63.0	2
S5018.0	8.00	4.00	8.00	16.00	63.0	2
S5019.0	9.00	4.50	10.00	16.00	72.0	2
S50110.0	10.00	5.00	10.00	19.00	72.0	2
S50112.0	12.00	6.00	12.00	22.00	83.0	2
S50116.0	16.00	8.00	16.00	26.00	92.0	2

S511

DORMER

4-Flute Solid Carbide Ball-Nosed End Mill, Extra Long Reach

Short cut length, extra long reach, 4-flute design provides high rigidity for increased strength and reduces vibrations in deeper applications. Ball nosed geometry is designed for high performance contouring of complex surfaces. X-CEED coating provides improved performance for milling difficult to machine materials.



HM	N	NOF 4
	λ 30°	γ 10°
DIN 6535HA	X-CEED	DC h9
	DORMER	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■161 E	■181 E	■186 E	■138 E	■121 E	■108 E	■112 E	■90 E	■76 E	■66 E	■57 E	◪46 E	■94 E	■79 E
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
■83 E	■69 E	◪77 E	◪66 E	◪59 D	◪58 D	■161 E	■119 E	■89 E	■165 E	■134 E	■107 E	■146 E	■112 E
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
■90 E	■136 E	■102 E	■75 E	■64 D	■54 D	■154 E	■115 E	■89 E	◪355 F	◪267 F	◪179 F	◪179 E	◪160 E
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**S1.1**	**S1.2**	**S2.1**	**S3.1**	**S4.1**			
◪115 E	■187 E	■109 E	◪56 E	◪187 E	◪72 E	◪126 E	◪112 E	◪86 D	◪65 D	◪51 D			

DCON MS tolerance h6; RE +0/-0.01 mm.

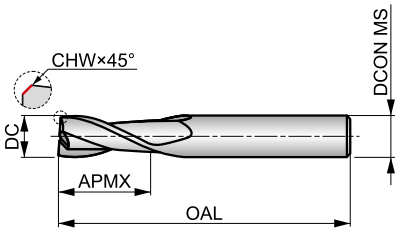
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S5113.0	3.00	1.50	6.00	8.00	80.0	4
S5114.0	4.00	2.00	6.00	11.00	80.0	4
S5115.0	5.00	2.50	6.00	13.00	80.0	4
S5116.0	6.00	3.00	6.00	13.00	80.0	4
S5117.0	7.00	3.50	8.00	16.00	100.0	4
S5118.0	8.00	4.00	8.00	19.00	100.0	4
S5119.0	9.00	4.50	10.00	19.00	100.0	4
S51110.0	10.00	5.00	10.00	22.00	100.0	4
S51112.0	12.00	6.00	12.00	26.00	100.0	4
S51116.0	16.00	8.00	16.00	32.00	100.0	4

S902

DORMER

2-Flute Solid Carbide End Mill

Medium cut length, 2-flute design with 30° helix provides high rigidity for milling standard slots.



HM	N	NOF 2
	λ 30°	γ 12°
DIN 6535HA	Bright	DC h10
	DORMER	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	K1.1	K1.2	K1.3
■106 K	■119 K	■123 K	■91 K	■80 K	◪71 J	■66 K	■53 J	◪45 J	■40 J	◪34 J	■80 K	◪59 K	◪44 K
K2.1	K2.2	K2.3	K3.1	K3.2	K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3
■98 K	■80 K	◪64 J	■87 K	■67 K	◪54 J	■81 J	■61 J	◪45 J	◪38 J	◪32 J	■91 J	■69 J	◪53 J
N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	S1.1	S1.2	S1.3
◪355 K	■267 K	■179 K	■179 K	◪160 K	◪115 K	■187 K	■109 K	■56 K	◪187 K	◪72 K	■38 J	◪36 J	◪15 J

DCON MS tolerance h6; DC≤10.00 mm: CHW ± 0.03X45° mm; DC>10.00 mm: CHW ± 0.05X45° mm.

Product	DC	CHW	DCON MS	APMX	OAL	NOF
	[mm]	[mm]	[mm]	[mm]	[mm]	
S9022.0	2.00	0.08	3.00	6.00	38.0	2
S9022.5	2.50	0.08	3.00	9.00	38.0	2
S9023.0	3.00	0.08	3.00	12.00	38.0	2
S9024.0	4.00	0.08	4.00	14.00	50.0	2
S9025.0	5.00	0.13	5.00	16.00	50.0	2
S9026.0	6.00	0.13	6.00	19.00	57.0	2
S9027.0	7.00	0.13	8.00	19.00	63.0	2
S9028.0	8.00	0.13	8.00	19.00	63.0	2
S9029.0	9.00	0.13	10.00	21.00	72.0	2
S90210.0	10.00	0.18	10.00	22.00	72.0	2
S90212.0	12.00	0.20	12.00	25.00	73.0	2
S90214.0	14.00	0.20	14.00	30.00	83.0	2
S90216.0	16.00	0.20	16.00	32.00	92.0	2
S90218.0	18.00	0.20	18.00	32.00	92.0	2
S90220.0	20.00	0.30	20.00	38.00	104.0	2

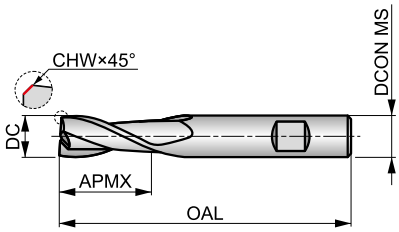
S922

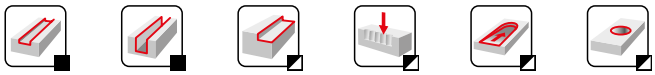
DORMER

2-Flute Solid Carbide End Mill

Medium cut length, 2-flute design with 30° helix provides high rigidity for milling standard slots. Cylindrical shank for cutting diameter up to 5 mm. TiALN coating for higher temperature resistance and longer tool life.

HM	N	NOF 2
	λ 30°	γ 12°
DIN 6535HB	TiAlN	DC h10
	DORMER	





Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	K1.1	K1.2
■ 132 K	■ 148 K	■ 153 K	■ 113 K	■ 100 K	■ 88 J	■ 98 K	■ 79 J	■ 67 J	■ 59 J	■ 50 J	◪ 41 J	■ 100 K	■ 74 K
K1.3	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**
■ 56 K	■ 107 K	■ 87 K	■ 70 J	■ 95 K	■ 72 K	■ 59 J	■ 88 J	■ 67 J	■ 49 J	■ 42 J	■ 35 J	■ 100 J	■ 75 J
K5.3	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**
■ 58 J	◪ 296 K	◪ 222 K	■ 149 K	■ 149 K	■ 133 K	■ 96 K	■ 156 K	■ 91 K	◪ 47 K	◪ 156 K	◪ 60 K	◪ 64 K	■ 47 J
S1.2	**S1.3**												
◪ 45 J	◪ 20 J												

DCON MS tolerance h6; DC≤10.00 mm: CHW ± 0.03X45° mm; DC>10.00 mm: CHW ± 0.05X45° mm.
Products from this series are also available in set. Please see S991.

Product	DC [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S9222.0 [1]	2.00	0.08	3.00	6.00	38.0	2
S9222.5 [1]	2.50	0.08	3.00	9.00	38.0	2
S9223.0 [1]	3.00	0.08	3.00	12.00	38.0	2
S9224.0 [1]	4.00	0.08	4.00	14.00	50.0	2
S9225.0 [1]	5.00	0.13	5.00	16.00	50.0	2
S9226.0	6.00	0.13	6.00	19.00	57.0	2
S9227.0	7.00	0.13	8.00	19.00	63.0	2
S9228.0	8.00	0.13	8.00	19.00	63.0	2
S9229.0	9.00	0.13	10.00	21.00	72.0	2
S92210.0	10.00	0.18	10.00	22.00	72.0	2
S92212.0	12.00	0.20	12.00	25.00	73.0	2
S92214.0	14.00	0.20	14.00	30.00	83.0	2
S92216.0	16.00	0.20	16.00	32.00	92.0	2
S92218.0	18.00	0.20	18.00	32.00	92.0	2
S92220.0	20.00	0.30	20.00	38.00	104.0	2

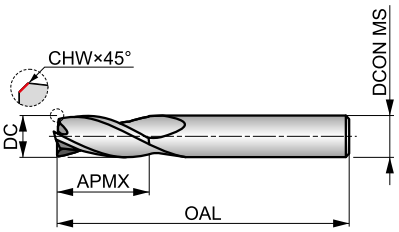
[1] Cylindrical shank.

S903

DORMER

3-Flute Solid Carbide End Mill

Medium cut length, 3-flute design with 30° helix and provides high rigidity for milling standard slots.



HM	N	NOF 3
	λ 30°	γ 12°
DIN 6535HA	Bright	DC h10
	DORMER	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	K1.1	K1.2	K1.3
■106 J	■119 J	■123 J	■91 J	■80 J	◪71 I	■66 J	■53 I	◪45 I	■40 I	◪34 I	■80 J	◪59 J	◪44 J
K2.1	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**
■98 J	■80 J	◪64 I	■87 J	■67 J	◪54 I	■81 I	■61 I	◪45 I	◪38 I	◪32 I	■91 I	■69 I	◪53 I
N1.1	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**S1.1**	**S1.2**	**S1.3**
◪355 K	■267 K	■179 K	■179 J	◪160 J	◪115 J	■187 J	■109 J	■56 J	◪187 J	◪72 J	■38 I	◪36 I	◪43 I

DCON MS tolerance h6; DC≤9.00 mm: CHW ± 0.03X45° mm; DC>9.00 mm: CHW ± 0.05X45° mm.

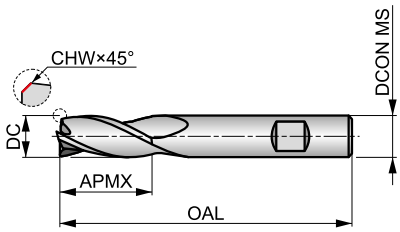
Product	DC	CHW	DCON MS	APMX	OAL	NOF
	[mm]	[mm]	[mm]	[mm]	[mm]	
S9032.0	2.00	0.08	3.00	6.00	38.0	3
S9032.5	2.50	0.08	3.00	9.00	38.0	3
S9033.0	3.00	0.08	3.00	12.00	38.0	3
S9034.0	4.00	0.08	4.00	14.00	50.0	3
S9035.0	5.00	0.13	5.00	16.00	50.0	3
S9036.0	6.00	0.13	6.00	19.00	57.0	3
S9037.0	7.00	0.13	8.00	19.00	63.0	3
S9038.0	8.00	0.13	8.00	19.00	63.0	3
S9039.0	9.00	0.13	10.00	21.00	72.0	3
S90310.0	10.00	0.20	10.00	22.00	72.0	3
S90312.0	12.00	0.20	12.00	25.00	73.0	3
S90314.0	14.00	0.20	14.00	30.00	83.0	3
S90316.0	16.00	0.20	16.00	32.00	92.0	3
S90318.0	18.00	0.20	18.00	32.00	92.0	3
S90320.0	20.00	0.30	20.00	38.00	104.0	3

S933

DORMER

3-Flute Solid Carbide End Mill

Medium cut length, 3-flute design with 30° helix provides high rigidity for milling standard slots. Cylindrical shank for cutting diameter up to 5 mm. TiALN coating for higher temperature resistance and longer tool life.



HM	N	NOF 3
	λ 30°	γ 12°
DIN 6535HB	TiAlN	DC h10
	DORMER	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	K1.1	K1.2
■132 J	■148 J	■153 J	■113 J	■100 J	■88 I	■98 J	■79 I	■67 I	■59 I	■50 I	◪41 I	■100 J	■74 J
K1.3	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**
■56 J	■107 J	■87 J	■70 I	■95 J	■72 J	■59 I	■88 I	■67 I	■49 I	■42 I	■35 I	■100 I	■75 I
K5.3	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**
■58 I	◪296 K	◪222 K	■149 K	■149 J	■133 J	■96 J	■156 J	■91 J	◪47 J	◪156 J	◪60 J	◪64 J	■47 I
S1.2	**S1.3**												
◪45 I	◪20 I												

DCON MS tolerance h6; DC≤9.00 mm: CHW ± 0.03X45° mm; DC>9.00 mm: CHW ± 0.05X45° mm.
Products from this series are also available in set. Please see S991.

Product	DC [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S9332.0 [1]	2.00	0.08	3.00	6.00	38.0	3
S9332.5 [1]	2.50	0.08	3.00	9.00	38.0	3
S9333.0 [1]	3.00	0.08	3.00	12.00	38.0	3
S9334.0 [1]	4.00	0.08	4.00	14.00	50.0	3
S9335.0 [1]	5.00	0.13	5.00	16.00	50.0	3
S9336.0	6.00	0.13	6.00	19.00	57.0	3
S9337.0	7.00	0.13	8.00	19.00	63.0	3
S9338.0	8.00	0.13	8.00	19.00	63.0	3
S9339.0	9.00	0.13	10.00	21.00	72.0	3
S93310.0	10.00	0.20	10.00	22.00	72.0	3
S93312.0	12.00	0.20	12.00	25.00	73.0	3
S93314.0	14.00	0.20	14.00	30.00	83.0	3
S93316.0	16.00	0.20	16.00	32.00	92.0	3
S93318.0	18.00	0.20	18.00	32.00	92.0	3
S93320.0	20.00	0.30	20.00	38.00	104.0	3

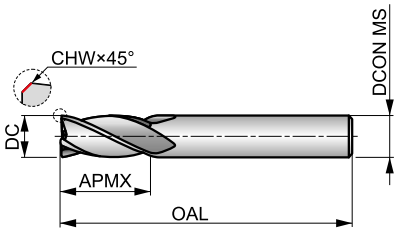
[1] Cylindrical shank.

S904

DORMER

4-Flute Solid Carbide End Mill

Medium cut length, 4-flute design with 30° helix provides high rigidity for milling standard slots.



HM	N	NOF 4
	λ 30°	γ 12°
DIN 6535HA	Bright	DC h12
	DORMER	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	K1.1	K1.2
■106 J	■119 J	■123 J	■91 J	■80 J	◪71 I	■66 J	■53 I	◪45 I	■40 I	◪34 I	◪18 I	■80 J	◪59 J
K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2
◪44 J	■98 J	■80 J	◪64 I	■87 J	■67 J	◪54 I	■81 I	■61 I	◪45 I	◪38 I	◪32 I	■91 I	■69 I
K5.3	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	S1.1	S1.2
◪53 I	◪355 J	■267 J	■179 J	■179 J	◪160 J	◪115 J	■187 J	■109 J	■56 J	◪187 J	◪72 J	■38 I	◪36 I
S1.3	S2.1	S2.2	S3.1	S3.2	S4.1	S4.2							
◪43 I	◪40 I	◪35 I	◪30 I	◪25 I	◪23 I	◪20 I							

DCON MS tolerance h6; DC≤9.00 mm: CHW ± 0.03X45° mm; DC>9.00 mm: CHW ± 0.05X45° mm.

Product	DC [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S9042.0	2.00	0.08	3.00	6.00	38.0	4
S9042.5	2.50	0.08	3.00	9.00	38.0	4
S9043.0	3.00	0.08	3.00	12.00	38.0	4
S9044.0	4.00	0.08	4.00	14.00	50.0	4
S9045.0	5.00	0.13	5.00	16.00	50.0	4
S9046.0	6.00	0.13	6.00	19.00	57.0	4
S9047.0	7.00	0.13	8.00	19.00	63.0	4
S9048.0	8.00	0.13	8.00	19.00	63.0	4
S9049.0	9.00	0.13	10.00	21.00	72.0	4
S90410.0	10.00	0.20	10.00	22.00	72.0	4
S90412.0	12.00	0.20	12.00	25.00	73.0	4
S90414.0	14.00	0.20	14.00	30.00	83.0	4
S90416.0	16.00	0.20	16.00	32.00	92.0	4
S90418.0	18.00	0.20	18.00	32.00	92.0	4
S90420.0	20.00	0.30	20.00	38.00	104.0	4

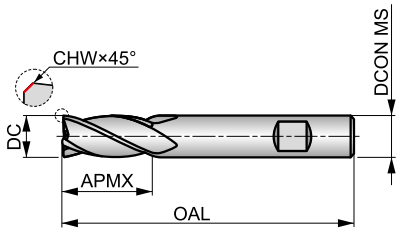
S944

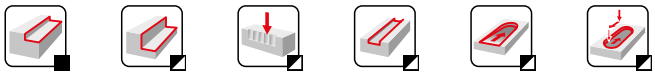
DORMER

4-Flute Solid Carbide End Mill

Medium cut length, 4-flute design with 30° helix provides high rigidity for milling standard slots. Cylindrical shank for cutting diameter up to 5 mm. TiALN coating for higher temperature resistance and longer tool life.

HM	N	NOF 4
	λ 30°	γ 12°
DIN 6535HB	TiAlN	DC h12
	DORMER	





Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 112.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	K1.1	K1.2
■132 J	■148 J	■153 J	■113 J	■100 J	■88 I	■98 J	■79 I	■67 I	■59 I	■50 I	◪41 I	■100 J	■74 J
K1.3	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**
■56 J	■107 J	■87 J	■70 I	■95 J	■72 J	■59 I	■88 I	■67 I	■49 I	■42 I	■35 I	■100 I	■75 I
K5.3	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**
■58 I	◪296 J	◪222 J	■149 J	■149 J	■133 J	■96 J	■156 J	■91 J	◪47 J	◪156 J	◪60 J	◪64 J	■47 I
S1.2	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**						
◪45 I	◪45 I	◪60 I	◪49 I	◪45 I	◪35 I	◪35 I	◪28 I						

DCON MS tolerance h6; DC≤9.00 mm: CHW ± 0.03X45° mm; DC>9.00 mm: CHW ± 0.05X45° mm.
Products from this series are also available in set. Please see S991.

Product	DC	CHW	DCON MS	APMX	OAL	NOF
	[mm]	[mm]	[mm]	[mm]	[mm]	
S9442.0 [1]	2.00	0.08	3.00	6.00	38.0	4
S9442.5 [1]	2.50	0.08	3.00	9.00	38.0	4
S9443.0 [1]	3.00	0.08	3.00	12.00	38.0	4
S9444.0 [1]	4.00	0.08	4.00	14.00	50.0	4
S9445.0 [1]	5.00	0.13	5.00	16.00	50.0	4
S9446.0	6.00	0.13	6.00	19.00	57.0	4
S9447.0	7.00	0.13	8.00	19.00	63.0	4
S9448.0	8.00	0.13	8.00	19.00	63.0	4
S9449.0	9.00	0.13	10.00	21.00	72.0	4
S94410.0	10.00	0.20	10.00	22.00	72.0	4
S94412.0	12.00	0.20	12.00	25.00	73.0	4
S94414.0	14.00	0.20	14.00	30.00	83.0	4
S94416.0	16.00	0.20	16.00	32.00	92.0	4
S94418.0	18.00	0.20	18.00	32.00	92.0	4
S94420.0	20.00	0.30	20.00	38.00	104.0	4

[1] Cylindrical shank.

S991

Set of Solid Carbide End Mills

Sets of solid carbide End Mills with TiALN coating. Range of S922, S933 or S944 (2, 3 or 4 flute). Sets contain Ø3, 4, 5, 6, 8 and 10 mm. Carried in a plastic container for good overview.

A = Product Family, B = No. in Set, C = Diameters in Set.

Product	A	B	C
S991SET922	S922	6	3.00 mm, 4.00 mm, 5.00 mm, 6.00 mm, 8.00 mm, 10.00 mm
S991SET933	S933	6	3.00 mm, 4.00 mm, 5.00 mm, 6.00 mm, 8.00 mm, 10.00 mm
S991SET944	S944	6	3.00 mm, 4.00 mm, 5.00 mm, 6.00 mm, 8.00 mm, 10.00 mm

DORMER PRAMET

FOLLOW US

SHARE

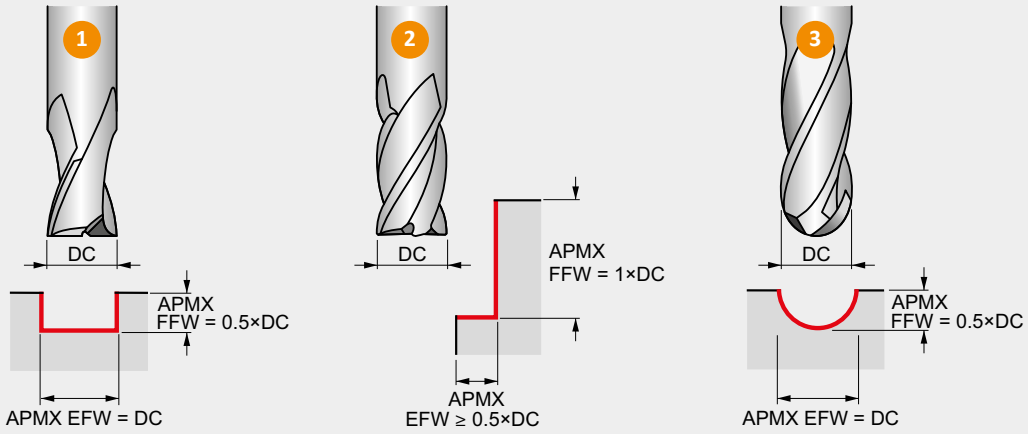
LIKE

COMMENT

TAG

RE-TWEET

SOLID HM MILLS – FEED PER TOOTH TABLE



Feed per tooth (f_z in mm/rev) depending on the working conditions it might be necessary to adjust these values ± 25%.

ONLY if plunging into solid material with a centre cutting end mill the values in this table should be considered as f_n (feed per revolution).

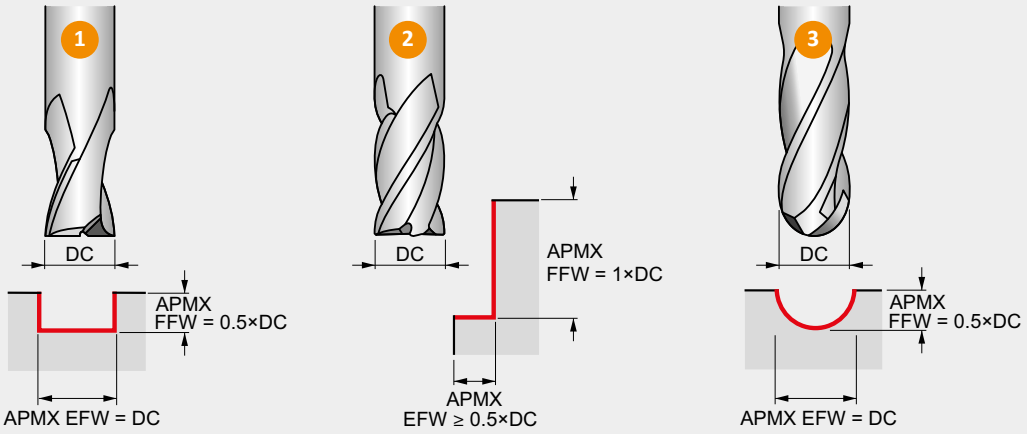
How to use this table to find the feed per tooth (f_z):

1. Find your Alpha Code on the product page (example: 199K, "K" is the Alpha Code).
2. Find the closest diameter for your cutting application in the top row of the table.
3. Find your Alpha Code in the left column of the table.
4. The intersection (cell) of the Diameter and Alpha Code is the feed per tooth (f_z).

FOR SOLID CARBIDE MILLING CUTTERS ONLY

		ø DC [mm]																
		1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00	25.00
Feed rates	A	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.010	0.011	0.014	0.015	0.017	0.019	0.021	0.025	0.028
	B	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.010	0.011	0.014	0.015	0.017	0.019	0.021	0.025	0.028
	C	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.010	0.011	0.014	0.015	0.017	0.019	0.021	0.025	0.028
	D	0.002	0.003	0.004	0.005	0.007	0.008	0.009	0.010	0.011	0.012	0.014	0.015	0.017	0.019	0.021	0.025	0.028
	E	0.002	0.003	0.004	0.008	0.009	0.012	0.013	0.014	0.015	0.016	0.019	0.021	0.024	0.026	0.028	0.030	0.034
	F	0.002	0.003	0.006	0.010	0.013	0.016	0.017	0.019	0.021	0.022	0.026	0.029	0.032	0.035	0.039	0.042	0.047
	G	0.002	0.005	0.008	0.014	0.018	0.022	0.024	0.026	0.028	0.031	0.035	0.040	0.044	0.048	0.053	0.057	0.064
	I	0.003	0.006	0.011	0.019	0.024	0.030	0.032	0.036	0.039	0.042	0.049	0.054	0.061	0.066	0.073	0.079	0.088
	J	0.004	0.009	0.014	0.026	0.033	0.041	0.044	0.048	0.053	0.057	0.066	0.074	0.083	0.090	0.099	0.107	0.120
	K	0.006	0.012	0.019	0.035	0.044	0.054	0.059	0.064	0.070	0.076	0.088	0.098	0.110	0.120	0.132	0.142	0.160
	N	0.008	0.016	0.025	0.047	0.058	0.072	0.078	0.086	0.094	0.101	0.117	0.131	0.146	0.160	0.175	0.189	0.212
	O	0.010	0.021	0.034	0.062	0.078	0.096	0.104	0.114	0.124	0.135	0.156	0.174	0.195	0.213	0.233	0.252	0.283
	P	0.014	0.028	0.045	0.083	0.104	0.128	0.138	0.152	0.166	0.180	0.207	0.231	0.259	0.283	0.311	0.335	0.376
	R	0.018	0.037	0.060	0.110	0.138	0.170	0.184	0.202	0.221	0.239	0.276	0.308	0.345	0.377	0.414	0.446	0.501
	S	0.024	0.049	0.080	0.147	0.183	0.226	0.245	0.269	0.294	0.318	0.367	0.410	0.459	0.502	0.550	0.593	0.667

SOLID HM MILLS – FEED PER TOOTH TABLE



Feed per tooth (IPT or inch/tooth) depending on the working conditions it might be necessary to adjust these values ± 25%.

ONLY if plunging into solid material with a centre cutting end mill the values in this table should be considered as IPR (feed in inch per revolution).

How to use this table to find the feed per tooth (IPT):

1. Find your Alpha Code on the product page (example: 653K, "K" is the Alpha Code).
2. Find the closest diameter for your cutting application in the top row of the table.
3. Find your Alpha Code in the left column of the table.
4. The intersection (cell) of the Diameter and Alpha Code is the feed per tooth (IPT).

FOR SOLID CARBIDE MILLING CUTTERS ONLY

		ø DC [inch]															
		1/16	3/32	1/8	5/32	3/16	7/32	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4	7/8	1
		.0625	.0938	.1250	.1563	.1875	.2188	.2500	.3125	.3750	.4375	.5000	.5625	.6250	.7500	.8750	1.0000
Feed rates	A	.0001	.0001	.0002	.0002	.0002	.0002	.0003	.0003	.0004	.0005	.0005	.0006	.0007	.0008	.0010	.0011
	B	.0001	.0001	.0002	.0002	.0002	.0002	.0003	.0003	.0004	.0005	.0005	.0006	.0007	.0008	.0010	.0011
	C	.0001	.0001	.0002	.0002	.0002	.0002	.0003	.0003	.0004	.0005	.0005	.0006	.0007	.0008	.0010	.0011
	D	.0001	.0001	.0002	.0002	.0002	.0003	.0004	.0004	.0004	.0005	.0006	.0006	.0007	.0008	.0010	.0011
	E	.0001	.0001	.0002	.0003	.0004	.0004	.0005	.0006	.0006	.0007	.0007	.0009	.0009	.0011	.0012	.0013
	F	.0001	.0002	.0002	.0004	.0005	.0006	.0006	.0007	.0009	.0009	.0011	.0012	.0013	.0015	.0017	.0019
	G	.0002	.0002	.0004	.0006	.0007	.0007	.0009	.0010	.0012	.0013	.0015	.0016	.0017	.0020	.0023	.0025
	I	.0002	.0003	.0005	.0007	.0009	.0011	.0012	.0014	.0016	.0018	.0020	.0022	.0024	.0028	.0031	.0035
	J	.0003	.0004	.0007	.0010	.0012	.0014	.0017	.0019	.0022	.0024	.0027	.0030	.0032	.0037	.0043	.0047
	K	.0004	.0006	.0009	.0014	.0016	.0019	.0022	.0025	.0029	.0032	.0036	.0040	.0043	.0050	.0056	.0063
	N	.0005	.0007	.0011	.0019	.0022	.0025	.0029	.0034	.0038	.0043	.0048	.0053	.0057	.0066	.0075	.0083
	O	.0006	.0010	.0015	.0024	.0029	.0034	.0039	.0045	.0051	.0057	.0063	.0070	.0076	.0088	.0100	.0111
	P	.0008	.0014	.0020	.0033	.0038	.0045	.0052	.0060	.0068	.0076	.0084	.0094	.0100	.0117	.0133	.0148
	R	.0011	.0018	.0027	.0043	.0051	.0060	.0069	.0080	.0091	.0101	.0112	.0125	.0134	.0156	.0177	.0197
	S	.0015	.0024	.0036	.0058	.0067	.0080	.0091	.0106	.0120	.0135	.0149	.0166	.0178	.0207	.0236	.0263

1 Slot Milling

Correction factors for cutting speed v_c and feed per tooth f_z for slot milling operations at different depths of cut.

APMX FFW / DC	25 %	50 %	100 %	150 %
X.V	1.25	1.00	0.75	0.50
X.f	1.25	1.00	0.75	0.50

2 Shoulder Milling

Correction factors for cutting speed v_c and feed per tooth f_z for square shoulder milling with <50% radial immersion.

APMX EFW / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	≥ 50 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.00
X.f	2.29	1.67	1.40	1.25	1.15	1.09	1.02	1.00

We recommend to avoid milling with 50% radial immersion.

3a Plain Copy Milling (with Ball Nose Cutters)

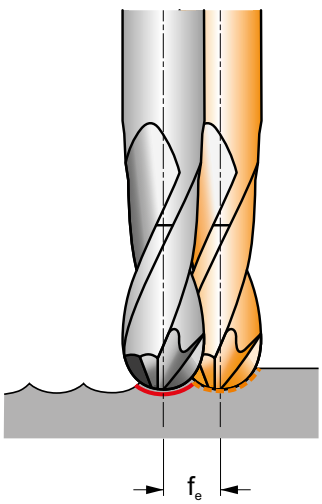
Correction factors for cutting speed v_c for plain copy milling at different depths of cut

APMX FFW / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %
X.V	2.29	1.67	1.40	1.25	1.15	1.09	1.02	1.00

3b

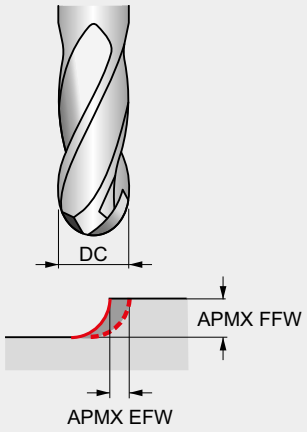
Line offset f_e (step-over distance) for achieving a theorectical surface roughness R_{th}

DC \ µm	2	4	8	16	32	63	125	250
2	0.13	0.18	0.25	0.36	0.50	0.70	0.97	1.32
3	0.15	0.22	0.31	0.44	0.62	0.86	1.20	1.66
4	0.18	0.25	0.36	0.50	0.71	1.00	1.39	1.94
5	0.20	0.28	0.40	0.56	0.80	1.12	1.56	2.18
6	0.22	0.31	0.44	0.62	0.87	1.22	1.71	2.40
8	0.25	0.36	0.51	0.71	1.01	1.41	1.98	2.78
10	0.28	0.40	0.57	0.80	1.13	1.58	2.22	3.12
12	0.31	0.44	0.62	0.88	1.24	1.73	2.44	3.43
14	0.33	0.47	0.67	0.95	1.34	1.87	2.63	3.71
16	0.36	0.51	0.72	1.01	1.43	2.00	2.82	3.97
18	0.38	0.54	0.76	1.07	1.52	2.13	2.99	4.21
20	0.40	0.57	0.80	1.13	1.60	2.24	3.15	4.44
22	0.42	0.59	0.84	1.19	1.68	2.35	3.31	4.66
25	0.45	0.63	0.89	1.26	1.79	2.51	3.53	4.97
28	0.47	0.67	0.95	1.34	1.89	2.65	3.73	5.27



Line offset dimensions shown are Metric (mm) only

3c



How to use this table to find the correction factor for the feed per tooth (f_z or IPT)) for plain copy milling:

1. Find the closest radial immersion (APMX EFW / DC) for your cutting application in the top row of the table.
3. Find your closert axial immersion (APMX FFW / DC) for your cutting application in the left column of the table.
4. The intersection (cell) of the radial and axial immersions is the correction factor for the feed per tooth.

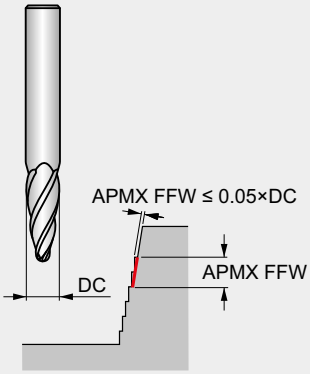
Example for plain copy milling:

1. Applying an 8 mm ball nose cutter with a depth of cut of 0.8 mm (APMX FFW), the aim is to achieve a theoretical surface roughness of 32 µm.
2. The correction factor for cutting speed with an axial immersion of 10% = 1.67 can be found in table 3a.
3. The step-over distance for a R_{th} of 32 µm = 1.01 mm can be found in table 3b.
4. The correction factor for feed per tooth with an axial immersion of 10% and a radial immersion of 1.01 / 8 = 12.6% can be found in table 3c and is in this case 2.33.

APMX FFW	APMX EFW	5 %	10 %	15 %	20 %	25 %	30 %	35 %	40 %	50 %
5%		5.26	3.82	3.21	2.87	2.65	2.50	2.40	2.34	2.29
10%		3.82	2.78	2.33	2.08	1.92	1.82	1.75	1.70	1.67
15%		3.21	2.33	1.96	1.75	1.62	1.53	1.47	1.43	1.40
20%		2.87	2.08	1.75	1.56	1.44	1.36	1.31	1.28	1.25
25%	x.f	2.65	1.92	1.62	1.44	1.33	1.26	1.21	1.18	1.15
30%	⇨	2.50	1.82	1.53	1.36	1.26	1.19	1.14	1.11	1.09
35%		2.40	1.75	1.47	1.31	1.21	1.14	1.10	1.07	1.05
40%		2.34	1.70	1.43	1.28	1.18	1.11	1.07	1.04	1.02
45%		2.31	1.68	1.41	1.26	1.16	1.10	1.05	1.03	1.01
50%		2.29	1.67	1.40	1.25	1.15	1.09	1.05	1.02	1.00

To increase the surface quality, the tool or surface should be inclinded with a tilt angle off 10°– 15°.

SOLID HM BARREL-SHAPE MILL – FEED PER TOOTH TABLE



Feed per tooth (f_z in mm/rev) depended on the working conditions it might be needed to adjust these values ± 25%.

How to use this table to find the feed per tooth (f_z):

1. Find your Alpha Code on the product page (example: 121F, "F" is the Alpha Code).
2. Find the closest diameter for your cutting application in the top row of the table.
3. Find your Alpha Code in the left column of the table.
4. The intersection (cell) of the Diameter and Alpha Code is the feed per tooth (f_z).

FOR HM S791
BARREL-SHAPE MILLS ONLY

		ø DC [mm]				
		6.00	**8.00**	**10.00**	**12.00**	**16.00**
Feed rates	**E**	0.030	0.039	0.053	0.067	0.096
	F	0.037	0.050	0.064	0.083	0.118
	I	0.062	0.084	0.111	0.141	0.203

HSS-E-PM, HSS-E, HSS MILLS

Tool materials

High Speed Steel	HSS	A medium-alloyed high speed steel that has good machinability and good performance. HSS exhibits hardness, toughness and wear resistance characteristics that make it attractive in a wide range of applications, for example in drills and taps.
Cobalt High Speed Steel	HSS-E	This high speed steel contains cobalt for increased hot hardness. The composition of HSCo is a good combination of toughness and hardness. It has good machinability and good wear resistance, which makes it usable for drills, taps, milling cutters and reamers.
Cobalt Powder Metallurgy Steel	HSS-E PM	Sintered Cobalt High Speed Steel (HSCo powder metal) is a substrate produced using powder metallurgy technology. Tools using substrates produced by this method exhibit superior toughness and grindability.

SOLID HSS MILLS – SURFACE TREATMENTS AND COATINGS NAVIGATOR

Surface Treatments

Bright (uncoated)		Bright finish (uncoated surface) improves chip flow in soft or non-ferrous materials and maintains sharp cutting edges in abrasive materials.
Steam Tempering		Steam tempering gives a strongly adhering blue oxide surface that acts to retain cutting fluid and prevent chip to tool welding, thereby counteracting the formation of a built-up edge. Steam tempering can be applied to any bright tool but is most effective on drills and taps.

Surface Coatings

Alcrona Coating (Alcrona)		The Alcrona (AlCrN) family of coatings are aluminium chromium nitride coatings mostly used for milling cutters. The two unique properties of these coatings are high hot hardness and high oxidation resistance. When used on tools for machining applications involving heavy mechanical and thermal stresses, these properties translate into superior wear resistance. Multiple levels or specific versions of these coatings are available and specific for various tools and applications.
Titanium Carbon Nitride Coating (TiCN)		Titanium Carbon Nitride is a ceramic coating applied by PVD coating technology. TiCN is harder than TiN and has a lower coefficient of friction. Its hardness and toughness in combination with good wear resistance ensures that it finds its principal application in the field of milling to enhance the performance of milling cutters.

Material code (BMC)	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E	HSS-E PM	HSS-E
Mill Profile	N	N	N	N	N	N	N	N	N	N	W	W	N
Number of flutes (NOF)	NOF 2	NOF 2	NOF 2	NOF 2	NOF 2	NOF 3	NOF 3	NOF 3	NOF 3	NOF 3	NOF 2	NOF 3	NOF 2
Cut length													
Flute Helix (FHA)	λ 30°	λ 30°	λ 30°	λ 30°	λ 30°	λ 30°	λ 30°	λ 40°	λ 30°	λ 30°	λ 40°	λ 40°	λ 30°
Radial rake angle (GAMF)	γ 12°	γ 12°	γ 12°	γ 12°	γ 12°	γ 12°	γ 12°	γ 15°	γ 12°	γ 12°	γ 20°	γ 25°	γ 12°
Shank	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835A
Coating	Bright	TiCN	Bright	TiCN	Bright	Bright	Alcrona	Alcrona	Bright	Alcrona	Bright	Bright	Bright
Cutting diameter tolerance class (TCDC)	DC e8	DC e8	DC e8	DC e8	DC e8	DC e8	DC e8	DC e8	DC e8	DC e8	DC e8	DC k10	DC js14
Direction													
Basic standard group (BSG)	DIN 327D	DIN 327D	DIN 844K	DIN 844K	DORMER	DIN 327D	DIN 327D	DIN 327D	DIN 844K	DIN 844K	DIN 844K	DIN 844K	DORMER
Product Family Code	C110	C126	C123	C139	C135	C306	C353	C367	C305	C352	C159	C336	C167
	1.00 - 40.00	1.00 - 30.00	1/16 - 30.00	2.00 - 25.00	2.00 - 20.00	3.00 - 30.00	3.00 - 30.00	2.00 - 20.00	2.00 - 32.00	3.00 - 20.00	2.00 - 20.00	10.00 - 30.00	6.00 - 16.00
	126	128	130	132	133	134	135	137	138	140	141	142	143
P P1	■	■	■	■	■	■	■	■	■	■	◪	◪	■
P2	◪	■	■	■	◪	■	■	◪	■	■	◪	◪	◪
P3	◪	■	■	■	◪	◪	■	◪	◪	■			◪
P4	◪	◪	■	◪	◪	◪	■	◪	◪	■			◪
M M1	◪	◪	◪	◪	◪	◪	◪	■	◪	◪	◪	◪	◪
M2	◪	◪	◪	◪	◪	◪	◪	■	◪	◪	◪	◪	◪
M3		◪		◪			◪	■		◪	◪	◪	
M4		◪		◪			◪	■		◪			
K K1	◪	■	◪	■	◪	◪	■		◪	■			◪
K2	◪	■	◪	■	◪	◪	■		◪	■			◪
K3	◪	■	◪	■	◪	◪	■		◪	■			◪
K4	◪	■	◪	■	◪	◪	■		◪	■			◪
K5	◪	■	◪	■	◪	◪	■		◪	■			◪
N N1	◪	◪	◪	◪	◪	◪	◪	■	◪	◪	■	■	◪
N2	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	■	■	◪
N3	■	■	■	■	■	■	■	◪	■	■	■	■	■
N4	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	■	■	◪
N5													
S S1	◪	■	◪	■	◪	◪	■	◪	◪	■	◪	◪	◪
S2	◪	◪	◪	◪	◪	◪	◪		■	◪			◪
S3	◪	◪	◪	◪	◪	◪	◪		■	◪			◪
S4	◪	◪	◪	◪	◪	◪	◪		■	◪			◪
H H1													
H2													
H3													
H4													

■ Primary use ◪ Possible use

	C122	C346	C299	C907	C920	C247	C246	C273	C295	C333	C922	C428	C492	C407	C908
	HSS-E	HSS-E	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM
	N	N	N	N	N	N	N	N	N	W	HRA	HRA	HRA	NRA	NRA
	NOF 2	NOF 3	NOF 3-4	NOF 3-6	NOF 3-5	NOF 4-8	NOF 4-5	NOF 4-6	NOF 4-6	NOF 3	NOF 3-4	NOF 4-6	NOF 3-6	NOF 4	NOF 4-6
	λ 30°	λ 30°	λ 45°	λ 45°	λ 45°	λ 30°	λ 30°	λ 30°	λ 30°	λ 40°	λ 35°	λ 35°	λ 35°	λ 35°	λ 35°
	γ 12°	γ 12°	γ 12°	γ 12°	γ 12°	γ 12°	γ 12°	γ 12°	γ 12°	γ 25°	γ 12°	γ 12°	γ 12°	γ 12°	γ 12°
	DIN 1835A	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B
	Bright	Bright	Bright	Alcrona	Alcrona	Bright	TiCN	Bright	TiCN	Bright	Alcrona	Alcrona	Alcrona	Bright	Alcrona
	DC e8	DC e8	DC k10	DC k10	DC k10	DC k10	DC k10	DC k10	DC k10	DC k10	DC k12	DC k12	DC k12	DC k12	DC k12
	DORMER	DIN 844L	DIN 844K	DIN 844K	DIN 844L	DIN 844K	DIN 844K	DIN 844L	DIN 844L	DIN 844L	DIN 844K	DIN 844K	DIN 844L	DIN 844K	DIN 844K
	5.00 - 22.00	3.00 - 20.00	3.00 - 20.00	3.00 - 32.00	6.00 - 25.00	2.00 - 50.00	2.00 - 25.00	2.00 - 40.00	2.00 - 40.00	10.00 - 30.00	6.00 - 32.00	6.00 - 40.00	6.00 - 30.00	6.00 - 20.00	6.00 - 32.00
	144	145	146	147	148	149	151	152	154	155	156	157	158	159	160
P1	■	■				■	■	■	■					■	
P2	◪	◪	■	■	■	■	■	■	■		◪	◪	■	■	■
P3	◪	◪	■	■	■	◪	■	◪	■		■	■	■	■	■
P4	◪	◪	■	■	■	◪	◪	◪	◪		■	■	■	■	■
M1	◪	◪	■	■	■	◪	◪	◪	◪		■	■	■	■	■
M2	◪	◪	■	■	■	◪	◪	◪	◪		■	■	■	■	■
M3			◪	■	■		◪		◪		■	■	■	◪	■
M4			■	■	■		◪		◪		■	■	■	■	■
K1	◪	◪	■	■	■	◪	■	◪	■		■	■	■	■	■
K2	◪	◪	■	■	■	◪	■	◪	■		■	■	■	■	■
K3	◪	◪	■	■	■	◪	■	◪	■		■	■	■	■	■
K4	◪	◪	■	■	■	◪	■	◪	■		■	■	■	■	■
K5	◪	◪	■	■	■	◪	■	◪	■		■	■	■	■	■
N1	◪	◪				◪	◪	◪	◪	■					
N2	◪					◪	◪	◪	◪	■					
N3	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
N4	◪	◪				◪	◪	◪	◪	■					
N5															
S1	◪	◪	■	■	■	◪	■	◪	■		■	■	■	■	■
S2	◪	◪	■	■	■	◪	◪	◪	◪		■	■	■	■	■
S3	◪	◪	■	■	■	◪	◪	◪	◪		■	■	■	■	■
S4	◪	◪	■	■	■	◪	◪	◪	◪		■	■	■	■	■
H1															
H2															
H3															
H4															

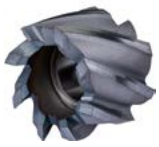
■ Primary use ◪ Possible use

Material code (BMC)		HSS-E PM	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS	HSS-E	HSS-E	HSS	HSS	HSS-E
Mill Profile		NRA	NF	NF	NF	N	N	N	N	N	NF	N	N	N
Number of flutes (NOF)		NOF 4-6	NOF 4	NOF 4	NOF 4-6	NOF 2	NOF 2	NOF 6-8	NOF 6-8	NOF 8-12	NOF 6-8	NOF 6-8	NOF 6-8	NOF 10-12
Cut length														
Flute Helix (FHA)		λ 35°	λ 30°	λ 30°	λ 30°	λ 30°	λ 30°	λ 15°	λ 12°	λ 15°	λ 12°	λ 0°	λ 0°	λ 0°
Radial rake angle (GAMF)		γ 12°	γ 12°	γ 12°	γ 12°	γ 12°	γ 12°	γ 10°	γ 10°	γ 15°	γ 10°	γ 0°	γ 0°	γ 0°
Shank		DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835	DIN 1835D	DIN 1835B	DIN 1835B	DIN 1835D	DIN 1835D	DIN 1835B
Coating		Alcrona	Bright	TiCN	Bright	Bright	Bright	Bright	Bright	Bright	Bright	Bright	Bright	Bright
Cutting diameter tolerance class (TCDC)		DC k12	DC k12	DC k12	DC k12	DC e8	DC e8	DC d11	DC d11	DC js16	DC d11			DC js16
Direction														
Basic standard group (BSG)		DIN 844L	DIN 844K	DIN 844K	DIN 844L	DIN 327D	DIN 844K	DIN 851	DORMER	DORMER	DIN 851	DORMER	DORMER	DIN 1833C
Product Family Code		C948	C400	C413	C403	C500	C505	C800	C810	C825	C801	C837	C835	C830
		6.00 - 32.00	6.00 - 20.00	6.00 - 20.00	10.00 - 50.00	2.00 - 25.00	3.00 - 30.00	11.00 - 50.00	12.50 - 40.00	40.00 - 63.00	16.00 - 32.00	13.00 - 38.00	1/2 - 1.1/2	12.00 - 32.00
		161	162	163	164	165	166	167	168	169	170	171	172	173
P	P1		■	■	■	■	■	■	■	■	■	■	■	■
	P2	■	■	■	■	◪	◪	■	■	■	■	■	■	■
	P3	■	◪	■	◪	◪	◪	■	■	■	■	■	■	■
	P4	■	◪	◪	◪	◪	◪	■	◪	■	■	◪	◪	■
M	M1	■	◪	◪	◪	◪	◪	■	■	■	■	■	■	■
	M2	■	◪	◪	◪	◪	◪	■	■	■	■	■	■	■
	M3	■		◪				■	◪	■	■	◪	◪	■
	M4	■		◪				■	◪	■	■	◪	◪	■
K	K1	■	◪	■	◪	◪	◪	■	■	■	■	■	■	■
	K2	■	◪	■	◪	◪	◪	■	■	■	■	■	■	■
	K3	■	◪	■	◪	◪	◪	■	■	■	■	■	■	■
	K4	■	◪	■	◪	◪	◪	■	■	■	■	■	■	■
	K5	■	◪	■	◪	◪	◪	■	■	■	■	■	■	■
N	N1		◪	◪	◪	◪	◪	■	■	■	■	■	■	■
	N2		◪	◪	◪	◪	◪	■	■	■	■	■	■	■
	N3	■	■	■	■	■	■	■	■	■	■	■	■	■
	N4		◪	◪	◪	◪	◪	■	◪	■	■	◪	◪	■
	N5													
S	S1	■	◪	◪	◪	◪	◪	■	◪	■	■	◪	◪	■
	S2	■	◪	◪	◪	◪	◪	■	◪	■	■	◪	◪	■
	S3	■	◪	◪	◪	◪	◪	■	◪	■	■	◪	◪	■
	S4	■	◪	◪	◪	◪	◪	■	◪	■	■	◪	◪	■
H	H1													
	H2													
	H3													
	H4													

■ Primary use ◪ Possible use

	C831	C710	C700	C822	C820	D200	D763	D745	D747	
	HSS-E	HSS	HSS-E	HSS-E	HSS	HSS-E	HSS-E	HSS	HSS	
	N	N	N	N	N					
	NOF 10-12	NOF 4	NOF 4-6	NOF 6-12	NOF 6-12	NOF 16-24	28-44 NOF	32-100 NOF	48-200 NOF	
	λ 0°	λ 0°	λ 0°	λ 10°	λ 12°	λ 15°	λ 15°			
	γ 0°	γ 0°	γ 0°	γ 10°	γ 10°	γ 10°	γ 10°	γ 15°	γ 5°	
	DIN 1835B	DIN 1835D	DIN 1835B	DIN 1835	DIN 1835D					
	Bright	Bright	Bright	Bright	Bright	Bright	Bright	Bright	Bright	
	DC js16			DC h11		DC js16	DC js16			
	DIN 1833D	BS 122/4	DORMER	DIN 850	DORMER	DIN 885A	DIN 885A	DIN 1838	DIN 1837	
	12.00 - 32.00	1/16 - 1/2	1.00 - 20.00	4.50 - 45.50	10.50 - 45.50	50.00 - 125.00	63.00 - 125.00	50.00 - 250.00	32.00 - 200.00	
	174	175	176	177	178	180	181	182	184	
P1	■	■	■	■	■	■	■	■	■	
P2	■	■	■	■	■	■	■	■	■	
P3	■	■	■	■	■	■	■	■	■	
P4	■	◪	■	■	◪	■	■	■	■	
M1	■	■	■	■	■	■	■	◪	◪	
M2	■	■	■	■	■	■	■	◪	◪	
M3	■	■	■	■	■	■	■	◪	◪	
M4	■	◪	■	■	◪	■	■			
K1	■	■	■	■	■	■	■	■	■	
K2	■	■	■	■	■	■	■	■	■	
K3	■	■	■	■	■	■	■	■	■	
K4	■	■	■	■	■	■	■	■	■	
K5	■	■	■	■	■	■	■	■	■	
N1	■	■	■	■	■	■	■	■	■	
N2	■	■	■	■	■	■	■	■	■	
N3	■	■	■	■	■	■	■	■	■	
N4	■			■	◪	■	■	■	■	
N5										
S1	■	■	■	■	◪	■	■			
S2	■	◪	■	■	◪	■	■			
S3	■	◪	■	■	◪	■	■			
S4	■	◪	■	■	◪	■	■			
H1										
H2										
H3										
H4										

■ Primary use ◪ Possible use

Material code (BMC)		HSS	HSS	HSS	HSS	HSS-E	HSS-E
Mill Profile						N	N
Number of flutes (NOF)		110-180 NOF	100-140 NOF	130-220 NOF	160-350 NOF	NOF 8	NOF 8
Cut length							
Flute Helix (FHA)						λ 30°	λ 30°
Radial rake angle (GAMF)		γ 18°	γ 18°	γ 18°	γ 18°	γ 12°	γ 12°
Shank							
Coating		ST	ST	ST	ST	Bright	TiCN
Cutting diameter tolerance class (TCDC)						DC js16	DC js16
Direction							
Basic standard group (BSG)		DORMER	DORMER	DORMER	DORMER	DIN 1880	DIN 1880
							
Product Family Code		D752	D753	D750	D751	D400	D420
		250.00 - 350.00	250.00 - 350.00	200.00 - 350.00	200.00 - 350.00	40.00 - 63.00	40.00 - 63.00
		186	187	188	189	190	191
P	P1	■	■	■	■	■	■
	P2	■	■	■	■	■	■
	P3	■	■	■	■	■	■
	P4	■	■	■	■	◪	■
M	M1	◪	◪	◪	◪	■	■
	M2	◪	◪	◪	◪	■	■
	M3	◪	◪	◪	◪	◪	■
	M4					■	■
K	K1	■	■	■	■	■	■
	K2	■	■	■	■	■	■
	K3	■	■	■	■	■	■
	K4	■	■	■	■	■	■
	K5	■	■	■	■	■	■
N	N1	■	■	■	■	◪	◪
	N2	■	■	■	■	■	■
	N3	■	■	■	■	■	■
	N4	■	■	■	■	◪	◪
	N5						
S	S1					◪	■
	S2					◪	■
	S3					◪	■
	S4					◪	■
H	H1						
	H2						
	H3						
	H4						

■ Primary use ◪ Possible use

	D402	D422
	HSS-E	HSS-E
	NR	NR
	NOF 6-8	NOF 6-8
	λ 30°	λ 30°
	γ 12°	γ 12°
	Bright	TiCN
	DC js16	DC js16
	DIN 1880	DIN 1880
	40.00 - 63.00	40.00 - 63.00
	192	193
P1	■	■
P2	■	■
P3	■	■
P4	◪	■
M1	■	■
M2	■	■
M3	◪	■
M4	■	■
K1	■	■
K2	■	■
K3	■	■
K4	■	■
K5	■	■
N1	◪	◪
N2	■	■
N3	■	■
N4	◪	◪
N5		
S1	◪	■
S2	◪	■
S3	◪	■
S4	◪	■
H1		
H2		
H3		
H4		

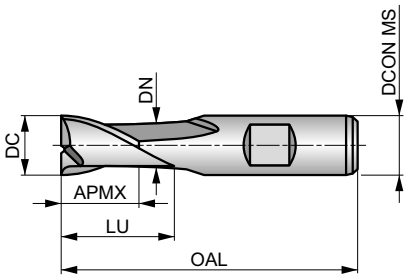
■ Primary use ◪ Possible use

C110

DORMER

2-Flute HSS-E-PM Slot End Mill, Bright Finish

Extra short cut length, 2-flute design provides high rigidity. Suitable for milling shallow slots and ramping. The accurate diameter means the tools are designed for milling standard keyway slots to a P9 tolerance. Versatile and can be used in mild steels, non-ferrous materials and medium strength titanium alloys.



HSS-E PM	N	NOF 2
	λ 30°	γ 12°
DIN 1835B	Bright	DC e8
	DIN 327D	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	K1.1	K1.2
■53 E	■59 E	■61 E	■45 E	◪40 E	◪37 E	◪30 D	◪22 D	◪41 E	◪35 E	◪37 E	◪30 D	◪35 E	◪26 E
K1.3	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**
◪19 E	◪62 E	◪50 E	◪40 D	◪54 E	◪42 E	◪34 D	◪50 D	◪38 D	◪28 D	◪24 C	◪20 C	◪57 D	◪43 D
K5.3	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**S1.1**	**S1.2**	**S2.1**
◪33 D	◪95 G	◪71 F	◪48 F	◪48 E	◪43 E	◪31 E	■50 E	■29 E	■15 E	◪50 E	■35 D	◪25 D	◪20 C
S3.1	**S4.1**												
◪15 C	◪12 C												

DCON MS tolerance h6.

Product	DC [inch]	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C1101.0	–	1.00	6.00	2.50	47.0	2	–	–
C1101.5	–	1.50	6.00	3.00	47.0	2	–	–
C1101/16	1/16	1.59	6.00	3.00	47.0	2	–	–
C1101.8	–	1.80	6.00	4.00	48.0	2	–	–
C1102.0	–	2.00	6.00	4.00	48.0	2	–	–
C1103/32	3/32	2.38	6.00	5.00	49.0	2	–	–
C1102.5	–	2.50	6.00	5.00	49.0	2	–	–
C1102.8	–	2.80	6.00	5.00	49.0	2	–	–
C1103.0	–	3.00	6.00	5.00	49.0	2	–	–
C1101/8	1/8	3.18	6.00	6.00	50.0	2	–	–
C1103.5	–	3.50	6.00	6.00	50.0	2	–	–
C1103.8	–	3.80	6.00	7.00	51.0	2	–	–
C1104.0	–	4.00	6.00	7.00	51.0	2	–	–
C1104.5	–	4.50	6.00	7.00	51.0	2	–	–
C1103/16	3/16	4.76	6.00	8.00	52.0	2	–	–
C1104.8 [2)]	–	4.80	6.00	8.00	52.0	2	–	–
C1105.0	–	5.00	6.00	8.00	52.0	2	–	–
C1105.5	–	5.50	6.00	8.00	52.0	2	–	–
C1105.75 [2)]	–	5.75	6.00	8.00	52.0	2	–	–
C1106.0	–	6.00	6.00	8.00	52.0	2	–	–
C1101/4	1/4	6.35	10.00	10.00	60.0	2	–	–
C1106.5	–	6.50	10.00	10.00	60.0	2	–	–
C1107.0	–	7.00	10.00	10.00	60.0	2	–	–
C1107.5	–	7.50	10.00	10.00	60.0	2	–	–
C1107.75 [2)]	–	7.75	10.00	11.00	61.0	2	–	–

Product	DC	DC	DCON MS	APMX	OAL	NOF	LU	DN
	[inch]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
C1105/16	5/16	7.94	10.00	11.00	61.0	2	–	–
C1108.0	–	8.00	10.00	11.00	61.0	2	–	–
C1108.5	–	8.50	10.00	11.00	61.0	2	–	–
C1109.0	–	9.00	10.00	11.00	61.0	2	–	–
C1109.5	–	9.50	10.00	11.00	61.0	2	–	–
C1103/8	3/8	9.52	10.00	13.00	63.0	2	22.50	9.50
C11010.0	–	10.00	10.00	13.00	63.0	2	22.50	9.50
C11013/32	13/32	10.32	12.00	13.00	70.0	2	–	–
C11010.5	–	10.50	12.00	13.00	70.0	2	–	–
C11011.0	–	11.00	12.00	13.00	70.0	2	–	–
C1107/16	7/16	11.11	12.00	13.00	70.0	2	–	–
C11011.5	–	11.50	12.00	13.00	70.0	2	–	–
C11012.0	–	12.00	12.00	16.00	73.0	2	27.50	11.50
C11012.5	–	12.50	12.00	16.00	73.0	2	27.50	11.50
C1101/2	1/2	12.70	12.00	16.00	73.0	2	27.50	11.50
C11013.0	–	13.00	12.00	16.00	73.0	2	27.50	11.50
C11017/32	17/32	13.49	12.00	16.00	73.0	2	27.50	11.50
C11014.0	–	14.00	12.00	16.00	73.0	2	27.50	11.50
C1109/16	9/16	14.29	12.00	16.00	73.0	2	27.50	11.50
C11015.0	–	15.00	12.00	16.00	73.0	2	27.50	11.50
C1105/8	5/8	15.88	16.00	19.00	79.0	2	30.50	15.50
C11016.0	–	16.00	16.00	19.00	79.0	2	30.50	15.50
C11017.0	–	17.00	16.00	19.00	79.0	2	30.50	15.50
C11011/16	11/16	17.46	16.00	19.00	79.0	2	30.50	15.50
C11018.0	–	18.00	16.00	19.00	79.0	2	30.50	15.50
C11019.0	–	19.00	16.00	19.00	79.0	2	30.50	15.50
C1103/4	3/4	19.05	20.00	22.00	88.0	2	37.50	18.50
C11020.0	–	20.00	20.00	22.00	88.0	2	37.50	19.50
C11022.0	–	22.00	20.00	22.00	88.0	2	37.50	19.50
C1107/8	7/8	22.22	20.00	22.00	88.0	2	37.50	19.50
C11024.0	–	24.00	25.00	26.00	102.0	2	45.50	23.50
C11025.0	–	25.00	25.00	26.00	102.0	2	45.50	24.50
C1101	1″	25.40	25.00	26.00	102.0	2	45.50	24.50
C11026.0	–	26.00	25.00	26.00	102.0	2	45.50	24.50
C11028.0	–	28.00	25.00	26.00	102.0	2	45.50	24.50
C11030.0	–	30.00	25.00	26.00	102.0	2	45.50	24.50
C11032.0	–	32.00	32.00	32.00	112.0	2	51.50	31.50
C11035.0 [1]	–	35.00	32.00	32.00	112.0	2	51.50	31.50
C11036.0 [1]	–	36.00	32.00	32.00	112.0	2	51.50	31.50
C11040.0 [1]	–	40.00	40.00	38.00	130.0	2	59.50	39.00

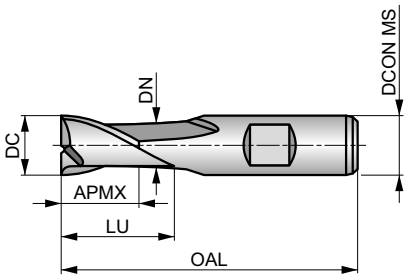
[1] DC tolerance h10; available in HSS-E only.
[2] DC tolerance h10; slot not in P9 tolerance.

C126

DORMER

2-Flute HSS-E-PM Slot End Mill, TiCN Coating

Extra short cut length, 2-flute design provides high rigidity. Suitable for milling shallow slots and ramping. The accurate diameter means the tools are designed for milling standard keyway slots to a P9 tolerance. TiCN coating increases the tool life and improves performance when milling hard and abrasive materials.



HSS-E PM	N	NOF 2
	λ 30°	γ 12°
DIN 1835B	TiCN	DC e8
	DIN 327D	

P9

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■126 E	■141 E	■146 E	■108 E	■95 E	◪84 D	■81 E	■65 D	◪55 D	■48 D	◪41 D	◪34 D	◪62 E	◪52 E
M2.1	**M2.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**
◪55 E	◪45 D	◪26 C	◪25 C	■60 E	■44 E	■33 E	■111 E	■90 E	■72 D	■98 E	■75 E	■61 D	■91 D
K4.2	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**
■68 D	■50 D	■43 C	■36 C	■103 D	■77 D	■60 D	◪177 G	◪133 F	◪89 F	◪89 E	■80 E	■57 E	■93 E
N3.2	**N3.3**	**N4.1**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**		
■55 E	■28 E	◪93 E	■45 D	■40 D	◪15 C	■33 C	◪14 C	■25 C	◪10 C	■20 C	◪8 C		

DCON MS tolerance h6.

Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C1261.0	1.00	6.00	2.50	47.0	2	–	–
C1261.5	1.50	6.00	3.00	47.0	2	–	–
C1262.0	2.00	6.00	4.00	48.0	2	–	–
C1262.5	2.50	6.00	5.00	49.0	2	–	–
C1263.0	3.00	6.00	5.00	49.0	2	–	–
C1263.5	3.50	6.00	6.00	50.0	2	–	–
C1264.0	4.00	6.00	7.00	51.0	2	–	–
C1264.5	4.50	6.00	7.00	51.0	2	–	–
C1265.0	5.00	6.00	8.00	52.0	2	–	–
C1265.5	5.50	6.00	8.00	52.0	2	–	–
C1266.0	6.00	6.00	8.00	52.0	2	–	–
C1266.5	6.50	10.00	10.00	60.0	2	–	–
C1267.0	7.00	10.00	10.00	60.0	2	–	–
C1267.5	7.50	10.00	10.00	60.0	2	–	–
C1268.0	8.00	10.00	11.00	61.0	2	–	–
C1268.5	8.50	10.00	11.00	61.0	2	–	–
C1269.0	9.00	10.00	11.00	61.0	2	–	–
C1269.5	9.50	10.00	11.00	61.0	2	–	–
C12610.0	10.00	10.00	13.00	63.0	2	22.50	9.50
C12610.5	10.50	12.00	13.00	70.0	2	–	–
C12611.0	11.00	12.00	13.00	70.0	2	–	–
C12611.5	11.50	12.00	13.00	70.0	2	–	–
C12612.0	12.00	12.00	16.00	73.0	2	27.50	11.50
C12612.5	12.50	12.00	16.00	73.0	2	27.50	11.50
C12613.0	13.00	12.00	16.00	73.0	2	27.50	11.50

Product	DC	DCON MS	APMX	OAL	NOF	LU	DN
	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
C12614.0	14.00	12.00	16.00	73.0	2	27.50	11.50
C12615.0	15.00	12.00	16.00	73.0	2	27.50	11.50
C12616.0	16.00	16.00	19.00	79.0	2	30.50	15.50
C12618.0	18.00	16.00	19.00	79.0	2	30.50	15.50
C12620.0	20.00	20.00	22.00	88.0	2	37.50	19.50
C12622.0	22.00	20.00	22.00	88.0	2	37.50	19.50
C12624.0	24.00	25.00	26.00	102.0	2	45.50	23.50
C12625.0	25.00	25.00	26.00	102.0	2	45.50	24.50
C12630.0	30.00	25.00	26.00	102.0	2	45.50	24.50

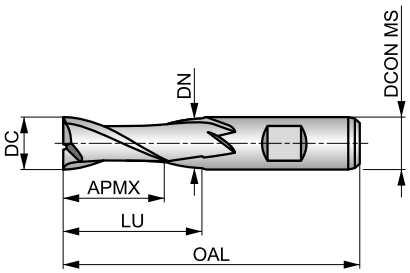
C123

DORMER

2-Flute HSS-E-PM Slot End Mill, Bright Finish

Short cut length, 2-flute design provides high rigidity. Suitable for milling shallow slots and ramping. The accurate diameter means the tools are designed for milling standard keyway slots to a P9 tolerance. Versatile and can be used in mild steels, non-ferrous materials and medium strength titanium alloys.

HSS-E PM	N	NOF 2
	λ 30°	γ 12°
DIN 1835B	Bright	DC e8
	DIN 844K	



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	K1.1	K1.2
■53 D	■59 D	■61 D	■45 D	■40 D	■37 D	■30 C	■22 C	◪34 D	◪29 D	◪31 D	◪25 C	◪30 D	◪22 D
K1.3	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**
◪17 D	◪55 D	◪45 D	◪36 C	◪49 D	◪37 D	◪30 B	◪45 C	◪34 C	◪25 C	◪22 B	◪18 B	◪51 C	◪39 C
K5.3	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**S1.1**	**S1.2**	**S2.1**
◪30 C	◪95 F	◪71 E	◪48 E	◪48 D	◪43 D	◪31 D	■50 D	■29 D	■15 D	◪50 D	■30 C	◪25 C	◪20 B
S3.1	**S4.1**												
◪15 B	◪12 B												

DCON MS tolerance h6.

Product	DC [inch]	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C1231/16 [1]	1/16	1.59	6.00	7.00	51.0	2	–	–
C1232.0	–	2.00	6.00	7.00	51.0	2	–	–
C1232.5	–	2.50	6.00	8.00	52.0	2	–	–
C1233.0	–	3.00	6.00	8.00	52.0	2	–	–
C1231/8 [1]	1/8	3.18	6.00	10.00	54.0	2	–	–
C1233.5	–	3.50	6.00	10.00	54.0	2	–	–
C1235/32 [1]	5/32	3.97	6.00	11.00	55.0	2	–	–
C1234.0	–	4.00	6.00	11.00	55.0	2	–	–
C1234.5	–	4.50	6.00	11.00	55.0	2	–	–
C1233/16 [1]	3/16	4.76	6.00	13.00	57.0	2	–	–
C1235.0	–	5.00	6.00	13.00	57.0	2	–	–
C1235.5	–	5.50	6.00	13.00	57.0	2	–	–
C1236.0	–	6.00	6.00	13.00	57.0	2	–	–
C1231/4 [1]	1/4	6.35	10.00	16.00	66.0	2	–	–
C1236.5	–	6.50	10.00	16.00	66.0	2	–	–
C1237.0	–	7.00	10.00	16.00	66.0	2	–	–
C1237.5	–	7.50	10.00	16.00	66.0	2	–	–
C1235/16 [1]	5/16	7.94	10.00	19.00	69.0	2	–	–
C1238.0	–	8.00	10.00	19.00	69.0	2	–	–
C1238.5	–	8.50	10.00	19.00	69.0	2	–	–
C1239.0	–	9.00	10.00	19.00	69.0	2	–	–
C1239.5	–	9.50	10.00	19.00	69.0	2	–	–
C1233/8 [1]	3/8	9.52	10.00	22.00	72.0	2	31.50	9.50
C12310.0	–	10.00	10.00	22.00	72.0	2	31.50	9.50
C12311.0	–	11.00	12.00	22.00	79.0	2	–	–

Product	DC	DC	DCON MS	APMX	OAL	NOF	LU	DN
	[inch]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
C12312.0	–	12.00	12.00	26.00	83.0	2	37.50	11.50
C1231/2 [1)]	1/2	12.70	12.00	26.00	83.0	2	37.50	11.50
C12313.0	–	13.00	12.00	26.00	83.0	2	37.50	11.50
C12314.0	–	14.00	12.00	26.00	83.0	2	37.50	11.50
C12315.0	–	15.00	12.00	26.00	83.0	2	37.50	11.50
C12316.0	–	16.00	16.00	32.00	92.0	2	43.50	15.50
C12318.0	–	18.00	16.00	32.00	92.0	2	43.50	15.50
C12320.0	–	20.00	20.00	38.00	104.0	2	53.50	19.50
C12322.0	–	22.00	20.00	38.00	104.0	2	53.50	19.50
C12325.0	–	25.00	25.00	45.00	121.0	2	64.50	24.50
C12330.0	–	30.00	25.00	45.00	121.0	2	64.50	24.50

[1)] DC tolerance -0.0005 inches / -0.0013 inches.

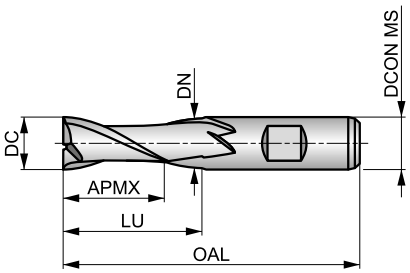
C139

DORMER

2-Flute HSS-E-PM Slot End Mill, TiCN Coating

Short cut length, 2-flute design provides high rigidity. Suitable for milling shallow slots and ramping. The accurate diameter means the tools are designed for milling standard keyway slots to a P9 tolerance. TiCN coating increases the life of the cutter and improves performance when milling hard and abrasive materials.

HSS-E PM	N	NOF 2
	λ 30°	γ 12°
DIN 1835B	TiCN	DC e8
	DIN 844K	



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■113 D	■126 D	■131 D	■97 D	■85 D	◪75 C	■74 D	■59 C	◪50 C	■44 C	◪37 C	◪31 C	◪62 D	◪52 D
M2.1	**M2.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**
◪55 D	◪45 C	◪26 B	◪25 B	■55 D	■41 D	■31 D	■98 D	■80 D	■64 C	■87 D	■67 D	■54 B	■81 C
K4.2	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**
■61 C	■45 C	■38 B	■32 B	■91 C	■69 C	■53 C	◪159 F	◪120 E	◪80 E	◪80 D	■72 D	■51 D	■84 D
N3.2	**N3.3**	**N4.1**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**		
■50 D	■25 D	◪84 D	■45 C	■35 C	◪15 B	■33 B	◪14 B	■25 B	◪10 B	■20 B	◪8 B		

DCON MS tolerance h6.

Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C1392.0	2.00	6.00	7.00	51.0	2	–	–
C1393.0	3.00	6.00	8.00	52.0	2	–	–
C1394.0	4.00	6.00	11.00	55.0	2	–	–
C1395.0	5.00	6.00	13.00	57.0	2	–	–
C1395.5	5.50	6.00	13.00	57.0	2	–	–
C1396.0	6.00	6.00	13.00	57.0	2	–	–
C1396.5	6.50	10.00	16.00	66.0	2	–	–
C1397.0	7.00	10.00	16.00	66.0	2	–	–
C1397.5	7.50	10.00	16.00	66.0	2	–	–
C1398.0	8.00	10.00	19.00	69.0	2	–	–
C1398.5	8.50	10.00	19.00	69.0	2	–	–
C1399.0	9.00	10.00	19.00	69.0	2	–	–
C1399.5	9.50	10.00	19.00	69.0	2	–	–
C13910.0	10.00	10.00	22.00	72.0	2	31.50	9.50
C13911.0	11.00	12.00	22.00	79.0	2	–	–
C13912.0	12.00	12.00	26.00	83.0	2	37.50	11.50
C13913.0	13.00	12.00	26.00	83.0	2	37.50	11.50
C13914.0	14.00	12.00	26.00	83.0	2	37.50	11.50
C13915.0	15.00	12.00	26.00	83.0	2	37.50	11.50
C13916.0	16.00	16.00	32.00	92.0	2	43.50	15.50
C13918.0	18.00	16.00	32.00	92.0	2	43.50	15.50
C13920.0	20.00	20.00	38.00	104.0	2	53.50	19.50
C13922.0	22.00	20.00	38.00	104.0	2	53.50	19.50
C13925.0	25.00	25.00	45.00	121.0	2	64.50	24.50

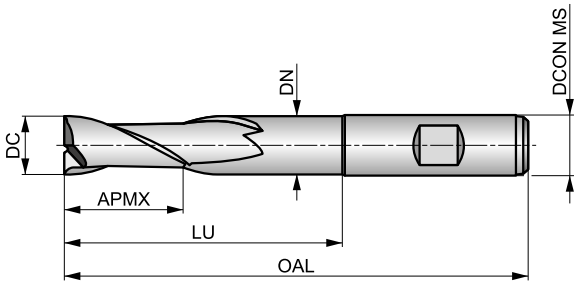
C135

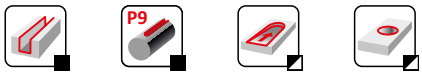
DORMER

2-Flute HSS-E Extra Long Reach Slot End Mill, Bright Finish

Short cut length, 2-flute design provides high rigidity for milling standard keyway slots to a P9 tolerance. Provides increased strength and reduced vibrations in difficult to reach areas. This can be used in mild steels and non-ferrous materials.

HSS-E	N	NOF 2
	λ 30°	γ 12°
DIN 1835B	Bright	DC e8
	DORMER	





Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	K1.1	K1.2
■46 C	■52 C	■54 C	■40 C	◪35 C	◪32 C	◪26 B	◪19 B	◪34 C	◪29 C	◪31 C	◪25 B	◪30 C	◪22 C
K1.3	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**
◪17 C	◪49 C	◪40 C	◪32 B	◪44 C	◪33 C	◪27 A	◪40 B	◪30 B	◪22 B	◪19 A	◪16 A	◪46 B	◪34 B
K5.3	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**S1.1**	**S1.2**	**S2.1**
◪27 B	◪81 E	◪60 D	◪41 D	◪41 C	◪37 C	◪26 C	■43 C	■25 C	■13 C	◪43 C	◪30 B	◪25 B	◪20 A
S3.1	**S4.1**												
◪15 A	◪12 A												

DCON MS tolerance h6.

Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C1352.0	2.00	6.00	7.00	54.0	2	18.00	1.80
C1353.0	3.00	6.00	8.00	56.0	2	20.00	2.80
C1354.0	4.00	6.00	11.00	63.0	2	27.00	3.70
C1355.0	5.00	6.00	13.00	68.0	2	32.00	4.70
C1356.0	6.00	6.00	13.00	68.0	2	32.00	5.70
C1358.0	8.00	10.00	19.00	88.0	2	48.00	7.50
C13510.0	10.00	10.00	22.00	95.0	2	54.50	9.50
C13512.0	12.00	12.00	26.00	110.0	2	64.50	11.50
C13514.0	14.00	12.00	26.00	110.0	2	64.50	11.50
C13516.0	16.00	16.00	32.00	123.0	2	74.50	15.50
C13518.0	18.00	16.00	32.00	123.0	2	74.50	15.50
C13520.0	20.00	20.00	38.00	141.0	2	90.50	19.50

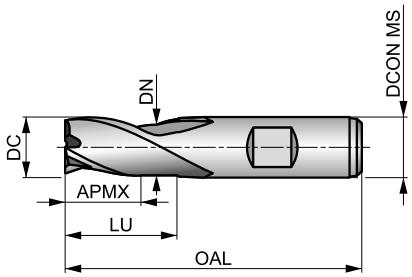
C306

DORMER

3-Flute HSS-E-PM Slot End Mill, Bright Finish

Extra short cut length, 3-flute design provides high rigidity and is suitable for milling shallow slots and ramping. The accurate diameter means the tools are designed for milling standard keyway slots to a P9 tolerance. Versatile and can be used in mild steels and non-ferrous materials.

HSS-E PM	N	NOF 3
	λ 30°	γ 12°
DIN 1835B	Bright	DC e8
	DIN 327D	



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	K1.1	K1.2
■54 E	■61 E	■63 E	■47 E	■41 E	◪38 E	◪31 D	◪23 D	◪36 E	◪30 E	◪32 E	◪26 D	◪32 E	◪24 E
K1.3	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**
◪18 E	◪59 E	◪48 E	◪38 D	◪52 E	◪40 E	◪32 D	◪48 D	◪37 D	◪27 D	◪23 C	◪19 C	◪55 D	◪41 D
K5.3	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**S1.1**	**S1.2**	**S2.1**	**S3.1**	**S4.1**
◪32 D	◪50 F	◪50 E	◪45 E	◪32 E	■52 E	■30 E	■16 E	◪52 E	■33 D	◪26 D	◪20 C	◪15 C	◪12 C

DCON MS tolerance h6.

Product	DC	DCON MS	APMX	OAL	NOF	LU	DN
	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
C3063.0	3.00	6.00	5.00	49.0	3	–	–
C3064.0	4.00	6.00	7.00	51.0	3	–	–
C3065.0	5.00	6.00	8.00	52.0	3	–	–
C3066.0	6.00	6.00	8.00	52.0	3	–	–
C3067.0	7.00	10.00	10.00	60.0	3	–	–
C3068.0	8.00	10.00	11.00	61.0	3	–	–
C3069.0	9.00	10.00	11.00	61.0	3	–	–
C3069.5	9.50	10.00	11.00	61.0	3	–	–
C30610.0	10.00	10.00	13.00	63.0	3	22.50	9.50
C30611.0	11.00	12.00	13.00	70.0	3	–	–
C30612.0	12.00	12.00	16.00	73.0	3	27.50	11.50
C30614.0	14.00	12.00	16.00	73.0	3	27.50	11.50
C30615.0	15.00	12.00	16.00	73.0	3	27.50	11.50
C30616.0	16.00	16.00	19.00	79.0	3	30.50	15.50
C30618.0	18.00	16.00	19.00	79.0	3	30.50	15.50
C30620.0	20.00	20.00	22.00	88.0	3	37.50	19.50
C30622.0	22.00	20.00	22.00	88.0	3	37.50	19.50
C30625.0	25.00	25.00	26.00	102.0	3	45.50	24.50
C30630.0	30.00	25.00	26.00	102.0	3	45.50	24.50

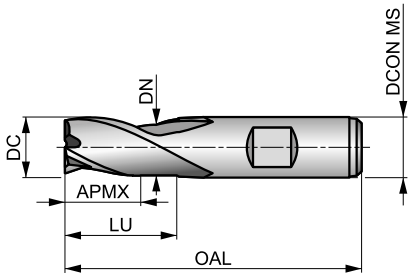
C353

DORMER

3-Flute HSS-E-PM Slot End Mill, Alcrona Coating

Extra short cut length, 3-flute design provides high rigidity and is suitable for milling shallow slots and ramping. The accurate diameter means the tools are designed for milling standard keyway slots to a P9 tolerance. Alcrona coating improves performance and extends the tool life.

HSS-E PM	N	NOF 3
	λ 30°	γ 12°
DIN 1835B	Alcrona	DC e8
	DIN 327D	



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■133 E	■148 E	■154 E	■114 E	■100 E	■88 D	■88 E	■71 D	■60 D	■53 D	■45 D	◪37 D	◪69 E	◪58 E
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
◪61 E	◪50 D	◪52 D	◪45 D	◪41 C	◪30 C	■65 E	■48 E	■36 E	■117 E	■95 E	■76 D	■103 E	■79 E
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**
■64 D	■96 D	■72 D	■53 D	■45 C	■38 C	■108 D	■82 D	■63 D	◪89 F	◪89 E	■80 E	■57 E	■93 E
N3.2	**N3.3**	**N4.1**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**		
■55 E	■28 E	◪93 E	■50 D	■40 D	◪20 C	■40 C	◪21 C	■30 C	◪15 C	■23 C	◪12 C		

DCON MS tolerance h6.

Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C3533.0	3.00	6.00	5.00	49.0	3	–	–
C3533.5	3.50	6.00	6.00	50.0	3	–	–
C3534.0	4.00	6.00	7.00	51.0	3	–	–
C3534.5	4.50	6.00	7.00	51.0	3	–	–
C3534.8 [1)]	4.80	6.00	8.00	52.0	3	–	–
C3535.0	5.00	6.00	8.00	52.0	3	–	–
C3535.5	5.50	6.00	8.00	52.0	3	–	–
C3536.0	6.00	6.00	8.00	52.0	3	–	–
C3536.5	6.50	10.00	10.00	60.0	3	–	–
C3537.0	7.00	10.00	10.00	60.0	3	–	–
C3537.5	7.50	10.00	10.00	60.0	3	–	–
C3537.75 [1)]	7.75	10.00	11.00	61.0	3	–	–
C3538.0	8.00	10.00	11.00	61.0	3	–	–
C3538.5	8.50	10.00	11.00	61.0	3	–	–
C3539.0	9.00	10.00	11.00	61.0	3	–	–
C3539.5	9.50	10.00	11.00	61.0	3	–	–
C35310.0	10.00	10.00	13.00	63.0	3	22.50	9.50
C35311.0	11.00	12.00	13.00	70.0	3	–	–
C35312.0	12.00	12.00	16.00	73.0	3	27.50	11.50
C35313.0	13.00	12.00	16.00	73.0	3	27.50	11.50
C35314.0	14.00	12.00	16.00	73.0	3	27.50	11.50
C35315.0	15.00	12.00	16.00	73.0	3	27.50	11.50
C35316.0	16.00	16.00	19.00	79.0	3	30.50	15.50
C35318.0	18.00	16.00	19.00	79.0	3	30.50	15.50
C35320.0	20.00	20.00	22.00	88.0	3	37.50	19.50

Product	DC	DCON MS	APMX	OAL	NOF	LU	DN
	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
C35322.0	22.00	20.00	22.00	88.0	3	37.50	19.50
C35325.0	25.00	25.00	26.00	102.0	3	45.50	24.50
C35328.0	28.00	25.00	26.00	102.0	3	45.50	24.50
C35330.0	30.00	25.00	26.00	102.0	3	45.50	24.50

[1] DC tolerance h10.

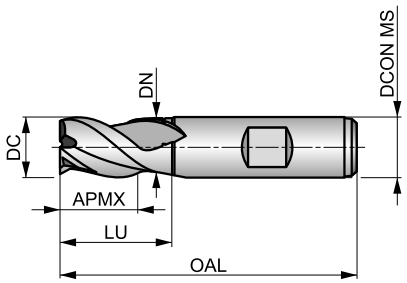
C367

DORMER

3-Flute HSS-E-PM Slot End Mill, Alcrona Coating

Extra short cut length, 3-flute design with a 40° helix. The sharp geometry is designed to machine mild steels, especially medium to high strength stainless steels and mild non-ferrous materials. The accurate diameter means that standard keyway slots to P9 tolerance can be milled. Alcrona coating extends tool life.

HSS-E PM	N	NOF 3
	λ 40°	γ 15°
DIN 1835B	Alcrona	DC e8
	DIN 327D	



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	M2.3	M3.1
■135 E	■151 E	■157 E	■116 E	◪102 E	◪94 E	◪75 D	◪56 D	■92 E	■78 E	■82 E	■67 D	■56 D	■64 D
M3.2	**M3.3**	**M4.1**	**M4.2**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**
■55 D	■50 C	■35 C	■30 C	■177 G	■133 F	◪89 F	◪89 E	◪80 E	◪57 E	◪93 E	◪55 E	■28 E	◪93 E
S1.1													
◪50 D													

DCON MS tolerance h6.

Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C3672.0	2.00	6.00	4.00	48.0	3	–	–
C3673.0	3.00	6.00	5.00	49.0	3	–	–
C3674.0	4.00	6.00	7.00	51.0	3	–	–
C3675.0	5.00	6.00	8.00	52.0	3	–	–
C3676.0	6.00	6.00	8.00	52.0	3	–	–
C3677.0	7.00	10.00	10.00	60.0	3	–	–
C3678.0	8.00	10.00	11.00	61.0	3	–	–
C36710.0	10.00	10.00	13.00	63.0	3	22.50	9.50
C36711.0	11.00	12.00	13.00	70.0	3	–	–
C36712.0	12.00	12.00	16.00	73.0	3	27.50	11.50
C36714.0	14.00	12.00	16.00	73.0	3	27.50	11.50
C36716.0	16.00	16.00	19.00	79.0	3	30.50	15.50
C36718.0	18.00	16.00	19.00	79.0	3	30.50	15.50
C36720.0	20.00	20.00	22.00	88.0	3	37.50	19.50

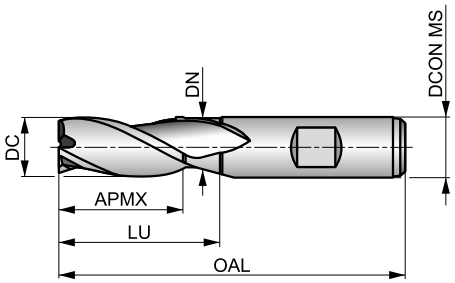
C305

DORMER

3-Flute HSS-E-PM Slot End Mill, Bright Finish

Short cut length, 3-flute design provides high rigidity for milling slots whilst the accurate diameter means that standard keyway slots to P9 tolerance can be milled. Suitable also for ramping and profile milling in mild steels, non-ferrous materials and medium strength high temperature alloys.

HSS-E PM	N	NOF 3
	λ 30°	γ 12°
DIN 1835B	Bright	DC e8
	DIN 844K	



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	K1.1	K1.2
■52 D	■58 D	■60 D	■44 D	■39 D	◪36 D	◪29 C	◪21 C	◪36 D	◪30 D	◪32 D	◪26 C	◪30 D	◪22 D
K1.3	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**
◪17 D	◪55 D	◪45 D	◪36 C	◪49 D	◪37 D	◪30 B	◪45 C	◪34 C	◪25 C	◪22 B	◪18 B	◪51 C	◪39 C
K5.3	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**S1.1**	**S1.2**	**S2.1**	**S3.1**	**S4.1**
◪30 C	◪48 E	◪48 D	◪43 D	◪31 D	■50 D	■29 D	■15 D	◪50 D	■29 C	◪24 C	■17 B	■13 B	■10 B

DCON MS tolerance h6.

Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C3052.0	2.00	6.00	7.00	51.0	3	–	–
C3052.5	2.50	6.00	8.00	52.0	3	–	–
C3053.0	3.00	6.00	8.00	52.0	3	–	–
C3053.5	3.50	6.00	10.00	54.0	3	–	–
C3054.0	4.00	6.00	11.00	55.0	3	–	–
C3054.5	4.50	6.00	11.00	55.0	3	–	–
C3055.0	5.00	6.00	13.00	57.0	3	–	–
C3055.5	5.50	6.00	13.00	57.0	3	–	–
C3056.0	6.00	6.00	13.00	57.0	3	–	–
C3056.5	6.50	10.00	16.00	66.0	3	–	–
C3057.0	7.00	10.00	16.00	66.0	3	–	–
C3057.5	7.50	10.00	16.00	66.0	3	–	–
C3058.0	8.00	10.00	19.00	69.0	3	–	–
C3058.5	8.50	10.00	19.00	69.0	3	–	–
C3059.0	9.00	10.00	19.00	69.0	3	–	–
C30510.0	10.00	10.00	22.00	72.0	3	31.50	9.50
C30511.0	11.00	12.00	22.00	79.0	3	–	–
C30512.0	12.00	12.00	26.00	83.0	3	37.50	11.50
C30513.0	13.00	12.00	26.00	83.0	3	37.50	11.50
C30514.0	14.00	12.00	26.00	83.0	3	37.50	11.50
C30515.0	15.00	12.00	26.00	83.0	3	37.50	11.50
C30516.0	16.00	16.00	32.00	92.0	3	43.50	15.50
C30517.0	17.00	16.00	32.00	92.0	3	43.50	15.50
C30518.0	18.00	16.00	32.00	92.0	3	43.50	15.50
C30519.0	19.00	16.00	32.00	92.0	3	43.50	15.50
C30520.0	20.00	20.00	38.00	104.0	3	53.50	19.50
C30522.0	22.00	20.00	38.00	104.0	3	53.50	19.50

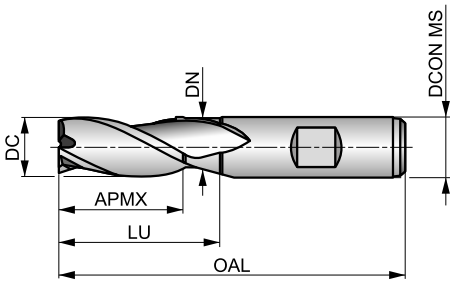
Product	DC	DCON MS	APMX	OAL	NOF	LU	DN
	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
C30525.0	25.00	25.00	45.00	121.0	3	–	–
C30528.0	28.00	25.00	45.00	121.0	3	–	–
C30530.0	30.00	25.00	45.00	121.0	3	–	–
C30532.0	32.00	32.00	53.00	133.0	3	–	–

C352

DORMER

3-Flute HSS-E-PM Slot End Mill, Alcrona Coating

Short cut length, 3-flute design provides high rigidity for milling slots whilst the accurate diameter means that standard keyway slots to P9 tolerance can be milled. Suitable also for ramping and profile milling in mild materials. Alcrona coating improves performance and extends the tool life.



HSS-E PM	N	NOF 3
	λ 30°	γ 12°
DIN 1835B	Alcrona	DC e8
	DIN 844K	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■126 D	■141 D	■146 D	■108 D	■95 D	■84 C	■81 D	■65 C	■55 C	■48 C	■41 C	◪34 C	◪69 D	◪58 D
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
◪61 D	◪50 C	◪47 C	◪40 C	◪36 B	◪25 B	■60 D	■44 D	■33 D	■111 D	■90 D	■72 C	■98 D	■75 D
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**
■61 B	■91 C	■68 C	■50 C	■43 B	■36 B	■103 C	■77 C	■60 C	◪89 E	◪89 D	■80 D	■57 D	■93 D
N3.2	**N3.3**	**N4.1**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**		
■55 D	■28 D	◪93 D	■45 C	■35 C	◪15 B	■33 B	◪14 B	■25 B	◪10 B	■20 B	◪8 B		

DCON MS tolerance h6.

Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C3523.0	3.00	6.00	8.00	52.0	3	–	–
C3524.0	4.00	6.00	11.00	55.0	3	–	–
C3525.0	5.00	6.00	13.00	57.0	3	–	–
C3526.0	6.00	6.00	13.00	57.0	3	–	–
C3528.0	8.00	10.00	19.00	69.0	3	–	–
C35210.0	10.00	10.00	22.00	72.0	3	31.50	9.50
C35212.0	12.00	12.00	26.00	83.0	3	37.50	11.50
C35214.0	14.00	12.00	26.00	83.0	3	37.50	11.50
C35216.0	16.00	16.00	32.00	92.0	3	43.50	15.50
C35218.0	18.00	16.00	32.00	92.0	3	43.50	15.50
C35220.0	20.00	20.00	38.00	104.0	3	53.50	19.50

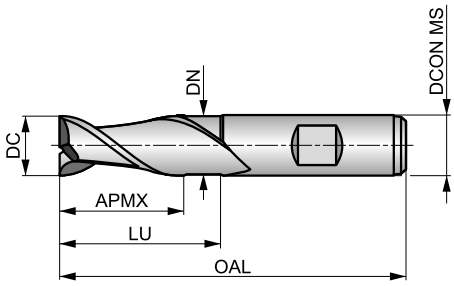
C159

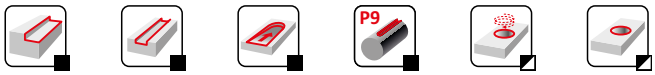
DORMER

2-Flute HSS-E Slot End Mill, Bright Finish

Short cut length, 2-flute design with 40° helix for milling slots, profile milling and ramping in softer materials, whilst the accurate diameter means standard keyway slots to P9 tolerance can be milled. Designed specifically for milling in non-ferrous materials.

HSS-E	W	NOF 2
	λ 40°	γ 20°
DIN 1835B	Bright	DC e8
	DIN 844K	





Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2	N1.1	N1.2	N1.3
◪46 D	◪52 D	◪54 D	◪40 D	◪35 D	◪32 D	◪27 D	◪28 D	◪23 C	◪22 C	◪19 C	■142 F	■107 E	■72 E

N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	S1.1
■72 D	■64 D	◪46 D	■75 D	■44 D	■22 D	■75 D	■29 D	◪28 C

DCON MS tolerance h6.

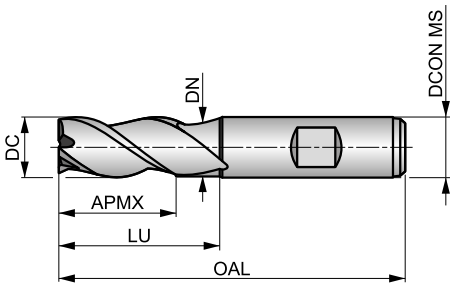
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C1592.0	2.00	6.00	7.00	51.0	2	–	–
C1593.0	3.00	6.00	8.00	52.0	2	–	–
C1594.0	4.00	6.00	11.00	55.0	2	–	–
C1595.0	5.00	6.00	13.00	57.0	2	–	–
C1596.0	6.00	6.00	13.00	57.0	2	–	–
C1598.0	8.00	10.00	19.00	69.0	2	–	–
C15910.0	10.00	10.00	22.00	72.0	2	–	–
C15912.0	12.00	12.00	26.00	83.0	2	–	–
C15914.0	14.00	12.00	26.00	83.0	2	37.50	11.50
C15916.0	16.00	16.00	32.00	92.0	2	43.50	15.50
C15918.0	18.00	16.00	32.00	92.0	2	43.50	15.50
C15920.0	20.00	20.00	38.00	104.0	2	53.50	19.50

C336

DORMER

3-Flute HSS-E-PM End Mill, Bright Finish

Short cut length, 3-flute design with a 40° helix. The flute with neck recess provides high rigidity for machining deeper slots and profiles. Designed specifically for milling non-ferrous materials.



HSS-E PM	W	NOF 3
	λ 40°	γ 25°
DIN 1835B	Bright	DC k10
	DIN 844K	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2	N1.1	N1.2	N1.3
◪50 D	◪56 D	◪58 D	◪43 D	◪38 D	◪34 D	◪29 D	◪31 D	◪25 C	◪24 C	◪21 C	■142 F	■107 E	■72 E

N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	S1.1
■72 D	■64 D	◪46 D	■75 D	■44 D	■22 D	■75 D	■29 D	◪30 C

DCON MS tolerance h6.

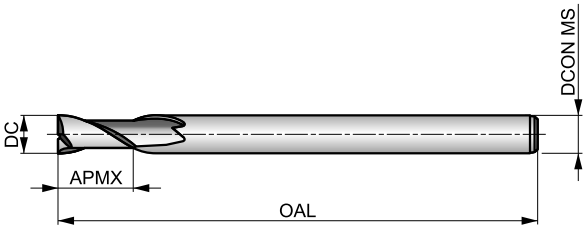
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C33610.0	10.00	10.00	22.00	72.0	3	31.50	9.50
C33612.0	12.00	12.00	26.00	83.0	3	37.50	11.50
C33614.0	14.00	12.00	26.00	83.0	3	37.50	11.50
C33616.0	16.00	16.00	32.00	92.0	3	43.50	15.50
C33618.0	18.00	16.00	32.00	92.0	3	43.50	15.50
C33620.0	20.00	20.00	38.00	104.0	3	53.50	19.50
C33622.0	22.00	20.00	38.00	104.0	3	53.50	19.50
C33625.0	25.00	25.00	45.00	121.0	3	64.50	24.50
C33630.0	30.00	25.00	45.00	121.0	3	64.50	24.50

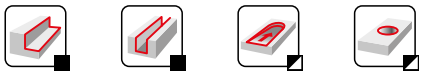
C167

2-flute HSS-E Extra Long Reach End Mill, Bright Finish

Short cut length, 2-flute design without neck recess and with extra long reach for machining extra deep pockets in difficult to reach areas. Suitable for milling in mild steels and non-ferrous materials.

HSS-E	N	NOF 2
	λ 30°	γ 12°
DIN 1835A	Bright	DC js14
	DORMER	





Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	K1.1	K1.2
■46 C	■52 C	■54 C	■40 C	◪35 C	◪32 C	◪26 B	◪19 B	◪34 C	◪29 C	◪31 C	◪25 B	◪30 C	◪22 C
K1.3	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**
◪17 C	◪49 C	◪40 C	◪32 B	◪44 C	◪33 C	◪27 A	◪40 B	◪30 B	◪22 B	◪19 A	◪16 A	◪46 B	◪34 B
K5.3	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**S1.1**	**S1.2**	**S2.1**
◪27 B	◪81 E	◪60 D	◪41 D	◪41 C	◪37 C	◪26 C	■43 C	■25 C	■13 C	◪43 C	◪30 B	◪25 B	◪20 A
S3.1	**S4.1**												
◪15 A	◪12 A												

DCON MS tolerance h6.

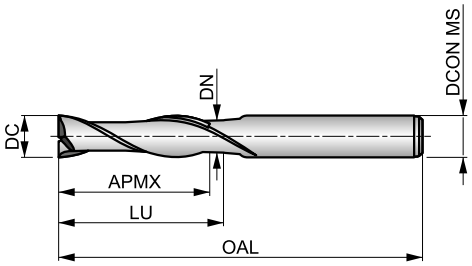
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
C1676.0	6.00	6.00	13.00	180.0	2
C1678.0	8.00	8.00	19.00	180.0	2
C16710.0	10.00	10.00	22.00	200.0	2
C16712.0	12.00	12.00	26.00	200.0	2
C16716.0	16.00	16.00	32.00	200.0	2

C122

DORMER

2-flute HSS-E Extra Long Series End Mill, Bright Finish

Long cut length, 2-flute design provides high rigidity for milling standard slots. Designed for machining deep slots in difficult to reach areas in mild steels and non-ferrous materials.



HSS-E	N	NOF 2
	λ 30°	γ 12°
DIN 1835A	Bright	DC e8
	DORMER	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	K1.1	K1.2
■41 C	■46 C	■48 C	■35 C	◪31 C	◪28 C	◪23 B	◪17 B	◪27 C	◪23 C	◪24 C	◪20 B	◪25 C	◪19 C
K1.3	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**
◪14 C	◪44 C	◪36 C	◪29 B	◪39 C	◪30 C	◪24 A	◪36 B	◪27 B	◪20 B	◪17 A	◪14 A	◪41 B	◪31 B
K5.3	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**S1.1**	**S1.2**	**S2.1**
◪24 B	◪76 E	◪57 D	◪38 D	◪38 C	◪34 C	◪25 C	■40 C	■23 C	■12 C	◪40 C	◪25 B	◪20 B	◪15 A
S3.1	**S4.1**												
◪11 A	◪9 A												

DCON MS tolerance h6.

Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C1225.0	5.00	5.00	22.00	65.0	2	–	–
C1226.0	6.00	6.00	27.00	75.0	2	–	–
C1227.0	7.00	8.00	33.00	85.0	2	–	–
C1228.0	8.00	8.00	33.00	85.0	2	–	–
C12210.0	10.00	10.00	40.00	95.0	2	–	–
C12212.0	12.00	12.00	45.00	110.0	2	–	–
C12214.0	14.00	12.00	52.00	125.0	2	–	–
C12216.0	16.00	16.00	58.00	140.0	2	69.50	15.50
C12218.0	18.00	16.00	65.00	150.0	2	76.50	15.50
C12220.0	20.00	20.00	70.00	160.0	2	85.50	19.50
C12222.0	22.00	20.00	75.00	170.0	2	90.50	19.50

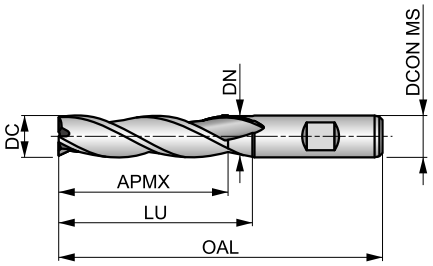
C346

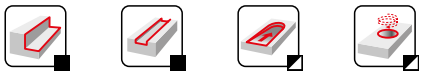
DORMER

3-Flute HSS-E Long Series End Mill, Bright Finish

Long cut length, 3-flute design provides high rigidity for standard slotting and profile milling in mild steels and non-ferrous materials. Long series cutter designed for machining deeper slots and walls in places which are difficult to reach.

HSS-E	N	NOF 3
	λ 30°	γ 12°
DIN 1835B	Bright	DC e8
	DIN 844L	





Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	K1.1	K1.2
■40 C	■45 C	■46 C	■34 C	◪30 C	◪28 C	◪22 B	◪16 B	◪27 C	◪23 C	◪24 C	◪20 B	◪25 C	◪19 C
K1.3	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**
◪14 C	◪43 C	◪35 C	◪28 B	◪38 C	◪29 C	◪24 A	◪35 B	◪27 B	◪20 B	◪17 A	◪14 A	◪40 B	◪30 B
K5.3	**N1.1**	**N1.2**	**N1.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**S1.1**	**S1.2**	**S2.1**	**S3.1**	**S4.1**	
◪23 B	◪76 E	◪57 D	◪38 D	■40 C	■23 C	■12 C	◪40 C	■25 B	◪20 B	◪13 A	◪10 A	◪8 A	

DCON MS tolerance h6.

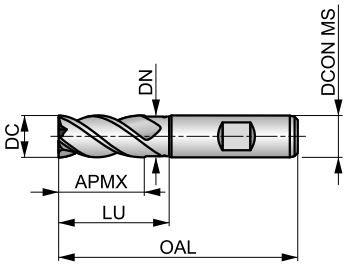
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C3463.0	3.00	6.00	12.00	56.0	3	–	–
C3464.0	4.00	6.00	19.00	63.0	3	–	–
C3465.0	5.00	6.00	24.00	68.0	3	–	–
C3466.0	6.00	6.00	24.00	68.0	3	–	–
C3467.0	7.00	10.00	30.00	80.0	3	–	–
C3468.0	8.00	10.00	38.00	88.0	3	–	–
C3469.0	9.00	10.00	38.00	88.0	3	–	–
C34610.0	10.00	10.00	45.00	95.0	3	–	–
C34611.0	11.00	12.00	45.00	102.0	3	–	–
C34612.0	12.00	12.00	53.00	110.0	3	–	–
C34613.0	13.00	12.00	53.00	110.0	3	64.50	11.50
C34615.0	15.00	12.00	53.00	110.0	3	64.50	11.50
C34616.0	16.00	16.00	63.00	123.0	3	74.50	15.50
C34620.0	20.00	20.00	75.00	141.0	3	90.50	19.50

C299

DORMER

3-4 Flute HSS-E-PM End Mill, Bright Finish

Short cut length, 3 or 4 flute design provides high rigidity for general profile and ramp milling applications. With a 45° helix and designed for machining higher strength materials. Neck recess on cutting diameter equal to 10 mm and above.



HSS-E PM	N	NOF 3-4
	λ 45°	γ 12°
DIN 1835B	Bright	DC k10
	DIN 844K	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2
■37 D	■33 C	■32 D	■26 C	■22 C	■19 C	■16 C	◪13 C	■36 D	■30 D	■32 D	■26 C	◪24 C	◪21 C
M3.3	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**
■19 B	■13 B	■30 D	■22 D	■17 D	■55 D	■45 D	■36 C	■49 D	■37 D	■30 B	■45 C	■34 C	■25 C
K4.4	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N3.1**	**N3.2**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**
■22 B	■18 B	■51 C	■39 C	■30 C	■43 D	■25 D	◪29 C	■57 C	■10 B	■17 B	■7 B	■13 B	■5 B
S4.1	**S4.2**												
■10 B	■4 B												

DCON MS tolerance h6.

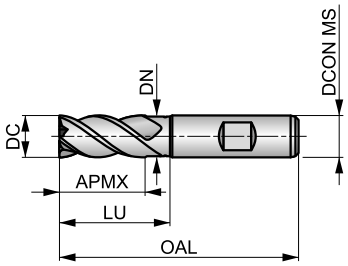
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C2993.0	3.00	6.00	8.00	52.0	3	–	–
C2994.0	4.00	6.00	11.00	55.0	3	–	–
C2995.0	5.00	6.00	13.00	57.0	3	–	–
C2996.0	6.00	6.00	13.00	57.0	3	–	–
C2998.0	8.00	10.00	19.00	69.0	4	–	–
C29910.0	10.00	10.00	22.00	72.0	4	31.50	9.50
C29912.0	12.00	12.00	26.00	83.0	4	37.50	11.50
C29914.0	14.00	12.00	26.00	83.0	4	37.50	11.50
C29916.0	16.00	16.00	32.00	92.0	4	43.50	15.50
C29918.0	18.00	16.00	32.00	92.0	4	43.50	15.50
C29920.0	20.00	20.00	38.00	104.0	4	53.50	19.50

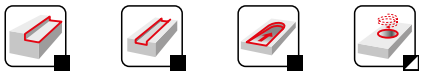
C907

Multi-Flute HSS-E-PM End Mill, Alcrona Coating

Short cut length, 3, 4, 5 or 6 flute design provides high rigidity for general profile and ramp milling applications. With a 45° helix and designed for machining higher strength materials. Neck recess on cutting diameter equal to 10 mm and above. Alcrona coating improves performance and extends the tool life.

HSS-E PM	N	NOF 3-6
	λ 45°	γ 12°
DIN 1835B	Alcrona	DC k10
	DIN 844K	





Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2
■95 D	■84 C	■81 D	■65 C	■55 C	■48 C	■41 C	■34 C	■69 D	■58 D	■61 D	■50 C	■47 C	■40 C
M3.3	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**
■36 B	■25 B	■60 D	■44 D	■33 D	■111 D	■90 D	■72 C	■98 D	■75 D	■61 B	■91 C	■68 C	■50 C
K4.4	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N3.1**	**N3.2**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**
■43 B	■36 B	■103 C	■77 C	■60 C	■93 D	■55 D	◪45 C	■85 C	■15 B	■33 B	■14 B	■25 B	■10 B
S4.1	**S4.2**												
■20 B	■8 B												

DCON MS tolerance h6.

Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C9073.0	3.00	6.00	8.00	52.0	3	–	–
C9074.0	4.00	6.00	11.00	55.0	3	–	–
C9075.0	5.00	6.00	13.00	57.0	3	–	–
C9076.0	6.00	6.00	13.00	57.0	3	–	–
C9078.0	8.00	10.00	19.00	69.0	4	–	–
C90710.0	10.00	10.00	22.00	72.0	4	31.50	9.50
C90712.0	12.00	12.00	26.00	83.0	4	37.50	11.50
C90714.0	14.00	12.00	26.00	83.0	4	37.50	11.50
C90716.0	16.00	16.00	32.00	92.0	4	43.50	15.50
C90718.0	18.00	16.00	32.00	92.0	4	43.50	15.50
C90720.0	20.00	20.00	38.00	104.0	4	53.50	19.50
C90722.0	22.00	20.00	38.00	104.0	5	53.50	19.50
C90725.0	25.00	25.00	45.00	121.0	5	64.50	24.50
C90728.0	28.00	25.00	45.00	121.0	6	64.50	24.50
C90730.0	30.00	25.00	45.00	121.0	6	64.50	24.50
C90732.0	32.00	32.00	53.00	133.0	6	72.50	31.50

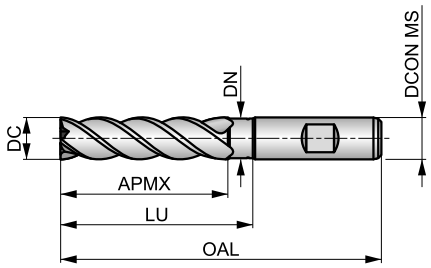
C920

DORMER

Multi-Flute HSS-E-PM Long Series End Mill, Alcrona Coating

Long cut length, 3, 4 or 5 flute design for high rigidity finishing deep profiles. With a 45° helix and designed for machining higher strength materials. Neck recess on cutting diameter equal to 10 mm and above to avoid work contact with the wall and extend reach. Alcrona coating extends the tool life.

HSS-E PM	N	NOF 3-5
	λ 45°	γ 12°
DIN 1835B	Alcrona	DC k10
	DIN 844L	



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2
■85 C	■75 B	■74 C	■59 B	■50 B	■44 B	■37 B	■31 B	■62 C	■52 C	■55 C	■45 B	■41 B	■35 B
M3.3	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**
■32 A	■25 A	■55 C	■41 C	■31 C	■98 C	■80 C	■64 B	■87 C	■67 C	■54 A	■81 B	■61 B	■45 B
K4.4	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N3.1**	**N3.2**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**
■38 A	■32 A	■91 B	■69 B	■53 B	■83 C	■49 C	◪40 B	■35 B	■15 A	■33 A	■14 A	■25 A	■10 A
S4.1	**S4.2**												
■20 A	■8 A												

DCON MS tolerance h6.

Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C9206.0	6.00	6.00	24.00	68.0	3	–	–
C9208.0	8.00	10.00	38.00	88.0	4	–	–
C92010.0	10.00	10.00	45.00	95.0	4	54.50	9.50
C92012.0	12.00	12.00	53.00	110.0	4	64.50	11.50
C92014.0	14.00	12.00	53.00	110.0	4	64.50	11.50
C92016.0	16.00	16.00	63.00	123.0	4	74.50	15.50
C92018.0	18.00	16.00	63.00	123.0	4	74.50	15.50
C92020.0	20.00	20.00	75.00	141.0	4	90.50	19.50
C92022.0	22.00	20.00	75.00	141.0	5	90.50	19.50
C92025.0	25.00	25.00	90.00	166.0	5	109.50	24.50

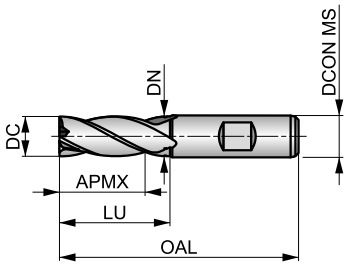
C247

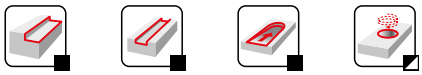
DORMER

Multi-Flute HSS-E-PM End Mill, Brigh Finish

Short cut length, 4, 5, 6 or 8 flute design provides high rigidity for general profile and ramp milling applications in mild steels and non-ferrous materials.

HSS-E PM	N	NOF 4-8
	λ 30°	γ 12°
DIN 1835B	Bright	DC k10
	DIN 844K	





Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	K1.1	K1.2
■53 D	■59 D	■61 D	■45 D	■40 D	◪36 D	◪29 C	◪22 C	◪34 D	◪29 D	◪31 D	◪25 C	◪30 D	◪22 D
K1.3	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**
◪17 D	◪55 D	◪45 D	◪36 C	◪49 D	◪37 D	◪30 B	◪45 C	◪34 C	◪25 C	◪22 B	◪18 B	◪51 C	◪39 C
K5.3	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**S1.1**	**S1.2**	**S2.1**
◪30 C	◪95 F	◪71 E	◪48 E	◪48 D	◪43 D	◪31 D	■50 D	■29 D	■15 D	◪50 D	■30 C	◪25 C	◪20 B
S3.1	**S4.1**												
◪15 B	◪12 B												

DCON MS tolerance h6.

Product	DC [inch]	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C2472.0	–	2.00	6.00	7.00	51.0	4	–	–
C2472.5	–	2.50	6.00	8.00	52.0	4	–	–
C2473.0	–	3.00	6.00	8.00	52.0	4	–	–
C2471/8 [2)]	1/8	3.18	6.00	10.00	54.0	4	–	–
C2473.5	–	3.50	6.00	10.00	54.0	4	–	–
C2474.0	–	4.00	6.00	11.00	55.0	4	–	–
C2474.5	–	4.50	6.00	11.00	55.0	4	–	–
C2473/16 [2)]	3/16	4.76	6.00	13.00	57.0	4	–	–
C2475.0	–	5.00	6.00	13.00	57.0	4	–	–
C2475.5	–	5.50	6.00	13.00	57.0	4	–	–
C2476.0	–	6.00	6.00	13.00	57.0	4	–	–
C2471/4 [2)]	1/4	6.35	10.00	16.00	66.0	4	–	–
C2476.5	–	6.50	10.00	16.00	66.0	4	–	–
C2477.0	–	7.00	10.00	16.00	66.0	4	–	–
C2477.5	–	7.50	10.00	16.00	66.0	4	–	–
C2475/16 [2)]	5/16	7.94	10.00	19.00	69.0	4	–	–
C2478.0	–	8.00	10.00	19.00	69.0	4	–	–
C2478.5	–	8.50	10.00	19.00	69.0	4	–	–
C2479.0	–	9.00	10.00	19.00	69.0	4	–	–
C2479.5	–	9.50	10.00	19.00	69.0	4	–	–
C2473/8 [2)]	3/8	9.52	10.00	22.00	72.0	4	31.50	9.50
C24710.0	–	10.00	10.00	22.00	72.0	4	31.50	9.50
C24711.0	–	11.00	12.00	22.00	79.0	4	–	–
C24712.0	–	12.00	12.00	26.00	83.0	4	37.50	11.50
C2471/2 [2)]	1/2	12.70	12.00	26.00	83.0	4	37.50	11.50

Product	DC	DC	DCON MS	APMX	OAL	NOF	LU	DN
	[inch]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
C24713.0	–	13.00	12.00	26.00	83.0	4	37.50	11.50
C24714.0	–	14.00	12.00	26.00	83.0	4	37.50	11.50
C2479/16 [2]	9/16	14.29	12.00	26.00	83.0	4	37.50	11.50
C24715.0	–	15.00	12.00	26.00	83.0	4	37.50	11.50
C2475/8 [2]	5/8	15.88	16.00	32.00	92.0	4	43.50	15.50
C24716.0	–	16.00	16.00	32.00	92.0	4	43.50	15.50
C24717.0	–	17.00	16.00	32.00	92.0	4	43.50	15.50
C24718.0	–	18.00	16.00	32.00	92.0	4	43.50	15.50
C24719.0	–	19.00	16.00	32.00	92.0	4	43.50	15.50
C2473/4 [2]	3/4	19.05	20.00	38.00	104.0	4	53.50	18.50
C24720.0	–	20.00	20.00	38.00	104.0	4	53.50	19.50
C24721.0	–	21.00	20.00	38.00	104.0	4	53.50	19.50
C24722.0	–	22.00	20.00	38.00	104.0	5	53.50	19.50
C2477/8 [2]	7/8	22.22	20.00	38.00	104.0	5	53.50	19.50
C24723.0	–	23.00	20.00	38.00	104.0	5	53.50	19.50
C24724.0	–	24.00	25.00	45.00	121.0	5	64.50	23.50
C24725.0	–	25.00	25.00	45.00	121.0	5	64.50	24.50
C2471 [2]	1″	25.40	25.00	45.00	121.0	5	64.50	24.50
C24726.0	–	26.00	25.00	45.00	121.0	6	64.50	24.50
C24728.0	–	28.00	25.00	45.00	121.0	6	64.50	24.50
C24730.0	–	30.00	25.00	45.00	121.0	6	64.50	24.50
C24732.0	–	32.00	32.00	53.00	133.0	6	72.50	31.50
C24736.0 [1]	–	36.00	32.00	53.00	133.0	6	72.50	31.50
C24740.0 [1]	–	40.00	40.00	63.00	155.0	6	84.50	39.00
C24750.0 [1]	–	50.00	50.00	75.00	177.0	8	96.50	48.00

[1] Available in HSS-E only; no centre cutting.
[2] DC tolerance +0.0025 inches / -0.0005 inches.

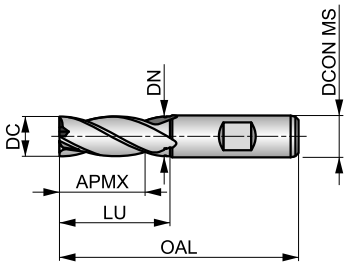
C246

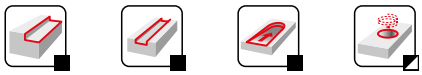
DORMER

Multi-Flute HSS-E-PM End Mill, TiCN Coating

Short cut length, 4 or 5 flute design provides high rigidity for general profile and ramp milling applications. TiCN coating increases the life of the cutter and improves performance when milling hard and abrasive materials.

HSS-E PM	N	NOF 4-5
	λ 30°	γ 12°
DIN 1835B	TiCN	DC k10
	DIN 844K	





Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 113 D	■ 126 D	■ 131 D	■ 97 D	■ 85 D	◪ 75 C	■ 74 D	■ 59 C	◪ 50 C	■ 44 C	◪ 37 C	◪ 31 C	◪ 62 D	◪ 52 D
M2.1	**M2.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**
◪ 55 D	◪ 45 C	◪ 26 B	◪ 25 B	■ 55 D	■ 41 D	■ 31 D	■ 97 D	■ 79 D	■ 63 C	■ 86 D	■ 66 D	■ 53 B	■ 80 C
K4.2	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**
■ 60 C	■ 44 C	■ 38 B	■ 31 B	■ 90 C	■ 68 C	■ 52 C	◪ 159 F	◪ 120 E	◪ 80 E	◪ 80 D	■ 72 D	■ 51 D	■ 84 D
N3.2	**N3.3**	**N4.1**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**		
■ 50 D	■ 25 D	◪ 84 D	■ 43 C	■ 35 C	◪ 15 B	■ 32 B	◪ 14 B	■ 24 B	◪ 10 B	■ 19 B	◪ 8 B		

DCON MS tolerance h6.

Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C2462.0	2.00	6.00	7.00	51.0	4	–	–
C2463.0	3.00	6.00	8.00	52.0	4	–	–
C2464.0	4.00	6.00	11.00	55.0	4	–	–
C2465.0	5.00	6.00	13.00	57.0	4	–	–
C2466.0	6.00	6.00	13.00	57.0	4	–	–
C2467.0	7.00	10.00	16.00	66.0	4	–	–
C2468.0	8.00	10.00	19.00	69.0	4	–	–
C24610.0	10.00	10.00	22.00	72.0	4	31.50	9.50
C24611.0	11.00	12.00	22.00	79.0	4	–	–
C24612.0	12.00	12.00	26.00	83.0	4	37.50	11.50
C24613.0	13.00	12.00	26.00	83.0	4	37.50	11.50
C24614.0	14.00	12.00	26.00	83.0	4	37.50	11.50
C24615.0	15.00	12.00	26.00	83.0	4	37.50	11.50
C24616.0	16.00	16.00	32.00	92.0	4	43.50	15.50
C24618.0	18.00	16.00	32.00	92.0	4	43.50	15.50
C24620.0	20.00	20.00	38.00	104.0	4	53.50	19.50
C24622.0	22.00	20.00	38.00	104.0	5	53.50	19.50
C24625.0	25.00	25.00	45.00	121.0	5	64.50	24.50

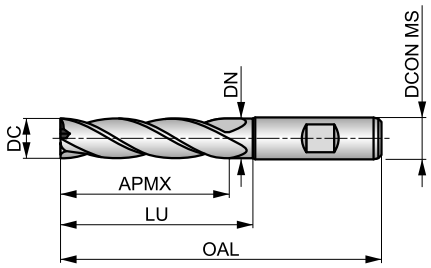
C273

DORMER

Multi-Flute HSS-E-PM Long Series End Mill, Bright Finish

Long cut length, 4, 5 or 6 flute design provides high rigidity for finishing deep profiles in mild steels and non-ferrous materials, such as aluminium and medium strength titanium alloys.

HSS-E PM	N	NOF 4-6
	λ 30°	γ 12°
DIN 1835B	Bright	DC k10
	DIN 844L	



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	K1.1	K1.2
■ 46 C	■ 52 C	■ 54 C	■ 40 C	■ 35 C	◪ 32 C	◪ 26 B	◪ 19 B	◪ 14 C	◪ 12 C	◪ 12 C	◪ 10 B	◪ 25 C	◪ 19 C
K1.3	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**
◪ 14 C	◪ 49 C	◪ 40 C	◪ 32 B	◪ 44 C	◪ 33 C	◪ 27 A	◪ 40 B	◪ 30 B	◪ 22 B	◪ 19 A	◪ 16 A	◪ 46 B	◪ 34 B
K5.3	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**S1.1**	**S1.2**	**S2.1**
◪ 27 B	◪ 81 E	◪ 60 D	◪ 41 D	◪ 41 C	◪ 37 C	◪ 26 C	■ 43 C	■ 25 C	■ 13 C	◪ 43 C	■ 25 B	◪ 20 B	◪ 13 A
S3.1	**S4.1**												
◪ 10 A	◪ 8 A												

DCON MS tolerance h6.

Product	DC [inch]	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C2732.0	–	2.00	6.00	10.00	54.0	4	–	–
C2732.5	–	2.50	6.00	12.00	56.0	4	–	–
C2733.0	–	3.00	6.00	12.00	56.0	4	–	–
C2731/8 [2)]	1/8	3.18	6.00	15.00	59.0	4	–	–
C2733.5	–	3.50	6.00	15.00	59.0	4	–	–
C2734.0	–	4.00	6.00	19.00	63.0	4	–	–
C2734.5	–	4.50	6.00	19.00	63.0	4	–	–
C2733/16 [2)]	3/16	4.76	6.00	24.00	68.0	4	–	–
C2735.0	–	5.00	6.00	24.00	68.0	4	–	–
C2735.5	–	5.50	6.00	24.00	68.0	4	–	–
C2736.0	–	6.00	6.00	24.00	68.0	4	–	–
C2731/4 [2)]	1/4	6.35	10.00	30.00	80.0	4	–	–
C2737.0	–	7.00	10.00	30.00	80.0	4	–	–
C2738.0	–	8.00	10.00	38.00	88.0	4	–	–
C2739.0	–	9.00	10.00	38.00	88.0	4	–	–
C2733/8 [2)]	3/8	9.52	10.00	45.00	95.0	4	54.50	9.50
C27310.0	–	10.00	10.00	45.00	95.0	4	54.50	9.50
C27311.0	–	11.00	12.00	45.00	102.0	4	–	–
C27312.0	–	12.00	12.00	53.00	110.0	4	64.50	11.50
C2731/2 [2)]	1/2	12.70	12.00	53.00	110.0	4	64.50	11.50
C27313.0	–	13.00	12.00	53.00	110.0	4	64.50	11.50
C27314.0	–	14.00	12.00	53.00	110.0	4	64.50	11.50
C27315.0	–	15.00	12.00	53.00	110.0	4	64.50	11.50
C2735/8 [2)]	5/8	15.88	16.00	63.00	123.0	4	74.50	15.50
C27316.0	–	16.00	16.00	63.00	123.0	4	74.50	15.50

Product	DC	DC	DCON MS	APMX	OAL	NOF	LU	DN
	[inch]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
C27318.0	–	18.00	16.00	63.00	123.0	4	74.50	15.50
C2733/4 [2]	3/4	19.05	20.00	75.00	141.0	4	90.50	18.50
C27320.0	–	20.00	20.00	75.00	141.0	4	90.50	19.50
C27322.0	–	22.00	20.00	75.00	141.0	5	90.50	19.50
C27325.0	–	25.00	25.00	90.00	166.0	5	109.50	24.50
C2731 [2]	1″	25.40	25.00	90.00	166.0	5	109.50	24.50
C27328.0	–	28.00	25.00	90.00	166.0	6	109.50	24.50
C27330.0	–	30.00	25.00	90.00	166.0	6	109.50	24.50
C27332.0	–	32.00	32.00	106.00	186.0	6	125.50	31.50
C27340.0 [1]	–	40.00	40.00	125.00	217.0	6	146.50	39.00

[1] Available in HSS-E only; no centre cutting.
[2] DC tolerance +0.0025 inches / -0.0005 inches.

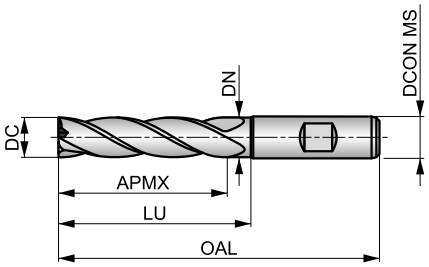
C295

DORMER

Multi-Flute HSS-E-PM Long Series End Mill, TiCN Coating

Long cut length, 4, 5 or 6 flute design provides high rigidity for finishing deep profiles. TiCN coating increases the life of the cutter and improves performance when milling hard and abrasive materials.

HSS-E PM	N	NOF 4-6
	λ 30°	γ 12°
DIN 1835B	TiCN	DC k10
	DIN 844L	



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■99 C	■111 C	■115 C	■85 C	■75 C	◪66 B	■66 C	■53 B	◪45 B	■40 B	◪34 B	◪27 B	◪55 C	◪46 C
M2.1	M2.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	K3.3	K4.1
◪49 C	◪40 B	◪21 A	◪20 A	■50 C	■37 C	■28 C	■86 C	■70 C	■56 B	■76 C	■58 C	■47 A	■71 B
K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1
■53 B	■39 B	■33 A	■28 A	■80 B	■60 B	■46 B	◪139 E	◪105 D	◪70 D	◪70 C	■63 C	■45 C	■73 C
N3.2	N3.3	N4.1	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2	S4.1	S4.2		
■43 C	■22 C	◪73 C	■40 B	■30 B	◪15 A	■27 A	◪14 A	■20 A	◪10 A	■16 A	◪8 A		

DCON MS tolerance h6.

Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C2952.0	2.00	6.00	10.00	54.0	4	–	–
C2953.0	3.00	6.00	12.00	56.0	4	–	–
C2954.0	4.00	6.00	19.00	63.0	4	–	–
C2955.0	5.00	6.00	24.00	68.0	4	–	–
C2956.0	6.00	6.00	24.00	68.0	4	–	–
C2957.0	7.00	10.00	30.00	80.0	4	–	–
C2958.0	8.00	10.00	38.00	88.0	4	–	–
C2959.0	9.00	10.00	38.00	88.0	4	–	–
C29510.0	10.00	10.00	45.00	95.0	4	54.50	9.50
C29511.0	11.00	12.00	45.00	102.0	4	–	–
C29512.0	12.00	12.00	53.00	110.0	4	64.50	11.50
C29515.0	15.00	12.00	53.00	110.0	4	64.50	11.50
C29516.0	16.00	16.00	63.00	123.0	4	74.50	15.50
C29518.0	18.00	16.00	63.00	123.0	4	74.50	15.50
C29520.0	20.00	20.00	75.00	141.0	4	90.50	19.50
C29525.0	25.00	25.00	90.00	166.0	5	109.50	24.50
C29530.0	30.00	25.00	90.00	166.0	6	109.50	24.50
C29532.0	32.00	32.00	106.00	186.0	6	125.50	31.50
C29540.0 [1)]	40.00	40.00	125.00	217.0	6	146.50	39.00

[1)] Available in HSS-E only; no centre cutting.

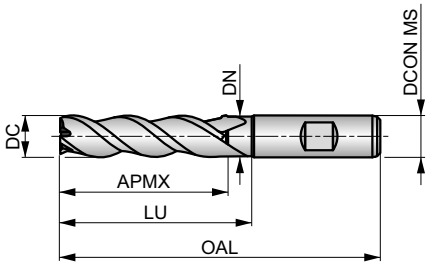
C333

DORMER

3-Flute HSS-E-PM Long Series End Mill, Bright Finish

Long cut length, 3-flute with a 40° helix designed for machining softer materials. The long series flute provides high rigidity for machining deep slots and profiles. Neck recess to avoid work contact with the wall and extend reach. Designed specifically for milling non-ferrous materials.

HSS-E PM	W	NOF 3
	λ 40°	γ 25°
DIN 1835B	Bright	DC k10
	DIN 844L	



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2
■ 114 E	■ 86 D	■ 58 D	■ 58 C	■ 51 C	◪ 37 C	■ 60 C	■ 35 C	■ 18 C	■ 60 C	■ 23 C

DCON MS tolerance h6.

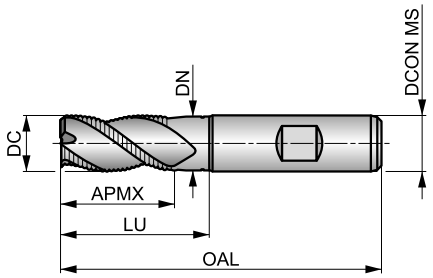
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C33310.0	10.00	10.00	45.00	95.0	3	54.50	9.50
C33312.0	12.00	12.00	53.00	110.0	3	64.50	11.50
C33314.0	14.00	12.00	53.00	110.0	3	64.50	11.50
C33316.0	16.00	16.00	63.00	123.0	3	74.50	15.50
C33318.0	18.00	16.00	63.00	123.0	3	74.50	15.50
C33320.0	20.00	20.00	75.00	141.0	3	90.50	19.50
C33325.0	25.00	25.00	90.00	166.0	3	109.50	24.50
C33330.0	30.00	25.00	90.00	166.0	3	109.50	24.50

C922

DORMER

3-4 Flute HSS-E-PM Roughing End Mill, Alcrona Coating

Short cut length, 3 or 4 flute design with neck recess on big cutting diameter sizes and an HRA profile to break up the chips for efficient roughing application. A 35° helix reduces vibration and improves performance. Alcrona coating improves performance and extends the tool life.



HSS-E PM	HRA	NOF 3-4
	λ 35°	γ 12°
DIN 1835B	Alcrona	DC k12
	DIN 844K	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2
◪95 F	■84 E	■81 F	■65 E	■55 E	■48 E	■41 E	■34 E	■69 F	■58 F	■61 F	■50 E	■47 E	■40 E
M3.3	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**
■36 D	■25 D	■60 F	■44 F	■33 F	■111 F	■90 F	■72 E	■98 F	■75 F	■61 E	■91 E	■68 E	■50 E
K4.4	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N3.1**	**N3.2**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**
■43 D	■36 D	■103 E	■77 E	■60 E	■93 F	■55 F	◪45 E	■35 E	■15 D	■33 D	■14 D	■25 D	■10 D
S4.1	**S4.2**												
■20 D	■8 D												

DCON MS tolerance h6.

Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C9226.0	6.00	6.00	13.00	57.0	3	–	–
C9227.0	7.00	10.00	16.00	66.0	3	–	–
C9228.0	8.00	10.00	19.00	69.0	3	–	–
C9229.0	9.00	10.00	19.00	69.0	3	–	–
C92210.0	10.00	10.00	22.00	72.0	3	31.50	9.50
C92211.0	11.00	12.00	22.00	79.0	3	–	–
C92212.0	12.00	12.00	26.00	83.0	3	37.50	11.50
C92213.0	13.00	12.00	26.00	83.0	3	37.50	11.50
C92214.0	14.00	12.00	26.00	83.0	3	37.50	11.50
C92215.0	15.00	12.00	26.00	83.0	3	37.50	11.50
C92216.0	16.00	16.00	32.00	92.0	3	43.50	15.50
C92218.0	18.00	16.00	32.00	92.0	3	43.50	15.50
C92220.0	20.00	20.00	38.00	104.0	3	53.50	19.50
C92222.0	22.00	20.00	38.00	104.0	3	53.50	19.50
C92224.0	24.00	25.00	45.00	121.0	4	64.50	23.50
C92225.0	25.00	25.00	45.00	121.0	4	64.50	24.50
C92228.0	28.00	25.00	45.00	121.0	4	64.50	24.50
C92232.0	32.00	32.00	53.00	133.0	4	72.50	31.50

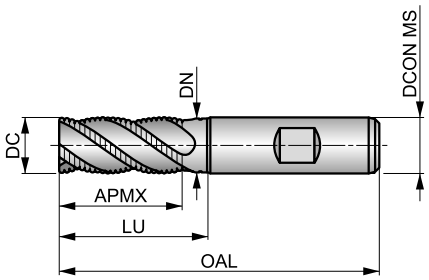
C428

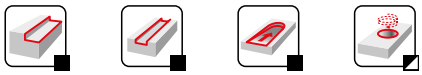
DORMER

Multi-Flute HSS-E-PM Roughing End Mill, Alcrona Coating

Short cut length, 4 or 6 flute design with neck recess on big cutting diameter sizes and an HRA profile to break chips for efficient roughing application. A 35° helix reduces vibration and improves performance. Alcrona coating improves performance and extends the tool life.

HSS-E PM	HRA	NOF 4-6
	λ 35°	γ 12°
DIN 1835B	Alcrona	DC k12
	DIN 844K	





Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2
◪93 F	■82 E	■80 F	■64 E	■54 E	■48 E	■40 E	■33 E	■66 F	■56 F	■59 F	■48 E	■47 E	■40 E
M3.3	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**
■36 D	■26 D	■61 F	■45 F	■34 F	■108 F	■88 F	■70 E	■96 F	■73 F	■59 E	■89 E	■67 E	■49 E
K4.4	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N3.1**	**N3.2**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**
■42 D	■35 D	■100 E	■76 E	■58 E	■116 F	■68 F	◪46 E	■37 E	■16 D	■36 D	■16 D	■27 D	■11 D
S4.1	**S4.2**												
■21 D	■9 D												

DCON MS tolerance h6.

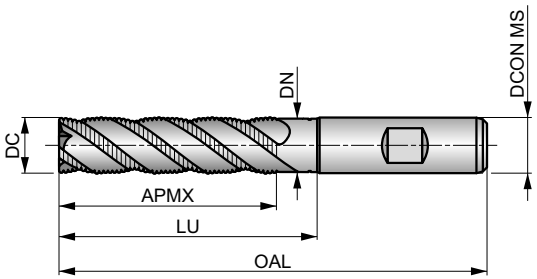
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C4286.0	6.00	6.00	13.00	57.0	4	–	–
C4287.0	7.00	10.00	16.00	66.0	4	–	–
C4288.0	8.00	10.00	19.00	69.0	4	–	–
C4289.0	9.00	10.00	19.00	69.0	4	–	–
C42810.0	10.00	10.00	22.00	72.0	4	31.50	9.50
C42811.0	11.00	12.00	22.00	79.0	4	–	–
C42812.0	12.00	12.00	26.00	83.0	4	37.50	11.50
C42813.0	13.00	12.00	26.00	83.0	4	37.50	11.50
C42814.0	14.00	12.00	26.00	83.0	4	37.50	11.50
C42815.0	15.00	12.00	26.00	83.0	4	37.50	11.50
C42816.0	16.00	16.00	32.00	92.0	4	43.50	15.50
C42818.0	18.00	16.00	32.00	92.0	4	43.50	15.50
C42820.0	20.00	20.00	38.00	104.0	4	53.50	19.50
C42822.0	22.00	20.00	38.00	104.0	4	53.50	19.50
C42825.0	25.00	25.00	45.00	121.0	6	64.50	24.50
C42828.0	28.00	25.00	45.00	121.0	6	64.50	24.50
C42830.0	30.00	25.00	45.00	121.0	6	64.50	24.50
C42832.0	32.00	32.00	53.00	133.0	6	72.50	31.50
C42836.0	36.00	32.00	53.00	133.0	6	72.50	31.00
C42840.0	40.00	40.00	63.00	155.0	6	84.50	39.00

C492

DORMER

Multi-Flute HSS-E-PM Long Series Roughing End Mill, Alcrona Coating

Long cut length, 3, 4 or 6 flute design with an HRA profile to break chips for efficient roughing of deep profiles. Neck recess on cutting diameter equal to 10 mm and above. A 35° helix reduces vibration and improves performance when roughing. Alcrona coating improves performance and extends tool life.



HSS-E PM	HRA	NOF 3-6
	λ 35°	γ 12°
DIN 1835B	Alcrona	DC k12
	DIN 844L	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2
■83 E	■73 D	■72 E	■58 D	■49 D	■43 D	■37 D	■30 D	■59 E	■50 E	■53 E	■43 D	■42 D	■36 D
M3.3	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**
■32 C	■23 C	■55 E	■41 E	■31 E	■97 E	■79 E	■63 D	■86 E	■66 E	■53 D	■80 D	■60 D	■44 D
K4.4	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N3.1**	**N3.2**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**
■38 C	■31 C	■90 D	■68 D	■52 D	■104 E	■61 E	◪41 D	■34 D	■15 C	■32 C	■14 C	■24 C	■10 C
S4.1	**S4.2**												
■19 C	■8 C												

DCON MS tolerance h6.

Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C4926.0	6.00	6.00	24.00	68.0	3	–	–
C4928.0	8.00	10.00	38.00	88.0	3	–	–
C49210.0	10.00	10.00	45.00	95.0	4	54.50	9.50
C49212.0	12.00	12.00	53.00	110.0	4	64.50	11.50
C49214.0	14.00	12.00	53.00	110.0	4	64.50	11.50
C49216.0	16.00	16.00	63.00	123.0	4	74.50	15.50
C49218.0	18.00	16.00	63.00	123.0	4	74.50	15.50
C49220.0	20.00	20.00	75.00	141.0	4	90.50	19.50
C49222.0	22.00	20.00	75.00	141.0	4	90.50	19.50
C49225.0	25.00	25.00	90.00	166.0	6	109.50	24.50
C49230.0	30.00	25.00	90.00	166.0	6	109.50	24.50

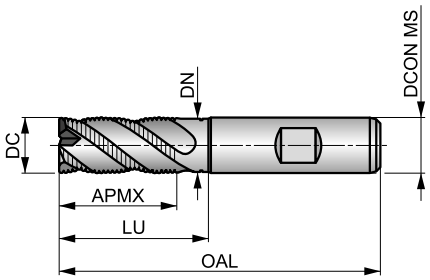
C407

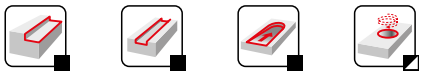
DORMER

4-Flute HSS-E-PM Roughing End Mill, Bright Finish

Short cut length, 4-flute design with neck recess on big cutting diameter sizes and an NRA profile to break chips for efficient roughing applications. A 35° helix reduces vibration and improves performance in roughing operations.

HSS-E PM	NRA	NOF 4
	λ 35°	γ 12°
DIN 1835B	Bright	DC k12
	DIN 844K	





Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 50 G	■ 56 G	■ 58 G	■ 43 G	■ 38 G	■ 34 F	■ 32 G	■ 26 F	■ 22 F	■ 19 F	■ 16 F	◪ 13 F	■ 34 G	■ 29 G
M2.1	M2.2	M3.1	M3.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2
■ 31 G	■ 25 F	◪ 24 F	◪ 21 F	■ 19 E	■ 13 E	■ 30 G	■ 22 G	■ 17 G	■ 54 G	■ 44 G	■ 35 F	■ 48 G	■ 37 G
K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N3.1	N3.2	S1.1	S1.2	S1.3
■ 30 F	■ 44 F	■ 33 F	■ 25 F	■ 21 E	■ 18 E	■ 50 F	■ 38 F	■ 29 F	■ 43 G	■ 25 G	◪ 30 F	■ 25 F	■ 11 E
S2.1	S2.2	S3.1	S3.2	S4.1	S4.2								
■ 19 E	■ 8 E	■ 14 E	■ 6 E	■ 11 E	■ 5 E								

DCON MS tolerance h6.

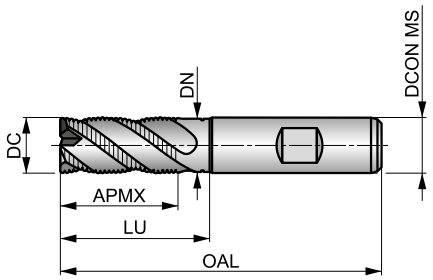
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C4076.0	6.00	6.00	13.00	57.0	4	–	–
C4077.0	7.00	10.00	16.00	66.0	4	–	–
C4078.0	8.00	10.00	19.00	69.0	4	–	–
C4079.0	9.00	10.00	19.00	69.0	4	–	–
C40710.0	10.00	10.00	22.00	72.0	4	31.50	9.50
C40711.0	11.00	12.00	22.00	79.0	4	–	–
C40712.0	12.00	12.00	26.00	83.0	4	37.50	11.50
C40713.0	13.00	12.00	26.00	83.0	4	37.50	11.50
C40714.0	14.00	12.00	26.00	83.0	4	37.50	11.50
C40715.0	15.00	12.00	26.00	83.0	4	37.50	11.50
C40716.0	16.00	16.00	32.00	92.0	4	43.50	15.50
C40718.0	18.00	16.00	32.00	92.0	4	43.50	15.50
C40720.0	20.00	20.00	38.00	104.0	4	53.50	19.50

C908

DORMER

Multi-Flute HSS-E-PM Roughing End Mill, Alcrona Coating

Short cut length, 4 or 6 flute design with neck recess on big cutting diameter sizes and an NRA profile to break chips for efficient roughing application. A 35° helix reduces vibration and improves performance in roughing operations. Alcrona coating improves performance and extends the tool life.



HSS-E PM	NRA	NOF 4-6
	λ 35°	γ 12°
DIN 1835B	Alcrona	DC k12
	DIN 844K	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2
■93 G	■82 F	■80 G	■64 F	■54 F	■48 F	■40 F	◪33 F	■66 G	■56 G	■59 G	■48 F	■47 F	■40 F
M3.3	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**
■36 E	■26 E	■61 G	■45 G	■34 G	■108 G	■88 G	■70 F	■96 G	■73 G	■59 F	■89 F	■67 F	■49 F
K4.4	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N3.1**	**N3.2**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**
■42 E	■35 E	■100 F	■76 F	■58 F	■93 G	■55 G	◪46 F	■37 F	■16 E	■36 E	■16 E	■27 E	■11 E
S4.1	**S4.2**												
■21 E	■9 E												

DCON MS tolerance h6.

Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C9086.0	6.00	6.00	13.00	57.0	4	–	–
C9087.0	7.00	10.00	16.00	66.0	4	–	–
C9088.0	8.00	10.00	19.00	69.0	4	–	–
C9089.0	9.00	10.00	19.00	69.0	4	–	–
C90810.0	10.00	10.00	22.00	72.0	4	31.50	9.50
C90811.0	11.00	12.00	22.00	79.0	4	–	–
C90812.0	12.00	12.00	26.00	83.0	4	37.50	11.50
C90813.0	13.00	12.00	26.00	83.0	4	37.50	11.50
C90814.0	14.00	12.00	26.00	83.0	4	37.50	11.50
C90815.0	15.00	12.00	26.00	83.0	4	37.50	11.50
C90816.0	16.00	16.00	32.00	92.0	4	43.50	15.50
C90818.0	18.00	16.00	32.00	92.0	4	43.50	15.50
C90820.0	20.00	20.00	38.00	104.0	4	53.50	19.50
C90822.0	22.00	20.00	38.00	104.0	4	53.50	19.50
C90825.0	25.00	25.00	45.00	121.0	6	64.50	24.50
C90830.0	30.00	25.00	45.00	121.0	6	64.50	24.50
C90832.0	32.00	32.00	53.00	133.0	6	72.50	31.50

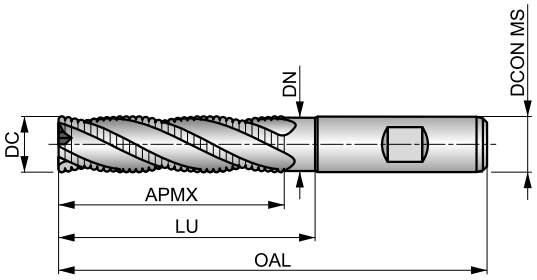
C948

DORMER

Multi-Flute HSS-E-PM Long Series Roughing End Mill, Alcrona Coating

Long cut length, 4 or 6 flute design with an NRA profile to break chips for efficient roughing of deep profiles. A 35° helix reduces vibration and improves performance in roughing operations. Neck recess on cutting diameter equal to 10 mm and above. Alcrona coating improves performance and extends tool life.

HSS-E PM	NRA	NOF 4-6
	λ 35°	γ 12°
DIN 1835B	Alcrona	DC k12
	DIN 844L	



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2
■83 F	■73 E	■72 F	■58 E	■49 E	■43 E	■37 E	■30 E	■59 F	■50 F	■53 F	■43 E	■42 E	■36 E
M3.3	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**
■32 D	■23 D	■55 F	■41 F	■31 F	■97 F	■79 F	■63 E	■86 F	■66 F	■53 E	■80 E	■60 E	■44 E
K4.4	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N3.1**	**N3.2**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**
■38 D	■31 D	■90 E	■68 E	■52 E	■83 F	■49 F	◪41 E	■34 E	■15 D	■32 D	■14 D	■24 D	■10 D
S4.1	**S4.2**												
■19 D	■8 D												

DCON MS tolerance h6.

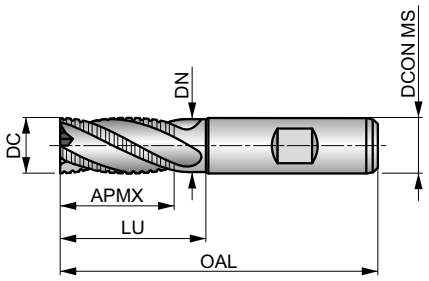
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C9486.0	6.00	6.00	24.00	68.0	4	–	–
C9488.0	8.00	10.00	38.00	88.0	4	–	–
C94810.0	10.00	10.00	45.00	95.0	4	54.50	9.50
C94812.0	12.00	12.00	53.00	110.0	4	64.50	11.50
C94814.0	14.00	12.00	53.00	110.0	4	64.50	11.50
C94816.0	16.00	16.00	63.00	123.0	4	74.50	15.50
C94818.0	18.00	16.00	63.00	123.0	4	74.50	15.50
C94820.0	20.00	20.00	75.00	141.0	4	90.50	19.50
C94825.0	25.00	25.00	90.00	166.0	6	109.50	24.50
C94830.0	30.00	25.00	90.00	166.0	6	109.50	24.50
C94832.0	32.00	32.00	106.00	186.0	6	125.50	31.50

C400

DORMER

4-Flute HSS-E Roughing End Mill, Bright Finish

Short cut length, 4-flute design without center cut, for peripheral roughing operations only. The NF profile breaks chips for an efficient roughing operation. A 30° helix reduces vibrations and improves performance when roughing mild materials.



HSS-E	NF	NOF 4
	λ 30°	γ 12°
DIN 1835B	Bright	DC k12
	DIN 844K	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	K1.1	K1.2
■ 46 E	■ 52 E	■ 54 E	■ 40 E	■ 35 E	◪ 32 E	◪ 26 D	◪ 19 D	◪ 34 E	◪ 29 E	◪ 31 E	◪ 25 D	◪ 30 E	◪ 22 E
K1.3	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**
◪ 17 E	◪ 49 E	◪ 40 E	◪ 32 D	◪ 44 E	◪ 33 E	◪ 27 D	◪ 40 D	◪ 30 D	◪ 22 D	◪ 19 C	◪ 16 C	◪ 46 D	◪ 34 D
K5.3	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**S1.1**	**S1.2**	**S2.1**	**S3.1**	**S4.1**
◪ 27 D	◪ 41 F	◪ 41 E	◪ 37 E	◪ 26 E	■ 43 E	■ 25 E	◪ 13 E	◪ 43 E	◪ 30 D	◪ 25 D	◪ 20 C	◪ 15 C	◪ 12 C

DCON MS tolerance h6.

Product	DC	DCON MS	APMX	OAL	NOF	LU	DN
	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
C4006.0	6.00	6.00	13.00	57.0	4	–	–
C4008.0	8.00	10.00	19.00	69.0	4	–	–
C40010.0	10.00	10.00	22.00	72.0	4	–	–
C40012.0	12.00	12.00	26.00	83.0	4	–	–
C40014.0	14.00	12.00	26.00	83.0	4	37.50	11.50
C40016.0	16.00	16.00	32.00	92.0	4	43.50	15.50
C40018.0	18.00	16.00	32.00	92.0	4	43.50	15.50
C40020.0	20.00	20.00	38.00	104.0	4	53.50	19.50

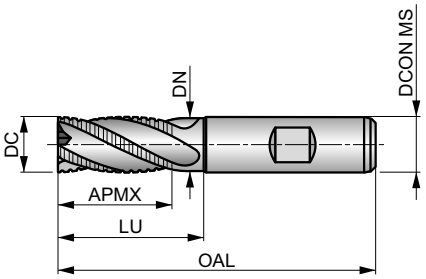
C413

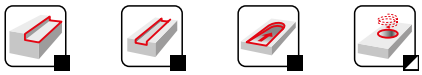
DORMER

4-Flute HSS-E Roughing End Mill, TiCN Coating

Short cut length, 4-flute design for peripheral roughing operations only. The NF profile breaks chips for an efficient roughing application. A 30° helix reduces vibrations and improves performance in roughing. TiCN coating increases the life of the cutter and improves performance when milling hard and abrasive materials.

HSS-E	NF	NOF 4
	λ 30°	γ 12°
DIN 1835B	TiCN	DC k12
	DIN 844K	





Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■93 E	■104 E	■108 E	■80 E	■70 E	◪62 D	■59 E	■47 D	◪40 D	■35 D	◪30 D	◪24 D	◪48 E	◪41 E
M2.1	**M2.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**
◪43 E	◪35 D	◪21 C	◪20 C	■45 E	■33 E	■25 E	■80 E	■65 E	■52 D	■71 E	■54 E	■44 D	■66 D
K4.2	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**
■49 D	■36 D	■31 C	■26 C	■74 D	■56 D	■43 D	◪82 F	◪82 E	■74 E	■52 E	■86 E	■50 E	◪26 E
N4.1	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**				
◪86 E	◪35 D	■30 D	◪10 C	■27 C	◪14 C	■20 C	◪10 C	■16 C	◪8 C				

DCON MS tolerance h6.

Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C4136.0	6.00	6.00	13.00	57.0	4	–	–
C4138.0	8.00	10.00	19.00	69.0	4	–	–
C41310.0	10.00	10.00	22.00	72.0	4	–	–
C41312.0	12.00	12.00	26.00	83.0	4	–	–
C41314.0	14.00	12.00	26.00	83.0	4	37.50	11.50
C41316.0	16.00	16.00	32.00	92.0	4	43.50	15.50
C41318.0	18.00	16.00	32.00	92.0	4	43.50	15.50
C41320.0	20.00	20.00	38.00	104.0	4	53.50	19.50

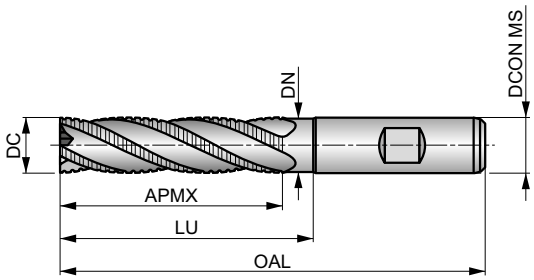
C403

DORMER

Multi-Flute HSS-E Long Series Roughing End Mill, Bright Finish

Long cut length, 4, 5 or 6 flute design with no center cut for peripheral roughing operations only. The NF profile breaks chips for an efficient roughing operation. A 30° helix reduces vibrations and improves performance when roughing mild materials. Neck recess on cutting diameter equal to 14 mm and above.

HSS-E	NF	NOF 4-6
	λ 30°	γ 12°
DIN 1835B	Bright	DC k12
	DIN 844L	



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	K1.1	K1.2
■40 D	■45 D	■46 D	■34 D	■30 D	◪28 D	◪22 C	◪16 C	◪27 D	◪23 D	◪24 D	◪20 C	◪25 D	◪19 D
K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2
◪14 D	◪43 D	◪35 D	◪28 C	◪38 D	◪29 D	◪24 B	◪35 C	◪27 C	◪20 C	◪17 B	◪14 B	◪40 C	◪30 C
K5.3	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	S1.1	S1.2	S2.1	S3.1	S4.1
◪23 C	◪38 E	◪38 D	◪34 D	◪25 D	■40 D	■23 D	◪12 D	◪40 D	◪25 C	◪20 C	◪13 B	◪10 B	◪8 B

DCON MS tolerance h6.

Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C40310.0	10.00	10.00	45.00	95.0	4	–	–
C40312.0	12.00	12.00	53.00	110.0	4	–	–
C40314.0	14.00	12.00	53.00	110.0	4	64.50	11.50
C40316.0	16.00	16.00	63.00	123.0	4	74.50	15.50
C40318.0	18.00	16.00	63.00	123.0	4	74.50	15.50
C40320.0	20.00	20.00	75.00	141.0	4	90.50	19.50
C40330.0	30.00	25.00	90.00	166.0	5	109.50	24.50
C40332.0	32.00	32.00	106.00	186.0	6	125.50	31.00
C40336.0	36.00	32.00	106.00	186.0	6	125.50	31.50
C40340.0	40.00	40.00	125.00	217.0	6	146.50	39.00
C40345.0	45.00	40.00	125.00	217.0	6	146.50	39.50
C40350.0	50.00	50.00	150.00	252.0	6	171.50	48.00

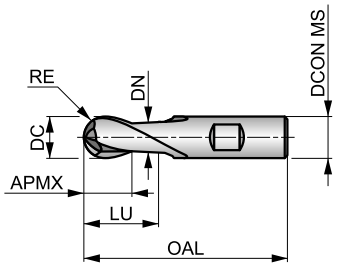
C500

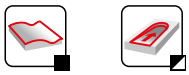
DORMER

2-Flute HSS-E Ball-Nosed End Mill, Bright Finish

Extra short cut length, 2-flute design provides high rigidity for increased strength and reduced vibrations. Geometry designed for contouring complex surfaces on CNC m/c, suited for mild steels, mild non-ferrous materials and medium strength titanium alloys. Neck recess on cutting diameter equal to 14 mm and above.

HSS-E	N	NOF 2
	λ 30°	γ 12°
DIN 1835B	Bright	DC e8
	DIN 327D	





Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	K1.1	K1.2
■53 E	■59 E	■61 E	■45 E	◪40 E	◪36 E	◪29 D	◪22 D	◪34 E	◪29 E	◪31 E	◪25 D	◪30 E	◪22 E
K1.3	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**
◪17 E	◪55 E	◪45 E	◪36 D	◪49 E	◪37 E	◪30 D	◪45 D	◪34 D	◪25 D	◪22 C	◪18 C	◪51 D	◪39 D
K5.3	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**S1.1**	**S1.2**	**S2.1**
◪30 D	◪95 G	◪71 F	◪48 F	◪48 E	◪43 E	◪31 E	■50 E	■29 E	■15 E	◪50 E	■30 D	◪25 D	◪20 C
S3.1	**S4.1**												
◪15 C	◪12 C												

DCON MS tolerance h6; RE ±0.05 mm.

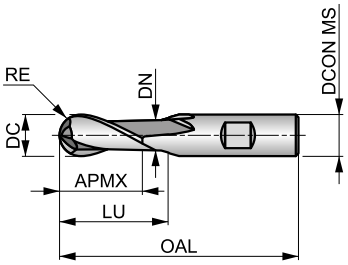
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C5002.0	2.00	1.00	6.00	4.00	48.0	2	–	–
C5003.0	3.00	1.50	6.00	5.00	49.0	2	–	–
C5004.0	4.00	2.00	6.00	7.00	51.0	2	–	–
C5005.0	5.00	2.50	6.00	8.00	52.0	2	–	–
C5006.0	6.00	3.00	6.00	8.00	52.0	2	–	–
C5007.0	7.00	3.50	10.00	10.00	60.0	2	–	–
C5008.0	8.00	4.00	10.00	11.00	61.0	2	–	–
C5009.0	9.00	4.50	10.00	11.00	61.0	2	–	–
C50010.0	10.00	5.00	10.00	13.00	63.0	2	–	–
C50012.0	12.00	6.00	12.00	16.00	73.0	2	–	–
C50014.0	14.00	7.00	12.00	16.00	73.0	2	27.50	11.50
C50015.0	15.00	7.50	12.00	16.00	73.0	2	27.50	11.50
C50016.0	16.00	8.00	16.00	19.00	79.0	2	30.50	15.50
C50018.0	18.00	9.00	16.00	19.00	79.0	2	30.50	15.50
C50020.0	20.00	10.00	20.00	22.00	88.0	2	37.50	19.50
C50025.0	25.00	12.50	25.00	26.00	102.0	2	45.50	24.50

C505

DORMER

2-Flute HSS-E Ball-Nosed End Mill, Bright Finish

Short cut length, 2-flute design provides high rigidity for increased strength and reduced vibrations. Geometry designed for contouring complex surfaces on CNC machines, suited for mild steels, mild non-ferrous materials and medium strength titanium alloys. Neck recess on cutting diameter equal to 14 mm and above.



HSS-E	N	NOF 2
	λ 30°	γ 12°
DIN 1835B	Bright	DC e8
	DIN 844K	

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	K1.1	K1.2
■46 D	■52 D	■54 D	■40 D	◪35 D	◪32 D	◪26 C	◪19 C	◪34 D	◪29 D	◪31 D	◪25 C	◪30 D	◪22 D
K1.3	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**
◪17 D	◪49 D	◪40 D	◪32 C	◪44 D	◪33 D	◪27 B	◪40 C	◪30 C	◪22 C	◪19 B	◪16 B	◪46 C	◪34 C
K5.3	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**S1.1**	**S1.2**	**S2.1**
◪27 C	◪81 F	◪60 E	◪41 E	◪41 D	◪37 D	◪26 D	■43 D	■25 D	■13 D	◪43 D	■30 C	◪25 C	◪20 B
S3.1	**S4.1**												
◪15 B	◪12 B												

DCON MS tolerance h6; RE ±0.05 mm.

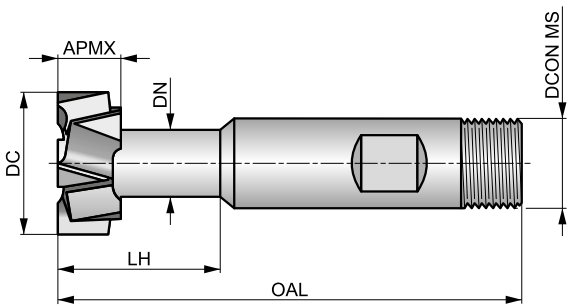
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C5053.0	3.00	1.50	6.00	8.00	52.0	2	–	–
C5054.0	4.00	2.00	6.00	11.00	55.0	2	–	–
C5055.0	5.00	2.50	6.00	13.00	57.0	2	–	–
C5056.0	6.00	3.00	6.00	13.00	57.0	2	–	–
C5058.0	8.00	4.00	10.00	19.00	69.0	2	–	–
C50510.0	10.00	5.00	10.00	22.00	72.0	2	–	–
C50512.0	12.00	6.00	12.00	26.00	83.0	2	–	–
C50514.0	14.00	7.00	12.00	26.00	83.0	2	37.50	11.50
C50516.0	16.00	8.00	16.00	32.00	92.0	2	43.50	15.50
C50520.0	20.00	10.00	20.00	38.00	104.0	2	53.50	19.50
C50522.0	22.00	11.00	20.00	38.00	104.0	2	53.50	19.50
C50525.0	25.00	12.50	25.00	45.00	121.0	2	64.50	24.50
C50528.0	28.00	14.00	25.00	45.00	121.0	2	64.50	24.50
C50530.0	30.00	15.00	25.00	45.00	121.0	2	64.50	24.50

C800

DORMER

HSS-E T-Slot Cutter

Suitable for milling T-slots. For accurate and stable holding in all types of toolholder, it has a combination shank and is capable of milling T-slots to accept standard T-bolts. The bright finish prevents workpiece material from sticking to the cutting edges of the tool.



HSS-E	N	NOF 6-8
λ 15°	γ 10°	DIN 1835
Bright	DC d11	
DIN 851		

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■40 V	■45 V	■46 V	■34 V	■30 U	■27 T	■29 U	■24 U	■20 T	■18 U	■15 T	■12 T	■27 S	■23 S
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
■24 S	■20 S	■17 S	■15 S	■14 S	■10 S	■20 V	■15 V	■11 V	■37 U	■30 U	■24 U	■33 U	■25 U
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
■20 U	■30 S	■23 S	■17 S	■14 S	■12 S	■34 U	■26 U	■20 U	■71 Y	■53 Y	■36 Y	■36 Y	■32 Y
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**
■23 Y	■38 V	■22 V	■11 W	■38 Y	■30 V	■20 V	■10 U	■13 U	■7 T	■10 U	■5 T	■8 U	■4 T

DCON MS tolerance h6.

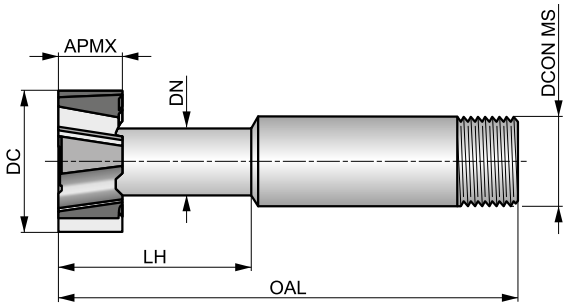
Product	APMX [mm]	DC [mm]	T DIN650	DN [mm]	LH [mm]	OAL [mm]	DCON MS [mm]	NOF
C80011.0X5.0	4.00	11.00	5	4.00	10.5	53.5	10.00	6
C80012.5X6.0	6.00	12.50	6	5.00	15.0	57.0	10.00	6
C80016.0X8.0	8.00	16.00	8	7.00	20.0	62.0	10.00	6
C80018.0X10.0	8.00	18.00	10	8.00	23.0	70.0	12.00	6
C80021.0X12.0	9.00	21.00	12	10.00	27.0	74.0	12.00	8
C80025.0X14.0	11.00	25.00	14	12.00	31.0	82.0	16.00	8
C80032.0X18.0	14.00	32.00	18	15.00	40.0	90.0	16.00	8
C80040.0X22.0	18.00	40.00	22	19.00	45.0	108.0	25.00	8
C80050.0X28.0	22.00	50.00	28	25.00	56.0	124.0	32.00	8

C810

DORMER

HSS T-Slot Cutter

Suitable for milling T-slots with a screw shank to ensure secure holding and capable of milling T-slots to accept standard T-bolts. The bright finish prevents workpiece material from sticking to the cutting edges of the tool.



HSS	N	NOF 6-8
λ 12°	γ 10°	DIN 1835D
Bright	DC d11	
DORMER		

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■27 V	■30 V	■31 V	■23 V	■20 U	◪18 T	■15 U	■12 U	◪10 T	■9 U	◪7 T	◪6 T	■21 S	■17 S
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
■18 S	■15 S	◪12 S	◪10 S	◪9 S	◪10 S	■20 V	■15 V	■11 V	■25 U	■20 U	■16 U	■22 U	■17 U
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
■13 U	■20 S	■15 S	■11 S	■10 S	■8 S	■23 U	■17 U	■13 U	■48 Y	■36 Y	■24 Y	■24 Y	■22 Y
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**
■16 Y	■26 V	■15 V	■8 W	◪26 Y	■20 V	◪15 V	◪5 U	◪7 U	◪7 T	◪5 U	◪5 T	◪4 U	◪4 T

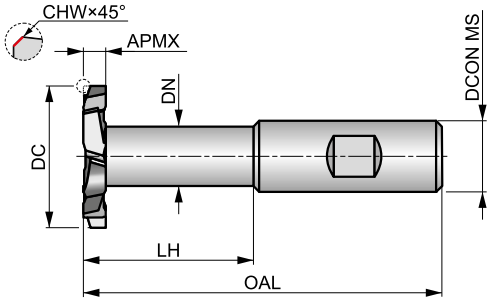
DCON MS tolerance 0.-0.025 mm.

Product	APMX [inch]	APMX [mm]	DC [inch]	DC [mm]	T DIN650	DN [mm]	LH [mm]	OAL [mm]	DCONMS [inch]	DCON MS [mm]	NOF
C8106.0	–	6.00	–	12.50	6.0	5.00	17.0	57.0	–	10.00	6
C8108.0	–	8.00	–	16.00	8.0	7.00	21.0	61.0	–	10.00	6
C81010.0	–	8.00	–	18.00	10.0	8.00	25.0	65.0	–	12.00	6
C81012.0	–	9.00	–	21.00	12.0	10.00	29.0	69.0	–	12.00	6
C81014.0	–	11.00	–	25.00	14.0	12.00	34.0	79.0	–	16.00	6
C81016.0	–	12.00	–	28.00	16.0	13.00	35.0	76.0	–	16.00	6
C81018.0	–	14.00	–	32.00	18.0	15.00	41.0	98.0	–	25.00	8
C81020.0	–	16.00	–	36.00	20.0	17.00	46.0	100.0	–	25.00	8
C81022.0	–	18.00	–	40.00	22.0	19.00	51.0	108.0	–	25.00	8

C825

HSS-E Side and Face Cutter

Versatile side and face cutters for grooving and slot milling. The Weldon shank provides accurate and stable holding whilst the side and face milling head makes the tools good for creating slots in vertical walls. The bright finish prevents workpiece material from sticking to the cutting edges of the tool.



HSS-E	N	NOF 8-12
λ 15°	γ 15°	DIN 1835B
Bright	DC js16	
DORMER		

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■40 V	■45 V	■46 V	■34 V	■30 U	■27 T	■22 U	■18 U	■15 T	■13 U	■11 T	■9 T	■21 S	■17 S
M2.1	M2.2	M3.1	M3.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2
■18 S	■15 S	■12 S	■10 S	■9 S	■10 S	■25 V	■19 V	■14 V	■37 U	■30 U	■24 U	■33 U	■25 U
K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3	N2.1	N2.2
■20 U	■30 S	■23 S	■17 S	■14 S	■12 S	■34 U	■26 U	■20 U	■71 Y	■53 Y	■36 Y	■36 Y	■32 Y
N2.3	N3.1	N3.2	N3.3	N4.1	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2	S4.1	S4.2
■23 Y	■38 V	■22 V	■11 W	■38 Y	■35 V	■20 V	■10 U	■7 U	■7 T	■5 U	■5 T	■4 U	■4 T

DCON MS tolerance h6.

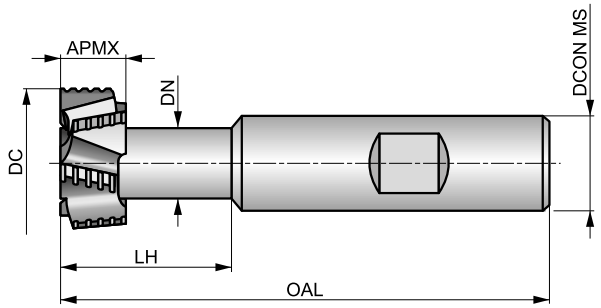
Product	APMX [mm]	DC [mm]	CHW [mm]	DN [mm]	LH [mm]	OAL [mm]	DCON MS [mm]	NOF
C8253.0X40.0	3.00	40.00	0.15	19.20	49.0	100.0	20.00	8
C8254.0X40.0	4.00	40.00	0.15	19.20	49.0	100.0	20.00	8
C8255.0X40.0	5.00	40.00	0.15	19.20	49.0	100.0	20.00	8
C8256.0X40.0	6.00	40.00	0.15	19.20	49.0	100.0	20.00	8
C8258.0X40.0	8.00	40.00	0.15	19.20	49.0	100.0	20.00	8
C82510.0X40.0	10.00	40.00	0.15	19.20	49.0	100.0	20.00	8
C8256.0X63.0	6.00	63.00	0.15	24.20	73.0	130.0	25.00	12
C8258.0X63.0	8.00	63.00	0.15	24.20	73.0	130.0	25.00	12
C82510.0X63.0	10.00	63.00	0.15	24.20	73.0	130.0	25.00	12
C82512.0X63.0	12.00	63.00	0.15	24.20	73.0	130.0	25.00	12
C82514.0X63.0	14.00	63.00	0.15	24.20	73.0	130.0	25.00	12
C82516.0X63.0	16.00	63.00	0.15	24.20	73.0	130.0	25.00	12

C801

DORMER

HSS-E Roughing T-slot Cutter

Suitable for rough milling T-slots, to accept standard T-bolts with Weldon shank for accurate and stable holding. The NF profile breaks chips for an efficient roughing application. The bright finish prevents workpiece material from sticking to the cutting edges of the tool.



HSS-E	NF	NOF 6-8
λ 12°	γ 10°	DIN 1835B
Bright	DC d11	
DIN 851		

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■40 V	■45 V	■46 V	■34 V	■30 U	■27 T	■29 U	■24 U	■20 T	■18 U	■15 T	■12 T	■34 S	■29 S
M2.1	M2.2	M3.1	M3.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2
■31 S	■25 S	■17 S	■15 S	■14 S	■15 S	■25 V	■19 V	■14 V	■43 U	■35 U	■28 U	■38 U	■29 U
K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3	N2.1	N2.2
■24 U	■35 S	■27 S	■20 S	■17 S	■14 S	■40 U	■30 U	■23 U	■71 Y	■53 Y	■36 Y	■36 Y	■32 Y
N2.3	N3.1	N3.2	N3.3	N4.1	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2	S4.1	S4.2
■23 Y	■38 V	■22 V	■11 W	■38 Y	■30 V	■20 V	■10 U	■13 U	■7 T	■10 U	■5 T	■8 U	■4 T

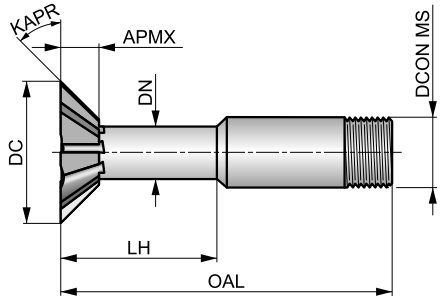
DCON MS tolerance h6.

Product	APMX [mm]	DC [mm]	T DIN650	DN [mm]	LH [mm]	OAL [mm]	DCON MS [mm]	NOF
C80116.0X8.0	8.00	16.00	8	7.00	18.0	62.0	10.00	6
C80118.0X10.0	8.00	18.00	10	8.00	21.0	70.0	12.00	6
C80121.0X12.0	9.00	21.00	12	10.00	25.0	74.0	12.00	6
C80125.0X14.0	11.00	25.00	14	12.00	28.0	82.0	16.00	8
C80132.0X18.0	14.00	32.00	18	15.00	36.0	90.0	16.00	8

C837

HSS Dovetail Cutter

Designed with a 45° angle to mill common dovetail slots. It has a screwed shank to make sure the tool can be held securely. Suitable for milling dovetail forms. The bright finish prevents workpiece material from sticking to the cutting edges of the tool.



HSS	N	NOF 6-8
λ 0°	γ 0°	DIN 1835D
Bright		DORMER

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 20 Y	■ 22 Y	■ 23 Y	■ 17 Y	■ 15 X	◪ 13 X	■ 15 X	■ 12 X	◪ 10 X	■ 9 X	◪ 7 X	◪ 6 X	■ 14 W	■ 12 W
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
■ 12 W	■ 10 W	◪ 12 W	◪ 10 W	◪ 9 W	◪ 5 W	■ 15 Y	■ 11 Y	■ 8 Y	■ 18 X	■ 15 X	■ 12 X	■ 16 X	■ 12 X
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
■ 10 X	■ 15 W	■ 11 W	■ 8 W	■ 7 W	■ 6 W	■ 17 X	■ 13 X	■ 10 X	■ 36 Z	■ 27 Z	■ 18 Z	■ 18 Z	■ 16 Z
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**
■ 12 Z	■ 19 Y	■ 11 Y	■ 6 Z	◪ 19 Z	■ 15 Y	◪ 10 Y	◪ 5 X	◪ 7 W	◪ 7 W	◪ 5 W	◪ 5 W	◪ 4 W	◪ 4 W

DCON MS tolerance 0.-0.025 mm.

Product	KAPR	APMX	DC	DC	DN	LH	OAL	DCONMS	DCON MS	NOF
	[°]	[mm]	[inch]	[mm]	[mm]	[mm]	[mm]	[inch]	[mm]	
C83713.0	45	3.00	–	13.00	4.75	19.5	63.5	–	12.00	6
C8375/8 [1]	45	4.00	5/8	15.88	6.35	21.5	66.5	1/2	12.70	6
C83716.0	45	4.00	–	16.00	6.35	21.5	66.5	–	12.00	6
C83719.0	45	5.50	–	19.00	6.35	21.5	66.5	–	12.00	6
C8373/4 [1]	45	5.50	3/4	19.05	6.35	21.5	66.5	1/2	12.70	6
C83722.0	45	6.50	–	22.00	7.15	22.5	68.5	–	12.00	6
C8377/8 [1]	45	6.50	7/8	22.23	7.15	22.5	68.5	1/2	12.70	6
C83725.0	45	7.50	–	25.00	7.95	24.0	70.0	–	12.00	6
C8371 [1]	45	8.00	1″	25.40	7.95	24.0	70.0	1/2	12.70	6
C83728.0	45	8.50	–	28.00	9.55	25.5	71.5	–	16.00	6
C83738.0	45	10.50	–	38.00	12.70	26.5	78.5	–	25.00	8

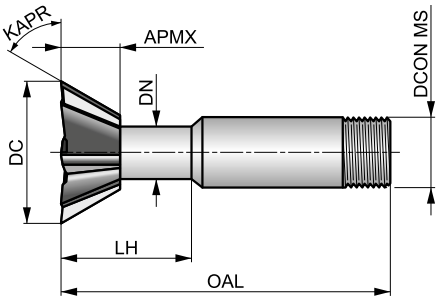
[1] Standard - BS 122/4.

C835

DORMER

HSS Dovetail Cutter

Designed with a 60° angle, it is suitable for milling common dovetail forms. The screwed shank provides secure holding. The bright finish prevents workpiece material from sticking to the cutting edges of the tool.



HSS	N	NOF 6-8
λ 0°	γ 0°	DIN 1835D
Bright		DORMER

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 20 Y	■ 22 Y	■ 23 Y	■ 17 Y	■ 15 X	◪ 13 X	■ 15 X	■ 12 X	◪ 10 X	■ 9 X	◪ 7 X	◪ 6 X	■ 14 W	■ 12 W
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
■ 12 W	■ 10 W	◪ 12 W	◪ 10 W	◪ 9 W	◪ 5 W	■ 15 Y	■ 11 Y	■ 8 Y	■ 18 X	■ 15 X	■ 12 X	■ 16 X	■ 12 X
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
■ 10 X	■ 15 W	■ 11 W	■ 8 W	■ 7 W	■ 6 W	■ 17 X	■ 13 X	■ 10 X	■ 36 Z	■ 27 Z	■ 18 Z	■ 18 Z	■ 16 Z
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**
■ 12 Z	■ 19 Y	■ 11 Y	■ 6 Z	◪ 19 Z	■ 15 Y	◪ 10 Y	◪ 5 X	◪ 7 W	◪ 7 W	◪ 5 W	◪ 5 W	◪ 4 W	◪ 4 W

DCON MS tolerance 0.-0.025 mm.

Product	KAPR	APMX	DC	DC	DN	LH	OAL	DCONMS	DCON MS	NOF
	[°]	[mm]	[inch]	[mm]	[mm]	[mm]	[mm]	[inch]	[mm]	
C8351/2 [1]	60	4.00	1/2	12.70	7.15	20.5	63.5	1/2	12.70	6
C83513.0	60	4.00	–	13.00	7.15	20.5	63.5	–	12.00	6
C8355/8 [1]	60	5.50	5/8	15.88	7.55	23.5	66.5	1/2	12.70	6
C83516.0	60	5.50	–	16.00	7.55	23.5	66.5	–	12.00	6
C83519.0	60	7.00	–	19.00	8.35	24.5	67.5	–	12.00	6
C8353/4 [1]	60	7.00	3/4	19.05	8.35	24.5	67.5	1/2	12.70	6
C83522.0	60	9.50	–	22.00	8.75	24.5	67.5	–	12.00	6
C8357/8 [1]	60	9.50	7/8	22.23	8.75	24.5	67.5	1/2	12.70	6
C83525.0	60	12.00	–	25.00	8.75	27.0	70.0	–	12.00	6
C8351 [1]	60	12.00	1″	25.40	8.75	27.0	70.0	1/2	12.70	6
C83528.0	60	12.50	–	28.00	11.10	28.0	73.0	–	16.00	6
C8351.1/8 [1]	60	12.50	1.1/8	28.58	11.10	28.0	73.0	5/8	15.88	6
C83532.0	60	13.50	–	32.00	12.70	29.5	74.5	–	16.00	8
C8351.1/4 [1]	60	13.50	1.1/4	31.75	12.70	29.5	74.5	5/8	15.88	8
C8351.3/8 [1]	60	14.50	1.3/8	34.93	12.70	30.5	82.5	1″	25.40	8
C83535.0	60	14.50	–	35.00	12.70	30.5	82.5	–	25.00	8
C83538.0	60	16.00	–	38.00	17.45	32.0	84.0	–	25.00	8
C8351.1/2 [1]	60	16.00	1.1/2	38.10	17.45	32.0	84.0	1″	25.40	8

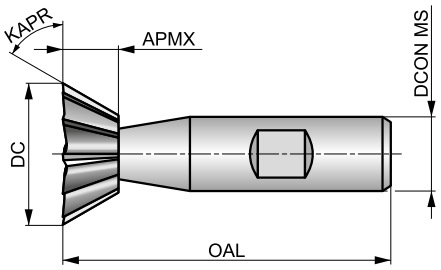
[1] Standard - BS 122/4.

C830

DORMER

HSS-E Dovetail Cutter

Designed with the optional 45° and 60° angle and Weldon shank for accurate and stable holding, it is suitable for common dovetail forms. The bright finish prevents workpiece material from sticking to the cutting edges of the tool.



HSS-E	N	NOF 10-12
λ 0°	γ 0°	DIN 1835B
Bright	DC js16	
DIN 1833C		

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■33 Y	■37 Y	■38 Y	■28 Y	■25 X	■22 X	■22 X	■18 X	■15 X	■13 X	■11 X	■9 X	■27 W	■23 W
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
■24 W	■20 W	■17 W	■15 W	■14 W	■10 W	■20 Y	■15 Y	■11 Y	■31 X	■25 X	■20 X	■27 X	■21 X
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
■17 X	■25 W	■19 W	■14 W	■12 W	■10 W	■29 X	■21 X	■17 X	■59 Z	■44 Z	■30 Z	■30 Z	■27 Z
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**
■19 Z	■31 Y	■18 Y	■9 Z	■31 Z	■25 Y	■15 Y	■10 X	■13 W	■7 W	■10 W	■5 W	■8 W	■4 W

DCON MS tolerance h6.

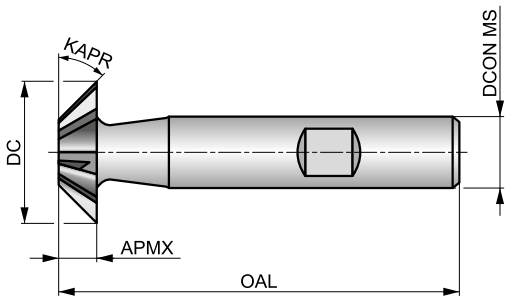
Product	KAPR [°]	APMX [mm]	DC [mm]	OAL [mm]	DCON MS [mm]	NOF
C83012.0X45	45	3.50	12.00	54.0	10.00	10
C83016.0X45	45	4.00	16.00	60.0	12.00	10
C83020.0X45	45	5.00	20.00	63.0	12.00	10
C83025.0X45	45	6.30	25.00	67.0	12.00	10
C83032.0X45	45	8.00	32.00	71.0	16.00	12
C83012.0X60	60	5.00	12.00	54.0	10.00	10
C83016.0X60	60	6.30	16.00	60.0	12.00	10
C83020.0X60	60	8.00	20.00	63.0	12.00	10
C83025.0X60	60	10.00	25.00	67.0	12.00	10
C83032.0X60	60	12.50	32.00	71.0	16.00	12

C831

DORMER

HSS-E Inverted Dovetail Cutter

Suitable for milling common inverted dovetail slots with optional 45° and 60° angles and Weldon shank for accurate and stable holding. The bright finish prevents workpiece material from sticking to the cutting edges of the tool.



HSS-E	N	NOF 10-12
λ 0°	γ 0°	DIN 1835B
Bright	DC js16	
DIN 1833D		

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■33 Y	■37 Y	■38 Y	■28 Y	■25 X	■22 X	■22 X	■18 X	■15 X	■13 X	■11 X	■9 X	■27 W	■23 W
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
■24 W	■20 W	■17 W	■15 W	■14 W	■10 W	■20 Y	■15 Y	■11 Y	■31 X	■25 X	■20 X	■27 X	■21 X
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
■17 X	■25 W	■19 W	■14 W	■12 W	■10 W	■29 X	■21 X	■17 X	■59 Z	■44 Z	■30 Z	■30 Z	■27 Z
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**
■19 Z	■31 Y	■18 Y	■9 Z	■31 Z	■25 Y	■15 Y	■10 X	■13 W	■7 W	■10 W	■5 W	■8 W	■4 W

DCON MS tolerance h6.

Product	KAPR	APMX	DC	OAL	DCON MS	NOF
	[°]	[mm]	[mm]	[mm]	[mm]	
C83112.0X45	45	3.50	12.00	54.0	10.00	10
C83116.0X45	45	4.00	16.00	60.0	12.00	10
C83120.0X45	45	5.00	20.00	63.0	12.00	10
C83125.0X45	45	6.30	25.00	67.0	12.00	10
C83132.0X45	45	8.00	32.00	71.0	16.00	12
C83112.0X60	60	5.00	12.00	54.0	10.00	10
C83116.0X60	60	6.30	16.00	60.0	12.00	10
C83120.0X60	60	8.00	20.00	63.0	12.00	10
C83125.0X60	60	10.00	25.00	67.0	12.00	10
C83132.0X60	60	12.50	32.00	71.0	16.00	12

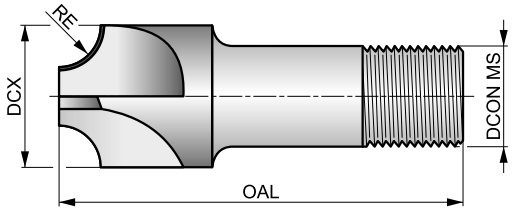
C710

DORMER

HSS Corner Rounding Cutter

With an accurate ground radius, capable of profile milling imperial corner radii around the perimeter of a component. The screwed shank makes sure the tool is held securely and improves the radius surface finish. It can be used for corner radius milling. Bright finish.

HSS	N	NOF 4
	λ 0°	γ 0°
DIN 1835D	Bright	
BS 122/4		



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 20 W	■ 22 W	■ 23 W	■ 17 W	■ 15 W	◪ 13 W	■ 15 W	■ 12 W	◪ 10 W	■ 9 W	◪ 7 W	◪ 6 W	■ 21 U	■ 17 U
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
■ 18 U	■ 15 U	■ 12 U	■ 10 U	◪ 9 U	◪ 5 U	■ 20 W	■ 15 W	■ 11 W	■ 18 W	■ 15 W	■ 12 W	■ 16 W	■ 12 W
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
■ 10 W	■ 15 U	■ 11 U	■ 8 U	■ 7 U	■ 6 U	■ 17 W	■ 13 W	■ 10 W	■ 36 X	■ 27 X	■ 18 X	■ 18 X	■ 16 X
N2.3	**N3.1**	**N3.2**	**N3.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**	
■ 12 X	■ 19 X	■ 11 X	■ 6 X	■ 15 U	■ 10 U	◪ 5 U	■ 7 U	◪ 7 U	■ 5 U	◪ 5 U	■ 4 U	◪ 4 U	

DCON MS tolerance h8.

Product	RE [inch]	DCX [inch]	DCONMS [inch]	DCON MS [mm]	OAL [mm]	NOF
C7101/16	1/16	3/8	3/8	9.53	60.5	4
C7101/8	1/8	1/2	1/2	12.70	60.5	4
C7105/32	5/32	9/16	1/2	12.70	60.5	4
C7103/16	3/16	5/8	5/8	15.88	60.5	4
C7101/4	1/4	7/8	5/8	15.88	63.5	4
C7103/8	3/8	1.1/16	1"	25.40	76.0	4
C7101/2	1/2	1.3/8	1"	25.40	82.5	4

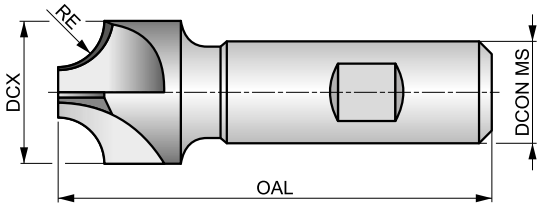
C700

DORMER

HSS-E Corner Rounding Cutter

With an accurate ground radius, suitable for producing accurate corner radii around the perimeter of components. The Weldon shank ensures stable holding to improve radius surface finish. Suitable for corner radius milling. Bright finish.

HSS-E	N	NOF 4-6
	λ 0°	γ 0°
DIN 1835B	Bright	
DORMER		



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 33 W	■ 37 W	■ 38 W	■ 28 W	■ 25 W	■ 22 W	■ 22 W	■ 18 W	■ 15 W	■ 13 W	■ 11 W	■ 9 W	■ 27 U	■ 23 U
M2.1	M2.2	M3.1	M3.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2
■ 24 U	■ 20 U	■ 17 U	■ 15 U	■ 14 U	■ 10 U	■ 20 W	■ 15 W	■ 11 W	■ 31 W	■ 25 W	■ 20 W	■ 27 W	■ 21 W
K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3	N2.1	N2.2
■ 17 W	■ 25 U	■ 19 U	■ 14 U	■ 12 U	■ 10 U	■ 29 W	■ 21 W	■ 17 W	■ 57 X	■ 43 X	■ 29 X	■ 29 X	■ 26 X
N2.3	N3.1	N3.2	N3.3	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2	S4.1	S4.2	
■ 19 X	■ 30 X	■ 17 X	■ 9 X	■ 25 U	■ 20 U	■ 10 U	■ 13 U	■ 7 U	■ 10 U	■ 5 U	■ 8 U	■ 4 U	

DCON MS tolerance h6.

Product	RE	DCX	DCON MS	OAL	NOF
	[mm]	[mm]	[mm]	[mm]	
C7001.0	1.00	10.00	10.00	60.0	4
C7001.5	1.50	10.00	10.00	60.0	4
C7002.0	2.00	10.00	10.00	60.0	4
C7002.5	2.50	10.00	10.00	60.0	4
C7003.0	3.00	12.00	12.00	60.0	4
C7003.5	3.50	12.00	12.00	60.0	4
C7004.0	4.00	15.00	12.00	60.0	4
C7005.0	5.00	18.00	16.00	70.0	4
C7006.0	6.00	21.00	16.00	70.0	4
C7007.0	7.00	24.00	16.00	70.0	4
C7008.0	8.00	24.00	16.00	70.0	4
C7009.0	9.00	28.00	20.00	85.0	4
C70010.0	10.00	28.00	20.00	85.0	4
C70012.0	12.00	35.00	20.00	100.0	4
C70012.5	12.50	35.00	20.00	100.0	4
C70014.0	14.00	42.00	25.00	100.0	4
C70015.0	15.00	48.00	25.00	105.0	5
C70016.0	16.00	48.00	25.00	105.0	5
C70020.0	20.00	60.00	32.00	115.0	6

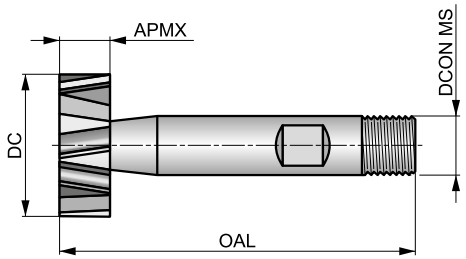
C822

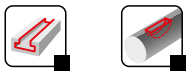
DORMER

HSS-E Woodruff Cutter

Suitable for milling Woodruff keys in spindles and shafts. The combination shank provides stable and accurate holding in all types of holders. The bright finish prevents workpiece material from sticking to the cutting edges of the tool.

HSS-E	N	NOF 6-12
λ 10°	γ 10°	DIN 1835
Bright	DC h11	
DIN 850		





Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■40 V	■45 V	■46 V	■34 V	■30 U	■27 T	■29 U	■24 U	■20 T	■18 U	■15 T	■12 T	■34 S	■29 S
M2.1	M2.2	M3.1	M3.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2
■31 S	■25 S	■17 S	■15 S	■14 S	■15 S	■25 V	■19 V	■14 V	■37 U	■30 U	■24 U	■33 U	■25 U
K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3	N2.1	N2.2
■20 U	■30 S	■23 S	■17 S	■14 S	■12 S	■34 U	■26 U	■20 U	■71 Y	■53 Y	■36 Y	■36 Y	■32 Y
N2.3	N3.1	N3.2	N3.3	N4.1	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2	S4.1	S4.2
■23 Y	■38 V	■22 V	■11 W	■38 Y	■30 V	■20 V	■10 U	■13 U	■7 T	■10 U	■5 T	■8 U	■4 T

DCON MS tolerance h6.

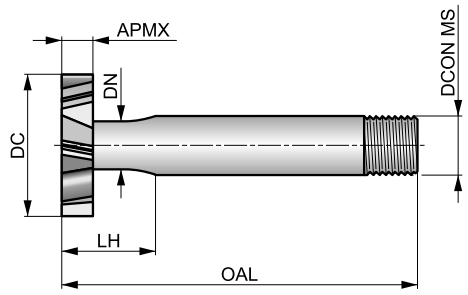
Product	APMX [mm]	DC [mm]	OAL [mm]	DCON MS [mm]	NOF
C8224.5X1.0	1.00	4.50	50.0	6.00	6
C8227.5X1.5	1.50	7.50	50.0	6.00	6
C8227.5X2.0	2.00	7.50	50.0	6.00	6
C82210.5X2.0	2.00	10.50	50.0	6.00	8
C82210.5X2.5	2.50	10.50	50.0	6.00	8
C82210.5X3.0	3.00	10.50	50.0	6.00	8
C82213.5X3.0	3.00	13.50	56.0	10.00	8
C82213.5X4.0	4.00	13.50	56.0	10.00	8
C82216.5X3.0	3.00	16.50	56.0	10.00	8
C82216.5X4.0	4.00	16.50	56.0	10.00	8
C82216.5X5.0	5.00	16.50	56.0	10.00	8
C82219.5X3.0	3.00	19.50	63.0	10.00	10
C82219.5X4.0	4.00	19.50	63.0	10.00	10
C82219.5X5.0	5.00	19.50	63.0	10.00	10
C82222.5X5.0	5.00	22.50	63.0	10.00	10
C82222.5X6.0	6.00	22.50	63.0	10.00	10
C82222.5X8.0	8.00	22.50	63.0	10.00	10
C82225.5X6.0	6.00	25.50	63.0	10.00	12
C82228.5X6.0	6.00	28.50	63.0	10.00	12
C82228.5X8.0	8.00	28.50	63.0	10.00	12
C82228.5X10.0	10.00	28.50	71.0	12.00	12
C82232.5X8.0	8.00	32.50	71.0	12.00	12
C82232.5X10.0	10.00	32.50	71.0	12.00	12
C82245.5X10.0	10.00	45.50	71.0	12.00	12

C820

DORMER

HSS Woodruff Cutter

Suitable for milling Woodruff keys in spindles and shafts. The screwed shank ensures secure holding. The bright finish prevents workpiece material from sticking to the cutting edges of the tool.



HSS	N	NOF 6-12
λ 12°	γ 10°	DIN 1835D
Bright		DORMER

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■27 V	■30 V	■31 V	■23 V	■20 U	◪18 T	■15 U	■12 U	◪10 T	■9 U	◪7 T	◪6 T	■21 S	■17 S
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
■18 S	■15 S	■12 S	■10 S	◪9 S	◪10 S	■20 V	■15 V	■11 V	■25 U	■20 U	■16 U	■22 U	■17 U
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
■13 U	■20 S	■15 S	■11 S	■10 S	■8 S	■23 U	■17 U	■13 U	■48 Y	■36 Y	■24 Y	■24 Y	■22 Y
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**
■16 Y	■26 V	■15 V	■8 W	◪26 Y	■20 V	◪15 V	◪10 U	◪7 U	◪7 T	◪5 U	◪5 T	◪4 U	◪4 T

DCON MS tolerance 0.-0.025 mm.

Product	Nr.	APMX [inch]	APMX [mm]	DC [inch]	DC [mm]	DN [mm]	LH [mm]	OAL [mm]	DCONMS [inch]	DCON MS [mm]	NOF
C82010.5X2.0	–	–	2.00	–	10.50	3.90	12.0	57.0	–	12.00	6
C82010.5X2.5	–	–	2.50	–	10.50	3.90	12.5	57.0	–	12.00	6
C82010.5X3.0	–	–	3.00	–	10.50	4.20	13.0	57.0	–	12.00	6
C820204 [1)]	204	1/16	1.59	1/2	12.70	3.30	11.6	57.0	1/2	12.70	6
C820404 [1)]	404	1/8	3.18	1/2	12.70	4.85	13.2	57.0	1/2	12.70	6
C82013.5X2.0	–	–	2.00	–	13.50	4.00	12.0	57.0	–	12.00	6
C82013.5X2.5	–	–	2.50	–	13.50	4.00	12.5	57.0	–	12.00	6
C82013.5X3.0	–	–	3.00	–	13.50	5.00	13.0	57.0	–	12.00	6
C82013.5X4.0	–	–	4.00	–	13.50	5.00	14.0	57.0	–	12.00	6
C820405 [1)]	405	1/8	3.18	5/8	15.88	5.65	13.2	57.0	1/2	12.70	6
C820505 [1)]	505	5/32	3.97	5/8	15.88	6.35	14.0	57.0	1/2	12.70	6
C82016.5X2.5	–	–	2.50	–	16.50	4.00	12.5	57.0	–	12.00	6
C82016.5X3.0	–	–	3.00	–	16.50	5.00	13.0	57.0	–	12.00	6
C82016.5X4.0	–	–	4.00	–	16.50	5.00	14.0	57.0	–	12.00	6
C82016.5X5.0	–	–	5.00	–	16.50	5.60	15.0	57.0	–	12.00	6
C820406 [1)]	406	1/8	3.18	3/4	19.05	5.50	13.2	57.0	1/2	12.70	6
C820506 [1)]	506	5/32	3.97	3/4	19.05	6.35	14.0	57.0	1/2	12.70	6
C820606 [1)]	606	3/16	4.76	3/4	19.05	7.15	14.8	57.0	1/2	12.70	6
C82019.5X3.0	–	–	3.00	–	19.50	5.60	13.0	57.0	–	12.00	6
C82019.5X4.0	–	–	4.00	–	19.50	5.60	14.0	57.0	–	12.00	6
C82019.5X5.0	–	–	5.00	–	19.50	6.00	15.0	57.0	–	12.00	6
C820507 [1)]	507	5/32	3.97	7/8	22.23	6.35	14.0	63.5	1/2	12.70	8
C820607 [1)]	607	3/16	4.76	7/8	22.23	7.15	14.8	63.5	1/2	12.70	8
C820807 [1)]	807	1/4	6.35	7/8	22.23	8.75	16.4	63.5	1/2	12.00	8
C82022.5X4.0	–	–	4.00	–	22.50	5.60	14.0	63.5	–	12.00	8

Product	Nr.	APMX	APMX	DC	DC	DN	LH	OAL	DCONMS	DCON MS	NOF
		[inch]	[mm]	[inch]	[mm]	[mm]	[mm]	[mm]	[inch]	[mm]	
C82022.5X5.0	–	–	5.00	–	22.50	6.00	15.0	63.5	–	12.00	8
C82022.5X6.0	–	–	6.00	–	22.50	6.50	16.0	63.5	–	12.00	8
C820608 [1)]	608	3/16	4.76	1″	25.40	7.15	14.8	70.0	1/2	12.70	8
C820808 [1)]	808	1/4	6.35	1″	25.40	8.75	16.4	70.0	1/2	12.70	8
C82025.5X5.0	–	–	5.00	–	25.50	7.50	15.0	70.0	–	12.00	8
C82025.5X6.0	–	–	6.00	–	25.50	7.50	16.0	70.0	–	12.00	8
C82025.5X8.0	–	–	8.00	–	25.50	8.00	18.0	70.0	–	12.00	8
C82028.5X5.0	–	–	5.00	–	28.50	8.00	17.0	70.0	–	12.00	8
C82028.5X6.0	–	–	6.00	–	28.50	8.50	18.0	70.0	–	12.00	8
C82028.5X8.0	–	–	8.00	–	28.50	9.00	20.0	70.0	–	12.00	8
C820610 [1)]	610	3/16	4.76	1.1/4	31.75	7.95	16.8	70.0	1/2	12.70	10
C820810 [1)]	810	1/4	6.35	1.1/4	31.75	9.50	18.4	70.0	1/2	12.70	10
C8201210 [1)]	1210	3/8	9.53	1.1/4	31.75	11.95	21.5	70.0	1/2	12.70	10
C82032.5X5.0 [1)]	–	–	5.00	–	32.50	8.00	17.0	70.0	–	12.00	10
C82032.5X6.0	–	–	6.00	–	32.50	8.50	18.0	70.0	–	12.00	10
C82032.5X8.0	–	–	8.00	–	32.50	9.00	20.0	70.0	–	12.00	10
C820811 [1)]	811	1/4	6.35	1.3/8	34.93	11.10	26.4	76.0	1/2	12.70	10
C8201211 [1)]	1211	3/8	9.53	1.3/8	34.93	11.95	29.5	76.0	1/2	12.70	10
C82035.5X6.0	–	–	6.00	–	35.50	9.50	26.0	76.0	–	12.00	10
C82035.5X8.0	–	–	8.00	–	35.50	11.50	28.0	76.0	–	12.00	10
C820812 [1)]	812	1/4	6.35	1.1/2	38.10	11.10	26.4	76.0	1/2	12.70	10
C8201212 [1)]	1212	3/8	9.53	1.1/2	38.10	11.95	29.5	76.0	1/2	12.70	10
C82038.5X8.0	–	–	8.00	–	38.50	11.50	28.0	76.0	–	12.00	10
C82038.5X10.0	–	–	10.00	–	38.50	11.50	30.0	76.0	–	12.00	10
C82045.5X10.0	–	–	10.00	–	45.50	11.50	30.0	76.0	–	12.00	12

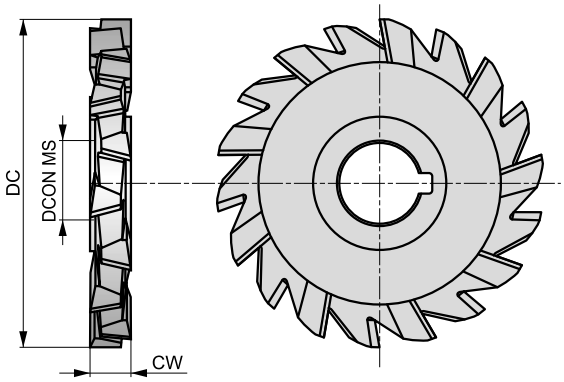
[1)] Standard - BS 122/4.

D200

DORMER

HSS-E Side and Face Coarse Pitch Milling Cutter

Versatile cutter designed to mill horizontal slots and is ideal for wide, deep slots. The bright finish prevents workpiece material from sticking to the cutting edges of the tool.



HSS-E	NOF 16-24	λ 15°
γ 10°	Bright	DC js16
DIN 885A		

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■46 X	■52 X	■54 X	■40 X	■35 X	■31 X	■29 X	■24 X	■20 X	■18 X	■15 X	■12 X	■41 X	■35 X
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
■37 X	■30 X	■23 X	■20 X	■18 X	■10 X	■30 X	■22 X	■17 X	■49 X	■40 X	■32 X	■44 X	■33 X
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
■27 X	■40 X	■30 X	■22 X	■19 X	■16 X	■46 X	■34 X	■27 X	■83 X	■62 X	■42 X	■42 X	■37 X
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**
■27 X	■44 X	■25 X	■13 X	■44 S	■30 V	■20 W	■15 W	■20 W	■14 S	■15 W	■10 S	■12 W	■8 S

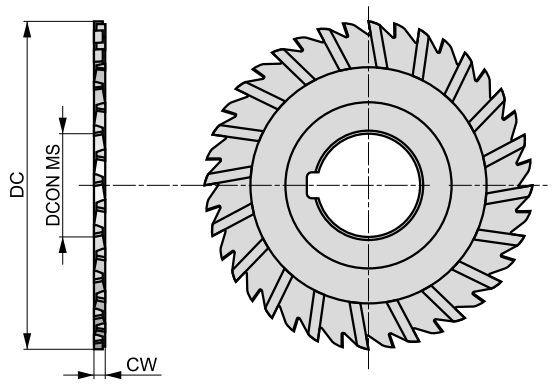
Product	DC [mm]	CW [mm]	DCON MS [mm]	NOF
D20050.0X4.0	50.00	4.0	16.00	16
D20050.0X5.0	50.00	5.0	16.00	16
D20063.0X6.0	63.00	6.0	22.00	18
D20063.0X8.0	63.00	8.0	22.00	18
D20080.0X6.0	80.00	6.0	27.00	20
D20080.0X8.0	80.00	8.0	27.00	20
D20080.0X10.0	80.00	10.0	27.00	18
D200100.0X8.0	100.00	8.0	32.00	22
D200100.0X10.0	100.00	10.0	32.00	22
D200100.0X12.0	100.00	12.0	32.00	20
D200100.0X14.0	100.00	14.0	32.00	20
D200100.0X16.0	100.00	16.0	32.00	20
D200125.0X10.0	125.00	10.0	32.00	24
D200125.0X12.0	125.00	12.0	32.00	22

D763

DORMER

HSS-E Side and Face Fine Pitch Milling Cutter

Designed with a fine pitch, ideal for narrow, deep slots, where the staggered tooth geometry also helps control chips during milling. A very versatile tool which can be used for horizontal milling slots and parting-off applications. The bright finish prevents workpiece material from sticking to the cutting edges of the tool.



HSS-E	28-44 NOF	λ 15°
γ 10°	Bright	DC js16
DIN 885A		

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■46 X	■52 X	■54 X	■40 X	■35 X	■31 X	■29 X	■24 X	■20 X	■18 X	■15 X	■12 X	■41 X	■35 X
M2.1	M2.2	M3.1	M3.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2
■37 X	■30 X	■23 X	■20 X	■18 X	■10 X	■30 X	■22 X	■17 X	■49 X	■40 X	■32 X	■44 X	■33 X
K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3	N2.1	N2.2
■27 X	■40 X	■30 X	■22 X	■19 X	■16 X	■46 X	■34 X	■27 X	■83 X	■62 X	■42 X	■42 X	■37 X
N2.3	N3.1	N3.2	N3.3	N4.1	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2	S4.1	S4.2
■27 X	■44 X	■25 X	■13 X	■44 S	■30 V	■20 W	■15 W	■20 W	■14 S	■15 W	■10 S	■12 W	■8 S

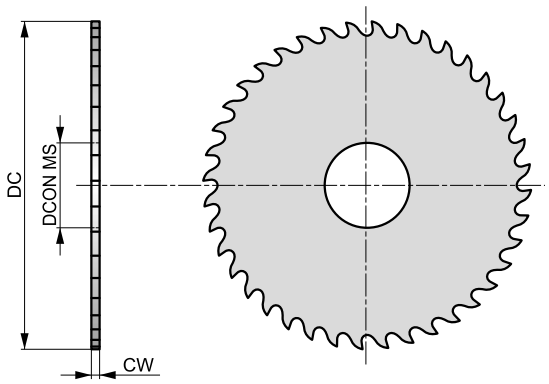
Product	DC [mm]	CW [mm]	DCON MS [mm]	NOF
D76363.0X1.6	63.00	1.6	22.00	32
D76363.0X2.0	63.00	2.0	22.00	32
D76363.0X2.5	63.00	2.5	22.00	32
D76363.0X3.0	63.00	3.0	22.00	28
D76363.0X3.5	63.00	3.5	22.00	28
D76380.0X2.0	80.00	2.0	27.00	36
D76380.0X2.5	80.00	2.5	27.00	36
D76380.0X3.0	80.00	3.0	27.00	32
D76380.0X3.5	80.00	3.5	27.00	32
D763100.0X2.0	100.00	2.0	32.00	44
D763100.0X3.0	100.00	3.0	32.00	40
D763125.0X2.0	125.00	2.0	32.00	44
D763125.0X3.0	125.00	3.0	32.00	44

D745

DORMER

HSS Slitting Saw Coarse Pitch

Designed with a coarse pitch, ideal for narrow, deep slots, whilst the dish ground and neutral tooth geometry, helps control chips and prevents rubbing when milling deep slots. Suitable for horizontal milling of slots and parting-off applications. Bright finish.



HSS		32-100 NOF
γ 15°	Bright	DIN 1838

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2
■ 40 Q	■ 45 Q	■ 46 Q	■ 34 Q	■ 30 Q	■ 29 P	■ 24 P	■ 18 P	◪ 14 P	◪ 12 P	◪ 12 P	◪ 10 P	◪ 12 P	◪ 10 P
K1.1	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K3.1**	**K3.2**	**K4.1**	**K4.2**	**K5.1**	**K5.2**	**N1.1**	**N1.2**	**N1.3**
■ 40 Q	■ 30 Q	■ 22 Q	■ 37 Q	■ 30 Q	■ 33 Q	■ 25 Q	■ 30 P	■ 23 P	■ 34 Q	■ 26 Q	■ 600 R	■ 450 R	■ 300 R
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**							
■ 769 R	■ 692 R	■ 500 R	■ 339 R	■ 200 R	■ 100 Q	■ 60 R							

Product	DC [mm]	CW [mm]	DCON MS [mm]	NOF
D74550.0X.5	50.00	0.5	13.00	48
D74550.0X.6	50.00	0.6	13.00	48
D74550.0X.8	50.00	0.8	13.00	40
D74550.0X1.0	50.00	1.0	13.00	40
D74550.0X1.2	50.00	1.2	13.00	40
D74550.0X1.5	50.00	1.5	13.00	32
D74550.0X1.6	50.00	1.6	13.00	32
D74550.0X2.0	50.00	2.0	13.00	32
D74563.0X.5	63.00	0.5	16.00	64
D74563.0X.6	63.00	0.6	16.00	48
D74563.0X.8	63.00	0.8	16.00	48
D74563.0X1.0	63.00	1.0	16.00	48
D74563.0X1.2	63.00	1.2	16.00	40
D74563.0X1.5	63.00	1.5	16.00	40
D74563.0X1.6	63.00	1.6	16.00	40
D74563.0X2.0	63.00	2.0	16.00	40
D74580.0X1.0	80.00	1.0	22.00	48
D74580.0X1.2	80.00	1.2	22.00	48
D74580.0X1.5	80.00	1.5	22.00	48
D74580.0X1.6	80.00	1.6	22.00	48
D74580.0X2.0	80.00	2.0	22.00	40
D74580.0X2.5	80.00	2.5	22.00	40
D74580.0X3.0	80.00	3.0	22.00	40
D745100.0X1.0	100.00	1.0	22.00	64
D745100.0X1.2	100.00	1.2	22.00	64
D745100.0X1.5	100.00	1.5	22.00	48
D745100.0X1.6	100.00	1.6	22.00	48
D745100.0X2.0	100.00	2.0	22.00	48

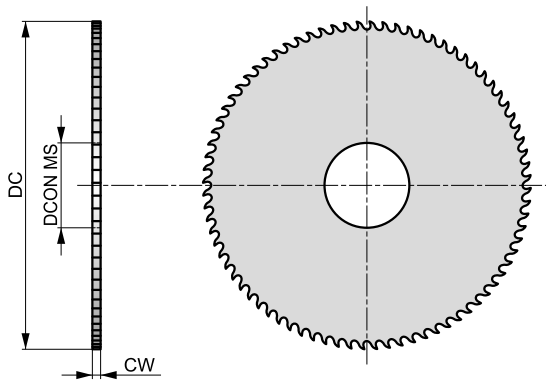
Product	DC	CW	DCON MS	NOF
	[mm]	[mm]	[mm]	
D745100.0X2.5	100.00	2.5	22.00	48
D745100.0X3.0	100.00	3.0	22.00	40
D745100.0X4.0	100.00	4.0	22.00	40
D745125.0X1.0	125.00	1.0	22.00	80
D745125.0X1.2	125.00	1.2	22.00	64
D745125.0X1.5	125.00	1.5	22.00	64
D745125.0X1.6	125.00	1.6	22.00	64
D745125.0X2.0	125.00	2.0	22.00	64
D745125.0X2.5	125.00	2.5	22.00	48
D745125.0X3.0	125.00	3.0	22.00	48
D745125.0X4.0	125.00	4.0	22.00	48
D745160.0X1.6	160.00	1.6	32.00	80
D745160.0X2.0	160.00	2.0	32.00	64
D745160.0X2.5	160.00	2.5	32.00	64
D745160.0X3.0	160.00	3.0	32.00	64
D745160.0X4.0	160.00	4.0	32.00	48
D745200.0X1.6	200.00	1.6	32.00	80
D745200.0X2.0	200.00	2.0	32.00	80
D745200.0X2.5	200.00	2.5	32.00	80
D745200.0X3.0	200.00	3.0	32.00	64
D745200.0X4.0	200.00	4.0	32.00	64
D745250.0X2.0	250.00	2.0	32.00	100
D745250.0X2.5	250.00	2.5	32.00	80
D745250.0X3.0	250.00	3.0	32.00	80

D747

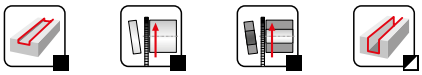
DORMER

HSS Slitting Saw Fine Pitch

Designed with a neutral tooth geometry to help control chips and prevent rubbing when milling deep slots. The fine pitch design makes it ideal for narrow, deep slots, and can be used for horizontal milling slots and parting-off applications. Bright finish.



HSS		48-200 NOF
γ 5°	Bright	DIN 1837



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2
■ 40 Q	■ 45 Q	■ 46 Q	■ 34 Q	■ 30 Q	■ 29 P	■ 24 P	■ 18 P	◪ 14 P	◪ 12 P	◪ 12 P	◪ 10 P	◪ 12 P	◪ 10 P
K1.1	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K3.1**	**K3.2**	**K4.1**	**K4.2**	**K5.1**	**K5.2**	**N1.1**	**N1.2**	**N1.3**
■ 40 Q	■ 30 Q	■ 22 Q	■ 37 Q	■ 30 Q	■ 33 Q	■ 25 Q	■ 30 P	■ 23 P	■ 34 Q	■ 26 Q	■ 600 R	■ 450 R	■ 300 R
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**							
■ 769 R	■ 692 R	■ 500 R	■ 339 R	■ 200 R	■ 100 Q	■ 60 R							

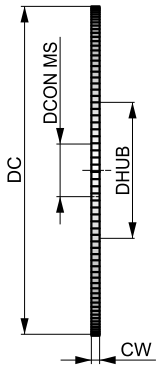
Product	DC [mm]	CW [mm]	DCON MS [mm]	NOF
D74732.0X.3	32.00	0.3	8.00	80
D74732.0X.4	32.00	0.4	8.00	80
D74732.0X.5	32.00	0.5	8.00	80
D74732.0X.6	32.00	0.6	8.00	64
D74732.0X.8	32.00	0.8	8.00	64
D74732.0X1.0	32.00	1.0	8.00	64
D74732.0X1.2	32.00	1.2	8.00	48
D74732.0X1.5	32.00	1.5	8.00	48
D74732.0X1.6	32.00	1.6	8.00	48
D74732.0X2.0	32.00	2.0	8.00	48
D74740.0X.3	40.00	0.3	10.00	100
D74740.0X.4	40.00	0.4	10.00	100
D74740.0X.5	40.00	0.5	10.00	80
D74740.0X.6	40.00	0.6	10.00	80
D74740.0X.8	40.00	0.8	10.00	80
D74740.0X1.0	40.00	1.0	10.00	64
D74740.0X1.2	40.00	1.2	10.00	64
D74740.0X1.5	40.00	1.5	10.00	64
D74740.0X1.6	40.00	1.6	10.00	64
D74740.0X2.0	40.00	2.0	10.00	48
D74750.0X.3	50.00	0.3	13.00	128
D74750.0X.4	50.00	0.4	13.00	100
D74750.0X.5	50.00	0.5	13.00	100
D74750.0X.6	50.00	0.6	13.00	100
D74750.0X.8	50.00	0.8	13.00	80
D74750.0X1.0	50.00	1.0	13.00	80
D74750.0X1.2	50.00	1.2	13.00	80
D74750.0X1.5	50.00	1.5	13.00	64

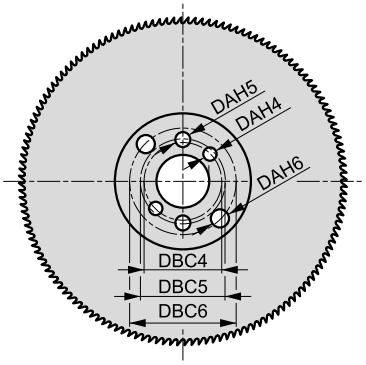
Product	DC	CW	DCON MS	NOF
	[mm]	[mm]	[mm]	
D74750.0X1.6	50.00	1.6	13.00	64
D74750.0X2.0	50.00	2.0	13.00	64
D74750.0X2.5	50.00	2.5	13.00	64
D74750.0X3.0	50.00	3.0	13.00	48
D74763.0X.5	63.00	0.5	16.00	128
D74763.0X.6	63.00	0.6	16.00	100
D74763.0X.8	63.00	0.8	16.00	100
D74763.0X1.0	63.00	1.0	16.00	100
D74763.0X1.2	63.00	1.2	16.00	80
D74763.0X1.5	63.00	1.5	16.00	80
D74763.0X1.6	63.00	1.6	16.00	80
D74763.0X2.0	63.00	2.0	16.00	80
D74763.0X2.5	63.00	2.5	16.00	64
D74763.0X3.0	63.00	3.0	16.00	64
D74763.0X4.0	63.00	4.0	16.00	64
D74780.0X.5	80.00	0.5	22.00	128
D74780.0X.6	80.00	0.6	22.00	128
D74780.0X.8	80.00	0.8	22.00	128
D74780.0X1.0	80.00	1.0	22.00	100
D74780.0X1.2	80.00	1.2	22.00	100
D74780.0X1.5	80.00	1.5	22.00	100
D74780.0X1.6	80.00	1.6	22.00	100
D74780.0X2.0	80.00	2.0	22.00	80
D74780.0X2.5	80.00	2.5	22.00	80
D74780.0X3.0	80.00	3.0	22.00	80
D74780.0X4.0	80.00	4.0	22.00	64
D747100.0X.5	100.00	0.5	22.00	160
D747100.0X.6	100.00	0.6	22.00	160
D747100.0X.8	100.00	0.8	22.00	128
D747100.0X1.0	100.00	1.0	22.00	128
D747100.0X1.2	100.00	1.2	22.00	128
D747100.0X1.5	100.00	1.5	22.00	100
D747100.0X1.6	100.00	1.6	22.00	100
D747100.0X2.0	100.00	2.0	22.00	100
D747100.0X2.5	100.00	2.5	22.00	100
D747100.0X3.0	100.00	3.0	22.00	80
D747100.0X4.0	100.00	4.0	22.00	80
D747125.0X1.0	125.00	1.0	22.00	160
D747125.0X1.2	125.00	1.2	22.00	128
D747125.0X1.5	125.00	1.5	22.00	128
D747125.0X1.6	125.00	1.6	22.00	128
D747125.0X2.0	125.00	2.0	22.00	128
D747125.0X2.5	125.00	2.5	22.00	100
D747125.0X3.0	125.00	3.0	22.00	100
D747125.0X4.0	125.00	4.0	22.00	100
D747160.0X1.0	160.00	1.0	32.00	160
D747160.0X1.2	160.00	1.2	32.00	160
D747160.0X1.5	160.00	1.5	32.00	160
D747160.0X1.6	160.00	1.6	32.00	160
D747160.0X2.0	160.00	2.0	32.00	128
D747160.0X2.5	160.00	2.5	32.00	128
D747160.0X3.0	160.00	3.0	32.00	128
D747160.0X4.0	160.00	4.0	32.00	100
D747160.0X5.0	160.00	5.0	32.00	100
D747200.0X1.0	200.00	1.0	32.00	200
D747200.0X1.2	200.00	1.2	32.00	200
D747200.0X2.0	200.00	2.0	32.00	160
D747200.0X3.0	200.00	3.0	32.00	128

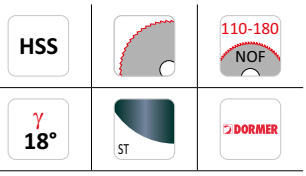
D752

HSS Slitting Saw Coarse Pitch

Designed with coarse pitch, ideal for thin section components. The dish ground and neutral tooth geometry, in addition to helping control chips, also prevents rubbing when slitting tubes and pipes. Suitable for slitting and cutting. The steam oxide finish acts to retain cutting fluid and prevent chip tool welding.







Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2
■ 40 Q	■ 45 Q	■ 46 Q	■ 34 Q	■ 30 Q	■ 29 P	■ 24 P	■ 18 P	◪ 14 P	◪ 12 P	◪ 12 P	◪ 10 P	◪ 12 P	◪ 10 P
K1.1	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K3.1**	**K3.2**	**K4.1**	**K4.2**	**K5.1**	**K5.2**	**N1.1**	**N1.2**	**N1.3**
■ 40 Q	■ 30 Q	■ 22 Q	■ 37 Q	■ 30 Q	■ 33 Q	■ 25 Q	■ 30 P	■ 23 P	■ 34 Q	■ 26 Q	■ 600 R	■ 450 R	■ 300 R
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**							
■ 769 R	■ 692 R	■ 500 R	■ 339 R	■ 200 R	■ 100 Q	■ 60 R							

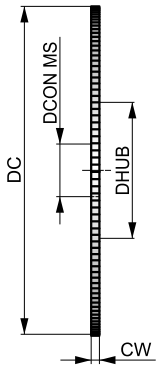
Product	DC [mm]	CW [mm]	DCON MS [mm]	NOF	P [mm]	DHUB [mm]	DAH4 [mm]	DBC4 [mm]	DAH5 [mm]	DBC5 [mm]	DAH6 [mm]	DBC6 [mm]
D752250.0X2.0X128	250.00	2.0	32.00	128	6	100	8	45	9	50	11	63
D752275.0X2.5X110	275.00	2.5	32.00	110	8	100	8	45	9	50	11	63
D752300.0X2.5X160	300.00	2.5	32.00	160	6	100	8	45	9	50	11	63
D752315.0X2.5X160	315.00	2.5	32.00	160	6	100	8	45	9	50	11	63
D752350.0X2.5X180	350.00	2.5	32.00	180	6	120	8	45	9	50	11	63

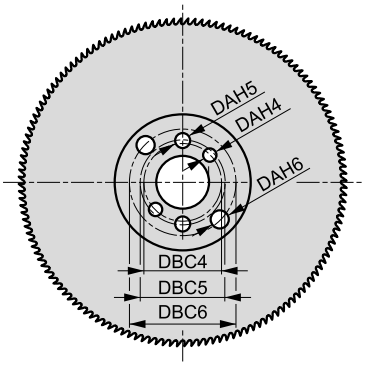
D753

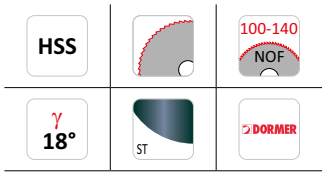
DORMER

HSS Slitting Saw Coarse Pitch

Designed with coarse pitch, ideal for thin section components. The dish ground and neutral tooth geometry, in addition to helping control chips, also prevents rubbing when slitting tubes and pipes. Suitable for slitting and cutting. The steam oxide finish acts to retain cutting fluid and prevent chip tool welding.







Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2
■ 40 Q	■ 45 Q	■ 46 Q	■ 34 Q	■ 30 Q	■ 29 P	■ 24 P	■ 18 P	◪ 14 P	◪ 12 P	◪ 12 P	◪ 10 P	◪ 12 P	◪ 10 P
K1.1	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K3.1**	**K3.2**	**K4.1**	**K4.2**	**K5.1**	**K5.2**	**N1.1**	**N1.2**	**N1.3**
■ 40 Q	■ 30 Q	■ 22 Q	■ 37 Q	■ 30 Q	■ 33 Q	■ 25 Q	■ 30 P	■ 23 P	■ 34 Q	■ 26 Q	■ 600 R	■ 450 R	■ 300 R
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**							
■ 769 R	■ 692 R	■ 500 R	■ 339 R	■ 200 R	■ 100 Q	■ 60 R							

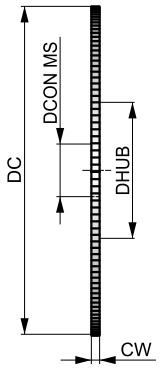
Product	DC [mm]	CW [mm]	DCON MS [mm]	NOF	P [mm]	DHUB [mm]	DAH4 [mm]	DBC4 [mm]	DAH5 [mm]	DBC5 [mm]	DAH6 [mm]	DBC6 [mm]
D753250.0X2.0	250.00	2.0	32.00	100	8	100	8	45	9	50	11	63
D753300.0X2.5	300.00	2.5	32.00	120	8	100	8	45	9	50	11	63
D753315.0X2.5	315.00	2.5	32.00	120	8	100	8	45	9	50	11	63
D753350.0X2.5	350.00	2.5	32.00	140	8	120	8	45	9	50	11	63

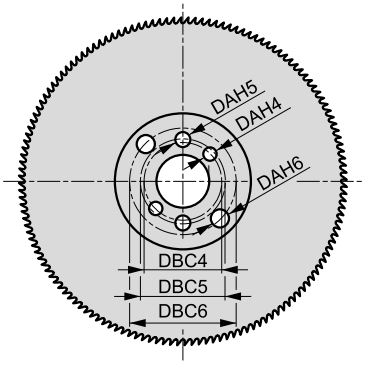
D750

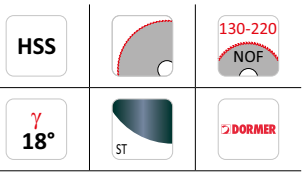
DORMER

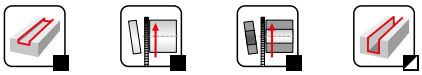
HSS Slitting Saw Fine Pitch

Designed with fine pitch, ideal for thin section components. Suitable for slitting and cutting. With ranges from 130 to 220 teeth, the neutral tooth geometry helps control chips and prevents rubbing when slitting tubes and pipes. The steam oxide finish acts to retain cutting fluid and prevent chip tool welding.









Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2
■ 40 Q	■ 45 Q	■ 46 Q	■ 34 Q	■ 30 Q	■ 29 P	■ 24 P	■ 18 P	◪ 14 P	◪ 12 P	◪ 12 P	◪ 10 P	◪ 12 P	◪ 10 P
K1.1	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K3.1**	**K3.2**	**K4.1**	**K4.2**	**K5.1**	**K5.2**	**N1.1**	**N1.2**	**N1.3**
■ 40 Q	■ 30 Q	■ 22 Q	■ 37 Q	■ 30 Q	■ 33 Q	■ 25 Q	■ 30 P	■ 23 P	■ 34 Q	■ 26 Q	■ 600 R	■ 450 R	■ 300 R
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**							
■ 769 R	■ 692 R	■ 500 R	■ 339 R	■ 200 R	■ 100 Q	■ 60 R							

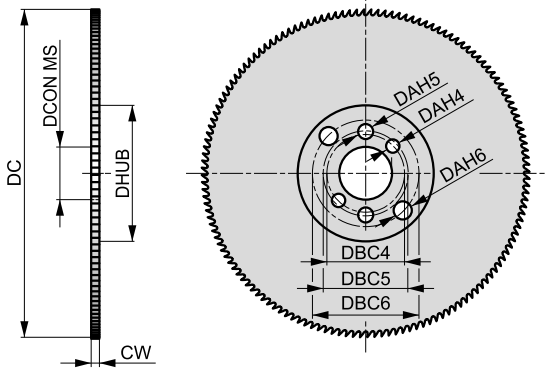
Product	DC	CW	DCON MS	NOF	P	DHUB	DAH4	DBC4	DAH5	DBC5	DAH6	DBC6
	[mm]	[mm]	[mm]		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
D750200.0X1.8	200.00	1.8	32.00	130	5	100	8	45	9	50	11	63
D750225.0X2.0	225.00	2.0	32.00	140	5	100	8	45	9	50	11	63
D750250.0X2.0	250.00	2.0	32.00	160	5	100	8	45	9	50	11	63
D750275.0X2.5	275.00	2.5	32.00	180	5	100	8	45	9	50	11	63
D750300.0X2.5	300.00	2.5	32.00	180	5	100	8	45	9	50	11	63
D750315.0X2.5	315.00	2.5	32.00	200	5	100	8	45	9	50	11	63
D750350.0X2.5	350.00	2.5	32.00	220	5	120	8	45	9	59	11	63

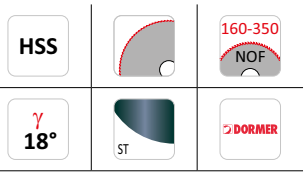
D751

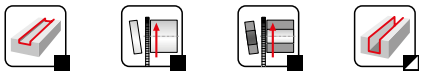
DORMER

HSS Slitting Saw Fine Pitch

Designed with fine pitch, ideal for thin section components. Suitable for slitting and cutting. With ranges from 160 to 350 teeth, the neutral tooth geometry helps control chips and prevents rubbing when slitting tubes and pipes. The steam oxide finish acts to retain cutting fluid and prevent chip tool welding.







Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2
■ 40 Q	■ 45 Q	■ 46 Q	■ 34 Q	■ 30 Q	■ 29 P	■ 24 P	■ 18 P	◪ 14 P	◪ 12 P	◪ 12 P	◪ 10 P	◪ 12 P	◪ 10 P
K1.1	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K3.1**	**K3.2**	**K4.1**	**K4.2**	**K5.1**	**K5.2**	**N1.1**	**N1.2**	**N1.3**
■ 40 Q	■ 30 Q	■ 22 Q	■ 37 Q	■ 30 Q	■ 33 Q	■ 25 Q	■ 30 P	■ 23 P	■ 34 Q	■ 26 Q	■ 600 R	■ 450 R	■ 300 R
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**							
■ 769 R	■ 692 R	■ 500 R	■ 339 R	■ 200 R	■ 100 Q	■ 60 R							

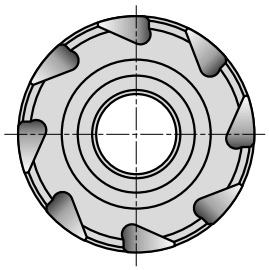
Product	DC [mm]	CW [mm]	DCON MS [mm]	NOF	P [mm]	DHUB [mm]	DAH4 [mm]	DBC4 [mm]	DAH5 [mm]	DBC5 [mm]	DAH6 [mm]	DBC6 [mm]
D751200.0X1.8X160	200.00	1.8	32.00	160	4	100	8	45	9	50	11	63
D751200.0X1.8X200	200.00	1.8	32.00	200	3	100	8	45	9	50	11	63
D751225.0X2.0X180	225.00	2.0	32.00	180	4	100	8	45	9	50	11	63
D751225.0X2.0X220	225.00	2.0	32.00	220	3	100	8	45	9	50	11	63
D751250.0X2.0X200	250.00	2.0	32.00	200	4	100	8	45	9	50	11	63
D751250.0X2.0X250	250.00	2.0	32.00	250	3	100	8	45	9	50	11	63
D751275.0X2.5X220	275.00	2.5	32.00	220	4	100	8	45	9	50	11	63
D751275.0X2.5X280	275.00	2.5	32.00	280	3	100	8	45	9	50	11	63
D751300.0X2.5X220	300.00	2.5	32.00	220	4	100	8	45	9	50	11	63
D751300.0X2.5X300	300.00	2.5	32.00	300	3	100	8	45	9	50	11	63
D751315.0X2.5X240	315.00	2.5	32.00	240	4	100	8	45	9	50	11	63
D751315.0X2.5X320	315.00	2.5	32.00	320	3	100	8	45	9	50	11	63
D751350.0X2.5X280	350.00	2.5	32.00	280	4	120	8	45	9	50	11	63
D751350.0X2.5X350	350.00	2.5	32.00	350	3	120	8	45	9	50	11	63

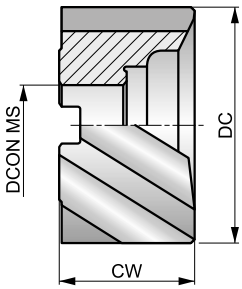
D400

DORMER

HSS-E Shell Cutter, Bright Finish

The standard bore sizes make it suitable for shell mill holders with a large diameter available up to 63 mm. Suitable for slotting and cutting. Bright finish.





HSS-E	N	NOF 8
λ 30°	γ 12°	Bright
DC js16		DIN 1880

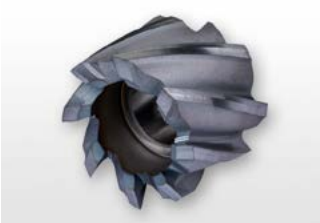
Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■40 C	■45 C	■46 C	■34 C	■30 C	◪27 B	■29 C	■24 B	◪20 B	■18 B	◪15 B	◪12 B	■34 C	■29 C
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
■31 C	■25 B	◪17 B	◪15 B	■14 A	■10 A	■20 C	■15 C	■11 C	■37 C	■30 C	■24 B	■33 C	■25 C
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
■20 A	■30 B	■23 B	■17 B	■14 A	■12 A	■34 B	■26 B	■20 B	◪76 E	◪57 D	■38 D	■38 C	■34 C
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**
■25 C	■40 C	■23 C	■12 C	◪40 C	◪15 C	◪17 C	■30 B	◪20 B	◪10 A	◪13 A	◪7 A	◪10 A	◪5 A
S4.1	**S4.2**												
◪8 A	◪4 A												

Product	DC [mm]	CW [mm]	DCON MS [mm]	NOF
D40040.0	40.00	32.0	16.00	8
D40050.0	50.00	36.0	22.00	8
D40063.0	63.00	40.0	27.00	8

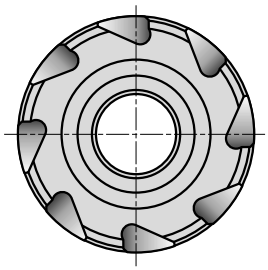
D420

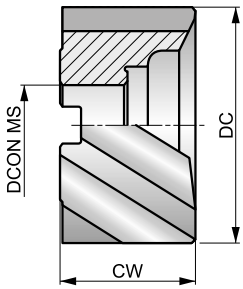
DORMER



HSS-E Shell Cutter, TiCN Coating

The standard bore sizes make it suitable for standard shell mill holders and can be used for slotting and cutting. Available in a large range of sizes, with diameters up to 63 mm available. TiCN coating increases the life of the cutter and improves performance when milling hard and abrasive materials.





HSS-E	N	NOF 8
λ 30°	γ 12°	TiCN
DC js16		DIN 1880

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■86 C	■96 C	■100 C	■74 C	■65 C	■57 B	■52 C	■42 B	■35 B	■31 B	■26 B	■21 B	■48 C	■41 C
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
■43 C	■35 B	■35 B	■30 B	■27 A	■20 A	■35 C	■26 C	■19 C	■62 C	■50 C	■40 B	■54 C	■42 C
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
■34 A	■50 B	■38 B	■28 B	■24 A	■20 A	■57 B	■43 B	■33 B	◪159 E	◪120 D	■80 D	■80 C	■72 C
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**
■51 C	■84 C	■50 C	■25 C	■84 C	◪32 C	◪35 C	■35 B	■25 B	■15 A	■27 A	■14 A	■20 A	■10 A
S4.1	**S4.2**												
■16 A	■8 A												

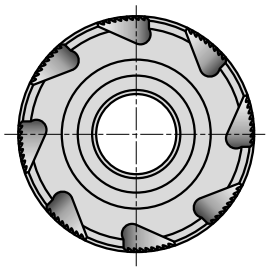
Product	DC [mm]	CW [mm]	DCON MS [mm]	NOF
D42040.0	40.00	32.0	16.00	8
D42050.0	50.00	36.0	22.00	8
D42063.0	63.00	40.0	27.00	8

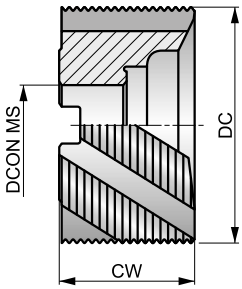
D402

DORMER

HSS-E Roughing Shell Mill Cutter, Bright Finish

Designed with a coarse pitch NR roughing profile, the tools are suitable for high metal removal roughing applications. The standard bore makes it possible to be used with standard shell end mill holders. Bright finish.





HSS-E	NR	NOF 6-8
λ 30°	γ 12°	Bright
DC js16		DIN 1880

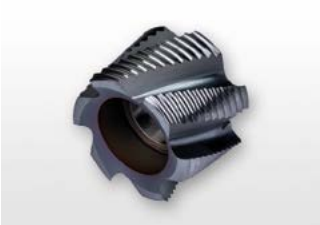
Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 40 D	■ 45 D	■ 46 D	■ 34 D	■ 30 D	◪ 27 C	■ 29 D	■ 24 C	◪ 20 C	■ 18 C	◪ 15 C	◪ 12 C	■ 34 D	■ 29 D
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
■ 31 D	■ 25 C	◪ 17 C	◪ 15 C	■ 14 B	■ 10 B	■ 20 D	■ 15 D	■ 11 D	■ 37 D	■ 30 D	■ 24 C	■ 33 D	■ 25 D
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
■ 20 B	■ 30 C	■ 23 C	■ 17 C	■ 14 B	■ 12 B	■ 34 C	■ 26 C	■ 20 C	◪ 76 F	◪ 57 E	■ 38 E	■ 38 D	■ 34 D
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**
■ 25 D	■ 40 D	■ 23 D	■ 12 D	◪ 40 D	◪ 15 D	◪ 17 D	■ 30 C	◪ 20 C	◪ 10 B	◪ 13 B	◪ 7 B	◪ 10 B	◪ 5 B
S4.1	**S4.2**												
◪ 8 B	◪ 4 B												

Product	DC [mm]	CW [mm]	DCON MS [mm]	NOF
D40240.0	40.00	32.0	16.00	6
D40250.0	50.00	36.0	22.00	6
D40263.0	63.00	40.0	27.00	8

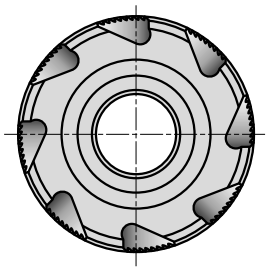
D422

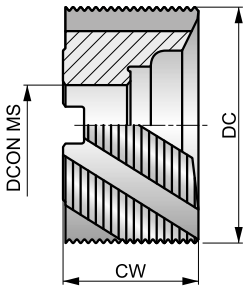
DORMER



HSS-E Roughing Shell Cutter, TiCN Coating

Designed with a coarse pitch NR roughing profile for high metal removal. With standard bore sizes which can be held in standard shell mill holders, the end mills are suitable for roughing applications. TiCN coating increases the life of the cutter and improves performance when milling hard and abrasive materials.





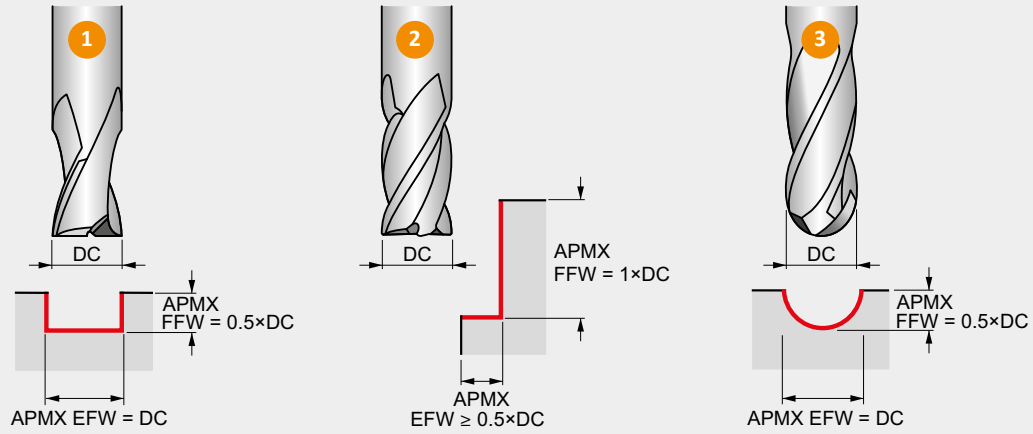
HSS-E	NR	NOF 6-8
λ 30°	γ 12°	TiCN
DC js16		DIN 1880

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■86 D	■96 D	■100 D	■74 D	■65 D	■57 C	■52 D	■42 C	■35 C	■31 C	■26 C	■21 C	■48 D	■41 D
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
■43 D	■35 C	■35 C	■30 C	■27 B	■20 B	■35 D	■26 D	■19 D	■62 D	■50 D	■40 C	■54 D	■42 D
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**
■34 B	■50 C	■38 C	■28 C	■24 B	■20 B	■57 C	■43 C	■33 C	◪159 F	◪120 E	■80 E	■80 D	■72 D
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**
■51 D	■84 D	■50 D	■25 D	■84 D	◪32 D	◪35 D	■35 C	■25 C	■15 B	■27 B	■14 B	■20 B	■10 B
S4.1	**S4.2**												
■16 B	■8 B												

Product	DC [mm]	CW [mm]	DCON MS [mm]	NOF
D42240.0	40.00	32.0	16.00	6
D42250.0	50.00	36.0	22.00	6
D42263.0	63.00	40.0	27.00	8

SOLID HSS MILLS – FEED PER TOOTH TABLE



Feed per tooth (f_z in mm/rev) depending on the working conditions it might be necessary to adjust these values ± 25%.

ONLY if plunging into solid material with a centre cutting end mill the values in this table should be considered as f_n (feed per revolution).

How to use this table to find the feed per tooth (f_z):

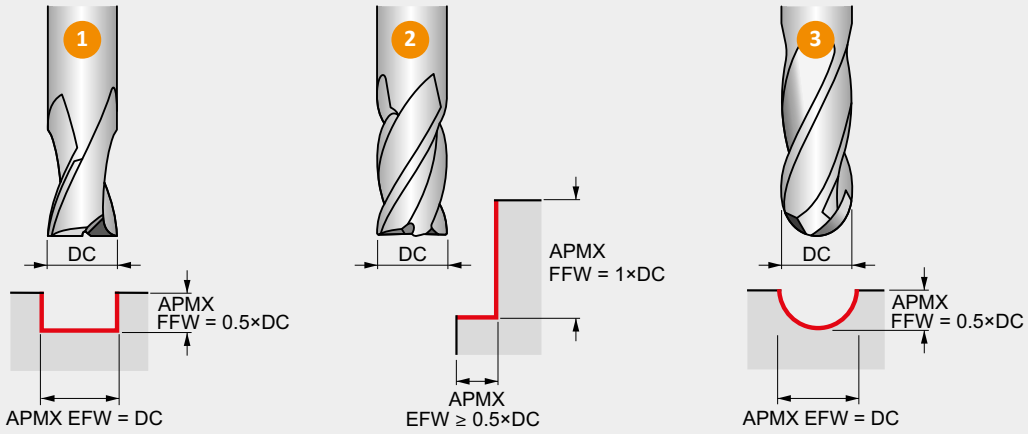
1. Find your Alpha Code on the product page (example: 48C, "C" is the Alpha Code).
2. Find the closest diameter for your cutting application in the top row of the table.
3. Find your Alpha Code in the left column of the table.
4. The intersection (cell) of the Diameter and Alpha Code is the feed per tooth (f_z).

FOR HSS, HSS-E AND HSS-E-PM MILLING CUTTERS ONLY

		ø DC [mm]																		
		1.00	2.00	3.00	4.00	5.00	6.00	8.00	10.00	12.00	16.00	20.00	25.00	28.00	32.00	36.00	40.00	63.00	80.00	100.00
Feed rates	A	0.002	0.003	0.003	0.005	0.005	0.005	0.007	0.009	0.011	0.015	0.018	0.023	0.027	0.030	0.033	0.034	0.043	0.045	0.042
	B	0.003	0.004	0.004	0.006	0.006	0.007	0.009	0.012	0.014	0.018	0.023	0.029	0.033	0.038	0.041	0.043	0.054	0.057	0.052
	C	0.004	0.004	0.005	0.007	0.008	0.008	0.011	0.015	0.017	0.023	0.029	0.036	0.042	0.047	0.051	0.054	0.067	0.071	0.065
	D	0.005	0.006	0.006	0.009	0.010	0.010	0.014	0.018	0.022	0.029	0.036	0.045	0.052	0.059	0.064	0.067	0.084	0.089	0.082
	E	0.006	0.007	0.008	0.011	0.012	0.013	0.017	0.023	0.027	0.036	0.045	0.056	0.065	0.074	0.080	0.084	0.105	0.111	0.102
	F	0.007	0.008	0.010	0.013	0.014	0.016	0.020	0.028	0.032	0.043	0.054	0.067	0.078	0.089	0.096	0.101	0.126	0.133	0.122
	G	0.009	0.010	0.012	0.016	0.017	0.019	0.024	0.033	0.039	0.052	0.065	0.081	0.094	0.107	0.115	0.121	0.151	0.160	0.147
	H	0.010	0.012	0.014	0.019	0.021	0.022	0.029	0.040	0.047	0.062	0.078	0.097	0.112	0.128	0.138	0.145	0.181	0.192	0.176
	I	0.012	0.015	0.017	0.023	0.025	0.027	0.035	0.048	0.056	0.075	0.093	0.116	0.135	0.153	0.166	0.174	0.218	0.230	0.212
	J	0.015	0.017	0.020	0.027	0.030	0.032	0.042	0.057	0.067	0.090	0.112	0.139	0.162	0.184	0.199	0.209	0.261	0.276	0.254

This table is valid for end mills and shell mills.

SOLID HSS MILLS – FEED PER TOOTH TABLE



Feed per tooth (IPT or inch/tooth) depending on the working conditions it might be necessary to adjust these values ± 25%.

ONLY if plunging into solid material with a centre cutting end mill the values in this table should be considered as IPR (feed in inch per revolution).

How to use this table to find the feed per tooth (IPT):

1. Find your Alpha Code on the product page (example: 157C, "C" is the Alpha Code).
2. Find the closest diameter for your cutting application in the top row of the table.
3. Find your Alpha Code in the left column of the table.
4. The intersection (cell) of the Diameter and Alpha Code is the feed per tooth (IPT).

FOR HSS, HSS-E AND HSS-E-PM MILLING CUTTERS ONLY

		ø DC [inch]																		
		1/16	3/32	1/8	5/32	3/16	7/32	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4	7/8	1	1 1/8	1 1/4	1 1/2
		.0625	.0938	.1250	.1563	.1875	.2188	.2500	.3125	.3750	.4375	.5000	.5625	.6250	.7500	.8750	1,0000	1,1250	1,2500	1,5000
Feed rates	A	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0003	.0004	.0004	.0005	.0006	.0006	.0007	.0008	.0009	.0011	.0012	.0013
	B	.0001	.0002	.0002	.0002	.0002	.0002	.0003	.0004	.0004	.0005	.0006	.0007	.0007	.0009	.0011	.0012	.0014	.0015	.0017
	C	.0002	.0002	.0002	.0003	.0003	.0003	.0004	.0004	.0005	.0006	.0007	.0008	.0009	.0011	.0013	.0015	.0017	.0019	.0020
	D	.0002	.0002	.0002	.0004	.0004	.0004	.0004	.0006	.0007	.0008	.0009	.0010	.0011	.0013	.0017	.0019	.0021	.0023	.0026
	E	.0002	.0003	.0003	.0004	.0005	.0005	.0006	.0007	.0008	.0010	.0011	.0013	.0014	.0017	.0020	.0023	.0027	.0029	.0032
	F	.0003	.0003	.0004	.0005	.0006	.0006	.0007	.0008	.0010	.0012	.0014	.0016	.0017	.0020	.0024	.0028	.0032	.0035	.0039
	G	.0004	.0004	.0005	.0006	.0007	.0007	.0008	.0009	.0012	.0014	.0017	.0019	.0020	.0024	.0030	.0033	.0039	.0042	.0046
	H	.0004	.0005	.0006	.0007	.0008	.0008	.0009	.0011	.0014	.0017	.0020	.0022	.0024	.0029	.0035	.0040	.0046	.0050	.0056
	I	.0005	.0006	.0007	.0009	.0010	.0010	.0011	.0014	.0017	.0020	.0024	.0027	.0030	.0035	.0043	.0048	.0056	.0060	.0067
	J	.0006	.0007	.0008	.0011	.0012	.0012	.0014	.0017	.0020	.0024	.0028	.0032	.0035	.0042	.0051	.0058	.0067	.0072	.0080

This table is valid for end mills and shell mills.

1 Slot Milling

Correction factors for cutting speed v_c and feed per tooth f_z for slot milling operations at different depths of cut.

APMX FFW / DC	25%	50%	100%	150%
X.V	1.25	1.00	0.75	0.50
X.f	1.25	1.00	0.75	0.50

2 Shoulder Milling

Correction factors for cutting speed v_c and feed per tooth f_z for square shoulder milling with < 50% radial immersion.

APMX EFW / DC	5%	10%	15%	20%	25%	30%	40%	≥ 50%
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.00
X.f	2.29	1.67	1.40	1.25	1.15	1.09	1.02	1.00

We recommend to avoid milling with 50% radial immersion.

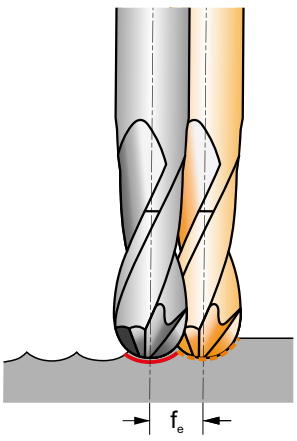
3a Plain Copy Milling (with Ball Nose Cutters)

Correction factors for cutting speed v_c for plain copy milling at different depths of cut.

APMX FFW / DC	5%	10%	15%	20%	25%	30%	40%	50%
X.V	2.29	1.67	1.40	1.25	1.15	1.09	1.02	1.00

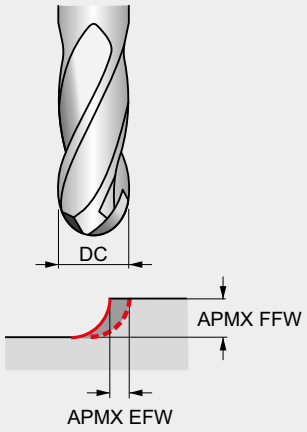
3b

Line offset f_e (step-over distance) for achieving a theoretical surface roughness R_{th}.

DC	µm	2	4	8	16	32	63	125	250
2		0.13	0.18	0.25	0.36	0.50	0.70	0.97	1.32
3		0.15	0.22	0.31	0.44	0.62	0.86	1.20	1.66
4		0.18	0.25	0.36	0.50	0.71	1.00	1.39	1.94
5		0.20	0.28	0.40	0.56	0.80	1.12	1.56	2.18
6		0.22	0.31	0.44	0.62	0.87	1.22	1.71	2.40
8		0.25	0.36	0.51	0.71	1.01	1.41	1.98	2.78
10		0.28	0.40	0.57	0.80	1.13	1.58	2.22	3.12
12		0.31	0.44	0.62	0.88	1.24	1.73	2.44	3.43
14		0.33	0.47	0.67	0.95	1.34	1.87	2.63	3.71
16		0.36	0.51	0.72	1.01	1.43	2.00	2.82	3.97
18		0.38	0.54	0.76	1.07	1.52	2.13	2.99	4.21
20		0.40	0.57	0.80	1.13	1.60	2.24	3.15	4.44
22		0.42	0.59	0.84	1.19	1.68	2.35	3.31	4.66
25		0.45	0.63	0.89	1.26	1.79	2.51	3.53	4.97
28		0.47	0.67	0.95	1.34	1.89	2.65	3.73	5.27

Line offset dimensions shown are Metric (mm) only.

3c



How to use this table to find the correction factor for the feed per tooth (f_z or IPT) for plain copy milling:

1. Find the closest radial immersion (APMX EFW / DC) for your cutting application in the top row of the table.
3. Find your closest axial immersion (APMX FFW / DC) for your cutting application in the left column of the table.
4. The intersection (cell) of the radial and axial immersions is the correction factor for the feed per tooth.

Example for plain copy milling:

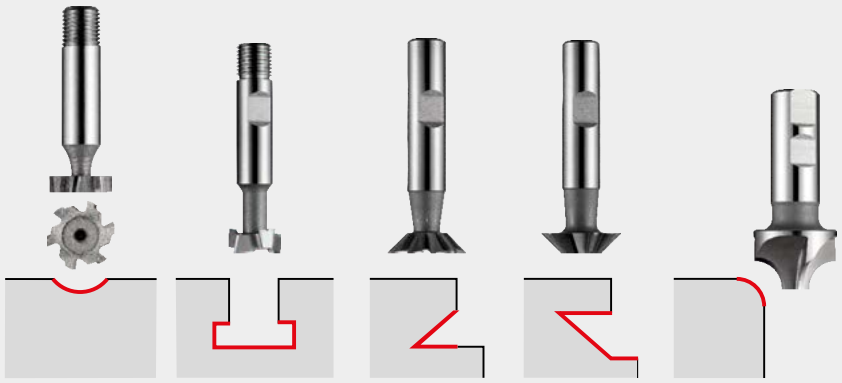
1. Applying an 8 mm ball nose cutter with a depth of cut of 0.8 mm (APMX FFW), the aim is to achieve a theoretical surface roughness of 32 µm.
2. The correction factor for cutting speed with an axial immersion of 10% = 1.67 can be found in table 3a.
3. The step-over distance for a R_{th} of 32 µm = 1.01 mm can be found in table 3b.
4. The correction factor for feed per tooth with an axial immersion of 10% and a radial immersion of 1.01 / 8 = 12.6% can be found in table 3c and is in this case 2.33.

Correction factors for feed per tooth f_z for plain copy milling with a line offset < 50% × DC at different of depths of cut.

APMX FFW	APMX EFW	5%	10%	15%	20%	25%	30%	35%	40%	50%
5%		5.26	3.82	3.21	2.87	2.65	2.50	2.40	2.34	2.29
10%		3.82	2.78	2.33	2.08	1.92	1.82	1.75	1.70	1.67
15%		3.21	2.33	1.96	1.75	1.62	1.53	1.47	1.43	1.40
20%		2.87	2.08	1.75	1.56	1.44	1.36	1.31	1.28	1.25
25%	x.f	2.65	1.92	1.62	1.44	1.33	1.26	1.21	1.18	1.15
30%	⇨	2.50	1.82	1.53	1.36	1.26	1.19	1.14	1.11	1.09
35%		2.40	1.75	1.47	1.31	1.21	1.14	1.10	1.07	1.05
40%		2.34	1.70	1.43	1.28	1.18	1.11	1.07	1.04	1.02
45%		2.31	1.68	1.41	1.26	1.16	1.10	1.05	1.03	1.01
50%		2.29	1.67	1.40	1.25	1.15	1.09	1.05	1.02	1.00

To increase the surface quality, the tool or surface should be inclinded with a tilt angle of 10°– 15°.

SOLID HSS MILLS – FEED PER TOOTH TABLE



Feed per tooth (f_z in mm/rev).
Depended of the working conditions it might be needed to adjust these values ± 25%.

How to use this table to find the feed per tooth (f_z):

1. Find your Alpha Code on the product page (example: 40V, "V" is the Alpha Code).
2. Find the closest diameter for your cutting application in the top row of the table.
3. Find your Alpha Code in the left column of the table.
4. The intersection (cell) of the Diameter and Alpha Code is the feed per tooth (f_z).

Feed rates for mills: C800, C801, C810, C820, C822, C825, C830, C835, C837, C831, C700, C710, D745, D747, D750, D751, D752, D753, D200, D763.

		ø DC [mm]															
		10.00	12.00	16.00	20.00	25.00	32.00	38.00	50.00	63.00	80.00	100.00	125.00	160.00	200.00	300.00	350.00
Feed rates	P	–	–	–	–	–	0.200	–	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
	Q	–	–	–	–	–	0.040	–	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040
	R	–	–	–	–	–	0.600	–	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600
	S	0.020	0.020	0.020	0.040	0.040	0.040	0.040	0.050	0.050	0.060	0.070	0.080	0.090	0.100	0.100	0.100
	T	0.020	0.020	0.030	0.050	0.050	0.050	0.060	0.060	0.060	–	–	–	–	–	–	–
	U	0.030	0.030	0.030	0.050	0.060	0.060	0.060	0.060	0.060	–	–	–	–	–	–	–
	V	0.030	0.030	0.040	0.060	0.060	0.060	0.070	0.070	0.070	0.080	0.090	0.100	0.110	0.120	0.120	0.120
	W	0.040	0.050	0.050	0.060	0.060	0.070	0.070	0.070	0.070	0.090	0.100	0.110	0.110	0.120	0.120	0.120
	X	0.050	0.050	0.060	0.070	0.080	0.100	0.110	0.110	0.110	0.110	0.110	0.120	0.130	0.140	0.140	0.140
	Y	0.060	0.060	0.070	0.090	0.100	0.110	0.130	0.130	–	–	–	–	–	–	–	–
	Z	0.070	0.070	0.090	0.110	0.120	0.110	0.150	–	–	–	–	–	–	–	–	–

Feeds (f_z) shown are Metric (mm) only.

SOLID HSS SLITTING SAWS – TOOTH PITCH CHOICE TABLES

Tooth pitch choices for slitting saws D750, D751, D752, D753

Solid section

Diameter (t)	Saw Pitch (P) 2,5	3	4	5	6	8
4		P M	N K			
6			P M	N K		
8				P M	N K	
10				P M	N K	
15					P M	N K
20					P M	N K
30						P M
40						
60						

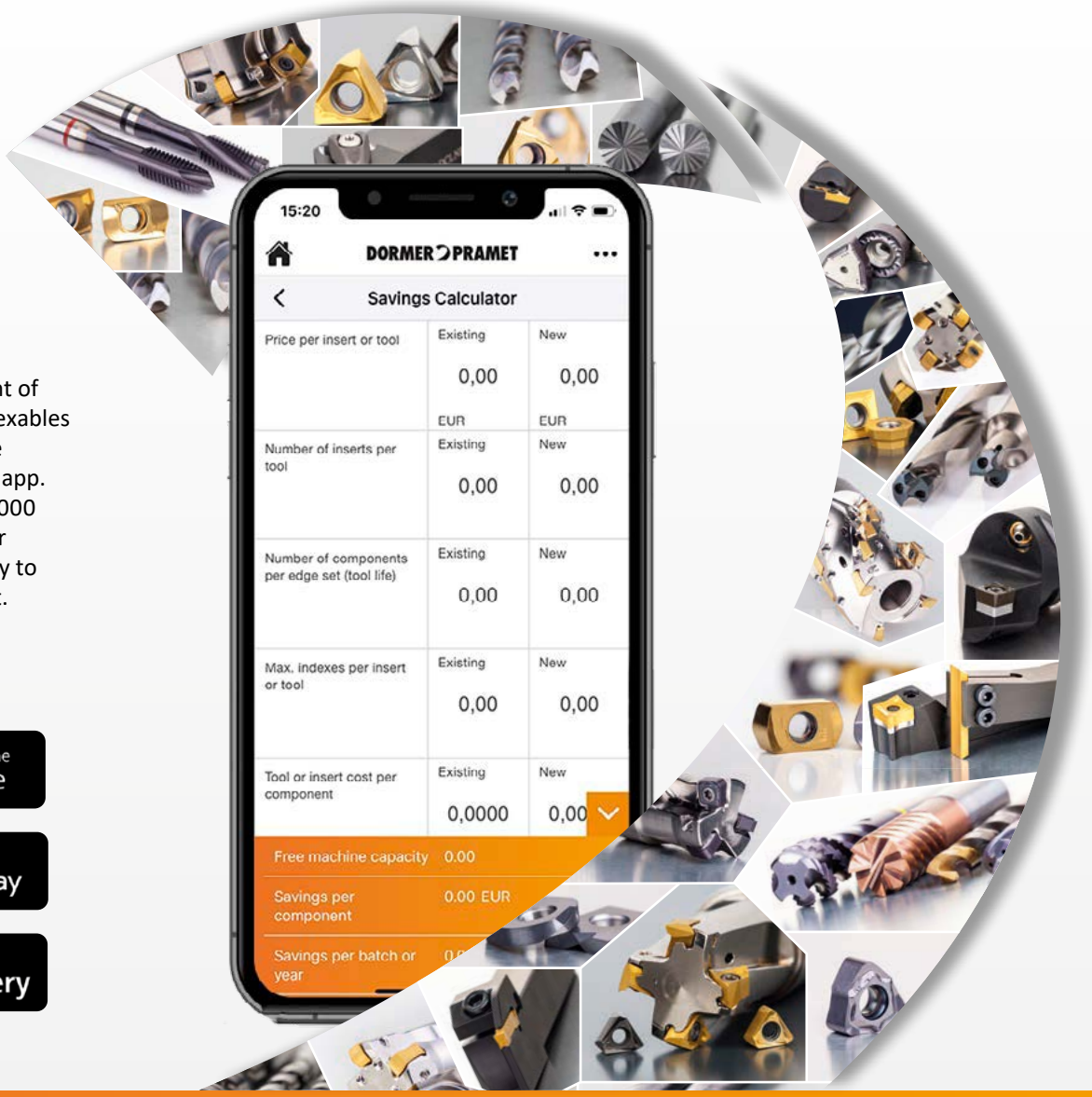
Profiles and Tubes

Wall Thickness (t)	Saw Pitch (P) 2,5	3	4	5	6	8
1		P M	N K			
1,5			P M	N K		
2				P M	N K	
3					P M	N K
> 4					P M	N K

P	ISO P = Steel Workpiece Material Group (WMG)
M	ISO M = Stainless Steel Workpiece Material Group (WMG)
K	ISO K = Cast Iron Workpiece Material Group (WMG)
N	ISO N = Non Ferrous Workpiece Material Group (WMG)

DORMER PRAMET

ALL TOOLS TOGETHER



Our entire assortment of rounds tools and indexables is included within the machining calculator app. That‘s more than 40,000 items! Whatever your machining we‘re likely to have something for it.

Simply Reliable.

Download on the App Store

GET IT ON Google Play

Download on AppGallery

SOLID MILLS – TECHNICAL INFORMATION

HSS materials

High Speed Steel	**HSS**	A medium-alloyed high speed steel that has good machinability and good performance. HSS exhibits hardness, toughness and wear resistance characteristics that make it attractive in a wide range of applications, for example in drills and taps.
Cobalt High Speed Steel	**HSS-E**	This high speed steel contains cobalt for increased hot hardness. The composition of HSCo is a good combination of toughness and hardness. It has good machinability and good wear resistance, which makes it usable for drills, taps, milling cutters and reamers.
Sintered Cobalt High Speed Steel	**HSS-E PM**	Sintered Cobalt High Speed Steel (HSCo powder metal) is a substrate produced using powder metallurgy technology. Tools using substrates produced by this method exhibit superior toughness and grindability.

	Grade	Hardness (HV10)	C %	W %	Mo %	Cr %	V %	Co %	Tool Material
HSS	M2	810 – 850	0.9	6.4	5.0	4.2	1.8	–	HSS
HSS-E	M35	830 – 870	0.93	6.4	5.0	4.2	1.8	4.8	HSCO
	M42	870 – 960	1.08	1.5	9.4	3.9	1.2	8.0	
HSS-E PM	ASP 2017	860 – 900	0.8	3.0	3.0	4.0	1.0	8.0	HSCO Powder Metal
	ASP 2030	870 – 910	1.28	6.4	5.0	4.2	3.1	8.5	
	ASP 2052	870 – 910	1.6	10.5	2.0	4.8	5.0	8.0	

HM materials

Carbide Materials (or Hard Materials)	HM	A sintered powder metallurgy substrate, consisting of a metallic carbide composite with binder metal. The most central raw material is tungsten carbide (WC). Tungsten carbide contributes to the hardness of the material. Tantalum carbide (TaC), titanium carbide (TiC) and niobium carbide (NbC) complements WC and adjusts the properties to what is desired. These three materials are called cubic carbides. Cobalt (Co) acts as a binder and keeps the material together. Carbide materials are often characterised by high compression strength, high hardness and therefore high wear resistance, but also by limited flexural strength and toughness. Carbide is used in taps, reamers, milling cutters, drills and thread milling cutters.

Properties	HSS materials	HM materials	K10/30F (often used for solid tools)
Hardness (HV30)	800 – 950	1300 – 1800	1600
Density (g/cm^3)	8.0 – 9.0	7.2 – 15.0	14.45
Compressive strength (N/mm^2)	3000 – 4000	3000 – 8000	6250
Flexural strength, (bending) (N/mm^2)	2500 – 4000	1000 – 4700	4300
Heat resistance (°C)	550	1000	900
E-module (KN/mm^2)	260 – 300	460 – 630	580
Grain size (µm)	–	0.2 – 10.0	0.8

The combination of hard particle (WC) and binder metal (Co) give the following changes in characteristics.

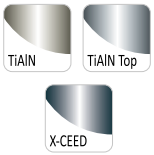
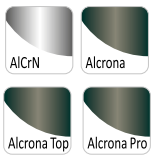
Characteristic	Higher WC content give	Higher Co content give
Hardness	Higher hardness	Lower hardness
Compressive strength (CS)	Higher CS	Lower CS
Bending strength (BS)	Lower BS	Higher BS

Grain size also influences the material properties. Small grain sizes means higher hardness and coarse grains give more toughness.

Surface Treatments

Bright (uncoated)		Bright finish (uncoated surface) improves chip flow in soft or non-ferrous materials and maintains sharp cutting edges in abrasive materials.
Steam Tempering		Steam tempering gives a strongly adhering blue oxide surface that acts to retain cutting fluid and prevent chip to tool welding, thereby counteracting the formation of a built-up edge. Steam tempering can be applied to any bright tool but is most effective on drills and taps.

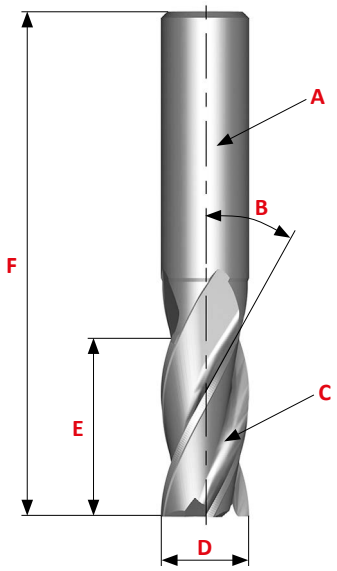
Surface Coatings

Titanium Carbon Nitride Coating (TiCN)		Titanium Carbon Nitride is a ceramic coating applied by PVD coating technology. TiCN is harder than TiN and has a lower coefficient of friction. Its hardness and toughness in combination with good wear resistance ensures that it finds its principal application in the field of milling to enhance the performance of milling cutters.
Titanium Aluminium Nitride Coatings (TiAlN, TiAlN-Top & X-CEED)		Titanium Aluminium Nitride is a multi layer ceramic coating applied by PVD coating technology, which exhibits high toughness and oxidation stability. These properties make it ideal for higher speeds and feeds, while at the same time improving tool life. TiAlN is used in drilling, tapping, and milling applications and can be suitable for use when machining without coolant. TiAlN-Top coating is the same as TiAlN but with a post-coating process designed to smooth out imperfections, enhance chip flow and reduce built up edge. X-CEED type TiAlN coating, also known as Futura-Nano coating is a nanolayered coating designed for higher hot hardness and higher stress applications.
Aluminium Titanium Nitride Coating (AlTiN)		Aluminium Titanium Nitride (AlTiN) is a nanolayered broad based coating technology which is an upgrade to the conventional TiAlN coatings and can offer superior toughness, high hot hardness and oxidation resistance.
Alcrona Coatings (AlCrN, Alcrona, Alcrona-Top & Alcrona-Pro)		The Alcrona (AlCrN) family of coatings are aluminium chromium nitride coatings mostly used for milling cutters. The two unique properties of these coatings are high hot hardness and high oxidation resistance. When used on tools for machining applications involving heavy mechanical and thermal stresses, these properties translate into superior wear resistance. Multiple levels or specific versions of these coatings are available and specific for various tools and applications.
Titanium Silicon Nitride Coating (TiSiN)		TiSiN is designed for extreme cutting conditions and high speed machining of hard materials. This multi-layered coating has a nano-composite outer layer with Si3N4 nano-crystallites in a crystalline TiN matrix and is engineered to protect the cutting edge from heat transfer, oxidation and abrasion. TiSiN coatings can perform well at minimum to zero lubrication conditions.

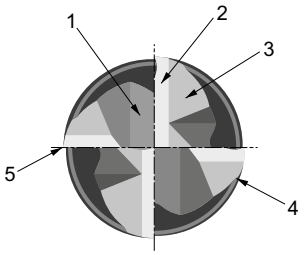
Surface treatment / Coating properties examples

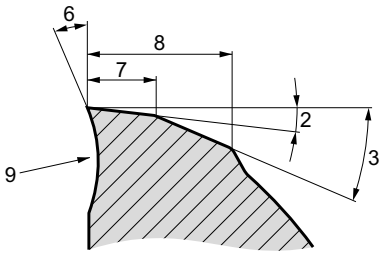
Surface Treaments	Color	Coating material	Hardness [HV]	Thickness [µm]	Coating structure	Frict. coeff. against steel	Max. appl. temp. [°C]
ST	Dark grey	Fe_3O_4	400	max. 5	Conversion into the surface	–	550
TiCN	Blue grey	TiCN	3000	1 – 4	Multi-layer gradient	0.4	500
TiAlN	Black grey	TiAlN	3300	3	Nano structured	0.3 – 0.35	900
AlCrN	Blue grey	AlCrN	3200	–	Mono-layer	0.35	1100

Nomenclature



A Shank
B Helix Angle
C Flute
D Outside Diameter (DC)
E Cutting Length (AP)
F Overall Length (OAL)

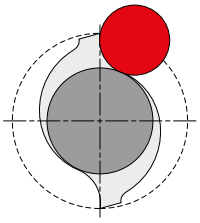
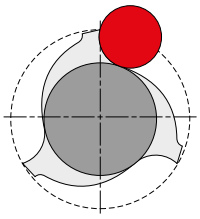
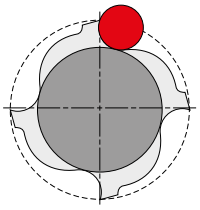




1 Gash
2 Primary Relief Angle
3 Secondary Relief Angle
4 Heel
5 Cutting Edge
6 Rake Angle
7 Width of Primary Relief Land
8 Width of Secondary Relief Land
9 Undercut Face

Features Of The End Mill - Choosing The Number Of Flutes (NOF)

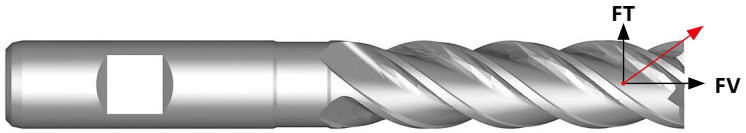
Number of flutes should be determined by:
- Milled material
- Dimension of workpiece
- Milling conditions

2 Flutes	3 Flutes	4 Flutes (or multi-flutes)
		
LOW ← **DEFLECTION STRENGTH** → **HIGH**		
BIG ← **CHIP SPACE** → **SMALL**		
• Large chip space. • Easy chip ejection. • Good for slot milling. • Good for heavy duty milling. • Less rigidity due to small section area. • Lower quality surface finish	• Chip space almost as large as for 2 flutes. • Larger section area - higher rigidity than 2 flutes • Improved surface finish	• Highest rigidity. • Largest section area – small chip space. • Gives best surface finish. • Recommended for profiling, side milling and shallow slotting.

Features Of The End Mill – Helix Angle

Increasing the number of flutes makes the load on the single tooth more homogeneous and consequently, this allows for a better finish. But with a high helix angle, the load (FV) along the cutter axis is increased too.

A high FV can give:
- Load problems on the spindle bearings
- Cutter movement along the spindle axis. To avoid this problem it is necessary to use Weldon or better Mechanical or Hydraulical Toolholder.

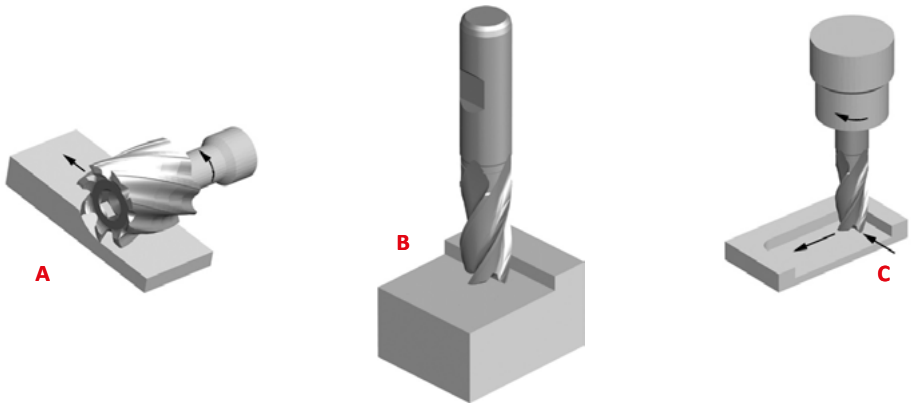


General hints on milling

Milling is a process of generating machined surfaces by progressively removing a predetermined amount of material or stock from the workpiece at a relatively slow rate of movement or feed by a milling cutter rotating at a comparatively high speed.
The characteristic feature of the milling process is that each milling cutter tooth removes its share of the stock in the form of small individual chips.

Type of milling cutters

The three basic milling operations are shown below: (**A**) peripheral milling, (**B**) face milling and (**C**) end milling.



In peripheral milling (also called slab milling), the axis of cutter rotation is parallel to the workpiece surface to be machined. The cutter has a number of teeth along its circumference, each tooth acting like a single-point cutting tool called a plain mill. Cutters used in peripheral milling may have straight or helical teeth generating an orthogonal or oblique cutting action.

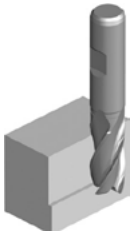
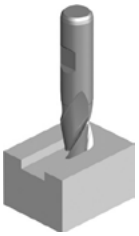
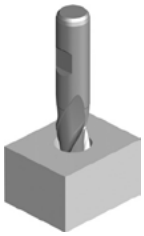
In face milling, the cutter is mounted on a spindle with an axis of rotation perpendicular to the workpiece surface. The milled surface results from the action of cutting edges located on the periphery and face of the cutter.

In end milling, the cutter generally rotates on an axis vertical to the workpiece. It can be tilted to machine tapered surfaces. Cutting teeth are located on both the end face of the cutter and the periphery of the cutter body.

Different applications for end mills

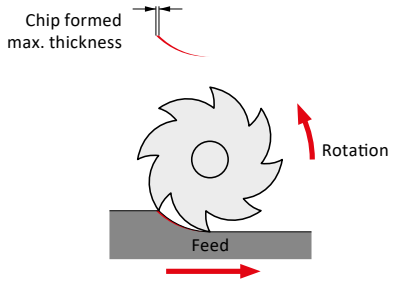
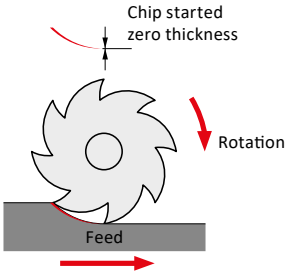
The Metal Removal Rate (MRR) and the applications are strongly related. For each different application we have a different MRR that increases with the engagement section of the cutter on the workpiece.

The recent Dormer catalogue was produced with simple icons that show the different applications.

Side Milling	Face Milling	Slot Milling	Plunge Milling	Ramping
				
The radial depth of cut should be less than 0.25 of the diameter of the end mill.	The radial depth of cut should be no more than 0.9 of the diameter, axial depth of cut less than 0.1 of the diameter.	Machining of a slot for keyways. The radial depth of cut is equal to the diameter on the end mill.	It is possible to drill the workpiece with an end mill only with the cutting centre. In this operation the feed has to be halved.	Both axial and radial entering into the workpiece.

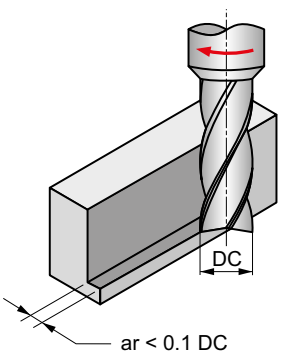
Milling Effectively

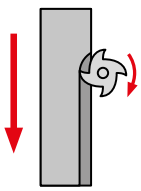
Types Of Cuts
Climb Milling Versus Conventional Milling

CLIMB MILLING	CONVENTIONAL MILLING
	
In climb milling, the cutter revolves in the same direction as the table feed. The tooth meets the work at the top of the cut, producing the thickest part of the chip first. In horizontal applications the resultant force created by climb milling can act as a clamping force, acting towards the machine table. It is important to make sure that the machine tool has no leadscrew backlash. Normally climb milling improves product surface finish and increases tool life.	In conventional milling, the cutter revolves opposite to the direction of table feed. Therefore the width of the chip starts at zero and increases to a maximum at the end of the cut. This can lead to accelerated tool wear under some conditions. Conventional milling may be advantageous when milling hot rolled steel, surface hardened and steels with a surface scale.

PERIPHERAL (CYLINDRICAL, SLAB) MILLING

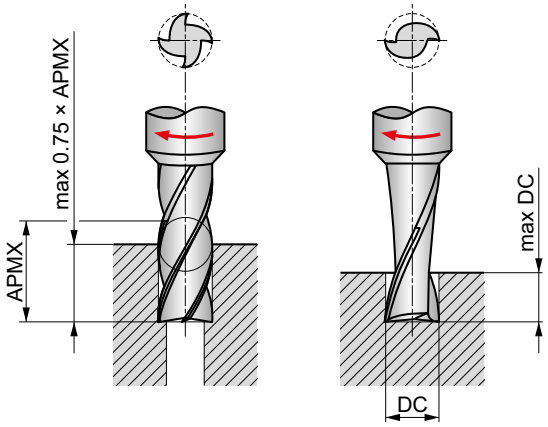
Peripheral Milling The milling of a surface which is parallel to the end mill axis.





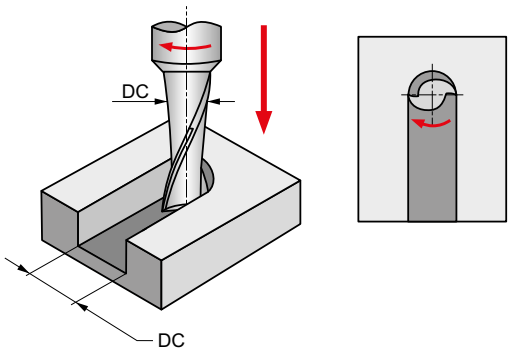
The radial depth of cut should be less than 0.1 of the diameter of the mill: ar < 0.1 DC.

Plunge Milling The direct movement between the workpiece and the centre line of the end mill when the end mill sinks directly into the workpiece.



In order to be able to “drill,” i.e. mill with axial feed, an end mill must have an end face cutting edge that goes all the way to the centre. An example of such a solid drilling operation is keyway milling in the middle of a shaft.
In boring, the depth of a hole may be up to 75 % of the cutting edge length. In solid drilling, however, it should not exceed 0.5 – 1.0 DC.

Slot Milling



The radial depth of cut is equal to the diameter of the mill: $a_r = DC$.
All slotting applications are a combination of conventional and climb milling. Refer to adjacent section.

End Mill Selection

Utilize the shortest possible tool available for the application with the largest diameter permissible and the shortest flute length as depth of cut allows. Extra length end mills have excessive overhang, thus a reduction in feed up to 25 % may be required. Stub length end mills, due to their short overall and flute length, have more rigidity, thus an increase in feed rates of up to 25 % may be required.

Speeds

Solid Carbide end mills must be run at higher speeds than High Speed Steel end mills. Many times, lighter cuts at higher speeds can improve the finish of the workpiece.
When the application is a slotting cut, the speed should be reduced by approximately 20 %. Speeds should be decreased when milling hard or tough materials or when taking heavy cuts. Speeds should be increased when milling softer materials or when taking lighter cuts. Speeds should also be increased for finishing cuts.

Coolants

Coolants are recommended when milling mild steel and high temperature alloys. The purpose of the coolant media is to direct the chips away from the cutting tool and workpiece. This prevents damage to the cutting edges due to recutting the chips. When machining titanium, coolant flow must be heavy and directed at the area of cut to prevent overheating and assist in chip removal.

Milling Terminology/Operating Formulas

The following terms and formulas can be used to determine the appropriate operating parameters.

Formulas (Metric)			Terms			Formulas (Imperial)
$V_c = \frac{n \times DC \times \pi}{1000}$	v_c	[m/min]	**Cutting speed**	SFM	[ft/min]	$SFM = \frac{RPM \times DC \times \pi}{12}$
$n = \frac{v_c \times 1000}{DC \times \pi}$	n	[rev/min]	**Spindle speed**	RPM	[rev/min]	$RPM = \frac{SFM \times 12}{DC \times \pi}$
$V_f = f_z \times z \times n$	V_f	[mm/min]	**Feed rate**	IPM	[in/min]	$IPM = IPT \times T \times RPM$
$f_z = \frac{V_f}{z \times n}$	f_z	[mm/z]	**Feed per tooth**	IPT	[in/T]	$IPT = \frac{IPM}{T \times RPM}$
$Q = \frac{V_f \times APMX\ FFW \times APMX\ EFW}{1000}$	DC	[mm]	**Cutting diameter**	DC	[in]	$MRR = IPM \times DOC \times WOC$
	z	[–]	**Number of teeth**	T	[–]	
	$APMX\ FFW$	[mm]	**Depth of cut**	DOC	[in]	
	$APMX\ EFW$	[mm]	**Width of cut**	WOC	[in]	
	Q	[cm^3/min]	**Metal removal rate**	MRR	in^3/min	

Problem	Solution	
Chipping of the Cutting Edge	• Try air blow or coolant • Reduce depth of cut • Check amount of wear on collet • Reduce feed per tooth • If wet cutting, change to dry cutting	• Check tool runout • Improve the stability of the work-holding
Extreme Flank Wear	• Use coated end mill • If conventional milling, change to climb • If using water soluble cutting fluid, change to non-water soluble cutting fluid • Use a tool with a larger helix angle	• If conventional milling, change to climb
Vibration/Chattering	• Use larger diameter end mill • Increase feed per tooth • Increase helix angle • Reduce length of flutes or overhang • Reduce cutting speed	• Check or change the holder • Increase number of flutes • Tighten chuck or use stronger chuck
Deflection	• Reduce depth of cut • Increase feed per tooth • Increase helix angle • If using water soluble cutting fluid, change to non-water soluble cutting fluid	• Use larger diameter end mill • Reduce length of flutes or overhang • If using 2-flute type, change to 4-flute type • If climb milling, change to conventional milling
Poor Surface Finish	• Reduce end mill runout • Increase cutting speed • Reduce feed per tooth • Increase helix angle • Increase number of flutes	• Increase volume of air or cutting fluid • Reduce depth of cut • If dry cutting, change to wet cutting
Waviness	• Reduce helix angle • Check end mill runout • Reduce depth of cut • Check or change the holder	
End Mill Fracturing	• Reduce depth of cut • Reduce feed per tooth • Reduce length of flutes or overhang • If chip jamming occurs, reduce the number of flutes	
Poor Chip Disposal	• Use air blow • Reduce depth of cut • Reduce feed per tooth • Reduce the number of flutes • Increase volume of air or cutting fluid	• Increase cutting speed
Burring Workpiece Chipping	• Reduce helix angle • Reduce feed per tooth • Reduce depth of cut	
Chip Welding	• Use coolant • Use coated end mill • Increase volume of cutting fluid • Increase helix angle	

ROTARY BURRS

6		WMG & ISO 13399
10	SOLID MILLS	INSTRUCTIONS
19	SOLID MILLS	HM MILLS
117	SOLID MILLS	HSS-E-PM, HSS-E, HSS MILLS
201	SOLID MILLS	TECHNICAL INFORMATION
212		**ROTARY BURRS**
292		THREAD MILLS
314	INDEXABLE MILLS	INSTRUCTIONS
328	INDEXABLE MILLS	NAVIGATORS
349	INDEXABLE MILLS	FACE MILLS
409	INDEXABLE MILLS	SQUARE SHOULDER MILLS
479	INDEXABLE MILLS	DEEP SHOULDER MILLS
508	INDEXABLE MILLS	SLOT MILLS
521	INDEXABLE MILLS	COPY MILLS
613	INDEXABLE MILLS	HIGH FEED MILLS (HFC)
645	INDEXABLE MILLS	CHAMFER & T-SLOT MILLS
667	INDEXABLE MILLS	OTHER INSERTS
691	INDEXABLE MILLS	TECHNICAL INFORMATION

CARBIDE ROTARY BURRS

Our range of carbide rotary burrs is a high quality and comprehensive program. This includes a variety of designs and shapes to offer an ideal option for the majority of applications in all major industry segments.

FEATURES AND BENEFITS

- The combination of premium grade materials for both the shank and head, with the precise production process, results in the creation of a consistent and secure program of tools.
- Each CUT STYLE has been designed to be the first choice for high performance machining in the relevant material. This includes steels (ST CUT), stainless steels (VA CUT), non-ferrous materials and plastics (ALUMINIUM CUT), superalloys (AS CUT), fibreglass and composite materials (GRP CUT), and general machining (DC CUT).

SHANK

- Toughened and hardened steel shanks
- Provides rigidity and strength
- Prevents bending and reduces vibration, resulting in improved tool life
- Ground to h6 (carbide) and h7 (steel) for improved holding

BRAZING

- Special brazing elements provide excellent braze strength
- Excellent impact strength to withstand high forces
- Able to withstand higher temperature without failing

CUT STYLES

ST CUT

First choice for high performance machining of **Steels**

- Material specific chip breaker design for higher machining output on steel parts
- Positive geometry, ensures smooth surface finish
- Creates less temperature which helps increase tool life

VA CUT

First choice for high performance machining of **Stainless steels**

- Sharp cutting geometry, reducing the onset of work-hardening
- Increases metal removal rate

ALUMINIUM CUT

First choice for **Non ferrous materials and Plastics**

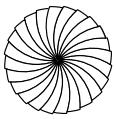
- High helix and large flute volume for rapid metal removal

CARBIDE ROTARY BURRS

BALL NOSE GEOMETRY

- Skip flute grinding
- Increased strength at the centre
- Reduced chance of swarf congestion
- Improved cutting action closer to the centre

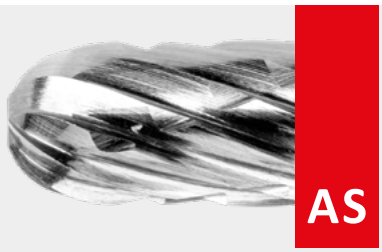
Skip



Normal

TiAlN COATING

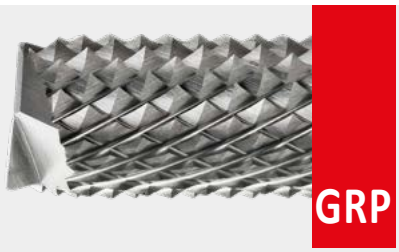
- Increased tool life in difficult conditions
- Reduced friction improves swarf evacuation
- Helps resist “built-up edge” common with cutting tools with small flute volumes



AS CUT

First choice for **Superalloys**

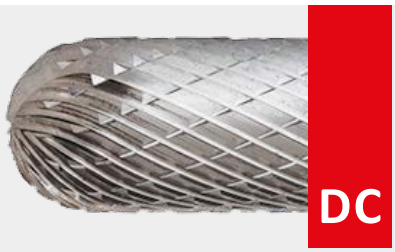
- Ergonomic
- High quality surface finish
- Fast and smooth cutting action



GRP CUT

First choice for **Fibreglass and Composite materials**

- Available with Drill Point and End Mill styles
- Designed to reduce splintering and improve entry and exit surface quality



DOUBLE CUT

First choice for **General machining**

- Improves ease of control
- Increases metal removal rate

CARBIDE ROTARY BURRS

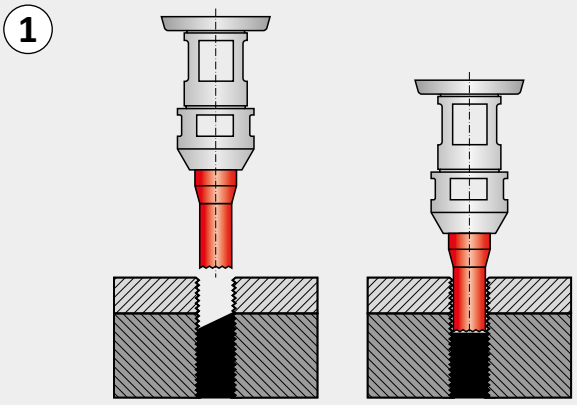
FOR BOLT REMOVAL

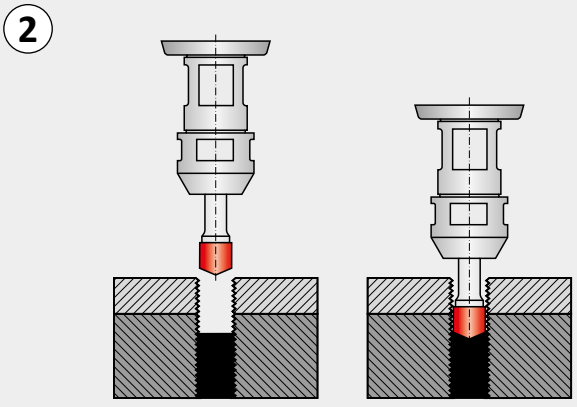
A specially designed range of burrs to prepare the surface of broken bolts to improve drill location and prevent damaging the threaded hole and component.

FEATURES AND BENEFITS

- Specific diameters and cutting lengths to suit various thread diameters
- Long reach and tapered shanks for easy access
- Developed cutting geometry for machining high tensile materials
- Reduces potential damage to existing threaded holes
- Improves drill location, ensuring damaged bolt is drilled on centre
- Prevents potential scrappage of component
- Highly consistent quality

OPERATIONS





CUT STYLES

PLAIN CYLINDER WITH END CUT

150° COUNTERSINK

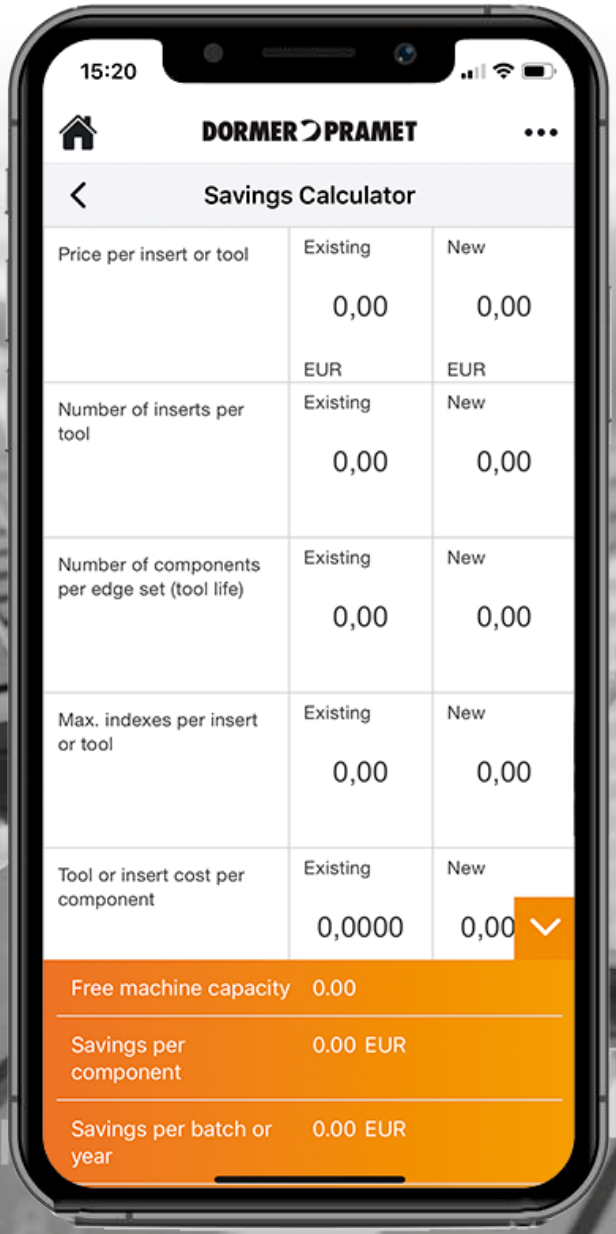
HOW TO USE THE TOOLS

- Choose the correct size burr for the broken bolt
- Use a right-handed die grinder
- Ensure the burr is perpendicular to the broken bolt
- Grind the broken surface flat – Operation ①
- Grind into the prepared surface to form a countersink location at the centre point of the bolt – Operation ②

DORMER PRAMET

POCKET SAVER

Our machining calculator allows you to measure the savings based on different products and applications. A useful pocket-sized tool, which will help keep cash in your pockets! **Simply Reliable.**



Download on the App Store

GET IT ON Google Play

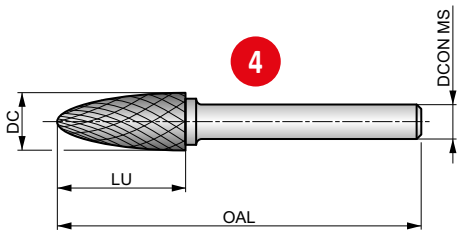
Download on AppGallery

1 **P811**

DORMER

Rotary Burr - Ball Nosed Tree, Shape F, Bright Finish 2

DC double cut flute style with close spaced edges for multi-angle contouring, rounding of edges and cutting into hard to reach areas. Carbide design for cutting diameter up to 6 mm; above 6 mm carbide head with toughened and hardened steel shank.



Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■	■	■	■	■	■	■	■	■	■	■	■	■	■
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
■	■	■	■	■	■	■	■	■	■	■	■	■	■
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N3.1**	**N3.2**	**N3.3**
■	■	■	■	■	■	■	■	■	■	■	■	■	◪
S1.1	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**	**H1.1**	**H2.1**	**H2.2**	**H3.1**	**H3.2**
■	■	■	■	■	■	■	■	■	■	■	■	■	■
H4.1	**H4.2**												
■	■												

7

DC≤6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.
Products from this series are also available in set. Please see P880 or P890.

8 t	DC [mm]	DCON MS [mm]	9 LU [mm]	OAL [mm]
P8113.0X3.0	3.00	3.00	14.00	38.0
P8116.3X3.0	6.30	3.00	12.70	45.0
P8116.0X6.0	6.00	6.00	18.00	50.0
P8118.0X6.0	8.00	6.00	20.00	65.0
P8119.6X6.0	9.60	6.00	19.00	64.0
P81112.7X6.0	12.70	6.00	25.00	70.0
P81116.0X6.0	16.00	6.00	25.00	70.0

Typical page with rotary burrs displayed – specific page details will differ.

ROTARY BURRS – PAGE OVERVIEW

Pos.	Description
1	Designation of rotary burrs
2	Product description
3	Illustrative picture
4	Schematic drawing of tool
5	Product features

Pos.	Description
6	Deburring operations
7	Material group recommendations
8	Product code
9	Product dimensions

ROTARY BURRS – ICONS OVERVIEW

General Icons

■	Primary use
◪	Possible use

Material Code (BMC)

HM	Hard Material (Solid Carbide)

Burr Shape

A	Cylinder Shape without endcut
B	Cylinder Shape with endcut
C	Ball Nosed Cylinder Shape
D	Ball Shape
E	Oval Shape
F	Ball Nosed Tree Shape
G	Pointed Tree Shape
H	Flame Shape
J	60° Countersink Shape
K	90° Countersink Shape
L	Ball Nosed Cone Shape
M	Cone Shape
N	Inverted Cone Shape

Burr End Shot

	Drill Point Burr End
	End Cut Burr End
	End Mill Burr End

Coating

Bright	Bright (uncoated)
TiAlN	Titanium Aluminium Nitride Coating

ROTARY BURRS – ICONS OVERVIEW

Application Angle

	60° Countersink
	90° Countersink
	Drill Point 135°
	Drill Point 180°
	Spot Drill Point 150°

Burr Cut Flute Style (BTC)

DC	Double Cut Geometry
ST	Steel Cut Geometry
VA	Stainless Steel Cut Geometry
AL	Aluminium Cut Geometry
GRP	Fibreglass and Composite Materials Cut Geometry
BR	Bolt Removal Cut Geometry
AS	Superalloy Cut Geometry

Basic Standard Group (BSG)

	Dormer Standards

Operations Deburring

Deburring - Bolt removal operation 1	Curved surface deburring and carving	Inverted back deburring
Deburring - Bolt removal operation 2	Fillet radii deburring	Plain surface deburring
Closed groove deburring and carving	Free hand deburring and carving	Shoulder deburring
Composite fibre routing	Chamfer deburring	V-groove deburring

Other Icons

	Bolt size

HM materials

Carbide Materials (or Hard Materials)	HM	A sintered powder metallurgy substrate, consisting of a metallic carbide composite with binder metal. The most central raw material is tungsten carbide (WC). Tungsten carbide contributes to the hardness of the material. Tantalum carbide (TaC), titanium carbide (TiC) and niobium carbide (NbC) complements WC and adjusts the properties to what is desired. These three materials are called cubic carbides. Cobalt (Co) acts as a binder and keeps the material together. Carbide materials are often characterised by high compression strength, high hardness and therefore high wear resistance, but also by limited flexural strength and toughness. Carbide is used in taps, reamers, milling cutters, drills and thread milling cutters.

ROTARY BURRS – SURFACE AND TREATMENTS COATINGS NAVIGATOR

Surface Treatments

Bright (uncoated)		Bright finish (uncoated surface) improves chip flow in soft or non-ferrous materials and maintains sharp cutting edges in abrasive materials.

Surface Coatings

Titanium Aluminium Nitride Coating (TiAlN)		Titanium Aluminium Nitride is a multi layer ceramic coating applied by PVD coating technology, which exhibits high toughness and oxidation stability. These properties make it ideal for higher speeds and feeds, while at the same time improving tool life. TiAlN is used in drilling, tapping, and milling applications and can be suitable for use when machining without coolant.

Material code (BMC)		HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM
Burr Shape		A	A	B	B	C	C	D	D	E	F	F	G	G
Burr end shot														
Coating		Bright	TiAlN	Bright	TiAlN	Bright	TiAlN	Bright	TiAlN	Bright	Bright	TiAlN	Bright	TiAlN
Application angle														
Burr Type Code (BTC)		DC	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC
Basic standard group (BSG)		DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER
Product Family Code		P801	P801C	P803	P803C	P805	P805C	P807	P807C	P809	P811	P811C	P813	P813C
		3.00 - 16.00	3.00 - 12.70	3.00 - 16.00	3.00 - 12.70	3.00 - 16.00	3.00 - 12.70	3.00 - 16.00	3.00 - 12.70	3.00 - 16.00	3.00 - 16.00	3.00 - 12.70	3.00 - 16.00	3.00 - 12.70
		230	231	232	233	234	235	236	237	238	239	240	241	242
P	P1	■	■	■	■	■	■	■	■	■	■	■	■	■
	P2	■	■	■	■	■	■	■	■	■	■	■	■	■
	P3	■	■	■	■	■	■	■	■	■	■	■	■	■
	P4	■	■	■	■	■	■	■	■	■	■	■	■	■
M	M1	■	■	■	■	■	■	■	■	■	■	■	■	■
	M2	■	■	■	■	■	■	■	■	■	■	■	■	■
	M3	■	■	■	■	■	■	■	■	■	■	■	■	■
	M4	■	■	■	■	■	■	■	■	■	■	■	■	■
K	K1	■	■	■	■	■	■	■	■	■	■	■	■	■
	K2	■	■	■	■	■	■	■	■	■	■	■	■	■
	K3	■	■	■	■	■	■	■	■	■	■	■	■	■
	K4	■	■	■	■	■	■	■	■	■	■	■	■	■
	K5	■	■	■	■	■	■	■	■	■	■	■	■	■
N	N1													
	N2													
	N3	■	■	■	■	■	■	■	■	■	■	■	■	■
	N4													
	N5													
S	S1	■	■	■	■	■	■	■	■	■	■	■	■	■
	S2	■	■	■	■	■	■	■	■	■	■	■	■	■
	S3	■	■	■	■	■	■	■	■	■	■	■	■	■
	S4	■	■	■	■	■	■	■	■	■	■	■	■	■
H	H1	■	■	■	■	■	■	■	■	■	■	■	■	■
	H2	■	■	■	■	■	■	■	■	■	■	■	■	■
	H3	■	■	■	■	■	■	■	■	■	■	■	■	■
	H4	■	■	■	■	■	■	■	■	■	■	■	■	■

■ Primary use ◪ Possible use

	P815	P815C	P817	P819	P821	P821C	P823	P825	P701	P703	P705	P707	P709	P711	P713
	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM
	H	H	J	K	L	L	M	N	A	B	C	D	E	F	G
	Bright	TiAlN	Bright	Bright	Bright	TiAlN	Bright	Bright	Bright	Bright	Bright	Bright	Bright	Bright	Bright
			60°	90°											
	DC	DC	DC	DC	DC	DC	DC	DC	ST	ST	ST	ST	ST	ST	ST
	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER
	3.00 - 16.00	8.00 - 12.70	3.00 - 16.00	3.00 - 16.00	3.00 - 16.00	3.00 - 12.70	3.00 - 16.00	3.00 - 16.00	6.00 - 12.70	6.00 - 12.70	6.00 - 12.70	6.00 - 12.70	12.70	6.00 - 12.70	6.00 - 12.70
	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257
P1	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
P2	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
P3	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
P4	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
M1	■	■	■	■	■	■	■	■							
M2	■	■	■	■	■	■	■	■							
M3	■	■	■	■	■	■	■	■							
M4	■	■	■	■	■	■	■	■							
K1	■	■	■	■	■	■	■	■							
K2	■	■	■	■	■	■	■	■							
K3	■	■	■	■	■	■	■	■							
K4	■	■	■	■	■	■	■	■							
K5	■	■	■	■	■	■	■	■							
N1															
N2															
N3	■	■	■	■	■	■	■	■							
N4															
N5															
S1	■	■	■	■	■	■	■	■							
S2	■	■	■	■	■	■	■	■							
S3	■	■	■	■	■	■	■	■							
S4	■	■	■	■	■	■	■	■							
H1	■	■	■	■	■	■	■	■							
H2	■	■	■	■	■	■	■	■							
H3	■	■	■	■	■	■	■	■							
H4	■	■	■	■	■	■	■	■							

■ Primary use ◪ Possible use

Material code (BMC)		HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM
Burr Shape		H	L	A	C	D	E	F	G	H	L	A	B	C
Burr end shot														
Coating		Bright	Bright	Bright	Bright	Bright	Bright	Bright	Bright	Bright	Bright	Bright	Bright	Bright
Application angle														
Burr Type Code (BTC)		ST	ST	VA	VA	VA	VA	VA	VA	VA	VA	AL	AL	AL
Basic standard group (BSG)		DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER
Product Family Code		P715	P721	P601	P605	P607	P609	P611	P613	P615	P621	P831	P833	P835
		8.00 - 12.70	10.00 - 12.70	3.00 - 12.70	3.00 - 12.70	3.00 - 12.70	8.00 - 12.70	3.00 - 12.70	6.00 - 12.70	8.00 - 12.70	8.00 - 12.70	6.00 - 12.70	6.00 - 12.70	6.00 - 12.70
		258	259	260	261	262	263	264	265	266	267	268	269	270
P	P1	■	■											
	P2	■	■											
	P3	■	■											
	P4	■	■											
M	M1			■	■	■	■	■	■	■	■			
	M2			■	■	■	■	■	■	■	■			
	M3			■	■	■	■	■	■	■	■			
	M4			■	■	■	■	■	■	■	■			
K	K1									◪				
	K2													
	K3													
	K4			◪	◪	◪	◪	◪	◪	◪	◪			
	K5													
N	N1											■	■	■
	N2											■	■	■
	N3											◪	◪	◪
	N4											■	■	■
	N5													
S	S1											◪	◪	◪
	S2													
	S3													
	S4													
H	H1													
	H2													
	H3													
	H4													

■ Primary use ◪ Possible use

	P837	P841	P842	P501	P505	P507	P509	P511	P513	P515	P521	P523	P843	P844	P100
	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM
	D	F	L	A	C	D	E	F	G	H	L	M			
	Bright	Bright	Bright	Bright	Bright	Bright	Bright	Bright	Bright	Bright	Bright	Bright	Bright	Bright	Bright
													135°	180°	
	AL	AL	AL	AS	AS	AS	AS	AS	AS	AS	AS	AS	GRP	GRP	BR
	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER
	6.00 - 12.70	6.00 - 12.70	6.00 - 12.70	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00 - 8.00	3.00 - 8.00	4.90 - 10.70
	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285
P1															■
P2															■
P3															■
P4															■
M1															■
M2															■
M3				◪	◪	◪	◪	◪	◪	◪	◪	◪			■
M4				◪	◪	◪	◪	◪	◪	◪	◪	◪			
K1															
K2															
K3															
K4															
K5															
N1	■	■	■												
N2	■	■	■												
N3	◪	◪	◪												
N4	■	■	■										■	■	
N5															
S1	◪	◪	◪	■	■	■	■	■	■	■	■	■			
S2				■	■	■	■	■	■	■	■	■			
S3				■	■	■	■	■	■	■	■	■			
S4				■	■	■	■	■	■	■	■	■			
H1															
H2															
H3															
H4															

■ Primary use ◪ Possible use

Material code (BMC)		HM											
Burr Shape													
Burr end shot													
Coating		Bright											
Application angle		150°											
Burr Type Code (BTC)		BR											
Basic standard group (BSG)		DORMER											
Product Family Code		P101	P880	P890									
		4.90 - 10.70	Set	Set									
		286	287	288									
P	P1	■											
	P2	■											
	P3	■											
	P4	■											
M	M1	■											
	M2	■											
	M3	■											
	M4												
K	K1												
	K2												
	K3												
	K4												
	K5												
N	N1												
	N2												
	N3												
	N4												
	N5												
S	S1												
	S2												
	S3												
	S4												
H	H1												
	H2												
	H3												
	H4												

■ Primary use ◪ Possible use

RECOMMENDED OPERATING SPEED (RPM)

AL DC

ISO		RPM						
		DC [mm]						
		3	6	8	10	12	16	20
P	min	64 000	32 000	24 000	20 000	16 000	12 000	10 000
	max	83 000	42 000	32 000	25 000	21 000	16 000	13 000
M	min	45 000	23 000	17 000	14 000	12 000	9 000	7 000
	max	64 000	32 000	24 000	20 000	16 000	12 000	10 000
K	min	58 000	29 000	22 000	19 000	15 000	11 000	9 000
	max	77 000	39 000	29 000	23 000	20 000	15 000	12 000
N	min	64 000	32 000	24 000	20 000	16 000	12 000	10 000
	max	96 000	48 000	36 000	29 000	24 000	18 000	15 000
S	min	45 000	23 000	17 000	14 000	12 000	9 000	7 000
	max	58 000	29 000	22 000	18 000	15 000	11 000	9 000
H	min	51 000	26 000	20 000	16 000	13 000	10 000	8 000
	max	71 000	36 000	27 000	22 000	18 000	14 000	11 000

ST BR

ISO		RPM				
		DC [mm]				
		3	6	8	10	12
P	min	100 000	65 000	60 000	55 000	35 000
	max	60 000	45 000	35 000	30 000	20 000

VA BR

ISO		RPM				
		DC [mm]				
		3	6	8	10	12
M	min	100 000	65 000	60 000	55 000	35 000
	max	60 000	30 000	25 000	20 000	15 000

GRP

ISO		RPM		
		DC [mm]		
		3	6	8
N4	min	25 000	20 000	18 000
	max	30 000	25 000	22 000

AS

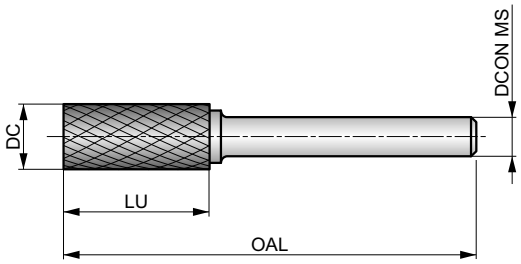
ISO		RPM
		DC [mm]
		3
S	min	60 000
	max	80 000

P801

DORMER

Rotary Burr - Cylinder without endcut, Shape A, Bright Finish

DC double cut flute style with close spaced edges for trimming and deburring surfaces. Carbide design for cutting diameter up to 6 mm; above 6 mm carbide head with toughened and hardened steel shank.



HM | A | Bright

DC | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

P1.1 ■	P1.2 ■	P1.3 ■	P2.1 ■	P2.2 ■	P2.3 ■	P3.1 ■	P3.2 ■	P3.3 ■	P4.1 ■	P4.2 ■	P4.3 ■	M1.1 ■	M1.2 ■
M2.1 ■	M2.2 ■	M2.3 ■	M3.1 ■	M3.2 ■	M3.3 ■	M4.1 ■	M4.2 ■	K1.1 ■	K1.2 ■	K1.3 ■	K2.1 ■	K2.2 ■	K2.3 ■
K3.1 ■	K3.2 ■	K3.3 ■	K4.1 ■	K4.2 ■	K4.3 ■	K4.4 ■	K4.5 ■	K5.1 ■	K5.2 ■	K5.3 ■	N3.1 ■	N3.2 ■	N3.3 ◪
S1.1 ■	S1.2 ■	S1.3 ■	S2.1 ■	S2.2 ■	S3.1 ■	S3.2 ■	S4.1 ■	S4.2 ■	H1.1 ■	H2.1 ■	H2.2 ■	H3.1 ■	H3.2 ■
H4.1 ■	H4.2 ■												

DC≤6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.
Products from this series are also available in set. Please see P880.

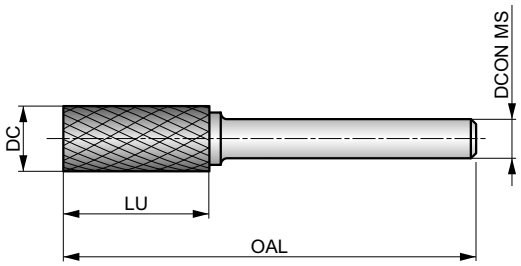
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P8013.0X3.0	3.00	3.00	14.00	38.0
P8016.3X3.0	6.30	3.00	12.70	45.0
P8016.0X6.0	6.00	6.00	18.00	50.0
P8018.0X6.0	8.00	6.00	19.00	64.0
P8019.6X6.0	9.60	6.00	19.00	64.0
P80112.7X6.0	12.70	6.00	25.00	70.0
P80116.0X6.0	16.00	6.00	25.00	70.0

P801C

DORMER

Rotary Burr - Cylinder without endcut, Shape A, TiAlN Coating

DC double cut flute style with close spaced edges for trimming and deburring surfaces. Carbide design for cutting diameter up to 6 mm; above 6 mm carbide head with toughened and hardened steel shank. TiALN coating for increased tool life, reduced friction and improved swarf evacuation.



HM | A | TiAlN

DC | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

P1.1 ■	P1.2 ■	P1.3 ■	P2.1 ■	P2.2 ■	P2.3 ■	P3.1 ■	P3.2 ■	P3.3 ■	P4.1 ■	P4.2 ■	P4.3 ■	M1.1 ■	M1.2 ■
M2.1 ■	M2.2 ■	M2.3 ■	M3.1 ■	M3.2 ■	M3.3 ■	M4.1 ■	M4.2 ■	K1.1 ■	K1.2 ■	K1.3 ■	K2.1 ■	K2.2 ■	K2.3 ■
K3.1 ■	K3.2 ■	K3.3 ■	K4.1 ■	K4.2 ■	K4.3 ■	K4.4 ■	K4.5 ■	K5.1 ■	K5.2 ■	K5.3 ■	N3.1 ■	N3.2 ■	N3.3 ◪
S1.1 ■	S1.2 ■	S1.3 ■	S2.1 ■	S2.2 ■	S3.1 ■	S3.2 ■	S4.1 ■	S4.2 ■	H1.1 ■	H2.1 ■	H2.2 ■	H3.1 ■	H3.2 ■
H4.1 ■	H4.2 ■												

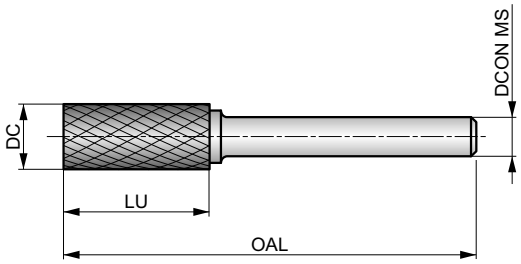
DC≤6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.

Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P801C3.0X3.0	3.00	3.00	14.00	38.0
P801C6.0X6.0	6.00	6.00	18.00	50.0
P801C8.0X6.0	8.00	6.00	19.00	64.0
P801C9.6X6.0	9.60	6.00	19.00	64.0
P801C12.7X6.0	12.70	6.00	25.00	70.0

P803

Rotary Burr - Cylinder with endcut, Shape B, Bright Finish

DC double cut flute style with close spaced edges for trimming and deburring surfaces and right-angled corners. Carbide design for cutting diameter up to 6 mm; above 6 mm carbide head with toughened and hardened steel shank.



HM | B | Bright | DC | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

P1.1 ■	P1.2 ■	P1.3 ■	P2.1 ■	P2.2 ■	P2.3 ■	P3.1 ■	P3.2 ■	P3.3 ■	P4.1 ■	P4.2 ■	P4.3 ■	M1.1 ■	M1.2 ■
M2.1 ■	M2.2 ■	M2.3 ■	M3.1 ■	M3.2 ■	M3.3 ■	M4.1 ■	M4.2 ■	K1.1 ■	K1.2 ■	K1.3 ■	K2.1 ■	K2.2 ■	K2.3 ■
K3.1 ■	K3.2 ■	K3.3 ■	K4.1 ■	K4.2 ■	K4.3 ■	K4.4 ■	K4.5 ■	K5.1 ■	K5.2 ■	K5.3 ■	N3.1 ■	N3.2 ■	N3.3 ◪
S1.1 ■	S1.2 ■	S1.3 ■	S2.1 ■	S2.2 ■	S3.1 ■	S3.2 ■	S4.1 ■	S4.2 ■	H1.1 ■	H2.1 ■	H2.2 ■	H3.1 ■	H3.2 ■
H4.1 ■	H4.2 ■												

DC≤6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.
Products from this series are also available in set. Please see P880 or P890.

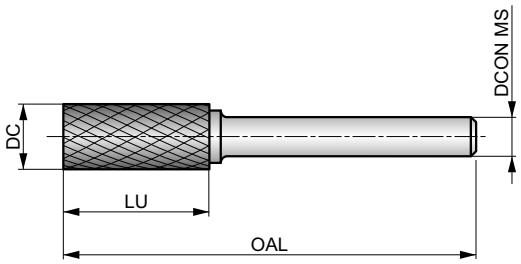
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P8033.0X3.0	3.00	3.00	14.00	38.0
P8036.3X3.0	6.30	3.00	12.70	45.0
P8036.0X6.0	6.00	6.00	18.00	50.0
P8038.0X6.0	8.00	6.00	19.00	64.0
P8039.6X6.0	9.60	6.00	19.00	64.0
P80312.7X6.0	12.70	6.00	25.00	70.0
P80316.0X6.0	16.00	6.00	25.00	70.0

P803C

DORMER

Rotary Burr - Cylinder with endcut, Shape B, TiAlN Coating

DC double cut flute style with close spaced edges for trimming and deburring surfaces and right-angled corners. Carbide design for cutting diameter up to 6 mm; above 6 mm carbide head with toughened and hardened steel shank. TiALN coating for increased tool life, reduced friction and improved swarf evacuation.



HM | B | TiAlN | DC | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■	■	■	■	■	■	■	■	■	■	■	■	■	■
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
■	■	■	■	■	■	■	■	■	■	■	■	■	■
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N3.1**	**N3.2**	**N3.3**
■	■	■	■	■	■	■	■	■	■	■	■	■	◪
S1.1	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**	**H1.1**	**H2.1**	**H2.2**	**H3.1**	**H3.2**
■	■	■	■	■	■	■	■	■	■	■	■	■	■
H4.1	**H4.2**												
■	■												

DC≤6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.
Products from this series are also available in set. Please see P880.

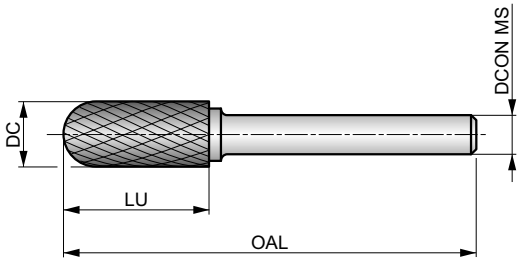
Product	DC	DCON MS	LU	OAL
	[mm]	[mm]	[mm]	[mm]
P803C3.0X3.0	3.00	3.00	14.00	38.0
P803C6.0X6.0	6.00	6.00	18.00	50.0
P803C8.0X6.0	8.00	6.00	19.00	64.0
P803C9.6X6.0	9.60	6.00	19.00	64.0
P803C12.7X6.0	12.70	6.00	25.00	70.0

P805

DORMER

Rotary Burr - Ball Nosed Cylinder, Shape C, Bright Finish

DC double cut flute style with close spaced edges for trimming and deburring contours and circular arcs. Carbide design for cutting diameter up to 6 mm; above 6 mm carbide head with toughened and hardened steel shank.



HM | C | Bright

DC | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

P1.1 ■	P1.2 ■	P1.3 ■	P2.1 ■	P2.2 ■	P2.3 ■	P3.1 ■	P3.2 ■	P3.3 ■	P4.1 ■	P4.2 ■	P4.3 ■	M1.1 ■	M1.2 ■
M2.1 ■	M2.2 ■	M2.3 ■	M3.1 ■	M3.2 ■	M3.3 ■	M4.1 ■	M4.2 ■	K1.1 ■	K1.2 ■	K1.3 ■	K2.1 ■	K2.2 ■	K2.3 ■
K3.1 ■	K3.2 ■	K3.3 ■	K4.1 ■	K4.2 ■	K4.3 ■	K4.4 ■	K4.5 ■	K5.1 ■	K5.2 ■	K5.3 ■	N3.1 ■	N3.2 ■	N3.3 ◪
S1.1 ■	S1.2 ■	S1.3 ■	S2.1 ■	S2.2 ■	S3.1 ■	S3.2 ■	S4.1 ■	S4.2 ■	H1.1 ■	H2.1 ■	H2.2 ■	H3.1 ■	H3.2 ■
H4.1 ■	H4.2 ■												

DC≤6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.
Products from this series are also available in set. Please see P880 or P890.

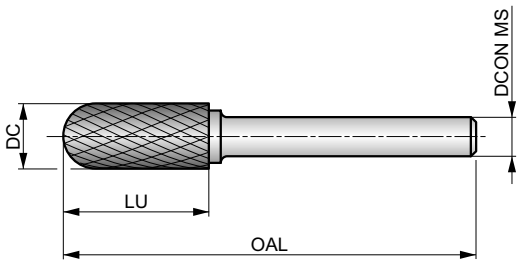
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P8053.0X3.0	3.00	3.00	14.00	38.0
P8056.3X3.0	6.30	3.00	12.70	45.0
P8056.0X6.0	6.00	6.00	18.00	50.0
P8058.0X6.0	8.00	6.00	19.00	64.0
P8059.6X6.0	9.60	6.00	19.00	64.0
P80512.7X6.0	12.70	6.00	25.00	70.0
P80516.0X6.0	16.00	6.00	25.00	70.0

P805C

DORMER

Rotary Burr - Ball Nosed Cylinder, Shape C, TiAlN Coating

DC double cut flute style with close spaced edges for trimming and deburring contours and circular arcs. Carbide design for cutting diameter up to 6 mm; above 6 mm carbide head with toughened and hardened steel shank. TiALN coating for increased tool life, reduced friction and improved swarf evacuation.



HM | C | TiAlN

DC | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■	■	■	■	■	■	■	■	■	■	■	■	■	■
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
■	■	■	■	■	■	■	■	■	■	■	■	■	■
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N3.1**	**N3.2**	**N3.3**
■	■	■	■	■	■	■	■	■	■	■	■	■	◪
S1.1	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**	**H1.1**	**H2.1**	**H2.2**	**H3.1**	**H3.2**
■	■	■	■	■	■	■	■	■	■	■	■	■	■
H4.1	**H4.2**												
■	■												

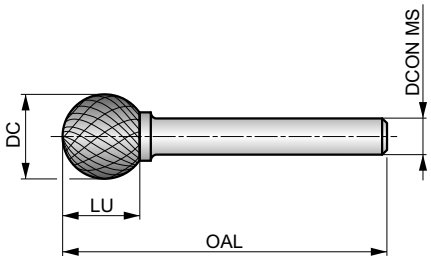
DC≤6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.
Products from this series are also available in set. Please see P880.

Product	DC	DCON MS	LU	OAL
	[mm]	[mm]	[mm]	[mm]
P805C3.0X3.0	3.00	3.00	14.00	38.0
P805C6.0X6.0	6.00	6.00	18.00	50.0
P805C8.0X6.0	8.00	6.00	19.00	64.0
P805C9.6X6.0	9.60	6.00	19.00	64.0
P805C12.7X6.0	12.70	6.00	25.00	70.0

P807

Rotary Burr - Ball, Shape D, Bright Finish

DC double cut flute style with close spaced edges for intricate carving, metal engraving and welding preparation. Carbide design for cutting diameter up to 6 mm; above 6 mm carbide head with toughened and hardened steel shank.



HM	D	Bright
DC	DORMER	

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

P1.1 ■	P1.2 ■	P1.3 ■	P2.1 ■	P2.2 ■	P2.3 ■	P3.1 ■	P3.2 ■	P3.3 ■	P4.1 ■	P4.2 ■	P4.3 ■	M1.1 ■	M1.2 ■
M2.1 ■	M2.2 ■	M2.3 ■	M3.1 ■	M3.2 ■	M3.3 ■	M4.1 ■	M4.2 ■	K1.1 ■	K1.2 ■	K1.3 ■	K2.1 ■	K2.2 ■	K2.3 ■
K3.1 ■	K3.2 ■	K3.3 ■	K4.1 ■	K4.2 ■	K4.3 ■	K4.4 ■	K4.5 ■	K5.1 ■	K5.2 ■	K5.3 ■	N3.1 ■	N3.2 ■	N3.3 ◪
S1.1 ■	S1.2 ■	S1.3 ■	S2.1 ■	S2.2 ■	S3.1 ■	S3.2 ■	S4.1 ■	S4.2 ■	H1.1 ■	H2.1 ■	H2.2 ■	H3.1 ■	H3.2 ■
H4.1 ■	H4.2 ■												

DC≤6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.
Products from this series are also available in set. Please see P880.

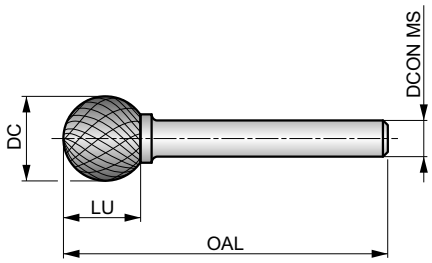
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P8073.0X3.0	3.00	3.00	2.50	38.0
P8074.0X3.0	4.00	3.00	3.40	38.0
P8076.3X3.0	6.30	3.00	5.00	38.0
P8076.0X6.0	6.00	6.00	4.70	50.0
P8078.0X6.0	8.00	6.00	6.00	52.0
P8079.6X6.0	9.60	6.00	8.00	54.0
P80712.7X6.0	12.70	6.00	11.00	56.0
P80716.0X6.0	16.00	6.00	14.00	59.0

P807C

DORMER

Rotary Burr - Ball, Shape D, TiAlN Coating

DC double cut flute style with close spaced edges for intricate carving, metal engraving and welding preparation. Carbide design for cutting diameter up to 6 mm; above 6 mm carbide head with toughened and hardened steel shank. TiALN coating for increased tool life, reduced friction and improved swarf evacuation.



HM | D | TiAlN

DC | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■	■	■	■	■	■	■	■	■	■	■	■	■	■
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
■	■	■	■	■	■	■	■	■	■	■	■	■	■
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N3.1**	**N3.2**	**N3.3**
■	■	■	■	■	■	■	■	■	■	■	■	■	◪
S1.1	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**	**H1.1**	**H2.1**	**H2.2**	**H3.1**	**H3.2**
■	■	■	■	■	■	■	■	■	■	■	■	■	■
H4.1	**H4.2**												
■	■												

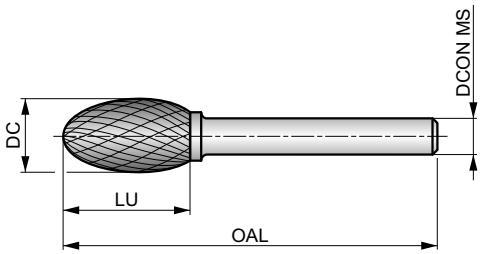
DC≤6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.
Products from this series are also available in set. Please see P880.

Product	DC	DCON MS	LU	OAL
	[mm]	[mm]	[mm]	[mm]
P807C3.0X3.0	3.00	3.00	2.50	38.0
P807C6.0X6.0	6.00	6.00	4.70	50.0
P807C8.0X6.0	8.00	6.00	6.00	52.0
P807C9.6X6.0	9.60	6.00	8.00	54.0
P807C12.7X6.0	12.70	6.00	11.00	56.0

P809

Rotary Burr - Oval, Shape E

DC double cut flute style with close spaced edges for round edge contouring. Carbide design for cutting diameter up to 6 mm; above 6 mm carbide head with toughend and hardened steel shank.



HM	E	Bright
DC	DORMER	

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

P1.1 ■	P1.2 ■	P1.3 ■	P2.1 ■	P2.2 ■	P2.3 ■	P3.1 ■	P3.2 ■	P3.3 ■	P4.1 ■	P4.2 ■	P4.3 ■	M1.1 ■	M1.2 ■
M2.1 ■	M2.2 ■	M2.3 ■	M3.1 ■	M3.2 ■	M3.3 ■	M4.1 ■	M4.2 ■	K1.1 ■	K1.2 ■	K1.3 ■	K2.1 ■	K2.2 ■	K2.3 ■
K3.1 ■	K3.2 ■	K3.3 ■	K4.1 ■	K4.2 ■	K4.3 ■	K4.4 ■	K4.5 ■	K5.1 ■	K5.2 ■	K5.3 ■	N3.1 ■	N3.2 ■	N3.3 ◪
S1.1 ■	S1.2 ■	S1.3 ■	S2.1 ■	S2.2 ■	S3.1 ■	S3.2 ■	S4.1 ■	S4.2 ■	H1.1 ■	H2.1 ■	H2.2 ■	H3.1 ■	H3.2 ■
H4.1 ■	H4.2 ■												

DC≤6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.
Products from this series are also available in set. Please see P880.

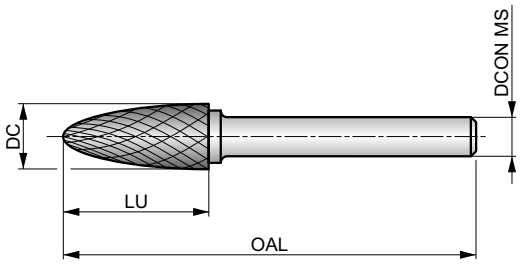
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P8093.0X3.0	3.00	3.00	6.00	38.0
P8096.3X3.0	6.30	3.00	9.50	42.0
P8096.0X6.0	6.00	6.00	10.00	50.0
P8098.0X6.0	8.00	6.00	15.00	60.0
P8099.6X6.0	9.60	6.00	16.00	60.0
P80912.7X6.0	12.70	6.00	22.00	67.0
P80916.0X6.0	16.00	6.00	25.00	70.0

P811

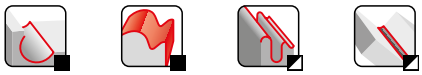
DORMER

Rotary Burr - Ball Nosed Tree, Shape F, Bright Finish

DC double cut flute style with close spaced edges for multi-angle contouring, rounding of edges and cutting into hard to reach areas. Carbide design for cutting diameter up to 6 mm; above 6 mm carbide head with toughened and hardened steel shank.



HM	F	Bright
DC	DORMER	



Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

P1.1 ■	P1.2 ■	P1.3 ■	P2.1 ■	P2.2 ■	P2.3 ■	P3.1 ■	P3.2 ■	P3.3 ■	P4.1 ■	P4.2 ■	P4.3 ■	M1.1 ■	M1.2 ■
M2.1 ■	M2.2 ■	M2.3 ■	M3.1 ■	M3.2 ■	M3.3 ■	M4.1 ■	M4.2 ■	K1.1 ■	K1.2 ■	K1.3 ■	K2.1 ■	K2.2 ■	K2.3 ■
K3.1 ■	K3.2 ■	K3.3 ■	K4.1 ■	K4.2 ■	K4.3 ■	K4.4 ■	K4.5 ■	K5.1 ■	K5.2 ■	K5.3 ■	N3.1 ■	N3.2 ■	N3.3 ◪
S1.1 ■	S1.2 ■	S1.3 ■	S2.1 ■	S2.2 ■	S3.1 ■	S3.2 ■	S4.1 ■	S4.2 ■	H1.1 ■	H2.1 ■	H2.2 ■	H3.1 ■	H3.2 ■
H4.1 ■	H4.2 ■												

DC≤6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.
Products from this series are also available in set. Please see P880 or P890.

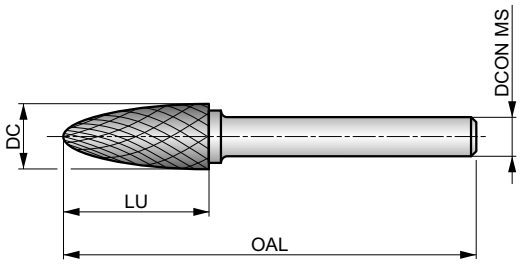
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P8113.0X3.0	3.00	3.00	14.00	38.0
P8116.3X3.0	6.30	3.00	12.70	45.0
P8116.0X6.0	6.00	6.00	18.00	50.0
P8118.0X6.0	8.00	6.00	20.00	65.0
P8119.6X6.0	9.60	6.00	19.00	64.0
P81112.7X6.0	12.70	6.00	25.00	70.0
P81116.0X6.0	16.00	6.00	25.00	70.0

P811C

DORMER

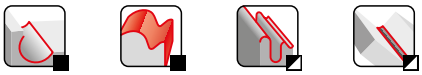
Rotary Burr - Ball Nosed Tree, Shape F, TiAlN Coating

DC double cut flute style with close spaced edges for multi-angle contouring, rounding of edges and cutting into hard to reach areas. Carbide design for cutting diameter up to 6 mm; above 6 mm carbide head with tough hard steel shank. TiALN coating for increased tool life, reduced friction and improved swarf evacuation.



HM | F | TiAlN

DC | DORMER



Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

P1.1 ■	P1.2 ■	P1.3 ■	P2.1 ■	P2.2 ■	P2.3 ■	P3.1 ■	P3.2 ■	P3.3 ■	P4.1 ■	P4.2 ■	P4.3 ■	M1.1 ■	M1.2 ■
M2.1 ■	M2.2 ■	M2.3 ■	M3.1 ■	M3.2 ■	M3.3 ■	M4.1 ■	M4.2 ■	K1.1 ■	K1.2 ■	K1.3 ■	K2.1 ■	K2.2 ■	K2.3 ■
K3.1 ■	K3.2 ■	K3.3 ■	K4.1 ■	K4.2 ■	K4.3 ■	K4.4 ■	K4.5 ■	K5.1 ■	K5.2 ■	K5.3 ■	N3.1 ■	N3.2 ■	N3.3 ◪
S1.1 ■	S1.2 ■	S1.3 ■	S2.1 ■	S2.2 ■	S3.1 ■	S3.2 ■	S4.1 ■	S4.2 ■	H1.1 ■	H2.1 ■	H2.2 ■	H3.1 ■	H3.2 ■
H4.1 ■	H4.2 ■												

DC≤6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.
Products from this series are also available in set. Please see P880.

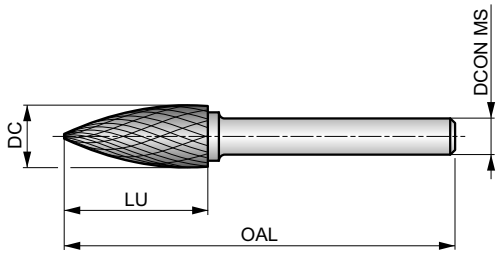
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P811C3.0X3.0	3.00	3.00	14.00	38.0
P811C6.0X6.0	6.00	6.00	18.00	50.0
P811C9.6X6.0	9.60	6.00	19.00	64.0
P811C12.7X6.0	12.70	6.00	25.00	70.0

P813

DORMER

Rotary Burr - Pointed Tree, Shape G, Bright Finish

DC double cut flute style with close spaced edges for multi-angle contouring and cutting narrow angles in hard to reach areas. Carbide design for cutting diameter up to 6 mm; above 6 mm carbide head with toughened and hardened steel shank.



HM	G	Bright
DC	DORMER	

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

P1.1 ■	P1.2 ■	P1.3 ■	P2.1 ■	P2.2 ■	P2.3 ■	P3.1 ■	P3.2 ■	P3.3 ■	P4.1 ■	P4.2 ■	P4.3 ■	M1.1 ■	M1.2 ■
M2.1 ■	M2.2 ■	M2.3 ■	M3.1 ■	M3.2 ■	M3.3 ■	M4.1 ■	M4.2 ■	K1.1 ■	K1.2 ■	K1.3 ■	K2.1 ■	K2.2 ■	K2.3 ■
K3.1 ■	K3.2 ■	K3.3 ■	K4.1 ■	K4.2 ■	K4.3 ■	K4.4 ■	K4.5 ■	K5.1 ■	K5.2 ■	K5.3 ■	N3.1 ■	N3.2 ■	N3.3 ◪
S1.1 ■	S1.2 ■	S1.3 ■	S2.1 ■	S2.2 ■	S3.1 ■	S3.2 ■	S4.1 ■	S4.2 ■	H1.1 ■	H2.1 ■	H2.2 ■	H3.1 ■	H3.2 ■
H4.1 ■	H4.2 ■												

DC≤6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.
Products from this series are also available in set. Please see P880 or P890.

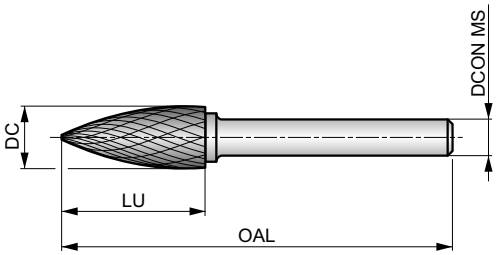
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P8133.0X3.0	3.00	3.00	14.00	38.0
P8136.3X3.0	6.30	3.00	12.70	45.0
P8136.0X6.0	6.00	6.00	18.00	50.0
P8138.0X6.0	8.00	6.00	19.00	64.0
P8139.6X6.0	9.60	6.00	19.00	64.0
P81312.7X6.0	12.70	6.00	25.00	70.0
P81316.0X6.0	16.00	6.00	25.00	70.0

P813C

DORMER

Rotary Burr - Pointed Tree, Shape G, TiAlN Coating

DC double cut flute style with close spaced edges for multi-angle contouring and cutting narrow angles in hard to reach areas. Carbide design for cutting diameter up to 6 mm; above 6 mm carbide head with tough hard steel shank. TiALN coating for increased tool life, reduced friction and improved swarf evacuation.



HM | G | TiAlN

DC | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■	■	■	■	■	■	■	■	■	■	■	■	■	■
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
■	■	■	■	■	■	■	■	■	■	■	■	■	■
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N3.1**	**N3.2**	**N3.3**
■	■	■	■	■	■	■	■	■	■	■	■	■	◪
S1.1	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**	**H1.1**	**H2.1**	**H2.2**	**H3.1**	**H3.2**
■	■	■	■	■	■	■	■	■	■	■	■	■	■
H4.1	**H4.2**												
■	■												

DC≤6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.
Products from this series are also available in set. Please see P880.

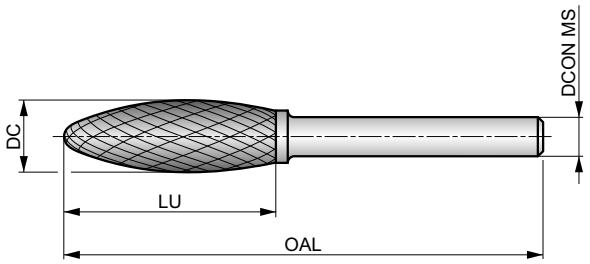
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P813C3.0X3.0	3.00	3.00	14.00	38.0
P813C6.0X6.0	6.00	6.00	18.00	50.0
P813C9.6X6.0	9.60	6.00	19.00	64.0
P813C12.7X6.0	12.70	6.00	25.00	70.0

P815

DORMER

Rotary Burr - Flame, Shape H, Bright Finish

DC double cut flute style with close spaced edges for round edge contouring and welding preparation. Carbide design for cutting diameter up to 6 mm; above 6 mm carbide head with toughened and hardened steel shank.



HM	H	Bright
DC	DORMER	

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

P1.1 ■	P1.2 ■	P1.3 ■	P2.1 ■	P2.2 ■	P2.3 ■	P3.1 ■	P3.2 ■	P3.3 ■	P4.1 ■	P4.2 ■	P4.3 ■	M1.1 ■	M1.2 ■
M2.1 ■	M2.2 ■	M2.3 ■	M3.1 ■	M3.2 ■	M3.3 ■	M4.1 ■	M4.2 ■	K1.1 ■	K1.2 ■	K1.3 ■	K2.1 ■	K2.2 ■	K2.3 ■
K3.1 ■	K3.2 ■	K3.3 ■	K4.1 ■	K4.2 ■	K4.3 ■	K4.4 ■	K4.5 ■	K5.1 ■	K5.2 ■	K5.3 ■	N3.1 ■	N3.2 ■	N3.3 ◪
S1.1 ■	S1.2 ■	S1.3 ■	S2.1 ■	S2.2 ■	S3.1 ■	S3.2 ■	S4.1 ■	S4.2 ■	H1.1 ■	H2.1 ■	H2.2 ■	H3.1 ■	H3.2 ■
H4.1 ■	H4.2 ■												

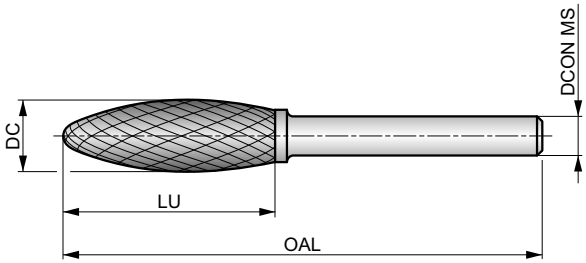
DC≤6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.
Products from this series are also available in set. Please see P880.

Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P8153.0X3.0	3.00	3.00	6.00	38.0
P8156.0X6.0	6.00	6.00	14.00	50.0
P8158.0X6.0	8.00	6.00	19.00	64.0
P8159.6X6.0	9.60	6.00	19.00	65.0
P81512.7X6.0	12.70	6.00	32.00	77.0
P81516.0X6.0	16.00	6.00	36.00	81.0

P815C

Rotary Burr - Flame, Shape H, TiAlN Coating

DC double cut flute style with close spaced edges for round edge contouring and welding preparation. Carbide head with toughened and hardened steel shank. TiALN coating for increased tool life, reduced friction and improved swarf evacuation.



HM | H | TiAlN

DC | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

P1.1 ■	P1.2 ■	P1.3 ■	P2.1 ■	P2.2 ■	P2.3 ■	P3.1 ■	P3.2 ■	P3.3 ■	P4.1 ■	P4.2 ■	P4.3 ■	M1.1 ■	M1.2 ■
M2.1 ■	M2.2 ■	M2.3 ■	M3.1 ■	M3.2 ■	M3.3 ■	M4.1 ■	M4.2 ■	K1.1 ■	K1.2 ■	K1.3 ■	K2.1 ■	K2.2 ■	K2.3 ■
K3.1 ■	K3.2 ■	K3.3 ■	K4.1 ■	K4.2 ■	K4.3 ■	K4.4 ■	K4.5 ■	K5.1 ■	K5.2 ■	K5.3 ■	N3.1 ■	N3.2 ■	N3.3 ◪
S1.1 ■	S1.2 ■	S1.3 ■	S2.1 ■	S2.2 ■	S3.1 ■	S3.2 ■	S4.1 ■	S4.2 ■	H1.1 ■	H2.1 ■	H2.2 ■	H3.1 ■	H3.2 ■
H4.1 ■	H4.2 ■												

Brazed on Steel Shank with DCON MS tolerance h7.

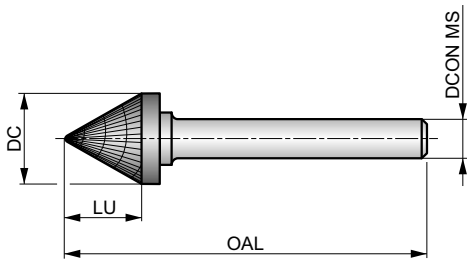
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P815C8.0X6.0	8.00	6.00	19.00	64.0
P815C12.7X6.0	12.70	6.00	32.00	77.0

P817

DORMER

Rotary Burr - 60° Countersink, Shape J

DC double cut flute style with close spaced edges for chamfering, making v-cuts and welding preparation. Carbide design for cutting diameter up to 6 mm; above 6 mm carbide head with toughened and hardened steel shank.



HM	J	Bright
60°	DC	DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■	■	■	■	■	■	■	■	■	■	■	■	■	■
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
■	■	■	■	■	■	■	■	■	■	■	■	■	■
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N3.1**	**N3.2**	**N3.3**
■	■	■	■	■	■	■	■	■	■	■	■	■	◪
S1.1	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**	**H1.1**	**H2.1**	**H2.2**	**H3.1**	**H3.2**
■	■	■	■	■	■	■	■	■	■	■	■	■	■
H4.1	**H4.2**												
■	■												

DC≤6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.

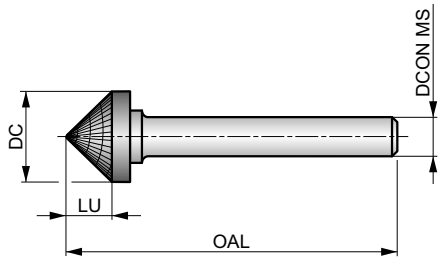
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P8173.0X3.0	3.00	3.00	2.50	38.0
P8176.0X6.0	6.00	6.00	4.00	50.0
P8179.6X6.0	9.60	6.00	8.00	56.0
P81712.7X6.0	12.70	6.00	11.00	59.0
P81716.0X6.0	16.00	6.00	14.50	63.0

P819

DORMER

Rotary Burr - 90° Countersink, Shape K

DC double cut flute style with close spaced edges for chamfering, making v-cuts and welding preparation. Carbide design for cutting diameter up to 6 mm; above 6 mm carbide head with toughened and hardened steel shank.



HM | K | Bright

90° | DC | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■	■	■	■	■	■	■	■	■	■	■	■	■	■

M2.1	M2.2	M2.3	M3.1	M3.2	M3.3	M4.1	M4.2	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3
■	■	■	■	■	■	■	■	■	■	■	■	■	■

K3.1	K3.2	K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N3.1	N3.2	N3.3
■	■	■	■	■	■	■	■	■	■	■	■	■	◪

S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2	S4.1	S4.2	H1.1	H2.1	H2.2	H3.1	H3.2
■	■	■	■	■	■	■	■	■	■	■	■	■	■

H4.1	H4.2
■	■

DC≤6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.

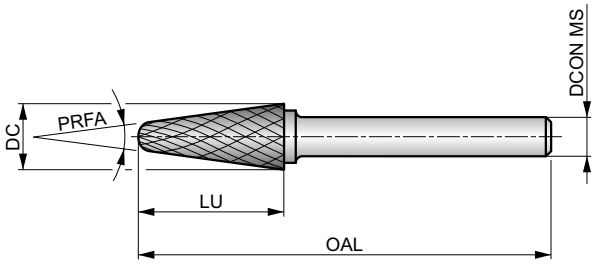
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P8193.0X3.0	3.00	3.00	1.50	38.0
P8196.0X6.0	6.00	6.00	3.00	50.0
P8199.6X6.0	9.60	6.00	4.70	53.0
P81912.7X6.0	12.70	6.00	6.30	55.0
P81916.0X6.0	16.00	6.00	8.00	57.0

P821

DORMER

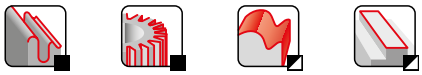
Rotary Burr - Ball Nosed Cone, Shape L, Bright Finish

DC double cut flute style with close spaced edges for enlarging holes, rounding edges and surface finishing in tight narrow angles or other hard to reach areas. Carbide design for cutting diameter up to 6 mm; above 6 mm carbide head with toughened and hardened steel shank.



HM | L | Bright

DC | DORMER



Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■	■	■	■	■	■	■	■	■	■	■	■	■	■
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
■	■	■	■	■	■	■	■	■	■	■	■	■	■
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N3.1**	**N3.2**	**N3.3**
■	■	■	■	■	■	■	■	■	■	■	■	■	◪
S1.1	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**	**H1.1**	**H2.1**	**H2.2**	**H3.1**	**H3.2**
■	■	■	■	■	■	■	■	■	■	■	■	■	■
H4.1	**H4.2**												
■	■												

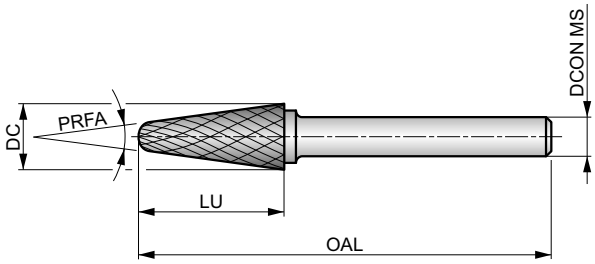
DC≤6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.
Products from this series are also available in set. Please see P880 or P890.

Product	DC	DCON MS	LU	OAL	PRFA
	[mm]	[mm]	[mm]	[mm]	[°]
P8213.0X3.0	3.00	3.00	14.00	38.0	8
P8216.0X6.0	6.00	6.00	18.00	50.0	14
P8218.0X6.0	8.00	6.00	25.40	70.0	14
P8219.6X6.0	9.60	6.00	30.00	76.0	14
P82112.7X6.0	12.70	6.00	32.00	77.0	14
P82116.0X6.0	16.00	6.00	33.00	78.0	14

P821C

Rotary Burr - Ball Nosed Cone, Shape L, TiAlN Coating

DC double cut flute style with close spaced edges for enlarging holes, rounding edges and surface finishing in tight narrow angles or other hard to reach areas. Carbide design for cutting diameter up to 6 mm; above 6 mm carbide head with toughened and hardened steel shank. TiALN coating for increased tool life.



HM | L | TiAlN

DC | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■	■	■	■	■	■	■	■	■	■	■	■	■	■
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
■	■	■	■	■	■	■	■	■	■	■	■	■	■
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N3.1**	**N3.2**	**N3.3**
■	■	■	■	■	■	■	■	■	■	■	■	■	◪
S1.1	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**	**H1.1**	**H2.1**	**H2.2**	**H3.1**	**H3.2**
■	■	■	■	■	■	■	■	■	■	■	■	■	■
H4.1	**H4.2**												
■	■												

DC≤6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.

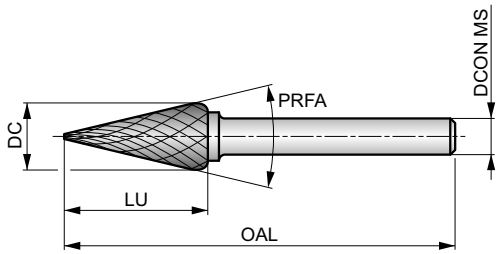
Product	DC	DCON MS	LU	OAL	PRFA
	[mm]	[mm]	[mm]	[mm]	[°]
P821C3.0X3.0	3.00	3.00	14.00	38.0	8
P821C12.7X6.0	12.70	6.00	32.00	77.0	14

P823

DORMER

Rotary Burr - Cone, Shape M

DC double cut flute style with close spaced edges for enlarging holes, surface finishing and cutting narrow angles in hard to reach areas. Carbide design for cutting diameter up to 6 mm; above 6 mm carbide head with toughened and hardened steel shank.



HM	M	Bright
DC	DORMER	

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

P1.1 ■	P1.2 ■	P1.3 ■	P2.1 ■	P2.2 ■	P2.3 ■	P3.1 ■	P3.2 ■	P3.3 ■	P4.1 ■	P4.2 ■	P4.3 ■	M1.1 ■	M1.2 ■
M2.1 ■	M2.2 ■	M2.3 ■	M3.1 ■	M3.2 ■	M3.3 ■	M4.1 ■	M4.2 ■	K1.1 ■	K1.2 ■	K1.3 ■	K2.1 ■	K2.2 ■	K2.3 ■
K3.1 ■	K3.2 ■	K3.3 ■	K4.1 ■	K4.2 ■	K4.3 ■	K4.4 ■	K4.5 ■	K5.1 ■	K5.2 ■	K5.3 ■	N3.1 ■	N3.2 ■	N3.3 ◪
S1.1 ■	S1.2 ■	S1.3 ■	S2.1 ■	S2.2 ■	S3.1 ■	S3.2 ■	S4.1 ■	S4.2 ■	H1.1 ■	H2.1 ■	H2.2 ■	H3.1 ■	H3.2 ■
H4.1 ■	H4.2 ■												

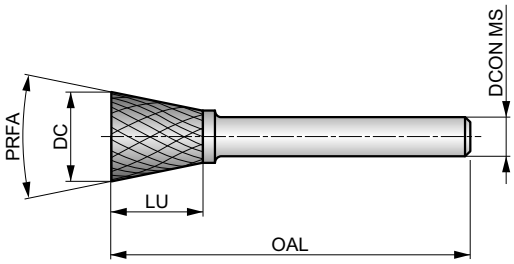
DC≤6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.
Products from this series are also available in set. Please see P880.

Product	DC	DCON MS	LU	OAL	PRFA
	[mm]	[mm]	[mm]	[mm]	[°]
P8233.0X3.0	3.00	3.00	11.00	38.0	14
P8236.3X3.0	6.30	3.00	12.70	49.0	22
P8236.0X6.0	6.00	6.00	20.00	50.0	14
P8239.6X6.0	9.60	6.00	16.00	64.0	28
P82312.7X6.0	12.70	6.00	22.00	71.0	28
P82316.0X6.0	16.00	6.00	25.00	71.0	31

P825

Rotary Burr - Inverted Cone, Shape N

DC double cut flute style with close spaced edges for making inverted v-cuts and rear side chamfering. Carbide design for cutting diameter up to 6 mm; above 6 mm carbide head with toughened and hardened steel shank.



HM | N | Bright

DC | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■	■	■	■	■	■	■	■	■	■	■	■	■	■

M2.1	M2.2	M2.3	M3.1	M3.2	M3.3	M4.1	M4.2	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3
■	■	■	■	■	■	■	■	■	■	■	■	■	■

K3.1	K3.2	K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N3.1	N3.2	N3.3
■	■	■	■	■	■	■	■	■	■	■	■	■	◪

S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2	S4.1	S4.2	H1.1	H2.1	H2.2	H3.1	H3.2
■	■	■	■	■	■	■	■	■	■	■	■	■	■

H4.1	H4.2
■	■

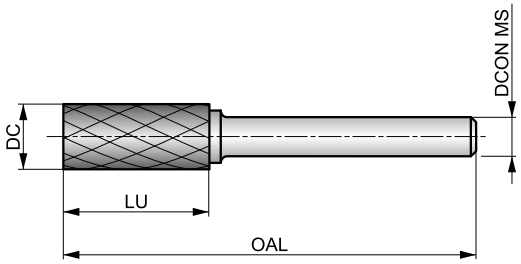
DC≤6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.

Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]	PRFA [°]
P8253.0X3.0	3.00	3.00	4.00	38.0	10
P8256.3X3.0	6.30	3.00	6.00	39.0	12
P8256.0X6.0	6.00	6.00	8.00	50.0	10
P8259.6X6.0	9.60	6.00	9.50	55.0	16
P82512.7X6.0	12.70	6.00	12.70	58.0	28
P82516.0X6.0	16.00	6.00	19.00	64.0	18

P701

Rotary Burr - Cylinder without endcut, Shape A

ST single cut flute style with chipbreakers and medium spaced edge for trimming and deburring surfaces. Carbide design for cutting diameter equal to 6 mm; above 6 mm carbide head with toughened and hardened steel shank. First choice for steels.



HM	A	Bright
ST	DORMER	

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3
■	■	■	■	■	■	■	■	■	■	■	■

DC=6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.

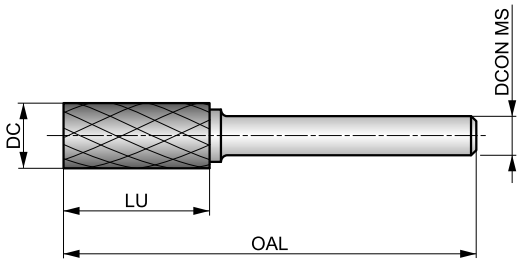
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P7016.0X6.0	6.00	6.00	18.00	50.0
P7018.0X6.0	8.00	6.00	19.00	64.0
P7019.6X6.0	9.60	6.00	19.00	64.0
P70112.7X6.0	12.70	6.00	25.00	70.0

P703

DORMER

Rotary Burr - Cylinder with endcut, Shape B

ST single cut flute style with chipbreakers and medium spaced edge for trimming and deburring surfaces and right-angled corners. Carbide design for cutting diameter equal to 6 mm; above 6 mm carbide head with toughened and hardened steel shank. First choice for steels.



HM | B | Bright | ST | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3
■	■	■	■	■	■	■	■	■	■	■	■

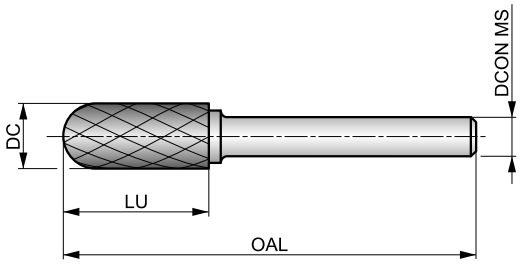
DC=6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.
Products from this series are also available in set. Please see P880.

Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P7036.0X6.0	6.00	6.00	18.00	50.0
P7038.0X6.0	8.00	6.00	19.00	64.0
P7039.6X6.0	9.60	6.00	19.00	64.0
P70312.7X6.0	12.70	6.00	25.00	70.0

P705

Rotary Burr - Ball Nosed Cylinder, Shape C

ST single cut flute style with chipbreakers and medium spaced edge for trimming and deburring contours and circular arcs. Carbide design for cutting diameter equal to 6 mm; above 6 mm carbide head with toughened and hardened steel shank. First choice for steels.



HM	C	Bright
ST	DORMER	

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3
■	■	■	■	■	■	■	■	■	■	■	■

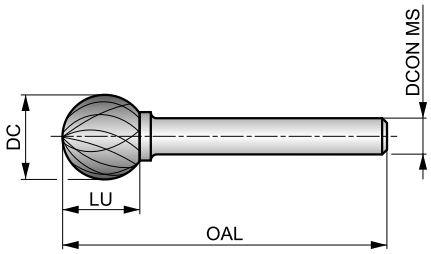
DC=6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.
Products from this series are also available in set. Please see P880.

Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P7056.0X6.0	6.00	6.00	18.00	50.0
P7058.0X6.0	8.00	6.00	19.00	64.0
P7059.6X6.0	9.60	6.00	19.00	64.0
P70512.7X6.0	12.70	6.00	25.00	70.0

P707

Rotary Burr - Ball, Shape D

ST single cut flute style with chipbreakers and medium spaced edge for intricate carving, metal engraving and welding preparation. Carbide design for cutting diameter equal to 6 mm; above 6 mm carbide head with toughened and hardened steel shank. First choice for steels.



HM | D | Bright

ST | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3
■	■	■	■	■	■	■	■	■	■	■	■

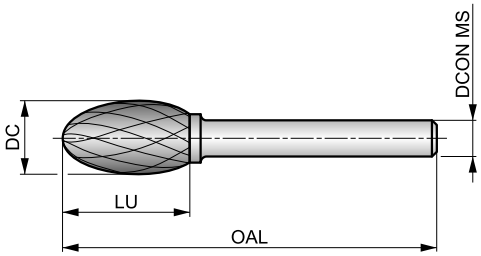
DC=6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.
Products from this series are also available in set. Please see P880.

Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P7076.0X6.0	6.00	6.00	4.70	50.0
P7078.0X6.0	8.00	6.00	6.00	52.0
P7079.6X6.0	9.60	6.00	8.00	54.0
P70712.7X6.0	12.70	6.00	11.00	56.0

P709

Rotary Burr - Oval, Shape E

ST single cut flute style with chipbreakers and medium spaced edge for round edge contouring. Carbide head with toughened and hardened steel shank. First choice for steels.



HM	E	Bright
ST	DORMER	

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3
■	■	■	■	■	■	■	■	■	■	■	■

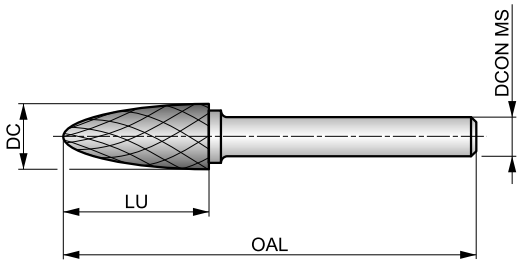
Brazed on Steel Shank with DCON MS tolerance h7.

Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P70912.7X6.0	12.70	6.00	22.00	67.0

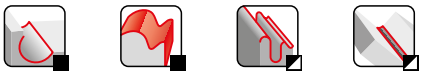
P711

Rotary Burr - Ball Nosed Tree, Shape F

ST single cut flute style with chipbreakers and medium spaced edge for multi-angle contouring, rounding of edges and cutting into hard to reach areas. Carbide design for cutting diameter equal to 6 mm; above 6 mm carbide head with toughend and hardened steel shank. First choice for steels.



HM	F	Bright
ST	DORMER	



Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3
■	■	■	■	■	■	■	■	■	■	■	■

DC=6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.
Products from this series are also available in set. Please see P880.

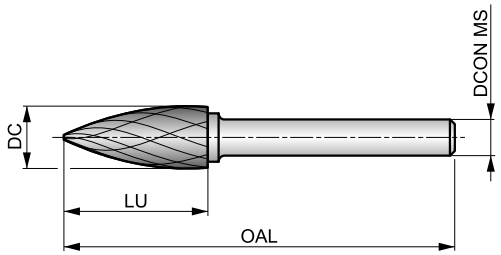
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P7116.0X6.0	6.00	6.00	18.00	50.0
P7118.0X6.0	8.00	6.00	20.00	65.0
P7119.6X6.0	9.60	6.00	19.00	64.0
P71112.7X6.0	12.70	6.00	25.00	70.0

P713

DORMER

Rotary Burr - Pointed Tree, Shape G

ST single cut flute style with chipbreakers and medium spaced edge for multi-angle contouring and cutting narrow angles in hard to reach areas. Carbide design for cutting diameter equal to 6 mm; above 6 mm carbide head with toughened and hardened steel shank. First choice for steels.



HM	G	Bright
ST	DORMER	

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3
■	■	■	■	■	■	■	■	■	■	■	■

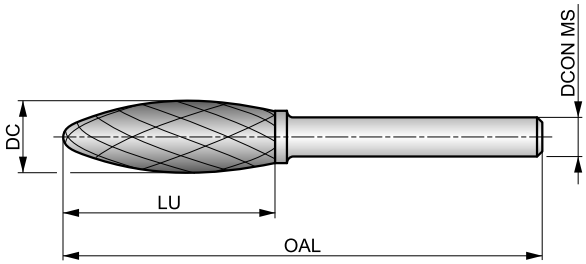
DC=6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.

Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P7136.0X6.0	6.00	6.00	18.00	50.0
P7138.0X6.0	8.00	6.00	19.00	64.0
P7139.6X6.0	9.60	6.00	19.00	64.0
P71312.7X6.0	12.70	6.00	25.00	70.0

P715

Rotary Burr - Flame, Shape H

ST single cut flute style with chipbreakers and medium spaced edge for round edge contouring and welding preparation. Carbide head with toughened and hardened steel shank. First choice for steels.



HM	H	Bright
ST	DORMER	

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3
■	■	■	■	■	■	■	■	■	■	■	■

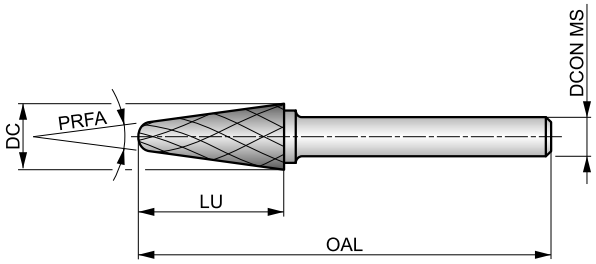
Brazed on Steel Shank with DCON MS tolerance h7.

Product	DC	DCON MS	LU	OAL
	[mm]	[mm]	[mm]	[mm]
P7158.0X6.0	8.00	6.00	19.00	64.0
P71512.7X6.0	12.70	6.00	32.00	77.0

P721

Rotary Burr - Ball Nosed Cone, Shape L

ST single cut flute style with chipbreakers and medium spaced edge for enlarging holes, rounding edges and surface-finishing in tight narrow angles or other hard to reach areas. Carbide head with toughened and hardened steel shank. First choice for steels.



HM	L	Bright
ST	DORMER	

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3
■	■	■	■	■	■	■	■	■	■	■	■

Brazed on Steel Shank with DCON MS tolerance h7.
Products from this series are also available in set. Please see P880.

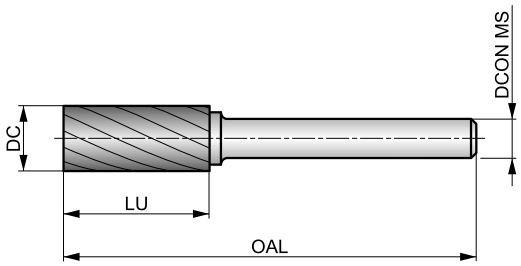
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]	PRFA [°]
P72110.0X6.0	10.00	6.00	20.00	65.0	14
P7219.6X6.0	9.60	6.00	30.00	76.0	14
P72112.7X6.0	12.70	6.00	32.00	77.0	14

P601

DORMER

Rotary Burr - Cylinder without endcut, Shape A

VA single cut flute style with medium spaced edges for trimming and deburring surfaces. Carbide design for cutting diameter up to 6 mm; above 6 mm carbide head with toughened and hardened steel shank. First choice for stainless steels.



HM	A	Bright
VA	DORMER	

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

M1.1	M1.2	M2.1	M2.2	M2.3	M3.1	M3.2	M3.3	M4.1	M4.2	K4.1	K4.2
■	■	■	■	■	■	■	■	■	■	◪	◪

DC≤6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.
Products from this series are also available in set. Please see P880.

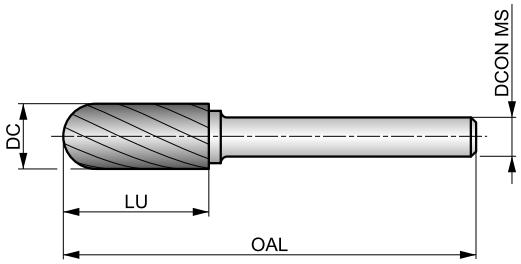
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P6013.0X3.0	3.00	3.00	14.00	38.0
P6016.3X3.0	6.30	3.00	12.70	45.0
P6016.0X6.0	6.00	6.00	18.00	50.0
P6018.0X6.0	8.00	6.00	19.00	64.0
P6019.6X6.0	9.60	6.00	19.00	64.0
P60112.7X6.0	12.70	6.00	25.00	70.0

P605

DORMER

Rotary Burr - Ball Nosed Cylinder, Shape C

VA single cut flute style with medium spaced edges for trimming and deburring contours and circular arcs. Carbide design for cutting diameter up to 6 mm; above 6 mm carbide head with toughened and hardened steel shank. First choice for stainless steels.



HM	C	Bright
VA	DORMER	

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

M1.1	M1.2	M2.1	M2.2	M2.3	M3.1	M3.2	M3.3	M4.1	M4.2	K4.1	K4.2
■	■	■	■	■	■	■	■	■	■	◪	◪

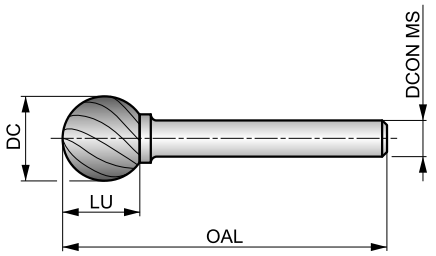
DC≤6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.
Products from this series are also available in set. Please see P880.

Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P6053.0X3.0	3.00	3.00	14.00	38.0
P6056.3X3.0	6.30	3.00	12.70	45.0
P6056.0X6.0	6.00	6.00	18.00	50.0
P6058.0X6.0	8.00	6.00	19.00	64.0
P6059.6X6.0	9.60	6.00	19.00	64.0
P60512.7X6.0	12.70	6.00	25.00	70.0

P607

Rotary Burr - Ball, Shape D

VA single cut flute style with medium spaced edges for intricate carving, metal engraving and welding preparation. Carbide design for cutting diameter up to 6 mm; above 6 mm carbide head with toughened and hardened steel shank. First choice for stainless steels.



HM | D | Bright

VA | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

M1.1	M1.2	M2.1	M2.2	M2.3	M3.1	M3.2	M3.3	M4.1	M4.2	K4.1	K4.2
■	■	■	■	■	■	■	■	■	■	◪	◪

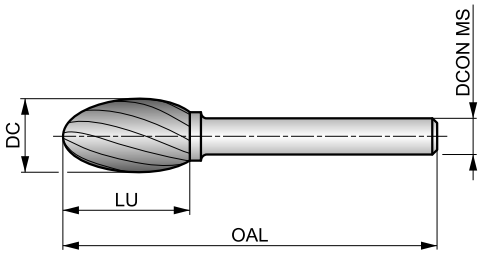
DC≤6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.
Products from this series are also available in set. Please see P880.

Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P6073.0X3.0	3.00	3.00	2.50	38.0
P6076.3X3.0	6.30	3.00	5.00	38.0
P6076.0X6.0	6.00	6.00	4.70	50.0
P6078.0X6.0	8.00	6.00	6.00	52.0
P6079.6X6.0	9.60	6.00	8.00	54.0
P60712.7X6.0	12.70	6.00	11.00	56.0

P609

Rotary Burr - Oval, Shape E

VA single cut flute style with medium spaced edges for round edge contouring. Carbide head with toughened and hardened steel shank. First choice for stainless steels.



HM	E	Bright
VA	DORMER	

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

M1.1	M1.2	M2.1	M2.2	M2.3	M3.1	M3.2	M3.3	M4.1	M4.2	K4.1	K4.2
■	■	■	■	■	■	■	■	■	■	◪	◪

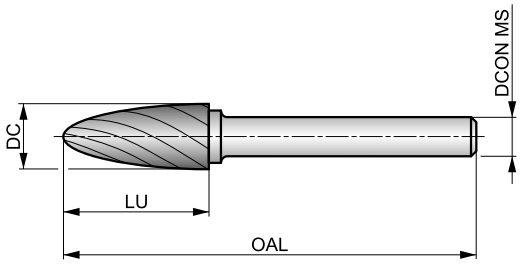
Brazed on Steel Shank with DCON MS tolerance h7.

Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P6098.0X6.0	8.00	6.00	15.00	60.0
P6099.6X6.0	9.60	6.00	16.00	60.0
P60912.7X6.0	12.70	6.00	22.00	67.0

P611

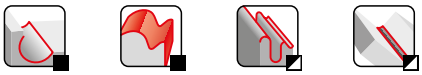
Rotary Burr - Ball Nosed Tree, Shape F

VA single cut flute style with medium spaced edges for multi-angle contouring, rounding of edges and cutting into hard to reach areas. Carbide design for cutting diameter up to 6 mm; above 6 mm carbide head with toughened and hardened steel shank. First choice for stainless steels.



HM | F | Bright

VA | DORMER



Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

M1.1	M1.2	M2.1	M2.2	M2.3	M3.1	M3.2	M3.3	M4.1	M4.2	K4.1	K4.2
■	■	■	■	■	■	■	■	■	■	◪	◪

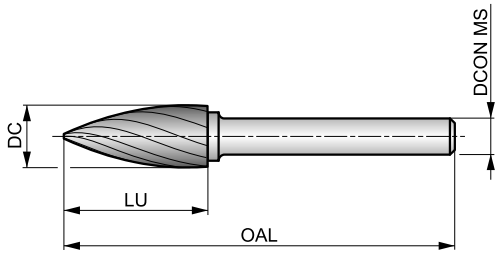
DC≤6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.
Products from this series are also available in set. Please see P880.

Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P6113.0X3.0	3.00	3.00	14.00	38.0
P6116.3X3.0	6.30	3.00	12.70	45.0
P6116.0X6.0	6.00	6.00	18.00	50.0
P6118.0X6.0	8.00	6.00	20.00	65.0
P6119.6X6.0	9.60	6.00	19.00	64.0
P61112.7X6.0	12.70	6.00	25.00	70.0

P613

Rotary Burr - Pointed Tree, Shape G

VA single cut flute style with medium spaced edges for multi-angle contouring and cutting narrow angles in hard to reach areas. Carbide design for cutting diameter equal to 6 mm; above 6 mm carbide head with toughened and hardened steel shank. First choice for stainless steels.



HM | G | Bright

VA | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

M1.1	M1.2	M2.2	M2.3	M3.1	M3.2	M3.3	M4.1	M4.2	K4.1	K4.2
■	■	■	■	■	■	■	■	■	◪	◪

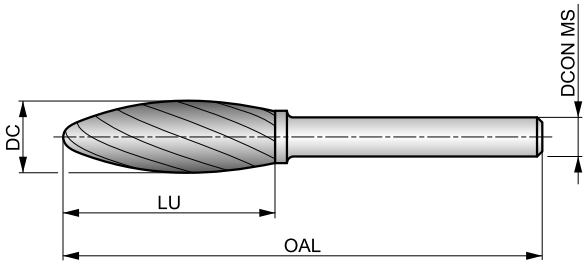
DC=6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.

Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P6136.0X6.0	6.00	6.00	18.00	50.0
P6138.0X6.0	8.00	6.00	19.00	64.0
P6139.6X6.0	9.60	6.00	19.00	64.0
P61312.7X6.0	12.70	6.00	25.00	70.0

P615

Rotary Burr - Flame, Shape H

VA single cut flute style with medium spaced edges for round edge contouring and welding preparation. Carbide head with toughened and hardened steel shank. First choice for stainless steels.



HM	H	Bright
VA	DORMER	

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

M1.1	M1.2	M2.1	M2.2	M2.3	M3.1	M3.2	M3.3	M4.1	M4.2	K4.1	K4.2
■	■	■	■	■	■	■	■	■	■	◪	◪

Brazed on Steel Shank with DCON MS tolerance h7.

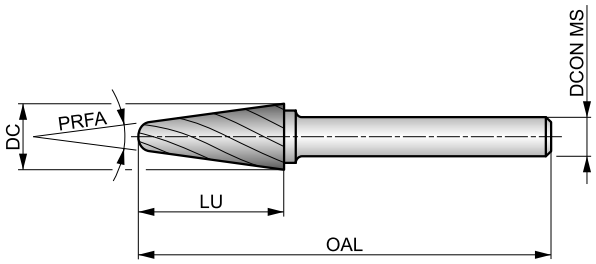
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P6158.0X6.0	8.00	6.00	19.00	64.0
P6159.6X6.0	9.60	6.00	19.00	65.0
P61512.7X6.0	12.70	6.00	32.00	77.0

P621

DORMER

Rotary Burr - Ball Nosed Cone, Shape L

VA single cut flute style with medium spaced edges for enlarging holes, rounding edges and surface finishing in tight narrow angles or other hard to reach areas. Carbide head with toughened and hardened steel shank. First choice for stainless steels.



HM	L	Bright
VA	DORMER	

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

M1.1	M1.2	M2.1	M2.2	M2.3	M3.1	M3.2	M3.3	M4.1	M4.2	K4.1	K4.2
■	■	■	■	■	■	■	■	■	■	◪	◪

Brazed on Steel Shank with DCON MS tolerance h7.
Products from this series are also available in set. Please see P880.

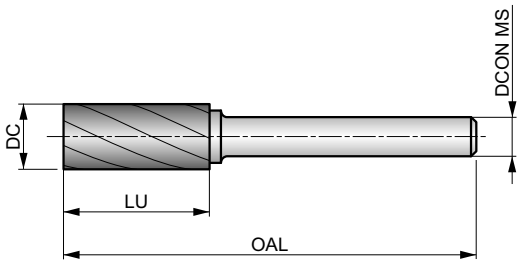
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]	PRFA [°]
P6218.0X6.0	8.00	6.00	25.40	70.0	14
P62110.0X6.0	10.00	6.00	20.00	65.0	14
P62112.7X6.0	12.70	6.00	32.00	77.0	14

P831

DORMER

Rotary Burr - Cylinder without endcut, Shape A

AL single cut flute style with wide spaced edges for trimming and deburring surfaces. Carbide design for cutting diameter equal to 6 mm; above 6 mm carbide head with toughened and hardened steel shank. First choice for non-ferrous materials and plastics.



HM	A	Bright
AL	DORMER	

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N4.1	N4.2	N4.3	S1.1
■	■	■	■	■	■	◪	◪	■	■	◪	◪

DC=6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.

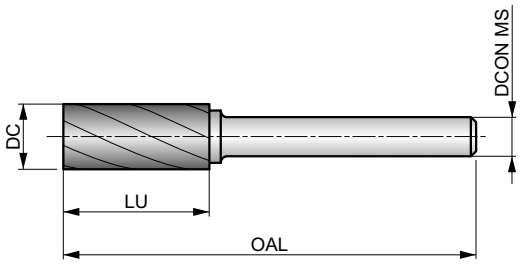
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P8316.0X6.0	6.00	6.00	18.00	50.0
P8319.6X6.0	9.60	6.00	19.00	64.0
P83112.7X6.0	12.70	6.00	25.00	70.0

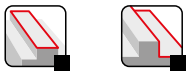
P833

DORMER

Rotary Burr - Cylinder with endcut, Shape B

AL single cut flute style with wide spaced edges for trimming and deburring surfaces and right-angled corners. Carbide design for cutting diameter equal to 6 mm; above 6 mm carbide head with toughened and hardened steel shank. First choice for non-ferrous materials and plastics.





Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N4.1	N4.2	N4.3	S1.1
■	■	■	■	■	■	◪	◪	■	■	◪	◪

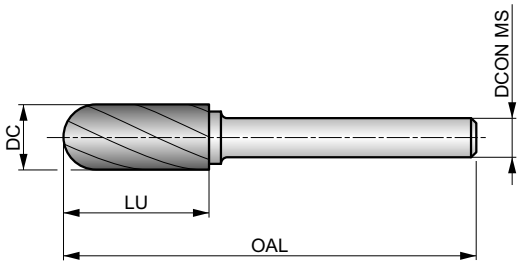
DC=6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.

Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P8336.0X6.0	6.00	6.00	18.00	50.0
P8339.6X6.0	9.60	6.00	19.00	64.0
P83312.7X6.0	12.70	6.00	25.00	70.0

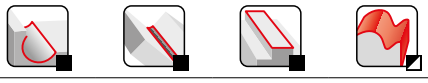
P835

Rotary Burr - Ball Nosed Cylinder, Shape C

AL single cut flute style with wide spaced edges for for trimming and deburring contours and circular arcs. Carbide design for cutting diameter equal to 6 mm; above 6 mm carbide head with toughened and hardened steel shank. First choice for non-ferrous materials and plastics.



HM	C	Bright
AL	DORMER	



Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N4.1	N4.2	N4.3	S1.1
■	■	■	■	■	■	◪	◪	■	■	◪	◪

DC=6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.

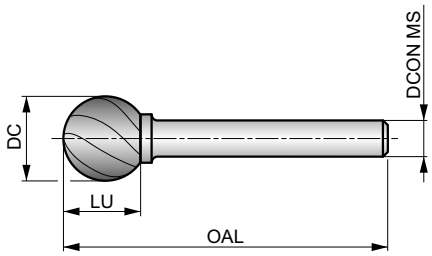
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P8356.0X6.0	6.00	6.00	18.00	50.0
P8359.6X6.0	9.60	6.00	19.00	64.0
P83512.7X6.0	12.70	6.00	25.00	70.0

P837

DORMER

Rotary Burr - Ball, Shape D

AL single cut flute style with wide spaced edges for intricate carving, metal engraving and welding preparation. Carbide design for cutting diameter equal to 6 mm; above 6 mm carbide head with toughened and hardened steel shank. First choice for non-ferrous materials and plastics.



HM	D	Bright
AL	DORMER	

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N4.1	N4.2	N4.3	S1.1
■	■	■	■	■	■	◪	◪	■	■	◪	◪

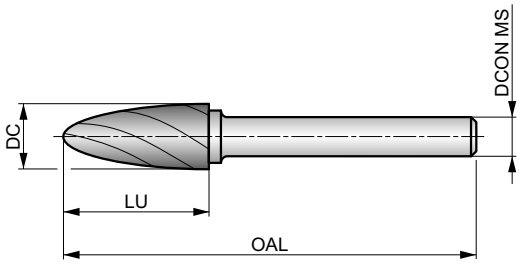
DC=6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.

Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P8376.0X6.0	6.00	6.00	4.70	50.0
P8379.6X6.0	9.60	6.00	8.00	54.0
P83712.7X6.0	12.70	6.00	11.00	56.0

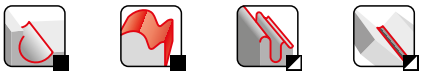
P841

Rotary Burr - Ball Nosed Tree, Shape F

AL single cut flute style with wide spaced edges for multi-angle contouring, rounding of edges and cutting into hard to reach areas. Carbide design for cutting diameter equal to 6 mm; above 6 mm carbide head with toughened and hardened steel shank. First choice for non-ferrous materials and plastics.



HM	F	Bright
AL	DORMER	



Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N4.1	N4.2	N4.3	S1.1
■	■	■	■	■	■	◪	◪	■	■	◪	◪

DC=6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.

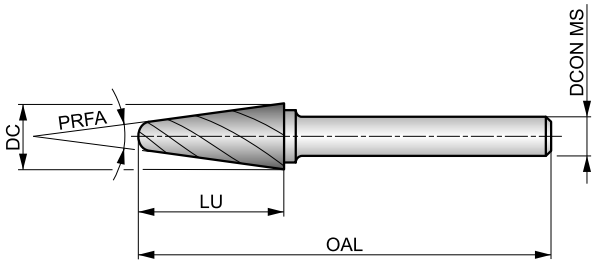
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P8416.0X6.0	6.00	6.00	18.00	50.0
P8419.6X6.0	9.60	6.00	19.00	64.0
P84112.7X6.0	12.70	6.00	25.00	70.0

P842

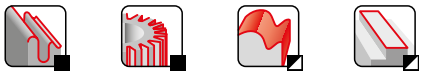
DORMER

Rotary Burr - Ball Nosed Cone, Shape L

AL single cut flute style - wide spaced edges for enlarging holes, rounding edges and surface finishing in tight narrow angles or other hard to reach areas. Carbide design for cutting diameter equal to 6 mm; above 6 mm carbide head with toughened and hardened steel shank. First choice for non-ferrous materials and plastics.



HM	L	Bright
AL	DORMER	



Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N4.1	N4.2	N4.3	S1.1
■	■	■	■	■	■	◪	◪	■	■	◪	◪

DC=6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.

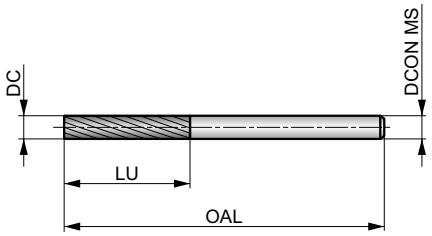
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]	PRFA [°]
P8426.0X6.0	6.00	6.00	18.00	50.0	14
P8429.6X6.0	9.60	6.00	30.00	76.0	14
P84212.7X6.0	12.70	6.00	32.00	77.0	14

P501

DORMER

Rotary Burr - Cylinder without endcut, Shape A

AS single cut flute style with light left-hand cross cut for trimming and deburring surfaces. Solid carbide shank for rigidity. First choice for superalloys.



HM	A	Bright
AS	DORMER	

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

M3.1	M3.2	M3.3	M4.1	M4.2	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2	S4.1	S4.2
◪	◪	◪	◪	◪	■	■	■	■	■	■	■	■	■

DCON MS tolerance h6.
Products from this series are also available in set. Please see P880.

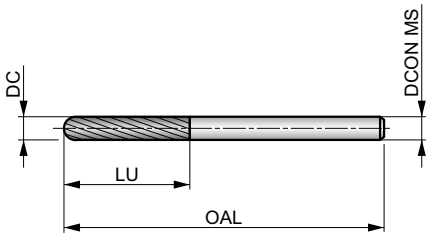
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P5013.0X3.0	3.00	3.00	12.00	38.0

P505

DORMER

Rotary Burr - Ball Nosed Cylinder, Shape C

AS single cut flute style with light left-hand cross cut for trimming and deburring contours and circular arcs. Solid carbide shank for rigidity. First choice for superalloys.



HM	C	Bright
AS	DORMER	

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

M3.1	M3.2	M3.3	M4.1	M4.2	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2	S4.1	S4.2
◪	◪	◪	◪	◪	■	■	■	■	■	■	■	■	■

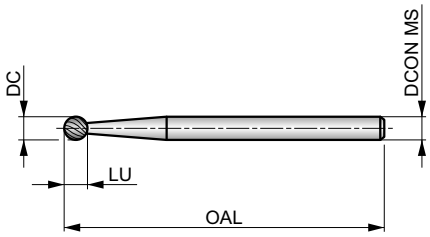
DCON MS tolerance h6.
Products from this series are also available in set. Please see P880.

Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P5053.0X3.0	3.00	3.00	14.00	38.0

P507

Rotary Burr - Ball, Shape D

AS single cut flute style with light left-hand cross cut for intricate carving, metal engraving and welding preparation. Solid carbide shank for rigidity. First choice for superalloys.



HM	D	Bright
AS	DORMER	

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

M3.1	M3.2	M3.3	M4.1	M4.2	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2	S4.1	S4.2
◪	◪	◪	◪	◪	■	■	■	■	■	■	■	■	■

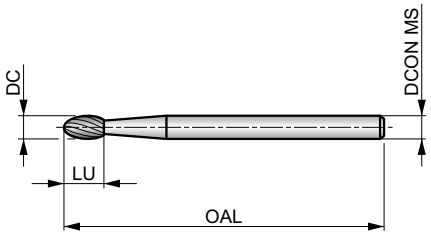
DCON MS tolerance h6.
Products from this series are also available in set. Please see P880.

Product	DC	DCON MS	LU	OAL
	[mm]	[mm]	[mm]	[mm]
P5073.0X3.0	3.00	3.00	2.50	38.0

P509

Rotary Burr - Oval, Shape E

AS single cut flute style with light left-hand cross cut for round edge contouring. Solid carbide shank for rigidity. First choice for superalloys.



HM	E	Bright
AS	DORMER	

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

M3.1	M3.2	M3.3	M4.1	M4.2	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2	S4.1	S4.2
◪	◪	◪	◪	◪	■	■	■	■	■	■	■	■	■

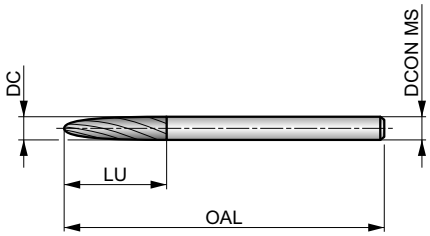
DCON MS tolerance h6.
Products from this series are also available in set. Please see P880.

Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P5093.0X3.0	3.00	3.00	6.00	38.0

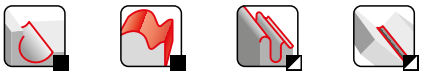
P511

Rotary Burr - Ball Nosed Tree, Shape F

AS single cut flute style with light left-hand cross cut for multi-angle contouring, rounding of edges and cutting into hard to reach areas. Solid carbide shank for rigidity. First choice for superalloys.



HM	F	Bright
AS	DORMER	



Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

M3.1	M3.2	M3.3	M4.1	M4.2	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2	S4.1	S4.2
◪	◪	◪	◪	◪	■	■	■	■	■	■	■	■	■

DCON MS tolerance h6.
Products from this series are also available in set. Please see P880.

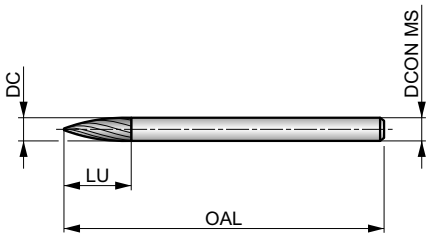
Product	DC	DCON MS	LU	OAL
	[mm]	[mm]	[mm]	[mm]
P5113.0X3.0	3.00	3.00	14.00	38.0

P513

DORMER

Rotary Burr - Pointed Tree, Shape G

AS single cut flute style with light left-hand cross cut for multi-angle contouring and cutting narrow angles in hard to reach areas. Solid carbide shank for rigidity. First choice for superalloys.



HM	G	Bright
AS	DORMER	

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

M3.1	M3.2	M3.3	M4.1	M4.2	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2	S4.1	S4.2
◪	◪	◪	◪	◪	■	■	■	■	■	■	■	■	■

DCON MS tolerance h6.
Products from this series are also available in set. Please see P880.

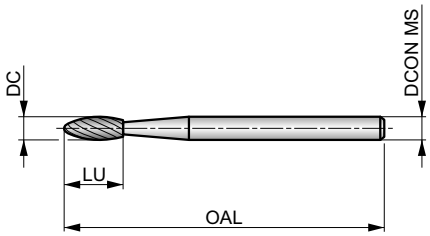
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P5133.0X3.0X8.0	3.00	3.00	8.00	38.0
P5133.0X3.0X14.0	3.00	3.00	14.00	38.0

P515

DORMER

Rotary Burr - Flame, Shape H

AS single cut flute style with light left-hand cross cut for round edge contouring and welding preparation. Solid carbide shank for rigidity. First choice for superalloys.



HM	H	Bright
AS	DORMER	

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

M3.1	M3.2	M3.3	M4.1	M4.2	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2	S4.1	S4.2
◪	◪	◪	◪	◪	■	■	■	■	■	■	■	■	■

DCON MS tolerance h6.
Products from this series are also available in set. Please see P880.

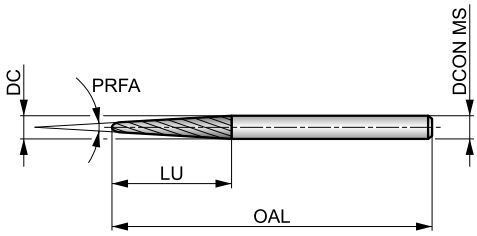
Product	DC	DCON MS	LU	OAL
	[mm]	[mm]	[mm]	[mm]
P5153.0X3.0	3.00	3.00	6.00	38.0

P521

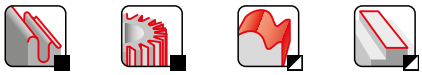
DORMER

Rotary Burr - Ball Nosed Cone, Shape L

AS single cut flute style with light left-hand cross cut for enlarging holes, rounding edges and surface-finishing in tight narrow angles or other hard to reach areas. Solid carbide shank for rigidity. First choice for superalloys.



HM	L	Bright
AS	DORMER	



Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

M3.1	M3.2	M3.3	M4.1	M4.2	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2	S4.1	S4.2
◪	◪	◪	◪	◪	■	■	■	■	■	■	■	■	■

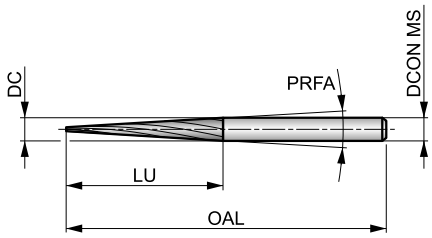
DCON MS tolerance h6.
Products from this series are also available in set. Please see P880.

Product	DC	DCON MS	LU	OAL	PRFA
	[mm]	[mm]	[mm]	[mm]	[°]
P5213.0X3.0	3.00	3.00	14.00	38.0	8

P523

Rotary Burr - Cone, Shape M

AS single cut flute style with light left-hand cross cut for enlarging holes, surface finishing and cutting narrow angles in hard to reach areas. Solid carbide shank for rigidity. First choice for superalloys.



HM	M	Bright
AS	DORMER	

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

M3.1	M3.2	M3.3	M4.1	M4.2	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2	S4.1	S4.2
◪	◪	◪	◪	◪	■	■	■	■	■	■	■	■	■

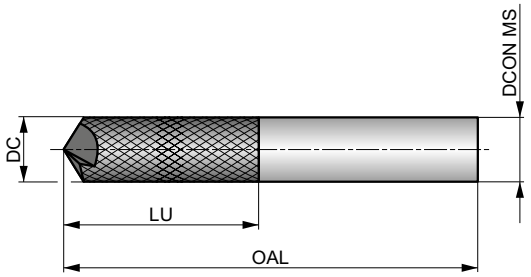
DCON MS tolerance h6.
Products from this series are also available in set. Please see P880.

Product	DC	DCON MS	LU	OAL	PRFA
	[mm]	[mm]	[mm]	[mm]	[°]
P5233.0X3.0	3.00	3.00	15.00	38.0	7

P843

Diamond Cut Router - 135° Drill Point

GRP diamond cut flute style with medium spaced edges for contouring, making cut-out shapes and holes. Solid carbide shank for rigidity. First choice for fibreglass and composite materials.



HM | Bright | 135° | GRP | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

N4.3

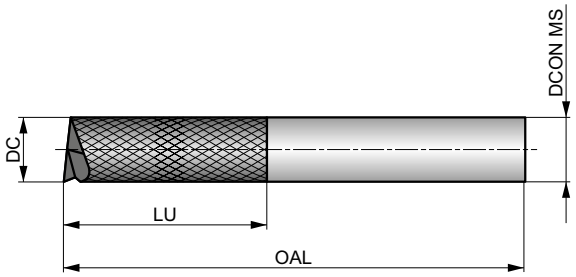
DCON MS tolerance h6.

Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P8433.0X3.0	3.00	3.00	13.00	45.0
P8436.0X6.0	6.00	6.00	19.00	63.0
P8438.0X8.0	8.00	8.00	25.00	63.0

P844

Diamond Cut Router - End Mill

GRP diamond cut flute style with medium spaced edges for contouring, groove and pocket milling and making cut-out shapes. Solid carbide shank for rigidity. First choice for fibreglass and composite materials.



HM | Bright | 180° | GRP | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 229.

N4.3

DCON MS tolerance h6.

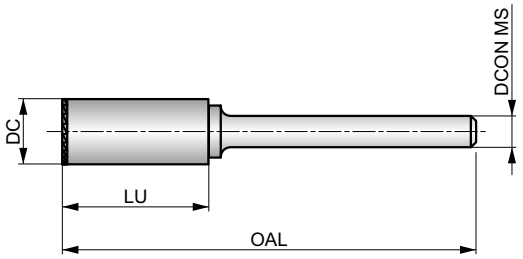
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P8443.0X3.0	3.00	3.00	13.00	45.0
P8446.0X6.0	6.00	6.00	19.00	63.0
P8448.0X8.0	8.00	8.00	25.00	63.0

P100

DORMER

1st Stage Rotary Burr for Broken Bolt Removal, Cylinder with End Cut

First stage broken bolt removal solid carbide burr. When a bolt is broken and needs to be extracted, first use P100 to flatten the broken bolt surface. Secondly use P101. This series of burrs makes sure the threaded hole is not damaged when removing the broken piece.



HM | Bright

BR | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 229 and 'how to use the tool' on page 216.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■	■	■	■	■	■	■	■	■	■	■	■	■	■

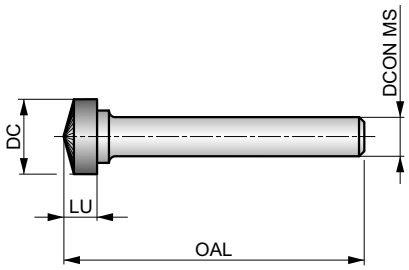
M2.2	M2.3	M3.1	M3.2	M3.3
■	■	■	■	■

Product	DC	DCON MS	LU	OAL	
	[mm]	[mm]	[mm]	[mm]	
P1004.9	4.90	6.00	20.00	50.0	1/4-20; 24; 28; M6
P1006.4	6.40	6.00	5.00	50.0	5/16-18; 24; 32; M8
P1007.8	7.80	6.00	19.00	65.0	3/8-16; 24; M10
P1009.3	9.30	6.00	19.00	65.0	7/16-14; 20; M12
P10010.7	10.70	6.00	25.00	70.0	1/2-13; 20; M14

P101

2nd Stage Rotary Burr for Broken Bolt Removal, 150° Countersink

Second stage broken bolt removal solid carbide burr. When a bolt is broken and needs to be extracted, P101 creates a centerpoint into the flattened broken bolt. Prepare it for the 3rd stage, drilling the broken piece with a drill.



HM | Bright | 150°

BR | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 229 and 'how to use the tool' on page 216.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■	■	■	■	■	■	■	■	■	■	■	■	■	■

M2.2	M2.3	M3.1	M3.2	M3.3
■	■	■	■	■

Product	DC	DCON MS	LU	OAL	
	[mm]	[mm]	[mm]	[mm]	
P1014.9	4.90	6.00	20.00	50.0	1/4-20; 24; 28; M6
P1016.4	6.40	6.00	5.00	50.0	5/16-18; 24; 32; M8
P1017.8	7.80	6.00	5.00	50.0	3/8-16; 24; M10
P1019.3	9.30	6.00	5.00	50.0	7/16-14; 20; M12
P10110.7	10.70	6.00	5.00	50.0	1/2-13; 20; M14

P880

Rotary Burr Set

Set of different rotary burrs in various shapes, sizes and forms.

A = Styles in Set, B = No. in Set, C = Rotary Burrs in Set.

Product	Nr.	A	B	C
P88001	Nr01	P803 + P805 + P807 + P809 + P813	5	P803 9.6 × 6.0; P805 9.6 × 6.0; P807 9.6 × 6.0; P809 9.6 × 6.0; P813 9.6 × 6.0
P88002	Nr02	P803C + P805C + P807C + P811C + P813C	5	P803C 9.6 × 6.0; P805C 9.6 × 6.0; P807C 9.6 × 6.0; P811C 9.6 × 6.0; P813C 9.6 × 6.0
P88003	Nr03	P601 + P605 + P607 + P611 + P621	5	P601 9.6 × 6.0; P605 9.6 × 6.0; P607 9.6 × 6.0; P611 9.6 × 6.0; P621 10.0 × 6.0
P88004	Nr04	P703 + P705 + P707 + P711 + P721	5	P703 9.6 × 6.0; P705 9.6 × 6.0; P707 9.6 × 6.0; P711 9.6 × 6.0; P721 10.0 × 6.0
P88006	Nr06	P501 + P505 + P507 + P509 + P511 + P513 + P515 + P521 + P523	10	P501 3.0 × 3.0; P505 3.0 × 3.0; P507 3.0 × 3.0; P509 3.0 × 3.0; P511 3.0 × 3.0; P513 3.0 × 3.0 × 8.0; P513 3.0 × 3.0 × 14.0; P515 3.0 × 3.0; P521 3.0 × 3.0; P523 3.0 × 3.0

P890

Rotary Burrs Display

Display of 40 pieces of solid burrs of the P8xx serie. DC double cut flute style with close spaced edges. Bright finish.

A = Styles in Set, B = No. in Set, C = Rotary Burrs in Set.

Product	Nr.	A	B	C
P89001	Nr01	P803 + P805 + P811 + P813 + P821	40	P803 (6.0 × 6.0; 8.0 × 6.0; 9.6 × 6.0; 12.7 × 6.0) × 2 P805 (6.0 × 6.0; 8.0 × 6.0; 9.6 × 6.0; 12.7 × 6.0) × 2 P811 (6.0 × 6.0; 8.0 × 6.0; 9.6 × 6.0; 12.7 × 6.0) × 2 P813 (6.0 × 6.0; 8.0 × 6.0; 9.6 × 6.0; 12.7 × 6.0) × 2 P821 (6.0 × 6.0; 8.0 × 6.0; 9.6 × 6.0; 12.7 × 6.0) × 2

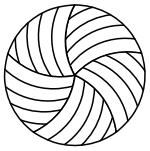
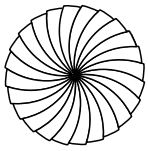
ROTARY BURRS – GENERAL HINTS

General hints on carbide burrs

Carbide Burrs are widely used for preparing and finishing components in a wide range of materials.
They are generally used by hand and mounted in air driven die-grinders.

Construction and Geometry

1. Toughened and hardened steel shanks improve rigidity and reduce the risk of bending or vibration.
2. Accurately ground shanks improve holding and reduce likelihood of spinning.
3. Special brazing elements prevent high temperature failure and also provide increased strength to withstand pressure and impact.
4. The universal Double Cut (DC) geometry is suitable for a wide range of materials and applications.
5. Material specific geometries are also available suited to Steel (ST), Stainless Steel (VA), Aluminium (AL), Super Alloys (AS) and Fibreglass (GRP).
6. Available with TiAlN coating to increase tool life in abrasive materials.
7. Ball nose burrs are ground with Skip Flute geometry. This provides active geometry towards the centre of the burr, improving the cutting action and reducing the chances of swarf build up and clogging.

Skip	Normal
	

Safety first

1. High speed rotating tools are hazardous and can be dangerous if miss-used.
2. Always disconnect the die grinder from the air supply before attempting to change the burrs.
3. Check the condition of the die grinder and if possible use low vibration versions.
4. Always use the appropriate protective equipment and ensure anyone working close by is also protected.

Personal protective equipment must be worn at all times!

ROTARY BURRS – GENERAL HINTS

Recommendations

- Always use the appropriate speed rated die grinder.
- Routine maintenance of die grinders is important, ensure they are oiled and bearings are not worn.
- Always clean the clamping nut, collet and internal taper of the die grinder when changing a burr.
- Try to avoid mechanical shock and heavy impact of the burrs.
- Try to avoid thermal shock by not allowing the burr to become overheated.
- Don’t plunge the burr too deep into the workpiece material or jam the bur into corners or channels.

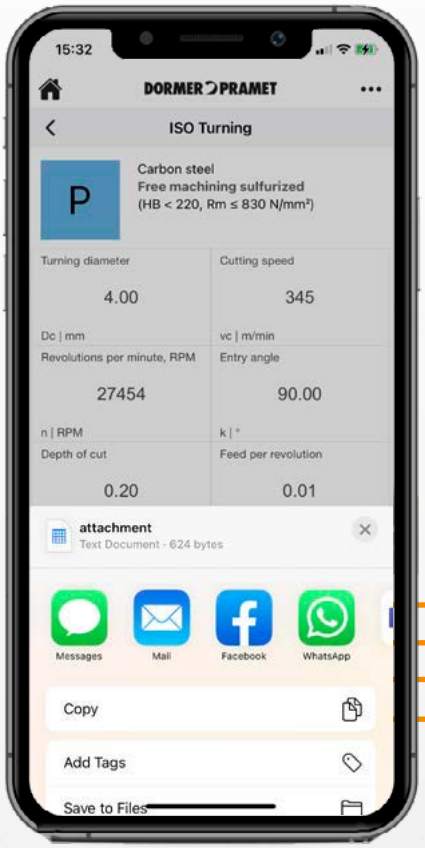
Trouble shooting using burrs

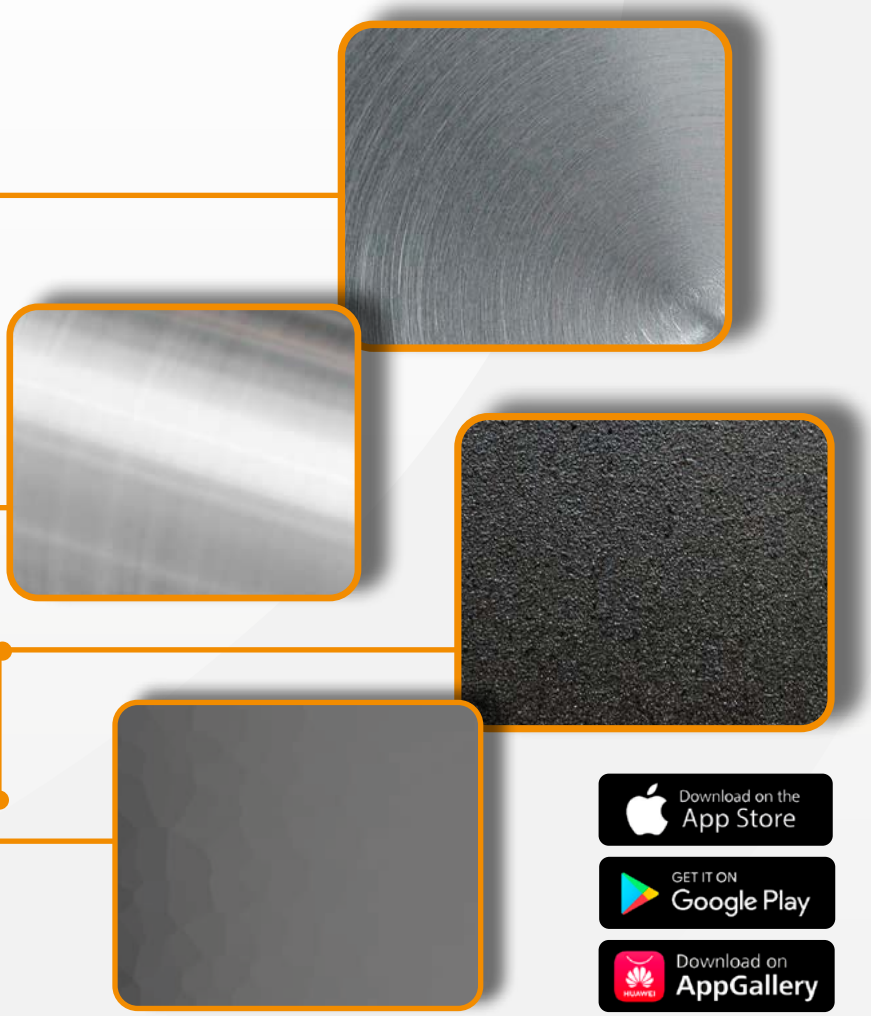
Problem	Cause
Chipping of Burr Teeth	Running speed too low (revolutions per minute) can cause bouncing (chatter).
	Eccentricity (worn spindle, collet or bearings).
	Plunging and jamming the burr into the workpiece.
Clogging of Burr Teeth	Flute length or overall length too long.
	Incorrect geometry choice for workpiece material.
Premature Wear	Running speed too high (revolutions per minute) for size of burr and workpiece material.
	Eccentricity (worn spindle, collet or bearings).
Head Detaches from Shank	Running speed too high (revolutions per minute) causing overheating.
	Running for prolonged periods causing overheating.

DORMER PRAMET

EVERY MATERIAL

Machining steel, stainless steel, cast iron, super-alloys or non-ferrous materials, all are covered within our calculator app. Download it from your app store today. **Simply Reliable.**





Download on the App Store

GET IT ON Google Play

Download on AppGallery

THREAD MILLS

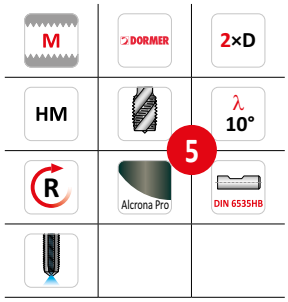
📖 6		WMG & ISO 13399
📖 10	SOLID MILLS	INSTRUCTIONS
📖 19	SOLID MILLS	HM MILLS
📖 117	SOLID MILLS	HSS-E-PM, HSS-E, HSS MILLS
📖 201	SOLID MILLS	TECHNICAL INFORMATION
📖 212		ROTARY BURRS
📖 292		**THREAD MILLS**
📖 314	INDEXABLE MILLS	INSTRUCTIONS
📖 328	INDEXABLE MILLS	NAVIGATORS
📖 349	INDEXABLE MILLS	FACE MILLS
📖 409	INDEXABLE MILLS	SQUARE SHOULDER MILLS
📖 479	INDEXABLE MILLS	DEEP SHOULDER MILLS
📖 508	INDEXABLE MILLS	SLOT MILLS
📖 521	INDEXABLE MILLS	COPY MILLS
📖 613	INDEXABLE MILLS	HIGH FEED MILLS (HFC)
📖 645	INDEXABLE MILLS	CHAMFER & T-SLOT MILLS
📖 667	INDEXABLE MILLS	OTHER INSERTS
📖 691	INDEXABLE MILLS	TECHNICAL INFORMATION

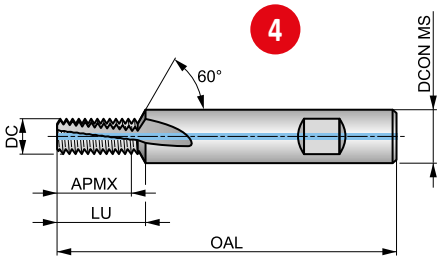
1 J205

DORMER

Solid Carbide Thread Mill with Through Coolant and Countersink, Metric 2

Universal high performance tool to machine same or bigger diameters than the TDZ with the same pitch. Left or right-hand, through or blind holes almost down to the bottom. With 60° countersink for chamfering. Alcrona Pro coated for the best machining result with through coolant for better chip evacuation.





Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 309.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 172 B	■ 193 B	■ 200 B	■ 148 B	■ 130 B	■ 115 B	■ 133 B	■ 107 B	■ 90 B	■ 79 B	■ 67 B	◪ 55 B	■ 62 B	■ 52 B
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
■ 55 B	■ 45 B	■ 38 B	■ 47 A	■ 40 A	■ 36 A	■ 30 A	◪ 26 A	■ 130 B	■ 96 B	■ 72 B	■ 123 B	■ 100 B	■ 80 B
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■ 109 B	■ 83 B	■ 67 B	■ 101 A	■ 76 A	■ 56 A	■ 48 A	◪ 40 A	■ 114 B	■ 86 B	■ 66 B	■ 400 C	■ 300 C	■ 200 C
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**
■ 262 C	■ 235 C	■ 170 C	■ 610 C	■ 360 C	■ 180 C	■ 290 C	■ 145 C	■ 65 C	■ 40 A	■ 40 A	◪ 30 A	■ 33 A	◪ 25 A
S3.1	**S3.2**	**S4.1**	**S4.2**	**H1.1**									
■ 25 A	◪ 21 A	■ 20 A	◪ 16 A	◪ 60 A									

6

Internal Thread.

7	TDZ	TP	DC	APMX	8 OAL	DCON MS	NOF	LU
		[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
J2056.5X1.25	M8	1.25	6.50	17.50	72.0	10.00	3	19.10
J2058.2X1.50	M10	1.50	8.20	21.00	83.0	12.00	3	22.80
J2059.9X1.75	M12	1.75	9.90	26.25	83.0	14.00	4	28.20
J20511.6X2.0	M14	2.00	11.60	30.00	92.0	16.00	4	32.20
J20513.6X2.0	M16	2.00	13.60	34.00	92.0	18.00	4	36.20

Typical page with thread mills displayed – specific page details will differ.

THREAD MILLS – PAGE OVERVIEW

Pos.	Description
1	Designation of thread mills
2	Product description
3	Illustrative picture
4	Schematic drawing of tool

Pos.	Description
5	Product features
6	Material group recommendations incl. speed and feed guidance
7	Product code
8	Product dimensions

THREAD MILLS – ICONS OVERVIEW

General Icons

■	Primary use
◪	Possible use

Thread Form (THFT)

G	Thread Form, British Standard Pipe
M	Thread Form, Metric Coarse
MF	Thread Form, Metric Fine
NPT	Thread Form, American National Pipe Taper
UNC	Thread Form, Unified Coarse
UNF	Thread Form, Unified Fine

Basic Standard Group (BSG)

DORMER	Dormer Standards

Usable Length (ULDR)

1.5×D	1.5×D Usable Tool Depth to Diameter Ratio
2×D	2×D Usable Tool Depth to Diameter Ratio

Material Code (BMC)

HM	Hard Material (Solid Carbide)

Flute Geometry (FDC)

	Spiral Flute Geometry

Flute Helix Angle (FHA)

λ 10°	10° Helix Angle (Flute)
λ 27°	27° Helix Angle (Flute)

Hand (Cutting direction)

R	Right Hand Rotation / Cutting

Coating

Alcrona Pro	Aluminium Chromium Nitride (special optimized process)

Shank

DIN 6535HA	DIN 6535 HA Cylindrical Shank
DIN 6535HB	DIN 6535 HB Weldon Shank

Coolant Exit Style (CXSC)

	Through Tool Coolant – Axial Exit

THREAD MILLS – TOOL MATERIALS AND SURFACE COATINGS NAVIGATOR

HM materials

Carbide Materials (or Hard Materials)	HM	A sintered powder metallurgy substrate, consisting of a metallic carbide composite with binder metal. The most central raw material is tungsten carbide (WC). Tungsten carbide contributes to the hardness of the material. Tantalum carbide (TaC), titanium carbide (TiC) and niobium carbide (NbC) complements WC and adjusts the properties to what is desired. These three materials are called cubic carbides. Cobalt (Co) acts as a binder and keeps the material together. Carbide materials are often characterised by high compression strength, high hardness and therefore high wear resistance, but also by limited flexural strength and toughness. Carbide is used in taps, reamers, milling cutters, drills and thread milling cutters.

Surface Coatings

Alcrona coatings (Alcrona Pro)		The Alcrona (AlCrN) family of coatings are aluminium chromium nitride coatings mostly used for milling cutters. The two unique properties of these coatings are high hot hardness and high oxidation resistance. When used on tools for machining applications involving heavy mechanical and thermal stresses, these properties translate into superior wear resistance. Multiple levels or specific versions of these coatings are available and specific for various tools and applications.

Thread form (THFT)	M	M	M	M	MF	MF	UNC	UNF	G	NPT	
Basic standard group (BSG)	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	
Usable length (ULDR)	2×D	2×D	2×D	2×D	1.5×D	1.5×D	2×D	2×D	1.5×D		
Material code (BMC)	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	
Flute Geometry (FDC)											
Flute helix angle (FHA)	λ 10°	λ 10°	λ 27°	λ 27°	λ 10°	λ 10°	λ 10°	λ 10°	λ 10°	λ 10°	
Hand (Cutting direction)	R	R	R	R	R	R	R	R	R	R	
Coating	Alcrona Pro	Alcrona Pro	Alcrona Pro	Alcrona Pro	Alcrona Pro	Alcrona Pro	Alcrona Pro	Alcrona Pro	Alcrona Pro	Alcrona Pro	
Shank	DIN 6535HA	DIN 6535HB	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HB	DIN 6535HB	DIN 6535HB	DIN 6535HA	DIN 6535HB	
Coolant exit style (CXSC)											
Product Family Code	J200	J205	J210	J215	J220	J225	J235	J245	J280	J260	
	M4 - M16	M8 - M16	M6 - M16	M6 - M16	M6 - M24	M10 - M18	1/4 - 3/4	1/4 - 3/4	1/8 - 3''	1/8 - 2''	
	299	300	301	302	303	304	305	306	307	308	
P	P1	■	■	■	■	■	■	■	■	■	■
	P2	■	■	■	■	■	■	■	■	■	■
	P3	■	■	■	■	■	■	■	■	■	■
	P4	■	■	■	■	■	■	■	■	■	■
M	M1	■	■	■	■	■	■	■	■	■	■
	M2	■	■	■	■	■	■	■	■	■	■
	M3	■	■	■	■	■	■	■	■	■	■
	M4	◪	◪	■	■	◪	◪	■	■	■	■
K	K1	■	■	■	■	■	■	■	■	■	■
	K2	■	■	■	■	■	■	■	■	■	■
	K3	■	■	■	■	■	■	■	■	■	■
	K4	■	■	■	■	■	■	■	■	■	■
	K5	■	■	■	■	■	■	■	■	■	■
N	N1	■	■	■	■	■	■	■	■	■	■
	N2	■	■	■	■	■	■	■	■	■	■
	N3	■	■	■	■	■	■	■	■	■	■
	N4	■	■	■	■	■	■	■	■	■	■
	N5										
S	S1	◪	■	◪	■	◪	■	■	■	■	■
	S2	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪
	S3	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪
	S4	◪	◪	◪	◪	◪	■	◪	◪	◪	◪
H	H1	◪	◪	■	■	■	■	■	■	■	■
	H2										
	H3			◪	◪	◪	◪	◪	◪	◪	◪
	H4										

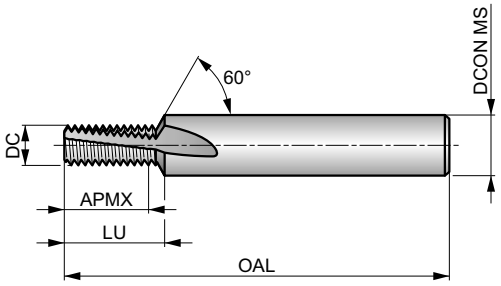
■ Primary use ◪ Possible use

J200

DORMER

Solid Carbide Thread Mill with Countersink, Metric

Universal high performance tool to machine same or bigger diameters than the TDZ with the same pitch. Left or right-hand, through or blind holes almost down to the bottom. With 60° countersink for chamfering in a single machining cycle. Alcrona Pro coated for the best machining result in a wide range of materials.



M	DORMER	2×D
HM		λ 10°
R	Alcrona Pro	DIN 6535HA

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 309.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 172 B	■ 193 B	■ 200 B	■ 148 B	■ 130 B	■ 115 B	■ 133 B	■ 107 B	■ 90 B	■ 79 B	■ 67 B	◪ 55 B	■ 62 B	■ 52 B
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
■ 55 B	■ 45 B	◪ 38 B	■ 47 A	■ 40 A	◪ 36 A	■ 30 A	◪ 26 A	■ 130 B	■ 96 B	■ 72 B	■ 123 B	■ 100 B	■ 80 B
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■ 109 B	■ 83 B	■ 67 B	■ 101 A	■ 76 A	■ 56 A	■ 48 A	◪ 40 A	■ 114 B	■ 86 B	■ 66 B	■ 400 C	■ 300 C	■ 200 C
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**
■ 262 C	■ 235 C	■ 170 C	■ 610 C	■ 360 C	■ 180 C	■ 290 C	■ 145 C	■ 65 C	■ 40 A	◪ 40 A	◪ 30 A	◪ 33 A	◪ 25 A
S3.1	**S3.2**	**S4.1**	**S4.2**	**H1.1**									
◪ 25 A	◪ 21 A	◪ 20 A	◪ 16 A	◪ 60 A									

Internal Thread.

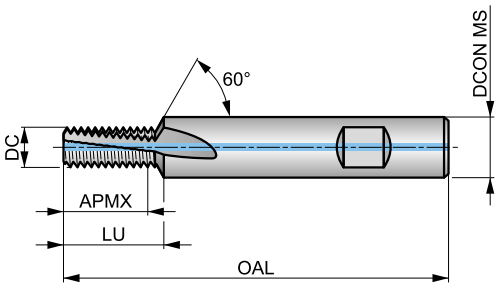
Product	TDZ	TP [mm]	DC [mm]	APMX [mm]	OAL [mm]	DCON MS [mm]	NOF	LU [mm]
J2003.2X.7	M4	0.70	3.20	8.40	57.0	6.00	3	9.50
J2004.1X.8	M5	0.80	4.10	11.20	57.0	6.00	3	12.10
J2004.8X1.0	M6	1.00	4.80	13.00	63.0	8.00	3	14.40
J2006.5X1.25	M8	1.25	6.50	17.50	72.0	10.00	3	19.10
J2008.2X1.5	M10	1.50	8.20	21.00	83.0	12.00	3	22.80
J2009.9X1.75	M12	1.75	9.90	26.25	83.0	14.00	4	28.20
J20011.6X2.0	M14	2.00	11.60	30.00	92.0	16.00	4	32.20
J20013.6X2.0	M16	2.00	13.60	34.00	92.0	18.00	4	36.20

J205

DORMER

Solid Carbide Thread Mill with Through Coolant and Countersink, Metric

Universal high performance tool to machine same or bigger diameters than the TDZ with the same pitch. Left or right-hand, through or blind holes almost down to the bottom. With 60° countersink for chamfering. Alcrona Pro coated for the best machining result with through coolant for better chip evacuation.



M	DORMER	2×D
HM		λ 10°
R	Alcrona Pro	DIN 6535HB

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 309.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■172 B	■193 B	■200 B	■148 B	■130 B	■115 B	■133 B	■107 B	■90 B	■79 B	■67 B	◪55 B	■62 B	■52 B
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
■55 B	■45 B	■38 B	■47 A	■40 A	■36 A	■30 A	◪26 A	■130 B	■96 B	■72 B	■123 B	■100 B	■80 B
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■109 B	■83 B	■67 B	■101 A	■76 A	■56 A	■48 A	◪40 A	■114 B	■86 B	■66 B	■400 C	■300 C	■200 C
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**
■262 C	■235 C	■170 C	■610 C	■360 C	■180 C	■290 C	■145 C	■65 C	■40 A	■40 A	◪30 A	■33 A	◪25 A
S3.1	**S3.2**	**S4.1**	**S4.2**	**H1.1**									
■25 A	◪21 A	■20 A	◪16 A	◪60 A									

Internal Thread.

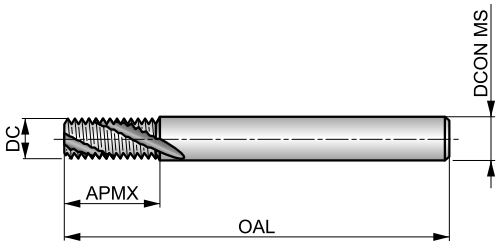
Product	TDZ	TP [mm]	DC [mm]	APMX [mm]	OAL [mm]	DCON MS [mm]	NOF	LU [mm]
J2056.5X1.25	M8	1.25	6.50	17.50	72.0	10.00	3	19.10
J2058.2X1.50	M10	1.50	8.20	21.00	83.0	12.00	3	22.80
J2059.9X1.75	M12	1.75	9.90	26.25	83.0	14.00	4	28.20
J20511.6X2.0	M14	2.00	11.60	30.00	92.0	16.00	4	32.20
J20513.6X2.0	M16	2.00	13.60	34.00	92.0	18.00	4	36.20

J210

DORMER

Solid Carbide Thread Mill with High Helix, Metric

Universal high performance tool to machine same or bigger diameters than the TDZ with the same pitch. Left or right-hand, through or blind holes almost down to the bottom. With Alcrona Pro coated for the best machining result in a wide range of materials and 27° helix for a smoother cutting action.



M	DORMER	2×D
HM		λ 27°
R	Alcrona Pro	DIN 6535HA

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 309.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 181 B	■ 203 B	■ 210 B	■ 156 B	■ 137 B	■ 121 B	■ 140 B	■ 112 B	■ 95 B	■ 83 B	■ 70 B	◪ 58 B	■ 65 B	■ 55 B
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
■ 58 B	■ 47 B	◪ 40 B	■ 50 A	■ 42 A	◪ 38 A	■ 32 A	◪ 27 A	■ 137 B	■ 101 B	■ 76 B	■ 129 B	■ 105 B	■ 84 B
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■ 115 B	■ 87 B	■ 71 B	■ 106 A	■ 80 A	■ 59 A	■ 51 A	◪ 42 A	■ 120 B	■ 90 B	■ 70 B	■ 420 C	■ 315 C	■ 210 C
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**
■ 275 C	■ 247 C	■ 179 C	■ 640 C	■ 378 C	■ 189 C	■ 305 C	■ 153 C	■ 69 C	■ 42 A	◪ 42 A	◪ 32 A	◪ 35 A	◪ 26 A
S3.1	**S3.2**	**S4.1**	**S4.2**	**H1.1**	**H3.1**								
◪ 26 A	◪ 22 A	◪ 21 A	◪ 17 A	■ 63 A	◪ 45 A								

Internal Thread.

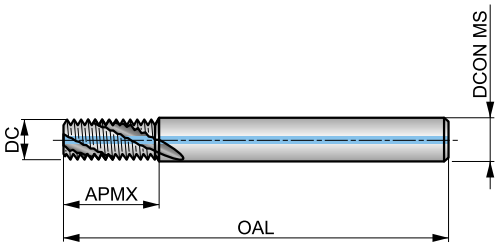
Product	TDZ	TP [mm]	DC [mm]	APMX [mm]	OAL [mm]	DCON MS [mm]	NOF
J2104.5X1.0	M6	1.00	4.50	13.00	57.0	6.00	3
J2106.0X1.25	M8	1.25	6.00	17.50	65.0	6.00	3
J2107.5X1.5	M10	1.50	7.50	21.00	72.0	8.00	3
J2109.5X1.75	M12	1.75	9.50	26.25	80.0	10.00	3
J21010.0X2.0	M14	2.00	10.00	30.00	83.0	10.00	4
J21012.0X2.0	M16	2.00	12.00	34.00	92.0	12.00	4

J215

DORMER

Solid Carbide Thread Mill with High Helix and Through Coolant, Metric

Universal high performance tool to machine same or bigger diameters than the TDZ with the same pitch. Left or right-hand, through or blind holes almost down to the bottom. Alcrona Pro coated for the best machining result with through coolant for better chip evacuation and 27° helix for a smoother cutting action.



M	DORMER	2×D
HM		λ 27°
R	Alcrona Pro	DIN 6535HA

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 309.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 181 B	■ 203 B	■ 210 B	■ 156 B	■ 137 B	■ 121 B	■ 140 B	■ 112 B	■ 95 B	■ 83 B	■ 70 B	■ 58 B	■ 65 B	■ 55 B
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
■ 58 B	■ 47 B	■ 40 B	■ 50 A	■ 42 A	■ 38 A	■ 32 A	◪ 27 A	■ 137 B	■ 101 B	■ 76 B	■ 129 B	■ 105 B	■ 84 B
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■ 115 B	■ 87 B	■ 71 B	■ 106 A	■ 80 A	■ 59 A	■ 51 A	■ 42 A	■ 120 B	■ 90 B	■ 70 B	■ 420 C	■ 315 C	■ 210 C
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**
■ 275 C	■ 247 C	■ 179 C	■ 640 C	■ 378 C	■ 189 C	■ 305 C	■ 153 C	■ 69 C	■ 42 A	■ 42 A	◪ 32 A	■ 35 A	◪ 26 A
S3.1	**S3.2**	**S4.1**	**S4.2**	**H1.1**	**H3.1**								
■ 26 A	◪ 22 A	■ 21 A	◪ 17 A	■ 63 A	◪ 45 A								

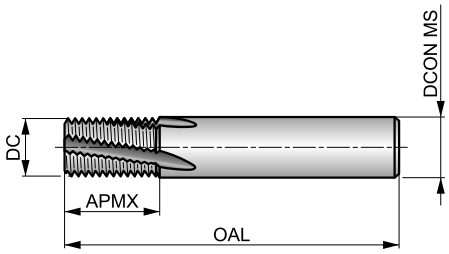
Internal Thread.

Product	TDZ	TP [mm]	DC [mm]	APMX [mm]	OAL [mm]	DCON MS [mm]	NOF
J2154.5X1.0	M6	1.00	4.50	13.00	57.0	6.00	3
J2156.0X1.25	M8	1.25	6.00	17.50	65.0	6.00	3
J2157.5X1.5	M10	1.50	7.50	21.00	72.0	8.00	3
J2159.5X1.75	M12	1.75	9.50	26.25	80.0	10.00	3
J21510.0X2.0	M14	2.00	10.00	30.00	83.0	10.00	4
J21512.0X2.0	M16	2.00	12.00	34.00	92.0	12.00	4

J220

Solid Carbide Thread Mill, Metric Fine

Universal high performance tool to machine same or bigger diameters than the TDZ with the same pitch. Left or right-hand, through or blind holes almost down to the bottom. Alcrona Pro coated for the best machining result in a wide range of materials.



MF | DORMER | 1.5×D

HM | | λ 10°

R | Alcrona Pro | DIN 6535HA

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 309.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 190 E	■ 212 E	■ 242 E	■ 163 E	■ 143 E	■ 127 E	■ 146 E	■ 118 E	■ 99 E	■ 87 E	■ 74 E	■ 61 E	■ 69 E	■ 58 E
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
■ 61 E	■ 50 E	◪ 42 E	■ 52 D	■ 44 D	◪ 40 D	■ 33 D	◪ 29 D	■ 143 E	■ 106 E	■ 80 E	■ 136 E	■ 110 E	■ 88 E
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■ 120 E	■ 91 E	■ 74 E	■ 111 D	■ 84 D	■ 62 D	■ 53 D	◪ 44 D	■ 126 E	■ 95 E	■ 73 E	■ 440 F	■ 330 F	■ 220 F
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**
■ 288 F	■ 259 F	■ 187 F	■ 671 F	■ 396 F	■ 198 F	■ 319 F	■ 160 F	■ 72 F	■ 44 D	◪ 44 D	◪ 33 D	◪ 36 D	◪ 28 D
S3.1	**S3.2**	**S4.1**	**S4.2**	**H1.1**	**H3.1**								
◪ 28 D	◪ 23 D	◪ 22 D	◪ 18 D	■ 66 D	◪ 48 D								

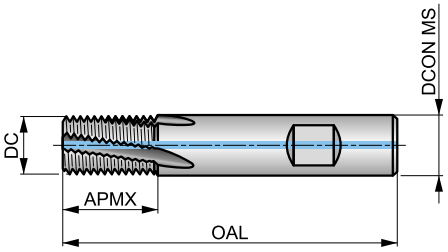
Internal Thread.

Product	TDZ	TP [mm]	DC [mm]	APMX [mm]	OAL [mm]	DCON MS [mm]	NOF
J2204.8X.5	M6	0.50	4.80	10.00	57.0	6.00	3
J2206.0X.75	M8	0.75	6.00	12.00	57.0	6.00	3
J2206.0X1.0	M8	1.00	6.00	12.00	57.0	6.00	3
J2208.0X1.0	M10	1.00	8.00	16.00	63.0	8.00	4
J22010.0X1.0	M12	1.00	10.00	20.00	72.0	10.00	4
J22010.0X1.5	M12	1.50	10.00	20.00	72.0	10.00	4
J22012.0X1.0	M14	1.00	12.00	22.00	83.0	12.00	4
J22012.0X1.5	M14	1.50	12.00	22.00	83.0	12.00	4
J22014.0X1.0	M16	1.00	14.00	26.00	83.0	14.00	5
J22014.0X1.5	M16	1.50	14.00	26.00	83.0	14.00	5
J22016.0X2.0	M20	2.00	16.00	30.00	92.0	16.00	5
J22016.0X2.5	M20	2.50	16.00	42.50	105.0	16.00	5
J22019.0X3.0	M24	3.00	19.00	50.00	125.0	20.00	5
J22020.0X2.0	M24	2.00	20.00	35.00	104.0	20.00	5

J225

Solid Carbide Thread Mill with Through Coolant, Metric Fine

Universal high performance tool to machine same or bigger diameters than the TDZ with the same pitch. Left or right-hand, through or blind holes almost down to the bottom. With Alcrona Pro coated for the best machining result and through coolant for better chip evacuation.



MF	DORMER	1.5×D
HM		λ 10°
R	Alcrona Pro	DIN 6535HB

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 309.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■190 E	■212 E	■242 E	■163 E	■143 E	■127 E	■146 E	■118 E	■99 E	■87 E	■74 E	■61 E	■69 E	■58 E
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
■61 E	■50 E	■42 E	■52 D	■44 D	■40 D	■33 D	◪29 D	■143 E	■106 E	■80 E	■136 E	■110 E	■88 E
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■120 E	■91 E	■74 E	■111 D	■84 D	■62 D	■53 D	■44 D	■126 E	■95 E	■73 E	■440 F	■330 F	■220 F
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**
■288 F	■259 F	■187 F	■671 F	■396 F	■198 F	■319 F	■160 F	■72 F	■44 D	■44 D	◪33 D	■36 D	◪28 D
S3.1	**S3.2**	**S4.1**	**S4.2**	**H1.1**	**H3.1**								
■28 D	◪23 D	■22 D	◪18 D	■66 D	◪48 D								

Internal Thread.

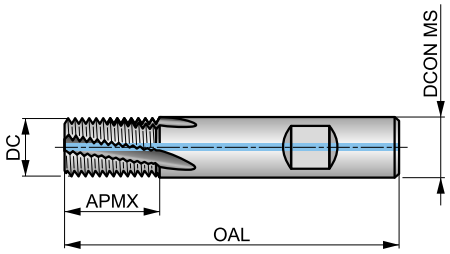
Product	TDZ	TP [mm]	DC [mm]	APMX [mm]	OAL [mm]	DCON MS [mm]	NOF
J2258.0X1.0	M10	1.00	8.00	16.00	63.0	8.00	4
J22510.0X1.0	M12	1.00	10.00	20.00	72.0	10.00	4
J22510.0X1.5	M12	1.50	10.00	20.00	72.0	10.00	4
J22512.0X1.0	M14	1.00	12.00	22.00	83.0	12.00	4
J22512.0X1.5	M14	1.50	12.00	22.00	83.0	12.00	4
J22514.0X1.0	M16	1.00	14.00	26.00	83.0	14.00	5
J22514.0X1.5	M16	1.50	14.00	26.00	83.0	14.00	5
J22516.0X1.5	M18	1.50	16.00	30.00	92.0	16.00	5

J235

DORMER

Solid Carbide Thread Mill with Through Coolant, UNC

Universal high performance tool to machine same or bigger diameters than the TDZ with the same pitch. Left or right-hand, through or blind holes almost down to the bottom. With Alcrona Pro coated for the best machining result and through coolant for better chip evacuation.



Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 309.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 181 H	■ 203 H	■ 210 H	■ 156 H	■ 137 H	■ 121 H	■ 140 H	■ 112 H	■ 95 H	■ 83 H	■ 70 H	■ 58 H	■ 65 H	■ 55 H
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
■ 58 H	■ 47 H	■ 40 H	■ 50 G	■ 42 G	■ 38 G	■ 32 G	◪ 27 G	■ 137 H	■ 101 H	■ 76 H	■ 129 H	■ 105 H	■ 84 H
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■ 115 H	■ 87 H	■ 71 H	■ 106 G	■ 80 G	■ 59 G	■ 51 G	■ 42 G	■ 120 H	■ 90 H	■ 70 H	■ 420 I	■ 315 I	■ 210 I
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**
■ 275 I	■ 247 I	■ 179 I	■ 640 I	■ 378 I	■ 189 I	■ 305 I	■ 153 I	■ 69 I	■ 42 G	■ 42 G	◪ 32 G	■ 35 G	◪ 26 G
S3.1	**S3.2**	**S4.1**	**S4.2**	**H1.1**	**H3.1**								
■ 26 G	◪ 22 G	■ 21 G	◪ 17 G	■ 63 G	◪ 45 G								

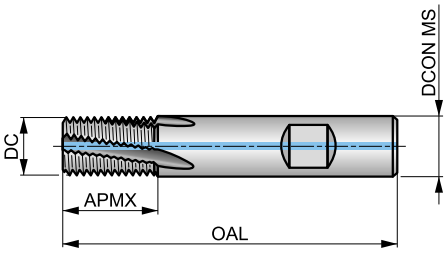
Internal Thread.

Product	TDZ	TPI	DC [mm]	APMX [mm]	OAL [mm]	DCON MS [mm]	NOF
J2354.8-20	1/4	20	4.80	14.00	57.0	6.00	3
J2355.5-18	5/16	18	5.50	14.00	57.0	6.00	3
J2357.5-16	3/8	16	7.50	19.00	63.0	8.00	4
J2358.0-14	7/16	14	8.00	19.00	63.0	8.00	4
J23510.0-13	1/2	13	10.00	22.00	72.0	10.00	4
J23510.0-12	9/16	12	10.00	22.00	72.0	10.00	4
J23512.0-11	5/8	11	12.00	26.00	83.0	12.00	4
J23514.0-10	3/4	10	14.00	32.00	83.0	14.00	5

J245

Solid Carbide Thread Mill with Through Coolant, UNF

Universal high performance tool to machine same or bigger diameters than the TDZ with the same pitch. Left or right-hand, through or blind holes almost down to the bottom. With Alcrona Pro coated for the best machining result and through coolant for better chip evacuation.



UNF	DORMER	2×D
HM		λ 10°
R	Alcrona Pro	DIN 6535HB

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page XY.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 181 K	■ 203 K	■ 210 K	■ 156 K	■ 137 K	■ 121 K	■ 140 K	■ 112 K	■ 95 K	■ 83 K	■ 70 K	■ 58 K	■ 65 K	■ 55 K
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
■ 58 K	■ 47 K	■ 40 K	■ 50 J	■ 42 J	■ 38 J	■ 32 J	◪ 27 J	■ 137 K	■ 101 K	■ 76 K	■ 129 K	■ 105 K	■ 84 K
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■ 115 K	■ 87 K	■ 71 K	■ 106 J	■ 80 J	■ 59 J	■ 51 J	■ 42 J	■ 120 K	■ 90 K	■ 70 K	■ 420 L	■ 315 L	■ 210 L
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**
■ 275 L	■ 247 L	■ 179 L	■ 640 L	■ 378 L	■ 189 L	■ 305 L	■ 153 L	■ 69 L	■ 42 J	■ 42 J	◪ 32 J	■ 35 J	◪ 26 J
S3.1	**S3.2**	**S4.1**	**S4.2**	**H1.1**	**H3.1**								
■ 26 J	◪ 22 J	■ 21 J	◪ 17 J	■ 63 J	◪ 45 J								

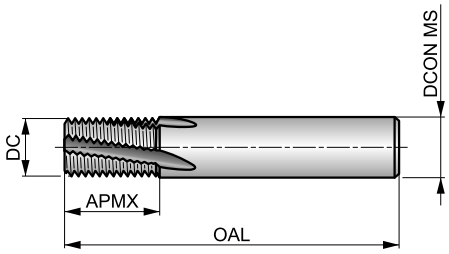
Internal Thread.

Product	TDZ	TPI	DC [mm]	APMX [mm]	OAL [mm]	DCON MS [mm]	NOF
J2454.8-28	1/4	28	4.80	14.00	57.0	6.00	3
J2456.0-24	5/16. 3/8	24	6.00	14.00	57.0	6.00	3
J2458.0-20	7/16. 1/2	20	8.00	19.00	63.0	8.00	4
J24510.0-18	9/16. 5/8	18	10.00	22.00	72.0	10.00	4
J24514.0-16	3/4	16	14.00	32.00	83.0	14.00	5

J280

Solid Carbide Thread Mill, G(BSP)

Universal high performance tool to machine same or bigger diameters than the TDZ with the same pitch. Left or right-hand, through or blind holes almost down to the bottom. Alcrona Pro coated for the best machining result in a wide range of materials. Suited for producing internal and external threads.



G	DORMER	1.5×D
HM		λ 10°
R	Alcrona Pro	DIN 6535HA

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 309.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 190 N	■ 212 N	■ 242 N	■ 163 N	■ 143 N	■ 127 N	■ 146 N	■ 118 N	■ 99 N	■ 87 N	■ 74 N	■ 61 N	■ 69 N	■ 58 N
M2.1	M2.2	M2.3	M3.1	M3.2	M3.3	M4.1	M4.2	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3
■ 61 N	■ 50 N	■ 42 N	■ 52 M	■ 44 M	■ 40 M	■ 33 M	◪ 29 M	■ 143 N	■ 106 N	■ 80 N	■ 136 N	■ 110 N	■ 88 N
K3.1	K3.2	K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3
■ 120 N	■ 91 N	■ 74 N	■ 111 M	■ 84 M	■ 62 M	■ 53 M	■ 44 M	■ 126 N	■ 95 N	■ 76 N	■ 440 O	■ 330 O	■ 220 O
N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	N4.3	S1.1	S1.2	S1.3	S2.1	S2.2
■ 288 O	■ 259 O	■ 187 O	■ 671 O	■ 396 O	■ 198 O	■ 319 O	■ 160 O	■ 72 O	■ 44 M	■ 44 M	◪ 33 M	■ 36 M	◪ 28 M
S3.1	S3.2	S4.1	S4.2	H1.1	H3.1								
■ 28 M	◪ 23 M	■ 22 M	◪ 18 M	■ 66 M	◪ 48 M								

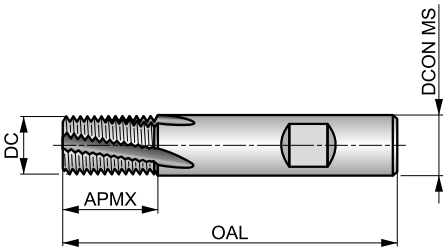
Internal and External Thread.

Product	TDZ	TPI	DC [mm]	APMX [mm]	OAL [mm]	DCON MS [mm]	NOF
J2806.0-28	1/8	28	6.00	15.00	57.0	6.00	3
J28010.0-19	1/4	19	10.00	20.00	72.0	10.00	4
J28014.0-19	3/8	19	14.00	26.00	83.0	14.00	5
J28016.0-14	1/2. 5/8	14	16.00	30.00	92.0	16.00	5
J28020.0-14	5/8. 3/4. 7/8	14	20.00	35.00	104.0	20.00	5
J28025.0-11	1". 3"	11	25.00	45.00	121.0	25.00	6

J260

Solid Carbide Thread Mill, NPT

Universal high performance tool to machine same or bigger diameters than the TDZ with the same pitch. Left or right-hand, through or blind holes almost down to the bottom. Alcrona Pro coated for the best machining result in a wide range of materials.



NPT	DORMER	HM
	λ 10°	R
Alcrona Pro	DIN 6535HB	

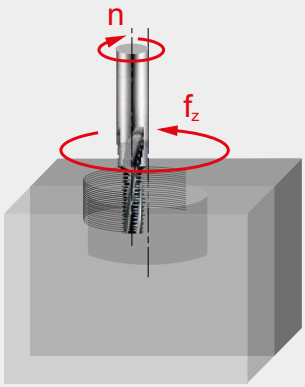
Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 309.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 190 R	■ 212 R	■ 242 R	■ 163 R	■ 143 R	■ 127 R	■ 146 R	■ 118 R	■ 99 R	■ 87 R	■ 74 R	■ 61 R	■ 69 R	■ 58 R
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
■ 61 R	■ 50 R	■ 42 R	■ 52 Q	■ 44 Q	■ 40 Q	■ 33 Q	◪ 29 Q	■ 143 R	■ 106 R	■ 80 R	■ 136 R	■ 110 R	■ 88 R
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■ 120 R	■ 91 R	■ 74 R	■ 111 Q	■ 84 Q	■ 62 Q	■ 53 Q	■ 44 Q	■ 126 R	■ 95 R	■ 73 R	■ 440 S	■ 330 S	■ 220 S
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**
■ 288 S	■ 259 S	■ 187 S	■ 671 S	■ 396 S	■ 198 S	■ 319 S	■ 160 S	■ 72 S	■ 44 Q	■ 44 Q	◪ 33 Q	■ 36 Q	◪ 28 Q
S3.1	**S3.2**	**S4.1**	**S4.2**	**H1.1**	**H3.1**								
■ 28 Q	◪ 23 Q	■ 22 Q	◪ 18 Q	■ 66 Q	◪ 48 Q								

Internal Thread.

Product	TDZ	TPI	DC [mm]	APMX [mm]	OAL [mm]	DCON MS [mm]	NOF
J2607.9-27	1/8	27	7.90	11.50	58.0	8.00	3
J2609.9-18	1/4. 3/8	18	9.90	15.92	66.0	10.00	3
J26015.9-14	1/2. 3/4	14	15.90	20.46	82.0	16.00	4
J26019.9-11.5	1". 2"	11.5	19.90	27.12	92.0	20.00	5

THREAD MILLS – FEED PER TOOTH TABLE



Feed per tooth per revolution (f_z in mm/rev).
The specified values are the recommended starting values for machining the full thread depth in one pass.

How to use this table to find the feed per tooth (f_z):

1. Find your Alpha Code on the product page (example: 181B, "B" is the Alpha Code).
2. Select the column matching your cutter diameter in the top row of the table with the Thread pitch ***P*** or ***TPI*** (in the rows with icons on the left).
3. Find your Alpha Code in the left column of the table.
4. The intersection (cell) of the Diameter + Pitch column and Alpha Code is the feed per tooth (f_z).

Correction of the feed per tooth for multiple passes:

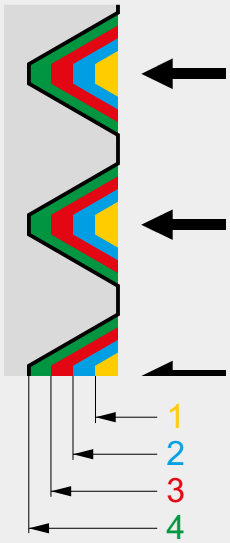
5. In case the thread is being machined in **2 passes** the feed values mentioned in the table should be increased by **30 to 40%**.
6. In case the thread is being machined in **3 passes** the feed values mentioned in the table should be increased by **55 to 65%**.
7. In case the thread is being machined in **4 passes** the feed values mentionedin the table should be increased by **80 to 90%**.

(Example: J2003.2X.7 machining WMG M4.1 with feed rate A in 4-passes the $f_z = 0.017 \times 1.80 = 0.031$ mm/z).

Feed rates

	ø DC [mm]																										
	3.20	**4.10**	**4.50**	**4.80**	**5.50**	**6.00**		**6.50**	**7.50**	**7.90**	**8.00**	**8.20**	**9.50**	**9.90**	**10.00**		**11.60**	**12.00**		**13.60**	**14.00**		**16.00**			**19.00**	**20.00**	**25.00**
	0.70	**0.80**	**1.00**	**1.00**		**1.25**		**1.25**	**1.50**			**1.50**	**1.75**	**1.75**	**2.00**		**2.50**	**2.00**		**2.00**								
A	0.017	0.022	0.023	0.024	–	0.024	–	0.029	0.036	–	–	0.040	0.044	0.047	0.053	–	0.056	0.068	–	0.071	–	–	–	–	–	–	–	–
B	0.022	0.029	0.031	0.032	–	0.032	–	0.038	0.048	–	–	0.053	0.059	0.063	0.070	–	0.075	0.090	–	0.095	–	–	–	–	–	–	–	–
C	0.028	0.036	0.039	0.040	–	0.040	–	0.048	0.060	–	–	0.066	0.074	0.079	0.088	–	0.094	0.113	–	0.119	–	–	–	–	–	–	–	–
				0.50		**0.75**	**1.00**				**1.00**				**1.00**	**1.50**		**1.00**	**1.50**		**1.00**	**1.50**	**1.50**	**2.00**	**2.50**	**3.00**	**2.00**	
D	–	–	–	0.044	–	0.041	0.036	–	–	–	0.057	–	–	–	0.075	0.067		0.079	0.071	–	0.083	0.071	0.092	0.081	0.073	0.067	0.096	–
E	–	–	–	0.058	–	0.055	0.048	–	–	–	0.076	–	–	–	0.100	0.089	–	0.105	0.094	–	0.110	0.095	0.122	0.108	0.097	0.089	0.128	–
F	–	–	–	0.073	–	0.069	0.060	–	–	–	0.095	–	–	–	0.125	0.111	–	0.131	0.118	–	0.138	0.119	0.153	0.135	0.121	0.111	0.160	–
				20	**18**				**16**		**14**				**13**	**12**		**11**			**10**							
G	–	–	–	0.019	0.023	–	–	–	0.030	–	0.034	–	–	–	0.053	0.051	–	0.055	–	–	0.066	–	–	–	–	–	–	–
H	–	–	–	0.025	0.030	–	–	–	0.040	–	0.045	–	–	–	0.071	0.068	–	0.073	–	–	0.088	–	–	–	–	–	–	–
I	–	–	–	0.031	0.038	–	–	–	0.050	–	0.056	–	–	–	0.089	0.085	–	0.091	–	–	0.110	–	–	–	–	–	–	–
				28		**24**					**20**				**18**						**16**							
J	–	–	–	0.023	–	0.026	–	–	–	–	0.041	–	–	–	0.062	–	–	–	–	–	0.083	–	–	–	–	–	–	–
K	–	–	–	0.030	–	0.035	–	–	–	–	0.054	–	–	–	0.083	–	–	–	–	–	0.110	–	–	–	–	–	–	–
L	–	–	–	0.038	–	0.044	–	–	–	–	0.068	–	–	–	0.104	–	–	–	–	–	0.138	–	–	–	–	–	–	–
						28									**19**						**19**		**14**				**14**	**11**
M	–	–	–	–	–	0.029	–	–	–	–	–	–	–	–	0.064	–	–	–	–	–	0.080	–	0.083	–	–	–	0.116	0.131
N	–	–	–	–	–	0.038	–	–	–	–	–	–	–	–	0.085	–	–	–	–	–	0.106	–	0.111	–	–	–	0.155	0.175
O	–	–	–	–	–	0.048	–	–	–	–	–	–	–	–	0.106	–	–	–	–	–	0.133	–	0.139	–	–	–	0.194	0.219
										27				**18**							**14**	**11.5**						
Q	–	–	–	–	–	–	–	–	–	0.039	–	–	–	0.044	–	–	–	–	–	–	0.079	0.115	–	–	–	–	–	–
R	–	–	–	–	–	–	–	–	–	0.052	–	–	–	0.059	–	–	–	–	–	–	0.105	0.153	–	–	–	–	–	–
S	–	–	–	–	–	–	–	–	–	0.065	–	–	–	0.074	–	–	–	–	–	–	0.131	0.191	–	–	–	–	–	–

THREAD MILLS – NUMBER OF PASSES TABLE



How to use the tables to find the depth increments per pass:

1. Select the table for your thread profile (example: "M12" is a metric thread).
2. Find the column matching your thread pitch in the top row of the table.
3. Find in that column below the recommended number of passes and for each pass the increment radial depth of cut. (example: for a pitch of 1.75 the recommended number of passes is 5 and radial depth of the 1st pass is 0.277 mm, the 2nd 0.228 mm etc.).
4. It is recommended to increase the number of passes for more difficult to machine materials.
5. For super-finishing result it is best practice to repeat the final pass.

Recommended number of passes and radial depth of cut per pass for female metric thread (60°).

	Radial depth of cut per pass [mm]										
	0.50	**0.70**	**0.75**	**0.80**	**1.00**	**1.25**	**1.50**	**1.75**	**2.00**	**2.50**	**3.00**
No. of passes 1	0.158	0.221	0.168	0.224	0.224	0.228	0.237	0.277	0.283	0.323	0.387
2	0.131	0.183	0.138	0.185	0.185	0.188	0.196	0.228	0.234	0.267	0.320
3	–	–	0.127	0.135	0.168	0.173	0.179	0.209	0.214	0.244	0.293
4	–	–	–	–	–	0.133	0.138	0.161	0.164	0.187	0.225
5	–	–	–	–	–	–	0.116	0.135	0.138	0.158	0.189
6	–	–	–	–	–	–	–	–	0.122	0.139	0.167
7	–	–	–	–	–	–	–	–	–	0.125	0.151
Acc. depth	0.289	0.404	0.433	0.544	0.577	0.722	0.866	1.010	1.155	1.443	1.732

Recommended number of passes and radial depth of cut per pass for female unified thread (60°).

	Radial depth of cut per pass [mm]									
	28	**24**	**20**	**18**	**16**	**14**	**13**	**12**	**11**	**10**
No. of passes 1	0.203	0.237	0.232	0.258	0.251	0.287	0.309	0.299	0.327	0.328
2	0.167	0.195	0.191	0.213	0.207	0.237	0.255	0.247	0.270	0.271
3	0.154	0.179	0.175	0.195	0.190	0.217	0.234	0.226	0.247	0.248
4	–	–	0.135	0.149	0.146	0.166	0.179	0.174	0.189	0.190
5	–	–	–	–	0.123	0.140	0.151	0.146	0.160	0.160
6	–	–	–	–	–	–	–	0.130	0.140	0.141
7	–	–	–	–	–	–	–	–	–	0.128
Acc. Depth	0.524	0.611	0.733	0.815	0.917	1.047	1.128	1.222	1.333	1.466

Recommended number of passes and radial depth of cut per pass for female BSP thread (55°).

		Radial depth of cut per pass [mm]			
1 2 3 / 1"		28	19	14	11
No. of passes	1	0.225	0.271	0.318	0.362
	2	0.186	0.224	0.263	0.299
	3	0.170	0.205	0.241	0.274
	4	–	0.156	0.185	0.210
	5	–	–	0.155	0.177
	6	–	–	–	0.157
	7	–	–	–	–
Acc. Depth		0.581	0.856	1.162	1.479

Recommended number of passes and radial depth of cut per pass for female NPT thread (60°).

		Radial depth of cut per pass [mm]			
1 2 3 / 1"		27	18	14	11.5
No. of passes	1	0.283	0.348	0.390	0.423
	2	0.233	0.287	0.322	0.349
	3	0.214	0.263	0.295	0.320
	4	–	0.202	0.226	0.246
	5	–	–	0.190	0.207
	6	–	–	–	0.183
	7	–	–	–	–
Acc. Depth		0.730	1.100	1.423	1.728

General hints on thread milling

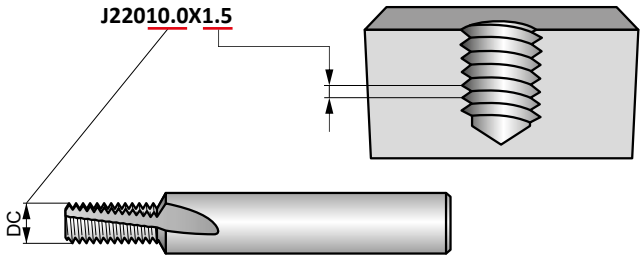
1. Thread milling is the process of generating a thread by the circular interpolation of a milling cutter with a specific thread geometry ground around it's periphery.
2. To be able to use a thread milling cutter it is necessary to have a CNC machine that can make circular paths.
3. Most modern CNC machines are equipped with machining cycles for thread milling.
4. Consult the manual or contact the machine supplier for information.

Features and benefits

1. Thread milling gives increased reliability and tool life.
2. Threadmills produce small chips resulting in problem free threading.
3. Tolerance adjustments can be made using exact co-ordinates.
4. You can generate a complete thread to the bottom of the hole.
5. Capable of machining a wide variety of materials.
6. The same cutter can produce different size threads provided the pitch is the same.
7. Both right and left hand threads can be created with the same tool.
8. Some thread mills can also machine the entry chamfer (J200 and J205).

Choosing your tool

Thread milling cutters have an item code based on the type, diameter (d_1) and pitch (P).
The item code is the number to use when ordering your tool.
Always consult the catalogue to ensure you have the correct thread dimensions.



This thread milling cutter can be used for threads ≥ M12×1.5 (M14×1.5, M18×1.5 etc.)

Programming with Rprg

- For easy adjustment of the thread tolerance always program with radius correction.
- The Rprg value is the start value for a new cutter and is printed on the cutter shank. This should be entered in the tool memory offset.
- Rprg is based on the theoretical zero-line of the thread meaning that when you program using Rprg the thread is never oversize, but normally tight.
- This means that with a small modification to the program co-ordinates you can create the thread to the required size.

Recommendations

- Always use the correct cutting data (refer to the cutting data chart in the Product section).
- Use the recommended drill size for the thread diameter, as for conventional taps.
- For easy adjustment of the thread tolerance always start with the Rprg value printed on the shank of the threadmill.
- Use a gauge to check the tolerance on the first thread to establish if the radius needs to be corrected. The radius can be corrected 2 or 3 times before the threadmill is worn out.
- When dry machining, compressed air is recommended to help with swarf removal.
- When threading more difficult materials, it is recommended to take multiple passes.

DORMER PRAMET

ALWAYS CONNECT

No wifi or internet connection? The machining calculator works perfectly even when you are offline, making sure it's always available when you need it. **Simply Reliable.**

Download on the App Store

GET IT ON Google Play

Download on AppGallery

INDEXABLE MILLS

		MILLING – GENERAL CONTENT
6		WMG & ISO 13399
10	SOLID MILLS	INSTRUCTIONS
19		HM MILLS
117		HSS-E-PM, HSS-E, HSS MILLS
201		TECHNICAL INFORMATION
212		ROTARY BURRS
292		THREAD MILLS
314	INDEXABLE MILLS	INSTRUCTIONS
328		NAVIGATORS
349		FACE MILLS
409		SQUARE SHOULDER MILLS
479		DEEP SHOULDER MILLS
508		SLOT MILLS
521		COPY MILLS
613		HIGH FEED MILLS (HFC)
645		CHAMFER & T-SLOT MILLS
667		OTHER INSERTS
691		TECHNICAL INFORMATION

1 **SAD11E**

P M K N S H 2

PRAMET 3 S

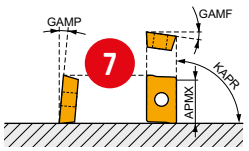
FORCE AD11 Square Shoulder Mill with Internal Coolant 5

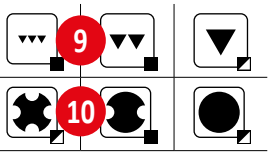
90° end and shell mills utilising positive AD.. 11 style insert with APMX of 9 mm. Suitable for face, shoulder, slot, helical, trochoidal, ramping and plunge milling. Available in cylindrical, Weldon, Morse taper, modular and arbor (with differential tooth pitch) style, in Ø16 up to Ø125 mm. Body treated for longer tool life.

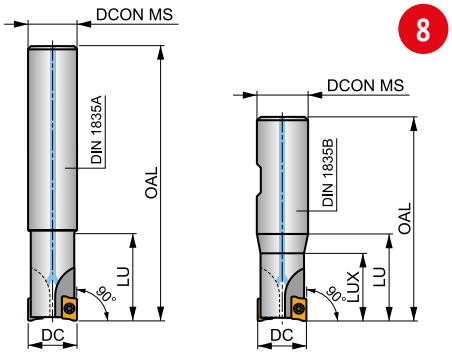
FORCE AD

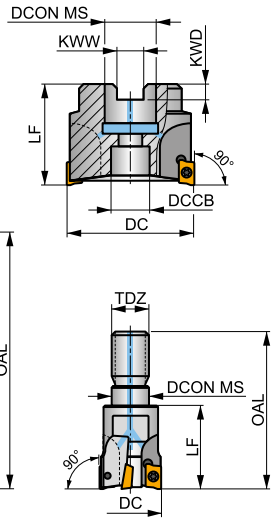
KAPR	90°
APMX	9.0 mm

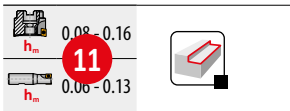
6











	Product	DC	OAL	DCON MS	DCCB	LU	LUX	LF	TDZ	CZC MS	KWW	KWD	GAMF	GAMP			max.		kg			
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[°]	[°]								
	14 **16A2R02[illegible]-SAD11E-C**	16	160	14	–	24	–	15	–	–	–	–	-12.8	4	16	17	18	19	20	21	22	23
	16A2R024A16-SAD11E-C	16	135	16	–	24	–	–	–	–	–	–	-12.8	4	2	–	30100	✓	0.19	[illegible]	SQ025	–
	16A2R050A16-SAD11E-C	16	135	16	–	50	–	–	–	–	–	–	-12.8	4	2	–	30100	✓	0.20	GI169	SQ025	–
	18A2R029A20-SAD11E-C	18	150	20	–	29	–	–	–	–	–	–	-12	4.5	2	–	28400	✓	0.35	GI169	SQ025	–
	20A2R029A20-SAD11E-C	20	150	20	–	29	–	–	–	–	–	–	-11.5	5	2	–	27000	✓	0.33	GI169	SQ020	–
	20A2R070A20-SAD11E-C	20	150	20	–	70	–	–	–	–	–	–	-11.5	5	2	–	27000	✓	0.32	GI169	SQ020	–
13	**20A3R029A18-SAD11E-C**	20	200	18	–	29	–	–	–	–	–	–	-11.5	5	3	–	27000	✓	0.38	GI169	SQ025	–
	20A3R029A20-SAD11E-C	20	150	20	–	29	–	–	–	–	–	–	-11.5	5	3	–	27000	✓	0.33	GI169	SQ025	–
DIN 1835A	**22A3R029A20-SAD11E-C**	22	200	20	–	29	–	–	–	–	–	–	-11.5	5	3	–	25600	✓	0.49	GI169	SQ025	–
	25A3R034A25-SAD11E-C	25	170	25	–	34	–	–	–	–	–	–	-10.2	5	3	–	24100	✓	0.42	GI169	SQ020	–

			24	
GI169	ADMX 11T3..			ADEX 11T3..

		Nm			25			
SQ020	US 62506-T07P	1.2	M 2.5	6	–	–	Flag T07P	–
SQ021	US 62506-T07P	1.2	M 2.5	6	D-T07P/T09P	FG-15	–	–
SQ022	US 62506-T07P	1.2	M 2.5	6	D-T07P/T09P	FG-15	–	HS 0830C
SQ023	US 62506-T07P	1.2	M 2.5	6	D-T07P/T09P	FG-15	–	HS 1030C
SQ025	US 62505-T07P	1.2	M 2.5	5	–	–	Flag T07P	–

		26	
AC001	KS 1230		K.FMH27
AC002	KS 1635		K.FMH32
AC003	KS 2040		K.FMH40

Typical page with indexable mills cutter displayed – specific page details will differ.

Pos.	Description
1	Designation of cutter
2	Material group recommendations
3	Clamping system of insert
4	Illustrative picture
5	Tool description
6	Setting angle and maximum theoretical depth of cut [mm]
7	Tool geometry
8	Schematic drawing of tool
9	Achievable quality of surface
10	Character of cut/working conditions
11	Maximum range of mean chip thickness [mm] for end milling cutters and/or shell milling cutters
12	Product applications
13	Shank type

Pos.	Description
14	ISO code of cutter
15	Dimensions [mm], angles [1] [°] and connection size code
16	Number of teeth
17	Irregular teeth pitch
18	Maximum revolutions of cutter
19	Internal supply of coolant
20	Weight [kg]
21	Group of compatible inserts [2]
22	Group of spare parts [2]
23	Group of special accessories [2]
24	Compatible inserts
25	Spare parts
26	Special accessories

[1] γ_f = Radial rake setting angle (***GAMF***) of insert pocket – see indexable mills technical information

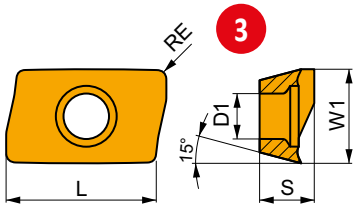
γ_p = Axial rake setting angle (***GAMP***) of insert pocket – see indexable mills technical information

[2] Spare parts and special accessories icons are designed schematically for their ease of understanding. They aren't included in the list of icons. Screws are, in some cases, completed with info on torque value in Nm, length of screw and size of thread.

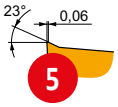
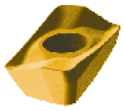
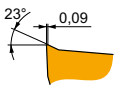
1 ADMX 11

PRAMET

	W1 [mm]	D1 [mm]	L [mm]	S [mm]
11T3	6.530	2.90	11.00	3.97



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																				
			F geometry with very sharp positive design for light machining.																	
ADMX 11T304SR-F	8215	0.4	245	0.10	2.0	145	0.09	2.0	230	0.10	2.0	735	0.12	2.0	60	0.08	1.6	–	–	–
	M8310	0.4	270	0.10	2.0	135	0.09	2.0	255	0.10	2.0	–	–	–	–	–	–	–	–	–
	[illegible]	0.4	240	0.10	2.0	140	0.09	2.0	225	0.10	2.0	720	0.12	2.0	60	0.08	1.6	–	–	–
	M8340	0.4	220	0.10	2.0	130	0.09	2.0	205	0.10	2.0	–	–	–	55	0.08	1.6	–	–	–
	M9340	0.4	285	0.10	2.0	170	0.09	2.0	–	–	–	–	–	–	70	0.08	1.6	–	–	–
ADMX 11T308SR-F	8215	0.8	290	0.10	2.0	170	0.09	2.0	275	0.10	2.0	870	0.12	2.0	70	0.08	1.6	–	–	–
	M8330	0.8	285	0.10	2.0	170	0.09	2.0	270	0.10	2.0	855	0.12	2.0	70	0.08	1.6	–	–	–
	M8340	0.8	260	0.10	2.0	155	0.09	2.0	245	0.10	2.0	–	–	–	65	0.08	1.6	–	–	–
	M9340	0.8	340	0.10	2.0	200	0.09	2.0	–	–	–	–	–	–	85	0.08	1.6	–	–	–
																				
			M geometry with positive design for light to medium machining.																	
ADMX 11T302SR-M	M8330	0.2	190	0.15	4.0	110	0.14	4.0	180	0.15	4.0	–	–	–	45	0.12	3.2	–	–	–
	M8340	0.2	170	0.15	4.0	100	0.14	4.0	160	0.15	4.0	–	–	–	40	0.12	3.2	–	–	–
ADMX 11T304SR-M	8215	0.4	205	0.15	4.0	120	0.14	4.0	190	0.15	4.0	–	–	–	50	0.12	3.2	–	–	–
	M8310	0.4	220	0.15	4.0	110	0.14	4.0	205	0.15	4.0	–	–	–	–	–	–	–	–	–

ADMX 11T304SR-M:M8310 Use full insert specification code when ordering!

- Grade
- Include colon
- ISO insert code

Typical page with milling inserts displayed – specific page details will differ. Most of inserts can be found in this catalogue just immediately after the relevant milling cutter or, alternatively, in the separate inserts chapter.

MILLING INSERTS – PAGE OVERVIEW

Pos.	Description
1	Designation of insert
2	Table with insert sizes [mm]
3	Schematic drawing of insert
4	Picture of representative insert
5	Profile of main cutting edge
6	Icons – specific features and cutting edge type

Pos.	Description
7	ISO insert code
8	Grade
9	Insert radii [mm]
10	Geometry description
11	Application area of insert [1]

[1] Recommendations for cutting speed corrections can be found at the end of Milling chapter in the technical section.

Technical information follows immediately after the milling cutter pages, their compatible inserts and info on starting cutting speeds. These will help you to use the tools in the correct way. If you are unsure how to use or interpret this information, either refer to the technical section at the end of the milling chapter or contact your Dormer Pramet representative.

INDEXABLE MILLS – ICONS OVERVIEW

General icons

■	Primary use
◪	Possible use

P	Material group P
M	Material group M
K	Material group K
N	Material group N
S	Material group S
H	Material group H

▼▼▼	Finishing – very good surface quality
▼▼	Medium machining – good surface quality
▼	Roughing – unlimited surface roughness
●	Suitable for stable working conditions
●	Suitable for unstable working conditions
●	Suitable for heavy working conditions

Milling Operations

	Face Milling
	Shallow shoulder milling
	Deep shoulder milling
	Shallow slot milling
	Deep slot milling

	T-slot Milling
	Contoured Surfaces (copy milling)
	Chamfer Milling
	Helical interpolation
	Helical interpolation in a pre-drilled hole

	Plunge Milling
	Progressive Plunging
	Ramping
	Rear face milling

Shanks

	Shell mill DIN 8030
	Shell mill DIN 8030 – helical mill
	Shell mill DIN 8030 – disc mill
	DIN 1835A Cylindrical Shank

	DIN 1835B Weldon Shank
	Morse shank DIN 228-1
	Polygon shank coupling ISO 26623-1
	Arbor DIN 2080-1

	Arbor DIN 69871-1
	Arbor MAS BT (JIS-B-6339)
	Threaded coupling

INDEXABLE MILLS – ICONS OVERVIEW

Features

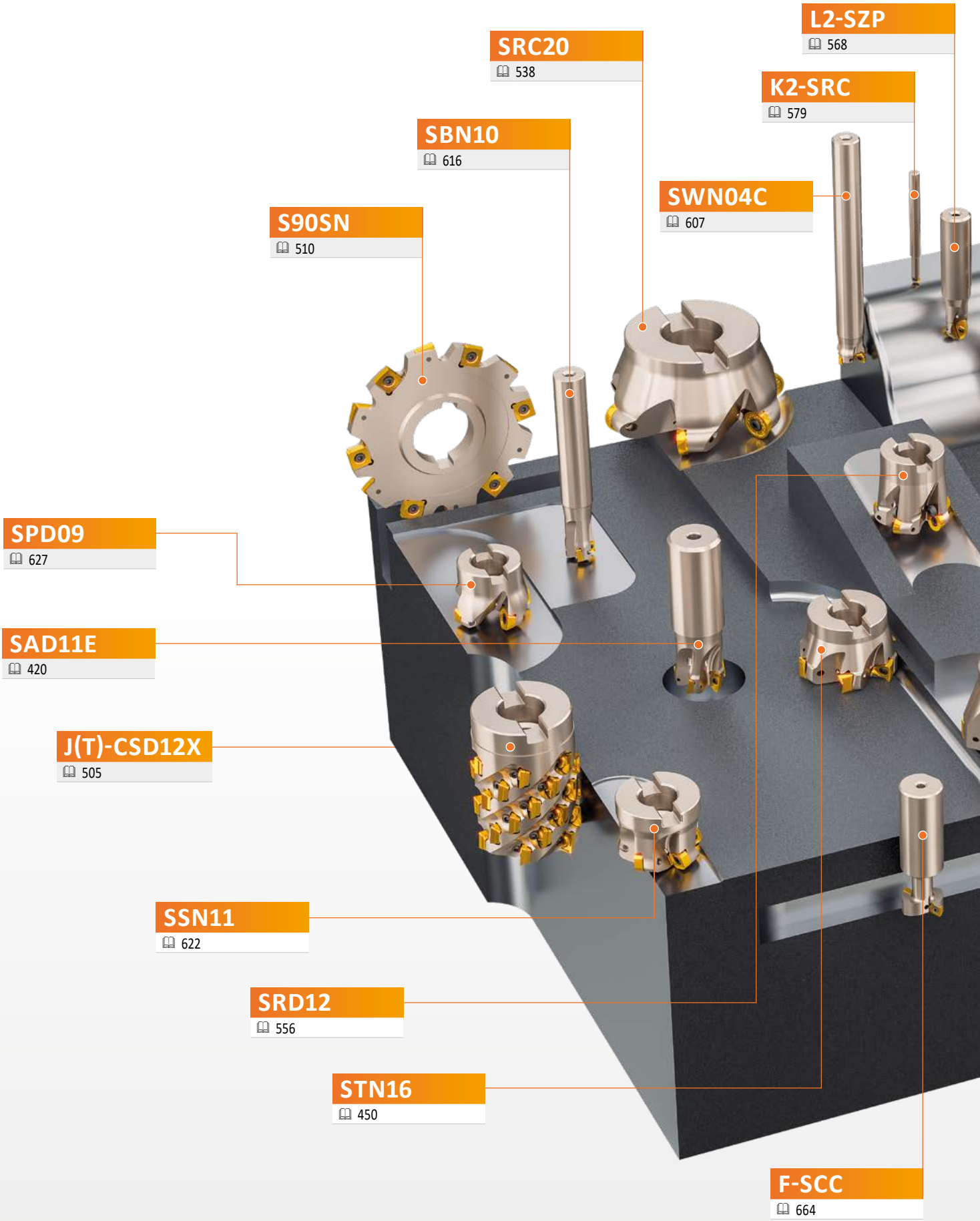
First choice	
Heavy working conditions	
High Feed Cutting	
Insert with Wiper geometry	
Long overhang	
Thin-walled and slim workpieces	
Universal wide range option	
Sharp edge	
Rounded edge	
Edge with facet	
Rounded edge with facet	
Rounded edge with double facet	

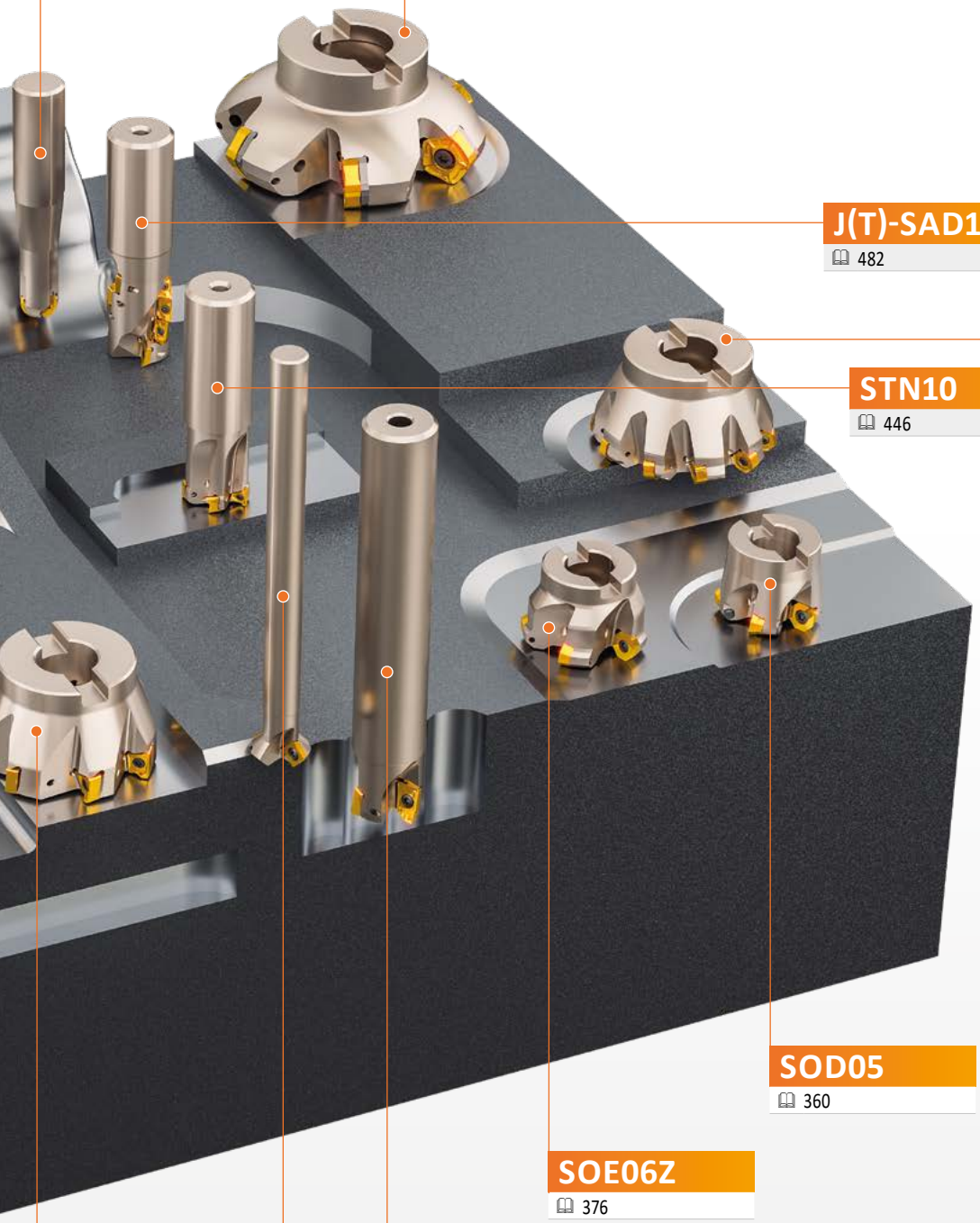
Others

Clamping torque of screw [Nm]	
Effective number of teeth	
Number of teeth (helical cutters)	

Technical Parts

Chamfering angle [°]	
Depth of cut [mm]	
Maximum cutting depth over the length of cut [mm]	
Wiper edge length [mm]	
Multiplication factor for feed (machining on centre line)	
Multiplication factor for feed (machining off centre line)	
Multiplication factor for cutting speed	
Diameter of cutter [mm]	
Maximum diameter of cutter [mm]	
Effective diameter of cutter [mm]	
Cutting depth for plunging [mm]	
Effective reach of tool [mm]	
Hole diameter [mm]	
Feed [mm/tooth]	
Minimal feed [mm/tooth]	
Maximal feed [mm/tooth]	
Chipbreaker	
Effective working length of tool [mm]	
Maximum width of machined area [mm]	
Number of edges in use	
Number of teeth	
Ratio [%] of radial width of cut to cutting diameter	
Ratio [%] of radial width of cut to maximal cutting diameter	
Corner radius of insert [mm]	
Maximal angle for ramping [°]	
Maximal depth per revolution for maximal diameter of hole [mm]	
Maximal depth per revolution for minimal diameter of hole [mm]	
Starting feed [mm/tooth]	
Contouring step in conventional milling [mm]	
Contouring step in up/down cross milling [mm]	
Roughness of machined surface R_a [µm]	
Time [min]	
Thread pitch	
Threads per inch	


L2-SZP
568
SRC20
538
K2-SRC
579
SBN10
616
SWN04C
607
S90SN
510
SPD09
627
SAD11E
420
J(T)-CSD12X
505
SSN11
622
SRD12
556
STN16
450
F-SCC
664



K3-CXP
575

SPN13
397

J(T)-SAD11E
482

SHN09C
356

STN10
446

SOD05
360

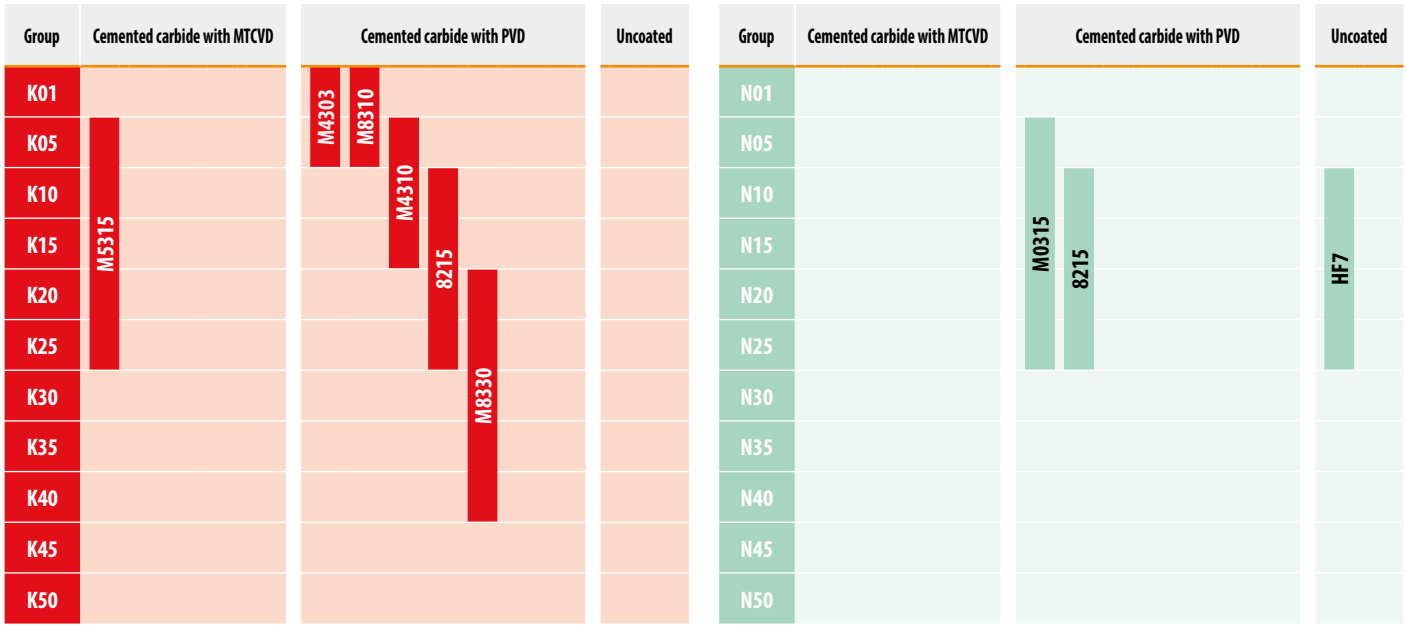
SOE06Z
376

SAD16E
441

SLN12
455

SSD09
648

Group
Cemented carbide with MTCVD
Cemented carbide with PVD
Uncoated
P01
P05
P10
P15
P20
P25
P30
P35
P40
P45
P50
M9315
M9325
M8310
8215
M8330
M8340
M8345
Group
Cemented carbide with MTCVD
Cemented carbide with PVD
Uncoated
M01
M05
M10
M15
M20
M25
M30
M35
M40
M45
M50
M9340
M6330
M8340
M8345


Group
Cemented carbide with MTCVD
Cemented carbide with PVD
Uncoated
K01
K05
K10
K15
K20
K25
K30
K35
K40
K45
K50
M5315
M4303
M8310
M4310
8215
M8330
Group
Cemented carbide with MTCVD
Cemented carbide with PVD
Uncoated
N01
N05
N10
N15
N20
N25
N30
N35
N40
N45
N50
M0315
8215
HF7

Group
Cemented carbide with MTCVD
Cemented carbide with PVD
Uncoated
S01
S05
S10
S15
S20
S25
S30
S35
S40
S45
S50
M9340
M6330
M8340
M8345
Group
Cemented carbide with MTCVD
Cemented carbide with PVD
Uncoated
H01
H05
H10
H15
H20
H25
H30
H35
H40
H45
H50
M5315
M4303
2003
M4310
M8310
8215

Grade Identification	Area of Application	Application	Feed	Cutting speed	Resistance to adverse Working Conditions	Coating	Colour	Substrate	Coolant benefit	Grade description
M9315	P05 – P25 K10 – K30 H10 – H20	■ ■ ◪				MT-CVD		H	- - -	Milling grade with high abrasion resistance even at high thermal loads, main application area is higher cutting speeds with medium or small depths of cut.
M9325	P10 – P30 K10 – K30 H15 – H20	■ ■ ◪				MT-CVD		H	- - -	This grade has an ideal balance between wear resistance and toughness, it is mainly designed for roughing operations. Advantages are excellent wear resistance even at relatively high cutting speeds with excellent reliability, this grade is more suitable for applications using higher speeds and lower feed rates.
M9340	P35 – P50 M30 – M40 S15 – S20	■ ■ ■				MT-CVD		H	- - -	A very tough grade, where the main advantage is the high strength of the cutting edge and resistance to adverse cutting conditions. Although this material has an MT-CVD M30 – M40 coating, it is possible to use emulsion cooling for its application, especially in optimum cutting conditions.
M5315	P05 – P20 K05 – K25 H05 – H20	◪ ■ ■				MT-CVD		H	- - -	One of the most abrasion-resistant milling grades which should be used under stable conditions. Its main advantage is the extremely high resistance to thermal stress and abrasive K05 – K25 wear. It is mainly used for machining hard and very hard materials, particularly cast iron.
M8310	P01 – P10 M01 – M10 K01 – K10 H05 – H15	■ ◪ ■ ◪				PVD		ultra submicron H	-	Grade specially developed for copy milling, featuring high resistance to abrasion. It is suitable for machining at higher cutting speeds under stable cutting conditions, and for machining virtually all groups of machined materials (particularly stronger and harder materials).
8215	P10 – P20 M10 – M20 K10 – K25 N10 – N25 S10 – S15 H10 – H15	■ ◪ ■ ■ ◪ ■				PVD		submicron H	+ / -	One of the most versatile milling grades, in terms of both the range of workpiece materials and the range of possible applications. It is characterised by high wear resistance and operational reliability. Its other advantages include excellent resistance to cracking induced by temperature shock. With its unique properties, this material is undoubtedly one of the pillars of the milling range.
M8325	P20 – P40 M15 – M30	■ ◪				PVD		S	-	The main application area of this grade is machining all kinds of steels (including stainless) in the "soft state". It can also be used for machining softer cast irons. Suitable for M15 – M30 machining at medium speeds under average cutting conditions.
M8330	P20 – P40 M20 – M35 K20 – K40 N15 – N30 S15 – S25 H15 – H25	■ ■ ■ ◪ ◪ ◪				PVD		submicron H	+ / -	This grade is universal and can be used for machining various types of materials. However, it's priority application area lies within steels and ductile cast irons. It is recommended for milling at medium speeds under unstable cutting conditions.
M8340	P25 – P50 M20 – M40 K20 – K40 S20 – S30	■ ■ ◪ ■				PVD		submicron H	+ / -	Grade specially developed for copy milling, featuring high resistance to abrasion. It is suitable for machining at higher cutting speeds under stable cutting conditions, and for machining virtually all groups of machined materials (particularly stronger and harder materials).

Grade Identification	Area of Application	Application	Feed	Cutting speed	Resistance to adverse Working Conditions	Coating	Colour	Substrate	Coolant benefit	Grade description
M8345	P30 – P50 M30 – M40	■ ■	▲	▲	▲+	PVD		H	-	This grade has exceptional operational reliability and is designed for heavy cuts in unfavourable conditions in difficult and tough materials.
M6330	P20 – P35 M20 – M35 S20 – S30	■ ■ ■	▲	▲	▲	PVD		H	+ / -	Milling grade with extraordinary service reliability. Especially suitable for machining of hard to machine materials. Powerful in applications where unfavourable conditions and heavy cuts dominate.
M4303	P01 – P10 K01 – K10 N01 – N10 H01 – H10	◪ ■ ◪ ■	▲	▲	▲	PVD		ultra submicron H	-	The most wear resistant grade for mold & die applications. Offers exceptional performance at high cutting speeds and low feeds in stable cutting conditions. Suitable for finishing operations in difficult workpiece materials.
M4310	P05 – P15 M05 – M15 K05 – K15 S05 – S10 H05 – H15	◪ ◪ ■ ■ ■	▲	▲	▲	PVD		ultra submicron H	-	Universal grade for mold & die applications. Suitable for finishing as well as semi-roughing operations. This grade combines high wear resistance with extraordinary operational reliability.
2003	P01 – P10 M01 – M10 K01 – K10 S05 – S10 H05 – H15	◪ ◪ ■ ■ ◪	▲	▲	▲	PVD		ultra submicron H	-	Milling grade with excellent wear resistance. Most suitable in a machining of hard and high strength materials under stable cutting conditions and moderate/higher cutting speeds. Suitable for cutting other workpiece group materials except non-ferrous metals.
M0315	N05 – N25	■	▲	▲	▲	PVD		submicron H	-	Submicron grade for milling non-ferrous metals and their alloys with a balanced ratio of wear resistance and toughness. It is provided with a unique coating with excellent friction properties.
S26	P15 – P30	■	▲	▲	▲	–		S	++	Uncoated milling grade with excellent resistance to erosion of the cutting face. It is intended solely for machining carbon and alloy steels at low cutting speeds.
S45	P30 – P45	■	▲	▲	▲+	–		S	++	Uncoated, tough cutting grade suitable for machining applications where low cutting speed and unfavourable cutting conditions dominate
HF7	M10 – M20 K10 – K25 N10 – N25	◪ ■ ■	▲	▲	▲	–		submicron H	++	Uncoated grade which is primarily designed for machining non-ferrous metals; can also be used for other machined materials (except steel). This grade can be used in turning, milling, and even boring.

MILLING GRADES – OVERVIEW

Substrate	
H	WC-Co based substrate
submicron H	WC-Co based substrate, fine-grained (< 1 µm)
ultra submicron H	WC-Co based substrate, very fine-grained (< 0,5 µm)
S	Substrate with cubic carbides

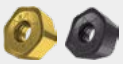
Coating	
MT-CVD	Medium-temperature chemical method of coating
PVD	Low-temperature physical method of coating
×	Uncoated grade

Coolant Benefit	
- - -	Very negative effect on tool life – cooling is not recommended
-	Slightly negative effect on tool life
+ / -	Influence of cooling may be both positive and negative – decisive factor is specific working conditions
+ +	Positive effect on tool life – cooling is recommended

Attribute Strength	
	Level 1 – 5

FACE MILLING

>>>

	SHN06C	SHN09C	SOD05	SOD06D	SOE06Z
	45°	45°	45°	45°	43°
	APMX [mm] 3.0	APMX [mm] 5.0	APMX [mm] 2.7 (10.0)	APMX [mm] 3.1 (8, 6)	APMX [mm] 3.3 (9.9)
	DC [mm] 25 – 125	DC [mm] 50 – 315	DCX [mm] 32 – 125	DC [mm] 63 – 160	DC [mm] 50 – 200
Cylindrical shank			DCX = 32 – 40 [mm]		
Weldon	DC = 25 – 32 [mm]				
Modular	DC = 25 – 40 [mm]				
Shell mill	DC = 40 – 125 [mm]		DCX = 40 – 125 [mm]		
Page	352	356	360	370	376
ISO	P M K H	P M K H	P M K N	P M K S H	P M N S
Insert shape					
Inserts	HNGX 0604 XNGX 0604	HNGX 0906 XNGX 0906	OD.. 0505 RD.. 1205 SD.. 1205	OD.. 0605 RPE. 1505	OEHT 0604 REHT 1604 XEHT 0604
No. of cutting edges	12 / 1	12 / 1	8 / – / 4	8 / 1 / –	8 / – / 1
Face milling	■	■	■	■	■
Chamfer milling	■	■	■	■	■
Helical interpolation			■		◪
Progressive plunging	■	■	■		◪
Ramping	■	■	■		◪
Shape surfaces milling (copy milling)			■		◪
Shallow shoulder milling			■		
Shallow slot milling			■		
Plunge milling			■		

<<<

FACE MILLING

	SOE09Z	SSE09	SSN12Z	SPN13	CHN09	FSB22X
	43°	45°	45°	57°	60°	60°
	APMX [mm] 5.0 (14.1)	APMX [mm] 4.5	APMX [mm] 6.5	APMX [mm] 10.0	APMX [mm] 6.0	APMX [mm] 15.0
	DC [mm] 80 – 315	DC [mm] 20 – 160	DC [mm] 50 – 250	DC [mm] 100 – 315	DC [mm] 80 – 125	DC [mm] 125 – 315
		DC = 20 – 32 [mm]				
		DC = 32 – 160 [mm]				
	383	389	393	397	401	405
	P M N S	P M K S	P M K S	P M K S H	K	P M K
	OEHT 0906 REHT 2406 XEHT 0906	SE.T 09T3	SN.T 1205	PNM. 1308 XN.. 1308	HN.. 0905	SB.. 2207
	8 / – / 1	4	4	10 / 1	12	4 / 1
	■	■	■	■	■	■
	■	■	■			
	◪					
	◪					
	◪					
	◪					

SQUARE SHOULDER MILLING

>>>

	SAD07D	SAD11E	SAD16E	SAP10D	SAP16D
	90°	90°	90°	90°	90°
	APMX [mm] 5.0	APMX [mm] 9.0	APMX [mm] 13.0	APMX [mm] 9.0	APMX [mm] 13.0
	DC [mm] 10 – 32	DC [mm] 16 – 125	DC [mm] 25 – 175	DC [mm] 10 – 63	DC [mm] 25 – 160
Cylindrical shank	DC = 10 – 25 [mm]	DC = 16 – 35 [mm]	DC = 25 – 32 [mm]		
Weldon		DC = 16 – 32 [mm]	DC = 25 – 40 [mm]	DC = 10 – 25 [mm]	DC = 25 – 40 [mm]
Modular	DC = 12 – 32 [mm]	DC = 16 – 40 [mm]	DC = 32 – 40 [mm]		
Shell mill		DC = 40 – 125 [mm]	DC = 40 – 175 [mm]	DC = 40 – 63 [mm]	DC = 40 – 160 [mm]
Page	413	420	429	438	441
ISO	P M K N S	P M K N S H	P M K N S H	P M K N S	P M K N S
Insert shape					
Inserts	AD.X 0702	AD.X 11T3	AD.X 1606	APKT 1003	AP.T 1604
No. of cutting edges	2	2	2	2	2
Shallow shoulder milling	■	■	■	■	■
Helical interpolation	■	■	■	■	■
Shallow slot milling	■	■	■	■	■
Plunge milling	■	■	■	■	■
Progressive plunging	■	■	■	■	■
Ramping	■	■	■	■	■
Face milling	◪	◪	◪	◪	◪
Shape surfaces milling (copy milling)	◪	■	■		

<<<

SQUARE SHOULDER MILLING

>>>

	STN10	STN16	SLN12	SLN16	SSO05O	SSO09
	90°	90°	90°	90°	90°	90°
	APMX [mm] 5.0	APMX [mm] 10.0	APMX [mm] 9.0	APMX [mm] 13.0	APMX [mm] 4.5	APMX [mm] 8.0
	DC [mm] 18 – 32	DC [mm] 25 – 175	DC [mm] 25 – 125	DC [mm] 63 – 175	DC [mm] 12 – 40	DC [mm] 20 – 125
	DC = 18 – 35 [mm]	DC = 25 – 35 [mm]	DC = 25 – 32 [mm]		DC = 12 – 25 [mm]	
	DC = 20 – 32 [mm]	DC = 25 – 40 [mm]	DC = 25 – 40 [mm]		DC = 20 – 32 [mm]	DC = 20 – 32 [mm]
	DC = 20 – 32 [mm]	DC = 25 – 40 [mm]	DC = 25 – 40 [mm]			
	DC = 40 – 80 [mm]	DC = 40 – 175 [mm]	DC = 40 – 125 [mm]		DC = 32 – 40 [mm]	DC = 40 – 125 [mm]
	446	450	455	461	466	469
	P M K N	P M K N	P M K N	P K N H	P M K S	P M K S
	TNGX 1004	TNGX 1606	LNG. 1205	LN.U 1607	SOMT 0502	SOMT 09T3
	6	6	4	4	4	4
	■	■	■	■	■	■
	◪	◪	◪			
	■	■	■	■	■	■
	◪		■	■	■	■
	◪		◪			
	◪		◪			
	■	■	◪			◪
			◪	◪	■	

<<<

SQUARE SHOULDER MILLING

	SSD12	FTB27X			
	90°	90°			
	APMX [mm] 10.0	APMX [mm] 18.0			
	DC [mm] 50 – 160	DC [mm] 140 – 260			
Cylindrical shank					
Weldon					
Modular					
Shell mill					
Page	472	475			
ISO	P M K N S	P M K			
Insert shape					
Inserts	SDMT 1205	TBMR 2707			
No. of cutting edges	4	3			
Shallow shoulder milling	■	■			
Helical interpolation					
Shallow slot milling	■	◪			
Plunge milling	■				
Progressive plunging					
Ramping					
Face milling	◪	◪			
Shape surfaces milling (copy milling)					

DEEP SHOULDER MILLING

>>>

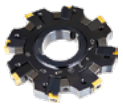
	J(T)-SAD11E	J(T)-SAD16E	J(T)-SLSN	J(T)-SSAP	J(T)-2416
	90°	90°	90°	90°	90°
	APMX [mm] 37.0 – 56.0	APMX [mm] 40.0 – 108.0	APMX [mm] 104.0 – 134.0	APMX [mm] 58 ,0– 95.0	APMX [mm] 40.0 – 63.0
	DC [mm] 25 – 50	DC [mm] 50 – 100	DC [mm] 63 - 80	DC [mm] 50 – 80	DC [mm] 20 – 40
Weldon	DC = 25 – 40 [mm]				
Morse taper	DC = 25 – 40 [mm]				
Arbor		DC = 50 – 80 [mm]			
Shell mill	DC = 50 [mm]	DC = 50 – 100 [mm]			
Page	482	488	494	498	503
ISO	P M K N S H	P M K N S H	P K	P M K N S H	P M K N
Insert shape					–
Inserts	AD 11T3	AD.. 1606	LNET 1606 SN.. 1305	APE. 150412 SPE. 1204	–
No. of cutting edges	2	2	2 / 8	2 / 4	–
Deep shoulder milling	■	■	■	■	■
Deep slot milling	■	■	■	■	◪
Face milling	◪	◪	◪	◪	◪
Plunge milling	◪	◪	◪	◪	

<<<

DEEP SHOULDER MILLING

	J(T)-CSD12X				
	90°				
	APMX [mm] 44.1 – 87.3				
	DC [mm] 40 – 63				
PCS	DC = 40 – 50 [mm]				
Morse taper	DC = 50 [mm]				
Arbor	DC = 40 – 63 [mm]				
Shell mill	DC = 50 – 80 [mm]				
Page	505				
ISO	P M S				
Insert shape					
Inserts	SD.X 1205				
No. of cutting edges	4				
Deep shoulder milling	■				
Deep slot milling	■				
Face milling	◪				
Plunge milling					

SLOT MILLING

	S90SN	S90CN(XN)			
	90°	90°			
	APMX [mm] 4.0 – 14.0	APMX [mm] 14.0 – 30.5			
	DC [mm] 80 – 200	DC [mm] 125 – 315			
Disc	DC = 80 – 200 [mm]	 DC = 125 – 315 [mm]			
Shell mill	DC = 63 – 160 [mm]	DC = 125 – 200 [mm]			
Page	510	516			
ISO	P M K	P M K			
Insert shape					
Inserts	SNHQ 11 SNHQ 12	CNHQ 1005 XNHQ 1205 XNHQ 1606			
No. of cutting edges	4	2			
Deep slot milling	■	■			
Deep shoulder milling	◪	◪			
Face milling	◪	◪			
Rear face milling	◪	◪			

COPY MILLING

>>>

	SRC10	SRC12	SRC16	SRC20	SRD05
	–	–	–	–	–
	APMX [mm] 5.0	APMX [mm] 6.0	APMX [mm] 8.0	APMX [mm] 10.0	APMX [mm] 1.5
	DCX [mm] 25 – 66	DCX [mm] 40 – 100	DCX [mm] 63 – 160	DCX [mm] 80 – 160	DCX [mm] 10 – 15
Cylindrical shank	DCX = 25 – 32 [mm]				
Weldon					
Modular	DCX = 25– 42 [mm]				
Shell mill	DCX = 40 – 66 [mm]				
Page	526	530	534	538	542
ISO	P M K S H	P M K S H	P M K S H	P M K S H	P K H
Insert shape					
Inserts	RC 10T3	RC 1204	RC 1606	RC 2006	RD 0501
No. of cutting edges	–	–	–	–	–
Shape surfaces milling (copy milling)	■	■	■	■	■
Face milling	■	■	■	■	■
Helical interpolation	■	■	■	■	■
Progressive plunging	■	■	■	■	■
Ramping	■	■	■	■	■
Shallow shoulder milling					
Deep shoulder milling					
Chamfer milling					
Plunge milling					

<<<

COPY MILLING

>>>

	SRD07	SRD10	SRD12	SRD16	L2-SZP	K3-CXP
	–	–	–	–	–	–
	APMX [mm] 2.0	APMX [mm] 2.5	APMX [mm] 3.0	APMX [mm] 4.0	APMX [mm] 8.9 – 44.7	APMX [mm] 8,0 – 16.0
	DCX [mm] 15 – 25	DCX [mm] 20 – 52	DCX [mm] 24 – 80	DCX [mm] 32 – 100	DCX [mm] 10 – 50	DCX [mm] 16 – 32
					DCX = 10 – 32 [mm]	DCX = 16 – 32 [mm]
	DCX = 15 [mm]	DCX = 20 [mm]			DCX = 12 – 50 [mm]	DCX = 16 – 25 [mm]
	DCX = 15 – 25 [mm]	DCX = 20 – 42 [mm]	DCX = 24 – 42 [mm]	DCX = 32 [mm]	DCX = 10 – 32 [mm]	DCX = 16 – 32 [mm]
		DCX = 42 – 52 [mm]	DCX = 50 – 80 [mm]	DCX = 52 – 100 [mm]		
	545	550	556	562	568	575
	P M K N S H	P M K N S H	P M K N S H	P M K N S H	P M K S H	P M K S H
	RD 0702	RD 1003	RD 12T3	RD 1604	ZP	XP
	–	–	–	–	2	1
	■	■	■	■	■	■
	■	■	■	■		
	■	■	■	■		
	■	■	■	■		
	■	■	■	■		

<<<

COPY MILLING

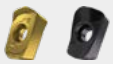
>>>

	K2-SRC	K2-SLC	K2-PPH	SVC22C	SWN04C
	–	90°	–	90°	90° (93°)
	APMX [mm] 0.6 – 3.2	APMX [mm] 1.0 – 3.0	APMX [mm] 0.3 – 4.0	APMX [mm] 3.0 (16.0)	APMX [mm] 0.5 (2.0)
	DCX [mm] 8 – 20	DCX [mm] 12 – 20	DCX [mm] 8 – 32	DC [mm] 32 – 80	DC [mm] 20 – 35
Cylindrical shank	DCX = 8 – 20 [mm]		DCX = 8 – 32 [mm]	DC = 32 – 40 [mm]	DC = 20 – 32 [mm]
Weldon					
Modular	DCX = 8 – 20 [mm]		DCX = 16 – 20 [mm]	DC = 32 – 40 [mm]	DC = 20 – 35 [mm]
Shell mill				DC = 50 – 80 [mm]	
Page	579	588	592	604	607
ISO	P M K H	P M K H	P M K S H	N	P K H
Insert shape					
Inserts	RC LC	LC	PPH PPHF PPHT	VCGT 220530	WN.. 0403
No. of cutting edges	2	2	2	2	6
Shape surfaces milling (copy milling)	■	■	■		■
Face milling					■
Helical interpolation		◪	◪	■	
Progressive plunging		◪	◪	■	
Ramping		◪	◪	◪	■
Shallow shoulder milling				◪	
Deep shoulder milling				◪	■
Chamfer milling		◪	◪		
Plunge milling					■

	SCN05C					
	90° (93°)					
	APMX [mm] 0.5 (1.0)					
	DC [mm] 12 – 20					
	DC = 12 – 20 [mm]					
	DC = 12 – 20 [mm]					
	610					
	P K H					
	CN.. 0502					
	4					
	■					
	■					
	■					
	■					
	■					

HIGH FEED MILLING

>>>

	SBN10	SSN11	SPD09	SZD07	SZD09
	20°	18°	19°	–	–
	APMX [mm] 1.0	APMX [mm] 1.7	APMX [mm] 2.0	APMX [mm] 1.0	APMX [mm] 1.0
	DCX [mm] 16 – 42	DCX [mm] 32 – 125	DCX [mm] 32 – 140	DCX [mm] 16 – 32	DCX [mm] 25 – 66
Cylindrical shank	DCX = 16 – 35 [mm]	DCX = 32 – 35 [mm]	DCX = 32 – 40 [mm]	DCX = 16 – 25 [mm]	
Weldon					DCX = 25 – 32 [mm]
Modular	DCX = 16 – 40 [mm]	DCX = 32 – 40 [mm]		DCX = 16 – 32 [mm]	DCX = 25 – 42 [mm]
Shell mill	DCX = 40 – 42 [mm]	DCX = 40 – 125 [mm]	DCX = 42 – 140 [mm]		DCX = 40 – 66 [mm]
Page	616	622	627	633	637
ISO	P M K S H	P M K S	P M K S H	P K H	P K H
Insert shape					
Inserts	BNGX 10T3 ANHX 10T3	SNGX 1104	PD.. 0905	ZDCW 0703	ZDCW 09T3
No. of cutting edges	4 / 2	8	5	4	4
Face milling	■	■	■	■	■
Helical interpolation	■	◪	■	◪	◪
Shallow shoulder milling	■	■	■	◪	◪
Plunge milling	■	■	■	◪	◪
Progressive plunging	■	◪	■	◪	◪
Ramping	■	◪	■		
Shape surfaces milling (copy milling)	■	■	◪	◪	◪
Shallow slot milling	◪	◪	◪	◪	◪

	SZD12					
	–					
	APMX [mm] 1.6					
	DCX [mm] 32 – 80					
	DCX = 40 [mm]					
	DCX = 32 – 40 [mm]					
	DCX = 50 – 80 [mm]					
	641					
	P K H					
	ZDEW 1204					
	4					
	■					
	◪					
	◪					
	◪					
	◪					
	◪					
	◪					

CHAMFER, T-SLOT MILLING

>>>

	SSD09	N-SSO09	2516	2636	J(T)-SXP16
	45°	45°	45°	10° – 80°	15° – 75°
	APMX [mm] 4.5	APMX [mm] 4.5	APMX [mm] 8.5	APMX [mm] 8.5	APMX [mm] 7.0 – 28.0
	DC [mm] 10 – 25	DC [mm] 8 – 25	DC [mm] 11 – 19	DC [mm] 5 – 23	DC [mm] 35 – 45
Cylindrical shank	DC = 16 – 25 [mm]				
Weldon	DC = 10 – 25 [mm]				
Morse	DC = 10 – 25 [mm]				
Shell mill					
Page	648	651	654	657	660
ISO	P M K S H	P M K S	P M K S	P M K S	P M K N
Insert shape					
Inserts	SDE. 0903	SOMT 09T3	TCMT 16T3	TCMT 16T3	XPHT 1604
No. of cutting edges	4	4	3	3	2
Chamfer milling	■	■	■	■	■
Rear face milling					
T-slot milling					
Shallow shoulder milling					
Shallow slot milling					

	F-SCC					
	90°					
	APMX [mm] 11.0 – 18.0					
	DC [mm] 25 – 40					
	664					
	P M K					
	CCMX					
	2					
	■					
	■					
	◪					
	◪					

ISO CODE DESIGNATION – SHELL MILL BODIES

	1	2	3	4		5	6	7	8	9	10	11	12
ISO	63	A	06	R	–		S	90	A	D	16	E	
ANSI	1	2	3	4		5	6	7	8	9	10	11	12
	300	F	04	N	–	I	S	90	S	N	12	N	4

1 Cutting diameter

DC	
DC	
DC	
DC	
DCX	

2 Cutting type, designation and/or size of clamping

A ISO 6462/A DIN 8030/A	B ISO 6462/B DIN 8030/B	C ISO 6462/C DIN 8030/C
F DC = 27 mm DC = 1.000		
G DC = 32 mm DC = 1.250		
H DC = 40 mm –		
J DC = 50 mm –		
K DC = 60 mm –		
M DC = 80 mm –		
T		

3 No. of working edges

4 Direction of cut

R	
L	
N	

5 Standard

I	[″]

6 Clamping designation

C	
S	
W	
F	

7 Setting angle [KAPR]

90°	
75°	
60°	
45°	
M0	DC [mm]

8 Insert shape

H	O	P	R
S	T	C 80°	D 55°
E 75°	M 86°	V 35°	W 80°
L	A 85°	B 82°	K 55°

9 Insert clearance angle

A 3°		B 5°	
C 7°		D 15°	
E 20°		F 25°	
G 30°		N 0°	
P 11°		O Special	

10 Cutting edge length

IC [mm]	[″]	H	O	P	S	T	C	D	E	M	V	W	R	K
3,97					03	06		04			06	02		
	5/32″							1.2″						
4,76					04	08	04	05	04	04	08	L3		
	3/16″							1.5″						
5,56					05	09	05	06	05	05	09	03		
	7/32″							1.8″						
6,35		03	02	04	08	11	06	07	08	08	11	04	06	
	1/4″							2″						
7,94		04	03	05	07	13	08	09	06	07	13	05	07	
	5/16″							2.5″						
9,525		05	04	07	09	16	09	11	09	09	16	06	09	19
	3/8″							3″						
12,7		07	05	09	12	22	12	15	13	12	22	08	12	
	1/2″							4″						
15,875		09	06	11	15	27	16	19	16	15	27	10	15	
	5/8″							5″						
19,05		11	07	13	19	33	19	23	19	19	33	13	19	
	3/4″							6″						
25,4		14	10	18	25	44	25	31	26	25	44	17	25	
	5/1″							8″						
31,75		18	13	23	31	54	32	38	32	31	54	21	31	
	1 1/4″							10″						

11 Wiper edge clearance angle

N ALP = 0°	C ALP = 7°	P ALP = 11°
D ALP = 15°	E ALP = 20°	F ALP = 25°

12 Cutting edge length (width)

CW [mm]/[″]

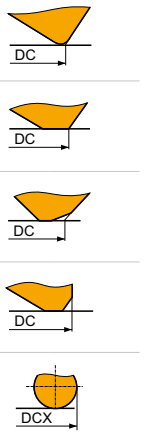
CW	1/16″
0.156	2.5
0.187	3
0.250	4
0.313	5
0.375	6

APMX

ISO CODE DESIGNATION – END SHOULDER MILL BODIES

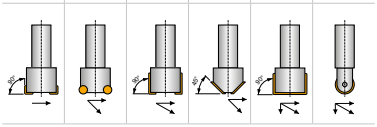
	1	2	3	4	5	6	7		8	9	10	11	12	13
ISO	32	A	4	R	042	B	32	–		S	A	D	11	E
ANSI	1	2	3	4	5	6	7		8	9	10	11	12	13
	125	A	4	R	150	W	125	–	I	S	A	D	11	E

1 Cutting diameter



2 Cutter type and setting angle

A	E	J	N	H	K



5 Overhang

[mm]

["]

6 Shank designation

A	C	DIN 1835A	6 – 40 mm / .250" – 1.250"
B	W	ISO 3338-2, DIN 1835B	6 – 50 mm / .375" – 2.000"
E	-	ISO 296, DIN 228-1	1 – 6 / –
G	-	ISO 297, DIN 208-1	40 – 50 mm / –
H	-	ISO/DIS 7388-1, DIN 69871-1	30 – 50 mm / –
N	-	ISO 12 164-1, DIN 69893	25 – 100 mm / –
-	R8	R8	– / 1.250"
X	-	MAS BT	30 – 50 / –
XC	-	CAPTO	3 – 10 / –
-	CA	ANSI B5.50	– / 40 / 50

7 Shank size

3 No. of working edges

4 Direction of cut

R	L	N

8 Insert shape

H	O	P	R
S	T	C 80°	D 55°
E 75°	M 86°	V 35°	W 80°
L	A 85°	B 82°	K 55°

9 Insert clearance angle

A 3°		B 5°	
C 7°		D 15°	
E 20°		F 25°	
G 30°		N 0°	
P 11°		O Special	

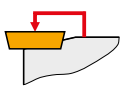
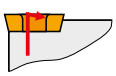
10 Cutting edge length

IC [mm]	IC ["]	H	O	P	S	T	C	D	E	M	V	W	R	K
3,97					03	06		04			06	02		
	5/32"							1.2"						
4,76					04	08	04	05	04	04	08	L3		
	3/16"							1.5"						
5,56					05	09	05	06	05	05	09	03		
	7/32"							1.8"						
6,35		03	02	04	08	11	06	07	08	08	11	04	06	
	1/4"							2"						
7,94		04	03	05	07	13	08	09	06	07	13	05	07	
	5/16"							2.5"						
9,525		05	04	07	09	16	09	11	09	09	16	06	09	19
	3/8"							3"						
12,7		07	05	09	12	22	12	15	13	12	22	08	12	
	1/2"							4"						
15,875		09	06	11	15	27	16	19	16	15	27	10	15	
	5/8"							5"						
19,05		11	07	13	19	33	19	23	19	19	33	13	19	
	3/4"							6"						
25,4		14	10	18	25	44	25	31	26	25	44	17	25	
	5/1"							8"						
31,75		18	13	23	31	54	32	38	32	31	54	21	31	
	1 1/4"							10"						

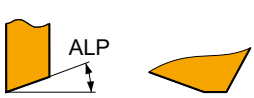
8 Standard

I	["]

9 Clamping designation

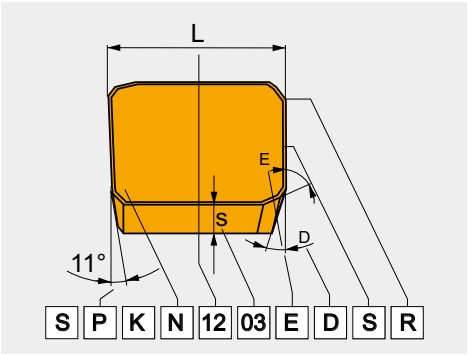
C		W	
S		F	

13 Wiper edge clearance angle



N ALP = 0°	C ALP = 7°	P ALP = 11°
D ALP = 15°	E ALP = 20°	F ALP = 25°

ISO CODE DESIGNATION – MILLING INSERTS



	1	2	3	4
ISO	S	P	G	N
	S	P	K	N
ANSI	1	2	3	4
	S	P	G	
	S	P	K	N

1 Insert shape

H	O	P	R
S	T	C (80°)	D (55°)
E (75°)	M (86°)	V (35°)	W (80°)
L	A (85°)	B (82°)	K (55°)

2 Insert clearance angle

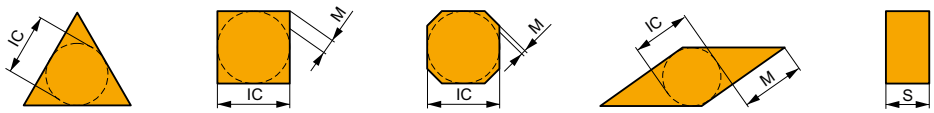
A	3°	B	5°
C	7°	D	15°
E	20°	F	25°
G	30°	N	0°
P	11°	O	Special

4 Insert type

N	
R	
F	
A	
M	
G	
W	40 – 60°
T	
Q	
U	
B	70 – 90°
H	
C	
J	
X	Special

3 Tolerances

	[mm]			[″]		
	M (±)	S (±)	IC (±)	M (±)	S (±)	IC (±)
A	0.005	0.025	0.025	0.0002″	0.001″	0.0010″
F	0.005	0.025	0.013	0.0002″	0.001″	0.0005″
C	0.013	0.025	0.025	0.0005″	0.001″	0.0010″
H	0.013	0.025	0.013	0.0005″	0.001″	0.0005″
E	0.025	0.025	0.025	0.0010″	0.001″	0.0010″
G	0.025	0.130	0.025	0.0010″	0.005″	0.0010″
J	0.005	0.025	0.05 – 0.13	0.0002″	0.001″	0.002″ – 0.005″
K	0.013	0.025	0.05 – 0.13	0.0005″	0.001″	0.002″ – 0.005″
L	0.025	0.025	0.05 – 0.13	0.0010″	0.001″	0.002″ – 0.005″
M	0.08 – 0.18	0.130	0.05 – 0.13	0.003″ – 0.007″	0.005″	0.002″ – 0.005″
N	0.08 – 0.18	0.025	0.05 – 0.13	0.003″ – 0.007″	0.001″	0.002″ – 0.005″
U	0.05 – 0.38	0.130	0.05 – 0.13	0.005″ – 0.015″	0.005″	0.003″ – 0.010″



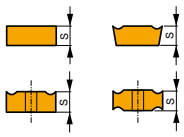
ISO CODE DESIGNATION – MILLING INSERTS

5	6	7	8	9		10
12	03	08			-	
12	03	ED	S	R		
5a	6a	7a	8	9		
4	2	2			-	
4	2	ED	S	R		

5 / 5 – Cutting edge length

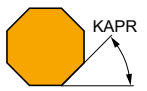
I.C. [mm]	I.C. [″]	H	O	P	S	T	C	D	E	M	V	W	R	K
3.97					03	06		04			06	02		
	5/32″							1.2″						
4.76					04	08	04	05	04	04	08	L3		
	3/16″							1.5″						
5.56					05	09	05	06	05	05	09	03		
	7/32″							1.8″						
6.35		03	02	04	08	11	06	07	08	08	11	04	06	
	1/4″							2″						
7.94		04	03	05	07	13	08	09	06	07	13	05	07	
	5/16″							2.5″						
9.525		05	04	07	09	16	09	11	09	09	16	06	09	19
	3/8″							3″						
12.7		07	05	09	12	22	12	15	13	12	22	08	12	
	1/2″							4″						
15.875		09	06	11	15	27	16	19	16	15	27	10	15	
	5/8″							5″						
19.05		11	07	13	19	33	19	23	19	19	33	13	19	
	3/4″							6″						
25.4		14	10	18	25	44	25	31	26	25	44	17	25	
	5/1″							8″						
31.75		18	13	23	31	54	32	38	32	31	54	21	31	
	1 1/4″							10″						

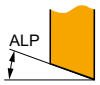
6 – Thickness



Symbol	S [mm]	S [″]
01	1.59	1/16″
T1	1.98	5/64″
02	2.38	3/32″
03	3.18	1/8″
T3	3.97	5.32″
04	4.76	3/16″
05	5.56	7/32″
06	6.35	1/4″
07	7.94	5/16″
09	9.52	3/8″

7 – Cutting edge angles / Clearance angle



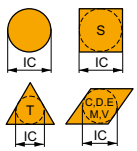


	KAPR		ALP
A	45°	A	3°
D	60°	B	5°
E	75°	C	7°
F	85°	D	15°
P	90°	E	20°
Z	Special	F	25°
		G	30°
		N	0°
		P	11°
		Z	Special

ZZ – Special

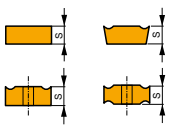
ANSI

5a – Inscribed circle



Symbol	I.C. [mm]	I.C. [″]
1	3.175	1/8″
1.2	3.969	5/32″
1.5	4.763	3/16″
1.8	5.556	7/32″
2	6.350	1/4″
2.5	7.938	5/16″
3	9.525	3/8″
4	12.700	1/2″
5	15.875	5/8″
6	19.050	3/4″
7	22.225	7/8″
8	25.400	1″
10	31.750	5/4″
12	38.100	6/4″

6a – Thickness



Symbol	S [mm]	S [″]
1	1.588	1/16″
1.2	1.984	5/64″
1.5	2.381	3/32″
2	3.175	1/8″
2.5	3.969	5/32″
3	4.763	3/16″
3.5	5.556	7/32″
4	6.350	1/4″
5	7.938	5/16″
6	9.525	3/8″
7	11.113	7/16″
8	12.700	1/2″
9	14.288	9/16″
10	15.875	5/8″

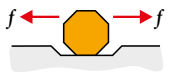
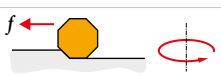
7a – Corner radius

Symbol	RE [mm]	RE [″]
0	0	0″
0.2	0.099	1/256″
0.5	0.198	1/128″
1	0.397	1/64″
2	0.794	1/32″
3	1.191	3/64″
4	1.588	1/16″
5	1.984	5/64″
6	2.381	3/32″
7	2.778	7/64″
8	3.175	1/8″
10	3.969	5/32″
12	4.763	3/16″
14	5.556	7/32″
16	6.350	1/4″

8 / 8 – Cutting edge design

F	Sharp edges	E	Rounded edges
T	Edges with facet	S	Rounded edges with facet
K	Edges with double facet	P	Rounded edges with double facet

9 / 9 – Feed direction

R		N	
L			

10 / 10 – Chip breaker designation

DORMER PRAMET

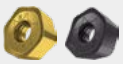
ALL IN ONE

All our publications in one place, tailored to your location and updated with the latest versions. What are you waiting for? Download our library app today from your relevant app store. **Simply Reliable.**

INDEXABLE FACE MILLS

FACE MILLING

>>>

	SHN06C	SHN09C	SOD05	SOD06D	SOE06Z
	45°	45°	45°	45°	43°
	APMX [mm] 3.0	APMX [mm] 5.0	APMX [mm] 2.7 (10.0)	APMX [mm] 3.1 (8, 6)	APMX [mm] 3.3 (9.9)
	DC [mm] 25 – 125	DC [mm] 50 – 315	DCX [mm] 32 – 125	DC [mm] 63 – 160	DC [mm] 50 – 200
Cylindrical shank			DCX = 32 – 40 [mm]		
Weldon	DC = 25 – 32 [mm]				
Modular	DC = 25 – 40 [mm]				
Shell mill	DC = 40 – 125 [mm]		DCX = 40 – 125 [mm]		
Page	352	356	360	370	376
ISO	P M K H	P M K H	P M K N	P M K S H	P M N S
Insert shape					
Inserts	HNGX 0604 XNGX 0604	HNGX 0906 XNGX 0906	OD.. 0505 RD.. 1205 SD.. 1205	OD.. 0605 RPE. 1505	OEHT 0604 REHT 1604 XEHT 0604
No. of cutting edges	12 / 1	12 / 1	8 / – / 4	8 / 1 / –	8 / – / 1
Face milling	■	■	■	■	■
Chamfer milling	■	■	■	■	■
Helical interpolation			■		◪
Progressive plunging	■	■	■		◪
Ramping	■	■	■		◪
Shape surfaces milling (copy milling)			■		◪
Shallow shoulder milling			■		
Shallow slot milling			■		
Plunge milling			■		

FACE MILLING

	SOE09Z	SSE09	SSN12Z	SPN13	CHN09	FSB22X
	43°	45°	45°	57°	60°	60°
	APMX [mm] 5.0 (14.1)	APMX [mm] 4.5	APMX [mm] 6.5	APMX [mm] 10.0	APMX [mm] 6.0	APMX [mm] 15.0
	DC [mm] 80 – 315	DC [mm] 20 – 160	DC [mm] 50 – 250	DC [mm] 100 – 315	DC [mm] 80 – 125	DC [mm] 125 – 315
		DC = 20 – 32 [mm]				
		DC = 32 – 160 [mm]				
	383	389	393	397	401	405
	P M N S	P M K S	P M K S	P M K S H	K	P M K
	OEHT 0906 REHT 2406 XEHT 0906	SE.T 09T3	SN.T 1205	PNM. 1308 XN.. 1308	HN.. 0905	SB.. 2207
	8 / – / 1	4	4	10 / 1	12	4 / 1
	■	■	■	■	■	■
	■	■	■			
	◪					
	◪					
	◪					
	◪					

SHN06C

P M K H

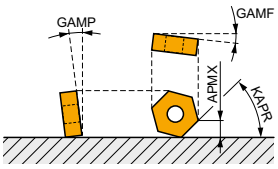
PRAMET

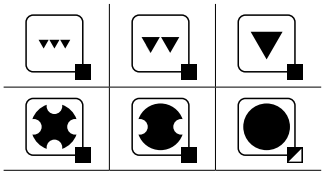
S

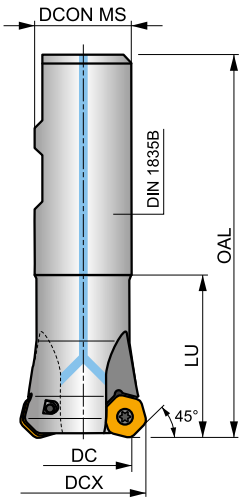
ECON HN06 45° Face Mill with Double Negative Design and Internal Coolant

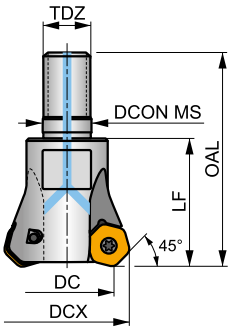
Highly productive 45° face mill utilising double sided HN.. 06 style inserts with APMX of 3 mm. Roughing, finishing and chamfering. Economical insert with 12 cutting edges. Differential tooth pitch. Weldon, modular and arbor style available in range from Ø25 up to Ø125 mm. Body treated for longer tool life.

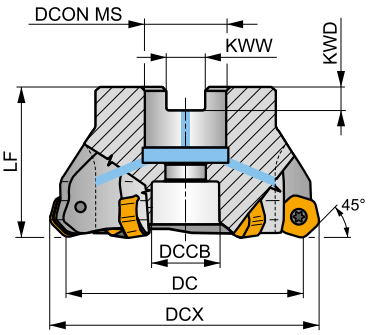
KAPR	45°
APMX	3.0 mm











h_m 0.06 - 0.15

h_m 0.06 - 0.15

	Product	DC [mm]	DCX [mm]	OAL [mm]	DCON MS [mm]	DCCB [mm]	LU [mm]	LF [mm]	TDZ	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg			
DIN 1835B	25N2R042B25-SHN06C-C	25	32.2	99	25	–	42	–	–	–	–	-7	-7	2	–	17400	✓	0.36	GI204	FA010	–
	32N3R042B32-SHN06C-C	32	39.3	103	32	–	42	–	–	–	–	-7	-7	3	–	15400	✓	0.59	GI204	FA010	–
MODULAR	25N2R033M12-SHN06C-C	25	32.2	56	12.5	–	–	33	M12	–	–	-7	-7	2	–	–	✓	0.11	GI204	FA010	–
	32N3R043M16-SHN06C-C	32	39.3	66	17	–	–	43	M16	–	–	-7	-7	3	–	–	✓	0.26	GI204	FA010	–
	40N4R043M16-SHN06C-C	40	47.3	66	17	–	–	43	M16	–	–	-7	-7	4	✓	–	✓	0.28	GI204	FA010	–
	40A05R-S45HN06C-C	40	47.3	–	16	14	–	40	–	8.4	5.6	-7	-7	5	✓	13800	✓	0.37	GI204	FA012	–
	50A04R-S45HN06C-C	50	57.3	–	22	18	–	40	–	10.4	6.3	-7	-7	4	✓	12300	✓	0.62	GI204	FA013	–
	50A06R-S45HN06C-C	50	57.3	–	22	18	–	40	–	10.4	6.3	-7	-7	6	✓	12300	✓	0.41	GI204	FA013	–
	63A06R-S45HN06C-C	63	70.3	–	22	18	–	40	–	10.4	6.3	-7	-7	6	✓	11000	✓	0.56	GI204	FA013	–
	63A08R-S45HN06C-C	63	70.3	–	22	18	–	40	–	10.4	6.3	-7	-7	8	✓	11000	✓	0.69	GI204	FA013	–
ISO 6462 DIN 8030	80A07R-S45HN06C-C	80	86.8	–	27	38	–	50	–	12.4	7	-7	-7	7	✓	9700	✓	1.10	GI204	FA011	AC001
	80A10R-S45HN06C-C	80	86.8	–	27	38	–	50	–	12.4	7	-7	-7	10	✓	9700	✓	0.19	GI204	FA011	AC001
	100A08R-S45HN06C-C	100	107.1	–	32	45	–	50	–	14.4	8	-7	-7	8	✓	8700	✓	2.07	GI204	FA011	AC002
	100A12R-S45HN06C-C	100	107.1	–	32	45	–	50	–	14.4	8	-7	-7	12	✓	8700	✓	1.82	GI204	FA011	AC002
	125A10R-S45HN06C-C	125	132.2	–	40	56	–	63	–	16.4	9	-7	-7	10	✓	7800	✓	3.62	GI204	FA011	AC003
	125A16R-S45HN06C-C	125	132.2	–	40	56	–	63	–	16.4	9	-7	-7	16	✓	7800	✓	3.93	GI204	FA011	AC003

GI204	HNGX 0604AN..	XNGX 0604AN..

		Nm						
FA010	US 3007-T09P	2.0	M 3	7.3	–	–	Flag T09P	–
FA011	US 3007-T09P	2.0	M 3	7.3	D-T07P/T09P	FG-15	–	–
FA012	US 3007-T09P	2.0	M 3	7.3	D-T07P/T09P	FG-15	–	HS 0830C

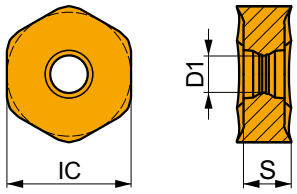
FA013	US 3007-T09P	2.0	M 3	7.3	D-T07P/T09P	FG-15	–	HS 1030C

AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

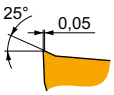
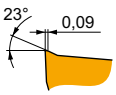
HNGX 06

PRAMET

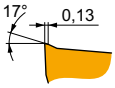
	IC [mm]	D1 [mm]	S [mm]
0604	10.500	3.70	4.76



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																				
			F geometry with highly positive design for light machining.																	
HNGX 0604ANSN-F	8215	–	315	0.11	1.7	185	0.10	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	M6330	–	265	0.11	1.7	185	0.10	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	M8310	–	345	0.11	1.7	175	0.10	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	M8330	–	305	0.11	1.7	180	0.10	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	M8340	–	285	0.11	1.7	170	0.10	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	M9340	–	365	0.11	1.7	215	0.10	1.7	–	–	–	–	–	–	–	–	–	–	–	–
																				
			M geometry with highly positive design for medium machining.																	
HNGX 0604ANSN-M	8215	–	300	0.13	2.0	180	0.13	2.0	285	0.13	2.0	–	–	–	–	–	–	–	–	–
	M5315	–	425	0.13	2.0	–	–	–	400	0.13	2.0	–	–	–	–	–	–	–	–	–
	M6330	–	255	0.13	2.0	180	0.13	2.0	–	–	–	–	–	–	–	–	–	–	–	–
	M8310	–	325	0.13	2.0	165	0.13	2.0	305	0.13	2.0	–	–	–	–	–	–	–	–	–
	M8330	–	295	0.13	2.0	175	0.13	2.0	280	0.13	2.0	–	–	–	–	–	–	–	–	–
	M8340	–	265	0.13	2.0	155	0.13	2.0	250	0.13	2.0	–	–	–	–	–	–	–	–	–
	M9315	–	410	0.13	2.0	–	–	–	385	0.13	2.0	–	–	–	–	–	–	–	–	–
	M9325	–	375	0.13	2.0	–	–	–	355	0.13	2.0	–	–	–	–	–	–	–	–	–
	M9340	–	345	0.13	2.0	205	0.13	2.0	–	–	–	–	–	–	–	–	–	–	–	–

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																				
HNGX 0604ANSN-R	**8215**	–	■ 280	0.18	1.8	◪ 165	0.18	1.8	■ 265	0.18	1.8	–	–	–	–	–	–	◪ 55	0.15	1.0
	M5315	–	◪ 370	0.18	1.8	–	–	–	■ 350	0.18	1.8	–	–	–	–	–	–	◪ 70	0.15	1.0
	M8310	–	■ 300	0.18	1.8	◪ 150	0.18	1.8	■ 285	0.18	1.8	–	–	–	–	–	–	◪ 60	0.15	1.0
	M8330	–	■ 275	0.18	1.8	◪ 165	0.18	1.8	■ 260	0.18	1.8	–	–	–	–	–	–	◪ 55	0.15	1.0
	M8340	–	■ 250	0.18	1.8	◪ 150	0.18	1.8	◪ 235	0.18	1.8	–	–	–	–	–	–	–	–	–
	M9325	–	■ 345	0.18	1.8	–	–	–	■ 325	0.18	1.8	–	–	–	–	–	–	◪ 65	0.15	1.0

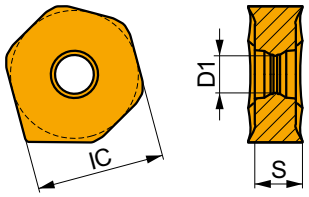
17° 0,13

R geometry with highly positive design for medium to heavy machining.

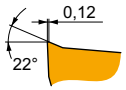
XNGX 06

PRAMET

	IC [mm]	D1 [mm]	S [mm]
0604	10.500	3.70	4.76



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

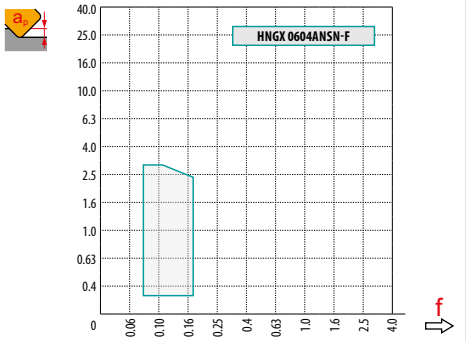
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																				
XNGX 0604ANSN	**8215**	–	■ 290	0.13	1.8	◪ 170	0.12	1.8	■ 275	0.13	1.8	–	–	–	–	–	–	–	–	–

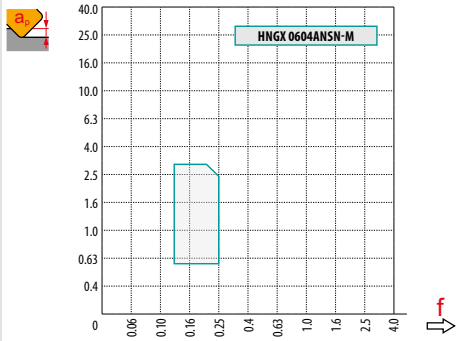
0,12 22°

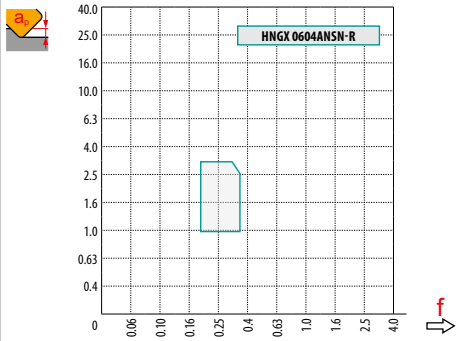
Wiper design for improved surface finish.

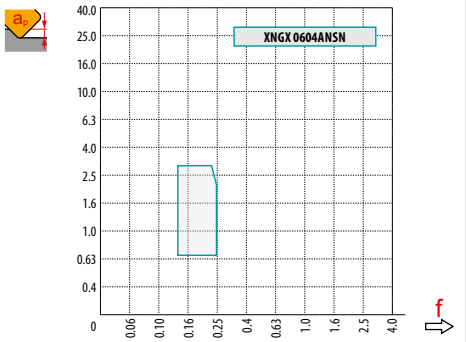
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ X.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ X.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	HNGX 06-F	HNGX 06-M	HNGX 06-R	XNGX 06
RE	–	–	–	–
BS	1.12	0.80	0.80	4.15









DC	X.V	f_{max}
25	1.31	0.24
32	1.36	0.28
40	1.40	0.31
50	1.45	0.35
63	1.49	0.39
80	1.54	0.44
100	1.59	0.49
125	1.64	0.55

DC	RPMX	APMX/I
25	2.7	3.0/65
32	1.9	3.0/89
40	1.5	2.5/100
50	1.1	1.9/100
63	0.9	1.4/100
80	0.6	1.0/100
100	0.5	0.8/100
125	0.4	0.6/100

a_p
0.9

SHN09C

P M K H

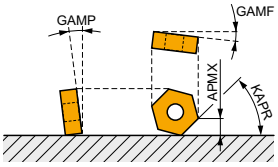
PRAMET

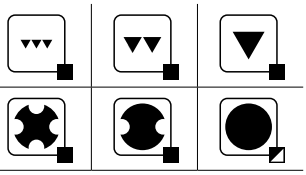
S

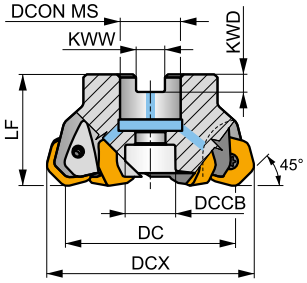
ECON HN09 45° Face Mill with Double Negative Design and Internal Coolant

Highly productive 45° face mill utilising double sided HN.. 09 style inserts with APMX of 5 mm. Roughing, finishing and chamfering. Economical insert with 12 cutting edges. Differential tooth pitch. Arbor style only in range from Ø50 up to Ø315 mm. Body treated for longer tool life.

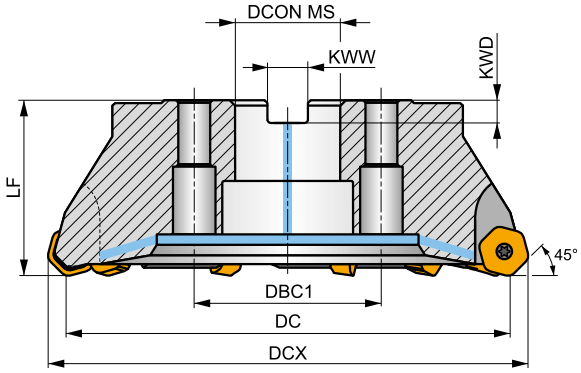
KAPR	45°
APMX	5.0 mm







DC 50 - 125 mm



DC 160 - 315 mm

h_m 0.08 - 0.25

	Product	DC [mm]	DCX [mm]	LF [mm]	DCON MS [mm]	DCCB [mm]	DBC1 [mm]	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg			
	50A04R-S45HN09C-CF	50	61.7	40	22	18	–	10.4	6.3	-7	-7	4	✓	7900	✓	0.38	GI252	FA023	–
	63A06R-S45HN09C-CF	63	74.7	40	22	18	–	10.4	6.3	-7	-7	6	✓	7000	✓	0.54	GI252	FA023	–
	80A06R-S45HN09C-CF	80	91.7	50	27	38	–	12.4	7	-7	-7	6	✓	6200	✓	1.06	GI252	FA021	AC001
	80A08R-S45HN09C-CF	80	91.7	50	27	38	–	12.4	7	-7	-7	8	✓	6200	✓	1.06	GI252	FA021	AC001
	100A06R-S45HN09C-CF	100	111.7	50	32	45	–	14.4	8	-7	-7	6	✓	5600	✓	1.76	GI252	FA021	AC002
	100A08R-S45HN09C-CF	100	111.7	50	32	45	–	14.4	8	-7	-7	8	✓	5600	✓	1.76	GI252	FA021	AC002
	100A10R-S45HN09C-CF	100	111.7	50	32	45	–	14.4	8	-8	-7	10	–	5600	✓	1.76	GI252	FA021	AC002
	125A06R-S45HN09C-CF	125	136.7	63	40	56	–	16.4	9	-7	-7	6	✓	5000	✓	3.36	GI252	FA021	AC003
ISO 6462 DIN 8030	**125A08R-S45HN09C-CF**	125	136.7	63	40	56	–	16.4	9	-7	-7	8	✓	4900	✓	3.72	GI252	FA021	AC003
	125A10R-S45HN09C-CF	125	136.7	63	40	56	–	16.4	9	-7	-7	10	✓	5000	✓	3.36	GI252	FA021	AC003
	125A12R-S45HN09C-CF	125	136.7	63	40	56	–	16.4	9	-8	-7	12	–	5000	✓	3.36	GI252	FA021	AC003
	160C08R-S45HN09C-CF	160	171.7	63	40	–	66.7	16.4	9	-7	-7	8	✓	4400	✓	6.30	GI252	FA026	–
	160C12R-S45HN09C-CF	160	171.7	63	40	–	66.7	16.4	9	-7	-7	12	✓	4400	✓	6.46	GI252	FA026	–
	160C14R-S45HN09C-CF	160	171.7	63	40	–	66.7	16.4	9	-7	-7	14	✓	4400	✓	6.45	GI252	FA026	–
	200C10R-S45HN09C-CF	200	211.7	63	60	–	101.6	25.7	14	-7	-7	10	✓	3900	✓	11.37	GI252	FA027	–
	250C14R-S45HN09C-CF	250	261.7	63	60	–	101.6	25.7	14	-7	-7	14	✓	3500	✓	18.50	GI252	FA028	–
	315C16R-S45HN09C-CF	315	326.7	80	60	–	101.6	25.7	14	-7	-7	16	✓	3100	✓	37.00	GI252	FA029	–

GI252	HNGX 0906AN..	XNGX 0906AN..

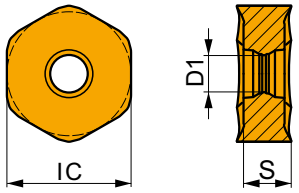
		Nm											
FA021	US 54511-T15P	5.0	M 4.5	11	D-T08P/T15P	FG-15	–	–	–	–	–	–
FA023	US 54511-T15P	5.0	M 4.5	11	D-T08P/T15P	FG-15	HS 1030C	–	–	–	–	–
FA026	US 54511-T15P	5.0	M 4.5	11	D-T08P/T15P	FG-15	HS 1240C	CAC 160C	HSD 0825C	HXK 5	–	–
FA027	US 54511-T15P	5.0	M 4.5	11	D-T08P/T15P	FG-15	HS 1655C	CAC 200C	HSD 1025C	HXK 7	–	–
FA028	US 54511-T15P	5.0	M 4.5	11	D-T08P/T15P	FG-15	HS 1655C	CAC 250C	HSD 1025C	HXK 7	–	–
FA029	US 54511-T15P	5.0	M 4.5	11	D-T08P/T15P	FG-15	HS 1655C	CAC 315C	HSD 1035C	HXK 7	CACP 3150C	RRH 34

AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

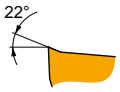
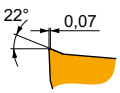
HNGX 09

PRAMET

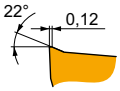
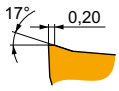
	IC [mm]	D1 [mm]	S [mm]
0906	16.500	4.90	6.35



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																				
			FF geometry with highly positive design for light machining.																	
HNGX 0906ANEN-FF	**8215**	–	■	345	0.10	1.0	◪	205	0.09	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	M8330	–	■	335	0.10	1.0	■	200	0.09	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	M9340	–	■	405	0.10	1.0	■	240	0.09	1.0	–	–	–	–	–	–	–	–	–	–	–	–
																				
			F geometry with highly positive design for light to medium machining.																	
HNGX 0906ANSN-F	**8215**	–	■	300	0.12	2.1	◪	180	0.11	2.1	–	–	–	–	–	–	–	–	–	–	–	–
	M6330	–	■	255	0.12	2.1	■	180	0.11	2.1	–	–	–	–	–	–	–	–	–	–	–	–
	M8310	–	■	330	0.12	2.1	◪	165	0.11	2.1	–	–	–	–	–	–	–	–	–	–	–	–
	M8330	–	■	300	0.12	2.1	■	180	0.11	2.1	–	–	–	–	–	–	–	–	–	–	–	–
	M8340	–	■	270	0.12	2.1	■	160	0.11	2.1	–	–	–	–	–	–	–	–	–	–	–	–

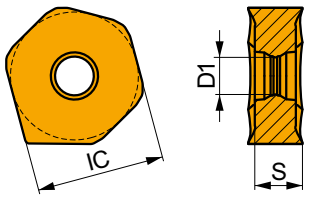
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]
																				
M geometry with highly positive design for medium machining.																				
HNGX 0906ANSN-M	**8215**	–	■ 255	0.20	2.7	◪ 150	0.18	2.7	■ 240	0.20	2.7	–	–	–	–	–	–	–	–	–
	M5315	–	◪ 340	0.20	2.7	–	–	–	■ 320	0.20	2.7	–	–	–	–	–	–	–	–	–
	M6330	–	■ 205	0.20	2.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	M8310	–	■ 280	0.20	2.7	◪ 140	0.18	2.7	■ 265	0.20	2.7	–	–	–	–	–	–	–	–	–
	M8330	–	■ 255	0.20	2.7	◪ 150	0.18	2.7	■ 240	0.20	2.7	–	–	–	–	–	–	–	–	–
	M8340	–	■ 235	0.20	2.7	◪ 140	0.18	2.7	◪ 220	0.20	2.7	–	–	–	–	–	–	–	–	–
	M9315	–	■ 340	0.20	2.7	–	–	–	■ 320	0.20	2.7	–	–	–	–	–	–	–	–	–
	M9325	–	■ 315	0.20	2.7	–	–	–	■ 295	0.20	2.7	–	–	–	–	–	–	–	–	–
	M9340	–	■ 290	0.20	2.7	◪ 170	0.18	2.7	–	–	–	–	–	–	–	–	–	–	–	–
																				
R geometry with positive design for medium to heavy machining.																				
HNGX 0906ANSN-R	**8215**	–	■ 240	0.25	3.0	◪ 140	0.25	3.0	■ 225	0.25	3.0	–	–	–	–	–	–	◪ 45	0.15	1.0
	M5315	–	◪ 305	0.25	3.0	–	–	–	■ 285	0.25	3.0	–	–	–	–	–	–	◪ 60	0.15	1.0
	M8310	–	■ 260	0.25	3.0	◪ 130	0.25	3.0	■ 245	0.25	3.0	–	–	–	–	–	–	◪ 50	0.15	1.0
	M8330	–	■ 240	0.25	3.0	◪ 140	0.25	3.0	■ 225	0.25	3.0	–	–	–	–	–	–	◪ 45	0.15	1.0
	M8340	–	■ 220	0.25	3.0	◪ 130	0.25	3.0	◪ 205	0.25	3.0	–	–	–	–	–	–	–	–	–
	M9315	–	■ 310	0.25	3.0	–	–	–	■ 290	0.25	3.0	–	–	–	–	–	–	◪ 60	0.15	1.0
	M9325	–	■ 295	0.25	3.0	–	–	–	■ 280	0.25	3.0	–	–	–	–	–	–	◪ 55	0.15	1.0

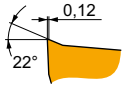
XNGX 09

PRAMET

	IC [mm]	D1 [mm]	S [mm]
0906	16.500	4.90	6.35

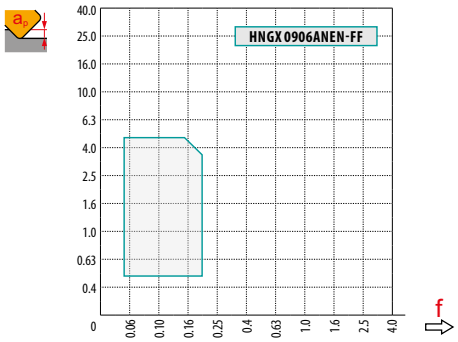


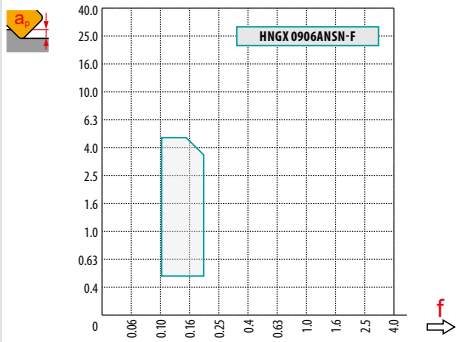
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

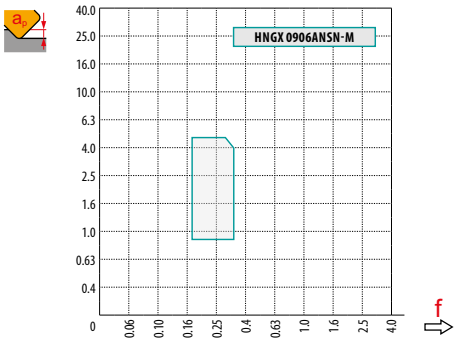
Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]
																				
Wiper design for improved surface finish.																				
XNGX 0906ANSN	**8215**	–	■ 245	0.20	2.7	◪ 145	0.18	2.7	■ 230	0.20	2.7	–	–	–	–	–	–	–	–	–
	M8330	–	■ 245	0.20	2.7	◪ 145	0.18	2.7	■ 230	0.20	2.7	–	–	–	–	–	–	–	–	–

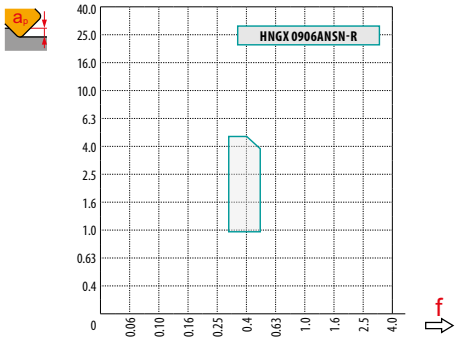
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ X.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ X.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

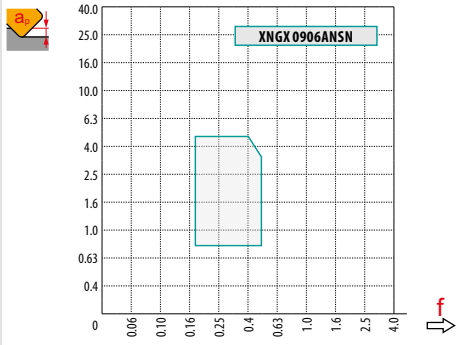
	HNGX 09-FF	HNGX 09-F	HNGX 09-M	HNGX 09-R	XNGX 09
RE	–	–	–	–	–
BS	1.50	1.17	1.17	1.17	7.53











DC	X.V	f_{max}
50	1.35	0.36
63	1.39	0.40
80	1.44	0.45
100	1.48	0.51
125	1.53	0.57
160	1.58	0.64
200	1.63	0.72
250	1.68	0.80
315	1.74	0.90

DC	RPMX	APMX/I
50	2.1	3.5/100
63	1.5	2.5/100
80	1.1	1.8/100
100	0.9	1.4/100
125	0.7	1.1/100
160	0.5	0.7/100

a_p
1.9

SOD05

P M K N

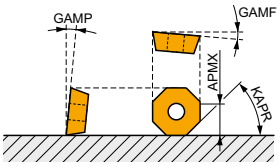
PRAMET

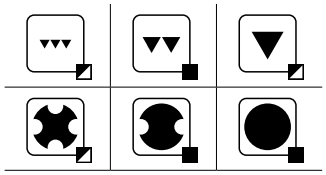
S

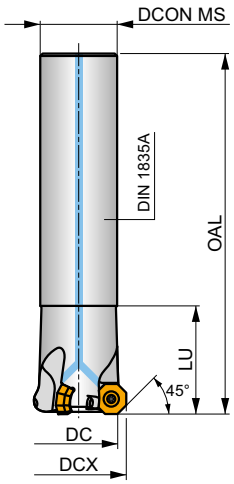
Universal Face Mill with Positive Design and Internal Coolant

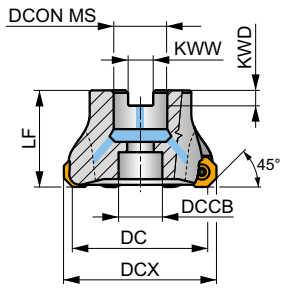
Highly productive universal face mill utilising single-sided positive inserts with APMX up to 10 mm. Unique insert seat fits OD.. 05, RD.. 12 and SD.. 12 style inserts, suited for wide range of applications. Differential tooth pitch. Arbor and cylindrical style in range from Ø32 up to Ø125 mm. Body treated for longer tool life.

KAPR	45°
APMX	2.7 (10.0) mm









h_m 0.03 - 0.15

h_m 0.03 - 0.12

	Product	DCX [mm]	DC [mm]	OAL [mm]	DCON MS [mm]	DCCB [mm]	LU [mm]	LF [mm]	KAPR [°]	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg			
DIN 1835A	**32N3R045A25-S0D05-C**	32	24.7	130	25	–	45	–	45	–	–	-10	8	3	–	17700	✓	0.41	GI326	FA049	–
DIN 1835A	**40N3R045A32-S0D05-C**	40	32.6	150	32	–	45	–	45	–	–	-7	8	3	–	15800	✓	0.86	GI326	FA040	–
	40A03R-S45OD05-C	40	32.7	–	16	14	–	40	45	8.4	5.6	-10	8	3	–	15800	✓	0.19	GI326	FA042	–
	50A04R-S45OD05-C	50	42.6	–	22	18	–	40	45	10.4	6.3	-7	8	4	–	14100	✓	0.28	GI326	FA043	–
	50A05R-S45OD05-C	50	42.6	–	22	18	–	40	45	10.4	6.3	-7	8	5	–	14100	✓	0.28	GI326	FA043	–
	63A05R-S45OD05-C	63	55.6	–	22	18	–	40	45	10.4	6.3	-7	8	5	✓	12600	✓	0.39	GI326	FA043	–
ISO 6462 DIN 8030	**63A06R-S45OD05-C**	63	55.6	–	22	18	–	40	45	10.4	6.3	-7	8	6	✓	12600	✓	0.40	GI326	FA043	–
	80A06R-S45OD05-C	80	72.6	–	27	38	–	50	45	12.4	7	-7	8	6	✓	11100	✓	0.73	GI326	FA041	AC001
	80A08R-S45OD05-C	80	72.6	–	27	38	–	50	45	12.4	7	-7	8	8	✓	11100	✓	0.66	GI326	FA041	AC001
	100A07R-S45OD05-C	100	92.6	–	32	45	–	50	45	14.4	8	-7	8	7	✓	10000	✓	1.09	GI326	FA041	AC002
	125A08R-S45OD05-C	125	117.6	–	40	56	–	63	45	16.4	9	-7	8	8	✓	8900	✓	2.20	GI326	FA041	AC003

GI326	OD.. 0505..	RD.. 1205..	SDKT 1205..	SDMT 1205..SN

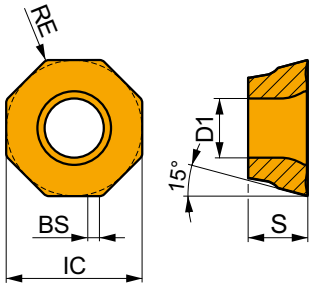
		Nm					
FA040	US 45014-T20P	5.0	M 5	13	Flag T20P	–	–
FA041	US 45014-T20P	5.0	M 5	13	–	SDR T20P-T	–
FA042	US 45014-T20P	5.0	M 5	13	–	SDR T20P-T	HS 90835
FA043	US 45014-T20P	5.0	M 5	13	–	SDR T20P-T	HS 1030C
FA049	US 45011-T20P	5.0	M 5	11	Flag T20P	–	–

AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

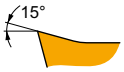
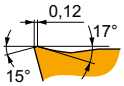
ODKT 05IM

PRAMET

	IC [mm]	D1 [mm]	S [mm]	BS [mm]
0505	12.700	5.50	5.56	1.00



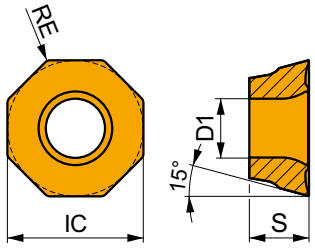
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																				
			F geometry, 45° face milling insert, with highly positive design for light machining.																	
ODKT 0505ADFR-F	**M8310**	0.8	■ 275	0.15	2.5	◪ 140	0.14	2.5	–	–	–	–	–	–	–	–	–	–	–	–
																				
			FM geometry, 45° face milling insert, with positive design for light to medium machining.																	
ODKT 0505ADSR-FM	**M6330**	0.8	■ 190	0.25	2.5	■ 135	0.23	2.5	–	–	–	–	–	–	–	–	–	–	–	–
	M8310	0.8	■ 240	0.25	2.5	◪ 120	0.23	2.5	◪ 225	0.25	2.5	–	–	–	–	–	–	–	–	–
	M8330	0.8	■ 225	0.25	2.5	■ 135	0.23	2.5	◪ 210	0.25	2.5	–	–	–	–	–	–	–	–	–
	M8345	0.8	■ 160	0.25	2.5	■ 95	0.23	2.5	–	–	–	–	–	–	–	–	–	–	–	–
	M9340	0.8	■ 245	0.25	2.5	■ 145	0.23	2.5	–	–	–	–	–	–	–	–	–	–	–	–

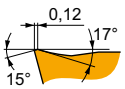
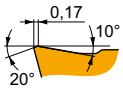
ODMT 05IM

PRAMET

	IC	D1	S
	[mm]	[mm]	[mm]
0505	12.700	5.50	5.56



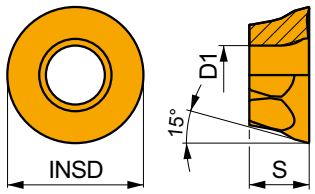
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
FM geometry, 45° face milling insert, with positive design for light to medium machining.																				
ODMT 0505ADSR-FM	**M8340**	0.8	200	0.25	2.5	120	0.23	2.5	190	0.25	2.5	–	–	–	–	–	–	–	–	–
	M9340	0.8	245	0.25	2.5	145	0.23	2.5	–	–	–	–	–	–	–	–	–	–	–	–
																				
R geometry, 45° face milling insert, with positive design for unstable cutting conditions.																				
ODMT 050508SN-R	**M8330**	0.8	190	0.25	2.5	–	–	–	180	0.25	2.5	–	–	–	–	–	–	–	–	–
	M9340	0.8	210	0.25	2.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

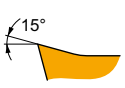
RDGT 12IM

PRAMET

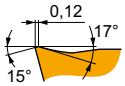
	INSD	D1	S
	[mm]	[mm]	[mm]
1205	12.7	5.50	5.56



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
F geometry with highly positive design for light machining.																				
RDGT 120500FN-F	**M8310**	–	210	0.20	1.5	105	0.18	1.5	–	–	–	–	–	–	–	–	–	–	–	–

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

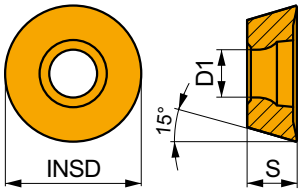
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																				
RDGT 120500SN-FM	M8330	–	■ 190	0.20	1.5	◪ 110	0.18	1.5	◪ 180	0.20	1.5	–	–	–	–	–	–	–	–	–
	M8345	–	■ 140	0.20	1.5	◪ 80	0.18	1.5	–	–	–	–	–	–	–	–	–	–	–	–

FM geometry with positive design for light to medium machining.

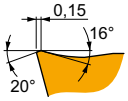
RDMT 12IM

PRAMET

	INSD [mm]	D1 [mm]	S [mm]
1205	12.7	5.50	5.56



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

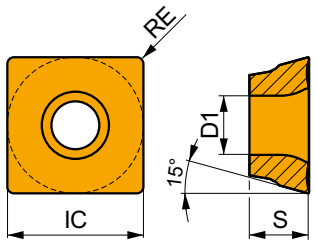
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																				
RDMT 120500SN-R	M8330	–	■ 175	0.30	1.5	–	–	–	■ 165	0.30	1.5	–	–	–	–	–	–	–	–	–
	M8340	–	■ 160	0.30	1.5	–	–	–	◪ 150	0.30	1.5	–	–	–	–	–	–	–	–	–
	M9340	–	■ 190	0.30	1.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

R geometry, copy and profile milling insert, with positive design for unstable cutting conditions.

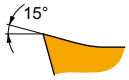
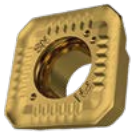
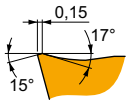
SDKT 12IM

PRAMET

	IC [mm]	D1 [mm]	S [mm]
1205	12.700	5.50	5.56



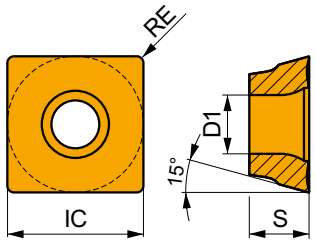
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			F																	
			F geometry, 90° shoulder milling insert, with highly positive design for light machining.																	
SDKT 1205PDFR-F	8215	0.8	■ 285	0.10	4.0	◪ 170	0.09	4.0	–	–	–	◪ 855	0.12	4.0	–	–	–	–	–	–
			1 U S																	
			FM geometry, 90° shoulder milling insert, with positive design for light to medium machining.																	
SDKT 1205AESN-FM	M6330	–	■ 240	0.15	4.0	◪ 170	0.15	4.0	–	–	–	–	–	–	–	–	–	–	–	–
	M8330	–	■ 280	0.15	4.0	◪ 165	0.15	4.0	◪ 265	0.15	4.0	–	–	–	–	–	–	–	–	–
	M8345	–	■ 205	0.15	4.0	◪ 120	0.15	4.0	–	–	–	–	–	–	–	–	–	–	–	–
SDKT 1205PDSR-FM	M8330	0.8	■ 255	0.15	4.0	◪ 150	0.15	4.0	◪ 240	0.15	4.0	–	–	–	–	–	–	–	–	–
	M8345	0.8	■ 185	0.15	4.0	◪ 110	0.15	4.0	–	–	–	–	–	–	–	–	–	–	–	–

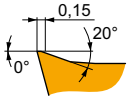
SDMT 12IM

PRAMET

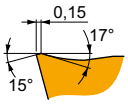
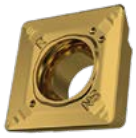
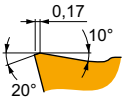
	IC [mm]	D1 [mm]	S [mm]
1205	12.700	5.50	5.56



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			S																	
			F geometry, 90° shoulder milling insert, with positive design for light to medium machining.																	
SDMT 120508SN-F	M8310	0.8	■ 265	0.15	4.0	◪ 135	0.15	4.0	–	–	–	–	–	–	–	–	–	–	–	–
	M8330	0.8	■ 245	0.15	4.0	◪ 145	0.15	4.0	–	–	–	◪ 735	0.18	4.0	–	–	–	–	–	–

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

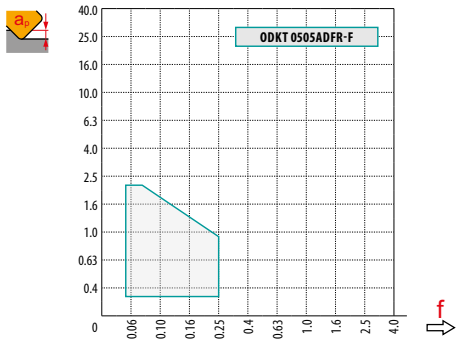
Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]
			S																	
FM geometry, 90° shoulder milling insert, with positive design for medium machining.																				
SDMT 120508SN-FM	**M8345**	0.8	■ 175	0.15	4.0	◩ 105	0.15	4.0	–	–	–	–	–	–	–	–	–	–	–	–
				S																
R geometry, 90° shoulder milling insert, with positive design for unstable cutting conditions.																				
SDMT 120508SN-R	**M8330**	0.8	■ 225	0.20	4.0	–	–	–	■ 210	0.20	4.0	–	–	–	–	–	–	–	–	–
	M8345	0.8	■ 165	0.20	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	M9340	0.8	■ 250	0.20	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
SDMT 1205AESN-R	**M8330**	–	■ 265	0.20	4.0	–	–	–	■ 250	0.20	4.0	–	–	–	–	–	–	–	–	–
	M8340	–	■ 240	0.20	4.0	–	–	–	◩ 225	0.20	4.0	–	–	–	–	–	–	–	–	–

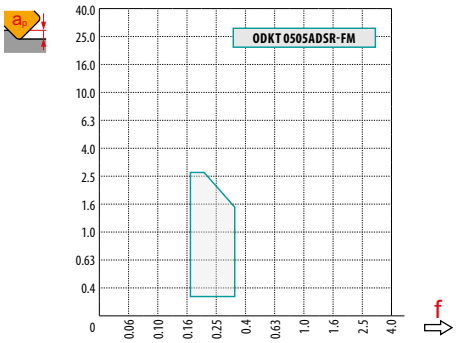
a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

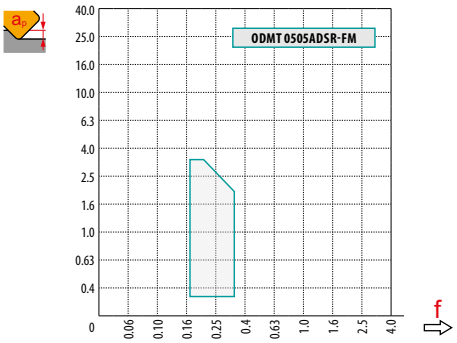
	ODKT 05-F	ODKT 05-FM	ODMT 05-FM	ODMT 05-R
RE	0.4	0.8	0.8	0.8
BS	1.00	1.00	–	–

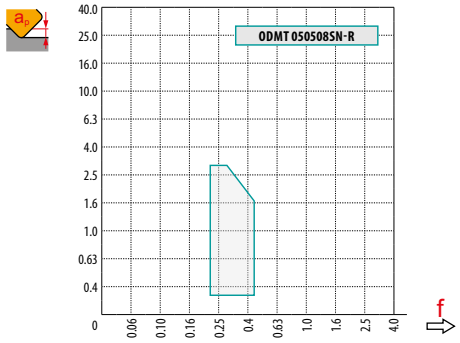
	RDGT 12-F	RDGT 12-FM	RDGT 12-R
RE	6.35	6.35	6.35
BS	–	–	–

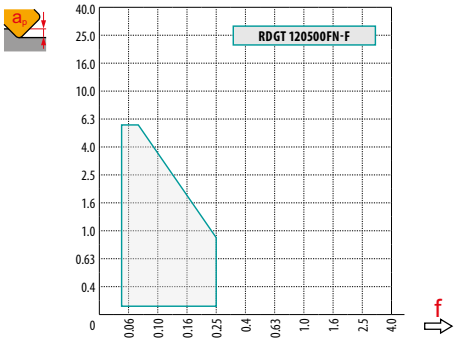
	SDKT 12-F	SDKT 12-FM	SDMT 12-F	SDMT 12-R
RE	0.8	0.8	0.8	0.8
BS	2.30	2.30	–	–

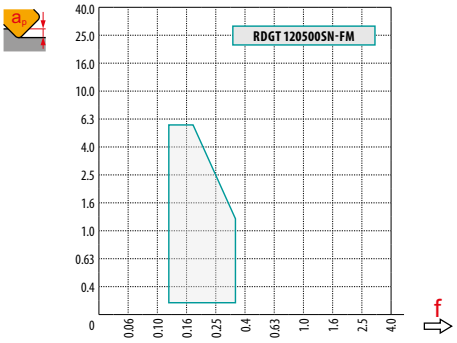


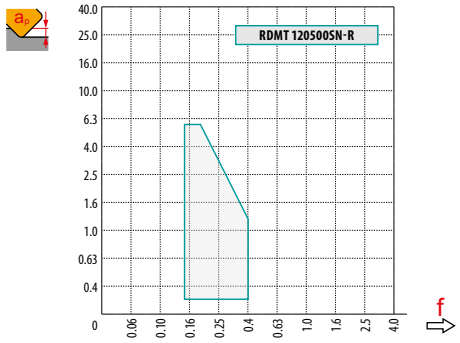


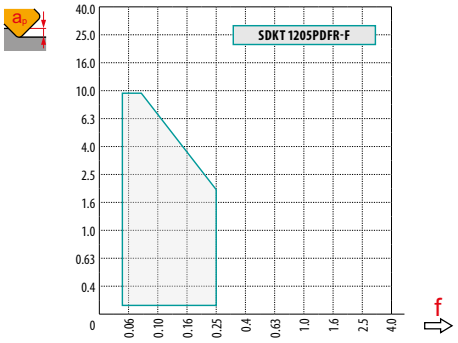


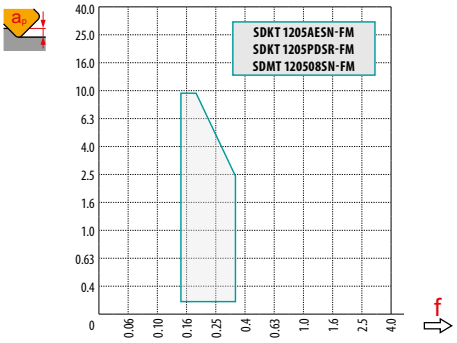


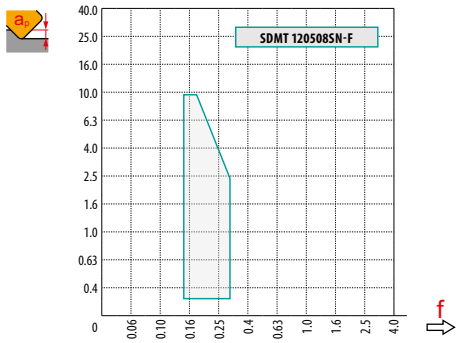


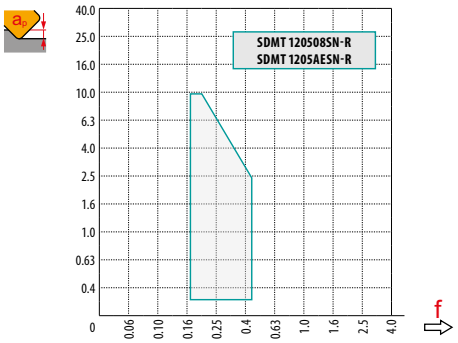












DCX	R												
	ap	0.25	0.50	0.60	0.70	0.80	1.00	1.25	1.50	2.00	3.00	4.00	5.00	6.00
32	DEF	23.43	24.80	25.23	25.62	25.99	26.63	27.33	27.94	28.94	30.39	31.31	31.83	32.00
40		31.43	32.80	33.23	33.62	33.99	34.63	35.33	35.94	36.94	38.39	39.31	39.83	40.00
50		41.43	42.80	43.23	43.62	43.99	44.63	45.33	45.94	46.94	48.39	49.31	49.83	50.00
63		54.43	55.80	56.23	56.62	56.99	57.63	58.33	58.94	59.94	61.39	62.31	62.83	63.00
80		71.43	72.80	73.23	73.62	73.99	74.63	75.33	75.94	76.94	78.39	79.31	79.83	80.00
100		91.43	92.80	93.23	93.62	93.99	94.63	95.33	95.94	96.94	98.39	99.31	99.83	100.00
125		116.43	117.80	118.23	118.62	118.99	119.63	120.33	120.94	121.94	123.39	124.31	124.83	125.00

DCX	X.V	f_{max}
32	1.36	0.28
40	1.40	0.31
50	1.43	0.33
63	1.47	0.37
80	1.52	0.42
100	1.57	0.47
125	1.62	0.52

S

a_{emax}
10.0

S

a_p	1.0	5.0	10.0
1 f	0.35	0.21	0.15

O

DCX	RPMX	APMX/l
50	4.1	7.05/100
63	2.7	4.6/100
80	1.8	3/100
100	1.7	2.85/100
125	0.7	1.1/100

R

DCX	RPMX	APMX/l
50	3.8	6.2/95
63	2.5	4.25/100
80	1.7	2.85/100
100	1.6	2.65/100
125	0.3	0.4/100

O

DCX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
50	78.0	100.0	4.5	4.5
63	105.0	126.0	4.5	4.5
80	138.0	160.0	4.5	4.5
100	178.0	200.0	4.5	4.5
125	229.0	250.0	4.0	4.5

R

DCX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
50	78.0	100.0	4.5	4.5
63	105.0	126.0	4.5	4.5
80	138.0	160.0	4.5	4.5
100	178.0	200.0	4.5	4.5
125	230.0	250.0	4.0	4.5

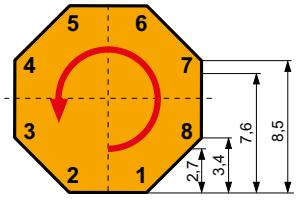
	O	R
a_p	2.4	2.3

R

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
32	FE	0.620	0.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578
40		0.693	0.894	1.265	1.549	1.789	2.191	2.530	2.828	3.098	3.578	4.000
50		0.775	1.000	1.414	1.732	2.000	2.449	2.828	3.162	3.464	4.000	4.472
63		0.869	1.122	1.587	1.944	2.245	2.750	3.175	3.550	3.888	4.490	5.020
80		0.980	1.265	1.789	2.191	2.530	3.098	3.578	4.000	4.382	5.060	5.657
100		1.095	1.414	2.000	2.449	2.828	3.464	4.000	4.472	4.899	5.657	6.325
125		1.225	1.581	2.236	2.739	3.162	3.873	4.472	5.000	5.477	6.325	7.071

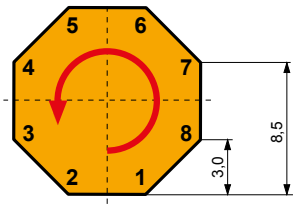
RE	µm	3	5	10	15	20	30	40	50	60	80	100
6.0	FE	0.379	0.490	0.693	0.849	0.980	1.200	1.386	1.549	1.697	1.960	2.191

ODKT 05



a_p	
–> 2.7	8
–> 3.4	7
–> 7.6	4
–> 8.5	2

ODMT 05



a_p	
–> 3.0	8
–> 8.5	4

SOD06D

P M K S H

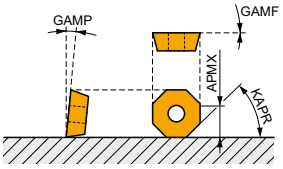
PRAMET

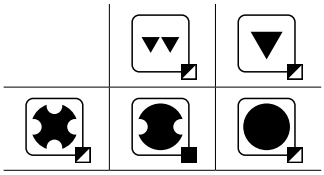
S

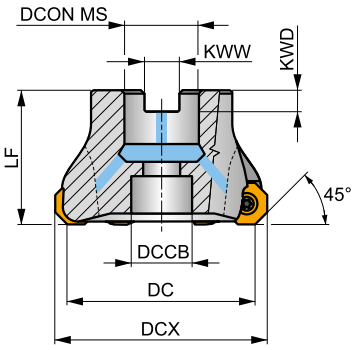
Universal Face Mill with Positive Design and Internal Coolant

Highly productive universal face mill utilising single sided positive inserts with APMX of up to 3.5 mm. Unique insert seat fits OD.. 06 and RP.. 15 style inserts, suited for face milling and chamfering. Arbor style only in range from Ø63 up to Ø160 mm with differential tooth pitch. Body treated for longer tool life.

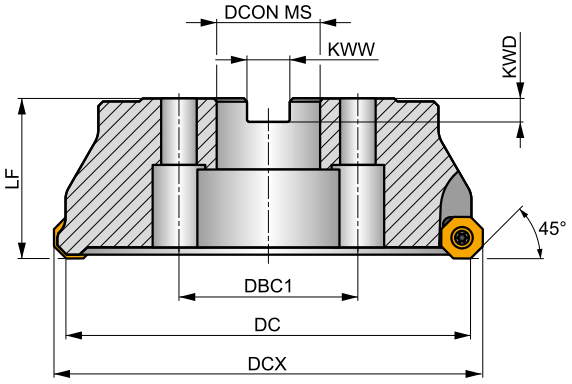
KAPR	45°
APMX	3.1 (8.6) mm







DC 63 - 125 mm



DC 160 mm

h_m 0.12 - 0.22

	Product	DC [mm]	DCX [mm]	LF [mm]	DCON MS [mm]	DCCB [mm]	DBC1 [mm]	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg		
ISO 6462 DIN 8030	**63A05R-S450D06D**	63	72.5	40	22	18	–	10.4	6.3	0	5	5	✓	8800	✓	0.60	GI059	FA071
	80A06R-S450D06D	80	89.5	50	27	20	–	12.4	7	0	5	6	✓	7800	✓	1.25	GI059	FA071
	100A07R-S450D06D	100	109.5	50	32	27	–	14.4	8	0	5	7	✓	7000	✓	2.09	GI059	FA071
	125A08R-S450D06D	125	134.5	63	40	33	–	16.4	9	0	5	8	✓	6300	✓	4.18	GI059	FA071
	160C09R-S450D06D	160	169.5	63	40	56	66.7	16.4	9	0	5	9	✓	5500	–	6.49	GI059	FA071

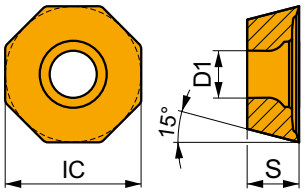
GI059	OD.. 0605ZZ..	RP.. 1505M0..

FA071	US 4511-T20	5.0 Nm	M 4.5	11	SDR T20-T

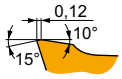
ODMT 06

PRAMET

	IC [mm]	D1 [mm]	S [mm]
0605	15.875	5.50	5.56



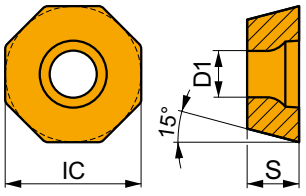
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																					
			Slightly positive design, 45° face milling insert, for medium machining.																		
ODMT 0605ZZN	**M5315**	–	255	0.24	3.0	–	–	–	240	0.24	3.0	–	–	–	–	–	–	–	–	–
	M8330	–	200	0.24	3.0	–	–	–	190	0.24	3.0	–	–	–	–	–	–	–	–	–
	M8340	–	185	0.24	3.0	–	–	–	175	0.24	3.0	–	–	–	–	–	–	–	–	–
	M9315	–	260	0.24	3.0	–	–	–	245	0.24	3.0	–	–	–	–	–	–	–	–	–
	M9325	–	245	0.24	3.0	–	–	–	230	0.24	3.0	–	–	–	–	–	–	–	–	–

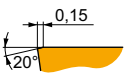
ODEW 06

PRAMET

	IC [mm]	D1 [mm]	S [mm]
0605	15.875	5.50	5.56



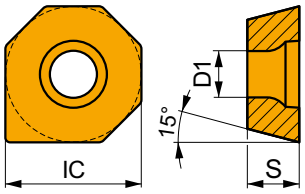
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																					
			Zero rake angle design, 45° face milling insert, for medium machining.																		
ODEW 0605ZZN	**M8330**	–	210	0.26	2.5	–	–	–	195	0.26	2.5	–	–	–	–	–	–	40	0.15	1.0

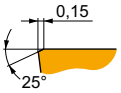
ODMX 06

PRAMET

	IC	D1	S
	[mm]	[mm]	[mm]
0605	15.875	5.50	5.56



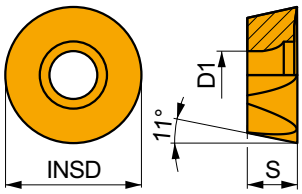
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
			W S																	
			Wiper design for improved surface finish.																	
ODMX 0605ZZ	**M8330**	–	205	0.28	2.5	–	–	–	190	0.28	2.5	–	–	–	–	–	–	40	0.15	1.0

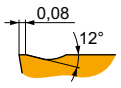
RPET 15

PRAMET

	INSD	D1	S
	[mm]	[mm]	[mm]
1505	15.8	5.50	5.56

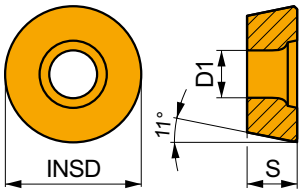


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

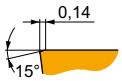
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
			HFC S																	
			M geometry, copy and profile mill insert, with positive design for light to rough machining.																	
RPET 1505MOS-M	**M8330**	–	230	0.40	1.0	135	0.36	1.0	215	0.40	1.0	–	–	–	55	0.28	0.8	–	–	–
	M8340	–	210	0.40	1.0	125	0.36	1.0	195	0.40	1.0	–	–	–	50	0.28	0.8	–	–	–

RPEW 15

	INSD	D1	S
	[mm]	[mm]	[mm]
1505	15.8	5.50	5.56

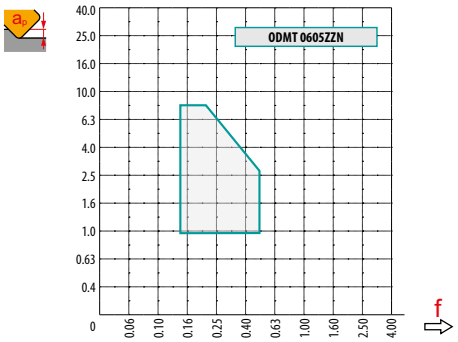


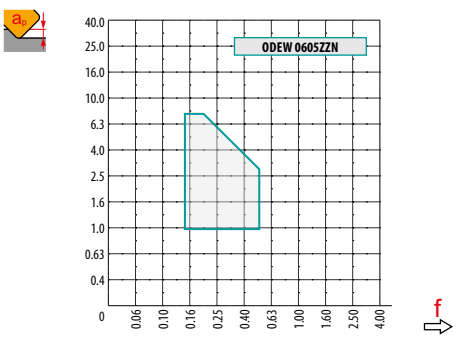
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

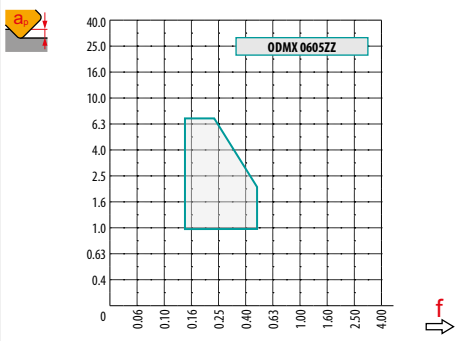
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
			HFC S																	
			Zero rake angle design, copy and profile mill insert, for medium machining.																	
RPEW 1505M0S	**M8330**	–	◩ 300	0.20	1.0	–	–	–	■ 285	0.20	1.0	–	–	–	–	–	–	◩ 60	0.15	1.0

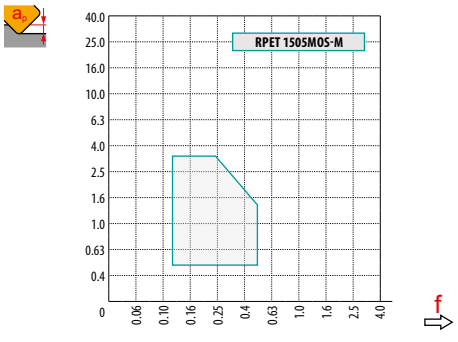
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

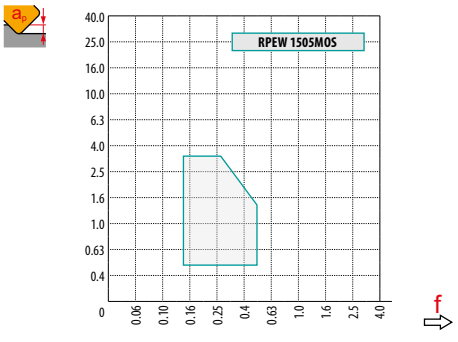
	ODMT 06	ODEW 06	ODMX 06	RPET 15-M	RPEW 15
RE	–	–	–	7.89	7.89
BS	1.73	5.92	9.91	–	–







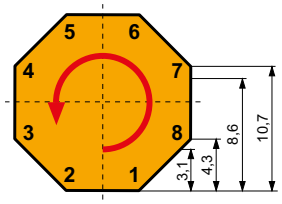




R

DC	a_p	0.00	0.50	0.75	1.25	1.50	2.00	2.50	3.00	4.00
63	DEF	56.63	62.17	63.36	65.18	65.91	67.16	68.19	69.05	70.41
80		73.63	79.17	80.36	82.18	82.91	84.16	85.19	86.05	87.41
100		93.63	99.17	100.36	102.18	102.91	104.16	105.19	106.05	107.41
125		118.63	124.17	125.36	127.18	127.91	129.16	130.19	131.05	132.41
160		153.63	159.17	160.36	162.18	162.91	164.16	165.19	166.05	167.41

DC	X.V	f_{max}
63	1.49	0.78
80	1.54	0.88
100	1.59	0.98
125	1.64	1.10
160	1.70	1.24



a_p	
–> 3.1	8
–> 4.3	7
–> 8.6	4
–> 10.7	2

SOE06Z

P M N S

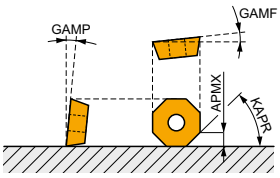
PRAMET

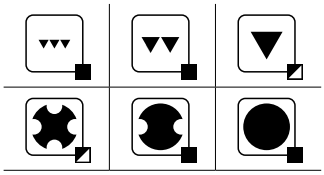
S

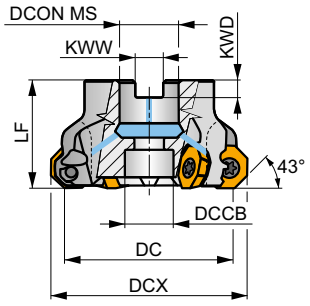
Universal Face Mill with Positive Design and Internal Coolant

Highly productive universal face mill utilising positive single sided inserts with APMX of 4 mm for RE.. 16. Unique insert seat fits OE.. 06, RE.. 16 and XE.. 06 style inserts, suited for a wide range of applications. Arbor style only in range from Ø50 up to Ø200 mm with differential tooth pitch. Body treated for longer tool life.

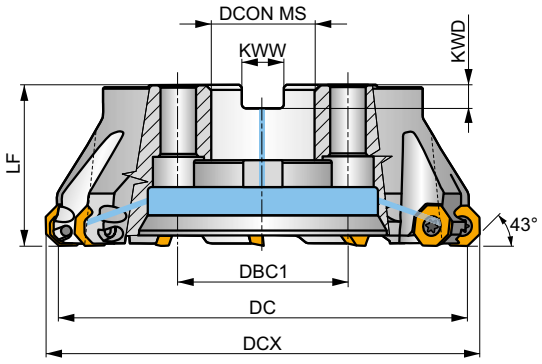
KAPR	43°
APMX	3.3 (9.9) mm







DC 50 – 125 mm



DC 160 – 200 mm

h_m 0.06 - 0.20

	Product	DC [mm]	DCX [mm]	LF [mm]	DCON MS [mm]	DCCB [mm]	DBC1 [mm]	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg			
	50A04R-S450E06Z-C	50	60.2	40	22	18	–	10.4	6.3	6	10	4	✓	10700	✓	0.48	GI283	FA053	–
	50A05R-S450E06Z-C	50	60	40	22	18	–	10.4	6.3	1	10	5	✓	10700	✓	0.48	GI283	FA053	–
	56A05R-S450E06Z-C	56	66	40	22	18	–	10.4	6.3	6	10	5	✓	10100	✓	0.54	GI283	FA053	–
	63A04R-S450E06Z-C	63	73.2	40	22	18	–	10.4	6.3	6	10	4	✓	9600	✓	0.59	GI283	FA053	–
	63A06R-S450E06Z-C	63	73	40	22	18	–	10.4	6.3	1	10	6	✓	9600	✓	0.61	GI283	FA053	–
	70A06R-S450E06Z-C	70	80	40	22	18	–	10.4	6.3	6	10	6	✓	9100	✓	0.69	GI283	FA053	–
	80A05R-S450E06Z-C	80	90.2	50	27	38	–	12.4	7	6	10	5	✓	8500	✓	1.03	GI283	FA051	AC001
	80A06R-S450E06Z-C	80	90.2	50	27	38	–	12.4	7	6	10	6	✓	8500	✓	1.07	GI283	FA051	AC001
ISO 6462 DIN 8030	**90A07R-S450E06Z-C**	90	100	50	32	45	–	14.4	8	6	10	7	✓	8000	✓	1.63	GI283	FA051	AC002
	100A06R-S450E06Z-C	100	110.2	50	32	45	–	14.4	8	6	10	6	✓	7600	✓	1.90	GI283	FA051	AC002
	100A08R-S450E06Z-C	100	109.9	50	32	45	–	14.4	8	1	10	8	✓	7600	✓	1.92	GI283	FA051	AC002
	125A07R-S450E06Z-C	125	135.2	63	40	56	–	16.4	9	6	10	7	✓	6800	✓	3.35	GI283	FA051	AC003
	125A09R-S450E06Z-C	125	134.9	63	40	56	–	16.4	9	1	10	9	✓	6800	✓	3.35	GI283	FA051	AC003
	160C09R-S450E06Z-C	160	170.2	63	40	–	66.7	16.4	9	6	10	9	✓	6000	✓	7.11	GI283	FA056	–
	160C12R-S450E06Z-C	160	169.9	63	40	–	66.7	16.4	9	1	10	12	✓	6000	✓	7.06	GI283	FA056	–
	200C11R-S450E06Z-C	200	210.2	63	60	–	101.6	25.7	14	6	10	11	✓	5300	✓	10.80	GI283	FA057	–
	200C14R-S450E06Z-C	200	209.9	63	60	–	101.6	25.7	14	1	10	14	✓	5300	✓	11.17	GI283	FA057	–

GI283	OEHT 0604AE..	REHT 1604M0..	XEHT 0604AE..

		Nm							
FA051	US 5011-T20P	5.0	M 5	11	SDR T20P-T	–	–	–	–
FA053	US 5011-T20P	5.0	M 5	11	SDR T20P-T	HS 1030C	–	–	–

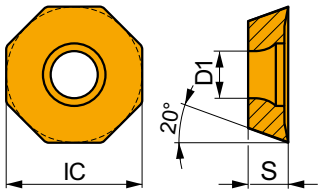
		Nm							
FA056	US 5011-T20P	5.0	M 5	11	SDR T20P-T	HS 1240C	CAC 160C	HSD 0825C	HXK 5
FA057	US 5011-T20P	5.0	M 5	11	SDR T20P-T	HS 1655C	CAC 200C	HSD 1025C	HXK 7

AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

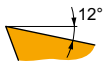
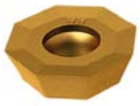
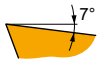
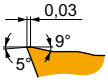
OEHT 06

PRAMET

	IC [mm]	D1 [mm]	S [mm]
0604	16.050	5.50	4.76



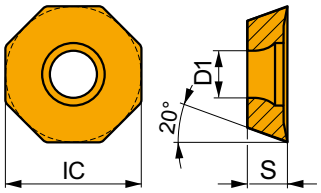
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc	M f	M ap	K vc	K f	K ap	N vc	N f	N ap	S vc	S f	S ap	H vc	H f	H ap
			E																	
			MF geometry, 45° face milling insert, with sharp positive design for light to medium and potentially finish machining.																	
OEHT 0604AEER-MF	**M6330**	–	◪ 255	0.12	2.2	■ 180	0.11	2.2	–	–	–	–	–	–	■ 75	0.10	1.8	–	–	–
	M8330	–	◪ 295	0.12	2.2	■ 175	0.11	2.2	–	–	–	◪ 885	0.14	2.2	◪ 70	0.10	1.8	–	–	–
	M8340	–	◪ 275	0.12	2.2	■ 165	0.11	2.2	–	–	–	–	–	–	■ 65	0.10	1.8	–	–	–
			1 E																	
			MM geometry, 45° face milling insert, with sharp positive design for light to medium machining.																	
OEHT 0604AEER-MM	**M6330**	–	◪ 245	0.16	2.2	■ 170	0.14	2.2	–	–	–	–	–	–	■ 70	0.11	1.8	–	–	–
	M8330	–	◪ 280	0.16	2.2	■ 165	0.14	2.2	–	–	–	◪ 840	0.19	2.2	◪ 70	0.11	1.8	–	–	–
	M8340	–	◪ 255	0.16	2.2	■ 150	0.14	2.2	–	–	–	–	–	–	■ 60	0.11	1.8	–	–	–
	M8345	–	◪ 205	0.16	2.2	■ 120	0.14	2.2	–	–	–	–	–	–	■ 50	0.11	1.8	–	–	–
	M9325	–	◪ 355	0.16	2.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	M9340	–	◪ 320	0.16	2.2	■ 190	0.14	2.2	–	–	–	–	–	–	■ 80	0.11	1.8	–	–	–
			S																	
			M geometry, 45° face milling insert, with slightly positive design for light to medium machining.																	
OEHT 0604AESR-M	**M6330**	–	■ 210	0.24	3.2	■ 150	0.22	3.2	–	–	–	–	–	–	◪ 60	0.17	2.6	–	–	–
	M8310	–	■ 265	0.24	3.2	◪ 135	0.22	3.2	–	–	–	–	–	–	–	–	–	–	–	–
	M8330	–	■ 245	0.24	3.2	■ 145	0.22	3.2	–	–	–	–	–	–	◪ 60	0.17	2.6	–	–	–
	M8340	–	■ 220	0.24	3.2	■ 130	0.22	3.2	–	–	–	–	–	–	◪ 55	0.17	2.6	–	–	–
	M9325	–	■ 295	0.24	3.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	M9340	–	■ 270	0.24	3.2	■ 160	0.22	3.2	–	–	–	–	–	–	◪ 65	0.17	2.6	–	–	–

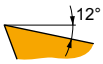
OEHT 06-FA

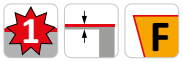
PRAMET

	IC [mm]	D1 [mm]	S [mm]
0604	16.050	5.50	4.76



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																					
OEHT 0604AEFR-FA	**HF7**	–	–	–	–	–	–	–	–	–	–	■	330	0.18	2.0	–	–	–	–	–	–
	M0315	–	–	–	–	–	–	–	–	–	–	■	765	0.18	2.0	–	–	–	–	–	–

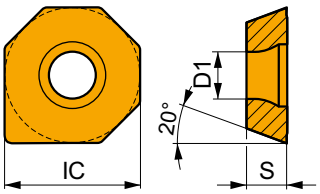


FA geometry, 45° face milling insert, with highly positive design for fine-finish to medium machining.

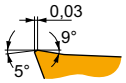
XEHT 06

PRAMET

	IC [mm]	D1 [mm]	S [mm]
0604	16.050	5.50	4.76



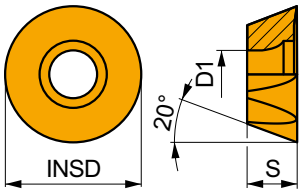
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																					
XEHT 0604AESR	**M8310**	–	■	265	0.24	3.2	◪	135	0.22	3.2	–	–	–	–	–	–	–	–	–	–	–
	M8330	–	■	245	0.24	3.2	◪	145	0.22	3.2	–	–	–	–	–	–	–	–	–	–	–

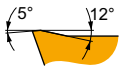
Slightly poisitive wiper design for improved surface finish.

REHT 16

	INSD	D1	S
	[mm]	[mm]	[mm]
1604	16.0	5.50	4.76

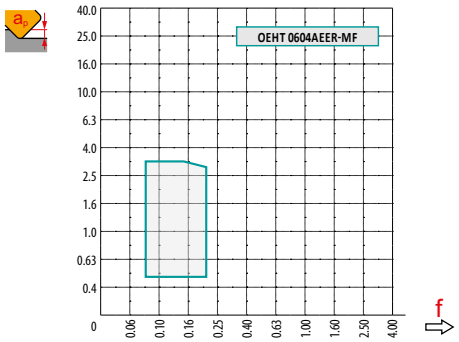


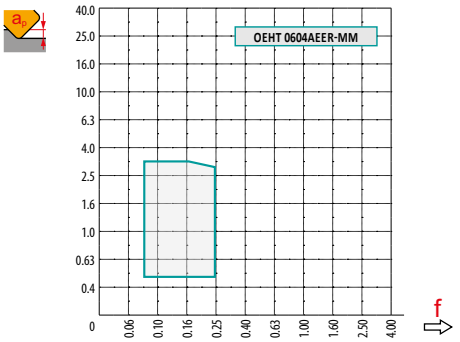
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

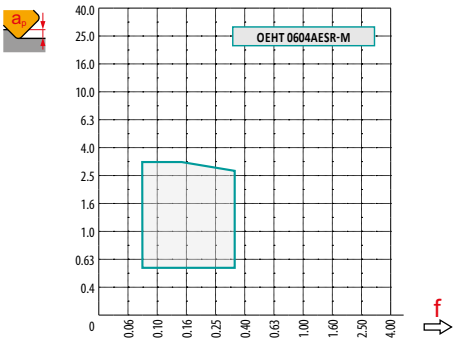
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
			E																	
			MM geometry, copy and profile mill insert, with slightly positive design for light to medium machining.																	
REHT 1604M0EN-MM	**M6330**	–	◪ 240	0.25	2.0	■ 170	0.23	2.0	–	–	–	–	–	–	■ 70	0.18	1.6	–	–	–
	M8330	–	◪ 280	0.25	2.0	■ 165	0.23	2.0	–	–	–	◪ 840	0.30	2.0	◪ 70	0.18	1.6	–	–	–
	M8340	–	◪ 255	0.25	2.0	■ 150	0.23	2.0	–	–	–	–	–	–	■ 60	0.18	1.6	–	–	–
	M8345	–	◪ 205	0.25	2.0	■ 120	0.23	2.0	–	–	–	–	–	–	■ 50	0.18	1.6	–	–	–
	M9325	–	◪ 340	0.25	2.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	M9340	–	◪ 305	0.25	2.0	■ 180	0.23	2.0	–	–	–	–	–	–	■ 75	0.18	1.6	–	–	–
			**S**																	
			M geometry, copy and profile mill insert, with positive design for light to medium machining.																	
REHT 1604M0SN-M	**M8310**	–	■ 275	0.35	2.0	◪ 140	0.32	2.0	–	–	–	–	–	–	–	–	–	–	–	–
	M8330	–	■ 260	0.35	2.0	■ 155	0.32	2.0	–	–	–	–	–	–	◪ 65	0.25	1.6	–	–	–
	M8340	–	■ 240	0.35	2.0	■ 140	0.32	2.0	–	–	–	–	–	–	◪ 60	0.25	1.6	–	–	–
	M9325	–	■ 310	0.35	2.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

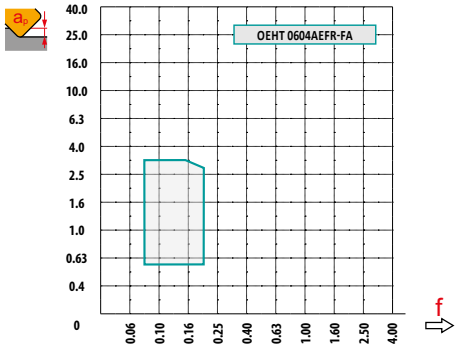
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

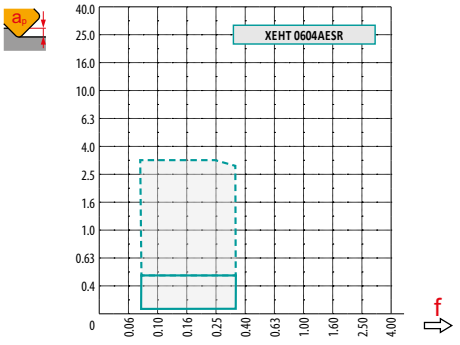
	OEHT 06-MF	OEHT 06-MM	OEHT 06-M	OEHT 06-FA	XEHT 06	REHT 16-MM	REHT 16-M
RE	–	–	–	–	–	8.00	8.00
BS	1.36	1.36	1.36	1.36	9.91	–	–

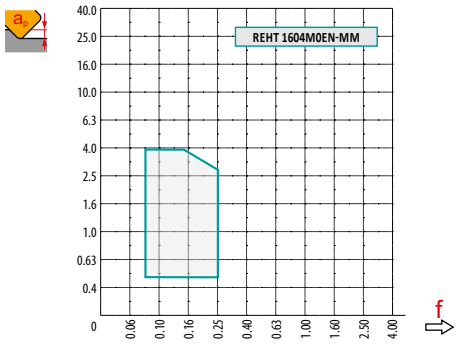


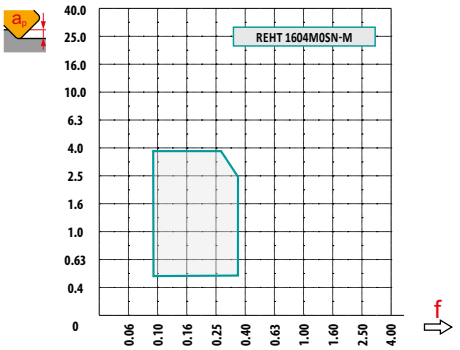












DC	R								
	a_p	0.00	0.50	0.75	1.25	1.50	2.00	2.50	3.00	4.00
50	DEF	43.90	49.47	50.66	52.49	53.23	54.48	55.52	56.39	57.76
56		49.80	55.37	56.56	58.39	59.13	60.38	61.42	62.29	63.66
63		56.90	62.47	63.66	65.49	66.23	67.48	68.52	69.39	70.76
70		63.80	69.37	70.56	72.39	73.13	74.38	75.42	76.29	77.66
80		73.90	79.47	80.66	82.49	83.23	84.48	85.52	86.39	87.76
90		83.80	89.37	90.56	92.39	93.13	94.38	95.42	96.29	97.66
100		93.90	99.47	100.66	102.49	103.23	104.48	105.52	106.39	107.76
125		118.90	124.47	125.66	127.49	128.23	129.48	130.52	131.39	132.76
160		153.90	159.47	160.66	162.49	163.23	164.48	165.52	166.39	167.76
200		193.90	199.47	200.66	202.49	203.23	204.48	205.52	206.39	207.76

DC	X.V	f_{max}
50	1.43	0.33
56	1.45	0.35
63	1.47	0.37
70	1.49	0.39
80	1.52	0.42
90	1.55	0.44
100	1.57	0.47
125	1.62	0.52
160	1.68	0.59
200	1.73	0.66

DC	DCX	O		R	
O	R	RPMX	APMX/I	RPMX	APMX/I
50	59.9	4.9	8.4/100	4.6	7.9/100
56	65.8	4.2	7.2/100	4	6.8/100
63	72.9	3.6	6.1/100	3	5.1/100
70	79.8	3.1	5.3/100	2.7	4.6/100
80	89.9	2.6	4.4/100	2.2	3.7/100
90	99.8	2.3	3.9/100	2	3.3/100
100	109.9	2	3.3/100	1.8	3.0/100
125	134.9	1.5	2.5/100	1.3	2.1/100

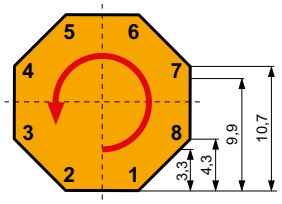
DC	DCX	O				R			
O	R	DMIN	DMAX	SMAX DMIN	SMAX DMAX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
50	59.9	91.5	120.0	5.9	5.9	91.5	119.5	5.9	5.9
56	65.8	103.2	131.5	5.9	5.9	103.5	131.0	5.9	5.9
63	72.9	117.4	146.0	5.9	5.9	118.0	145.5	5.9	5.9
70	79.8	131.2	159.5	5.9	5.9	131.5	159.0	5.9	5.9
80	89.9	151.4	180.0	5.9	5.9	151.5	179.5	5.9	5.9
90	99.8	171.2	199.5	5.9	5.9	171.5	199.0	5.9	5.9
100	109.9	191.4	220.0	5.9	5.9	191.5	219.5	5.9	5.9
125	134.9	241.3	270.0	5.9	5.9	241.5	269.5	5.9	5.9

	O	R
a_p	3.1	3.0

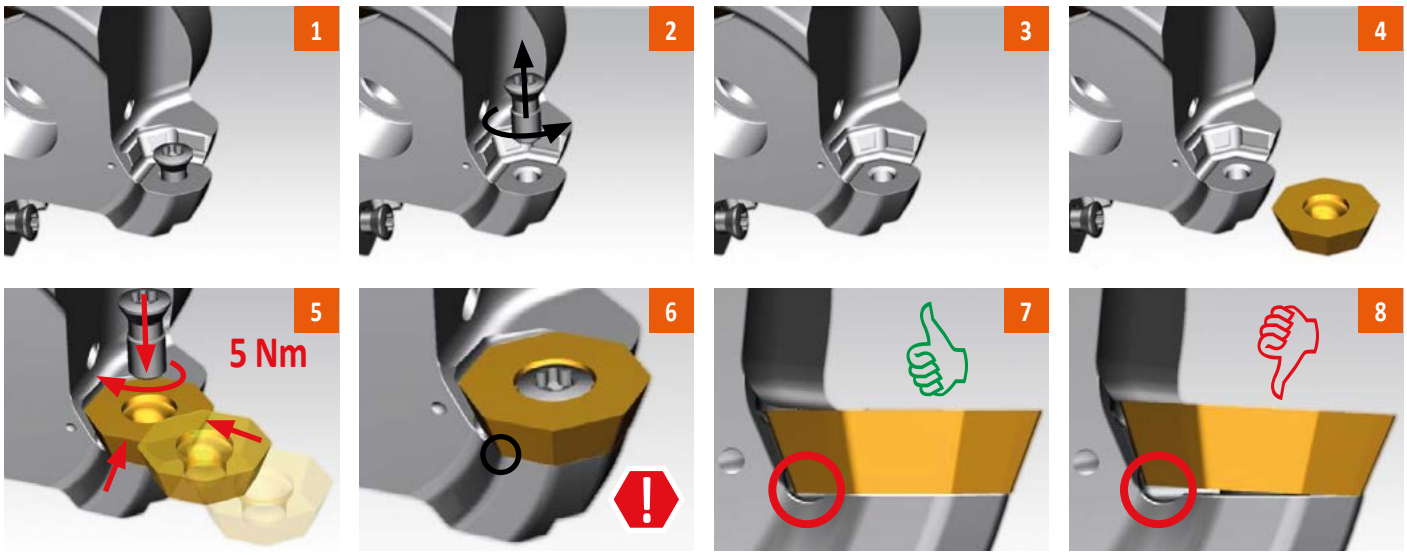
R

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
59.9	FE	0.848	1.095	1.548	1.896	2.189	2.681	3.096	3.461	3.792	4.378	4.895
65.8		0.889	1.147	1.622	1.987	2.294	2.810	3.245	3.628	3.974	4.589	5.130
72.9		0.935	1.207	1.708	2.091	2.415	2.958	3.415	3.818	4.183	4.830	5.400
79.8		0.979	1.263	1.787	2.188	2.527	3.095	3.573	3.995	4.376	5.053	5.650
89.9		1.039	1.341	1.896	2.322	2.682	3.285	3.793	4.240	4.645	5.364	5.997
99.8		1.094	1.413	1.998	2.447	2.826	3.461	3.996	4.468	4.894	5.651	6.318

RE	µm	3	5	10	15	20	30	40	50	60	80	100
8.0	FE	0.438	0.566	0.800	0.980	1.131	1.386	1.600	1.789	1.960	2.263	2.530



a_p	
–> 3.3	8
–> 4.3	7
–> 9.9	4
–> 10.7	2



SOE09Z

P M N S

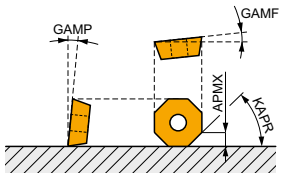
PRAMET

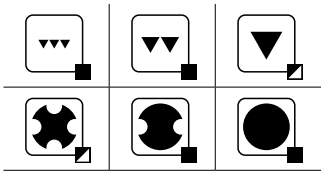
S

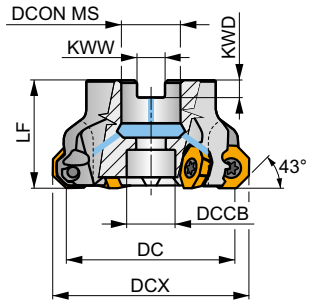
Universal Face Mill with Positive Design and Internal Coolant

Highly productive universal face mill utilising positive single sided inserts with APMX of 6 mm for RE.. 24. Unique insert seat fits OE.. 09, RE.. 24 and XE.. 09 style inserts. Suited for a wide range of applications. Arbor style only in range from Ø80 up to Ø315 mm with differential tooth pitch. Body treated for longer tool life.

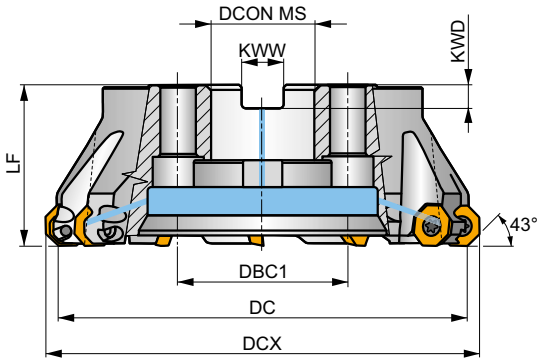
KAPR	43°
APMX	5.0 (14.1) mm







DC 80 – 125 mm



DC 160 – 315 mm

h_m 0.09 - 0.25

	Product	DC [mm]	DCX [mm]	LF [mm]	DCON MS [mm]	DCCB [mm]	DBC1 [mm]	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg			
ISO 6462 DIN 8030	**80A05R-S45OE09Z-C**	80	95	50	27	22	–	12.4	7	6	10	5	✓	6100	✓	1.32	GI293	FA064	–
	100A06R-S45OE09Z-C	100	115	50	32	45	–	14.4	8	6	10	6	✓	5400	✓	1.90	GI293	FA061	AC002
	125A07R-S45OE09Z-C	125	140	63	40	56	–	16.4	9	6	10	7	✓	4800	✓	3.38	GI293	FA061	AC003
	160C08R-S45OE09Z-C	160	175	63	40	–	66.7	16.4	9	6	10	8	✓	4300	✓	6.12	GI293	FA066	–
	200C10R-S45OE09Z-C	200	215	63	60	–	101.6	25.7	14	1	10	10	✓	3800	✓	11.50	GI293	FA067	–
	250C12R-S45OE09Z-C	250	265	63	60	–	101.6	25.7	14	1	10	12	✓	3400	✓	18.50	GI293	FA068	–
	315C14R-S45OE09Z-C	315	330	80	60	–	101.6	25.7	14	1	10	14	✓	3000	✓	36.00	GI293	FA069	–

GI293	OEHT 0906AE..	REHT 2406M0..	XEHT 0906AE..

		Nm									
FA061	US 68020-T30P	15.0	M 8	20	SDR T30P-T	–	–	–	–	–	–
FA064	US 68020-T30P	15.0	M 8	20	SDR T30P-T	HS 1230C	–	–	–	–	–
FA066	US 68020-T30P	15.0	M 8	20	SDR T30P-T	HS 1240C	CAC 160C	HSD 0825C	HXK 5	–	–
FA067	US 68020-T30P	15.0	M 8	20	SDR T30P-T	HS 1655C	CAC 200C	HSD 1025C	HXK 7	–	–
FA068	US 68020-T30P	15.0	M 8	20	SDR T30P-T	HS 1655C	CAC 250C	HSD 1025C	HXK 7	–	–
FA069	US 68020-T30P	15.0	M 8	20	SDR T30P-T	HS 1655C	CAC 315C	HSD 1035C	HXK 7	CACP 315OC	RRH 34

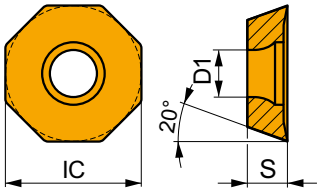
AC002	KS 1635	K.FMH32

AC003	KS 2040	K.FMH40

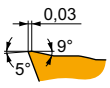
OEHT 09

PRAMET

	IC [mm]	D1 [mm]	S [mm]
0906	24.100	8.60	7.15



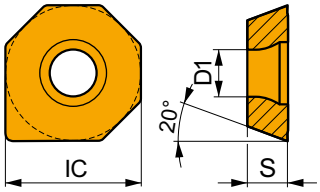
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
MM geometry, 45° face milling insert, with sharp positive design for light to medium and potentially heavy machining.																				
OEHT 0906AEER-MM	**M8330**	–	255	0.25	3.5	150	0.23	3.5	–	–	–	765	0.30	3.5	60	0.18	2.8	–	–	–
	M8340	–	230	0.25	3.5	135	0.23	3.5	–	–	–	–	–	–	55	0.18	2.8	–	–	–
																				
M geometry, 45° face milling insert, with positive design for light to medium and potentially heavy machining.																				
OEHT 0906AESR-M	**M8310**	–	250	0.35	3.5	125	0.32	3.5	–	–	–	–	–	–	–	–	–	–	–	–
	M8330	–	235	0.35	3.5	140	0.32	3.5	–	–	–	–	–	–	55	0.25	2.8	–	–	–
	M8340	–	215	0.35	3.5	125	0.32	3.5	–	–	–	–	–	–	50	0.25	2.8	–	–	–
	M9325	–	275	0.35	3.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

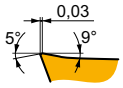
XEHT 09

PRAMET

	IC [mm]	D1 [mm]	S [mm]
0906	24.100	8.60	7.15



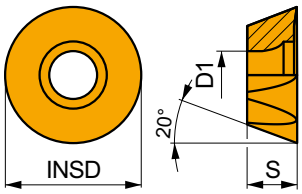
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			W S																	
			Slightly positive wiper design for improved surface finish.																	
XEHT 0906AESR	M8310	–	■ 235	0.35	3.5	◪ 115	0.32	3.5	–	–	–	–	–	–	–	–	–	–	–	–

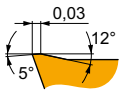
REHT 24

PRAMET

	INSD [mm]	D1 [mm]	S [mm]
2406	24.0	8.60	7.15

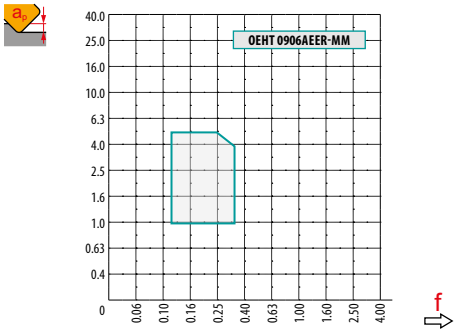


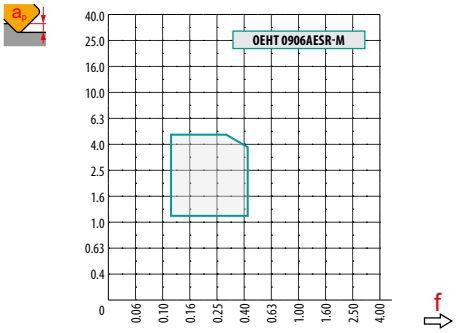
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

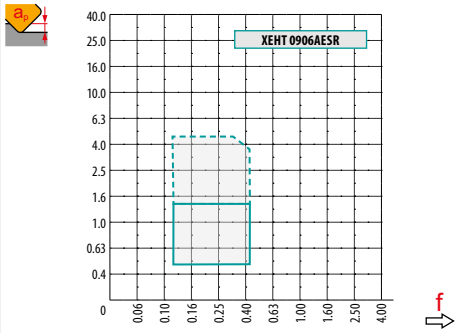
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			E																	
			MM geometry, copy and profile mill insert, with slightly positive design for light to medium and potentially heavy machining.																	
REHT 2406M0EN-MM	M8330	–	◪ 280	0.25	2.0	■ 165	0.23	2.0	–	–	–	◪ 840	0.30	2.0	◪ 70	0.18	1.6	–	–	–
	M8340	–	◪ 255	0.25	2.0	■ 150	0.23	2.0	–	–	–	–	–	–	■ 60	0.18	1.6	–	–	–
			S																	
			M geometry, copy and profile mill insert, with slightly positive design for light to medium and potentially heavy machining.																	
REHT 2406M0SN-M	M8330	–	■ 260	0.35	2.0	■ 155	0.32	2.0	–	–	–	–	–	–	◪ 65	0.25	1.6	–	–	–
	M8340	–	■ 240	0.35	2.0	■ 140	0.32	2.0	–	–	–	–	–	–	◪ 60	0.25	1.6	–	–	–

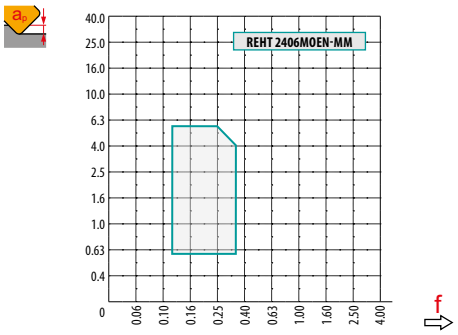
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

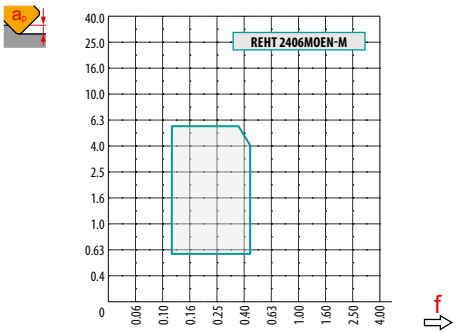
	OEHT 09-MM	OEHT 09-M	XEHT 09	REHT 24-MM	REHT 24-M
RE	–	–	–	12.00	12.00
BS	2.00	2.00	14.80	–	–











R

DC / a_p	0.00	0.50	0.75	1.25	1.50	2.00	2.50	3.00	4.00	5.00	6.00
80	70.90	77.76	79.25	81.57	82.52	84.17	85.56	86.77	88.79	90.39	91.68
100	90.90	97.76	99.25	101.57	102.52	104.17	105.56	106.77	108.79	110.39	111.68
125	115.90	122.76	124.25	126.57	127.52	129.17	130.56	131.77	133.79	135.39	136.68
160	150.90	157.76	159.25	161.57	162.52	164.17	165.56	166.77	168.79	170.39	171.68
200	190.90	197.76	199.25	201.57	202.52	204.17	205.56	206.77	208.79	210.39	211.68
250	240.60	247.46	248.95	251.27	252.22	253.87	255.26	256.47	258.49	260.09	261.38
315	305.60	312.46	313.95	316.27	317.22	318.87	320.26	321.47	323.49	325.09	326.38

DC	X.V	f_{max}
80	1.44	0.51
100	1.48	0.57
125	1.53	0.64
160	1.58	0.72
200	1.63	0.80
250	1.68	0.90
315	1.74	1.01

DC	DCX	O		R	
O	R	RPMX	APMX/I	RPMX	APMX/I
80	94.9	4.9	8.4/100	5.0	8.6/100
100	114.9	3.7	6.3/100	3.7	6.3/100
125	139.9	2.8	4.7/100	2.8	4.7/100
160	174.9	2.1	3.5/100	2.1	3.5/100
200	214.9	1.6	2.6/100	1.6	2.6/100

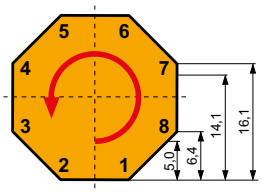
DC	DCX	O				R			
O	R	DMIN	DMAX	SMAX DMIN	SMAX DMAX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
80	94.9	146.0	190.0	8.8	8.8	146.0	189.0	11.5	11.5
100	114.9	186.0	230.0	8.8	8.8	186.0	229.0	11.5	11.5
125	139.9	236.0	280.0	8.8	8.8	236.0	279.0	11.5	11.5
160	174.9	306.0	350.0	8.8	8.8	306.0	349.0	11.5	11.5
200	214.9	386.0	430.0	8.8	8.8	386.0	429.0	11.5	11.5

	O	R
a_p	5.5	5.4

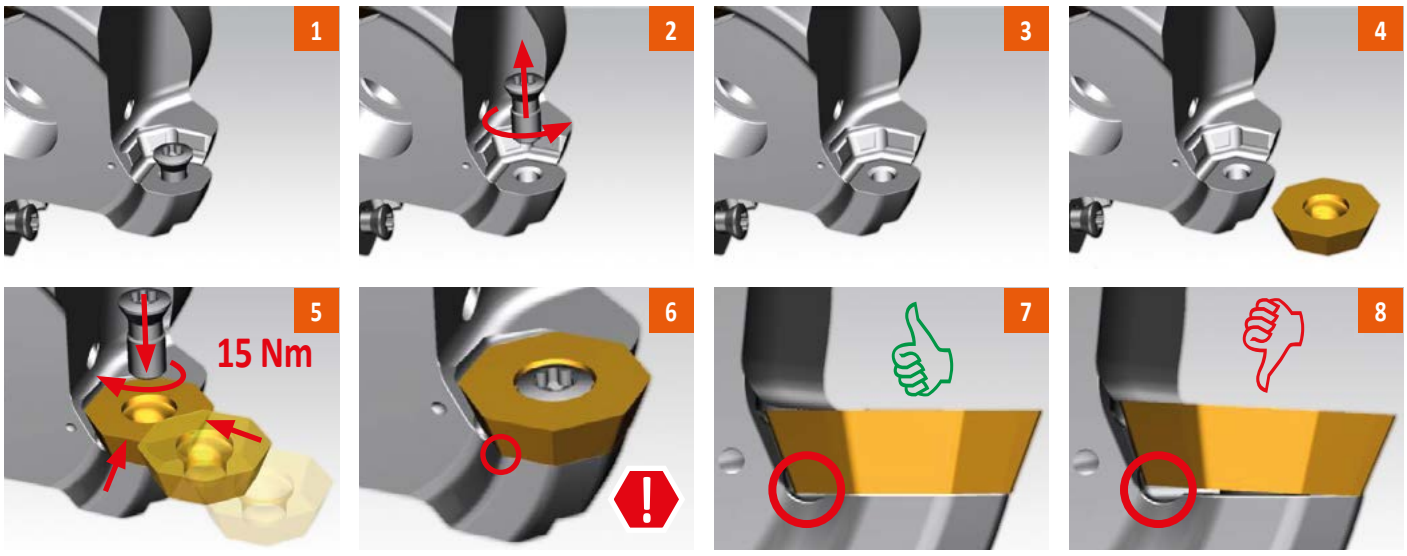
R

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
94.9	FE	1.067	1.378	1.948	2.386	2.755	3.375	3.897	4.357	4.772	5.511	6.161

RE	µm	3	5	10	15	20	30	40	50	60	80	100
12.0	FE	0.537	0.693	0.980	1.200	1.386	1.697	1.960	2.191	2.400	2.771	3.098



a_p	
–> 5.0	8
–> 6.4	7
–> 14.1	4
–> 16.1	2



SSE09

P M K S

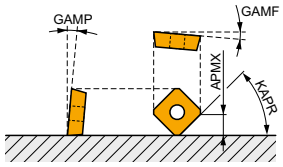
PRAMET

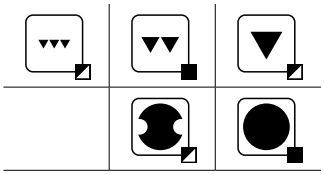
S

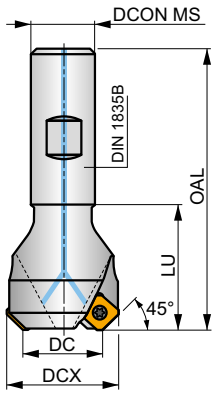
45° Face Mill with Positive Design and Internal Coolant

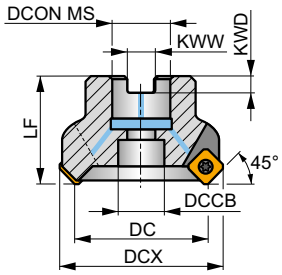
Highly productive 45° face mill utilising single sided SE.. 09 style inserts with APMX of 4.5 mm. Suited for face milling and chamfering. Weldon and arbor style available, in range from Ø20 up to Ø160 mm and with differential tooth pitch. Body treated for longer tool life.

KAPR	45°
APMX	4.5 mm

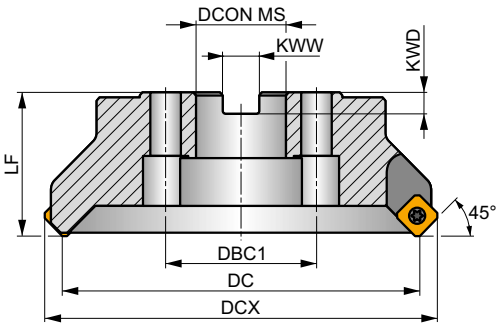








DC 32 – 125 mm



DC 160 mm

h_m 0.06 - 0.2

h_m 0.06 - 0.18

	Product	DC [mm]	DCX [mm]	OAL [mm]	DCON MS [mm]	DCCB [mm]	DBC1 [mm]	LU [mm]	LF [mm]	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg			
DIN 1835B	20N2R032B20-SSE09-C	20	29.8	82	20	–	–	32	–	–	–	-5	20	2	–	24600	✓	0.26	GI147	FA010	–
DIN 1835B	25N3R042B25-SSE09-C	25	34.8	98	25	–	–	42	–	–	–	-5	20	3	–	22000	✓	0.44	GI147	FA010	–
DIN 1835B	32N4R042B32-SSE09-C	32	42	102	32	–	–	42	–	–	–	-5	20	4	–	19400	✓	0.68	GI147	FA010	–
	32A04R-S45SE09F-C	32	42	–	16	14	–	–	40	8.4	6.4	-5	20	4	✓	19400	✓	0.24	GI147	FA012	–
	40A04R-S45SE09F-C	40	53.2	–	16	14	–	–	40	8.4	6.4	-5	20	4	✓	17400	✓	0.30	GI147	FA012	–
	50A05R-S45SE09F-C	50	59.6	–	22	18	–	–	40	10.4	6.4	-5	20	5	✓	15600	✓	0.56	GI147	FA013	–
	63A05R-S45SE09F-C	63	75.8	–	22	18	–	–	40	10.4	6.4	-5	20	5	✓	13900	✓	0.57	GI147	FA013	–
	63A06R-S45SE09F-C	63	75.8	–	22	18	–	–	40	10.4	6.4	-5	20	6	✓	13900	✓	0.58	GI147	FA013	–
ISO 6462 DIN 8030	80A06R-S45SE09F-C	80	89.6	–	27	38	–	–	50	12.4	7	-5	20	6	✓	12300	✓	1.14	GI147	FA011	AC001
ISO 6462 DIN 8030	80A08R-S45SE09F-C	80	89.6	–	27	38	–	–	50	12.4	7	-5	20	8	✓	12300	✓	1.13	GI147	FA011	AC001
	100A08R-S45SE09F-C	100	110	–	32	45	–	–	50	14.4	8	-5	20	8	✓	11000	✓	1.83	GI147	FA011	AC002
	100A10R-S45SE09F-C	100	110	–	32	45	–	–	50	14.4	8	-5	20	10	✓	10900	✓	1.82	GI147	FA011	AC002
	125A09R-S45SE09F-C	125	134.5	–	40	60	–	–	63	16.4	9	-5	20	9	✓	9800	✓	3.87	GI147	FA011	AC003
	125A12R-S45SE09F-C	125	134.5	–	40	60	–	–	63	16.4	9	-5	20	12	✓	9800	✓	3.87	GI147	FA011	AC003
	160C10R-S45SE09F	160	169.6	–	40	–	66.7	–	63	16.4	9	-5	20	10	✓	8700	–	6.21	GI147	FA014	–
	160C14R-S45SE09F	160	169.6	–	40	–	66.7	–	63	16.4	9	-5	20	14	✓	8700	–	6.29	GI147	FA014	–

GI147	SEET 09T3AF..	SEMT 09T3AF..

		Nm						
FA010	US 3007-T09P	2.0	M 3	7.3	–	–	Flag T09P	–
FA011	US 3007-T09P	2.0	M 3	7.3	D-T07P/T09P	FG-15	–	–
FA012	US 3007-T09P	2.0	M 3	7.3	D-T07P/T09P	FG-15	–	HS 0830C

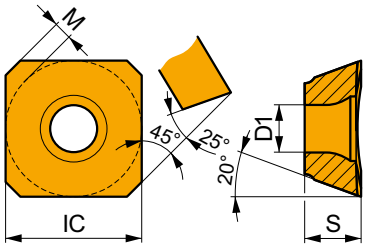
		Nm						
FA013	US 3007-T09P	2.0	M 3	7.3	D-T07P/T09P	FG-15	–	HS 1030C
FA014	US 3007-T09P	2.0	M 3	7.3	D-T07P/T09P	FG-15	–	HS 1240C

AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

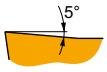
SEET 09

PRAMET

	IC [mm]	D1 [mm]	M [mm]	S [mm]
09T3	9.525	3.50	1	3.97

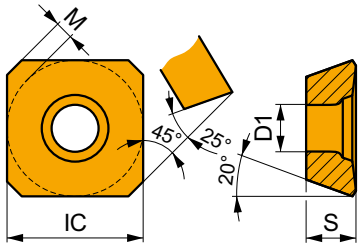


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

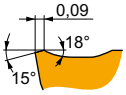
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																				
			Positive design for light to medium machining.																	
SEET 09T3AFEN	**8215**	–	300	0.14	2.5	180	0.13	2.5	–	–	–	–	–	–	75	0.10	2.0	–	–	–
	M6330	–	255	0.14	2.5	180	0.13	2.5	–	–	–	–	–	–	75	0.10	2.0	–	–	–
	M8330	–	295	0.14	2.5	175	0.13	2.5	–	–	–	–	–	–	70	0.10	2.0	–	–	–
	M8340	–	270	0.14	2.5	160	0.13	2.5	–	–	–	–	–	–	65	0.10	2.0	–	–	–
	M9325	–	380	0.14	2.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	M9340	–	345	0.14	2.5	205	0.13	2.5	–	–	–	–	–	–	85	0.10	2.0	–	–	–

SEMT 09

	IC [mm]	D1 [mm]	M [mm]	S [mm]
09T3	9.525	3.50	1	3.97

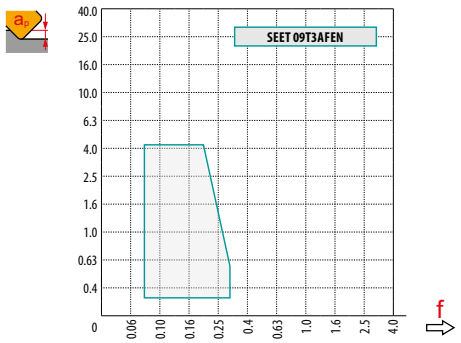


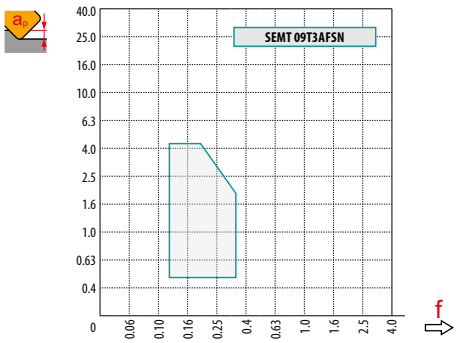
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																				
			Positive design for light to medium machining.																	
SEMT 09T3AFSN	**8215**	–	■ 295	0.18	1.8	◪ 175	0.16	1.8	■ 280	0.18	1.8	–	–	–	–	–	–	–	–	–
	M8330	–	■ 290	0.18	1.8	◪ 170	0.16	1.8	■ 275	0.18	1.8	–	–	–	–	–	–	–	–	–
	M8340	–	■ 265	0.18	1.8	◪ 155	0.16	1.8	◪ 250	0.18	1.8	–	–	–	–	–	–	–	–	–
	M9325	–	■ 365	0.18	1.8	–	–	–	■ 345	0.18	1.8	–	–	–	–	–	–	–	–	–

a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	SEET 09	SEMT 09
RE	–	–
BS	1.28	1.25





DC	X.V	f_{max}
20	1.20	0.18
25	1.24	0.20
32	1.29	0.23
40	1.33	0.25
50	1.37	0.28
63	1.41	0.32
80	1.46	0.36
100	1.50	0.40
125	1.55	0.45
160	1.60	0.51

SSN12Z

P M K S

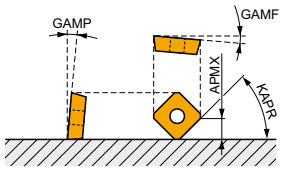
PRAMET

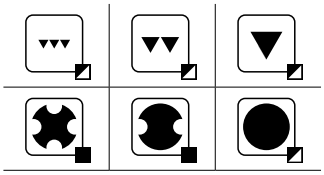
S

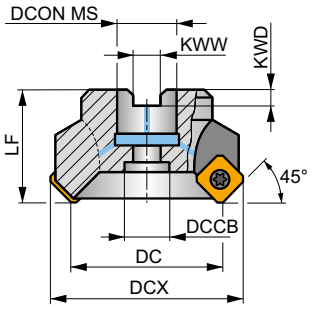
45° Face Mill with Positive Design and Internal Coolant

Highly productive 45° face mill utilising single sided SN.. 12 style inserts with APMX of 6.5 mm. Suited for face milling and chamfering. Arbor style only in range from Ø50 up to Ø250 mm. Body treated for longer tool life.

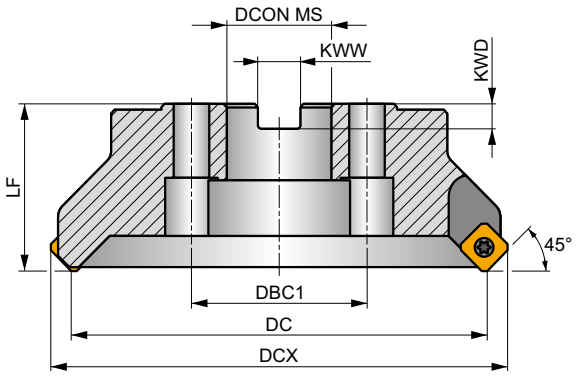
KAPR	45°
APMX	6.5 mm







DC 40 – 125 mm



DC 160 – 250 mm

h_m 0.12 - 0.35

	Product	DC [mm]	DCX [mm]	LF [mm]	DCON MS [mm]	DCCB [mm]	DBC1 [mm]	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg			
ISO 6462 DIN 8030	**50A04R-S45SN12Z-C**	50	65	40	22	18	–	10.4	6.3	-5.5	7.5	4	–	9700	✓	0.48	GI156	FA071	–
	63A05R-S45SN12Z-C	63	78	40	22	18	–	10.4	6.3	-5.5	7.5	5	–	8600	✓	0.68	GI156	FA071	–
	80A06R-S45SN12Z-C	80	95	50	27	38	–	12.4	7	-5.5	7.5	6	–	7700	✓	1.42	GI156	FA071	AC001
	100A07R-S45SN12Z-C	100	115	50	32	45	–	14.4	8	-5.5	7.5	7	–	6900	✓	1.70	GI156	FA071	AC002
	125A08R-S45SN12Z-C	125	140	63	40	56	–	16.4	9	-5.5	7.5	8	–	6100	✓	3.59	GI156	FA071	AC003
	160C10R-S45SN12Z	160	173	–	40	–	66.7	16.4	9	-5.5	7.5	10	–	5400	–	6.30	GI156	FA071	–
	200C12R-S45SN12Z	200	210	–	60	–	101.6	25.7	14	-5.5	7.5	12	–	4900	–	9.10	GI156	FA071	–
	250C16R-S45SN12Z	250	260	–	60	–	101.6	25.7	14	-5.5	7.5	16	–	4300	–	11.87	GI156	FA071	–

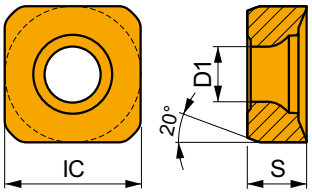
GI156	SNKT 1205AZ..	SNMT 1205AZ..

FA071	US 4511-T20	5.0 Nm	M 4.5	11	SDR T20-T

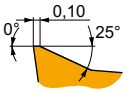
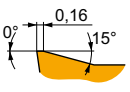
AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

SNMT 12

	IC [mm]	D1 [mm]	S [mm]
1205	12.700	5.20	5.56

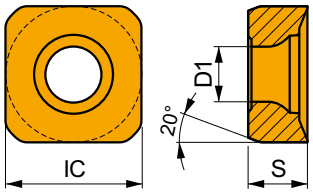


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

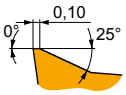
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																				
			M geometry with highly positive design for medium machining.																	
SNMT 1205AZSR-M	**8215**	–	■ 300	0.25	3.2	◪ 180	0.23	3.2	◪ 285	0.25	3.2	–	–	–	◪ 75	0.18	2.6	–	–	–
	M8330	–	■ 300	0.25	3.2	■ 180	0.23	3.2	◪ 285	0.25	3.2	–	–	–	◪ 75	0.18	2.6	–	–	–
	M8340	–	■ 275	0.25	3.2	■ 165	0.23	3.2	◪ 260	0.25	3.2	–	–	–	◪ 65	0.18	2.6	–	–	–
	M9315	–	■ 385	0.25	3.2	–	–	–	◪ 365	0.25	3.2	–	–	–	–	–	–	–	–	–
	M9325	–	■ 365	0.25	3.2	–	–	–	◪ 345	0.25	3.2	–	–	–	–	–	–	–	–	–
																				
			R geometry with positive design for medium to heavy machining.																	
SNMT 1205AZSR-R	**8215**	–	■ 290	0.27	3.5	◪ 170	0.24	3.5	◪ 275	0.27	3.5	–	–	–	◪ 70	0.22	2.8	–	–	–
	M5315	–	◪ 365	0.27	3.5	–	–	–	◪ 345	0.27	3.5	–	–	–	–	–	–	–	–	–
	M8330	–	■ 290	0.27	3.5	◪ 170	0.24	3.5	◪ 275	0.27	3.5	–	–	–	◪ 70	0.22	2.8	–	–	–
	M8340	–	■ 270	0.27	3.5	◪ 160	0.24	3.5	◪ 255	0.27	3.5	–	–	–	◪ 65	0.22	2.8	–	–	–
	M9315	–	■ 375	0.27	3.5	–	–	–	◪ 355	0.27	3.5	–	–	–	–	–	–	–	–	–
	M9325	–	■ 355	0.27	3.5	–	–	–	◪ 335	0.27	3.5	–	–	–	–	–	–	–	–	–

SNKT 12

	IC [mm]	D1 [mm]	S [mm]
1205	12.700	5.20	5.56



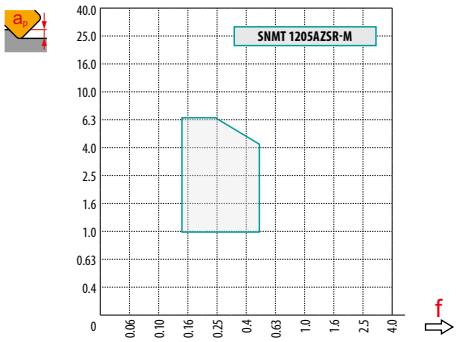
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

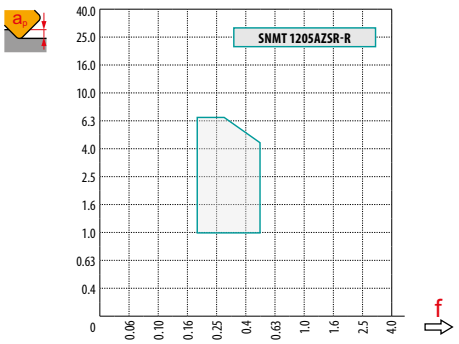
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																				
SNKT 1205AZSR-M	**M8330**	–	■ 305	0.24	3.2	■ 180	0.22	3.2	◪ 285	0.24	3.2	–	–	–	◪ 75	0.17	2.6	–	–	–
	M8340	–	■ 275	0.24	3.2	■ 165	0.22	3.2	◪ 260	0.24	3.2	–	–	–	◪ 65	0.17	2.6	–	–	–

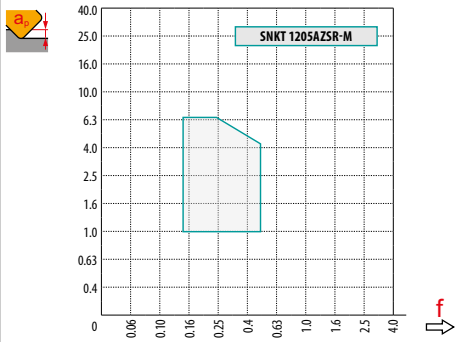
M geometry with highly positive design for medium machining.

a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	SNMT 12-M	SNMT 12-R	SNKT 12-M
RE	–	–	–
BS	0.95	1.03	1.59







DC	X.V	f_{max}
50	1.30	0.47
63	1.34	0.53
80	1.39	0.60
100	1.43	0.67
125	1.47	0.74
160	1.53	0.84
200	1.57	0.94
250	1.62	1.05

SPN13

P M K S H

PRAMET

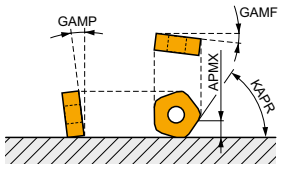
S

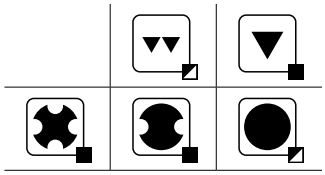
PENTA HD 57° Face Mill with Double Negative Design for Heavy Face Milling

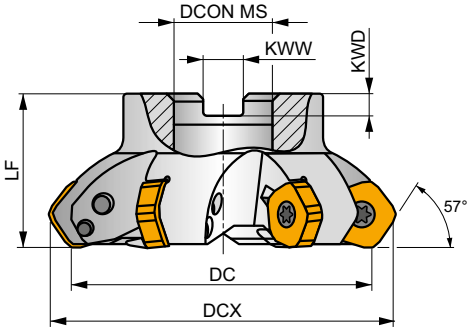
Highly productive 57° face mill utilising double sided PN.. 13 and XN.. 13 style inserts with APMX of 10 mm. Suited for face milling. Arbor style only in range from Ø100 up to Ø315 mm. An insert seat protected with a shim. Body treated for longer tool life.

PENTA HD

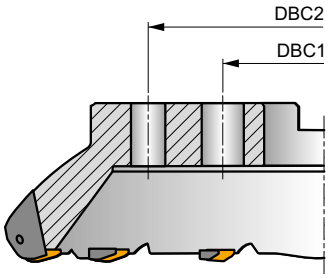
KAPR	57°
APMX	10.0 mm







DC 100 – 125 mm



DC 160 – 315 mm

h_m 0.20 - 0.50

	Product	DC [mm]	DCX [mm]	LF [mm]	DCON MS [mm]	DBC1 [mm]	DBC2 [mm]	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg			
ISO 6462 DIN 8030	**100A05R-S57PN13**	100	115.8	50	32	–	–	14.4	8	-8.2	-4	5	–	3400	–	1.22	GI261	FA081	AC002
	125A06R-S57PN13	125	140.8	63	40	–	–	16.4	9	-7	-4	6	–	3100	–	2.34	GI261	FA081	AC003
	160C08R-S57PN13	160	175.8	63	40	66.7	–	16.4	9	-6	-4	8	–	2700	–	3.58	GI261	FA081	–
	200C10R-S57PN13	200	215.8	63	60	101.6	–	25.7	14	-5	-4	10	–	2400	–	9.17	GI261	FA081	–
	250C12R-S57PN13	250	265.8	63	60	101.6	–	25.7	14	-5	-4	12	–	2200	–	15.39	GI261	FA081	–
	315C14R-S57PN13	315	330.8	80	60	101.6	177.8	25.7	14	-5	-4	14	–	1900	–	29.17	GI261	FA081	–

GI261	PNMU 1308DN..	XNGX 1308DNSN	PNMQ 1308DN..

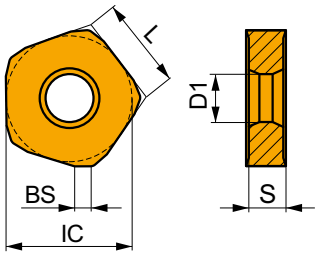
FA081	SPN 13T3DN	US 64010-T15P	SDR T15P	US 68026-T30P	15.0 Nm	M 8	26	SDR T30P-T

AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

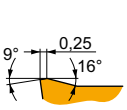
PNMU 13

PRAMET

	BS	IC	D1	L	S
	[mm]	[mm]	[mm]	[mm]	[mm]
1308	3.00	24.400	10.00	13.00	7.94



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

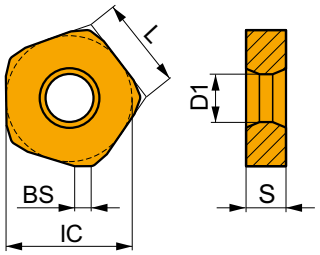
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
PNMU 1308DNSR-M	**8215**	–	■	165	0.35	6.5	◪	95	0.32	6.5	■	155	0.35	6.5		–	–	–	◪	40	0.28	5.2	◪	30	0.15	1.0
	M8330	–	■	190	0.35	6.5	◪	110	0.32	6.5	■	180	0.35	6.5		–	–	–	◪	45	0.28	5.2	◪	35	0.15	1.0
	M8345	–	■	135	0.35	6.5	◪	80	0.32	6.5		–	–	–		–	–	–	◪	30	0.28	5.2		–	–	–
	M9315	–	■	210	0.35	6.5		–	–	–	■	195	0.35	6.5		–	–	–		–	–	–	◪	40	0.15	1.0
	M9340	–	■	170	0.35	6.5	◪	100	0.32	6.5		–	–	–		–	–	–	◪	40	0.28	5.2		–	–	–

M geometry with positive design for rough machining.

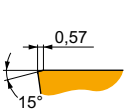
PNMQ 13

PRAMET

	BS	IC	D1	L	S
	[mm]	[mm]	[mm]	[mm]	[mm]
1308	3.00	24.400	10.00	13.00	7.94



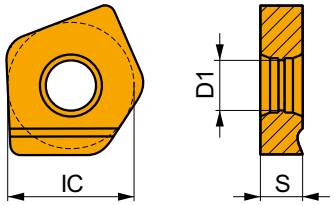
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
PNMQ 1308DNSN	**M8330**	–	◪	165	0.60	6.5		–	–	–	■	155	0.60	6.5		–	–	–		–	–	–	◪	30	0.15	1.0
	M8345	–	◪	120	0.60	6.5		–	–	–		–	–	–		–	–	–		–	–	–		–	–	–

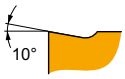
Zero rake angle design particularly suited to rough machining.

XNGX 13

	IC [mm]	D1 [mm]	S [mm]
1308	24.180	10.00	7.94

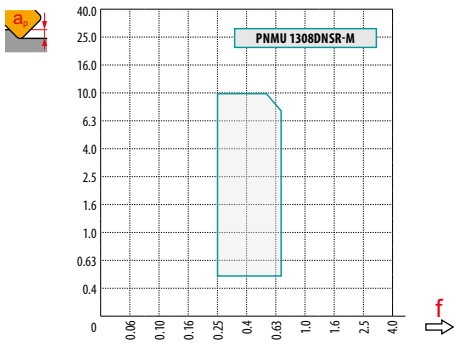


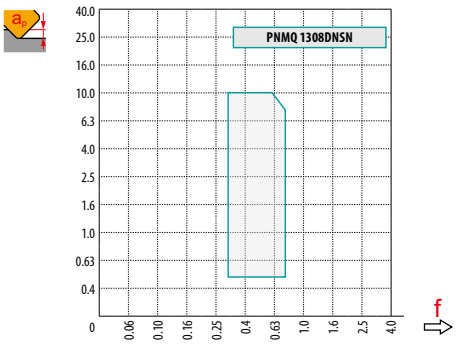
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

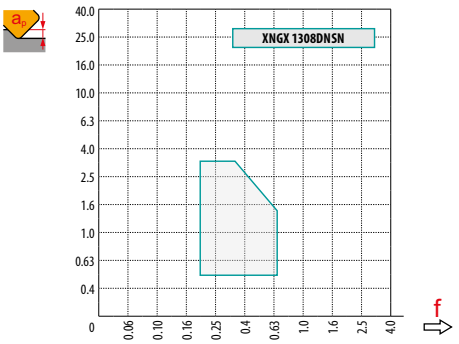
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			W S																	
			Wiper design for improved surface finish.																	
XNGX 1308DNSN	**M8330**	–	■ 245	0.45	2.5	–	–	–	■ 230	0.45	2.5	–	–	–	–	–	–	–	–	–

a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

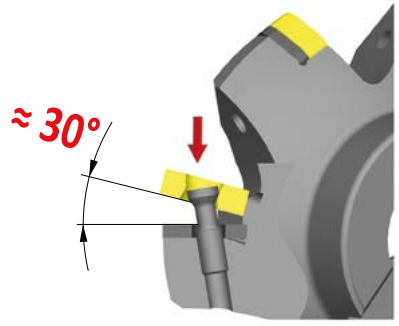
	PNMU 13-M	PNMQ 13	XNGX 13
RE	–	–	–
BS	3.00	3.00	12.71



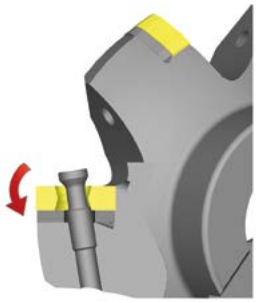




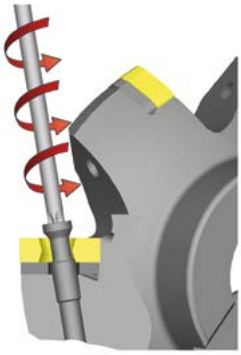
1



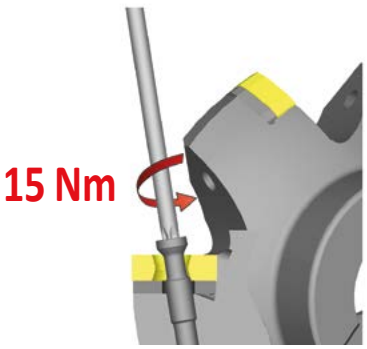
2



3



4



CHN09

K

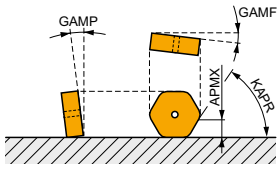
PRAMET

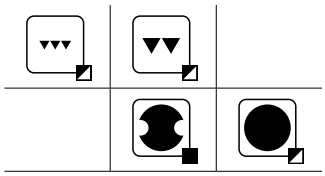
C

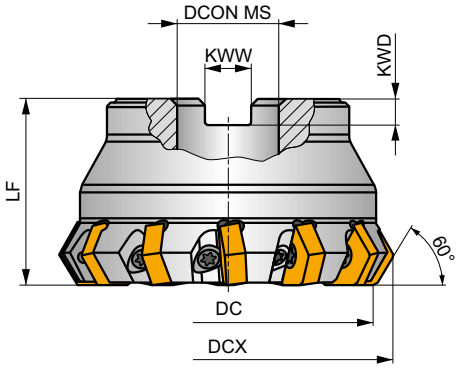
ECON HN 60° Face mill with Double Negative Design for Cast Iron

Highly productive 60° face mill utilising double sided HN.. 09 style inserts with APMX of up to 6 mm (depending on insert type). Optimized for face milling in cast iron. Arbor style only in range from Ø80 up to Ø200 mm. Body treated for longer tool life.

KAPR	60°
APMX	6.0 mm







h_m 0.07 - 0.3

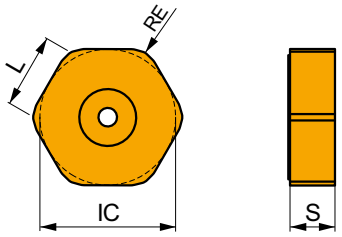
	Product	DC [mm]	DCX [mm]	LF [mm]	DCON MS [mm]	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg		
ISO 6462 DIN 8030	**80A08R-C60HN09**	80	89.4	50	27	12.4	7	-5	-7.2	8	–	6200	–	1.45	GI262	FA094
	80A12R-C60HN09	80	89.4	50	27	12.4	7	-5	-7.2	12	–	6200	–	1.39	GI262	FA094
	100A10R-C60HN09	100	109.4	50	32	14.4	8	-5	-7.2	10	–	5600	–	2.44	GI262	FA095
	100A16R-C60HN09	100	109.4	50	32	14.4	8	-5	-7.2	16	–	5600	–	2.32	GI262	FA095
	125A12R-C60HN09	125	134.4	63	40	16.4	9	-5	-7.2	12	–	5000	–	4.23	GI262	FA096
	125A20R-C60HN09	125	134.4	63	40	16.4	9	-5	-7.2	20	–	5000	–	4.09	GI262	FA096
	160C16R-C60HN09	160	169.4	63	40	–	–	-5	-7.2	16	–	4400	–	6.20	GI262	FA091
	200C20R-C60HN09	200	209.4	63	60	–	–	-5	-7.2	20	–	3900	–	11.08	GI262	FA091

GI262	HNEF 0905..	HNMF 0905..

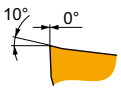
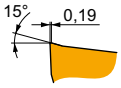
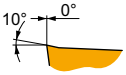
		Nm					
FA091	US 74016-T15P	3.5	M 4	16	D-T08P/T15P	FG-15	–
FA094	US 74016-T15P	3.5	M 4	16	D-T08P/T15P	FG-15	HS 1230C
FA095	US 74016-T15P	3.5	M 4	16	D-T08P/T15P	FG-15	HS 1635C
FA096	US 74016-T15P	3.5	M 4	16	D-T08P/T15P	FG-15	HS 2040C

HNEF 09

	IC [mm]	L [mm]	S [mm]
0905	16.200	9.40	5.64



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																				
HNEF 0905DNFN-F	**M5315**	0.4	–	–	–	–	–	–	380	0.15	1.5	–	–	–	–	–	–	–	–	–
																				
HNEF 090508EN-M	**M5315**	0.8	–	–	–	–	–	–	290	0.18	3.0	–	–	–	–	–	–	–	–	–
	M9325	0.8	–	–	–	–	–	–	275	0.18	3.0	–	–	–	–	–	–	–	–	–
																				
HNEF 0905ZZR-W	**8215**	0.8	–	–	–	–	–	–	275	0.18	1.0	–	–	–	–	–	–	–	–	–
	M5315	0.8	–	–	–	–	–	–	370	0.18	1.0	–	–	–	–	–	–	–	–	–

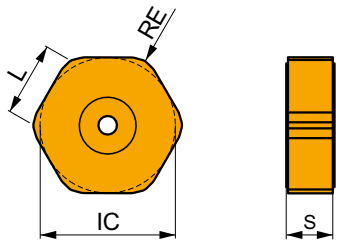
F geometry with positive design for light machining.

M geometry with positive design for light to medium machining.

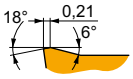
W geometry positive design for finishing.

HNMF 09

	IC	L	S
	[mm]	[mm]	[mm]
0905	16.200	9.40	5.64

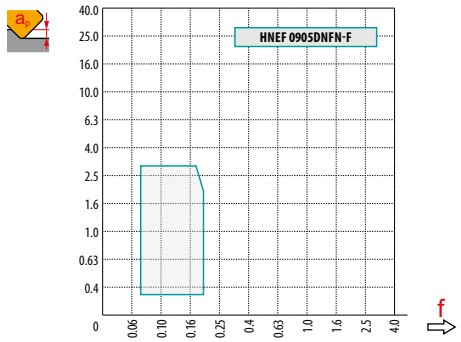


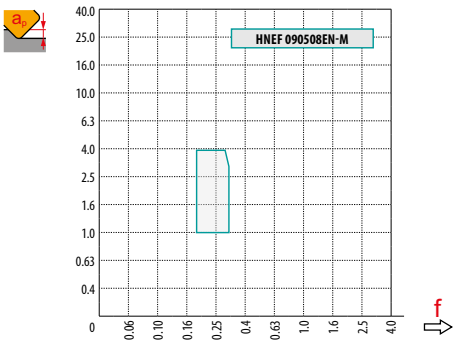
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

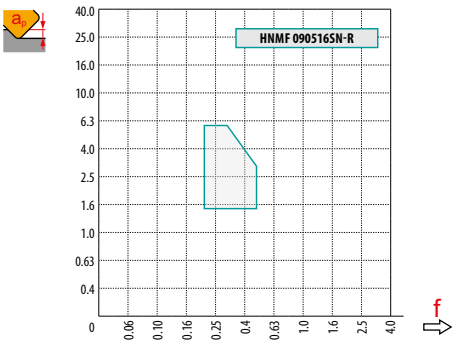
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
			R geometry with negative design for light and heavy machining.																	
HNMF 090516SN-R	**8215**	1.6	–	–	–	–	–	–	■	210	0.30	3.0	–	–	–	–	–	–	–	–	–
	M5315	1.6	–	–	–	–	–	–	■	265	0.30	3.0	–	–	–	–	–	–	–	–	–
	M9325	1.6	–	–	–	–	–	–	■	260	0.30	3.0	–	–	–	–	–	–	–	–	–

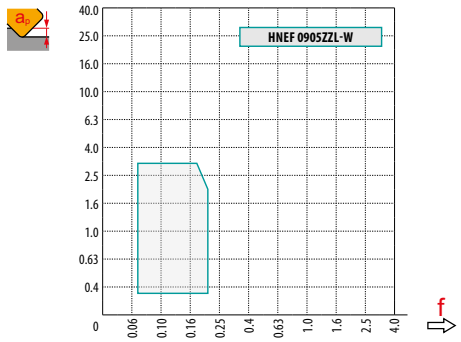
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

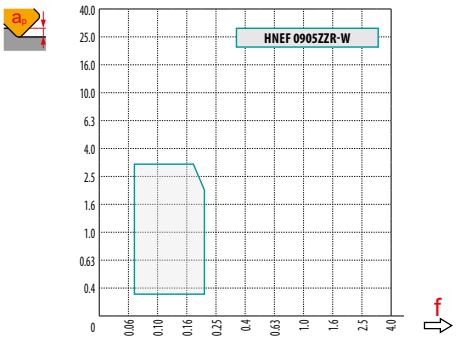
	HNEF 09-F	HNEF 09-M	HNMF 09-R	HNEF 09 ZZL-W	HNEF 09 ZZR-W
RE	–	–	–	–	–
BS	1.20	–	–	1.26	1.26

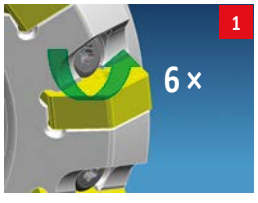


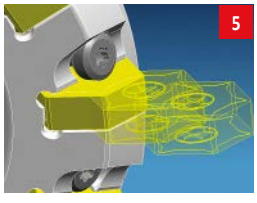












FSB22X

P M K

PRAMET

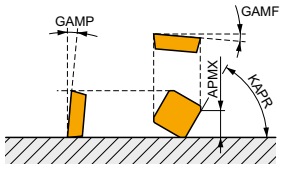
F

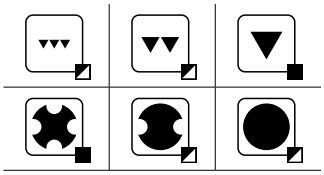
ROUGH SB 60° Face Mill with Positive Design for Heavy Face Milling

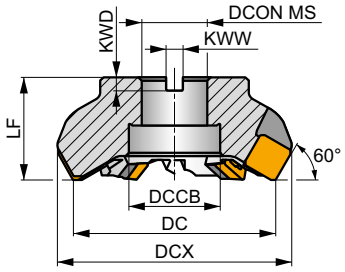
Highly productive 60° face mill utilising single sided SB.. 22 style inserts with APMX of 15 mm. Optimized for heavy face milling with smooth cutting action. Differential tooth pitch. Arbor style only in range from Ø125 up to Ø315 mm. Body treated for longer tool life.

ROUGH SB

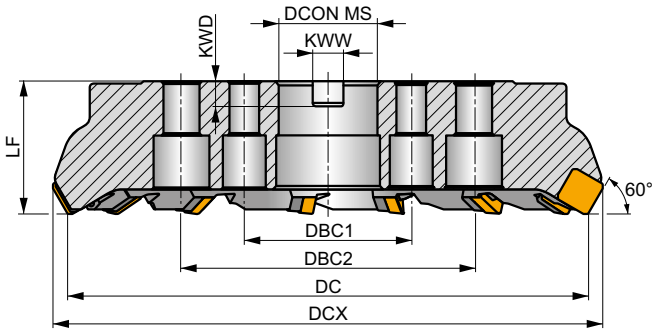
KAPR	60°
APMX	15.0 mm







DC 125 mm



DC 160 – 315 mm

h_m 0.15 - 0.5

	Product	DC [mm]	DCX [mm]	LF [mm]	DCON MS [mm]	DCCB [mm]	DBC1 [mm]	DBC2 [mm]	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg			
	125B05R-F60SB22X	125	144.4	63	40	56	–	–	16.4	9	-9	9	5	✓	–	–	3.88	GI144	FA111	AC003
	125B07R-F60SB22X	125	144.4	63	40	56	–	–	16.4	9	-9	9	7	✓	–	–	3.64	GI144	FA111	AC003
	160C06R-F60SB22X	160	178.7	63	40	–	66.7	–	16.4	9	-9	9	6	✓	–	–	6.51	GI144	FA114	–
	160C08R-F60SB22X	160	178.7	63	40	–	66.7	–	16.4	9	-9	9	8	✓	–	–	6.30	GI144	FA114	–
ISO 6462 DIN 8030	**200C08R-F60SB22X**	200	217.9	63	60	–	101.6	–	25.7	14	-9	9	8	✓	–	–	10.59	GI144	FA115	–
	200C10R-F60SB22X	200	217.9	63	60	–	101.6	–	25.7	14	-9	9	10	✓	–	–	9.81	GI144	FA115	–
	250C09R-F60SB22X	250	267.4	63	60	–	101.6	–	25.7	14	-9	9	9	✓	–	–	17.54	GI144	FA115	–
	250C12R-F60SB22X	250	267.4	63	60	–	101.6	–	25.7	14	-9	9	12	✓	–	–	16.50	GI144	FA115	–
	315C11R-F60SB22X	315	331.8	80	60	–	101.6	177.8	25.7	14	-9	9	11	✓	–	–	36.00	GI144	FA115	–
	315C14R-F60SB22X	315	331.8	80	60	–	101.6	177.8	25.7	14	-9	9	14	✓	–	–	36.50	GI144	FA115	–

GI144	SBKX 2207DZ..	SBMR 2207DZ..

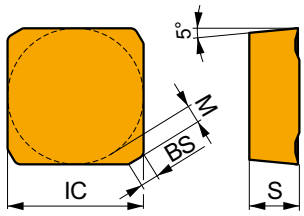
FA111	LNX 220616	US 6013-T20P	SDR T20P-T	KU SBMR 2207	DS 01Z	KL 04	–
FA114	LNX 220616	US 6013-T20P	SDR T20P-T	KU SBMR 2207	DS 01Z	KL 04	HS 1240
FA115	LNX 220616	US 6013-T20P	SDR T20P-T	KU SBMR 2207	DS 01Z	KL 04	HS 1655

AC003	KS 2040	K.FMH40

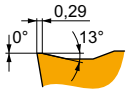
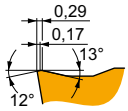
SBMR 22

PRAMET

	IC [mm]	M [mm]	S [mm]	BS [mm]
2207	22.000	3	8.00	1.99



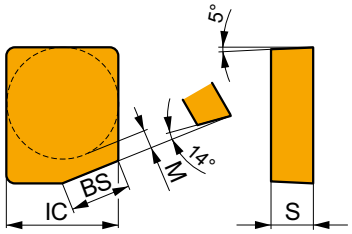
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																				
			Stable design for heavy machining.																	
SBMR 2207DZSR	**M8326**	–	140	0.38	8.5	–	–	–	130	0.38	8.5	–	–	–	–	–	–	–	–	–
	M8346	–	120	0.38	8.5	70	0.38	8.5	–	–	–	–	–	–	–	–	–	–	–	–
	M9325	–	175	0.38	8.5	–	–	–	165	0.38	8.5	–	–	–	–	–	–	–	–	–
																				
			R geometry with stable design for heavy machining.																	
SBMR 2207DZSR-R	**M5326**	–	160	0.44	9.8	–	–	–	150	0.44	9.8	–	–	–	–	–	–	–	–	–
	M8326	–	135	0.44	9.8	–	–	–	125	0.44	9.8	–	–	–	–	–	–	–	–	–
	M8346	–	115	0.44	9.8	65	0.40	9.8	–	–	–	–	–	–	–	–	–	–	–	–

SBKX 22

PRAMET

	IC [mm]	M [mm]	S [mm]	BS [mm]
2207	22.000	3	8.00	11.84

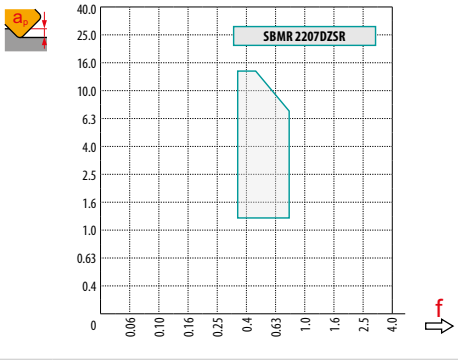


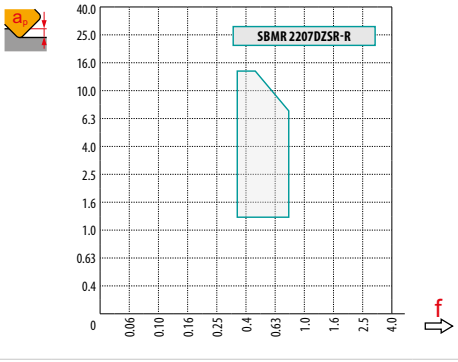
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

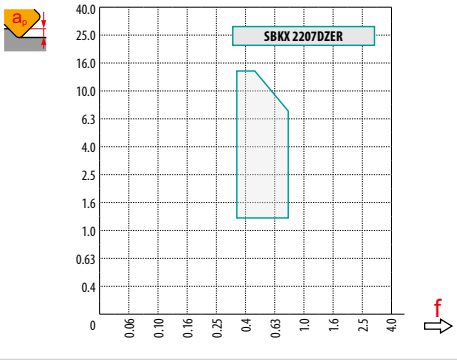
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			Zero rake wiper design for improved surface finish.																	
SBKX 2207DZER	**M8326**	–	100	0.60	8.5	–	–	–	95	0.60	8.5	–	–	–	–	–	–	–	–	–

a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ X.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ X.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	SBMR 22	SBMR 22-R	SBKX 22
RE	–	–	–
BS	1.99	1.99	11.84







DORMER PRAMET

HELP IS AT HAND

Our techincal support team are always at hand to help with any technical questions or queries you have about our technical apps. Use the contact us details to reach out to your local Dormer Pramet sales office. **Simply Reliable.**

INDEXABLE SQUARE SHOULDER MILLS

SQUARE SHOULDER MILLING

>>>

	SAD07D	SAD11E	SAD16E	SAP10D	SAP16D
	90°	90°	90°	90°	90°
	APMX [mm] 5.0	APMX [mm] 9.0	APMX [mm] 13.0	APMX [mm] 9.0	APMX [mm] 13.0
	DC [mm] 10 – 32	DC [mm] 16 – 125	DC [mm] 25 – 175	DC [mm] 10 – 63	DC [mm] 25 – 160
Cylindrical shank	DC = 10 – 25 [mm]	DC = 16 – 35 [mm]	DC = 25 – 32 [mm]		
Weldon		DC = 16 – 32 [mm]	DC = 25 – 40 [mm]	DC = 10 – 25 [mm]	DC = 25 – 40 [mm]
Modular	DC = 12 – 32 [mm]	DC = 16 – 40 [mm]	DC = 32 – 40 [mm]		
Shell mill		DC = 40 – 125 [mm]	DC = 40 – 175 [mm]	DC = 40 – 63 [mm]	DC = 40 – 160 [mm]
Page	413	420	429	438	441
ISO	P M K N S	P M K N S H	P M K N S H	P M K N S	P M K N S
Insert shape					
Inserts	AD.X 0702	AD.X 11T3	AD.X 1606	APKT 1003	AP.T 1604
No. of cutting edges	2	2	2	2	2
Shallow shoulder milling	■	■	■	■	■
Helical interpolation	■	■	■	■	■
Shallow slot milling	■	■	■	■	■
Plunge milling	■	■	■	■	■
Progressive plunging	■	■	■	■	■
Ramping	■	■	■	■	■
Face milling	◪	◪	◪	◪	◪
Shape surfaces milling (copy milling)	◪	■	■		

<<<

SQUARE SHOULDER MILLING

>>>

	STN10	STN16	SLN12	SLN16	SSO05O	SSO09
	90°	90°	90°	90°	90°	90°
	APMX [mm] 5.0	APMX [mm] 10.0	APMX [mm] 9.0	APMX [mm] 13.0	APMX [mm] 4.5	APMX [mm] 8.0
	DC [mm] 18 – 32	DC [mm] 25 – 175	DC [mm] 25 – 125	DC [mm] 63 – 175	DC [mm] 12 – 40	DC [mm] 20 – 125
	DC = 18 – 35 [mm]	DC = 25 – 35 [mm]	DC = 25 – 32 [mm]		DC = 12 – 25 [mm]	
	DC = 20 – 32 [mm]	DC = 25 – 40 [mm]	DC = 25 – 40 [mm]		DC = 20 – 32 [mm]	DC = 20 – 32 [mm]
	DC = 20 – 32 [mm]	DC = 25 – 40 [mm]	DC = 25 – 40 [mm]			
	DC = 40 – 80 [mm]	DC = 40 – 175 [mm]	DC = 40 – 125 [mm]		DC = 32 – 40 [mm]	DC = 40 – 125 [mm]
	446	450	455	461	466	469
	P M K N	P M K N	P M K N	P K N H	P M K S	P M K S
	TNGX 1004	TNGX 1606	LNG. 1205	LN.U 1607	SOMT 0502	SOMT 09T3
	6	6	4	4	4	4
	■	■	■	■	■	■
	◪	◪	◪			
	■	■	■	■	■	■
	◪		■	■	■	■
	◪		◪			
	◪		◪			
	■	■	◪			◪
			◪	◪	■	

<<<

SQUARE SHOULDER MILLING

	SSD12	FTB27X			
	90°	90°			
	APMX [mm] 10.0	APMX [mm] 18.0			
	DC [mm] 50 – 160	DC [mm] 140 – 260			
Cylindrical shank					
Weldon					
Modular					
Shell mill					
Page	472	475			
ISO	P M K N S	P M K			
Insert shape					
Inserts	SDMT 1205	TBMR 2707			
No. of cutting edges	4	3			
Shallow shoulder milling	■	■			
Helical interpolation					
Shallow slot milling	■	◪			
Plunge milling	■				
Progressive plunging					
Ramping					
Face milling	◪	◪			
Shape surfaces milling (copy milling)					

SAD07D

P M K N S

PRAMET

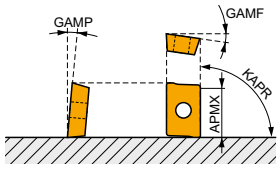
S

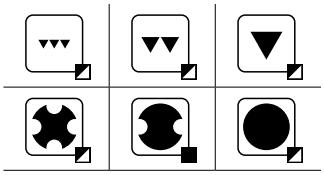
FORCE AD07 Square Shoulder Mill with Internal Coolant

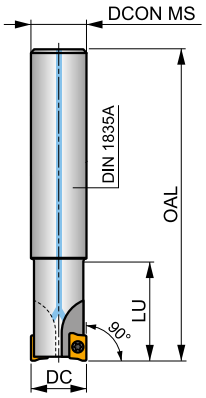
90° end mill utilising positive AD.. 07 style insert with APMX of 5 mm. Suitable for applications, including face, shoulder, slot, helical, trochoidal, ramping and plunge milling. Available in cylindrical and modular style and with differential tooth pitch, in Ø10 up to Ø32 mm. Body treated for longer tool life.

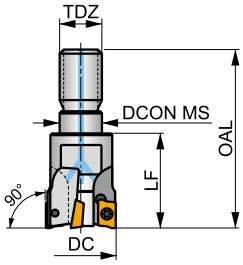
FORCE AD

KAPR	90°
APMX	5.0 mm









h_m 0.03 - 0.08

	Product	DC [mm]	OAL [mm]	DCON MS [mm]	LU [mm]	LF [mm]	TDZ	GAMF [°]	GAMP [°]			max.		kg		
	10A2R016A08-SAD07D-C	10	100	8	16	–	–	-12	8	2	–	61600	✓	0.07	GI276	SQ010
	10A2R016A10-SAD07D-C	10	80	10	16	–	–	-12	8	2	–	61600	✓	0.07	GI276	SQ010
	10A2R018A08-SAD07D-CF	10	100	8	18	–	–	-12	8	2	–	61600	✓	0.07	GI276	SQ010
	10A2R018A10-SAD07D-CF	10	80	10	18	–	–	-12	8	2	–	61600	✓	0.07	GI276	SQ010
	12A2R018A10-SAD07D-C	12	120	10	18	–	–	-10	8	2	–	56300	✓	0.09	GI276	SQ010
	12A2R018A12-SAD07D-C	12	90	12	18	–	–	-10	8	2	–	56300	✓	0.10	GI276	SQ010
	12A3R018A12-SAD07D-C	12	90	12	18	–	–	-10	8	3	–	56200	✓	0.10	GI276	SQ010
	12A3R020A12-SAD07D-CF	12	90	12	20	–	–	-10	8	3	–	56200	✓	0.10	GI276	SQ010
	14A3R018A12-SAD07D-C	14	140	12	18	–	–	-9	8	3	–	52100	✓	0.15	GI276	SQ010
	14A3R018A14-SAD07D-C	14	90	14	18	–	–	-9	8	3	–	52100	✓	0.12	GI276	SQ010
DIN 1835A	**14A3R020A12-SAD07D-CF**	14	140	12	20	–	–	-9	8	3	–	52100	✓	0.14	GI276	SQ010
DIN 1835A	**14A3R020A14-SAD07D-CF**	14	90	14	20	–	–	-9	8	3	–	52100	✓	0.09	GI276	SQ010
	16A3R019A14-SAD07D-C	16	160	14	19	–	–	-8	8	3	–	48700	✓	0.21	GI276	SQ011
	16A3R019A16-SAD07D-C	16	110	16	19	–	–	-8	8	3	–	48700	✓	0.18	GI276	SQ011
	16A4R019A16-SAD07D-C	16	110	16	19	–	–	-8	8	4	–	48700	✓	0.18	GI276	SQ011
	18A4R019A16-SAD07D-C	18	180	16	19	–	–	-7.5	8	4	✓	45900	✓	0.28	GI276	SQ011
	18A4R019A18-SAD07D-C	18	110	18	19	–	–	-7.5	8	4	✓	45900	✓	0.22	GI276	SQ011
	20A4R020A18-SAD07D-C	20	200	18	20	–	–	-7	8	4	✓	43600	✓	0.38	GI276	SQ011
	20A4R020A20-SAD07D-C	20	125	20	20	–	–	-7	8	4	✓	43600	✓	0.30	GI276	SQ011
	20A5R020A20-SAD07D-C	20	125	20	20	–	–	-7	8	5	✓	43600	✓	0.30	GI276	SQ011
	25A5R024A25-SAD07D-C	25	140	25	24	–	–	-6.5	8	5	✓	39000	✓	0.52	GI276	SQ011
	25A6R024A25-SAD07D-C	25	140	25	24	–	–	-6.5	8	6	✓	39000	✓	0.52	GI276	SQ011
	12A2R020M06-SAD07D-C	12	35	6.5	–	20	M6	-10	8	2	–	–	✓	0.05	GI276	SQ010
	14A3R020M08-SAD07D-C	14	38	8.5	–	20	M8	-9	8	3	–	–	✓	0.05	GI276	SQ010
MODULAR	**14A3R023M08-SAD07D-CF**	14	41	8.5	–	23	M8	-9	8	3	–	–	✓	0.05	GI276	SQ010
MODULAR	**16A4R023M08-SAD07D-C**	16	41	8.5	–	23	M8	-8	8	4	✓	–	✓	0.06	GI276	SQ011
MODULAR	**20A5R030M10-SAD07D-C**	20	49	10.5	–	30	M10	-7	8	5	✓	–	✓	0.09	GI276	SQ011

	Product	DC [mm]	OAL [mm]	DCON MS [mm]	LU [mm]	LF [mm]	TDZ	GAMF [°]	GAMP [°]			max.		kg		
MODULAR	**25A6R035M12-SAD07D-C**	25	57	12.5	–	35	M12	-6.5	8	6	✓	–	✓	0.13	GI276	SQ011
MODULAR	**32A8R043M16-SAD07D-C**	32	66	17	–	43	M16	-6	8	8	✓	–	✓	0.25	GI276	SQ011

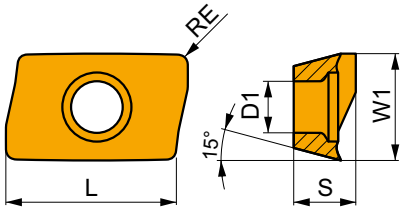
GI276	ADMX 0702..

		Nm			
SQ010	US 62003A-T06P	0.6	M 2	3	Flag T06P
SQ011	US 62004A-T06P	0.6	M 2	4	Flag T06P

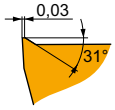
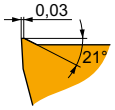
ADMX 07

PRAMET

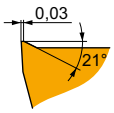
	W1 [mm]	D1 [mm]	L [mm]	S [mm]
0702	4.482	2.20	6.95	2.48



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																				
			F geometry with very sharp positive design for light machining.																	
ADMX 070202SR-F	**M8330**	0.2	220	0.07	2.0	130	0.06	2.0	–	–	–	660	0.08	2.0	55	0.05	1.6	–	–	–
	M8340	0.2	200	0.07	2.0	120	0.06	2.0	–	–	–	–	–	–	50	0.05	1.6	–	–	–
ADMX 070204SR-F	**M6330**	0.4	200	0.07	2.0	140	0.06	2.0	–	–	–	–	–	–	60	0.05	1.6	–	–	–
	M8310	0.4	265	0.07	2.0	135	0.06	2.0	–	–	–	–	–	–	–	–	–	–	–	–
	M8330	0.4	235	0.07	2.0	140	0.06	2.0	–	–	–	705	0.08	2.0	55	0.05	1.6	–	–	–
	M8340	0.4	215	0.07	2.0	125	0.06	2.0	–	–	–	–	–	–	50	0.05	1.6	–	–	–
	M9340	0.4	290	0.07	2.0	170	0.06	2.0	–	–	–	–	–	–	70	0.05	1.6	–	–	–
ADMX 070208SR-F	**M6330**	0.8	240	0.07	2.0	170	0.06	2.0	–	–	–	–	–	–	70	0.05	1.6	–	–	–
	M8310	0.8	320	0.07	2.0	160	0.06	2.0	–	–	–	–	–	–	–	–	–	–	–	–
	M8330	0.8	280	0.07	2.0	165	0.06	2.0	–	–	–	840	0.08	2.0	70	0.05	1.6	–	–	–
	M8340	0.8	255	0.07	2.0	150	0.06	2.0	–	–	–	–	–	–	60	0.05	1.6	–	–	–
																				
			M geometry with positive design for light to medium machining.																	
ADMX 070202SR-M	**8215**	0.2	210	0.09	2.2	125	0.08	2.2	195	0.09	2.2	630	0.11	2.2	50	0.06	1.8	–	–	–
	M8330	0.2	205	0.09	2.2	120	0.08	2.2	190	0.09	2.2	615	0.11	2.2	50	0.06	1.8	–	–	–
	M8340	0.2	185	0.09	2.2	110	0.08	2.2	175	0.09	2.2	–	–	–	45	0.06	1.8	–	–	–

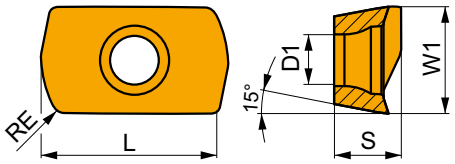
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
			M geometry with positive design for light to medium machining.																	
ADMX 070204SR-M	**8215**	0.4	■ 225	0.09	2.2	◪ 135	0.08	2.2	◪ 210	0.09	2.2	◪ 675	0.11	2.2	◪ 55	0.06	1.8	–	–	–
	M6330	0.4	■ 190	0.09	2.2	◪ 135	0.08	2.2	–	–	–	–	–	–	◪ 55	0.06	1.8	–	–	–
	M8310	0.4	■ 245	0.09	2.2	◪ 120	0.08	2.2	◪ 230	0.09	2.2	–	–	–	–	–	–	–	–	–
	M8330	0.4	■ 220	0.09	2.2	◪ 130	0.08	2.2	◪ 205	0.09	2.2	◪ 660	0.11	2.2	◪ 55	0.06	1.8	–	–	–
	M8340	0.4	■ 200	0.09	2.2	◪ 120	0.08	2.2	◪ 190	0.09	2.2	–	–	–	◪ 50	0.06	1.8	–	–	–
	M9340	0.4	■ 265	0.09	2.2	◪ 155	0.08	2.2	–	–	–	–	–	–	◪ 65	0.06	1.8	–	–	–
ADMX 070208SR-M	**8215**	0.8	■ 270	0.09	2.2	◪ 160	0.08	2.2	◪ 255	0.09	2.2	◪ 810	0.11	2.2	◪ 65	0.06	1.8	–	–	–
	M6330	0.8	■ 225	0.09	2.2	◪ 160	0.08	2.2	–	–	–	–	–	–	◪ 65	0.06	1.8	–	–	–
	M8310	0.8	■ 290	0.09	2.2	◪ 145	0.08	2.2	◪ 275	0.09	2.2	–	–	–	–	–	–	–	–	–
	M8330	0.8	■ 260	0.09	2.2	◪ 155	0.08	2.2	◪ 245	0.09	2.2	◪ 780	0.11	2.2	◪ 65	0.06	1.8	–	–	–
	M8340	0.8	■ 240	0.09	2.2	◪ 140	0.08	2.2	◪ 225	0.09	2.2	–	–	–	◪ 60	0.06	1.8	–	–	–
	M9340	0.8	■ 315	0.09	2.2	◪ 185	0.08	2.2	–	–	–	–	–	–	◪ 75	0.06	1.8	–	–	–
ADMX 070212SR-M	**M8340**	1.2	■ 250	0.09	2.2	◪ 150	0.08	2.2	◪ 235	0.09	2.2	–	–	–	◪ 60	0.06	1.8	–	–	–
ADMX 070216SR-M	**M8310**	1.6	■ 320	0.09	2.2	◪ 160	0.08	2.2	◪ 300	0.09	2.2	–	–	–	–	–	–	–	–	–
	M8330	1.6	■ 290	0.09	2.2	◪ 170	0.08	2.2	◪ 275	0.09	2.2	◪ 870	0.11	2.2	◪ 70	0.06	1.8	–	–	–
	M8340	1.6	■ 265	0.09	2.2	◪ 155	0.08	2.2	◪ 250	0.09	2.2	–	–	–	◪ 65	0.06	1.8	–	–	–
ADMX 070220SR-M	**M6330**	2.0	■ 260	0.09	2.2	◪ 185	0.08	2.2	–	–	–	–	–	–	◪ 75	0.06	1.8	–	–	–
	M8310	2.0	■ 340	0.09	2.2	◪ 170	0.08	2.2	◪ 320	0.09	2.2	–	–	–	–	–	–	–	–	–
	M8330	2.0	■ 300	0.09	2.2	◪ 180	0.08	2.2	◪ 285	0.09	2.2	◪ 900	0.11	2.2	◪ 75	0.06	1.8	–	–	–
	M8340	2.0	■ 275	0.09	2.2	◪ 165	0.08	2.2	◪ 260	0.09	2.2	–	–	–	◪ 65	0.06	1.8	–	–	–

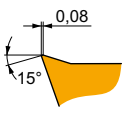
ADEX 07-HF

PRAMET

	W1	D1	L	S
	[mm]	[mm]	[mm]	[mm]
0702	4.439	2.20	6.45	2.48

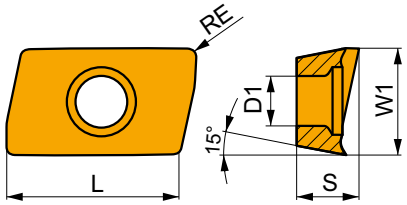


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

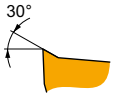
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
			HF geometry with highly positive design for high feed machining.																	
ADEX 070206SR-HF	**M6330**	0.6	■ 200	0.60	0.3	◪ 140	0.54	0.3	–	–	–	–	–	–	–	–	–	–	–	–
	M8330	0.6	■ 225	0.60	0.3	◪ 135	0.54	0.3	–	–	–	–	–	–	–	–	–	–	–	–
	M8340	0.6	■ 215	0.60	0.3	◪ 125	0.54	0.3	–	–	–	–	–	–	–	–	–	–	–	–

ADEX 07-FA

	W1	D1	L	S
	[mm]	[mm]	[mm]	[mm]
0702	4.497	2.20	6.95	2.48

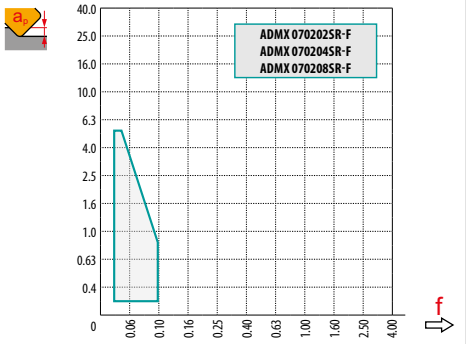


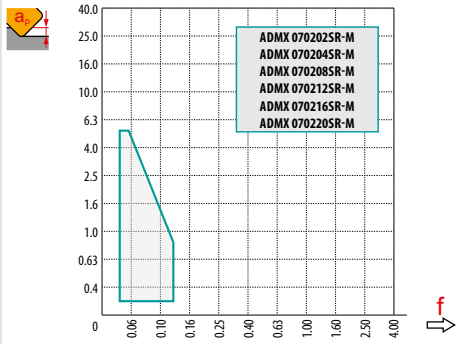
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

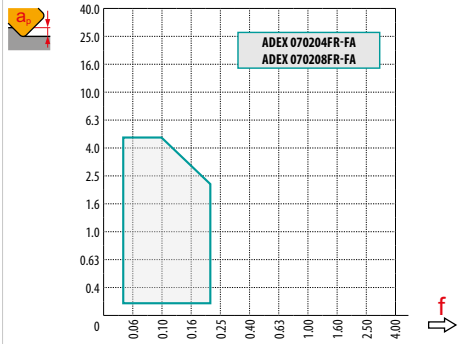
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
			FA geometry with highly positive design for fine-finish to medium machining.																	
ADEX 070204FR-FA	**HF7**	0.4	–	–	–	–	–	–	–	–	–	■ 240	0.18	3.0	–	–	–	–	–	–
	M0315	0.4	–	–	–	–	–	–	–	–	–	■ 555	0.18	3.0	–	–	–	–	–	–
ADEX 070208FR-FA	**HF7**	0.8	–	–	–	–	–	–	–	–	–	■ 285	0.18	3.0	–	–	–	–	–	–

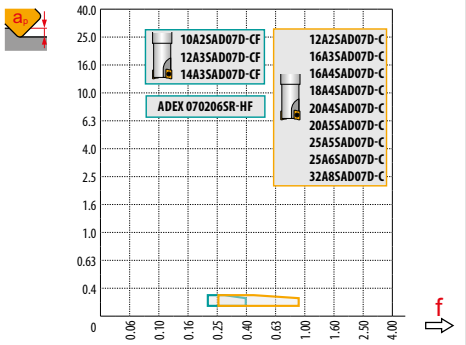
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ X.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ X.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	ADMX 07-F			ADMX 07-M						ADEX 07-HF	ADEX 07-FA	
RE	0.2	0.4	0.8	0.2	0.4	0.8	1.2	1.6	2.0	0.6	0.4	0.8
BS	1.38	0.89	0.54	1.38	0.89	0.54	1.07	0.7	0.33	–	0.94	0.55









ADEX 07-HF					HFC			
DC	a_p	0	0.1	0.2	0.3	a_p	0.1	0.2	0.3
10		5.6	7.8	8.7	9.4				
12		7.6	9.8	10.7	11.4				
14		9.6	11.8	12.7	13.4				
16	DEF	11.6	13.8	14.7	15.4				
18		13.6	15.8	16.7	17.4				
20		15.6	17.8	18.7	19.4				
25		20.6	22.8	23.7	24.4				
32		27.6	29.8	30.7	31.4				
						⇨ f	0.9	0.8	0.6

3.0

	HFC					
a_p	1.0	3.0	5.0	0.1	0.2	0.3
f	0.13	0.08	0.05	0.7	0.6	0.4

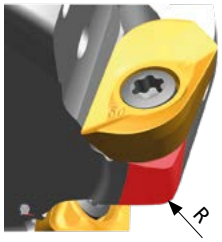
			HFC	
DC	RPMX	APMX/l	RPMX	APMX/l
10	5.2	5.0/56	3.5	0.3/6
12	3.4	5.0/86	2.2	0.3/9
14	2.5	4.2/100	1.6	0.3/12
16	1.9	3.2/100	1.3	0.3/15
18	1.7	2.8/100	1.1	0.3/17
20	1.5	2.5/100	0.9	0.3/21
25	1.1	1.8/100	0.7	0.3/26
32	0.8	1.2/100	0.5	0.3/36

					HFC			
DC	DMIN	DMAX	SMAX DMIN	SMAX DMAX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
10	12.0	20.0	0.5	2.8	12	20	0.30	0.30
12	16.0	24.0	0.7	2.2	16	24	0.30	0.30
14	20.0	28.0	0.8	1.9	20	28	0.30	0.30
16	24.0	32.0	0.8	1.6	24	32	0.30	0.30
18	28.0	36.0	0.9	1.6	28	36	0.30	0.30
20	32.0	40.0	0.9	1.6	32	40	0.30	0.30
25	42.0	50.0	1.0	1.5	42	50	0.30	0.30
32	56.0	64.0	1.0	1.4	56	64	0.30	0.30

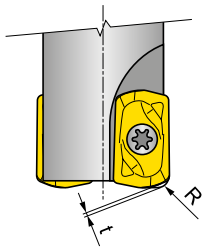
0.5

	HFC
a_p	0.3

DC	µm	3	5	10	15	20	30	40	50	60	80	100
10		0.346	0.447	0.632	0.775	0.894	1.095	1.265	1.414	1.549	1.789	2.000
12		0.379	0.490	0.693	0.849	0.980	1.200	1.386	1.549	1.697	1.960	2.191
14		0.410	0.529	0.748	0.917	1.058	1.296	1.497	1.673	1.833	2.117	2.366
16	FE	0.438	0.566	0.800	0.980	1.131	1.386	1.600	1.789	1.960	2.263	2.530
18		0.465	0.600	0.849	1.039	1.200	1.470	1.697	1.897	2.078	2.400	2.683
20		0.490	0.632	0.894	1.095	1.265	1.549	1.789	2.000	2.191	2.530	2.828
25		0.548	0.707	1.000	1.225	1.414	1.732	2.000	2.236	2.449	2.828	3.162
32		0.620	0.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578



ADMX 07	R
ADMX 070216SR-M	1
ADMX 070220SR-M	1.5
ADEX 070206SR-HF	1



ADEX 07	R	t
ADEX 070206SR-HF	0.8	0.18

SAD11E

P M K N S H

PRAMET

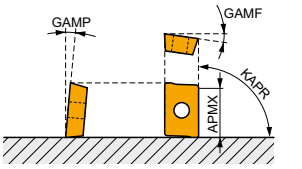
S

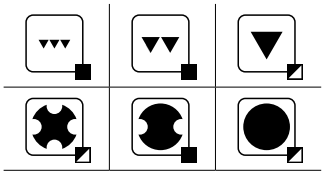
FORCE AD11 Square Shoulder Mill with Internal Coolant

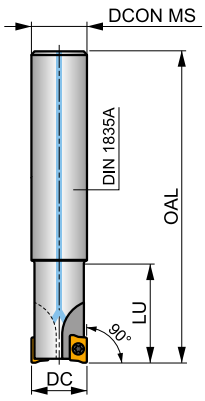
90° end and shell mills utilising positive AD.. 11 style insert with APMX of 9 mm. Suitable for face, shoulder, slot, helical, trochoidal, ramping and plunge milling. Available in cylindrical, Weldon, Morse taper, modular and arbor (with differential tooth pitch) style, in Ø16 up to Ø125 mm. Body treated for longer tool life.

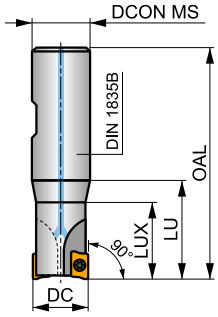
FORCE AD

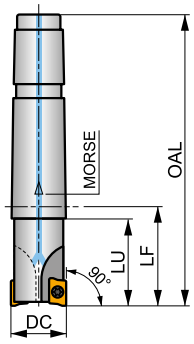
KAPR	90°
APMX	9.0 mm

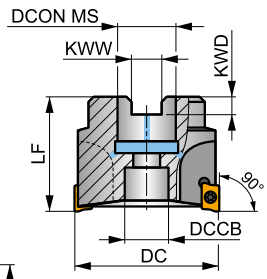


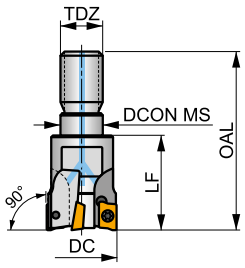












h_m 0.08 - 0.16

h_m 0.06 - 0.13

	Product	DC [mm]	OAL [mm]	DCON MS [mm]	DCCB [mm]	LU [mm]	LUX [mm]	LF [mm]	TDZ	CZC MS	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg			
	16A2R024A14-SAD11E-C	16	160	14	–	24	–	–	–	–	–	–	-12.8	4	2	–	30100	✓	0.21	GI169	SQ025	–
	16A2R024A16-SAD11E-C	16	135	16	–	24	–	–	–	–	–	–	-12.8	4	2	–	30100	✓	0.19	GI169	SQ025	–
	16A2R050A16-SAD11E-C	16	135	16	–	50	–	–	–	–	–	–	-12.8	4	2	–	30100	✓	0.20	GI169	SQ025	–
	18A2R029A20-SAD11E-C	18	150	20	–	29	–	–	–	–	–	–	-12	4.5	2	–	28400	✓	0.35	GI169	SQ025	–
	20A2R029A20-SAD11E-C	20	150	20	–	29	–	–	–	–	–	–	-11.5	5	2	–	27000	✓	0.33	GI169	SQ020	–
	20A2R070A20-SAD11E-C	20	150	20	–	70	–	–	–	–	–	–	-11.5	5	2	–	27000	✓	0.32	GI169	SQ020	–
	20A3R029A18-SAD11E-C	20	200	18	–	29	–	–	–	–	–	–	-11.5	5	3	–	27000	✓	0.38	GI169	SQ025	–
	20A3R029A20-SAD11E-C	20	150	20	–	29	–	–	–	–	–	–	-11.5	5	3	–	27000	✓	0.33	GI169	SQ025	–
DIN 1835A	22A3R029A20-SAD11E-C	22	200	20	–	29	–	–	–	–	–	–	-11.5	5	3	–	25600	✓	0.49	GI169	SQ025	–
	25A3R034A25-SAD11E-C	25	170	25	–	34	–	–	–	–	–	–	-10.2	5	3	–	24100	✓	0.42	GI169	SQ020	–
	25A3R080A25-SAD11E-C	25	170	25	–	80	–	–	–	–	–	–	-10.2	5	3	–	24100	✓	0.55	GI169	SQ020	–
	25A4R034A25-SAD11E-C	25	170	25	–	34	–	–	–	–	–	–	-10.2	5	4	–	24100	✓	0.42	GI169	SQ025	–
	25A4R040A25-SAD11E-C	25	250	25	–	40	–	–	–	–	–	–	-10.2	5	4	–	24100	✓	0.86	GI169	SQ025	–
	30A3R080A32-SAD11E-C	30	200	32	–	80	–	–	–	–	–	–	-9.3	7	3	–	22000	✓	1.02	GI169	SQ020	–
	32A3R090A32-SAD11E-C	32	195	32	–	90	–	–	–	–	–	–	-9	5	3	–	21300	✓	1.01	GI169	SQ020	–
	32A5R034A32-SAD11E-C	32	195	32	–	34	–	–	–	–	–	–	-9	8	5	–	21300	✓	1.03	GI169	SQ025	–
	35A5R025A32-SAD11E-C	35	200	32	–	25	–	–	–	–	–	–	-9	8	5	–	20300	✓	1.16	GI169	SQ020	–
	16A2R027B16-SAD11E-C	16	75	16	–	–	27	–	–	–	–	–	-12.8	4	2	–	30100	✓	0.09	GI169	SQ025	–
	20A2R032B20-SAD11E-C	20	82	20	–	–	32	–	–	–	–	–	-11.5	5	2	–	27000	✓	0.13	GI169	SQ020	–
	20A3R032B20-SAD11E-C	20	82	20	–	–	32	–	–	–	–	–	-11.5	5	3	–	27000	✓	0.13	GI169	SQ025	–
DIN 1835B	25A3R042B25-SAD11E-C	25	98	25	–	–	42	–	–	–	–	–	-10.2	5	3	–	24100	✓	0.29	GI169	SQ020	–
	25A4R042B25-SAD11E-C	25	98	25	–	–	42	–	–	–	–	–	-10.2	5	4	–	24100	✓	0.31	GI169	SQ025	–
	32A4R042B32-SAD11E-C	32	102	32	–	–	42	–	–	–	–	–	-9	8	4	–	21300	✓	0.27	GI169	SQ020	–
	32A5R042B32-SAD11E-C	32	102	32	–	–	42	–	–	–	–	–	-9	8	5	–	21300	✓	0.52	GI169	SQ025	–
	16A2R030E02-SAD11E-C	16	94	–	–	25	–	30	–	2	–	–	-12.8	4	2	–	30100	✓	0.15	GI169	SQ025	–
DIN 228A	20A3R035E03-SAD11E-C	20	116	–	–	30	–	35	–	3	–	–	-11.5	5	3	–	27000	✓	0.28	GI169	SQ025	–
	25A4R043E03-SAD11E-C	25	124	–	–	38	–	43	–	3	–	–	-10.2	5	4	–	24100	✓	0.32	GI169	SQ025	–

	Product	DC [mm]	OAL [mm]	DCON MS [mm]	DCCB [mm]	LU [mm]	LUX [mm]	LF [mm]	TDZ	CZC MS	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg			
MODULAR	**16A2R024M08-SAD11E-C**	16	38	8.5	–	–	–	24	M8	–	–	–	-12.8	4	2	–	–	✓	0.04	GI169	SQ025	–
	20A2R026M10-SAD11E-C	20	45	11	–	–	–	26	M10	–	–	–	-11.5	5	2	–	–	✓	0.09	GI169	SQ020	–
	20A3R026M10-SAD11E-C	20	45	10.5	–	–	–	26	M10	–	–	–	-11.5	5	3	–	–	✓	0.06	GI169	SQ025	–
	25A3R033M12-SAD11E-C	25	55	12.5	–	–	–	33	M12	–	–	–	-10.2	5	3	–	–	✓	0.15	GI169	SQ020	–
	25A4R033M12-SAD11E-C	25	55	12.5	–	–	–	33	M12	–	–	–	-10.2	5	4	–	–	✓	0.09	GI169	SQ025	–
	32A4R043M16-SAD11E-C	32	66	17	–	–	–	43	M16	–	–	–	-9	8	4	–	–	✓	0.21	GI169	SQ020	–
	32A5R043M16-SAD11E-C	32	66	17	–	–	–	43	M16	–	–	–	-9	8	5	–	–	✓	0.19	GI169	SQ025	–
	40A4R043M16-SAD11E-C	40	66	17	–	–	–	43	M16	–	–	–	-8.1	11	4	–	–	✓	0.27	GI169	SQ020	–
	40A6R043M16-SAD11E-C	40	66	17	–	–	–	43	M16	–	–	–	-8.1	11	6	–	–	✓	0.21	GI169	SQ020	–
	40A04R-S90AD11E-C	40	–	16	14	–	–	40	–	–	8.4	5.6	-8.1	11	4	✓	19100	✓	0.16	GI169	SQ022	–
	40A05R-S90AD11E-C	40	–	16	14	–	–	40	–	–	8.4	5.6	-8.1	11	5	✓	19000	✓	0.32	GI169	SQ022	–
	40A06R-S90AD11E-C	40	–	16	14	–	–	40	–	–	8.4	5.6	-8.1	11	6	✓	19100	✓	0.16	GI169	SQ022	–
	50A05R-S90AD11E-C	50	–	22	18	–	–	40	–	–	10.4	6.3	-7.2	12	5	✓	17000	✓	0.31	GI169	SQ023	–
ISO 6462 DIN 8030	**50A07R-S90AD11E-C**	50	–	22	18	–	–	40	–	–	10.4	6.3	-7.2	12	7	✓	17000	✓	0.45	GI169	SQ023	–
	63A06R-S90AD11E-C	63	–	22	18	–	–	40	–	–	10.4	6.3	-6.5	12	6	✓	15200	✓	0.54	GI169	SQ023	–
	63A09R-S90AD11E-C	63	–	22	18	–	–	40	–	–	10.4	6.3	-6.5	12	9	✓	15200	✓	0.63	GI169	SQ023	–
	80A10R-S90AD11E-C	80	–	27	38	–	–	50	–	–	12.4	7	-6	12	10	✓	13500	✓	1.05	GI169	SQ021	AC001
	100A11R-S90AD11E-C	100	–	32	45	–	–	50	–	–	14.4	8	-5.5	12	11	✓	12100	✓	1.89	GI169	SQ021	AC002
	125A12R-S90AD11E-C	125	–	40	56	–	–	63	–	–	16.4	9	-5.2	12	12	✓	10800	✓	2.97	GI169	SQ021	AC003

GI169	ADMX 11T3..	ADEX 11T3..

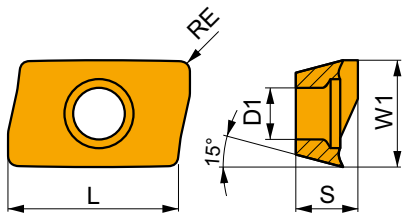
		Nm						
SQ020	US 62506-T07P	1.2	M 2.5	6	–	–	Flag T07P	–
SQ021	US 62506-T07P	1.2	M 2.5	6	D-T07P/T09P	FG-15	–	–
SQ022	US 62506-T07P	1.2	M 2.5	6	D-T07P/T09P	FG-15	–	HS 0830C
SQ023	US 62506-T07P	1.2	M 2.5	6	D-T07P/T09P	FG-15	–	HS 1030C
SQ025	US 62505-T07P	1.2	M 2.5	5	–	–	Flag T07P	–

AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

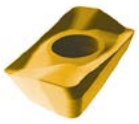
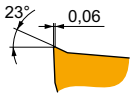
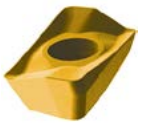
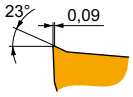
ADMX 11

PRAMET

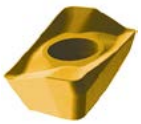
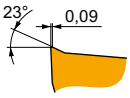
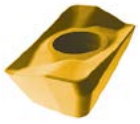
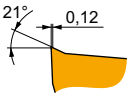
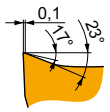
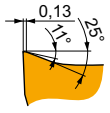
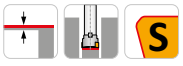
	W1	D1	L	S
	[mm]	[mm]	[mm]	[mm]
11T3	6.530	2.90	11.00	3.97



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

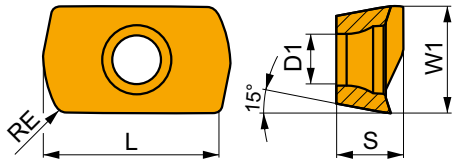
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
			F geometry with very sharp positive design for light machining.																	
ADMX 11T304SR-F	**8215**	0.4	245	0.10	2.0	145	0.09	2.0	230	0.10	2.0	735	0.12	2.0	60	0.08	1.6	–	–	–
	M8310	0.4	270	0.10	2.0	135	0.09	2.0	255	0.10	2.0	–	–	–	–	–	–	–	–	–
	M8330	0.4	240	0.10	2.0	140	0.09	2.0	225	0.10	2.0	720	0.12	2.0	60	0.08	1.6	–	–	–
	M8340	0.4	220	0.10	2.0	130	0.09	2.0	205	0.10	2.0	–	–	–	55	0.08	1.6	–	–	–
	M9340	0.4	285	0.10	2.0	170	0.09	2.0	–	–	–	–	–	–	70	0.08	1.6	–	–	–
ADMX 11T308SR-F	**8215**	0.8	290	0.10	2.0	170	0.09	2.0	275	0.10	2.0	870	0.12	2.0	70	0.08	1.6	–	–	–
	M8330	0.8	285	0.10	2.0	170	0.09	2.0	270	0.10	2.0	855	0.12	2.0	70	0.08	1.6	–	–	–
	M8340	0.8	260	0.10	2.0	155	0.09	2.0	245	0.10	2.0	–	–	–	65	0.08	1.6	–	–	–
	M9340	0.8	340	0.10	2.0	200	0.09	2.0	–	–	–	–	–	–	85	0.08	1.6	–	–	–
																				
			M geometry with positive design for light to medium machining.																	
ADMX 11T302SR-M	**M8330**	0.2	190	0.15	4.0	110	0.14	4.0	180	0.15	4.0	–	–	–	45	0.12	3.2	–	–	–
	M8340	0.2	170	0.15	4.0	100	0.14	4.0	160	0.15	4.0	–	–	–	40	0.12	3.2	–	–	–
ADMX 11T304SR-M	**8215**	0.4	205	0.15	4.0	120	0.14	4.0	190	0.15	4.0	–	–	–	50	0.12	3.2	–	–	–
	M8310	0.4	220	0.15	4.0	110	0.14	4.0	205	0.15	4.0	–	–	–	–	–	–	–	–	–
	M8330	0.4	205	0.15	4.0	120	0.14	4.0	190	0.15	4.0	–	–	–	50	0.12	3.2	–	–	–
	M8340	0.4	185	0.15	4.0	110	0.14	4.0	175	0.15	4.0	–	–	–	45	0.12	3.2	–	–	–
	M9325	0.4	255	0.15	4.0	–	–	–	240	0.15	4.0	–	–	–	–	–	–	–	–	–
	M9340	0.4	235	0.15	4.0	140	0.14	4.0	–	–	–	–	–	–	55	0.12	3.2	–	–	–
ADMX 11T308SR-M	**8215**	0.8	245	0.15	4.0	145	0.14	4.0	230	0.15	4.0	–	–	–	60	0.12	3.2	–	–	–
	M5315	0.8	335	0.15	4.0	–	–	–	315	0.15	4.0	–	–	–	–	–	–	–	–	–
	M8310	0.8	265	0.15	4.0	135	0.14	4.0	250	0.15	4.0	–	–	–	–	–	–	–	–	–
	M8330	0.8	245	0.15	4.0	145	0.14	4.0	230	0.15	4.0	–	–	–	60	0.12	3.2	–	–	–
	M8340	0.8	220	0.15	4.0	130	0.14	4.0	205	0.15	4.0	–	–	–	55	0.12	3.2	–	–	–
	M9315	0.8	330	0.15	4.0	–	–	–	310	0.15	4.0	–	–	–	–	–	–	–	–	–
	M9325	0.8	305	0.15	4.0	–	–	–	285	0.15	4.0	–	–	–	–	–	–	–	–	–
	M9340	0.8	275	0.15	4.0	165	0.14	4.0	–	–	–	–	–	–	65	0.12	3.2	–	–	–
ADMX 11T310SR-M	**M8330**	1.0	255	0.15	4.0	150	0.14	4.0	240	0.15	4.0	–	–	–	60	0.12	3.2	–	–	–
	M8340	1.0	230	0.15	4.0	135	0.14	4.0	215	0.15	4.0	–	–	–	55	0.12	3.2	–	–	–
ADMX 11T312SR-M	**8215**	1.2	255	0.15	4.0	150	0.14	4.0	240	0.15	4.0	–	–	–	60	0.12	3.2	–	–	–
	M8330	1.2	255	0.15	4.0	150	0.14	4.0	240	0.15	4.0	–	–	–	60	0.12	3.2	–	–	–
	M8340	1.2	230	0.15	4.0	135	0.14	4.0	215	0.15	4.0	–	–	–	55	0.12	3.2	–	–	–
ADMX 11T316SR-M	**8215**	1.6	270	0.15	4.0	160	0.14	4.0	255	0.15	4.0	–	–	–	65	0.12	3.2	–	–	–
	M6330	1.6	230	0.15	4.0	165	0.14	4.0	–	–	–	–	–	–	65	0.12	3.2	–	–	–
	M8310	1.6	295	0.15	4.0	150	0.14	4.0	280	0.15	4.0	–	–	–	–	–	–	–	–	–
	M8330	1.6	270	0.15	4.0	160	0.14	4.0	255	0.15	4.0	–	–	–	65	0.12	3.2	–	–	–
	M8340	1.6	240	0.15	4.0	140	0.14	4.0	225	0.15	4.0	–	–	–	60	0.12	3.2	–	–	–

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

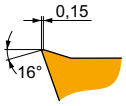
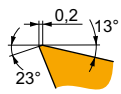
Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]
																				
M geometry with positive design for light to medium machining.																				
ADMX 11T320SR-M	**M6330**	2.0	■ 240	0.15	4.0	■ 170	0.14	4.0	–	–	–	–	–	–	◪ 70	0.12	3.2	–	–	–
	M8330	2.0	■ 280	0.15	4.0	■ 165	0.14	4.0	■ 265	0.15	4.0	–	–	–	◪ 70	0.12	3.2	–	–	–
	M8340	2.0	■ 255	0.15	4.0	■ 150	0.14	4.0	◪ 240	0.15	4.0	–	–	–	◪ 60	0.12	3.2	–	–	–
ADMX 11T325SR-M	**M6330**	2.5	■ 240	0.15	4.0	■ 170	0.14	4.0	–	–	–	–	–	–	◪ 70	0.12	3.2	–	–	–
	M8340	2.5	■ 255	0.15	4.0	■ 150	0.14	4.0	◪ 240	0.15	4.0	–	–	–	◪ 60	0.12	3.2	–	–	–
ADMX 11T330SR-M	**M6330**	3.0	■ 240	0.15	4.0	■ 170	0.14	4.0	–	–	–	–	–	–	◪ 70	0.12	3.2	–	–	–
	M8330	3.0	■ 280	0.15	4.0	■ 165	0.14	4.0	■ 265	0.15	4.0	–	–	–	◪ 70	0.12	3.2	–	–	–
	M8340	3.0	■ 255	0.15	4.0	■ 150	0.14	4.0	◪ 240	0.15	4.0	–	–	–	◪ 60	0.12	3.2	–	–	–
																				
R geometry with positive design for machining conditions in less stable conditions.																				
ADMX 11T308PR-R	**8215**	0.8	■ 230	0.18	4.0	◪ 135	0.16	4.0	■ 215	0.18	4.0	–	–	–	◪ 55	0.16	3.2	◪ 45	0.15	1.0
	M5315	0.8	◪ 310	0.18	4.0	–	–	–	■ 290	0.18	4.0	–	–	–	–	–	–	◪ 60	0.15	1.0
	M8310	0.8	■ 250	0.18	4.0	◪ 125	0.16	4.0	■ 235	0.18	4.0	–	–	–	–	–	–	◪ 50	0.15	1.0
	M8330	0.8	■ 230	0.18	4.0	◪ 135	0.16	4.0	■ 215	0.18	4.0	–	–	–	◪ 55	0.16	3.2	◪ 45	0.15	1.0
	M8340	0.8	■ 210	0.18	4.0	◪ 125	0.16	4.0	◪ 195	0.18	4.0	–	–	–	◪ 50	0.16	3.2	–	–	–
	M9315	0.8	■ 310	0.18	4.0	–	–	–	■ 290	0.18	4.0	–	–	–	–	–	–	◪ 60	0.15	1.0
	M9325	0.8	■ 290	0.18	4.0	–	–	–	■ 275	0.18	4.0	–	–	–	–	–	–	◪ 55	0.15	1.0
ADMX 11T316PR-R	**8215**	1.6	■ 255	0.18	4.0	◪ 150	0.16	4.0	■ 240	0.18	4.0	–	–	–	◪ 60	0.16	3.2	◪ 50	0.15	1.0
	M8330	1.6	■ 255	0.18	4.0	◪ 150	0.16	4.0	■ 240	0.18	4.0	–	–	–	◪ 60	0.16	3.2	◪ 50	0.15	1.0
	M9325	1.6	■ 320	0.18	4.0	–	–	–	■ 300	0.18	4.0	–	–	–	–	–	–	◪ 60	0.15	1.0
																				
MF geometry with highly positive design for light to finish machining.																				
ADMX 11T304SR-MF	**M6330**	0.4	■ 215	0.08	2.5	■ 150	0.07	2.5	–	–	–	–	–	–	■ 60	0.06	2.0	–	–	–
	M8340	0.4	■ 220	0.08	2.5	■ 130	0.07	2.5	–	–	–	–	–	–	■ 55	0.06	2.0	–	–	–
ADMX 11T308SR-MF	**M6330**	0.8	■ 255	0.08	2.5	■ 180	0.07	2.5	–	–	–	–	–	–	■ 75	0.06	2.0	–	–	–
	M8340	0.8	■ 265	0.08	2.5	■ 155	0.07	2.5	–	–	–	–	–	–	■ 65	0.06	2.0	–	–	–
	M9340	0.8	■ 360	0.08	2.5	■ 215	0.07	2.5	–	–	–	–	–	–	■ 90	0.06	2.0	–	–	–
																				
MM geometry with highly positive design for light to medium and finish to semi-rough machining.																				
ADMX 11T304SR-MM	**M6330**	0.4	■ 185	0.14	2.5	■ 130	0.13	2.5	–	–	–	–	–	–	■ 55	0.11	2.0	–	–	–
	M8340	0.4	■ 195	0.14	2.5	■ 115	0.13	2.5	–	–	–	–	–	–	■ 45	0.11	2.0	–	–	–
	M9340	0.4	■ 250	0.14	2.5	■ 150	0.13	2.5	–	–	–	–	–	–	■ 60	0.11	2.0	–	–	–
ADMX 11T308SR-MM	**M6330**	0.8	■ 225	0.14	2.5	■ 155	0.13	2.5	–	–	–	–	–	–	■ 65	0.11	2.0	–	–	–
	M8340	0.8	■ 235	0.14	2.5	■ 140	0.13	2.5	–	–	–	–	–	–	■ 55	0.11	2.0	–	–	–
	M8345	0.8	■ 190	0.14	2.5	■ 110	0.13	2.5	–	–	–	–	–	–	■ 45	0.11	2.0	–	–	–
	M9340	0.8	■ 300	0.14	2.5	■ 180	0.13	2.5	–	–	–	–	–	–	■ 75	0.11	2.0	–	–	–
ADMX 11T312SR-MM	**M6330**	1.2	■ 235	0.14	2.5	■ 165	0.13	2.5	–	–	–	–	–	–	■ 70	0.11	2.0	–	–	–
	M8340	1.2	■ 245	0.14	2.5	■ 145	0.13	2.5	–	–	–	–	–	–	■ 60	0.11	2.0	–	–	–
	M9340	1.2	■ 315	0.14	2.5	■ 185	0.13	2.5	–	–	–	–	–	–	■ 75	0.11	2.0	–	–	–

ADEX 11-HF

	W1	D1	L	S
	[mm]	[mm]	[mm]	[mm]
11T3	6.450	2.90	10.67	3.82

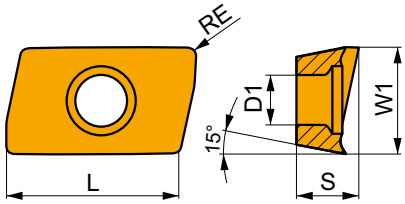


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

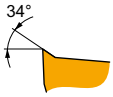
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
			HFC S																	
HF geometry with highly positive design for high feed machining.																				
ADEX 11T308SR-HF	**8215**	0.8	■ 215	0.68	0.4	◪ 125	0.61	0.4	–	–	–	–	–	–	–	–	–	–	–	–
	M6330	0.8	■ 185	0.68	0.4	◪ 130	0.61	0.4	–	–	–	–	–	–	–	–	–	–	–	–
	M8310	0.8	■ 220	0.68	0.4	◪ 110	0.52	0.4	–	–	–	–	–	–	–	–	–	–	–	–
	M8330	0.8	■ 215	0.68	0.4	◪ 125	0.61	0.4	–	–	–	–	–	–	–	–	–	–	–	–
	M8340	0.8	■ 200	0.68	0.4	◪ 120	0.61	0.4	–	–	–	–	–	–	–	–	–	–	–	–
	M9340	0.8	■ 220	0.68	0.4	◪ 130	0.61	0.4	–	–	–	–	–	–	–	–	–	–	–	–
			HFC S																	
HF2 geometry with positive design for high feed machining.																				
ADEX 11T308SR-HF2	**M8310**	0.8	■ 220	0.68	0.4	◪ 110	0.61	0.4	◪ 205	0.68	0.4	–	–	–	–	–	–	◪ 40	0.15	1.0
	M8330	0.8	■ 215	0.68	0.4	◪ 125	0.61	0.4	◪ 200	0.68	0.4	–	–	–	◪ 50	0.48	0.3	◪ 40	0.15	1.0
	M8340	0.8	■ 200	0.68	0.4	◪ 120	0.61	0.4	◪ 190	0.68	0.4	–	–	–	◪ 50	0.48	0.3	–	–	–
	M9325	0.8	■ 250	0.68	0.4	–	–	–	◪ 235	0.68	0.4	–	–	–	–	–	–	◪ 50	0.15	1.0
	M9340	0.8	■ 220	0.68	0.4	◪ 130	0.61	0.4	–	–	–	–	–	–	◪ 55	0.48	0.3	–	–	–

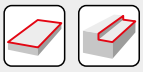
ADEX 11-FA

	W1	D1	L	S
	[mm]	[mm]	[mm]	[mm]
11T3	6.450	2.90	9.70	3.91



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

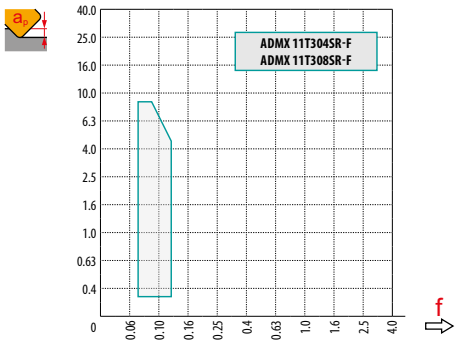
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
			FA geometry with highly positive design for fine-finish to medium machining.																	
ADEX 11T304FR-FA	**HF7**	0.4	–	–	–	–	–	–	–	–	–	■	210	0.30	5.0	–	–	–	–	–	–
	M0315	0.4	–	–	–	–	–	–	–	–	–	■	480	0.30	5.0	–	–	–	–	–	–
ADEX 11T308FR-FA	**HF7**	0.8	–	–	–	–	–	–	–	–	–	■	240	0.30	5.0	–	–	–	–	–	–
	M0315	0.8	–	–	–	–	–	–	–	–	–	■	570	0.30	5.0	–	–	–	–	–	–
ADEX 11T312FR-FA	**HF7**	1.2	–	–	–	–	–	–	–	–	–	■	255	0.30	5.0	–	–	–	–	–	–
	M0315	1.2	–	–	–	–	–	–	–	–	–	■	600	0.30	5.0	–	–	–	–	–	–
ADEX 11T316FR-FA	**HF7**	1.6	–	–	–	–	–	–	–	–	–	■	270	0.18	5.0	–	–	–	–	–	–

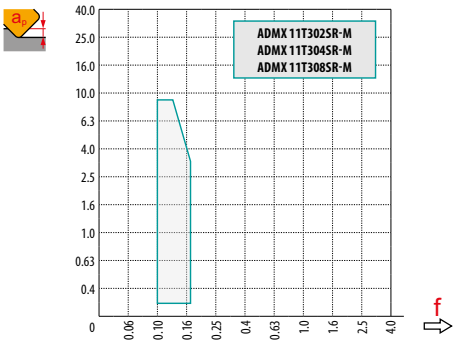


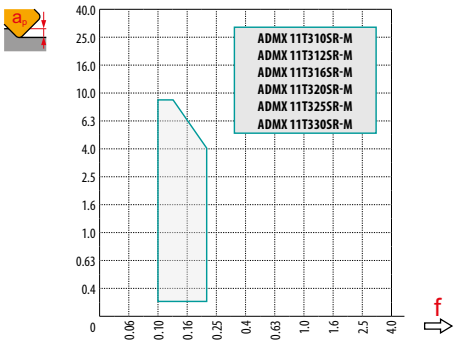
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

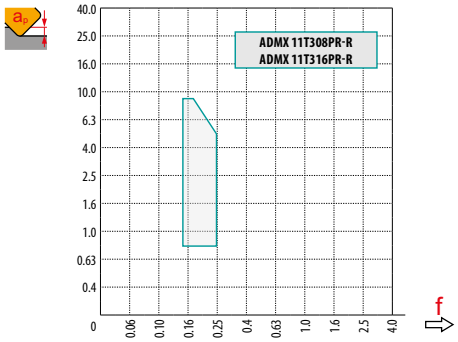
	ADMX 11-F		ADMX 11-M									ADMX 11-R		ADMX 11-MF	
RE	0.4	0.8	0.2	0.4	0.8	1.0	1.2	1.6	2.0	2.5	3.0	0.8	1.6	0.4	0.8
BS	1.89	1.48	2.09	1.89	1.48	1.27	1.08	0.68	1.61	1.13	0.66	1.48	0.68	1.89	1.48

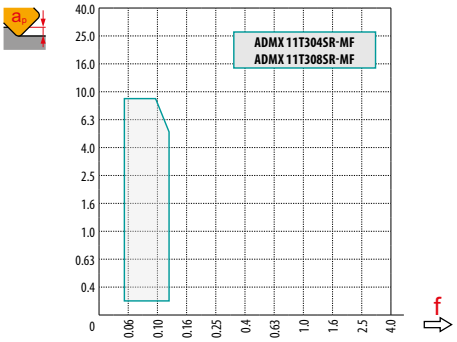
	ADMX 11-MM				ADEX 11-HF	ADEX 11-HF2	ADEX 11-FA			
RE	0.4	0.8	1.2	1.6	0.8	0.8	0.4	0.8	1.2	1.6
BS	1.89	1.48	1.08	0.61	0.17	0.17	1.77	1.39	1.0	0.62

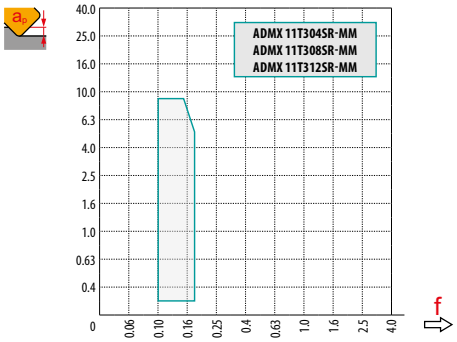


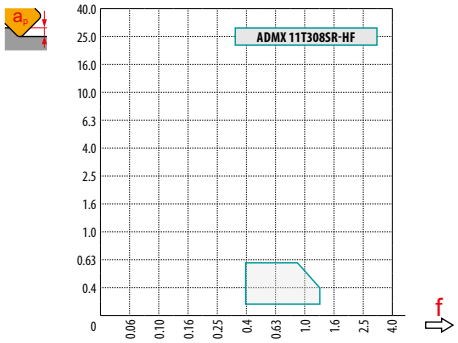


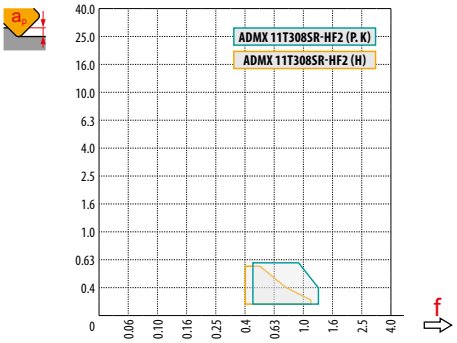


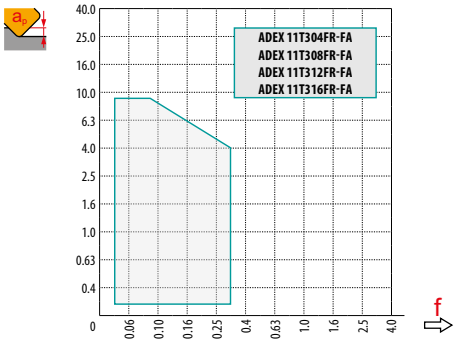












4.5

a_p	1.0	5.0	9.0
1 f	0.20	0.13	0.10

			HFC		
DC	RPMX	APMX/l	RPMX *	RPMX **	APMX/l
16	13.5	9.0/40	4.1	5.7	0.6/8
18	10.0	9.0/53	2.8	4.5	0.6/12
20	9.0	9.0/59	2.3	4.3	0.6/15
25	6.0	9.0/87	1.3	6.7	0.6/26
32	5.3	9.0/99	0.7	4.3	0.6/49
40	3.8	6.5/100	0.3	2.9	0.6/100
50	2.8	4.7/100	0.1	2.1	0.6/100
63	1.8	3.0/100	–	–	–
80	1.6	2.6/100	–	–	–

* HFC milling

** Conventional milling

DC	DMIN	DMAX	SMAX DMIN	SMAX DMAX	HFC DMIN	HFC DMAX	HFC SMAX DMIN	HFC SMAX DMAX
16	27.0	32.0	8.3	9.0	21.0	32.0	0.6	0.6
18	32.0	36.0	7.5	9.0	29.0	36.0	0.6	0.6
20	35.0	40.0	7.5	9.0	29.0	40.0	0.6	0.6
25	45.0	50.0	6.5	7.5	39.0	50.0	0.6	0.6
32	59.0	64.0	4.0	4.5	53.0	64.0	0.6	0.6
40	75.0	80.0	1.5	2.0	68.5	80.0	0.6	0.6
50	–	–	–	–	88.5	100.0	0.6	0.6

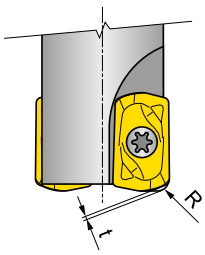
a_p

1.7

DC	µm	3	5	10	15	20	30	40	50	60	80	100
16	FE	0.438	0.566	0.800	0.980	1.131	1.386	1.600	1.789	1.960	2.263	2.530
18		0.465	0.600	0.849	1.039	1.200	1.470	1.697	1.897	2.078	2.400	2.683
20		0.490	0.632	0.894	1.095	1.265	1.549	1.789	2.000	2.191	2.530	2.828
20		0.490	0.632	0.894	1.095	1.265	1.549	1.789	2.000	2.191	2.530	2.828
25		0.548	0.707	1.000	1.225	1.414	1.732	2.000	2.236	2.449	2.828	3.162
32		0.620	0.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578
40		0.693	0.894	1.265	1.549	1.789	2.191	2.530	2.828	3.098	3.578	4.000
50		0.775	1.000	1.414	1.732	2.000	2.449	2.828	3.162	3.464	4.000	4.472
63		0.869	1.122	1.587	1.944	2.245	2.750	3.175	3.550	3.888	4.490	5.020
80		0.980	1.265	1.789	2.191	2.530	3.098	3.578	4.000	4.382	5.060	5.657

RE	µm	3	5	10	15	20	30	40	50	60	80	100
1.0	FE	0.155	0.200	0.283	0.346	0.400	0.490	0.566	0.632	0.693	0.800	0.894
1.2		0.170	0.219	0.310	0.379	0.438	0.537	0.620	0.693	0.759	0.876	0.980
1.6		0.196	0.253	0.358	0.438	0.506	0.620	0.716	0.800	0.876	1.012	1.131
2.0		0.219	0.283	0.400	0.490	0.566	0.693	0.800	0.894	0.980	1.131	1.265
2.5		0.245	0.316	0.447	0.548	0.632	0.775	0.894	1.000	1.095	1.265	1.414
3.0		0.268	0.346	0.490	0.600	0.693	0.849	0.980	1.095	1.200	1.386	1.549

ADMX/ADEX 11	R
ADMX 11T320SR-M	1.0
ADMX 11T325SR-M	1.8
ADMX 11T330SR-M	1.8
ADEX 11T308SR-HF	1.4
ADEX 11T308SR-HF2	1.4



ADEX 11	R	t
ADEX 11T308SR-HF	1.42	0.35
ADEX 11T308SR-HF2	1.34	0.38

SAD16E

P M K N S H

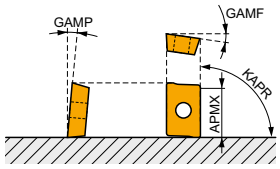
PRAMET

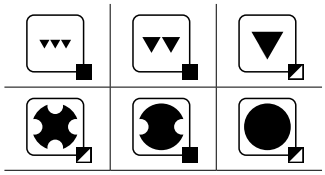
S

FORCE AD16 Square Shoulder Mill with Internal Coolant

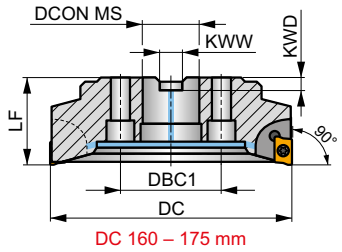
90° end and shell mills utilising positive AD.. 16 style insert with APMX of 13 mm. Suitable for face, shoulder, slot, helical, trochoidal, ramping and plunge milling. Available in cylindrical, Weldon, Morse taper, modular and arbor (with differential tooth pitch) style, in Ø25 up to Ø175 mm. Body treated for longer tool life.

KAPR	90°
APMX	13.0 mm

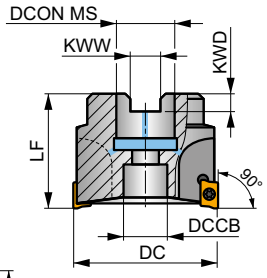




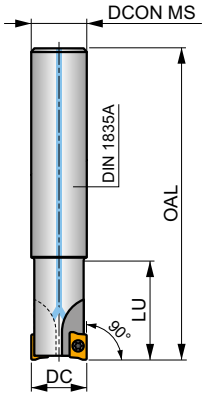
FORCE AD

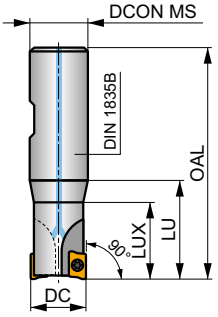


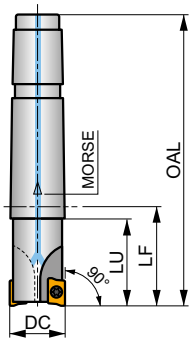
DC 160 – 175 mm

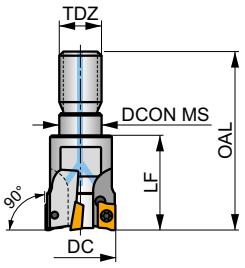


DC 40 – 140 mm









h_m 0.08 - 0.22

h_m 0.06 - 0.18

	Product	DC [mm]	OAL [mm]	DCON MS [mm]	DCCB [mm]	DBC1 [mm]	LU [mm]	LUX [mm]	LF [mm]	TDZ	CZC MS	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg			
DIN 1835A	25A2R033A25-SAD16E-C	25	165	25	–	–	33	–	–	–	–	–	–	-13	5	2	–	18700	✓	0.52	GI165	SQ030	–
	25A2R038A25-SAD16E-C	25	200	25	–	–	38	–	–	–	–	–	–	-13	5	2	–	18700	✓	0.71	GI165	SQ030	–
	32A3R033A32-SAD16E-C	32	195	32	–	–	33	–	–	–	–	–	–	-12	7	3	–	16500	✓	1.03	GI165	SQ030	–
	32A3R048A32-SAD16E-C	32	250	32	–	–	48	–	–	–	–	–	–	-12	7	3	–	16500	✓	1.37	GI165	SQ030	–
DIN 1835B	25A2R042B25-SAD16E-C	25	98	25	–	–	–	42	–	–	–	–	–	-13	5	2	–	18700	✓	0.29	GI165	SQ030	–
	32A3R040B32-SAD16E-C	32	100	32	–	–	–	40	–	–	–	–	–	-12	7	3	–	16500	✓	0.50	GI165	SQ030	–
	40A3R050B32-SAD16E-C	40	110	32	–	–	–	50	–	–	–	–	–	-8.2	10.5	3	–	14800	✓	0.59	GI165	SQ030	–
	40A4R050B32-SAD16E-C	40	110	32	–	–	–	50	–	–	–	–	–	-8.2	10.5	4	–	14800	✓	0.65	GI165	SQ030	–
DIN 228A	25A2R043E03-SAD16E-C	25	98	–	–	–	38	–	43	–	3	–	–	-13	5	2	–	18600	✓	0.31	GI165	SQ030	–
	32A3R043E03-SAD16E-C	32	100	–	–	–	38	–	43	–	3	–	–	-12	7	3	–	16500	✓	0.33	GI165	SQ030	–
	40A3R054E04-SAD16E-C	40	110	–	–	–	48	–	54	–	4	–	–	-8.2	10.5	3	–	14700	✓	0.74	GI165	SQ030	–
	40A4R054E04-SAD16E-C	40	110	–	–	–	48	–	54	–	4	–	–	-8.2	10.5	4	–	14700	✓	0.70	GI165	SQ030	–
MODULAR	32A3R043M16-SAD16E-C	32	66	17	–	–	–	–	43	M16	–	–	–	-12	7	3	–	–	✓	0.20	GI165	SQ030	–
	40A4R043M16-SAD16E-C	40	66	17	–	–	–	–	43	M16	–	–	–	-8.2	10.5	4	–	–	✓	0.27	GI165	SQ030	–
ISO 6462 DIN 8030	40A04R-S90AD16E-C	40	–	16	14	–	–	–	40	–	–	8.4	5.6	-8.2	10.5	4	–	14700	✓	0.21	GI165	SQ032	–
	50A03R-S90AD16E-C	50	–	22	18	–	–	–	40	–	–	10.4	6.3	-7	11	3	–	13200	✓	0.43	GI165	SQ033	–
	50A05R-S90AD16E-C	50	–	22	18	–	–	–	40	–	–	10.4	6.3	-7	11	5	✓	13200	✓	0.59	GI165	SQ033	–
	63A04R-S90AD16E-C	63	–	22	18	–	–	–	40	–	–	10.4	6.3	-6	12	4	✓	11800	✓	0.62	GI165	SQ033	–
	63A06R-S90AD16E-C	63	–	22	18	–	–	–	40	–	–	10.4	6.3	-6	12	6	✓	11800	✓	0.46	GI165	SQ033	–
	80A05R-S90AD16E-C	80	–	27	38	–	–	–	50	–	–	12.4	7	-5	12	5	✓	10400	✓	1.01	GI165	SQ031	AC001
	80A07R-S90AD16E-C	80	–	27	38	–	–	–	50	–	–	12.4	7	-5	13	7	✓	10400	✓	0.97	GI165	SQ031	AC001
	100A06R-S90AD16E-C	100	–	32	45	–	–	–	50	–	–	14.4	8	-4	12	6	✓	9300	✓	1.89	GI165	SQ031	AC002
	100A08R-S90AD16E-C	100	–	32	45	–	–	–	50	–	–	14.4	8	-4	12	8	✓	9300	✓	1.69	GI165	SQ031	AC002
	125A09R-S90AD16E-C	125	–	40	56	–	–	–	63	–	–	16.4	9	-3.8	12	9	✓	8400	✓	3.46	GI165	SQ031	AC003
	140A08R-S90AD16E-C	140	–	40	56	–	–	–	63	–	–	16.4	9	-3.8	12	8	✓	7900	✓	4.06	GI165	SQ031	–
	160C10R-S90AD16E-C	160	–	40	–	66.7	–	–	63	–	–	16.4	9.2	-3.8	10	10	✓	7300	✓	6.04	GI165	SQ036	–
	175C10R-S90AD16E-C	175	–	40	–	66.7	–	–	63	–	–	16.4	9.2	-3.8	12	10	✓	7000	✓	7.00	GI165	SQ036	–

GI165	ADMX 1606..	ADEX 1606..

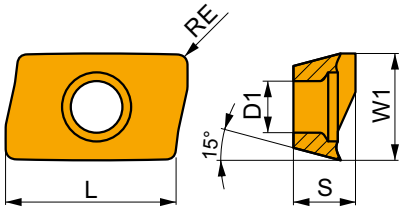
		Nm									
SQ030	US 4008-T15P	3.5	M 4	8	–	–	Flag T15P	–	–	–	–
SQ031	US 4011-T15P	3.5	M 4	10.6	D-T08P/T15P	FG-15	–	–	–	–	–
SQ032	US 4008-T15P	3.5	M 4	8	D-T08P/T15P	FG-15	–	HS 0830C	–	–	–
SQ033	US 4011-T15P	3.5	M 4	10.6	D-T08P/T15P	FG-15	–	HS 1030C	–	–	–
SQ036	US 4011-T15P	3.5	M 4	10.6	D-T08P/T15P	FG-15	–	HS 1240C	CAC 160C	HSD 0825C	HXK 5

AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

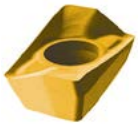
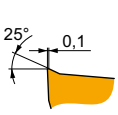
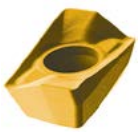
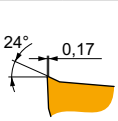
ADMX 16

PRAMET

	W1	D1	L	S
	[mm]	[mm]	[mm]	[mm]
1606	9.950	4.50	16.00	6.25



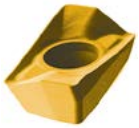
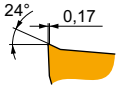
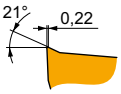
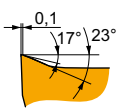
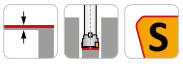
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
ADMX 160608SR-F	**8215**	0.8	265	0.15	2.0	155	0.14	2.0	250	0.15	2.0	795	0.18	2.0	65	0.11	1.6	–	–	–
	M8310	0.8	285	0.15	2.0	145	0.14	2.0	270	0.15	2.0	–	–	–	–	–	–	–	–	–
	M8330	0.8	260	0.15	2.0	155	0.14	2.0	245	0.15	2.0	780	0.18	2.0	65	0.11	1.6	–	–	–
	M8340	0.8	235	0.15	2.0	140	0.14	2.0	220	0.15	2.0	–	–	–	55	0.11	1.6	–	–	–
	M9340	0.8	300	0.15	2.0	180	0.14	2.0	–	–	–	–	–	–	75	0.11	1.6	–	–	–
																				
ADMX 160604SR-M	**8215**	0.4	190	0.18	5.0	110	0.16	5.0	180	0.18	5.0	–	–	–	45	0.13	4.0	–	–	–
	M8330	0.4	190	0.18	5.0	110	0.16	5.0	180	0.18	5.0	–	–	–	45	0.13	4.0	–	–	–
	M8340	0.4	170	0.18	5.0	100	0.16	5.0	160	0.18	5.0	–	–	–	40	0.13	4.0	–	–	–

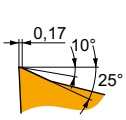
F geometry with highly positive design for light to medium machining.

M geometry with positive design for light to medium machining.

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P				M				K				N				S				H			
		[mm]		vc [m/min]	f [mm/tooth]	ap [mm]		vc [m/min]	f [mm/tooth]	ap [mm]		vc [m/min]	f [mm/tooth]	ap [mm]		vc [m/min]	f [mm/tooth]	ap [mm]		vc [m/min]	f [mm/tooth]	ap [mm]		vc [m/min]	f [mm/tooth]	ap [mm]
			M geometry with positive design for light to medium machining.																								
ADMX 160608SR-M	**8215**	0.8	■	225	0.18	5.0	◪	135	0.16	5.0	■	210	0.18	5.0		–	–	–	◪	55	0.13	4.0		–	–	–
	M5315	0.8	◪	305	0.18	5.0		–	–	–	■	285	0.18	5.0		–	–	–		–	–	–		–	–	–
	M8310	0.8	■	250	0.18	5.0	◪	125	0.16	5.0	■	235	0.18	5.0		–	–	–		–	–	–		–	–	–
	M8330	0.8	■	225	0.18	5.0	■	135	0.16	5.0	■	210	0.18	5.0		–	–	–	◪	55	0.13	4.0		–	–	–
	M8340	0.8	■	205	0.18	5.0	■	120	0.16	5.0	◪	190	0.18	5.0		–	–	–	◪	50	0.13	4.0		–	–	–
	M9315	0.8	■	305	0.18	5.0		–	–	–	■	285	0.18	5.0		–	–	–		–	–	–		–	–	–
	M9325	0.8	■	280	0.18	5.0		–	–	–	■	265	0.18	5.0		–	–	–		–	–	–		–	–	–
	M9340	0.8	■	255	0.18	5.0	■	150	0.16	5.0		–	–	–		–	–	–	◪	60	0.13	4.0		–	–	–
ADMX 160616SR-M	**8215**	1.6	■	250	0.18	5.0	◪	150	0.16	5.0	■	235	0.18	5.0		–	–	–	◪	60	0.13	4.0		–	–	–
	M8310	1.6	■	275	0.18	5.0	◪	140	0.16	5.0	■	260	0.18	5.0		–	–	–		–	–	–		–	–	–
	M8330	1.6	■	250	0.18	5.0	■	150	0.16	5.0	■	235	0.18	5.0		–	–	–	◪	60	0.13	4.0		–	–	–
	M8340	1.6	■	225	0.18	5.0	■	135	0.16	5.0	◪	210	0.18	5.0		–	–	–	◪	55	0.13	4.0		–	–	–
	M9325	1.6	■	310	0.18	5.0		–	–	–	■	290	0.18	5.0		–	–	–		–	–	–		–	–	–
ADMX 160620SR-M	**M6330**	2.0	■	225	0.18	5.0	■	155	0.16	5.0		–	–	–		–	–	–	◪	65	0.13	4.0		–	–	–
	M8330	2.0	■	265	0.18	5.0	■	155	0.16	5.0	■	250	0.18	5.0		–	–	–	◪	65	0.13	4.0		–	–	–
	M8340	2.0	■	240	0.18	5.0	■	140	0.16	5.0	◪	225	0.18	5.0		–	–	–	◪	60	0.13	4.0		–	–	–
ADMX 160630SR-M	**M8330**	3.0	■	265	0.18	5.0	■	155	0.16	5.0	■	250	0.18	5.0		–	–	–	◪	65	0.13	4.0		–	–	–
	M8340	3.0	■	240	0.18	5.0	■	140	0.16	5.0	◪	225	0.18	5.0		–	–	–	◪	60	0.13	4.0		–	–	–
ADMX 160632SR-M	**M6330**	3.2	■	225	0.18	5.0	■	155	0.16	5.0		–	–	–		–	–	–	◪	65	0.13	4.0		–	–	–
	M8330	3.2	■	265	0.18	5.0	■	155	0.16	5.0	■	250	0.18	5.0		–	–	–	◪	65	0.13	4.0		–	–	–
	M8340	3.2	■	240	0.18	5.0	■	140	0.16	5.0	◪	225	0.18	5.0		–	–	–	◪	60	0.13	4.0		–	–	–
	M9325	3.2	■	325	0.18	5.0		–	–	–	■	305	0.18	5.0		–	–	–		–	–	–		–	–	–
ADMX 160640SR-M	**M6330**	4.0	■	225	0.18	5.0	■	155	0.16	5.0		–	–	–		–	–	–	◪	65	0.13	4.0		–	–	–
	M8330	4.0	■	265	0.18	5.0	■	155	0.16	5.0	■	250	0.18	5.0		–	–	–	◪	65	0.13	4.0		–	–	–
	M8340	4.0	■	240	0.18	5.0	■	140	0.16	5.0	◪	225	0.18	5.0		–	–	–	◪	60	0.13	4.0		–	–	–
ADMX 160650SR-M	**M8330**	5.0	■	265	0.18	5.0	■	155	0.16	5.0	■	250	0.18	5.0		–	–	–	◪	65	0.13	4.0		–	–	–
	M8340	5.0	■	240	0.18	5.0	■	140	0.16	5.0	◪	225	0.18	5.0		–	–	–	◪	60	0.13	4.0		–	–	–
			R geometry with positive design for medium to less stable machining conditions.																								
ADMX 160608PR-R	**8215**	0.8	■	205	0.25	6.0	◪	120	0.23	6.0	■	190	0.25	6.0		–	–	–	◪	50	0.20	4.8	◪	40	0.15	1.0
	M5315	0.8	◪	260	0.25	6.0		–	–	–	■	245	0.25	6.0		–	–	–		–	–	–	◪	50	0.15	1.0
	M8310	0.8	■	220	0.25	6.0	◪	110	0.23	6.0	■	205	0.25	6.0		–	–	–		–	–	–	◪	40	0.15	1.0
	M8330	0.8	■	205	0.25	6.0	◪	120	0.23	6.0	■	190	0.25	6.0		–	–	–	◪	50	0.20	4.8	◪	40	0.15	1.0
	M8340	0.8	■	190	0.25	6.0	◪	110	0.23	6.0	◪	180	0.25	6.0		–	–	–	◪	45	0.20	4.8		–	–	–
	M9315	0.8	■	265	0.25	6.0		–	–	–	■	250	0.25	6.0		–	–	–		–	–	–	◪	50	0.15	1.0
	M9325	0.8	■	250	0.25	6.0		–	–	–	■	235	0.25	6.0		–	–	–		–	–	–	◪	50	0.15	1.0
ADMX 160616PR-R	**M5315**	1.6	◪	290	0.25	6.0		–	–	–	■	275	0.25	6.0		–	–	–		–	–	–	◪	55	0.15	1.0
	M8330	1.6	■	225	0.25	6.0	◪	135	0.23	6.0	■	210	0.25	6.0		–	–	–	◪	55	0.20	4.8	◪	45	0.15	1.0
	M8340	1.6	■	210	0.25	6.0	◪	125	0.23	6.0	◪	195	0.25	6.0		–	–	–	◪	50	0.20	4.8		–	–	–
	M9315	1.6	■	295	0.25	6.0		–	–	–	■	280	0.25	6.0		–	–	–		–	–	–	◪	55	0.15	1.0
	M9325	1.6	■	275	0.25	6.0		–	–	–	■	260	0.25	6.0		–	–	–		–	–	–	◪	55	0.15	1.0
			 MF geometry with highly positive design for finish machining.																								
ADMX 160608SR-MF	**M6330**	0.8	■	215	0.08	4.0	■	150	0.07	4.0		–	–	–		–	–	–	■	60	0.06	3.2		–	–	–
	M8340	0.8	■	225	0.08	4.0	■	135	0.07	4.0		–	–	–		–	–	–	■	55	0.06	3.2		–	–	–
	M9340	0.8	■	305	0.08	4.0	■	180	0.07	4.0		–	–	–		–	–	–	■	75	0.06	3.2		–	–	–

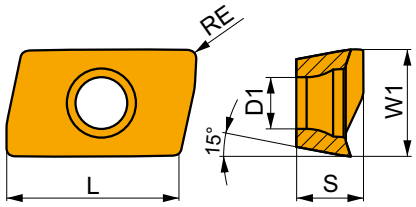
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
MM geometry with highly positive design for light to medium machining.																				
ADMX 160604SR-MM	**M6330**	0.4	145	0.18	4.0	105	0.16	4.0	–	–	–	–	–	–	40	0.14	3.2	–	–	–
	M8340	0.4	160	0.18	4.0	95	0.16	4.0	–	–	–	–	–	–	40	0.14	3.2	–	–	–
ADMX 160608SR-MM	**M6330**	0.8	175	0.18	4.0	125	0.16	4.0	–	–	–	–	–	–	50	0.14	3.2	–	–	–
	M8340	0.8	190	0.18	4.0	110	0.16	4.0	–	–	–	–	–	–	45	0.14	3.2	–	–	–
	M8345	0.8	150	0.18	4.0	90	0.16	4.0	–	–	–	–	–	–	35	0.14	3.2	–	–	–
	M9340	0.8	235	0.18	4.0	140	0.16	4.0	–	–	–	–	–	–	55	0.14	3.2	–	–	–
ADMX 160616SR-MM	**M6330**	1.6	195	0.18	4.0	140	0.16	4.0	–	–	–	–	–	–	55	0.14	3.2	–	–	–
	M8340	1.6	210	0.18	4.0	125	0.16	4.0	–	–	–	–	–	–	50	0.14	3.2	–	–	–
	M8345	1.6	165	0.18	4.0	95	0.16	4.0	–	–	–	–	–	–	40	0.14	3.2	–	–	–
	M9340	1.6	260	0.18	4.0	155	0.16	4.0	–	–	–	–	–	–	65	0.14	3.2	–	–	–

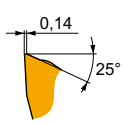
ADEX 16

PRAMET

	W1	D1	L	S
	[mm]	[mm]	[mm]	[mm]
1606	9.950	4.50	16.00	6.25

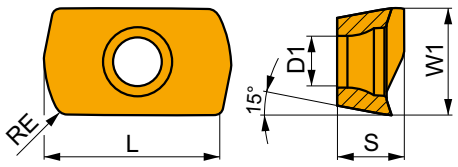


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

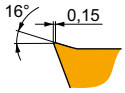
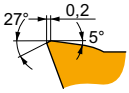
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
FM geometry with highly positive design for medium machining.																				
ADEX 160608SR-FM	**8215**	0.8	260	0.16	2.0	155	0.14	2.0	245	0.16	2.0	–	–	–	65	0.11	1.6	–	–	–
	M8330	0.8	255	0.16	2.0	150	0.14	2.0	240	0.16	2.0	–	–	–	60	0.11	1.6	–	–	–
	M8340	0.8	235	0.16	2.0	140	0.14	2.0	220	0.16	2.0	–	–	–	55	0.11	1.6	–	–	–

ADEX 16-HF

	W1	D1	L	S
	[mm]	[mm]	[mm]	[mm]
1606	9.950	4.50	16.00	5.88

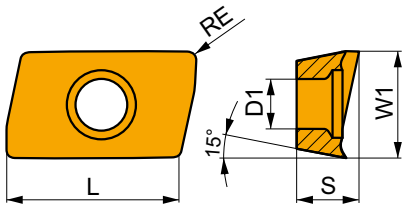


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

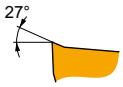
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
			HFC S																	
			HF geometry with highly positive design for high feed machining.																	
ADEX 160612SR-HF	**8215**	1.2	■ 195	1.00	0.6	◪ 115	0.90	0.6	–	–	–	–	–	–	–	–	–	–	–	–
	M8310	1.2	■ 205	1.00	0.6	◪ 100	0.77	0.6	–	–	–	–	–	–	–	–	–	–	–	–
	M8330	1.2	■ 200	1.00	0.6	◪ 120	0.90	0.6	–	–	–	–	–	–	–	–	–	–	–	–
	M8340	1.2	■ 185	1.00	0.6	◪ 110	0.90	0.6	–	–	–	–	–	–	–	–	–	–	–	–
	M9340	1.2	■ 195	1.00	0.6	◪ 115	0.90	0.6	–	–	–	–	–	–	–	–	–	–	–	–
			HFC S																	
			HF2 geometry with positive design for high feed machining.																	
ADEX 160612SR-HF2	**M8310**	1.2	■ 225	0.70	0.6	◪ 110	0.63	0.6	◪ 210	0.70	0.6	–	–	–	–	–	–	◪ 45	0.15	1.0
	M8330	1.2	■ 215	0.70	0.6	◪ 125	0.63	0.6	◪ 200	0.70	0.6	–	–	–	◪ 50	0.63	0.5	◪ 40	0.15	1.0
	M8340	1.2	■ 205	0.70	0.6	◪ 120	0.63	0.6	◪ 190	0.70	0.6	–	–	–	◪ 50	0.63	0.5	–	–	–
	M9325	1.2	■ 245	0.70	0.6	–	–	–	◪ 230	0.70	0.6	–	–	–	–	–	–	◪ 45	0.15	1.0
	M9340	1.2	■ 215	0.70	0.6	◪ 125	0.63	0.6	–	–	–	–	–	–	◪ 50	0.63	0.5	–	–	–

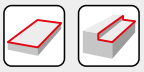
ADEX 16-FA

	W1	D1	L	S
	[mm]	[mm]	[mm]	[mm]
1606	9.950	4.50	16.00	6.17



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

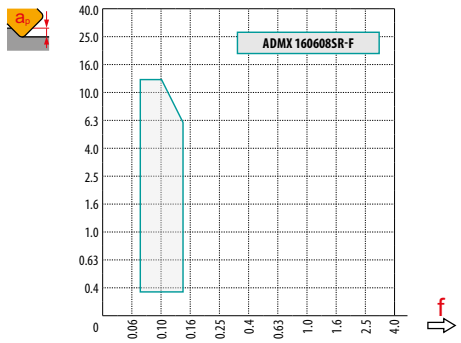
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
			FA geometry with highly positive design for fine-finish to medium machining.																	
ADEX 160604FR-FA	**HF7**	0.4	–	–	–	–	–	–	–	–	–	■ 195	0.28	6.0	–	–	–	–	–	–
	M0315	0.4	–	–	–	–	–	–	–	–	–	■ 480	0.28	6.0	–	–	–	–	–	–
ADEX 160608FR-FA	**HF7**	0.8	–	–	–	–	–	–	–	–	–	■ 240	0.28	6.0	–	–	–	–	–	–
	M0315	0.8	–	–	–	–	–	–	–	–	–	■ 570	0.28	6.0	–	–	–	–	–	–
ADEX 160616FR-FA	**HF7**	1.6	–	–	–	–	–	–	–	–	–	■ 255	0.28	6.0	–	–	–	–	–	–
	M0315	1.6	–	–	–	–	–	–	–	–	–	■ 630	0.28	6.0	–	–	–	–	–	–
ADEX 160630FR-FA	**HF7**	3.0	–	–	–	–	–	–	–	–	–	■ 270	0.28	6.0	–	–	–	–	–	–

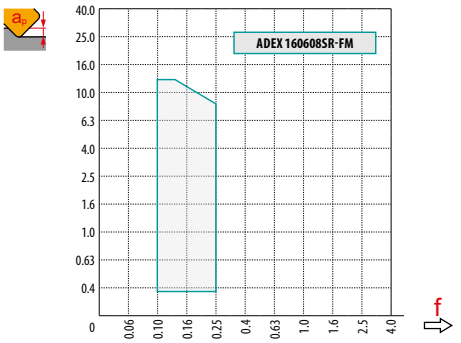


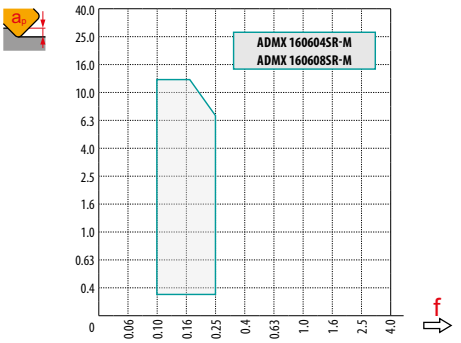
a_e/DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ X.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ X.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

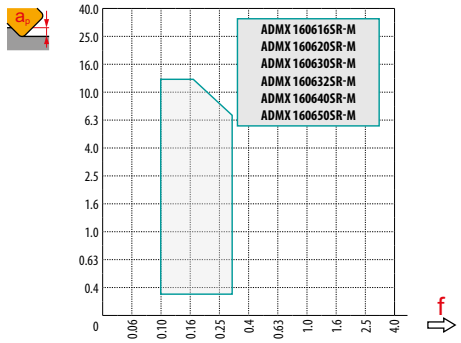
	ADMX 16-F	ADEX 16-FM	ADMX 16-M								ADMX 16-R	
RE	0.8	0.8	0.4	0.8	1.6	2.0	3.0	3.2	4.0	5.0	0.8	1.6
BS	2.99	2.18	3.39	2.99	1.62	1.23	0.28	0.09	2.69	1.52	2.99	1.62

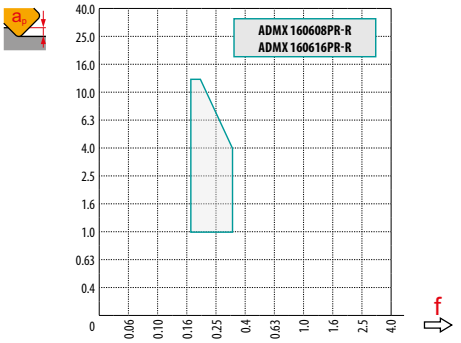
	ADMX 16-MF	ADMX 16-MM			ADEX 16-HF	ADEX 16-HF2	ADEX 16-FA			
RE	0.8	0.4	0.8	1.6	1.2	1.2	0.4	0.8	1.6	3.0
BS	2.99	3.39	2.99	1.62	0.52	0.52	2.84	2.44	1.65	0.69

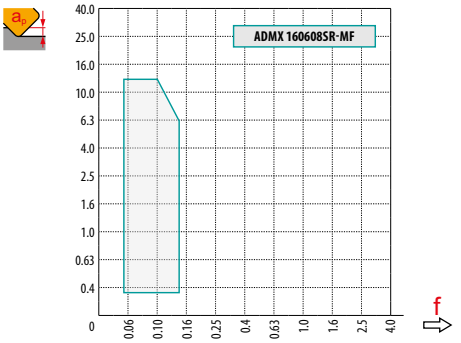


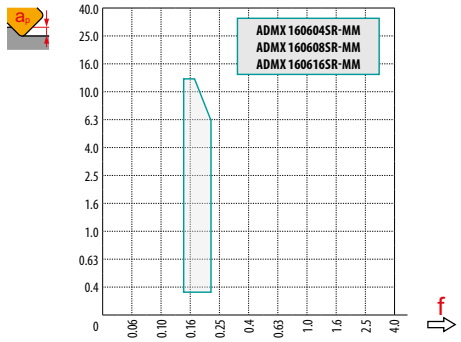


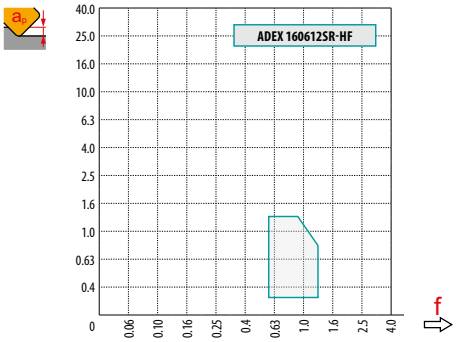


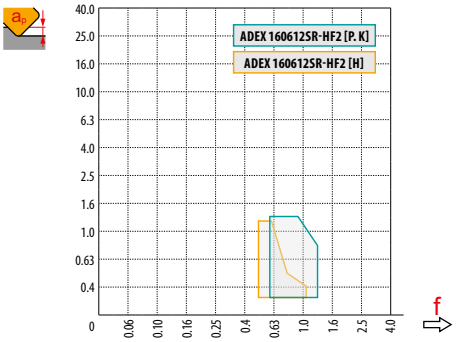


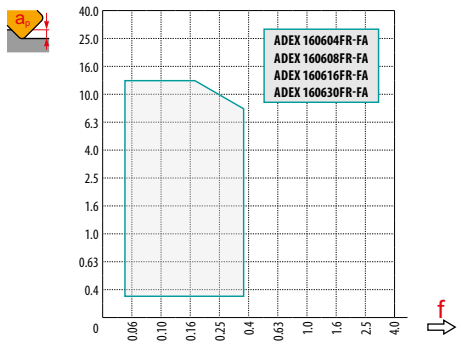












7.5

a_p	1.0	6.0	13.0
1 f	0.28	0.19	0.10

			HFC		
DC	RPMX	APMX/l	RPMX *	RPMX **	APMX/l
25	12.5	13.0/60	4.0	8.0	1.3/19
32	7.5	13.0/100	2.0	7.5	1.3/38
40	5.0	8.6/100	1.2	4.5	1.3/65
50	3.5	6.0/100	0.8	3.0	1.3/100
63	2.5	4.2/100	0.5	2.0	0.8/100
80	2.0	3.3/100	0.4	1.5	0.6/100

* HFC milling
** Conventional milling

DC	DMIN	DMAX	SMAX DMIN	SMAX DMAX	HFC DMIN	HFC DMAX	HFC SMAX DMIN	HFC SMAX DMAX
25	42.0	50.0	10.0	12.5	42.0	50.0	1.3	1.3
32	55.0	64.0	6.5	9.0	55.0	64.0	1.3	1.3
40	72.0	80.0	5.0	8.0	72.0	80.0	1.3	1.3
50	92.0	100.0	4.5	6.0	92.0	100.0	1.3	1.3
63	118.0	126.0	4.0	5.0	118.0	126.0	1.3	1.3
80	136.0	160.0	1.5	2.0	136.0	160.0	1.3	1.3

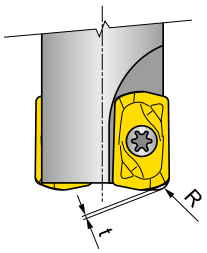
a_p

2.5

DC	µm 3	5	10	15	20	30	40	50	60	80	100
25	0.548	0.707	1.000	1.225	1.414	1.732	2.000	2.236	2.449	2.828	3.162
32	0.620	0.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578
40	0.693	0.894	1.265	1.549	1.789	2.191	2.530	2.828	3.098	3.578	4.000
50	0.775	1.000	1.414	1.732	2.000	2.449	2.828	3.162	3.464	4.000	4.472
63	0.869	1.122	1.587	1.944	2.245	2.750	3.175	3.550	3.888	4.490	5.020
80	0.980	1.265	1.789	2.191	2.530	3.098	3.578	4.000	4.382	5.060	5.657

RE	µm 3	5	10	15	20	30	40	50	60	80	100
1.6	0.196	0.253	0.358	0.438	0.506	0.620	0.716	0.800	0.876	1.012	1.131
2.0	0.219	0.283	0.400	0.490	0.566	0.693	0.800	0.894	0.980	1.131	1.265
3.0	0.268	0.346	0.490	0.600	0.693	0.849	0.980	1.095	1.200	1.386	1.549
3.2	0.277	0.358	0.506	0.620	0.716	0.876	1.012	1.131	1.239	1.431	1.600
4.0	0.310	0.400	0.566	0.693	0.800	0.980	1.131	1.265	1.386	1.600	1.789
5.0	0.346	0.447	0.632	0.775	0.894	1.095	1.265	1.414	1.549	1.789	2.000

ADMX/ADEX 16	R
ADMX 160630SR-M	2.5
ADMX 160632SR-M	2.5
ADMX 160640SR-M	4.0
ADMX 160650SR-M	4.5
ADEX 160612SR-HF	3.0
ADEX 160612SR-HF2	3.0



ADEX 16	R	t
ADEX 160612SR-HF	2.59	0.56
ADEX 160612SR-HF2	2.48	0.57

SAP10D

P M K N S

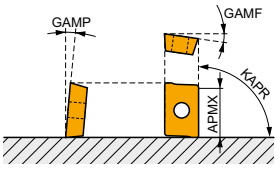
PRAMET

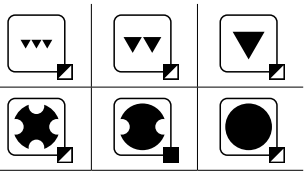
S

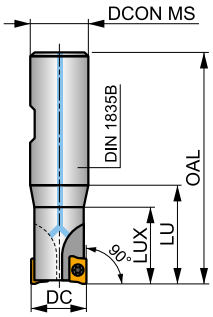
Square Shoulder Mill for APKT 10 Insert with Internal Coolant

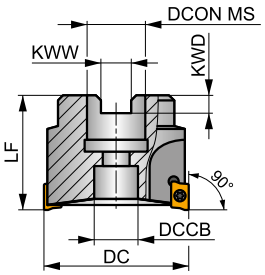
90° end and shell mills utilising positive APKT 10 style insert with APMX of 9 mm. Suitable for face, shoulder, slot, helical, trochoidal, ramping and plunge milling. Available in weldon and arbor (with differential tooth pitch) style, in Ø10 up to Ø63 mm. Body treated for longer tool life.

KAPR	90°
APMX	9.0 mm









h_m 0.08 - 0.16

h_m 0.06 - 0.13

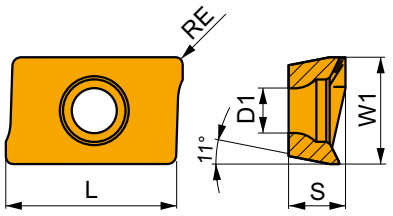
	Product	DC [mm]	OAL [mm]	DCON MS [mm]	DCCB [mm]	LU [mm]	LUX [mm]	LF [mm]	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg		
DIN 1835B	**10A1R020B16-SAP10D-C**	10	78	16	–	30	20	–	–	–	12	2	1	–	39000	✓	0.09	GI081	SQ215
	12A1R027B16-SAP10D-C	12	75	16	–	27	–	–	–	–	12	2	1	–	35600	✓	0.10	GI081	SQ210
	14A1R027B16-SAP10D-C	14	75	16	–	27	–	–	–	–	12	2	1	–	32900	✓	0.13	GI081	SQ210
	16A2R032B16-SAP10D-C	16	80	16	–	32	–	–	–	–	12	4	2	–	30800	✓	0.12	GI081	SQ210
	18A2R032B20-SAP10D-C	18	82	20	–	32	–	–	–	–	12	4	2	–	29100	✓	0.15	GI081	SQ210
	20A3R032B20-SAP10D-C	20	82	20	–	32	–	–	–	–	12	4	3	–	27600	✓	0.15	GI081	SQ210
	25A3R042B25-SAP10D-C	25	98	25	–	42	–	–	–	–	12	4	3	–	24700	✓	0.36	GI081	SQ210
ISO 6462 DIN 8030	**40A6R-S90AP10D**	40	40	16	14	40	–	–	8.4	5.6	8	3	6	✓	19500	–	0.23	GI081	SQ211
	50A7R-S90AP10D	50	40	22	18	40	–	–	10.4	6.3	8	3	7	✓	17400	–	0.41	GI081	SQ211
	63A9R-S90AP10D	63	50	22	18	40	–	–	10.4	6.3	8	3	9	✓	15500	–	0.57	GI081	SQ211

GI081	APKT 1003..

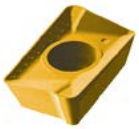
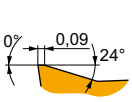
		Nm					
SQ210	US 2506-T07P	1.2	M 2.5	6.3	–	–	Flag T07P
SQ211	US 2506-T07P	1.2	M 2.5	6.3	D-T07P/T09P	FG-15	–
SQ215	US 2505-T07P	1.2	M 2.5	5.2	–	–	Flag T07P

APKT 10

	W1	D1	L	S
	[mm]	[mm]	[mm]	[mm]
1003	6.700	2.88	11.00	3.50

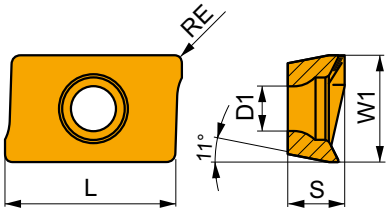


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

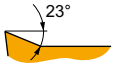
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
			M geometry with highly positive design for light to medium machining.																	
APKT 1003PDER-M	**8215**	0.5	■	285	0.12	4.0	◪	170	0.11	4.0	■	270	0.12	4.0	–	–	–	◪	70	0.11	3.2	–	–	–
	M8330	0.5	■	285	0.12	4.0	◪	170	0.11	4.0	■	270	0.12	4.0	–	–	–	◪	70	0.11	3.2	–	–	–
	M8340	0.5	■	255	0.12	4.0	◪	150	0.11	4.0	◪	240	0.12	4.0	–	–	–	◪	60	0.11	3.2	–	–	–
	M9315	0.5	■	400	0.12	4.0		–	–	–	■	380	0.12	4.0	–	–	–		–	–	–	–	–	–
	M9325	0.5	■	360	0.12	4.0		–	–	–	■	340	0.12	4.0	–	–	–		–	–	–	–	–	–
	M9340	0.5	■	335	0.12	4.0	◪	200	0.11	4.0		–	–	–	–	–	–	◪	80	0.11	3.2	–	–	–

APKT 10-FA

	W1	D1	L	S
	[mm]	[mm]	[mm]	[mm]
1003	6.700	2.88	11.00	3.50

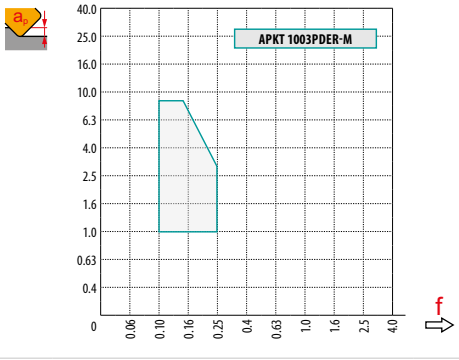


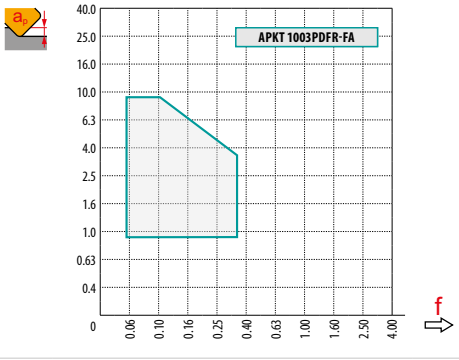
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
			FA geometry with highly positive design for fine-finish to medium machining.																	
APKT 1003PDFR-FA	**HF7**	0.5	–	–	–	–	–	–	–	–	–	■	300	0.18	5.0	–	–	–	–	–	–

a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	APKT 10-M	APKT 10-FA
RE	0.5	0.5
BS	0.84	0.84





max
4.5

a_p	1.0	3.0	5.0
f	0.20	0.13	0.10

DC	RPMX	APMX/I
10	7.3	9.0/72
12	6.2	9.0/84
14	5.3	9.0/99
16	2.4	4.0/100
18	2.3	3.9/100
20	2.2	3.7/100
25	2.2	3.7/100
32	1.6	2.6/100

DC	DMIN	DMAX	SMAX DMIN	SMAX DMAX
10	11.0	20.0	0.4	3.8
12	13.0	24.0	0.3	3.9
14	17.5	28.0	1.0	3.9
16	20.5	32.0	0.6	2.0
18	23.8	36.0	0.7	2.2
20	27.2	40.0	0.9	2.4
25	37.9	50.0	1.6	3.0
32	50.9	64.0	1.7	2.8

a_p
0.3

SAP16D

P M K N S

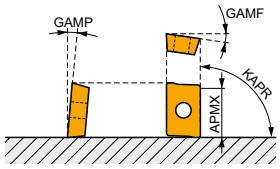
PRAMET

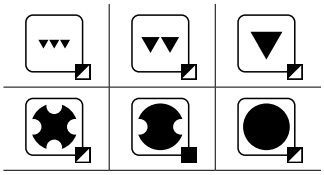
S

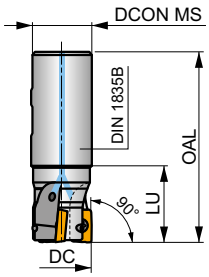
Square Shoulder Mill for APKT 16 Insert with Internal Coolant

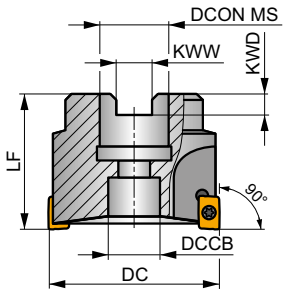
90° end and shell mills utilising positive APKT 16 style insert with APMX of 13 mm. Suitable for face, shoulder, slot, helical, trochoidal, ramping and plunge milling. Available in Weldon and arbor (with differential tooth pitch) style, in Ø25 up to Ø160 mm. Body treated for longer tool life.

KAPR	90°
APMX	13.0 mm

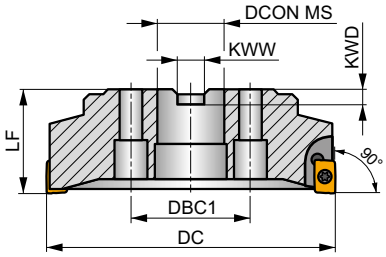




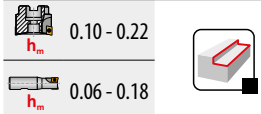




DC 40 – 125 mm



DC 160 mm



	Product	DC [mm]	OAL [mm]	DCON MS [mm]	DCCB [mm]	DBC1 [mm]	LU [mm]	LF [mm]	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg			
DIN 1835B	**25A2R042B25-SAP16D-C**	25	98	25	–	–	42	–	–	–	0	6	2	–	16800	✓	0.31	GI080	SQ030	–
	32A3R040B32-SAP16D-C	32	100	32	–	–	50	–	–	–	0	8	3	–	14800	✓	0.51	GI080	SQ220	–
	40A3R050B32-SAP16D-C	40	110	32	–	–	50	–	–	–	0	8	3	–	13200	✓	0.65	GI080	SQ220	–
	40A4R050B32-SAP16D-C	40	110	32	–	–	50	–	–	–	0	8	4	–	13200	✓	0.67	GI080	SQ220	–
ISO 6462 DIN 8030	**40A4R-S90AP16D**	40	40	16	11	–	–	40	8.4	5.6	0	6	4	✓	13200	–	0.23	GI080	SQ031	–
	50A5R-S90AP16D	50	40	22	18	–	–	40	10.4	6.3	0	6	5	✓	11800	–	0.33	GI080	SQ031	–
	63A6R-S90AP16D	63	40	22	18	–	–	40	10.4	6.3	0	6	6	✓	10600	–	0.50	GI080	SQ031	–
	80B5R-S90AP16D	80	50	27	38	–	–	50	12.4	7	0	6	5	✓	9400	–	0.97	GI080	SQ031	AC001
	80B7R-S90AP16D	80	50	27	38	–	–	50	12.4	7	0	6	7	✓	9400	–	1.07	GI080	SQ031	AC001
	100B6R-S90AP16D	100	50	32	45	–	–	50	14.4	8	0	6	6	✓	8400	–	1.60	GI080	SQ031	AC002
	100B8R-S90AP16D	100	50	32	45	–	–	50	14.4	8	0	6	8	✓	8400	–	1.50	GI080	SQ031	AC002
	125B9R-S90AP16D	125	63	40	56	–	–	63	16.4	9	0	6	9	✓	7500	–	2.80	GI080	SQ031	AC003
	160C10R-S90AP16D	160	63	40	–	66.7	–	63	16.4	9	0	6	10	✓	6600	–	5.12	GI080	SQ031	–

GI080	APKT 1604..	APET 1604..

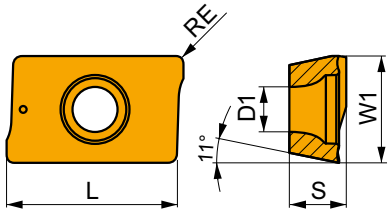
		Nm					
SQ030	US 4008-T15P	3.5	M 4	8	–	–	Flag T15P
SQ031	US 4011-T15P	3.5	M 4	10.6	D-T08P/T15P	FG-15	–
SQ220	US 4011-T15P	3.5	M 4	10.6	–	–	Flag T15P

AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

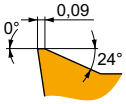
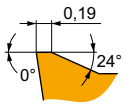
APKT 16

PRAMET

	W1 [mm]	D1 [mm]	L [mm]	S [mm]
1604	9.440	4.60	17.00	5.67



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

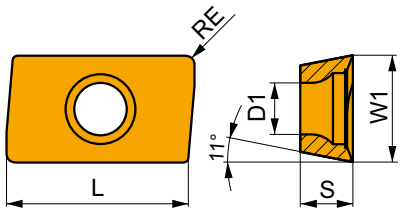
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																				
APKT 1604PDR-GM	**M8330**	0.8	235	0.20	8.0	140	0.18	8.0	220	0.20	8.0	–	–	–	55	0.16	6.4	–	–	–
	M8340	0.8	210	0.20	8.0	125	0.18	8.0	195	0.20	8.0	–	–	–	50	0.16	6.4	–	–	–
	M9315	0.8	310	0.20	8.0	–	–	–	290	0.20	8.0	–	–	–	–	–	–	–	–	–
	M9325	0.8	285	0.20	8.0	–	–	–	270	0.20	8.0	–	–	–	–	–	–	–	–	–
	M9340	0.8	260	0.20	8.0	155	0.18	8.0	–	–	–	–	–	–	65	0.16	6.4	–	–	–
																				
APKT 160404-HM	**M8340**	0.4	160	0.30	6.0	95	0.27	6.0	150	0.30	6.0	–	–	–	40	0.24	4.8	–	–	–
APKT 160416-HM	**M8340**	1.6	210	0.30	6.0	125	0.27	6.0	195	0.30	6.0	–	–	–	50	0.24	4.8	–	–	–
APKT 160431-HM	**M8340**	3.1	220	0.30	6.0	130	0.27	6.0	205	0.30	6.0	–	–	–	55	0.24	4.8	–	–	–
APKT 1604PDR-HM	**8215**	0.8	220	0.30	6.0	130	0.27	6.0	205	0.30	6.0	–	–	–	55	0.24	4.8	–	–	–
	M5315	0.8	270	0.30	6.0	–	–	–	255	0.30	6.0	–	–	–	–	–	–	–	–	–
	M8330	0.8	220	0.30	6.0	130	0.27	6.0	205	0.30	6.0	–	–	–	55	0.24	4.8	–	–	–
	M8340	0.8	200	0.30	6.0	120	0.27	6.0	190	0.30	6.0	–	–	–	50	0.24	4.8	–	–	–
	M9315	0.8	275	0.30	6.0	–	–	–	260	0.30	6.0	–	–	–	–	–	–	–	–	–
	M9325	0.8	260	0.30	6.0	–	–	–	245	0.30	6.0	–	–	–	–	–	–	–	–	–

GM geometry with highly positive design for light to medium machining.

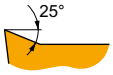
HM geometry with highly positive design for medium and less stable machining conditions.

APET 16-FA

	W1	D1	L	S
	[mm]	[mm]	[mm]	[mm]
1604	9.600	4.50	17.00	4.76



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

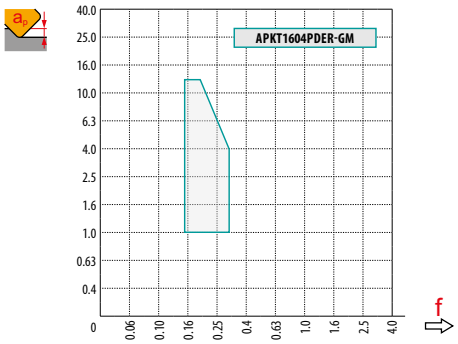
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				

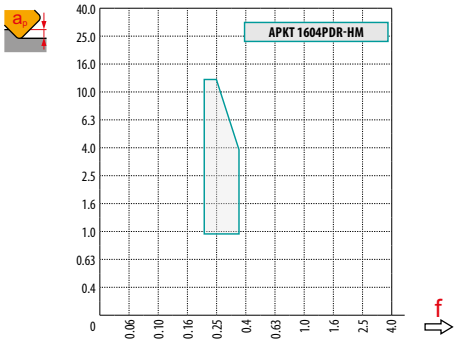
FA geometry with highly positive design for fine-finish to medium machining.

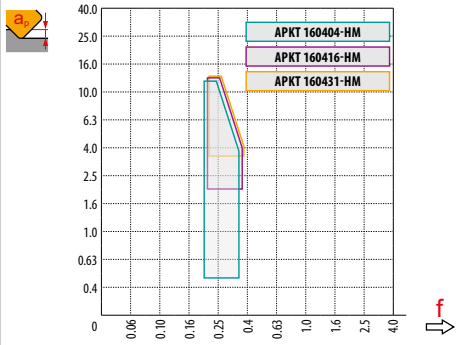
APET 160408FR-FA	**HF7**	0.8	–	–	–	–	–	–	–	–	–	255	0.24	8.0	–	–	–	–	–	–

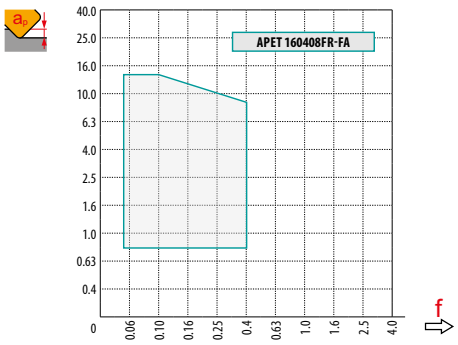
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	APKT 16-GM	APKT 16-HM				APET 16-FA
RE	0.8	0.8	0.4	1.6	3.1	0.8
BS	1.39	1.48	1.87	0.64	1.30	1.59









max
7.4

a_p	1.0	6.0	13.0
f	0.28	0.19	0.13

DC	DMIN	DMAX	SMAX / DMIN	SMAX / DMAX
25	34.7	50.0	1.2	3.1
32	48.5	64.0	0.9	1.7
40	63.5	80.0	1.3	2.2
50	83.5	100.0	0.9	1.4
63	110.0	126.0	1.0	1.4
80	144.0	160.0	1.1	1.3

DC	RPMX	APMX/I
25	2.3	3.9/100
32	1.0	1.6/100
40	1.0	1.6/100
50	0.5	0.7/100
63	0.4	0.5/100
80	0.3	0.4/100

a_p
0.2

STN10

P M K N S

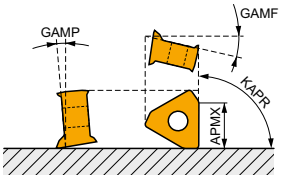
PRAMET

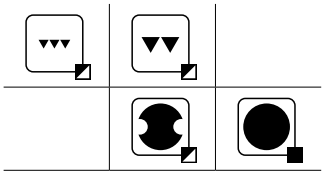
S

ECON TN10 Square Shoulder Mill with Internal Coolant

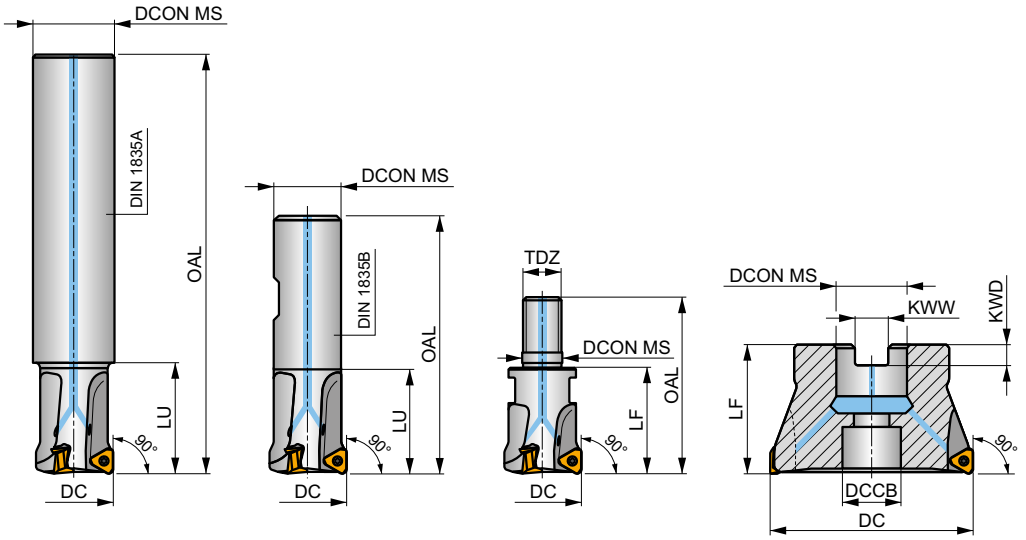
90° end and shell mills utilising double sided TNGX 10 insert with 6 cutting edges and APMX of 5 mm. Suitable for a wide range of applications. Available in cylindrical, weldon, modular and arbor style, in Ø18 up to Ø80 mm, with or without differential tooth pitch. Body treated for longer tool life.

KAPR	90°
APMX	5.0 mm





ECON TN



h_m 0.03 - 0.08

h_m 0.03 - 0.06

	Product	DC [mm]	OAL [mm]	DCON MS [mm]	DCCB [mm]	LU [mm]	LF [mm]	TDZ	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg			
	18A2R050A20-STN10-C	18	180	20	–	50	–	–	–	–	-17.1	-11	2	–	29100	✓	0.40	GI292	SQ300	–
	20A2R029A20-STN10-C	20	150	20	–	29	–	–	–	–	-16.5	-11	2	–	27600	✓	0.35	GI292	SQ300	–
	20A3R029A20-STN10-C	20	150	20	–	29	–	–	–	–	-16.5	-11	3	–	27600	✓	0.34	GI292	SQ300	–
	22A3R050A25-STN10-C	22	180	25	–	50	–	–	–	–	-16.5	-11	3	–	26300	✓	0.59	GI292	SQ300	–
DIN 1835A	**25A3R034A25-STN10-C**	25	170	25	–	34	–	–	–	–	-16	-11	3	–	24700	✓	0.58	GI292	SQ300	–
	25A4R034A25-STN10-C	25	170	25	–	34	–	–	–	–	-16	-11	4	✓	24700	✓	0.59	GI292	SQ300	–
	30A4R050A32-STN10-C	30	200	32	–	50	–	–	–	–	-16	-11	4	✓	22500	✓	1.07	GI292	SQ300	–
	32A4R037A32-STN10-C	32	195	32	–	37	–	–	–	–	-16	-11	4	✓	21800	✓	1.09	GI292	SQ300	–
	32A5R037A32-STN10-C	32	195	32	–	37	–	–	–	–	-16	-11	5	✓	21800	✓	1.09	GI292	SQ300	–
	35A5R080A32-STN10-C	35	200	32	–	80	–	–	–	–	-16	-11	5	✓	20800	✓	0.08	GI292	SQ300	–
	20A2R032B20-STN10-C	20	90	20	–	32	–	–	–	–	-16.5	-11	2	–	27600	✓	0.20	GI292	SQ300	–
	20A3R032B20-STN10-C	20	90	20	–	32	–	–	–	–	-16.5	-11	3	–	27600	✓	0.20	GI292	SQ300	–
DIN 1835B	**25A3R042B25-STN10-C**	25	100	25	–	42	–	–	–	–	-16	-11	3	–	24700	✓	0.31	GI292	SQ300	–
	25A4R042B25-STN10-C	25	100	25	–	42	–	–	–	–	-16	-11	4	✓	24700	✓	0.31	GI292	SQ300	–
	32A4R042B32-STN10-C	32	110	32	–	42	–	–	–	–	-16	-11	4	✓	21800	✓	0.57	GI292	SQ300	–
	32A5R042B32-STN10-C	32	110	32	–	42	–	–	–	–	-16	-11	5	✓	21800	✓	0.56	GI292	SQ300	–
	20A2R026M10-STN10-C	20	45	10.5	–	–	26	M10	–	–	-16.5	-11	2	–	–	✓	0.07	GI292	SQ300	–
	20A3R026M10-STN10-C	20	45	10.5	–	–	26	M10	–	–	-16.5	-11	3	–	–	✓	0.07	GI292	SQ300	–
MODULAR	**25A3R033M12-STN10-C**	25	55	12.5	–	–	33	M12	–	–	-16	-11	3	–	–	✓	0.10	GI292	SQ300	–
	25A4R033M12-STN10-C	25	55	12.5	–	–	33	M12	–	–	-16	-11	4	✓	–	✓	0.11	GI292	SQ300	–
	32A4R043M16-STN10-C	32	66	17	–	–	43	M16	–	–	-16	-11	4	✓	–	✓	0.22	GI292	SQ300	–
	32A5R043M16-STN10-C	32	66	17	–	–	43	M16	–	–	-16	-11	5	✓	–	✓	0.22	GI292	SQ300	–
	40A04R-S90TN10-C	40	–	16	14	–	40	–	8.4	5.6	-15	-11	4	✓	19500	✓	0.35	GI292	SQ302	–
	40A06R-S90TN10-C	40	–	16	14	–	40	–	8.4	5.6	-15	-11	6	✓	19500	✓	0.34	GI292	SQ302	–
ISO 6462 DIN 8030	**50A05R-S90TN10-C**	50	–	22	18	–	40	–	10.4	6.3	-15	-11	5	✓	17400	✓	0.49	GI292	SQ303	–
	50A07R-S90TN10-C	50	–	22	18	–	40	–	10.4	6.3	-15	-11	7	✓	17400	✓	0.50	GI292	SQ303	–
	63A06R-S90TN10-C	63	–	22	18	–	40	–	10.4	6.3	-15	-11	6	✓	15500	✓	0.63	GI292	SQ303	–

	Product	DC [mm]	OAL [mm]	DCON MS [mm]	DCCB [mm]	LU [mm]	LF [mm]	TDZ	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg			
ISO 6462 DIN 8030	**63A09R-S90TN10-C**	63	–	22	18	–	40	–	10.4	6.3	-15	-11	9	✓	15500	✓	0.64	GI292	SQ303	–
	80A10R-S90TN10-C	80	–	27	38	–	50	–	12.4	7	-15	-11	10	✓	13800	✓	1.11	GI292	SQ301	AC001

GI292	TNGX 1004..

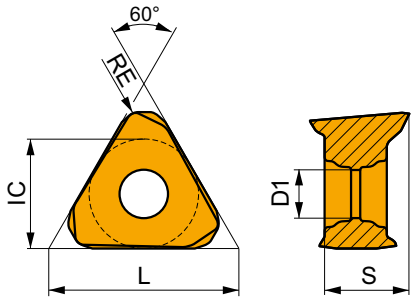
		Nm						
SQ300	US 52506-T07P	0.8	M 2.5	6	–	–	Flag T07P	–
SQ301	US 52506-T07P	0.8	M 2.5	6	D-T07P/T09P	FG-15	–	–
SQ302	US 52506-T07P	0.8	M 2.5	6	D-T07P/T09P	FG-15	–	HS 0830C
SQ303	US 52506-T07P	0.8	M 2.5	6	D-T07P/T09P	FG-15	–	HS 1030C

AC001	KS 1230	K.FMH27

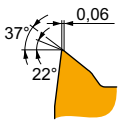
TNGX 10

PRAMET

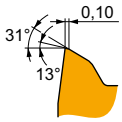
	IC [mm]	D1 [mm]	L [mm]	S [mm]
1004	6.000	2.80	10.39	4.69



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			S																	
F geometry with highly positive design for light machining.																				
TNGX 100402SR-F	**M8330**	0.2	205	0.09	2.0	120	0.08	2.0	190	0.09	2.0	–	–	–	–	–	–	–	–	–
	M8340	0.2	190	0.09	2.0	110	0.08	2.0	180	0.09	2.0	–	–	–	–	–	–	–	–	–
TNGX 100404SR-F	**8215**	0.4	225	0.09	2.0	135	0.08	2.0	210	0.09	2.0	–	–	–	–	–	–	–	–	–
	M6330	0.4	190	0.09	2.0	135	0.08	2.0	–	–	–	–	–	–	–	–	–	–	–	–
	M8330	0.4	220	0.09	2.0	130	0.08	2.0	205	0.09	2.0	–	–	–	–	–	–	–	–	–
	M8340	0.4	200	0.09	2.0	120	0.08	2.0	190	0.09	2.0	–	–	–	–	–	–	–	–	–
	M9340	0.4	270	0.09	2.0	160	0.08	2.0	–	–	–	–	–	–	–	–	–	–	–	–
TNGX 100408SR-F	**8215**	0.8	270	0.09	2.0	160	0.08	2.0	255	0.09	2.0	–	–	–	–	–	–	–	–	–
	M6330	0.8	225	0.09	2.0	160	0.08	2.0	–	–	–	–	–	–	–	–	–	–	–	–
	M8330	0.8	260	0.09	2.0	155	0.08	2.0	245	0.09	2.0	–	–	–	–	–	–	–	–	–
	M8340	0.8	240	0.09	2.0	140	0.08	2.0	225	0.09	2.0	–	–	–	–	–	–	–	–	–
	M9340	0.8	320	0.09	2.0	190	0.08	2.0	–	–	–	–	–	–	–	–	–	–	–	–

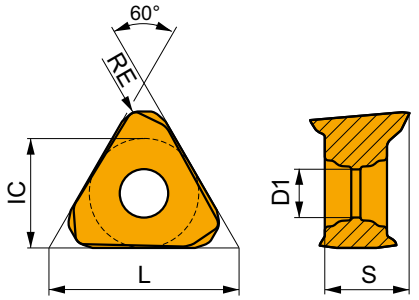
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
			M geometry with positive design for light to medium machining.																	
TNGX 100404SR-M	**8215**	0.4	205	0.13	2.0	120	0.12	2.0	190	0.13	2.0	–	–	–	50	0.09	1.6	–	–	–
	M6330	0.4	175	0.13	2.0	125	0.12	2.0	–	–	–	–	–	–	50	0.09	1.6	–	–	–
	M8330	0.4	205	0.13	2.0	120	0.12	2.0	190	0.13	2.0	–	–	–	50	0.09	1.6	–	–	–
	M8340	0.4	185	0.13	2.0	110	0.12	2.0	175	0.13	2.0	–	–	–	45	0.09	1.6	–	–	–
	M8345	0.4	150	0.13	2.0	90	0.12	2.0	–	–	–	–	–	–	35	0.09	1.6	–	–	–
	M9340	0.4	240	0.13	2.0	140	0.12	2.0	–	–	–	–	–	–	60	0.09	1.6	–	–	–
TNGX 100408SR-M	**8215**	0.8	245	0.13	2.0	145	0.12	2.0	230	0.13	2.0	–	–	–	60	0.09	1.6	–	–	–
	M6330	0.8	210	0.13	2.0	150	0.12	2.0	–	–	–	–	–	–	60	0.09	1.6	–	–	–
	M8310	0.8	270	0.13	2.0	135	0.12	2.0	255	0.13	2.0	–	–	–	–	–	–	–	–	–
	M8330	0.8	245	0.13	2.0	145	0.12	2.0	230	0.13	2.0	–	–	–	60	0.09	1.6	–	–	–
	M8340	0.8	220	0.13	2.0	130	0.12	2.0	205	0.13	2.0	–	–	–	55	0.09	1.6	–	–	–
	M8345	0.8	180	0.13	2.0	105	0.12	2.0	–	–	–	–	–	–	45	0.09	1.6	–	–	–
	M9340	0.8	285	0.13	2.0	170	0.12	2.0	–	–	–	–	–	–	70	0.09	1.6	–	–	–
TNGX 100412SR-M	**M8330**	1.2	255	0.13	2.0	150	0.12	2.0	240	0.13	2.0	–	–	–	60	0.09	1.6	–	–	–
	M8340	1.2	230	0.13	2.0	135	0.12	2.0	215	0.13	2.0	–	–	–	55	0.09	1.6	–	–	–
TNGX 100416SR-M	**M8310**	1.6	300	0.13	2.0	150	0.12	2.0	285	0.13	2.0	–	–	–	–	–	–	–	–	–
	M8330	1.6	270	0.13	2.0	160	0.12	2.0	255	0.13	2.0	–	–	–	65	0.09	1.6	–	–	–
	M8340	1.6	245	0.13	2.0	145	0.12	2.0	230	0.13	2.0	–	–	–	60	0.09	1.6	–	–	–

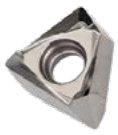
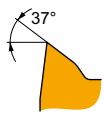
TNGX 10-FA

PRAMET

	IC	D1	L	S
	[mm]	[mm]	[mm]	[mm]
1004	6.000	2.80	10.39	4.69

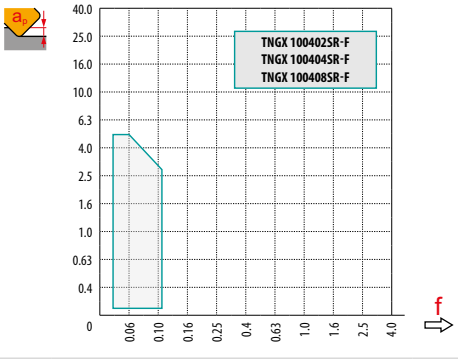


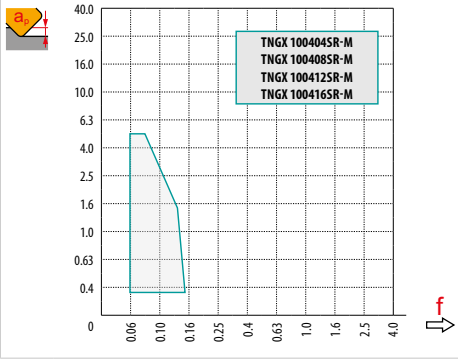
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

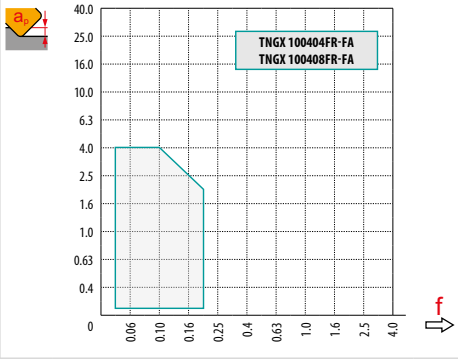
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
			FA geometry with highly positive design for fine-finish to medium machining.																	
TNGX 100404FR-FA	**HF7**	0.4	–	–	–	–	–	–	–	–	–	345	0.10	1.5	–	–	–	–	–	–
	M0315	0.4	–	–	–	–	–	–	–	–	–	780	0.10	1.5	–	–	–	–	–	–
TNGX 100408FR-FA	**HF7**	0.8	–	–	–	–	–	–	–	–	–	345	0.10	1.5	–	–	–	–	–	–
	M0315	0.8	–	–	–	–	–	–	–	–	–	780	0.10	1.5	–	–	–	–	–	–

a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨X.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨X.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	TNGX 10-F			TNGX 10-M		TNGX 10-FA	
RE	0.2	0.4	0.8	0.4	0.8	0.4	0.8
BS	1.53	1.34	0.92	1.34	0.92	1.33	0.93







max
1.5

a_p	1.0	3.0	5.0
1 ⇨f	0.10	0.08	0.04

a_p
0.2

DC	RPMX	APMX/l
18	1.80	3.05/100
20	1.60	2.70/100
22	1.20	2.00/100
25	1.00	1.70/100
30	0.90	1.45/100
32	0.80	1.30/100
35	0.65	1.0/100
40	0.60	0.90/100
50	0.50	0.70/100
63	0.40	0.50/100
80	0.25	0.30/100

DC	DMIN	DMAX	SMAX DMIN	SMAX DMAX
18	33	36	1.2	1.2
20	37	40	1.2	1.2
22	41	44	1.0	1.0
25	47	50	1.0	1.0
30	57	60	1.0	1.0
32	61	64	1.0	1.0
35	67	70	0.9	0.9
40	77	80	0.9	0.9
50	97	100	0.9	0.9
63	123	126	0.9	0.9
80	157	160	0.9	0.9

STN16

P M K N S

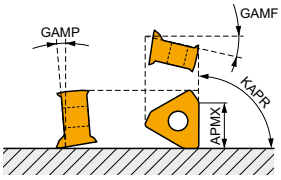
PRAMET

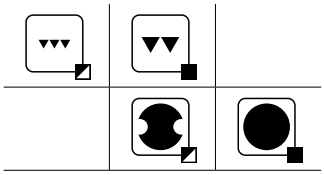
S

ECON TN16 Square Shoulder Mill with Internal Coolant

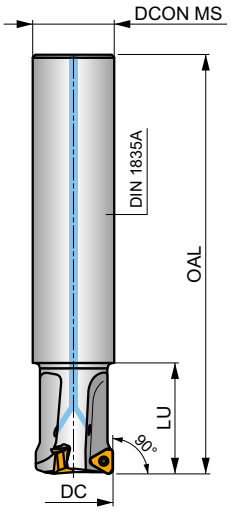
90° end and shell mills utilising double sided TNGX 16 inserts with 6 cutting edges and APMX of 10 mm. Suitable for a wide range of applications. Available in cylindrical, weldon, modular and arbor (with differential tooth pitch) style, in Ø25 up to Ø175 mm. Body treated for longer tool life.

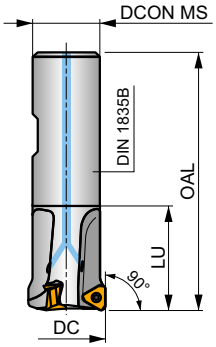
KAPR	90°
APMX	10.0 mm

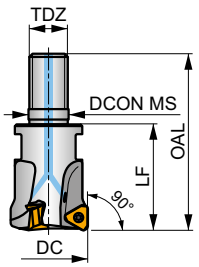


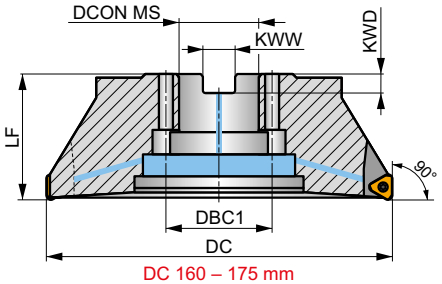


ECON TN

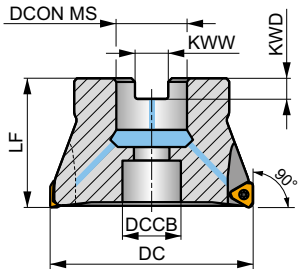








DC 160 – 175 mm



DC 40 – 140 mm

h_m 0.03 - 0.15

h_m 0.03 - 0.13

	Product	DC [mm]	OAL [mm]	DCON MS [mm]	DCCB [mm]	DBC1 [mm]	LU [mm]	LF [mm]	TDZ	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg		
DIN 1835A	25A2R034A25-STN16-C	25	170	25	–	–	34	–	–	–	–	-18.5	-9.5	2	–	20000	✓	0.54	GI340	C0382
	32A2R034A32-STN16-C	32	195	32	–	–	34	–	–	–	–	-16	-9.5	2	–	17500	✓	1.05	GI340	C0382
	25A2R080A25-STN16-C	25	170	25	–	–	80	–	–	–	–	-18.5	-9.5	2	–	20000	✓	0.48	GI340	C0382
	32A2R080A32-STN16-C	32	195	32	–	–	80	–	–	–	–	-16	-9.5	2	–	17500	✓	0.96	GI340	C0382
	32A3R034A32-STN16-C	32	195	32	–	–	34	–	–	–	–	-16	-9.5	3	–	17500	✓	1.04	GI340	C0382
	35A3R034A32-STN16-C	35	195	32	–	–	34	–	–	–	–	-16	-9.5	3	–	17000	✓	1.07	GI340	C0382
DIN 1835B	25A2R042B25-STN16-C	25	55	25	–	–	42	–	–	–	–	-18.5	-9.5	2	–	20000	✓	0.30	GI340	C0382
	32A3R042B32-STN16-C	32	110	32	–	–	42	–	–	–	–	-16	-9.5	3	–	17500	✓	0.52	GI340	C0382
	40A4R050B32-STN16-C	40	120	32	–	–	50	–	–	–	–	-16	-9.5	4	–	16000	✓	0.67	GI340	C0382
MODULAR	25A2R033M12-STN16-C	25	55	12.5	–	–	–	33	M12	–	–	-18.5	-9.5	2	–	20000	✓	0.08	GI340	C0382
	32A2R043M16-STN16-C	32	66	17	–	–	–	43	M16	–	–	-16	-9.5	2	–	17500	✓	0.18	GI340	C0382
	32A3R043M16-STN16-C	32	66	17	–	–	–	43	M16	–	–	-16	-9.5	3	–	17500	✓	0.17	GI340	C0382
	40A3R043M16-STN16-C	40	66	17	–	–	–	43	M16	–	–	-16	-9.5	3	–	16000	✓	0.20	GI340	C0382
	40A4R043M16-STN16-C	40	66	17	–	–	–	43	M16	–	–	-16	-9.5	4	–	16000	✓	0.21	GI340	C0382
ISO 6462 DIN 8030	40A03R-S90TN16-C	40	40	16	12.4	–	–	40	–	8.4	5.6	-16	-9.5	3	–	16000	✓	0.20	GI340	C0384
	40A04R-S90TN16-C	40	40	16	12.4	–	–	40	–	8.4	5.6	-16	-9.5	4	–	16000	✓	0.20	GI340	C0384
	50A04R-S90TN16-C	50	40	22	18.1	–	–	40	–	10.4	6.3	-16	-9.5	4	✓	14000	✓	0.34	GI340	C0386
	50A05R-S90TN16-C	50	40	22	18.1	–	–	40	–	10.4	6.3	-16	-9.5	5	✓	14000	✓	0.32	GI340	C0386
	63A04R-S90TN16-C	63	40	22	18.1	–	–	40	–	10.4	6.3	-16	-9.5	4	✓	12500	✓	0.47	GI340	C0386
	63A06R-S90TN16-C	63	40	22	18.1	–	–	40	–	10.4	6.3	-16	-9.5	6	✓	12500	✓	0.48	GI340	C0386
	80A05R-S90TN16-C	80	50	27	22.1	–	–	50	–	12.4	7	-16	-9.5	5	✓	11000	✓	1.02	GI340	C0388
	80A07R-S90TN16-C	80	50	27	22.1	–	–	50	–	12.4	7	-16	-9.5	7	✓	11000	✓	1.05	GI340	C0388
	100A06R-S90TN16-C	100	50	32	45.1	–	–	50	–	14.4	8	-16	-9.5	6	✓	10000	✓	1.79	GI340	C0390
	100A08R-S90TN16-C	100	50	32	45.1	–	–	50	–	14.4	8	-16	-9.5	8	✓	10000	✓	1.66	GI340	C0390
	115A06R-S90TN16-C	115	50	32	45.1	–	–	50	–	14.4	8	-16	-9.5	6	✓	9500	✓	2.04	GI340	C0390
	125A07R-S90TN16-C	125	63	40	56.1	–	–	63	–	16.4	9	-16	-9.5	7	✓	9000	✓	3.05	GI340	C0390
	125A09R-S90TN16-C	125	63	40	56.1	–	–	63	–	16.4	9	-16	-9.5	9	✓	9000	✓	3.14	GI340	C0390

	Product	DC [mm]	OAL [mm]	DCON MS [mm]	DCCB [mm]	DBC1 [mm]	LU [mm]	LF [mm]	TDZ	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg		
ISO 6462 DIN 8030	**140A08R-S90TN16-C**	140	63	40	56.1	–	–	63	–	16.4	9	-16	-9.5	8	✓	8500	✓	3.69	GI340	C0390
	160C10R-S90TN16-C	160	63	40	–	66.7	–	63	–	16.4	9.2	-16	-9.5	10	✓	8000	✓	5.16	GI340	C0394
	175C10R-S90TN16-C	175	63	40	–	66.7	–	63	–	16.4	9.2	-16	-9.5	10	✓	7500	✓	5.99	GI340	C0394

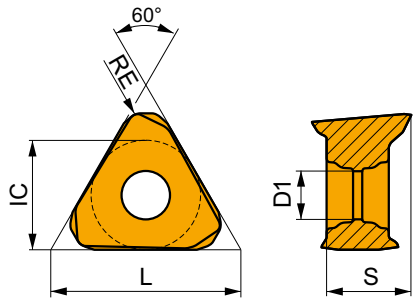
GI340	TNGX1606..

		Nm								
C0382	US 44010-T15P	3.5	M 4	10	–	–	Flag T15P	–	–	–
C0384	US 44010-T15P	3.5	M 4	10	D-T08P/T15P	FG-15	–	HS 90835	–	–
C0386	US 44010-T15P	3.5	M 4	10	D-T08P/T15P	FG-15	–	HS 1030C	–	–
C0388	US 44010-T15P	3.5	M 4	10	D-T08P/T15P	FG-15	–	HS 1230C	–	–
C0390	US 44010-T15P	3.5	M 4	10	D-T08P/T15P	FG-15	–	–	–	–
C0394	US 44010-T15P	3.5	M 4	10	D-T08P/T15P	FG-15	–	HS 1240C	HSD 0825C	CAC 160C

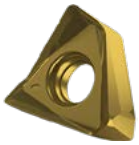
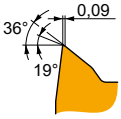
TNGX 16

PRAMET

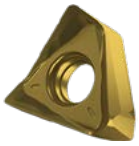
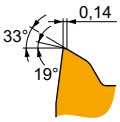
	IC [mm]	D1 [mm]	L [mm]	S [mm]
1606	9.525	4.40	16.50	6.58



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																				
			F geometry with highly positive design for light machining.																	
TNGX 160604SR-F	**M8330**	0.4	205	0.10	3.0	120	0.09	3.0	190	0.10	3.0	–	–	–	–	–	–	–	–	–
	M8340	0.4	190	0.10	3.0	110	0.09	3.0	180	0.10	3.0	–	–	–	–	–	–	–	–	–
TNGX 160608SR-F	**8215**	0.8	250	0.10	3.0	150	0.09	3.0	235	0.10	3.0	–	–	–	–	–	–	–	–	–
	M6330	0.8	215	0.10	3.0	150	0.09	3.0	–	–	–	–	–	–	–	–	–	–	–	–
	M8310	0.8	280	0.10	3.0	140	0.09	3.0	265	0.10	3.0	–	–	–	–	–	–	–	–	–
	M8330	0.8	245	0.10	3.0	145	0.09	3.0	230	0.10	3.0	–	–	–	–	–	–	–	–	–
	M8340	0.8	225	0.10	3.0	135	0.09	3.0	210	0.10	3.0	–	–	–	–	–	–	–	–	–

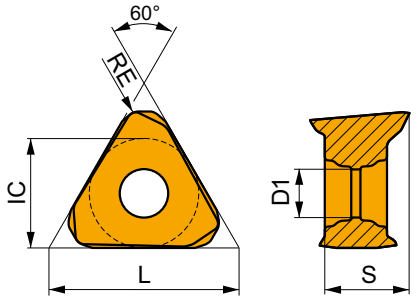
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
M geometry with positive design for light to medium machining.																				
TNGX 160604SR-M	**8215**	0.4	■ 190	0.15	3.0	◪ 110	0.14	3.0	◪ 180	0.15	3.0	–	–	–	◪ 45	0.11	2.4	–	–	–
	M6330	0.4	■ 165	0.15	3.0	◪ 115	0.14	3.0	–	–	–	–	–	–	◪ 45	0.11	2.4	–	–	–
	M8310	0.4	■ 205	0.15	3.0	◪ 100	0.14	3.0	◪ 190	0.15	3.0	–	–	–	–	–	–	–	–	–
	M8330	0.4	■ 190	0.15	3.0	◪ 110	0.14	3.0	◪ 180	0.15	3.0	–	–	–	◪ 45	0.11	2.4	–	–	–
	M8340	0.4	■ 170	0.15	3.0	◪ 100	0.14	3.0	◪ 160	0.15	3.0	–	–	–	◪ 40	0.11	2.4	–	–	–
TNGX 160608SR-M	**8215**	0.8	■ 230	0.15	3.0	◪ 135	0.14	3.0	◪ 215	0.15	3.0	–	–	–	◪ 55	0.11	2.4	–	–	–
	M6330	0.8	■ 195	0.15	3.0	◪ 135	0.14	3.0	–	–	–	–	–	–	◪ 55	0.11	2.4	–	–	–
	M8310	0.8	■ 245	0.15	3.0	◪ 120	0.14	3.0	◪ 230	0.15	3.0	–	–	–	–	–	–	–	–	–
	M8330	0.8	■ 225	0.15	3.0	◪ 135	0.14	3.0	◪ 210	0.15	3.0	–	–	–	◪ 55	0.11	2.4	–	–	–
	M8340	0.8	■ 205	0.15	3.0	◪ 120	0.14	3.0	◪ 190	0.15	3.0	–	–	–	◪ 50	0.11	2.4	–	–	–
	M8345	0.8	■ 160	0.15	3.0	◪ 95	0.14	3.0	–	–	–	–	–	–	◪ 40	0.11	2.4	–	–	–
	M9325	0.8	■ 285	0.15	3.0	–	–	–	◪ 270	0.15	3.0	–	–	–	–	–	–	–	–	–
	M9340	0.8	■ 260	0.15	3.0	◪ 155	0.14	3.0	–	–	–	–	–	–	◪ 65	0.11	2.4	–	–	–
TNGX 160612SR-M	**M8330**	1.2	■ 235	0.15	3.0	◪ 140	0.14	3.0	◪ 220	0.15	3.0	–	–	–	◪ 55	0.11	2.4	–	–	–
	M8340	1.2	■ 215	0.15	3.0	◪ 125	0.14	3.0	◪ 200	0.15	3.0	–	–	–	◪ 50	0.11	2.4	–	–	–
TNGX 160616SR-M	**M8310**	1.6	■ 275	0.15	3.0	◪ 140	0.14	3.0	◪ 260	0.15	3.0	–	–	–	–	–	–	–	–	–
	M8330	1.6	■ 250	0.15	3.0	◪ 150	0.14	3.0	◪ 235	0.15	3.0	–	–	–	◪ 60	0.11	2.4	–	–	–
	M8340	1.6	■ 225	0.15	3.0	◪ 135	0.14	3.0	◪ 210	0.15	3.0	–	–	–	◪ 55	0.11	2.4	–	–	–

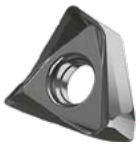
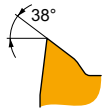
TNGX 16-FA

PRAMET

	IC	D1	L	S
	[mm]	[mm]	[mm]	[mm]
1606	9.525	4.40	16.50	6.58

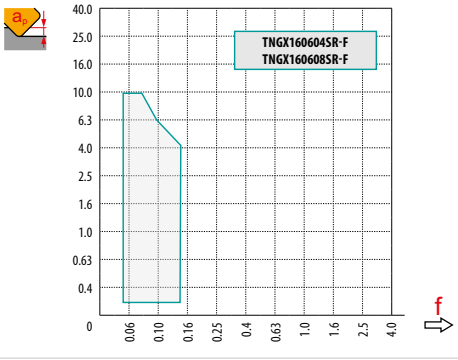


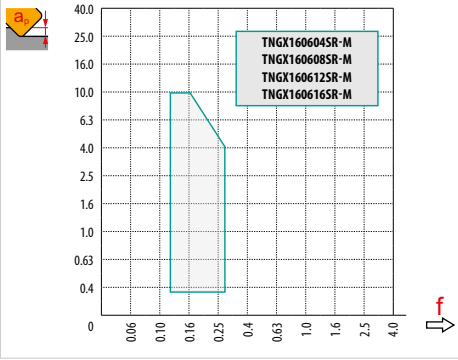
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

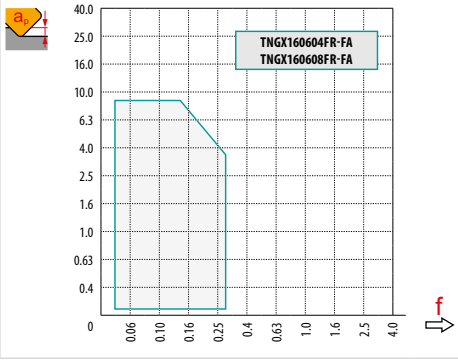
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
FA geometry with highly positive design for fine-finish to medium machining.																				
TNGX 160604FR-FA	**HF7**	0.4	–	–	–	–	–	–	–	–	–	■ 255	0.14	2.0	–	–	–	–	–	–
	M0315	0.4	–	–	–	–	–	–	–	–	–	■ 585	0.14	2.0	–	–	–	–	–	–
TNGX 160608FR-FA	**HF7**	0.8	–	–	–	–	–	–	–	–	–	■ 300	0.14	2.0	–	–	–	–	–	–
	M0315	0.8	–	–	–	–	–	–	–	–	–	■ 690	0.14	2.0	–	–	–	–	–	–

a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨X.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨X.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	TNGX 16-F		TNGX 16-M				TNGX 16-FA	
RE	0.4	0.8	0.4	0.8	1.2	1.6	0.4	0.8
BS	2.10	1.9	2.10	1.90	1.73	1.14	2.10	1.90



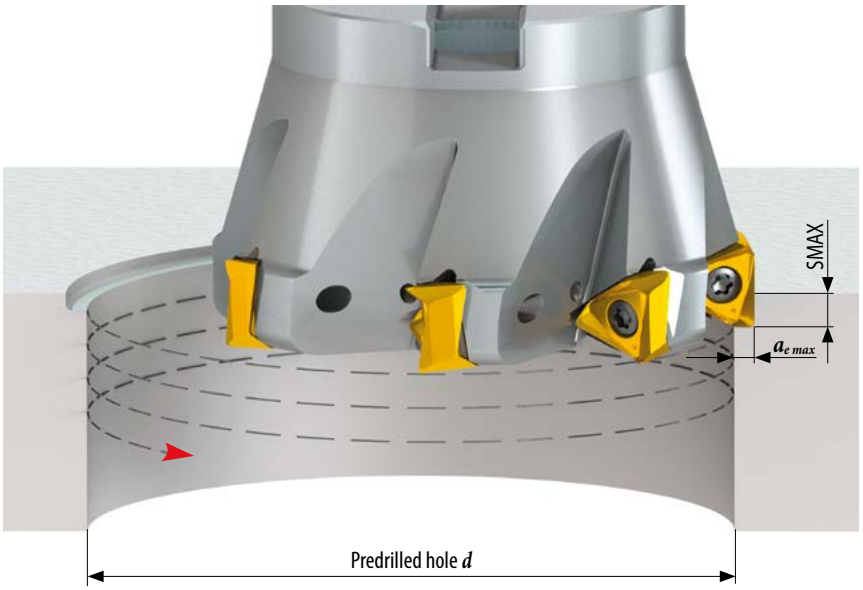




a_p	3.0	4.5	6.0
f	0.18	0.14	0.10

DC	min	d_{min} = DC *		d = 1.25 DC		d = 1.5 DC			d = 1.75 DC			d ≥ 2 DC		
		SMAX	$a_{e\,max}$		SMAX	$a_{e\,max}$		SMAX	$a_{e\,max}$		SMAX	$a_{e\,max}$		SMAX	$a_{e\,max}$
25	25	0.14	1.3	31	0.22	2.2	38	0.33	3.0	44	0.60	4.0	50	0.70	5.0
32	32	0.16	1.5	40	0.33	2.8	48	0.44	4.0	56	0.70	5.0	64	0.90	6.5
40	40	0.22	2.0	50	0.38	3.5	60	0.55	5.0	70	0.90	6.5	80	1.15	8.0
50	50	0.27	2.5	63	0.50	4.5	75	0.70	6.5	88	1.00	8.0	100	1.40	10.0
63	63	0.33	3.2	80	0.60	5.5	95	0.90	8.0	110	1.45	10.0	125	1.80	12.5
80	80	0.55	4.0	100	1.00	7.0	120	1.45	10.0	140	2.15	13.0	160	2.60	16.0
100	100	0.70	5.0	125	1.20	9.0	150	1.80	12.5	175	2.70	16.5	200	3.30	20.0
115	115	0.85	6.0	145	1.50	10.0	175	1.90	14.5	200	2.80	19.0	230	3.80	23.0
125	125	0.90	6.5	155	1.60	11.0	190	2.30	15.5	220	3.10	20.0	250	4.10	25.0
140	140	1.00	7.0	175	1.80	12.5	210	2.60	17.5	245	3.70	23.0	280	4.60	28.0
160	160	1.20	8.0	200	2.00	14.0	240	2.90	20.0	280	4.30	26.0	320	5.30	32.0
175	175	1.30	8.8	220	2.20	15.5	265	3.20	22.0	305	4.70	29.0	350	5.80	35.0

* Check feed rate reduction when hole diameter is between d_{min} - 1.5 DC.



SLN12

P M K N

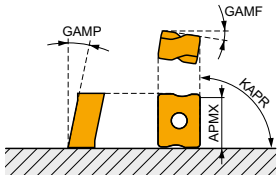
PRAMET

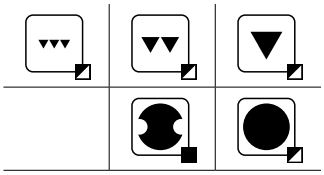
S

ECON LN12 Square Shoulder Mill with Internal Coolant

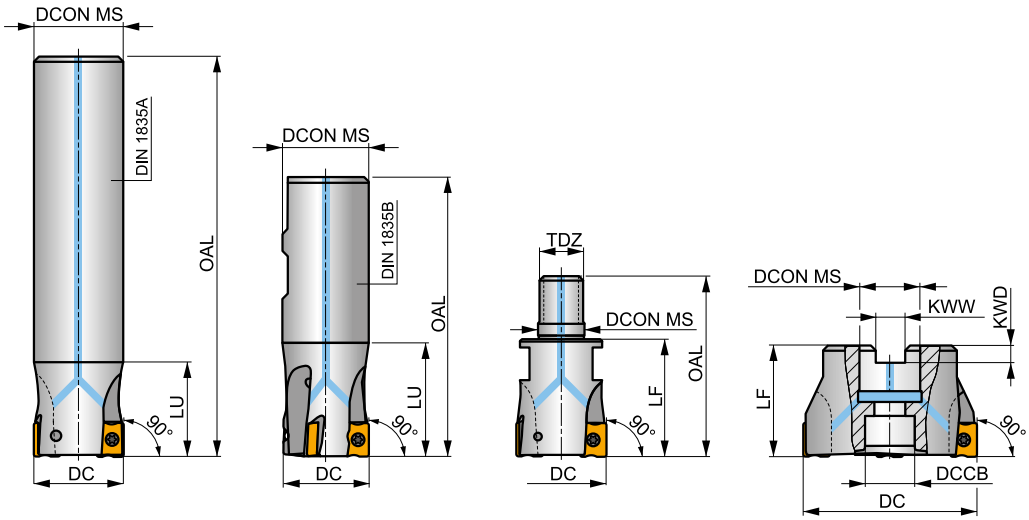
90° end and shell mills utilising double sided LN.. 12 inserts with APMX of 9 mm. Suitable for a wide range of applications. Available in cylindrical, Weldon, modular and arbor (with differential tooth pitch) style, in Ø25 up to Ø125 mm. Body treated for longer tool life.

KAPR	90°
APMX	9.0 mm





ECON LN



h_m	0.06 - 0.15
h_m	0.06 - 0.13

	Product	DC [mm]	OAL [mm]	DCON MS [mm]	DCCB [mm]	LU [mm]	LF [mm]	TDZ	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg			
DIN 1835A	25A2R034A25-SLN12-C	25	170	25	–	34	–	–	–	–	-23	-8	2	–	19500	✓	0.58	GI205	SQ340	–
	25A2R080A25-SLN12-C	25	170	25	–	80	–	–	–	–	-23	-8	2	–	19500	✓	0.51	GI205	SQ340	–
	32A2R034A32-SLN12-C	32	195	32	–	34	–	–	–	–	-15	-6	2	–	17300	✓	1.05	GI205	SQ340	–
	32A2R090A32-SLN12-C	32	195	32	–	90	–	–	–	–	-15	-6	2	–	17300	✓	0.98	GI205	SQ340	–
DIN 1835B	25A2R042B25-SLN12-C	25	99	25	–	42	–	–	–	–	-23	-8	2	–	19500	✓	0.30	GI205	SQ340	–
	32A3R042B32-SLN12-C	32	103	32	–	42	–	–	–	–	-15	-6	3	–	17300	✓	0.50	GI205	SQ340	–
	40A4R050B32-SLN12-C	40	111	32	–	50	–	–	–	–	-15	-6	4	✓	15500	✓	0.62	GI205	SQ340	–
MODULAR	25A2R033M12-SLN12-C	25	55	12.5	–	–	33	–	–	–	-22	-6	2	–	–	✓	0.12	GI205	SQ340	–
	32A2R043M16-SLN12-C	32	66	17	–	–	43	–	–	–	-15	-6	2	–	–	✓	0.22	GI205	SQ340	–
	32A3R043M16-SLN12-C	32	66	17	–	–	43	–	–	–	-15	-6	3	–	–	✓	0.23	GI205	SQ340	–
	40A3R043M16-SLN12-C	40	66	17	–	–	43	–	–	–	-15	-6	3	–	–	✓	0.30	GI205	SQ340	–
ISO 6462 DIN 8030	40A04R-S90LN12-C	40	–	16	14	–	40	–	8.4	5.6	-15	-6	4	✓	15500	✓	0.23	GI205	SQ342	–
	50A04R-S90LN12-C	50	–	22	18	–	40	–	10.4	6.3	-14.5	-6	4	✓	13800	✓	0.35	GI205	SQ343	–
	50A05R-S90LN12-C	50	–	22	18	–	40	–	10.4	6.3	-14.5	-6	5	✓	13800	✓	0.11	GI205	SQ343	–
	63A04R-S90LN12-C	63	–	22	18	–	40	–	10.4	6.3	-14	-6	4	✓	12300	✓	0.55	GI205	SQ343	–
	63A06R-S90LN12-C	63	–	22	18	–	40	–	10.4	6.3	-14	-6	6	✓	12300	✓	0.50	GI205	SQ343	–
	80A05R-S90LN12-C	80	–	27	38	–	50	–	12.4	7	-14	-6	5	✓	10900	✓	1.18	GI205	SQ341	AC001
	80A07R-S90LN12-C	80	–	27	38	–	50	–	12.4	7	-14	-6	7	✓	10900	✓	1.02	GI205	SQ341	AC001
	100A06R-S90LN12-C	100	–	32	45	–	50	–	14.4	8	-14	-6	6	✓	9800	✓	1.78	GI205	SQ341	AC002
	100A08R-S90LN12-C	100	–	32	45	–	50	–	14.4	8	-14	-6	8	✓	9800	✓	2.01	GI205	SQ341	AC002
	110A06R-S90LN12-C	110	–	32	45	–	50	–	14.4	8	-14	-6	6	✓	9300	✓	2.09	GI205	SQ341	AC002
	125A07R-S90LN12-C	125	–	40	56	–	63	–	16.4	9	-14	-6	7	✓	8700	✓	3.44	GI205	SQ341	AC003
	125A09R-S90LN12-C	125	–	40	56	–	63	–	16.4	9	-14	-6	9	✓	8700	✓	3.38	GI205	SQ341	AC003

GI205	LNGX 1205..	LNGU 1205..

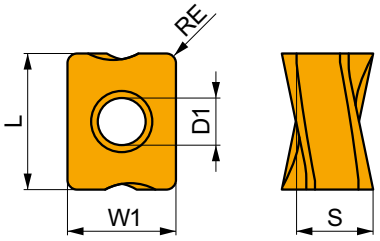
		Nm						
SQ340	US 44012-T15P	3.5	M 4	12	–	–	Flag T15P	–
SQ341	US 44012-T15P	3.5	M 4	12	D-T08P/T15P	FG-15	–	–
SQ342	US 44012-T15P	3.5	M 4	12	D-T08P/T15P	FG-15	–	HS 0830C
SQ343	US 44012-T15P	3.5	M 4	12	D-T08P/T15P	FG-15	–	HS 1030C

AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

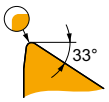
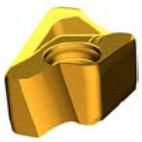
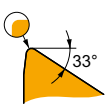
LNGX 12

PRAMET

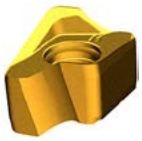
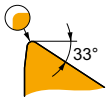
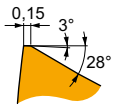
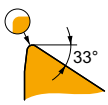
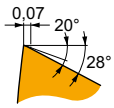
	W1 [mm]	D1 [mm]	L [mm]	S [mm]
1205	9.500	4.50	12.00	5.96



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]
																				
F geometry with highly positive design for light machining.																				
LNGX 120504ER-F	**8215**	0.4	200	0.15	1.5	–	–	–	190	0.15	1.5	–	–	–	–	–	–	–	–	–
	M8330	0.4	200	0.15	1.5	–	–	–	190	0.15	1.5	–	–	–	–	–	–	–	–	–
	M8340	0.4	180	0.15	1.5	–	–	–	170	0.15	1.5	–	–	–	–	–	–	–	–	–
LNGX 120508ER-F	**8215**	0.8	240	0.15	1.5	–	–	–	225	0.15	1.5	–	–	–	–	–	–	–	–	–
	M8310	0.8	260	0.15	1.5	–	–	–	245	0.15	1.5	–	–	–	–	–	–	–	–	–
	M8330	0.8	235	0.15	1.5	–	–	–	220	0.15	1.5	–	–	–	–	–	–	–	–	–
	M8340	0.8	215	0.15	1.5	–	–	–	200	0.15	1.5	–	–	–	–	–	–	–	–	–
																				
M geometry with positive design for light to medium machining.																				
LNGX 120504ER-M	**M8330**	0.4	185	0.15	3.0	–	–	–	175	0.15	3.0	–	–	–	–	–	–	–	–	–
	M8340	0.4	170	0.15	3.0	–	–	–	160	0.15	3.0	–	–	–	–	–	–	–	–	–
LNGX 120508ER-M	**8215**	0.8	220	0.15	3.0	–	–	–	205	0.15	3.0	–	–	–	–	–	–	–	–	–
	M8310	0.8	240	0.15	3.0	–	–	–	225	0.15	3.0	–	–	–	–	–	–	–	–	–
	M8330	0.8	220	0.15	3.0	–	–	–	205	0.15	3.0	–	–	–	–	–	–	–	–	–
	M8340	0.8	200	0.15	3.0	–	–	–	190	0.15	3.0	–	–	–	–	–	–	–	–	–
	M9315	0.8	300	0.15	3.0	–	–	–	285	0.15	3.0	–	–	–	–	–	–	–	–	–
	M9325	0.8	280	0.15	3.0	–	–	–	265	0.15	3.0	–	–	–	–	–	–	–	–	–
	M9340	0.8	250	0.15	3.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
LNGX 120510ER-M	**M8330**	1.0	230	0.15	3.0	–	–	–	215	0.15	3.0	–	–	–	–	–	–	–	–	–
	M8340	1.0	210	0.15	3.0	–	–	–	195	0.15	3.0	–	–	–	–	–	–	–	–	–

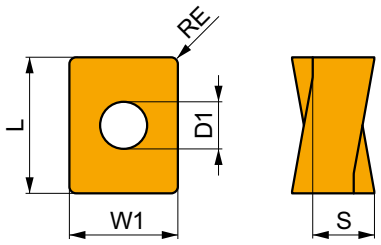
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
		[mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]
																				
			M geometry with positive design for light to medium machining.																	
LNGX 120512ER-M	**M8330**	1.2	230	0.15	3.0	–	–	–	215	0.15	3.0	–	–	–	–	–	–	–	–	–
	M8340	1.2	210	0.15	3.0	–	–	–	195	0.15	3.0	–	–	–	–	–	–	–	–	–
LNGX 120516ER-M	**M8330**	1.6	240	0.15	3.0	–	–	–	225	0.15	3.0	–	–	–	–	–	–	–	–	–
	M8340	1.6	220	0.15	3.0	–	–	–	205	0.15	3.0	–	–	–	–	–	–	–	–	–
LNGX 120520ER-M	**M8310**	2.0	280	0.15	3.0	–	–	–	265	0.15	3.0	–	–	–	–	–	–	–	–	–
	M8330	2.0	255	0.15	3.0	–	–	–	240	0.15	3.0	–	–	–	–	–	–	–	–	–
	M8340	2.0	230	0.15	3.0	–	–	–	215	0.15	3.0	–	–	–	–	–	–	–	–	–
																				
			R geometry with positive design for unstable cutting conditions.																	
LNGX 120508SR-R	**8215**	0.8	205	0.20	3.5	–	–	–	190	0.20	3.5	–	–	–	–	–	–	–	–	–
	M5315	0.8	265	0.20	3.5	–	–	–	250	0.20	3.5	–	–	–	–	–	–	–	–	–
	M8310	0.8	220	0.20	3.5	–	–	–	205	0.20	3.5	–	–	–	–	–	–	–	–	–
	M8330	0.8	205	0.20	3.5	–	–	–	190	0.20	3.5	–	–	–	–	–	–	–	–	–
	M8340	0.8	185	0.20	3.5	–	–	–	175	0.20	3.5	–	–	–	–	–	–	–	–	–
	M9315	0.8	265	0.20	3.5	–	–	–	250	0.20	3.5	–	–	–	–	–	–	–	–	–
	M9325	0.8	250	0.20	3.5	–	–	–	235	0.20	3.5	–	–	–	–	–	–	–	–	–
	M9340	0.8	225	0.20	3.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
LNGX 120516SR-R	**8215**	1.6	225	0.20	3.5	–	–	–	210	0.20	3.5	–	–	–	–	–	–	–	–	–
	M8330	1.6	225	0.20	3.5	–	–	–	210	0.20	3.5	–	–	–	–	–	–	–	–	–
	M8340	1.6	205	0.20	3.5	–	–	–	190	0.20	3.5	–	–	–	–	–	–	–	–	–
	M9325	1.6	275	0.20	3.5	–	–	–	260	0.20	3.5	–	–	–	–	–	–	–	–	–
																				
			MF geometry with highly positive design for light machining.																	
LNGX 120504ER-MF	**M6330**	0.4	175	0.15	1.0	125	0.14	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	M8340	0.4	190	0.15	1.0	110	0.14	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	M9340	0.4	240	0.15	1.0	140	0.14	1.0	–	–	–	–	–	–	–	–	–	–	–	–
LNGX 120508ER-MF	**M6330**	0.8	210	0.15	1.0	150	0.14	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	M8340	0.8	225	0.15	1.0	135	0.14	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	M9340	0.8	285	0.15	1.0	170	0.14	1.0	–	–	–	–	–	–	–	–	–	–	–	–
																				
			MM geometry with positive design for light to medium machining.																	
LNGX 120508SR-MM	**M6330**	0.8	190	0.15	2.8	135	0.14	2.8	–	–	–	–	–	–	–	–	–	–	–	–
	M8340	0.8	200	0.15	2.8	120	0.14	2.8	–	–	–	–	–	–	–	–	–	–	–	–
	M8345	0.8	160	0.15	2.8	95	0.14	2.8	–	–	–	–	–	–	–	–	–	–	–	–
	M9340	0.8	255	0.15	2.8	150	0.14	2.8	–	–	–	–	–	–	–	–	–	–	–	–

LNGU 12

PRAMET

	W1	D1	L	S
	[mm]	[mm]	[mm]	[mm]
1205	9.500	4.50	12.00	5.96



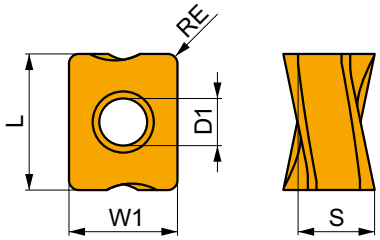
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
			M geometry with positive design for medium machining.																	
LNGU 120525ER-M	**M8330**	2.5	■ 255	0.15	3.0	–	–	–	■ 240	0.15	3.0	–	–	–	–	–	–	–	–	–
	M8340	2.5	■ 230	0.15	3.0	–	–	–	◪ 215	0.15	3.0	–	–	–	–	–	–	–	–	–
LNGU 120530ER-M	**M8330**	3.0	■ 255	0.15	3.0	–	–	–	■ 240	0.15	3.0	–	–	–	–	–	–	–	–	–
	M8340	3.0	■ 230	0.15	3.0	–	–	–	◪ 215	0.15	3.0	–	–	–	–	–	–	–	–	–

LNGX 12-FA

PRAMET

	W1	D1	L	S
	[mm]	[mm]	[mm]	[mm]
1205	9.500	4.50	12.00	5.96



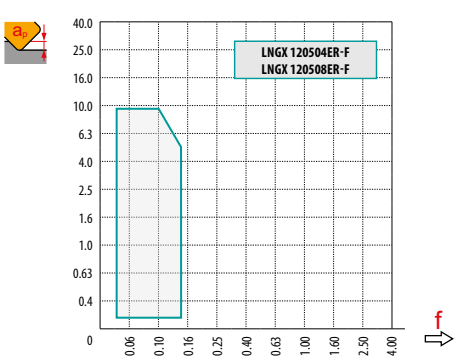
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

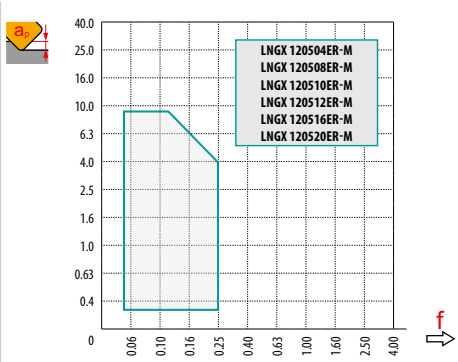
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
			FA geometry with highly positive design for fine-finish to medium machining.																	
LNGX 120504FR-FA	**HF7**	0.4	–	–	–	–	–	–	–	–	–	■ 270	0.30	2.0	–	–	–	–	–	–
LNGX 120508FR-FA	**HF7**	0.8	–	–	–	–	–	–	–	–	–	■ 315	0.30	2.0	–	–	–	–	–	–
	M0315	0.8	–	–	–	–	–	–	–	–	–	■ 720	0.30	2.0	–	–	–	–	–	–

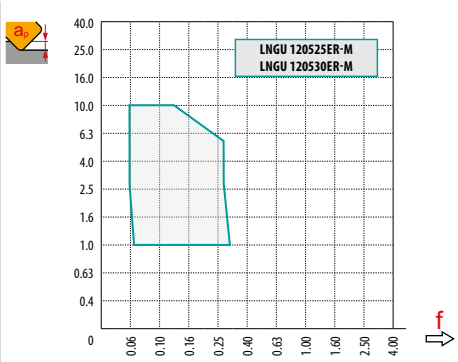
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ X.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ X.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

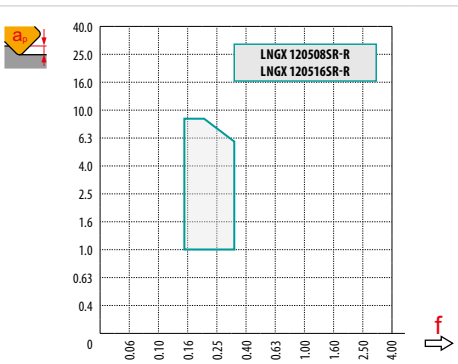
	LNGX 12-F		LNGX 12-M						LNGU 12-M	
RE	0.4	0.8	0.4	0.8	1.0	1.2	1.6	2.0	2.5	3.0
BS	2.29	1.89	2.29	1.89	1.69	1.49	1.09	0.68	0.87	0.36

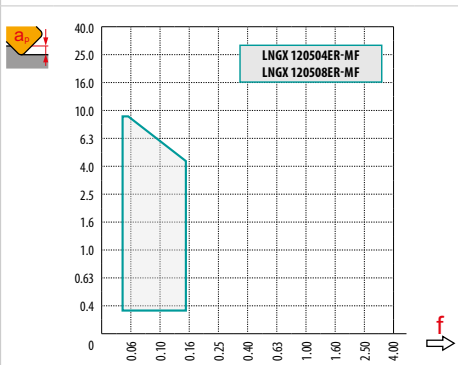
	LNGX 12-R		LNGX 12-MF		LNGX 12-MM	LNGX 12-FA	
RE	0.8	1.6	0.4	0.8	0.8	0.4	0.8
BS	1.88	1.08	2.28	1.88	1.88	2.30	1.89

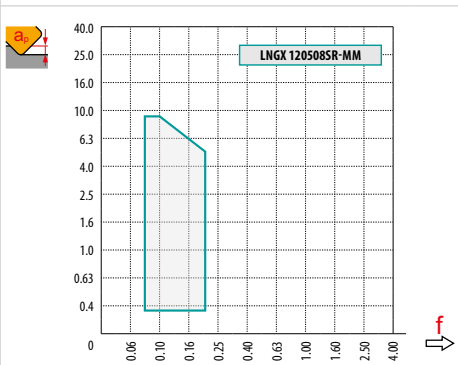


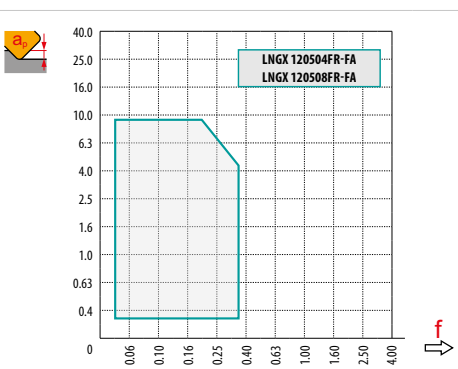












3.5

a_p	1.0	5.0	9.0
f	0.19	0.13	0.08

LNGX 12

DC	RPMX	APMX/l
25	1.3	2.1/100
32	0.7	1.1/100
40	0.5	0.7/100
50	0.4	0.5/100
63	0.2	0.3/100
80	0.2	0.2/100

LNGX 12

DC	DMIN	DMAX	SMAX DMIN	SMAX DMAX
25	35.0	50.0	0.7	1.7
32	49.0	64.0	0.6	1.2
40	65.0	80.0	0.6	1.0
50	85.0	100.0	0.7	1.0
63	111.0	126.0	0.6	0.8
80	145.0	160.0	0.7	0.8

0.2

DC	µm	3	5	10	15	20	30	40	50	60	80	100
25	FE	0.548	0.707	1.000	1.225	1.414	1.732	2.000	2.236	2.449	2.828	3.162
32		0.620	0.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578
40		0.693	0.894	1.265	1.549	1.789	2.191	2.530	2.828	3.098	3.578	4.000
50		0.775	1.000	1.414	1.732	2.000	2.449	2.828	3.162	3.464	4.000	4.472
63		0.869	1.122	1.587	1.944	2.245	2.750	3.175	3.550	3.888	4.490	5.020
80		0.980	1.265	1.789	2.191	2.530	3.098	3.578	4.000	4.382	5.060	5.657

RE	µm	3	5	10	15	20	30	40	50	60	80	100
1.6	FE	0.196	0.253	0.358	0.438	0.506	0.620	0.716	0.800	0.876	1.012	1.131
2.0		0.219	0.283	0.400	0.490	0.566	0.693	0.800	0.894	0.980	1.131	1.265
2.5		0.245	0.316	0.447	0.548	0.632	0.775	0.894	1.000	1.095	1.265	1.414
3.0		0.268	0.346	0.490	0.600	0.693	0.849	0.980	1.095	1.200	1.386	1.549

SLN16

P K N H

PRAMET

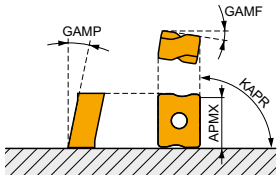
S

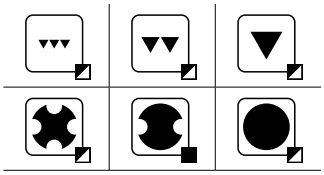
ECON LN16 Square Shoulder Mill with Internal Coolant

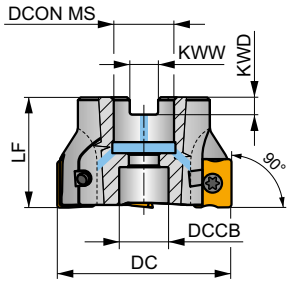
90° shell mill utilising double sided LN.. 16 inserts with APMX of 13 mm. Suitable for a wide range of applications. Available in arbor style in Ø63 up to Ø175 mm with differential tooth pitch. Body treated for longer tool life.

ECON LN

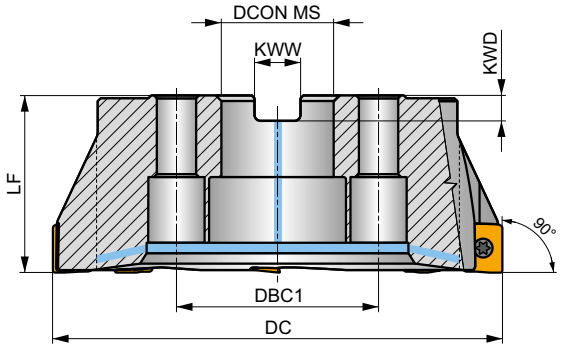
KAPR	90°
APMX	13.0 mm







DC 63 – 140 mm



DC 160 – 175 mm

h_m 0.08 - 0.2

	Product	DC [mm]	LF [mm]	DCON MS [mm]	DCCB [mm]	DBC1 [mm]	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg			
ISO 6462 DIN 8030	**63A04R-S90LN16-C**	63	40	22	18	–	10.4	6.3	-10.5	-6	4	✓	7600	✓	0.46	GI207	SQ353	–
	63A05R-S90LN16-C	63	40	22	18	–	10.4	6.3	-10.5	-6	5	✓	7600	✓	0.46	GI207	SQ353	–
	80A04R-S90LN16-C	80	50	27	38	–	12.4	7	-10.5	-6	4	✓	6800	✓	0.98	GI207	SQ351	AC001
	80A06R-S90LN16-C	80	50	27	38	–	12.4	7	-10.5	-6	6	✓	6800	✓	0.89	GI207	SQ351	AC001
	100A05R-S90LN16-C	100	50	32	45	–	14.4	8	-10.5	-6	5	✓	6100	✓	0.98	GI207	SQ351	AC002
	100A07R-S90LN16-C	100	50	32	45	–	14.4	8	-10.5	-6	7	✓	6100	✓	1.84	GI207	SQ351	AC002
	125A06R-S90LN16-C	125	63	40	56	–	16.4	9	-10.5	-6	6	✓	5400	✓	3.44	GI207	SQ351	AC003
	125A08R-S90LN16-C	125	63	40	56	–	16.4	9	-10.5	-6	8	✓	5400	✓	3.33	GI207	SQ351	AC003
	140A06R-S90LN16-C	140	63	40	56	–	16.4	9	-10.5	-6	6	✓	5100	✓	3.91	GI207	SQ351	AC003
	160C08R-S90LN16-C	160	63	40	–	66.7	16.4	9	-10.5	-6	8	✓	4700	✓	6.19	GI207	SQ356	–
	175C08R-S90LN16-C	175	63	40	–	66.7	16.4	9	-10.5	-6	8	✓	4500	✓	7.11	GI207	SQ356	–

GI207	LNMU 1607..	LNGU 1607..

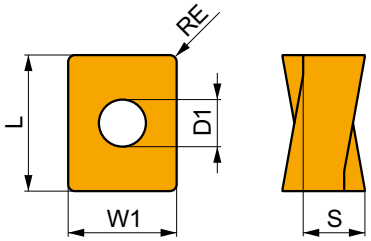
		Nm							
SQ351	US 45012-T20P	5.0	M 5	12	SDR T20P-T	–	–	–	–
SQ353	US 45012-T20P	5.0	M 5	12	SDR T20P-T	HS 1030C	–	–	–
SQ356	US 45012-T20P	5.0	M 5	12	SDR T20P-T	HS 1240C	CAC 160C	HSD 0825C	HXK 5

AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

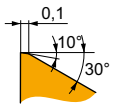
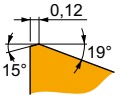
LNMU 16

PRAMET

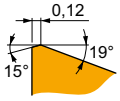
	W1 [mm]	D1 [mm]	L [mm]	S [mm]
1607	13.200	5.70	16.60	7.50



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			E																	
			F geometry with highly positive design for light machining.																	
LNMU 160708ER-F	**8215**	0.8	235	0.16	1.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	M8330	0.8	230	0.16	1.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	M8340	0.8	210	0.16	1.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			1	S																
			M geometry with positive design for medium machining.																	
LNMU 160708SR-M	**8215**	0.8	200	0.18	5.0	–	–	–	190	0.18	5.0	–	–	–	–	–	–	–	–	–
	M6330	0.8	170	0.18	5.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	M8330	0.8	200	0.18	5.0	–	–	–	190	0.18	5.0	–	–	–	–	–	–	–	–	–
	M8340	0.8	180	0.18	5.0	–	–	–	170	0.18	5.0	–	–	–	–	–	–	–	–	–
	M9325	0.8	250	0.18	5.0	–	–	–	235	0.18	5.0	–	–	–	–	–	–	–	–	–
LNMU 160720SR-M	**M8330**	2.0	230	0.18	5.0	–	–	–	215	0.18	5.0	–	–	–	–	–	–	–	–	–
	M8340	2.0	210	0.18	5.0	–	–	–	195	0.18	5.0	–	–	–	–	–	–	–	–	–
LNMU 160730SR-M	**M8330**	3.0	230	0.18	5.0	–	–	–	215	0.18	5.0	–	–	–	–	–	–	–	–	–
	M8340	3.0	210	0.18	5.0	–	–	–	195	0.18	5.0	–	–	–	–	–	–	–	–	–
LNMU 160740SR-M	**M8330**	4.0	230	0.18	5.0	–	–	–	215	0.18	5.0	–	–	–	–	–	–	–	–	–
	M8340	4.0	210	0.18	5.0	–	–	–	195	0.18	5.0	–	–	–	–	–	–	–	–	–
			S																	
			R geometry with positive stable design for medium machining.																	
LNMU 160708SR-R	**M5315**	0.8	265	0.18	6.3	–	–	–	250	0.18	6.3	–	–	–	–	–	–	50	0.15	1.0
	M8310	0.8	215	0.18	6.3	–	–	–	200	0.18	6.3	–	–	–	–	–	–	40	0.15	1.0
	M8330	0.8	195	0.18	6.3	–	–	–	185	0.18	6.3	–	–	–	–	–	–	35	0.15	1.0
	M8340	0.8	175	0.18	6.3	–	–	–	165	0.18	6.3	–	–	–	–	–	–	–	–	–
	M9315	0.8	260	0.18	6.3	–	–	–	245	0.18	6.3	–	–	–	–	–	–	50	0.15	1.0
	M9325	0.8	240	0.18	6.3	–	–	–	225	0.18	6.3	–	–	–	–	–	–	45	0.15	1.0

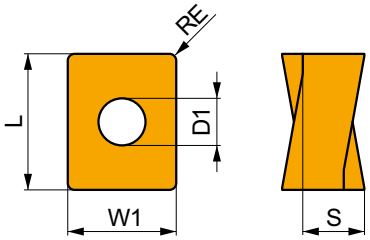
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
			R geometry with positive stable design for medium machining.																	
LNMU 160716SR-R	**M8330**	1.6	■ 215	0.18	6.3	–	–	–	■ 200	0.18	6.3	–	–	–	–	–	–	◪ 40	0.15	1.0
	M8340	1.6	■ 195	0.18	6.3	–	–	–	◪ 185	0.18	6.3	–	–	–	–	–	–	–	–	–
	M9315	1.6	■ 285	0.18	6.3	–	–	–	■ 270	0.18	6.3	–	–	–	–	–	–	◪ 55	0.15	1.0
	M9325	1.6	■ 265	0.18	6.3	–	–	–	■ 250	0.18	6.3	–	–	–	–	–	–	◪ 50	0.15	1.0

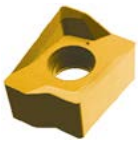
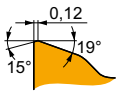
LNGU 16

PRAMET

	W1	D1	L	S
	[mm]	[mm]	[mm]	[mm]
1607	13.200	5.70	16.60	7.50

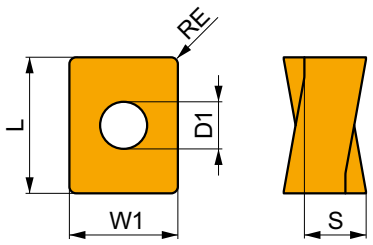


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
			M geometry with highly positive design for medium machining.																	
LNGU 160708SR-M	**8215**	0.8	■ 200	0.18	5.0	–	–	–	■ 190	0.18	5.0	–	–	–	–	–	–	◪ 40	0.15	1.0
	M8340	0.8	■ 180	0.18	5.0	–	–	–	◪ 170	0.18	5.0	–	–	–	–	–	–	–	–	–
	M9315	0.8	■ 265	0.18	5.0	–	–	–	■ 250	0.18	5.0	–	–	–	–	–	–	◪ 50	0.15	1.0
	M9325	0.8	■ 250	0.18	5.0	–	–	–	■ 235	0.18	5.0	–	–	–	–	–	–	◪ 50	0.15	1.0

LNGU 16-FA

	W1	D1	L	S
	[mm]	[mm]	[mm]	[mm]
1607	13.200	5.70	16.60	7.50

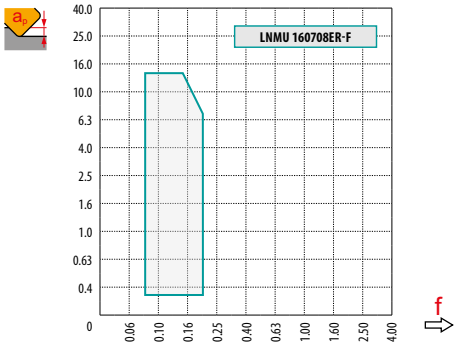


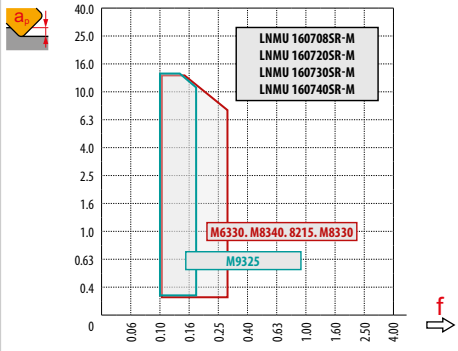
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

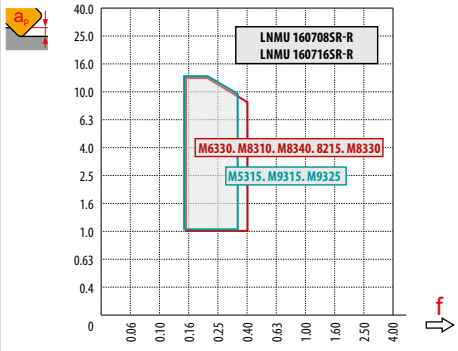
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
			F																	
			FA geometry with highly positive design for fine-finish to medium machining.																	
LNGU 160708FR-FA	**HF7**	0.8	–	–	–	–	–	–	–	–	–	300	0.30	3.0	–	–	–	–	–	–

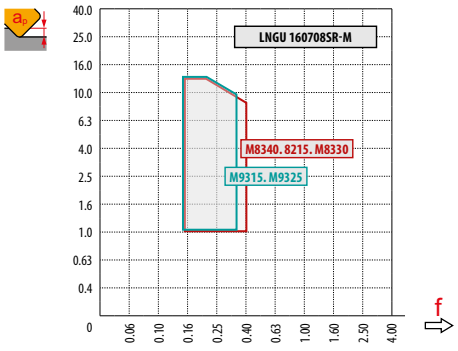
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ X.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ X.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

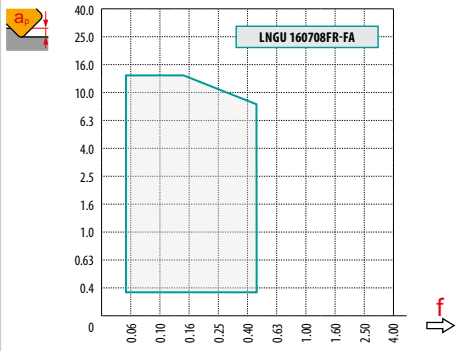
	LNMU 16-F	LNMU 16-M				LNMU 16-R		LNGU 16-M	LNGU 16-FA
RE	0.8	0.8	2.0	3.0	4.0	0.8	1.6	0.8	0.8
BS	3.30	3.30	2.11	1.12	0.10	3.30	2.50	3.24	3.30











max
7.0

a_p	1.0	6.0	13.0
1 ⇨ f	0.31	0.24	0.13

SSO05O

P M K S

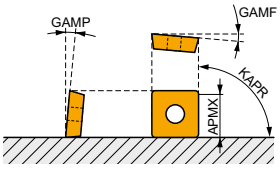
PRAMET

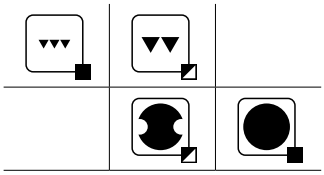
S

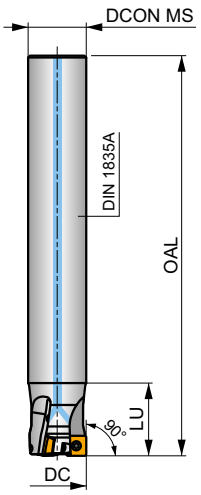
90° Square Shoulder Mill for SOMT 05 Insert with Internal Coolant

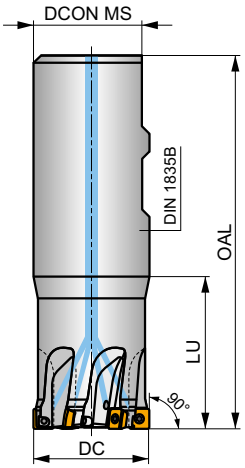
90° end and shell mills utilising positive SOMT 05 inserts with APMX of 4.5 mm. Suitable for face, shoulder, slot and plunge milling. Available in cylindrical, Weldon and arbor style, in Ø12 up to Ø40 mm and with differential tooth pitch. Body treated for longer tool life.

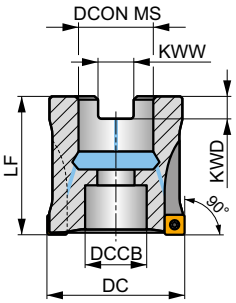
KAPR	90°
APMX	4.5 mm











h_m 0.04 - 0.08

h_m 0.04 - 0.06

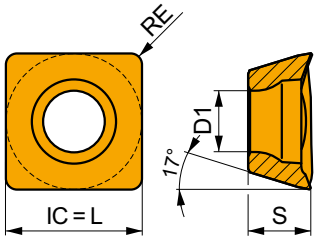
	Product	DC [mm]	OAL [mm]	DCON MS [mm]	DCCB [mm]	LU [mm]	LF [mm]	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg		
DIN 1835A	12A2R018A10-SSO050-C	12	90	10	–	18	–	–	–	-8	8	2	–	58000	✓	0.05	GI327	SQ330
	12A2R018A12-SSO050-C	12	90	12	–	18	–	–	–	-8	8	2	–	58000	✓	0.07	GI327	SQ330
	16A3R020A14-SSO050-C	16	110	14	–	20	–	–	–	-5	8	3	–	50300	✓	0.12	GI327	SQ330
	16A3R020A16-SSO050-C	16	110	16	–	20	–	–	–	-5	8	3	–	50300	✓	0.15	GI327	SQ330
	20A4R020A18-SSO050-C	20	125	18	–	20	–	–	–	-5	8	4	✓	45000	✓	0.21	GI327	SQ330
	20A4R020A20-SSO050-C	20	125	20	–	20	–	–	–	-5	8	4	✓	45000	✓	0.26	GI327	SQ330
	25A5R024A25-SSO050-C	25	140	25	–	24	–	–	–	-5	8	5	✓	40200	✓	0.48	GI327	SQ330
DIN 1835B	20A4R032B20-SSO050-C	20	83	20	–	32	–	–	–	-5	8	4	✓	45000	✓	0.16	GI327	SQ330
	25A5R042B25-SSO050-C	25	99	25	–	42	–	–	–	-5	8	5	✓	40200	✓	0.31	GI327	SQ330
	32A6R042B32-SSO050-C	32	103	32	–	42	–	–	–	-4.5	8	6	✓	35500	✓	0.54	GI327	SQ330
ISO 6462 DIN 8030	32A06R-S90SO050-C	32	–	16	12.4	–	32	8.4	5.6	-4.5	8	6	✓	35500	✓	0.10	GI327	SQ332
	40A08R-S90SO050-C	40	–	22	18.1	–	40	10.4	6.3	-4	8	8	✓	31800	✓	0.19	GI327	SQ333

GI327	SOMT 0502..

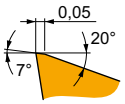
		Nm						
SQ330	US 62204-T07P	0.8	M 2.2	4.1	Flag T07P	–	–	–
SQ332	US 62204-T07P	0.8	M 2.2	4.1	–	D-T07P/T09P	FG-15	HS 90835
SQ333	US 62204-T07P	0.8	M 2.2	4.1	–	D-T07P/T09P	FG-15	HS 1030C

SOMT 05

	IC	D1	L	S
	[mm]	[mm]	[mm]	[mm]
0502	5.570	2.50	5.57	2.63

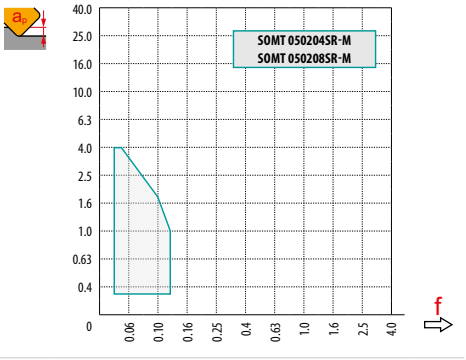


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
			U	S																
			M geometry with positive design for light to medium machining.																	
SOMT 050204SR-M	**M6330**	0.4	■ 255	0.05	2.5	■ 180	0.05	2.5	–	–	–	–	–	–	◪ 75	0.04	2.0	–	–	–
	M8330	0.4	■ 290	0.05	2.5	■ 170	0.05	2.5	◪ 275	0.05	2.5	–	–	–	◪ 70	0.04	2.0	–	–	–
	M8340	0.4	■ 260	0.05	2.5	■ 155	0.05	2.5	◪ 245	0.05	2.5	–	–	–	◪ 65	0.04	2.0	–	–	–
SOMT 050208SR-M	**M6330**	0.8	■ 300	0.05	2.5	■ 210	0.05	2.5	–	–	–	–	–	–	◪ 85	0.04	2.0	–	–	–
	M8330	0.8	■ 350	0.05	2.5	■ 210	0.05	2.5	◪ 330	0.05	2.5	–	–	–	◪ 85	0.04	2.0	–	–	–
	M8340	0.8	■ 310	0.05	2.5	■ 185	0.05	2.5	◪ 290	0.05	2.5	–	–	–	◪ 75	0.04	2.0	–	–	–

a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	SOMT 05-M	
RE	0.4	0.8
BS	–	–



max.
1.5

a_p	1.0	2.0	4.0
1 f	0.12	0.08	0.03

SSO09

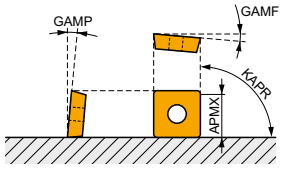
P M K S

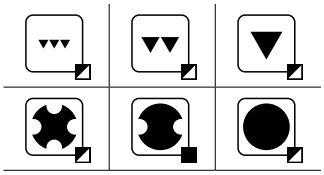
PRAMET S

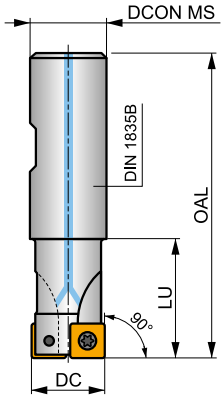
90° Square Shoulder Mill for SOMT 09 Insert with Internal Coolant

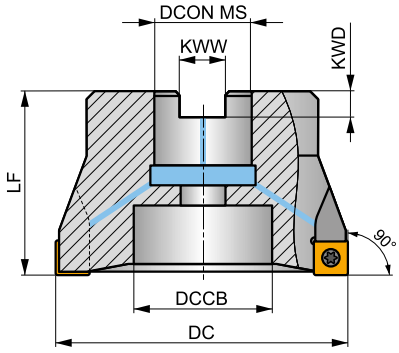
90° end and shell mills utilising positive SOMT 09 inserts with APMX of 8 mm. Suitable for face, shoulder, slot and plunge milling. Available in Weldon and arbor style, in Ø20 up to Ø125 mm. Differential tooth pitch available. Body treated for longer tool life.

KAPR	90°
APMX	8.0 mm









h_m 0.07 - 0.22

h_m 0.07 - 0.18

	Product	DC [mm]	OAL [mm]	DCON MS [mm]	DCCB [mm]	LU [mm]	LF [mm]	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg			
DIN 1835B	20A2R032B20-SS009-C	20	82	20	–	32	–	–	–	-12	6	2	–	23800	✓	0.21	GI146	SQ400	–
	25A3R042B25-SS009-C	25	98	25	–	42	–	–	–	-12	6	3	–	21300	✓	0.31	GI146	SQ400	–
	32A4R042B32-SS009-C	32	102	32	–	42	–	–	–	-10	10	4	✓	18800	✓	0.55	GI146	SQ400	–
	40A05R-S90S009-C	40	–	16	14	–	40	8.4	5.6	-9.1	10	5	–	16800	✓	0.29	GI146	SQ402	–
	50A06R-S90S009-C	50	–	22	18	–	40	10.4	6.4	-8.8	10	6	–	15100	✓	0.33	GI146	SQ403	–
ISO 6462 DIN 8030	63A07R-S90S009-C	63	–	22	18	–	40	10.4	6.4	-8.6	10	7	–	13400	✓	0.86	GI146	SQ403	–
	80A09R-S90S009-C	80	–	27	38	–	50	12.4	7	-8.1	10	9	–	11900	✓	1.03	GI146	SQ401	AC001
	100A10R-S90S009-C	100	–	32	45	–	50	14.4	8	-8.1	10	10	–	10700	✓	1.79	GI146	SQ401	AC002
	125A12R-S90S009-C	125	–	40	56	–	63	16.4	9	-8.1	10	12	–	9500	✓	3.62	GI146	SQ401	AC003

GI146	SOMT 09T3..

		Nm						
SQ400	US 3006-T09P	2.0	M 3	6	–	–	Flag T09P	–
SQ401	US 3006-T09P	2.0	M 3	6	D-T07P/T09P	FG-15	–	–
SQ402	US 3006-T09P	2.0	M 3	6	D-T07P/T09P	FG-15	–	HS 0830C
SQ403	US 3006-T09P	2.0	M 3	6	D-T07P/T09P	FG-15	–	HS 1030C

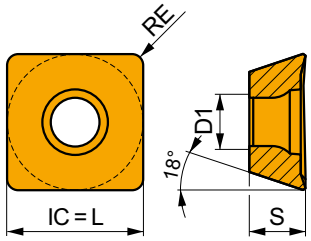
AC001	KS 1230	K.FMH27

AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

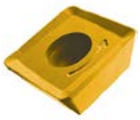
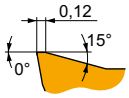
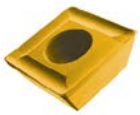
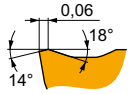
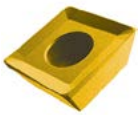
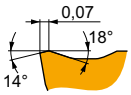
SOMT 09

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
09T3	9.550	3.50	9.55	3.97



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Conditions are valid for setting angle 90°. Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																				
SOMT 09T308-M	**8215**	0.8	275	0.14	2.5	165	0.13	2.5	260	0.14	2.5	–	–	–	65	0.13	2.0	–	–	–
	M5315	0.8	390	0.14	2.5	–	–	–	370	0.14	2.5	–	–	–	–	–	–	–	–	–
	M8330	0.8	270	0.14	2.5	160	0.13	2.5	255	0.14	2.5	–	–	–	65	0.13	2.0	–	–	–
	M8340	0.8	250	0.14	2.5	150	0.13	2.5	235	0.14	2.5	–	–	–	60	0.13	2.0	–	–	–
	M9315	0.8	380	0.14	2.5	–	–	–	360	0.14	2.5	–	–	–	–	–	–	–	–	–
																				
SOMT 09T304-MI	**8215**	0.4	230	0.14	2.5	135	0.13	2.5	215	0.14	2.5	–	–	–	55	0.10	2.0	–	–	–
	M8310	0.4	255	0.14	2.5	130	0.13	2.5	240	0.14	2.5	–	–	–	–	–	–	–	–	–
	M8330	0.4	230	0.14	2.5	135	0.13	2.5	215	0.14	2.5	–	–	–	55	0.10	2.0	–	–	–
	M8340	0.4	210	0.14	2.5	125	0.13	2.5	195	0.14	2.5	–	–	–	50	0.10	2.0	–	–	–
	M9315	0.4	320	0.14	2.5	–	–	–	300	0.14	2.5	–	–	–	–	–	–	–	–	–
	M9340	0.4	265	0.14	2.5	155	0.13	2.5	–	–	–	–	–	–	65	0.10	2.0	–	–	–
																				
SOMT 09T304-P	**M8330**	0.4	250	0.14	2.5	150	0.13	2.5	235	0.14	2.5	–	–	–	60	0.10	2.0	–	–	–
	M8340	0.4	230	0.14	2.5	135	0.13	2.5	215	0.14	2.5	–	–	–	55	0.10	2.0	–	–	–
	M9325	0.4	320	0.14	2.5	–	–	–	300	0.14	2.5	–	–	–	–	–	–	–	–	–

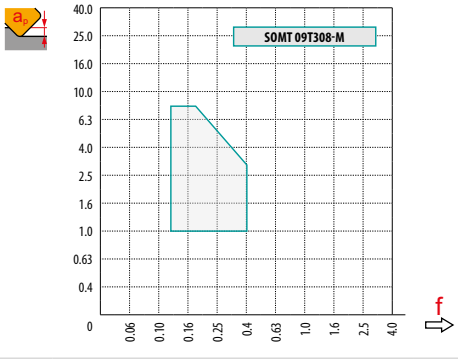
M geometry with positive design for medium machining.

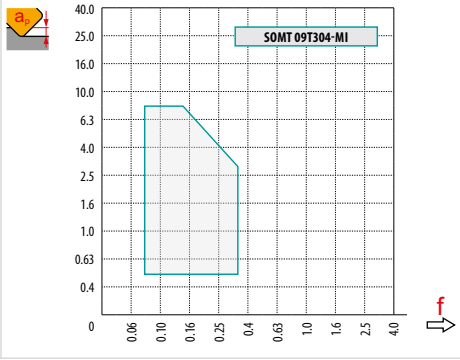
MI geometry with stable positive design for medium machining.

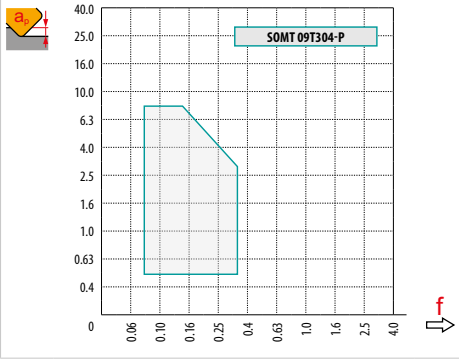
P geometry with highly positive design for medium machining.

a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ X.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ X.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	SOMT 09-M	SOMT 09-MI	SOMT 09-P
RE	0.8	0.4	0.4
BS	0.90	1.30	1.30







max.
6.0

a_p	1.0	4.0	8.0
1 ⇨ f	0.28	0.19	0.09

SSD12

P M K N S

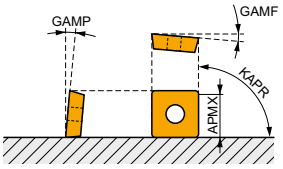
PRAMET

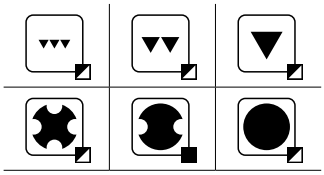
S

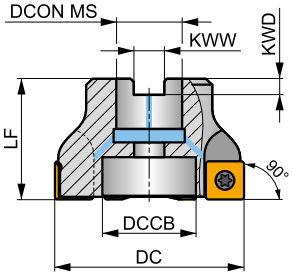
90° Square Shoulder Mill for SDMT 12 Insert with Internal Coolant

90° shell mill utilising positive SDMT 12 inserts with APMX of 10 mm. Suitable for face, shoulder, slot and plunge milling. Available in arbor style only in Ø50 up to Ø160 mm. Body treated for longer tool life.

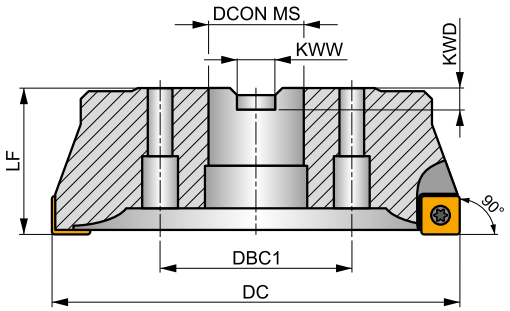
KAPR	90°
APMX	10.0 mm







DC 50 - 125 mm



DC 160 mm

h_m 0.09 - 0.25

	Product	DC [mm]	LF [mm]	DCON MS [mm]	DCCB [mm]	DBC1 [mm]	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg			
ISO 6462 DIN 8030	**50A05R-S90SD12-C**	50	40	22	18	–	10.4	6.3	-5	8	5	–	13000	✓	0.34	GI057	SQ413	–
	63A06R-S90SD12-C	63	40	22	18	–	10.4	6.3	-5	8	6	–	11600	✓	0.53	GI057	SQ413	–
	80A06R-S90SD12-C	80	50	27	38	–	12.4	7	-5	8	6	–	10300	✓	0.92	GI057	SQ411	AC001
	100A08R-S90SD12-C	100	50	32	45	–	14.4	8	-5	8	8	–	9200	✓	1.69	GI057	SQ411	AC002
	125A09R-S90SD12-C	125	63	40	56	–	16.4	9	-5	8	9	–	8300	✓	3.29	GI057	SQ411	AC003
	160C12R-S90SD12	160	63	40	–	66.7	16.4	9	-5	8	12	–	7300	–	5.74	GI057	SQ411	–

GI057	SDMT 1205..

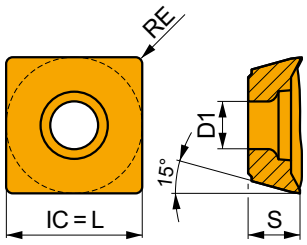
					Nm					
SQ411	SSN 100312	MS 3510	HXK 3,5	US 3511-T15	3.0	M 3.5	11	D-T07/T15	FG-15	–
SQ413	–	–	–	US 3511-T15	3.0	M 3.5	11	D-T07/T15	FG-15	HS 1030C

AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

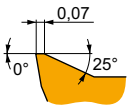
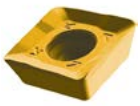
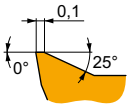
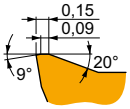
SDMT 12

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
1205	12.700	4.40	12.70	5.00

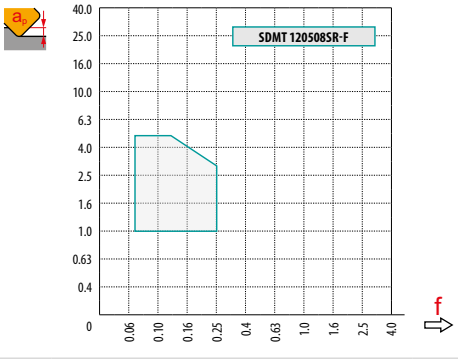


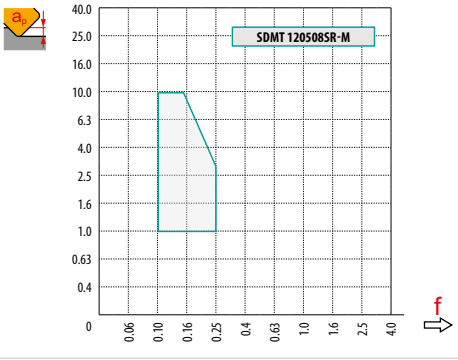
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

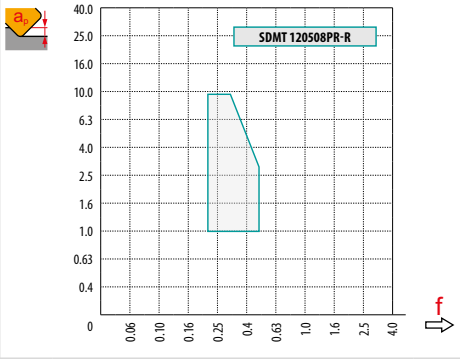
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																				
SDMT 120508SR-F	**M8330**	0.8	■ 275	0.10	3.0	◪ 165	0.09	3.0	◪ 260	0.10	3.0	◪ 825	0.12	3.0	◪ 65	0.08	2.4	–	–	–
	M8340	0.8	■ 250	0.10	3.0	◪ 150	0.09	3.0	◪ 235	0.10	3.0	–	–	–	◪ 60	0.08	2.4	–	–	–
																				
SDMT 120508SR-M	**8215**	0.8	■ 245	0.16	3.5	◪ 145	0.14	3.5	◪ 230	0.16	3.5	–	–	–	◪ 60	0.11	2.8	–	–	–
	M8330	0.8	■ 240	0.16	3.5	■ 140	0.14	3.5	◪ 225	0.16	3.5	–	–	–	◪ 60	0.11	2.8	–	–	–
	M8340	0.8	■ 220	0.16	3.5	■ 130	0.14	3.5	◪ 205	0.16	3.5	–	–	–	◪ 55	0.11	2.8	–	–	–
	M9325	0.8	■ 305	0.16	3.5	–	–	–	◪ 285	0.16	3.5	–	–	–	–	–	–	–	–	–
																				
SDMT 120508PR-R	**M8330**	0.8	■ 220	0.25	3.5	◪ 130	0.23	3.5	■ 205	0.25	3.5	–	–	–	◪ 55	0.23	2.8	–	–	–
	M8340	0.8	■ 195	0.25	3.5	◪ 115	0.23	3.5	◪ 185	0.25	3.5	–	–	–	◪ 45	0.23	2.8	–	–	–
	M9315	0.8	■ 280	0.25	3.5	–	–	–	■ 265	0.25	3.5	–	–	–	–	–	–	–	–	–
	M9325	0.8	■ 265	0.25	3.5	–	–	–	■ 250	0.25	3.5	–	–	–	–	–	–	–	–	–

a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	SDMT 12-F	SDMT 12-M	SDMT 12-R
RE	0.8	0.8	0.8
BS	–	–	–







max.
8.0

a_p	1.0	5.0	10.0
⇨ f	0.39	0.25	0.14

FTB27X

P M K

PRAMET

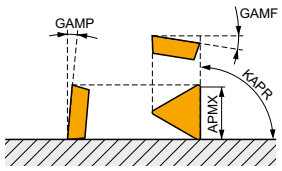
F

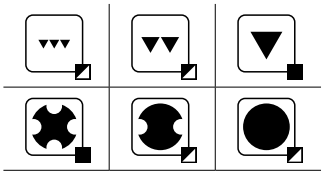
ROUGH TB Square Shoulder Face Mill for TBMR 27 Insert for Heavy Milling

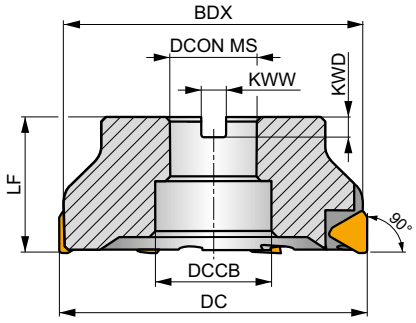
90° shell mill utilising positive TBMR 27 inserts with APMX of 18 mm. Suitable for heavy face, shoulder and slot milling. Available in arbor style only in Ø140 up to Ø260 mm and with differential tooth pitch. Body treated for longer tool life.

ROUGH TB

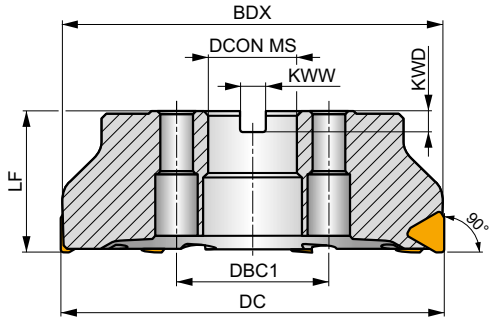
KAPR	90°
APMX	18.0 mm







DC 140 mm



DC 175 – 260 mm

h_m 0.15 - 0.38

	Product	DC [mm]	BDX [mm]	LF [mm]	DCON MS [mm]	DCCB [mm]	DBC1 [mm]	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg			
ISO 6462 DIN 8030	**140B07R-F90TB27X**	140	135.7	63	40	56	–	16.4	9	-9	9	7	✓	–	–	4.75	GI163	SQ421	AC003
	175C08R-F90TB27X	175	169.6	63	40	–	66.7	16.4	16.4	-9	9	8	✓	–	–	7.59	GI163	SQ424	–
	210C10R-F90TB27X	210	204.1	63	60	–	101.6	25.7	25.7	-9	9	10	✓	–	–	10.80	GI163	SQ425	–
	260C12R-F90TB27X	260	253.4	63	60	–	101.6	25.7	25.7	-9	9	12	✓	–	–	18.21	GI163	SQ425	–

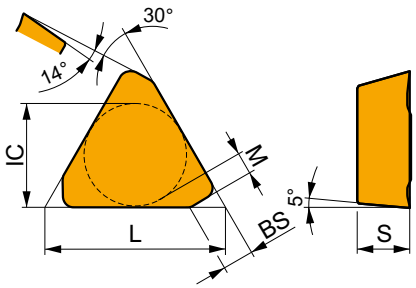
GI163	TBMR 2707PZ..

SQ421	LNK 220616	US 6013-T20P	SDR T20P-T	KU TBMR 2707	DS 01Z	KL 04	–
SQ424	LNK 220616	US 6013-T20P	SDR T20P-T	KU TBMR 2707	DS 01Z	KL 04	HS 1240
SQ425	LNK 220616	US 6013-T20P	SDR T20P-T	KU TBMR 2707	DS 01Z	KL 04	HS 1655

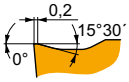
AC003	KS 2040	K.FMH40

TBMR 27

	BS	IC	L	M	S
	[mm]	[mm]	[mm]	[mm]	[mm]
2707	4.61	15.875	27.50	3	7.94



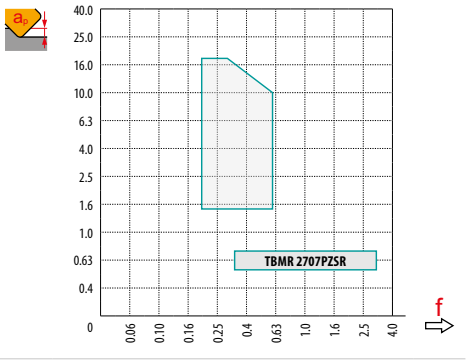
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
TBMR 2707PZSR	**M8326**	–	130	0.20	11.0	–	–	–	120	0.20	11.0	–	–	–	–	–	–	–	–	–
	M8346	–	110	0.20	11.0	65	0.20	11.0	–	–	–	–	–	–	–	–	–	–	–	–

Strong design for heavy machining.

a_e/DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨X.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨X.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	TBMR 27
RE	–
BS	2.70



a_p	1.5	8.0	18.0
f	0.60	0.39	0.24

DORMER PRAMET

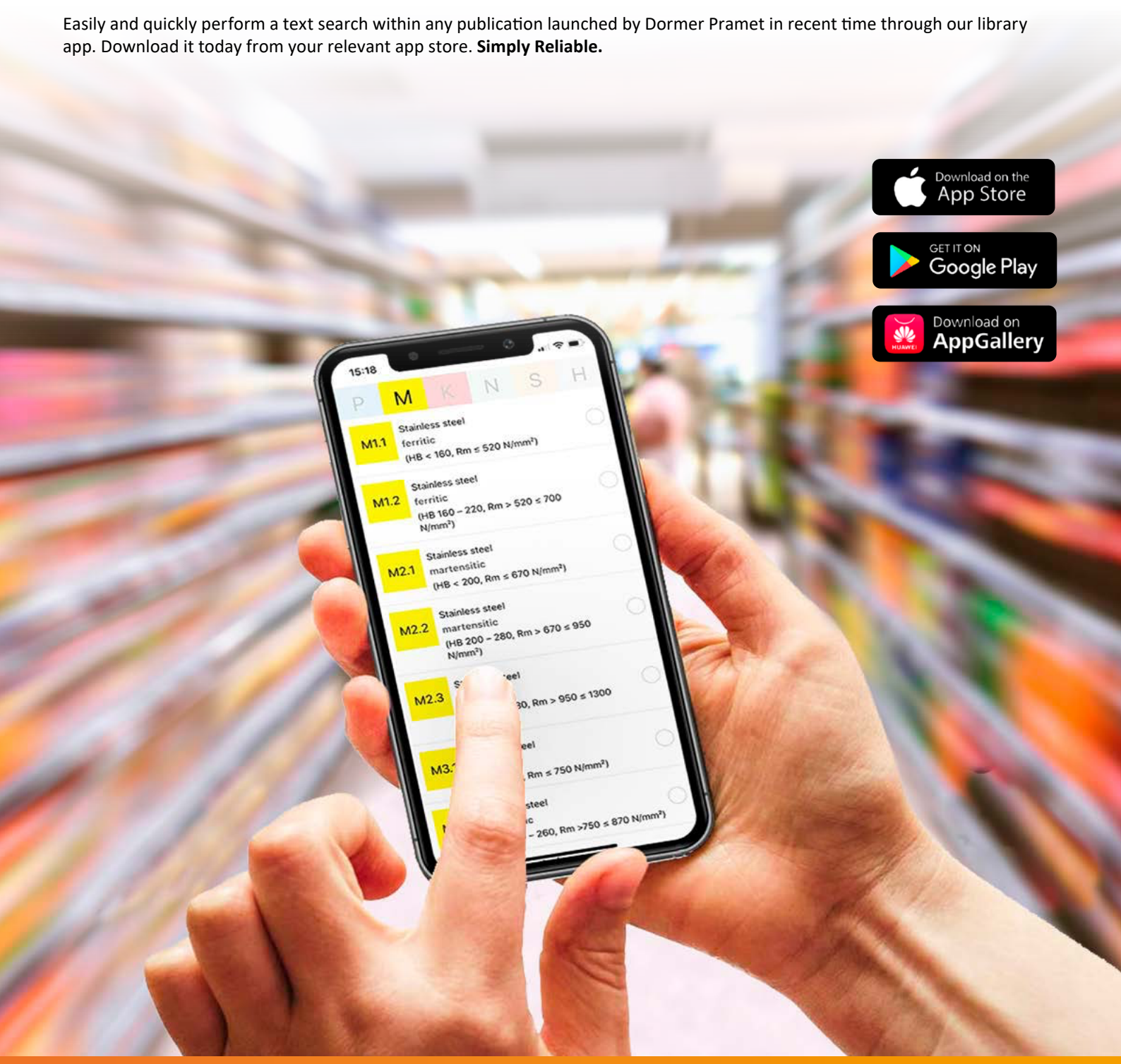
QUICK SEARCH

Easily and quickly perform a text search within any publication launched by Dormer Pramet in recent time through our library app. Download it today from your relevant app store. **Simply Reliable.**

Download on the App Store

GET IT ON Google Play

Download on AppGallery



INDEXABLE DEEP SHOULDER MILLS

DEEP SHOULDER MILLING

>>>

	J(T)-SAD11E	J(T)-SAD16E	J(T)-SLSN	J(T)-SSAP	J(T)-2416
	90°	90°	90°	90°	90°
	APMX [mm] 37.0 – 56.0	APMX [mm] 40.0 – 108.0	APMX [mm] 104.0 – 134.0	APMX [mm] 58 ,0– 95.0	APMX [mm] 40.0 – 63.0
	DC [mm] 25 – 50	DC [mm] 50 – 100	DC [mm] 63 - 80	DC [mm] 50 – 80	DC [mm] 20 – 40
Weldon	DC = 25 – 40 [mm]				
Morse taper	DC = 25 – 40 [mm]				
Arbor		DC = 50 – 80 [mm]			
Shell mill	DC = 50 [mm]	DC = 50 – 100 [mm]			
Page	482	488	494	498	503
ISO	P M K N S H	P M K N S H	P K	P M K N S H	P M K N
Insert shape					–
Inserts	AD 11T3	AD.. 1606	LNET 1606 SN.. 1305	APE. 150412 SPE. 1204	–
No. of cutting edges	2	2	2 / 8	2 / 4	–
Deep shoulder milling	■	■	■	■	■
Deep slot milling	■	■	■	■	◪
Face milling	◪	◪	◪	◪	◪
Plunge milling	◪	◪	◪	◪	

<<<

DEEP SHOULDER MILLING

	J(T)-CSD12X					
	90°					
	APMX [mm] 44.1 – 87.3					
	DC [mm] 40 – 63					
	DC = 40 – 50 [mm]					
	DC = 50 [mm]					
	DC = 40 – 63 [mm]					
	DC = 50 – 80 [mm]					
	505					
	P M S					
	SD.X 1205					
	4					
	■					
	■					
	◪					

J(T)-SAD11E

P M K N S

PRAMET

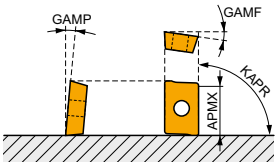
S

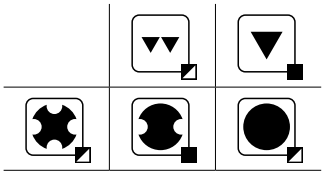
HELICAL AD11 Long Edge Mill with Internal Coolant

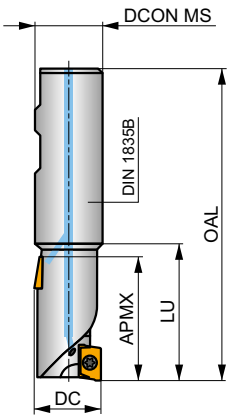
90° long edge end mill utilising positive ADMX 11 inserts with APMX of 36 up to 56 mm with internal coolant. Suitable for shoulder, slot, face or plunge milling. Available in Weldon, Morse taper and arbor style in Ø25 up to Ø50 mm. Body treated for longer tool life.

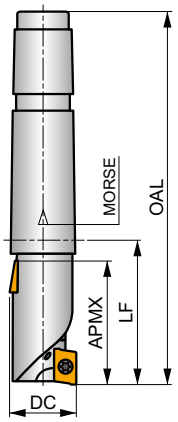
FORCE AD

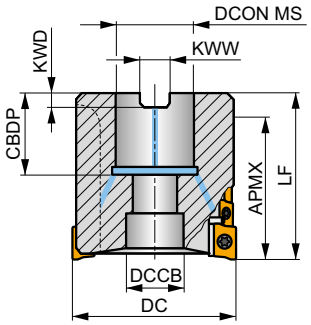
KAPR	90°
APMX	37.0 - 56.0 mm

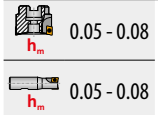




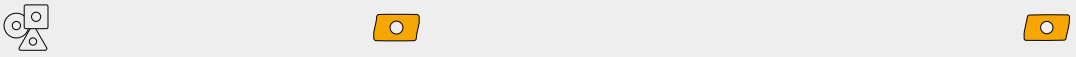








	Product	DC [mm]	OAL [mm]	DCON MS [mm]	DCCB [mm]	LU [mm]	LF [mm]	APMX [mm]	CBDP [mm]	CZC MS	GAMF [°]	GAMP [°]	NOF			max.		kg		
DIN 1835B	**25J2R50B25-SAD11E38-C**	25	106	25	–	50	–	38.00	–	–	-10.5	5	2	8	–	24100	✓	0.32	GI184	SQ210
	32J2R60B32-SAD11E47-C	32	120	32	–	60	–	47.00	–	–	-9	8	2	10	–	21300	✓	0.60	GI184	SQ210
	40J2R60B40-SAD11E47-C	40	130	40	–	60	–	47.00	–	–	-8.1	11	2	10	–	19100	✓	1.12	GI184	SQ210
	40J3R70B32-SAD11E56-C	40	130	32	–	70	–	56.00	–	–	-8.1	11	3	18	–	19100	✓	0.76	GI184	SQ210
	40J3R70B40-SAD11E56-C	40	140	40	–	70	–	56.00	–	–	-8.1	11	3	18	–	19100	✓	1.12	GI184	SQ210
DIN 228A	**25J2R55E03-SAD11E38-C**	25	136	–	–	–	55	38.00	–	3	-10.5	5	2	8	–	24100	✓	0.38	GI184	SQ210
	32J2R65E04-SAD11E47-C	32	167.5	–	–	–	65	47.00	–	4	-9	8	2	10	–	21300	✓	0.72	GI184	SQ210
	40J3R75E04-SAD11E56-C	40	177.5	–	–	–	75	56.00	–	4	-8.1	11	3	18	–	19100	✓	0.85	GI184	SQ210
ISO 6462 DIN 8030	**50T03R-S90AD11E37-C**	50	–	22	18	–	58	37.00	21	–	-7.2	12	3	12	–	17000	✓	0.67	GI184	SQ903



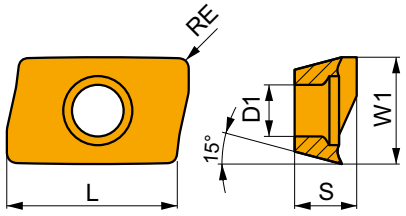
GI184	ADMX 11T3..	ADEX 11T3..-FA

SQ210	US 2506-T07P	1.2	M 2.5	6.3	–	–	Flag T07P	–
SQ903	US 2506-T07P	1.2	M 2.5	6.3	D-T07P/T09P	FG-15	–	HS 1030C

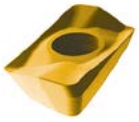
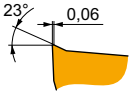
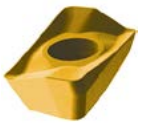
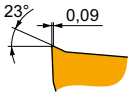
ADMX 11

PRAMET

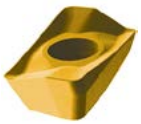
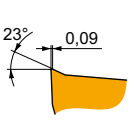
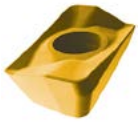
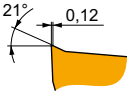
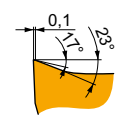
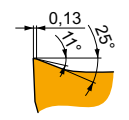
	W1	D1	L	S
	[mm]	[mm]	[mm]	[mm]
11T3	6.530	2.90	11.00	3.97



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

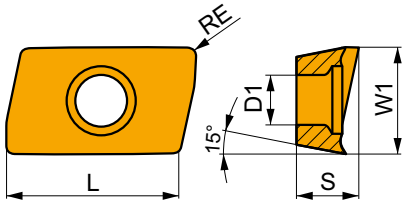
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
F geometry with very sharp positive design for light machining.																				
ADMX 11T304SR-F	**8215**	0.4	■	245	0.10	2.0	◪	145	0.09	2.0	◪	230	0.10	2.0	◪	735	0.12	2.0	◪	60	0.08	1.6	–	–	–
	M8310	0.4	■	270	0.10	2.0	◪	135	0.09	2.0	◪	255	0.10	2.0		–	–	–		–	–	–	–	–	–
	M8330	0.4	■	240	0.10	2.0	◪	140	0.09	2.0	◪	225	0.10	2.0	◪	720	0.12	2.0	◪	60	0.08	1.6	–	–	–
	M8340	0.4	■	220	0.10	2.0	◪	130	0.09	2.0	◪	205	0.10	2.0		–	–	–	◪	55	0.08	1.6	–	–	–
	M9340	0.4	■	285	0.10	2.0	◪	170	0.09	2.0		–	–	–		–	–	–	◪	70	0.08	1.6	–	–	–
ADMX 11T308SR-F	**8215**	0.8	■	290	0.10	2.0	◪	170	0.09	2.0	◪	275	0.10	2.0	◪	870	0.12	2.0	◪	70	0.08	1.6	–	–	–
	M8330	0.8	■	285	0.10	2.0	◪	170	0.09	2.0	◪	270	0.10	2.0	◪	855	0.12	2.0	◪	70	0.08	1.6	–	–	–
	M8340	0.8	■	260	0.10	2.0	◪	155	0.09	2.0	◪	245	0.10	2.0		–	–	–	◪	65	0.08	1.6	–	–	–
	M9340	0.8	■	340	0.10	2.0	◪	200	0.09	2.0		–	–	–		–	–	–	◪	85	0.08	1.6	–	–	–
																				
M geometry with positive design for light to medium machining.																				
ADMX 11T302SR-M	**M8330**	0.2	■	190	0.15	4.0	■	110	0.14	4.0	■	180	0.15	4.0		–	–	–	◪	45	0.12	3.2	–	–	–
	M8340	0.2	■	170	0.15	4.0	■	100	0.14	4.0	◪	160	0.15	4.0		–	–	–	◪	40	0.12	3.2	–	–	–
ADMX 11T304SR-M	**8215**	0.4	■	205	0.15	4.0	◪	120	0.14	4.0	■	190	0.15	4.0		–	–	–	◪	50	0.12	3.2	–	–	–
	M8310	0.4	■	220	0.15	4.0	◪	110	0.14	4.0	■	205	0.15	4.0		–	–	–		–	–	–	–	–	–
	M8330	0.4	■	205	0.15	4.0	■	120	0.14	4.0	■	190	0.15	4.0		–	–	–	◪	50	0.12	3.2	–	–	–
	M8340	0.4	■	185	0.15	4.0	■	110	0.14	4.0	◪	175	0.15	4.0		–	–	–	◪	45	0.12	3.2	–	–	–
	M9325	0.4	■	255	0.15	4.0		–	–	–	■	240	0.15	4.0		–	–	–		–	–	–	–	–	–
	M9340	0.4	■	235	0.15	4.0	■	140	0.14	4.0		–	–	–		–	–	–	◪	55	0.12	3.2	–	–	–
ADMX 11T308SR-M	**8215**	0.8	■	245	0.15	4.0	◪	145	0.14	4.0	■	230	0.15	4.0		–	–	–	◪	60	0.12	3.2	–	–	–
	M5315	0.8	◪	335	0.15	4.0		–	–	–	■	315	0.15	4.0		–	–	–		–	–	–	–	–	–
	M8310	0.8	■	265	0.15	4.0	◪	135	0.14	4.0	■	250	0.15	4.0		–	–	–		–	–	–	–	–	–
	M8330	0.8	■	245	0.15	4.0	■	145	0.14	4.0	■	230	0.15	4.0		–	–	–	◪	60	0.12	3.2	–	–	–
	M8340	0.8	■	220	0.15	4.0	■	130	0.14	4.0	◪	205	0.15	4.0		–	–	–	◪	55	0.12	3.2	–	–	–
	M9315	0.8	■	330	0.15	4.0		–	–	–	■	310	0.15	4.0		–	–	–		–	–	–	–	–	–
	M9325	0.8	■	305	0.15	4.0		–	–	–	■	285	0.15	4.0		–	–	–		–	–	–	–	–	–
	M9340	0.8	■	275	0.15	4.0	■	165	0.14	4.0		–	–	–		–	–	–	◪	65	0.12	3.2	–	–	–
ADMX 11T310SR-M	**M8330**	1.0	■	255	0.15	4.0	■	150	0.14	4.0	■	240	0.15	4.0		–	–	–	◪	60	0.12	3.2	–	–	–
	M8340	1.0	■	230	0.15	4.0	■	135	0.14	4.0	◪	215	0.15	4.0		–	–	–	◪	55	0.12	3.2	–	–	–
ADMX 11T312SR-M	**8215**	1.2	■	255	0.15	4.0	◪	150	0.14	4.0	■	240	0.15	4.0		–	–	–	◪	60	0.12	3.2	–	–	–
	M8330	1.2	■	255	0.15	4.0	■	150	0.14	4.0	■	240	0.15	4.0		–	–	–	◪	60	0.12	3.2	–	–	–
	M8340	1.2	■	230	0.15	4.0	■	135	0.14	4.0	◪	215	0.15	4.0		–	–	–	◪	55	0.12	3.2	–	–	–
ADMX 11T316SR-M	**8215**	1.6	■	270	0.15	4.0	◪	160	0.14	4.0	■	255	0.15	4.0		–	–	–	◪	65	0.12	3.2	–	–	–
	M6330	1.6	■	230	0.15	4.0	■	165	0.14	4.0		–	–	–		–	–	–	◪	65	0.12	3.2	–	–	–
	M8310	1.6	■	295	0.15	4.0	◪	150	0.14	4.0	■	280	0.15	4.0		–	–	–		–	–	–	–	–	–
	M8330	1.6	■	270	0.15	4.0	■	160	0.14	4.0	■	255	0.15	4.0		–	–	–	◪	65	0.12	3.2	–	–	–
	M8340	1.6	■	240	0.15	4.0	■	140	0.14	4.0	◪	225	0.15	4.0		–	–	–	◪	60	0.12	3.2	–	–	–

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

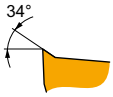
Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]
																				
			M geometry with positive design for light to medium machining.																	
ADMX 11T320SR-M	**M6330**	2.0	■ 240	0.15	4.0	■ 170	0.14	4.0	–	–	–	–	–	–	◪ 70	0.12	3.2	–	–	–
	M8330	2.0	■ 280	0.15	4.0	■ 165	0.14	4.0	■ 265	0.15	4.0	–	–	–	◪ 70	0.12	3.2	–	–	–
	M8340	2.0	■ 255	0.15	4.0	■ 150	0.14	4.0	◪ 240	0.15	4.0	–	–	–	◪ 60	0.12	3.2	–	–	–
ADMX 11T325SR-M	**M6330**	2.5	■ 240	0.15	4.0	■ 170	0.14	4.0	–	–	–	–	–	–	◪ 70	0.12	3.2	–	–	–
	M8340	2.5	■ 255	0.15	4.0	■ 150	0.14	4.0	◪ 240	0.15	4.0	–	–	–	◪ 60	0.12	3.2	–	–	–
ADMX 11T330SR-M	**M6330**	3.0	■ 240	0.15	4.0	■ 170	0.14	4.0	–	–	–	–	–	–	◪ 70	0.12	3.2	–	–	–
	M8330	3.0	■ 280	0.15	4.0	■ 165	0.14	4.0	■ 265	0.15	4.0	–	–	–	◪ 70	0.12	3.2	–	–	–
	M8340	3.0	■ 255	0.15	4.0	■ 150	0.14	4.0	◪ 240	0.15	4.0	–	–	–	◪ 60	0.12	3.2	–	–	–
																				
			R geometry with positive design for machining conditions in less stable conditions.																	
ADMX 11T308PR-R	**8215**	0.8	■ 230	0.18	4.0	◪ 135	0.16	4.0	■ 215	0.18	4.0	–	–	–	◪ 55	0.16	3.2	◪ 45	0.15	1.0
	M5315	0.8	◪ 310	0.18	4.0	–	–	–	■ 290	0.18	4.0	–	–	–	–	–	–	◪ 60	0.15	1.0
	M8310	0.8	■ 250	0.18	4.0	◪ 125	0.16	4.0	■ 235	0.18	4.0	–	–	–	–	–	–	◪ 50	0.15	1.0
	M8330	0.8	■ 230	0.18	4.0	◪ 135	0.16	4.0	■ 215	0.18	4.0	–	–	–	◪ 55	0.16	3.2	◪ 45	0.15	1.0
	M8340	0.8	■ 210	0.18	4.0	◪ 125	0.16	4.0	◪ 195	0.18	4.0	–	–	–	◪ 50	0.16	3.2	–	–	–
	M9315	0.8	■ 310	0.18	4.0	–	–	–	■ 290	0.18	4.0	–	–	–	–	–	–	◪ 60	0.15	1.0
	M9325	0.8	■ 290	0.18	4.0	–	–	–	■ 275	0.18	4.0	–	–	–	–	–	–	◪ 55	0.15	1.0
ADMX 11T316PR-R	**8215**	1.6	■ 255	0.18	4.0	◪ 150	0.16	4.0	■ 240	0.18	4.0	–	–	–	◪ 60	0.16	3.2	◪ 50	0.15	1.0
	M8330	1.6	■ 255	0.18	4.0	◪ 150	0.16	4.0	■ 240	0.18	4.0	–	–	–	◪ 60	0.16	3.2	◪ 50	0.15	1.0
	M9325	1.6	■ 320	0.18	4.0	–	–	–	■ 300	0.18	4.0	–	–	–	–	–	–	◪ 60	0.15	1.0
																				
			MF geometry with highly positive design for light to finish machining.																	
ADMX 11T304SR-MF	**M6330**	0.4	■ 215	0.08	2.5	■ 150	0.07	2.5	–	–	–	–	–	–	■ 60	0.06	2.0	–	–	–
	M8340	0.4	■ 220	0.08	2.5	■ 130	0.07	2.5	–	–	–	–	–	–	■ 55	0.06	2.0	–	–	–
ADMX 11T308SR-MF	**M6330**	0.8	■ 255	0.08	2.5	■ 180	0.07	2.5	–	–	–	–	–	–	■ 75	0.06	2.0	–	–	–
	M8340	0.8	■ 265	0.08	2.5	■ 155	0.07	2.5	–	–	–	–	–	–	■ 65	0.06	2.0	–	–	–
	M9340	0.8	■ 360	0.08	2.5	■ 215	0.07	2.5	–	–	–	–	–	–	■ 90	0.06	2.0	–	–	–
																				
			MM geometry with highly positive design for light to medium and finish to semi-rough machining.																	
ADMX 11T304SR-MM	**M6330**	0.4	■ 185	0.14	2.5	■ 130	0.13	2.5	–	–	–	–	–	–	■ 55	0.11	2.0	–	–	–
	M8340	0.4	■ 195	0.14	2.5	■ 115	0.13	2.5	–	–	–	–	–	–	■ 45	0.11	2.0	–	–	–
	M9340	0.4	■ 250	0.14	2.5	■ 150	0.13	2.5	–	–	–	–	–	–	■ 60	0.11	2.0	–	–	–
ADMX 11T308SR-MM	**M6330**	0.8	■ 225	0.14	2.5	■ 155	0.13	2.5	–	–	–	–	–	–	■ 65	0.11	2.0	–	–	–
	M8340	0.8	■ 235	0.14	2.5	■ 140	0.13	2.5	–	–	–	–	–	–	■ 55	0.11	2.0	–	–	–
	M8345	0.8	■ 190	0.14	2.5	■ 110	0.13	2.5	–	–	–	–	–	–	■ 45	0.11	2.0	–	–	–
	M9340	0.8	■ 300	0.14	2.5	■ 180	0.13	2.5	–	–	–	–	–	–	■ 75	0.11	2.0	–	–	–
ADMX 11T312SR-MM	**M6330**	1.2	■ 235	0.14	2.5	■ 165	0.13	2.5	–	–	–	–	–	–	■ 70	0.11	2.0	–	–	–
	M8340	1.2	■ 245	0.14	2.5	■ 145	0.13	2.5	–	–	–	–	–	–	■ 60	0.11	2.0	–	–	–
	M9340	1.2	■ 315	0.14	2.5	■ 185	0.13	2.5	–	–	–	–	–	–	■ 75	0.11	2.0	–	–	–

ADEX 11-FA

	W1	D1	L	S
	[mm]	[mm]	[mm]	[mm]
11T3	6.450	2.90	9.70	3.91



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
			FA geometry with highly positive design for fine-finish to medium machining.																	
ADEX 11T304FR-FA	**HF7**	0.4	–	–	–	–	–	–	–	–	–	■	210	0.30	5.0	–	–	–	–	–	–
	M0315	0.4	–	–	–	–	–	–	–	–	–	■	480	0.30	5.0	–	–	–	–	–	–
ADEX 11T308FR-FA	**HF7**	0.8	–	–	–	–	–	–	–	–	–	■	240	0.30	5.0	–	–	–	–	–	–
	M0315	0.8	–	–	–	–	–	–	–	–	–	■	570	0.30	5.0	–	–	–	–	–	–
ADEX 11T312FR-FA	**HF7**	1.2	–	–	–	–	–	–	–	–	–	■	255	0.30	5.0	–	–	–	–	–	–
	M0315	1.2	–	–	–	–	–	–	–	–	–	■	600	0.30	5.0	–	–	–	–	–	–
ADEX 11T316FR-FA	**HF7**	1.6	–	–	–	–	–	–	–	–	–	■	270	0.18	5.0	–	–	–	–	–	–

a_e/DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	0.89	0.81	0.76	0.73	0.71	0.70	0.67	0.65	0.63	0.62	0.60	0.60	0.60	0.45

$a_{e\,max}$	1		2.5		5		7.5		10		15		20	
DC	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨
25	0.25	0.40	0.16	0.26	0.12	0.19	0.10	0.15	0.09	0.14	0.07	0.12	0.07	0.11
32	0.28	0.45	0.18	0.29	0.13	0.21	0.11	0.17	0.09	0.15	0.08	0.13	0.07	0.12
40	0.32	0.51	0.20	0.32	0.14	0.23	0.12	0.19	0.10	0.17	0.09	0.14	0.08	0.13
50	0.35	0.57	0.23	0.36	0.16	0.26	0.13	0.21	0.12	0.19	0.10	0.15	0.09	0.14

$a_{e\,max}$	25		32		40		50	
DC	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨
25	0.08	0.13	–	–	–	–	–	–
32	0.07	0.11	0.08	0.13	–	–	–	–
40	0.07	0.12	0.07	0.11	0.08	0.13	–	–
50	0.08	0.13	0.07	0.12	0.07	0.11	0.08	0.13

	ADMX 11-F		ADMX 11-M									ADMX 11-R		ADMX 11-MF		ADMX 11-MM			ADEX 11-FA			
RE	0.4	0.8	0.2	0.4	0.8	1.0	1.2	1.6	2.0	2.5	3.0	0.8	1.6	0.4	0.8	0.4	0.8	1.2	0.4	0.8	1.2	1.6
BS	1.89	1.48	2.09	1.89	1.48	1.27	1.08	0.68	1.61	1.13	0.66	1.48	0.68	1.89	1.48	1.89	1.48	1.08	1.77	1.39	1.0	0.62

ISO	DC		APMX	a_p
25J2R50B25-SAD11E38-C	25	2	38	34.5
32J2R60B32-SAD11E47-C	32	2	47	43.5
40J2R60B40-SAD11E47-C	40	2	47	43.5
40J3R70B32-SAD11E56-C	40	3	56	52.5
40J3R70B40-SAD11E56-C	40	3	56	52.5
25J2R55E03-SAD11E38-C	25	2	38	34.5
32J2R65E04-SAD11E47-C	32	2	47	43.5
40J3R75E04-SAD11E56-C	40	3	56	52.5
50T03R-S90AD11E37-C	50	3	37	33.5

max
4.5

ADMX/ADEX 11	R
ADMX 11T320SR-M	1.0
ADMX 11T325SR-M	1.8
ADMX 11T330SR-M	1.8

J(T)-SAD16E

P M K N S

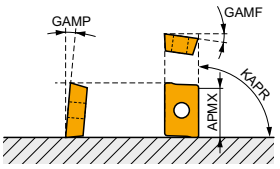
PRAMET

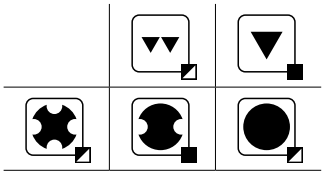
S

HELICAL AD16 Long Edge Mill with Internal Coolant

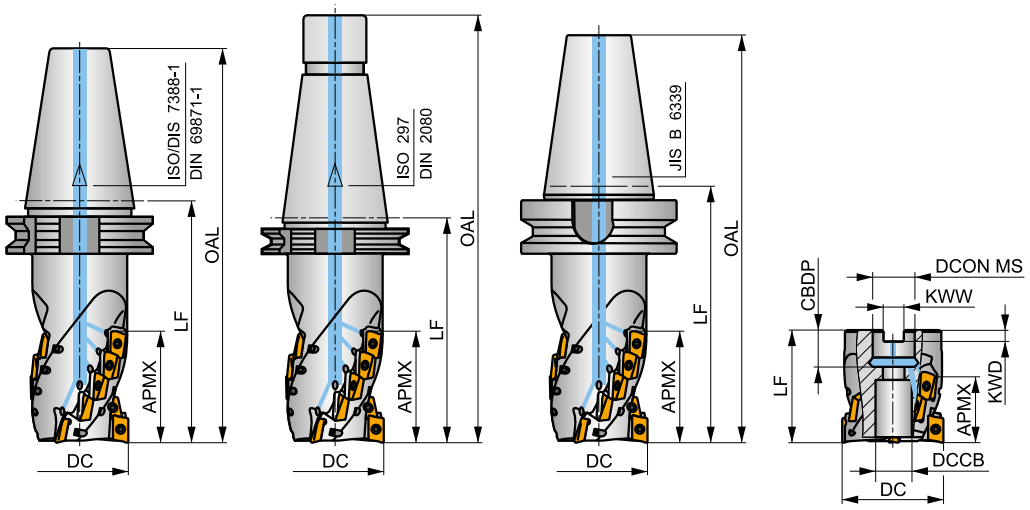
90° long edge end mill utilising positive AD.. 16 inserts with APMX of 40 up to 108 mm with internal coolant. Suitable for shoulder, slot, face or plunge milling. Available in arbor, DIN 69871, BT and DIN 2080 taper style, in Ø50 up to Ø100 mm, with or without differential tooth pitch. Body treated for longer tool life.

KAPR	90°
APMX	40.0 - 108.0 mm





FORCE AD



h_m	0.08 - 0.1
h_m	0.08 - 0.1

	Product	DC [mm]	OAL [mm]	DCON MS [mm]	DCCB [mm]	LU [mm]	LF [mm]	APMX [mm]	CBDP [mm]	CZC MS	GAMF [°]	GAMP [°]	NOF			max.		kg		
	50J3R100H50-SAD16E54-C	50	202	–	–	–	100	54.00	–	50	-6	12	3	12	–	13200	✓	4.08	GI282	SQ031
	50J3R140H50-SAD16E80-C	50	242	–	–	–	140	80.00	–	50	-6	12	3	18	–	13200	✓	4.38	GI282	SQ031
ISO/DIS 7388-1	**63J3R140H50-SAD16E68-C**	63	242	–	–	–	140	68.00	–	50	-6	12	3	15	–	11700	✓	5.34	GI282	SQ031
	63J3R155H50-SAD16E95-C	63	257	–	–	–	155	95.00	–	50	-6	12	3	21	–	11700	✓	5.43	GI282	SQ031
	80J4R165H50-SAD16E108-C	80	257	–	–	–	165	108.00	–	50	-6	12	4	32	✓	10400	✓	7.37	GI282	SQ031
	50J3R140G50-SAD16E80-C	50	267	–	–	–	140	80.00	–	50	-6	12	3	18	–	13200	✓	4.48	GI282	SQ031
ISO 297	**63J3R155G50-SAD16E95-C**	63	282	–	–	–	155	95.00	–	50	-6	12	3	21	–	11700	✓	5.52	GI282	SQ031
	80J4R165G50-SAD16E108-C	80	292	–	–	–	165	108.00	–	50	-6	12	4	32	✓	10400	✓	7.51	GI282	SQ031
	50J3R140X50-SAD16E68-C	50	242	–	–	–	140	68.00	–	50	-6	12	3	15	–	13200	✓	5.28	GI282	SQ031
JIS B 6339	**63J3R155X50-SAD16E80-C**	63	257	–	–	–	155	80.00	–	50	-6	12	3	18	–	11700	✓	6.19	GI282	SQ031
	80J4R165X50-SAD16E95-C	80	267	–	–	–	165	95.00	–	50	-6	12	4	28	✓	10400	✓	7.84	GI282	SQ031
	50T03R-S90AD16E40-C	50	–	22	18	–	70	40.00	21	–	-6	12	3	9	–	13200	✓	1.11	GI282	SQ913
	63T04R-S90AD16E40-C	63	–	27	22	–	70	40.00	22	–	-6	12	4	12	✓	11700	✓	1.50	GI282	SQ914
ISO 6462 DIN 8030	**63T04R-S90AD16E68-C**	63	–	27	22	–	100	68.00	22	–	-6	12	4	20	✓	11700	✓	1.86	GI282	SQ914
	80T04R-S90AD16E55-C	80	–	32	30	–	85	55.00	25	–	-6	12	4	16	✓	10400	✓	2.56	GI282	SQ915
	80T04R-S90AD16E80-C	80	–	32	30	–	115	80.00	25	–	-6	12	4	24	✓	10400	✓	3.17	GI282	SQ915
	100T05R-S90AD16E80-C	100	–	40	36	–	120	80.00	30	–	-6	12	5	30	✓	9300	✓	5.73	GI282	SQ916

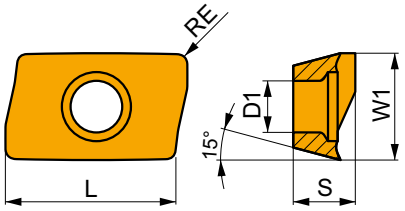
GI282	ADMX 1606..	ADEX 1606..-FA	ADEX 1606..-FM

		Nm					
SQ031	US 4011-T15P	3.5	M 4	10.6	D-T08P/T15P	FG-15	–
SQ913	US 4011-T15P	3.5	M 4	10.6	D-T08P/T15P	FG-15	HS 1030C
SQ914	US 4011-T15P	3.5	M 4	10.6	D-T08P/T15P	FG-15	HS 1230C
SQ915	US 4011-T15P	3.5	M 4	10.6	D-T08P/T15P	FG-15	HS 1630C
SQ916	US 4011-T15P	3.5	M 4	10.6	D-T08P/T15P	FG-15	HS 2040C

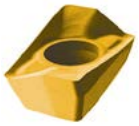
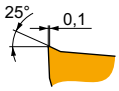
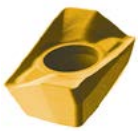
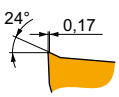
ADMX 16

PRAMET

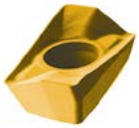
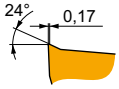
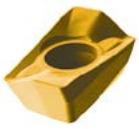
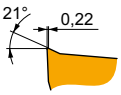
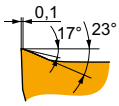
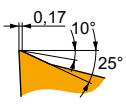
	W1 [mm]	D1 [mm]	L [mm]	S [mm]
1606	9.950	4.50	16.00	6.25



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																				
F geometry with highly positive design for light to medium machining.																				
ADMX 160608SR-F	**8215**	0.8	265	0.15	2.0	155	0.14	2.0	250	0.15	2.0	795	0.18	2.0	65	0.11	1.6	–	–	–
	M8310	0.8	285	0.15	2.0	145	0.14	2.0	270	0.15	2.0	–	–	–	–	–	–	–	–	–
	M8330	0.8	260	0.15	2.0	155	0.14	2.0	245	0.15	2.0	780	0.18	2.0	65	0.11	1.6	–	–	–
	M8340	0.8	235	0.15	2.0	140	0.14	2.0	220	0.15	2.0	–	–	–	55	0.11	1.6	–	–	–
	M9340	0.8	300	0.15	2.0	180	0.14	2.0	–	–	–	–	–	–	75	0.11	1.6	–	–	–
																				
M geometry with positive design for light to medium machining.																				
ADMX 160604SR-M	**8215**	0.4	190	0.18	5.0	110	0.16	5.0	180	0.18	5.0	–	–	–	45	0.13	4.0	–	–	–
	M8330	0.4	190	0.18	5.0	110	0.16	5.0	180	0.18	5.0	–	–	–	45	0.13	4.0	–	–	–
	M8340	0.4	170	0.18	5.0	100	0.16	5.0	160	0.18	5.0	–	–	–	40	0.13	4.0	–	–	–
ADMX 160608SR-M	**8215**	0.8	225	0.18	5.0	135	0.16	5.0	210	0.18	5.0	–	–	–	55	0.13	4.0	–	–	–
	M5315	0.8	305	0.18	5.0	–	–	–	285	0.18	5.0	–	–	–	–	–	–	–	–	–
	M8310	0.8	250	0.18	5.0	125	0.16	5.0	235	0.18	5.0	–	–	–	–	–	–	–	–	–
	M8330	0.8	225	0.18	5.0	135	0.16	5.0	210	0.18	5.0	–	–	–	55	0.13	4.0	–	–	–
	M8340	0.8	205	0.18	5.0	120	0.16	5.0	190	0.18	5.0	–	–	–	50	0.13	4.0	–	–	–
	M9315	0.8	305	0.18	5.0	–	–	–	285	0.18	5.0	–	–	–	–	–	–	–	–	–
	M9325	0.8	280	0.18	5.0	–	–	–	265	0.18	5.0	–	–	–	–	–	–	–	–	–
	M9340	0.8	255	0.18	5.0	150	0.16	5.0	–	–	–	–	–	–	60	0.13	4.0	–	–	–
ADMX 160616SR-M	**8215**	1.6	250	0.18	5.0	150	0.16	5.0	235	0.18	5.0	–	–	–	60	0.13	4.0	–	–	–
	M8310	1.6	275	0.18	5.0	140	0.16	5.0	260	0.18	5.0	–	–	–	–	–	–	–	–	–
	M8330	1.6	250	0.18	5.0	150	0.16	5.0	235	0.18	5.0	–	–	–	60	0.13	4.0	–	–	–
	M8340	1.6	225	0.18	5.0	135	0.16	5.0	210	0.18	5.0	–	–	–	55	0.13	4.0	–	–	–
	M9325	1.6	310	0.18	5.0	–	–	–	290	0.18	5.0	–	–	–	–	–	–	–	–	–
ADMX 160620SR-M	**M6330**	2.0	225	0.18	5.0	155	0.16	5.0	–	–	–	–	–	–	65	0.13	4.0	–	–	–
	M8330	2.0	265	0.18	5.0	155	0.16	5.0	250	0.18	5.0	–	–	–	65	0.13	4.0	–	–	–
	M8340	2.0	240	0.18	5.0	140	0.16	5.0	225	0.18	5.0	–	–	–	60	0.13	4.0	–	–	–

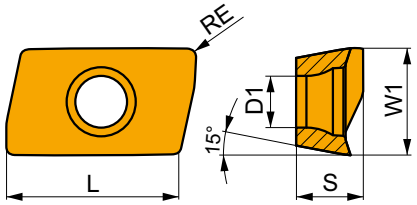
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]
																				
M geometry with positive design for light to medium machining.																				
ADMX 160630SR-M	**M8330**	3.0	■ 265	0.18	5.0	■ 155	0.16	5.0	■ 250	0.18	5.0	–	–	–	◪ 65	0.13	4.0	–	–	–
	M8340	3.0	■ 240	0.18	5.0	■ 140	0.16	5.0	◪ 225	0.18	5.0	–	–	–	◪ 60	0.13	4.0	–	–	–
ADMX 160632SR-M	**M6330**	3.2	■ 225	0.18	5.0	■ 155	0.16	5.0	–	–	–	–	–	–	◪ 65	0.13	4.0	–	–	–
	M8330	3.2	■ 265	0.18	5.0	■ 155	0.16	5.0	■ 250	0.18	5.0	–	–	–	◪ 65	0.13	4.0	–	–	–
	M8340	3.2	■ 240	0.18	5.0	■ 140	0.16	5.0	◪ 225	0.18	5.0	–	–	–	◪ 60	0.13	4.0	–	–	–
	M9325	3.2	■ 325	0.18	5.0	–	–	–	■ 305	0.18	5.0	–	–	–	–	–	–	–	–	–
ADMX 160640SR-M	**M6330**	4.0	■ 225	0.18	5.0	■ 155	0.16	5.0	–	–	–	–	–	–	◪ 65	0.13	4.0	–	–	–
	M8330	4.0	■ 265	0.18	5.0	■ 155	0.16	5.0	■ 250	0.18	5.0	–	–	–	◪ 65	0.13	4.0	–	–	–
	M8340	4.0	■ 240	0.18	5.0	■ 140	0.16	5.0	◪ 225	0.18	5.0	–	–	–	◪ 60	0.13	4.0	–	–	–
ADMX 160650SR-M	**M8330**	5.0	■ 265	0.18	5.0	■ 155	0.16	5.0	■ 250	0.18	5.0	–	–	–	◪ 65	0.13	4.0	–	–	–
	M8340	5.0	■ 240	0.18	5.0	■ 140	0.16	5.0	◪ 225	0.18	5.0	–	–	–	◪ 60	0.13	4.0	–	–	–
																				
R geometry with positive design for medium to less stable machining conditions.																				
ADMX 160608PR-R	**8215**	0.8	■ 205	0.25	6.0	◪ 120	0.23	6.0	■ 190	0.25	6.0	–	–	–	◪ 50	0.20	4.8	◪ 40	0.15	1.0
	M5315	0.8	◪ 260	0.25	6.0	–	–	–	■ 245	0.25	6.0	–	–	–	–	–	–	◪ 50	0.15	1.0
	M8310	0.8	■ 220	0.25	6.0	◪ 110	0.23	6.0	■ 205	0.25	6.0	–	–	–	–	–	–	◪ 40	0.15	1.0
	M8330	0.8	■ 205	0.25	6.0	◪ 120	0.23	6.0	■ 190	0.25	6.0	–	–	–	◪ 50	0.20	4.8	◪ 40	0.15	1.0
	M8340	0.8	■ 190	0.25	6.0	◪ 110	0.23	6.0	◪ 180	0.25	6.0	–	–	–	◪ 45	0.20	4.8	–	–	–
	M9315	0.8	■ 265	0.25	6.0	–	–	–	■ 250	0.25	6.0	–	–	–	–	–	–	◪ 50	0.15	1.0
	M9325	0.8	■ 250	0.25	6.0	–	–	–	■ 235	0.25	6.0	–	–	–	–	–	–	◪ 50	0.15	1.0
ADMX 160616PR-R	**M5315**	1.6	◪ 290	0.25	6.0	–	–	–	■ 275	0.25	6.0	–	–	–	–	–	–	◪ 55	0.15	1.0
	M8330	1.6	■ 225	0.25	6.0	◪ 135	0.23	6.0	■ 210	0.25	6.0	–	–	–	◪ 55	0.20	4.8	◪ 45	0.15	1.0
	M8340	1.6	■ 210	0.25	6.0	◪ 125	0.23	6.0	◪ 195	0.25	6.0	–	–	–	◪ 50	0.20	4.8	–	–	–
	M9315	1.6	■ 295	0.25	6.0	–	–	–	■ 280	0.25	6.0	–	–	–	–	–	–	◪ 55	0.15	1.0
	M9325	1.6	■ 275	0.25	6.0	–	–	–	■ 260	0.25	6.0	–	–	–	–	–	–	◪ 55	0.15	1.0
																				
MF geometry with highly positive design for finish machining.																				
ADMX 160608SR-MF	**M6330**	0.8	■ 215	0.08	4.0	■ 150	0.07	4.0	–	–	–	–	–	–	■ 60	0.06	3.2	–	–	–
	M8340	0.8	■ 225	0.08	4.0	■ 135	0.07	4.0	–	–	–	–	–	–	■ 55	0.06	3.2	–	–	–
	M9340	0.8	■ 305	0.08	4.0	■ 180	0.07	4.0	–	–	–	–	–	–	■ 75	0.06	3.2	–	–	–
																				
MM geometry with highly positive design for light to medium machining.																				
ADMX 160604SR-MM	**M6330**	0.4	■ 145	0.18	4.0	■ 105	0.16	4.0	–	–	–	–	–	–	■ 40	0.14	3.2	–	–	–
	M8340	0.4	■ 160	0.18	4.0	■ 95	0.16	4.0	–	–	–	–	–	–	■ 40	0.14	3.2	–	–	–
ADMX 160608SR-MM	**M6330**	0.8	■ 175	0.18	4.0	■ 125	0.16	4.0	–	–	–	–	–	–	■ 50	0.14	3.2	–	–	–
	M8340	0.8	■ 190	0.18	4.0	■ 110	0.16	4.0	–	–	–	–	–	–	■ 45	0.14	3.2	–	–	–
	M8345	0.8	■ 150	0.18	4.0	■ 90	0.16	4.0	–	–	–	–	–	–	■ 35	0.14	3.2	–	–	–
	M9340	0.8	■ 235	0.18	4.0	■ 140	0.16	4.0	–	–	–	–	–	–	■ 55	0.14	3.2	–	–	–
ADMX 160616SR-MM	**M6330**	1.6	■ 195	0.18	4.0	■ 140	0.16	4.0	–	–	–	–	–	–	■ 55	0.14	3.2	–	–	–
	M8340	1.6	■ 210	0.18	4.0	■ 125	0.16	4.0	–	–	–	–	–	–	■ 50	0.14	3.2	–	–	–
	M8345	1.6	■ 165	0.18	4.0	■ 95	0.16	4.0	–	–	–	–	–	–	■ 40	0.14	3.2	–	–	–
	M9340	1.6	■ 260	0.18	4.0	■ 155	0.16	4.0	–	–	–	–	–	–	■ 65	0.14	3.2	–	–	–

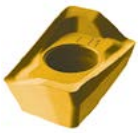
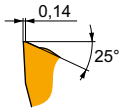
ADEX 16

PRAMET

	W1	D1	L	S
	[mm]	[mm]	[mm]	[mm]
1606	9.950	4.50	16.00	6.25



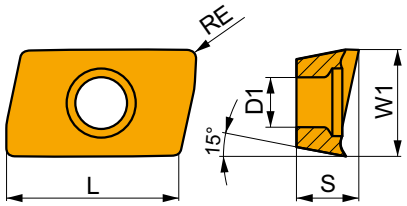
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
			FM geometry with highly positive design for medium machining.																	
ADEX 160608SR-FM	**8215**	0.8	260	0.16	2.0	155	0.14	2.0	245	0.16	2.0	–	–	–	65	0.11	1.6	–	–	–
	M8330	0.8	255	0.16	2.0	150	0.14	2.0	240	0.16	2.0	–	–	–	60	0.11	1.6	–	–	–
	M8340	0.8	235	0.16	2.0	140	0.14	2.0	220	0.16	2.0	–	–	–	55	0.11	1.6	–	–	–

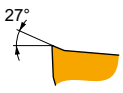
ADEX 16-FA

PRAMET

	W1	D1	L	S
	[mm]	[mm]	[mm]	[mm]
1606	9.950	4.50	16.00	6.17



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
			FA geometry with highly positive design for fine-finish to medium machining.																	
ADEX 160604FR-FA	**HF7**	0.4	–	–	–	–	–	–	–	–	–	195	0.28	6.0	–	–	–	–	–	–
	M0315	0.4	–	–	–	–	–	–	–	–	–	480	0.28	6.0	–	–	–	–	–	–
ADEX 160608FR-FA	**HF7**	0.8	–	–	–	–	–	–	–	–	–	240	0.28	6.0	–	–	–	–	–	–
	M0315	0.8	–	–	–	–	–	–	–	–	–	570	0.28	6.0	–	–	–	–	–	–
ADEX 160616FR-FA	**HF7**	1.6	–	–	–	–	–	–	–	–	–	255	0.28	6.0	–	–	–	–	–	–
	M0315	1.6	–	–	–	–	–	–	–	–	–	630	0.28	6.0	–	–	–	–	–	–
ADEX 160630FR-FA	**HF7**	3.0	–	–	–	–	–	–	–	–	–	270	0.28	6.0	–	–	–	–	–	–

a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	0.89	0.81	0.76	0.73	0.71	0.70	0.66	0.65	0.63	0.62	0.60	0.60	0.60	0.45

$a_{e\,max}$	1		2.5		5		7.5		10		15		20	
DC	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹
50	0.57	0.71	0.36	0.45	0.26	0.32	0.21	0.27	0.19	0.23	0.15	0.19	0.14	0.17
63	0.64	0.80	0.40	0.51	0.29	0.36	0.24	0.30	0.21	0.26	0.17	0.21	0.15	0.19
80	0.72	0.90	0.45	0.57	0.32	0.40	0.27	0.33	0.23	0.29	0.19	0.24	0.17	0.21
100	0.80	1.00	0.51	0.64	0.36	0.45	0.30	0.37	0.26	0.32	0.21	0.27	0.19	0.23

$a_{e\,max}$	25		32		40		50		63		80		100	
DC	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹
50	0.13	0.16	0.12	0.14	0.11	0.14	0.13	0.16	-	-	-	-	-	-
63	0.14	0.17	0.12	0.16	0.12	0.15	0.11	0.14	0.13	0.16	-	-	-	-
80	0.15	0.19	0.14	0.17	0.13	0.16	0.12	0.15	0.11	0.14	0.13	0.16	-	-
100	0.17	0.21	0.15	0.19	0.14	0.17	0.13	0.16	0.12	0.15	0.11	0.14	0.13	0.16

	ADMX 16-F	ADEX 16-FM	ADMX 16-M								ADMX 16-R	
RE	0.8	0.8	0.4	0.8	1.6	2.0	3.0	3.2	4.0	5.0	0.8	1.6
BS	2.99	2.18	3.39	2.99	1.62	1.23	0.28	0.09	2.69	1.52	2.99	1.62

	ADMX 16-MF	ADMX 16-MM			ADEX 16-FA			
RE	0.8	0.4	0.8	1.6	0.4	0.8	1.6	3.0
BS	2.99	3.39	2.99	1.62	2.84	2.44	1.65	0.69

ISO	DC		APMX	a_p
50J3R100H50-SAD16E54-C	50	3	54	50.5
50J3R140H50-SAD16E80-C	50	3	80	76.5
63J3R140H50-SAD16E68-C	63	3	68	64.5
63J3R155H50-SAD16E95-C	63	3	95	91.5
80J4R165H50-SAD16E108-C	80	4	108	104.5
50J3R140G50-SAD16E80-C	50	3	80	76.5
63J3R155G50-SAD16E95-C	63	3	95	91.5
80J4R165G50-SAD16E108-C	80	4	108	104.5
50J3R140X50-SAD16E68-C	50	3	68	64.5
63J3R155X50-SAD16E80-C	63	3	80	76.5
80J4R165X50-SAD16E95-C	80	4	95	91.5
50T03R-S90AD16E40-C	50	3	40	36.5
63T04R-S90AD16E40-C	63	4	40	36.5
63T04R-S90AD16E68-C	63	4	68	64.5
80T04R-S90AD16E55-C	80	4	55	51.5
80T04R-S90AD16E80-C	80	4	80	76.5
100T05R-S90AD16E80-C	100	5	80	76.5

max
7.5

ADMX/ADEX 16	R
ADMX 160630SR-M	2.5
ADMX 160632SR-M	2.5
ADMX 160640SR-M	4.0
ADMX 160650SR-M	4.5

J(T)-SLSN

P K

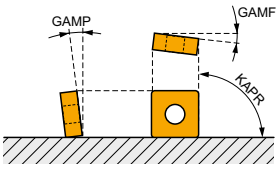
PRAMET

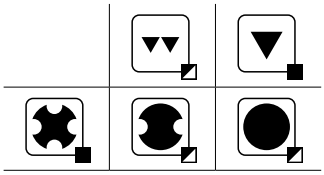
S

ROUGH SN Long Edge Mill for Heavy Milling with Internal Coolant

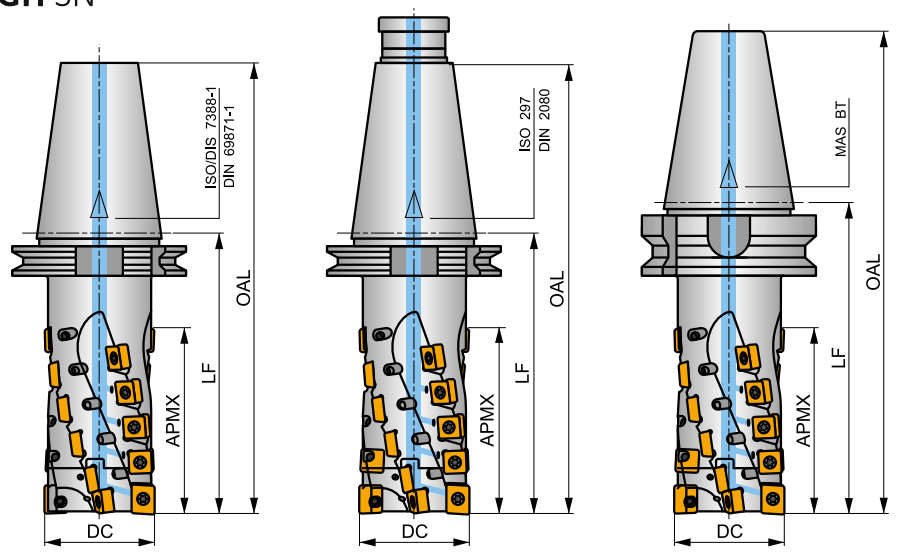
90° long edge end mill utilising LNET 16 and SN.. 13 inserts with APMX of 104 up to 134 mm. Body has exchangeable end piece. Suitable for shoulder, slot, face and plunge milling. Available in DIN 69871, BT and DIN 2080 50 taper style, in Ø63 and Ø80 mm. Body treated for longer tool life.

KAPR	90°
APMX	104.0 - 134.0 mm





ROUGH SN



h_m 0.08 - 0.22

	Product	DC [mm]	OAL [mm]	APMX [mm]	LF [mm]	GAMF [°]	GAMP [°]	CZCMS	NOF	LN	SN		max.		kg		
ISO/DIS 7388-1	**63J2R155H50-SLSN104-C**	63	257	104.00	155	-9	-10	50	4	2	20	–	8500	✓	5.03	GI209	SQ934
	80J2R190H50-SLSN134-C	80	292	134.00	190	-9	-10	50	4	2	26	–	7500	✓	7.45	GI209	SQ935
ISO 297	**63J2R155G50-SLSN104-C**	63	282	104.00	155	-9	-10	50	4	2	20	–	8500	✓	5.20	GI209	SQ934
	80J2R190G50-SLSN134-C	80	317	134.00	190	-9	-10	50	4	2	26	–	7500	✓	7.40	GI209	SQ935
JIS B 6339	**63J2R175X50-SLSN104-C**	63	277	104.00	175	-9	-10	50	4	2	20	–	8500	✓	6.10	GI209	SQ934
	80J2R210X50-SLSN134-C	80	312	134.00	210	-9	-10	50	4	2	26	–	7500	✓	8.50	GI209	SQ935

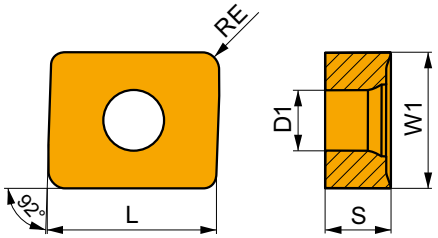
GI209	LNET 1606..	SN.. 1305..

					Nm			
SQ934	EH6326-SL-C	HS 1230	HXK 10	US 45012-T20P	5.0	M 5	12	SDR T20P-T
SQ935	EH8036-SL-C	HS 1640	HXK 14	US 45012-T20P	5.0	M 5	12	SDR T20P-T

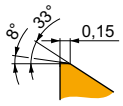
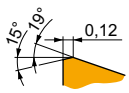
LNET 16

PRAMET

	W1 [mm]	D1 [mm]	L [mm]	S [mm]
1606	13.200	5.90	16.40	6.38



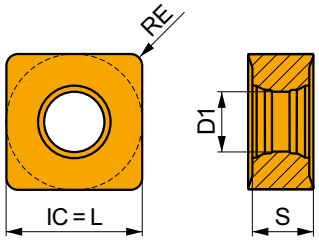
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			M geometry with highly positive design for medium machining.																	
LNET 160616SR-M	**M8330**	1.6	■ 110	0.15	15.0	–	–	–	■ 100	0.15	15.0	–	–	–	–	–	–	–	–	–
	M8340	1.6	■ 105	0.15	15.0	–	–	–	◪ 95	0.15	15.0	–	–	–	–	–	–	–	–	–
			R geometry with highly positive design for medium machining.																	
LNET 160616SR-R	**M8330**	1.6	■ 100	0.15	15.0	–	–	–	■ 95	0.15	15.0	–	–	–	–	–	–	–	–	–
	M8340	1.6	■ 95	0.15	15.0	–	–	–	◪ 90	0.15	15.0	–	–	–	–	–	–	–	–	–

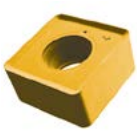
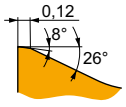
SNGX 13

PRAMET

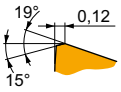
	IC [mm]	D1 [mm]	S [mm]
1305	13.200	5.90	5.96



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			M geometry with positive design for light machining.																	
SNGX 130512SN-M	**M8330**	1.2	■ 105	0.15	12.0	–	–	–	◪ 95	0.15	12.0	–	–	–	–	–	–	–	–	–
	M8340	1.2	■ 105	0.15	12.0	–	–	–	◪ 95	0.15	12.0	–	–	–	–	–	–	–	–	–

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

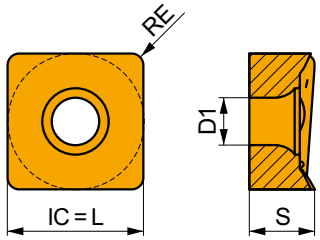
Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]
																				
SNGX 130512PN-R	**M8330**	1.2	■ 95	0.15	12.0	–	–	–	■ 90	0.15	12.0	–	–	–	–	–	–	–	–	–
	M8340	1.2	■ 95	0.15	12.0	–	–	–	◪ 90	0.15	12.0	–	–	–	–	–	–	–	–	–

R geometry with positive design for rough machining and unstable conditions.

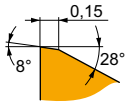
SNET 13

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
1305	13.200	5.90	13.20	6.33



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]
																				
SNET 130512SR-M	**M8330**	1.2	■ 105	0.15	12.0	–	–	–	◪ 95	0.15	12.0	–	–	–	–	–	–	–	–	–
	M8340	1.2	■ 105	0.15	12.0	–	–	–	◪ 95	0.15	12.0	–	–	–	–	–	–	–	–	–

M geometry with positive design for light to medium machining.

a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00

$a_{e\,max}$	1		2.5		5		7.5		10		15		20	
DC	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹
63	0.64	1.75	0.40	1.11	0.29	0.79	0.24	0.65	0.21	0.57	0.17	0.47	0.15	0.41
80	0.72	1.97	0.45	1.25	0.32	0.89	0.27	0.73	0.23	0.64	0.19	0.53	0.17	0.46

$a_{e\,max}$	25		32		40		50		63		80	
DC	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹
63	0.14	0.38	0.12	0.34	0.12	0.32	0.11	0.30	0.13	0.35	–	–
80	0.15	0.42	0.14	0.38	0.13	0.35	0.12	0.32	0.11	0.30	0.13	0.35

	LNET 16-M	LNET 16-R	SNGX 13-M	SNGX 13-R	SNET 13-M
RE	1.6	1.6	1.2	1.2	1.2
BS	–	–	–	–	–

ISO	DC		APMX	a_p
63J2R155H50-SLSN104-C	63	2+2	104	101.2
80J2R190H50-SLSN134-C	80	2+2	134	131.2
63J2R155G50-SLSN104-C	63	2+2	104	101.2
80J2R190G50-SLSN134-C	80	2+2	134	131.2
63J2R175X50-SLSN104-C	63	2+2	104	101.2
80J2R210X50-SLSN134-C	80	2+2	134	131.2

J(T)-SSAP

P M K S

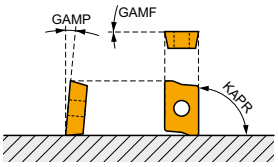
PRAMET

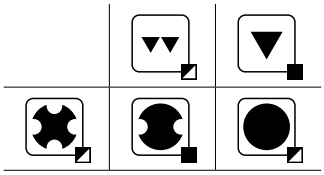
S

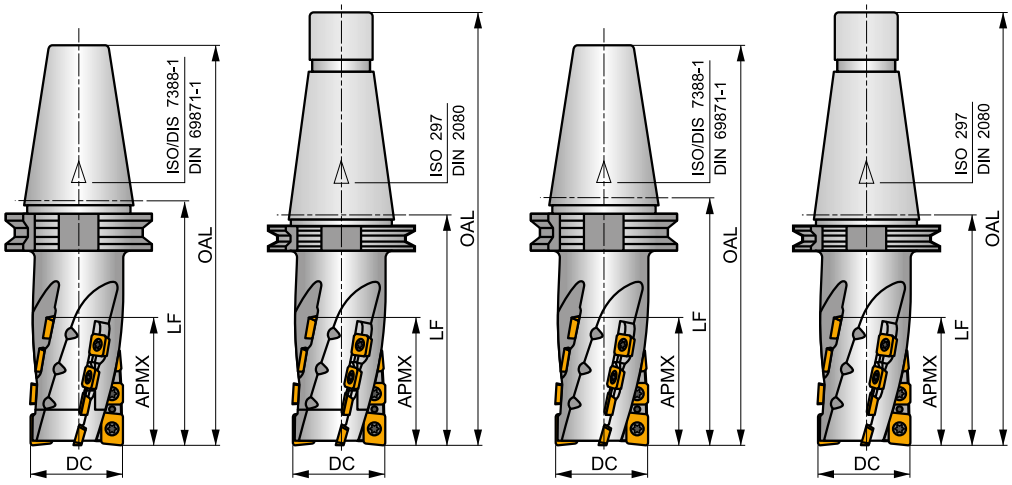
Long Edge End Mill for Medium Milling for AP.. 15 and SP.. 12 Inserts

90° long edge end mill utilising AP.. 15 and SP.. 12 inserts with APMX of 58 up to 95 mm. Body has exchangeable end piece. Suitable for shoulder, slot, face and plunge milling. Available in DIN 69871 and DIN 2080 50 taper style, in Ø50 up to Ø80 mm. Body treated for longer tool life.

KAPR	90°
APMX	58.0 - 95.0 mm







h_m 0.07 - 0.1

	Product	DC [mm]	OAL [mm]	APMX [mm]	LF [mm]	GAMF [°]	GAMP [°]	CZCMS	NOF	AP	SP		max.		kg		
ISO/DIS 7388-1	50J4R110H50-SSAP37+21	50	212	58.00	110	0	7	50	4	2	12	–	9500	–	3.65	GI128	SQ942
	50J4R128H50-SSAP55+21	50	230	76.00	128	0	7	50	4	2	16	–	9500	–	3.80	GI128	SQ942
	63J4R150H50-SSAP74+21	63	252	95.00	150	0	7	50	4	2	20	–	8500	–	4.50	GI128	SQ943
ISO 297	50J4R106X50-SSAP37+21	50	233	58.00	106	0	7	50	4	2	12	–	9500	–	3.50	GI128	SQ942
	50J4R124X50-SSAP55+21	50	251	76.00	124	0	7	50	4	2	16	–	9500	–	4.43	GI128	SQ942
	63J4R146X50-SSAP74+21	63	273	95.00	146	0	7	50	4	2	20	–	8500	–	4.75	GI128	SQ943
ISO/DIS 7388-1	50J4R110H50-SSAP58-A	50	212	58.00	110	0	7	50	4	2	12	–	9500	–	3.50	GI128	SQ941
	50J4R128H50-SSAP76-A	50	230	76.00	128	0	7	50	4	2	16	–	9500	–	3.80	GI128	SQ941
	63J4R150H50-SSAP95-A	63	252	95.00	150	0	7	50	4	2	20	–	8500	–	4.50	GI128	SQ941
	80J6R155H50-SSAP95-A	80	257	95.00	155	0	7	50	6	3	30	–	7500	–	6.30	GI128	SQ941
ISO 297	50J4R106X50-SSAP58-A	50	233	58.00	106	0	7	50	4	2	12	–	9500	–	3.70	GI128	SQ941
	50J4R124X50-SSAP76-A	50	251	76.00	124	0	7	50	4	2	16	–	9500	–	3.80	GI128	SQ941
	63J4R146X50-SSAP95-A	63	273	95.00	146	0	7	50	4	2	20	–	8500	–	4.50	GI128	SQ941
	80J6R151X50-SSAP95-A	80	275	95.00	151	0	7	50	6	3	30	–	7500	–	6.20	GI128	SQ941

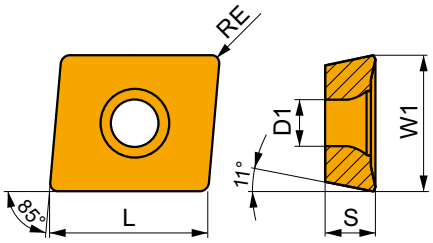
GI128	APE. 1504..	SPE. 1204..

SQ941	–	–	–	US 4511-T20	5.0	M 4.5	11	SDR T20-T
SQ942	P50X21	SR 25	HXK 6	US 4511-T20	5.0	M 4.5	11	SDR T20-T
SQ943	P63X21	SR 26	HXK 8	US 4511-T20	5.0	M 4.5	11	SDR T20-T

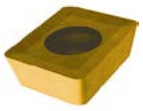
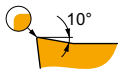
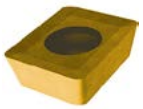
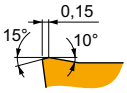
APET 15

PRAMET

	W1	D1	L	S
	[mm]	[mm]	[mm]	[mm]
1504	12.700	5.50	15.90	4.76



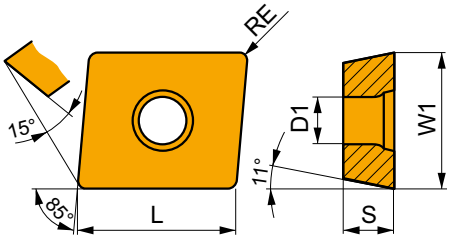
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
			E																	
EN edge preperation, positive geometry for light to medium machining.																				
APET 150412EN	**M8330**	1.2	225	0.20	12.0	135	0.18	12.0	210	0.20	12.0	–	–	–	55	0.14	9.6	–	–	–
			S																	
SN edge preperation, positive geometry for medium to heavy machining.																				
APET 150412SN	**M8330**	1.2	215	0.25	12.0	125	0.23	12.0	200	0.25	12.0	–	–	–	50	0.25	9.6	–	–	–
	M8340	1.2	190	0.25	12.0	110	0.23	12.0	180	0.25	12.0	–	–	–	45	0.25	9.6	–	–	–

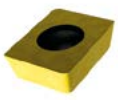
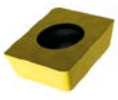
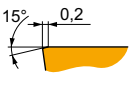
APEW 15

PRAMET

	W1	D1	L	M	S
	[mm]	[mm]	[mm]	[mm]	[mm]
1504	12.700	5.50	15.90	4	4.76



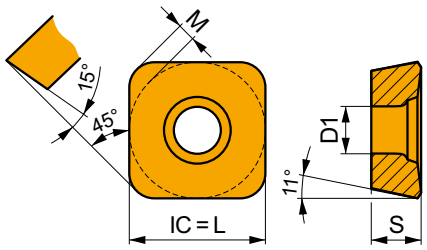
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
			E																	
ER edge preperation, zero rake angle geometry for light to medium machining.																				
APEW 150412ER	**M8330**	1.2	200	0.20	12.0	–	–	–	190	0.20	12.0	–	–	–	–	–	–	40	0.15	1.0
			S																	
SR edge preperation, zero rake angle geometry for medium to heavy machining.																				
APEW 150412SR	**M8330**	1.2	200	0.20	12.0	–	–	–	190	0.20	12.0	–	–	–	–	–	–	40	0.15	1.0
	M8340	1.2	180	0.20	12.0	–	–	–	170	0.20	12.0	–	–	–	–	–	–	–	–	–

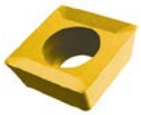
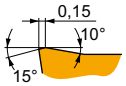
SPET 12

PRAMET

	IC	D1	L	M	S
	[mm]	[mm]	[mm]	[mm]	[mm]
1204	12.700	5.50	12.70	2	4.76



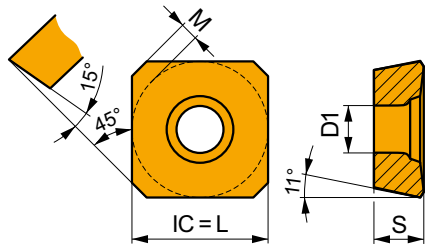
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
			S																	
			S edge prepartion, positive general purpose geometry.																	
SPET 120408S	**M8330**	0.8	215	0.20	12.0	125	0.18	12.0	200	0.20	12.0	–	–	–	50	0.18	9.6	–	–	–
	M8340	0.8	190	0.20	12.0	110	0.18	12.0	180	0.20	12.0	–	–	–	45	0.18	9.6	–	–	–

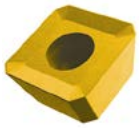
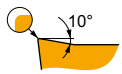
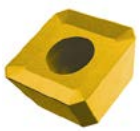
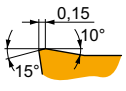
SPET 12 AD

PRAMET

	IC	D1	L	M	S
	[mm]	[mm]	[mm]	[mm]	[mm]
1204	12.700	5.50	12.70	2	4.76



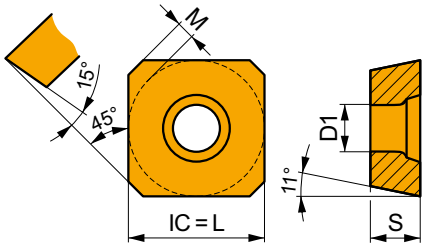
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
			E																	
			ADEN edge prepartion, positive geometry for light to medium machining.																	
SPET 1204ADEN	**M8330**	–	245	0.20	12.0	145	0.18	12.0	230	0.20	12.0	–	–	–	60	0.14	9.6	–	–	–
	M8340	–	220	0.20	12.0	130	0.18	12.0	205	0.20	12.0	–	–	–	55	0.14	9.6	–	–	–
			S																	
			ADSN edge prepartion, positive geometry for medium machining.																	
SPET 1204ADSN	**M8330**	–	245	0.20	12.0	145	0.18	12.0	230	0.20	12.0	–	–	–	60	0.14	9.6	–	–	–
	M8340	–	220	0.20	12.0	130	0.18	12.0	205	0.20	12.0	–	–	–	55	0.14	9.6	–	–	–

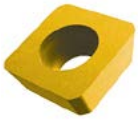
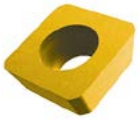
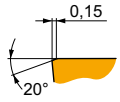
SPEW 12 AD

PRAMET

	IC	D1	L	M	S
	[mm]	[mm]	[mm]	[mm]	[mm]
1204	12.700	5.50	12.70	2	4.76



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
			E																	
ADEN edge preperation, zero rake angle geometry for light to medium machining.																				
SPEW 1204ADEN	**M8330**	–	220	0.20	12.0	–	–	–	205	0.20	12.0	–	–	–	–	–	–	40	0.15	1.0
	M8340	–	200	0.20	12.0	–	–	–	190	0.20	12.0	–	–	–	–	–	–	–	–	–
			S																	
ADSN edge preperation, zero rake angle geometry for medium machining.																				
SPEW 1204ADSN	**M8330**	–	220	0.20	12.0	–	–	–	205	0.20	12.0	–	–	–	–	–	–	40	0.15	1.0
	M8340	–	200	0.20	12.0	–	–	–	190	0.20	12.0	–	–	–	–	–	–	–	–	–

a_e/DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	0.89	0.81	0.76	0.73	0.71	0.70	0.67	0.65	0.63	0.62	0.60	0.60	0.60	0.45

$a_{e\,max}$	1		2.5		5		7.5		10		15		20	
DC	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨
50	0.50	0.71	0.32	0.45	0.23	0.32	0.19	0.27	0.16	0.23	0.14	0.19	0.12	0.17
63	0.56	0.80	0.35	0.51	0.25	0.36	0.21	0.30	0.18	0.26	0.15	0.21	0.13	0.19
80	0.63	0.90	0.40	0.57	0.28	0.40	0.23	0.33	0.20	0.29	0.17	0.24	0.15	0.21

$a_{e\,max}$	25		32		40		50		63		80	
DC	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨
50	0.11	0.16	0.10	0.14	0.10	0.14	0.11	0.16	–	–	–	–
63	0.12	0.17	0.11	0.16	0.10	0.15	0.10	0.14	0.11	0.16	–	–
80	0.13	0.19	0.12	0.17	0.11	0.16	0.10	0.15	0.10	0.14	0.11	0.16

	APET 15	APEW 15	SPET 12	SPET 12AD	SPEW 12AD
RE	1.2	1.2	0.8	–	–
BS	–	–	–	–	–

ISO	DC			
50J4R110H50-SSAP37+21	50	2+2	58	55.6
50J4R128H50-SSAP55+21	50	2+2	76	73.6
63J4R150H50-SSAP74+21	63	2+2	95	92.6
50J4R106X50-SSAP37+21	50	2+2	58	55.6
50J4R124X50-SSAP55+21	50	2+2	76	73.6
63J4R146X50-SSAP74+21	63	2+2	95	92.6
50J4R110H50-SSAP58-A	50	2+2	58	55.6
50J4R128H50-SSAP76-A	50	2+2	76	73.6
63J4R150H50-SSAP95-A	63	2+2	95	92.6
80J6R155H50-SSAP95-A	80	3+3	95	92.6
50J4R106X50-SSAP58-A	50	2+2	58	55.6
50J4R124X50-SSAP76-A	50	2+2	76	73.6
63J4R146X50-SSAP95-A	63	2+2	95	92.6
80J6R151X50-SSAP95-A	80	3+3	95	92.6

J(T)-2416

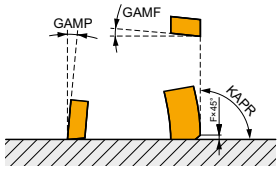
P M K N

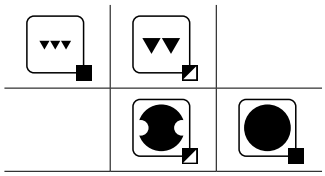
PRAMET

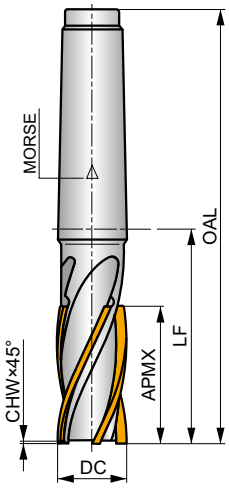
Long Edge Mill with Brazed Solid Carbide Helical Tips

90° long edge mill with helically brazed carbide tips and APMX of 40 up to 63 mm. Suitable for shoulder, slot and face milling. Available in morse taper 4 and 6, in Ø20 up to Ø40 mm. Body treated for longer tool life.

KAPR	90°
APMX	40.0 - 63.0 mm



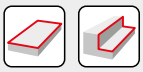




h_m 0.02 - 0.04

	Product	DC [mm]	OAL [mm]	APMX [mm]	LF [mm]	CHW [mm]	CZCMS	NOF		max.		kg		
DIN 228A	**2416-20R-E3-P**	20	146	40.00	65	0.5	3	4	–	–	–	0.37	–	–
	2416-25R-E3-P	25	160	50.00	79	0.5	3	4	–	–	–	0.40	–	–
	2416-32R-E4-P	32	180	50.00	78	0.5	4	4	–	–	–	0.80	–	–
	2416-40R-E4-P	40	200	63.00	98	0.8	4	6	–	–	–	1.19	–	–

ISO		f_{min}	f_{max}	P30
P	●	0.03	0.08	149
	⬣	0.03	0.07	133
	✖	0.03	0.06	115
M	●	0.03	0.08	88
	⬣	0.03	0.07	79
	✖	0.03	0.06	70
K	●	0.03	0.08	142
	⬣	0.03	0.07	126
	✖	0.03	0.06	110
N	●	0.03	0.08	374
	⬣	0.03	0.07	333
	✖	0.03	0.06	290



a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨X.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨X.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

ISO	DC		APMX	a_p
2416-20R-E3-P	20	4	40	40
2416-25R-E3-P	25	4	50	50
2416-32R-E4-P	32	4	50	50
2416-40R-E4-P	40	6	63	63

$a_{e\,max}$	0.5		1		2		3		4		5		8	
DC	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨
20	0.14	0.25	0.10	0.18	0.07	0.13	0.06	0.11	0.05	0.09	0.05	0.08	0.04	0.07
25	0.16	0.28	0.11	0.20	0.08	0.14	0.07	0.12	0.06	0.10	0.05	0.09	0.04	0.08
32	0.18	0.32	0.13	0.23	0.09	0.16	0.07	0.13	0.07	0.12	0.06	0.10	0.05	0.08
40	0.20	0.36	0.14	0.25	0.10	0.18	0.08	0.15	0.07	0.13	0.07	0.12	0.05	0.09

$a_{e\,max}$	10		12		16		20		25		32		40	
DC	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨
20	0.04	0.06	0.03	0.06	0.03	0.06	0.04	0.06	–	–	–	–	–	–
25	0.04	0.07	0.04	0.06	0.03	0.06	0.03	0.06	0.04	0.06	–	–	–	–
32	0.04	0.08	0.04	0.07	0.04	0.06	0.03	0.06	0.03	0.06	0.04	0.06	–	–
40	0.05	0.08	0.04	0.08	0.04	0.07	0.04	0.06	0.03	0.06	0.03	0.06	0.04	0.06

J(T)-CSD12X

P M S

PRAMET

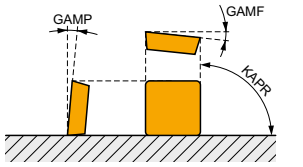
C

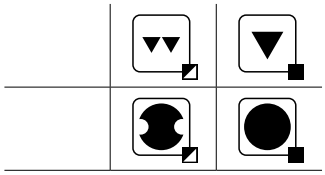
MULTISIDE SD Long Edge Mill

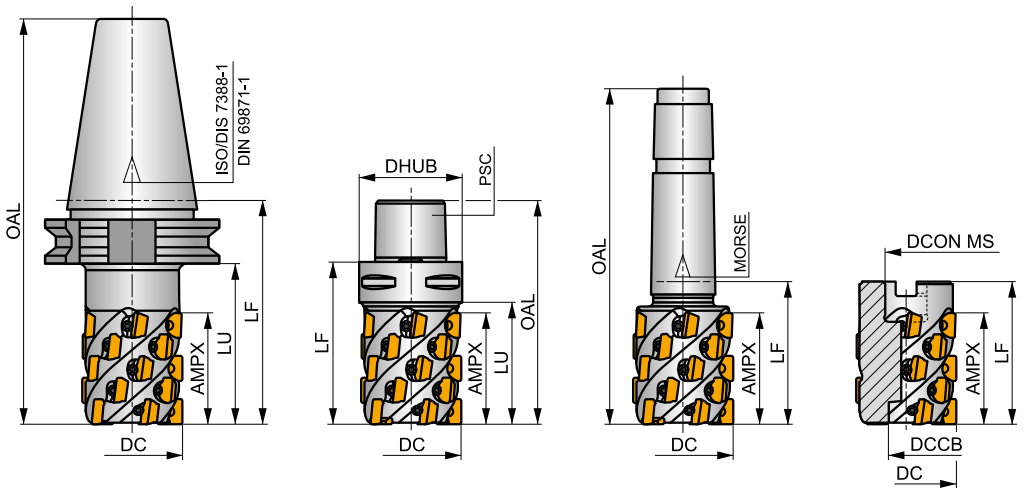
90° long edge end mill utilising positive SD.. 12 inserts with APMX of 44.1 up to 87.3 mm. Suitable for shoulder, slot or face milling. Available in arbor, PSC, Morse or DIN 69871 taper style, in Ø40 up to Ø80 mm. Body treated for longer tool life.

MULTISIDE SD

KAPR	90°
APMX	44.1 - 87.3 mm







h_m 0.025 - 0.05

h_m 0.025 - 0.05

	Product	DC [mm]	OAL [mm]	DCON MS [mm]	DCCB [mm]	LU [mm]	LF [mm]	APMX [mm]	GAMF [°]	GAMP [°]	CZC MS	NOF	max.	kg		
ISO/DIS 7388-1	**40J4R090H40-CSD12X44**	40	158.4	–	–	70	90	44.10	-5	8	40	4	4000	1.16	GI271	SQ091
	50J5R100H50-CSD12X55	50	201.7	–	–	80	100	54.90	-5	8	50	5	3200	4.20	GI271	SQ091
	63J6R110H50-CSD12X66	63	211.7	–	–	90	110	65.70	-5	8	50	6	2500	4.90	GI271	SQ091
PSC	**40J4R080XC5-CSD12X44**	40	110	–	–	59	80	44.10	-5	8	C5	4	4000	1.06	GI271	SQ091
	50J5R080XC5-CSD12X55	50	110	–	–	59	80	54.90	-5	8	C5	5	3200	1.24	GI271	SQ091
DIN 228A	**50J5R065E04-CSD12X55**	50	167.5	–	–	–	65	54.90	-5	8	4	5	3200	1.34	GI271	SQ091
ISO 6462 DIN 8030	**50T05R-C90SD12X55**	50	–	22	18	–	78	54.90	-5	8	–	5	3200	0.95	GI271	SQ923
	63T06R-C90SD12X66	63	–	27	22	–	90	65.70	-5	8	–	6	2500	1.72	GI271	SQ924
	80T08R-C90SD12X88	80	–	40	36	–	115	87.30	-5	8	–	8	2000	3.20	GI271	SQ925

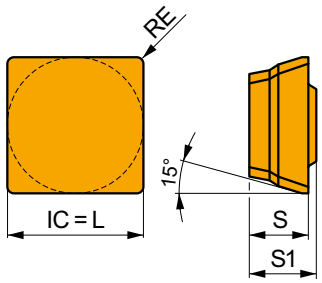
GI271	SDGX 1205..	SDMX 1205..

		Nm					
SQ091	US 63511D-T15P	3.0	M 3.5	11	D-T08P/T15P	FG-15	–
SQ923	US 63511D-T15P	3.0	M 3.5	11	D-T08P/T15P	FG-15	HSD 1070
SQ924	US 63511D-T15P	3.0	M 3.5	11	D-T08P/T15P	FG-15	HS 1280
SQ925	US 63511D-T15P	3.0	M 3.5	11	D-T08P/T15P	FG-15	HS 20100

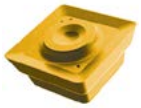
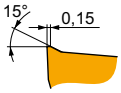
SDGX 12

PRAMET

	IC	L	S	S1
	[mm]	[mm]	[mm]	[mm]
1205	12.700	12.70	5.56	6.35



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

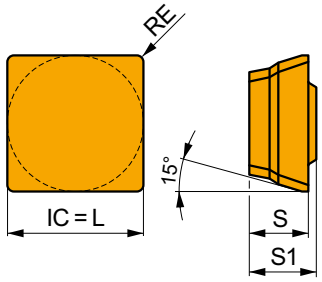
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
SDGX 120508EN-FM	M8330	0.8	■ 220	0.15	12.0	■ 130	0.14	12.0	–	–	–	–	–	–	◪ 55	0.11	9.6	–	–	–
	M8345	0.8	■ 155	0.15	12.0	■ 90	0.14	12.0	–	–	–	–	–	–	■ 35	0.11	9.6	–	–	–

FM geometry with positive design for light to medium heavy machining.

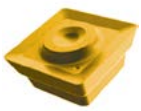
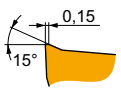
SDMX 12

PRAMET

	IC	L	S	S1
	[mm]	[mm]	[mm]	[mm]
1205	12.700	12.70	5.56	6.35



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
SDMX 120508EN-M	M8330	0.8	◪ 220	0.15	12.0	■ 130	0.14	12.0	–	–	–	–	–	–	◪ 55	0.11	9.6	–	–	–
	M8345	0.8	◪ 155	0.15	12.0	■ 90	0.14	12.0	–	–	–	–	–	–	■ 35	0.11	9.6	–	–	–

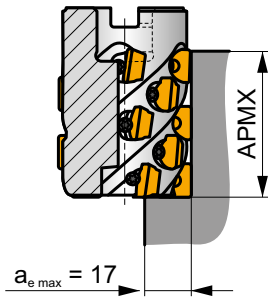
M geometry with positive design for light to heavy machining.

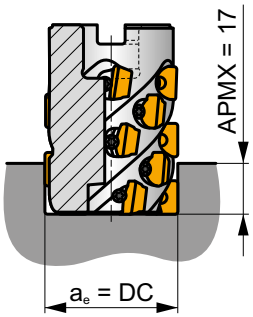
a_e/DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	0.89	0.81	0.76	0.73	0.71	0.70	0.66	0.65	0.63	0.62	0.60	0.60	0.60	0.45

$a_{e\,max}$	1		2.5		5		7.5		10		15		20	
DC	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨
40	0.16	0.32	0.10	0.20	0.07	0.14	0.06	0.12	0.05	0.10	0.04	0.09	0.04	0.08
50	0.18	0.35	0.11	0.23	0.08	0.16	0.07	0.13	0.06	0.12	0.05	0.10	0.04	0.09
63	0.20	0.40	0.13	0.25	0.09	0.18	0.07	0.15	0.06	0.13	0.05	0.11	0.05	0.09
80	0.22	0.45	0.14	0.28	0.10	0.20	0.08	0.17	0.07	0.14	0.06	0.12	0.05	0.10

$a_{e\,max}$	25		32		40		50		63		80	
DC	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨
40	0.04	0.07	0.03	0.07	0.04	0.08	–	–	–	–	–	–
50	0.04	0.08	0.04	0.07	0.03	0.07	0.04	0.08	–	–	–	–
63	0.04	0.09	0.04	0.08	0.04	0.07	0.03	0.07	0.04	0.08	–	–
80	0.05	0.09	0.04	0.09	0.04	0.08	0.04	0.07	0.03	0.07	0.04	0.08

	SDGX 12-FM	SDMX 12-M
RE	0.8	0.8
BS	2.99	2.99

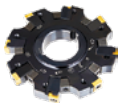




ISO	DC		APMX	a_p
40J4R090H40-CSD12X44	40	4	44.1	42.5
50J5R100H50-CSD12X55	50	5	54.9	53.3
63J6R110H50-CSD12X66	63	6	65.7	64.1
80J8R130H50-CSD12X88	80	8	87.3	85.7
40J4R080XC5-CSD12X44	40	4	44.1	42.5
50J5R080XC5-CSD12X55	50	5	54.9	53.3
63J6R095XC6-CSD12X66	63	6	65.7	64.1
50J5R065E04-CSD12X55	50	5	54.9	53.3
50T05R-C90SD12X55	50	5	54.9	53.3
63T06R-C90SD12X66	63	6	65.7	64.1
80T08R-C90SD12X88	80	8	87.3	85.7

INDEXABLE SLOT MILLS

SLOT MILLING

	S90SN	S90CN(XN)			
	90°	90°			
	APMX [mm] 4.0 – 14.0	APMX [mm] 14.0 – 30.5			
	DC [mm] 80 – 200	DC [mm] 125 – 315			
Disc	DC = 80 – 200 [mm]	 DC = 125 – 315 [mm]			
Shell mill	DC = 63 – 160 [mm]	DC = 125 – 200 [mm]			
Page	510	516			
ISO	P M K	P M K			
Insert shape					
Inserts	SNHQ 11 SNHQ 12	CNHQ 1005 XNHQ 1205 XNHQ 1606			
No. of cutting edges	4	2			
Deep slot milling	■	■			
Deep shoulder milling	◪	◪			
Face milling	◪	◪			
Rear face milling	◪	◪			

S90SN

P M K

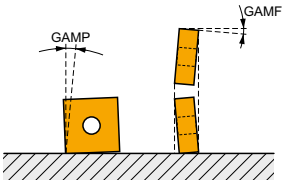
PRAMET

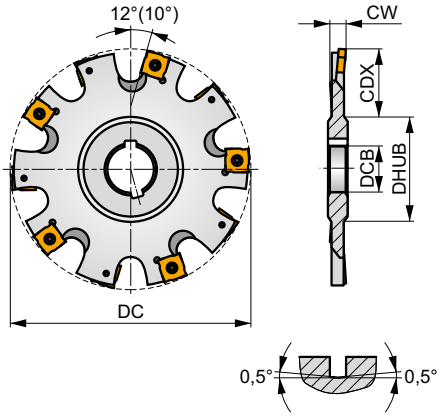
S

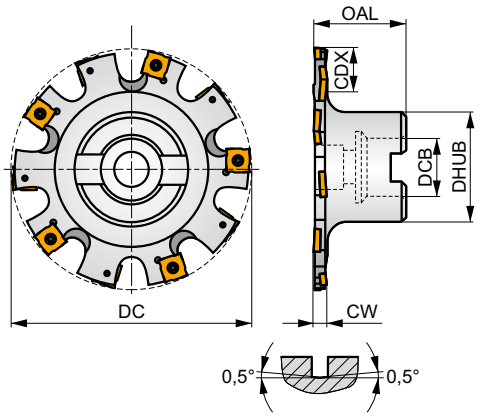
Side and Face Disk Milling Cutter

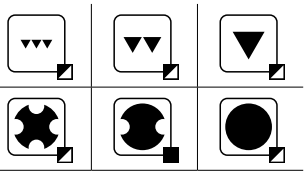
90° side and face cutter utilising SNHQ 11, 12 inserts with APMX (slotting depth) of 10.5 up to 62 mm. Suitable for shoulder, slot, rear side and face milling. Available in arbor or stub arbor style, in range Ø63 up to Ø200 mm. Body treated for longer tool life.

KAPR	90°
CW	4.0 - 14.0 mm









h_m 0.07 - 0.09

h_m 0.07 - 0.09

	Product	DC [mm]	OAL [mm]	DCB [mm]	DHUB [mm]	CDX [mm]	CW [mm]	x/1	GAMF [°]	GAMP [°]			max.		kg			
	80F8N-S90SN11N4	80	–	27	42	16	4.00	–	2.5	-0.5	8	–	12300	–	0.23	GI151	DI011	–
	80F8N-S90SN11N5	80	–	27	42	16	5.00	–	2.5	-0.5	8	–	12300	–	0.22	GI152	DI019	–
	80F8N-S90SN12N6	80	–	27	42	16	6.00	–	2.5	-0.5	8	–	8400	–	0.25	GI153	DI012	–
	80F8N-S90SN12N8	80	–	27	42	16	8.00	–	2.5	-0.5	8	–	8400	–	0.28	GI157	DI013	–
	100G10N-S90SN12N6	100	–	32	48	24	6.00	–	2.5	-0.5	10	–	7500	–	0.43	GI153	DI012	–
	100G10N-S90SN12N8	100	–	32	48	24	8.00	–	2.5	-0.5	10	–	7500	–	0.42	GI157	DI013	–
	100G10N-S90SN12N10	100	–	32	48	24	10.00	–	2.5	-0.5	10	–	7500	–	0.46	GI154	DI014	–
	100G10N-S90SN12N12	100	–	32	48	24	12.00	–	2.5	-0.5	10	–	7500	–	0.66	GI158	DI015	–
	125H12N-S90SN12N6	125	–	40	58	31	6.00	–	2.5	-0.5	12	–	6700	–	0.62	GI153	DI012	–
	125H12N-S90SN12N8	125	–	40	58	31	8.00	–	2.5	-0.5	12	–	6700	–	0.73	GI157	DI013	–
ISO 6462 DIN 8030	**125H12N-S90SN12N10**	125	–	40	58	31	10.00	–	2.5	-0.5	12	–	6700	–	0.66	GI154	DI014	–
	125H12N-S90SN12N12	125	–	40	58	31	12.00	–	2.5	-0.5	12	–	6700	–	0.76	GI158	DI015	–
	160H16N-S90SN12N6	160	–	40	58	43	6.00	–	2.5	-0.5	16	–	5900	–	0.86	GI153	DI012	–
	160H16N-S90SN12N8	160	–	40	58	43	8.00	–	2.5	-0.5	16	–	5900	–	1.10	GI157	DI013	–
	160H16N-S90SN12N10	160	–	40	58	43	10.00	–	2.5	-0.5	16	–	5900	–	1.14	GI154	DI014	–
	160H16N-S90SN12N12	160	–	40	58	43	12.00	–	2.5	-0.5	16	–	5900	–	1.30	GI158	DI015	–
	160H15N-S90SN12N14	160	–	40	58	43	14.00	–	2.5	-0.5	15	–	5900	–	1.40	GI158	DI015	–
	200J18N-S90SN12N6	200	–	50	72	62	6.00	–	2.5	-0.5	18	–	5300	–	1.40	GI153	DI012	–
	200J18N-S90SN12N8	200	–	50	72	62	8.00	–	2.5	-0.5	18	–	5300	–	1.78	GI157	DI013	–
	200J18N-S90SN12N10	200	–	50	72	62	10.00	–	2.5	-0.5	18	–	5300	–	1.89	GI154	DI014	–
	200J18N-S90SN12N12	200	–	50	72	62	12.00	–	2.5	-0.5	18	–	5300	–	2.23	GI158	DI015	–
	200J18N-S90SN12N14	200	–	50	72	62	14.00	–	2.5	-0.5	18	–	5300	–	2.67	GI158	DI015	–
	63A03R-S90SN11N4	63	40	16	34	10.5	4.00	3	2.5	-0.5	6	–	13900	–	0.39	GI151	DI021	–
	63A03R-S90SN11N5	63	40	16	34	10.5	5.00	3	2.5	-0.5	6	–	13900	–	0.36	GI152	DI021	–
ISO 6462 DIN 8030	**63A03R-S90SN12N6**	63	40	16	34	10.5	6.00	3	2.5	-0.5	6	–	9500	–	0.37	GI153	DI022	–
	80A04R-S90SN11N5	80	40	22	40	17.5	5.00	4	2.5	-0.5	8	–	12300	–	0.48	GI152	DI023	–
	80A04R-S90SN12N6	80	40	22	40	17.5	6.00	4	2.5	-0.5	8	–	8400	–	0.50	GI153	DI024	–

	Product	DC [mm]	OAL [mm]	DCB [mm]	DHUB [mm]	CDX [mm]	CW [mm]		GAMF [°]	GAMP [°]			max.		kg			
ISO 6462 DIN 8030	**100A05R-S90SN12N6**	100	50	27	48	23.5	6.00	5	2.5	-0.5	10	–	7500	–	0.86	GI153	DI025	–
	125B06R-S90SN12N6	125	50	40	56	24	6.00	6	2.5	-0.5	12	–	6700	–	1.20	GI153	DI012	AC003
	160B08R-S90SN12N10	160	50	40	70	41	10.00	8	2.5	-0.5	16	–	5900	–	2.03	GI154	DI014	–

GI151	SNHQ 1102..
GI152	SNHQ 1103..
GI153	SNHQ 1203..
GI154	SNHQ 1205..
GI157	SNHQ 1204..
GI158	SNHQ 1207

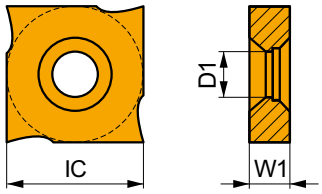
		Nm					
DI011	US 3504-T09P	3.0	M 3.5	4	D-T07P/T09P	FG-15	–
DI012	US 70	5.0	M 4	5	D-T07/T15	FG-15	–
DI013	US 71	5.0	M 4	7	D-T07/T15	FG-15	–
DI014	US 72	5.0	M 4	9	D-T07/T15	FG-15	–
DI015	US 73	5.0	M 4	11	D-T07/T15	FG-15	–
DI019	US 3505-T09P	3.0	M 3.5	5	D-T07P/T09P	FG-15	HS 0830
DI021	US 3504-T09P	3.0	M 3.5	4	D-T07P/T09P	FG-15	HS 0830
DI022	US 70	5.0	M 4	5	D-T07/T15	FG-15	HS 0830
DI023	US 3505-T09P	3.0	M 3.5	5	D-T07P/T09P	FG-15	HS 1030
DI024	US 70	5.0	M 4	5	D-T07/T15	FG-15	HS 1030
DI025	US 70	5.0	M 4	5	D-T07/T15	FG-15	HS 1230

AC003	KS 2040	K.FMH40

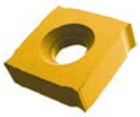
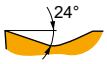
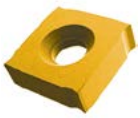
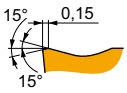
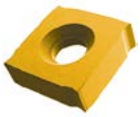
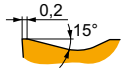
SNHQ AZ

PRAMET

	IC [mm]	D1 [mm]	W1 [mm]
1102	11.000	4.30	2.300
1103	11.000	4.30	2.700
1203	12.700	5.00	3.200
1204	12.700	5.00	4.500
1205	12.700	5.00	5.400
1207	12.700	5.00	7.000

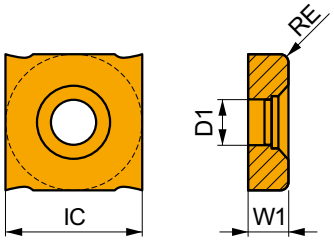


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

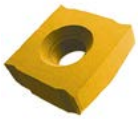
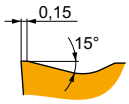
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			U E																	
EN geometry with special design for slot milling.																				
SNHQ 1203AZEN	**8215**	–	415	0.10	–	245	0.10	–	390	0.10	–	–	–	–	–	–	–	–	–	–
	M8340	–	370	0.10	–	220	0.10	–	350	0.10	–	–	–	–	–	–	–	–	–	–
SNHQ 1204AZEN	**8215**	–	405	0.10	–	240	0.10	–	380	0.10	–	–	–	–	–	–	–	–	–	–
	M8340	–	355	0.10	–	210	0.10	–	335	0.10	–	–	–	–	–	–	–	–	–	–
SNHQ 1205AZEN	**8215**	–	390	0.10	–	230	0.10	–	370	0.10	–	–	–	–	–	–	–	–	–	–
	M8340	–	345	0.10	–	205	0.10	–	325	0.10	–	–	–	–	–	–	–	–	–	–
SNHQ 1207AZEN	**8215**	–	380	0.10	–	225	0.10	–	360	0.10	–	–	–	–	–	–	–	–	–	–
	M8340	–	335	0.10	–	200	0.10	–	315	0.10	–	–	–	–	–	–	–	–	–	–
			U T																	
TN geometry with special design for slot milling.																				
SNHQ 1102AZTN	**M8330**	–	365	0.20	–	215	0.18	–	345	0.20	–	–	–	–	–	–	–	–	–	–
	M8340	–	335	0.20	–	200	0.18	–	315	0.20	–	–	–	–	–	–	–	–	–	–
SNHQ 1103AZTN	**M8330**	–	345	0.20	–	205	0.18	–	325	0.20	–	–	–	–	–	–	–	–	–	–
	M8340	–	315	0.20	–	185	0.18	–	295	0.20	–	–	–	–	–	–	–	–	–	–
			U T																	
TN geometry with special design for slot milling.																				
SNHQ 1203AZTN	**M8330**	–	345	0.20	–	205	0.18	–	325	0.20	–	–	–	–	–	–	–	–	–	–
	M8340	–	315	0.20	–	185	0.18	–	295	0.20	–	–	–	–	–	–	–	–	–	–
SNHQ 1204AZTN	**M8330**	–	335	0.20	–	200	0.20	–	315	0.20	–	–	–	–	–	–	–	–	–	–
	M8340	–	300	0.20	–	180	0.20	–	285	0.20	–	–	–	–	–	–	–	–	–	–
SNHQ 1205AZTN	**M8330**	–	330	0.20	–	195	0.20	–	310	0.20	–	–	–	–	–	–	–	–	–	–
	M8340	–	295	0.20	–	175	0.20	–	280	0.20	–	–	–	–	–	–	–	–	–	–
SNHQ 1207AZTN	**M8330**	–	320	0.20	–	190	0.20	–	300	0.20	–	–	–	–	–	–	–	–	–	–
	M8340	–	290	0.20	–	170	0.20	–	275	0.20	–	–	–	–	–	–	–	–	–	–

SNHQ TRL

	IC [mm]	D1 [mm]	L [mm]	W1 [mm]
1203	12.700	5.00	12.70	3.200
1204	12.700	5.00	12.70	4.500
1205	12.700	5.00	12.70	5.400
1207	12.700	5.00	12.70	7.000

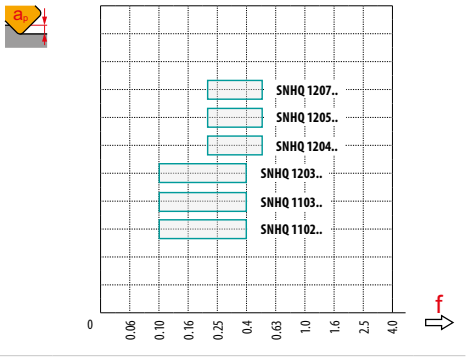


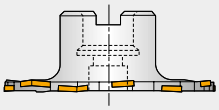
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

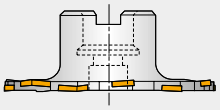
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																				
			U T																	
			TRL geometry with special design for slot milling.																	
SNHQ 120305TRL	**M8340**	0.5	■ 230	0.20	–	◪ 135	0.18	–	◪ 215	0.20	–	–	–	–	–	–	–	–	–	–
SNHQ 120310TRL	**M8340**	1.0	■ 285	0.20	–	◪ 170	0.18	–	◪ 270	0.20	–	–	–	–	–	–	–	–	–	–
SNHQ 120315TRL	**M8340**	1.5	■ 300	0.20	–	◪ 180	0.18	–	◪ 285	0.20	–	–	–	–	–	–	–	–	–	–
SNHQ 120405TRL	**M8340**	0.5	■ 220	0.20	–	◪ 130	0.20	–	◪ 205	0.20	–	–	–	–	–	–	–	–	–	–
SNHQ 120410TRL	**M8340**	1.0	■ 275	0.20	–	◪ 165	0.20	–	◪ 260	0.20	–	–	–	–	–	–	–	–	–	–
SNHQ 120415TRL	**M8340**	1.5	■ 290	0.20	–	◪ 170	0.20	–	◪ 275	0.20	–	–	–	–	–	–	–	–	–	–
SNHQ 120505TRL	**M8340**	0.5	■ 215	0.20	–	◪ 125	0.20	–	◪ 200	0.20	–	–	–	–	–	–	–	–	–	–
SNHQ 120510TRL	**M8340**	1.0	■ 270	0.20	–	◪ 160	0.20	–	◪ 255	0.20	–	–	–	–	–	–	–	–	–	–
SNHQ 120515TRL	**M8340**	1.5	■ 280	0.20	–	◪ 165	0.20	–	◪ 265	0.20	–	–	–	–	–	–	–	–	–	–
SNHQ 120705TRL	**M8340**	0.5	■ 210	0.20	–	◪ 125	0.20	–	◪ 195	0.20	–	–	–	–	–	–	–	–	–	–
SNHQ 120710TRL	**M8340**	1.0	■ 265	0.20	–	◪ 155	0.20	–	◪ 250	0.20	–	–	–	–	–	–	–	–	–	–
SNHQ 120715TRL	**M8340**	1.5	■ 275	0.20	–	◪ 165	0.20	–	◪ 260	0.20	–	–	–	–	–	–	–	–	–	–

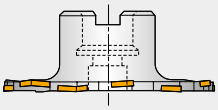
a_e / DC	0.05	0.10	0.15	0.20	0.25	0.30	0.40	0.50	0.60	0.70	0.75	0.80	0.90	1.00
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00

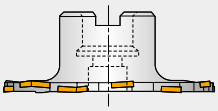
	SNHQ AZEN	SNHQ AZTN	SNHQ 12TRL
RE	–	–	0.5 – 1.5
BS	–	–	–



	DC		CDX	$a_{e\,max}$
	80	4	16	16
	100	5	24	24
	125	6	31	31
	160	5	43	43
	200	9	62	62
	63	3	10.5	63
	80	4	17.5	80
	100	5	23.5	100
	125	6	24	125
	160	8	41	160

	a_e	5		10		15		20		25	
	DC	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨
	80	0.28	0.36	0.20	0.26	0.17	0.21	–	–	–	–
	100	0.32	0.41	0.23	0.29	0.19	0.24	0.16	0.21	–	–
	125	0.35	0.45	0.25	0.32	0.21	0.27	0.18	0.23	0.16	0.21
	160	0.40	0.51	0.28	0.36	0.23	0.30	0.20	0.26	0.18	0.23
	200	0.44	0.57	0.32	0.41	0.26	0.33	0.23	0.29	0.20	0.26
	63	0.25	0.32	0.18	0.23	0.15	0.19	0.13	0.17	0.12	0.15
	80	0.28	0.36	0.20	0.26	0.17	0.21	0.15	0.19	0.13	0.17
	100	0.32	0.41	0.23	0.29	0.19	0.24	0.16	0.21	0.15	0.19
	125	0.35	0.45	0.25	0.32	0.21	0.27	0.18	0.23	0.16	0.21
	160	0.40	0.51	0.28	0.36	0.23	0.30	0.20	0.26	0.18	0.23

	a_e	32		40		50		63		80	
	DC	f_{min}	f_{max}	f_{min}	f_{max}	f_{min}	f_{max}	f_{min}	f_{max}	f_{min}	f_{max}
	80	–	–	–	–	–	–	–	–	–	–
	100	–	–	–	–	–	–	–	–	–	–
	125	–	–	–	–	–	–	–	–	–	–
	160	0.16	0.21	0.15	0.19	–	–	–	–	–	–
	200	0.18	0.23	0.16	0.21	0.15	0.19	–	–	–	–
	**63**	0.11	0.14	0.10	0.13	0.10	0.12	0.10	0.11	–	–
	80	0.12	0.15	0.11	0.14	0.10	0.13	0.10	0.12	0.10	0.11
	100	0.13	0.17	0.12	0.15	0.11	0.14	0.10	0.13	0.10	0.12
	125	0.15	0.19	0.13	0.17	0.12	0.15	0.11	0.14	0.10	0.13
	160	0.16	0.21	0.15	0.19	0.13	0.17	0.12	0.16	0.11	0.14

	a_e	100		125		160	
	DC	f_{min}	f_{max}	f_{min}	f_{max}	f_{min}	f_{max}
	80	–	–	–	–	–	–
	100	–	–	–	–	–	–
	125	–	–	–	–	–	–
	160	–	–	–	–	–	–
	200	–	–	–	–	–	–
	**63**	–	–	–	–	–	–
	80	–	–	–	–	–	–
	100	0.10	0.11	–	–	–	–
	125	0.10	0.12	0.10	0.11	–	–
	160	0.10	0.13	0.10	0.12	0.10	0.11

S90CN(XN)

P M K

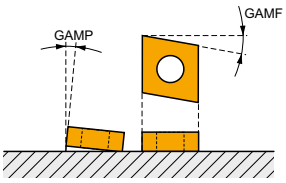
PRAMET

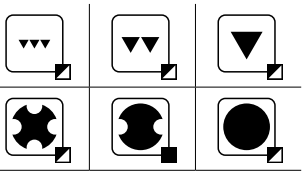
S

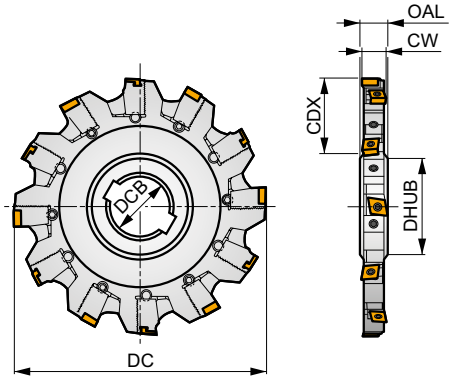
Side and Face Disk Milling Cutter with Adjustable Width

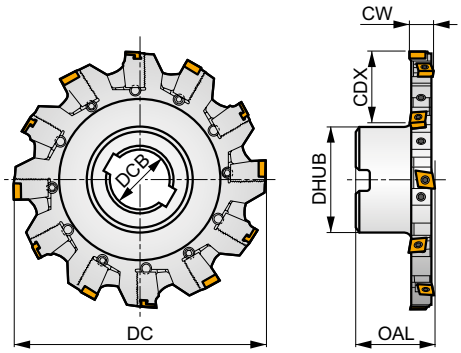
90° side and face cutter utilising CNHQ 10 and XNHQ 12, 16 inserts with APMX (slotting depth) of 25 up to 110 mm. Suitable for shoulder, slot, rear side and face milling. Available in arbor or stub arbor style, in range Ø125 up to Ø315 mm. Body treated for longer tool life.

KAPR	90°
CW	14.0 - 30.5 mm









h_m 0.07 - 0.09

h_m 0.07 - 0.09

	Product	DC [mm]	OAL [mm]	DCB [mm]	DHUB [mm]	CDX [mm]	CW [mm]	GAMF [°]	GAMP [°]	x	z1		max.		kg			
	125H04N-S90CN10N18	125	18	40	56	34	14.0 ÷ 18.5	-10	4	4	8	–	7800	–	1.50	GI195	DI051	–
	160H06N-S90CN10N18	160	18	40	56	50	14.0 ÷ 18.5	-8	4	6	12	–	6900	–	1.80	GI195	DI052	–
	160H05N-S90XN12N24	160	24	40	56	50	19.0 ÷ 24.3	-8	5	5	10	–	5200	–	2.50	GI196	DI056	–
	200J07N-S90CN10N18	200	18	50	71	60	14.0 ÷ 18.5	-8	4	7	14	–	6100	–	2.85	GI195	DI053	–
	200J06N-S90XN12N24	200	24	50	71	60	19.0 ÷ 24.3	-8	5	6	12	–	4700	–	3.60	GI196	DI057	–
ISO 6462 DIN 8030	**200J06N-S90XN16N30**	200	30	50	71	60	24.5 ÷ 30.5	-9	5	6	12	–	4000	–	6.00	GI197	DI060	–
	250J09N-S90CN10N18	250	18	50	71	85	14.0 ÷ 18.5	-8	4	9	18	–	5500	–	5.30	GI195	DI054	–
	250J08N-S90XN12N24	250	24	50	71	85	19.0 ÷ 24.3	-8	5	8	16	–	4200	–	7.50	GI196	DI058	–
	250J08N-S90XN16N30	250	30	50	71	85	24.5 ÷ 30.5	-8	5	8	16	–	3600	–	8.00	GI197	DI061	–
	315J12N-S90CN10N18	315	18	50	71	110	14.0 ÷ 18.5	-8	4	12	24	–	4900	–	7.80	GI195	DI055	–
	315J10N-S90XN12N24	315	24	50	71	110	19.0 ÷ 24.3	-8	5	10	20	–	3700	–	11.00	GI196	DI059	–
	315K10N-S90XN16N30	315	30	60	85	110	24.5 ÷ 30.5	-8	5	10	20	–	3200	–	13.00	GI197	DI062	–
	125B04R-S90CN10N18	125	50	40	70	25	14.0 ÷ 18.5	-10	4	4	8	–	7800	–	1.65	GI195	DI071	AC003
ISO 6462 DIN 8030	**160B06R-S90CN10N18**	160	50	40	70	44	14.0 ÷ 18.5	-8	5	6	12	–	6900	–	2.55	GI195	DI072	–
	160B05R-S90XN12N24	160	50	40	70	44	19.0 ÷ 24.3	-8	5	5	10	–	5200	–	2.90	GI196	DI074	–
	200C06R-S90XN12N24	200	50	40	90	52	19.0 ÷ 24.3	-8	5	6	12	–	6100	–	4.70	GI196	DI075	–
ISO 6462 DIN 8030	**200C06R-S90XN16N30**	200	50	60	130	34	24.5 ÷ 30.5	-9	5	6	12	–	4700	–	5.95	GI197	DI076	–
	200C07R-S90CN10N18	200	50	40	90	52	14.0 ÷ 18.5	-8	4	7	14	–	6100	–	4.05	GI195	DI073	–

GI195	CNHQ 1005..
GI196	XNHQ 1205..
GI197	XNHQ 1606..

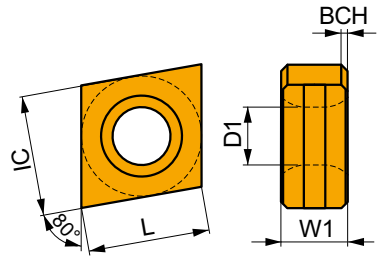
DI051	125H04N-S-14-08	KL-1418-CN10	KR-1418-CN10	KS 613F	DS 6018F	SDR T20	SS 6005-T09P	SDR T09	US 4011-T15P	3.5	M 4	10.6	SDR T15P	–
DI052	160H06N-S-14-12	KL-1418-CN10	KR-1418-CN10	KS 613F	DS 6018F	SDR T20	SS 6005-T09P	SDR T09	US 4011-T15P	3.5	M 4	10.6	SDR T15P	–
DI053	200J07N-S-14-14	KL-1418-CN10	KR-1418-CN10	KS 613F	DS 6018F	SDR T20	SS 6005-T09P	SDR T09	US 4011-T15P	3.5	M 4	10.6	SDR T15P	–
DI054	250J09N-S-14-18	KL-1418-CN10	KR-1418-CN10	KS 613F	DS 6018F	SDR T20	SS 6005-T09P	SDR T09	US 4011-T15P	3.5	M 4	10.6	SDR T15P	–
DI055	315J12N-S-14-24	KL-1418-CN10	KR-1418-CN10	KS 613F	DS 6018F	SDR T20	SS 6005-T09P	SDR T09	US 4011-T15P	3.5	M 4	10.6	SDR T15P	–
DI056	160H05N-S-19-10	KL-1924-XN12	KR-1924-XN12	KS 617M	DS 6500	–	SS 6005-T09P	SDR T09	US 4011-T15P	3.5	M 4	10.6	SDR T15P	HXK 4
DI057	200J06N-S-19-12	KL-1924-XN12	KR-1924-XN12	KS 617M	DS 6500	–	SS 6005-T09P	SDR T09	US 4011-T15P	3.5	M 4	10.6	SDR T15P	HXK 4
DI058	250J08N-S-19-16	KL-1924-XN12	KR-1924-XN12	KS 617M	DS 6500	–	SS 6005-T09P	SDR T09	US 4011-T15P	3.5	M 4	10.6	SDR T15P	HXK 4
DI059	315J10N-S-19-20	KL-1924-XN12	KR-1924-XN12	KS 617M	DS 6500	–	SS 6005-T09P	SDR T09	US 4011-T15P	3.5	M 4	10.6	SDR T15P	HXK 4
DI060	200J06N-S-25-12	KL-2530-XN16	KR-2530-XN16	KS 623M	DS 6500	–	SS 6005-T09P	SDR T09	US 4011-T15P	3.5	M 4	10.6	SDR T15P	HXK 4
DI061	250J08N-S-25-16	KL-2530-XN16	KR-2530-XN16	KS 623M	DS 6500	–	SS 6005-T09P	SDR T09	US 4011-T15P	3.5	M 4	10.6	SDR T15P	HXK 4
DI062	315K10N-S-25-20	KL-2530-XN16	KR-2530-XN16	KS 623M	DS 6500	–	SS 6005-T09P	SDR T09	US 4011-T15P	3.5	M 4	10.6	SDR T15P	HXK 4
DI071	125B04R-S-14-08	KL-1418-CN10	KR-1418-CN10	KS 613F	DS 6018F	SDR T20	SS 6005-T09P	SDR T09	US 4011-T15P	3.5	M 4	10.6	SDR T15P	–
DI072	160B06R-S-14-12	KL-1418-CN10	KR-1418-CN10	KS 613F	DS 6018F	SDR T20	SS 6005-T09P	SDR T09	US 4011-T15P	3.5	M 4	10.6	SDR T15P	–
DI073	200C07R-S-14-14	KL-1418-CN10	KR-1418-CN10	KS 613F	DS 6018F	SDR T20	SS 6005-T09P	SDR T09	US 4011-T15P	3.5	M 4	10.6	SDR T15P	–
DI074	160B05R-S-19-10	KL-1924-XN12	KR-1924-XN12	KS 617M	DS 6500	–	SS 6005-T09P	SDR T09	US 4011-T15P	3.5	M 4	10.6	SDR T15P	HXK 4
DI075	200C06R-S-19-12	KL-1924-XN12	KR-1924-XN12	KS 617M	DS 6500	–	SS 6005-T09P	SDR T09	US 4011-T15P	3.5	M 4	10.6	SDR T15P	HXK 4
DI076	200C06R-S-25-12	KL-2530-XN16	KR-2530-XN16	KS 623M	DS 6500	–	SS 6005-T09P	SDR T09	US 4011-T15P	3.5	M 4	10.6	SDR T15P	HXK 4

AC003	KS 2040	K.FMH40

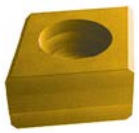
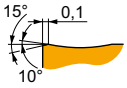
CNHQ

PRAMET

	BCH	IC	D1	L	W1
	[mm]	[mm]	[mm]	[mm]	[mm]
1005	0.50	10.000	4.70	10.00	5.400



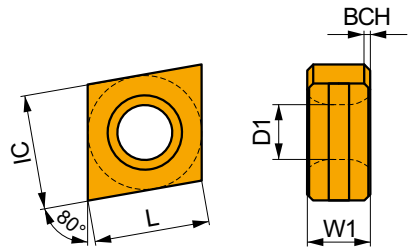
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
			Special design for slot milling with light to heavy cutting conditions.																	
CNHQ 1005AZTN	**M8330**	–	■ 310	0.15	–	◪ 185	0.14	–	■ 290	0.15	–	–	–	–	–	–	–	–	–	–
	M8340	–	■ 280	0.15	–	◪ 165	0.14	–	◪ 265	0.15	–	–	–	–	–	–	–	–	–	–

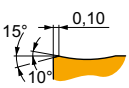
XNHQ

PRAMET

	BCH	IC	D1	L	W1
	[mm]	[mm]	[mm]	[mm]	[mm]
1205	0.50	10.000	4.70	12.70	5.400
1606	0.50	12.000	5.90	16.00	6.400

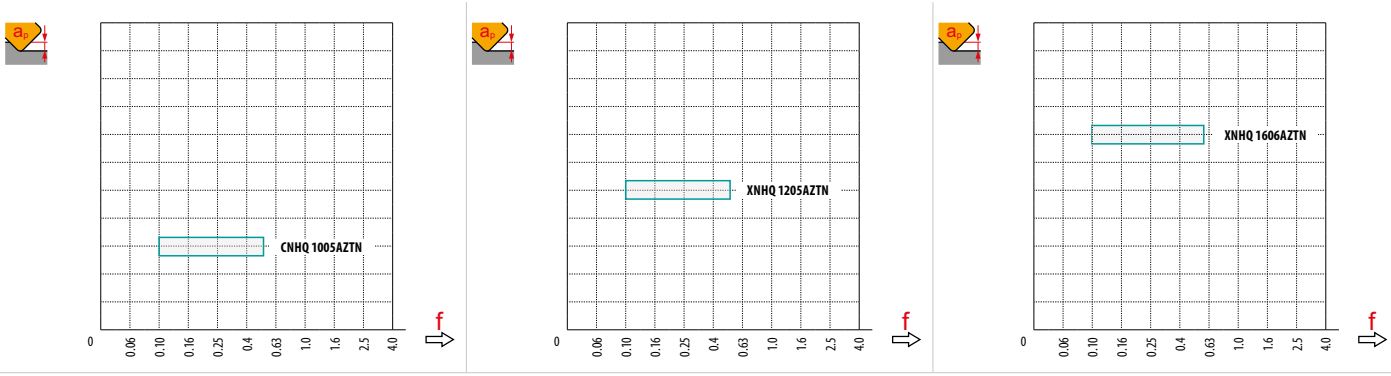


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
			Special design for slot milling.																	
XNHQ 1205AZTN	**M8330**	–	■ 310	0.15	–	◪ 185	0.14	–	■ 290	0.15	–	–	–	–	–	–	–	–	–	–
	M8340	–	■ 275	0.15	–	◪ 165	0.14	–	◪ 260	0.15	–	–	–	–	–	–	–	–	–	–
XNHQ 1606AZTN	**M8330**	–	■ 300	0.15	–	◪ 180	0.14	–	■ 285	0.15	–	–	–	–	–	–	–	–	–	–
	M8340	–	■ 270	0.15	–	◪ 160	0.14	–	◪ 255	0.15	–	–	–	–	–	–	–	–	–	–

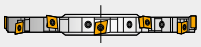
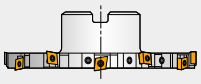
a_e / DC	0.05	0.10	0.15	0.20	0.25	0.30	0.40	0.50	0.60	0.70	0.75	0.80	0.90	1.00
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00

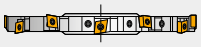
	CNHQ 10	XNHQ 12	XNHQ 16
RE	–	–	–
BS	–	–	–



	DC		CDX	$a_{e\,max}$
	125	4	34	34
	160	6	50	50
	200	7	60	60
	250	9	85	85
	315	12	110	110
	125	4	25	125
	160	6	44	160
	200	7	52	200

	a_e	5		10		15		20		25	
	DC	f_{min}	f_{max}	f_{min}	f_{max}	f_{min}	f_{max}	f_{min}	f_{max}	f_{min}	f_{max}
	125	0.35	0.45	0.25	0.32	0.21	0.27	0.18	0.23	0.16	0.21
	160	0.40	0.51	0.28	0.36	0.23	0.30	0.20	0.26	0.18	0.23
	200	0.44	0.57	0.32	0.41	0.26	0.33	0.23	0.29	0.20	0.26
	250	0.50	0.64	0.35	0.45	0.29	0.37	0.25	0.32	0.23	0.29
	315	0.56	0.72	0.39	0.51	0.32	0.42	0.28	0.36	0.25	0.32
	125	0.35	0.45	0.25	0.32	0.21	0.27	0.18	0.23	0.16	0.21
	160	0.40	0.51	0.28	0.36	0.23	0.30	0.20	0.26	0.18	0.23
	200	0.44	0.57	0.32	0.41	0.26	0.33	0.23	0.29	0.20	0.26

	a_e	32		40		50		63		80	
	DC	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹
	**125**	0.15	0.19	–	–	–	–	–	–	–	–
	160	0.16	0.21	0.15	0.19	–	–	–	–	–	–
	200	0.18	0.23	0.16	0.21	0.15	0.19	–	–	–	–
	250	0.20	0.26	0.18	0.23	0.16	0.21	0.15	0.19	0.13	0.17
	315	0.22	0.29	0.20	0.26	0.18	0.23	0.16	0.21	0.15	0.19
	**125**	0.15	0.19	0.13	0.17	0.12	0.15	0.11	0.14	0.10	0.13
	160	0.16	0.21	0.15	0.19	0.13	0.17	0.12	0.16	0.11	0.14
	200	0.18	0.23	0.16	0.21	0.15	0.19	0.13	0.17	0.12	0.15

	a_e	100		125		160		200	
	DC	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹
	**125**	–	–	–	–	–	–	–	–
	160	–	–	–	–	–	–	–	–
	200	–	–	–	–	–	–	–	–
	250	–	–	–	–	–	–	–	–
	315	0.13	0.17	–	–	–	–	–	–
	125	0.10	0.12	0.10	0.11	–	–	–	–
	160	0.10	0.13	0.10	0.12	0.10	0.11	–	–
	200	0.11	0.14	0.10	0.13	0.10	0.12	0.10	0.11

INDEXABLE COPY MILLS

COPY MILLING

>>>

	SRC10	SRC12	SRC16	SRC20	SRD05
	–	–	–	–	–
	APMX [mm] 5.0	APMX [mm] 6.0	APMX [mm] 8.0	APMX [mm] 10.0	APMX [mm] 1.5
	DCX [mm] 25 – 66	DCX [mm] 40 – 100	DCX [mm] 63 – 160	DCX [mm] 80 – 160	DCX [mm] 10 – 15
Cylindrical shank	DCX = 25 – 32 [mm]				
Weldon					
Modular	DCX = 25– 42 [mm]				
Shell mill	DCX = 40 – 66 [mm]				
Page	526	530	534	538	542
ISO	P M K S H	P M K S H	P M K S H	P M K S H	P K H
Insert shape					
Inserts	RC 10T3	RC 1204	RC 1606	RC 2006	RD 0501
No. of cutting edges	–	–	–	–	–
Shape surfaces milling (copy milling)	■	■	■	■	■
Face milling	■	■	■	■	■
Helical interpolation	■	■	■	■	■
Progressive plunging	■	■	■	■	■
Ramping	■	■	■	■	■
Shallow shoulder milling					
Deep shoulder milling					
Chamfer milling					
Plunge milling					

<<<

COPY MILLING

>>>

	SRD07	SRD10	SRD12	SRD16	L2-SZP	K3-CXP
	–	–	–	–	–	–
	APMX [mm] 2.0	APMX [mm] 2.5	APMX [mm] 3.0	APMX [mm] 4.0	APMX [mm] 8.9 – 44.7	APMX [mm] 8,0 – 16.0
	DCX [mm] 15 – 25	DCX [mm] 20 – 52	DCX [mm] 24 – 80	DCX [mm] 32 – 100	DCX [mm] 10 – 50	DCX [mm] 16 – 32
					DCX = 10 – 32 [mm]	DCX = 16 – 32 [mm]
	DCX = 15 [mm]	DCX = 20 [mm]			DCX = 12 – 50 [mm]	DCX = 16 – 25 [mm]
	DCX = 15 – 25 [mm]	DCX = 20 – 42 [mm]	DCX = 24 – 42 [mm]	DCX = 32 [mm]	DCX = 10 – 32 [mm]	DCX = 16 – 32 [mm]
		DCX = 42 – 52 [mm]	DCX = 50 – 80 [mm]	DCX = 52 – 100 [mm]		
	545	550	556	562	568	575
	P M K N S H	P M K N S H	P M K N S H	P M K N S H	P M K S H	P M K S H
	RD 0702	RD 1003	RD 12T3	RD 1604	ZP	XP
	–	–	–	–	2	1
	■	■	■	■	■	■
	■	■	■	■		
	■	■	■	■		
	■	■	■	■		
	■	■	■	■		

<<<

COPY MILLING

>>>

	K2-SRC	K2-SLC	K2-PPH	SVC22C	SWN04C
	–	90°	–	90°	90° (93°)
	APMX [mm] 0.6 – 3.2	APMX [mm] 1.0 – 3.0	APMX [mm] 0.3 – 4.0	APMX [mm] 3.0 (16.0)	APMX [mm] 0.5 (2.0)
	DCX [mm] 8 – 20	DCX [mm] 12 – 20	DCX [mm] 8 – 32	DC [mm] 32 – 80	DC [mm] 20 – 35
Cylindrical shank	DCX = 8 – 20 [mm]		DCX = 8 – 32 [mm]	DC = 32 – 40 [mm]	DC = 20 – 32 [mm]
Weldon					
Modular	DCX = 8 – 20 [mm]		DCX = 16 – 20 [mm]	DC = 32 – 40 [mm]	DC = 20 – 35 [mm]
Shell mill				DC = 50 – 80 [mm]	
Page	579	588	592	604	607
ISO	P M K H	P M K H	P M K S H	N	P K H
Insert shape					
Inserts	RC LC	LC	PPH PPHF PPHT	VCGT 220530	WN.. 0403
No. of cutting edges	2	2	2	2	6
Shape surfaces milling (copy milling)	■	■	■		■
Face milling					■
Helical interpolation		◪	◪	■	
Progressive plunging		◪	◪	■	
Ramping		◪	◪	◪	■
Shallow shoulder milling				◪	
Deep shoulder milling				◪	■
Chamfer milling		◪	◪		
Plunge milling					■

	SCN05C					
	90° (93°)					
	APMX [mm] 0.5 (1.0)					
	DC [mm] 12 – 20					
	DC = 12 – 20 [mm]					
	DC = 12 – 20 [mm]					
	610					
	P K H					
	CN.. 0502					
	4					
	■					
	■					
	■					
	■					
	■					

SRC10

P M K S H

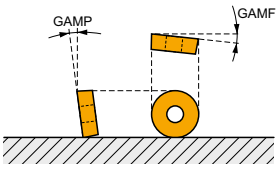
PRAMET

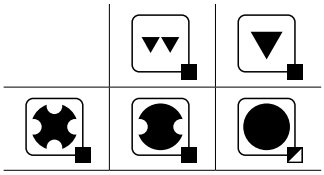
S

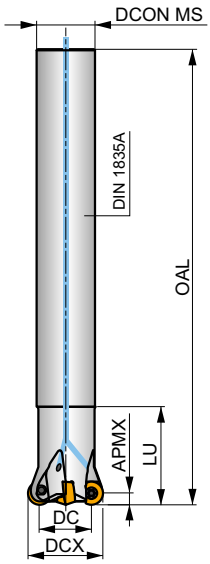
Copy Milling Cutter for Round Inserts RCMT 10 with Internal Coolant

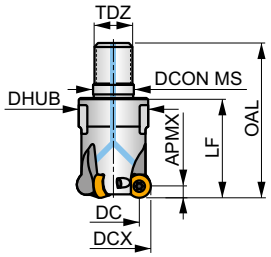
Milling cutter for copy milling utilising positive RCMT 10 inserts with APMX of 5 mm. Internal coolant. Suitable for face, helical interpolation, ramping, progressive plunge and high-feed milling. Available in cylindrical, modular and arbor style, in range Ø25 up to Ø66 mm. Body treated for longer tool life.

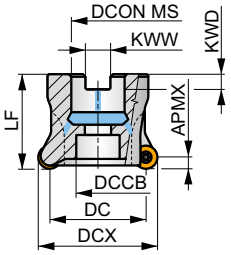
APMX	5.0 mm











h_m 0.08 - 0.15

h_m 0.05 - 0.12

	Product	DCX [mm]	DC [mm]	OAL [mm]	DCON MS [mm]	DHUB [mm]	DCCB [mm]	LU [mm]	LF [mm]	TDZ	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg		
DIN 1835A	**25E2R034A20-SRC10-C**	25	15	170	20	–	–	34	–	–	–	–	-3	-7	2	–	20900	✓	0.36	GI328	C0010
	25E3R034A20-SRC10-C	25	15	170	20	–	–	34	–	–	–	–	-3	-7	3	–	20900	✓	0.36	GI328	C0010
	32E3R042A25-SRC10-C	32	22	200	25	–	–	42	–	–	–	–	-2.6	-7	4	–	18500	✓	0.67	GI328	C0010
	32E4R042A25-SRC10-C	32	22	200	25	–	–	42	–	–	–	–	-2.6	-7	3	–	18500	✓	0.66	GI328	C0010
MODULAR	**25E2R032M12-SRC10-C**	25	15	54	12.5	21	–	–	32	M12	–	–	-3	-7	2	–	20900	✓	0.11	GI328	C0010
	25E3R032M12-SRC10-C	25	15	54	12.5	21	–	–	32	M12	–	–	-3	-7	3	–	20900	✓	0.08	GI328	C0010
	32E3R042M16-SRC10-C	32	22	65	17	29	–	–	42	M16	–	–	-2.6	-7	3	–	18500	✓	0.22	GI328	C0010
	32E4R042M16-SRC10-C	32	22	65	17	29	–	–	42	M16	–	–	-2.6	-7	4	–	18500	✓	0.21	GI328	C0010
	35E4R042M16-SRC10-C	35	25	65	17	29	–	–	42	M16	–	–	-2.4	-7	4	–	17700	✓	0.20	GI328	C0010
	42E4R042M16-SRC10-C	42	32	65	17	29	–	–	42	M16	–	–	-2.1	-7	4	–	16100	✓	0.22	GI328	C0010
	42E5R042M16-SRC10-C	42	32	65	17	29	–	–	42	M16	–	–	-2.1	-7	5	–	16100	✓	0.21	GI328	C0010
ISO 6462 DIN 8030	**40A05R-SMORC10-C**	40	30	–	16	–	14	–	40	–	8.4	5.6	-2.2	-7	5	–	16500	✓	0.16	GI328	C0012
	50A05R-SMORC10-C	50	40	–	22	–	18	–	40	–	10.4	6.3	-2	-7	5	–	14800	✓	0.28	GI328	C0013
	50A06R-SMORC10-C	50	40	–	22	–	18	–	40	–	10.4	6.3	-2	-7	6	–	14800	✓	0.24	GI328	C0013
	52A05R-SMORC10-C	52	42	–	22	–	18	–	40	–	10.4	6.3	-2	-7	5	–	14500	✓	0.29	GI328	C0013
	52A06R-SMORC10-C	52	42	–	22	–	18	–	40	–	10.4	6.3	-2	-7	6	–	14500	✓	0.28	GI328	C0013
	63A06R-SMORC10-C	63	53	–	22	–	18	–	40	–	10.4	6.3	-1.8	-7	6	–	13200	✓	0.46	GI328	C0013
	63A07R-SMORC10-C	63	53	–	22	–	18	–	40	–	10.4	6.3	-1.8	-7	7	–	13200	✓	0.46	GI328	C0013
	66A06R-SMORC10-C	66	56	–	27	–	22	–	50	–	12.4	7	-1.4	-7	6	–	12800	✓	0.58	GI328	C0014
	66A07R-SMORC10-C	66	56	–	27	–	22	–	50	–	12.4	7	-1.4	-7	7	–	12800	✓	0.57	GI328	C0014

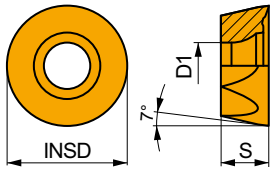
GI328	RCMT 10T3M0..

		Nm				
C0010	US 63509-T10P	3.0	M 3.5	9	Flag T10P	–
C0012	US 63509-T10P	3.0	M 3.5	9	Flag T10P	HS 0830C
C0013	US 63509-T10P	3.0	M 3.5	9	Flag T10P	HS 1030C
C0014	US 63509-T10P	3.0	M 3.5	9	Flag T10P	HS 1230C

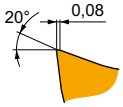
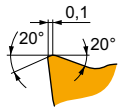
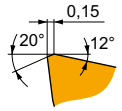
RCMT 10

PRAMET

	INSD [mm]	D1 [mm]	S [mm]
10T3	10.0	3.90	3.97

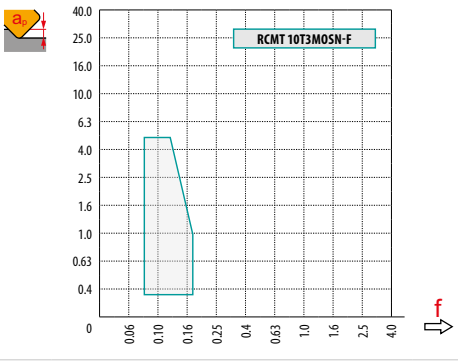


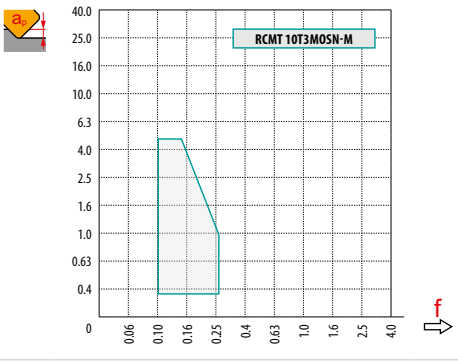
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

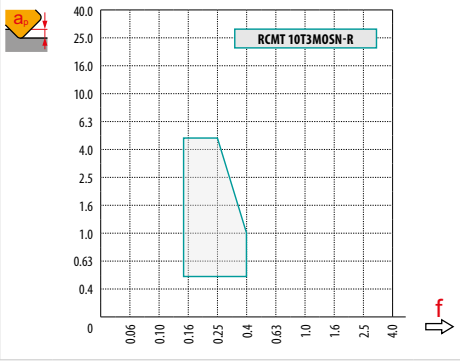
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			HFC S																	
			F geometry with highly positive design for light machining.																	
RCMT 10T3MOSN-F	**M6330**	–	■ 340	0.10	1.0	■ 240	0.09	1.0	–	–	–	–	–	–	■ 100	0.08	0.8	–	–	–
	M8310	–	■ 445	0.10	1.0	◪ 225	0.09	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	M8330	–	■ 395	0.10	1.0	■ 235	0.09	1.0	–	–	–	–	–	–	◪ 95	0.08	0.8	–	–	–
			1 U HFC S																	
			M geometry with highly positive design for medium machining.																	
RCMT 10T3MOSN-M	**M6330**	–	■ 310	0.12	1.0	◪ 220	0.11	1.0	–	–	–	–	–	–	■ 90	0.11	0.8	–	–	–
	M8310	–	■ 400	0.12	1.0	◪ 200	0.11	1.0	■ 380	0.12	1.0	–	–	–	–	–	–	–	–	–
	M8330	–	■ 360	0.12	1.0	◪ 215	0.11	1.0	■ 340	0.12	1.0	–	–	–	◪ 90	0.11	0.8	–	–	–
	M8340	–	■ 330	0.12	1.0	◪ 195	0.11	1.0	◪ 310	0.12	1.0	–	–	–	■ 80	0.11	0.8	–	–	–
	M8345	–	■ 260	0.12	1.0	◪ 155	0.11	1.0	–	–	–	–	–	–	■ 65	0.11	0.8	–	–	–
	M9325	–	■ 465	0.12	1.0	–	–	–	■ 440	0.12	1.0	–	–	–	–	–	–	–	–	–
	M9340	–	■ 425	0.12	1.0	◪ 255	0.11	1.0	–	–	–	–	–	–	■ 105	0.11	0.8	–	–	–
			HFC S																	
			R geometry with positive design for rough copy machining.																	
RCMT 10T3MOSN-R	**M5315**	–	◪ 435	0.17	1.0	–	–	–	■ 410	0.17	1.0	–	–	–	–	–	–	■ 85	0.15	1.0
	M8310	–	■ 345	0.17	1.0	–	–	–	■ 325	0.17	1.0	–	–	–	–	–	–	■ 65	0.15	1.0
	M8330	–	■ 310	0.17	1.0	–	–	–	■ 290	0.17	1.0	–	–	–	◪ 75	0.17	0.8	◪ 60	0.15	1.0
	M8340	–	■ 285	0.17	1.0	–	–	–	◪ 270	0.17	1.0	–	–	–	◪ 70	0.17	0.8	–	–	–
	M9325	–	■ 395	0.17	1.0	–	–	–	■ 375	0.17	1.0	–	–	–	–	–	–	◪ 75	0.15	1.0

a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	RCMT 10-F	RCMT 10-M	RCMT 10-R
RE	5.0	5.0	5.0
BS	–	–	–







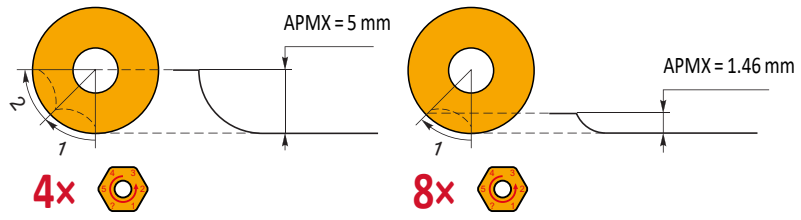
DCX	a_p	0.00	0.15	0.30	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00
25		15.00	17.43	18.41	19.36	20.27	21.00	21.61	22.14	23.00	23.66	24.17	24.80	25.00
32		22.00	24.43	25.41	26.36	27.27	28.00	28.61	29.14	30.00	30.66	31.17	31.80	32.00
35		25.00	27.43	28.41	29.36	30.27	31.00	31.61	32.14	33.00	33.66	34.17	34.80	35.00
40		30.00	32.43	33.41	34.36	35.27	36.00	36.61	37.14	38.00	38.66	39.17	39.80	40.00
42	DEF	32.00	34.43	35.41	36.36	37.27	38.00	38.61	39.14	40.00	40.66	41.17	41.80	42.00
50		40.00	42.43	43.41	44.36	45.27	46.00	46.61	47.14	48.00	48.66	49.17	49.80	50.00
52		42.00	44.43	45.41	46.36	47.27	48.00	48.61	49.14	50.00	50.66	51.17	51.80	52.00
63		53.00	55.43	56.41	57.36	58.27	59.00	59.61	60.14	61.00	61.66	62.17	62.80	63.00
66		56.00	58.43	59.41	60.36	61.27	62.00	62.61	63.14	64.00	64.66	65.17	65.80	66.00
	a_p	–	0.15	0.30	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00
	f	–	0.90	0.64	0.50	0.41	0.35	0.32	0.29	0.25	0.23	0.21	0.19	0.17

DCX	RPMX	APMX/I
25	13.2	5/23
32	12.6	5/24
35	12.3	5/24
40	9.5	5/31
42	6.5	5/45
50	6.4	5/46
52	6.1	5/48
63	4.7	5/62
66	4.4	5/66

DCX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
25	32.0	50.0	3.0	3.0
32	45.0	64.0	3.0	3.0
35	51.0	70.0	3.0	3.0
40	61.0	80.0	3.0	3.0
42	65.0	84.0	3.0	3.0
50	81.0	100.0	3.0	3.0
52	85.0	104.0	3.0	3.0
63	107.0	126.0	3.0	3.0
66	113.0	132.0	3.0	3.0

a_p
2.24

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
25	FE	0.548	0.707	1.000	1.225	1.414	1.732	2.000	2.236	2.449	2.828	3.162
32		0.620	0.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578
35		0.648	0.837	1.183	1.449	1.673	2.049	2.366	2.646	2.898	3.347	3.742
40		0.693	0.894	1.265	1.549	1.789	2.191	2.530	2.828	3.098	3.578	4.000
42		0.710	0.917	1.296	1.587	1.833	2.245	2.592	2.898	3.175	3.666	4.099
50		0.775	1.000	1.414	1.732	2.000	2.449	2.828	3.162	3.464	4.000	4.472
52		0.790	1.020	1.442	1.766	2.040	2.498	2.884	3.225	3.533	4.079	4.561
63		0.869	1.122	1.587	1.944	2.245	2.750	3.175	3.550	3.888	4.490	5.020
66		0.890	1.149	1.625	1.990	2.298	2.814	3.250	3.633	3.980	4.596	5.138
RE	µm	3	5	10	15	20	30	40	50	60	80	100
5.0	FE	0.346	0.447	0.632	0.775	0.894	1.095	1.265	1.414	1.549	1.789	2.000



SRC12

P M K S H

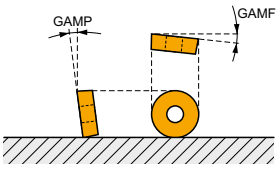
PRAMET

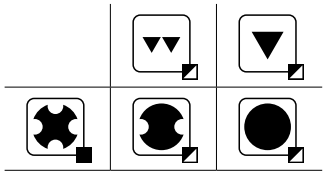
S

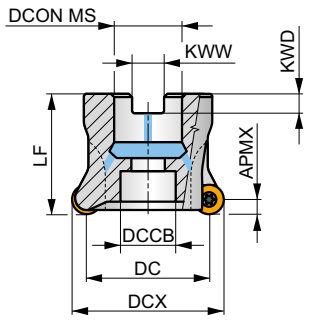
Copy Milling Cutter for Round Inserts RCMT 12 with Internal Coolant

Milling cutter for medium copy milling utilising positive RCMT 12 inserts with APMX of 6 mm. Internal coolant. Suitable for face, helical interpolation, ramping, progressive plunge and high-feed milling. Available in arbor style only in range Ø40 up to Ø100 mm. Body treated for longer tool life.

APMX	6.0 mm







h_m 0.1 - 0.2

	Product	DCX [mm]	DC [mm]	DCON MS [mm]	DCCB [mm]	LF [mm]	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg			
ISO 6462 DIN 8030	**40A03R-SMORC12-C**	40	28	16	12	40	8.4	5.6	-2.1	-7	3	–	14800	✓	0.29	GI279	C0022	–
	50A04R-SMORC12-C	50	38	22	18	40	10.4	6.3	-2	-7	4	–	13200	✓	0.39	GI279	C0023	–
	52A05R-SMORC12-C	52	40	22	18	40	10.4	6.3	-2	-7	5	–	12900	✓	0.36	GI279	C0023	–
	63A05R-SMORC12-C	63	51	22	30	40	10.4	6.3	-2	-7	5	–	11800	✓	0.51	GI279	C0023	–
	66A06R-SMORC12-C	66	54	27	22	50	12.4	7	-1.5	-7	6	–	11400	✓	0.67	GI279	C0024	–
	80A05R-SMORC12-C	80	68	27	37	50	12.4	7	-1.7	-7	5	–	10400	✓	1.10	GI279	C0024	–
	100A06R-SMORC12-C	100	88	32	45	50	14.4	8	-1.8	-7	6	–	9300	✓	1.83	GI279	C0021	AC002

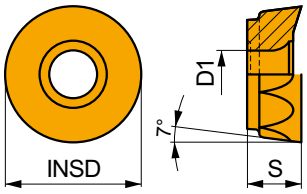
GI279	RCMT 1204M0..

		Nm					
C0021	US 63509-T15P	3.0	M 3.5	10	D-T08P/T15P	FG-15	–
C0022	US 63509-T15P	3.0	M 3.5	10	D-T08P/T15P	FG-15	HS 90835
C0023	US 63509-T15P	3.0	M 3.5	10	D-T08P/T15P	FG-15	HS 1030C
C0024	US 63509-T15P	3.0	M 3.5	10	D-T08P/T15P	FG-15	HS 1230C

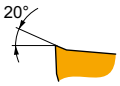
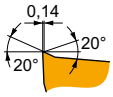
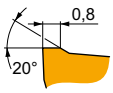
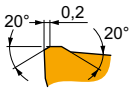
AC002	KS 1635	K.FMH32

RCMT 12

	INSD [mm]	D1 [mm]	S [mm]
1204	12.0	4.40	4.76

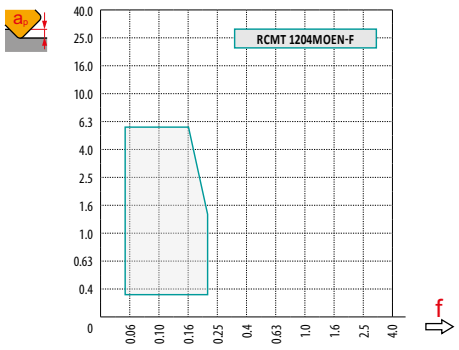


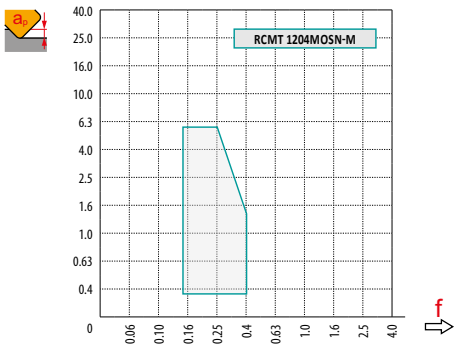
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

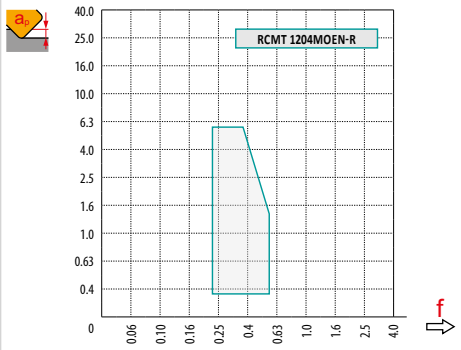
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			HFC E F geometry with highly positive design for light machining.																	
RCMT 1204MOEN-F	**8215**	–	■ 390	0.10	1.5	◪ 230	0.09	1.5	–	–	–	–	–	–	◪ 95	0.07	1.2	–	–	–
	M8310	–	■ 420	0.10	1.5	◪ 210	0.09	1.5	–	–	–	–	–	–	–	–	–	–	–	–
	M8330	–	■ 380	0.10	1.5	■ 225	0.09	1.5	–	–	–	–	–	–	◪ 95	0.07	1.2	–	–	–
			U HFC S M geometry with highly positive design for medium machining.																	
RCMT 1204MOSN-M	**M6330**	–	■ 265	0.20	1.5	◪ 185	0.18	1.5	–	–	–	–	–	–	■ 75	0.16	1.2	–	–	–
	M8310	–	■ 335	0.20	1.5	◪ 170	0.18	1.5	■ 315	0.20	1.5	–	–	–	–	–	–	–	–	–
	M8330	–	■ 305	0.20	1.5	◪ 180	0.18	1.5	■ 285	0.20	1.5	–	–	–	◪ 75	0.16	1.2	–	–	–
	M8345	–	■ 225	0.20	1.5	◪ 135	0.18	1.5	–	–	–	–	–	–	■ 55	0.16	1.2	–	–	–
	M9325	–	■ 380	0.20	1.5	–	–	–	■ 360	0.20	1.5	–	–	–	–	–	–	–	–	–
	M9340	–	■ 345	0.20	1.5	◪ 205	0.18	1.5	–	–	–	–	–	–	■ 85	0.16	1.2	–	–	–
			HFC S EN-R geometry with positive design for rough copy machining.																	
RCMT 1204MOEN-R	**M8310**	–	■ 280	0.30	1.5	◪ 140	0.27	1.5	■ 265	0.30	1.5	–	–	–	–	–	–	■ 55	0.15	1.0
	M8330	–	■ 260	0.30	1.5	◪ 155	0.27	1.5	■ 245	0.30	1.5	–	–	–	◪ 65	0.24	1.2	◪ 50	0.15	1.0
			HFC P SN-R geometry with positive design for rough copy machining.																	
RCMT 1204MOSN-R	**M8345**	–	■ 190	0.35	1.5	–	–	–	–	–	–	–	–	–	◪ 45	0.25	1.2	–	–	–
	M9315	–	■ 315	0.35	1.5	–	–	–	■ 295	0.35	1.5	–	–	–	–	–	–	◪ 60	0.15	1.0

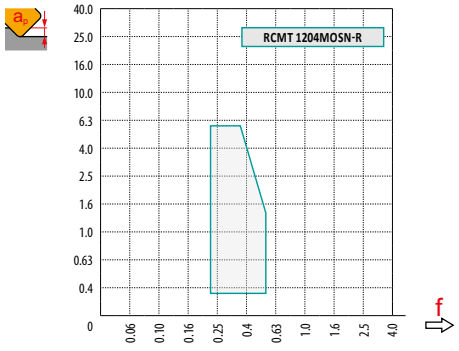
a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	RCMT 12-F	RCMT 12-M	RCMT 12 EN-R	RCMT 12 SN-R
RE	6.0	6.0	6.0	6.0
BS	–	–	–	–









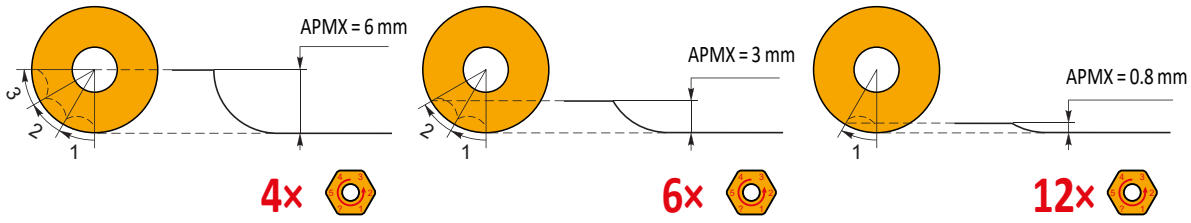
DCX	a_p	0.00	0.30	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00	6.00
40	DEF	28.0	31.7	32.8	33.8	34.6	35.3	35.9	36.9	37.7	38.4	39.3	39.8	40.0
50		38.0	41.7	42.8	43.8	44.6	45.3	45.9	46.9	47.7	48.4	49.3	49.8	50.0
52		40.0	43.7	44.8	45.8	46.6	47.3	47.9	48.9	49.7	50.4	51.3	51.8	52.0
63		51.0	54.7	55.8	56.8	57.6	58.3	58.9	59.9	60.7	61.4	62.3	62.8	63.0
66		54.0	57.7	58.8	59.8	60.6	61.3	61.9	62.9	63.7	64.4	65.3	65.8	66.0
80		68.0	71.7	72.8	73.8	74.6	75.3	75.9	76.9	77.7	78.4	79.3	79.8	80.0
100		88.0	91.7	92.8	93.8	94.6	95.3	95.9	96.9	97.7	98.4	99.3	99.8	100.0
	a_p	–	0.30	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00	6.00
	f	–	0.95	0.74	0.61	0.53	0.47	0.43	0.38	0.34	0.31	0.28	0.25	0.24

DC	RPMX	APMX/I
40	9.0	6.0/39
50	7.0	6.0/50
52	6.5	6.0/53
63	5.0	6.0/70
66	4.5	6.0/76
80	3.0	5.1/100
100	2.0	3.3/100

DC	DMIN	DMAX	SMAX DMIN	SMAX DMAX
40	56.0	80.0	6.0	6.0
50	76.0	100.0	6.0	6.0
52	80.0	104.0	6.0	6.0
63	102.0	126.0	6.0	6.0
66	108.0	132.0	6.0	6.0
80	136.0	160.0	6.0	6.0
100	176.0	200.0	6.0	6.0

a_p
3.5

DC	µm	3	5	10	15	20	30	40	50	60	80	100
40	FE	0.693	0.894	1.265	1.549	1.789	2.191	2.530	2.828	3.098	3.578	4.000
50		0.775	1.000	1.414	1.732	2.000	2.449	2.828	3.162	3.464	4.000	4.472
52		0.790	1.020	1.442	1.766	2.040	2.498	2.884	3.225	3.533	4.079	4.561
63		0.869	1.122	1.587	1.944	2.245	2.750	3.175	3.550	3.888	4.490	5.020
66		0.890	1.149	1.625	1.990	2.298	2.814	3.250	3.633	3.980	4.596	5.138
80		0.980	1.265	1.789	2.191	2.530	3.098	3.578	4.000	4.382	5.060	5.657
100		1.095	1.414	2.000	2.449	2.828	3.464	4.000	4.472	4.899	5.657	6.325
RE	µm	3	5	10	15	20	30	40	50	60	80	100
6.0	FE	0.379	0.490	0.693	0.849	0.980	1.200	1.386	1.549	1.697	1.960	2.191



SRC16

P M K S H

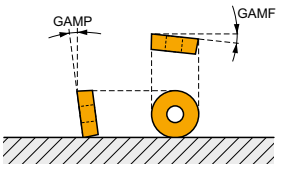
PRAMET

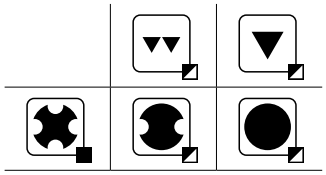
S

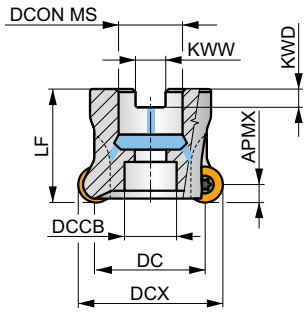
Copy Milling Cutter for Round Inserts RCMT 16 with Internal Coolant

Milling cutter for medium to heavy copy milling utilising positive RCMT 16 inserts with APMX of 8 mm. Internal coolant. Suitable for face, helical interpolation, ramping, progressive plunge and high-feed milling. Available in arbor style in range Ø63 up to Ø160 mm. Body treated for longer tool life.

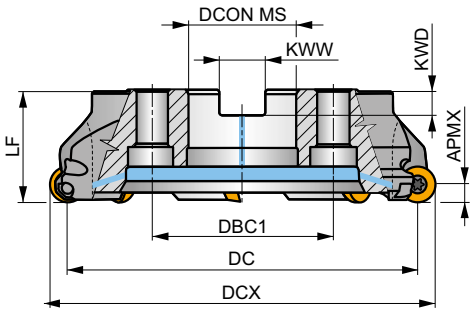
APMX	8.0 mm







DC 63 - 125 mm



DC 160 mm

h_m 0.1 - 0.25

	Product	DCX [mm]	DC [mm]	DCON MS [mm]	DCCB [mm]	DBC1 [mm]	LF [mm]	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg			
ISO 6462 DIN 8030	**63A04R-SMORC16-C**	63	47	22	18	–	50	10.4	6.3	-2.6	-7	4	–	9700	✓	0.61	GI280	C0033	–
	66A05R-SMORC16-C	66	50	27	22	–	50	12.4	7	-2.5	-7	5	–	9200	✓	0.60	GI280	C0030	–
	80A05R-SMORC16-C	80	64	27	37	–	50	12.4	7	-1.7	-7	5	–	8600	✓	0.88	GI280	C0030	–
	100A06R-SMORC16-C	100	84	32	45	–	50	14.4	8	-1.7	-7	6	–	7700	✓	1.33	GI280	C0031	AC002
	125A07R-SMORC16-C	125	109	40	36	–	63	16.4	9	-1.2	-7	7	–	6500	✓	3.07	GI280	C0032	–
	160C08R-SMORC16-C	160	144	40	–	66.7	63	16.4	9	-0.9	-7	8	–	5400	✓	5.68	GI280	C0034	–

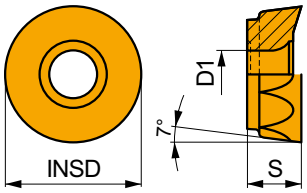
GI280	RCMT 1606M0..

		Nm							
C0030	US 65014-T20P	5.0	M 5	14	SDR T20P-T	HS 1230C	–	–	–
C0031	US 65014-T20P	5.0	M 5	14	SDR T20P-T	–	–	–	–
C0032	US 65014-T20P	5.0	M 5	14	SDR T20P-T	HSD 2040	–	–	–
C0033	US 65014-T20P	5.0	M 5	14	SDR T20P-T	HS 1030C	–	–	–
C0034	US 65014-T20P	5.0	M 5	14	SDR T20P-T	HS 1240C	CAC 160C	HSD 0825C	HXK 5

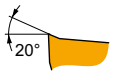
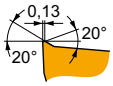
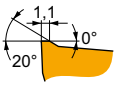
AC002	KS 1635	K.FMH32

RCMT 16

	INSD	D1	S
	[mm]	[mm]	[mm]
1606	16.0	5.50	6.35

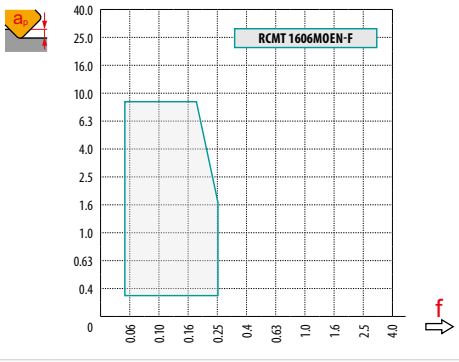


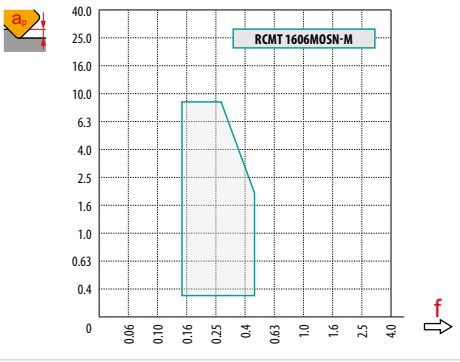
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

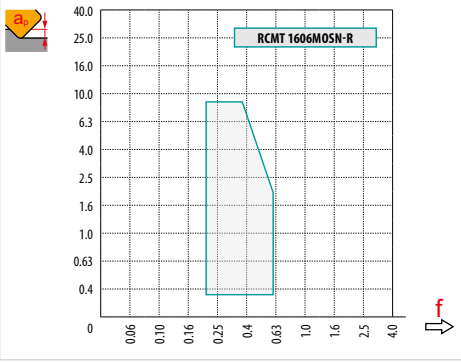
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
			HFC E																	
			F geometry with highly positive design for light machining.																	
RCMT 1606MOEN-F	**M8310**	–	410	0.10	2.0	205	0.09	2.0	–	–	–	–	–	–	–	–	–	–	–	–
	M8330	–	370	0.10	2.0	220	0.09	2.0	–	–	–	–	–	–	90	0.07	1.6	–	–	–
			U HFC S																	
			M geometry with highly positive design for medium machining.																	
RCMT 1606MOSN-M	**M6330**	–	255	0.20	2.0	180	0.18	2.0	–	–	–	–	–	–	75	0.16	1.6	–	–	–
	M8330	–	300	0.20	2.0	180	0.18	2.0	285	0.20	2.0	–	–	–	75	0.16	1.6	–	–	–
	M8345	–	215	0.20	2.0	125	0.18	2.0	–	–	–	–	–	–	50	0.16	1.6	–	–	–
	M9325	–	370	0.20	2.0	–	–	–	350	0.20	2.0	–	–	–	–	–	–	–	–	–
	M9340	–	335	0.20	2.0	200	0.18	2.0	–	–	–	–	–	–	80	0.16	1.6	–	–	–
			HFC P																	
			R geometry with positive design for rough copy machining.																	
RCMT 1606MOSN-R	**M8310**	–	250	0.40	2.0	–	–	–	235	0.40	2.0	–	–	–	–	–	–	50	0.15	1.0
	M8330	–	240	0.40	2.0	–	–	–	225	0.40	2.0	–	–	–	60	0.28	1.6	45	0.15	1.0
	M8345	–	175	0.40	2.0	–	–	–	–	–	–	–	–	–	40	0.28	1.6	–	–	–
	M9325	–	280	0.40	2.0	–	–	–	265	0.40	2.0	–	–	–	–	–	–	55	0.15	1.0

a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	RCMT 16-F	RCMT 16-M	RCMT 16-R
RE	8.0	8.0	8.0
BS	–	–	–







DCX	a_p	0.00	0.30	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00	6.00	7.00	8.00
63		47.0	51.3	52.6	53.8	54.7	55.6	56.3	57.6	58.6	59.5	60.9	61.8	62.5	62.9	63.0
66		50.0	54.3	55.6	56.8	57.8	58.6	59.3	60.6	61.6	62.5	63.9	64.8	65.5	65.9	66.0
80	DEF	64.0	68.3	69.6	70.8	71.7	72.6	73.3	74.6	75.6	76.5	77.9	78.8	79.5	79.9	80.0
100		84.0	88.3	89.6	90.8	91.7	92.6	93.3	94.6	95.6	96.5	97.9	98.8	99.5	99.9	100.0
125		109.0	113.3	114.6	115.8	116.7	117.6	118.3	119.6	120.6	121.5	122.9	123.8	124.5	124.9	125.0
160		144.0	148.3	149.6	150.8	151.7	152.6	153.3	154.6	155.6	156.5	157.9	158.8	159.5	159.9	160.0
	a_p	–	0.30	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00	6.00	7.00	8.00
	f	–	1.10	0.85	0.70	0.61	0.54	0.50	0.43	0.39	0.36	0.31	0.28	0.26	0.25	0.24

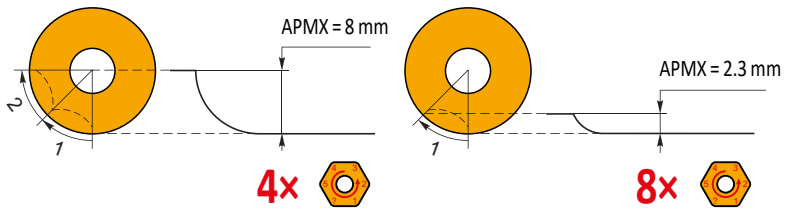
DC	RPMX	APMX/I
63	7.0	8.0/67
66	6.5	8.0/71
80	5.0	8.0/93
100	4.0	6.8/100

DC	DMIN	DMAX	SMAX DMIN	SMAX DMAX
63	94.0	126.0	8.0	8.0
66	100.0	132.0	8.0	8.0
80	128.0	160.0	8.0	8.0
100	168.0	200.0	8.0	8.0

a_p
5.0

DC	µm	3	5	10	15	20	30	40	50	60	80	100
63	FE	0.869	1.122	1.587	1.944	2.245	2.750	3.175	3.550	3.888	4.490	5.020
66		0.890	1.149	1.625	1.990	2.298	2.814	3.250	3.633	3.980	4.596	5.138
80		0.980	1.265	1.789	2.191	2.530	3.098	3.578	4.000	4.382	5.060	5.657
100		1.095	1.414	2.000	2.449	2.828	3.464	4.000	4.472	4.899	5.657	6.325
125		1.225	1.581	2.236	2.739	3.162	3.873	4.472	5.000	5.477	6.325	7.071
160		1.386	1.789	2.530	3.098	3.578	4.382	5.060	5.657	6.197	7.155	8.000

RE	µm	3	5	10	15	20	30	40	50	60	80	100
8.0	FE	0.438	0.566	0.800	0.980	1.131	1.386	1.600	1.789	1.960	2.263	2.530



SRC20

P M K S H

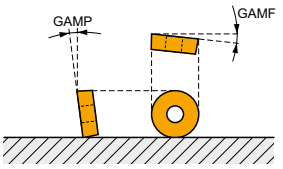
PRAMET

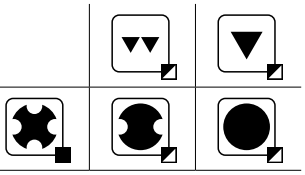
S

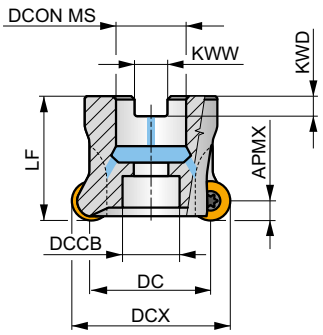
Copy Milling Cutter for Round Inserts RCMT 20 with Internal Coolant

Milling cutter for heavy copy milling utilising positive RCMT 16 inserts with APMX of 10 mm. Internal coolant. Suitable for face, helical interpolation, ramping, progressive plunge and high-feed milling. Available in arbor style in range Ø80 up to Ø160 mm. Body treated for longer tool life.

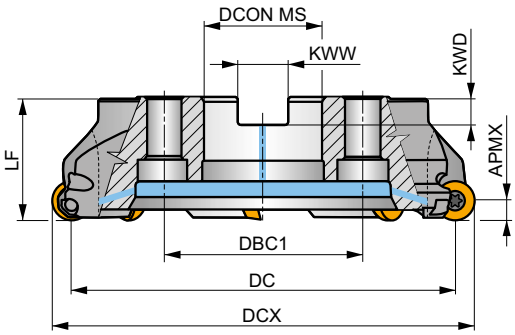
APMX	10.0 mm







DC 80 - 125 mm



DC 160 mm

h_m 0.11 - 0.32

	Product	DCX [mm]	DC [mm]	DCON MS [mm]	DCCB [mm]	DBC1 [mm]	LF [mm]	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg			
ISO 6462 DIN 8030	**80A04R-SM0RC20-C**	80	60	27	28	–	50	12.4	7	-2.7	-7	4	–	8500	✓	0.96	GI281	C0040	–
	100A05R-SM0RC20-C	100	80	32	45	–	50	14.4	8	-1.7	-7	5	–	7600	✓	1.26	GI281	C0041	AC002
	125A06R-SM0RC20-C	125	105	40	36	–	63	16.4	9	-1	-7	6	–	6500	✓	2.96	GI281	C0042	–
	160C07R-SM0RC20-C	160	140	40	–	66.7	63	16.4	9	-0.9	-7	7	–	5400	✓	5.44	GI281	C0046	–

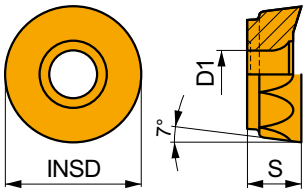
GI281	RCMT 2006M0..

		Nm							
C0040	US 66015-T25P	7.5	M 6	15	SDR T25P-T	HS 1230C	–	–	–
C0041	US 66015-T25P	7.5	M 6	15	SDR T25P-T	–	–	–	–
C0042	US 66015-T25P	7.5	M 6	15	SDR T25P-T	HSD 2040	–	–	–
C0046	US 66015-T25P	7.5	M 6	15	SDR T25P-T	HS 1240C	CAC 160C	HSD 0825C	HXK 5

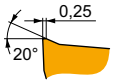
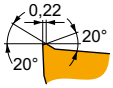
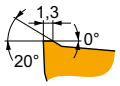
AC002	KS 1635	K.FMH32

RCMT 20

	INSD	D1	S
	[mm]	[mm]	[mm]
2006	20.0	6.50	6.35

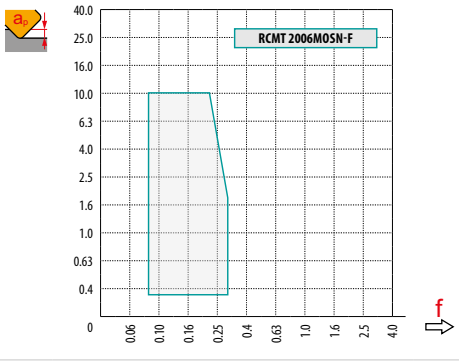


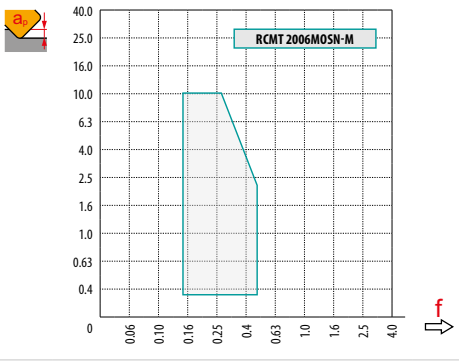
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

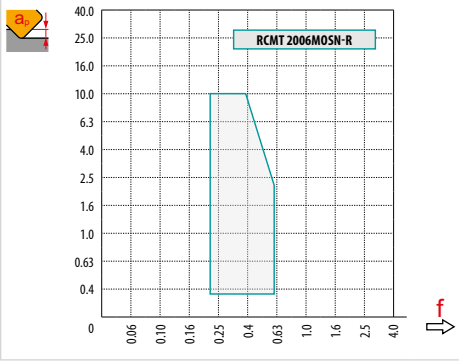
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
			HFC S																	
			F geometry with highly positive design for light machining.																	
RCMT 2006MOSN-F	**M8330**	–	■ 320	0.15	3.0	◪ 190	0.14	3.0	–	–	–	–	–	–	◪ 80	0.11	2.4	–	–	–
			U HFC S																	
			M geometry with highly positive design for medium machining.																	
RCMT 2006MOSN-M	**M6330**	–	■ 225	0.30	3.0	◪ 155	0.27	3.0	–	–	–	–	–	–	■ 65	0.21	2.4	–	–	–
	M8330	–	■ 255	0.30	3.0	◪ 150	0.27	3.0	■ 240	0.30	3.0	–	–	–	◪ 60	0.21	2.4	–	–	–
	M8345	–	■ 190	0.30	3.0	◪ 110	0.27	3.0	–	–	–	–	–	–	■ 45	0.21	2.4	–	–	–
	M9315	–	■ 330	0.30	3.0	–	–	–	■ 310	0.30	3.0	–	–	–	–	–	–	–	–	–
	M9325	–	■ 315	0.30	3.0	–	–	–	■ 295	0.30	3.0	–	–	–	–	–	–	–	–	–
	M9340	–	■ 275	0.30	3.0	◪ 165	0.27	3.0	–	–	–	–	–	–	■ 65	0.21	2.4	–	–	–
			HFC P																	
			R geometry with positive design for rough copy machining.																	
RCMT 2006MOSN-R	**M8330**	–	■ 225	0.45	3.0	–	–	–	■ 210	0.45	3.0	–	–	–	◪ 55	0.32	2.4	◪ 45	0.15	1.0
	M8345	–	■ 165	0.45	3.0	–	–	–	–	–	–	–	–	–	◪ 40	0.32	2.4	–	–	–
	M9325	–	■ 260	0.45	3.0	–	–	–	■ 245	0.45	3.0	–	–	–	–	–	–	◪ 50	0.15	1.0

a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	RCMT 20-F	RCMT 20-M	RCMT 20-R
RE	10.0	10.0	10.0
BS	–	–	–







DCX	a_p	0.00	0.30	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00
80	DEF	60.0	64.9	66.2	67.6	68.7	69.7	70.5	72.0	73.2	74.3	76.0	77.3	78.3	79.1	79.6	79.9	80.0
100		80.0	84.9	86.2	87.6	88.7	89.7	90.5	92.0	93.2	94.3	96.0	97.3	98.3	99.1	99.6	99.9	100.0
125		105.0	109.9	111.2	112.6	113.7	114.7	115.5	117.0	118.2	119.3	121.0	122.3	123.3	124.1	124.6	124.9	125.0
160		140.0	144.9	146.2	147.6	148.7	149.7	150.5	152.0	153.2	154.3	156.0	157.3	158.3	159.1	159.6	159.9	160.0
	a_p	–	0.30	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00
	f	–	1.23	0.95	0.78	0.68	0.61	0.55	0.48	0.43	0.40	0.35	0.31	0.29	0.27	0.26	0.25	0.24

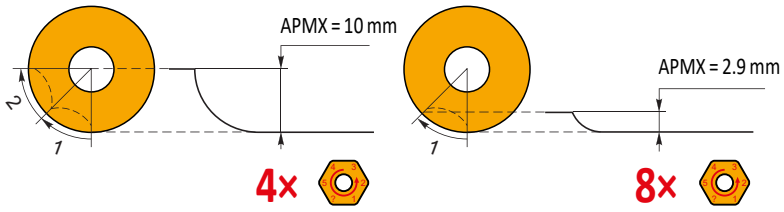
DCX	RPMX	APMX/I
80	7.0	10.0/83
100	5.0	8.6/100

DCX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
80	120.0	160.0	10.0	10.0
100	160.0	200.0	10.0	10.0

a_p
6.0

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
80	FE	0.980	1.265	1.789	2.191	2.530	3.098	3.578	4.000	4.382	5.060	5.657
100		1.095	1.414	2.000	2.449	2.828	3.464	4.000	4.472	4.899	5.657	6.325
125		1.225	1.581	2.236	2.739	3.162	3.873	4.472	5.000	5.477	6.325	7.071
160		1.386	1.789	2.530	3.098	3.578	4.382	5.060	5.657	6.197	7.155	8.000

RE	µm	3	5	10	15	20	30	40	50	60	80	100
10.0	FE	0.490	0.632	0.894	1.095	1.265	1.549	1.789	2.000	2.191	2.530	2.828



SRD05

P K H

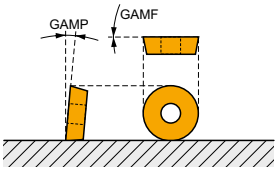
PRAMET

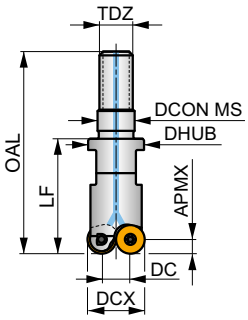
S

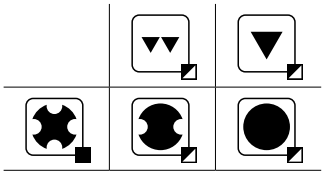
Copy Milling Cutter for Round Inserts RDHX 05 with Internal Coolant

Milling cutter for copy milling utilising positive RDHX 05 inserts with APMX of 1.5 mm. Internal coolant. Suitable for face, helical interpolation, ramping, progressive plunge and copy milling. Available as modular style in range Ø10 up to Ø15 mm. Body treated for longer tool life.

APMX	1.5 mm







h_m 0.03 - 0.1

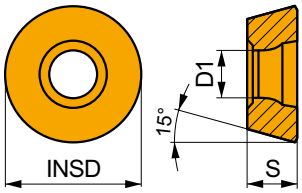
	Product	DCX [mm]	DC [mm]	DHUB [mm]	OAL [mm]	LF [mm]	DCON MS [mm]	TDZ	GAMF [°]	GAMP [°]			max.		kg		
MODULAR	**10E2R020M06-SRD05-CF**	10	5	9.8	35	20	6.5	M6	5	3	2	–	89300	✓	0.01	GI117	CO352
	12E3R020M06-SRD05-CF	12	7	10	35	20	6.5	M6	0	3	3	–	81500	✓	0.01	GI117	CO352
	15E4R020M08-SRD05-CF	15	10	13.5	38	20	8.5	M8	0	3	4	–	72900	✓	0.02	GI117	CO352

GI117	RD.. 0501M0..

		Nm			
CO352	US 62003B-T06P	0.9	M 2	3	Flag T06P

RDHX 05

	INSD	D1	S
	[mm]	[mm]	[mm]
0501	5.0	2.20	1.51

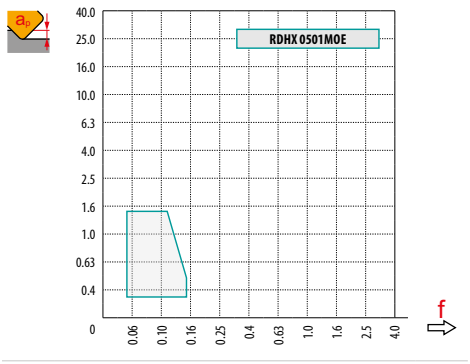


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
			HFC E																	
			Zero rake angle design for finish machining.																	
RDHX 0501MOE	**M8310**	–	400	0.10	0.5	–	–	–	380	0.10	0.5	–	–	–	–	–	–	80	0.15	1.0

a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	RDHX 05
RE	2.5
BS	–



DCX	a_p	0.00	0.30	0.50	0.75	1.00	1.25	1.50	2.00	2.50
10	DEF	5.0	7.4	8.0	8.6	9.0	9.3	9.6	9.9	10.0
12		7.0	9.4	10.0	10.6	11.0	11.3	11.6	11.9	12.0
15		10.0	12.4	13.0	13.6	14.0	14.3	14.6	14.9	15.0
	a_p	–	0.30	0.50	0.75	1.00	1.25	1.50	2.00	2.50
	f	–	0.25	0.19	0.16	0.14	0.13	0.12	0.10	0.09

DCX	RPMX	APMX/I
10	15.0	1.3/11
12	11.0	1.3/14
15	7.0	1.3/22

DCX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
10	12.0	20.0	1.2	1.2
12	16.0	24.0	1.2	1.2
15	22.0	30.0	1.2	1.2

a_p
1.0

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
10	FE	0.346	0.447	0.632	0.775	0.894	1.095	1.265	1.414	1.549	1.789	2.000
12		0.379	0.490	0.693	0.849	0.980	1.200	1.386	1.549	1.697	1.960	2.191
15		0.424	0.548	0.775	0.949	1.095	1.342	1.549	1.732	1.897	2.191	2.449
RE	µm	3	5	10	15	20	30	40	50	60	80	100
2.5	FE	0.245	0.316	0.447	0.548	0.632	0.775	0.894	1.000	1.095	1.265	1.414

SRD07

P M K N S H

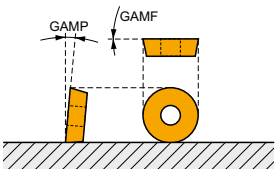
PRAMET

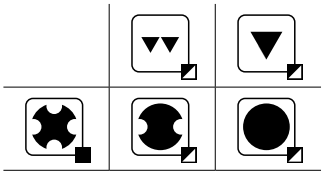
S

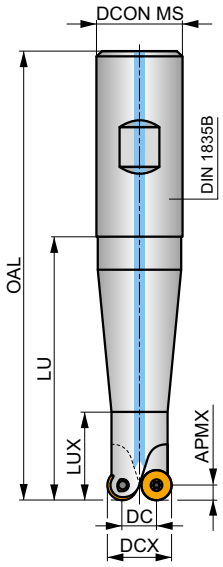
Copy Milling Cutter for Round Inserts RD.. 07 with Internal Coolant

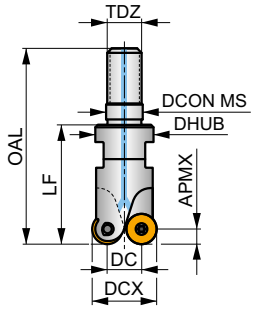
Milling cutter for copy milling utilising positive RD.. 07 inserts with APMX of 2 mm. Internal coolant. Suitable for face, helical interpolation, ramping, progressive plunge and copy milling. Available in Weldon and modular style, in range Ø15 up to Ø25 mm. Body treated for longer tool life.

APMX	2.0 mm









h_m 0.065 - 0.13

	Product	DCX [mm]	DC [mm]	OAL [mm]	DCON MS [mm]	DHUB [mm]	LU [mm]	LUX [mm]	LF [mm]	TDZ	GAMF [°]	GAMP [°]			max.		kg		
DIN 1835B	**15E2R040B16-SRD07-CF**	15	8	88	16	–	40	20	–	–	1	0	2	–	44200	✓	0.10	GI118	C0354
	15E2R060B16-SRD07-CF	15	8	108	16	–	60	20	–	–	1	0	2	–	44200	✓	0.13	GI118	C0354
	15E2R080B20-SRD07-CF	15	8	130	20	–	80	22	–	–	1	0	2	–	44200	✓	0.22	GI118	C0354
	15E2R100B20-SRD07-CF	15	8	150	20	–	100	22	–	–	1	0	2	–	44200	✓	0.25	GI118	C0354
	15E2R120B25-SRD07-CF	15	8	176	25	–	120	22	–	–	1	0	2	–	44200	✓	0.43	GI118	C0354
MODULAR	**15E2R028M08-SRD07-CF**	15	8	46	8.5	13.5	–	–	28	M8	1	0	2	–	44200	✓	0.03	GI118	C0354
	15E3R028M08-SRD07-CF	15	8	46	10.5	13.5	–	–	28	M8	2	0	3	–	44200	✓	0.03	GI118	C0354
	20E4R028M10-SRD07-CF	20	13	47	12.5	18	–	–	28	M10	-8	0	4	–	38200	✓	0.05	GI118	C0354
	25E5R028M12-SRD07-CF	25	18	50	12.5	21	–	–	28	M12	-2	0	5	–	34200	✓	0.08	GI118	C0354

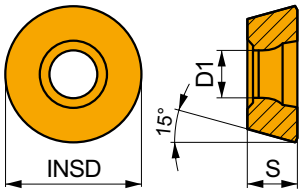
GI118	RD.. 0702M0..

C0354	US 42505-T07P	1.2	M 2.5	5	Flag T07P

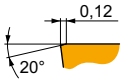
RDHX 07

PRAMET

	INSD [mm]	D1 [mm]	S [mm]
0702	7.0	2.80	2.38
07T1	7.0	2.80	1.98



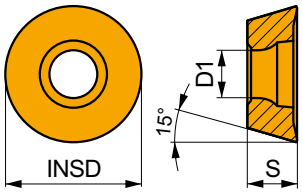
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			HFC T																	
			Zero rake angle design for finish machining.																	
RDHX 0702MOT	**M4303**	–	◪ 370	0.15	0.5	–	–	–	■ 350	0.15	0.5	–	–	–	–	–	–	■ 70	0.15	1.0
	M8310	–	◪ 360	0.15	0.5	–	–	–	■ 340	0.15	0.5	–	–	–	–	–	–	■ 70	0.15	1.0
	M8325	–	◪ 275	0.15	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
RDHX 07T1MOT	**M8310**	–	◪ 360	0.15	0.5	–	–	–	■ 340	0.15	0.5	–	–	–	–	–	–	■ 70	0.15	1.0
	M8325	–	◪ 275	0.15	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

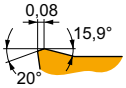
RDGT 07

PRAMET

	INSD [mm]	D1 [mm]	S [mm]
0702	7.0	2.80	2.38



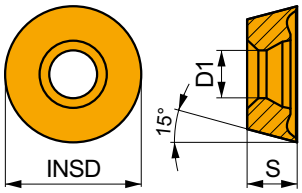
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			U HFC T																	
			Positive design for finish machining.																	
RDGT 0702MOT	**M8310**	–	■ 400	0.15	0.5	◪ 200	0.14	0.5	■ 380	0.15	0.5	–	–	–	–	–	–	–	–	–
	M8325	–	■ 305	0.15	0.5	◪ 145	0.14	0.5	–	–	–	–	–	–	–	–	–	–	–	–
	M8345	–	■ 270	0.15	0.5	◪ 160	0.14	0.5	–	–	–	–	–	–	◪ 65	0.12	0.4	–	–	–

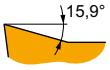
RDHT 07-FA

PRAMET

	INSD	D1	S
	[mm]	[mm]	[mm]
0702	7.0	2.80	2.38



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
RDHT 0702M0-FA	**HF7**	–	–	–	–	–	–	–	–	–	–	■	420	0.18	0.5	–	–	–	–	–	–

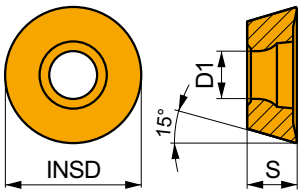
HFC F

FA geometry with highly positive design for fine-finish to medium machining.

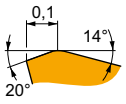
RDMT 07

PRAMET

	INSD	D1	S
	[mm]	[mm]	[mm]
0702	7.0	2.80	2.38



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

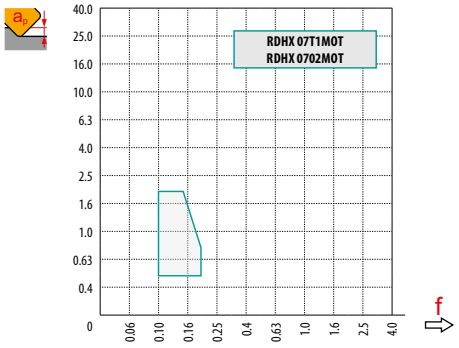
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
RDMT 0702M0T	**M8325**	–	■	305	0.15	0.5	◪	145	0.14	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–

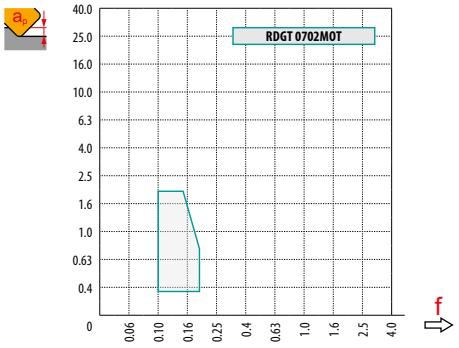
HFC S

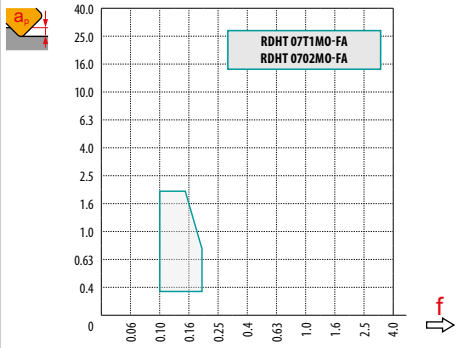
Positive design for finish machining.

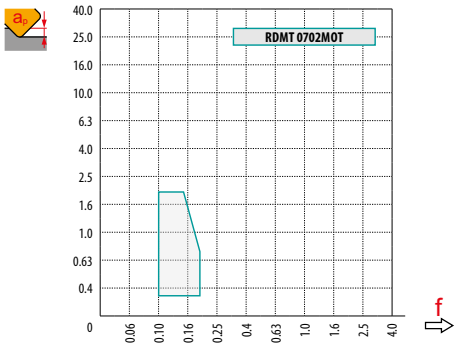
a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	RDHX 07	RDGT 07	RDHT 07-FA
RE	3.5	3.5	3.5
BS	–	–	–









DCX	a_p	0.00	0.30	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00	3.50
15	DEF	8.0	10.8	11.6	12.3	12.9	13.4	13.7	14.3	14.7	14.9	15.0
20		13.0	15.8	16.6	17.3	17.9	18.4	18.7	19.3	19.7	19.9	20.0
25		18.0	20.8	21.6	22.3	22.9	23.4	23.7	24.3	24.7	24.9	25.0
	a_p	0.00	0.30	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00	3.50
	f	–	0.29	0.23	0.19	0.16	0.15	0.13	0.12	0.11	0.10	0.09

DCX	RPMX	APMX/I
15	11.0	1.7/20
20	7.0	1.7/30
25	6.0	1.7/35

DCX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
15	17.0	30.0	0.4	1.7
20	28.0	40.0	1.7	1.7
25	38.0	50.0	1.7	1.7

a_p
1.2

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
15	FE	0.424	0.548	0.775	0.949	1.095	1.342	1.549	1.732	1.897	2.191	2.449
20		0.490	0.632	0.894	1.095	1.265	1.549	1.789	2.000	2.191	2.530	2.828
25		0.548	0.707	1.000	1.225	1.414	1.732	2.000	2.236	2.449	2.828	3.162
RE	µm	3	5	10	15	20	30	40	50	60	80	100
3.5	FE	0.290	0.374	0.529	0.648	0.748	0.917	1.058	1.183	1.296	1.497	1.673

SRD10

P M K N S H

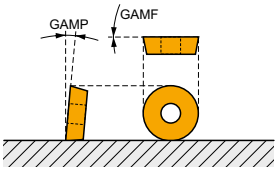
PRAMET

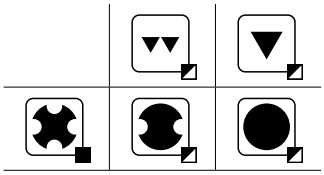
S

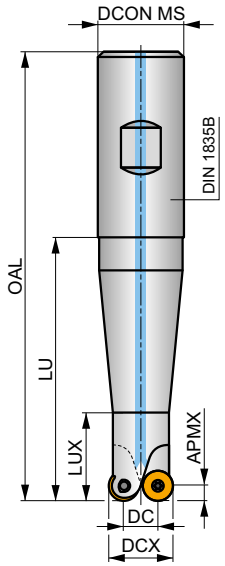
Copy Milling Cutter for Round Inserts RD.. 10 with Internal Coolant

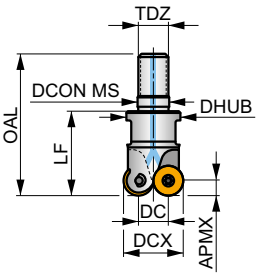
Milling cutter for copy milling utilising positive RD.. 10 inserts with APMX of 2.5 mm. Internal coolant. Suitable for face, helical interpolation, ramping, progressive plunge and copy milling. Available in Weldon, modular and arbor style, in range Ø20 up to Ø52 mm. Body treated for longer tool life.

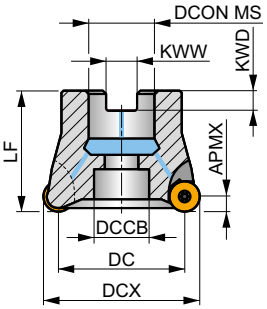
APMX	2.5 mm











h_m 0.065 - 0.19

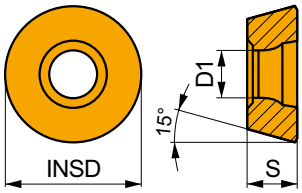
	Product	DCX [mm]	DC [mm]	OAL [mm]	DCON MS [mm]	DHUB [mm]	DCCB [mm]	LU [mm]	LUX [mm]	LF [mm]	TDZ	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg		
DIN 1835B	20E2R040B20-SRD10-CF	20	10	90	20	–	–	40	20	–	–	–	–	-2	0	2	–	30800	✓	0.17	GI119	C0356
	20E2R060B20-SRD10-CF	20	10	110	20	–	–	60	22	–	–	–	–	-2	0	2	–	30800	✓	0.20	GI119	C0356
	20E2R080B25-SRD10-CF	20	10	136	25	–	–	80	25	–	–	–	–	-2	0	2	–	30800	✓	0.36	GI119	C0356
	20E2R100B25-SRD10-CF	20	10	156	25	–	–	100	25	–	–	–	–	-2	0	2	–	30800	✓	0.41	GI119	C0356
	20E2R120B25-SRD10-CF	20	10	176	25	–	–	120	25	–	–	–	–	-2	0	2	–	30800	✓	0.46	GI119	C0356
MODULAR	20E2R028M10-SRD10-CF	20	10	47	10.5	18	–	–	–	28	M10	–	–	-2	0	2	–	30800	✓	0.07	GI119	C0356
	25E2R032M12-SRD10-CF	25	15	54	12.5	21	–	–	–	32	M12	–	–	0.5	0.5	2	–	27500	✓	0.08	GI119	C0356
	25E3R032M12-SRD10-CF	25	15	54	12.5	21	–	–	–	32	M12	–	–	0.5	0.5	3	–	27500	✓	0.08	GI119	C0356
	30E4R042M16-SRD10-CF	30	20	65	17	29	–	–	–	42	M16	–	–	0	0	4	–	25100	✓	0.18	GI119	C0356
	32E4R042M16-SRD10-CF	32	22	65	17	29	–	–	–	42	M16	–	–	0	0	4	–	24300	✓	0.19	GI119	C0356
	35E5R042M16-SRD10-CF	35	25	65	17	29	–	–	–	42	M16	–	–	0	0	5	–	23200	✓	0.20	GI119	C0356
	42E4R042M16-SRD10-CF	42	32	65	17	29	–	–	–	42	M16	–	–	0	0	4	–	21200	✓	0.24	GI119	C0356
	42E5R042M16-SRD10-CF	42	32	65	17	29	–	–	–	42	M16	–	–	0	0	5	–	21200	✓	0.24	GI119	C0356
ISO 6462 DIN 8030	42A05R-SMORD10-CF	42	32	–	16	–	14	–	–	40	–	8.4	8.4	0	0	5	–	21200	✓	0.20	GI119	C0358
	52A07R-SMORD10-CF	52	42	–	22	–	18	–	–	40	–	10.4	10.4	0	0	7	–	19100	✓	0.28	GI119	C0360

GI119	RD.. 1003MOT	RDHT 1003MO-FA

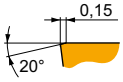
		Nm					
C0356	US 63507-T15P	3.0	M 3.5	7	Flag T15P	–	–
C0358	US 63507-T15P	3.0	M 3.5	7	D-T08P/T15P	FG-15	HS 0830C
C0360	US 63507-T15P	3.0	M 3.5	7	D-T08P/T15P	FG-15	HS 1030C

RDHX 10

	INSD [mm]	D1 [mm]	S [mm]
1003	10.0	3.90	3.18

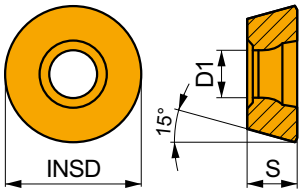


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

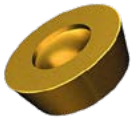
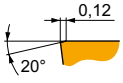
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			HFC T																	
			Zero rake angle design for finish machining.																	
RDHX 1003MOT	**M4303**	–	◪ 340	0.15	1.0	–	–	–	■ 320	0.15	1.0	–	–	–	–	–	–	■ 65	0.15	1.0
	M8310	–	◪ 335	0.15	1.0	–	–	–	■ 315	0.15	1.0	–	–	–	–	–	–	■ 65	0.15	1.0
	M8325	–	◪ 250	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	M8330	–	◪ 305	0.15	1.0	–	–	–	■ 285	0.15	1.0	–	–	–	–	–	–	◪ 60	0.15	1.0
	M8345	–	◪ 225	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

RDMX 10

	INSD [mm]	D1 [mm]	S [mm]
1003	10.0	3.90	3.18



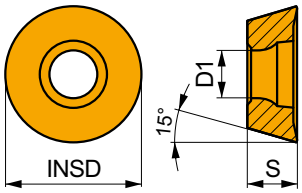
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			HFC T																	
			Zero rake angle design for finish machining.																	
RDMX 1003MOT	**M8310**	–	◪ 335	0.15	1.0	–	–	–	■ 315	0.15	1.0	–	–	–	–	–	–	■ 65	0.15	1.0
	M8325	–	◪ 250	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	M8345	–	◪ 225	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

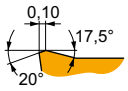
RDGT 10

PRAMET

	INSD [mm]	D1 [mm]	S [mm]
1003	10.0	3.90	3.18



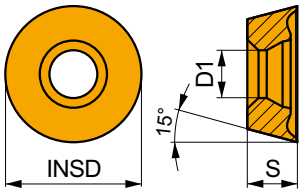
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			U HFC T — Positive design for finish machining.																	
RDGT 1003M0T	**M6330**	–	■ 290	0.15	1.0	■ 205	0.14	1.0	–	–	–	–	–	–	◪ 85	0.12	0.8	–	–	–
	M8310	–	■ 375	0.15	1.0	◪ 190	0.14	1.0	■ 355	0.15	1.0	–	–	–	–	–	–	–	–	–
	M8325	–	■ 280	0.15	1.0	◪ 130	0.14	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	M8345	–	■ 250	0.15	1.0	■ 150	0.14	1.0	–	–	–	–	–	–	◪ 60	0.12	0.8	–	–	–
	M9340	–	■ 395	0.15	1.0	■ 235	0.14	1.0	–	–	–	–	–	–	◪ 95	0.12	0.8	–	–	–

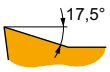
RDHT 10-FA

PRAMET

	INSD [mm]	D1 [mm]	S [mm]
1003	10.0	3.90	3.18

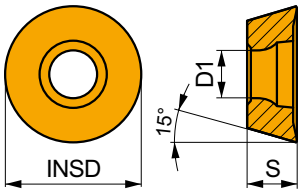


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

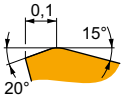
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			HFC F — FA geometry with highly positive design for fine-finish to medium machining.																	
RDHT 1003M0-FA	**HF7**	–	–	–	–	–	–	–	–	–	–	■ 390	0.18	1.0	–	–	–	–	–	–

RDMT 10

	INSD	D1	S
	[mm]	[mm]	[mm]
1003	10.0	3.90	3.18

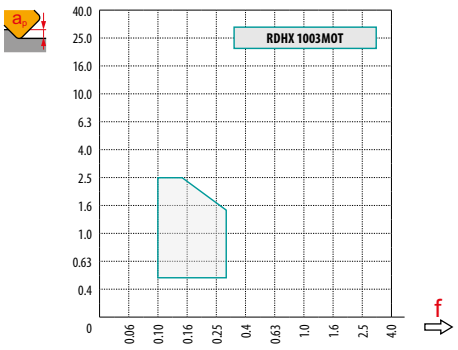


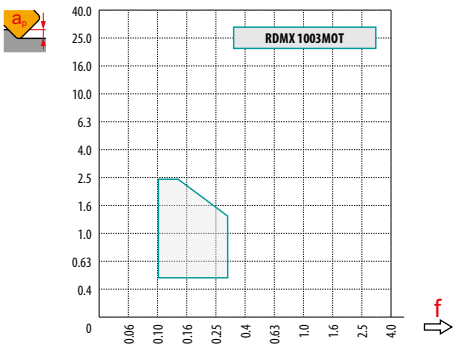
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

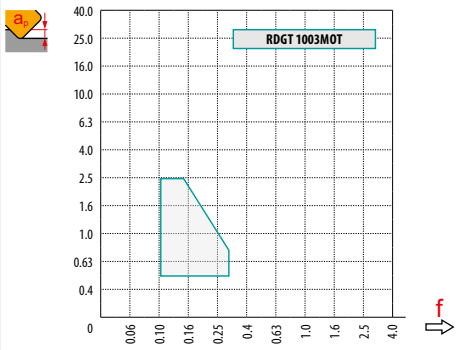
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
			HFC S																	
			Positive design for finish machining.																	
RDMT 1003MOT	**M8325**	–	■ 280	0.15	1.0	◪ 130	0.14	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	M8345	–	■ 250	0.15	1.0	◪ 150	0.14	1.0	–	–	–	–	–	–	–	–	–	–	–	–

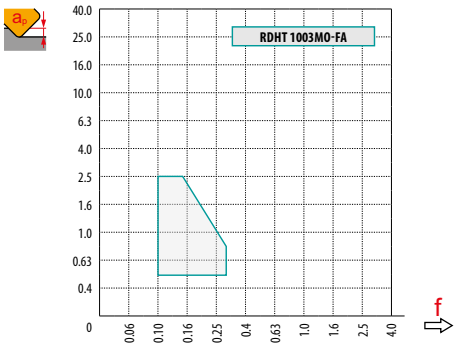
a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

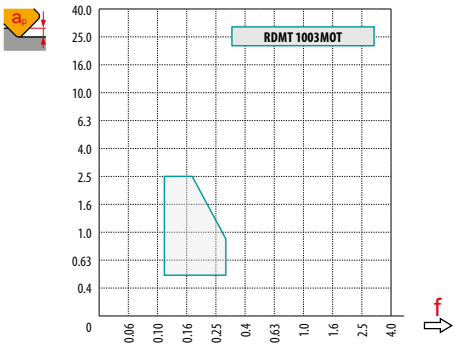
	RDHX 10	RDMX 10	RDGT 10	RDHT 10-FA
RE	5.0	5.0	5.0	5.0
BS	–	–	–	–











DCX	a_p	0.00	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00	3.50	4.00	5.00
20	DEF	10.0	14.4	15.3	16.0	16.6	17.1	18.0	18.7	19.2	19.5	19.8	20.0
25		15.0	19.4	20.3	21.0	21.6	22.1	23.0	23.7	24.2	24.5	24.8	25.0
30		20.0	24.4	25.3	26.0	26.6	27.1	28.0	28.7	29.2	29.5	29.8	30.0
32		22.0	26.4	27.3	28.0	28.6	29.1	30.0	30.7	31.2	31.5	31.8	32.0
35		25.0	29.4	30.3	31.0	31.6	32.1	33.0	33.7	34.2	34.5	34.8	35.0
42		32.0	36.4	37.3	38.0	38.6	39.1	40.0	40.7	41.2	41.5	41.8	42.0
52		42.0	46.4	47.3	48.0	48.6	49.1	50.0	50.7	51.2	51.5	51.8	52.0
	a_p	0.00	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00	3.50	4.00	5.00
	⇨ f	–	0.54	0.44	0.39	0.35	0.32	0.28	0.25	0.23	0.22	0.21	0.19

DCX	RPMX	APMX/I
20	20	2.5/15
25	12	2.5/25
30	8	2.5/37
32	7.5	2.5/20
35	7	2.5/42
42	4	2.5/37
52	3	2.5/49

DCX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
20	22.0	40.0	2.5	2.5
25	32.0	50.0	2.5	2.5
30	42.0	60.0	2.5	2.5
32	46.0	64.0	2.5	2.5
35	52.0	70.0	2.5	2.5
42	66.0	84.0	2.5	2.5
52	86.0	104.0	2.5	2.5

a_p
2.5

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
20	FE	0.490	0.632	0.894	1.095	1.265	1.549	1.789	2.000	2.191	2.530	2.828
25		0.548	0.707	1.000	1.225	1.414	1.732	2.000	2.236	2.449	2.828	3.162
30		0.600	0.775	1.095	1.342	1.549	1.897	2.191	2.449	2.683	3.098	3.464
32		0.620	0.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578
35		0.648	0.837	1.183	1.449	1.673	2.049	2.366	2.646	2.898	3.347	3.742
42		0.710	0.917	1.296	1.587	1.833	2.245	2.592	2.898	3.175	3.666	4.099
52		0.790	1.020	1.442	1.766	2.040	2.498	2.884	3.225	3.533	4.079	4.561
RE	µm	**3**	**5**	**10**	**15**	**20**	**30**	**40**	**50**	**60**	**80**	**100**
5.0	FE	0.346	0.447	0.632	0.775	0.894	1.095	1.265	1.414	1.549	1.789	2.000

SRD12

P M K N S H

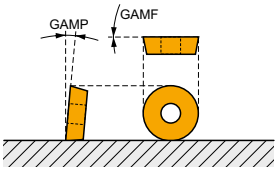
PRAMET

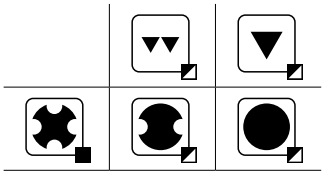
S(C)

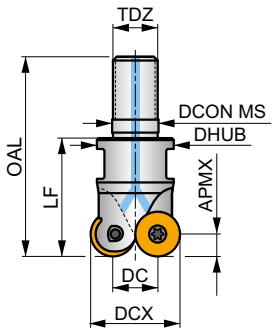
Copy Milling Cutter for Round Inserts RD.. 12 with Internal Coolant

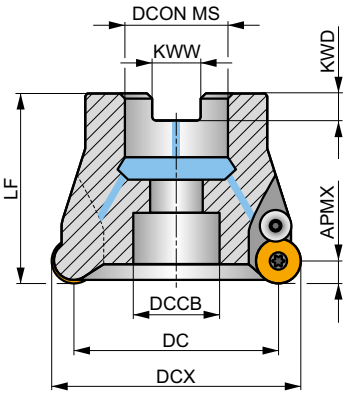
Milling cutter for copy milling utilising positive RD.. 12 inserts with APMX of 3 mm. Internal coolant. Suitable for face, helical interpolation, ramping, progressive plunge and copy milling. Available in modular and arbor style, in range Ø24 up to Ø80 mm. Body treated for longer tool life.

APMX	3.0 mm









h_m 0.065 - 0.25

h_m 0.065 - 0.22

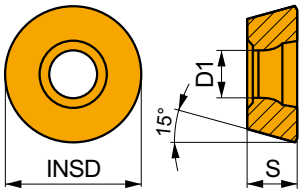
	Product	DCX [mm]	DC [mm]	OAL [mm]	DCON MS [mm]	DHUB [mm]	DCCB [mm]	LF [mm]	TDZ	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg		
MODULAR	**24E2R032M12-SRD12-CF**	24	12	54	12.5	21	–	32	M12	–	–	-3	0	2	–	21900	✓	0.07	GI120	C0362
	35E3R042M16-SCRD12-CF	35	23	65	17	29	–	42	M16	–	–	0	0	3	–	18100	✓	0.19	GI120	C0364
	35E4R042M16-SRD12-CF	35	23	65	17	29	–	42	M16	–	–	0	0	4	–	18100	✓	0.20	GI120	C0362
	42E4R042M16-SCRD12-CF	42	30	65	17	29	–	42	M16	–	–	0	0	4	–	16600	✓	0.21	GI120	C0364
	42E5R042M16-SRD12-CF	42	30	65	17	29	–	42	M16	–	–	0	0	5	–	16600	✓	0.22	GI120	C0366
ISO 6462 DIN 8030	**50A05R-SCM0RD12-CF**	50	38	–	22	–	18	50	–	10.4	10.4	2	7	5	–	15200	✓	0.29	GI120	C0366
	52A05R-SCM0RD12-CF	52	40	–	22	–	18	50	–	10.4	10.4	2	7	5	–	14900	✓	0.32	GI120	C0366
	66A06R-SCM0RD12-CF	66	54	–	27	–	22	50	–	12.4	12.4	2	7	6	–	13200	✓	0.54	GI120	C0370
	80A07R-SCM0RD12-CF	80	68	–	27	–	38	52	–	12.4	12.4	2	7	7	–	12000	✓	0.89	GI120	C0372

GI120	RD.. 12T3M0T	RDHT 12T3M0-FA

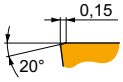
		Nm							
C0362	US 3508-T15P	3.5	M 3.5	8	–	–	Flag T15P	–	–
C0364	US 3006-T09P	2.0	M 3	6	D-T07P/T09P	FG-15	HS 1230C	–	–
C0366	US 3508-T15P	3.5	M 3.5	8	D-T08P/T15P	FG-15	–	CS12P	HS 1030C
C0370	US 3508-T15P	3.5	M 3.5	8	D-T08P/T15P	FG-15	–	CS12P	HS 1230C
C0372	US 3508-T15P	3.5	M 3.5	8	D-T08P/T15P	FG-15	–	CS12P	–

RDHX 12

	INSD	D1	S
	[mm]	[mm]	[mm]
12T3	12.0	3.90	3.97



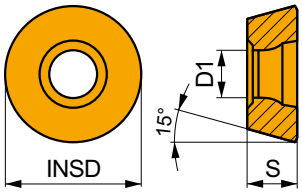
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
RDHX 12T3M0T	**M4303**	–	◪	300	0.20	1.5	–	–	–	■	285	0.20	1.5	–	–	–	–	–	–	■	60	0.15	1.0
	M8310	–	◪	300	0.20	1.5	–	–	–	■	285	0.20	1.5	–	–	–	–	–	–	■	60	0.15	1.0
	M8325	–	◪	225	0.20	1.5	–	–	–		–	–	–	–	–	–	–	–	–		–	–	–
	M8330	–	◪	270	0.20	1.5	–	–	–	■	255	0.20	1.5	–	–	–	–	–	–	◪	50	0.15	1.0
	M8345	–	◪	200	0.20	1.5	–	–	–		–	–	–	–	–	–	–	–	–		–	–	–

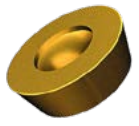
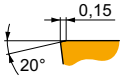
Zero rake angle design for finish machining.

RDMX 12

	INSD	D1	S
	[mm]	[mm]	[mm]
12T3	12.0	3.90	3.97



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

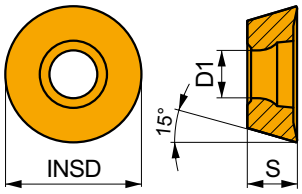
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
RDMX 12T3M0T	**M8310**	–	◪	300	0.20	1.5	–	–	–	■	285	0.20	1.5	–	–	–	–	–	–	■	60	0.15	1.0
	M8325	–	◪	225	0.20	1.5	–	–	–		–	–	–	–	–	–	–	–	–		–	–	–
	M8345	–	◪	200	0.20	1.5	–	–	–		–	–	–	–	–	–	–	–	–		–	–	–

Zero rake angle design for finish machining.

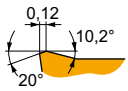
RDGT 12

PRAMET

	INSD	D1	S
	[mm]	[mm]	[mm]
12T3	12.0	3.90	3.97



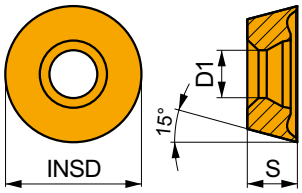
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
			U HFC T																	
			Positive design for finish machining.																	
RDGT 12T3M0T	**M6330**	–	■ 260	0.20	1.5	■ 185	0.18	1.5	–	–	–	–	–	–	◪ 75	0.14	1.2	–	–	–
	M8310	–	■ 330	0.20	1.5	◪ 165	0.18	1.5	■ 310	0.20	1.5	–	–	–	–	–	–	–	–	–
	M8325	–	■ 250	0.20	1.5	◪ 120	0.18	1.5	–	–	–	–	–	–	–	–	–	–	–	–
	M8345	–	■ 225	0.20	1.5	■ 135	0.18	1.5	–	–	–	–	–	–	◪ 55	0.14	1.2	–	–	–
	M9340	–	■ 340	0.20	1.5	■ 200	0.18	1.5	–	–	–	–	–	–	◪ 85	0.14	1.2	–	–	–

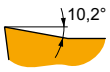
RDHT 12-FA

PRAMET

	INSD	D1	S
	[mm]	[mm]	[mm]
12T3	12.0	3.90	3.97

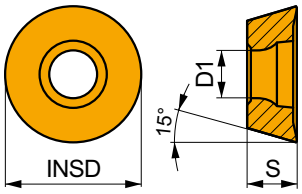


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

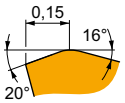
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
			HFC F																	
			FA geometry with highly positive design for fine-finish to medium machining.																	
RDHT 12T3M0-FA	**HF7**	–	–	–	–	–	–	–	–	–	–	■ 360	0.24	1.5	–	–	–	–	–	–

RDMT 12

	INSD	D1	S
	[mm]	[mm]	[mm]
12T3	12.0	3.90	3.97

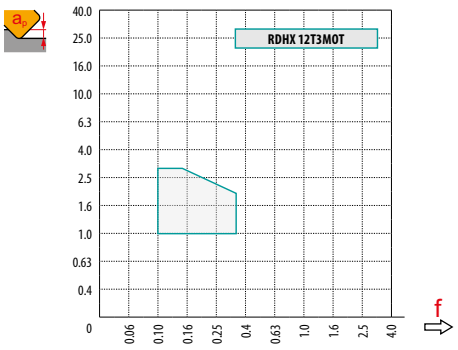


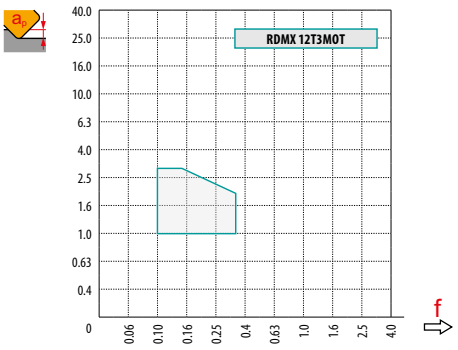
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

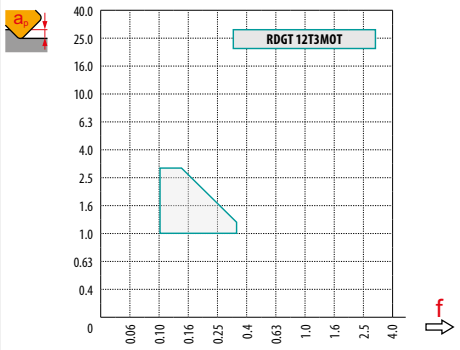
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
			HFC S																	
			Positive design for finish machining.																	
RDMT 12T3M0T	**M8325**	–	■ 250	0.20	1.5	◪ 120	0.18	1.5	–	–	–	–	–	–	–	–	–	–	–	–
	M8345	–	■ 225	0.20	1.5	◪ 135	0.18	1.5	–	–	–	–	–	–	–	–	–	–	–	–

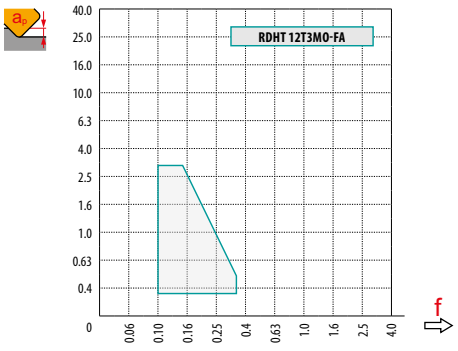
a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

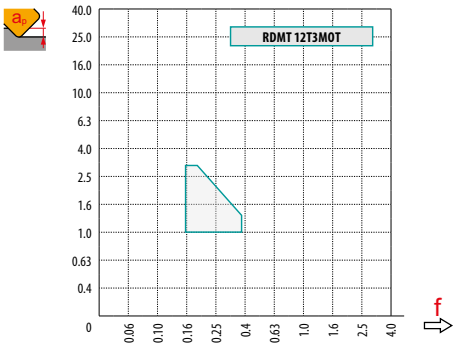
	RDHX 12	RDMX 12	RDGT 12	RDHT 12-FA
RE	6.0	6.0	6.0	6.0
a_p	–	–	–	–











DCX	a_p	0.00	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00	3.50	4.00	5.00	6.00
24		12.0	16.8	17.8	18.6	19.3	19.9	20.9	21.7	22.4	22.9	23.3	23.8	24.0
35		23.0	27.8	28.8	29.6	30.3	30.9	31.9	32.7	33.4	33.9	34.3	34.8	35.0
42		30.0	34.8	35.8	36.6	37.3	37.9	38.9	39.7	40.4	40.9	41.3	41.8	42.0
50	DEF	38.0	42.8	43.8	44.6	45.3	45.9	46.9	47.7	48.4	48.9	49.3	49.8	50.0
52		40.0	44.8	45.8	46.6	47.3	47.9	48.9	49.7	50.4	50.9	51.3	51.8	52.0
66		54.0	58.8	59.8	60.6	61.3	61.9	62.9	63.7	64.4	64.9	65.3	65.8	66.0
80		68.0	72.8	73.8	74.6	75.3	75.9	76.9	77.7	78.4	78.9	79.3	79.8	80.0
	a_p	0.00	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00	3.50	4.00	5.00	6.00
	f	–	0.49	0.40	0.35	0.32	0.29	0.25	0.23	0.21	0.20	0.18	0.17	0.16

DCX	RPMX	APMX/I
24	25.0	3.0/14
35	9.0	3.0/39
42	8.0	3.0/44
50	4.0	3.0/87
52	4.0	3.0/87
66	3.0	3.0/100
80	2.2	3.0/100

DCX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
24	26.0	48.0	3.0	3.0
35	46.0	70.0	3.0	3.0
42	62.0	84.0	3.0	3.0
50	78.0	100.0	2.8	2.8
52	82.0	104.0	2.8	2.8
66	110.0	132.0	2.8	2.8
80	136.0	160.0	2.8	2.8

a_p
2.8

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
24	FE	0.537	0.693	0.980	1.200	1.386	1.697	1.960	2.191	2.400	2.771	3.098
35		0.648	0.837	1.183	1.449	1.673	2.049	2.366	2.646	2.898	3.347	3.742
42		0.710	0.917	1.296	1.587	1.833	2.245	2.592	2.898	3.175	3.666	4.099
50		0.775	1.000	1.414	1.732	2.000	2.449	2.828	3.162	3.464	4.000	4.472
52		0.790	1.020	1.442	1.766	2.040	2.498	2.884	3.225	3.533	4.079	4.561
66		0.890	1.149	1.625	1.990	2.298	2.814	3.250	3.633	3.980	4.596	5.138
80		0.980	1.265	1.789	2.191	2.530	3.098	3.578	4.000	4.382	5.060	5.657
RE	µm	3	5	10	15	20	30	40	50	60	80	100
6.0	FE	0.379	0.490	0.693	0.849	0.980	1.200	1.386	1.549	1.697	1.960	2.191

SRD16

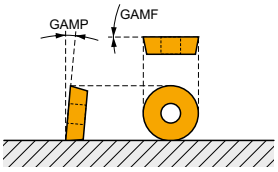
P M K N S H

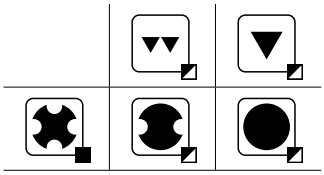
PRAMET S(C)

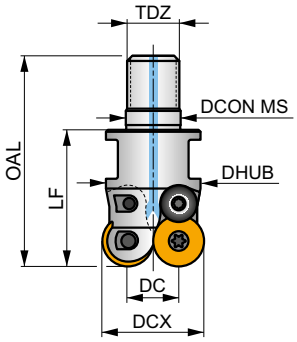
Copy Milling Cutter for Round Inserts RD.. 16 with Internal Coolant

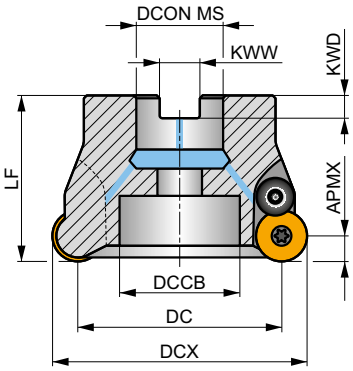
Milling cutter for copy milling utilising positive RD.. 16 inserts with APMX of 4 mm. Internal coolant. Suitable for face, helical interpolation, ramping, progressive plunge and copy milling. Available in modular and arbor style, in range Ø32 up to Ø100 mm. Body treated for longer tool life.

APMX	4.0 mm









h_m	0.11 - 0.25
h_m	0.1 - 0.2

	Product	DCX [mm]	DC [mm]	OAL [mm]	DCON MS [mm]	DHUB [mm]	DCCB [mm]	LF [mm]	TDZ	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg		
MODULAR	**32E2R042M16-SCRD16-CF**	32	16	65	17	29	–	42	M16	–	–	-2	0	2	–	12600	✓	0.16	GI121	C0374
	52A04R-SCM0RD16-CF	52	36	–	22	–	16.5	50	–	10.4	10.4	0	7	4	–	9900	✓	0.28	GI121	C0376
ISO 6462 DIN 8030	**66A05R-SCM0RD16-CF**	66	50	–	27	–	22	50	–	12.4	12.4	0	7	5	–	8800	✓	0.61	GI121	C0378
	80A06R-SCM0RD16-CF	80	64	–	27	–	38	52	–	12.4	12.4	0	7	6	–	8000	✓	0.75	GI121	C0380
	100A07R-SCM0RD16-CF	100	84	–	32	–	45	52	–	14.4	14.4	0	7	7	–	7100	✓	1.41	GI121	C0380

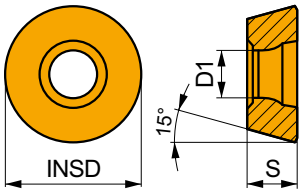
GI121	RD.. 1604M0T	RDHT 1604M0-FA

		Nm						
C0374	US 64510-T20P	4.5	M 4.5	10	–	Flag T20P	CS16P	–
C0376	US 64510-T20P	4.5	M 4.5	10	SDR T20P-T	–	CS16P	HS 1030C
C0378	US 64510-T20P	4.5	M 4.5	10	SDR T20P-T	–	CS16P	HS 1230C
C0380	US 64510-T20P	4.5	M 4.5	10	SDR T20P-T	–	CS16P	–

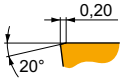
RDHX 16

PRAMET

	INSD [mm]	D1 [mm]	S [mm]
1604	16.0	5.20	4.76



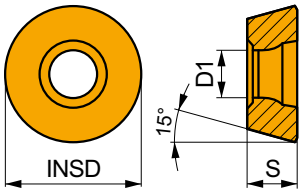
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc	M f	M ap	K vc	K f	K ap	N vc	N f	N ap	S vc	S f	S ap	H vc	H f	H ap
			HFC T																	
			Zero rake angle design for finish machining.																	
RDHX 1604M0T	**M8310**	–	255	0.30	2.0	–	–	–	240	0.30	2.0	–	–	–	–	–	–	50	0.15	1.0
	M8325	–	195	0.30	2.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	M8330	–	245	0.30	2.0	–	–	–	230	0.30	2.0	–	–	–	–	–	–	45	0.15	1.0
	M8345	–	180	0.30	2.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	M9325	–	290	0.30	2.0	–	–	–	275	0.30	2.0	–	–	–	–	–	–	55	0.15	1.0

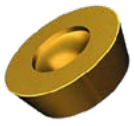
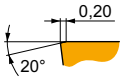
RDMX 16

PRAMET

	INSD [mm]	D1 [mm]	S [mm]
1604	16.0	5.20	4.76



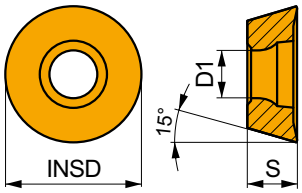
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc	M f	M ap	K vc	K f	K ap	N vc	N f	N ap	S vc	S f	S ap	H vc	H f	H ap
			HFC T																	
			Zero rake angle design for finish machining.																	
RDMX 1604M0T	**M8310**	–	255	0.30	2.0	–	–	–	240	0.30	2.0	–	–	–	–	–	–	50	0.15	1.0
	M8325	–	195	0.30	2.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	M8345	–	180	0.30	2.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

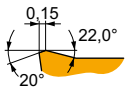
RDGT 16

PRAMET

	INSD [mm]	D1 [mm]	S [mm]
1604	16.0	5.20	4.76



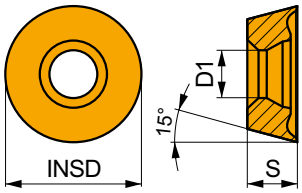
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																				
RDGT 1604M0T	M6330	–	■ 230	0.30	2.0	■ 165	0.27	2.0	–	–	–	–	–	–	◪ 65	0.21	1.6	–	–	–
	M8310	–	■ 285	0.30	2.0	◪ 145	0.27	2.0	■ 270	0.30	2.0	–	–	–	–	–	–	–	–	–
	M8325	–	■ 220	0.30	2.0	◪ 105	0.27	2.0	–	–	–	–	–	–	–	–	–	–	–	–
	M8345	–	■ 200	0.30	2.0	■ 120	0.27	2.0	–	–	–	–	–	–	◪ 50	0.21	1.6	–	–	–
	M9340	–	■ 290	0.30	2.0	■ 170	0.27	2.0	–	–	–	–	–	–	◪ 70	0.21	1.6	–	–	–

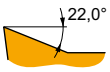
RDHT 16-FA

PRAMET

	INSD [mm]	D1 [mm]	S [mm]
1604	16.0	5.20	4.76

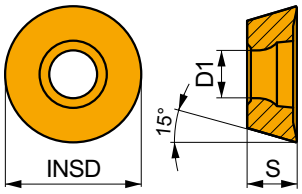


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

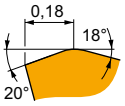
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																				
RDHT 1604M0-FA	HF7	–	–	–	–	–	–	–	–	–	–	■ 315	0.36	2.0	–	–	–	–	–	–

RDMT 16

	INSD	D1	S
	[mm]	[mm]	[mm]
1604	16.0	5.20	4.76

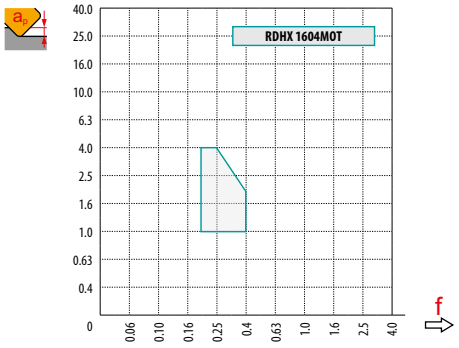


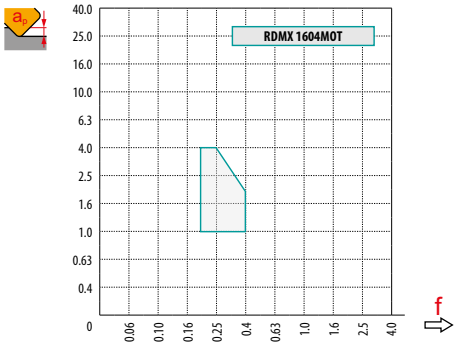
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

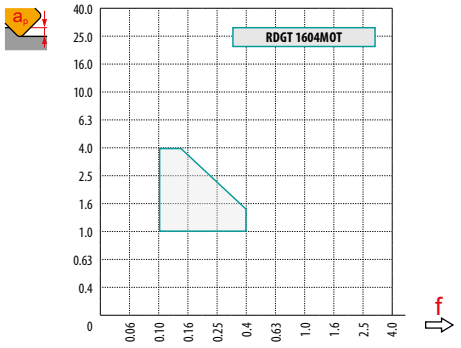
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
			HFC S																	
	Positive design for finish machining.																			
RDMT 1604MOT	**M8325**	–	■ 220	0.30	2.0	◪ 105	0.27	2.0	–	–	–	–	–	–	–	–	–	–	–	–
	M8345	–	■ 200	0.30	2.0	◪ 120	0.27	2.0	–	–	–	–	–	–	–	–	–	–	–	–

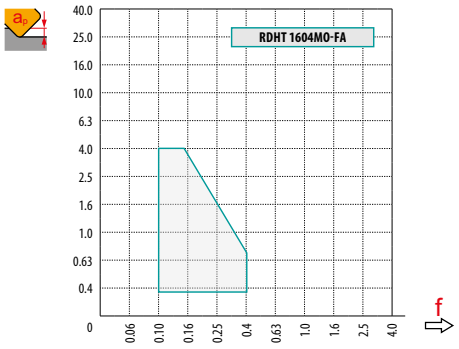
a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

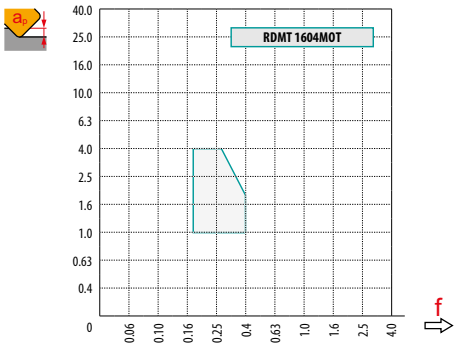
	RDHX 16	RDMX 16	RDGT 16	RDHT 16-FA
RE	8.0	8.0	8.0	8.0
BS	–	–	–	–











DCX	a_p	0.00	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00	3.50	4.00	5.00	6.00	7.00	8.00
32	DEF	16.0	21.6	22.8	23.7	24.6	25.3	26.6	27.6	28.5	29.2	29.9	30.8	31.5	31.9	32.0
52		36.0	41.6	42.8	43.7	44.6	45.3	46.6	47.6	48.5	49.2	49.9	50.8	51.5	51.9	52.0
66		50.0	55.6	56.8	57.7	58.6	59.3	60.6	61.6	62.5	63.2	63.9	64.8	65.5	65.9	66.0
80		64.0	69.6	70.8	71.7	72.6	73.3	74.6	75.6	76.5	77.2	77.9	78.8	79.5	79.9	80.0
100		84.0	89.6	90.8	91.7	92.6	93.3	94.6	95.6	96.5	97.2	97.9	98.8	99.5	99.9	100.0
	a_p	0.00	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00	3.50	4.00	5.00	6.00	7.00	8.00
	1 f	–	0.91	0.74	0.65	0.58	0.53	0.46	0.42	0.38	0.36	0.34	0.30	0.28	0.26	0.25

DCX	RPMX	APMX/I
32	25.0	4.0/19
52	8.0	4.0/58
66	6.0	4.0/78
80	4.0	4.0/100
100	3.0	4.0/100

DCX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
32	34.0	64.0	4.0	4.0
52	74.0	104.0	4.0	4.0
66	102.0	132.0	4.0	4.0
80	130.0	160.0	4.0	4.0
100	170.0	200.0	4.0	4.0

a_p
4.0

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
32	FE	0.620	0.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578
52		0.790	1.020	1.442	1.766	2.040	2.498	2.884	3.225	3.533	4.079	4.561
66		0.890	1.149	1.625	1.990	2.298	2.814	3.250	3.633	3.980	4.596	5.138
80		0.980	1.265	1.789	2.191	2.530	3.098	3.578	4.000	4.382	5.060	5.657
100		1.095	1.414	2.000	2.449	2.828	3.464	4.000	4.472	4.899	5.657	6.325
RE	µm	3	5	10	15	20	30	40	50	60	80	100
8.0	FE	0.438	0.566	0.800	0.980	1.131	1.386	1.600	1.789	1.960	2.263	2.530

L2-SZP

P M K S H

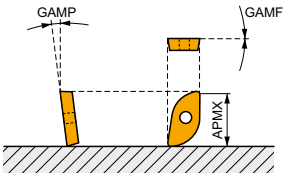
PRAMET

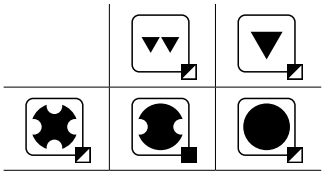
S

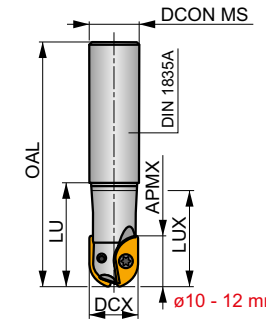
Ball nose Profile Milling Cutter for ZP.. Inserts

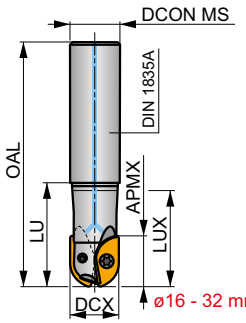
Ball nose milling cutter utilising ZP.. style inserts with APMX from 8.9 up to 44.7 mm. Suitable for profile milling. Available in cylindrical, Weldon, Morse taper and modular style, in range Ø10 up to Ø50 mm. Body treated for longer tool life.

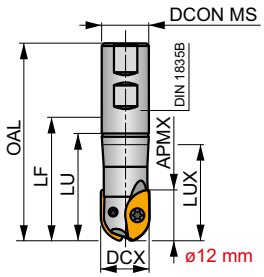
APMX	8.9 - 44.7 mm

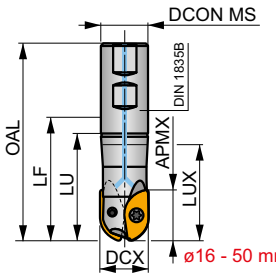


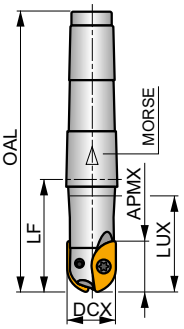


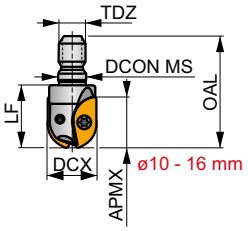


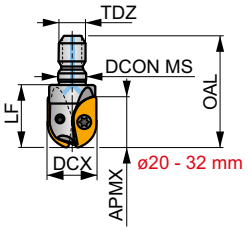












h_m	0.05 - 0.19

	Product	DCX [mm]	OAL [mm]	DCON MS [mm]	LU [mm]	LUX [mm]	LF [mm]	TDZ	CZC MS	APMX [mm]	GAMF [°]	GAMP [°]			max.		kg		
	10L2R030A10-SZP10	10	130	10	30	30	–	–	–	–	0	-10	2	–	35800	–	0.11	GI255	C0510
	10L2R050A16-SZP10	10	160	16	50	22.3	–	–	–	–	0	-10	2	–	35800	–	0.26	GI255	C0510
	12L2R035A12-SZP12	12	140	12	35	35	–	–	–	–	0	-10	2	–	21000	–	0.15	GI253	C0510
	12L2R045A20-SZP12	12	200	20	–	22	–	–	–	–	0	-10	2	–	21000	–	0.51	GI253	C0511
	16L2R040A16-SZP16-C	16	160	16	40	40	–	–	–	–	0	-10	2	–	20000	✓	0.24	GI256	C0510
DIN 1835A	**16L2R045A20-SZP16-C**	16	200	20	–	29.4	–	–	–	–	0	-10	2	–	20000	✓	1.48	GI256	C0512
DIN 1835A	**20L2R050A20-SZP20-C**	20	250	20	50	–	–	–	–	–	0	-10	2	–	24000	✓	0.56	GI254	C0513
DIN 1835A	**20L2R055A25-SZP20-C**	20	200	25	–	36.1	–	–	–	–	0	-10	2	–	24000	✓	0.68	GI254	C0513
DIN 1835A	**20L2R055A32-SZP20-C**	20	250	32	–	34.5	–	–	–	–	0	-10	2	–	24000	✓	1.34	GI254	C0513
DIN 1835A	**25L2R060A25-SZP25-C**	25	250	25	60	–	–	–	–	–	0	-10	2	–	24000	✓	0.86	GI257	C0514
DIN 1835A	**25L2R065A32-SZP25-C**	25	250	32	–	43	–	–	–	–	0	-10	2	–	24000	✓	1.34	GI257	C0514
DIN 1835A	**32L2R070A32-SZP32-C**	32	250	32	–	–	–	–	–	–	0	-10	2	–	18500	✓	1.43	GI258	C0515
	12L2R040B20-SZP12	12	91	20	40	21.5	66.5	–	–	–	0	-10	2	–	21000	–	0.19	GI253	C0511
	12L2R060B20-SZP12	12	111	20	60	23.8	86.5	–	–	–	0	-10	2	–	21000	–	0.23	GI253	C0511
	16L2R040B20-SZP16-C	16	91	20	40	28.3	66.5	–	–	–	0	-10	2	–	20000	✓	0.15	GI256	C0512
	16L2R060B20-SZP16-C	16	111	20	60	32.9	86.5	–	–	–	0	-10	2	–	20000	✓	0.21	GI256	C0512
	20L2R050B25-SZP20-C	20	107	25	50	35.1	75.5	–	–	–	0	-10	2	–	24000	✓	0.31	GI254	C0513
	20L2R070B25-SZP20-C	20	127	25	70	39.5	95.5	–	–	–	0	-10	2	–	24000	✓	0.36	GI254	C0513
DIN 1835B	**25L2R060B25-SZP25-C**	25	117	25	60	–	85.5	–	–	–	0	-10	2	–	24000	✓	0.36	GI257	C0514
DIN 1835B	**25L2R080B25-SZP25-C**	25	137	25	80	–	105	–	–	–	0	-10	2	–	24000	✓	0.43	GI257	C0514
DIN 1835B	**32L2R070B32-SZP32-C**	32	131	32	70	–	95.5	–	–	–	0	-10	2	–	18500	✓	0.72	GI258	C0515
DIN 1835B	**32L2R100B32-SZP32-C**	32	161	32	100	–	125.5	–	–	–	0	-10	2	–	18500	✓	0.85	GI258	C0515
DIN 1835B	**40L2R070B32-SZP40-C**	40	131	32	70	–	95.5	–	–	–	0	-10	2	–	8000	✓	0.81	GI259	C0516
DIN 1835B	**40L2R100B40-SZP40-C**	40	171	40	100	–	131	–	–	–	0	-10	2	–	8000	✓	1.40	GI259	C0516
DIN 1835B	**50L2R100B50-SZP50-C**	50	181	50	100	–	136.5	–	–	–	0	-10	2	–	7000	✓	2.25	GI260	C0517
DIN 228A	**10L2R050E02-SZP10**	10	114	–	–	21.9	50	–	2	–	0	-10	2	–	35800	–	0.13	GI255	C0510
DIN 228A	**12L2R040E02-SZP12**	12	104	–	–	22.5	40	–	2	–	0	-10	2	–	21000	–	0.14	GI253	C0511

	Product	DCX [mm]	OAL [mm]	DCON MS [mm]	LU [mm]	LUX [mm]	LF [mm]	TDZ	CZC MS	APMX [mm]	GAMF [°]	GAMP [°]			max.		kg		
DIN 228A	**12L2R060E02-SZP12**	12	124	–	–	25.8	60	–	2	–	0	-10	2	–	21000	–	0.18	GI253	C0511
	12L2R090E02-SZP12	12	154	–	–	25.8	90	–	2	–	0	-10	2	–	21000	–	0.23	GI253	C0511
	16L2R040E02-SZP16	16	104	–	–	31.3	40	–	2	–	0	-10	2	–	20000	–	0.14	GI256	C0512
	16L2R060E02-SZP16	16	124	–	–	42.2	60	–	2	–	0	-10	2	–	20000	–	0.19	GI256	C0512
	16L2R090E02-SZP16	16	154	–	–	75.9	90	–	2	–	0	-10	2	–	20000	–	0.23	GI256	C0512
	20L2R050E03-SZP20	20	131	–	–	36.6	50	–	3	–	0	-10	2	–	24000	–	0.35	GI254	C0513
	20L2R070E03-SZP20	20	151	–	–	–	70	–	3	–	0	-10	2	–	24000	–	0.39	GI254	C0513
	20L2R100E03-SZP20	20	181	–	–	77.4	100	–	3	–	0	-10	2	–	24000	–	0.42	GI254	C0513
	25L2R080E03-SZP25	25	161	–	–	–	80	–	3	–	0	-10	2	–	24000	–	0.46	GI257	C0514
	25L2R110E04-SZP25	25	213	–	–	92.7	110	–	4	–	0	-10	2	–	24000	–	0.84	GI257	C0514
	32L2R100E04-SZP32	32	203	–	–	–	100	–	4	–	0	-10	2	–	18500	–	0.90	GI258	C0515
	32L2R150E04-SZP32	32	253	–	–	–	150	–	4	–	0	-10	2	–	18500	–	1.10	GI258	C0515
	50L2R100E05-SZP50	50	230	–	–	–	100	–	5	–	0	-10	2	–	7000	–	2.20	GI260	C0517
MODULAR	**10L2R025M08-SZP10**	10	–	8.5	–	–	25	M8	–	–	0	-10	2	–	–	–	0.03	GI255	C0510
	12L2R025M06-SZP12	12	–	6.5	–	–	25	M6	–	–	0	-10	2	–	–	–	0.05	GI253	C0510
	12L2R025M08-SZP12	12	–	8.5	–	–	25	M8	–	–	0	-10	2	–	–	–	0.05	GI253	C0511
	16L2R025M08-SZP16	16	–	8.5	–	–	25	M8	–	–	0	-10	2	–	–	–	0.05	GI256	C0512
	20L2R030M10-SZP20-C	20	–	10.5	–	–	30	M10	–	–	0	-10	2	–	–	✓	0.07	GI254	C0513
	25L2R035M12-SZP25-C	25	–	12.5	–	–	35	M12	–	–	0	-10	2	–	–	✓	0.09	GI257	C0514
	32L2R045M16-SZP32-C	32	–	17	–	–	45	M16	–	–	0	-10	2	–	–	✓	0.15	GI258	C0515

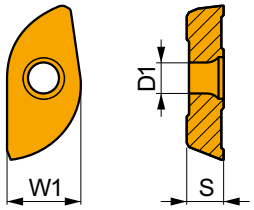
GI253	ZP 12..
GI254	ZP 20..
GI255	ZP 10..
GI256	ZP 16..
GI257	ZP 25..
GI258	ZP 32..
GI259	ZP 40..
GI260	ZP 50..

					Nm			
C0510	–	–	Flag T06P	US 62004-T06P	0.6	M 2	4	–
C0511	–	–	Flag T08P	US 62506-T08P	1.2	M 2.5	6	–
C0512	–	–	Flag T08P	US 62508-T08P	1.2	M 2.5	7	–
C0513	–	–	Flag T10P	US 63510-T10P	2.0	M 3.5	9	–
C0514	–	–	Flag T15P	US 4011A-T15P	3.5	M 4	11	–
C0515	–	–	–	US 65013-T20	5.0	M 5	13	SDR T20
C0516	–	–	–	US 66015-T25P	7.5	M 6	15	SDR T25P
C0517	SZN 400322	US 3508-T15P	Flag T15P	US 68020-T30P	15.0	M 8	20	SDR T30P

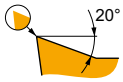
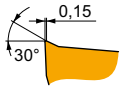
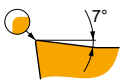
ZP

PRAMET

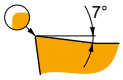
	W1 [mm]	D1 [mm]	S [mm]
10	10.000	2.20	1.70
12	12.000	2.90	2.38
16	16.000	2.90	3.18
20	20.000	4.00	3.97
25	25.000	4.70	4.76
32	32.000	5.90	6.35
40	40.000	7.00	7.94
50	50.000	9.60	7.94



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			F																	
			F geometry with highly positive design for light machining.																	
ZP 20ER-F	**M8310**	–	◪ 305	0.27	1.0	◪ 155	0.24	1.0	–	–	–	–	–	–	–	–	–	–	–	–
			E																	
			FM geometry with sharp neutral design for light to medium machining.																	
ZP 10ER-FM	**M8310**	–	■ 305	0.36	0.5	–	–	–	■ 285	0.36	0.5	–	–	–	–	–	–	■ 60	0.15	1.0
	M8345	–	■ 210	0.36	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
ZP 12ER-FM	**M8310**	–	■ 300	0.36	0.6	–	–	–	■ 285	0.36	0.6	–	–	–	–	–	–	■ 60	0.15	1.0
	M8345	–	■ 205	0.36	0.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
ZP 16ER-FM	**M8310**	–	■ 290	0.36	0.8	–	–	–	■ 275	0.36	0.8	–	–	–	–	–	–	■ 55	0.15	1.0
	M8345	–	■ 200	0.36	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
ZP 20ER-FM	**M8310**	–	■ 285	0.36	1.0	–	–	–	■ 270	0.36	1.0	–	–	–	–	–	–	■ 55	0.15	1.0
	M8345	–	■ 195	0.36	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
ZP 25ER-FM	**M8310**	–	■ 275	0.36	1.3	–	–	–	■ 260	0.36	1.3	–	–	–	–	–	–	■ 55	0.15	1.0
	M8345	–	■ 190	0.36	1.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
ZP 32ER-FM	**M8310**	–	■ 270	0.36	1.6	–	–	–	■ 255	0.36	1.6	–	–	–	–	–	–	■ 50	0.15	1.0
	M8345	–	■ 185	0.36	1.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			1 S																	
			M geometry with very positive design for medium machining.																	
ZP 12ER-M	**M8330**	–	■ 280	0.36	0.6	■ 165	0.32	0.6	◪ 265	0.36	0.6	–	–	–	◪ 70	0.25	0.5	–	–	–
	M8340	–	■ 260	0.36	0.6	■ 155	0.32	0.6	◪ 245	0.36	0.6	–	–	–	◪ 65	0.25	0.5	–	–	–
	M8345	–	■ 205	0.36	0.6	■ 120	0.32	0.6	–	–	–	–	–	–	◪ 50	0.25	0.5	–	–	–
ZP 16ER-M	**M8330**	–	■ 270	0.36	0.8	■ 160	0.32	0.8	◪ 255	0.36	0.8	–	–	–	◪ 65	0.25	0.6	–	–	–
	M8340	–	■ 250	0.36	0.8	■ 150	0.32	0.8	◪ 235	0.36	0.8	–	–	–	◪ 60	0.25	0.6	–	–	–
	M8345	–	■ 200	0.36	0.8	■ 120	0.32	0.8	–	–	–	–	–	–	◪ 50	0.25	0.6	–	–	–
ZP 20ER-M	**M8330**	–	■ 265	0.36	1.0	■ 155	0.32	1.0	◪ 250	0.36	1.0	–	–	–	◪ 65	0.25	0.8	–	–	–
	M8345	–	■ 195	0.36	1.0	■ 115	0.32	1.0	–	–	–	–	–	–	◪ 45	0.25	0.8	–	–	–
ZP 25ER-M	**M8330**	–	■ 260	0.36	1.3	■ 155	0.32	1.3	◪ 245	0.36	1.3	–	–	–	◪ 65	0.25	1.0	–	–	–
	M8345	–	■ 190	0.36	1.3	■ 110	0.32	1.3	–	–	–	–	–	–	◪ 45	0.25	1.0	–	–	–
ZP 32ER-M	**M8330**	–	■ 255	0.36	1.6	■ 150	0.32	1.6	◪ 240	0.36	1.6	–	–	–	◪ 60	0.25	1.3	–	–	–
	M8345	–	■ 185	0.36	1.6	■ 110	0.32	1.6	–	–	–	–	–	–	◪ 45	0.25	1.3	–	–	–
			U E																	
			R geometry with sharp slightly positive design for light to medium machining.																	
ZP 16ER-R	**M8345**	–	■ 190	0.45	0.8	■ 110	0.41	0.8	–	–	–	–	–	–	◪ 45	0.32	0.6	–	–	–
ZP 20ER-R	**M8345**	–	■ 185	0.45	1.0	■ 110	0.41	1.0	–	–	–	–	–	–	◪ 45	0.32	0.8	–	–	–

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

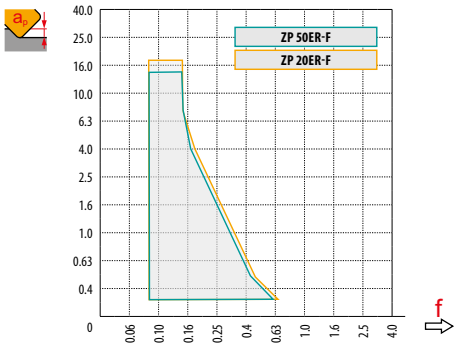
Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]
			U E																	
			R geometry with sharp slightly positive design for light to medium machining.																	
ZP 25ER-R	**M8345**	–	■ 180	0.45	1.3	■ 105	0.41	1.3	–	–	–	–	–	–	◪ 45	0.32	1.0	–	–	–
ZP 32ER-R	**M8330**	–	■ 240	0.45	1.6	■ 140	0.41	1.6	◪ 225	0.45	1.6	–	–	–	◪ 60	0.32	1.3	◪ 45	0.15	1.0
	M8345	–	■ 175	0.45	1.6	■ 105	0.41	1.6	–	–	–	–	–	–	◪ 40	0.32	1.3	–	–	–
ZP 40ER-R	**M8345**	–	■ 170	0.45	2.0	■ 100	0.41	2.0	–	–	–	–	–	–	◪ 40	0.32	1.6	–	–	–
ZP 50ER-R	**M8345**	–	■ 165	0.45	2.5	■ 95	0.41	2.5	–	–	–	–	–	–	◪ 40	0.32	2.0	–	–	–

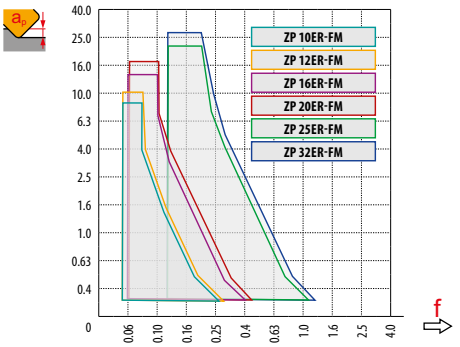
a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

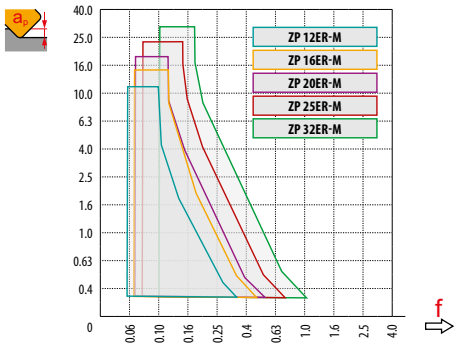
	ZP 20-F	ZP 50-F	ZP 10-FM	ZP 12-FM	ZP 16-FM	ZP 20-FM	ZP 25-FM	ZP 32-FM
RE	10.0	25.0	5.0	6.0	8.0	10.0	12.5	16.0
BS	–	–	–	–	–	–	–	–

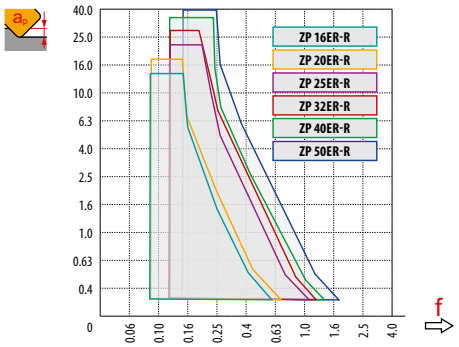
	ZP 12-M	ZP 16-M	ZP 20-M	ZP 25-M	ZP 32-M
RE	6.0	8.0	10.0	12.5	16.0
BS	–	–	–	–	–

	ZP 16-R	ZP 20-R	ZP 25-R	ZP 32-R	ZP 40-R	ZP 50-R
RE	8.0	10.0	12.5	16.0	20.0	25.0
BS	–	–	–	–	–	–

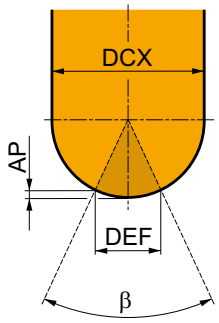








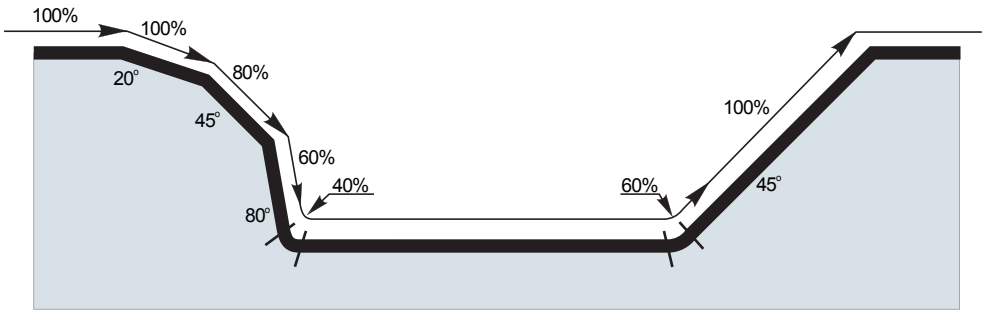
DCX	a_p	0.30	0.40	0.50	0.70	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00	6.00	8.00	10.00	12.00	15.00	16.00	20.00	22.50	25.00
10		3.4	3.9	4.4	5.1	6.0	6.6	7.1	8.0	8.7	9.2	9.8	10.0	–	–	–	–	–	–	–	–	–
12		3.7	4.3	4.8	5.6	6.6	7.3	7.9	8.9	9.7	10.4	11.3	11.8	12.0	–	–	–	–	–	–	–	–
16		4.3	5.0	5.6	6.5	7.7	8.6	9.3	10.6	11.6	12.5	13.9	14.8	15.5	16.0	–	–	–	–	–	–	–
20	DEF	4.9	5.6	6.2	7.4	8.7	9.7	10.5	12.0	13.2	14.3	16.0	17.3	18.3	19.6	20.0	–	–	–	–	–	–
25		5.4	6.3	7.0	8.2	9.8	10.9	11.9	13.6	15.0	16.2	18.3	20.0	21.4	23.3	24.5	25.0	–	–	–	–	–
32		6.2	7.1	7.9	9.4	11.1	12.4	13.5	15.5	17.2	18.7	21.2	23.2	25.0	27.7	29.7	31.2	31.9	32.0	–	–	–
40		6.9	8.0	8.9	10.5	12.5	13.9	15.2	17.4	19.4	21.1	24.0	26.5	28.6	32.0	34.6	37.1	38.7	39.2	40.0	–	–
50		7.7	8.9	9.9	11.7	14.0	15.6	17.1	19.6	21.8	23.7	27.1	30.0	32.5	36.7	40.0	43.3	45.8	46.6	49.0	49.7	50.0



DCX		β	DEF	AP
10	FM	41°	3.496	0.322
12	FM	41°	4.194	0.381
16	FM	42°	5.660	0.520
20	FM	42°	7.100	0.650
25	FM	41°	8.756	0.794
35	FM	41°	11.113	0.998
40	R	41°	14.108	1.298
50	R	45°	19.176	1.915

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
10		0.346	0.447	0.632	0.775	0.894	1.095	1.265	1.414	1.549	1.789	2.000
12		0.379	0.490	0.693	0.849	0.980	1.200	1.386	1.549	1.697	1.960	2.191
16	FE	0.438	0.566	0.800	0.980	1.131	1.386	1.600	1.789	1.960	2.263	2.530
20		0.490	0.632	0.894	1.095	1.265	1.549	1.789	2.000	2.191	2.530	2.828
25	FE	0.548	0.707	1.000	1.225	1.414	1.732	2.000	2.236	2.449	2.828	3.162
32		0.620	0.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578
40		0.693	0.894	1.265	1.549	1.789	2.191	2.530	2.828	3.098	3.578	4.000
50		0.775	1.000	1.414	1.732	2.000	2.449	2.828	3.162	3.464	4.000	4.472

DEF	a_e	1 %	2.5 %	5 %	7.5 %	10 %	15 %	20 %	25 %	30 %	35 %	40 %	45 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
	a_p										⇨ x.f									
19.9 %	1.0 %	2.86	1.84	1.33	1.12	1.00	0.89	–	–	–	–	–	–	–	–	–	–	–	–	–
31.2 %	2.5 %	3.58	2.28	1.64	1.36	1.20	1.01	0.92	0.88	0.91	–	–	–	–	–	–	–	–	–	–
43.6 %	5.0 %	4.22	2.68	1.92	1.58	1.39	1.16	1.03	0.95	0.90	0.88	0.89	–	–	–	–	–	–	–	–
52.7 %	7.5 %	4.63	2.95	2.10	1.73	1.51	1.26	1.11	1.02	0.96	0.91	0.89	0.88	0.90	–	–	–	–	–	–
60.0 %	10.0 %	4.94	3.14	2.24	1.84	1.61	1.33	1.18	1.07	1.00	0.95	0.91	0.89	0.88	1.00	–	–	–	–	–
71.4 %	15.0 %	5.39	3.42	2.43	2.00	1.74	1.44	1.27	1.15	1.07	1.01	0.96	0.93	0.90	0.88	0.93	–	–	–	–
80.0 %	20.0 %	5.70	3.62	2.57	2.11	1.84	1.52	1.33	1.21	1.12	1.05	1.00	0.96	0.93	0.89	0.88	0.89	1.00	–	–
86.6 %	25.0 %	5.93	3.76	2.67	2.20	1.91	1.58	1.38	1.25	1.16	1.08	1.03	0.99	0.95	0.90	0.88	0.88	0.89	–	–
91.7 %	30.0 %	6.10	3.87	2.75	2.26	1.96	1.62	1.42	1.28	1.18	1.11	1.05	1.01	0.97	0.92	0.89	0.88	0.88	0.93	–
95.4 %	35.0 %	6.23	3.95	2.80	2.30	2.00	1.65	1.44	1.31	1.20	1.13	1.07	1.02	0.98	0.93	0.89	0.88	0.88	0.90	–
98.0 %	40.0 %	6.31	4.00	2.84	2.33	2.03	1.67	1.46	1.32	1.22	1.14	1.08	1.03	0.99	0.93	0.90	0.89	0.88	0.89	–
99.5%	45.0 %	6.36	4.03	2.86	2.35	2.04	1.68	1.47	1.33	1.23	1.15	1.09	1.04	1.00	0.94	0.90	0.89	0.88	0.88	–
100.0 %	50.0 %	6.38	4.04	2.87	2.35	2.05	1.69	1.48	1.33	1.23	1.15	1.09	1.04	1.00	0.94	0.90	0.89	0.88	0.88	1.00



Overhang (multiple of diameter DCX)	<3.0	3.0 – 3.5	3.6 – 4.0	4.1 – 4.5	>4.6
Multiplication factor for speed	1.0	0.9	0.8	0.7	0.5

K3-CXP

P M K S H

PRAMET

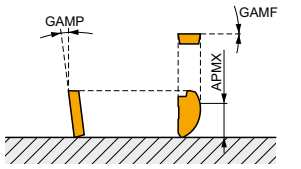
C

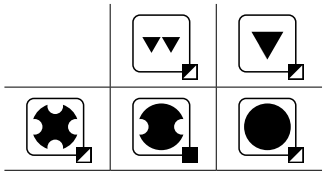
MULTISIDE XP Profile Milling Cutter

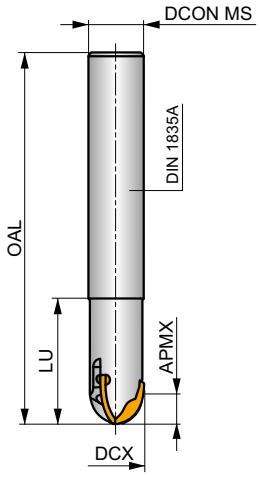
Ball nose milling cutter utilising XP.. style inserts with APMX from 8 up to 16 mm. Unique clamping enables use of three inserts. Available in cylindrical and modular style, in range Ø16 up to Ø32 mm. Body treated for longer tool life.

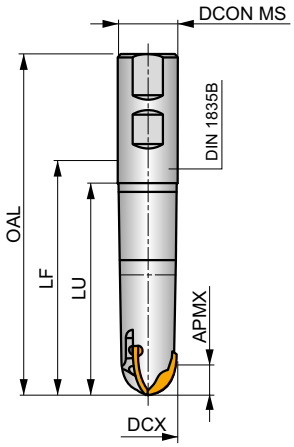
MULTISIDE XP

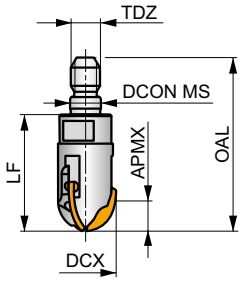
APMX	8.0 - 16.0 mm











h_m 0.05 - 0.19

	Product	DCX [mm]	OAL [mm]	DCON MS [mm]	LU [mm]	LUX [mm]	LF [mm]	TDZ	APMX [mm]	GAMF [°]	GAMP [°]			max.		kg		
	16K3R050A16-CXP16	16	200	16	50	–	–	–	8.00	0	-5	3	–	22600	–	0.36	GI267	C0520
	16K3R050A20-CXP16	16	200	20	50	–	–	–	8.00	0	-5	3	–	22600	–	0.51	GI267	C0520
DIN 1835A	**20K3R050A20-CXP20**	20	200	20	50	–	–	–	10.00	0	-5	3	–	20000	–	0.53	GI268	C0521
DIN 1835A	**20K3R060A25-CXP20**	20	250	25	60	–	–	–	10.00	0	-5	3	–	20000	–	0.92	GI268	C0521
	25K3R060A25-CXP25	25	250	25	60	–	–	–	12.50	0	-5	3	–	20000	–	0.96	GI269	C0522
	32K3R080A32-CXP32	32	250	32	80	–	–	–	16.00	0	-5	3	–	15000	–	1.50	GI270	C0523
	16K3R060B20-CXP16	16	111	20	60	–	86.5	–	8.00	0	-5	3	–	22600	–	0.24	GI267	C0520
DIN 1835B	**20K3R070B25-CXP20**	20	127	25	70	–	95.5	–	10.00	0	-5	3	–	20000	–	0.41	GI268	C0521
DIN 1835B	**25K3R080B25-CXP25**	25	137	25	80	–	105	–	12.50	0	-5	3	–	20000	–	0.49	GI269	C0522
	16K3R035M08-CXP16	16	–	8.5	–	–	35	M8	8.00	0	-5	3	–	–	–	0.07	GI267	C0520
	16K3R035M10-CXP16	16	–	10.5	–	–	35	M10	8.00	0	-5	3	–	–	–	0.07	GI267	C0520
MODULAR	**20K3R040M10-CXP20**	20	–	10.5	–	–	40	M10	10.00	0	-5	3	–	–	–	0.07	GI268	C0521
MODULAR	**25K3R045M12-CXP25**	25	–	12.5	–	–	45	M12	12.50	0	-5	3	–	–	–	0.16	GI269	C0522
MODULAR	**32K3R055M16-CXP32**	32	–	17	–	–	55	M16	16.00	0	-5	3	–	–	–	0.29	GI270	C0523

GI267	XP 16..
GI268	XP 20..
GI269	XP 25..
GI270	XP 32..

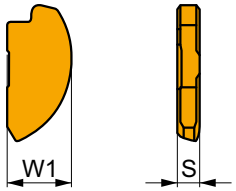
		Nm			
C0520	US 63009-T09P	1.2	M 3	9	Flag T09P
C0521	US 63513-T15P	3.0	M 3.5	12	Flag T15P

		Nm			
C0522	US 64014-T15P	3.5	M 4	14	Flag T15P
C0523	US 65017-T20P	5.0	M 5	17	Flag T20P

XP

PRAMET

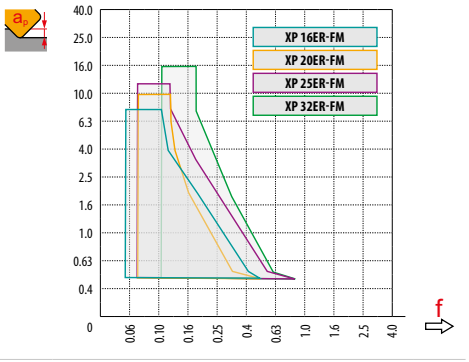
	W1 [mm]	S [mm]
16	16.000	2.00
20	20.000	2.50
25	25.000	3.17
32	32.000	4.00



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

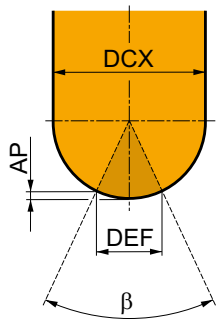
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			U E																	
			FM geometry with neutral design for light machining.																	
XP 16ER-FM	**M8310**	–	■ 285	0.27	0.8	◪ 145	0.24	0.8	■ 270	0.27	0.8	–	–	–	–	–	–	■ 55	0.15	1.0
	M8330	–	■ 265	0.27	0.8	◪ 155	0.24	0.8	■ 250	0.27	0.8	–	–	–	◪ 65	0.19	0.6	◪ 50	0.15	1.0
	M8345	–	■ 195	0.27	0.8	◪ 115	0.24	0.8	–	–	–	–	–	–	◪ 45	0.19	0.6	–	–	–
XP 20ER-FM	**M8310**	–	■ 275	0.27	1.0	◪ 140	0.24	1.0	■ 260	0.27	1.0	–	–	–	–	–	–	■ 55	0.15	1.0
	M8330	–	■ 260	0.27	1.0	◪ 155	0.24	1.0	■ 245	0.27	1.0	–	–	–	◪ 65	0.19	0.8	◪ 50	0.15	1.0
	M8345	–	■ 190	0.27	1.0	◪ 110	0.24	1.0	–	–	–	–	–	–	◪ 45	0.19	0.8	–	–	–
XP 25ER-FM	**M8310**	–	■ 270	0.27	1.3	◪ 135	0.24	1.3	■ 255	0.27	1.3	–	–	–	–	–	–	■ 50	0.15	1.0
	M8330	–	■ 250	0.27	1.3	◪ 150	0.24	1.3	■ 235	0.27	1.3	–	–	–	◪ 60	0.19	1.0	◪ 50	0.15	1.0
XP 32ER-FM	**M8310**	–	■ 265	0.27	1.6	◪ 135	0.24	1.6	■ 250	0.27	1.6	–	–	–	–	–	–	■ 50	0.15	1.0
	M8330	–	■ 245	0.27	1.6	◪ 145	0.24	1.6	■ 230	0.27	1.6	–	–	–	◪ 60	0.19	1.3	◪ 45	0.15	1.0
	M8345	–	■ 180	0.27	1.6	◪ 105	0.24	1.6	–	–	–	–	–	–	◪ 45	0.19	1.3	–	–	–

	XP 16-FM	XP 20-FM	XP 25-FM	XP 32-FM
RE	8.0	10.0	12.5	16.0
BS	–	–	–	–



DCX	a_p	0.3	0.4	0.5	0.7	1.0	1.25	1.5	2.0	2.5	3.0	4.0	5.0	6.0	8.0	10.0	12.0	15.0	16.0	20.0	22.5	25.0
16	DEF	4.3	5.0	5.6	6.5	7.7	8.6	9.3	10.6	11.6	12.5	13.9	14.8	15.5	16.0	–	–	–	–	–	–	–
20		4.9	5.6	6.2	7.4	8.7	9.7	10.5	12.0	13.2	14.3	16.0	17.3	18.3	19.6	20.0	–	–	–	–	–	–
25		5.4	6.3	7.0	8.2	9.8	10.9	11.9	13.6	15.0	16.2	18.3	20.0	21.4	23.3	24.5	25.0	–	–	–	–	–
32		6.2	7.1	7.9	9.4	11.1	12.4	13.5	15.5	17.2	18.7	21.2	23.2	25.0	27.7	29.7	31.2	31.9	–	–	–	–

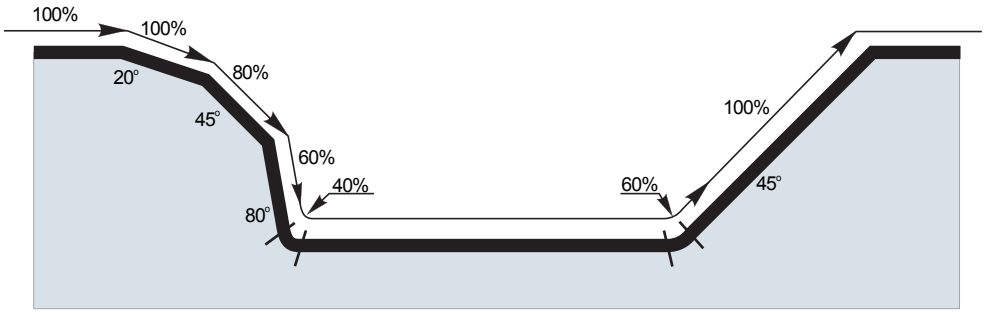
Effective area for 1 tool cutting edge.



DCX	β	DEF	AP
16	41°	5.568	0.51
20	37°	6.314	0.52
25	37°	7.901	0.65
32	37°	10.122	0.83

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
16	FE	0.438	0.566	0.800	0.980	1.131	1.386	1.600	1.789	1.960	2.263	2.530
20		0.490	0.632	0.894	1.095	1.265	1.549	1.789	2.000	2.191	2.530	2.828
25	FE	0.548	0.707	1.000	1.225	1.414	1.732	2.000	2.236	2.449	2.828	3.162
32		0.620	0.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578

DEF	a_e	1.0 %	2.5 %	5.0 %	7.5 %	10 %	15 %	20 %	25 %	30 %	35 %	40 %	45 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
	a_p										⇨ x.f									
19.9 %	1.0 %	2.86	1.84	1.33	1.12	1.00	0.89	–	–	–	–	–	–	–	–	–	–	–	–	–
31.2 %	2.5 %	3.58	2.28	1.64	1.36	1.20	1.01	0.92	0.88	0.91	–	–	–	–	–	–	–	–	–	–
43.6 %	5.0 %	4.22	2.68	1.92	1.58	1.39	1.16	1.03	0.95	0.90	0.88	0.89	–	–	–	–	–	–	–	–
52.7 %	7.5 %	4.63	2.95	2.10	1.73	1.51	1.26	1.11	1.02	0.96	0.91	0.89	0.88	0.90	–	–	–	–	–	–
60.0%	10.0 %	4.94	3.14	2.24	1.84	1.61	1.33	1.18	1.07	1.00	0.95	0.91	0.89	0.88	1.00	–	–	–	–	–
71.4 %	15.0 %	5.39	3.42	2.43	2.00	1.74	1.44	1.27	1.15	1.07	1.01	0.96	0.93	0.90	0.88	0.93	–	–	–	–
80.0 %	20.0 %	5.70	3.62	2.57	2.11	1.84	1.52	1.33	1.21	1.12	1.05	1.00	0.96	0.93	0.89	0.88	0.89	1.00	–	–
86.6 %	25.0 %	5.93	3.76	2.67	2.20	1.91	1.58	1.38	1.25	1.16	1.08	1.03	0.99	0.95	0.90	0.88	0.88	0.89	–	–
91.7 %	30.0 %	6.10	3.87	2.75	2.26	1.96	1.62	1.42	1.28	1.18	1.11	1.05	1.01	0.97	0.92	0.89	0.88	0.88	0.93	–
95.4 %	35.0 %	6.23	3.95	2.80	2.30	2.00	1.65	1.44	1.31	1.20	1.13	1.07	1.02	0.98	0.93	0.89	0.88	0.88	0.90	–
98.0 %	40.0 %	6.31	4.00	2.84	2.33	2.03	1.67	1.46	1.32	1.22	1.14	1.08	1.03	0.99	0.93	0.90	0.89	0.88	0.89	–
99.5 %	45.0 %	6.36	4.03	2.86	2.35	2.04	1.68	1.47	1.33	1.23	1.15	1.09	1.04	1.00	0.94	0.90	0.89	0.88	0.88	–
100.0 %	50.0 %	6.38	4.04	2.87	2.35	2.05	1.69	1.48	1.33	1.23	1.15	1.09	1.04	1.00	0.94	0.90	0.89	0.88	0.88	1.00



Overhang (multiple of diameter DCX)	<3.0	3.1 – 4.0	4.1 – 6.0	>6.1
Multiplication factor for speed	1.0	0.9	0.7	0.5

K2-SRC

P M K H

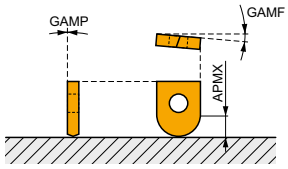
PRAMET

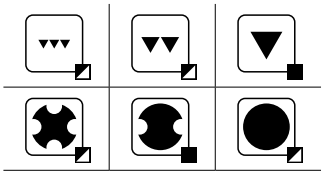
S

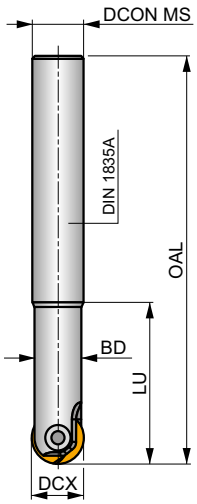
Copy and Profile End Mills

Flexible end mill for a wide range of Die & Mold applications. One tool solution for ball-nosed and toroidal inserts. Available in cylindrical and modular style, in range Ø8 up to Ø32 mm. Body treated for longer tool life.

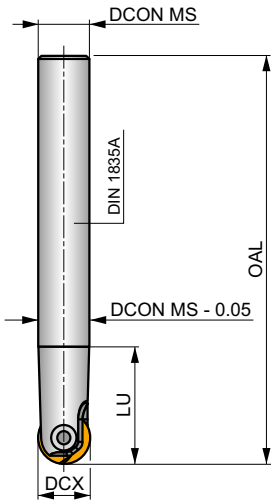
APMX	0.6 - 3.2 mm



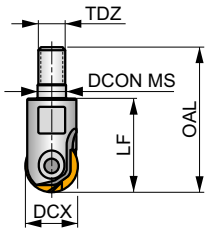




DCX 8 – 20 mm



DCX 8 – 20 mm



h_m 0.07 - 0.14

	Product	DCX [mm]	OAL [mm]	DCON MS [mm]	BD [mm]	LU [mm]	LF [mm]	TDZ			max.		kg		
DIN 1835A	08K2R025A10-SRC08-A	8	110	10	7.5	25	–	–	2	–	56000	–	0.09	GI030	C0530
	08K2R050A12-SRC08-A	8	140	12	–	13.5	–	–	2	–	56000	–	0.11	GI030	C0530
	10K2R030A12-SRC10-A	10	130	12	9	30	–	–	2	–	42000	–	0.11	GI031	C0531
	10K2R060A16-SRC10-A	10	150	16	–	19.5	–	–	2	–	42000	–	0.18	GI031	C0531
	12K2R030A12-SRC12-A	12	130	12	10.5	30	–	–	2	–	35000	–	0.11	GI032	C0532
	16K2R035A16-SRC16-A	16	140	16	14	35	–	–	2	–	22000	–	0.23	GI033	C0533
	20K2R045A20-SRC20-A	20	160	20	18	45	–	–	2	–	16000	–	0.40	GI034	C0534
	25K2R045A25-SRC25-A	25	160	25	22.4	45	–	–	2	–	10000	–	0.59	GI035	C0535
	32K2R060A32-SRC32-A	32	180	32	28.6	60	–	–	2	–	6000	–	1.10	GI036	C0536
	12K2R060A16-SRC12-A	12	160	16	–	24.5	–	–	2	–	35000	–	0.14	GI032	C0532
	16K2R065A20-SRC16-A	16	175	20	–	31.5	–	–	2	–	22000	–	0.41	GI033	C0533
	20K2R080A25-SRC20-A	20	190	25	–	33.5	–	–	2	–	16000	–	0.66	GI034	C0534
MODULAR	08K2R30M06-SRC08-A	8	45	6.5	–	–	30	M6	2	–	–	–	0.02	GI123	C0530
	10K2R30M06-SRC10-A	10	45	6.5	–	–	30	M6	2	–	–	–	0.03	GI124	C0531
	12K2R30M06-SRC12-A	12	45	6.5	–	–	30	M6	2	–	–	–	0.16	GI125	C0530
	12K2R30M08-SRC12-A	12	48	8.5	–	–	30	M8	2	–	–	–	0.04	GI125	C0532
	16K2R35M08-SRC16-A	16	53	8.5	–	–	35	M8	2	–	–	–	0.05	GI033	C0533
	20K2R35M10-SRC20-A	20	54	10.5	–	–	35	M10	2	–	–	–	0.08	GI034	C0534

GI030	RC 08	RC 08-F	LC 08-KP	LC 08-KPF	–	–
GI031	RC 10	RC 10-F	LC 10-KP	LC 10-KPF	–	–
GI032	RC 12	RC 12-F	–	–	LC 12..-CH	LC 12..-RE
GI033	RC 16	RC 16-F	–	–	–	–
GI034	RC 20	RC 20-F	–	–	–	–
GI035	RC 25	RC 25-F	–	–	–	–

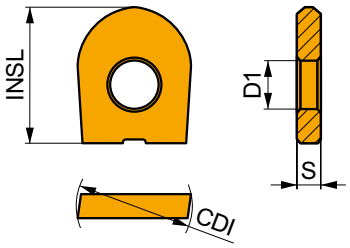
GI036	RC 32	RC 32-F	–	–	–	–
GI123	RC 08	RC 08-F	–	–	–	–
GI124	RC 10	RC 10-F	–	–	–	–
GI125	RC 12	RC 12-F	–	–	–	–

		Nm						
C0530	CS 3007-T08P	1.2	M 3	7	–	–	–	Flag T08P
C0531	CS 4008-T15P	3.0	M 4	8	–	D-T08P/T15P	FG-15	–
C0532	CS 5009-T20P	5.0	M 5	9	SDR T20P	–	–	–
C0533	CS 5013-T20P	5.0	M 5	13	SDR T20P	–	–	–
C0534	CS 5015-T20P	5.0	M 5	15	SDR T20P	–	–	–
C0535	CS 6020-T20P	7.5	M 6	20	SDR T20P	–	–	–
C0536	CS 8025-T30P	15.0	M 8	25	SDR T30P	–	–	–

RC

PRAMET

	CDI [mm]	D1 [mm]	INSL [mm]	S [mm]
08	8.0	3.00	9.5	2.00
10	10.0	4.00	11.5	2.50
12	12.0	5.00	12.0	2.50
16	16.0	5.00	14.0	3.00
20	20.0	5.00	16.0	3.00
25	25.0	6.00	21.5	4.00
32	32.0	8.00	25.8	5.00



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			Neutral face with a positive cutting edge design.																	
RC 08	**M4310**	–	255	0.36	0.4	–	–	–	240	0.36	0.4	–	–	–	–	–	–	50	0.15	1.0
	M8310	–	295	0.36	0.4	–	–	–	280	0.36	0.4	–	–	–	–	–	–	55	0.15	1.0
	M8330	–	275	0.36	0.4	–	–	–	260	0.36	0.4	–	–	–	–	–	–	55	0.15	1.0
RC 10	**M4310**	–	250	0.36	0.5	–	–	–	235	0.36	0.5	–	–	–	–	–	–	50	0.15	1.0
	M8310	–	290	0.36	0.5	–	–	–	275	0.36	0.5	–	–	–	–	–	–	55	0.15	1.0
	M8330	–	270	0.36	0.5	–	–	–	255	0.36	0.5	–	–	–	–	–	–	50	0.15	1.0
RC 12	**M4310**	–	245	0.36	0.6	–	–	–	230	0.36	0.6	–	–	–	–	–	–	45	0.15	1.0
	M8310	–	285	0.36	0.6	–	–	–	270	0.36	0.6	–	–	–	–	–	–	55	0.15	1.0
	M8330	–	265	0.36	0.6	–	–	–	250	0.36	0.6	–	–	–	–	–	–	50	0.15	1.0
RC 16	**M4310**	–	235	0.36	0.8	–	–	–	220	0.36	0.8	–	–	–	–	–	–	45	0.15	1.0
	M8310	–	275	0.36	0.8	–	–	–	260	0.36	0.8	–	–	–	–	–	–	55	0.15	1.0
	M8330	–	255	0.36	0.8	–	–	–	240	0.36	0.8	–	–	–	–	–	–	50	0.15	1.0
RC 20	**M4310**	–	235	0.36	1.0	–	–	–	220	0.36	1.0	–	–	–	–	–	–	45	0.15	1.0
	M8310	–	270	0.36	1.0	–	–	–	255	0.36	1.0	–	–	–	–	–	–	50	0.15	1.0
	M8330	–	250	0.36	1.0	–	–	–	235	0.36	1.0	–	–	–	–	–	–	50	0.15	1.0
RC 25	**M4310**	–	225	0.36	1.3	–	–	–	210	0.36	1.3	–	–	–	–	–	–	45	0.15	1.0
	M8310	–	260	0.36	1.3	–	–	–	245	0.36	1.3	–	–	–	–	–	–	50	0.15	1.0
	M8330	–	245	0.36	1.3	–	–	–	230	0.36	1.3	–	–	–	–	–	–	45	0.15	1.0
RC 32	**M4310**	–	220	0.36	1.6	–	–	–	205	0.36	1.6	–	–	–	–	–	–	40	0.15	1.0
	M8330	–	240	0.36	1.6	–	–	–	225	0.36	1.6	–	–	–	–	–	–	45	0.15	1.0

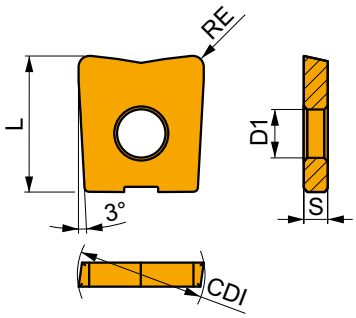
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
			F																	
F geometry is sharp and suitable for finish machining.																				
RC 08-F	**M4310**	–	255	0.36	0.4	130	0.32	0.4	240	0.36	0.4	–	–	–	–	–	–	50	0.15	1.0
RC 10-F	**M4310**	–	250	0.36	0.5	125	0.32	0.5	235	0.36	0.5	–	–	–	–	–	–	50	0.15	1.0
RC 12-F	**M4310**	–	245	0.36	0.6	120	0.32	0.6	230	0.36	0.6	–	–	–	–	–	–	45	0.15	1.0
RC 16-F	**M4310**	–	235	0.36	0.8	115	0.32	0.8	220	0.36	0.8	–	–	–	–	–	–	45	0.15	1.0
	M8330	–	255	0.36	0.8	150	0.32	0.8	240	0.36	0.8	–	–	–	–	–	–	50	0.15	1.0
RC 20-F	**M4310**	–	235	0.36	1.0	115	0.32	1.0	220	0.36	1.0	–	–	–	–	–	–	45	0.15	1.0
	M8330	–	250	0.36	1.0	150	0.32	1.0	235	0.36	1.0	–	–	–	–	–	–	50	0.15	1.0

LC

PRAMET

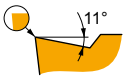
	CDI	D1	L	S
	[mm]	[mm]	[mm]	[mm]
08	8.0	3.00	9.50	2.00
10	10.0	4.00	11.50	2.50
12	12.0	5.00	14.00	2.50
16	16.0	5.00	16.00	3.00
20	20.0	5.00	18.00	3.00



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
			U																	
KP geometry with zero rake angle design for light to medium machining.																				
LC 0806-KP	**M4310**	0.6	280	0.16	0.3	–	–	–	265	0.16	0.3	–	–	–	–	–	–	55	0.15	1.0
	M8310	0.6	325	0.16	0.3	–	–	–	305	0.16	0.3	–	–	–	–	–	–	65	0.15	1.0
	M8330	0.6	295	0.16	0.3	–	–	–	280	0.16	0.3	–	–	–	–	–	–	55	0.15	1.0
LC 0810-KP	**M4310**	1.0	280	0.16	0.5	–	–	–	265	0.16	0.5	–	–	–	–	–	–	55	0.15	1.0
	M8310	1.0	325	0.16	0.5	–	–	–	305	0.16	0.5	–	–	–	–	–	–	65	0.15	1.0
LC 1008-KP	**M4310**	0.8	270	0.16	0.4	–	–	–	255	0.16	0.4	–	–	–	–	–	–	50	0.15	1.0
	M8310	0.8	315	0.16	0.4	–	–	–	295	0.16	0.4	–	–	–	–	–	–	60	0.15	1.0
	M8330	0.8	290	0.16	0.4	–	–	–	275	0.16	0.4	–	–	–	–	–	–	55	0.15	1.0
LC 1010-KP	**M4310**	1.0	280	0.16	0.5	–	–	–	265	0.16	0.5	–	–	–	–	–	–	55	0.15	1.0
	M8310	1.0	325	0.16	0.5	–	–	–	305	0.16	0.5	–	–	–	–	–	–	65	0.15	1.0
	M8330	1.0	295	0.16	0.5	–	–	–	280	0.16	0.5	–	–	–	–	–	–	55	0.15	1.0
LC 1210-KP	**M4310**	1.0	280	0.16	0.5	–	–	–	265	0.16	0.5	–	–	–	–	–	–	55	0.15	1.0
	M8310	1.0	325	0.16	0.5	–	–	–	305	0.16	0.5	–	–	–	–	–	–	65	0.15	1.0
	M8330	1.0	295	0.16	0.5	–	–	–	280	0.16	0.5	–	–	–	–	–	–	55	0.15	1.0
LC 1220-KP	**M4310**	2.0	285	0.16	1.0	–	–	–	270	0.16	1.0	–	–	–	–	–	–	55	0.15	1.0
LC 1610-KP	**M4310**	1.0	280	0.16	0.5	–	–	–	265	0.16	0.5	–	–	–	–	–	–	55	0.15	1.0
	M8310	1.0	325	0.16	0.5	–	–	–	305	0.16	0.5	–	–	–	–	–	–	65	0.15	1.0
	M8330	1.0	295	0.16	0.5	–	–	–	280	0.16	0.5	–	–	–	–	–	–	55	0.15	1.0
LC 1613-KP	**M4310**	1.3	270	0.16	0.7	–	–	–	255	0.16	0.7	–	–	–	–	–	–	50	0.15	1.0
	M8310	1.3	315	0.16	0.7	–	–	–	295	0.16	0.7	–	–	–	–	–	–	60	0.15	1.0
LC 1630-KP	**M4310**	3.0	270	0.16	1.5	–	–	–	255	0.16	1.5	–	–	–	–	–	–	50	0.15	1.0
LC 2010-KP	**M4310**	1.0	280	0.16	0.5	–	–	–	265	0.16	0.5	–	–	–	–	–	–	55	0.15	1.0
	M8310	1.0	325	0.16	0.5	–	–	–	305	0.16	0.5	–	–	–	–	–	–	65	0.15	1.0
	M8330	1.0	295	0.16	0.5	–	–	–	280	0.16	0.5	–	–	–	–	–	–	55	0.15	1.0

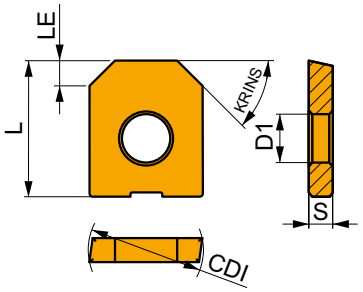
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]
			U E																	
KP geometry with zero rake angle design for light to medium machining.																				
LC 2016-KP	**M4310**	1.6	◪ 280	0.16	0.8	–	–	–	■ 265	0.16	0.8	–	–	–	–	–	–	■ 55	0.15	1.0
	M8310	1.6	■ 325	0.16	0.8	–	–	–	■ 305	0.16	0.8	–	–	–	–	–	–	■ 65	0.15	1.0
LC 2040-KP	**M8330**	4.0	■ 285	0.16	2.0	–	–	–	■ 270	0.16	2.0	–	–	–	–	–	–	◪ 55	0.15	1.0
			F																	
KPF geometry with positive design for light to medium machining.																				
LC 0806-KPF	**M4310**	0.6	◪ 280	0.16	0.3	◪ 140	0.14	0.3	■ 265	0.16	0.3	–	–	–	–	–	–	■ 55	0.15	1.0
LC 1008-KPF	**M4310**	0.8	◪ 270	0.16	0.4	◪ 135	0.14	0.4	■ 255	0.16	0.4	–	–	–	–	–	–	■ 50	0.15	1.0
LC 1210-KPF	**M4310**	1.0	◪ 280	0.16	0.5	◪ 140	0.14	0.5	■ 265	0.16	0.5	–	–	–	–	–	–	■ 55	0.15	1.0
	M8330	1.0	■ 295	0.16	0.5	◪ 175	0.14	0.5	■ 280	0.16	0.5	–	–	–	–	–	–	◪ 55	0.15	1.0
LC 1613-KPF	**M4310**	1.3	◪ 270	0.16	0.7	◪ 135	0.14	0.7	■ 255	0.16	0.7	–	–	–	–	–	–	■ 50	0.15	1.0
LC 2016-KPF	**M4310**	1.6	◪ 280	0.16	0.8	◪ 140	0.14	0.8	■ 265	0.16	0.8	–	–	–	–	–	–	■ 55	0.15	1.0

LC 12-CH

PRAMET

	CDI [mm]	D1 [mm]	L [mm]	S [mm]
1245	12.0	5.00	14.00	2.50

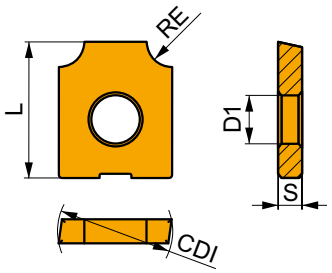


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]
			U E																	
CH geometry with zero rake angle design for light to medium machining.																				
LC 1245-CH	**M4310**	–	◪ 225	0.20	2.0	–	–	–	■ 210	0.20	2.0	–	–	–	–	–	–	■ 45	0.15	1.0

LC 12-RE

	CDI [mm]	D1 [mm]	L [mm]	S [mm]
12	12.0	5.00	14.00	2.50



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

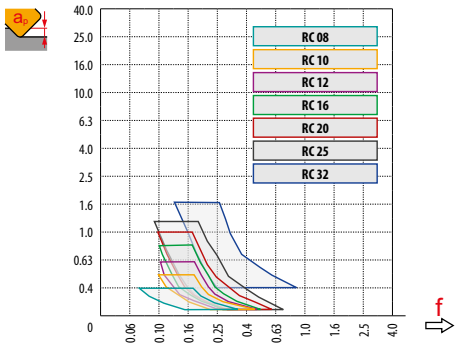
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			U E																	
RE geometry with zero rake angle design for light to medium machining.																				
LC 1220-RE	**M4310**	2.0	295	0.10	2.0	–	–	–	280	0.10	2.0	–	–	–	–	–	–	55	0.15	1.0
LC 1230-RE	**M4310**	3.0	285	0.10	3.0	–	–	–	270	0.10	3.0	–	–	–	–	–	–	55	0.15	1.0

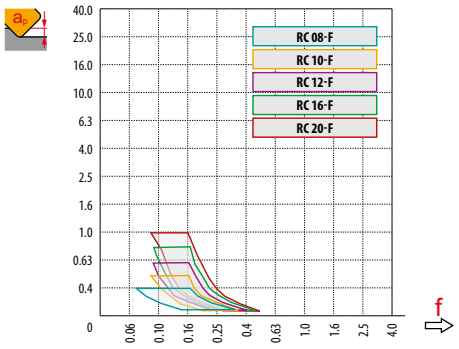
	RC 08	RC 10	RC 12	RC 16	RC 20	RC 25	RC 32
RE	4.0	5.0	6.0	8.0	10.0	12.5	16.0
BS	–	–	–	–	–	–	–

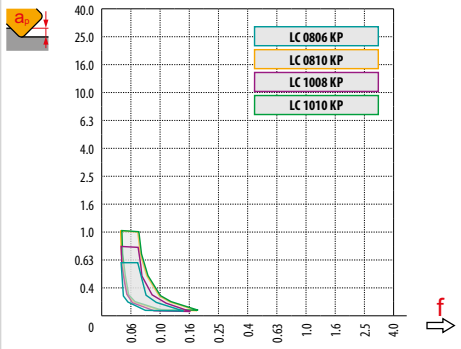
	RC 08-F	RC 10-F	RC 12-F	RC 16-F	RC 20-F
RE	4.0	5.0	6.0	8.0	10.0
BS	–	–	–	–	–

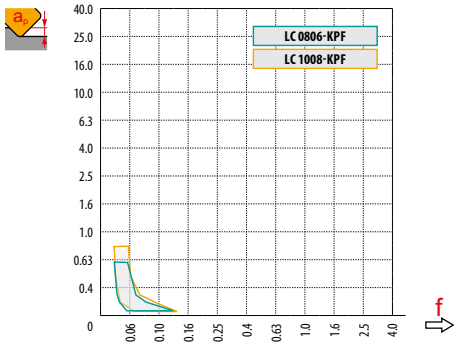
	LC 08-KP	LC 08-KP	LC 10-KP	LC 10-KP	LC 08-KPF	LC 10-KPF
RE	0.6	1.0	0.8	1.0	0.6	0.8
BS	–	–	–	–	–	–

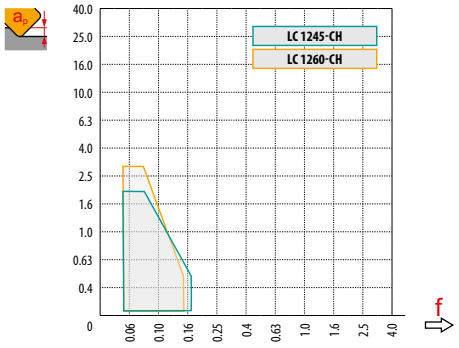
	LC 1245-CH	LC 1260-CH	LC 1210-RE	LC 1220-RE	LC 1230-RE
RE	3×45	5×60	1.0	2.0	3.0
BS	–	–	–	–	–

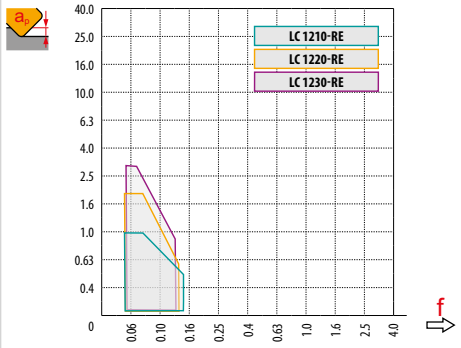








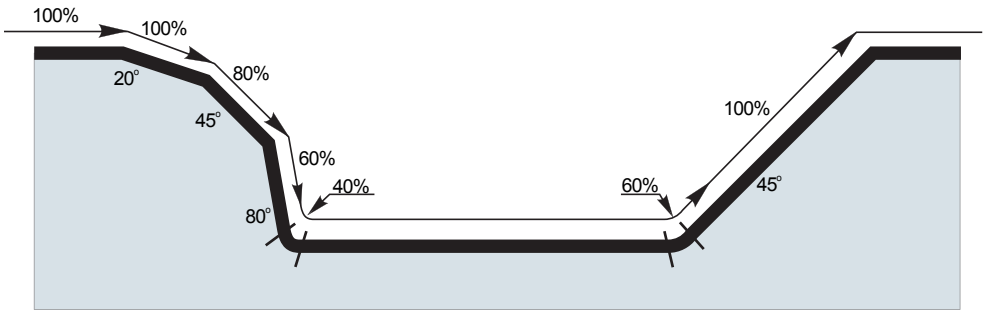




	DCX	a_p 0.3	0.4	0.5	0.7	1.0	1.25	1.5	2.0	2.5	3.0	4.0	5.0	6.0	8.0	10.0	12.0	15.0	16.0
RC 08 / RC 08-F	8	3.0	3.5	3.9	4.5	5.3	5.8	6.2	6.9	7.4	7.7	8.0	–	–	–	–	–	–	–
RC 10 / RC 10-F	10	3.4	3.9	4.4	5.1	6.0	6.6	7.1	8.0	8.7	9.2	9.8	10.0	–	–	–	–	–	–
RC 12 / RC 12-F	12	3.7	4.3	4.8	5.6	6.6	7.3	7.9	8.9	9.7	10.4	11.3	11.8	12.0	–	–	–	–	–
RC 16 / RC 16-F	16	4.3	5.0	5.6	6.5	7.7	8.6	9.3	10.6	11.6	12.5	13.9	14.8	15.5	16.0	–	–	–	–
RC 20 / RC 20-F	20	4.9	5.6	6.2	7.4	8.7	9.7	10.5	12.0	13.2	14.3	16.0	17.3	18.3	19.6	20.0	–	–	–
RC 25 / RC 25-F	25	5.4	6.3	7.0	8.2	9.8	10.9	11.9	13.6	15.0	16.2	18.3	20.0	21.4	23.3	24.5	25.0	–	–
RC 32 / RC 32-F	32	6.17	7.11	7.94	9.36	11.14	12.40	13.53	15.49	17.18	18.65	21.17	23.24	24.98	27.71	29.66	30.98	31.94	32.00

	DCX	µm 3	5	10	15	20	30	40	50	60	80	100
RC 08 / RC 08-F	8	0.310	0.400	0.566	0.693	0.800	0.980	1.131	1.265	1.386	1.600	1.789
RC 10 / RC 10-F	10	0.346	0.447	0.632	0.775	0.894	1.095	1.265	1.414	1.549	1.789	2.000
RC 12 / RC 12-F	12	0.379	0.490	0.693	0.849	0.980	1.200	1.386	1.549	1.697	1.960	2.191
RC 16 / RC 16-F	16	0.438	0.566	0.800	0.980	1.131	1.386	1.600	1.789	1.960	2.263	2.530
RC 20 / RC 20-F	20	0.490	0.632	0.894	1.095	1.265	1.549	1.789	2.000	2.191	2.530	2.828
RC 25 / RC 25-F	25	0.548	0.707	1.000	1.225	1.414	1.732	2.000	2.236	2.449	2.828	3.162
RC 32 / RC 32-F	32	0.620	0.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578

DEF	a_e	1.0 %	2.5 %	5.0 %	7.5 %	10 %	15 %	20 %	25 %	30 %	35 %	40 %	45 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
	a_p										⇨ x.f									
19.9%	1.0%	2.86	1.84	1.33	1.12	1.00	0.89	–	–	–	–	–	–	–	–	–	–	–	–	–
31.2%	2.5%	3.58	2.28	1.64	1.36	1.20	1.01	0.92	0.88	0.91	–	–	–	–	–	–	–	–	–	–
43.6%	5.0%	4.22	2.68	1.92	1.58	1.39	1.16	1.03	0.95	0.90	0.88	0.89	–	–	–	–	–	–	–	–
52.7%	7.5%	4.63	2.95	2.10	1.73	1.51	1.26	1.11	1.02	0.96	0.91	0.89	0.88	0.90	–	–	–	–	–	–
60.0%	10.0%	4.94	3.14	2.24	1.84	1.61	1.33	1.18	1.07	1.00	0.95	0.91	0.89	0.88	1.00	–	–	–	–	–
71.4%	15.0%	5.39	3.42	2.43	2.00	1.74	1.44	1.27	1.15	1.07	1.01	0.96	0.93	0.90	0.88	0.93	–	–	–	–
80.0%	20.0%	5.70	3.62	2.57	2.11	1.84	1.52	1.33	1.21	1.12	1.05	1.00	0.96	0.93	0.89	0.88	0.89	1.00	–	–
86.6%	25.0%	5.93	3.76	2.67	2.20	1.91	1.58	1.38	1.25	1.16	1.08	1.03	0.99	0.95	0.90	0.88	0.88	0.89	–	–
91.7%	30.0%	6.10	3.87	2.75	2.26	1.96	1.62	1.42	1.28	1.18	1.11	1.05	1.01	0.97	0.92	0.89	0.88	0.88	0.93	–
95.4%	35.0%	6.23	3.95	2.80	2.30	2.00	1.65	1.44	1.31	1.20	1.13	1.07	1.02	0.98	0.93	0.89	0.88	0.88	0.90	–
98.0%	40.0%	6.31	4.00	2.84	2.33	2.03	1.67	1.46	1.32	1.22	1.14	1.08	1.03	0.99	0.93	0.90	0.89	0.88	0.89	–
99.5%	45.0%	6.36	4.03	2.86	2.35	2.04	1.68	1.47	1.33	1.23	1.15	1.09	1.04	1.00	0.94	0.90	0.89	0.88	0.88	–
100.0%	50.0%	6.38	4.04	2.87	2.35	2.05	1.69	1.48	1.33	1.23	1.15	1.09	1.04	1.00	0.94	0.90	0.89	0.88	0.88	1.00



	DCX	RE	a_p 0.00	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.25	1.50	2.00	2.50	3.00	4.00
LC 0806-KP		0.6	6.8	7.8	7.9	8.0	8.0	–	–	–	–	–	–	–	–	–	–
LC 0806-KPF	**8**	0.6	6.8	7.8	7.9	8.0	8.0	–	–	–	–	–	–	–	–	–	–
LC 0810-KP		1.0	6.0	7.4	7.6	7.7	7.8	7.9	8.0	8.0	8.0	–	–	–	–	–	–
LC 1008-KP		0.8	8.4	9.6	9.8	9.9	9.9	10.0	10.0	–	–	–	–	–	–	–	–
LC 1008-KPF	**10**	0.8	8.4	9.6	9.8	9.9	9.9	10.0	10.0	–	–	–	–	–	–	–	–
LC 1010-KP		1.0	8.0	9.4	9.6	9.7	9.8	9.9	10.0	10.0	10.0	–	–	–	–	–	–
LC 1245-CH		3×45	8.0	8.6	8.8	9.0	9.2	9.4	9.6	9.8	10.0	10.5	11.0	12.0	–	–	–
LC 1260-CH		5×60	9.7	10.0	10.2	10.3	10.4	10.5	10.6	10.7	10.8	11.1	11.4	12.0	–	–	–
LC 1210-RE	**12**	1.0	10.0	10.1	10.2	10.3	10.4	10.6	10.8	11.1	12.0	–	–	–	–	–	–
LC 1220-RE		2.0	8.0	8.0	8.1	8.1	8.2	8.3	8.3	8.4	8.5	8.9	9.4	12.0	–	–	–
LC 1230-RE		3.0	6.0	6.0	6.1	6.1	6.1	6.2	6.2	6.3	6.3	6.5	6.8	7.5	8.7	12.0	–

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
8	FE	0.310	0.400	0.566	0.693	0.800	0.980	1.131	1.265	1.386	1.600	1.789
10		0.346	0.447	0.632	0.775	0.894	1.095	1.265	1.414	1.549	1.789	2.000
RE	**µm**	**3**	**5**	**10**	**15**	**20**	**30**	**40**	**50**	**60**	**80**	**100**
0.6	FE	0.120	0.155	0.219	0.268	0.310	0.379	0.438	0.490	0.537	0.620	0.693
0.8		0.139	0.179	0.253	0.310	0.358	0.438	0.506	0.566	0.620	0.716	0.800
1.0		0.155	0.200	0.283	0.346	0.400	0.490	0.566	0.632	0.693	0.800	0.89

	DCX	RE	max
LC 0806-KP		0.6	3.0
LC 0806-KPF	**8**	0.6	2.8
LC 0810-KP		1.0	3.0
LC 1008-KP		0.8	3.8
LC 1008-KPF	**10**	0.8	3.6
LC 1010-KP		1.0	3.8
LC 1245-CH		3×45	–
LC 1260-CH		5×60	–
LC 1210-RE	**12**	1.0	–
LC 1220-RE		2.0	–
LC 1230-RE		3.0	–

	DCX	RE	RPMX	APMX/l
LC 0806-KP		0.6	2.5	1.5/35
LC 0806-KPF	**8**	0.6	2.2	1.5/39
LC 0810-KP		1.0	2.4	1.5/36
LC 1008-KP		0.8	2.6	1.5/33
LC 1008-KPF	**10**	0.8	2.3	1.5/38
LC 1010-KP		1.0	2.6	1.5/33
LC 1245-CH		3×45	–	–
LC 1260-CH		5×60	–	–
LC 1210-RE	**12**	1.0	–	–
LC 1220-RE		2.0	–	–
LC 1230-RE		3.0	–	–

	DCX	RE	DMIN	DMAX	SMAX DMIN	SMAX DMAX
LC 0806-KP	8	0.6	9.8	15.9	0.8	1.0
LC 0806-KPF		0.6	10.2	15.9	0.1	0.1
LC 0810-KP		1.0	9.9	15.9	0.1	0.1
LC 1008-KP	10	0.8	12.2	19.9	0.9	1.1
LC 1008-KPF		0.8	12.6	19.9	0.2	0.2
LC 1010-KP		1.0	12.2	19.9	0.2	0.2
LC 1245-CH	12	3×45	–	–	–	–
LC 1260-CH		5×60	–	–	–	–
LC 1210-RE		1.0	–	–	–	–
LC 1220-RE		2.0	–	–	–	–
LC 1230-RE		3.0	–	–	–	–

	DCX	RE	a_p
LC 0806-KP	8	0.6	0.15
LC 0806-KPF		0.6	0.13
LC 0810-KP		1.0	0.13
LC 1008-KP	10	0.8	0.2
LC 1008-KPF		0.8	0.18
LC 1010-KP		1.0	0.19
LC 1245-CH	12	3×45	–
LC 1260-CH		5×60	–
LC 1210-RE		1.0	–
LC 1220-RE		2.0	–
LC 1230-RE		3.0	–

	DCX	Chamfer	Coefficient for speed	Feed for APMX
LC 1245-CH	12	3 × 45	1.26	0.21
LC 1260-CH		5 × 60	1.26	0.21

Overhang (multiple of diameter DCX)	<3.0	3.0 – 3.5	3.6 – 4.0	4.1 – 4.5	>4.6
Multiplication factor for speed	1.0	0.9	0.8	0.7	0.5

K2-SLC

P M K H

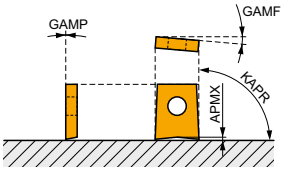
PRAMET

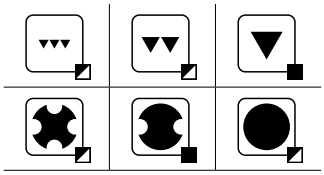
S

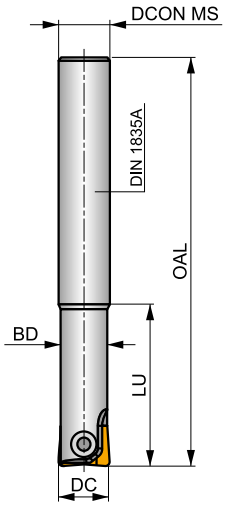
Copy and Profile End Mills for finishing

End mill for finishing operations in a wide range of applications utilising LC inserts. High precision ground inserts provide excellent accuracy. For profiling, chamfering, helical, progressive plunge milling and ramping. Available in cylindrical style only in range Ø12 up to Ø20 mm. Body treated for longer tool life .

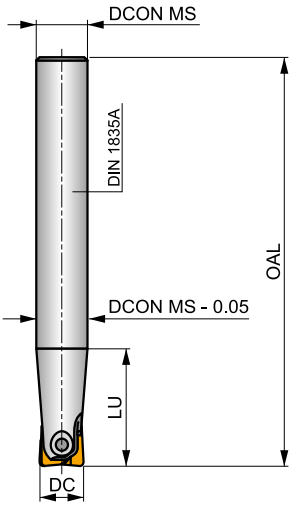
APMX	1.0 - 3.0 mm







DC 12 - 16 mm



DC 20 mm

h_m 0.03 - 0.10

	Product	DC [mm]	OAL [mm]	DCON MS [mm]	LU [mm]	BD [mm]			max.		kg		
DIN 1835A	**12K2R030A12-SLC12-A**	12	130	12	30	10.5	2	–	35000	–	0.11	GI037	C0532
	16K2R035A16-SLC16-A	16	140	16	35	14	2	–	22000	–	0.20	GI038	C0533
	20K2R045A20-SLC20-A	20	160	20	45	18	2	–	16000	–	0.38	GI039	C0534

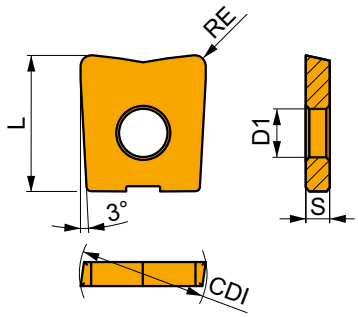
GI037	LC 12-KP	LC 12-KPF
GI038	LC 16-KP	LC 16-KPF
GI039	LC 20-KP	LC 20-KPF

		Nm			
C0532	CS 5009-T20P	5.0	M 5	9	SDR T20P
C0533	CS 5013-T20P	5.0	M 5	13	SDR T20P
C0534	CS 5015-T20P	5.0	M 5	15	SDR T20P

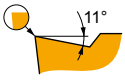
LC

PRAMET

	CDI [mm]	D1 [mm]	L [mm]	S [mm]
08	8.0	3.00	9.50	2.00
10	10.0	4.00	11.50	2.50
12	12.0	5.00	14.00	2.50
16	16.0	5.00	16.00	3.00
20	20.0	5.00	18.00	3.00



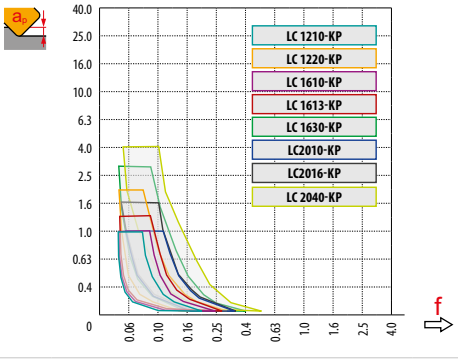
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

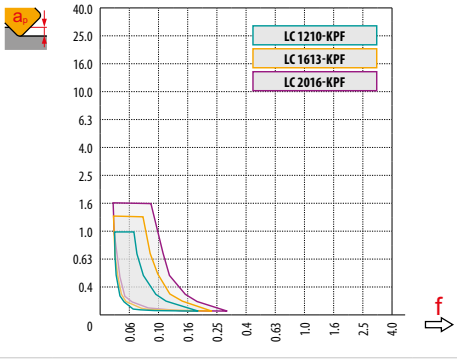
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			U E																	
KP geometry with zero rake angle design for light to medium machining.																				
LC 0806-KP	**M4310**	0.6	280	0.16	0.3	–	–	–	265	0.16	0.3	–	–	–	–	–	–	55	0.15	1.0
	M8310	0.6	325	0.16	0.3	–	–	–	305	0.16	0.3	–	–	–	–	–	–	65	0.15	1.0
	M8330	0.6	295	0.16	0.3	–	–	–	280	0.16	0.3	–	–	–	–	–	–	55	0.15	1.0
LC 0810-KP	**M4310**	1.0	280	0.16	0.5	–	–	–	265	0.16	0.5	–	–	–	–	–	–	55	0.15	1.0
	M8310	1.0	325	0.16	0.5	–	–	–	305	0.16	0.5	–	–	–	–	–	–	65	0.15	1.0
LC 1008-KP	**M4310**	0.8	270	0.16	0.4	–	–	–	255	0.16	0.4	–	–	–	–	–	–	50	0.15	1.0
	M8310	0.8	315	0.16	0.4	–	–	–	295	0.16	0.4	–	–	–	–	–	–	60	0.15	1.0
	M8330	0.8	290	0.16	0.4	–	–	–	275	0.16	0.4	–	–	–	–	–	–	55	0.15	1.0
LC 1010-KP	**M4310**	1.0	280	0.16	0.5	–	–	–	265	0.16	0.5	–	–	–	–	–	–	55	0.15	1.0
	M8310	1.0	325	0.16	0.5	–	–	–	305	0.16	0.5	–	–	–	–	–	–	65	0.15	1.0
	M8330	1.0	295	0.16	0.5	–	–	–	280	0.16	0.5	–	–	–	–	–	–	55	0.15	1.0
LC 1210-KP	**M4310**	1.0	280	0.16	0.5	–	–	–	265	0.16	0.5	–	–	–	–	–	–	55	0.15	1.0
	M8310	1.0	325	0.16	0.5	–	–	–	305	0.16	0.5	–	–	–	–	–	–	65	0.15	1.0
	M8330	1.0	295	0.16	0.5	–	–	–	280	0.16	0.5	–	–	–	–	–	–	55	0.15	1.0
LC 1220-KP	**M4310**	2.0	285	0.16	1.0	–	–	–	270	0.16	1.0	–	–	–	–	–	–	55	0.15	1.0
LC 1610-KP	**M4310**	1.0	280	0.16	0.5	–	–	–	265	0.16	0.5	–	–	–	–	–	–	55	0.15	1.0
	M8310	1.0	325	0.16	0.5	–	–	–	305	0.16	0.5	–	–	–	–	–	–	65	0.15	1.0
	M8330	1.0	295	0.16	0.5	–	–	–	280	0.16	0.5	–	–	–	–	–	–	55	0.15	1.0
LC 1613-KP	**M4310**	1.3	270	0.16	0.7	–	–	–	255	0.16	0.7	–	–	–	–	–	–	50	0.15	1.0
	M8310	1.3	315	0.16	0.7	–	–	–	295	0.16	0.7	–	–	–	–	–	–	60	0.15	1.0
LC 1630-KP	**M4310**	3.0	270	0.16	1.5	–	–	–	255	0.16	1.5	–	–	–	–	–	–	50	0.15	1.0
LC 2010-KP	**M4310**	1.0	280	0.16	0.5	–	–	–	265	0.16	0.5	–	–	–	–	–	–	55	0.15	1.0
	M8310	1.0	325	0.16	0.5	–	–	–	305	0.16	0.5	–	–	–	–	–	–	65	0.15	1.0
	M8330	1.0	295	0.16	0.5	–	–	–	280	0.16	0.5	–	–	–	–	–	–	55	0.15	1.0
LC 2016-KP	**M4310**	1.6	280	0.16	0.8	–	–	–	265	0.16	0.8	–	–	–	–	–	–	55	0.15	1.0
	M8310	1.6	325	0.16	0.8	–	–	–	305	0.16	0.8	–	–	–	–	–	–	65	0.15	1.0
LC 2040-KP	**M8330**	4.0	285	0.16	2.0	–	–	–	270	0.16	2.0	–	–	–	–	–	–	55	0.15	1.0
			F																	
KPF geometry with positive design for light to medium machining.																				
LC 0806-KPF	**M4310**	0.6	280	0.16	0.3	140	0.14	0.3	265	0.16	0.3	–	–	–	–	–	–	55	0.15	1.0
LC 1008-KPF	**M4310**	0.8	270	0.16	0.4	135	0.14	0.4	255	0.16	0.4	–	–	–	–	–	–	50	0.15	1.0
LC 1210-KPF	**M4310**	1.0	280	0.16	0.5	140	0.14	0.5	265	0.16	0.5	–	–	–	–	–	–	55	0.15	1.0
	M8330	1.0	295	0.16	0.5	175	0.14	0.5	280	0.16	0.5	–	–	–	–	–	–	55	0.15	1.0
LC 1613-KPF	**M4310**	1.3	270	0.16	0.7	135	0.14	0.7	255	0.16	0.7	–	–	–	–	–	–	50	0.15	1.0
LC 2016-KPF	**M4310**	1.6	280	0.16	0.8	140	0.14	0.8	265	0.16	0.8	–	–	–	–	–	–	55	0.15	1.0

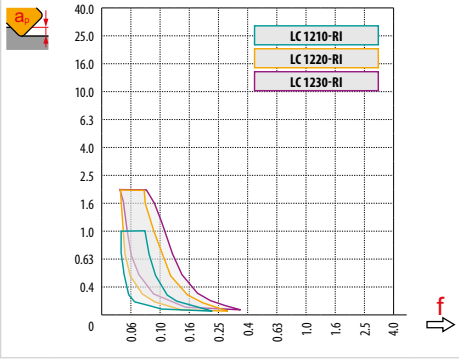
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	LC 12-KP	LC 12-KP	LC 16-KP	LC 16-KP	LC 16-KP	LC 20-KP	LC 20-KP	LC 20-KP
RE	1.0	2.0	1.0	1.3	3.0	1.0	1.6	4.0
BS	–	–	–	–	–	–	–	–

	LC 12-KPF	LC 16-KPF	LC 20-KP	LC 1215-RI	LC 1220-RI	LC 1230-RI
RE	1.0	1.3	1.6	1.5	2.0	3.0
BS	–	–	–	–	–	–







	DC		a_p													
		RE	0.0	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.25	1.5	2.0	2.5	3.0	4.0
LC 1210-KP	12	1.0	10.0	11.4	11.6	11.7	11.8	11.9	12.0	12.0	12.0	–	–	–	–	–	–
LC 1210-KPF		1.0	10.0	11.4	11.6	11.7	11.8	11.9	12.0	12.0	12.0	–	–	–	–	–	–
LC 1220-KP		2.0	8.0	10.1	10.4	10.6	10.9	11.0	11.2	11.3	11.5	11.7	11.9	12.0	–	–	–
LC 1210-RI		1.0	10.0	11.4	11.6	11.7	11.8	11.9	12.0	12.0	12.0	–	–	–	–	–	–
LC 1220-RI		2.0	8.0	10.1	10.4	10.6	10.9	11.0	11.2	11.3	11.5	11.7	11.9	12.0	–	–	–
LC 1230-RI		3.0	6.0	8.6	9.0	9.3	9.6	9.9	10.1	10.3	10.5	10.9	11.2	11.7	11.9	–	–
LC 1610-KP	16	1.0	14.0	15.4	15.6	15.7	15.8	15.9	16.0	16.0	16.0	–	–	–	–	–	–
LC 1613-KP		1.3	13.4	15.1	15.3	15.4	15.6	15.7	15.8	15.9	15.9	16.0	–	–	–	–	–
LC 1613-KPF		1.3	13.4	15.1	15.3	15.4	15.6	15.7	15.8	15.9	15.9	16.0	–	–	–	–	–
LC 1630-KP		3.0	10.0	12.6	13.0	13.3	13.6	13.9	14.1	14.3	14.5	14.9	15.2	15.7	15.9	–	–
LC 2010-KP	20	1.0	18.0	19.4	19.6	19.7	19.8	19.9	20.0	20.0	20.0	–	–	–	–	–	–
LC 2016-KP		1.6	16.8	18.7	18.9	19.1	19.3	19.4	19.6	19.7	19.8	19.9	20.0	–	–	–	–
LC 2016-KPF		1.6	16.8	18.7	18.9	19.1	19.3	19.4	19.6	19.7	19.8	19.9	20.0	–	–	–	–
LC 2040-KP		4.0	12.0	15.0	15.5	15.9	16.2	16.5	16.8	17.1	17.3	17.8	18.2	18.9	19.4	–	–

DC	µm	3	5	10	15	20	30	40	50	60	80	100
12	FE	0.379	0.490	0.693	0.849	0.980	1.200	1.386	1.549	1.697	1.960	2.191
16		0.438	0.566	0.800	0.980	1.131	1.386	1.600	1.789	1.960	2.263	2.530
20		0.490	0.632	0.894	1.095	1.265	1.549	1.789	2.000	2.191	2.530	2.828
RE	**µm**	**3**	**5**	**10**	**15**	**20**	**30**	**40**	**50**	**60**	**80**	**100**
1.3	FE	0.177	0.228	0.322	0.395	0.456	0.559	0.645	0.721	0.790	0.912	1.020
1.6		0.196	0.253	0.358	0.438	0.506	0.620	0.716	0.800	0.876	1.012	1.131
2.0		0.219	0.283	0.400	0.490	0.566	0.693	0.800	0.894	0.980	1.131	1.265
3.0		0.268	0.346	0.490	0.600	0.693	0.849	0.980	1.095	1.200	1.386	1.549
4.0		0.310	0.400	0.566	0.693	0.800	0.980	1.131	1.265	1.386	1.600	1.789

	DC	RE	max
LC 1210-KP	12	1.0	4.8
LC 1210-KPF		1.0	4.4
LC 1220-KP		2.0	4.8
LC 1210-RI		1.0	–
LC 1220-RI		2.0	–
LC 1230-RI		3.0	–
LC 1610-KP	16	1.0	6.6
LC 1613-KP		1.3	6.6
LC 1613-KPF		1.3	5.9
LC 1630-KP		3.0	6.6
LC 2010-KP	20	1.0	8.5
LC 2016-KP		1.6	8.5
LC 2016-KPF		1.6	7.5
LC 2040-KP		4.0	8.5

	DC	RE	RPMX	APMX/l
LC 1210-KP	12	1.0	4.7	1.5/19
LC 1210-KPF		1.0	3.8	1.5/23
LC 1220-KP		2.0	4.4	2.0/26
LC 1210-RI		1.0	–	–
LC 1220-RI		2.0	–	–
LC 1230-RI		3.0	–	–
LC 1610-KP	16	1.0	4.8	1.5/18
LC 1613-KP		1.3	4.8	1.5/18
LC 1613-KPF		1.3	3.8	1.5/23
LC 1630-KP		3.0	4.4	3.0/39
LC 2010-KP	20	1.0	5.0	1.5/18
LC 2016-KP		1.6	4.9	1.6/19
LC 2016-KPF		1.6	3.8	1.6/25
LC 2040-KP		4.0	4.5	4.0/51

	DC	RE	DMIN	DMAX	SMAX DMIN	SMAX DMAX
LC 1210-KP	12	1.0	14.1	23.9	1.0	1.2
LC 1210-KPF		1.0	15.0	23.9	0.4	0.4
LC 1220-KP		2.0	14.1	23.9	0.3	0.3
LC 1210-RI		1.0	–	–	–	–
LC 1220-RI		2.0	–	–	–	–
LC 1230-RI		3.0	–	–	–	–
LC 1610-KP	16	1.0	18.6	31.9	1.1	1.4
LC 1613-KP		1.3	18.6	31.9	0.6	0.6
LC 1613-KPF		1.3	19.9	31.9	0.5	0.5
LC 1630-KP		3.0	18.6	31.9	0.4	0.4
LC 2010-KP	20	1.0	22.8	39.9	1.3	1.5
LC 2016-KP		1.6	22.8	39.9	0.8	0.8
LC 2016-KPF		1.6	24.8	39.9	0.7	0.7
LC 2040-KP		4.0	22.8	39.9	0.5	0.5

	DC	RE	a_p
LC 1210-KP	12	1.0	0.44
LC 1210-KPF		1.0	0.9
LC 1220-KP		2.0	0.4
LC 1210-RI		1.0	–
LC 1220-RI		2.0	–
LC 1230-RI		3.0	–
LC 1610-KP	16	1.0	0.65
LC 1613-KP		1.3	0.62
LC 1613-KPF		1.3	0.53
LC 1630-KP		3.0	0.44
LC 2010-KP	20	1.0	0.85
LC 2016-KP		1.6	0.79
LC 2016-KPF		1.6	0.67
LC 2040-KP		4.0	0.54

Overhang (multiple of diameter DC)	<3.0	3 – 3.5	3.6 – 4.0	4.1 – 4.5	>4.6
Multiplication factor for speed	1.0	0.9	0.8	0.7	0.5

K2-PPH

P M K S H

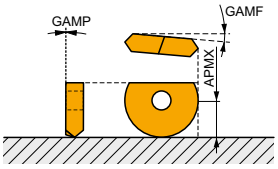
PRAMET

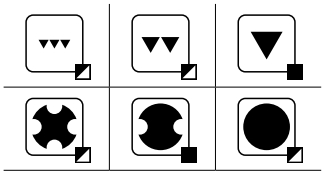
S

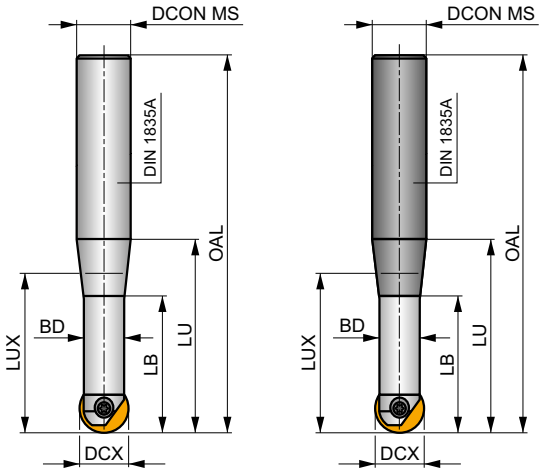
Copy and Profile End Mills

Flexible end mill for a wide range of Die & Mold applications. One tool solution for ball-nosed, toroidal and high-feed inserts. High precision ground inserts provide high accuracy. Available in cylindrical and modular style, in range Ø8 up to Ø32 mm. Body treated for longer tool life.

APMX	0.3 - 4.0 mm







h_m 0.07 - 0.14

	Product	DCX [mm]	OAL [mm]	DCON MS [mm]	BD [mm]	LB [mm]	LU [mm]	LUX [mm]	LF [mm]	TDZ	Carbide	max.		kg		
	PPH-08/02-QC12-092	8	92	12	6.5	19	35	23.1	–	–	–	40000	–	0.14	GI284	C0540
	PPH-08/02-QC12-110	8	110	12	6.5	33.5	53	41.5	–	–	–	33600	–	0.15	GI284	C0540
	PPH-08/02-QC12-132	8	132	12	6.5	19	75	41.8	–	–	–	16800	–	0.16	GI284	C0540
	PPH-10/02-QC12-092	10	92	12	8	22.4	38	30	–	–	–	40000	–	0.12	GI285	C0541
	PPH-10/02-QC12-110	10	110	12	8	38.7	53	51.9	–	–	–	40000	–	0.15	GI285	C0541
	PPH-10/02-QC12-132	10	132	12	8	21.8	75	73.6	–	–	–	20300	–	0.17	GI285	C0541
	PPH-12/02-QC16-145	12	145	16	10	22.5	85	63.3	–	–	–	19800	–	0.25	GI286	C0542
	PPH-16/02-QC20-166	16	166	20	14	29.5	100	75.5	–	–	–	20000	–	0.38	GI287	C0543
	PPH-20/02-QC25-191	20	191	25	17	35	115	82.2	–	–	–	18400	–	0.64	GI288	C0544
	PPH-25/02-QC32-215	25	215	32	21	42.5	135	97	–	–	–	16500	–	1.07	GI289	C0545
	PPH-12/02-QC12-083	12	83	12	10	–	26	–	–	–	–	40000	–	0.15	GI286	C0542
	PPH-12/02-QC12-110	12	110	12	10	–	53	–	–	–	–	40000	–	0.17	GI286	C0542
DIN 1835A	**PPH-12/02-QC12-145**	12	145	12	10	–	45	–	–	–	–	40000	–	0.20	GI286	C0542
	PPH-16/02-QC16-092	16	92	16	14	–	92	–	–	–	–	36000	–	0.21	GI287	C0543
	PPH-16/02-QC16-123	16	123	16	14	–	63	–	–	–	–	36000	–	0.24	GI287	C0543
	PPH-16/02-QC16-166	16	166	16	14	–	55	–	–	–	–	36000	–	0.31	GI287	C0543
	PPH-20/02-QC20-104	20	104	20	17	–	38	–	–	–	–	40000	–	0.35	GI288	C0544
	PPH-20/02-QC20-141	20	141	20	17	–	75	–	–	–	–	40000	–	0.41	GI288	C0544
	PPH-20/02-QC20-191	20	191	20	17	–	65	–	–	–	–	40000	–	0.54	GI288	C0544
	PPH-25/02-QC25-121	25	121	25	21	–	45	–	–	–	–	40000	–	0.53	GI289	C0545
	PPH-25/02-QC25-166	25	166	25	21	–	90	–	–	–	–	37100	–	0.57	GI289	C0545
	PPH-32/02-QC32-186	32	186	32	26	–	107	–	–	–	–	32500	–	1.09	GI290	C0546
	PPH-32/02-QC32-240	32	240	32	26	–	160	–	–	–	–	14500	–	1.37	GI290	C0546
	PPH-08/02-QC12-110HSCW	8	110	12	6.5	19	53	30.1	–	–	✓	40000	–	0.21	GI284	C0540
	PPH-08/02-QC12-132HSCW	8	132	12	6.5	19	75	37.1	–	–	✓	23400	–	0.24	GI284	C0540
	PPH-10/02-QC12-092HSCW	10	92	12	8	21.9	38.1	90.9	–	–	✓	40000	–	0.20	GI285	C0541

	Product	DCX [mm]	OAL [mm]	DCON MS [mm]	BD [mm]	LB [mm]	LU [mm]	LUX [mm]	LF [mm]	TDZ	Carbide	max.		kg		
DIN 1835A	**PPH-10/02-QC12-110HSCW**	10	110	12	8	21.8	53.1	41.4	–	–	✓	40000	–	0.22	GI285	C0541
	PPH-10/02-QC12-132HSCW	10	132	12	8	21.8	75.1	51.1	–	–	✓	23400	–	0.27	GI285	C0541
	PPH-12/02-QC16-145HSCW	12	145	16	10	21.5	85	65.6	–	–	✓	21000	–	0.28	GI286	C0542
	PPH-16/02-QC20-166HSCW	16	166	20	14	28.5	100	87.2	–	–	✓	25500	–	0.66	GI287	C0543
	PPH-20/02-QC25-191HSCW	20	191	25	17	35	115	75.6	–	–	✓	18500	–	1.09	GI288	C0544
	PPH-08/02-QC08-130HSCW	8	130	8	6.5	–	20	–	–	–	✓	40000	–	0.17	GI284	C0540
	PPH-10/02-QC10-140HSCW	10	140	10	8	–	25	–	–	–	✓	40000	–	0.25	GI285	C0541
	PPH-12/02-QC12-083HSCW	12	83	12	10	–	26	–	–	–	✓	40000	–	0.23	GI286	C0542
	PPH-12/02-QC12-110HSCW	12	110	12	10	–	53	–	–	–	✓	40000	–	0.26	GI286	C0542
	PPH-16/02-QC16-092HSCW	16	92	16	14	–	32	–	–	–	✓	43000	–	0.32	GI287	C0543
	PPH-16/02-QC16-123HSCW	16	123	16	14	–	63	–	–	–	✓	43000	–	0.36	GI287	C0543
	PPH-20/02-QC20-104HSCW	20	104	20	17	–	38	–	–	–	✓	40000	–	0.50	GI288	C0544
	PPH-20/02-QC20-141HSCW	20	141	20	17	–	75	–	–	–	✓	40000	–	0.62	GI288	C0544
MODULAR	**PPH-16/02-025-P08**	16	–	8.5	–	–	–	–	25	M8	–	–	–	0.14	GI287	C0543
	PPH-20/02-030-P10	20	–	10.5	–	–	–	–	30	M10	–	–	–	0.18	GI288	C0544

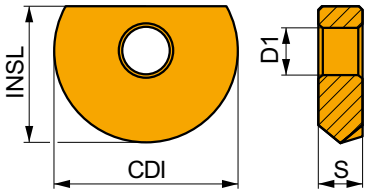
GI284	PPH 08..	–	PPHT 08..	PPHF 08..
GI285	PPH 10..	PPHE 10..	PPHT 10..	PPHF 10..
GI286	PPH 12..	PPHE 12..	PPHT 12..	PPHF 12..
GI287	PPH 16..	PPHE 16..	PPHT 16..	PPHF 16..
GI288	PPH 20..	PPHE 20..	PPHT 20..	PPHF 20..
GI289	PPH 25..	–	PPHT 25..	PPHF 25..
GI290	PPH 32..	–	–	–

		Nm						
C0540	CS 42506-T07P	1.0	M 2.5	6	D-T07P/T09P	FG-15	–	–
C0541	CS 43008-T08P	1.2	M 3	8	D-T08P/T15P	FG-15	–	–
C0542	CS 43509-T10P	2.0	M 3.5	9	–	–	SDR T10P	–
C0543	CS 44013-T15P	3.0	M 4	13	D-T08P/T15P	FG-15	–	–
C0544	CS 45016-T20P	5.0	M 5	16	–	–	SDR T20P	–
C0545	CS 46020-T25P	7.5	M 6	20	–	–	–	SDR T25P-T
C0546	CS 48025-T40P	15.0	M 8	25	–	–	–	SDR T40P-T

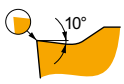
PPH

PRAMET

	CDI [mm]	D1 [mm]	INSL [mm]	S [mm]
0800	8.0	2.50	7.0	2.40
1000	10.0	3.00	8.5	2.60
1200	12.0	3.50	10.0	3.00
1600	16.0	4.00	12.0	4.00
2000	20.0	5.00	15.0	5.00
2500	25.0	6.00	18.5	6.00
3000	30.0	8.00	22.5	7.00
3200	32.0	8.00	23.5	7.00



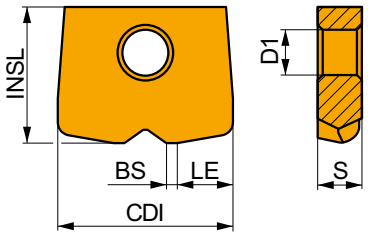
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			CL1 geometry with sharp design.																	
PPH 0800-CL1	2003	–	285	0.36	0.4	145	0.32	0.4	270	0.36	0.4	–	–	–	–	–	–	55	0.15	1.0
PPH 1000-CL1	2003	–	280	0.36	0.5	140	0.32	0.5	265	0.36	0.5	–	–	–	–	–	–	55	0.15	1.0
PPH 1200-CL1	2003	–	275	0.36	0.6	140	0.32	0.6	260	0.36	0.6	–	–	–	–	–	–	55	0.15	1.0
PPH 1600-CL1	2003	–	265	0.36	0.8	135	0.32	0.8	250	0.36	0.8	–	–	–	–	–	–	50	0.15	1.0
PPH 2000-CL1	2003	–	260	0.36	1.0	130	0.32	1.0	245	0.36	1.0	–	–	–	–	–	–	50	0.15	1.0
PPH 2500-CL1	2003	–	250	0.36	1.3	125	0.32	1.3	235	0.36	1.3	–	–	–	–	–	–	50	0.15	1.0
PPH 3000-CL1	2003	–	245	0.36	1.5	120	0.32	1.5	230	0.36	1.5	–	–	–	–	–	–	45	0.15	1.0
PPH 3200-CL1	2003	–	245	0.36	1.6	120	0.32	1.6	230	0.36	1.6	–	–	–	–	–	–	45	0.15	1.0
			CL4 geometry with sharp design for interrupted cuts.																	
PPH 0800-CL4	8215	–	270	0.36	0.4	–	–	–	255	0.36	0.4	–	–	–	–	–	–	50	0.15	1.0
PPH 1000-CL4	8215	–	265	0.36	0.5	–	–	–	250	0.36	0.5	–	–	–	–	–	–	50	0.15	1.0
PPH 1200-CL4	8215	–	255	0.36	0.6	–	–	–	240	0.36	0.6	–	–	–	–	–	–	50	0.15	1.0
PPH 1600-CL4	8215	–	250	0.36	0.8	–	–	–	235	0.36	0.8	–	–	–	–	–	–	50	0.15	1.0
PPH 2000-CL4	8215	–	245	0.36	1.0	–	–	–	230	0.36	1.0	–	–	–	–	–	–	45	0.15	1.0
PPH 2500-CL4	8215	–	240	0.36	1.3	–	–	–	225	0.36	1.3	–	–	–	–	–	–	45	0.15	1.0
PPH 3000-CL4	8215	–	235	0.36	1.5	–	–	–	220	0.36	1.5	–	–	–	–	–	–	45	0.15	1.0
PPH 3200-CL4	8215	–	235	0.36	1.6	–	–	–	220	0.36	1.6	–	–	–	–	–	–	45	0.15	1.0
			SM1 geometry with sharp design.																	
PPHE 1000-SM1	8215	–	260	0.31	0.5	155	0.28	0.5	245	0.31	0.5	–	–	–	–	–	–	50	0.15	1.0
PPHE 1200-SM1	8215	–	245	0.36	0.6	145	0.32	0.6	230	0.36	0.6	–	–	–	–	–	–	45	0.15	1.0
PPHE 1600-SM1	8215	–	250	0.31	0.8	150	0.28	0.8	235	0.31	0.8	–	–	–	–	–	–	50	0.15	1.0
PPHE 2000-SM1	8215	–	240	0.31	1.0	140	0.28	1.0	225	0.31	1.0	–	–	–	–	–	–	45	0.15	1.0

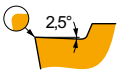
PPHF

PRAMET

	BS	LE	CDI	D1	INSL	S
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
0800	0.40	2.60	8.0	2.50	7.0	2.40
1000	0.50	3.20	10.0	3.00	8.5	2.60
1200	0.60	3.90	12.0	3.50	10.0	3.00
1600	0.80	5.20	16.0	4.00	12.0	4.00
2000	1.00	6.40	20.0	5.00	15.0	5.00
2500	1.20	7.90	25.0	6.00	18.5	6.00



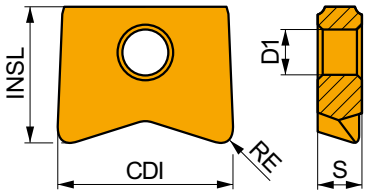
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
			HFC E																	
CE1 geometry with strong design for high feed machining.																				
PPHF 080004-CE1	**M8330**	–	200	0.30	0.3	120	0.27	0.3	190	0.30	0.3	–	–	–	50	0.27	0.2	40	0.15	1.0
PPHF 100005-CE1	**M8330**	–	190	0.35	0.3	110	0.32	0.3	180	0.35	0.3	–	–	–	45	0.32	0.2	35	0.15	1.0
PPHF 120006-CE1	**M8330**	–	205	0.45	0.4	120	0.41	0.4	190	0.45	0.4	–	–	–	50	0.41	0.3	40	0.15	1.0
PPHF 160008-CE1	**M8330**	–	190	0.60	0.5	110	0.54	0.5	180	0.60	0.5	–	–	–	45	0.54	0.4	35	0.15	1.0
PPHF 200010-CE1	**M8330**	–	190	0.70	0.6	110	0.63	0.6	180	0.70	0.6	–	–	–	45	0.63	0.5	35	0.15	1.0
PPHF 250012-CE1	**M8330**	–	175	0.90	0.8	105	0.81	0.8	165	0.90	0.8	–	–	–	40	0.81	0.6	35	0.15	1.0

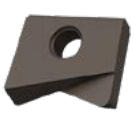
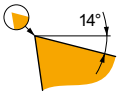
PPHT

PRAMET

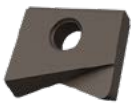
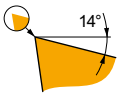
	CDI	D1	INSL	S
	[mm]	[mm]	[mm]	[mm]
0800	8.0	2.50	7.0	2.40
1000	10.0	3.00	8.5	2.60
1200	12.0	3.50	10.0	3.00
1600	16.0	4.00	12.0	4.00
2000	20.0	5.00	15.0	5.00
2500	25.0	6.00	18.5	6.00



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

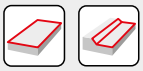
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
			U F																	
A2 geometry with positive design for light to medium machining.																				
PPHT 080003-A2	**2003**	0.3	275	0.10	0.3	140	0.09	0.3	260	0.10	0.3	–	–	–	–	–	–	55	0.15	1.0
PPHT 080005-A2	**2003**	0.5	270	0.13	0.3	135	0.12	0.3	255	0.13	0.3	–	–	–	–	–	–	50	0.15	1.0
PPHT 080008-A2	**2003**	0.8	305	0.14	0.4	155	0.13	0.4	285	0.14	0.4	–	–	–	–	–	–	60	0.15	1.0
PPHT 080010-A2	**2003**	1.0	315	0.14	0.5	160	0.13	0.5	295	0.14	0.5	–	–	–	–	–	–	60	0.15	1.0
PPHT 100005-A2	**2003**	0.5	270	0.13	0.3	135	0.12	0.3	255	0.13	0.3	–	–	–	–	–	–	50	0.15	1.0
PPHT 100008-A2	**2003**	0.8	305	0.14	0.4	155	0.13	0.4	285	0.14	0.4	–	–	–	–	–	–	60	0.15	1.0
PPHT 100010-A2	**2003**	1.0	315	0.14	0.5	160	0.13	0.5	295	0.14	0.5	–	–	–	–	–	–	60	0.15	1.0
PPHT 120005-A2	**2003**	0.5	270	0.13	0.3	135	0.12	0.3	255	0.13	0.3	–	–	–	–	–	–	50	0.15	1.0
PPHT 120010-A2	**2003**	1.0	315	0.14	0.5	160	0.13	0.5	295	0.14	0.5	–	–	–	–	–	–	60	0.15	1.0
PPHT 120020-A2	**2003**	2.0	320	0.14	1.0	160	0.13	1.0	300	0.14	1.0	–	–	–	–	–	–	60	0.15	1.0

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				

A2 geometry with positive design for light to medium machining.

PPHT 160010-A2	**2003**	1.0	315	0.14	0.5	160	0.13	0.5	295	0.14	0.5	–	–	–	–	–	–	60	0.15	1.0
PPHT 160013-A2	**2003**	1.3	300	0.15	0.6	150	0.13	0.6	285	0.15	0.6	–	–	–	–	–	–	60	0.15	1.0
PPHT 160020-A2	**2003**	2.0	320	0.14	1.0	160	0.13	1.0	300	0.14	1.0	–	–	–	–	–	–	60	0.15	1.0
PPHT 160030-A2	**2003**	3.0	305	0.14	1.5	155	0.13	1.5	285	0.14	1.5	–	–	–	–	–	–	60	0.15	1.0
PPHT 200010-A2	**2003**	1.0	315	0.14	0.5	160	0.13	0.5	295	0.14	0.5	–	–	–	–	–	–	60	0.15	1.0
PPHT 200016-A2	**2003**	1.6	310	0.14	0.8	155	0.13	0.8	290	0.14	0.8	–	–	–	–	–	–	60	0.15	1.0
PPHT 200030-A2	**2003**	3.0	305	0.14	1.5	155	0.13	1.5	285	0.14	1.5	–	–	–	–	–	–	60	0.15	1.0
PPHT 200040-A2	**2003**	4.0	295	0.14	2.0	150	0.13	2.0	280	0.14	2.0	–	–	–	–	–	–	55	0.15	1.0
PPHT 250020-A2	**2003**	2.0	320	0.14	1.0	160	0.13	1.0	300	0.14	1.0	–	–	–	–	–	–	60	0.15	1.0



a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ X.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ X.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	PPH 08-CL1	PPH 10-CL1	PPH 12-CL1	PPH 16-CL1	PPH 20-CL1	PPH 25-CL1	PPH 30-CL1	PPH 32-CL1
RE	4.0	5.0	6.0	8.0	10.0	12.5	15.0	16.0
BS	–	–	–	–	–	–	–	–

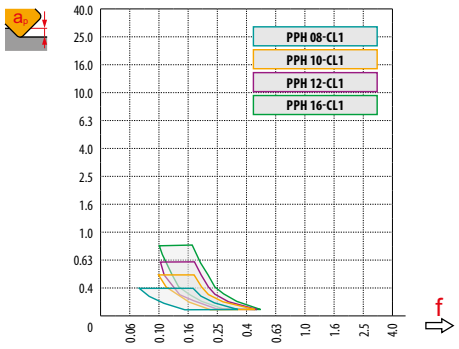
	PPH 08-CL4	PPH 10-CL4	PPH 12-CL4	PPH 16-CL4	PPH 20-CL4	PPH 25-CL4	PPH 30-CL4	PPH 32-CL4
RE	4.0	5.0	6.0	8.0	10.0	12.5	15.0	16.0
BS	–	–	–	–	–	–	–	–

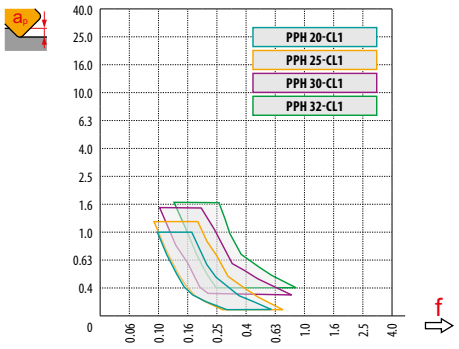
	PPHE 10-SM1	PPHE 12-SM1	PPHE 16-SM1	PPHE 20-SM1
RE	5.0	6.0	8.0	10.0
BS	–	–	–	–

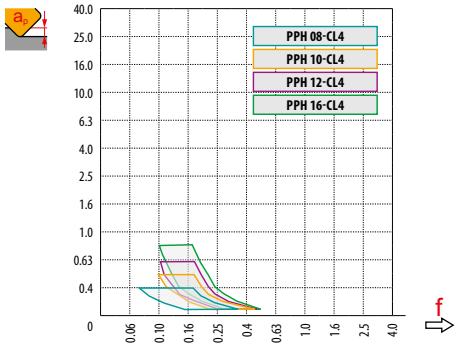
	PPHF 08-CE1	PPHF 10-CE1	PPHF 12-CE1	PPHF 16-CE1	PPHF 20-CE1	PPHF 25-CE1
RE	0.6	0.8	1.0	1.3	1.6	1.9
BS	0.40	0.50	0.60	0.80	1.00	1.20

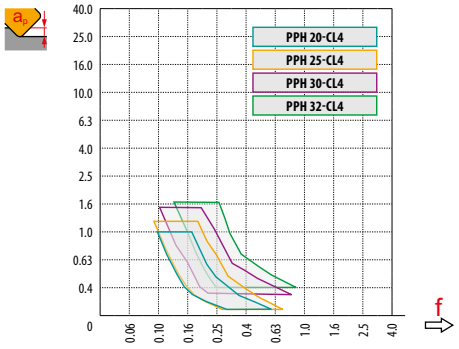
	PPHT 08-A2	PPHT 08-A2	PPHT 08-A2	PPHT 08-A2	PPHT 10-A2	PPHT 10-A2	PPHT 10-A2	PPHT 12-A2	PPHT 12-A2	PPHT 12-A2	PPHT 16-A2
RE	0.3	0.5	0.8	1.0	0.5	0.8	1.0	0.5	1.0	2.0	1.0
BS	–	–	–	–	–	–	–	–	–	–	–

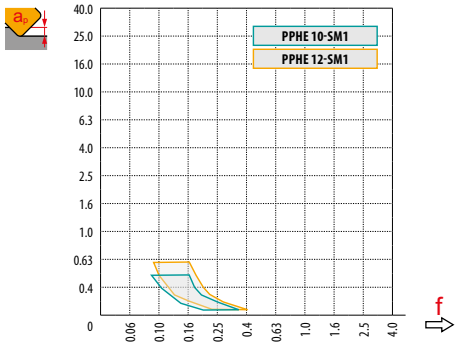
	PPHT 16-A2	PPHT 16-A2	PPHT 16-A2	PPHT 20-A2	PPHT 20-A2	PPHT 20-A2	PPHT 20-A2	PPHT 25-A2
RE	1.3	2.0	3.0	1.0	1.6	3.0	4.0	2.0
BS	–	–	–	–	–	–	–	–

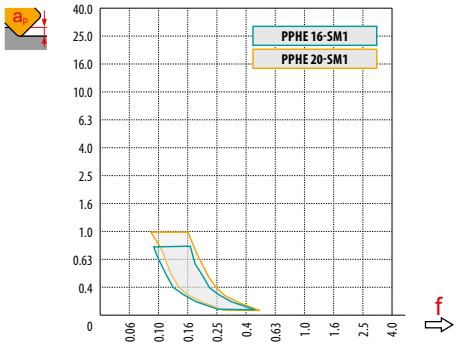

a_p
40.0
25.0
16.0
10.0
6.3
4.0
2.5
1.6
1.0
0.63
0.4
0
0.06
0.10
0.16
0.25
0.4
0.63
1.0
1.6
2.5
4.0
f
PPH 08-CL1
PPH 10-CL1
PPH 12-CL1
PPH 16-CL1

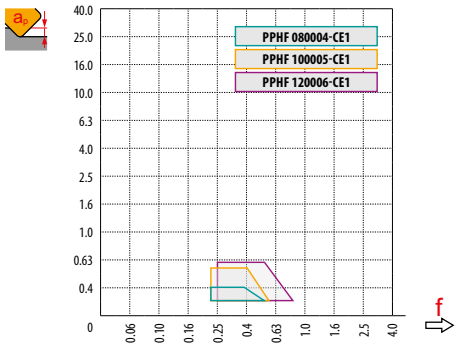

a_p
40.0
25.0
16.0
10.0
6.3
4.0
2.5
1.6
1.0
0.63
0.4
0
0.06
0.10
0.16
0.25
0.4
0.63
1.0
1.6
2.5
4.0
f
PPH 20-CL1
PPH 25-CL1
PPH 30-CL1
PPH 32-CL1

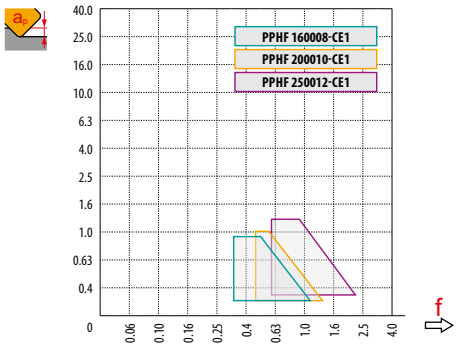

a_p
40.0
25.0
16.0
10.0
6.3
4.0
2.5
1.6
1.0
0.63
0.4
0
0.06
0.10
0.16
0.25
0.4
0.63
1.0
1.6
2.5
4.0
f
PPH 08-CL4
PPH 10-CL4
PPH 12-CL4
PPH 16-CL4

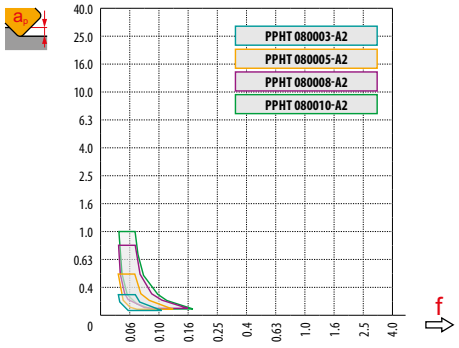

a_p
40.0
25.0
16.0
10.0
6.3
4.0
2.5
1.6
1.0
0.63
0.4
0
0.06
0.10
0.16
0.25
0.4
0.63
1.0
1.6
2.5
4.0
f
PPH 20-CL4
PPH 25-CL4
PPH 30-CL4
PPH 32-CL4

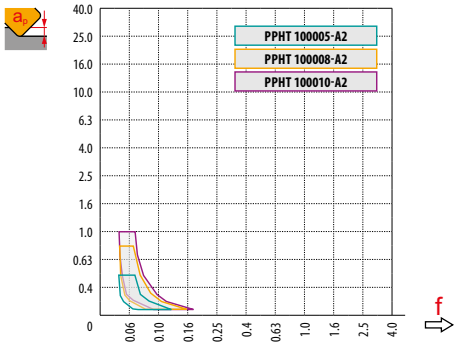

a_p
40.0
25.0
16.0
10.0
6.3
4.0
2.5
1.6
1.0
0.63
0.4
0
0.06
0.10
0.16
0.25
0.4
0.63
1.0
1.6
2.5
4.0
f
PPHE 10-SM1
PPHE 12-SM1

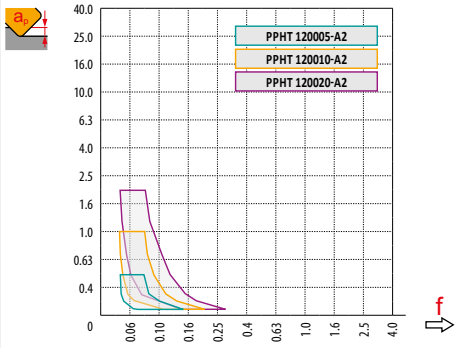

a_p
40.0
25.0
16.0
10.0
6.3
4.0
2.5
1.6
1.0
0.63
0.4
0
0.06
0.10
0.16
0.25
0.4
0.63
1.0
1.6
2.5
4.0
f
PPHE 16-SM1
PPHE 20-SM1

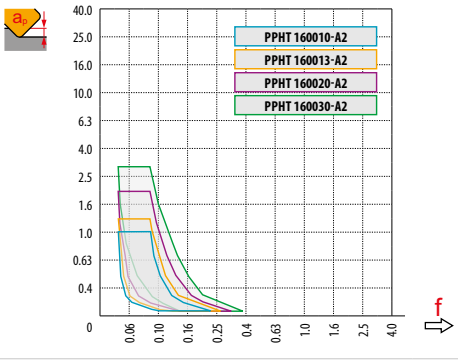

a_p
40.0
25.0
16.0
10.0
6.3
4.0
2.5
1.6
1.0
0.63
0.4
0
0.06
0.10
0.16
0.25
0.4
0.63
1.0
1.6
2.5
4.0
f
PPHF 080004-CE1
PPHF 100005-CE1
PPHF 120006-CE1

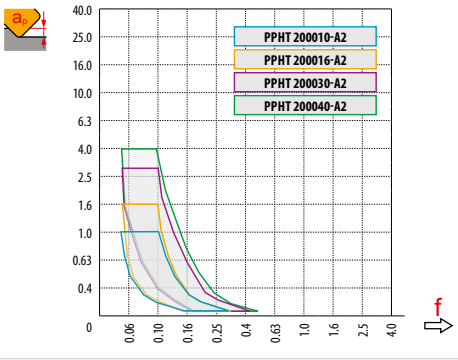

a_p
40.0
25.0
16.0
10.0
6.3
4.0
2.5
1.6
1.0
0.63
0.4
0
0.06
0.10
0.16
0.25
0.4
0.63
1.0
1.6
2.5
4.0
f
PPHF 160008-CE1
PPHF 200010-CE1
PPHF 250012-CE1

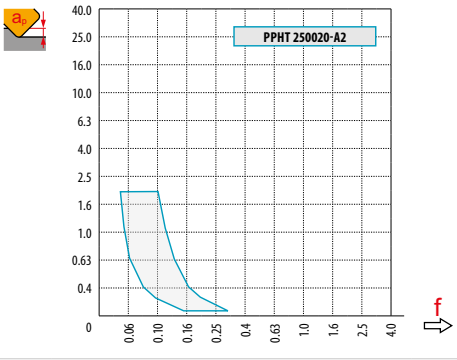

a_p
40.0
25.0
16.0
10.0
6.3
4.0
2.5
1.6
1.0
0.63
0.4
0
0.06
0.10
0.16
0.25
0.4
0.63
1.0
1.6
2.5
4.0
f
PPHT 080003-A2
PPHT 080005-A2
PPHT 080008-A2
PPHT 080010-A2


a_p
40.0
25.0
16.0
10.0
6.3
4.0
2.5
1.6
1.0
0.63
0.4
0
0.06
0.10
0.16
0.25
0.4
0.63
1.0
1.6
2.5
4.0
f
PPHT 100005-A2
PPHT 100008-A2
PPHT 100010-A2


a_p
40.0
25.0
16.0
10.0
6.3
4.0
2.5
1.6
1.0
0.63
0.4
0
0.06
0.10
0.16
0.25
0.4
0.63
1.0
1.6
2.5
4.0
f
PPHT 120005-A2
PPHT 120010-A2
PPHT 120020-A2







	DCX	a_p	0.3	0.4	0.5	0.7	1.0	1.25	1.5	2.0	2.5	3.0	4.0	5.0	6.0	8.0	10.0	12.0	15.0	16.0
PPH 08	**8**		3.0	3.5	3.9	4.5	5.3	5.8	6.2	6.9	7.4	7.7	8.0	–	–	–	–	–	–	–
PPH 10	**10**		3.4	3.9	4.4	5.1	6.0	6.6	7.1	8.0	8.7	9.2	9.8	10.0	–	–	–	–	–	–
PPH 12	**12**		3.7	4.3	4.8	5.6	6.6	7.3	7.9	8.9	9.7	10.4	11.3	11.8	12.0	–	–	–	–	–
PPH 16	**16**	DEF	4.3	5.0	5.6	6.5	7.7	8.6	9.3	10.6	11.6	12.5	13.9	14.8	15.5	16.0	–	–	–	–
PPH 20	**20**		4.9	5.6	6.2	7.4	8.7	9.7	10.5	12.0	13.2	14.3	16.0	17.3	18.3	19.6	20.0	–	–	–
PPH 25	**25**		5.4	6.3	7.0	8.2	9.8	10.9	11.9	13.6	15.0	16.2	18.3	20.0	21.4	23.3	24.5	25.0	–	–
PPH 30	**30**		5.97	6.88	7.68	9.06	10.77	11.99	13.08	14.97	16.58	18.00	20.40	22.36	24.00	26.53	28.28	29.39	30.00	–
PPH 32	**32**		6.17	7.11	7.94	9.36	11.14	12.40	13.53	15.49	17.18	18.65	21.17	23.24	24.98	27.71	29.66	30.98	31.94	32.00

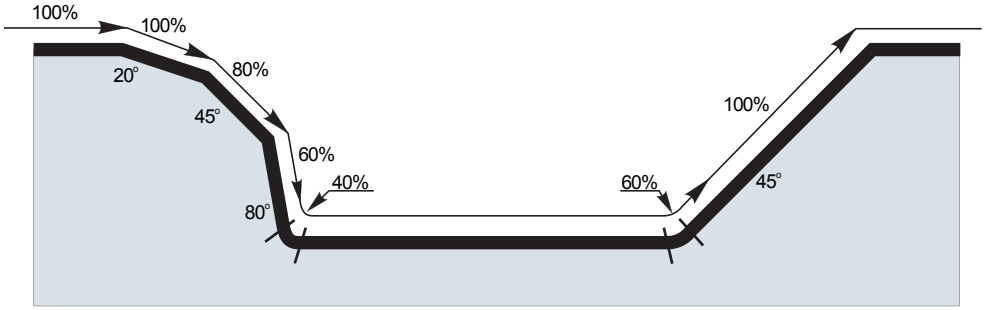
	DCX	µm	3	5	10	15	20	30	40	50	60	80	100
PPH 08	**8**		0.310	0.400	0.566	0.693	0.800	0.980	1.131	1.265	1.386	1.600	1.789
PPH 10	**10**	FE	0.346	0.447	0.632	0.775	0.894	1.095	1.265	1.414	1.549	1.789	2.000
PPH 12	**12**		0.379	0.490	0.693	0.849	0.980	1.200	1.386	1.549	1.697	1.960	2.191
PPH 16	**16**		0.438	0.566	0.800	0.980	1.131	1.386	1.600	1.789	1.960	2.263	2.530
PPH 20	**20**	FE	0.490	0.632	0.894	1.095	1.265	1.549	1.789	2.000	2.191	2.530	2.828
PPH 25	**25**		0.548	0.707	1.000	1.225	1.414	1.732	2.000	2.236	2.449	2.828	3.162
PPH 30	**30**		0.600	0.775	1.095	1.342	1.549	1.897	2.191	2.449	2.683	3.098	3.464
PPH 32	**32**		0.620	0.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578

DEF	a_e	1 %	2.5 %	5 %	7.5 %	10 %	15 %	20 %	25 %	30 %	35 %	40 %	45 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
	a_p										⇨ x.f									
19.9 %	1.0 %	2.86	1.84	1.33	1.12	1.00	0.89	–	–	–	–	–	–	–	–	–	–	–	–	–
31.2 %	2.5 %	3.58	2.28	1.64	1.36	1.20	1.01	0.92	0.88	0.91	–	–	–	–	–	–	–	–	–	–
43.6 %	5.0 %	4.22	2.68	1.92	1.58	1.39	1.16	1.03	0.95	0.90	0.88	0.89	–	–	–	–	–	–	–	–
52.7 %	7.5 %	4.63	2.95	2.10	1.73	1.51	1.26	1.11	1.02	0.96	0.91	0.89	0.88	0.90	–	–	–	–	–	–
60.0 %	10.0 %	4.94	3.14	2.24	1.84	1.61	1.33	1.18	1.07	1.00	0.95	0.91	0.89	0.88	1.00	–	–	–	–	–
71.4 %	15.0 %	5.39	3.42	2.43	2.00	1.74	1.44	1.27	1.15	1.07	1.01	0.96	0.93	0.90	0.88	0.93	–	–	–	–
80.0 %	20.0 %	5.70	3.62	2.57	2.11	1.84	1.52	1.33	1.21	1.12	1.05	1.00	0.96	0.93	0.89	0.88	0.89	1.00	–	–
86.6 %	25.0 %	5.93	3.76	2.67	2.20	1.91	1.58	1.38	1.25	1.16	1.08	1.03	0.99	0.95	0.90	0.88	0.88	0.89	–	–
91.7 %	30.0 %	6.10	3.87	2.75	2.26	1.96	1.62	1.42	1.28	1.18	1.11	1.05	1.01	0.97	0.92	0.89	0.88	0.88	0.93	–
95.4 %	35.0 %	6.23	3.95	2.80	2.30	2.00	1.65	1.44	1.31	1.20	1.13	1.07	1.02	0.98	0.93	0.89	0.88	0.88	0.90	–
98.0 %	40.0 %	6.31	4.00	2.84	2.33	2.03	1.67	1.46	1.32	1.22	1.14	1.08	1.03	0.99	0.93	0.90	0.89	0.88	0.89	–
99.5 %	45.0 %	6.36	4.03	2.86	2.35	2.04	1.68	1.47	1.33	1.23	1.15	1.09	1.04	1.00	0.94	0.90	0.89	0.88	0.88	–
100.0 %	50.0 %	6.38	4.04	2.87	2.35	2.05	1.69	1.48	1.33	1.23	1.15	1.09	1.04	1.00	0.94	0.90	0.89	0.88	0.88	1.00

	DCX	RE	a_p 0.0	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.25	1.5	2.0	2.5	3.0	4.0
PPHT 08-A2		0.3	7.4	8.0	–	–	–	–	–	–	–	–	–	–	–	–	–
PPHT 08-A2	**8**	0.5	7.0	7.9	8.0	8.0	–	–	–	–	–	–	–	–	–	–	–
PPHT 08-A2		0.8	6.4	7.6	7.8	7.9	7.9	8.0	8.0	–	–	–	–	–	–	–	–
PPHT 08-A2		1.0	6.0	7.4	7.6	7.7	7.8	7.9	8.0	8.0	8.0	–	–	–	–	–	–
PPHT 10-A2		0.5	9.0	9.9	10.0	10.0	–	–	–	–	–	–	–	–	–	–	–
PPHT 10-A2	**10**	0.8	8.4	9.6	9.8	9.9	9.9	10.0	10.0	–	–	–	–	–	–	–	–
PPHT 10-A2		1.0	8.0	9.4	9.6	9.7	9.8	9.9	10.0	10.0	10.0	–	–	–	–	–	–
PPHT 12-A2		0.5	11.0	11.9	12.0	12.0	–	–	–	–	–	–	–	–	–	–	–
PPHT 12-A2	**12**	1.0	10.0	11.4	11.6	11.7	11.8	11.9	12.0	12.0	12.0	–	–	–	–	–	–
PPHT 12-A2		2.0	8.0	10.1	10.4	10.6	10.9	11.0	11.2	11.3	11.5	11.7	11.9	12.0	–	–	–
PPHT 16-A2		1.0	14.0	15.4	15.6	15.7	15.8	15.9	16.0	16.0	16.0	–	–	–	–	–	–
PPHT 16-A2	**16**	1.3	13.4	15.1	15.3	15.4	15.6	15.7	15.8	15.9	15.9	16.0	–	–	–	–	–
PPHT 16-A2		2.0	12.0	14.1	14.4	14.6	14.9	15.0	15.2	15.3	15.5	15.7	15.9	16.0	–	–	–
PPHT 16-A2		3.0	10.0	12.6	13.0	13.3	13.6	13.9	14.1	14.3	14.5	14.9	15.2	15.7	15.9	16.0	–
PPHT 20-A2		1.0	18.0	19.4	19.6	19.7	19.8	19.9	20.0	20.0	20.0	–	–	–	–	–	–
PPHT 20-A2	**20**	1.6	16.8	18.7	18.9	19.1	19.3	19.4	19.6	19.7	19.8	19.9	20.0	–	–	–	–
PPHT 20-A2		3.0	14.0	16.6	17.0	17.3	17.6	17.9	18.1	18.3	18.5	18.9	19.2	19.7	19.9	20.0	–
PPHT 20-A2		4.0	12.0	15.0	15.5	15.9	16.2	16.5	16.8	17.1	17.3	17.8	18.2	18.9	19.4	19.7	20.0
PPHT 25-A2	**25**	2.0	21.0	23.1	23.4	23.6	23.9	24.0	24.2	24.3	24.5	24.7	24.9	25.0	–	–	–
PPHF 08-CE1	**8**	0.6	2.8	6.0	7.1	–	–	–	–	–	–	–	–	–	–	–	–
PPHF 10-CE1	**10**	0.8	3.6	6.8	7.9	9.0	–	–	–	–	–	–	–	–	–	–	–
PPHF 12-CE1	**12**	1.0	4.2	7.4	8.5	9.6	10.7	11.8	–	–	–	–	–	–	–	–	–
PPHF 16-CE1	**16**	1.3	5.6	8.8	9.9	11.0	12.1	13.2	14.2	15.3	–	–	–	–	–	–	–
PPHF 20-CE1	**20**	1.6	7.2	10.4	11.5	12.6	13.7	14.8	15.8	16.9	18.0	–	–	–	–	–	–
PPHF 25-CE1	**25**	1.9	9.2	12.4	13.5	14.6	15.7	16.8	17.8	18.9	20.0	22.7	–	–	–	–	–

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
8	FE	0.310	0.400	0.566	0.693	0.800	0.980	1.131	1.265	1.386	1.600	1.789
10		0.346	0.447	0.632	0.775	0.894	1.095	1.265	1.414	1.549	1.789	2.000
12		0.379	0.490	0.693	0.849	0.980	1.200	1.386	1.549	1.697	1.960	2.191
16		0.438	0.566	0.800	0.980	1.131	1.386	1.600	1.789	1.960	2.263	2.530
20		0.490	0.632	0.894	1.095	1.265	1.549	1.789	2.000	2.191	2.530	2.828
25		0.548	0.707	1.000	1.225	1.414	1.732	2.000	2.236	2.449	2.828	3.162

RE	µm	3	5	10	15	20	30	40	50	60	80	100
1.3	FE	0.177	0.228	0.322	0.395	0.456	0.559	0.645	0.721	0.790	0.912	1.020
1.6		0.196	0.253	0.358	0.438	0.506	0.620	0.716	0.800	0.876	1.012	1.131
1.9		0.214	0.276	0.390	0.477	0.551	0.675	0.780	0.872	0.955	1.103	1.233
2.0		0.219	0.283	0.400	0.490	0.566	0.693	0.800	0.894	0.980	1.131	1.265
3.0		0.268	0.346	0.490	0.600	0.693	0.849	0.980	1.095	1.200	1.386	1.549
4.0		0.310	0.400	0.566	0.693	0.800	0.980	1.131	1.265	1.386	1.600	1.789



	DCX	RE	max
PPHT 08-A2	8	0.3	2.4
PPHT 08-A2		0.5	2.4
PPHT 08-A2		0.8	2.5
PPHT 08-A2		1.0	2.7
PPHT 10-A2	10	0.5	3.2
PPHT 10-A2		0.8	3.3
PPHT 10-A2		1.0	3.4
PPHT 12-A2	12	0.5	4.0
PPHT 12-A2		1.0	4.2
PPHT 12-A2		2.0	4.6
PPHT 16-A2	16	1.0	5.7
PPHT 16-A2		1.3	5.8
PPHT 16-A2		2.0	6.0
PPHT 16-A2		3.0	6.4
PPHT 20-A2	20	1.0	7.2
PPHT 20-A2		1.6	7.4
PPHT 20-A2		3.0	7.8
PPHT 20-A2		4.0	8.2
PPHT 25-A2	25	2.0	9.3

	DCX	RE	max
PPHF 08-CE1	8	0.6	2.0
PPHF 10-CE1	10	0.8	2.5
PPHF 12-CE1	12	1.0	3.0
PPHF 16-CE1	16	1.3	4.0
PPHF 20-CE1	20	1.6	5.0
PPHF 25-CE1	25	1.9	6.0

	DCX	RE	RPMX	APMX/l
PPHT 08-A2	8	0.3	6.3	1.2/11
PPHT 08-A2		0.5	6.1	1.2/12
PPHT 08-A2		0.8	5.7	1.2/12
PPHT 08-A2		1.0	6.8	1.2/11
PPHT 10-A2	10	0.5	6.9	1.5/13
PPHT 10-A2		0.8	6.6	1.5/13
PPHT 10-A2		1.0	7.5	1.5/12
PPHT 12-A2	12	0.5	7.9	1.8/13
PPHT 12-A2		1.0	7.5	1.8/14
PPHT 12-A2		2.0	9.0	1.8/12
PPHT 16-A2	16	1.0	8.9	2.4/16
PPHT 16-A2		1.3	8.9	2.4/16
PPHT 16-A2		2.0	8.5	2.4/17
PPHT 16-A2		3.0	12.3	2.4/11
PPHT 20-A2	20	1.0	9.3	3/19
PPHT 20-A2		1.6	9.1	3/19
PPHT 20-A2		3.0	8.8	3/20
PPHT 20-A2		4.0	11.4	3/15
PPHT 25-A2	25	2.0	8.3	3.7/26

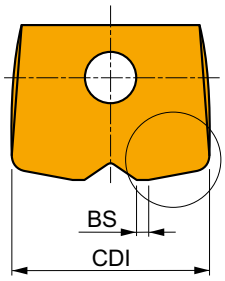
	DCX	RE	RPMX	APMX/l
PPHF 08-CE1	8	0.6	8.0	0.4/3
PPHF 10-CE1	10	0.8	8.0	0.5/4
PPHF 12-CE1	12	1.0	8.0	0.6/5
PPHF 16-CE1	16	1.3	8.0	0.8/6
PPHF 20-CE1	20	1.6	8.0	1.0/8
PPHF 25-CE1	25	1.9	8.0	1.2/9

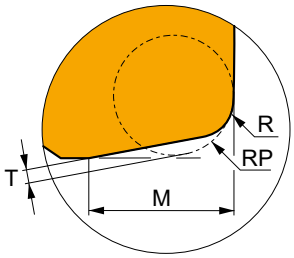
	DCX	RE	DMIN	DMAX	SMAX DMIN	SMAX DMAX
PPHT 08-A2	8	0.3	11.0	15.9	0.5	0.5
PPHT 08-A2		0.5	10.9	15.9	0.5	0.5
PPHT 08-A2		0.8	10.7	15.9	0.4	0.4
PPHT 08-A2		1.0	10.3	15.9	0.4	0.4
PPHT 10-A2	10	0.5	13.4	19.9	0.7	0.7
PPHT 10-A2		0.8	13.2	19.9	0.6	0.6
PPHT 10-A2		1.0	12.9	19.9	0.6	0.6
PPHT 12-A2	12	0.5	15.8	23.9	1.0	1.0
PPHT 12-A2		1.0	15.4	23.9	0.8	0.8
PPHT 12-A2		2.0	14.6	23.9	0.7	0.7
PPHT 16-A2	16	1.0	20.4	31.9	1.3	1.3
PPHT 16-A2		1.3	20.2	31.9	1.3	1.3
PPHT 16-A2		2.0	19.7	31.9	1.0	1.0
PPHT 16-A2		3.0	18.9	31.9	1.2	1.2
PPHT 20-A2	20	1.0	25.4	39.9	1.8	1.8
PPHT 20-A2		1.6	24.9	39.9	1.6	1.6
PPHT 20-A2		3.0	24.1	39.9	1.2	1.2
PPHT 20-A2		4.0	23.3	39.9	1.3	1.3
PPHT 25-A2	25	2.0	31.1	49.9	1.8	1.8

	DCX	RE	DMIN	DMAX	SMAX DMIN	SMAX DMAX
PPHF 08-CE1	8	0.6	10.0	14.7	0.40	0.40
PPHF 10-CE1	10	0.8	13.0	18.4	0.50	0.50
PPHF 12-CE1	12	1.0	15.7	22.0	0.60	0.60
PPHF 16-CE1	16	1.3	20.9	29.4	0.80	0.80
PPHF 20-CE1	20	1.6	26.2	36.7	1.00	1.00
PPHF 25-CE1	25	1.9	33.0	46.1	1.20	1.20

	DCX	RE	a_p
PPHT 08-A2	**8**	0.3	0.52
PPHT 08-A2		0.5	0.47
PPHT 08-A2		0.8	0.39
PPHT 08-A2		1.0	0.40
PPHT 10-A2	**10**	0.5	0.69
PPHT 10-A2		0.8	0.61
PPHT 10-A2		1.0	0.62
PPHT 12-A2	**12**	0.5	0.97
PPHT 12-A2		1.0	0.79
PPHT 12-A2		2.0	0.68
PPHT 16-A2	**16**	1.0	1.33
PPHT 16-A2		1.3	1.26
PPHT 16-A2		2.0	1.03
PPHT 16-A2		3.0	1.15
PPHT 20-A2	**20**	1.0	1.80
PPHT 20-A2		1.6	1.59
PPHT 20-A2		3.0	1.21
PPHT 20-A2		4.0	1.27
PPHT 25-A2	**25**	2.0	1.83

	DCX	RE	a_p
PPHF 08-CE1	**8**	0.6	0.40
PPHF 10-CE1	**10**	0.8	0.50
PPHF 12-CE1	**12**	1.0	0.60
PPHF 16-CE1	**16**	1.3	0.80
PPHF 20-CE1	**20**	1.6	1.00
PPHF 25-CE1	25	1.9	1.20





DCX	R	RP	M	T
08	0.6	1.0	2.6	0.3
10	0.8	1.2	3.2	0.4
12	1.0	1.5	3.9	0.4
16	1.3	2.0	5.2	0.6
20	1.6	2.5	6.4	0.7
25	1.9	3.0	7.9	0.9

Overhang (multiple of diameter DCX)	**<3.0**	**3.0 – 3.5**	**3.6 – 4.0**	**4.1 – 4.5**	**>4.6**
Multiplication factor for speed	1.0	0.9	0.8	0.7	0.5

SVC22C

N

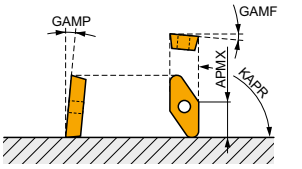
PRAMET

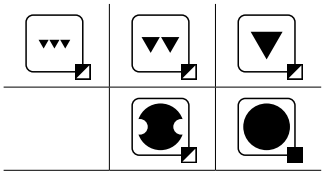
S

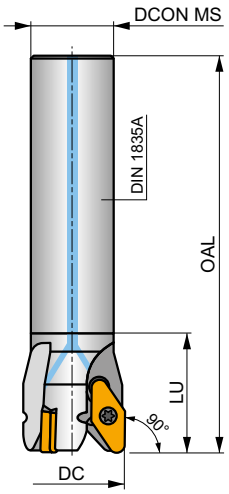
Milling Cutters for Machining Non ferrous materials with Internal Coolant

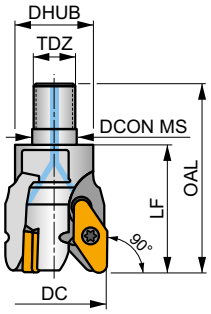
Highly productive cutter for aluminium and non ferrous material utilising VCGT 22 inserts with APMX of 16 mm. Internal coolant. Suitable for face, progressive plunge, shoulder, ramping and slot milling. Available in cylindrical, modular and arbor style, in range of Ø32 up to Ø80 mm. Body treated for longer tool life.

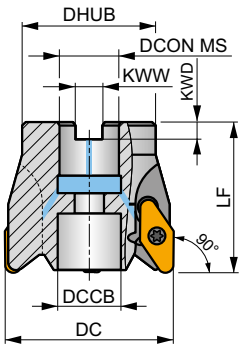
KAPR	90°
APMX	3.0 (16.0) mm

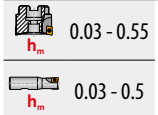












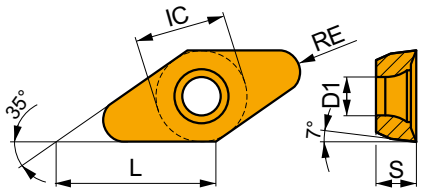
	Product	DC [mm]	OAL [mm]	DCON MS [mm]	DCCB [mm]	LU [mm]	LF [mm]	DHUB [mm]	TDZ	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg		
DIN 1835A	**32A2R045A25-SVC22C**	32	120	25	–	45	–	–	–	–	–	4	3	2	–	10400	✓	0.46	GI141	C0560
	40A3R045A32-SVC22C	40	150	32	–	45	–	–	–	–	–	8	3	3	–	9300	✓	0.91	GI141	C0560
MODULAR	**32A2R048M16-SVC22C**	32	71	17	–	–	48	29	M16	–	–	11	3	2	–	–	✓	0.23	GI141	C0560
	40A3R048M16-SVC22C	40	71	17	–	–	48	29	M16	–	–	13	3	3	–	–	✓	0.26	GI141	C0560
ISO 6462 DIN 8030	**50A03R-S90VC22C**	50	–	22	18	–	56	40	–	10	6.3	4	3	3	–	8400	✓	0.44	GI141	C0563
	63A04R-S90VC22C	63	–	22	18	–	56	50	–	10	6.3	6	3	4	–	7400	✓	0.68	GI141	C0563
	80A05R-S90VC22C	80	–	27	20	–	56	63	–	12	7	8	3	5	–	6600	✓	1.15	GI141	C0562

GI141	VCGT 220530F-FA

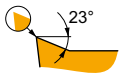
		Nm					
C0560	US 4511-T20	5.0	M 4.5	11	–	–	Flag T20
C0562	US 4511-T20	5.0	M 4.5	11	SDR T20-T	–	–
C0563	US 4511-T20	5.0	M 4.5	11	SDR T20-T	HS 1030C	–

VCGT 22-FA

	IC [mm]	D1 [mm]	L [mm]	S [mm]
2205	12.700	5.20	22.00	5.50



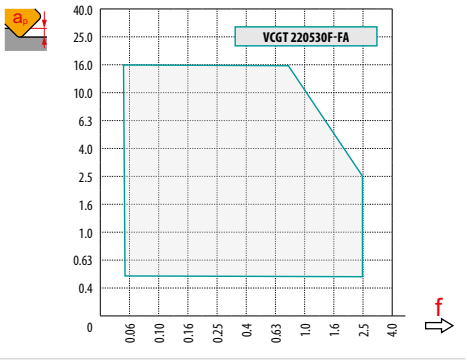
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																				
VCGT 220530F-FA	HF7	3.0	–	–	–	–	–	–	–	–	–	210	0.48	1.0	–	–	–	–	–	–

FA geometry with highly positive design for medium to rough machining.

a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	VCGT 22-FA
RE	3.0
BS	–



a_p	0.5	3.0	12.0
f	0.86	0.31	0.05

DC	RPMX	APMX/I
32	8.0	12.0/87
40	8.0	12.0/87
50	6.0	10.4/100
63	4.2	7.2/100
80	3.1	5.3/100

DC	DMIN	DMAX	SMAX DMIN	SMAX DMAX
32	42.0	64.0	4.2	12.0
40	58.0	80.0	7.7	12.0
50	78.0	100.0	9.0	12.0
63	104.0	126.0	9.3	12.0
80	138.0	160.0	9.7	12.0

a_p
9

DC	µm	3	5	10	15	20	30	40	50	60	80	100
32	FE	0.620	0.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578
40		0.693	0.894	1.265	1.549	1.789	2.191	2.530	2.828	3.098	3.578	4.000
50		0.775	1.000	1.414	1.732	2.000	2.449	2.828	3.162	3.464	4.000	4.472
63		0.869	1.122	1.587	1.944	2.245	2.750	3.175	3.550	3.888	4.490	5.020
80		0.980	1.265	1.789	2.191	2.530	3.098	3.578	4.000	4.382	5.060	5.657
RE	µm	3	5	10	15	20	30	40	50	60	80	100
3.0	FE	0.268	0.346	0.490	0.600	0.693	0.849	0.980	1.095	1.200	1.386	1.549

SWN04C

P K H

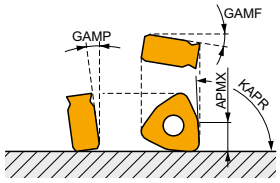
PRAMET

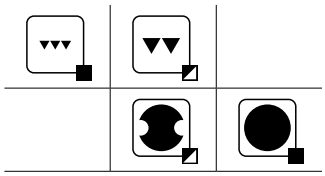
S

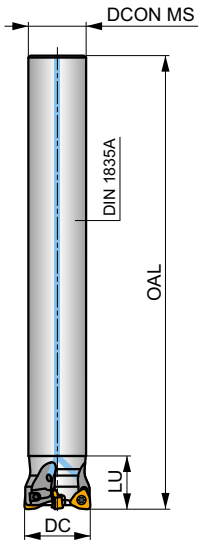
End Mills for Die & Mold Applications with Internal Coolant

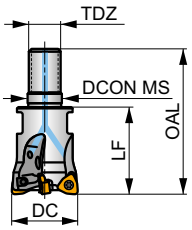
End mill for a wide range of applications in the finishing area for Die & Mold with APMX of 0.5 mm. High precision ground WNHX 04 inserts with 6 cutting edges, provide high accuracy and economy. Available in cylindrical and modular style, in range Ø20 up to Ø35 mm. Body treated for longer tool life.

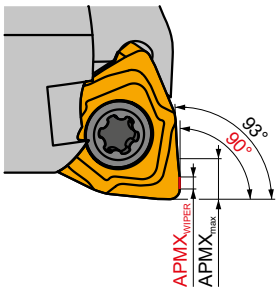
KAPR	90° (93°)
APMX	0.5 (2.0 mm)











h_m 0.02 - 0.07

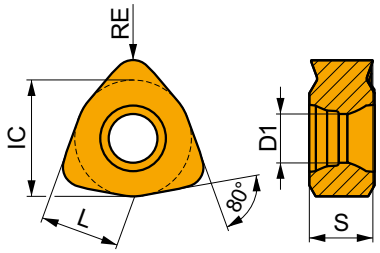
	Product	DC [mm]	OAL [mm]	DCON MS [mm]	LU [mm]	LF [mm]	TDZ	GAMF [°]	GAMP [°]			max.		kg		
DIN 1835A	**20A3R020A18-SWN04C-C**	20	160	18	20	–	–	-12	-8	3	–	19700	–	0.27	GI331	C0602
	25A4R020A22-SWN04C-C	25	180	22	20	–	–	-11.5	-8	4	–	26600	–	0.45	GI331	C0602
	32A6R020A25-SWN04C-C	32	200	25	20	–	–	-11.2	-8	6	–	23500	–	0.69	GI331	C0602
MODULAR	**20A3R030M10-SWN04C-C**	20	49	10.5	–	30	M10	-12	-8	3	–	–	–	0.08	GI331	C0602
	25A4R033M12-SWN04C-C	25	55	12.5	–	33	M12	-11.5	-8	4	–	–	–	0.11	GI331	C0602
	32A6R040M16-SWN04C-C	32	63	17	–	40	M16	-11.2	-8	6	–	–	–	0.19	GI331	C0602
	35A6R043M16-SWN04C-C	35	66	17	–	43	M16	-11.1	-8	6	–	–	–	0.22	GI331	C0602

GI331	WNHX0403..

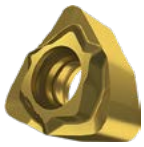
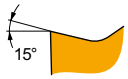
		Nm			
C0602	US 42507-T07P	1.2	M 2.5	7	Flag T07P

WNHX 04

	IC	D1	S
	[mm]	[mm]	[mm]
0403	6.200	2.60	3.38



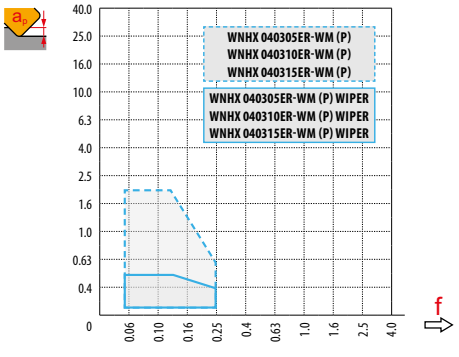
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

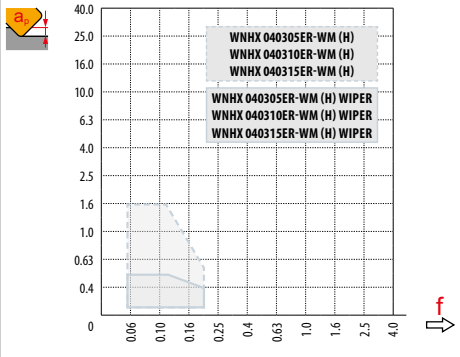
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
			WM geometry with wiper design for semi-finish to finish machining.																	
WNHX 040305ER-WM	**M4310**	0.5	◪ 290	0.15	1.0	–	–	–	■ 275	0.15	1.0	–	–	–	–	–	–	■ 55	0.15	1.0
	M8330	0.5	■ 260	0.15	1.0	–	–	–	■ 245	0.15	1.0	–	–	–	–	–	–	◪ 50	0.15	1.0
WNHX 040310ER-WM	**M4310**	1.0	◪ 370	0.15	1.0	–	–	–	■ 350	0.15	1.0	–	–	–	–	–	–	■ 70	0.15	1.0
	M8330	1.0	■ 330	0.15	1.0	–	–	–	■ 310	0.15	1.0	–	–	–	–	–	–	◪ 65	0.15	1.0
WNHX 040315ER-WM	**M4310**	1.5	◪ 390	0.15	1.0	–	–	–	■ 370	0.15	1.0	–	–	–	–	–	–	■ 75	0.15	1.0
	M8330	1.5	■ 345	0.15	1.0	–	–	–	■ 325	0.15	1.0	–	–	–	–	–	–	◪ 65	0.15	1.0

a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00

a_e / DC	0.5 %	1.0 %	2.0 %	3.0 %	4.0 %	5.0 %
X.V	2.04	1.85	1.68	1.59	1.53	1.48

	WNHX 04-WM		
RE	0.5	1.0	1.5
BS	0.50	0.50	0.50





DC	max
20	0.4
25	0.5
32	0.5
35	0.5

DC	RPMX	APMX/l
20	0.7	1.1/100
25	0.5	0.75/100
32	0.3	0.4/100
35	0.3	0.4/100

SCN05C

P K H

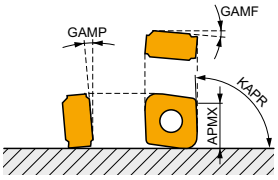
PRAMET

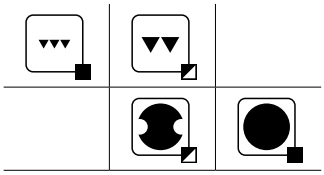
S

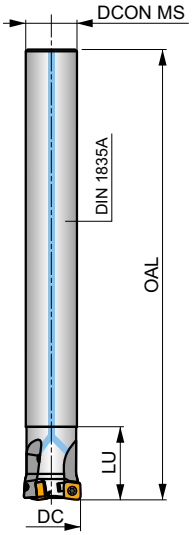
End Mills for Die & Mold Applications with Internal Coolant

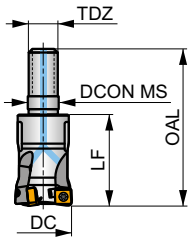
End mill for a wide range of applications in the finishing area for Die & Mold with APMX of 0.5 mm. High precision ground double-sided CNHX 05 inserts with 4 cutting edges provide high accuracy and economy. Available in cylindrical and modular style, in range Ø12 up to Ø20 mm. Body treated for longer tool life.

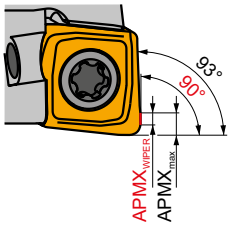
KAPR	90° (93°)
APMX	0.5 (1.0 mm)











h_m 0.02 - 0.07

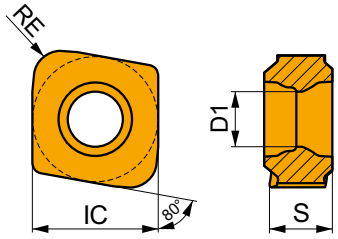
	Product	DC [mm]	OAL [mm]	DCON MS [mm]	LU [mm]	LF [mm]	TDZ	GAMF [°]	GAMP [°]			max.		kg		
DIN 1835A	**12A2R020A10-SCN05C-C**	12	100	10	20	–	–	-15	-8	2	–	48700	✓	0.08	GI330	C0601
	16A3R020A14-SCN05C-C	16	130	14	20	–	–	-13.5	-7.8	3	–	42200	✓	0.13	GI330	C0601
	20A5R020A18-SCN05C-C	20	160	18	20	–	–	-12.7	-7.5	5	✓	37700	✓	0.28	GI330	C0601
MODULAR	**12A2R020M06-SCN05C-C**	12	35	6.5	–	20	M6	-15	-8	2	–	–	✓	0.04	GI330	C0601
	16A3R025M08-SCN05C-C	16	43	8.5	–	25	M8	-13.5	-7.8	3	–	–	✓	0.06	GI330	C0601
	20A5R030M10-SCN05C-C	20	49	10.5	–	30	M10	-12.7	-7.5	5	✓	–	✓	0.08	GI330	C0601

GI330	CNHX0502..

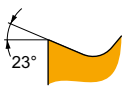
		Nm			
C0601	US 62005-T06P	0.9	M 2	4.9	Flag T06P

CNHX 05

	IC [mm]	D1 [mm]	S [mm]
0502	4.800	2.10	2.40



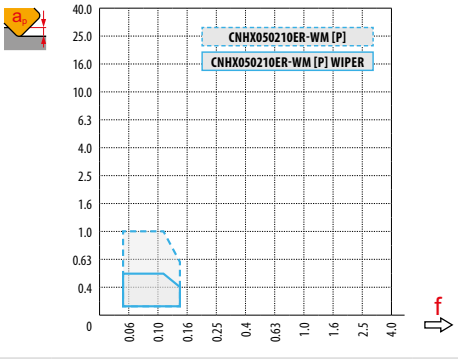
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

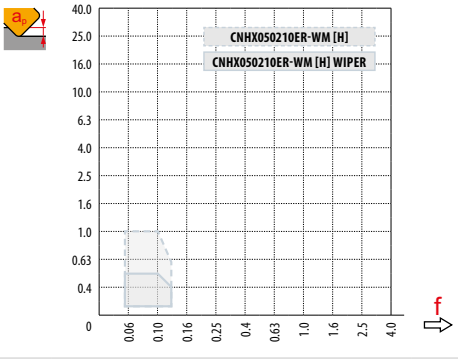
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																				
			WM geometry with wiper design for semi-finish to finish machining.																	
CNHX 050205ER-WM	**M4310**	0.5	◪ 350	0.10	0.5	–	–	–	■ 335	0.10	0.5	–	–	–	–	–	–	■ 70	0.15	1.0
	M8330	0.5	■ 310	0.10	0.5	–	–	–	■ 290	0.10	0.5	–	–	–	–	–	–	◪ 60	0.15	1.0
CNHX 050210ER-WM	**M4310**	1.0	◪ 440	0.10	0.5	–	–	–	■ 420	0.10	0.5	–	–	–	–	–	–	■ 85	0.15	1.0
	M8330	1.0	■ 390	0.10	0.5	–	–	–	■ 370	0.10	0.5	–	–	–	–	–	–	◪ 75	0.15	1.0

a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00

a_e / DC	0.5 %	1.0 %	2.0 %	3.0 %	4.0 %	5.0 %
X.V	2.04	1.85	1.68	1.59	1.53	1.48

	CNHX 05-WM	
RE	0.5	1.0
BS	0.50	0.50





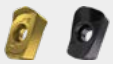
DC	max.
12	0.4
16	0.4
20	0.5

DC	RPMX	APMX/I
12	2.4	1/25
16	1.5	1/40
20	1.1	1/54

INDEXABLE HIGH FEED MILLS

HIGH FEED MILLING

>>>

	SBN10	SSN11	SPD09	SZD07	SZD09
	20°	18°	19°	–	–
	APMX [mm] 1.0	APMX [mm] 1.7	APMX [mm] 2.0	APMX [mm] 1.0	APMX [mm] 1.0
	DCX [mm] 16 – 42	DCX [mm] 32 – 125	DCX [mm] 32 – 140	DCX [mm] 16 – 32	DCX [mm] 25 – 66
Cylindrical shank	DCX = 16 – 35 [mm]	DCX = 32 – 35 [mm]	DCX = 32 – 40 [mm]	DCX = 16 – 25 [mm]	
Weldon					DCX = 25 – 32 [mm]
Modular	DCX = 16 – 40 [mm]	DCX = 32 – 40 [mm]		DCX = 16 – 32 [mm]	DCX = 25 – 42 [mm]
Shell mill	DCX = 40 – 42 [mm]	DCX = 40 – 125 [mm]	DCX = 42 – 140 [mm]		DCX = 40 – 66 [mm]
Page	616	622	627	633	637
ISO	P M K S H	P M K S	P M K S H	P K H	P K H
Insert shape					
Inserts	BNGX 10T3 ANHX 10T3	SNGX 1104	PD.. 0905	ZDCW 0703	ZDCW 09T3
No. of cutting edges	4 / 2	8	5	4	4
Face milling	■	■	■	■	■
Helical interpolation	■	◪	■	◪	◪
Shallow shoulder milling	■	■	■	◪	◪
Plunge milling	■	■	■	◪	◪
Progressive plunging	■	◪	■	◪	◪
Ramping	■	◪	■		
Shape surfaces milling (copy milling)	■	■	◪	◪	◪
Shallow slot milling	◪	◪	◪	◪	◪

	SZD12					
	–					
	APMX [mm] 1.6					
	DCX [mm] 32 – 80					
	DCX = 40 [mm]					
	DCX = 32 – 40 [mm]					
	DCX = 50 – 80 [mm]					
	641					
	P K H					
	ZDEW 1204					
	4					
	■					
	◪					
	◪					
	◪					
	◪					
	◪					
	◪					

SBN10

P M K S H

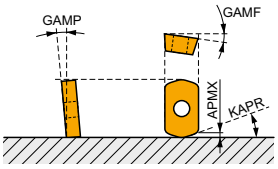
PRAMET

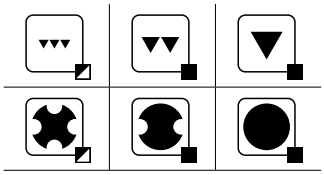
S

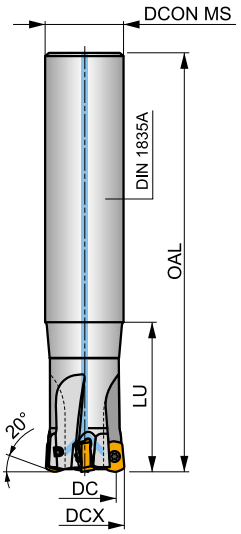
High Feed Milling Cutter for BN.. 10 inserts with Internal Coolant, Next Generation

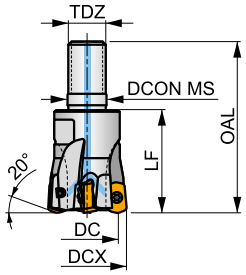
High-feed milling cutter for smaller diameters utilising double-sided BNGX 10 inserts with four cutting edges and APMX of 1 mm. Internal coolant. Suitable for a wide range of applications. Available in cylindrical, modular and arbor style in range of Ø16 up to Ø42 mm. Body treated for longer tool life.

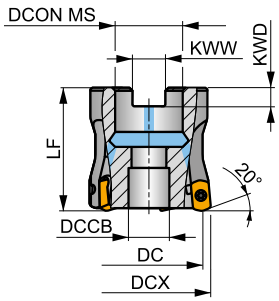
KAPR	20°
APMX	1.0 mm











h_m 0.17 - 0.41

h_m 0.17 - 0.41

	Product	DCX [mm]	DC [mm]	OAL [mm]	DCON MS [mm]	DCCB [mm]	LU [mm]	LF [mm]	TDZ	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg		
	16E2R030A16-SBN10-C	16	9.4	100	16	–	30	–	–	–	–	-12	-10	2	✓	31100	✓	0.13	GI329	C0310
	16E2R050A16-SBN10-C	16	9.4	150	16	–	50	–	–	–	–	-12	-10	2	–	31100	✓	0.18	GI329	C0310
	16E2R030A14-SBN10-C	16	9.4	150	14	–	30	–	–	–	–	-12	-10	2	–	31100	✓	0.15	GI329	C0310
	18E2R030A16-SBN10-C	18	11.4	150	16	–	30	–	–	–	–	-11	-10	2	–	29200	✓	0.20	GI329	C0310
	20E3R040A20-SBN10-C	20	13.4	130	20	–	40	–	–	–	–	-10	-10	3	–	27700	✓	0.25	GI329	C0310
	20E3R080A20-SBN10-C	20	13.4	160	20	–	80	–	–	–	–	-10	-10	3	–	27700	✓	0.29	GI329	C0310
	20E3R040A18-SBN10-C	20	13.4	180	18	–	40	–	–	–	–	-10	-10	3	–	27700	✓	0.30	GI329	C0310
	20E4R040A20-SBN10-C	20	13.4	130	20	–	40	–	–	–	–	-10	-10	4	–	27700	✓	0.26	GI329	C0310
DIN 1835A	**25E4R050A25-SBN10-C**	25	18.4	140	25	–	50	–	–	–	–	-9	-10	4	✓	24800	✓	0.42	GI329	C0310
	25E4R100A25-SBN10-C	25	18.4	180	25	–	100	–	–	–	–	-9	-10	4	✓	24800	✓	0.51	GI329	C0310
	25E4R050A22-SBN10-C	25	18.4	220	22	–	50	–	–	–	–	-9	-10	4	✓	24800	✓	0.54	GI329	C0310
	25E5R050A25-SBN10-C	25	18.4	140	25	–	50	–	–	–	–	-9	-10	5	–	24800	✓	0.42	GI329	C0310
	32E5R070A32-SBN10-C	32	25.4	150	32	–	70	–	–	–	–	-8	-10	5	✓	21900	✓	0.73	GI329	C0310
	32E6R070A32-SBN10-C	32	25.4	150	32	–	70	–	–	–	–	-8	-10	6	✓	21900	✓	0.73	GI329	C0310
	32E5R120A32-SBN10-C	32	25.4	200	32	–	120	–	–	–	–	-8	-10	5	✓	21900	✓	1.02	GI329	C0310
	35E5R050A32-SBN10-C	35	28.4	200	32	–	50	–	–	–	–	-7.5	-10	5	✓	21000	✓	1.08	GI329	C0310
	35E6R050A32-SBN10-C	35	28.4	200	32	–	50	–	–	–	–	-7.5	-10	6	✓	21000	✓	1.08	GI329	C0310
	16E2R025M08-SBN10-C	16	9.4	43	8.5	–	–	25	M8	–	–	-12	-10	2	–	31100	✓	0.03	GI329	C0310
	18E2R025M08-SBN10-C	18	11.4	43	8.5	–	–	25	M8	–	–	-11	-10	2	–	29200	✓	0.06	GI329	C0310
	20E3R030M10-SBN10-C	20	13.4	49	10.5	–	–	30	M10	–	–	-10	-10	3	–	27700	✓	0.08	GI329	C0310
	20E4R030M10-SBN10-C	20	13.4	49	10.5	–	–	30	M10	–	–	-10	-10	4	–	27700	✓	0.08	GI329	C0310
MODULAR	**25E4R033M12-SBN10-C**	25	18.4	55	12.5	–	–	33	M12	–	–	-9	-10	4	✓	24800	✓	0.08	GI329	C0310
	25E5R033M12-SBN10-C	25	18.4	55	12.5	–	–	33	M12	–	–	-9	-10	5	–	24800	✓	0.10	GI329	C0310
	28E5R035M12-SBN10-C	28	21.4	57	12.5	–	–	35	M12	–	–	-8.5	-10	5	✓	23400	✓	0.13	GI329	C0310
	32E5R040M16-SBN10-C	32	25.4	63	17	–	–	40	M16	–	–	-8	-10	5	✓	21900	✓	0.21	GI329	C0310
	32E6R040M16-SBN10-C	32	25.4	63	17	–	–	40	M16	–	–	-8	-10	6	✓	21900	✓	0.21	GI329	C0310
	35E6R043M16-SBN10-C	35	28.4	66	17	–	–	43	M16	–	–	-7.5	-10	6	✓	21000	✓	0.24	GI329	C0310

	Product	DCX [mm]	DC [mm]	OAL [mm]	DCON MS [mm]	DCCB [mm]	LU [mm]	LF [mm]	TDZ	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg		
MODULAR	**40E6R043M16-SBN10-C**	40	33.4	66	17	–	–	43	M16	–	–	-7	-10	6	✓	19600	✓	0.27	GI329	C0310
MODULAR	**40E7R043M16-SBN10-C**	40	33.4	66	17	–	–	43	M16	–	–	-7	-10	7	✓	19600	✓	0.26	GI329	C0310
ISO 6462 DIN 8030	**40A05R-SM0BN10-C**	40	33.4	–	16	14.1	–	40	–	8.4	5.6	-7	-10	5	✓	19600	✓	0.23	GI329	C0312
ISO 6462 DIN 8030	**40A07R-SM0BN10-C**	40	33.4	–	16	14.1	–	40	–	8.4	5.6	-7	-10	7	✓	19600	✓	0.27	GI329	C0312
ISO 6462 DIN 8030	**42A05R-SM0BN10-C**	42	35.4	–	16	14.1	–	40	–	8.4	5.6	-7	-10	5	✓	19100	✓	0.23	GI329	C0312
ISO 6462 DIN 8030	**42A07R-SM0BN10-C**	42	35.4	–	16	14.1	–	40	–	8.4	5.6	-7	-10	7	✓	19100	✓	0.26	GI329	C0312

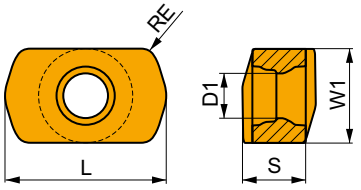
GI329	BNGX 10T3…	ANHX 10T3..

		Nm					
C0310	US 42507-T07P	3.0	M 2.5	7	Flag T07P	–	–
C0312	US 42507-T07P	3.0	M 2.5	7	D-T07P/T09P	FG-15	HS 0830C

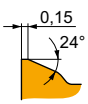
BNGX 10

PRAMET

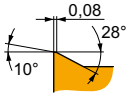
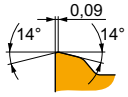
	W1 [mm]	D1 [mm]	L [mm]	S [mm]
10T3	5.800	2.76	9.92	3.90



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																				
			M geometry with positive design for high feed machining.																	
BNGX 10T308SR-M	**8215**	0.8	■ 240	0.65	0.7	–	–	–	■ 225	0.65	0.7	–	–	–	–	–	–	◪ 45	0.15	1.0
	M6330	0.8	■ 210	0.65	0.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	M8310	0.8	■ 250	0.65	0.7	–	–	–	■ 235	0.65	0.7	–	–	–	–	–	–	◪ 50	0.15	1.0
	M8330	0.8	■ 240	0.65	0.7	–	–	–	■ 225	0.65	0.7	–	–	–	–	–	–	◪ 45	0.15	1.0
	M8340	0.8	■ 225	0.65	0.7	–	–	–	◪ 210	0.65	0.7	–	–	–	–	–	–	–	–	–
	M8345	0.8	■ 180	0.65	0.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	M9325	0.8	■ 275	0.65	0.7	–	–	–	■ 260	0.65	0.7	–	–	–	–	–	–	◪ 55	0.15	1.0

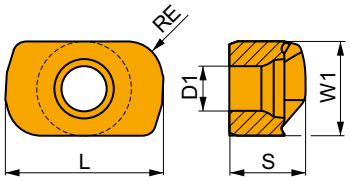
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
			MM geometry with highly positive design for high feed machining.																	
BNGX 10T308SR-MM	**M6330**	0.8	215	0.65	0.6	150	0.59	0.6	–	–	–	–	–	–	60	0.46	0.5	–	–	–
	M8310	0.8	255	0.65	0.6	130	0.59	0.6	–	–	–	–	–	–	–	–	–	–	–	–
	M8330	0.8	245	0.65	0.6	145	0.59	0.6	–	–	–	–	–	–	60	0.46	0.5	–	–	–
	M8340	0.8	230	0.65	0.6	135	0.59	0.6	–	–	–	–	–	–	55	0.46	0.5	–	–	–
	M8345	0.8	180	0.65	0.6	105	0.59	0.6	–	–	–	–	–	–	45	0.46	0.5	–	–	–
	M9325	0.8	280	0.65	0.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	M9340	0.8	250	0.65	0.6	150	0.59	0.6	–	–	–	–	–	–	60	0.46	0.5	–	–	–
																				
			HM geometry with strong design for high feed machining.																	
BNGX 10T308SR-HM	**8215**	0.8	–	–	–	–	–	–	290	0.30	0.4	–	–	–	–	–	–	60	0.15	1.0
	M8310	0.8	–	–	–	–	–	–	305	0.30	0.4	–	–	–	–	–	–	65	0.15	1.0
	M8330	0.8	–	–	–	–	–	–	285	0.30	0.4	–	–	–	–	–	–	60	0.15	1.0

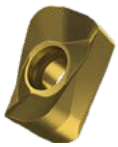
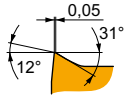
ANHX 10

PRAMET

	W1	D1	L	S
	[mm]	[mm]	[mm]	[mm]
10T3	5.800	2.76	9.72	4.70



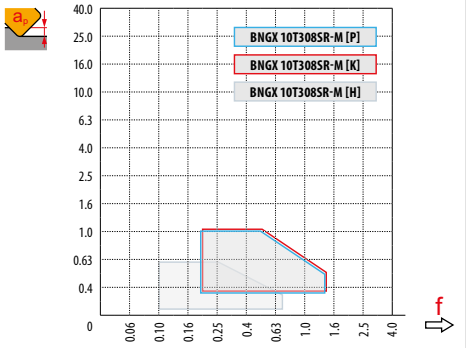
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

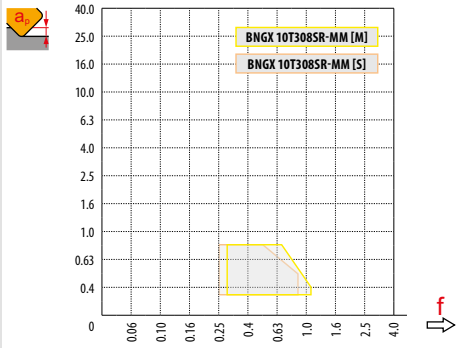
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
			F geometry with positive design for finish and semi-finish machining.																	
ANHX 10T320SR-F	**M8310**	2.0	380	0.10	2.5	190	0.09	2.5	–	–	–	–	–	–	–	–	–	–	–	–
	M8330	2.0	340	0.10	2.5	200	0.09	2.5	–	–	–	–	–	–	–	–	–	–	–	–

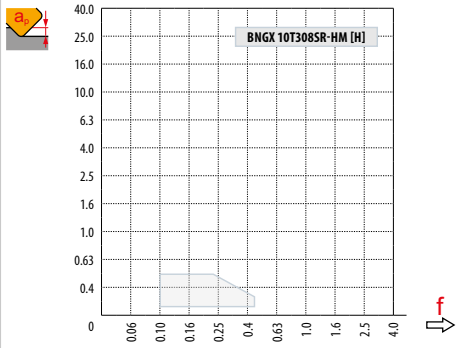
a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨X.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨X.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

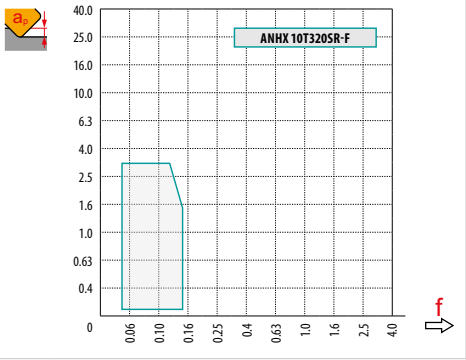
	BNGX 10-M	BNGX 10-MM	BNGX 10-HM
RE	0.8	0.8	0.8
BS	–	–	–

	ANHX 10 - F
RE	2.0
BS	0.92









BNGX 10 (HFC)

DCX	a_p	0.00	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00
16		9.40	12.85	13.36	13.80	14.20	14.56	14.88	15.19	15.47
18		11.40	14.85	15.36	15.80	16.20	16.56	16.88	17.19	17.47
20		13.40	16.85	17.36	17.80	18.20	18.56	18.88	19.19	19.47
25		18.40	21.85	22.36	22.80	23.20	23.56	23.88	24.19	24.47
28	DEF	21.40	24.85	25.36	25.80	26.20	26.56	26.88	27.19	27.47
32		25.40	28.85	29.36	29.80	30.20	30.56	30.88	31.19	31.47
35		28.40	31.85	32.36	32.80	33.20	33.56	33.88	34.19	34.47
40		33.40	36.85	37.36	37.80	38.20	38.56	38.88	39.19	39.47
42		35.40	38.85	39.36	39.80	40.20	40.56	40.88	41.19	41.47
	a_p	**0.00**	**0.30**	**0.40**	**0.50**	**0.60**	**0.70**	**0.80**	**0.90**	**1.00**
	f	–	1.30	1.10	0.90	0.80	0.72	0.68	0.65	0.50

BNGX 10

DCX	a_{emax}	f_{max}
16	3.5	0.12
18	3.5	0.12
20	4.0	0.15
25	4.0	0.15
28	4.0	0.17
32	4.0	0.17
35	4.0	0.17
40	4.0	0.17
42	4.0	0.17

BNGX 10 (HFC)

a_p	0.3	0.6	1.0
f	1.10	0.60	0.30

BNGX 10 (HFC)

DCX	RPMX	APMX/l
16	4.0	1/16
18	4.0	1/16
20	4.0	1/16
25	2.8	1/22
28	2.3	1/26
32	1.9	1/32
35	1.7	1/35
40	1.3	1/46
42	1.3	1/46

ANHX 10

DCX	RPMX	APMX/l
16	1.6	2.65/100
18	1.3	2.15/100
20	1.1	1.80/100
25	0.8	1.25/100
28	0.7	1.10/100
32	0.5	0.75/100
35	0.5	0.75/100
40	0.4	0.55/100
42	0.4	0.55/100

BNGX 10 (HFC)

DCX	a_p	f_{max}
16	0.4	0.15
18	0.7	0.15
20	0.7	0.15
25	0.7	0.15
28	0.7	0.2
32	0.7	0.2
35	0.7	0.2
40	0.7	0.2
42	0.7	0.2

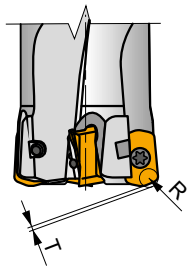
BNGX 10 (HFC)

DCX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
16	22.4	31.8	0.5	0.5
18	25.4	35.8	0.5	0.5
20	29.4	39.8	0.5	0.5
25	39.4	49.8	0.5	0.5
28	45.4	55.8	0.5	0.5
32	53.4	63.8	0.5	0.5
35	59.4	69.8	0.5	0.5
40	69.4	79.8	0.5	0.5
42	73.4	83.8	0.5	0.5

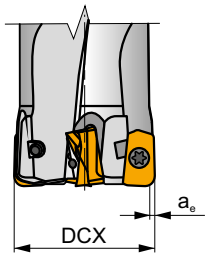
DCX	µm	3	5	10	15	20	30	40	50	60	80	100
16	FE	0.438	0.566	0.800	0.980	1.131	1.386	1.600	1.789	1.960	2.263	2.530
18		0.465	0.600	0.849	1.039	1.200	1.470	1.697	1.897	2.078	2.400	2.683
20		0.490	0.632	0.894	1.095	1.265	1.549	1.789	2.000	2.191	2.530	2.828
25		0.548	0.707	1.000	1.225	1.414	1.732	2.000	2.236	2.449	2.828	3.162
28		0.580	0.748	1.058	1.296	1.497	1.833	2.117	2.366	2.592	2.993	3.347
32		0.620	0.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578
35		0.648	0.837	1.183	1.449	1.673	2.049	2.366	2.646	2.898	3.347	3.742
40		0.693	0.894	1.265	1.549	1.789	2.191	2.530	2.828	3.098	3.578	4.000
42		0.710	0.917	1.296	1.587	1.833	2.245	2.592	2.898	3.175	3.666	4.099

ANHX 10

RE	µm	3	5	10	15	20	30	40	50	60	80	100
2.0	FE	0.219	0.283	0.400	0.490	0.566	0.693	0.800	0.894	0.980	1.131	1.265



	R	T
BNGX 10T308	1.60	0.44



	max a_e/DCX
ANHX 10T320	0.05

SSN11

P M K S

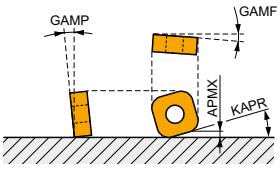
PRAMET

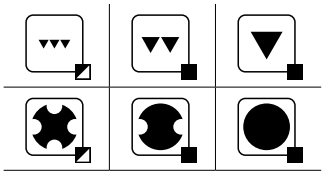
S

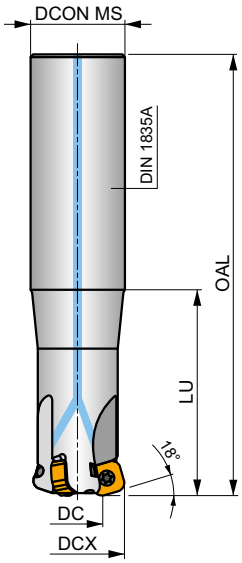
High Feed Milling Cutter for SN.. 11 inserts with Internal Coolant, Next Generation

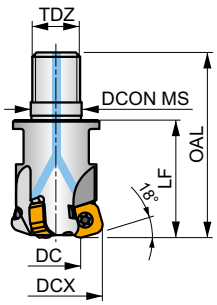
High-feed milling cutter for bigger diameters utilising double-sided SNXG 11 inserts with eight cutting edges and APMX of 1.7 mm. Internal coolant. Suitable for a wide range of applications. Available in cylindrical, modular and arbor style in range of Ø32 up to Ø125 mm. Body treated for longer tool life.

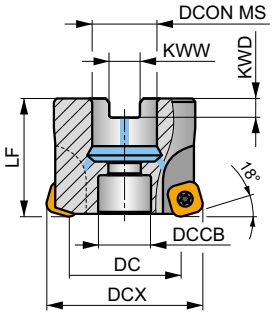
KAPR	18°
APMX	1.7 mm











h_m 0.20 - 0.46

h_m 0.20 - 0.46

	Product	DCX [mm]	DC [mm]	OAL [mm]	DCON MS [mm]	DCCB [mm]	LU [mm]	LF [mm]	TDZ	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]		ZNP	max.		kg			
DIN 1835A	32E3R070A32-SSN11-C	32	18.3	150	32	–	70	–	–	–	–	-11.5	-10	3	–	–	17500	✓	0.69	GI339	C0314	–
DIN 1835A	32E3R120A32-SSN11-C	32	18.3	200	32	–	120	–	–	–	–	-11.5	-10	3	–	–	17500	✓	0.89	GI339	C0314	–
DIN 1835A	35E3R050A32-SSN11-C	35	21.2	200	32	–	50	–	–	–	–	-11	-10	3	–	–	16800	✓	1.11	GI339	C0314	–
MODULAR	32E3R040M16-SSN11-C	32	18.3	63	17	–	–	40	M16	–	–	-11.5	-10	3	–	–	17500	✓	0.17	GI339	C0314	–
MODULAR	35E3R040M16-SSN11-C	35	21.2	63	17	–	–	40	M16	–	–	-11	-10	3	–	–	16800	✓	0.19	GI339	C0314	–
MODULAR	40E4R043M16-SSN11-C	40	26.2	66	17	–	–	43	M16	–	–	-10.5	-10	4	–	✓	15700	✓	0.23	GI339	C0314	–
ISO 6462 DIN 8030	40A04R-SMOSN11-C	40	26.2	–	16	12.4	–	40	–	8.4	5.6	-10.5	-10	4	–	✓	15700	✓	0.19	GI339	C0316	–
ISO 6462 DIN 8030	42A04R-SMOSN11-C	42	28.2	–	16	14.1	–	40	–	8.4	5.6	-10.5	-10	4	–	✓	15300	✓	0.21	GI339	C0318	–
ISO 6462 DIN 8030	50A05R-SMOSN11-C	50	36.1	–	22	18.1	–	40	–	10.4	6.3	-10	-10	5	–	✓	14000	✓	0.31	GI339	C0320	–
ISO 6462 DIN 8030	50A06R-SMOSN11-C	50	36.1	–	22	18.1	–	40	–	10.4	6.3	-10	-10	6	–	✓	14000	✓	0.31	GI339	C0320	–
ISO 6462 DIN 8030	52A05R-SMOSN11-C	52	38.1	–	22	18.1	–	40	–	10.4	6.3	-10	-10	5	–	✓	13800	✓	0.34	GI339	C0320	–
ISO 6462 DIN 8030	52A06R-SMOSN11-C	52	38.1	–	22	18.1	–	40	–	10.4	6.3	-10	-10	6	–	✓	13800	✓	0.33	GI339	C0320	–
ISO 6462 DIN 8030	63A06R-SMOSN11-C	63	49.1	–	22	18.1	–	40	–	10.4	6.3	-10	-10	6	–	✓	12500	✓	0.46	GI339	C0320	–
ISO 6462 DIN 8030	63A08R-SMOSN11-C	63	49.1	–	22	18.1	–	40	–	10.4	6.3	-10	-10	8	–	✓	12500	✓	0.47	GI339	C0320	–
ISO 6462 DIN 8030	66A06R-SMOSN11-C	66	52.1	–	27	18.1	–	50	–	12.4	7	-10	-10	6	–	✓	12200	✓	0.74	GI339	C0322	–
ISO 6462 DIN 8030	66A08R-SMOSN11-C	66	52.1	–	27	18.1	–	50	–	12.4	7	-10	-10	8	–	✓	12200	✓	0.75	GI339	C0322	–
ISO 6462 DIN 8030	80A07R-SMOSN11-C	80	66.1	–	27	38.1	–	50	–	12.4	7	-10	-10	7	–	✓	11100	✓	0.95	GI339	C0324	AC001
ISO 6462 DIN 8030	80A09R-SMOSN11-C	80	66.1	–	27	38.1	–	50	–	12.4	7	-10	-10	9	–	✓	11100	✓	1.04	GI339	C0324	AC001
ISO 6462 DIN 8030	100A08R-SMOSN11-C	100	86.1	–	32	45.1	–	50	–	14.4	8	-10	-10	8	–	✓	9900	✓	1.63	GI339	C0324	AC002
ISO 6462 DIN 8030	115A08R-SMOSN11-C	115	101.1	–	32	45.1	–	50	–	14.4	8	-10	-10	8	–	✓	9200	✓	2.34	GI339	C0324	AC002
ISO 6462 DIN 8030	125A08R-SMOSN11-C	125	111.1	–	40	56.1	–	63	–	16.4	9	-10	-10	8	–	✓	8900	✓	3.39	GI339	C0324	AC003

GI339	SNGX 1104..

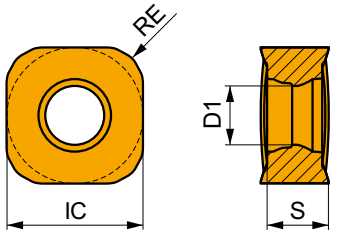
		Nm						
C0314	US 44012-T15P	3.5	M 4	12	–	–	Flag T15P	–
C0316	US 44012-T15P	3.5	M 4	12	D-T08P/T15P	FG-15	–	HCS 0840C
C0318	US 44012-T15P	3.5	M 4	12	D-T08P/T15P	FG-15	–	HS 90835
C0320	US 44012-T15P	3.5	M 4	12	D-T08P/T15P	FG-15	–	HS 1030C
C0322	US 44012-T15P	3.5	M 4	12	D-T08P/T15P	FG-15	–	HS 1230C
C0324	US 44012-T15P	3.5	M 4	12	D-T08P/T15P	FG-15	–	–

AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

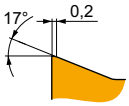
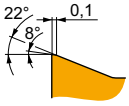
SNGX 11

PRAMET

	IC [mm]	D1 [mm]	S [mm]
1104	10.600	4.56	4.76

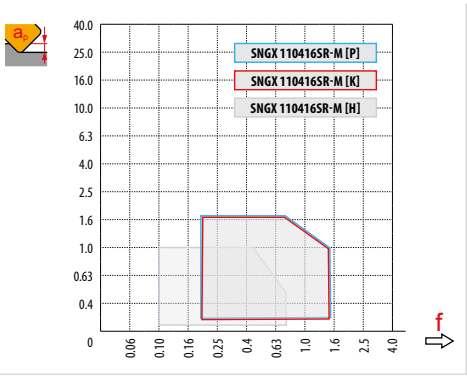


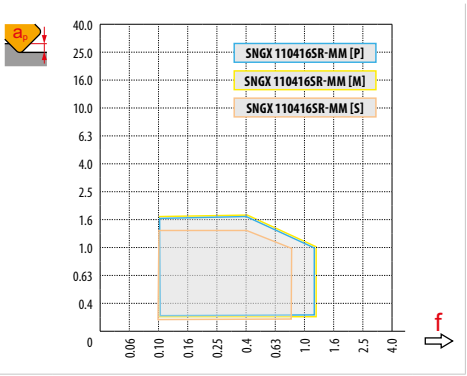
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																				
			M geometry with positive design for high feed machining.																	
SNGX 110416SR-M	**8215**	1.6	■ 260	0.60	1.0	–	–	–	■ 245	0.60	1.0	–	–	–	–	–	–	–	–	–
	M8310	1.6	■ 275	0.60	1.0	–	–	–	■ 260	0.60	1.0	–	–	–	–	–	–	–	–	–
	M8330	1.6	■ 260	0.60	1.0	–	–	–	■ 245	0.60	1.0	–	–	–	–	–	–	–	–	–
	M8340	1.6	■ 245	0.60	1.0	–	–	–	◪ 230	0.60	1.0	–	–	–	–	–	–	–	–	–
	M9325	1.6	■ 305	0.60	1.0	–	–	–	■ 285	0.60	1.0	–	–	–	–	–	–	–	–	–
	M9340	1.6	■ 270	0.60	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
																				
			MM geometry with highly positive design for high feed machining.																	
SNGX 110416SR-MM	**M6330**	1.6	■ 175	0.60	1.0	■ 125	0.54	1.0	–	–	–	–	–	–	■ 50	0.42	0.8	–	–	–
	M8340	1.6	■ 190	0.60	1.0	■ 110	0.54	1.0	–	–	–	–	–	–	■ 45	0.42	0.8	–	–	–
	M8345	1.6	■ 150	0.60	1.0	■ 90	0.54	1.0	–	–	–	–	–	–	■ 35	0.42	0.8	–	–	–
	M9340	1.6	■ 210	0.60	1.0	■ 125	0.54	1.0	–	–	–	–	–	–	■ 50	0.42	0.8	–	–	–

a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	SNGX 11 - M	SNGX 11 - MM
RE	1.6	1.6
BS	–	–





HFC

DCX	a_p	0.00	0.20	0.40	0.60	0.80	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70
32		18.30	19.53	20.76	21.99	23.22	24.46	25.07	25.69	26.30	26.92	27.53	28.15	28.76
35		21.20	22.43	23.66	24.89	26.12	27.36	27.97	28.59	29.20	29.82	30.43	31.05	31.66
40		26.20	27.43	28.66	29.89	31.12	32.36	32.97	33.59	34.20	34.82	35.43	36.05	36.66
42		28.20	29.43	30.66	31.89	33.12	34.36	34.97	35.59	36.20	36.82	37.43	38.05	38.66
50		36.10	37.33	38.56	39.79	41.02	42.26	42.87	43.49	44.10	44.72	45.33	45.95	46.56
52	DEF	38.10	39.33	40.56	41.79	43.02	44.26	44.87	45.49	46.10	46.72	47.33	47.95	48.56
63		49.10	50.33	51.56	52.79	54.02	55.26	55.87	56.49	57.10	57.72	58.33	58.95	59.56
66		52.10	53.33	54.56	55.79	57.02	58.26	58.87	59.49	60.10	60.72	61.33	61.95	62.56
80		66.10	67.33	68.56	69.79	71.02	72.26	72.87	73.49	74.10	74.72	75.33	75.95	76.56
100		86.10	87.33	88.56	89.79	91.02	92.26	92.87	93.49	94.10	94.72	95.33	95.95	96.56
115		101.10	102.33	103.56	104.79	106.02	107.26	107.87	108.49	109.10	109.72	110.33	110.95	111.56
125		111.10	112.33	113.56	114.79	116.02	117.26	117.87	118.49	119.10	119.72	120.33	120.95	121.56
	a_p	–	0.20	0.40	0.60	0.80	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70
	f	–	1.37	0.98	0.81	0.71	0.64	0.62	0.59	0.58	0.56	0.54	0.53	0.52

SNGX		
DCX	$a_{e\,max}$	f_{max}
32	5.0	0.25
35	5.0	0.25
40	5.2	0.30
42	5.2	0.30
50	5.3	0.30
52	5.3	0.30
63	5.4	0.30
66	5.4	0.30
80	5.5	0.35
100	5.5	0.35
115	5.5	0.35
125	5.5	0.35

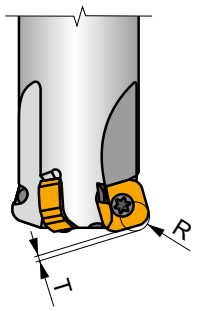
SNGX (HFC)		
DCX	RPMX	APMX/I
32	0.8	1.4/100
35	0.8	1.4/100
40	0.7	1.2/100
42	0.7	1.2/100
50	0.5	0.9/100
52	0.5	0.9/100
63	0.4	0.7/100
66	0.4	0.7/100
80	0.3	0.5/100
100	0.2	0.3/100
115	0.2	0.3/100
125	0.2	0.3/100

SNGX (HFC)		
DCX	a_p	f_{max}
32	0.2	0.3
35	0.2	0.3
40	0.2	0.3
42	0.2	0.3
50	0.3	0.4
52	0.3	0.4
63	0.3	0.4
66	0.3	0.4
80	0.3	0.4
100	0.3	0.4
115	0.3	0.4
125	0.3	0.4

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
32		0.620	0.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578
35		0.648	0.837	1.183	1.449	1.673	2.049	2.366	2.646	2.898	3.347	3.742
40		0.693	0.894	1.265	1.549	1.789	2.191	2.530	2.828	3.098	3.578	4.000
42		0.710	0.917	1.296	1.587	1.833	2.245	2.592	2.898	3.175	3.666	4.099
50		0.775	1.000	1.414	1.732	2.000	2.449	2.828	3.162	3.464	4.000	4.472
52	FE	0.790	1.020	1.442	1.766	2.040	2.498	2.884	3.225	3.533	4.079	4.561
63		0.869	1.122	1.587	1.944	2.245	2.750	3.175	3.550	3.888	4.490	5.020
66		0.890	1.149	1.625	1.990	2.298	2.814	3.250	3.633	3.980	4.596	5.138
80		0.980	1.265	1.789	2.191	2.530	3.098	3.578	4.000	4.382	5.060	5.657
100		1.095	1.414	2.000	2.449	2.828	3.464	4.000	4.472	4.899	5.657	6.325
115		1.175	1.517	2.145	2.627	3.033	3.715	4.290	4.796	5.254	6.066	6.782
125		1.225	1.581	2.236	2.739	3.162	3.873	4.472	5.000	5.477	6.325	7.071

	SNGX			
a_p	0.2	0.5	1.0	1.7
f	1.20	1.00	0.50	0.25

SNGX (HFC)				
DCX	DMIN	DMAX	SMAX / DMIN	SMAX / DMAX
32	48.0	63.8	0.7	1.4
35	54.0	69.8	0.8	1.5
40	64.0	79.8	0.9	1.5
42	68.0	83.8	1.0	1.6
50	84.0	99.8	0.9	1.4
52	88.0	103.8	1.0	1.4
63	109.0	125.8	1.0	1.4
66	115.0	131.8	1.1	1.4
80	143.0	159.8	1.0	1.3
100	183.0	199.8	0.9	1.1
115	213.0	229.8	1.1	1.3
125	233.0	249.8	1.2	1.4



SNGX	R	T
SNGX 110416	4.6	0.92

SPD09

P M K S H

PRAMET

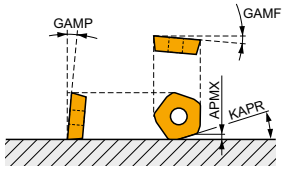
S

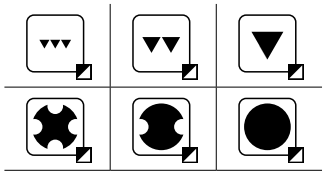
PENTA HF High-Feed Milling Cutter with Internal Coolant

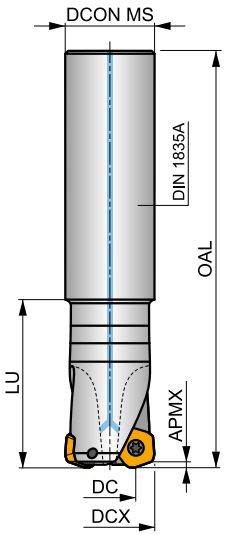
Productive high-feed milling cutter utilising single-sided positive PD.. 09 insert with 5 cutting edges and APMX of 2 mm. Internal coolant. Suitable for a wide range of applications. Available in cylindrical and arbor style, in range of Ø32 up to Ø140 mm. Body treated for longer tool life.

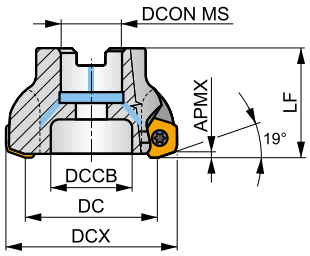
PENTA HF

KAPR	19°
APMX	2.0 mm









h_m	0.065 - 0.975
h_m	0.065 - 0.975

	Product	DCX [mm]	DC [mm]	OAL [mm]	DCON MS [mm]	DCCB [mm]	LU [mm]	LF [mm]	GAMF [°]	GAMP [°]			max.		kg			
DIN 1835A	**32E2R060A32-SPD09-C**	32	18.4	250	32	–	60	–	-24	10	2	–	13100	✓	1.54	GI245	C0340	–
DIN 1835A	**40E3R060A32-SPD09-C**	40	25.5	250	32	–	60	–	-11	10	3	–	11700	✓	1.43	GI245	C0340	–
	42A03R-S19PD09-C	42	27.5	–	16	12	–	40	-8	10	3	–	11500	✓	0.18	GI245	C0342	–
	50A04R-S19PD09-C	50	35.3	–	22	18	–	40	-3	10	4	–	10500	✓	0.23	GI245	C0343	–
	50A05R-S19PD09-C	50	35.3	–	22	18	–	40	-3	10	5	–	10500	✓	0.36	GI245	C0343	–
	52A04R-S19PD09-C	52	37.3	–	22	18	–	40	-3	10	4	–	10300	✓	0.25	GI245	C0343	–
	63A05R-S19PD09-C	63	48.2	–	22	18	–	40	-1	10	5	–	9400	✓	0.33	GI245	C0343	–
	63A06R-S19PD09-C	63	48.2	–	22	18	–	40	-1	10	6	–	9300	✓	0.46	GI245	C0343	–
	66A06R-S19PD09-C	66	51.2	–	22	18	–	40	-1	10	6	–	9200	✓	0.35	GI245	C0343	–
ISO 6462 DIN 8030	**66A06R-S19PD09-CF**	66	51.2	–	27	22	–	50	-1	10	6	–	9100	✓	0.68	GI245	C0344	–
	80A05R-S19PD09-C	80	65.3	–	27	37	–	50	-1	10	5	–	8300	✓	0.84	GI245	C0341	AC001
	80A06R-S19PD09-C	80	65.3	–	27	37	–	50	-1	10	6	–	8300	✓	0.88	GI245	C0341	AC001
	100A06R-S19PD09-C	100	58.3	–	32	45	–	50	-1	10	6	–	7400	✓	1.46	GI245	C0341	AC002
	100A08R-S19PD09-C	100	85.3	–	32	45	–	50	-1	10	8	–	7400	✓	1.40	GI245	C0341	AC002
	125A08R-S19PD09-C	125	110.3	–	40	36	–	63	-1	10	8	–	6600	✓	3.16	GI245	C0349	–
	125A10R-S19PD09-C	125	110.3	–	40	36	–	63	-1	10	10	–	6600	✓	3.15	GI245	C0349	–
	140A08R-S19PD09-C	140	125.3	–	40	36	–	63	-1	10	8	–	6200	✓	3.62	GI245	C0349	–

GI245	PD.X 0905ZE..	PDKT 0905..	PDMW 0905..

		Nm					
C0340	US 45011-T20P	5.0	M 5	11	–	–	Flag T20P
C0341	US 45011-T20P	5.0	M 5	11	SDR T20P-T	–	–

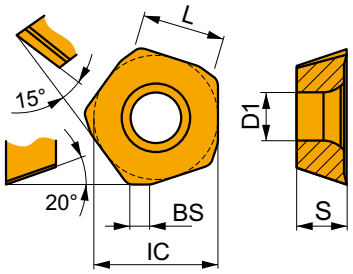
		Nm					
C0342	US 45011-T20P	5.0	M 5	11	SDR T20P-T	HS 90835	–
C0343	US 45011-T20P	5.0	M 5	11	SDR T20P-T	HS 1030C	–
C0344	US 45011-T20P	5.0	M 5	11	SDR T20P-T	HS 1230C	–
C0349	US 45011-T20P	5.0	M 5	11	SDR T20P-T	HSD 2040	–

AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32

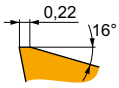
PDKX 09

PRAMET

	BS [mm]	IC [mm]	D1 [mm]	L [mm]	S [mm]
0905	2.00	13.500	5.50	9.00	5.47



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

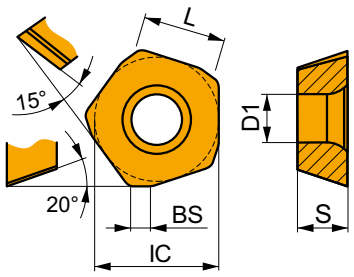
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																				
PDKX 0905ZEER-FM	M6330	–	■ 195	1.00	1.2	■ 135	0.90	1.2	–	–	–	–	–	–	■ 55	0.70	1.0	–	–	–
	M8345	–	■ 165	1.00	1.2	■ 95	0.90	1.2	–	–	–	–	–	–	■ 40	0.70	1.0	–	–	–
	M9340	–	■ 215	1.00	1.2	■ 125	0.90	1.2	–	–	–	–	–	–	■ 50	0.70	1.0	–	–	–

FM geometry with highly positive design for medium high feed machining.

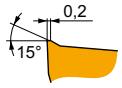
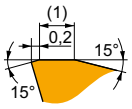
PDMX 09

PRAMET

	BS	IC	D1	L	S
	[mm]	[mm]	[mm]	[mm]	[mm]
0905	2.00	13.500	5.50	9.00	5.47



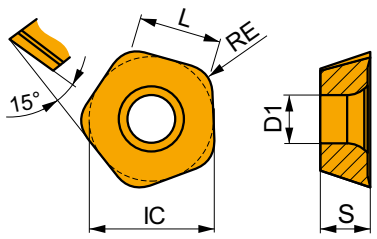
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
			M geometry with positive design for medium high feed machining.																	
PDMX 0905ZEER-M	**8215**	–	■	215	1.00	1.2	◪	125	0.90	1.2	◪	200	1.00	1.2	–	–	–	–	–	–	–	–	–
	M8330	–	■	220	1.00	1.2	■	130	0.90	1.2	◪	205	1.00	1.2	–	–	–	–	–	–	–	–	–
	M8345	–	■	165	1.00	1.2	■	95	0.90	1.2		–	–	–	–	–	–	–	–	–	–	–	–
	M9340	–	■	215	1.00	1.2	■	125	0.90	1.2		–	–	–	–	–	–	–	–	–	–	–	–
																				
			R geometry with strong design for high feed machining.																	
PDMX 0905ZESR-R	**8215**	–	◪	215	1.00	1.3		–	–	–	■	200	1.00	1.3	–	–	–	–	–	–	■	40	0.15	1.0
	M8330	–	◪	215	1.00	1.3		–	–	–	■	200	1.00	1.3	–	–	–	–	–	–	◪	40	0.15	1.0
	M8345	–	◪	165	1.00	1.3		–	–	–		–	–	–	–	–	–	–	–	–		–	–	–
	M9325	–	◪	245	1.00	1.3		–	–	–	■	230	1.00	1.3	–	–	–	–	–	–	◪	45	0.15	1.0

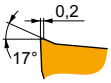
PDKT 09

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
0905	13.500	5.50	9.00	5.47



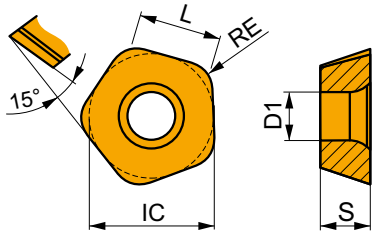
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]
		[mm]																		
																				
			FM geometry with highly positive design for light to medium high feed machining.																	
PDKT 090530ER-FM	**8215**	3.0	■ 240	1.00	1.2	◪ 140	0.90	1.2	◪ 225	1.00	1.2	–	–	–	◪ 60	0.70	1.0	–	–	–
	M6330	3.0	■ 210	1.00	1.2	■ 150	0.90	1.2	–	–	–	–	–	–	■ 60	0.70	1.0	–	–	–
	M8310	3.0	■ 250	1.00	1.2	◪ 125	0.90	1.2	◪ 235	1.00	1.2	–	–	–	–	–	–	–	–	–
	M8330	3.0	■ 245	1.00	1.2	■ 145	0.90	1.2	◪ 230	1.00	1.2	–	–	–	◪ 60	0.70	1.0	–	–	–
	M8345	3.0	■ 180	1.00	1.2	■ 105	0.90	1.2	–	–	–	–	–	–	■ 45	0.70	1.0	–	–	–
	M9325	3.0	■ 275	1.00	1.2	–	–	–	◪ 260	1.00	1.2	–	–	–	–	–	–	–	–	–

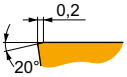
PDMW 09

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
0905	13.500	5.50	9.00	5.47

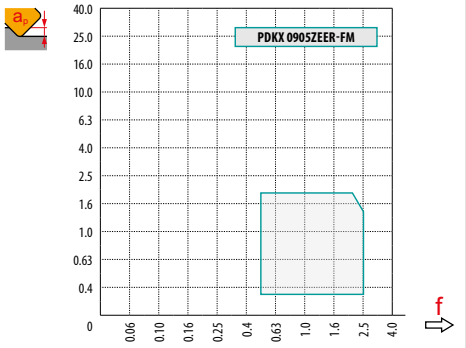


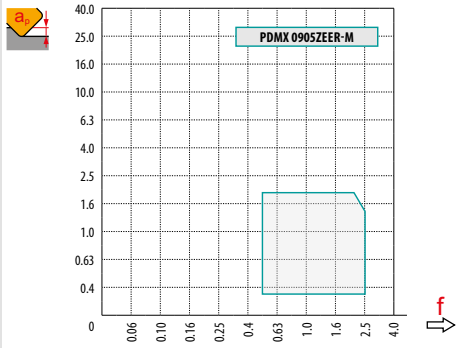
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

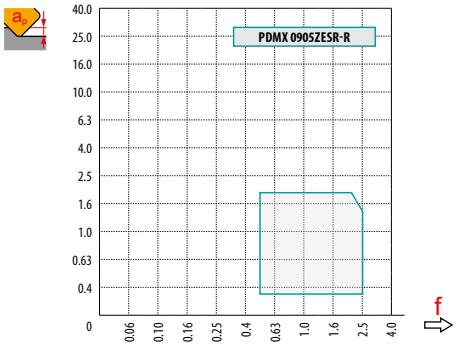
Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]
		[mm]																		
																				
			Zero rake angle design for high feed machining.																	
PDMW 090530SR	**M8310**	3.0	◪ 245	1.00	1.4	–	–	–	■ 230	1.00	1.4	–	–	–	–	–	–	■ 45	0.15	1.0
	M8345	3.0	◪ 180	1.00	1.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	M9325	3.0	◪ 270	1.00	1.4	–	–	–	■ 255	1.00	1.4	–	–	–	–	–	–	◪ 50	0.15	1.0

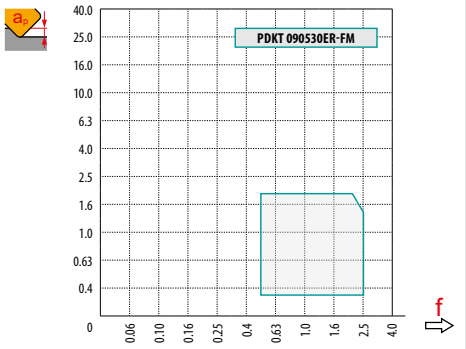
a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ X.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ X.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

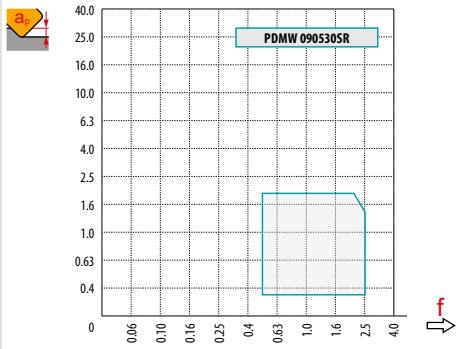
	PDKX 09-FM	PDMX 09-M	PDMX 09-R	PDKT 09-FM	PDMW 09
RE	–	–	–	3.0	3.0
BS	2.00	2.00	2.00	–	–











DCX	a_p	0.00	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.25	1.50	2.00
32		18.4	20.1	20.7	21.3	21.9	22.5	23.0	23.6	24.2	25.7	27.1	30.0
40		25.5	27.2	27.8	28.4	29.0	29.6	30.1	30.7	31.3	32.8	34.2	37.1
42		27.5	29.2	29.8	30.4	31.0	31.6	32.1	32.7	33.3	34.8	36.2	39.1
50		35.3	37.0	37.6	38.2	38.8	39.4	39.9	40.5	41.1	42.6	44.0	46.9
52		37.3	39.0	39.6	40.2	40.8	41.4	41.9	42.5	43.1	44.6	46.0	48.9
63	DEF	48.2	49.9	50.5	51.1	51.7	52.3	52.8	53.4	54.0	55.5	56.9	59.8
66		51.2	52.9	53.5	54.1	54.7	55.3	55.8	56.4	57.0	58.5	59.9	62.8
80		65.3	67.0	67.6	68.2	68.8	69.4	69.9	70.5	71.1	72.6	74.0	76.9
100		85.3	87.0	87.6	88.2	88.8	89.4	89.9	90.5	91.1	92.6	94.0	96.9
125		110.3	112.3	112.9	113.5	114.1	114.6	115.2	115.8	116.4	117.9	119.3	122.2
140		125.3	127.3	127.9	128.5	129.1	129.7	130.2	130.8	131.4	132.9	134.3	137.2
	a_p	0.00	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.25	1.50	2.00
	1 ⇨ f	–	3.00	3.00	2.90	2.80	2.70	2.60	2.50	2.40	2.25	1.50	1.50

Follow instructions provided for flat surface milling. When milling close to vertical surfaces. decrease feed per tooth (f_z) by 50 % to prevent vibrations and damage of the cutting edge.

DCX	max	f_{max}
32	5.0	0.20
40	5.0	0.20
42	5.0	0.20
50	6.0	0.20
52	6.0	0.20
63	7.0	0.25
66	7.0	0.25
80	8.0	0.30
100	8.0	0.30

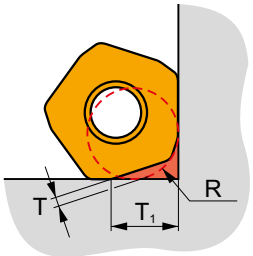
	HFC		
a_p	0.5	1.0	2.0
f	3.0	2.3	1.5

DCX	RPMX	APMX/l
40	8.0	1.80/16
42	8.0	2.00/16
50	8.0	2.00/16
52	8.0	2.00/16
63	7.0	2.00/18
66	6.0	2.00/21
80	5.0	2.00/24
100	3.0	2.00/40

DCX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
40	63.7	80.0	2.00	2.00
42	67.5	84.0	2.00	2.00
50	83.3	100.0	2.00	2.00
52	87.3	104.0	2.00	2.00
63	109.2	126.0	2.00	2.00
66	115.2	132.0	2.00	2.00
80	143.3	160.0	2.00	2.00
100	183.3	200.0	2.00	2.00

DCX	a_p	f_{max}
32	1.8	0.20
40	1.8	0.20
42	2.0	0.20
50	2.0	0.20
52	2.0	0.20
63	2.0	0.25
66	2.0	0.25
80	2.0	0.30
100	2.0	0.30

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
32		0.620	0.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578
40		0.693	0.894	1.265	1.549	1.789	2.191	2.530	2.828	3.098	3.578	4.000
42		0.710	0.917	1.296	1.587	1.833	2.245	2.592	2.898	3.175	3.666	4.099
50	FE	0.775	1.000	1.414	1.732	2.000	2.449	2.828	3.162	3.464	4.000	4.472
52		0.790	1.020	1.442	1.766	2.040	2.498	2.884	3.225	3.533	4.079	4.561
63		0.869	1.122	1.587	1.944	2.245	2.750	3.175	3.550	3.888	4.490	5.020
66		0.890	1.149	1.625	1.990	2.298	2.814	3.250	3.633	3.980	4.596	5.138
80		0.980	1.265	1.789	2.191	2.530	3.098	3.578	4.000	4.382	5.060	5.657



DCX	R	T	T_1
32	4.5	1.1	6.8
40 – 140	4.5	1.1	7.3

SZD07

P K H

PRAMET

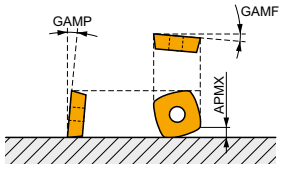
S

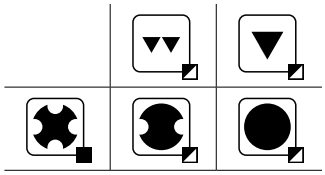
FEED ZD07 High-Feed Milling Cutter with Internal Coolant

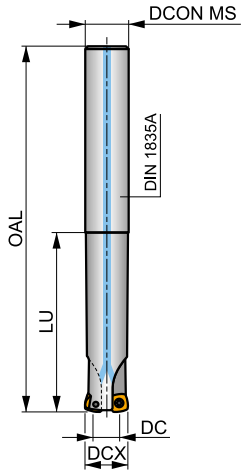
Productive high-feed milling cutter utilising single-sided ZD.. 07 insert with 4 cutting edges and a APMX of 1 mm. Internal coolant. Suitable for a wide range of applications. Available in cylindrical and modular style, in range of Ø16 up to Ø32 mm. Body treated for longer tool life.

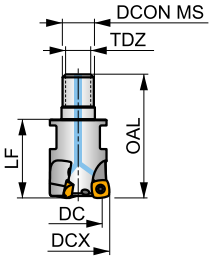
FEED ZD

APMX	1.0 mm









h_m 0.175 - 0.44

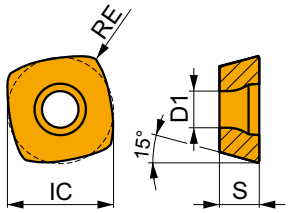
	Product	DCX [mm]	DC [mm]	OAL [mm]	DCON MS [mm]	LU [mm]	LF [mm]	TDZ	GAMF [°]	GAMP [°]			max.		kg		
DIN 1835A	**16E2R030A16-SZD07**	16	6	100	16	30	–	–	-5	8	2	–	47400	✓	0.13	GI201	C0350
	16E2R065A16-SZD07	16	6	145	16	65	–	–	-5	8	2	–	47400	✓	0.19	GI201	C0350
	20E3R040A20-SZD07	20	10	120	20	40	–	–	-5	8	3	–	42400	✓	0.25	GI201	C0350
	20E3R080A20-SZD07	20	10	165	20	80	–	–	-5	8	3	–	42400	✓	0.33	GI201	C0350
	25E3R050A25-SZD07	25	15	140	25	50	–	–	-5	8	3	–	37900	✓	0.47	GI201	C0350
	25E3R100A25-SZD07	25	15	190	25	100	–	–	-5	8	3	–	37900	✓	0.60	GI201	C0350
MODULAR	**16E2R030M08-SZD07**	16	6	48	8.5	–	30	M8	-5	8	2	–	–	✓	0.04	GI201	C0350
	20E3R030M10-SZD07	20	10	49	10.5	–	30	M10	-5	8	3	–	–	✓	0.08	GI201	C0350
	25E3R032M12-SZD07	25	15	54	12.5	–	32	M12	-5	8	3	–	–	✓	0.15	GI201	C0350
	25E4R032M12-SZD07	25	15	54	12.5	–	32	M12	-5	8	4	✓	–	✓	0.04	GI201	C0350
	32E4R040M16-SZD07	32	22	65	17	–	40	M16	-5	8	4	✓	–	✓	0.22	GI201	C0350

GI201	ZDCW 0703..

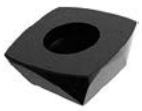
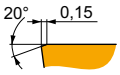
		Nm			
C0350	US 2205-T07P	0.9	M 2.2	5	Flag T07P

ZDCW 07

	IC	D1	S
	[mm]	[mm]	[mm]
0703	6.800	2.60	3.18



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				

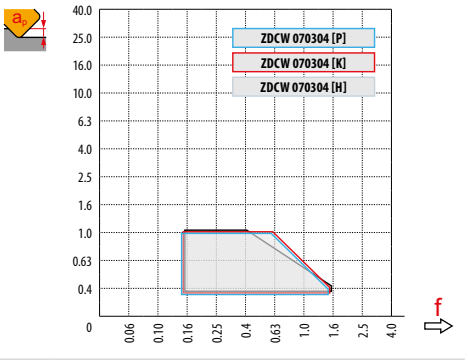
HFC

Special geometry for high feed machining.

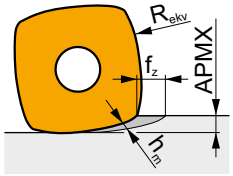
ZDCW 070304	**M8310**	0.4	420	0.60	0.4	–	–	–	395	0.60	0.4	–	–	–	–	–	–	80	0.15	1.0
	M8325	0.4	325	0.60	0.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	M8345	0.4	305	0.60	0.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ X.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ X.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	ZDCW 07
RE	0.4
BS	–



DCX	a_p	0.00	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00
16	DEF	6.0	12.0	12.9	13.7	14.4	15.1	15.7	16.2	16.8
20		10.0	16.0	16.9	17.7	18.4	19.1	19.7	20.2	20.8
25		15.0	21.0	21.9	22.7	23.4	24.1	24.7	25.2	25.8
32		22.0	28.0	28.9	29.7	30.4	31.1	31.7	32.2	32.8
	a_p	0.00	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00
	1 f	–	1.50	1.50	1.13	1.00	0.88	0.75	0.61	0.60



$$f_z = h_m \sqrt{\frac{2R_{ekv.}}{APMX}} \quad \text{[mm/tooth]}$$

Follow instructions provided for flat surface milling. When milling close to vertical surfaces, decrease feed per tooth (f_z) by 50 % to prevent vibrations and damage of the cutting edge.

DCX	max	f_{max}
16	5.6	0.12
20	5.6	0.15
25	5.6	0.17
32	5.6	0.17

HFC			
a_p	0.3	0.6	1.0
1 f	1.50	0.80	0.40

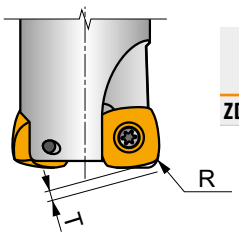
DCX	RPMX	APMX/I
16	7.8	1.0/9
20	9.7	1.0/7
25	4.9	1.0/13
32	2.8	1.0/22

HFC		
DCX	RPMX	APMX/I
16	0.5	0.75/100
20	0.3	0.40/100
25	0.2	0.20/100
32	0.1	0.05/100

DCX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
16	21.0	32.0	0.10	0.40
20	29.0	40.0	0.10	0.30
25	39.0	50.0	0.15	0.25
32	53.0	64.0	0.10	0.15

DCX	a_p	f_{max}
16	0.05	0.12
20	0.05	0.15
25	0.05	0.17
32	0.05	0.17

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
16	FE	0.438	0.566	0.800	0.980	1.131	1.386	1.600	1.789	1.960	2.263	2.530
20		0.490	0.632	0.894	1.095	1.265	1.549	1.789	2.000	2.191	2.530	2.828
25		0.548	0.707	1.000	1.225	1.414	1.732	2.000	2.236	2.449	2.828	3.162
32		0.620	0.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578



	R	T
ZDCW 070304	1.70	0.60

SZD09

P K H

PRAMET

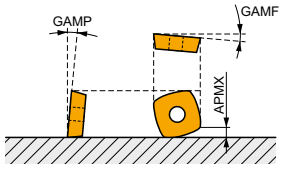
S

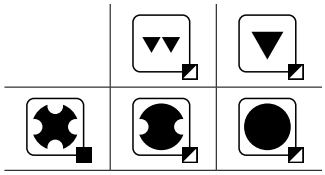
FEED ZD09 High-Feed Milling Cutter with Internal Coolant

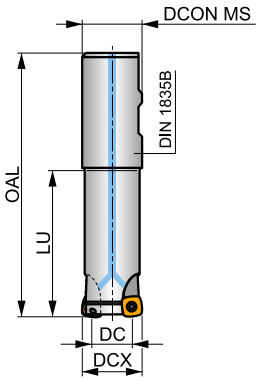
Productive high-feed milling cutter utilising single-sided ZD.. 09 insert with 4 cutting edges and APMX of 1 mm. Internal coolant. Suited for a wide range of applications. Available in cylindrical, modular and arbor style, in range of Ø25 up to Ø66 mm. Body treated for longer tool life.

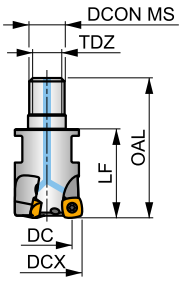
FEED ZD

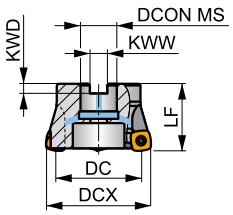
APMX	1.0 mm











h_m 0.31 - 0.618

h_m 0.31 - 0.618

	Product	DCX [mm]	DC [mm]	OAL [mm]	DCON MS [mm]	LU [mm]	LF [mm]	TDZ	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg		
DIN 1835B	25E2R080B25-SZD09-C	25	11.6	140	25	80	–	–	–	–	-6	10	2	–	22800	✓	0.49	GI191	SQ400
	25E2R140B25-SZD09-C	25	11.6	200	25	140	–	–	–	–	-6	10	2	–	22800	✓	0.63	GI191	SQ400
	25E2R240B25-SZD09-C	25	11.6	300	25	240	–	–	–	–	-6	10	2	–	22800	✓	0.90	GI191	SQ400
	32E2R080B32-SZD09-C	32	18.7	140	32	80	–	–	–	–	-6	10	2	–	20100	✓	0.80	GI191	SQ400
	32E2R140B32-SZD09-C	32	18.7	200	32	140	–	–	–	–	-6	10	2	–	20100	✓	1.07	GI191	SQ400
	32E2R240B32-SZD09-C	32	18.7	300	32	240	–	–	–	–	-6	10	2	–	20100	✓	1.57	GI191	SQ400
MODULAR	25E2R032M12-SZD09-C	25	11.6	54	12.5	–	32	M12	–	–	-6	10	2	–	–	✓	0.15	GI191	SQ400
	25E3R032M12-SZD09-C	25	11.6	54	12.5	–	32	M12	–	–	-6	10	3	–	–	✓	0.14	GI191	SQ400
	32E3R040M16-SZD09-C	32	18.7	63	17	–	40	M16	–	–	-6	10	3	–	–	✓	0.26	GI191	SQ400
	35E4R040M16-SZD09-C	35	21.7	63	17	–	40	M16	–	–	-6	10	4	✓	–	✓	0.22	GI191	SQ400
	42E4R040M16-SZD09-C	42	28.7	63	17	–	40	M16	–	–	-6	10	4	✓	–	✓	0.27	GI191	SQ400
ISO 6462 DIN 8030	40A03R-SM0ZD09-C	40	26.7	–	16	–	40	–	8.4	5.6	-6	10	3	–	18000	✓	0.36	GI191	SQ402
	40A04R-SM0ZD09-C	40	26.7	–	16	–	40	–	8.4	5.6	-6	10	4	✓	18000	✓	0.44	GI191	SQ402
	50A05R-SM0ZD09-C	50	36.7	–	22	–	40	–	10.4	6.4	-6	10	5	✓	16000	✓	0.43	GI191	SQ403
	52A05R-SM0ZD09-C	52	38.7	–	22	–	40	–	10.4	6.4	-6	10	5	✓	15700	✓	0.46	GI191	SQ403
	63A06R-SM0ZD09-C	63	49.7	–	22	–	40	–	10.4	6.4	-6	10	6	✓	14300	✓	0.60	GI191	SQ403
	66A06R-SM0ZD09-C	66	52.7	–	27	–	50	–	12	7	-6	10	6	✓	14000	✓	0.89	GI191	C0364

GI191	ZDCW 09T3..

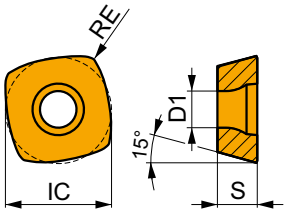
		Nm						
C0364	US 3006-T09P	2.0	M 3	6	D-T07P/T09P	FG-15	HS 1230C	–
SQ400	US 3006-T09P	2.0	M 3	6	–	–	Flag T09P	–

		Nm						
SQ402	US 3006-T09P	2.0	M 3	6	D-T07P/T09P	FG-15	–	HS 0830C
SQ403	US 3006-T09P	2.0	M 3	6	D-T07P/T09P	FG-15	–	HS 1030C

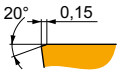
ZDCW 09

PRAMET

	IC [mm]	D1 [mm]	S [mm]
09T3	9.525	3.40	3.97

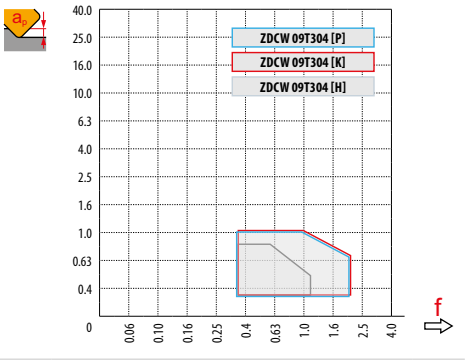


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

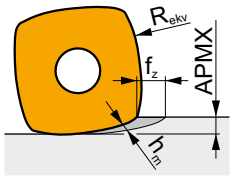
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																				
Special geometry for high feed machining.																				
ZDCW 09T304	**M8310**	0.4	320	1.00	0.6	–	–	–	300	1.00	0.6	–	–	–	–	–	–	60	0.15	1.0
	M8325	0.4	250	1.00	0.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	M8345	0.4	235	1.00	0.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨X.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨X.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	ZDCW 09
RE	0.4
BS	–



DCX	a_p	0.00	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00
25		11.6	17.4	18.2	19.0	19.7	20.3	20.9	21.5	22.0
32		18.7	24.5	25.3	26.1	26.8	27.4	28.0	28.6	29.1
35		21,7	27,3	28,1	28,8	29,5	30,1	30,7	31,2	31,7
40		27.7	33.5	34.3	35.1	35.8	36.4	37.0	37.6	38.1
42	DEF	28,7	34,3	35,1	35,8	36,5	37,1	37,7	38,2	38,7
50		36,7	42,3	43,1	43,8	44,5	45,1	45,7	46,2	46,7
52		38,7	44,3	45,1	45,8	46,5	47,1	47,7	48,2	48,7
63		49,7	55,3	56,1	56,8	57,5	58,1	58,7	59,2	59,7
66		52,7	58,3	59,1	59,8	60,5	61,1	61,7	62,2	62,7
	a_p	**0.00**	**0.30**	**0.40**	**0.50**	**0.60**	**0.70**	**0.80**	**0.90**	**1.00**
	1 ⇨f	–	2.00	2.00	2.00	1.75	1.50	1.25	1.13	1.00



$$f_z = h_m \sqrt{\frac{2R_{ekv.}}{APMX}} \quad \text{[mm/tooth]}$$

Follow instructions provided for flat surface milling. When milling close to vertical surfaces, decrease feed per tooth (f_z) by 50 % to prevent vibrations and damage of the cutting edge.

DCX	max	f_{max}
25	7.7	0.15
32	7.7	0.17
40	7.7	0.20

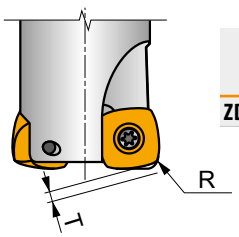
	HFC		
a_p	0.3	0.6	1.0
f	2.00	1.50	1.00

			HFC	
DCX	RPMX	APMX/I	RPMX	APMX/I
25	12.0	1.0/6	0.9	1.00/65
32	7.5	1.0/11	0.5	0.75/100
40	3.6	1.0/17	0.4	0.55/100

DCX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
25	35.0	50.0	0.45	1.00
32	49.0	64.0	0.45	0.85
40	65.0	80.0	0.50	0.85

DCX	a_p	f_{max}
25	0.15	0.15
32	0.15	0.17
40	0.15	0.20

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
25		0,548	0,707	1,000	1,225	1,414	1,732	2,000	2,236	2,449	2,828	3,162
32		0,620	0,800	1,131	1,386	1,600	1,960	2,263	2,530	2,771	3,200	3,578
35		0,648	0,837	1,183	1,449	1,673	2,049	2,366	2,646	2,898	3,347	3,742
40	FE	0,693	0,894	1,265	1,549	1,789	2,191	2,530	2,828	3,098	3,578	4,000
42		0,710	0,917	1,296	1,587	1,833	2,245	2,592	2,898	3,175	3,666	4,099
52		0,790	1,020	1,442	1,766	2,040	2,498	2,884	3,225	3,533	4,079	4,561
63		0,869	1,122	1,587	1,944	2,245	2,750	3,175	3,550	3,888	4,490	5,020
66		0,890	1,149	1,625	1,990	2,298	2,814	3,250	3,633	3,980	4,596	5,138



	R	T
ZDCW 09T304	2.27	0.52

SZD12

P K H

PRAMET

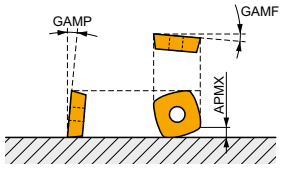
S

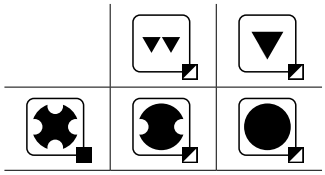
FEED ZD12 High-Feed Milling Cutter with Internal Coolant

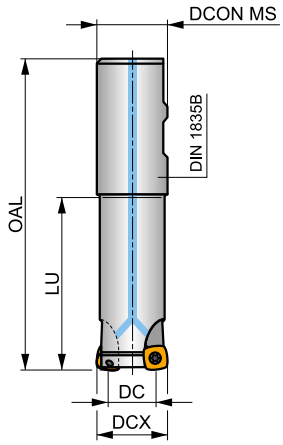
Highly productive high-feed milling cutter utilising single-sided ZD.. 12 insert with 4 cutting edges and APMX of 1.6 mm. Internal coolant. Suitable for a wide range of applications. Available in cylindrical, modular and arbor style, in range of Ø32 up to Ø80 mm. Body treated for longer tool life.

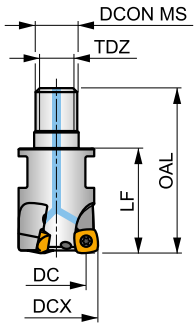
FEED ZD

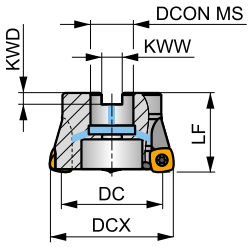
APMX	1.6 mm











h_m 0.46 - 0.925

h_m 0.46 - 0.925

	Product	DCX [mm]	DC [mm]	OAL [mm]	DCON MS [mm]	LU [mm]	LF [mm]	TDZ	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg			
DIN 1835B	**40E4R080B32-SZD12-C**	40	22.5	140	32	80	–	–	–	–	-6	10	4	✓	15700	✓	0.78	GI192	SQ220	–
DIN 1835B	**40E4R140B32-SZD12-C**	40	22.5	200	32	140	–	–	–	–	-6	10	4	✓	15700	✓	1.13	GI192	SQ220	–
MODULAR	**32E3R040M16-SZD12-C**	32	14.5	63	17	–	40	M16	–	–	-6	10	3	–	–	✓	0.24	GI192	SQ220	–
MODULAR	**40E4R040M16-SZD12-C**	40	22.5	63	17	–	40	M16	–	–	-6	10	4	–	–	✓	0.23	GI192	SQ220	–
ISO 6462 DIN 8030	**50A04R-SM0ZD12-C**	50	32.5	–	22	–	40	–	10.4	6.4	-6	10	4	✓	14000	✓	0.47	GI192	SQ033	–
ISO 6462 DIN 8030	**63A05R-SM0ZD12-C**	63	45.5	–	22	–	40	–	10.4	6.4	-6	10	5	✓	12500	✓	0.63	GI192	SQ033	–
ISO 6462 DIN 8030	**80A05R-SM0ZD12-C**	80	62.5	–	27	–	50	–	12	7	-6	10	5	✓	11100	✓	1.12	GI192	C0371	AC001

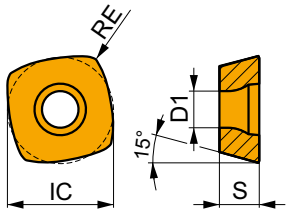
GI192	ZDEW 1204..

		Nm						
C0371	US 4011-T15P	3.5	M 4	10.6	D-T08P/T15P	FG-15	–	–
SQ033	US 4011-T15P	3.5	M 4	10.6	D-T08P/T15P	FG-15	–	HS 1030C
SQ220	US 4011-T15P	3.5	M 4	10.6	–	–	Flag T15P	–

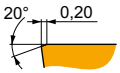
AC001	KS 1230	K.FMH27

ZDEW 12

	IC [mm]	D1 [mm]	S [mm]
1204	12.700	4.40	4.76

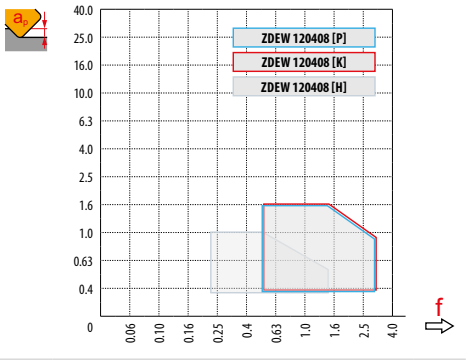


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

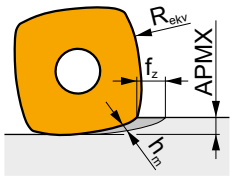
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																				
			HFC	S																
			Special geometry for high feed machining.																	
ZDEW 120408	**M8310**	0.8	270	1.00	1.0	–	–	–	255	1.00	1.0	–	–	–	–	–	–	50	0.15	1.0
	M8325	0.8	205	1.00	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	M8345	0.8	195	1.00	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨X.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨X.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	ZDEW 12
RE	0.8
BS	–



DCX	a_p	0.00	0.50	0.60	0.70	0.80	0.90	1.00	1.10	1.20	1.30	1.40	1.50	1.60
32		14.5	22.7	23.5	24.2	24.8	25.4	26.0	26.5	27.0	27.5	28.0	28.5	28.9
40		22.5	30.7	31.5	32.2	32.8	33.4	34.0	34.5	35.0	35.5	36.0	36.5	36.9
50		32.5	40.7	41.5	42.2	42.8	43.4	44.0	44.5	45.0	45.5	46.0	46.5	46.9
52	DEF	34.5	42.7	43.5	44.2	44.8	45.4	46.0	46.5	47.0	47.5	48.0	48.5	48.9
63		45.5	53.7	54.5	55.2	55.8	56.4	57.0	57.5	58.0	58.5	59.0	59.5	59.9
66		48.5	56.7	57.5	58.2	58.8	59.4	60.0	60.5	61.0	61.5	62.0	62.5	62.9
80		62.5	70.7	71.5	72.2	72.8	73.4	74.0	74.5	75.0	75.5	76.0	76.5	76.9
	a_p	0.00	0.50	0.60	0.70	0.80	0.90	1.00	1.10	1.20	1.30	1.40	1.50	1.60
	⇨f	–	3.00	3.00	3.00	3.00	3.00	3.00	2.50	2.25	2.00	1.80	1.65	1.50



$$f_z = h_m \sqrt{\frac{2R_{ekv.}}{APMX}} \quad \text{[mm/tooth]}$$

Follow instructions provided for flat surface milling. When milling close to vertical surfaces, decrease feed per tooth (f_z) by 50 % to prevent vibrations and damage of the cutting edge.

DCX	max	f_{max}
32	10.0	0.15
40	10.0	0.17
50	10.0	0.20
52	10.0	0.20
63	10.0	0.20
66	10.0	0.20
80	10.0	0.25

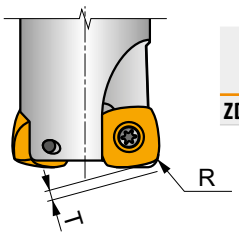
	HFC		
a_p	0.5	1.0	1.6
1 f	3.00	2.00	1.50

			HFC	
DCX	RPMX	APMX/I	RPMX	APMX/I
32	10	1.6/11	1.2	1.60/78
40	5.5	1.6/18	0.7	1.10/100
50	3.3	1.6/29	0.5	0.75/100
52	3.1	1.6/31	0.5	0.75/100
63	2.2	1.6/43	0.3	0.40/100
66	2.0	1.6/47	0.3	0.40/100
80	1.5	1.6/63	0.2	0.20/100

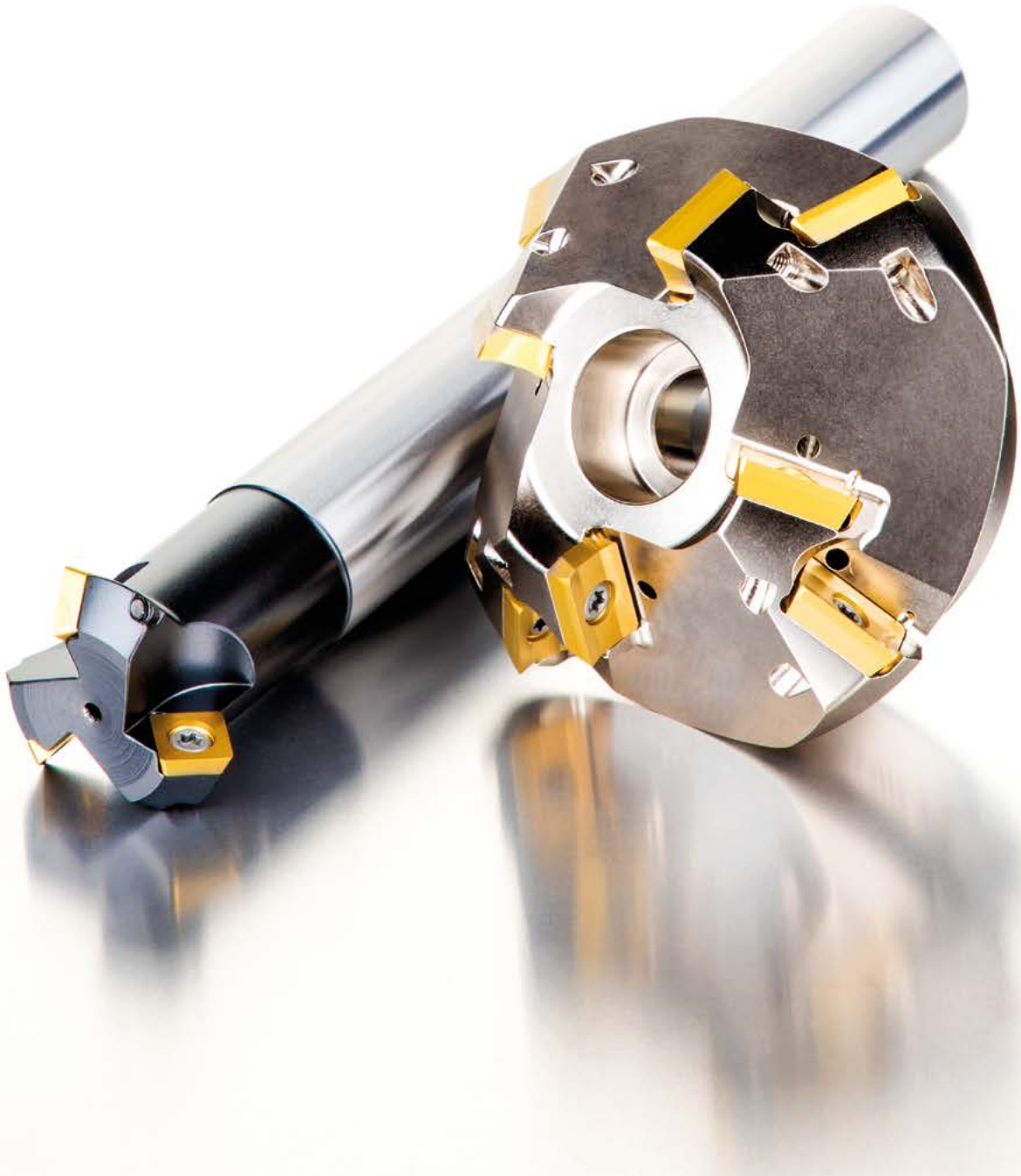
DCX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
32	44.0	64.0	0.75	1.60
40	60.0	80.0	0.75	1.50
50	80.0	100.0	0.80	1.35
52	84.0	104.0	0.80	1.35
63	106.0	126.0	0.70	1.00
66	112.0	132.0	0.70	1.00
80	140.0	160.0	0.65	0.85

DCX	a_p	f_{max}
32	0.25	0.15
40	0.25	0.17
50	0.25	0.20
52	0.25	0.20
63	0.25	0.20
66	0.25	0.20
80	0.25	0.25

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
32	FE	0.620	0.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578
40		0.693	0.894	1.265	1.549	1.789	2.191	2.530	2.828	3.098	3.578	4.000
50		0.775	1.000	1.414	1.732	2.000	2.449	2.828	3.162	3.464	4.000	4.472
52		0.790	1.020	1.442	1.766	2.040	2.498	2.884	3.225	3.533	4.079	4.561
63		0.869	1.122	1.587	1.944	2.245	2.750	3.175	3.550	3.888	4.490	5.020
66		0.890	1.149	1.625	1.990	2.298	2.814	3.250	3.633	3.980	4.596	5.138
80		0.980	1.265	1.789	2.191	2.530	3.098	3.578	4.000	4.382	5.060	5.657



	R	T
ZDEW 120408	3.52	0.64



INDEXABLE CHAMFER & T-SLOTS MILLS

CHAMFER, T-SLOT MILLING

>>>

	SSD09	N-SSO09	2516	2636	J(T)-SXP16
	45°	45°	45°	10° – 80°	15° – 75°
	APMX [mm] 4.5	APMX [mm] 4.5	APMX [mm] 8.5	APMX [mm] 8.5	APMX [mm] 7.0 – 28.0
	DC [mm] 10 – 25	DC [mm] 8 – 25	DC [mm] 11 – 19	DC [mm] 5 – 23	DC [mm] 35 – 45
Cylindrical shank	DC = 16 – 25 [mm]				
Weldon	DC = 10 – 25 [mm]				
Morse	DC = 10 – 25 [mm]				
Shell mill					
Page	648	651	654	657	660
ISO	P M K S H	P M K S	P M K S	P M K S	P M K N
Insert shape					
Inserts	SDE. 0903	SOMT 09T3	TCMT 16T3	TCMT 16T3	XPHT 1604
No. of cutting edges	4	4	3	3	2
Chamfer milling	■	■	■	■	■
Rear face milling					
T-slot milling					
Shallow shoulder milling					
Shallow slot milling					

<<<

CHAMFER, T-SLOT MILLING

	F-SCC					
	90°					
	APMX [mm] 11.0 – 18.0					
	DC [mm] 25 – 40					
	664					
	P M K					
	CCMX					
	2					
	■					
	■					
	◪					
	◪					

SSD09

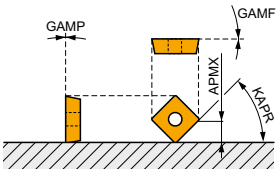
P M K S H

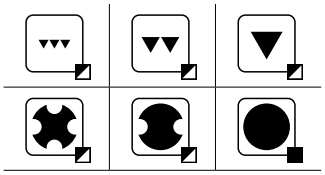
PRAMET S

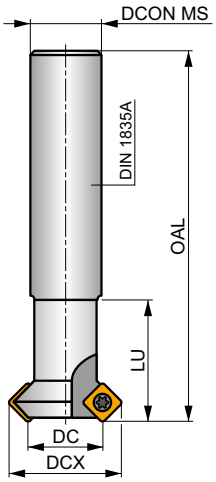
45° Chamfer Milling Cutter for Square Insert SD.. 09

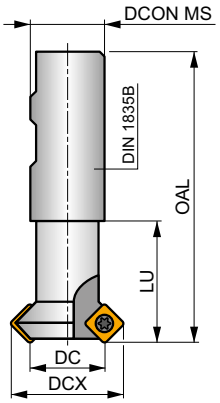
A 45° chamfer milling cutter utilising single-sided SD.. 09 inserts with APMX of 4.5 mm. Suitable for top and bottom side chamfering. Available in cylindrical, Weldon and Morse taper style and outside Ø22, Ø28 and Ø37 mm . Body treated for longer tool life.

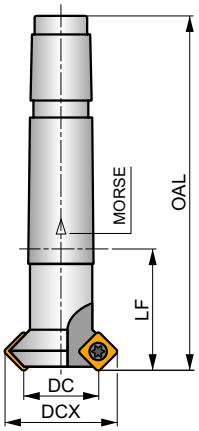
KAPR	45°
APMX	4.5 mm











h_m 0.095 - 0.15

	Product	DC [mm]	DCX [mm]	OAL [mm]	DCON MS [mm]	LU [mm]	LF [mm]	CZCMS	GAMF [°]	GAMP [°]			max.		kg		
DIN 1835A	**16N2R027A16-SSD09**	16	28	200	16	27	–	–	0	0	2	–	32200	–	0.37	GI129	C0070
	25N3R042A25-SSD09	25	37	200	25	42	–	–	0	0	3	–	25800	–	0.78	GI129	CH011
DIN 1835B	**10N1R027B16-SSD09-A**	10	22	75	16	27	–	–	0	0	1	–	40700	–	0.14	GI129	C0070
	16N2R027B16-SSD09-A	16	28	75	16	27	–	–	0	0	2	–	32200	–	0.14	GI129	C0070
	25N3R042B25-SSD09-A	25	37	98	25	42	–	–	0	0	3	–	25800	–	0.37	GI129	CH011
DIN 228A	**10N1R030E02-SSD09-A**	10	22	94	–	–	30	2	0	0	1	–	40700	–	0.17	GI129	C0070
	16N2R030E02-SSD09-A	16	28	94	–	–	30	2	0	0	2	–	32200	–	0.25	GI129	C0070
	25N3R043E03-SSD09-A	25	37	124	–	–	43	3	0	0	3	–	25800	–	0.38	GI129	CH011

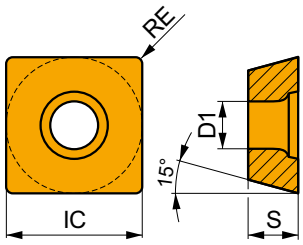
GI129	SDEW 0903..	SDEX 0903..

		Nm			
C0070	US 3507-T15	3.0	M 3.5	7	Flag T15
CH011	US 3509-T15	3.0	M 3.5	9	Flag T15

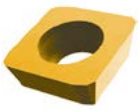
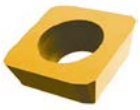
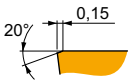
SDEW 09

PRAMET

	IC [mm]	D1 [mm]	S [mm]
0903	9.525	4.40	3.18



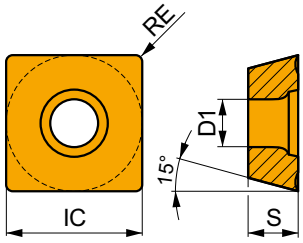
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			U E																	
EN geometry with zero rake angle design for 45° chamfer milling.																				
SDEW 090308EN	**M8330**	0.8	235	0.10	4.5	–	–	–	220	0.10	4.5	–	–	–	–	–	–	45	0.15	1.0
	M8340	0.8	210	0.10	4.5	–	–	–	195	0.10	4.5	–	–	–	–	–	–	–	–	–
			S																	
SN geometry with zero rake angle design for 45° chamfer milling.																				
SDEW 090308SN	**8215**	0.8	215	0.15	4.5	–	–	–	200	0.15	4.5	–	–	–	–	–	–	40	0.15	1.0
	M8330	0.8	215	0.15	4.5	–	–	–	200	0.15	4.5	–	–	–	–	–	–	40	0.15	1.0
	M8340	0.8	195	0.15	4.5	–	–	–	185	0.15	4.5	–	–	–	–	–	–	–	–	–

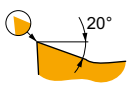
SDEX 09

PRAMET

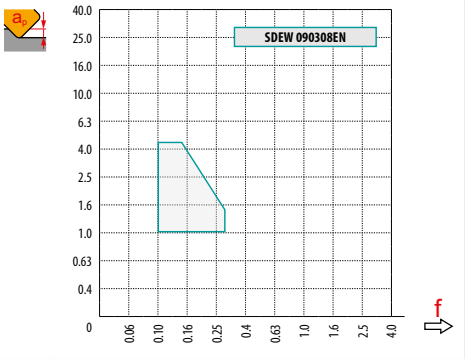
	IC [mm]	D1 [mm]	S [mm]
0903	9.525	4.40	3.18

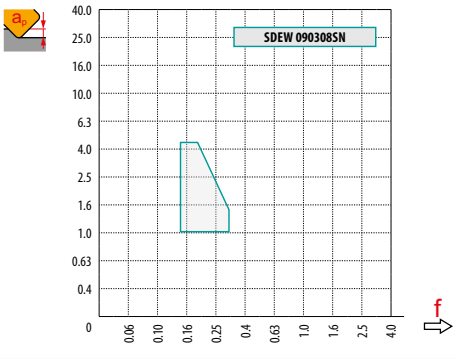


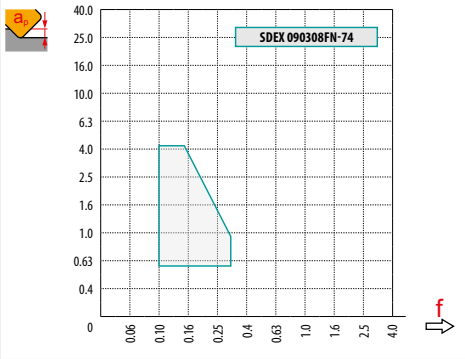
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			F																	
Geometry 74 with positive design for 45° chamfer milling.																				
SDEX 090308FN-74	**M8330**	0.8	305	0.12	4.5	180	0.11	4.5	285	0.12	4.5	–	–	–	75	0.11	3.6	–	–	–

	SDEW 09 EN	SDEW 09 SN	SDEX 09-74
RE	0.8	0.8	0.8
BS	–	–	–







DC	DCX	X.V	f_{min}	f_{max}
10	22	1.09	0.20	0.30
16	28	1.17	0.25	0.34
25	37	1.24	0.32	0.39

a_e / DC	0.10			0.15			0.20			0.25			0.30			0.35			0.40			0.50 – 1.00		
	f																							
45°	0.42	0.54	0.67	0.35	0.44	0.55	0.30	0.38	0.47	0.27	0.34	0.42	0.25	0.31	0.39	0.23	0.29	0.36	0.21	0.27	0.34	0.19	0.24	0.30
X.V	1.35			1.27			1.22			1.19			1.16			1.13			1.11			1.00		

N-SSO09

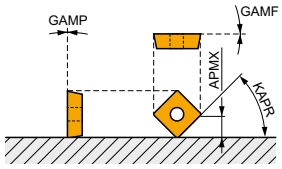
P M K S

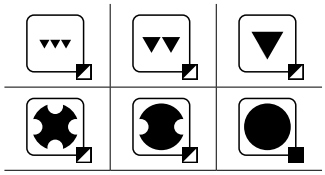
PRAMET S

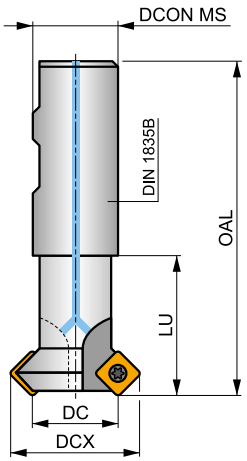
45° Chamfer Milling Cutter for Square Insert SOMT 09 with Internal Coolant

A 45° chamfer milling cutter utilising single-sided SOMT 09 inserts with APMX of 4.5 mm. Internal coolant. Suitable for top and bottom side chamfering. Available in cylindrical, Weldon and Morse taper style and outside Ø20.5, Ø28.8 and Ø37.8 mm. Body treated for longer tool life.

KAPR	45°
APMX	4.5 mm







h_m 0.095 - 0.18

	Product	DC [mm]	DCX [mm]	OAL [mm]	DCON MS [mm]	LU [mm]	GAMF [°]	GAMP [°]			max.		kg		
DIN 1835B	**16N2R027B16-SSO09-C**	16	28.8	110	16	27	0	0	2	–	26600	✓	0.23	GI146	SQ500
DIN 1835B	**25N3R042B25-SSO09-C**	25	37.8	125	25	42	0	0	3	–	21300	✓	0.50	GI146	SQ500
	8N1R027B16-SSO09-C	8	20.5	90	16	27	0	0	1	–	37700	✓	0.12	GI146	SQ500

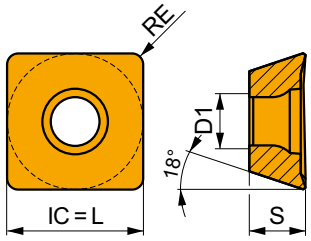
GI146	SOMT 09T3..

		Nm			
SQ500	US 3006-T09P	2.0	M 3	6	Flag T09P

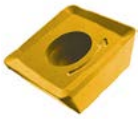
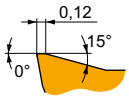
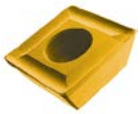
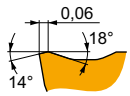
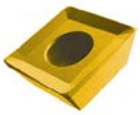
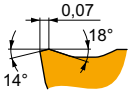
SOMT 09

PRAMET

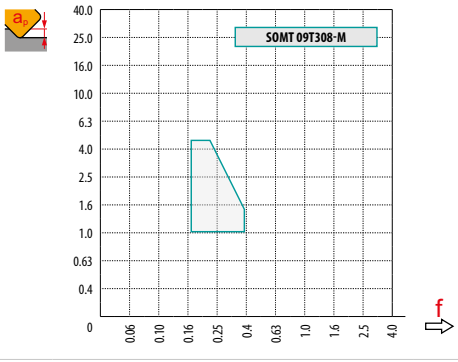
	IC	D1	L	S
	[mm]	[mm]	[mm]	[mm]
09T3	9.550	3.50	9.55	3.97

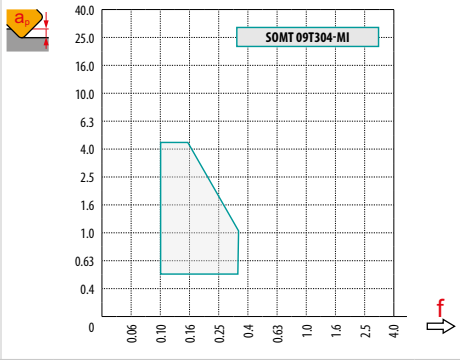


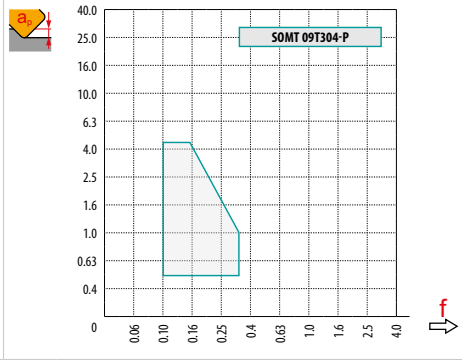
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Conditions are valid for setting angle 90°. Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
			M geometry with positive design for medium machining.																	
SOMT 09T308-M	**8215**	0.8	275	0.14	2.5	165	0.13	2.5	260	0.14	2.5	–	–	–	65	0.13	2.0	–	–	–
	M5315	0.8	390	0.14	2.5	–	–	–	370	0.14	2.5	–	–	–	–	–	–	–	–	–
	M8330	0.8	270	0.14	2.5	160	0.13	2.5	255	0.14	2.5	–	–	–	65	0.13	2.0	–	–	–
	M8340	0.8	250	0.14	2.5	150	0.13	2.5	235	0.14	2.5	–	–	–	60	0.13	2.0	–	–	–
	M9315	0.8	380	0.14	2.5	–	–	–	360	0.14	2.5	–	–	–	–	–	–	–	–	–
			MI geometry with stable positive design for medium machining.																	
SOMT 09T304-MI	**8215**	0.4	230	0.14	2.5	135	0.13	2.5	215	0.14	2.5	–	–	–	55	0.10	2.0	–	–	–
	M8310	0.4	255	0.14	2.5	130	0.13	2.5	240	0.14	2.5	–	–	–	–	–	–	–	–	–
	M8330	0.4	230	0.14	2.5	135	0.13	2.5	215	0.14	2.5	–	–	–	55	0.10	2.0	–	–	–
	M8340	0.4	210	0.14	2.5	125	0.13	2.5	195	0.14	2.5	–	–	–	50	0.10	2.0	–	–	–
	M9315	0.4	320	0.14	2.5	–	–	–	300	0.14	2.5	–	–	–	–	–	–	–	–	–
	M9340	0.4	265	0.14	2.5	155	0.13	2.5	–	–	–	–	–	–	65	0.10	2.0	–	–	–
			P geometry with highly positive design for medium machining.																	
SOMT 09T304-P	**M8330**	0.4	250	0.14	2.5	150	0.13	2.5	235	0.14	2.5	–	–	–	60	0.10	2.0	–	–	–
	M8340	0.4	230	0.14	2.5	135	0.13	2.5	215	0.14	2.5	–	–	–	55	0.10	2.0	–	–	–
	M9325	0.4	320	0.14	2.5	–	–	–	300	0.14	2.5	–	–	–	–	–	–	–	–	–

	SOMT 09-M	SOMT 09-MI	SOMT 09-P
RE	0.8	0.4	0.4
BS	–	–	–







DC	DCX	X.V	f_{min}	f_{max}
8	20.5	1.06	0.18	0.29
16	28.8	1.17	0.25	0.34
25	37.8	1.24	0.32	0.39

a_e / DC	0.10			0.15			0.20			0.25			0.30			0.35			0.40			0.50 – 1.00		
	f																							
45°	0.42	0.63	0.80	0.35	0.51	0.66	0.30	0.44	0.57	0.27	0.40	0.51	0.25	0.36	0.46	0.23	0.33	0.43	0.21	0.31	0.40	0.19	0.28	0.36
X.V	1.35			1.27			1.22			1.19			1.16			1.13			1.11			1.00		

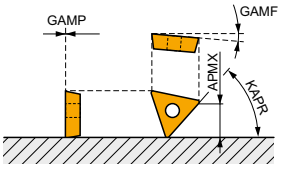
2516

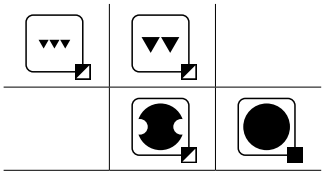
P M K N

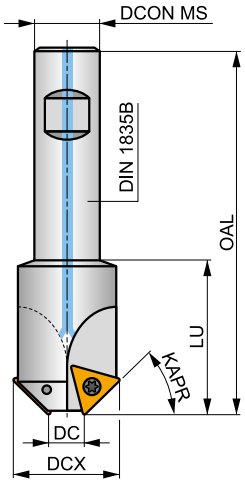
PRAMET

S

KAPR	45°
APMX	8,5 mm







h_m 0.065 - 0.095

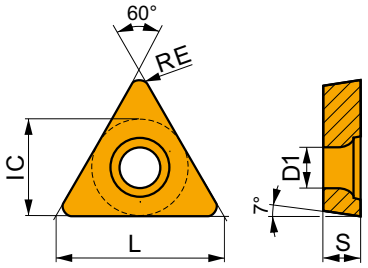
		DCX [mm]	DC [mm]	OAL [mm]	DCON MS [mm]	LU [mm]			max.		kg		
DIN 1835B	**2516-45-11**	31	11	100	16	30	2	–	18100	✓	0.24	GI155	SQ220
	2516-45-19	39	19	100	20	30	2	–	16200	✓	0.35	GI155	SQ220

GI155	TCMT 16T308E-FM:T83..

		Nm			
SQ220	US 4011-T15P	3.5	M 4	10.6	Flag T15P

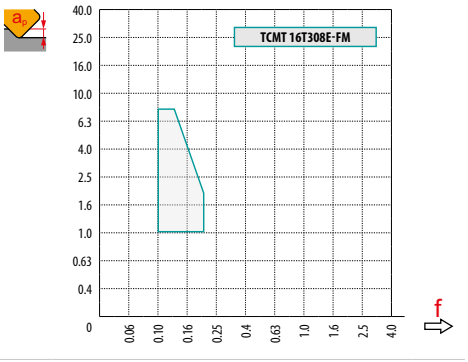
TCMT

	IC [mm]	D1 [mm]	L [mm]	S [mm]
16T3	9.525	4.4	16.5	3.97



		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
TCMT 16T308E-FM	**T8315**	0.80	170	0.17	1.7	100	0.15	1.7	160	0.17	1.7	510	0.20	1.7	–	–	–	–	–	–
	T8330	0.80	160	0.17	1.7	95	0.15	1.7	150	0.17	1.7	480	0.20	1.7	–	–	–	–	–	–

	TCMT 16-FM
RE	0.8
BS	–



DC	DCX	X.V	f_{min}	f_{max}
11.0	31.0	1.02	0.10	0.18
19.0	39.0	1.10	0.14	0.20

a_e / DC	0.10			0.15			0.20			0.25			0.30			0.35			0.40			0.50 – 1.00		
	f																							
45°	0.29	0.34	0.42	0.24	0.27	0.35	0.21	0.24	0.30	0.18	0.21	0.27	0.17	0.19	0.25	0.16	0.18	0.23	0.15	0.17	0.21	0.13	0.15	0.19
X.V	1.35			1.27			1.22			1.19			1.16			1.13			1.11			1.00		

2636

P M K N

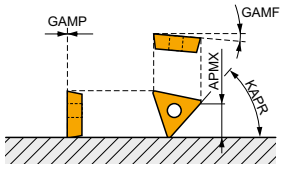
PRAMET

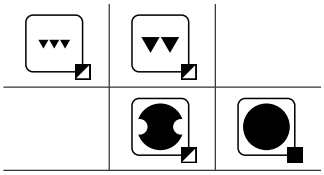
S

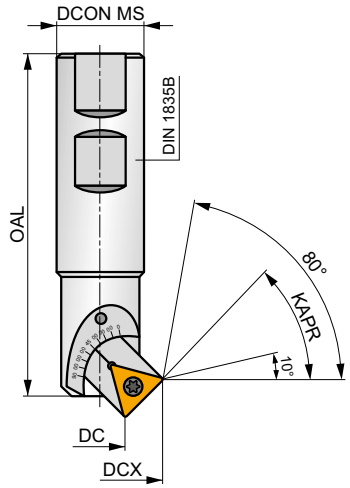
Adjustable Milling Cutter for TCMT 16 insert

Adjustable chamfering milling cutter utilising TCMT 16 inserts with APMX of 8.5 mm. Adjustable angle range from 10° up to 80°. Available in Weldon style Ø25 mm only. Body treated for longer tool life.

KAPR	10°- 80°
APMX	8,5 mm







h_m 0.03 - 0.08

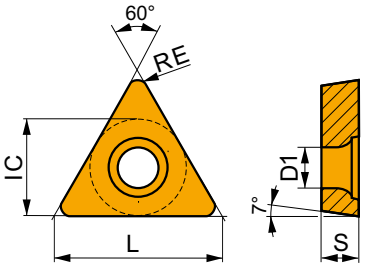
	Product	DC [mm]	DCX [mm]	OAL [mm]	DCON MS [mm]	KAPR [°]	GAMF [°]	GAMP [°]			max.		kg		
DIN 1835B	**2636-05-25**	5.0	31.0	100	25	10	-8	0	1	–	18100	–	0.35	GI294	CH040
		5.5	31.0			15									
		7.0	29.5			30									
		11.0	29.5			45									
		16.0	28.5			60									
		21.0	26.5			75									
		23.0	26.0			80									

GI294	TCMT 16T304E-FM:T83..	TCMT 16T308E-FM:T83..

CH040	USI 0614	CA 2669	US 4011-T15P	3.5 Nm	M 4	10.6	Flag T15

TCMT

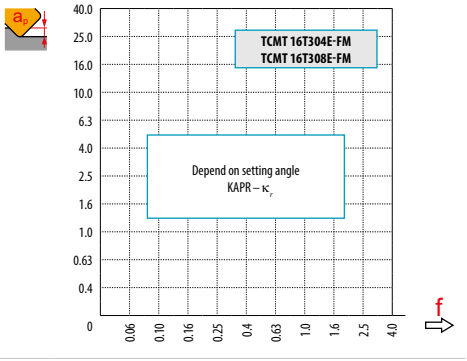
	IC	D1	L	S
	[mm]	[mm]	[mm]	[mm]
16T3	9.525	4.4	16.5	3.97



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
			FM geometry for finish to semi-rough machining, continuous to slightly interrupted cuts.																	
TCMT 16T304E-FM	**T8315**	0.40	155	0.12	1.7	90	0.11	1.7	145	0.12	1.7	465	0.14	1.7	–	–	–	–	–	–
	T8330	0.40	150	0.12	1.7	90	0.11	1.7	140	0.12	1.7	450	0.14	1.7	–	–	–	–	–	–
TCMT 16T308E-FM	**T8315**	0.80	170	0.17	1.7	100	0.15	1.7	160	0.17	1.7	510	0.20	1.7	–	–	–	–	–	–
	T8330	0.80	160	0.17	1.7	95	0.15	1.7	150	0.17	1.7	480	0.20	1.7	–	–	–	–	–	–

	TCMT 16-FM	
RE	0.8	0.4
BS	–	–



	a_p	DC	DCX	X.V	f_{min}	f_{max}
10°	2.6	5.0	31.0	1.38	0.24	0.59
15°	3.9	5.5	31.0	1.30	0.17	0.40
30°	7.6	7.0	29.5	1.18	0.10	0.20
45°	10.7	11.0	29.5	1.13	0.09	0.14
60°	13.2	16.0	28.5	1.09	0.09	0.11
75°	14.7	21.0	26.5	1.06	0.09	0.10
80°	15.0	23.0	26.0	1.06	0.09	0.10

a_e / DC	0.10			0.15			0.20			0.25			0.30			0.35			0.40			0.50 – 1.00		
	f																							
10°	0.55	0.91	1.46	0.45	0.74	1.19	0.39	0.64	1.03	0.35	0.58	0.92	0.32	0.53	0.84	0.29	0.49	0.78	0.27	0.46	0.73	0.24	0.41	0.65
15°	0.37	0.61	0.98	0.30	0.50	0.80	0.26	0.43	0.69	0.23	0.39	0.62	0.21	0.35	0.56	0.20	0.33	0.52	0.18	0.31	0.49	0.16	0.27	0.44
30°	0.19	0.32	0.51	0.15	0.26	0.41	0.13	0.22	0.36	0.12	0.20	0.32	0.11	0.18	0.29	0.10	0.17	0.27	0.09	0.16	0.25	0.08	0.14	0.23
45°	0.13	0.22	0.36	0.11	0.18	0.29	0.09	0.16	0.25	0.08	0.14	0.23	0.08	0.13	0.21	0.07	0.12	0.19	0.07	0.11	0.18	0.06	0.10	0.16
60°	0.11	0.18	0.29	0.09	0.15	0.24	0.08	0.13	0.21	0.07	0.12	0.18	0.06	0.11	0.17	0.06	0.10	0.16	0.05	0.09	0.15	0.05	0.08	0.13
75°	0.10	0.16	0.26	0.08	0.13	0.21	0.07	0.12	0.19	0.06	0.10	0.17	0.06	0.09	0.15	0.05	0.09	0.14	0.05	0.08	0.13	0.04	0.07	0.12
80°	0.10	0.16	0.26	0.08	0.13	0.21	0.07	0.11	0.18	0.06	0.10	0.16	0.06	0.09	0.15	0.05	0.09	0.14	0.05	0.08	0.13	0.04	0.07	0.11
X.V	1.35			1.27			1.22			1.19			1.16			1.13			1.11			1.00		

J(T)-SXP16

P M K N

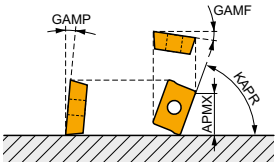
PRAMET

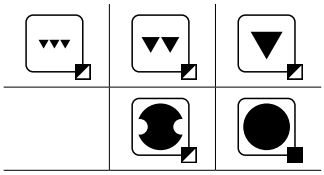
S

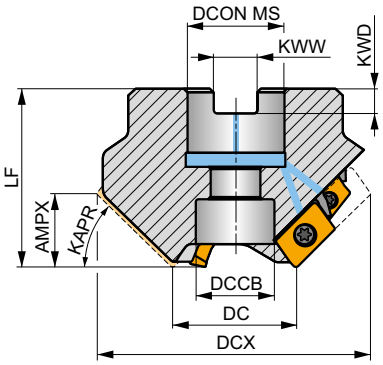
Long Edge Chamfer Milling Cutter for XPHT 16 insert with Internal Coolant

Chamfer milling cutter utilising single-sided XPHT 16 inserts with APMX from 7 up to 28 mm. Internal coolant. Suitable for top chamfering. Available in arbor style only. Minor Ø35 and Ø45 mm, in range of 15°, 25°, 30°, 35°, 40°, 45°, 50°, 55°, 60° and 75° chamfer angle. Body treated for longer tool life.

KAPR	15° - 75°
APMX	7.0 - 28.0 mm







h_m 0.05 - 0.11

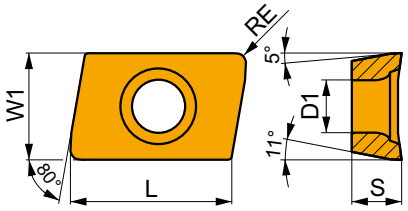
	Product	DC [mm]	DCX [mm]	LF [mm]	DCON MS [mm]	DCCB [mm]	KAPR [°]	KWW [mm]	KWD [mm]	APMX [mm]	GAMF [°]	GAMP [°]	NOF			max.		kg		
	35T03R-S15XP1607-C	35	90.6	50	27	22	15	12.4	7	7.00	-6	-1	3	6	–	15200	✓	1.38	GI208	CH050
	35T03R-S25XP1612-C	35	87.3	50	27	22	25	12.4	7	12.00	-6	0	3	6	–	15200	✓	1.24	GI208	CH050
	35T03R-S30XP1614-C	35	85.1	50	27	22	30	12.4	7	14.00	-6	0	3	6	–	15200	✓	1.28	GI208	CH050
	35T03R-S35XP1616-C	35	82.4	50	27	22	35	12.4	7	16.00	-6	0	3	6	–	15200	✓	1.15	GI208	CH050
	35T03R-S40XP1618-C	35	79.4	50	27	22	40	12.4	7	18.00	-6	1	3	6	–	15200	✓	1.07	GI208	CH050
	35T03R-S45XP1620-C	35	76.1	50	27	22	45	12.4	7	20.00	-6	2	3	6	–	15200	✓	0.97	GI208	CH050
	35T03R-S50XP1622-C	35	72.4	50	27	22	50	12.4	7	22.00	-6	2	3	6	–	15200	✓	0.91	GI208	CH050
	35T03R-S55XP1623-C	35	68.4	50	27	22	55	12.4	7	23.00	-6	2	3	6	–	15200	✓	0.83	GI208	CH050
ISO 6462 DIN 8030	**35T03R-S60XP1625-C**	35	64.2	50	27	22	60	12.4	7	25.00	-5	4	3	6	–	15200	✓	0.67	GI208	CH050
	45T03R-S75XP1628-C	45	60.1	50	27	22	75	12.4	7	28.00	-5	5	3	6	–	13400	✓	0.73	GI208	CH050
	45T04R-S25XP1612-C	45	97.3	50	27	22	25	12.4	7	12.00	-6	0	4	8	✓	13400	✓	1.63	GI208	CH050
	45T04R-S30XP1614-C	45	95.1	50	27	22	30	12.4	7	14.00	-6	0	4	8	✓	13400	✓	1.22	GI208	CH050
	45T04R-S35XP1616-C	45	92.4	50	27	22	35	12.4	7	16.00	-6	2	4	8	✓	13400	✓	1.30	GI208	CH050
	45T04R-S40XP1618-C	45	89.5	50	27	22	40	12.4	7	18.00	-6	2	4	8	✓	13400	✓	1.18	GI208	CH050
	45T04R-S45XP1620-C	45	86.1	50	27	22	45	12.4	7	20.00	-6	2	4	8	✓	13400	✓	1.11	GI208	CH050
	45T04R-S50XP1622-C	45	82.4	50	27	22	50	12.4	7	22.00	-6	2	4	8	✓	13400	✓	1.04	GI208	CH050
	45T04R-S55XP1623-C	45	78.4	50	27	22	55	12.4	7	23.00	-6	2	4	8	✓	13400	✓	0.96	GI208	CH050
	45T04R-S60XP1625-C	45	74.2	50	27	22	60	12.4	7	25.00	-5	4	4	8	✓	13400	✓	0.82	GI208	CH050

GI208	XPHT 1604..

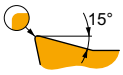
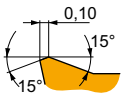
CH050	US 3509-T15	3.0 Nm	M 3.5	9	D-T07/T15	FG-15	HS 1230C

XPHT 16

	W1 [mm]	D1 [mm]	L [mm]	S [mm]
1604	9.525	4.40	15.88	4.76

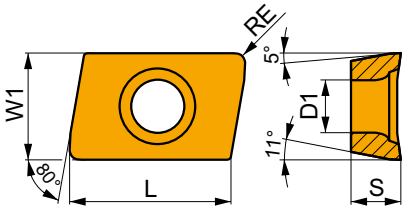


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

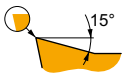
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			U E																	
E geometry with highly positive design for chamfer milling.																				
XPHT 160412E	**8215**	1.2	225	0.10	15.0	135	0.09	15.0	210	0.10	15.0	–	–	–	–	–	–	–	–	–
	M6330	1.2	190	0.10	15.0	135	0.09	15.0	–	–	–	–	–	–	–	–	–	–	–	–
	M8330	1.2	220	0.10	15.0	130	0.09	15.0	205	0.10	15.0	–	–	–	–	–	–	–	–	–
	M8340	1.2	195	0.10	15.0	115	0.09	15.0	185	0.10	15.0	–	–	–	–	–	–	–	–	–
			1 U S																	
S geometry with highly positive design for chamfer milling.																				
XPHT 160412S	**8215**	1.2	210	0.12	15.0	125	0.11	15.0	195	0.12	15.0	–	–	–	–	–	–	–	–	–
	M8330	1.2	210	0.12	15.0	125	0.11	15.0	195	0.12	15.0	–	–	–	–	–	–	–	–	–
	M8340	1.2	190	0.12	15.0	110	0.11	15.0	180	0.12	15.0	–	–	–	–	–	–	–	–	–
	M9325	1.2	270	0.12	15.0	–	–	–	255	0.12	15.0	–	–	–	–	–	–	–	–	–
	M9340	1.2	245	0.12	15.0	145	0.11	15.0	–	–	–	–	–	–	–	–	–	–	–	–

XPHT 16-FA

	W1	D1	L	S
	[mm]	[mm]	[mm]	[mm]
1604	9.525	4.40	15.88	4.76



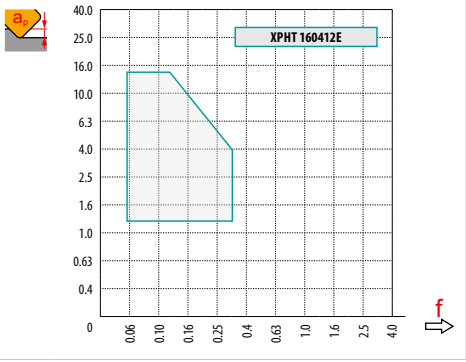
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

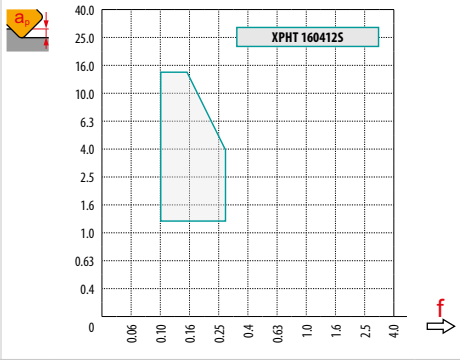
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
XPHT 160408F-FA	**HF7**	0.8	–	–	–	–	–	–	–	–	–	255	0.12	15.0	–	–	–	–	–	–

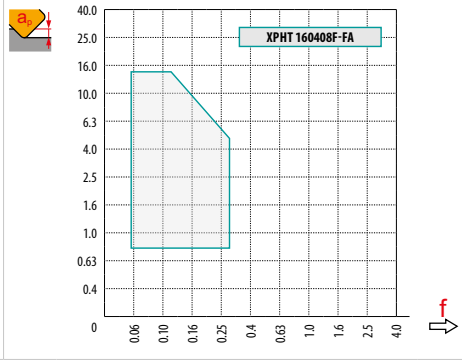
F

FA geometry with highly positive design for chamfer milling.

	XPHT 16 E	XPHT 16 S	XPHT 16-FA
RE	1.2	1.2	0.8
BS	–	–	–







a_e / DC	0.10			0.15			0.20			0.25			0.30			0.35			0.40			0.50 – 1.00		
	f																							
15°	0.61	0.98	1.34	0.50	0.80	1.10	0.43	0.69	0.95	0.39	0.62	0.85	0.35	0.56	0.78	0.33	0.52	0.72	0.31	0.49	0.67	0.27	0.44	0.60
25°	0.37	0.60	0.82	0.31	0.49	0.67	0.26	0.42	0.58	0.24	0.38	0.52	0.22	0.35	0.48	0.20	0.32	0.44	0.19	0.30	0.41	0.17	0.27	0.37
30°	0.32	0.51	0.70	0.26	0.41	0.57	0.22	0.36	0.49	0.20	0.32	0.44	0.18	0.29	0.40	0.17	0.27	0.37	0.16	0.25	0.35	0.14	0.23	0.31
35°	0.28	0.44	0.61	0.23	0.36	0.50	0.19	0.31	0.43	0.17	0.28	0.38	0.16	0.25	0.35	0.15	0.24	0.32	0.14	0.22	0.30	0.12	0.20	0.27
40°	0.25	0.39	0.54	0.20	0.32	0.44	0.17	0.28	0.38	0.16	0.25	0.34	0.14	0.23	0.31	0.13	0.21	0.29	0.12	0.20	0.27	0.11	0.18	0.24
45°	0.22	0.36	0.49	0.18	0.29	0.40	0.16	0.25	0.35	0.14	0.23	0.31	0.13	0.21	0.28	0.12	0.19	0.26	0.11	0.18	0.25	0.10	0.16	0.22
50°	0.21	0.33	0.45	0.17	0.27	0.37	0.15	0.23	0.32	0.13	0.21	0.29	0.12	0.19	0.26	0.11	0.18	0.24	0.10	0.17	0.23	0.09	0.15	0.20
55°	0.19	0.31	0.42	0.16	0.25	0.35	0.14	0.22	0.30	0.12	0.20	0.27	0.11	0.18	0.25	0.10	0.17	0.23	0.10	0.15	0.21	0.09	0.14	0.19
60°	0.18	0.29	0.40	0.15	0.24	0.33	0.13	0.21	0.28	0.12	0.18	0.25	0.11	0.17	0.23	0.10	0.16	0.21	0.09	0.15	0.20	0.08	0.13	0.18
75°	0.16	0.26	0.36	0.13	0.21	0.29	0.12	0.19	0.25	0.10	0.17	0.23	0.09	0.15	0.21	0.09	0.14	0.19	0.08	0.13	0.18	0.07	0.12	0.16
X.V	1.35			1.27			1.22			1.19			1.16			1.13			1.11			1.00		

	a_p	DC	DCX	X.V	f_{min}	f_{max}
15°	7	35.0	90.6	1.16	0.43	0.70
25°	12	35.0	87.3	1.16	0.20	0.32
30°	14	35.0	85.1	1.17	0.16	0.25
35°	16	35.0	82.4	1.17	0.13	0.20
40°	18	35.0	79.4	1.17	0.11	0.16
45°	20	35.0	76.0	1.18	0.09	0.14
50°	22	35.0	72.4	1.18	0.08	0.12
55°	23	35.0	68.4	1.20	0.08	0.11
60°	25	35.0	64.1	1.20	0.07	0.09
25°	12	45.0	97.3	1.18	0.23	0.34
30°	14	45.0	95.0	1.18	0.18	0.26
35°	16	45.0	92.4	1.19	0.15	0.21
40°	18	45.0	89.5	1.19	0.12	0.17
45°	20	45.0	86.0	1.20	0.11	0.15
50°	22	45.0	82.4	1.21	0.09	0.13

	a_p	DC	DCX	X.V	f_{min}	f_{max}
55°	23	45.0	78.4	1.22	0.09	0.11
60°	25	45.0	74.1	1.23	0.08	0.10
75°	28	45.0	60.1	1.31	0.07	0.08

Cutters with setting angle 15°can be used as HFC. Use feeds from chamfers table.

F-SCC

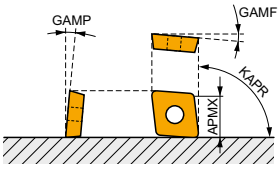
P M K

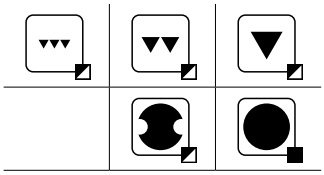
PRAMET S

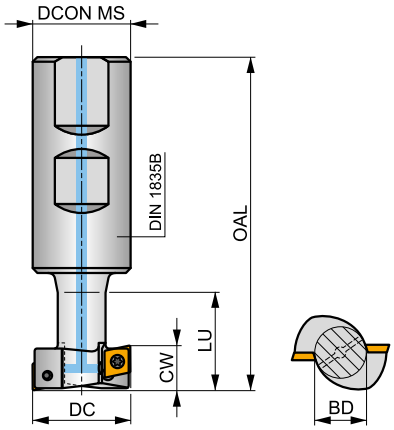
T-Slot Milling Cutter for CCMX insert with Internal Coolant

T-slot milling cutter utilising single-sided CCMX inserts. Internal coolant. Suitable for T-slot, back-face, shallow shoulder and shallow slot milling. Available in Weldon style only in outside Ø25, Ø32 and Ø40 mm. Body treated for longer tool life.

KAPR	90°
APMX	11.0 - 18.0 mm







h_m 0.05 - 0.08

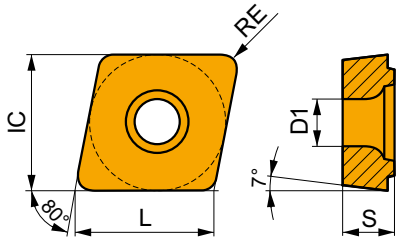
	Product	DC [mm]	BD [mm]	OAL [mm]	DCON MS [mm]	LU [mm]	CW [mm]				max.		kg		
DIN 1835B	**25F1R030B25-SCC06-C**	25	12	86	25	25	11.00	1	2	–	28100	✓	0.26	GI148	SQ213
	32F1R038B32-SCC08-C	32	16	98	32	33	14.00	1	2	–	19100	✓	0.50	GI149	SQ212
	40F2R046B32-SCC09-C	40	20	105	32	41	18.00	2	4	–	14900	✓	0.56	GI150	SQ212

GI148	CCMX 060304
GI149	CCMX 08T308
GI150	CCMX 09T308

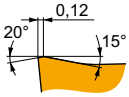
		Nm			
SQ212	US 3007-T09P	2.0	M 3	7.3	Flag T09P
SQ213	US 2506-T07P	1.2	M 2.5	6.3	Flag T07P

CCMX

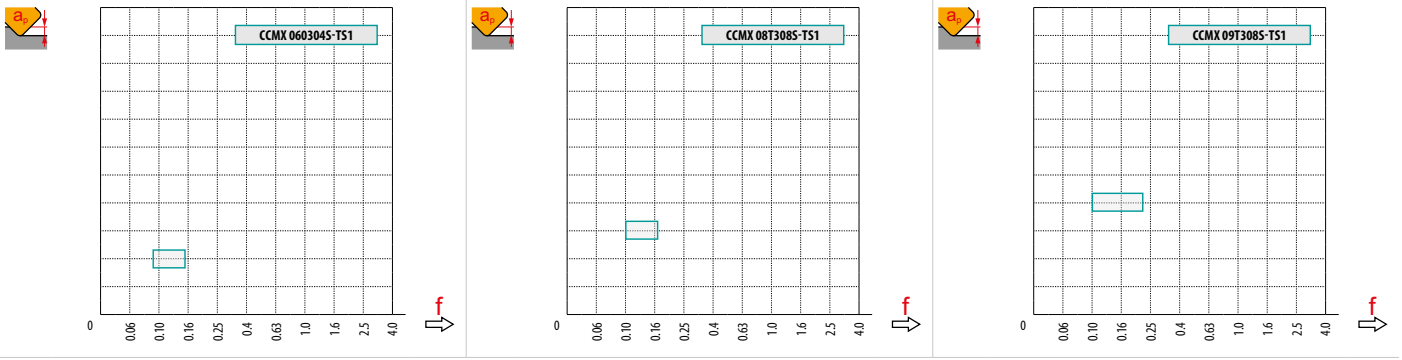
	IC [mm]	D1 [mm]	L [mm]	S [mm]
0603	6.350	2.80	6.40	3.50
08T3	8.030	3.50	8.10	4.40
09T3	9.525	3.50	9.70	3.97



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			U S																	
			Special design for T-Slot milling fo+l250r light to medium cutting conditions.																	
CCMX 060304S-TS1	**M8330**	0.4	■ 240	0.10	–	◪ 140	0.09	–	■ 225	0.10	–	–	–	–	–	–	–	–	–	–
	M8340	0.4	■ 215	0.10	–	◪ 125	0.09	–	◪ 200	0.10	–	–	–	–	–	–	–	–	–	–
CCMX 08T308S-TS1	**M8330**	0.8	■ 275	0.10	–	◪ 165	0.10	–	■ 260	0.10	–	–	–	–	–	–	–	–	–	–
	M8340	0.8	■ 245	0.10	–	◪ 145	0.10	–	◪ 230	0.10	–	–	–	–	–	–	–	–	–	–
CCMX 09T308S-TS1	**M8330**	0.8	■ 270	0.10	–	◪ 160	0.10	–	■ 255	0.10	–	–	–	–	–	–	–	–	–	–
	M8340	0.8	■ 240	0.10	–	◪ 140	0.10	–	◪ 225	0.10	–	–	–	–	–	–	–	–	–	–

	CCMX 06-TS1	CCMX 08-TS1	CCMX 09-TS1
RE	0.4	0.8	0.8
BS	–	–	–



a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00

DC	a_e = 1		a_e = 2		a_e = 3		a_e = 4		a_e = 5		a_e = 8		a_e = 10	
	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹
25	0.25	0.40	0.18	0.29	0.15	0.24	0.13	0.21	0.12	0.19	0.09	0.15	0.09	0.14
32	0.28	0.45	0.20	0.32	0.17	0.27	0.14	0.23	0.13	0.21	0.10	0.17	0.09	0.15
40	0.32	0.51	0.23	0.36	0.18	0.30	0.16	0.26	0.14	0.23	0.12	0.19	0.10	0.17

DC	a_e = 12		a_e = 16		a_e = 20		a_e = 25		a_e = 32		a_e = 40	
	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹
25	0.08	0.13	0.07	0.12	0.07	0.11	0.08	0.13	–	–	–	–
32	0.09	0.14	0.08	0.13	0.07	0.12	0.07	0.11	0.08	0.13	–	–
40	0.10	0.15	0.09	0.14	0.08	0.13	0.07	0.12	0.07	0.11	0.08	0.13

Valid for T-slot milling

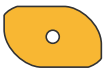
Valid for shoulder and inverse face milling

Valid for shoulder milling

DC		a_{PMX}	a_{emax}
25	1	11	6.4
32	1	14	8.0
40	2	18	9.7

OTHER MILLING INSERTS

ADKT 15 670

ADKX 15  670

APMT 16 671

CNM 672

ODMT 05 672

OFKR 07 673

RDET 673

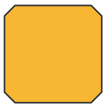
RDEX 674

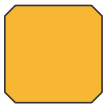
RDHX 20 674

RPET 12 675

RPEW 12 675

RPEX 676

SEEN  676

SEER  677

SEET 12 678

SEET 12-FA 678

SEET 12-PM 679

SEEW 12 679

SFCN 680

SNHF 680

SNHN 681

SNKX 681

SNUN 682

SPGN 682

SPGN 25 DZ 683

SPKN 683

SPKR 684

SPKX 685

SPUN 685

TNJF 686

TPCN 16 687

TPKN 687

TPKR 688

TPUN 689

VCGT 22-FA 690

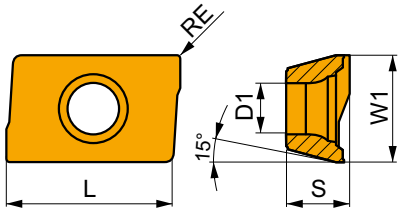
XDHW

690

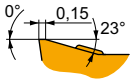
ADKT 15

PRAMET

	W1	D1	L	S
	[mm]	[mm]	[mm]	[mm]
1505	9.525	4.40	15.55	5.60



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

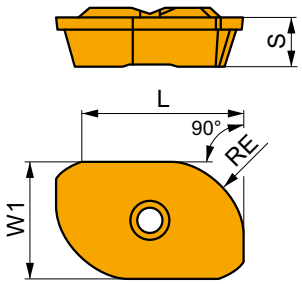
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
ADKT 1505PDER-M	**M8330**	0.8	■ 235	0.20	5.0	■ 140	0.18	5.0	■ 220	0.20	5.0	–	–	–	◪ 55	0.16	4.0	–	–	–
	M8340	0.8	■ 210	0.20	5.0	■ 125	0.18	5.0	◪ 195	0.20	5.0	–	–	–	◪ 50	0.16	4.0	–	–	–
	M9325	0.8	■ 290	0.20	5.0	–	–	–	■ 275	0.20	5.0	–	–	–	–	–	–	–	–	–

M geometry with highly positive design for medium machining.

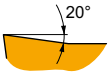
ADKX 15

PRAMET

	W1	L	S
	[mm]	[mm]	[mm]
15T3	9.525	12.60	3.97



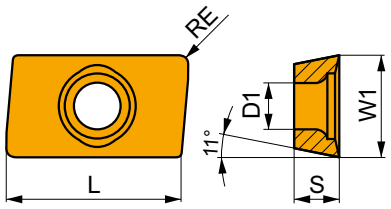
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
ADKX 15T308ER-F	**M8330**	0.8	◪ 245	0.10	10.0	■ 145	0.09	10.0	–	–	–	–	–	–	◪ 60	0.07	8.0	–	–	–
	M8345	0.8	◪ 170	0.10	10.0	■ 100	0.09	10.0	–	–	–	–	–	–	◪ 40	0.07	8.0	–	–	–
ADKX 15T330ER-F	**M8330**	3.0	■ 280	0.10	10.0	■ 165	0.09	10.0	–	–	–	–	–	–	◪ 70	0.07	8.0	–	–	–
	M8345	3.0	■ 200	0.10	10.0	■ 120	0.09	10.0	–	–	–	–	–	–	■ 50	0.07	8.0	–	–	–
ADKX 15T340ER-F	**M8330**	4.0	■ 280	0.10	10.0	■ 165	0.09	10.0	–	–	–	–	–	–	◪ 70	0.07	8.0	–	–	–
	M8345	4.0	■ 200	0.10	10.0	■ 120	0.09	10.0	–	–	–	–	–	–	■ 50	0.07	8.0	–	–	–
ADKX 15T360ER-F	**M8330**	6.0	■ 280	0.10	10.0	■ 165	0.09	10.0	–	–	–	–	–	–	◪ 70	0.07	8.0	–	–	–

F geometry with very sharp positive design for light to medium machining.

APMT 16

	W1	D1	L	S
	[mm]	[mm]	[mm]	[mm]
1604	9.600	4.50	17.00	4.76



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
APMT 1604PDER-F	**M8330**	–	■ 290	0.15	2.0	■ 170	0.14	2.0	◪ 275	0.15	2.0	–	–	–	◪ 70	0.11	1.6	–	–	–
APMT 1604PDER-FM	**M8330**	–	■ 285	0.16	2.0	■ 170	0.14	2.0	◪ 270	0.16	2.0	–	–	–	◪ 70	0.13	1.6	–	–	–
	M8345	–	■ 205	0.16	2.0	■ 120	0.14	2.0	–	–	–	–	–	–	◪ 50	0.13	1.6	–	–	–
APMT 1604PDER-R	**M8330**	–	■ 255	0.16	5.0	–	–	–	■ 240	0.16	5.0	–	–	–	–	–	–	–	–	–
	M8345	–	■ 185	0.16	5.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
APMT 1604PDSR-R	**M8330**	–	■ 255	0.18	5.0	–	–	–	■ 240	0.18	5.0	–	–	–	–	–	–	–	–	–
	M8345	–	■ 180	0.18	5.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

F geometry with positive design for light machining.

FM geometry with positive design for light to medium machining.

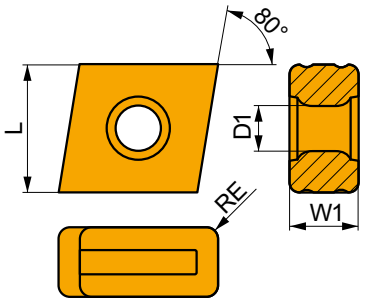
ER-R geometry with positive design for rough machining.

SR-R geometry with positive design for rough machining.

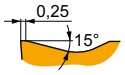
CNM

PRAMET

	D1	L	S
	[mm]	[mm]	[mm]
63	5.50	15.00	8.00



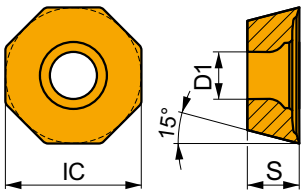
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
			U T																	
			Universal geometry.																	
CNM 563	**M8330**	1.2	■ 185	0.30	10.0	–	–	–	■ 175	0.30	10.0	–	–	–	–	–	–	–	–	–
	M8340	1.2	■ 220	0.30	10.0	–	–	–	◪ 205	0.30	10.0	–	–	–	–	–	–	–	–	–

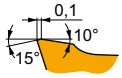
ODMT 05

PRAMET

	IC	D1	S
	[mm]	[mm]	[mm]
0504	12.700	4.40	4.76



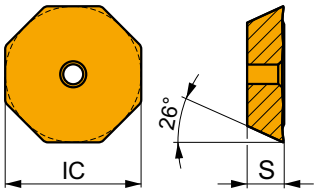
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
			1 S																	
			Slightly positive design for medium machining.																	
ODMT 0504ZZN	**M8340**	–	■ 195	0.25	1.5	–	–	–	◪ 185	0.25	1.5	–	–	–	–	–	–	–	–	–

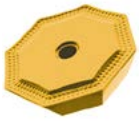
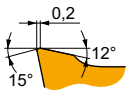
OFKR 07

PRAMET

	IC [mm]	D1 [mm]	S [mm]
0704	17.845	2.65	4.56



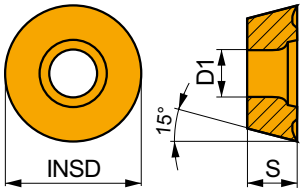
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			M geometry with positive design for light to medium machining.																	
OFKR 0704SN-M	**M8330**	–	235	0.25	1.5	140	0.23	1.5	220	0.25	1.5	–	–	–	–	–	–	–	–	–
	M8340	–	215	0.25	1.5	125	0.23	1.5	200	0.25	1.5	–	–	–	–	–	–	–	–	–

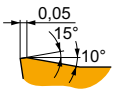
RDET

PRAMET

	INSD [mm]	D1 [mm]	S [mm]
0802	8.0	3.40	2.38
1003	10.0	4.40	3.18
12T3	12.0	4.40	3.97



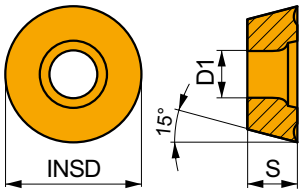
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			Positive design for finish machining.																	
RDET 0802MOSN	**M8340**	–	335	0.15	0.5	200	0.14	0.5	315	0.15	0.5	–	–	–	80	0.12	0.4	–	–	–
RDET 1003MOSN	**M8340**	–	310	0.15	1.0	185	0.14	1.0	290	0.15	1.0	–	–	–	75	0.12	0.8	–	–	–
RDET 12T3MOSN	**M8340**	–	280	0.20	1.5	165	0.18	1.5	265	0.20	1.5	–	–	–	70	0.14	1.2	–	–	–

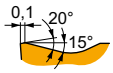
RDEX

PRAMET

	INSD [mm]	D1 [mm]	S [mm]
1204	12.0	4.40	4.76
1604	16.0	5.50	4.76



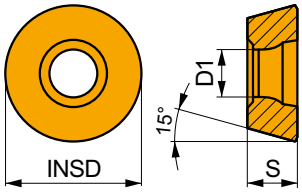
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			HFC S																	
			Positive design for finish machining.																	
RDEX 1204MOSN-12	**M8340**	–	■ 205	0.30	1.5	◪ 120	0.27	1.5	◪ 190	0.30	1.5	–	–	–	◪ 50	0.21	1.2	–	–	–
RDEX 1604MOSN-12	**M8340**	–	■ 195	0.30	2.0	◪ 115	0.27	2.0	◪ 185	0.30	2.0	–	–	–	◪ 45	0.24	1.6	–	–	–

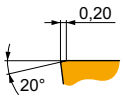
RDHX 20

PRAMET

	INSD [mm]	D1 [mm]	S [mm]
2006	20.0	5.20	6.35



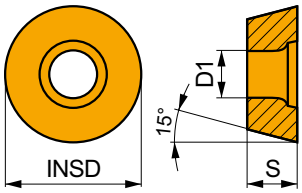
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			HFC T																	
			Zero rake angle design for finish machining.																	
RDHX 2006MOT	**M8310**	–	◪ 240	0.35	3.0	–	–	–	■ 225	0.35	3.0	–	–	–	–	–	–	■ 45	0.15	1.0
	M8325	–	◪ 180	0.35	3.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

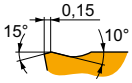
RPET 12

PRAMET

	INSD	D1	S
	[mm]	[mm]	[mm]
1204	12.0	4.40	4.76



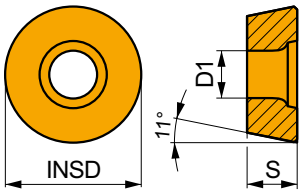
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
			HFC S																	
			Positive design for finish machining.																	
RPET 1204M0SN	**8215**	–	■ 325	0.20	1.5	◪ 195	0.18	1.5	◪ 305	0.20	1.5	–	–	–	◪ 80	0.14	1.2	–	–	–
	M8330	–	■ 320	0.20	1.5	◪ 190	0.18	1.5	◪ 300	0.20	1.5	–	–	–	◪ 80	0.14	1.2	–	–	–
	M8340	–	■ 295	0.20	1.5	◪ 175	0.18	1.5	◪ 280	0.20	1.5	–	–	–	◪ 70	0.14	1.2	–	–	–

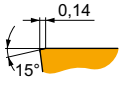
RPEW 12

PRAMET

	INSD	D1	S
	[mm]	[mm]	[mm]
1204	12.0	4.40	4.76



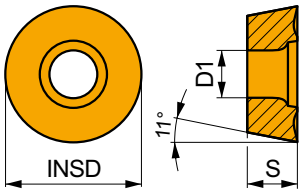
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
			HFC S																	
			Zero rake angle design for finish machining.																	
RPEW 1204M0SN	**M8330**	–	◪ 285	0.20	1.5	–	–	–	■ 270	0.20	1.5	–	–	–	–	–	–	◪ 55	0.15	1.0
	M8340	–	◪ 265	0.20	1.5	–	–	–	◪ 250	0.20	1.5	–	–	–	–	–	–	–	–	–

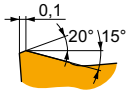
RPEX

PRAMET

	INSD	D1	S
	[mm]	[mm]	[mm]
1204	12.0	4.40	4.76



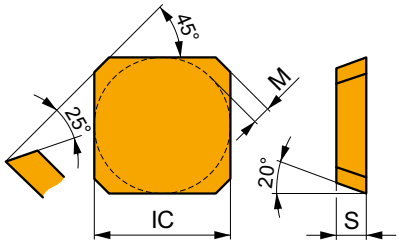
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
			HFC S																	
			Positive design for finish machining.																	
RPEX 1204MOSN-12	**M8330**	–	235	0.30	1.5	140	0.27	1.5	220	0.30	1.5	–	–	–	55	0.21	1.2	–	–	–
	M8340	–	215	0.30	1.5	125	0.27	1.5	200	0.30	1.5	–	–	–	50	0.21	1.2	–	–	–

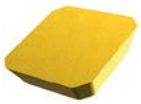
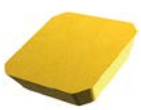
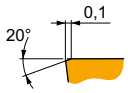
SEEN

PRAMET

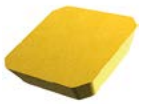
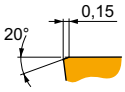
	IC	M	S
	[mm]	[mm]	[mm]
1203	12.700	2	3.18
1504	15.875	2	4.76



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
			U F																	
			AFFN edge preperation, zero rake angle geometry for light to medium machining.																	
SEEN 1203AFFN	**M8330**	–	270	0.15	2.0	160	0.14	2.0	255	0.15	2.0	–	–	–	–	–	–	–	–	–
	M8340	–	245	0.15	2.0	145	0.14	2.0	230	0.15	2.0	–	–	–	–	–	–	–	–	–
			U S																	
			AFSN edge preperation, zero rake angle geometry for medium to heavy machining.																	
SEEN 1203AFSN	**8215**	–	255	0.20	2.0	–	–	–	240	0.20	2.0	–	–	–	–	–	–	50	0.15	1.0
	M8330	–	255	0.20	2.0	–	–	–	240	0.20	2.0	–	–	–	–	–	–	50	0.15	1.0
	M8340	–	230	0.20	2.0	–	–	–	215	0.20	2.0	–	–	–	–	–	–	–	–	–
	M9315	–	340	0.20	2.0	–	–	–	320	0.20	2.0	–	–	–	–	–	–	65	0.15	1.0
	M9325	–	315	0.20	2.0	–	–	–	295	0.20	2.0	–	–	–	–	–	–	60	0.15	1.0
	M9340	–	285	0.20	2.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

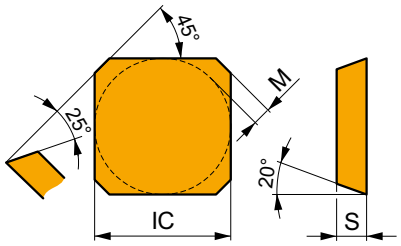
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																				
AFSN edge preperation, zero rake angle geometry for medium to heavy machining.																				
SEEN 1504AFSN	**M8330**	–	■ 240	0.20	3.0	–	–	–	■ 225	0.20	3.0	–	–	–	–	–	–	◪ 45	0.15	1.0
	M8340	–	■ 225	0.20	3.0	–	–	–	◪ 210	0.20	3.0	–	–	–	–	–	–	–	–	–
	M9315	–	■ 320	0.20	3.0	–	–	–	■ 300	0.20	3.0	–	–	–	–	–	–	◪ 60	0.15	1.0
	M9325	–	■ 300	0.20	3.0	–	–	–	■ 285	0.20	3.0	–	–	–	–	–	–	◪ 60	0.15	1.0

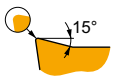
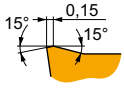
SEER

PRAMET

	IC [mm]	M [mm]	S [mm]
1203	12.700	2	3.18
1204	12.700	2	4.76
1504	15.875	2	4.76



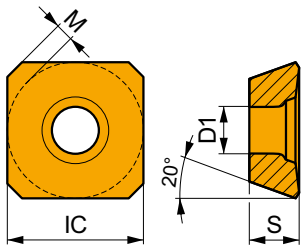
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																				
AFEN edge preperation, chipbreaker geometry for medium to heavy machining.																				
SEER 1203AFEN	**M8330**	–	■ 265	0.24	2.5	■ 155	0.22	2.5	◪ 250	0.24	2.5	–	–	–	◪ 65	0.22	2.0	–	–	–
	M8340	–	■ 245	0.24	2.5	■ 145	0.22	2.5	◪ 230	0.24	2.5	–	–	–	◪ 60	0.22	2.0	–	–	–
SEER 1504AFEN	**M8330**	–	■ 250	0.27	3.5	■ 150	0.24	3.5	◪ 235	0.27	3.5	–	–	–	◪ 60	0.24	2.8	–	–	–
																				
AFSN edge preperation, chipbreaker geometry for medium to heavy machining.																				
SEER 1203AFSN	**M8330**	–	■ 265	0.25	2.5	◪ 155	0.23	2.5	■ 250	0.25	2.5	–	–	–	◪ 65	0.20	2.0	–	–	–
	M8340	–	■ 240	0.25	2.5	◪ 140	0.23	2.5	◪ 225	0.25	2.5	–	–	–	◪ 60	0.20	2.0	–	–	–
	M9325	–	■ 315	0.25	2.5	–	–	–	■ 295	0.25	2.5	–	–	–	–	–	–	–	–	–
	M9340	–	■ 285	0.25	2.5	◪ 170	0.23	2.5	–	–	–	–	–	–	◪ 70	0.20	2.0	–	–	–
SEER 1204AFSN	**M8330**	–	■ 265	0.25	2.5	◪ 155	0.23	2.5	■ 250	0.25	2.5	–	–	–	◪ 65	0.20	2.0	–	–	–
SEER 1504AFSN	**M8330**	–	■ 255	0.25	3.5	◪ 150	0.23	3.5	■ 240	0.25	3.5	–	–	–	◪ 60	0.20	2.8	–	–	–
	M8340	–	■ 230	0.25	3.5	◪ 135	0.23	3.5	◪ 215	0.25	3.5	–	–	–	◪ 55	0.20	2.8	–	–	–
	M9325	–	■ 305	0.25	3.5	–	–	–	■ 285	0.25	3.5	–	–	–	–	–	–	–	–	–

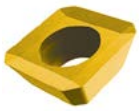
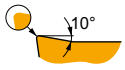
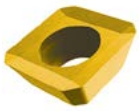
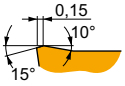
SEET 12

PRAMET

	IC [mm]	D1 [mm]	M [mm]	S [mm]
1204	12.700	5.50	2	4.76



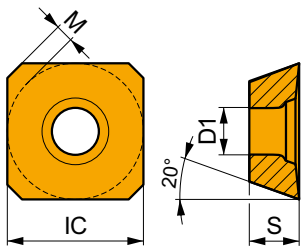
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			E																	
			AFEN edge preperation, positive all purpose geometry.																	
SEET 1204AFEN	**M8330**	–	265	0.24	2.5	155	0.22	2.5	250	0.24	2.5	–	–	–	65	0.22	2.0	–	–	–
			1	S																
			AFSN edge preperation, positive all purpose geometry.																	
SEET 1204AFSN	**8215**	–	265	0.23	2.5	155	0.21	2.5	250	0.23	2.5	–	–	–	65	0.21	2.0	–	–	–
	M8330	–	265	0.24	2.5	155	0.22	2.5	250	0.24	2.5	–	–	–	65	0.22	2.0	–	–	–
	M8340	–	240	0.25	2.5	140	0.23	2.5	225	0.25	2.5	–	–	–	60	0.23	2.0	–	–	–
	M9325	–	340	0.20	2.5	–	–	–	320	0.20	2.5	–	–	–	–	–	–	–	–	–
	M9340	–	290	0.23	2.5	170	0.21	2.5	–	–	–	–	–	–	70	0.21	2.0	–	–	–

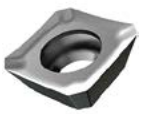
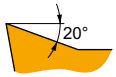
SEET 12-FA

PRAMET

	IC [mm]	D1 [mm]	M [mm]	S [mm]
1204	12.700	5.50	2	4.76



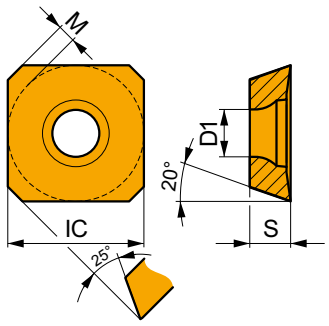
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			F																	
			FA geometry with highly positive design for fine-finish to medium machining.																	
SEET 1204AFFN-FA	**HF7**	–	–	–	–	–	–	–	–	–	–	330	0.18	3.0	–	–	–	–	–	–
	M0315	–	–	–	–	–	–	–	–	–	–	780	0.18	3.0	–	–	–	–	–	–

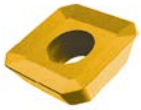
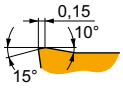
SEET 12-PM

PRAMET

	IC [mm]	D1 [mm]	M [mm]	S [mm]
12T3	13.400	4.20	2	3.97



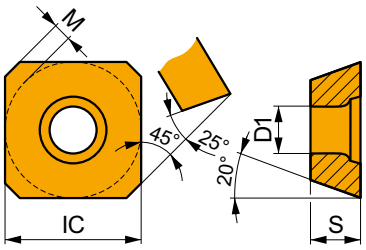
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																				
			PM geometry with positive all purpose design.																	
SEET 12T3M-PM	**M8330**	–	265	0.25	2.0	155	0.23	2.0	250	0.25	2.0	–	–	–	65	0.20	1.6	–	–	–
	M8340	–	245	0.25	2.0	145	0.23	2.0	230	0.25	2.0	–	–	–	60	0.20	1.6	–	–	–
	M9325	–	325	0.25	2.0	–	–	–	305	0.25	2.0	–	–	–	–	–	–	–	–	–
	M9340	–	290	0.25	2.0	170	0.23	2.0	–	–	–	–	–	–	70	0.20	1.6	–	–	–

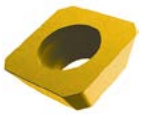
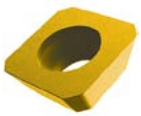
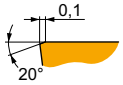
SEEW 12

PRAMET

	IC [mm]	D1 [mm]	M [mm]	S [mm]
1204	12.700	5.50	2	4.76



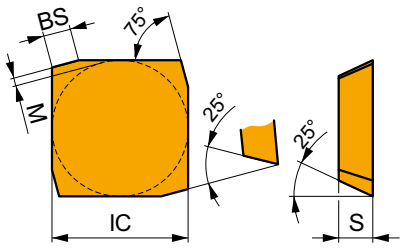
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																				
			AFEN edge preperation with zero rake angle geometry for light to medium machining.																	
SEEW 1204AFEN	**M8330**	–	265	0.15	2.5	–	–	–	250	0.15	2.5	–	–	–	–	–	–	–	–	–
	M8340	–	240	0.15	2.5	–	–	–	225	0.15	2.5	–	–	–	–	–	–	–	–	–
																				
			AFSN edge preperation with zero rake angle geometry for light to medium machining.																	
SEEW 1204AFSN	**8215**	–	250	0.20	2.5	–	–	–	235	0.20	2.5	–	–	–	–	–	–	50	0.15	1.0
	M8330	–	245	0.20	2.5	–	–	–	230	0.20	2.5	–	–	–	–	–	–	45	0.15	1.0
	M8340	–	225	0.20	2.5	–	–	–	210	0.20	2.5	–	–	–	–	–	–	–	–	–
	M9325	–	305	0.20	2.5	–	–	–	285	0.20	2.5	–	–	–	–	–	–	60	0.15	1.0

SFCN

PRAMET

	IC [mm]	M [mm]	S [mm]	BS [mm]
1203	12.700	1	3.18	2.00



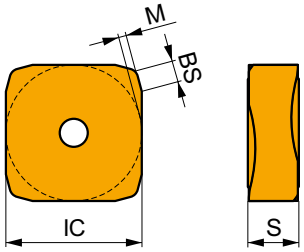
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			F																	
			Positive design for light to medium machining.																	
SFCN 1203EFFR	H10	–	–	–	–	–	–	–	–	–	–	■ 405	0.12	3.0	–	–	–	–	–	–
	M0315	–	–	–	–	–	–	–	–	–	–	■ 765	0.12	3.0	–	–	–	–	–	–

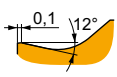
SNHF

PRAMET

	BS [mm]	IC [mm]	M [mm]	S [mm]
1204	2.00	12.700	1	4.76
1504	1.40	15.875	1	4.76



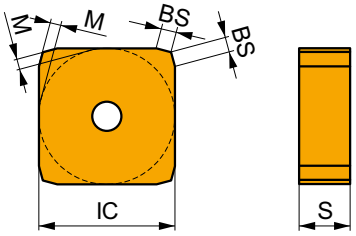
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			S																	
			M geometry with positive design for light to medium machining.																	
SNHF 1204ENSR-M	M8330	–	■ 235	0.15	4.0	–	–	–	◪ 220	0.15	4.0	–	–	–	–	–	–	–	–	–
	M8340	–	■ 230	0.15	4.0	–	–	–	◪ 215	0.15	4.0	–	–	–	–	–	–	–	–	–
SNHF 1504ENSR-M	M8330	–	■ 225	0.15	6.0	–	–	–	◪ 210	0.15	6.0	–	–	–	–	–	–	–	–	–
	M8340	–	■ 220	0.15	6.0	–	–	–	◪ 205	0.15	6.0	–	–	–	–	–	–	–	–	–

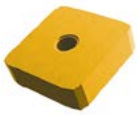
SNHN

PRAMET

	BS [mm]	IC [mm]	M [mm]	S [mm]
1204	1.40	12.700	1	4.76
1504	1.40	15.875	1	4.76



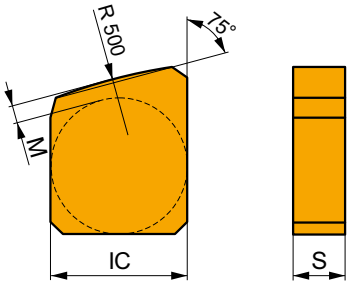
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			U E																	
			Standard negative milling geometry for 75° face milling.																	
SNHN 1204ENEN	**8215**	–	◪ 275	0.15	6.0	–	–	–	■ 260	0.15	6.0	–	–	–	–	–	–	◪ 55	0.15	1.0
	M8330	–	◪ 270	0.15	6.0	–	–	–	■ 255	0.15	6.0	–	–	–	–	–	–	◪ 50	0.15	1.0
	M8340	–	◪ 245	0.15	6.0	–	–	–	◪ 230	0.15	6.0	–	–	–	–	–	–	–	–	–
	M9325	–	◪ 340	0.15	6.0	–	–	–	■ 320	0.15	6.0	–	–	–	–	–	–	◪ 65	0.15	1.0
	S26	–	◪ 110	0.15	6.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
SNHN 1504ENEN	**8215**	–	◪ 260	0.15	9.0	–	–	–	■ 245	0.15	9.0	–	–	–	–	–	–	◪ 50	0.15	1.0
	M8330	–	◪ 260	0.15	9.0	–	–	–	■ 245	0.15	9.0	–	–	–	–	–	–	◪ 50	0.15	1.0
	M8340	–	◪ 235	0.15	9.0	–	–	–	◪ 220	0.15	9.0	–	–	–	–	–	–	–	–	–
	S26	–	◪ 105	0.15	9.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

SNKX

PRAMET

	IC [mm]	M [mm]	S [mm]
1204	12.700	1	4.76
1504	15.875	1	4.76



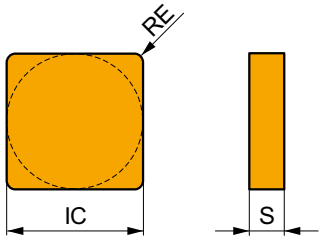
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			W F																	
			Standard negative wiper geometry for 75° face milling.																	
SNKX 1204ENFN	**H10**	–	–	–	–	–	–	–	■ 115	0.15	6.0	–	–	–	–	–	–	–	–	–
SNKX 1504ENFN	**H10**	–	–	–	–	–	–	–	■ 110	0.15	9.0	–	–	–	–	–	–	–	–	–

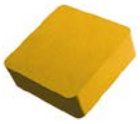
SNUN

PRAMET

	IC [mm]	S [mm]
1204	12.700	4.76
1504	15.875	4.76



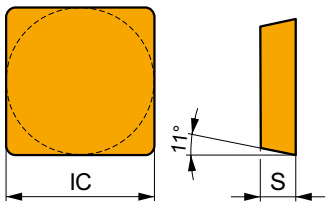
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			E																	
			Negative geometry milling insert, can also be used for turning.																	
SNUN 120408	**M8330**	0.8	◪ 260	0.13	4.5	–	–	–	■ 245	0.13	4.5	–	–	–	–	–	–	◪ 50	0.15	1.0
SNUN 120412	**M8330**	1.2	◪ 275	0.13	4.5	–	–	–	■ 260	0.13	4.5	–	–	–	–	–	–	◪ 55	0.15	1.0
	S26	1.2	◪ 110	0.13	4.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
SNUN 150412	**M8330**	1.2	◪ 255	0.15	6.0	–	–	–	■ 240	0.15	6.0	–	–	–	–	–	–	◪ 50	0.15	1.0

SPGN

PRAMET

	IC [mm]	S [mm]
0903	9.525	3.18
1203	12.700	3.18
1504	15.875	4.76



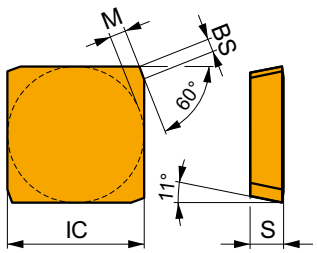
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			E																	
			Zero rake angle design milling insert, can also be used for turning.																	
SPGN 090308	**M8340**	0.8	■ 225	0.15	2.0	–	–	–	◪ 210	0.15	2.0	–	–	–	–	–	–	–	–	–
SPGN 120304	**M8330**	0.4	■ 195	0.15	4.0	–	–	–	■ 185	0.15	4.0	–	–	–	–	–	–	–	–	–
	M8340	0.4	■ 175	0.15	4.0	–	–	–	◪ 165	0.15	4.0	–	–	–	–	–	–	–	–	–
SPGN 120308	**M8330**	0.8	■ 230	0.15	4.0	–	–	–	■ 215	0.15	4.0	–	–	–	–	–	–	–	–	–
SPGN 150412	**M8330**	1.2	■ 225	0.20	5.0	–	–	–	◪ 210	0.20	5.0	–	–	–	–	–	–	–	–	–

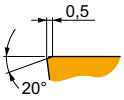
SPGN 25 DZ

PRAMET

	IC [mm]	M [mm]	S [mm]	BS [mm]
2506	25.000	3	6.35	2.40



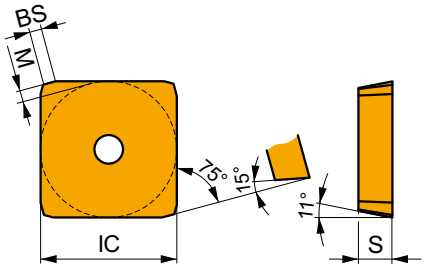
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc	M f	M ap	K vc	K f	K ap	N vc	N f	N ap	S vc	S f	S ap	H vc	H f	H ap
			DZ geometry with zero rake angle design for heavy machining.																	
SPGN 2506DZSR	**M8326**	–	110	0.50	12.0	–	–	–	100	0.50	12.0	–	–	–	–	–	–	–	–	–
	M8346	–	90	0.50	12.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

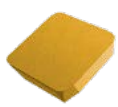
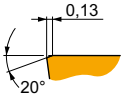
SPKN

PRAMET

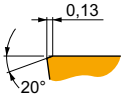
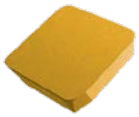
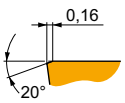
	IC [mm]	M [mm]	S [mm]	BS [mm]
1203	12.700	1	3.18	1.60
1504	15.875	1	4.76	1.70



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc	M f	M ap	K vc	K f	K ap	N vc	N f	N ap	S vc	S f	S ap	H vc	H f	H ap
			EDER edge preperation with zero rake angle geometry for light to medium machining.																	
SPKN 1203EDER	**H10**	–	–	–	–	–	–	–	110	0.15	4.0	–	–	–	–	–	–	–	–	–
	M8330	–	255	0.15	4.0	–	–	–	240	0.15	4.0	–	–	–	–	–	–	–	–	–
	M8340	–	230	0.15	4.0	–	–	–	215	0.15	4.0	–	–	–	–	–	–	–	–	–
SPKN 1504EDER	**H10**	–	–	–	–	–	–	–	100	0.20	5.0	–	–	–	–	–	–	–	–	–
	M8330	–	235	0.20	5.0	–	–	–	220	0.20	5.0	–	–	–	–	–	–	–	–	–
	M8340	–	210	0.20	5.0	–	–	–	195	0.20	5.0	–	–	–	–	–	–	–	–	–
			EDSR edge preperation with zero rake angle geometry for medium machining.																	
SPKN 1203EDSL	**M8330**	–	240	0.20	4.0	–	–	–	225	0.20	4.0	–	–	–	–	–	–	45	0.15	1.0

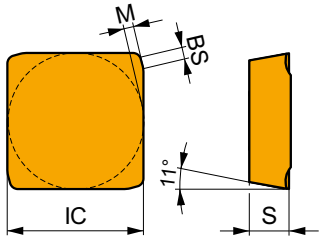
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
			EDSR edge preperation with zero rake angle geometry for medium machining.																	
SPKN 1203EDSR	**8215**	–	240	0.20	4.0	–	–	–	225	0.20	4.0	–	–	–	–	–	–	45	0.15	1.0
	H10	–	–	–	–	–	–	–	100	0.20	4.0	–	–	–	–	–	–	–	–	–
	M8330	–	240	0.20	4.0	–	–	–	225	0.20	4.0	–	–	–	–	–	–	45	0.15	1.0
	M8340	–	215	0.20	4.0	–	–	–	200	0.20	4.0	–	–	–	–	–	–	–	–	–
	M9325	–	290	0.20	4.0	–	–	–	275	0.20	4.0	–	–	–	–	–	–	55	0.15	1.0
	S26	–	95	0.20	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
																				
			EDSR (right-hand cut) / EDSL (left-hand cut) edge preperation with zero rake angle geometry for medium machining.																	
SPKN 1504EDSL	**M8340**	–	205	0.25	5.0	–	–	–	190	0.25	5.0	–	–	–	–	–	–	–	–	–
SPKN 1504EDSR	**8215**	–	220	0.25	5.0	–	–	–	205	0.25	5.0	–	–	–	–	–	–	40	0.15	1.0
	H10	–	–	–	–	–	–	–	95	0.25	5.0	–	–	–	–	–	–	–	–	–
	M8330	–	220	0.25	5.0	–	–	–	205	0.25	5.0	–	–	–	–	–	–	40	0.15	1.0
	M8340	–	205	0.25	5.0	–	–	–	190	0.25	5.0	–	–	–	–	–	–	–	–	–
	M9315	–	285	0.25	5.0	–	–	–	270	0.25	5.0	–	–	–	–	–	–	55	0.15	1.0
	M9325	–	270	0.25	5.0	–	–	–	255	0.25	5.0	–	–	–	–	–	–	50	0.15	1.0
	S26	–	90	0.25	5.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

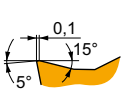
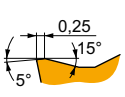
SPKR

PRAMET

	IC	L	M	S
	[mm]	[mm]	[mm]	[mm]
1203	12.700	12.70	1	3.18
1504	15.875	15.88	1	4.76



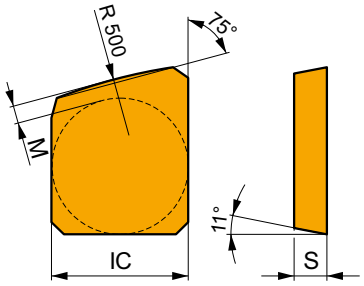
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
			EDSR edge preperation, chipbreaker geometry for medium to heavy machining.																	
SPKR 1203EDSR	**M8330**	–	265	0.20	4.0	155	0.18	4.0	250	0.20	4.0	–	–	–	–	–	–	–	–	–
	M8340	–	240	0.20	4.0	140	0.18	4.0	225	0.20	4.0	–	–	–	–	–	–	–	–	–
	M9340	–	295	0.20	4.0	175	0.18	4.0	–	–	–	–	–	–	–	–	–	–	–	–
																				
			EDSR edge preperation, chipbreaker geometry for medium to heavy machining.																	
SPKR 1504EDSR	**M8330**	–	245	0.25	5.0	145	0.25	5.0	230	0.25	5.0	–	–	–	–	–	–	–	–	–
	M8340	–	225	0.25	5.0	135	0.25	5.0	210	0.25	5.0	–	–	–	–	–	–	–	–	–

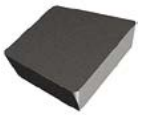
SPKX

PRAMET

	IC [mm]	M [mm]	S [mm]
1203	12.700	1	3.18
1504	15.875	1	4.76



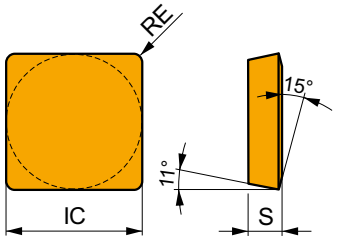
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			W F																	
			Zero rake wiper geomerty for improved surface finish																	
SPKX 1203EDFR	**H10**	–	–	–	–	–	–	–	■ 100	0.20	4.0	–	–	–	–	–	–	–	–	–
SPKX 1504EDFR	**H10**	–	–	–	–	–	–	–	■ 95	0.25	5.0	–	–	–	–	–	–	–	–	–

SPUN

PRAMET

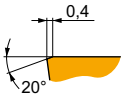
	IC [mm]	S [mm]
1203	12.700	3.18
1504	15.875	4.76
1904	19.050	4.76
2506	25.400	6.35



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			E																	
			Zero rake geometry milling insert, can also be used for turning.																	
SPUN 120304	**M8330**	0.4	■ 195	0.15	4.0	–	–	–	◪ 185	0.15	4.0	–	–	–	–	–	–	–	–	–
SPUN 120308	**H10**	0.8	–	–	–	–	–	–	◪ 95	0.15	4.0	–	–	–	–	–	–	–	–	–
	M8330	0.8	■ 230	0.15	4.0	–	–	–	◪ 215	0.15	4.0	–	–	–	–	–	–	–	–	–
	S26	0.8	■ 95	0.15	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
SPUN 120312	**M8330**	1.2	■ 245	0.15	4.0	–	–	–	◪ 230	0.15	4.0	–	–	–	–	–	–	–	–	–
			E																	
			Zero rake geometry milling insert, can also be used for turning.																	
SPUN 150412	**M8330**	1.2	■ 225	0.20	5.0	–	–	–	◪ 210	0.20	5.0	–	–	–	–	–	–	–	–	–
SPUN 190408	**M8330**	0.8	■ 210	0.20	6.0	–	–	–	◪ 195	0.20	6.0	–	–	–	–	–	–	–	–	–
SPUN 190412	**M8330**	1.2	■ 220	0.20	6.0	–	–	–	◪ 205	0.20	6.0	–	–	–	–	–	–	–	–	–

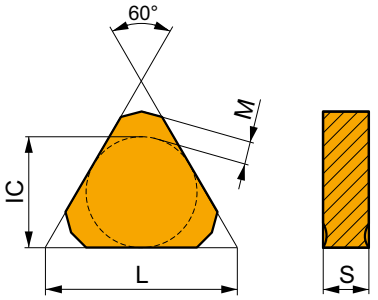
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]
																				
			Zero rake geometry milling insert, can also be used for turning.																	
SPUN 250616S	**M8326**	1.6	115	0.40	12.0	–	–	–	105	0.40	12.0	–	–	–	–	–	–	–	–	–
SPUN 250620S	**M5326**	2.0	145	0.40	12.0	–	–	–	135	0.40	12.0	–	–	–	–	–	–	–	–	–
	M8326	2.0	120	0.40	12.0	–	–	–	110	0.40	12.0	–	–	–	–	–	–	–	–	–
	M8346	2.0	100	0.40	12.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	S26	2.0	45	0.40	12.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

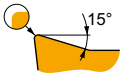
TNJF

PRAMET

	IC [mm]	L [mm]	M [mm]	S [mm]
1204	12.700	22.00	2	4.76



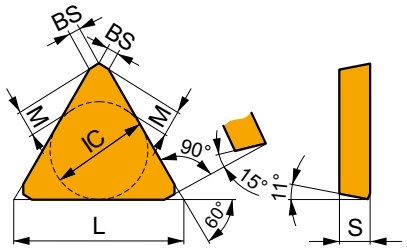
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]
																				
			Positive rake angle with chip breaking geometry.																	
TNJF 1204ANEN	**M8330**	–	270	0.15	4.0	160	0.14	4.0	255	0.15	4.0	–	–	–	–	–	–	–	–	–

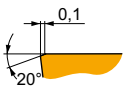
TPCN 16

PRAMET

	BS	IC	L	M	S
	[mm]	[mm]	[mm]	[mm]	[mm]
1603	1.20	9.530	16.10	2	3.18



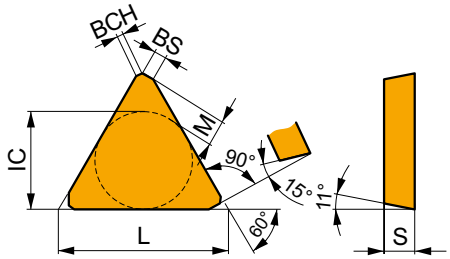
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
			U S																	
			Special design for disc milling.																	
TPCN 1603PDSN	**M8330**	–	195	0.20	–	–	–	–	185	0.20	–	–	–	–	–	–	–	–	–	–
	M8340	–	175	0.20	–	–	–	–	165	0.20	–	–	–	–	–	–	–	–	–	–

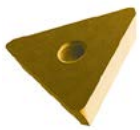
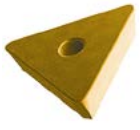
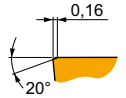
TPKN

PRAMET

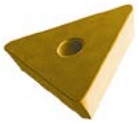
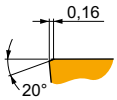
	IC	L	M	S	BCH	BS
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
1603	9.530	16.50	2	3.18	1.20	1.30
2204	12.700	22.00	4	4.76	1.20	1.50



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
			E																	
			PDER edge preperation, zero rake angle geometry for light to medium machining.																	
TPKN 1603PDER	**M8330**	–	195	0.15	4.0	–	–	–	185	0.15	4.0	–	–	–	–	–	–	–	–	–
	M8340	–	175	0.15	4.0	–	–	–	165	0.15	4.0	–	–	–	–	–	–	–	–	–
TPKN 2204PDER	**8215**	–	190	0.15	5.5	–	–	–	180	0.15	5.5	–	–	–	–	–	–	–	–	–
	M8330	–	190	0.15	5.5	–	–	–	180	0.15	5.5	–	–	–	–	–	–	–	–	–
	M8340	–	170	0.15	5.5	–	–	–	160	0.15	5.5	–	–	–	–	–	–	–	–	–
			U S																	
			PDSR edge preperation, zero rake angle geometry for medium machining.																	
TPKN 1603PDSR	**M8330**	–	185	0.20	4.0	–	–	–	175	0.20	4.0	–	–	–	–	–	–	35	0.15	1.0
	M8340	–	165	0.20	4.0	–	–	–	155	0.20	4.0	–	–	–	–	–	–	–	–	–
	S26	–	75	0.20	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

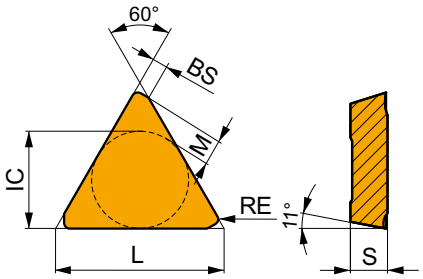
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
			PDSR edge preperation, zero rake angle geometry for medium machining.																	
TPKN 2204PDSR	**H10**	–	–	–	–	–	–	–	◪	80	0.20	5.5	–	–	–	–	–	–	–	–	–
	M5315	–	◪	235	0.20	5.5	–	–	–	◪	220	0.20	5.5	–	–	–	–	–	–	◪	45	0.15	1.0
	M8310	–	◪	195	0.20	5.5	–	–	–	◪	185	0.20	5.5	–	–	–	–	–	–	◪	35	0.15	1.0
	M8330	–	◪	175	0.20	5.5	–	–	–	◪	165	0.20	5.5	–	–	–	–	–	–	◪	35	0.15	1.0
	M8340	–	◪	160	0.20	5.5	–	–	–	◪	150	0.20	5.5	–	–	–	–	–	–		–	–	–
	M9325	–	◪	220	0.20	5.5	–	–	–	◪	205	0.20	5.5	–	–	–	–	–	–	◪	40	0.15	1.0
	S26	–	◪	75	0.20	5.5	–	–	–		–	–	–	–	–	–	–	–	–		–	–	–

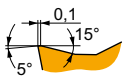
TPKR

PRAMET

	IC	L	M	S	BS
	[mm]	[mm]	[mm]	[mm]	[mm]
1603	9.530	16.50	2	3.18	1.40
2204	12.700	22.00	4	4.76	1.40

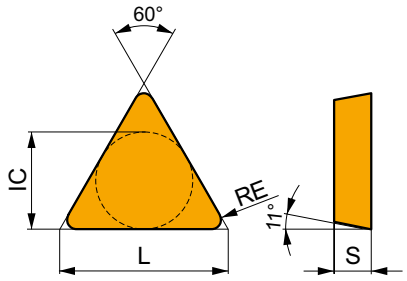


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]	[m/min]	[mm/tooth]	[mm]
																				
			PDSR edge preperation, chipbreaker geometry for medium to heavy machining.																	
TPKR 1603PDSR	**M8330**	–	■	185	0.20	4.0	◪	110	0.18	4.0	■	175	0.20	4.0	–	–	–	–	–	–	–	–	–
	M8340	–	■	165	0.20	4.0	◪	95	0.18	4.0	◪	155	0.20	4.0	–	–	–	–	–	–	–	–	–
TPKR 2204PDSR	**M8330**	–	■	175	0.20	5.5	◪	105	0.18	5.5	■	165	0.20	5.5	–	–	–	–	–	–	–	–	–
	M8340	–	■	160	0.20	5.5	◪	95	0.18	5.5	◪	150	0.20	5.5	–	–	–	–	–	–	–	–	–
	M9325	–	■	220	0.20	5.5		–	–	–	■	205	0.20	5.5	–	–	–	–	–	–	–	–	–
	M9340	–	■	195	0.20	5.5	◪	115	0.18	5.5		–	–	–	–	–	–	–	–	–	–	–	–

TPUN

	IC [mm]	L [mm]	S [mm]
1103	6.350	11.00	3.18
1603	9.525	16.50	3.18
2204	12.700	22.00	4.76



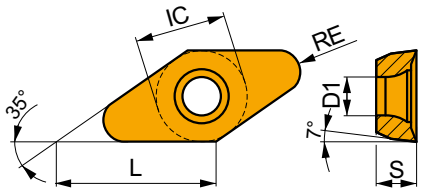
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			E																	
			Zero rake geometry milling insert, can also be used for turning.																	
TPUN 110304	**H10**	0.4	–	–	–	–	–	–	90	0.10	0.8	–	–	–	–	–	–	–	–	–
	M8330	0.4	–	–	–	–	–	–	150	0.10	1.2	–	–	–	–	–	–	30	0.15	1.0
TPUN 110308	**M8330**	0.8	–	–	–	–	–	–	155	0.18	1.2	–	–	–	–	–	–	30	0.15	1.0
TPUN 160304	**8215**	0.4	155	0.15	4.0	–	–	–	145	0.15	4.0	–	–	–	–	–	–	–	–	–
	H10	0.4	–	–	–	–	–	–	65	0.15	4.0	–	–	–	–	–	–	–	–	–
	M8330	0.4	155	0.15	4.0	–	–	–	145	0.15	4.0	–	–	–	–	–	–	–	–	–
	S26	0.4	65	0.15	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
TPUN 160308	**8215**	0.8	185	0.15	4.0	–	–	–	175	0.15	4.0	–	–	–	–	–	–	–	–	–
	H10	0.8	–	–	–	–	–	–	80	0.15	4.0	–	–	–	–	–	–	–	–	–
	M8330	0.8	–	–	–	–	–	–	155	0.18	1.5	–	–	–	–	–	–	30	0.15	1.0
	S26	0.8	75	0.15	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
TPUN 160312	**M8330**	1.2	–	–	–	–	–	–	155	0.20	1.5	–	–	–	–	–	–	30	0.15	1.0
TPUN 220408	**8215**	0.8	170	0.20	5.0	–	–	–	160	0.20	5.0	–	–	–	–	–	–	–	–	–
	M8330	0.8	170	0.20	5.0	–	–	–	160	0.20	5.0	–	–	–	–	–	–	–	–	–
	S26	0.8	70	0.20	5.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
TPUN 220412	**M8330**	1.2	–	–	–	–	–	–	155	0.20	2.0	–	–	–	–	–	–	30	0.15	1.0

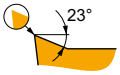
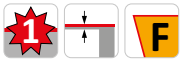
VCGT 22-FA

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
2205	12.700	5.20	22.00	5.50



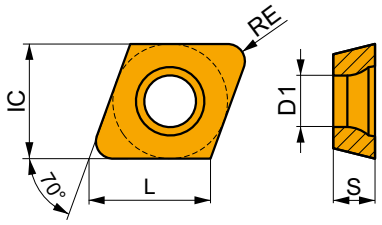
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																				
			FA geometry with highly positive design for medium to rough machining.																	
VCGT 220515F-FA	HF7	1.5	–	–	–	–	–	–	–	–	–	255	0.24	0.4	–	–	–	–	–	–
VCGT 220520F-FA	HF7	2.0	–	–	–	–	–	–	–	–	–	255	0.30	0.5	–	–	–	–	–	–
VCGT 220530F-FA	HF7	3.0	–	–	–	–	–	–	–	–	–	210	0.48	1.0	–	–	–	–	–	–

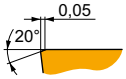
XDHW

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
0702	6.500	2.95	6.90	2.38
10T3	10.000	3.95	10.60	3.97

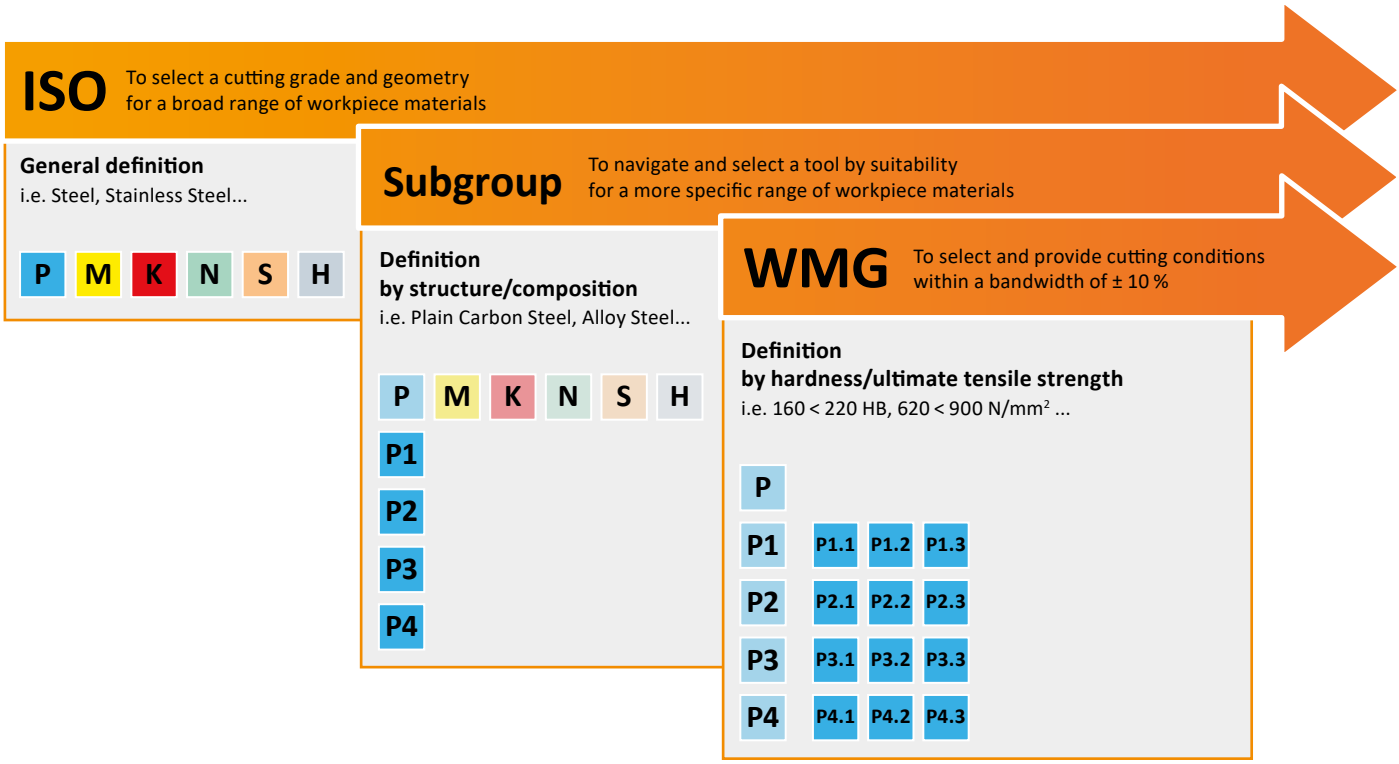


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
			EN geometry with zero rake angle design for slot milling.																	
XDHW 070210EN	M8310	1.0	310	0.10	1.0	–	–	–	290	0.10	1.0	–	–	–	–	–	–	60	0.15	1.0
																				
			SN geometry with zero rake angle design for slot milling.																	
XDHW 070210SN	M8310	1.0	310	0.10	1.0	–	–	–	290	0.10	1.0	–	–	–	–	–	–	60	0.15	1.0
	M8325	1.0	230	0.10	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
XDHW 10T310SN	M8310	1.0	275	0.15	1.0	–	–	–	260	0.15	1.0	–	–	–	–	–	–	55	0.15	1.0
	M8325	1.0	210	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

INDEXABLE MILLS – TECHNICAL INFORMATION

WORKPIECE MATERIAL GROUP (WMG)



ABOUT DORMER PRAMET'S WORKPIECE MATERIAL CLASSIFICATION

Workpiece **M**aterial **G**roups (**WMG**) are used to support easy and reliable selection of the right cutting tool and starting values for machining conditions in particular applications.
Dormer Pramet classifies workpiece materials into six different coloured groups;

- **Blue**: Steel and cast steel (P-group)
- **Yellow**: Stainless steel (M-group)
- **Red**: Cast iron (K-group)
- **Green**: Non-ferrous metals (N-group)
- **Brown**: High-temperature alloys (S-group)
- **Grey**: Hardened materials (H-group)

Each of these are divided into subgroups on the basis of their structure and/or composition. For example, P-group steel and cast steel is split into four subgroups, namely;

- **P1** – Free machining steel
- **P2** – Plain carbon steel
- **P3** – Alloy steel
- **P4** – Tool steel

A final division includes material properties, such as hardness and ultimate tensile strength. This is to provide our customers with a complete tool recommendation, including starting values for cutting speed and feed.
The table on the next page includes a description of each workpiece material group, as well as examples of commonly used designations.

ISO group		Subgroup		WMG (Work Material Group)		k_{vg}	Examples of material (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
P	**Steel and cast steel** (steels with alloy content ≤ 10 % and a hardness of < 45 HRC)	P1	Free machining steel (carbon steels with increased machinability)	P1.1	Free machining sulfurized carbon steel with a hardness of < 220 HB	1.33	AISI **1108,** EN **15S22,** DIN **1.0723,** SS **1922,** ČSN **11120,** BS **210A15,** UNE **F.210F,** GB **Y15,** AFNOR **10F1,** GOST **A30,** UNI **CF10S20**
				P1.2	Free machining sulfurized and phosphorized carbon steel with a hardness of < 180 HB	1.49	AISI **1211,** EN **11SMn30,** DIN **1.0715,** SS **1912,** ČSN **11109,** BS **230M7,** UNE **F.2111,** GB **Y15,** AFNOR **S250,** GOST **A40G,** UNI **CF9SMn28**
				P1.3	Free machining sulfurized/phosphorized and leaded carbon steel with a hardness of < 160 HB	1.53	AISI **12L13,** EN **11SMnPb30,** DIN **1.0718,** SS **1914,** ČSN **12110,** BS **210M16,** UNE **F.2114,** GB **Y15Pb,** AFNOR **S250Pb,** GOST **AS35G2,** UNI **CF10SPb20**
		P2	Plain carbon steel (steels comprised of mainly iron and carbon)	P2.1	Plain low carbon steel containing < 0.25 % C with a hardness of < 180 HB	1.14	AISI **1015,** EN **C15,** DIN **1.0401,** SS **1350,** ČSN **11301 ,** BS **080A15,** UNE **F.111,** GB **15,** AFNOR **C18RR,** GOST **St2ps,** UNI **Fe360**
				P2.2	Plain medium carbon steel containing < 0.55 %C with a hardness of < 240 HB	1.00	AISI **1030,** EN **C30,** DIN **1.0528,** SS **1550,** ČSN **12031,** BS **080M32,** UNE **F.1130,** GB **30,** AFNOR **AF50C30,** GOST **30G,** UNI **Fe590**
				P2.3	Plain high carbon steel containing > 0.55 % C, with a hardness of < 300 HB	0.89	AISI **1060,** EN **C60,** DIN **1.0601,** SS **1655,** ČSN **12061,** BS **080A62,** UNE **F513,** GB **60,** AFNOR **1C60,** GOST **60G,** UNI **C60**
		P3	Alloy steel (carbon steels with an alloying content ≤ 10 %)	P3.1	Alloy steel with a hardness of < 180 HB	0.92	AISI **5015,** EN **16Mo3,** DIN **1.5415,** SS **2912,** ČSN **15020,** BS **1501-240,** UNE **F.2601,** GB **16Mo,** AFNOR **15D3,** GOST **15M,** UNI **16Mo3KW**
				P3.2	Alloy steel with a hardness of 180 – 260 HB	0.74	AISI **4140,** EN **42CrMo4,** DIN **1.7225,** SS **2244,** ČSN **15142,** BS **708M40,** UNE **F.8232,** GB **42CrMo,** AFNOR **42CD4,** GOST **40ChFA,** UNI **42CrMo4**
				P3.3	Alloy steel with a hardness of 260 – 360 HB	0.63	AISI **4140,** EN **42CrMo4,** DIN **1.7225,** SS **2244,** ČSN **15142,** BS **708M40,** UNE **F.8232,** GB **42CrMo,** AFNOR **42CD4,** GOST **40ChFA,** UNI **42CrMo4**
		P4	Tool steel (special alloy steel for tools, dies and molds)	P4.1	Tool steel with a hardness of < 26 HRC	0.55	AISI **D2,** EN **X155CrVMo12-1,** DIN **1.2370,** SS **2736,** ČSN **19573,** BS **BD2,** UNE **F.520A,** GB **Cr12Mo1V1,** AFNOR **Z160CDV12,** GOST **Ch12MF,** UNI **X155CrVMo121KU**
				P4.2	Tool steel with a hardness of 26 – 39 HRC	0.47	AISI **D2,** EN **X155CrVMo12-1,** DIN **1.2370,** SS **2736,** ČSN **19573,** BS **BD2,** UNE **F.520A,** GB **Cr12Mo1V1,** AFNOR **Z160CDV12,** GOST **Ch12MF,** UNI **X155CrVMo121KU**
				P4.3	Tool steel with a hardness of 39 – 45 HRC	0.38	AISI **D2,** EN **X155CrVMo12-1,** DIN **1.2370,** SS **2736,** ČSN **19573,** BS **BD2,** UNE **F.520A,** GB **Cr12Mo1V1,** AFNOR **Z160CDV12,** GOST **Ch12MF,** UNI **X155CrVMo121KU**

ISO group		Subgroup		WMG (Work Material Group)		k_{vG}	Examples of material (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
M	**Stainless steel** (corrosion resistant steels with ≥ 11 % chromium content)	**M1**	Ferritic stainless steel (straight chromium non-hardenable alloys)	**M1.1**	Stainless steel, ferritic with a hardness of < 160 HB	**1.22**	AISI **S429,** EN **X7Cr14,** DIN **1.4001,** SS **2326,** BS **434S17,** UNE **F.3401,** AFNOR **Z8C12,** GOST **08Ch13,** UNI **X6CrTi12**
				M1.2	Stainless steel, ferritic with a hardness of 160 – 220 HB	**1.03**	AISI **446,** EN **X10CrAl24,** DIN **1.4762,** SS **2322,** ČSN **17113,** BS **430S17,** UNE **F.3154,** GB **10Cr17,** AFNOR **Z10CAS24,** GOST **12Ch17,** UNI **X16Cr26**
		M2	Martensitic stainless steel (straight chromium hardenable alloys)	**M2.1**	Stainless steel, martensitic with a hardness of < 200 HB	**1.08**	AISI **430F,** EN **X14CrMoS17,** DIN **1.4104,** SS **2383,** ČSN **17140,** BS **410S21,** UNE **F.3117,** AFNOR **Z10CF17,** UNI **X10CrS17**
				M2.2	Stainless steel, martensitic with a hardness of 200 – 280 HB	**0.89**	AISI **440C,** EN **X105CrMo17,** DIN **1.4125,** SS **2385,** ČSN **17023,** BS **425C11,** UNE **F.3402,** GB **102Cr17Mo,** AFNOR **Z100CD17,** GOST **95Ch18,** UNI **GX6CrNi 13 04**
				M2.3	Stainless steel, martensitic with a hardness of 280 – 380 HB	**0.75**	AISI **420,** EN **X45Cr13,** DIN **1.4034,** ČSN **17029,** BS **425C11,** UNE **F.3405,** AFNOR **Z44C14,** GOST **20X17H12,** UNI **X30Cr13**
		M3	Austenitic stainless steel (chromium-nickel and chromium-nickel-manganese alloys)	**M3.1**	Stainless steel, austenitic with a hardness of < 200 HB	**1.00**	AISI **304,** EN **X5CrNi18-12,** DIN **1.4303,** SS **2352,** ČSN **17249,** BS **305S17,** UNE **F.3513,** GB **10Cr18Ni12,** AFNOR **Z8CN18.12,** UNI **X7CrNi18 10**
				M3.2	Stainless steel, austenitic with a hardness of 200 – 260 HB	**0.86**	AISI **309,** EN **X15CrNiSi20-12,** DIN **1.4828,** ČSN **17251,** BS **309S24,** UNE **F.3312,** GB **1Cr23Ni13,** AFNOR **Z15CNS20.12,** GOST **20Ch20N14S2,** UNI **16CrNi23 14**
				M3.3	Stainless steel, austenitic with a hardness of 260 – 300 HB	**0.77**	AISI **5848,** EN **X45CrNiW18-9,** DIN **1.4873,** BS **331S40,** UNE **F.3211,** AFNOR **Z35CNWS14-4,** UNI **X45CrNiW 18 9**
		M4	Super-austenitic, Duplex or Precipitation Hardening stainless steel (austenitic alloys with > 20 % Ni, austenitic-ferritic microstructure or precipitation hardened)	**M4.1**	Stainless steel, austenitic-ferritic or super-austenitic with a hardness of < 300 HB	**0.75**	AISI **329,** EN **X1-NiCrMoCU25-20-5,** DIN **1.4539,** SS **2562,** ČSN **17265,** BS **318S13,** UNE **F.3552,** GB **022Cr25NiMo2N,** AFNOR **Z1NCDU25.20**
				M4.2	Stainless steel, precipitation hardening austenitic with a hardness of 300 – 380 HB	**0.64**	AISI **631 (17-7PH),** EN **X7CrNiAL17-7,** DIN **1.4568,** SS **2388,** ČSN **17465 ,** BS **301S13,** UNE **F.3217,** GB **07Cr17Ni7Al,** AFNOR **29CNA17-07,** GOST **09Ch17N7Ju1,** UNI **X53CrMnNiN21 9**

ISO group		Subgroup		WMG (Work Material Group)		k_{vG}	Examples of material (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
K	**Cast Iron** (castings of iron and carbon alloys with > 2 % carbon content)	**K1**	Gray iron (GG) (iron-carbon castings with a lamellar graphite microstructure)	**K1.1**	Gray iron, ferritic or ferritic-pearlitic with a hardness of < 180 HB	**1.35**	ASTM **A48 Grade 20 (F11401),** EN-**JL-100,** DIN **GG-10 (0.6010),** SS **0110,** STN **422410,** BS **Grade 150,** UNE **FG10,** GB **HAT 100,** AFNOR **Ft10D,** GOST **SC 10,** UNI **G10**
				K1.2	Gray iron, ferritic-pearlitic or pearlitic with a hardness of 180 – 240 HB	**1.00**	ASTM **A48 Grade 30 (F12101),** EN-**JL-1030,** DIN **GG-20 (0.6020),** SS **0120,** STN **422420,** BS **Grade 220,** UNE **FG20,** GB **HT200,** AFNOR **Ft20D,** GOST **СЧ20,** UNI **G20**
				K1.3	Gray iron, pearlitic with a hardness of 240 – 280 HB	**0.75**	ASTM **A48 Grade 50 (F13501),** EN-**JL-1060,** DIN **GG-35 (0.6035),** SS **0135,** STN **422435,** BS **Grade 350,** UNE **FG35,** GB **HAT300,** AFNOR **Ft35D,** GOST **SC35,** UNI **G35**
		K2	Malleable iron (GTS/GTW) (heat-treated iron-carbon castings with a graphite-free microstructure)	**K2.1**	Malleable iron, ferritic with a hardness of < 160 HB	**1.39**	ASTM **A602 Grade M3210 (F20000),** EN-**JM-1130,** DIN **GTS-35 (0.8135),** SS **0815,** BS **B340/12,** UNE **Type A,** AFNOR **MN 35-10,** GOST **КЧ35-10**
				K2.2	Malleable iron, ferritic or pearlitic with a hardness of 160 – 200 HB	**1.13**	ASTM **A602 Grade M4504 (F20001),** EN-**JM-1040,** DIN **GTS-50-05 (0.8045),** BS **P50-05,** AFNOR **MB 45-7**
				K2.3	Malleable iron, pearlitic with a hardness of 200 – 240 HB	**0.90**	ASTM **A602 Grade M7002 (F20004),** EN-**JM-1140,** DIN **GTS-45 (0.8145),** SS **0854,** STN **422540,** BS **P 45-06,** UNE **Typ B,** AFNOR **MP 50-5,** GOST **КЧ45-7,** UNI **GMN 45**
		K3	Ductile iron (GGG) (iron-carbon castings with a nodular graphite microsturcture)	**K3.1**	Ductile (nodular/spheriodal) iron, ferritic with a hardness of < 180 HB	**1.23**	ASTM **A536 Grade 60-40-18 (F32800),** EN-**JS-1030,** DIN **GGG-40 (0.7040),** SS **0717,** STN **422304,** BS **420/12,** UNE **FGE 42-12,** GB **QT 400,** AFNOR **FGS 400-12,** GOST **ВЧ40**
				K3.2	Ductile (nodular/spheriodal) iron, ferritic or pearlitic with a hardness of 180 – 220 HB	**0.94**	ASTM **A536 Grade 80-55-06 (F33800),** EN-**JS-1050,** DIN **GGG-50 (0.7050),** SS **0727,** STN **422305,** BS **500/7,** UNE **FGE 50-7,** GB **QT 500-7,** AFNOR **FGS 500-7,** GOST **ВЧ50**
				K3.3	Ductile (nodular/spheriodal) iron, pearlitic with a hardness of 220 – 260 HB	**0.76**	ASTM **A536 Grade 100-70-03 (F34800),** EN-**JS-1060,** DIN **GGG-60 (0.7060),** SS **0732,** STN **422306,** BS **600/3,** UNE **FG70-2,** GB **QT 600-3,** AFNOR **FGS 600-3,** GOST **ВЧ60**
		K4	Austenitic or austempered ductile iron (Ni-Resist/ADI) (iron-carbon alloy castings with an austenitic or ausferrite microstructure)	**K4.1**	Austenitic cast iron with a hardness of < 180 HB	**1.14**	ASTM **A436 Type 1 (L-NiCuCr 15 6 2, F41000),** EN-**JL-3011,** DIN **GGL-NiMn 13 7 (0.6652),** SS **0523,** BS **Grade F1,** AFNOR **FGL-Ni13Mn7,** GOST **S-NiMn 13 7**
				K4.2	Austenitic cast iron with a hardness of 180 – 240 HB	**0.86**	ASTM **A439 Type D-2B (S-NiCr 20 3, F43001),** EN-**JS-3021,** DIN **GGG-NiMn 23 4,** SS **0776,** BS **Grade S2M,** AFNOR **FGS Ni23 Mn4,** GOST **ЧН19Х3Ш**
				K4.3	Austempered ductile iron with a hardness of 240 – 280 HB	**0.63**	ASTM **A897 Grade 110-70-11**
				K4.4	Austempered ductile iron with a hardness of 280 – 320 HB	**0.54**	ASTM **A897 Grade 125-80-10,** EN-**JS-1100,** DIN **GGG-90 (5.3400)**
				K4.5	Austempered ductile iron with a hardness of 320 – 360 HB	**0.45**	ASTM **A897 Grade 2 (150-110-07),** EN-**JS-1110,** DIN **GGG-100 (5.3403)**
		K5	Compacted graphite iron (CGI) (iron-carbon castings with a vermicular graphite structure)	**K5.1**	Vermicular, compacted graphite iron with a hardness of < 180 HB	**1.29**	ASTM **A842 Grade 300,** EN-**GJV-300,** DIN **GGV 30,** GOST **ЧВГ30,**
				K5.2	Vermicular, compacted graphite iron with a hardness of 180 – 220 HB	**0.97**	ASTM **A842 Grade 350,** EN-**GJV-350,** DIN **GGV 35 (5.2200),** GOST **ЧВГ30,**
				K5.3	Vermicular, compacted graphite iron with a hardness of 220 – 260 HB	**0.75**	ASTM **A842 Grade 450,** EN-**GJV-450,** DIN **GGV 45,** GOST **ЧВГ45,**

ISO group		Subgroup		WMG (Work Material Group)		k_{vG}	Examples of material (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
N	Non-ferrous metals (metals including alloys without an appreciable amount of iron)	N1	Wrought aluminium	N1.1	Pure aluminium and wrought aluminium alloys with a hardness of < 60 HB	1.33	UNS **A91200,** EN **AL99.6,** DIN **3.0205,** SS **4010,** STN **424009,** BS **1C,** UNE **L-3001,** GB **L5,** AFNOR **A4,** GOST **АДС,** UNI **3567**
				N1.2	Wrought aluminium alloys with a hardness of 60 – 100 HB	1.00	UNS **A93004,** EN **AlMn0.5Mg0.5,** DIN **3.0505,** SS **4054,** STN **424432,** BS **N31,** UNE **L-3831,** GB **LF2,** AFNOR **A-M1,** GOST **АМц,** UNI **3568**
				N1.3	Wrought aluminium alloys with a hardness of 100 – 150 HB	0.67	UNS **A95083,** EN **AlMg4.5Mn0.7,** DIN **3.3547,** SS **4140,** STN **424415,** BS **N8,** UNE **L-3321,** GB **AlMg4.5Mn,** AFNOR **A-G4.5Mn,** GOST **Amg 4.5,** UNI **P-AlMg4.4**
		N2	Cast aluminium	N2.1	Cast aluminium alloys with a hardness of < 75 HB	0.67	UNS **A02080,** EN **AlCu4S,** BS **LM11,** STN **424331,** UNE **Al Si1Cu,** GOST **AMg5K,** UNI **G-AlSi7Mg**
				N2.2	Cast aluminium alloys with a hardness of 75 – 90 HB	0.60	UNS **A02420,** EN **AlCu4Ni2Mg2,** SS **AlSi7MgFe,** BS **LM6,** STN **424519,** UNE **Al-7SiMg,** AFNOR **A-S7G,** GOST **AK7,** UNI **G-AlSi7Mg**
				N2.3	Cast aluminium alloys with a hardness of 90 < 140 HB	0.43	UNS **A03360,** EN **G-ALCu4NiMg2,** SS **ALSi10Mg,** STN **424336,** BS **LM 30,** AFNOR **A-S10G,** UNI **G-AlSi9Mg**
		N3	Copper or copper alloys	N3.1	Free-cutting copper-alloys materials with excellent machining properties	0.70	UNS **C14700,** EN **CuPb1P,** DIN **2.1498,** STN **423214,** BS **C111,** AFNOR **CuZn35Pb2,** GOST **L63-3,** UNI **CuS(P0.01)**
				N3.2	Short-chip copper-alloys with good to moderate machining properties	0.41	UNS **C81540,** EN **CuNi2SiCr,** DIN **2.0857,** STN **423220,** BS **NS113,** UNE **CuSn12,** AFNOR **CuZn40,** GOST **L60,** UNI **P-CuZn-40**
				N3.3	Electrolytic copper and long-chip copper-alloys with moderate to poor machining properties	0.21	UNS **C10100,** EN **CuAg0.1,** DIN **2.1203,** SS **5010,** UNE **CUSi3Mn1,** AFNOR **Cu-C2,** GOST **M1f,** UNI **Cu-0F**
		N4	Polymers (synthetic or semi-synthetic materials)	N4.1	Thermoplastic polymers	0.70	ABS, Acryl, Duraplast, Elastomer, EP, Epoxid, FEP, Fluor, Gummi, Kautschuk, Latex, MF, MPF, PA, PAI, PC, PE, PEEK, PEI, PES, PET, PF, Phenolharze, PI, PMMA, Polyamide, Polyester, Polyolefine, Polysulfon, POM, PP, PPE, PPS, PS, PSU, PTFE, PU, PUR, PVDF, SAN, SI, Styrol, UF, Ureol
				N4.2	Thermosetting polymers	0.27	Aramid, Epoxy, Fluoropolymer, Mehacrylate, Melamine, Phenolic, Polyester, Polyimide, Polymethacrylimide, Polyurethane
				N4.3	Reinforced polymers or composites	0.29	CFK, GFK, GMT, Honeycomb, Kevlar, LFT, Organo, SMC
		N5	Graphite	N5.1		1.0	CGM-1, CM-00, GM-10, GM-11, GR030, GR030PI, GR060, GR060PI, GR125, MC-01, MC-01RO, MC-03, MC-03M, IG11, IG-15, IG-32, IG-43, IG-45, IG-70, ISEM-1, ISEM-2, ISEM-3, R8340, R8500X, Technograph 15, Technograph 30, ISO-63, EDM C-3, EDM1, EDM3, ISO-90, ISO-93, ISO-95, R8510, R8650,

ISO group		Subgroup		WMG (Work Material Group)		k_{vG}	Examples of material (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
S	**High-temperature alloys** (superalloys with high temperature stength and corrosion resistant surpassing that of stainless steel)	**S1**	Titanium or titanium alloys	**S1.1**	Titanium or titanium alloys, with a hardness of <200 HB	1.94	UNS **R50250 (Grade 1),** EN **Ti 99.6,** DIN **3.7035,** BS **TA.2,** UNE **Ti-Po2,** AFNOR **T-40,** GOST **BT1-00,** AISI **R50250, 3.7025, T35, 2TA1, R50400, 3.7035, 2TA2,**
				S1.2	Titanium alloys, with a hardness of 200 – 280 HB	1.72	UNS **R56404 (Grade 29),** EN **Ti2Cu,** DIN **3.7124,** BS **TA.21,** UNE **Ti-P11,** AFNOR **T-U2 ,** AISI **TA6V, Ti-6Al-4V, Ti 10.2.3, Ti5553**
				S1.3	Titanium alloys, a hardness of 280 – 360 HB	1.44	UNS **R54250 (Grade 38),** EN **TiAl6V4,** DIN **3.7165,** ČSN **TiAl6VELI,** BS **TA. 13,** UNE **Ti-P63,** AFNOR **T-A6V,** GOST **BT6,** AISI **TA6V, Ti-6Al-4V, Ti 10.2.3, Ti5553**
		S2	Fe-based high-temperature alloys	**S2.1**	High-temperature Fe-based alloys with a hardness of <200 HB	1.33	UNS **N08801 (Incoloy 801),** EN **X8 NiCrAlTi31-21,** DIN **1.4959,** BS **NA 15,** AFNOR **Z8NC33-21,** AISI **A-286, Discaloy, Haynes 556, Iconel 909, Greek Ascolloy**
				S2.2	High-temperature Fe-based alloys with a hardness of 200 – 280 HB	1.17	UNS **N19907,** EN **X6NiCrTiMoVB25-15-2,** DIN **1.4980,** SS **2570,** BS **HR52,** AFNOR **Z6NCTDV25.15B,** GOST **36HXTЮ,** AISI **A-286, Discaloy, Haynes 556, Iconel 909, Greek Ascolloy**
		S3	Ni-based high-temperature alloys	**S3.1**	High-temperature Ni-based alloys with a hardness of <280 HB	1.00	UNS **A09706 (Inconel 706),** EN **NiCr25FeAl,** DIN **2.4856,** BS **HR 6,** ČSN **Inconel 625,** UNE **F.3313,** GB **1Cr16Ni35,** AFNOR **NC22FeDNB,** GOST **XH38BT,** AISI **Inconel 718, 706 Waspalloy, Udimet 720, Inconel 625**
				S3.2	High-temperature Ni-based alloys with a hardness of 280 – 360 HB	0.83	UNS **N07001,** EN **NiCr20Co13Mo4Ti3Al,** DIN **2.4654,** BS **HR 2,** ČSN **Waspaloy,** AFNOR **NCKD 20ATV,** GOST **XH80TБЮ,** AISI **Inconel 718, 706 Waspalloy, Udimet 720, Inconel 625**
		S4	Co-based high-temperature alloys	**S4.1**	High-temperature Co-based alloys with a hardness of <240 HB	0.78	UNS **R30016 (Stellite 6b),** EN **CoCr20W15Ni,** DIN **2.4964,** AFNOR **KC 20 WN,** GOST **ЛК52,** AISI **Haynes 25, Stellite 21, 31**
				S4.2	High-temperature Co-based alloys with a hardness of 240 – 320 HB	0.67	UNS **R30016 (Stellite 6b),** EN **CoCr20W15Ni,** DIN **2.4964,** AFNOR **KC 20 WN,** GOST **ЛК52,** AISI **Haynes 25, Stellite 21, 31**

ISO group		Subgroup		WMG (Work Material Group)		k_{vG}	Examples of material (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
H	**Hardened materials** (any engineering metal with a hardness > 45 HRC)	**H1**	Chilled cast iron	**H1.1**	Chilled cast iron with a hardness of < 440 HB	**1.52**	UNS **F45001,** EN-**GJS-1050-6,** DIN **5.3406,** SS **0512,** BS **Grade 2A**
		H2	Hardened cast iron	**H2.1**	Hardened cast iron with a hardness < 55 HRC	**0.90**	UNS **F45003,** EN-**GJS-1400-1,** DIN **5.3405,** SS **0457,** BS **Grade 3D**
				H2.2	Hardened cast iron with a hardness > 55 HRC	**0.77**	UNS **F45003,** EN **G-X260NiCr4-2,** DIN **0.9620,** SS **0466,** BS **Grade S**
		H3	Hardened steel < 55 HRC	**H3.1**	Hardened steel with a hardness of < 51 HRC	**1.00**	AISI **4135,** EN **34CrMo4,** DIN **1.7220,** SS **2234,** STN **415131,** BS **198,** UNE **F.1250,** GB **35CrMo,** AFNOR **35CD4,** GOST **АС38ХГМ,** UNI **35CrMo4KB**
				H3.2	Hardened steel with a hardness of 51 – 55 HRC	**0.82**	AISI **4135,** EN **34CrMo4,** DIN **1.7220,** SS **2234,** STN **415131,** BS **198,** UNE **F.1250,** GB **35CrMo,** AFNOR **35CD4,** GOST **АС38ХГМ,** UNI **35CrMo4KB**
		H4	Hardened steel > 55 HRC	**H4.1**	Hardened steel with a hardness of 55 – 59 HRC	**0.64**	UNS **T31501,** EN **100MnCrW4,** DIN **1.2510,** SS **2140,** STN **419413,** BS **BO1,** UNE **F.5220,** GB **9CrWMn,** AFNOR **90MWCrV5,** GOST **9ХВГ,** UNI **95MNWCr5KU**
				H4.2	Hardened steel with a hardness of > 59 HRC	**0.54**	UNS **T31501,** EN **100MnCrW4,** DIN **1.2510,** SS **2140,** STN **419413,** BS **BO1,** UNE **F.5220,** GB **9CrWMn,** AFNOR **90MWCrV5,** GOST **9ХВГ,** UNI **95MNWCr5KU**

Correction factors for specific type of cutter and operation C_{VcO}

X.V	●	◖◗	✱
Face mills with *KAPR* 45° – 60° and negative inserts (SHN06C, SHN09C, CHN09, . . .)	1.15	1.00	0.85
Face mills with *KAPR* 45° and positive inserts (SOE06Z, SOE09Z, SOD05,...)	1.15	1.00	0.85
Shoulder mills with *KAPR* 90° (SAD07D, SAD11E, SAD16E, SLN12, SLN16..)	1.10	1.00	0.90
Copy face mills (SRC10 - SRC20, SRD05 - SRD16, . . .)	1.10	1.00	0.90
Copy end mills (K2-PPH, K2-SLC, K2-SRC, K3-CXP. . .)	1.10	1.00	0.90
Disc mills (S90CN(XN), S90SN...)	1.10	1.00	0.90
Shoulder mills with extended flute J(T)-CSD12X, J(T)-SAD11E, J(T)-SAD16E...)	1.25	1.00	0.80
Face mills for heavy duty (FSB22X, SPN13..)	1.30	1.00	0.85
Shoulder mills for heavy duty (FTB27X..)	1.25	1.00	0.85

Correction factors for required durability C_{VcT}

minutes	15	20	30	45	60	90	120
General machining operations (fine finishing up to roughing)	1.23	1.13	1.00	0.89	0.81	0.72	–
Heavy machining operations (heavy roughing)	–	–	1.23	1.13	1.00	0.89	0.81

Additional correction factors C_{VcA}

Machining environment	C_{VcA}
Condition of the work-material (hard skin due to forging or casting)	0.70
Unstable machining conditions	0.85
Common machining conditions	1.00
Stable machining conditions	1.20

Correction factors for cutting speed when face and shoulder milling with <100% radial immersion C_{VcRCT}

a_e/DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	**1.48**	**1.35**	**1.27**	**1.22**	**1.19**	**1.16**	1.11	1.08	1.05	1.03	**1.00**	**1.00**	**1.00**	**1.00**

Correction factors to compensate for chip-thinning when face and shoulder milling with <100% radial immersion Cf_{zRCT}

a_e/DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
⇨x.f	**2.20**	**1.60**	**1.35**	**1.20**	**1.10**	0.95	0.85	0.75	0.85	0.95	**1.00**	**1.00**	**1.00**	**1.00**
⇨x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	**0.68**	**0.71**	**0.72**	**0.74**	**0.79**	**1.00**

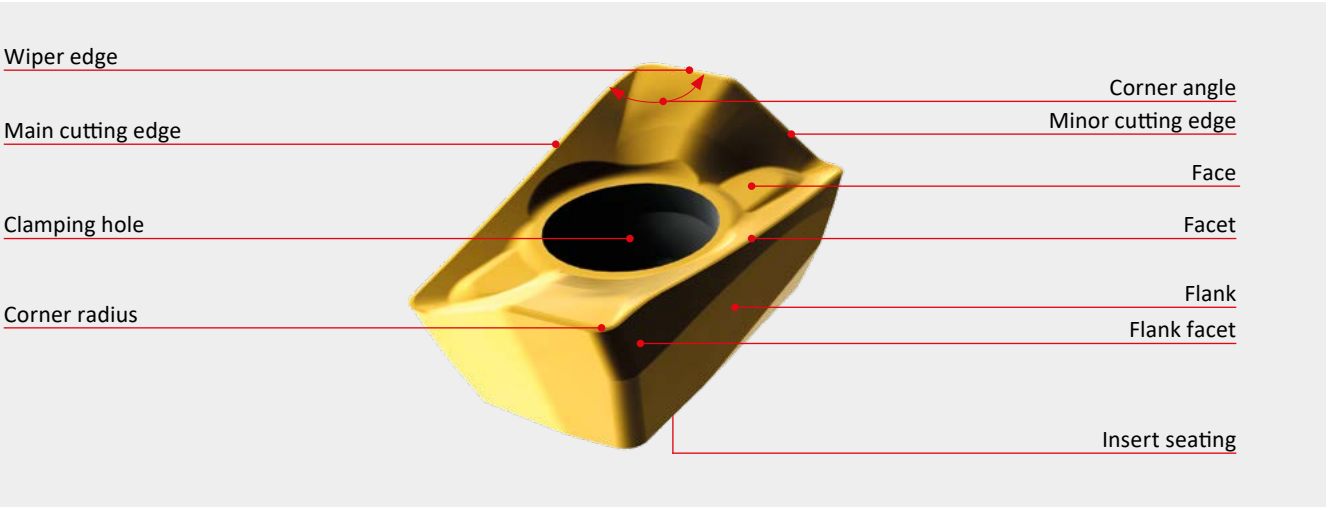
Resulting corrected cutting speed vcc

$vcc = vc \,.\, kvG \,.\, Cvco \,.\, CvcT \,.\, CvcA \,.\, CvcRTC \,.\, CfzRTC$

kvG - coefficient of used material

vc - starting speed from catalogue page

Parts of an Indexable Insert



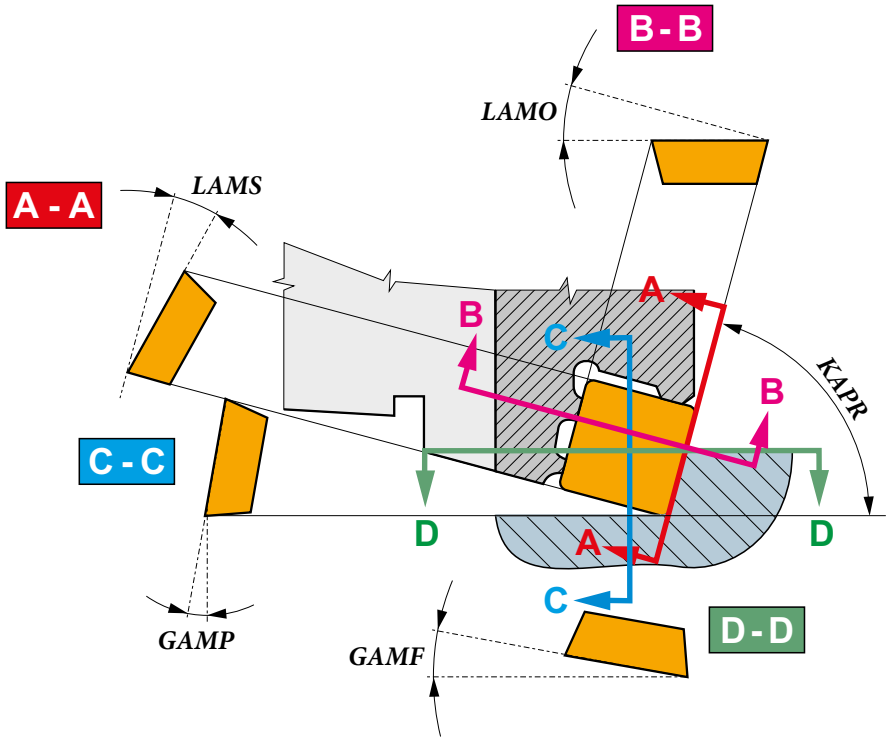
Geometry of milling tool

Constructional angles determine the basic orientation of the seat position that the cutting insert is clamped in and are therefore important for the design of the milling cutter body. There are two angles: axial face angle $GAMP - \gamma_p$ (tool back rake) and radial face angle $GAMF - \gamma_f$ (tool side rake) – see picture below.
Working angles are the setting angle $KAPR - \kappa_r$, the orthogonal face angle $GAMO\ \gamma_o$ and the rake angle of the cutting edge $LAMS - \lambda_s$.

- **Orthogonal face angle** $GAMO - \gamma_o$ affects not only the extent of plastic deformation of the cut chip but also the cutting force and temperature. The bigger the rake angle $GAMO - \gamma_o$, the lower the cutting force and power demand of the spindle motor (and vice versa).
- **Setting angle** $KAPR - \kappa_r$ determines the thickness of the chip at a specific feed per tooth f_z and axial depth of cut a_p. It therefore affects cutting forces, specifically load, wear and tool service life. Reducing the setting angle $KAPR - \kappa_r$ at a constant feed f_z causes a decrease in the chip thickness h.
- **Rake angle of cutting edge** $LAMS - \lambda_s$ together with setting angle $KAPR - \kappa_r$ and face angle $GAMO - \gamma_o$, this determines the point of first contact between the edge and work piece. That is why it affects the resistance of the edge to chipping during interrupted cut. At the same time, it affects the direction of chip evacuation.

Working angles of the tool you can determine the bed using the formulas or diagrams below.

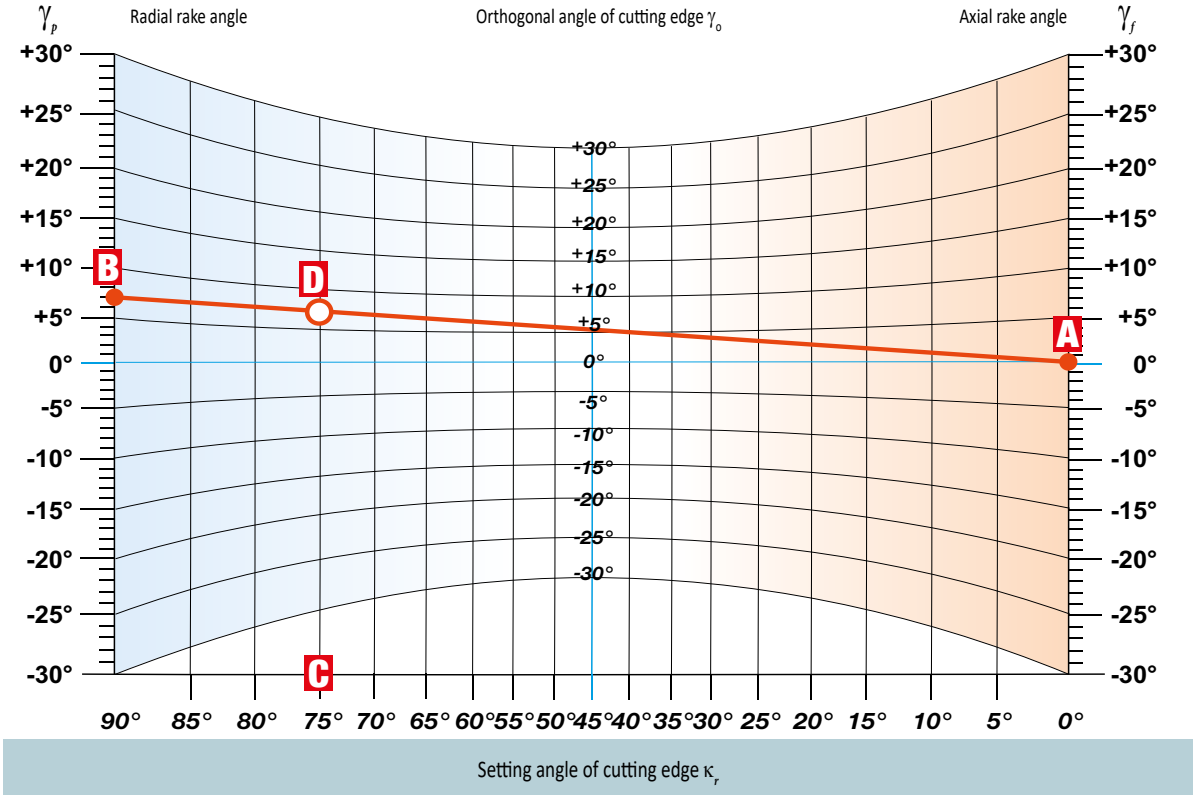
Working and constructional angles of milling tool



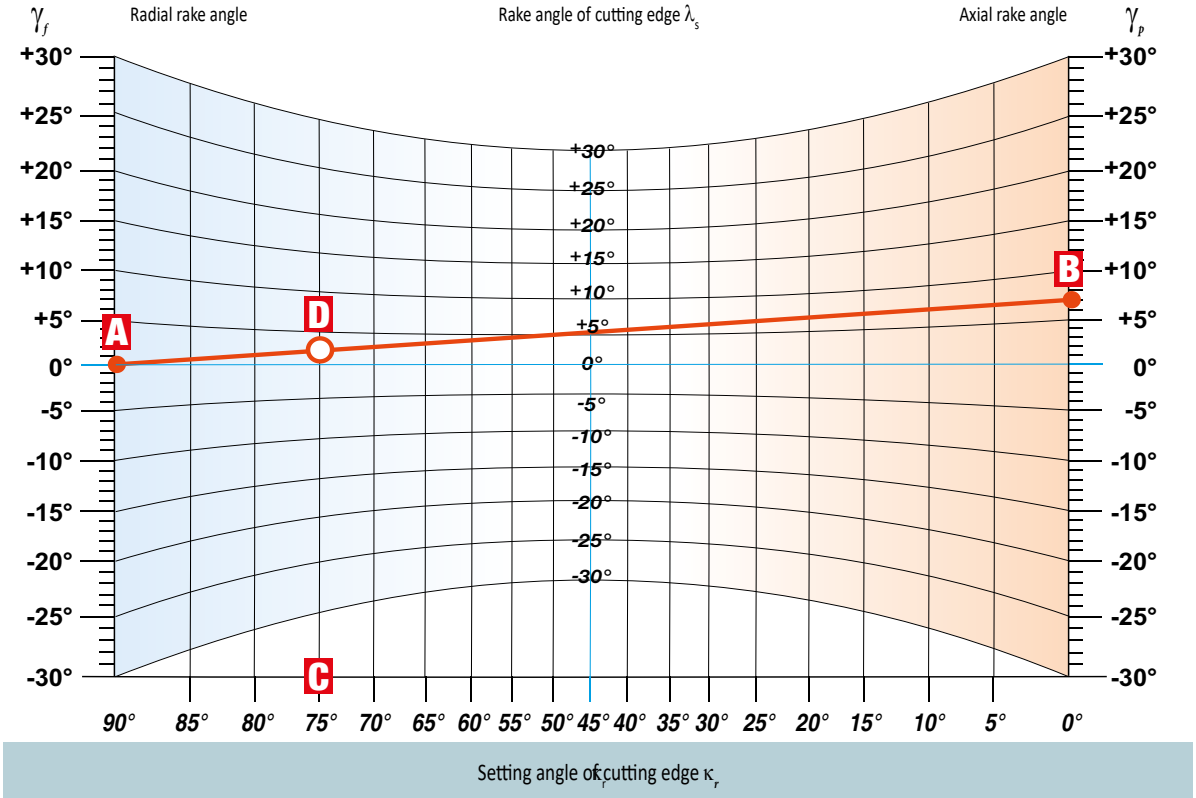
NOMOGRAM FOR CALCULATING THE WORKING GEOMETRY OF MILLING TOOL

Nomogram for calculating the working geometry of mills

$$\tan \gamma_o = \tan \gamma_p \cdot \sin \kappa_o + \tan \gamma_f \cdot \cos \kappa_r$$



$$\tan \lambda_s = \tan \gamma_f \cdot \sin \kappa_r - \tan \gamma_p \cdot \cos \kappa_r$$



NOMOGRAM FOR CALCULATING THE WORKING GEOMETRY OF MILLING TOOL

The exiting of the cutting edge from the cut is also accompanied by thermal stress, caused by a rapid reduction in temperature of the surface layer of the cutting edge and mechanical stress caused by elastic deformation relief of the surface layer of workpiece at a rapid drop in cutting force.

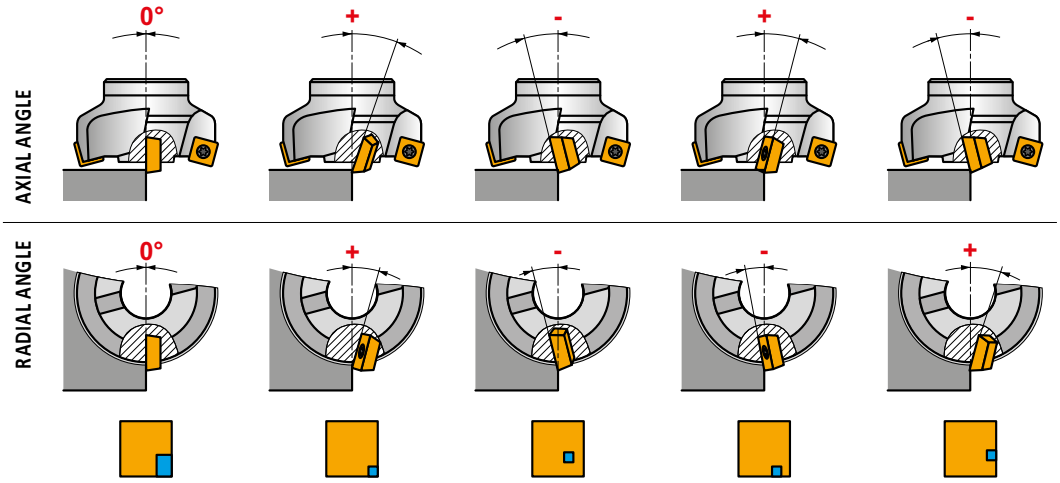
That is why we use the average value of chip thickness h_m for any calculations.

The chip thickness h fluctuates during one revolution depending on angle φ in accordance with the formula $h\varphi = f_z \times sin\varphi$.

The maximum chip thickness equal to f_z is reached at the axis of the milling cutter. The average chip thickness h_m cut by one tooth during one revolution is equal to the height of the rectangle of the same area as the area under the sine curve relates to the radial depth of cut a_e.

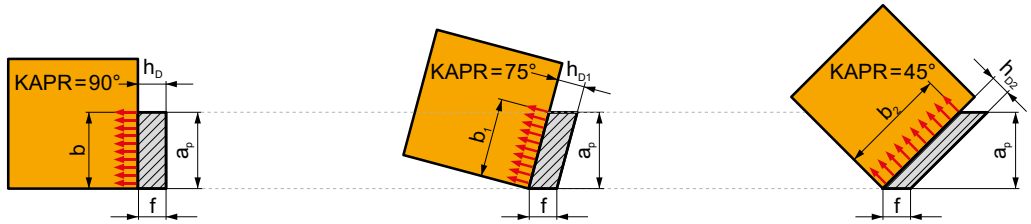
The average chip thickness h_m depends on the type of milling cutter and the cutting conditions, especially on the relation a_e/DC, feed per tooth f_z and the setting angle $KAPR - \kappa_r$. See picture on the next page for an illustrative example.

Milling Cutter Geometry



When choosing a tool, it is necessary to take many criteria into account. One of the primary requirements is that the place of first contact between the cutting wedge and the workpiece lie further away from the tip and the cutting edge. That, however, is dependent on the basic geometry of the cutting wedge i.e. angles $GAMO - \gamma_o$, $LAMS - \lambda_s$, $KAPR - \kappa_r$, as well as the mutual position of the milling cutter and the entry edge of the workpiece. The following figure shows individual milling cutter geometries (or rather, the combinations of radial and axial angles) at some of the most adverse engagement conditions (i.e. when the axis of the milling cutter is in line with the edge of the workpiece). At the bottom of the figure is a depiction of the indexable insert with an indication of the area where the insert makes first contact with the workpiece. The figure shows that in such adverse engagement conditions, tools with negative - negative geometry perform the best, while tools with positive - positive geometry will be the most problematic. Another criterion is chip removal. Negative - negative tools push the chip into the work surface (towards the workpiece) while positive - positive tools do the opposite, leading the chip away from the work surface, i.e. away from the workpiece. It is thus an optimal compromise to combine negative and positive angles.

Entering Angle



$h_D = f$ $k_c = 1{,}00\ k_{c1}$ $k_c/b = 1{,}00$	$h_{D1} = 0{,}97f$ $k_c = 1{,}01\ k_{c1}$ $k_c/b_1 = 0{,}98$	$h_{D2} = 0{,}71f$ $k_c = 1{,}09\ k_{c1}$ $k_c/b_2 = 0{,}77$

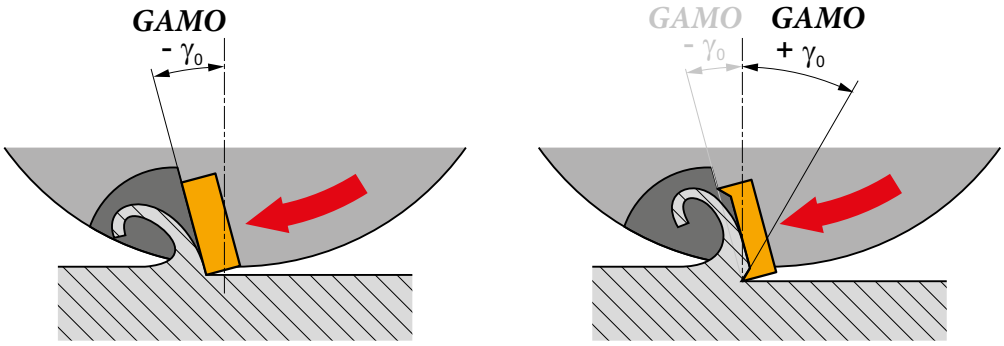
When choosing the entering angle for face milling, you should, among other things, account for the power and rigidity of the machine (size and type of tool holder), its dynamic capabilities and maximum depth of removal. For instance, if you have a high-performance (50 – 100 kW) machine at your disposal with an ISO 50 tool holder and you cut at high depth, your first choice should be a milling cutter with an entering angle between 90° – 58°. On the other hand, if you have a low-power machine (up to 10 kW) with an ISO 40 (HSK 63) tool holder and you expect to cut at 2 – 3 mm depth, you should choose a tool with an entering angle of 45° – 10° (i.e. HFC) or with round inserts. It would thus be an ideal compromise to choose a tool with an entering angle of 45°, which can also handle higher depths of cut and, when compared to a tool with an entering angle of 90°, can cut at the same depth at up to 30 % higher feed and at approximately the same load.

Finally, it is important to emphasise that the lower the entering angle, the thinner the chip and the longer the engaged section of the cutting wedge, which is important with regard to heat dissipation and the distribution of force across the edge of the insert. Also worth mentioning is the change in the direction of the resultant cutting forces, which, in simplified terms, can be visualised as perpendicular to the edge. (Decreasing the entering angle increases the passive component of the cutting force leading into the spindle and decreases the active radial component of the cutting force).

The following figure shows the assortment of Pramet milling cutters with regard to the entering angle and the basic geometry of the cutter body (i.e. the axial and radial angle of the face). However, it must be pointed out that insert geometry may change the resulting geometry of the tool as indicated in the following figure.

	Negative – Negative	←	Negative – Positive	→	Positive – Positive
93°	SWN04C SCN05C				
90°	STN10 STN16 SLN12 SLN16 J(T)-SLSN		SAD07D SAD11E SAD16E SAP10D SAP16D FTB27X SSD12 SS009 SS0050 J(T)-SAD11E S90SN S90CN(XN) F-SCC J(T)-SAD16E J(T)-CSD12X J(T)-SSAP	SAP10D J(T)-2416 SVC22C
60°	CNH09		FSB22X		
57°	SPN13				
45°	SHN06C SHN09C SSD09 N-SS009 2516		SOD05 SOD06D SSE09 SSN12Z	
43°					SOE06Z SOE09Z
20°	SBN10				
19°			SPD09		
18°	SSN11				
I	SRC10 SRC12 SRC16 SRC20 SRD10 SRD12 L2-SZP K3-CXP K2-PPH K2-SLC K2-SRC		SRD05 SRD07 SRD10 SRD12 SRD16 SZD07 SZD09 SZD12 2636 J(T)-SXP16	

Resulting Geometry (Milling Cutter + Indexable Insert)



The following table lists the three basic milling cutter geometries and the approximate priority of their use with regard to the type of machined material. More detailed information about individual tool families with consideration of insert geometries can be found in the catalogue section.

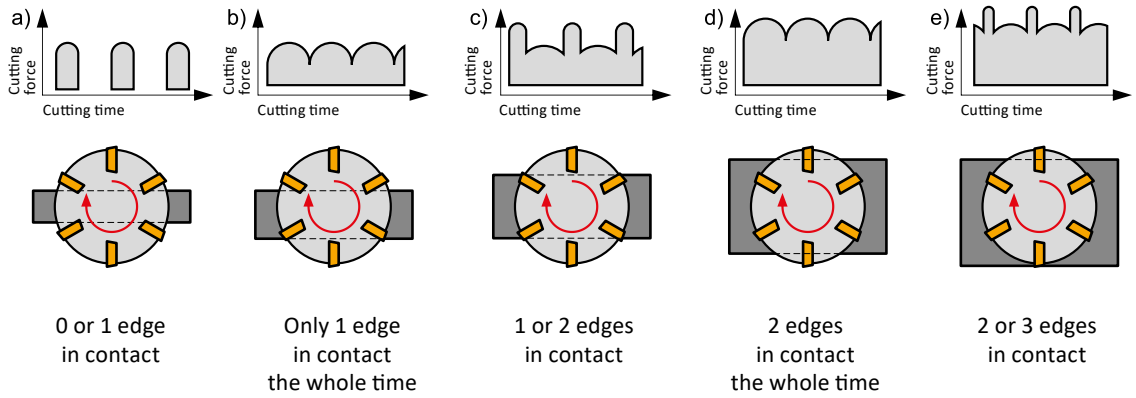
Conditions		Selection of cutter geometry according to application		
		Negative – Negative	Negative – Positive	Positive – Positive
Structural parameter of the body	***GAMP*** (A.R.)	-	+	+
	GAMF (R.R.)	-	-	+
	GAMO	-	+	+
Machined material	Carbon steels, alloy steels (< 300 HB)	◪	■	■
	Stainless steels (< 300 HB)		■	◪
	Stainless steels (> 300 HB)		■	◪
	Cast iron, ductile iron	■	◪	◪
	Al alloys		◪	■
	Copper and its alloys		◪	■
	Titanium and its alloys		◪	◪
	Hardened steels (40 – 55 HRC)	◪	◪	

Number of Teeth on the Milling Cutter

The number of teeth on the milling cutter is also important in relation to the width of the milled surface, where it determines the force (and acoustic) characteristics of the cut, as indicated in the following figure.

Feed per minute	+	++	+++
Tough materials	+++	++	+
Power requirement	+	++	+++
Resulting roughness	+++	++	+

Tooth Pitch



0 or 1 edge in contact

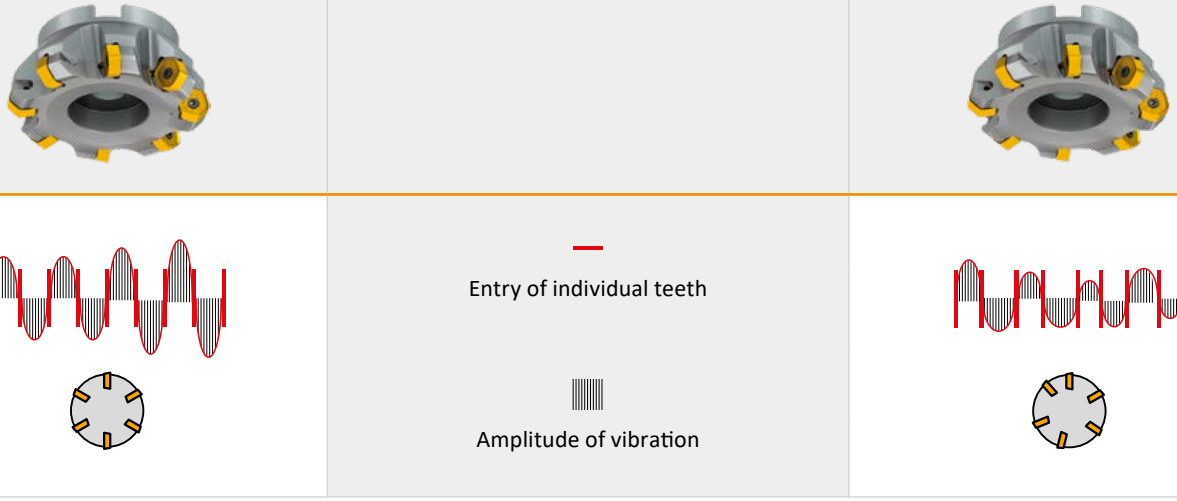
Only 1 edge in contact the whole time

1 or 2 edges in contact

2 edges in contact the whole time

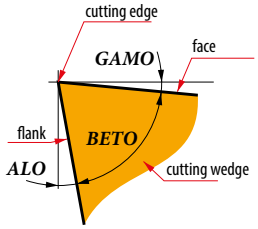
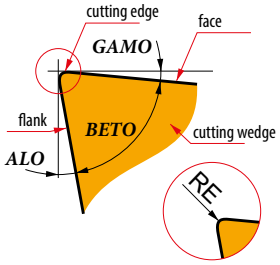
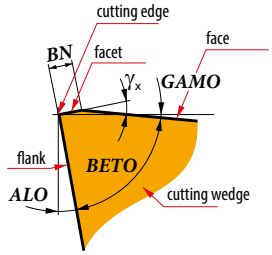
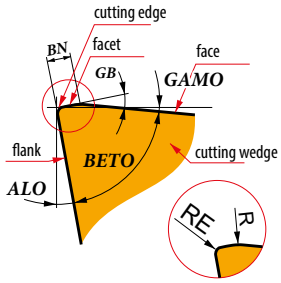
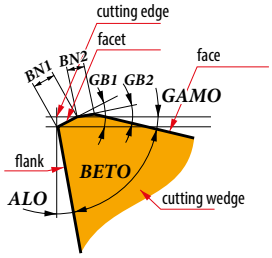
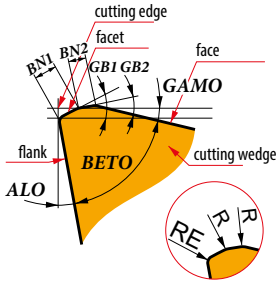
2 or 3 edges in contact

In addition, some tool families offer the option to choose between even and uneven tooth pitch. Using a tool with an uneven tooth pitch interferes with harmonic oscillation and, as a result, helps improve stability and reduce the risk of vibration. That means you should choose uneven tooth pitch if you anticipate a risk of vibration, i.e. primarily when working at higher overhang or when machining at high radial depth of cut and under conditions which are not entirely stable.



When choosing an indexable insert, please also pay attention to its microgeometry, which is indicated by icons directly in the catalogue section. Below is an overview of the types of cutting edges you can find on our inserts.

Overview of Cutting Edge Designs

F		**Sharp cutting edges** – recommended for inserts designed for use with milling cutters for Al alloys. Sharp cutting wedges result in minimal deformation of the cut layer, reduced build-up on the edge and a lower cutting force requirement. However, the strength of the cutting wedge is lower compared to other types.
E		**Rounded cutting edges** – a slight rounding of the wedge with the aim of eliminating micro-imperfections on its surface. Rectifying the wedge at a certain very low radius (RE) improves the cutting edge's resistance to mechanical damage, i.e. brittle fracture or so-called micro-crumbling. This modification is currently used on all indexable inserts without a facet (F modification previously), which are used for milling almost all types of material.
T		**Faceted cutting edges** – a facet with width of x and angle of γ_x increases the angle γ_n of the cutting wedge in the immediate vicinity of the cutting edge, thus also increasing its strength, i.e. its resistance to mechanical load, brittle damage or fracture. Currently used only rarely, as it has been replaced by the S modification.
S		**Rounded edges with facet** – compared to the T modification, the insert has undergone rectification which results in rounding of the cutting edge and thickening by a facet. This modification increases the resistance of the wedge against mechanical damage to a greater degree.
K		**Edges with double facet** – double facet with widths of x_1 x_2 and angle of γ_{x1} γ_{x2} further increases the strength of the edge, i.e. its resistance to mechanical stress, brittle damage or fracture. Rarely used for milling inserts, only for the most difficult cuts.
P		**Rounded edges with double facet** – compared to the K modification, the insert has undergone rectification which results in rounding of the cutting edge and thickening by a double facet. This modification provides the wedge with maximum resistance to mechanical damage.

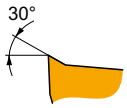
707

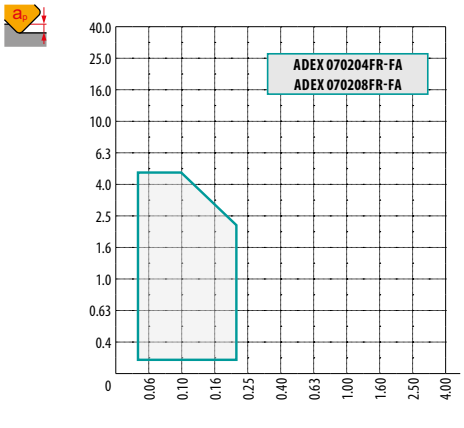
Geometry of milling inserts

The following tables should allow you to choose the insert geometry more precisely with respect to the groups of materials being machined, the nature of the cut, the considered range of depths of cut and the feeds. Cuttings with the main cutting edge are also available (remember that you must also consider the geometry of the cutters when assessing the final geometry).

Milling insert geometries	
A	
ADEX 07-FA	709
ADEX 07-HF	709
ADEX 11-FA	709
ADEX 11-HF	709
ADEX 11-HF2	710
ADEX 16-FA	710
ADEX 16-FM	710
ADEX 16-HF	710
ADEX 16-HF2	711
ADKT 15-M	711
ADKX 15-F	711
ADKX 15-F (RAD)	711
ADMX 07-F	712
ADMX 07-M	712
ADMX 11-F	712
ADMX 11-M	712
ADMX 11-MF	713
ADMX 11-MM	713
ADMX 11-R	713
ADMX 16-F	713
ADMX 16-M	714
ADMX 16-MF	714
ADMX 16-MM	714
ADMX 16-R	714
ANHX 10-F	715
APET 15EN	715
APET 15SN	715
APET 16-FA	715
APEW 15ER	716
APEW 15SR	716
APKT 10-FA	716
APKT 10-M	716
APKT 16-GM	717
APKT 16-HM	717
APMT 16 ER-R	717
APMT 16 SR-R	717
APMT 16-F	718
APMT 16-FM	718
B	
BNGX 10-HM	718
BNGX 10-M	718
BNGX 10-MM	719
C	
CCMX -TS1	719
CNHQ 10	719
CNHX 05-WM	719
CNM 563	720
H	
HNEF 09-F	720
HNEF 09-M	720
HNEF 09-W	720
HNGX 06-F	721
HNGX 06-M	721
HNGX 06-R	721
HNGX 09-F	721
HNGX 09-FF	722
HNGX 09-M	722
HNGX 09-R	722
HNMF 09-R	722
L	
LC 12-CH	723
LC 12-RE	723
LC -KP	723
LC -KPF	723
LNET 16-M	724
LNET 16-R	724
LNG(U)X 12-M	724
LNGU 16-FA	724
LNGU 16-M	725
LNGX 12-F	725
LNGX 12-FA	725
LNGX 12-MF	725
LNGX 12-MM	726
LNGX 12-R	726
LNMU 16-F	726
LNMU 16-M	726
LNMU 16-R	727
O	
ODEW 06	727
ODKT 05-F	727
ODK(M)T 05-FM	727
ODMT 05-R	728
ODMT 06	728
ODMX 06	728
OEHT 06-FA	728
OEHT 06-M	729
OEHT 06-MF	729
OEHT 06-MM	729
OEHT 09-M	729
OEHT 09-MM	730
OFKR 07-M	730
P	
PDKT 09-FM	730
PDKX 09-FM	730
PDMW 09	731
PDMX 09-M	731
PDMX 09-R	731
PNMQ 13	731
PNMU 13-M	732
PPH -CL1	732
PPH -CL4	732
PPHE -SM1	732
PPHF -CE1	733
PPHT-A2	733
R	
RC	733
RC -F	733
RCMT 12EN-R	734
RCMT-F	734
RCMT-M	734
RCMT-R	734
RCMT SN-R	735
RDET	735
RDEW	735
RDEX 12	735
RDEX 16	736
RDGT 07	736
RDGT 10	736
RDGT 12	736
RDGT 12-F	737
RDGT 12-FM	737
RDHT -FA	737
RDHX 05	737
RDHX MOT	738
RDMT	738
RDMT 12	738
RDMT -R	738
RDMX	739
REHT -M	739
REHT -MM	739
RPET 12	739
RPET 15-M	740
RPEW 12	740
RPEW 15	740
RPEX -12	740
S	
SBKX 22	741
SBMR 22	741
SBMR 22-R	741
SDEW 09EN	741
SDEW 09SN	742
SDEX 09-74	742
SDGX 12-FM	742
SDK(M)T 12-FM (IM)	742
SDKT 12-F (IM)	743
SDMT 12-F	743
SDMT 12-F (IM)	743
SDMT 12-M	743
SDMT 12-R	744
SDMT 12-R (IM)	744
SDMX 12-M	744
SEEN 12FN	744
SEEN SN	745
SEER EN	745
SEER SN	745
SEET 09	745
SEET 12EN	746
SEET 12SN	746
SEET 12-FA	746
SEET 12-PM	746
SEEW 12 EN	747
SEEW 12 SN	747
SEMT 09	747
SFCN 12	747
SNET 13-M	748
SNGX 11-M	748
SNGX 11-MM	748
SNGX 13-M	748
SNGX 13-R	749
SNHF -M	749
SNHN	749
SNHQ 11	749
SNHQ 12TN	750
SNHQ 12EN	750
SNHQ 12TRL	750
SNK(M)T 12-M	750
SNKX	751
SNMT 12-R	751
SNUN	751
SOMT 05-M	751
SOMT 09-M	752
SOMT 09-MI	752
SOMT 09-P	752
SPET 12EN	752
SPET 12S	753
SPEW 12EN	753
SPEW 12SN	753
SPGN	753
SPGN DZ	754
SPKN EDSR(L)	754
SPKN EDER(L)	754
SPKR	754
SPKX	755
SPUN	755
SPUN 25	755
T	
TBMR 27	755
TCMT 16-FM	756
TNGX 10-F	756
TNGX 10-FA	756
TNGX 10-M	756
TNGX 16-F	757
TNGX 16-FA	757
TNGX 16-M	757
TNJF 12	757
TPCN 16	758
TPKN ER	758
TPKN SR	758
TPKR	758
TPUN	759
V	
VCGT 22-FA	759
W	
WNHX 04-WM	759
XDHW EN	759
XDHW SN	760
XEHT	760
XNGX ANSN	760
XNGX 13	760
XNHQ TN	761
XP ER-FM	761
XPHT 16E	761
XPHT 16-FA	761
XPHT 16S	762
Z	
ZDCW 07	762
ZDCW 09	762
ZDEW 12	762
ZP ER-F	763
ZP ER-FM	763
ZP ER-M	763
ZP ER-R	763

ADEX 07-FA

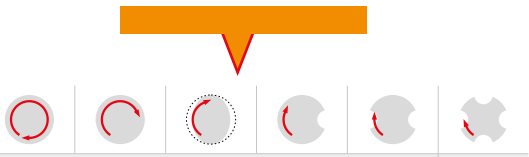




P	M	K	N	S	H
			■		

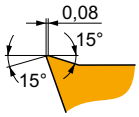
f ⇨ 0.03 – 0.20

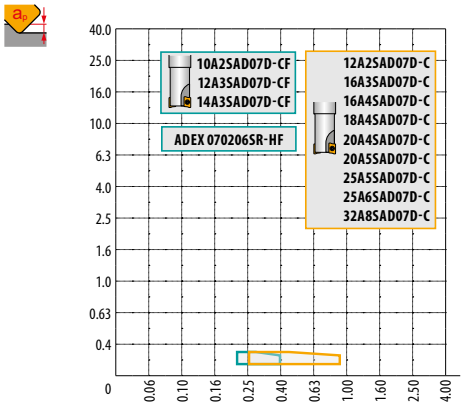
a_p 0.1 – 5.0



? **ADEX 0702..FR-FA**

ADEX 07-HF

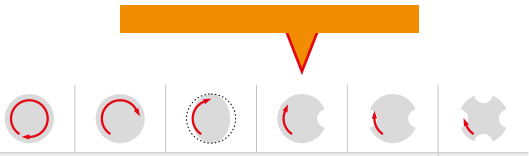




P	M	K	N	S	H
■	◪				

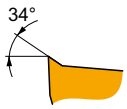
f ⇨ 0.20 – 0.90

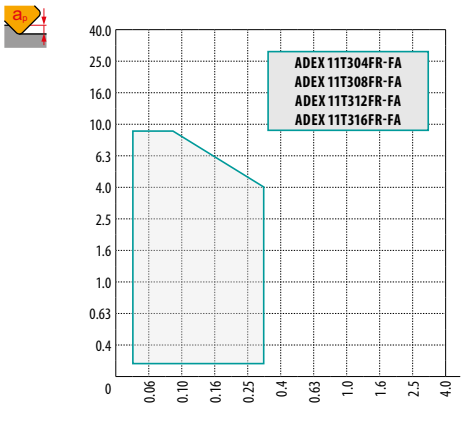
a_p 0.1 – 0.3



? **ADEX 070206SR-HF**

ADEX 11-FA

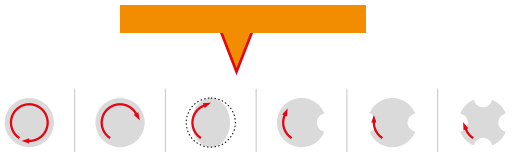




P	M	K	N	S	H
			■		

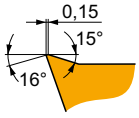
f ⇨ 0.03 – 0.30

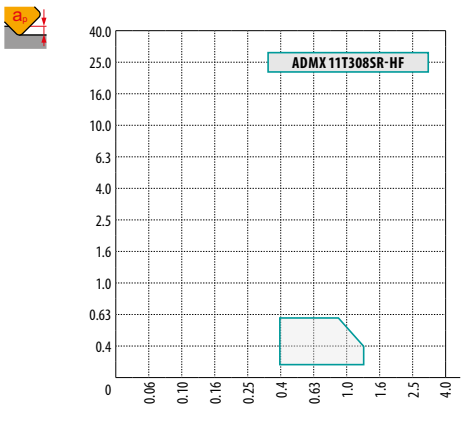
a_p 0.2 – 9.0



? **ADEX 11T304FR-FA, ADEX 11T308FR-FA**
ADEX 11T312FR-FA, ADEX 11T316FR-FA

ADEX 11-HF

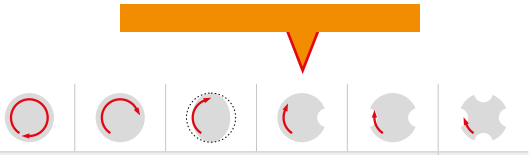




P	M	K	N	S	H
■	◪				

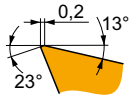
f ⇨ 0.40 – 1.3

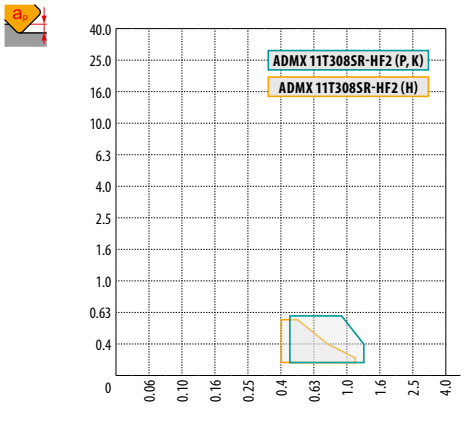
a_p 0.1 – 0.6



? **ADEX 11T308SR-HF**

ADEX 11-HF2





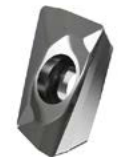
P	M	K	N	S	H
■	◪	◪		◪	◪

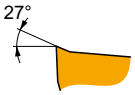
f ⇨ 0.40 – 1.3

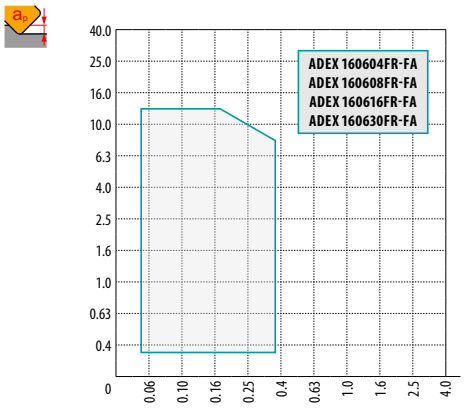
a_p 0.2 – 0.6

ADEX 11T308SR-HF2

ADEX 16-FA







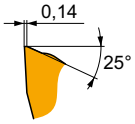
P	M	K	N	S	H
			■		

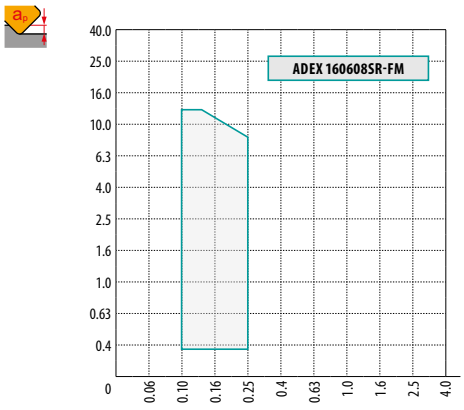
f ⇨ 0.05 – 0.35

a_p 0.3 – 13.0

ADEX 160604FR-FA, ADEX 160608FR-FA
ADEX 160616FR-FA, ADEX 160630FR-FA

ADEX 16-FM





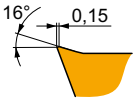
P	M	K	N	S	H
■	◪	■		◪	

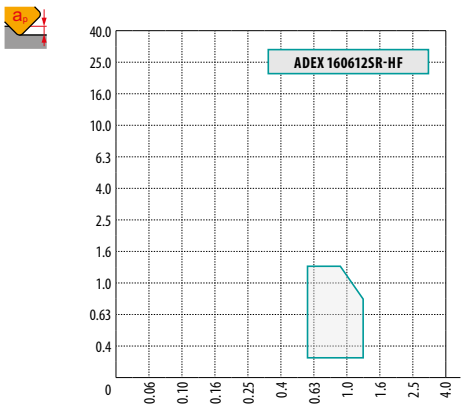
f ⇨ 0.10 – 0.25

a_p 0.3 – 13.0

ADEX 160608SR-FM

ADEX 16-HF





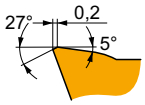
P	M	K	N	S	H
■	◪				

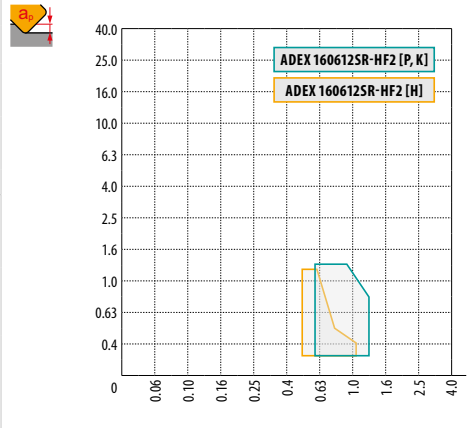
f ⇨ 0.60 – 1.3

a_p 0.3 – 1.3

ADEX 160612SR-HF

ADEX 16-HF2





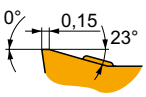
P	M	K	N	S	H
■	◪	◪		◪	◪

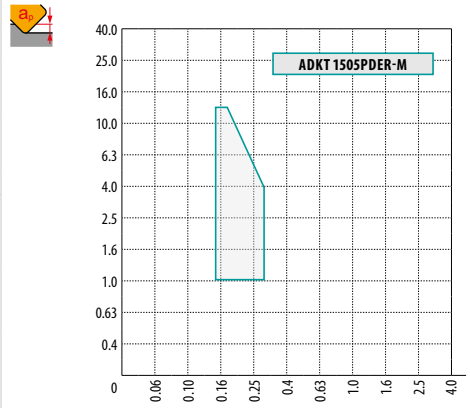
f: 0.60 – 1.3

a_p: 0.3 – 1.3

ADEX 160612SR-HF2

ADKT 15-M





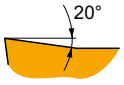
P	M	K	N	S	H
■	■	■		◪	

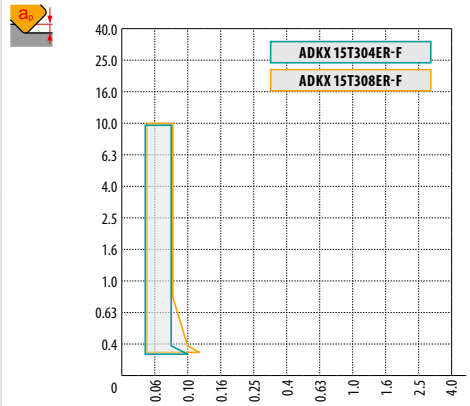
f: 0.15 – 0.30

a_p: 1.0 – 13.0

ADKT 1505PDER-M

ADKX 15-F





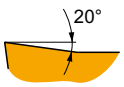
P	M	K	N	S	H
◪	■			◪	

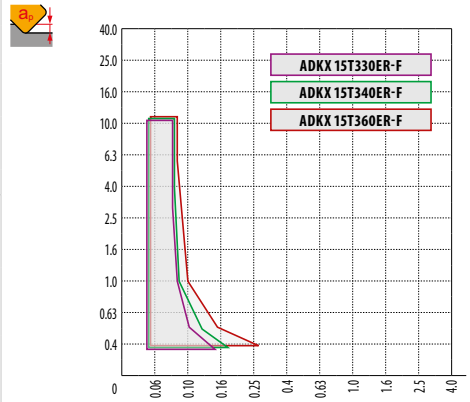
f: 0.05 – 0.12

a_p: 0.3 – 10.0

ADKX 15T304ER-F
ADKX 15T308ER-F

ADKX 15-F (RAD)





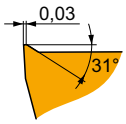
P	M	K	N	S	H
■	■			■	

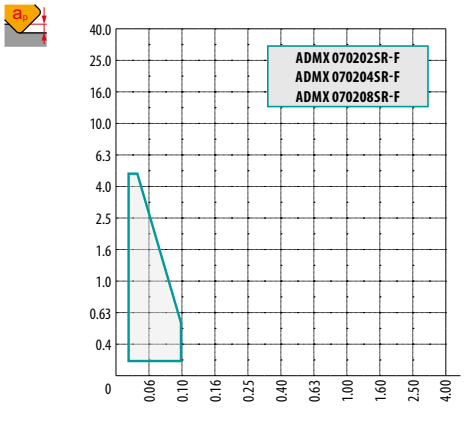
f: 0.05 – 0.26 (according to insert radii)

a_p: 0.3 – 10.0

ADKX 15T330ER-F
ADKX 15T340ER-F
ADKX 15T360ER-F

ADMX 07-F





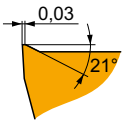
P	M	K	N	S	H
■	■		◪	◪	

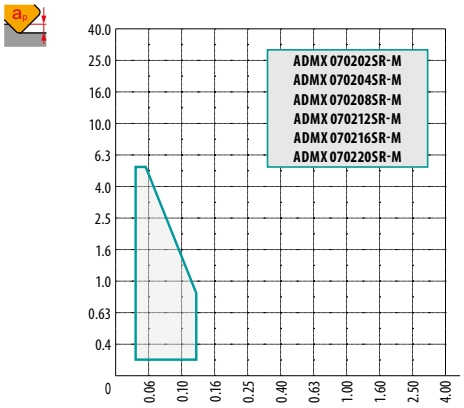
f ⇨ 0.02 – 0.10

a_p 0.1 – 5.0

ADMX 070202SR-F
ADMX 070204SR-F
ADMX 070208SR-F

ADMX 07-M





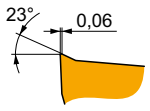
P	M	K	N	S	H
■	◪	◪	◪	◪	

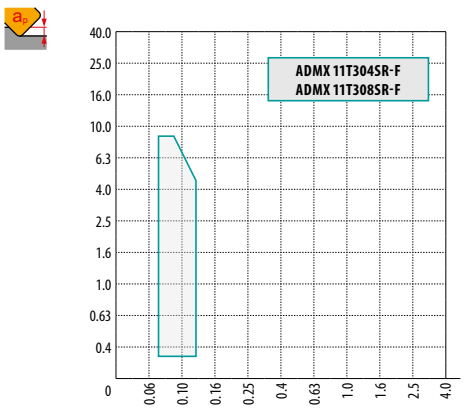
f ⇨ 0.03 – 0.12

a_p 0.1 – 5.0

ADMX 070202SR-M, ADMX 070204SR-M
ADMX 070208SR-M, ADMX 070212SR-M
ADMX 070216SR-M, ADMX 070220SR-M

ADMX 11-F





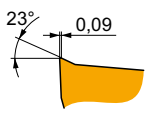
P	M	K	N	S	H
■	◪	◪	◪	◪	

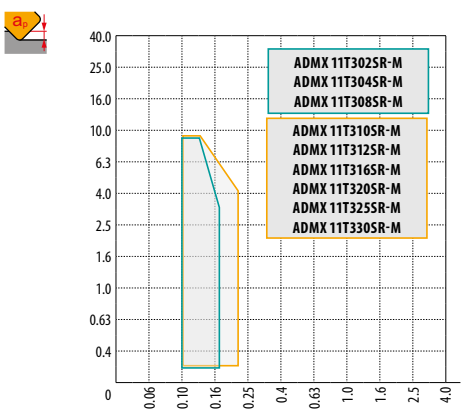
f ⇨ 0.07 – 0.12

a_p 0.2 – 9.0

ADMX 11T304SR-F
ADMX 11T308SR-F

ADMX 11-M





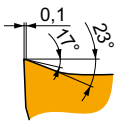
P	M	K	N	S	H
■	■	■		◪	

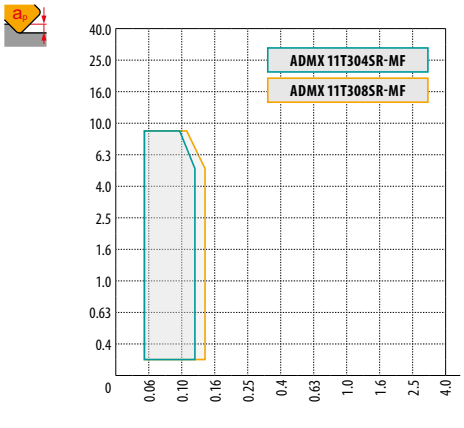
f ⇨ 0.10 – 0.22

a_p 0.2 – 9.0

ADMX 11T3..SR-M

ADMX 11-MF





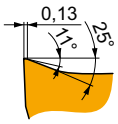
P	M	K	N	S	H
■	■		◪	■	

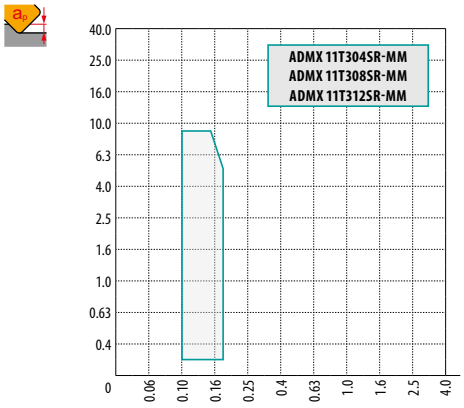
f 0.05 – 0.14

a_p 0.2 – 9.0

ADMX 11T304SR-MF
ADMX 11T308SR-MF

ADMX 11-MM





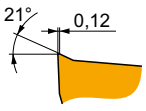
P	M	K	N	S	H
■	■		◪	■	

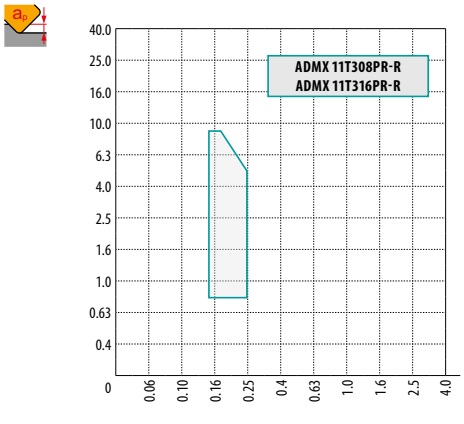
f 0.10 – 0.18

a_p 0.2 – 9.0

ADMX 11T304SR-MM
ADMX 11T308SR-MM
ADMX 11T312SR-MM

ADMX 11-R





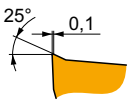
P	M	K	N	S	H
■	◪	■		◪	◪

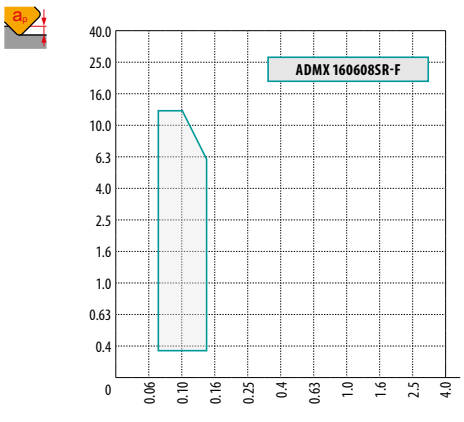
f 0.15 – 0.25

a_p 0.8 – 9.0

ADMX 11T3..PR-R

ADMX 16-F





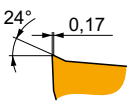
P	M	K	N	S	H
■	◪	◪	◪	◪	

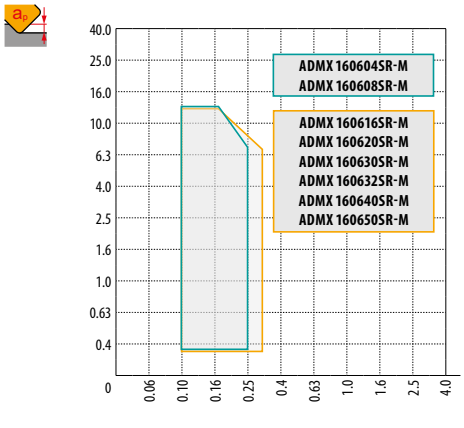
f 0.07 – 0.15

a_p 0.3 – 13.0

ADMX 160608SR-F

ADMX 16-M

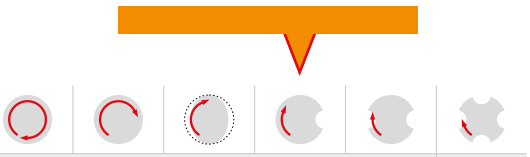




P	M	K	N	S	H
■	■	■		◪	

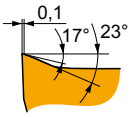
f ⇨ 0.10 – 0.25

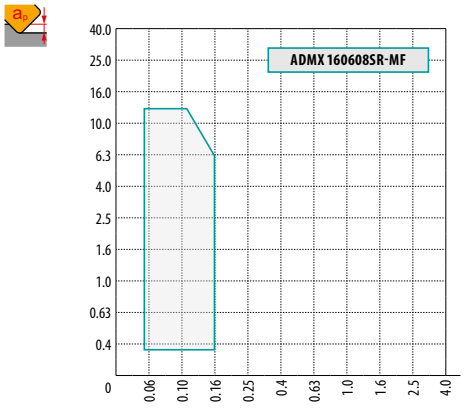
a_p 0.3 – 13.0



ADMX 1606..SR-M

ADMX 16-MF

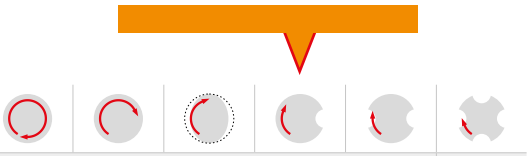




P	M	K	N	S	H
■	■		◪	■	

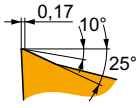
f ⇨ 0.05 – 0.16

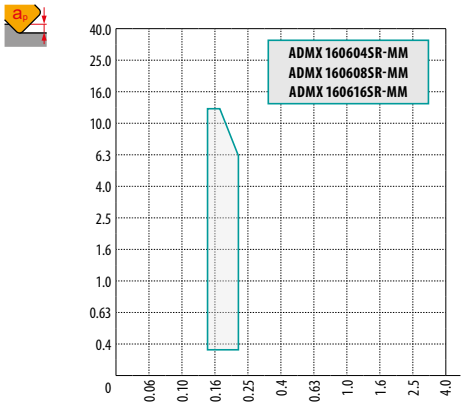
a_p 0.3 – 13.0



ADMX 160608SR-MF

ADMX 16-MM

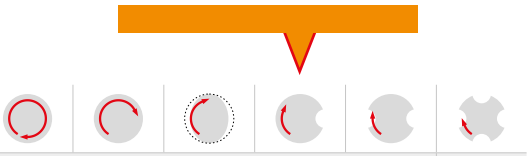




P	M	K	N	S	H
■	■		◪	■	

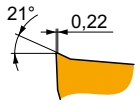
f ⇨ 0.14 – 0.22

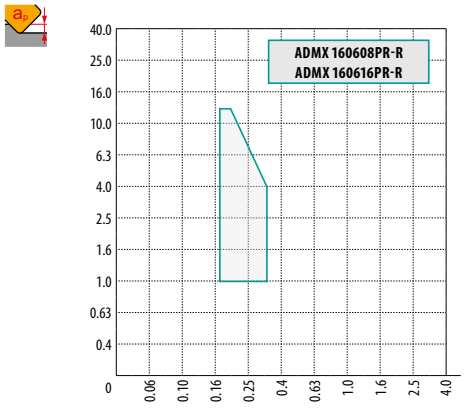
a_p 0.3 – 13.0



ADMX 160604SR-MM
ADMX 160608SR-MM
ADMX 160616SR-MM

ADMX 16-R





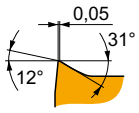
P	M	K	N	S	H
■	◪	■		◪	◪

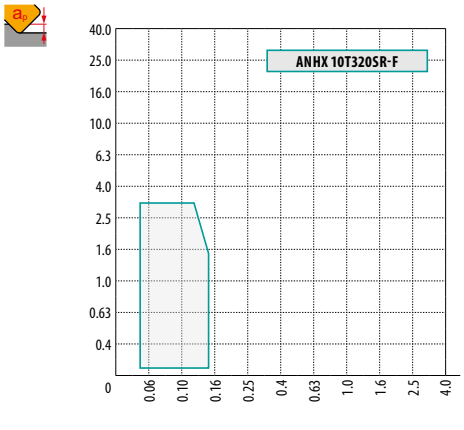
f ⇨ 0.17 – 0.35

a_p 1.0 – 13.0

ADMX 160608PR-R
ADMX 160616PR-R

ANHX 10-F

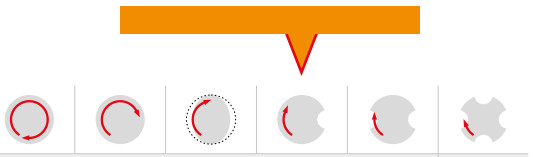




P	M	K	N	S	H
■	◪				

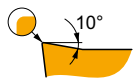
f ⇨ 0.05 – 0.15

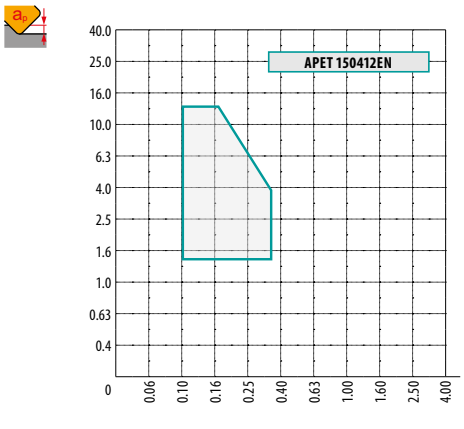
a_p 0.1 – 3.0



? **ANHX 10T320SR-F**

APET 15EN

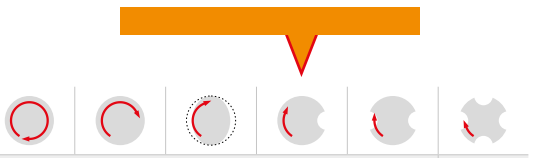




P	M	K	N	S	H
■	◪	■		◪	

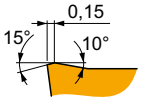
f ⇨ 0.10 – 0.35

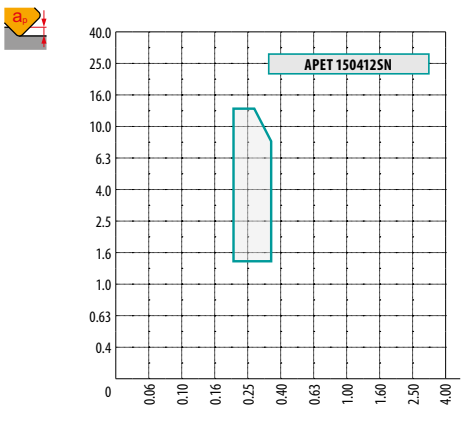
a_p 1.5 – 12.0



? **APET 150412EN**

APET 15SN

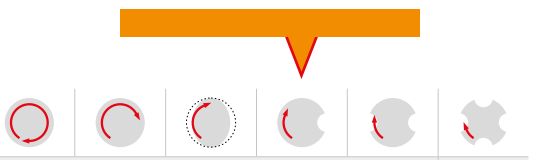




P	M	K	N	S	H
■	◪	■		◪	

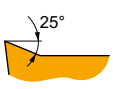
f ⇨ 0.20 – 0.35

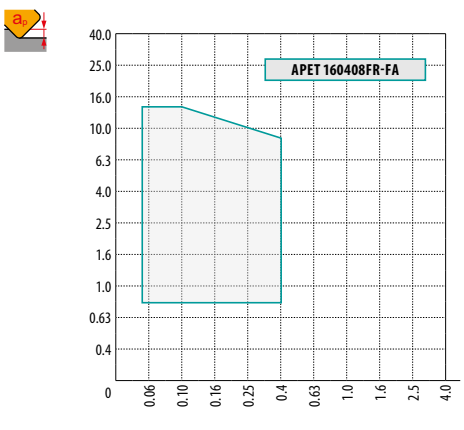
a_p 1.5 – 12.0



? **APET 150412SN**

APET 16-FA

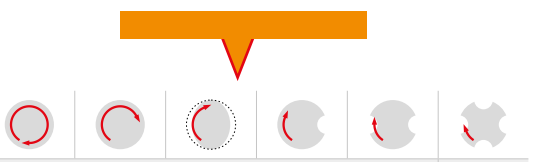




P	M	K	N	S	H
			■		

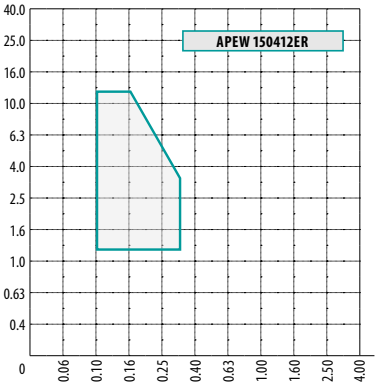
f ⇨ 0.05 – 0.40

a_p 0.8 – 15.0



? **APET 160408FR-FA**

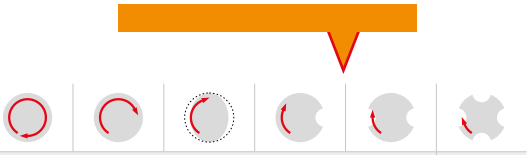
APEW 15ER



P	M	K	N	S	H
◪		■			◪

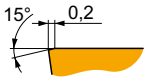
f 0.10 – 0.30

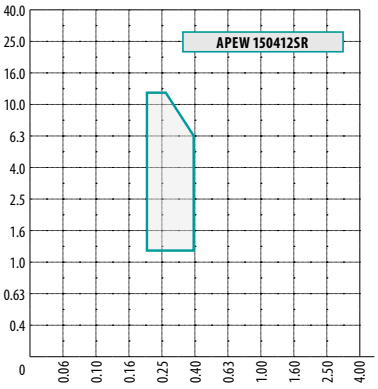
a_p 1.2 – 12.0



APEW 150412ER

APEW 15SR

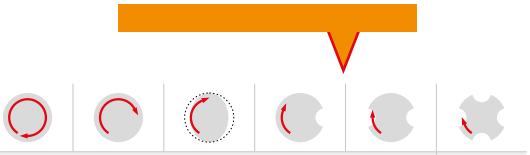




P	M	K	N	S	H
◪		■			◪

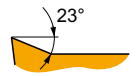
f 0.20 – 0.40

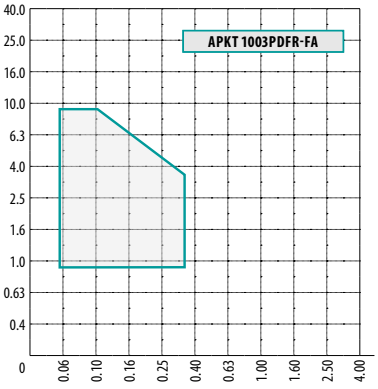
a_p 1.2 – 12.0



APEW 150412SR

APKT 10-FA

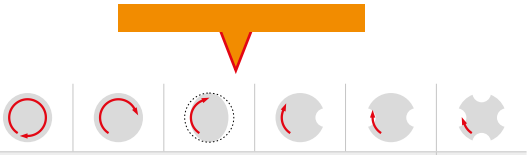




P	M	K	N	S	H
			■		

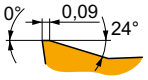
f 0.05 – 0.30

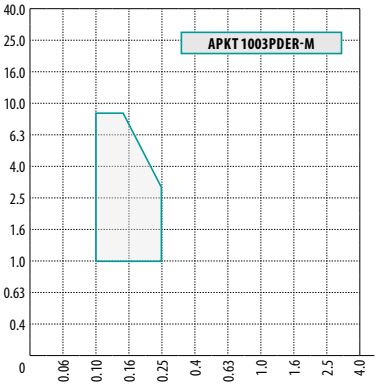
a_p 0.8 – 9.0



APKT 1003PDFR-FA

APKT 10-M

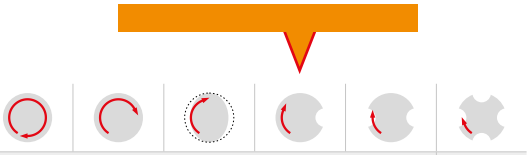




P	M	K	N	S	H
■	◪	■		◪	

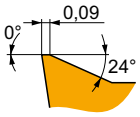
f 0.10 – 0.25

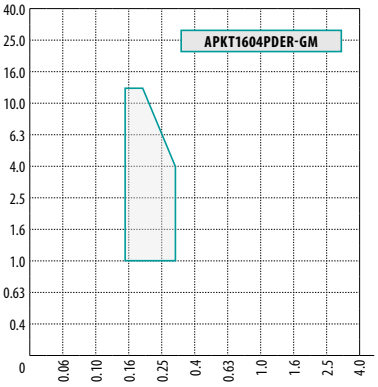
a_p 1.0 – 9.0



APKT 1003PDER-M

APKT 16-GM

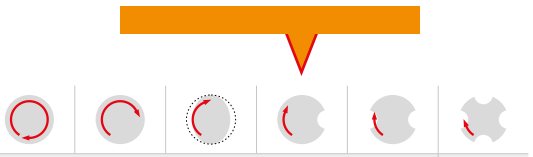




P	M	K	N	S	H
■	◪	■		◪	

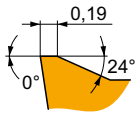
f 0.15 – 0.30

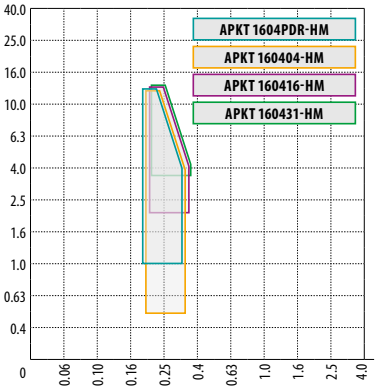
a_p 1.0 – 13.0



? **APKT 1604PDR-GM**

APKT 16-HM

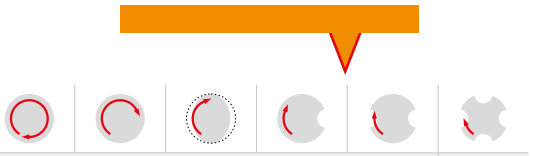




P	M	K	N	S	H
■	◪	■		◪	

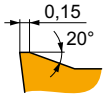
f 0.20 – 0.35

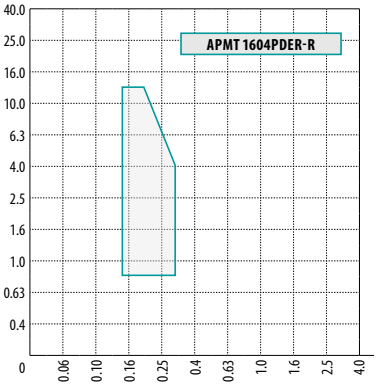
a_p 1.0 – 13.0



? **APKT 1604PDR-HM, APKT 160404-HM APKT 160416-HM, APKT 160431-HM**

APMT 16 ER-R

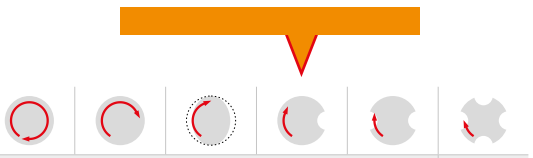




P	M	K	N	S	H
■		■			

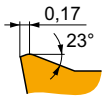
f 0.15 – 0.30

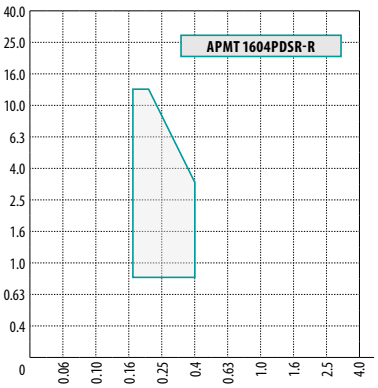
a_p 0.8 – 13.0



? **APMT 1604PDER-R**

APMT 16 SR-R

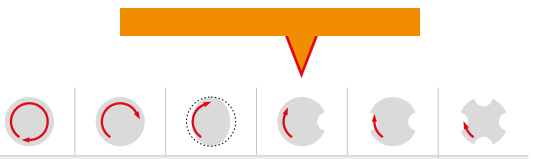




P	M	K	N	S	H
■		■			

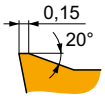
f 0.17 – 0.40

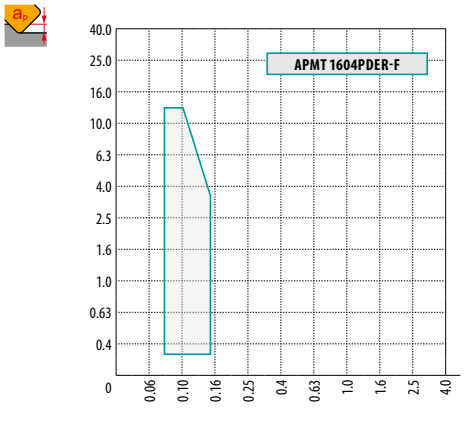
a_p 0.8 – 13.0



? **APMT 1604PDSR-R**

APMT 16-F





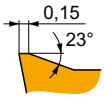
P	M	K	N	S	H
■	■	◪		◪	

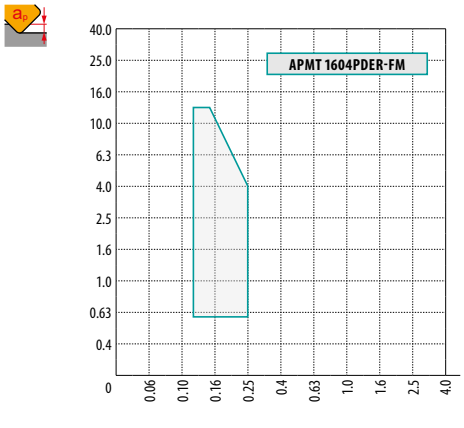
f ⇨ 0.07 – 0.15

a_p 0.3 – 13.0

APMT 1604PDER-F

APMT 16-FM





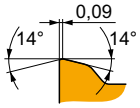
P	M	K	N	S	H
■	■	◪		◪	

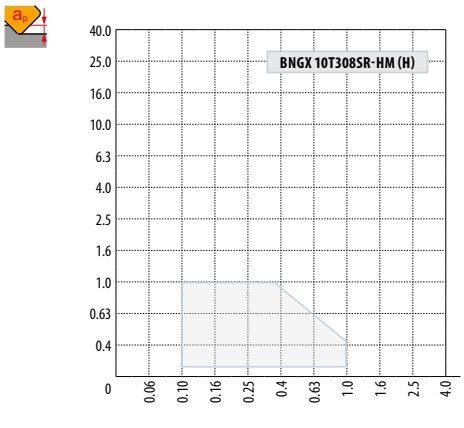
f ⇨ 0.12 – 0.25

a_p 0.6 – 13.0

APMT 1604PDER-FM

BNGX 10-HM





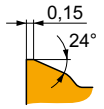
P	M	K	N	S	H
		◪			■

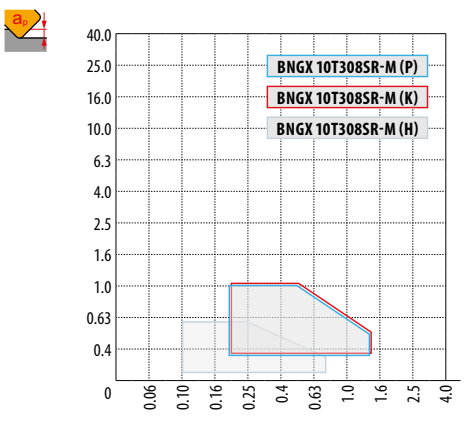
f ⇨ 0.10 – 1.00

a_p 0.1 – 1.0

BNGX 10T308SR-HM

BNGX 10-M





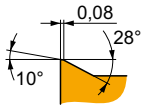
P	M	K	N	S	H
■		■			◪

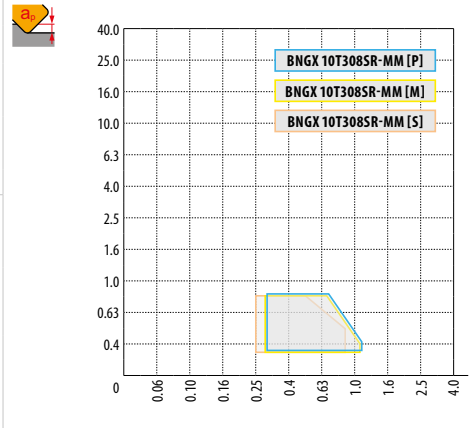
f ⇨ 0.20 – 1.40

a_p 0.3 – 1.0

BNGX 10T308SR-M

BNGX 10-MM





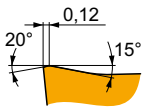
P	M	K	N	S	H
■	◪			■	

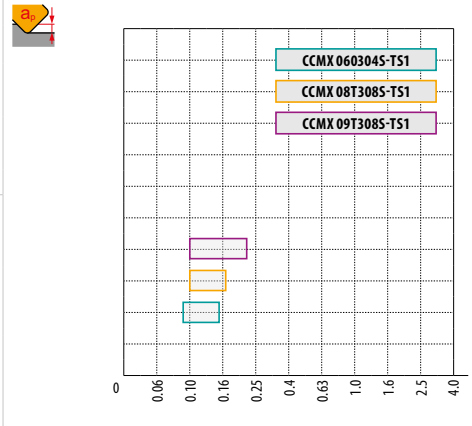
f: 0.20 – 1.10

a_p: 0.3 – 1.0

BNGX 10T308SR-MM

CCMX -TS1





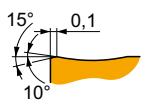
P	M	K	N	S	H
■	◪	■			

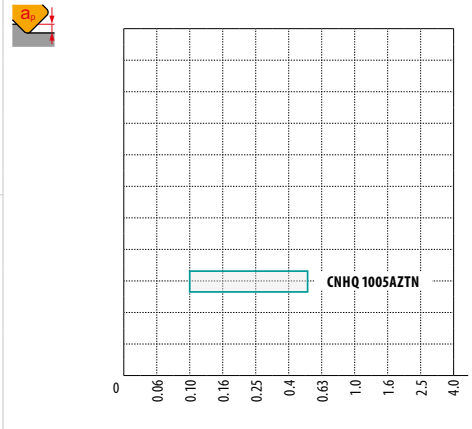
f: 0.08 – 0.18 (according to insert size)

a_p: –

CCMX 060304S-TS1
CCMX 08T308S-TS1
CCMX 09T308S-TS1

CNHQ 10





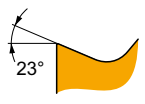
P	M	K	N	S	H
■	◪	■			

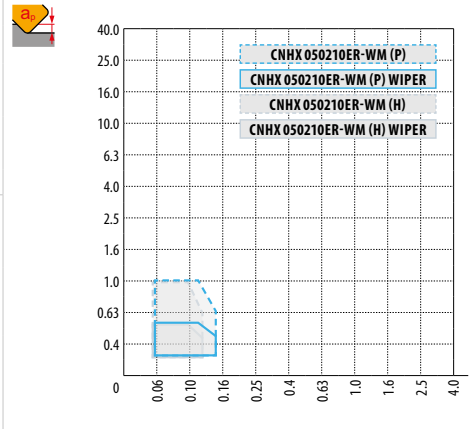
f: 0.10 – 0.50

a_p: –

CNHQ 1005AZTN

CNHX 05-WM





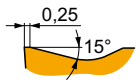
P	M	K	N	S	H
■		■			■

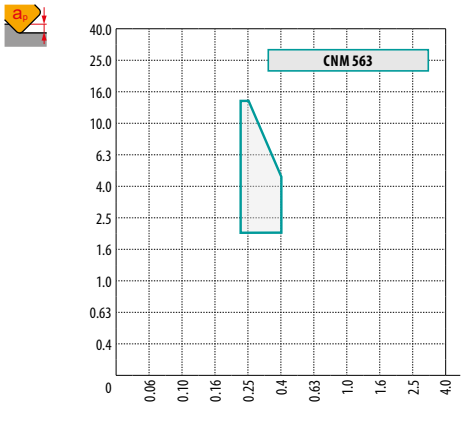
f: 0.05 – 0.15

a_p: 0.1 – 1.0

CNHX 050210ER-WM
CNHX 050210ER-WM

CNM 563

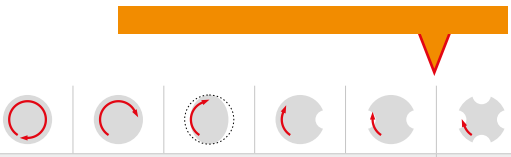




P	M	K	N	S	H
■		■			

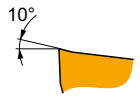
f ⇨ 0.20 – 0.40

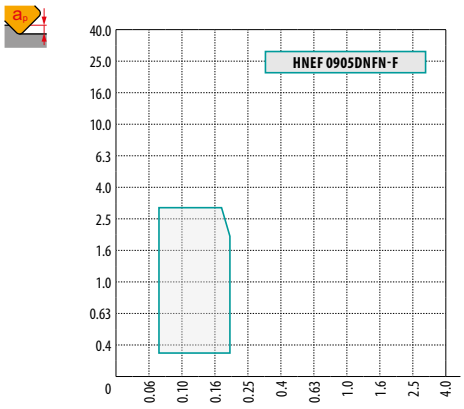
a_p 2.0 – 14.0



CNM 563

HNEF 09-F

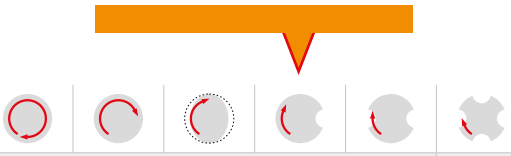




P	M	K	N	S	H
		■			

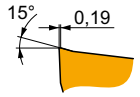
f ⇨ 0.07 – 0.20

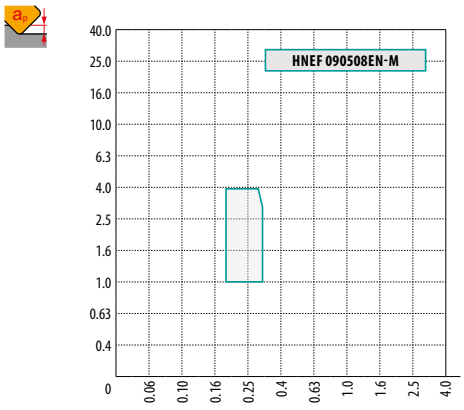
a_p 0.3 – 3.0



HNEF 0905DNFN-F

HNEF 09-M

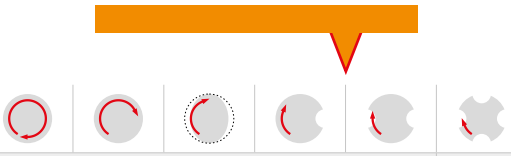




P	M	K	N	S	H
		■			

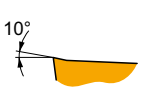
f ⇨ 0.17 – 0.30

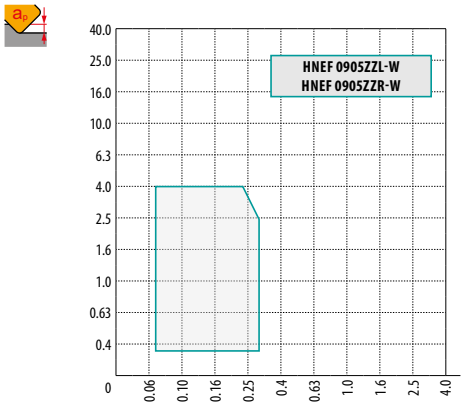
a_p 1.0 – 4.0



HNEF 090508EN-M

HNEF 09-W

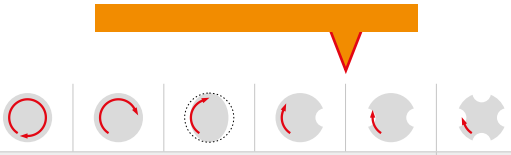




P	M	K	N	S	H
		■			

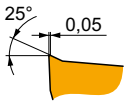
f ⇨ 0.07 – 0.30

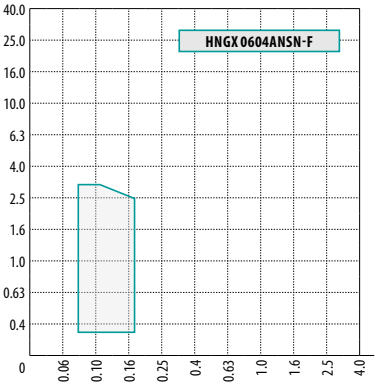
a_p 0.3 – 4.0



HNEF 0905ZZL-W
HNEF 0905ZZR-W

HNGX 06-F

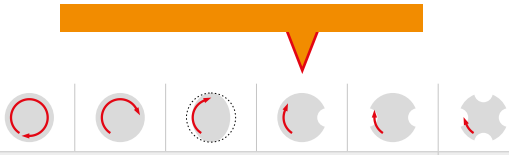




P	M	K	N	S	H
■	◪				

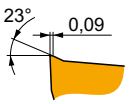
f ⇨ 0.08 – 0.17

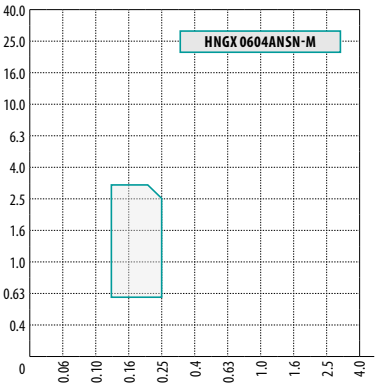
a_p 0.3 – 3.0



HNGX 0604ANSN-F

HNGX 06-M

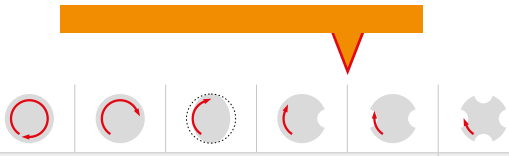




P	M	K	N	S	H
■	◪	■			

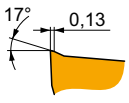
f ⇨ 0.13 – 0.25

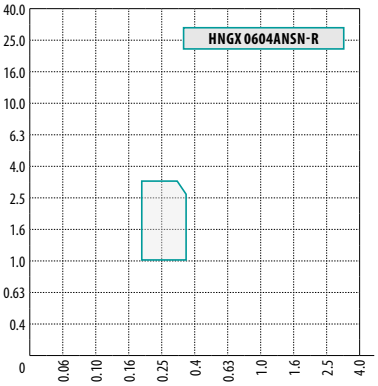
a_p 0.6 – 3.0



HNGX 0604ANSN-M

HNGX 06-R

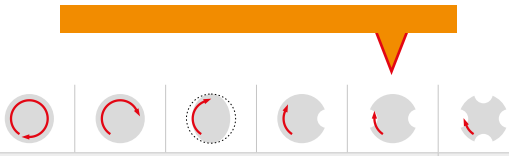




P	M	K	N	S	H
■	◪	■			◪

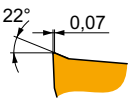
f ⇨ 0.18 – 0.30

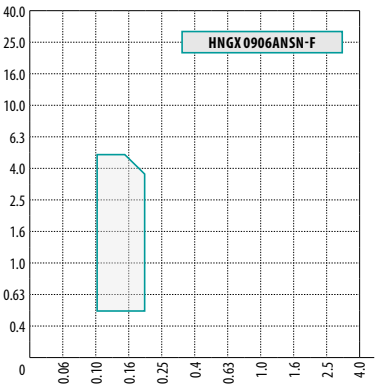
a_p 1.0 – 3.0



HNGX 0604ANSN-R

HNGX 09-F

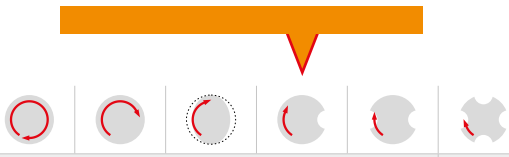




P	M	K	N	S	H
■	■				

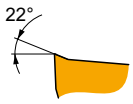
f ⇨ 0.10 – 0.20

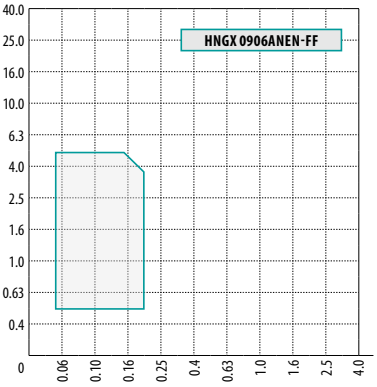
a_p 0.5 – 5.0



HNGX 0906ANSN-F

HNGX 09-FF

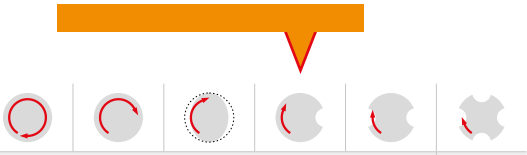




P	M	K	N	S	H
■	■				

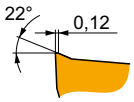
f 0.05 – 0.20

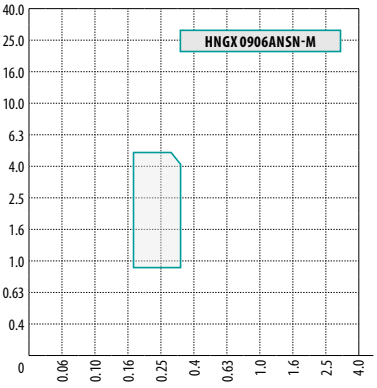
a_p 0.5 – 5.0



HNGX 0906ANEN-FF

HNGX 09-M

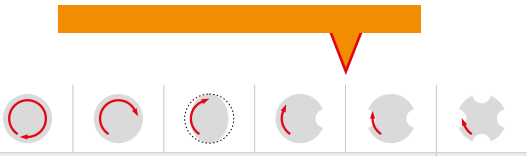




P	M	K	N	S	H
■	◪	■			

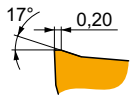
f 0.17 – 0.35

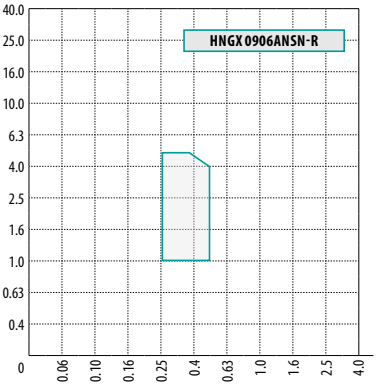
a_p 0.8 – 5.0



HNGX 0906ANSN-M

HNGX 09-R

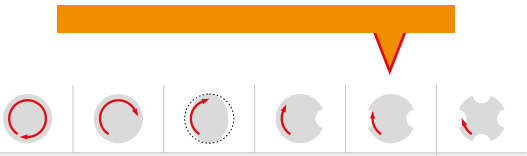




P	M	K	N	S	H
■	◪	■			◪

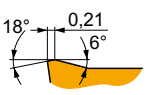
f 0.25 – 0.50

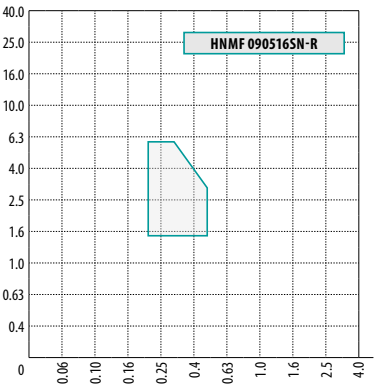
a_p 1.0 – 5.0



HNGX 0906ANSN-R

HNMF 09-R

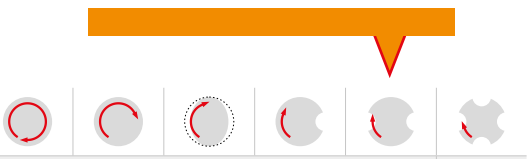




P	M	K	N	S	H
		■			

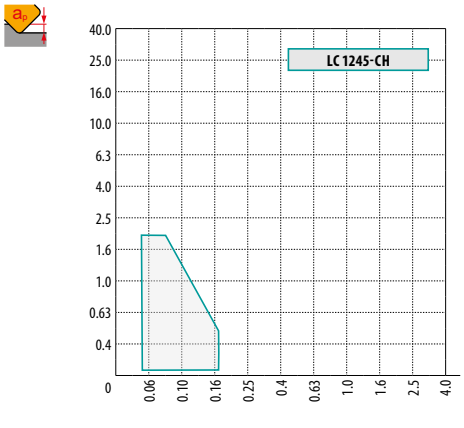
f 0.22 – 0.50

a_p 1.5 – 6.0



HNMF 090516SN-R

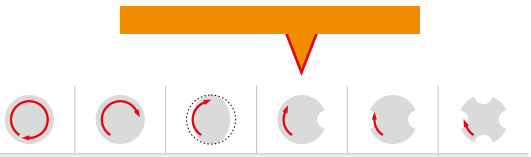
LC 12-CH



P	M	K	N	S	H
◪		■			■

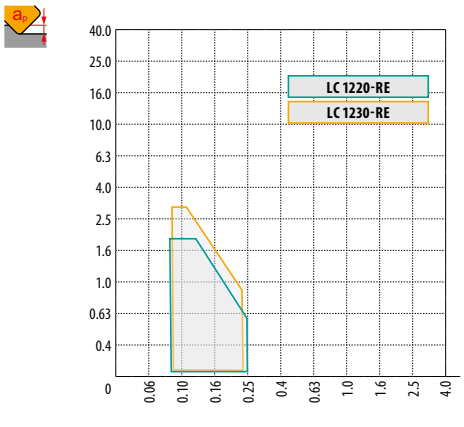
f ⇨ 0.08 – 0.25

a_p 0.1 – 2.0



? **LC 1245-CH**

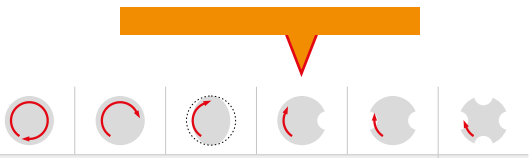
LC 12-RE



P	M	K	N	S	H
◪		■			■

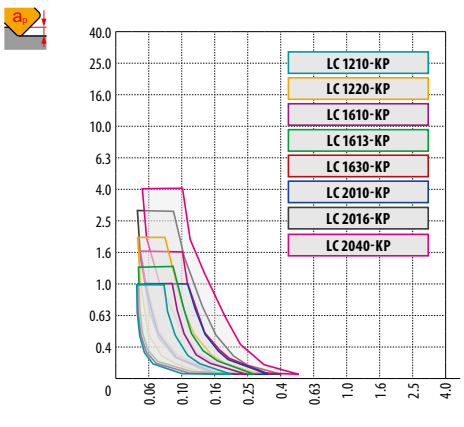
f ⇨ 0.08 – 0.25

a_p 0.1 – 3.0 (according to insert size)



? **LC 1220-RE**
LC 1230-RE

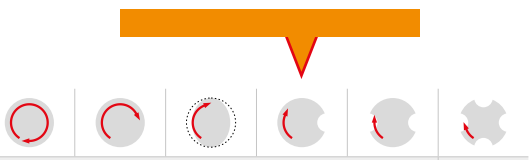
LC -KP



P	M	K	N	S	H
■		■			■

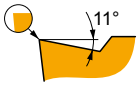
f ⇨ 0.08 – 0.35 (according to insert size)

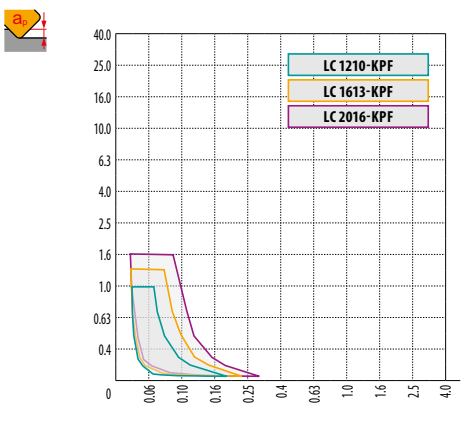
a_p 0.1 – 4.0 (according to insert size)



? **LC ....-KP**

LC -KPF

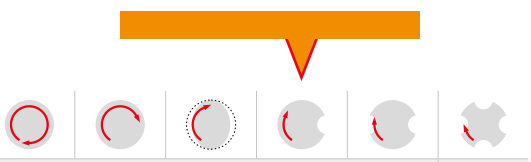




P	M	K	N	S	H
■	◪	■			■

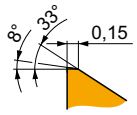
f ⇨ 0.05 – 0.30 (according to insert size and radii)

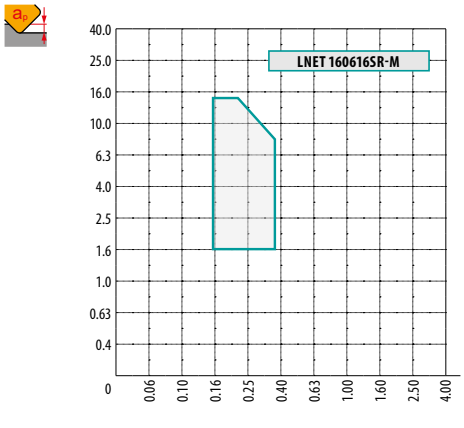
a_p 0.1 – 1.6 (according to insert size and radii)



? **LC 1210-KPF**
LC 1613-KPF
LC 2016-KPF

LNET 16-M





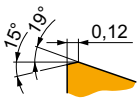
P	M	K	N	S	H
■		■			

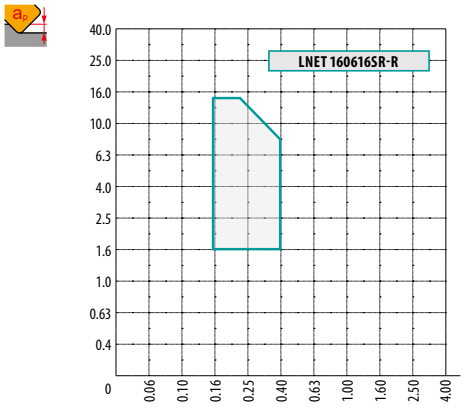
f ⇨ 0.15 – 0.35

a_p 1.6 – 15.0

LNET 160616SR-M

LNET 16-R





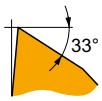
P	M	K	N	S	H
■		■			

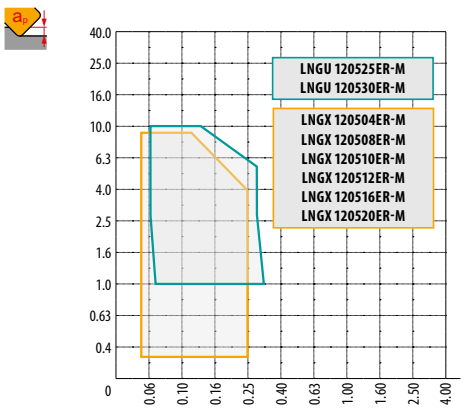
f ⇨ 0.15 – 0.40

a_p 1.6 – 15.0

LNET 160616SR-R

LNG(U)X 12-M





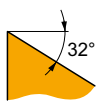
P	M	K	N	S	H
■		■			

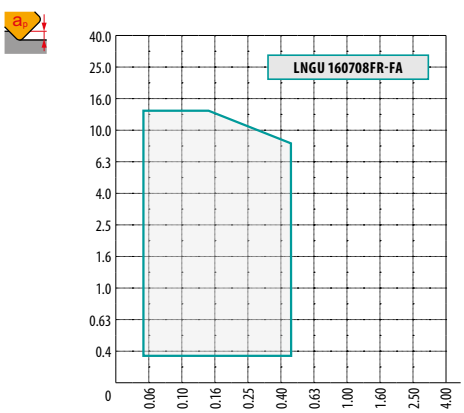
f ⇨ 0.05 – 0.25

a_p 0.2 – 9.0 (according to insert radii)

LNGU 1205..ER-M
LNGX 1205..ER-M

LNGU 16-FA





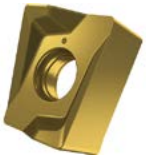
P	M	K	N	S	H
			■		

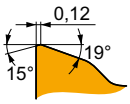
f ⇨ 0.05 – 0.45

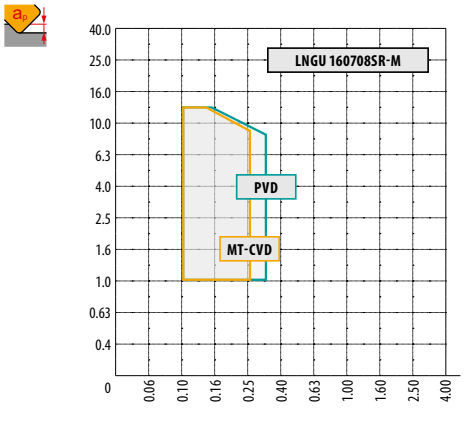
a_p 0.3 – 13.0

LNGU 160708FR-FA

LNGU 16-M



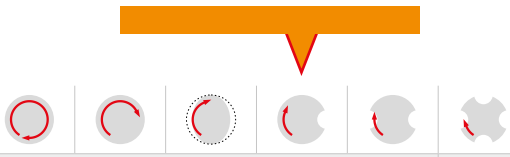




P	M	K	N	S	H
■		■			

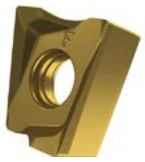
f ⇨ 0.10 – 0.30 (according to insert coating)

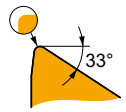
a_p 1.0 – 13.0

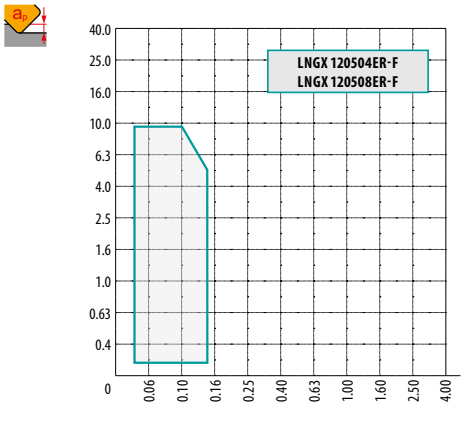


? **LNGU 160708SR-M**

LNGX 12-F



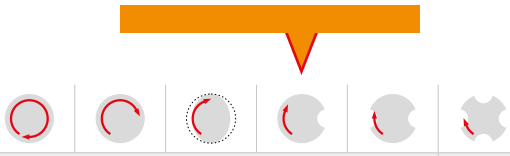




P	M	K	N	S	H
■		◪			

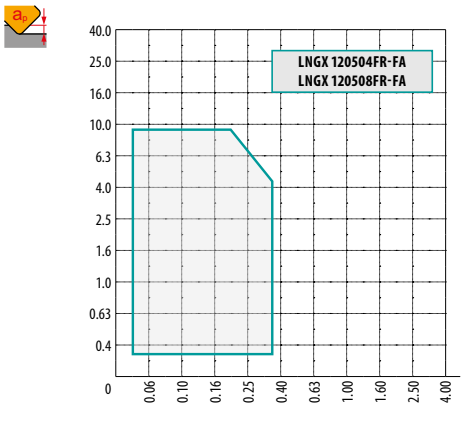
f ⇨ 0.04 – 0.15

a_p 0.2 – 9.0



? **LNGX 120504ER-F**
LNGX 120508ER-F

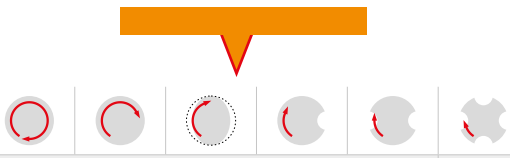
LNGX 12-FA



P	M	K	N	S	H
			■		

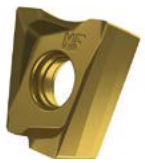
f ⇨ 0.03 – 0.35

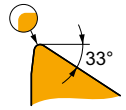
a_p 0.2 – 9.0

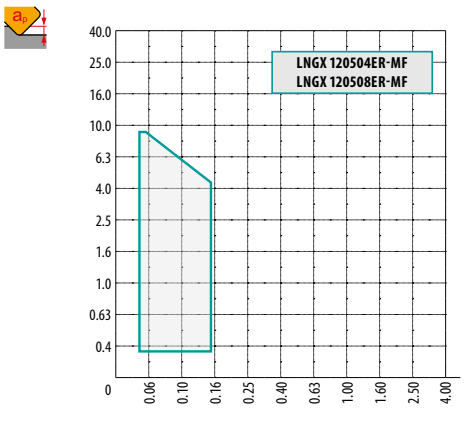


? **LNGX 120504FR-FA**
LNGX 120508FR-FA

LNGX 12-MF



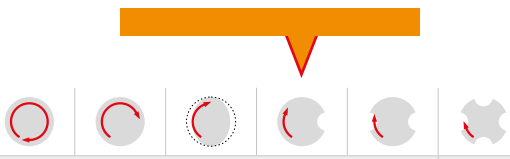




P	M	K	N	S	H
◪	■				

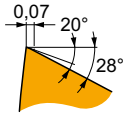
f ⇨ 0.04 – 0.15

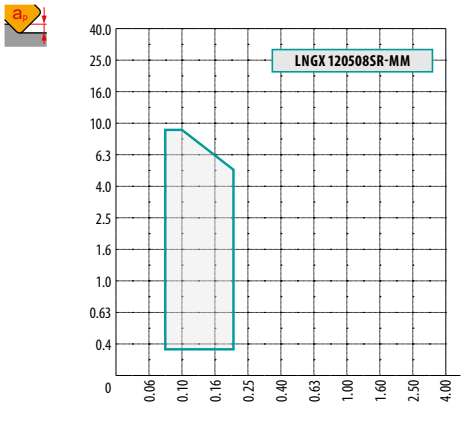
a_p 0.3 – 9.0



? **LNGX 120504ER-MF**
LNGX 120508ER-MF

LNGX 12-MM





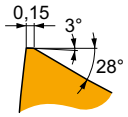
P	M	K	N	S	H
■	■				

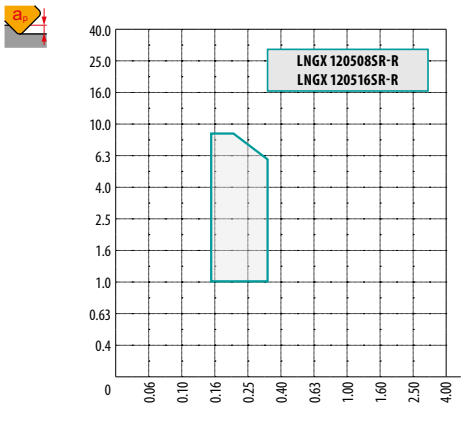
f ⇨ 0.08 – 0.20

a_p 0.3 – 9.0

LNGX 120508SR-MM

LNGX 12-R





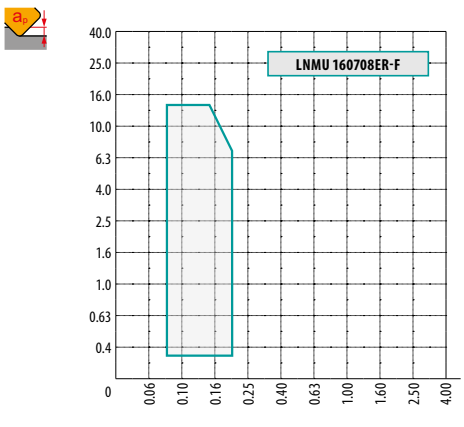
P	M	K	N	S	H
■		■			

f ⇨ 0.15 – 0.35

a_p 1.0 – 9.0

LNGX 120508SR-R
LNGX 120516SR-R

LNMU 16-F



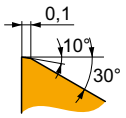
P	M	K	N	S	H
■					

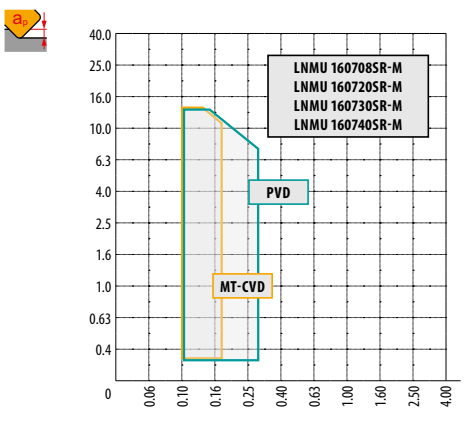
f ⇨ 0.08 – 0.20

a_p 0.3 – 13.0

LNMU 160708ER-F

LNMU 16-M





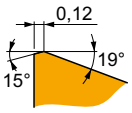
P	M	K	N	S	H
■		■			

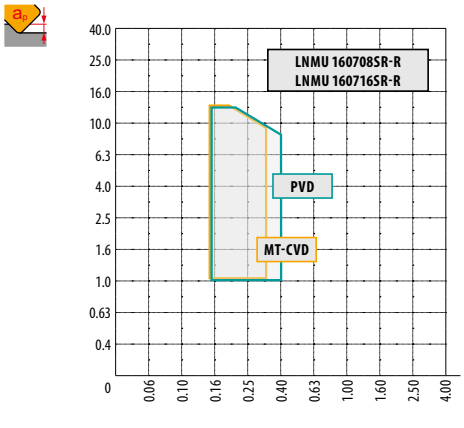
f ⇨ 0.10 – 0.30 (according to insert coating)

a_p 0.3 – 13.0

LNMU 160708SR-M, LNMU 160720SR-M
LNMU 160730SR-M, LNMU 160740SR-M

LNMU 16-R





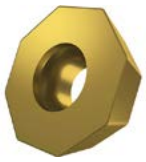
P	M	K	N	S	H
■		■			◪

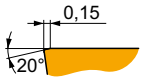
f: 0.15 – 0.40 (according to insert coating)

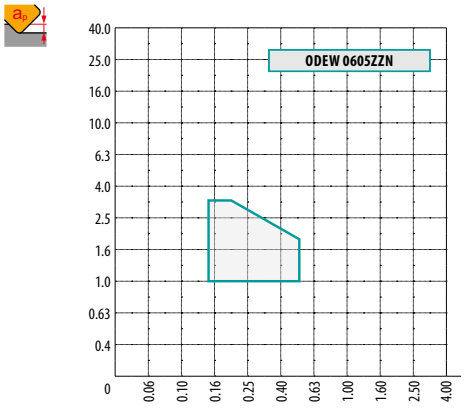
a_p: 1.0 – 13.0

LNMU 160708SR-R
LNMU 160716SR-R

ODEW 06







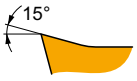
P	M	K	N	S	H
◪		■			◪

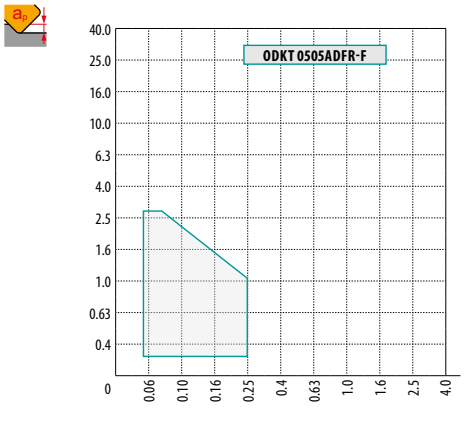
f: 0.15 – 0.45

a_p: 1.0 – 3.1

ODEW 0605ZZN

ODKT 05-F





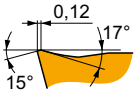
P	M	K	N	S	H
■	◪				

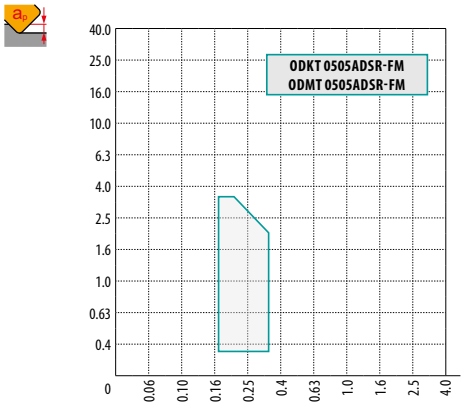
f: 0.05 – 0.25

a_p: 0.2 – 2.7

ODKT 0505ADFR-F

ODK(M)T 05-FM





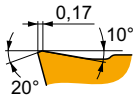
P	M	K	N	S	H
■	■	◪			

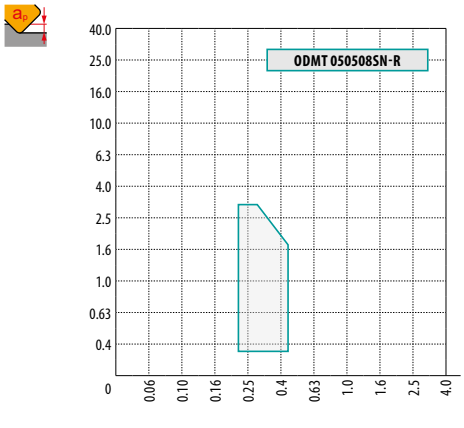
f: 0.17 – 0.35

a_p: 0.3 – 3.0

ODKT 0505ADSR-FM
ODMT 0505ADSR-FM

ODMT 05-R





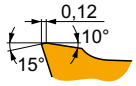
P	M	K	N	S	H
■		■			

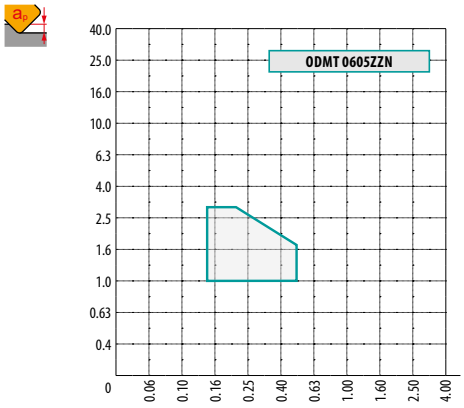
f 0.23 – 0.45

a_p 0.3 – 3.0

ODMT 050508SN-R

ODMT 06





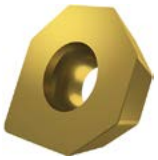
P	M	K	N	S	H
■		■			

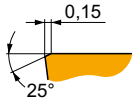
f 0.15 – 0.45

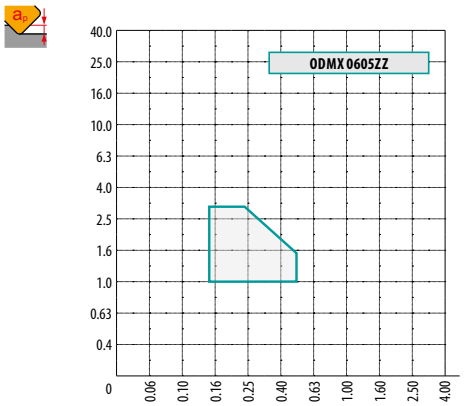
a_p 1.0 – 3.1

ODMT 0605ZZN

ODMX 06







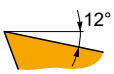
P	M	K	N	S	H
◪		■			◪

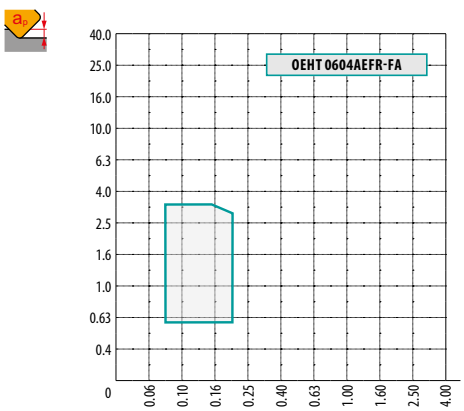
f 0.15 – 0.45

a_p 1.0 – 3.1

ODMX 0605ZZ

OEHT 06-FA





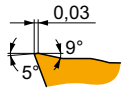
P	M	K	N	S	H
			■		

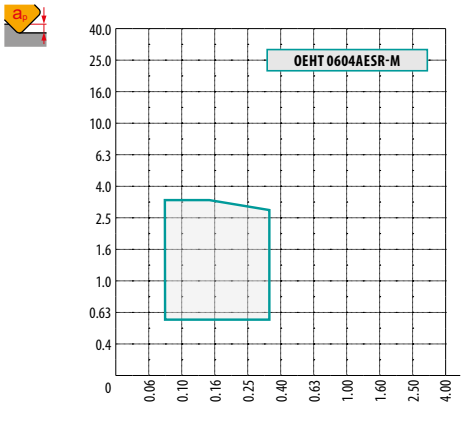
f 0.08 – 0.20

a_p 0.5 – 3.3

OEHT 0604AEFR-FA

OEHT 06-M





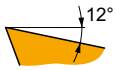
P	M	K	N	S	H
■	■			◪	

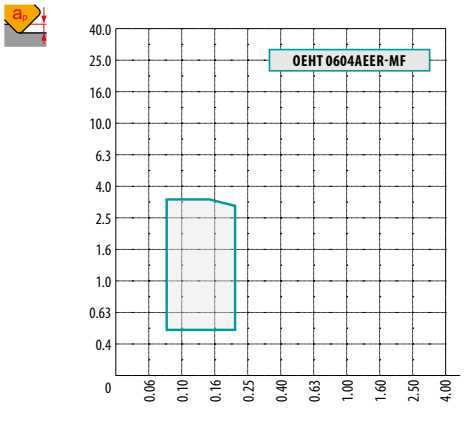
f ⇨ 0.08 – 0.35

a_p 0.5 – 3.3

? **OEHT 0604AESR-M**

OEHT 06-MF





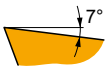
P	M	K	N	S	H
◪	■		◪	■	

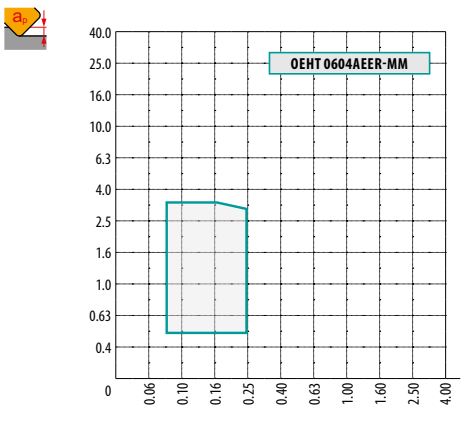
f ⇨ 0.08 – 0.20

a_p 0.5 – 3.3

? **OEHT 0604AEER-MF**

OEHT 06-MM





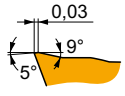
P	M	K	N	S	H
◪	■		◪	■	

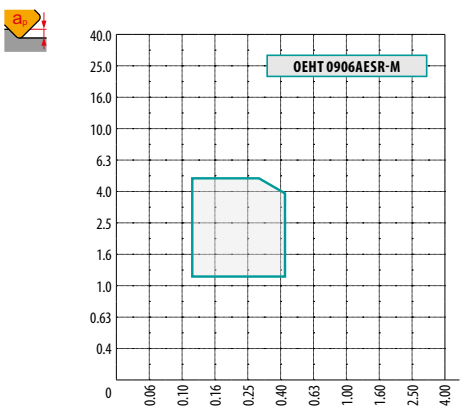
f ⇨ 0.08 – 0.25

a_p 0.5 – 3.3

? **OEHT 0604AEER-MM**

OEHT 09-M





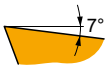
P	M	K	N	S	H
■	■			◪	

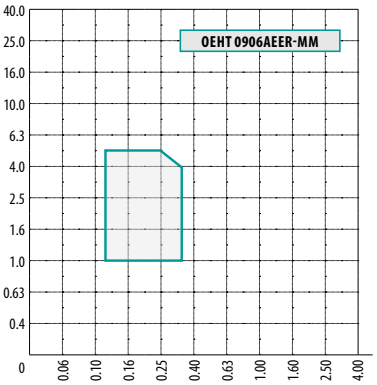
f ⇨ 0.12 – 0.45

a_p 1.2 – 5.0

? **OEHT 0906AESR-M**

OEHT 09-MM

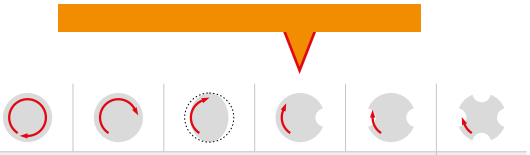




P	M	K	N	S	H
◪	■		◪	■	

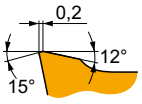
f ⇨ 0.12 – 0.35

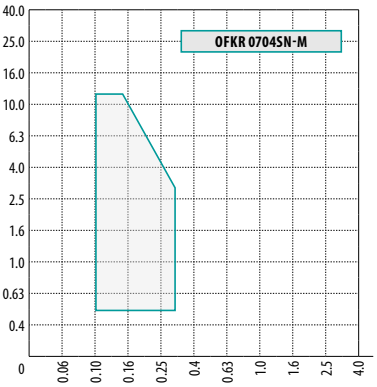
a_p 1.0 – 5.0



? **OEHT 0906AEER-MM**

OFKR 07-M

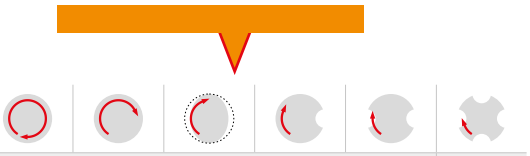




P	M	K	N	S	H
■	■	◪		■	

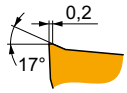
f ⇨ 0.1 – 0.3

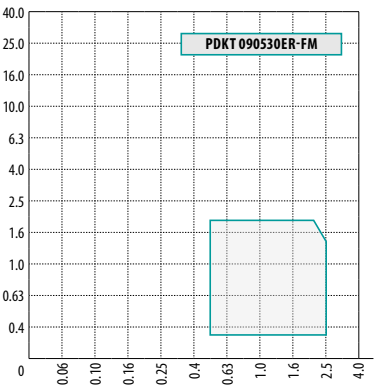
a_p 0.5 – 12.0



? **OFKR 0704SN-M**

PDKT 09-FM

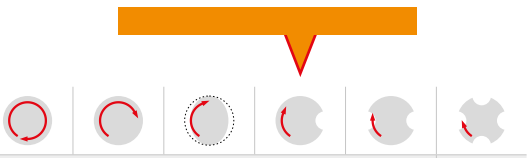




P	M	K	N	S	H
■	■	◪		■	

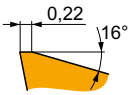
f ⇨ 0.50 – 2.50

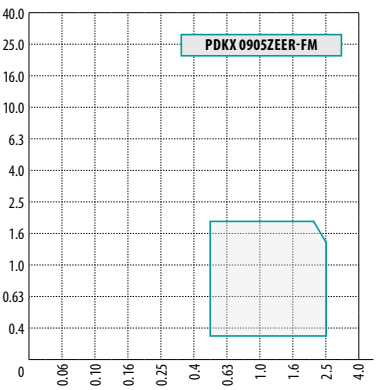
a_p 0.3 – 2.0



? **PDKT 090530ER-FM**

PDKX 09-FM

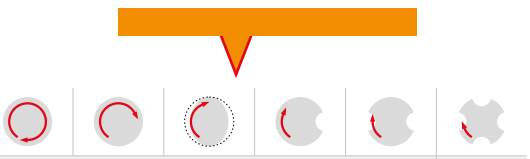




P	M	K	N	S	H
■	■	◪		■	

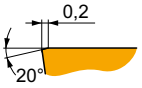
f ⇨ 0.50 – 2.50

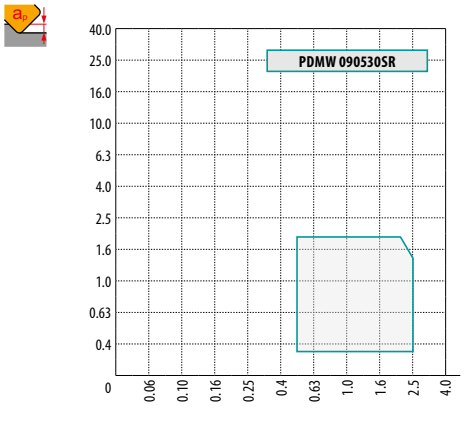
a_p 0.3 – 2.0



? **PDKX 0905ZEER-FM**

PDMW 09

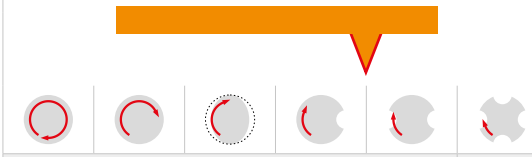




P	M	K	N	S	H
■		■			■

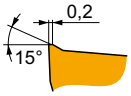
f 0.50 – 2.50

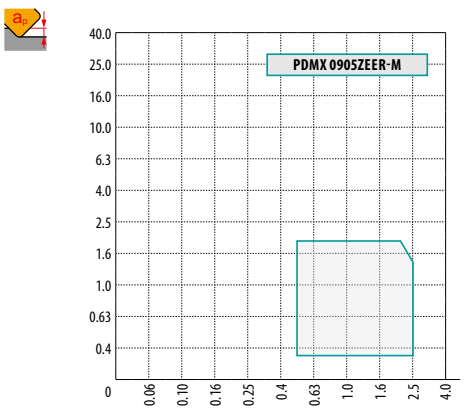
a_p 0.3 – 2.0



PDMW 090530SR

PDMX 09-M

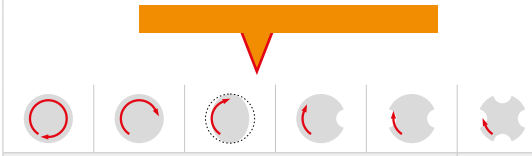




P	M	K	N	S	H
■	■	◪			

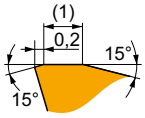
f 0.50 – 2.50

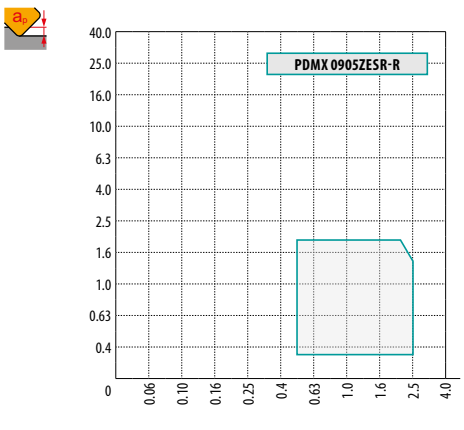
a_p 0.3 – 2.0



PDMX 0905ZEER-M

PDMX 09-R

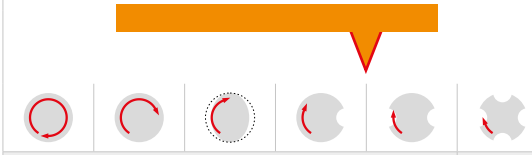




P	M	K	N	S	H
◪		■			■

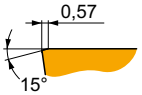
f 0.50 – 2.50

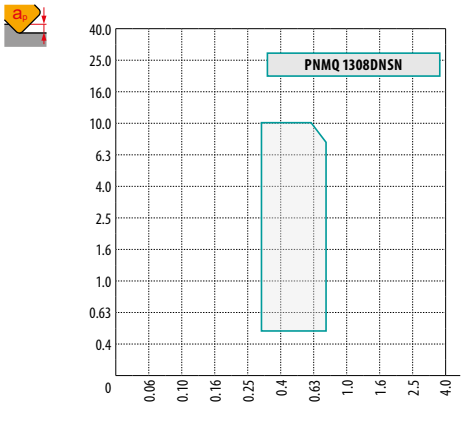
a_p 0.3 – 2.0



PDMX 0905ZESR-R

PNMQ 13

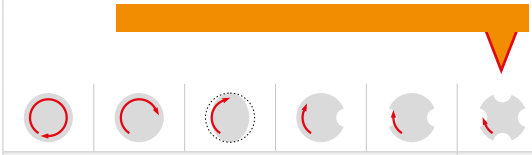




P	M	K	N	S	H
◪		■			■

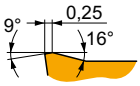
f 0.30 – 0.70

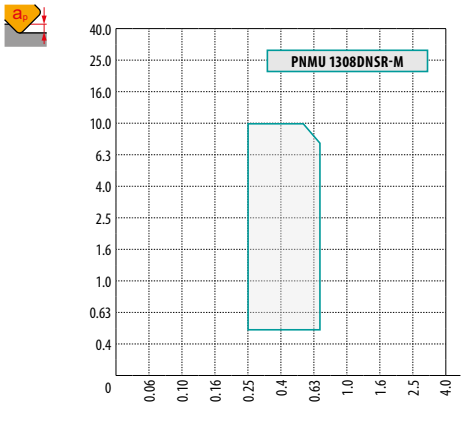
a_p 0.5 – 10.0



PNMQ 1308DNSN

PNMU 13-M





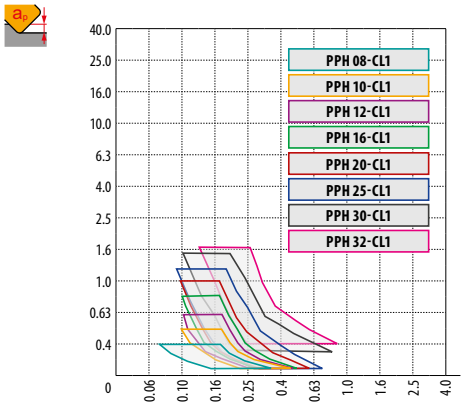
P	M	K	N	S	H
■	◪	■		◪	◪

f ⇨ 0.25 – 0.70

a_p 0.5 – 10.0

PNMU 1308DNSR-M

PPH -CL1



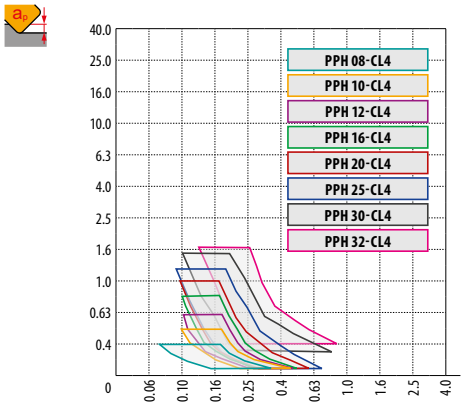
P	M	K	N	S	H
■	◪	■			◪

f ⇨ 0.05 – 0.60 (according to insert size)

a_p 0.1 – 3.2 (according to insert size)

PPH ..00-CL1

PPH -CL4



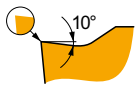
P	M	K	N	S	H
■		■			■

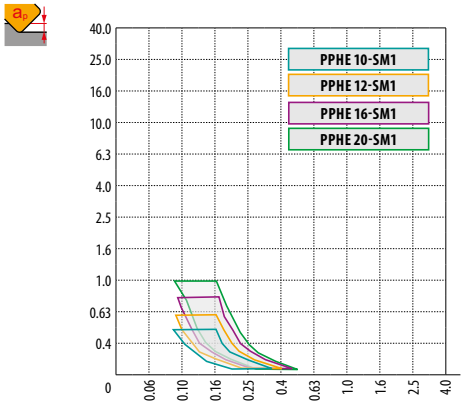
f ⇨ 0.05 – 0.60 (according to insert size)

a_p 0.1 – 3.2 (according to insert size)

PPH ..00-CL4

PPHE -SM1





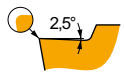
P	M	K	N	S	H
■	◪	■			■

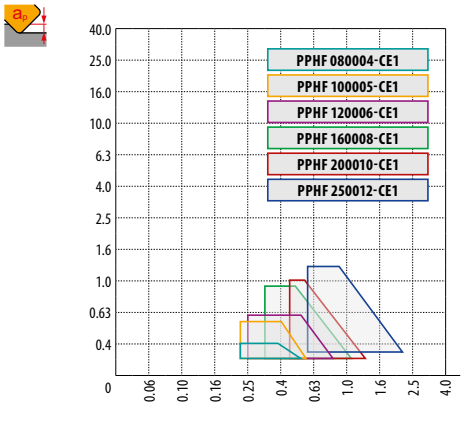
f ⇨ 0.05 – 0.50 (according to insert size)

a_p 0.1 – 2.0 (according to insert size)

PPHE ..00-SM1

PPHF -CE1

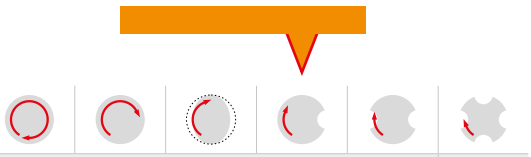




P	M	K	N	S	H
■	◪	■		◪	■

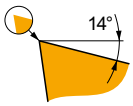
f ⇨ 0.20 – 1.50 (according to insert size)

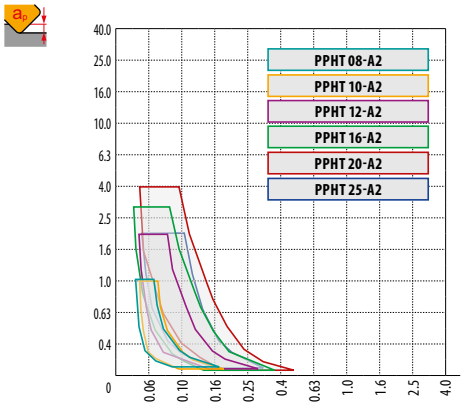
a_p 0.1 – 1.2 (according to insert size)



PPHF 080004-CE1, PPHF 100005-CE1
PPHF 120006-CE1, PPHF 160008-CE1
PPHF 200010-CE1, PPHF 250012-CE1

PPHT-A2

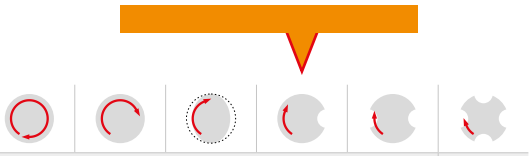




P	M	K	N	S	H
■	◪	■			■

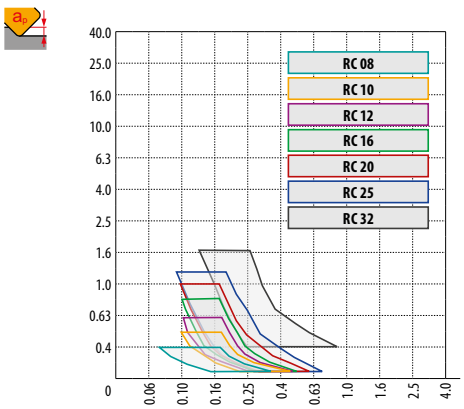
f ⇨ 0.05 – 0.50 (according to insert size and radii)

a_p 0.1 – 4.0 (according to insert size and radii)



PPHT 08-A2, PPHT 10-A2
PPHT 12-A2, PPHT 16-A2
PPHT 20-A2, PPHT 25-A2

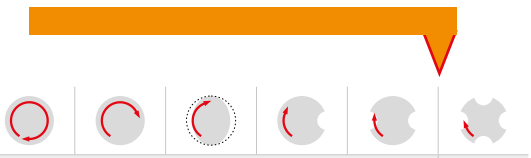
RC



P	M	K	N	S	H
■		■			■

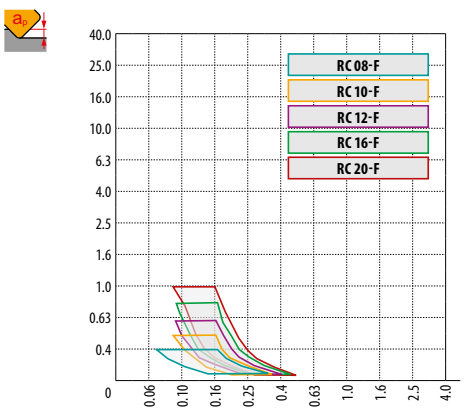
f ⇨ 0.10 – 0.60 (according to insert size)

a_p 0.3 – 3.2 (according to insert size)



RC 08, RC 10, RC 12, RC 16,
RC 20, RC 25, RC 32

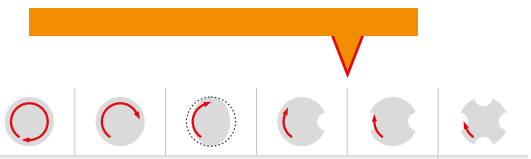
RC -F



P	M	K	N	S	H
■	◪	■			■

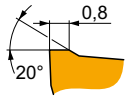
f ⇨ 0.05 – 0.60 (according to insert size)

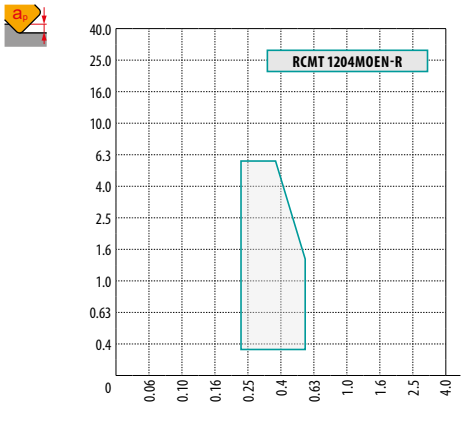
a_p 0.3 – 3.2 (according to insert size)



RC 08-F, RC 10-F, RC 12-F
RC 16-F, RC 20-F

RCMT 12EN-R

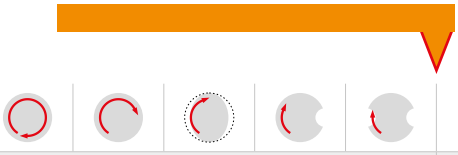




P	M	K	N	S	H
■		■		◪	■

f ⇨ 0.20 – 0.50

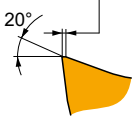
a_p 0.3 – 6.0

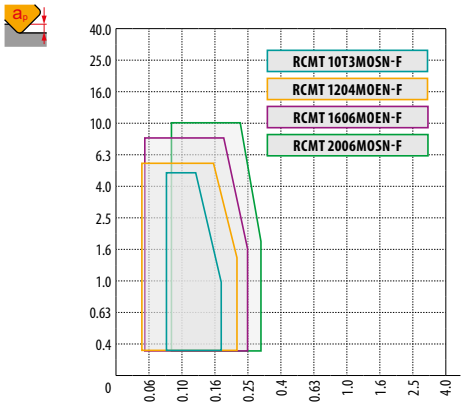


? **RCMT 1204M0EN-R**

RCMT-F

RCMT 10	0.08
RCMT 12	–
RCMT 16	–
RCMT 20	0.25

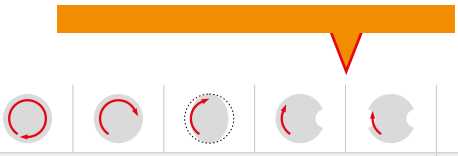




P	M	K	N	S	H
■	■			■	

f ⇨ 0.05 – 0.30 (according to insert size)

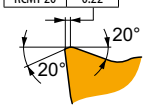
a_p 0.3 – 10.0 (according to insert size)

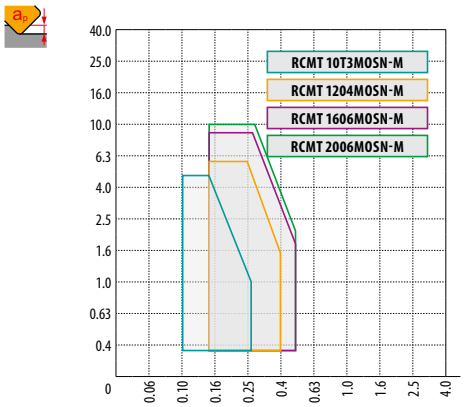


? **RCMT 10T3M0SN-F, RCMT 1204M0EN-F**
RCMT 1606M0EN-F, RCMT 2006M0SN-F

RCMT-M

RCMT 10	0.10
RCMT 12	0.14
RCMT 16	0.13
RCMT 20	0.22

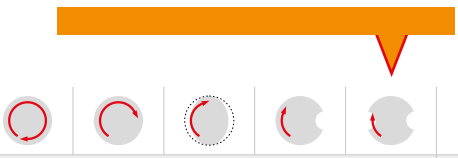




P	M	K	N	S	H
■	◪	■		■	

f ⇨ 0.10 – 0.45 (according to insert size)

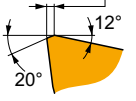
a_p 0.3 – 10.0 (according to insert size)

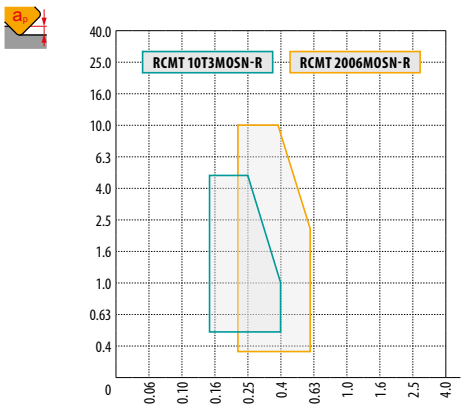


? **RCMT 10T3M0SN-M, RCMT 1204M0SN-M**
RCMT 1606M0SN-M, RCMT 2006M0SN-M

RCMT-R

RCMT 10	0.15
RCMT 20	0.17

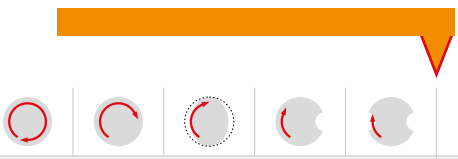




P	M	K	N	S	H
■		■		◪	■

f ⇨ 0.15 – 0.60 (according to insert size)

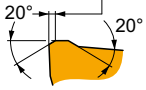
a_p 0.3 – 10.0 (according to insert size)

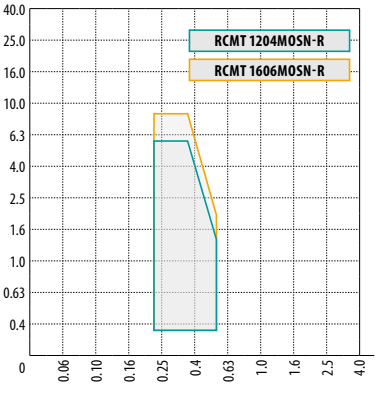


? **RCMT 10T3M0SN-R**
RCMT 2006M0SN-R

RCMT SN-R

RCMT 12	0.20
RCMT 16	0.13





P	M	K	N	S	H
■		■		◪	■

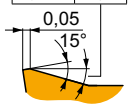
f 0.15 – 0.60 (according to insert size)

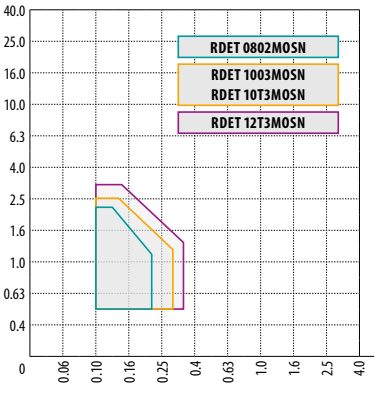
a_p 0.3 – 10.0 (according to insert size)

RCMT 1204MOSN-R
RCMT 1606MOSN-R

RDET

RDET 08	10°
RDET 10	15°
RDET 12	15°





P	M	K	N	S	H
■	◪	■		◪	

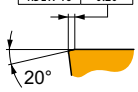
f 0.10 – 0.35 (according to insert size)

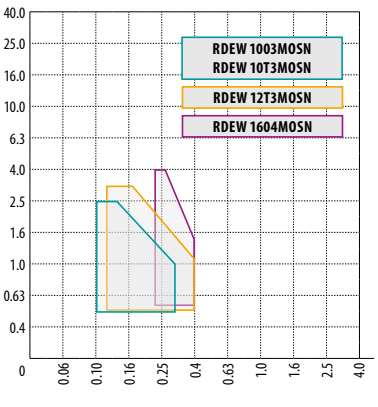
a_p 0.5 – 3.0 (according to insert size)

RDET 0802MOSN, RDET 1003MOSN
RDET 10T3MOSN, RDET 12T3MOSN

RDEW

RDEW 10	0.05
RDEW 12	0.15
RDEW 16	0.20





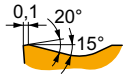
P	M	K	N	S	H
◪		■			■

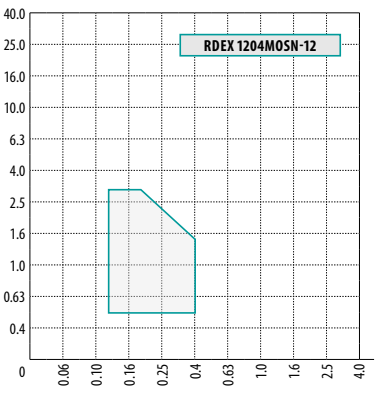
f 0.10 – 0.40 (according to insert size)

a_p 0.5 – 4.0 (according to insert size)

RDEW 1003MOSN, RDEW 10T3MOSN
RDEW 12T3MOSN, RDEW 1604MOSN

RDEX 12





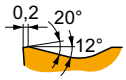
P	M	K	N	S	H
■	◪	■		◪	

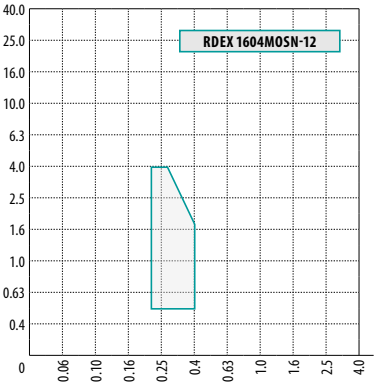
f 0.12 – 0.40

a_p 0.5 – 3.0

RDEX 1604MOSN-12

RDEX 16





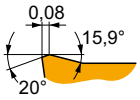
P	M	K	N	S	H
■	◪	■		◪	

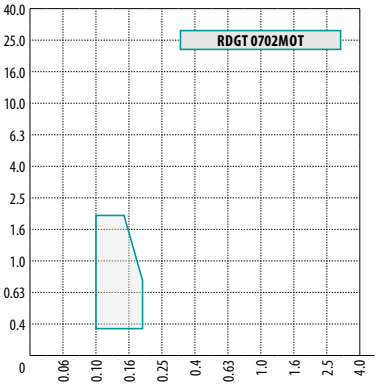
f ⇨ 0.22 – 0.40

a_p 0.5 – 4.0

RDEX 1604MOSN-12

RDGT 07





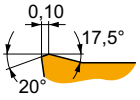
P	M	K	N	S	H
■	◪	■		◪	

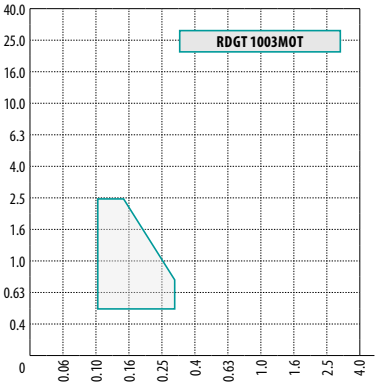
f ⇨ 0.10 – 0.20

a_p 0.3 – 2.0

RDGT 0702MOT

RDGT 10





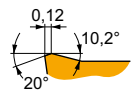
P	M	K	N	S	H
■	◪	■		◪	

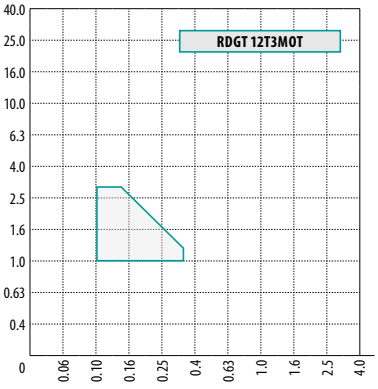
f ⇨ 0.10 – 0.30

a_p 0.5 – 2.5

RDGT 1003MOT

RDGT 12





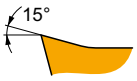
P	M	K	N	S	H
■	◪	■		◪	

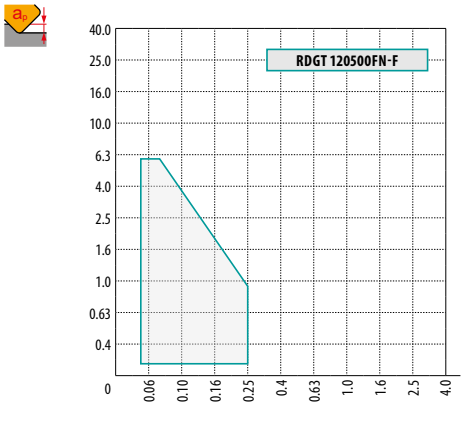
f ⇨ 0.10 – 0.35

a_p 1.0 – 3.0

RDGT 12T3MOT

RDGT 12-F





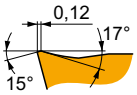
P	M	K	N	S	H
■	◪		◪		

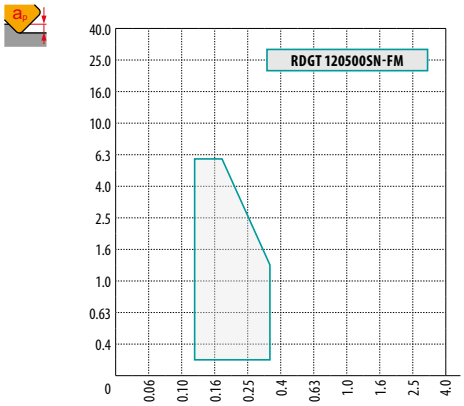
f ⇨ 0.05 – 0.25

a_p 0.2 – 6.0

RDGT 120500FN-F

RDGT 12-FM





P	M	K	N	S	H
■	◪	◪			

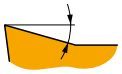
f ⇨ 0.12 – 0.35

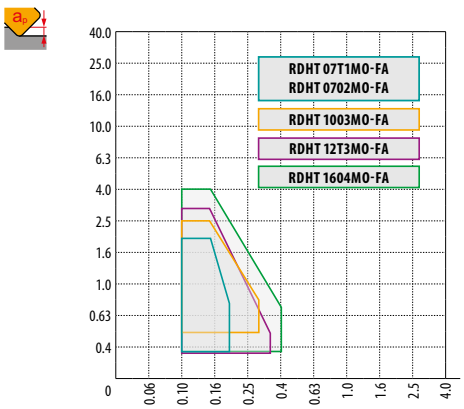
a_p 0.2 – 6.0

RDGT 120500SN-FM

RDHT -FA

RDHT 07	15.9°
RDHT 10	17.5°
RDHT 12	10.2°
RDHT 16	22.0°





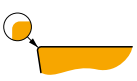
P	M	K	N	S	H
			■		

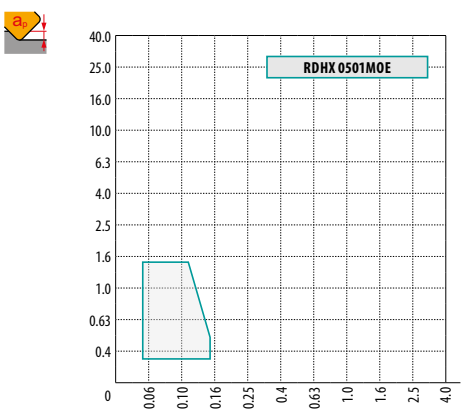
f ⇨ 0.10 – 0.40 (according to insert size)

a_p 0.3 – 4.0 (according to insert size)

RDHT 07T1MO-FA, RDHT 0702MO-FA
RDHT 1003MO-FA, RDHT 12T3MO-FA
RDHT 1604MO-FA

RDHX 05





P	M	K	N	S	H
◪		■			■

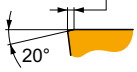
f ⇨ 0.05 – 0.15

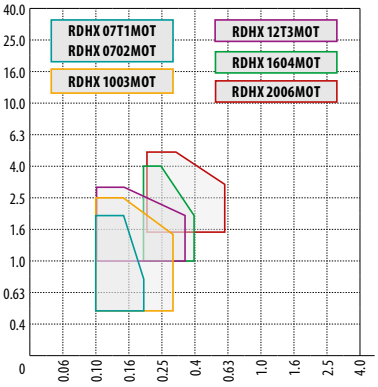
a_p 0.3 – 1.5

RDHX 0501MOE

RDHX MOT

RDHX 07	0.12
RDHX 10	0.15
RDHX 12	0.15
RDHX 16	0.20
RDHX 20	0.20





P	M	K	N	S	H
■		■			■

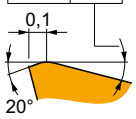
f 0.10 – 0.60 (according to insert size)

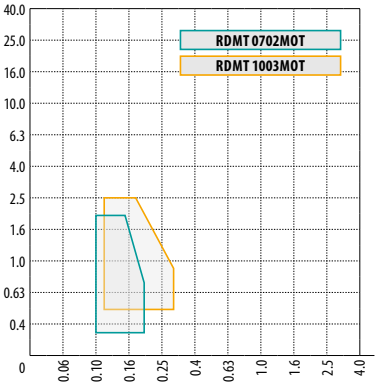
a_p 0.5 – 5.0 (according to insert size)

RDHX 07T1MOT, RDHX 0702MOT
RDHX 1003MOT, RDHX 12T3MOT
RDHX 1604MOT, RDHX 2006MOT

RDMT

RDMT 07	14°
RDMT 10	15°





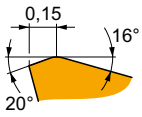
P	M	K	N	S	H
■	◪	■			

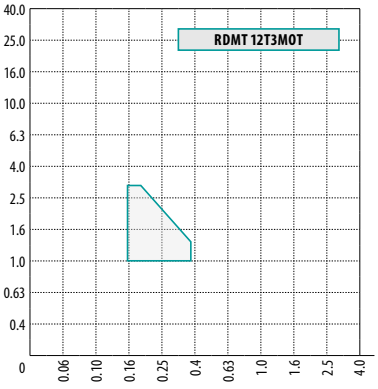
f 0.10 – 0.30 (according to insert size)

a_p 0.3 – 2.5 (according to insert size)

RDMT 0702MOT
RDMT 1003MOT

RDMT 12





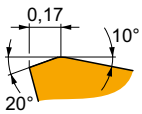
P	M	K	N	S	H
■	◪	■			

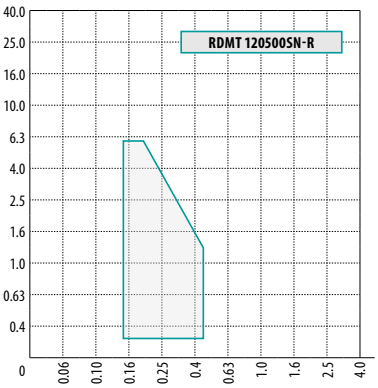
f 0.15 – 0.35

a_p 1.0 – 3.0

RDMT 12T3MOT

RDMT -R





P	M	K	N	S	H
■		■			

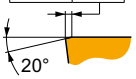
f 0.17 – 0.45

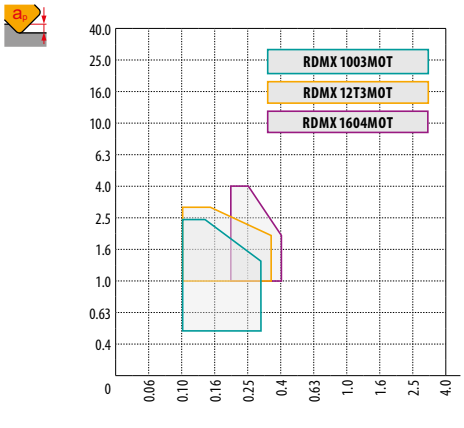
a_p 0.3 – 6.0

RDMT 120500SN-R

RDMX

RDMX 10	0.12
RDMX 12	0.15
RDMX 16	0.20





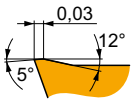
P	M	K	N	S	H
■		■			■

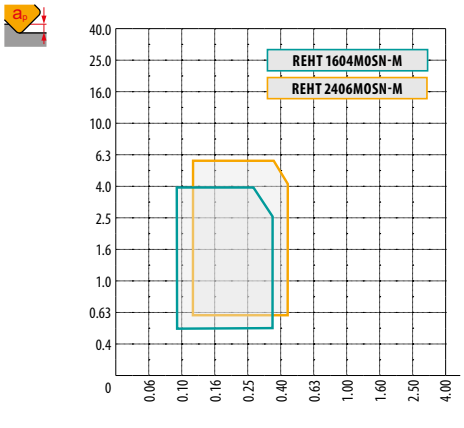
f 0.10 – 0.40 (according to insert size)

a_p 0.5 – 4.0 (according to insert size)

RDMX 1003M0T
RDMX 12T3M0T
RDMX 1604M0T

REHT -M





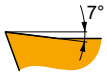
P	M	K	N	S	H
■	■			◪	

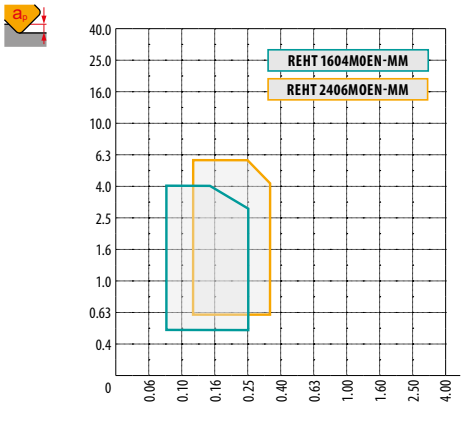
f 0.08 – 0.45 (according to insert size)

a_p 0.5 – 6.0 (according to insert size)

REHT 1604M0SN-M
REHT 2406M0SN-M

REHT -MM





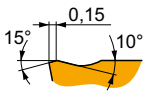
P	M	K	N	S	H
◪	■		◪	■	

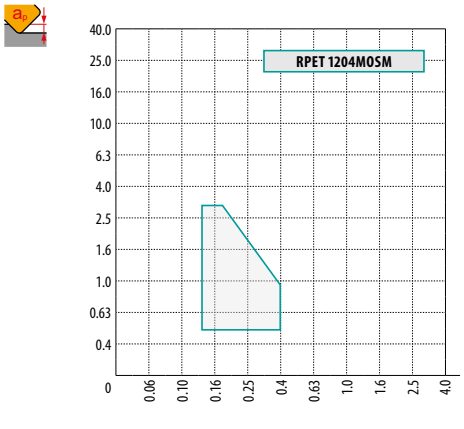
f 0.08 – 0.35 (according to insert size)

a_p 0.5 – 6.0 (according to insert size)

REHT 1604M0EN-MM
REHT 2406M0EN-MM

RPET 12





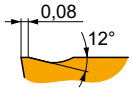
P	M	K	N	S	H
■	◪	◪		◪	

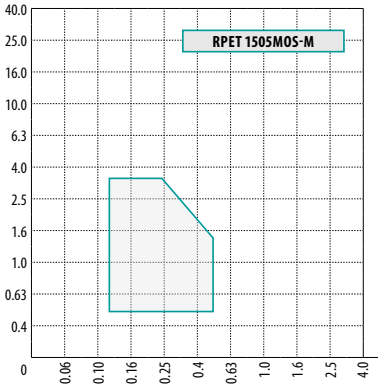
f 0.12 – 0.40

a_p 0.5 – 3.0

RPET 1204M0SM

RPET 15-M

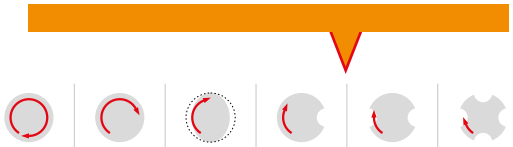




P	M	K	N	S	H
■	◪	◪		◪	

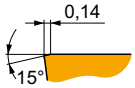
f ⇨ 0.12 – 0.50

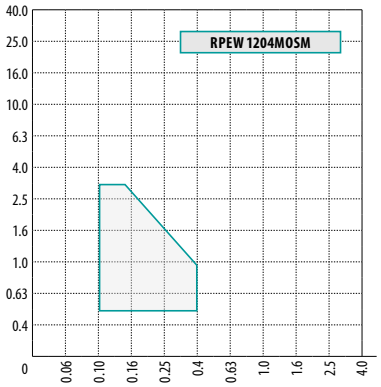
a_p 0.5 – 3.5



RPET 1505MOS-M

RPEW 12

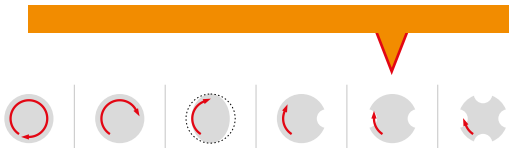




P	M	K	N	S	H
◪		■			■

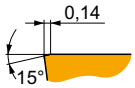
f ⇨ 0.10 – 0.40

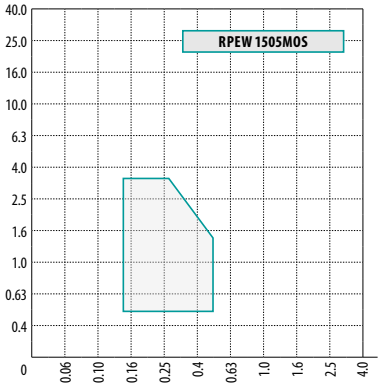
a_p 0.5 – 3.0



RPEW 1204MOSM

RPEW 15

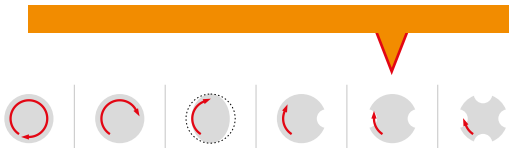




P	M	K	N	S	H
◪		■			■

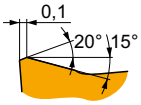
f ⇨ 0.15 – 0.50

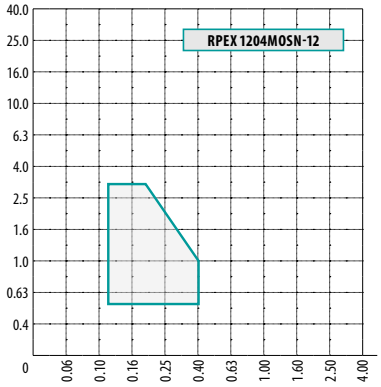
a_p 0.5 – 3.5



RPEW 1505MOS

RPEX -12

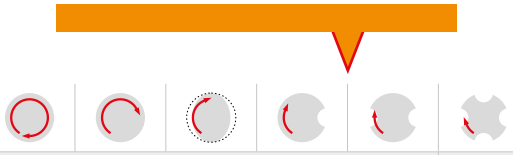




P	M	K	N	S	H
■	◪	■		◪	

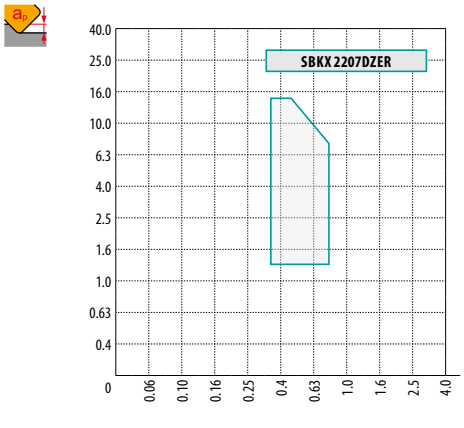
f ⇨ 0.12 – 0.40

a_p 0.5 – 3.0



RPEX 1204MOSN-12

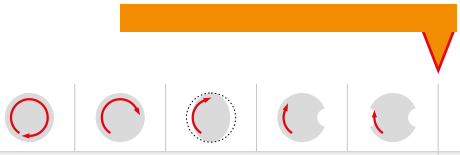
SBKX 22



P	M	K	N	S	H
■		■			

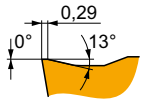
f 0.35 – 0.80

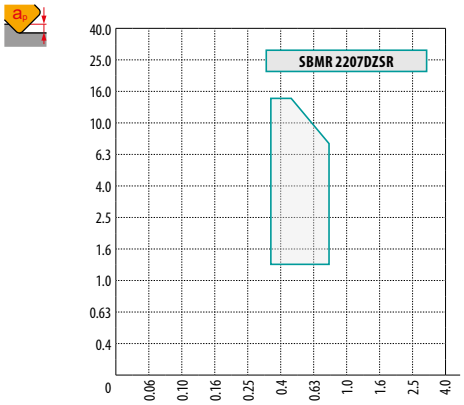
a_p 1.5 – 15.0



? **SBKX 2207DZER**

SBMR 22

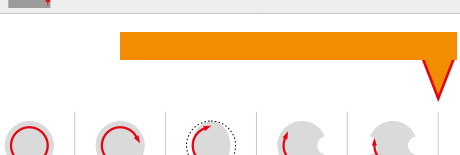




P	M	K	N	S	H
■	◪	■			

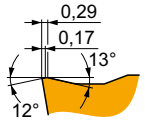
f 0.35 – 0.80

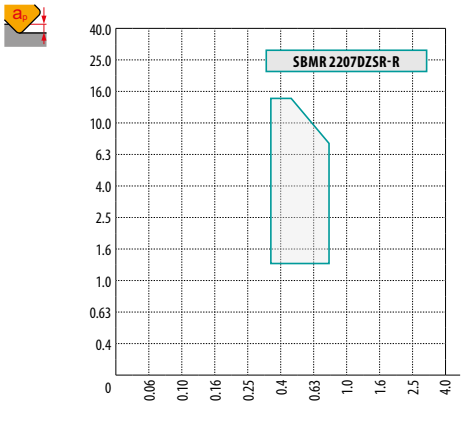
a_p 1.5 – 15.0



? **SBMR 2207DZSR**

SBMR 22-R

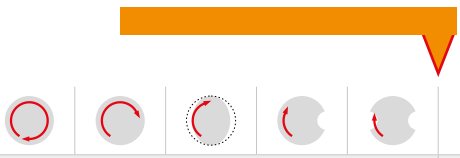




P	M	K	N	S	H
■	◪	■			

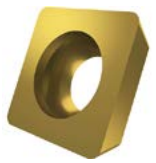
f 0.35 – 0.80

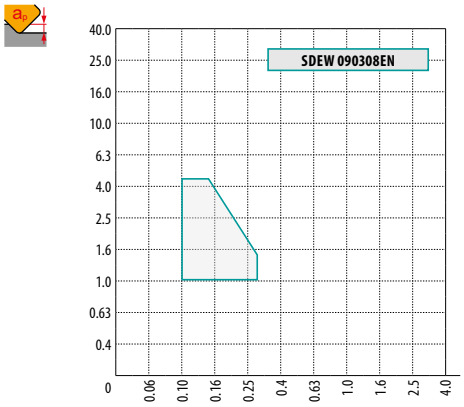
a_p 1.5 – 15.0



? **SBMR 2207DZSR-R**

SDEW 09EN

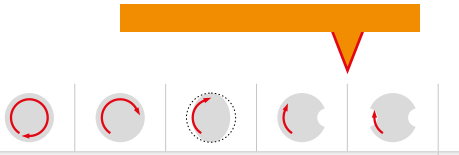




P	M	K	N	S	H
◪		■			◪

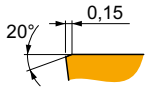
f 0.10 – 0.30

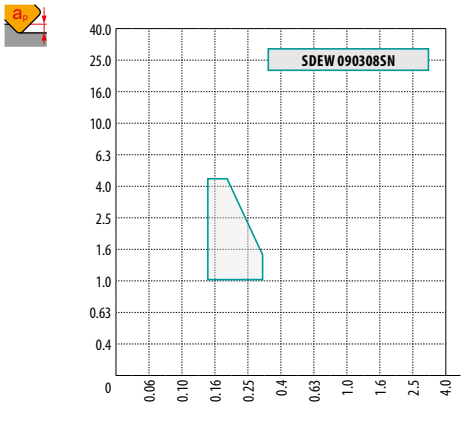
a_p 1.0 – 4.5



? **SDEW 090308EN**

SDEW 09SN





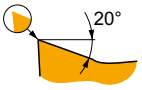
P	M	K	N	S	H
◪		■			◪

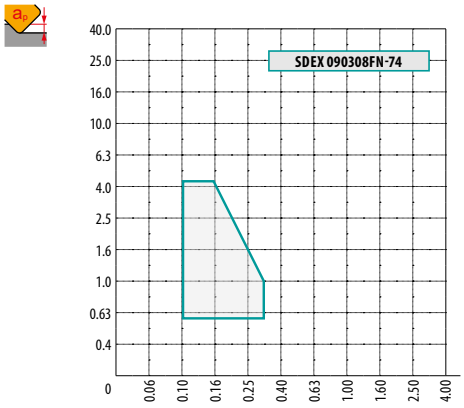
f ⇨ 0.15 – 0.30

a_p 1.0 – 4.5

SDEW 090308SN

SDEX 09-74





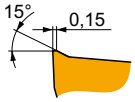
P	M	K	N	S	H
■	◪	◪		◪	

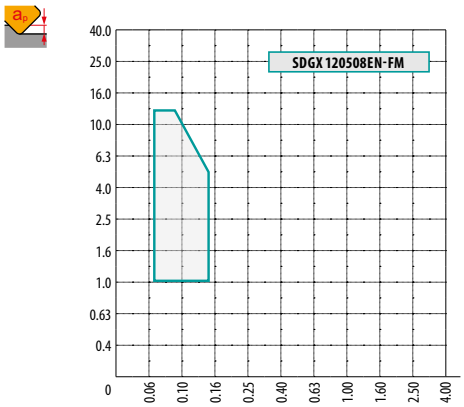
f ⇨ 0.10 – 0.30

a_p 0.5 – 4.5

SDEX 090308FN-74

SDGX 12-FM





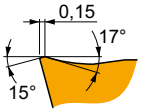
P	M	K	N	S	H
■	■			■	

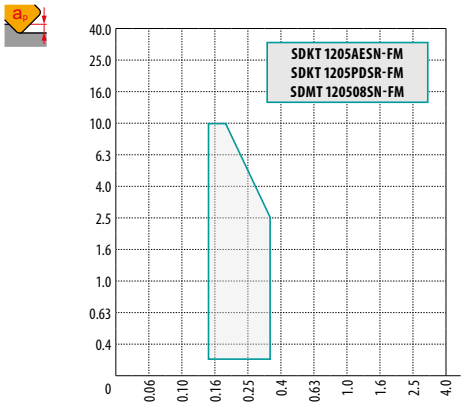
f ⇨ 0.07 – 0.15

a_p 1.0 – 12.0

SDGX 120508EN-FM

SDK(M)T 12-FM (IM)





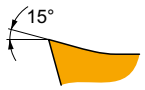
P	M	K	N	S	H
■	◪	◪			

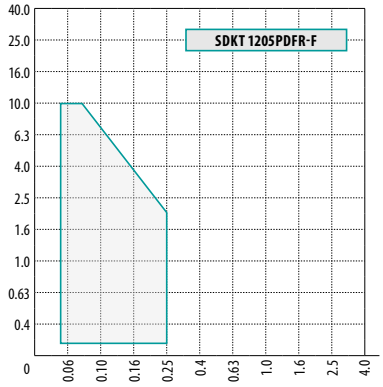
f ⇨ 0.15 – 0.35

a_p 0.2 – 10.0

SDKT 1205AESN-FM
SDKT 1205PDSR-FM
SDMT 120508SN-FM

SDKT 12-F (IM)

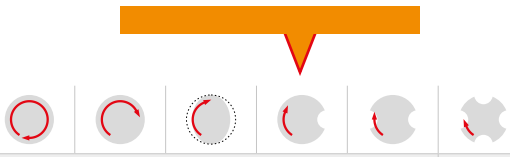




P	M	K	N	S	H
■	◪		◪		

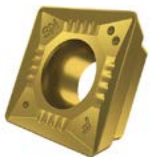
f ⇨ 0.05 – 0.25

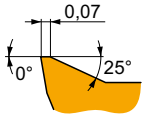
a_p 0.2 – 10.0

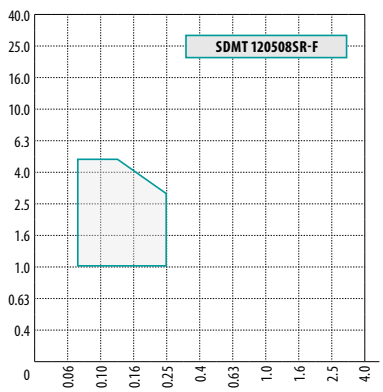


? **SDKT 1205PDFR-F**

SDMT 12-F



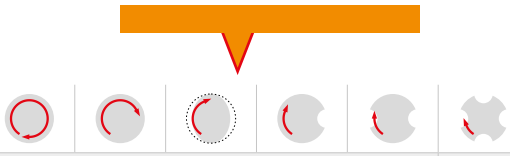




P	M	K	N	S	H
■	◪	◪	◪	◪	

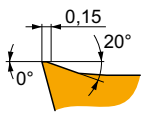
f ⇨ 0.07 – 0.25

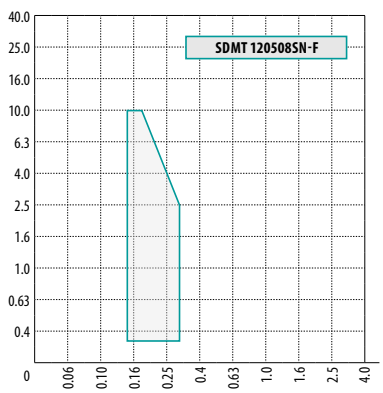
a_p 1.0 – 5.0



? **SDMT 120508SR-F**

SDMT 12-F (IM)

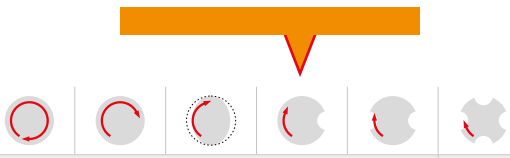




P	M	K	N	S	H
■	◪		◪		

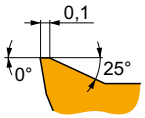
f ⇨ 0.15 – 0.30

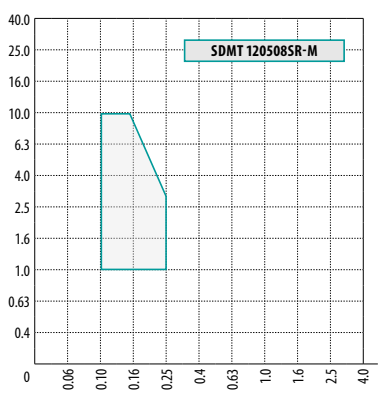
a_p 0.3 – 10.0



? **SDMT 120508SN-F**

SDMT 12-M

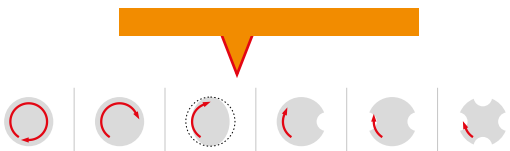




P	M	K	N	S	H
■	■	◪		◪	

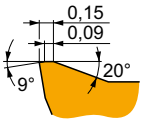
f ⇨ 0.10 – 0.25

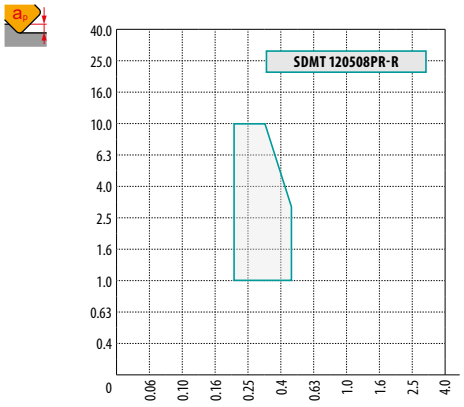
a_p 1.0 – 10.0



? **SDMT 120508SR-M**

SDMT 12-R





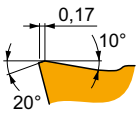
P	M	K	N	S	H
■	◪	■		◪	

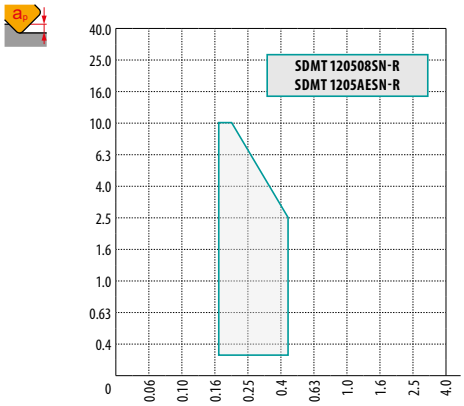
f ⇨ 0.20 – 0.45

a_p 1.0 – 10.0

SDMT 120508PR-R

SDMT 12-R (IM)





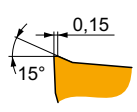
P	M	K	N	S	H
■		■			

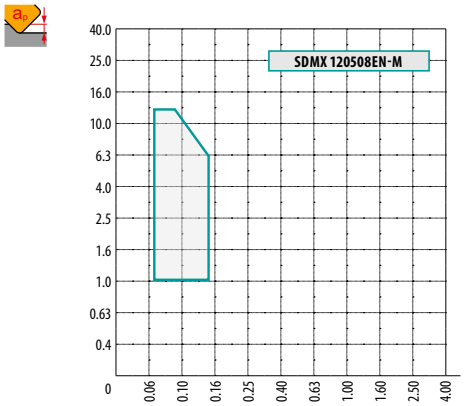
f ⇨ 0.17 – 0.45

a_p 0.3 – 10.0

SDMT 120508SN-R
SDMT 1205AESN-R

SDMX 12-M





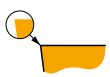
P	M	K	N	S	H
◪	■			■	

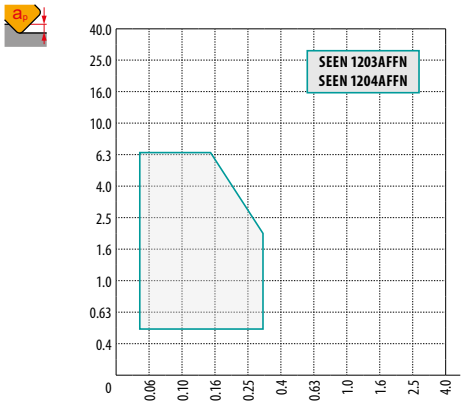
f ⇨ 0.07 – 0.15

a_p 1.0 – 12.0

SDMX 120508EN-M

SEEN 12FN





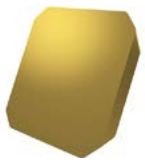
P	M	K	N	S	H
■	◪	◪			

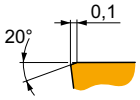
f ⇨ 0.05 – 0.40 (according to insert size)

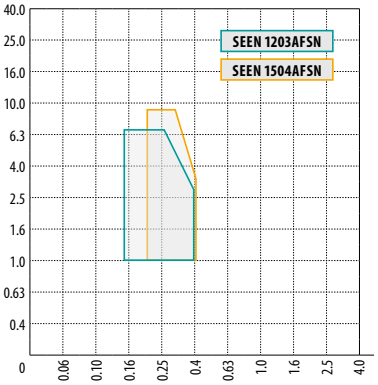
a_p 0.5 – 6.5

SEEN 1203AFFN
SEEN 1204AFFN

SEEN SN



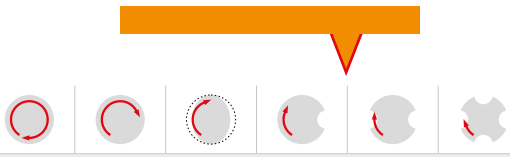




P	M	K	N	S	H
■		■			◪

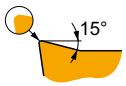
f 0.15 – 0.40 (according to insert size)

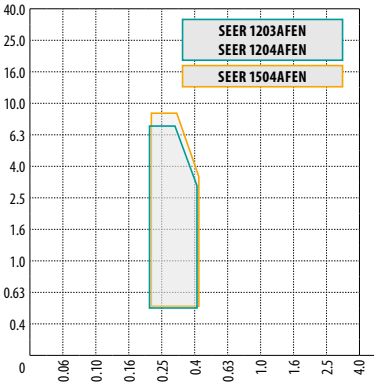
a_p 0.5 – 9.0 (according to insert size)



SEEN 1203AFSN
SEEN 1504AFSN

SEER EN

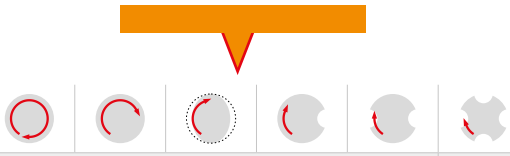




P	M	K	N	S	H
■	◪	■		◪	

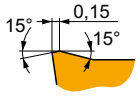
f 0.20 – 0.40 (according to insert size)

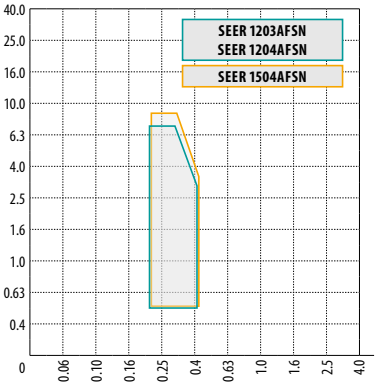
a_p 0.5 – 9.0 (according to insert size)



SEER 1203AFEN
SEER 1204AFEN
SEER 1504AFEN

SEER SN

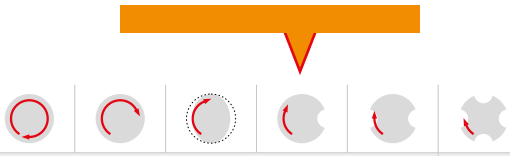




P	M	K	N	S	H
■	◪	■		◪	

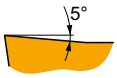
f 0.20 – 0.40 (according to insert size)

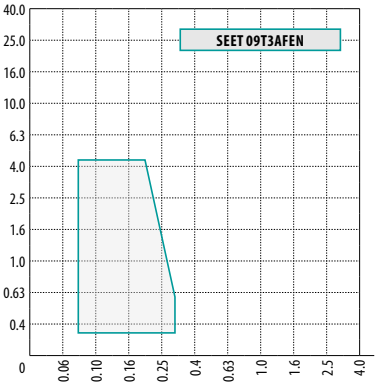
a_p 1.0 – 9.0 (according to insert size)



SEER 1203AFSN
SEER 1204AFSN
SEER 1504AFSN

SEET 09

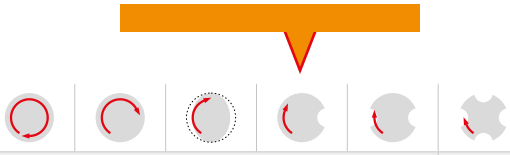




P	M	K	N	S	H
■	◪			◪	

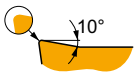
f 0.08 – 0.30

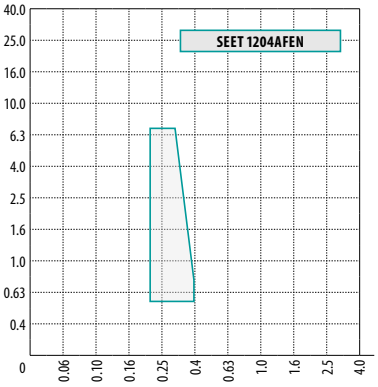
a_p 0.3 – 4.5



SEET 09T3AFEN

SEET 12EN

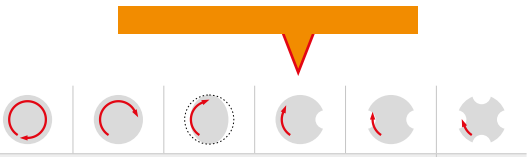




P	M	K	N	S	H
■	■	◪		◪	

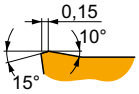
f ⇨ 0.20 – 0.40

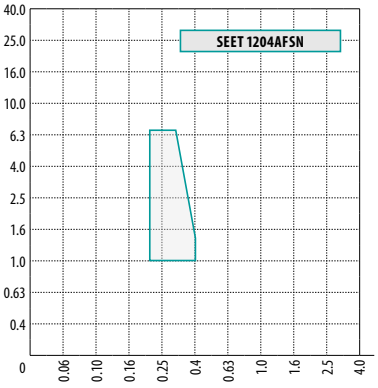
a_p 0.5 – 6.5



SEET 1204AFEN

SEET 12SN

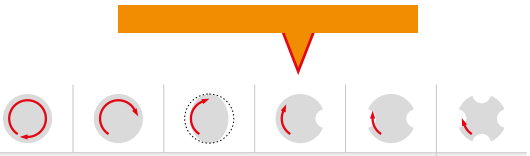




P	M	K	N	S	H
■	■	◪		◪	

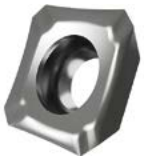
f ⇨ 0.20 – 0.40

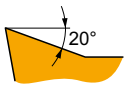
a_p 1.0 – 6.5

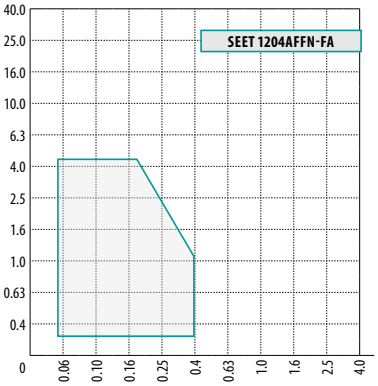


SEET 1204AFSN

SEET 12-FA



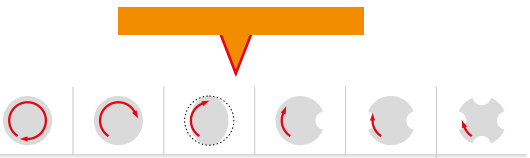




P	M	K	N	S	H
			■		

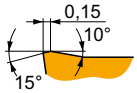
f ⇨ 0.05 – 0.40

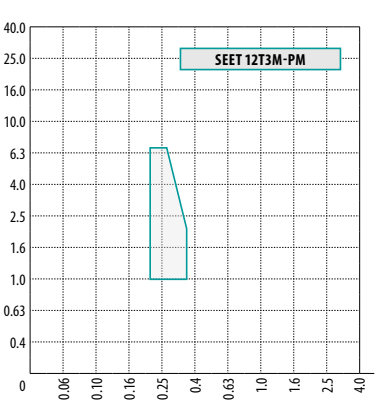
a_p 0.2 – 4.5



SEET 1204AFFN-FA

SEET 12-PM

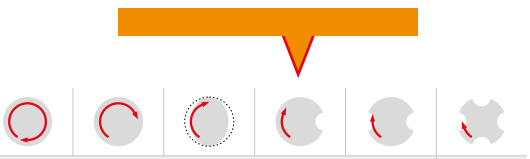




P	M	K	N	S	H
■	◪	■		◪	

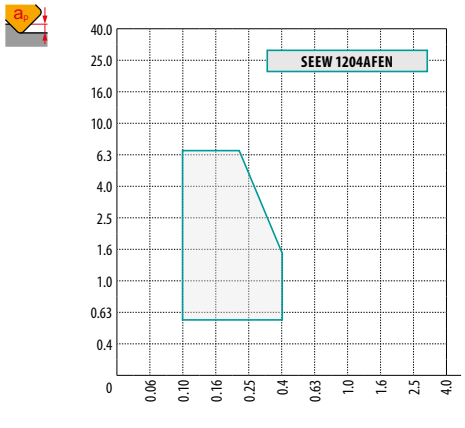
f ⇨ 0.20 – 0.35

a_p 1.0 – 6.5



SEET 12T3M-PM

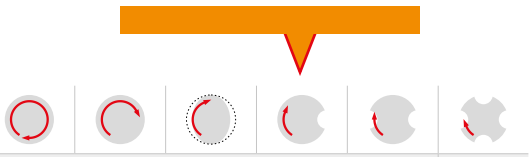
SEEW 12 EN



P	M	K	N	S	H
◪		◪			

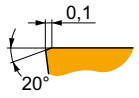
f ⇨ 0.10 – 0.40

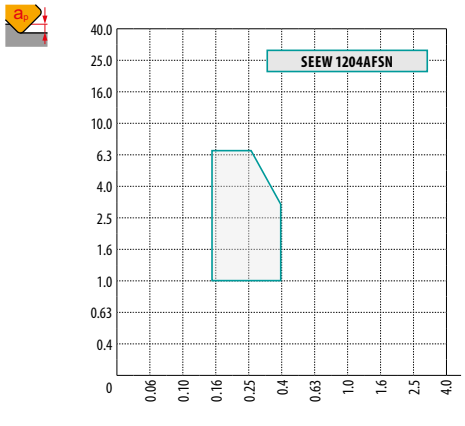
a_p 0.5 – 6.5



? **SEEW 1204AFEN**

SEEW 12 SN

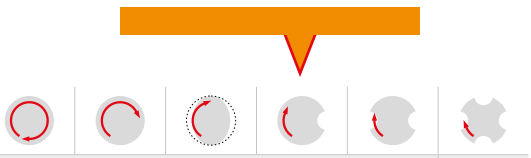




P	M	K	N	S	H
◪		■			◪

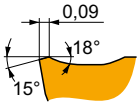
f ⇨ 0.15 – 0.40

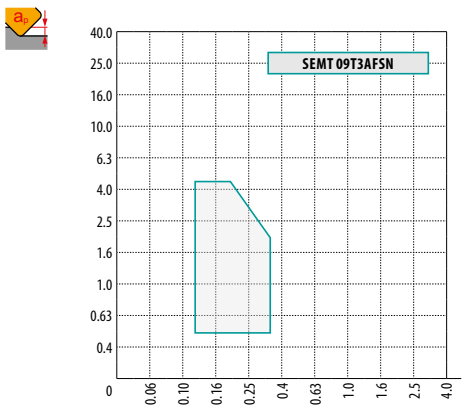
a_p 1.0 – 6.5



? **SEEW 1204AFSN**

SEMT 09

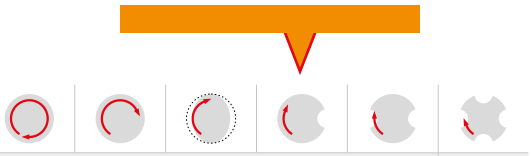




P	M	K	N	S	H
■	◪	■			

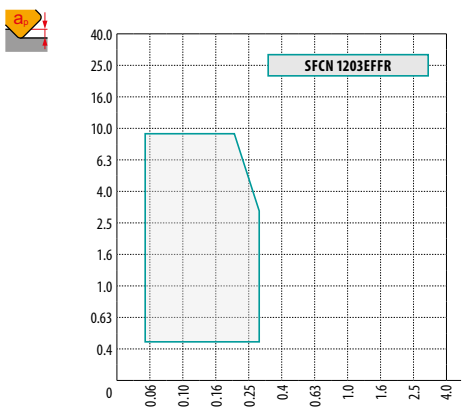
f ⇨ 0.12 – 0.35

a_p 0.5 – 4.5



? **SEMT 09T3AFSN**

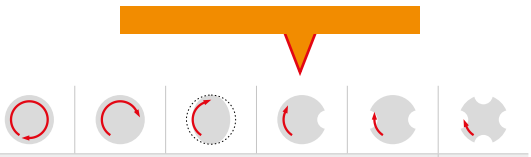
SFCN 12



P	M	K	N	S	H
			■		

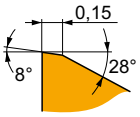
f ⇨ 0.05 – 0.30

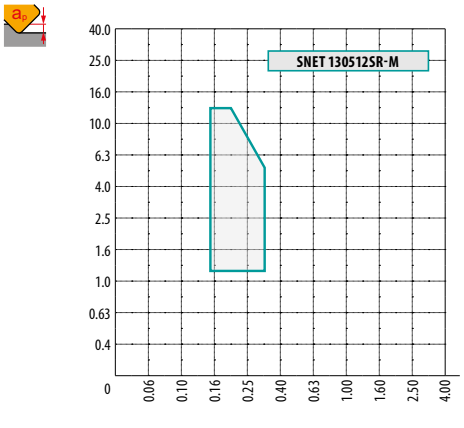
a_p 0.5 – 9.0



? **SFCN 1203EFFR**

SNET 13-M





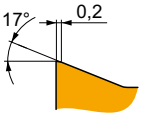
P	M	K	N	S	H
■		◪			

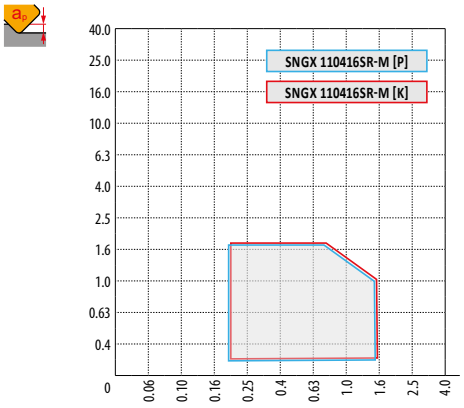
f ⇨ 0.15 – 0.35

a_p 1.2 – 12.0

SNET 130512SR-M

SNGX 11-M





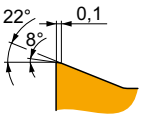
P	M	K	N	S	H
■		■			

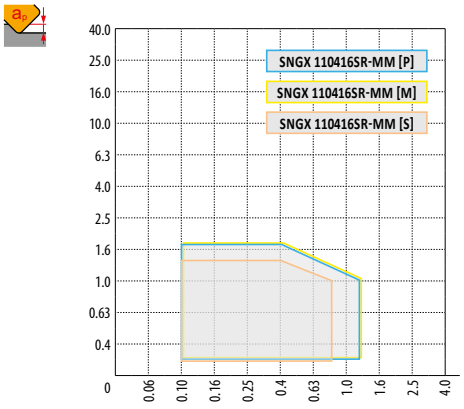
f ⇨ 0.20 – 1.50

a_p 0.2 – 1.7

SNGX 110416SR-M

SNGX 11-MM





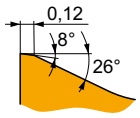
P	M	K	N	S	H
■	■			■	

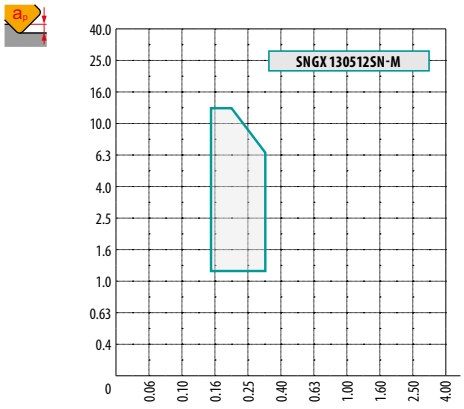
f ⇨ 0.10 – 1.20

a_p 0.2 – 1.7

SNGX 110416SR-MM

SNGX 13-M





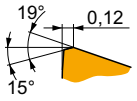
P	M	K	N	S	H
■		◪			

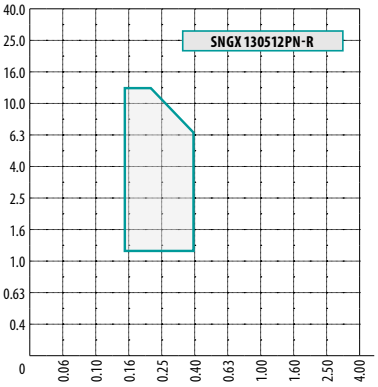
f ⇨ 0.15 – 0.35

a_p 1.2 – 12.0

SNGX 130512SN-M

SNGX 13-R





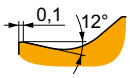
P	M	K	N	S	H
■		■			

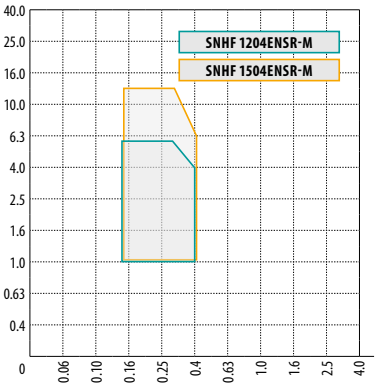
f ⇨ 0.15 – 0.40

a_p 1.2 – 12.0

SNGX 130512PN-R

SNHF -M





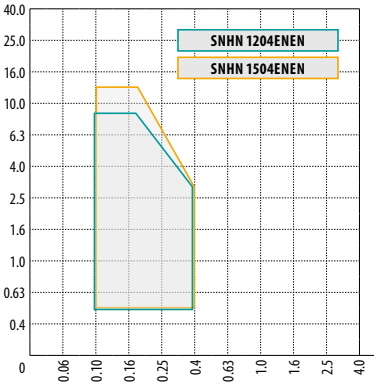
P	M	K	N	S	H
■		◪			

f ⇨ 0.15 – 0.40

a_p 1.0 – 13.5 (according to insert size)

SNHF 1204ENSR-M
SNHF 1504ENSR-M

SNHN



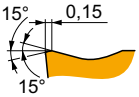
P	M	K	N	S	H
◪		■			◪

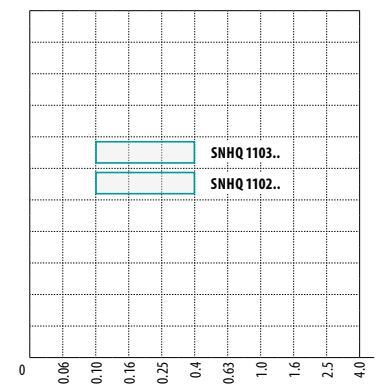
f ⇨ 0.10 – 0.40

a_p 0.5 – 13.5 (according to insert size)

SNHN 1204ENEN
SNHN 1504ENEN

SNHQ 11





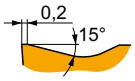
P	M	K	N	S	H
■	◪	■			

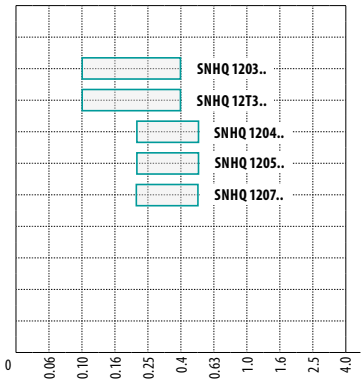
f ⇨ 0.10 – 0.40

a_p –

SNHQ 110.AZTN

SNHQ 12TN





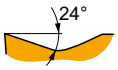
P	M	K	N	S	H
■	◪	■			

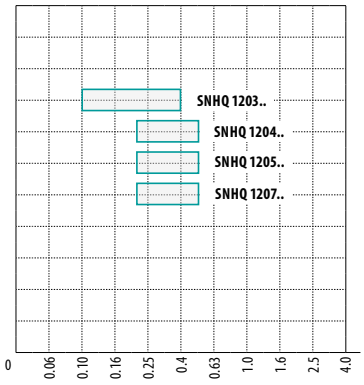
f ⇨ 0.10 – 0.50 (according to insert type)

a_p –

SNHQ 1203AZTN, SNHQ 12T3AZTN
SNHQ 1204AZTN, SNHQ 1205AZTN
SNHQ 1207AZTN

SNHQ 12EN





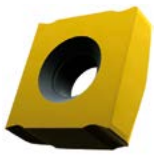
P	M	K	N	S	H
■	◪	■			

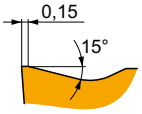
f ⇨ 0.10 – 0.50 (according to insert type)

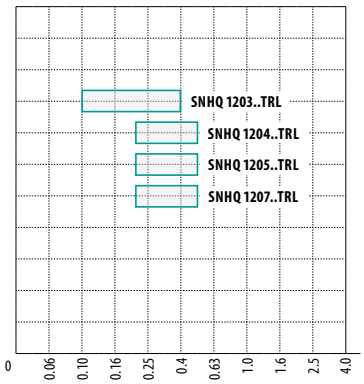
a_p –

SNHQ 1203AZEN, SNHQ 1204AZEN
SNHQ 1205AZEN, SNHQ 1207AZEN

SNHQ 12TRL







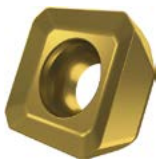
P	M	K	N	S	H
■	◪	◪			

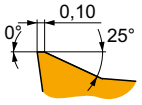
f ⇨ 0.10 – 0.50 (according to insert type)

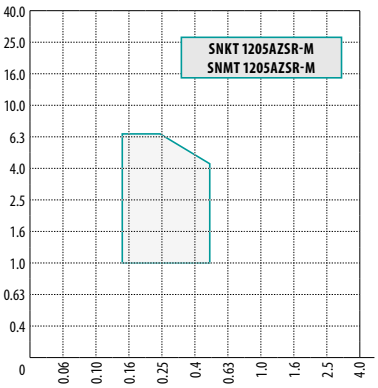
a_p –

SNHQ 1203..TRL, SNHQ 1204..TRL
SNHQ 1205..TRL, SNHQ 1207..TRL

SNK(M)T 12-M







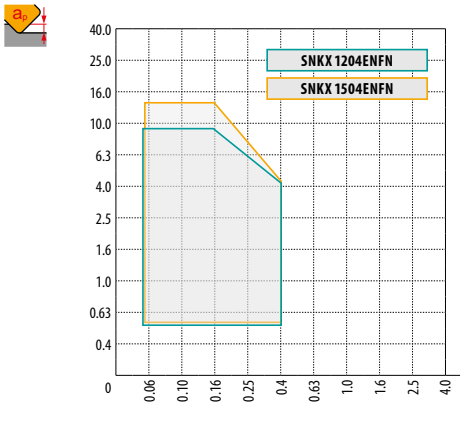
P	M	K	N	S	H
■	■	◪		◪	

f ⇨ 0.15 – 0.50

a_p 1.0 – 6.5

SNKT 1205AZSR-M
SNMT 1205AZSR-M

SNKX



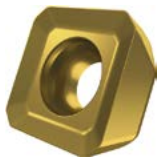
P	M	K	N	S	H
■		■			

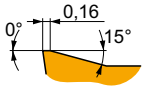
f 0.05 – 0.40

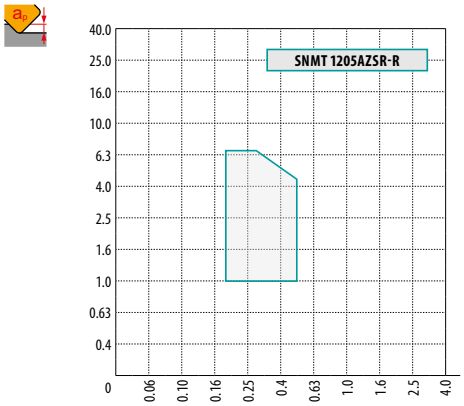
a_p 0.5 – 13.5 (according to insert size)

SNKX 1204ENFN
SNKX 1504ENFN

SNMT 12-R







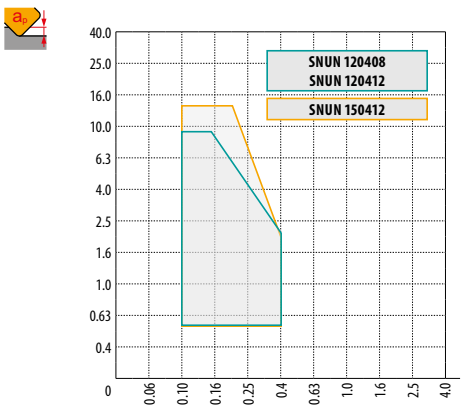
P	M	K	N	S	H
■	◪	◪		◪	

f 0.18 – 0.50

a_p 1.0 – 6.5

SNMT 1205AZSR-R

SNUN



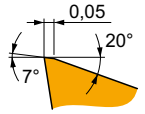
P	M	K	N	S	H
◪		■			◪

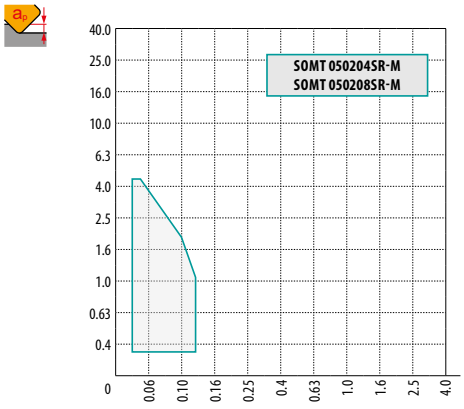
f 0.10 – 0.40

a_p 0.5 – 13.5 (according to insert size)

SNUN 120408
SNUN 120412
SNUN 150412

SOMT 05-M





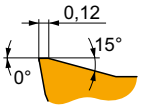
P	M	K	N	S	H
■	■	◪		◪	

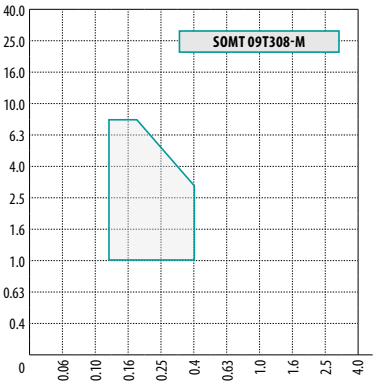
f 0.03 – 0.12

a_p 0.4 – 4.5

SOMT 050204SR-M
SOMT 050208SR-M

SOMT 09-M

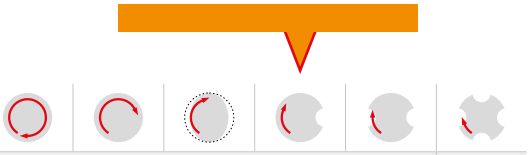




P	M	K	N	S	H
■	■	◪		◪	

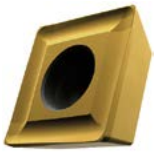
f ⇨ 0.12 – 0.40

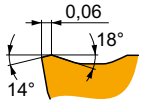
a_p 1.0 – 8.0

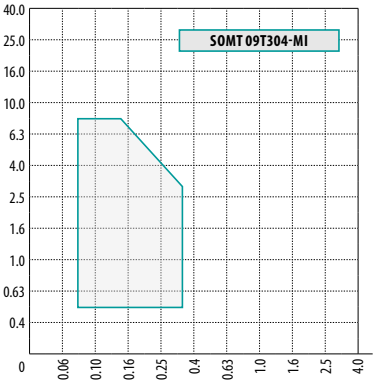


? **SOMT 09T308-M**

SOMT 09-MI



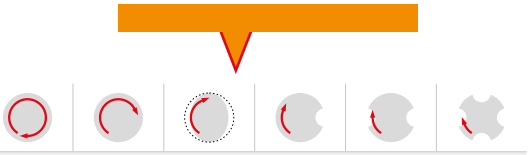




P	M	K	N	S	H
■	■	◪		◪	

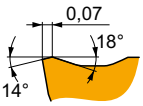
f ⇨ 0.08 – 0.35

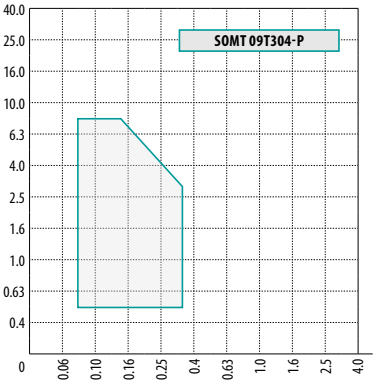
a_p 0.5 – 8.0



? **SOMT 09T304-MI**

SOMT 09-P

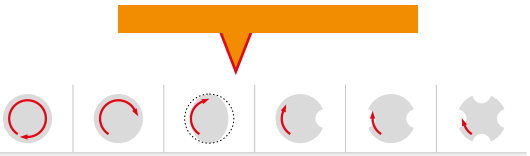




P	M	K	N	S	H
■	◪	◪		◪	

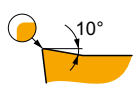
f ⇨ 0.08 – 0.35

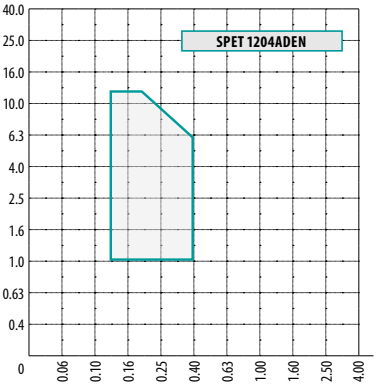
a_p 0.5 – 8.0



? **SOMT 09T304-P**

SPET 12EN

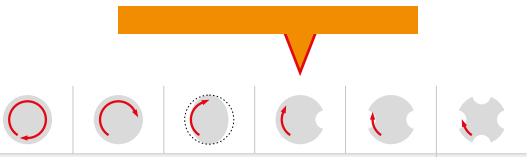




P	M	K	N	S	H
■	◪	■		◪	

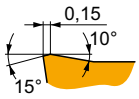
f ⇨ 0.12 – 0.40

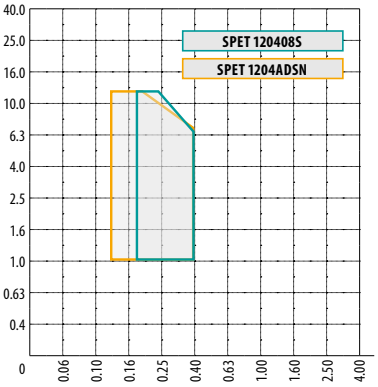
a_p 1.0 – 12.0



? **SPET 1204ADEN**

SPET 12S

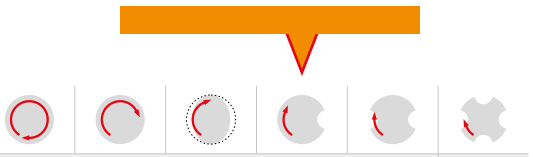




P	M	K	N	S	H
■	◪	■		◪	

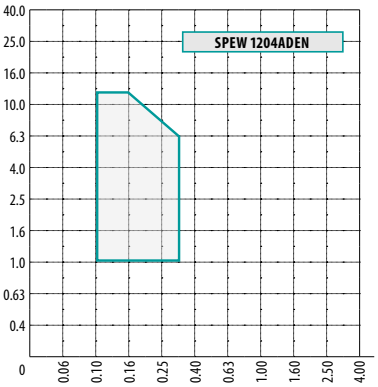
f ⇨ 0.12 – 0.40 (according to insert type)

a_p 1.0 – 12.0



SPET 120408S
SPET 1204ADSN

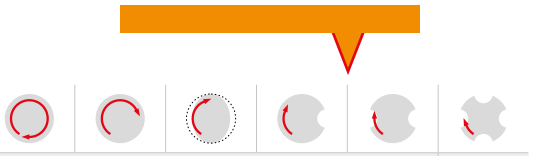
SPEW 12EN



P	M	K	N	S	H
◪		■			◪

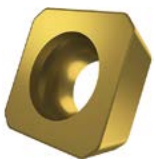
f ⇨ 0.10 – 0.35

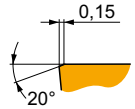
a_p 1.0 – 12.0

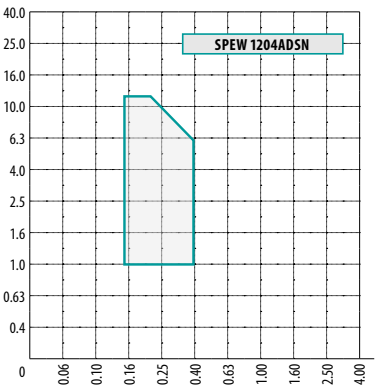


SPEW 1204ADEN

SPEW 12SN



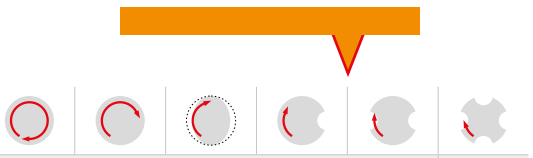




P	M	K	N	S	H
◪		■			◪

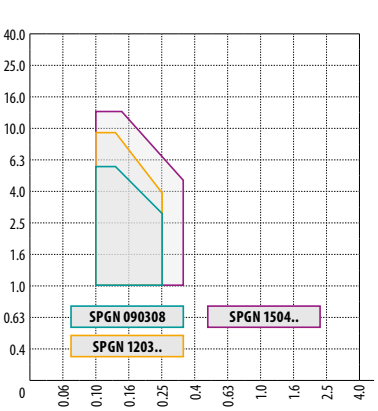
f ⇨ 0.15 – 0.40

a_p 1.0 – 12.0



SPEW 1204ADSN

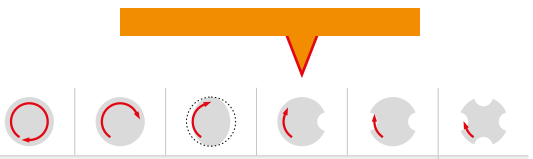
SPGN



P	M	K	N	S	H
■		■			

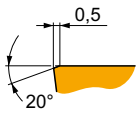
f ⇨ 0.10 – 0.35 (according to insert size)

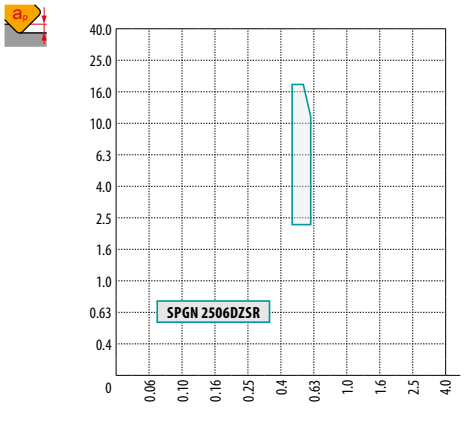
a_p 0.5 – 13.5 (according to insert size)



SPGN 090308
SPGN 1203..
SPGN 1504..

SPGN DZ





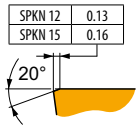
P	M	K	N	S	H
■		■			

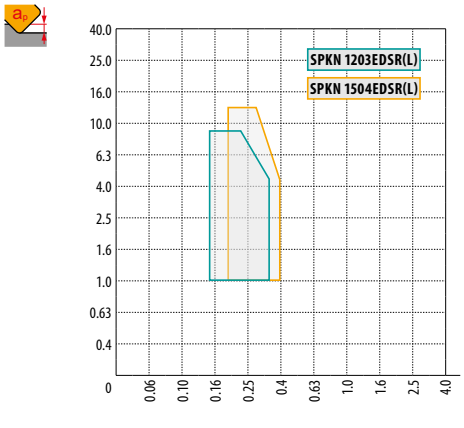
f: 0.45 – 0.60

a_p: 2.0 – 18.0

SPGN 2506DZSR

SPKN EDSR(L)





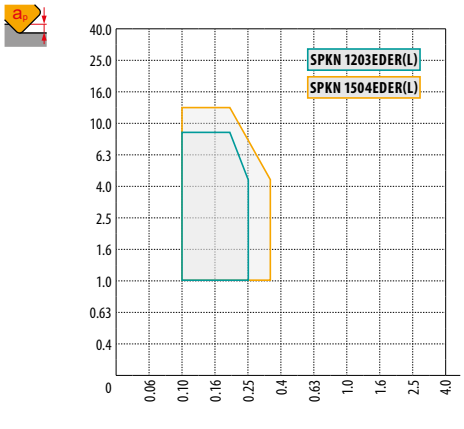
P	M	K	N	S	H
◪		■			◪

f: 0.15 – 0.40 (according to insert size)

a_p: 1.0 – 13.0 (according to insert size)

SPKN 1203EDSR(L)
SPKN 1504EDSR(L)

SPKN EDER(L)



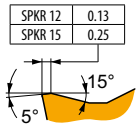
P	M	K	N	S	H
◪		■			◪

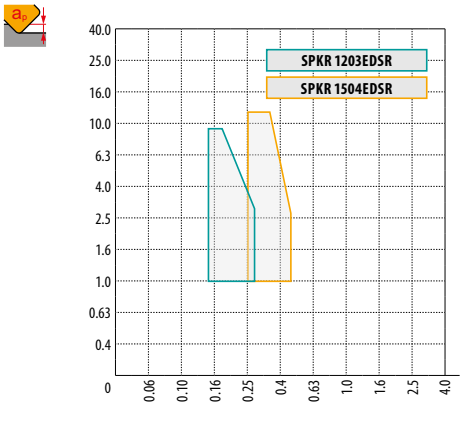
f: 0.10 – 0.35 (according to insert size)

a_p: 1.0 – 13.0 (according to insert size)

SPKN 1203EDER(L)
SPKN 1504EDER(L)

SPKR





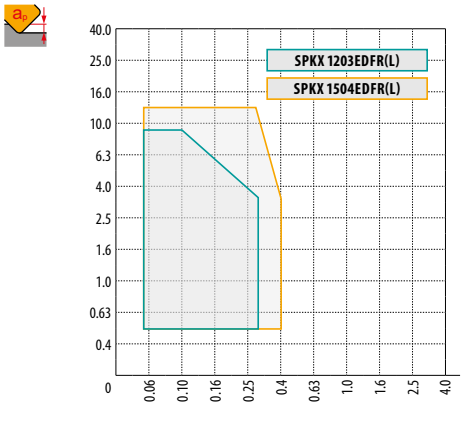
P	M	K	N	S	H
■	◪	■			

f: 0.15 – 0.45 (according to insert size)

a_p: 1.0 – 12.0 (according to insert size)

SPKR 1203EDSR
SPKR 1504EDSR

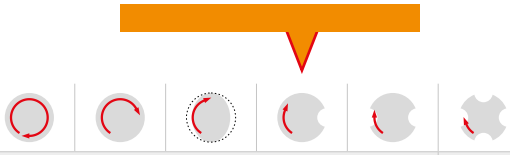
SPKX



P	M	K	N	S	H
■		■			

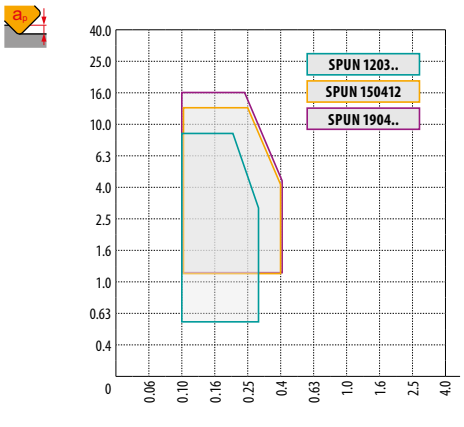
f: 0.05 – 0.40 (according to insert size)

a_p: 0.5 – 13.0 (according to insert size)



SPKX 1203EDFR(L)
SPKX 1504EDFR(L)

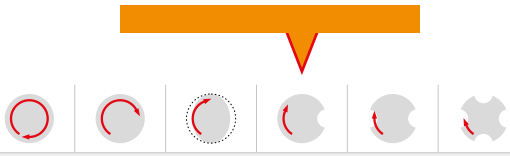
SPUN



P	M	K	N	S	H
■		◪			

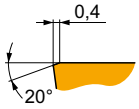
f: 0.10 – 0.40 (according to insert size)

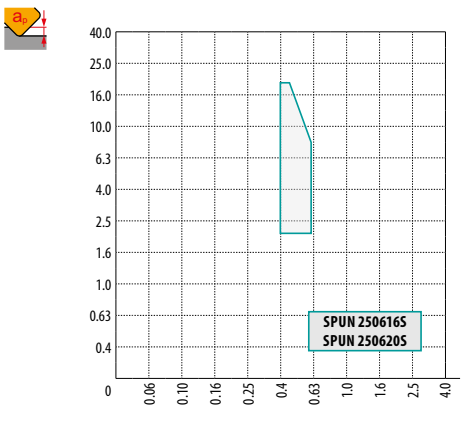
a_p: 0.5 – 16.0 (according to insert size)



SPUN 1203..
SPUN 150412
SPUN 1904..

SPUN 25

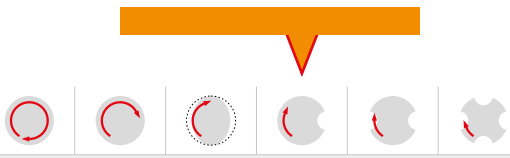




P	M	K	N	S	H
■		◪			

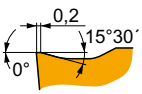
f: 0.4 – 0.6

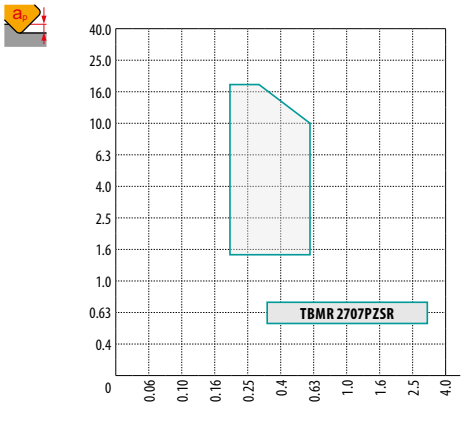
a_p: 2.0 – 18.0



SPUN 250616S
SPUN 250620S

TBMR 27

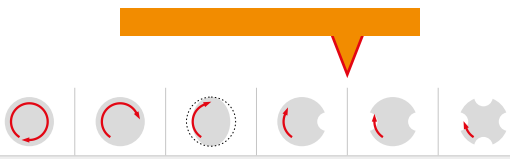




P	M	K	N	S	H
■	◪	■		◪	

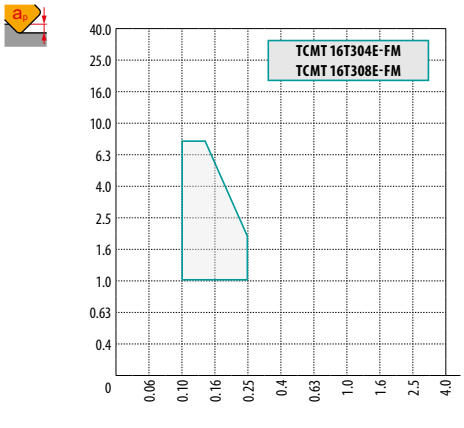
f: 0.20 – 0.60

a_p: 1.5 – 18.0



TBMR 2707PZSR

TCMT 16-FM



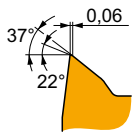
P	M	K	N	S	H
■	■	◪			

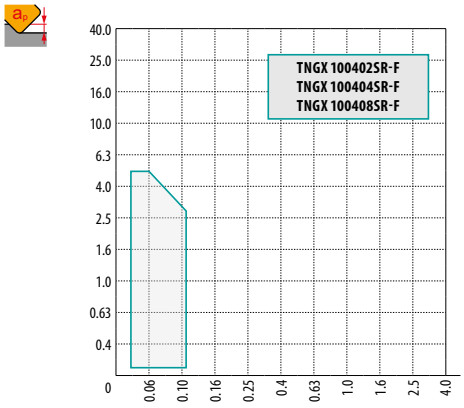
f ⇨ 0.10 – 0.25

a_p 1.0 – 8.5

TCMT 16T304E-FM
TCMT 16T308E-FM

TNGX 10-F





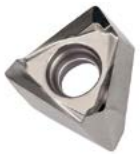
P	M	K	N	S	H
■	◪	◪			

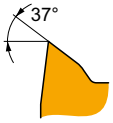
f ⇨ 0.3 – 0.11

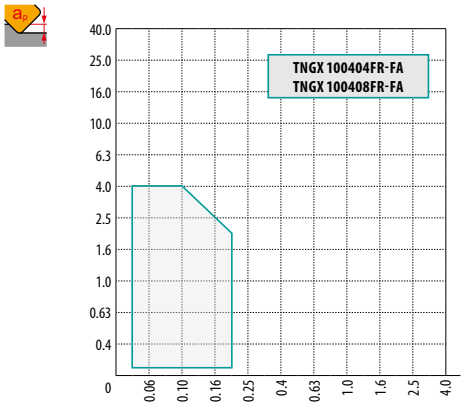
a_p 0.1 – 5.0

TNGX 100402SR-F
TNGX 100404SR-F
TNGX 100408SR-F

TNGX 10-FA







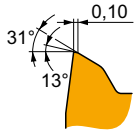
P	M	K	N	S	H
			■		

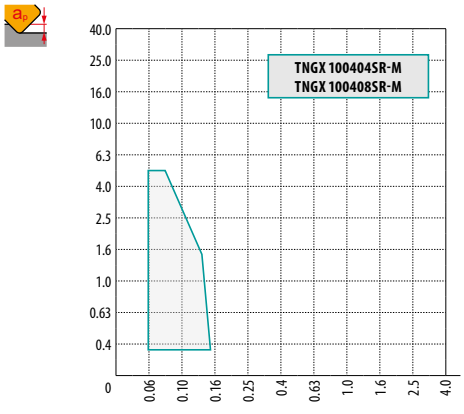
f ⇨ 0.03 – 0.20

a_p 0.1 – 4.0

TNGX 100404FR-FA
TNGX 100408FR-FA

TNGX 10-M





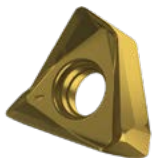
P	M	K	N	S	H
■	◪	◪		◪	

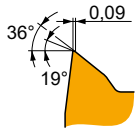
f ⇨ 0.05 – 0.15

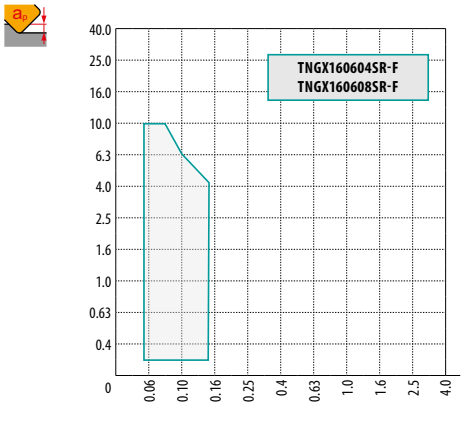
a_p 0.3 – 5.0

TNGX 100404SR-M
TNGX 100408SR-M

TNGX 16-F







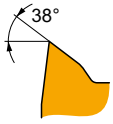
P	M	K	N	S	H
■	◪	◪			

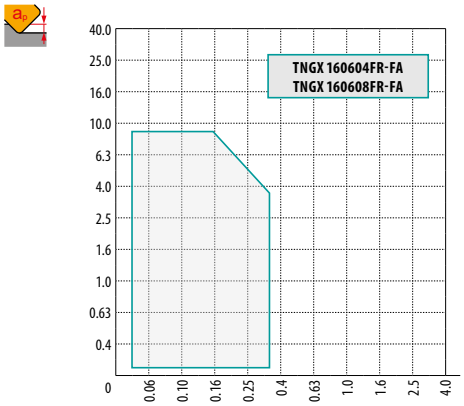
f ⇨ 0.05 – 0.15

a_p 0.2 – 10.0

TNGX160604SR-F
TNGX160608SR-F

TNGX 16-FA





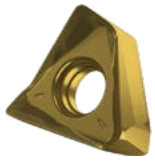
P	M	K	N	S	H
			■		

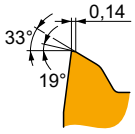
f ⇨ 0.03 – 0.36

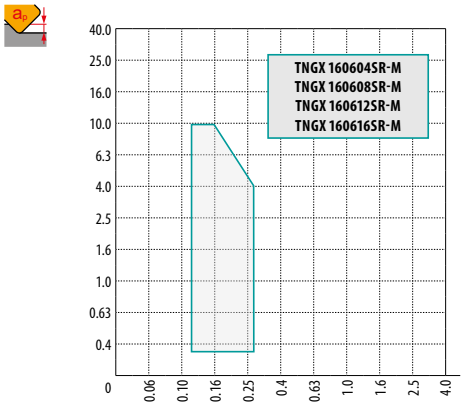
a_p 0.2 – 9.0

TNGX 160604FR-FA
TNGX 160608FR-FA

TNGX 16-M







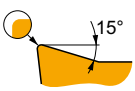
P	M	K	N	S	H
■	◪	◪		◪	

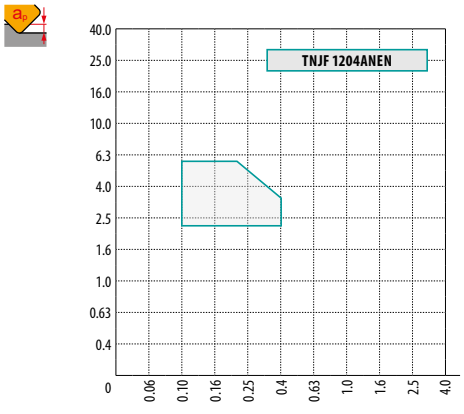
f ⇨ 0.12 – 0.28

a_p 0.3 – 10.0

TNGX 160604SR-M, TNGX 160608SR-M
TNGX 160612SR-M, TNGX 160616SR-M

TNJF 12





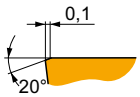
P	M	K	N	S	H
■	◪	◪			

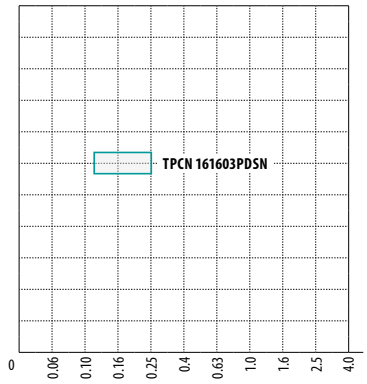
f ⇨ 0.10 – 0.40

a_p 2.0 – 6.0

TNJF 1204ANEN

TPCN 16

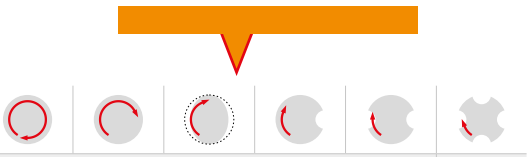




P	M	K	N	S	H
■		■			

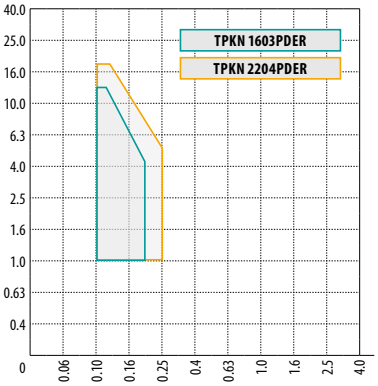
f: 0.12 – 0.25

a_p: –



TPCN 161603PDSN

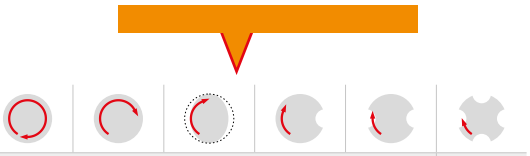
TPKN ER



P	M	K	N	S	H
◪		◪			

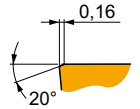
f: 0.10 – 0.25 (according to insert size)

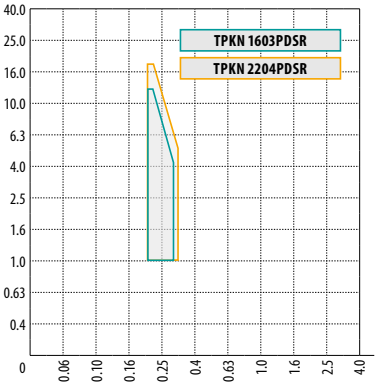
a_p: 1.0 – 17.0 (according to insert size)



TPKN 1603PDER
TPKN 2204PDER

TPKN SR

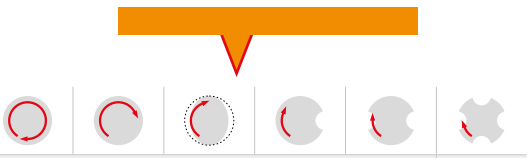




P	M	K	N	S	H
◪		◪			◪

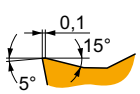
f: 0.20 – 0.35 (according to insert size)

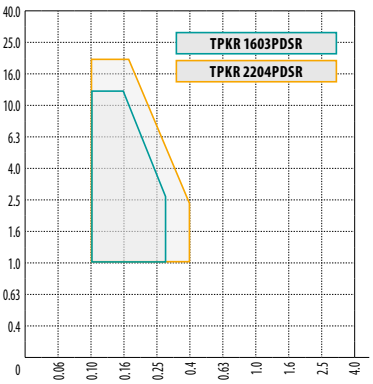
a_p: 1.0 – 17.0 (according to insert size)



TPKN 1603PDSR
TPKN 2204PDSR

TPKR

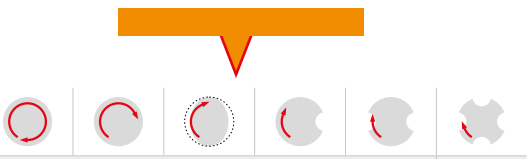




P	M	K	N	S	H
■	◪	■			

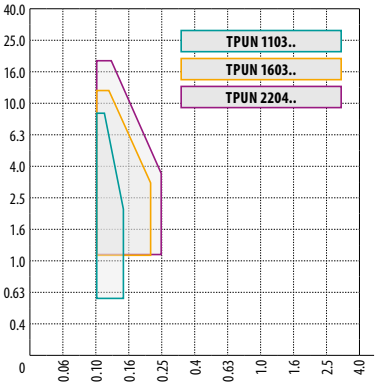
f: 0.10 – 0.40 (according to insert size)

a_p: 1.0 – 17.0 (according to insert size)



TPKR 1603PDSR
TPKR 2204PDSR

TPUN



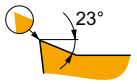
P	M	K	N	S	H
■		■			

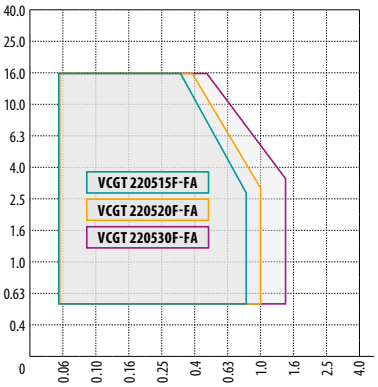
f: 0.10 – 0.25 (according to insert size)

a_p: 0.5 – 17.0 (according to insert size)

TPUN 1103..
TPUN 1603..
TPUN 2204..

VCGT 22-FA





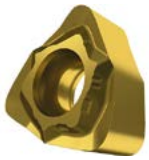
P	M	K	N	S	H
			■		

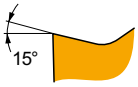
f: 0.05 – 1.5 (according to insert size)

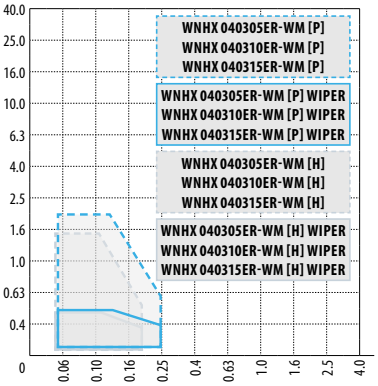
a_p: 0.5 – 16.0

VCGT 220515F-FA
VCGT 220520F-FA
VCGT 220530F-FA

WNHX 04-WM







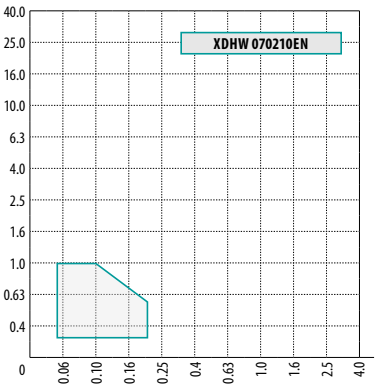
P	M	K	N	S	H
■		■			■

f: 0.05 – 0.25

a_p: 0.1 – 2.0

WNHX 0403..ER-WM

XDHW EN



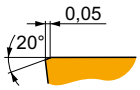
P	M	K	N	S	H
■		■			■

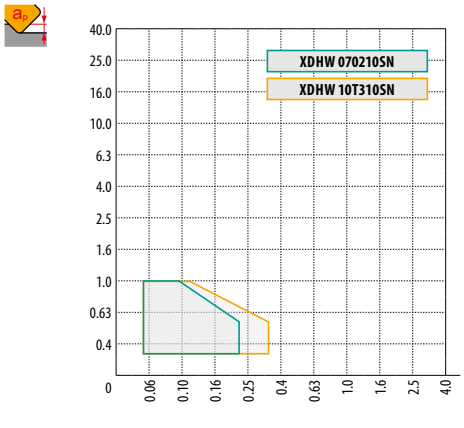
f: 0.05 – 0.20

a_p: 0.2 – 1.0

XDHW 070210EN

XDHW SN

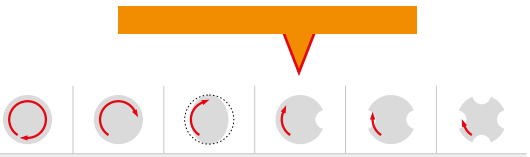




P	M	K	N	S	H
◪		■			■

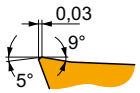
f ⇨ 0.05 – 0.35 (according to insert size)

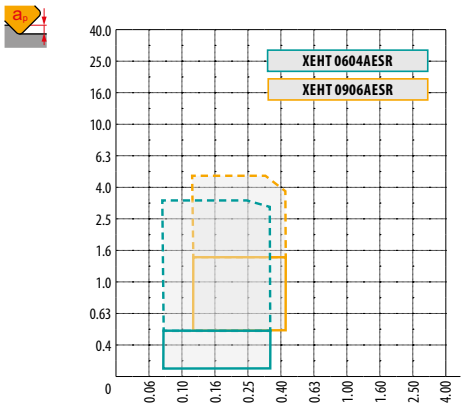
a_p 0.2 – 1.0



XDHW 070210SN
XDHW 10T310SN

XEHT

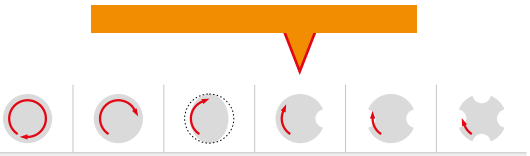




P	M	K	N	S	H
■	◪				

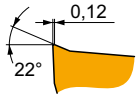
f ⇨ 0.08 – 0.45 (according to insert size)

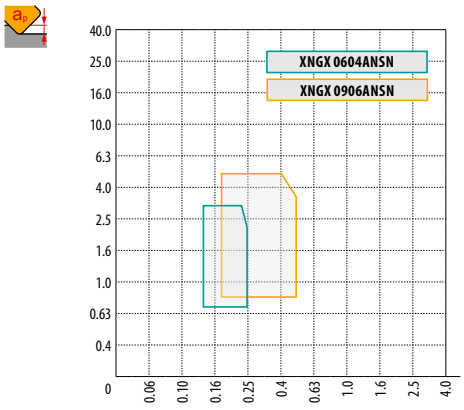
a_p 0.1 – 5.0 (according to insert size)



XEHT 0604AESR
XEHT 0906AESR

XNGX ANSN

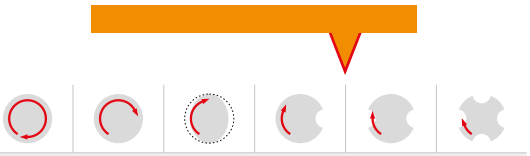




P	M	K	N	S	H
■	◪	■			

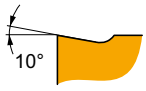
f ⇨ 0.13 – 0.50 (according to insert size)

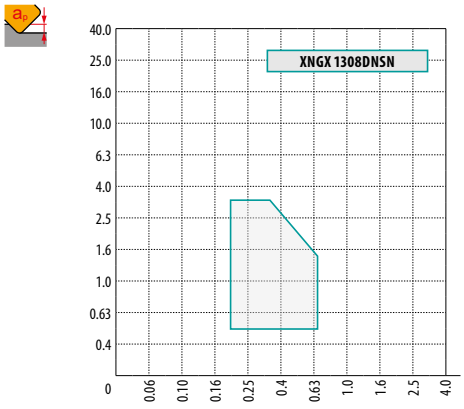
a_p 0.7 – 5.0 (according to insert size)



XNGX 0604ANSN
XNGX 0906ANSN

XNGX 13

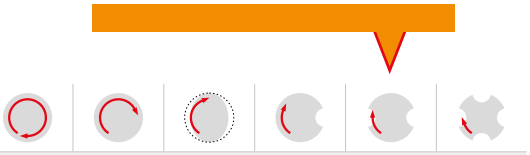




P	M	K	N	S	H
■		■			

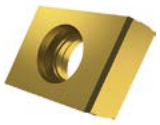
f ⇨ 0.25 – 0.70

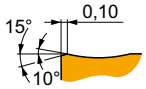
a_p 0.5 – 3.5

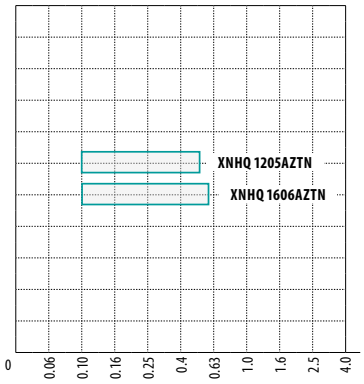


XNGX 1308DNSN

XNHQ TN



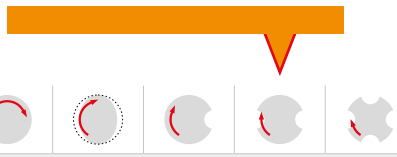




P	M	K	N	S	H
■	◪	■			

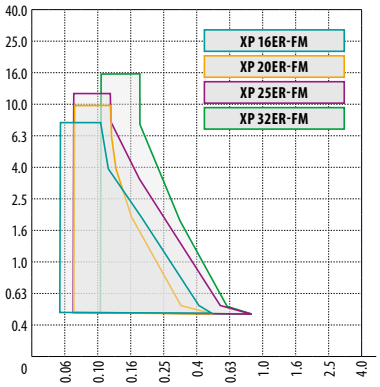
f: 0.10 – 0.60 (according to insert size)

a_p: –



XNHQ 1205AZTN
XNHQ 1606AZTN

XP ER-FM



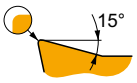
P	M	K	N	S	H
■	◪	■		◪	■

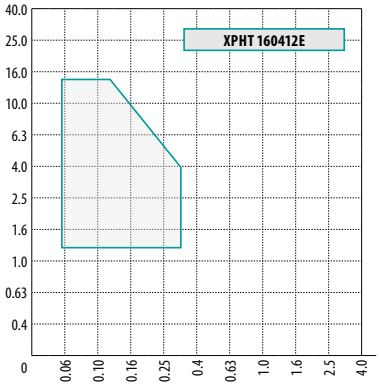
f: 0.05 – 0.25 (according to insert size)

a_p: 0.3 – 16.0 (according to insert size)

XP 16ER-FM, XP 20ER-FM
XP 25ER-FM, XP 32ER-FM

XPHT 16E

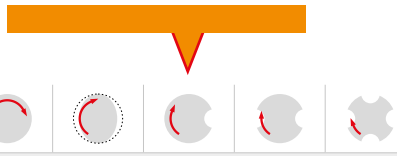




P	M	K	N	S	H
■	■	◪			

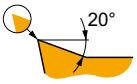
f: 0.05 – 0.30

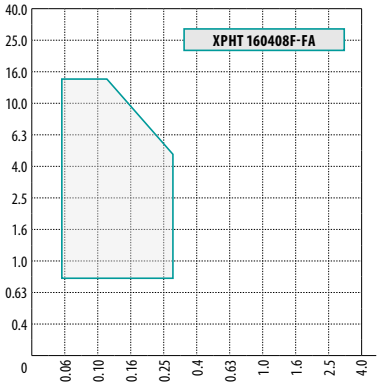
a_p: 1.2 – 15.0



XPHT 160412E

XPHT 16-FA

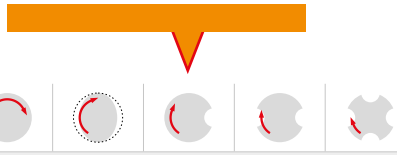




P	M	K	N	S	H
			■		

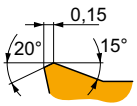
f: 0.05 – 0.30

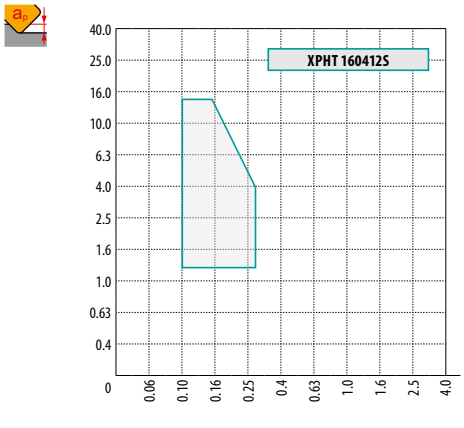
a_p: 0.8 – 15.0



XPHT 160408F-FA

XPHT 16S





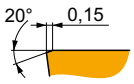
P	M	K	N	S	H
■	■	◪			

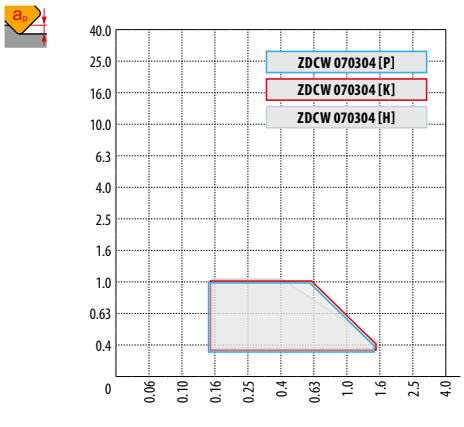
f ⇨ 0.05 – 0.30

a_p 1.2 – 15.0

XPHT 160412S

ZDCW 07





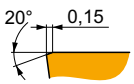
P	M	K	N	S	H
◪		■			■

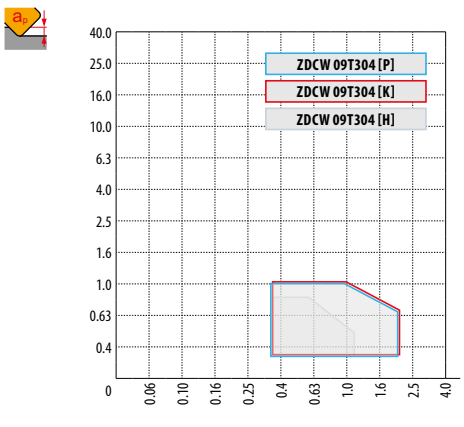
f ⇨ 0.15 – 1.50

a_p 0.3 – 1.0

ZDCW 070304

ZDCW 09





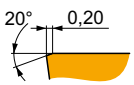
P	M	K	N	S	H
◪		■			■

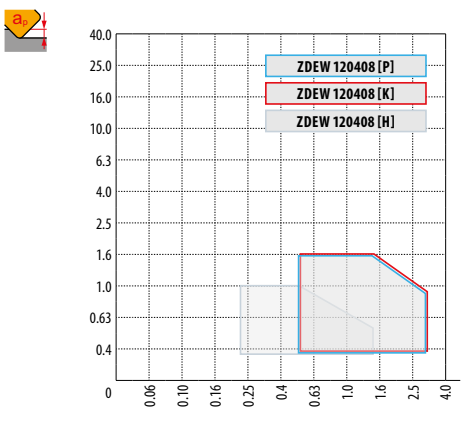
f ⇨ 0.30 – 2.00

a_p 0.3 – 1.0

ZDCW 09T304

ZDEW 12





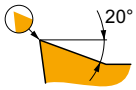
P	M	K	N	S	H
◪		■			■

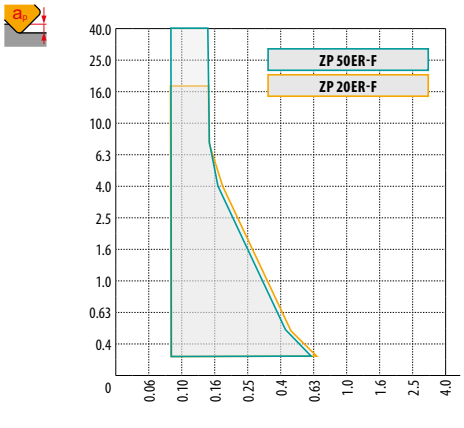
f ⇨ 0.50 – 3.00

a_p 0.3 – 1.6

ZDEW 120408

ZP ER-F





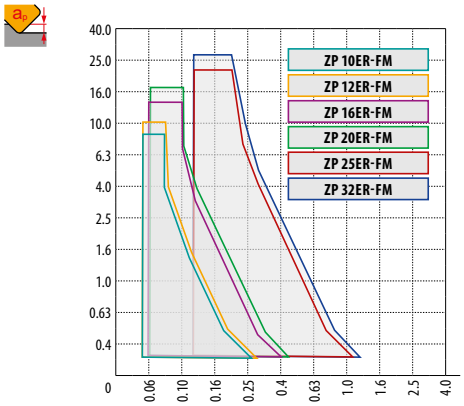
P	M	K	N	S	H
◪	◪		◪		

f ⇨ 0.04 – 0.18 (according to insert size)

a_p 0.3 – 44.7 (according to insert size)

ZP 50ER-F
ZP 20ER-F

ZP ER-FM



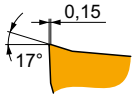
P	M	K	N	S	H
■		■			■

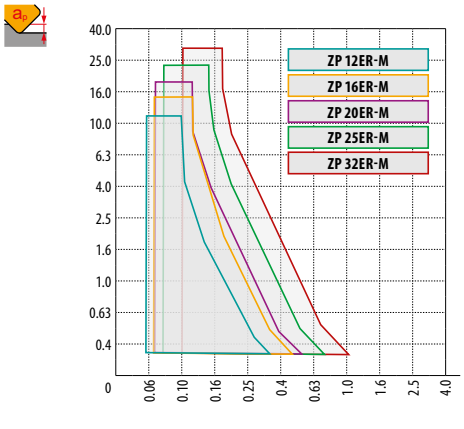
f ⇨ 0.05 – 0.21 (according to insert size)

a_p 0.3 – 28.6 (according to insert size)

ZP 10ER-FM, ZP 12ER-FM
ZP 16ER-FM, ZP 20ER-FM
ZP 25ER-FM, ZP 32ER-FM

ZP ER-M





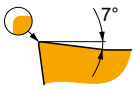
P	M	K	N	S	H
■	■	◪		◪	

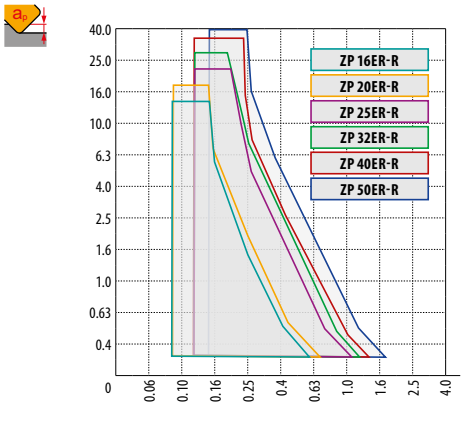
f ⇨ 0.06 – 0.25 (according to insert size)

a_p 0.3 – 28.6 (according to insert size)

ZP 12ER-M, ZP 16ER-M
ZP 20ER-M, ZP 25ER-M,
ZP 32ER-M

ZP ER-R





P	M	K	N	S	H
■	■	◪		◪	

f ⇨ 0.09 – 0.33 (according to insert size)

a_p 0.3 – 44.7 (according to insert size)

ZP 16ER-R, ZP 20ER-R
ZP 25ER-R, ZP 32ER-R
ZP 40ER-R, ZP 50ER-R

Marking of grades

M	9	3	2	5
Operation type	**Coating / Substrate**	**Generation**	**ISO range**	

	Operation type
D	Drilling
M	Milling
T	Turning
G	Grooving and Parting off

	Coating / Substrate
0 PVD 1 CVD	Special application
2 PVD 3 CVD	Free
4 PVD 5 CVD	Group K, H
6 PVD 7 CVD	Group M, S
8 PVD 9 CVD	Universal
B	CBN
D	PCD

Generation
1 – 9

	ISO range
	01 – 05
	05 – 10
	10 – 20
	20 – 30
	30 – 40
	40 – 50

Grade Identification	Area of Application	Application	Feed	Cutting speed	Resistance to adverse Working Conditions	Coating	Colour	Substrate	Coolant benefit	Grade description
M9315	P05 – P25 K10 – K30 H10 – H20	■ ■ ◪				MT-CVD		H	- - -	Milling grade with high abrasion resistance even at high thermal loads, main application area is higher cutting speeds with medium or small depths of cut.
M9325	P10 – P30 K10 – K30 H15 – H20	■ ■ ◪				MT-CVD		H	- - -	This grade has an ideal balance between wear resistance and toughness, it is mainly designed for roughing operations. Advantages are excellent wear resistance even at relatively high cutting speeds with excellent reliability, this grade is more suitable for applications using higher speeds and lower feed rates.
M9340	P35 – P50 M30 – M40 S15 – S20	■ ■ ■				MT-CVD		H	- - -	A very tough grade, where the main advantage is the high strength of the cutting edge and resistance to adverse cutting conditions. Although this material has an MT-CVD M30 – M40 coating, it is possible to use emulsion cooling for its application, especially in optimum cutting conditions.
M5315	P05 – P20 K05 – K25 H05 – H20	◪ ■ ■				MT-CVD		H	- - -	One of the most abrasion-resistant milling grades which should be used under stable conditions. Its main advantage is the extremely high resistance to thermal stress and abrasive K05 – K25 wear. It is mainly used for machining hard and very hard materials, particularly cast iron.
M8310	P01 – P10 M01 – M10 K01 – K10 H05 – H15	■ ◪ ■ ◪				PVD		ultra submicron H	-	Grade specially developed for copy milling, featuring high resistance to abrasion. It is suitable for machining at higher cutting speeds under stable cutting conditions, and for machining virtually all groups of machined materials (particularly stronger and harder materials).
8215	P10 – P20 M10 – M20 K10 – K25 N10 – N25 S10 – S15 H10 – H15	■ ◪ ■ ■ ◪ ■				PVD		submicron H	+ / -	One of the most versatile milling grades, in terms of both the range of workpiece materials and the range of possible applications. It is characterised by high wear resistance and operational reliability. Its other advantages include excellent resistance to cracking induced by temperature shock. With its unique properties, this material is undoubtedly one of the pillars of the milling range.
M8325	P20 – P40 M15 – M30	■ ◪				PVD		S	-	The main application area of this grade is machining all kinds of steels (including stainless) in the "soft state". It can also be used for machining softer cast irons. Suitable for M15 – M30 machining at medium speeds under average cutting conditions.
M8330	P20 – P40 M20 – M35 K20 – K40 N15 – N30 S15 – S25 H15 – H25	■ ■ ■ ◪ ◪ ◪				PVD		submicron H	+ / -	This grade is universal and can be used for machining various types of materials. However, it's priority application area lies within steels and ductile cast irons. It is recommended for milling at medium speeds under unstable cutting conditions.
M8340	P25 – P50 M20 – M40 K20 – K40 S20 – S30	■ ■ ◪ ■				PVD		submicron H	+ / -	Grade specially developed for copy milling, featuring high resistance to abrasion. It is suitable for machining at higher cutting speeds under stable cutting conditions, and for machining virtually all groups of machined materials (particularly stronger and harder materials).

Grade Identification	Area of Application	Application	Feed	Cutting speed	Resistance to adverse Working Conditions	Coating	Colour	Substrate	Coolant benefit	Grade description
M8345	P30 – P50 M30 – M40	■ ■				PVD		H	-	This grade has exceptional operational reliability and is designed for heavy cuts in unfavourable conditions in difficult and tough materials.
M6330	P20 – P35 M20 – M35 S20 – S30	■ ■ ■				PVD		H	+ / -	Milling grade with extraordinary service reliability. Especially suitable for machining of hard to machine materials. Powerful in applications where unfavourable conditions and heavy cuts dominate.
M4303	P01 – P10 K01 – K10 N01 – N10 H01 – H10	◪ ■ ◪ ■				PVD		ultra submicron H	-	The most wear resistant grade for mold & die applications. Offers exceptional performance at high cutting speeds and low feeds in stable cutting conditions. Suitable for finishing operations in difficult workpiece materials.
M4310	P05 – P15 M05 – M15 K05 – K15 S05 – S10 H05 – H15	◪ ◪ ■ ■ ■				PVD		ultra submicron H	-	Universal grade for mold & die applications. Suitable for finishing as well as semi-roughing operations. This grade combines high wear resistance with extraordinary operational reliability.
2003	P01 – P10 M01 – M10 K01 – K10 S05 – S10 H05 – H15	◪ ◪ ■ ■ ◪				PVD		ultra submicron H	-	Milling grade with excellent wear resistance. Most suitable in a machining of hard and high strength materials under stable cutting conditions and moderate/higher cutting speeds. Suitable for cutting other workpiece group materials except non-ferrous metals.
M0315	N05 – N25	■				PVD		submicron H	-	Submicron grade for milling non-ferrous metals and their alloys with a balanced ratio of wear resistance and toughness. It is provided with a unique coating with excellent friction properties.
M8326	P20 – P40 M15 – M30	■ ◪				PVD		H	-	Special grade for heavy duty. The main application area of this grade is machining all kinds of steels (including stainless) in the „soft state". It can also be used for machining softer cast irons. Suitable for M15 – M30 machining at medium speeds under average cutting conditions.
M8346	P30 – P50 M30 – M40	■ ■				PVD		H	-	Special grade for heavy duty. This grade has exceptional operational reliability and is designed for heavy cuts in unfavourable conditions in difficult and tough materials.
S26	P15 – P30	■				–		S	++	Uncoated milling grade with excellent resistance to erosion of the cutting face. It is intended solely for machining carbon and alloy steels at low cutting speeds.
S45	P30 – P45	■				–		S	++	Uncoated, tough cutting grade suitable for machining applications where low cutting speed and unfavourable cutting conditions dominate
HF7	M10 – M20 K10 – K25 N10 – N25	◪ ■ ■				–		submicron H	++	Uncoated grade which is primarily designed for machining non-ferrous metals; can also be used for other machined materials (except steel). This grade can be used in turning, milling, and even boring.

MILLING GRADES – OVERVIEW

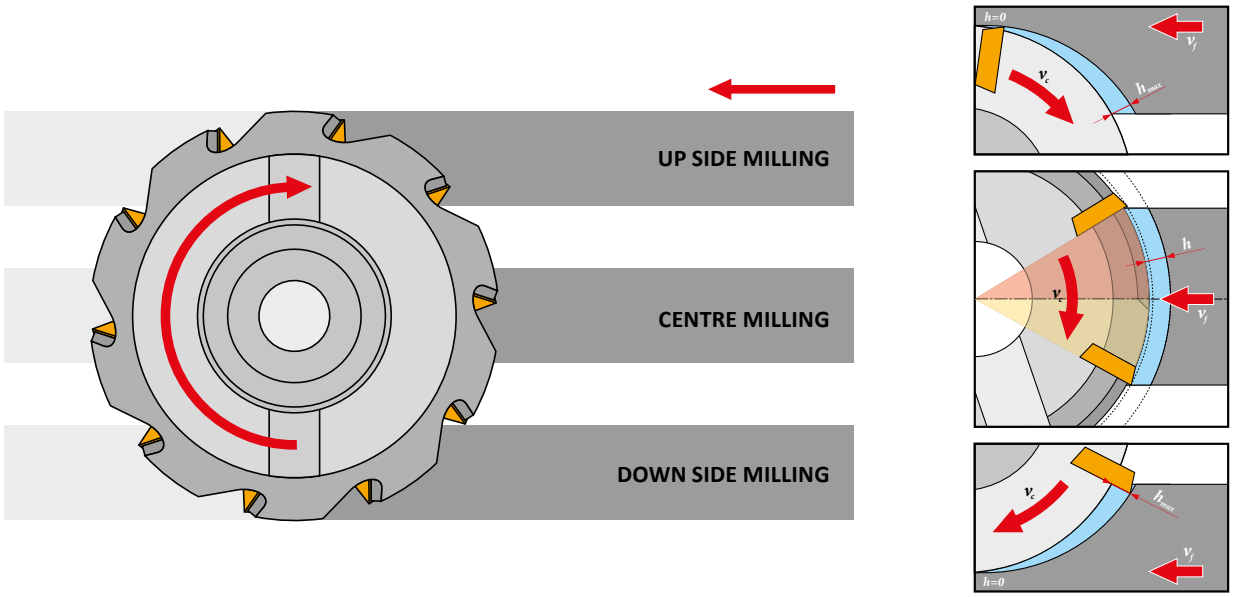
Substrate	
H	WC-Co based substrate
submicron H	WC-Co based substrate, fine-grained (< 1 µm)
ultra submicron H	WC-Co based substrate, very fine-grained (< 0.5 µm)
S	Substrate with cubic carbides

Coating	
MT-CVD	Medium-temperature chemical method of coating
PVD	Low-temperature physical method of coating
×	Uncoated grade

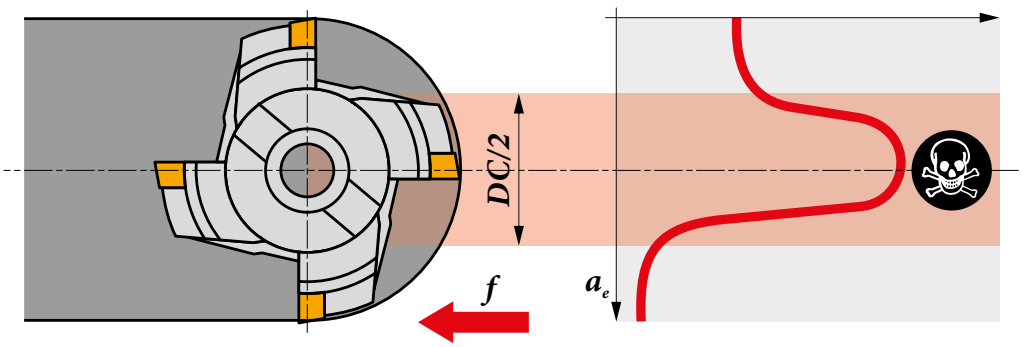
Coolant Benefit	
- - -	Very negative effect on tool life – cooling is not recommended
-	Slightly negative effect on tool life
+ / -	Influence of cooling may be both positive and negative – decisive factor is specific working conditions
+ +	Positive effect on tool life – cooling is recommended

Attribute Strength	
	Level 1 – 5

When performing a milling operation, the edge of the milling cutter almost always makes interrupted (intermittent) cuts. Each edge enters and exits the workpiece at least once within a single revolution of the tool.
In addition, a periodic change in chip thickness takes place during each revolution of the milling cutter. This results in fluctuations in the size and direction of the tangential component of the cutting force. The edge of the milling cutter is thus subjected to cyclic stress which results in specific wear. The durability of the milling cutter edge is therefore dependent on the conditions in which the edge enters and exits the workpiece. Proper choice of these conditions significantly affects the milling process and its results in terms of cutting power and quality of the machined surface. At the moment the edge enters or exits the workpiece, the edge is subjected to more or less intense mechanical shock which causes mechanical stress in the immediate vicinity of the cutting edge. If engagement conditions are chosen incorrectly, this shock can cause brittle damage to the edge, in the form of either fracturing or crumbling of the edge.
Position of the milling cutter relative to the workpiece is thus a very important factor. There are essentially three possible milling cutter positions: side up milling, centre milling and side down milling. For indexable tools, we recommend using co-directional engagement (so that the cutter forms thick chips on entry and thin chips on exit). **However**, there are notable exceptions (workpieces with surface skin, machines with worn feed screws...).

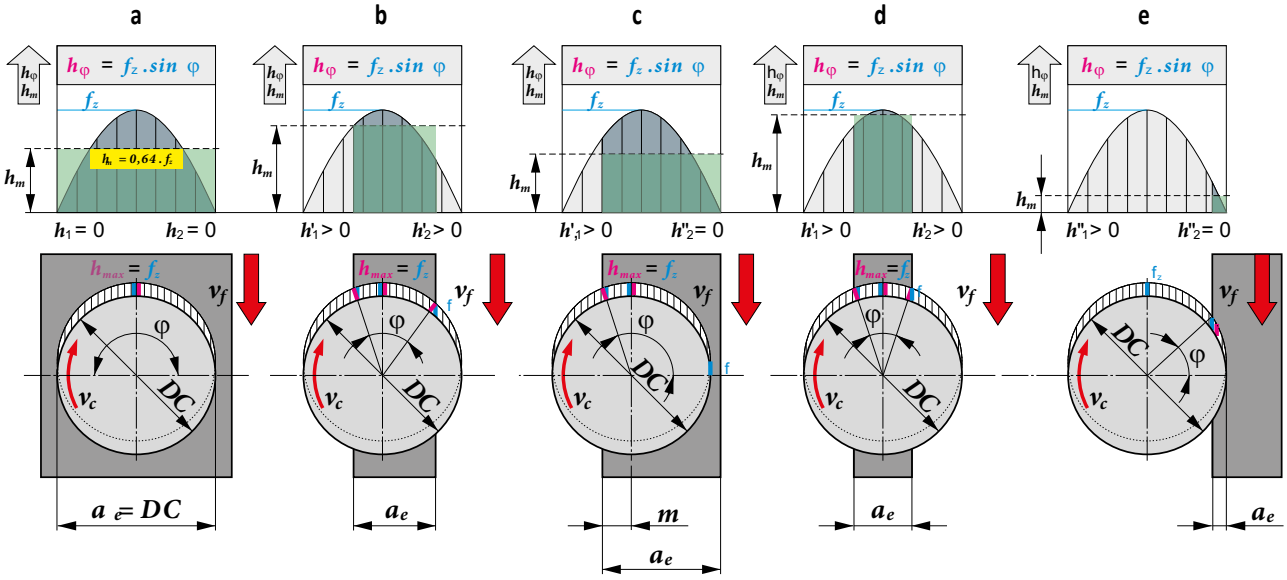


During face milling, where the width of the milled surface a_e is equal to the diameter of the milling cutter, follow the values recommended specifically for the inserts. If the engagement width is less than the diameter of the milling cutter, then the key factor is whether we machine with the centre or the side of the milling cutter, as mentioned above. In both cases, corrections in feed and cutting speed should be made (see correction tables on page 699). Either way, we should try to ensure that the tool does not enter or exit the cut in an area close to the centre of the milling cutter (so-called dead zone).



When the edge exits from the cut, this is accompanied by both stressing of the edge due to rapid cooling of the surface layers of the insert near the cutting edge and by mechanical shock caused by the release of flexible deformations, particularly in the surface layers of the workpiece after a rapid decrease in cutting force.

As stated above, chip thickness h changes during a single revolution depending on the angle φ in line with the formula $h\varphi = f_z \times sin\varphi$. Maximum chip thickness with steady f_z is reached within the axis of the milling cutter. The average thickness of a chip (h_m) removed by one tooth during one revolution is calculated as the height of a rectangle with the same area as the area under a sine curve relative to the radial depth of cut a_e. Average chip thickness h_m is dependent on the type of milling cutter and on engagement conditions, particularly the ratio of a_e/DC, feed per tooth f_z and naturally also on the entering angle $KAPR - \kappa_r$. The following figure shows illustrative examples.



Average chip thickness h_m for milling (with the centre) in accordance with figure a, b, d is calculated based on the formula:

$$h_m = f_z . sin\ \kappa_r \left(57.3 \frac{a_e}{DC . arcsin . \left[\frac{a_e}{DC} \right]} \right)$$

Average chip thickness h_m for machining with the side of the milling cutter (figure c, e) is calculated based on the formula:

$$h_m = f_z . sin\ \kappa_r \ . 114.6 . \left(\frac{a_e}{DC . arccos . \left[1 - \frac{2a_e}{DC} \right]} \right)$$

For milling with the side of the cutter in line with figure e, where the a_e/DC ratio is very low < (0.2), average chip thickness h_m can be calculated using the simplified formula:

$$h_m = f_z\ sin\ \kappa_r \sqrt{\frac{a_e}{DC}}$$

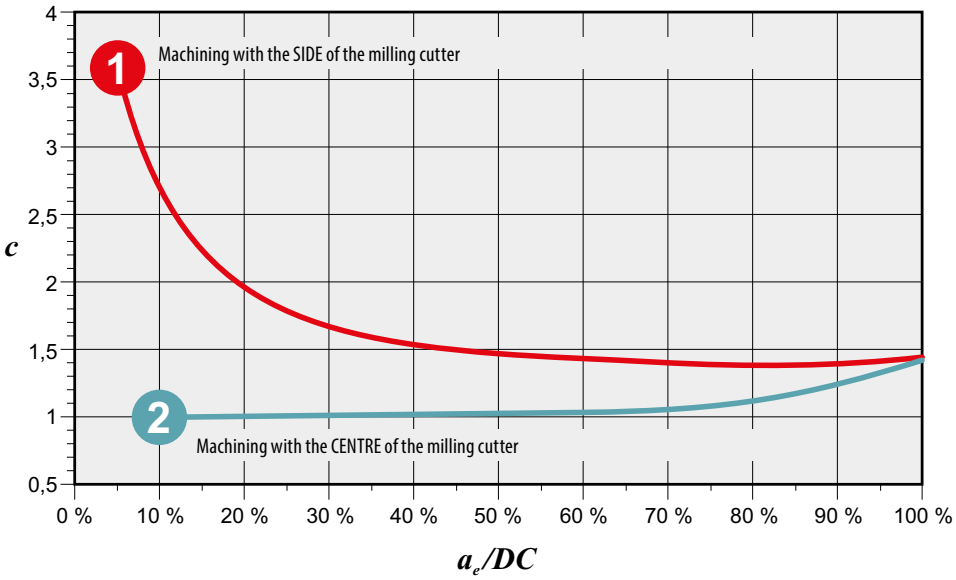
Where:

h_m	Is average chip thickness [mm]
f_z	Feed per tooth [mm/tooth]
a_e	Radial depth of cut [mm]
DC	Diameter of the milling cutter [mm]
κ_r	Entering angle of the main cutting edge ($KAPR$) [°]

For optimal application of any milling tool, we recommend checking chip thickness, or rather, using the recommended h_m range to choose (calculate) the proper feed rate.

It is, of course, also necessary to take into account the geometry of the indexable insert itself. To calculate f_z, you can use the formulae provided above or use the following formula. The values of coefficient c can be derived from the following chart:

$$f_z = \frac{h_m}{\sin . \kappa_r} . c$$



Each tool type listed in this catalogue has its own optimum range of average chip thickness. Using values lower than listed in this range may prevent the tool from cutting or, rather, may subject the insert to excessive wear and, in extreme cases, may even destroy it in the process. Similarly, exceeding the recommended values may destroy the insert by overloading the tool. The ranges of recommended average chip thickness are listed directly by each tool family.

The full range of chip thickness can only be used for groups P and K. The lower limit of chip thickness must be adjusted (taken as higher than listed) for groups M and S and for tougher materials from group N. The upper limit must be lowered for groups H, S and slightly also for tougher materials from group M. On the contrary, it is possible to increase the upper limit of recommended average chip thickness by approx. 10 – 15 % when machining soft materials from group N.

SHN06C

P M K H

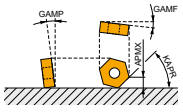
PRAMET

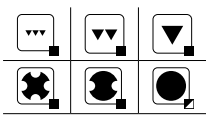
S

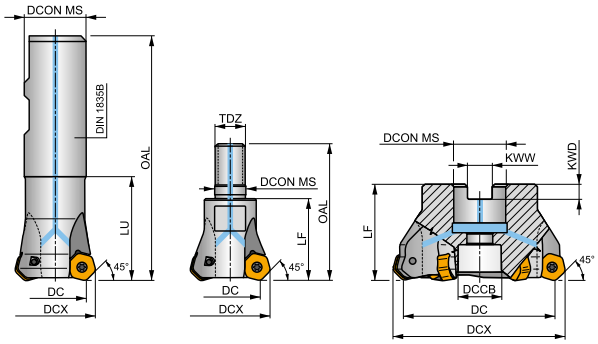
ECON HN06 45° Face Mill with Double Negative Design and Internal Coolant

Highly productive 45° face mill utilising double sided HN.. 06 style inserts with APMX of 3 mm. Roughing, finishing and chamfering. Economical insert with 12 cutting edges. Differential tooth pitch. Weldon, modular and arbor style available in range from Ø25 up to Ø125 mm. Body treated for longer tool life.

KAPR	45°
APMX	3.0 mm







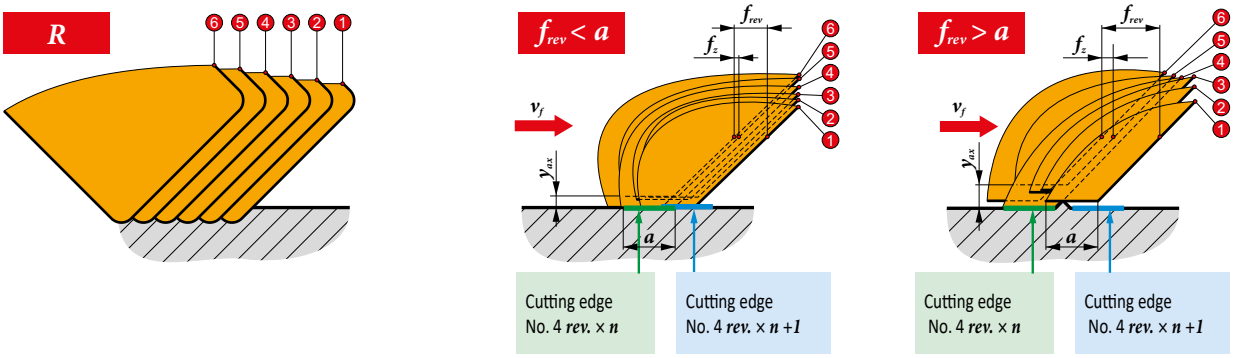
Optimum range of average chip thickness [mm]

| | | |

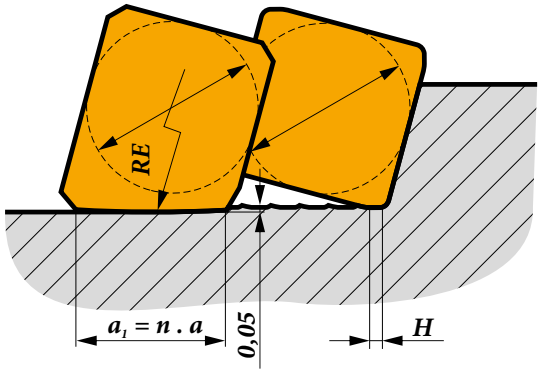
One of the key criteria in finishing operations is the resulting roughness of the machined surface. The following article will therefore provide several tips on how to approach this issue.

Face Milling

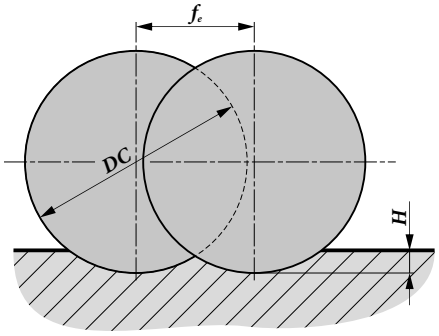
When performing any milling operation, the machined surface is shaped by multiple edges. The microgeometry of the surface is thus dependent on the axial runout of the individual edges of the milling cutter. The most axially protruding edges are the ones that shape the machined surface. The resulting roughness of the milled surface is, to a large extent, influenced by the design of the tip of the indexable insert. If the tip of the indexable insert has a radius, it creates imperfections on the surface. The size of these imperfections is dependent on the corner radius and feed speed (fig.a). For inserts with smoothing segments, the rule of thumb is that the feed per revolution must be less than 80 % of the size of the smoothing segment. In larger (multi-tooth) cutters, fulfilling this condition can sometimes be problematic, since the maximum feed value $f_z = 0.8.a/z$ may approach the lower limit recommended for certain types of insert geometry (the feed speed is lower than the width of the facet in the feed direction). Using lower feed speeds usually results in an increase in cutting resistance, leading to reduced tool life.



In that case, the best solution is to use a milling cutter with fewer teeth or to reduce the number of teeth on the milling cutter (only fitting an insert onto every other tooth of milling cutters with an even number of teeth). There is, however, a risk of reduced productivity. Another alternative is the use of so-called wiper inserts (if such inserts are available for the given type of tool). Even this solution has its drawbacks, however. For milling cutters with a small diameter (approx. 63 mm and less) the speed gradient is too high and there is a risk of tearing or smearing of the surface (edge build-up) towards the centre of the milling cutter when machining tough materials.
Information about the size of smoothing segments can be found at the beginning of technical information in the catalogue section.



As regards the majority of other types of milling operations, the approximate maximum surface roughness can again be calculated. To do so, we can use the following formula, here accompanied by a graphical explanation.

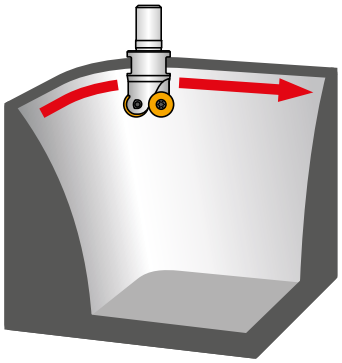


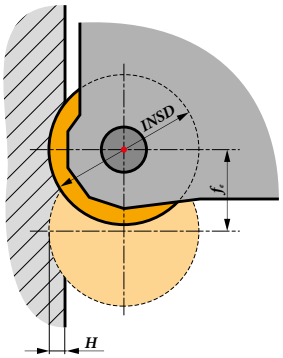
$$H = \frac{f_e^2}{4 \,.\, DC} \quad \rightarrow \quad f_e = \sqrt{4 \,.\, DC \,.\, H}$$

Where and when to apply this formula:

1) When determining line spacing during peripheral linear machining with toric* or ball-nose milling cutters.

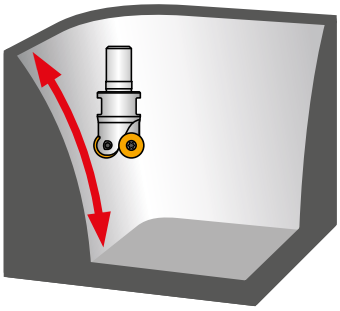
* Substitute insert diameter for ***INSD.***

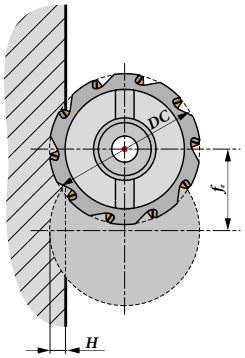




2) When determining line spacing during transverse linear machining with (not only) toric milling cutters and during plunge milling **.

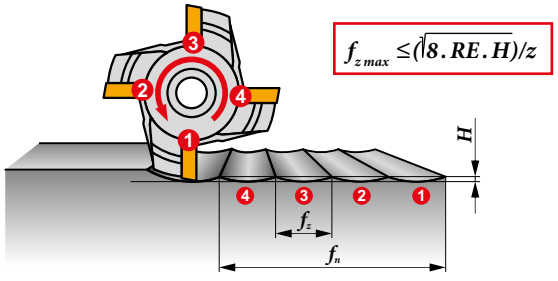
** Substitute milling cutter diameter for ***DC.***

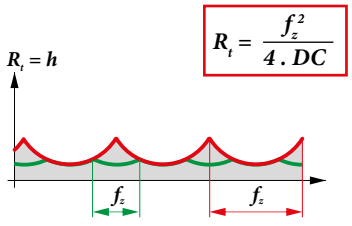




3) When determining feed per tooth during contour milling (side milling).***

*** Substitute milling cutter diameter for ***DC*** and divide by the number of teeth.

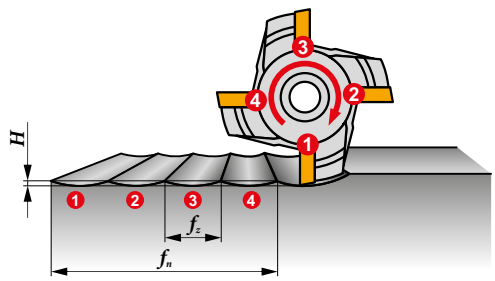




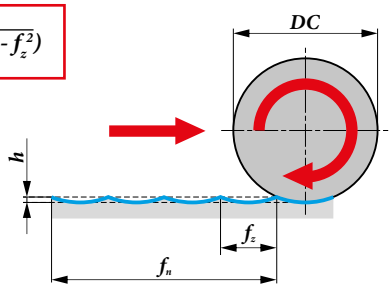
MACHINED SURFACE ROUGHNESS

Surface roughness in the radial direction, i.e. during side milling (contour or bottom of a slot milled with a disc milling cutter) is calculated using the following formula:

Substitute milling cutter diameter for ***DC***.



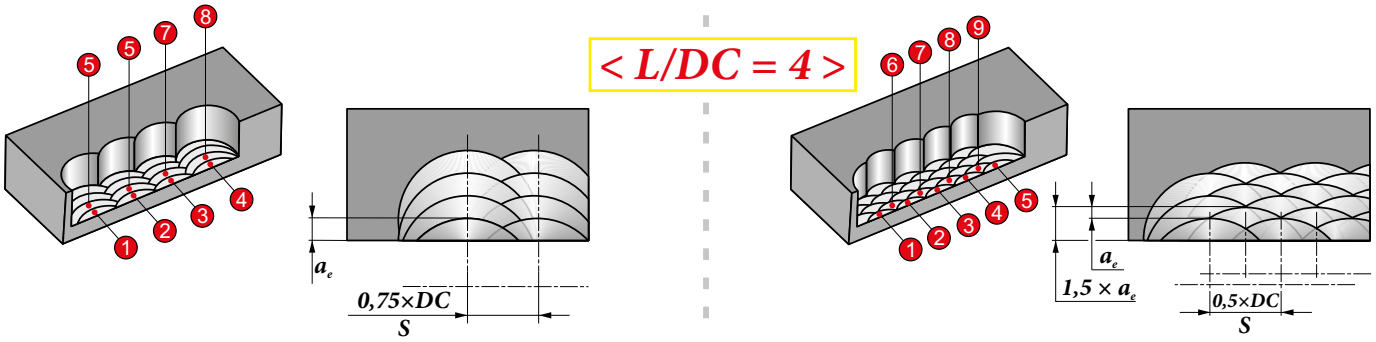
$$h = \frac{1}{2}\left(DC - \sqrt{DC^2 - f_z^2}\right)$$



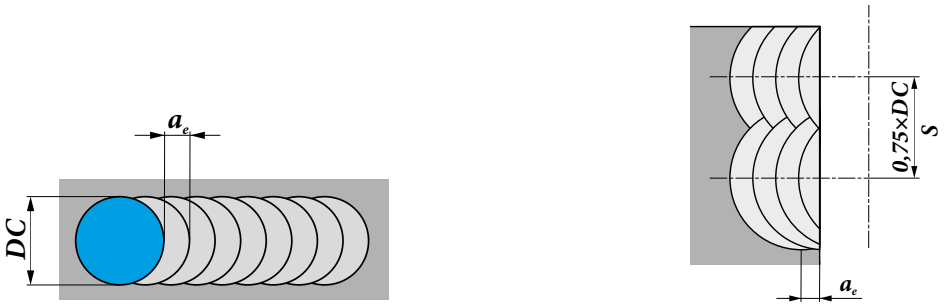
Plunge Milling (Slotting)

For this technology, you will find recommendations for the maximum permitted radial depth of cut for a given tool group. In this case, tool overhang ***L*** plays a vital role. It is therefore recommended to use a higher overhang (***L/DC > 4***) when creating wider recesses and to adjust engagement conditions in line with the following figures:

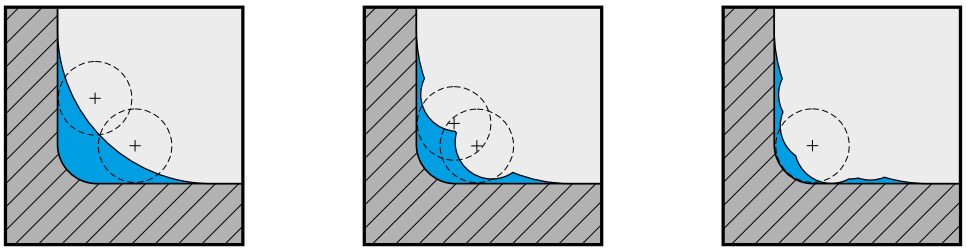
Contour milling



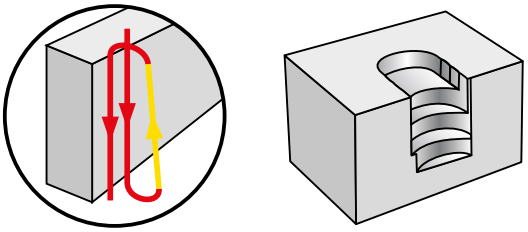
Slot milling



Shoulder milling



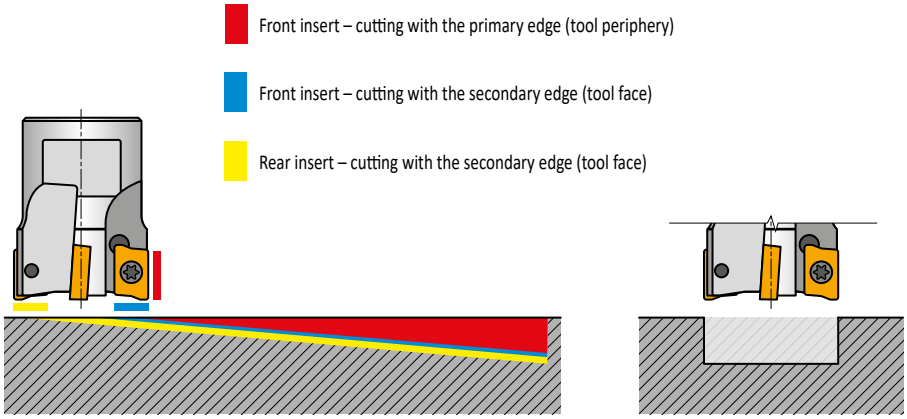
In shoulder milling, the mutual offset of paths should also not exceed ¾ of the milling cutter diameter (and should be gradually decreased towards the corner).



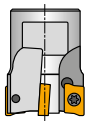
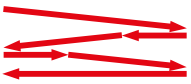
When creating programmes for this technology, you should avoid passes over already machined surfaces (bottom). In other words, we do not recommend using a so-called drilling cycle. When selecting engagement conditions, make sure that more than one tooth is engaged at all times. We also recommend gradually reducing the axial depth of cut (plunge depth), i.e. creating a "staircase" structure. Also keep in mind that plunge milling requires the use of lower speeds and feeds per tooth compared to traditional methods.

Ramping

Ramping is a technology that simultaneously applies three different cutting methods:



An important parameter here is the ramp angle, i.e. the descent in the Z axis across the given stretch. Some tools (HFC) allow descending at a lower angle but with a higher feed, or allow a higher ramp angle with lower feed to be used. These angles or descents across the given section are listed in technical recommendations.

	
	Down at max. angle and horizontally back and down again at max. angle and horizontally back...
	There and back at a smaller (half) angle and last exit horizontally.
	Down at max. angle, back horizontally by length D and then down at max. angle, repeat straight...
	Down at max. angle, then up by length X and down again at max. angle. $X = tg\,\alpha\,(DC - W1)$

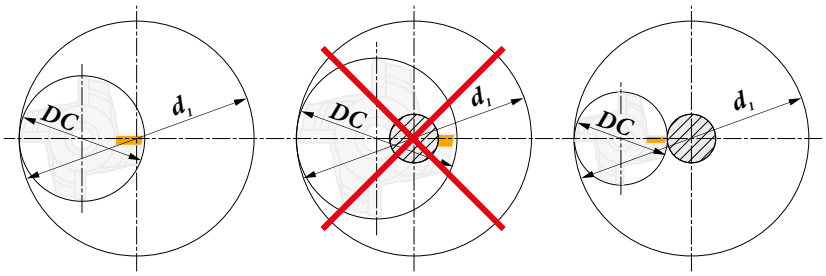
When choosing the feed speed, we advise following the recommendation given for slot milling. If the slot is deeper (i.e. first pass at an angle, second to level off), you must select one of four basic programme variants for the consecutive steps.

Where:

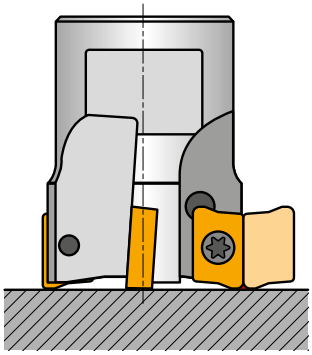
X	Offset [mm]
α	Ramp angle [°]
DC	Diameter of the milling cutter [mm]
$W1$	Insert width [mm]

Milling using Circular or Helical Interpolation

This method is analogous to ramping, except it is performed along a circular path. In this case, one of the most important factors is the milling cutter diameter or minimum and maximum diameter of the hole we are able to machine with the given milling cutter type (this information is vital only when using milling cutters without central cutting edges). If the milling cutter diameter is too large, the path of the insert will not pass through the axis of the hole, resulting in a protrusion which will collide with the face of the tool and may potentially destroy the tool completely. On the other hand, if the diameter of the milling cutter is too small, the core will remain inside the hole axis and must then be milled off separately.



$DC = cca\ 0{,}5 \times d_1$ $DC > 0{,}5 \times d_1$ $DC < 0{,}5 \times d_1$



D_{max} – Hole diameter

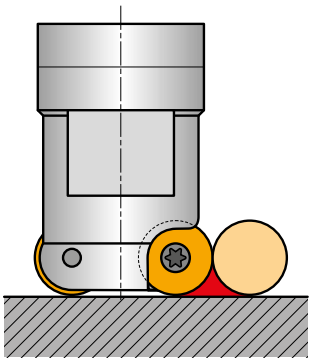
DC – Milling cutter diameter

$INSD$ – Insert diameter

RE – Insert corner radius

BS – WIPER edge length

b – Max. a_e for grooving



Maximum hole diameter

For blind holes, you can achieve a flat bottom by having the tool pass over the bottom's centre.

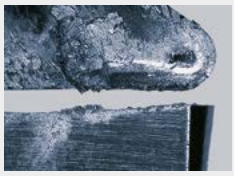
For through hole: $D_{max} = 2 \,.\, DC$		For through hole: $D_{max} = 2 \,.\, DC$

Minimum hole diameter

For through hole: $D_{min} = (DC - b) \,.\, 2$		For through hole: $D_{min} = (DC - 0.8\ INSD) \,.\, 2$
For flat bottom: $D_{min} = (DC - (RE + BS)) \,.\, 2$		For flat bottom: $D_{min} = (DC - 0.5\ INSD) \,.\, 2$

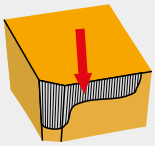
Recommendations include tables listing the minimum hole diameter, maximum hole diameter and in-axis descent angle values for these diameters (in some cases there will be two tables: one for standard insert geometry and another for HFC).

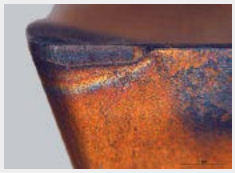
BUILT–UP EDGE



		It has no influence.
(MT)CVD / PVD	++	Any coating (decisive factor is anti-adhesion effect).
f	↑	The higher the feed rate the less probability of built-up edge creation.
v	↓↑	Change (generally increase) the cutting speed.
a_p		It has no influence.
	↓↑	Use more positive geometry (built up edge is not created when the rake angle is more than 40°).
	-	Use a coolant with more effective anti-sticking properties (we do not recommend to use coolant for milling).

FLANK WEAR



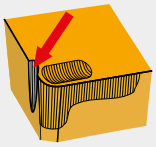


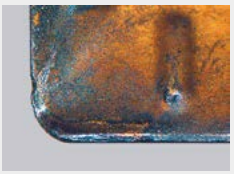
		Use a more wear resistant substrate (H).
(MT)CVD / PVD	++	Any coating (decisive factor is hardness – TiC, TiCN).
f	↑	Increase feed (especially if it is under 0.1 mm).
v	↓	Decrease cutting speed.
a_p		It has no influence.
	↑	Increase the clearance angle.
	+	It can help, but only with ideal working conditions.

CRATERING

	↑	Use a more wear resistant substrate (S).
(MT)CVD / PVD	++	CVD coating (decisive factor is oxidation resistance – α Al_2O_3).
f	↑	Feed has infuence on shape and position of crater.
v	↓	Decrease cutting speed.
a_p	↓	Minimal effect.
	↑	Use more positive cutting geometry.
	++	It can help, but only with ideal working conditions.

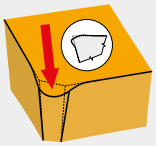
OXIDATION GROOVE ON THE MINOR EDGE

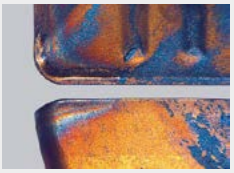




	↑	Use a more wear resistant substrate (S).
(MT)CVD PVD	+ +	CVD coating (decisive factor is oxidation resistance – α Al_2O_3).
f	↓	Feed has infuence on shape and position of groove.
v	↓	Decrease cutting speed.
a_p	↓	Minimal effect.
	↑	Use another (more positive) cutting geometry.
	+ +	It can help, but only with ideal working conditions.

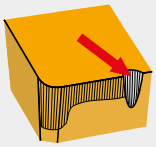
PLASTIC DEFORMATION

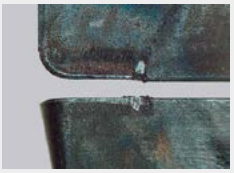




	↑	Using a more wear resistant substrate (decisive factor is content of Co).
(MT)CVD PVD	+	Any coating (decisive factor is friction).
f	↓	Decrease feed rate.
v	↓	Decrease cutting speed.
a_p	↓	Minimal effect.
	↑	Use another (more positive) cutting geometry.
	+ +	It can help, but only with ideal working conditions.

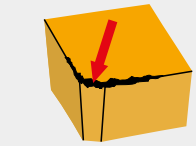
NOTCH WEAR

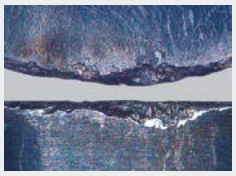




	↑↓	It depends on the character of the damage (abrasive – use more wear resistant substrate; breaking – use tougher substrate).
(MT)CVD PVD	+ +	CVD coating (decisive factor is oxidation resistance – α Al_2O_3).
f	↓	Feed has infuence on intensity, but less than the cutting speed.
v	↓	Decrease cutting speed.
a_p	↑↓	Use unequal depth of cut.
	↓	Use less positive cutting geometry.
	+	It can help, but only with ideal working conditions.
		Use tool with smaller setting angle.

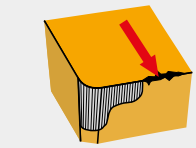
BRITTLE CRACKS AT THE CUTTING EDGE





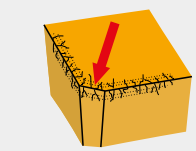
	↓	(H) grain has a great influence.
(MT)CVD / PVD	+	PVD coating recommended.
f	↓	Feed has infuence on intensity, but less than the cutting speed.
v	↑↓	It is about vibrations.
a_p	↓	It has no influence.
	↑	Increase the rake angle to reduce cutting forces.
	-	No coolant (it is possible to use air to remove chips from cutting area).
		Use better working condition (a_e/DC).

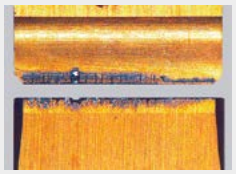
FAILURE OF CUTTING EDGE



	↓	(H) grain has a great influence.
(MT)CVD / PVD	+	PVD coating recommended.
f	↑↓	Good swarf control is very important.
v	↑↓	It is about swarf control and vibration.
a_p	↑↓	Reduces the force load (important for machining with long overhangs).
	↓	Use less positive cutting geometry.
		It has no influence.
		Use better working conditions, reduce feed rate until insert is in cut.

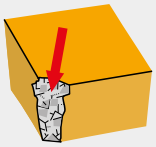
CREATION OF RACK CRACKS

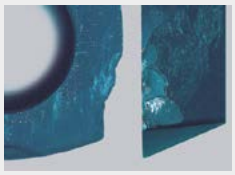




	↓	(H) grain has a great influence.
(MT)CVD / PVD	+ +	PVD coating recommended.
f	↓	Feed has infuence on intensity, but less than the cutting speed.
v	↓	Lower speed means lower temperature.
a_p		It has no influence.
	↑	Use another (more positive) cutting geometry.
	- - -	No coolant (it is possible to use air to remove chips from cutting area).
		Use better working condition (a_e/DC).

INSERT FRACTURE





	↓	(H) grain has a great influence.
(MT)CVD / PVD	+	PVD coating recommended.
f	↓	Very important to reduce cutting force.
v	↑↓	It is about swarf control and vibration.
a_p	↓	Reduces the force load.
	↓	Use less positive cutting geometry.
		It has no influence.
		Use better working conditions (a_e/DC).

POOR SURFACE QUALITY

Description and cause:

Numerous causes depending on the workpiece material, cutting conditons (feed rate and cutting speed), the condition of the cutting edge, the extent and type of wear, and the condition and rigidity of the machine – tool – workpiece assembly.

- Incorrect tool chosen
- Incorrect chip thickness
- Incorrect cutting speed
- Coolant is needed
- High feed rate

Corrective measures:

- Use a finishing insert, or an insert with finishing segment
- Use an insert with suitable cutting geometry
- Reduce the feed rate
- Adjust (usually increase) the cutting speed
- Use coolant or lubrication (MQL)
- Eliminate vibrations
- Use a tool with which the position of the individual inserts can be adjusted more accurately
- Change the chip thickness (modify the machining conditions)

VIBRATIONS

Description and cause:

This is a very common problem, which is mainly caused by an unbalanced workpiece or tool, unstable fixing of the machined part and high cutting forces.

- Low rigidity of machine-tool-workpiece assembly
- Excessive chip depth (both axial and radial)
- Run-out – poor workpiece or tool balance
- Large tool overhang

Corrective measures:

- Check the stability of the workpiece fixing
- Check the stability of the tool fixing
- Reduce the cutting depth
- Use a tool with smaller overhang
- Modify the cutting speed
- Reduce the chip thickness (change the cutting or machining conditions)
- Choose a suitable cutting geometry and tool material to minimize the cutting process force balance (as sharp and as positive as possible), i.e. use a tool with a lower cutting resistance
- When milling, use a tool with a smaller setting angle

TYPES OF WEAR ON MILLING INSERTS

BURRS

Description and cause:

This usually occurs on soft steels and plastic materials.

Corrective measures:

- Use a cutting insert with a sharp cutting edge
- Use a cutting insert with positive geometry
- Use a tool with a smaller setting angle

ERRORS IN DIMENSIONS AND SHAPE OF WORKPIECE

Description and cause:

Depends on a number of factors.

Corrective measures:

- Use a wear-resistant cutting insert
- Improve the stability of the cutter and workpiece
- Minimize tool overhang
- Use a workpiece with a suitable machining allowance

INADEQUATE CHIP FORMATION

Description and cause:

Producing a chip with a suitable shape is very important to insert durability and service life of the tool. The workpiece material, the feed rate, the depth of cut and the cutting geometry all have an effect on chip forming. A chip that is too long is unacceptable for various reasons, while a chip that is too short is undesirable as it overloads the cutting edge and causes vibrations.

Corrective measures:

- Change the feed rate and depth of cut
- Use a more suitable cutting geometry
- Change the cutting conditions

CHECK THE SEAT CONDITION OF THE CUTTING INSERT

Before clamping a new cutting insert or changing the edge, it is necessary to clean the seat and check its condition or the condition of the anvil and wedge (especially the damage under the corner of the cutting insert).

CHECK AND SERVICE THE CLAMPING PARTS

It is also important to check the clamping parts, including clamping levers, screws, wedges and clamps. Only use original, undamaged parts (found in the catalogue). Regularly lubricate the threads and the binding surface of screws using, for example, heat-resistant lubricant (MOLYKOTE). For assembly and disassembly, only use screwdrivers and wrenches specified in our catalogue or recommended by the tool manufacturer. Be careful not to over-tighten. To avoid this, we advise using a pre-set torque wrench.

CHECK THE TIGHTENING

Before tightening, check the fit of the cutting insert on the whole of the binding surface and in the radial and axial directions. Cutting inserts and tools must always be clean and undamaged.

FORMULAS

Value	Unit	Formula
Number of revolutions	[rev/min]	$n = \frac{v_c \,.\, 1000}{DC \,.\, \pi}$
Cutting speed	[m/min]	$v_c = \frac{\pi \,.\, DC \,.\, n}{1000}$
Feed per revolution	[mm/rev]	$f_{rev} = \frac{f_{min}}{n} = f_z \,.\, z$
Feed per minute (speed of feed)	[mm/min]	$f_{min} = v_f = f_{rev} \,.\, n = f_z \,.\, z \,.\, n$
Feed per tooth	[mm/tooth]	$f_z = \frac{f_{rev}}{z} = \frac{f_{min}}{n \,.\, z}$
Chip cross section	[mm^2]	$A = f_z \,.\, a_p$
Chip thickness (for inserts with a straight edge)	[mm]	$h = f_z \,.\, sin\, \kappa_r$
Chip thickness (for round cutting inserts)	[mm]	$h = f_z \,.\, \sqrt{\frac{a_p}{INSD}}$
Metal removal rate	[cm^3/min]	$Q = \frac{a_p \,.\, a_e \,.\, f_{min}}{1000}$
Power demand	[kW]	$P_c = \frac{a_p \,.\, a_e \,.\, f_{min}}{60 \,.\, 10^6 \,.\, \eta} \,.\, k_c \,.\, k_\gamma$
Approximate power demand	[kW]	$P_c = \frac{a_p \,.\, a_e \,.\, f_{min}}{x}$

Note:

	Quantity	Unit
n	Number of revolutions	[rev/min]
DC	Diameter (of tool or work piece)	[mm]
v_c	Cutting speed	[m/min]
f_{rev}	Feed per revolution	[mm/rev]
A	Chip cross section	[mm^2]
a_p	Axial depth of cut (depth of cut)	[mm]
a_e	Radial depth of cut (width of cut)	[mm]
κ_r	Setting angle	[°]
f_{min}	Feed per minute (sometimes called speed of feed)	[mm/min]
f_z	Feed per tooth	[mm/tooth]
z	Number of teeth	[-]
$INSD$	Diameter of insert	[mm]

	Quantity	Unit
h	Chip thickness	[mm]
Q	Material removal rate per minute	[cm^3/min]
P_c	Power demand	[kW]
k_c	Cutting force per mm^2	[MPa]
k_γ	Coefficient of influence of angle γ_0	[°]
η	Machine efficiency usually $\eta = 0{,}75$	[-]
x	Coefficient of influence of work piece material	[-]

Material	Steel	Cast iron	Al
Coefficient x	24 000	30 000	120 000

RECOMMENDED TORQUE OF CLAMPING SCREWS

Clamping screw	Torque	Thread	Length
	[Nm]	–	[mm]
US 20	0.9	M 2	3
US 2205-T07P	0.9	M 2.2	5
US 25	1.2	M 2.5	5
US 2505-T08P	1.2	M 2.5	5
US 2506-T07P	1.2	M 2.5	6
US 3006-T09P	2	M 3	6
US 3007-T09P	2	M 3	7
US 3504-T09P	3	M 3.5	4
US 3507-T15	3	M 3.5	7
US 3509-T15	3	M 3.5	9
US 3511-T15	3	M 3.5	11
US 3512-T15P	3	M 3.5	12
US 4008-T15P	3.5	M 4	8
US 4011-T15P	3.5	M 4	11
US 4511-T20	5	M 4.5	11
US 5012-T15P	5	M 5	12
US 70	5	M 4	5
US 71	5	M 4	7
US 72	5	M 4	9
US 73	5	M 4	11
CS 3007-T08P	1.2	M 3	7
CS 4008-T15P	3	M 4	8
CS 42506-T07P	1	M 2.5	6
CS 43008-T08P	1.2	M 3	8
CS 43509-T10P	2	M 3.5	9
CS 44013-T15P	3	M 4	13
CS 45016-T20P	5	M 5	16
CS 46020-T25P	7.5	M 6	20
CS 48025-T40P	15	M 8	25
CS 5009-T20P	5	M 5	9
CS 5013-T20P	5	M 5	13
CS 5015-T20P	5	M 5	15
CS 6020-T20P	7.5	M 6	20
CS 8025-T30P	15	M 8	25
US 2505-T07P	1.2	M 2.5	5
US 2506-T07P	1.2	M 2.5	6
US 3007-T09P	2	M 3	7
US 3505-T09P	3	M 3.5	5
US 4011A-T15P	3.5	M 4	11
US 4011-T15P	3.5	M 4	11
US 44010-T15P	3.5	M 4	10
US 44012-T15P	3.5	M 4	12
US 45011-T20P	5	M 5	11
US 45012-T20P	5	M 5	12
US 5011-T20P	5	M 5	11
US 5018-T20P	5	M 5	18
US 52506-T07P	0.8	M 2.5	6
US 54511-T15P	5	M 4.5	11
US 62003A-T06P	0.6	M 2	3
US 62004A-T06P	0.6	M 2	4
US 62004-T06P	0.6	M 2	4
US 62505-T07P	1.2	M 2.5	5
US 62506-T07P	1.2	M 2.5	6
US 62506-T08P	1.2	M 2.5	6
US 62508-T08P	1.2	M 2.5	7
US 63009-T09P	1.2	M 3	9
US 63509-T15P	3	M 3.5	10
US 63510-T10P	2	M 3.5	9
US 63511D-T15P	3	M 3.5	11
US 63513-T15P	3	M 3.5	12
US 64014-T15P	3.5	M 4	14
US 65013-T20	5	M 5	13
US 65014-T20P	5	M 5	14
US 65017-T20P	5	M 5	17
US 66015-T25P	7.5	M 6	15
US 68020-T30P	15	M 8	20
US 68026-T30P	15	M 8	26
US 74016-T15P	3.5	M 4	16

Torque screwdrivers

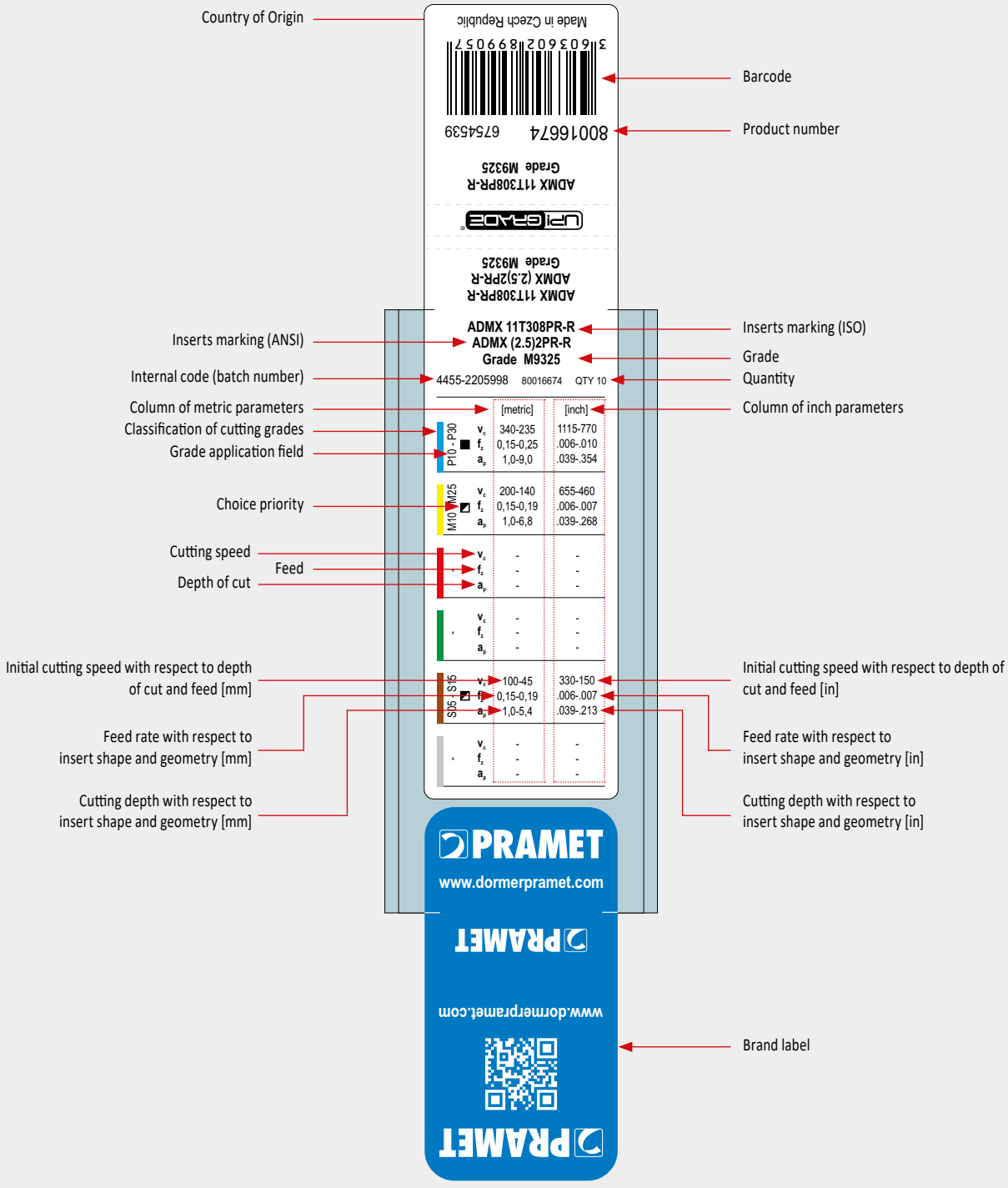
Torque handle	Torque [Nm]	Clamping screw thread
MR-0.8-2.0 Vario	0.5 – 2.0	M 2 – M 3
MR-1.0-5.0 Vario	0.8 – 5.0	M 2.5 – M 5
MR-0.9 fix	0.9	M 2
MR-2.0 fix	2.0	M 3
MR-3.0 fix	3.0	M 3.5
MR-3.5 fix	3.5	M 4
MR-5.0 fix	5.0	M 5

Replaceable shanks

Replaceable shanks
D-T6
D-T6P
D-T7
D-T7P
D-T8
D-T8P
D-T9
D-T9P
D-T15
D-T15P
D-T20
D-T20P

Screw lubrication

Insert clamping screws are subject to high thermal stresses. It is recommended that all screws be lubricated with a high quality paste such as MOLYKOTE 1000.


Country of Origin
Made in Czech Republic
3 160360 2 899057
Barcode
80016674 6754539
Product number
ADMX 11T308PR-R
Grade M9325
UPI GRADE
ADMX 11T308PR-R
ADMX (2.5)2PR-R
Grade M9325
Inserts marking (ANSI)
Inserts marking (ISO)
ADMX 11T308PR-R
ADMX (2.5)2PR-R
Grade M9325
Grade
Internal code (batch number)
Quantity
4455-2205998 80016674 QTY 10
Column of metric parameters
Column of inch parameters
[metric]
[inch]
Classification of cutting grades
Grade application field
P10 - P30
v_c 340-235 1115-770
f_z 0,15-0,25 .006-.010
a_p 1,0-9,0 .039-.354
Choice priority
M10 - M25
v_c 200-140 655-460
f_z 0,15-0,19 .006-.007
a_p 1,0-6,8 .039-.268
Cutting speed
Feed
Depth of cut
v_c - -
f_z - -
a_p - -
v_c - -
f_z - -
a_p - -
Initial cutting speed with respect to depth of cut and feed [mm]
Initial cutting speed with respect to depth of cut and feed [in]
S05 - S15
v_c 100-45 330-150
f_z 0,15-0,19 .006-.007
a_p 1,0-5,4 .039-.213
Feed rate with respect to insert shape and geometry [mm]
Feed rate with respect to insert shape and geometry [in]
v_c - -
f_z - -
a_p - -
Cutting depth with respect to insert shape and geometry [mm]
Cutting depth with respect to insert shape and geometry [in]
PRAMET
www.dormerpramet.com
PRAMET
www.dormerpramet.com
PRAMET
Brand label

HARDNESS CONVERSION TABLE

Strength [MPa]	Hardness			
	BRINELL	VICKERS	ROCKWELL	ROCKWELL
R_m	HB	HV	HRB	HRC
285	86	**90**	1190	–
320	95	**100**	56.2	–
350	105	**110**	62.3	–
385	114	**120**	66.7	–
415	124	**130**	71.2	–
450	133	**140**	75.0	–
480	143	**150**	78.7	–
510	152	**160**	81.7	–
545	162	**170**	85.8	–
575	171	**180**	87.1	–
610	181	**190**	89.5	–
640	190	**200**	91.5	–
675	199	**210**	93.5	–
705	209	**220**	95	–
740	219	**230**	96.7	–
770	228	**240**	98.1	–
800	238	**250**	99.5	–
820	242	**255**	–	23.1
850	252	**265**	–	24.8
880	261	**275**	–	26.4
900	266	**280**	–	27.1
930	276	**290**	–	28.5
950	280	**295**	–	29.2
995	295	**310**	–	31.0
1030	304	**320**	–	32.2
1060	314	**330**	–	33.3
1095	323	**340**	–	34.4
1125	333	**350**	–	35.5
1155	342	**360**	–	36.6

Strength [MPa]	Hardness			
	BRINELL	VICKERS	ROCKWELL	ROCKWELL
R_m	HB	HV	HRB	HRC
1190	352	**370**	–	37.7
1220	361	**380**	–	38.8
1255	371	**390**	–	39.8
1290	380	**400**	–	40.8
1320	390	**410**	–	41.8
1350	399	**420**	–	42.7
1385	409	**430**	–	43.6
1420	418	**440**	–	44.5
1455	428	**450**	–	45.3
1485	437	**460**	–	46.1
1520	447	**470**	–	46.9
1555	456	**480**	–	47.7
1595	466	**490**	–	48.4
1630	475	**500**	–	49.1
1665	485	**510**	–	49.8
1700	494	**520**	–	50.5
1740	504	**530**	–	51.1
1775	513	**540**	–	51.7
1810	523	**550**	–	52.3
1845	532	**560**	–	53.0
1880	542	**570**	–	53.6
1920	551	**580**	–	54.1
1955	561	**590**	–	54.7
1995	570	**600**	–	55.2
2030	580	**610**	–	55.7
2070	589	**620**	–	56.3
2105	599	**630**	–	56.8
2145	608	**640**	–	57.3
2180	618	**650**	–	57.8

NOTES

NOTES

SIMPLY RELIABLE

As a professional you can judge the quality of work by just looking at the chip. Our chip is a clean and uncomplicated shape that in itself tells a story. It is a clear and consistent signal and that's why we use it as a symbol for being **Simply Reliable**.

DORMER PRAMET

Austria
T: +31 10 2080 240
info.at@dormerpramet.com

Belgium & Luxembourg
T: +32 3 440 59 01
info.be@dormerpramet.com

Brazil
T: +55 11 5660 3000
info.br@dormerpramet.com

Canada
T: (888) 336 7637
En Français: (888) 368 8457
cs.canada@dormerpramet.com

China
T: +86 21 2416 0508
info.cn@dormerpramet.com

Croatia
T: +385 98 407 489
info.hr@dormerpramet.com

Czech Republic
T: +420 583 381 111
info.cz@dormerpramet.com

Denmark
T: 808 82106
info.se@dormerpramet.com

Finland
T: 0205 44 7003
info.fi@dormerpramet.com

France
T: +33 (0)2 47 62 57 01
info.fr@dormerpramet.com

Germany
T: +49 9131 933 08 70
info.de@dormerpramet.com

Hungary
T: +36-96 / 522-846
info.hu@dormerpramet.com

India
T: +91 11 4601 5686
info.in@dormerpramet.com

Italy
T: +39 02 30 70 54 44
info.it@dormerpramet.com

Kazakhstan
T: +7 771 305 11 45
info.kz@dormerpramet.com

Mexico
T: +52 (555) 7293981
cs.mexico@dormerpramet.com

Netherlands
T: +31 10 2080 240
info.nl@dormerpramet.com

Norway
T: 800 10 113
info.se@dormerpramet.com

Poland
T: +48 32 78-15-890
info.pl@dormerpramet.com

Portugal
T: +351 21 424 54 21
info.pt@dormerpramet.com

Romania
T: +4(0)730 015 885
info.ro@dormerpramet.com

Russia
T: +7 (495) 775 10 28
info.ru@dormerpramet.com

Slovakia
T: +421 (41) 764 54 60
info.sk@dormerpramet.com

Slovenia
T: +385 98 407 489
info.si@dormerpramet.com

Spain
T: +34 935717722
info.es@dormerpramet.com

Sweden
responsible for Iceland
T: +46 35 16 52 96
info.se@dormerpramet.com

Switzerland
T: +31 10 2080 240
info.ch@dormerpramet.com

Turkey
T: +90 533 212 45 47
info.tr@dormerpramet.com

Ukraine
T: +38 067 566 38 80
T: +38 067 566 81 51
info.ua@dormerpramet.com

United Kingdom
responsible for Ireland
T: 0870 850 4466
info.uk@dormerpramet.com

United States of America
T: (800) 877-3745
cs@dormerpramet.com

Other countries

South America
T: +55 11 5660 3000
info.br@dormerpramet.com

Adria
T: +420 583 381 527
info.rcee@dormerpramet.com

Rest of the World
Dormer Pramet International UK
T: +44 1246 571338
info.int@dormerpramet.com

Dormer Pramet International CZ
T: +420 583 381 520
info.int.cz@dormerpramet.com

DP-CAT-MILLING-2021-EN

FOLLOW US...

www.dormerpramet.com
youtube.com/dormerpramet
facebook.com/dormerprametsocial
linkedin.com/company/dormerpramet
instagram.com/dormerprametsocial
twitter.com/dormerpramet

DORMER PRAMET

THREADING 2021 – 2022

DORMER

THREADING – GENERAL CONTENT

📖 6		WMG & ISO 13399
📖 12	TAPS	INSTRUCTIONS
📖 15	TAPS	SOLID CARBIDE TAPS
📖 25	TAPS	MATERIAL SPECIFIC SHARK TAPS
📖 62	TAPS	HSS HAND & MACHINE TAPS
📖 216	TAPS	TECHNICAL INFORMATION
📖 218		THREAD MILLS
📖 238		DIES
📖 270		CUTTING FLUIDS
📖 274		GENERAL TECHNICAL INFORMATION

DORMER PRAMET

ALL IN ONE

All our publications in one place, tailored to your location and updated with the latest versions. What are you waiting for? Download our library app today from your relevant app store. **Simply Reliable.**

PRODUCT FAMILY	🕮
E	
E000	96
E000TIN	97
E001	98
E002	112
E002TIN	113
E003	114
E011	138
E013	142
E021	151
E023	154
E031	164
E033	167
E041	191
E043	194
E100	74
E101	77
E102	76
E105	124
E108	144
E111	157
E115	171
E119	184
E200	78
E201	36
E207	104
E212	106
E216	100
E225	145
E229	158
E237	80
E238	52
E239	53
E240	43
E241	44
E242	129
E243	207
E250	79
E251	81
E252	37
E255	40
E256	41
E258	105
E260	49
E261	50
E263	107
E266	101
E268	127
E275	146
E278	159

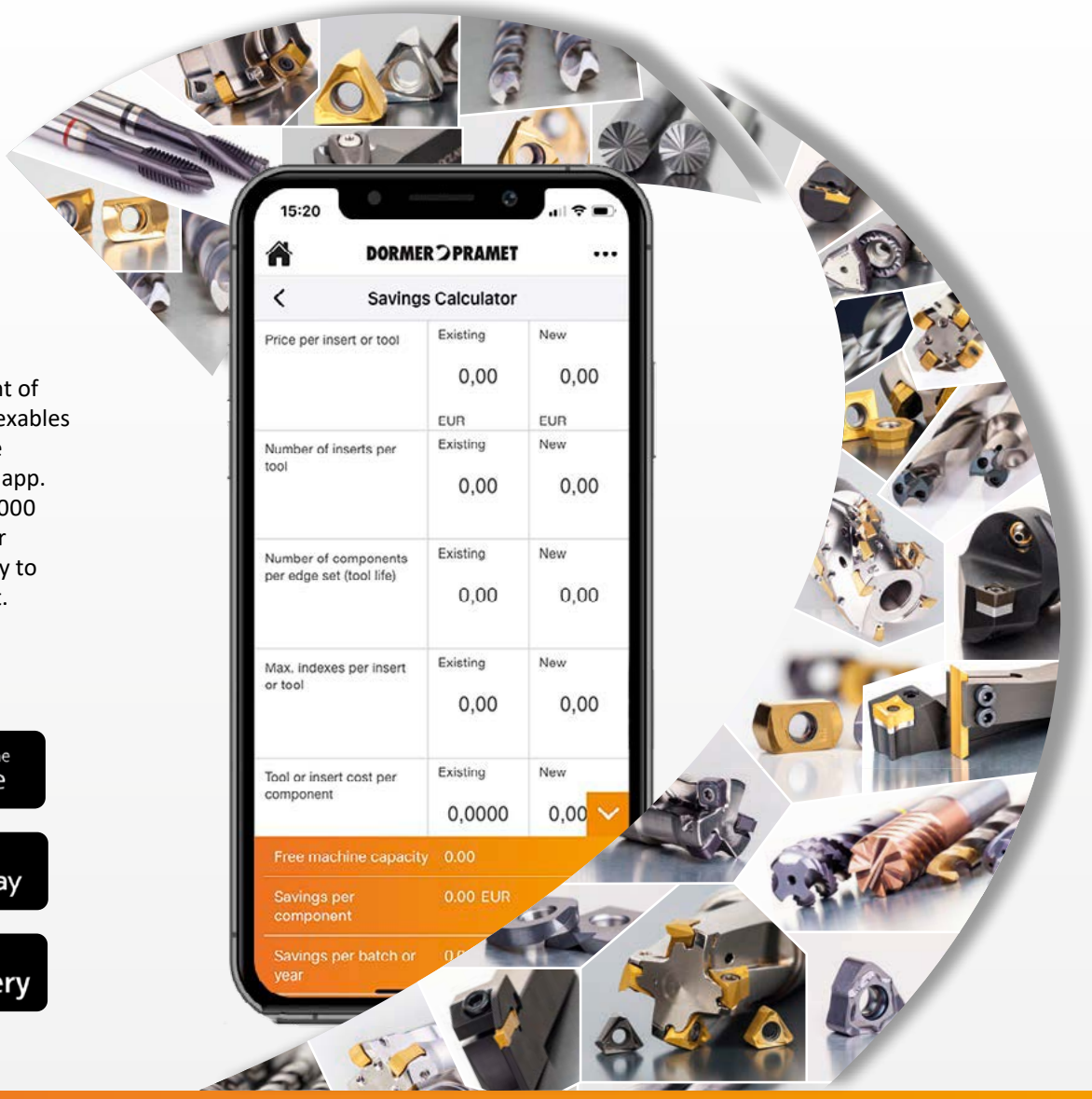
PRODUCT FAMILY	🕮
E282	186
E286	169
E287	156
E288	143
E289	120
E290	130
E291	117
E292	118
E293	121
E294	119
E295	122
E296	123
E297	39
E298	47
E299	57
E300	59
E303	89
E334	42
E335	51
E382	61
E383	60
E384	58
E390	38
E412	48
E414	54
E422	102
E423	103
E471	45
E472	46
E473	55
E474	56
E500	82
E501	86
E504	88
E513	131
E515	147
E524	160
E531	172
E533	175
E534	174
E536	176
E538	179
E539	178
E542	180
E544	183
E545	182
E547	187
E550	197
E570	170
E600	90

PRODUCT FAMILY	🕮
E605	116
E606	99
E610	91
E620	195
E621	196
E650	115
E651	155
E653	202
E654	168
E708	206
E709	204
E710	199
E711	201
E712	203
E714	198
E720	205
E721	200
EP006G	93
EP006H	92
EP00TIN	94
EP016H	95
EP10	135
EP10TIN	136
EP11	137
EP20	149
EP21	150
EP30	162
EP31	163
EP40	189
EP41	190
EX006G	109
EX006H	108
EX00TIN	110
EX016H	111
EX10	139
EX10TIN	140
EX11	141
EX20	152
EX21	153
EX30	165
EX31	166
EX40	192
EX41	193
F	
F100	248
F108	250
F110	251
F120	252
F130	253
F140	254

PRODUCT FAMILY	🕮
F150	255
F170	256
F180	257
F190	258
F201	249
F202	264
F272	267
F300	259
F302	265
F310	260
F312	266
F320	261
F330	262
F370	263
J	
J200	224
J205	225
J210	226
J215	227
J220	228
J225	229
J235	230
J245	231
J260	233
J280	232
L	
L000	210
L001	211
L002	212
L110	214
L112	215
L113	209
L114	209
L115	210
L119	208
L120	213
L126	208
M	
M200-1	272
M200-2	272
M200-3	273
T	
T200	19
T201	20
T205	22
T206	23
T210	21
T215	24

DORMER PRAMET

ALL TOOLS TOGETHER



Our entire assortment of rounds tools and indexables is included within the machining calculator app. That‘s more than 40,000 items! Whatever your machining we‘re likely to have something for it.

Simply Reliable.

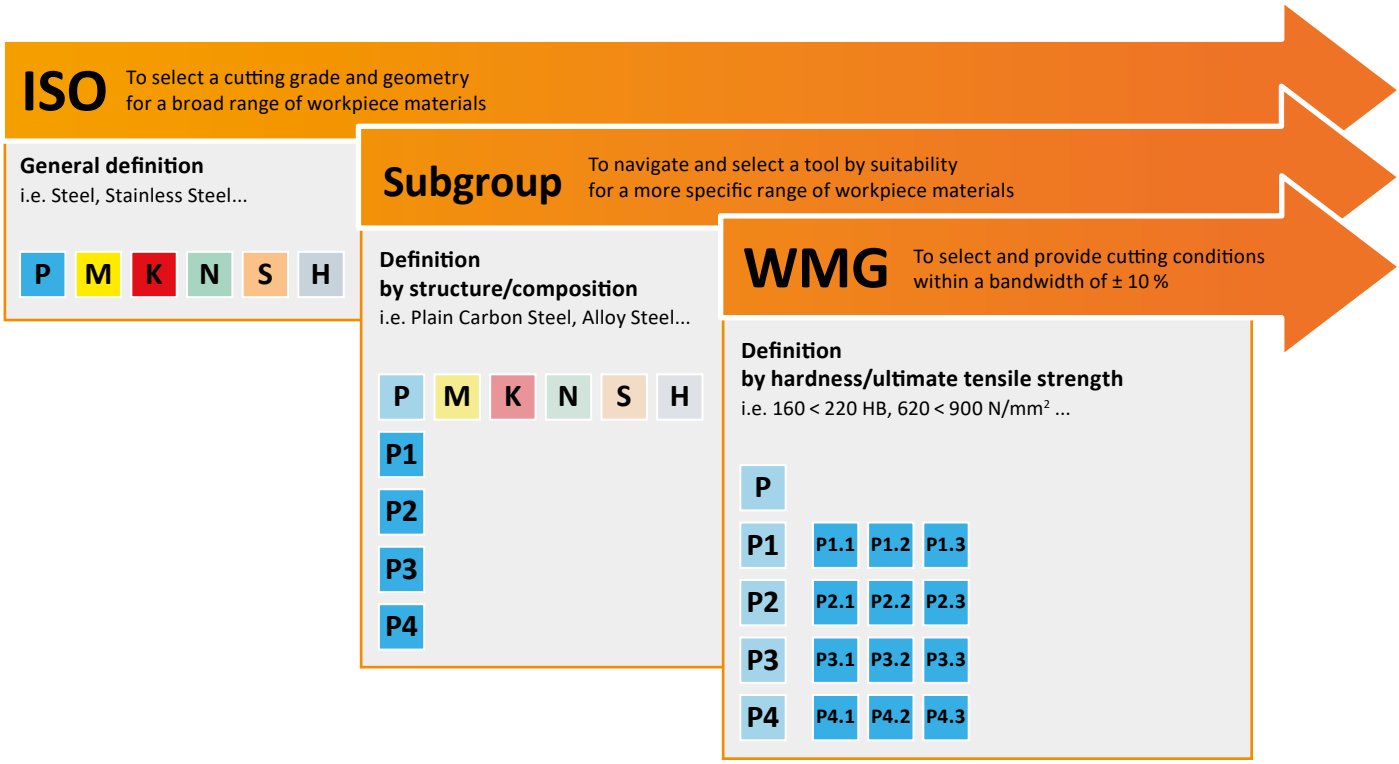
Download on the App Store

GET IT ON Google Play

Download on AppGallery

📖 6		**WMG & ISO 13399**
📖 12	TAPS	INSTRUCTIONS
📖 15		SOLID CARBIDE TAPS
📖 25		MATERIAL SPECIFIC SHARK TAPS
📖 62		HSS HAND & MACHINE TAPS
📖 216		TECHNICAL INFORMATION
📖 218		THREAD MILLS
📖 238		DIES
📖 270		CUTTING FLUIDS
📖 274		GENERAL TECHNICAL INFORMATION

WORKPIECE MATERIAL GROUPS (WMG)



ABOUT DORMER PRAMET'S WORKPIECE MATERIAL CLASSIFICATION

Workpiece **M**aterial **G**roups (**WMG**) are used to support easy and reliable selection of the right cutting tool and starting values for machining conditions in particular applications.
Dormer Pramet classifies workpiece materials into six different coloured groups;

- **Blue**: Steel and cast steel (P-group)
- **Yellow**: Stainless steel (M-group)
- **Red**: Cast iron (K-group)
- **Green**: Non-ferrous metals (N-group)
- **Brown**: High-temperature alloys (S-group)
- **Grey**: Hardened materials (H-group)

Each of these are divided into subgroups on the basis of their structure and/or composition. For example, P-group steel and cast steel is split into four subgroups, namely;

- **P1** – Free machining steel
- **P2** – Plain carbon steel
- **P3** – Alloy steel
- **P4** – Tool steel

A final division includes material properties, such as hardness and ultimate tensile strength. This is to provide our customers with a complete tool recommendation, including starting values for cutting speed and feed.
The table on the next page includes a description of each workpiece material group, as well as examples of commonly used designations.

WMG (WORK MATERIAL GROUP)

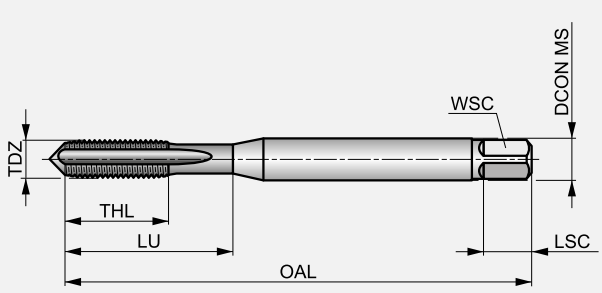
ISO group		WMG (Work Material Group)			Hardness (HB or HRC)	Ultimate Tensile Strength (MPa)
P	P1	P1.1	Free machining steel (carbon steels with increased machinability)	Sulfurized	< 240 HB	≤ 830
		P1.2		Sulfurized and phosphorized	< 180 HB	≤ 620
		P1.3		Sulfurized/phosphorized and leaded	< 180 HB	≤ 620
	P2	P2.1	Plain carbon steel (steels comprised of mainly iron and carbon)	Containing <0.25 % C	< 180 HB	≤ 620
		P2.2		Containing <0.55 % C	< 240 HB	≤ 830
		P2.3		Containing >0.55 % C	< 300 HB	≤ 1030
	P3	P3.1	Alloy steel (carbon steels with an alloying content ≤ 10%)	Annealed	< 180 HB	≤ 620
		P3.2		Hardened and tempered	180 – 260 HB	> 620 ≤ 900
		P3.3			260 – 360 HB	> 900 ≤ 1240
	P4	P4.1	Tool steel (special alloy steel for tools, dies and molds)	Annealed	< 26 HRC	≤ 900
		P4.2		Hardened and tempered	26 – 39 HRC	> 900 ≤ 1240
		P4.3			39 – 45 HRC	> 1240 ≤ 1450
M	M1	M1.1	Ferritic stainless steel (straight chromium non-hardenable alloys)		< 160 HB	≤ 520
		M1.2			160 – 220 HB	> 520 ≤ 700
	M2	M2.1	Martensitic stainless steel (straight chromium hardenable alloys)	Annealed	< 200 HB	≤ 670
		M2.2		Quenched and tempered	200 – 280 HB	> 670 ≤ 950
		M2.3		Precipitation-hardened	280 – 380 HB	> 950 ≤ 1300
	M3	M3.1	Austenitic stainless steel (chromium-nickel and chromium-nickel-manganese alloys)		< 200 HB	≤ 750
		M3.2			200 – 260 HB	> 750 ≤ 870
		M3.3			260 – 300 HB	> 870 ≤ 1040
	M4	M4.1	Austenitic-ferritic (DUPLEX) or super-austenitic stainless steel		< 300 HB	≤ 990
		M4.2	Precipitation hardening austenitic stainless steel		300 – 380 HB	≤ 1320
K	K1	K1.1	Gray iron or Automotive Gray iron (GG) (iron-carbon castings with a lamellar graphite microstructure)	Ferritic or ferritic-pearlitic	< 180 HB	≤ 190
		K1.2		Ferritic-pearlictic or pearlitic	180 – 240 HB	> 190 ≤ 310
		K1.3		Pearlitic	240 – 280 HB	> 310 ≤ 390
	K2	K2.1	Malleable iron (GTS/GTW) (iron-carbon castings with a graphite-free microstructure)	Ferritic	< 160 HB	≤ 400
		K2.2		Ferritic or pearlitic	160 – 200 HB	> 400 ≤ 550
		K2.3		Pearlitic	200 – 240 HB	> 550 ≤ 660
	K3	K3.1	Ductile iron (GGG) (iron-carbon castings with a nodular graphite microstructure)	Ferritic	< 180 HB	≤ 560
		K3.2		Ferritic or pearlitic	180 – 220 HB	> 560 ≤ 680
		K3.3		Pearlitic	220 – 260 HB	> 680 ≤ 800
	K4	K4.1	Austenitic gray iron (ASTM A436) (iron-carbon alloy castings with an austenitic lamellar graphite microstructure)		< 180 HB	≤ 190
		K4.2	Austenitic ductile iron (ASTM A439 or ASTM A571) (iron-carbon alloy castings with an austenitic nodular graphite microstructure)		< 240 HB	≤ 740
		K4.3	Austempered ductile iron (ASTM A897) (iron-carbon alloy castings with an ausferrite microstructure)		< 280 HB	> 840 ≤ 980
		K4.4			280 – 320 HB	> 980 ≤ 1130
		K4.5			320 – 360 HB	> 1130 ≤ 1280
	K5	K5.1	Compacted graphite iron CGI (ASTM A842) (iron-carbon castings with a vermicular graphite structure)	Ferritic	< 180 HB	≤ 400
		K5.2		Ferritic-pearlitic	180 – 220 HB	> 400 ≤ 450
		K5.3		Pearlitic	220 – 260 HB	> 450 ≤ 500
N	N1	N1.1	Commercially pure wrought aluminium		< 60 HB	≤ 240
		N1.2	Wrought aluminium alloys	Half hard tempered	60 – 100 HB	> 240 ≤ 400
		N1.3		Full hard tempered	100 – 150 HB	> 400 ≤ 590
	N2	N2.1	Cast aluminium alloys		< 75 HB	≤ 240
		N2.2			75 – 90 HB	> 240 ≤ 270
		N2.3			90 – 140 HB	> 270 ≤ 440
	N3	N3.1	Free-cutting copper-alloys materials with excellent machining properties		–	–
		N3.2	Short-chip copper-alloys with good to moderate machining properties		–	–
		N3.3	Electrolytic copper and long-chip copper-alloys with moderate to poor machining properties		–	–
	N4	N4.1	Thermoplastic polymers		–	–
		N4.2	Thermosetting polymers		–	–
		N4.3	Reinforced polymers or composites		–	–
	N5	N5.1	Graphite		–	–
S	S1	S1.1	Titanium or titanium alloys		< 200 HB	≤ 660
		S1.2			200 – 280 HB	> 660 ≤ 950
		S1.3			280 – 360 HB	> 950 ≤ 1200
	S2	S2.1	Fe-based high-temperature alloys		< 200 HB	≤ 690
		S2.2			200 – 280 HB	> 690 ≤ 970
	S3	S3.1	Ni-based high-temperature alloys		< 280 HB	≤ 940
		S3.2			280 – 360 HB	> 940 ≤ 1200
	S4	S4.1	Co-based high-temperature alloys		< 240 HB	≤ 800
		S4.2			240 – 320 HB	> 800 ≤ 1070
H	H1	H1.1	Chilled cast iron		< 440 HB	–
	H2	H2.1	Hardened cast iron		< 55 HRC	–
		H2.2			> 55 HRC	–
	H3	H3.1	Hardened steel <55 HRC		< 51 HRC	–
		H3.2			51 – 55 HRC	–
	H4	H4.1	Hardened steel >55 HRC		55 – 59 HRC	–
		H4.2			> 59 HRC	–

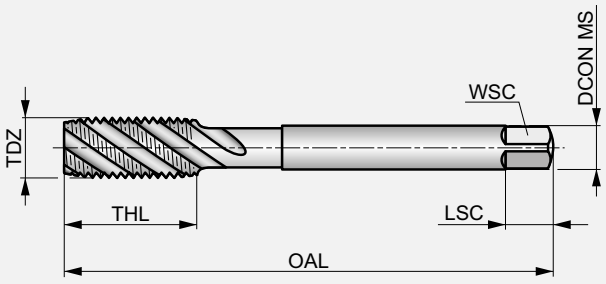
CUTTING TOOL PARAMETERS ACCORDING TO ISO 13399

All cutting tools are defined by a number of parameters according to the standard ISO 13399. This list contains all the parameters used in this catalogue and their definitions.

ISO 13399 is an international cutting tool information standard. It provides dimensions and parameters in a neutral format that is independent of any particular system or company nomenclature. When cutting tools are clearly defined according to a global standard, all types of software can process the electronic data more quickly, improving the quality of communication and helping to make the exchange of information run smoothly. Supporting a common language in our cutting tool descriptions this will assist system to system communication. It will save you a significant amount of time, providing an easier gathering of high-quality data across our 40,000 solid and indexable tools. By using an ISO 13399 compliant system, there will be no need to manually interpret data and key-enter it into your system.

EXAMPLES ONLY!





ISO 13399	Description
BD	Body diameter
DCON MS	Connection diameter
DRVS	Drive size
LDP	Drill part length
LSC	Clamping length
LU	Usable Length
NOF	Flute count
OAL	Overall length
PHD	Premachined hole diameter
PRAT_HEADER	Description

ISO 13399	Description
TCL	Tap chamfer length
TD	Thread diameter
TDZ	Thread diameter size
THL	Threading length
TP	Thread pitch
TPI	Threads per inch
WSC	Clamping width
WSCN	Clamping width minimum
WSCX	Clamping width maximum

DORMER PRAMET

FOLLOW US

SHARE

LIKE

COMMENT

TAG

RE-TWEET

SOLID CARBIDE,
MATERIAL SPECIFIC & HSS TAPS

THREADING – GENERAL CONTENT

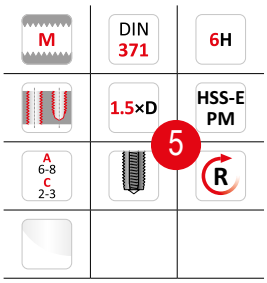
📖 6		WMG & ISO 13399
📖 12	TAPS	**INSTRUCTIONS**
📖 15	TAPS	**SOLID CARBIDE TAPS**
📖 25	TAPS	**MATERIAL SPECIFIC SHARK TAPS**
📖 62	TAPS	**HSS HAND & MACHINE TAPS**
📖 216	TAPS	**TECHNICAL INFORMATION**
📖 218		THREAD MILLS
📖 238		DIES
📖 270		CUTTING FLUIDS
📖 274		GENERAL TECHNICAL INFORMATION

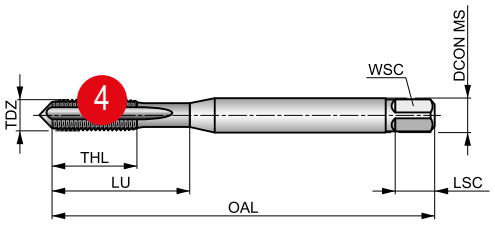
1 E200

DORMER

HSS-E-PM Straight Flute Machine Tap, Metric, DIN371 Standard, Bright Finish

The straight flute design makes it suitable for both through and blind holes whilst the bright finish means workpiece material will not stick to the cutting edge, so giving you a more accurate finish on the thread. Suitable for a wide range of materials.





Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
■11	■12	■12	■9	■8	◩7	■7	◩6	◩4	◩13	◩10	◩8	◩14	◩11

K3.1	K3.2	K4.1	K4.2	K5.1	K5.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N4.2
◩12	◩9	◩12	◩9	◩12	◩10	◩12	◩15	◩14	◩11	◩21	■14	◩8

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E200M2	2	0.40	45.0	6	2.80	2.10	5	3	1.60	9.00
E200M2.5	2.5	0.45	50.0	8	2.80	2.10	5	3	2.05	12.50
E200M3	3	0.50	56.0	9	3.50	2.70	6	3	2.50	18.00
E200M3N01	3	0.50	56.0	9	3.50	2.70	6	3	2.50	18.00
E200	4	0.70	63.0	12	4.50	3.40	6	3	3.30	21.00
E200 01	4	0.70	63.0	12	4.50	3.40	6	3	3.30	21.00
E200M5	5	0.80	70.0	13	6.00	4.90	8	3	4.20	25.00
E200M5N01	5	0.80	70.0	13	6.00	4.90	8	3	4.20	25.00
E200M6	6	1.00	80.0	15	6.00	4.90	8	3	5.00	30.00
E200M6N01	6	1.00	80.0	15	6.00	4.90	8	3	5.00	30.00
E200M8	8	1.25	90.0	18	8.00	6.20	9	3	6.80	35.00
E200M8N01	8	1.25	90.0	18	8.00	6.20	9	3	6.80	35.00
E200M10	10	1.50	100.0	20	10.00	8.00	11	3	8.50	39.00
E200M10N01	10	1.50	100.0	20	10.00	8.00	11	3	8.50	39.00

Pos.	Description
1	Designation of taps
2	Product description
3	Illustrative picture
4	Schematic drawing of tool

Pos.	Description
5	Product features
6	Material group recommendations incl. speed and feed guidance
7	Product code
8	Product dimensions

Typical page with tap holder displayed – specific page details will differ.

SOLID CARBIDE TAPS – HSS TAPS – ICONS OVERVIEW

General icons

■	Primary use
◪	Possible use

Basic standard group (BSG)

ANSI B94.9	ANSI B94.9 – Tap Standard
ANSI	ANSI – Tap Standard
ANSI DORMER	ANSI Dormer Standard
DIN 2174	DIN 2174 – Forming Tap Standard
DIN 2181	DIN 2181 – Hand Tap Standard
DIN 2184-1	DIN 2184-1 – Tap Standard
DIN 351	DIN 351 – Straight Flute Tap Standard
DIN 352	DIN 352 – Thread Form Standard
DIN 357	DIN 357 – Nut Tap Standard
DIN 371	DIN 371 – Thread Form Standard
DIN 374	DIN 374 – MF Thread Standard
DIN 376	DIN 376 – Thread Form Standard
DIN 40432	DIN 40432 – PG Thread Standard
DIN 5156	DIN 5156 – Thread Form Standard
DIN 5157	DIN 5157 – Pipe Thread Standard
DIN DORMER	DIN Dormer Standard
DIN 371/376	DIN Thread Standard (based on size range) DIN 371 if Ø ≤ 10mm / DIN 376 if Ø ≥ 12mm
ISO 2283	ISO 2283 – Long Shank Tap Standard
ISO 2284	ISO 2284 – Pipe Tap Standard
ISO 529	ISO 529 – Tap Standard
ISO DORMER	ISO Dormer Standard

Material code (BMC)

HSS-E PM	High Speed Cobalt Powder Metal Tool Material
HSS-E	High Speed Cobalt Steel Tool Material
HSS	High Speed Steel Tool Material
HM	Hard Material (Solid Carbide)

Coating

Bright	Bright (uncoated)
Bright ST	Combination Bright and Steam Tempered
Cr	Flash Chrome (Hard Chrome) Plating
Super B	Special TiAlN Coating (+ WC/C)
ST	Steam Tempered (Steam Oxide) Surface Treatment
TiAlN Top	Titanium Aluminium Nitride Coating (with smoothing process)
TiAlN	Titanium Aluminium Nitride Coating
TiN	Titanium Nitride Coating
TiCN	Titanium Carbon Nitride Coating

Coolant exit style code (CXSC)

	Through Tool Coolant – Radial Exit
	Through Tool Coolant – Axial Exit

Flute helix angle (FHA)

λ 15°	15° Helix Angle (Flute)
λ 27°	27° Helix Angle (Flute)
λ 30°	30° Helix Angle (Flute)
λ 35°	35° Helix Angle (Flute)
λ 40°	40° Helix Angle (Flute)
λ 45°	45° Helix Angle (Flute)
λ 48°	48° Helix Angle (Flute)

SOLID CARBIDE TAPS – HSS TAPS – ICONS OVERVIEW

Flute Geometry (FDC)

	Fluteless Geometry (Threadforming)
	Oil Grooves Geometry (Threadforming)
	Spiral Flute Geometry
	Spiral Point Geometry
	Straight Flute Geometry

Hand (Cutting direction)

	Left Hand Rotation / Cutting
	Right Hand Rotation / Cutting

Tap chamfer style (TCS)

E 1.5-2	Full Bottoming Tap Chamfer (1.5-2 Pitch Lead)
B 3.5-5	Plug Tap Chamfer (3.5-5 Pitch Lead)
C 2-3	Semi-Bottoming Tap Chamfer (2-3 Pitch Lead)
C 2-3.5	Semi-Bottoming Tap Chamfer (2-3.5 Pitch Lead)
A 6-8 C 2-3	Tap Chamfers; A = Taper (6-8 Pitch Lead) & C = Semi-Bottoming (2-3 Pitch Lead)
C 2-3 D 18-20	Tap Chamfers; C = Semi-Bottoming (2-3 Pitch Lead) & D = Nut Style (18-20 Pitch Lead)

Thread form type (THFT)

NPSF	Thread Form, American National Pipe Straight Fuel (Dryseal)
NPSM	Thread Form, American National Pipe Straight Mechanical
NPT	Thread Form, American National Pipe Taper
NPTF	Thread Form, American National Pipe Taper Fuel (Dryseal)
BA	Thread Form, British Association Screw Threads
BSF	Thread Form, British Standard Fine
G	Thread Form, British Standard Pipe (BSP)
Rc	Thread Form, British Standard Taper Pipe, 1:16 Taper (BSPT)
BSW	Thread Form, British Standard Whitworth
M	Thread Form, Metric Coarse
MF	Thread Form, Metric Fine
EGM	Thread Form, Metric ISO (Screw Thread Insert Type)
PG	Thread Form, Steel Conduit DIN 40430 (electrical)
UNC	Thread Form, Unified Coarse
UNF	Thread Form, Unified Fine
UN	Thread Form, Unified National

Thread Tolerance Zone class (TCTR)

6H	DIN Thread Pitch Diameter Tolerance Zone (high basic pitch diameter)
6G	DIN Thread Pitch Diameter Tolerance Zone (low basic pitch diameter)
6HX	DIN Thread Pitch Diameter Tolerance Zone (with increased pitch diameter)
6GX	DIN Thread Pitch Diameter Tolerance Zone (with increased pitch diameter)
2B	Internal Inch Thread Medium Class of Fit
2BX	Internal Inch Thread Medium Class of Fit (with increased pitch diameter)
Medium	Medium Inch Thread Class of Fit
Normal	Normal Fit Class for Pipe Thread

Threading application

	Blind Hole Application
	Through Hole Application
	Through or Blind Hole Application

Usable length diameter ratio (ULDR)

1.5×D	1.5×D Useable Tool Depth to Diameter Ratio
2.5×D	2.5×D Useable Tool Depth to Diameter Ratio
2×D	2×D Useable Tool Depth to Diameter Ratio
3.5×D	3.5×D Useable Tool Depth to Diameter Ratio
3×D	3×D Useable Tool Depth to Diameter Ratio

SOLID CARBIDE TAPS

Carbide materials

Carbide Materials (or Hard Materials)	HM	A sintered powder metallurgy substrate, consisting of a metallic carbide composite with binder metal. The most central raw material is tungsten carbide (WC). Tungsten carbide contributes to the hardness of the material. Tantalum carbide (TaC), titanium carbide (TiC) and niobium carbide (NbC) complements WC and adjusts the properties to what is desired. These three materials are called cubic carbides. Cobalt (Co) acts as a binder and keeps the material together. Carbide materials are often characterised by high compression strength, high hardness and therefore high wear resistance, but also by limited flexural strength and toughness. Carbide is used in taps, reamers, milling cutters, drills and thread milling cutters.

Surface Treatments

Bright (uncoated)		Bright finish (uncoated surface) improves chip flow in soft or non-ferrous materials and maintains sharp cutting edges in abrasive materials.

Surface Coatings

Titanium Carbon Nitride Coating (TiCN)		Titanium Carbon Nitride is a ceramic coating applied by PVD coating technology. TiCN is harder than TiN and has a lower coefficient of friction. Its hardness and toughness in combination with good wear resistance ensures that it finds its principal application in the field of milling to enhance the performance of milling cutters.
Super-B Coating (TiAlN/ WC/C)		Super B is a Titanium Aluminium Nitride + Tungsten Carbide + Carbon Coating used for wet and minimal lubrication machining in drilling, milling and tapping applications. Very effective for cast iron, hardened steels and heat resistant super alloys.

DORMER PRAMET

ALWAYS CONNECT

No wifi or internet connection? The machining calculator works perfectly even when you are offline, making sure it's always available when you need it. **Simply Reliable.**

Download on the App Store

GET IT ON Google Play

Download on AppGallery

Thread form (THFT)		M	M	M	M	M	M							
Basic standard group (BSG)		DIN 371/376	DIN 371/376	DIN 371	DIN 371/376	DIN 371/376	DIN 2174							
Thread tolerance class (TCTR)		6H	6HX	6HX	6H	6H	6HX							
Threading application														
Usable length (ULDR)		2×D	2.5×D	2×D	2×D	2.5×D	3×D							
Material code (BMC)		HM	HM	HM	HM	HM	HM							
Tap chamfer style (TCS)		C 2-3	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3.5							
Flute Geometry (FDC)														
Flute helix angle (FHA)					λ 15°	λ 15°								
Hand (Cutting direction)		R	R	R	R	R	R							
Coating		TiCN	Super B	TiCN	Bright	Bright	TiCN							
Coolant exit style (CXSC)														
Product Family Code		T200	T201	T210	T205	T206	T215							
		M3 - M12	M5 - M16	M3 - M12	M3 - M12	M5 - M12	M3 - M10							
		19	20	21	22	23	24							
P	P1						■							
	P2						■							
	P3						■							
	P4						■							
M	M1						■							
	M2						■							
	M3						■							
	M4						◪							
K	K1	◪	■		◪	◪								
	K2		◪		■	■								
	K3		◪		■	■								
	K4		◪		■	■								
	K5		◪		■	■								
N	N1						■							
	N2		◪		■	■	■							
	N3						■							
	N4	◪	◪		◪	◪								
	N5													
S	S1													
	S2													
	S3													
	S4													
H	H1	■		◪										
	H2	◪		◪										
	H3	■		◪										
	H4	◪		■										

■ Primary use ◪ Possible use

T200

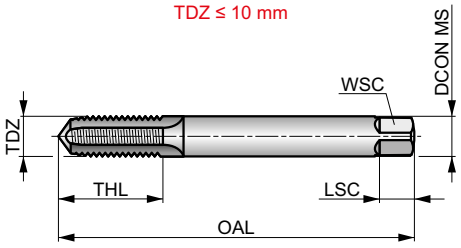
DORMER

Carbide Straight Flute Machine Tap, Metric, with TiCN Coating, DIN Standard

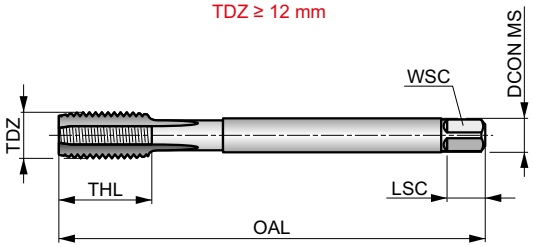
Superior performance and great tool life at high speeds. Suitable for machine tapping in tool steels, high silicon aluminium and other hardened and abrasive materials. The straight flute design makes the taps ideal for threading both through and blind holes. TiCN coated to improve performance and extend tool life.

M	DIN 371/376	6H
	2×D	HM
C 2-3		R
TiCN		

TDZ ≤ 10 mm



TDZ ≥ 12 mm



Workpiece material group suitability and starting values for cutting speed (m/min).

K1.1	K1.2	K1.3	N2.3	N3.2	N4.2	N4.3	H1.1	H2.1	H2.2	H3.1	H3.2	H4.1	H4.2
◪60	◪44	◪33	◪60	◪7	◪50	◪30	■11	■7	◪5	■7	■6	◪4	◪3

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
T200M3 [1]	3	0.50	56.0	10	3.50	2.70	6	3	2.60	–
T200M4 [1]	4	0.70	63.0	13	4.50	3.40	6	3	3.40	–
T200M5 [1]	5	0.80	70.0	16	6.00	4.90	8	3	4.30	–
T200M6	6	1.00	80.0	19	6.00	4.90	8	3	5.10	30.00
T200M8	8	1.25	90.0	22	8.00	6.20	9	3	6.90	35.00
T200M10	10	1.50	100.0	24	10.00	8.00	11	3	8.70	39.00
T200M12	12	1.75	110.0	23	9.00	7.00	10	3	10.40	–

[1] Without neck.

T201

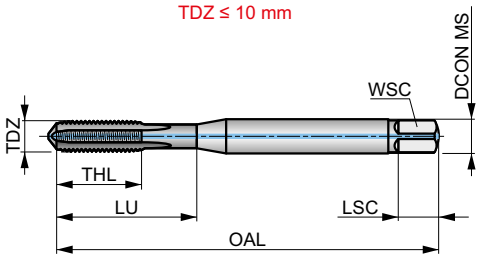
DORMER

Carbide Straight Flute Machine Tap with Coolant Feed, Metric, DIN Standard

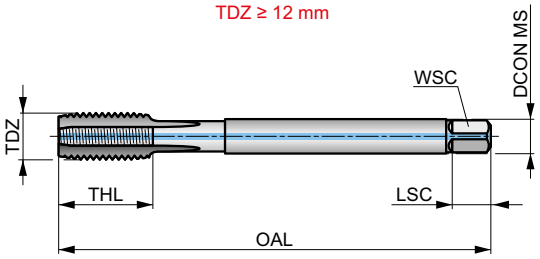
Suitable for machine tapping in abrasive materials, such as cast iron and high silicon aluminium. It has a straight flute design with coolant feed, for efficient threading of blind holes. Super-B coated to improve performance and extend the tool life.

M	DIN 371/376	6HX
	2.5×D	HM
C 2-3		R
Super B		

TDZ ≤ 10 mm



TDZ ≥ 12 mm



Workpiece material group suitability and starting values for cutting speed (m/min).

K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	K3.3	K4.1	K4.2	K4.3	K4.4	K4.5
■ 60	■ 44	■ 33	◪ 47	◪ 38	◪ 30	◪ 41	◪ 32	◪ 26	◪ 38	◪ 29	◪ 21	◪ 18	◪ 15

K5.1	K5.2	K5.3	N2.2	N2.3	N3.2	N4.2	N4.3
◪ 43	◪ 33	◪ 25	◪ 50	■ 40	◪ 10	◪ 25	◪ 15

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
T201M5 [1]	5	0.80	70.0	16	6.00	4.90	8	4	4.30	–
T201M6	6	1.00	80.0	19	6.00	4.90	8	4	5.10	30.00
T201M8	8	1.25	90.0	22	8.00	6.20	9	4	6.90	35.00
T201M10	10	1.50	100.0	24	10.00	8.00	11	4	8.70	39.00
T201M12	12	1.75	110.0	23	9.00	7.00	10	4	10.40	–
T201M16	16	2.00	110.0	25	12.00	9.00	12	4	14.25	–

[1] Without neck.

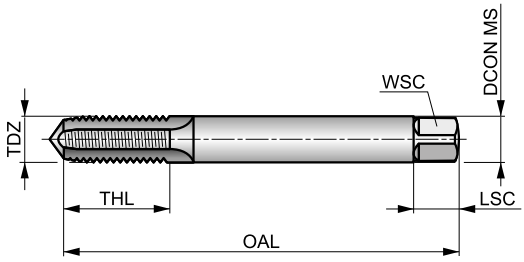
T210

DORMER

Carbide Straight Flute Machine Tap, Metric, DIN Standard

Superior performance and great tool life at high speeds. Suitable for machine tapping of hardened steel. The straight flute design makes the taps ideal for threading both through and blind holes. TiCN coated to improve performance and extend the tool life.

M	DIN 371	6HX
	2×D	HM
C 2-3		R
TiCN		



Workpiece material group suitability and starting values for cutting speed (m/min).

H1.1	H2.1	H2.2	H3.1	H3.2	H4.1	H4.2
◪11	◪7	■5	◪7	◪6	■4	■3

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
T210M3 [1)]	3	0.50	56.0	8	3.50	2.70	6	4	2.60
T210M4 [1)]	4	0.70	63.0	11	4.50	3.40	6	5	3.40
T210M5 [1)]	5	0.80	70.0	13.5	6.00	4.90	8	5	4.30
T210M6 [1)]	6	1.00	80.0	16.5	6.00	4.90	8	5	5.10
T210M8 [1)]	8	1.25	90.0	21.5	8.00	6.20	9	5	6.90
T210M10 [1)]	10	1.50	100.0	27	10.00	8.00	11	5	8.70
T210M12 [1)]	12	1.75	110.0	32	12.00	9.00	12	6	10.40

[1)] Without neck.

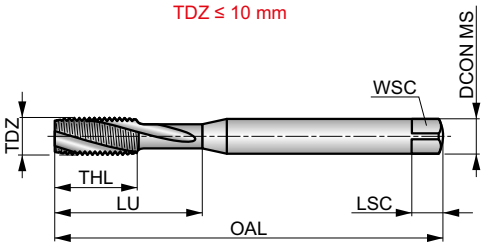
T205

Carbide 15° Spiral Flute Machine Tap, Metric, DIN Standard

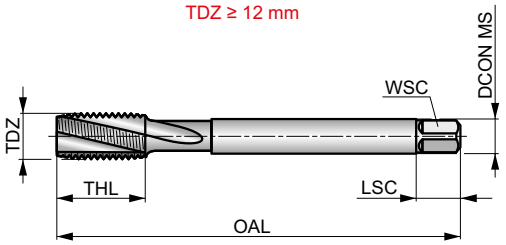
Suitable for machine tapping in abrasive materials, such as cast iron and high silicon aluminium, making them a very versatile choice. The 15° spiral flute makes it great for threading holes which do not go all the way through the workpiece (blind holes). The bright finish ensures a clean and accurate result.

M	DIN 371/376	6H
2×D		HM
C 2-3		λ 15°
R	Bright	

TDZ ≤ 10 mm



TDZ ≥ 12 mm



Workpiece material group suitability and starting values for cutting speed (m/min).

K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	K3.3	K4.1	K4.2	K4.3	K4.4	K4.5
◪ 40	◪ 30	◪ 22	■ 31	■ 25	■ 20	■ 27	■ 21	■ 17	■ 25	■ 19	■ 14	■ 12	■ 10

K5.1	K5.2	K5.3	N2.1	N2.2	N2.3	N4.2	N4.3
■ 29	■ 21	■ 17	■ 54	■ 48	■ 35	◪ 25	◪ 15

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
T205M3 [1]	3	0.50	56.0	10	3.50	2.70	6	3	2.60	–
T205M4 [1]	4	0.70	63.0	13	4.50	3.40	6	3	3.40	–
T205M5 [1]	5	0.80	70.0	16	6.00	4.90	8	3	4.30	–
T205M6	6	1.00	80.0	19	6.00	4.90	8	3	5.10	30.00
T205M8	8	1.25	90.0	22	8.00	6.20	9	3	6.90	35.00
T205M10	10	1.50	100.0	24	10.00	8.00	11	3	8.70	39.00
T205M12	12	1.75	110.0	23	9.00	7.00	10	3	10.40	–

[1] Without neck.

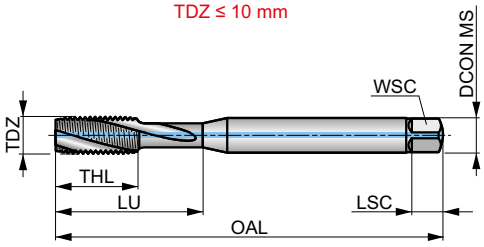
T206

Carbide 15° Spiral Flute Machine Tap, Coolant Feed, Metric, DIN Standard

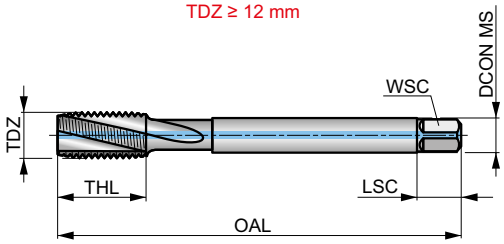
Premium carbide tap which provides superior performance, coupled with longer tool life. It can be used to machine tap in abrasive materials, such as cast iron and high silicon aluminium. The 15° spiral flute, makes it ideal for threading holes which do not go all the way through the workpiece (blind holes). Bright finish.

M	DIN 371/376	6H
	2.5×D	HM
C 2-3		λ 15°
R	Bright	

TDZ ≤ 10 mm



TDZ ≥ 12 mm



Workpiece material group suitability and starting values for cutting speed (m/min).

K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	K3.3	K4.1	K4.2	K4.3	K4.4	K4.5
◪40	◪30	◪22	■31	■25	■20	■27	■21	■17	■25	■19	■14	■12	■10

K5.1	K5.2	K5.3	N2.1	N2.2	N2.3	N4.2	N4.3
■29	■21	■17	■54	■48	■35	◪25	◪15

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
T206M5 [1]	5	0.80	70.0	16	6.00	4.90	8	3	4.30	–
T206M6	6	1.00	80.0	19	6.00	4.90	8	3	5.10	30.00
T206M8	8	1.25	90.0	22	8.00	6.20	9	3	6.90	35.00
T206M10	10	1.50	100.0	24	10.00	8.00	11	3	8.70	39.00
T206M12	12	1.75	110.0	23	9.00	7.00	10	3	10.40	–

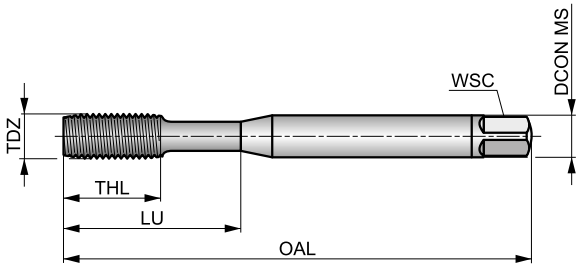
[1] Without neck.

T215

Carbide Thread Forming Tap, Metric, DIN Standard

Forming tap for blind and through holes. Provides a strong, clean, chip free and accurate thread with excellent tolerance. The carbide material gives high process security and excellent tool life when forming threads in mild to medium strength steels, medium strength stainless steel and non-ferrous materials. TiCN coated.

M	DIN 2174	6HX
	3×D	HM
C 2-3.5		R
TiCN		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■ 60	■ 68	■ 68	■ 68	■ 60	■ 45	■ 44	■ 36	■ 30	■ 26	■ 22	■ 34	■ 29	■ 31
M2.2	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**
■ 25	◪ 21	■ 29	■ 25	■ 23	■ 25	◪ 22	■ 70	■ 53	■ 35	■ 98	■ 98	■ 80	■ 50
N3.2	**N3.3**												
◪ 50	■ 38												

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
T215M3 [1]	3	0.50	56.0	10	3.50	2.70	6	4	2.80	–
T215M4 [1]	4	0.70	63.0	13	4.50	3.40	6	5	3.70	–
T215M5 [1]	5	0.80	70.0	16	6.00	4.90	8	5	4.60	–
T215M6	6	1.00	80.0	19	6.00	4.90	8	5	5.50	30.00
T215M8	8	1.25	90.0	22	8.00	6.20	9	5	7.40	35.00
T215M10	10	1.50	100.0	24	10.00	8.00	11	5	9.30	39.00

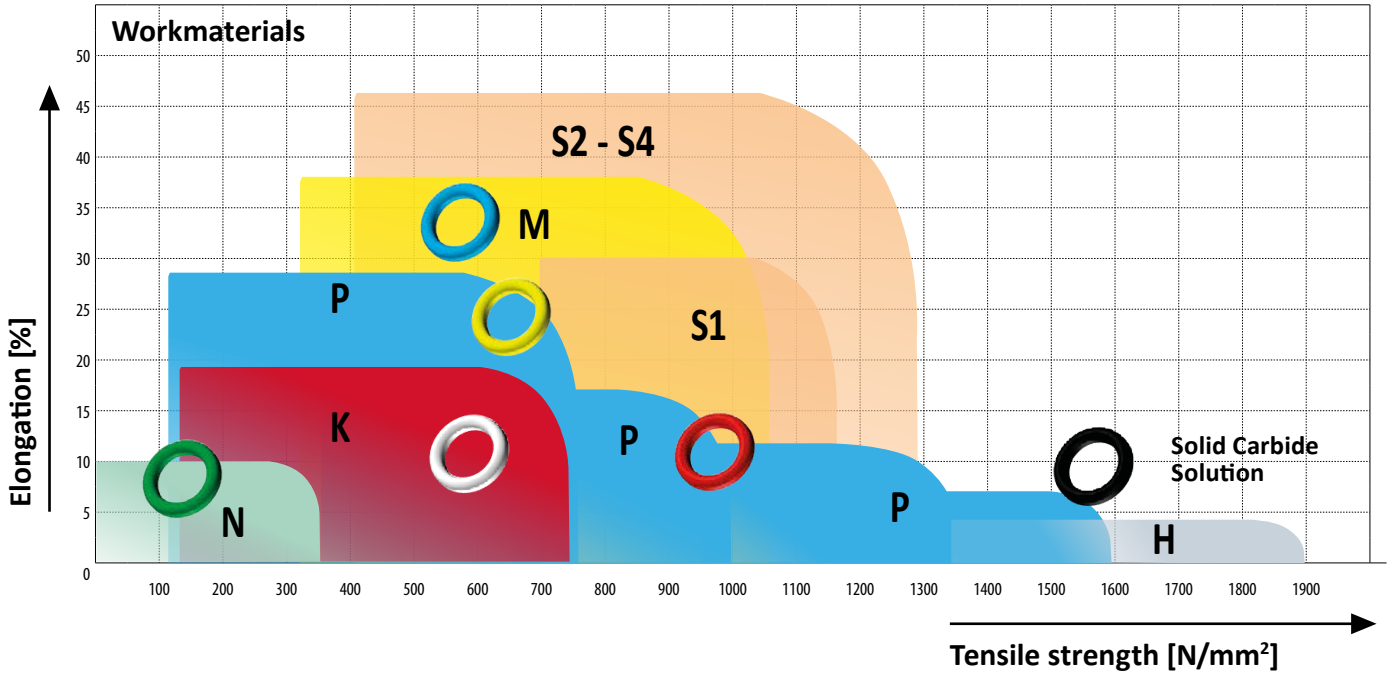
[1] Without neck.

MATERIAL SPECIFIC TAPS

SHARK

MATERIAL SPECIFIC APPLICATION TAPS

Dormer's application-based ranges of DIN taps, branded Shark Line, are renowned for their high performance and are easily recognizable by their colored rings, denoting recommendation for use on specific materials.



FEATURES AND BENEFITS

COLOUR RING CODING

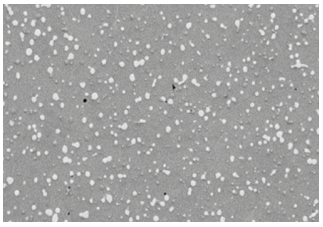
- The colour ring on the tool shank identifies suitability for specific materials and enables **quick and easy tool selection**.

EDGE TREATMENT (Black, Red, Yellow, Blue Shark)

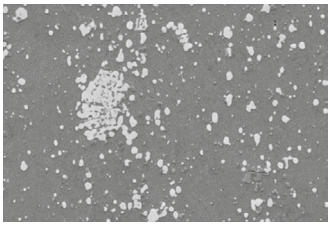
- Spiral flute taps incorporate a special edge treatment to increase strength and reduce the chance of micro-chipping on the cutting edges. This considerably improves **performance and tool life** as well as process security.

MATERIAL

Shark taps are manufactured from a unique powder metallurgy tool steel different from any other HSS-E-PM. This provides an unbeatable combination of toughness and edge strength, allowing the taps to perform at higher cutting temperatures while offering excellent performance and longer tool life.



Unique HSS-E-PM material used for **SHARK TAPS** (note the evenly dispersed grain structure)



Traditional HSS-E (M35) material

STRUCTURAL, PLAIN CARBON & LOW ALLOY STEELS

YELLOW SHARK

- **SURFACE TREATMENT**
  Hard chrome plating (Cr) with an additional edge treatment prevents built up edge when tapping in materials prone to sticking to the cutting edges.
- **FLUTE GEOMETRY**
  Available in spiral point for through holes and spiral flute (40° angle) for blind holes. Special flute geometry on Yellow Shark spiral flute taps prevents nest formation of chips, reducing the risk of re-cutting chips on reversal.
- **THREAD FORMS**
  Metric and Metric Fine
- **PRODUCT CODES**
  E297, E298, E299, E300

YELLOW SHARK 3×D

- **SURFACE TREATMENT**
  TiAlN-Top coating with an additional edge treatment.
- **FLUTE GEOMETRY**
  Spiral flute angle of 48° facilitates smooth and fast chip evacuation, making it suitable for threading deep blind holes (3×D). The increased thread relief also enables higher cutting speeds in high strength steels.
- **CUTTING GEOMETRY**
  The special three radii profile with a constant rake angle along the flute length leads to a better control of cutting properties and prevents nest formation of chips.
- **BACK TAPERED**
  Back taper further facilitates chip evacuation, reducing chipping on the last threads of the taps and also reducing torque when the tap reverses.
- **TAPPING ATTACHMENT (RECOMMENDATION)**
  When using 48° spiral flute Yellow Shark taps, it is recommended to use a tool holder with minimal float or soft start.
- **THREAD FORMS**
  Metric
- **PRODUCT CODE**
  E412

STAINLESS STEELS

BLUE SHARK

- **SURFACE TREATMENT**
  Steam-tempered or Super-B (TiAlN + WC/C) coated with an additional edge treatment.
- **FLUTE GEOMETRY**
  Available in spiral point for through holes and spiral flute (40° angle) for blind holes.
- **BACK TAPERED**
  Back taper on spiral flute taps further facilitates chip evacuation, reducing chipping on the last threads of the taps and also reducing torque when the tap reverses.
- **THREAD FORMS**
  Metric, Metric Fine and G(BSP)
- **PRODUCT CODES**
  E238, E239, E240, E241, E382, E383, E384

BLUE SHARK 3×D

- **SURFACE TREATMENT**
  Super-B (TiAlN + WC/C) coating with an additional edge treatment.
- **FLUTE GEOMETRY**
  Spiral flute angle of 48° facilitates smooth and fast chip evacuation, making it suitable for threading deep blind holes (3×D). The increased thread relief ensures process security when tapping resilient materials such as stainless steel.
- **CUTTING GEOMETRY**
  The special three radii profile with a constant rake angle along the flute length leads to a better control of cutting properties and prevents nest formation of chips.
- **BACK TAPERED**
  Back taper further facilitates chip evacuation, reducing chipping on the last threads of the taps and also reducing torque when the tap reverses.
- **TAPPING ATTACHMENT (RECOMMENDATION)**
  When using 48° spiral flute Blue Shark taps, it is recommended to use a tool holder with minimal float or soft start.
- **THREAD FORMS**
  Metric
- **PRODUCT CODE**
  E414

SHARK

MATERIAL SPECIFIC APPLICATION TAPS

ALLOY STEELS

RED SHARK

- **SURFACE TREATMENT**
  Bright or TiAlN-Top coated with an additional edge treatment.
- **FLUTE GEOMETRY**
  Available in spiral point for through holes and spiral flute (45° angle) for blind holes.
- **BACK TAPERED**
  Back taper on spiral flute taps further facilitates chip evacuation, reducing chipping on the last threads of the taps and also reducing torque when the tap reverses.
- **CUTTING GEOMETRY (SPIRAL FLUTE TAPS)**
  The special three-radii profile with a constant rake angle along the flute length leads to better control of cutting properties and prevents nest formation of chips.
- **TAPPING ATTACHMENT (RECOMMENDATION)**
  When using spiral flute Red Shark taps, it is recommended to use a tool holder with minimal float or soft start.
- **THREAD FORMS**
  Metric
- **PRODUCT CODES**
  E255, E256, E260, E261

HIGH STRENGTH STEELS

BLACK SHARK

NEW

- **SURFACE TREATMENT**
  TiAlN-Top coating with an additional edge treatment.
- **FLUTE GEOMETRY**
  Spiral point or low helix spiral flute geometries with low rake angle for good chip control and edge strength.
- **CUTTING GEOMETRY (SPIRAL FLUTE TAPS)**
  The special three-radii profile with a constant rake angle along the flute length leads to better control of cutting properties and prevents nest formation of chips.
- **TAPPING ATTACHMENT (RECOMMENDATION)**
  When using Black Shark taps, it is recommended to use synchronized (rigid) tapping.
- **THREAD FORMS**
  Metric
- **PRODUCT CODES**
  E334, E335

SHARK

MATERIAL SPECIFIC APPLICATION TAPS

NON-FERROUS MATERIALS

GREEN SHARK

- **SURFACE TREATMENT**
  Bright or Super-B (TiAlN + WC/C) coated.
- **FLUTE GEOMETRY**
  Available in spiral point for through holes and spiral flute (35° angle) for blind holes.
- **CUTTING GEOMETRY (SPIRAL FLUTE TAPS)**
  The special three radii profile with a constant rake angle along the flute length leads to a better control of cutting properties and prevents nest formation of chips.
- **THREAD FORMS**
  Metric
- **PRODUCT CODES**
  E471, E472, E473, E474

CAST IRONS

WHITE SHARK

- **SURFACE TREATMENT**
  Steam-tempered or TiAlN-Top coated.
- **FLUTE GEOMETRY**
  Straight flute design gives excellent performance when threading both through and blind holes in short chipping materials.
- **THREAD FORMS**
  Metric
- **PRODUCT CODES**
  E201, E252, E390

Tool materials

Sintered Cobalt High Speed Steel	HSS-E PM	HSS-E-PM is a Cobalt High Speed Powder Metal substrate which has been produced using powder metal technology. High speed steel produced by this method exhibits superior toughness and grindability due to the uniform and consistent grain structure. High performance taps and end mills have a particular advantage when manufactured from this substrate.

Surface Treatments

Bright (uncoated)		Bright finish (uncoated surface) improves chip flow in soft or non-ferrous materials and maintains sharp cutting edges in abrasive materials.
Steam Tempering		Steam tempering gives a strongly adhering blue oxide surface that acts to retain cutting fluid and prevent chip to tool welding, thereby counteracting the formation of a built-up edge. Steam tempering can be applied to any bright tool but is most effective on drills and taps.

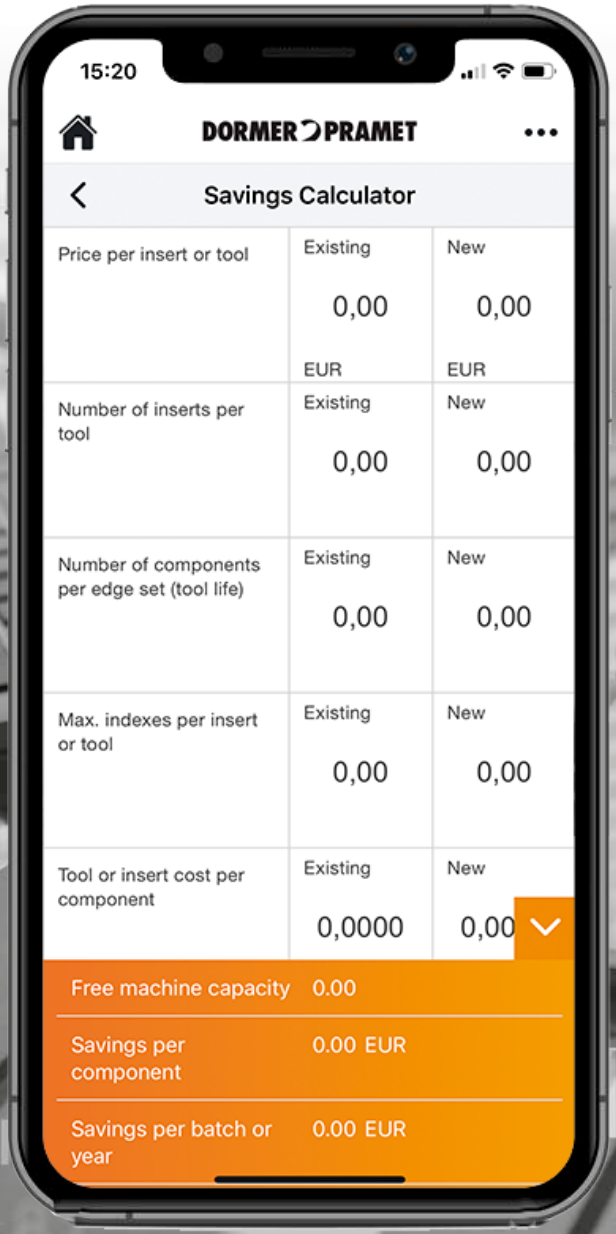
Surface Coatings

Titanium Aluminium Nitride Coatings (TiAlN & TiAlN-Top)	 	Titanium Aluminium Nitride is a multi layer ceramic coating applied by PVD coating technology, which exhibits high toughness and oxidation stability. These properties make it ideal for higher speeds and feeds, while at the same time improving tool life. TiAlN is used in drilling, tapping, and milling applications and can be suitable for use when machining without coolant. TiAlN-Top coating is the same as TiAlN but with a post-coating process designed to smooth out imperfections, enhance chip flow and reduce built up edge.
Super-B Coating (TiAlN/ WC/C)		Super B is a Titanium Aluminium Nitride + Tungsten Carbide + Carbon Coating used for wet and minimal lubrication machining in drilling, milling and tapping applications. Very effective for cast iron, hardened steels and heat resistant super alloys.
Chromium Nitride Coating (CrN)		Hard chromium (Cr) for cutting tool applications provides excellent wear and abrasion resistance due to lowering the coefficient of friction. Only designed for machining soft and gummy materials to promote chip flow and to prevent workpiece materials from sticking to the tool. Hard chromium increases the surface hardness of the tool and is especially effective for tapping soft structural steels, copper and brass materials.

DORMER PRAMET

POCKET SAVER

Our machining calculator allows you to measure the savings based on different products and applications. A useful pocket-sized tool, which will help keep cash in your pockets! **Simply Reliable.**



Download on the App Store

GET IT ON Google Play

Download on AppGallery

Thread form (THFT)		M	M	M	M	M	M	M	M	M	M	M	M	M
Basic standard group (BSG)		DIN 371	DIN 376	DIN 371/376	DIN 371/376	DIN 371/376	DIN 371/376	DIN DORMER	DIN 371/376	DIN 371/376	DIN 371/376	DIN 371/376	DIN 371/376	DIN 371/376
Thread tolerance class (TCTR)		6HX	6HX	6HX	6H	6HX	6HX	6HX	6H	6H	6H	6H	6H	6H
Threading application														
Usable length (ULDR)		2×D	2×D	2×D	2.5×D	2.5×D	2.5×D	2.5×D	2.5×D	2.5×D	2.5×D	2.5×D	2×D	3×D
Material code (BMC)		HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM
Tap chamfer style (TCS)		C 2-3	C 2-3	C 2-3	B 3.5-5	B 3.5-5	B 3.5-5	B 3.5-5	B 3.5-5	B 3.5-5	B 3.5-5	B 3.5-5	C 2-3	C 2-3
Flute Geometry (FDC)														
Flute helix angle (FHA)													λ 40°	λ 48°
Hand (Cutting direction)		R	R	R	R	R	R	R	R	R	R	R	R	R
Coating		ST	ST	TiAlN	Cr	Bright	TiAlN Top	TiAlN Top	ST	Super B	Bright	Super B	Cr	TiAlN Top
		SHARK	SHARK	SHARK	SHARK	SHARK	SHARK	SHARK NEW	SHARK	SHARK	SHARK	SHARK	SHARK	SHARK
Product Family Code		E201	E252	E390	E297	E255	E256	E334	E240	E241	E471	E472	E298	E412
		M3 - M10	M8 - M24	M3 - M20	M3 - M30	M3 - M20	M3 - M20	M3 - M12	M3 - M30	M3 - M20	M3 - M20	M3 - M20	M3 - M30	M3 - M30
		36	37	38	39	40	41	42	43	44	45	46	47	48
P	P1				■						◪	◪	■	■
	P2				■	■	■		◪	◪	◪	◪	■	■
	P3				◪	■	■	◪	◪	◪			◪	■
	P4				◪	■	■	■	◪	◪			◪	■
M	M1								■	■				◪
	M2								■	■				◪
	M3								■	■				◪
	M4								■	◪				◪
K	K1	■	■	■										
	K2	■	■	■										
	K3	■	■	■										
	K4	◪	◪	◪										
	K5	■	■	■										
N	N1										■	◪		◪
	N2										■	■		◪
	N3	◪	◪	◪	■						■	◪	■	◪
	N4	■	■	■							■	◪		
	N5													
S	S1					◪	◪	■						
	S2					◪	◪							
	S3					◪	◪	■						
	S4					◪	◪							
H	H1													
	H2													
	H3							◪						
	H4													

■ Primary use ◪ Possible use

	M	M	M	M	M	M	M	M	MF	MF	MF	MF	G
	DIN 371/376	DIN 371/376	DIN DORMER	DIN 371/376	DIN 371/376	DIN 371/376	DIN 371/376	DIN 371/376	DIN 374	DIN 374	DIN 374	DIN 374	DIN 5156
	6HX	6HX	6HX	6H	6H	6H	6H	6H	6H	6H	6H	6H	Normal
	U	U	U	U	U	U	U	U	II	II	U	U	U
	2.5×D	2.5×D	1.5×D	2.5×D	2.5×D	3×D	2.5×D	2.5×D	2.5×D	2.5×D	2×D	2×D	2×D
	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM
	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3	B 3.5-5	B 3.5-5	C 2-3	C 2-3	C 2-3
	λ 45°	λ 45°	λ 15°	λ 40°	λ 40°	λ 48°	λ 35°	λ 35°			λ 40°	λ 40°	λ 40°
	R	R	R	R	R	R	R	R	R	R	R	R	R
	Bright	TiAlN Top	TiAlN Top	ST	Super B	Super B	Bright	Super B	Cr	ST	Cr	ST	ST
	SHARK	SHARK	SHARK NEW	SHARK	SHARK	SHARK	SHARK	SHARK	SHARK	SHARK	SHARK	SHARK	SHARK
	E260	**E261**	**E335**	**E238**	**E239**	**E414**	**E473**	**E474**	**E299**	**E384**	**E300**	**E383**	**E382**
	M3 - M20	M3 - M20	M3 - M12	M3 - M30	M3 - M20	M3 - M20	M3 - M20	M3 - M20	M4 - M30	M6 - M20	M4 - M30	M6 - M20	1/8 - 1"
	49	50	51	52	53	54	55	56	57	58	59	60	61
P1							◪	◪	■		■		
P2	■	■		◪	◪	◪	◪	◪	■	◪	■	◪	◪
P3	■	■	◪	◪	◪	◪			◪	◪	◪	◪	◪
P4	■	■	■	◪	◪	◪			◪	◪	◪	◪	◪
M1				■	■	■				■		■	■
M2				■	■	■				■		■	■
M3				■	■	■				■		■	■
M4				■	◪					■		■	■
K1													
K2													
K3													
K4													
K5													
N1							■	◪					
N2							■	■					
N3							■	◪	■		■		
N4							■	◪					
N5													
S1	◪	◪	■										
S2	◪	◪											
S3	◪	◪	■										
S4	◪	◪											
H1													
H2													
H3			◪										
H4													

■ Primary use ◪ Possible use

E201

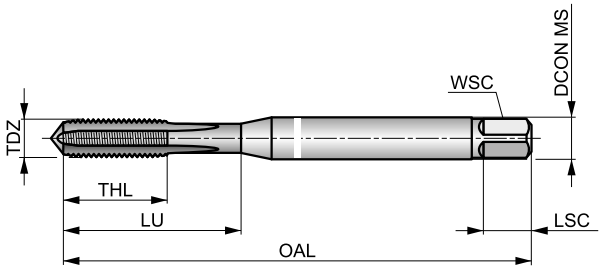
DORMER

White SHARK Straight Flute Metric Machine Tap, DIN Standard

Straight flute tap with reduced shank for blind and through holes in short chipping cast iron and high strength non-ferrous materials. HSS-E-PM substrate provides superior performance, consistency and extended tool life. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

SHARK

M	DIN 371	6HX
	2×D	HSS-E PM
C 2-3		R
ST		



Workpiece material group suitability and starting values for cutting speed (m/min).

K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	K3.3	K4.1	K4.2	K4.3	K4.4	K4.5
■ 15	■ 11	■ 8	■ 18	■ 15	◪ 12	■ 16	■ 12	◪ 10	■ 15	■ 11	◪ 8	◪ 7	◪ 6

K5.1	K5.2	K5.3	N2.3	N3.2	N4.2
■ 17	■ 13	◪ 10	◪ 15	◪ 20	■ 10

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E201M3	3	0.50	56.0	9	3.50	2.70	6	3	2.50	18.00
E201M4	4	0.70	63.0	12	4.50	3.40	6	4	3.30	21.00
E201M5	5	0.80	70.0	13	6.00	4.90	8	4	4.20	25.00
E201M6	6	1.00	80.0	15	6.00	4.90	8	4	5.00	30.00
E201M8	8	1.25	90.0	18	8.00	6.20	9	4	6.80	35.00
E201M10	10	1.50	100.0	20	10.00	8.00	11	4	8.50	39.00

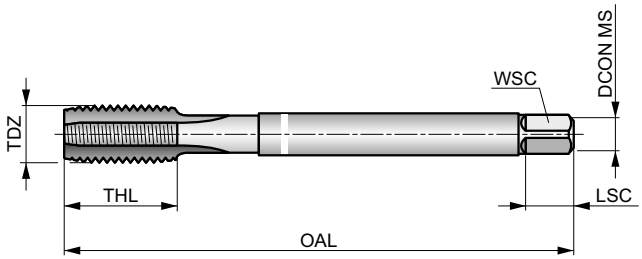
E252

White SHARK Straight Flute Metric Machine Tap, DIN Standard

Straight flute tap with reinforced shank for blind and through holes in short chipping cast iron and high strength non-ferrous materials. HSS-E-PM substrate provides superior performance, consistency and extended tool life. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

SHARK

M	DIN 376	6HX
	2×D	HSS-E PM
C 2-3		R
ST		



Workpiece material group suitability and starting values for cutting speed (m/min).

K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	K3.3	K4.1	K4.2	K4.3	K4.4	K4.5
■15	■11	■8	■18	■15	◪12	■16	■12	◪10	■15	■11	◪8	◪7	◪6

K5.1	K5.2	K5.3	N2.3	N3.2	N4.2
■17	■13	◪10	◪15	◪20	■10

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
E252M8	8	1.25	90.0	18	6.00	4.90	8	4	6.80
E252M10	10	1.50	100.0	20	7.00	5.50	8	4	8.50
E252M12	12	1.75	110.0	23	9.00	7.00	10	4	10.30
E252M14	14	2.00	110.0	25	11.00	9.00	12	4	12.00
E252M16	16	2.00	110.0	25	12.00	9.00	12	4	14.00
E252M18	18	2.50	125.0	30	14.00	11.00	14	4	15.50
E252M20	20	2.50	140.0	30	16.00	12.00	15	4	17.50
E252M22	22	2.50	140.0	34	18.00	14.50	17	4	19.50
E252M24	24	3.00	160.0	38	18.00	14.50	17	4	21.00

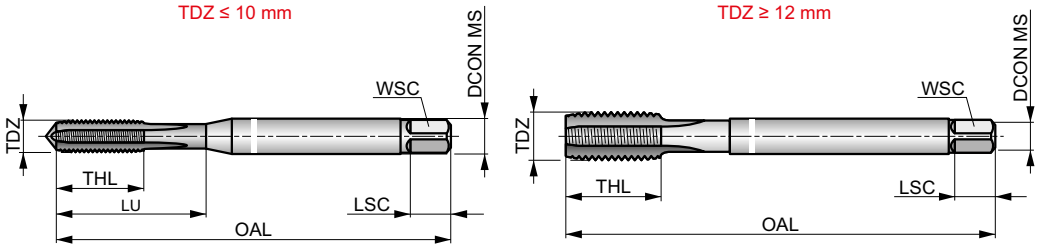
E390

White SHARK Straight Flute Metric Machine Tap, DIN Standard

High performance TiAlN coated tap for blind and through holes in short chipping materials, such as cast iron and non-ferrous metals. Premium HSS-E-PM substrate provides superior performance, consistency and extended tool life. Up to M10 with reinforced and from M12 with reduced shank.

SHARK

M	DIN 371/376	6HX
LU	2×D	HSS-E PM
C 2-3		R
TiAlN		



Workpiece material group suitability and starting values for cutting speed (m/min).

K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	K3.3	K4.1	K4.2	K4.3	K4.4	K4.5
■ 30	■ 22	■ 17	■ 43	■ 35	◪ 28	■ 38	■ 29	◪ 24	■ 35	■ 27	◪ 20	◪ 17	◪ 14

K5.1	K5.2	K5.3	N2.3	N3.2	N4.2
■ 40	■ 30	◪ 23	◪ 20	◪ 30	■ 15

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E390M3	3	0.50	56.0	9	3.50	2.70	6	3	2.50	18.00
E390M4	4	0.70	63.0	12	4.50	3.40	6	4	3.30	21.00
E390M5	5	0.80	70.0	13	6.00	4.90	8	4	4.20	25.00
E390M6	6	1.00	80.0	15	6.00	4.90	8	4	5.00	30.00
E390M8	8	1.25	90.0	18	8.00	6.20	9	4	6.80	35.00
E390M10	10	1.50	100.0	20	10.00	8.00	11	4	8.50	39.00
E390M12	12	1.75	110.0	23	9.00	7.00	10	4	10.30	–
E390M16	16	2.00	110.0	25	12.00	9.00	12	4	14.00	–
E390M20	20	2.50	140.0	30	16.00	12.00	15	4	17.50	–

E297

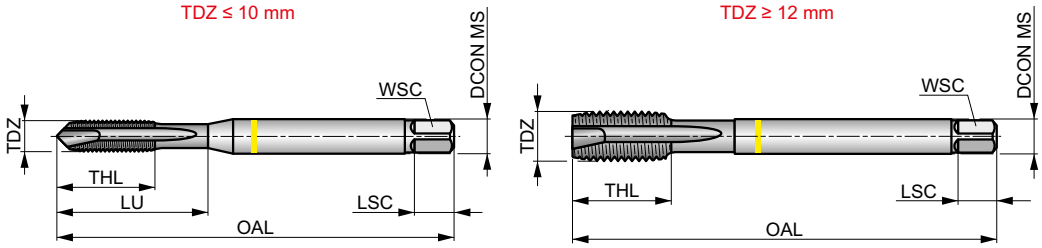
DORMER

Yellow SHARK Spiral Point Metric Machine Tap, DIN Standard

High performance through hole tap for low carbon and alloyed steel and non-ferrous materials. Unique HSS-E-PM substrate with additional edge treatment provides consistency and process security. Hard chrome coated to increase the surface hardness and reduce built-up edge for increased performance and tool life.

SHARK

M	DIN 371/376	6H
	2.5×D	HSS-E PM
B 3.5-5		R
Cr		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	N3.1	N3.2	N3.3
■ 24	■ 27	■ 28	■ 20	■ 18	◪ 16	■ 15	◪ 12	◪ 9	■ 51	■ 30	◪ 15

Products from this series are also available in set with drills. Please see L114.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E297M3	3	0.50	56.0	9	3.50	2.70	6	3	2.50	18.00
E297M4	4	0.70	63.0	12	4.50	3.40	6	3	3.30	21.00
E297M5	5	0.80	70.0	13	6.00	4.90	8	3	4.20	25.00
E297M6	6	1.00	80.0	15	6.00	4.90	8	3	5.00	30.00
E297M8	8	1.25	90.0	18	8.00	6.20	9	3	6.80	35.00
E297M10	10	1.50	100.0	20	10.00	8.00	11	3	8.50	39.00
E297M12	12	1.75	110.0	23	9.00	7.00	10	3	10.30	–
E297M14	14	2.00	110.0	25	11.00	9.00	12	3	12.00	–
E297M16	16	2.00	110.0	25	12.00	9.00	12	3	14.00	–
E297M18	18	2.50	125.0	30	14.00	11.00	14	3	15.50	–
E297M20	20	2.50	140.0	30	16.00	12.00	15	3	17.50	–
E297M22	22	2.50	140.0	34	18.00	14.50	17	4	19.50	–
E297M24	24	3.00	160.0	38	18.00	14.50	17	4	21.00	–
E297M27	27	3.00	160.0	38	20.00	16.00	19	4	24.00	–
E297M30	30	3.50	180.0	45	22.00	18.00	21	4	26.50	–

E255

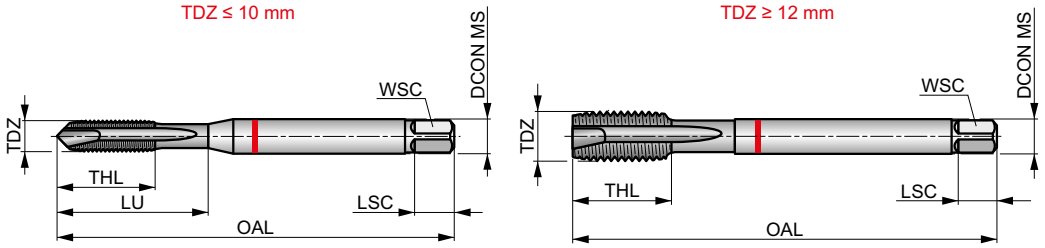
DORMER

Red SHARK, Spiral Point Metric Machine Tap, DIN Standard

Through hole tap with reinforced or reduced shank for medium to high strength steels. Unique HSS-E-PM steel with bright surface finish provide consistency and process security.

SHARK

M	DIN 371/376	6HX
2.5×D		HSS-E PM
B 3.5-5		R
Bright		



Workpiece material group suitability and starting values for cutting speed (m/min).

P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	S1.2	S2.1	S3.1	S4.1
■11	■10	■8	■7	■6	■5	◪2	◪3	◪2	◪2

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E255M3	3	0.50	56.0	9	3.50	2.70	6	3	2.50	18.00
E255M4	4	0.70	63.0	12	4.50	3.40	6	3	3.30	21.00
E255M5	5	0.80	70.0	13	6.00	4.90	8	3	4.20	25.00
E255M6	6	1.00	80.0	15	6.00	4.90	8	3	5.00	30.00
E255M8	8	1.25	90.0	18	8.00	6.20	9	3	6.80	35.00
E255M10	10	1.50	100.0	20	10.00	8.00	11	3	8.50	39.00
E255M12	12	1.75	110.0	23	9.00	7.00	10	3	10.30	–
E255M14	14	2.00	110.0	25	11.00	9.00	12	3	12.00	–
E255M16	16	2.00	110.0	25	12.00	9.00	12	3	14.00	–
E255M20	20	2.50	140.0	30	16.00	12.00	15	4	17.50	–

E256

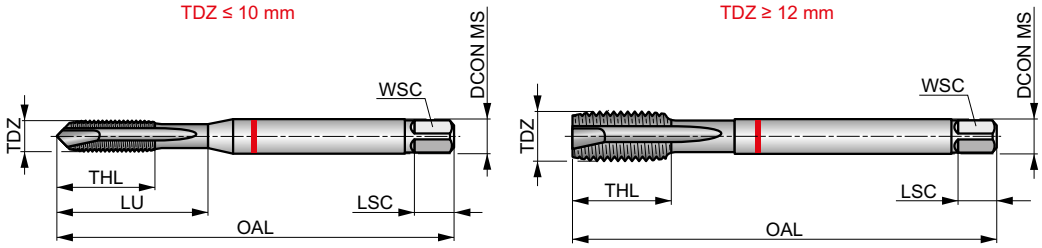
DORMER

Red SHARK Spiral Point Metric Machine Tap, DIN Standard

High performance through hole tap with reinforced or reduced shank for medium to high strength steel. Unique HSS-E-PM substrate along with TiAlN-Top coating and edge treatment provide superior performance, consistency, extended tool life and higher process security.

SHARK

M	DIN 371/376	6HX
	2.5×D	HSS-E PM
B 3.5-5		R
TiAlN Top		



Workpiece material group suitability and starting values for cutting speed (m/min).

P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	S1.2	S2.1	S3.1	S4.1
■27	■25	■20	■17	■15	■13	◪10	◪3	◪4	◪3	◪3

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E256M3	3	0.50	56.0	9	3.50	2.70	6	3	2.50	18.00
E256M4	4	0.70	63.0	12	4.50	3.40	6	3	3.30	21.00
E256M5	5	0.80	70.0	13	6.00	4.90	8	3	4.20	25.00
E256M6	6	1.00	80.0	15	6.00	4.90	8	3	5.00	30.00
E256M8	8	1.25	90.0	18	8.00	6.20	9	3	6.80	35.00
E256M10	10	1.50	100.0	20	10.00	8.00	11	3	8.50	39.00
E256M12	12	1.75	110.0	23	9.00	7.00	10	3	10.30	–
E256M16	16	2.00	110.0	25	12.00	9.00	12	3	14.00	–
E256M20	20	2.50	140.0	30	16.00	12.00	15	4	17.50	–

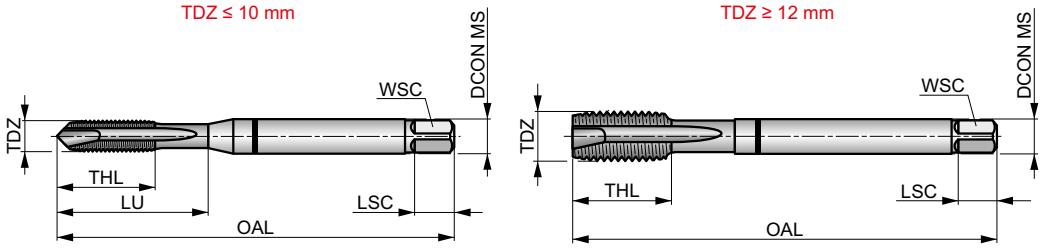
E334

Red SHARK 45° Spiral Flute Metric Machine Tap, DIN Standard

Blind hole tap with reinforced or reduced shank for medium to high strength steels. Unique HSS-E-PM substrate with bright surface finish. Extra back taper to further facilitate chip evacuation, preventing chipping on the last threads of the tap and also reduces torque when the tap reverses.

SHARK

M	DIN DORMER	6HX
	2.5×D	HSS-E PM
B 3.5-5		R
TiAlN Top		



Workpiece material group suitability and starting values for cutting speed (m/min).

P3.3	P4.2	P4.3	S1.2	S1.3	S3.1	S3.2	H3.1
■17	■13	■10	■13	■8	■5	■3	◪7

Product	TDZ	TP [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]	LU [mm]
E334M3	3	0.50	63.0	12	4.50	3.40	6	3	2.50	12.00
E334M4	4	0.70	70.0	17	6.00	4.90	8	3	3.30	17.00
E334M5	5	0.80	80.0	20	6.00	4.90	8	3	4.20	20.00
E334M6	6	1.00	90.0	24	8.00	6.20	9	3	5.00	24.00
E334M8	8	1.25	100.0	32	10.00	8.00	11	3	6.80	32.00
E334M10	10	1.50	100.0	20	10.00	8.00	11	3	8.50	39.00
E334M12	12	1.75	110.0	23	9.00	7.00	10	4	10.30	–

E240

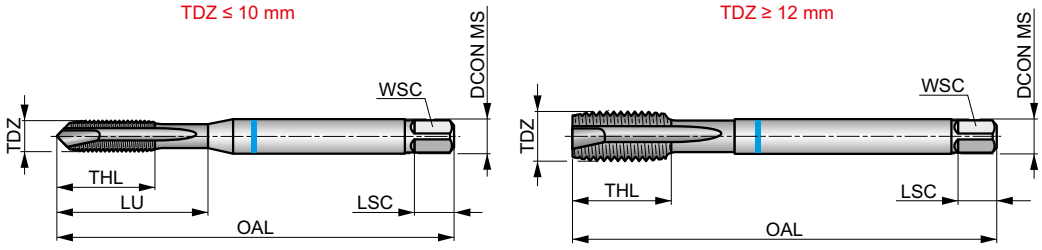
DORMER

Blue SHARK Spiral Point Metric Machine Tap, DIN Standard

Through hole tap with reinforced or reduced shank for medium strength stainless steel. Unique HSS-E-PM substrate along with additional edge treatment provide consistency and process security. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

SHARK

M	DIN 371/376	6H
	2.5×D	HSS-E PM
B 3.5-5		R
ST		



Workpiece material group suitability and starting values for cutting speed (m/min).

P2.3	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2	M3.3	M4.1
◪8	◪10	◪9	◪7	■11	■9	■10	■8	■8	■7	■6	■5

Products from this series are also available in set with drills. Please see L114.

Product	TDZ	TP [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]	LU [mm]
E240M3	3	0.50	56.0	9	3.50	2.70	6	3	2.50	18.00
E240M4	4	0.70	63.0	12	4.50	3.40	6	3	3.30	21.00
E240M5	5	0.80	70.0	13	6.00	4.90	8	3	4.20	25.00
E240M6	6	1.00	80.0	15	6.00	4.90	8	3	5.00	30.00
E240M8	8	1.25	90.0	18	8.00	6.20	9	3	6.80	35.00
E240M10	10	1.50	100.0	20	10.00	8.00	11	3	8.50	39.00
E240M12	12	1.75	110.0	23	9.00	7.00	10	4	10.30	–
E240M14	14	2.00	110.0	25	11.00	9.00	12	4	12.00	–
E240M16	16	2.00	110.0	25	12.00	9.00	12	4	14.00	–
E240M18	18	2.50	125.0	30	14.00	11.00	14	4	15.50	–
E240M20	20	2.50	140.0	30	16.00	12.00	15	4	17.50	–
E240M22	22	2.50	140.0	34	18.00	14.50	17	4	19.50	–
E240M24	24	3.00	160.0	38	18.00	14.50	17	4	21.00	–
E240M27	27	3.00	160.0	38	20.00	16.00	19	4	24.00	–
E240M30	30	3.50	180.0	45	22.00	18.00	21	4	26.50	–

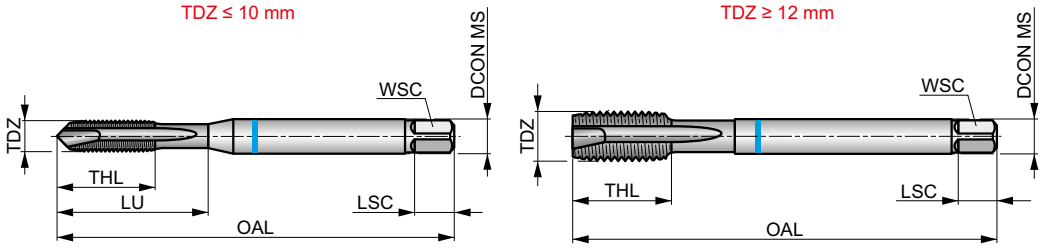
E241

Blue SHARK Spiral Point Metric Machine Tap, DIN Standard

High performance through hole tap with reinforced or reduced shank for medium strength stainless steel. Unique HSS-E-PM substrate with Super-B coating and additional edge treatment providing superior performance, consistency and extended tool life.

SHARK

M	DIN 371/376	6H
	2.5×D	HSS-E PM
B 3.5-5		R
Super B		



Workpiece material group suitability and starting values for cutting speed (m/min).

P2.3	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2	M2.3	M3.1	M3.2	M3.3	M4.1	M4.2
◪16	◪14	◪11	◪9	■19	■16	■17	■14	◪12	■12	■10	■9	■6	◪5

Product	TDZ	TP [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]	LU [mm]
E241M3	3	0.50	56.0	9	3.50	2.70	6	3	2.50	18.00
E241M4	4	0.70	63.0	12	4.50	3.40	6	3	3.30	21.00
E241M5	5	0.80	70.0	13	6.00	4.90	8	3	4.20	25.00
E241M6	6	1.00	80.0	15	6.00	4.90	8	3	5.00	30.00
E241M8	8	1.25	90.0	18	8.00	6.20	9	3	6.80	35.00
E241M10	10	1.50	100.0	20	10.00	8.00	11	3	8.50	39.00
E241M12	12	1.75	110.0	23	9.00	7.00	10	4	10.30	–
E241M14	14	2.00	110.0	25	11.00	9.00	12	4	12.00	–
E241M16	16	2.00	110.0	25	12.00	9.00	12	4	14.00	–
E241M18	18	2.50	125.0	30	14.00	11.00	14	4	15.50	–
E241M20	20	2.50	140.0	30	16.00	12.00	15	4	17.50	–

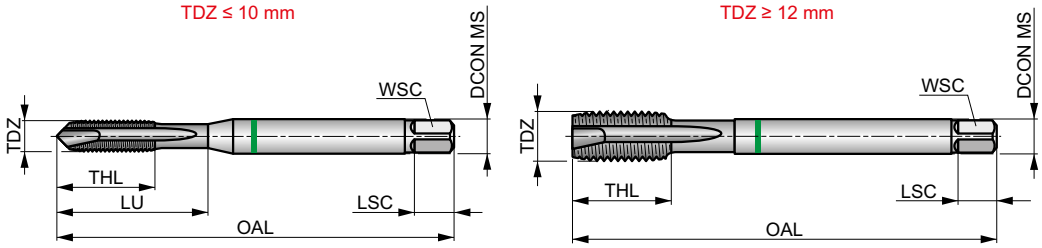
E471

Green SHARK Spiral Point Metric Machine Tap, DIN Standard

Through hole tap with reinforced or reduced shank for non-ferrous materials. Unique HSS-E-PM substrate with polished flutes to avoid chip sticking, provide consistency and process security.

SHARK

M	DIN 371/376	6H
	2.5×D	HSS-E PM
B 3.5-5		R
Bright		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.2	P1.3	P2.1	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1
◪23	◪24	◪16	■16	■12	■8	■31	■28	■20	■51	■30	◪15	■25

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E471M3	3	0.50	56.0	9	3.50	2.70	6	2	2.50	18.00
E471M4	4	0.70	63.0	12	4.50	3.40	6	2	3.30	21.00
E471M5	5	0.80	70.0	13	6.00	4.90	8	2	4.20	25.00
E471M6	6	1.00	80.0	15	6.00	4.90	8	3	5.00	30.00
E471M8	8	1.25	90.0	18	8.00	6.20	9	3	6.80	35.00
E471M10	10	1.50	100.0	20	10.00	8.00	11	3	8.50	39.00
E471M12	12	1.75	110.0	23	9.00	7.00	10	3	10.30	–
E471M16	16	2.00	110.0	25	12.00	9.00	12	4	14.00	–
E471M20	20	2.50	140.0	30	16.00	12.00	15	4	17.50	–

E472

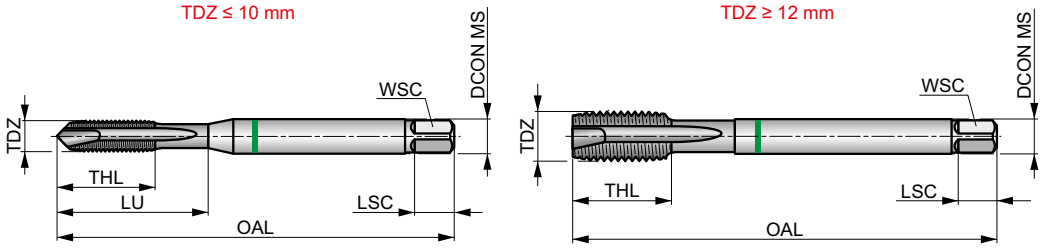
DORMER

Green SHARK Spiral Point Metric Machine Tap, DIN Standard

High performance through hole tap with reinforced or reduced shank for non-ferrous materials. Unique HSS-E-PM substrate with Super-B coating to avoid chip sticking, providing superior performance, consistency and extended tool life.

SHARK

M	DIN 371/376	6H
2.5×D		HSS-E PM
B 3.5-5		R
Super B		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N4.1
◪34	◪38	◪40	◪29	◪24	◪35	◪26	■18	■46	■42	■30	◪76	■45	◪30

Product	TDZ	TP [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]	LU [mm]
E472M3	3	0.50	56.0	9	3.50	2.70	6	2	2.50	18.00
E472M4	4	0.70	63.0	12	4.50	3.40	6	2	3.30	21.00
E472M5	5	0.80	70.0	13	6.00	4.90	8	2	4.20	25.00
E472M6	6	1.00	80.0	15	6.00	4.90	8	3	5.00	30.00
E472M8	8	1.25	90.0	18	8.00	6.20	9	3	6.80	35.00
E472M10	10	1.50	100.0	20	10.00	8.00	11	3	8.50	39.00
E472M12	12	1.75	110.0	23	9.00	7.00	10	3	10.30	–
E472M16	16	2.00	110.0	25	12.00	9.00	12	4	14.00	–
E472M20	20	2.50	140.0	30	16.00	12.00	15	4	17.50	–

E298

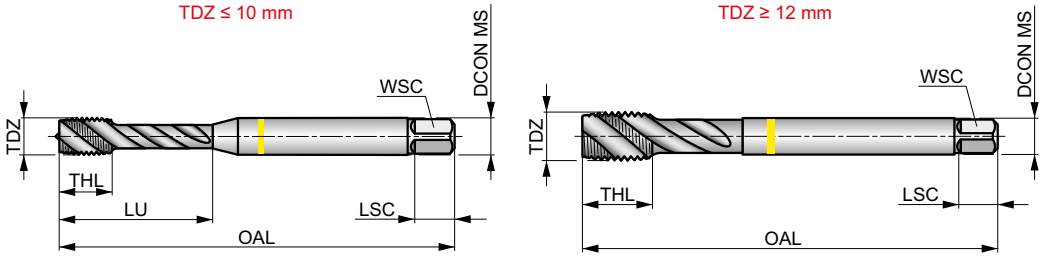
DORMER

Yellow SHARK 40° Spiral Flute Metric Machine Tap, DIN Standard

High performance blind hole tap for low carbon and alloyed steel and non-ferrous materials. Unique HSS-E-PM substrate with additional edge treatment to provide consistency and process security. Hard chrome coated to increase the surface hardness, reducing built-up edge and extend tool life.

SHARK

M	DIN 371/376	6H
	2×D	HSS-E PM
C 2-3		λ 40°
R	Cr	



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	N3.1	N3.2	N3.3
■ 23	■ 25	■ 26	■ 19	■ 17	◪ 15	■ 14	◪ 11	◪ 8	■ 48	■ 28	◪ 14

Products from this series are also available in set with drills. Please see L114.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E298M3	3	0.50	56.0	6	3.50	2.70	6	3	2.50	18.00
E298M4	4	0.70	63.0	7	4.50	3.40	6	3	3.30	21.00
E298M5	5	0.80	70.0	8	6.00	4.90	8	3	4.20	25.00
E298M6	6	1.00	80.0	10	6.00	4.90	8	3	5.00	30.00
E298M8	8	1.25	90.0	12	8.00	6.20	9	3	6.80	35.00
E298M10	10	1.50	100.0	15	10.00	8.00	11	3	8.50	39.00
E298M12	12	1.75	110.0	16	9.00	7.00	10	3	10.30	–
E298M14	14	2.00	110.0	20	11.00	9.00	12	3	12.00	–
E298M16	16	2.00	110.0	20	12.00	9.00	12	4	14.00	–
E298M18	18	2.50	125.0	25	14.00	11.00	14	4	15.50	–
E298M20	20	2.50	140.0	25	16.00	12.00	15	4	17.50	–
E298M22	22	2.50	140.0	25	18.00	14.50	17	4	19.50	–
E298M24	24	3.00	160.0	30	18.00	14.50	17	4	21.00	–
E298M27	27	3.00	160.0	30	20.00	16.00	19	4	24.00	–
E298M30	30	3.50	160.0	36	22.00	18.00	21	4	26.50	–

E412

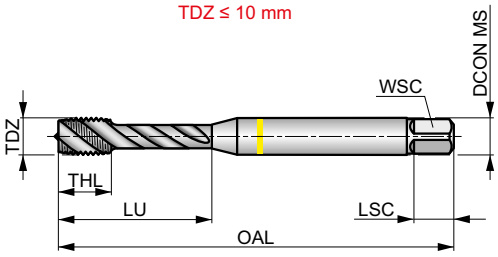
Yellow SHARK 48° Spiral Flute Metric Machine Tap, DIN Standard

High performance quick spiral tap for deep blind holes in medium strength steels. Unique HSS-E-PM substrate with TiAlN-Top coating and additional edge treatment provide superior performance. Extra back taper facilitates chip evacuation and reduces torque on reversal. Recommended for synchronous feed tap holders.

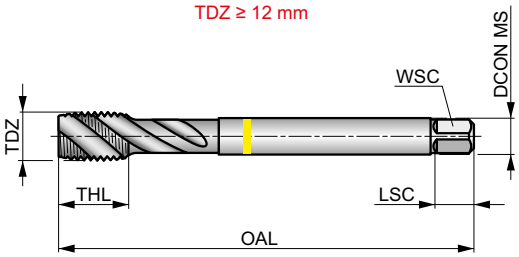
SHARK

M	DIN 371/376	6H
	3×D	HSS-E PM
C 2-3		λ 48°
R	TiAlN Top	

TDZ ≤ 10 mm



TDZ ≥ 12 mm



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■46	■52	■54	■40	■35	■31	■24	■19	■16	■14	■12	◪19	◪16	◪17

M2.2	M3.1	M3.2	M3.3	M4.1	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1
◪14	◪12	◪10	◪9	◪6	◪16	◪12	◪8	◪54	◪48	◪35	◪60

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E412M3	3	0.50	56.0	6	3.50	2.70	6	3	2.50	18.00
E412M4	4	0.70	63.0	7	4.50	3.40	6	3	3.30	21.00
E412M5	5	0.80	70.0	8	6.00	4.90	8	3	4.20	25.00
E412M6	6	1.00	80.0	10	6.00	4.90	8	3	5.00	30.00
E412M8	8	1.25	90.0	13	8.00	6.20	9	3	6.80	35.00
E412M10	10	1.50	100.0	15	10.00	8.00	11	3	8.50	39.00
E412M12	12	1.75	110.0	18	9.00	7.00	10	3	10.30	–
E412M14	14	2.00	110.0	20	11.00	9.00	12	3	12.00	–
E412M16	16	2.00	110.0	20	12.00	9.00	12	4	14.00	–
E412M20	20	2.50	140.0	25	16.00	12.00	15	4	17.50	–
E412M22	22	2.50	140.0	25	18.00	14.50	17	4	19.50	–
E412M24	24	3.00	160.0	30	18.00	14.50	17	4	21.00	–
E412M27	27	3.00	160.0	30	20.00	16.00	19	4	24.00	–
E412M30	30	3.50	180.0	36	22.00	18.00	21	4	26.50	–

E260

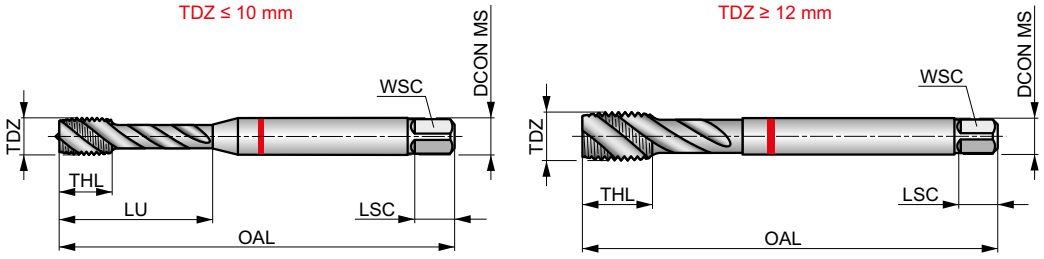
DORMER

Red SHARK 45° Spiral Flute Metric Machine Tap, DIN Standard

Through hole tap with reinforced or reduced shank for medium to high strength steels. Unique HSS-E-PM substrate with bright surface finish. Extra back taper to further facilitate chip evacuation, preventing chipping on the last threads of the tap and also reduces torque when the tap reverses.

SHARK

M	DIN 371/376	6HX
	2.5×D	HSS-E PM
C 2-3		λ 45°
R	Bright	



Workpiece material group suitability and starting values for cutting speed (m/min).

P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	S1.2	S2.1	S3.1	S4.1
■10	■9	■7	■6	■5	■4	◪2	◪3	◪2	◪2

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E260M3	3	0.50	56.0	6	3.50	2.70	6	3	2.50	18.00
E260M4	4	0.70	63.0	7	4.50	3.40	6	3	3.30	21.00
E260M5	5	0.80	70.0	8	6.00	4.90	8	3	4.20	25.00
E260M6	6	1.00	80.0	10	6.00	4.90	8	3	5.00	30.00
E260M8	8	1.25	90.0	12	8.00	6.20	9	3	6.80	35.00
E260M10	10	1.50	100.0	15	10.00	8.00	11	3	8.50	39.00
E260M12	12	1.75	110.0	16	9.00	7.00	10	3	10.30	–
E260M14	14	2.00	110.0	20	11.00	9.00	12	3	12.00	–
E260M16	16	2.00	110.0	20	12.00	9.00	12	4	14.00	–
E260M20	20	2.50	140.0	25	16.00	12.00	15	4	17.50	–

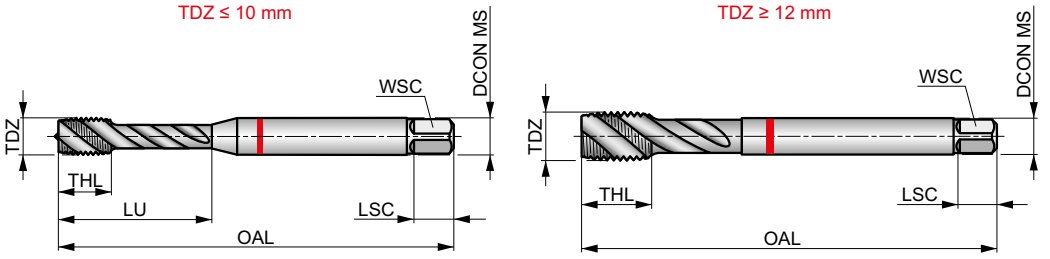
E261

Red SHARK 45° Spiral Flute Metric Machine Tap, DIN Standard

High performance blind hole tap for medium to high strength steels. Unique HSS-E-PM substrate with TiAlN-Top coating and additional edge treatment provide superior performance, consistency and extended tool life. Extra back taper further facilitates chip evacuation and reduces torque on tap reversal.

SHARK

M	DIN 371/376	6HX
2.5×D		HSS-E PM
C 2-3		λ 45°
R	TiAlN Top	



Workpiece material group suitability and starting values for cutting speed (m/min).

P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	S1.2	S2.1	S3.1	S4.1
■26	■24	■19	■16	■14	■12	◪9	◪2	◪3	◪2	◪2

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E261M3	3	0.50	56.0	6	3.50	2.70	6	3	2.50	18.00
E261M4	4	0.70	63.0	7	4.50	3.40	6	3	3.30	21.00
E261M5	5	0.80	70.0	8	6.00	4.90	8	3	4.20	25.00
E261M6	6	1.00	80.0	10	6.00	4.90	8	3	5.00	30.00
E261M8	8	1.25	90.0	12	8.00	6.20	9	3	6.80	35.00
E261M10	10	1.50	100.0	15	10.00	8.00	11	3	8.50	39.00
E261M12	12	1.75	110.0	16	9.00	7.00	10	3	10.30	–
E261M16	16	2.00	110.0	20	12.00	9.00	12	4	14.00	–
E261M20	20	2.50	140.0	25	16.00	12.00	15	4	17.50	–

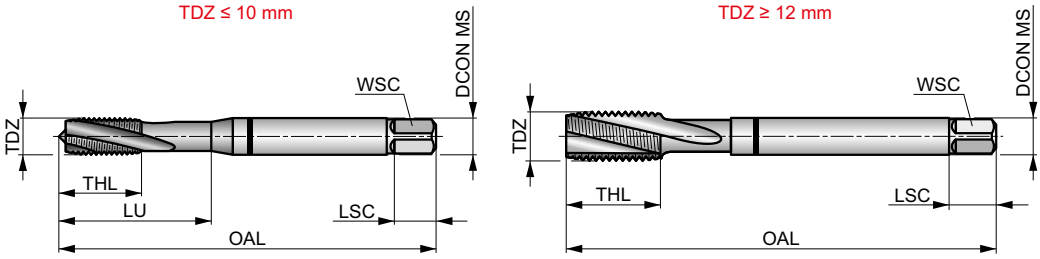
E335

Black SHARK 15° Spiral Flute Metric Machine Tap, DIN Standard

High performance blind hole tap for efficient tapping in high strength steels and titanium alloys. A 15° slow spiral allows the chips to be pulled slightly upwards, yet without weakening the cutting edge, as higher spiral taps would. Unique HSS-E-PM substrate along with TiAlN-Top coating for superior performance.

SHARK

M	DIN DORMER	6HX
	1.5×D	HSS-E PM
C 2-3		λ 15°
R	TiAlN Top	



Workpiece material group suitability and starting values for cutting speed (m/min).

P3.3	P4.2	P4.3	S1.2	S1.3	S3.1	S3.2	H3.1
■16	■12	■9	■12	■7	■4	■2	◪6

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E335M3	3	0.50	63.0	12	4.50	3.40	6	3	2.50	12.00
E335M4	4	0.70	70.0	13	6.00	4.90	8	3	3.30	13.00
E335M5	5	0.80	80.0	15	6.00	4.90	8	3	4.20	15.00
E335M6	6	1.00	90.0	18	8.00	6.20	9	3	5.00	18.00
E335M8	8	1.25	100.0	20	10.00	8.00	11	3	6.80	20.00
E335M10	10	1.50	100.0	20	10.00	8.00	11	3	8.50	39.00
E335M12	12	1.75	110.0	23	9.00	7.00	10	4	10.30	–

E238

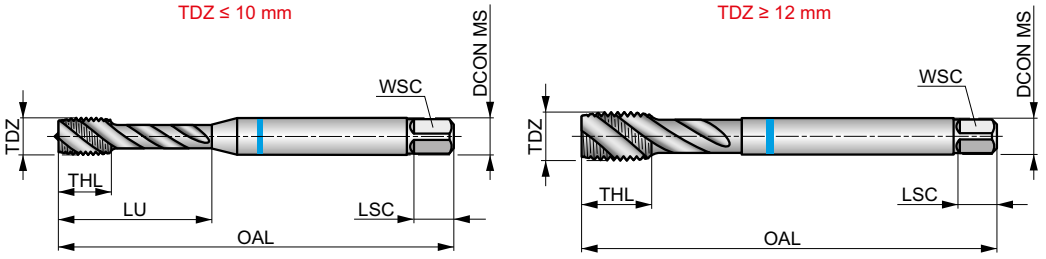
DORMER

Blue SHARK 40° Spiral Flute Metric Machine Tap, DIN Standard

Blind hole tap with reinforced or reduced shank for medium strength stainless steel. Unique HSS-E-PM substrate, along with additional edge treatment, provide consistency and process security. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

SHARK

M	DIN 371/376	6H
	2.5×D	HSS-E PM
C 2-3		λ 40°
R	ST	



Workpiece material group suitability and starting values for cutting speed (m/min).

P2.3	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2	M3.3	M4.1
◪7	◪9	◪8	◪7	■10	■8	■9	■7	■7	■6	■5	■4

Products from this series are also available in set with drills. Please see L114.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E238M3	3	0.50	56.0	6	3.50	2.70	6	3	2.50	18.00
E238M4	4	0.70	63.0	7	4.50	3.40	6	3	3.30	21.00
E238M5	5	0.80	70.0	8	6.00	4.90	8	3	4.20	25.00
E238M6	6	1.00	80.0	10	6.00	4.90	8	3	5.00	30.00
E238M8	8	1.25	90.0	12	8.00	6.20	9	3	6.80	33.00
E238M10	10	1.50	100.0	15	10.00	8.00	11	3	8.50	39.00
E238M12	12	1.75	110.0	16	9.00	7.00	10	4	10.30	–
E238M14	14	2.00	110.0	20	11.00	9.00	12	4	12.00	–
E238M16	16	2.00	110.0	20	12.00	9.00	12	4	14.00	–
E238M18	18	2.50	125.0	25	14.00	11.00	14	4	15.50	–
E238M20	20	2.50	140.0	25	16.00	12.00	15	4	17.50	–
E238M22	22	2.50	140.0	25	18.00	14.50	17	4	19.80	–
E238M24	24	3.00	160.0	30	18.00	14.50	17	4	21.00	–
E238M27	27	3.00	160.0	30	20.00	16.00	19	4	24.00	–
E238M30	30	3.50	180.0	36	22.00	18.00	21	4	26.50	–

E239

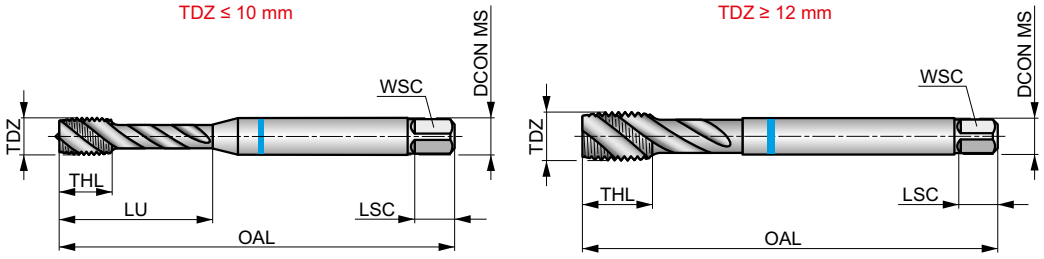
DORMER

Blue SHARK 40° Spiral Flute Metric Machine Tap, DIN Standard

High performance blind hole tap for medium strength stainless steel. Unique HSS-E-PM substrate with Super-B coating and additional edge treatment providing superior performance, consistency and extended tool life. Back taper on spiral flute taps facilitates chip evacuation and reduces torque when the tap reverses.

SHARK

M	DIN 371/376	6H
	2.5×D	HSS-E PM
C 2-3		λ 40°
R	Super B	



Workpiece material group suitability and starting values for cutting speed (m/min).

P2.3	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2	M2.3	M3.1	M3.2	M3.3	M4.1	M4.2
◪15	◪13	◪10	◪8	■18	■15	■16	■13	◪11	■11	■9	■8	■5	◪4

Product	TDZ	TP [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]	LU [mm]
E239M3	3	0.50	56.0	6	3.50	2.70	6	3	2.50	18.00
E239M4	4	0.70	63.0	7	4.50	3.40	6	3	3.30	21.00
E239M5	5	0.80	70.0	8	6.00	4.90	8	3	4.20	25.00
E239M6	6	1.00	80.0	10	6.00	4.90	8	3	5.00	30.00
E239M8	8	1.25	90.0	12	8.00	6.20	9	3	6.80	33.00
E239M10	10	1.50	100.0	15	10.00	8.00	11	3	8.50	39.00
E239M12	12	1.75	110.0	16	9.00	7.00	10	4	10.30	–
E239M14	14	2.00	110.0	20	11.00	9.00	12	4	12.00	–
E239M16	16	2.00	110.0	20	12.00	9.00	12	4	14.00	–
E239M20	20	2.50	140.0	25	16.00	12.00	15	4	17.50	–

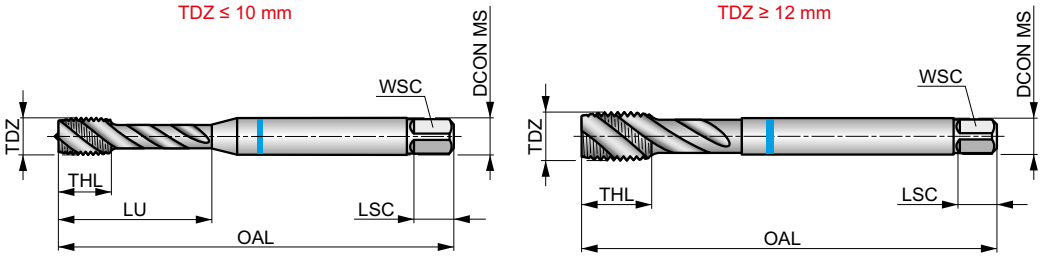
E414

Blue SHARK 48° Spiral Flute Metric Machine Tap, DIN Standard

High performance quick spiral tap for deep blind holes in stainless steels. Unique HSS-E-PM substrate with Super-B coating and additional edge treatment provide superior performance. Extra back taper facilitates chip evacuation and reduces torque on reversal. Recommended to be used with synchronous feed tap holders.

SHARK

M	DIN 371/376	6H
	3×D	HSS-E PM
C 2-3		λ 48°
R	Super B	



Workpiece material group suitability and starting values for cutting speed (m/min).

P2.2	P2.3	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2	M2.3	M3.1	M3.2	M3.3
◪32	◪28	◪15	◪13	◪11	◪10	■22	■19	■20	■16	■13	■14	■12	■11

M4.1	M4.2
■8	■7

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E414M3	3	0.50	56.0	6	3.50	2.70	6	3	2.50	18.00
E414M4	4	0.70	63.0	7	4.50	3.40	6	3	3.30	21.00
E414M5	5	0.80	70.0	8	6.00	4.90	8	3	4.20	25.00
E414M6	6	1.00	80.0	10	6.00	4.90	8	3	5.00	30.00
E414M8	8	1.25	90.0	13	8.00	6.20	9	3	6.80	35.00
E414M10	10	1.50	100.0	15	10.00	8.00	11	3	8.50	39.00
E414M12	12	1.75	110.0	18	9.00	7.00	10	3	10.30	–
E414M14	14	2.00	110.0	20	11.00	9.00	12	3	12.00	–
E414M16	16	2.00	110.0	20	12.00	9.00	12	4	14.00	–
E414M20	20	2.50	140.0	25	16.00	12.00	15	4	17.50	–

E473

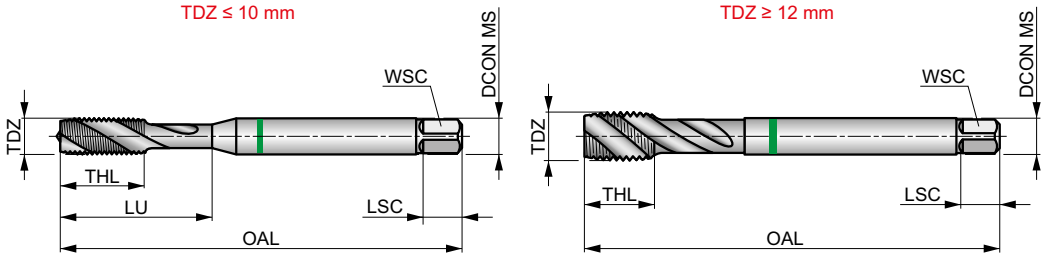
DORMER

Green SHARK 35° Spiral Flute Metric Machine Tap, DIN Standard

Blind hole tap with reinforced or reduced shank for non-ferrous materials. Unique HSS-E-PM substrate with polished flutes provide consistency and process security.

SHARK

M	DIN 371/376	6H
	2.5×D	HSS-E PM
C 2-3		λ 35°
R	Bright	



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.2	P1.3	P2.1	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1
◪22	◪23	◪15	■15	■11	■7	■29	■27	■19	■48	■28	◪14	■24

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E473M3	3	0.50	56.0	9	3.50	2.70	6	2	2.50	18.00
E473M4	4	0.70	63.0	12	4.50	3.40	6	2	3.30	21.00
E473M5	5	0.80	70.0	13	6.00	4.90	8	2	4.20	25.00
E473M6	6	1.00	80.0	15	6.00	4.90	8	2	5.00	30.00
E473M8	8	1.25	90.0	18	8.00	6.20	9	2	6.80	35.00
E473M10	10	1.50	100.0	20	10.00	8.00	11	2	8.50	39.00
E473M12	12	1.75	110.0	23	9.00	7.00	10	3	10.30	–
E473M16	16	2.00	110.0	25	12.00	9.00	12	3	14.00	–
E473M20	20	2.50	140.0	30	16.00	12.00	15	3	17.50	–

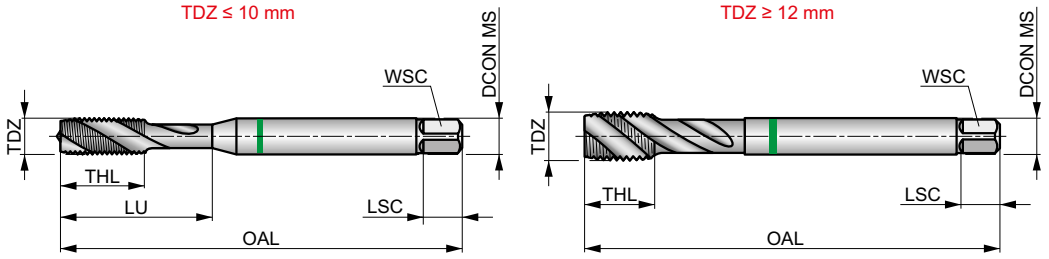
E474

Green SHARK 35° Spiral Flute Metric Machine Tap, DIN Standard

High performance blind hole tap with reinforced or reduced shank for non-ferrous materials. Unique HSS-E-PM substrate with Super-B to avoid chip sticking, providing superior performance, consistency and extended tool life.

SHARK

M	DIN 371/376	6H
	2.5×D	HSS-E PM
C 2-3		λ 35°
R	Super B	



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N4.1
◪32	◪36	◪38	◪27	◪22	◪33	◪24	■17	■44	■40	■28	◪72	■43	◪28

Product	TDZ	TP [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]	LU [mm]
E474M3	3	0.50	56.0	9	3.50	2.70	6	2	2.50	18.00
E474M4	4	0.70	63.0	12	4.50	3.40	6	2	3.30	21.00
E474M5	5	0.80	70.0	13	6.00	4.90	8	2	4.20	25.00
E474M6	6	1.00	80.0	15	6.00	4.90	8	2	5.00	30.00
E474M8	8	1.25	90.0	18	8.00	6.20	9	2	6.80	35.00
E474M10	10	1.50	100.0	20	10.00	8.00	11	2	8.50	39.00
E474M12	12	1.75	110.0	23	9.00	7.00	10	3	10.30	–
E474M16	16	2.00	110.0	25	12.00	9.00	12	3	14.00	–
E474M20	20	2.50	140.0	30	16.00	12.00	15	3	17.50	–

E299

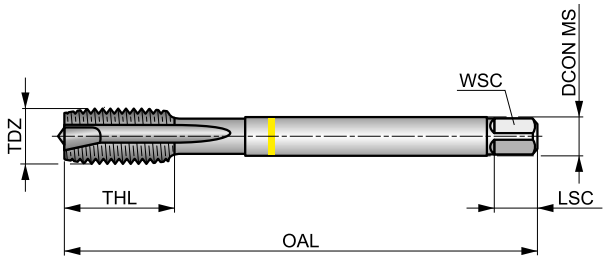
DORMER

Yellow SHARK Spiral Point Metric-Fine Machine Tap, DIN Standard

High performance through hole tap for low carbon and alloyed steel and non-ferrous materials. Unique HSS-E-PM substrate with additional edge treatment, provide consistency and process security. Hard chrome coated to increase the surface hardness and reduce built-up edge, increasing performance and tool life.

SHARK

MF	DIN 374	6H
	2.5×D	HSS-E PM
B 3.5-5		R
Cr		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	N3.1	N3.2	N3.3
■24	■27	■28	■20	■18	◪16	■15	◪12	◪9	■51	■30	◪15

Product	TDZ	TP [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]
E299M4X.5	4	0.50	63.0	12	2.80	2.10	5	3	3.50
E299M5X.5	5	0.50	70.0	13	3.50	2.70	6	3	4.50
E299M6X.75	6	0.75	80.0	15	4.50	3.40	6	3	5.30
E299M8X.75	8	0.75	80.0	15	6.00	4.90	8	3	7.30
E299M8X1.0	8	1.00	90.0	18	6.00	4.90	8	3	7.00
E299M10X.75	10	0.75	90.0	20	7.00	5.50	8	3	9.30
E299M10X1.0	10	1.00	90.0	20	7.00	5.50	8	3	9.00
E299M10X1.25	10	1.25	100.0	20	7.00	5.50	8	3	8.80
E299M12X1.0	12	1.00	100.0	21	9.00	7.00	10	4	11.00
E299M12X1.25	12	1.25	100.0	21	9.00	7.00	10	4	10.80
E299M12X1.5	12	1.50	110.0	21	9.00	7.00	10	4	10.50
E299M14X1.0	14	1.00	100.0	21	11.00	9.00	12	4	13.00
E299M14X1.25	14	1.25	100.0	21	11.00	9.00	12	4	12.80
E299M14X1.5	14	1.50	100.0	21	11.00	9.00	12	4	12.50
E299M16X1.0	16	1.00	100.0	21	12.00	9.00	12	4	15.00
E299M16X1.5	16	1.50	100.0	21	12.00	9.00	12	4	14.50
E299M18X1.0	18	1.00	110.0	24	14.00	11.00	14	4	17.00
E299M18X1.5	18	1.50	110.0	24	14.00	11.00	14	4	16.50
E299M20X1.5	20	1.50	125.0	24	16.00	12.00	15	4	18.50
E299M22X1.5	22	1.50	125.0	25	18.00	14.50	17	4	20.50
E299M24X1.5	24	1.50	140.0	28	18.00	14.50	17	4	22.50
E299M24X2.0	24	2.00	140.0	28	18.00	14.50	17	4	22.00
E299M27X2.0	27	2.00	140.0	28	20.00	16.00	19	4	25.00
E299M30X2.0	30	2.00	150.0	28	22.00	18.00	21	4	28.00

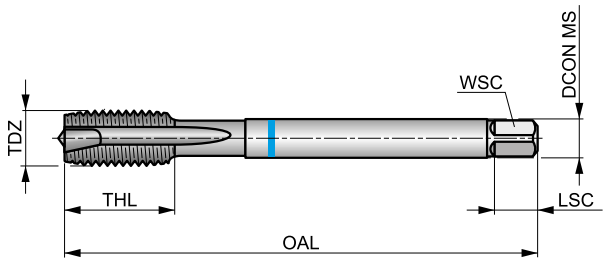
E384

Blue SHARK Spiral Point Metric-Fine Machine Tap, DIN Standard

Through hole tap with reinforced or reduced shank for medium strength stainless steel. Unique HSS-E-PM substrate along with additional edge treatment, provide consistency and process security. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

SHARK

MF	DIN 374	6H
	2.5×D	HSS-E PM
B 3.5-5		R
ST		



Workpiece material group suitability and starting values for cutting speed (m/min).

P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2	M2.1	M2.2	M2.3	M3.1	M3.2
◪8	◪15	◪12	◪10	◪9	◪7	◪6	■11	■9	■10	■8	◪7	■8	■7

M3.3	M4.1	M4.2
■6	■5	◪4

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
E384M6X.75	6	0.75	80.0	15	4.50	3.40	6	3	5.30
E384M8X1.0	8	1.00	90.0	18	6.00	4.90	8	3	7.00
E384M10X1.0	10	1.00	90.0	20	7.00	5.50	8	3	9.00
E384M10X1.25	10	1.25	100.0	20	7.00	5.50	8	3	8.80
E384M12X1.0	12	1.00	100.0	21	9.00	7.00	10	4	11.00
E384M12X1.25	12	1.25	100.0	21	9.00	7.00	10	4	10.80
E384M12X1.5	12	1.50	100.0	21	9.00	7.00	10	4	10.50
E384M14X1.5	14	1.50	100.0	21	11.00	9.00	12	4	12.50
E384M16X1.5	16	1.50	100.0	21	12.00	9.00	12	5	14.50
E384M18X1.5	18	1.50	110.0	24	14.00	11.00	14	5	16.50
E384M20X1.5	20	1.50	125.0	24	16.00	12.00	15	5	18.50

E300

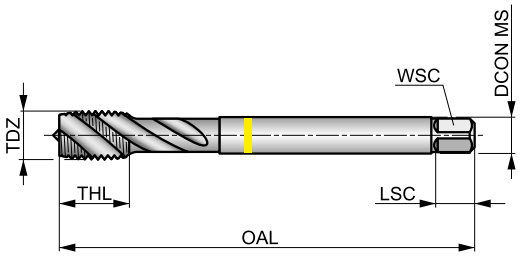
DORMER

Yellow SHARK 40° Spiral Flute Metric-Fine Machine Tap, DIN Standard

High performance blind hole tap for low carbon and alloyed steel and non-ferrous materials. Unique HSS-E-PM substrate with additional edge treatment, provide consistency and process security. Hard chrome coated to increase the surface hardness, reduces built-up edge, resulting in increased performance and tool life.

SHARK

MF	DIN 374	6H
	2×D	HSS-E PM
C 2-3		λ 40°
R	Cr	



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	N3.1	N3.2	N3.3
■23	■25	■26	■19	■17	◪15	■14	◪11	◪8	■48	■28	◪14

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
E300M4X.5	4	0.50	63.0	6.5	2.80	2.10	5	3	3.50
E300M5X.5	5	0.50	70.0	7.5	3.50	2.70	6	3	4.50
E300M6X.75	6	0.75	80.0	10	4.50	3.40	6	3	5.30
E300M8X.75	8	0.75	80.0	13	6.00	4.90	8	3	7.30
E300M8X1.0	8	1.00	90.0	13	6.00	4.90	8	3	7.00
E300M10X.75	10	0.75	90.0	13	7.00	5.50	8	3	9.30
E300M10X1.0	10	1.00	90.0	12	7.00	5.50	8	3	9.00
E300M10X1.25	10	1.25	100.0	15	7.00	5.50	8	3	8.80
E300M12X1.0	12	1.00	100.0	15	9.00	7.00	10	4	11.00
E300M12X1.25	12	1.25	100.0	13	9.00	7.00	10	4	10.80
E300M12X1.5	12	1.50	100.0	13	9.00	7.00	10	4	10.50
E300M14X1.0	14	1.00	100.0	15	11.00	9.00	12	4	13.00
E300M14X1.25	14	1.25	100.0	15	11.00	9.00	12	4	12.80
E300M14X1.5	14	1.50	100.0	15	11.00	9.00	12	4	12.50
E300M16X1.0	16	1.00	100.0	15	12.00	9.00	12	5	15.00
E300M16X1.5	16	1.50	100.0	15	12.00	9.00	12	5	14.50
E300M18X1.0	18	1.00	110.0	17	14.00	11.00	14	5	17.00
E300M18X1.5	18	1.50	110.0	17	14.00	11.00	14	5	16.50
E300M20X1.5	20	1.50	125.0	17	16.00	12.00	15	5	18.50
E300M22X1.5	22	1.50	125.0	17	18.00	14.50	17	5	20.50
E300M24X1.5	24	1.50	140.0	20	18.00	14.50	17	5	22.50
E300M24X2.0	24	2.00	140.0	20	18.00	14.50	17	5	22.00
E300M27X2.0	27	2.00	140.0	20	20.00	16.00	19	5	25.00
E300M30X2.0	30	2.00	150.0	20	22.00	18.00	21	5	28.00

E383

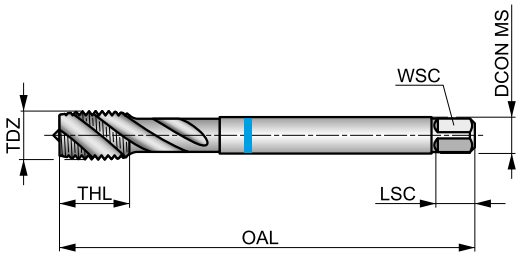
DORMER

Blue SHARK 40° Spiral Flute Metric-Fine Machine Tap, DIN Standard

Blind hole tap with reduced shank for medium strength stainless steel. Unique HSS-E-PM substrate along with additional edge treatment, provide consistency and process security. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

SHARK

MF	DIN 374	6H
	2×D	HSS-E PM
C 2-3		λ 40°
R	ST	



Workpiece material group suitability and starting values for cutting speed (m/min).

P2.3	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2	M3.3	M4.1
◪7	◪9	◪8	◪7	■10	■8	■9	■7	■7	■6	■5	■4

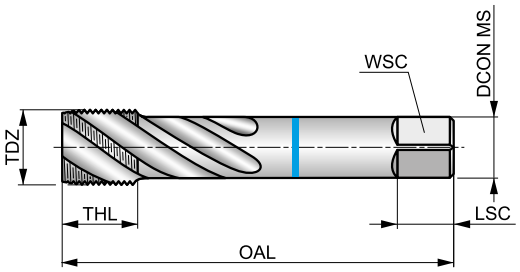
Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
E383M6X.75	6	0.75	80.0	10	4.50	3.40	6	3	5.30
E383M8X1.0	8	1.00	90.0	13	6.00	4.90	8	3	7.00
E383M10X1.0	10	1.00	90.0	12	7.00	5.50	8	3	9.00
E383M10X1.25	10	1.25	100.0	15	7.00	5.50	8	3	8.80
E383M12X1.0	12	1.00	100.0	13	9.00	7.00	10	4	11.00
E383M12X1.25	12	1.25	100.0	13	9.00	7.00	10	4	10.80
E383M12X1.5	12	1.50	100.0	13	9.00	7.00	10	4	10.50
E383M14X1.5	14	1.50	100.0	21	11.00	9.00	12	4	12.50
E383M16X1.5	16	1.50	100.0	21	12.00	9.00	12	5	14.50
E383M18X1.5	18	1.50	110.0	24	14.00	11.00	14	5	16.50
E383M20X1.5	20	1.50	125.0	24	16.00	12.00	15	5	18.50

E382

Blue SHARK 40° Spiral Flute G(BSP) Machine Tap, DIN Standard

Blind hole tap with reduced shank for medium strength stainless steel. Unique HSS-E-PM substrate along with additional edge treatment, provide consistency and process security. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

SHARK



G	DIN 5156	Normal
	2×D	HSS-E PM
C 2-3		λ 40°
R	ST	

Workpiece material group suitability and starting values for cutting speed (m/min).

P2.3	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2	M3.3	M4.1
◪8	◪10	◪9	◪7	■10	■8	■9	■7	■7	■6	■5	■4

Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]
E3821/8	1/8	28	9.730	90.0	12	7.00	5.50	8	3	8.80
E3821/4	1/4	19	13.160	100.0	15	11.00	9.00	12	4	11.80
E3823/8	3/8	19	16.660	100.0	15	12.00	9.00	12	4	15.25
E3821/2	1/2	14	20.960	125.0	24	16.00	12.00	15	4	19.00
E3823/4	3/4	14	26.440	140.0	20	20.00	16.00	19	4	24.50
E3821	1″	11	33.250	160.0	24	25.00	20.00	23	4	30.75

HSS HAND & MACHINE TAPS

HSS HAND & MACHINE TAPS – TOOL MATERIAL NAVIGATOR

Tool materials

High Speed Steel	HSS	A medium-alloyed high speed steel that has good machinability and good performance. HSS exhibits hardness, toughness and wear resistance characteristics that make it attractive in a wide range of applications, for example in drills and taps.
Sintered Cobalt High Speed Steel	HSS-E PM	HSS-E-PM is a Cobalt High Speed Powder Metal substrate which has been produced using powder metal technology. High speed steel produced by this method exhibits superior toughness and grindability due to the uniform and consistent grain structure. High performance taps and end mills have a particular advantage when manufactured from this substrate.

Surface Treatments

Bright (uncoated)		Bright finish (uncoated surface) improves chip flow in soft or non-ferrous materials and maintains sharp cutting edges in abrasive materials.
Combination Bright and Steam Tempered		Combination of bright and steam tempering can be effective as the blue oxide more porous surface acts to retain and pull cutting fluid into the hole while the bright surface assists in chip evacuation. This combination is achieved by grinding the bright surface after tempering.
Steam Tempering		Steam tempering gives a strongly adhering blue oxide surface that acts to retain cutting fluid and prevent chip to tool welding, thereby counteracting the formation of a built-up edge. Steam tempering can be applied to any bright tool but is most effective on drills and taps.

Surface Coatings

Titanium Nitride (TiN)		Titanium Nitride is a gold coloured ceramic coating applied by physical vapour deposition (PVD). High hardness combined with low friction properties ensures considerably longer tool life, or alternatively, better cutting performance from tools which have not been coated. TiN coatings are used mainly for drills and taps.

Thread form (THFT)		M	M	M	M	M	M	M	M	M	M	M	M
Basic standard group (BSG)		DIN 352	DIN 352	DIN 352	DIN 371	DIN 376	DIN 371	DIN 376	ISO 529	ISO 529	ISO 529	DIN 357	ISO 2283	ISO 2283
Thread tolerance class (TCTR)		6H	6HX	6H	6H	6H	6H	6H	6H	6H	6H	6H	6H	6H
Threading application		IU	IU	IU	IU	IU	IU	IU	IU	IU	IU	IU	IU	IU
Usable length (ULDR)		1.5×D	1.5×D	1.5×D	1.5×D	1.5×D	1.5×D	1.5×D	1.5×D	1.5×D	1.5×D	2×D	1.5×D	1.5×D
Material code (BMC)		HSS	HSS-E	HSS	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS	HSS	HSS	HSS-E	HSS-E PM	HSS-E PM
Tap chamfer style (TCS)		C 2-3	C 2-3	C 2-3	A 6-8 C 2-3	A 6-8 C 2-3	C 2-3	C 2-3				C 2-3 D 18-20	C 2-3	C 2-3
Flute Geometry (FDC)														
Flute helix angle (FHA)														
Hand (Cutting direction)		R	R	L	R	R	L	L	R	L	R	R	R	R
Coating		Bright	ST	Bright	Bright	Bright	Bright	Bright	Bright	Bright	TiN	Bright	Bright	TiN
Coolant exit style (CXSC)														
Product Family Code		E100	E102	E101	E200	E250	E237	E251	E500	E501	E504	E303	E600	E610
		M1.6 - M52	M3 - M30	M4 - M16	M2 - M10	M3 - M52	M3 - M10	M12 - M24	M1 - M56	M3 - M24	M3 - M10	M3 - M20	M3 - M20	M3 - M16
		74	76	77	78	79	80	81	82	86	88	89	90	91
P	P1	■	◪	■	■	■	■	■	■	■	■	■	■	■
	P2	■	◪	■	■	■	■	■	■	■	◪	◪	■	■
	P3	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪
	P4	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪
M	M1		■											
	M2		◪											
	M3		■											
	M4		◪											
K	K1	◪	■	◪	◪	◪	◪	◪	◪	◪	■	◪	◪	■
	K2	◪	■	◪	◪	◪	◪	◪	◪	◪	■	◪	◪	■
	K3	◪	■	◪	◪	◪	◪	◪	◪	◪	■	◪	◪	■
	K4	◪	■	◪	◪	◪	◪	◪	◪	◪	■	◪	◪	◪
	K5		■		◪	◪	◪	◪	◪	◪	■	◪	◪	■
N	N1	■		■	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪
	N2	■		■	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪
	N3	■		■	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪
	N4	■		■	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪
	N5													
S	S1		◪											
	S2		◪											
	S3		◪											
	S4		◪											
H	H1													
	H2													
	H3													
	H4													

■ Primary use ◪ Possible use

	EP006H	EP006G	EP00TIN	EP016H	E000	E000TIN	E001	E606	E216	E266	E422	E423	E207	E258	E212
	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
	DIN 371/376	DIN 371/376	DIN 371/376	DIN 371/376	ISO 529	ISO 529	ISO 529	ISO 2283	DIN 371	DIN 376	DIN 371	DIN 376	DIN 371	DIN 376	DIN 371
	6H	6G	6H	6H	6H	6H	6H	6H	6H	6H	6H	6H	6H	6H	6H
	2.5×D	2.5×D	2.5×D	2.5×D	2.5×D	2.5×D	2.5×D	2.5×D	3×D	3×D	3×D	3×D	1.5×D	1.5×D	1.5×D
	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM
	B 3.5-5	B 3.5-5	B 3.5-5	B 3.5-5	B 3.5-5	B 3.5-5	B 3.5-5	B 3.5-5	B 3.5-5	B 3.5-5	B 3.5-5	B 3.5-5	C 2-3	C 2-3	C 2-3
													λ 15°	λ 15°	λ 15°
	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
	Bright	Bright	TiN	ST	Bright	TiN	ST	Bright	Bright	Bright	TiN	TiN	Bright	Bright	TiN
	M2 - M30	M3 - M20	M3 - M30	M2 - M30	M1.6 - M24	M3 - M20	M1.6 - M24	M3 - M24	M3 - M10	M12 - M24	M3 - M10	M12 - M24	M2 - M10	M4 - M36	M3 - M10
	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106
P1	■	■	■	◪	■	■	◪	■	■	■	■	■			
P2	■	■	■	■	■	■	■	■	■	■	■	■	◪	◪	◪
P3	◪	◪	■	■	◪	■	■	◪	■	■	■	■	■	■	■
P4	◪	◪	■	■	◪	◪	■	◪	◪	◪	◪	◪	◪	◪	◪
M1			■	◪		■	◪								
M2			■	◪		■	◪								
M3			■	◪		■	◪								
M4			◪	◪		◪	◪								
K1			◪	◪		◪	◪								
K2			◪	◪		◪	◪								
K3			◪	◪		◪	◪								
K4			◪	◪		◪	◪								
K5			◪	◪		◪	◪								
N1	■	■	■		■	■		◪	■	■	■	■	◪	◪	◪
N2	■	■	■		■	■		◪	◪	◪	◪	◪	◪	◪	◪
N3	◪	◪	◪		■	■		◪	◪	◪	■	■			
N4	◪	◪	◪		◪	◪		◪	◪	◪	◪	◪			
N5															
S1															
S2															
S3															
S4															
H1															
H2															
H3															
H4															

■ Primary use ◪ Possible use

		E263	EX006H	EX006G	EX00TIN	EX016H	E002	E002TIN	E003	E650	E605	E291	E292	E294
Thread form (THFT)		M	M	M	M	M	M	M	M	M	M	M	M	M
Basic standard group (BSG)		DIN 376	DIN 371/376	DIN 371/376	DIN 371/376	DIN 371/376	ISO 529	ISO 529	ISO 529	ISO DORMER	ISO 2283	DIN 2174	DIN 2174	DIN 2174
Thread tolerance class (TCTR)		6H	6H	6G	6H	6H	6H	6H	6H	6H	6H	6HX	6HX	6HX
Threading application		U	U	U	U	U	U	U	U	‖	U	‖U	‖U	‖U
Usable length (ULDR)		1.5×D	2.5×D	2.5×D	2.5×D	2.5×D	2.5×D	2.5×D	2.5×D	1.5×D	2×D	3×D	3×D	3.5×D
Material code (BMC)		HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS	HSS-E PM	HSS-E	HSS-E	HSS-E
Tap chamfer style (TCS)		C 2-3	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3.5	C 2-3.5	C 2-3.5
Flute Geometry (FDC)														
Flute helix angle (FHA)		λ 15°	λ 45°	λ 45°	λ 45°	λ 45°	λ 45°	λ 45°	λ 45°	λ 30°	λ 40°			
Hand (Cutting direction)		R	R	R	R	R	R	R	R	R	R	R	R	R
Coating		TiN	Bright	Bright	TiN	ST	Bright	TiN	ST	ST	Bright	Bright	TiN	TiN
Coolant exit style (CXSC)														
Product Family Code		E263	EX006H	EX006G	EX00TIN	EX016H	E002	E002TIN	E003	E650	E605	E291	E292	E294
		M12 - M36	M2 - M64	M3 - M20	M3 - M30	M2 - M64	M2 - M24	M3 - M20	M2 - M24	M3 - M16	M3 - M20	M1.6 - M16	M1.6 - M16	M3 - M16
		107	108	109	110	111	112	113	114	115	116	117	118	119
P	P1		■	■	■	◪	■	■	◪	■	◪	■	■	■
	P2	◪	■	■	■	■	■	■	■	◪	■	■	■	■
	P3	■	◪	■	■	■	◪	■	■	◪	◪	■	■	■
	P4	◪	◪	◪	■	■	◪	◪	■		◪	■	◪	■
M	M1				■	◪		■	◪				■	■
	M2				■	◪		■	◪				■	■
	M3				■	◪		■	◪				■	■
	M4				◪	◪		◪	◪				◪	■
K	K1													
	K2													
	K3													
	K4													
	K5													
N	N1	◪	■	■			■			◪	◪	■	■	■
	N2	◪	■	■	■		■	■			◪	◪	■	■
	N3									◪			◪	◪
	N4									◪				
	N5													
S	S1													
	S2													
	S3													
	S4													
H	H1													
	H2													
	H3													
	H4													

■ Primary use ◪ Possible use

	E289	E293	E295	E296	E105	E268	E242	E290	E513	EP10	EP10TIN	EP11	E011	EX10	EX10TIN
	M	M	M	M	MF	MF	MF	MF	MF	MF	MF	MF	MF	MF	MF
	DIN 2174	DIN 2174	DIN 2174	DIN 2174	DIN 2181	DIN 374	DIN 371	DIN 374	ISO 529	DIN 374	DIN 374	DIN 374	ISO 529	DIN 374	DIN 374
	6HX	6HX	6GX	6GX	6H	6H	6H	6H	6H	6H	6H	6H	6H	6H	6H
	3.5×D	3×D	3×D	3×D	1.5×D	1.5×D	1.5×D	1.5×D	1.5×D	2.5×D	2.5×D	2.5×D	2.5×D	2.5×D	2.5×D
	HSS-E	HSS-E	HSS-E	HSS-E	HSS	HSS-E PM	HSS-E PM	HSS-E PM	HSS	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM
	C 2-3.5	E 1.5-2	C 2-3.5	E 1.5-2	C 2-3	C 2-3	C 2-3	C 2-3		B 3.5-5	B 3.5-5	B 3.5-5	B 3.5-5	C 2-3	C 2-3
														λ 45°	λ 45°
	R	R	R	R	R	R	L	L	R	R	R	R	R	R	R
	TiN	TiN	TiN	TiN	Bright	Bright	Bright	Bright	Bright	Bright	TiN	ST	ST	Bright	TiN
	M5 - M12	M3 - M16	M3 - M12	M3 - M10	M2.5 - M50	M4 - M50	M8 - M10	M12 - M24	M3 - M50	M4 - M30	M8 - M20	M4 - M30	M4 - M24	M4 - M30	M8 - M20
	120	121	122	123	124	127	129	130	131	135	136	137	138	139	140
P1	■	■	■	■	■	■	■	■	■	■	■	◪	◪	■	■
P2	■	■	■	■	■	■	■	■	■	■	■	◪	■	■	■
P3	■	■	■	■	◪	◪	◪	◪	◪	■	■	■	■	◪	■
P4	■	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	■	◪	◪
M1	■	■	■	■							■	◪	◪		■
M2	■	■	■	■							■	◪	◪		■
M3	■	■	■	■							■	◪	◪		■
M4	■	◪	◪	◪							◪	◪	◪		◪
K1					◪	◪	◪	◪	◪		◪	◪	◪		
K2					◪	◪	◪	◪	◪		◪	◪	◪		
K3					◪	◪	◪	◪	◪		◪	◪	◪		
K4					◪	◪	◪	◪	◪		◪	◪	◪		
K5						◪	◪	◪	◪		◪	◪	◪		
N1	■	■	■	■	■	◪	◪	◪	◪	■	■			■	
N2	■	■	■	■	■	◪	◪	◪	◪	■	■			■	■
N3	◪	◪	◪	◪	■	◪	◪	◪	■	◪	◪				
N4					■	◪	◪	◪	◪	◪	◪				
N5															
S1															
S2															
S3															
S4															
H1															
H2															
H3															
H4															

■ Primary use ◪ Possible use

Thread form (THFT)		MF	MF	MF	UNC	UNC	UNC	UNC	UNC	UNC	UNC	UNC	UNC	UNC
Basic standard group (BSG)		DIN 374	ISO 529	DIN 2174	DIN 352	DIN 371	DIN 376	ISO 529	DIN 2184-1	DIN 2184-1	ISO 529	DIN 2184-1	DIN 2184-1	ISO 529
Thread tolerance class (TCTR)		6H	6H	6HX	2B	2B	2B	2B	2B	2B	2B	2B	2B	2B
Threading application		U	U	IU	IU	IU	IU	IU	I	I	I	U	U	U
Usable length (ULDR)		2.5×D	2.5×D	3×D	1.5×D	1.5×D	1.5×D	1.5×D	2.5×D	2.5×D	2.5×D	2.5×D	2.5×D	2.5×D
Material code (BMC)		HSS-E PM	HSS-E PM	HSS-E	HSS	HSS-E PM	HSS-E PM	HSS	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM
Tap chamfer style (TCS)		C 2-3	C 2-3	C 2-3.5	C 2-3	C 2-3	C 2-3		B 3.5-5	B 3.5-5	B 3.5-5	C 2-3	C 2-3	C 2-3
Flute Geometry (FDC)														
Flute helix angle (FHA)		λ 45°	λ 45°									λ 45°	λ 45°	λ 45°
Hand (Cutting direction)		R	R	R	R	R	R	R	R	R	R	R	R	R
Coating		ST	ST	TIN	Bright	Bright	Bright	Bright	Bright	ST	ST	Bright	ST	ST
Coolant exit style (CXSC)														
Product Family Code		EX11	E013	E288	E108	E225	E275	E515	EP20	EP21	E021	EX20	EX21	E023
		M4 - M30	M4 - M22	M5 - M12	No.5 - 1"	No.4 - 1/4	5/16 - 1.1/2	No.1 - 2"	No.4 - 1"	No.4 - 1"	No.2 - 1"	No.4 - 1"	No.4 - 1"	No.2 - 1"
		141	142	143	144	145	146	147	149	150	151	152	153	154
P	P1	◪	◪	■	■	■	■	■	■	◪	◪	■	◪	◪
	P2	■	■	■	■	■	■	■	■	■	■	■	■	■
	P3	■	■	■	◪	◪	◪	◪	◪	■	■	◪	■	■
	P4	■	■	◪	◪	◪	◪	◪	◪	■	■	◪	■	■
M	M1	◪	◪	■						◪	◪		◪	◪
	M2	◪	◪	■						◪	◪		◪	◪
	M3	◪	◪	■						◪	◪		◪	◪
	M4	◪	◪	◪						◪	◪		◪	◪
K	K1				◪	◪	◪	◪		◪	◪			
	K2				◪	◪	◪	◪		◪	◪			
	K3				◪	◪	◪	◪		◪	◪			
	K4				◪	◪	◪	◪		◪	◪			
	K5				◪	◪	◪	◪		◪	◪			
N	N1			■	■	◪	◪	◪	■			■		
	N2			■	■	◪	◪	◪	■			■		
	N3			◪	■	◪	◪	■	◪					
	N4				◪	◪	◪	◪	◪					
	N5													
S	S1													
	S2													
	S3													
	S4													
H	H1													
	H2													
	H3													
	H4													

■ Primary use ◪ Possible use

	E651	E287	E111	E229	E278	E524	EP30	EP31	E031	EX30	EX31	E033	E654	E286	E570
	UNC	UNC	UNF	UNF	UNF	UNF	UNF	UNF	UNF	UNF	UNF	UNF	UNF	UNF	UN
	DIN DORMER	DIN 2184-1	DIN 2181	DIN 371	DIN 374	ISO 529	DIN 2184-1	DIN 2184-1	ISO 529	DIN 2184-1	DIN 2184-1	ISO 529	DIN DORMER	DIN 2184-1	ISO 529
	2B	2BX	2B	2B	2B	2B	2B	2B	2B	2B	2B	2B	Medium	2BX	2B
	1.5×D	3.5×D	1.5×D	1.5×D	1.5×D	1.5×D	2.5×D	2.5×D	2.5×D	2.5×D	2.5×D	2.5×D	1.5×D	3.5×D	1.5×D
	HSS	HSS-E	HSS	HSS-E PM	HSS-E PM	HSS	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS	HSS-E	HSS
	C 2-3	C 2-3.5	C 2-3	C 2-3	C 2-3		C 2-3	C 2-3	B 3.5-5	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3.5	C 2-3
	λ 30°									λ 45°	λ 45°	λ 45°	λ 30°		
	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
	ST	TiN	Bright	Bright	Bright	Bright	Bright	ST	ST	Bright	ST	ST	ST	TiN	Bright
	155	156	157	158	159	160	162	163	164	165	166	167	168	169	170
P1	■	■	■	■	■	■	■	◪	◪	■	◪	◪	■	■	■
P2	◪	■	◪	■	■	■	■	■	■	■	◪	■	◪	■	■
P3	◪	■	◪	◪	◪	◪	◪	■	■	◪	■	■	◪	■	◪
P4		■	◪	◪	◪	◪	◪	■	■	◪	◪	■		■	◪
M1		■						◪	◪		◪	◪		■	
M2		■						◪	◪		◪	◪		■	
M3		■						◪	◪		◪	◪		■	
M4		■						◪	◪		◪	◪		■	
K1			◪	◪	◪	◪		◪	◪						◪
K2			◪	◪	◪	◪		◪	◪						◪
K3			◪	◪	◪	◪		◪	◪						◪
K4			◪	◪	◪	◪		◪	◪						◪
K5			◪	◪	◪	◪		◪	◪						◪
N1	◪	■	■	◪	◪	◪	■			■			◪	■	◪
N2		■	■	◪	◪	◪	■			■				■	◪
N3	◪	◪	■	◪	◪	■	■						◪	◪	■
N4	◪		■	◪	◪	◪	◪						◪		◪
N5															
S1															
S2															
S3															
S4															
H1															
H2															
H3															
H4															

■ Primary use ◪ Possible use

Thread form (THFT)	BSW	BSW	BSW	BSW	BSF	BSF	BSF	BA	BA	BA	G	G	G
Basic standard group (BSG)	DIN 351	ISO 529	ISO 529	ISO 529	ISO 529	ISO 529	ISO 529	ISO 529	ISO 529	ISO 529	DIN 5157	DIN 5156	ISO 2284
Thread tolerance class (TCTR)	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Normal	Normal	Normal	Normal	Normal	Normal
Threading application	IU	IU	I	U	IU	I	U	IU	I	U	IU	IU	IU
Usable length (ULDR)	1.5×D	1.5×D	2.5×D	2×D	1.5×D	2.5×D	2×D	1.5×D	2.5×D	2×D	1.5×D	1.5×D	1.5×D
Material code (BMC)	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS-E PM	HSS
Tap chamfer style (TCS)	C 2-3		B 3.5-5	C 2-3		B 3.5-5	C 2-3		B 3.5-5	C 2-3	C 2-3	C 2-3	
Flute Geometry (FDC)													
Flute helix angle (FHA)				λ 40°			λ 40°			λ 40°			
Hand (Cutting direction)	R	R	R	R	R	R	R	R	R	R	R	R	R
Coating	Bright	Bright	ST	Bright ST	Bright	ST	Bright ST	Bright	ST	Bright ST	Bright	Bright	Bright
Coolant exit style (CXSC)													
Product Family Code	E115	E531	E534	E533	E536	E539	E538	E542	E545	E544	E119	E282	E547
	1/8 - 1"	1/8 - 1"	1/8 - 3/4	1/8 - 3/4	3/16 - 1"	1/4 - 1/2	1/4 - 1/2	No.10 - No.0	No.10 - No.2	No.8 - No.2	1/8 - 3"	1/8 - 1.1/2	1/8 - 2"
	171	172	174	175	176	178	179	180	182	183	184	186	187
P	P1	■	■	◪	■	■	◪	■	■	◪	■	■	■	■
	P2	■	■	◪	■	◪	■	■	■	■	■	■	■	■
	P3	◪	◪	■	◪	◪	■	■	◪	■	■	◪	◪	◪
	P4	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪
M	M1			◪	◪		■	◪		■	◪				
	M2			◪	◪		◪	◪		◪	◪				
	M3			◪	◪		■	◪		■	◪				
	M4			◪	◪		◪	◪		◪	◪				
K	K1	◪	◪	◪		◪	◪		◪	◪		◪	◪	◪	◪
	K2	◪	◪	◪		◪	◪		◪	◪		◪	◪	◪	◪
	K3	◪	◪	◪		◪	◪		◪	◪		◪	◪	◪	◪
	K4	◪	◪	◪		◪	◪		◪	◪		◪	◪	◪	◪
	K5	◪	◪	◪		◪	◪		◪	◪		◪	◪	◪	◪
N	N1	■	◪			◪		◪	◪		◪	■	◪	◪	◪
	N2	■	◪		◪	◪		◪	◪		◪	■	◪	◪	◪
	N3	■	■			■			◪			■	◪	◪	◪
	N4	■	◪			◪			◪			■	◪	◪	◪
	N5														
S	S1														
	S2														
	S3														
	S4														
H	H1														
	H2														
	H3														
	H4														

■ Primary use ◪ Possible use

	EP40	EP41	E041	EX40	EX41	E043	E620	E621	E550	E714	E710	E721	E711	E653	E712
	G	G	G	G	G	G	EGM	EGM	Rc	NPT	NPT	NPT	NPT	NPT	NPTF
	DIN 5156	DIN 5156	ISO DORMER	DIN 5156	DIN 5156	ISO DORMER	ISO DORMER	ISO DORMER	ISO 2284	ANSI DORMER	ANSI B94.9	ANSI B94.9	ANSI B94.9	ANSI	ANSI B94.9
	Normal	Normal	Normal	Normal	Normal	Normal	6H	6H	Normal	Normal	Normal	Normal	Normal	Normal	Normal
	2.5×D	2.5×D	2.5×D	2.5×D	2.5×D	2.5×D	1.5×D	2×D	1.5×D	1.5×D	1.5×D	1.5×D	1.5×D	1.5×D	1.5×D
	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS	HSS	HSS	HSS-E PM	HSS	HSS	HSS	HSS	HSS
	B 3.5-5	B 3.5-5	B 3.5-5	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3		C 2-3
				λ 45°	λ 45°	λ 45°		λ 40°						λ 27°	
	Bright	ST	ST	Bright	ST	ST	Bright	Bright	Bright	Bright	Bright	TiN	Bright	Bright	Bright
	1/8 - 1"	1/8 - 1"	1/8 - 3/4	1/8 - 1.1/2	1/8 - 1.1/2	1/8 - 3/4	M3 - M16	M3 - M16	1/8 - 2"	1/8 - 1"	1/16 - 2"	1/8 - 1"	1/8 - 1.1/2	1/8 - 1"	1/16 - 1.1/4
	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203
P1	■	◪	◪	■	◪	◪	■	■	■	■	■	■	◪	■	■
P2	■	■	■	■	■	■	■	■	◪	■	■	◪	◪	◪	■
P3	◪	■	■	◪	■	■	◪	◪	◪	■	◪	◪	■	◪	◪
P4	◪	■	■	◪	■	■	◪	◪	◪	◪	◪	■	◪		◪
M1		◪	◪		◪	◪			◪						
M2		◪	◪		◪	◪			◪						
M3		◪	◪		◪	◪			◪						
M4		◪	◪		◪	◪			◪						
K1		◪	◪				◪		◪	◪	◪	■	◪		◪
K2		◪	◪				◪		◪	◪	◪	■	◪		◪
K3		◪	◪				◪		◪	◪	◪	■	◪		◪
K4		◪	◪				◪		◪	◪	◪	■	◪		◪
K5		◪	◪				◪		◪	◪	◪	■	◪		◪
N1	■			■			◪		◪					◪	
N2	■			■			◪	◪	◪	◪	◪	◪	◪		◪
N3	■						◪		■	■	■	■	◪	◪	■
N4	◪						◪		◪		◪	◪	◪	◪	◪
N5															
S1															
S2															
S3															
S4															
H1															
H2															
H3															
H4															

■ Primary use ◪ Possible use

Thread form (THFT)		NPSF	NPSF	NPSM	PG	M	M		
Basic standard group (BSG)		ANSI B94.9	ANSI B94.9	ANSI B94.9	DIN 40432	DIN 352	ISO DORMER		
Thread tolerance class (TCTR)		Normal	Normal	Normal	Normal	6H	6H		
Threading application		IU	IU	IU	IU	IU			
Usable length (ULDR)		1.5×D	1.5×D	1.5×D	1.5×D	1.5×D	1.5×D		
Material code (BMC)		HSS	HSS	HSS	HSS	HSS	HSS		
Tap chamfer style (TCS)		C 2-3	C 2-3	C 2-3		C 2-3	C 2-3		
Flute Geometry (FDC)									
Flute helix angle (FHA)							λ 30°		
Hand (Cutting direction)		R	R	R	R	R	R		
Coating		Bright	TiN	Bright	Bright	Bright	ST		
Coolant exit style (CXSC)									
Product Family Code		E709	E720	E708	E243	L119	L126	L113	L114
		1/8 - 3/4	1/8 - 3/4	1/8 - 1"	No.7 - No.36	Set	Set	Set	Set
		204	205	206	207	208	208	209	209
P	P1	■	◪	■	■				
	P2	■	◪	◪	■				
	P3	■	■	■	◪				
	P4	◪	◪	◪	◪				
M	M1								
	M2								
	M3								
	M4								
K	K1	◪	■	◪	◪				
	K2	◪	■	◪	◪				
	K3	◪	■	◪	◪				
	K4	◪	■	◪	◪				
	K5	◪	■	◪	◪				
N	N1				◪				
	N2	◪	◪	◪	◪				
	N3	■	■	■	■				
	N4	◪	◪	◪	◪				
	N5								
S	S1								
	S2								
	S3								
	S4								
H	H1								
	H2								
	H3								
	H4								

■ Primary use ◪ Possible use

	L115	**L000**	**L001**	**L002**	**L120**	**L110**	**L112**		
	Set	Set	Set	Set	Set	16.00 - 4"	BT1 - No.7		
	210	210	211	212	213	214	215		
P1									
P2									
P3									
P4									
M1									
M2									
M3									
M4									
K1									
K2									
K3									
K4									
K5									
N1									
N2									
N3									
N4									
N5									
S1									
S2									
S3									
S4									
H1									
H2									
H3									
H4									

■ Primary use ◪ Possible use

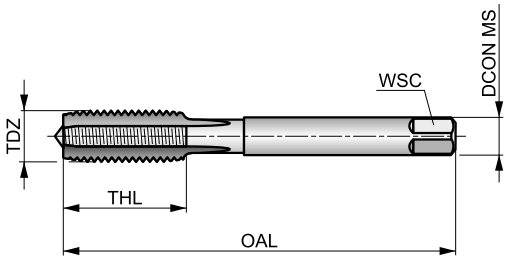
E100

DORMER

HSS Straight Flute Serial Hand Taps, Metric, DIN Standard, Bright Finish

Ideal for hand tapping tough materials. The straight flute design makes it ideal for both through and blind holes. Available as a single finishing tap or as a set of three serial taps, which should be used one after the other to create the full thread. Bright finish.

M	DIN 352	6H
1.5×D		HSS
C 2-3		R
Bright		



Workpiece material group suitability.

P1.1 ■	P1.2 ■	P1.3 ■	P2.1 ■	P2.2 ■	P2.3 ◪	P3.1 ■	P3.2 ◪	P4.1 ◪	K1.1 ◪	K1.2 ◪	K1.3 ◪	K2.1 ◪	K2.2 ◪
K3.1 ◪	K3.2 ◪	K4.1 ◪	K4.2 ◪	K5.1 ◪	K5.2 ◪	N1.1 ■	N1.2 ■	N1.3 ■	N2.1 ■	N2.2 ■	N2.3 ■	N3.1 ■	N3.2 ■
N3.3 ■	N4.2 ■	N4.3 ■											

Products from this series are also available in set of sizes or with dies. Please see L119 or L120.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	NOF	PHD
		[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
E100M1.6N03	1.6	0.35	32.0	7	2.50	2.10	3	1.25
E100M1.6N08	1.6	0.35	32.0	7	2.50	2.10	3	1.25
E100M2N03	2	0.40	36.0	8	2.80	2.10	3	1.60
E100M2N08	2	0.40	36.0	8	2.80	2.10	3	1.60
E100M2.5N03	2.5	0.45	40.0	9	2.80	2.10	3	2.05
E100M2.5N08	2.5	0.45	40.0	9	2.80	2.10	3	2.05
E100M3N03	3	0.50	40.0	10	3.50	2.70	3	2.50
E100M3N08	3	0.50	40.0	10	3.50	2.70	3	2.50
E100M3.5N03	3.5	0.60	45.0	10	4.00	3.00	3	2.90
E100M3.5N08	3.5	0.60	45.0	10	4.00	3.00	3	2.90
E100M4N03	4	0.70	45.0	12	4.50	3.40	3	3.30
E100M4N08	4	0.70	45.0	12	4.50	3.40	3	3.30
E100M5N03	5	0.80	50.0	14	6.00	4.90	3	4.20
E100M5N08	5	0.80	50.0	14	6.00	4.90	3	4.20
E100M6N03	6	1.00	56.0	16	6.00	4.90	3	5.00
E100M6N08	6	1.00	56.0	16	6.00	4.90	3	5.00
E100M7N03	7	1.00	56.0	16	6.00	4.90	3	6.00
E100M7N08	7	1.00	56.0	16	6.00	4.90	3	6.00
E100M8N03	8	1.25	63.0	19	6.00	4.90	3	6.80
E100M8N08	8	1.25	63.0	19	6.00	4.90	3	6.80
E100M9N03	9	1.25	63.0	20	7.00	5.50	3	7.80
E100M9N08	9	1.25	63.0	20	7.00	5.50	3	7.80
E100M10N03	10	1.50	70.0	22	7.00	5.50	3	8.50
E100M10N08	10	1.50	70.0	22	7.00	5.50	3	8.50
E100M12N03	12	1.75	75.0	25	9.00	7.00	4	10.30
E100M12N08	12	1.75	75.0	25	9.00	7.00	4	10.30
E100M14N03	14	2.00	80.0	25	11.00	9.00	4	12.00

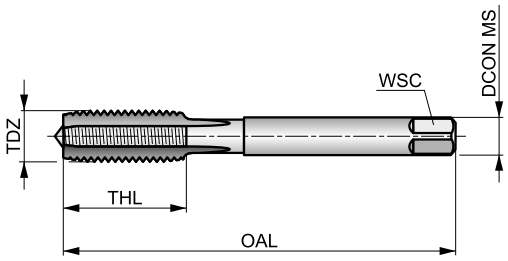
Product	TDZ	TP	OAL	THL	DCON MS	WSC	NOF	PHD
		[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
E100M14NO8	14	2.00	80.0	25	11.00	9.00	4	12.00
E100M16NO3	16	2.00	80.0	25	12.00	9.00	4	14.00
E100M16NO8	16	2.00	80.0	25	12.00	9.00	4	14.00
E100M18NO3	18	2.50	95.0	32	14.00	11.00	4	15.50
E100M18NO8	18	2.50	95.0	32	14.00	11.00	4	15.50
E100M20NO3	20	2.50	95.0	32	16.00	12.00	4	17.50
E100M20NO8	20	2.50	95.0	32	16.00	12.00	4	17.50
E100M22NO3	22	2.50	100.0	34	18.00	14.50	4	19.50
E100M22NO8	22	2.50	100.0	34	18.00	14.50	4	19.50
E100M24NO3	24	3.00	110.0	38	18.00	14.50	4	21.00
E100M24NO8	24	3.00	110.0	38	18.00	14.50	4	21.00
E100M27NO3	27	3.00	110.0	38	20.00	16.00	4	24.00
E100M27NO8	27	3.00	110.0	38	20.00	16.00	4	24.00
E100M30NO3	30	3.50	125.0	45	22.00	18.00	4	26.50
E100M30NO8	30	3.50	125.0	45	22.00	18.00	4	26.50
E100M33NO3	33	3.50	125.0	50	25.00	20.00	4	29.50
E100M33NO8	33	3.50	125.0	50	25.00	20.00	4	29.50
E100M36NO3	36	4.00	150.0	56	28.00	22.00	4	32.00
E100M36NO8	36	4.00	150.0	56	28.00	22.00	4	32.00
E100M39NO3	39	4.00	150.0	60	32.00	24.00	4	35.00
E100M39NO8	39	4.00	150.0	60	32.00	24.00	4	35.00
E100M42NO3	42	4.50	150.0	60	32.00	24.00	4	37.50
E100M42NO8	42	4.50	150.0	60	32.00	24.00	4	37.50
E100M45NO3	45	4.50	160.0	65	36.00	29.00	6	40.50
E100M45NO8	45	4.50	160.0	65	36.00	29.00	6	40.50
E100M48NO3	48	5.00	180.0	70	36.00	29.00	6	43.00
E100M48NO8	48	5.00	180.0	70	36.00	29.00	6	43.00
E100M52NO3	52	5.00	180.0	70	40.00	32.00	6	47.00
E100M52NO8	52	5.00	180.0	70	40.00	32.00	6	47.00

E102

HSS-E Straight Flute Serial Hand Taps, Metric, DIN Standard

Ideal for hand tapping tough materials. The straight flute design makes it ideal for both through and blind holes. Available as a set of three serial taps, which should be used one after the other to create the full thread. Steam tempered surface acts to retain cutting fluid to improve lubrication and provide smoother cutting.

M	DIN 352	6HX
	1.5×D	HSS-E
C 2-3		R
ST		



Workpiece material group suitability.

P1.1 ◪	P1.2 ◪	P1.3 ◪	P2.1 ◪	P2.2 ◪	P2.3 ■	P3.1 ◪	P3.2 ■	P3.3 ◪	P4.1 ■	P4.2 ◪	M1.1 ■	M1.2 ■	M2.1 ■
M2.2 ◪	M3.1 ■	M3.2 ■	M3.3 ◪	M4.1 ◪	K1.1 ■	K1.2 ■	K1.3 ■	K2.1 ■	K2.2 ■	K2.3 ◪	K3.1 ■	K3.2 ■	K3.3 ◪
K4.1 ■	K4.2 ■	K4.3 ◪	K5.1 ■	K5.2 ■	K5.3 ◪	S1.1 ◪	S2.1 ◪	S3.1 ◪	S4.1 ◪				

No4 with pilot guide.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	NOF	PHD
		[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
E102M3N08	3	0.50	40.0	10	3.50	2.70	3	2.50
E102M4N08	4	0.70	45.0	12	4.50	3.40	3	3.30
E102M5N08	5	0.80	50.0	14	6.00	4.90	3	4.20
E102M6N08	6	1.00	56.0	16	6.00	4.90	3	5.00
E102M8N08	8	1.25	63.0	19	6.00	4.90	3	6.80
E102M10N08	10	1.50	70.0	22	7.00	5.50	3	8.50
E102M12N08	12	1.75	75.0	25	9.00	7.00	4	10.30
E102M14N08	14	2.00	80.0	25	11.00	9.00	4	12.00
E102M16N08	16	2.00	80.0	25	12.00	9.00	4	14.00
E102M18N08	18	2.50	95.0	32	14.00	11.00	4	15.50
E102M20N08	20	2.50	95.0	32	16.00	12.00	4	17.50
E102M24N08	24	3.00	110.0	38	18.00	14.50	4	21.00
E102M27N08	27	3.00	110.0	38	20.00	16.00	4	24.00
E102M30N08	30	3.50	125.0	45	22.00	18.00	4	26.50

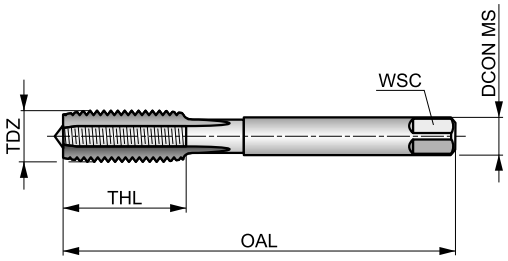
E101

DORMER

HSS Straight Flute Serial Hand Taps, Metric, DIN Standard, Left-Handed

Ideal for hand tapping tough materials. The straight flute design makes it ideal for both through and blind holes. Available as a single finishing tap or as a set of three serial taps, which should be used one after the other to create the full thread. Bright finish.

M	DIN 352	6H
1.5×D		HSS
C 2-3		L
Bright		



Workpiece material group suitability.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
■	■	■	■	■	◪	■	◪	◪	◪	◪	◪	◪	◪

K3.1	K3.2	K4.1	K4.2	K5.1	K5.2	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2
◪	◪	◪	◪	◪	◪	■	■	■	■	■	■	■	■

N3.3	N4.2	N4.3
■	■	■

Product	TDZ	TP [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	NOF	PHD [mm]
E101M4N03	4	0.70	45.0	12	4.50	3.40	3	3.30
E101M4N08	4	0.70	45.0	12	4.50	3.40	3	3.30
E101M5N03	5	0.80	50.0	14	6.00	4.90	3	4.20
E101M5N08	5	0.80	50.0	14	6.00	4.90	3	4.20
E101M6N03	6	1.00	56.0	16	6.00	4.90	3	5.00
E101M6N08	6	1.00	56.0	16	6.00	4.90	3	5.00
E101M8N03	8	1.25	63.0	19	6.00	4.90	3	6.80
E101M8N08	8	1.25	63.0	19	6.00	4.90	3	6.80
E101M10N03	10	1.50	70.0	22	7.00	5.50	3	8.50
E101M10N08	10	1.50	70.0	22	7.00	5.50	3	8.50
E101M12N03	12	1.75	75.0	25	9.00	7.00	4	10.30
E101M12N08	12	1.75	75.0	25	9.00	7.00	4	10.30
E101M14N03	14	2.00	80.0	25	11.00	9.00	4	12.00
E101M14N08	14	2.00	80.0	25	11.00	9.00	4	12.00
E101M16N03	16	2.00	80.0	25	12.00	9.00	4	14.00
E101M16N08	16	2.00	80.0	25	12.00	9.00	4	14.00

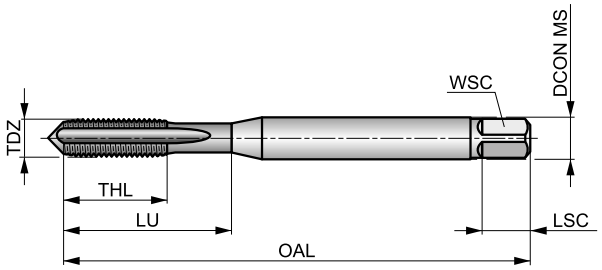
E200

DORMER

HSS-E-PM Straight Flute Machine Tap, Metric, DIN Standard

General purpose straight flute machine tap for through and blind holes. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges. The reinforced shank increases strength against torsional twist.

M	DIN 371	6H
	1.5×D	HSS-E PM
A 6-8 C 2-3		R
Bright		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
■11	■12	■12	■9	■8	◪7	■7	◪6	◪4	◪13	◪10	◪8	◪14	◪11

K3.1	K3.2	K4.1	K4.2	K5.1	K5.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N4.2
◪12	◪9	◪12	◪9	◪12	◪10	◪12	◪15	◪14	◪11	◪21	■14	◪8

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E200M2	2	0.40	45.0	6	2.80	2.10	5	3	1.60	9.00
E200M2.5	2.5	0.45	50.0	8	2.80	2.10	5	3	2.05	12.50
E200M3	3	0.50	56.0	9	3.50	2.70	6	3	2.50	18.00
E200M3NO1	3	0.50	56.0	9	3.50	2.70	6	3	2.50	18.00
E200M4	4	0.70	63.0	12	4.50	3.40	6	3	3.30	21.00
E200M4NO1	4	0.70	63.0	12	4.50	3.40	6	3	3.30	21.00
E200M5	5	0.80	70.0	13	6.00	4.90	8	3	4.20	25.00
E200M5NO1	5	0.80	70.0	13	6.00	4.90	8	3	4.20	25.00
E200M6	6	1.00	80.0	15	6.00	4.90	8	3	5.00	30.00
E200M6NO1	6	1.00	80.0	15	6.00	4.90	8	3	5.00	30.00
E200M8	8	1.25	90.0	18	8.00	6.20	9	3	6.80	35.00
E200M8NO1	8	1.25	90.0	18	8.00	6.20	9	3	6.80	35.00
E200M10	10	1.50	100.0	20	10.00	8.00	11	3	8.50	39.00
E200M10NO1	10	1.50	100.0	20	10.00	8.00	11	3	8.50	39.00

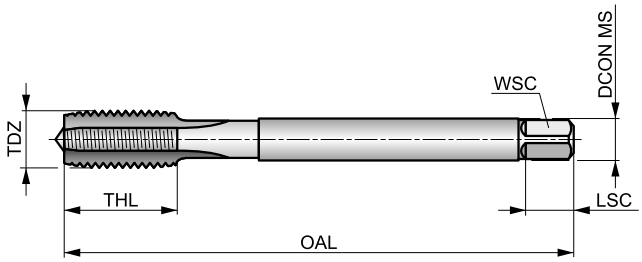
E250

DORMER

HSS-E-PM Straight Flute Machine Tap, Metric, DIN Standard

General purpose straight flute machine tap for through and blind holes. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges. The reduced shank increases the reach of the tap.

M	DIN 376	6H
1.5×D		HSS-E PM
A 6-8 C 2-3		R
Bright		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
■11	■12	■12	■9	■8	◪7	■7	◪6	◪4	◪13	◪10	◪8	◪14	◪11

K3.1	K3.2	K4.1	K4.2	K5.1	K5.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N4.2
◪12	◪9	◪12	◪9	◪12	◪10	◪12	◪15	◪14	◪11	◪21	■14	◪8

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
E250M3	3	0.50	56.0	10	2.20	1.80	5	3	2.50
E250M4	4	0.70	63.0	12	2.80	2.10	5	3	3.30
E250M5	5	0.80	70.0	13	3.50	2.70	6	3	4.20
E250M6	6	1.00	80.0	15	4.50	3.40	6	3	5.00
E250M6N01	6	1.00	80.0	15	4.50	3.40	6	3	5.00
E250M8	8	1.25	90.0	18	6.00	4.90	8	3	6.80
E250M8N01	8	1.25	90.0	18	6.00	4.90	8	3	6.80
E250M10	10	1.50	100.0	20	7.00	5.50	8	3	8.50
E250M12	12	1.75	110.0	23	9.00	7.00	10	3	10.30
E250M12N01	12	1.75	110.0	23	9.00	7.00	10	3	10.30
E250M14	14	2.00	110.0	25	11.00	9.00	12	3	12.00
E250M14N01	14	2.00	110.0	25	11.00	9.00	12	3	12.00
E250M16	16	2.00	110.0	25	12.00	9.00	12	3	14.00
E250M16N01	16	2.00	110.0	25	12.00	9.00	12	3	14.00
E250M18	18	2.50	125.0	30	14.00	11.00	14	3	15.50
E250M18N01	18	2.50	125.0	30	14.00	11.00	14	3	15.50
E250M20	20	2.50	140.0	30	16.00	12.00	15	3	17.50
E250M20N01	20	2.50	140.0	30	16.00	12.00	15	3	17.50
E250M22	22	2.50	140.0	34	18.00	14.50	17	4	19.50
E250M22N01	22	2.50	140.0	34	18.00	14.50	17	4	19.50
E250M24	24	3.00	160.0	38	18.00	14.50	17	4	21.00
E250M27	27	3.00	160.0	38	20.00	16.00	19	4	24.00
E250M30	30	3.50	180.0	45	22.00	18.00	21	4	26.50
E250M33	33	3.50	180.0	50	25.00	20.00	23	4	29.50
E250M36	36	4.00	200.0	55	28.00	22.00	25	4	32.00
E250M39	39	4.00	200.0	60	32.00	24.00	27	4	35.00
E250M42 [1]	42	4.50	200.0	60	32.00	24.00	27	4	37.50
E250M45 [1]	45	4.50	220.0	65	36.00	29.00	32	6	40.50
E250M48 [1]	48	5.00	250.0	70	36.00	29.00	32	6	43.00
E250M52 [1]	52	5.00	250.0	70	40.00	32.00	35	6	47.00

[1] HSS-E.

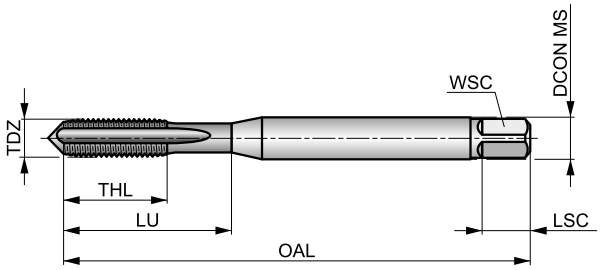
E237

DORMER

HSS-E-PM Straight Flute Machine Tap, Metric, DIN Standard, Left-Handed

General purpose straight flute machine tap for through and blind holes. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges. The reinforced shank increases strength against torsional twist.

M	DIN 371	6H
	1.5×D	HSS-E PM
C 2-3		L
Bright		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
■11	■12	■12	■9	■8	◪7	■7	◪6	◪4	◪13	◪10	◪8	◪14	◪11

K3.1	K3.2	K4.1	K4.2	K5.1	K5.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N4.2
◪13	◪10	◪12	◪9	◪12	◪10	◪12	◪15	◪14	◪11	◪21	■14	◪8

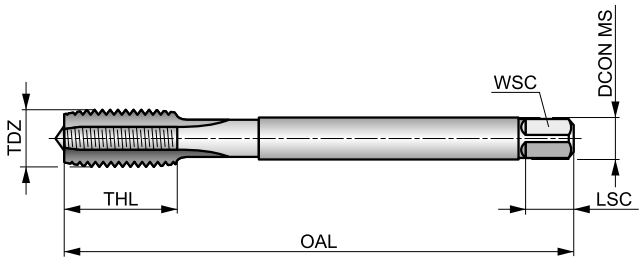
Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E237M3	3	0.50	56.0	9	3.50	2.70	6	3	2.50	18.00
E237M4	4	0.70	63.0	12	4.50	3.40	6	3	3.30	21.00
E237M5	5	0.80	70.0	13	6.00	4.90	8	3	4.20	25.00
E237M6	6	1.00	80.0	15	6.00	4.90	8	3	5.00	30.00
E237M8	8	1.25	90.0	18	8.00	6.20	9	3	6.80	35.00
E237M10	10	1.50	100.0	20	10.00	8.00	11	3	8.50	39.00

E251

HSS-E-PM Straight flute Machine tap, Metric, DIN Standard, Left-handed

General purpose straight flute machine tap for through and blind holes. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges. The reduced shank increases the reach of the tap.

M	DIN 376	6H
1.5×D		HSS-E PM
C 2-3		L
Bright		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
■11	■12	■12	■9	■8	◪7	■7	◪6	◪4	◪13	◪10	◪8	◪14	◪11

K3.1	K3.2	K4.1	K4.2	K5.1	K5.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N4.2
◪12	◪9	◪12	◪9	◪12	◪10	◪12	◪15	◪14	◪11	◪21	◪14	◪8

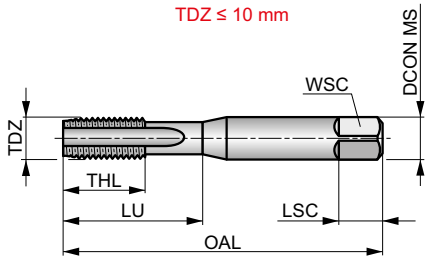
Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
E251M12	12	1.75	110.0	23	9.00	7.00	10	4	10.30
E251M14	14	2.00	110.0	25	11.00	9.00	12	4	12.00
E251M16	16	2.00	110.0	25	12.00	9.00	12	4	14.00
E251M18	18	2.50	125.0	30	14.00	11.00	14	4	15.50
E251M20	20	2.50	140.0	30	16.00	12.00	15	4	17.50
E251M22	22	2.50	140.0	34	18.00	14.50	17	4	19.50
E251M24	24	3.00	160.0	38	18.00	14.50	17	4	21.00

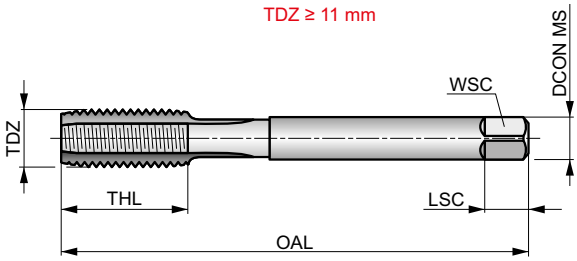
E500

DORMER

Straight Flute Hand Taps, Metric, ISO Standard

A versatile tool, suitable for hand and machine tapping, with a straight flute design for both through and blind holes. As a hand tap set of three N06 or two N07 with different chamfer length, each producing a full thread. Or as a set N08 with three serial taps to be used in sequence to create the full thread.





M	ISO 529	6H
	1.5×D	HSS
	R	Bright

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	P4.2	K1.1	K1.2	K1.3	K2.1
■7	■7	■8	■6	■5	◪4	■4	◪4	◪3	◪2	◪12	◪9	◪7	◪12
K2.2	**K3.1**	**K3.2**	**K4.1**	**K4.2**	**K5.1**	**K5.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**
◪10	◪11	◪8	◪10	◪8	◪11	◪9	◪8	◪11	◪10	◪7	◪17	◪10	◪5
N4.2	**N4.3**												
◪5	◪3												

Products from this series are also available in sets with drills or dies. Please see L115, L000 or L120.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E500M1N01 [1]	1	0.25	38.0	4.5	2.50	2.00	4	2	0.75	4.50
E500M1N02 [1]	1	0.25	38.0	4.5	2.50	2.00	4	2	0.75	4.50
E500M1N03 [1]	1	0.25	38.0	4.5	2.50	2.00	4	2	0.75	4.50
E500M1.2N01 [1]	1.2	0.25	38.0	4.5	2.50	2.00	4	2	0.95	4.50
E500M1.2N02 [1]	1.2	0.25	38.0	4.5	2.50	2.00	4	2	0.95	4.50
E500M1.2N03 [1]	1.2	0.25	38.0	4.5	2.50	2.00	4	2	0.95	4.50
E500M1.4N01 [1]	1.4	0.30	40.0	6	2.50	2.00	4	2	1.10	6.00
E500M1.4N02 [1]	1.4	0.30	40.0	6	2.50	2.00	4	2	1.10	6.00
E500M1.4N03 [1]	1.4	0.30	40.0	6	2.50	2.00	4	2	1.10	6.00
E500M1.6N01	1.6	0.35	41.0	8	2.50	2.00	4	2	1.25	8.00
E500M1.6N02	1.6	0.35	41.0	8	2.50	2.00	4	2	1.25	8.00
E500M1.6N03	1.6	0.35	41.0	8	2.50	2.00	4	2	1.25	8.00
E500M1.6N06	1.6	0.35	41.0	8	2.50	2.00	4	2	1.25	8.00
E500M1.7N01	1.7	0.35	41.0	8	2.50	2.00	4	2	1.35	8.00
E500M1.7N02	1.7	0.35	41.0	8	2.50	2.00	4	2	1.35	8.00
E500M1.7N03	1.7	0.35	41.0	8	2.50	2.00	4	2	1.35	8.00
E500M1.7N06	1.7	0.35	41.0	8	2.50	2.00	4	2	1.35	8.00
E500M1.7N08	1.7	0.35	41.0	8	2.50	2.00	4	2	1.35	8.00
E500M1.8N01	1.8	0.35	41.0	8	2.50	2.00	4	2	1.45	8.00
E500M1.8N02	1.8	0.35	41.0	8	2.50	2.00	4	2	1.45	8.00
E500M1.8N03	1.8	0.35	41.0	8	2.50	2.00	4	2	1.45	8.00
E500M2N01	2	0.40	41.0	8	2.50	2.00	4	3	1.60	8.00
E500M2N02	2	0.40	41.0	8	2.50	2.00	4	3	1.60	8.00
E500M2N03	2	0.40	41.0	8	2.50	2.00	4	3	1.60	8.00
E500M2N06	2	0.40	41.0	8	2.50	2.00	4	3	1.60	8.00
E500M2N08	2	0.40	41.0	8	2.50	2.00	4	3	1.60	8.00
E500M2X.45N01	2	0.45	41.0	8	2.50	2.00	4	3	1.55	8.00

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E500M2X.45N02	2	0.45	41.0	8	2.50	2.00	4	3	1.55	8.00
E500M2X.45N03	2	0.45	41.0	8	2.50	2.00	4	3	1.55	8.00
E500M2.2N01	2.2	0.45	44.5	9.5	2.80	2.24	5	3	1.75	9.50
E500M2.2N02	2.2	0.45	44.5	9.5	2.80	2.24	5	3	1.75	9.50
E500M2.2N03	2.2	0.45	44.5	9.5	2.80	2.24	5	3	1.75	9.50
E500M2.3N01	2.3	0.45	44.5	9.5	2.80	2.24	5	3	1.85	9.50
E500M2.3N02	2.3	0.45	44.5	9.5	2.80	2.24	5	3	1.85	9.50
E500M2.3N03	2.3	0.45	44.5	9.5	2.80	2.24	5	3	1.85	9.50
E500M2.5N01	2.5	0.45	44.5	9.5	2.80	2.24	5	3	2.05	9.50
E500M2.5N02	2.5	0.45	44.5	9.5	2.80	2.24	5	3	2.05	9.50
E500M2.5N03	2.5	0.45	44.5	9.5	2.80	2.24	5	3	2.05	9.50
E500M2.5N06	2.5	0.45	44.5	9.5	2.80	2.24	5	3	2.05	9.50
E500M2.5N08	2.5	0.45	44.5	9.5	2.80	2.24	5	3	2.05	9.50
E500M2.6N01	2.6	0.45	44.5	9.5	2.80	2.24	5	3	2.15	9.50
E500M2.6N02	2.6	0.45	44.5	9.5	2.80	2.24	5	3	2.15	9.50
E500M2.6N03	2.6	0.45	44.5	9.5	2.80	2.24	5	3	2.15	9.50
E500M3N01	3	0.50	48.0	12.5	3.15	2.50	5	3	2.50	12.50
E500M3N02	3	0.50	48.0	12.5	3.15	2.50	5	3	2.50	12.50
E500M3N03	3	0.50	48.0	12.5	3.15	2.50	5	3	2.50	12.50
E500M3N06	3	0.50	48.0	12.5	3.15	2.50	5	3	2.50	12.50
E500M3N07	3	0.50	48.0	12.5	3.15	2.50	5	3	2.50	12.50
E500M3N08	3	0.50	48.0	12.5	3.15	2.50	5	3	2.50	12.50
E500M3X.6N01	3	0.60	48.0	12.5	3.15	2.50	5	3	2.40	12.50
E500M3X.6N02	3	0.60	48.0	12.5	3.15	2.50	5	3	2.40	12.50
E500M3X.6N03	3	0.60	48.0	12.5	3.15	2.50	5	3	2.40	12.50
E500M3.5N01	3.5	0.60	50.0	14	3.55	2.80	5	3	2.90	14.00
E500M3.5N02	3.5	0.60	50.0	14	3.55	2.80	5	3	2.90	14.00
E500M3.5N03	3.5	0.60	50.0	14	3.55	2.80	5	3	2.90	14.00
E500M3.5N06	3.5	0.60	50.0	14	3.55	2.80	5	3	2.90	14.00
E500M4N01	4	0.70	53.0	14	4.00	3.15	6	3	3.30	14.00
E500M4N02	4	0.70	53.0	14	4.00	3.15	6	3	3.30	14.00
E500M4N03	4	0.70	53.0	14	4.00	3.15	6	3	3.30	14.00
E500M4N06	4	0.70	53.0	14	4.00	3.15	6	3	3.30	14.00
E500M4N07	4	0.70	53.0	14	4.00	3.15	6	3	3.30	14.00
E500M4N08	4	0.70	53.0	14	4.00	3.15	6	3	3.30	14.00
E500M4X.75N01	4	0.75	53.0	14	4.00	3.15	6	3	3.25	14.00
E500M4X.75N02	4	0.75	53.0	14	4.00	3.15	6	3	3.25	14.00
E500M4X.75N03	4	0.75	53.0	14	4.00	3.15	6	3	3.25	14.00
E500M4.5N01	4.5	0.75	53.0	9.5	4.50	3.55	6	3	3.80	18.00
E500M4.5N02	4.5	0.75	53.0	9.5	4.50	3.55	6	3	3.80	18.00
E500M4.5N03	4.5	0.75	53.0	9.5	4.50	3.55	6	3	3.80	18.00
E500M4.5N06	4.5	0.75	53.0	9.5	4.50	3.55	6	3	3.80	18.00
E500M5N01	5	0.80	58.0	11	5.00	4.00	7	3	4.20	22.00
E500M5N02	5	0.80	58.0	11	5.00	4.00	7	3	4.20	22.00
E500M5N03	5	0.80	58.0	11	5.00	4.00	7	3	4.20	22.00
E500M5N06	5	0.80	58.0	11	5.00	4.00	7	3	4.20	22.00
E500M5N07	5	0.80	58.0	11	5.00	4.00	7	3	4.20	22.00
E500M5N08	5	0.80	58.0	11	5.00	4.00	7	3	4.20	22.00
E500M5X.9N01	5	0.90	58.0	11	5.00	4.00	7	3	4.10	22.00
E500M5X.9N02	5	0.90	58.0	11	5.00	4.00	7	3	4.10	22.00
E500M5X.9N03	5	0.90	58.0	11	5.00	4.00	7	3	4.10	22.00
E500M5.5X.9N01	5.5	0.90	62.0	12	5.60	4.50	7	3	4.60	21.00
E500M5.5X.9N02	5.5	0.90	62.0	12	5.60	4.50	7	3	4.60	21.00
E500M5.5X.9N03	5.5	0.90	62.0	12	5.60	4.50	7	3	4.60	21.00
E500M6N01	6	1.00	66.0	13	6.30	5.00	8	3	5.00	26.00
E500M6N02	6	1.00	66.0	13	6.30	5.00	8	3	5.00	26.00
E500M6N03	6	1.00	66.0	13	6.30	5.00	8	3	5.00	26.00
E500M6N06	6	1.00	66.0	13	6.30	5.00	8	3	5.00	26.00
E500M6N07	6	1.00	66.0	13	6.30	5.00	8	3	5.00	26.00
E500M6N08	6	1.00	66.0	13	6.30	5.00	8	3	5.00	26.00
E500M7N01	7	1.00	66.0	13	7.10	5.60	8	3	6.00	26.00
E500M7N02	7	1.00	66.0	13	7.10	5.60	8	3	6.00	26.00

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E500M7N03	7	1.00	66.0	13	7.10	5.60	8	3	6.00	26.00
E500M7N06	7	1.00	66.0	13	7.10	5.60	8	3	6.00	26.00
E500M8N01	8	1.25	72.0	16	8.00	6.30	9	3	6.80	29.00
E500M8N02	8	1.25	72.0	16	8.00	6.30	9	3	6.80	29.00
E500M8N03	8	1.25	72.0	16	8.00	6.30	9	3	6.80	29.00
E500M8N06	8	1.25	72.0	16	8.00	6.30	9	3	6.80	29.00
E500M8N07	8	1.25	72.0	16	8.00	6.30	9	3	6.80	29.00
E500M8N08	8	1.25	72.0	16	8.00	6.30	9	3	6.80	29.00
E500M9N01	9	1.25	72.0	16	9.00	7.10	10	3	7.80	29.00
E500M9N02	9	1.25	72.0	16	9.00	7.10	10	3	7.80	29.00
E500M9N03	9	1.25	72.0	16	9.00	7.10	10	3	7.80	29.00
E500M9N06	9	1.25	72.0	16	9.00	7.10	10	3	7.80	29.00
E500M10N01	10	1.50	80.0	18	10.00	8.00	11	3	8.50	34.00
E500M10N02	10	1.50	80.0	18	10.00	8.00	11	3	8.50	34.00
E500M10N03	10	1.50	80.0	18	10.00	8.00	11	3	8.50	34.00
E500M10N06	10	1.50	80.0	18	10.00	8.00	11	3	8.50	34.00
E500M10N07	10	1.50	80.0	18	10.00	8.00	11	3	8.50	34.00
E500M10N08	10	1.50	80.0	18	10.00	8.00	11	3	8.50	34.00
E500M11N01	11	1.50	85.0	19	8.00	6.30	9	3	9.50	–
E500M11N02	11	1.50	85.0	19	8.00	6.30	9	3	9.50	–
E500M11N03	11	1.50	85.0	19	8.00	6.30	9	3	9.50	–
E500M11N06	11	1.50	85.0	19	8.00	6.30	9	3	9.50	–
E500M12N01	12	1.75	89.0	22	9.00	7.10	10	3	10.30	–
E500M12N02	12	1.75	89.0	22	9.00	7.10	10	3	10.30	–
E500M12N03	12	1.75	89.0	22	9.00	7.10	10	3	10.30	–
E500M12N06	12	1.75	89.0	22	9.00	7.10	10	3	10.30	–
E500M12N07	12	1.75	89.0	22	9.00	7.10	10	3	10.30	–
E500M12N08	12	1.75	89.0	22	9.00	7.10	10	3	10.30	–
E500M14N01	14	2.00	95.0	24	11.20	9.00	12	4	12.00	–
E500M14N02	14	2.00	95.0	24	11.20	9.00	12	4	12.00	–
E500M14N03	14	2.00	95.0	24	11.20	9.00	12	4	12.00	–
E500M14N06	14	2.00	95.0	24	11.20	9.00	12	4	12.00	–
E500M14N07	14	2.00	95.0	24	11.20	9.00	12	4	12.00	–
E500M14N08	14	2.00	95.0	24	11.20	9.00	12	4	12.00	–
E500M16N01	16	2.00	102.0	24	12.50	10.00	13	4	14.00	–
E500M16N02	16	2.00	102.0	24	12.50	10.00	13	4	14.00	–
E500M16N03	16	2.00	102.0	24	12.50	10.00	13	4	14.00	–
E500M16N06	16	2.00	102.0	24	12.50	10.00	13	4	14.00	–
E500M16N07	16	2.00	102.0	24	12.50	10.00	13	4	14.00	–
E500M16N08	16	2.00	102.0	24	12.50	10.00	13	4	14.00	–
E500M18N01	18	2.50	112.0	29	14.00	11.20	14	4	15.50	–
E500M18N02	18	2.50	112.0	29	14.00	11.20	14	4	15.50	–
E500M18N03	18	2.50	112.0	29	14.00	11.20	14	4	15.50	–
E500M18N06	18	2.50	112.0	29	14.00	11.20	14	4	15.50	–
E500M20N01	20	2.50	112.0	29	14.00	11.20	14	4	17.50	–
E500M20N02	20	2.50	112.0	29	14.00	11.20	14	4	17.50	–
E500M20N03	20	2.50	112.0	29	14.00	11.20	14	4	17.50	–
E500M20N06	20	2.50	112.0	29	14.00	11.20	14	4	17.50	–
E500M20N07	20	2.50	112.0	29	14.00	11.20	14	4	17.50	–
E500M20N08	20	2.50	112.0	29	14.00	11.20	14	4	17.50	–
E500M22N01	22	2.50	118.0	29	16.00	12.50	16	4	19.50	–
E500M22N02	22	2.50	118.0	29	16.00	12.50	16	4	19.50	–
E500M22N03	22	2.50	118.0	29	16.00	12.50	16	4	19.50	–
E500M22N06	22	2.50	118.0	29	16.00	12.50	16	4	19.50	–
E500M24N01	24	3.00	130.0	35	18.00	14.00	18	4	21.00	–
E500M24N02	24	3.00	130.0	35	18.00	14.00	18	4	21.00	–
E500M24N03	24	3.00	130.0	35	18.00	14.00	18	4	21.00	–
E500M24N06	24	3.00	130.0	35	18.00	14.00	18	4	21.00	–
E500M24N07	24	3.00	130.0	35	18.00	14.00	18	4	21.00	–
E500M27N01	27	3.00	135.0	35	20.00	16.00	20	4	24.00	–
E500M27N02	27	3.00	135.0	35	20.00	16.00	20	4	24.00	–
E500M27N03	27	3.00	135.0	35	20.00	16.00	20	4	24.00	–

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E500M30NO1	30	3.50	138.0	41	20.00	16.00	20	4	26.50	–
E500M30NO2	30	3.50	138.0	41	20.00	16.00	20	4	26.50	–
E500M30NO3	30	3.50	138.0	41	20.00	16.00	20	4	26.50	–
E500M33NO1	33	3.50	151.0	41	22.40	18.00	22	4	29.50	–
E500M33NO2	33	3.50	151.0	41	22.40	18.00	22	4	29.50	–
E500M33NO3	33	3.50	151.0	41	22.40	18.00	22	4	29.50	–
E500M36NO1	36	4.00	162.0	47	25.00	20.00	24	4	32.00	–
E500M36NO2	36	4.00	162.0	47	25.00	20.00	24	4	32.00	–
E500M36NO3	36	4.00	162.0	47	25.00	20.00	24	4	32.00	–
E500M39NO1	39	4.00	170.0	47	28.00	22.40	26	4	35.00	–
E500M39NO2	39	4.00	170.0	47	28.00	22.40	26	4	35.00	–
E500M39NO3	39	4.00	170.0	47	28.00	22.40	26	4	35.00	–
E500M42NO1	42	4.50	170.0	53	28.00	22.40	26	6	37.50	–
E500M42NO2	42	4.50	170.0	53	28.00	22.40	26	6	37.50	–
E500M42NO3	42	4.50	170.0	53	28.00	22.40	26	6	37.50	–
E500M45NO1	45	4.50	187.0	54	31.50	25.00	28	6	40.50	–
E500M45NO2	45	4.50	187.0	54	31.50	25.00	28	6	40.50	–
E500M45NO3	45	4.50	187.0	54	31.50	25.00	28	6	40.50	–
E500M48NO1	48	5.00	187.0	60	31.50	25.00	28	6	43.00	–
E500M48NO2	48	5.00	187.0	60	31.50	25.00	28	6	43.00	–
E500M48NO3	48	5.00	187.0	60	31.50	25.00	28	6	43.00	–
E500M52NO3	52	5.00	200.0	60	35.50	28.00	31	6	47.00	–
E500M56NO3	56	5.50	200.0	60	35.50	28.00	31	6	50.50	–

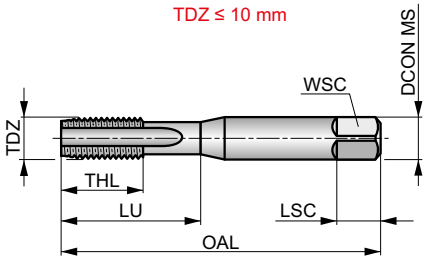
[1] Supplied in 5H tolerance.

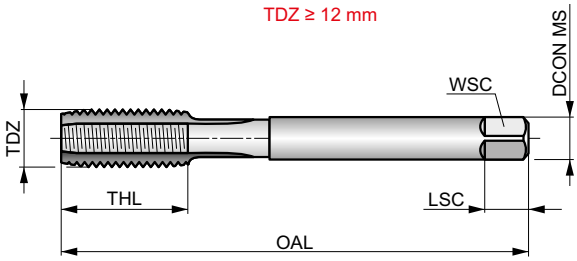
E501

DORMER

HSS Straight Flute Hand Taps, Metric, ISO standard, Left-Handed

A versatile tool, suitable for hand and machine tapping. Available with taper lead N01 for short through holes, plug lead N02 for deeper through holes or bottoming lead N03 for blind holes.





M	ISO 529	6H
	1.5×D	HSS
	L	Bright

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	P4.2	K1.1	K1.2	K1.3	K2.1
■7	■7	■8	■6	■5	◪4	■4	◪4	◪3	◪2	◪12	◪9	◪7	◪12
K2.2	**K3.1**	**K3.2**	**K4.1**	**K4.2**	**K5.1**	**K5.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**
◪10	◪11	◪8	◪10	◪8	◪11	◪9	◪8	◪11	◪10	◪7	◪17	◪10	◪5
N4.2	**N4.3**												
◪5	◪3												

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E501M3N01	3	0.50	48.0	12.5	3.15	2.50	5	3	2.50	12.50
E501M3N02	3	0.50	48.0	12.5	3.15	2.50	5	3	2.50	12.50
E501M3N03	3	0.50	48.0	12.5	3.15	2.50	5	3	2.50	12.50
E501M4N01	4	0.70	53.0	14	4.00	3.15	6	3	3.30	14.00
E501M4N02	4	0.70	53.0	14	4.00	3.15	6	3	3.30	14.00
E501M4N03	4	0.70	53.0	14	4.00	3.15	6	3	3.30	14.00
E501M5N02	5	0.80	58.0	11	5.00	4.00	7	3	4.20	22.00
E501M5N03	5	0.80	58.0	11	5.00	4.00	7	3	4.20	22.00
E501M6N01	6	1.00	66.0	13	6.30	5.00	8	3	5.00	26.00
E501M6N02	6	1.00	66.0	13	6.30	5.00	8	3	5.00	26.00
E501M6N03	6	1.00	66.0	13	6.30	5.00	8	3	5.00	26.00
E501M8N01	8	1.25	72.0	16	8.00	6.30	9	3	6.80	29.00
E501M8N02	8	1.25	72.0	16	8.00	6.30	9	3	6.80	29.00
E501M8N03	8	1.25	72.0	16	8.00	6.30	9	3	6.80	29.00
E501M10N01	10	1.50	80.0	18	10.00	8.00	11	3	8.50	34.00
E501M10N02	10	1.50	80.0	18	10.00	8.00	11	3	8.50	34.00
E501M10N03	10	1.50	80.0	18	10.00	8.00	11	3	8.50	34.00
E501M12N01	12	1.75	89.0	22	9.00	7.10	10	3	10.30	–
E501M12N02	12	1.75	89.0	22	9.00	7.10	10	3	10.30	–
E501M12N03	12	1.75	89.0	22	9.00	7.10	10	3	10.30	–
E501M14N01	14	2.00	95.0	24	11.20	9.00	12	4	12.00	–
E501M14N02	14	2.00	95.0	24	11.20	9.00	12	4	12.00	–
E501M14N03	14	2.00	95.0	24	11.20	9.00	12	4	12.00	–
E501M16N01	16	2.00	102.0	24	12.50	10.00	13	4	14.00	–
E501M16N02	16	2.00	102.0	24	12.50	10.00	13	4	14.00	–
E501M16N03	16	2.00	102.0	24	12.50	10.00	13	4	14.00	–
E501M18N03	18	2.50	112.0	29	14.00	11.20	14	4	15.50	–
E501M20N01	20	2.50	112.0	29	14.00	11.20	14	4	17.50	–

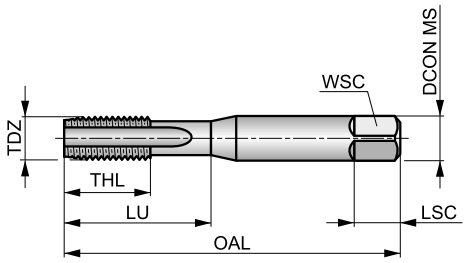
Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E501M20N02	20	2.50	112.0	29	14.00	11.20	14	4	17.50	–
E501M20N03	20	2.50	112.0	29	14.00	11.20	14	4	17.50	–
E501M22N03	22	2.50	118.0	29	16.00	12.50	16	4	19.50	–
E501M24N02	24	3.00	130.0	35	18.00	14.00	18	4	21.00	–
E501M24N03	24	3.00	130.0	35	18.00	14.00	18	4	21.00	–

E504

DORMER

HSS Straight Flute Hand Tap with TiN Coating, Metric, ISO Standard

A versatile tool, suitable for machine and also hand tapping, with a straight flute design and bottoming lead for blind and through holes. TiN coated to improve performance and extend tool life.



M	ISO 529	6H
1.5×D	HSS	
R	TiN	

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	K1.1	K1.2	K1.3
■ 13	■ 15	■ 15	■ 11	■ 10	◪ 9	■ 9	◪ 7	◪ 6	◪ 5	◪ 4	■ 18	■ 13	■ 10

K2.1	K2.2	K3.1	K3.2	K4.1	K4.2	K5.1	K5.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2
■ 27	■ 22	■ 24	■ 18	■ 22	■ 17	■ 25	■ 19	◪ 16	◪ 22	◪ 19	◪ 14	◪ 34	◪ 20

N3.3	N4.2	N4.3
◪ 10	◪ 10	◪ 6

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E504M3N03	3	0.50	48.0	12.5	3.15	2.50	5	3	2.50	12.50
E504M4N03	4	0.70	53.0	14	4.00	3.15	6	3	3.30	14.00
E504M5N03	5	0.80	58.0	11	5.00	4.00	7	3	4.20	22.00
E504M6N03	6	1.00	66.0	13	6.30	5.00	8	3	5.00	26.00
E504M8N03	8	1.25	72.0	16	8.00	6.30	9	3	6.80	29.00
E504M10N03	10	1.50	80.0	18	10.00	8.00	11	3	8.50	34.00

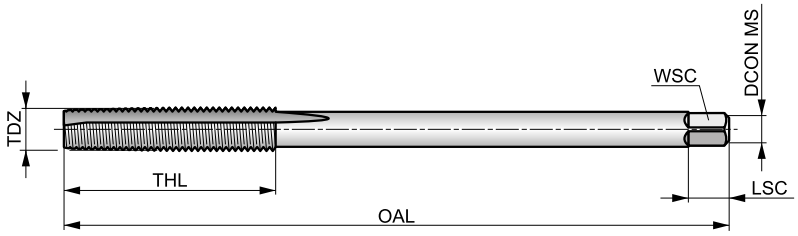
E303

DORMER

HSS-E Straight Flute Nut Taps Metric, DIN Standard

Designed for efficient small production runs in conventional tapping machines, with either extra-long taper lead N01 to reduce torque or with short bottoming lead N03 to reduce cycle times.

M	DIN 357	6H
	2×D	HSS-E
C 2-3 D 18-20		R
Bright		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
■9	■10	■10	◪7	◪6	◪5	■6	◪5	◪4	◪11	◪8	◪6	◪11	◪9

K3.1	K3.2	K4.1	K4.2	K5.1	K5.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N4.2
◪10	◪7	◪9	◪7	◪10	◪8	◪7	◪10	◪9	◪6	◪16	◪9	◪5

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
E303M3N01	3	0.50	70.0	22	2.20	2.10	5	3	2.50
E303M3N03	3	0.50	70.0	22	2.20	2.10	5	3	2.50
E303M4N01	4	0.70	90.0	25	2.80	2.10	5	3	3.30
E303M4N03	4	0.70	90.0	25	2.80	2.10	5	3	3.30
E303M5N01	5	0.80	100.0	28	3.50	2.70	6	3	4.20
E303M5N03	5	0.80	100.0	28	3.50	2.70	6	3	4.20
E303M6N01	6	1.00	110.0	32	4.50	3.40	6	3	5.00
E303M6N03	6	1.00	110.0	32	4.50	3.40	6	3	5.00
E303M8N01	8	1.25	125.0	40	6.00	4.90	8	3	6.80
E303M8N03	8	1.25	125.0	40	6.00	4.90	8	3	6.80
E303M10N01	10	1.50	140.0	45	7.00	5.50	8	3	8.50
E303M10N03	10	1.50	140.0	45	7.00	5.50	8	3	8.50
E303M12N01	12	1.75	180.0	50	9.00	7.00	10	3	10.30
E303M12N03	12	1.75	180.0	50	9.00	7.00	10	3	10.30
E303M14N01	14	2.00	200.0	56	11.00	9.00	12	3	12.00
E303M14N03	14	2.00	200.0	56	11.00	9.00	12	3	12.00
E303M16N01	16	2.00	200.0	63	12.00	9.00	12	3	14.00
E303M16N03	16	2.00	200.0	63	12.00	9.00	12	3	14.00
E303M20N01	20	2.50	250.0	70	16.00	12.00	15	3	17.50
E303M20N03	20	2.50	250.0	70	16.00	12.00	15	3	17.50

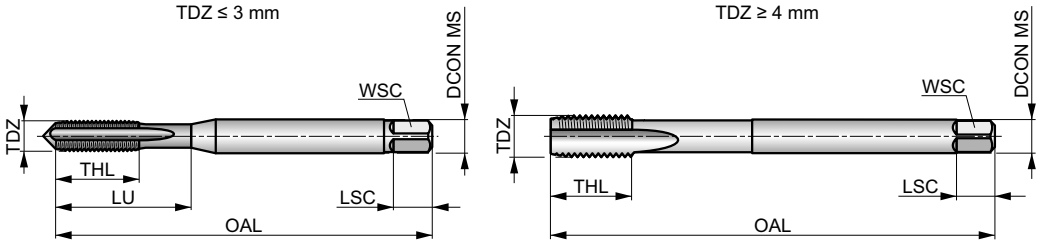
E600

DORMER

HSS-E-PM Straight Flute Long Series Machine Tap, Metric, ISO Standard

General purpose straight flute machine tap with taper lead N01 for short through holes, plug lead N02 for deeper through holes or bottoming lead N03 for blind holes. Bright finish to prevent material from sticking to the cutting edges. Longer design for extra reach when threading difficult to access holes.

M	ISO 2283	6H
	1.5×D	HSS-E PM
C 2-3		R
Bright		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
■9	■8	■8	■7	■6	◪5	■6	◪5	◪3	◪12	◪9	◪7	◪12	◪10
K3.1	**K3.2**	**K4.1**	**K4.2**	**K5.1**	**K5.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.2**
◪11	◪8	◪10	◪8	◪11	◪9	◪8	◪11	◪10	◪7	◪17	■10	◪5	◪5
N4.3													
◪3													

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E600M3N03	3	0.50	66.0	9	3.15	2.50	5	3	2.50	18.00
E600M4N01	4	0.70	73.0	12	3.15	2.50	5	3	3.30	–
E600M4N02	4	0.70	73.0	12	3.15	2.50	5	3	3.30	–
E600M4N03	4	0.70	73.0	12	3.15	2.50	5	3	3.30	–
E600M5N01	5	0.80	79.0	12	4.00	3.15	6	3	4.20	–
E600M5N02	5	0.80	79.0	12	4.00	3.15	6	3	4.20	–
E600M5N03	5	0.80	79.0	12	4.00	3.15	6	3	4.20	–
E600M6N01	6	1.00	89.0	14	4.50	3.55	6	3	5.00	–
E600M6N02	6	1.00	89.0	14	4.50	3.55	6	3	5.00	–
E600M6N03	6	1.00	89.0	14	4.50	3.55	6	3	5.00	–
E600M8N01	8	1.25	97.0	17	6.30	5.00	8	3	6.80	–
E600M8N02	8	1.25	97.0	17	6.30	5.00	8	3	6.80	–
E600M8N03	8	1.25	97.0	17	6.30	5.00	8	3	6.80	–
E600M10N01	10	1.50	108.0	19	8.00	6.30	9	3	8.50	–
E600M10N02	10	1.50	108.0	19	8.00	6.30	9	3	8.50	–
E600M10N03	10	1.50	108.0	19	8.00	6.30	9	3	8.50	–
E600M12N01	12	1.75	119.0	23	9.00	7.10	10	3	10.30	–
E600M12N02	12	1.75	119.0	23	9.00	7.10	10	3	10.30	–
E600M12N03	12	1.75	119.0	23	9.00	7.10	10	3	10.30	–
E600M16N03	16	2.00	137.0	25	12.50	10.00	13	4	14.00	–
E600M20N03	20	2.50	149.0	30	14.00	11.20	14	4	17.50	–

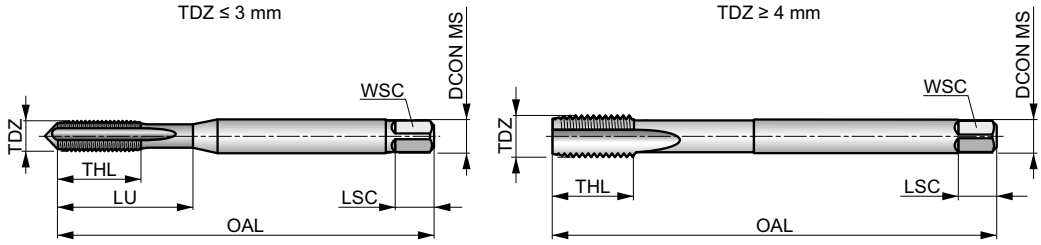
E610

DORMER

HSS-E-PM Straight Flute Long Series Machine tap, Metric, ISO Standard

General purpose straight flute machine tap for through and blind holes. Longer design for extra reach when threading difficult to access holes. TiN coated to allow higher cutting speeds, improve performance and extend tool life.

M	ISO 2283	6H
LU	1.5×D	HSS-E PM
C 2-3		R
TiN		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	K1.1	K1.2	K1.3
■16	■18	■18	■15	■13	◪11	■12	■7	◪6	■5	◪4	■18	■13	■10
K2.1	**K2.2**	**K3.1**	**K3.2**	**K4.1**	**K4.2**	**K5.1**	**K5.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**
■24	■20	■22	■16	■20	■16	■22	■18	◪16	◪22	◪19	◪14	◪34	■20
N3.3	**N4.2**	**N4.3**											
◪10	◪10	◪6											

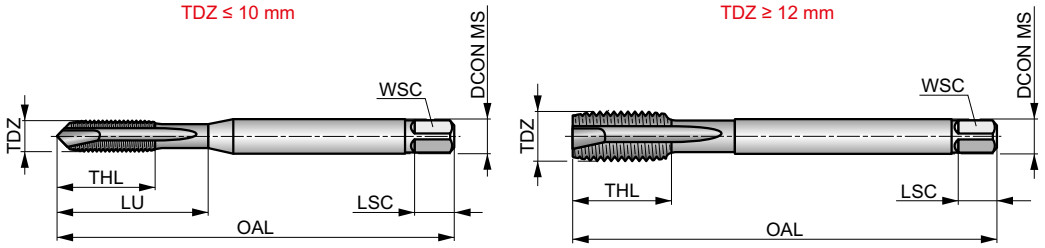
Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E610M3N03	3	0.50	66.0	9	3.15	2.50	5	3	2.50	18.00
E610M4N03	4	0.70	73.0	12	3.15	2.50	5	3	3.30	–
E610M5N03	5	0.80	79.0	12	4.00	3.15	6	3	4.20	–
E610M6N03	6	1.00	89.0	14	4.50	3.55	6	3	5.00	–
E610M8N03	8	1.25	97.0	17	6.30	5.00	8	3	6.80	–
E610M10N03	10	1.50	108.0	19	8.00	6.30	9	3	8.50	–
E610M12N03	12	1.75	119.0	23	9.00	7.10	10	3	10.30	–
E610M16N03	16	2.00	137.0	25	12.50	10.00	13	4	14.00	–

EP006H

DORMER

HSS-E-PM Spiral Point Machine Tap, Metric, DIN Standard

Machine tap to produce normal fit threads within 6H tolerance. The spiral point is suited for through holes only. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges.



M	DIN 371/376	6H
	2.5×D	HSS-E PM
B 3.5-5		R
Bright		

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	N1.1	N1.2	N1.3	N2.1	N2.2
■ 22	■ 24	■ 25	■ 18	■ 16	◪ 14	■ 13	◪ 10	◪ 8	■ 14	■ 10	■ 7	■ 28	■ 25

N2.3	N3.1	N3.2	N3.3	N4.1
■ 18	■ 44	◪ 27	◪ 13	◪ 22

Products from this series are also available in set with drills. Please see L114 or L001.

Product	TDZ	TP [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]	LU [mm]
EP00M2	2	0.40	50.0	6	2.80	2.10	5	2	1.60	9.00
EP00M2.5	2.5	0.45	50.0	8	2.80	2.10	5	2	2.10	12.50
EP00M3	3	0.50	56.0	9	3.50	2.70	6	3	2.50	18.00
EP00M3DIN376	3	0.50	56.0	10	2.20	1.80	4	3	2.50	18.00
EP00M3.5	3.5	0.60	56.0	11	4.00	3.00	6	3	2.90	20.00
EP00M4	4	0.70	63.0	12	4.50	3.40	6	3	3.30	21.00
EP00M4DIN376	4	0.70	63.0	12	2.80	2.10	5	3	3.30	21.00
EP00M4.5	4.5	0.75	70.0	13	6.00	4.90	8	3	3.80	25.00
EP00M5	5	0.80	70.0	13	6.00	4.90	8	3	4.20	25.00
EP00M5DIN376	5	0.80	70.0	13	3.50	2.70	6	3	4.20	25.00
EP00M6	6	1.00	80.0	15	6.00	4.90	8	3	5.00	30.00
EP00M6DIN376	6	1.00	80.0	15	4.50	3.40	6	3	5.00	30.00
EP00M7	7	1.00	80.0	15	7.00	5.50	8	3	6.00	30.00
EP00M8	8	1.25	90.0	18	8.00	6.20	9	3	6.80	35.00
EP00M8DIN376	8	1.25	90.0	18	6.00	4.90	8	3	6.80	35.00
EP00M10	10	1.50	100.0	20	10.00	8.00	11	3	8.50	39.00
EP00M10DIN376	10	1.50	100.0	20	7.00	5.50	8	3	8.50	–
EP00M12	12	1.75	110.0	23	9.00	7.00	10	3	10.30	–
EP00M14	14	2.00	110.0	25	11.00	9.00	12	3	12.00	–
EP00M16	16	2.00	110.0	25	12.00	9.00	12	3	14.00	–
EP00M18	18	2.50	125.0	30	14.00	11.00	14	4	15.50	–
EP00M20	20	2.50	140.0	30	16.00	12.00	15	4	17.50	–
EP00M22	22	2.50	140.0	34	18.00	14.50	17	4	19.50	–
EP00M24	24	3.00	160.0	38	18.00	14.50	17	4	21.00	–
EP00M27	27	3.00	160.0	38	20.00	16.00	19	4	24.00	–
EP00M30	30	3.50	180.0	45	22.00	18.00	21	4	26.50	–

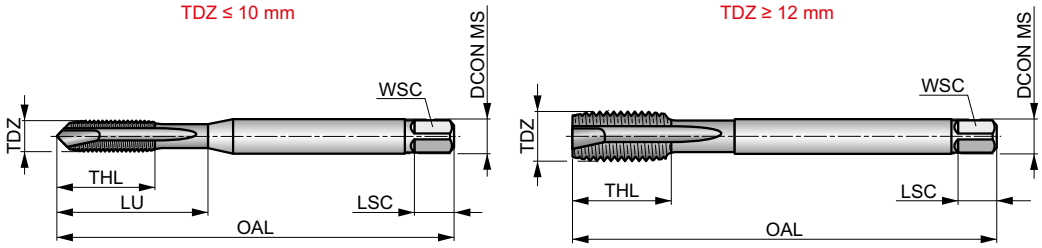
EP006G

DORMER

HSS-E-PM Spiral Point Machine Tap, Metric, DIN Standard

Machine tap to produce threads within 6G tolerance for a fit with large allowance. The spiral point is suited for through holes only. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges.

M	DIN 371/376	6G
	2.5×D	HSS-E PM
B 3.5-5		R
Bright		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	N1.1	N1.2	N1.3	N2.1	N2.2
■ 22	■ 24	■ 25	■ 18	■ 16	◪ 14	■ 13	◪ 10	◪ 8	■ 14	■ 10	■ 7	■ 28	■ 25

N2.3	N3.1	N3.2	N3.3	N4.1
■ 18	■ 44	◪ 27	◪ 13	◪ 22

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
EP006GM3	3	0.50	56.0	9	3.50	2.70	6	3	2.50	18.00
EP006GM4	4	0.70	63.0	12	4.50	3.40	6	3	3.30	21.00
EP006GM5	5	0.80	70.0	13	6.00	4.90	8	3	4.20	25.00
EP006GM6	6	1.00	80.0	15	6.00	4.90	8	3	5.00	30.00
EP006GM8	8	1.25	90.0	18	8.00	6.20	9	3	6.80	35.00
EP006GM10	10	1.50	100.0	20	10.00	8.00	11	3	8.50	39.00
EP006GM12	12	1.75	110.0	23	9.00	7.00	10	3	10.30	–
EP006GM16	16	2.00	110.0	25	12.00	9.00	12	3	14.00	–
EP006GM20	20	2.50	140.0	30	16.00	12.00	15	4	17.50	–

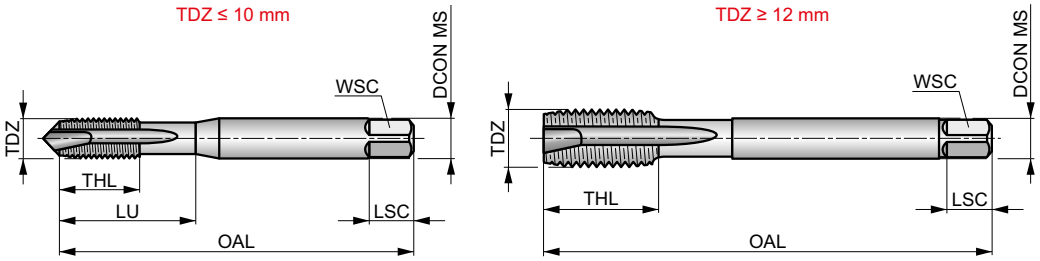
EP00TIN

DORMER

HSS-E-PM Spiral Point Machine Tap with TiN Coating, Metric, DIN Standard

High performance machine tap with spiral point for through holes only. Suited for a broad range of workpiece materials. TiN coated to allow higher cutting speeds, improve performance and extend tool life.

M	DIN 371/376	6H
	2.5×D	HSS-E PM
B 3.5-5		R
TiN		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■34	■38	■40	■29	■24	■20	■19	■14	◪12	■10	◪9	■11	■9	■10
M2.2	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K3.1**	**K3.2**	**K4.1**	**K4.2**
■8	■8	■7	◪6	◪5	◪21	◪16	◪12	◪30	◪24	◪26	◪20	◪24	◪18
K5.1	**K5.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N4.1**					
◪28	◪20	■12	■37	■34	■24	◪60	◪36	◪26					

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
EP00TINM3	3	0.50	56.0	9	3.50	2.70	6	3	2.50	18.00
EP00TINM4	4	0.70	63.0	12	4.50	3.40	6	3	3.30	21.00
EP00TINM5	5	0.80	70.0	13	6.00	4.90	8	3	4.20	25.00
EP00TINM6	6	1.00	80.0	15	6.00	4.90	8	3	5.00	30.00
EP00TINM8	8	1.25	90.0	18	8.00	6.20	9	3	6.80	35.00
EP00TINM10	10	1.50	100.0	20	10.00	8.00	11	3	8.50	39.00
EP00TINM12	12	1.75	110.0	23	9.00	7.00	10	3	10.30	–
EP00TINM14	14	2.00	110.0	25	11.00	9.00	12	3	12.00	–
EP00TINM16	16	2.00	110.0	25	12.00	9.00	12	3	14.00	–
EP00TINM18	18	2.50	125.0	30	14.00	11.00	14	4	15.50	–
EP00TINM20	20	2.50	140.0	30	16.00	12.00	15	4	17.50	–
EP00TINM22	22	2.50	140.0	34	18.00	14.50	17	4	19.50	–
EP00TINM24	24	3.00	160.0	38	18.00	14.50	17	4	21.00	–
EP00TINM27	27	3.00	160.0	38	20.00	16.00	19	4	24.00	–
EP00TINM30	30	3.50	180.0	45	22.00	18.00	21	4	26.50	–

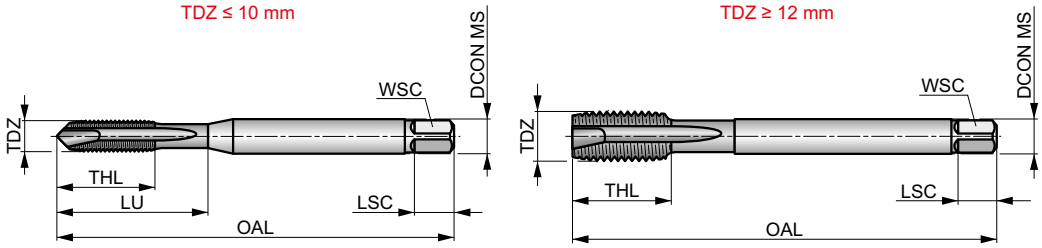
EP016H

DORMER

HSS-E-PM Spiral Point Machine Tap, Metric, DIN Standard

Machine tap to produce normal fit threads within 6H tolerance. The spiral point is suited for through holes only. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

M	DIN 371/376	6H
	2.5×D	HSS-E PM
B 3.5-5		R
ST		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P2.2	P2.3	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2	M3.3
◪22	◪16	■14	■10	◪9	■8	◪6	◪10	◪8	◪9	◪7	◪7	◪6	◪5

M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K3.1	K3.2	K4.1	K4.2	K5.1	K5.2
◪4	◪13	◪10	◪7	◪16	◪13	◪14	◪10	◪13	◪9	◪15	◪11

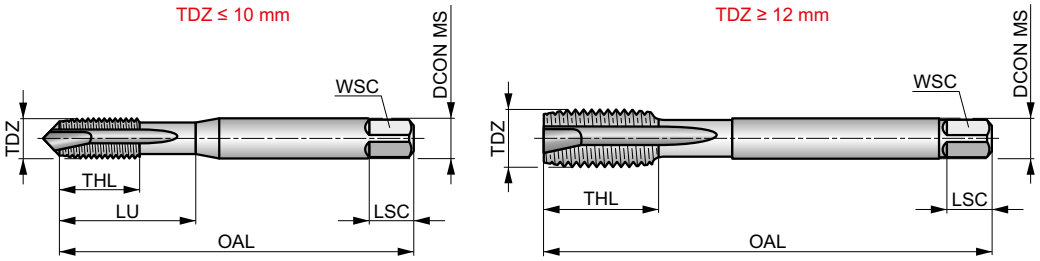
Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
EP01M2	2	0.40	50.0	6	2.80	2.10	5	2	1.60	9.00
EP01M2.5	2.5	0.45	50.0	8	2.80	2.10	5	2	2.10	12.50
EP01M3	3	0.50	56.0	9	3.50	2.70	6	3	2.50	18.00
EP01M3DIN376	3	0.50	56.0	10	2.20	1.80	4	3	2.50	18.00
EP01M3.5	3.5	0.60	56.0	11	4.00	3.00	6	3	2.90	20.00
EP01M4	4	0.70	63.0	12	4.50	3.40	6	3	3.30	21.00
EP01M4DIN376	4	0.70	63.0	12	2.80	2.10	5	3	3.30	21.00
EP01M4.5	4.5	0.75	70.0	13	6.00	4.90	8	3	3.80	25.00
EP01M5	5	0.80	70.0	13	6.00	4.90	8	3	4.20	25.00
EP01M5DIN376	5	0.80	70.0	13	3.50	2.70	6	3	4.20	25.00
EP01M6	6	1.00	80.0	15	6.00	4.90	8	3	5.00	30.00
EP01M6DIN376	6	1.00	80.0	15	4.50	3.40	6	3	5.00	30.00
EP01M7	7	1.00	80.0	15	7.00	5.50	8	3	6.00	30.00
EP01M8	8	1.25	90.0	18	8.00	6.20	9	3	6.80	35.00
EP01M8DIN376	8	1.25	90.0	18	6.00	4.90	8	3	6.80	35.00
EP01M10	10	1.50	100.0	20	10.00	8.00	11	3	8.50	39.00
EP01M10DIN376	10	1.50	100.0	20	7.00	5.50	8	3	8.50	–
EP01M12	12	1.75	110.0	23	9.00	7.00	10	3	10.30	–
EP01M14	14	2.00	110.0	25	11.00	9.00	12	3	12.00	–
EP01M16	16	2.00	110.0	25	12.00	9.00	12	3	14.00	–
EP01M18	18	2.50	125.0	30	14.00	11.00	14	4	15.50	–
EP01M20	20	2.50	140.0	30	16.00	12.00	15	4	17.50	–
EP01M22	22	2.50	140.0	34	18.00	14.50	17	4	19.50	–
EP01M24	24	3.00	160.0	38	18.00	14.50	17	4	21.00	–
EP01M27	27	3.00	160.0	38	20.00	16.00	19	4	24.00	–
EP01M30	30	3.50	180.0	45	22.00	18.00	21	4	26.50	–

E000

DORMER

HSS-E-PM Spiral Point Machine Tap, Metric, ISO Standard

Machine tap with spiral point suited for through holes only. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges.



M	ISO 529	6H
	2.5×D	HSS-E PM
B 3.5-5		R
Bright		

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	N1.1	N1.2	N1.3	N2.1	N2.2
■ 22	■ 24	■ 25	■ 18	■ 16	◪ 14	■ 13	◪ 10	◪ 8	■ 14	■ 10	■ 7	■ 28	■ 25

N2.3	N3.1	N3.2	N3.3	N4.1
■ 18	■ 44	◪ 27	◪ 13	◪ 22

Products from this series are also available in set with drills. Please see L113 or L002.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E000M1.6	1.6	0.35	41.0	7	2.50	2.00	4	2	1.25	7.00
E000M2	2	0.40	41.0	8	2.50	2.00	4	2	1.60	8.00
E000M2.5	2.5	0.45	44.5	9.5	2.80	2.24	5	2	2.05	9.50
E000M3	3	0.50	48.0	15	3.15	2.50	5	3	2.50	15.00
E000M3.5	3.5	0.60	50.0	16	3.55	2.80	5	3	2.90	16.00
E000M4	4	0.70	53.0	17	4.00	3.15	6	3	3.30	17.00
E000M5	5	0.80	58.0	11	5.00	4.00	7	3	4.20	22.00
E000M6	6	1.00	66.0	13	6.30	5.00	8	3	5.00	26.00
E000M8	8	1.25	72.0	16	8.00	6.30	9	3	6.80	29.00
E000M10	10	1.50	80.0	18	10.00	8.00	11	3	8.50	34.00
E000M12	12	1.75	89.0	22	9.00	7.10	10	3	10.30	–
E000M14	14	2.00	95.0	24	11.20	9.00	12	3	12.00	–
E000M16	16	2.00	102.0	24	12.50	10.00	13	3	14.00	–
E000M18	18	2.50	112.0	29	14.00	11.20	14	4	15.50	–
E000M20	20	2.50	112.0	29	14.00	11.20	14	4	17.50	–
E000M22	22	2.50	118.0	29	16.00	12.50	16	4	19.50	–
E000M24	24	3.00	130.0	35	18.00	14.00	18	4	21.00	–

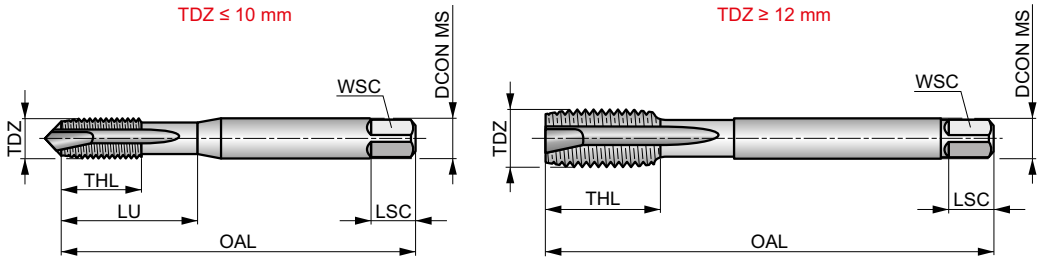
E000TIN

DORMER

HSS-E-PM Spiral Point Machine Tap with TiN Coating, Metric, ISO Standard

High performance machine tap with spiral point for through holes only. Suited for a broad range of workpiece materials. TiN coated to allow higher cutting speeds, improve performance and extend tool life.

M	ISO 529	6H
	2.5×D	HSS-E PM
B 3.5-5		R
TiN		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■34	■38	■40	■29	■24	■20	■19	■14	◪12	■10	◪9	■11	■9	■10
M2.2	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K3.1**	**K3.2**	**K4.1**	**K4.2**
■8	■8	■7	◪6	◪5	◪21	◪16	◪12	◪30	◪24	◪26	◪20	◪24	◪18
K5.1	**K5.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N4.1**					
◪28	◪20	■12	■37	■34	■24	■60	◪36	◪26					

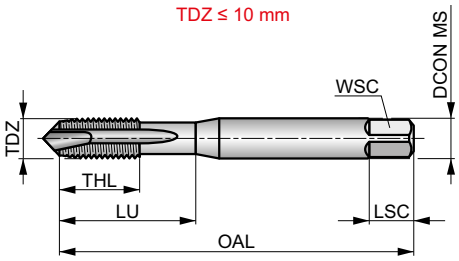
Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E000TINM3	3	0.50	48.0	15	3.15	2.50	5	3	2.50	15.00
E000TINM4	4	0.70	53.0	17	4.00	3.15	6	3	3.30	17.00
E000TINM5	5	0.80	58.0	11	5.00	4.00	7	3	4.20	22.00
E000TINM6	6	1.00	66.0	13	6.30	5.00	8	3	5.00	26.00
E000TINM8	8	1.25	72.0	16	8.00	6.30	9	3	6.80	29.00
E000TINM10	10	1.50	80.0	18	10.00	8.00	11	3	8.50	34.00
E000TINM12	12	1.75	89.0	22	9.00	7.10	10	3	10.30	–
E000TINM16	16	2.00	102.0	24	12.50	10.00	13	3	14.00	–
E000TINM20	20	2.50	112.0	29	14.00	11.20	14	4	17.50	–

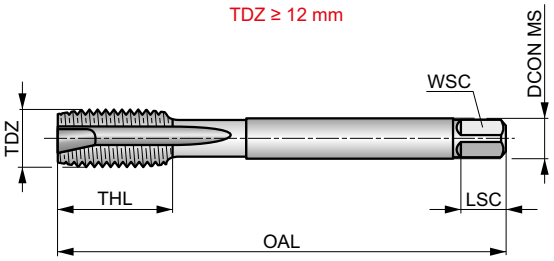
E001

DORMER

HSS-E-PM Spiral Point Machine Tap, Metric, ISO Standard

Machine tap with spiral point suited for through holes only. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.





M	ISO 529	6H
2.5×D		HSS-E PM
B 3.5-5		R
ST		

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P2.2	P2.3	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2	M3.3
◪22	◪16	■14	■10	◪9	■8	◪6	◪10	◪8	◪9	◪7	◪7	◪6	◪5

M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K3.1	K3.2	K4.1	K4.2	K5.1	K5.2
◪4	◪13	◪10	◪7	◪16	◪13	◪14	◪10	◪13	◪9	◪15	◪11

Products from this series are also available in set with drills. Please see L113.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E001M1.6	1.6	0.35	41.0	7	2.50	2.00	4	2	1.25	7.00
E001M2	2	0.40	41.0	8	2.50	2.00	4	2	1.60	8.00
E001M2.5	2.5	0.45	44.5	9.5	2.80	2.24	5	2	2.05	9.50
E001M3	3	0.50	48.0	15	3.15	2.50	5	3	2.50	15.00
E001M3.5	3.5	0.60	50.0	16	3.55	2.80	5	3	2.90	16.00
E001M4	4	0.70	53.0	17	4.00	3.15	6	3	3.30	17.00
E001M5	5	0.80	58.0	11	5.00	4.00	7	3	4.20	22.00
E001M6	6	1.00	66.0	13	6.30	5.00	8	3	5.00	26.00
E001M8	8	1.25	72.0	16	8.00	6.30	9	3	6.80	29.00
E001M10	10	1.50	80.0	18	10.00	8.00	11	3	8.50	34.00
E001M12	12	1.75	89.0	22	9.00	7.10	10	3	10.30	–
E001M14	14	2.00	95.0	24	11.20	9.00	12	3	12.00	–
E001M16	16	2.00	102.0	24	12.50	10.00	13	3	14.00	–
E001M18	18	2.50	112.0	29	14.00	11.20	14	4	15.50	–
E001M20	20	2.50	112.0	29	14.00	11.20	14	4	17.50	–
E001M22	22	2.50	118.0	29	16.00	12.50	16	4	19.50	–
E001M24	24	3.00	130.0	35	18.00	14.00	18	4	21.00	–

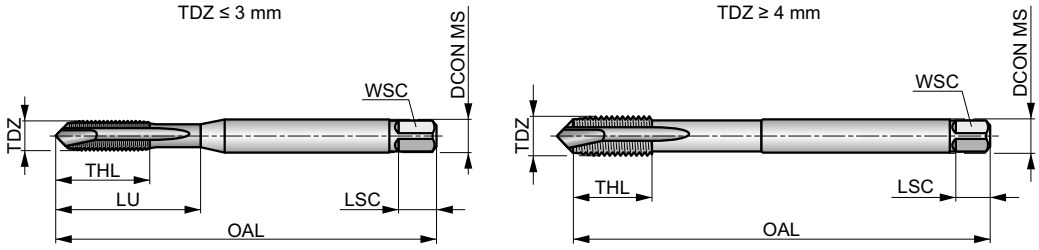
E606

DORMER

HSS-E-PM Spiral Point Long Series Machine Tap, Metric, ISO Standard

Longer design for extra reach when threading difficult to access holes. The spiral point drives the swarf forward ahead of the cutting edges for a safe and reliable process. Suited for through holes only.

M	ISO 2283	6H
2.5×D		HSS-E PM
B 3.5-5		R
Bright		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	N1.1	N1.2	N1.3	N2.1	N2.2
■ 12	■ 14	■ 14	■ 11	■ 10	◪ 9	■ 9	◪ 6	◪ 4	◪ 10	◪ 8	◪ 5	◪ 20	◪ 18

N2.3	N3.1	N3.3	N4.1
◪ 13	◪ 33	◪ 10	◪ 20

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E606M3	3	0.50	66.0	9	3.15	2.50	5	3	2.50	18.00
E606M4	4	0.70	73.0	12	3.15	2.50	5	3	3.30	–
E606M5	5	0.80	79.0	12	4.00	3.15	6	3	4.20	–
E606M6	6	1.00	89.0	14	4.50	3.55	6	3	5.00	–
E606M8	8	1.25	97.0	17	6.30	5.00	8	3	6.80	–
E606M10	10	1.50	108.0	19	8.00	6.30	9	3	8.50	–
E606M12	12	1.75	119.0	23	9.00	7.10	10	3	10.30	–
E606M14	14	2.00	127.0	25	11.20	9.00	12	3	12.00	–
E606M16	16	2.00	137.0	25	12.50	10.00	13	3	14.00	–
E606M20	20	2.50	149.0	30	14.00	11.20	14	4	17.50	–
E606M24	24	3.00	172.0	36	18.00	14.00	18	4	21.00	–

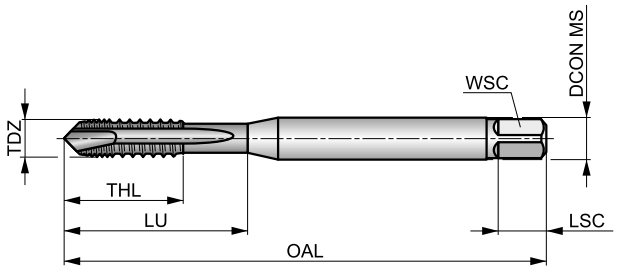
E216

DORMER

HSS-E-PM Spiral Point Interrupted Thread Machine Tap, Metric, DIN Standard

Spiral point machine tap for through holes only. Interrupted threads are designed to lessen the damaging effects of chip wedging on both forward and reverse rotation and reduce friction, permit better lubrication and allow more space for the passage of chips. Reinforced shank increases strength against torsional twist.

M	DIN 371	6H
	3×D	HSS-E PM
B 3.5-5		R
Bright		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	N1.1	N1.2	N1.3	N2.1	N2.2
■ 21	■ 24	■ 25	■ 18	■ 16	◪ 14	■ 10	◪ 8	◪ 6	■ 16	■ 12	◪ 8	◪ 25	◪ 22

N2.3	N3.1	N3.2	N3.3	N4.1
◪ 16	■ 51	◪ 26	■ 15	◪ 25

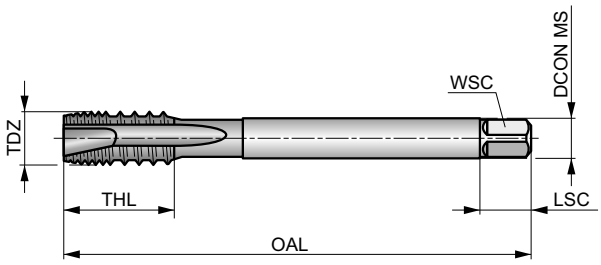
Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E216M3	3	0.50	56.0	9	3.50	2.70	6	3	2.50	18.00
E216M4	4	0.70	63.0	12	4.50	3.40	6	3	3.30	21.00
E216M5	5	0.80	70.0	13	6.00	4.90	8	3	4.20	25.00
E216M6	6	1.00	80.0	15	6.00	4.90	8	3	5.00	30.00
E216M8	8	1.25	90.0	18	8.00	6.20	9	3	6.80	35.00
E216M10	10	1.50	100.0	20	10.00	8.00	11	3	8.50	39.00

E266

HSS-E-PM Spiral Point Interrupted Thread Machine Tap, Metric, DIN Standard

Spiral point machine tap for through holes only. Interrupted threads to lessen the damaging effects of chip wedging on both forward and reverse rotation and reduce friction, permit better lubrication and allow more space for the passage of chips. The reduced shank increases the reach of the tap.

M	DIN 376	6H
	3×D	HSS-E PM
B 3.5-5		R
Bright		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	N1.1	N1.2	N1.3	N2.1	N2.2
■21	■24	■25	■18	■16	◪14	■10	◪8	◪6	■16	■12	◪8	◪25	◪22

N2.3	N3.1	N3.2	N3.3	N4.1
◪16	■51	◪30	■15	◪25

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
E266M12	12	1.75	110.0	23	9.00	7.00	10	3	10.30
E266M14	14	2.00	110.0	25	11.00	9.00	12	3	12.00
E266M16	16	2.00	110.0	25	12.00	9.00	12	3	14.00
E266M20	20	2.50	140.0	30	16.00	12.00	15	3	17.50
E266M24	24	3.00	160.0	38	18.00	14.50	17	4	21.00

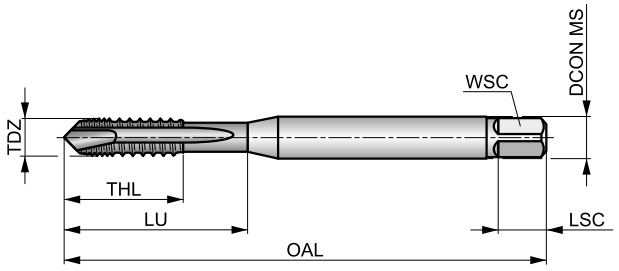
E422

DORMER

HSS-E-PM Spiral Point Interrupted Thread Machine Tap, Metric, DIN Standard

High performance spiral point tap for through holes only. Interrupted threads to lessen the damaging effects of chip wedging, reduce friction, permit better lubrication and allow more space for the passage of chips. The reinforced shank increases the strength and TiN coating enables higher cutting speeds and performance.

M	DIN 371	6H
	3×D	HSS-E PM
B 3.5-5		R
TiN		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	N1.1	N1.2	N1.3	N2.1	N2.2
■ 37	■ 42	■ 43	■ 32	■ 28	◪ 25	■ 15	◪ 12	◪ 9	■ 25	■ 19	◪ 13	◪ 46	◪ 42

N2.3	N3.1	N3.2	N3.3	N4.1
◪ 30	■ 76	◪ 45	■ 23	◪ 30

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E422M3	3	0.50	56.0	9	3.50	2.70	6	3	2.50	18.00
E422M4	4	0.70	63.0	12	4.50	3.40	6	3	3.30	21.00
E422M5	5	0.80	70.0	13	6.00	4.90	8	3	4.20	25.00
E422M6	6	1.00	80.0	15	6.00	4.90	8	3	5.00	30.00
E422M8	8	1.25	90.0	18	8.00	6.20	9	3	6.80	35.00
E422M10	10	1.50	100.0	20	10.00	8.00	11	3	8.50	39.00

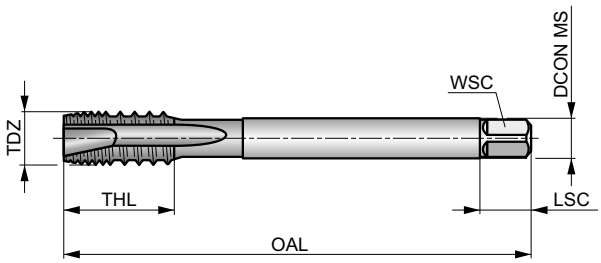
E423

DORMER

HSS-E-PM Spiral Point Interrupted Thread Machine Tap, Metric, DIN Standard

High performance spiral point tap for through holes only. Interrupted threads to lessen the damaging effects of chip wedging, reduce friction, permit better lubrication and allow more space for the passage of chips. The reduced shank increases the reach and TiN coating enables higher cutting speeds and performance.

M	DIN 376	6H
	3×D	HSS-E PM
B 3.5-5		R
TiN		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	N1.1	N1.2	N1.3	N2.1	N2.2
■37	■42	■43	■32	■28	◪25	■15	◪12	◪9	■25	■19	◪13	◪46	◪42

N2.3	N3.1	N3.2	N3.3	N4.1
◪30	■76	◪45	■23	◪30

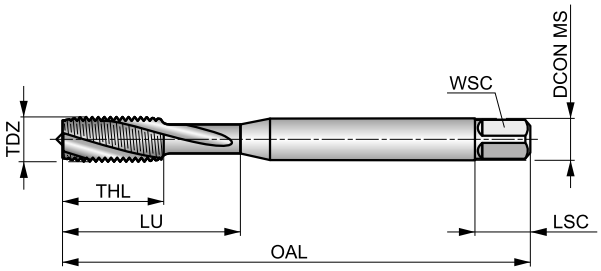
Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
E423M12	12	1.75	110.0	23	9.00	7.00	10	3	10.30
E423M14	14	2.00	110.0	25	11.00	9.00	12	3	12.00
E423M16	16	2.00	110.0	25	12.00	9.00	12	3	14.00
E423M20	20	2.50	140.0	30	16.00	12.00	15	3	17.50
E423M24	24	3.00	160.0	38	18.00	14.50	17	4	21.00

E207

HSS-E-PM 15° Spiral Flute Machine Tap, Metric, DIN Standard

Slow spiral flute tap for up to 1.5xD deep blind holes. With 15° helix for more stability threading in harder and higher strength steels. The reinforced shank increases strength against torsional twist.

M	DIN 371	6H
	1.5×D	HSS-E PM
C 2-3		λ 15°
R	Bright	



Workpiece material group suitability and starting values for cutting speed (m/min).

P2.2	P2.3	P3.1	P3.2	P4.1	N1.3	N2.1	N2.2	N2.3
■ 16	◪ 14	■ 10	■ 8	■ 6	◪ 6	◪ 23	◪ 21	◪ 15

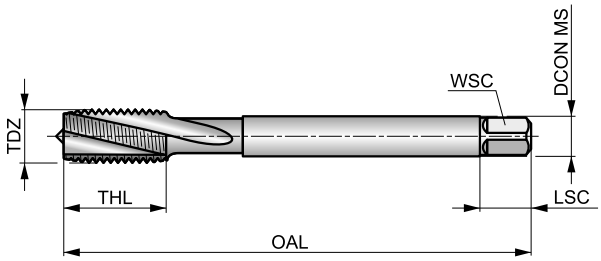
Product	TDZ [mm]	TP [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]	LU [mm]
E207M2	2	0.40	45.0	4	2.80	2.10	5	3	1.60	9.00
E207M2.5	2.5	0.45	50.0	4	2.80	2.10	5	3	2.05	12.50
E207M3	3	0.50	56.0	9	3.50	2.70	6	3	2.50	18.00
E207M4	4	0.70	63.0	12	4.50	3.40	6	3	3.30	21.00
E207M5	5	0.80	70.0	13	6.00	4.90	8	3	4.20	25.00
E207M6	6	1.00	80.0	15	6.00	4.90	8	3	5.00	30.00
E207M8	8	1.25	90.0	18	8.00	6.20	9	3	6.80	35.00
E207M10	10	1.50	100.0	20	10.00	8.00	11	3	8.50	39.00

E258

HSS-E-PM 15° Spiral Flute Machine Tap, Metric, DIN Standard

Slow spiral flute tap for up to 1.5xD deep blind holes. With 15° helix for more stability threading in harder and higher strength steels. The reduced shank increases the reach of the tap.

M	DIN 376	6H
	1.5×D	HSS-E PM
C 2-3		λ 15°
R	Bright	



Workpiece material group suitability and starting values for cutting speed (m/min).

P2.2	P2.3	P3.1	P3.2	P4.1	N1.3	N2.1	N2.2	N2.3
■ 16	◪ 14	■ 10	■ 8	■ 6	◪ 6	◪ 23	◪ 21	◪ 15

Product	TDZ	TP [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]
E258M4	4	0.70	63.0	12	2.80	2.10	5	3	3.30
E258M5	5	0.80	70.0	13	3.50	2.70	6	3	4.20
E258M6	6	1.00	80.0	15	4.50	3.40	6	3	5.00
E258M8	8	1.25	90.0	18	6.00	4.90	8	3	6.80
E258M10	10	1.50	100.0	20	7.00	5.50	8	3	8.50
E258M12	12	1.75	110.0	23	9.00	7.00	10	3	10.30
E258M14	14	2.00	110.0	25	11.00	9.00	12	3	12.00
E258M16	16	2.00	110.0	25	12.00	9.00	12	3	14.00
E258M18	18	2.50	125.0	30	14.00	11.00	14	3	15.50
E258M20	20	2.50	140.0	30	16.00	12.00	15	3	17.50
E258M22	22	2.50	140.0	34	18.00	14.50	17	4	19.50
E258M24	24	3.00	160.0	38	18.00	14.50	17	4	21.00
E258M27	27	3.00	160.0	38	20.00	16.00	19	4	24.00
E258M30	30	3.50	180.0	45	22.00	18.00	21	4	26.50
E258M36	36	4.00	200.0	55	28.00	22.00	25	4	32.00

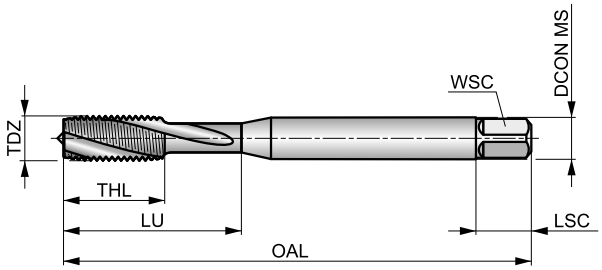
E212

DORMER

HSS-E-PM 15° Spiral Flute Machine Tap, Metric, DIN Standard

High performance slow spiral flute tap for up to 1.5xD deep holes. With 15° helix for more stability threading of harder and higher strength steels. The reinforced shank increases strength against torsional twist. TiN coated to allow higher cutting speeds, improve performance and extend tool life.

M	DIN 371	6H
	1.5×D	HSS-E PM
C 2-3		λ 15°
R	TiN	



Workpiece material group suitability and starting values for cutting speed (m/min).

P2.2	P2.3	P3.1	P3.2	P4.1	N1.3	N2.1	N2.2	N2.3
■ 28	◪ 25	■ 15	■ 12	■ 9	◪ 8	◪ 31	◪ 28	◪ 20

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E212M3	3	0.50	56.0	9	3.50	2.70	6	3	2.50	18.00
E212M4	4	0.70	63.0	12	4.50	3.40	6	3	3.30	21.00
E212M5	5	0.80	70.0	13	6.00	4.90	8	3	4.20	25.00
E212M6	6	1.00	80.0	15	6.00	4.90	8	3	5.00	30.00
E212M8	8	1.25	90.0	18	8.00	6.20	9	3	6.80	35.00
E212M10	10	1.50	100.0	20	10.00	8.00	11	3	8.50	39.00

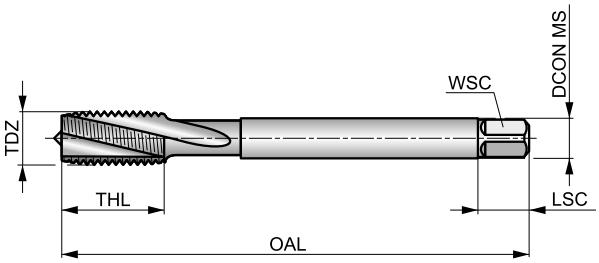
E263

DORMER

HSS-E-PM 15° Spiral Flute Machine Tap, Metric, DIN Standard

High performance slow spiral flute tap for up to 1.5xD deep holes. With 15° helix for more stability threading of harder and higher strength steels. The reduced shank increases the reach of the tap. TiN coated to allow higher cutting speeds, improve performance and extend tool life.

M	DIN 376	6H
	1.5×D	HSS-E PM
C 2-3		λ 15°
R	TiN	



Workpiece material group suitability and starting values for cutting speed (m/min).

P2.2	P2.3	P3.1	P3.2	P4.1	N1.3	N2.1	N2.2	N2.3
■ 28	◪ 25	■ 15	■ 12	■ 9	◪ 8	◪ 31	◪ 28	◪ 20

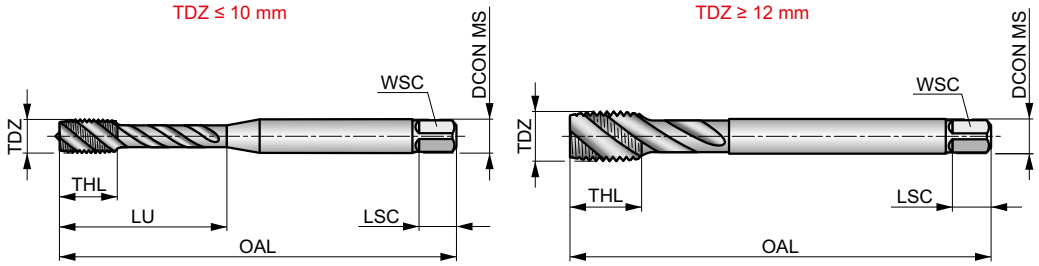
Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
E263M12	12	1.75	110.0	23	9.00	7.00	10	3	10.30
E263M14	14	2.00	110.0	25	11.00	9.00	12	3	12.00
E263M16	16	2.00	110.0	25	12.00	9.00	12	3	14.00
E263M18	18	2.50	125.0	30	14.00	11.00	14	3	15.50
E263M20	20	2.50	140.0	30	16.00	12.00	15	3	17.50
E263M22	22	2.50	140.0	34	18.00	14.50	17	4	19.50
E263M24	24	3.00	160.0	38	18.00	14.50	17	4	21.00
E263M27	27	3.00	160.0	38	20.00	16.00	19	4	24.00
E263M30	30	3.50	180.0	45	22.00	18.00	21	4	26.50
E263M36	36	4.00	200.0	55	28.00	22.00	25	4	32.00

EX006H

HSS-E-PM 45° Spiral Flute Tap, Metric, DIN Standard

Machine tap to produce normal fit threads within 6H tolerance. The spiral flute is suited for blind holes. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges.

M	DIN 371/376	6H
2.5×D		HSS-E PM
C 2-3		λ 45°
R	Bright	



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3
■21	■23	■24	■17	■15	◪13	■12	◪9	◪7	■13	■9	■6	■27	■24	■17

Products from this series are also available in set with drills. Please see L114 or L001.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
EX00M2 [1]	2	0.40	45.0	4	2.80	2.10	5	3	1.60	9.00
EX00M2.5 [1]	2.5	0.45	50.0	4	2.80	2.10	5	3	2.05	12.50
EX00M3	3	0.50	56.0	6	3.50	2.70	6	3	2.50	18.00
EX00M3.5	3.5	0.60	56.0	7	4.00	3.00	6	3	2.90	20.00
EX00M4	4	0.70	63.0	7	4.50	3.40	6	3	3.30	21.00
EX00M5	5	0.80	70.0	8	6.00	4.90	8	3	4.20	25.00
EX00M6	6	1.00	80.0	10	6.00	4.90	8	3	5.00	31.00
EX00M6DIN376	6	1.00	80.0	10	4.50	3.40	6	3	5.00	31.00
EX00M7	7	1.00	80.0	10	7.00	5.50	8	3	6.00	31.00
EX00M8	8	1.25	90.0	12	8.00	6.20	9	3	6.80	35.00
EX00M8DIN376	8	1.25	90.0	13	6.00	4.90	8	3	6.80	35.00
EX00M10	10	1.50	100.0	15	10.00	8.00	11	3	8.50	39.00
EX00M10DIN376	10	1.50	100.0	15	7.00	5.50	8	3	8.50	39.00
EX00M12	12	1.75	110.0	16	9.00	7.00	10	3	10.30	–
EX00M14	14	2.00	110.0	20	11.00	9.00	12	3	12.00	–
EX00M16	16	2.00	110.0	20	12.00	9.00	12	4	14.00	–
EX00M18	18	2.50	125.0	25	14.00	11.00	14	4	15.50	–
EX00M20	20	2.50	140.0	25	16.00	12.00	15	4	17.50	–
EX00M22	22	2.50	140.0	25	18.00	14.50	17	4	19.50	–
EX00M24	24	3.00	160.0	30	18.00	14.50	17	4	21.00	–
EX00M27	27	3.00	160.0	30	20.00	16.00	19	4	24.00	–
EX00M30	30	3.50	180.0	36	22.00	18.00	21	4	26.50	–
EX00M33	33	3.50	180.0	36	25.00	20.00	23	4	29.50	–
EX00M36	36	4.00	200.0	40	28.00	22.00	25	4	32.00	–
EX00M39	39	4.00	200.0	40	32.00	24.00	27	4	35.00	–
EX00M42 [1]	42	4.50	200.0	45	32.00	24.00	27	4	37.50	–
EX00M48 [1]	48	5.00	250.0	50	36.00	29.00	32	4	43.00	–
EX00M52 [1]	52	5.00	250.0	50	40.00	32.00	35	5	47.00	–
EX00M56 [1]	56	5.50	250.0	55	40.00	32.00	35	5	50.50	–
EX00M64 [1]	64	6.00	315.0	60	50.00	39.00	42	6	58.00	–

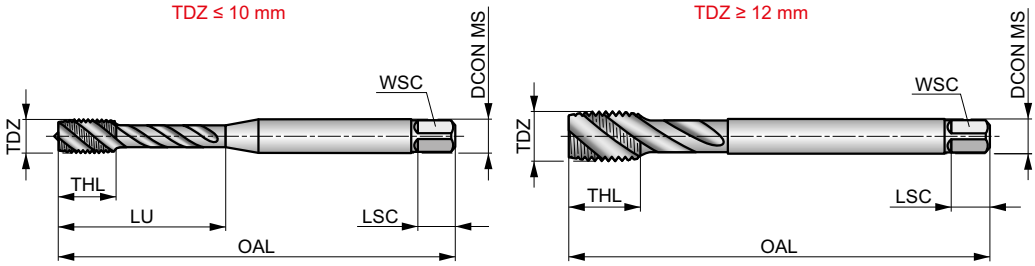
[1] HSS-E.

EX006G

HSS-E-PM 45° Spiral Flute Tap, Metric, DIN Standard

Machine tap to produce threads within 6G tolerance for a fit with large allowance. The spiral flute is suited for blind holes. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges.

M	DIN 371/376	6G
	2.5×D	HSS-E PM
C 2-3		λ 45°
R	Bright	



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3
■21	■23	■24	■17	■15	◪13	■12	◪9	◪7	■13	■9	■6	■27	■24	■17

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
EX00M36G	3	0.50	56.0	6	3.50	2.70	6	3	2.50	18.00
EX00M46G	4	0.70	63.0	7	4.50	3.40	6	3	3.30	21.00
EX00M56G	5	0.80	70.0	8	6.00	4.90	8	3	4.20	25.00
EX00M66G	6	1.00	80.0	10	6.00	4.90	8	3	5.00	31.00
EX00M86G	8	1.25	90.0	12	8.00	6.20	9	3	6.80	35.00
EX00M106G	10	1.50	100.0	15	10.00	8.00	11	3	8.50	39.00
EX00M126G	12	1.75	110.0	16	9.00	7.00	10	3	10.30	–
EX00M146G	14	2.00	110.0	20	11.00	9.00	12	3	12.00	–
EX00M166G	16	2.00	110.0	20	12.00	9.00	12	4	14.00	–
EX00M206G	20	2.50	140.0	25	16.00	12.00	15	4	17.50	–

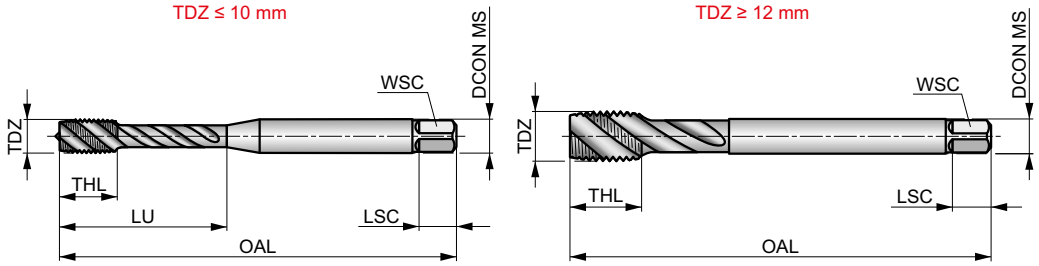
EX00TIN

DORMER

HSS-E-PM 45° Spiral Flute Machine Tap, Metric, DIN Standard

High performance machine tap with spiral flute for blind holes. Suited for a broad range of workpiece materials. TiN coated to allow higher cutting speeds, improve performance and extend tool life.

M	DIN 371/376	6H
	2.5×D	HSS-E PM
C 2-3		λ 45°
R	TiN	



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■32	■36	■37	■27	■23	■19	■18	■13	◪11	■10	◪8	■10	■8	■9

M2.2	M3.1	M3.2	M3.3	M4.1	N2.1	N2.2	N2.3
■7	■7	■6	◪5	◪4	■35	■32	■23

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
EX00TINM3	3	0.50	56.0	6	3.50	2.70	6	3	2.50	18.00
EX00TINM4	4	0.70	63.0	7	4.50	3.40	6	3	3.30	21.00
EX00TINM5	5	0.80	70.0	8	6.00	4.90	8	3	4.20	25.00
EX00TINM6	6	1.00	80.0	10	6.00	4.90	8	3	5.00	31.00
EX00TINM8	8	1.25	90.0	12	8.00	6.20	9	3	6.80	35.00
EX00TINM10	10	1.50	100.0	15	10.00	8.00	11	3	8.50	39.00
EX00TINM12	12	1.75	110.0	16	9.00	7.00	10	3	10.30	–
EX00TINM14	14	2.00	110.0	20	11.00	9.00	12	3	12.00	–
EX00TINM16	16	2.00	110.0	20	12.00	9.00	12	4	14.00	–
EX00TINM18	18	2.50	125.0	25	14.00	11.00	14	4	15.50	–
EX00TINM20	20	2.50	140.0	25	16.00	12.00	15	4	17.50	–
EX00TINM22	22	2.50	140.0	25	18.00	14.50	17	4	19.50	–
EX00TINM24	24	3.00	160.0	30	18.00	14.50	17	4	21.00	–
EX00TINM27	27	3.00	160.0	30	20.00	16.00	19	4	24.00	–
EX00TINM30	30	3.50	180.0	36	22.00	18.00	21	4	26.50	–

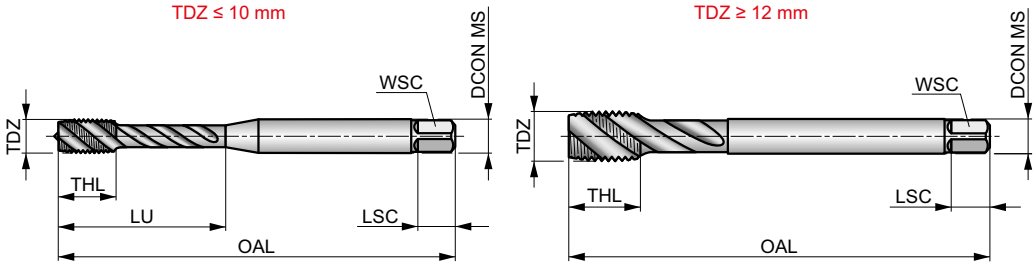
EX016H

DORMER

HSS-E-PM 45° Spiral Flute Machine Tap, Metric, DIN Standard

Machine tap to produce normal fit threads within 6H tolerance. The spiral flute is suited for blind holes. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

M	DIN 371/376	6H
	2.5×D	HSS-E PM
C 2-3		λ 45°
R	ST	



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P2.2	P2.3	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2	M3.3	M4.1
◪21	◪15	■13	■9	◪8	■7	◪5	◪8	◪6	◪7	◪5	◪5	◪4	◪3	◪3

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
EX01M2 [1]	2	0.40	45.0	4	2.80	2.10	5	3	1.60	9.00
EX01M2.5 [1]	2.5	0.45	50.0	4	2.80	2.10	5	3	2.05	12.50
EX01M3	3	0.50	56.0	6	3.50	2.70	6	3	2.50	18.00
EX01M3.5	3.5	0.60	56.0	7	4.00	3.00	6	3	2.90	20.00
EX01M4	4	0.70	63.0	7	4.50	3.40	6	3	3.30	21.00
EX01M5	5	0.80	70.0	8	6.00	4.90	8	3	4.20	25.00
EX01M6	6	1.00	80.0	10	6.00	4.90	8	3	5.00	31.00
EX01M6DIN376	6	1.00	80.0	10	4.50	3.40	6	3	5.00	31.00
EX01M7	7	1.00	80.0	10	7.00	5.50	8	3	6.00	31.00
EX01M8	8	1.25	90.0	12	8.00	6.20	9	3	6.80	35.00
EX01M8DIN376	8	1.25	90.0	13	6.00	4.90	8	3	6.80	35.00
EX01M10	10	1.50	100.0	15	10.00	8.00	11	3	8.50	39.00
EX01M10DIN376	10	1.50	100.0	15	7.00	5.50	8	3	8.50	39.00
EX01M12	12	1.75	110.0	16	9.00	7.00	10	3	10.30	–
EX01M14	14	2.00	110.0	20	11.00	9.00	12	3	12.00	–
EX01M16	16	2.00	110.0	20	12.00	9.00	12	4	14.00	–
EX01M18	18	2.50	125.0	25	14.00	11.00	14	4	15.50	–
EX01M20	20	2.50	140.0	25	16.00	12.00	15	4	17.50	–
EX01M22	22	2.50	140.0	25	18.00	14.50	17	4	19.50	–
EX01M24	24	3.00	160.0	30	18.00	14.50	17	4	21.00	–
EX01M27	27	3.00	160.0	30	20.00	16.00	19	4	24.00	–
EX01M30	30	3.50	180.0	36	22.00	18.00	21	4	26.50	–
EX01M33	33	3.50	180.0	36	25.00	20.00	23	4	29.50	–
EX01M36	36	4.00	200.0	40	28.00	22.00	25	4	32.00	–
EX01M39	39	4.00	200.0	40	32.00	24.00	27	4	35.00	–
EX01M42 [1]	42	4.50	200.0	45	32.00	24.00	27	4	37.50	–
EX01M48 [1]	48	5.00	250.0	50	36.00	29.00	32	4	43.00	–
EX01M52 [1]	52	5.00	250.0	50	40.00	32.00	35	5	47.00	–
EX01M56 [1]	56	5.50	250.0	55	40.00	32.00	35	5	50.50	–
EX01M64 [1]	64	6.00	315.0	60	50.00	39.00	42	6	58.00	–

[1] HSS-E.

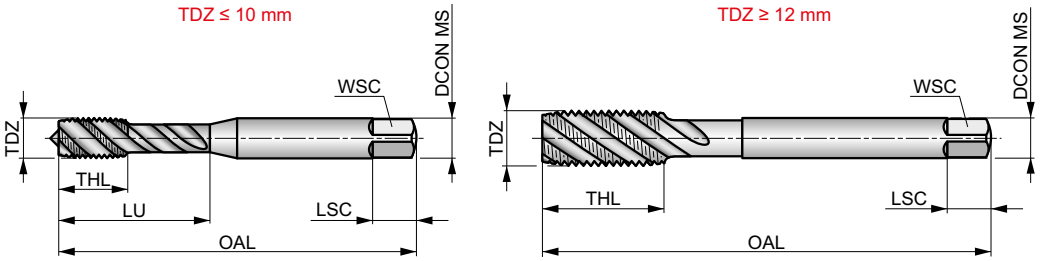
E002

DORMER

HSS-E-PM 45° Spiral Flute Machine Tap, Metric, ISO Standard

Machine tap with spiral flute suited for blind holes. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges.

M	ISO 529	6H
2.5×D		HSS-E PM
C 2-3		λ 45°
R	Bright	



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3
■21	■23	■24	■17	■15	◪13	■12	◪9	◪7	■13	■9	■6	■27	■24	■17

Products from this series are also available in set with drills. Please see L113 or L002.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E002M2 [1]	2	0.40	41.0	8	2.50	2.00	4	2	1.60	8.00
E002M2.5 [1]	2.5	0.45	44.5	9.5	2.80	2.24	5	2	2.05	9.50
E002M3	3	0.50	48.0	6	3.15	2.50	5	3	2.50	12.50
E002M4	4	0.70	53.0	7	4.00	3.15	6	3	3.30	19.00
E002M5	5	0.80	58.0	8	5.00	4.00	7	3	4.20	22.00
E002M6	6	1.00	66.0	10	6.30	5.00	8	3	5.00	27.00
E002M8	8	1.25	72.0	12	8.00	6.30	9	3	6.80	31.00
E002M10	10	1.50	80.0	15	10.00	8.00	11	3	8.50	35.00
E002M12	12	1.75	89.0	16	9.00	7.10	10	3	10.30	–
E002M14	14	2.00	95.0	18	11.20	9.00	12	3	12.00	–
E002M16	16	2.00	102.0	18	12.50	10.00	13	4	14.00	–
E002M18	18	2.50	112.0	29	14.00	11.20	14	4	15.50	–
E002M20	20	2.50	112.0	29	14.00	11.20	14	4	17.50	–
E002M22	22	2.50	118.0	29	16.00	12.50	16	4	19.50	–
E002M24	24	3.00	130.0	35	18.00	14.00	18	4	21.00	–

[1] HSS-E.

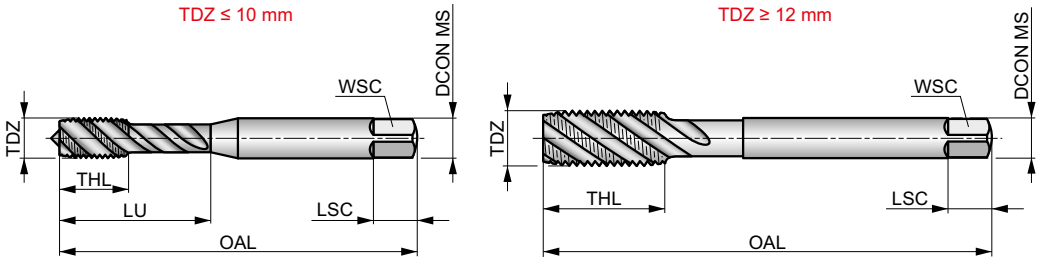
E002TIN

DORMER

HSS-E-PM 45° Spiral Flute Machine Tap, Metric, ISO Standard

High performance machine tap with spiral flute for blind holes. Suited for a broad range of workpiece materials. TiN coated to allow higher cutting speeds, improve performance and extend tool life.

M	ISO 529	6H
	2.5×D	HSS-E PM
C 2-3		λ 45°
R	TiN	



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■32	■36	■37	■27	■23	■19	■18	■13	◪11	■10	◪8	■10	■8	■9

M2.2	M3.1	M3.2	M3.3	M4.1	N2.1	N2.2	N2.3
■7	■7	■6	◪5	◪4	■35	■32	■23

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E002TINM3	3	0.50	48.0	6	3.15	2.50	5	3	2.50	12.50
E002TINM4	4	0.70	53.0	7	4.00	3.15	6	3	3.30	19.00
E002TINM5	5	0.80	58.0	8	5.00	4.00	7	3	4.20	22.00
E002TINM6	6	1.00	66.0	10	6.30	5.00	8	3	5.00	27.00
E002TINM8	8	1.25	72.0	12	8.00	6.30	9	3	6.80	31.00
E002TINM10	10	1.50	80.0	15	10.00	8.00	11	3	8.50	35.00
E002TINM12	12	1.75	89.0	16	9.00	7.10	10	3	10.30	–
E002TINM16	16	2.00	102.0	18	12.50	10.00	13	4	14.00	–
E002TINM20	20	2.50	112.0	29	14.00	11.20	14	4	17.50	–

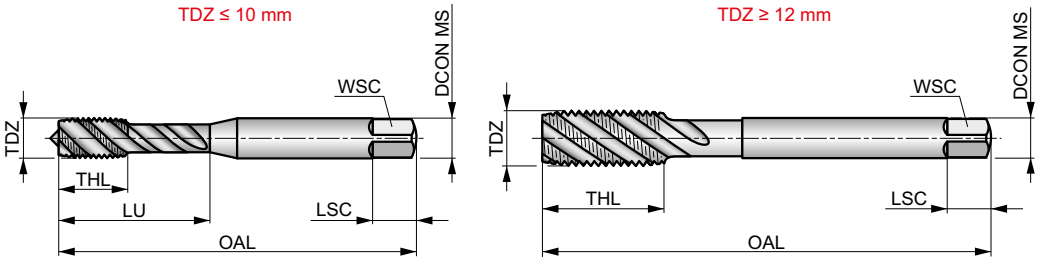
E003

DORMER

HSS-E-PM 45° Spiral Flute Machine Tap, Metric, ISO Standard

Machine tap with spiral flute suited for blind holes. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

M	ISO 529	6H
	2.5×D	HSS-E PM
C 2-3		λ 45°
R	ST	



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P2.2	P2.3	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2	M3.3	M4.1
◪21	◪15	■13	■9	◪8	■7	◪5	◪8	◪6	◪7	◪5	◪5	◪4	◪3	◪3

Products from this series are also available in set with drills. Please see L113.

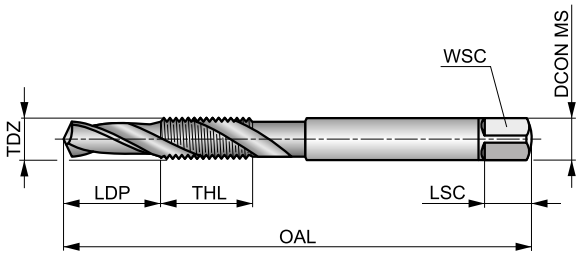
Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E003M2 [1]	2	0.40	41.0	8	2.50	2.00	4	2	1.60	8.00
E003M2.5 [1]	2.5	0.45	44.5	9.5	2.80	2.24	5	2	2.05	9.50
E003M3	3	0.50	48.0	6	3.15	2.50	5	3	2.50	12.50
E003M4	4	0.70	53.0	7	4.00	3.15	6	3	3.30	19.00
E003M5	5	0.80	58.0	8	5.00	4.00	7	3	4.20	22.00
E003M6	6	1.00	66.0	10	6.30	5.00	8	3	5.00	27.00
E003M8	8	1.25	72.0	12	8.00	6.30	9	3	6.80	31.00
E003M10	10	1.50	80.0	15	10.00	8.00	11	3	8.50	35.00
E003M12	12	1.75	89.0	16	9.00	7.10	10	3	10.30	–
E003M14	14	2.00	95.0	18	11.20	9.00	12	3	12.00	–
E003M16	16	2.00	102.0	18	12.50	10.00	13	4	14.00	–
E003M18	18	2.50	112.0	29	14.00	11.20	14	4	15.50	–
E003M20	20	2.50	112.0	29	14.00	11.20	14	4	17.50	–
E003M22	22	2.50	118.0	29	16.00	12.50	16	4	19.50	–
E003M24	24	3.00	130.0	35	18.00	14.00	18	4	21.00	–

[1] HSS-E.

E650

HSS Drill-Tap Combination Tool with 30° Spiral Flute, Metric, ISO Standard

Combination of a core-hole drill and tap to produce a thread in one pass. This significantly reduces the time needed to produce the thread on site with the use of a hand-held power tool. There is no need for a tap wrench or tool change. Steam tempered surface acts to retain the lubricant and provide smoother cutting.



M	ISO DORMER	6H
	1.5×D	HSS
C 2-3		λ 30°
R	ST	

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	N1.2	N1.3	N3.1	N3.2	N4.1
■ 18	■ 20	■ 22	■ 20	◪ 18	◪ 15	◪ 12	◪ 14	◪ 9	◪ 20	◪ 15	◪ 25

Products from this series are also available in set. Please see L126.

Product	TDZ	TP	TD	OAL	THL	LDP	DCON MS	WSC	LSC	NOF
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	
E650M3	3	0.50	2.500	56.0	10	6.00	3.15	2.50	5	2
E650M4	4	0.70	3.300	65.0	12	8.00	4.00	3.15	6	2
E650M5	5	0.80	4.200	69.0	15	10.00	5.00	4.00	7	2
E650M6	6	1.00	5.000	84.0	18	12.00	6.30	5.00	8	2
E650M8	8	1.25	6.800	96.0	21	16.00	8.00	6.30	9	2
E650M10	10	1.50	8.500	108.0	22	20.00	10.00	8.00	11	2
E650M12	12	1.75	10.200	113.0	29	24.00	9.00	7.10	10	2
E650M14	14	2.00	12.000	123.0	30	28.00	11.20	9.00	12	2
E650M16	16	2.00	14.000	134.0	32	32.00	12.50	10.00	13	2

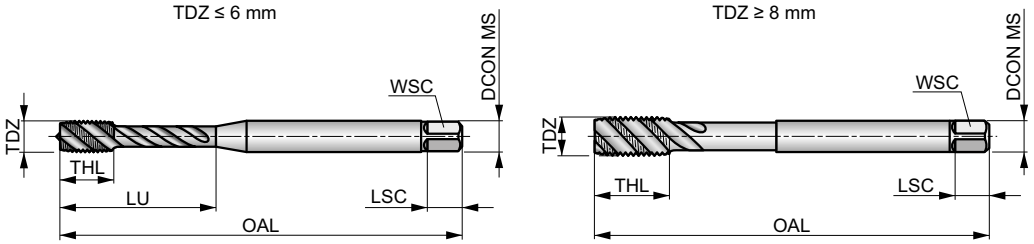
E605

DORMER

HSS-E-PM 40° Spiral Flute Long Series Machine Tap, Metric, ISO Standard

Longer design to give extra reach when threading difficult to access holes. The spiral flutes transport the swarf away from the cutting edges and out of the hole, avoiding packing of swarf in the flutes or at the bottom. Suited for blind holes.

M	ISO 2283	6H
	2×D	HSS-E PM
C 2-3		λ 40°
R	Bright	



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3
■ 11	■ 13	■ 13	■ 10	■ 9	◪ 8	■ 8	◪ 5	◪ 3	◪ 9	◪ 7	◪ 4	◪ 19	◪ 17	◪ 12

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E605M3	3	0.50	66.0	9	3.15	2.50	5	2	2.50	21.00
E605M4	4	0.70	73.0	9	4.00	3.15	6	2	3.30	22.00
E605M5	5	0.80	79.0	12	5.00	4.00	7	3	4.20	26.00
E605M6	6	1.00	89.0	12	6.30	5.00	8	3	5.00	29.00
E605M8	8	1.25	97.0	12	6.30	5.00	8	3	6.80	–
E605M10	10	1.50	108.0	14	8.00	6.30	9	3	8.50	–
E605M12	12	1.75	119.0	23	9.00	7.10	10	3	10.30	–
E605M14	14	2.00	127.0	25	11.20	9.00	12	3	12.00	–
E605M16	16	2.00	137.0	25	12.50	10.00	13	3	14.00	–
E605M20	20	2.50	149.0	30	14.00	11.20	14	3	17.50	–

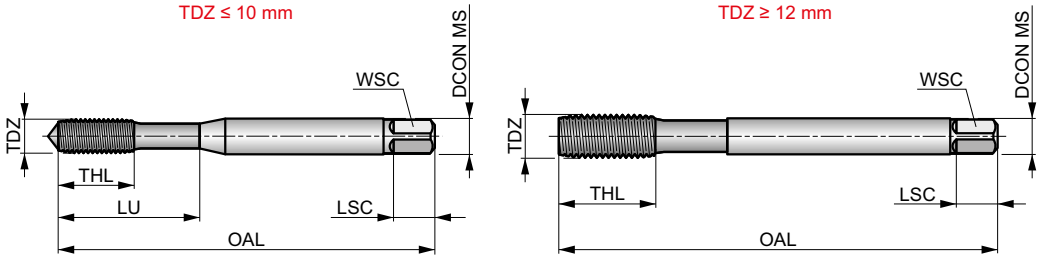
E291

DORMER

HSS-E Thread Forming Tap, Metric, DIN Standard

Fluteless tap to produce high quality thread in blind and through holes. Provides a strong, clean, chip-free and accurate thread with excellent tolerance. Highly versatile for mild to medium strength steel and non-ferrous metal.

M	DIN 2174	6HX
	3×D	HSS-E
C 2-3.5		R
Bright		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	P4.1	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3
■ 23	■ 26	■ 26	■ 26	■ 23	■ 15	■ 12	■ 9	■ 26	■ 20	■ 13	◪ 34	◪ 30	◪ 22

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E291M1.6	1.6	0.35	40.0	8	2.50	2.10	5	3	1.40	–
E291M2	2	0.40	45.0	6	2.80	2.10	5	3	1.80	11.00
E291M2.5	2.5	0.45	50.0	8	2.80	2.10	5	3	2.30	12.50
E291M3	3	0.50	56.0	9	3.50	2.70	6	4	2.80	18.00
E291M3.5	3.5	0.60	56.0	11	4.00	3.00	6	4	3.20	20.00
E291M4	4	0.70	63.0	12	4.50	3.40	6	5	3.70	21.00
E291M5	5	0.80	70.0	13	6.00	4.90	8	5	4.60	25.00
E291M6	6	1.00	80.0	15	6.00	4.90	8	5	5.50	30.00
E291M8	8	1.25	90.0	18	8.00	6.20	9	5	7.40	35.00
E291M10	10	1.50	100.0	20	10.00	8.00	11	5	9.30	39.00
E291M12	12	1.75	110.0	23	9.00	7.00	10	5	11.20	–
E291M16	16	2.00	110.0	25	12.00	9.00	12	6	15.00	–

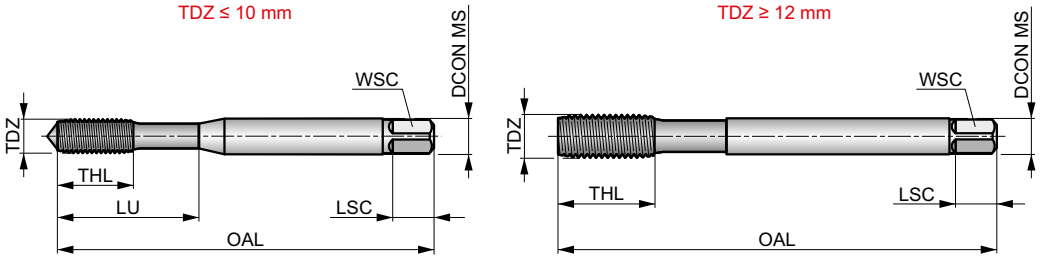
E292

DORMER

HSS-E Thread Forming TiN Coated Tap, Metric, DIN Standard

High performance fluteless tap to produce high quality thread in blind and through holes. Provides a strong, clean, chip-free and accurate thread with excellent tolerance. Highly versatile for steel, stainless steel and non-ferrous metal. TiN coated to allow higher cutting speeds, improve performance and extend tool life.

M	DIN 2174	6HX
LU	3×D	HSS-E
C 2-3.5		R
TiN		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2
■ 45	■ 51	■ 51	■ 51	■ 45	■ 29	■ 24	◪ 18	■ 18	◪ 13	■ 25	■ 21	■ 22	■ 18

M3.1	M3.2	M3.3	M4.1	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.3
■ 17	■ 15	◪ 12	◪ 8	■ 55	■ 41	■ 28	■ 62	■ 55	■ 40	◪ 36	◪ 12

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E292M1.6	1.6	0.35	40.0	8	2.50	2.10	5	3	1.40	–
E292M2	2	0.40	45.0	6	2.80	2.10	5	3	1.80	11.00
E292M2.5	2.5	0.45	50.0	8	2.80	2.10	5	3	2.30	12.50
E292M3	3	0.50	56.0	9	3.50	2.70	6	4	2.80	18.00
E292M3.5	3.5	0.60	56.0	11	4.00	3.00	6	4	3.20	20.00
E292M4	4	0.70	63.0	12	4.50	3.40	6	5	3.70	21.00
E292M5	5	0.80	70.0	13	6.00	4.90	8	5	4.60	25.00
E292M6	6	1.00	80.0	15	6.00	4.90	8	5	5.50	30.00
E292M8	8	1.25	90.0	18	8.00	6.20	9	5	7.40	35.00
E292M10	10	1.50	100.0	20	10.00	8.00	11	5	9.30	39.00
E292M12	12	1.75	110.0	23	9.00	7.00	10	5	11.20	–
E292M16	16	2.00	110.0	25	12.00	9.00	12	6	15.00	–

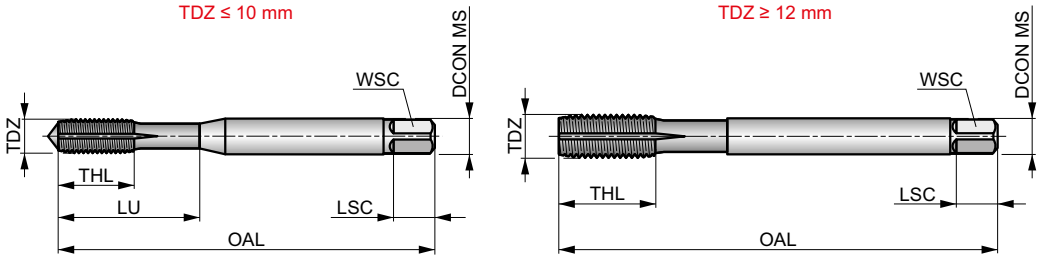
E294

DORMER

HSS-E Thread Forming TiN Coated Tap, Oil-Grooves, Metric, DIN Standard

High performance fluteless tap for blind and through holes. Provide strong, clean, chip-free and accurate threads with excellent tolerance. Highly versatile for steel, stainless steel and non-ferrous metal. TiN coated for higher cutting speeds, performance and tool life. With oil-grooves for better lubrication in deep holes.

M	DIN 2174	6HX
	3.5×D	HSS-E
C 2-3.5		R
TiN		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■45	■51	■51	■51	■45	◪40	■29	■24	■20	■18	■15	■25	■21	■22
M2.2	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.3**
■18	◪12	■17	■15	■14	■10	■55	■41	■28	■62	■55	■40	◪40	◪12

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E294M3	3	0.50	56.0	9	3.50	2.70	6	4	2.80	18.00
E294M4	4	0.70	63.0	12	4.50	3.40	6	5	3.70	21.00
E294M5	5	0.80	70.0	13	6.00	4.90	8	5	4.60	25.00
E294M6	6	1.00	80.0	15	6.00	4.90	8	5	5.50	30.00
E294M8	8	1.25	90.0	18	8.00	6.20	9	5	7.40	35.00
E294M10	10	1.50	100.0	20	10.00	8.00	11	5	9.30	39.00
E294M12	12	1.75	110.0	23	9.00	7.00	10	5	11.20	–
E294M14	14	2.00	110.0	25	11.00	9.00	12	6	13.00	–
E294M16	16	2.00	110.0	25	12.00	9.00	12	6	15.00	–

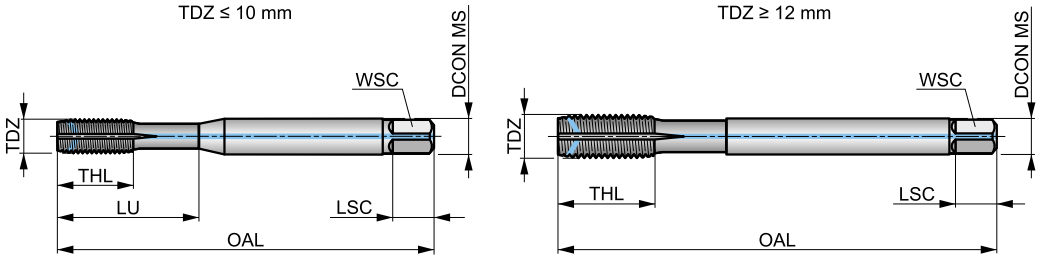
E289

DORMER

HSS-E Thread Forming TiN Coated Tap, Through Coolant, Metric, DIN Standard

High performance fluteless tap for blind and through holes. Provide strong, clean, chip-free and accurate threads with excellent tolerance. Highly versatile for steel, stainless steel and non-ferrous metal. TiN coated for higher cutting speeds, performance and tool life. Through coolant and oil-grooves for optimal lubrication.

M	DIN 2174	6HX
	3.5×D	HSS-E
C 2-3.5		R
TiN		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■ 50	■ 56	■ 56	■ 56	■ 49	◪ 42	■ 33	■ 26	■ 22	■ 20	■ 16	■ 27	■ 23	■ 24
M2.2	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.3**
■ 19	◪ 12	■ 18	■ 16	■ 14	■ 10	■ 60	■ 55	■ 31	■ 68	■ 60	■ 44	◪ 40	◪ 14

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E289M5	5	0.80	70.0	13	6.00	4.90	8	5	4.60	25.00
E289M6	6	1.00	80.0	15	6.00	4.90	8	5	5.50	30.00
E289M8	8	1.25	90.0	18	8.00	6.20	9	5	7.40	35.00
E289M10	10	1.50	100.0	20	10.00	8.00	11	5	9.30	39.00
E289M12	12	1.75	110.0	23	9.00	7.00	10	5	11.20	–

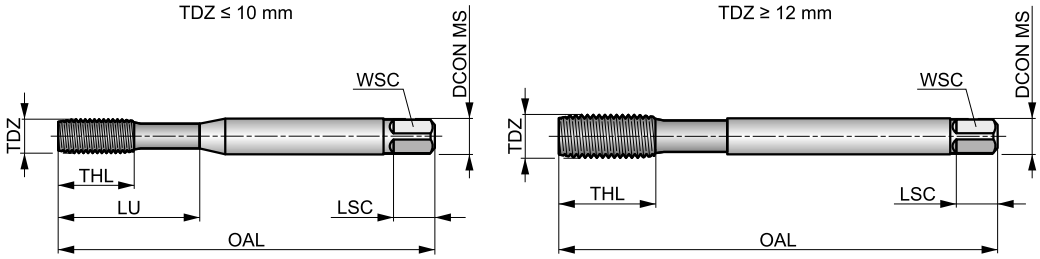
E293

DORMER

HSS-E Thread Forming TiN Coated Tap, Metric, DIN Standard

High performance fluteless tap with full-bottoming lead to produce an almost full thread in blind holes. Provides a strong, clean, chip-free and accurate thread with excellent tolerance. Highly versatile for steel, stainless steel and non-ferrous metal. TiN coated for higher cutting speeds, improve performance and tool life.

M	DIN 2174	6HX
	3×D	HSS-E
E 1.5-2		R
TiN		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2
■45	■51	■51	■51	■45	■29	■24	◪18	■18	◪13	■25	■21	■22	■18

M3.1	M3.2	M3.3	M4.1	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.3
■17	■15	◪12	◪8	■55	■41	■28	■62	■55	■40	◪36	◪12

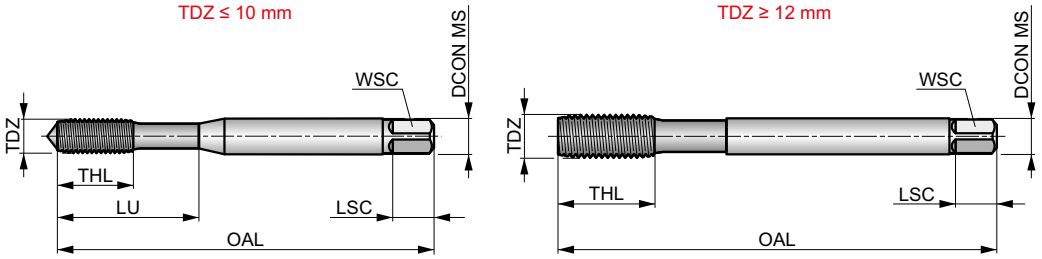
Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E293M3	3	0.50	56.0	9	3.50	2.70	6	4	2.80	18.00
E293M4	4	0.70	63.0	12	4.50	3.40	6	5	3.70	21.00
E293M5	5	0.80	70.0	13	6.00	4.90	8	5	4.60	25.00
E293M6	6	1.00	80.0	15	6.00	4.90	8	5	5.50	30.00
E293M8	8	1.25	90.0	18	8.00	6.20	9	5	7.40	35.00
E293M10	10	1.50	100.0	20	10.00	8.00	11	5	9.30	39.00
E293M12	12	1.75	110.0	23	9.00	7.00	10	5	11.20	–
E293M16	16	2.00	110.0	25	12.00	9.00	12	6	15.00	–

E295

HSS-E Thread Forming TiN Coated Tap, Metric, DIN Standard

High performance fluteless tap to produce high quality threads within 6G tolerance for a fit with large allowance. Provides a strong, clean, chip-free and accurate thread with excellent tolerance. Highly versatile for steel, stainless steel and non-ferrous metal. TiN coated for higher cutting speeds and extend tool life.

M	DIN 2174	6GX
	3×D	HSS-E
C 2-3.5		R
TiN		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2
■ 45	■ 51	■ 51	■ 51	■ 45	■ 29	■ 24	◪ 18	■ 18	◪ 13	■ 25	■ 21	■ 22	■ 18

M3.1	M3.2	M3.3	M4.1	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.3
■ 17	■ 15	◪ 12	◪ 8	■ 55	■ 41	■ 28	■ 62	■ 55	■ 40	◪ 36	◪ 12

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E295M3	3	0.50	56.0	9	3.50	2.70	6	4	2.80	18.00
E295M3.5	3.5	0.60	56.0	11	4.00	3.00	6	4	3.20	20.00
E295M4	4	0.70	63.0	12	4.50	3.40	6	5	3.70	21.00
E295M5	5	0.80	70.0	13	6.00	4.90	8	5	4.60	25.00
E295M6	6	1.00	80.0	15	6.00	4.90	8	5	5.50	30.00
E295M8	8	1.25	90.0	18	8.00	6.20	9	5	7.40	35.00
E295M10	10	1.50	100.0	20	10.00	8.00	11	5	9.30	39.00
E295M12	12	1.75	110.0	23	9.00	7.00	10	5	11.20	–

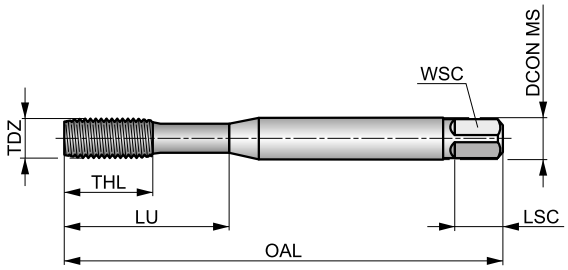
E296

DORMER

HSS-E Thread Forming TiN Coated Tap, Metric, DIN Standard

High performance fluteless tap with full-bottoming lead to produce an almost full blind hole thread within 6G tolerance. Provides a strong, clean, chip-free and accurate thread. Highly versatile for steel, stainless steel and non-ferrous metal. TiN coated for higher cutting speeds, improve performance and tool life.

M	DIN 2174	6GX
	3×D	HSS-E
E 1.5-2		R
TiN		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2
■45	■51	■51	■51	■45	■29	■24	◪18	■18	◪13	■25	■21	■22	■18

M3.1	M3.2	M3.3	M4.1	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.3
■17	■15	◪12	◪8	■55	■41	■28	■62	■55	■40	◪36	◪12

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E296M3	3	0.50	56.0	9	3.50	2.70	6	4	2.80	18.00
E296M4	4	0.70	63.0	12	4.50	3.40	6	5	3.70	21.00
E296M5	5	0.80	70.0	13	6.00	4.90	8	5	4.60	25.00
E296M6	6	1.00	80.0	15	6.00	4.90	8	5	5.50	30.00
E296M8	8	1.25	90.0	18	8.00	6.20	9	5	7.40	35.00
E296M10	10	1.50	100.0	20	10.00	8.00	11	5	9.30	39.00

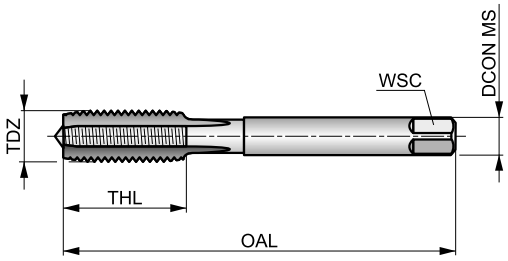
E105

DORMER

HSS Straight Flute Serial Hand Tap, Metric-Fine, DIN Standard

Ideal for hand tapping tough materials. The straight flute design makes it ideal for both through and blind holes. Available as a single finishing tap or as a set of two serial taps, which should be used one after the other to create the full thread.

MF	DIN 2181	6H
	1.5×D	HSS
C 2-3		R
Bright		



Workpiece material group suitability.

P1.1 ■	P1.2 ■	P1.3 ■	P2.1 ■	P2.2 ■	P2.3 ◪	P3.1 ■	P3.2 ◪	P4.1 ◪	K1.1 ◪	K1.2 ◪	K1.3 ◪	K2.1 ◪	K2.2 ◪
K3.1 ◪	K3.2 ◪	K4.1 ◪	K4.2 ◪	K5.1 ◪	K5.2 ◪	N1.1 ■	N1.2 ■	N1.3 ■	N2.1 ■	N2.2 ■	N2.3 ■	N3.1 ■	N3.2 ■
N3.3 ■	N4.2 ■	N4.3 ■											

Product	TDZ	TP	OAL	THL	DCON MS	WSC	NOF	PHD
		[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
E105M2.5X.35NO3	2.5	0.35	40.0	9	2.80	2.10	3	2.15
E105M2.5X.35NO9	2.5	0.35	40.0	9	2.80	2.10	3	2.15
E105M3X.35NO3	3	0.35	40.0	9	3.50	2.70	3	2.65
E105M3X.35NO9	3	0.35	40.0	9	3.50	2.70	3	2.65
E105M3.5X.35NO3	3.5	0.35	45.0	10	4.00	3.00	3	3.20
E105M3.5X.35NO9	3.5	0.35	45.0	10	4.00	3.00	3	3.20
E105M4X.5NO3	4	0.50	45.0	12	4.50	3.40	3	3.50
E105M4X.5NO9	4	0.50	45.0	12	4.50	3.40	3	3.50
E105M5X.5NO3	5	0.50	50.0	14	6.00	4.90	3	4.50
E105M5X.5NO9	5	0.50	50.0	14	6.00	4.90	3	4.50
E105M5.5X.5NO9	5.5	0.50	56.0	16	6.00	4.90	3	5.00
E105M6X.75NO3	6	0.75	56.0	16	6.00	4.90	3	5.30
E105M6X.75NO9	6	0.75	56.0	16	6.00	4.90	3	5.30
E105M7X.75NO3	7	0.75	56.0	16	6.00	4.90	3	6.30
E105M7X.75NO9	7	0.75	56.0	16	6.00	4.90	3	6.30
E105M8X.75NO3	8	0.75	56.0	16	6.00	4.90	3	7.30
E105M8X.75NO9	8	0.75	56.0	16	6.00	4.90	3	7.30
E105M8X1.0NO3	8	1.00	63.0	19	6.00	4.90	3	7.00
E105M8X1.0NO9	8	1.00	63.0	19	6.00	4.90	3	7.00
E105M9X.75NO3	9	0.75	63.0	19	7.00	5.50	3	8.30
E105M9X.75NO9	9	0.75	63.0	19	7.00	5.50	3	8.30
E105M9X1.0NO3	9	1.00	63.0	19	7.00	5.50	3	8.00
E105M9X1.0NO9	9	1.00	63.0	19	7.00	5.50	3	8.00
E105M10X.75NO3	10	0.75	63.0	16	7.00	5.50	3	9.30
E105M10X.75NO9	10	0.75	63.0	16	7.00	5.50	3	9.30
E105M10X1.0NO3	10	1.00	63.0	16	7.00	5.50	3	9.00
E105M10X1.0NO9	10	1.00	63.0	16	7.00	5.50	3	9.00
E105M10X1.25NO3	10	1.25	70.0	22	7.00	5.50	3	8.80

Product	TDZ	TP	OAL	THL	DCON MS	WSC	NOF	PHD
		[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
E105M10X1.25N09	10	1.25	70.0	22	7.00	5.50	3	8.80
E105M11X.75N03	11	0.75	63.0	15	8.00	6.20	3	10.30
E105M11X.75N09	11	0.75	63.0	15	8.00	6.20	3	10.30
E105M11X1.0N03	11	1.00	63.0	15	8.00	6.20	3	10.00
E105M11X1.0N09	11	1.00	63.0	15	8.00	6.20	3	10.00
E105M12X1.0N03	12	1.00	70.0	16	9.00	7.00	3	11.00
E105M12X1.0N09	12	1.00	70.0	16	9.00	7.00	3	11.00
E105M12X1.25N03	12	1.25	70.0	16	9.00	7.00	3	10.80
E105M12X1.25N09	12	1.25	70.0	16	9.00	7.00	3	10.80
E105M12X1.5N03	12	1.50	70.0	16	9.00	7.00	3	10.50
E105M12X1.5N09	12	1.50	70.0	16	9.00	7.00	3	10.50
E105M14X1.0N03	14	1.00	70.0	16	11.00	9.00	4	13.00
E105M14X1.0N09	14	1.00	70.0	16	11.00	9.00	4	13.00
E105M14X1.25N03	14	1.25	70.0	16	11.00	9.00	4	12.80
E105M14X1.25N09	14	1.25	70.0	16	11.00	9.00	4	12.80
E105M14X1.5N03	14	1.50	70.0	16	11.00	9.00	4	12.50
E105M14X1.5N09	14	1.50	70.0	16	11.00	9.00	4	12.50
E105M15X1.0N03	15	1.00	70.0	16	12.00	9.00	4	14.00
E105M15X1.0N09	15	1.00	70.0	16	12.00	9.00	4	14.00
E105M15X1.5N03	15	1.50	70.0	16	12.00	9.00	4	13.50
E105M15X1.5N09	15	1.50	70.0	16	12.00	9.00	4	13.50
E105M16X1.0N03	16	1.00	70.0	16	12.00	9.00	4	15.00
E105M16X1.0N09	16	1.00	70.0	16	12.00	9.00	4	15.00
E105M16X1.5N03	16	1.50	70.0	16	12.00	9.00	4	14.50
E105M16X1.5N09	16	1.50	70.0	16	12.00	9.00	4	14.50
E105M18X1.0N03	18	1.00	80.0	18	14.00	11.00	4	17.00
E105M18X1.0N09	18	1.00	80.0	18	14.00	11.00	4	17.00
E105M18X1.5N03	18	1.50	80.0	18	14.00	11.00	4	16.50
E105M18X1.5N09	18	1.50	80.0	18	14.00	11.00	4	16.50
E105M20X1.0N03	20	1.00	80.0	18	16.00	12.00	4	19.00
E105M20X1.0N09	20	1.00	80.0	18	16.00	12.00	4	19.00
E105M20X1.5N03	20	1.50	80.0	18	16.00	12.00	4	18.50
E105M20X1.5N09	20	1.50	80.0	18	16.00	12.00	4	18.50
E105M22X1.0N03	22	1.00	80.0	22	18.00	14.50	4	21.00
E105M22X1.0N09	22	1.00	80.0	22	18.00	14.50	4	21.00
E105M22X1.5N03	22	1.50	80.0	22	18.00	14.50	4	20.50
E105M22X1.5N09	22	1.50	80.0	22	18.00	14.50	4	20.50
E105M24X1.0N03	24	1.00	90.0	22	18.00	14.50	4	23.00
E105M24X1.0N09	24	1.00	90.0	22	18.00	14.50	4	23.00
E105M24X1.5N03	24	1.50	90.0	22	18.00	14.50	4	22.50
E105M24X1.5N09	24	1.50	90.0	22	18.00	14.50	4	22.50
E105M24X2.0N03	24	2.00	90.0	22	18.00	14.50	4	22.00
E105M24X2.0N09	24	2.00	90.0	22	18.00	14.50	4	22.00
E105M25X1.5N03	25	1.50	90.0	22	18.00	14.50	4	23.50
E105M25X1.5N09	25	1.50	90.0	22	18.00	14.50	4	23.50
E105M25X2.0N03	25	2.00	90.0	22	18.00	14.50	4	23.00
E105M25X2.0N09	25	2.00	90.0	22	18.00	14.50	4	23.00
E105M27X1.5N03	27	1.50	90.0	22	20.00	16.00	4	25.50
E105M27X1.5N09	27	1.50	90.0	22	20.00	16.00	4	25.50
E105M27X2.0N03	27	2.00	90.0	22	20.00	16.00	4	25.00
E105M27X2.0N09	27	2.00	90.0	22	20.00	16.00	4	25.00
E105M28X1.5N03	28	1.50	90.0	22	20.00	16.00	4	26.50
E105M28X1.5N09	28	1.50	90.0	22	20.00	16.00	4	26.50
E105M28X2.0N03	28	2.00	90.0	22	20.00	16.00	4	26.00
E105M28X2.0N09	28	2.00	90.0	22	20.00	16.00	4	26.00
E105M30X1.5N03	30	1.50	90.0	22	22.00	18.00	4	28.50
E105M30X1.5N09	30	1.50	90.0	22	22.00	18.00	4	28.50
E105M30X2.0N03	30	2.00	90.0	22	22.00	18.00	4	28.00
E105M30X2.0N09	30	2.00	90.0	22	22.00	18.00	4	28.00
E105M32X1.5N03	32	1.50	90.0	22	22.00	18.00	4	30.50
E105M32X1.5N09	32	1.50	90.0	22	22.00	18.00	4	30.50
E105M32X2.0N03	32	2.00	90.0	22	22.00	18.00	4	30.00

Product	TDZ	TP	OAL	THL	DCON MS	WSC	NOF	PHD
		[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
E105M32X2.0N09	32	2.00	90.0	22	22.00	18.00	4	30.00
E105M36X1.5N03	36	1.50	100.0	25	28.00	22.00	4	34.50
E105M36X1.5N09	36	1.50	100.0	25	28.00	22.00	4	34.50
E105M36X2.0N03	36	2.00	125.0	40	28.00	22.00	4	34.00
E105M36X2.0N09	36	2.00	125.0	40	28.00	22.00	4	34.00
E105M36X3.0N03	36	3.00	125.0	40	28.00	22.00	4	33.00
E105M36X3.0N09	36	3.00	125.0	40	28.00	22.00	4	33.00
E105M40X1.5N03	40	1.50	110.0	25	32.00	24.00	4	38.50
E105M40X1.5N09	40	1.50	110.0	25	32.00	24.00	4	38.50
E105M40X2.0N03	40	2.00	125.0	40	32.00	24.00	4	38.00
E105M40X2.0N09	40	2.00	125.0	40	32.00	24.00	4	38.00
E105M40X3.0N03	40	3.00	125.0	40	32.00	24.00	4	37.00
E105M40X3.0N09	40	3.00	125.0	40	32.00	24.00	4	37.00
E105M42X1.5N03	42	1.50	110.0	25	32.00	24.00	4	40.50
E105M42X1.5N09	42	1.50	110.0	25	32.00	24.00	4	40.50
E105M42X2.0N03	42	2.00	125.0	40	32.00	24.00	4	40.00
E105M42X2.0N09	42	2.00	125.0	40	32.00	24.00	4	40.00
E105M42X3.0N03	42	3.00	125.0	40	32.00	24.00	4	39.00
E105M42X3.0N09	42	3.00	125.0	40	32.00	24.00	4	39.00
E105M45X1.5N03	45	1.50	110.0	25	36.00	29.00	6	43.50
E105M45X1.5N09	45	1.50	110.0	25	36.00	29.00	6	43.50
E105M45X2.0N03	45	2.00	125.0	40	36.00	29.00	6	43.00
E105M45X2.0N09	45	2.00	125.0	40	36.00	29.00	6	43.00
E105M45X3.0N03	45	3.00	125.0	40	36.00	29.00	6	42.00
E105M45X3.0N09	45	3.00	125.0	40	36.00	29.00	6	42.00
E105M48X1.5N03	48	1.50	140.0	40	36.00	29.00	6	46.50
E105M48X1.5N09	48	1.50	140.0	40	36.00	29.00	6	46.50
E105M48X2.0N03	48	2.00	140.0	40	36.00	29.00	6	46.00
E105M48X2.0N09	48	2.00	140.0	40	36.00	29.00	6	46.00
E105M48X3.0N03	48	3.00	140.0	40	36.00	29.00	6	45.00
E105M48X3.0N09	48	3.00	140.0	40	36.00	29.00	6	45.00
E105M50X1.5N03	50	1.50	140.0	40	36.00	29.00	6	48.50
E105M50X1.5N09	50	1.50	140.0	40	36.00	29.00	6	48.50
E105M50X2.0N03	50	2.00	140.0	40	36.00	29.00	6	48.00
E105M50X2.0N09	50	2.00	140.0	40	36.00	29.00	6	48.00
E105M50X3.0N03	50	3.00	140.0	40	36.00	29.00	6	47.00
E105M50X3.0N09	50	3.00	140.0	40	36.00	29.00	6	47.00

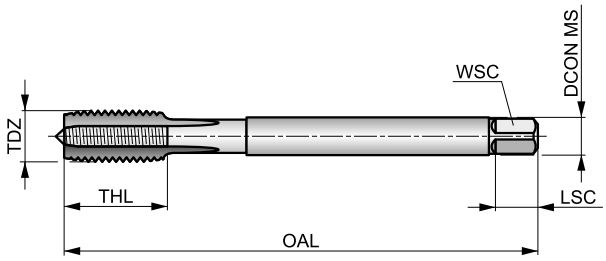
E268

DORMER

HSS-E-PM Straight Flute Machine Tap, Metric-Fine, DIN Standard

General purpose straight flute machine tap for through and blind holes. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges. The reduced shank increases the reach of the tap.

MF	DIN 374	6H
	1.5×D	HSS-E PM
C 2-3		R
Bright		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
■11	■12	■12	■9	■8	◪7	■7	◪6	◪4	◪13	◪10	◪8	◪14	◪11

K3.1	K3.2	K4.1	K4.2	K5.1	K5.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N4.2
◪13	◪10	◪12	◪9	◪12	◪10	◪12	◪15	◪14	◪11	◪21	■14	◪8

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
E268M4X.5	4	0.50	63.0	10	2.80	2.10	5	3	3.50
E268M5X.5	5	0.50	70.0	13	3.50	2.70	6	3	4.50
E268M6X.75	6	0.75	80.0	15	4.50	3.40	6	3	5.30
E268M7X.75	7	0.75	80.0	15	5.50	4.30	7	3	6.30
E268M8X.75	8	0.75	80.0	15	6.00	4.90	8	3	7.30
E268M8X1.0	8	1.00	90.0	18	6.00	4.90	8	3	7.00
E268M9X1.0	9	1.00	90.0	18	6.00	4.90	8	3	8.00
E268M10X.75	10	0.75	90.0	20	7.00	5.50	8	3	9.30
E268M10X1.0	10	1.00	90.0	20	7.00	5.50	8	3	9.00
E268M10X1.25	10	1.25	100.0	20	7.00	5.50	8	3	8.80
E268M11X1.0	11	1.00	90.0	20	8.00	6.20	9	3	10.00
E268M12X1.0	12	1.00	100.0	21	9.00	7.00	10	4	11.00
E268M12X1.25	12	1.25	100.0	21	9.00	7.00	10	4	10.80
E268M12X1.5	12	1.50	100.0	21	9.00	7.00	10	4	10.50
E268M14X1.0	14	1.00	100.0	21	11.00	9.00	12	4	13.00
E268M14X1.25	14	1.25	100.0	21	11.00	9.00	12	4	12.80
E268M14X1.5	14	1.50	100.0	21	11.00	9.00	12	4	12.50
E268M15X1.5	15	1.50	100.0	21	12.00	9.00	12	4	13.50
E268M16X1.0	16	1.00	100.0	21	12.00	9.00	12	4	15.00
E268M16X1.5	16	1.50	100.0	21	12.00	9.00	12	4	14.50
E268M18X1.0	18	1.00	110.0	24	14.00	11.00	14	4	17.00
E268M18X1.5	18	1.50	110.0	24	14.00	11.00	14	4	16.50
E268M20X1.0	20	1.00	125.0	24	16.00	12.00	15	4	19.00
E268M20X1.5	20	1.50	125.0	24	16.00	12.00	15	4	18.50
E268M22X1.0	22	1.00	125.0	25	18.00	14.50	17	4	21.00
E268M22X1.5	22	1.50	125.0	25	18.00	14.50	17	4	20.50
E268M24X1.0	24	1.00	140.0	28	18.00	14.50	17	4	23.00
E268M24X1.5	24	1.50	140.0	28	18.00	14.50	17	4	22.50
E268M24X2.0	24	2.00	140.0	28	18.00	14.50	17	4	22.00
E268M25X1.5	25	1.50	140.0	28	18.00	14.50	17	4	23.50

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
E268M25X2.0	25	2.00	140.0	28	18.00	14.50	17	4	23.00
E268M26X1.5	26	1.50	140.0	28	18.00	14.50	17	4	24.50
E268M26X2.0	26	2.00	140.0	28	18.00	14.50	17	4	24.00
E268M27X1.5	27	1.50	140.0	28	20.00	16.00	19	4	25.50
E268M27X2.0	27	2.00	140.0	28	20.00	16.00	19	4	25.00
E268M28X1.5	28	1.50	140.0	28	20.00	16.00	19	4	26.50
E268M28X2.0	28	2.00	140.0	28	20.00	16.00	19	4	26.00
E268M30X1.5	30	1.50	150.0	28	22.00	18.00	21	4	28.50
E268M30X2.0	30	2.00	150.0	28	22.00	18.00	21	4	28.00
E268M32X1.5	32	1.50	150.0	28	22.00	18.00	21	4	30.50
E268M32X2.0	32	2.00	150.0	28	22.00	18.00	21	4	30.00
E268M33X1.5	33	1.50	160.0	30	25.00	20.00	23	4	31.50
E268M34X1.5	34	1.50	170.0	30	28.00	22.00	25	4	32.50
E268M35X1.5	35	1.50	170.0	30	28.00	22.00	25	4	33.50
E268M36X1.5	36	1.50	170.0	30	28.00	22.00	25	4	34.50
E268M36X2.0	36	2.00	170.0	30	28.00	22.00	25	4	34.00
E268M36X3.0	36	3.00	200.0	55	28.00	22.00	25	4	33.00
E268M40X1.5 [1)]	40	1.50	170.0	30	32.00	24.00	27	4	38.50
E268M40X2.0 [1)]	40	2.00	170.0	30	32.00	24.00	27	4	38.00
E268M40X3.0 [1)]	40	3.00	200.0	60	32.00	24.00	27	4	37.00
E268M42X1.5 [1)]	42	1.50	170.0	30	32.00	24.00	27	4	40.50
E268M42X2.0 [1)]	42	2.00	170.0	30	32.00	24.00	27	4	40.00
E268M42X3.0 [1)]	42	3.00	200.0	60	32.00	24.00	27	4	39.00
E268M45X1.5 [1)]	45	1.50	180.0	32	36.00	29.00	32	6	43.50
E268M45X2.0 [1)]	45	2.00	180.0	32	36.00	29.00	32	6	43.00
E268M45X3.0 [1)]	45	3.00	200.0	42	36.00	29.00	32	6	42.00
E268M48X1.5 [1)]	48	1.50	190.0	32	36.00	29.00	32	6	46.50
E268M48X2.0 [1)]	48	2.00	190.0	32	36.00	29.00	32	6	46.00
E268M48X3.0 [1)]	48	3.00	225.0	50	36.00	29.00	32	6	45.00
E268M50X1.5 [1)]	50	1.50	190.0	32	36.00	29.00	32	6	48.50
E268M50X2.0 [1)]	50	2.00	190.0	30	36.00	29.00	32	6	48.00
E268M50X3.0 [1)]	50	3.00	225.0	50	36.00	29.00	32	6	47.00

[1)] HSS-E.

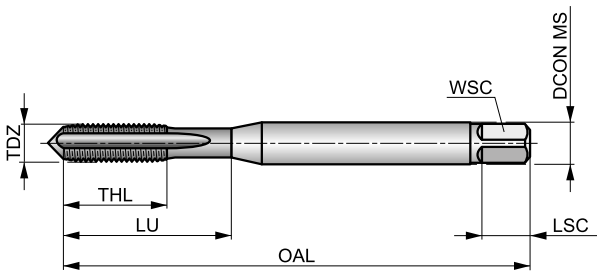
E242

DORMER

HSS-E-PM Straight Flute Machine Tap, Metric Fine, DIN Left-Handed

General purpose straight flute machine tap for through and blind holes. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges. The reinforced shank increases strength against torsional twist.

MF	DIN 371	6H
1.5×D		HSS-E PM
C 2-3		L
Bright		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
■11	■12	■12	■9	■8	◪7	■7	◪6	◪4	◪13	◪10	◪8	◪14	◪11

K3.1	K3.2	K4.1	K4.2	K5.1	K5.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N4.2
◪13	◪10	◪12	◪9	◪12	◪10	◪12	◪15	◪14	◪11	◪21	■14	◪8

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E242M8X1.0	8	1.00	90.0	18	8.00	6.20	9	3	7.00	35.00
E242M10X1.0	10	1.00	100.0	20	10.00	8.00	11	3	9.00	39.00

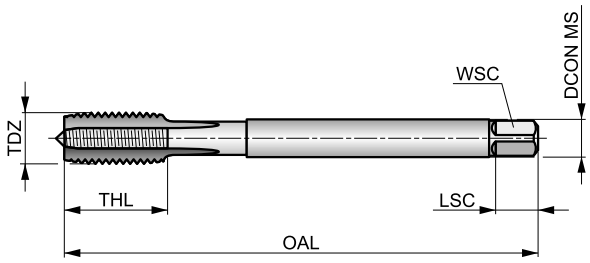
E290

DORMER

HSS-E-PM Straight Flute Machine Tap Metric Fine, DIN Left-Handed

General purpose straight flute machine tap for through and blind holes. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges. The reduced shank increases the reach of the tap.

MF	DIN 374	6H
	1.5×D	HSS-E PM
C 2-3		L
Bright		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
■11	■12	■12	■9	■8	◪7	■7	◪6	◪4	◪13	◪10	◪8	◪14	◪11

K3.1	K3.2	K4.1	K4.2	K5.1	K5.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N4.2
◪13	◪10	◪12	◪9	◪12	◪10	◪12	◪15	◪14	◪11	◪21	■14	◪8

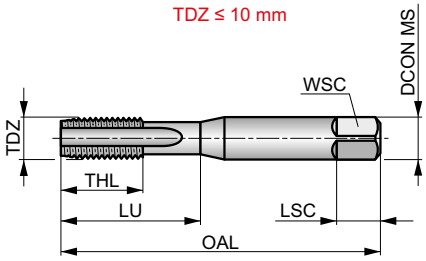
Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
E290M12X1.0	12	1.00	100.0	21	9.00	7.00	10	4	11.00
E290M12X1.5	12	1.50	100.0	21	9.00	7.00	10	4	10.50
E290M14X1.0	14	1.00	100.0	21	11.00	9.00	12	4	13.00
E290M14X1.5	14	1.50	100.0	21	11.00	9.00	12	4	12.50
E290M16X1.0	16	1.00	100.0	21	12.00	9.00	12	4	15.00
E290M16X1.5	16	1.50	100.0	21	12.00	9.00	12	4	14.50
E290M18X1.5	18	1.50	110.0	24	14.00	11.00	14	4	16.50
E290M20X1.5	20	1.50	125.0	24	16.00	12.00	15	4	18.50
E290M22X1.5	22	1.50	125.0	25	18.00	14.50	17	4	20.50
E290M24X1.5	24	1.50	140.0	28	18.00	14.50	17	4	22.50

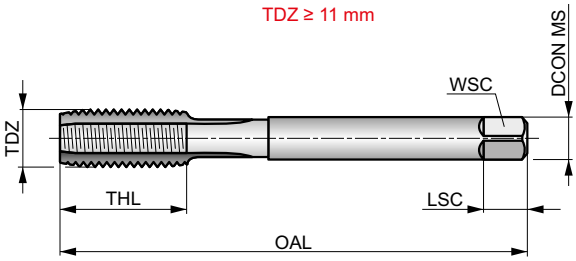
E513

DORMER

HSS Straight Flute Hand Tap, Metric Fine, ISO Standard

A versatile tool, suitable for hand and machine tapping, with a straight flute design for both through and blind holes. Available with taper lead N01 for short through holes, plug lead N02 for deeper through holes or bottoming lead N03 for blind holes. Also, as a set N07 with a plug lead and bottoming lead tap.





MF	ISO 529	6H
	1.5×D	HSS
	R	Bright

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
■7	■7	■8	■6	■5	◪4	■4	◪4	◪3	◪12	◪9	◪7	◪12	◪10

K3.1	K3.2	K4.1	K4.2	K5.1	K5.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.2
◪11	◪8	◪10	◪8	◪11	◪9	◪8	◪11	◪10	◪7	■17	■10	◪5	◪5

N4.3
◪3

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E513M3X.35N01	3	0.35	48.0	12.5	3.15	2.50	5	3	2.65	12.50
E513M3X.35N02	3	0.35	48.0	12.5	3.15	2.50	5	3	2.65	12.50
E513M3X.35N03	3	0.35	48.0	12.5	3.15	2.50	5	3	2.65	12.50
E513M3.5X.35N03	3.5	0.35	48.0	12.5	3.15	2.50	5	3	3.20	12.50
E513M4X.5N01	4	0.50	53.0	14	4.00	3.15	6	3	3.50	14.00
E513M4X.5N02	4	0.50	53.0	14	4.00	3.15	6	3	3.50	14.00
E513M4X.5N03	4	0.50	53.0	14	4.00	3.15	6	3	3.50	14.00
E513M4X.5N07	4	0.50	53.0	14	4.00	3.15	6	3	3.50	14.00
E513M5X.5N01	5	0.50	58.0	11	5.00	4.00	7	3	4.50	22.00
E513M5X.5N02	5	0.50	58.0	11	5.00	4.00	7	3	4.50	22.00
E513M5X.5N03	5	0.50	58.0	11	5.00	4.00	7	3	4.50	22.00
E513M5X.5N07	5	0.50	58.0	11	5.00	4.00	7	3	4.50	22.00
E513M5X.75N01	5	0.75	58.0	11	5.00	4.00	7	3	4.30	22.00
E513M5X.75N02	5	0.75	58.0	11	5.00	4.00	7	3	4.30	22.00
E513M5X.75N03	5	0.75	58.0	11	5.00	4.00	7	3	4.30	22.00
E513M6X.5N01	6	0.50	66.0	13	6.30	5.00	8	3	5.50	26.00
E513M6X.5N02	6	0.50	66.0	13	6.30	5.00	8	3	5.50	26.00
E513M6X.5N03	6	0.50	66.0	13	6.30	5.00	8	3	5.50	26.00
E513M6X.75N01	6	0.75	66.0	13	6.30	5.00	8	3	5.30	26.00
E513M6X.75N02	6	0.75	66.0	13	6.30	5.00	8	3	5.30	26.00
E513M6X.75N03	6	0.75	66.0	13	6.30	5.00	8	3	5.30	26.00
E513M6X.75N07	6	0.75	66.0	13	6.30	5.00	8	3	5.30	26.00
E513M7X.75N01	7	0.75	66.0	13	7.10	5.60	8	3	6.30	26.00
E513M7X.75N02	7	0.75	66.0	13	7.10	5.60	8	3	6.30	26.00
E513M7X.75N03	7	0.75	66.0	13	7.10	5.60	8	3	6.30	26.00
E513M8X.5N01	8	0.50	72.0	16	8.00	6.30	9	3	7.50	29.00
E513M8X.5N02	8	0.50	72.0	16	8.00	6.30	9	3	7.50	29.00
E513M8X.5N03	8	0.50	72.0	16	8.00	6.30	9	3	7.50	29.00

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E513M8X.75N01	8	0.75	72.0	16	8.00	6.30	9	3	7.30	29.00
E513M8X.75N02	8	0.75	72.0	16	8.00	6.30	9	3	7.30	29.00
E513M8X.75N03	8	0.75	72.0	16	8.00	6.30	9	3	7.30	29.00
E513M8X.75N07	8	0.75	72.0	16	8.00	6.30	9	3	7.30	29.00
E513M8X1.0N01	8	1.00	72.0	16	8.00	6.30	9	3	7.00	29.00
E513M8X1.0N02	8	1.00	72.0	16	8.00	6.30	9	3	7.00	29.00
E513M8X1.0N03	8	1.00	72.0	16	8.00	6.30	9	3	7.00	29.00
E513M8X1.0N07	8	1.00	72.0	16	8.00	6.30	9	3	7.00	29.00
E513M9X.75N03	9	0.75	72.0	16	9.00	7.10	10	3	8.30	29.00
E513M9X1.0N01	9	1.00	72.0	16	9.00	7.10	10	3	8.00	29.00
E513M9X1.0N02	9	1.00	72.0	16	9.00	7.10	10	3	8.00	29.00
E513M9X1.0N03	9	1.00	72.0	16	9.00	7.10	10	3	8.00	29.00
E513M10X.5N03	10	0.50	80.0	18	10.00	8.00	11	3	9.50	34.00
E513M10X.75N01	10	0.75	80.0	18	10.00	8.00	11	3	9.30	34.00
E513M10X.75N02	10	0.75	80.0	18	10.00	8.00	11	3	9.30	34.00
E513M10X.75N03	10	0.75	80.0	18	10.00	8.00	11	3	9.30	34.00
E513M10X1.0N01	10	1.00	80.0	18	10.00	8.00	11	3	9.00	34.00
E513M10X1.0N02	10	1.00	80.0	18	10.00	8.00	11	3	9.00	34.00
E513M10X1.0N03	10	1.00	80.0	18	10.00	8.00	11	3	9.00	34.00
E513M10X1.0N06	10	1.00	80.0	18	10.00	8.00	11	3	9.00	34.00
E513M10X1.0N07	10	1.00	80.0	18	10.00	8.00	11	3	9.00	34.00
E513M10X1.25N01	10	1.25	80.0	18	10.00	8.00	11	3	8.80	34.00
E513M10X1.25N02	10	1.25	80.0	18	10.00	8.00	11	3	8.80	34.00
E513M10X1.25N03	10	1.25	80.0	18	10.00	8.00	11	3	8.80	34.00
E513M10X1.25N06	10	1.25	80.0	18	10.00	8.00	11	3	8.80	34.00
E513M10X1.25N07	10	1.25	80.0	18	10.00	8.00	11	3	8.80	34.00
E513M11X.75N01	11	0.75	85.0	19	8.00	6.30	9	3	10.30	–
E513M11X.75N02	11	0.75	85.0	19	8.00	6.30	9	3	10.30	–
E513M11X.75N03	11	0.75	85.0	19	8.00	6.30	9	3	10.30	–
E513M11X1.0N01	11	1.00	85.0	19	8.00	6.30	9	3	10.00	–
E513M11X1.0N02	11	1.00	85.0	19	8.00	6.30	9	3	10.00	–
E513M11X1.0N03	11	1.00	85.0	19	8.00	6.30	9	3	10.00	–
E513M11X1.25N03	11	1.25	85.0	19	8.00	6.30	9	3	9.80	–
E513M12X.75N03	12	0.75	89.0	22	9.00	7.10	10	3	11.30	–
E513M12X1.0N01	12	1.00	89.0	22	9.00	7.10	10	3	11.00	–
E513M12X1.0N02	12	1.00	89.0	22	9.00	7.10	10	3	11.00	–
E513M12X1.0N03	12	1.00	89.0	22	9.00	7.10	10	3	11.00	–
E513M12X1.0N07	12	1.00	89.0	22	9.00	7.10	10	3	11.00	–
E513M12X1.25N01	12	1.25	89.0	22	9.00	7.10	10	3	10.80	–
E513M12X1.25N02	12	1.25	89.0	22	9.00	7.10	10	3	10.80	–
E513M12X1.25N03	12	1.25	89.0	22	9.00	7.10	10	3	10.80	–
E513M12X1.25N06	12	1.25	89.0	22	9.00	7.10	10	3	10.80	–
E513M12X1.25N07	12	1.25	89.0	22	9.00	7.10	10	3	10.80	–
E513M12X1.5N01	12	1.50	89.0	22	9.00	7.10	10	3	10.50	–
E513M12X1.5N02	12	1.50	89.0	22	9.00	7.10	10	3	10.50	–
E513M12X1.5N03	12	1.50	89.0	22	9.00	7.10	10	3	10.50	–
E513M12X1.5N06	12	1.50	89.0	22	9.00	7.10	10	3	10.50	–
E513M12X1.5N07	12	1.50	89.0	22	9.00	7.10	10	3	10.50	–
E513M13X1.5N03	13	1.50	89.0	22	9.00	7.10	10	3	11.50	–
E513M14X1.0N01	14	1.00	95.0	24	11.20	9.00	12	4	13.00	–
E513M14X1.0N02	14	1.00	95.0	24	11.20	9.00	12	4	13.00	–
E513M14X1.0N03	14	1.00	95.0	24	11.20	9.00	12	4	13.00	–
E513M14X1.0N07	14	1.00	95.0	24	11.20	9.00	12	4	13.00	–
E513M14X1.25N01	14	1.25	95.0	24	11.20	9.00	12	4	12.80	–
E513M14X1.25N02	14	1.25	95.0	24	11.20	9.00	12	4	12.80	–
E513M14X1.25N03	14	1.25	95.0	24	11.20	9.00	12	4	12.80	–
E513M14X1.25N06	14	1.25	95.0	24	11.20	9.00	12	4	12.80	–
E513M14X1.5N01	14	1.50	95.0	24	11.20	9.00	12	4	12.50	–
E513M14X1.5N02	14	1.50	95.0	24	11.20	9.00	12	4	12.50	–
E513M14X1.5N03	14	1.50	95.0	24	11.20	9.00	12	4	12.50	–
E513M14X1.5N06	14	1.50	95.0	24	11.20	9.00	12	4	12.50	–
E513M14X1.5N07	14	1.50	95.0	24	11.20	9.00	12	4	12.50	–

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E513M15X1.5N02	15	1.50	95.0	24	11.20	9.00	12	4	13.50	–
E513M15X1.5N03	15	1.50	95.0	24	11.20	9.00	12	4	13.50	–
E513M16X1.0N01	16	1.00	102.0	24	12.50	10.00	13	4	15.00	–
E513M16X1.0N02	16	1.00	102.0	24	12.50	10.00	13	4	15.00	–
E513M16X1.0N03	16	1.00	102.0	24	12.50	10.00	13	4	15.00	–
E513M16X1.0N07	16	1.00	102.0	24	12.50	10.00	13	4	15.00	–
E513M16X1.25N03	16	1.25	102.0	24	12.50	10.00	13	4	14.80	–
E513M16X1.5N01	16	1.50	102.0	24	12.50	10.00	13	4	14.50	–
E513M16X1.5N02	16	1.50	102.0	24	12.50	10.00	13	4	14.50	–
E513M16X1.5N03	16	1.50	102.0	24	12.50	10.00	13	4	14.50	–
E513M16X1.5N06	16	1.50	102.0	24	12.50	10.00	13	4	14.50	–
E513M16X1.5N07	16	1.50	102.0	24	12.50	10.00	13	4	14.50	–
E513M18X1.0N01	18	1.00	112.0	29	14.00	11.20	14	4	17.00	–
E513M18X1.0N02	18	1.00	112.0	29	14.00	11.20	14	4	17.00	–
E513M18X1.0N03	18	1.00	112.0	29	14.00	11.20	14	4	17.00	–
E513M18X1.0N07	18	1.00	112.0	29	14.00	11.20	14	4	17.00	–
E513M18X1.5N01	18	1.50	112.0	29	14.00	11.20	14	4	16.50	–
E513M18X1.5N02	18	1.50	112.0	29	14.00	11.20	14	4	16.50	–
E513M18X1.5N03	18	1.50	112.0	29	14.00	11.20	14	4	16.50	–
E513M18X1.5N06	18	1.50	112.0	29	14.00	11.20	14	4	16.50	–
E513M18X1.5N07	18	1.50	112.0	29	14.00	11.20	14	4	16.50	–
E513M18X2.0N01	18	2.00	112.0	29	14.00	11.20	14	4	16.00	–
E513M18X2.0N02	18	2.00	112.0	29	14.00	11.20	14	4	16.00	–
E513M18X2.0N03	18	2.00	112.0	29	14.00	11.20	14	4	16.00	–
E513M18X2.0N07	18	2.00	112.0	29	14.00	11.20	14	4	16.00	–
E513M20X1.0N01	20	1.00	112.0	29	14.00	11.20	14	4	19.00	–
E513M20X1.0N02	20	1.00	112.0	29	14.00	11.20	14	4	19.00	–
E513M20X1.0N03	20	1.00	112.0	29	14.00	11.20	14	4	19.00	–
E513M20X1.0N07	20	1.00	112.0	29	14.00	11.20	14	4	19.00	–
E513M20X1.5N01	20	1.50	112.0	29	14.00	11.20	14	4	18.50	–
E513M20X1.5N02	20	1.50	112.0	29	14.00	11.20	14	4	18.50	–
E513M20X1.5N03	20	1.50	112.0	29	14.00	11.20	14	4	18.50	–
E513M20X1.5N06	20	1.50	112.0	29	14.00	11.20	14	4	18.50	–
E513M20X1.5N07	20	1.50	112.0	29	14.00	11.20	14	4	18.50	–
E513M20X2.0N01	20	2.00	112.0	29	14.00	11.20	14	4	18.00	–
E513M20X2.0N02	20	2.00	112.0	29	14.00	11.20	14	4	18.00	–
E513M20X2.0N03	20	2.00	112.0	29	14.00	11.20	14	4	18.00	–
E513M20X2.0N07	20	2.00	112.0	29	14.00	11.20	14	4	18.00	–
E513M22X1.0N02	22	1.00	118.0	29	16.00	12.50	16	4	21.00	–
E513M22X1.0N03	22	1.00	118.0	29	16.00	12.50	16	4	21.00	–
E513M22X1.0N07	22	1.00	118.0	29	16.00	12.50	16	4	21.00	–
E513M22X1.5N01	22	1.50	118.0	29	16.00	12.50	16	4	20.50	–
E513M22X1.5N02	22	1.50	118.0	29	16.00	12.50	16	4	20.50	–
E513M22X1.5N03	22	1.50	118.0	29	16.00	12.50	16	4	20.50	–
E513M22X1.5N07	22	1.50	118.0	29	16.00	12.50	16	4	20.50	–
E513M22X2.0N01	22	2.00	118.0	29	16.00	12.50	16	4	20.00	–
E513M22X2.0N02	22	2.00	118.0	29	16.00	12.50	16	4	20.00	–
E513M22X2.0N03	22	2.00	118.0	29	16.00	12.50	16	4	20.00	–
E513M22X2.0N07	22	2.00	118.0	29	16.00	12.50	16	4	20.00	–
E513M24X1.0N02	24	1.00	130.0	35	18.00	14.00	18	4	23.00	–
E513M24X1.0N03	24	1.00	130.0	35	18.00	14.00	18	4	23.00	–
E513M24X1.5N01	24	1.50	130.0	35	18.00	14.00	18	4	22.50	–
E513M24X1.5N02	24	1.50	130.0	35	18.00	14.00	18	4	22.50	–
E513M24X1.5N03	24	1.50	130.0	35	18.00	14.00	18	4	22.50	–
E513M24X1.5N07	24	1.50	130.0	35	18.00	14.00	18	4	22.50	–
E513M24X2.0N01	24	2.00	130.0	35	18.00	14.00	18	4	22.00	–
E513M24X2.0N02	24	2.00	130.0	35	18.00	14.00	18	4	22.00	–
E513M24X2.0N03	24	2.00	130.0	35	18.00	14.00	18	4	22.00	–
E513M24X2.0N07	24	2.00	130.0	35	18.00	14.00	18	4	22.00	–
E513M25X1.5N01	25	1.50	130.0	35	18.00	14.00	18	4	23.50	–
E513M25X1.5N02	25	1.50	130.0	35	18.00	14.00	18	4	23.50	–
E513M25X1.5N03	25	1.50	130.0	35	18.00	14.00	18	4	23.50	–

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E513M25X1.5N06	25	1.50	130.0	35	18.00	14.00	18	4	23.50	–
E513M25X1.5N07	25	1.50	130.0	35	18.00	14.00	18	4	23.50	–
E513M26X1.5N02	26	1.50	130.0	35	18.00	14.00	18	4	24.50	–
E513M26X1.5N03	26	1.50	130.0	35	18.00	14.00	18	4	24.50	–
E513M27X1.5N02	27	1.50	135.0	35	20.00	16.00	20	4	25.50	–
E513M27X1.5N03	27	1.50	135.0	35	20.00	16.00	20	4	25.50	–
E513M27X2.0N03	27	2.00	135.0	35	20.00	16.00	20	4	25.00	–
E513M28X1.5N02	28	1.50	138.0	35	20.00	16.00	20	4	26.50	–
E513M28X1.5N03	28	1.50	138.0	35	20.00	16.00	20	4	26.50	–
E513M30X1.5N02	30	1.50	138.0	41	20.00	16.00	20	4	28.50	–
E513M30X1.5N03	30	1.50	138.0	41	20.00	16.00	20	4	28.50	–
E513M30X2.0N02	30	2.00	138.0	41	20.00	16.00	20	4	28.00	–
E513M30X2.0N03	30	2.00	138.0	41	20.00	16.00	20	4	28.00	–
E513M32X1.5N01	32	1.50	151.0	41	22.40	18.00	22	4	30.50	–
E513M32X1.5N02	32	1.50	151.0	41	22.40	18.00	22	4	30.50	–
E513M32X1.5N03	32	1.50	151.0	41	22.40	18.00	22	4	30.50	–
E513M33X2.0N02	33	2.00	151.0	41	22.40	18.00	22	4	31.00	–
E513M33X2.0N03	33	2.00	151.0	41	22.40	18.00	22	4	31.00	–
E513M35X1.5N02	35	1.50	162.0	47	25.00	20.00	24	4	33.50	–
E513M35X1.5N03	35	1.50	162.0	47	25.00	20.00	24	4	33.50	–
E513M36X1.5N03	36	1.50	162.0	47	25.00	20.00	24	4	34.50	–
E513M36X2.0N02	36	2.00	162.0	47	25.00	20.00	24	4	34.00	–
E513M36X2.0N03	36	2.00	162.0	47	25.00	20.00	24	4	34.00	–
E513M36X3.0N02	36	3.00	162.0	47	25.00	20.00	24	4	33.00	–
E513M36X3.0N03	36	3.00	162.0	47	25.00	20.00	24	4	33.00	–
E513M39X3.0N02	39	3.00	170.0	47	28.00	22.40	26	4	36.00	–
E513M39X3.0N03	39	3.00	170.0	47	28.00	22.40	26	4	36.00	–
E513M40X1.5N02	40	1.50	170.0	53	28.00	22.40	26	6	38.50	–
E513M40X1.5N03	40	1.50	170.0	53	28.00	22.40	26	6	38.50	–
E513M42X1.5N02	42	1.50	170.0	53	28.00	22.40	26	6	40.50	–
E513M42X1.5N03	42	1.50	170.0	53	28.00	22.40	26	6	40.50	–
E513M42X3.0N03	42	3.00	170.0	53	28.00	22.40	26	6	39.00	–
E513M45X1.5N02	45	1.50	187.0	54	31.50	25.00	28	6	43.50	–
E513M45X1.5N03	45	1.50	187.0	54	31.50	25.00	28	6	43.50	–
E513M48X1.5N03	48	1.50	187.0	60	31.50	25.00	28	6	46.50	–
E513M48X2.0N03	48	2.00	187.0	60	31.50	25.00	28	6	46.00	–
E513M48X3.0N03	48	3.00	187.0	60	31.50	25.00	28	6	45.00	–
E513M50X1.5N02	50	1.50	187.0	60	31.50	25.00	28	6	48.50	–
E513M50X1.5N03	50	1.50	187.0	60	31.50	25.00	28	6	48.50	–

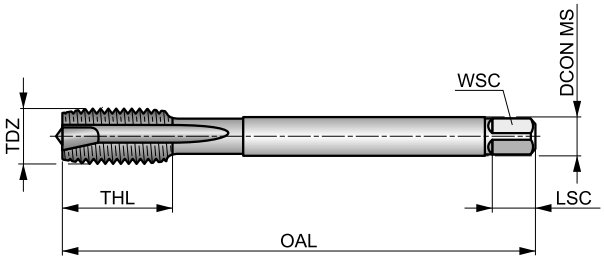
EP10

DORMER

HSS-E-PM Spiral Point Machine Tap, Metric Fine, DIN Standard

Machine tap with spiral point suited for through holes only. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges. The reduced shank increases the reach of the tap.

MF	DIN 374	6H
	2.5×D	HSS-E PM
B 3.5-5		R
Bright		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	N1.1	N1.2	N1.3	N2.1	N2.2
■22	■24	■25	■18	■16	◪14	■13	◪10	◪8	■14	■10	■7	■28	■25

N2.3	N3.1	N3.2	N3.3	N4.1
■18	■44	◪27	◪13	◪22

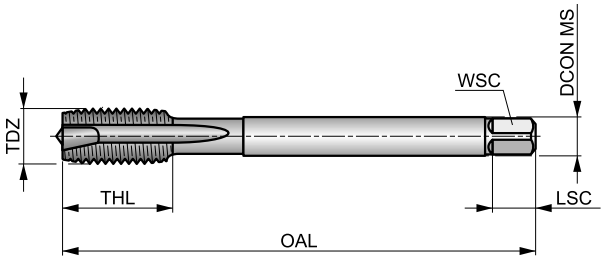
Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
EP10M4X.5	4	0.50	63.0	12	2.80	2.10	5	3	3.50
EP10M5X.5	5	0.50	70.0	13	3.50	2.70	6	3	4.50
EP10M6X.75	6	0.75	80.0	15	4.50	3.40	6	3	5.30
EP10M8X.75	8	0.75	80.0	15	6.00	4.90	8	3	7.30
EP10M8X1.0	8	1.00	90.0	18	6.00	4.90	8	3	7.00
EP10M10X.75	10	0.75	90.0	18	7.00	5.50	8	3	9.30
EP10M10X1.0	10	1.00	90.0	18	7.00	5.50	8	3	9.00
EP10M10X1.25	10	1.25	100.0	20	7.00	5.50	8	3	8.80
EP10M12X1.0	12	1.00	100.0	21	9.00	7.00	10	3	11.00
EP10M12X1.25	12	1.25	100.0	21	9.00	7.00	10	3	10.80
EP10M12X1.5	12	1.50	100.0	21	9.00	7.00	10	3	10.50
EP10M14X1.0	14	1.00	100.0	21	11.00	9.00	12	3	13.00
EP10M14X1.25	14	1.25	100.0	21	11.00	9.00	12	3	13.00
EP10M14X1.5	14	1.50	100.0	21	11.00	9.00	12	3	12.50
EP10M16X1.0	16	1.00	100.0	21	12.00	9.00	12	3	15.00
EP10M16X1.5	16	1.50	100.0	21	12.00	9.00	12	3	14.50
EP10M18X1.0	18	1.00	110.0	24	14.00	11.00	14	4	17.00
EP10M18X1.5	18	1.50	110.0	24	14.00	11.00	14	4	16.50
EP10M20X1.0	20	1.00	125.0	24	16.00	12.00	15	4	19.00
EP10M20X1.5	20	1.50	125.0	24	16.00	12.00	15	4	18.50
EP10M22X1.5	22	1.50	125.0	25	18.00	14.50	17	4	20.50
EP10M24X1.5	24	1.50	140.0	28	18.00	14.50	17	4	22.50
EP10M24X2.0	24	2.00	140.0	28	18.00	14.50	17	4	22.00
EP10M25X1.5	25	1.50	140.0	28	18.00	14.50	17	4	23.50
EP10M26X1.5	26	1.50	140.0	28	18.00	14.50	17	4	24.50
EP10M27X1.5	27	1.50	140.0	28	20.00	16.00	19	4	25.50
EP10M27X2.0	27	2.00	140.0	28	20.00	16.00	19	4	25.00
EP10M28X1.5	28	1.50	140.0	28	20.00	16.00	19	4	26.50
EP10M30X1.5	30	1.50	150.0	28	22.00	18.00	21	4	28.50
EP10M30X2.0	30	2.00	150.0	28	22.00	18.00	21	4	28.00

EP10TIN

DORMER

HSS-E-PM Spiral Point Machine Tap, Metric Fine, TiN Coating, DIN Standard

High performance machine tap with spiral point for through holes only. Suited for a broad range of workpiece materials. TiN coating allows higher cutting speeds, improves performance and extends tool life. The reduced shank increases the reach of the tap.



MF	DIN 374	6H
	2.5×D	HSS-E PM
B 3.5-5		
TiN		

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■34	■38	■40	■29	■24	■20	■19	■14	◪12	■10	◪9	■11	■9	■10
M2.2	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K3.1**	**K3.2**	**K4.1**	**K4.2**
■8	■8	■7	◪6	◪5	◪21	◪16	◪12	◪30	◪24	◪26	◪20	◪24	◪18
K5.1	**K5.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N4.1**					
◪28	◪20	■12	■37	■34	■24	■60	◪36	◪26					

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
EP10TINM8X1.0	8	1.00	90.0	18	6.00	4.90	8	3	7.00
EP10TINM10X1.0	10	1.00	90.0	18	7.00	5.50	8	3	9.00
EP10TINM10X1.25	10	1.25	100.0	20	7.00	5.50	8	3	8.80
EP10TINM12X1.0	12	1.00	100.0	21	9.00	7.00	10	3	11.00
EP10TINM12X1.25	12	1.25	100.0	21	9.00	7.00	10	3	10.80
EP10TINM12X1.5	12	1.50	100.0	21	9.00	7.00	10	3	10.50
EP10TINM14X1.5	14	1.50	100.0	21	11.00	9.00	12	3	12.50
EP10TINM16X1.5	16	1.50	100.0	21	12.00	9.00	12	3	14.50
EP10TINM18X1.5	18	1.50	110.0	24	14.00	11.00	14	4	16.50
EP10TINM20X1.5	20	1.50	125.0	24	16.00	12.00	15	4	18.50

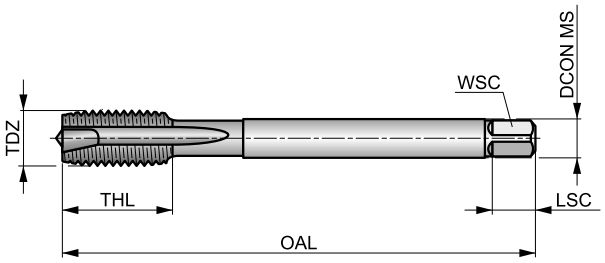
EP11

DORMER

HSS-E-PM Spiral Point Machine Tap, Metric Fine, DIN Standard

Machine tap with spiral point suited for through holes only. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding. The reduced shank increases the reach of the tap.

MF	DIN 374	6H
	2.5×D	HSS-E PM
B 3.5-5		R
ST		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P2.2	P2.3	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2	M3.3
◪22	◪16	■14	■10	◪9	■8	◪6	◪10	◪8	◪9	◪7	◪7	◪6	◪5

M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K3.1	K3.2	K4.1	K4.2	K5.1	K5.2
◪4	◪13	◪10	◪7	◪16	◪13	◪14	◪10	◪13	◪9	◪15	◪11

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
EP11M4X.5	4	0.50	63.0	12	2.80	2.10	5	3	3.50
EP11M5X.5	5	0.50	70.0	13	3.50	2.70	6	3	4.50
EP11M6X.75	6	0.75	80.0	15	4.50	3.40	6	3	5.30
EP11M8X.75	8	0.75	80.0	15	6.00	4.90	8	3	7.30
EP11M8X1.0	8	1.00	90.0	18	6.00	4.90	8	3	7.00
EP11M10X.75	10	0.75	90.0	18	7.00	5.50	8	3	9.30
EP11M10X1.0	10	1.00	90.0	18	7.00	5.50	8	3	9.00
EP11M10X1.25	10	1.25	100.0	20	7.00	5.50	8	3	8.80
EP11M12X1.0	12	1.00	100.0	21	9.00	7.00	10	3	11.00
EP11M12X1.25	12	1.25	100.0	21	9.00	7.00	10	3	10.80
EP11M12X1.5	12	1.50	100.0	21	9.00	7.00	10	3	10.50
EP11M14X1.0	14	1.00	100.0	21	11.00	9.00	12	3	13.00
EP11M14X1.25	14	1.25	100.0	21	11.00	9.00	12	3	13.00
EP11M14X1.5	14	1.50	100.0	21	11.00	9.00	12	3	12.50
EP11M16X1.0	16	1.00	100.0	21	12.00	9.00	12	3	15.00
EP11M16X1.5	16	1.50	100.0	21	12.00	9.00	12	3	14.50
EP11M18X1.0	18	1.00	110.0	24	14.00	11.00	14	4	17.00
EP11M18X1.5	18	1.50	110.0	24	14.00	11.00	14	4	16.50
EP11M20X1.0	20	1.00	125.0	24	16.00	12.00	15	4	19.00
EP11M20X1.5	20	1.50	125.0	24	16.00	12.00	15	4	18.50
EP11M22X1.5	22	1.50	125.0	25	18.00	14.50	17	4	20.50
EP11M24X1.5	24	1.50	140.0	28	18.00	14.50	17	4	22.50
EP11M24X2.0	24	2.00	140.0	28	18.00	14.50	17	4	22.00
EP11M25X1.5	25	1.50	140.0	28	18.00	14.50	17	4	23.50
EP11M26X1.5	26	1.50	140.0	28	18.00	14.50	17	4	24.50
EP11M27X1.5	27	1.50	140.0	28	20.00	16.00	19	4	25.50
EP11M27X2.0	27	2.00	140.0	28	20.00	16.00	19	4	25.00
EP11M28X1.5	28	1.50	140.0	28	20.00	16.00	19	4	26.50
EP11M30X1.5	30	1.50	150.0	28	22.00	18.00	21	4	28.50
EP11M30X2.0	30	2.00	150.0	28	22.00	18.00	21	4	28.00

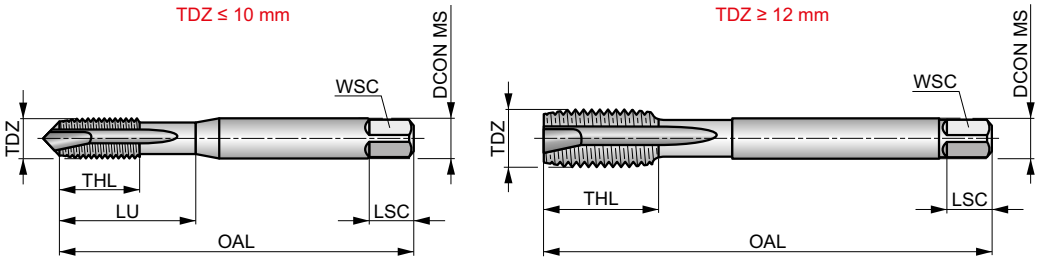
E011

DORMER

HSS-E-PM Spiral Point Machine Tap, Metric Fine, ISO Standard

Machine tap with spiral point suited for through holes only. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

MF	ISO 529	6H
2.5×D		HSS-E PM
B 3.5-5		R
ST		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P2.2	P2.3	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2	M3.3
◪22	◪16	■14	■10	◪9	■8	◪6	◪10	◪8	◪9	◪7	◪7	◪6	◪5

M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K3.1	K3.2	K4.1	K4.2	K5.1	K5.2
◪4	◪13	◪10	◪7	◪16	◪13	◪14	◪10	◪13	◪9	◪15	◪11

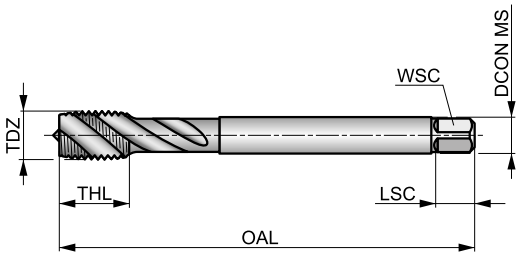
Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E011M4X.5	4	0.50	53.0	17	4.00	3.15	6	3	3.50	17.00
E011M5X.5	5	0.50	58.0	11	5.00	4.00	7	3	4.50	22.00
E011M6X.5	6	0.50	66.0	13	6.30	5.00	8	3	5.50	26.00
E011M6X.75	6	0.75	66.0	13	6.30	5.00	8	3	5.30	26.00
E011M8X.75	8	0.75	72.0	16	8.00	6.30	9	3	7.30	29.00
E011M8X1.0	8	1.00	72.0	16	8.00	6.30	9	3	7.00	29.00
E011M10X1.0	10	1.00	80.0	18	10.00	8.00	11	3	9.00	34.00
E011M10X1.25	10	1.25	80.0	18	10.00	8.00	11	3	8.80	34.00
E011M12X1.0	12	1.00	89.0	22	9.00	7.10	10	3	11.00	–
E011M12X1.25	12	1.25	89.0	22	9.00	7.10	10	3	10.80	–
E011M12X1.5	12	1.50	89.0	22	9.00	7.10	10	3	10.50	–
E011M14X1.0	14	1.00	95.0	24	11.20	9.00	12	3	13.00	–
E011M14X1.25	14	1.25	95.0	24	11.20	9.00	12	3	12.80	–
E011M14X1.5	14	1.50	95.0	24	11.20	9.00	12	3	12.50	–
E011M16X1.0	16	1.00	102.0	24	12.50	10.00	13	3	15.00	–
E011M16X1.5	16	1.50	102.0	24	12.50	10.00	13	3	14.50	–
E011M18X1.0	18	1.00	112.0	29	14.00	11.20	14	4	17.00	–
E011M18X1.5	18	1.50	112.0	29	14.00	11.20	14	4	16.50	–
E011M20X1.0	20	1.00	112.0	29	14.00	11.20	14	4	19.00	–
E011M20X1.5	20	1.50	112.0	29	14.00	11.20	14	4	18.50	–
E011M20X2.0	20	2.00	112.0	29	14.00	11.20	14	4	18.00	–
E011M22X1.5	22	1.50	118.0	29	16.00	12.50	16	4	20.50	–
E011M24X1.5	24	1.50	130.0	35	18.00	14.00	18	4	22.50	–
E011M24X2.0	24	2.00	130.0	35	18.00	14.00	18	4	22.00	–

EX10

DORMER

HSS-E-PM Spiral Flute Machine Tap, Metric Fine, DIN Standard

Machine tap with spiral flute suited for blind holes. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges. The reduced shank increases the reach of the tap.



MF	DIN 374	6H
	2.5×D	HSS-E PM
C 2-3		λ 45°
R	Bright	

Workpiece material group suitability and starting values for cutting speed (m/min).

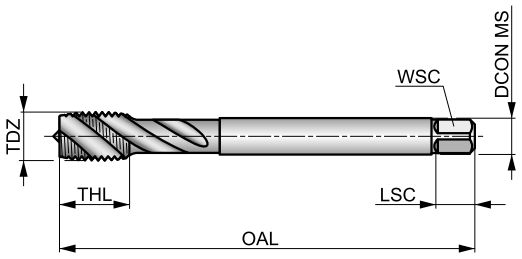
P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3
■21	■23	■24	■17	■15	◪13	■12	◪9	◪7	■13	■9	■6	■27	■24	■17

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
EX10M4X.50	4	0.50	63.0	7	2.80	2.10	5	3	3.50
EX10M5X.50	5	0.50	70.0	8	3.50	2.70	6	3	4.50
EX10M6X.75	6	0.75	80.0	10	4.50	3.40	6	3	5.30
EX10M8X.75	8	0.75	80.0	13	6.00	4.90	8	3	7.30
EX10M8X1.0	8	1.00	90.0	13	6.00	4.90	8	3	7.00
EX10M10X.75	10	0.75	90.0	13	7.00	5.50	8	3	9.30
EX10M10X1.0	10	1.00	90.0	13	7.00	5.50	8	3	9.00
EX10M10X1.25	10	1.25	100.0	15	7.00	5.50	8	3	8.80
EX10M12X1.0	12	1.00	100.0	15	9.00	7.00	10	3	11.00
EX10M12X1.25	12	1.25	100.0	15	9.00	7.00	10	3	10.80
EX10M12X1.5	12	1.50	100.0	15	9.00	7.00	10	3	10.50
EX10M14X1.0	14	1.00	100.0	15	11.00	9.00	12	3	13.00
EX10M14X1.25	14	1.25	100.0	15	11.00	9.00	12	3	12.80
EX10M14X1.5	14	1.50	100.0	15	11.00	9.00	12	3	12.50
EX10M16X1.0	16	1.00	100.0	15	12.00	9.00	12	4	15.00
EX10M16X1.5	16	1.50	100.0	15	12.00	9.00	12	4	14.50
EX10M18X1.0	18	1.00	110.0	17	14.00	11.00	14	4	17.00
EX10M18X1.5	18	1.50	110.0	17	14.00	11.00	14	4	16.50
EX10M20X1.0	20	1.00	125.0	17	16.00	12.00	15	4	19.00
EX10M20X1.5	20	1.50	125.0	17	16.00	12.00	15	4	18.50
EX10M22X1.5	22	1.50	125.0	17	18.00	14.50	17	4	20.50
EX10M24X1.5	24	1.50	140.0	20	18.00	14.50	17	4	22.50
EX10M24X2.0	24	2.00	140.0	20	18.00	14.50	17	4	22.00
EX10M25X1.5	25	1.50	140.0	20	18.00	14.50	17	4	23.50
EX10M26X1.5	26	1.50	140.0	20	18.00	14.50	17	4	24.50
EX10M27X1.5	27	1.50	140.0	20	20.00	16.00	19	4	25.50
EX10M27X2.0	27	2.00	140.0	20	20.00	16.00	19	4	25.00
EX10M28X1.5	28	1.50	140.0	20	20.00	16.00	19	4	26.50
EX10M30X1.5	30	1.50	150.0	20	22.00	18.00	21	4	28.50
EX10M30X2.0	30	2.00	150.0	20	22.00	18.00	21	4	28.00

EX10TIN

HSS-E-PM Spiral Flute Machine Tap, Metric Fine, TiN Coating, DIN Standard

High performance machine tap with spiral flute for blind holes. Suited for a broad range of workpiece materials. TiN coated to allow higher cutting speeds, improve performance and extend tool life. The reduced shank increases the reach of the tap.



MF	DIN 374	6H
	2.5×D	HSS-E PM
C 2-3		λ 45°
R	TiN	

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■32	■36	■37	■27	■23	■19	■18	■13	◪11	■10	◪8	■10	■8	■9

M2.2	M3.1	M3.2	M3.3	M4.1	N2.1	N2.2	N2.3
■7	■7	■6	◪5	◪4	■35	■32	■23

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
EX10TINM8X1.0	8	1.00	90.0	13	6.00	4.90	8	3	7.00
EX10TINM10X1.0	10	1.00	90.0	13	7.00	5.50	8	3	9.00
EX10TINM10X1.25	10	1.25	100.0	15	7.00	5.50	8	3	8.80
EX10TINM12X1.0	12	1.00	100.0	15	9.00	7.00	10	3	11.00
EX10TINM12X1.25	12	1.25	100.0	15	9.00	7.00	10	3	10.80
EX10TINM12X1.5	12	1.50	100.0	15	9.00	7.00	10	3	10.50
EX10TINM14X1.5	14	1.50	100.0	15	11.00	9.00	12	3	12.50
EX10TINM16X1.5	16	1.50	100.0	15	12.00	9.00	12	4	14.50
EX10TINM18X1.5	18	1.50	110.0	17	14.00	11.00	14	4	16.50
EX10TINM20X1.5	20	1.50	125.0	17	16.00	12.00	15	4	18.50

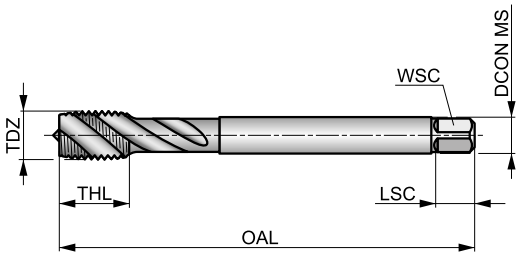
EX11

DORMER

HSS-E-PM Spiral Flute Machine Tap, Metric Fine, DIN Standard

Machine tap with spiral flute suited for blind holes. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding. The reduced shank increases the reach of the tap.

MF	DIN 374	6H
	2.5×D	HSS-E PM
C 2-3		λ 45°
R	ST	



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P2.2	P2.3	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2	M3.3	M4.1
◪21	◪15	■13	■9	◪8	■7	◪5	◪8	◪6	◪7	◪5	◪5	◪4	◪3	◪3

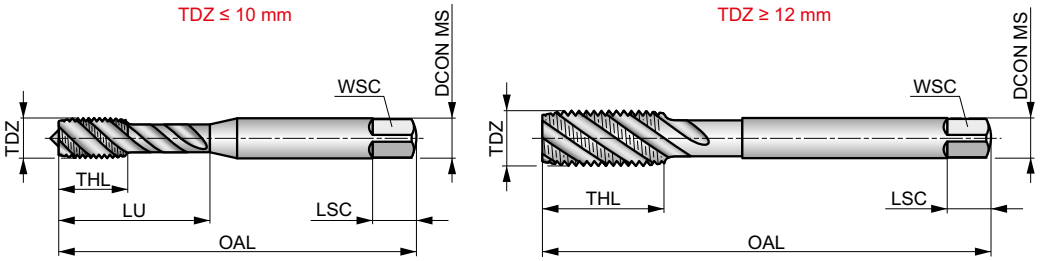
Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
EX11M4X.50	4	0.50	63.0	7	2.80	2.10	5	3	3.50
EX11M5X.50	5	0.50	70.0	8	3.50	2.70	6	3	4.50
EX11M6X.75	6	0.75	80.0	10	4.50	3.40	6	3	5.30
EX11M8X.75	8	0.75	80.0	13	6.00	4.90	8	3	7.30
EX11M8X1.0	8	1.00	90.0	13	6.00	4.90	8	3	7.00
EX11M10X.75	10	0.75	90.0	13	7.00	5.50	8	3	9.30
EX11M10X1.0	10	1.00	90.0	13	7.00	5.50	8	3	9.00
EX11M10X1.25	10	1.25	100.0	15	7.00	5.50	8	3	8.80
EX11M12X1.0	12	1.00	100.0	15	9.00	7.00	10	3	11.00
EX11M12X1.25	12	1.25	100.0	15	9.00	7.00	10	3	10.80
EX11M12X1.5	12	1.50	100.0	15	9.00	7.00	10	3	10.50
EX11M14X1.0	14	1.00	100.0	15	11.00	9.00	12	3	13.00
EX11M14X1.25	14	1.25	100.0	15	11.00	9.00	12	3	12.80
EX11M14X1.5	14	1.50	100.0	15	11.00	9.00	12	3	12.50
EX11M16X1.0	16	1.00	100.0	15	12.00	9.00	12	4	15.00
EX11M16X1.5	16	1.50	100.0	15	12.00	9.00	12	4	14.50
EX11M18X1.0	18	1.00	110.0	17	14.00	11.00	14	4	17.00
EX11M18X1.5	18	1.50	110.0	17	14.00	11.00	14	4	16.50
EX11M20X1.0	20	1.00	125.0	17	16.00	12.00	15	4	19.00
EX11M20X1.5	20	1.50	125.0	17	16.00	12.00	15	4	18.50
EX11M22X1.5	22	1.50	125.0	17	18.00	14.50	17	4	20.50
EX11M24X1.5	24	1.50	140.0	20	18.00	14.50	17	4	22.50
EX11M24X2.0	24	2.00	140.0	20	18.00	14.50	17	4	22.00
EX11M25X1.5	25	1.50	140.0	20	18.00	14.50	17	4	23.50
EX11M26X1.5	26	1.50	140.0	20	18.00	14.50	17	4	24.50
EX11M27X1.5	27	1.50	140.0	20	20.00	16.00	19	4	25.50
EX11M27X2.0	27	2.00	140.0	20	20.00	16.00	19	4	25.00
EX11M28X1.5	28	1.50	140.0	20	20.00	16.00	19	4	26.50
EX11M30X1.5	30	1.50	150.0	20	22.00	18.00	21	4	28.50
EX11M30X2.0	30	2.00	150.0	20	22.00	18.00	21	4	28.00

E013

HSS-E-PM Spiral Flute Machine Tap, Metric Fine, ISO Standard

Machine tap with spiral flute suited for blind holes. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

MF	ISO 529	6H
	2.5×D	HSS-E PM
C 2-3		λ 45°
R	ST	



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P2.2	P2.3	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2	M3.3	M4.1
◪21	◪15	■13	■9	◪8	■7	◪5	◪8	◪6	◪7	◪5	◪5	◪4	◪3	◪3

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E013M4X.5	4	0.50	53.0	7	4.00	3.15	6	3	3.50	19.00
E013M5X.5	5	0.50	58.0	8	5.00	4.00	7	3	4.50	22.00
E013M6X.5	6	0.50	66.0	10	6.30	5.00	8	3	5.50	27.00
E013M6X.75	6	0.75	66.0	10	6.30	5.00	8	3	5.30	27.00
E013M8X.75	8	0.75	72.0	12	8.00	6.30	9	3	7.30	31.00
E013M8X1.0	8	1.00	72.0	12	8.00	6.30	9	3	7.00	31.00
E013M10X1.0	10	1.00	80.0	15	10.00	8.00	11	3	9.00	35.00
E013M10X1.25	10	1.25	80.0	15	10.00	8.00	11	3	8.80	35.00
E013M12X1.0	12	1.00	89.0	16	9.00	7.10	10	3	11.00	–
E013M12X1.25	12	1.25	89.0	16	9.00	7.10	10	3	10.80	–
E013M12X1.5	12	1.50	89.0	16	9.00	7.10	10	3	10.50	–
E013M14X1.5	14	1.50	95.0	18	11.20	9.00	12	3	12.50	–
E013M16X1.0	16	1.00	102.0	18	12.50	10.00	13	4	15.00	–
E013M16X1.5	16	1.50	102.0	18	12.50	10.00	13	4	14.50	–
E013M18X1.5	18	1.50	112.0	29	14.00	11.20	14	4	16.50	–
E013M20X1.5	20	1.50	112.0	29	14.00	11.20	14	4	18.50	–
E013M22X1.5	22	1.50	118.0	29	16.00	12.50	16	4	20.50	–

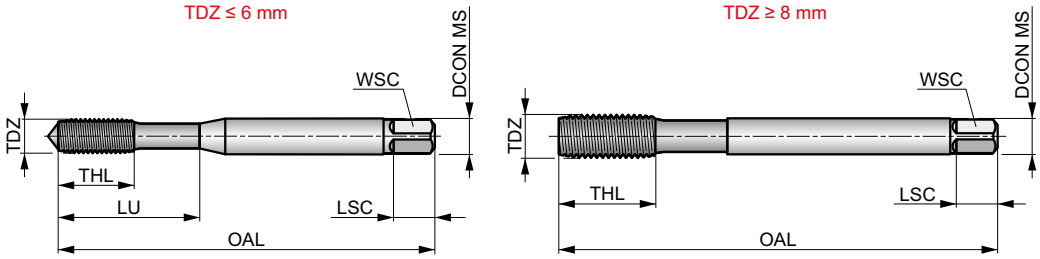
E288

DORMER

HSS-E Fluteless Machine Tap, Metric Fine with TiN Coating, DIN Standard

High performance fluteless tap to produce high quality thread in blind and through holes. Provides a strong, clean, chip-free and accurate thread with excellent tolerance. Highly versatile for steel, stainless steel and non-ferrous metal. TiN coated for higher cutting speeds, improve performance and tool life.

MF	DIN 2174	6HX
	3×D	HSS-E
C 2-3.5		R
TiN		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2
■45	■51	■51	■51	■45	■29	■24	◪18	■18	◪13	■25	■21	■22	■18

M3.1	M3.2	M3.3	M4.1	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.3
■17	■15	◪12	◪8	■55	■41	■28	■62	■55	■40	◪36	◪12

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E288M5X.5	5	0.50	70.0	13	6.00	4.90	8	5	4.80	25.00
E288M6X.75	6	0.75	80.0	15	6.00	4.90	8	5	5.70	30.00
E288M8X1.0	8	1.00	90.0	18	6.00	4.90	8	5	7.50	–
E288M10X1.0	10	1.00	90.0	20	7.00	5.50	8	5	9.50	–
E288M10X1.25	10	1.25	100.0	20	7.00	5.50	8	5	9.40	–
E288M12X1.5	12	1.50	100.0	21	9.00	7.00	10	5	11.30	–

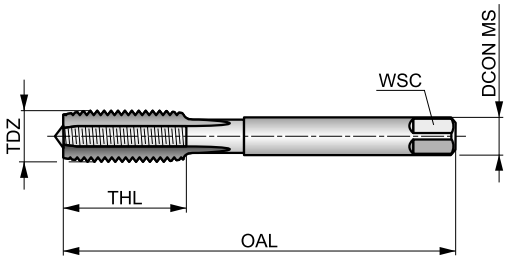
E108

DORMER

HSS Straight Flute Serial Hand Tap, UNC, DIN Standard

Ideal for hand tapping tough materials. The straight flute design makes it ideal for both through and blind holes. Available as a single finishing tap or as a set of three serial taps, which should be used one after the other to create the full thread.

UNC	DIN 352	2B
	1.5×D	HSS
C 2-3		R
Bright		



Workpiece material group suitability.

P1.1 ■	P1.2 ■	P1.3 ■	P2.1 ■	P2.2 ■	P2.3 ◪	P3.1 ■	P3.2 ◪	P4.1 ◪	K1.1 ◪	K1.2 ◪	K1.3 ◪	K2.1 ◪	K2.2 ◪
K3.1 ◪	K3.2 ◪	K4.1 ◪	K4.2 ◪	K5.1 ◪	K5.2 ◪	N1.1 ■	N1.2 ■	N1.3 ■	N2.1 ■	N2.2 ■	N2.3 ■	N3.1 ■	N3.2 ■
N3.3 ■	N4.2 ■	N4.3 ■											

Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	NOF	PHD [mm]
E1085-40N03	5	40	3.180	45.0	13	4.00	3.00	3	2.65
E1085-40N08	5	40	3.180	45.0	13	4.00	3.00	3	2.65
E1086-32N03	6	32	3.510	45.0	10	4.00	3.00	3	2.85
E1086-32N08	6	32	3.510	45.0	10	4.00	3.00	3	2.85
E1088-32N03	8	32	4.170	50.0	14	6.00	4.90	3	3.50
E1088-32N08	8	32	4.170	50.0	14	6.00	4.90	3	3.50
E10810-24N03	10	24	4.830	50.0	14	6.00	4.90	3	3.90
E10810-24N08	10	24	4.830	50.0	14	6.00	4.90	3	3.90
E10812-24N03	12	24	5.490	56.0	16	6.00	4.90	3	4.50
E10812-24N08	12	24	5.490	56.0	16	6.00	4.90	3	4.50
E1081/4N03	1/4	20	6.350	56.0	17	6.00	4.90	3	5.10
E1081/4N08	1/4	20	6.350	56.0	17	6.00	4.90	3	5.10
E1085/16N03	5/16	18	7.940	63.0	19	6.00	4.90	3	6.60
E1085/16N08	5/16	18	7.940	63.0	19	6.00	4.90	3	6.60
E1083/8N03	3/8	16	9.530	70.0	22	7.00	5.50	3	8.00
E1083/8N08	3/8	16	9.530	70.0	22	7.00	5.50	3	8.00
E1087/16N03	7/16	14	11.110	75.0	30	8.00	6.20	3	9.40
E1087/16N08	7/16	14	11.110	75.0	30	8.00	6.20	3	9.40
E1081/2N03	1/2	13	12.700	75.0	27	9.00	7.00	3	10.80
E1081/2N08	1/2	13	12.700	75.0	27	9.00	7.00	3	10.80
E1089/16N03	9/16	12	14.290	80.0	30	11.00	9.00	4	12.20
E1089/16N08	9/16	12	14.290	80.0	30	11.00	9.00	4	12.20
E1085/8N03	5/8	11	15.880	80.0	32	12.00	9.00	4	13.50
E1085/8N08	5/8	11	15.880	80.0	32	12.00	9.00	4	13.50
E1083/4N03	3/4	10	19.050	95.0	34	14.00	11.00	4	16.50
E1083/4N08	3/4	10	19.050	95.0	34	14.00	11.00	4	16.50
E1087/8N03	7/8	9	22.230	110.0	38	18.00	14.50	4	19.50
E1087/8N08	7/8	9	22.230	110.0	38	18.00	14.50	4	19.50
E1081N08	1"	8	25.400	110.0	38	20.00	16.00	4	22.25

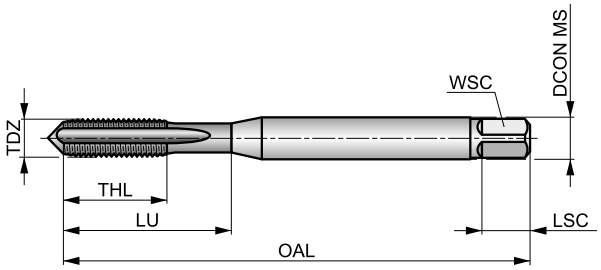
E225

DORMER

HSS-E-PM Straight Flute Machine Tap, UNC, DIN Standard

General purpose straight flute machine tap for through and blind holes. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges. The reinforced shank increases strength against torsional twist.

UNC	DIN 371	2B
	1.5×D	HSS-E PM
C 2-3		R
Bright		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
■11	■12	■12	■9	■8	◪7	■7	◪6	◪4	◪13	◪10	◪8	◪14	◪11

K3.1	K3.2	K4.1	K4.2	K5.1	K5.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N4.2
◪13	◪10	◪12	◪9	◪12	◪10	◪12	◪15	◪14	◪11	◪21	■14	◪8

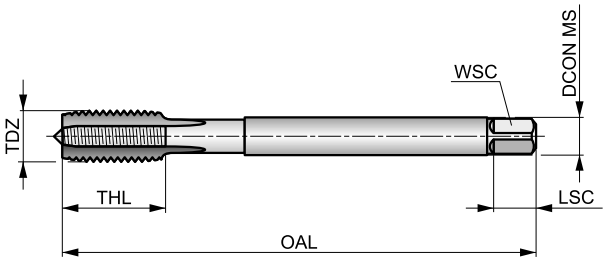
Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]	LU [mm]
E2254-40	4	40	2.845	56.0	9	3.50	2.70	6	3	2.35	18.00
E2255-40	5	40	3.175	56.0	10	3.50	2.70	6	3	2.65	18.00
E2256-32	6	32	3.505	56.0	11	4.00	3.00	6	3	2.85	20.00
E2258-32	8	32	4.166	63.0	12	4.50	3.40	8	3	3.50	21.00
E22510-24	10	24	4.826	70.0	13	6.00	4.90	8	3	3.90	25.00
E22512-24	12	24	5.486	80.0	15	6.00	4.90	8	3	4.50	30.00
E2251/4	1/4	20	6.350	80.0	16	7.00	5.50	8	3	5.10	30.00

E275

DORMER

HSS-E-PM Straight Flute Machine Tap, UNC, DIN Standard

General purpose straight flute machine tap for through and blind holes. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges. The reduced shank increases the reach of the tap.



UNC	DIN 376	2B
	1.5×D	HSS-E PM
C 2-3		R
Bright		

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
■11	■12	■12	■9	■8	◪7	■7	◪6	◪4	◪13	◪10	◪8	◪14	◪11

K3.1	K3.2	K4.1	K4.2	K5.1	K5.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N4.2
◪13	◪10	◪12	◪9	◪12	◪10	◪12	◪15	◪14	◪11	◪21	■14	◪8

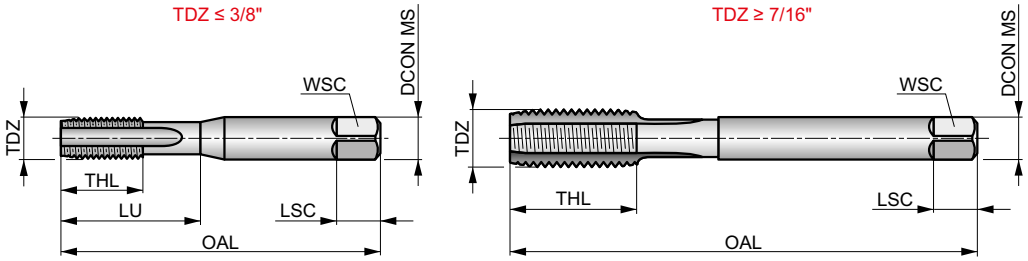
Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]
E2755/16	5/16	18	7.940	90.0	18	6.00	4.90	8	3	6.60
E2753/8	3/8	16	9.530	100.0	24	7.00	5.50	8	3	8.00
E2757/16	7/16	14	11.110	110.0	23	9.00	7.00	10	3	9.40
E2751/2	1/2	13	12.700	110.0	23	9.00	7.00	10	3	10.80
E2759/16	9/16	12	14.290	110.0	25	11.00	9.00	12	3	12.20
E2755/8	5/8	11	15.880	110.0	25	12.00	9.00	12	4	13.50
E2753/4	3/4	10	19.050	140.0	34	14.00	11.00	14	4	16.50
E2757/8	7/8	9	22.230	140.0	34	18.00	14.50	17	4	19.50
E2751	1″	8	25.400	160.0	38	20.00	16.00	19	4	22.25
E2751.1/8	1.1/8	7	28.580	180.0	45	22.00	18.00	21	4	25.00
E2751.1/4	1.1/4	7	31.750	180.0	50	25.00	20.00	23	4	28.00
E2751.1/2	1.1/2	6	38.100	200.0	60	32.00	24.00	27	4	34.00

E515

DORMER

HSS Straight Flute Hand Tap, UNC, ISO Standard

A versatile tool, suitable for hand and machine tapping. With a straight flute design for both through and blind holes. Available as a set of three N06 or as separate taps with taper lead N01 for short through holes, plug lead N02 for deeper through holes or bottoming lead N03 for blind holes.



UNC	ISO 529	2B
	1.5×D	HSS
	R	Bright

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
■7	■7	■8	■6	■5	◪4	■4	◪4	◪3	◪12	◪9	◪7	◪12	◪10

K3.1	K3.2	K4.1	K4.2	K5.1	K5.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.2
◪11	◪8	◪10	◪8	◪11	◪9	◪8	◪11	◪10	◪7	■17	■10	◪5	◪5

N4.3
◪3

Products from this series are also available in set with dies. Please see L120.

Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]	LU [mm]
E5151-64N01	1	64	1.854	41.0	8	2.50	2.00	4	2	1.55	8.00
E5151-64N02	1	64	1.854	41.0	8	2.50	2.00	4	2	1.55	8.00
E5151-64N03	1	64	1.854	41.0	8	2.50	2.00	4	2	1.55	8.00
E5151-64N06	1	64	1.854	41.0	8	2.50	2.00	4	2	1.55	8.00
E5152-56N01	2	56	2.184	44.5	9.5	2.80	2.24	5	3	1.85	9.50
E5152-56N02	2	56	2.184	44.5	9.5	2.80	2.24	5	3	1.85	9.50
E5152-56N03	2	56	2.184	44.5	9.5	2.80	2.24	5	3	1.85	9.50
E5152-56N06	2	56	2.184	44.5	9.5	2.80	2.24	5	3	1.85	9.50
E5153-48N01	3	48	2.515	44.5	9.5	2.80	2.24	5	3	2.10	9.50
E5153-48N02	3	48	2.515	44.5	9.5	2.80	2.24	5	3	2.10	9.50
E5153-48N03	3	48	2.515	44.5	9.5	2.80	2.24	5	3	2.10	9.50
E5153-48N06	3	48	2.515	44.5	9.5	2.80	2.24	5	3	2.10	9.50
E5154-40N01	4	40	2.845	48.0	12.5	3.15	2.50	5	3	2.35	12.50
E5154-40N02	4	40	2.845	48.0	12.5	3.15	2.50	5	3	2.35	12.50
E5154-40N03	4	40	2.845	48.0	12.5	3.15	2.50	5	3	2.35	12.50
E5154-40N06	4	40	2.845	48.0	12.5	3.15	2.50	5	3	2.35	12.50
E5155-40N01	5	40	3.175	48.0	12.5	3.15	2.50	5	3	2.65	12.50
E5155-40N02	5	40	3.175	48.0	12.5	3.15	2.50	5	3	2.65	12.50
E5155-40N03	5	40	3.175	48.0	12.5	3.15	2.50	5	3	2.65	12.50
E5155-40N06	5	40	3.175	48.0	12.5	3.15	2.50	5	3	2.65	12.50
E5156-32N01	6	32	3.505	50.0	14	3.55	2.80	5	3	2.85	14.00
E5156-32N02	6	32	3.505	50.0	14	3.55	2.80	5	3	2.85	14.00
E5156-32N03	6	32	3.505	50.0	14	3.55	2.80	5	3	2.85	14.00
E5156-32N06	6	32	3.505	50.0	14	3.55	2.80	5	3	2.85	14.00
E5158-32N01	8	32	4.166	53.0	9.5	4.50	3.55	6	3	3.50	17.00
E5158-32N02	8	32	4.166	53.0	9.5	4.50	3.55	6	3	3.50	17.00
E5158-32N03	8	32	4.166	53.0	9.5	4.50	3.55	6	3	3.50	17.00

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
			[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E5158-32N06	8	32	4.166	53.0	9.5	4.50	3.55	6	3	3.50	17.00
E51510-24N01	10	24	4.826	58.0	11	5.00	4.00	7	3	3.90	20.00
E51510-24N02	10	24	4.826	58.0	11	5.00	4.00	7	3	3.90	20.00
E51510-24N03	10	24	4.826	58.0	11	5.00	4.00	7	3	3.90	20.00
E51510-24N06	10	24	4.826	58.0	11	5.00	4.00	7	3	3.90	20.00
E51512-24N01	12	24	5.486	62.0	12	5.60	4.50	7	3	4.50	21.00
E51512-24N02	12	24	5.486	62.0	12	5.60	4.50	7	3	4.50	21.00
E51512-24N03	12	24	5.486	62.0	12	5.60	4.50	7	3	4.50	21.00
E51512-24N06	12	24	5.486	62.0	12	5.60	4.50	7	3	4.50	21.00
E5151/4N01	1/4	20	6.350	66.0	13	6.30	5.00	8	3	5.10	26.00
E5151/4N02	1/4	20	6.350	66.0	13	6.30	5.00	8	3	5.10	26.00
E5151/4N03	1/4	20	6.350	66.0	13	6.30	5.00	8	3	5.10	26.00
E5151/4N06	1/4	20	6.350	66.0	13	6.30	5.00	8	3	5.10	26.00
E5155/16N01	5/16	18	7.938	72.0	16	8.00	6.30	9	3	6.60	29.00
E5155/16N02	5/16	18	7.938	72.0	16	8.00	6.30	9	3	6.60	29.00
E5155/16N03	5/16	18	7.938	72.0	16	8.00	6.30	9	3	6.60	29.00
E5155/16N06	5/16	18	7.938	72.0	16	8.00	6.30	9	3	6.60	29.00
E5153/8N01	3/8	16	9.525	80.0	18	10.00	8.00	11	3	8.00	32.00
E5153/8N02	3/8	16	9.525	80.0	18	10.00	8.00	11	3	8.00	32.00
E5153/8N03	3/8	16	9.525	80.0	18	10.00	8.00	11	3	8.00	32.00
E5153/8N06	3/8	16	9.525	80.0	18	10.00	8.00	11	3	8.00	32.00
E5157/16N01	7/16	14	11.112	85.0	19	8.00	6.30	9	3	9.40	–
E5157/16N02	7/16	14	11.112	85.0	19	8.00	6.30	9	3	9.40	–
E5157/16N03	7/16	14	11.112	85.0	19	8.00	6.30	9	3	9.40	–
E5157/16N06	7/16	14	11.112	85.0	19	8.00	6.30	9	3	9.40	–
E5151/2N01	1/2	13	12.700	89.0	22	9.00	7.10	10	3	10.80	–
E5151/2N02	1/2	13	12.700	89.0	22	9.00	7.10	10	3	10.80	–
E5151/2N03	1/2	13	12.700	89.0	22	9.00	7.10	10	3	10.80	–
E5151/2N06	1/2	13	12.700	89.0	22	9.00	7.10	10	3	10.80	–
E5159/16N01	9/16	12	14.288	95.0	24	11.20	9.00	12	4	12.20	–
E5159/16N02	9/16	12	14.288	95.0	24	11.20	9.00	12	4	12.20	–
E5159/16N03	9/16	12	14.288	95.0	24	11.20	9.00	12	4	12.20	–
E5159/16N06	9/16	12	14.288	95.0	24	11.20	9.00	12	4	12.20	–
E5155/8N01	5/8	11	15.875	102.0	24	12.50	10.00	13	4	13.50	–
E5155/8N02	5/8	11	15.875	102.0	24	12.50	10.00	13	4	13.50	–
E5155/8N03	5/8	11	15.875	102.0	24	12.50	10.00	13	4	13.50	–
E5155/8N06	5/8	11	15.875	102.0	24	12.50	10.00	13	4	13.50	–
E5153/4N01	3/4	10	19.050	112.0	29	14.00	11.20	14	4	16.50	–
E5153/4N02	3/4	10	19.050	112.0	29	14.00	11.20	14	4	16.50	–
E5153/4N03	3/4	10	19.050	112.0	29	14.00	11.20	14	4	16.50	–
E5153/4N06	3/4	10	19.050	112.0	29	14.00	11.20	14	4	16.50	–
E5157/8N01	7/8	9	22.225	118.0	29	16.00	12.50	16	4	19.50	–
E5157/8N02	7/8	9	22.225	118.0	29	16.00	12.50	16	4	19.50	–
E5157/8N03	7/8	9	22.225	118.0	29	16.00	12.50	16	4	19.50	–
E5157/8N06	7/8	9	22.225	118.0	29	16.00	12.50	16	4	19.50	–
E5151N03	1″	8	25.400	130.0	35	18.00	14.00	18	4	22.25	–
E5151N01	1″	8	25.400	130.0	35	18.00	14.00	18	4	22.25	–
E5151N02	1″	8	25.400	130.0	35	18.00	14.00	18	4	22.25	–
E5151N06	1″	8	25.400	130.0	35	18.00	14.00	18	4	22.25	–
E5151.1/8N01	1.1/8	7	28.575	138.0	35	20.00	16.00	20	4	25.00	–
E5151.1/8N02	1.1/8	7	28.575	138.0	35	20.00	16.00	20	4	25.00	–
E5151.1/8N03	1.1/8	7	28.575	138.0	35	20.00	16.00	20	4	25.00	–
E5151.1/4N01	1.1/4	7	31.750	151.0	41	22.40	18.00	22	4	28.00	–
E5151.1/4N02	1.1/4	7	31.750	151.0	41	22.40	18.00	22	4	28.00	–
E5151.1/4N03	1.1/4	7	31.750	151.0	41	22.40	18.00	22	4	28.00	–
E5151.3/8N01	1.3/8	6	34.925	162.0	47	25.00	20.00	24	4	30.75	–
E5151.3/8N02	1.3/8	6	34.925	162.0	47	25.00	20.00	24	4	30.75	–
E5151.3/8N03	1.3/8	6	34.925	162.0	47	25.00	20.00	24	4	30.75	–
E5151.1/2N01	1.1/2	6	38.100	170.0	47	28.00	22.40	26	4	34.00	–
E5151.1/2N02	1.1/2	6	38.100	170.0	47	28.00	22.40	26	4	34.00	–
E5151.1/2N03	1.1/2	6	38.100	170.0	47	28.00	22.40	26	4	34.00	–
E5151.3/4N01	1.3/4	5	44.450	187.0	54	31.50	25.00	28	6	39.50	–
E5151.3/4N02	1.3/4	5	44.450	187.0	54	31.50	25.00	28	6	39.50	–
E5151.3/4N03	1.3/4	5	44.450	187.0	54	31.50	25.00	28	6	39.50	–
E5152N03	2″	4.5	50.800	200.0	60	35.50	28.00	31	6	45.00	–
E5152N01	2″	4.5	50.800	200.0	60	35.50	28.00	31	6	45.00	–
E5152N02	2″	4.5	50.800	200.0	60	35.50	28.00	31	6	45.00	–

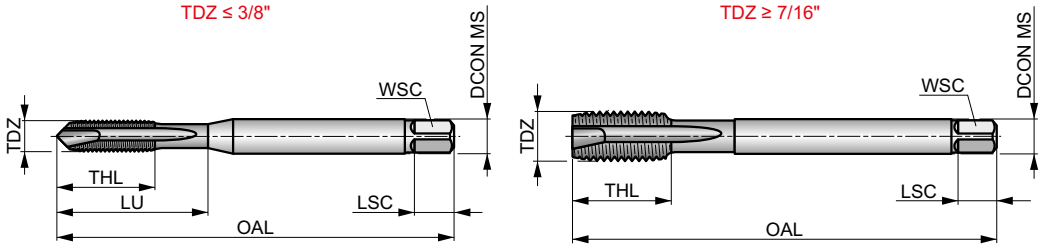
EP20

DORMER

HSS-E-PM Spiral Point Machine Tap, UNC, DIN Standard

Machine tap with spiral point suited for through holes only. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges.

UNC	DIN 2184-1	2B
	2.5×D	HSS-E PM
B 3.5-5		R
Bright		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	N1.1	N1.2	N1.3	N2.1	N2.2
■ 22	■ 24	■ 25	■ 18	■ 16	◪ 14	■ 13	◪ 10	◪ 8	■ 14	■ 10	■ 7	■ 28	■ 25

N2.3	N3.1	N3.2	N3.3	N4.1
■ 18	■ 44	◪ 27	◪ 13	◪ 22

Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]	LU [mm]
EP204-40	4	40	2.845	56.0	9	3.50	2.70	6	3	2.35	18.00
EP205-40	5	40	3.175	56.0	10	3.50	2.70	6	3	2.65	18.00
EP206-32	6	32	3.505	56.0	11	4.00	3.00	6	3	2.85	20.00
EP208-32	8	32	4.166	63.0	12	4.50	3.40	8	3	3.50	21.00
EP2010-24	10	24	4.826	70.0	13	6.00	4.90	8	3	3.90	25.00
EP2012-24	12	24	5.486	80.0	15	6.00	4.90	8	3	4.50	30.00
EP201/4	1/4	20	6.350	80.0	15	7.00	5.50	8	3	5.10	30.00
EP205/16	5/16	18	7.938	90.0	18	8.00	6.20	9	3	6.60	35.00
EP203/8	3/8	16	9.525	100.0	20	10.00	8.00	11	3	8.00	39.00
EP207/16	7/16	14	11.112	100.0	20	8.00	6.20	9	3	9.40	–
EP201/2	1/2	13	12.700	110.0	23	9.00	7.00	10	3	10.80	–
EP205/8	5/8	11	15.875	110.0	25	12.00	9.00	12	3	13.50	–
EP203/4	3/4	10	19.050	125.0	30	14.00	11.00	14	4	16.50	–
EP207/8	7/8	9	22.225	140.0	34	18.00	14.50	17	4	19.50	–
EP201	1″	8	25.400	160.0	38	18.00	14.50	17	4	22.25	–

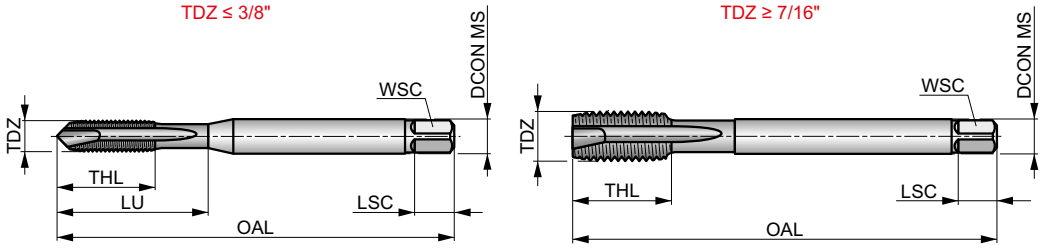
EP21

DORMER

HSS-E-PM Spiral Point Machine Tap, UNC, DIN Standard

Machine tap with spiral point suited for through holes only. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

UNC	DIN 2184-1	2B
	2.5×D	HSS-E PM
B 3.5-5		
ST		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P2.2	P2.3	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2	M3.3
◪22	◪16	■14	■10	◪9	■8	◪6	◪10	◪8	◪9	◪7	◪7	◪6	◪5

M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K3.1	K3.2	K4.1	K4.2	K5.1	K5.2
◪4	◪13	◪10	◪7	◪16	◪13	◪14	◪10	◪13	◪9	◪15	◪11

Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]	LU [mm]
EP214-40	4	40	2.845	56.0	9	3.50	2.70	6	3	2.35	18.00
EP215-40	5	40	3.175	56.0	10	3.50	2.70	6	3	2.65	18.00
EP216-32	6	32	3.505	56.0	11	4.00	3.00	6	3	2.85	20.00
EP218-32	8	32	4.166	63.0	12	4.50	3.40	8	3	3.50	21.00
EP2110-24	10	24	4.826	70.0	13	6.00	4.90	8	3	3.90	25.00
EP2112-24	12	24	5.486	80.0	15	6.00	4.90	8	3	4.50	30.00
EP211/4	1/4	20	6.350	80.0	15	7.00	5.50	8	3	5.10	30.00
EP215/16	5/16	18	7.938	90.0	18	8.00	6.20	9	3	6.60	35.00
EP213/8	3/8	16	9.525	100.0	20	10.00	8.00	11	3	8.00	39.00
EP217/16	7/16	14	11.112	100.0	20	8.00	6.20	9	3	9.40	–
EP211/2	1/2	13	12.700	110.0	23	9.00	7.00	10	3	10.80	–
EP215/8	5/8	11	15.875	110.0	25	12.00	9.00	12	3	13.50	–
EP213/4	3/4	10	19.050	125.0	30	14.00	11.00	14	4	16.50	–
EP217/8	7/8	9	22.225	140.0	34	18.00	14.50	17	4	19.50	–
EP211	1″	8	25.400	160.0	38	18.00	14.50	17	4	22.25	–

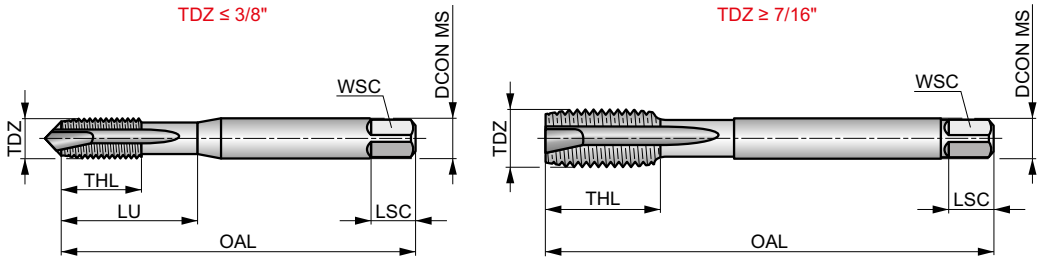
E021

DORMER

HSS-E-PM Spiral Point Machine Tap, UNC, ISO Standard

Machine tap with spiral point suited for through holes only. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

UNC	ISO 529	2B
	2.5×D	HSS-E PM
B 3.5-5		R
ST		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P2.2	P2.3	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2	M3.3
◪22	◪16	■14	■10	◪9	■8	◪6	◪10	◪8	◪9	◪7	◪7	◪6	◪5

M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K3.1	K3.2	K4.1	K4.2	K5.1	K5.2
◪4	◪13	◪10	◪7	◪16	◪13	◪14	◪10	◪13	◪9	◪15	◪11

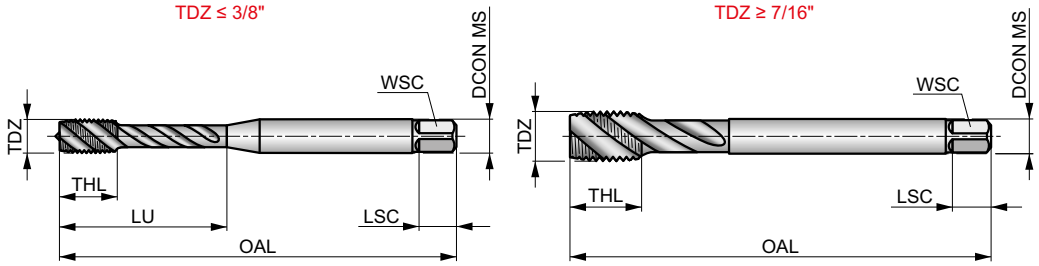
Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]	LU [mm]
E0212-56	2	56	2.184	44.5	9.5	2.80	2.24	5	2	1.85	9.50
E0214-40	4	40	2.845	48.0	14	3.15	2.50	5	3	2.35	14.00
E0215-40	5	40	3.175	48.0	12.5	3.15	2.50	5	3	2.65	12.50
E0216-32	6	32	3.505	50.0	16	3.55	2.80	5	3	2.85	16.00
E0218-32	8	32	4.166	53.0	9.5	4.50	3.55	6	3	3.50	17.00
E02110-24	10	24	4.826	58.0	11	5.00	4.00	7	3	3.90	20.00
E02112-24	12	24	5.486	62.0	12	5.60	4.50	7	3	4.50	21.00
E0211/4	1/4	20	6.350	66.0	13	6.30	5.00	8	3	5.10	26.00
E0215/16	5/16	18	7.938	72.0	16	8.00	6.30	9	3	6.60	29.00
E0213/8	3/8	16	9.525	80.0	18	10.00	8.00	11	3	8.00	32.00
E0217/16	7/16	14	11.112	85.0	19	8.00	6.30	9	3	9.40	–
E0211/2	1/2	13	12.700	89.0	22	9.00	7.10	10	3	10.80	–
E0215/8	5/8	11	15.875	102.0	24	12.50	10.00	13	3	13.50	–
E0213/4	3/4	10	19.050	112.0	29	14.00	11.20	14	4	16.50	–
E0217/8	7/8	9	22.225	118.0	29	16.00	12.50	16	4	19.50	–
E0211	1″	8	25.400	130.0	35	18.00	14.00	18	4	22.25	–

EX20

HSS-E-PM Spiral Flute Machine Tap, UNC, DIN Standard

Machine tap with spiral flute suited for blind holes. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

UNC	DIN 2184-1	2B
	2.5×D	HSS-E PM
C 2-3		λ 45°
R	Bright	



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3
■21	■23	■24	■17	■15	◪13	■12	◪9	◪7	■13	■9	■6	■27	■24	■17

Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]	LU [mm]
EX204-40	4	40	2.845	56.0	6	3.50	2.70	6	3	2.35	18.00
EX205-40	5	40	3.175	56.0	6	3.50	2.70	6	3	2.65	18.00
EX206-32	6	32	3.505	56.0	7	4.00	3.00	6	3	2.85	20.00
EX208-32	8	32	4.166	63.0	7	4.50	3.40	8	3	3.50	21.00
EX2010-24	10	24	4.826	70.0	8	6.00	4.90	8	3	3.90	25.00
EX2012-24	12	24	5.486	80.0	10	6.00	4.90	8	3	4.50	30.00
EX201/4	1/4	20	6.350	80.0	10	7.00	5.50	8	3	5.10	30.00
EX205/16	5/16	18	7.938	90.0	12	8.00	6.20	9	3	6.60	35.00
EX203/8	3/8	16	9.525	100.0	15	10.00	8.00	11	3	8.00	39.00
EX207/16	7/16	14	11.112	100.0	15	8.00	6.20	9	3	9.40	–
EX201/2	1/2	13	12.700	110.0	18	9.00	7.00	10	3	10.80	–
EX205/8	5/8	11	15.875	110.0	20	12.00	9.00	12	4	13.50	–
EX203/4	3/4	10	19.050	125.0	25	14.00	11.00	14	4	16.50	–
EX207/8	7/8	9	22.225	140.0	25	18.00	14.50	17	4	19.50	–
EX201	1″	8	25.400	160.0	30	18.00	14.50	17	4	22.25	–

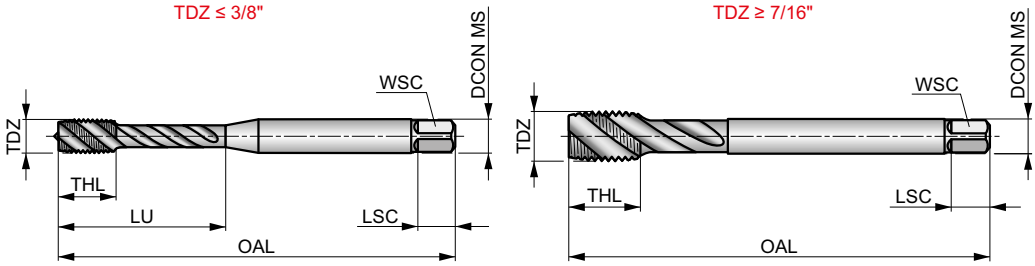
EX21

DORMER

HSS-E-PM Spiral Flute Machine Tap, UNC, DIN Standard

Machine tap to produce normal fit threads within 2B tolerance. The spiral flute is suited for blind holes. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

UNC	DIN 2184-1	2B
	2.5×D	HSS-E PM
C 2-3		λ 45°
R	ST	



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P2.2	P2.3	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2	M3.3	M4.1
◪21	◪15	■13	■9	◪8	■7	◪5	◪8	◪6	◪7	◪5	◪5	◪4	◪3	◪3

Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]	LU [mm]
EX214-40	4	40	2.845	56.0	6	3.50	2.70	6	3	2.35	18.00
EX215-40	5	40	3.175	56.0	6	3.50	2.70	6	3	2.65	18.00
EX216-32	6	32	3.505	56.0	7	4.00	3.00	6	3	2.85	20.00
EX218-32	8	32	4.166	63.0	7	4.50	3.40	8	3	3.50	21.00
EX2110-24	10	24	4.826	70.0	8	6.00	4.90	8	3	3.90	25.00
EX2112-24	12	24	5.486	80.0	10	6.00	4.90	8	3	4.50	30.00
EX211/4	1/4	20	6.350	80.0	10	7.00	5.50	8	3	5.10	30.00
EX215/16	5/16	18	7.938	90.0	12	8.00	6.20	9	3	6.60	35.00
EX213/8	3/8	16	9.525	100.0	15	10.00	8.00	11	3	8.00	39.00
EX217/16	7/16	14	11.112	100.0	15	8.00	6.20	9	3	9.40	–
EX211/2	1/2	13	12.700	110.0	18	9.00	7.00	10	3	10.80	–
EX215/8	5/8	11	15.875	110.0	20	12.00	9.00	12	4	13.50	–
EX213/4	3/4	10	19.050	125.0	25	14.00	11.00	14	4	16.50	–
EX217/8	7/8	9	22.225	140.0	25	18.00	14.50	17	4	19.50	–
EX211	1″	8	25.400	160.0	30	18.00	14.50	17	4	22.25	–

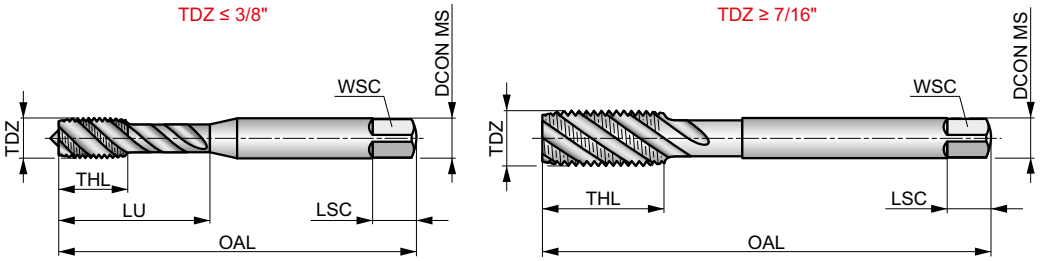
E023

DORMER

HSS-E-PM Spiral Flute Machine Tap, UNC, ISO Standard

Machine tap with spiral flute suited for blind holes. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

UNC	ISO 529	2B
	2.5×D	HSS-E PM
C 2-3		λ 45°
R	ST	



Workpiece material group suitability and starting values for cutting speed (m/min).

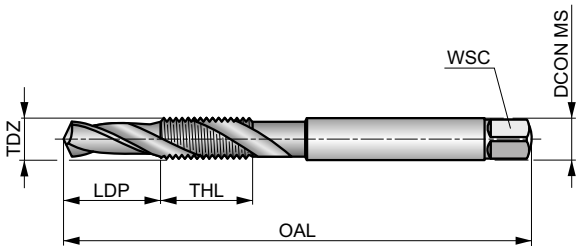
P1.1	P2.2	P2.3	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2	M3.3	M4.1
◪21	◪15	■13	■9	◪8	■7	◪5	◪8	◪6	◪7	◪5	◪5	◪4	◪3	◪3

Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]	LU [mm]
E0232-56	2	56	2.184	44.5	9.5	2.80	2.24	5	2	1.85	9.50
E0234-40	4	40	2.845	48.0	6	3.15	2.50	5	3	2.35	14.00
E0235-40	5	40	3.175	48.0	6	3.15	2.50	5	3	2.65	12.50
E0236-32	6	32	3.505	50.0	6	3.55	2.80	5	3	2.85	16.00
E0238-32	8	32	4.166	53.0	7	4.50	3.55	6	3	3.50	17.00
E02310-24	10	24	4.826	58.0	8	5.00	4.00	7	3	3.90	20.00
E02312-24	12	24	5.486	62.0	12	5.60	4.50	7	3	4.50	21.00
E0231/4	1/4	20	6.350	66.0	10	6.30	5.00	8	3	5.10	28.00
E0235/16	5/16	18	7.938	72.0	12	8.00	6.30	9	3	6.60	31.00
E0233/8	3/8	16	9.525	80.0	15	10.00	8.00	11	3	8.00	34.00
E0237/16	7/16	14	11.112	85.0	19	8.00	6.30	9	3	9.40	–
E0231/2	1/2	13	12.700	89.0	19	9.00	7.10	10	3	10.80	–
E0235/8	5/8	11	15.875	102.0	24	12.50	10.00	13	4	13.50	–
E0233/4	3/4	10	19.050	112.0	29	14.00	11.20	14	4	16.50	–
E0237/8	7/8	9	22.225	118.0	29	16.00	12.50	16	4	19.50	–
E0231	1″	8	25.400	130.0	35	18.00	14.00	18	4	22.25	–

E651

HSS Drill-Tap Combination Tool with 30° Spiral Flute, UNC, DIN Standard

Combination of a core-hole drill and tap to produce a thread in one pass. This significantly reduces the time needed to produce the thread on site with the use of a hand-held power tool. There is no need for a tap wrench or tool change. Steam tempered surface acts to retain the lubricant and provide smoother cutting.



UNC	DIN DORMER	2B
	1.5×D	HSS
C 2-3		λ 30°
R	ST	

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	N1.2	N1.3	N3.1	N3.2	N4.1
■ 18	■ 20	■ 22	■ 20	◪ 18	◪ 15	◪ 12	◪ 14	◪ 9	◪ 20	◪ 15	◪ 25

Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	LDP [mm]	DCON MS [mm]	WSC [mm]	NOF
E6516-32	6	32	2.850	56.9	12	6.00	3.50	2.90	2
E6518-32	8	32	3.500	64.0	12	8.00	4.50	3.55	2
E65110-24	10	24	3.900	72.0	15	10.00	5.00	4.00	2
E65112-24	12	24	4.500	77.0	15	11.00	5.60	4.50	2
E6511/4	1/4	20	5.100	83.0	17	13.00	6.30	5.00	2
E6515/16	5/16	18	6.600	94.0	21	16.00	8.00	6.30	2
E6513/8	3/8	16	8.000	107.0	23	19.00	10.00	8.00	2
E6517/16	7/16	14	9.400	107.0	25	22.00	8.00	6.30	2
E6511/2	1/2	13	10.800	114.0	29	25.00	9.00	7.10	2
E6519/16	9/16	12	12.200	124.0	29	28.00	11.20	9.00	2
E6515/8	5/8	11	13.500	134.0	31	32.50	12.50	10.00	2

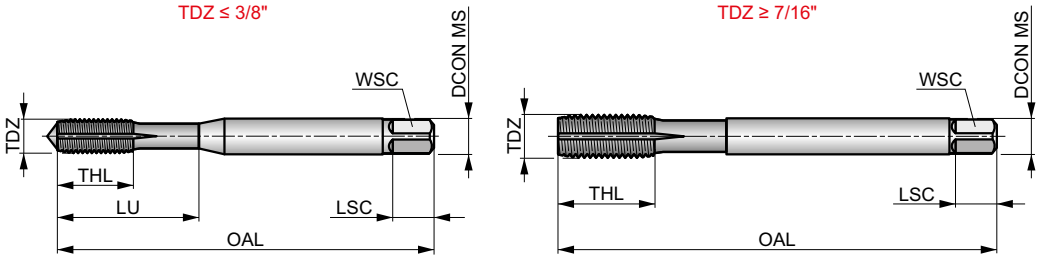
E287

DORMER

HSS-E Thread Forming TiN Coated Tap, Oil-Grooves, UNC, DIN Standard

High performance fluteless tap for blind and through holes. Provide strong, clean, chip-free and accurate threads with excellent tolerance. Highly versatile for steel, stainless steel and non-ferrous metal. TiN coated for higher cutting speeds, performance and tool life. With oil-grooves for better lubrication in deep holes.

UNC	DIN 2184-1	2BX
	3.5×D	HSS-E
C 2-3.5		R
TiN		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■ 45	■ 51	■ 51	■ 51	■ 45	◪ 40	■ 29	■ 24	■ 20	■ 18	■ 15	■ 25	■ 21	■ 22
M2.2	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.3**
■ 18	◪ 12	■ 17	■ 15	■ 14	■ 10	■ 55	■ 41	■ 28	■ 62	■ 55	■ 40	◪ 40	◪ 12

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
			[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E2874-40	4	40	2.845	56.0	9	3.50	2.70	6	4	2.60	18.00
E2876-32	6	32	3.505	56.0	11	4.00	3.00	6	4	3.20	20.00
E2878-32	8	32	4.166	63.0	12	4.50	3.40	6	5	3.80	21.00
E28710-24	10	24	4.826	70.0	13	6.00	4.90	8	5	4.40	25.00
E2871/4	1/4	20	6.350	80.0	15	7.00	5.50	8	5	5.80	30.00
E2875/16	5/16	18	7.938	90.0	18	8.00	6.20	9	5	7.30	35.00
E2873/8	3/8	16	9.525	100.0	20	10.00	8.00	11	5	8.80	39.00
E2877/16	7/16	14	11.112	100.0	20	8.00	6.20	9	5	10.30	–
E2871/2	1/2	13	12.700	110.0	23	9.00	7.00	10	5	11.90	–

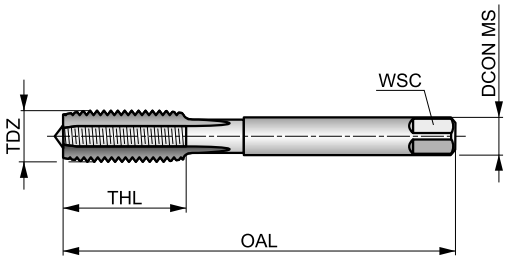
E111

DORMER

HSS Straight Flute Serial Hand Tap, UNF, DIN Standard

Ideal for hand tapping tough materials. The straight flute design makes it suited for both through and blind holes. Available as a single finishing tap or as a set of two serial taps, which should be used one after the other to create the full thread.

UNF	DIN 2181	2B
	1.5×D	HSS
C 2-3		R
Bright		



Workpiece material group suitability.

P1.1 ■	P1.2 ■	P1.3 ■	P2.1 ■	P2.2 ■	P2.3 ◪	P3.1 ■	P3.2 ◪	P4.1 ◪	K1.1 ◪	K1.2 ◪	K1.3 ◪	K2.1 ◪	K2.2 ◪
K3.1 ◪	K3.2 ◪	K4.1 ◪	K4.2 ◪	K5.1 ◪	K5.2 ◪	N1.1 ■	N1.2 ■	N1.3 ■	N2.1 ■	N2.2 ■	N2.3 ■	N3.1 ■	N3.2 ■
N3.3 ■	N4.2 ■	N4.3 ■											

Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	NOF	PHD [mm]
E1115-44N03	5	44	3.180	45.0	13	4.00	3.00	3	2.70
E1115-44N09	5	44	3.180	45.0	13	4.00	3.00	3	2.70
E1116-40N03	6	40	3.510	45.0	10	4.00	3.00	3	2.95
E1116-40N09	6	40	3.510	45.0	10	4.00	3.00	3	2.95
E1118-36N03	8	36	4.170	50.0	14	6.00	4.90	3	3.50
E1118-36N09	8	36	4.170	50.0	14	6.00	4.90	3	3.50
E11110-32N03	10	32	4.820	50.0	14	6.00	4.90	3	4.10
E11110-32N09	10	32	4.820	50.0	14	6.00	4.90	3	4.10
E1111/4N03	1/4	28	6.350	56.0	17	6.00	4.90	3	5.50
E1111/4N09	1/4	28	6.350	56.0	17	6.00	4.90	3	5.50
E1115/16N03	5/16	24	7.940	63.0	19	6.00	4.90	3	6.90
E1115/16N09	5/16	24	7.940	63.0	19	6.00	4.90	3	6.90
E1113/8N03	3/8	24	9.530	63.0	16	7.00	5.50	3	8.50
E1113/8N09	3/8	24	9.530	63.0	16	7.00	5.50	3	8.50
E1117/16N03	7/16	20	11.110	63.0	15	8.00	6.20	3	9.90
E1117/16N09	7/16	20	11.110	63.0	15	8.00	6.20	3	9.90
E1111/2N03	1/2	20	12.700	70.0	22	9.00	7.00	3	11.50
E1111/2N09	1/2	20	12.700	70.0	22	9.00	7.00	3	11.50
E1119/16N03	9/16	18	14.290	70.0	16	11.00	9.00	4	12.90
E1119/16N09	9/16	18	14.290	70.0	16	11.00	9.00	4	12.90
E1115/8N03	5/8	18	15.880	70.0	16	12.00	9.00	4	14.50
E1115/8N09	5/8	18	15.880	70.0	16	12.00	9.00	4	14.50
E1113/4N03	3/4	16	19.050	80.0	22	14.00	11.00	4	17.50
E1113/4N09	3/4	16	19.050	80.0	22	14.00	11.00	4	17.50
E1117/8N03	7/8	14	22.230	90.0	22	18.00	14.50	4	20.40
E1117/8N09	7/8	14	22.230	90.0	22	18.00	14.50	4	20.40
E1111N03	1"	12	25.400	90.0	22	20.00	16.00	4	23.25
E1111N09	1"	12	25.400	90.0	22	20.00	16.00	4	23.25

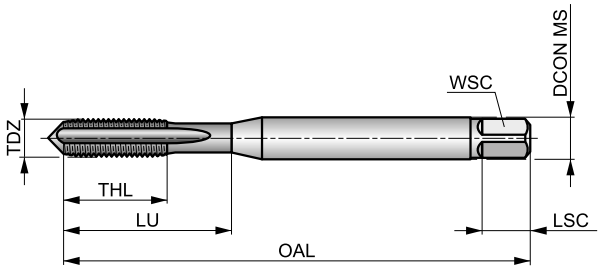
E229

DORMER

HSS-E-PM Straight Flute Machine Tap, UNF, DIN Standard

General purpose straight flute machine tap for through and blind holes. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges. The reinforced shank increases strength against torsional twist.

UNF	DIN 371	2B
	1.5×D	HSS-E PM
C 2-3		R
Bright		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
■11	■12	■12	■9	■8	◪7	■7	◪6	◪4	◪13	◪10	◪8	◪14	◪11

K3.1	K3.2	K4.1	K4.2	K5.1	K5.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N4.2
◪13	◪10	◪12	◪9	◪12	◪10	◪12	◪15	◪14	◪11	◪21	■14	◪8

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
			[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E2292-64	2	64	2.184	45.0	7	2.80	2.10	5	3	1.90	12.00
E2293-56	3	56	2.515	50.0	8	2.80	2.10	5	3	2.15	12.50
E2294-48	4	48	2.845	56.0	9	3.50	2.70	6	3	2.40	18.00
E2295-44	5	44	3.175	56.0	10	3.50	2.70	6	3	2.70	18.00
E2296-40	6	40	3.505	56.0	11	4.00	3.00	6	3	2.95	20.00
E2298-36	8	36	4.166	63.0	12	4.50	3.40	6	3	3.50	21.00
E22910-32	10	32	4.826	70.0	13	6.00	4.90	8	3	4.10	25.00
E22912-28	12	28	5.486	80.0	15	6.00	4.90	8	3	4.70	30.00
E2291/4	1/4	28	6.350	80.0	15	7.00	5.50	8	3	5.50	30.00

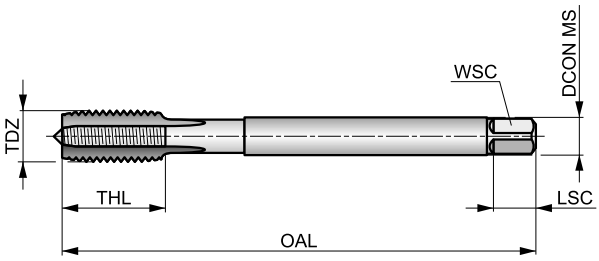
E278

DORMER

HSS-E-PM Straight Flute Machine Tap, UNF, DIN Standard

General purpose straight flute machine tap for through and blind holes. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges. The reduced shank increases the reach of the tap.

UNF	DIN 374	2B
	1.5×D	HSS-E PM
C 2-3		R
Bright		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
■11	■12	■12	■9	■8	◪7	■7	◪6	◪4	◪13	◪10	◪8	◪14	◪11

K3.1	K3.2	K4.1	K4.2	K5.1	K5.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N4.2
◪13	◪10	◪12	◪9	◪12	◪10	◪12	◪15	◪14	◪11	◪21	■14	◪8

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD
			[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
E2785/16	5/16	24	7.940	90.0	18	6.00	4.90	8	3	6.90
E2783/8	3/8	24	9.530	100.0	24	7.00	5.50	8	3	8.50
E2787/16	7/16	20	11.110	100.0	22	9.00	7.00	10	3	9.90
E2781/2	1/2	20	12.700	100.0	21	9.00	7.00	10	3	11.50
E2789/16	9/16	18	14.290	100.0	21	11.00	9.00	12	4	12.90
E2785/8	5/8	18	15.880	100.0	21	12.00	9.00	12	4	14.50
E2783/4	3/4	16	19.050	125.0	25	14.00	11.00	14	4	17.50
E2787/8	7/8	14	22.230	140.0	28	18.00	14.50	17	4	20.40
E2781	1″	12	25.400	140.0	26	18.00	14.50	17	4	23.25
E2781.1/8	1.1/8	12	28.580	150.0	28	22.00	18.00	21	4	26.50
E2781.1/4	1.1/4	12	31.750	150.0	28	25.00	20.00	23	4	29.50
E2781.3/8	1.3/8	12	34.930	170.0	30	28.00	22.00	25	4	32.75
E2781.1/2 [1]	1.1/2	12	38.100	170.0	30	32.00	24.00	27	4	36.00

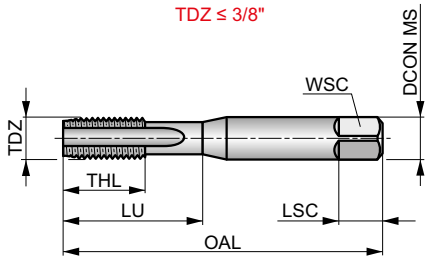
[1] HSS-E.

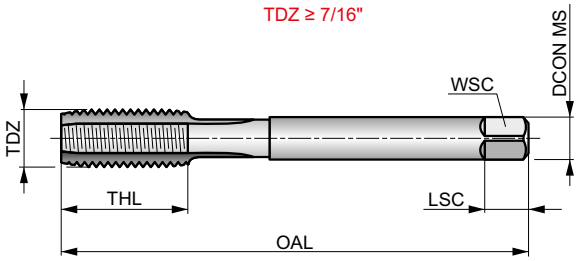
E524

DORMER

HSS Straight Flute Hand Tap, UNF, ISO Standard

A versatile tool, suitable for hand and machine tapping. With a straight flute design for both through and blind holes. Available as a set of three NO6 or as separate taps with taper lead NO1 for short through holes, plug lead NO2 for deeper through holes or bottoming lead NO3 for blind holes.





UNF	ISO 529	2B
	1.5×D	HSS
	R	Bright

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
■7	■7	■8	■6	■5	◪4	■4	◪4	◪3	◪12	◪9	◪7	◪12	◪10

K3.1	K3.2	K4.1	K4.2	K5.1	K5.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.2	N4.3
◪11	◪8	◪10	◪8	◪11	◪9	◪8	◪11	◪10	◪7	■17	■10	◪5	◪5	◪3

Products from this series are also available in set with dies. Please see L120.

Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]	LU [mm]
E5240-80N01	0	80	1.524	41.0	7	2.50	2.00	4	2	1.25	7.00
E5240-80N02	0	80	1.524	41.0	7	2.50	2.00	4	2	1.25	7.00
E5240-80N03	0	80	1.524	41.0	7	2.50	2.00	4	2	1.25	7.00
E5241-72N01	1	72	1.854	41.0	8	2.50	2.00	4	2	1.55	8.00
E5241-72N02	1	72	1.854	41.0	8	2.50	2.00	4	2	1.55	8.00
E5241-72N03	1	72	1.854	41.0	8	2.50	2.00	4	2	1.55	8.00
E5242-64N01	2	64	2.184	44.5	9.5	2.80	2.24	5	3	1.90	9.50
E5242-64N02	2	64	2.184	44.5	9.5	2.80	2.24	5	3	1.90	9.50
E5242-64N03	2	64	2.184	44.5	9.5	2.80	2.24	5	3	1.90	9.50
E5244-48N01	4	48	2.845	48.0	12.5	3.15	2.50	5	3	2.40	12.50
E5244-48N02	4	48	2.845	48.0	12.5	3.15	2.50	5	3	2.40	12.50
E5244-48N03	4	48	2.845	48.0	12.5	3.15	2.50	5	3	2.40	12.50
E5245-44N01	5	44	3.175	48.0	12.5	3.15	2.50	5	3	2.70	12.50
E5245-44N02	5	44	3.175	48.0	12.5	3.15	2.50	5	3	2.70	12.50
E5245-44N03	5	44	3.175	48.0	12.5	3.15	2.50	5	3	2.70	12.50
E5246-40N01	6	40	3.505	50.0	14	3.55	2.80	5	3	2.95	14.00
E5246-40N02	6	40	3.505	50.0	14	3.55	2.80	5	3	2.95	14.00
E5246-40N03	6	40	3.505	50.0	14	3.55	2.80	5	3	2.95	14.00
E5248-36N01	8	36	4.166	53.0	9.5	4.50	3.55	6	3	3.50	17.00
E5248-36N02	8	36	4.166	53.0	9.5	4.50	3.55	6	3	3.50	17.00
E5248-36N03	8	36	4.166	53.0	9.5	4.50	3.55	6	3	3.50	17.00
E52410-32N01	10	32	4.826	58.0	11	5.00	4.00	7	3	4.10	20.00
E52410-32N02	10	32	4.826	58.0	11	5.00	4.00	7	3	4.10	20.00
E52410-32N03	10	32	4.826	58.0	11	5.00	4.00	7	3	4.10	20.00
E52410-32N06	10	32	4.826	58.0	11	5.00	4.00	7	3	4.10	20.00
E52412-28N01	12	28	5.486	62.0	12	5.60	4.50	7	3	4.70	21.00
E52412-28N02	12	28	5.486	62.0	12	5.60	4.50	7	3	4.70	21.00

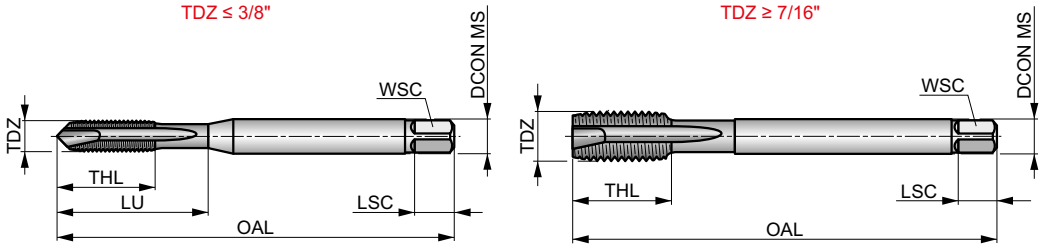
Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
			[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E52412-28N03	12	28	5.486	62.0	12	5.60	4.50	7	3	4.70	21.00
E52412-28N06	12	28	5.486	62.0	12	5.60	4.50	7	3	4.70	21.00
E5241/4N01	1/4	28	6.350	66.0	13	6.30	5.00	8	3	5.50	26.00
E5241/4N02	1/4	28	6.350	66.0	13	6.30	5.00	8	3	5.50	26.00
E5241/4N03	1/4	28	6.350	66.0	13	6.30	5.00	8	3	5.50	26.00
E5241/4N06	1/4	28	6.350	66.0	13	6.30	5.00	8	3	5.50	26.00
E5245/16N01	5/16	24	7.938	72.0	16	8.00	6.30	9	3	6.90	29.00
E5245/16N02	5/16	24	7.938	72.0	16	8.00	6.30	9	3	6.90	29.00
E5245/16N03	5/16	24	7.938	72.0	16	8.00	6.30	9	3	6.90	29.00
E5245/16N06	5/16	24	7.938	72.0	16	8.00	6.30	9	3	6.90	29.00
E5243/8N01	3/8	24	9.525	80.0	18	10.00	8.00	11	3	8.50	32.00
E5243/8N02	3/8	24	9.525	80.0	18	10.00	8.00	11	3	8.50	32.00
E5243/8N03	3/8	24	9.525	80.0	18	10.00	8.00	11	3	8.50	32.00
E5243/8N06	3/8	24	9.525	80.0	18	10.00	8.00	11	3	8.50	32.00
E5247/16N01	7/16	20	11.112	85.0	19	8.00	6.30	9	3	9.90	–
E5247/16N02	7/16	20	11.112	85.0	19	8.00	6.30	9	3	9.90	–
E5247/16N03	7/16	20	11.112	85.0	19	8.00	6.30	9	3	9.90	–
E5247/16N06	7/16	20	11.112	85.0	19	8.00	6.30	9	3	9.90	–
E5241/2N01	1/2	20	12.700	89.0	22	9.00	7.10	10	3	11.50	–
E5241/2N02	1/2	20	12.700	89.0	22	9.00	7.10	10	3	11.50	–
E5241/2N03	1/2	20	12.700	89.0	22	9.00	7.10	10	3	11.50	–
E5241/2N06	1/2	20	12.700	89.0	22	9.00	7.10	10	3	11.50	–
E5249/16N01	9/16	18	14.288	95.0	24	11.20	9.00	12	4	12.90	–
E5249/16N02	9/16	18	14.288	95.0	24	11.20	9.00	12	4	12.90	–
E5249/16N03	9/16	18	14.288	95.0	24	11.20	9.00	12	4	12.90	–
E5249/16N06	9/16	18	14.288	95.0	24	11.20	9.00	12	4	12.90	–
E5245/8N01	5/8	18	15.875	102.0	24	12.50	10.00	13	4	14.50	–
E5245/8N02	5/8	18	15.875	102.0	24	12.50	10.00	13	4	14.50	–
E5245/8N03	5/8	18	15.875	102.0	24	12.50	10.00	13	4	14.50	–
E5245/8N06	5/8	18	15.875	102.0	24	12.50	10.00	13	4	14.50	–
E5243/4N01	3/4	16	19.050	112.0	29	14.00	11.20	14	4	17.50	–
E5243/4N02	3/4	16	19.050	112.0	29	14.00	11.20	14	4	17.50	–
E5243/4N03	3/4	16	19.050	112.0	29	14.00	11.20	14	4	17.50	–
E5243/4N06	3/4	16	19.050	112.0	29	14.00	11.20	14	4	17.50	–
E5247/8N01	7/8	14	22.225	118.0	29	16.00	12.50	16	4	20.40	–
E5247/8N02	7/8	14	22.225	118.0	29	16.00	12.50	16	4	20.40	–
E5247/8N03	7/8	14	22.225	118.0	29	16.00	12.50	16	4	20.40	–
E5247/8N06	7/8	14	22.225	118.0	29	16.00	12.50	16	4	20.40	–
E5241N01	1″	12	25.400	130.0	35	18.00	14.00	18	4	23.25	–
E5241N02	1″	12	25.400	130.0	35	18.00	14.00	18	4	23.25	–
E5241N03	1″	12	25.400	130.0	35	18.00	14.00	18	4	23.25	–
E5241N06	1″	12	25.400	130.0	35	18.00	14.00	18	4	23.25	–
E5241.1/8N01	1.1/8	12	28.575	138.0	35	20.00	16.00	20	4	26.50	–
E5241.1/8N02	1.1/8	12	28.575	138.0	35	20.00	16.00	20	4	26.50	–
E5241.1/8N03	1.1/8	12	28.575	138.0	35	20.00	16.00	20	4	26.50	–
E5241.1/4N01	1.1/4	12	31.750	151.0	41	22.40	18.00	22	4	29.50	–
E5241.1/4N02	1.1/4	12	31.750	151.0	41	22.40	18.00	22	4	29.50	–
E5241.1/4N03	1.1/4	12	31.750	151.0	41	22.40	18.00	22	4	29.50	–
E5241.3/8N01	1.3/8	12	34.925	162.0	47	25.00	20.00	24	4	32.75	–
E5241.3/8N02	1.3/8	12	34.925	162.0	47	25.00	20.00	24	4	32.75	–
E5241.3/8N03	1.3/8	12	34.925	162.0	47	25.00	20.00	24	4	32.75	–
E5241.1/2N01	1.1/2	12	38.100	170.0	47	28.00	22.40	26	4	36.00	–
E5241.1/2N02	1.1/2	12	38.100	170.0	47	28.00	22.40	26	4	36.00	–
E5241.1/2N03	1.1/2	12	38.100	170.0	47	28.00	22.40	26	4	36.00	–

EP30

HSS-E-PM Spiral Point Machine Tap, UNF, DIN Standard

Machine tap with spiral point suited for through holes only. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges.

UNF	DIN 2184-1	2B
	2.5×D	HSS-E PM
C 2-3		R
Bright		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	N1.1	N1.2	N1.3	N2.1	N2.2
■ 22	■ 24	■ 25	■ 18	■ 16	◪ 14	■ 13	◪ 10	◪ 8	■ 14	■ 10	■ 7	■ 28	■ 25

N2.3	N3.1	N3.2	N3.3	N4.1
■ 18	■ 44	◪ 27	■ 13	◪ 22

Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]	LU [mm]
EP308-36	8	36	4.166	63.0	12	4.50	3.40	8	3	3.50	21.00
EP3010-32	10	32	4.826	70.0	13	6.00	4.90	8	3	4.10	25.00
EP301/4	1/4	28	6.350	80.0	15	7.00	5.50	8	3	5.50	30.00
EP305/16	5/16	24	7.938	90.0	18	8.00	6.20	9	3	6.90	35.00
EP303/8	3/8	24	9.525	100.0	20	10.00	8.00	11	3	8.50	39.00
EP307/16	7/16	20	11.112	100.0	20	8.00	6.20	9	3	9.90	–
EP301/2	1/2	20	12.700	110.0	23	9.00	7.00	10	3	11.50	–
EP305/8	5/8	18	15.875	110.0	25	12.00	9.00	12	3	14.50	–
EP303/4	3/4	16	19.050	125.0	30	14.00	11.00	14	4	17.50	–
EP307/8	7/8	14	22.225	140.0	34	18.00	14.50	17	4	20.40	–
EP301	1"	12	25.400	160.0	38	18.00	14.50	17	4	23.25	–

EP31

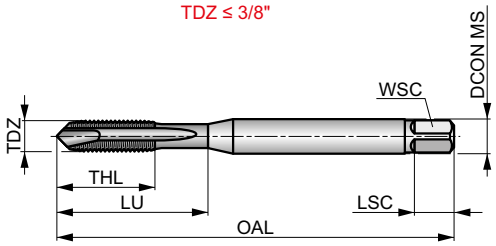
DORMER

HSS-E-PM Spiral Point Machine Tap, UNF, DIN Standard

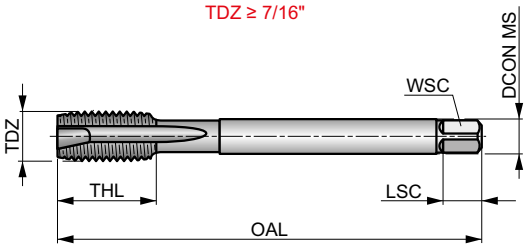
Machine tap with spiral point suited for through holes only. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

UNF	DIN 2184-1	2B
	2.5×D	HSS-E PM
C 2-3		R
ST		

TDZ ≤ 3/8"



TDZ ≥ 7/16"



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P2.2	P2.3	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2	M3.3
◪22	◪16	■14	■10	◪9	■8	◪6	◪10	◪8	◪9	◪7	◪7	◪6	◪5
M4.1	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K3.1**	**K3.2**	**K4.1**	**K4.2**	**K5.1**	**K5.2**		
◪4	◪13	◪10	◪7	◪16	◪13	◪14	◪10	◪13	◪9	◪15	◪11		

Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]	LU [mm]
EP318-36	8	36	4.166	63.0	12	4.50	3.40	8	3	3.50	21.00
EP3110-32	10	32	4.826	70.0	13	6.00	4.90	8	3	4.10	25.00
EP311/4	1/4	28	6.350	80.0	15	7.00	5.50	8	3	5.50	30.00
EP315/16	5/16	24	7.938	90.0	18	8.00	6.20	9	3	6.90	35.00
EP313/8	3/8	24	9.525	100.0	20	10.00	8.00	11	3	8.50	39.00
EP317/16	7/16	20	11.112	100.0	20	8.00	6.20	9	3	9.90	–
EP311/2	1/2	20	12.700	110.0	23	9.00	7.00	10	3	11.50	–
EP315/8	5/8	18	15.875	110.0	25	12.00	9.00	12	3	14.50	–
EP313/4	3/4	16	19.050	125.0	30	14.00	11.00	14	4	17.50	–
EP317/8	7/8	14	22.225	140.0	34	18.00	14.50	17	4	20.40	–
EP311	1"	12	25.400	160.0	38	18.00	14.50	17	4	23.25	–

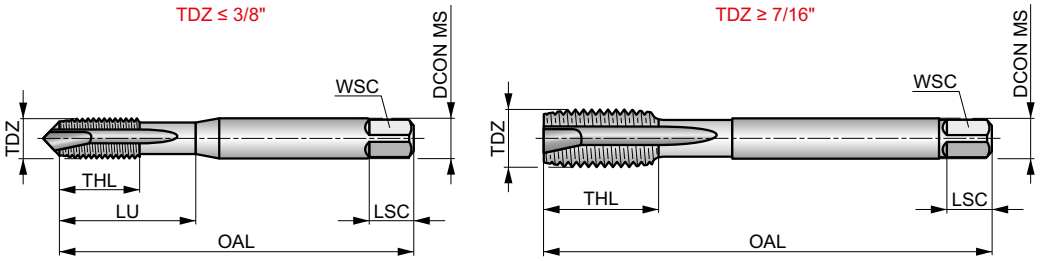
E031

DORMER

HSS-E-PM Spiral Point Machine Tap, UNF, ISO Standard

Machine tap with spiral point suited for through holes only. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

UNF	ISO 529	2B
	2.5×D	HSS-E PM
B 3.5-5		R
ST		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P2.2	P2.3	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2	M3.3
◪22	◪16	■14	■10	◪9	■8	◪6	◪10	◪8	◪9	◪7	◪7	◪6	◪5

M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K3.1	K3.2	K4.1	K4.2	K5.1	K5.2
◪4	◪13	◪10	◪7	◪16	◪13	◪14	◪10	◪13	◪9	◪15	◪11

Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]	LU [mm]
E0318-36	8	36	4.166	53.0	9.5	4.50	3.55	6	3	3.50	17.00
E03110-32	10	32	4.826	58.0	11	5.00	4.00	7	3	4.10	20.00
E0311/4	1/4	28	6.350	66.0	13	6.30	5.00	8	3	5.50	26.00
E0315/16	5/16	24	7.938	72.0	16	8.00	6.30	9	3	6.90	29.00
E0313/8	3/8	24	9.525	80.0	18	10.00	8.00	11	3	8.50	32.00
E0317/16	7/16	20	11.112	85.0	19	8.00	6.30	9	3	9.90	–
E0311/2	1/2	20	12.700	89.0	22	9.00	7.10	10	3	11.50	–
E0319/16	9/16	18	14.288	95.0	24	11.20	9.00	12	3	12.90	–
E0315/8	5/8	18	15.875	102.0	24	12.50	10.00	13	3	14.50	–
E0313/4	3/4	16	19.050	112.0	29	14.00	11.20	14	4	17.50	–
E0317/8	7/8	14	22.225	118.0	29	16.00	12.50	16	4	20.40	–
E0311	1″	12	25.400	130.0	35	18.00	14.00	18	4	23.25	–

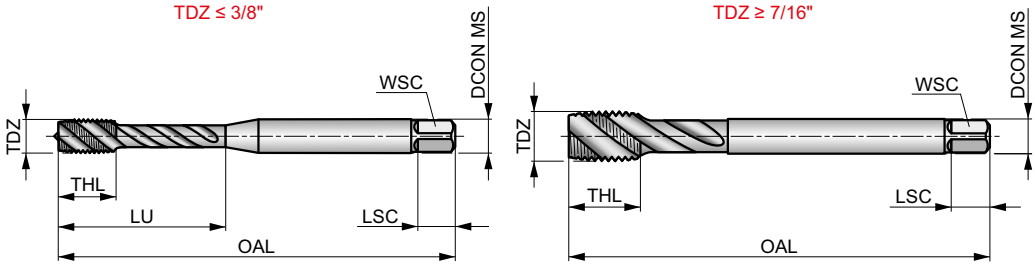
EX30

DORMER

HSS-E-PM Spiral Flute Machine Tap, UNF, DIN Standard

Machine tap with spiral flute suited for blind holes. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges.

UNF	DIN 2184-1	2B
	2.5×D	HSS-E PM
C 2-3		λ 45°
R	Bright	



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3
■21	■23	■24	■17	■15	◪13	■12	◪9	◪7	■13	■9	■6	■27	■24	■17

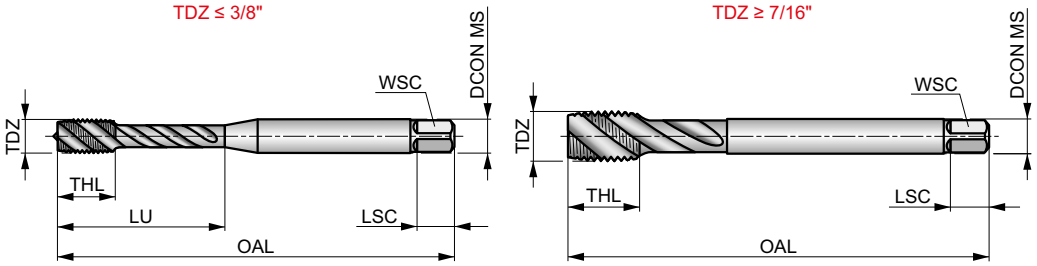
Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]	LU [mm]
EX308-36	8	36	4.166	63.0	7	4.50	3.40	8	3	3.50	21.00
EX3010-32	10	32	4.826	70.0	8	6.00	4.90	8	3	4.10	25.00
EX301/4	1/4	28	6.350	80.0	10	7.00	5.50	8	3	5.50	30.00
EX305/16	5/16	24	7.938	90.0	12	8.00	6.20	9	3	6.90	35.00
EX303/8	3/8	24	9.525	100.0	15	10.00	8.00	11	3	8.50	39.00
EX307/16	7/16	20	11.112	100.0	15	8.00	6.20	9	3	9.90	–
EX301/2	1/2	20	12.700	110.0	18	9.00	7.00	10	3	11.50	–
EX305/8	5/8	18	15.875	110.0	20	12.00	9.00	12	4	14.50	–
EX303/4	3/4	16	19.050	125.0	25	14.00	11.00	14	4	17.50	–
EX307/8	7/8	14	22.225	140.0	25	18.00	14.50	17	4	20.40	–
EX301	1"	12	25.400	160.0	30	18.00	14.50	17	4	23.25	–

EX31

DORMER

HSS-E-PM Spiral Flute Machine Tap, UNF, DIN Standard

Machine tap with spiral flute suited for blind holes. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.



UNF	DIN 2184-1	2B
	2.5×D	HSS-E PM
C 2-3		λ 45°
R	ST	

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P2.2	P2.3	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2	M3.3	M4.1
◪21	◪15	■13	■9	◪8	■7	◪5	◪8	◪6	◪7	◪5	◪5	◪4	◪3	◪3

Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]	LU [mm]
EX318-36	8	36	4.166	63.0	7	4.50	3.40	8	3	3.50	21.00
EX3110-32	10	32	4.826	70.0	8	6.00	4.90	8	3	4.10	25.00
EX311/4	1/4	28	6.350	80.0	10	7.00	5.50	8	3	5.50	30.00
EX315/16	5/16	24	7.938	90.0	12	8.00	6.20	9	3	6.90	35.00
EX313/8	3/8	24	9.525	100.0	15	10.00	8.00	11	3	8.50	39.00
EX317/16	7/16	20	11.112	100.0	15	8.00	6.20	9	3	9.90	–
EX311/2	1/2	20	12.700	110.0	18	9.00	7.00	10	3	11.50	–
EX315/8	5/8	18	15.875	110.0	20	12.00	9.00	12	4	14.50	–
EX313/4	3/4	16	19.050	125.0	25	14.00	11.00	14	4	17.50	–
EX317/8	7/8	14	22.225	140.0	25	18.00	14.50	17	4	20.40	–
EX311	1″	12	25.400	160.0	30	18.00	14.50	17	4	23.25	–

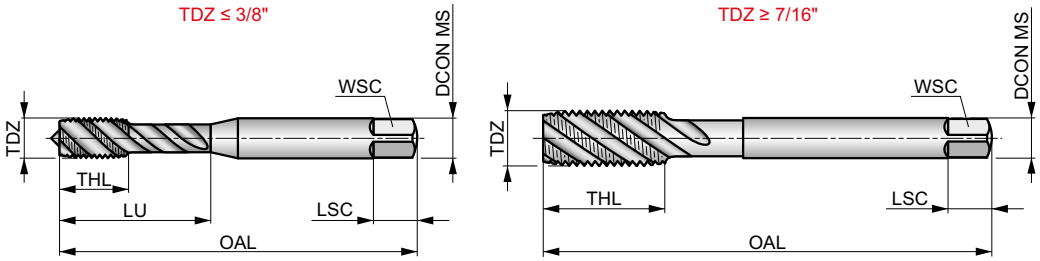
E033

DORMER

HSS-E-PM Spiral Flute Machine Tap, UNF, ISO Standard

Machine tap with spiral flute suited for blind holes. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

UNF	ISO 529	2B
	2.5×D	HSS-E PM
C 2-3		λ 45°
R	ST	



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P2.2	P2.3	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2	M3.3	M4.1
◪21	◪15	■13	■9	◪8	■7	◪5	◪8	◪6	◪7	◪5	◪5	◪4	◪3	◪3

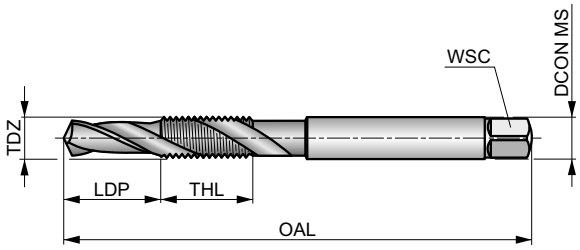
Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]	LU [mm]
E0338-36	8	36	4.166	53.0	7	4.50	3.55	6	3	3.50	17.00
E03310-32	10	32	4.826	58.0	8	5.00	4.00	7	3	4.10	20.00
E0331/4	1/4	28	6.350	66.0	10	6.30	5.00	8	3	5.50	28.00
E0335/16	5/16	24	7.938	72.0	12	8.00	6.30	9	3	6.90	31.00
E0333/8	3/8	24	9.525	80.0	15	10.00	8.00	11	3	8.50	34.00
E0337/16	7/16	20	11.112	85.0	19	8.00	6.30	9	3	9.90	–
E0331/2	1/2	20	12.700	89.0	22	9.00	7.10	10	3	11.50	–
E0339/16	9/16	18	14.288	95.0	24	11.20	9.00	12	3	12.90	–
E0335/8	5/8	18	15.875	102.0	24	12.50	10.00	13	4	14.50	–
E0333/4	3/4	16	19.050	112.0	29	14.00	11.20	14	4	17.50	–
E0337/8	7/8	14	22.225	118.0	29	16.00	12.50	16	4	20.40	–
E0331	1″	12	25.400	130.0	35	18.00	14.00	18	4	23.25	–

E654

DORMER

HSS Drill-Tap Combination Tool with 30° Spiral Flute, UNF, DIN Standard

Combination of a core-hole drill and tap to produce a thread in one pass. This significantly reduces the time needed to produce the thread on site with the use of a hand-held power tool. There is no need for a tap wrench or tool change. Steam tempered surface acts to retain the lubricant and provide smoother cutting.



UNF	DIN DORMER	Medium
	1.5×D	HSS
C 2-3		λ 30°
R	ST	

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	N1.2	N1.3	N3.1	N3.2	N4.1
■ 18	■ 20	■ 22	■ 20	◪ 18	◪ 15	◪ 12	◪ 14	◪ 9	◪ 20	◪ 15	◪ 25

Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	LDP [mm]	DCON MS [mm]	WSC [mm]	NOF
E6548-36	8	36	3.500	64.0	13	8.00	4.50	3.55	2
E65410-32	10	32	4.100	72.0	16	10.00	5.00	4.00	2
E65412-28	12	28	4.700	77.0	17	11.00	5.60	4.50	2
E6541/4	1/4	28	5.500	83.0	19	13.00	6.30	5.00	2
E6545/16	5/16	24	6.900	94.0	22	16.00	8.00	6.30	2
E6543/8	3/8	24	8.500	104.0	24	19.00	10.00	8.00	2
E6547/16	7/16	20	9.900	107.0	25	22.00	8.00	6.30	2
E6541/2	1/2	20	11.500	114.0	29	25.00	9.00	7.10	2
E6545/8	5/8	18	14.500	134.0	32	32.00	12.50	10.00	2

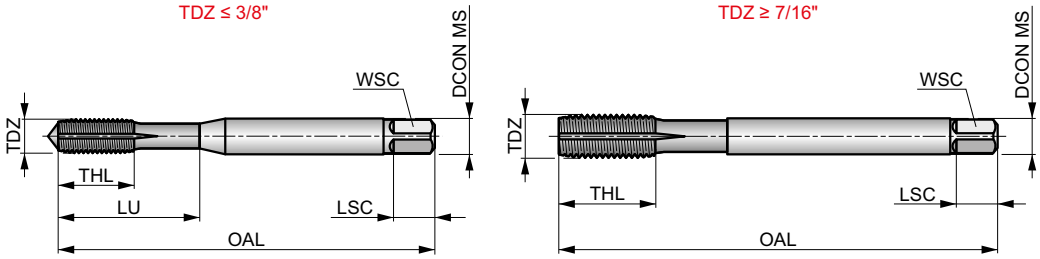
E286

DORMER

HSS-E Thread Forming TiN Coated Tap, Oil-Grooves, UNF, DIN Standard

High performance fluteless tap for blind and through holes. Provide strong, clean, chip-free and accurate threads with excellent tolerance. Highly versatile for steel, stainless steel and non-ferrous metal. TiN coated for higher cutting speeds and extend tool life. With oil-grooves for better lubrication in deep holes.

UNF	DIN 2184-1	2BX
	3.5×D	HSS-E
C 2-3.5		R
TiN		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■45	■51	■51	◪51	■45	◪40	■29	■24	■20	■18	■15	■25	■21	■22
M2.2	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.3**
■18	◪15	■17	■15	■14	■10	■55	■41	■28	■62	■55	■40	◪40	◪12

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
			[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E2864-48	4	48	2.845	56.0	9	3.50	2.70	6	4	2.60	18.00
E2866-40	6	40	3.505	56.0	11	4.00	3.00	6	4	3.20	20.00
E2868-36	8	36	4.166	63.0	12	4.50	3.40	6	5	3.90	21.00
E28610-32	10	32	4.826	70.0	13	6.00	4.90	8	5	4.50	25.00
E2861/4	1/4	28	6.350	80.0	15	7.00	5.50	8	5	6.00	30.00
E2865/16	5/16	24	7.938	90.0	18	8.00	6.20	9	5	7.50	35.00
E2863/8	3/8	24	9.525	100.0	20	10.00	8.00	11	5	9.10	39.00
E2867/16	7/16	20	11.112	100.0	20	8.00	6.20	9	5	10.60	–
E2861/2	1/2	20	12.700	100.0	21	9.00	7.00	10	5	12.10	–

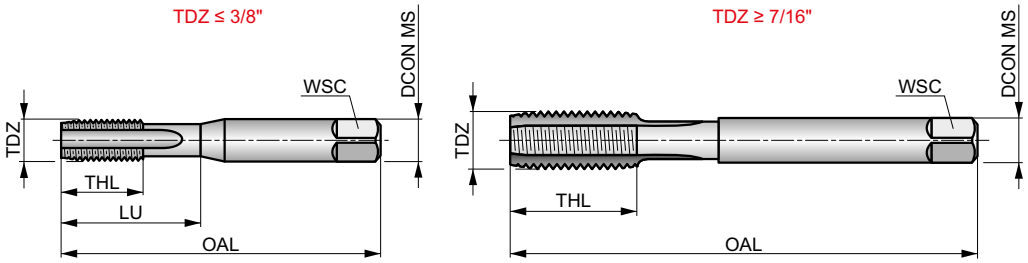
E570

DORMER

HSS Straight Flute Hand Tap, UN, ISO Standard

A versatile tool, suitable for machine and also hand tapping. With a straight flute design and bottoming lead for blind and through holes.

UN	ISO 529	2B
	1.5×D	HSS
C 2-3		R
Bright		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
■7	■7	■8	■6	■5	◪4	■4	◪4	◪3	◪12	◪9	◪7	◪12	◪10
K3.1	**K3.2**	**K4.1**	**K4.2**	**K5.1**	**K5.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.2**
◪11	◪8	◪10	◪8	◪11	◪9	◪8	◪11	◪10	◪7	■17	■10	◪5	◪5
N4.3													
◪3													

Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	NOF	PHD [mm]	LU [mm]
E5701/4X32NO3	1/4	32	6.350	66.0	13	6.30	5.00	3	5.60	26.00
E5701/4X36NO3	1/4	36	6.350	66.0	13	6.30	5.00	3	5.70	26.00
E5701/4X40NO3	1/4	40	6.350	66.0	13	6.30	5.00	3	5.70	26.00
E5705/16X32NO3	5/16	32	7.938	72.0	16	8.00	6.30	3	7.20	29.00
E5703/8X32NO3	3/8	32	9.525	80.0	18	10.00	8.00	3	8.80	32.00
E5707/16X24NO3	7/16	24	11.112	85.0	19	8.00	6.30	3	10.00	–
E5707/16X28NO3	7/16	28	11.112	85.0	19	8.00	6.30	3	10.20	–
E5701/2X28NO3	1/2	28	12.700	89.0	22	9.00	7.10	3	11.80	–
E5709/16X24NO3	9/16	24	14.288	95.0	24	11.20	9.00	4	13.25	–
E5705/8X24NO3	5/8	24	15.875	102.0	24	12.50	10.00	4	14.80	–
E5703/4X20NO3	3/4	20	19.050	112.0	29	14.00	11.20	4	17.80	–
E5707/8X20NO3	7/8	20	22.225	118.0	30	16.00	12.50	4	21.00	–
E5701X14NO3	1″	14	25.400	130.0	36	18.00	14.00	4	23.50	–
E5701.1/16X12NO3	1.1/16	12	26.988	127.0	37	20.00	16.00	4	24.75	–
E5701.1/8X8NO3	1.1/8	8	28.575	138.0	35	20.00	16.00	4	25.50	–
E5701.3/16X12NO3	1.3/16	12	30.163	137.0	37	22.40	18.00	4	28.00	–
E5701.1/4X8NO3	1.1/4	8	31.750	151.0	41	22.40	18.00	4	28.50	–
E5701.5/16X12NO3	1.5/16	12	33.338	137.0	37	22.40	18.00	4	31.25	–

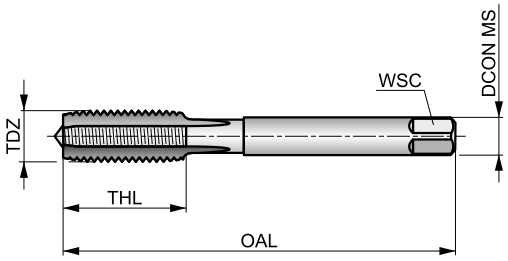
E115

DORMER

HSS Straight Flute Serial Hand Tap, BSW, DIN352 Standard

Ideal for hand tapping tough materials. The straight flute design makes it ideal for both through and blind holes. Available as a single finishing tap or as a set of three serial taps, which should be used one after the other to create the full thread.

BSW	DIN 351	Medium
	1.5×D	HSS
C 2-3		R
Bright		



Workpiece material group suitability.

P1.1 ■	P1.2 ■	P1.3 ■	P2.1 ■	P2.2 ■	P2.3 ◪	P3.1 ■	P3.2 ◪	P4.1 ◪	K1.1 ◪	K1.2 ◪	K1.3 ◪	K2.1 ◪	K2.2 ◪
K3.1 ◪	K3.2 ◪	K4.1 ◪	K4.2 ◪	K5.1 ◪	K5.2 ◪	N1.1 ■	N1.2 ■	N1.3 ■	N2.1 ■	N2.2 ■	N2.3 ■	N3.1 ■	N3.2 ■
N3.3 ■	N4.2 ■	N4.3 ■											

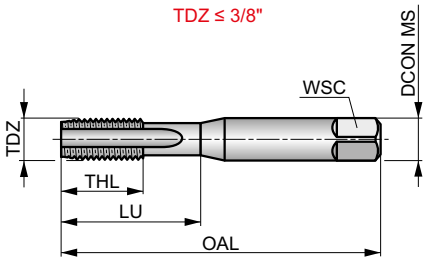
Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	NOF	PHD [mm]
E1151/8N03	1/8	40	3.175	40.0	10	3.50	2.70	3	2.55
E1151/8N08	1/8	40	3.175	40.0	10	3.50	2.70	3	2.55
E1155/32N03	5/32	32	3.969	45.0	12	4.50	3.40	3	3.20
E1155/32N08	5/32	32	3.969	45.0	12	4.50	3.40	3	3.20
E1153/16N03	3/16	24	4.763	50.0	16	5.50	4.30	3	3.70
E1153/16N08	3/16	24	4.763	50.0	16	5.50	4.30	3	3.70
E1151/4N03	1/4	20	6.350	56.0	17	6.00	4.90	3	5.10
E1151/4N08	1/4	20	6.350	56.0	17	6.00	4.90	3	5.10
E1155/16N03	5/16	18	7.938	63.0	25	6.00	4.90	3	6.50
E1155/16N08	5/16	18	7.938	63.0	25	6.00	4.90	3	6.50
E1153/8N03	3/8	16	9.525	70.0	22	7.00	5.50	3	7.90
E1153/8N08	3/8	16	9.525	70.0	22	7.00	5.50	3	7.90
E1157/16N03	7/16	14	11.113	75.0	30	8.00	6.20	3	9.20
E1157/16N08	7/16	14	11.113	75.0	30	8.00	6.20	3	9.20
E1151/2N03	1/2	12	12.700	80.0	30	9.00	7.00	3	10.50
E1151/2N08	1/2	12	12.700	80.0	30	9.00	7.00	3	10.50
E1159/16N03	9/16	12	14.288	80.0	30	11.00	9.00	4	12.00
E1159/16N08	9/16	12	14.288	80.0	30	11.00	9.00	4	12.00
E1155/8N03	5/8	11	15.875	90.0	36	12.00	9.00	4	13.50
E1155/8N08	5/8	11	15.875	90.0	36	12.00	9.00	4	13.50
E1153/4N03	3/4	10	19.050	105.0	40	14.00	11.00	4	16.50
E1153/4N08	3/4	10	19.050	105.0	40	14.00	11.00	4	16.50
E1157/8N03	7/8	9	22.225	110.0	45	18.00	14.50	4	19.25
E1157/8N08	7/8	9	22.225	110.0	45	18.00	14.50	4	19.25
E1151N03	1″	8	25.400	110.0	50	20.00	16.00	4	22.00
E1151N08	1″	8	25.400	110.0	50	20.00	16.00	4	22.00

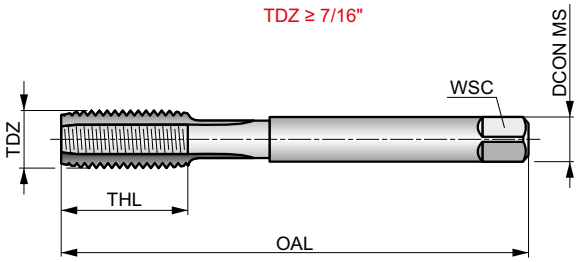
E531

DORMER

HSS Straight Flute Hand Tap, BSW, ISO Standard

A versatile tool, suitable for hand and machine tapping, with a straight flute design for both through and blind holes. Available as a set of three NO6 or as separate taps with taper lead NO1 for short through holes, plug lead NO2 for deeper through holes or bottoming lead NO3 for blind holes.





BSW	ISO 529	Medium
	1.5×D	HSS
	R	Bright

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
■7	■7	■8	■6	■5	◪4	■4	◪4	◪3	◪12	◪9	◪7	◪12	◪10

K3.1	K3.2	K4.1	K4.2	K5.1	K5.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.2	N4.3
◪11	◪8	◪10	◪8	◪11	◪9	◪8	◪11	◪10	◪7	■17	■10	◪5	◪5	◪3

Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	NOF	PHD [mm]	LU [mm]
E5311/8N01	1/8	40	3.175	48.0	12.5	3.15	2.50	3	2.55	12.50
E5311/8N02	1/8	40	3.175	48.0	12.5	3.15	2.50	3	2.55	12.50
E5311/8N03	1/8	40	3.175	48.0	12.5	3.15	2.50	3	2.55	12.50
E5311/8N06	1/8	40	3.175	48.0	12.5	3.15	2.50	3	2.55	12.50
E5315/32N01	5/32	32	3.969	53.0	14	4.00	3.15	3	3.20	14.00
E5315/32N02	5/32	32	3.969	53.0	14	4.00	3.15	3	3.20	14.00
E5315/32N03	5/32	32	3.969	53.0	14	4.00	3.15	3	3.20	14.00
E5315/32N06	5/32	32	3.969	53.0	14	4.00	3.15	3	3.20	14.00
E5313/16N01	3/16	24	4.763	58.0	11	5.00	4.00	3	3.70	20.00
E5313/16N02	3/16	24	4.763	58.0	11	5.00	4.00	3	3.70	20.00
E5313/16N03	3/16	24	4.763	58.0	11	5.00	4.00	3	3.70	20.00
E5313/16N06	3/16	24	4.763	58.0	11	5.00	4.00	3	3.70	20.00
E5311/4N01	1/4	20	6.350	66.0	13	6.30	5.00	3	5.10	26.00
E5311/4N02	1/4	20	6.350	66.0	13	6.30	5.00	3	5.10	26.00
E5311/4N03	1/4	20	6.350	66.0	13	6.30	5.00	3	5.10	26.00
E5311/4N06	1/4	20	6.350	66.0	13	6.30	5.00	3	5.10	26.00
E5315/16N01	5/16	18	7.938	72.0	16	8.00	6.30	3	6.50	29.00
E5315/16N02	5/16	18	7.938	72.0	16	8.00	6.30	3	6.50	29.00
E5315/16N03	5/16	18	7.938	72.0	16	8.00	6.30	3	6.50	29.00
E5315/16N06	5/16	18	7.938	72.0	16	8.00	6.30	3	6.50	29.00
E5313/8N01	3/8	16	9.525	80.0	18	10.00	8.00	3	7.90	32.00
E5313/8N02	3/8	16	9.525	80.0	18	10.00	8.00	3	7.90	32.00
E5313/8N03	3/8	16	9.525	80.0	18	10.00	8.00	3	7.90	32.00
E5313/8N06	3/8	16	9.525	80.0	18	10.00	8.00	3	7.90	32.00
E5317/16N01	7/16	14	11.112	85.0	19	8.00	6.30	3	9.20	–
E5317/16N02	7/16	14	11.112	85.0	19	8.00	6.30	3	9.20	–
E5317/16N03	7/16	14	11.112	85.0	19	8.00	6.30	3	9.20	–
E5317/16N06	7/16	14	11.112	85.0	19	8.00	6.30	3	9.20	–

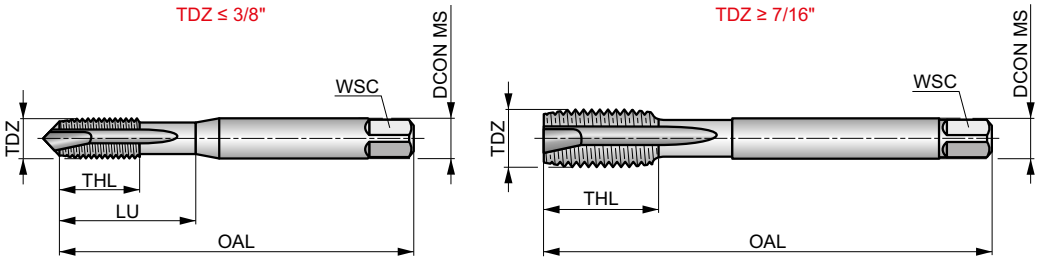
Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	NOF	PHD	LU
			[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E5311/2N01	1/2	12	12.700	89.0	22	9.00	7.10	3	10.50	–
E5311/2N02	1/2	12	12.700	89.0	22	9.00	7.10	3	10.50	–
E5311/2N03	1/2	12	12.700	89.0	22	9.00	7.10	3	10.50	–
E5311/2N06	1/2	12	12.700	89.0	22	9.00	7.10	3	10.50	–
E5315/8N01	5/8	11	15.875	102.0	24	12.50	10.00	4	13.50	–
E5315/8N02	5/8	11	15.875	102.0	24	12.50	10.00	4	13.50	–
E5315/8N03	5/8	11	15.875	102.0	24	12.50	10.00	4	13.50	–
E5315/8N06	5/8	11	15.875	102.0	24	12.50	10.00	4	13.50	–
E5313/4N01	3/4	10	19.050	112.0	29	14.00	11.20	4	16.50	–
E5313/4N02	3/4	10	19.050	112.0	29	14.00	11.20	4	16.50	–
E5313/4N03	3/4	10	19.050	112.0	29	14.00	11.20	4	16.50	–
E5313/4N06	3/4	10	19.050	112.0	29	14.00	11.20	4	16.50	–
E5311N01	1″	8	25.400	130.0	35	18.00	14.00	4	22.00	–
E5311N02	1″	8	25.400	130.0	35	18.00	14.00	4	22.00	–
E5311N03	1″	8	25.400	130.0	35	18.00	14.00	4	22.00	–
E5311N06	1″	8	25.400	130.0	35	18.00	14.00	4	22.00	–

E534

DORMER

HSS Spiral Point Machine Tap, BSW, ISO Standard

Machine tap with spiral point suited for through holes only. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.



BSW	ISO 529	Medium
	2.5×D	HSS
B 3.5-5		R
ST		

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2
■11	◪12	◪14	◪9	■8	■7	◪8	■6	■5	◪4	■7	◪6	◪6	◪5
M3.1	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K3.1**	**K3.2**	**K4.1**	**K4.2**	**K5.1**
■5	◪4	◪3	◪2	◪9	◪6	◪4	◪12	◪9	◪10	◪6	◪9	◪5	◪11
K5.2													
◪7													

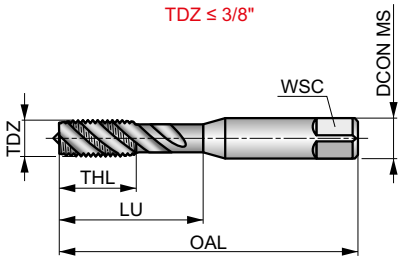
Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	NOF	PHD [mm]	LU [mm]
E5341/8	1/8	40	3.175	48.0	12.5	3.15	2.50	3	2.55	12.50
E5345/32	5/32	32	3.969	53.0	14	4.00	3.15	3	3.20	14.00
E5343/16	3/16	24	4.763	58.0	11	5.00	4.00	3	3.70	20.00
E5341/4	1/4	20	6.350	66.0	13	6.30	5.00	3	5.10	26.00
E5345/16	5/16	18	7.938	72.0	16	8.00	6.30	3	6.50	29.00
E5343/8	3/8	16	9.525	80.0	18	10.00	8.00	3	7.90	32.00
E5347/16	7/16	14	11.112	85.0	19	8.00	6.30	3	9.20	–
E5341/2	1/2	12	12.700	89.0	22	9.00	7.10	3	10.50	–
E5345/8	5/8	11	15.875	102.0	24	12.50	10.00	3	13.50	–
E5343/4	3/4	10	19.050	112.0	29	14.00	11.20	4	16.50	–

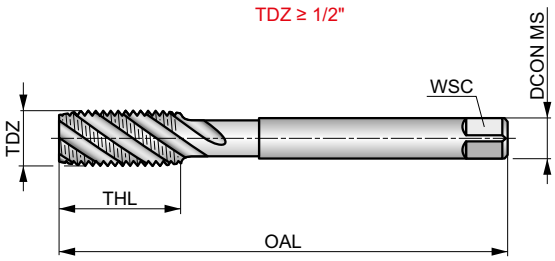
E533

DORMER

HSS Spiral Flute Machine Tap, BSW, ISO Standard

Machine tap with spiral flute suited for blind holes. Available with bright finish to produce more accurate and cleaner threads, preventing the workpiece material from sticking to the cutting edges or BLUE finish with steam tempered surface, which acts to retain cutting fluid and prevent chip to tool welding.





BSW	ISO 529	Medium
2×D		HSS
C 2-3		λ 40°
R	Bright ST	

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■10	■11	■13	■8	■7	■6	■7	■5	◪4	■4	◪3	■6	◪5	◪4

M2.2	M2.3	M3.1	M3.2	M3.3	M4.1	N1.3	N2.1	N2.2	N2.3
◪5	◪5	■5	◪4	◪3	◪2	◪5	◪12	◪10	◪8

Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	NOF	PHD [mm]	LU [mm]
E5331/8 [1]	1/8	40	3.175	48.0	12.5	3.15	2.50	3	2.55	12.50
E5331/8BLUE	1/8	40	3.175	48.0	12.5	3.15	2.50	3	2.55	12.50
E5333/16 [1]	3/16	24	4.763	58.0	11	5.00	4.00	3	3.70	20.00
E5333/16BLUE	3/16	24	4.763	58.0	11	5.00	4.00	3	3.70	20.00
E5331/4 [1]	1/4	20	6.350	66.0	13	6.30	5.00	3	5.10	26.00
E5331/4BLUE	1/4	20	6.350	66.0	13	6.30	5.00	3	5.10	26.00
E5335/16 [1]	5/16	18	7.938	72.0	16	8.00	6.30	3	6.50	31.00
E5335/16BLUE	5/16	18	7.938	72.0	16	8.00	6.30	3	6.50	31.00
E5333/8 [1]	3/8	16	9.525	80.0	18	10.00	8.00	3	7.90	34.00
E5333/8BLUE	3/8	16	9.525	80.0	18	10.00	8.00	3	7.90	34.00
E5331/2 [1]	1/2	12	12.700	89.0	22	9.00	7.10	3	10.50	–
E5331/2BLUE	1/2	12	12.700	89.0	22	9.00	7.10	3	10.50	–
E5335/8 [1]	5/8	11	15.875	102.0	24	12.50	10.00	3	13.50	–
E5335/8BLUE	5/8	11	15.875	102.0	24	12.50	10.00	3	13.50	–
E5333/4 [1]	3/4	10	19.050	112.0	29	14.00	11.20	3	16.50	–
E5333/4BLUE	3/4	10	19.050	112.0	29	14.00	11.20	3	16.50	–

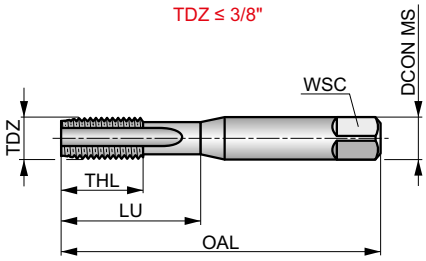
[1] Bright Finish.

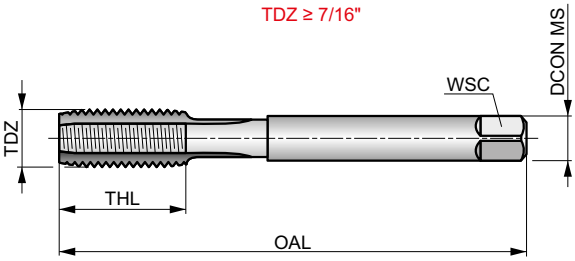
E536

DORMER

HSS Straight Flute Hand Tap, BSF, ISO Standard

A versatile tool, suitable for hand and machine tapping, with a straight flute design for both through and blind holes. Available as a set of three N06 or as separate taps with taper lead N01 for short through holes, plug lead N02 for deeper through holes or bottoming lead N03 for blind holes.





BSF	ISO 529	Medium
	1.5×D	HSS
	R	Bright

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
■7	■7	■8	■6	■5	◪4	■4	◪4	◪3	◪12	◪9	◪7	◪12	◪10

K3.1	K3.2	K4.1	K4.2	K5.1	K5.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.2	N4.3
◪11	◪8	◪10	◪8	◪11	◪9	◪8	◪11	◪10	◪7	■17	■10	◪5	◪5	◪3

Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	NOF	PHD [mm]	LU [mm]
E5363/16N01	3/16	32	4.760	58.0	12	5.00	4.00	3	4.00	20.00
E5363/16N02	3/16	32	4.760	58.0	12	5.00	4.00	3	4.00	20.00
E5363/16N03	3/16	32	4.760	58.0	12	5.00	4.00	3	4.00	20.00
E5363/16N06	3/16	32	4.760	58.0	12	5.00	4.00	3	4.00	20.00
E5361/4N01	1/4	26	6.350	66.0	14	6.30	5.00	3	5.30	26.00
E5361/4N02	1/4	26	6.350	66.0	14	6.30	5.00	3	5.30	26.00
E5361/4N03	1/4	26	6.350	66.0	14	6.30	5.00	3	5.30	26.00
E5361/4N06	1/4	26	6.350	66.0	14	6.30	5.00	3	5.30	26.00
E5365/16N01	5/16	22	7.940	72.0	18	8.00	6.30	3	6.80	29.00
E5365/16N02	5/16	22	7.940	72.0	18	8.00	6.30	3	6.80	29.00
E5365/16N03	5/16	22	7.940	72.0	18	8.00	6.30	3	6.80	29.00
E5365/16N06	5/16	22	7.940	72.0	18	8.00	6.30	3	6.80	29.00
E5363/8N01	3/8	20	9.530	80.0	20	10.00	8.00	3	8.30	32.00
E5363/8N02	3/8	20	9.530	80.0	20	10.00	8.00	3	8.30	32.00
E5363/8N03	3/8	20	9.530	80.0	20	10.00	8.00	3	8.30	32.00
E5363/8N06	3/8	20	9.530	80.0	20	10.00	8.00	3	8.30	32.00
E5367/16N01	7/16	18	11.110	85.0	20	8.00	6.30	3	9.70	–
E5367/16N02	7/16	18	11.110	85.0	20	8.00	6.30	3	9.70	–
E5367/16N03	7/16	18	11.110	85.0	20	8.00	6.30	3	9.70	–
E5361/2N01	1/2	16	12.700	89.0	23	9.00	7.10	3	11.00	–
E5361/2N02	1/2	16	12.700	89.0	23	9.00	7.10	3	11.00	–
E5361/2N03	1/2	16	12.700	89.0	23	9.00	7.10	3	11.00	–
E5361/2N06	1/2	16	12.700	89.0	23	9.00	7.10	3	11.00	–
E5369/16N01	9/16	16	14.280	95.0	25	11.20	9.00	4	12.70	–
E5369/16N02	9/16	16	14.280	95.0	25	11.20	9.00	4	12.70	–
E5369/16N03	9/16	16	14.280	95.0	25	11.20	9.00	4	12.70	–
E5365/8N01	5/8	14	15.880	102.0	25	12.50	10.00	4	14.00	–
E5365/8N02	5/8	14	15.880	102.0	25	12.50	10.00	4	14.00	–

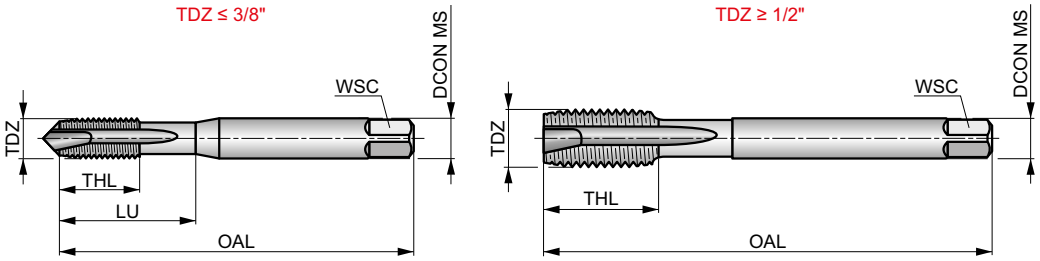
Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	NOF	PHD	LU
			[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E5365/8N03	5/8	14	15.880	102.0	25	12.50	10.00	4	14.00	–
E5363/4N01	3/4	12	19.050	112.0	30	14.00	11.20	4	17.00	–
E5363/4N02	3/4	12	19.050	112.0	30	14.00	11.20	4	17.00	–
E5363/4N03	3/4	12	19.050	112.0	30	14.00	11.20	4	17.00	–
E5367/8N01	7/8	11	22.230	118.0	30	16.00	12.50	4	19.75	–
E5367/8N02	7/8	11	22.230	118.0	30	16.00	12.50	4	19.75	–
E5367/8N03	7/8	11	22.230	118.0	30	16.00	12.50	4	19.75	–
E5367/8N06	7/8	11	22.230	118.0	30	16.00	12.50	4	19.75	–
E5361N01	1″	10	25.400	130.0	36	18.00	14.00	4	22.75	–
E5361N02	1″	10	25.400	130.0	36	18.00	14.00	4	22.75	–
E5361N03	1″	10	25.400	130.0	36	18.00	14.00	4	22.75	–

E539

DORMER

HSS Spiral Point Machine Tap, BSF, ISO Standard

Machine tap with spiral point suited for through holes only. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.



BSF	ISO 529	Medium
	2.5×D	HSS
B 3.5-5		R
ST		

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2
◪11	◪12	◪14	◪9	◪8	■7	◪8	■6	■5	◪4	■7	■6	◪6	◪5
M3.1	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K3.1**	**K3.2**	**K4.1**	**K4.2**	**K5.1**
■5	◪4	◪3	◪2	◪9	◪6	◪4	◪12	◪9	◪10	◪6	◪9	◪5	◪11
K5.2													
◪7													

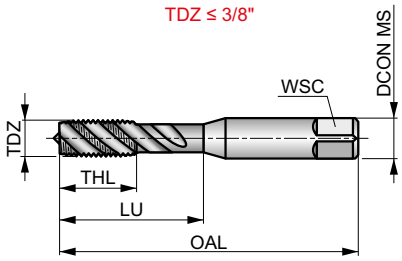
Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	NOF	PHD [mm]	LU [mm]
E5391/4	1/4	26	6.350	66.0	14	6.30	5.00	3	5.30	26.00
E5395/16	5/16	22	7.940	72.0	18	8.00	6.30	3	6.80	29.00
E5393/8	3/8	20	9.530	80.0	20	10.00	8.00	3	8.30	32.00
E5391/2	1/2	16	12.700	89.0	23	9.00	7.10	3	11.00	–

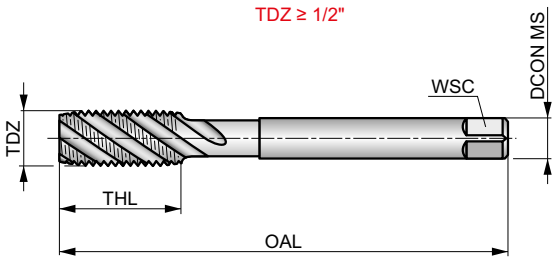
E538

DORMER

HSS Spiral Flute Machine Tap, BSF, ISO Standard

Machine tap with spiral flute suited for blind holes. Available with bright finish to produce more accurate and cleaner threads, preventing the workpiece material from sticking to the cutting edges or BLUE finish with steam tempered surface, which acts to retain cutting fluid and prevent chip to tool welding.





BSF	ISO 529	Medium
2×D		HSS
C 2-3		λ 40°
R	Bright ST	

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■10	■11	■13	■8	■7	■6	■7	■5	◪4	■4	◪3	■6	◪5	◪4

M2.2	M2.3	M3.1	M3.2	M3.3	M4.1	N1.3	N2.1	N2.2	N2.3
◪5	◪5	■5	◪4	◪3	◪2	◪5	◪12	◪10	◪8

Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	NOF	PHD [mm]	LU [mm]
E5381/4 [1]	1/4	26	6.350	66.0	13	6.30	5.00	3	5.30	26.00
E5381/4BLUE	1/4	26	6.350	66.0	13	6.30	5.00	3	5.30	26.00
E5385/16 [1]	5/16	22	7.938	72.0	16	8.00	6.30	3	6.80	31.00
E5385/16BLUE	5/16	22	7.938	72.0	16	8.00	6.30	3	6.80	31.00
E5383/8 [1]	3/8	20	9.525	80.0	18	10.00	8.00	3	8.30	34.00
E5383/8BLUE	3/8	20	9.525	80.0	18	10.00	8.00	3	8.30	34.00
E5381/2 [1]	1/2	16	12.700	89.0	22	9.00	7.10	3	11.00	–
E5381/2BLUE	1/2	16	12.700	89.0	22	9.00	7.10	3	11.00	–

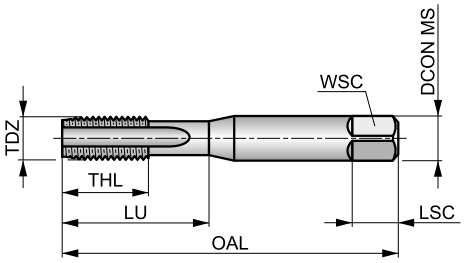
[1] Bright Finish.

E542

DORMER

HSS Straight Flute Hand Tap, BA, ISO Standard

A versatile tool, suitable for hand and machine tapping, with a straight flute design for both through and blind holes. Available as a set of three NO6 or as separate taps with taper lead NO1 for short through holes, plug lead NO2 for deeper through holes or bottoming lead NO3 for blind holes.



BA	ISO 529	Normal
	1.5×D	HSS
	R	Bright

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
■7	■7	■8	■6	■5	◪4	■4	◪4	◪3	◪12	◪9	◪7	◪12	◪10
K3.1	**K3.2**	**K4.1**	**K4.2**	**K5.1**	**K5.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.2**
◪11	◪8	◪10	◪8	◪11	◪9	◪8	◪11	◪10	◪7	■17	■10	◪5	◪5
N4.3													
◪3													

Product	TDZ	TP [mm]	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]	LU [mm]
E542BA10NO1	BA10	0.35	1.700	41.0	7	2.50	2.00	4	2	1.30	7.00
E542BA10NO2	BA10	0.35	1.700	41.0	7	2.50	2.00	4	2	1.30	7.00
E542BA10NO3	BA10	0.35	1.700	41.0	7	2.50	2.00	4	2	1.30	7.00
E542BA10NO6	BA10	0.35	1.700	41.0	7	2.50	2.00	4	2	1.30	7.00
E542BA8NO1	BA 8	0.43	2.200	44.5	9.5	2.80	2.20	5	3	1.80	9.50
E542BA8NO2	BA 8	0.43	2.200	44.5	9.5	2.80	2.20	5	3	1.80	9.50
E542BA8NO3	BA 8	0.43	2.200	44.5	9.5	2.80	2.20	5	3	1.80	9.50
E542BA8NO6	BA 8	0.43	2.200	44.5	9.5	2.80	2.20	5	3	1.80	9.50
E542BA6NO1	BA 6	0.53	2.800	44.5	9.5	2.80	2.20	5	3	2.30	9.50
E542BA6NO2	BA 6	0.53	2.800	44.5	9.5	2.80	2.20	5	3	2.30	9.50
E542BA6NO3	BA 6	0.53	2.800	44.5	9.5	2.80	2.20	5	3	2.30	9.50
E542BA6NO6	BA 6	0.53	2.800	44.5	9.5	2.80	2.20	5	3	2.30	9.50
E542BA5NO1	BA 5	0.59	3.200	48.0	14.5	3.15	2.50	5	3	2.65	14.50
E542BA5NO2	BA 5	0.59	3.200	48.0	14.5	3.15	2.50	5	3	2.65	14.50
E542BA5NO3	BA 5	0.59	3.200	48.0	14.5	3.15	2.50	5	3	2.65	14.50
E542BA5NO6	BA 5	0.59	3.200	48.0	14.5	3.15	2.50	5	3	2.65	14.50
E542BA4NO1	BA 4	0.66	3.600	50.0	16.5	3.55	2.80	5	3	3.00	16.50
E542BA4NO2	BA 4	0.66	3.600	50.0	16.5	3.55	2.80	5	3	3.00	16.50
E542BA4NO3	BA 4	0.66	3.600	50.0	16.5	3.55	2.80	5	3	3.00	16.50
E542BA4NO6	BA 4	0.66	3.600	50.0	16.5	3.55	2.80	5	3	3.00	16.50
E542BA3NO1	BA 3	0.73	4.100	53.0	10	4.50	3.50	6	3	3.40	17.00
E542BA3NO2	BA 3	0.73	4.100	53.0	10	4.50	3.50	6	3	3.40	17.00
E542BA3NO3	BA 3	0.73	4.100	53.0	10	4.50	3.50	6	3	3.40	17.00
E542BA3NO6	BA 3	0.73	4.100	53.0	10	4.50	3.50	6	3	3.40	17.00
E542BA2NO1	BA 2	0.81	4.700	58.0	12	5.00	4.00	7	3	4.00	20.00
E542BA2NO2	BA 2	0.81	4.700	58.0	12	5.00	4.00	7	3	4.00	20.00
E542BA2NO3	BA 2	0.81	4.700	58.0	12	5.00	4.00	7	3	4.00	20.00
E542BA2NO6	BA 2	0.81	4.700	58.0	12	5.00	4.00	7	3	4.00	20.00

Product	TDZ	TP	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E542BA0N01	BA 0	1.00	6.000	66.0	14	6.30	5.00	8	3	5.10	26.00
E542BA0N02	BA 0	1.00	6.000	66.0	14	6.30	5.00	8	3	5.10	26.00
E542BA0N03	BA 0	1.00	6.000	66.0	14	6.30	5.00	8	3	5.10	26.00
E542BA0N06	BA 0	1.00	6.000	66.0	14	6.30	5.00	8	3	5.10	26.00

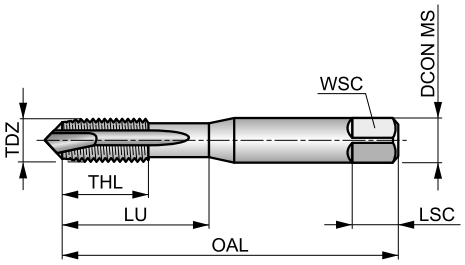
E545

DORMER

HSS Spiral Point Machine Tap, BA, ISO Standard

Machine tap with spiral point suited for through holes only. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

BA	ISO 529	Normal
	2.5×D	HSS
B 3.5-5		R
ST		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2
◪11	◪12	◪14	◪9	◪8	■7	◪8	■6	■5	◪4	■7	■6	◪4	◪5

M3.1	M3.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K3.1	K3.2	K4.1	K4.2	K5.1	K5.2
■5	◪4	◪3	◪2	◪9	◪6	◪4	◪12	◪9	◪10	◪6	◪9	◪5	◪11	◪7

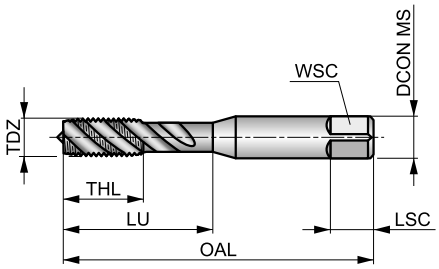
Product	TDZ	TP [mm]	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]	LU [mm]
E545BA10	BA10	0.35	1.700	41.0	7	2.50	2.00	4	2	1.30	7.00
E545BA8	BA 8	0.43	2.200	44.5	9.5	2.80	2.20	5	3	1.80	9.50
E545BA6	BA 6	0.53	2.800	44.5	9.5	2.80	2.20	5	3	2.30	9.50
E545BA4	BA 4	0.66	3.600	50.0	16.5	3.55	2.80	5	3	3.00	16.50
E545BA2	BA 2	0.81	4.700	58.0	12	5.00	4.00	7	3	4.00	20.00

E544

DORMER

HSS Spiral Flute Machine Tap, BA, ISO Standard

Machine tap with spiral flute suited for blind holes. Available with bright finish to produce more accurate and cleaner threads, preventing the workpiece material from sticking to the cutting edges or BLUE finish with steam tempered surface, which acts to retain cutting fluid and prevent chip to tool welding.



BA	ISO 529	Normal
	2×D	HSS
C 2-3		λ 40°
R	Bright ST	

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■10	■11	■13	■8	■7	■6	■7	■5	◪4	■4	◪3	■6	◪5	◪4

M2.2	M2.3	M3.1	M3.2	M3.3	M4.1	N1.3	N2.1	N2.2	N2.3
◪5	◪5	■5	◪4	◪3	◪2	◪5	◪12	◪10	◪8

Product	TDZ	TP	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E544BA8 [1]	BA 8	0.43	2.200	44.5	9.5	2.80	2.20	5	2	1.80	9.50
E544BA8BLUE	BA 8	0.43	2.200	44.5	9.5	2.80	2.20	5	2	1.80	9.50
E544BA6 [1]	BA 6	0.53	2.800	44.5	9.5	2.80	2.20	5	2	2.30	9.50
E544BA6BLUE	BA 6	0.53	2.800	44.5	9.5	2.80	2.20	5	2	2.30	9.50
E544BA4 [1]	BA 4	0.66	3.600	50.0	16.5	3.55	2.80	5	3	3.00	16.50
E544BA4BLUE	BA 4	0.66	3.600	50.0	16.5	3.55	2.80	5	3	3.00	16.50
E544BA2 [1]	BA 2	0.81	4.700	58.0	12	5.00	4.00	7	3	4.00	20.00
E544BA2BLUE	BA 2	0.81	4.700	58.0	12	5.00	4.00	7	3	4.00	20.00

[1] Bright Finish.

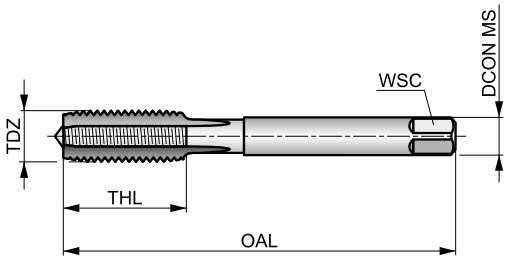
E119

DORMER

HSS Straight Flute Serial Hand Tap, G(BSP), DIN Standard

Ideal for hand tapping tough materials. The straight flute design makes it ideal for both through and blind holes. Available as a single finishing tap or as a set of two serial taps, which should be used one after the other to create the full thread.

G	DIN 5157	Normal
	1.5×D	HSS
C 2-3		R
Bright		



Workpiece material group suitability.

P1.1 ■	P1.2 ■	P1.3 ■	P2.1 ■	P2.2 ■	P2.3 ◪	P3.1 ■	P3.2 ◪	P4.1 ◪	K1.1 ◪	K1.2 ◪	K1.3 ◪	K2.1 ◪	K2.2 ◪
K3.1 ◪	K3.2 ◪	K4.1 ◪	K4.2 ◪	K5.1 ◪	K5.2 ◪	N1.1 ■	N1.2 ■	N1.3 ■	N2.1 ■	N2.2 ■	N2.3 ■	N3.1 ■	N3.2 ■
N3.3 ■	N4.2 ■	N4.3 ■											

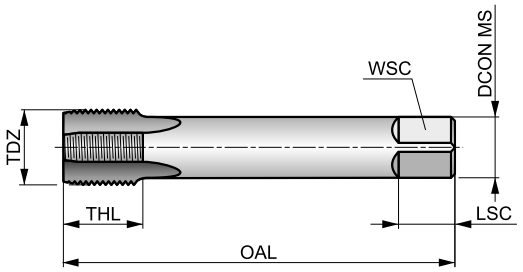
Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	NOF	PHD [mm]
E1191/8N03	1/8	28	9.730	63.0	15	7.00	5.50	3	8.80
E1191/8N09	1/8	28	9.730	63.0	15	7.00	5.50	3	8.80
E1191/4N03	1/4	19	13.160	70.0	16	11.00	9.00	4	11.80
E1191/4N09	1/4	19	13.160	70.0	16	11.00	9.00	4	11.80
E1193/8N03	3/8	19	16.660	70.0	16	12.00	9.00	4	15.25
E1193/8N09	3/8	19	16.660	70.0	16	12.00	9.00	4	15.25
E1191/2N03	1/2	14	20.960	80.0	18	16.00	12.00	4	19.00
E1191/2N09	1/2	14	20.960	80.0	18	16.00	12.00	4	19.00
E1195/8N03	5/8	14	22.910	80.0	22	18.00	14.50	4	21.00
E1195/8N09	5/8	14	22.910	80.0	22	18.00	14.50	4	21.00
E1193/4N03	3/4	14	26.440	90.0	22	20.00	16.00	4	24.50
E1193/4N09	3/4	14	26.440	90.0	22	20.00	16.00	4	24.50
E1197/8N03	7/8	14	30.200	90.0	22	22.00	18.00	6	28.25
E1197/8N09	7/8	14	30.200	90.0	22	22.00	18.00	6	28.25
E1191N03	1″	11	33.250	100.0	25	25.00	20.00	6	30.75
E1191N09	1″	11	33.250	100.0	25	25.00	20.00	6	30.75
E1191.1/8N03	1.1/8	11	37.900	125.0	40	28.00	22.00	6	35.00
E1191.1/8N09	1.1/8	11	37.900	125.0	40	28.00	22.00	6	35.00
E1191.1/4N03	1.1/4	11	41.910	125.0	40	32.00	24.00	6	39.50
E1191.1/4N09	1.1/4	11	41.910	125.0	40	32.00	24.00	6	39.50
E1191.1/2N03	1.1/2	11	47.800	140.0	40	36.00	29.00	6	45.00
E1191.1/2N09	1.1/2	11	47.800	140.0	40	36.00	29.00	6	45.00
E1191.3/4N03	1.3/4	11	53.750	140.0	40	40.00	32.00	6	51.00
E1191.3/4N09	1.3/4	11	53.750	140.0	40	40.00	32.00	6	51.00
E1192N03	2″	11	59.610	160.0	40	45.00	35.00	6	57.00
E1192N09	2″	11	59.610	160.0	40	45.00	35.00	6	57.00
E1192.1/4N03	2.1/4	11	65.710	160.0	40	50.00	39.00	6	63.00
E1192.1/4N09	2.1/4	11	65.710	160.0	40	50.00	39.00	6	63.00

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	NOF	PHD
			[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
E1192.1/2N03	2.1/2	11	75.180	160.0	40	50.00	39.00	6	72.50
E1192.1/2N09	2.1/2	11	75.180	160.0	40	50.00	39.00	6	72.50
E1192.3/4N03	2.3/4	11	81.530	160.0	40	50.00	39.00	8	79.00
E1192.3/4N09	2.3/4	11	81.530	160.0	40	50.00	39.00	8	79.00
E1193N03	3″	11	87.880	160.0	40	50.00	39.00	8	85.50
E1193N09	3″	11	87.880	160.0	40	50.00	39.00	8	85.50

E282

HSS-E-PM Straight Flute Machine Tap G(BSP), DIN Standard

General purpose straight flute machine tap for through and blind holes. Bright finish to produce more accurate and cleaner threads, preventing the workpiece material from sticking to the cutting edges. The reduced shank increases the reach of the tap.



G	DIN 5156	Normal
	1.5×D	HSS-E PM
C 2-3		R
Bright		

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
■11	■12	■12	■9	■8	◪7	■7	◪6	◪4	◪13	◪10	◪8	◪14	◪11

K3.1	K3.2	K4.1	K4.2	K5.1	K5.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N4.2
◪13	◪10	◪12	◪9	◪12	◪10	◪12	◪15	◪14	◪11	◪21	■14	◪8

Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]
E2821/8	1/8	28	9.730	90.0	20	7.00	5.50	8	3	8.80
E2821/4	1/4	19	13.160	100.0	21	11.00	9.00	12	4	11.80
E2823/8	3/8	19	16.660	100.0	21	12.00	9.00	12	4	15.25
E2821/2	1/2	14	20.960	125.0	24	16.00	12.00	15	4	19.00
E2823/4	3/4	14	26.440	140.0	28	20.00	16.00	19	4	24.50
E2821	1″	11	33.250	160.0	30	25.00	20.00	23	4	30.75
E2821.1/4 [1]	1.1/4	11	41.910	170.0	30	32.00	24.00	27	4	39.50
E2821.1/2 [1]	1.1/2	11	47.800	190.0	32	36.00	29.00	32	6	45.00

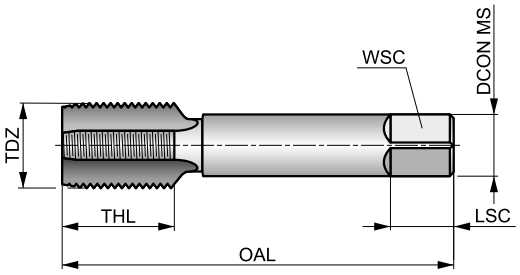
[1] HSS-E.

E547

DORMER

HSS Straight Flute Hand Tap G(BSP), ISO Standard

A versatile tool, suitable for hand and machine tapping, with a straight flute design for both through and blind holes. Available with taper lead N01 for short through holes, plug lead N02 for deeper through holes or bottoming lead N03 for blind holes. Also, as set N07 with a plug lead and bottoming lead tap.



G	ISO 2284	Normal
	1.5×D	HSS
	R	Bright

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
■7	■7	■8	■6	■5	◪4	■4	◪4	◪3	◪12	◪9	◪7	◪12	◪10

K3.1	K3.2	K4.1	K4.2	K5.1	K5.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.2	N4.3
◪11	◪8	◪10	◪8	◪11	◪9	◪8	◪11	◪10	◪7	◪17	◪10	◪5	◪5	◪3

Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]
E5471/8N01	1/8	28	9.728	59.0	15	8.00	8.00	9	4	8.80
E5471/8N02	1/8	28	9.728	59.0	15	8.00	6.30	9	4	8.80
E5471/8N03	1/8	28	9.728	59.0	15	8.00	6.30	9	4	8.80
E5471/8N07	1/8	28	9.728	59.0	15	8.00	6.30	9	4	8.80
E5471/4N01	1/4	19	13.157	67.0	19	10.00	8.00	11	4	11.80
E5471/4N02	1/4	19	13.157	67.0	19	10.00	8.00	11	4	11.80
E5471/4N03	1/4	19	13.157	67.0	19	10.00	8.00	11	4	11.80
E5471/4N07	1/4	19	13.157	67.0	19	10.00	8.00	11	4	11.80
E5473/8N01	3/8	19	16.662	75.0	21	12.50	10.00	13	4	15.25
E5473/8N02	3/8	19	16.662	75.0	21	12.50	10.00	13	4	15.25
E5473/8N03	3/8	19	16.662	75.0	21	12.50	10.00	13	4	15.25
E5473/8N07	3/8	19	16.662	75.0	21	12.50	10.00	13	4	15.25
E5471/2N01	1/2	14	20.955	87.0	26	16.00	12.50	16	4	19.00
E5471/2N02	1/2	14	20.955	87.0	26	16.00	12.50	16	4	19.00
E5471/2N03	1/2	14	20.955	87.0	26	16.00	12.50	16	4	19.00
E5471/2N07	1/2	14	20.955	87.0	26	16.00	12.50	16	4	19.00
E5475/8N01	5/8	14	22.911	91.0	26	18.00	14.00	18	4	21.00
E5475/8N02	5/8	14	22.911	91.0	26	18.00	14.00	18	4	21.00
E5475/8N03	5/8	14	22.911	91.0	26	18.00	14.00	18	4	21.00
E5475/8N07	5/8	14	22.911	91.0	26	18.00	14.00	18	4	21.00
E5473/4N01	3/4	14	26.441	96.0	28	20.00	16.00	20	4	24.50
E5473/4N02	3/4	14	26.441	96.0	28	20.00	16.00	20	4	24.50
E5473/4N03	3/4	14	26.441	96.0	28	20.00	16.00	20	4	24.50
E5473/4N07	3/4	14	26.441	96.0	28	20.00	16.00	20	4	24.50
E5477/8N01	7/8	14	30.201	102.0	29	22.40	18.00	22	4	28.25
E5477/8N02	7/8	14	30.201	102.0	29	22.40	18.00	22	4	28.25
E5477/8N03	7/8	14	30.201	102.0	29	22.40	18.00	22	4	28.25
E5471N01	1"	11	33.249	109.0	33	25.00	20.00	24	4	30.75

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD
			[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
E5471N02	1″	11	33.249	109.0	33	25.00	20.00	24	4	30.75
E5471N03	1″	11	33.249	109.0	33	25.00	20.00	24	4	30.75
E5471.1/4N01	1.1/4	11	41.910	119.0	36	31.50	25.00	28	6	39.50
E5471.1/4N02	1.1/4	11	41.910	119.0	36	31.50	25.00	28	6	39.50
E5471.1/4N03	1.1/4	11	41.910	119.0	36	31.50	25.00	28	6	39.50
E5471.1/2N01	1.1/2	11	47.803	125.0	37	35.50	28.00	31	6	45.00
E5471.1/2N02	1.1/2	11	47.803	125.0	37	35.50	28.00	31	6	45.00
E5471.1/2N03	1.1/2	11	47.803	125.0	37	35.50	28.00	31	6	45.00
E5472N01	2″	11	59.614	140.0	41	40.00	31.50	34	6	57.00
E5472N02	2″	11	59.614	140.0	41	40.00	31.50	34	6	57.00
E5472N03	2″	11	59.614	140.0	41	40.00	31.50	34	6	57.00

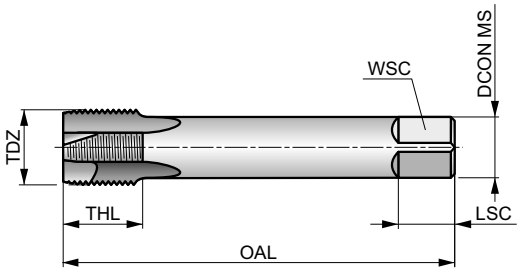
EP40

DORMER

HSS-E-PM Spiral Point Machine Tap G(BSP), DIN Standard

Machine tap with spiral point suited for through holes only. Bright finish to produce more accurate and cleaner threads, preventing the workpiece material from sticking to the cutting edges. The reduced shank increases the reach of the tap.

G	DIN 5156	Normal
	2.5×D	HSS-E PM
B 3.5-5		R
Bright		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	N1.1	N1.2	N1.3	N2.1	N2.2
■ 22	■ 24	■ 25	■ 18	■ 16	◪ 14	■ 13	◪ 10	◪ 8	■ 14	■ 10	■ 7	■ 28	■ 25

N2.3	N3.1	N3.2	N3.3	N4.1
■ 18	■ 44	◪ 27	■ 13	◪ 22

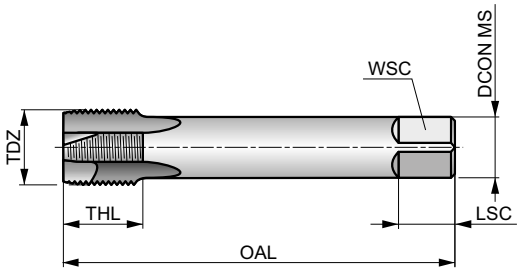
Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD
			[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
EP401/8	1/8	28	9.728	90.0	18	7.00	5.50	8	3	8.80
EP401/4	1/4	19	13.157	100.0	21	11.00	9.00	12	3	11.80
EP403/8	3/8	19	16.662	100.0	21	12.00	9.00	12	4	15.25
EP401/2	1/2	14	20.955	125.0	24	16.00	12.00	15	4	19.00
EP405/8	5/8	14	22.911	125.0	24	18.00	14.50	17	4	21.00
EP403/4	3/4	14	26.441	140.0	28	20.00	16.00	19	4	24.50
EP407/8	7/8	14	30.201	150.0	28	22.00	18.00	21	4	28.25
EP401	1"	11	33.249	160.0	30	25.00	20.00	23	4	30.75

EP41

DORMER

HSS-E-PM Spiral Point Machine Tap, G(BSP), DIN Standard

Machine tap with spiral point suited for through holes only. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding. The reduced shank increases the reach of the tap.



G	DIN 5156	Normal
	2.5×D	HSS-E PM
B 3.5-5		
ST		

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P2.2	P2.3	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2	M3.3
◪22	◪16	■14	■10	◪9	■8	◪6	◪10	◪8	◪9	◪7	◪7	◪6	◪5

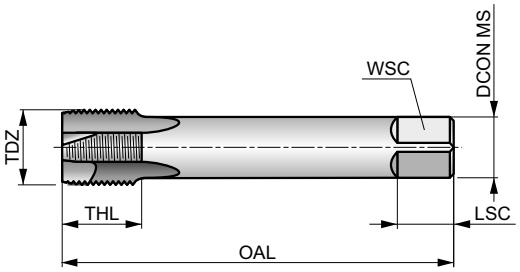
M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K3.1	K3.2	K4.1	K4.2	K5.1	K5.2
◪4	◪13	◪10	◪7	◪16	◪13	◪14	◪10	◪13	◪9	◪15	◪11

Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]
EP411/8	1/8	28	9.728	90.0	18	7.00	5.50	8	3	8.80
EP411/4	1/4	19	13.157	100.0	21	11.00	9.00	12	3	11.80
EP413/8	3/8	19	16.662	100.0	21	12.00	9.00	12	4	15.25
EP411/2	1/2	14	20.955	125.0	24	16.00	12.00	15	4	19.00
EP415/8	5/8	14	22.911	125.0	24	18.00	14.50	17	4	21.00
EP413/4	3/4	14	26.441	140.0	28	20.00	16.00	19	4	24.50
EP417/8	7/8	14	30.201	150.0	28	22.00	18.00	21	4	28.25
EP411	1″	11	33.249	160.0	30	25.00	20.00	23	4	30.75

E041

HSS-E-PM Spiral Point Machine Tap, G(BSP), ISO Standard

Machine tap with spiral point suited for through holes only. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding. The reduced shank increases the reach of the tap.



G	ISO DORMER	Normal
	2.5×D	HSS-E PM
B 3.5-5		R
ST		

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P2.2	P2.3	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2	M3.3
◪22	◪16	■14	■10	◪9	■8	◪6	◪10	◪8	◪9	◪7	◪7	◪6	◪5

M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K3.1	K3.2	K4.1	K4.2	K5.1	K5.2
◪4	◪13	◪10	◪7	◪16	◪13	◪14	◪10	◪13	◪9	◪15	◪11

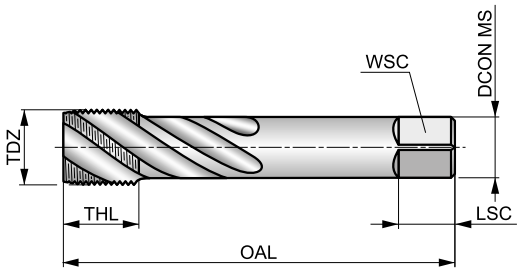
Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD
			[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
E0411/8	1/8	28	9.728	90.0	15	8.00	6.30	9	3	8.80
E0411/4	1/4	19	13.157	100.0	19	10.00	8.00	11	3	11.80
E0413/8	3/8	19	16.662	100.0	21	12.50	10.00	13	3	15.25
E0411/2	1/2	14	20.955	125.0	26	16.00	12.50	16	4	19.00
E0413/4	3/4	14	26.441	140.0	28	20.00	16.00	20	4	24.50

EX40

DORMER

HSS-E-PM Spiral Flute Machine Tap, UNC, DIN Standard

Machine tap with spiral flute suited for blind holes. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges.



G	DIN 5156	Normal
	2.5×D	HSS-E PM
C 2-3		λ 45°
R	Bright	

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3
■ 21	■ 23	■ 24	■ 17	■ 15	◪ 13	■ 12	◪ 9	◪ 7	■ 13	■ 9	■ 6	■ 27	■ 24	■ 17

Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]
EX401/8	1/8	28	9.728	90.0	13	7.00	5.50	8	3	8.80
EX401/4	1/4	19	13.157	100.0	15	11.00	9.00	12	3	11.80
EX403/8	3/8	19	16.662	100.0	15	12.00	9.00	12	4	15.25
EX401/2	1/2	14	20.955	125.0	18	16.00	12.00	15	4	19.00
EX405/8	5/8	14	22.911	125.0	18	18.00	14.50	17	4	21.00
EX403/4	3/4	14	26.441	140.0	20	20.00	16.00	19	4	24.50
EX407/8	7/8	14	30.201	150.0	20	22.00	18.00	21	4	28.25
EX401	1″	11	33.249	160.0	22	25.00	20.00	23	4	30.75
EX401.1/8	1.1/8	11	37.897	170.0	22	28.00	22.00	25	4	35.00
EX401.1/4 [1]	1.1/4	11	41.910	170.0	22	32.00	24.00	27	4	39.50
EX401.1/2 [1]	1.1/2	11	47.803	190.0	23	36.00	29.00	32	4	45.00

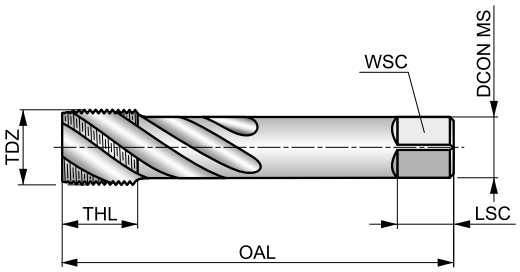
[1] HSS-E.

EX41

DORMER

HSS-E-PM Spiral Flute Machine Tap, G(BSP), DIN Standard

Machine tap with spiral flute suited for blind holes. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding. The reduced shank increases the reach of the tap.



G	DIN 5156	Normal
	2.5×D	HSS-E PM
C 2-3		λ 45°
R	ST	

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P2.2	P2.3	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2	M3.3	M4.1
◪21	◪15	■13	■9	◪8	■7	◪5	◪8	◪6	◪7	◪5	◪5	◪4	◪3	◪3

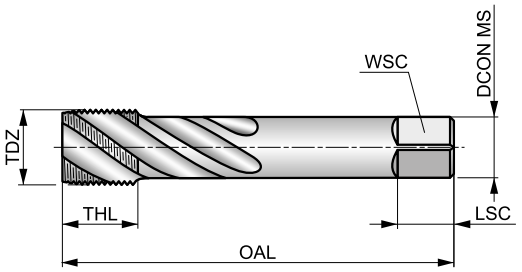
Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD
			[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
EX411/8	1/8	28	9.728	90.0	13	7.00	5.50	8	3	8.80
EX411/4	1/4	19	13.157	100.0	15	11.00	9.00	12	3	11.80
EX413/8	3/8	19	16.662	100.0	15	12.00	9.00	12	4	15.25
EX411/2	1/2	14	20.955	125.0	18	16.00	12.00	15	4	19.00
EX415/8	5/8	14	22.911	125.0	18	18.00	14.50	17	4	21.00
EX413/4	3/4	14	26.441	140.0	20	20.00	16.00	19	4	24.50
EX417/8	7/8	14	30.201	150.0	20	22.00	18.00	21	4	28.25
EX411	1″	11	33.249	160.0	22	25.00	20.00	23	4	30.75
EX411.1/8	1.1/8	11	37.897	170.0	22	28.00	22.00	25	4	35.00
EX411.1/4 [1]	1.1/4	11	41.910	170.0	22	32.00	24.00	27	4	39.50
EX411.1/2 [1]	1.1/2	11	47.803	190.0	23	36.00	29.00	32	4	45.00

[1] HSS-E.

E043

HSS-E-PM Spiral Flute Machine tap, G(BSP), ISO Standard

Machine tap with spiral flute suited for blind holes. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding. The reduced shank increases the reach of the tap.



G	ISO DORMER	Normal
	2.5×D	HSS-E PM
C 2-3		λ 45°
R	ST	

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P2.2	P2.3	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2	M3.3	M4.1
◪21	◪15	■13	■9	◪8	■7	◪5	◪8	◪6	◪7	◪5	◪5	◪4	◪3	◪3

Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]
E0431/8	1/8	28	9.728	90.0	15	8.00	6.30	9	3	8.80
E0431/4	1/4	19	13.157	100.0	19	10.00	8.00	11	3	11.80
E0433/8	3/8	19	16.662	100.0	21	12.50	10.00	13	4	15.25
E0431/2	1/2	14	20.955	125.0	26	16.00	12.50	16	4	19.00
E0433/4	3/4	14	26.441	140.0	28	20.00	16.00	20	4	24.50

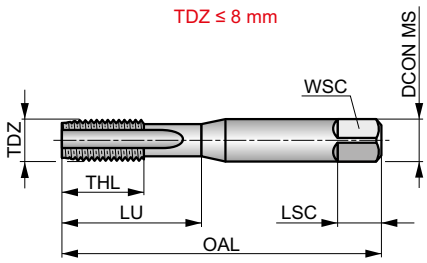
E620

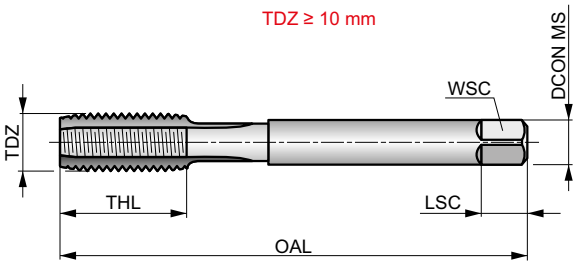
DORMER

HSS Straight Flute Machine Tap, Metric for Helicoil Insert, ISO Standard

General purpose straight flute machine tap for through and blind holes. Bright finish to produce more accurate and cleaner threads for Screw-Thread-Inserts. These STIs are inserted into the threaded hole, produced with this tap, to reinforce the original thread or repair damaged ones.

EGM	ISO DORMER	6H
LU	1.5×D	HSS
C 2-3		R
Bright		





Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
■7	■7	■8	■6	■5	◪4	■4	◪4	◪3	◪12	◪9	◪7	◪12	◪10

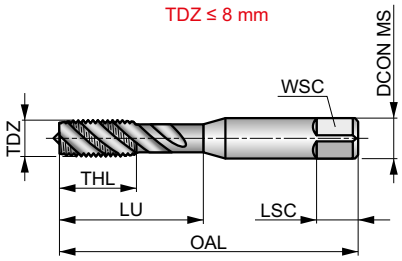
K3.1	K3.2	K4.1	K4.2	K5.1	K5.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.2	N4.3
◪11	◪8	◪10	◪8	◪11	◪9	◪8	◪11	◪10	◪7	■17	■10	◪5	◪5	◪3

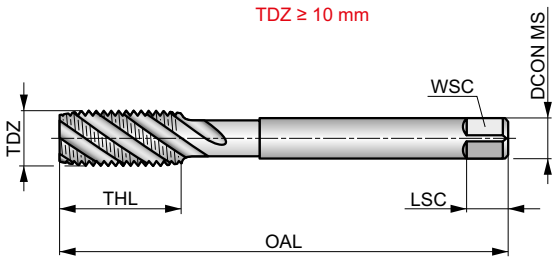
Product	TDZ	TP	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
E620M3	3	0.50	3.650	53.0	14	4.00	3.15	6	3	3.20	14.00
E620M4	4	0.70	4.910	58.0	11	5.00	4.00	7	3	4.20	20.00
E620M5	5	0.80	6.040	66.0	13	6.30	5.00	8	3	5.20	26.00
E620M6	6	1.00	7.300	72.0	16	8.00	6.30	9	3	6.30	29.00
E620M8	8	1.25	9.620	80.0	18	10.00	8.00	11	3	8.40	32.00
E620M10	10	1.50	11.950	89.0	22	9.00	7.10	10	3	10.50	–
E620M12	12	1.75	14.270	95.0	24	11.20	9.00	12	4	12.50	–
E620M14	14	2.00	16.600	112.0	29	14.00	11.20	14	4	14.50	–
E620M16	16	2.00	18.600	112.0	29	14.00	11.20	14	4	16.50	–

E621

HSS Spiral Flute Machine Tap, Metric for Helicoil Insert, ISO Standard

Machine tap with spiral flute suited for blind holes. Bright finish to produce more accurate and cleaner threads for Screw-Thread-Inserts. These STIs are inserted into the threaded hole, produced with this tap, to reinforce the original thread or repair damaged ones.





EGM	ISO DORMER	6H
	2×D	HSS
C 2-3		λ 40°
R	Bright	

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	N1.3	N2.1	N2.2	N2.3
■10	■11	■13	■8	■7	◪6	■7	◪5	◪4	◪5	◪12	◪10	◪8

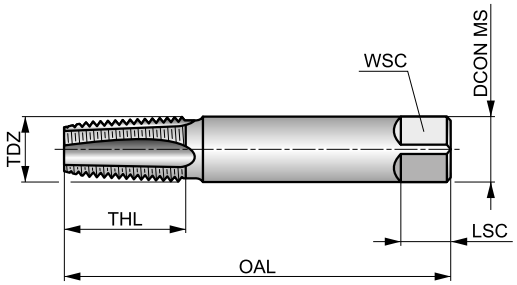
Product	TDZ	TP [mm]	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]	LU [mm]
E621M3	3	0.50	3.650	53.0	14	4.00	3.15	6	3	3.20	14.00
E621M4	4	0.70	4.910	58.0	11	5.00	4.00	7	3	4.20	20.00
E621M5	5	0.80	6.040	66.0	13	6.30	5.00	8	3	5.20	26.00
E621M6	6	1.00	7.300	72.0	16	8.00	6.30	9	3	6.30	31.00
E621M8	8	1.25	9.620	80.0	18	10.00	8.00	11	3	8.40	34.00
E621M10	10	1.50	11.950	89.0	22	9.00	7.10	10	3	10.50	–
E621M12	12	1.75	14.270	95.0	24	11.20	9.00	12	3	12.50	–
E621M14	14	2.00	16.600	112.0	29	14.00	11.20	14	3	14.50	–
E621M16	16	2.00	18.600	112.0	29	14.00	11.20	14	3	16.50	–

E550

DORMER

HSS Straight Flute Serial Hand Tap, Rc(BSPT), ISO Standard

Ideal for hand tapping tough materials. The straight flute design makes it ideal for both through and blind holes. Available as a single finishing tap or as a set of two serial taps, which should be used one after the other to create the full thread.



Rc	ISO 2284	Normal
	1.5×D	HSS
C 2-3		R
Bright		

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	M3.1
■7	■7	■8	■6	■5	◪4	■4	◪4	◪3	◪5	◪4	◪5	◪4	◪5
M3.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K3.1	K3.2	K4.1	K4.2	K5.1	K5.2
◪4	◪3	◪3	◪6	◪4	◪3	◪7	◪6	◪7	◪5	◪6	◪5	◪7	◪5
N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.2	N4.3					
◪8	◪11	◪10	◪7	■17	■10	◪5	◪5	◪3					

Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]
E5501/8	1/8	28	9.728	59.0	15	8.00	6.30	9	3	8.40
E5501/8N07	1/8	28	9.728	59.0	15	8.00	6.30	9	3	8.40
E5501/4	1/4	19	13.157	67.0	19	10.00	8.00	11	3	11.20
E5501/4N07	1/4	19	13.157	67.0	19	10.00	8.00	11	3	11.20
E5503/8	3/8	19	16.662	75.0	21	12.50	10.00	13	3	14.75
E5503/8N07	3/8	19	16.662	75.0	21	12.50	10.00	13	3	14.75
E5501/2	1/2	14	20.955	87.0	26	16.00	12.50	16	5	18.25
E5501/2N07	1/2	14	20.955	87.0	26	16.00	12.50	16	5	18.25
E5503/4	3/4	14	26.441	96.0	28	20.00	16.00	20	5	23.75
E5503/4N07	3/4	14	26.441	96.0	28	20.00	16.00	20	5	23.75
E5501	1″	11	33.249	109.0	33	25.00	20.00	24	5	30.00
E5501.1/4	1.1/4	11	41.910	119.0	36	31.50	25.00	28	5	38.50
E5501.1/2	1.1/2	11	47.803	125.0	37	35.50	28.00	31	7	44.50
E5502	2″	11	59.614	140.0	41	40.00	31.50	34	7	56.00

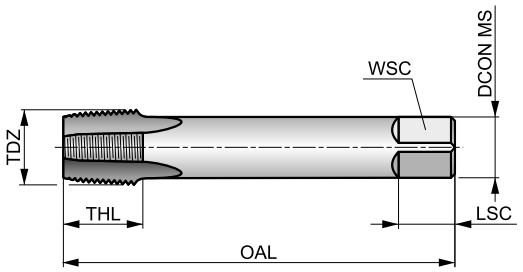
E714

DORMER

HSS-E-PM Straight Flute Machine Tap, NPT, ANSI Standard

General purpose straight flute machine tap for through and blind holes. Bright finish to produce more accurate and cleaner threads, preventing the workpiece material from sticking to the cutting edges.

NPT	ANSI DORMER	Normal
	1.5×D	HSS-E PM
C 2-3		R
Bright		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	K1.1	K1.2	K1.3
■8	■9	■9	■7	■6	◪5	■4	◪4	◪3	■3	◪2	◪6	◪4	◪3
K2.1	**K2.2**	**K3.1**	**K3.2**	**K4.1**	**K4.2**	**K5.1**	**K5.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**
◪7	◪6	◪7	◪5	◪6	◪5	◪7	◪5	◪9	◪12	◪11	◪8	■18	■11

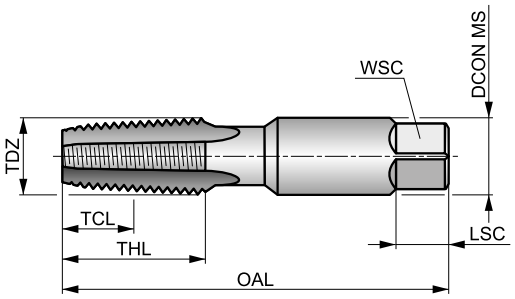
Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]
E7141/8	1/8	27	10.230	90.0	14	11.00	9.00	12	3	8.50
E7141/4	1/4	18	13.600	100.0	20	14.00	11.00	14	3	11.00
E7143/8	3/8	18	17.040	110.0	20	16.00	12.00	15	4	14.50
E7141/2	1/2	14	21.200	125.0	26	18.00	14.50	17	4	18.00
E7143/4	3/4	14	26.540	140.0	26	22.00	18.00	21	5	23.00
E7141	1″	11.5	33.200	150.0	31	28.00	22.00	25	5	29.00

E710

DORMER

HSS Straight Flute Serial Hand Tap, NPT, ANSI Standard

Ideal for hand tapping tough materials. The straight flute design makes it ideal for both through and blind holes. Available as a single finishing tap or as a set of two serial taps, which should be used one after the other to create the full thread.



NPT	ANSI B94.9	Normal
	1.5×D	HSS
C 2-3		R
Bright		

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
■7	■7	■8	■6	■5	◪4	■4	◪4	◪3	◪6	◪4	◪3	◪7	◪6

K3.1	K3.2	K4.1	K4.2	K5.1	K5.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.2
◪7	◪5	◪6	◪5	◪7	◪5	◪8	◪11	◪10	◪7	■17	■10	◪5	◪5

N4.3
◪3

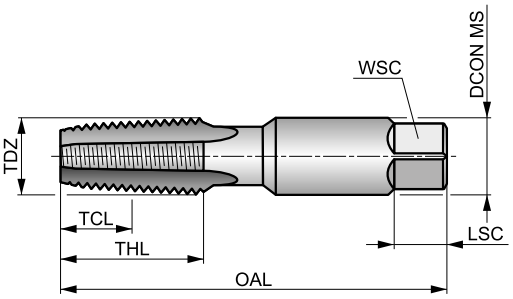
Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	TCL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]
E7101/16N03	1/16	27	7.940	65.0	17	11.70	8.10	6.00	8	4	6.30
E7101/8	1/8	27	10.290	70.0	19	11.90	11.10	8.30	10	4	8.50
E7101/8N07	1/8	27	10.290	70.0	19	11.90	11.10	8.30	10	4	8.50
E7101/4	1/4	18	13.720	75.0	27	17.60	14.30	10.70	11	4	11.00
E7101/4N07	1/4	18	13.720	75.0	27	17.60	14.30	10.70	11	4	11.00
E7103/8	3/8	18	17.150	80.0	27	19.50	17.80	13.50	13	4	14.50
E7103/8N07	3/8	18	17.150	80.0	27	19.50	17.80	13.50	13	4	14.50
E7101/2	1/2	14	21.340	100.0	35	22.70	17.50	13.10	16	4	18.00
E7101/2N07	1/2	14	21.340	100.0	35	22.70	17.50	13.10	16	4	18.00
E7103/4	3/4	14	26.670	105.0	35	24.40	23.00	17.20	17	5	23.00
E7103/4N07	3/4	14	26.670	105.0	35	24.40	23.00	17.20	17	5	23.00
E7101	1″	11.5	33.400	115.0	43	29.40	28.60	21.40	21	5	29.00
E7101.1/4	1.1/4	11.5	42.160	125.0	43	27.70	33.30	25.00	24	5	38.00
E7101.1/2	1.1/2	11.5	48.260	135.0	43	28.90	38.10	28.60	25	7	44.00
E7102	2″	11.5	60.330	145.0	43	26.60	47.60	35.70	29	7	56.00

E721

DORMER

HSS Straight Flute Hand Tap with TiN Coating, NPT, ANSI Standard

A versatile tool, suitable for machine and also hand tapping. With a straight flute design and bottoming lead for blind and through holes. TiN coated to improve performance and extend tool life.



NPT	ANSI B94.9	Normal
	1.5×D	HSS
C 2-3		R
TiN		

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	K1.1	K1.2	K1.3
◪12	◪13	■13	◪12	■11	◪9	◪7	■6	◪4	■5	◪3	■12	■9	■7

K2.1	K2.2	K3.1	K3.2	K4.1	K4.2	K5.1	K5.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2
■12	■10	■11	■8	■10	■8	■11	■9	◪10	◪17	◪15	■11	■19	■11

N3.3	N4.2	N4.3
◪6	◪7	◪5

Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	TCL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]
E7211/8	1/8	27	10.290	70.0	19	11.90	11.10	8.30	10	4	8.50
E7211/4	1/4	18	13.720	75.0	27	17.60	14.30	10.70	11	4	11.00
E7213/8	3/8	18	17.150	80.0	27	19.50	17.80	13.50	13	4	14.50
E7211/2	1/2	14	21.340	100.0	35	22.70	17.50	13.10	16	4	18.00
E7213/4	3/4	14	26.670	105.0	35	24.40	23.00	17.20	17	5	23.00
E7211	1"	11.5	33.400	115.0	43	29.40	28.60	21.40	21	5	29.00

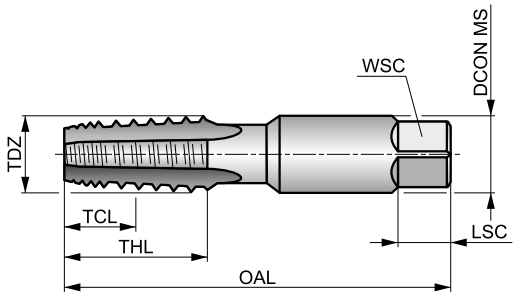
E711

DORMER

HSS Straight Flute Interrupted Thread Hand Tap, NPT, ANSI Standard

A versatile tool, suitable for machine and also hand tapping. Interrupted threads lessen the damaging effects of chip wedging on both forward and reverse rotation and reduce friction, permit better lubrication and allow more space for the passage of chips. The reduced shank increases the reach of the tap.

NPT	ANSI B94.9	Normal
	1.5×D	HSS
C 2-3		R
Bright		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
◪7	◪7	■8	◪6	■5	◪4	◪4	■4	■3	◪6	◪4	◪3	◪7	◪6

K3.1	K3.2	K4.1	K4.2	K5.1	K5.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.2	N4.3
◪7	◪5	◪6	◪5	◪7	◪5	◪8	◪11	◪10	◪7	■17	■10	◪5	◪5	◪3

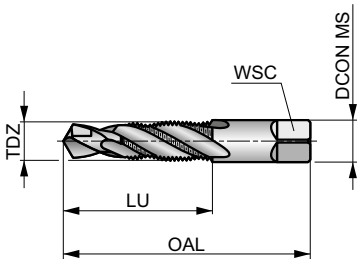
Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	TCL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]
E7111/8	1/8	27	10.290	70.0	19	11.90	11.10	8.30	10	5	8.50
E7111/4	1/4	18	13.720	75.0	27	17.60	14.30	10.70	11	5	11.00
E7113/8	3/8	18	17.150	80.0	27	19.50	17.80	13.50	13	5	14.50
E7111/2	1/2	14	21.330	100.0	35	22.70	17.50	13.10	16	5	18.00
E7113/4	3/4	14	26.670	105.0	35	24.40	23.00	17.20	17	5	23.00
E7111	1"	11.5	33.400	115.0	43	29.40	28.60	21.40	21	5	29.00
E7111.1/2	1.1/2	11.5	48.260	135.0	43	28.90	38.10	28.60	25	7	44.00

E653

HSS Drill-Tap Combination Tool with 27° Spiral Flute, NPT, ANSI Standard

Combination of a core-hole drill and tap to produce a thread in one pass. This significantly reduces the time needed to produce the thread on site with the use of a hand-held power tool. There is no need for a tap wrench or tool change. Steam tempered surface acts to retain the lubricant and provide smoother cutting.

NPT	ANSI	Normal
1.5×D		HSS
λ 27°		R
Bright		



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	N1.2	N1.3	N3.1	N3.2	N4.1
■ 18	■ 20	■ 22	■ 20	◪ 18	◪ 15	◪ 12	◪ 14	◪ 9	◪ 20	◪ 15	◪ 25

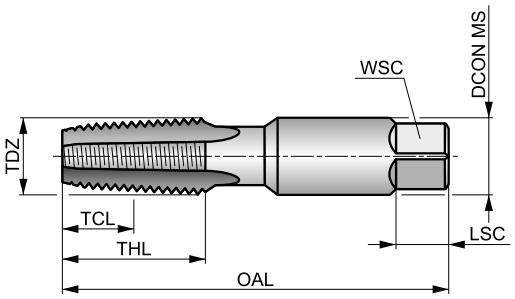
Product	TDZ	TPI	TD [inch]	OAL [inch]	LU [inch]	DCON MS [inch]	WSC [inch]	NOF
E6531/8	1/8	27	0.3346	2.7/8	3/4	0.4370	0.3280	2
E6531/4	1/4	18	0.4331	3.5/16	1.1/16	0.5620	0.4210	2
E6533/8	3/8	18	0.5709	3.1/2	1.1/16	0.7000	0.5310	2
E6531/2	1/2	14	0.7087	4.3/8	1.3/8	0.6870	0.5150	2
E6533/4	3/4	14	0.9055	4.9/16	1.3/8	0.9060	0.6790	2
E6531	1"	11.5	1.1417	5.3/8	1.3/4	1.1250	0.8430	2

E712

DORMER

HSS Straight Flute Hand Tap, NPTF, ANSI Standard

A versatile tool, suitable for machine and also hand tapping. With a straight flute design and bottoming lead for blind and through holes. Bright finish to produce more accurate and cleaner threads, preventing the workpiece material from sticking to the cutting edges.



NPTF	ANSI B94.9	Normal
	1.5×D	HSS
C 2-3		R
Bright		

Workpiece material group suitability and starting values for cutting speed (m/min).

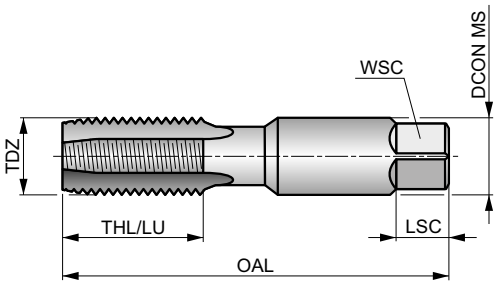
P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
■7	■7	■8	■6	■5	◪4	■4	◪4	◪3	◪6	◪4	◪3	◪7	◪6
K3.1	**K3.2**	**K4.1**	**K4.2**	**K5.1**	**K5.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.2**
◪7	◪5	◪6	◪5	◪7	◪5	◪8	◪11	◪10	◪7	■17	■10	◪5	◪5
N4.3													
◪3													

Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	TCL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]
E7121/16	1/16	27	7.940	65.0	17	11.70	8.10	6.00	8	4	6.20
E7121/8	1/8	27	10.290	70.0	19	11.90	11.10	8.30	10	4	8.40
E7121/4	1/4	18	13.720	75.0	27	17.60	14.30	10.70	11	4	10.90
E7123/8	3/8	18	17.150	80.0	27	19.50	17.80	13.50	13	4	14.25
E7121/2	1/2	14	21.340	100.0	35	22.70	17.50	13.10	16	4	17.75
E7123/4	3/4	14	26.670	105.0	35	24.40	23.00	17.20	17	5	23.00
E7121	1"	11.5	33.400	115.0	43	29.40	28.60	21.40	21	5	29.00
E7121.1/4	1.1/4	11.5	42.160	125.0	43	27.70	33.40	24.90	23	5	37.75

E709

HSS Straight Flute Machine Tap, NPSF, ANSI Standard

General purpose straight flute machine tap for through and blind holes. Bright finish to produce more accurate and cleaner threads, preventing the workpiece material from sticking to the cutting edges.



NPSF	ANSI B94.9	Normal
	1.5×D	HSS
C 2-3		R
Bright		

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
■7	■7	■8	■6	■5	◪4	■4	◪4	◪3	◪6	◪4	◪3	◪7	◪6

K3.1	K3.2	K4.1	K4.2	K5.1	K5.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.2	N4.3
◪7	◪5	◪6	◪5	◪7	◪5	◪8	◪11	◪10	◪7	■17	■10	◪5	◪5	◪3

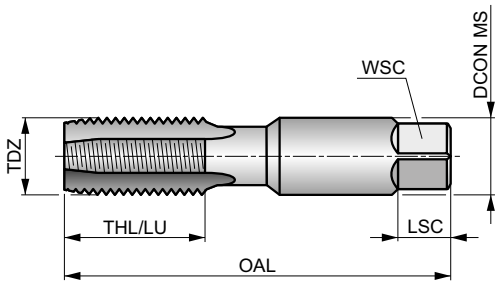
Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	LU [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]
E7091/8	1/8	27	10.290	70.0	19	19.00	11.10	8.30	10	4	8.70
E7091/4	1/4	18	13.720	75.0	27	27.00	14.30	10.70	11	4	11.30
E7093/8	3/8	18	17.150	80.0	27	27.00	17.80	13.50	13	4	14.75
E7091/2	1/2	14	21.340	100.0	35	–	17.50	13.10	16	4	18.25
E7093/4	3/4	14	26.670	105.0	35	–	23.00	17.20	17	5	23.50

E720

DORMER

HSS Straight Flute Machine Tap with TiN Coating, NPSF, ANSI Standard

General purpose straight flute machine tap for through and blind holes. TiN coated to improve performance and extend tool life.



NPSF	ANSI B94.9	Normal
LU	1.5×D	HSS
C 2-3		R
TiN		

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	K1.1	K1.2	K1.3
◪8	◪9	■9	◪7	■6	◪5	◪4	■4	◪3	■3	◪2	■12	■9	■7
K2.1	**K2.2**	**K3.1**	**K3.2**	**K4.1**	**K4.2**	**K5.1**	**K5.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**
■12	■10	■11	■8	■10	■8	■11	■9	◪10	◪17	◪15	■11	■19	■11
N3.3	**N4.2**	**N4.3**											
◪6	◪7	◪5											

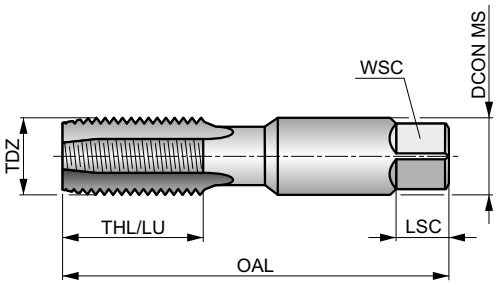
Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	LU [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]
E7201/8N03	1/8	27	10.290	70.0	19	19.00	11.10	8.30	10	4	8.70
E7201/4N03	1/4	18	13.720	75.0	27	27.00	14.30	10.70	11	4	11.30
E7203/8N03	3/8	18	17.150	80.0	27	27.00	17.80	13.50	13	4	14.75
E7201/2N03	1/2	14	21.340	100.0	35	–	17.50	13.10	13	4	18.25
E7203/4N03	3/4	14	26.670	105.0	35	–	23.00	17.20	17	5	23.50

E708

DORMER

HSS Straight Flute Machine Tap, NPSM, ANSI Standard

General purpose straight flute machine tap for through and blind holes. Bright finish to produce more accurate and cleaner threads, preventing the workpiece material from sticking to the cutting edges.



NPSM	ANSI B94.9	Normal
LU	1.5×D	HSS
C 2-3		R
Bright		

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
■7	■7	■8	■6	■5	◪4	■4	◪4	◪3	◪6	◪4	◪3	◪7	◪6
K3.1	**K3.2**	**K4.1**	**K4.2**	**K5.1**	**K5.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.2**
◪7	◪5	◪6	◪5	◪7	◪5	◪8	◪11	◪10	◪7	■17	■10	◪5	◪5
N4.3													
◪3													

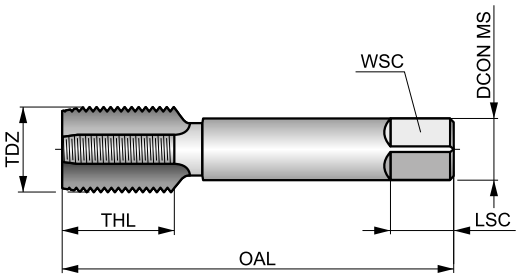
Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	LU [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]
E7081/8	1/8	27	10.290	70.0	19	19.00	11.10	8.30	10	4	9.10
E7081/4	1/4	18	13.720	75.0	27	27.00	14.30	10.70	11	4	12.00
E7083/8	3/8	18	17.150	80.0	27	27.00	17.80	13.50	13	4	15.50
E7081/2	1/2	14	21.330	100.0	35	–	17.50	13.10	16	4	19.00
E7083/4	3/4	14	26.670	105.0	35	–	23.00	17.20	17	5	24.50
E7081	1″	11.5	33.400	115.0	43	–	28.60	21.40	21	5	30.50

E243

DORMER

HSS Straight Flute Hand Tap, PG Conduit Thread, DIN Standard

A versatile tool, suitable for hand and machine tapping, with a straight flute design for both through and blind holes. Available tap with plug lead NO2 for through holes or bottoming lead NO3 for blind holes.



PG	DIN 40432	Normal
	1.5×D	HSS
	R	Bright

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
■7	■7	■8	■6	■5	◪4	■4	◪4	◪3	◪6	◪4	◪3	◪7	◪6

K3.1	K3.2	K4.1	K4.2	K5.1	K5.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.2
◪7	◪5	◪6	◪5	◪7	◪5	◪8	◪11	◪10	◪7	■17	■10	◪5	◪5

N4.3
◪3

Product	TDZ	TPI	TD [mm]	OAL [mm]	THL [mm]	DCON MS [mm]	WSC [mm]	LSC [mm]	NOF	PHD [mm]
E243PG7NO2	7	20	12.500	70.0	22	9.00	7.00	10	4	11.40
E243PG7NO3	7	20	12.500	70.0	22	9.00	7.00	10	4	11.40
E243PG9NO2	9	18	15.200	70.0	22	12.00	9.00	12	4	13.90
E243PG9NO3	9	18	15.200	70.0	22	12.00	9.00	12	4	13.90
E243PG11NO2	11	18	18.600	80.0	22	14.00	11.00	14	4	17.25
E243PG11NO3	11	18	18.600	80.0	22	14.00	11.00	14	4	17.25
E243PG13.5NO2	13.5	18	20.400	80.0	22	16.00	12.00	15	4	19.00
E243PG13.5NO3	13.5	18	20.400	80.0	22	16.00	12.00	15	4	19.00
E243PG16NO2	16	18	22.500	80.0	22	18.00	14.50	17	4	21.25
E243PG16NO3	16	18	22.500	80.0	22	18.00	14.50	17	4	21.25
E243PG21NO2	21	16	28.300	90.0	22	22.00	18.00	21	4	27.00
E243PG21NO3	21	16	28.300	90.0	22	22.00	18.00	21	4	27.00
E243PG29NO2	29	16	37.000	100.0	25	28.00	22.00	25	6	35.50
E243PG29NO3	29	16	37.000	100.0	25	28.00	22.00	25	6	35.50
E243PG36NO2	36	16	47.000	140.0	32	36.00	29.00	32	6	45.50
E243PG36NO3	36	16	47.000	140.0	32	36.00	29.00	32	6	45.50

L119

DORMER

HSS Straight Flute Serial Hand Tap, Set of 21 Pieces, Metric, DIN Standard

Metal cassette containing seven sets of serial hand taps according to DIN standard. Ideal for hand tapping tough materials. The straight flute design makes it suitable for both through and blind holes. Each set of three serial taps should be used one after the other to create the full thread.

Nr. =Set number, A=Styles in Set, B=No. in Set, C=Tap diameters in Set

Product	Nr.	A	B	C
L11917	Nr.17	E100	21	E100M3NO8, E100M4NO8, E100M5NO8, E100M6NO8, E100M8NO8, E100M10NO8, E100M12NO8

L126

DORMER

HSS Drill-Taps with 30° Spiral Flute, Set of 6 pieces, Metric, ISO Standard

Metal cassette containing six drill-taps to produce threads in one pass. This significantly reduces the time needed to produce the thread on site with the use of a hand-held power tool. There is no need for a tap wrench or tool change. Steam tempered surface acts to retain the lubricant and provide smoother cutting.

Nr. =Set number, A=Styles in Set, B=No. in Set, C=Tap diameters in Set

Product	Nr.	A	B	C
L126650	Nr. 650	E650	6	E650M4, E650M5, E650M6, E650M8, E650M10, E650M12

L113

DORMER

Set with Taps and A002 Drills

Shock-proof plastic box containing seven machine taps according to ISO standard with corresponding drills. Includes either spiral point taps for through holes only Nr.201 with bright finish or Nr.202 steam tempered. Spiral flute taps for blind holes Nr.203 with bright finish or Nr.204 steam tempered.

Nr. =Set number, A=Styles in Set, B=No. in Set, C=Tap diameters in Set, D=Drill diameters in Set.

Product	Nr.	A	B	C	D
L113201	Nr.201	E000 + A002	14	E000M3, E000M4, E000M5, E000M6, E000M8, E000M10, E000M12	A0022.5, A0023.3, A0024.2, A0025.0, A0026.8, A0028.5, A00210.2
L113202	Nr.202	E001 + A002	14	E001M3, E001M4, E001M5, E001M6, E001M8, E001M10, E001M12	A0022.5, A0023.3, A0024.2, A0025.0, A0026.8, A0028.5, A00210.2
L113203	Nr.203	E002 + A002	14	E002M3, E002M4, E002M5, E002M6, E002M8, E002M10, E002M12	A0022.5, A0023.3, A0024.2, A0025.0, A0026.8, A0028.5, A00210.2
L113204	Nr.204	E003 + A002	14	E003M3, E003M4, E003M5, E003M6, E003M8, E003M10, E003M12	A0022.5, A0023.3, A0024.2, A0025.0, A0026.8, A0028.5, A00210.2

L114

DORMER

Set of EP/EX or Shark Line Taps with A002 or A108 Drills

Plastic box with 7 machine taps and corresponding drills. Either with spiral point taps for through holes only Nr.301 with bright finish, Nr.303 Yellow Shark with hard-chrome coating or Nr.305 Blue Shark for stainless steel. Spiral flute taps for blind holes Nr.302 with bright finish, Nr.304 Yellow Shark or Nr.306 Blue Shark.

Nr. =Set number, A=Styles in Set, B=No. in Set, C=Tap diameters in Set, D=Drill diameters in Set.

Product	Nr.	A	B	C	D
L114301	Nr.301	EP006H + A002	14	EP00M3, EP00M4, EP00M5, EP00M6, EP00M8, EP00M10, EP00M12	A0022.5, A0023.3, A0024.2, A0025.0, A0026.8, A0028.5, A00210.2
L114302	Nr.302	EX006H + A002	14	EX00M3, EX00M4, EX00M5, EX00M6, EX00M8, EX00M10, EX00M12	A0022.5, A0023.3, A0024.2, A0025.0, A0026.8, A0028.5, A00210.2
L114303	Nr.303	E297 + A002	14	E297M3, E297M4, E297M5, E297M6, E297M8, E297M10, E297M12	A0022.5, A0023.3, A0024.2, A0025.0, A0026.8, A0028.5, A00210.2
L114304	Nr.304	E298 + A002	14	E298M3, E298M4, E298M5, E298M6, E298M8, E298M10, E298M12	A0022.5, A0023.3, A0024.2, A0025.0, A0026.8, A0028.5, A00210.2
L114305	Nr.305	E238 + A108	14	E238M3, E238M4, E238M5, E238M6, E238M8, E238M10, E238M12	A1082.5, A1083.3, A1084.2, A1085.0, A1086.8, A1088.5, A10810.2
L114306	Nr.306	E240 + A108	14	E240M3, E240M4, E240M5, E240M6, E240M8, E240M10, E240M12	A1082.5, A1083.3, A1084.2, A1085.0, A1086.8, A1088.5, A10810.2

L115

Set of E500 Taps and A002 or A022 Drills

Shock-proof plastic box containing straight flute taps according to ISO standard with corresponding drills. Suitable for hand and machine tapping. Nr.101 with bottoming lead taps NO3 for blind holes and A002 jobber drills or Nr.100 with NO3 and NO2 plug lead taps for through holes and A022 stub drills.

Nr. =Set number, A=Styles in Set, B=No. in Set, C=Tap diameters in Set, D=Drill diameters in Set.

Product	Nr.	A	B	C	D
L115100	Nr.100	E500 + A022	21	E500M3NO2, E500M3NO3, E500M4NO2, E500M4NO3, E500M-5NO2, E500M5NO3, E500M6NO2, E500M6NO3, E500M8NO2, E500M8NO3, E500M10NO2, E500M10NO3, E500M12NO2, E500M12NO3	A0222.5, A0223.3, A0224.2, A0225.0, A0226.8, A0228.5, A02210.2
L115101	Nr.101	E500 + A002	14	E500M3NO3, E500M4NO3, E500M5NO3, E500M6NO3, E500M8NO3, E500M10NO3, E500M12NO3	A0022.5, A0023.3, A0024.2, A0025.0, A0026.8, A0028.5, A00210.2

L000

DuoPack with E500 Tap and A002 Drill, Various Sizes

DuoPack containing a straight flute hand tap according to ISO standard with corresponding drill. Suitable for hand and machine tapping. Available with plug lead NO2 for through holes or bottoming lead NO3 for blind holes. The convenient packaging ensures the right drill size to make a perfect thread.

Nr. =Set number, A=Styles in Set, B=No. in Set, C=Tap diameters in Set, D=Drill diameters in Set.

Product	Nr.	A	B	C	D
L000E500M3NO2XA002	Nr.1	E500 + A002	2	E500M3NO2	A0022.5
L000E500M4NO2XA002	Nr.2	E500 + A002	2	E500M4NO2	A0023.3
L000E500M5NO2XA002	Nr.3	E500 + A002	2	E500M5NO2	A0024.2
L000E500M6NO2XA002	Nr.4	E500 + A002	2	E500M6NO2	A0025.0
L000E500M8NO2XA002	Nr.5	E500 + A002	2	E500M8NO2	A0026.8
L000E500M10NO2XA002	Nr.6	E500 + A002	2	E500M10NO2	A0028.5
L000E500M12NO2XA002	Nr.7	E500 + A002	2	E500M12NO2	A00210.2
L000E500M3NO3XA002	Nr.8	E500 + A002	2	E500M3NO3	A0022.5
L000E500M4NO3XA002	Nr.9	E500 + A002	2	E500M4NO3	A0023.3
L000E500M5NO3XA002	Nr.10	E500 + A002	2	E500M5NO3	A0024.2
L000E500M6NO3XA002	Nr.11	E500 + A002	2	E500M6NO3	A0025.0
L000E500M8NO3XA002	Nr.12	E500 + A002	2	E500M8NO3	A0026.8
L000E500M10NO3XA002	Nr.13	E500 + A002	2	E500M10NO3	A0028.5
L000E500M12NO3XA002	Nr.14	E500 + A002	2	E500M12NO3	A00210.2

L001

DuoPack with EP00 or EX00 Tap and A002 Drill, Various Sizes

DuoPack containing a machine tap according to DIN standard with corresponding drill. Either with a spiral point tap EP00 for through holes only or spiral flute tap EX00 for blind holes. The convenient packaging ensures the right drill size to make a perfect thread.

Nr. =Set number, A=Styles in Set, B=No. in Set, C=Tap diameters in Set, D=Drill diameters in Set.

Product	Nr.	A	B	C	D
L001EP00M3XA002	Nr.1	EP006H + A002	2	EP00M3	A0022.5
L001EP00M4XA002	Nr.2	EP006H + A002	2	EP00M4	A0023.3
L001EP00M5XA002	Nr.3	EP006H + A002	2	EP00M5	A0024.2
L001EP00M6XA002	Nr.4	EP006H + A002	2	EP00M6	A0025.0
L001EP00M8XA002	Nr.5	EP006H + A002	2	EP00M8	A0026.8
L001EP00M10XA002	Nr.6	EP006H + A002	2	EP00M10	A0028.5
L001EP00M12XA002	Nr.7	EP006H + A002	2	EP00M12	A00210.2
L001EX00M3XA002	Nr.8	EX006H + A002	2	EX00M3	A0022.5
L001EX00M4XA002	Nr.9	EX006H + A002	2	EX00M4	A0023.3
L001EX00M5XA002	Nr.10	EX006H + A002	2	EX00M5	A0024.2
L001EX00M6XA002	Nr.11	EX006H + A002	2	EX00M6	A0025.0
L001EX00M8XA002	Nr.12	EX006H + A002	2	EX00M8	A0026.8
L001EX00M10XA002	Nr.13	EX006H + A002	2	EX00M10	A0028.5
L001EX00M12XA002	Nr.14	EX006H + A002	2	EX00M12	A00210.2

L002

DuoPack with E000 or E002 Tap and A002 Drill, Various Sizes

DuoPack containing a machine tap according to ISO standard with corresponding drill. Either with a spiral point tap E000 for through holes only or spiral flute tap E002 for blind holes. The convenient packaging ensures the right drill size to make a perfect thread.

Nr. =Set number, A=Styles in Set, B=No. in Set, C=Tap diameters in Set, D=Drill diameters in Set.

Product	Nr.	A	B	C	D
L002E000M3XA002	Nr.1	E000 + A002	2	E000M3	A0022.5
L002E000M4XA002	Nr.2	E000 + A002	2	E000M4	A0023.3
L002E000M5XA002	Nr.3	E000 + A002	2	E000M5	A0024.2
L002E000M6XA002	Nr.4	E000 + A002	2	E000M6	A0025.0
L002E000M8XA002	Nr.5	E000 + A002	2	E000M8	A0026.8
L002E000M10XA002	Nr.6	E000 + A002	2	E000M10	A0028.5
L002E000M12XA002	Nr.7	E000 + A002	2	E000M12	A00210.2
L002E002M3XA002	Nr.8	E002 + A002	2	E002M3	A0022.5
L002E002M4XA002	Nr.9	E002 + A002	2	E002M4	A0023.3
L002E002M5XA002	Nr.10	E002 + A002	2	E002M5	A0024.2
L002E002M6XA002	Nr.11	E002 + A002	2	E002M6	A0025.0
L002E002M8XA002	Nr.12	E002 + A002	2	E002M8	A0026.8
L002E002M10XA002	Nr.13	E002 + A002	2	E002M10	A0028.5
L002E002M12XA002	Nr.14	E002 + A002	2	E002M12	A00210.2

L120

Set of Taps, Dies and Tap Wrenches, Various Sizes

Threading kit for either ISO-Metric, UNC or UNF thread. Containing sets of hand or serial hand taps, dies, tap wrenches and die stocks, all together in a smart metal case with carry handle and latch-lock fasteners.

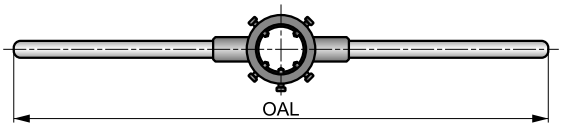
Nr. =Set number, A=No. in Set, B=Styles in Set, C=Diameters in set.

Product	Nr.	A	B	C
L12021	21	21	E100	E100M3N08, E100M4N08, E100M5N08, E100M6N08, E100M8N08, E100M10N08, E100M12N08
			F100	F100M3, F100M4, F100M5, F100M6, F100M8, F100M10, F100M12
			L112	L112N01.1/2, L112N03
			L110	L1102A, L1102B, L1103, L1104, L1105
L12030	30	30	E100	E100M3N08, E100M4N08, E100M5N08, E100M6N08, E100M8N08, E100M10N08, E100M12N08, E100M14N08, E100M16N08, E100M18N08, E100M20N08
			F100	F100M3, F100M4, F100M5, F100M6, F100M8, F100M10, F100M12, F100M14, F100M16, F100M18, F100M20
			L112	L112N01.1/2, L112N04
			L110	L1102A, L1102B, L1103, L1104, L1105, L1106
L1202M	HS-2M	23	E500	E500M2N01, E500M2N03, E500M2.5N01, E500M2.5N03, E500M3N01, E500M3N03, E500M3.5N01, E500M3.5N03, E500M4N01, E500M4N03, E500M5N01, E500M-5N03, E500M6N01, E500M6N03
			F300	F300M2X13/16, F300M2.5X13/16, F300M3X13/16, F300M3.5X13/16, F300M4X13/16, F300M5X13/16, F300M6X13/16
			L112	L112BT1
			L110	L11013/16
L1204M	HS-4M	32	E500	E500M5N01, E500M5N03, E500M6N01, E500M6N03, E500M7N01, E500M7N03, E500M8N01, E500M8N03, E500M9N01, E500M9N03, E500M10N01, E500M10N03, E500M11N01, E500M11N03, E500M12N01, E500M12N03
			F300	F300M5X13/16, F300M6X13/16, F300M7X13/16, F300M8X1.5/16, F300M9X1.5/16, F300M10X1.5/16, F300M11X1.5/16, F300M12X1.5/16, F300M5X13/16, F300M6X13/16, F300M7X13/16, F300M8X1.5/16, F300M9X1.5/16
			L112	L112BT2
			L110	L11013/16, L1101.5/16
L1208M	HS-8M	17	E500	E500M2N01, E500M2N03, E500M3N01, E500M3N03, E500M4N01, E500M4N03, E500M5N01, E500M5N03, E500M6N01, E500M6N03
			F300	F300M2X13/16, F300M3X13/16, F300M4X13/16, F300M5X13/16, F300M6X13/16
			L112	L112BT1
			L110	L11013/16
L12010M	HS-10M	27	E500	E500M3N01, E500M3N03, E500M4N01, E500M4N03, E500M5N01, E500M5N03, E500M6N01, E500M6N03, E500M7N01, E500M7N03, E500M8N01, E500M8N03, E500M9N01, E500M9N03, E500M10N01, E500M10N03
			F300	F300M3X13/16, F300M4X13/16, F300M5X13/16, F300M6X1, F300M7X1, F300M8X1, F300M9X1, F300M10X1
			L112	L112BT2
			L110	L11013/16, L1101INCH
L12012M	HS-12M	35	E500	E500M2N01, E500M2N03, E500M3N01, E500M3N03, E500M4N01, E500M4N03, E500M5N01, E500M5N03, E500M6N01, E500M6N03, E500M7N01, E500M7N03, E500M8N01, E500M8N03, E500M9N01, E500M9N03, E500M10N01, E500M10N03, E500M12N01, E500M12N03
			F300	F300M2X13/16, F300M3X13/16, F300M4X13/16, F300M5X13/16, F300M6X13/16, F300M7X13/16, F300M8X1, F300M9X1, F300M10X1, F300M12X1.5/16
			L112	L112BT1, L112BT2
			L110	L11013/16, L1101INCH, L1101.5/16
L12014M	HS-14M	34	E500	E500M6N01, E500M6N03, E500M7N01, E500M7N03, E500M8N01, E500M8N03, E500M9N01, E500M9N03, E500M10N01, E500M10N03, E500M12N01, E500M12N03, E500M14N01, E500M14N03, E500M16N01, E500M16N03, E500M18N01, E500M18N03, E500M20N01, E500M20N03
			F300	F300M6X1, F300M7X1, F300M8X1, F300M9X1, F300M10X1, F300M12X1.5/16, F300M14X1.5/16, F300M16X1.1/2, F300M18X1.1/2, F300M20X1.1/2
			L112	L112N03
			L110	L1101INCH, L1101.5/16, L1101.1/2

L110

Die Stock

The die stock is an accessory to make it easy to use dies by hand. The die is held securely in the metal ring, whilst the arms at either end are used to rotate the die around the outside of the metal cylinder to be threaded. The L110 series comes in an extensive range to hold all sizes of round dies.



Products from this series are also available in set with taps and dies. Please see L120.

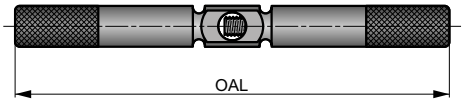
Product	Nr.	OAL [mm]	Die BD x Die OAL
L1101	1″	160.0	16 x 5
L1102A	2a	200.0	20 x 5
L1102B	2b	200.0	20 x 7
L1103	3	224.0	25 x 9
L1104	4″	280.0	30 x 11
L1105	5	315.0	38 x 14
L1105F	5f	315.0	38 x 10
L1106	6	450.0	45 x 18
L1106F	6f	450.0	45 x 14
L1107	7	560.0	55 x 22
L1107F	7f	560.0	55 x 16
L1108	8	630.0	65 x 25
L1108F	8f	630.0	65 x 18
L1109	9	800.0	75 x 30
L1109F	9f	800.0	75 x 20
L11010	10	900.0	90 x 36
L11010F	10f	900.0	90 x 22
L11013/16	–	200.0	13/16 x 1/4
L1101INCH	–	224.0	1 x 3/8
L1101.5/16	–	270.0	1.5/16 x 7/16
L1101.1/2	–	315.0	1.1/2 x 1/2
L1102INCH	–	560.0	2 x 5/8
L1102.1/4	–	560.0	2.1/4 x 11/16
L1103INCH	–	900.0	3 x 7/8
L1104INCH	–	1000.0	4 x 1

L112

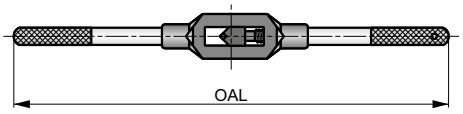
Tap Wrench

Adjustable, so one tap wrench can be used to hold several different tap sizes. The square end of the tap is inserted into the wrench which is then tightened to hold the tap securely. The two metal bars on either side of the wrench are used to rotate the tap in the hole of the workpiece to create the thread.

BT1-BT2



NO0-NO7

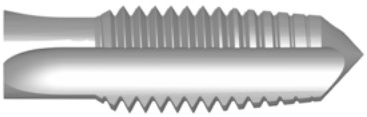
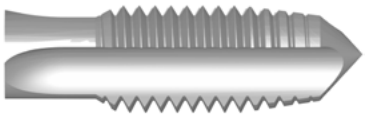
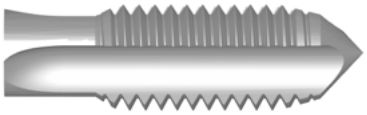


Products from this series are also available in set with taps and dies. Please see L120.

Product	Nr.	OAL [mm]	WSCN [mm]	WSCX [mm]	WSCN [inch]	WSCX [inch]	Tap Range (M)	Tap Range (Inch)
L112BT1	BT1	105.0	1.00	6.50	0.0394	0.2559	M1 - M8	No. 0 - 5/16
L112BT2	BT2	162.0	1.00	10.00	0.0394	0.3937	M1 - M14	No. 0 - 5/8
L112N00	No. 0	130.0	2.00	5.00	0.0787	0.1969	M1 - M5	No. 0 - 1/4
L112N01.1/2	No. 1.1/2	205.0	2.10	8.00	0.0827	0.3150	M2.2 - M12	No. 0 - 1/2
L112N03	No. 3	380.0	4.90	12.00	0.1929	0.4724	M5 - M20	5/16 - 3/4
L112N04	No. 4	500.0	5.50	16.00	0.2165	0.6299	M7 - M30	5/16 - 1″
L112N06	No. 6	1000.0	11.00	24.00	0.4331	0.9449	M18 - M42	3/4 - 1.1/2
L112N07	No. 7	1250.0	16.00	32.00	0.6299	1.2598	M27 - M48	1.1/8 - 2″

TAPS
TECHNICAL INFORMATION

Hand taps (ISO standard) with different chamfer lengths each producing a full thread profile.

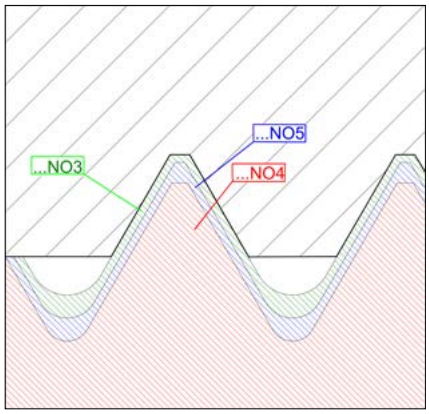
NO1 =	Taper lead	**A** 6-8	
NO2 =	Plug lead	**B** 4-6	
NO3 =	Bottoming lead	**C** 2-3	

ISO	**NO6 =**	NO1 + NO2 + NO3
	NO7 =	NO2 + NO3 *

ANSI	**NO6 =**	NO1 (taper) + NO2 (plug) + NO3 (bottoming)

*** E550, E710** **NO7 =** NO3 (truncated) + NO3

Serial taps (DIN standard) with each sequencing tap cutting a part of the profile, the NO3 tap is needed to complete a full thread profile.

NO4 =	Starter tap	**A** 6-8	
NO5 =	Seconding tap	**B** 3.5-5	
NO3 =	Finishing (bottoming lead) tap	**C** 2-3	

DIN ISO	**NO8 =**	NO3 + NO4 + NO5
	NO9 =	NO3 + NO5

THREAD MILLS

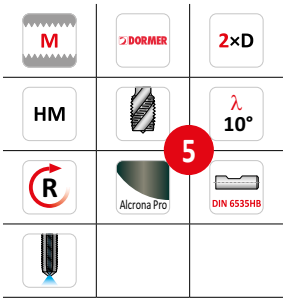
📖 6		WMG & ISO 13399
📖 12	TAPS	INSTRUCTIONS
📖 15	TAPS	SOLID CARBIDE TAPS
📖 25	TAPS	MATERIAL SPECIFIC SHARK TAPS
📖 62	TAPS	HSS HAND & MACHINE TAPS
📖 216	TAPS	TECHNICAL INFORMATION
📖 **218**		**THREAD MILLS**
📖 238		DIES
📖 270		CUTTING FLUIDS
📖 274		GENERAL TECHNICAL INFORMATION

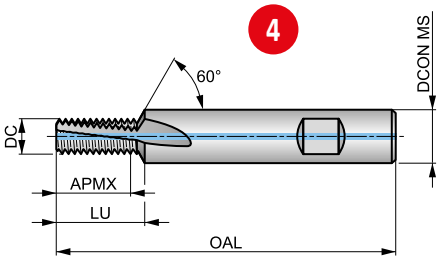
1 J205

DORMER

Solid Carbide Thread Mill with Through Coolant and Countersink, Metric 2

Universal high performance tool to machine same or bigger diameters than the TDZ with the same pitch. Left or right-hand, through or blind holes almost down to the bottom. With 60° countersink for chamfering. Alcrona Pro coated for the best machining result with through coolant for better chip evacuation.





Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■172	■193	■200	■148	■130	■115	■133	■107	■90	■79	■67	◪55	■62	■52
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
■55	■45	■38	■47	■40	■36	■30	◪26	■130	■96	■72	■123	■100	■80
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■109	■83	■67	■101	■76	■56	■48	◪40	■114	■86	■66	■400	■300	■200
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**
■262	■235	■170	■610	■360	■180	■290	■145	■65	■40	■40	◪30	■33	◪25
S3.1	**S3.2**	**S4.1**	**S4.2**	**H1.1**									
■25	◪21	■20	◪16	◪60									

6

Internal Thread.

7 t	TDZ	TP	DC	APMX 8	OAL	DCON MS	NOF	LU
		[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
J2056.5X1.25	M8	1.25	6.50	17.50	72.0	10.00	3	19.10
J2058.2X1.50	M10	1.50	8.20	21.00	83.0	12.00	3	22.80
J2059.9X1.75	M12	1.75	9.90	26.25	83.0	14.00	4	28.20
J20511.6X2.0	M14	2.00	11.60	30.00	92.0	16.00	4	32.20

Pos.	Description
1	Designation of thread mills
2	Product description
3	Illustrative picture
4	Schematic drawing of tool

Pos.	Description
5	Product features
6	Material group recommendations incl. speed and feed guidance
7	Product code
8	Product dimensions

Typical page with thread mills displayed – specific page details will differ.

THREAD MILLS – ICONS OVERVIEW

General Icons

■	Primary use
◪	Possible use

Thread Form (THFT)

G	Thread Form, British Standard Pipe	MF	Thread Form, Metric Fine	UNC	Thread Form, Unified Coarse
M	Thread Form, Metric Coarse	NPT	Thread Form, American National Pipe Taper	UNF	Thread Form, Unified Fine

Basic Standard Group (BSG)

DORMER	Dormer Standards

Usable Length (ULDR)

1.5×D	1.5×D Usable Tool Depth to Diameter Ratio	2×D	2×D Usable Tool Depth to Diameter Ratio

Material Code (BMC)

HM	Hard Material (Solid Carbide)

Flute Geometry (FDC)

	Spiral Flute Geometry

Flute Helix Angle (FHA)

λ 10°	10° Helix Angle (Flute)	λ 27°	27° Helix Angle (Flute)

Hand (Cutting direction)

R	Right Hand Rotation / Cutting

Coating

Alcrona Pro	Aluminium Chromium Nitride (special optimized process)

Shank

DIN 6535HA	DIN 6535 HA Cylindrical Shank	DIN 6535HB	DIN 6535 HB Weldon Shank

Coolant Exit Style (CXSC)

	Through Tool Coolant - Axial Exit

THREAD MILLS – TOOL MATERIALS AND SURFACE COATINGS NAVIGATOR

HM materials

Carbide Materials (or Hard Materials)	HM	A sintered powder metallurgy substrate, consisting of a metallic carbide composite with binder metal. The most central raw material is tungsten carbide (WC). Tungsten carbide contributes to the hardness of the material. Tantalum carbide (TaC), titanium carbide (TiC) and niobium carbide (NbC) complements WC and adjusts the properties to what is desired. These three materials are called cubic carbides. Cobalt (Co) acts as a binder and keeps the material together. Carbide materials are often characterised by high compression strength, high hardness and therefore high wear resistance, but also by limited flexural strength and toughness. Carbide is used in taps, reamers, milling cutters, drills and thread milling cutters.

Surface Coatings

Alcrona coatings (Alcrona Pro)		The Alcrona (AlCrN) family of coatings are aluminium chromium nitride coatings mostly used for milling cutters. The two unique properties of these coatings are high hot hardness and high oxidation resistance. When used on tools for machining applications involving heavy mechanical and thermal stresses, these properties translate into superior wear resistance. Multiple levels or specific versions of these coatings are available and specific for various tools and applications.

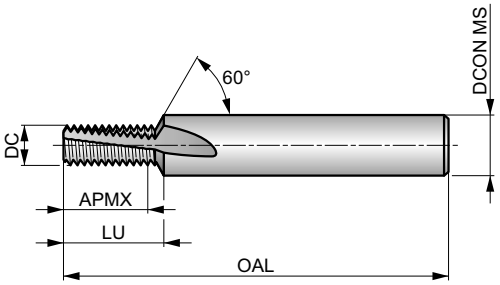
Thread form (THFT)		M	M	M	M	MF	MF	UNC	UNF	G	NPT
Basic standard group (BSG)		DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER
Usable length (ULDR)		2×D	2×D	2×D	2×D	1.5×D	1.5×D	2×D	2×D	1.5×D	
Material code (BMC)		HM	HM	HM	HM	HM	HM	HM	HM	HM	HM
Flute Geometry (FDC)											
Flute helix angle (FHA)		λ 10°	λ 10°	λ 27°	λ 27°	λ 10°	λ 10°	λ 10°	λ 10°	λ 10°	λ 10°
Hand (Cutting direction)		R	R	R	R	R	R	R	R	R	R
Coating		Alcrona Pro	Alcrona Pro	Alcrona Pro	Alcrona Pro	Alcrona Pro	Alcrona Pro	Alcrona Pro	Alcrona Pro	Alcrona Pro	Alcrona Pro
Shank		DIN 6535HA	DIN 6535HB	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HB	DIN 6535HB	DIN 6535HB	DIN 6535HA	DIN 6535HB
Coolant exit style (CXSC)											
Product Family Code		J200	J205	J210	J215	J220	J225	J235	J245	J280	J260
		M4 - M16	M8 - M16	M6 - M16	M6 - M16	M6 - M24	M10 - M18	1/4 - 3/4	1/4 - 3/4	1/8 - 3"	1/8 - 2"
		224	225	226	227	228	229	230	231	232	233
P	P1	■	■	■	■	■	■	■	■	■	■
	P2	■	■	■	■	■	■	■	■	■	■
	P3	■	■	■	■	■	■	■	■	■	■
	P4	■	■	■	■	■	■	■	■	■	■
M	M1	■	■	■	■	■	■	■	■	■	■
	M2	■	■	■	■	■	■	■	■	■	■
	M3	■	■	■	■	■	■	■	■	■	■
	M4	◪	◪	■	■	◪	◪	■	■	■	■
K	K1	■	■	■	■	■	■	■	■	■	■
	K2	■	■	■	■	■	■	■	■	■	■
	K3	■	■	■	■	■	■	■	■	■	■
	K4	■	■	■	■	■	■	■	■	■	■
	K5	■	■	■	■	■	■	■	■	■	■
N	N1	■	■	■	■	■	■	■	■	■	■
	N2	■	■	■	■	■	■	■	■	■	■
	N3	■	■	■	■	■	■	■	■	■	■
	N4	■	■	■	■	■	■	■	■	■	■
	N5										
S	S1	◪	■	◪	■	◪	■	■	■	■	■
	S2	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪
	S3	◪	◪	◪	◪	◪	◪	◪	◪	◪	◪
	S4	◪	◪	◪	◪	◪	■	◪	◪	◪	◪
H	H1	◪	◪	■	■	■	■	■	■	■	■
	H2										
	H3			◪	◪	◪	◪	◪	◪	◪	◪
	H4										

■ Primary use ◪ Possible use

J200

Solid Carbide Thread Mill with Countersink, Metric

Universal high performance tool to machine same or bigger diameters than the TDZ with the same pitch. Left or right-hand, through or blind holes almost down to the bottom. With 60° countersink for chamfering in a single machining cycle. Alcrona Pro coated for the best machining result in a wide range of materials.



M	DORMER	2×D
HM		λ 10°
R	Alcrona Pro	DIN 6535HA

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 234.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■172 B	■193 B	■200 B	■148 B	■130 B	■115 B	■133 B	■107 B	■90 B	■79 B	■67 B	◪55 B	■62 B	■52 B
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
■55 B	■45 B	◪38 B	■47 A	■40 A	◪36 A	■30 A	◪26 A	■130 B	■96 B	■72 B	■123 B	■100 B	■80 B
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■109 B	■83 B	■67 B	■101 A	■76 A	■56 A	■48 A	◪40 A	■114 B	■86 B	■66 B	■400 C	■300 C	■200 C
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**
■262 C	■235 C	■170 C	■610 C	■360 C	■180 C	■290 C	■145 C	■65 C	■40 A	◪40 A	◪30 A	◪33 A	◪25 A
S3.1	**S3.2**	**S4.1**	**S4.2**	**H1.1**									
◪25 A	◪21 A	◪20 A	◪16 A	◪60 A									

Internal Thread.

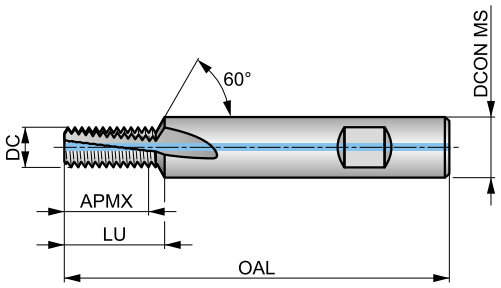
Product	TDZ	TP	DC	APMX	OAL	DCON MS	NOF	LU
		[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
J2003.2X.7	M4	0.70	3.20	8.40	57.0	6.00	3	9.50
J2004.1X.8	M5	0.80	4.10	11.20	57.0	6.00	3	12.10
J2004.8X1.0	M6	1.00	4.80	13.00	63.0	8.00	3	14.40
J2006.5X1.25	M8	1.25	6.50	17.50	72.0	10.00	3	19.10
J2008.2X1.5	M10	1.50	8.20	21.00	83.0	12.00	3	22.80
J2009.9X1.75	M12	1.75	9.90	26.25	83.0	14.00	4	28.20
J20011.6X2.0	M14	2.00	11.60	30.00	92.0	16.00	4	32.20
J20013.6X2.0	M16	2.00	13.60	34.00	92.0	18.00	4	36.20

J205

DORMER

Solid Carbide Thread Mill with Through Coolant and Countersink, Metric

Universal high performance tool to machine same or bigger diameters than the TDZ with the same pitch. Left or right-hand, through or blind holes almost down to the bottom. With 60° countersink for chamfering. Alcrona Pro coated for the best machining result with through coolant for better chip evacuation.



M	DORMER	2×D
HM		λ 10°
R	Alcrona Pro	DIN 6535HB

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 234.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 172 B	■ 193 B	■ 200 B	■ 148 B	■ 130 B	■ 115 B	■ 133 B	■ 107 B	■ 90 B	■ 79 B	■ 67 B	◪ 55 B	■ 62 B	■ 52 B
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
■ 55 B	■ 45 B	■ 38 B	■ 47 A	■ 40 A	■ 36 A	■ 30 A	◪ 26 A	■ 130 B	■ 96 B	■ 72 B	■ 123 B	■ 100 B	■ 80 B
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■ 109 B	■ 83 B	■ 67 B	■ 101 A	■ 76 A	■ 56 A	■ 48 A	◪ 40 A	■ 114 B	■ 86 B	■ 66 B	■ 400 C	■ 300 C	■ 200 C
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**
■ 262 C	■ 235 C	■ 170 C	■ 610 C	■ 360 C	■ 180 C	■ 290 C	■ 145 C	■ 65 C	■ 40 A	■ 40 A	◪ 30 A	■ 33 A	◪ 25 A
S3.1	**S3.2**	**S4.1**	**S4.2**	**H1.1**									
■ 25 A	◪ 21 A	■ 20 A	◪ 16 A	◪ 60 A									

Internal Thread.

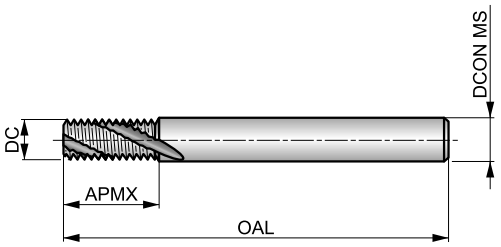
Product	TDZ	TP [mm]	DC [mm]	APMX [mm]	OAL [mm]	DCON MS [mm]	NOF	LU [mm]
J2056.5X1.25	M8	1.25	6.50	17.50	72.0	10.00	3	19.10
J2058.2X1.50	M10	1.50	8.20	21.00	83.0	12.00	3	22.80
J2059.9X1.75	M12	1.75	9.90	26.25	83.0	14.00	4	28.20
J20511.6X2.0	M14	2.00	11.60	30.00	92.0	16.00	4	32.20
J20513.6X2.0	M16	2.00	13.60	34.00	92.0	18.00	4	36.20

J210

DORMER

Solid Carbide Thread Mill with High Helix, Metric

Universal high performance tool to machine same or bigger diameters than the TDZ with the same pitch. Left or right-hand, through or blind holes almost down to the bottom. With Alcrona Pro coated for the best machining result in a wide range of materials and 27° helix for a smoother cutting action.



M	DORMER	2×D
HM		λ 27°
R	Alcrona Pro	DIN 6535HA

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 234.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 181 B	■ 203 B	■ 210 B	■ 156 B	■ 137 B	■ 121 B	■ 140 B	■ 112 B	■ 95 B	■ 83 B	■ 70 B	◪ 58 B	■ 65 B	■ 55 B
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
■ 58 B	■ 47 B	◪ 40 B	■ 50 A	■ 42 A	◪ 38 A	■ 32 A	◪ 27 A	■ 137 B	■ 101 B	■ 76 B	■ 129 B	■ 105 B	■ 84 B
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■ 115 B	■ 87 B	■ 71 B	■ 106 A	■ 80 A	■ 59 A	■ 51 A	◪ 42 A	■ 120 B	■ 90 B	■ 70 B	■ 420 C	■ 315 C	■ 210 C
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**
■ 275 C	■ 247 C	■ 179 C	■ 640 C	■ 378 C	■ 189 C	■ 305 C	■ 153 C	■ 69 C	■ 42 A	◪ 42 A	◪ 32 A	◪ 35 A	◪ 26 A
S3.1	**S3.2**	**S4.1**	**S4.2**	**H1.1**	**H3.1**								
◪ 26 A	◪ 22 A	◪ 21 A	◪ 17 A	■ 63 A	◪ 45 A								

Internal Thread.

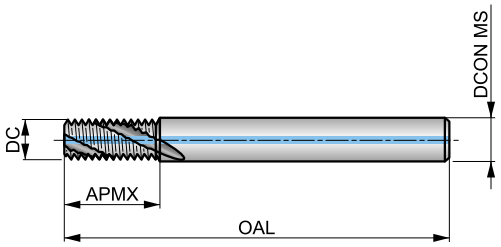
Product	TDZ	TP [mm]	DC [mm]	APMX [mm]	OAL [mm]	DCON MS [mm]	NOF
J2104.5X1.0	M6	1.00	4.50	13.00	57.0	6.00	3
J2106.0X1.25	M8	1.25	6.00	17.50	65.0	6.00	3
J2107.5X1.5	M10	1.50	7.50	21.00	72.0	8.00	3
J2109.5X1.75	M12	1.75	9.50	26.25	80.0	10.00	3
J21010.0X2.0	M14	2.00	10.00	30.00	83.0	10.00	4
J21012.0X2.0	M16	2.00	12.00	34.00	92.0	12.00	4

J215

DORMER

Solid Carbide Thread Mill with High Helix and Through Coolant, Metric

Universal high performance tool to machine same or bigger diameters than the TDZ with the same pitch. Left or right-hand, through or blind holes almost down to the bottom. Alcrona Pro coated for the best machining result with through coolant for better chip evacuation and 27° helix for a smoother cutting action.



M | DORMER | 2×D
HM | | λ 27°
R | Alcrona Pro | DIN 6535HA

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 234.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 181 B	■ 203 B	■ 210 B	■ 156 B	■ 137 B	■ 121 B	■ 140 B	■ 112 B	■ 95 B	■ 83 B	■ 70 B	■ 58 B	■ 65 B	■ 55 B
M2.1	M2.2	M2.3	M3.1	M3.2	M3.3	M4.1	M4.2	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3
■ 58 B	■ 47 B	■ 40 B	■ 50 A	■ 42 A	■ 38 A	■ 32 A	◪ 27 A	■ 137 B	■ 101 B	■ 76 B	■ 129 B	■ 105 B	■ 84 B
K3.1	K3.2	K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3
■ 115 B	■ 87 B	■ 71 B	■ 106 A	■ 80 A	■ 59 A	■ 51 A	■ 42 A	■ 120 B	■ 90 B	■ 70 B	■ 420 C	■ 315 C	■ 210 C
N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	N4.3	S1.1	S1.2	S1.3	S2.1	S2.2
■ 275 C	■ 247 C	■ 179 C	■ 640 C	■ 378 C	■ 189 C	■ 305 C	■ 153 C	■ 69 C	■ 42 A	■ 42 A	◪ 32 A	■ 35 A	◪ 26 A
S3.1	S3.2	S4.1	S4.2	H1.1	H3.1								
■ 26 A	◪ 22 A	■ 21 A	◪ 17 A	■ 63 A	◪ 45 A								

Internal Thread.

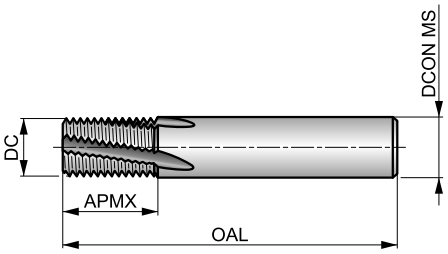
Product	TDZ	TP [mm]	DC [mm]	APMX [mm]	OAL [mm]	DCON MS [mm]	NOF
J2154.5X1.0	M6	1.00	4.50	13.00	57.0	6.00	3
J2156.0X1.25	M8	1.25	6.00	17.50	65.0	6.00	3
J2157.5X1.5	M10	1.50	7.50	21.00	72.0	8.00	3
J2159.5X1.75	M12	1.75	9.50	26.25	80.0	10.00	3
J21510.0X2.0	M14	2.00	10.00	30.00	83.0	10.00	4
J21512.0X2.0	M16	2.00	12.00	34.00	92.0	12.00	4

J220

DORMER

Solid Carbide Thread Mill, Metric Fine

Universal high performance tool to machine same or bigger diameters than the TDZ with the same pitch. Left or right-hand, through or blind holes almost down to the bottom. Alcrona Pro coated for the best machining result in a wide range of materials.



MF	DORMER	1.5×D
HM		λ 10°
R	Alcrona Pro	DIN 6535HA

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 234.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■190 E	■212 E	■242 E	■163 E	■143 E	■127 E	■146 E	■118 E	■99 E	■87 E	■74 E	■61 E	■69 E	■58 E
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
■61 E	■50 E	◪42 E	■52 D	■44 D	◪40 D	■33 D	◪29 D	■143 E	■106 E	■80 E	■136 E	■110 E	■88 E
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■120 E	■91 E	■74 E	■111 D	■84 D	■62 D	■53 D	◪44 D	■126 E	■95 E	■73 E	■440 F	■330 F	■220 F
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**
■288 F	■259 F	■187 F	■671 F	■396 F	■198 F	■319 F	■160 F	■72 F	■44 D	◪44 D	◪33 D	◪36 D	◪28 D
S3.1	**S3.2**	**S4.1**	**S4.2**	**H1.1**	**H3.1**								
◪28 D	◪23 D	◪22 D	◪18 D	■66 D	◪48 D								

Internal Thread.

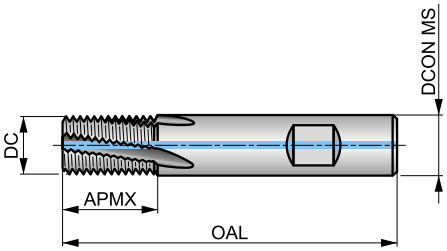
Product	TDZ	TP [mm]	DC [mm]	APMX [mm]	OAL [mm]	DCON MS [mm]	NOF
J2204.8X.5	M6	0.50	4.80	10.00	57.0	6.00	3
J2206.0X.75	M8	0.75	6.00	12.00	57.0	6.00	3
J2206.0X1.0	M8	1.00	6.00	12.00	57.0	6.00	3
J2208.0X1.0	M10	1.00	8.00	16.00	63.0	8.00	4
J22010.0X1.0	M12	1.00	10.00	20.00	72.0	10.00	4
J22010.0X1.5	M12	1.50	10.00	20.00	72.0	10.00	4
J22012.0X1.0	M14	1.00	12.00	22.00	83.0	12.00	4
J22012.0X1.5	M14	1.50	12.00	22.00	83.0	12.00	4
J22014.0X1.0	M16	1.00	14.00	26.00	83.0	14.00	5
J22014.0X1.5	M16	1.50	14.00	26.00	83.0	14.00	5
J22016.0X2.0	M20	2.00	16.00	30.00	92.0	16.00	5
J22016.0X2.5	M20	2.50	16.00	42.50	105.0	16.00	5
J22019.0X3.0	M24	3.00	19.00	50.00	125.0	20.00	5
J22020.0X2.0	M24	2.00	20.00	35.00	104.0	20.00	5

J225

DORMER

Solid Carbide Thread Mill with Through Coolant, Metric Fine

Universal high performance tool to machine same or bigger diameters than the TDZ with the same pitch. Left or right-hand, through or blind holes almost down to the bottom. With Alcrona Pro coated for the best machining result and through coolant for better chip evacuation.



MF	DORMER	1.5×D
HM		λ 10°
R	Alcrona Pro	DIN 6535HB

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 234.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■190 E	■212 E	■242 E	■163 E	■143 E	■127 E	■146 E	■118 E	■99 E	■87 E	■74 E	■61 E	■69 E	■58 E
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
■61 E	■50 E	■42 E	■52 D	■44 D	■40 D	■33 D	◪29 D	■143 E	■106 E	■80 E	■136 E	■110 E	■88 E
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■120 E	■91 E	■74 E	■111 D	■84 D	■62 D	■53 D	■44 D	■126 E	■95 E	■73 E	■440 F	■330 F	■220 F
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**
■288 F	■259 F	■187 F	■671 F	■396 F	■198 F	■319 F	■160 F	■72 F	■44 D	■44 D	◪33 D	■36 D	◪28 D
S3.1	**S3.2**	**S4.1**	**S4.2**	**H1.1**	**H3.1**								
■28 D	◪23 D	■22 D	◪18 D	■66 D	◪48 D								

Internal Thread.

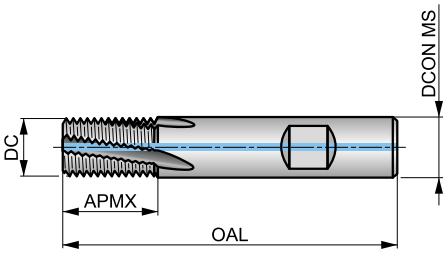
Product	TDZ	TP [mm]	DC [mm]	APMX [mm]	OAL [mm]	DCON MS [mm]	NOF
J2258.0X1.0	M10	1.00	8.00	16.00	63.0	8.00	4
J22510.0X1.0	M12	1.00	10.00	20.00	72.0	10.00	4
J22510.0X1.5	M12	1.50	10.00	20.00	72.0	10.00	4
J22512.0X1.0	M14	1.00	12.00	22.00	83.0	12.00	4
J22512.0X1.5	M14	1.50	12.00	22.00	83.0	12.00	4
J22514.0X1.0	M16	1.00	14.00	26.00	83.0	14.00	5
J22514.0X1.5	M16	1.50	14.00	26.00	83.0	14.00	5
J22516.0X1.5	M18	1.50	16.00	30.00	92.0	16.00	5

J235

DORMER

Solid Carbide Thread Mill with Through Coolant, UNC

Universal high performance tool to machine same or bigger diameters than the TDZ with the same pitch. Left or right-hand, through or blind holes almost down to the bottom. With Alcrona Pro coated for the best machining result and through coolant for better chip evacuation.



UNC	DORMER	2×D
HM		λ 10°
R	Alcrona Pro	DIN 6535HB

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 234.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 181 H	■ 203 H	■ 210 H	■ 156 H	■ 137 H	■ 121 H	■ 140 H	■ 112 H	■ 95 H	■ 83 H	■ 70 H	■ 58 H	■ 65 H	■ 55 H
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
■ 58 H	■ 47 H	■ 40 H	■ 50 G	■ 42 G	■ 38 G	■ 32 G	◪ 27 G	■ 137 H	■ 101 H	■ 76 H	■ 129 H	■ 105 H	■ 84 H
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■ 115 H	■ 87 H	■ 71 H	■ 106 G	■ 80 G	■ 59 G	■ 51 G	■ 42 G	■ 120 H	■ 90 H	■ 70 H	■ 420 I	■ 315 I	■ 210 I
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**
■ 275 I	■ 247 I	■ 179 I	■ 640 I	■ 378 I	■ 189 I	■ 305 I	■ 153 I	■ 69 I	■ 42 G	■ 42 G	◪ 32 G	■ 35 G	◪ 26 G
S3.1	**S3.2**	**S4.1**	**S4.2**	**H1.1**	**H3.1**								
■ 26 G	◪ 22 G	■ 21 G	◪ 17 G	■ 63 G	◪ 45 G								

Internal Thread.

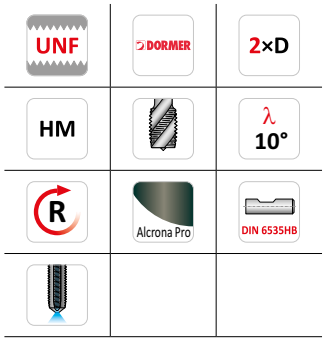
Product	TDZ	TPI	DC [mm]	APMX [mm]	OAL [mm]	DCON MS [mm]	NOF
J2354.8-20	1/4	20	4.80	14.00	57.0	6.00	3
J2355.5-18	5/16	18	5.50	14.00	57.0	6.00	3
J2357.5-16	3/8	16	7.50	19.00	63.0	8.00	4
J2358.0-14	7/16	14	8.00	19.00	63.0	8.00	4
J23510.0-13	1/2	13	10.00	22.00	72.0	10.00	4
J23510.0-12	9/16	12	10.00	22.00	72.0	10.00	4
J23512.0-11	5/8	11	12.00	26.00	83.0	12.00	4
J23514.0-10	3/4	10	14.00	32.00	83.0	14.00	5

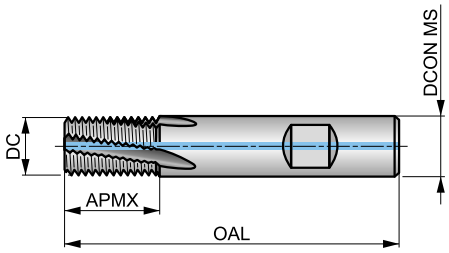
J245

DORMER

Solid Carbide Thread Mill with Through Coolant, UNF

Universal high performance tool to machine same or bigger diameters than the TDZ with the same pitch. Left or right-hand, through or blind holes almost down to the bottom. With Alcrona Pro coated for the best machining result and through coolant for better chip evacuation.





Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 234.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 181 K	■ 203 K	■ 210 K	■ 156 K	■ 137 K	■ 121 K	■ 140 K	■ 112 K	■ 95 K	■ 83 K	■ 70 K	■ 58 K	■ 65 K	■ 55 K
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
■ 58 K	■ 47 K	■ 40 K	■ 50 J	■ 42 J	■ 38 J	■ 32 J	◪ 27 J	■ 137 K	■ 101 K	■ 76 K	■ 129 K	■ 105 K	■ 84 K
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■ 115 K	■ 87 K	■ 71 K	■ 106 J	■ 80 J	■ 59 J	■ 51 J	■ 42 J	■ 120 K	■ 90 K	■ 70 K	■ 420 L	■ 315 L	■ 210 L
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**
■ 275 L	■ 247 L	■ 179 L	■ 640 L	■ 378 L	■ 189 L	■ 305 L	■ 153 L	■ 69 L	■ 42 J	■ 42 J	◪ 32 J	■ 35 J	◪ 26 J
S3.1	**S3.2**	**S4.1**	**S4.2**	**H1.1**	**H3.1**								
■ 26 J	◪ 22 J	■ 21 J	◪ 17 J	■ 63 J	◪ 45 J								

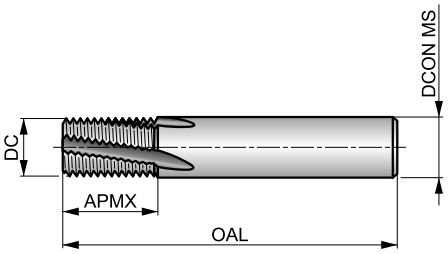
Internal Thread.

Product	TDZ	TPI	DC [mm]	APMX [mm]	OAL [mm]	DCON MS [mm]	NOF
J2454.8-28	1/4	28	4.80	14.00	57.0	6.00	3
J2456.0-24	5/16. 3/8	24	6.00	14.00	57.0	6.00	3
J2458.0-20	7/16. 1/2	20	8.00	19.00	63.0	8.00	4
J24510.0-18	9/16. 5/8	18	10.00	22.00	72.0	10.00	4
J24514.0-16	3/4	16	14.00	32.00	83.0	14.00	5

J280

Solid Carbide Thread Mill, G(BSP)

Universal high performance tool to machine same or bigger diameters than the TDZ with the same pitch. Left or right-hand, through or blind holes almost down to the bottom. Alcrona Pro coated for the best machining result in a wide range of materials. Suited for producing internal and external threads.



G	DORMER	1.5×D
HM		λ 10°
R	Alcrona Pro	DIN 6535HA

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 234.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 190 N	■ 212 N	■ 242 N	■ 163 N	■ 143 N	■ 127 N	■ 146 N	■ 118 N	■ 99 N	■ 87 N	■ 74 N	■ 61 N	■ 69 N	■ 58 N
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
■ 61 N	■ 50 N	■ 42 N	■ 52 M	■ 44 M	■ 40 M	■ 33 M	◪ 29 M	■ 143 N	■ 106 N	■ 80 N	■ 136 N	■ 110 N	■ 88 N
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■ 120 N	■ 91 N	■ 74 N	■ 111 M	■ 84 M	■ 62 M	■ 53 M	■ 44 M	■ 126 N	■ 95 N	■ 76 N	■ 440 0	■ 330 0	■ 220 0
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**
■ 288 0	■ 259 0	■ 187 0	■ 671 0	■ 396 0	■ 198 0	■ 319 0	■ 160 0	■ 72 0	■ 44 M	■ 44 M	◪ 33 M	■ 36 M	◪ 28 M
S3.1	**S3.2**	**S4.1**	**S4.2**	**H1.1**	**H3.1**								
■ 28 M	◪ 23 M	■ 22 M	◪ 18 M	■ 66 M	◪ 48 M								

Internal and External Thread.

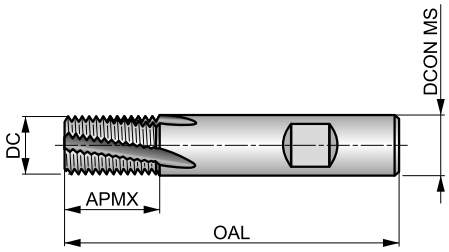
Product	TDZ	TPI	DC [mm]	APMX [mm]	OAL [mm]	DCON MS [mm]	NOF
J2806.0-28	1/8	28	6.00	15.00	57.0	6.00	3
J28010.0-19	1/4	19	10.00	20.00	72.0	10.00	4
J28014.0-19	3/8	19	14.00	26.00	83.0	14.00	5
J28016.0-14	1/2. 5/8	14	16.00	30.00	92.0	16.00	5
J28020.0-14	5/8. 3/4. 7/8	14	20.00	35.00	104.0	20.00	5
J28025.0-11	1". 3"	11	25.00	45.00	121.0	25.00	6

J260

DORMER

Solid Carbide Thread Mill, NPT

Universal high performance tool to machine same or bigger diameters than the TDZ with the same pitch. Left or right-hand, through or blind holes almost down to the bottom. Alcrona Pro coated for the best machining result in a wide range of materials.



NPT	DORMER	HM
	λ 10°	R
Alcrona Pro	DIN 6535HB	

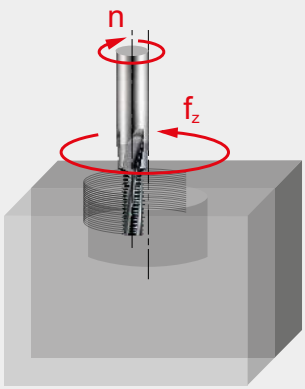
Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 234.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 190 R	■ 212 R	■ 242 R	■ 163 R	■ 143 R	■ 127 R	■ 146 R	■ 118 R	■ 99 R	■ 87 R	■ 74 R	■ 61 R	■ 69 R	■ 58 R
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
■ 61 R	■ 50 R	■ 42 R	■ 52 Q	■ 44 Q	■ 40 Q	■ 33 Q	◪ 29 Q	■ 143 R	■ 106 R	■ 80 R	■ 136 R	■ 110 R	■ 88 R
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■ 120 R	■ 91 R	■ 74 R	■ 111 Q	■ 84 Q	■ 62 Q	■ 53 Q	■ 44 Q	■ 126 R	■ 95 R	■ 73 R	■ 440 S	■ 330 S	■ 220 S
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**
■ 288 S	■ 259 S	■ 187 S	■ 671 S	■ 396 S	■ 198 S	■ 319 S	■ 160 S	■ 72 S	■ 44 Q	■ 44 Q	◪ 33 Q	■ 36 Q	◪ 28 Q
S3.1	**S3.2**	**S4.1**	**S4.2**	**H1.1**	**H3.1**								
■ 28 Q	◪ 23 Q	■ 22 Q	◪ 18 Q	■ 66 Q	◪ 48 Q								

Internal Thread.

Product	TDZ	TPI	DC [mm]	APMX [mm]	OAL [mm]	DCON MS [mm]	NOF
J2607.9-27	1/8	27	7.90	11.50	58.0	8.00	3
J2609.9-18	1/4. 3/8	18	9.90	15.92	66.0	10.00	3
J26015.9-14	1/2. 3/4	14	15.90	20.46	82.0	16.00	4
J26019.9-11.5	1". 2"	11.5	19.90	27.12	92.0	20.00	5

THREAD MILLS – FEED PER TOOTH TABLE



Feed per tooth per revolution (f_z in mm/rev).
The specified values are the recommended starting values for machining the full thread depth in one pass.

How to use this table to find the feed per tooth (f_z):

1. Find your Alpha Code on the product page (example: 181B, "B" is the Alpha Code).
2. Select the column matching your cutter diameter in the top row of the table with the Thread pitch ***P*** or ***TPI*** (in the rows with icons on the left).
3. Find your Alpha Code in the left column of the table.
4. The intersection (cell) of the Diameter + Pitch column and Alpha Code is the feed per tooth (f_z).

Correction of the feed per tooth for multiple passes:

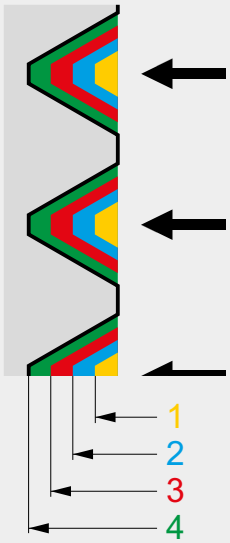
5. In case the thread is being machined in **2 passes** the feed values mentioned in the table should be increased by **30 to 40%**.
6. In case the thread is being machined in **3 passes** the feed values mentioned in the table should be increased by **55 to 65%**.
7. In case the thread is being machined in **4 passes** the feed values mentionedin the table should be increased by **80 to 90%**.

(Example: J2003.2X.7 machining WMG M4.1 with feed rate A in 4-passes the $f_z = 0.017 \times 1.80 = 0.031$ mm/z).

Feed rates

	ø DC [mm]																											
	3.20	**4.10**	**4.50**	**4.80**	**5.50**	**6.00**		**6.50**	**7.50**	**7.90**	**8.00**	**8.20**	**9.50**	**9.90**	**10.00**		**11.60**	**12.00**		**13.60**	**14.00**		**16.00**			**19.00**	**20.00**	**25.00**
	0.70	**0.80**	**1.00**	**1.00**		**1.25**		**1.25**	**1.50**			**1.50**	**1.75**	**1.75**	**2.00**		**2.50**	**2.00**		**2.00**								
A	0.017	0.022	0.023	0.024	–	0.024	–	0.029	0.036	–	–	0.040	0.044	0.047	0.053	–	0.056	0.068	–	0.071	–	–	–	–	–	–	–	–
B	0.022	0.029	0.031	0.032	–	0.032	–	0.038	0.048	–	–	0.053	0.059	0.063	0.070	–	0.075	0.090	–	0.095	–	–	–	–	–	–	–	–
C	0.028	0.036	0.039	0.040	–	0.040	–	0.048	0.060	–	–	0.066	0.074	0.079	0.088	–	0.094	0.113	–	0.119	–	–	–	–	–	–	–	–
				0.50		**0.75**	**1.00**				**1.00**				**1.00**	**1.50**		**1.00**	**1.50**		**1.00**	**1.50**	**1.50**	**2.00**	**2.50**	**3.00**	**2.00**	
D	–	–	–	0.044	–	0.041	0.036	–	–	–	0.057	–	–	–	0.075	0.067		0.079	0.071	–	0.083	0.071	0.092	0.081	0.073	0.067	0.096	–
E	–	–	–	0.058	–	0.055	0.048	–	–	–	0.076	–	–	–	0.100	0.089	–	0.105	0.094	–	0.110	0.095	0.122	0.108	0.097	0.089	0.128	–
F	–	–	–	0.073	–	0.069	0.060	–	–	–	0.095	–	–	–	0.125	0.111	–	0.131	0.118	–	0.138	0.119	0.153	0.135	0.121	0.111	0.160	–
				20	**18**				**16**		**14**				**13**	**12**		**11**			**10**							
G	–	–	–	0.019	0.023	–	–	–	0.030	–	0.034	–	–	–	0.053	0.051	–	0.055	–	–	0.066	–	–	–	–	–	–	–
H	–	–	–	0.025	0.030	–	–	–	0.040	–	0.045	–	–	–	0.071	0.068	–	0.073	–	–	0.088	–	–	–	–	–	–	–
I	–	–	–	0.031	0.038	–	–	–	0.050	–	0.056	–	–	–	0.089	0.085	–	0.091	–	–	0.110	–	–	–	–	–	–	–
				28		**24**					**20**				**18**						**16**							
J	–	–	–	0.023	–	0.026	–	–	–	–	0.041	–	–	–	0.062	–	–	–	–	–	0.083	–	–	–	–	–	–	–
K	–	–	–	0.030	–	0.035	–	–	–	–	0.054	–	–	–	0.083	–	–	–	–	–	0.110	–	–	–	–	–	–	–
L	–	–	–	0.038	–	0.044	–	–	–	–	0.068	–	–	–	0.104	–	–	–	–	–	0.138	–	–	–	–	–	–	–
						28									**19**						**19**		**14**				**14**	**11**
M	–	–	–	–	–	0.029	–	–	–	–	–	–	–	–	0.064	–	–	–	–	–	0.080	–	0.083	–	–	–	0.116	0.131
N	–	–	–	–	–	0.038	–	–	–	–	–	–	–	–	0.085	–	–	–	–	–	0.106	–	0.111	–	–	–	0.155	0.175
O	–	–	–	–	–	0.048	–	–	–	–	–	–	–	–	0.106	–	–	–	–	–	0.133	–	0.139	–	–	–	0.194	0.219
										27				**18**							**14**	**11.5**						
Q	–	–	–	–	–	–	–	–	–	0.039	–	–	–	0.044	–	–	–	–	–	–	0.079	0.115	–	–	–	–	–	–
R	–	–	–	–	–	–	–	–	–	0.052	–	–	–	0.059	–	–	–	–	–	–	0.105	0.153	–	–	–	–	–	–
S	–	–	–	–	–	–	–	–	–	0.065	–	–	–	0.074	–	–	–	–	–	–	0.131	0.191	–	–	–	–	–	–

THREAD MILLS – NUMBER OF PASSES TABLE



How to use the tables to find the depth increments per pass:

1. Select the table for your thread profile (example: "M12" is a metric thread).
2. Find the column matching your thread pitch in the top row of the table.
3. Find in that column below the recommended number of passes and for each pass the increment radial depth of cut. (example: for a pitch of 1.75 the recommended number of passes is 5 and radial depth of the 1st pass is 0.277 mm, the 2nd 0.228 mm etc.).
4. It is recommended to increase the number of passes for more difficult to machine materials.
5. For super-finishing result it is best practice to repeat the final pass.

Recommended number of passes and radial depth of cut per pass for female metric thread (60°).

		Radial depth of cut per pass [mm]										
		0.50	**0.70**	**0.75**	**0.80**	**1.00**	**1.25**	**1.50**	**1.75**	**2.00**	**2.50**	**3.00**
No. of passes	**1**	0.158	0.221	0.168	0.224	0.224	0.228	0.237	0.277	0.283	0.323	0.387
	2	0.131	0.183	0.138	0.185	0.185	0.188	0.196	0.228	0.234	0.267	0.320
	3	–	–	0.127	0.135	0.168	0.173	0.179	0.209	0.214	0.244	0.293
	4	–	–	–	–	–	0.133	0.138	0.161	0.164	0.187	0.225
	5	–	–	–	–	–	–	0.116	0.135	0.138	0.158	0.189
	6	–	–	–	–	–	–	–	–	0.122	0.139	0.167
	7	–	–	–	–	–	–	–	–	–	0.125	0.151
Acc. depth		0.289	0.404	0.433	0.544	0.577	0.722	0.866	1.010	1.155	1.443	1.732

Recommended number of passes and radial depth of cut per pass for female unified thread (60°).

		Radial depth of cut per pass [mm]									
	1"	**28**	**24**	**20**	**18**	**16**	**14**	**13**	**12**	**11**	**10**
No. of passes	**1**	0.203	0.237	0.232	0.258	0.251	0.287	0.309	0.299	0.327	0.328
	2	0.167	0.195	0.191	0.213	0.207	0.237	0.255	0.247	0.270	0.271
	3	0.154	0.179	0.175	0.195	0.190	0.217	0.234	0.226	0.247	0.248
	4	–	–	0.135	0.149	0.146	0.166	0.179	0.174	0.189	0.190
	5	–	–	–	–	0.123	0.140	0.151	0.146	0.160	0.160
	6	–	–	–	–	–	–	–	0.130	0.140	0.141
	7	–	–	–	–	–	–	–	–	–	0.128
Acc. Depth		0.524	0.611	0.733	0.815	0.917	1.047	1.128	1.222	1.333	1.466

THREAD MILLS – NUMBER OF PASSES TABLE

Recommended number of passes and radial depth of cut per pass for female BSP thread (55°).

1 2 3 / 1"		Radial depth of cut per pass [mm]			
		28	19	14	11
No. of passes	1	0.225	0.271	0.318	0.362
	2	0.186	0.224	0.263	0.299
	3	0.170	0.205	0.241	0.274
	4	–	0.156	0.185	0.210
	5	–	–	0.155	0.177
	6	–	–	–	0.157
	7	–	–	–	–
Acc. Depth		0.581	0.856	1.162	1.479

Recommended number of passes and radial depth of cut per pass for female NPT thread (60°).

1 2 3 / 1"		Radial depth of cut per pass [mm]			
		27	18	14	11.5
No. of passes	1	0.283	0.348	0.390	0.423
	2	0.233	0.287	0.322	0.349
	3	0.214	0.263	0.295	0.320
	4	–	0.202	0.226	0.246
	5	–	–	0.190	0.207
	6	–	–	–	0.183
	7	–	–	–	–
Acc. Depth		0.730	1.100	1.423	1.728

General hints on thread milling

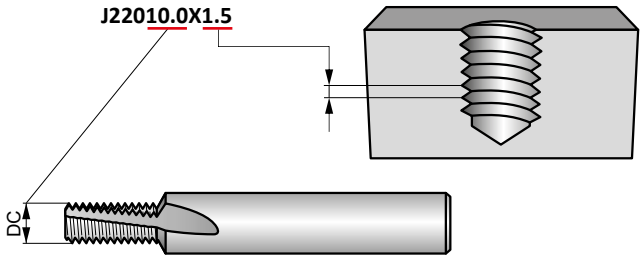
1. Thread milling is the process of generating a thread by the circular interpolation of a milling cutter with a specific thread geometry ground around it's periphery.
2. To be able to use a thread milling cutter it is necessary to have a CNC machine that can make circular paths.
3. Most modern CNC machines are equipped with machining cycles for thread milling.
4. Consult the manual or contact the machine supplier for information.

Features and benefits

1. Thread milling gives increased reliability and tool life.
2. Threadmills produce small chips resulting in problem free threading.
3. Tolerance adjustments can be made using exact co-ordinates.
4. You can generate a complete thread to the bottom of the hole.
5. Capable of machining a wide variety of materials.
6. The same cutter can produce different size threads provided the pitch is the same.
7. Both right and left hand threads can be created with the same tool.
8. Some thread mills can also machine the entry chamfer (J200 and J205).

Choosing your tool

Thread milling cutters have an item code based on the type, diameter (d_1) and pitch (P).
The item code is the number to use when ordering your tool.
Always consult the catalogue to ensure you have the correct thread dimensions.



This thread milling cutter can be used for threads ≥ M12×1.5 (M14×1.5, M18×1.5 etc.)

Programming with Rprg

- For easy adjustment of the thread tolerance always program with radius correction.
- The Rprg value is the start value for a new cutter and is printed on the cutter shank. This should be entered in the tool memory offset.
- Rprg is based on the theoretical zero-line of the thread meaning that when you program using Rprg the thread is never oversize, but normally tight.
- This means that with a small modification to the program co-ordinates you can create the thread to the required size.

Recommendations

- Always use the correct cutting data (refer to the cutting data chart in the Product section).
- Use the recommended drill size for the thread diameter, as for conventional taps.
- For easy adjustment of the thread tolerance always start with the Rprg value printed on the shank of the threadmill.
- Use a gauge to check the tolerance on the first thread to establish if the radius needs to be corrected. The radius can be corrected 2 or 3 times before the threadmill is worn out.
- When dry machining, compressed air is recommended to help with swarf removal.
- When threading more difficult materials, it is recommended to take multiple passes.

DIES

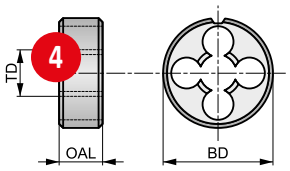
📖 6		WMG & ISO 13399
📖 12	TAPS	INSTRUCTIONS
📖 15	TAPS	SOLID CARBIDE TAPS
📖 25	TAPS	MATERIAL SPECIFIC SHARK TAPS
📖 62	TAPS	HSS HAND & MACHINE TAPS
📖 216	TAPS	TECHNICAL INFORMATION
📖 218		THREAD MILLS
📖 **238**		**DIES**
📖 270		CUTTING FLUIDS
📖 274		GENERAL TECHNICAL INFORMATION

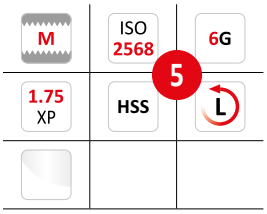
1 F201

DORMER

HSS Gun Nosed Machine Die, Metric, Left Hand

Creates left handed, external screw threads with a me[2]se thread form. The bright finish ensures workpiece material will not stick to the cutting edges of the tool so you get a cleaner, more accurate thread and the gun nosed geometry directs chips away from the cutting edges for improved performance.





Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	K1.1
■12	■13	■14	■10	■9	◪8	■8	◪7	◪5	■7	■6	■6	◪5	■11

K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	K3.3	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3
■8	◪6	■11	■9	◪7	■10	■8	◪6	■10	■8	◪6	◪20	◪15	◪10

N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	N4.3
◪10	◪9	◪6	■11	◪6	◪3	◪11	◪4	◪4

6

Product	TD [mm]	TP [mm]	BD [mm]	OAL [mm]
F201M3	3.000	0.50	20.00	5.0
F201M4	4.000	0.70	20.00	5.0
F201[7]	5.000	0.80	20.00	7.0
F201	6.000	1.00	20.00	7.0
F201M8	8.000	1.25	25.00	9.0
F201M10	10.000	1.50	30.00	11.0
F201M12	12.000	1.75	38.00	14.0
F201M14	14.000	2.00	38.00	14.0
F201M16	16.000	2.00	45.00	18.0
F201M18	18.000	2.50	45.00	18.0
F201M20	20.000	2.50	45.00	18.0

8

Pos.	Description
1	Designation of taps
2	Product description
3	Illustrative picture
4	Schematic drawing of tool

Pos.	Description
5	Product features
6	Material group recommendations incl. speed and feed guidance
7	Product code
8	Product dimensions

Typical page with tap holder displayed – specific page details will differ.

HSS DIES – ICONS OVERVIEW

General icons

■	Primary use
◪	Possible use

Basic standard group (BSG)

BS 1127:1950	BS 1127:1950 – Round Dies Stds.
DIN 382	DIN 382 – Hex Die Stds.
ISO 2568	ISO 2568 – Die Stds.

Material code (BMC)

HSS-E	High Speed Cobalt Steel Tool Material
HSS	High Speed Steel Tool Material

Coating

Bright	Bright (uncoated)

Die chamfer to pitch ratio (DCPR)

1.75 XP	Die Thread Chamfer to Pitch Ratio (1.75xP)
2.25 XP	Die Thread Chamfer to Pitch Ratio (2.25xP)

Hand (Cutting direction)

L	Left Hand Rotation / Cutting
R	Right Hand Rotation / Cutting

Thread form type (THFT)

NPT	Thread Form, American National Pipe Taper
BSW	Thread Form, British Standard Whitworth
PG	Thread Form, Steel Conduit DIN 40 430 (electrical)
BSF	Thread Form, British Standard Fine
M	Thread Form, Metric Coarse
UNC	Thread Form, Unified Coarse
G	Thread Form, British Standard Pipe
MF	Thread Form, Metric Fine
UNF	Thread Form, Unified Fine

Thread tolerance class (TCTR)

6g	Normal Fit "middle" Tolerance Class
Medium	Medium Inch Thread Class of Fit
Normal	Normal Fit Class for Pipe Thread
2A	External Inch Thread Medium Class of Fit
Class A	Medium Inch Thread Class of Fit

HSS DIES – TOOL MATERIAL NAVIGATOR

Tool materials

High Speed Steel	HSS	A medium-alloyed high speed steel that has good machinability and good performance. HSS exhibits hardness, toughness and wear resistance characteristics that make it attractive in a wide range of applications, for example in drills and taps.
Cobalt High Speed Steel	HSS-E	This high speed steel contains cobalt for increased hot hardness. The composition of HSCo provides a good combination of toughness and hardness. It has good machinability and good wear resistance, which makes it excellent for producing drills, taps, reamers and milling cutters.

Surface Coatings

Bright (uncoated)		Bright finish (uncoated surface) improves chip flow in soft or non-ferrous materials and maintains sharp cutting edges in abrasive materials.

DORMER PRAMET

HELP IS AT HAND

Our techincal support team are always at hand to help with any technical questions or queries you have about our technical apps. Use the contact us details to reach out to your local Dormer Pramet sales office. **Simply Reliable.**

Thread form (THFT)		M	M	M	MF	UNC	UNF
Basic standard group (BSG)		ISO 2568	ISO 2568	ISO 2568	ISO 2568	ISO 2568	ISO 2568
Thread tolerance class (TCTR)		6g	6g	6g	6g	2A	2A
Die chamfer to pitch ratio (DCPR)		1.75 XP	1.75 XP	2.25 XP	1.75 XP	1.75 XP	1.75 XP
Material code (BMC)		HSS	HSS	HSS-E	HSS	HSS	HSS
Hand (Cutting direction)		R	L	R	R	R	R
Coating		Bright	Bright	Bright	Bright	Bright	Bright
Product Family Code		F100	F201	F108	F110	F120	F130
		M2 - M42	M3 - M20	M2 - M20	M4 - M40	No.8 - 1"	No.10 - 1"
		248	249	250	251	252	253
P	P1	■	■	◪	■	■	■
	P2	■	■	◪	■	■	■
	P3	◪	◪	■	◪	◪	◪
	P4	◪	◪	■	◪	◪	◪
M	M1	■	■	◪	■	■	■
	M2	◪	◪	■	◪	◪	◪
	M3			■			
	M4			◪			
K	K1	■	■		■	■	■
	K2	■	■		■	■	■
	K3	■	■		■	■	■
	K4			■			
	K5	■	■		■	■	■
N	N1	◪	◪	◪	◪	◪	◪
	N2	◪	◪	◪	◪	◪	◪
	N3	◪	◪	◪	◪	◪	◪
	N4	◪	◪	◪	◪	◪	◪
	N5						
S	S1			◪			
	S2						
	S3						
	S4						
H	H1						
	H2						
	H3						
	H4						

■ Primary use ◪ Possible use

	BSW	BSF	G	NPT	PG	M	MF
	ISO 2568	ISO 2568	ISO 2568	ISO 2568	ISO 2568	BS 1127:1950	BS 1127:1950
	Medium	Medium	Class A	Normal	Normal		
	1.75 XP	1.75 XP	1.75 XP	1.75 XP	1.75 XP	1.75 XP	1.75 XP
	HSS	HSS	HSS	HSS	HSS	HSS	HSS
	R	R	R	R	R	R	R
	Bright	Bright	Bright	Bright	Bright	Bright	Bright
	F140	F150	F170	F180	F190	F300	F310
	1/8 - 1"	3/16 - 1/2	1/8 - 2"	1/8 - 1"	No.7 - No.36	M2 - M36	M3 - M30
	254	255	256	257	258	259	260
P1	■	■	■	■	■	■	■
P2	■	■	■	■	■	■	■
P3	◪	◪	◪	◪	◪	◪	◪
P4	◪	◪	◪	◪	◪	◪	◪
M1	■	■	■	■	■	■	■
M2	◪	◪	◪	◪	◪	◪	◪
M3							
M4							
K1	■	■	■	■	■	■	■
K2	■	■	■	■	■	■	■
K3	■	■	■	■	■	■	■
K4							
K5	■	■	■	■	■	■	■
N1	◪	◪	◪	◪	◪	◪	◪
N2	◪	◪	◪	◪	◪	◪	◪
N3	◪	◪	◪	◪	◪	◪	◪
N4	◪	◪	◪	◪	◪	◪	◪
N5							
S1							
S2							
S3							
S4							
H1							
H2							
H3							
H4							

■ Primary use ◪ Possible use

Thread form (THFT)		UNC	UNF	G	M	M	MF	
Basic standard group (BSG)		BS 1127:1950	BS 1127:1950	BS 1127:1950	DIN 382	BS 1127:1950	BS 1127:1950	
Thread tolerance class (TCTR)					6g	6g	6g	
Die chamfer to pitch ratio (DCPR)		1.75 XP	1.75 XP	1.75 XP	1.75 XP	1.75 XP	1.75 XP	
Material code (BMC)		HSS	HSS	HSS	HSS	HSS	HSS	
Hand (Cutting direction)		R	R	R	R	R	R	
Coating		Bright	Bright	Bright	Bright	Bright	Bright	
Product Family Code		F320	F330	F370	F202	F302	F312	
		No.4 - 1.1/4	No.4 - 1.1/2	1/8 - 1.1/2	M3 - M36	M3 - M36	M8 - M24	
		261	262	263	264	265	266	
P	P1	■	■	■	■	■	■	
	P2	■	■	■	■	■	■	
	P3	◪	◪	◪	◪	◪	◪	
	P4	◪	◪	◪	◪	◪	◪	
M	M1	■	■	■	■	■	■	
	M2	◪	◪	◪	◪	◪	◪	
	M3							
	M4							
K	K1	■	■	■	■	■	■	
	K2	■	■	■	■	■	■	
	K3	■	■	■	■	■	■	
	K4							
	K5	■	■	■	■	■	■	
N	N1	◪	◪	◪	◪	◪	◪	
	N2	◪	◪	◪	◪	◪	◪	
	N3	◪	◪	◪	◪	◪	◪	
	N4	◪	◪	◪	◪	◪	◪	
	N5							
S	S1							
	S2							
	S3							
	S4							
H	H1							
	H2							
	H3							
	H4							

■ Primary use ◪ Possible use

G

DIN 382

Class A

1.75 XP

HSS

R

Bright

	F272
	1/8 - 1.1/2
	267
P1	■
P2	■
P3	◪
P4	◪
M1	■
M2	◪
M3	
M4	
K1	■
K2	■
K3	■
K4	
K5	■
N1	◪
N2	◪
N3	◪
N4	◪
N5	
S1	
S2	
S3	
S4	
H1	
H2	
H3	
H4	

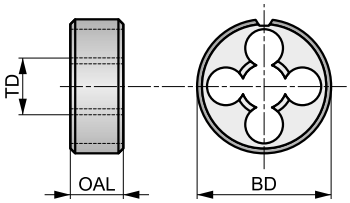
■ Primary use ◪ Possible use

F100

DORMER

HSS Gun Nosed Machine Die, Metric, Right Hand

Solid die for external thread. Generally for use on lathes, small diameters can be produced by hand with a die stock holder. The gun-nose will drive the chip ahead of the cutting edge, increasing performance. Bright finish lapped surface prevents the workpiece material from sticking and improves the threading action.



M	ISO 2568	6g
1.75 XP	HSS	R
Bright		

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	K1.1
■12	■13	■14	■10	■9	◪8	■8	◪7	◪5	■7	■6	■6	◪5	■11
K1.2	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■8	◪6	■11	■9	◪7	■10	■8	◪6	■10	■8	◪6	◪20	◪15	◪10
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**					
◪10	◪9	◪6	■11	◪6	◪3	◪11	◪4	◪4					

Products from this series are also available in set with taps. Please see L120.

Product	TD [mm]	TP [mm]	BD [mm]	OAL [mm]
F100M2 [1]	2.000	0.40	16.00	5.0
F100M2.5 [1]	2.500	0.45	16.00	5.0
F100M2.6 [1]	2.600	0.45	16.00	5.0
F100M3	3.000	0.50	20.00	5.0
F100M3.5	3.500	0.60	20.00	5.0
F100M4	4.000	0.70	20.00	5.0
F100M4.5	4.500	0.75	20.00	7.0
F100M5	5.000	0.80	20.00	7.0
F100M6	6.000	1.00	20.00	7.0
F100M7	7.000	1.00	25.00	9.0
F100M8	8.000	1.25	25.00	9.0
F100M9	9.000	1.25	25.00	9.0
F100M10	10.000	1.50	30.00	11.0
F100M11	11.000	1.50	30.00	11.0

Product	TD [mm]	TP [mm]	BD [mm]	OAL [mm]
F100M12	12.000	1.75	38.00	14.0
F100M14	14.000	2.00	38.00	14.0
F100M16	16.000	2.00	45.00	18.0
F100M18	18.000	2.50	45.00	18.0
F100M20	20.000	2.50	45.00	18.0
F100M22	22.000	2.50	55.00	22.0
F100M24	24.000	3.00	55.00	22.0
F100M27	27.000	3.00	65.00	25.0
F100M30	30.000	3.50	65.00	25.0
F100M33	33.000	3.50	65.00	25.0
F100M36	36.000	4.00	65.00	25.0
F100M39	39.000	4.00	75.00	30.0
F100M42	42.000	4.50	75.00	30.0

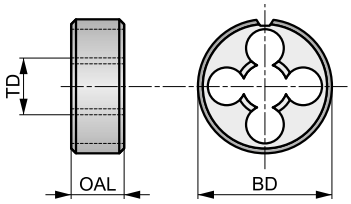
[1] Without gun-nose.

F201

DORMER

HSS Gun Nosed Machine Die, Metric, Left Hand

Solid die for external thread. Generally for use on lathes, small diameters can be produced by hand with a die stock holder. The gun-nose will drive the chip ahead of the cutting edge, increasing performance. Bright finish lapped surface prevents the workpiece material from sticking and improves the threading action.



M	ISO 2568	6g
1.75 XP	HSS	L
Bright		

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	K1.1
■12	■13	■14	■10	■9	◪8	■8	◪7	◪5	■7	■6	■6	◪5	■11
K1.2	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■8	◪6	■11	■9	◪7	■10	■8	◪6	■10	■8	◪6	◪20	◪15	◪10
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**					
◪10	◪9	◪6	■11	◪6	◪3	◪11	◪4	◪4					

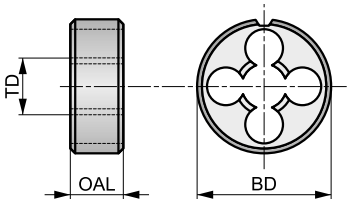
Product	TD [mm]	TP [mm]	BD [mm]	OAL [mm]
F201M3	3.000	0.50	20.00	5.0
F201M4	4.000	0.70	20.00	5.0
F201M5	5.000	0.80	20.00	7.0
F201M6	6.000	1.00	20.00	7.0
F201M8	8.000	1.25	25.00	9.0
F201M10	10.000	1.50	30.00	11.0
F201M12	12.000	1.75	38.00	14.0
F201M14	14.000	2.00	38.00	14.0
F201M16	16.000	2.00	45.00	18.0
F201M18	18.000	2.50	45.00	18.0
F201M20	20.000	2.50	45.00	18.0

F108

DORMER

HSS-E Gun Nosed Machine Die, Metric, Right Hand

Solid die for producing external thread. The gun-nose will drive the chip ahead of the cutting edge, increasing performance. Bright finish lapped surface prevents the workpiece material from sticking and improves the threading action. Specific geometry to cut accurate threads in stainless steel.



M	ISO 2568	6g
2.25 XP	HSS-E	R
Bright		

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
◪12	◪13	◪14	◪10	◪9	■8	◪8	■7	■6	■5	■4	◪7	◪6	■6
M2.2	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**N1.1**	**N1.2**	**N1.3**
■5	◪5	■6	■5	■4	■5	■9	■7	■5	■4	◪4	◪20	◪15	■10
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**	**S1.1**				
◪10	◪9	■6	■11	◪6	◪3	◪11	◪4	◪4	◪5				

Product	TD [mm]	TP [mm]	BD [mm]	OAL [mm]
F108M2 [1]	2.000	0.40	16.00	5.0
F108M2.5 [1]	2.500	0.45	16.00	5.0
F108M3	3.000	0.50	20.00	5.0
F108M4	4.000	0.70	20.00	5.0
F108M5	5.000	0.80	20.00	7.0
F108M6	6.000	1.00	20.00	7.0
F108M8	8.000	1.25	25.00	9.0
F108M10	10.000	1.50	30.00	11.0
F108M12	12.000	1.75	38.00	14.0
F108M14	14.000	2.00	38.00	14.0
F108M16	16.000	2.00	45.00	18.0
F108M18	18.000	2.50	45.00	18.0
F108M20	20.000	2.50	45.00	18.0

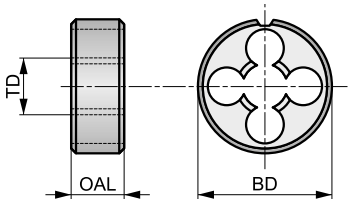
[1] Without gun-nose.

F110

DORMER

HSS Gun Nosed Machine Die, Metric Fine, Right Hand

Solid die for external thread. Generally for use on lathes, small diameters can be produced by hand with a die stock holder. The gun-nose will drive the chip ahead of the cutting edge increasing performance. Bright finish lapped surface prevents the workpiece material from sticking and improves the threading action.



MF	ISO 2568	6g
1.75 XP	HSS	R
Bright		

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	K1.1
■12	■13	■14	■10	■9	◪8	■8	◪7	◪5	■7	■6	■6	◪5	■11
K1.2	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■8	◪6	■11	■9	◪7	■10	■8	◪6	■10	■8	◪6	◪20	◪15	◪10
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**					
◪10	◪9	◪6	■11	◪6	◪3	◪11	◪4	◪4					

Product	TD [mm]	TP [mm]	BD [mm]	OAL [mm]
F110M4X.5	4.000	0.50	20.00	5.0
F110M5X.5	5.000	0.50	20.00	5.0
F110M6X.75	6.000	0.75	20.00	7.0
F110M7X.75	7.000	0.75	25.00	9.0
F110M8X.75	8.000	0.75	25.00	9.0
F110M8X1.0	8.000	1.00	25.00	9.0
F110M9X1.0	9.000	1.00	25.00	9.0
F110M10X.75	10.000	0.75	30.00	11.0
F110M10X1.0	10.000	1.00	30.00	11.0
F110M10X1.25	10.000	1.25	30.00	11.0
F110M11X1.0	11.000	1.00	30.00	11.0
F110M12X1.0	12.000	1.00	38.00	10.0
F110M12X1.25	12.000	1.25	38.00	10.0
F110M12X1.5	12.000	1.50	38.00	10.0
F110M13X1.0	13.000	1.00	38.00	10.0
F110M14X1.0	14.000	1.00	38.00	10.0
F110M14X1.25	14.000	1.25	38.00	10.0
F110M14X1.5	14.000	1.50	38.00	10.0
F110M15X1.0	15.000	1.00	38.00	10.0
F110M15X1.5	15.000	1.50	38.00	10.0
F110M16X1.0	16.000	1.00	45.00	14.0

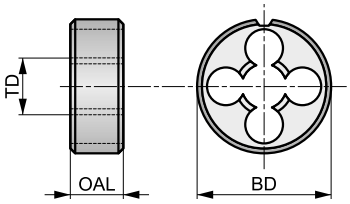
Product	TD [mm]	TP [mm]	BD [mm]	OAL [mm]
F110M16X1.5	16.000	1.50	45.00	14.0
F110M18X1.0	18.000	1.00	45.00	14.0
F110M18X1.5	18.000	1.50	45.00	14.0
F110M20X1.0	20.000	1.00	45.00	14.0
F110M20X1.5	20.000	1.50	45.00	14.0
F110M22X1.0	22.000	1.00	55.00	16.0
F110M22X1.5	22.000	1.50	55.00	16.0
F110M24X1.0	24.000	1.00	55.00	16.0
F110M24X1.5	24.000	1.50	55.00	16.0
F110M24X2.0	24.000	2.00	55.00	16.0
F110M25X1.5	25.000	1.50	55.00	16.0
F110M26X1.5	26.000	1.50	55.00	16.0
F110M27X1.5	27.000	1.50	65.00	18.0
F110M27X2.0	27.000	2.00	65.00	18.0
F110M28X1.5	28.000	1.50	65.00	18.0
F110M30X1.5	30.000	1.50	65.00	18.0
F110M32X1.5	32.000	1.50	65.00	18.0
F110M35X1.5	35.000	1.50	65.00	18.0
F110M36X1.5	36.000	1.50	65.00	18.0
F110M40X1.5	40.000	1.50	75.00	20.0

F120

DORMER

HSS Gun Nosed Machine Die, UNC, Right Hand

Solid die for external thread. Generally for use on lathes, small diameters can be produced by hand with a die stock holder. The gun-nose will drive the chip ahead of the cutting edge, increasing performance. Bright finish lapped surface prevents the workpiece material from sticking and improves the threading action.



UNC	ISO 2568	2A
1.75 XP	HSS	R
Bright		

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	K1.1
■12	■13	■14	■10	■9	◪8	■8	◪7	◪5	■7	■6	■6	◪5	■11
K1.2	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■8	◪6	■11	■9	◪7	■10	■8	◪6	■10	■8	◪6	◪20	◪15	◪10
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**					
◪10	◪9	◪6	■11	◪6	◪3	◪11	◪4	◪4					

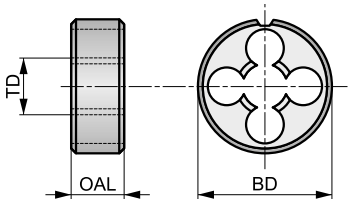
Product	TDZ	TPI	TD [mm]	BD [mm]	OAL [mm]
F1208-32	8	32	4.170	20.00	7.0
F12010-24	10	24	4.830	20.00	7.0
F1201/4	1/4	20	6.350	20.00	7.0
F1205/16	5/16	18	7.940	25.00	9.0
F1203/8	3/8	16	9.530	30.00	11.0
F1207/16	7/16	14	11.110	30.00	11.0
F1201/2	1/2	13	12.700	38.00	14.0
F1209/16	9/16	12	14.290	38.00	14.0
F1205/8	5/8	11	15.880	45.00	18.0
F1203/4	3/4	10	19.050	45.00	18.0
F1207/8	7/8	9	22.230	55.00	22.0
F1201	1″	8	25.400	55.00	22.0

F130

DORMER

HSS Gun Nosed Machine Die, UNF, Right Hand

Solid die for external thread. Generally for use on lathes, small diameters can be produced by hand with a die stock holder. The gun-nose will drive the chip ahead of the cutting edge, increasing performance. Bright finish lapped surface prevents the workpiece material from sticking and improves the threading action.



UNF	ISO 2568	2A
1.75 XP	HSS	R
Bright		

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	K1.1
■12	■13	■14	■10	■9	◪8	■8	◪7	◪5	■7	■6	■6	◪5	■11
K1.2	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■8	◪6	■11	■9	◪7	■10	■8	◪6	■10	■8	◪6	◪20	◪15	◪10
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**					
◪10	◪9	◪6	■11	◪6	◪3	◪11	◪4	◪4					

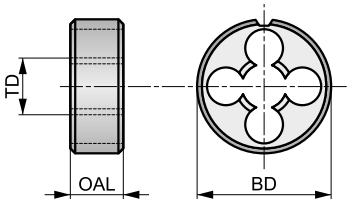
Product	TDZ	TPI	TD [mm]	BD [mm]	OAL [mm]
F13010-32	10	32	4.830	20.00	7.0
F1301/4	1/4	28	6.350	20.00	7.0
F1305/16	5/16	24	7.940	25.00	9.0
F1303/8	3/8	24	9.530	30.00	11.0
F1307/16	7/16	20	11.110	30.00	11.0
F1301/2	1/2	20	12.700	38.00	10.0
F1309/16	9/16	18	14.290	38.00	10.0
F1305/8	5/8	18	15.880	45.00	14.0
F1303/4	3/4	16	19.050	45.00	14.0
F1307/8	7/8	14	22.230	55.00	16.0
F1301	1"	12	25.400	55.00	16.0

F140

DORMER

HSS Gun Nosed Machine Die, BSW, Right Hand

Solid die for external thread. Generally for use on lathes, small diameters can be produced by hand with a die stock holder. The gun-nose will drive the chip ahead of the cutting edge, increasing performance. Bright finish lapped surface prevents the workpiece material from sticking and improves the threading action.



BSW	ISO 2568	Medium
1.75 XP	HSS	R
Bright		

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	K1.1
■12	■13	■14	■10	■9	◪8	■8	◪7	◪5	■7	■6	■6	◪5	■11
K1.2	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■8	◪6	■11	■9	◪7	■10	■8	◪6	■10	■8	◪6	◪20	◪15	◪10
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**					
◪10	◪9	◪6	■11	◪6	◪3	◪11	◪4	◪4					

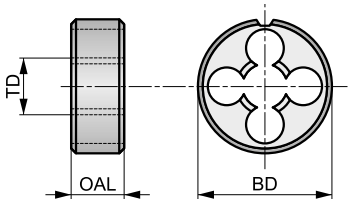
Product	TDZ	TPI	TD [mm]	BD [mm]	OAL [mm]
F1401/8	1/8	40	3.170	20.00	5.0
F1403/16	3/16	24	4.760	20.00	7.0
F1401/4	1/4	20	6.350	20.00	7.0
F1405/16	5/16	18	7.940	25.00	9.0
F1403/8	3/8	16	9.530	30.00	11.0
F1407/16	7/16	14	11.110	30.00	11.0
F1401/2	1/2	12	12.700	38.00	14.0
F1405/8	5/8	11	15.880	45.00	18.0
F1403/4	3/4	10	19.050	45.00	18.0
F1407/8	7/8	9	22.230	55.00	22.0
F1401	1″	8	25.400	55.00	22.0

F150

DORMER

HSS Gun Nosed Machine Die, BSF, Right Hand

Solid die for external thread. Generally for use on lathes, yet small diameters can be produced by hand with a die stock holder. The gun-nose will drive the chip ahead of the cutting edge, increasing performance. Bright finish lapped surface prevents the workpiece material from sticking and improves the threading action.



BSF	ISO 2568	Medium
1.75 XP	HSS	R
Bright		

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	K1.1
■12	■13	■14	■10	■9	◪8	■8	◪7	◪5	■7	■6	■6	◪5	■11
K1.2	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■8	◪6	■11	■9	◪7	■10	■8	◪6	■10	■8	◪6	◪20	◪15	◪10
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**					
◪10	◪9	◪6	■11	◪6	◪3	◪11	◪4	◪4					

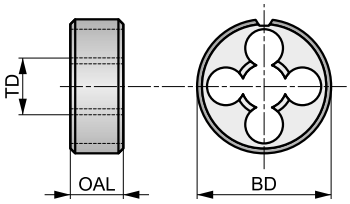
Product	TDZ	TPI	TD [mm]	BD [mm]	OAL [mm]
F1503/16	3/16	32	4.760	20.00	7.0
F1501/4	1/4	26	6.350	20.00	7.0
F1505/16	5/16	22	7.940	25.00	9.0
F1503/8	3/8	20	9.530	30.00	11.0
F1507/16	7/16	18	11.110	30.00	11.0
F1501/2	1/2	16	12.700	38.00	10.0

F170

DORMER

HSS Gun Nosed Machine Die, G(BSP) Right Hand

Solid die for external thread. Generally for use on lathes, small diameters can be produced by hand with a die stock holder. The gun-nose will drive the chip ahead of the cutting edge, increasing performance. Bright finish lapped surface prevents the workpiece material from sticking and improves the threading action.



G	ISO 2568	Class A
1.75 XP	HSS	R
Bright		

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	K1.1
■12	■13	■14	■10	■9	◪8	■8	◪7	◪5	■7	■6	■6	◪5	■11
K1.2	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■8	◪6	■11	■9	◪7	■10	■8	◪6	■10	■8	◪6	◪20	◪15	◪10
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**					
◪10	◪9	◪6	■11	◪6	◪3	◪11	◪4	◪4					

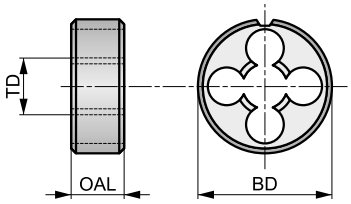
Product	TDZ	TPI	TD [mm]	BD [mm]	OAL [mm]
F1701/8	1/8	28	9.730	30.00	11.0
F1701/4	1/4	19	13.160	38.00	10.0
F1703/8	3/8	19	16.660	45.00	14.0
F1701/2	1/2	14	20.960	45.00	14.0
F1705/8	5/8	14	22.910	55.00	16.0
F1703/4	3/4	14	26.440	55.00	16.0
F1707/8	7/8	14	30.200	65.00	18.0
F1701	1″	11	33.250	65.00	18.0
F1701.1/8	1.1/8	11	37.890	75.00	20.0
F1701.1/4	1.1/4	11	41.910	75.00	20.0
F1701.1/2	1.1/2	11	47.800	90.00	22.0
F1702	2″	11	59.610	105.00	22.0

F180

DORMER

HSS Gun Nosed Machine Die, NPT, Right Hand

Solid die for external thread. Generally for use on lathes, small diameters can be produced by hand with a die stock holder. The gun-nose will drive the chip ahead of the cutting edge, increasing performance. Bright finish lapped surface prevents the workpiece material from sticking and improves the threading action.



NPT	ISO 2568	Normal
1.75 XP	HSS	R
Bright		

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	K1.1
■12	■13	■14	■10	■9	◪8	■8	◪7	◪5	■7	■6	■6	◪5	■11
K1.2	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■8	◪6	■11	■9	◪7	■10	■8	◪6	■10	■8	◪6	◪20	◪15	◪10
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**					
◪10	◪9	◪6	■11	◪6	◪3	◪11	◪4	◪4					

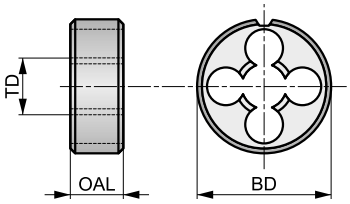
Product	TDZ	TPI	TD [mm]	BD [mm]	OAL [mm]
F1801/8	1/8	27	9.490	30.00	11.0
F1801/4	1/4	18	12.490	38.00	14.0
F1803/8	3/8	18	15.930	45.00	14.0
F1801/2	1/2	14	19.770	45.00	18.0
F1803/4	3/4	14	25.120	55.00	22.0
F1801	1"	11.5	31.460	65.00	25.0

F190

DORMER

HSS Gun Nosed Machine Die, PG Conduit Thread, Right Hand

Solid die for external thread. Generally for use on lathes, small diameters can be produced by hand with a die stock holder. The gun-nose will drive the chip ahead of the cutting edge, increasing performance. Bright finish lapped surface prevents the workpiece material from sticking and improves the threading action.



PG	ISO 2568	Normal
1.75 XP	HSS	R
Bright		

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	K1.1
■12	■13	■14	■10	■9	◪8	■8	◪7	◪5	■7	■6	■6	◪5	■11
K1.2	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■8	◪6	■11	■9	◪7	■10	■8	◪6	■10	■8	◪6	◪20	◪15	◪10
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**					
◪10	◪9	◪6	■11	◪6	◪3	◪11	◪4	◪4					

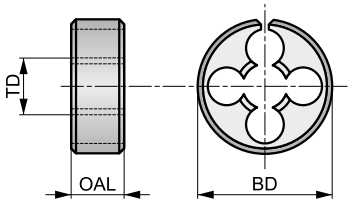
Product	TDZ	TPI	TD [mm]	BD [mm]	OAL [mm]
F190PG7	7	20	12.500	38.00	10.0
F190PG9	9	18	15.200	38.00	10.0
F190PG11	11	18	18.600	45.00	14.0
F190PG13.5	13.5	18	20.400	45.00	14.0
F190PG16	16	18	22.500	55.00	16.0
F190PG21	21	16	28.300	65.00	18.0
F190PG29	29	16	37.000	65.00	18.0
F190PG36	36	16	47.000	90.00	22.0

F300

DORMER

HSS Adjustable Split Hand Die, Metric, Right Hand

Split die to produce external thread by hand in multiple passes, adjusting each pass. By tightening the die stock holder, different classes of thread fit can be achieved - tight, regular or loose fit. Slightly tightened in the holder, it can be used to clean up or produce a partial thread.



M	BS 1127:1950	1.75 XP
HSS	R	Bright

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	K1.1
■12	■13	■14	■10	■9	◪8	■8	◪7	◪5	■7	■6	■6	◪5	■11
K1.2	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■8	◪6	■11	■9	◪7	■10	■8	◪6	■10	■8	◪6	◪20	◪15	◪10
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**					
◪10	◪9	◪6	■11	◪6	◪3	◪11	◪4	◪4					

Products from this series are also available in set with taps. Please see L120.

Product	TD [mm]	TP [mm]	BD [inch]	OAL [inch]
F300M2X13/16	2.000	0.40	13/16	1/4
F300M2.5X13/16	2.500	0.45	13/16	1/4
F300M3X13/16	3.000	0.50	13/16	1/4
F300M3.5X13/16	3.500	0.60	13/16	1/4
F300M4X13/16	4.000	0.70	13/16	1/4
F300M5X13/16	5.000	0.80	13/16	1/4
F300M5X1	5.000	0.80	1″	3/8
F300M6X13/16	6.000	1.00	13/16	1/4
F300M6X1	6.000	1.00	1″	3/8
F300M6X1.5/16	6.000	1.00	1.5/16	7/16
F300M7X13/16	7.000	1.00	13/16	1/4
F300M7X1	7.000	1.00	1″	3/8
F300M8X1	8.000	1.25	1″	3/8
F300M8X1.5/16	8.000	1.25	1.5/16	7/16
F300M9X1	9.000	1.25	1″	3/8
F300M9X1.5/16	9.000	1.25	1.5/16	7/16
F300M10X1	10.000	1.50	1″	3/8
F300M10X1.5/16	10.000	1.50	1.5/16	7/16

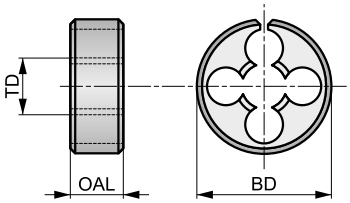
Product	TD [mm]	TP [mm]	BD [inch]	OAL [inch]
F300M10X1.1/2	10.000	1.50	1.1/2	1/2
F300M11X1.5/16	11.000	1.50	1.5/16	7/16
F300M12X1.5/16	12.000	1.75	1.5/16	7/16
F300M12X1.1/2	12.000	1.75	1.1/2	1/2
F300M14X1.5/16	14.000	2.00	1.5/16	7/16
F300M14X1.1/2	14.000	2.00	1.1/2	1/2
F300M16X1.1/2	16.000	2.00	1.1/2	1/2
F300M16X2	16.000	2.00	2″	5/8
F300M18X1.1/2	18.000	2.50	1.1/2	1/2
F300M18X2	18.000	2.50	2″	5/8
F300M20X1.1/2	20.000	2.50	1.1/2	1/2
F300M20X2	20.000	2.50	2″	5/8
F300M22X2	22.000	2.50	2″	5/8
F300M24X2	24.000	3.00	2″	5/8
F300M27X3	27.000	3.00	3″	7/8
F300M30X3	30.000	3.50	3″	7/8
F300M36X3	36.000	4.00	3″	7/8

F310

DORMER

HSS Adjustable Split Hand Die, Metric Fine, Right Hand

Split die to produce external thread by hand in multiple passes, adjusting each pass. By tightening the die stock holder, different classes of thread fit can be achieved - tight, regular or loose fit. Slightly tightened in the holder, it can be used to clean up or produce a partial thread.



MF	BS 1127:1950	1.75 XP
HSS	R	Bright

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	K1.1
■12	■13	■14	■10	■9	◪8	■8	◪7	◪5	■7	■6	■6	◪5	■11
K1.2	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■8	◪6	■11	■9	◪7	■10	■8	◪6	■10	■8	◪6	◪20	◪15	◪10
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**					
◪10	◪9	◪6	■11	◪6	◪3	◪11	◪4	◪4					

Product	TD [mm]	TP [mm]	BD [inch]	OAL [inch]
F310M3X.35X13/16	3.000	0.35	13/16	1/4
F310M4X.5X13/16	4.000	0.50	13/16	1/4
F310M4X.75X13/16	4.000	0.75	13/16	1/4
F310M5X.5X13/16	5.000	0.50	13/16	1/4
F310M5X.9X13/16	5.000	0.90	13/16	1/4
F310M6X.75X13/16	6.000	0.75	13/16	1/4
F310M8X.75X1	8.000	0.75	1″	3/8
F310M8X1.0X1	8.000	1.00	1″	3/8
F310M9X1.0X1	9.000	1.00	1″	3/8
F310M10X.75X1	10.000	0.75	1″	3/8
F310M10X1.0X1	10.000	1.00	1″	3/8
F310M10X1.25X1	10.000	1.25	1″	3/8
F310M10X1.25X1.5/16	10.000	1.25	1.5/16	7/16
F310M12X1.0X1.5/16	12.000	1.00	1.5/16	7/16
F310M12X1.25X1.5/16	12.000	1.25	1.5/16	7/16

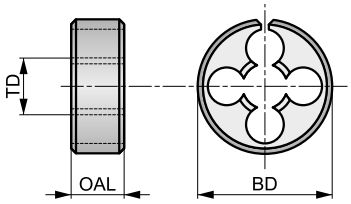
Product	TD [mm]	TP [mm]	BD [inch]	OAL [inch]
F310M12X1.5X1.5/16	12.000	1.50	1.5/16	7/16
F310M14X1.25X1.5/16	14.000	1.25	1.5/16	7/16
F310M14X1.5X1.5/16	14.000	1.50	1.5/16	7/16
F310M16X1.0X1.1/2	16.000	1.00	1.1/2	1/2
F310M16X1.5X1.1/2	16.000	1.50	1.1/2	1/2
F310M18X1.5X1.1/2	18.000	1.50	1.1/2	1/2
F310M20X1.0X1.1/2	20.000	1.00	1.1/2	1/2
F310M20X1.5X2	20.000	1.50	2″	5/8
F310M20X2.0X1.1/2	20.000	2.00	1.1/2	1/2
F310M22X1.5X2	22.000	1.50	2″	5/8
F310M24X1.5X2	24.000	1.50	2″	5/8
F310M24X2.0X2	24.000	2.00	2″	5/8
F310M25X1.5X2	25.000	1.50	2″	5/8
F310M27X2.0X2.1/4	27.000	2.00	2.1/4	11/16
F310M30X2.0X2.1/4	30.000	2.00	2.1/4	11/16

F320

DORMER

HSS Adjustable Split Hand Die, UNC, Right Hand

Split die to produce external thread by hand in multiple passes, adjusting each pass. By tightening the die stock holder, different classes of thread fit can be achieved - tight, regular or loose fit. Slightly tightened in the holder it can be used to clean up or produce a partial thread.



UNC	BS 1127:1950	1.75 XP
HSS	R	Bright

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	K1.1
■12	■13	■14	■10	■9	◪8	■8	◪7	◪5	■7	■6	■6	◪5	■11
K1.2	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■8	◪6	■11	■9	◪7	■10	■8	◪6	■10	■8	◪6	◪20	◪15	◪10
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**					
◪10	◪9	◪6	■11	◪6	◪3	◪11	◪4	◪4					

Products from this series are also available in set with taps. Please see L120.

Product	TDZ	TPI	TD [mm]	BD [inch]	OAL [inch]
F3204-40X13/16	4	40	2.850	13/16	1/4
F3205-40X13/16	5	40	3.180	13/16	1/4
F3206-32X13/16	6	32	3.510	13/16	1/4
F3208-32X13/16	8	32	4.170	13/16	1/4
F3208-32X1	8	32	4.170	1″	3/8
F32010-24X13/16	10	24	4.830	13/16	1/4
F32010-24X1	10	24	4.830	1″	3/8
F32012-24X13/16	12	24	5.490	13/16	1/4
F3201/4X13/16	1/4	20	6.350	13/16	1/4
F3201/4X1	1/4	20	6.350	1″	3/8
F3201/4X1.5/16	1/4	20	6.350	1.5/16	7/16
F3201/4X1.1/2	1/4	20	6.350	1.1/2	1/2
F3205/16X1	5/16	18	7.940	1″	3/8
F3205/16X1.1/2	5/16	18	7.940	1.1/2	1/2
F3203/8X1	3/8	16	9.530	1″	3/8
F3203/8X1.5/16	3/8	16	9.530	1.5/16	7/16

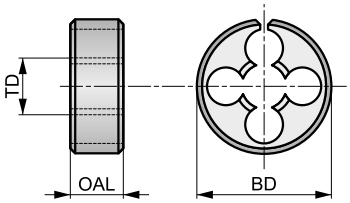
Product	TDZ	TPI	TD [mm]	BD [inch]	OAL [inch]
F3203/8X1.1/2	3/8	16	9.530	1.1/2	1/2
F3207/16X1.5/16	7/16	14	11.110	1.5/16	7/16
F3207/16X1.1/2	7/16	14	11.110	1.1/2	1/2
F3201/2X1.5/16	1/2	13	12.700	1.5/16	7/16
F3201/2X1.1/2	1/2	13	12.700	1.1/2	1/2
F3201/2X2	1/2	13	12.700	2″	5/8
F3209/16X1.1/2	9/16	12	14.290	1.1/2	1/2
F3205/8X1.1/2	5/8	11	15.880	1.1/2	1/2
F3205/8X2	5/8	11	15.880	2″	5/8
F3203/4X1.1/2	3/4	10	19.050	1.1/2	1/2
F3203/4X2	3/4	10	19.050	2″	5/8
F3207/8X2	7/8	9	22.230	2″	5/8
F3201X2	1″	8	25.400	2″	5/8
F3201.1/8X3	1.1/8	7	28.580	3″	7/8
F3201.1/4X3	1.1/4	7	31.750	3″	7/8

F330

DORMER

HSS Adjustable Split Hand Die, UNF, Right Hand

Split die to produce external thread by hand in multiple passes, adjusting each pass. By tightening the die stock holder, different classes of thread fit can be achieved - tight, regular or loose fit. Slightly tightened in the holder it can be used to clean up or produce a partial thread.



UNF	BS 1127:1950	1.75 XP
HSS	R	Bright

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	K1.1
■12	■13	■14	■10	■9	◪8	■8	◪7	◪5	■7	■6	■6	◪5	■11
K1.2	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■8	◪6	■11	■9	◪7	■10	■8	◪6	■10	■8	◪6	◪20	◪15	◪10
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**					
◪10	◪9	◪6	■11	◪6	◪3	◪11	◪4	◪4					

Products from this series are also available in set with taps. Please see L120.

Product	TDZ	TPI	TD [mm]	BD [inch]	OAL [inch]
F3304-48X13/16	4	48	2.850	13/16	1/4
F3305-44X13/16	5	44	3.180	13/16	1/4
F3306-40X13/16	6	40	3.510	13/16	1/4
F3308-36X13/16	8	36	4.170	13/16	1/4
F33010-32X13/16	10	32	4.830	13/16	1/4
F33010-32X1	10	32	4.830	1″	3/8
F33012-28X13/16	12	28	5.490	13/16	1/4
F3301/4X13/16	1/4	28	6.350	13/16	1/4
F3301/4X1	1/4	28	6.350	1″	3/8
F3301/4X1.1/2	1/4	28	6.350	1.1/2	1/2
F3305/16X1	5/16	24	7.940	1″	3/8
F3305/16X1.5/16	5/16	24	7.940	1.5/16	7/16
F3305/16X1.1/2	5/16	24	7.940	1.1/2	1/2
F3303/8X1	3/8	24	9.530	1″	3/8
F3303/8X1.5/16	3/8	24	9.530	1.5/16	7/16
F3303/8X1.1/2	3/8	24	9.530	1.1/2	1/2

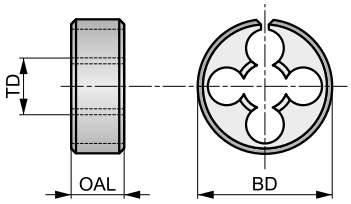
Product	TDZ	TPI	TD [mm]	BD [inch]	OAL [inch]
F3307/16X1	7/16	20	11.110	1″	3/8
F3307/16X1.5/16	7/16	20	11.110	1.5/16	7/16
F3307/16X1.1/2	7/16	20	11.110	1.1/2	1/2
F3301/2X1.5/16	1/2	20	12.700	1.5/16	7/16
F3301/2X1.1/2	1/2	20	12.700	1.1/2	1/2
F3309/16X1.5/16	9/16	18	14.290	1.5/16	7/16
F3309/16X1.1/2	9/16	18	14.290	1.1/2	1/2
F3305/8X1.1/2	5/8	18	15.880	1.1/2	1/2
F3305/8X2	5/8	18	15.880	2″	5/8
F3303/4X1.1/2	3/4	16	19.050	1.1/2	1/2
F3303/4X2	3/4	16	19.050	2″	5/8
F3307/8X2	7/8	14	22.230	2″	5/8
F3301X2	1″	12	25.400	2″	5/8
F3301.1/8X3	1.1/8	12	28.580	3″	7/8
F3301.1/4X3	1.1/4	12	31.750	3″	7/8
F3301.1/2X3	1.1/2	12	38.100	3″	7/8

F370

DORMER

HSS Adjustable Split Hand Die, G(BSP) Right Hand

Split die to produce external thread by hand in multiple passes, adjusting each pass. By tightening the die stock holder, different classes of thread fit can be achieved - tight, regular or loose fit. Slightly tightened in the holder it can be used to clean up or produce a partial thread.



G	BS 1127:1950	1.75 XP
HSS	R	Bright

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	K1.1
■12	■13	■14	■10	■9	◪8	■8	◪7	◪5	■7	■6	■6	◪5	■11
K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	K3.3	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3
■8	◪6	■11	■9	◪7	■10	■8	◪6	■10	■8	◪6	◪20	◪15	◪10
N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	N4.3					
◪10	◪9	◪6	■11	◪6	◪3	◪11	◪4	◪4					

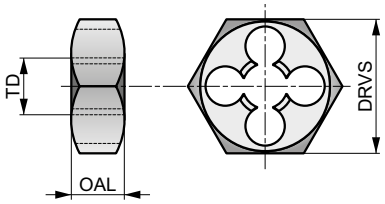
Product	TDZ	TPI	TD [mm]	BD [inch]	OAL [inch]
F3701/8X1	1/8	28	9.730	1″	3/8
F3701/4X1.5/16	1/4	19	13.160	1.5/16	7/16
F3703/8X1.1/2	3/8	19	16.660	1.1/2	1/2
F3701/2X2	1/2	14	20.960	2″	5/8
F3705/8X2	5/8	14	22.910	2″	5/8
F3703/4X2	3/4	14	26.440	2″	5/8
F3707/8X2.1/4	7/8	14	30.200	2.1/4	11/16
F3701X2.1/4	1″	11	33.250	2.1/4	11/16
F3701.1/4X3	1.1/4	11	41.910	3″	7/8
F3701.1/2X4	1.1/2	11	47.800	4″	1″

F202

DORMER

HSS Die Nut Metric, Right Hand

Hexagon die nut designed to repair or clean out damaged external threads by re-cutting the original thread form by hand. A wrench or spanner can be used to rotate the die nut around the outside of the bolt, thus it can be used in difficult to access locations.



M	DIN 382	6g
1.75 XP	HSS	R
Bright		

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	K1.1
■12	■13	■14	■10	■9	◪8	■8	◪7	◪5	■7	■6	■6	◪5	■11
K1.2	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**	**K3.3**	**K5.1**	**K5.2**	**K5.3**	**N1.1**	**N1.2**	**N1.3**
■8	◪6	■11	■9	◪7	■10	■8	◪6	■10	■8	◪6	◪20	◪15	◪10
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**N4.3**					
◪10	◪9	◪6	■11	◪6	◪3	◪11	◪4	◪4					

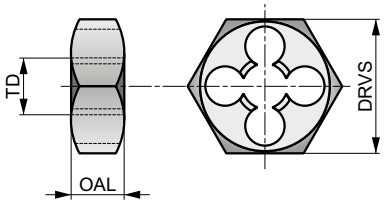
Product	TD [mm]	TP [mm]	DRVS [mm]	OAL [mm]
F202M3	3.000	0.50	19.00	5.0
F202M4	4.000	0.70	19.00	5.0
F202M5	5.000	0.80	19.00	7.0
F202M6	6.000	1.00	19.00	7.0
F202M7	7.000	1.00	22.00	9.0
F202M8	8.000	1.25	22.00	9.0
F202M10	10.000	1.50	27.00	11.0
F202M12	12.000	1.75	36.00	14.0
F202M14	14.000	2.00	36.00	14.0
F202M16	16.000	2.00	41.00	18.0
F202M18	18.000	2.50	41.00	18.0
F202M20	20.000	2.50	41.00	18.0
F202M22	22.000	2.50	50.00	22.0
F202M24	24.000	3.00	50.00	22.0
F202M27	27.000	3.00	60.00	25.0
F202M30	30.000	3.50	60.00	25.0
F202M36	36.000	4.00	60.00	25.0

F302

DORMER

HSS Die Nut Metric, Right Hand

Hexagon die nut designed to repair or clean out damaged external threads by re-cutting the original thread form by hand. A wrench or spanner can be used to rotate the die nut around the outside of the bolt, thus it can be used in difficult to access locations.



M	BS 1127:1950	6g
1.75 XP	HSS	R
Bright		

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	K1.1
■12	■13	■14	■10	■9	◪8	■8	◪7	◪5	■7	■6	■6	◪5	■11

K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	K3.3	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3
■8	◪6	■11	■9	◪7	■10	■8	◪6	■10	■8	◪6	◪20	◪15	◪10

N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	N4.3
◪10	◪9	◪6	■11	◪6	◪3	◪11	◪4	◪4

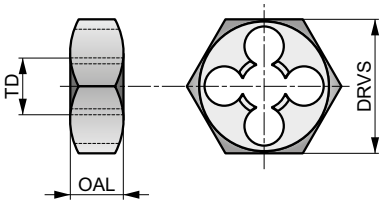
Product	TD [mm]	TP [mm]	DRVS [inch]	OAL [inch]
F302M3	3.000	0.50	0.7100	1/4
F302M4	4.000	0.70	0.7100	1/4
F302M5	5.000	0.80	0.7100	1/4
F302M6	6.000	1.00	0.7100	1/4
F302M7	7.000	1.00	0.8200	5/16
F302M8	8.000	1.25	0.8200	5/16
F302M10	10.000	1.50	0.9200	3/8
F302M11	11.000	1.50	1.0100	7/16
F302M12	12.000	1.75	1.1000	1/2
F302M14	14.000	2.00	1.3000	5/8
F302M16	16.000	2.00	1.3000	5/8
F302M18	18.000	2.50	1.4800	11/16
F302M20	20.000	2.50	1.4800	11/16
F302M22	22.000	2.50	1.6700	13/16
F302M24	24.000	3.00	2.0500	15/16
F302M27	27.000	3.00	2.2200	1.1/16
F302M30	30.000	3.50	2.2200	1.1/16
F302M33	33.000	3.50	2.5800	1.1/8
F302M36	36.000	4.00	2.7600	1.1/4

F312

DORMER

HSS Die Nut Metric Fine, Right Hand

Hexagon die nut designed to repair or clean out damaged external threads by re-cutting the original thread form by hand. A wrench or spanner can be used to rotate the die nut around the outside of the bolt, thus it can be used in difficult to access locations.



MF	BS 1127:1950	6g
1.75 XP	HSS	R
Bright		

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	K1.1
■12	■13	■14	■10	■9	◪8	■8	◪7	◪5	■7	■6	■6	◪5	■11

K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	K3.3	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3
■8	◪6	■11	■9	◪7	■10	■8	◪6	■10	■8	◪6	◪20	◪15	◪10

N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	N4.3
◪10	◪9	◪6	■11	◪6	◪3	◪11	◪4	◪4

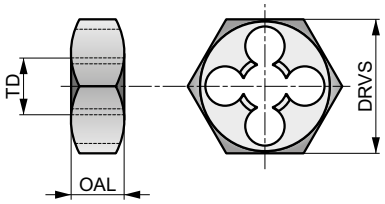
Product	TD [mm]	TP [mm]	DRVS [inch]	OAL [inch]
F312M8X.75	8.000	0.75	0.8200	5/16
F312M8X1.0	8.000	1.00	0.8200	5/16
F312M10X1.0	10.000	1.00	0.9200	3/8
F312M10X1.25	10.000	1.25	0.9200	3/8
F312M12X1.0	12.000	1.00	1.0100	7/16
F312M12X1.25	12.000	1.25	1.0100	7/16
F312M12X1.5	12.000	1.50	1.0100	7/16
F312M14X1.5	14.000	1.50	1.3000	5/8
F312M16X1.5	16.000	1.50	1.3000	5/8
F312M18X1.5	18.000	1.50	1.4800	11/16
F312M20X1.5	20.000	1.50	1.4800	11/16
F312M22X1.5	22.000	1.50	1.6700	13/16
F312M24X1.5	24.000	1.50	2.0500	15/16
F312M24X2.0	24.000	2.00	2.0500	15/16

F272

DORMER

HSS Die Nut G(BSP) Right Hand

Hexagon die nut designed to repair or clean out damaged external threads by re-cutting the original thread form by hand. A wrench or spanner can be used to rotate the die nut around the outside of the bolt, thus it can be used in difficult to access locations.



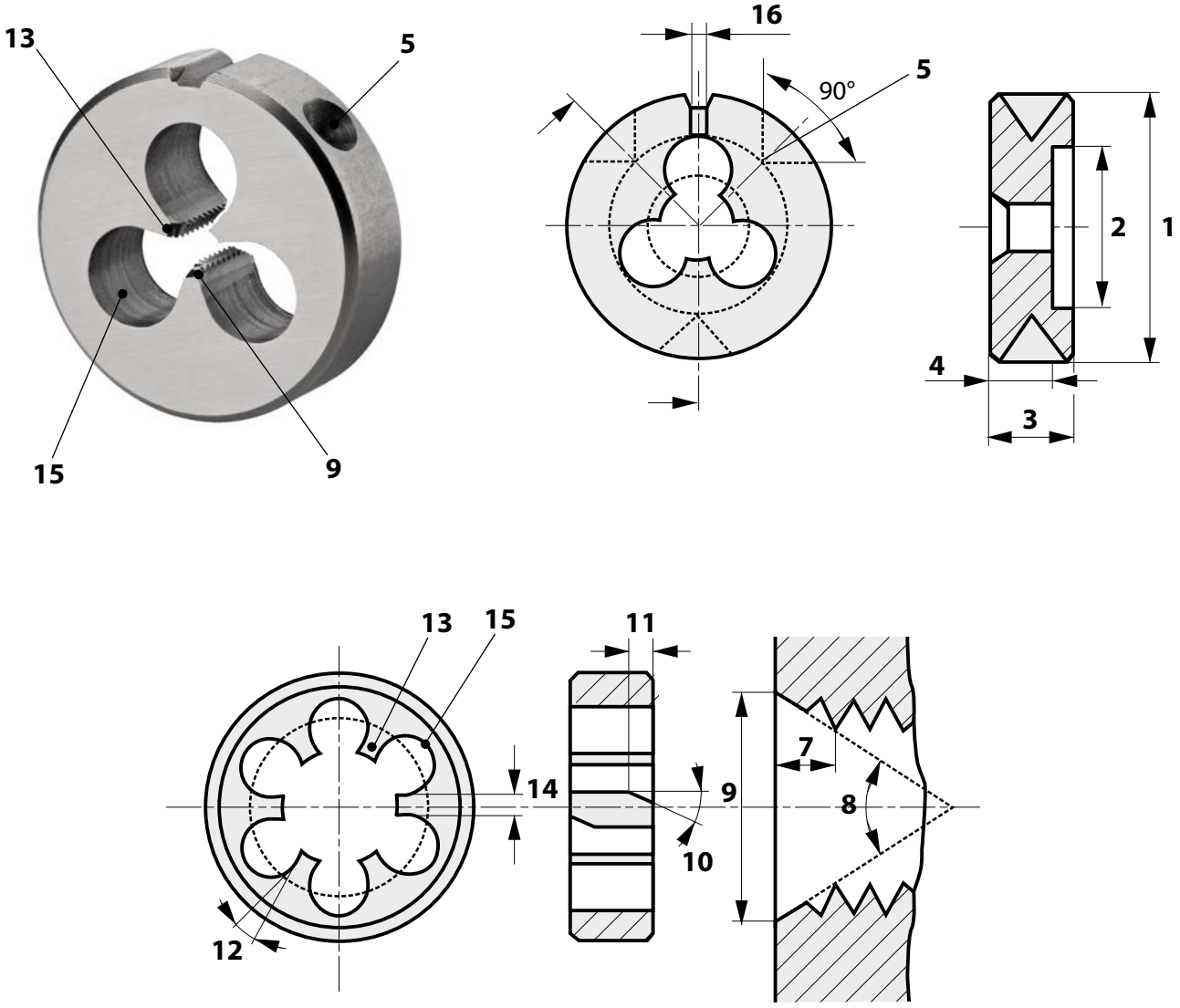
G	DIN 382	Class A
1.75 XP	HSS	R
Bright		

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	K1.1
■12	■13	■14	■10	■9	◪8	■8	◪7	◪5	■7	■6	■6	◪5	■11
K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	K3.3	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3
■8	◪6	■11	■9	◪7	■10	■8	◪6	■10	■8	◪6	◪20	◪15	◪10
N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	N4.3					
◪10	◪9	◪6	■11	◪6	◪3	◪11	◪4	◪4					

Product	TDZ	TPI	TD [mm]	DRVS [mm]	OAL [mm]
F2721/8	1/8	28	9.730	27.00	11.0
F2721/4	1/4	19	13.160	36.00	10.0
F2723/8	3/8	19	16.660	41.00	14.0
F2721/2	1/2	14	20.960	41.00	14.0
F2723/4	3/4	14	26.440	60.00	18.0
F2721	1"	11	33.250	60.00	18.0
F2721.1/4	1.1/4	11	41.910	70.00	20.0
F2721.1/2	1.1/2	11	47.800	85.00	22.0

Nomenclature



1	Outside Diameter
2	Recess Diameter
3	Thickness
4	Thread Length
5	Conical Hole for Fixing Screw
6	Chamfer Angle
7	Chamfer Length
8	Chamfer Diameter

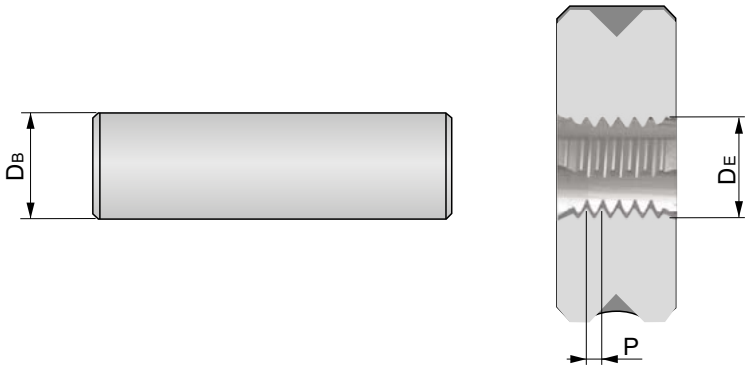
9	Gun-nose
10	Spiral Angle
11	Spiral Length
12	Rake Angle
13	Land
14	Width of Land
15	Clearance Hole
16	Split of Adjustment

Technical Tips on Threading with Dies

1. Before starting the die or dienut, chamfer the end of the bar at an angle of 45 degrees to eliminate sudden loading of the leading edges. Ensure the die or dienut is presented to the bolt squarely.
2. Make use of the large tolerances associated with the major diameter of the bolt, by reducing the diameter of the bar (see below). This will reduce the cutting force to a minimum.
3. Use the gun nose type of die, as this ensures the chips are directed away from the cutting area.
4. Ensure a good supply of the correct lubricant is aimed at the cutting area.
5. When adjusting split dies, avoid opening out as this will cause rubbing. Split dies may be closed down by approximately 0.15mm, by turning the adjustment screws equally. Pressure on one side of the die only may cause breakage.
6. Generally speaking, dienuts are used for reclaiming or cleaning out existing threads by hand. They tend to be of a more robust construction and should only be used in exceptional circumstances to cut a thread from solid.

Pre-machining Dimensions

The diameter of the bolt blank must be smaller than the max. external diameter of the screw thread.



$$D_B = D_E - (0.1 * P)$$

Trouble Shooting When Threading With Dies

Problem	Cause	Solution
Oversize / Undersize	Misalignment	Correct alignment, ensure cleanliness
	Incorrect axial feed rate	Ensure axial feed rate is controlled accurately
Poor finish	Incorrect rake angle for the material	Try alternative dies or special die
	Incorrect/lack of lubricant	See lubricants section
	Incorrect speed	Follow recommendations in Catalogue
	Bar diameter too large	Reduce to appropriate size
	Bar end not chamfered	Ensure bar end is chamfered
Chipping / Breakage	Wrong type of die	Follow recommendations in Catalogue
	Speed too high	Follow recommendations in Catalogue
	Bar diameter too large	Reduce to appropriate size
	Bar end not chamfered	Ensure bar end is chamfered
	Misalignment	Correct alignment, ensure cleanliness
Rapid wear	Incorrect/lack of lubricant	See lubricants section
	Speed too high	Follow recommendations in Catalogue
Built up edge	Incorrect/lack of lubricant	See section lubricants
	Bar diameter too large	Reduce to appropriate size
	Speed too low	Follow recommendations in Catalogue

CUTTING FLUIDS

6		WMG & ISO 13399
12	TAPS	INSTRUCTIONS
15	TAPS	SOLID CARBIDE TAPS
25	TAPS	MATERIAL SPECIFIC SHARK TAPS
62	TAPS	HSS HAND & MACHINE TAPS
216	TAPS	TECHNICAL INFORMATION
218		THREAD MILLS
238		DIES
270		**CUTTING FLUIDS**
274		GENERAL TECHNICAL INFORMATION

M200-1

M200 no. 1 Blue, Cutting Fluid for Heavy Machining

A high performance cutting oil for difficult operations, such as tapping, broaching and drilling by hand or with a pillar drill. For increased tool life and improved surface finishes. First choice recommendation for high strength steel, stainless steel and super alloys.

Product	Nr.
M2000.25NR.1BLUE	1/4 Ltr. 12x
M2001.0NR.1BLUE	1 Ltr.
M2005.0NR.1BLUE	5 Ltr.
M20020.0NR.1BLUE	20 Ltr.

M200-2

M200 no. 2 Red, Cutting Fluid for Non-Ferrous Metals

A neat oil for machining operations requiring chip removal in aluminium and its alloys. For lubrication and cooling to promote long tool life and ensure excellent surface finish. Low impact on the environment due to excellent anti-mist properties, high oxidation stability and low odours.

Product	Nr.
M2000.25NR.2RED	1/4 Ltr. 12x
M2001.0NR.2RED	1 Ltr.
M2005.0NR.2RED	5 Ltr.

M200-3

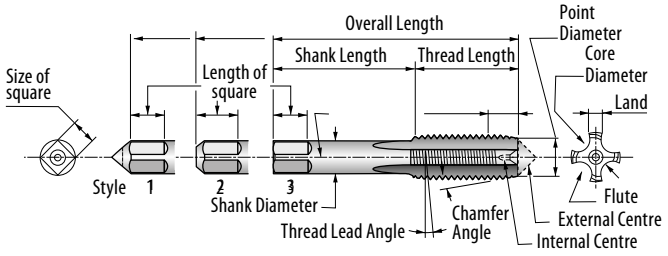
M200 no. 3 Green, Cutting Fluid for General Purpose Machining

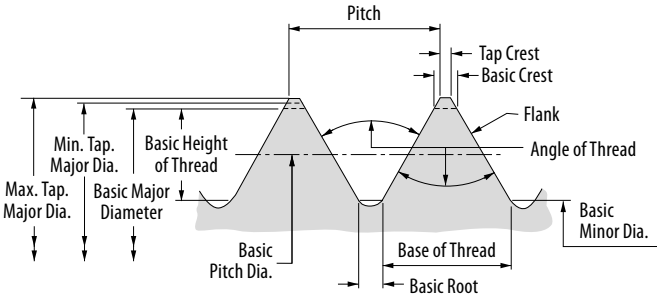
A high performance cutting oil with extreme pressure (EP) additives to provide longer tool life. For general cutting or forming operations, such as tapping, broaching and drilling in steel or cast steel and stainless steel.

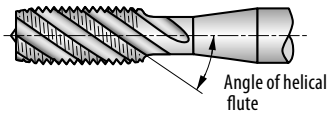
Product	Nr.
M2000.25NR.3GREEN	1/4 Ltr. 12x
M2001.0NR.3GREEN	1 Ltr.
M2005.0NR.3GREEN	5 Ltr.

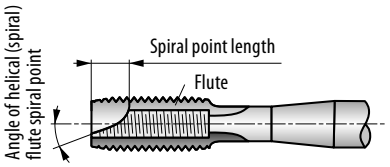
GENERAL
TECHNICAL INFORMATION

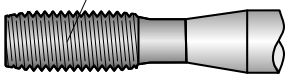
📖 6		WMG & ISO 13399
📖 8	TAPS	INSTRUCTIONS
📖 16		SOLID CARBIDE TAPS
📖 24		MATERIAL SPECIFIC SHARK TAPS
📖 60		HSS HAND & MACHINE TAPS
📖 214		TECHNICAL INFORMATION
📖 216		THREAD MILLS
📖 236		DIES
📖 268		CUTTING FLUIDS
📖 272		GENERAL TECHNICAL INFORMATION

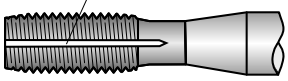












Allowance: The minimum clearance or maximum interference which is intended between mating parts.

Angle of Thread: The angle included between the flanks of a thread measured in an axial plane.

Back Taper: A slight taper on the threaded portion of the tap making the pitch diameter near the shank smaller than that at the chamfer.

Basic: The theoretical or nominal standard size from which all variations are made.

Chamfer: The tapered and relieved cutting teeth at the front end of the threaded section. Common types of chamfer are taper, 8 to 10 pitches long, plug, 3 to 5 pitches and bottoming, 1 to 2 pitches.

Crest: The top surface joining the two sides or flanks of a thread.

Cutting Face: The leading side of the land.

Flute: The longitudinal channels formed on a tap to create cutting edges on the thread profile.

Heel: The following side of the land.

Height of Thread: In profile, distance between crest and bottom section of thread measured normal to the axis.

Hook Face: A concave cutting face of the land. This may be varied for different materials and conditions.

Interrupted Thread: Alternate teeth are removed in the thread helix on a tap; usually restricted to those having an odd number of flutes.

Land: One of the threaded sections between the flutes of a tap.

Lead of Thread: The distance a screw thread advances axially in one turn.

Major Diameter: The largest diameter of the screw or nut on a straight screw thread.

Minor Diameter: The smallest diameter of the screw or nut on a straight screw thread.

Neck: The reduced diameter, on some taps, between the threaded portion and the shank.

Pitch: The distance from a point on one thread to a corresponding point on the next thread, measured parallel to the axis.

Pitch Diameter: On a straight screw thread, the diameter of an imaginary cylinder where the width of the thread and the width of the space between threads is equal.

Point Diameter: The diameter at the leading end of the chamfered portion.

Radial: The straight face of a land, the plane of which passes through the axis of the tap.

Rake: The angle of the cutting face of the land in relation to an axial plane intersecting the cutting face at the major diameter.

Relief: The removal of metal behind the cutting edge to provide clearance between the part being threaded and a portion of the threaded land. Also, see back taper.

CHAMFER RELIEF: The gradual decrease in land height from cutting edge to heel on the chamfered portion of the tap land to provide radial clearance for the cutting edge.

CONCENTRIC RELIEF: Radial relief in the thread form starting at the back of a concentric margin.

ECCENTRIC THREAD RELIEF: Radial relief in the thread form starting at the cutting edge and continuing to the heel.

Root: The bottom surface joining the flanks of two adjacent threads.

Side or flank of thread: The surface of the thread which connects the crest with the root.

Shank: The portion of the tap by which it is held and driven.

Spiral Point: An oblique cutting edge ground into the lands to provide a shear cutting action on the first few threads.

Square: The squared end of the tap shank.

Thread: The helical formed tooth of the tap which produces the thread in a tapped hole.

Thread Lead Angle: The angle made by the helix of the thread at the pitch diameter, with a plane perpendicular to the axis.

Threads Per Inch: The number of threads in one inch of length.

Thread: **SINGLE:** A thread in which lead is equal to pitch.

DOUBLE: A thread in which lead is equal to twice the pitch.

TRIPLE: A thread in which lead is equal to triple the pitch.

General hints on tapping

The success of any tapping operation depends on a number of factors, all of which affect the quality of the finished product.

1. Select the correct design of tap for the component material and type of hole, i.e. through or blind, from the Materials Classification chart.
2. Ensure the component is securely clamped – lateral movement may cause tap breakage or poor quality threads.
3. Select the correct size of drill from the relevant catalogue page. Always ensure that work hardening of the component material is kept to a minimum.
4. Select the correct cutting speed as shown on the catalogue product page.
5. Use appropriate cutting fluid for correct application.
6. In NC applications ensure that the feed value chosen for the program is correct. When using a tapping attachment, 95% to 97% of the pitch is recommended to allow the tap to generate its own pitch.
7. Where possible, hold the tap in a good quality torque limiting tapping attachment, which ensures free axial movement of the tap and presents it squarely to the hole. It also protects the tap from breakage if accidentally 'bottomed' in a blind hole.
8. Ensure smooth entry of the tap into the hole, as an uneven feed may cause 'bell mouthing'.

Tap tolerance vs tolerance on internal thread (nut)

Tolerance class, Tap			Tolerance, Internal thread (Nut)					Application
ISO	DIN	ANSI BS						
ISO 1	4 H	3 B	4 H	5 H	–	–	–	Fit without allowance
ISO 2	6 H	2 B	4 G	5 G	6 H	–	–	Normal fit
ISO 3	6 G	1 B	–	–	6 G	7 H	8 H	Fit with large allowance
–	7 G	–	–	–	–	7 G	8 G	Loose fit for following treatment or coating

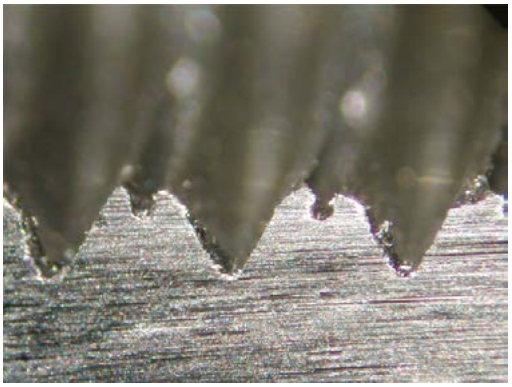
Tap Geometries & Applications

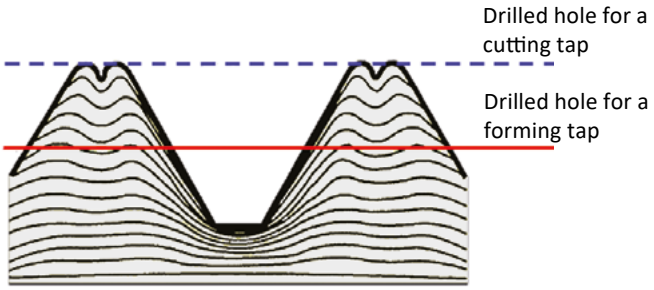
Description	Chips
Taps with straight flutes Straight flutes are the most commonly used type of tap. Suitable for use on most materials, mainly short chipping steel and cast iron, they form the basis of the program.	
Taps with interrupted thread The interrupted thread ensures less friction and therefore less resistance, which is particularly important when threading material which is resilient and difficult to machine (e.g. aluminium, bronze). It is also easier for lubricant to penetrate to the cutting edges, thus helping to minimize the torque generated	
Spiral point taps The tap has a straight fairly shallow flute and is often referred to as a gun nose or spiral point tap. The gun nose or spiral point is designed to drive the chips forward. The relatively shallow flutes ensure that the sectional strength is maximised. They also act to allow lubricant to reach the cutting edges. This type of tap is recommended for threading through holes.	
Nut taps These taps are generally used to thread nuts but can be used also on deep through holes. They have a shank diameter smaller than the nominal and a longer overall length, because their function is to accumulate nuts. They are used on special machines designed to thread huge amounts of nuts. They can work in steel and stainless steel. The first serial tap has a very long chamfer, in order to spread the cutting load on almost two thirds of the thread length.	

Description	Chips
Taps with flutes only on the chamfer lead The cutting part of the tap is formed by gun nosing in the same manner as for a spiral point tap, the function being to drive the chips forward ahead of the cutting edges. This design is extremely rigid which facilitates good machining results. However, the short length of the gun nosing limits its application to a depth of hole less than about 1.5 x Ø.	
Taps with spiral flutes Taps with spiral flutes are intended primarily for threading in blind holes. The helical flute transports the chips back away from the cutting edges and out of the hole, thus avoiding packing of chips in the flutes or at the bottom of the hole. In this way, danger of breaking the tap or damaging the thread is minimised.	
Cold forming taps Cold forming taps differ from cutting taps in that the thread is produced by plastic deformation of the component material rather than by the traditional cutting action. This means that no chips are produced by their action. The application range is materials with good formability. Tensile strength (Rm) should not exceed 1200 N/mm^2 and the elongation factor (A_5) should not be less than 10%. Cold forming taps without flutes are suitable for normal machining and are especially suitable when vertically tapping blind holes. They are also available with through coolant.	
Through coolant taps The performance of taps with through coolant holes is higher than the same taps used with external lubrication. These kinds of taps allow better evacuation of the chip, which is transported away from the cutting area itself. Wear on the cutting edge is reduced, since the cooling effect on the cutting zone is higher than the heat generation. Lubrication can be oil, emulsion or air pressurised with oil mist. Working pressure not less then 15 bar is required, but good results can be obtained with minimal lubrication.	

Flow Of Material When Forming A Thread

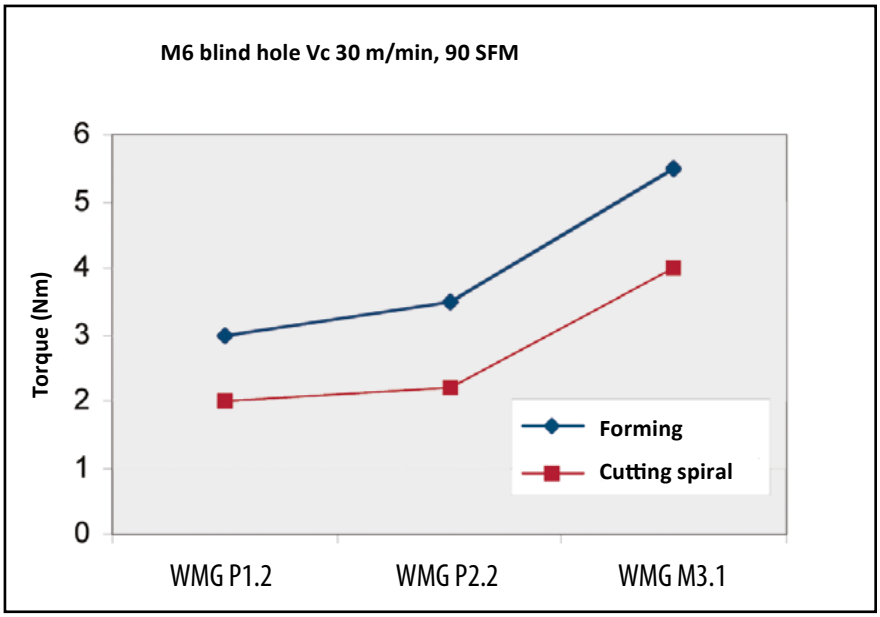
The tapping hole size depends upon the material being drilled, the cutting conditions selected and the condition of the equipment being used. If material is pushed up at the thread entry by the tap and/or the life of the tap is too short, select a slightly larger drill diameter. If on the other hand the profile of the thread formed is insufficient, then select a slightly smaller drill diameter.





Section of thread obtained by forming tap on steel C45

Cold forming taps require more power on the spindle, compared to a cutting tap of the same size, since it generates higher torque.



Torque comparison between forming and cutting taps in different material groups.

Trouble Shooting When Tapping

Problem	Cause	Remedy
Oversize	Incorrect tolerance	Choose a tap with lower thread tolerance
	Incorrect axial feed rate	Reduce feed rate by 5-10% or increase compression of tap holder
	Wrong type of tap for application	Use spiral point for through hole or spiral flute for blind hole. Use coated tool to prevent built up edge. Check Catalogue or Product Selector for correct tool alternative
	Tap not centered on the hole	Check tap holder and position tap centre on the hole
	Lack of lubrication	Use good lubrication in order to prevent built up edge. See lubricant section in technical handbook
	Tap speed too slow	Follow recommendation in Catalogue / Product Selector
Undersize	Wrong type of tap for application	Use spiral point for through hole or spiral flute for blind hole. Use coated tool to prevent built up edge. Use tap with higher rake angle. Check Catalogue or Product Selector for correct tool alternative
	Incorrect tolerance	Choose a tap with higher tolerance, especially on material with low oversize tendency, such as cast iron, stainless steel
	Incorrect or lack of lubricant	Use good lubrication in order to prevent chip blockage inside the hole. See lubricant section in technical handbook
	Tap drill hole too small	Increase drill diameter to the maximum value. Check tapping size drill
	Material closing in after tapping	See recommendation in Catalogue / Product Selector for correct tool alternative
Chipping	Wrong type of tap for application	Choose a tap with lower rake angle. Choose a tap with longer chamfer. Use spiral point taps for through hole and spiral flute for blind holes, in order to avoid chip blockage. Check Catalogue or Product Selector for correct tool alternative
	Incorrect or lack of lubricant	Use good lubrication in order to prevent built up edge. See lubricant section in technical handbook
	Taps hit bottom of hole	Increase depth of drilling or decrease depth of tapping
	Work hardening surface	Reduce speed, use coated tool, use good lubrication. See section for machining of stainless steel in technical handbook
	Swarf trapping on reversal	Avoid sudden return of tap on reversal motion
	Chamfer hits hole entrance	Check axial position and reduce axial error of tap point on hole centre
	Tap drill hole too small	Increase drill diameter to maximum value. Check tapping size drill

Trouble Shooting When Tapping

Problem	Cause	Remedy
Breakage	Tap worn out	Use a new tap or regrind the old one
	Lack of lubricant	Use good lubrication in order to prevent built up edge and chip blockage. See lubricant section in technical handbook
	Taps hit bottom of hole	Increase depth of drilling or decrease depth of tapping
	Tap speed too high	Reduce cutting speed. Follow recommendation in Catalogue / Product Selector
	Work hardening surface	Reduce speed. Use coated tool Use good lubrication. See section for machining of stainless steel in technical handbook
	Tap drill hole too small	Increase drill diameter up to maximum value. See tap drill tables
	Too high torque	Use tapping attachment with torque adjustment clutch
	Material closing in after tapping	See recommendation in Catalogue / Product Selector for correct tool alternative
Rapid wear	Wrong type of tap for application	Use tap with lower rake angle and/or higher relief and/or longer chamfer. Use coated tool. Check Catalogue or Product Selector for correct tool alternative
	Lack of lubricant	Use good lubrication in order to prevent built up edge and thermal stress on cutting edge. See lubricant section in technical handbook
	Tap speed too high	Reduce cutting speed. Follow recommendation in Catalogue / Product Selector
Built up edge	Wrong type of tap for application	Use tap with lower rake angle and/or higher relief. Check Catalogue or Product Selector for correct tool alternative
	Lack of lubricant	Use good lubrication in order to prevent built up edge. See lubricant section in technical handbook
	Surface treatment not suitable	Choose a tap with the recommended surface treatment
	Tap speed too low	Follow recommendation in Catalogue / Product Selector

NOTES

NOTES

NOTES

SIMPLY RELIABLE

As a professional you can judge the quality of work by just looking at the chip. Our chip is a clean and uncomplicated shape that in itself tells a story. It is a clear and consistent signal and that's why we use it as a symbol for being **Simply Reliable**.

DORMER PRAMET

Austria
T: +31 10 2080 240
info.at@dormerpramet.com

Belgium & Luxembourg
T: +32 3 440 59 01
info.be@dormerpramet.com

Brazil
T: +55 11 5660 3000
info.br@dormerpramet.com

Canada
T: (888) 336 7637
En Français: (888) 368 8457
cs.canada@dormerpramet.com

China
T: +86 21 2416 0508
info.cn@dormerpramet.com

Croatia
T: +385 98 407 489
info.hr@dormerpramet.com

Czech Republic
T: +420 583 381 111
info.cz@dormerpramet.com

Denmark
T: 808 82106
info.se@dormerpramet.com

Finland
T: 0205 44 7003
info.fi@dormerpramet.com

France
T: +33 (0)2 47 62 57 01
info.fr@dormerpramet.com

Germany
T: +49 9131 933 08 70
info.de@dormerpramet.com

Hungary
T: +36-96 / 522-846
info.hu@dormerpramet.com

India
T: +91 11 4601 5686
info.in@dormerpramet.com

Italy
T: +39 02 30 70 54 44
info.it@dormerpramet.com

Kazakhstan
T: +7 771 305 11 45
info.kz@dormerpramet.com

Mexico
T: +52 (555) 7293981
cs.mexico@dormerpramet.com

Netherlands
T: +31 10 2080 240
info.nl@dormerpramet.com

Norway
T: 800 10 113
info.se@dormerpramet.com

Poland
T: +48 32 78-15-890
info.pl@dormerpramet.com

Portugal
T: +351 21 424 54 21
info.pt@dormerpramet.com

Romania
T: +4(0)730 015 885
info.ro@dormerpramet.com

Russia
T: +7 (495) 775 10 28
info.ru@dormerpramet.com

Slovakia
T: +421 (41) 764 54 60
info.sk@dormerpramet.com

Slovenia
T: +385 98 407 489
info.si@dormerpramet.com

Spain
T: +34 935717722
info.es@dormerpramet.com

Sweden
responsible for Iceland
T: +46 35 16 52 96
info.se@dormerpramet.com

Switzerland
T: +31 10 2080 240
info.ch@dormerpramet.com

Turkey
T: +90 533 212 45 47
info.tr@dormerpramet.com

Ukraine
T: +38 067 566 38 80
T: +38 067 566 81 51
info.ua@dormerpramet.com

United Kingdom
responsible for Ireland
T: 0870 850 4466
info.uk@dormerpramet.com

United States of America
T: (800) 877-3745
cs@dormerpramet.com

Other countries

South America
T: +55 11 5660 3000
info.br@dormerpramet.com

Adria
T: +420 583 381 527
info.rcee@dormerpramet.com

Rest of the World
Dormer Pramet International UK
T: +44 1246 571338
info.int@dormerpramet.com

Dormer Pramet International CZ
T: +420 583 381 520
info.int.cz@dormerpramet.com

DP-CAT-THREADING-2021-EN

FOLLOW US...

www.dormerpramet.com
youtube.com/dormerpramet
facebook.com/dormerprametsocial
linkedin.com/company/dormerpramet
instagram.com/dormerprametsocial
twitter.com/dormerpramet

DORMER PRAMET

TURNING

2021 – 2022

PRAMET

📖 6		WMG & ISO 13399
📖 10	ISO TURNING	INSTRUCTIONS
📖 18	ISO TURNING	NAVIGATORS
📖 57	ISO TURNING	POSITIVE INSERTS
📖 219	ISO TURNING	NEGATIVE INSERTS
📖 386		PARTING-OFF & GROOVING
📖 482		THREAD TURNING
📖 528		BROACHING
📖 536		GENERAL TECHNICAL INFORMATION

PRODUCT FAMILY	🕮
C	
C.-DCLN(RL) EXT	249
C.-DCLN(RL) INT	257
C.-DDJN(RL) EXT	277
C.-DDNNN EXT	278
C.-DDUN(RL) EXT	279
C.-DDUN(RL) INT	282
C.-DRSN(RL) EXT	297
C.-DSDNN EXT	324
C.-DSKN(RL) EXT	325
C.-DSRN(RL) EXT	326
C.-DSSN(RL) EXT	327
C.-DTFN(RL) INT	354
C.-DTJN(RL) EXT	351
C.-DVJN(RL) EXT	363
C.-DWLN(RL) EXT	381
C.-DWLN(RL) INT	385
C.-SCLC(RL) EXT	75
C.-SCLC(RL) INT	81
C.-SDJC(RL) EXT	96
C.-SDNCN EXT	97
C.-SDUC(RL) INT	102
C.-SRDCN EXT	130
C.-SVHB(RL) EXT	177, 201
C.-SVJB(RL) EXT	178, 202
C.-SVQB(RL) INT	183, 210
C.-SVVBN EXT	179, 203
CKJN(RL) EXT	287
D	
DCBN(RL) EXT	240
DCKN(RL) EXT	242
DCLN(RL) EXT	243
DCLN(RL) INT	254
DDJN(RL) EXT	273
DDUN(RL) INT	280
DKH(RL)	132, 143 253, 292, 330
DRSN(RL) EXT	295
DSBN(RL) EXT	313
DSDNN EXT	315
DSKN(RL) EXT	316
DSSN(RL) EXT	317
DTFN(RL) EXT	345
DTFN(RL) INT	352
DTGN(RL) EXT	346
DU, D	415, 441, 460, 467
DVJN(RL) EXT	360
DVPN(RL) EXT	361
DVUN(RL) INT	364
DWLN(RL) EXT	377
DWLN(RL) INT	382
G	
GFI(RL) EXT	437
GFIL-L AXIAL	422, 444
GFIL-R AXIAL	423, 445
GFIR-L AXIAL	424, 446
GFIR-R AXIAL	425, 447
GFK(RL) EXT	455
GFM(RL) EXT	439
GFML-L AXIAL	426, 448
GFML-R AXIAL	427, 449
GFMR-L AXIAL	428, 450
GFMR-R AXIAL	429, 450
GG.(RL) INT	421
GGI(RL)-90 AXIAL	430, 452
GLS B	414
GLSF(RL) EXT	410
GLSF(RL) EXT-G	412
GLSF(RL) EXT-S	413
K	
KHP-CBN(RL)	251
KHP-CLN(RL)	252
KHP-LBN(RL)	291
KHP-RSC(RL)	131
KHP-SBN(RL)	328
KHP-SSN(RL)	329
KHS-SBC(RL)	142
M	
MS-EN	443, 463
MTJN(RL) EXT	347
MVJN(RL) EXT	362
MWLN(RL) EXT	379
P	
P61(RL) EXT	470
P61(RL) INT	471
P61S(RL)-1 INT	474
PCBN(RL) EXT	245
PCKN(RL) EXT	246
PCLN(RL) EXT	247
PCLN(RL) INT	255
PDJN(RL) EXT	274
PDNN(RL) EXT	275
PDUN(RL) INT	281
PDXN(RL) EXT	276
PHZ	533
PHZ-2	534
PLBN(RL) EXT	290
PRDCN EXT	124
PRSC(RL) EXT	125
PRSN(RL) EXT	296
PSBN(RL) EXT	318
PSDNN EXT	320
PSKN(RL) EXT	321
PSKN(RL) INT	331
PSSN(RL) EXT	323
PTFN(RL) EXT	348
PTFN(RL) INT	353
PTGN(RL) EXT	349
PTTN(RL) EXT	350
PWLN(RL) EXT	380
PWLN(RL) INT	383
S	
SCAC(RL) EXT	70
SCBC(RL) EXT	71
SCDCR EXT	72
SCFC(RL) EXT	73
SCFC(RL) INT	76
SCKC(RL) INT	77
SCLC(RL) EXT	74
SCLC(RL) INT	78
SCXC(RL) INT	80
SDJC(RL) EXT	94
SDNCN EXT	95
SDQC(RL) INT	98
SDUC(RL) INT	99
SDUC(RL)-E INT	100
SDZC(RL) INT	101
SE(RL)	478, 522
SE(RL)-S	523
SEGC(RL) EXT	107
SELP(RL) INT	111
SELP(RL)-E INT	112
SEUC(RL) INT	108
SEUP(RL) INT	113
SEXP(RL) INT	114
SEXP(RL)-E INT	115
SI(RL)	479, 524
SI(RL)-S	526
SRDC(RL) EXT	126
SRDCN EXT	127
SRSC(RL) EXT	128
SSBC(RL) EXT	139
SSDCN EXT	140
SSKC(RL) EXT	141
SSSC(RL) INT	144
STFC(RL) EXT	155
STFC(RL) INT	158
STFC(RL)-A EXT	156
STFC(RL)-E INT	160
STJC(RL) EXT	157
SVAC(RL)-DC EXT	193
SVGC(RL) EXT	194
SVHB(C)(RL) EXT	172, 195
SVJB(C)(RL) EXT	173, 196
SVJB(RL) INT	180, 204
SVJC(RL)-DC EXT	197
SVLC(RL) INT	205
SVPB(C)(RL) EXT	174, 198
SVQB(C)(RL) INT	181, 206
SVUB(C)(RL) INT	182, 207
SVVB(C)N EXT	175, 199
SVXB(C)(RL) EXT	176, 200
SVXC(RL) INT	208
SVXC(RL)-E INT	209
SWLC(RL) EXT	215
SWLC(RL) INT	216
SWUC(RL) INT	217
SWUC(RL)-E INT	218
X	
XLCCN 25 BS	442
XLCCN B	440
XLCF(NRL) BS	461
XLCF(RL)	465
XLCFN B	459
XLCFN B LFUX	466
XLXFL BS AXIAL	462

PRODUCT FAMILY	🕮
C	
CCGT	60
CCGW CBN	69
CCMT	62
CCMW	68
CNGA CBN	239
CNGA CER	238
CNGG	222
CNGN CER	238
CNMA	222
CNMG	223
CNMM	234
CPGX	83
D	
DCGT	86
DCGW CBN	92
DCMT	87
DCMW	92
DCMW PCD	93
DNGA CBN	272
DNGA CER	271
DNGN CER	271
DNMA	260
DNMG	260
DNMM	270
E	
ECGT	104
ECMT	105
ECMW	106
EPGX	110
EPMT	110
G	
GL. D – GM	406
GL. D – MM	406
GL. D – PM	407
GL. D – PR	408
H	
HZ	531
HZ-2	532
K	
KNUX	284

PRODUCT FAMILY	🕮
L	
LCMF 13 – CM	418
LCMF 13 – F	418
LCMF 13 – MP	419
LCMF 16 – CM	431
LCMF 16 – M	433
LCMF 16, LCMF 30 – F	432
LCMF 16, LCMF 30 – MP	433
LCMF 20 – F1	453
LCMF 20 – M2	453
LCMF 20 – MP	454
LCMR 13 – F	419
LCMR 13 – MP	420
LCMR 16 – CM	434
LCMR 16 – M	435
LCMR 16 – MP	436
LCMR 16, LCMR 30 – F	435
LFMX – F1	456
LFMX – F2	456
LFMX – M2	457
LFUX	464
LNUX 40, LN.X 50	289
R	
RCGT	118
RCGX CER	123
RCMT	118
RCMW	120
RCMX	121
RNGN CER	294
RNMG	294
S	
SCGT	134
SCMT	135
SCMW	138
SNGA CER	311
SNGN CER	312
SNMA	300
SNMG	301
SNMM	307
SNMX	311
SPGN CER	147

PRODUCT FAMILY	🕮
SPMR	146
SPUN	146
T	
TCGT	149
TCGW CBN	154
TCMT	150
TCMW	154
TN 55° PP EXT	508
TN 55° PP INT	509
TN 60° PP EXT	499
TN 60° PP INT	500
TN 60°-S PP EXT	501
TN 60°-S PP INT	501
TN ACME EXT	515
TN ACME INT	516
TN API RD EXT	519
TN API RD INT	519
TN BSPT EXT	510
TN BSPT INT	510
TN M EXT	495
TN M INT	497
TN MJ EXT	499
TN NPT EXT	511
TN NPT INT	512
TN R EXT	475
TN R INT	475
TN RD EXT	520
TN RD INT	520
TN STACME EXT	517
TN STACME INT	518
TN TR EXT	512
TN TR INT	513
TN TR-S EXT	514
TN TR-S INT	514
TN UN EXT	502
TN UN INT	503
TN UNJ EXT	504
TN W EXT	505
TN W INT	506
TN ZZ EXT	476
TN ZZ INT	477

PRODUCT FAMILY	🕮
TNGA CBN	344
TNGA CER	343
TNGN CER	344
TNMA	334
TNMG	335
TNMM	342
TPGN CER	164
TPGX	162
TPMR	163
TPUN	164
V	
VBGW CBN	171
VBMT	168
VCGT	186
VCGW	189
VCGX	189
VCMT	190
VCMW	191
VCMW PCD	192
VNGA CBN	359
VNGA CER	359
VNMG	356
W	
WCGT	212
WCGX	213
WCMT	213
WNGA CBN	376
WNMA	366
WNMG	366
WNMM	375
X	
X 61	468
X 61 R	469
X 61 R-1	473
X 61-1	472

DORMER PRAMET

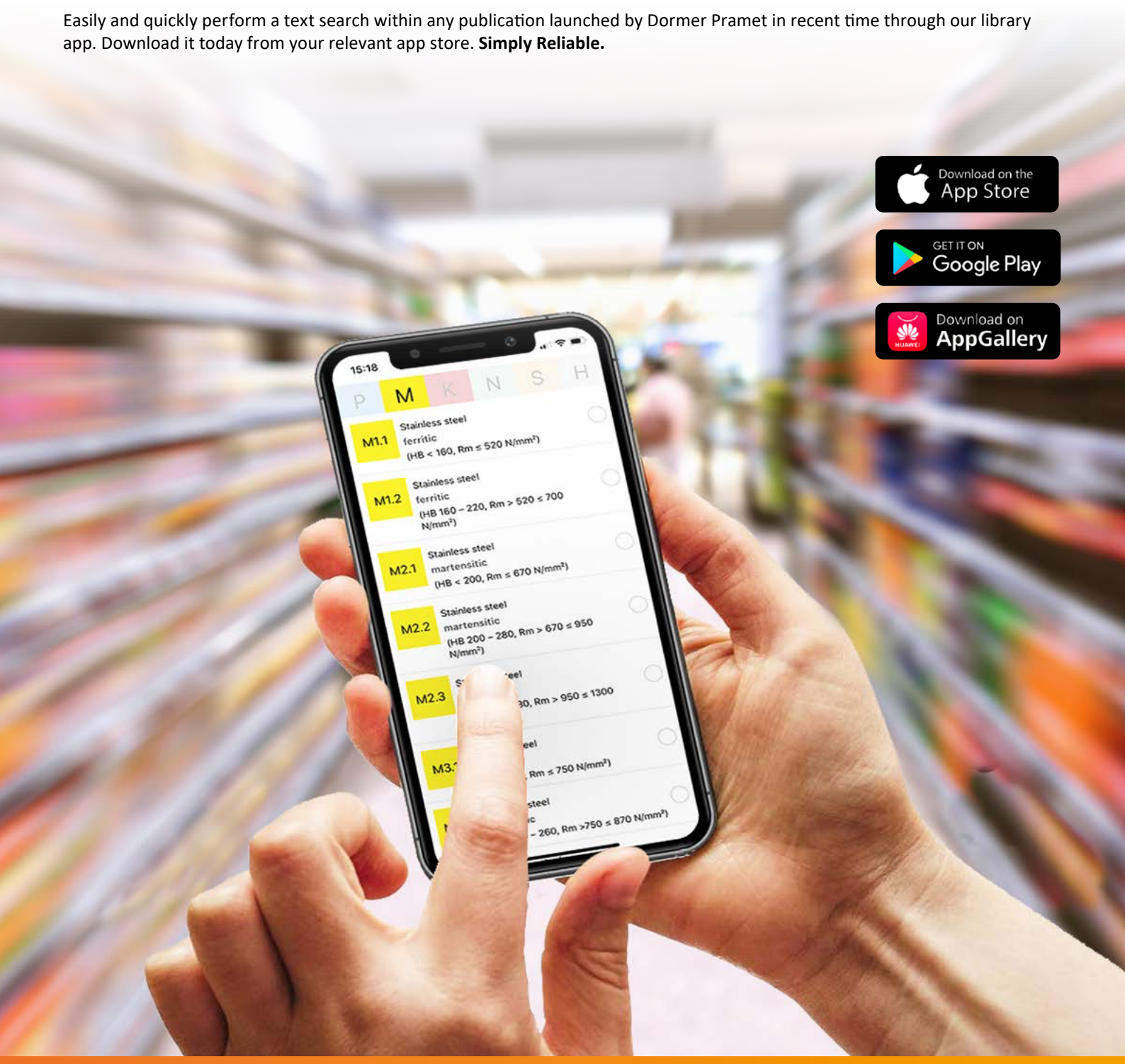
QUICK SEARCH

Easily and quickly perform a text search within any publication launched by Dormer Pramet in recent time through our library app. Download it today from your relevant app store. **Simply Reliable.**

Download on the App Store

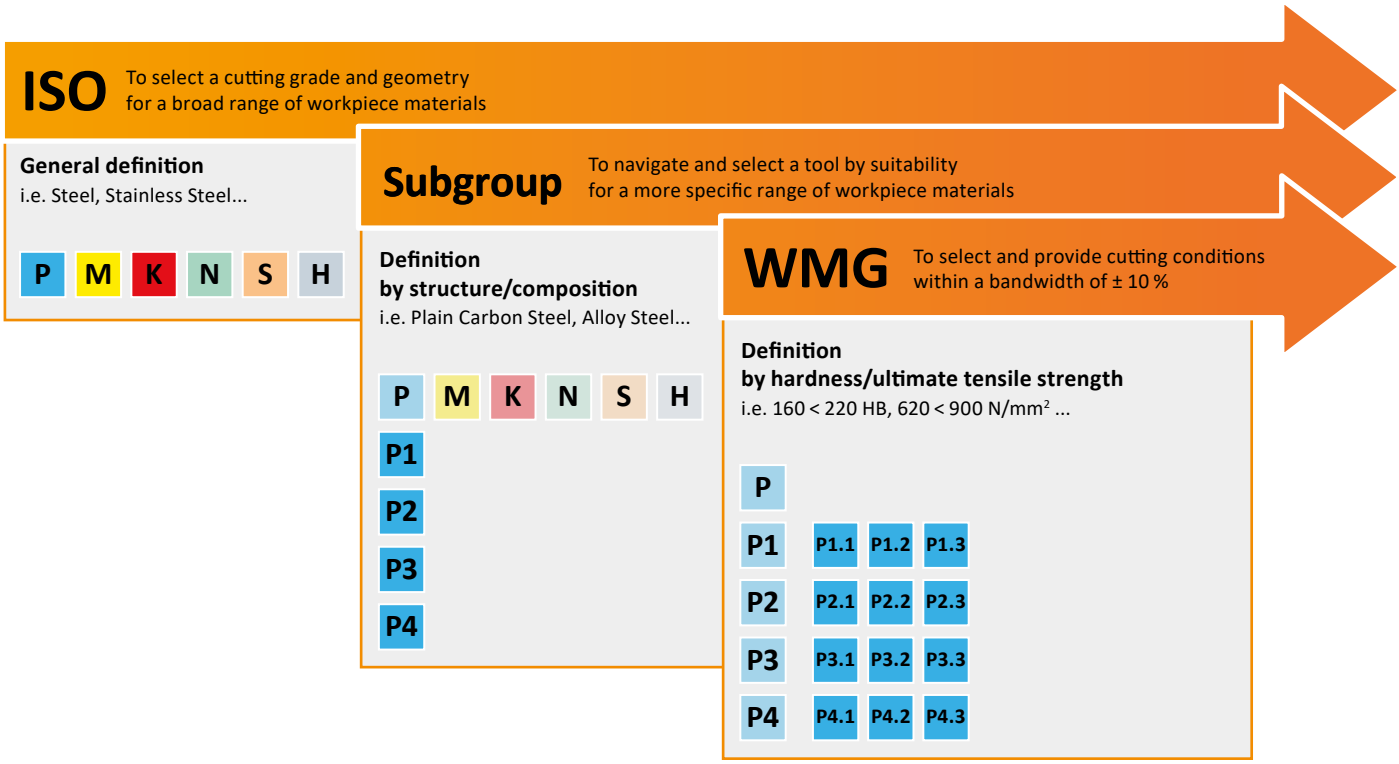
GET IT ON Google Play

Download on AppGallery



🕮 6		WMG & ISO 13399
🕮 10	ISO TURNING	INSTRUCTIONS
🕮 18		NAVIGATORS
🕮 57		POSITIVE INSERTS
🕮 219		NEGATIVE INSERTS
🕮 386		PARTING-OFF & GROOVING
🕮 482		THREAD TURNING
🕮 528		BROACHING
🕮 536		GENERAL TECHNICAL INFORMATION

WORKPIECE MATERIAL GROUPS (WMG)



ABOUT DORMER PRAMET'S WORKPIECE MATERIAL CLASSIFICATION

Workpiece **M**aterial **G**roups (**WMG**) are used to support easy and reliable selection of the right cutting tool and starting values for machining conditions in particular applications.

Dormer Pramet classifies workpiece materials into six different coloured groups;

- **Blue**: Steel and cast steel (P-group)
- **Yellow**: Stainless steel (M-group)
- **Red**: Cast iron (K-group)
- **Green**: Non-ferrous metals (N-group)
- **Brown**: High-temperature alloys (S-group)
- **Grey**: Hardened materials (H-group)

Each of these are divided into subgroups on the basis of their structure and/or composition. For example, P-group steel and cast steel is split into four subgroups, namely;

- **P1** – Free machining steel
- **P2** – Plain carbon steel
- **P3** – Alloy steel
- **P4** – Tool steel

A final division includes material properties, such as hardness and ultimate tensile strength. This is to provide our customers with a complete tool recommendation, including starting values for cutting speed and feed.

The table on the next page includes a description of each workpiece material group, as well as examples of commonly used designations.

WMG (WORK MATERIAL GROUP)

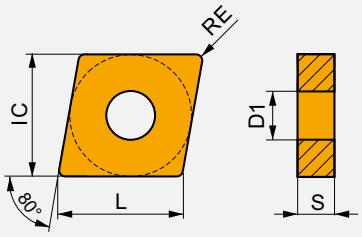
ISO group		WMG (Work Material Group)			Hardness (HB or HRC)	Ultimate Tensile Strength (MPa)	Examples
P	P1	P1.1	Free machining steel (carbon steels with increased machinability)	Sulfurized	< 240 HB	≤ 830	Examples of machining materials – see chapter **GENERAL TECHNICAL INFORMATION** (page 539).
		P1.2		Sulfurized and phosphorized	< 180 HB	≤ 620	
		P1.3		Sulfurized/phosphorized and leaded	< 180 HB	≤ 620	
	P2	P2.1	Plain carbon steel (steels comprised of mainly iron and carbon)	Containing <0.25 % C	< 180 HB	≤ 620	
		P2.2		Containing <0.55 % C	< 240 HB	≤ 830	
		P2.3		Containing >0.55 % C	< 300 HB	≤ 1030	
	P3	P3.1	Alloy steel (carbon steels with an alloying content ≤ 10%)	Annealed	< 180 HB	≤ 620	
		P3.2		Hardened and tempered	180 – 260 HB	> 620 ≤ 900	
		P3.3			260 – 360 HB	> 900 ≤ 1240	
	P4	P4.1	Tool steel (special alloy steel for tools, dies and molds)	Annealed	< 26 HRC	≤ 900	
		P4.2		Hardened and tempered	26 – 39 HRC	> 900 ≤ 1240	
		P4.3			39 – 45 HRC	> 1240 ≤ 1450	
M	M1	M1.1	Ferritic stainless steel (straight chromium non-hardenable alloys)		< 160 HB	≤ 520	
		M1.2			160 – 220 HB	> 520 ≤ 700	
	M2	M2.1	Martensitic stainless steel (straight chromium hardenable alloys)	Annealed	< 200 HB	≤ 670	
		M2.2		Quenched and tempered	200 – 280 HB	> 670 ≤ 950	
		M2.3		Precipitation-hardened	280 – 380 HB	> 950 ≤ 1300	
	M3	M3.1	Austenitic stainless steel (chromium-nickel and chromium-nickel-manganese alloys)		< 200 HB	≤ 750	
		M3.2			200 – 260 HB	> 750 ≤ 870	
		M3.3			260 – 300 HB	> 870 ≤ 1040	
	M4	M4.1	Austenitic-ferritic (DUPLEX) or super-austenitic stainless steel		< 300 HB	≤ 990	
		M4.2	Precipitation hardening austenitic stainless steel		300 – 380 HB	≤ 1320	
K	K1	K1.1	Gray iron or Automotive Gray iron (GG) (iron-carbon castings with a lamellar graphite microstructure)	Ferritic or ferritic-pearlitic	< 180 HB	≤ 190	
		K1.2		Ferritic-pearlictic or pearlitic	180 – 240 HB	> 190 ≤ 310	
		K1.3		Pearlitic	240 – 280 HB	> 310 ≤ 390	
	K2	K2.1	Malleable iron (GTS/GTW) (iron-carbon castings with a graphite-free microstructure)	Ferritic	< 160 HB	≤ 400	
		K2.2		Ferritic or pearlitic	160 – 200 HB	> 400 ≤ 550	
		K2.3		Pearlitic	200 – 240 HB	> 550 ≤ 660	
	K3	K3.1	Ductile iron (GGG) (iron-carbon castings with a nodular graphite microstructure)	Ferritic	< 180 HB	≤ 560	
		K3.2		Ferritic or pearlitic	180 – 220 HB	> 560 ≤ 680	
		K3.3		Pearlitic	220 – 260 HB	> 680 ≤ 800	
	K4	K4.1	Austenitic gray iron (ASTM A436) (iron-carbon alloy castings with an austenitic lamellar graphite microstructure)		< 180 HB	≤ 190	
		K4.2	Austenitic ductile iron (ASTM A439 or ASTM A571) (iron-carbon alloy castings with an austenitic nodular graphite microstructure)		< 240 HB	≤ 740	
		K4.3	Austempered ductile iron (ASTM A897) (iron-carbon alloy castings with an ausferrite microstructure)		< 280 HB	> 840 ≤ 980	
		K4.4			280 – 320 HB	> 980 ≤ 1130	
		K4.5			320 – 360 HB	> 1130 ≤ 1280	
	K5	K5.1	Compacted graphite iron CGI (ASTM A842) (iron-carbon castings with a vermicular graphite structure)	Ferritic	< 180 HB	≤ 400	
		K5.2		Ferritic-pearlitic	180 – 220 HB	> 400 ≤ 450	
		K5.3		Pearlitic	220 – 260 HB	> 450 ≤ 500	
N	N1	N1.1	Commercially pure wrought aluminium		< 60 HB	≤ 240	
		N1.2	Wrought aluminium alloys	Half hard tempered	60 – 100 HB	> 240 ≤ 400	
		N1.3		Full hard tempered	100 – 150 HB	> 400 ≤ 590	
	N2	N2.1	Cast aluminium alloys		< 75 HB	≤ 240	
		N2.2			75 – 90 HB	> 240 ≤ 270	
		N2.3			90 – 140 HB	> 270 ≤ 440	
	N3	N3.1	Free-cutting copper-alloys materials with excellent machining properties		–	–	
		N3.2	Short-chip copper-alloys with good to moderate machining properties		–	–	
		N3.3	Electrolytic copper and long-chip copper-alloys with moderate to poor machining properties		–	–	
	N4	N4.1	Thermoplastic polymers		–	–	
		N4.2	Thermosetting polymers		–	–	
		N4.3	Reinforced polymers or composites		–	–	
	N5	N5.1	Graphite		–	–	
S	S1	S1.1	Titanium or titanium alloys		< 200 HB	≤ 660	
		S1.2			200 – 280 HB	> 660 ≤ 950	
		S1.3			280 – 360 HB	> 950 ≤ 1200	
	S2	S2.1	Fe-based high-temperature alloys		< 200 HB	≤ 690	
		S2.2			200 – 280 HB	> 690 ≤ 970	
	S3	S3.1	Ni-based high-temperature alloys		< 280 HB	≤ 940	
		S3.2			280 – 360 HB	> 940 ≤ 1200	
	S4	S4.1	Co-based high-temperature alloys		< 240 HB	≤ 800	
		S4.2			240 – 320 HB	> 800 ≤ 1070	
H	H1	H1.1	Chilled cast iron		< 440 HB	–	
	H2	H2.1	Hardened cast iron		< 55 HRC	–	
		H2.2			> 55 HRC	–	
	H3	H3.1	Hardened steel <55 HRC		< 51 HRC	–	
		H3.2			51 – 55 HRC	–	
	H4	H4.1	Hardened steel >55 HRC		55 – 59 HRC	–	
		H4.2			> 59 HRC	–	

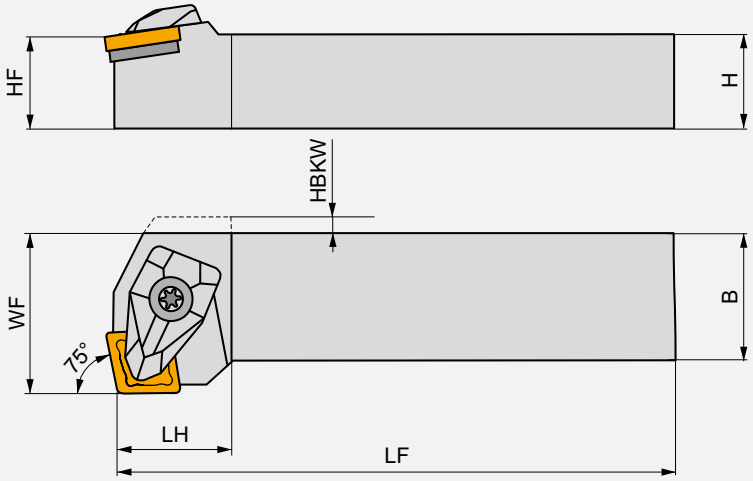
CUTTING TOOL PARAMETERS ACCORDING TO ISO 13399

All cutting tools are defined by a number of parameters according to the standard ISO 13399. This list contains all the parameters used in this catalogue and their definitions.

ISO 13399 is an international cutting tool information standard. It provides dimensions and parameters in a neutral format that is independent of any particular system or company nomenclature. When cutting tools are clearly defined according to a global standard, all types of software can process the electronic data more quickly, improving the quality of communication and helping to make the exchange of information run smoothly. Supporting a common language in our cutting tool descriptions this will assist system to system communication. It will save you a significant amount of time, providing an easier gathering of high-quality data across our 40,000 solid and indexable tools. By using an ISO 13399 compliant system, there will be no need to manually interpret data and key-enter it into your system.

EXAMPLES ONLY!





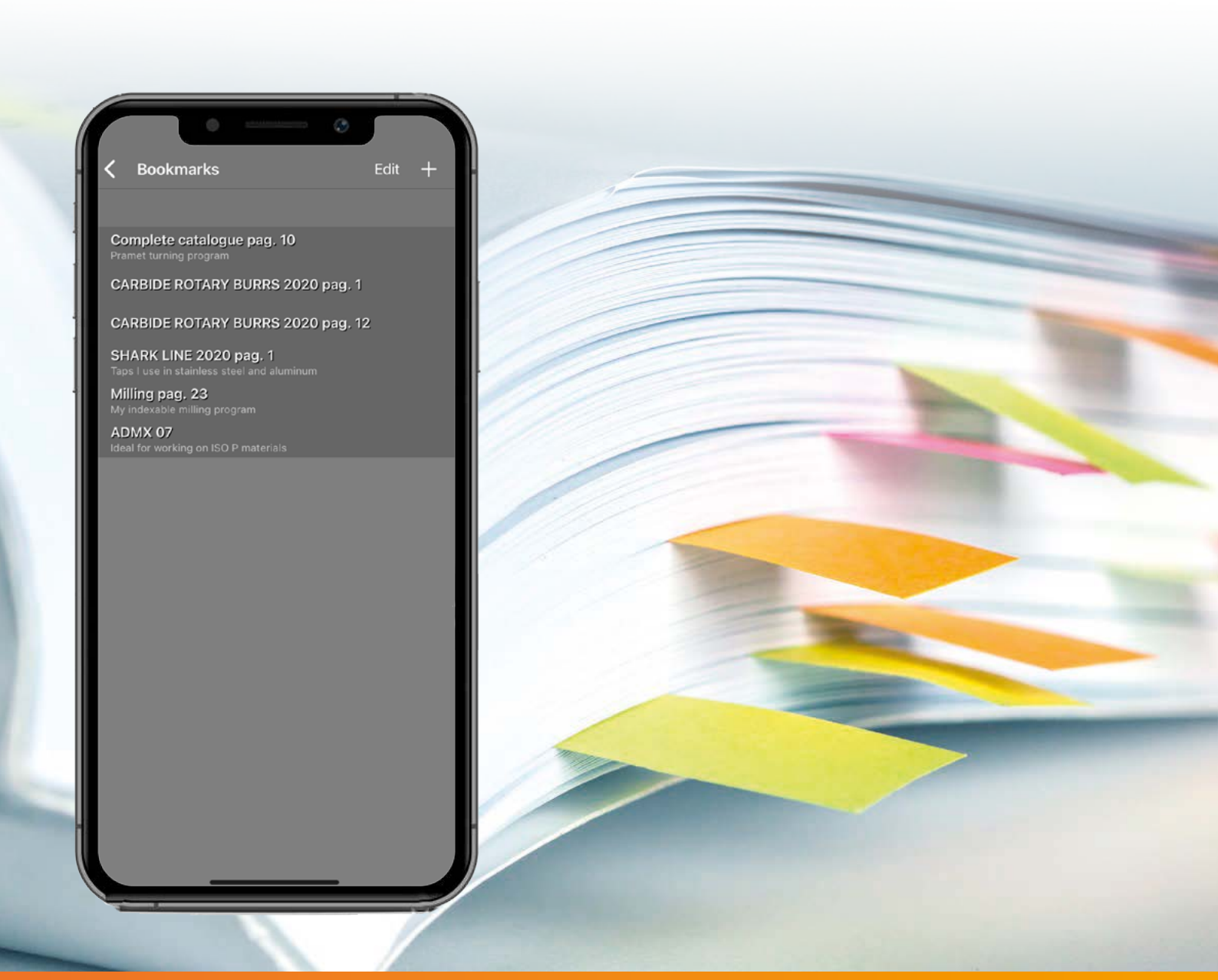
ISO 13399	Description
APMX	Depth of cut maximum
B	Shank width
BD	Body diameter
BLRAD	Blade reinforcement radius
BW	Insert body width
CDX	Cutting depth maximum
CND	Coolant entry diameter
CUTDIA	Work piece parting diameter maximum
CW	Cutting width
CWTOLL	Cutting width lower tolerance
CWTOLU	Cutting width upper tolerance
D1	Fixing hole diameter
DAXIN	Minimum axial groove inside diameter
DAXN	Minimum axial groove outside diameter
DAXX	Maximum axial groove outside diameter
DCON MS	Connection diameter
DMIN	Minimum bore diameter
DMINP	Minimum bore diameter perpendicular
GAMO	Ortogonal rake angle
GAMP	Axial rake angle
H	Shank height
HBH	Head bottom offset height
HBKW	Head bottom offset width
HF	Functional height
IC	Inscribed circle diameter
INSD	Insert diameter
INSL	Insert length

ISO 13399	Description
KAPR	Tool cutting edge angle
L	Cutting edge length
LAMS	Inclination angle
LB	Body length
LF	Functional length
LFA	A dimension on LF
LFS	Functional length secondary
LH	Head length
LU	Usable length
M	M-dimension
OAL	Overall length
PDX	Profile distance X
PDY	Profile distance Y
PSIRL	Tool lead angle left
PSIRR	Tool lead angle right
RE	Corner radius
S	Insert thickness
S1	Insert thickness total
TP	Thread pitch
TPI	Threads per inch
TPIN	Threads per inch
TPIX	Threads per inch
TPN	Thread pitch minimum
TPX	Thread pitch maximum
W1	Insert width
WF	Functional width
WFS	Functional width secondary

DORMER PRAMET

YOUR PERSONAL LIBRARY

Always revisiting the same sections of our publications? Our library app allows you to save key pages that you can revert back to again and again, whenever you need to. Simply Reliable. **Simply Reliable.**



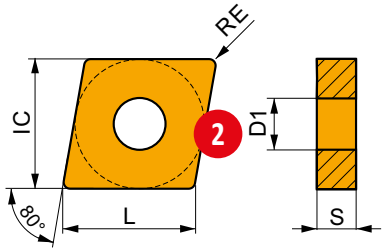
ISO TURNING

📖 6		WMG & ISO 13399
📖 10	ISO TURNING	INSTRUCTIONS
📖 18		NAVIGATORS
📖 57		POSITIVE INSERTS
📖 219		NEGATIVE INSERTS
📖 386		PARTING-OFF & GROOVING
📖 482		THREAD TURNING
📖 526		BROACHING
📖 533		TECHNICAL INFORMATION

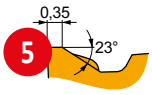
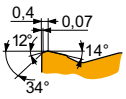
1 CNMM

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
1204	12.700	5.16	12.90	4.76
1606	15.875	6.35	16.10	6.35
1906	19.050	7.94	19.30	6.35
2509	25.400	9.12	25.80	9.53



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc	M f	M ap	K vc	K f	K ap	N vc	N f	N ap	S vc	S f	S ap	H vc	H f	H ap
																				
DR geometry for semi-rough to rough machining, a…tinuous to interrupted cuts.																				
CNMM 160612E-DR	T9315	1.2	225	0.45	6.0	–	–	–	210	0.45	6.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	200	0.45	6.0	120	0.41	6.0	190	…5	6.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	170	0.45	6.0	100	0.41	6.0	–	–	–	–	–	–	–	–	–	–	–	–
CNMM 190608E-DR	T9315	0.8	215	0.40	8.0	–	–	–	200	0.40	8.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	190	0.40	8.0	110	0.36	8.0	180	0.40	8.0	–	–	–	–	–	–	–	–	–
CNMM 190612E-DR	T9315	1.2	220	0.45	8.0	–	–	–	205	0.45	8.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	195	0.45	8.0	115	0.41	8.0	185	0.45	8.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	170	0.45	8.0	100	0.41	8.0	–	–	–	–	–	–	–	–	–	–	–	–
CNMM 190616E-DR	T9325	1.6	195	0.50	9.0	115	0.45	9.0	185	0.50	9.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	170	0.50	9.0	100	0.45	9.0	–	–	–	–	–	–	–	–	–	–	–	–
																				
HR geometry for rough to heavy-rough machining, and continuous to interrupted cuts.																				
CNMM 190616E-HR	6640	1.6	75	0.60	10.0	45	0.54	10.0	70	0.60	10.0	–	–	–	–	–	–	–	–	–
	T8345	1.6	55	0.60	10.0	30	0.54	10.0	50	0.60	10.0	–	–	–	–	–	–	–	–	–
	T9325	1.6	105	0.60	10.0	60	0.54	10.0	95	0.60	10.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	80	0.60	10.0	45	0.54	10.0	–	–	–	–	–	–	–	–	–	–	–	–

CNMM190616E-HR:T8345 Use full insert specification code when ordering!

- Grade
- Include colon
- ISO insert code

TURNING INSERTS – PAGE OVERVIEW

Pos.	Description
1	Designation of insert
2	Schematic drawing of insert
3	Table with insert sizes [mm]
4	Picture of representative insert
5	Profile of main cutting edge
6	Icons – specific features and cutting edge type

Pos.	Description
7	ISO insert code
8	Grade
9	Insert radii [mm]
10	Geometry description
11	Application area of insert

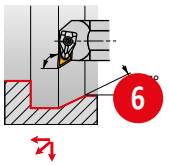
1 **DDUN(RL) INT**

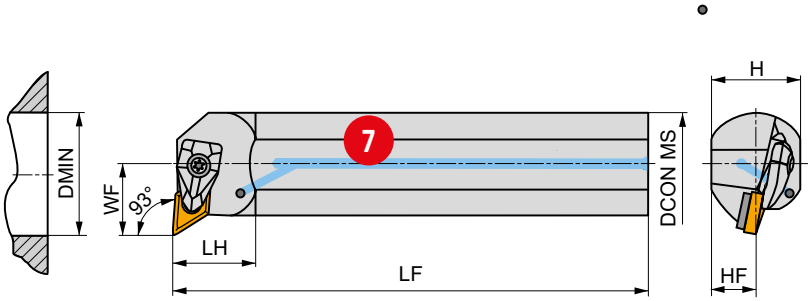
P M K N S I 2

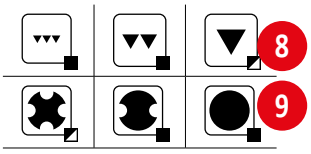
PRAMET 3 D

Internal Double Clamp Boring Bar with 93° Cutting Angle for DN.. Insert 5

Internal Right/Left hand double clamp boring bar, through coolant, 93° cutting angle for DN.. 11 and 15 inserts. Minimum internal turning diameter Ø32 mm. Suited for wide range of internal turning applications, copy turning up to 27°. Available with shank size Ø25 up to Ø50 mm. Body treated for longer tool life.







	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	H [mm]	HF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]		kg			
R	**A25T-DDUNR 11**	25	32	17	23	11.5	300	28	-12	-6	✓	0.96	GI046	DD11	–
	A32T-DDUNR 11	32	40	22	30	15	300	30	-10	-6	✓	1.68	GI046	DD11	–
	A40T-DDUNR 15	40	50	27	37	18.5	300	36	-11	-6					
	A50U-DDUNR 15	50	63	35	47	23.5	350	39	-8	-6					
L	**A25T-DDUNL 11**	25	32	17	23	11.5	300	28	-12	-6	✓	0.96	GI046	DD11	–
	A32T-DDUNL 11	32	40	22	30	15	300	30	-10	-6	✓	1.69	GI046	DD11	–
	A40T-DDUNL 15	40	50	27	37	18.5	300	36	-11	-6	✓	2.59	GI044	DD154	AT002
	A50U-DDUNL 15	50	63	35	47	23.5	350	39	-8	-6	✓	5.25	GI044	DD154	AT002

11 12 13 14 15 16 17 18

	19	
GI044		DN.. 1506..
GI046		DN.. 1104..

		Nm	20		
DD11	DCS 09	1.7	DDS 267-01	US 2004-T09P	FLAG T09P
DD154	DCS 12	3.9	DDS 266-02	US 2002-T15P	FLAG T15P/3,5

		21	
AT002a	DN.. 1504..	–	DDS 266-01
AT002b	CER DN.N 1506..	DCS 12C4	–
AT002c	CER DN.A 1506..	DCS 12C2	–

Typical page with turning holder displayed – specific page details will differ.

TURNING HOLDERS – PAGE OVERVIEW

Pos.	Description
1	Designation of turning holder
2	Material group recommendations
3	Clamping system of insert
4	Illustrative picture [1]
5	Tool description
6	Workpiece profile
7	Schematic drawing of tool
8	Achievable quality of surface
9	Character of cut/working conditions
10	Product applications
11	Tool design

Pos.	Description
12	ISO code of holder
13	Dimensions [mm] and angles [2] [°] of holder
14	Internal coolant supply
15	Weight [kg]
16	Group of compatible inserts [3]
17	Group of spare parts [3], [4]
18	Group of accessories [3], [4]
19	Compatible inserts
20	Spare parts
21	Special accessories

[1] Turning holder is primarily displayed in its right design (R)

[2] GAMO = orthogonal rake angle (see technical pages)
LAMS = inclination angle of main cutting edge (see technical pages)

[3] Code of Group of compatible inserts, spare parts and special accessories is used only for purposes of this catalogue. It cannot be used for orders.

[4] Spare parts and special accessories icons are designed schematically for ease of understanding. They aren't included in list of icons. Screws are, in some cases, completed with info on torque value in Nm, length of screw and size of thread.

TURNING HOLDERS – ICONS OVERVIEW

GENERAL ICONS

■	Primary use
◪	Possible use

▼▼▼	Finishing – very good surface quality
▼▼	Medium machining – good surface quality
▼	Roughing – unlimited surface roughness

●	Suitable for stable working conditions
●	Suitable for unstable working conditions
●	Suitable for very unstable working conditions

FEATURES

1	First choice
	For short chipping materials
	For tough materials (long chipping)
	Heavy working conditions
HFC	High Feed Cutting
HSC	High Speed Cutting

W	Insert with Wiper geometry
	Large overhang
	Railway wheel machining
	Thin-walled and slim workpieces
U	Universal wide range option

F	Sharp edge
E	Rounded edge
T	Edge with facet
S	Rounded edge with facet
K	Edge with double facet
P	Rounded edge with double facet

TURNING OPERATIONS

	Cone turning – external
	Cone turning – internal
	Copy turning (multi directional machining)
	Face copy turning
	Face copy turning in hole
	Face turning with shoulder
	Face turning without shoulder

	Chamfering (bevelling)
	Chamfering (bevelling) from the back
	Chamfering (bevelling) in hole
	Longitudinal turning with shoulder – external
	Longitudinal turning with shoulder – internal
	Longitudinal turning without shoulder – external
	Longitudinal turning without shoulder – internal

	Machining the rear face (shoulder) from the back
	Multi directional copy turning – external
	Multi directional copy turning – internal
	One directional copy turning – external
	One directional copy turning – internal
	Shallow radial groove

TURNING HOLDERS – ICONS OVERVIEW

TECHNICAL PAGES

FF	Fine finishing
F	Finishing
M	Medium machining
R	Roughing
HR	Heavy roughing
X.V	Multiplication factor for cutting speed
a_p	Depth of cut [mm]
f	Feed [mm/rev]
	Durability [min]
	Grade
(MT)CVD PVD	Coating
V	Cutting speed
	Cutting edge profile
	Cooling
	Very high cutting speed, excellent system rigidity (stable working conditions)
	High cutting speed, high system rigidity (stable working conditions)
	High cutting speed, system rigidity slightly limited (depth of cut changing)
	Medium cutting speed, system rigidity limited (slightly interrupted cut)
	Low cutting speed, low system rigidity (interrupted cut)
	Very low cutting speed, very low system rigidity (very unstable working conditions)

OTHERS

Nm	Clamping torque of screw [Nm]
	Group of heads for roughing
	Internal supply of coolant

CCGT

60

CCMT

62

CCMW

68

CCGW CBN

69

DCGT

86

DCMT

87

DCMW

92

DCGW CBN

92

DCMW PCD

93

ECGT

104

ECMT

105

ECMW

106

EPGX

110

EPMT

110

RCGT

118

RCMT

118

RCMW

120

RCMX

121

RCGX CER

123

SCGT

134

SCMT

135

SCMW

138

SPMR

146

SPUN

146

SPGN CER

147

TCGT

149

TCMT

150

TCMW

154

TCGW CBN

154

TPGX

162

TPMR

163

TPUN

164

TPGN CER

164

VBMT

168

VBGW CBN

171

VCGT

186

VCGW

189

VCGX

189

VCMT

190

VCMW

191

VCMW PCD

192

WCGT

212

WCGX

213

WCMT

213

CNGG

222

CNMA

222

CNMG

223

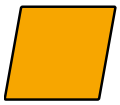
CNMM

234

CNGA CER

238

CNGN CER



238

CNGA CBN

239

DNMA

260

DNMG

260

DNMM

270

DNGA CER

271

DNGN CER

271

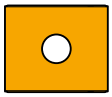
DNGA CBN

272

KNUX

284

LNUX 40, LN.X 50



289

RNMG

294

RNGN CER

294

SNMA

300

SNMG

301

SNMM

307

SNMX

311

SNGA CER

311

SNGN CER

312

TNMA

334

TNMG

335

TNMM

342

TNGA CER

343

TNGN CER

344

TNGA CBN

344

VNMG

356

VNGA CER

359

VNGA CBN

359

WNMA

366

WNMG

366

WNMM

375

WNGA CBN

376

P

Very unstable working conditions

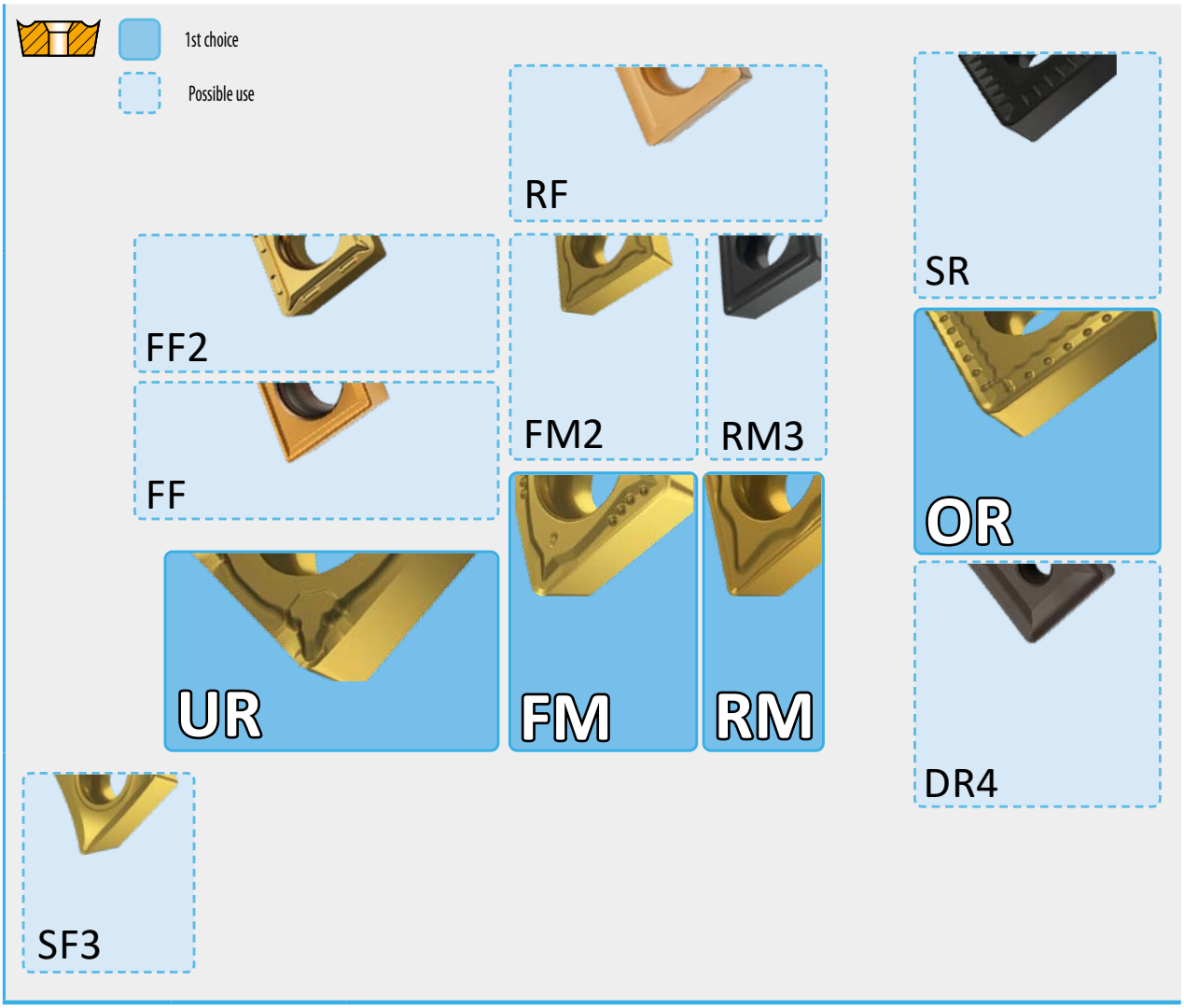
Unstable working conditions

Stable working conditions

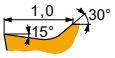
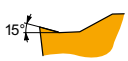
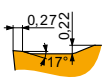
Thin -walled and slim workpieces

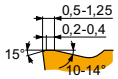
1st choice

Possible use



	FF	F	M	R	HR
f	0.05 – 0.2 mm/rev	0.05 – 0.2 mm/rev	0.2 – 0.4 mm/rev	0.4 – 1.0 mm/rev	> 1.0 mm/rev
a_p	0.05 – 2 mm	0.05 – 2 mm	2 – 4 mm	4 – 10 mm	> 10 mm

UR		Designed for fine to finish machining, steels and cast irons and potentially stainless steel, continuous and interrupted cuts
FM		Designed for finish to semi-rough machining, steels and stainless steels, potentially cast irons and non ferrous materials, continuous and moderately interrupted cuts
RM		Designed for semi-rough machining, steels, stainless steels and cast irons, potentially super alloys and hard-ened materials, continuous and interrupted cuts

OR		Designed for rough and heavy rough machining, steels, stainless steels and cast irons, potentially super alloys. continuous and interrupted cuts

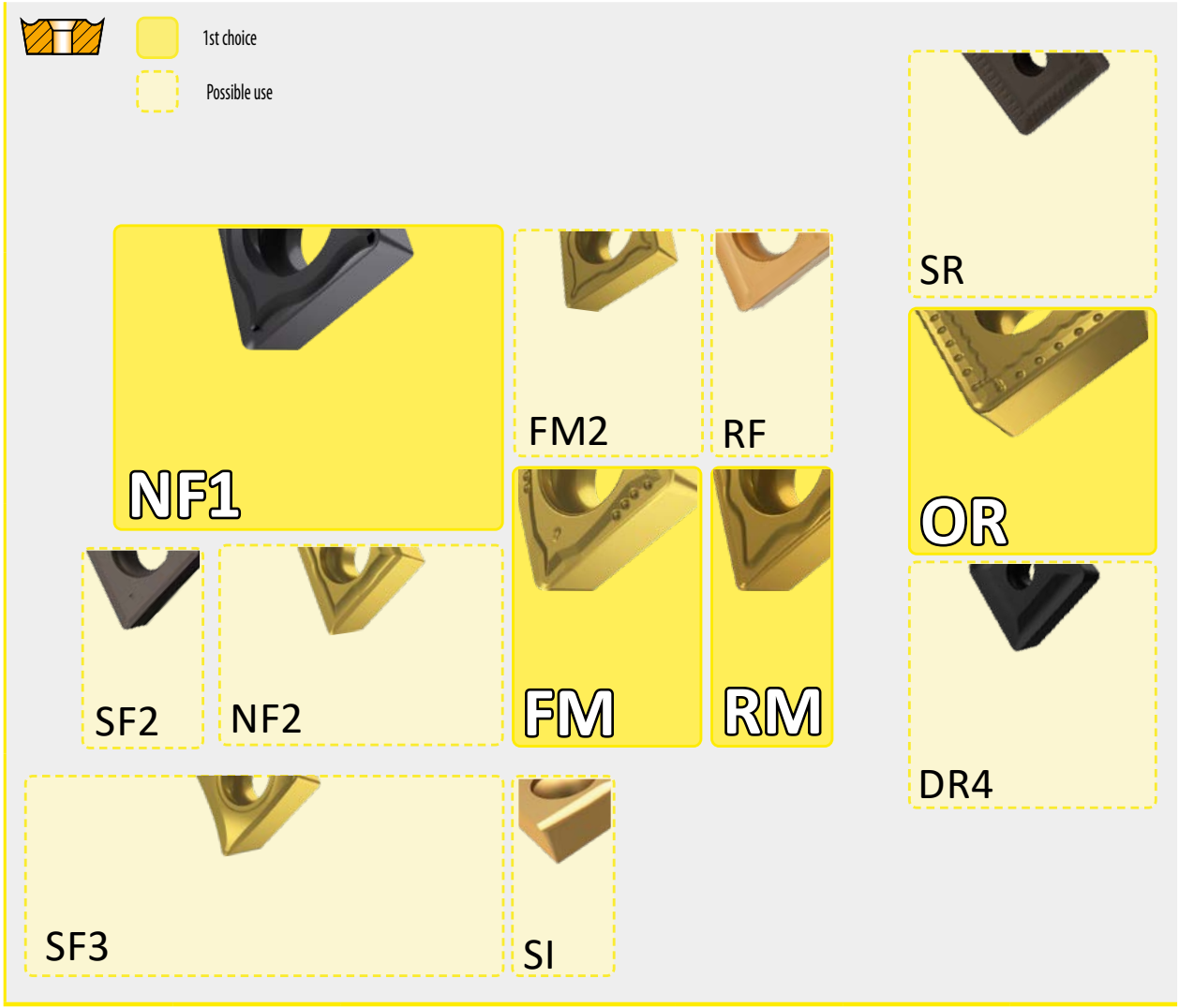
M

Very unstable working conditions

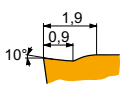
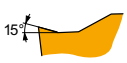
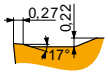
Unstable working conditions

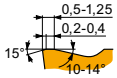
Stable working conditions

Thin -walled and slim workpieces



	FF	F	M	R	HR
f	0.05 – 0.2 mm/rev	0.05 – 0.2 mm/rev	0.2 – 0.4 mm/rev	0.4 – 1.0 mm/rev	> 1.0 mm/rev
a_p	0.05 – 2 mm	0.05 – 2 mm	2 – 4 mm	4 – 10 mm	> 10 mm

NF1		Positive design for fine-finish to medium machining, stainless steels and super alloys, potentially steels, non ferrous and hard materials, continuous cuts
FM		Designed for finish to semi-rough machining, steels and stainless steels, potentially cast irons and non ferrous materials, continuous and moderately interrupted cuts
RM		Designed for semi-rough machining, steels, stainless steels and cast irons, potentially super alloys and hard-ened materials, continuous and interrupted cuts

OR		Designed for rough and heavy rough machining, steels, stainless steels and cast irons, potentially super alloys. continuous and interrupted cuts

K

Very unstable working conditions

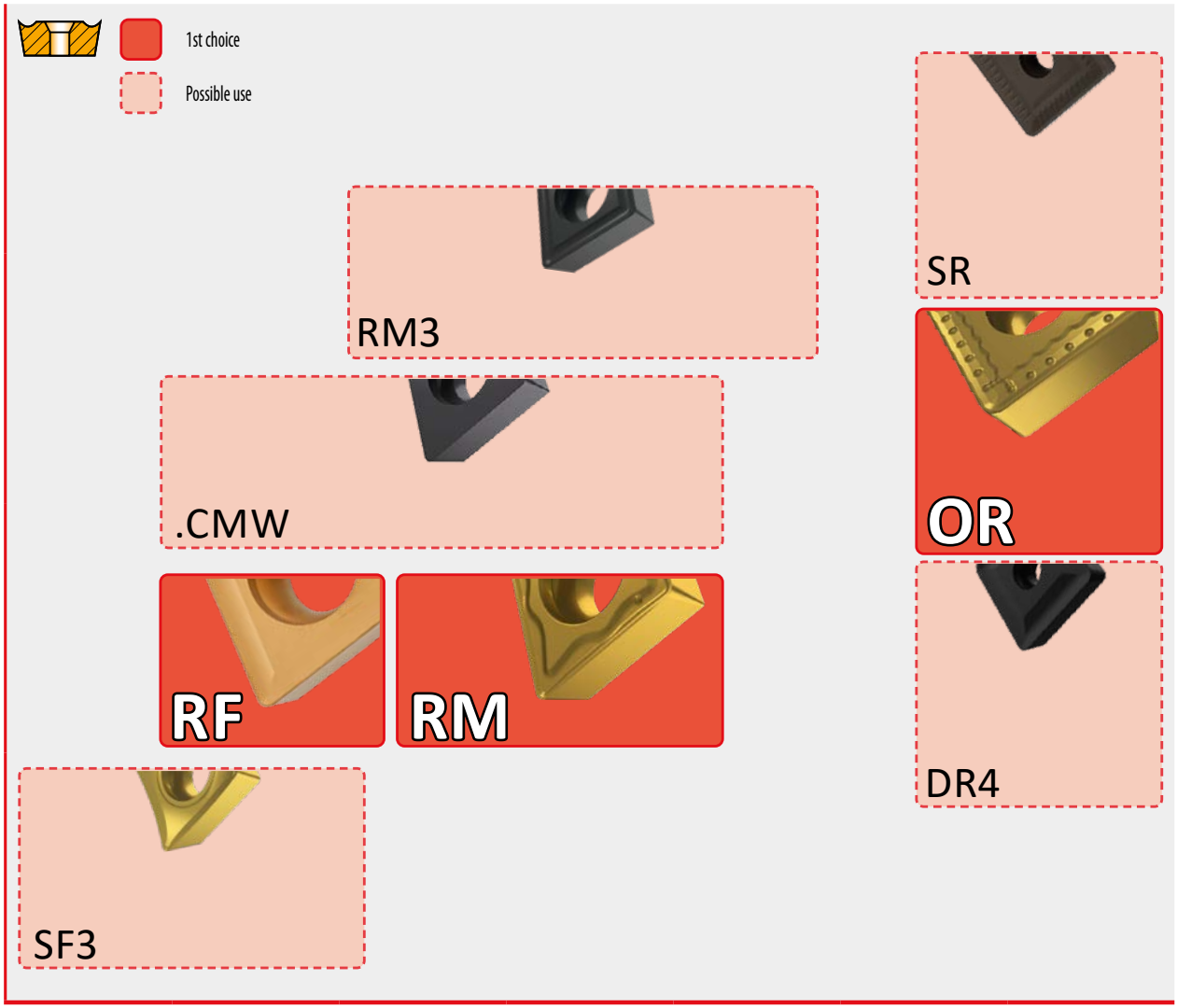
Unstable working conditions

Stable working conditions

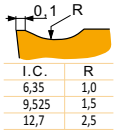
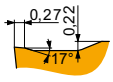
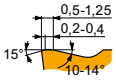
Thin -walled and slim workpieces

1st choice

Possible use



	FF	F	M	R	HR
f	0.05 – 0.2 mm/rev	0.05 – 0.2 mm/rev	0.2 – 0.4 mm/rev	0.4 – 1.0 mm/rev	> 1.0 mm/rev
a_p	0.05 – 2 mm	0.05 – 2 mm	2 – 4 mm	4 – 10 mm	> 10 mm

RF	 I.C. / R: 6,35 / 1,0; 9,525 / 1,5; 12,7 / 2,5	Designed for rough machining, cast irons, potentially steels, stainless steels and hard materials, continuous and interrupted cuts
RM		Designed for semi-rough machining, steels, stainless steels and cast irons, potentially super alloys and hardened materials, continuous and interrupted cuts
OR		Designed for rough and heavy rough machining, steels, stainless steels and cast irons, potentially super alloys. continuous and interrupted cuts

N

1st choice

Possible use

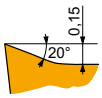
Very unstable working conditions

Unstable working conditions

Stable working conditions

Thin -walled and slim workpieces

	FF	F	M	R	HR
f	0.05 – 0.2 mm/rev	0.05 – 0.2 mm/rev	0.2 – 0.4 mm/rev	0.4 – 1.0 mm/rev	> 1.0 mm/rev
a_p	0.05 – 2 mm	0.05 – 2 mm	2 – 4 mm	4 – 10 mm	> 10 mm

SF3		Very positive design for fine and finish machining, super alloys, stainless steels and non ferrous materials, potentially steel, cast irons and hard materials, continuous cuts
AL		Highly positive design for fine finish to rough machining, aluminium, aluminium alloys and other non ferrous materials, potentially super alloys, continuous cuts

S

Very unstable working conditions

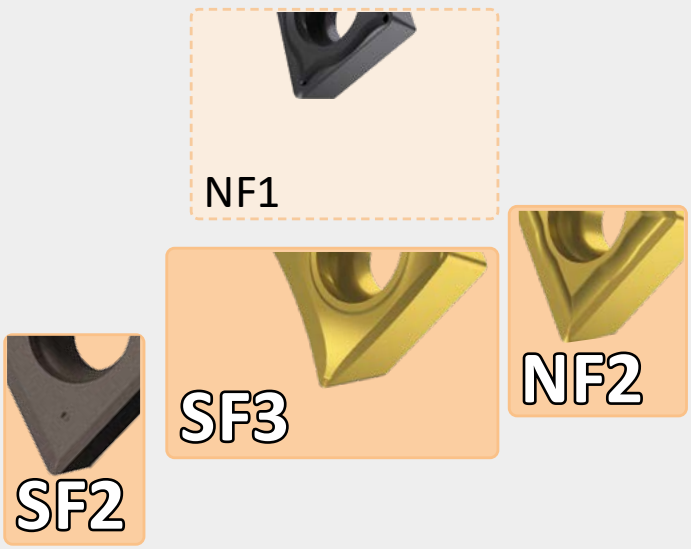
Unstable working conditions

Stable working conditions

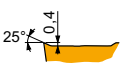
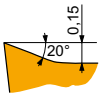
Thin -walled and slim workpieces

1st choice

Possible use



	FF	F	M	R	HR
f ⇨	0.05 – 0.2 mm/rev	0.05 – 0.2 mm/rev	0.2 – 0.4 mm/rev	0.4 – 1.0 mm/rev	> 1.0 mm/rev
a_p	0.05 – 2 mm	0.05 – 2 mm	2 – 4 mm	4 – 10 mm	> 10 mm

SF2		Very positive design for fine and finish machining, super alloys, potentially stainless steels, steels and non ferrous materials, continuous cuts
SF3		Very positive design for fine and finish machining, super alloys, stainless steels and non ferrous materials, po-tentially steel, cast irons and hard materials, continuous cuts
NF2		Positive design for fine-finish to semi rough machining, stainless steels and super alloys, continuous cuts

H

Very unstable working conditions

Unstable working conditions

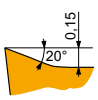
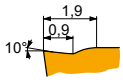
Stable working conditions

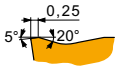
Thin -walled and slim workpieces

1st choice

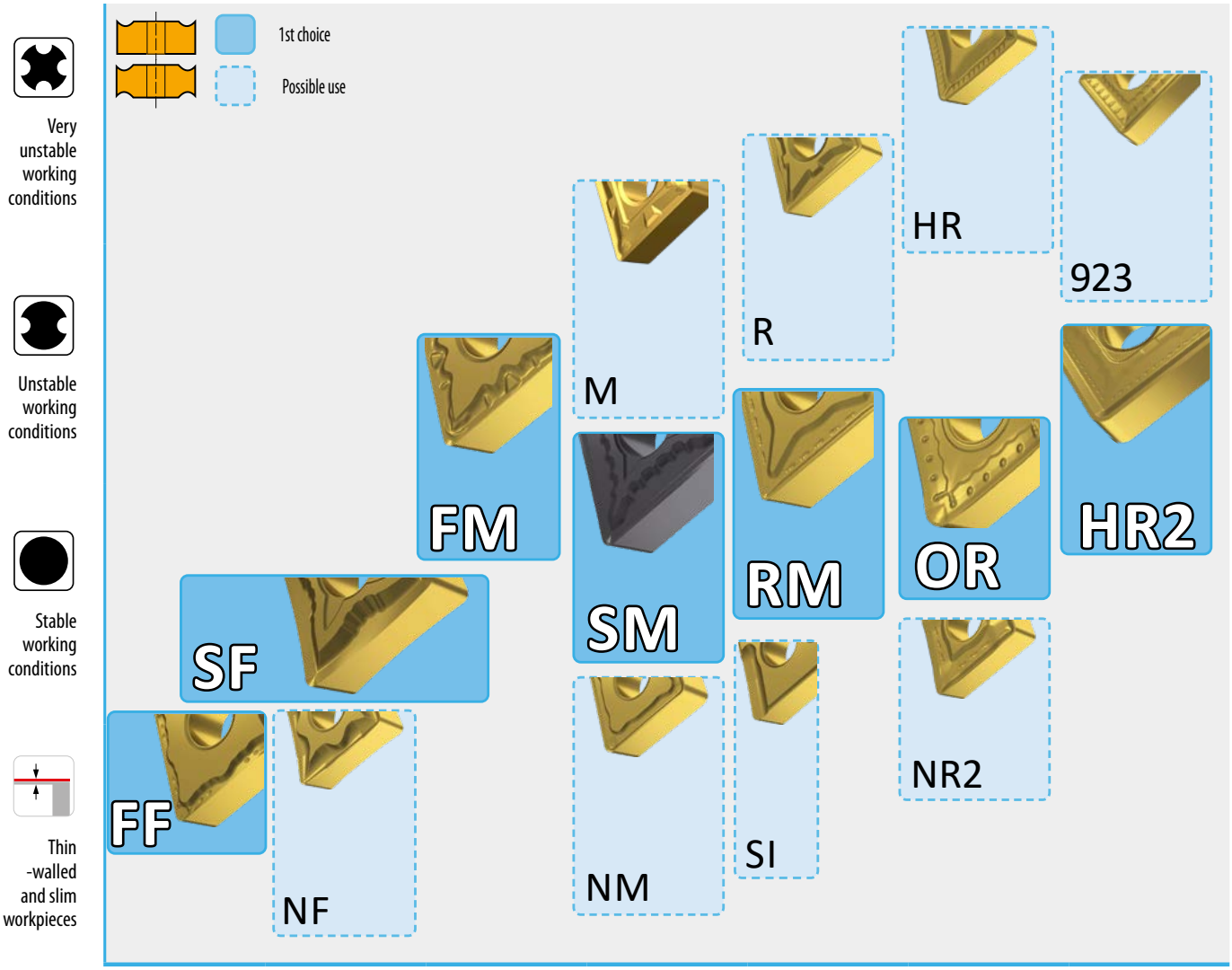
Possible use

	FF	F	M	R	HR
f	0.05 – 0.2 mm/rev	0.05 – 0.2 mm/rev	0.2 – 0.4 mm/rev	0.4 – 1.0 mm/rev	> 1.0 mm/rev
a_p	0.05 – 2 mm	0.05 – 2 mm	2 – 4 mm	4 – 10 mm	> 10 mm

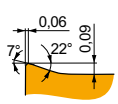
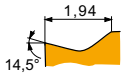
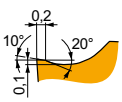
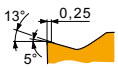
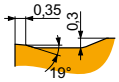
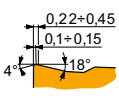
SF3		Very positive design for fine and finish machining, super alloys,stainless steels and non ferrous materials, potentially steel, cast irons and hard materials, continuous cuts
NF1		Positive design for fine-finish to medium machining, stainless steels and super alloys, potentially steels, non ferrous and hard materials, continuous cuts
.CMW		Designed for fine finish to semi rough machining, cast irons, potentially hard materials, continuous and slightly interrupted cuts

RM3		Designed for rough machining, cast irons, potentially steels, stainless steels and hard materials, continuous and interrupted cuts

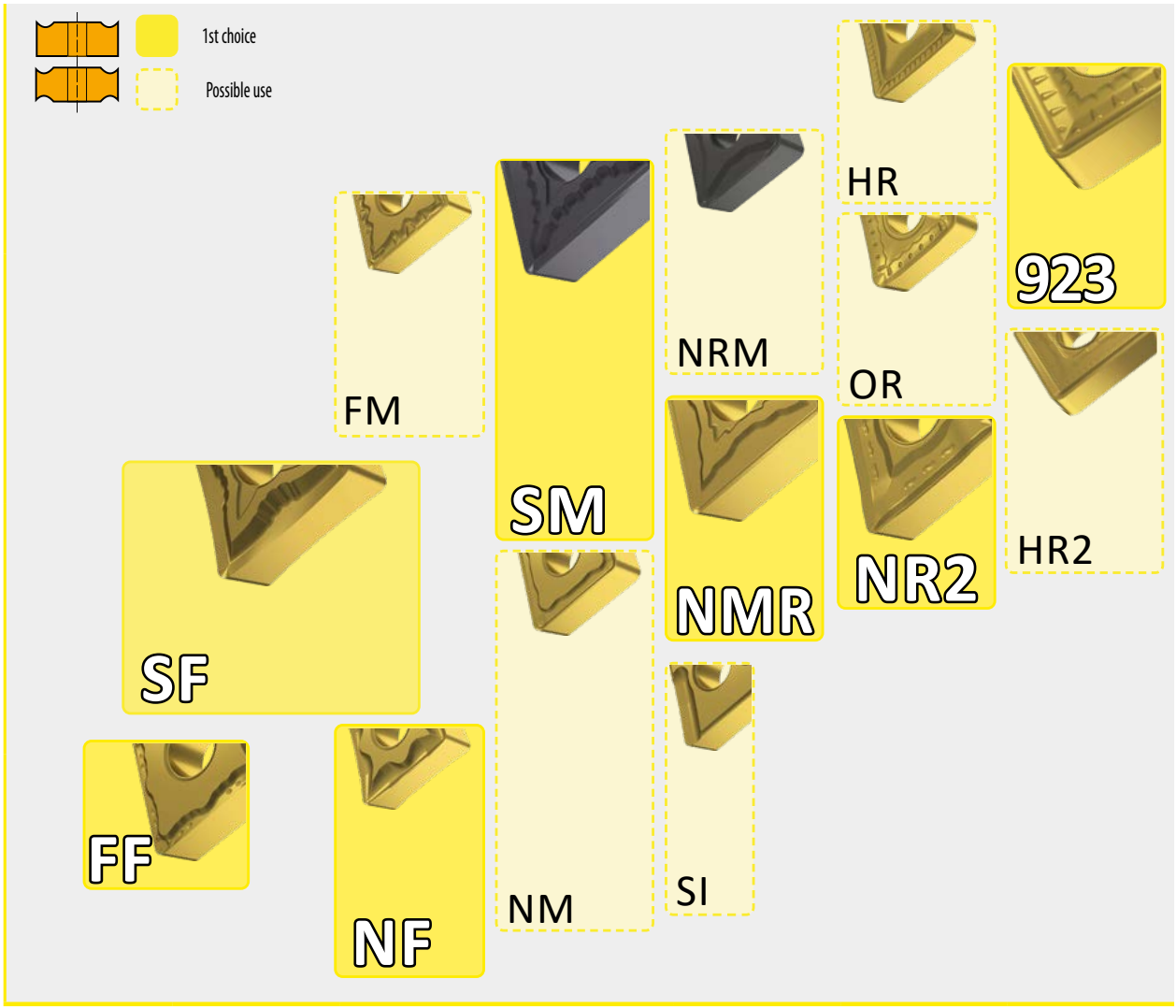
P



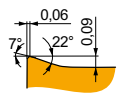
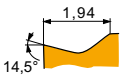
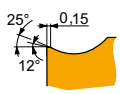
	FF	F	M	R	HR
f	0.05 – 0.2 mm/rev	0.05 – 0.2 mm/rev	0.2 – 0.4 mm/rev	0.4 – 1.0 mm/rev	> 1.0 mm/rev
a_p	0.05 – 2 mm	0.05 – 2 mm	2 – 4 mm	4 – 10 mm	> 10 mm

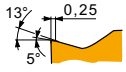
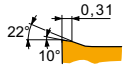
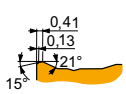
FF		Highly positive geometry designed for fine finish machining, stainless steel and steel, potentially cast irons, continuous cuts
SF		Versatile positive geometry designed for fine finish machining, steels, stainless steels, cast irons and super alloys and hard materials, potentially non ferous materials and for machining thin walls, with continuous cuts
FM		Positive geometry designed for finish to semi-rough machining, steel and cast irons, potentially and super alloys, continuous and moderately interrupted cuts
SM		Positive geometry designed for medium machining, stainless steels, super alloys, steels and cast irons, potentially non ferrous and hard materials and for machining thin walls, continuous and interrupted cuts
RM		Designed for semi-rough and rough machining, steels, stainless steels and cast irons, potentaillly super alloys, continuous and interrupted cuts
OR		Designed for finish to heavy rough machining, steels and cast irons, potentially stainless steel and super alloys, continuous and interrupted cuts

M



	FF	F	M	R	HR
f	0.05 – 0.2 mm/rev	0.05 – 0.2 mm/rev	0.2 – 0.4 mm/rev	0.4 – 1.0 mm/rev	> 1.0 mm/rev
a_p	0.05 – 2 mm	0.05 – 2 mm	2 – 4 mm	4 – 10 mm	> 10 mm

FF		Highly positive geometry designed for fine finish machining, stainless steel and steel, potentially cast irons, continuous cuts
SF		Versatile positive geometry designed for fine finish machining, steels, stainless steels, cast irons and super alloys and hard materials, potentially non ferous materials and for machining thin walls, with continuous cuts
NF		Highly positive design for fine finish and medium machining, stainless steels. steel, potentially cast irons, non ferrous materials and super alloys, continuous cuts

SM		Positive geometry designed for medium machining, stainless steels, super alloys, steels and cast irons, potentially non ferrous and hard materials and for machining thin walls, continuous and interrupted cuts
NMR		Positive design for medium to rough machining, stainless steels as well as soft steels and super alloys, continuous cuts
NR2		Designed for finish to rough machining, stainless steels and steels, potentially cast irons and super alloys, continuous and interrupted cuts

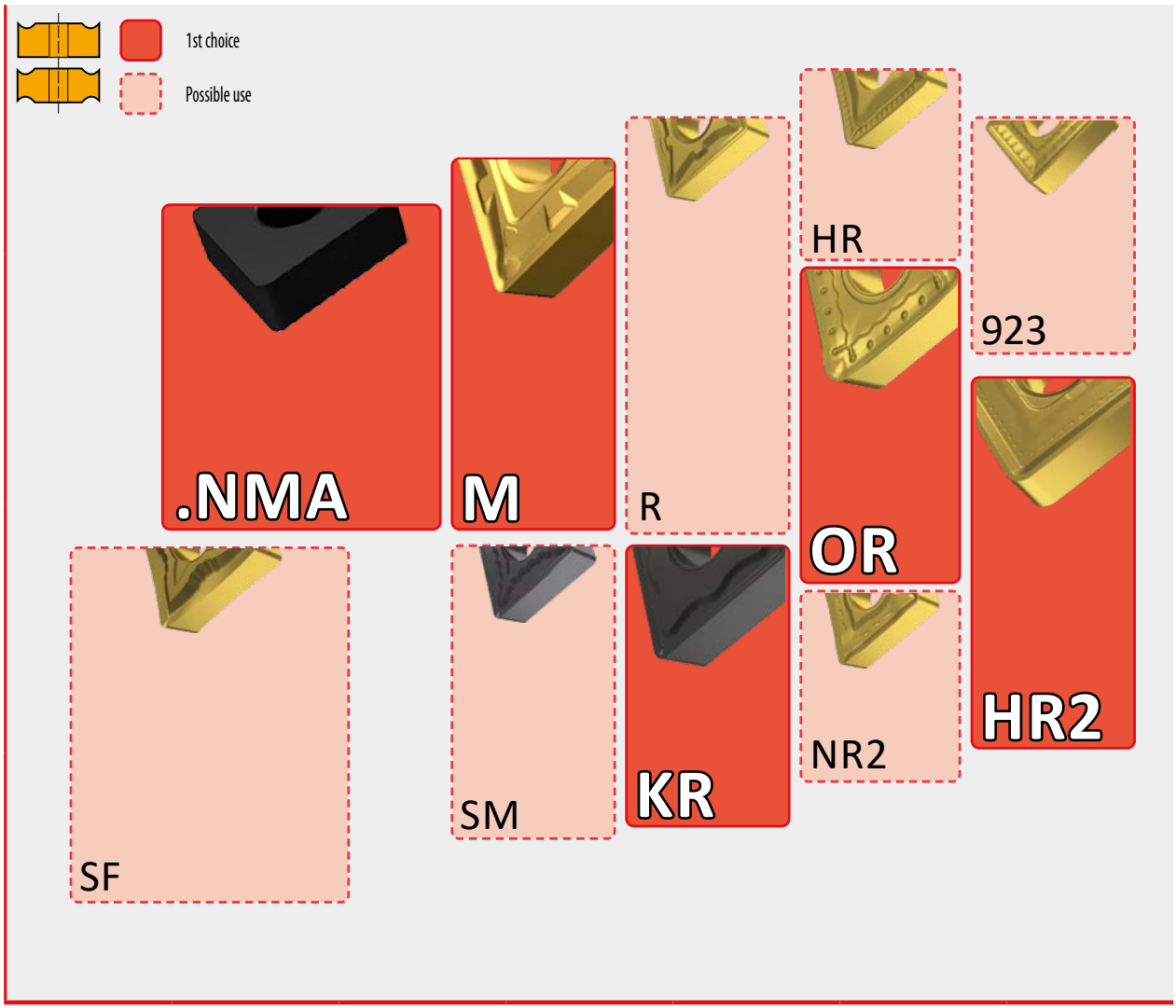
K

Very unstable working conditions

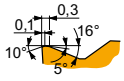
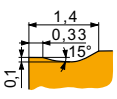
Unstable working conditions

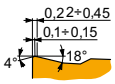
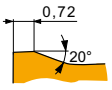
Stable working conditions

Thin -walled and slim workpieces



	FF	F	M	R	HR
f	0.05 – 0.2 mm/rev	0.05 – 0.2 mm/rev	0.2 – 0.4 mm/rev	0.4 – 1.0 mm/rev	> 1.0 mm/rev
a_p	0.05 – 2 mm	0.05 – 2 mm	2 – 4 mm	4 – 10 mm	> 10 mm

.NMA		Designed for fine finish to semi rough machining, cast irons, potentially hard materials, continuous and slightly interrupted cuts
M		Designed for finish and semi-rough machining, cast irons, potentially steels and hard materials, continuous and interrupted cuts
KR		Designed for semi-rough and rough machining, cast irons, potentially steel and hard materials, continuous and interrupted cuts

OR		Designed for finish to heavy rough machining, steels and cast irons, potentially stainless steel and super alloys, continuous and interrupted cuts
HR2		Designed for rough to heavy rough machining with high feeds, steels and cast irons, potentially stainless steels, continuous and interrupted cuts

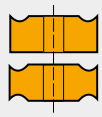
N

Very unstable working conditions

Unstable working conditions

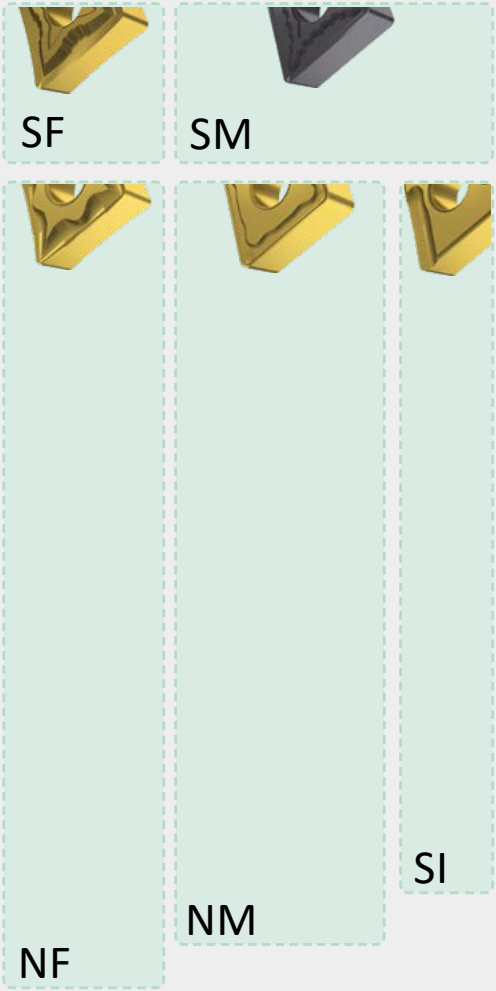
Stable working conditions

Thin -walled and slim workpieces

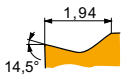
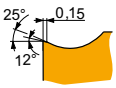
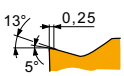


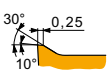
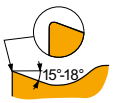
1st choice

Possible use

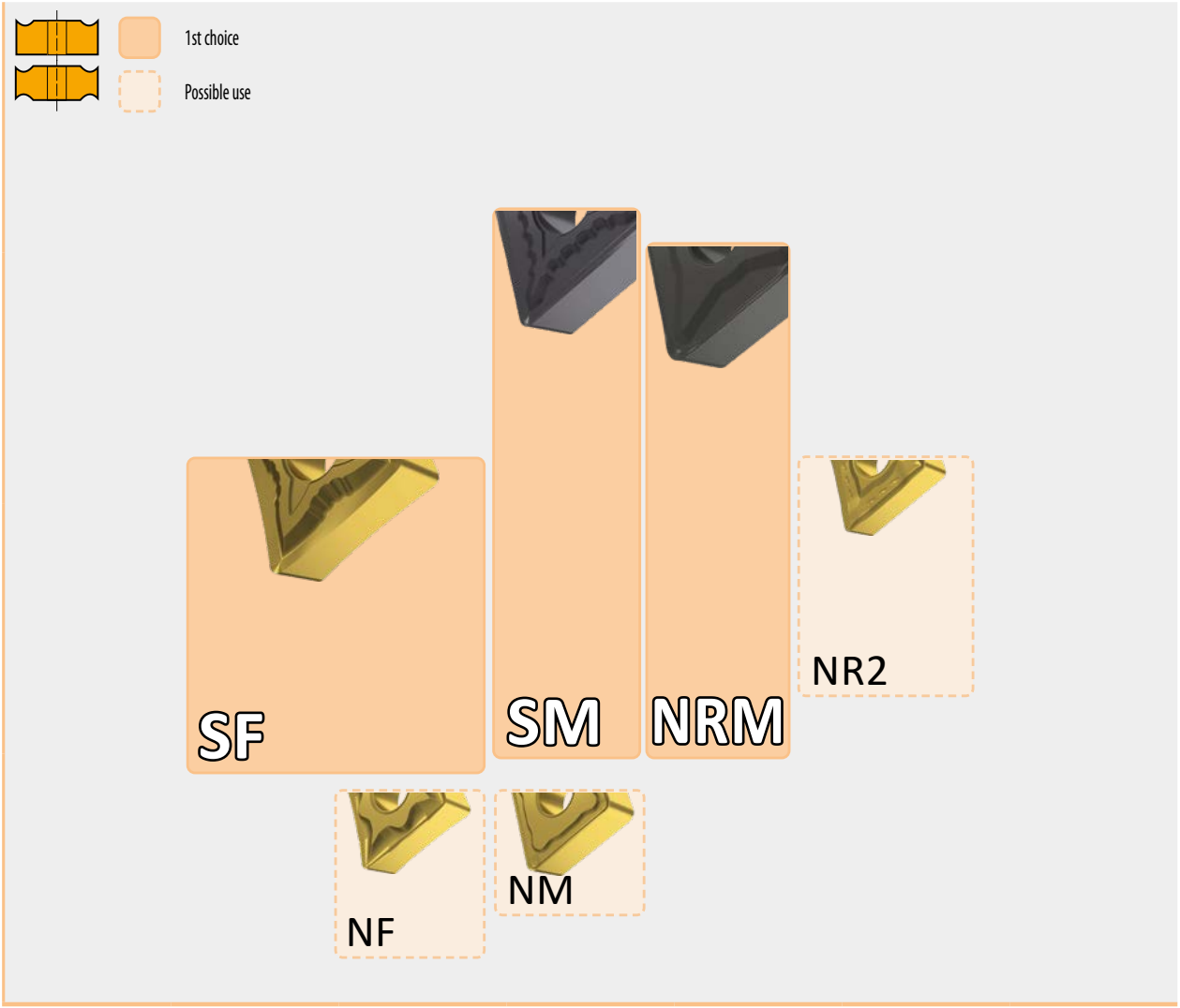


	FF	F	M	R	HR
f	0.05 – 0.2 mm/rev	0.05 – 0.2 mm/rev	0.2 – 0.4 mm/rev	0.4 – 1.0 mm/rev	> 1.0 mm/rev
a_p	0.05 – 2 mm	0.05 – 2 mm	2 – 4 mm	4 – 10 mm	> 10 mm

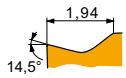
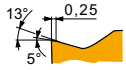
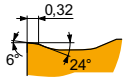
SF		Versatile positive geometry designed for fine finish machining, steels, stainless steels, cast irons and super alloys and hard materials, potentially non ferous materi-als and for machining thin walls, with continuous cuts
NF		Highly positive design for fine finish and medium ma-chining, stainless steels. steel, potentially cast irons, non ferrous materials and super alloys, continuous cuts
SM		Positive geometry designed for medium machining, stainless steels, super alloys, steels and cast irons, potentially non ferrous and hard materials and for machining thin walls, continuous and interrupted cuts

NM		Highly positive design for fine finish, medium and rough machining, stainless steels, steels, potentially non ferrrous materials and super alloys, continuous cuts
SI		Positive geometry for fine finish to semi-rough machining, steels, stainless steels and cast irons and potentially non ferrous materials, continuous cuts

S



	FF	F	M	R	HR
f ⇨	0.05 – 0.2 mm/rev	0.05 – 0.2 mm/rev	0.2 – 0.4 mm/rev	0.4 – 1.0 mm/rev	> 1.0 mm/rev
a_p	0.05 – 2 mm	0.05 – 2 mm	2 – 4 mm	4 – 10 mm	> 10 mm

SF		Versatile positive geometry designed for fine finish machining, steels, stainless steels, cast irons and super alloys and hard materials, potentially non ferous materials and for machining thin walls, with continuous cuts
SM		Positive geometry designed for medium machining, stainless steels, super alloys, steels and cast irons, potentially non ferrous and hard materials and for machining thin walls, continuous and interrupted cuts
NRM		Positive design for semi-rough and rough machining, stainless steel, soft steels and super alloys, continuous cuts

H

1st choice

Possible use

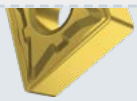
Very unstable working conditions

Unstable working conditions

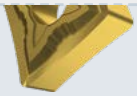
Stable working conditions

Thin -walled and slim workpieces

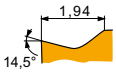
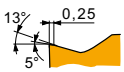
.NMA

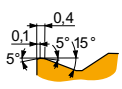

R

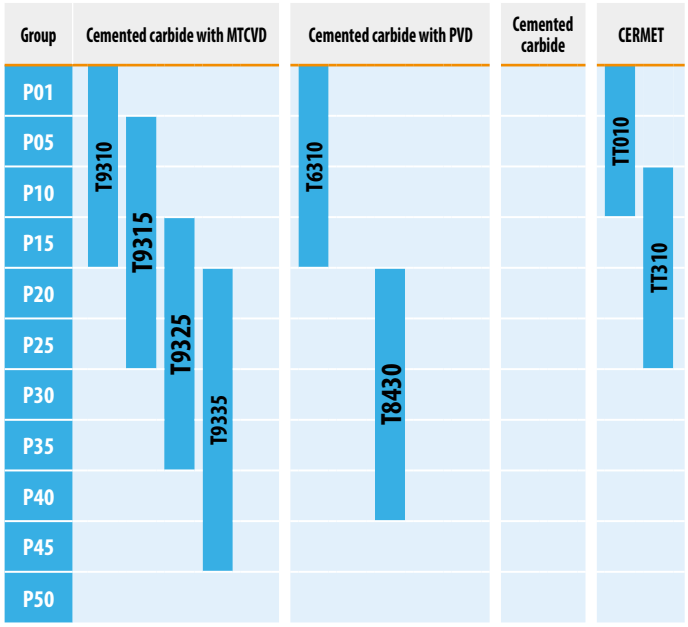
SM

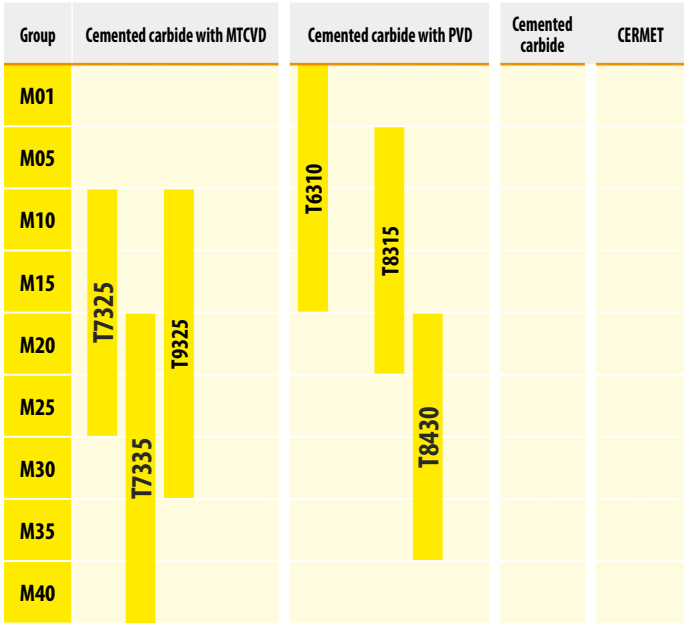

SF

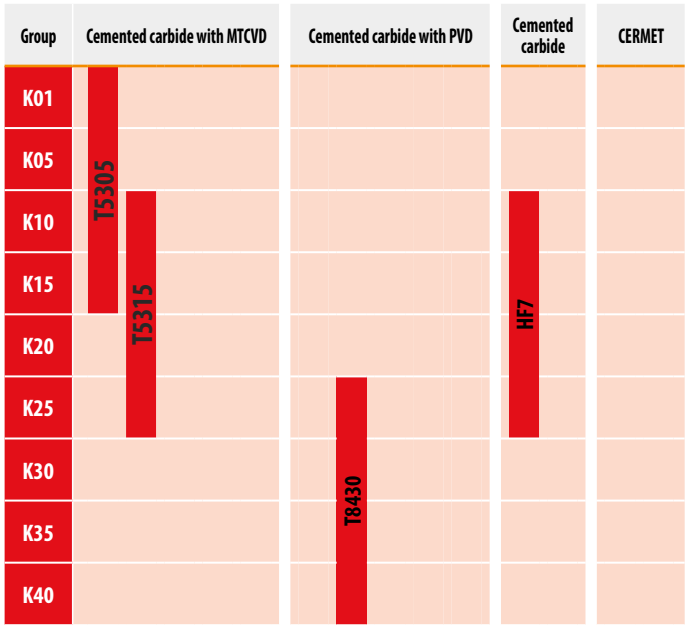
	FF	F	M	R	HR
f	0.05 – 0.2 mm/rev	0.05 – 0.2 mm/rev	0.2 – 0.4 mm/rev	0.4 – 1.0 mm/rev	> 1.0 mm/rev
a_p	0.05 – 2 mm	0.05 – 2 mm	2 – 4 mm	4 – 10 mm	> 10 mm

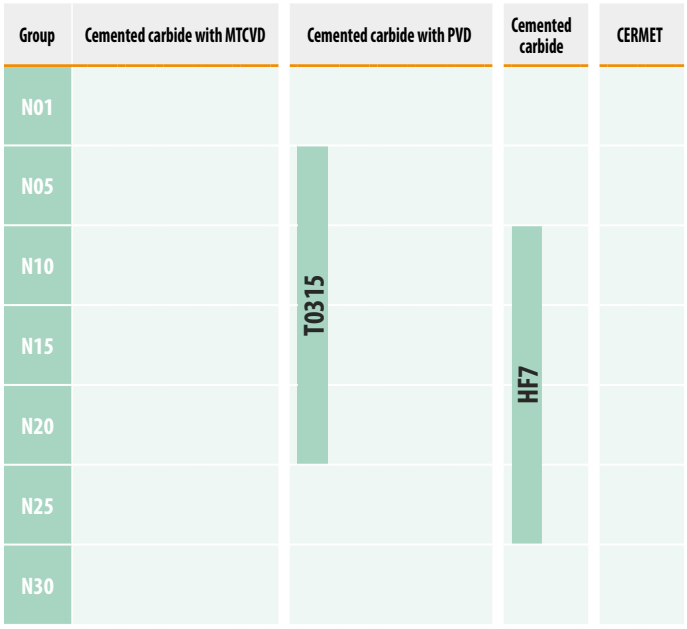
SF		Versatile positive geometry designed for fine finish machining, steels, stainless steels, cast irons and super alloys and hard materials, potentially non ferous materials and for machining thin walls, with continuous cuts
SM		Positive geometry designed for medium machining, stainless steels, super alloys, steels and cast irons, potentially non ferrous and hard materials and for machining thin walls, continuous and interrupted cuts
.NMA		Designed for fine finish to semi rough machining, cast irons, potentially hard materials, continuous and slightly interrupted cuts

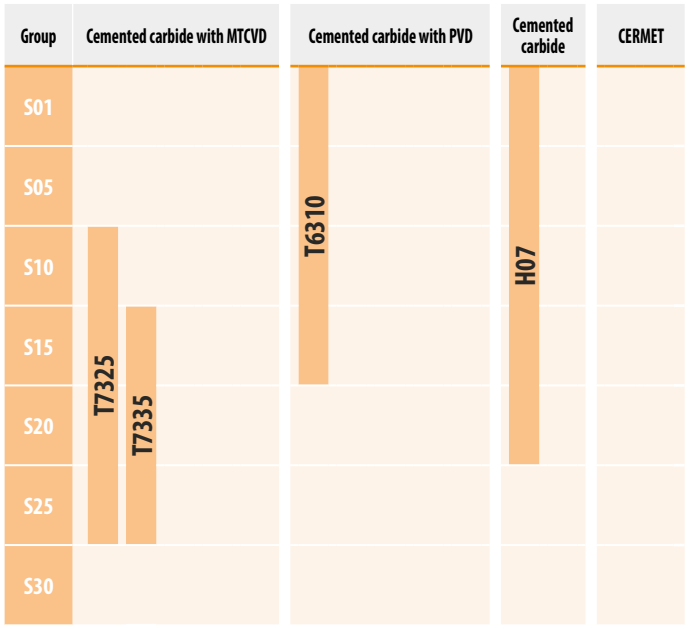
R		Designed for semi-rough and rough machining, cast irons, potentially steel and hard materials, continuous and interrupted cuts

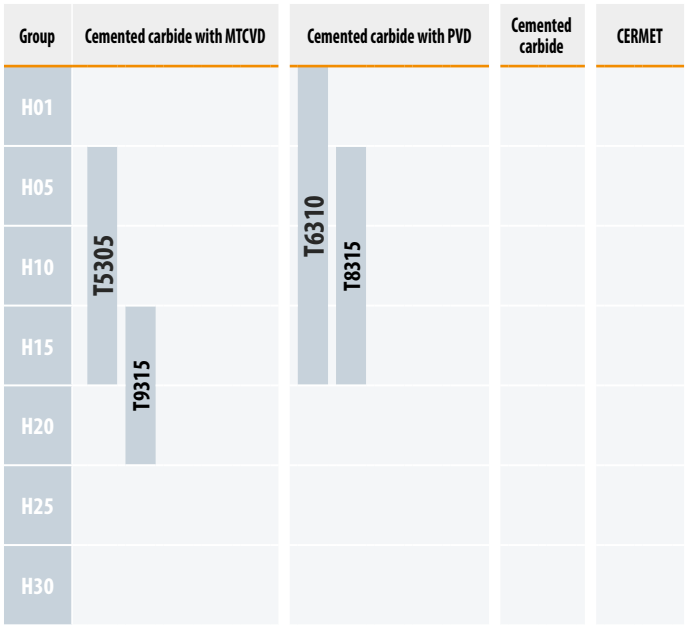

Group
Cemented carbide with MTCVD
Cemented carbide with PVD
Cemented carbide
CERMET
P01
P05
P10
P15
P20
P25
P30
P35
P40
P45
P50
T9310
T9315
T9325
T9335
T6310
T8430
TT010
TT310


Group
Cemented carbide with MTCVD
Cemented carbide with PVD
Cemented carbide
CERMET
M01
M05
M10
M15
M20
M25
M30
M35
M40
T7325
T7335
T9325
T6310
T8315
T8430


Group
Cemented carbide with MTCVD
Cemented carbide with PVD
Cemented carbide
CERMET
K01
K05
K10
K15
K20
K25
K30
K35
K40
T5305
T5315
T8430
HF7


Group
Cemented carbide with MTCVD
Cemented carbide with PVD
Cemented carbide
CERMET
N01
N05
N10
N15
N20
N25
N30
T0315
HF7


Group
Cemented carbide with MTCVD
Cemented carbide with PVD
Cemented carbide
CERMET
S01
S05
S10
S15
S20
S25
S30
T7325
T7335
T6310
H07


Group
Cemented carbide with MTCVD
Cemented carbide with PVD
Cemented carbide
CERMET
H01
H05
H10
H15
H20
H25
H30
T5305
T9315
T6310
T8315

Grade Identification	Area of Application	Application	Feed	Cutting speed	Resistance to adverse Working Conditions	Coating	Colour	Substrate	Coolant benefit	Grade description
T9310	P01 - P15 K05 - K20 H10 - H20	■ ◪ ◪				MT-CVD		FGM	+ +	Grade with high abrasion resistance which can be used for slightly interrupted cutting. It will be used for finishing or semi-roughing operations. This material can also be used for roughing operations provided the machine-tool-workpiece configuration is sufficiently rigid.
T9315	P05 - P25 K05 - K25 H10 - H20	■ ◪ ◪				MT-CVD		FGM	+ +	A versatile grade with excellent wear resistance properties even under intense cutting conditions. It can also be used for operations with interrupted cuts. With it's well balanced properties this grade can be first choice for a wide range of turning operations. Not suited to low cutting speeds.
T9325	P15 - P35 M10 - M30 K15 - K35 S10 - S20	■ ■ ◪ ◪				MT-CVD		FGM	+ +	From a technological perspective this is an extremely versatile grade with high resistance to mechanical damage in adverse cutting conditions and retains excellent wear resistance. The correct application of this material requires high cutting speeds.
T9335	P20 - P45 M15 - M40 S15 - S25	■ ■ ◪				MT-CVD		FGM	+ + +	One of the toughest grades which is especially suitable for adverse cutting conditions at medium to high feed rates and medium cutting speeds. Compared to its predecessors, M15 – M40 it is not only tougher, but also more abrasion resistant which will be useful when using intensive cutting conditions.
T7325	P15 - P35 M10 - M25 S10 - S25	◪ ■ ■				MT-CVD		FGM	+ + +	One of the most universal turning grades. Especially designed for stainless steel machining. Optimal balance between wear resistance and performance reliability. Suitable for broad variety of application in turning operations.
T7335	P20 - P40 M20 - M40 S15 - S25	◪ ■ ■				MT-CVD		FGM	+ + +	Grade with functionally graded substrate, featuring very high operational reliability and very good wear-resistance. It is best suited to use in the machining of very tough M20 – M40 materials.
T5305	P05 - P15 K01 - K15 H05 - H15	◪ ■ ◪				MT-CVD		H	+	Grade with very high resistance to chemical wear; suitable for finishing operations using high cutting speeds. With its high abrasion resistance, it is also suitable for productive K01 – K15, machining of hardened and treated materials.
T5315	P10 - P25 K10 - K25 H15 - H25	◪ ■ ◪				MT-CVD		H	+	Grade intended primarily for productive machining which has high abrasion resistance and good operational reliability. Due to its properties, this material is particularly suitable for roughing and finishing operations for good or slightly adverse cutting conditions.
6640	P20 - P40 M20 - M35 K25 - K40	■ ■ ■				MT-CVD		H	+ + +	One of the toughest turning materials which can be used especially in roughing operations, or where operational reliability under adverse cutting conditions is a priority. Another ideal choice for machines working with low to medium cutting speeds and medium to high feed rates.

Grade Identification	Area of Application	Application	Feed	Cutting speed	Resistance to adverse Working Conditions	Coating	Colour	Substrate	Coolant benefit	Grade description
T8315	P05 - P20 M05 - M20 K05 - K25 N05 - N25 S05 - S15 H05 - H15	◪ ■ ■ ■ ◪ ■				PVD		submicron H	+ +	Grade featuring excellent abrasion resistance while maintaining above average operational reliability, it is suitable for machining at medium to high cutting speeds in short chipping harder materials.
T8430	P20 - P40 M20 - M35 K25 - K40 N15 - N30 S15 - S25 H15 - H25	■ ■ ◪ ◪ ◪ ◪				PVD		submicron H	+ + +	Undoubtedly the most versatile cutting material, this is useful for machining of all types of machined materials and is practically applicable in almost all types of turning operations. Its main benefits are its high operational reliability and very good frictional properties; it is therefore suitable for applications at medium and lower cutting speeds.
T8330	P25 - P40 M20 - M35 K20 - K40 N15 - N30 S15 - S25 H15 - H25	■ ■ ■ ◪ ◪ ◪				PVD		submicron H	+ + +	Versatile cutting material, this is useful for machining of all types of machined materials and is practically applicable in almost all types of turning operations. Its main benefits are its high operational reliability and very good frictional properties; it is therefore suitable for applications at medium and lower cutting speeds.
T8345	P30 - P50 M20 - M40 K30 - K40 S20 - S30	■ ◪ ◪ ◪				PVD		submicron H	+ + +	This is the toughest turning grade, which is intended mainly for machining under the worst cutting conditions and in applications with the highest requirements for operating reliability. Because of these properties, this material is recommended for lower cutting speeds.
T6310	P01 - P15 M01 - M15 K05 - K20 N05 - N20 S01 - S15 H01 - H15	■ ■ ■ ■ ■ ■				PVD		ultra submicron H	+ + +	High wear resistant turning grade with top PVD coating. Suitable for finishing operation and applications, where sharp cutting edge together with high flank wear resistance is of high importance
T0315	N05 - N20	■				PVD			+ +	Submicron grade for turning non-ferrous metals and their alloys with a balance of wear resistance and toughness. It is provided with a unique coating with excellent friction properties.
HF7	M10 - M20 K10 - K25 N10 - N25	◪ ■ ■				×		submicron H	+ +	Uncoated grade which is primarily designed for machining non-ferrous metals; but can also be used for other machined materials (except steel). This material can be used in turning, milling, and even boring.
H07	M05 - M15 K10 - K25 N10 - N30 S01 - S20	◪ ■ ■ ■				×		submicron H	+ +	Uncoated turning grade suitable for machining applications where oxidation resistance is not dominating criterion of tool life. Designed for machining of Ti-based alloys. Grade exhibits high strength of cutting edge together with good wear resistance.
TT310	P10 - P25 M15 - M25	■ ◪				PVD		cermet	+ / –	Coated cermet used for fine and finish turning of carbon and alloy steels (including stainless). Its excellent friction properties are further improved by the coating applied using the PVD technique.
TT010	P01 - P10 M01 - M10	■ ◪				×		cermet	+ / –	Uncoated cermet, which is suitable for fine machining of all types of steel (including stainless) at very low feed rates. Its main advantage is the minimal radius of the cutting edge and its high resistance to physical and chemical wear mechanisms.

TURNING GRADES – NAVIGATOR

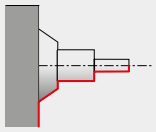
Grade Identification	Area of Application	Application	Feed	Cutting speed	Resistance to adverse Working Conditions	Coating	Colour	Substrate	Coolant benefit	Grade description
TC100	K01 - K15	■				×		ceramics	– -	Ceramic grade for cast iron machining. Suitable for machining with high cutting speed at stable conditions.
TB310	K01 - K10	■				×		CBN	– -	CBN grade for machining of hardened materials. Suitable for machining with high cutting speed and small feeds at stable conditions.
	S05 - S10	◪								
	H01 - H10	◪								
PD1	N05 - N25	■				×		PKD	-	PKD grade for turning non-ferrous materials. Ideal choice for working with high cutting speed and small feeds at stable conditions.
333TN	P45 - P50	■				PVD		HSS	+ + +	Special grade composed of HSS substrate and thin hard PVD coating. The most tough cutting grade in the portfolio. Inserts with this grade are one and only used for slotting of key groove.
	M35 - M40	◪								
	K35 - K40	◪								

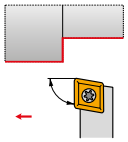
Substrat	
H	WC-Co based substrate
submicron H	WC-Co based substrate fine grained (< 1 µm)
ultra submicron H	WC-Co based substrate very fine grained (< 0.5 µm)
FGM	Functionally graded substrate
Cermet	Cemented carbide without WC
ceramics	Cutting ceramics
PCD	Polycrystalline Diamond
CBN	Cubic Boron Nitride
HSS	High speed steel

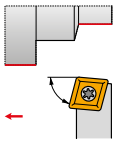
Coating	
MT-CVD	Medium-temperature chemical method of coating
PVD	Low-temperature physical method of coating
×	Uncoated grade

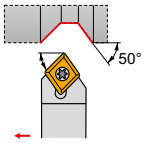
Benefits of cutting fluid	
+ + +	Use of coolant is essential
+ +	Highly recommended
+	Recommended
+ / –	Optional
– -	Do not use coolant
–	Coolant not recommended

ISO TURNING – EXTERNAL
LONG AND UNSTABLE COMPONENTS (positive inserts)

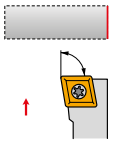


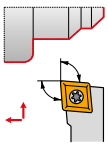
SCAC(RL) EXT
90° | CC..
06
09

08×08
16×16
70 | 60 – 69

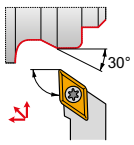
SCBC(RL) EXT
75° | CC..
09
12

12×12
25×25
71 | 60 – 69

SCDCR EXT
45° | CC..
06


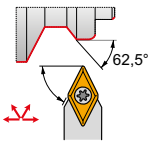
10×10
72 | 60 – 69

SCFC(RL) EXT
90° | CC..
06
09

08×08
16×16
73 | 60 – 69

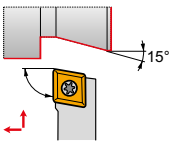
SCLC(RL) EXT
95° | CC..
06
08
09
12

08×08
25×25
74 | 60 – 69

SDJC(RL) EXT
93° | DC..
07
11
15


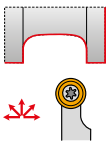
08×08
25×25
94 | 86 – 93

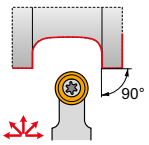
SDNCN EXT
62°30´ | DC..
7
11


08×08
25×25
95 | 86 – 93

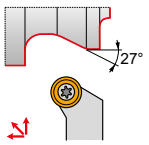
SEGC(RL) EXT
90° | EC..
08


12×12
16×16
107 | 104 – 106

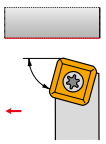
SRDC(RL) EXT
RC..
08

20×20
32×25
126 | 118 – 123

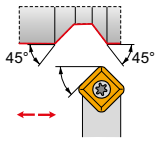
SRDCN EXT
RC..
06
08
10
12
16


12×12
32×25
127 | 118 – 123

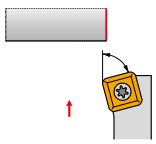
SRSC(RL) EXT
RC..
06
08
10
12
16


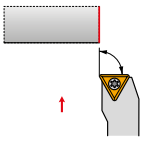
12×12
32×25
128 | 118 – 123

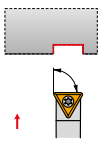
SSBC(RL) EXT
75° | SC..
09
12
25
38

12×12
60×60
139 | 134 – 138

SSDCN EXT
45° | SC..
09
12


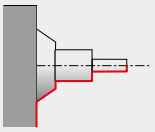
12×12
25×25
140 | 134 – 138

SSKC(RL) EXT
75° | SC..
09
12

12×12
25×25
141 | 134 – 138

STFC(RL) EXT
90° | TC..
11
16

16×16
25×25
155 | 149 – 154

STFC(RL)-A EXT
90° | TC..
11

20×20
156 | 149 – 154

ISO TURNING – EXTERNAL
LONG AND UNSTABLE COMPONENTS (positive inserts)



STJC(RL) EXT
93° | TC..
11
16
16×16
25×25
157 | 149 – 154

SVAC(RL)-DC EXT
90° | VC..
13
10×10
25×25
193 | 186 – 192

SVGC(RL) EXT
90° | VC..
07
08×08
16×16
194 | 186 – 192

SVHB(C)(RL) EXT
107°30´ | VB, VC..
11
16
16×16
25×25
172, 195 | 168 – 171, 186 – 192

SVJB(C)(RL) EXT
93° | VB, VC..
11
13
16
12×12
32×25
173, 196 | 168 – 171, 186 – 192

SVJC(RL)-DC EXT
93° | VC..
13
10×10
25×25
197 | 186 – 192

SVPB(C)(RL) EXT
117°30´ | VB, VC..
11
16
16×16
32×25
174, 198 | 168 – 171, 186 – 192

SVVB(C)N EXT
72°30´ | VB, VC..
11
13
16
12×12
32×25
175, 199 | 168 – 171, 186 – 192

SVXB(C)(RL) EXT
98° | VB, VC..
11
13
16
12×12
32×25
176, 200 | 168 – 171, 186 – 192

SWLC(RL) EXT
95° | WC..
06
08
16×16
25×25
215 | 212 – 214

CKJN(RL) EXT
93° | KN..
16
20×20
32×25
287 | 284 – 286

C.-SCLC(RL) EXT
95° | CC..
09
12
20
32
75 | 60 – 69

C.-SDJC(RL) EXT
93° | DC..
11
C3
C5
96 | 86 – 93

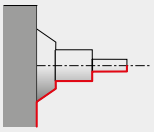
C.-SDNCN EXT
62°30´ | DC..
11
C4
C5
97 | 86 – 93

C.-SRDCN EXT
RC..
10
12
C4
C5
130 | 118 – 123

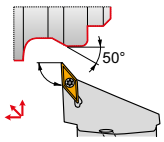
C.-SVHB(RL) EXT
107°30´ | VB, VC..
16
C4
C6
177, 201 | 168 – 171, 186 – 192

ISO TURNING – EXTERNAL

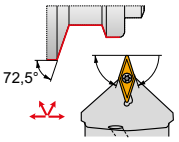
LONG AND UNSTABLE COMPONENTS (positive inserts)



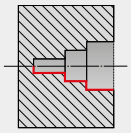
C.-SVJB(RL) EXT

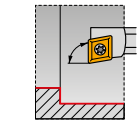
93°	VB, VC..
	11 16
C3 / C6	
178, 202	168 – 171 186 – 192

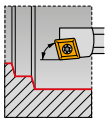
C.-SVVBN EXT

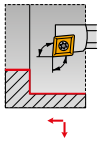
72°30´	VB, VC..
	16
C4 / C6	
179, 203	168 – 171 186 – 192

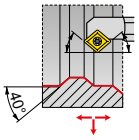
ISO TURNING – INTERNAL
LONG AND UNSTABLE COMPONENTS (positive inserts)



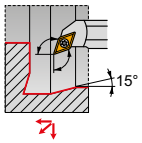
SCFC(RL) INT
90° | CC..
06

ØDmin 13/16
76 | 60 – 69

SCKC(RL) INT
75° | CC..
06 09 12

ØDmin 11/40
77 | 60 – 69

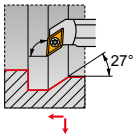
SCLC(RL) INT
95° | CC..
06 09 12

ØDmin 11/40
78 | 60 – 69

SCXC(RL) INT
40° | CC..
06


ØDmin 13/20
80 | 60 – 69

SDQC(RL) INT
107°30´ | DC..
07 11


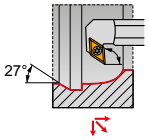
ØDmin 13/40
98 | 86 – 93

SDUC(RL) INT
93° | DC..
07 11


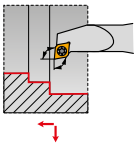
ØDmin 13/40
99 | 86 – 93

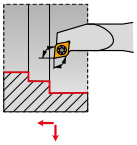
SDUC(RL)-E INT
93° | DC..
07 11

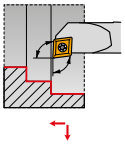
ØDmin 13/40
100 | 86 – 93

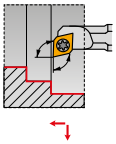
SDZC(RL) INT
93° | DC..
07 11


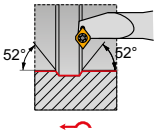
ØDmin 27/65
101 | 86 – 93

SELP(RL) INT
95° | EP..
05

ØDmin 8/16
111 | 110

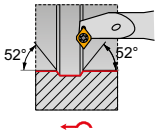
SELP(RL)-E INT
95° | EP..
05

ØDmin 8/16
112 | 110

SEUC(RL) INT
93° | EC..
06 08

ØDmin 11/32
108 | 104 – 106

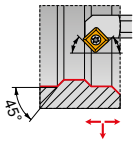
SEUP(RL) INT
93° | EP..
05

ØDmin 8.3
113 | 110

SEXP(RL) INT
52°30´ | EP..
05


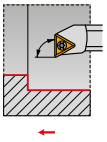
ØDmin 9.5/16
114 | 110

SEXP(RL)-E INT
52°30´ | EP..
05


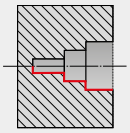
ØDmin 9.5/16
115 | 110

SSSC(RL) INT
45° | SC..
09


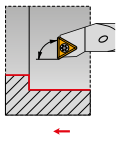
ØDmin 25/32
144 | 134 – 138

STFC(RL) INT
90° | TC..
06 09 11 16

ØDmin 8.5/40
158 | 149 – 154

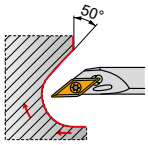
ISO TURNING – INTERNAL
LONG AND UNSTABLE COMPONENTS (positive inserts)



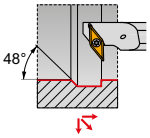
STFC(RL)-E INT

90°	TC..
	06 09 11
ØDmin 8.5 / 20	
160	149 – 154

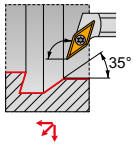
SVJB(RL) INT

93°	VB, VC..
	11
ØDmin 25 / 32	
180, 204	168 – 171 186 – 192

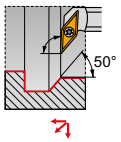
SVLC(RL) INT

95°	VC..
	13
ØDmin 27 / 43	
205	186 – 192

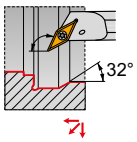
SVQB(C)(RL) INT

107°30´	VB, VC..
	11 13 16
ØDmin 20 / 50	
181, 206	168 – 171 186 – 192

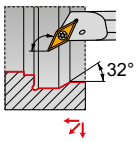
SVUB(C)(RL) INT

93°	VB, VC..
	11 13 16
ØDmin 20 / 50	
182, 207	168 – 171 186 – 192

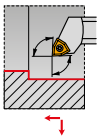
SVXC(RL) INT

113°	VC..
	07
ØDmin 12.5 / 17.5	
208	186 – 192

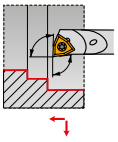
SVXC(RL)-E INT

113°	VC..
	07
ØDmin 12.5 / 17.5	
209	186 – 192

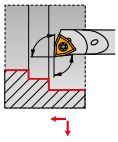
SWLC(RL) INT

95°	WC..
	06 08
ØDmin 25 / 40	
216	212 – 214

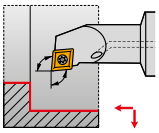
SWUC(RL) INT

93°	WC..
	02
ØDmin 5.8 / 7.8	
217	212 – 214

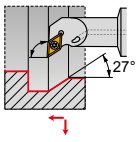
SWUC(RL)-E INT

93°	WC..
	02
ØDmin 5.8 / 7.8	
218	212 – 214

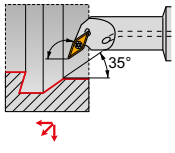
C.-SCLC(RL) INT

95°	CC..
	09
ØDmin C3 / C5	
81	60 – 69

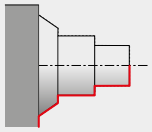
C.-SDUC(RL) INT

93°	DC..
	07 11
ØDmin 20 / 32	
102	86 – 93

C.-SVQB(C)(RL) INT

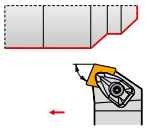
108°	VB, VC..
	16
ØDmin 33	
183, 210	168 – 171 186 – 192

ISO TURNING – EXTERNAL
SHORT AND STABLE COMPONENTS (negative inserts)



DCBN(RL) EXT

75°



CN..

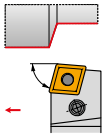
12
16
19

20×20
40×40

240 | 222 – 239

PCBN(RL) EXT

75°



CN..

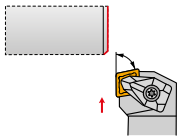
12
16
19
25

20×20
50×50

245 | 222 – 239

DCKN(RL) EXT

75°



CN..

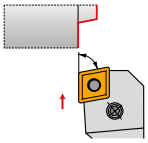
12
16

20×20
32X32

242 | 222 – 239

PCKN(RL) EXT

75°



CN..

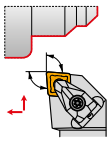
12
16
19

20×20
40×40

246 | 222 – 239

DCLN(RL) EXT

95°



CN..

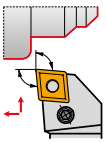
09
12
16
19

16×16
40×40

243 | 222 – 239

PCLN(RL) EXT

95°



CN..

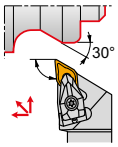
12
16
19
25

20×20
50×50

247 | 222 – 239

DDJN(RL) EXT

93°



DN..

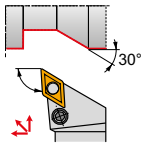
11
15

20×20
32×32

273 | 260 – 272

PDJN(RL) EXT

93°



DN..

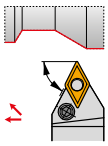
11
15

20×20
32×32

274 | 260 – 272

PDNN(RL) EXT

62°30´



DN..

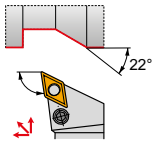
11
15

20×20
32×25

275 | 260 – 272

PDXN(RL) EXT

98°



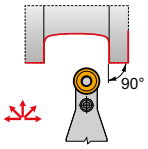
DN..

15

20×20
32×25

276 | 260 – 272

PRDCN EXT



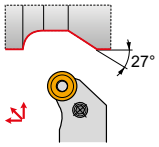
RC..

16
20
25
32

32×25
50×50

124 | 118 – 123

PRSC(RL) EXT



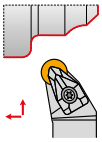
RC..

16
20
25

32×25
40×40

125 | 118 – 123

DRSN(RL) EXT



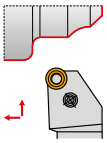
RN..

12

25×25

295 | 294

PRSN(RL) EXT



RN..

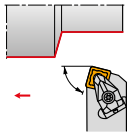
12
15
19

25×25
40×40

296 | 294

DSBN(RL) EXT

75°



SN..

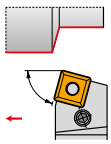
12
15
19

20×20
40×40

313 | 300 – 312

PSBN(RL) EXT

75°



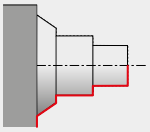
SN..

12
15
19
25

20×20
50×50

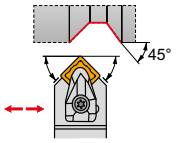
318 | 300 – 312

ISO TURNING – EXTERNAL
SHORT AND STABLE COMPONENTS (negative inserts)



DSDNN EXT

45°



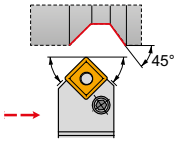
SN..
12
15
19
25

20×20
40×40

315 | 300 – 312

PSDNN EXT

45°



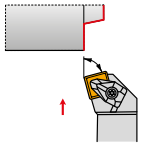
SN..
12
15
19
25

20×20
50×50

320 | 300 – 312

DSKN(RL) EXT

75°



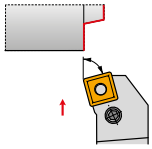
SN..
12
19

25×25
32×32

316 | 300 – 312

PSKN(RL) EXT

75°



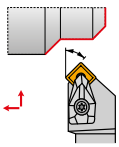
SN..
12
15
19
25

20×20
50×50

321 | 300 – 312

DSSN(RL) EXT

45°



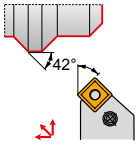
SN..
12
15
19

20×20
40×40

317 | 300 – 312

PSSN(RL) EXT

45°



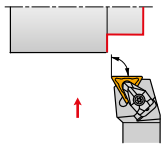
SN..
12
15
19
25

20×20
50×50

323 | 300 – 312

DTFN(RL) EXT

90°



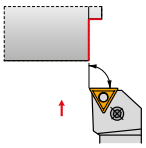
TN..
16
22

20×20
25×25

345 | 334 – 344

PTFN(RL) EXT

90°



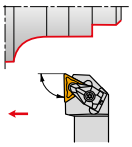
TN..
16
22
27

16×16
40×40

348 | 334 – 344

DTGN(RL) EXT

90°



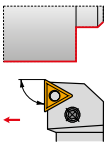
TN..
16
22

20×20
32×25

346 | 334 – 344

PTGN(RL) EXT

90°



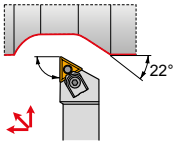
TN..
16
22
27

16×16
40×40

349 | 334 – 344

MTJN(RL) EXT

93°



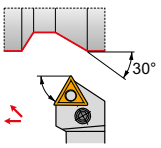
TN..
16
22

16×16
32×32

347 | 334 – 344

PTTN(RL) EXT

60°



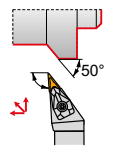
TN..
16
22

20×20
32×25

350 | 334 – 344

DVJN(RL) EXT

93°



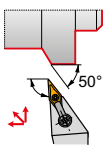
VN..
16

20×20
32×25

360 | 356 – 376

MVJN(RL) EXT

93°



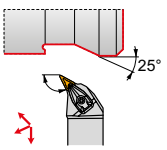
VN..
16

20×20
32×25

362 | 356 – 376

DVPN(RL) EXT

62°30´



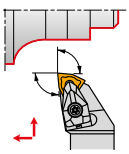
VN..
16

20×20
32×25

361 | 356 – 376

DWLN(RL) EXT

95°

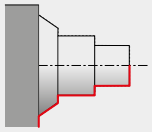


WN..
06
08
10
13

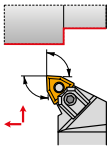
16×16
40×40

377 | 366 – 376

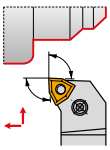
ISO TURNING – EXTERNAL
SHORT AND STABLE COMPONENTS (negative inserts)



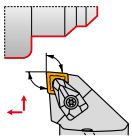
MWLN(RL) EXT

95°	WN..
	08
25×25 40×40	
379	366 – 376

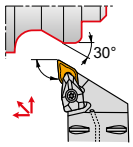
PWLN(RL) EXT

95°	WN..
	06 08
16×16 32×25	
380	366 – 376

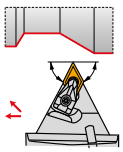
C.-DCLN(RL) EXT

95°	CN..
	12 16 19
C3 C8	
249	222 – 239

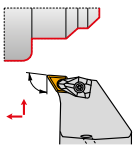
C.-DDJN(RL) EXT

93°	DN..
	11 15
C4 C6	
277	260 – 272

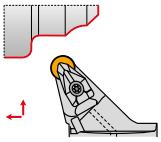
C.-DDNNN EXT

62.5°	DN..
	15
C5 C6	
278	260 – 272

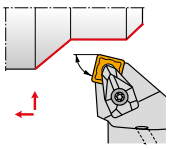
C.-DDUN(RL) EXT

93°	DN..
	15
C5 C6	
279	260 – 272

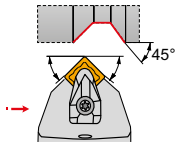
C.-DRSN(RL) EXT

	RN..
	12
C6	
297	294

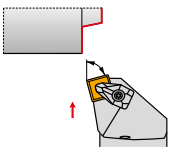
C.-DSRN(RL) EXT

75°	SN..
	12 19
C4 C6	
326	300 – 312

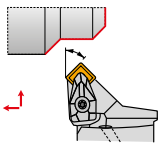
C.-DSDNN EXT

45°	SN..
	12 19
C4 C6	
324	300 – 312

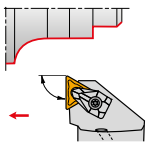
C.-DSKN(RL) EXT

75°	SN..
	12
C4	
325	300 – 312

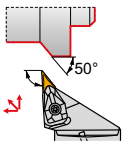
C.-DSSN(RL) EXT

45°	SN..
	12
C4 C5	
327	300 – 312

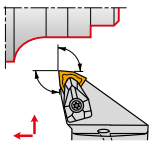
C.-DTJN(RL) EXT

93°	TN..
	16
C4 C5	
351	334 – 344

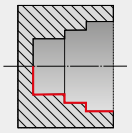
C.-DVJN(RL) EXT

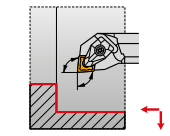
93°	VN..
	16
C4 C6	
363	356 – 376

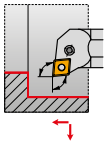
C.-DWLN(RL) EXT

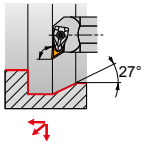
95°	WN..
	06 08
C4 C6	
381	366 – 376

ISO TURNING – INTERNAL
SHORT AND STABLE COMPONENTS (negative inserts)

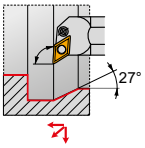


DCLN(RL) INT
95° | CN..
09
12

ØDmin 32/50
254 | 222 – 239

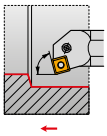
PCLN(RL) INT
95° | CN..
09
12
16
19

ØDmin 20/80
255 | 222 – 239

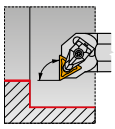
DDUN(RL) INT
93° | DN..
11
15


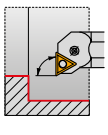
ØDmin 25/50
280 | 260 – 272

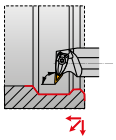
PDUN(RL) INT
93° | DN..
11
15


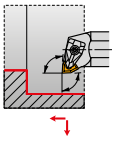
ØDmin 25/60
281 | 260 – 272

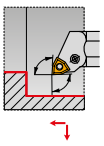
PSKN(RL) INT
93° | SN..
11
15

ØDmin 32/80
331 | 300 – 312

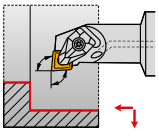
DTFN(RL) INT
90° | TN..
16
22

ØDmin 32/50
352 | 334 – 344

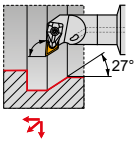
PTFN(RL) INT
90° | TN..
16
22

ØDmin 32/50
353 | 334 – 344

DVUN(RL) INT
VN..
16

ØDmin 50
364 | 356 – 376

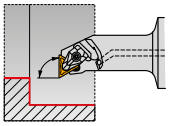
DWLN(RL) INT
95° | WN..
06
08

ØDmin 32/63
382 | 366 – 376

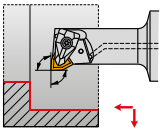
PWLN(RL) INT
95° | WN..
06
08

ØDmin 20/80
383 | 366 – 376

C.-DCLN(RL) INT
95° | CN..
09
12
16

ØDmin 25/50
257 | 222 – 239

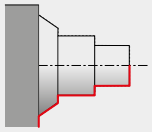
C.-DDUN(RL) INT
93° | DN..
11


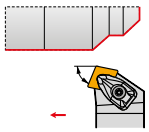
ØDmin 12
282 | 260 – 272

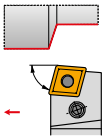
C.-DTFN(RL) INT
91° | TN..
16

ØDmin 32
354 | 334 – 344

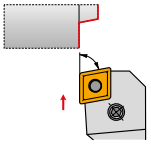
C.-DWLN(RL) INT
95° | WN..
06
08

ØDmin 27/33
385 | 366 – 376

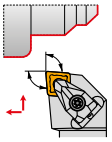
ISO TURNING – HEAVY ROUGHING – EXTERNAL
FIXED TOOL HOLDERS

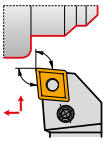


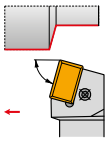
DCBN(RL) EXT
75° | CN..

19
40×40
240 | 222 – 239

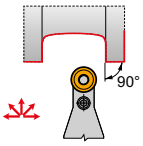
PCBN(RL) EXT
75° | CN..

19
25
40×40
50×50
245 | 222 – 239

PCKN(RL) EXT
75° | CN..

19
40×40
246 | 222 – 239

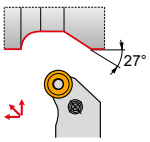
DCLN(RL) EXT
95° | CN..

19
40×40
243 | 222 – 239

PCLN(RL) EXT
95° | CN..

19
25
40×40
50×50
247 | 222 – 239

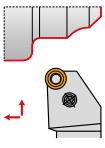
PLBN(RL) EXT
75° | LN..

40
50
60×60
290 | 289

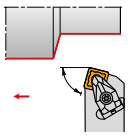
PRDCN EXT
RC..


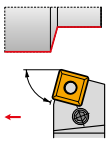
20
25
32
40×40
50×50
124 | 118 – 123

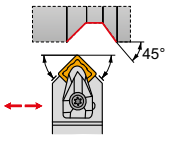
PRSC(RL) EXT
RC..


16
25
40×40
125 | 118 – 123

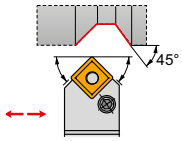
PRSN(RL) EXT
RN..

19
40×40
296 | 294

DSBN(RL) EXT
75° | SN..

19
40×40
313 | 300 – 312

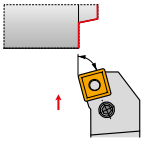
PSBN(RL) EXT
75° | SN..

19
25
40×40
50×50
318 | 300 – 312

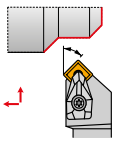
DSDNN EXT
45° | SN..


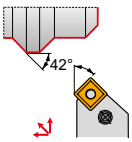
19
25
40×40
315 | 300 – 312

PSDNN EXT
45° | SN..


19
25
40×40
50×50
320 | 300 – 312

PSKN(RL) EXT
75° | SN..

19
25
40×40
50×50
321 | 300 – 312

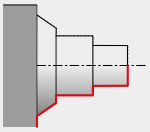
DSSN(RL) EXT
45° | SN..

19
40×40
317 | 300 – 312

PSSN(RL) EXT
45° | SN..


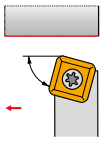
19
25
40×40
50×50
323 | 300 – 312

ISO TURNING – HEAVY ROUGHING – EXTERNAL

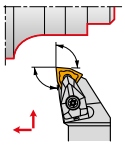
FIXED TOOL HOLDERS



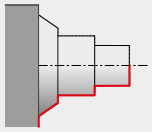
SSBC(RL) EXT

75°	SC..
	25 38
40×40 60×60	
139	134 – 138

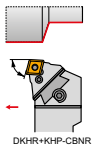
DWLN(RL) EXT

95°	WN..
	13
40×40	
377	366 – 376

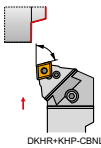
ISO TURNING – HEAVY ROUGHING – EXTERNAL
HEAD (KH)



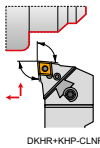
KHP-CBNR + DKH(RL)

75°	CN..
 DKHR+KHP-CBNR	25
40×50 60×80	
251, 253	222 – 239

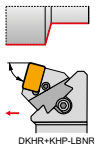
KHP-CBNL + DKH(RL)

75°	CN..
 DKHR+KHP-CBNL	25
40×50 60×80	
251, 253	222 – 239

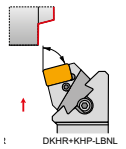
KHP-CLNR/L + DKH(RL)

95°	CN..
 DKHR+KHP-CLNR	19 25
40×50 60×80	
252, 253	222 – 239

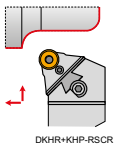
KHP-LBNR + DKH(RL)

75°	LN..
 DKHR+KHP-LBNR	40
40×50 60×80	
291, 292	289

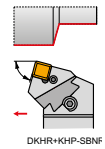
KHP-LBNL + DKH(RL)

75°	LN..
 DKHR+KHP-LBNL	40
40×50 60×80	
291, 292	289

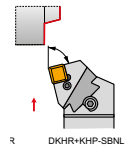
KHP-RSCR/L + DKH(RL)

	RC..
 DKHR+KHP-RSCR	20 25 32
40×50 60×80	
131, 132	118 – 123

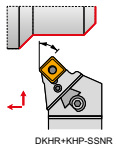
KHP-SBNR + DKH(RL)

75°	SN..
 DKHR+KHP-SBNR	25
40×50 60×80	
328, 330	300 – 312

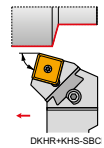
KHP-SBNL + DKH(RL)

75°	SN..
 DKHR+KHP-SBNL	25
40×50 60×80	
328, 330	300 – 312

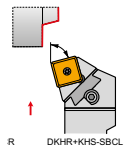
KHP-SSNR/L + DKH(RL)

45°	SN..
 DKHR+KHP-SSNR	19 25
40×50 60×80	
329, 330	300 – 312

KHS-SBCR + DKH(RL)

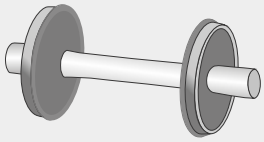
75°	SC..
 DKHR+KHS-SBC	25 38
40×50 60×80	
142, 143	134 – 138

KHS-SBCL + DKH(RL)

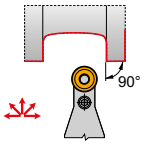
75°	SC..
 DKHR+KHS-SBCL	25 38
40×50 60×80	
142, 143	134 – 138

ISO TURNING – HEAVY ROUGHING – EXTERNAL

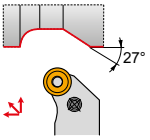
RAILWAY WHEEL MACHINING



PRDCN EXT

	RC..
	20 25 32
32×25 50×50	
124	118 – 123

PRSC(RL) EXT

	RC..
	20 25
32×25 40×40	
125	118 – 123

DORMER PRAMET

FOLLOW US

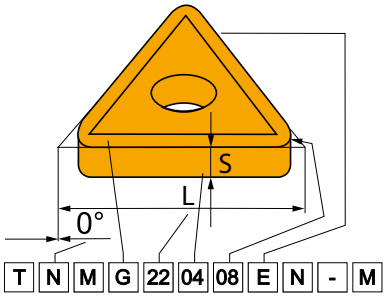
SHARE

LIKE

COMMENT

TAG

RE-TWEET



	1	2	3	4
ISO	T	N	U	N
	T	N	M	G
	1	2	3	4
ANSI	T	N	U	
	T	N	M	G

1 Insert shape

H	O	P	R
S	T	C 80°	D 55°
E 75°	M 86°	V 35°	W 80°
L	A 85°	B 82°	K 55°

2 Insert clearance angle

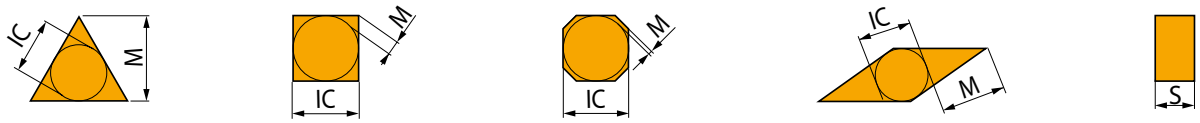
A 3°		B 5°	
C 7°		D 15°	
E 20°		F 25°	
G 30°		N 0°	
P 11°		O Special	

4 Insert type

N	
R	
F	
A	
M	
G	
W	40° – 60°
T	
Q	
U	
B	70° – 90°
H	
C	
J	
X	Special

3 Tolerances

	[mm]			[″]		
	M (±)	S (±)	IC (±)	M (±)	S (±)	IC (±)
A	0.005	0.025	0.025	.0002″	.001″	.0010″
F	0.005	0.025	0.013	.0002″	.001″	.0005″
C	0.013	0.025	0.025	.0005″	.001″	.0010″
H	0.013	0.025	0.013	.0005″	.001″	.0005″
E	0.025	0.025	0.025	.0010″	.001″	.0010″
G	0.025	0.130	0.025	.0010″	.005″	.0010″
J	0.005	0.025	0.05 – 0.13	.0002″	.001″	.002 – 0.005″
K	0.013	0.025	0.05 – 0.13	.0005″	.001″	.002 – 0.005″
L	0.025	0.025	0.05 – 0.13	.0010″	.001″	.002 – 0.005″
M	0.08 – 0.18	0.130	0.05 – 0.13	.003 – 0.007″	.005″	.002 – 0.005″
N	0.08 – 0.18	0.025	0.05 – 0.13	.003 – 0.007″	.001″	.002 – 0.005″
U	0.05 – 0.38	0.130	0.05 – 0.13	.005 – 0.015″	.005″	.003 – 0.010″

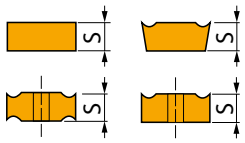


5	6	7	8	9		10
22	04	08			-	
22	04	08	E	N		M
5	6	7	8	9		10
4	3	2			-	
4	3	2	E	N		M

5 – Insert cutting edge length (insert size)

d=IC [mm]	[in]	H	O	P	S	T	C	D	E	M	V	W	R	K
3.97					03	06		04			06	02		
	5/32"	1.2												
4.76					04	08	04	05	04	04	08	L3		
	3/16"	1.5												
5.56					05	09	05	06	05	05	09	03		
	7/32"	1.8												
6.35		03	02	04	08	11	06	07	08	08	11	04	06	
	1/4"	2												
7.94		04	03	05	07	13	08	09	06	07	13	05	07	
	5/16"	2.5												
9.525		05	04	07	09	16	09	11	09	09	16	06	09	16
	3/8"	3												
12.7		07	05	09	12	22	12	15	13	12	22	08	12	
	1/2"	4												
15.875		09	06	11	15	27	16	19	16	15	27	10	15	
	5/8"	5												
19.05		11	07	13	19	33	19	23	19	19	33	13	19	
	3/4"	6												
25.40		14	10	18	25	44	25	31	26	25	44	17	25	
	1"	8												
31.75		18	13	23	31	54	32	38	32	31	54	21	31	
	1 1/4"	10												

6 – Insert thickness



	S [mm]	S ["]
01	1.59	1/16"
T1	1.98	5/64"
02	2.38	3/32"
03	3.18	1/8"
T3	3.97	5.32"
04	4.76	3/16"
05	5.56	7/32"
06	6.35	1/4"
07	7.94	5/16"
09	9.52	3/8"

7 – Insert nose radius

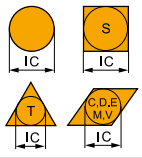
	RE [mm]	RE ["]
00	0	0"
02	0.2	1/128"
04	0.4	1/64"
08	0.8	1/32"
12	1.2	3/64"
16	1.6	1/16"
24	2.4	3/32"
32	3.2	1/8"

Round inserts

d=I.C.	
["]	00
[mm]	M0

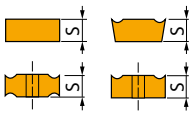
ANSI

5 – Inscribed circle



Symbol	d=I.C. [mm]	d=I.C. ["]
1	3.175	1/8"
1.2	3.969	5/32"
1.5	4.763	3/16"
1.8	5.556	7/32"
2	6.350	1/4"
2.5	7.938	5/16"
3	9.525	3/8"
4	12.700	1/2"
5	15.875	5/8"
6	19.050	3/4"
7	22.225	7/8"
8	25.400	1"
10	31.750	5/4"
12	38.100	6/4"

6 – Insert thickness



Symbol	S [mm]	S ["]
1	1.588	1/16"
1.2	1.984	5/64"
1.5	2.381	3/32"
2	3.175	1/8"
2.5	3.969	5/32"
3	4.763	3/16"
3.5	5.556	7/32"
4	6.350	1/4"
5	7.938	5/16"
6	9.525	3/8"
7	11.113	7/16"
8	12.700	1/2"
9	14.288	9/16"
10	15.875	5/8"

7 – Insert nose radius

Symbol	RE [mm]	RE ["]
0	0	0"
0.2	0.099	1/256"
0.5	0.198	1/128"
1	0.397	1/64"
2	0.794	1/32"
3	1.191	3/64"
4	1.588	1/16"
5	1.984	5/64"
6	2.381	3/32"
7	2.778	7/64"
8	3.175	1/8"
10	3.969	5/32"
12	4.763	3/16"
14	5.556	7/32"
16	6.350	1/4"

8 – Insert cutting edge design

F Sharp edges	E Rounded edges
T Edges with facet	S Rounded edges with facet
K Edges with double facet	P Rounded edges with double facet

9 – Feed direction

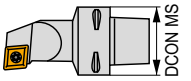
R	Feed ←	N	Feed ← Feed →
L	Feed →		

10 – Chip breaker designation

EXTERNAL TURNING TOOLS – ISO CODE DESIGNATION

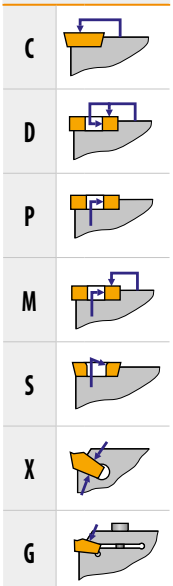
Shank tool	ISO		2	3	4	5	6		7	8	11	12		13
			P	C	L	N	R	–	32	25	L	12	–	M
PSC	ISO	1	2	3	4	5	6		9	10		12		
		C4	D	C	L	N	R	–	27	050	–	12		
Shank tool	ANSI		2	3	4	5	6		7 & 8		12	11		
			D	C	L	N	R	–	16		4	D		

1 Coupling size

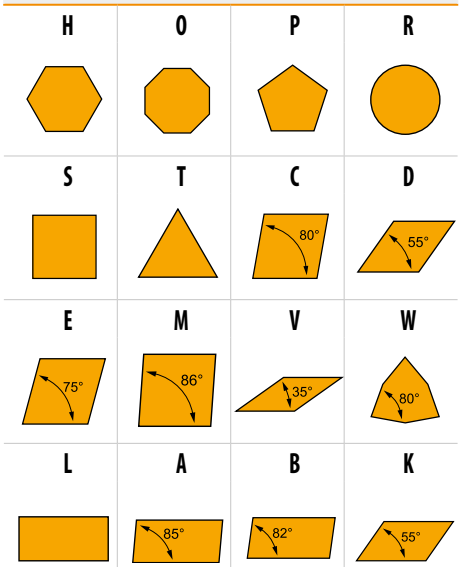


C	DCON MS
C3	32
C4	40
C5	50
C6	63
C8	80

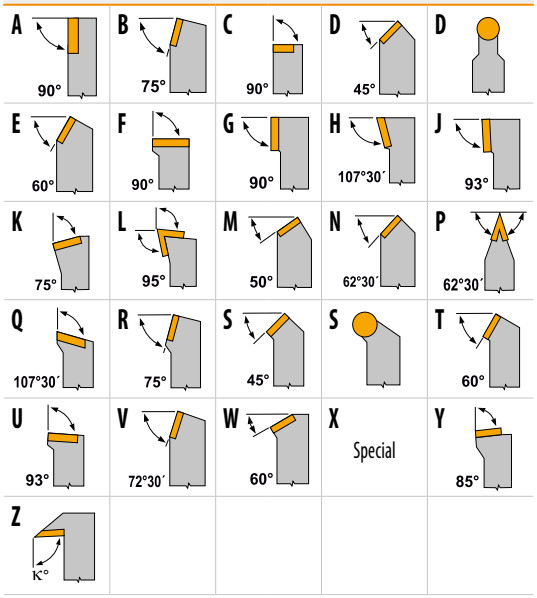
2 Clamping designation



3 Insert shape



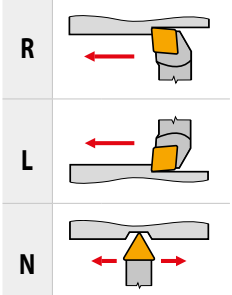
4 Holder style – cutting edge angle



5 Insert clearance angle

N	B	C	P
0°	5°	7°	11°

6 Direction of cut



7 Shank height [mm]

08	10	12	16	20	25
32	38	40	45	50	60

8 Shank width [mm]

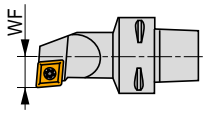
08	10	12	16	20	25
32	38	40	45	50	60

7 & 8 Shank width & Shank height [″]

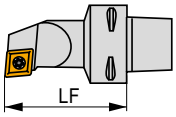
Symbol	B [″]	H [″]
05	5/16″	5/16″
06	3/8″	3/8″
08	1/2″	1/2″
10	5/8″	5/8″
12	3/4″	3/4″
16	1″	1″
85	1″	1 1/4″
86	1″	1 1/2″
20	1 1/4″	1 1/4″
24	1 1/2″	1 1/2″
32	2″	2″

For square shanks, the number is the width or height in terms of 16ths. For rectangular shanks the first digit is the width in terms of 8ths and the second digit is the height in terms of 4ths.

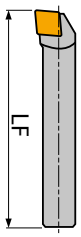
9 Functional width [mm]



10 Functional lenght [mm]



11 Holder total length



	LF [″]
A	4.000″
B	4.500″
C	5.000″
D	6.000″
E	7.000″
F	8.000″
M	4.000″
N	4.500″
R	6.000″
S	7.000″
T	8.000″

	LF [mm]
D	60
E	70
F	80
H	100
J	110
K	125
L	140
M	150
N	160
P	170
Q	180
R	200
S	250
T	300
U	350
V	400
W	450
X	Spec.
Y	500

	15	16	17		2	3	4	5	6	12		14
ISO	A	25	T	–	P	C	L	N	L	12	–	X
ANSI	A	16	T	–	D	C	L	N	L	4		

12 / 12 – Insert cutting edge length (insert size)

d = I.C. [mm]	d = I.C. [″]	H	O	P	S	T	C	D	E	M	V	W	R	K
3.97					03	06		04			06	02		
	5/32″	1.2												
4.76					04	08	04	05	04	04	08	L3		
	3/16″	1.5												
5.56					05	09	05	06	05	05	09	03		
	7/32″	1.8												
6.35		03	02	04	08	11	06	07	08	08	11	04	06	
	1/4″	2												
7.94		04	03	05	07	13	08	09	06	07	13	05	07	
	5/16″	2.5												
9.525		05	04	07	09	16	09	11	09	09	16	06	09	16
	3/8″	3												
12.7		07	05	09	12	22	12	15	13	12	22	08	12	
	1/2″	4												
15.875		09	06	11	15	27	16	19	16	15	27	10	15	
	5/8″	5												
19.05		11	07	13	19	33	19	23	19	19	33	13	19	
	3/4″	6												
25.40		14	10	18	25	44	25	31	26	25	44	17	25	
	1″	8												
31.75		18	13	23	31	54	32	38	32	31	54	21	31	
	1 1/4″	10												

13 – Manufacturer's designation

M	Clamping system "S" with shim

14 – Manufacturer's designation

X	Special shank style
. .	
93	Z – style tool setting angle
. .	

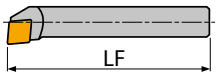
15 / 15 – Shank

S	Steel shank
A	Steel shank with coolant hole
E	Tungsten carbide shank with coolant hole

16 / 16 – Shank Ø [mm]

DCON MS [mm]		DCON MS [″]	
08	8	03	.1875″
10	10	04	.250″
12	12	05	.3125″
16	16	06	.375″
20	20	08	.500″
25	25	10	.625″
32	32	12	.750″
40	40	16	1.000″
50	50	20	1.250″
60	60	24	1.500″
		32	2.000″

17 / 17 – Holder total Length



	LF [″]
F	3.250″
H	4.000″
K	5.000″
M	6.000″
P	6.250″
Q	7.250″
R	8.000″
S	10.000″
T	12.000″
U	14.000″
V	15.750″
W	17.750″
Y	20.000″
X	Spec.

	LF [mm]
D	60
E	70
F	80
H	100
J	110
K	125
L	140
M	150
N	160
P	170
Q	180
R	200
S	250
T	300
U	350
V	400
W	450
X	Spec.
Y	500

CARTRIDGE

1	2		3	4	5	6	7
KH	P	–	C	L	N	R	25

HOLDER

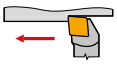
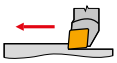
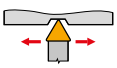
8	6	9	10	11
DKH	R	50	60	W

1 Cartridge

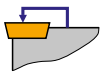
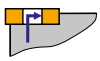
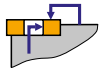
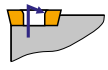
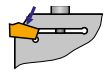
5 Insert clearance angle

N	C	P
0°	7°	11°

6 Direction of cut

R	
L	
N	

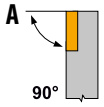
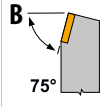
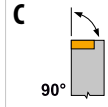
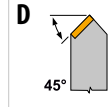
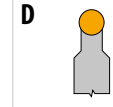
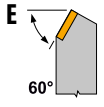
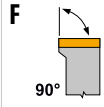
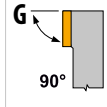
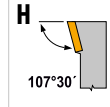
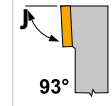
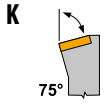
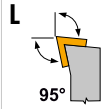
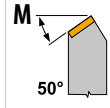
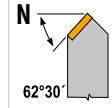
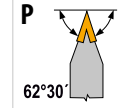
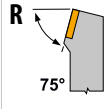
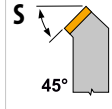
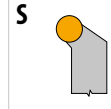
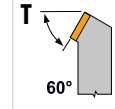
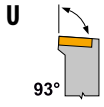
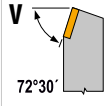
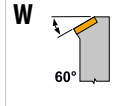
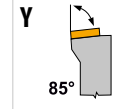
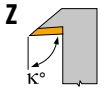
2 Clamping designation

C	
D	
P	
M	
S	
X	
G	

3 Insert shape

S		C	
T		D	
R		K	
W		V	
L		X	Special

4 Holder style – cutting edge angle

A 	B 	C 	D 	D 
E 	F 	G 	H 	J 
K 	L 	M 	N 	P 
Q	R 	S 	S 	T 
U 	V 	W 	X Special	Y 
Z 				

7 Insert cutting edge length (insert size)

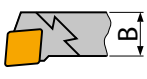
d = I.C.		H	O	P	S	T	C	D	E	M	V	W	R	K
[mm]	[″]													
3.97					03	06		04			06	02		
	5/32″						1.2							
4.76					04	08	04	05	04	04	08	L3		
	3/16″						1.5							
5.56					05	09	05	06	05	05	09	03		
	7/32″						1.8							
6.35		03	02	04	08	11	06	07	08	08	11	04	06	
	1/4″						2							
7.94		04	03	05	07	13	08	09	06	07	13	05	07	
	5/16″						2.5							
9.525		05	04	07	09	16	09	11	09	09	16	06	09	16
	3/8″						3							
12.7		07	05	09	12	22	12	15	13	12	22	08	12	
	1/2″						4							
15.875		09	06	11	15	27	16	19	16	15	27	10	15	
	5/8″						5							
19.05		11	07	13	19	33	19	23	19	19	33	13	19	
	3/4″						6							
25.40		14	10	18	25	44	25	31	26	25	44	17	25	
	1″						8							
31.75		18	13	23	31	54	32	38	32	31	54	21	31	
	1 1/4″						10							

8 Cartridge holder

9 Shank height [mm]

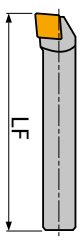
08	10	12	16	20	25
32	40	50	60	70	80

10 Shank width [mm]

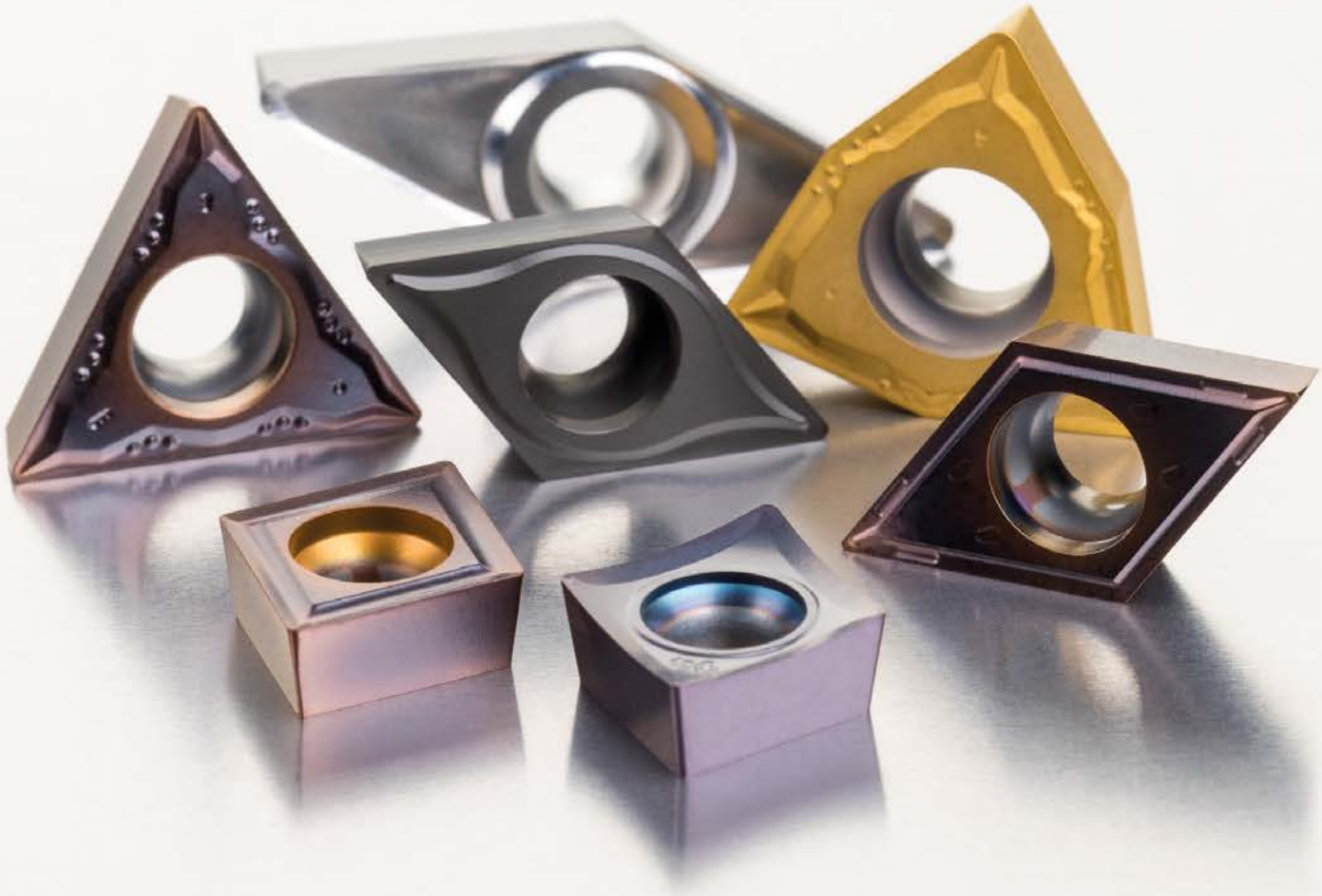


08	10	12	16	20	25
32	40	50	60	70	80

11 Holder total length



	LF [mm]
H	100
J	110
K	125
L	140
M	150
N	160
P	170
Q	180
R	200
S	250
T	300
U	350
V	400
W	450
X	Spec.
Y	500



POSITIVE INSERTS

CC

06 / 08 / 09 / 12

CARBIDE INSERTS

CCGT

60

CCMT

62

CCMW

68

CBN INSERTS

CCGW CBN

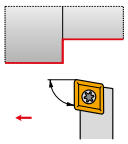
69

MATCH THE RIGHT SIZE (example)	
Insert	**Tool Holder**
CCMT **12**0404E-UR	S32U-SCKCR **12**-A

ISO TURNING – EXTERNAL

SCAC(RL) EXT

90° | CC..



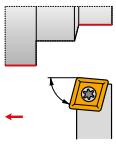
06
09

08×08
16×16

70 | 60 – 69

SCBC(RL) EXT

75° | CC..



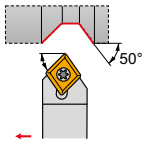
09
12

12×12
25×25

71 | 60 – 69

SCDCR EXT

45° | CC..



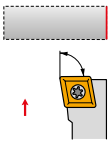
06

10×10

72 | 60 – 69

SCFC(RL) EXT

90° | CC..



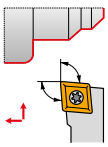
06
09

08×08
16×16

73 | 60 – 69

SCLC(RL) EXT

95° | CC..



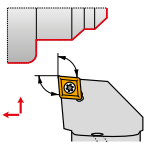
06
08
09
12

08×08
25×25

74 | 60 – 69

C.-SCLC(RL) EXT

95° | CC..



09
12

C3
C5

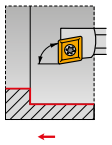
75 | 60 – 69

CC 06 / 08 / 09 / 12

ISO TURNING – INTERNAL

SCFC(RL) INT

90°

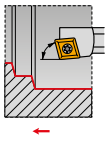


ØDmin	CC..
13	06
16	

76 | 60 – 69

SCKC(RL) INT

75°

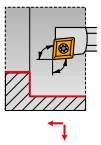


ØDmin	CC..
11	06
40	09
	12

77 | 60 – 69

SCLC(RL) INT

95°

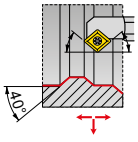


ØDmin	CC..
11	06
40	09
	12

78 | 60 – 69

SCXC(RL) INT

40°

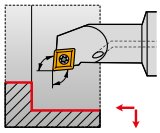


ØDmin	CC..
13	06
20	

80 | 60 – 69

C.-SCLC(RL) INT

95°



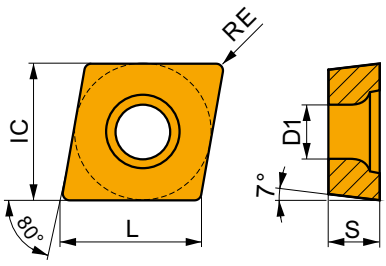
ØDmin	CC..
20	09
32	

81 | 60 – 69

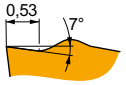
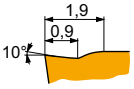
CCGT

PRAMET

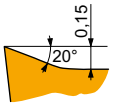
	IC [mm]	D1 [mm]	L [mm]	S [mm]
0602	6.350	2.80	6.40	2.38
0602-SF3	6.350	2.80	6.40	2.58
0803-AL	7.940	3.40	8.10	3.43
0803-SF3	7.940	3.40	8.10	3.43
09T3	9.525	4.40	9.70	3.97
09T3-SF3	9.525	4.40	9.70	4.22
1204	12.700	5.50	12.90	4.76
1204-SF3	12.700	5.50	12.90	5.01



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			F																	
AL geometry with highly positive design for fine-finish to rough machining, continuous to slightly interrupted cuts.																				
CCGT 060202F-AL	**HF7**	0.2	–	–	–	–	–	–	–	–	–	450	0.12	1.0	–	–	–	–	–	–
	T0315	0.2	–	–	–	–	–	–	–	–	–	645	0.12	1.0	–	–	–	–	–	–
CCGT 060204F-AL	**HF7**	0.4	–	–	–	–	–	–	–	–	–	360	0.24	1.0	–	–	–	–	–	–
	T0315	0.4	–	–	–	–	–	–	–	–	–	525	0.24	1.0	–	–	–	–	–	–
CCGT 080302F-AL	**T0315**	0.2	–	–	–	–	–	–	–	–	–	645	0.12	1.0	–	–	–	–	–	–
CCGT 080304F-AL	**HF7**	0.4	–	–	–	–	–	–	–	–	–	360	0.24	1.0	–	–	–	–	–	–
	T0315	0.4	–	–	–	–	–	–	–	–	–	525	0.24	1.0	–	–	–	–	–	–
CCGT 09T302F-AL	**HF7**	0.2	–	–	–	–	–	–	–	–	–	450	0.12	1.0	–	–	–	–	–	–
	T0315	0.2	–	–	–	–	–	–	–	–	–	645	0.12	1.0	–	–	–	–	–	–
CCGT 09T304F-AL	**HF7**	0.4	–	–	–	–	–	–	–	–	–	345	0.24	1.5	–	–	–	–	–	–
	T0315	0.4	–	–	–	–	–	–	–	–	–	495	0.24	1.5	–	–	–	–	–	–
CCGT 09T308F-AL	**HF7**	0.8	–	–	–	–	–	–	–	–	–	315	0.48	1.5	–	–	–	–	–	–
	T0315	0.8	–	–	–	–	–	–	–	–	–	450	0.48	1.5	–	–	–	–	–	–
CCGT 120404F-AL	**HF7**	0.4	–	–	–	–	–	–	–	–	–	330	0.24	2.4	–	–	–	–	–	–
	T0315	0.4	–	–	–	–	–	–	–	–	–	480	0.24	2.4	–	–	–	–	–	–
CCGT 120408F-AL	**HF7**	0.8	–	–	–	–	–	–	–	–	–	300	0.48	2.4	–	–	–	–	–	–
	T0315	0.8	–	–	–	–	–	–	–	–	–	435	0.48	2.4	–	–	–	–	–	–
																				
			U		E															
FF2 geometry with positive design for fine-finish to finish machining, continuous to slightly interrupted cuts.																				
CCGT 09T302E-FF2	**T7325**	0.2	235	0.05	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.2	345	0.05	1.0	–	–	–	325	0.05	1.0	–	–	–	–	–	–	–	–	–
																				
			U		E															
NF1 geometry with positive design for fine-finish to medium machining and continuous cuts.																				
CCGT 060204E-NF1	**H07**	0.4	–	–	–	95	0.09	0.8	–	–	–	485	0.12	0.8	45	0.07	0.6	–	–	–
	T6310	0.4	180	0.10	0.8	125	0.09	0.8	–	–	–	540	0.12	0.8	50	0.07	0.6	35	0.15	1.0
	T7325	0.4	210	0.10	0.8	160	0.09	0.8	–	–	–	–	–	–	65	0.07	0.6	–	–	–
CCGT 060208E-NF1	**T6310**	0.8	205	0.12	0.8	145	0.11	0.8	–	–	–	615	0.14	0.8	60	0.11	0.6	40	0.15	1.0
	T7325	0.8	235	0.12	0.8	180	0.11	0.8	–	–	–	–	–	–	75	0.11	0.6	–	–	–
CCGT 09T304E-NF1	**H07**	0.4	–	–	–	90	0.09	1.2	–	–	–	470	0.12	1.2	45	0.07	1.0	–	–	–
	T6310	0.4	175	0.10	1.2	125	0.09	1.2	–	–	–	525	0.12	1.2	50	0.07	1.0	35	0.15	1.0
	T7325	0.4	200	0.10	1.2	155	0.09	1.2	–	–	–	–	–	–	65	0.07	1.0	–	–	–
CCGT 09T308E-NF1	**T6310**	0.8	190	0.14	1.2	135	0.13	1.2	–	–	–	570	0.17	1.2	55	0.13	1.0	35	0.15	1.0
	T7325	0.8	215	0.14	1.2	165	0.13	1.2	–	–	–	–	–	–	65	0.13	1.0	–	–	–

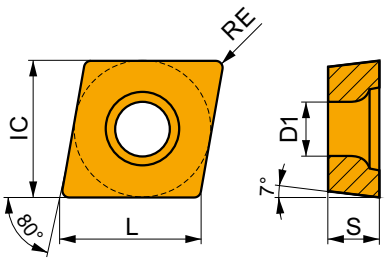
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
		[mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]
			SF3 geometry with highly positive design for fine to finish machining, and continuous cuts.																	
CCGT 060201E-SF3	T6310	0.1	200	0.05	0.5	140	0.05	0.5	160	0.05	0.5	600	0.06	0.5	60	0.04	0.4	40	0.15	1.0
CCGT 060202E-SF3	H07	0.2	–	–	–	120	0.05	0.8	190	0.05	0.8	605	0.06	0.8	60	0.04	0.6	–	–	–
	T6310	0.2	205	0.05	0.8	145	0.05	0.8	165	0.05	0.8	615	0.06	0.8	60	0.04	0.6	40	0.15	1.0
	T8315	0.2	215	0.05	0.8	125	0.05	0.8	200	0.05	0.8	645	0.06	0.8	50	0.04	0.6	40	0.15	1.0
CCGT 060204E-SF3	H07	0.4	–	–	–	95	0.09	0.8	150	0.10	0.8	485	0.12	0.8	45	0.07	0.6	–	–	–
	T6310	0.4	180	0.10	0.8	125	0.09	0.8	145	0.10	0.8	540	0.12	0.8	50	0.07	0.6	35	0.15	1.0
	T8315	0.4	190	0.10	0.8	110	0.09	0.8	180	0.10	0.8	570	0.12	0.8	45	0.07	0.6	35	0.15	1.0
CCGT 080302E-SF3	T6310	0.2	205	0.05	0.8	145	0.05	0.8	165	0.05	0.8	615	0.06	0.8	60	0.04	0.6	40	0.15	1.0
	T8315	0.2	215	0.05	0.8	125	0.05	0.8	200	0.05	0.8	645	0.06	0.8	50	0.04	0.6	40	0.15	1.0
CCGT 080304E-SF3	H07	0.4	–	–	–	95	0.09	1.0	150	0.10	1.0	485	0.12	1.0	45	0.07	0.8	–	–	–
	T6310	0.4	180	0.10	1.0	125	0.09	1.0	145	0.10	1.0	540	0.12	1.0	50	0.07	0.8	35	0.15	1.0
	T8315	0.4	190	0.10	1.0	110	0.09	1.0	180	0.10	1.0	570	0.12	1.0	45	0.07	0.8	35	0.15	1.0
CCGT 09T301E-SF3	T6310	0.1	200	0.05	0.5	140	0.05	0.5	160	0.05	0.5	600	0.06	0.5	60	0.04	0.4	40	0.15	1.0
CCGT 09T302E-SF3	H07	0.2	–	–	–	120	0.05	0.8	190	0.05	0.8	605	0.06	0.8	60	0.04	0.6	–	–	–
	T6310	0.2	205	0.05	0.8	145	0.05	0.8	165	0.05	0.8	615	0.06	0.8	60	0.04	0.6	40	0.15	1.0
	T8315	0.2	215	0.05	0.8	125	0.05	0.8	200	0.05	0.8	645	0.06	0.8	50	0.04	0.6	40	0.15	1.0
CCGT 09T304E-SF3	H07	0.4	–	–	–	95	0.09	1.0	150	0.10	1.0	485	0.12	1.0	45	0.07	0.8	–	–	–
	T6310	0.4	180	0.10	1.0	125	0.09	1.0	145	0.10	1.0	540	0.12	1.0	50	0.07	0.8	35	0.15	1.0
	T8315	0.4	190	0.10	1.0	110	0.09	1.0	180	0.10	1.0	570	0.12	1.0	45	0.07	0.8	35	0.15	1.0
CCGT 09T308E-SF3	H07	0.8	–	–	–	110	0.09	1.0	175	0.10	1.0	565	0.12	1.0	55	0.08	0.8	–	–	–
	T6310	0.8	210	0.10	1.0	150	0.09	1.0	165	0.10	1.0	630	0.12	1.0	60	0.08	0.8	40	0.15	1.0
	T8315	0.8	225	0.10	1.0	135	0.09	1.0	210	0.10	1.0	675	0.12	1.0	55	0.08	0.8	45	0.15	1.0
CCGT 120404E-SF3	T6310	0.4	180	0.10	1.0	125	0.09	1.0	145	0.10	1.0	540	0.12	1.0	50	0.07	0.8	35	0.15	1.0
CCGT 120408E-SF3	H07	0.8	–	–	–	105	0.12	1.0	165	0.12	1.0	525	0.14	1.0	50	0.11	0.8	–	–	–
	T6310	0.8	200	0.12	1.0	140	0.12	1.0	160	0.12	1.0	600	0.14	1.0	60	0.11	0.8	40	0.15	1.0
	T8315	0.8	210	0.12	1.0	125	0.12	1.0	195	0.12	1.0	630	0.14	1.0	50	0.11	0.8	40	0.15	1.0
			ER-SI geometry with positive right-handed design for fine-finish machining, and continuous cuts.																	
CCGT 060202ER-SI	T8330	0.2	215	0.10	0.8	125	0.09	0.8	200	0.10	0.8	–	–	–	50	0.08	0.6	–	–	–
	T8430	0.2	260	0.10	0.8	140	0.09	0.8	215	0.10	0.8	–	–	–	55	0.08	0.6	–	–	–
CCGT 060204ER-SI	T8315	0.4	225	0.12	0.8	135	0.11	0.8	210	0.12	0.8	–	–	–	55	0.10	0.6	–	–	–
	T8330	0.4	215	0.12	0.8	125	0.11	0.8	200	0.12	0.8	–	–	–	50	0.10	0.6	–	–	–
	T8430	0.4	260	0.12	0.8	140	0.11	0.8	215	0.12	0.8	–	–	–	55	0.10	0.6	–	–	–
CCGT 09T304ER-SI	T8315	0.4	205	0.17	0.8	120	0.15	0.8	190	0.17	0.8	–	–	–	50	0.15	0.6	–	–	–
	T8330	0.4	195	0.17	0.8	115	0.15	0.8	185	0.17	0.8	–	–	–	45	0.15	0.6	–	–	–
	T8430	0.4	230	0.17	0.8	125	0.15	0.8	185	0.17	0.8	–	–	–	45	0.15	0.6	–	–	–
CCGT 120408ER-SI	T8330	0.8	205	0.23	1.0	120	0.21	1.0	190	0.23	1.0	–	–	–	50	0.21	0.8	–	–	–
	T8430	0.8	230	0.24	1.0	125	0.22	1.0	185	0.24	1.0	–	–	–	45	0.22	0.8	–	–	–
			EL-SI geometry with positive left-handed design for fine-finish machining, and continuous cuts.																	
CCGT 060202EL-SI	T8330	0.2	215	0.10	0.8	125	0.09	0.8	200	0.10	0.8	–	–	–	50	0.08	0.6	–	–	–
	T8430	0.2	260	0.10	0.8	140	0.09	0.8	215	0.10	0.8	–	–	–	55	0.08	0.6	–	–	–
CCGT 060204EL-SI	T8315	0.4	225	0.12	0.8	135	0.11	0.8	210	0.12	0.8	–	–	–	55	0.10	0.6	–	–	–
	T8330	0.4	215	0.12	0.8	125	0.11	0.8	200	0.12	0.8	–	–	–	50	0.10	0.6	–	–	–
	T8430	0.4	260	0.12	0.8	140	0.11	0.8	215	0.12	0.8	–	–	–	55	0.10	0.6	–	–	–
CCGT 09T304EL-SI	T8315	0.4	205	0.17	0.8	120	0.15	0.8	190	0.17	0.8	–	–	–	50	0.15	0.6	–	–	–
	T8330	0.4	195	0.17	0.8	115	0.15	0.8	185	0.17	0.8	–	–	–	45	0.15	0.6	–	–	–
	T8430	0.4	230	0.17	0.8	125	0.15	0.8	185	0.17	0.8	–	–	–	45	0.15	0.6	–	–	–
CCGT 120408EL-SI	T8330	0.8	205	0.23	1.0	120	0.21	1.0	190	0.23	1.0	–	–	–	50	0.21	0.8	–	–	–
	T8430	0.8	230	0.24	1.0	125	0.22	1.0	185	0.24	1.0	–	–	–	45	0.22	0.8	–	–	–

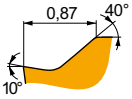
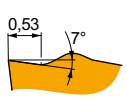
CCMT

PRAMET

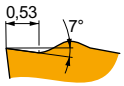
	IC [mm]	D1 [mm]	L [mm]	S [mm]
0602	6.350	2.80	6.40	2.38
0803	7.940	3.40	8.10	3.18
09T3	9.525	4.40	9.70	3.97
1204	12.700	5.50	12.90	4.76



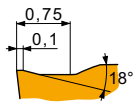
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
																				
FF geometry with positive design for fine-finish to finish machining, and continuous to slightly interrupted cuts.																				
CCMT 060202E-FF	**T8315**	0.2	◪ 195	0.10	1.0	◪ 115	0.09	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.2	■ 185	0.10	1.0	◪ 110	0.09	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8430	0.2	■ 230	0.10	1.0	◪ 125	0.09	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T9315	0.2	■ 315	0.10	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 060204E-FF	**T8315**	0.4	◪ 195	0.12	1.0	◪ 115	0.11	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	■ 185	0.12	1.0	◪ 110	0.11	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8430	0.4	■ 225	0.12	1.0	◪ 120	0.11	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T9315	0.4	■ 310	0.12	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 09T304E-FF	**T8315**	0.4	◪ 190	0.12	1.2	◪ 110	0.11	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	■ 185	0.12	1.2	◪ 110	0.11	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8430	0.4	■ 225	0.12	1.2	◪ 120	0.11	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T9315	0.4	■ 300	0.12	1.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
																				
FF2 geometry with positive design for fine-finish to finish machining, and continuous to slightly interrupted cuts.																				
CCMT 060202E-FF2	**T7325**	0.2	◪ 240	0.05	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.2	■ 205	0.05	0.8	–	–	–	■ 190	0.05	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.2	■ 280	0.05	0.8	–	–	–	◪ 230	0.05	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.2	■ 390	0.05	0.8	–	–	–	◪ 370	0.05	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.2	■ 350	0.05	0.8	–	–	–	◪ 330	0.05	0.8	–	–	–	–	–	–	–	–	–
	TT010	0.2	■ 345	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 060204E-FF2	**T7325**	0.4	◪ 190	0.12	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	■ 165	0.12	1.0	–	–	–	■ 155	0.12	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.4	■ 205	0.12	1.0	–	–	–	◪ 170	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9315	0.4	■ 280	0.12	1.0	–	–	–	◪ 265	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 255	0.12	1.0	–	–	–	◪ 240	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9335	0.4	■ 215	0.12	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	TT010	0.4	■ 280	0.12	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 080302E-FF2	**T7325**	0.2	◪ 240	0.05	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.2	■ 205	0.05	0.8	–	–	–	■ 190	0.05	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.2	■ 280	0.05	0.8	–	–	–	◪ 230	0.05	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.2	■ 350	0.05	0.8	–	–	–	◪ 330	0.05	0.8	–	–	–	–	–	–	–	–	–
	TT010	0.2	■ 345	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 080304E-FF2	**T7325**	0.4	◪ 190	0.12	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	■ 165	0.12	1.0	–	–	–	■ 155	0.12	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.4	■ 205	0.12	1.0	–	–	–	◪ 170	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 255	0.12	1.0	–	–	–	◪ 240	0.12	1.0	–	–	–	–	–	–	–	–	–
	TT010	0.4	■ 350	0.06	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

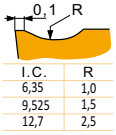
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
FF2 geometry with positive design for fine-finish to finish machining, and continuous to slightly interrupted cuts.																				
CCMT 080308E-FF2	**T7325**	0.8	205	0.17	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	180	0.17	1.0	–	–	–	170	0.17	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.8	210	0.17	1.0	–	–	–	175	0.17	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	260	0.17	1.0	–	–	–	245	0.17	1.0	–	–	–	–	–	–	–	–	–
CCMT 09T304E-FF2	**T7325**	0.4	190	0.12	1.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	165	0.12	1.2	–	–	–	155	0.12	1.2	–	–	–	–	–	–	–	–	–
	T8430	0.4	200	0.12	1.2	–	–	–	165	0.12	1.2	–	–	–	–	–	–	–	–	–
	T9315	0.4	275	0.12	1.2	–	–	–	260	0.12	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.4	250	0.12	1.2	–	–	–	235	0.12	1.2	–	–	–	–	–	–	–	–	–
	T9335	0.4	215	0.12	1.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	TT010	0.4	350	0.06	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 09T308E-FF2	**T7325**	0.8	205	0.17	1.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	175	0.17	1.2	–	–	–	165	0.17	1.2	–	–	–	–	–	–	–	–	–
	T8430	0.8	205	0.17	1.2	–	–	–	170	0.17	1.2	–	–	–	–	–	–	–	–	–
	T9315	0.8	285	0.17	1.2	–	–	–	270	0.17	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.8	255	0.17	1.2	–	–	–	240	0.17	1.2	–	–	–	–	–	–	–	–	–
	TT010	0.8	350	0.10	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
FM geometry for finish to semi-rough machining, and continuous to slightly interrupted cuts.																				
CCMT 060202E-FM	**T7325**	0.2	210	0.10	1.0	160	0.09	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.2	210	0.10	1.0	160	0.09	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.2	195	0.10	1.0	115	0.09	1.0	185	0.10	1.0	585	0.12	1.0	–	–	–	–	–	–
	T8330	0.2	185	0.10	1.0	110	0.09	1.0	175	0.10	1.0	555	0.12	1.0	–	–	–	–	–	–
	T8430	0.2	230	0.10	1.0	125	0.09	1.0	185	0.10	1.0	630	0.12	1.0	–	–	–	–	–	–
	T9315	0.2	315	0.10	1.0	–	–	–	295	0.10	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.2	285	0.10	1.0	170	0.09	1.0	270	0.10	1.0	–	–	–	–	–	–	–	–	–
CCMT 060204E-FM	**T7325**	0.4	200	0.15	1.0	155	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.4	195	0.15	1.0	150	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	185	0.15	1.0	110	0.14	1.0	175	0.15	1.0	555	0.18	1.0	–	–	–	–	–	–
	T8330	0.4	170	0.15	1.0	100	0.14	1.0	160	0.15	1.0	510	0.18	1.0	–	–	–	–	–	–
	T8430	0.4	205	0.15	1.0	110	0.14	1.0	170	0.15	1.0	570	0.18	1.0	–	–	–	–	–	–
	T9315	0.4	285	0.15	1.0	–	–	–	270	0.15	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.4	250	0.15	1.0	150	0.15	1.0	235	0.15	1.0	–	–	–	–	–	–	–	–	–
CCMT 060208E-FM	**T7325**	0.8	220	0.20	1.0	170	0.18	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	190	0.20	1.0	110	0.18	1.0	180	0.20	1.0	570	0.24	1.0	–	–	–	–	–	–
	T8430	0.8	220	0.20	1.0	120	0.18	1.0	180	0.20	1.0	600	0.24	1.0	–	–	–	–	–	–
	T9315	0.8	300	0.20	1.0	–	–	–	285	0.20	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	265	0.20	1.0	155	0.18	1.0	250	0.20	1.0	–	–	–	–	–	–	–	–	–
CCMT 09T302E-FM	**T7325**	0.2	205	0.10	1.2	155	0.09	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.2	205	0.10	1.2	155	0.09	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.2	190	0.10	1.2	110	0.09	1.2	180	0.10	1.2	570	0.12	1.2	–	–	–	–	–	–
	T8330	0.2	180	0.10	1.2	105	0.09	1.2	170	0.10	1.2	540	0.12	1.2	–	–	–	–	–	–
	T8430	0.2	225	0.10	1.2	120	0.09	1.2	185	0.10	1.2	615	0.12	1.2	–	–	–	–	–	–
	T9315	0.2	310	0.10	1.2	–	–	–	290	0.10	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.2	275	0.10	1.2	165	0.09	1.2	260	0.10	1.2	–	–	–	–	–	–	–	–	–
CCMT 09T304E-FM	**T7325**	0.4	195	0.15	1.2	150	0.15	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.4	190	0.15	1.2	145	0.15	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	180	0.15	1.2	105	0.14	1.2	170	0.15	1.2	540	0.18	1.2	–	–	–	–	–	–
	T8330	0.4	170	0.15	1.2	100	0.14	1.2	160	0.15	1.2	510	0.18	1.2	–	–	–	–	–	–
	T8430	0.4	200	0.15	1.2	110	0.14	1.2	165	0.15	1.2	555	0.18	1.2	–	–	–	–	–	–
	T9315	0.4	275	0.15	1.2	–	–	–	260	0.15	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.4	245	0.15	1.2	145	0.15	1.2	230	0.15	1.2	–	–	–	–	–	–	–	–	–

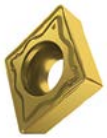
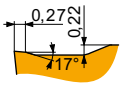
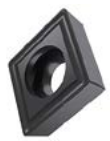
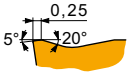
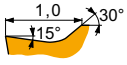
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
FM geometry for finish to semi-rough machining, and continuous to slightly interrupted cuts.																				
CCMT 09T308E-FM	**T7325**	0.8	215	0.20	1.2	165	0.18	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.8	205	0.20	1.2	155	0.18	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	195	0.20	1.2	115	0.18	1.2	185	0.20	1.2	585	0.24	1.2	–	–	–	–	–	–
	T8330	0.8	185	0.20	1.2	110	0.18	1.2	175	0.20	1.2	555	0.24	1.2	–	–	–	–	–	–
	T8430	0.8	210	0.20	1.2	115	0.18	1.2	175	0.20	1.2	585	0.24	1.2	–	–	–	–	–	–
	T9315	0.8	290	0.20	1.2	–	–	–	275	0.20	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.8	260	0.20	1.2	155	0.18	1.2	245	0.20	1.2	–	–	–	–	–	–	–	–	–
CCMT 120404E-FM	**T7325**	0.4	190	0.15	1.7	145	0.15	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.4	185	0.15	1.7	140	0.15	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	170	0.15	1.7	100	0.14	1.7	160	0.15	1.7	510	0.18	1.7	–	–	–	–	–	–
	T8330	0.4	165	0.15	1.7	95	0.14	1.7	155	0.15	1.7	495	0.18	1.7	–	–	–	–	–	–
	T8430	0.4	195	0.15	1.7	105	0.14	1.7	160	0.15	1.7	540	0.18	1.7	–	–	–	–	–	–
	T9315	0.4	265	0.15	1.7	–	–	–	250	0.15	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.4	240	0.15	1.7	140	0.15	1.7	225	0.15	1.7	–	–	–	–	–	–	–	–	–
CCMT 120408E-FM	**T7325**	0.8	205	0.20	1.7	155	0.18	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.8	200	0.20	1.7	155	0.18	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	190	0.20	1.7	110	0.18	1.7	180	0.20	1.7	570	0.24	1.7	–	–	–	–	–	–
	T8330	0.8	180	0.20	1.7	105	0.18	1.7	170	0.20	1.7	540	0.24	1.7	–	–	–	–	–	–
	T8430	0.8	205	0.20	1.7	110	0.18	1.7	170	0.20	1.7	570	0.24	1.7	–	–	–	–	–	–
	T9315	0.8	280	0.20	1.7	–	–	–	265	0.20	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.8	250	0.20	1.7	150	0.18	1.7	235	0.20	1.7	–	–	–	–	–	–	–	–	–
CCMT 120412E-FM	**T8330**	1.2	175	0.27	1.7	105	0.24	1.7	165	0.27	1.7	525	0.32	1.7	–	–	–	–	–	–
	T8430	1.2	190	0.27	1.7	105	0.24	1.7	155	0.27	1.7	525	0.32	1.7	–	–	–	–	–	–
	T9325	1.2	235	0.27	1.7	140	0.24	1.7	220	0.27	1.7	–	–	–	–	–	–	–	–	–
																				
FM2 geometry for finish to medium machining, and continuous to interrupted cuts.																				
CCMT 080304E-FM2	**T8330**	0.4	165	0.12	1.0	95	0.11	1.0	155	0.12	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.4	205	0.12	1.0	110	0.11	1.0	170	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9315	0.4	280	0.12	1.0	–	–	–	265	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.4	255	0.12	1.0	150	0.11	1.0	240	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9335	0.4	215	0.12	1.0	125	0.11	1.0	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 080308E-FM2	**T8330**	0.8	180	0.17	1.0	105	0.15	1.0	170	0.17	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.8	210	0.17	1.0	115	0.15	1.0	175	0.17	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	260	0.17	1.0	155	0.15	1.0	245	0.17	1.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	225	0.17	1.0	135	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 09T304E-FM2	**T6310**	0.4	165	0.12	1.0	115	0.11	1.0	130	0.12	1.0	–	–	–	–	–	–	–	–	–
	T8330	0.4	165	0.12	1.0	95	0.11	1.0	155	0.12	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.4	205	0.12	1.0	110	0.11	1.0	170	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9315	0.4	280	0.12	1.0	–	–	–	265	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.4	255	0.12	1.0	150	0.11	1.0	240	0.12	1.0	–	–	–	–	–	–	–	–	–
CCMT 09T308E-FM2	**T6310**	0.8	180	0.17	1.0	125	0.15	1.0	145	0.17	1.0	–	–	–	–	–	–	–	–	–
	T7325	0.8	205	0.17	1.0	155	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	180	0.17	1.0	105	0.15	1.0	170	0.17	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.8	210	0.17	1.0	115	0.15	1.0	175	0.17	1.0	–	–	–	–	–	–	–	–	–
	T9315	0.8	290	0.17	1.0	–	–	–	275	0.17	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	260	0.17	1.0	155	0.15	1.0	245	0.17	1.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	225	0.17	1.0	135	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 120408E-FM2	**T7325**	0.8	190	0.20	1.5	145	0.18	1.5	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	165	0.20	1.5	95	0.18	1.5	155	0.20	1.5	–	–	–	–	–	–	–	–	–
	T8430	0.8	190	0.20	1.5	105	0.18	1.5	155	0.20	1.5	–	–	–	–	–	–	–	–	–
	T9325	0.8	235	0.20	1.5	140	0.18	1.5	220	0.20	1.5	–	–	–	–	–	–	–	–	–
	T9335	0.8	200	0.20	1.5	120	0.18	1.5	–	–	–	–	–	–	–	–	–	–	–	–

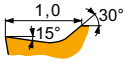
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
			U		E															
NF2 geometry with positive design for fine-finish to semi-rough machining, and continuous cuts.																				
CCMT 060202E-NF2	**T6310**	0.2	170	0.10	0.8	120	0.09	0.8	135	0.10	0.8	510	0.12	0.8	50	0.08	0.6	–	–	–
	T7325	0.2	195	0.10	0.8	150	0.09	0.8	–	–	–	–	–	–	60	0.08	0.6	–	–	–
	T8330	0.2	170	0.10	0.8	100	0.09	0.8	160	0.10	0.8	510	0.12	0.8	40	0.08	0.6	–	–	–
	T8430	0.2	210	0.10	0.8	115	0.09	0.8	175	0.10	0.8	585	0.12	0.8	45	0.08	0.6	–	–	–
	T9325	0.2	260	0.10	0.8	155	0.09	0.8	245	0.10	0.8	–	–	–	55	0.08	0.6	–	–	–
CCMT 060204E-NF2	**H07**	0.4	–	–	–	85	0.11	0.8	140	0.12	0.8	445	0.14	0.8	45	0.11	0.6	–	–	–
	T6310	0.4	170	0.12	0.8	120	0.11	0.8	135	0.12	0.8	510	0.14	0.8	50	0.11	0.6	–	–	–
	T7325	0.4	200	0.12	0.8	155	0.11	0.8	–	–	–	–	–	–	65	0.11	0.6	–	–	–
	T8330	0.4	170	0.12	0.8	100	0.11	0.8	160	0.12	0.8	510	0.14	0.8	40	0.11	0.6	–	–	–
	T8430	0.4	205	0.12	0.8	110	0.11	0.8	170	0.12	0.8	570	0.14	0.8	45	0.11	0.6	–	–	–
	T9315	0.4	290	0.12	0.8	–	–	–	275	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	255	0.12	0.8	150	0.11	0.8	240	0.12	0.8	–	–	–	55	0.11	0.6	–	–	–
	T9335	0.4	220	0.12	0.8	130	0.11	0.8	–	–	–	–	–	–	45	0.11	0.6	–	–	–
CCMT 080304E-NF2	**T5315**	0.4	280	0.12	1.0	–	–	–	265	0.12	1.0	–	–	–	–	–	–	–	–	–
	T7325	0.4	190	0.12	1.0	145	0.11	1.0	–	–	–	–	–	–	60	0.11	0.8	–	–	–
	T7335	0.4	190	0.12	1.0	145	0.11	1.0	–	–	–	–	–	–	60	0.11	0.8	–	–	–
	T9315	0.4	280	0.12	1.0	–	–	–	265	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.4	255	0.12	1.0	150	0.11	1.0	240	0.12	1.0	–	–	–	55	0.11	0.8	–	–	–
	T9335	0.4	215	0.12	1.2	125	0.11	1.2	–	–	–	–	–	–	45	0.11	1.0	–	–	–
CCMT 080308E-NF2	**H07**	0.8	–	–	–	95	0.13	1.2	150	0.14	1.2	485	0.17	1.2	45	0.13	1.0	–	–	–
	T5315	0.8	295	0.17	1.0	–	–	–	280	0.17	1.0	–	–	–	–	–	–	–	–	–
	T7325	0.8	205	0.17	1.0	155	0.15	1.0	–	–	–	–	–	–	65	0.14	0.8	–	–	–
	T7335	0.8	205	0.17	1.0	155	0.15	1.0	–	–	–	–	–	–	65	0.14	0.8	–	–	–
	T9325	0.8	260	0.17	1.0	155	0.15	1.0	245	0.17	1.0	–	–	–	55	0.14	0.8	–	–	–
CCMT 09T304E-NF2	**H07**	0.4	–	–	–	85	0.11	1.2	135	0.12	1.2	430	0.14	1.2	40	0.11	1.0	–	–	–
	T6310	0.4	165	0.12	1.2	115	0.11	1.2	130	0.12	1.2	495	0.14	1.2	45	0.11	1.0	–	–	–
	T7325	0.4	190	0.12	1.2	145	0.11	1.2	–	–	–	–	–	–	60	0.11	1.0	–	–	–
	T8330	0.4	165	0.12	1.2	95	0.11	1.2	155	0.12	1.2	495	0.14	1.2	40	0.11	1.0	–	–	–
	T8430	0.4	200	0.12	1.2	110	0.11	1.2	165	0.12	1.2	555	0.14	1.2	40	0.11	1.0	–	–	–
	T9315	0.4	275	0.12	1.2	–	–	–	260	0.12	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.4	250	0.12	1.2	150	0.11	1.2	235	0.12	1.2	–	–	–	55	0.11	1.0	–	–	–
	T9335	0.4	215	0.12	1.2	125	0.11	1.2	–	–	–	–	–	–	45	0.11	1.0	–	–	–
CCMT 09T308E-NF2	**H07**	0.8	–	–	–	95	0.13	1.2	150	0.14	1.2	485	0.17	1.2	45	0.13	1.0	–	–	–
	T6310	0.8	190	0.14	1.2	135	0.13	1.2	150	0.14	1.2	570	0.17	1.2	55	0.13	1.0	–	–	–
	T7325	0.8	215	0.14	1.2	165	0.13	1.2	–	–	–	–	–	–	65	0.13	1.0	–	–	–
	T8330	0.8	190	0.14	1.2	110	0.13	1.2	180	0.14	1.2	570	0.17	1.2	45	0.13	1.0	–	–	–
	T8430	0.8	225	0.14	1.2	120	0.13	1.2	185	0.14	1.2	615	0.17	1.2	45	0.13	1.0	–	–	–
	T9315	0.8	310	0.14	1.2	–	–	–	290	0.14	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.8	275	0.14	1.2	165	0.13	1.2	260	0.14	1.2	–	–	–	60	0.13	1.0	–	–	–
	T9335	0.8	235	0.14	1.2	140	0.13	1.2	–	–	–	–	–	–	50	0.13	1.0	–	–	–
	 I.C. / R: 6,35 / 1,0; 9,525 / 1,5; 12,7 / 2,5		U		S															
RF geometry for semi-rough to rough machining, and continuous to interrupted cuts.																				
CCMT 060202E-RF	**T7335**	0.2	150	0.15	1.0	115	0.14	1.0	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 060204E-RF	**T5315**	0.4	235	0.15	1.0	–	–	–	220	0.15	1.0	–	–	–	–	–	–	45	0.15	1.0
	T7335	0.4	160	0.15	1.0	120	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.4	205	0.15	1.0	120	0.15	1.0	190	0.15	1.0	–	–	–	–	–	–	–	–	–
CCMT 09T304E-RF	**T7335**	0.4	135	0.20	1.5	105	0.18	1.5	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.4	175	0.20	1.5	105	0.18	1.5	165	0.20	1.5	–	–	–	–	–	–	–	–	–
CCMT 09T308E-RF	**T5315**	0.8	245	0.20	1.5	–	–	–	230	0.20	1.5	–	–	–	–	–	–	45	0.15	1.0
	T7335	0.8	165	0.20	1.5	125	0.18	1.5	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	210	0.20	1.5	125	0.18	1.5	195	0.20	1.5	–	–	–	–	–	–	–	–	–
CCMT 120408E-RF	**T5315**	0.8	230	0.22	2.2	–	–	–	215	0.22	2.2	–	–	–	–	–	–	45	0.15	1.0
	T7335	0.8	150	0.22	2.2	115	0.22	2.2	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	195	0.22	2.2	115	0.22	2.2	185	0.22	2.2	–	–	–	–	–	–	–	–	–

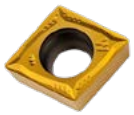
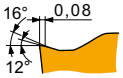
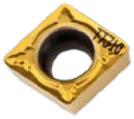
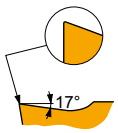
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
RM geometry for semi-rough to rough machining, and continuous to interrupted cuts.																				
CCMT 09T304E-RM	**T5305**	0.4	260	0.27	2.2	–	–	–	245	0.27	2.2	–	–	–	–	–	–	50	0.15	1.0
	T5315	0.4	230	0.27	2.2	–	–	–	215	0.27	2.2	–	–	–	–	–	–	45	0.15	1.0
	T7335	0.4	155	0.27	2.2	120	0.24	2.2	–	–	–	–	–	–	50	0.19	1.8	–	–	–
	T8330	0.4	140	0.27	2.2	80	0.24	2.2	130	0.27	2.2	–	–	–	35	0.19	1.8	25	0.15	1.0
	T8430	0.4	150	0.27	2.2	80	0.24	2.2	125	0.27	2.2	–	–	–	30	0.19	1.8	25	0.15	1.0
	T9315	0.4	215	0.27	2.2	–	–	–	200	0.27	2.2	–	–	–	–	–	–	40	0.15	1.0
	T9325	0.4	190	0.27	2.2	110	0.24	2.2	180	0.27	2.2	–	–	–	40	0.19	1.8	–	–	–
CCMT 09T308E-RM	**T5305**	0.8	290	0.30	2.2	–	–	–	275	0.30	2.2	–	–	–	–	–	–	55	0.15	1.0
	T5315	0.8	265	0.30	2.2	–	–	–	250	0.30	2.2	–	–	–	–	–	–	50	0.15	1.0
	T7335	0.8	175	0.30	2.2	135	0.27	2.2	–	–	–	–	–	–	55	0.24	1.8	–	–	–
	T8330	0.8	165	0.30	2.2	95	0.27	2.2	155	0.30	2.2	–	–	–	40	0.24	1.8	30	0.15	1.0
	T8430	0.8	180	0.30	2.2	95	0.27	2.2	145	0.30	2.2	–	–	–	35	0.24	1.8	30	0.15	1.0
	T9315	0.8	240	0.30	2.2	–	–	–	225	0.30	2.2	–	–	–	–	–	–	45	0.15	1.0
	T9325	0.8	215	0.30	2.2	125	0.27	2.2	200	0.30	2.2	–	–	–	45	0.24	1.8	–	–	–
CCMT 120408E-RM	**T5305**	0.8	290	0.30	2.7	–	–	–	275	0.30	2.7	–	–	–	–	–	–	55	0.15	1.0
	T5315	0.8	260	0.30	2.7	–	–	–	245	0.30	2.7	–	–	–	–	–	–	50	0.15	1.0
	T7335	0.8	175	0.30	2.7	135	0.27	2.7	–	–	–	–	–	–	55	0.24	2.2	–	–	–
	T8330	0.8	160	0.30	2.7	95	0.27	2.7	150	0.30	2.7	–	–	–	40	0.24	2.2	30	0.15	1.0
	T8430	0.8	175	0.30	2.7	95	0.27	2.7	140	0.30	2.7	–	–	–	35	0.24	2.2	30	0.15	1.0
	T9315	0.8	235	0.30	2.7	–	–	–	220	0.30	2.7	–	–	–	–	–	–	45	0.15	1.0
	T9325	0.8	210	0.30	2.7	125	0.27	2.7	195	0.30	2.7	–	–	–	45	0.24	2.2	–	–	–
CCMT 120412E-RM	**T8330**	1.2	165	0.33	2.7	95	0.30	2.7	155	0.33	2.7	–	–	–	40	0.23	2.2	30	0.15	1.0
	T8430	1.2	180	0.33	2.7	95	0.30	2.7	145	0.33	2.7	–	–	–	35	0.23	2.2	30	0.15	1.0
	T9315	1.2	235	0.33	2.7	–	–	–	220	0.33	2.7	–	–	–	–	–	–	45	0.15	1.0
	T9325	1.2	215	0.33	2.7	125	0.30	2.7	200	0.33	2.7	–	–	–	45	0.23	2.2	–	–	–
																				
RM3 geometry for semi-rough to rough machining, and continuous to interrupted cuts.																				
CCMT 120404E-RM3	**T7325**	0.4	140	0.25	2.5	105	0.25	2.5	–	–	–	–	–	–	–	–	–	–	–	–
	T9315	0.4	190	0.25	2.5	–	–	–	180	0.25	2.5	–	–	–	–	–	–	35	0.15	1.0
	T9325	0.4	165	0.25	2.5	95	0.25	2.5	155	0.25	2.5	–	–	–	–	–	–	–	–	–
CCMT 120408E-RM3	**T6310**	0.8	145	0.27	2.5	100	0.27	2.5	115	0.27	2.5	–	–	–	–	–	–	25	0.15	1.0
	T7325	0.8	165	0.27	2.5	125	0.27	2.5	–	–	–	–	–	–	–	–	–	–	–	–
	T9315	0.8	215	0.27	2.5	–	–	–	200	0.27	2.5	–	–	–	–	–	–	40	0.15	1.0
	T9325	0.8	195	0.27	2.5	115	0.27	2.5	185	0.27	2.5	–	–	–	–	–	–	–	–	–
CCMT 120412E-RM3	**T7325**	1.2	170	0.30	2.5	130	0.27	2.5	–	–	–	–	–	–	–	–	–	–	–	–
	T9315	1.2	220	0.30	2.5	–	–	–	205	0.30	2.5	–	–	–	–	–	–	40	0.15	1.0
																				
UR geometry for fine to finish machining, and continuous to slightly interrupted cuts.																				
CCMT 060202E-UR	**T7325**	0.2	185	0.10	0.8	140	0.09	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.2	185	0.10	0.8	140	0.09	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.2	170	0.10	0.8	100	0.09	0.8	160	0.10	0.8	–	–	–	–	–	–	–	–	–
	T8330	0.2	160	0.10	0.8	95	0.09	0.8	150	0.10	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.2	200	0.10	0.8	110	0.09	0.8	165	0.10	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.2	275	0.10	0.8	–	–	–	260	0.10	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.2	250	0.10	0.8	150	0.09	0.8	235	0.10	0.8	–	–	–	–	–	–	–	–	–
	TT310	0.2	275	0.10	0.5	165	0.09	0.5	–	–	–	–	–	–	–	–	–	–	–	–

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
UR geometry for fine to finish machining, and continuous to slightly interrupted cuts.																				
CCMT 060204E-UR	**T5315**	0.4	245	0.15	1.0	–	–	–	230	0.15	1.0	–	–	–	–	–	–	–	–	–
	T7325	0.4	170	0.15	1.0	130	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.4	170	0.15	1.0	130	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	160	0.15	1.0	95	0.14	1.0	150	0.15	1.0	–	–	–	–	–	–	–	–	–
	T8330	0.4	150	0.15	1.0	90	0.14	1.0	140	0.15	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.4	175	0.15	1.0	95	0.14	1.0	140	0.15	1.0	–	–	–	–	–	–	–	–	–
	T9315	0.4	245	0.15	1.0	–	–	–	230	0.15	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.4	215	0.15	1.0	125	0.15	1.0	200	0.15	1.0	–	–	–	–	–	–	–	–	–
	TT310	0.4	255	0.15	0.5	150	0.14	0.5	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 060208E-UR	**T5315**	0.8	270	0.20	1.0	–	–	–	255	0.20	1.0	–	–	–	–	–	–	–	–	–
	T7325	0.8	190	0.20	1.0	145	0.18	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	165	0.20	1.0	95	0.18	1.0	155	0.20	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.8	185	0.20	1.0	100	0.18	1.0	150	0.20	1.0	–	–	–	–	–	–	–	–	–
	T9315	0.8	255	0.20	1.0	–	–	–	240	0.20	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	230	0.20	1.0	135	0.18	1.0	215	0.20	1.0	–	–	–	–	–	–	–	–	–
CCMT 09T302E-UR	**T6310**	0.2	160	0.10	1.0	115	0.09	1.0	125	0.10	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.2	195	0.10	1.0	105	0.09	1.0	160	0.10	1.0	–	–	–	–	–	–	–	–	–
	TT310	0.2	255	0.10	1.0	150	0.09	1.0	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 09T304E-UR	**T5315**	0.4	245	0.15	1.2	–	–	–	230	0.15	1.2	–	–	–	–	–	–	–	–	–
	T7325	0.4	170	0.15	1.2	130	0.15	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.4	165	0.15	1.2	125	0.15	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	155	0.15	1.2	90	0.14	1.2	145	0.15	1.2	–	–	–	–	–	–	–	–	–
	T8330	0.4	150	0.15	1.2	90	0.14	1.2	140	0.15	1.2	–	–	–	–	–	–	–	–	–
	T8430	0.4	175	0.15	1.2	95	0.14	1.2	140	0.15	1.2	–	–	–	–	–	–	–	–	–
	T9310	0.4	265	0.15	1.2	–	–	–	250	0.15	1.2	–	–	–	–	–	–	–	–	–
	T9315	0.4	235	0.15	1.2	–	–	–	220	0.15	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.4	215	0.15	1.2	125	0.15	1.2	200	0.15	1.2	–	–	–	–	–	–	–	–	–
	TT310	0.4	235	0.15	1.2	140	0.14	1.2	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 09T308E-UR	**T5315**	0.8	265	0.20	1.2	–	–	–	250	0.20	1.2	–	–	–	–	–	–	–	–	–
	T7325	0.8	185	0.20	1.2	140	0.18	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.8	175	0.20	1.2	135	0.18	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	170	0.20	1.2	100	0.18	1.2	160	0.20	1.2	–	–	–	–	–	–	–	–	–
	T8330	0.8	160	0.20	1.2	95	0.18	1.2	150	0.20	1.2	–	–	–	–	–	–	–	–	–
	T8430	0.8	185	0.20	1.2	100	0.18	1.2	150	0.20	1.2	–	–	–	–	–	–	–	–	–
	T9310	0.8	280	0.20	1.2	–	–	–	265	0.20	1.2	–	–	–	–	–	–	–	–	–
	T9315	0.8	250	0.20	1.2	–	–	–	235	0.20	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.8	225	0.20	1.2	135	0.18	1.2	210	0.20	1.2	–	–	–	–	–	–	–	–	–
	TT310	0.8	255	0.20	1.2	150	0.18	1.2	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 120404E-UR	**T5315**	0.4	235	0.15	1.7	–	–	–	220	0.15	1.7	–	–	–	–	–	–	–	–	–
	T7325	0.4	160	0.15	1.7	120	0.15	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	140	0.15	1.7	80	0.14	1.7	130	0.15	1.7	–	–	–	–	–	–	–	–	–
	T8430	0.4	170	0.15	1.7	90	0.14	1.7	135	0.15	1.7	–	–	–	–	–	–	–	–	–
	T9315	0.4	230	0.15	1.7	–	–	–	215	0.15	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.4	205	0.15	1.7	120	0.15	1.7	190	0.15	1.7	–	–	–	–	–	–	–	–	–
CCMT 120408E-UR	**T5315**	0.8	255	0.20	1.7	–	–	–	240	0.20	1.7	–	–	–	–	–	–	–	–	–
	T7325	0.8	175	0.20	1.7	135	0.18	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.8	170	0.20	1.7	130	0.18	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	155	0.20	1.7	90	0.18	1.7	145	0.20	1.7	–	–	–	–	–	–	–	–	–
	T8430	0.8	180	0.20	1.7	95	0.18	1.7	145	0.20	1.7	–	–	–	–	–	–	–	–	–
	T9315	0.8	240	0.20	1.7	–	–	–	225	0.20	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.8	215	0.20	1.7	125	0.18	1.7	200	0.20	1.7	–	–	–	–	–	–	–	–	–
CCMT 120412E-UR	**T5315**	1.2	240	0.27	1.7	–	–	–	225	0.27	1.7	–	–	–	–	–	–	–	–	–
	T7325	1.2	170	0.27	1.7	130	0.24	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	T8430	1.2	165	0.27	1.7	90	0.24	1.7	135	0.27	1.7	–	–	–	–	–	–	–	–	–
	T9315	1.2	225	0.27	1.7	–	–	–	210	0.27	1.7	–	–	–	–	–	–	–	–	–
	T9325	1.2	205	0.27	1.7	120	0.24	1.7	190	0.27	1.7	–	–	–	–	–	–	–	–	–

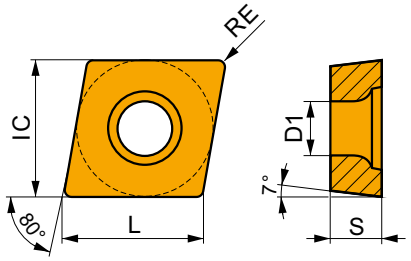
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
			W S																	
			W-FM wiper geometry for fine to finish machining with increased feed rates and improved surface finish.																	
CCMT 060204W-FM	**T7325**	0.4	165	0.30	0.8	125	0.27	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8430	0.4	165	0.30	0.8	90	0.27	0.8	135	0.30	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	215	0.30	0.8	–	–	–	200	0.30	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	190	0.30	0.8	110	0.27	0.8	180	0.30	0.8	–	–	–	–	–	–	–	–	–
CCMT 09T304W-FM	**T7325**	0.4	165	0.30	0.8	125	0.27	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	145	0.30	0.8	85	0.27	0.8	135	0.30	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	165	0.30	0.8	90	0.27	0.8	135	0.30	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	215	0.30	0.8	–	–	–	200	0.30	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	190	0.30	0.8	110	0.27	0.8	180	0.30	0.8	–	–	–	–	–	–	–	–	–
CCMT 09T308W-FM	**T8330**	0.8	155	0.40	1.0	90	0.36	1.0	145	0.40	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.8	170	0.40	1.0	90	0.36	1.0	135	0.40	1.0	–	–	–	–	–	–	–	–	–
	T9315	0.8	220	0.40	1.0	–	–	–	205	0.40	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	200	0.40	1.0	120	0.36	1.0	190	0.40	1.0	–	–	–	–	–	–	–	–	–
																				
			W E																	
			W-UR wiper geometry for fine to finish machining with increased feed rates and improved surface finish.																	
CCMT 060204W-UR	**TT310**	0.4	255	0.15	0.5	150	0.14	0.5	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 09T308W-UR	**TT310**	0.8	255	0.20	1.2	150	0.18	1.2	–	–	–	–	–	–	–	–	–	–	–	–

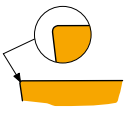
CCMW

PRAMET

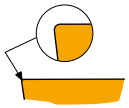
	IC	D1	L	S
	[mm]	[mm]	[mm]	[mm]
0602	6.350	2.80	6.40	2.38
09T3	9.525	4.40	9.70	3.97
1204	12.700	5.50	12.90	4.76



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
			E																	
			For fine-finish to semi-rough machining, and continuous to slightly interrupted cuts.																	
CCMW 060202	**T5305**	0.2	–	–	–	–	–	–	230	0.08	2.0	–	–	–	–	–	–	45	0.15	1.0
	T6310	0.2	–	–	–	–	–	–	100	0.08	2.0	–	–	–	–	–	–	25	0.15	1.0
CCMW 060204	**T5305**	0.4	–	–	–	–	–	–	230	0.10	2.0	–	–	–	–	–	–	45	0.15	1.0
	T5315	0.4	–	–	–	–	–	–	195	0.10	2.0	–	–	–	–	–	–	40	0.15	1.0
	T6310	0.4	–	–	–	–	–	–	95	0.10	2.0	–	–	–	–	–	–	20	0.15	1.0
CCMW 09T304	**T5305**	0.4	–	–	–	–	–	–	215	0.10	3.0	–	–	–	–	–	–	45	0.15	1.0
	T5315	0.4	–	–	–	–	–	–	190	0.10	3.0	–	–	–	–	–	–	40	0.15	1.0
	T6310	0.4	–	–	–	–	–	–	95	0.10	3.0	–	–	–	–	–	–	20	0.15	1.0
CCMW 09T308	**T5305**	0.8	–	–	–	–	–	–	200	0.20	3.0	–	–	–	–	–	–	40	0.15	1.0
	T5315	0.8	–	–	–	–	–	–	180	0.20	3.0	–	–	–	–	–	–	35	0.15	1.0
	T6310	0.8	–	–	–	–	–	–	90	0.20	3.0	–	–	–	–	–	–	20	0.15	1.0

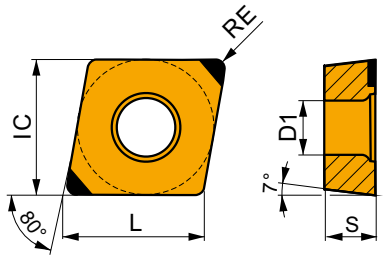
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
																				
For fine-finish to semi-rough machining, and continuous to slightly interrupted cuts.																				
CCMW 120404	**T5305**	0.4	–	–	–	–	–	–	■	210	0.10	4.0	–	–	–	–	–	–	◪	45	0.15	1.0
	T5315	0.4	–	–	–	–	–	–	■	185	0.10	4.0	–	–	–	–	–	–	◪	35	0.15	1.0
	T6310	0.4	–	–	–	–	–	–	■	90	0.10	4.0	–	–	–	–	–	–	◪	20	0.15	1.0
CCMW 120408	**T5305**	0.8	–	–	–	–	–	–	■	195	0.20	4.0	–	–	–	–	–	–	◪	40	0.15	1.0
	T5315	0.8	–	–	–	–	–	–	■	175	0.20	4.0	–	–	–	–	–	–	◪	35	0.15	1.0
	T6310	0.8	–	–	–	–	–	–	■	90	0.20	4.0	–	–	–	–	–	–	◪	20	0.15	1.0

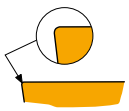
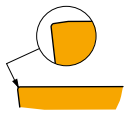
CCGW CBN

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
0602	6.350	2.80	6.50	2.38
09T3	9.525	4.50	9.70	3.97



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
																				
For finish machining.																				
CCGW 060204E-B	**TB310**	0.4	–	–	–	–	–	–	◪	460	0.10	0.4	–	–	–	◪	120	0.07	0.3	■	95	0.15	1.0
CCGW 09T304E-B	**TB310**	0.4	–	–	–	–	–	–	◪	460	0.10	0.4	–	–	–	◪	120	0.07	0.3	■	95	0.15	1.0
																				
For finish machining.																				
CCGW 060204S01020B	**TB310**	0.4	–	–	–	–	–	–	◪	460	0.10	0.4	–	–	–	◪	120	0.07	0.3	■	95	0.15	1.0
CCGW 09T304S01020B	**TB310**	0.4	–	–	–	–	–	–	◪	460	0.10	0.4	–	–	–	◪	120	0.07	0.3	■	95	0.15	1.0

SCAC(RL) EXT

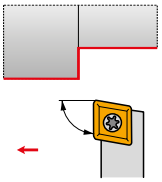
P M K N S H

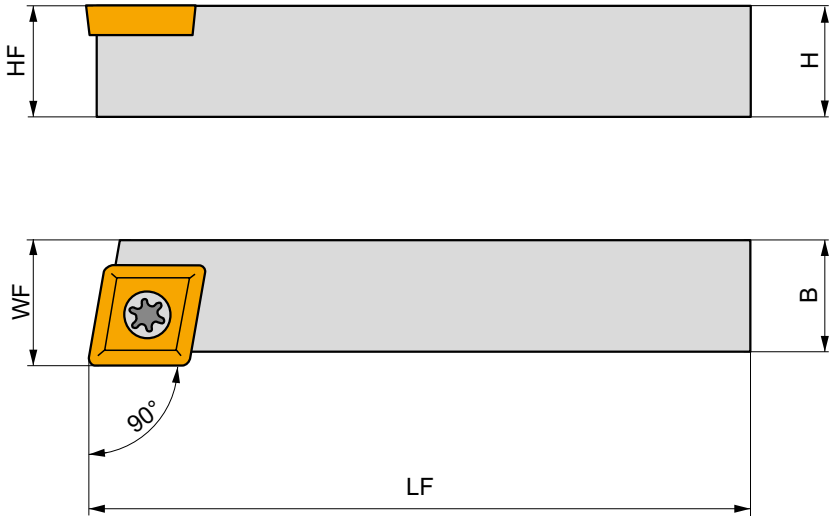
PRAMET

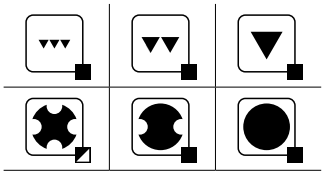
S

External Screw Lock Tool Holder with 90° Cutting Angle for CC.. Insert

External Right/Left hand tool holder with 90° cutting angle for screw type positive CC.. 06 or 09 inserts. Suited for external longitudinal, taper and chamfer turning. Available with shank size 08x08 up to 16x16 mm. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LAMS [°]	GAMO [°]	kg		
R	SCACR 0808 D 06	8	8	8	8.5	60	0	0	0.04	GI045	S07
	SCACR 1010 E 06	10	10	10	10.5	70	0	0	0.09	GI045	S07
	SCACR 1212 F 09	12	12	12	12.5	80	0	0	0.12	GI041	S04
	SCACR 1616 H 09	16	16	16	16.5	100	0	0	0.22	GI041	S04
L	SCACL 0808 D 06	8	8	8	8.5	60	0	0	0.07	GI045	S07
	SCACL 1010 E 06	10	10	10	10.5	70	0	0	0.06	GI045	S07
	SCACL 1212 F 09	12	12	12	12.5	80	0	0	0.12	GI041	S04
	SCACL 1616 H 09	16	16	16	16.5	100	0	0	0.22	GI041	S04

GI041	CC.. 09T3..
GI045	CC.. 0602..

		Nm			
S04	US 3510-T15P	3.0	M 3.5	10.6	FLAG T15P
S07	US 2506-T07P	0.9	M 2.5	6.3	FLAG T07P

SCBC(RL) EXT

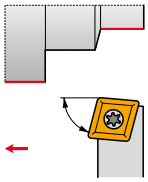
P M K N S H

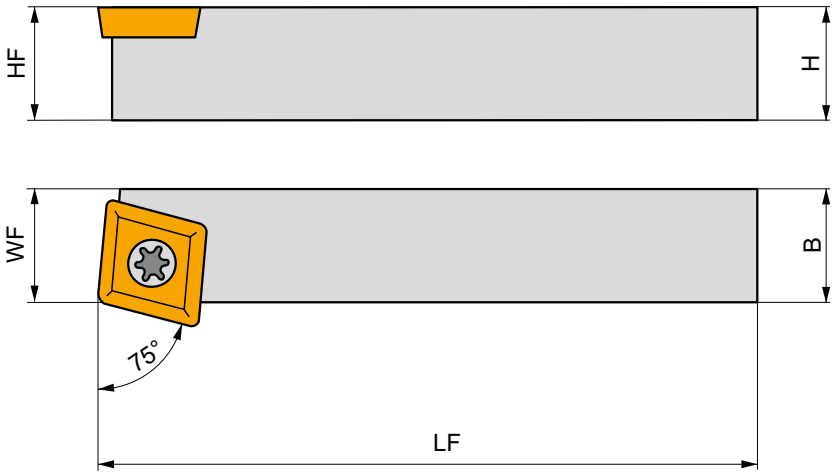
PRAMET

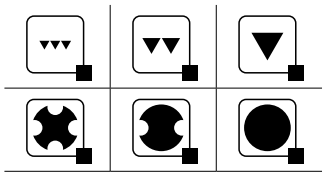
S

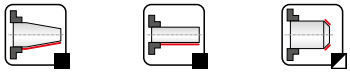
External Screw Lock Tool Holder with 75° Cutting Angle for CC.. Insert

External Right/Left hand tool holder with 75° cutting angle for screw type positive CC.. 09 or 12 inserts. Suited for external longitudinal without shoulder and chamfer turning. Available with shank size 12x12 up to 25x25 mm. Body treated for longer tool life.









	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LAMS [°]	GAMO [°]	kg		
R	SCBCR 1212 F 09	12	12	12	11	80	0	0	0.10	GI041	S08
	SCBCR 1616 H 09	16	16	16	13	100	0	0	0.20	GI041	S08
	SCBCR 2020 K 12-M-A	20	20	20	17	125	0	0	0.45	GI011	SC20
	SCBCR 2525 M 12-M-A	25	25	25	22	150	0	0	0.61	GI011	SC20
L	SCBCL 1212 F 09	12	12	12	11	80	0	0	0.10	GI041	S08
	SCBCL 1616 H 09	16	16	16	13	100	0	0	0.22	GI041	S08
	SCBCL 2020 K 12-M-A	20	20	20	17	125	0	0	0.43	GI011	SC20
	SCBCL 2525 M 12-M-A	25	25	25	22	150	0	0	0.75	GI011	SC20

GI011	CC.. 1204..
GI041	CC.. 09T3..

		Nm						
SC20	US 5012-T15P	5.0	M 5	12.2	SCN 120304	MS 5008	FLAG T15P	HXK 5
S08	US 3510-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–

SCDCR EXT

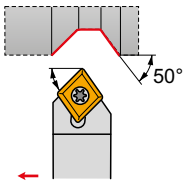
P M K N S H

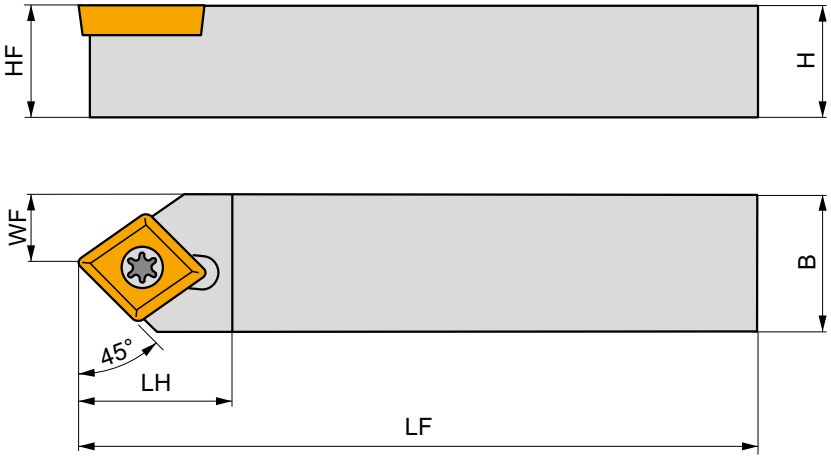
PRAMET

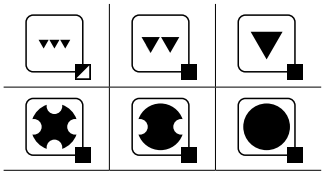
S

External Screw Lock Tool Holder with 45° Cutting Angle for CC.. Insert

External right hand tool holder with 45° cutting angle for screw type positive CC.. 06 inserts. Suited for external longitudinal without shoulder, taper, multi-directional copy, and chamfer turning. Available with shank size 10x10 mm only. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	SCDCR 1010 E 06	10	10	10	5.11	70	11	0	0	0.06	GI045	SC21

GI045	CC.. 0602..

SC21	5513 020-03	0.8 Nm	M 2.5	6.5	PT-8001

SCFC(RL) EXT

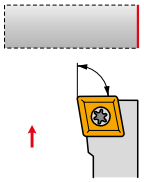
P M K N S H

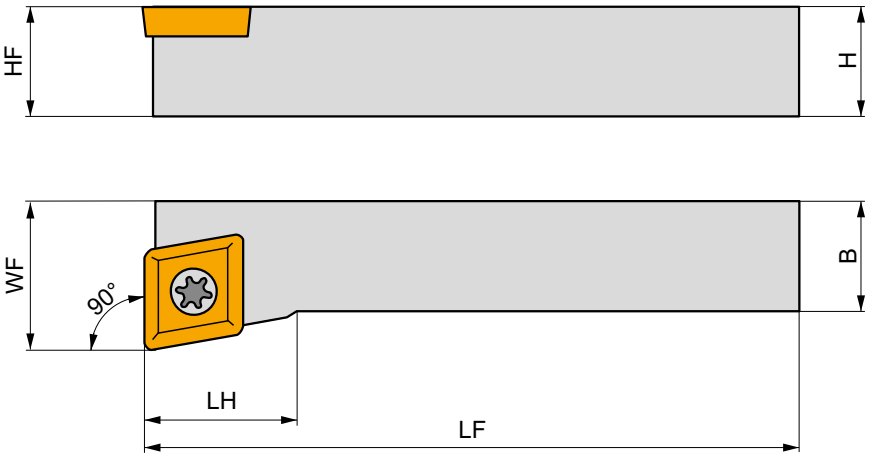
PRAMET

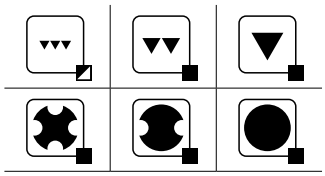
S

External Screw Lock Tool Holder with 90° Cutting Angle for CC.. Insert

External Right/Left hand tool holder with 90° cutting angle for screw type positive CC.. 06 or 09 inserts. Suited for external face and longitudinal turning with shoulder, taper and chamfer turning. Available with shank size 08x08 up to 16x16 mm. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	SCFCR 0808 D 06	8	8	8	10	60	8	0	0	0.04	GI045	S07
	SCFCR 1010 E 06	10	10	10	12	70	8	0	0	0.07	GI045	S07
	SCFCR 1212 F 09	12	12	12	16	80	16	0	0	0.12	GI041	S04
	SCFCR 1616 H 09	16	16	16	20	100	16	0	0	0.22	GI041	S04
L	SCFCL 0808 D 06	8	8	8	10	60	8	0	0	0.04	GI045	S07
	SCFCL 1010 E 06	10	10	10	12	70	8	0	0	0.06	GI045	S07
	SCFCL 1212 F 09	12	12	12	16	80	16	0	0	0.10	GI041	S04
	SCFCL 1616 H 09	16	16	16	20	100	16	0	0	0.22	GI041	S04

GI041	CC.. 09T3..
GI045	CC.. 0602..

		Nm			
S04	US 3510-T15P	3.0	M 3.5	10.6	FLAG T15P
S07	US 2506-T07P	0.9	M 2.5	6.3	FLAG T07P

SCLC(RL) EXT

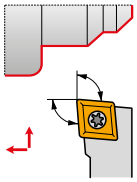
P M K N S H

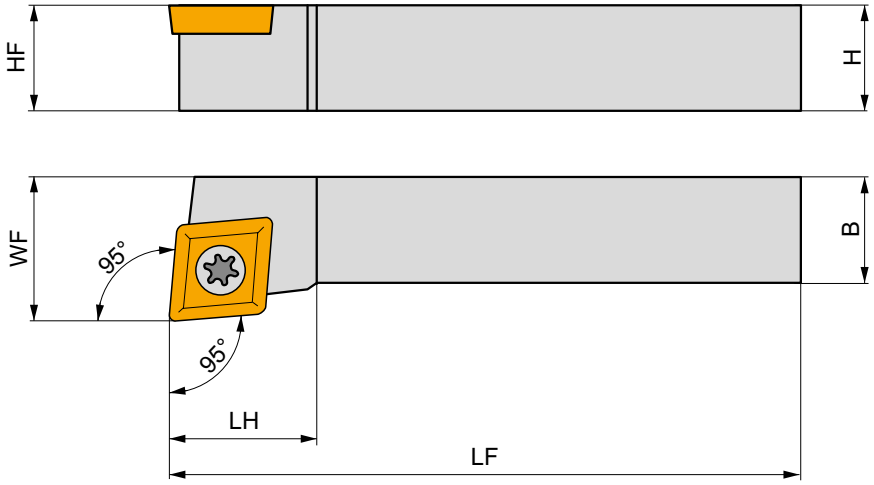
PRAMET

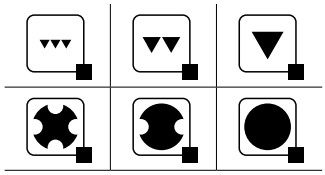
S

External Screw Lock Tool Holder with 95° Cutting Angle for CC.. Insert

External Right/Left hand tool holder with 95° cutting angle for screw type positive CC.. 06, 08, 09 or 12 inserts. Suited for external longitudinal turning with shoulder, taper and chamfer turning. Available with shank size 08x08 up to 25x25 mm. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	SCLCR 0808 D 06	8	8	8	10	60	8	0	0	0.06	GI045	S01
	SCLCR 1010 E 06	10	10	10	12	70	8	0	0	0.09	GI045	S01
	SCLCR 1010 E 08	10	10	10	12	70	13.2	0	0	0.03	GI232	SC22
	SCLCR 1212 F 08	12	12	12	16	80	13.4	0	0	0.02	GI232	SC22
	SCLCR 1616 H 08	16	16	16	20	100	15.2	0	0	0.22	GI232	SC22
	SCLCR 1212 F 09	12	12	12	16	80	16	0	0	0.12	GI041	S08
	SCLCR 1616 H 09	16	16	16	20	100	16	0	0	0.22	GI041	S08
	SCLCR 2020 K 12-M-A	20	20	20	25	125	20	0	0	0.44	GI011	SC20
	SCLCR 2525 M 12-M-A	20	25	20	32	150	20	0	0	0.68	GI011	SC20
L	SCLCL 0808 D 06	8	8	8	10	60	8	0	0	0.06	GI045	S01
	SCLCL 1010 E 06	10	10	10	12	70	8	0	0	0.06	GI045	S01
	SCLCL 1212 F 08	12	12	12	16	80	13.4	0	0	0.03	GI232	SC22
	SCLCL 1616 H 08	16	16	16	20	100	15.2	0	0	0.23	GI232	SC22
	SCLCL 1212 F 09	12	12	12	16	80	16	0	0	0.10	GI041	S08
	SCLCL 1616 H 09	16	16	16	20	100	16	0	0	0.22	GI041	S08
	SCLCL 2020 K 12-M-A	20	20	20	25	125	20	0	0	0.40	GI011	SC20
	SCLCL 2525 M 12-M-A	25	25	25	32	150	20	0	0	0.78	GI011	SC20

GI011	CC.. 1204..
GI041	CC.. 09T3..
GI045	CC.. 0602..
GI232	CC.. 0803..

		Nm						
SC20	US 5012-T15P	5.0	M 5	12.2	SCN 120304	MS 5008	FLAG T15P	HXK 5
SC22	5513 020-04	1.5	M 3	7.2	–	–	PT-8003	–
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
S08	US 3510-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–

C.-SCLC(RL) EXT

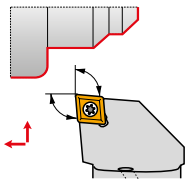
P M K N S H

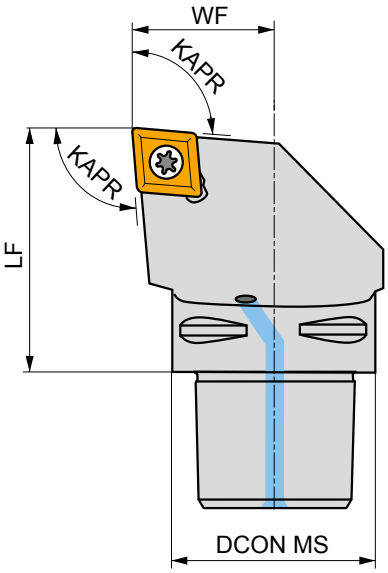
PRAMET

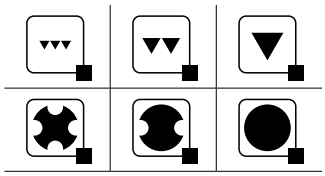
S

External PSC Quick Change Tool, Screw Lock, 95° Cutting Angle for CC.. Insert

External Right/Left hand tool, through coolant, with 95° cutting angle for screw type positive CC.. 09 and 12 inserts. Suited for external longitudinal turning with shoulder, taper and chamfer turning. PSC shank (Polygon Shank Coupling) size C3 up to C5. Body treated for longer tool life.







	Product	DCON MS [mm]	WF [mm]	LF [mm]	KAPR [°]	LAMS [°]	GAMO [°]		kg		
R	C3-SCLCR-22040-09	32	22	40	95	0	0	✓	0.21	GI041	C-SC09S
	C4-SCLCR-27050-09	40	27	50	95	0	0	✓	0.39	GI041	C-SC09S
	C4-SCLCR-27050-12	40	27	50	95	0	0	✓	0.40	GI011	C-SC12-1
	C5-SCLCR-35060-12	50	35	60	95	0	0	✓	0.72	GI011	C-SC12-2
L	C3-SCLCL-22040-09	32	22	40	95	0	0	✓	0.21	GI041	C-SC09S
	C4-SCLCL-27050-09	40	27	50	95	0	0	✓	0.39	GI041	C-SC09S
	C5-SCLCL-35060-12	50	35	60	95	0	0	✓	0.72	GI011	C-SC12-2

GI011	CC.. 1204..
GI041	CC.. 09T3..

		Nm						
C-SC09S	US 2001-T15P	3.0	M 3.5	12.1	SCS 232-01	MS 9001	FLAG T15P/3,5	CN 034-01
C-SC12-1	US 2018-T15P	3.0	M 4	14	SCS 232-02	MS 9003	FLAG T15P/4	CN 034-01
C-SC12-2	US 2018-T15P	3.0	M 4	14	SCS 232-02	MS 9003	FLAG T15P/4	CN 034-02

SCFC(RL) INT

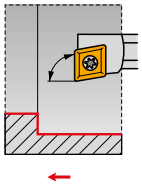
P M K N S H

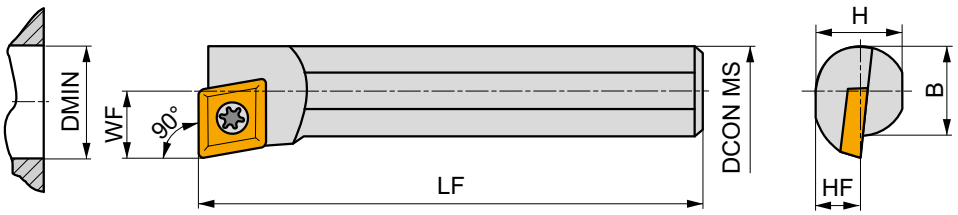
PRAMET

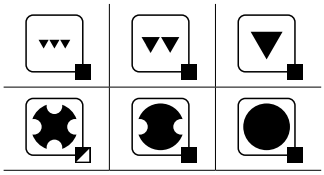
S

Internal Screw Lock Boring Bar with 90° Cutting Angle for CC.. Insert

Internal Right/Left hand boring bar with 90° cutting angle for screw type CC.. 06 inserts. Minimum internal turning diameter Ø13 mm. Suited for internal face and longitudinal turning with shoulder, taper and chamfer turning. Available with shank size Ø10 and Ø12 mm. Body treated for longer tool life.







	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	H [mm]	B [mm]	LF [mm]	LAMS [°]	GAMO [°]	kg		
R	S10H-SCFCR 06	10	13	7	9	9.5	100	-10	0	0.08	GI045	S06
	S12K-SCFCR 06	12	16	9	11	11.5	125	-7	0	0.11	GI045	S06
L	S10H-SCFCL 06	10	13	7	9	9.5	100	-10	0	0.10	GI045	S06
	S12K-SCFCL 06	12	16	9	11	11.5	125	-7	0	0.14	GI045	S06

GI045	CC.. 0602..

		Nm			
S06	US 2505-T07P	0.9	M 2.5	5.2	FLAG T07P

SCKC(RL) INT

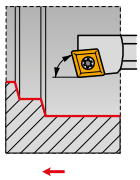
P M K N S H

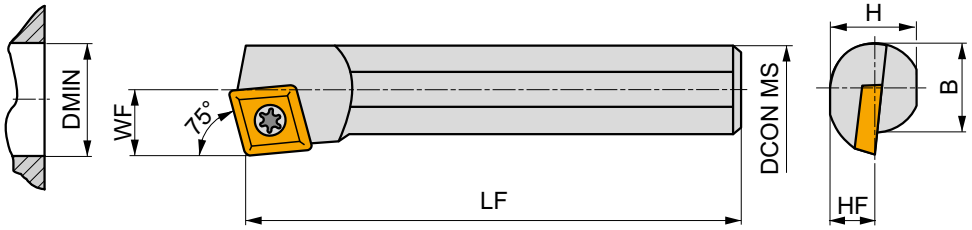
PRAMET

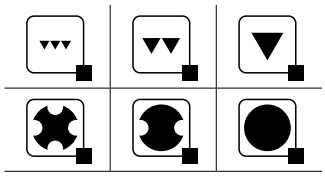
S

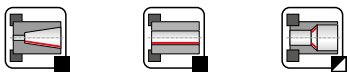
Internal Screw Lock Boring Bar with 75° Cutting Angle for CC.. Insert

Internal Right/Left hand boring bar with 75° cutting angle for screw type CC.. 06, 09 or 12 inserts. Minimum internal turning diameter Ø11 mm. Suited for internal longitudinal turning without shoulder, taper and chamfer turning. Available with shank size Ø8 up to Ø32 mm. Body treated for longer tool life.









	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	H [mm]	B [mm]	LF [mm]	LAMS [°]	GAMO [°]	kg		
R	S08F-SCKCR 06	8	11	6	7.2	7.6	80	-12	0	0.03	GI045	S02
	S12K-SCKCR 06	12	16	9	11	11.5	125	-8	0	0.11	GI045	S02
	S16M-SCKCR 09-A	16	20	11	14.5	15	150	-8	0	0.25	GI041	S05
	S20S-SCKCR 09	20	25	13	18.5	18.5	250	-5	0	0.60	GI041	S08
	S25T-SCKCR 09	25	32	17	23	23	300	-3	0	1.15	GI041	S08
	S32U-SCKCR 12-A	32	40	22	30	30	350	-10	0	2.10	GI011	SC20
L	S08F-SCKCL 06	8	11	6	7.2	7.6	80	-12	0	0.03	GI045	S02
	S12K-SCKCL 06	12	16	9	11	11.5	125	-8	0	0.11	GI045	S02
	S16M-SCKCL 09-A	16	20	11	14.5	15	150	-8	0	0.24	GI041	S05
	S20S-SCKCL 09	20	25	13	18.5	18.5	250	-5	0	0.60	GI041	S08
	S25T-SCKCL 09	25	32	17	23	23	300	-3	0	1.15	GI041	S08
	S32U-SCKCL 12-A	32	40	22	30	30	350	-10	0	2.10	GI011	SC20

GI011	CC.. 1204..
GI041	CC.. 09T3..
GI045	CC.. 0602..

		Nm						
SC20	US 5012-T15P	5.0	M 5	12.2	SCN 120304	MS 5008	FLAG T15P	HXK 5
S02	US 2505-T07P	0.9	M 2.5	5.2	–	–	FLAG T07P	–
S05	US 4008-T15P	3.5	M 4	8	–	–	FLAG T15P	–
S08	US 3510-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–

SCLC(RL) INT

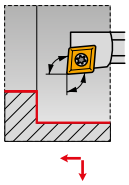
P M K N S H

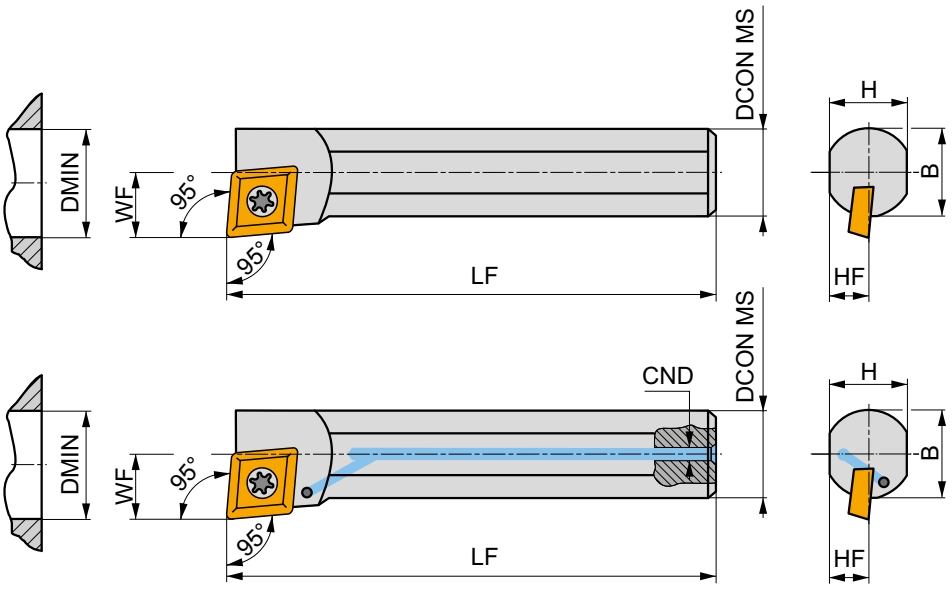
PRAMET

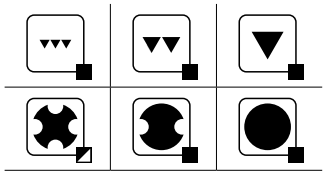
S

Internal Screw Lock Boring Bar with 95° Cutting Angle for CC.. Insert

Internal Right/Left hand boring bar, through coolant available, 95° cutting angle for screw type CC.. 06, 08, 09 or 12 inserts. Minimum internal turning diameter Ø11 mm. For internal longitudinal turning with shoulder, taper and chamfer turning. Available with shank size Ø8 to Ø32 mm. Body treated for longer tool life.







	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	H [mm]	B [mm]	LF [mm]	CND [mm]	LAMS [°]	GAMO [°]		kg		
R	A08H-SCLCR 06	8	11	6	7.2	7.6	100	3.5	-13	0	✓	0.06	GI045	S02
	S08F-SCLCR 06	8	11	6	7.2	7.6	80	–	-13	0	–	0.06	GI045	S02
	A10H-SCLCR 06	10	13	7	9	–	100	4	-10	0	✓	0.07	GI045	S02
	S10H-SCLCR 06	10	13	7	9	9.5	100	–	-10	0	–	0.08	GI045	S02
	A12K-SCLCR 06	12	16	9	11	–	125	5	-8	0	✓	0.11	GI045	S01
	S12K-SCLCR 06	12	16	9	11	11.5	125	–	-8	0	–	0.13	GI045	S01
	S16M-SCLCR 06	16	20	11	14.5	15	150	–	-8	0	–	0.25	GI045	S01
	A10K-SCLCR 08	10	12	6	9	9.5	125	4	-14	0	✓	0.09	GI232	SC22
	A12M-SCLCR 08	12	16	9	11	11.5	150	5	-5	0	✓	0.14	GI232	SC22
	A16R-SCLCR 08	16	20	11	14	15	200	6	-8	0	✓	0.28	GI232	SC22
	A16M-SCLCR 09-A	16	20	11	14.5	–	150	6	-8	0	✓	0.22	GI041	S05
	S16M-SCLCR 09-A	16	20	11	14.5	15	150	–	-8	0	–	0.25	GI041	S05
	A20Q-SCLCR 09	20	25	13	18	–	180	8	-5	0	✓	0.38	GI041	S08
	S20S-SCLCR 09	20	25	13	18	18.5	250	–	-5	0	–	0.62	GI041	S08
	A25R-SCLCR 09	25	32	17	23	23	200	8	-3	0	✓	0.60	GI041	S08
	S25T-SCLCR 09	25	32	17	23	23	300	–	-3	0	–	1.10	GI041	S08
	A32S-SCLCR 12-A	32	40	22	30	30	250	8	-10	0	✓	1.35	GI011	SC20
	S32U-SCLCR 12-A	32	40	22	30	30	350	–	-10	0	–	2.10	GI011	SC20
L	A08H-SCLCL 06	8	11	6	7.2	7.6	100	–	-13	0	✓	0.06	GI045	S02
	S08F-SCLCL 06	8	11	6	7.2	7.6	80	–	-13	0	–	0.05	GI045	S02
	A10H-SCLCL 06	10	13	7	9	–	100	4	-10	0	✓	0.06	GI045	S02
	S10H-SCLCL 06	10	13	7	9	9.5	100	–	-10	0	–	0.06	GI045	S02
	A12K-SCLCL 06	12	16	9	11	–	125	5	-8	0	✓	0.10	GI045	S01
	S12K-SCLCL 06	12	16	9	11	11.5	125	–	-8	0	–	0.11	GI045	S01
	S16M-SCLCL 06	16	20	11	14.5	15	150	–	-8	0	–	0.26	GI045	S01
	A10K-SCLCL 08	10	12	6	9	9.5	125	4	-14	0	✓	0.02	GI232	SC22
	A12M-SCLCL 08	12	16	9	11	11.5	150	5	-5	0	✓	0.14	GI232	SC22

	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	H [mm]	B [mm]	LF [mm]	CND [mm]	LAMS [°]	GAMO [°]		kg		
L	**A16R-SCLCL 08**	16	20	11	14	15	200	6	-8	0	✓	0.30	GI232	SC22
	A16M-SCLCL 09-A	16	20	11	14.5	–	150	6	-8	0	✓	0.22	GI041	S05
	S16M-SCLCL 09-A	16	20	11	14.5	15	150	–	-8	0	–	0.24	GI041	S05
	A20Q-SCLCL 09	20	25	13	18	–	180	8	-5	0	✓	0.40	GI041	S08
	S20S-SCLCL 09	20	25	13	18	18.5	250	–	-5	0	–	0.60	GI041	S08
	A25R-SCLCL 09	25	32	17	23	23	200	8	-3	0	✓	0.67	GI041	S08
	S25T-SCLCL 09	25	32	17	23	23	300	–	-3	0	–	1.15	GI041	S08
	A32S-SCLCL 12-A	32	40	22	30	30	250	8	-10	0	✓	1.35	GI011	SC20
	S32U-SCLCL 12-A	32	40	22	30	30	350	–	-10	0	–	2.10	GI011	SC20

GI011	CC.. 1204..
GI041	CC.. 09T3..
GI045	CC.. 0602..
GI232	CC.. 0803..

		Nm						
SC20	US 5012-T15P	5.0	M 5	12.2	SCN 120304	MS 5008	FLAG T15P	HXK 5
SC22	5513 020-04	1.5	M 3	7.2	–	–	PT-8003	–
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
S02	US 2505-T07P	0.9	M 2.5	5.2	–	–	FLAG T07P	–
S05	US 4008-T15P	3.5	M 4	8	–	–	FLAG T15P	–
S08	US 3510-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–

SCXC(RL) INT

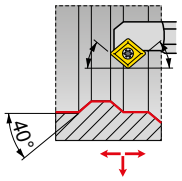
P M K N S H

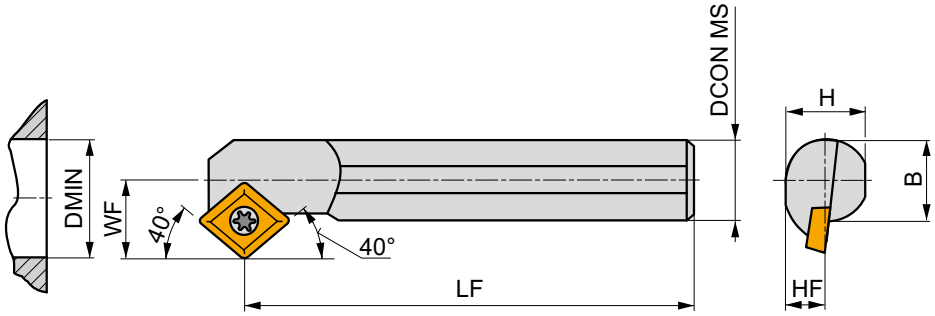
PRAMET

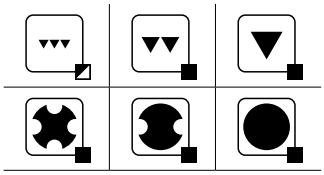
S

Internal Screw Lock Boring Bar with 40° Cutting Angle for CC.. Insert

Internal Right/Left hand boring bar, 40° cutting angle for screw type CC.. 06 inserts. Minimum internal turning diameter Ø13 mm. Suited for internal front and back chamfering, longitudinal turning without shoulder and taper turning. Available with shank size Ø10 up to Ø16 mm. Body treated for longer tool life.







	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	H [mm]	B [mm]	LF [mm]	LAMS [°]	GAMO [°]	kg		
R	S10H-SCXCR 06	10	13	7	9	9.5	100	-10	0	0.06	GI045	S06
	S12K-SCXCR 06	12	16	9	11	11.5	125	-8	0	0.11	GI045	S06
	S16Q-SCXCR 06	16	20	11	14.5	15	180	-7	0	0.31	GI045	S07
L	S10H-SCXCL 06	10	13	7	9	9.5	100	-10	0	0.06	GI045	S06
	S12K-SCXCL 06	12	16	9	11	11.5	125	-8	0	0.11	GI045	S06
	S16Q-SCXCL 06	16	20	11	14.5	15	180	-7	0	0.30	GI045	S07

GI045	CC.. 0602..

		Nm			
S06	US 2505-T07P	0.9	M 2.5	5.2	FLAG T07P
S07	US 2506-T07P	0.9	M 2.5	6.3	FLAG T07P

C.-SCLC(RL) INT

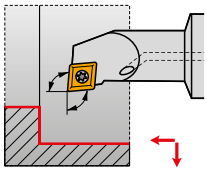
P M K N S H

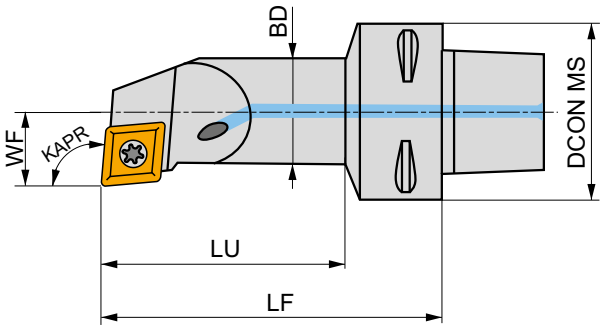
PRAMET

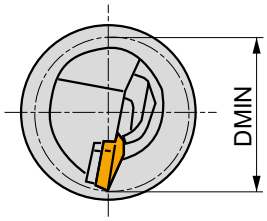
S

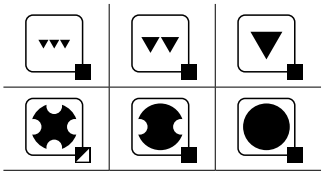
Internal PSC Quick Change Tool, Screw Lock, 95° Cutting Angle for CC.. Insert

Internal Right/Left hand tool, through coolant, with 95° cutting angle for screw type CC.. 09 inserts. Minimum internal turning diameter Ø20 mm. Suited for a wide range of internal turning applications. PSC shank (Polygon Shank Coupling) size C3 up to C5 with choice of lengths. Body treated for longer tool life.









	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	LF [mm]	LU [mm]	BD [mm]	KAPR [°]	LAMS [°]	GAMO [°]		kg		
R	C3-SCLCR-11065-09	32	20	11	65	48	16	95	-8.4	0	✓	0.21	GI041	SC09M
	C3-SCLCR-13075-09	32	25	13	75	58	20	95	-5.8	0	✓	0.26	GI041	SC09M
	C4-SCLCR-11070-09	40	20	11	70	47	16	95	-8.4	0	✓	0.36	GI041	SC09M
	C4-SCLCR-13080-09	40	25	13	80	57	20	95	-5.8	0	✓	0.41	GI041	SC09M
	C4-SCLCR-17090-09	40	32	17	90	68	25	95	-3.4	0	✓	0.50	GI041	SC09M
	C5-SCLCR-11070-09	50	20	11	70	46	16	95	-8.4	0	✓	0.55	GI041	SC09M
	C5-SCLCR-13080-09	50	25	13	80	56	20	95	-5.8	0	✓	0.60	GI041	SC09M
L	C4-SCLCL-11070-09	40	20	11	70	47	16	95	-8.4	0	✓	0.36	GI041	SC09M
	C4-SCLCL-13080-09	40	25	13	80	57	20	95	-5.8	0	✓	0.62	GI041	SC09M
	C5-SCLCL-11070-09	50	20	11	70	46	16	95	-8.4	0	✓	0.55	GI041	SC09M
	C5-SCLCL-13080-09	50	25	13	80	56	20	95	-5.8	0	✓	0.60	GI041	SC09M

GI041	CC.. 09T3..

		Nm			
SC09M	US 2009-T15P	3.0	M 3.5	8.1	FLAG T15P/3,5

CP 05

CARBIDE INSERTS

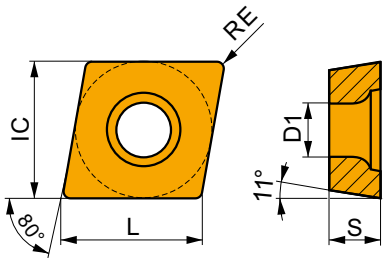
CPGX

83

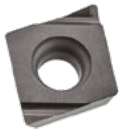
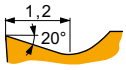
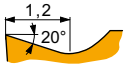
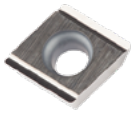
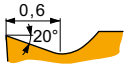
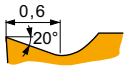
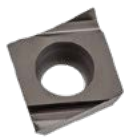
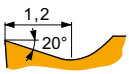
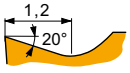
CPGX

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
0602	6.350	2.80	6.40	2.38
0803	7.940	3.40	8.10	3.18
09T3	9.525	4.40	9.70	3.97



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
																				
			FR-JQ positive geometry with right-handed design for fine-finish machining and continuous cuts.																	
CPGX 080304FR-JQ	TT010	0.4	■ 350	0.06	0.5	◪ 210	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–
																				
			FL-JQ positive geometry with left-handed design for fine-finish machining and continuous cuts.																	
CPGX 080304FL-JQ	TT010	0.4	■ 350	0.06	0.5	◪ 210	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–
CPGX 09T304FL-JQ	TT010	0.4	■ 350	0.06	0.5	◪ 210	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–
																				
			FR-JR positive geometry with right-handed design for fine-finish machining and continuous cuts.																	
CPGX 060204FR-JR	TT010	0.4	■ 350	0.06	0.5	◪ 210	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–
CPGX 080304FR-JR	TT010	0.4	■ 350	0.06	0.5	◪ 210	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–
																				
			FL-JR positive geometry with left-handed design for fine-finish machining and continuous cuts.																	
CPGX 060204FL-JR	TT010	0.4	■ 350	0.06	0.5	◪ 210	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–
CPGX 080304FL-JR	TT010	0.4	■ 350	0.06	0.5	◪ 210	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–
																				
			FR-JZ positive geometry with right-handed design for fine-finish machining and continuous cuts.																	
CPGX 060202FR-JZ	TT010	0.2	■ 330	0.06	0.5	◪ 195	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–
																				
			FL-JZ positive geometry with left-handed design for fine-finish machining and continuous cuts.																	
CPGX 060202FL-JZ	TT010	0.2	■ 330	0.06	0.5	◪ 195	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–

DC

07 / 11 / 15

CARBIDE INSERTS

DCGT

86

DCMT

87

DCMW

92

CBN & PCD INSERTS

DCGW CBN

92

DCMW PCD

93

MATCH THE RIGHT SIZE (example)

Insert	Tool Holder
DCMT 070204E-UR	SDJCR 0808 D 07

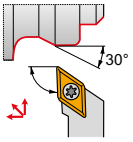
ISO TURNING – EXTERNAL

SDJC(RL) EXT

93°

DC..

07
11
15



08×08
25×25

94

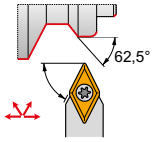
86 – 93

SDNCN EXT

62°30´

DC..

7
11



08×08
25×25

95

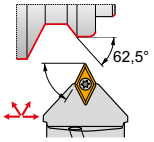
86 – 93

C.-SDNCN EXT

62°30´

DC..

11



C4
C5

97

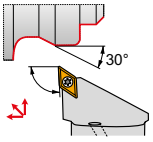
86 – 93

C.-SDJC(RL) EXT

93°

DC..

11



C3
C5

96

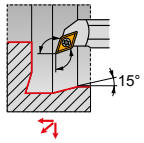
86 – 93

DC

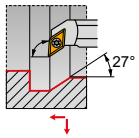
07 / 11 / 15

ISO TURNING – INTERNAL

SDQC(RL) INT

107°30´	DC..
	07 11
ØDmin 13 / 40	
98	86 – 93

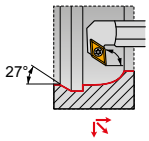
SDUC(RL) INT

93°	DC..
	07 11
ØDmin 13 / 40	
99	86 – 93

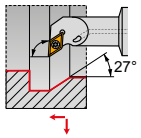
SDUC(RL)-E INT

93°	DC..
	07 11
ØDmin 13 / 40	
100	86 – 93

SDZC(RL) INT

93°	DC..
	07 11
ØDmin 27 / 65	
101	86 – 93

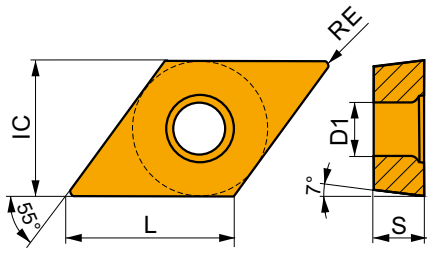
C.-SDUC(RL) INT

93°	DC..
	07 11
ØDmin 20 / 32	
102	86 – 93

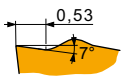
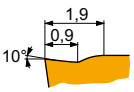
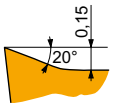
DCGT

PRAMET

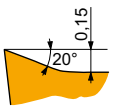
	IC [mm]	D1 [mm]	L [mm]	S [mm]
0702	6.350	2.80	7.80	2.38
0702-SF3	6.350	2.80	7.80	2.58
11T3	9.525	4.40	11.60	3.97
11T3-SF3	9.525	4.40	11.60	4.22



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			F																	
AL geometry with highly positive design for fine-finish to rough machining, and continuous to slightly interrupted cuts.																				
DCGT 070202F-AL	**HF7**	0.2	–	–	–	–	–	–	–	–	–	360	0.12	1.0	–	–	–	–	–	–
	T0315	0.2	–	–	–	–	–	–	–	–	–	510	0.12	1.0	–	–	–	–	–	–
DCGT 070204F-AL	**HF7**	0.4	–	–	–	–	–	–	–	–	–	285	0.24	1.0	–	–	–	–	–	–
	T0315	0.4	–	–	–	–	–	–	–	–	–	420	0.24	1.0	–	–	–	–	–	–
DCGT 11T302F-AL	**HF7**	0.2	–	–	–	–	–	–	–	–	–	345	0.12	1.5	–	–	–	–	–	–
	T0315	0.2	–	–	–	–	–	–	–	–	–	495	0.12	1.5	–	–	–	–	–	–
DCGT 11T304F-AL	**HF7**	0.4	–	–	–	–	–	–	–	–	–	270	0.24	1.5	–	–	–	–	–	–
	T0315	0.4	–	–	–	–	–	–	–	–	–	390	0.24	1.5	–	–	–	–	–	–
DCGT 11T308F-AL	**HF7**	0.8	–	–	–	–	–	–	–	–	–	255	0.48	1.5	–	–	–	–	–	–
	T0315	0.8	–	–	–	–	–	–	–	–	–	360	0.48	1.5	–	–	–	–	–	–
																				
			U E																	
FF2 geometry with positive design for fine-finish to finish machining, and continuous to slightly interrupted cuts.																				
DCGT 11T302E-FF2	**T7325**	0.2	190	0.05	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.2	165	0.05	0.8	–	–	–	155	0.05	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.2	225	0.05	0.8	–	–	–	185	0.05	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.2	280	0.05	0.8	–	–	–	265	0.05	0.8	–	–	–	–	–	–	–	–	–
	TT010	0.2	275	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
																				
			U E																	
NF1 geometry with positive design for fine-finish to medium machining, and continuous cuts.																				
DCGT 11T304E-NF1	**T6310**	0.4	145	0.10	0.8	100	0.09	0.8	–	–	–	435	0.12	0.8	40	0.07	0.6	25	0.15	1.0
	T7325	0.4	165	0.10	0.8	125	0.09	0.8	–	–	–	–	–	–	50	0.07	0.6	–	–	–
DCGT 11T308E-NF1	**T6310**	0.8	155	0.14	0.8	110	0.13	0.8	–	–	–	465	0.17	0.8	45	0.13	0.6	30	0.15	1.0
	T7325	0.8	180	0.14	0.8	140	0.13	0.8	–	–	–	–	–	–	55	0.13	0.6	–	–	–
																				
			E																	
SF3 geometry with highly positive design for fine to finish machining, and continuous cuts.																				
DCGT 070201E-SF3	**T6310**	0.1	160	0.05	0.5	115	0.05	0.5	125	0.05	0.5	480	0.06	0.5	45	0.04	0.4	30	0.15	1.0
DCGT 070202E-SF3	**H07**	0.2	–	–	–	95	0.05	0.8	150	0.05	0.8	485	0.06	0.8	45	0.04	0.6	–	–	–
	T6310	0.2	165	0.05	0.8	115	0.05	0.8	130	0.05	0.8	495	0.06	0.8	45	0.04	0.6	30	0.15	1.0
	T8315	0.2	175	0.05	0.8	105	0.05	0.8	165	0.05	0.8	525	0.06	0.8	40	0.04	0.6	35	0.15	1.0
DCGT 070204E-SF3	**H07**	0.4	–	–	–	75	0.09	0.8	120	0.10	0.8	390	0.12	0.8	35	0.07	0.6	–	–	–
	T6310	0.4	145	0.10	0.8	100	0.09	0.8	115	0.10	0.8	435	0.12	0.8	40	0.07	0.6	25	0.15	1.0
	T8315	0.4	155	0.10	0.8	90	0.09	0.8	145	0.10	0.8	465	0.12	0.8	35	0.07	0.6	30	0.15	1.0
DCGT 11T301E-SF3	**T6310**	0.1	160	0.05	0.5	115	0.05	0.5	125	0.05	0.5	480	0.06	0.5	45	0.04	0.4	30	0.15	1.0

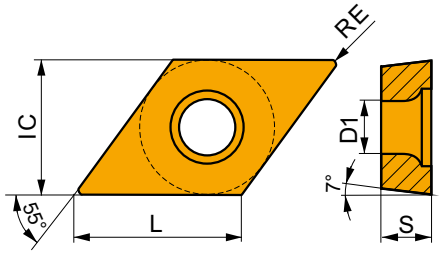
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
																				
			SF3 geometry with highly positive design for fine to finish machining, and continuous cuts.																	
DCGT 11T302E-SF3	**H07**	0.2	–	–	–	95	0.05	0.8	150	0.05	0.8	485	0.06	0.8	45	0.04	0.6	–	–	–
	T6310	0.2	165	0.05	0.8	115	0.05	0.8	130	0.05	0.8	495	0.06	0.8	45	0.04	0.6	30	0.15	1.0
DCGT 11T304E-SF3	**H07**	0.4	–	–	–	75	0.09	0.8	120	0.10	0.8	390	0.12	0.8	35	0.07	0.6	–	–	–
	T6310	0.4	145	0.10	0.8	100	0.09	0.8	115	0.10	0.8	435	0.12	0.8	40	0.07	0.6	25	0.15	1.0
	T8315	0.4	155	0.10	0.8	90	0.09	0.8	145	0.10	0.8	465	0.12	0.8	35	0.07	0.6	30	0.15	1.0
DCGT 11T308E-SF3	**H07**	0.8	–	–	–	90	0.09	0.8	145	0.10	0.8	455	0.12	0.8	45	0.08	0.6	–	–	–
	T6310	0.8	170	0.10	0.8	120	0.09	0.8	135	0.10	0.8	510	0.12	0.8	50	0.08	0.6	30	0.15	1.0
	T8315	0.8	180	0.10	0.8	105	0.09	0.8	170	0.10	0.8	540	0.12	0.8	45	0.08	0.6	35	0.15	1.0
			ER-SI geometry with positive right-handed design for fine-finish machining, and continuous cuts.																	
DCGT 11T304ER-SI	**T8330**	0.4	170	0.12	0.8	100	0.11	0.8	160	0.12	0.8	–	–	–	40	0.10	0.6	–	–	–
	T8430	0.4	205	0.12	0.8	110	0.11	0.8	170	0.12	0.8	–	–	–	45	0.10	0.6	–	–	–
DCGT 11T308ER-SI	**T8330**	0.8	170	0.22	1.0	100	0.20	1.0	160	0.22	1.0	–	–	–	40	0.18	0.8	–	–	–
	T8430	0.8	190	0.22	1.0	105	0.20	1.0	155	0.22	1.0	–	–	–	40	0.18	0.8	–	–	–
			EL-SI geometry with positive left-handed design for fine-finish machining, and continuous cuts.																	
DCGT 11T304EL-SI	**T8330**	0.4	170	0.12	0.8	100	0.11	0.8	160	0.12	0.8	–	–	–	40	0.10	0.6	–	–	–
	T8430	0.4	205	0.12	0.8	110	0.11	0.8	170	0.12	0.8	–	–	–	45	0.10	0.6	–	–	–
DCGT 11T308EL-SI	**T8430**	0.8	190	0.22	1.0	105	0.20	1.0	155	0.22	1.0	–	–	–	40	0.18	0.8	–	–	–

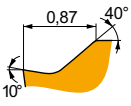
DCMT

PRAMET

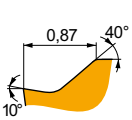
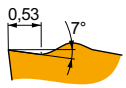
	IC [mm]	D1 [mm]	L [mm]	S [mm]
0702	6.350	2.80	7.80	2.38
11T3	9.525	4.40	11.60	3.97
1504	12.700	5.50	15.50	4.76



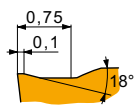
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
																				
			FF geometry with positive design for fine-finish to finish machining, and continuous to slightly interrupted cuts.																	
DCMT 11T302E-FF	**T8315**	0.2	160	0.10	0.8	95	0.09	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.2	150	0.10	0.8	90	0.09	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8430	0.2	185	0.10	0.8	100	0.09	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T9315	0.2	255	0.10	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

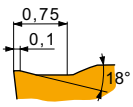
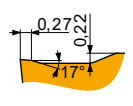
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]
																				
FF geometry with positive design for fine-finish to finish machining, and continuous to slightly interrupted cuts.																				
DCMT 11T304E-FF	**T8315**	0.4	160	0.12	0.8	95	0.11	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	150	0.12	0.8	90	0.11	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8430	0.4	185	0.12	0.8	100	0.11	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T9315	0.4	255	0.12	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
DCMT 11T308E-FF	**T8315**	0.8	180	0.15	0.8	105	0.14	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	170	0.15	0.8	100	0.14	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8430	0.8	200	0.15	0.8	110	0.14	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T9315	0.8	270	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
																				
FF2 geometry with positive design for fine-finish to finish machining, and continuous to slightly interrupted cuts.																				
DCMT 070202E-FF2	**T7325**	0.2	190	0.05	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.2	165	0.05	0.8	–	–	–	155	0.05	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.2	225	0.05	0.8	–	–	–	185	0.05	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.2	280	0.05	0.8	–	–	–	265	0.05	0.8	–	–	–	–	–	–	–	–	–
	TT010	0.2	275	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
DCMT 070204E-FF2	**T7325**	0.4	160	0.12	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	135	0.12	0.8	–	–	–	125	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	170	0.12	0.8	–	–	–	135	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	230	0.12	0.8	–	–	–	215	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	205	0.12	0.8	–	–	–	190	0.12	0.8	–	–	–	–	–	–	–	–	–
DCMT 070208E-FF2	**T7325**	0.8	170	0.17	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	150	0.17	0.8	–	–	–	140	0.17	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.8	175	0.17	0.8	–	–	–	140	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.8	235	0.17	0.8	–	–	–	220	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.8	215	0.17	0.8	–	–	–	200	0.17	0.8	–	–	–	–	–	–	–	–	–
DCMT 11T304E-FF2	**T7325**	0.4	160	0.12	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	135	0.12	0.8	–	–	–	125	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	170	0.12	0.8	–	–	–	135	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	230	0.12	0.8	–	–	–	215	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	205	0.12	0.8	–	–	–	190	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9335	0.4	175	0.12	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	TT010	0.4	280	0.06	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
DCMT 11T308E-FF2	**T7325**	0.8	170	0.17	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	150	0.17	0.8	–	–	–	140	0.17	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.8	175	0.17	0.8	–	–	–	140	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.8	235	0.17	0.8	–	–	–	220	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.8	215	0.17	0.8	–	–	–	200	0.17	0.8	–	–	–	–	–	–	–	–	–
	TT010	0.8	280	0.10	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
FM geometry for finish to semi-rough machining, and continuous to slightly interrupted cuts.																				
DCMT 070202E-FM	**T7325**	0.2	175	0.10	0.8	135	0.09	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.2	160	0.10	0.8	95	0.09	0.8	150	0.10	0.8	480	0.12	0.8	–	–	–	–	–	–
	T8330	0.2	150	0.10	0.8	90	0.09	0.8	140	0.10	0.8	450	0.12	0.8	–	–	–	–	–	–
	T8430	0.2	185	0.10	0.8	100	0.09	0.8	150	0.10	0.8	510	0.12	0.8	–	–	–	–	–	–
	T9315	0.2	255	0.10	0.8	–	–	–	240	0.10	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.2	230	0.10	0.8	135	0.09	0.8	215	0.10	0.8	–	–	–	–	–	–	–	–	–

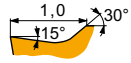
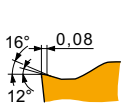
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
FM geometry for finish to semi-rough machining, and continuous to slightly interrupted cuts.																				
DCMT 070204E-FM	**T7325**	0.4	155	0.17	0.8	120	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.4	155	0.17	0.8	120	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	160	0.12	0.8	95	0.11	0.8	150	0.12	0.8	480	0.14	0.8	–	–	–	–	–	–
	T8330	0.4	150	0.12	0.8	90	0.11	0.8	140	0.12	0.8	450	0.14	0.8	–	–	–	–	–	–
	T8430	0.4	185	0.12	0.8	100	0.11	0.8	150	0.12	0.8	510	0.14	0.8	–	–	–	–	–	–
	T9315	0.4	255	0.12	0.8	–	–	–	240	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	190	0.18	0.8	110	0.16	0.8	180	0.18	0.8	–	–	–	–	–	–	–	–	–
DCMT 11T302E-FM	**T7325**	0.2	175	0.10	0.8	135	0.09	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.2	160	0.10	0.8	95	0.09	0.8	150	0.10	0.8	480	0.12	0.8	–	–	–	–	–	–
	T8330	0.2	150	0.10	0.8	90	0.09	0.8	140	0.10	0.8	450	0.12	0.8	–	–	–	–	–	–
	T8430	0.2	185	0.10	0.8	100	0.09	0.8	150	0.10	0.8	510	0.12	0.8	–	–	–	–	–	–
	T9315	0.2	255	0.10	0.8	–	–	–	240	0.10	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.2	230	0.10	0.8	135	0.09	0.8	215	0.10	0.8	–	–	–	–	–	–	–	–	–
DCMT 11T304E-FM	**T7325**	0.4	155	0.17	0.8	120	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.4	155	0.17	0.8	120	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	160	0.12	0.8	95	0.11	0.8	150	0.12	0.8	480	0.14	0.8	–	–	–	–	–	–
	T8330	0.4	135	0.17	0.8	80	0.15	0.8	125	0.17	0.8	405	0.20	0.8	–	–	–	–	–	–
	T8430	0.4	155	0.17	0.8	85	0.15	0.8	130	0.17	0.8	435	0.20	0.8	–	–	–	–	–	–
	T9310	0.4	285	0.12	0.8	–	–	–	270	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	255	0.12	0.8	–	–	–	240	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	190	0.18	0.8	110	0.16	0.8	180	0.18	0.8	–	–	–	–	–	–	–	–	–
DCMT 11T308E-FM	**T7325**	0.8	185	0.17	0.8	140	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.8	180	0.17	0.8	140	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	170	0.17	0.8	100	0.15	0.8	160	0.17	0.8	510	0.20	0.8	–	–	–	–	–	–
	T8330	0.8	165	0.17	0.8	95	0.15	0.8	155	0.17	0.8	495	0.20	0.8	–	–	–	–	–	–
	T8430	0.8	190	0.17	0.8	105	0.15	0.8	155	0.17	0.8	525	0.20	0.8	–	–	–	–	–	–
	T9310	0.8	285	0.17	0.8	–	–	–	270	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.8	260	0.17	0.8	–	–	–	245	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.8	235	0.17	0.8	140	0.15	0.8	220	0.17	0.8	–	–	–	–	–	–	–	–	–
DCMT 11T312E-FM	**T8330**	1.2	150	0.22	1.2	90	0.22	1.2	140	0.22	1.2	450	0.26	1.2	–	–	–	–	–	–
	T8430	1.2	175	0.22	1.2	95	0.22	1.2	140	0.22	1.2	480	0.26	1.2	–	–	–	–	–	–
	T9315	1.2	235	0.22	1.2	–	–	–	220	0.22	1.2	–	–	–	–	–	–	–	–	–
	T9325	1.2	210	0.22	1.2	125	0.22	1.2	195	0.22	1.2	–	–	–	–	–	–	–	–	–
																				
FM2 geometry for finish to medium machining, and continuous to interrupted cuts.																				
DCMT 070204E-FM2	**T6310**	0.4	135	0.12	0.8	95	0.11	0.8	105	0.12	0.8	–	–	–	–	–	–	–	–	–
	T7325	0.4	160	0.12	0.8	120	0.11	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	135	0.12	0.8	80	0.11	0.8	125	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	170	0.12	0.8	90	0.11	0.8	135	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	230	0.12	0.8	–	–	–	215	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	205	0.12	0.8	120	0.11	0.8	190	0.12	0.8	–	–	–	–	–	–	–	–	–
DCMT 11T304E-FM2	**T6310**	0.4	135	0.12	0.8	95	0.11	0.8	105	0.12	0.8	–	–	–	–	–	–	–	–	–
	T7325	0.4	160	0.12	0.8	120	0.11	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	135	0.12	0.8	80	0.11	0.8	125	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	170	0.12	0.8	90	0.11	0.8	135	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	230	0.12	0.8	–	–	–	215	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	205	0.12	0.8	120	0.11	0.8	190	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9335	0.4	175	0.12	0.8	105	0.11	0.8	–	–	–	–	–	–	–	–	–	–	–	–

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]
																				
FM2 geometry for finish to medium machining, and continuous to interrupted cuts.																				
DCMT 11T308E-FM2	**T6310**	0.8	150	0.17	0.8	105	0.15	0.8	120	0.17	0.8	–	–	–	–	–	–	–	–	–
	T7325	0.8	170	0.17	0.8	130	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	150	0.17	0.8	90	0.15	0.8	140	0.17	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.8	175	0.17	0.8	95	0.15	0.8	140	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.8	235	0.17	0.8	–	–	–	220	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.8	215	0.17	0.8	125	0.15	0.8	200	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9335	0.8	180	0.17	0.8	105	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–
DCMT 11T312E-FM2	**T8430**	1.2	155	0.22	1.2	85	0.20	1.2	130	0.22	1.2	–	–	–	–	–	–	–	–	–
	T9325	1.2	190	0.22	1.2	110	0.20	1.2	180	0.22	1.2	–	–	–	–	–	–	–	–	–
DCMT 150408E-FM2	**T9315**	0.8	205	0.20	1.5	–	–	–	190	0.20	1.5	–	–	–	–	–	–	–	–	–
	T9325	0.8	185	0.20	1.5	110	0.18	1.5	175	0.20	1.5	–	–	–	–	–	–	–	–	–
	T9335	0.8	160	0.20	1.5	95	0.18	1.5	–	–	–	–	–	–	–	–	–	–	–	–
RF geometry for semi-rough to rough machining, and continuous to interrupted cuts.																				
DCMT 11T304E-RF	**T5315**	0.4	175	0.20	0.8	–	–	–	165	0.20	0.8	–	–	–	–	–	–	35	0.15	1.0
	T7335	0.4	115	0.20	0.8	85	0.18	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.4	150	0.20	0.8	90	0.18	0.8	140	0.20	0.8	–	–	–	–	–	–	–	–	–
DCMT 11T308E-RF	**T5315**	0.8	205	0.20	0.8	–	–	–	190	0.20	0.8	–	–	–	–	–	–	40	0.15	1.0
	T7335	0.8	140	0.20	0.8	105	0.18	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	175	0.20	0.8	105	0.18	0.8	165	0.20	0.8	–	–	–	–	–	–	–	–	–
																				
RM geometry for semi-rough to rough machining, and continuous to interrupted cuts.																				
DCMT 11T304E-RM	**T5305**	0.4	225	0.27	0.8	–	–	–	210	0.27	0.8	–	–	–	–	–	–	45	0.15	1.0
	T5315	0.4	205	0.27	0.8	–	–	–	190	0.27	0.8	–	–	–	–	–	–	40	0.15	1.0
	T7335	0.4	135	0.27	0.8	105	0.24	0.8	–	–	–	–	–	–	40	0.19	0.6	–	–	–
	T8330	0.4	125	0.27	0.8	75	0.24	0.8	115	0.27	0.8	–	–	–	30	0.19	0.6	25	0.15	1.0
	T8430	0.4	135	0.27	0.8	75	0.24	0.8	110	0.27	0.8	–	–	–	25	0.19	0.6	20	0.15	1.0
	T9315	0.4	185	0.27	0.8	–	–	–	175	0.27	0.8	–	–	–	–	–	–	35	0.15	1.0
	T9325	0.4	165	0.27	0.8	95	0.24	0.8	155	0.27	0.8	–	–	–	35	0.19	0.6	–	–	–
DCMT 11T308E-RM	**T5305**	0.8	270	0.27	0.8	–	–	–	255	0.27	0.8	–	–	–	–	–	–	50	0.15	1.0
	T5315	0.8	240	0.27	0.8	–	–	–	225	0.27	0.8	–	–	–	–	–	–	45	0.15	1.0
	T7335	0.8	165	0.27	0.8	125	0.24	0.8	–	–	–	–	–	–	50	0.19	0.6	–	–	–
	T8330	0.8	150	0.27	0.8	90	0.24	0.8	140	0.27	0.8	–	–	–	35	0.19	0.6	30	0.15	1.0
	T8430	0.8	165	0.27	0.8	90	0.24	0.8	135	0.27	0.8	–	–	–	35	0.19	0.6	25	0.15	1.0
	T9315	0.8	220	0.27	0.8	–	–	–	205	0.27	0.8	–	–	–	–	–	–	40	0.15	1.0
	T9325	0.8	200	0.27	0.8	120	0.24	0.8	190	0.27	0.8	–	–	–	45	0.19	0.6	–	–	–
DCMT 11T312E-RM	**T7335**	1.2	165	0.27	1.2	125	0.24	1.2	–	–	–	–	–	–	50	0.19	1.2	–	–	–
	T8330	1.2	150	0.27	1.2	90	0.24	1.2	140	0.27	1.2	–	–	–	35	0.19	1.2	30	0.15	1.0
	T8430	1.2	170	0.27	1.2	90	0.24	1.2	135	0.27	1.2	–	–	–	35	0.19	1.2	25	0.15	1.0
	T9315	1.2	225	0.27	1.2	–	–	–	210	0.27	1.2	–	–	–	–	–	–	45	0.15	1.0
	T9325	1.2	200	0.27	1.2	120	0.24	1.2	190	0.27	1.2	–	–	–	45	0.19	1.2	–	–	–
DCMT 150408E-RM	**T8330**	0.8	135	0.27	1.9	80	0.24	1.9	125	0.27	1.9	–	–	–	30	0.22	1.5	25	0.15	1.0
	T8430	0.8	150	0.27	1.9	80	0.24	1.9	125	0.27	1.9	–	–	–	30	0.22	1.5	25	0.15	1.0
	T9315	0.8	200	0.27	1.9	–	–	–	190	0.27	1.9	–	–	–	–	–	–	40	0.15	1.0
	T9325	0.8	180	0.27	1.9	105	0.24	1.9	170	0.27	1.9	–	–	–	40	0.22	1.5	–	–	–

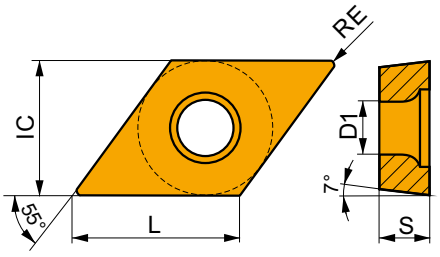
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
			E																	
UR geometry for fine to finish machining, and continuous to slightly interrupted cuts.																				
DCMT 070202E-UR	**T7325**	0.2	150	0.10	0.8	115	0.09	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.2	135	0.10	0.8	80	0.09	0.8	125	0.10	0.8	–	–	–	–	–	–	–	–	–
	T8330	0.2	130	0.10	0.8	75	0.09	0.8	120	0.10	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.2	155	0.10	0.8	85	0.09	0.8	130	0.10	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.2	220	0.10	0.8	–	–	–	205	0.10	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.2	200	0.10	0.8	120	0.09	0.8	190	0.10	0.8	–	–	–	–	–	–	–	–	–
DCMT 070204E-UR	**T7325**	0.4	135	0.17	0.8	105	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	135	0.12	0.8	80	0.11	0.8	125	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8330	0.4	130	0.12	0.8	75	0.11	0.8	120	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	155	0.12	0.8	85	0.11	0.8	130	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	220	0.12	0.8	–	–	–	205	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	165	0.18	0.8	95	0.16	0.8	155	0.18	0.8	–	–	–	–	–	–	–	–	–
	TT310	0.4	210	0.12	0.8	125	0.11	0.8	–	–	–	–	–	–	–	–	–	–	–	–
DCMT 11T302E-UR	**T7325**	0.2	150	0.10	0.8	115	0.09	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.2	130	0.10	0.8	75	0.09	0.8	120	0.10	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.2	155	0.10	0.8	85	0.09	0.8	130	0.10	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.2	220	0.10	0.8	–	–	–	205	0.10	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.2	200	0.10	0.8	120	0.09	0.8	190	0.10	0.8	–	–	–	–	–	–	–	–	–
	TT310	0.2	210	0.10	0.8	125	0.09	0.8	–	–	–	–	–	–	–	–	–	–	–	–
DCMT 11T304E-UR	**T5315**	0.4	220	0.12	0.8	–	–	–	205	0.12	0.8	–	–	–	–	–	–	–	–	–
	T7325	0.4	135	0.17	0.8	105	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.4	130	0.17	0.8	100	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	135	0.12	0.8	80	0.11	0.8	125	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8330	0.4	130	0.12	0.8	75	0.11	0.8	120	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	155	0.12	0.8	85	0.11	0.8	130	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	220	0.12	0.8	–	–	–	205	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	165	0.18	0.8	95	0.16	0.8	155	0.18	0.8	–	–	–	–	–	–	–	–	–
	TT310	0.4	210	0.12	0.8	125	0.11	0.8	–	–	–	–	–	–	–	–	–	–	–	–
DCMT 11T308E-UR	**T5315**	0.8	230	0.17	0.8	–	–	–	215	0.17	0.8	–	–	–	–	–	–	–	–	–
	T7325	0.8	160	0.17	0.8	120	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.8	155	0.17	0.8	120	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	145	0.17	0.8	85	0.15	0.8	135	0.17	0.8	–	–	–	–	–	–	–	–	–
	T8330	0.8	140	0.17	0.8	80	0.15	0.8	130	0.17	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.8	165	0.17	0.8	90	0.15	0.8	135	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.8	225	0.17	0.8	–	–	–	210	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.8	200	0.17	0.8	120	0.15	0.8	190	0.17	0.8	–	–	–	–	–	–	–	–	–
	TT310	0.8	225	0.17	0.8	135	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–
DCMT 11T312E-UR	**T9315**	1.2	205	0.22	1.2	–	–	–	190	0.22	1.2	–	–	–	–	–	–	–	–	–
	T9325	1.2	180	0.22	1.2	105	0.20	1.2	170	0.22	1.2	–	–	–	–	–	–	–	–	–
			W	S																
W-FM wiper geometry for fine to finish machining with increased feed rates and improved surface finish.																				
DCMX 11T304W-FM	**T7325**	0.4	130	0.30	0.8	100	0.27	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	115	0.30	0.8	65	0.27	0.8	105	0.30	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	130	0.30	0.8	70	0.27	0.8	105	0.30	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	170	0.30	0.8	–	–	–	160	0.30	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	155	0.30	0.8	90	0.27	0.8	145	0.30	0.8	–	–	–	–	–	–	–	–	–
DCMX 11T308W-FM	**T7325**	0.8	140	0.40	1.0	105	0.36	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8430	0.8	130	0.40	1.0	70	0.36	1.0	105	0.40	1.0	–	–	–	–	–	–	–	–	–
	T9315	0.8	175	0.40	1.0	–	–	–	165	0.40	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	160	0.40	1.0	95	0.36	1.0	150	0.40	1.0	–	–	–	–	–	–	–	–	–

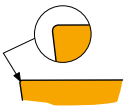
DCMW

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
0702	6.350	2.80	7.80	2.38
11T3	9.525	4.40	11.60	3.97



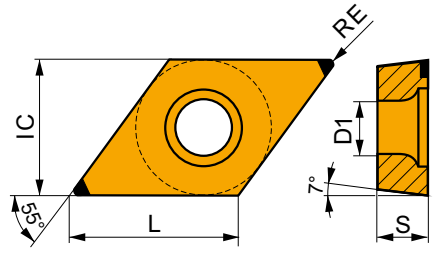
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			E																	
			For fine-finish to semi-rough machining, and continuous to slightly interrupted cuts.																	
DCMW 070202	**T5305**	0.2	–	–	–	–	–	–	200	0.08	0.8	–	–	–	–	–	–	40	0.15	1.0
	T6310	0.2	–	–	–	–	–	–	80	0.08	0.8	–	–	–	–	–	–	20	0.15	1.0
DCMW 070204	**T5305**	0.4	–	–	–	–	–	–	195	0.10	0.8	–	–	–	–	–	–	40	0.15	1.0
	T5315	0.4	–	–	–	–	–	–	175	0.10	0.8	–	–	–	–	–	–	35	0.15	1.0
	T6310	0.4	–	–	–	–	–	–	85	0.10	0.8	–	–	–	–	–	–	20	0.15	1.0
DCMW 11T304	**T5305**	0.4	–	–	–	–	–	–	190	0.10	1.2	–	–	–	–	–	–	40	0.15	1.0
	T5315	0.4	–	–	–	–	–	–	165	0.10	1.2	–	–	–	–	–	–	35	0.15	1.0
	T6310	0.4	–	–	–	–	–	–	80	0.10	1.2	–	–	–	–	–	–	20	0.15	1.0
DCMW 11T308	**T5305**	0.8	–	–	–	–	–	–	185	0.18	1.2	–	–	–	–	–	–	35	0.15	1.0
	T5315	0.8	–	–	–	–	–	–	160	0.18	1.2	–	–	–	–	–	–	30	0.15	1.0
	T6310	0.8	–	–	–	–	–	–	80	0.18	1.2	–	–	–	–	–	–	20	0.15	1.0

DCGW CBN

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
11T3	9.525	4.50	11.60	3.97

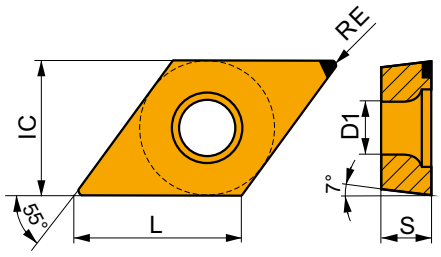


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

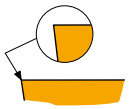
Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			HSC		S															
			For finish machining.																	
DCGW 11T304S01020B	**TB310**	0.4	–	–	–	–	–	–	370	0.10	0.4	–	–	–	95	0.07	0.3	75	0.15	1.0
DCGW 11T308S01020B	**TB310**	0.8	–	–	–	–	–	–	380	0.15	0.6	–	–	–	100	0.11	0.5	80	0.15	1.0

DCMW PCD

	IC [mm]	D1 [mm]	L [mm]	S [mm]
11T3	9.525	4.40	11.60	3.97



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			HSC F																	
			For finish machining, high speeds and stable cutting conditions.																	
DCMW 11T304FN	**PD1**	0.4	–	–	–	–	–	–	–	–	–	■ 1035	0.12	0.5	–	–	–	–	–	–
DCMW 11T308FN	**PD1**	0.8	–	–	–	–	–	–	–	–	–	■ 1200	0.12	1.0	–	–	–	–	–	–

SDJC(RL) EXT

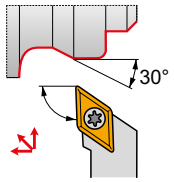
P M K N S H

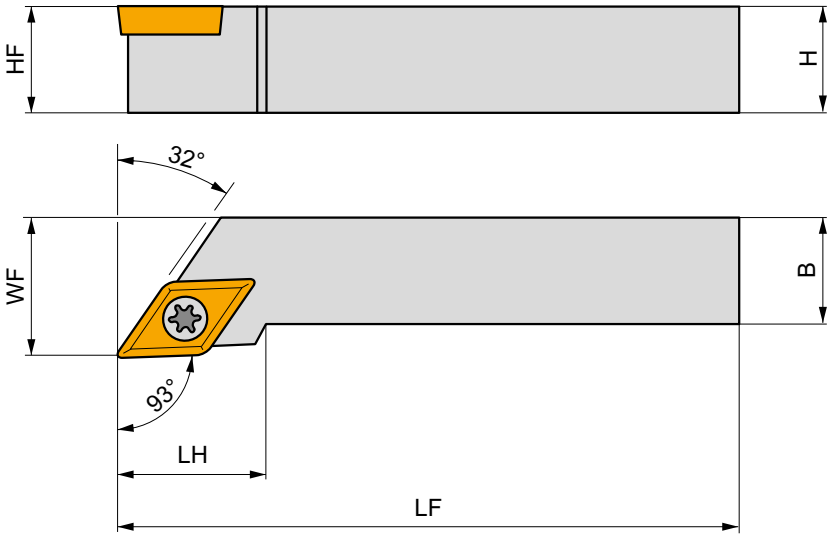
PRAMET

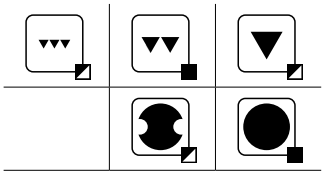
S

External Screw Lock Tool Holder with 93° Cutting Angle for DC.. Insert

External Right/Left hand tool holder with 93° cutting angle for screw type positive DC.. 07, 11 or 15 inserts. Suited for external longitudinal turning with shoulder, copy, taper and chamfer turning. Available with shank size 08x08 up to 25x25 mm. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	SDJCR 0808 D 07	8	8	8	10	60	14	0	0	0.06	GI052	S01
	SDJCR 1010 E 07	10	10	10	12	70	14	0	0	0.06	GI052	S01
	SDJCR 1212 F 07	12	12	12	16	80	14	0	0	0.11	GI052	S01
	SDJCR 1212 F 11	12	12	12	16	80	20	0	0	0.10	GI012	S08
	SDJCR 1616 H 11	16	16	16	20	100	20	0	0	0.22	GI012	S08
	SDJCR 2020 K 11-M-A	20	20	20	25	125	20	0	0	0.40	GI012	SD10
	SDJCR 2525 M 11-M-A	25	25	25	32	150	20	0	0	0.74	GI012	SD10
	SDJCR 2525 M 15	25	25	25	32	150	28	0	0	0.75	GI243	SD11
L	SDJCL 0808 D 07	8	8	8	10	60	14	0	0	0.04	GI052	S01
	SDJCL 1010 E 07	10	10	10	12	70	14	0	0	0.08	GI052	S01
	SDJCL 1212 F 07	12	12	12	16	80	14	0	0	0.12	GI052	S01
	SDJCL 1212 F 11	12	12	12	16	80	20	0	0	0.12	GI012	S08
	SDJCL 1616 H 11	16	16	16	20	100	20	0	0	0.20	GI012	S08
	SDJCL 2020 K 11-M-A	20	20	20	25	125	20	0	0	0.41	GI012	SD10
	SDJCL 2525 M 11-M-A	25	25	25	32	150	20	0	0	0.74	GI012	SD10
	SDJCL 2525 M 15	25	25	25	32	150	28	0	0	0.07	GI243	SD11

GI012	DC.. 11T3..
GI052	DC.. 0702..
GI243	DC.. 1504..

		Nm						
SD10	US 3510-T15P	3.0	M 3.5	10.6	SDN 110304	MS 3510	FLAG T15P	HXK 3.5
SD11	US 64518-T15P	5.0	M 4.5	18	SDN 150304	MS 4512	FLAG T15P	HXK 5
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
S08	US 3510-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–

SDNCN EXT

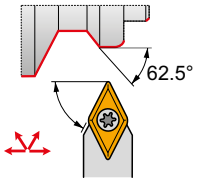
P M K N S H

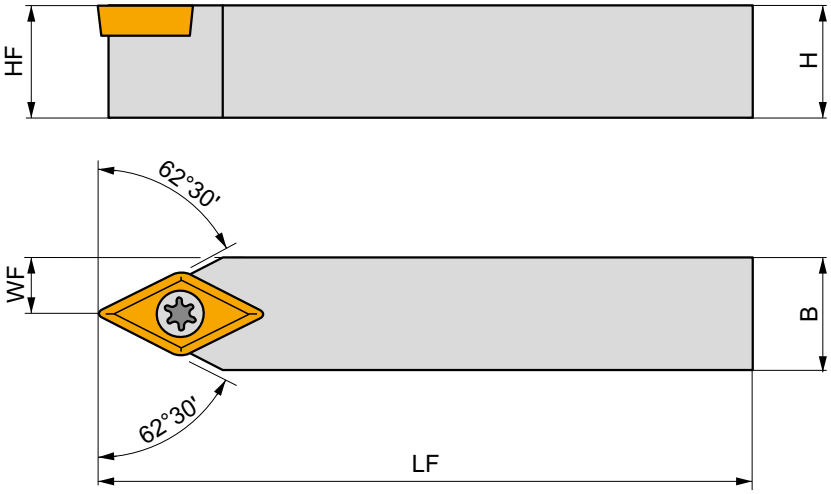
PRAMET

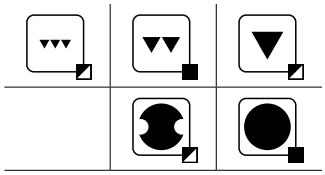
S

External Screw Lock Tool Holder with 62.5° Cutting Angle for DC.. Insert

External neutral tool holder with 62.5° cutting angle for screw type positive DC.. 07 or 11 inserts. Suited for external longitudinal turning without shoulder, copy, taper and chamfer turning. Available with shank size 08x08 up to 25x25 mm. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LAMS [°]	GAMO [°]	kg	GI	SO
N	**SDNCN 0808 D 07**	8	8	8	4	60	0	0	0.06	GI052	SO1
	SDNCN 1010 E 07	10	10	10	5	70	0	0	0.08	GI052	SO1
	SDNCN 1212 F 07	12	12	12	6	80	0	0	0.12	GI052	SO1
	SDNCN 1212 F 11	12	12	12	6	80	0	0	0.12	GI012	SO8
	SDNCN 1616 H 11	16	16	16	8	100	0	0	0.18	GI012	SO8
	SDNCN 2020 K 11-M-A	20	20	20	10	125	0	0	0.35	GI012	SD10
	SDNCN 2525 M 11-M-A	25	25	25	12.5	150	0	0	0.70	GI012	SD10

GI	
GI012	DC.. 11T3..
GI052	DC.. 0702..

SO		Nm						
SD10	US 3510-T15P	3.0	M 3.5	10.6	SDN 110304	MS 3510	FLAG T15P	HXK 3.5
SO1	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
SO8	US 3510-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–

C.-SDJC(RL) EXT

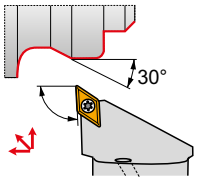
P M K N S H

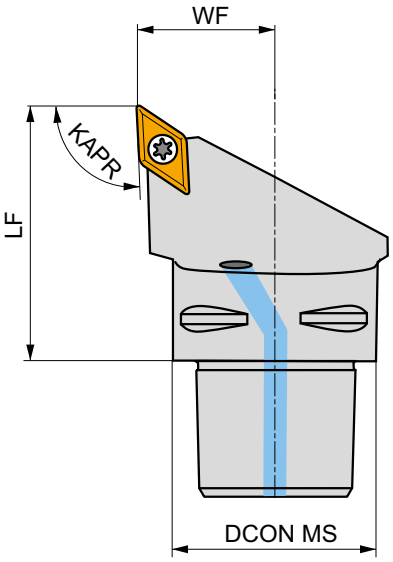
PRAMET

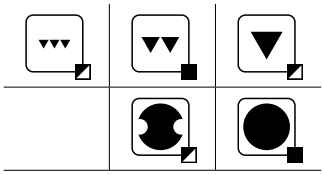
S

External PSC Quick Change Tool, Screw Lock, 93° Cutting Angle for DC.. Insert

External Right/Left hand tool, through coolant, with 93° cutting angle for screw type positive DC.. 07, 11 or 15 inserts. Suited for external longitudinal turning with shoulder, copy, taper and chamfer turning. Available with PSC (Polygon Shank Coupling) size C3 up to C5. Body treated for longer tool life.







	Product	DCON MS [mm]	WF [mm]	LF [mm]	KAPR [°]	LAMS [°]	GAMO [°]		kg		
R	C3-SDJCR-22040-11	32	22	40	93	0	0	✓	0.21	GI012	C-SD11V-1
	C4-SDJCR-27050-11	40	27	50	93	0	0	✓	0.38	GI012	C-SD11V-1
	C5-SDJCR-35060-11	50	35	60	93	0	0	✓	0.69	GI012	C-SD11V-2
L	C3-SDJCL-22040-11	32	22	40	93	0	0	✓	0.21	GI012	C-SD11V-1
	C4-SDJCL-27050-11	40	27	50	93	0	0	✓	0.38	GI012	C-SD11V-1
	C5-SDJCL-35060-11	50	35	60	93	0	0	✓	0.70	GI012	C-SD11V-2

GI012	DC.. 11T3..

		Nm						
C-SD11V-1	US 2001-T15P	3.0	M 3.5	12.1	SDS 263-01	MS 9001	FLAG T15P/3,5	CN 034-01
C-SD11V-2	US 2001-T15P	3.0	M 3.5	12.1	SDS 263-01	MS 9001	FLAG T15P/3,5	CN 034-02

C.-SDNCN EXT

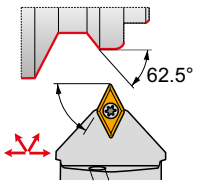
P M K N S H

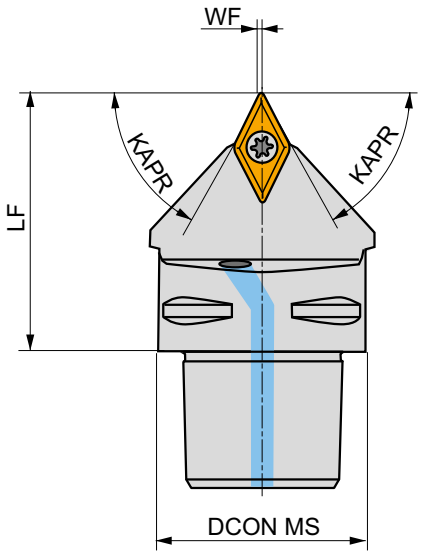
PRAMET

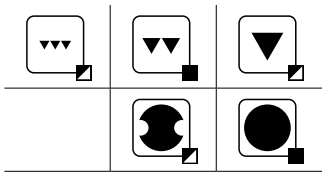
S

External PSC Quick Change Tool, Screw Lock, 62.5° Cutting Angle, DC.. Insert

External Right/Left hand tool, through coolant, with 62.5° cutting angle for screw type positive DC.. 11 inserts. Suited for external longitudinal turning without shoulder, copy, taper and chamfer turning. Available with PSC (Polygon Shank Coupling) size C4 and C5. Body treated for longer tool life.







	Product	DCON MS [mm]	WF [mm]	LF [mm]	KAPR [°]	LAMS [°]	GAMO [°]		kg		
N	**C4-SDNCN-00050-11**	40	0.5	50	62.5	0	0	✓	0.35	GI012	C-SD11V-1
	C5-SDNCN-00060-11	50	0.5	60	62.5	0	0	✓	0.62	GI012	C-SD11V-2

GI012	DC.. 11T3..

		Nm						
C-SD11V-1	US 2001-T15P	3.0	M 3.5	12.1	SDS 263-01	MS 9001	FLAG T15P/3,5	CN 034-01
C-SD11V-2	US 2001-T15P	3.0	M 3.5	12.1	SDS 263-01	MS 9001	FLAG T15P/3,5	CN 034-02

SDQC(RL) INT

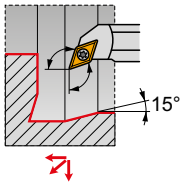
P M K N S H

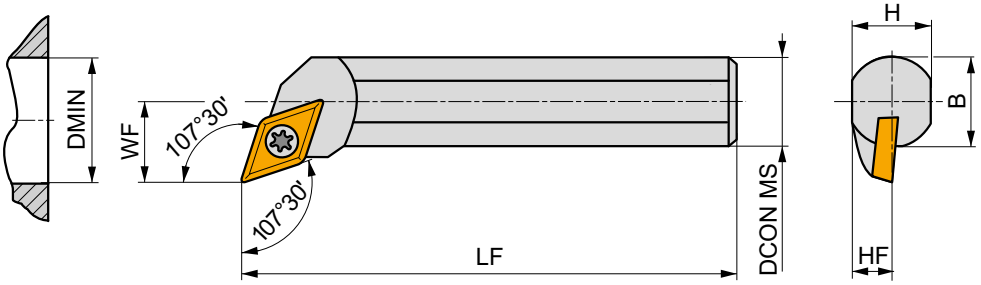
PRAMET

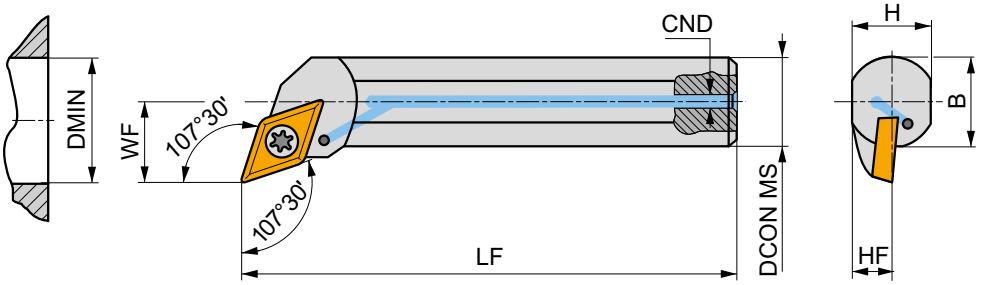
S

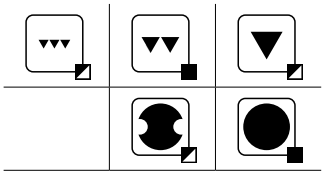
Internal Screw Lock Boring Bar with 107.5° Cutting Angle for DC.. Insert

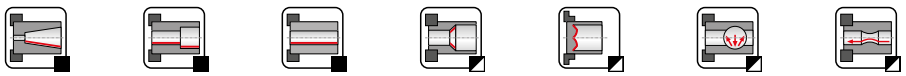
Internal Right/Left hand boring bar, through coolant available, 107.5° cutting angle for screw type DC.. 07 or 11 inserts. Minimum internal turning diameter Ø13 mm. For internal longitudinal turning with shoulder, taper, copying and chamfer turning. Ø10 to Ø32 mm shanks available. Body treated for longer tool life.











	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	H [mm]	B [mm]	LF [mm]	CND [mm]	LAMS [°]	GAMO [°]		kg		
R	A10H-SDQCR 07	10	13	7	9	–	100	4	-10	0	✓	0.07	GI052	S02
	A12K-SDQCR 07	12	16	9	11	–	125	5	-7	0	✓	0.10	GI052	S02
	A16M-SDQCR 07	16	20	11	14.5	–	150	6	-7	0	✓	0.24	GI052	S01
	A20Q-SDQCR 11	20	25	13	18	–	180	8	-5	0	✓	0.40	GI012	S08
	S20S-SDQCR 11	20	25	13	18	18.5	250	–	-5	0	–	0.60	GI012	S08
	A25R-SDQCR 11	25	32	17	23	23	200	8	-3	0	✓	0.67	GI012	S08
	S25T-SDQCR 11	25	32	17	23	23	300	–	-3	0	–	1.09	GI012	S08
	A32S-SDQCR 11-A	32	40	22	30	30	250	8	-10	0	✓	1.25	GI012	SD10
	S32U-SDQCR 11-A	32	40	22	30	30	350	–	-10	0	–	2.10	GI012	SD10
L	A10H-SDQCL 07	10	13	7	9	–	100	4	-10	0	✓	0.06	GI052	S02
	A12K-SDQCL 07	12	16	9	11	–	125	5	-7	0	✓	0.11	GI052	S02
	A16M-SDQCL 07	16	20	11	14.5	–	150	6	-7	0	✓	0.24	GI052	S01
	A20Q-SDQCL 11	20	25	13	18	–	180	8	-5	0	✓	0.37	GI012	S08
	S20S-SDQCL 11	20	25	13	18	18.5	250	–	-5	0	–	0.63	GI012	S08
	A25R-SDQCL 11	25	32	17	23	23	200	8	-3	0	✓	0.64	GI012	S08
	S25T-SDQCL 11	25	32	17	23	23	300	–	-3	0	–	1.15	GI012	S08
	A32S-SDQCL 11-A	32	40	22	30	30	250	8	-10	0	✓	1.33	GI012	SD10
	S32U-SDQCL 11-A	32	40	22	30	30	350	–	-10	0	–	2.08	GI012	SD10

GI012	DC.. 11T3..
GI052	DC.. 0702..

		Nm						
SD10	US 3510-T15P	3.0	M 3.5	10.6	SDN 110304	MS 3510	FLAG T15P	HXK 3.5
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
S02	US 2505-T07P	0.9	M 2.5	5.2	–	–	FLAG T07P	–
S08	US 3510-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–

SDUC(RL) INT

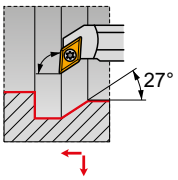
P M K N S H

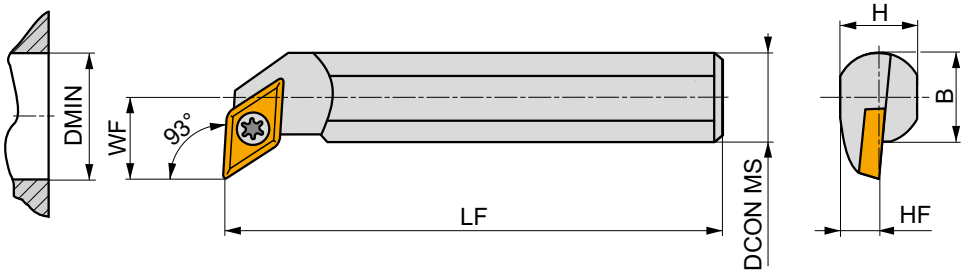
PRAMET

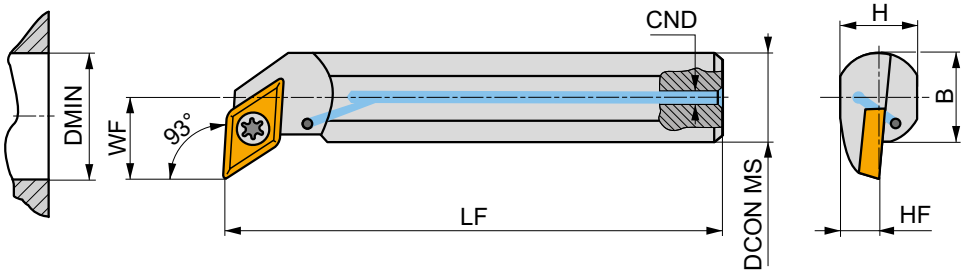
S

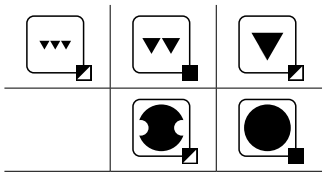
Internal Screw Lock Boring Bar with 93° Cutting Angle for DC.. Insert

Internal Right/Left hand boring bar, through coolant available, 93° cutting angle for screw type DC.. 07 or 11 inserts. Minimum internal turning diameter Ø13 mm. For internal longitudinal turning with shoulder, taper, copying and chamfer turning. Ø10 up to Ø32 mm shanks available. Body treated for longer tool life.









	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	H [mm]	B [mm]	LF [mm]	CND [mm]	LAMS [°]	GAMO [°]		kg		
R	A10H-SDUCR 07	10	13	7	9	–	100	4	-10	0	✓	0.05	GI052	S02
	A12K-SDUCR 07	12	16	9	11	–	125	5	-7	0	✓	0.12	GI052	S02
	A16M-SDUCR 07	16	20	11	14.5	–	150	6	-7	0	✓	0.22	GI052	S01
	A20Q-SDUCR 11	20	25	13	18	–	180	8	-3	0	✓	0.38	GI012	S08
	S20S-SDUCR 11	20	25	13	18	18.5	250	–	-5	0	–	0.60	GI012	S08
	A25R-SDUCR 11	25	32	17	23	23	200	8	-3	0	✓	0.60	GI012	S08
	S25T-SDUCR 11	25	32	17	23	23	300	–	-3	0	–	1.15	GI012	S08
	A32S-SDUCR 11-A	32	40	22	30	30	250	8	-10	0	✓	1.30	GI012	SD10
	S32U-SDUCR 11-A	32	40	22	30	30	350	–	-10	0	–	2.10	GI012	SD10
L	A10H-SDUCL 07	10	13	7	9	–	100	4	-10	0	✓	0.06	GI052	S02
	A12K-SDUCL 07	12	16	9	11	–	125	5	-7	0	✓	0.11	GI052	S02
	A16M-SDUCL 07	16	20	11	14.5	–	150	6	-7	0	✓	0.21	GI052	S01
	A20Q-SDUCL 11	20	25	13	18	–	180	8	-3	0	✓	0.38	GI012	S08
	S20S-SDUCL 11	20	25	13	18	18.5	250	–	-5	0	–	0.60	GI012	S08
	A25R-SDUCL 11	25	32	17	23	23	200	8	-3	0	✓	0.67	GI012	S08
	S25T-SDUCL 11	25	32	17	23	23	300	–	-3	0	–	1.15	GI012	S08
	A32S-SDUCL 11-A	32	40	22	30	30	250	8	-10	0	✓	1.35	GI012	SD10
	S32U-SDUCL 11-A	32	40	22	30	30	350	–	-10	0	–	2.09	GI012	SD10

GI012	DC.. 11T3..
GI052	DC.. 0702..

		Nm						
SD10	US 3510-T15P	3.0	M 3.5	10.6	SDN 110304	MS 3510	FLAG T15P	HXK 3.5
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
S02	US 2505-T07P	0.9	M 2.5	5.2	–	–	FLAG T07P	–
S08	US 3510-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–

SDUC(RL)-E INT

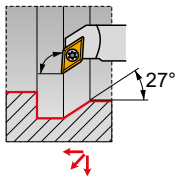
P M K N S H

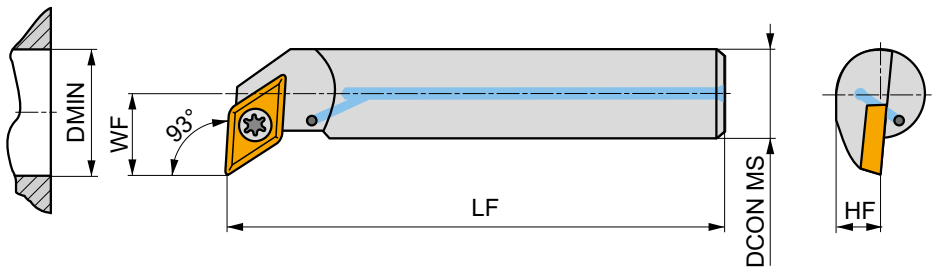
PRAMET

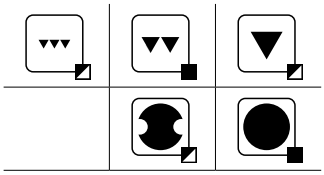
S

Internal Carbide Screw Lock Boring Bar with 93° Cutting Angle for DC.. Insert

Internal Right/Left hand carbide boring bar, through coolant, 93° cutting angle for screw type positive DC.. 07 inserts. Minimum internal turning diameter Ø15 mm. For internal longitudinal turning with shoulder, taper, copying and chamfer turning. Ø10 up to Ø16 mm shanks available. For tool overhang >3xD.







	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	HF [mm]	LF [mm]	LAMS [°]	GAMO [°]		kg		
R	E10M-SDUCR 07-ER	10	15	9	5.6	150	-5	0	✓	0.14	GI052	SD21
	E12Q-SDUCR 07-ER	12	18	11	6.5	150	-5	0	✓	0.26	GI052	SD21
	E16R-SDUCR 07-ER	16	22	13	8.5	150	-5	0	✓	0.49	GI052	SD21
L	E10M-SDUCL 07-ER	10	15	9	5.6	150	-5	0	✓	0.15	GI052	SD21
	E12Q-SDUCL 07-ER	12	18	11	6.5	150	-5	0	✓	0.26	GI052	SD21
	E16R-SDUCL 07-ER	16	22	13	8.5	150	-5	0	✓	0.50	GI052	SD21

GI052	DC.. 0702..

		Nm			
SD21	5513 020-03	0.8	M 2.5	6.5	PT-8001

SDZC(RL) INT

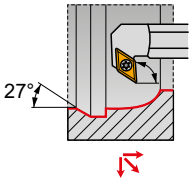
P M K N S H

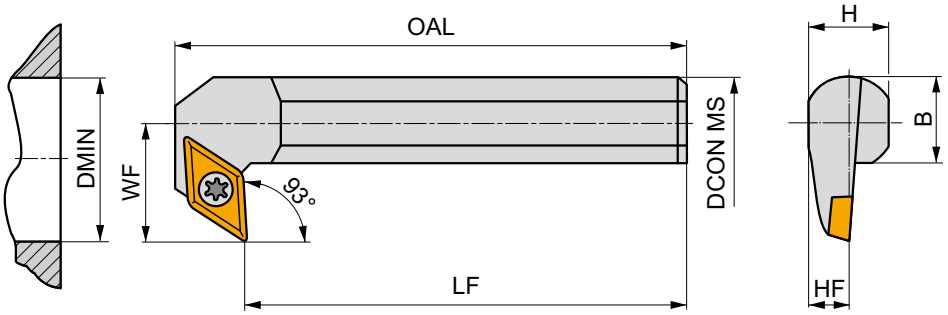
PRAMET

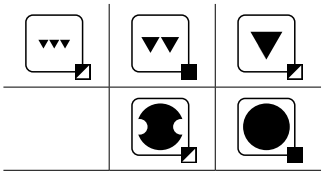
S

Internal Screw Lock Boring Bar with 93° Cutting Angle for DC.. Insert

Internal Right/Left hand boring bar with 93° cutting angle for screw type DC.. 07 or 11 inserts. Minimum internal turning diameter Ø27 mm. Suited for internal longitudinal back turning with shoulder, taper, copying and chamfer turning. Available with shank size Ø16 up to Ø40 mm. Body treated for longer tool life.







	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	H [mm]	B [mm]	LF [mm]	OAL [mm]	LAMS [°]	GAMO [°]	kg		
R	S16M-SDZCR 07-93	16	27	17	14.5	15	150	163	-4	0	0.26	GI052	S01
	S20Q-SDZCR 11-93	20	35	22	18	18.5	180	198	-5	0	0.50	GI012	S08
	S25R-SDZCR 11-93	25	42	27	23	23	200	218	-3	0	0.83	GI012	S08
	S32S-SDZCR 11-93-A	32	53	35	30	30	250	268	-6	0	1.64	GI012	SD10
	S40T-SDZCR 11-93-A	40	65	43	38	38	300	322	-5	0	3.00	GI012	SD10
L	S16M-SDZCL 07-93	16	27	17	14.5	15	150	163	-4	0	0.27	GI052	S01
	S20Q-SDZCL 11-93	20	35	22	18	18.5	180	198	-5	0	0.60	GI012	S08
	S25R-SDZCL 11-93	25	42	27	23	23	200	218	-3	0	0.80	GI012	S08
	S32S-SDZCL 11-93-A	32	53	35	30	30	250	268	-6	0	1.60	GI012	SD10
	S40T-SDZCL 11-93-A	40	65	43	38	38	300	322	-5	0	3.00	GI012	SD10

GI012	DC.. 11T3..
GI052	DC.. 0702..

		Nm						
SD10	US 3510-T15P	3.0	M 3.5	10.6	SDN 110304	MS 3510	FLAG T15P	HXK 3.5
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
S08	US 3510-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–

C.-SDUC(RL) INT

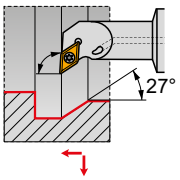
P M K N S H

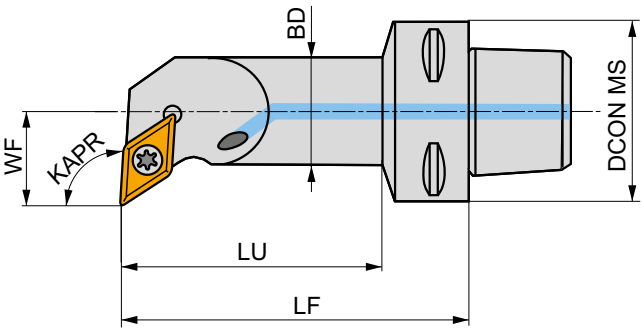
PRAMET

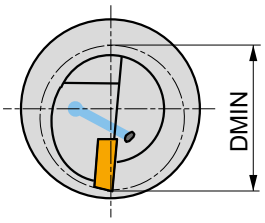
S

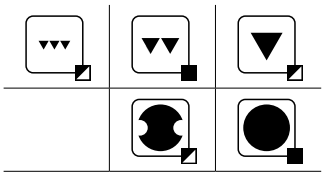
Internal PSC Quick Change Tool, Screw Lock, 93° Cutting Angle for DC.. Insert

Internal Right/Left hand tool, through coolant, with 93° cutting angle for screw type DC.. 07 or 11 inserts. Minimum internal turning diameter Ø20 mm. Suited for a wide range of internal turning applications. PSC shank (Polygon Shank Coupling) size C3 up to C5 with choice of lengths. Body treated for longer tool life.









	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	LF [mm]	LU [mm]	BD [mm]	KAPR [°]	LAMS [°]	GAMO [°]		kg		
R	C3-SDUCR-11065-07	50	20	11	65	48	16	93	-4.3	0	✓	0.20	GI052	SV11
	C4-SDUCR-11070-07	40	20	11	70	47	16	93	-4.3	0	✓	0.35	GI052	SV11
	C4-SDUCR-13080-11	40	25	13	80	57	20	93	-5.8	0	✓	0.41	GI012	SC09M
	C4-SDUCR-17090-11	40	32	17	90	68	25	93	-3.4	0	✓	0.49	GI012	SV16
	C5-SDUCR-13080-11	50	25	13	80	56	20	93	-5.8	0	✓	0.60	GI012	SC09M
	C5-SDUCR-17090-11	50	32	17	90	67	25	93	-3.4	0	✓	0.68	GI012	SV16
L	C4-SDUCL-11070-07	40	20	11	70	47	16	93	-4.3	0	✓	0.35	GI052	SV11
	C4-SDUCL-13080-11	40	25	13	80	57	20	93	-5.8	0	✓	0.41	GI012	SC09M
	C4-SDUCL-17090-11	40	32	17	90	68	25	93	-3.4	0	✓	0.49	GI012	SV16
	C5-SDUCL-13080-11	50	25	13	80	56	20	93	-5.8	0	✓	0.60	GI012	SC09M

GI012	DC.. 11T3..
GI052	DC.. 0702..

		Nm				
SC09M	US 2009-T15P	3.0	M 3.5	8.1	FLAG T15P/3,5	–
SV11	US 2003-T07P	0.8	M 2.5	6.5	–	FLAG T07P
SV16	US 2010-T15P	3.0	M 3.5	10.1	–	FLAG T15P/3,5

EC

06 / 08

CARBIDE INSERTS

ECGT

104

ECMT

105

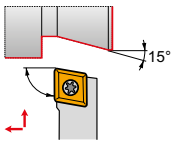
ECMW

106

MATCH THE RIGHT SIZE (example)	
Insert	**Tool Holder**
ECMT 060204E-FM2	S08K-SEUCR 06

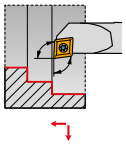
ISO TURNING – EXTERNAL

SEGC(RL) EXT

90°	EC..
	08
12×12 16×16	
107	104 – 106

ISO TURNING – INTERNAL

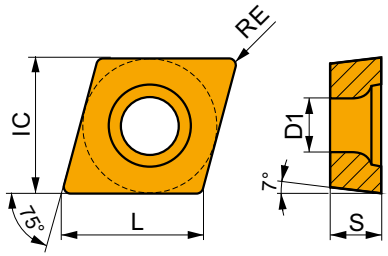
SEUC(RL) INT

93°	EC..
	06 08
11 32	
108	104 – 106

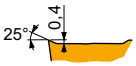
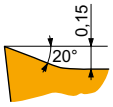
ECGT

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
0602	6.350	2.80	6.50	2.38
0602-SF3	6.350	2.80	6.50	2.58
0803	7.940	3.40	8.20	3.18
0803-SF3	7.940	3.40	8.20	3.43



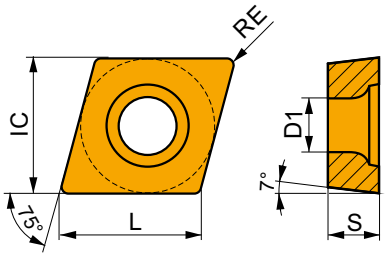
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
																				
			SF2 geometry with highly positive design for fine to finish machining, and continuous cuts.																	
ECGT 060202E-SF2	**H07**	0.2	–	–	–	105	0.05	1.0	–	–	–	525	0.06	1.0	50	0.04	0.8	–	–	–
	T6310	0.2	185	0.05	1.0	130	0.05	1.0	–	–	–	555	0.06	1.0	55	0.04	0.8	–	–	–
ECGT 060204E-SF2	**H07**	0.4	–	–	–	85	0.09	1.0	–	–	–	430	0.12	1.0	40	0.07	0.8	–	–	–
	T6310	0.4	160	0.10	1.0	115	0.09	1.0	–	–	–	480	0.12	1.0	45	0.07	0.8	–	–	–
ECGT 080302E-SF2	**H07**	0.2	–	–	–	105	0.05	1.0	–	–	–	525	0.06	1.0	50	0.04	0.8	–	–	–
	T6310	0.2	185	0.05	1.0	130	0.05	1.0	–	–	–	555	0.06	1.0	55	0.04	0.8	–	–	–
ECGT 080304E-SF2	**H07**	0.4	–	–	–	85	0.09	1.0	–	–	–	430	0.12	1.0	40	0.07	0.8	–	–	–
	T6310	0.4	160	0.10	1.0	115	0.09	1.0	–	–	–	480	0.12	1.0	45	0.07	0.8	–	–	–
																				
			SF3 geometry with highly positive design for fine to finish machining, and continuous cuts.																	
ECGT 060202E-SF3	**H07**	0.2	–	–	–	105	0.05	0.8	170	0.05	0.8	540	0.06	0.8	55	0.04	0.6	–	–	–
	T6310	0.2	185	0.05	0.8	130	0.05	0.8	145	0.05	0.8	555	0.06	0.8	55	0.04	0.6	35	0.15	1.0
ECGT 080304E-SF3	**H07**	0.4	–	–	–	85	0.09	1.0	135	0.10	1.0	430	0.12	1.0	40	0.07	0.8	–	–	–
	T6310	0.4	160	0.10	1.0	115	0.09	1.0	125	0.10	1.0	480	0.12	1.0	45	0.07	0.8	30	0.15	1.0

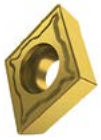
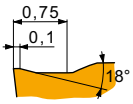
ECMT

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
0602	6.350	2.80	6.50	2.38
0803	7.940	3.40	8.20	3.18



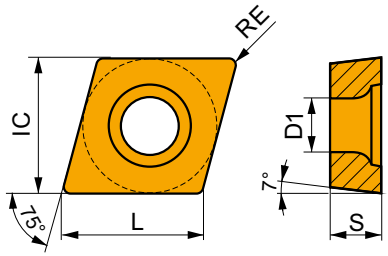
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			U S																	
			FM2 geometry for finish to medium machining, and continuous to interrupted cuts.																	
ECMT 060204E-FM2	**T7325**	0.4	180	0.12	0.8	140	0.11	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	155	0.12	0.8	90	0.11	0.8	145	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	205	0.12	0.8	110	0.11	0.8	170	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	290	0.12	0.8	–	–	–	275	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	255	0.12	0.8	150	0.11	0.8	240	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9335	0.4	220	0.12	0.8	130	0.11	0.8	–	–	–	–	–	–	–	–	–	–	–	–
ECMT 080304E-FM2	**T5315**	0.4	280	0.12	1.0	–	–	–	265	0.12	1.0	–	–	–	–	–	–	–	–	–
	T7325	0.4	170	0.12	1.0	130	0.11	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	150	0.12	1.0	90	0.11	1.0	140	0.12	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.4	205	0.12	1.0	110	0.11	1.0	170	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9315	0.4	280	0.12	1.0	–	–	–	265	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.4	255	0.12	1.0	150	0.11	1.0	240	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9335	0.4	215	0.12	1.0	125	0.11	1.0	–	–	–	–	–	–	–	–	–	–	–	–
ECMT 080308E-FM2	**T7325**	0.8	185	0.17	1.0	140	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	165	0.17	1.0	95	0.15	1.0	155	0.17	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.8	210	0.17	1.0	115	0.15	1.0	175	0.17	1.0	–	–	–	–	–	–	–	–	–
	T9315	0.8	290	0.17	1.0	–	–	–	275	0.17	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	260	0.17	1.0	155	0.15	1.0	245	0.17	1.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	225	0.17	1.0	135	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–

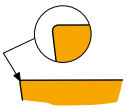
ECMW

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
0602	6.350	2.80	6.50	2.38
0803	7.940	3.40	8.20	3.18



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			E																	
			For fine-finish to semi-rough machining, and continuous to slightly interrupted cuts.																	
ECMW 060204	**H07**	0.4	–	–	–	–	–	–	■ 100	0.10	2.0	–	–	–	–	–	–	–	–	–
ECMW 080304	**H07**	0.4	–	–	–	–	–	–	■ 100	0.10	2.5	–	–	–	–	–	–	–	–	–
ECMW 080308	**H07**	0.8	–	–	–	–	–	–	■ 95	0.18	2.5	–	–	–	–	–	–	–	–	–

SEGC(RL) EXT

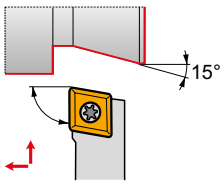
P M K N S H

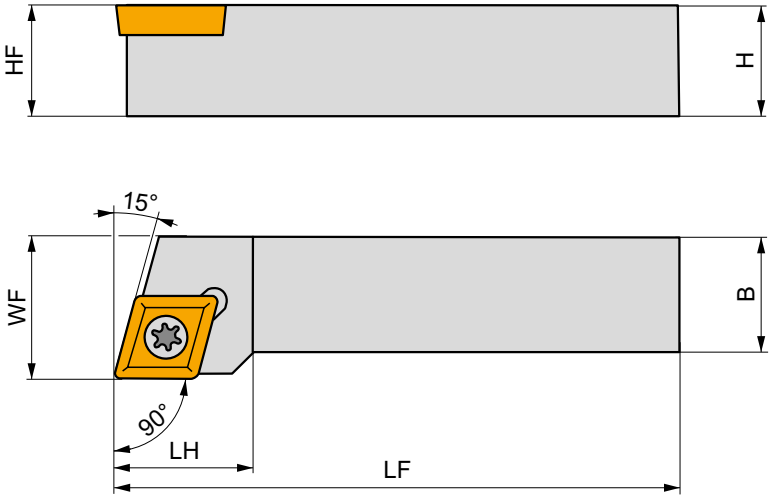
PRAMET

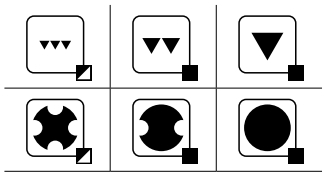
S

External Screw Lock Tool Holder with 90° Cutting Angle for EC.. Insert

External Right/Left hand tool holder with 90° cutting angle for screw type positive EC.. 08 inserts. Suited for external face and longitudinal turning with shoulder, taper, chamfer and face turning. Available with shank size 12x12 and 16x16 mm. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	SEGCR 1212 N 08	12	12	12	16	160	12	0	0	0.15	GI210	SE08
	SEGCR 1616 H 08	16	16	16	20	100	12	0	0	0.22	GI210	SE08
L	SEGCL 1212 N 08	12	12	12	16	160	12	0	0	0.22	GI210	SE08
	SEGCL 1616 H 08	16	16	16	20	100	12	0	0	2.14	GI210	SE08

GI210	EC.. 0803..

SE08	416.1-832	3.6	M 3	8.5	PT-8002

SEUC(RL) INT

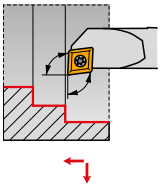
P M K N S H

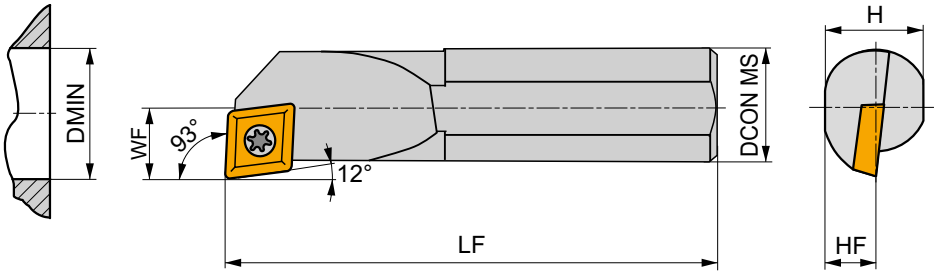
PRAMET

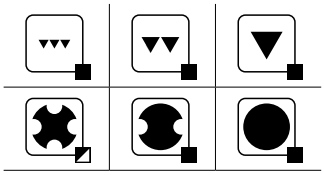
S

Internal Screw Lock Boring Bar with 93° Cutting Angle for EC.. Insert

Internal Right/Left hand boring bar with 93° cutting angle for screw type EC.. 06 and 08 inserts. Minimum internal turning diameter Ø11 mm. Suited for internal taper and longitudinal turning with shoulder and chamfer turning. Available with shank size Ø8 up to Ø25 mm. Body treated for longer tool life.







	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	H [mm]	HF [mm]	LF [mm]	LAMS [°]	GAMO [°]	kg		
R	**S08K-SEUCR 06**	8	11	7	7	3.5	125	-5	0	0.06	GI213	SE23
	S10M-SEUCR 06	10	13	8	9	4.5	150	-5	0	0.10	GI213	SE23
	S12M-SEUCR 08	12	15	9	11	5.5	150	-5	0	0.14	GI210	SE24
	S16R-SEUCR 08	16	20	11	15	7.5	200	-5	0	0.32	GI210	SE24
	S20S-SEUCR 08	20	25	13	18	9	250	-5	0	0.58	GI210	SE24
	S25T-SEUCR 08	25	32	17	23	11.5	300	-4	0	1.06	GI210	SE24
L	**S08K-SEUCL 06**	8	11	7	7	3.5	125	-5	0	0.06	GI213	SE23
	S10M-SEUCL 06	10	13	8	9	4.5	150	-5	0	0.10	GI213	SE23
	S12M-SEUCL 08	12	15	9	11	5.5	150	-5	0	0.14	GI210	SE24
	S16R-SEUCL 08	16	20	11	15	7.5	200	-5	0	0.32	GI210	SE24
	S20S-SEUCL 08	20	25	13	18	9	250	-5	0	0.58	GI210	SE24

GI210	EC.. 0803..
GI213	EC.. 0602..

		Nm			
SE23	5513 020-03	0.8	M 2.5	6.5	PT-8001
SE24	416.1-832	3.6	M 3	8.5	PT-8003

EP 05

CARBIDE INSERTS

EPGX

110

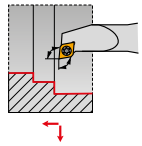
EPMT

110

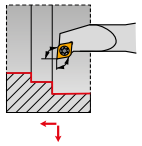
MATCH THE RIGHT SIZE (example)	
Insert	**Tool Holder**
EPGX **05**0202FR-JZ	S0608H-SELPR **05**

ISO TURNING – INTERNAL

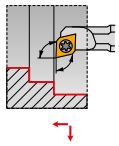
SELP(RL) INT

95°	EP..
	05
ØDmin 8 / 16	
111	110

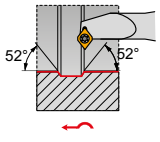
SELP(RL)-E INT

95°	EP..
	05
ØDmin 8 / 16	
112	110

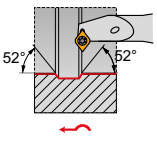
SEUP(RL) INT

93°	EP..
	05
ØDmin 8,3	
113	110

SEXP(RL) INT

52°30´	EP..
	05
ØDmin 9,5 / 16	
114	110

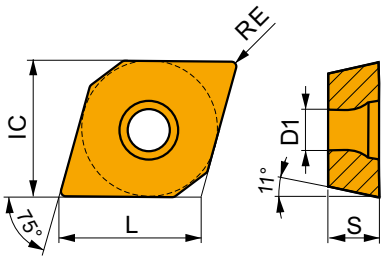
SEXP(RL)-E INT

52°30´	EP..
	05
ØDmin 9,5 / 16	
115	110

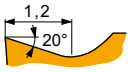
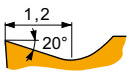
EPGX

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
0502	5.560	2.50	5.70	2.38



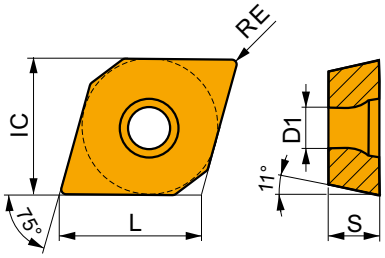
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			F																	
FR-JZ geometry with positive right-handed design for fine-finish machining and continuous cuts.																				
EPGX 050202FR-JZ	**TT010**	0.2	■ 295	0.06	0.5	◪ 175	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–
			F																	
FL-JZ geometry with positive left-handed design for fine-finish machining, and continuous cuts.																				
EPGX 050202FL-JZ	**TT010**	0.2	■ 295	0.06	0.5	◪ 175	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–

EPMT

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
0502	5.560	2.50	5.70	2.38



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			U E																	
NF2 geometry with positive design for fine-finish to semi-rough machining, and continuous cuts.																				
EPMT 050202E-NF2	**H07**	0.2	–	–	–	◪ 80	0.09	0.8	◪ 125	0.10	0.8	◪ 405	0.12	0.8	■ 40	0.07	0.6	–	–	–
	T7325	0.2	◪ 215	0.07	0.8	■ 165	0.06	0.8	–	–	–	–	–	–	■ 65	0.06	0.6	–	–	–
	T7335	0.2	◪ 220	0.07	0.8	■ 170	0.06	0.8	–	–	–	–	–	–	■ 70	0.06	0.6	–	–	–
	T9315	0.2	◪ 390	0.05	0.8	–	–	–	◪ 370	0.05	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.2	◪ 305	0.07	0.8	■ 180	0.06	0.8	◪ 285	0.07	0.8	–	–	–	◪ 65	0.06	0.6	–	–	–
	T9335	0.2	◪ 200	0.10	0.8	■ 120	0.09	0.8	–	–	–	–	–	–	◪ 45	0.07	0.6	–	–	–
	TT010	0.2	◪ 345	0.05	0.5	◪ 205	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–

SELP(RL) INT

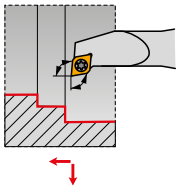
P M K N S H

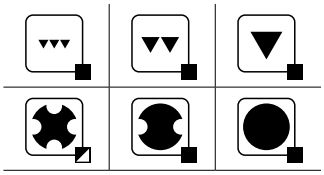
PRAMET

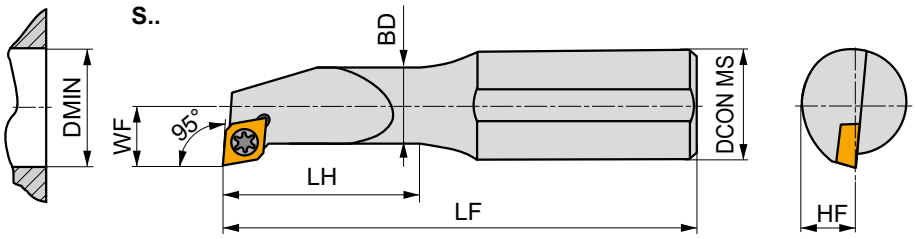
S

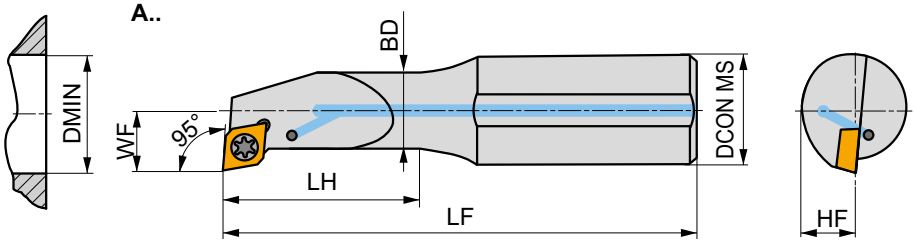
Internal Screw Lock Boring Bar with 95° Cutting Angle for EP.. Insert

Internal Right/Left hand boring bar, through coolant available, with 95° cutting angle for screw type EP.. 0502 inserts. Minimum internal turning diameter Ø8 mm. Suited for internal taper and longitudinal turning with shoulder and chamfer turning. Ø8 up to Ø16 mm shanks available. Body treated for longer tool life.









	Product	DCON MS [mm]	DMIN [mm]	BD [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]		kg		
R	S0608H-SELPR 05	8	8	6	4.5	100	20	-10	0	–	0.04	GI212	SE21
	S0810J-SELPR 05	10	11	8	6	110	26	-5	0	–	0.06	GI212	SE22
	S1012K-SELPR 05	12	13	10	7	125	32	-5	0	–	0.11	GI212	SE22
	A1216M-SELPR 05	16	16	12	9	150	40	-2	0	✓	0.18	GI212	SE22
	S1216M-SELPR 05	16	16	12	9	150	40	-2	0	–	0.21	GI212	SE22
L	S0608H-SELPL 05	8	8	6	4.5	100	20	-10	0	–	0.04	GI212	SE21
	S0810J-SELPL 05	10	11	8	6	110	26	-5	0	–	0.06	GI212	SE22
	S1012K-SELPL 05	12	13	10	7	125	32	-5	0	–	0.11	GI212	SE22
	S1216M-SELPL 05	16	16	12	9	150	40	-2	0	–	0.21	GI212	SE22

GI212	EP.. 0502..

		Nm			
SE21	28992	0.8	M 2.2	4.2	MA2-8304
SE22	28588	0.8	M 2.2	5.6	MA2-8304

SELP(RL)-E INT

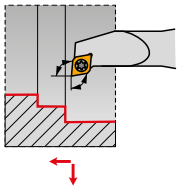
P M K N S H

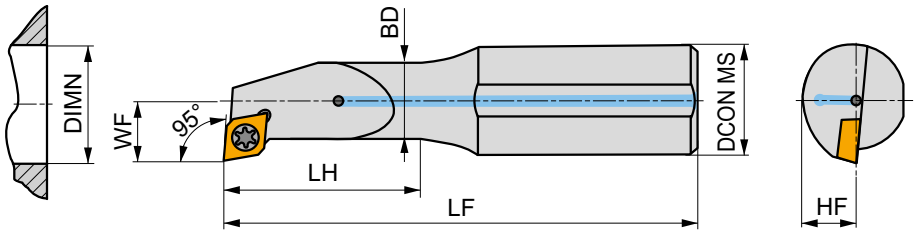
PRAMET

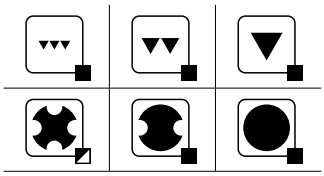
S

Internal Carbide Screw Lock Boring Bar with 95° Cutting Angle for EP.. Insert

Internal Right/Left hand carbide boring bar, through coolant, with 95° cutting angle for screw type EP.. 0502 inserts. Minimum internal turning diameter Ø8 mm. Suited for internal taper and longitudinal turning with shoulder and chamfer turning. Available with shank size Ø8 up to Ø16 mm. For tool overhang >3xD.







	Product	DCON MS [mm]	DMIN [mm]	BD [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]		kg		
R	E0608H-SELPR 05	8	8	6	4.5	100	28	-10	0	✓	0.06	GI212	SE22
	E0810J-SELPR 05	10	11	8	6	110	36	-5	0	✓	0.10	GI212	SE22
	E1012K-SELPR 05	12	13	10	7	125	44	-5	0	✓	0.18	GI212	SE22
L	E0608H-SELPL 05	8	8	6	4.5	100	28	-10	0	✓	0.06	GI212	SE22
	E0810J-SELPL 05	10	11	8	6	110	36	-5	0	✓	0.10	GI212	SE22
	E1216M-SELPL 05	16	16	12	9	150	55	-2	0	✓	0.33	GI212	SE22

GI212	EP.. 0502..

		Nm			
SE22	28588	0.8	M 2.2	5.6	MA2-8304

SEUP(RL) INT

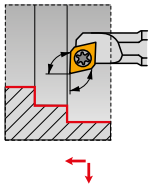
P M K N S H

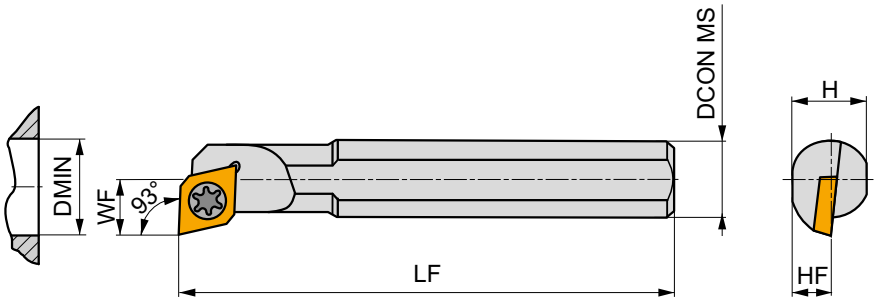
PRAMET

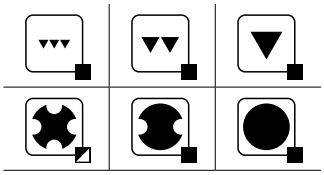
S

Internal Screw Lock Boring Bar with 93° Cutting Angle for EP.. Insert

Internal Right/Left hand boring bar with 93° cutting angle for screw type EP.. 0502 inserts. Minimum internal turning diameter Ø8.3 mm. Suited for internal taper and longitudinal turning with shoulder and chamfer turning. Available with shank size Ø6 mm. Body treated for longer tool life.







	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	H [mm]	HF [mm]	LF [mm]	LAMS [°]	GAMO [°]	kg		
R	S06H-SEUPR 05	6	8.3	5	5.4	2.7	100	-7	0	0.03	GI212	SE21
L	S06H-SEUPL 05	6	8.3	5	5.4	2.7	100	-7	0	0.03	GI212	SE21

GI212	EP.. 0502..

SE21	28992	0.8 Nm	M 2.2	4.2	MA2-8304

SEXP(RL) INT

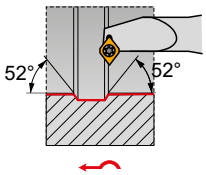
P M K N S H

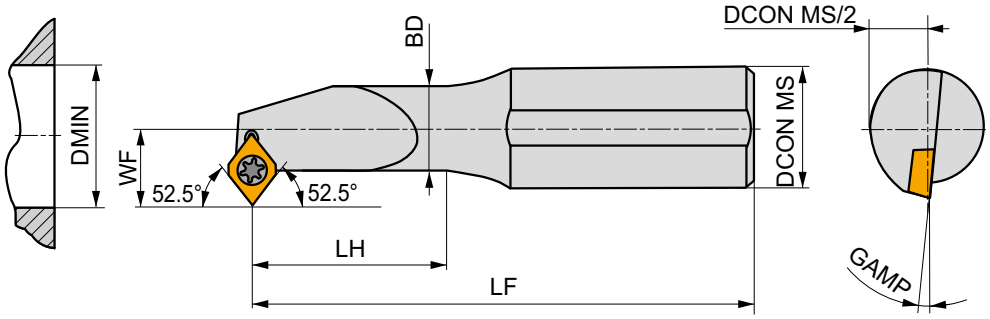
PRAMET

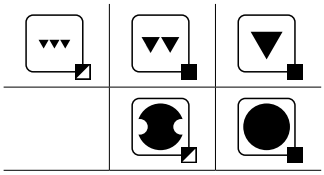
S

Internal Screw Lock Boring Bar with 52.5° Cutting Angle for EP.. Insert

Internal Right/Left hand boring bar, 52.5° cutting angle for screw type EP.. 0502 inserts. Minimum internal turning diameter Ø9.5mm. For internal back chamfer, taper, multi-directional, chamfer and longitudinal turning without shoulder. Available with shank size Ø8 up to Ø16mm. Body treated for longer tool life.







	Product	DCON MS [mm]	DMIN [mm]	BD [mm]	WF [mm]	LF [mm]	LH [mm]	GAMP [°]	kg		
R	S0608H-SEXPR 05	8	9.5	6	5.5	100	20	-7	0.04	GI212	SE21
	S0810J-SEXPR 05	10	11	8	6	110	26	-5	0.06	GI212	SE22
	S1012K-SEXPR 05	12	13	10	7	125	32	-5	0.11	GI212	SE22
	S1216M-SEXPR 05	16	16	12	9	150	40	-2	0.21	GI212	SE22
L	S0608H-SEXPL 05	8	9.5	6	5.5	100	20	-7	0.04	GI212	SE21
	S0810J-SEXPL 05	10	11	8	6	110	26	-5	0.07	GI212	SE22
	S1012K-SEXPL 05	12	13	10	7	125	32	-5	0.11	GI212	SE22
	S1216M-SEXPL 05	16	16	12	9	150	40	-2	0.21	GI212	SE22

GI212	EP.. 0502..

		Nm			
SE21	28992	0.8	M 2.2	4.2	MA2-8304
SE22	28588	0.8	M 2.2	5.6	MA2-8304

SEXP(RL)-E INT

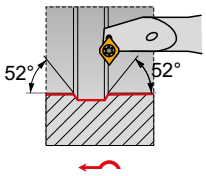
P M K N S H

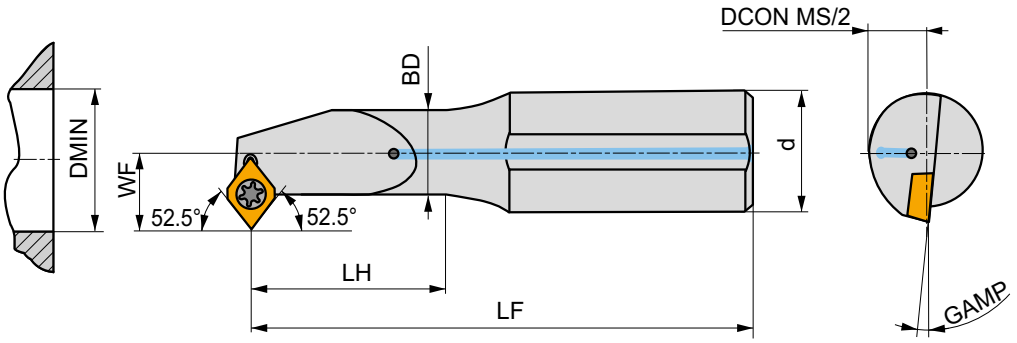
PRAMET

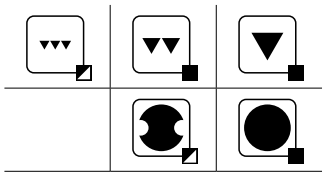
S

Internal Carbide Screw Lock Boring Bar, 52.5° Cutting Angle for EP.. Insert

Internal Right/Left hand carbide boring bar, through coolant, 52.5° cutting angle for screw type EP.. 0502 inserts. Minimum internal turning diameter Ø9.5 mm. For internal back chamfer, taper, multi-directional, chamfer and longitudinal turning without shoulder. Ø8 to Ø16 mm shanks available. For overhang > 3xD.







	Product	DCON MS [mm]	DMIN [mm]	BD [mm]	WF [mm]	LF [mm]	LH [mm]	GAMP [°]		kg		
R	**E0608H-SEXPR 05**	8	9.5	6	5.5	100	28	-7	✓	0.07	GI212	SE21
	E0810J-SEXPR 05	10	11	8	6	110	36	-5	✓	0.11	GI212	SE22
	E1012K-SEXPR 05	12	13	10	7	125	44	-5	✓	0.16	GI212	SE22
	E1216M-SEXPR 05	16	16	12	9	150	55	-2	✓	0.32	GI212	SE22
L	**E0608H-SEXPL 05**	8	9.5	6	5.5	100	28	-7	✓	0.06	GI212	SE21

GI212	EP.. 0502..

		Nm			
SE21	28992	0.8	M 2.2	4.2	MA2-8304
SE22	28588	0.8	M 2.2	5.6	MA2-8304

RC

06/ 08/ 12/ 16/ 20/ 25/ 32

CARBIDE INSERTS

RCGT

118

RCMT

118

RCMW

120

RCMX

121

CER INSERTS

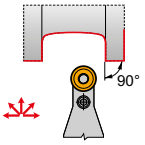
RCGX CER

123

MATCH THE RIGHT SIZE (example)	
Insert	**Tool Holder**
RCMT 1204MOE-RM3	SRDCN 3225 P 12-M

ISO TURNING – EXTERNAL

PRDCN EXT

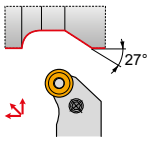


RC..
20
25
32

40×40 / 50×50

124 | 118 – 123

PRSC(RL) EXT

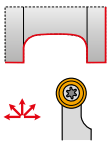


RC..
16
25

40×40

125 | 118 – 123

SRDC(RL) EXT

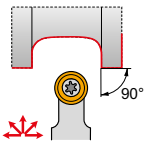


RC..
08

20×20 / 32×25

126 | 118 – 123

SRDCN EXT

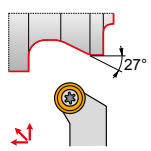


RC..
06
08
10
12
16

12×12 / 32×25

127 | 118 – 123

SRSC(RL) EXT

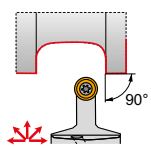


RC..
06
08
10
12
16

12×12 / 32×25

128 | 118 – 123

C.-SRDCN EXT



RC..
10
12

C4 / C5

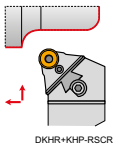
130 | 118 – 123

RC

06/ 08/ 12/ 16/ 20/ 25/ 32

ISO TURNING – HEAVY ROUGHING – EXTERNAL

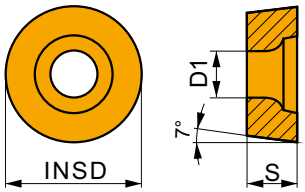
KHP-RSCR/L + DKH(RL)

	RC..
 DKHR+KHP-RSCR	20 25 32
■ 40×50 60×80	
131, 132	118 – 123

RCGT

PRAMET

	INSD [mm]	D1 [mm]	S [mm]
0803	8.0	3.40	3.18
1003	10.0	4.40	3.18



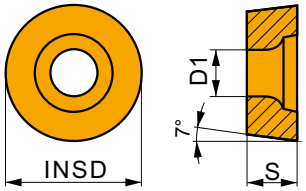
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
AL geometry with highly positive design for fine-finish to rough machining, and continuous to slightly interrupted cuts.																				
RCGT 0803MOF-AL	**HF7**	–	–	–	–	–	–	–	–	–	–	■	285	1.20	1.0	–	–	–	–	–	–
	T0315	–	–	–	–	–	–	–	–	–	–	■	420	1.20	1.0	–	–	–	–	–	–
RCGT 1003MOF-AL	**HF7**	–	–	–	–	–	–	–	–	–	–	■	255	1.50	1.0	–	–	–	–	–	–
	T0315	–	–	–	–	–	–	–	–	–	–	■	390	1.50	1.0	–	–	–	–	–	–

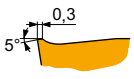
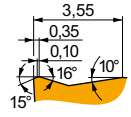
RCMT

PRAMET

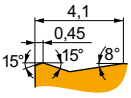
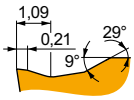
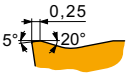
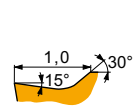
	INSD [mm]	D1 [mm]	S [mm]
0602	6.0	2.80	2.38
0803	8.0	3.40	3.18
10T3	10.0	4.40	3.97
1204	12.0	4.40	4.76
1606	16.0	5.50	6.35
2006	20.0	6.50	6.35
2507	25.0	8.60	7.94



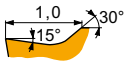
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
																				
Geometry 37 for semi-rough to heavy-rough machining, and continuous to interrupted cuts.																				
RCMT 1606MOS-37	**T9315**	–	■	165	0.60	3.0	–	–	–	◪	155	0.60	3.0	–	–	–	–	–	–	–	–	–
	T9325	–	■	145	0.60	3.0	–	–	–	◪	135	0.60	3.0	–	–	–	–	–	–	–	–	–
																				
Geometry 371 for semi-rough to heavy-rough machining, and continuous to interrupted cuts.																				
RCMT 2006MOS-371	**T9315**	–	■	145	0.80	3.0	–	–	–	◪	135	0.80	3.0	–	–	–	–	–	–	–	–	–
	T9325	–	■	125	0.80	3.0	–	–	–	◪	115	0.80	3.0	–	–	–	–	–	–	–	–	–

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
																				
			Geometry 372 for semi-rough to heavy-rough machining, continuous to interrupted cuts.																	
RCMT 2507MOS-372	T9325	–	■ 90	0.80	3.0	–	–	–	◪ 85	0.80	3.0	–	–	–	–	–	–	–	–	–
																				
			FM geometry for finish to semi-rough machining, and continuous to slightly interrupted cuts.																	
RCMT 0602MOE-FM	T7325	–	◪ 215	0.45	1.2	■ 165	0.41	1.2		–	–	–	–	–	–	–	–	–	–	–
	T8330	–	■ 190	0.45	1.2	■ 110	0.41	1.2	◪ 180	0.45	1.2	◪ 570	0.54	1.2	–	–	–	–	–	–
	T8430	–	■ 200	0.45	1.2	■ 110	0.41	1.2	◪ 165	0.45	1.2	◪ 555	0.54	1.2	–	–	–	–	–	–
	T9315	–	■ 260	0.45	1.2	–	–	–	◪ 245	0.45	1.2	–	–	–	–	–	–	–	–	–
	T9325	–	■ 235	0.45	1.2	■ 140	0.41	1.2	◪ 220	0.45	1.2	–	–	–	–	–	–	–	–	–
RCMT 0803MOE-FM	T7325	–	◪ 190	0.60	1.6	■ 145	0.54	1.6		–	–	–	–	–	–	–	–	–	–	–
	T8330	–	■ 170	0.60	1.6	■ 100	0.54	1.6	◪ 160	0.60	1.6	◪ 510	0.72	1.6	–	–	–	–	–	–
	T8430	–	■ 175	0.60	1.6	■ 95	0.54	1.6	◪ 140	0.60	1.6	◪ 480	0.72	1.6	–	–	–	–	–	–
	T9315	–	■ 225	0.60	1.6	–	–	–	◪ 210	0.60	1.6	–	–	–	–	–	–	–	–	–
	T9325	–	■ 200	0.60	1.6	■ 120	0.54	1.6	◪ 190	0.60	1.6	–	–	–	–	–	–	–	–	–
RCMT 10T3MOE-FM	T7325	–	◪ 185	0.65	1.7	■ 140	0.59	1.7		–	–	–	–	–	–	–	–	–	–	–
	T8330	–	■ 165	0.65	1.7	■ 95	0.59	1.7	◪ 155	0.65	1.7	◪ 495	0.78	1.7	–	–	–	–	–	–
	T8430	–	■ 170	0.65	1.7	■ 90	0.59	1.7	◪ 135	0.65	1.7	◪ 465	0.78	1.7	–	–	–	–	–	–
	T9315	–	■ 220	0.65	1.7	–	–	–	◪ 205	0.65	1.7	–	–	–	–	–	–	–	–	–
	T9325	–	■ 195	0.65	1.7	■ 115	0.59	1.7	◪ 185	0.65	1.7	–	–	–	–	–	–	–	–	–
RCMT 1204MOE-FM	T7325	–	◪ 175	0.70	1.8	■ 135	0.63	1.8		–	–	–	–	–	–	–	–	–	–	–
	T8330	–	■ 160	0.70	1.8	■ 95	0.63	1.8	◪ 150	0.70	1.8	◪ 480	0.84	1.8	–	–	–	–	–	–
	T8430	–	■ 155	0.70	1.8	■ 85	0.63	1.8	◪ 130	0.70	1.8	◪ 435	0.84	1.8	–	–	–	–	–	–
	T9315	–	■ 205	0.70	1.8	–	–	–	◪ 190	0.70	1.8	–	–	–	–	–	–	–	–	–
	T9325	–	■ 190	0.70	1.8	■ 110	0.63	1.8	◪ 180	0.70	1.8	–	–	–	–	–	–	–	–	–
																				
			RM3 geometry for semi-rough to rough machining, and continuous to interrupted cuts.																	
RCMT 0803MOE-RM3	T7325	–	◪ 185	0.50	1.3	◪ 140	0.45	1.3		–	–	–	–	–	–	–	–	–	–	–
	T9315	–	■ 225	0.50	1.3	–	–	–	◪ 210	0.50	1.3	–	–	–	–	–	–	◪ 45	0.15	1.0
RCMT 1204MOE-RM3	H07	–	–	–	–	◪ 65	0.54	1.8	■ 105	0.60	1.8	–	–	–	–	–	–	–	–	–
	T7325	–	◪ 165	0.60	1.8	◪ 125	0.54	1.8		–	–	–	–	–	–	–	–	–	–	–
	T8330	–	■ 150	0.60	1.8	◪ 90	0.54	1.8	■ 140	0.60	1.8	–	–	–	–	–	–	◪ 30	0.15	1.0
	T8430	–	■ 150	0.60	1.8	◪ 80	0.54	1.8	◪ 125	0.60	1.8	–	–	–	–	–	–	◪ 25	0.15	1.0
	T9315	–	■ 205	0.60	1.8	–	–	–	◪ 190	0.60	1.8	–	–	–	–	–	–	◪ 40	0.15	1.0
RCMT 1606MOE-RM3	T7325	–	◪ 160	0.65	2.0	◪ 120	0.59	2.0		–	–	–	–	–	–	–	–	–	–	–
	T8330	–	■ 145	0.65	2.0	◪ 85	0.59	2.0	■ 135	0.65	2.0	–	–	–	–	–	–	◪ 25	0.15	1.0
	T8430	–	■ 145	0.65	2.0	◪ 80	0.59	2.0	◪ 120	0.65	2.0	–	–	–	–	–	–	◪ 25	0.15	1.0
	T9315	–	■ 195	0.65	2.0	–	–	–	◪ 185	0.65	2.0	–	–	–	–	–	–	◪ 35	0.15	1.0
RCMT 2507MOE-RM3	H07	–	–	–	–	◪ 60	0.54	3.0	■ 95	0.60	3.0	–	–	–	–	–	–	–	–	–
																				
			UR geometry for fine to finish machining, and continuous to slightly interrupted cuts.																	
RCMT 0602MOE-UR	T6310	–	■ 170	0.40	1.2	◪ 120	0.36	1.2	■ 135	0.40	1.2	–	–	–	–	–	–	–	–	–
	T7325	–	◪ 190	0.40	1.2	◪ 145	0.36	1.2		–	–	–	–	–	–	–	–	–	–	–
	T8330	–	■ 170	0.40	1.2	◪ 100	0.36	1.2	■ 160	0.40	1.2	–	–	–	–	–	–	–	–	–
	T8430	–	■ 180	0.40	1.2	◪ 95	0.36	1.2	◪ 145	0.40	1.2	–	–	–	–	–	–	–	–	–
	T9315	–	■ 240	0.40	1.2	–	–	–	◪ 225	0.40	1.2	–	–	–	–	–	–	–	–	–
	T9325	–	■ 215	0.40	1.2	◪ 125	0.36	1.2	◪ 200	0.40	1.2	–	–	–	–	–	–	–	–	–

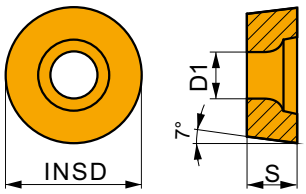
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
			UR geometry for fine to finish machining, and continuous to slightly interrupted cuts.																	
RCMT 0803M0E-UR	**T6310**	–	■ 160	0.45	1.6	◪ 115	0.41	1.6	■ 125	0.45	1.6	–	–	–	–	–	–	–	–	–
	T7325	–	◪ 180	0.45	1.6	◪ 140	0.41	1.6	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	–	■ 160	0.45	1.6	◪ 95	0.41	1.6	■ 150	0.45	1.6	–	–	–	–	–	–	–	–	–
	T8430	–	■ 170	0.45	1.6	◪ 90	0.41	1.6	◪ 135	0.45	1.6	–	–	–	–	–	–	–	–	–
	T9315	–	■ 220	0.45	1.6	–	–	–	◪ 205	0.45	1.6	–	–	–	–	–	–	–	–	–
	T9325	–	■ 200	0.45	1.6	◪ 120	0.41	1.6	◪ 190	0.45	1.6	–	–	–	–	–	–	–	–	–
RCMT 10T3M0E-UR	**T6310**	–	■ 160	0.50	1.4	◪ 115	0.45	1.4	■ 125	0.50	1.4	–	–	–	–	–	–	–	–	–
	T7325	–	◪ 175	0.50	1.4	◪ 135	0.45	1.4	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	–	■ 160	0.50	1.4	◪ 95	0.45	1.4	■ 150	0.50	1.4	–	–	–	–	–	–	–	–	–
	T8430	–	■ 165	0.50	1.4	◪ 90	0.45	1.4	◪ 135	0.50	1.4	–	–	–	–	–	–	–	–	–
	T9315	–	■ 215	0.50	1.4	–	–	–	◪ 200	0.50	1.4	–	–	–	–	–	–	–	–	–
	T9325	–	■ 190	0.50	1.4	◪ 110	0.45	1.4	◪ 180	0.50	1.4	–	–	–	–	–	–	–	–	–
RCMT 1204M0E-UR	**T6310**	–	■ 150	0.55	1.8	◪ 105	0.50	1.8	■ 120	0.55	1.8	–	–	–	–	–	–	–	–	–
	T7325	–	◪ 165	0.55	1.8	◪ 125	0.50	1.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	–	■ 150	0.55	1.8	◪ 90	0.50	1.8	■ 140	0.55	1.8	–	–	–	–	–	–	–	–	–
	T8430	–	■ 145	0.55	1.8	◪ 80	0.50	1.8	◪ 120	0.55	1.8	–	–	–	–	–	–	–	–	–
	T9315	–	■ 200	0.55	1.8	–	–	–	◪ 190	0.55	1.8	–	–	–	–	–	–	–	–	–
	T9325	–	■ 180	0.55	1.8	◪ 105	0.50	1.8	◪ 170	0.55	1.8	–	–	–	–	–	–	–	–	–

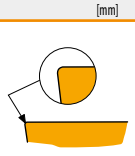
RCMW

PRAMET

	INSD	D1	S
	[mm]	[mm]	[mm]
0602	6.0	2.80	2.38
0803	8.0	3.40	3.18
10T3	10.0	4.40	3.97
1204	12.0	4.40	4.76



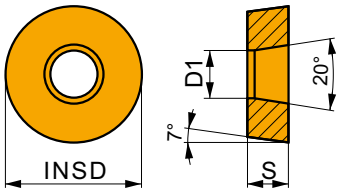
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
			For fine-finish to semi-rough machining, and continuous to slightly interrupted cuts.																	
RCMW 0602M0	**T5305**	–	–	–	–	–	–	–	■ 280	0.25	0.6	–	–	–	–	–	–	◪ 55	0.15	1.0
	T5315	–	–	–	–	–	–	–	■ 250	0.25	0.6	–	–	–	–	–	–	◪ 50	0.15	1.0
RCMW 0803M0	**T5305**	–	–	–	–	–	–	–	■ 255	0.30	0.8	–	–	–	–	–	–	◪ 50	0.15	1.0
	T5315	–	–	–	–	–	–	–	■ 230	0.30	0.8	–	–	–	–	–	–	◪ 45	0.15	1.0
RCMW 10T3M0	**T5305**	–	–	–	–	–	–	–	■ 225	0.40	1.0	–	–	–	–	–	–	◪ 45	0.15	1.0
	T5315	–	–	–	–	–	–	–	■ 200	0.40	1.0	–	–	–	–	–	–	◪ 40	0.15	1.0
RCMW 1204M0	**T5305**	–	–	–	–	–	–	–	■ 205	0.45	1.2	–	–	–	–	–	–	◪ 40	0.15	1.0
	T5315	–	–	–	–	–	–	–	■ 190	0.45	1.2	–	–	–	–	–	–	◪ 40	0.15	1.0

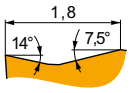
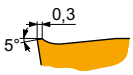
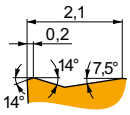
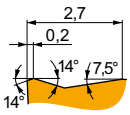
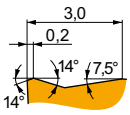
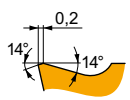
RCMX

PRAMET

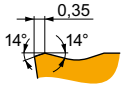
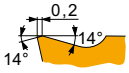
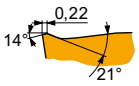
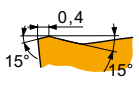
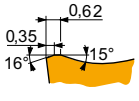
	INSD [mm]	D1 [mm]	S [mm]
1003	10.0	3.60	3.18
1204	12.0	4.20	4.76
1606	16.0	5.20	6.35
2006	20.0	6.50	6.35
2507	25.0	7.20	7.94
3209	32.0	9.50	9.53



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

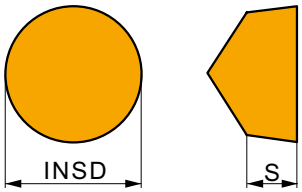
Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			HFC E Geometry 31 for finish to semi-rough machining, and continuous to interrupted cuts.																	
RCMX 1003M0S-31	**T9325**	–	165	0.50	2.0	95	0.45	2.0	155	0.50	2.0	–	–	–	–	–	–	–	–	–
	T9335	–	140	0.50	2.0	80	0.45	2.0	–	–	–	–	–	–	–	–	–	–	–	–
			HFC S Geometry 37 for semi-rough to heavy-rough machining, and continuous to interrupted cuts.																	
RCMX 1606M0S-37	**T9315**	–	165	0.60	3.0	–	–	–	155	0.60	3.0	–	–	–	–	–	–	–	–	–
	T9325	–	145	0.60	3.0	–	–	–	135	0.60	3.0	–	–	–	–	–	–	–	–	–
			HFC S Geometry 321 for semi-rough to heavy-rough machining, and continuous to interrupted cuts.																	
RCMX 1204M0S-321	**T9315**	–	130	1.00	3.0	–	–	–	120	1.00	3.0	–	–	–	–	–	–	–	–	–
	T9325	–	120	1.00	3.0	–	–	–	110	1.00	3.0	–	–	–	–	–	–	–	–	–
	T9335	–	105	1.00	3.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			HFC S Geometry 331 for semi-rough to heavy-rough machining, and continuous to interrupted cuts.																	
RCMX 1606M0S-331	**T9315**	–	120	1.20	3.5	–	–	–	110	1.20	3.5	–	–	–	–	–	–	–	–	–
	T9325	–	105	1.20	3.5	–	–	–	95	1.20	3.5	–	–	–	–	–	–	–	–	–
	T9335	–	110	0.80	3.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			HFC S Geometry 341 for semi-rough to heavy-rough machining, and continuous to interrupted cuts.																	
RCMX 2006M0S-341	**6640**	–	90	1.00	3.5	–	–	–	85	1.00	3.5	–	–	–	–	–	–	–	–	–
			HFC S Geometry 351 for semi-rough to heavy-rough machining, and continuous to interrupted cuts.																	
RCMX 2507M0S-351	**6640**	–	60	1.00	3.5	–	–	–	55	1.00	3.5	–	–	–	–	–	–	–	–	–

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

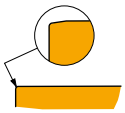
Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]
			HFC S																	
			Geometry 361 for rough to heavy-rough machining and continuous to heavy interrupted cuts.																	
RCMX 3209M0S-361	**6640**	–	■ 50	1.40	4.5	–	–	–	■ 45	1.40	4.5	–	–	–	–	–	–	–	–	–
			HFC S																	
			RF1 geometry for finish to semi-rough machining, and continuous to interrupted cuts.																	
RCMX 2006M0-RF1	**T5305**	–	◪ 105	0.80	3.5	–	–	–	◪ 95	0.80	3.5	–	–	–	–	–	–	–	–	–
	T9310	–	■ 105	0.80	3.5	–	–	–	◪ 95	0.80	3.5	–	–	–	–	–	–	–	–	–
	T9315	–	■ 100	0.80	3.5	–	–	–	◪ 95	0.80	3.5	–	–	–	–	–	–	–	–	–
	T9325	–	■ 90	0.80	3.5	–	–	–	◪ 85	0.80	3.5	–	–	–	–	–	–	–	–	–
	T9335	–	■ 110	0.80	3.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
RCMX 2507M0-RF1	**T8345**	–	■ 45	1.00	3.5	–	–	–	◪ 40	1.00	3.5	–	–	–	–	–	–	–	–	–
	T9310	–	■ 95	1.00	3.5	–	–	–	◪ 90	1.00	3.5	–	–	–	–	–	–	–	–	–
	T9315	–	■ 90	1.00	3.5	–	–	–	◪ 85	1.00	3.5	–	–	–	–	–	–	–	–	–
	T9325	–	■ 80	1.00	3.5	–	–	–	◪ 75	1.00	3.5	–	–	–	–	–	–	–	–	–
	T9335	–	■ 65	1.00	3.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			HFC S																	
			RM1 geometry for finish to rough machining, and continuous to interrupted cuts.																	
RCMX 2006M0-RM1	**T9310**	–	■ 95	1.00	3.5	–	–	–	◪ 90	1.00	3.5	–	–	–	–	–	–	–	–	–
	T9315	–	■ 90	1.00	3.5	–	–	–	◪ 85	1.00	3.5	–	–	–	–	–	–	–	–	–
	T9325	–	■ 80	1.00	3.5	–	–	–	◪ 75	1.00	3.5	–	–	–	–	–	–	–	–	–
	T9335	–	■ 125	0.60	3.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
RCMX 2507M0-RM1	**T9310**	–	■ 95	1.00	3.5	–	–	–	◪ 90	1.00	3.5	–	–	–	–	–	–	–	–	–
	T9315	–	■ 90	1.00	3.5	–	–	–	◪ 85	1.00	3.5	–	–	–	–	–	–	–	–	–
	T9325	–	■ 80	1.00	3.5	–	–	–	◪ 75	1.00	3.5	–	–	–	–	–	–	–	–	–
	T9335	–	■ 80	0.60	3.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			HFC S																	
			RM2 geometry for semi-rough to rough machining, and continuous to interrupted cuts.																	
RCMX 2507M0-RM2	**T9310**	–	■ 90	1.10	3.5	–	–	–	◪ 85	1.10	3.5	–	–	–	–	–	–	–	–	–
	T9315	–	■ 85	1.10	3.5	–	–	–	◪ 80	1.10	3.5	–	–	–	–	–	–	–	–	–
	T9325	–	■ 75	1.10	3.5	–	–	–	◪ 70	1.10	3.5	–	–	–	–	–	–	–	–	–
RCMX 3209M0-RM2	**T5315**	–	◪ 95	1.00	4.5	–	–	–	◪ 90	1.00	4.5	–	–	–	–	–	–	–	–	–
	T9310	–	■ 90	1.00	4.5	–	–	–	◪ 85	1.00	4.5	–	–	–	–	–	–	–	–	–
	T9315	–	■ 85	1.00	4.5	–	–	–	◪ 80	1.00	4.5	–	–	–	–	–	–	–	–	–
	T9325	–	■ 75	1.00	4.5	–	–	–	◪ 70	1.00	4.5	–	–	–	–	–	–	–	–	–
	T9335	–	■ 55	1.40	4.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			HFC P																	
			RR2 geometry for heavy rough machining, and continuous to interrupted cuts.																	
RCMX 3209M0-RR2	**T9315**	–	■ 60	1.40	4.5	–	–	–	◪ 55	1.40	4.5	–	–	–	–	–	–	◪ 10	0.15	1.0
	T9316	–	■ 60	1.40	4.5	–	–	–	◪ 55	1.40	4.5	–	–	–	–	–	–	–	–	–

RCGX CER

	INSD [mm]	S [mm]
0606	6.350	6.35
0907	9.525	7.94
1207	12.700	7.94



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			HSC		K															
			For machining with high speeds and continuous cuts.																	
RCGX 060600 K15015	**TC100**	–	–	–	–	–	–	–	365	0.30	0.8	–	–	–	–	–	–	–	–	–
RCGX 090700 K15015	**TC100**	–	–	–	–	–	–	–	410	0.20	1.2	–	–	–	–	–	–	–	–	–
RCGX 120700 K15015	**TC100**	–	–	–	–	–	–	–	405	0.20	1.5	–	–	–	–	–	–	–	–	–

PRDCN EXT

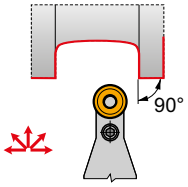
P M K N S H

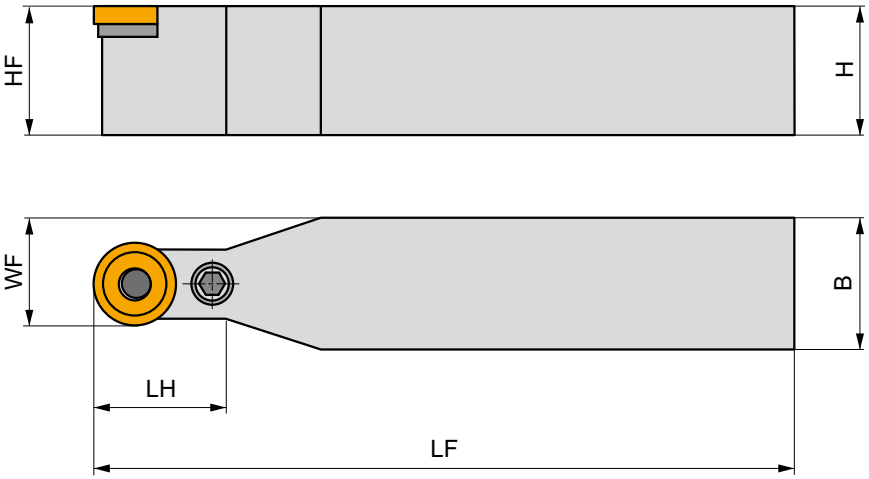
PRAMET

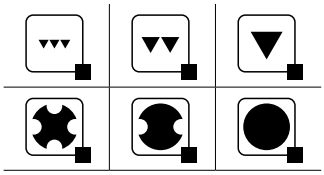
P

External Lever Lock Tool Holder for Round RC.. Insert

External neutral lever lock tool holder for positive RC.. 16 up to 32 inserts. Suited for external face and longitudinal turning without shoulder, copy turning up to 90°, taper and chamfer turning. Available with shank size 32x25 up to 50x50 mm. Body treated for longer tool life.







	Product	H	B	HF	WF	LF	LH	LAMS	GAMO	kg		
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[°]	[°]			
N	**PRDCN 3225 P 16**	32	25	32	20.5	170	32	0	0	0.80	GI090	PRP70
	PRDCN 3232 P 20	32	32	32	26	170	32	0	0	1.30	GI069	PRP90
	PRDCN 4040 S 20	40	40	40	30	250	40	0	0	3.10	GI069	PRP90
	PRDCN 4040 S 25	40	40	40	32.5	250	40	0	0	3.20	GI122	PRP80
	PRDCN 5050 S 32	50	50	50	41	250	50	0	0	3.50	GI096	PRP32
	PRDCN 5050 T 32	50	50	50	41	300	50	0	0	5.12	GI096	PRP32

GI069	RCMX 2006M0
GI090	RCMX 1606M0
GI096	RCMX 3209M0
GI122	RCMX 2507M0

				Nm					
PRP32	RCU 320600	PU 10	US 47	8.0	M 12x1	36	NT 08	MT 08	HXK 5
PRP70	RCU 160300	PU 07	US 36	6.0	M 8x1	26	NT 05	MT 05	HXK 4
PRP80	RCU 250600	PU 08	US 38	8.0	M 10x1	29	NT 06	MT 06	HXK 5
PRP90	RCU 200400	PU 09	US 36	6.0	M 8x1	26	NT 07	MT 07	HXK 4

PRSC(RL) EXT

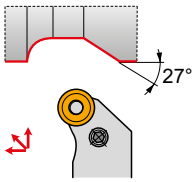
P M K N S H

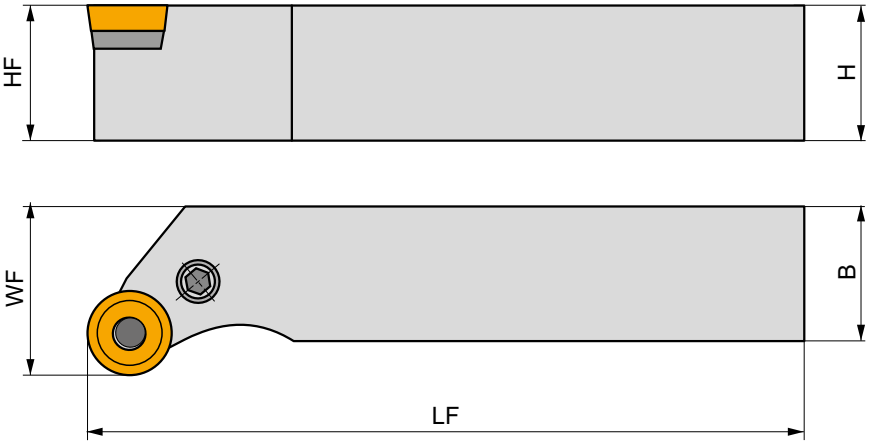
PRAMET

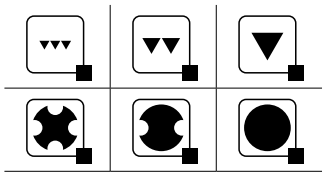
P

External Lever Lock Tool Holder for Round RC.. Insert

External Right/Left hand lever lock tool holder for positive RC.. 16 up to 25 inserts. Suited for external face and longitudinal turning without shoulder, copy turning up to 27°, taper and chamfer turning, including face copy turning. Available with shank size 32x25 up to 40x40 mm. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LAMS [°]	GAMO [°]	kg		
R	PRSCR 3225 P 16	32	25	32	32	170	0	0	0.90	GI090	PRP70
	PRSCR 4040 R 16	40	40	40	50	200	0	0	2.38	GI090	PRP70
	PRSCR 3232 P 20	32	32	32	40	170	0	0	1.40	GI069	PRP90
	PRSCR 4040 S 25	40	40	40	50	250	0	0	3.40	GI122	PRP80
L	PRSCL 3225 P 16	32	25	32	32	170	0	0	0.90	GI090	PRP70
	PRSCL 4040 R 16	40	40	40	50	200	0	0	2.38	GI090	PRP70
	PRSCL 3232 P 20	32	32	32	40	170	0	0	1.32	GI069	PRP90
	PRSCL 4040 S 25	40	40	40	50	250	0	0	3.40	GI122	PRP80

GI069	RCMX 2006M0
GI090	RCMX 1606M0
GI122	RCMX 2507M0

				Nm					
PRP70	RCU 160300	PU 07	US 36	6.0	M 8x1	26	NT 05	MT 05	HXK 4
PRP80	RCU 250600	PU 08	US 38	8.0	M 10x1	29	NT 06	MT 06	HXK 5
PRP90	RCU 200400	PU 09	US 36	6.0	M 8x1	26	NT 07	MT 07	HXK 4

SRDC(RL) EXT

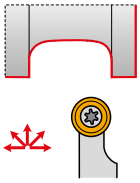
P M K N S H

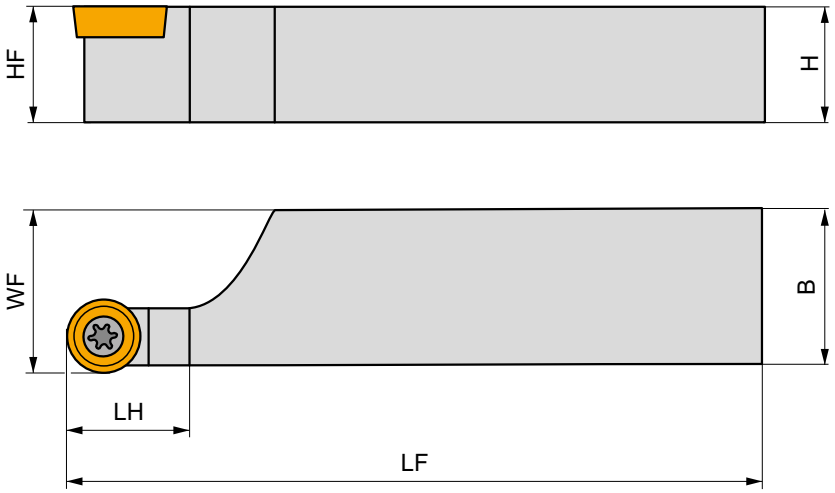
PRAMET

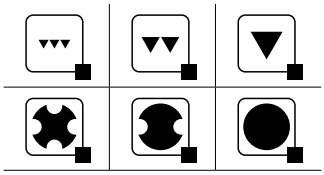
S

External Screw Lock Tool Holder for Round RC.. Insert

External Right/Left hand tool holder for screw type positive RC.. 08 inserts. Suited for external face and longitudinal turning without shoulder, taper and chamfer turning. Available with shank size 20x20 up to 32x25 mm. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	SRDCR 2020 K 08-A	20	20	20	20.5	125	20	0	0	0.36	GI051	SR21
	SRDCR 2525 M 08-A	25	25	25	25.5	150	20	0	0	0.66	GI051	SR21
	SRDCR 3225 P 08-A	32	25	32	25.5	170	20	0	0	0.95	GI051	SR21
L	SRDCL 2020 K 08-A	20	20	20	20.5	125	20	0	0	0.37	GI051	SR21
	SRDCL 2525 M 08-A	25	25	25	25.5	150	20	0	0	0.66	GI051	SR21
	SRDCL 3225 P 08-A	32	25	32	25.5	170	20	0	0	0.96	GI051	SR21

GI051	RC.. 0803M0

		Nm			
SR21	5513 020-04	1.5	M 3	7.2	PT-8002

SRDCN EXT

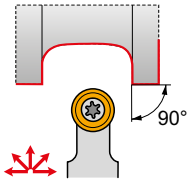
P M K N S H

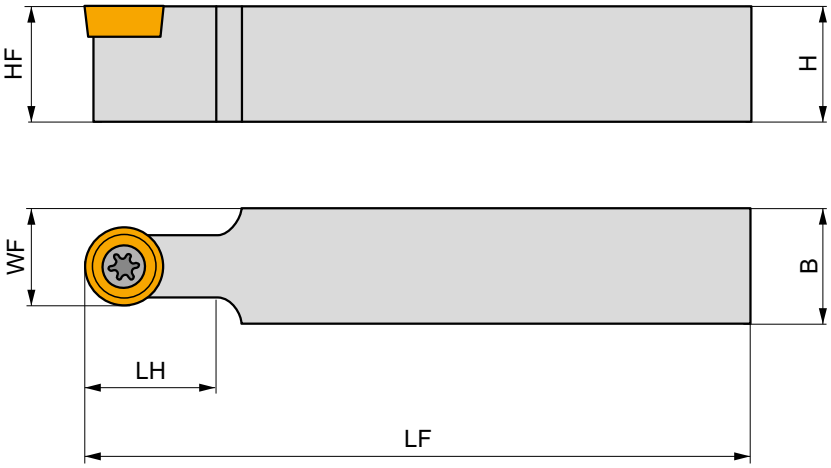
PRAMET

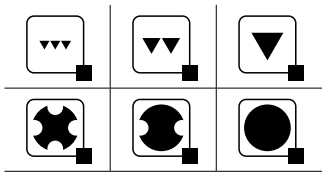
S

External Screw Lock Tool Holder for Round RC.. Insert

External neutral tool holder for screw type positive RC.. 06 up to 16 inserts. Suited for external face and longitudinal turning without shoulder, copy, taper and chamfer turning. Available with shank size 12x12 up to 32x25 mm. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
N	**SRDCN 1212 F 06**	12	12	12	9	80	12	0	0	0.10	GI054	S01
	SRDCN 1616 H 06	16	16	16	11	100	12	0	0	0.20	GI054	S01
	SRDCN 2020 K 08	20	20	20	14	125	20	0	0	0.38	GI051	S03
	SRDCN 2020 K 1003-M-A	20	20	20	15	125	25	0	0	0.40	GI064	SR10
	SRDCN 2020 K 10-M-A	20	20	20	15	125	25	0	0	0.40	GI013	SR10
	SRDCN 2525 M 10-M-A	25	25	25	17.5	150	25	0	0	0.68	GI013	SR10
	SRDCN 2525 M 12-M-A	25	25	25	18.5	150	30	0	0	0.68	GI014	SR12
	SRDCN 3225 P 10-M	32	25	32	17.5	170	25	0	0	0.90	GI013	SR10
	SRDCN 3225 P 12-M	32	25	32	18.5	170	30	0	0	0.90	GI014	SR12
	SRDCN 3225 P 16-M	32	25	32	20.5	170	32	0	0	1.00	GI161	SR16

GI013	RC.. 10T3M0
GI014	RC.. 1204M0
GI051	RC.. 0803M0
GI054	RC.. 0602M0
GI064	RC.. 1003M0
GI161	RC.. 1606M0

		Nm						
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
S03	US 3007-T09P	2.0	M 3	7.3	–	–	FLAG T09P	–
SR10	US 3510-T15P	3.0	M 3.5	10.6	SRN 100300	MS 3510	FLAG T15P	HXK 3.5
SR12	US 3510-T15P	3.0	M 3.5	10.6	SRN 120300	MS 3510	FLAG T15P	HXK 3.5
SR16	US 5018-T20P	5.0	M 5	18.2	SRN 16T3M0	MS 5015	FLAG T20P	HXK 5

SRSC(RL) EXT

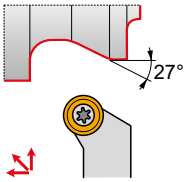
P M K N S H

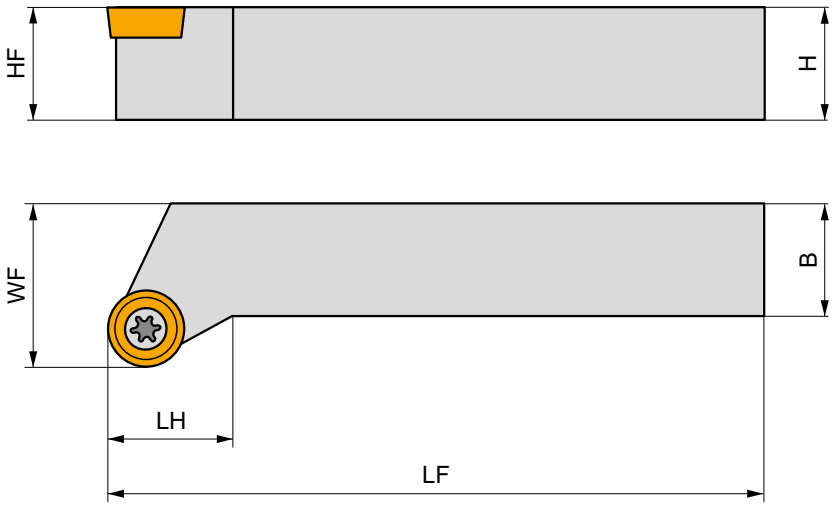
PRAMET

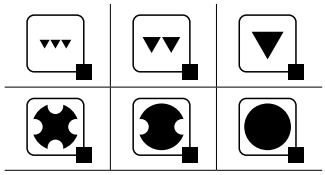
S

External Screw Lock Tool Holder for Round RC.. Insert

External Right/Left hand tool holder for screw type positive RC.. 06 up to 16 inserts. Suited for external face and longitudinal turning without shoulder, copy, taper and chamfer turning. Available with shank size 12x12 up to 32x25 mm. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	SRSCR 1212 F 06	12	12	12	16	80	12	0	0	0.09	GI054	S01
	SRSCR 1616 H 06	16	16	16	20	100	12	0	0	0.22	GI054	S01
	SRSCR 2020 K 08	20	20	20	25	125	20	0	0	0.45	GI051	S03
	SRSCR 2020 K 10-M-A	20	20	20	25	125	20	0	0	0.45	GI013	SR10
	SRSCR 2525 M 10-M-A	25	25	25	32	150	20	0	0	0.75	GI013	SR10
	SRSCR 3225 P 10-M	32	25	32	32	170	20	0	0	1.06	GI013	SR10
	SRSCR 2525 M 12-M-A	25	25	25	32	150	20	0	0	0.75	GI014	SR12
	SRSCR 3225 P 12-M	32	25	32	32	170	20	0	0	1.07	GI014	SR12
	SRSCR 3225 P 16-M	32	25	32	32	170	20	0	0	1.10	GI161	SR16
L	SRSCL 1212 F 06	12	12	12	16	80	12	0	0	0.10	GI054	S01
	SRSCL 1616 H 06	16	16	16	20	100	12	0	0	0.22	GI054	S01
	SRSCL 2020 K 08	20	20	20	25	125	20	0	0	0.45	GI051	S03
	SRSCL 2020 K 10-M-A	20	20	20	25	125	20	0	0	0.45	GI013	SR10
	SRSCL 2525 M 10-M-A	25	25	25	32	150	20	0	0	0.75	GI013	SR10
	SRSCL 3225 P 10-M	32	25	32	32	170	20	0	0	1.06	GI013	SR10
	SRSCL 2525 M 12-M-A	25	25	25	32	150	20	0	0	0.75	GI014	SR12
	SRSCL 3225 P 12-M	32	25	32	32	170	20	0	0	1.07	GI014	SR12
	SRSCL 3225 P 16-M	32	25	32	32	170	20	0	0	1.10	GI161	SR16

GI013	RC.. 10T3M0
GI014	RC.. 1204M0
GI051	RC.. 0803M0
GI054	RC.. 0602M0
GI161	RC.. 1606M0

		Nm						
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
S03	US 3007-T09P	2.0	M 3	7.3	–	–	FLAG T09P	–
SR10	US 3510-T15P	3.0	M 3.5	10.6	SRN 100300	MS 3510	FLAG T15P	HXK 3.5
SR12	US 3510-T15P	3.0	M 3.5	10.6	SRN 120300	MS 3510	FLAG T15P	HXK 3.5
SR16	US 5018-T20P	5.0	M 5	18.2	SRN 16T3M0	MS 5015	FLAG T20P	HXK 5

C.-SRDCN EXT

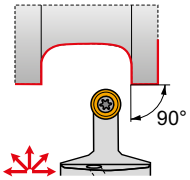
P M K N S H

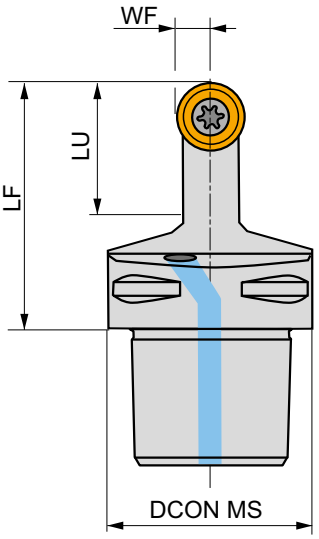
PRAMET

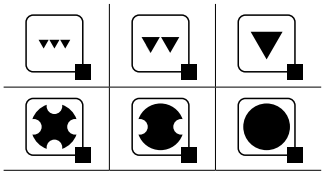
S

External PSC Quick Change Tool, Screw Lock for RC.. Insert

External neutral tool, through coolant, for screw type positive RC.. 10 up to 12 inserts. Suited for external face and longitudinal turning without shoulder, copy, taper and chamfer turning. Available with PSC (Polygon Shank Coupling) size C4 and C5. Body treated for longer tool life.







	Product	DCON MS [mm]	WF [mm]	LF [mm]	LU [mm]	LAMS [°]	GAMO [°]		kg		
N	**C4-SRDCN-00050-12A**	40	6	50	28	0	0	✓	0.32	GI014	C-SR12V-1
	C5-SRDCN-00060-10A	50	5	60	25	0	0	✓	0.56	GI013	C-SR10V
	C5-SRDCN-00060-12A	50	6	60	28	0	0	✓	0.56	GI014	C-SR12V-2

GI013	RC.. 10T3M0
GI014	RC.. 1204M0

		Nm						
C-SR10V	US 2010-T15P	3.0	M 3.5	10.1	SRS 110-01	MS 9001	FLAG T15P/3,5	CN 034-02
C-SR12V-1	US 2001-T15P	3.0	M 3.5	12.1	SRS 110-02	MS 9001	FLAG T15P/3,5	CN 034-01
C-SR12V-2	US 2001-T15P	3.0	M 3.5	12.1	SRS 110-02	MS 9001	FLAG T15P/3,5	CN 034-02

KHP-RSC(RL)

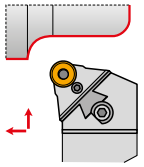
P M K

PRAMET

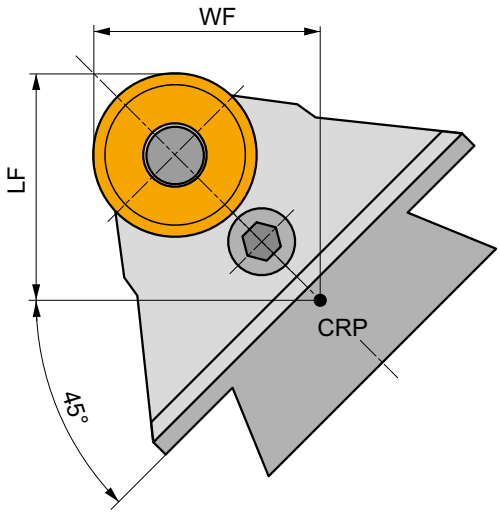
P

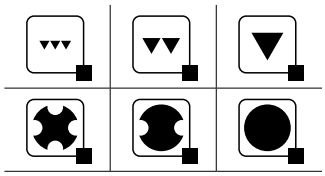
Modular KHP Lever Lock Turning Cartridge for RC.. Insert

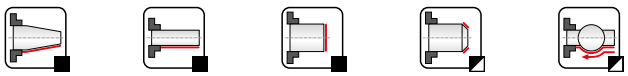
Dovetailed Right/Left hand lever lock turning cartridge for mounting on DKH tool holder shank. Suited for heavy longitudinal turning without shoulder, face turning, taper and chamfer turning with positive RC.. 20 up to 32 inserts. Tool holder treated for longer tool life.



DKHR+KHP-RSCR







	Product	WF [mm]	LF [mm]	LAMS [°]	GAMO [°]	kg		
R	**KHP-RSCR 20**	35	45	0	0	1.25	GI069	PRP90
	KHP-RSCR 25	35	45	0	0	1.30	GI122	PRP80
	KHP-RSCR 32	35	45	0	0	1.30	GI096	PRP32
	KHP-RSCL 20	35	45	0	0	1.30	GI069	PRP90
	KHP-RSCL 25	35	45	0	0	1.30	GI122	PRP80
	KHP-RSCL 32	35	45	0	0	1.30	GI096	PRP32

GI069	RCMX 2006M0
GI096	RCMX 3209M0
GI122	RCMX 2507M0

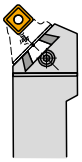
				Nm					
PRP32	RCU 320600	PU 10	US 47	8.0	M 12x1	36	NT 08	MT 08	HXK 5
PRP80	RCU 250600	PU 08	US 38	8.0	M 10x1	29	NT 06	MT 06	HXK 5
PRP90	RCU 200400	PU 09	US 36	6.0	M 8x1	26	NT 07	MT 07	HXK 4

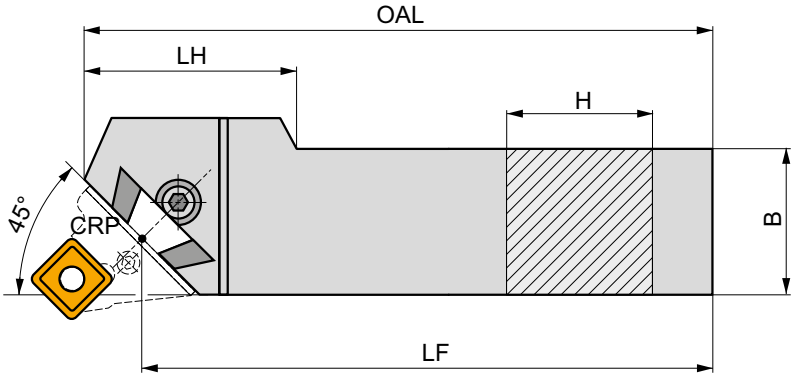
DKH(RL)

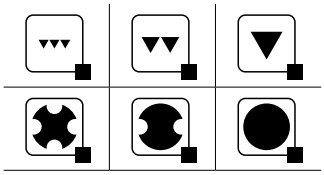
PRAMET

External Tool Holder Shank for KHP/KHS Heavy Turning Cartridges

Dovetailed Right/Left hand modular tool shank for KHP/KHS cartridges. Suited for heavy turning applications. Available with shank size 40x50 up to 60x80 mm. Body treated for longer tool life.







	Product	H [mm]	B [mm]	LF [mm]	OAL [mm]	LH [mm]	kg		
R	**DKHR 4050 V**	40	50	400	425	100	7.10	GI098	DKH10
	DKHR 5060 W	50	60	450	475	110	11.30	GI098	DKH10
	DKHR 6080 W-A	60	80	450	485	90	19.65	GI098	DKH10
L	**DKHL 4050 V**	40	50	400	425	100	7.10	GI098	DKH10
	DKHL 5060 W	50	60	450	475	110	11.30	GI098	DKH10
	DKHL 6080 W-A	60	80	450	485	90	19.28	GI098	DKH10

GI098	KHP	KHS

DKH10	SR 14	HXK 10

SC

09/ 12/ 25/ 38

CARBIDE INSERTS

SCGT

134

SCMT

135

SCMW

138

MATCH THE RIGHT SIZE (example)

Insert	Tool Holder
SCMT 120408E-RM	SSDCN 2020 K 12-M-A

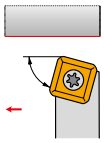
ISO TURNING – EXTERNAL

SSBC(RL) EXT

75°

SC..

09
12
25
38



12×12
60×60

139

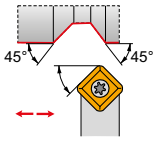
134 – 138

SSDCN EXT

45°

SC..

09
12



12×12
25×25

140

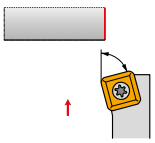
134 – 138

SSKC(RL) EXT

75°

SC..

09
12



12×12
25×25

141

134 – 138

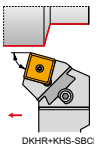
ISO TURNING – HEAVY ROUGHING – EXTERNAL

KHS-SBCR + DKH(RL)

75°

SC..

25
38



40×50
60×80

142, 143

134 – 138

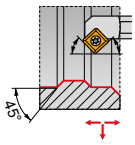
ISO TURNING – INTERNAL

SSSC(RL) INT

45°

SC..

09



25
32

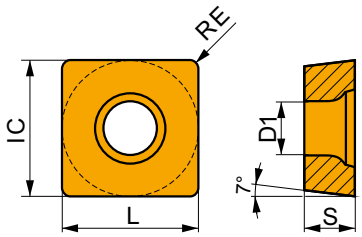
144

134 – 138

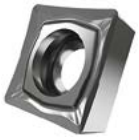
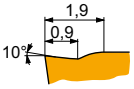
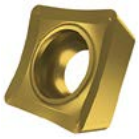
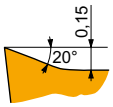
SCGT

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
09T3	9.525	4.40	9.53	3.97
09T3-SF3	9.525	4.40	9.53	4.22
1204	12.700	5.50	12.70	4.76



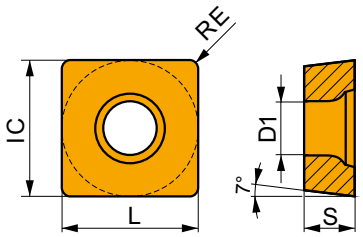
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
																				
SCGT 120408F-AL	**HF7**	0.8	–	–	–	–	–	–	–	–	–	■ 315	0.48	2.0	–	–	–	–	–	–
	T0315	0.8	–	–	–	–	–	–	–	–	–	■ 465	0.48	2.0	–	–	–	–	–	–
																				
SCGT 09T308E-NF1	**H07**	0.8	–	–	–	◪ 100	0.13	1.2	–	–	–	◪ 510	0.17	1.2	■ 50	0.13	1.0	–	–	–
	T6310	0.8	■ 200	0.14	1.2	■ 140	0.13	1.2	–	–	–	◪ 600	0.17	1.2	■ 60	0.13	1.0	◪ 40	0.15	1.0
	T7325	0.8	◪ 225	0.14	1.2	■ 175	0.13	1.2	–	–	–	–	–	–	■ 70	0.13	1.0	–	–	–
SCGT 120408E-NF1	**H07**	0.8	–	–	–	◪ 90	0.16	1.4	–	–	–	◪ 455	0.22	1.4	■ 45	0.16	1.1	–	–	–
	T6310	0.8	■ 180	0.18	1.4	■ 125	0.16	1.4	–	–	–	◪ 540	0.22	1.4	■ 50	0.16	1.1	◪ 35	0.15	1.0
	T7325	0.8	◪ 205	0.18	1.4	■ 155	0.16	1.4	–	–	–	–	–	–	■ 65	0.16	1.1	–	–	–
																				
SCGT 09T304E-SF3	**H07**	0.4	–	–	–	◪ 95	0.09	1.0	◪ 155	0.10	1.0	■ 495	0.12	1.0	■ 50	0.07	0.8	–	–	–
	T6310	0.4	◪ 185	0.10	1.0	■ 130	0.09	1.0	◪ 145	0.10	1.0	■ 555	0.12	1.0	■ 55	0.07	0.8	◪ 35	0.15	1.0
	T8315	0.4	◪ 200	0.10	1.0	■ 120	0.09	1.0	◪ 190	0.10	1.0	■ 600	0.12	1.0	◪ 50	0.07	0.8	◪ 40	0.15	1.0
SCGT 09T308E-SF3	**T6310**	0.8	◪ 210	0.12	1.0	■ 150	0.12	1.0	◪ 165	0.12	1.0	■ 630	0.14	1.0	■ 60	0.11	0.8	◪ 40	0.15	1.0
	T8315	0.8	◪ 220	0.12	1.0	■ 130	0.12	1.0	◪ 205	0.12	1.0	■ 660	0.14	1.0	◪ 55	0.11	0.8	◪ 40	0.15	1.0

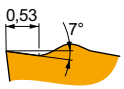
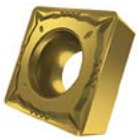
SCMT

PRAMET

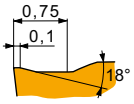
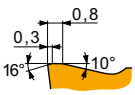
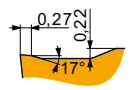
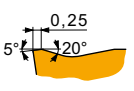
	IC [mm]	D1 [mm]	L [mm]	S [mm]
09T3	9.525	4.40	9.53	3.97
1204	12.700	5.50	12.70	4.76
2509	25.400	8.70	25.40	9.53
3809	38.100	8.70	38.10	9.53



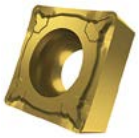
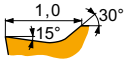
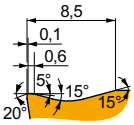
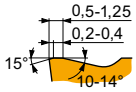
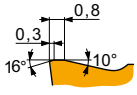
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
																				
FF2 geometry with positive design for fine-finish to finish machining, and continuous to slightly interrupted cuts.																				
SCMT 09T304E-FF2	**T8430**	0.4	■ 210	0.12	1.2	–	–	–	◪ 175	0.12	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 260	0.12	1.2	–	–	–	◪ 245	0.12	1.2	–	–	–	–	–	–	–	–	–
SCMT 09T308E-FF2	**T8330**	0.8	■ 185	0.17	1.2	–	–	–	■ 175	0.17	1.2	–	–	–	–	–	–	–	–	–
	T8430	0.8	■ 220	0.17	1.2	–	–	–	◪ 180	0.17	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 265	0.17	1.2	–	–	–	◪ 250	0.17	1.2	–	–	–	–	–	–	–	–	–
																				
FM geometry for finish to semi-rough machining, and continuous to slightly interrupted cuts.																				
SCMT 09T304E-FM	**T7325**	0.4	◪ 205	0.15	1.2	■ 155	0.15	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.4	◪ 200	0.15	1.2	■ 155	0.15	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	◪ 190	0.15	1.2	■ 110	0.14	1.2	◪ 180	0.15	1.2	◪ 570	0.18	1.2	–	–	–	–	–	–
	T8330	0.4	■ 180	0.15	1.2	■ 105	0.14	1.2	◪ 170	0.15	1.2	◪ 540	0.18	1.2	–	–	–	–	–	–
	T8430	0.4	■ 210	0.15	1.2	■ 115	0.14	1.2	◪ 175	0.15	1.2	◪ 585	0.18	1.2	–	–	–	–	–	–
	T9315	0.4	■ 290	0.15	1.2	–	–	–	◪ 275	0.15	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 260	0.15	1.2	■ 155	0.15	1.2	◪ 245	0.15	1.2	–	–	–	–	–	–	–	–	–
SCMT 09T308E-FM	**T7325**	0.8	◪ 225	0.20	1.2	■ 175	0.18	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.8	◪ 215	0.20	1.2	■ 165	0.18	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	◪ 205	0.20	1.2	■ 120	0.18	1.2	◪ 190	0.20	1.2	◪ 615	0.24	1.2	–	–	–	–	–	–
	T8330	0.8	■ 195	0.20	1.2	■ 115	0.18	1.2	◪ 185	0.20	1.2	◪ 585	0.24	1.2	–	–	–	–	–	–
	T8430	0.8	■ 225	0.20	1.2	■ 120	0.18	1.2	◪ 185	0.20	1.2	◪ 615	0.24	1.2	–	–	–	–	–	–
	T9315	0.8	■ 305	0.20	1.2	–	–	–	◪ 285	0.20	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 275	0.20	1.2	■ 165	0.18	1.2	◪ 260	0.20	1.2	–	–	–	–	–	–	–	–	–
SCMT 120404E-FM	**T7325**	0.4	◪ 195	0.15	1.6	■ 150	0.15	1.6	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	◪ 185	0.15	1.6	■ 110	0.14	1.6	◪ 175	0.15	1.6	◪ 555	0.18	1.6	–	–	–	–	–	–
	T8330	0.4	■ 170	0.15	1.6	■ 100	0.14	1.6	◪ 160	0.15	1.6	◪ 510	0.18	1.6	–	–	–	–	–	–
	T8430	0.4	■ 205	0.15	1.6	■ 110	0.14	1.6	◪ 170	0.15	1.6	◪ 570	0.18	1.6	–	–	–	–	–	–
	T9315	0.4	■ 280	0.15	1.6	–	–	–	◪ 265	0.15	1.6	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 250	0.15	1.6	■ 150	0.15	1.6	◪ 235	0.15	1.6	–	–	–	–	–	–	–	–	–
SCMT 120408E-FM	**T7325**	0.8	◪ 215	0.20	1.6	■ 165	0.18	1.6	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.8	◪ 210	0.20	1.6	■ 160	0.18	1.6	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	◪ 200	0.20	1.6	■ 120	0.18	1.6	◪ 190	0.20	1.6	◪ 600	0.24	1.6	–	–	–	–	–	–
	T8330	0.8	■ 190	0.20	1.6	■ 110	0.18	1.6	◪ 180	0.20	1.6	◪ 570	0.24	1.6	–	–	–	–	–	–
	T8430	0.8	■ 220	0.20	1.6	■ 120	0.18	1.6	◪ 180	0.20	1.6	◪ 600	0.24	1.6	–	–	–	–	–	–
	T9315	0.8	■ 300	0.20	1.6	–	–	–	◪ 285	0.20	1.6	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 265	0.20	1.6	■ 155	0.18	1.6	◪ 250	0.20	1.6	–	–	–	–	–	–	–	–	–
SCMT 120412E-FM	**T7325**	1.2	◪ 210	0.27	1.6	■ 160	0.24	1.6	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	1.2	■ 185	0.27	1.6	■ 110	0.24	1.6	◪ 175	0.27	1.6	◪ 555	0.32	1.6	–	–	–	–	–	–
	T8430	1.2	■ 200	0.27	1.6	■ 110	0.24	1.6	◪ 165	0.27	1.6	◪ 555	0.32	1.6	–	–	–	–	–	–
	T9315	1.2	■ 275	0.27	1.6	–	–	–	◪ 260	0.27	1.6	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 245	0.27	1.6	■ 145	0.24	1.6	◪ 230	0.27	1.6	–	–	–	–	–	–	–	–	–

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]
																				
			FM2 geometry for finish to medium machining, and continuous to interrupted cuts.																	
SCMT 09T304E-FM2	**T7325**	0.4	200	0.12	1.0	155	0.11	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8430	0.4	220	0.12	1.0	120	0.11	1.0	180	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.4	265	0.12	1.0	155	0.11	1.0	250	0.12	1.0	–	–	–	–	–	–	–	–	–
SCMT 09T308E-FM2	**T8330**	0.8	190	0.17	1.0	110	0.15	1.0	180	0.17	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.8	225	0.17	1.0	120	0.15	1.0	185	0.17	1.0	–	–	–	–	–	–	–	–	–
	T9315	0.8	305	0.17	1.0	–	–	–	285	0.17	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	270	0.17	1.0	160	0.15	1.0	255	0.17	1.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	235	0.17	1.0	140	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–
																				
			RF geometry for semi-rough to rough machining, and continuous to interrupted cuts.																	
SCMT 09T308E-RF	**T5315**	0.8	255	0.20	1.5	–	–	–	240	0.20	1.5	–	–	–	–	–	–	50	0.15	1.0
	T7335	0.8	170	0.20	1.5	130	0.18	1.5	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	220	0.20	1.5	130	0.18	1.5	205	0.20	1.5	–	–	–	–	–	–	–	–	–
SCMT 120408E-RF	**T5315**	0.8	240	0.22	2.2	–	–	–	225	0.22	2.2	–	–	–	–	–	–	45	0.15	1.0
	T7335	0.8	160	0.22	2.2	120	0.22	2.2	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	205	0.22	2.2	120	0.22	2.2	190	0.22	2.2	–	–	–	–	–	–	–	–	–
																				
			RM geometry for semi-rough to rough machining, and continuous to interrupted cuts.																	
SCMT 09T308E-RM	**T5315**	0.8	275	0.30	2.0	–	–	–	260	0.30	2.0	–	–	–	–	–	–	55	0.15	1.0
	T7335	0.8	190	0.30	2.0	145	0.27	2.0	–	–	–	–	–	–	60	0.24	1.6	–	–	–
	T8330	0.8	175	0.30	2.0	105	0.27	2.0	165	0.30	2.0	–	–	–	40	0.24	1.6	35	0.15	1.0
	T8430	0.8	190	0.30	2.0	105	0.27	2.0	155	0.30	2.0	–	–	–	40	0.24	1.6	30	0.15	1.0
	T9315	0.8	255	0.30	2.0	–	–	–	240	0.30	2.0	–	–	–	–	–	–	50	0.15	1.0
	T9325	0.8	230	0.30	2.0	135	0.27	2.0	215	0.30	2.0	–	–	–	50	0.24	1.6	–	–	–
SCMT 120408E-RM	**T5305**	0.8	305	0.30	2.3	–	–	–	285	0.30	2.3	–	–	–	–	–	–	60	0.15	1.0
	T5315	0.8	275	0.30	2.3	–	–	–	260	0.30	2.3	–	–	–	–	–	–	55	0.15	1.0
	T7335	0.8	185	0.30	2.3	140	0.27	2.3	–	–	–	–	–	–	60	0.24	1.8	–	–	–
	T8330	0.8	175	0.30	2.3	105	0.27	2.3	165	0.30	2.3	–	–	–	40	0.24	1.8	35	0.15	1.0
	T8430	0.8	190	0.30	2.3	105	0.27	2.3	155	0.30	2.3	–	–	–	40	0.24	1.8	30	0.15	1.0
	T9315	0.8	250	0.30	2.3	–	–	–	235	0.30	2.3	–	–	–	–	–	–	50	0.15	1.0
	T9325	0.8	225	0.30	2.3	135	0.27	2.3	210	0.30	2.3	–	–	–	50	0.24	1.8	–	–	–
																				
			RM3 geometry for semi-rough to rough machining, and continuous to interrupted cuts.																	
SCMT 120408E-RM3	**T6310**	0.8	155	0.27	2.3	110	0.27	2.3	125	0.27	2.3	–	–	–	–	–	–	30	0.15	1.0
	T8330	0.8	155	0.27	2.3	90	0.27	2.3	145	0.27	2.3	–	–	–	–	–	–	30	0.15	1.0
	T8430	0.8	170	0.27	2.3	90	0.27	2.3	135	0.27	2.3	–	–	–	–	–	–	25	0.15	1.0
	T9315	0.8	225	0.27	2.3	–	–	–	210	0.27	2.3	–	–	–	–	–	–	45	0.15	1.0
	T9325	0.8	205	0.27	2.3	120	0.27	2.3	190	0.27	2.3	–	–	–	–	–	–	–	–	–
	T9335	0.8	175	0.27	2.3	105	0.27	2.3	–	–	–	–	–	–	–	–	–	–	–	–
SCMT 120412E-RM3	**T7325**	1.2	175	0.30	2.3	135	0.27	2.3	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	1.2	205	0.30	2.3	120	0.27	2.3	190	0.30	2.3	–	–	–	–	–	–	–	–	–

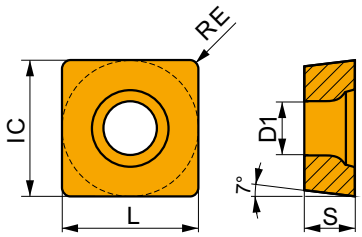
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
UR geometry for fine to finish machining, and continuous to slightly interrupted cuts.																				
SCMT 09T304E-UR	**T7325**	0.4	175	0.15	1.2	135	0.15	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	155	0.15	1.2	90	0.14	1.2	145	0.15	1.2	–	–	–	–	–	–	–	–	–
	T8430	0.4	180	0.15	1.2	95	0.14	1.2	145	0.15	1.2	–	–	–	–	–	–	–	–	–
	T9315	0.4	250	0.15	1.2	–	–	–	235	0.15	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.4	225	0.15	1.2	135	0.15	1.2	210	0.15	1.2	–	–	–	–	–	–	–	–	–
SCMT 09T308E-UR	**T5315**	0.8	280	0.20	1.2	–	–	–	265	0.20	1.2	–	–	–	–	–	–	–	–	–
	T7325	0.8	195	0.20	1.2	150	0.18	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	170	0.20	1.2	100	0.18	1.2	160	0.20	1.2	–	–	–	–	–	–	–	–	–
	T8430	0.8	190	0.20	1.2	105	0.18	1.2	155	0.20	1.2	–	–	–	–	–	–	–	–	–
	T9315	0.8	260	0.20	1.2	–	–	–	245	0.20	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.8	235	0.20	1.2	140	0.18	1.2	220	0.20	1.2	–	–	–	–	–	–	–	–	–
	TT310	0.8	270	0.20	1.2	160	0.18	1.2	–	–	–	–	–	–	–	–	–	–	–	–
SCMT 120408E-UR	**T5315**	0.8	270	0.20	1.6	–	–	–	255	0.20	1.6	–	–	–	–	–	–	–	–	–
	T7325	0.8	185	0.20	1.6	140	0.18	1.6	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	165	0.20	1.6	95	0.18	1.6	155	0.20	1.6	–	–	–	–	–	–	–	–	–
	T8430	0.8	185	0.20	1.6	100	0.18	1.6	150	0.20	1.6	–	–	–	–	–	–	–	–	–
	T9315	0.8	260	0.20	1.6	–	–	–	245	0.20	1.6	–	–	–	–	–	–	–	–	–
	T9325	0.8	230	0.20	1.6	135	0.18	1.6	215	0.20	1.6	–	–	–	–	–	–	–	–	–
SCMT 120412E-UR	**T8330**	1.2	160	0.27	1.6	95	0.24	1.6	150	0.27	1.6	–	–	–	–	–	–	–	–	–
	T8430	1.2	175	0.27	1.6	95	0.24	1.6	140	0.27	1.6	–	–	–	–	–	–	–	–	–
	T9325	1.2	215	0.27	1.6	125	0.24	1.6	200	0.27	1.6	–	–	–	–	–	–	–	–	–
																				
DR4 geometry for rough to heavy-rough machining, and continuous to interrupted cuts.																				
SCMT 380932E-DR4	**T9335**	3.2	50	1.33	16.0	30	1.20	16.0	–	–	–	–	–	–	–	–	–	–	–	–
																				
OR geometry for rough to heavy-rough machining, and continuous to interrupted cuts.																				
SCMT 250924E-OR	**T9226**	2.4	80	1.00	10.0	45	0.90	10.0	75	1.00	10.0	–	–	–	15	0.70	8.0	–	–	–
	T9325	2.4	90	1.00	10.0	50	0.90	10.0	85	1.00	10.0	–	–	–	20	0.70	8.0	–	–	–
	T9335	2.4	70	1.00	10.0	40	0.90	10.0	–	–	–	–	–	–	15	0.70	8.0	–	–	–
SCMT 380932E-OR	**6635**	3.2	60	1.20	18.0	35	1.08	18.0	–	–	–	–	–	–	15	1.08	9.9	–	–	–
	T9226	3.2	65	1.20	18.0	35	1.08	18.0	60	1.20	18.0	–	–	–	10	1.08	9.9	–	–	–
	T9315	3.2	85	1.20	18.0	–	–	–	80	1.20	18.0	–	–	–	–	–	–	–	–	–
	T9325	3.2	80	1.20	18.0	45	1.08	18.0	75	1.20	18.0	–	–	–	15	1.08	9.9	–	–	–
	T9335	3.2	60	1.20	18.0	35	1.08	18.0	–	–	–	–	–	–	10	1.08	9.9	–	–	–
																				
SR geometry for rough to heavy-rough machining, and continuous to interrupted cuts.																				
SCMT 250924E-SR	**T9325**	2.4	70	1.00	14.0	40	0.90	14.0	65	1.00	14.0	–	–	–	–	–	–	–	–	–
	T9335	2.4	60	1.00	14.0	35	0.90	14.0	–	–	–	–	–	–	–	–	–	–	–	–
SCMT 380932E-SR	**T9335**	3.2	50	1.30	20.0	30	1.30	20.0	–	–	–	–	–	–	–	–	–	–	–	–

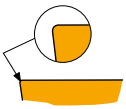
SCMW

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
09T3	9.525	4.40	9.53	3.97
1204	12.700	5.50	12.70	4.76



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			For fine-finish to semi-rough machining, and continuous to slightly interrupted cuts.																	
SCMW 09T304	**T5305**	0.4	–	–	–	–	–	–	240	0.10	2.0	–	–	–	–	–	–	50	0.15	1.0
	T5315	0.4	–	–	–	–	–	–	205	0.10	2.0	–	–	–	–	–	–	40	0.15	1.0
SCMW 09T308	**T5305**	0.8	–	–	–	–	–	–	220	0.20	2.0	–	–	–	–	–	–	45	0.15	1.0
	T5315	0.8	–	–	–	–	–	–	190	0.20	2.0	–	–	–	–	–	–	40	0.15	1.0
SCMW 120408	**T5305**	0.8	–	–	–	–	–	–	205	0.20	4.0	–	–	–	–	–	–	40	0.15	1.0
	T5315	0.8	–	–	–	–	–	–	185	0.20	4.0	–	–	–	–	–	–	35	0.15	1.0

SSBC(RL) EXT

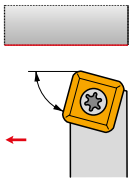
P M K N S H

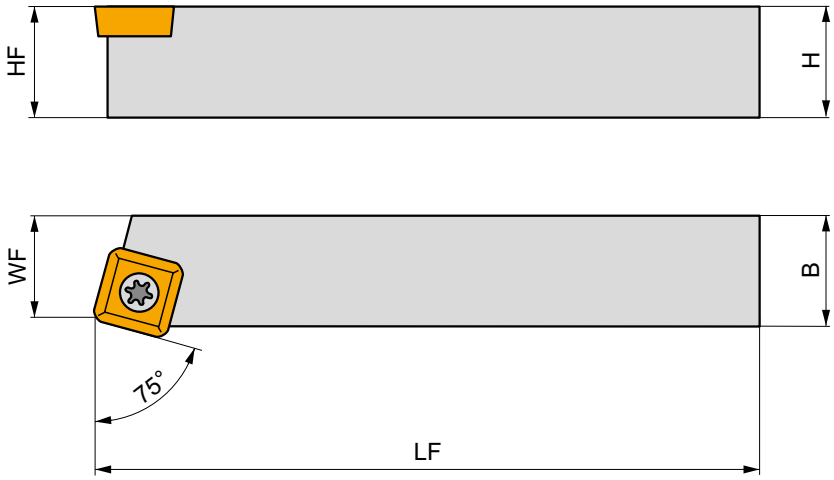
PRAMET

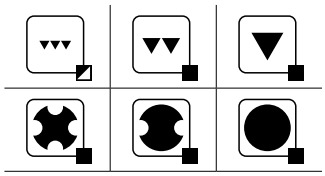
S

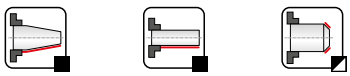
External Screw Lock Tool Holder with 75° Cutting Angle for SC.. Insert

External Right/Left hand tool holder for screw type positive SC.. 09 up to 38 inserts. Suited for external longitudinal turning without shoulder, taper and chamfer turning. Available with shank size 12x12 up to 60x60 mm. Body treated for longer tool life.









	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LAMS [°]	GAMO [°]	kg		
R	SSBCR 1212 F 09	12	12	12	11	80	0	0	0.10	GI053	S08
	SSBCR 1616 H 09	16	16	16	13	100	0	0	0.20	GI053	S08
	SSBCR 2020 K 12-M-A	20	20	20	17	125	0	0	0.40	GI015	SS20
	SSBCR 2525 M 12-M-A	25	25	25	22	150	0	0	0.76	GI015	SS20
	SSBCR 4040 S 25	40	40	40	35	250	0	0	3.01	GI131	SS25
	SSBCR 5050 T 25	50	50	50	43	300	0	0	5.65	GI131	SS25
	SSBCR 5050 T 38-A	50	50	50	43	300	0	0	4.84	GI164	SS38A
	SSBCR 6060 V 38-A	60	60	60	53	400	0	0	11.10	GI164	SS38A
L	SSBCL 1212 F 09	12	12	12	11	80	0	0	0.10	GI053	S08
	SSBCL 1616 H 09	16	16	16	13	100	0	0	0.22	GI053	S08
	SSBCL 2020 K 12-M-A	20	20	20	17	125	0	0	0.40	GI015	SS20
	SSBCL 2525 M 12-M-A	25	25	25	22	150	0	0	0.47	GI015	SS20
	SSBCL 4040 S 25	40	40	40	35	250	0	0	3.01	GI131	SS25
	SSBCL 5050 T 25	50	50	50	43	300	0	0	5.65	GI131	SS25
	SSBCL 5050 T 38-A	50	50	50	43	300	0	0	5.78	GI164	SS38A
	SSBCL 6060 V 38-A	60	60	60	53	400	0	0	11.16	GI164	SS38A

GI015	SC.. 1204..
GI053	SC.. 09T3..
GI131	SC.. 2509..
GI164	SC.. 3809..

		Nm							
S08	US 3510-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–	–
SS20	US 5012-T15P	5.0	M 5	12.2	SSN 120304	MS 5008	FLAG T15P	HXK 5	–
SS25	US 8025-T30P	13.0	M 8	24.2	SSN 250620	MS 8020	–	HXK 5	SDR T30P
SS38A	US 8025-T30P	13.0	M 8	24.2	SSN 380920	MS 8020	–	HXK 5	SDR T30P

SSDCN EXT

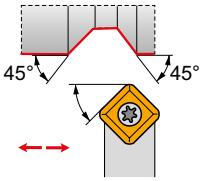
P M K N S H

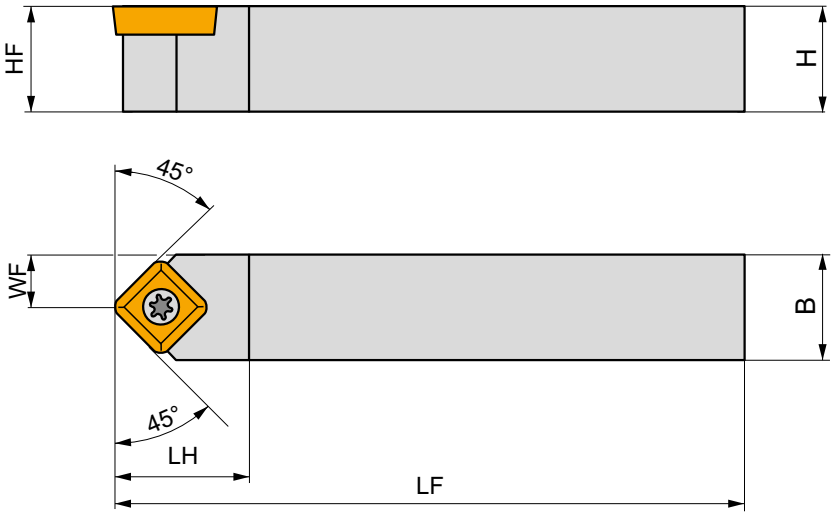
PRAMET

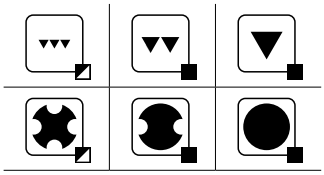
S

External Screw Lock Tool Holder with 45° Cutting Angle for SC.. Insert

External neutral tool holder for screw type positive SC.. 09 or 12 inserts. Suited for external longitudinal turning without shoulder, copy, taper and chamfer turning. Available with shank size 12x12 up to 25x25 mm. Body treated for longer tool life.







	Product	H	B	HF	WF	LF	LH	LAMS	GAMO	kg		
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[°]	[°]			
N	**SSDCN 1212 F 09**	12	12	12	6	80	–	0	0	0.12	GI053	S08
	SSDCN 1616 H 09	16	16	16	8	100	–	0	0	0.20	GI053	S08
	SSDCN 2020 K 12-M-A	20	20	20	10	125	–	0	0	0.42	GI015	SS20
	SSDCN 2525 M 12-M-A	25	25	25	12.5	150	–	0	0	0.74	GI015	SS20

GI015	SC.. 1204..
GI053	SC.. 09T3..

		Nm						
S08	US 3510-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–
SS20	US 5012-T15P	5.0	M 5	12.2	SSN 120304	MS 5008	FLAG T15P	HXK 5

SSKC(RL) EXT

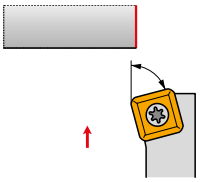
P M K N S H

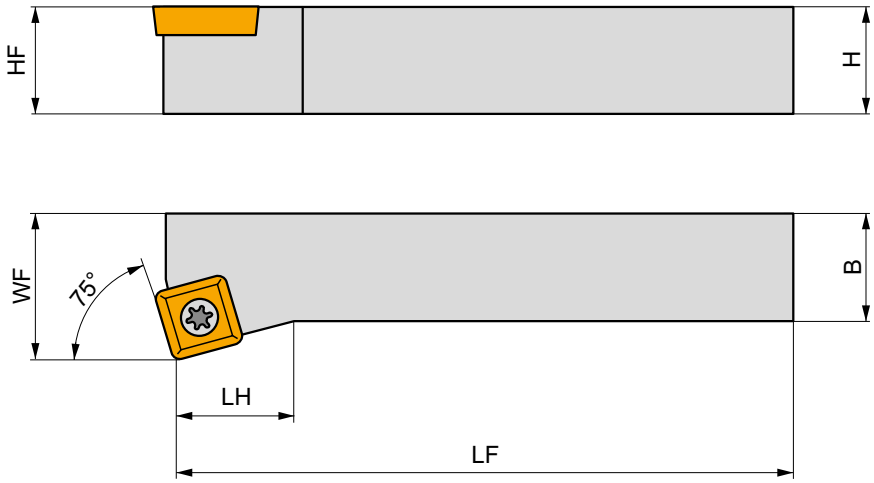
PRAMET

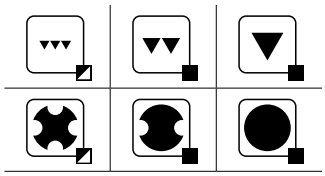
S

Ext. Screw Lock Tool Holder, 75° (Face Turning) Cutting Angle for SC.. Insert

External Right/Left hand tool holder for screw type positive SC.. 09 up to 12 inserts. Suited for external face turning without shoulder and chamfer turning. Available with shank size 12x12 up to 25x25 mm. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	SSKCR 1212 F 09	12	12	12	16	80	32	0	0	0.10	GI053	S08
	SSKCR 1616 H 09	16	16	16	20	100	32	0	0	0.25	GI053	S08
	SSKCR 2020 K 12-M-A	20	20	20	25	125	36	0	0	0.75	GI015	SS20
	SSKCR 2525 M 12-M-A	25	25	25	32	150	36	0	0	0.75	GI015	SS20
L	SSKCL 1212 F 09	12	12	12	16	80	32	0	0	0.10	GI053	S08
	SSKCL 1616 H 09	16	16	16	20	100	32	0	0	0.22	GI053	S08
	SSKCL 2020 K 12-M-A	20	20	20	25	125	36	0	0	0.45	GI015	SS20
	SSKCL 2525 M 12-M-A	25	25	25	32	150	36	0	0	0.80	GI015	SS20

GI015	SC.. 1204..
GI053	SC.. 09T3..

		Nm						
S08	US 3510-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–
SS20	US 5012-T15P	5.0	M 5	12.2	SSN 120304	MS 5008	FLAG T15P	HXK 5

KHS-SBC(RL)

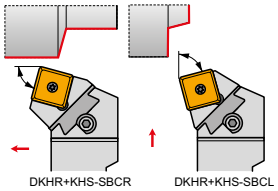
P M K

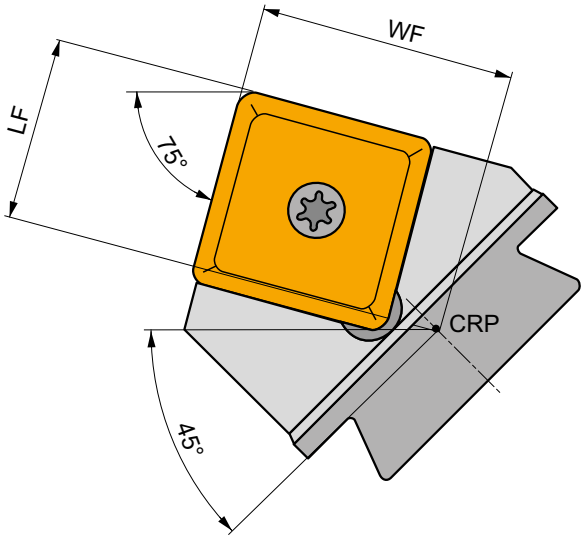
PRAMET

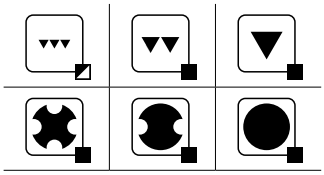
S

Modular KHS Screw Clamp Turning Cartridge 75° Cutting Angle for SC.. Insert

Dovetailed Right/Left hand lever lock turning cartridge, 75° cutting angle, for mounting on DKH tool holder shank. Suited for heavy longitudinal turning without shoulder, face turning, taper and chamfer turning with positive SC.. 25 or 38 inserts Tool holder treated for longer tool life.







	Product	WF [mm]	LF [mm]	LAMS [°]	GAMO [°]	kg		
R	KHS-SBCR 25	47	36	0	0	1.50	GI131	SS26
	KHS-SBCR 38-A	47	36	0	0	1.50	GI164	SS38
L	KHS-SBCL 25	47	36	0	0	1.45	GI131	SS26
	KHS-SBCL 38-A	47	36	0	0	1.48	GI164	SS38

GI131	SC.. 2509..
GI164	SC.. 3809..

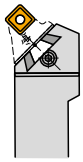
SS26	US 8025-T30P	13.0	M 8	24.2	SSN 250620	MS 8020	SDR T30P	HXK 5
SS38	US 8025-T30P	13.0	M 8	24.2	SSN 380620	MS 8020	SDR T30P	HXK 5

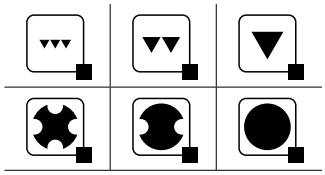
DKH(RL)

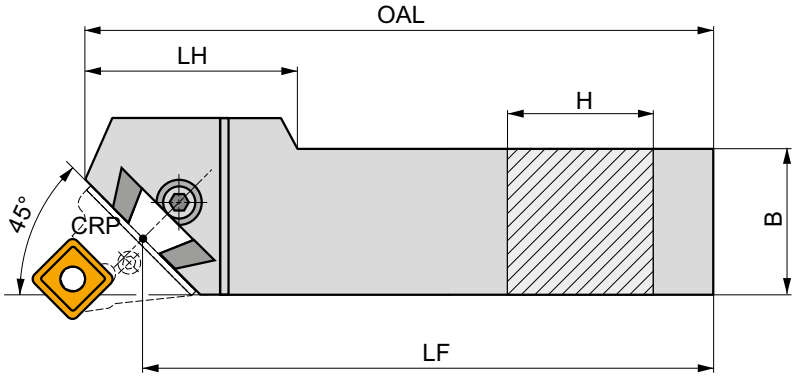
PRAMET

External Tool Holder Shank for KHP/KHS Heavy Turning Cartridges

Dovetailed Right/Left hand modular tool shank for KHP/KHS cartridges. Suited for heavy turning applications. Available with shank size 40x50 up to 60x80 mm. Body treated for longer tool life.







	Product	H [mm]	B [mm]	LF [mm]	OAL [mm]	LH [mm]	kg		
R	DKHR 4050 V	40	50	400	425	100	7.10	GI098	DKH10
	DKHR 5060 W	50	60	450	475	110	11.30	GI098	DKH10
	DKHR 6080 W-A	60	80	450	485	90	19.65	GI098	DKH10
L	DKHL 4050 V	40	50	400	425	100	7.10	GI098	DKH10
	DKHL 5060 W	50	60	450	475	110	11.30	GI098	DKH10
	DKHL 6080 W-A	60	80	450	485	90	19.28	GI098	DKH10

GI098	KHP	KHS

DKH10	SR 14	HXK 10

SSSC(RL) INT

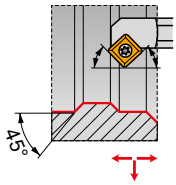
P M K N S H

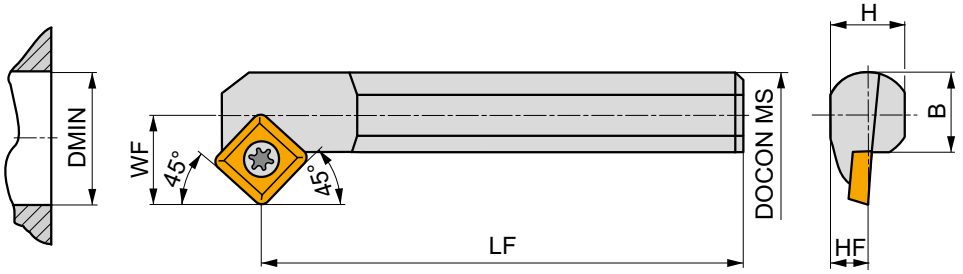
PRAMET

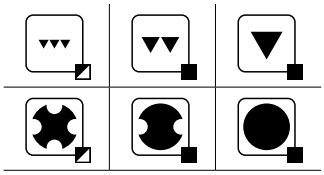
S

Internal Screw Lock Boring Bar with 45° Cutting Angle for SC.. Insert

Internal Right/Left hand boring bar with 45° cutting angle for screw type SC.. 09 inserts. Minimum internal turning diameter Ø25 mm. For internal back chamfer, taper, multi-directional, chamfer and longitudinal turning without shoulder. Available with shank size Ø20 up to Ø25 mm. Body treated for longer tool life.







	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	H [mm]	B [mm]	LF [mm]	LAMS [°]	GAMO [°]	kg		
R	S20S-SSSCR 09	20	25	13	18	18.5	250	-5	0	0.61	GI053	S04
	S25T-SSSCR 09	25	32	17	23	23	300	-3	0	1.15	GI053	S04
L	S20S-SSSCL 09	20	25	13	18	18.5	250	-5	0	0.05	GI053	S04
	S25T-SSSCL 09	25	32	17	23	23	300	-3	0	1.11	GI053	S04

GI053	SC.. 09T3..

S04	US 3510-T15P	3.0	M 3.5	10.6	FLAG T15P

SP

09/ 12/ 15/ 19/ 25

CARBIDE INSERTS

SPMR

146

SPUN

146

CER INSERTS

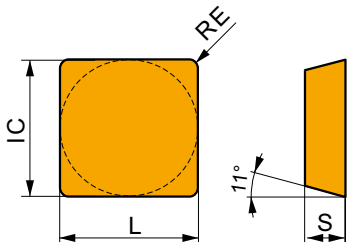
SPGN CER

147

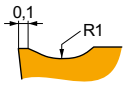
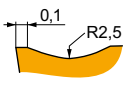
SPMR

PRAMET

	IC [mm]	L [mm]	S [mm]
0903	9.525	9.53	3.18
1203	12.700	12.70	3.18



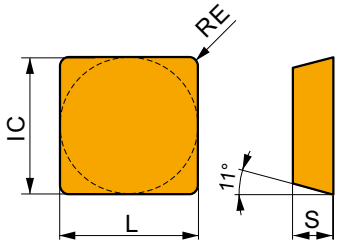
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
																				
			Geometry 46 for fine to finish machining, and continuous to interrupted cuts.																	
SPMR 090304E-46	**T9325**	0.4	215	0.15	1.0	125	0.15	1.0	200	0.15	1.0	–	–	–	–	–	–	–	–	–
SPMR 090308E-46	**T9325**	0.8	255	0.15	1.0	150	0.15	1.0	240	0.15	1.0	–	–	–	–	–	–	–	–	–
																				
			Geometry 48 for finish to semi-rough machining, and continuous to interrupted cuts.																	
SPMR 120304E-48	**T9325**	0.4	170	0.22	2.2	100	0.22	2.2	160	0.22	2.2	–	–	–	–	–	–	–	–	–
	T9335	0.4	145	0.22	2.2	85	0.22	2.2	–	–	–	–	–	–	–	–	–	–	–	–
SPMR 120308E-48	**6640**	0.8	160	0.22	2.2	95	0.22	2.2	150	0.22	2.2	–	–	–	–	–	–	–	–	–
	T9325	0.8	205	0.22	2.2	120	0.22	2.2	190	0.22	2.2	–	–	–	–	–	–	–	–	–
	T9335	0.8	175	0.22	2.2	105	0.22	2.2	–	–	–	–	–	–	–	–	–	–	–	–
SPMR 120312E-48	**T9325**	1.2	215	0.22	2.2	125	0.22	2.2	200	0.22	2.2	–	–	–	–	–	–	–	–	–

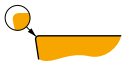
SPUN

PRAMET

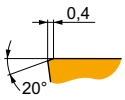
	IC [mm]	L [mm]	M [mm]	S [mm]
1203	12.700	12.70	2	3.18
1504	15.875	15.88	3	4.76
1904	19.050	19.05	3	4.76
2506	25.400	25.40	4	6.35



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
																				
			For fine-finish to semi-rough machining, and continuous to slightly interrupted cuts.																	
SPUN 120308	**6640**	0.8	180	0.15	4.0	–	–	–	170	0.15	4.0	–	–	–	–	–	–	–	–	–
SPUN 120312	**6640**	1.2	190	0.15	4.0	–	–	–	180	0.15	4.0	–	–	–	–	–	–	–	–	–
SPUN 150408	**6640**	0.8	155	0.20	5.0	–	–	–	145	0.20	5.0	–	–	–	–	–	–	–	–	–

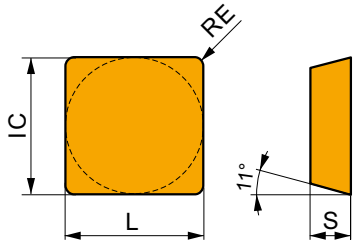
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc	M f	M ap	K vc	K f	K ap	N vc	N f	N ap	S vc	S f	S ap	H vc	H f	H ap
			E																	
			For fine-finish to semi-rough machining, and continuous to slightly interrupted cuts.																	
SPUN 150412	**6640**	1.2	165	0.20	5.0	–	–	–	155	0.20	5.0	–	–	–	–	–	–	–	–	–
SPUN 190408	**6640**	0.8	150	0.20	6.0	–	–	–	140	0.20	6.0	–	–	–	–	–	–	–	–	–
SPUN 190412	**6640**	1.2	160	0.20	6.0	–	–	–	150	0.20	6.0	–	–	–	–	–	–	–	–	–
SPUN 190416	**6640**	1.6	165	0.20	6.0	–	–	–	155	0.20	6.0	–	–	–	–	–	–	–	–	–
			S																	
			For fine-finish to semi-rough machining, and continuous to slightly interrupted cuts.																	
SPUN 250620S	**6640**	2.0	80	0.40	12.0	–	–	–	75	0.40	12.0	–	–	–	–	–	–	–	–	–

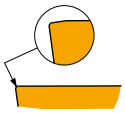
SPGN CER

PRAMET

	IC [mm]	L [mm]	S [mm]
1203	12.700	12.70	3.18



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc	M f	M ap	K vc	K f	K ap	N vc	N f	N ap	S vc	S f	S ap	H vc	H f	H ap
			HSC		T															
			For machining with high speeds and continuous cuts.																	
SPGN 120308 T01020	**TC100**	0.8	–	–	–	–	–	–	530	0.20	1.5	–	–	–	–	–	–	–	–	–

TC

06/ 09/ 11/16

CARBIDE INSERTS

TCGT

149

TCMT

150

TCMW

154

CBN INSERTS

TCGW CBN

154

MATCH THE RIGHT SIZE (example)

Insert	Tool Holder
TCMT 110204E-FF2	STFCR 1616 H 11

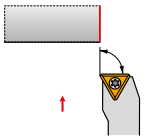
ISO TURNING – EXTERNAL

STFC(RL) EXT

90°

TC..

11
16



16×16
25×25

155

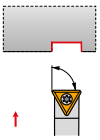
149 – 154

STFC(RL)-A EXT

90°

TC..

11



20×20

156

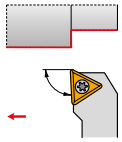
149 – 154

STJC(RL) EXT

93°

TC..

11
16



16×16
25×25

157

149 – 154

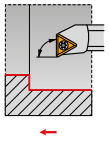
ISO TURNING – INTERNAL

STFC(RL) INT

90°

TC..

06
09
11
16



ØDmin

8,5
40

158

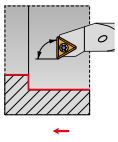
149 – 154

STFC(RL)-E INT

90°

TC..

06
09
11



ØDmin

8,5
20

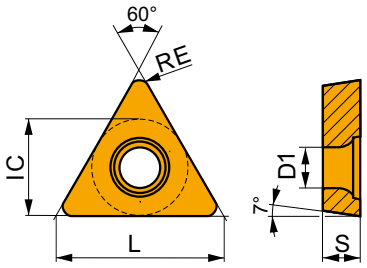
160

149 – 154

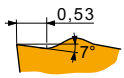
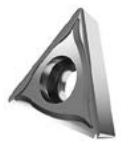
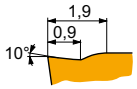
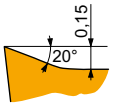
TCGT

PRAMET

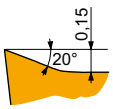
	IC [mm]	D1 [mm]	L [mm]	S [mm]
06T1	3.970	2.20	6.90	1.98
0902	5.560	2.50	9.60	2.38
1102	6.350	2.80	11.00	2.38
1102-SF3	6.350	2.80	11.00	2.58
16T3	9.525	4.40	16.50	3.97
16T3-SF3	9.525	4.40	16.50	4.22



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			F																	
AL geometry with highly positive design for fine-finish to rough machining, and continuous to slightly interrupted cuts.																				
TCGT 090202F-AL	**HF7**	0.2	–	–	–	–	–	–	–	–	–	375	0.12	1.0	–	–	–	–	–	–
	T0315	0.2	–	–	–	–	–	–	–	–	–	555	0.12	1.0	–	–	–	–	–	–
TCGT 090204F-AL	**HF7**	0.4	–	–	–	–	–	–	–	–	–	300	0.24	1.0	–	–	–	–	–	–
	T0315	0.4	–	–	–	–	–	–	–	–	–	450	0.24	1.0	–	–	–	–	–	–
TCGT 110202F-AL	**HF7**	0.2	–	–	–	–	–	–	–	–	–	360	0.12	1.5	–	–	–	–	–	–
	T0315	0.2	–	–	–	–	–	–	–	–	–	525	0.12	1.5	–	–	–	–	–	–
TCGT 110204F-AL	**HF7**	0.4	–	–	–	–	–	–	–	–	–	285	0.24	1.5	–	–	–	–	–	–
	T0315	0.4	–	–	–	–	–	–	–	–	–	420	0.24	1.5	–	–	–	–	–	–
TCGT 110208F-AL	**HF7**	0.8	–	–	–	–	–	–	–	–	–	270	0.48	1.5	–	–	–	–	–	–
TCGT 16T304F-AL	**HF7**	0.4	–	–	–	–	–	–	–	–	–	285	0.24	2.4	–	–	–	–	–	–
	T0315	0.4	–	–	–	–	–	–	–	–	–	405	0.24	2.4	–	–	–	–	–	–
TCGT 16T308F-AL	**HF7**	0.8	–	–	–	–	–	–	–	–	–	255	0.48	2.4	–	–	–	–	–	–
	T0315	0.8	–	–	–	–	–	–	–	–	–	360	0.48	2.4	–	–	–	–	–	–
			U		E															
FF2 geometry with positive design for fine-finish to finish machining, and continuous to slightly interrupted cuts.																				
TCGT 06T102E-FF2	**T8330**	0.2	175	0.05	0.8	–	–	–	165	0.05	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.2	235	0.05	0.8	–	–	–	190	0.05	0.8	–	–	–	–	–	–	–	–	–
	TT010	0.2	295	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
TCGT 090202E-FF2	**TT010**	0.2	295	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			U		E															
NF1 geometry with positive design for fine-finish to medium machining, and continuous cuts.																				
TCGT 110204E-NF1	**H07**	0.4	–	–	–	80	0.09	0.8	–	–	–	415	0.12	0.8	40	0.08	0.6	–	–	–
	T6310	0.4	155	0.10	0.8	110	0.09	0.8	–	–	–	465	0.12	0.8	45	0.08	0.6	30	0.15	1.0
	T7325	0.4	180	0.10	0.8	140	0.09	0.8	–	–	–	–	–	–	55	0.08	0.6	–	–	–
			E																	
SF3 geometry with highly positive design for fine to finish machining, and continuous cuts.																				
TCGT 110202E-SF3	**T6310**	0.2	175	0.05	0.8	125	0.05	0.8	140	0.05	0.8	525	0.06	0.8	50	0.04	0.6	35	0.15	1.0
	T8315	0.2	185	0.05	0.8	110	0.05	0.8	175	0.05	0.8	555	0.06	0.8	45	0.04	0.6	35	0.15	1.0
TCGT 110204E-SF3	**H07**	0.4	–	–	–	80	0.09	0.8	130	0.10	0.8	415	0.12	0.8	40	0.07	0.6	–	–	–
	T6310	0.4	155	0.10	0.8	110	0.09	0.8	125	0.10	0.8	465	0.12	0.8	45	0.07	0.6	30	0.15	1.0
	T8315	0.4	165	0.10	0.8	95	0.09	0.8	155	0.10	0.8	495	0.12	0.8	40	0.07	0.6	30	0.15	1.0

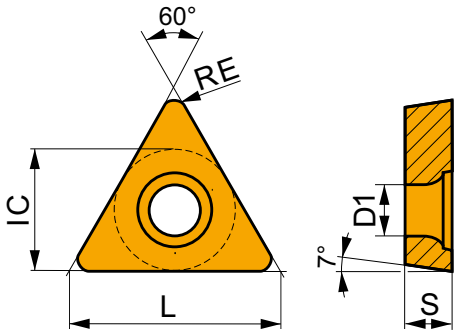
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
			SF3 geometry with highly positive design for fine to finish machining, and continuous cuts.																	
TCGT 16T304E-SF3	**H07**	0.4	–	–	–	80	0.09	1.0	125	0.10	1.0	405	0.12	1.0	40	0.07	0.8	–	–	–
	T6310	0.4	150	0.10	1.0	105	0.09	1.0	120	0.10	1.0	450	0.12	1.0	45	0.07	0.8	30	0.15	1.0
	T8315	0.4	160	0.10	1.0	95	0.09	1.0	150	0.10	1.0	480	0.12	1.0	40	0.07	0.8	30	0.15	1.0
TCGT 16T308E-SF3	**H07**	0.8	–	–	–	90	0.09	1.2	145	0.10	1.2	470	0.12	1.2	45	0.08	1.0	–	–	–
	T6310	0.8	175	0.10	1.2	125	0.09	1.2	140	0.10	1.2	525	0.12	1.2	50	0.08	1.0	35	0.15	1.0
	T8315	0.8	185	0.10	1.2	110	0.09	1.2	175	0.10	1.2	555	0.12	1.2	45	0.08	1.0	35	0.15	1.0
TCGT 16T312E-SF3	**T6310**	1.2	150	0.20	1.2	105	0.18	1.2	120	0.20	1.2	450	0.24	1.2	45	0.14	1.0	30	0.15	1.0
			ER-SI geometry with positive right-handed design for fine-finish machining, and continuous cuts.																	
TCGT 110202ER-SI	**T8315**	0.2	190	0.10	0.8	110	0.09	0.8	180	0.10	0.8	–	–	–	45	0.08	0.6	–	–	–
	T8330	0.2	180	0.10	0.8	105	0.09	0.8	170	0.10	0.8	–	–	–	45	0.08	0.6	–	–	–
	T8430	0.2	225	0.10	0.8	120	0.09	0.8	185	0.10	0.8	–	–	–	45	0.08	0.6	–	–	–
TCGT 110204ER-SI	**T8330**	0.4	180	0.12	0.8	105	0.11	0.8	170	0.12	0.8	–	–	–	45	0.10	0.6	–	–	–
	T8430	0.4	225	0.12	0.8	120	0.11	0.8	185	0.12	0.8	–	–	–	45	0.10	0.6	–	–	–
			EL-SI geometry with positive left-handed design for fine-finish machining, and continuous cuts.																	
TCGT 110202EL-SI	**T8315**	0.2	190	0.10	0.8	110	0.09	0.8	180	0.10	0.8	–	–	–	45	0.08	0.6	–	–	–
	T8330	0.2	180	0.10	0.8	105	0.09	0.8	170	0.10	0.8	–	–	–	45	0.08	0.6	–	–	–
	T8430	0.2	225	0.10	0.8	120	0.09	0.8	185	0.10	0.8	–	–	–	45	0.08	0.6	–	–	–
TCGT 110204EL-SI	**T8315**	0.4	195	0.12	0.8	115	0.11	0.8	185	0.12	0.8	–	–	–	45	0.10	0.6	–	–	–
	T8330	0.4	180	0.12	0.8	105	0.11	0.8	170	0.12	0.8	–	–	–	45	0.10	0.6	–	–	–
	T8430	0.4	225	0.12	0.8	120	0.11	0.8	185	0.12	0.8	–	–	–	45	0.10	0.6	–	–	–

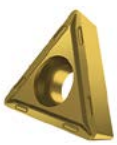
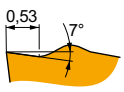
TCMT

PRAMET

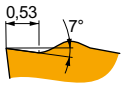
	IC	D1	L	S
	[mm]	[mm]	[mm]	[mm]
06T1	3.970	2.20	6.90	1.98
0902	5.560	2.50	9.60	2.38
1102	6.350	2.80	11.00	2.38
16T3	9.525	4.40	16.50	3.97



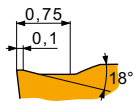
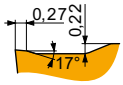
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
			FF2 geometry with positive design for fine-finish to finish machining, and continuous to slightly interrupted cuts.																	
TCMT 06T102E-FF2	**T8330**	0.2	175	0.05	0.8	–	–	–	165	0.05	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.2	235	0.05	0.8	–	–	–	190	0.05	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.2	335	0.05	0.8	–	–	–	315	0.05	0.8	–	–	–	–	–	–	–	–	–

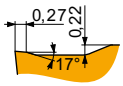
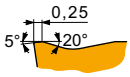
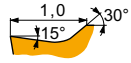
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
FF2 geometry with positive design for fine-finish to finish machining, and continuous to slightly interrupted cuts.																				
TCMT 06T104E-FF2	**T7325**	0.4	◪ 170	0.12	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	■ 145	0.12	0.8	–	–	–	■ 135	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	■ 180	0.12	0.8	–	–	–	◪ 145	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	■ 245	0.12	0.8	–	–	–	◪ 230	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 220	0.12	0.8	–	–	–	◪ 205	0.12	0.8	–	–	–	–	–	–	–	–	–
TCMT 090204E-FF2	**T5315**	0.4	◪ 240	0.12	1.0	–	–	–	■ 225	0.12	1.0	–	–	–	–	–	–	–	–	–
	T7325	0.4	◪ 165	0.12	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	■ 140	0.12	1.0	–	–	–	■ 130	0.12	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.4	■ 175	0.12	1.0	–	–	–	◪ 140	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9315	0.4	■ 240	0.12	1.0	–	–	–	◪ 225	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 215	0.12	1.0	–	–	–	◪ 200	0.12	1.0	–	–	–	–	–	–	–	–	–
TCMT 110204E-FF2	**T7325**	0.4	◪ 170	0.12	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	■ 145	0.12	0.8	–	–	–	■ 135	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	■ 180	0.12	0.8	–	–	–	◪ 145	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	■ 245	0.12	0.8	–	–	–	◪ 230	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 220	0.12	0.8	–	–	–	◪ 205	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9335	0.4	■ 185	0.12	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
TCMT 110208E-FF2	**T7325**	0.8	◪ 180	0.17	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	■ 155	0.17	0.8	–	–	–	■ 145	0.17	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.8	■ 185	0.17	0.8	–	–	–	◪ 150	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.8	■ 250	0.17	0.8	–	–	–	◪ 235	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 225	0.17	0.8	–	–	–	◪ 210	0.17	0.8	–	–	–	–	–	–	–	–	–
TCMT 16T304E-FF2	**T7325**	0.4	◪ 170	0.12	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	■ 145	0.12	0.8	–	–	–	■ 135	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	■ 180	0.12	0.8	–	–	–	◪ 145	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	■ 245	0.12	0.8	–	–	–	◪ 230	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 220	0.12	0.8	–	–	–	◪ 205	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9335	0.4	■ 185	0.12	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	TT010	0.4	■ 295	0.06	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
TCMT 16T308E-FF2	**T7325**	0.8	◪ 180	0.17	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	■ 155	0.17	0.8	–	–	–	■ 145	0.17	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.8	■ 185	0.17	0.8	–	–	–	◪ 150	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.8	■ 250	0.17	0.8	–	–	–	◪ 235	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 225	0.17	0.8	–	–	–	◪ 210	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 195	0.17	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
FM geometry for finish to semi-rough machining, and continuous to slightly interrupted cuts.																				
TCMT 110202E-FM	**T7325**	0.2	◪ 185	0.10	0.8	■ 140	0.09	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.2	◪ 185	0.10	0.8	■ 140	0.09	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.2	◪ 170	0.10	0.8	■ 100	0.09	0.8	◪ 160	0.10	0.8	◪ 510	0.12	0.8	–	–	–	–	–	–
	T8330	0.2	■ 160	0.10	0.8	■ 95	0.09	0.8	◪ 150	0.10	0.8	◪ 480	0.12	0.8	–	–	–	–	–	–
	T8430	0.2	■ 195	0.10	0.8	■ 105	0.09	0.8	◪ 160	0.10	0.8	◪ 540	0.12	0.8	–	–	–	–	–	–
	T9315	0.2	■ 270	0.10	0.8	–	–	–	◪ 255	0.10	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.2	■ 245	0.10	0.8	■ 145	0.09	0.8	◪ 230	0.10	0.8	–	–	–	–	–	–	–	–	–
TCMT 110204E-FM	**T7325**	0.4	◪ 160	0.19	0.8	■ 120	0.17	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.4	◪ 155	0.19	0.8	■ 120	0.17	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	◪ 170	0.12	0.8	■ 100	0.11	0.8	◪ 160	0.12	0.8	◪ 510	0.14	0.8	–	–	–	–	–	–
	T8330	0.4	■ 160	0.12	0.8	■ 95	0.11	0.8	◪ 150	0.12	0.8	◪ 480	0.14	0.8	–	–	–	–	–	–
	T8430	0.4	■ 195	0.12	0.8	■ 105	0.11	0.8	◪ 160	0.12	0.8	◪ 540	0.14	0.8	–	–	–	–	–	–
	T9315	0.4	■ 270	0.12	0.8	–	–	–	◪ 255	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 205	0.18	0.8	■ 120	0.16	0.8	◪ 190	0.18	0.8	–	–	–	–	–	–	–	–	–

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]
FM geometry for finish to semi-rough machining, and continuous to slightly interrupted cuts.																				
TCMT 110208E-FM	**T7325**	0.8	195	0.17	0.8	150	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	175	0.17	0.8	105	0.15	0.8	165	0.17	0.8	525	0.20	0.8	–	–	–	–	–	–
	T8430	0.8	200	0.17	0.8	110	0.15	0.8	165	0.17	0.8	555	0.20	0.8	–	–	–	–	–	–
	T9315	0.8	275	0.17	0.8	–	–	–	260	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.8	250	0.17	0.8	150	0.15	0.8	235	0.17	0.8	–	–	–	–	–	–	–	–	–
TCMT 16T304E-FM	**T7325**	0.4	150	0.19	1.7	115	0.17	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.4	145	0.19	1.7	110	0.17	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	155	0.12	1.7	90	0.11	1.7	145	0.12	1.7	465	0.14	1.7	–	–	–	–	–	–
	T8330	0.4	150	0.12	1.7	90	0.11	1.7	140	0.12	1.7	450	0.14	1.7	–	–	–	–	–	–
	T8430	0.4	180	0.12	1.7	95	0.11	1.7	145	0.12	1.7	495	0.14	1.7	–	–	–	–	–	–
	T9315	0.4	250	0.12	1.7	–	–	–	235	0.12	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.4	190	0.18	1.7	110	0.16	1.7	180	0.18	1.7	–	–	–	–	–	–	–	–	–
TCMT 16T308E-FM	**T7325**	0.8	180	0.17	1.7	140	0.15	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.8	175	0.17	1.7	135	0.15	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	170	0.17	1.7	100	0.15	1.7	160	0.17	1.7	510	0.20	1.7	–	–	–	–	–	–
	T8330	0.8	160	0.17	1.7	95	0.15	1.7	150	0.17	1.7	480	0.20	1.7	–	–	–	–	–	–
	T8430	0.8	185	0.17	1.7	100	0.15	1.7	150	0.17	1.7	510	0.20	1.7	–	–	–	–	–	–
	T9315	0.8	255	0.17	1.7	–	–	–	240	0.17	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.8	230	0.17	1.7	135	0.15	1.7	215	0.17	1.7	–	–	–	–	–	–	–	–	–
																				
FM2 geometry for finish to medium machining, and continuous to interrupted cuts.																				
TCMT 110204E-FM2	**T8330**	0.4	145	0.12	0.8	85	0.11	0.8	135	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	180	0.12	0.8	95	0.11	0.8	145	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	220	0.12	0.8	130	0.11	0.8	205	0.12	0.8	–	–	–	–	–	–	–	–	–
TCMT 110208E-FM2	**T8330**	0.8	155	0.17	0.8	90	0.15	0.8	145	0.17	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.8	185	0.17	0.8	100	0.15	0.8	150	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.8	225	0.17	0.8	135	0.15	0.8	210	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9335	0.8	195	0.17	0.8	115	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–
TCMT 16T308E-FM2	**T7325**	0.8	170	0.20	1.0	130	0.18	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	145	0.20	1.0	85	0.18	1.0	135	0.20	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.8	170	0.20	1.0	90	0.18	1.0	135	0.20	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	205	0.20	1.0	120	0.18	1.0	190	0.20	1.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	175	0.20	1.0	105	0.18	1.0	–	–	–	–	–	–	–	–	–	–	–	–
RF geometry for semi-rough to rough machining, and continuous to interrupted cuts.																				
TCMT 16T308E-RF	**T9325**	0.8	175	0.20	1.5	105	0.18	1.5	165	0.20	1.5	–	–	–	–	–	–	–	–	–
																				
RM geometry for semi-rough to rough machining, and continuous to interrupted cuts.																				
TCMT 16T308E-RM	**T5305**	0.8	265	0.27	1.9	–	–	–	250	0.27	1.9	–	–	–	–	–	–	50	0.15	1.0
	T5315	0.8	235	0.27	1.9	–	–	–	220	0.27	1.9	–	–	–	–	–	–	45	0.15	1.0
	T7335	0.8	155	0.27	1.9	120	0.24	1.9	–	–	–	–	–	–	50	0.19	1.5	–	–	–
	T8330	0.8	145	0.27	1.9	85	0.24	1.9	135	0.27	1.9	–	–	–	35	0.19	1.5	25	0.15	1.0
	T8430	0.8	165	0.27	1.9	90	0.24	1.9	135	0.27	1.9	–	–	–	35	0.19	1.5	25	0.15	1.0
	T9315	0.8	215	0.27	1.9	–	–	–	200	0.27	1.9	–	–	–	–	–	–	40	0.15	1.0
	T9325	0.8	195	0.27	1.9	115	0.24	1.9	185	0.27	1.9	–	–	–	40	0.19	1.5	–	–	–

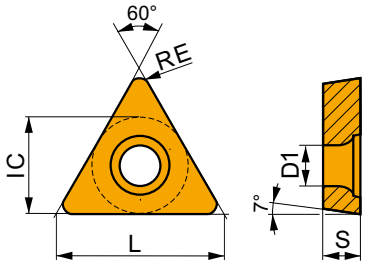
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
			RM geometry for semi-rough to rough machining, and continuous to interrupted cuts.																	
TCMT 16T312E-RM	**T5305**	1.2	280	0.27	1.9		–	–	–	265	0.27	1.9	–	–	–	–	–	–	55	0.15	1.0
	T5315	1.2	250	0.27	1.9		–	–	–	235	0.27	1.9	–	–	–	–	–	–	50	0.15	1.0
	T8330	1.2	150	0.27	1.9	90	0.24	1.9	140	0.27	1.9	–	–	–	35	0.19	1.5	30	0.15	1.0
	T8430	1.2	170	0.27	1.9	90	0.24	1.9	135	0.27	1.9	–	–	–	35	0.19	1.5	25	0.15	1.0
	T9315	1.2	225	0.27	1.9	–	–	–	210	0.27	1.9	–	–	–	–	–	–	45	0.15	1.0
	T9325	1.2	205	0.27	1.9	120	0.24	1.9	190	0.27	1.9	–	–	–	45	0.19	1.5	–	–	–
																				
			RM3 geometry for semi-rough to rough machining, and continuous to interrupted cuts.																	
TCMT 16T304E-RM3	**T6310**	0.4	110	0.25	2.0	75	0.25	2.0	85	0.25	2.0	–	–	–	–	–	–	20	0.15	1.0
	T7325	0.4	125	0.25	2.0	95	0.25	2.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	110	0.25	2.0	65	0.25	2.0	100	0.25	2.0	–	–	–	–	–	–	20	0.15	1.0
	T8430	0.4	120	0.25	2.0	65	0.25	2.0	95	0.25	2.0	–	–	–	–	–	–	20	0.15	1.0
	T9315	0.4	165	0.25	2.0	–	–	–	155	0.25	2.0	–	–	–	–	–	–	30	0.15	1.0
	T9325	0.4	145	0.25	2.0	85	0.25	2.0	135	0.25	2.0	–	–	–	–	–	–	–	–	–
	T9335	0.4	125	0.25	2.0	75	0.25	2.0	–	–	–	–	–	–	–	–	–	–	–	–
TCMT 16T308E-RM3	**T6310**	0.8	125	0.27	2.0	90	0.27	2.0	100	0.27	2.0	–	–	–	–	–	–	25	0.15	1.0
	T7325	0.8	145	0.27	2.0	110	0.27	2.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	125	0.27	2.0	75	0.27	2.0	115	0.27	2.0	–	–	–	–	–	–	25	0.15	1.0
	T8430	0.8	135	0.27	2.0	75	0.27	2.0	110	0.27	2.0	–	–	–	–	–	–	20	0.15	1.0
	T9315	0.8	185	0.27	2.0	–	–	–	175	0.27	2.0	–	–	–	–	–	–	35	0.15	1.0
	T9325	0.8	170	0.27	2.0	100	0.27	2.0	160	0.27	2.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	145	0.27	2.0	85	0.27	2.0	–	–	–	–	–	–	–	–	–	–	–	–
																				
			UR geometry for fine to finish machining, and continuous to slightly interrupted cuts.																	
TCMT 110204E-UR	**T7325**	0.4	135	0.19	0.8	105	0.17	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	135	0.12	0.8	80	0.11	0.8	125	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	170	0.12	0.8	90	0.11	0.8	135	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	235	0.12	0.8	–	–	–	220	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	175	0.18	0.8	105	0.16	0.8	165	0.18	0.8	–	–	–	–	–	–	–	–	–
TCMT 16T304E-UR	**T7325**	0.4	135	0.19	0.8	105	0.17	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	135	0.12	0.8	80	0.11	0.8	125	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	170	0.12	0.8	90	0.11	0.8	135	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	235	0.12	0.8	–	–	–	220	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	175	0.18	0.8	105	0.16	0.8	165	0.18	0.8	–	–	–	–	–	–	–	–	–
	TT310	0.4	225	0.12	0.8	135	0.11	0.8	–	–	–	–	–	–	–	–	–	–	–	–
TCMT 16T308E-UR	**T5315**	0.8	245	0.17	0.8	–	–	–	230	0.17	0.8	–	–	–	–	–	–	–	–	–
	T7325	0.8	170	0.17	0.8	130	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	150	0.17	0.8	90	0.15	0.8	140	0.17	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.8	175	0.17	0.8	95	0.15	0.8	140	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.8	240	0.17	0.8	–	–	–	225	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.8	215	0.17	0.8	125	0.15	0.8	200	0.17	0.8	–	–	–	–	–	–	–	–	–

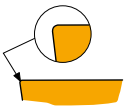
TCMW

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
1102	6.350	2.80	11.00	2.38
16T3	9.525	4.40	16.50	3.97



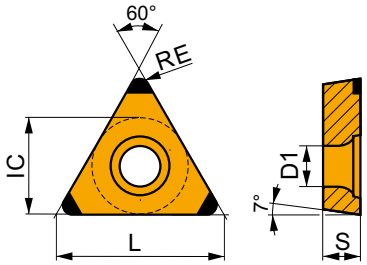
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			E																	
			For fine-finish to semi-rough machining, and continuous to slightly interrupted cuts.																	
TCMW 110204	**T5305**	0.4	–	–	–	–	–	–	200	0.10	1.2	–	–	–	–	–	–	40	0.15	1.0
	T5315	0.4	–	–	–	–	–	–	180	0.10	1.2	–	–	–	–	–	–	35	0.15	1.0
TCMW 16T304	**T5305**	0.4	–	–	–	–	–	–	195	0.10	1.5	–	–	–	–	–	–	40	0.15	1.0
	T5315	0.4	–	–	–	–	–	–	175	0.10	1.5	–	–	–	–	–	–	35	0.15	1.0
	T6310	0.4	–	–	–	–	–	–	85	0.10	1.5	–	–	–	–	–	–	20	0.15	1.0
TCMW 16T308	**T5305**	0.8	–	–	–	–	–	–	190	0.18	1.5	–	–	–	–	–	–	40	0.15	1.0
	T5315	0.8	–	–	–	–	–	–	165	0.18	1.5	–	–	–	–	–	–	35	0.15	1.0
	T6310	0.8	–	–	–	–	–	–	85	0.18	1.5	–	–	–	–	–	–	20	0.15	1.0

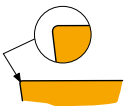
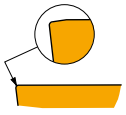
TCGW CBN

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
1102	6.350	2.90	11.00	2.38



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			HSC E																	
			For finish machining, and continuous cuts.																	
TCGW 110204E-C	**TB310**	0.4	–	–	–	–	–	–	390	0.10	0.4	–	–	–	100	0.07	0.3	80	0.15	1.0
			HSC S																	
			For finish machining, and continuous cuts.																	
TCGW 110204S01020C	**TB310**	0.4	–	–	–	–	–	–	390	0.10	0.4	–	–	–	100	0.07	0.3	80	0.15	1.0
TCGW 110208S01020C	**TB310**	0.8	–	–	–	–	–	–	400	0.15	0.6	–	–	–	105	0.11	0.5	85	0.15	1.0

STFC(RL) EXT

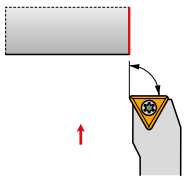
P M K N S H

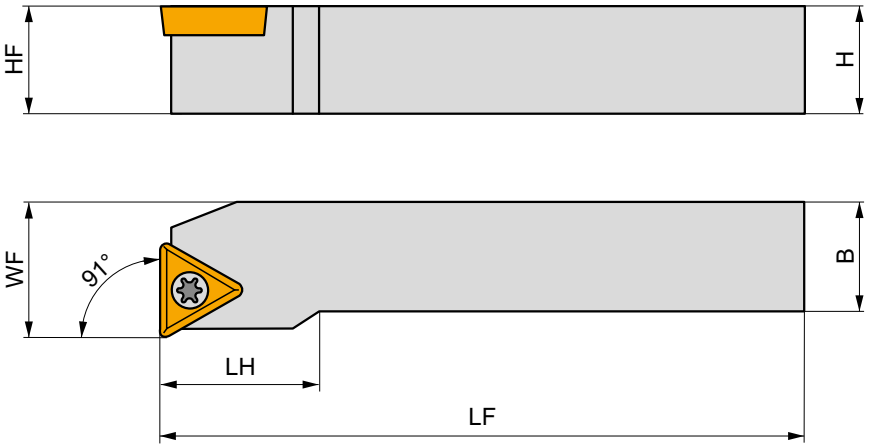
PRAMET

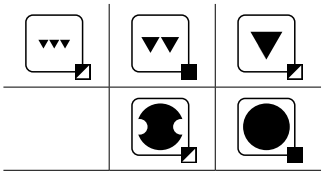
S

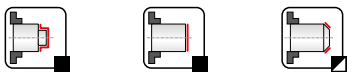
Ext. Screw Lock Tool Holder, 91° (Face Turning) Cutting Angle for TC.. Insert

External Right/Left hand tool holder for screw type positive TC.. 11 up to 16 inserts. Suited for external face turning with shoulder and chamfer turning. Available with shank size 16x16 up to 25x25 mm. Body treated for longer tool life.









	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	STFCR 1616 H 11	16	16	16	20	100	18	0	0	0.20	GI056	S01
R	STFCR 2020 K 16-M-A	20	20	20	25	125	25	0	0	0.40	GI016	ST10
R	STFCR 2525 M 16-M-A	25	25	25	32	150	25	0	0	0.76	GI016	ST10
L	STFCL 1616 H 11	16	16	16	20	100	18	0	0	0.22	GI056	S01
L	STFCL 2020 K 16-M-A	20	20	20	25	125	25	0	0	0.40	GI016	ST10
L	STFCL 2525 M 16-M-A	25	25	25	32	150	25	0	0	0.75	GI016	ST10

GI016	TC.. 16T3..
GI056	TC.. 1102..

		Nm						
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
ST10	US 3510-T15P	3.0	M 3.5	10.6	STN 160308	MS 3510	FLAG T15P	HXK 3.5

STFC(RL)-A EXT

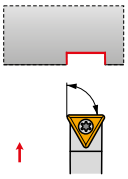
P M K N S H

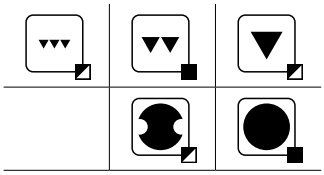
PRAMET

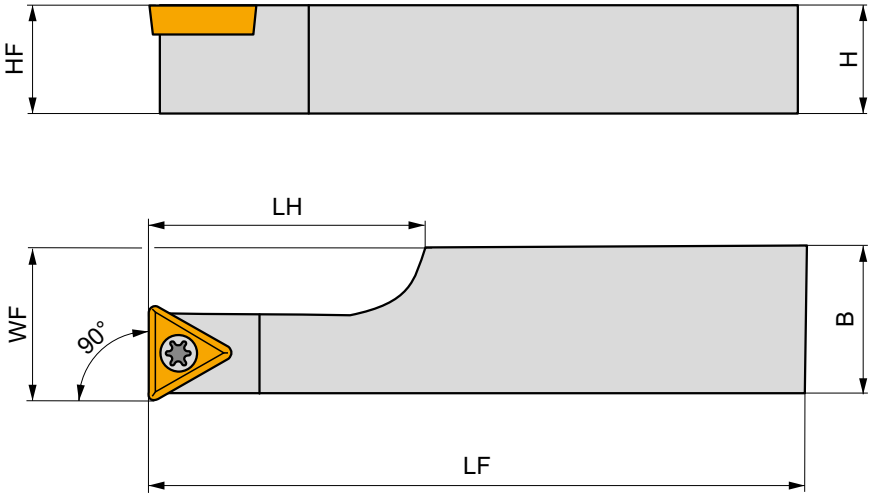
S

Ext. Screw Lock Tool Holder, 90° (Face Turning) Cutting Angle for TC.. Insert

External Right/Left hand tool holder for screw type positive TC.. 11 inserts. Suited for left and right-sided external face turning with shoulder and chamfer turning. Available with shank size 20x20 mm. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	STFCR 2020 K 11-A	20	20	20	25	125	21.3	0	0	0.52	GI056	ST21
L	STFCL 2020 K 11-A	20	20	20	25	125	21.3	0	0	0.36	GI056	ST21

GI056	TC.. 1102..

ST21	5513 020-03	0.8	M 2.5	6.5	PT-8001

STJC(RL) EXT

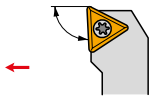
P M K N S H

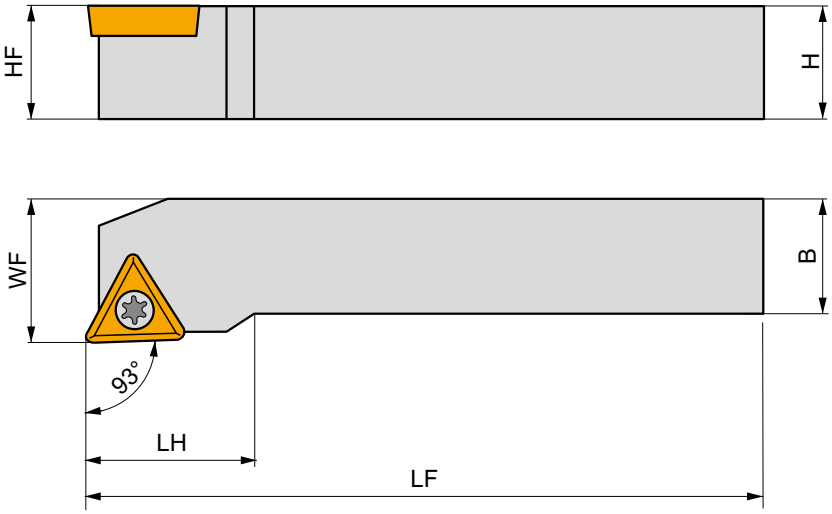
PRAMET

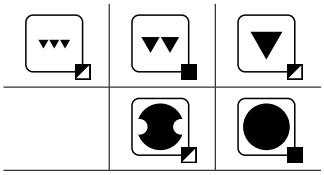
S

External Screw Lock Tool Holder with 93° Cutting Angle for TC.. Insert

External Right/Left hand tool holder for screw type positive TC.. 11 up to 16 inserts. Suited for external longitudinal turning with shoulder, taper and chamfer turning. Available with shank size 16x16 up to 25x25 mm. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	**STJCR 1616 H 11**	16	16	16	20	100	18	0	0	0.23	GI056	S01
	STJCR 2020 K 16-M-A	20	20	20	25	125	25	0	0	0.44	GI016	ST10
	STJCR 2525 M 16-M-A	25	25	25	32	150	25	0	0	0.76	GI016	ST10
L	**STJCL 1616 H 11**	16	16	16	20	100	18	0	0	0.22	GI056	S01
	STJCL 2020 K 16-M-A	20	20	20	25	125	25	0	0	0.43	GI016	ST10
	STJCL 2525 M 16-M-A	25	25	25	32	150	25	0	0	0.75	GI016	ST10

GI016	TC.. 16T3..
GI056	TC.. 1102..

		Nm						
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
ST10	US 3510-T15P	3.0	M 3.5	10.6	STN 160308	MS 3510	FLAG T15P	HXK 3.5

STFC(RL) INT

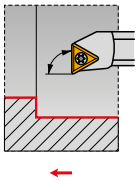
P M K N S H

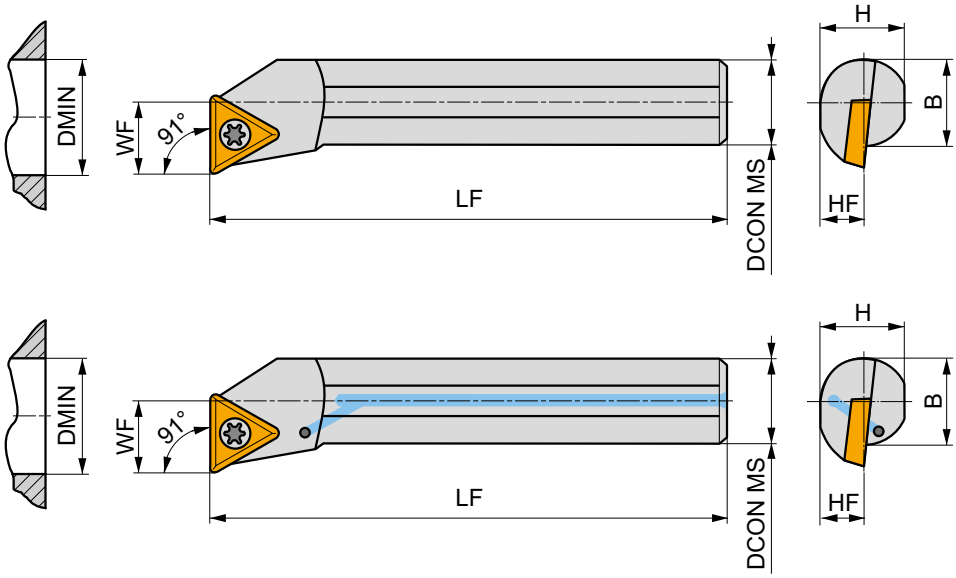
PRAMET

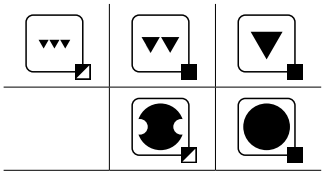
S

Internal Screw Lock Boring Bar with 91° Cutting Angle for TC.. Insert

Internal Right/Left hand boring bar, through coolant available, 91° cutting angle for screw type TC.. 06 up to 16 inserts. Minimum internal turning diameter Ø8.5 mm. Suited for internal taper and longitudinal turning with shoulder and chamfer turning. Ø6 to Ø32 mm shanks available. Body treated for longer tool life.







	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	H [mm]	B [mm]	LF [mm]	LAMS [°]	GAMO [°]		kg		
R	A06F-STFCR 06	6	8.5	4.5	5	–	80	-12	0	✓	0.03	GI217	ST12
	A08H-STFCR 06	8	11	5.9	7	–	100	-10	0	✓	0.04	GI217	ST13
	A10K-STFCR 09	10	13	7	9	–	125	-9	0	✓	0.06	GI218	ST14
	A12M-STFCR 09	12	16	9	11	–	150	-6.5	0	✓	0.12	GI218	ST14
	S10H-STFCR 11	10	13	7	9	9.5	100	-10	0	–	0.08	GI056	S02
	A12M-STFCR 11	12	16	9	11	11.5	150	-10	0	✓	0.14	GI056	S01
	S12K-STFCR 11	12	16	9	11	11.5	125	-7	0	–	0.13	GI056	S01
	A16R-STFCR 11	16	20	11	14.5	15	200	-7	0	✓	0.27	GI056	S01
	S16M-STFCR 11	16	20	11	14.5	15	150	-7	0	–	0.24	GI056	S01
	A20S-STFCR 11	20	25	13	18	18.5	250	-7	0	✓	0.54	GI056	S01
	S20Q-STFCR 11	20	25	13	18	18.5	180	-7	0	–	0.40	GI056	S01
	A25R-STFCR 16	25	32	17	23	23	200	-3	0	✓	0.67	GI016	S08
	S25T-STFCR 16	25	32	17	23	23	300	-3	0	–	1.15	GI016	S08
	A32S-STFCR 16	32	40	22	30	30	250	-10	0	✓	1.36	GI016	ST10
	S32U-STFCR 16-A	32	40	22	30	30	350	-10	0	–	2.10	GI016	ST10
L	A06F-STFCL 06	6	8.5	4.5	5	–	80	-12	0	✓	0.03	GI217	ST12
	A08H-STFCL 06	8	11	5.9	7	–	100	-10	0	✓	0.05	GI217	ST13
	A10K-STFCL 09	10	13	7	9	–	125	-9	0	✓	0.06	GI218	ST14
	A12M-STFCL 09	12	16	9	11	–	150	-6.5	0	✓	0.03	GI218	ST14
	S10H-STFCL 11	10	13	7	9	9.5	100	-10	0	–	0.06	GI056	S02
	A12M-STFCL 11	12	16	9	11	11.5	150	-10	0	✓	0.12	GI056	S01
	S12K-STFCL 11	12	16	9	11	11.5	125	-7	0	–	0.12	GI056	S01
	A16R-STFCL 11	16	20	11	14.5	15	200	-7	0	✓	0.00	GI056	S01
	S16M-STFCL 11	16	20	11	14.5	15	150	-7	0	–	0.25	GI056	S01
	A20S-STFCL 11	20	25	13	18	18.5	250	-7	0	✓	0.00	GI056	S01
	S20Q-STFCL 11	20	25	13	18	18.5	180	-7	0	–	0.42	GI056	S01
	A25R-STFCL 16	25	32	17	23	23	200	-3	0	✓	0.00	GI016	S08

	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	H [mm]	B [mm]	LF [mm]	LAMS [°]	GAMO [°]		kg		
L	**S25T-STFCL 16**	25	32	17	23	23	300	-3	0	–	1.15	GI016	S08
	A32S-STFCL 16	32	40	22	30	30	250	-10	0	✓	1.36	GI016	ST10
	S32U-STFCL 16-A	32	40	22	30	30	350	-10	0	–	2.06	GI016	ST10

GI016	TC.. 16T3..
GI056	TC.. 1102..
GI217	TC.. 06T1..
GI218	TC.. 0902..

		Nm							
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–	–
S02	US 2505-T07P	0.9	M 2.5	5.2	–	–	FLAG T07P	–	–
S08	US 3510-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–	–
ST10	US 3510-T15P	3.0	M 3.5	10.6	STN 160308	MS 3510	FLAG T15P	HXK 3.5	–
ST12	5513 020-28	0.6	M 2	4.2	–	–	–	–	PT-8000
ST13	5513 020-27	0.6	M 2	4.9	–	–	–	–	PT-8000
ST14	5513 020-05	0.8	M 2.2	6.4	–	–	–	–	PT-8001

STFC(RL)-E INT

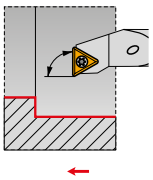
P M K N S H

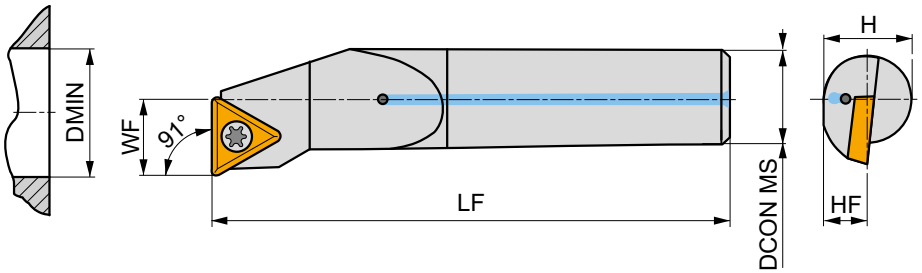
PRAMET

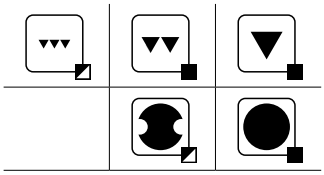
S

Internal Carbide Screw Lock Boring Bar with 91° Cutting Angle for TC.. Insert

Internal Right/Left hand carbide boring bar, through coolant, with 91° cutting angle for screw type TC.. 06 up to 11 inserts. Minimum internal turning diameter Ø8.5 mm. For internal taper and longitudinal turning with shoulder and chamfer turning. Available with shank size Ø6 up to Ø16 mm. For tool overhang >3xD.







	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	H [mm]	HF [mm]	LF [mm]	LAMS [°]	GAMO [°]		kg		
R	E06H-STFCR 06-R	6	8.5	4.5	6	3	100	-10	0	✓	0.05	GI217	ST22
	E08K-STFCR 06-R	8	11	5.9	8	4	125	-10	0	✓	0.09	GI217	ST23
	E10M-STFCR 09-R	10	13	7	10	5	150	-8	0	✓	0.15	GI218	ST24
	E12Q-STFCR 09-R	12	16	9	12	6	180	-6	0	✓	0.26	GI218	ST24
	E16R-STFCR 11-R	16	20	11	16	8	200	-5	0	✓	0.48	GI056	ST21
L	E06H-STFCL 06-R	6	8.5	4.5	6	3	100	-10	0	✓	0.05	GI217	ST22
	E08K-STFCL 06-R	8	11	5.9	8	4	125	-10	0	✓	0.09	GI217	ST23
	E10M-STFCL 09-R	10	13	7	10	5	150	-8	0	✓	0.15	GI218	ST24
	E12Q-STFCL 09-R	12	16	9	12	6	180	-6	0	✓	0.26	GI218	ST24
	E16R-STFCL 11-R	16	20	11	16	8	200	-5	0	✓	0.48	GI056	ST21

GI056	TC.. 1102..
GI217	TC.. 06T1..
GI218	TC.. 0902..

		Nm			
ST21	5513 020-03	0.8	M 2.5	6.5	PT-8001
ST22	5513 020-28	0.6	M 2	4.2	PT-8000
ST23	5513 020-27	0.6	M 2	4.9	PT-8000
ST24	5513 020-05	0.8	M 2.2	6.4	PT-8001

TP

09/ 11/ 16

CARBIDE INSERTS

TPGX

162

TPMR

163

TPUN

164

CER INSERTS

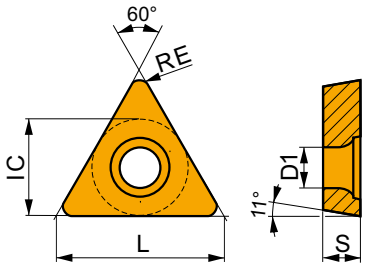
TPGN CER

164

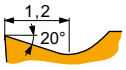
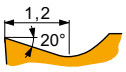
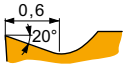
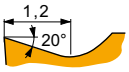
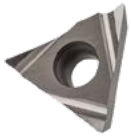
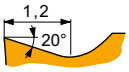
TPGX

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
0902	5.560	2.50	9.60	2.38
1102	6.350	2.80	11.00	2.38
16T3	9.525	4.40	16.50	3.97



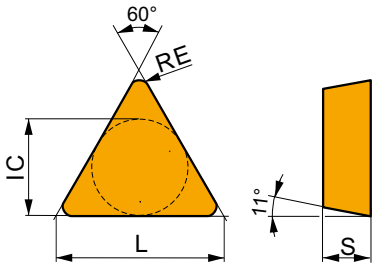
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			F																	
			FR-JQ geometry with positive right-handed design for fine-finish machining, and continuous cuts.																	
TPGX 110204FR-JQ	**TT010**	0.4	■ 295	0.06	0.5	◪ 175	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–
			F																	
			FL-JQ geometry with positive left-handed design for fine-finish machining, continuous cuts.																	
TPGX 090204FL-JQ	**TT010**	0.4	■ 295	0.06	0.5	◪ 175	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–
TPGX 110204FL-JQ	**TT010**	0.4	■ 295	0.06	0.5	◪ 175	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–
			F																	
			FL-JR geometry with positive left-handed design for fine-finish machining, and continuous cuts.																	
TPGX 16T304FL-JR	**TT010**	0.4	■ 295	0.06	0.5	◪ 175	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–
			F																	
			FR-JZ geometry with positive right-handed design for fine-finish machining, and continuous cuts.																	
TPGX 090202FR-JZ	**TT010**	0.2	■ 280	0.06	0.5	◪ 165	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–
			F																	
			FL-JZ geometry with positive left-handed design for fine-finish machining, and continuous cuts.																	
TPGX 090202FL-JZ	**TT010**	0.2	■ 280	0.06	0.5	◪ 165	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–

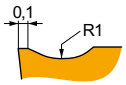
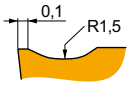
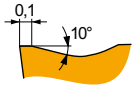
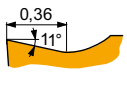
TPMR

PRAMET

	IC [mm]	L [mm]	S [mm]
1103	6.350	11.00	3.18
1603	9.525	16.50	3.18



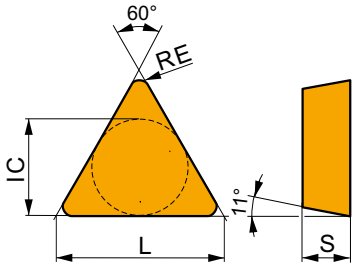
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
																				
Geometry 46 for fine to finish machining, and continuous to interrupted cuts.																				
TPMR 110304E-46	**6640**	0.4	■ 140	0.15	1.0	◪ 80	0.14	1.0	■ 130	0.15	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 175	0.15	1.0	◪ 105	0.15	1.0	◪ 165	0.15	1.0	–	–	–	–	–	–	–	–	–
	T9335	0.4	■ 150	0.15	1.0	◪ 90	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–
TPMR 110308E-46	**6640**	0.8	■ 170	0.15	1.0	◪ 100	0.14	1.0	■ 160	0.15	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 205	0.15	1.0	◪ 120	0.15	1.0	◪ 190	0.15	1.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 180	0.15	1.0	◪ 105	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–
																				
Geometry 47 for finish to semi-rough machining, and continuous to interrupted cuts.																				
TPMR 160304E-47	**6640**	0.4	■ 120	0.20	1.5	◪ 70	0.18	1.5	■ 110	0.20	1.5	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 150	0.20	1.5	◪ 90	0.18	1.5	◪ 140	0.20	1.5	–	–	–	–	–	–	–	–	–
	T9335	0.4	■ 125	0.20	1.5	◪ 75	0.18	1.5	–	–	–	–	–	–	–	–	–	–	–	–
TPMR 160308E-47	**6640**	0.8	■ 140	0.20	1.5	◪ 80	0.18	1.5	■ 130	0.20	1.5	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 175	0.20	1.5	◪ 105	0.18	1.5	◪ 165	0.20	1.5	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 150	0.20	1.5	◪ 90	0.18	1.5	–	–	–	–	–	–	–	–	–	–	–	–
TPMR 160312E-47	**T9325**	1.2	■ 185	0.20	1.5	◪ 110	0.18	1.5	◪ 175	0.20	1.5	–	–	–	–	–	–	–	–	–
	T9335	1.2	■ 160	0.20	1.5	◪ 95	0.18	1.5	–	–	–	–	–	–	–	–	–	–	–	–
																				
Geometry 61 for finish machining with moderate feeds and depths of cut, and continuous to interrupted cuts.																				
TPMR 160308E-61	**T9325**	0.8	■ 135	0.35	1.8	◪ 80	0.32	1.8	◪ 125	0.35	1.8	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 120	0.35	1.8	◪ 70	0.32	1.8	–	–	–	–	–	–	–	–	–	–	–	–
																				
PF2 geometry for fine to finish machining, and continuous cuts.																				
TPMR 110304-PF2	**TT010**	0.4	■ 255	0.10	0.5	◪ 150	0.10	0.5	–	–	–	–	–	–	–	–	–	–	–	–
TPMR 160304-PF2	**TT010**	0.4	■ 255	0.10	0.5	◪ 150	0.10	0.5	–	–	–	–	–	–	–	–	–	–	–	–

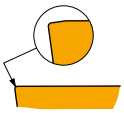
TPUN

PRAMET

	IC [mm]	L [mm]	S [mm]
1103	6.350	11.00	3.18
1603	9.525	16.50	3.18
2204	12.700	22.00	4.76
2706	15.875	27.50	6.35
3306	19.050	33.00	6.35



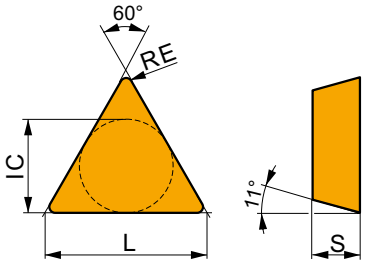
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc	M f	M ap	K vc	K f	K ap	N vc	N f	N ap	S vc	S f	S ap	H vc	H f	H ap
			E																	
For fine-finish to semi-rough machining, and continuous to slightly interrupted cuts.																				
TPUN 110304	**6640**	0.4	135	0.10	1.2	–	–	–	125	0.10	1.2	–	–	–	–	–	–	–	–	–
TPUN 110308	**6640**	0.8	125	0.18	1.2	–	–	–	115	0.18	1.2	–	–	–	–	–	–	–	–	–
TPUN 160304	**6640**	0.4	135	0.10	1.5	–	–	–	125	0.10	1.5	–	–	–	–	–	–	–	–	–
TPUN 160308	**6640**	0.8	125	0.18	1.5	–	–	–	115	0.18	1.5	–	–	–	–	–	–	–	–	–
TPUN 160312	**6640**	1.2	125	0.20	1.5	–	–	–	115	0.20	1.5	–	–	–	–	–	–	–	–	–
TPUN 220408	**6640**	0.8	120	0.18	2.0	–	–	–	110	0.18	2.0	–	–	–	–	–	–	–	–	–
TPUN 220412	**6640**	1.2	120	0.20	2.0	–	–	–	110	0.20	2.0	–	–	–	–	–	–	–	–	–
			S																	
For fine-finish to semi-rough machining, and continuous to slightly interrupted cuts.																				
TPUN 270616S	**6640**	1.6	60	0.30	7.0	–	–	–	55	0.30	7.0	–	–	–	–	–	–	–	–	–
TPUN 330620S	**6640**	2.0	65	0.30	5.0	–	–	–	60	0.30	5.0	–	–	–	–	–	–	–	–	–

TPGN CER

PRAMET

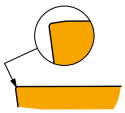
	IC [mm]	L [mm]	S [mm]
1103	6.350	11.00	3.18
1603	9.525	16.50	3.18



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc	M f	M ap	K vc	K f	K ap	N vc	N f	N ap	S vc	S f	S ap	H vc	H f	H ap
			HSC		T															
For machining with high speeds and continuous cuts.																				
TPGN 110304 T01020	**TC100**	0.4	–	–	–	–	–	–	460	0.10	1.5	–	–	–	–	–	–	–	–	–
TPGN 110308 T01020	**TC100**	0.8	–	–	–	–	–	–	425	0.20	1.5	–	–	–	–	–	–	–	–	–

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]
		[mm]	HSC		T															
			For machining with high speeds and continuous cuts.																	
TPGN 160304 T01020	**TC100**	0.4	–	–	–	–	–	–	460	0.10	1.5	–	–	–	–	–	–	–	–	–
TPGN 160308 T01020	**TC100**	0.8	–	–	–	–	–	–	425	0.20	1.5	–	–	–	–	–	–	–	–	–
TPGN 160312 T01020	**TC100**	1.2	–	–	–	–	–	–	450	0.20	1.5	–	–	–	–	–	–	–	–	–

VB

CARBIDE INSERTS

VBMT

168

CBN INSERTS

VBGW CBN

171

MATCH THE RIGHT SIZE (example)

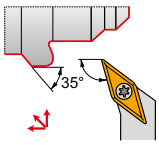
Insert	Tool Holder
VBMT 160408E-FM	SVHCR 2020 K 16-M-A

ISO TURNING – EXTERNAL

SVHB(C)(RL) EXT

107°30´

VB, VC..



11
16

16×16
25×25

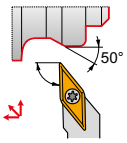
172

168 – 171
186 – 192

SVJB(C)(RL) EXT

93°

VB, VC..



11
13
16

12×12
32×25

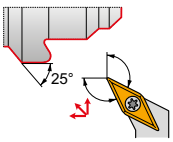
173

168 – 171
186 – 192

SVPB(C)(RL) EXT

117°30´

VB, VC..



11
16

16×16
32×25

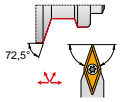
174

168 – 171
186 – 192

SVVB(C)N EXT

72°30´

VB, VC..



11
13
16

12×12
32×25

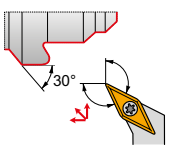
175

168 – 171
186 – 192

SVXB(C)(RL) EXT

98°

VB, VC..



11
13
16

12×12
32×25

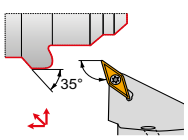
176

168 – 171
186 – 192

C.-SVHB(RL) EXT

107°30´

VB, VC..



16

C4
C6

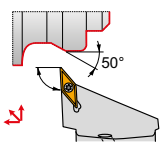
177

168 – 171
186 – 192

C.-SVJB(RL) EXT

93°

VB, VC..



11
16

C3
C6

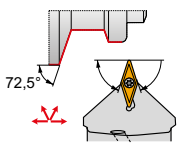
178

168 – 171
186 – 192

C.-SVVBN EXT

72°30´

VB, VC..



16

C4
C6

179

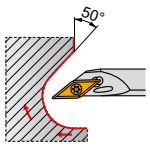
168 – 171
186 – 192

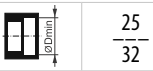
VB

ISO TURNING – INTERNAL

SVJB(RL) INT

93°





25 / 32

180

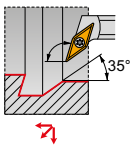
VB, VC..

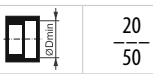
11

168 – 171
186 – 192

SVQB(C)(RL) INT

107°30´





20 / 50

181

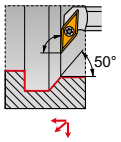
VB, VC..

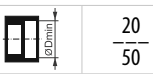
11
13
16

168 – 171
186 – 192

SVUB(C)(RL) INT

93°





20 / 50

182

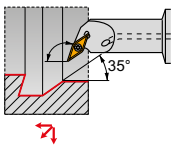
VB, VC..

11
13
16

168 – 171
186 – 192

C.-SVQB(C)(RL) INT

108°



33

183

VB, VC..

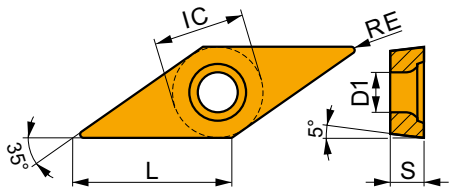
16

168 – 171
186 – 192

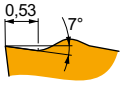
VBMT

PRAMET

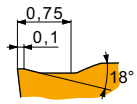
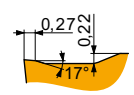
	IC [mm]	D1 [mm]	L [mm]	S [mm]
1102	6.350	2.80	11.10	2.38
1103	6.350	2.80	11.10	3.18
1604	9.525	4.40	16.60	4.76



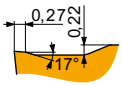
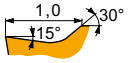
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]
																				
			FF2 geometry with positive design for fine-finish to finish machining, and continuous to slightly interrupted cuts.																	
VBMT 160404E-FF2	**T7325**	0.4	145	0.12	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	125	0.12	0.8	–	–	–	115	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	150	0.12	0.8	–	–	–	125	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	215	0.12	0.8	–	–	–	200	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	190	0.12	0.8	–	–	–	180	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9335	0.4	160	0.12	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			FM geometry for finish to semi-rough machining, and continuous to slightly interrupted cuts.																	
VBMT 110302E-FM	**T7325**	0.2	160	0.10	0.8	120	0.09	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.2	145	0.10	0.8	85	0.09	0.8	135	0.10	0.8	435	0.12	0.8	–	–	–	–	–	–
	T8330	0.2	135	0.10	0.8	80	0.09	0.8	125	0.10	0.8	405	0.12	0.8	–	–	–	–	–	–
	T8430	0.2	170	0.10	0.8	90	0.09	0.8	135	0.10	0.8	465	0.12	0.8	–	–	–	–	–	–
	T9325	0.2	210	0.10	0.8	125	0.09	0.8	195	0.10	0.8	–	–	–	–	–	–	–	–	–
VBMT 110304E-FM	**T7325**	0.4	140	0.19	0.8	105	0.17	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.4	135	0.19	0.8	105	0.17	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	145	0.12	0.8	85	0.11	0.8	135	0.12	0.8	435	0.14	0.8	–	–	–	–	–	–
	T8330	0.4	140	0.12	0.8	80	0.11	0.8	130	0.12	0.8	420	0.14	0.8	–	–	–	–	–	–
	T8430	0.4	170	0.12	0.8	90	0.11	0.8	135	0.12	0.8	465	0.14	0.8	–	–	–	–	–	–
	T9315	0.4	235	0.12	0.8	–	–	–	220	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	175	0.19	0.8	105	0.17	0.8	165	0.19	0.8	–	–	–	–	–	–	–	–	–
VBMT 110308E-FM	**T7325**	0.8	170	0.17	0.8	130	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	150	0.17	0.8	90	0.15	0.8	140	0.17	0.8	450	0.20	0.8	–	–	–	–	–	–
	T8430	0.8	175	0.17	0.8	95	0.15	0.8	140	0.17	0.8	480	0.20	0.8	–	–	–	–	–	–
	T9315	0.8	240	0.17	0.8	–	–	–	225	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.8	215	0.17	0.8	125	0.15	0.8	200	0.17	0.8	–	–	–	–	–	–	–	–	–
VBMT 160402E-FM	**T7325**	0.2	150	0.10	1.2	115	0.09	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.2	130	0.10	1.2	75	0.09	1.2	120	0.10	1.2	390	0.12	1.2	–	–	–	–	–	–
	T8430	0.2	165	0.10	1.2	90	0.09	1.2	135	0.10	1.2	450	0.12	1.2	–	–	–	–	–	–
	T9315	0.2	230	0.10	1.2	–	–	–	215	0.10	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.2	205	0.10	1.2	120	0.09	1.2	190	0.10	1.2	–	–	–	–	–	–	–	–	–
VBMT 160404E-FM	**T5315**	0.4	225	0.12	1.2	–	–	–	210	0.12	1.2	–	–	–	–	–	–	–	–	–
	T7325	0.4	130	0.19	1.2	100	0.17	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.4	130	0.19	1.2	100	0.17	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	140	0.12	1.2	80	0.11	1.2	130	0.12	1.2	420	0.14	1.2	–	–	–	–	–	–
	T8330	0.4	135	0.12	1.2	80	0.11	1.2	125	0.12	1.2	405	0.14	1.2	–	–	–	–	–	–
	T8430	0.4	165	0.12	1.2	90	0.11	1.2	135	0.12	1.2	450	0.14	1.2	–	–	–	–	–	–
	T9315	0.4	225	0.12	1.2	–	–	–	210	0.12	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.4	165	0.19	1.2	95	0.17	1.2	155	0.19	1.2	–	–	–	–	–	–	–	–	–

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
FM geometry for finish to semi-rough machining, and continuous to slightly interrupted cuts.																				
VBMT 160408E-FM	**T5315**	0.8	235	0.17	1.2	–	–	–	220	0.17	1.2	–	–	–	–	–	–	–	–	–
	T7325	0.8	165	0.17	1.2	125	0.15	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.8	160	0.17	1.2	120	0.15	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	150	0.17	1.2	90	0.15	1.2	140	0.17	1.2	450	0.20	1.2	–	–	–	–	–	–
	T8330	0.8	145	0.17	1.2	85	0.15	1.2	135	0.17	1.2	435	0.20	1.2	–	–	–	–	–	–
	T8430	0.8	170	0.17	1.2	90	0.15	1.2	135	0.17	1.2	465	0.20	1.2	–	–	–	–	–	–
	T9310	0.8	255	0.17	1.2	–	–	–	240	0.17	1.2	–	–	–	–	–	–	–	–	–
	T9315	0.8	230	0.17	1.2	–	–	–	215	0.17	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.8	205	0.17	1.2	120	0.15	1.2	190	0.17	1.2	–	–	–	–	–	–	–	–	–
VBMT 160412E-FM	**T7325**	1.2	160	0.22	1.2	120	0.22	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	1.2	140	0.22	1.2	80	0.22	1.2	130	0.22	1.2	420	0.26	1.2	–	–	–	–	–	–
	T8430	1.2	155	0.22	1.2	85	0.22	1.2	130	0.22	1.2	435	0.26	1.2	–	–	–	–	–	–
	T9315	1.2	215	0.22	1.2	–	–	–	200	0.22	1.2	–	–	–	–	–	–	–	–	–
	T9325	1.2	195	0.22	1.2	115	0.22	1.2	185	0.22	1.2	–	–	–	–	–	–	–	–	–
																				
FM2 geometry for finish to medium machining, and continuous to interrupted cuts.																				
VBMT 160404E-FM2	**T6310**	0.4	120	0.12	1.2	85	0.11	1.2	95	0.12	1.2	–	–	–	–	–	–	–	–	–
	T7325	0.4	140	0.12	1.2	105	0.11	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	125	0.12	1.2	75	0.11	1.2	115	0.12	1.2	–	–	–	–	–	–	–	–	–
	T8430	0.4	145	0.12	1.2	80	0.11	1.2	120	0.12	1.2	–	–	–	–	–	–	–	–	–
	T9315	0.4	200	0.12	1.2	–	–	–	190	0.12	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.4	185	0.12	1.2	110	0.11	1.2	175	0.12	1.2	–	–	–	–	–	–	–	–	–
	T9335	0.4	155	0.12	1.2	90	0.11	1.2	–	–	–	–	–	–	–	–	–	–	–	–
VBMT 160408E-FM2	**T6310**	0.8	125	0.20	1.2	90	0.18	1.2	100	0.20	1.2	–	–	–	–	–	–	–	–	–
	T7325	0.8	145	0.20	1.2	110	0.18	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	125	0.20	1.2	75	0.18	1.2	115	0.20	1.2	–	–	–	–	–	–	–	–	–
	T8430	0.8	140	0.20	1.2	75	0.18	1.2	115	0.20	1.2	–	–	–	–	–	–	–	–	–
	T9315	0.8	195	0.20	1.2	–	–	–	185	0.20	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.8	175	0.20	1.2	105	0.18	1.2	165	0.20	1.2	–	–	–	–	–	–	–	–	–
	T9335	0.8	150	0.20	1.2	90	0.18	1.2	–	–	–	–	–	–	–	–	–	–	–	–
VBMT 160412E-FM2	**T8430**	1.2	145	0.22	1.2	80	0.20	1.2	120	0.22	1.2	–	–	–	–	–	–	–	–	–
	T9315	1.2	195	0.22	1.2	–	–	–	185	0.22	1.2	–	–	–	–	–	–	–	–	–
	T9325	1.2	175	0.22	1.2	105	0.20	1.2	165	0.22	1.2	–	–	–	–	–	–	–	–	–
																				
RM geometry for semi-rough to rough machining, and continuous to interrupted cuts.																				
VBMT 160404E-RM	**T5305**	0.4	270	0.12	1.2	–	–	–	255	0.12	1.2	–	–	–	–	–	–	50	0.15	1.0
	T5315	0.4	235	0.12	1.2	–	–	–	220	0.12	1.2	–	–	–	–	–	–	45	0.15	1.0
	T7335	0.4	140	0.18	1.2	105	0.16	1.2	–	–	–	–	–	–	45	0.16	1.0	–	–	–
	T8330	0.4	140	0.12	1.2	80	0.11	1.2	130	0.12	1.2	–	–	–	35	0.11	1.0	25	0.15	1.0
	T8430	0.4	170	0.12	1.2	90	0.11	1.2	135	0.12	1.2	–	–	–	35	0.11	1.0	25	0.15	1.0
	T9315	0.4	235	0.12	1.2	–	–	–	220	0.12	1.2	–	–	–	–	–	–	45	0.15	1.0
	T9325	0.4	170	0.20	1.2	100	0.18	1.2	160	0.20	1.2	–	–	–	35	0.18	1.0	–	–	–
VBMT 160408E-RM	**T5305**	0.8	285	0.17	1.2	–	–	–	270	0.17	1.2	–	–	–	–	–	–	55	0.15	1.0
	T5315	0.8	250	0.17	1.2	–	–	–	235	0.17	1.2	–	–	–	–	–	–	50	0.15	1.0
	T7335	0.8	155	0.20	1.2	120	0.18	1.2	–	–	–	–	–	–	50	0.18	1.0	–	–	–
	T8330	0.8	150	0.17	1.2	90	0.15	1.2	140	0.17	1.2	–	–	–	35	0.12	1.0	30	0.15	1.0
	T8430	0.8	175	0.17	1.2	95	0.15	1.2	140	0.17	1.2	–	–	–	35	0.12	1.0	30	0.15	1.0
	T9315	0.8	240	0.17	1.2	–	–	–	225	0.17	1.2	–	–	–	–	–	–	45	0.15	1.0
	T9325	0.8	200	0.20	1.2	120	0.18	1.2	190	0.20	1.2	–	–	–	45	0.18	1.0	–	–	–

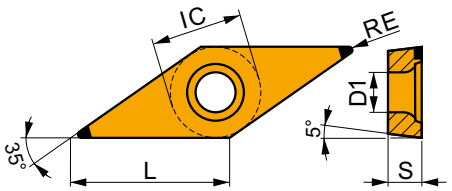
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]
																				
RM geometry for semi-rough to rough machining, and continuous to interrupted cuts.																				
VBMT 160412E-RM	**T7335**	1.2	◪ 150	0.27	1.2	■ 115	0.24	1.2		–	–	–	–	–	–	◪ 45	0.19	1.0	–	–	–
	T8330	1.2	■ 140	0.27	1.2	■ 80	0.24	1.2	■ 130	0.27	1.2	–	–	–	◪ 35	0.19	1.0	◪ 25	0.15	1.0
	T8430	1.2	■ 155	0.27	1.2	■ 85	0.24	1.2	◪ 130	0.27	1.2	–	–	–	◪ 30	0.19	1.0	◪ 25	0.15	1.0
	T9315	1.2	■ 210	0.27	1.2	–	–	–	◪ 195	0.27	1.2	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9325	1.2	■ 185	0.27	1.2	■ 110	0.24	1.2	◪ 175	0.27	1.2	–	–	–	◪ 40	0.19	1.0	–	–	–
																				
UR geometry for fine to finish machining, and continuous to slightly interrupted cuts.																				
VBMT 110202E-UR	**TT310**	0.2	■ 195	0.10	0.8	◪ 115	0.09	0.8		–	–	–	–	–	–	–	–	–	–	–
VBMT 110204E-UR	**T7325**	0.4	◪ 120	0.19	0.8	◪ 90	0.17	0.8		–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	■ 120	0.12	0.8	◪ 70	0.11	0.8	■ 110	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	■ 145	0.12	0.8	◪ 80	0.11	0.8	◪ 120	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	■ 200	0.12	0.8	–	–	–	◪ 190	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 150	0.19	0.8	◪ 90	0.17	0.8	◪ 140	0.19	0.8	–	–	–	–	–	–	–	–	–
	TT310	0.4	■ 195	0.12	0.8	◪ 115	0.11	0.8		–	–	–	–	–	–	–	–	–	–	–
VBMT 160402E-UR	**T8330**	0.2	■ 115	0.10	1.2	◪ 65	0.09	1.2	■ 105	0.10	1.2	–	–	–	–	–	–	–	–	–
	T8430	0.2	■ 140	0.10	1.2	◪ 75	0.09	1.2	◪ 115	0.10	1.2	–	–	–	–	–	–	–	–	–
VBMT 160404E-UR	**T5315**	0.4	◪ 195	0.12	1.2	–	–	–	■ 185	0.12	1.2	–	–	–	–	–	–	–	–	–
	T7325	0.4	◪ 115	0.19	1.2	◪ 85	0.17	1.2		–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	■ 115	0.12	1.2	◪ 65	0.11	1.2	■ 105	0.12	1.2	–	–	–	–	–	–	–	–	–
	T8430	0.4	■ 140	0.12	1.2	◪ 75	0.11	1.2	◪ 115	0.12	1.2	–	–	–	–	–	–	–	–	–
	T9310	0.4	■ 215	0.12	1.2	–	–	–	◪ 200	0.12	1.2	–	–	–	–	–	–	–	–	–
	T9315	0.4	■ 190	0.12	1.2	–	–	–	◪ 180	0.12	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 145	0.18	1.2	◪ 85	0.16	1.2	◪ 135	0.18	1.2	–	–	–	–	–	–	–	–	–
	TT310	0.4	■ 185	0.12	1.2	◪ 110	0.11	1.2		–	–	–	–	–	–	–	–	–	–	–
VBMT 160408E-UR	**T5315**	0.8	◪ 205	0.17	1.2	–	–	–	■ 190	0.17	1.2	–	–	–	–	–	–	–	–	–
	T7325	0.8	◪ 140	0.17	1.2	◪ 105	0.15	1.2		–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	■ 125	0.17	1.2	◪ 75	0.15	1.2	■ 115	0.17	1.2	–	–	–	–	–	–	–	–	–
	T8430	0.8	■ 145	0.17	1.2	◪ 80	0.15	1.2	◪ 120	0.17	1.2	–	–	–	–	–	–	–	–	–
	T9310	0.8	■ 220	0.17	1.2	–	–	–	◪ 205	0.17	1.2	–	–	–	–	–	–	–	–	–
	T9315	0.8	■ 200	0.17	1.2	–	–	–	◪ 190	0.17	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 180	0.17	1.2	◪ 105	0.15	1.2	◪ 170	0.17	1.2	–	–	–	–	–	–	–	–	–
	TT310	0.8	■ 200	0.17	1.2	◪ 120	0.15	1.2		–	–	–	–	–	–	–	–	–	–	–
VBMT 160412E-UR	**T7325**	1.2	◪ 135	0.22	1.2	◪ 105	0.20	1.2		–	–	–	–	–	–	–	–	–	–	–
	T8330	1.2	■ 120	0.22	1.2	◪ 70	0.20	1.2	■ 110	0.22	1.2	–	–	–	–	–	–	–	–	–
	T8430	1.2	■ 135	0.22	1.2	◪ 75	0.20	1.2	◪ 110	0.22	1.2	–	–	–	–	–	–	–	–	–
	T9310	1.2	■ 205	0.22	1.2	–	–	–	◪ 190	0.22	1.2	–	–	–	–	–	–	–	–	–
	T9315	1.2	■ 185	0.22	1.2	–	–	–	◪ 175	0.22	1.2	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 170	0.22	1.2	◪ 100	0.20	1.2	◪ 160	0.22	1.2	–	–	–	–	–	–	–	–	–

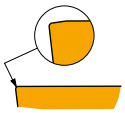
VBGW CBN

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
1604	9.525	4.50	16.00	4.76



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			HSC		S															
			For finish machining and continuous cuts.																	
VBGW 160404S01020B	**TB310**	0.4	–	–	–	–	–	–	340	0.10	0.4	–	–	–	90	0.07	0.3	70	0.15	1.0
VBGW 160408S01020B	**TB310**	0.8	–	–	–	–	–	–	350	0.15	0.6	–	–	–	90	0.11	0.5	70	0.15	1.0

SVHB(C)(RL) EXT

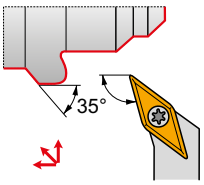
P M K N S H

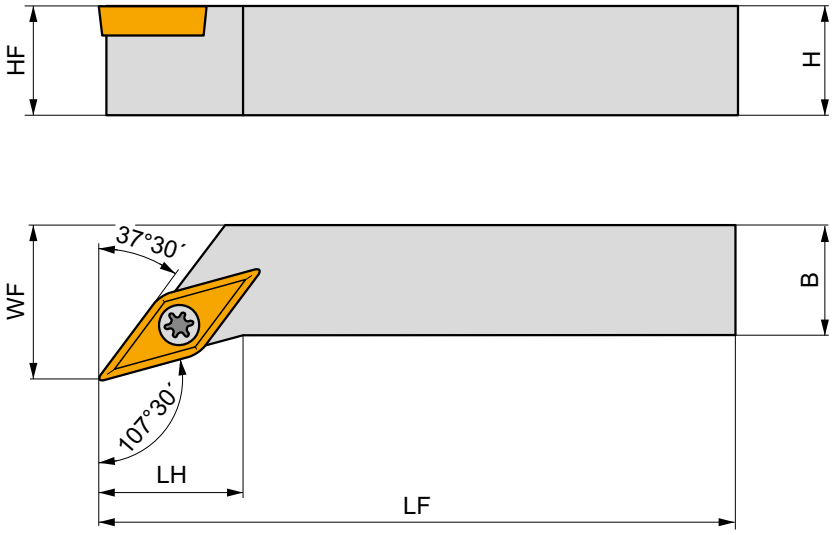
PRAMET

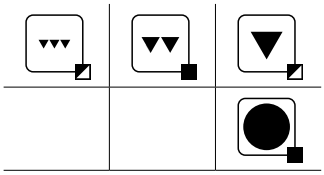
S

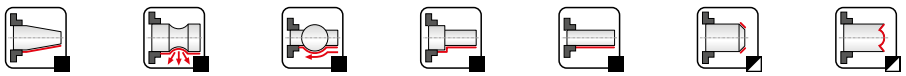
Ext. Screw Lock Tool Holder with 107.5° Cutting Angle for VB/VC.. Inserts

External Right/Left hand tool holder for screw type positive VB.. 11 or 16 and VC.. 11 or 16 inserts. Suited for external face and longitudinal turning with shoulder, taper, face and longitudinal copy turning up to 35° and chamfer turning. Available with shank size 16x16 up to 25x25 mm. Body treated for longer tool life.









	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	**SVHBR 1616 H 11**	16	16	16	20	100	14	0	0	0.21	GI194	S01
	SVHCR 2020 K 16-M-A	20	20	20	25	125	20	0	0	0.40	GI017	SV10
	SVHCR 2525 M 16-M-A	25	25	25	32	150	20	0	0	0.68	GI017	SV10
L	**SVHBL 1616 H 11**	16	16	16	20	100	14	0	0	0.19	GI194	S01
	SVHCL 2020 K 16-M-A	20	20	20	25	125	20	0	0	0.40	GI017	SV10
	SVHCL 2525 M 16-M-A	25	25	25	32	150	20	0	0	0.07	GI017	SV10

GI017	VB.. 1604..	VC.. 1604..
GI194	VB.. 1103..	VC.. 1103..

		Nm						
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
SV10	US 3512-T15P	3.0	M 3.5	12.6	SVN 160304	MS 3510	FLAG T15P	HXK 3.5

SVJB(C)(RL) EXT

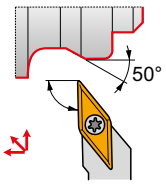
P M K N S H

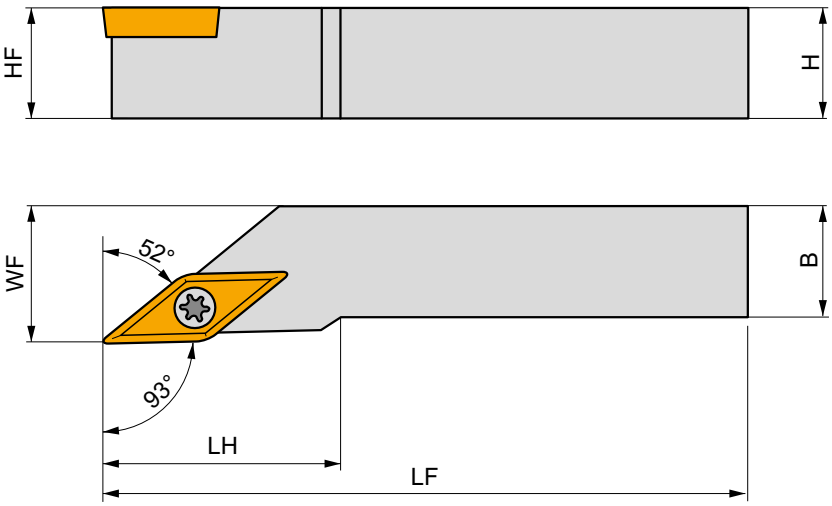
PRAMET

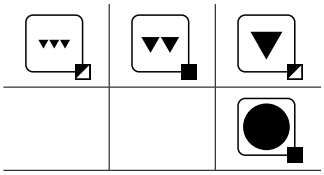
S

External Screw Lock Tool Holder with 93° Cutting Angle for VB/VC.. Inserts

External Right/Left hand tool holder for screw type positive VB.. 11 or 16 and VC.. 11 up to 16 inserts. Suited for external longitudinal turning with shoulder, taper, copy turning up to 50° and chamfer turning. Available with shank size 12x12 up to 32x25 mm. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	SVJBR 1212 F 11	12	12	12	16	80	20	0	0	0.09	GI194	S01
	SVJBR 1616 H 11	16	16	16	20	100	20	0	0	0.20	GI194	S01
	SVJCR 1212 N 13	12	12	12	16	160	27	0	0	0.19	GI211	SV21
	SVJCR 1616 H 13	16	16	16	20	100	30	0	0	0.20	GI211	SV21
	SVJCR 2020 K 13	20	20	20	25	125	30	0	0	0.37	GI211	SV22
	SVJCR 2525 M 13	25	25	25	32	150	30	0	0	0.67	GI211	SV22
	SVJCR 2020 K 16-M-A	20	20	20	25	125	28	0	0	0.35	GI017	SV10
	SVJCR 2525 M 16-M-A	25	25	25	32	150	32	0	0	0.68	GI017	SV10
	SVJCR 3225 P 16-M-A	32	25	32	32	170	32	0	0	0.99	GI017	SV10
L	SVJBL 1212 F 11	12	12	12	16	80	20	0	0	0.09	GI194	S01
	SVJBL 1616 H 11	16	16	16	20	100	20	0	0	0.19	GI194	S01
	SVJCL 1212 N 13	12	12	12	16	160	27	0	0	0.19	GI211	SV21
	SVJCL 1616 H 13	16	16	16	20	100	30	0	0	0.20	GI211	SV21
	SVJCL 2020 K 13	20	20	20	25	125	30	0	0	0.37	GI211	SV22
	SVJCL 2525 M 13	25	25	25	32	150	30	0	0	0.67	GI211	SV22
	SVJCL 2020 K 16-M-A	20	20	20	25	125	28	0	0	0.40	GI017	SV10
	SVJCL 2525 M 16-M-A	25	25	25	32	150	32	0	0	0.70	GI017	SV10
	SVJCL 3225 P 16-M-A	32	25	32	32	170	32	0	0	0.99	GI017	SV10

GI017	VB.. 1604..	VC.. 1604..
GI194	VB.. 1103..	VC.. 1103..
GI211	–	VC.. 1303..

		Nm						
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
SV10	US 3512-T15P	3.0	M 3.5	12.6	SVN 160304	MS 3510	FLAG T15P	HXK 3.5
SV21	5513 020-24	1.5	M 3	8.5	–	–	PT-8002	–
SV22	DVF 0573	1.5	M 3	10.3	DAP 0331	DVT 0332	PT-8002	174.1-870

SVPB(C)(RL) EXT

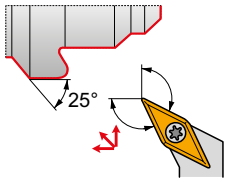
P M K N S H

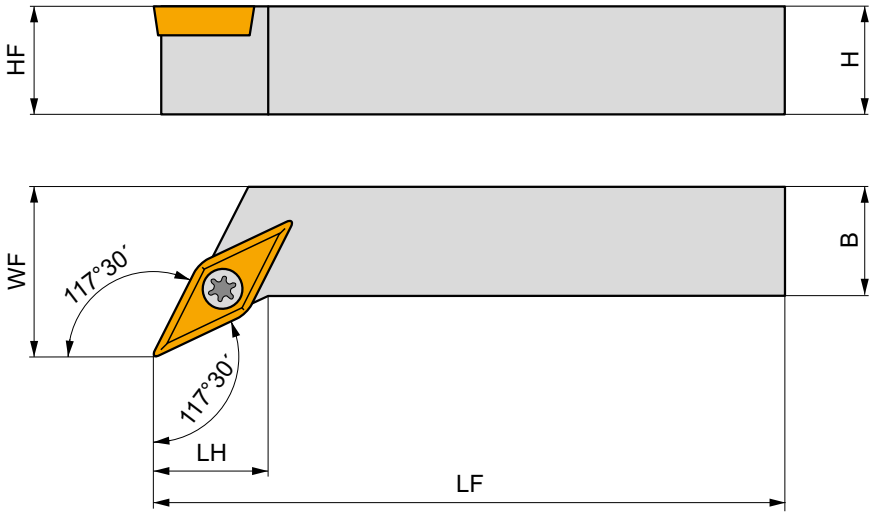
PRAMET

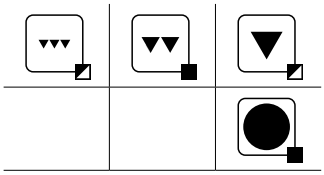
S

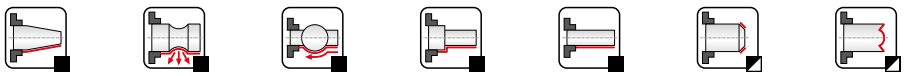
External Screw Lock Tool Holder, 117.5° Cutting Angle for VB/VC.. Inserts

External Right/Left hand tool holder for screw type positive VB.. 11 or 16 and VC.. 11 or 16 inserts. Suited for external face and longitudinal turning with shoulder, taper, face copy turning up to 25° and chamfer turning. Available with shank size 16x16 up to 32x25 mm. Body treated for longer tool life.









	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	SVPBR 1616 H 11	16	16	16	20	100	12	0	0	0.20	GI194	S01
	SVPBR 2020 K 11	20	20	20	25	125	12	0	0	0.41	GI194	S01
	SVPCR 2020 K 16-M-A	20	20	20	25	125	20	0	0	0.40	GI017	SV10
	SVPCR 2525 M 16-M-A	25	25	25	32	150	25	0	0	0.75	GI017	SV10
	SVPCR 3225 P 16-M-A	32	25	32	32	170	25	0	0	1.10	GI017	SV10
L	SVPBL 1616 H 11	16	16	16	20	100	12	0	0	0.20	GI194	S01
	SVPBL 2020 K 11	20	20	20	25	125	12	0	0	0.39	GI194	S01
	SVPCL 2020 K 16-M-A	20	20	20	25	125	20	0	0	0.70	GI017	SV10
	SVPCL 2525 M 16-M-A	25	25	25	32	150	25	0	0	0.70	GI017	SV10
	SVPCL 3225 P 16-M-A	32	25	32	32	170	25	0	0	1.10	GI017	SV10

GI017	VB.. 1604..	VC.. 1604..
GI194	VB.. 1103..	VC.. 1103..

		Nm						
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
SV10	US 3512-T15P	3.0	M 3.5	12.6	SVN 160304	MS 3510	FLAG T15P	HXK 3.5

SVVB(C)N EXT

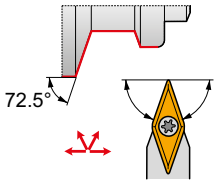
P M K N S H

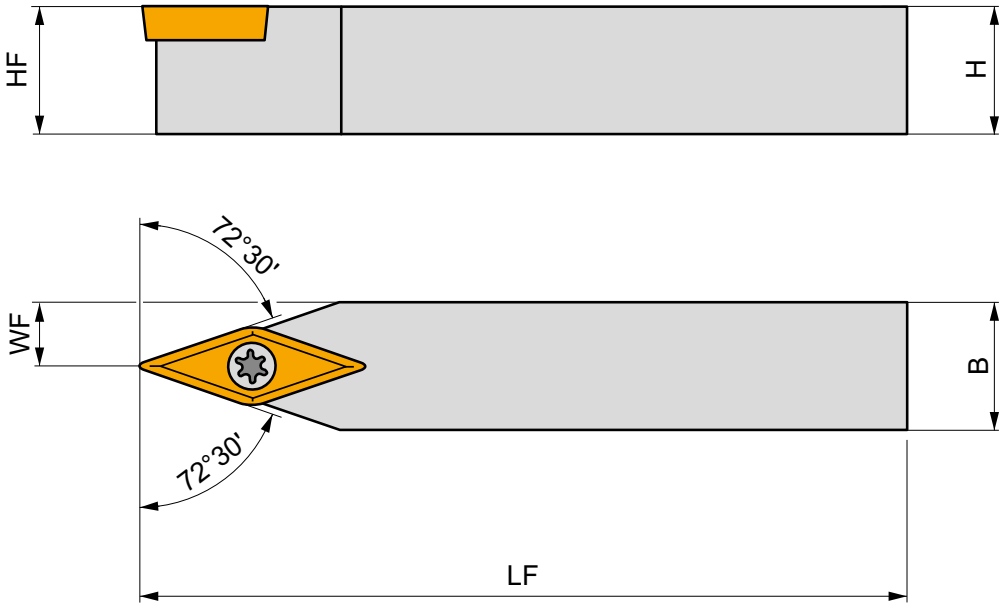
PRAMET

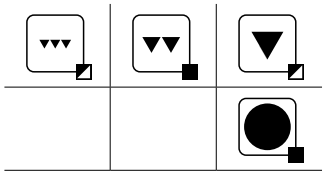
S

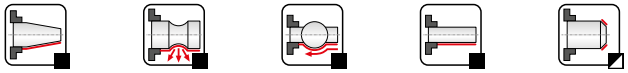
External Screw Lock Tool Holder, 72.5° Cutting Angle for VB/VC.. Inserts

External neutral tool holder for screw type positive VB.. 11 or 16 and VC.. 11 up to 16 inserts. Suited for external longitudinal turning without shoulder, taper, copy turning up to 72.5° and chamfer turning. Available with shank size 12x12 up to 32x25 mm. Body treated for longer tool life.









	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
N	**SVVBN 1212 F 11**	12	12	12	6	80	–	0	0	0.11	GI194	S01
	SVVBN 1616 H 11	16	16	16	8	100	–	0	0	0.18	GI194	S01
	SVVBN 2020 K 11	20	20	20	10	125	–	0	0	0.38	GI194	S01
	SVVCN 1212 N 13	12	12	12	6	160	–	0	0	0.19	GI211	SV21
	SVVCN 1616 H 13	16	16	16	8	100	–	0	0	0.20	GI211	SV21
	SVVCN 2020 K 13	20	20	20	10	125	–	0	0	0.36	GI211	SV22
	SVVCN 2525 M 13	25	25	25	12.5	150	–	0	0	0.66	GI211	SV22
	SVVCN 2020 K 16-M-A	20	20	20	10	125	–	0	0	0.34	GI017	SV10
	SVVCN 2525 M 16-M-A	25	25	25	12.5	150	–	0	0	0.68	GI017	SV10
	SVVCN 3225 P 16-M-A	32	25	32	12.5	170	–	0	0	0.98	GI017	SV10

GI017	VB.. 1604..	VC.. 1604..
GI194	VB.. 1103..	VC.. 1103..
GI211	–	VC.. 1303..

		Nm						
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
SV10	US 3512-T15P	3.0	M 3.5	12.6	SVN 160304	MS 3510	FLAG T15P	HXK 3.5
SV21	5513 020-24	1.5	M 3	8.5	–	–	PT-8002	–
SV22	DVF 0573	1.5	M 3	10.3	DAP 0331	DVT 0332	PT-8002	174.1-870

SVXB(C)(RL) EXT

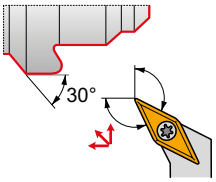
P M K N S H

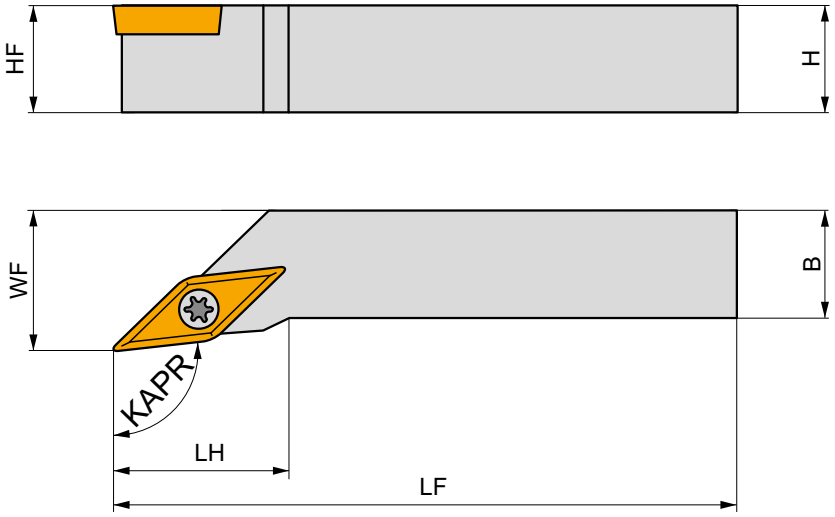
PRAMET

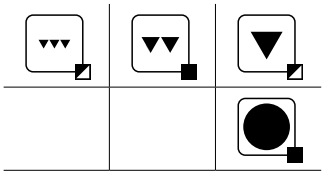
S

External Screw Lock Tool Holder 98/113° Cutting Angle for VB/VC.. Inserts

External Right/Left hand tool holder for screw type positive VB.. 11 or 16 and VC.. 11 up to 16 inserts. Suited for external longitudinal turning with shoulder, taper, copy turning up to 30° and chamfer turning. Available with shank size 12x12 up to 32x25 mm. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	KAPR [°]	LAMS [°]	GAMO [°]	kg		
R	SVXBR 1212 F 11	12	12	12	16	80	20	98	0	0	0.09	GI194	SO1
	SVXBR 1616 H 11	16	16	16	20	100	14	98	0	0	0.19	GI194	SO1
	SVXCR 2020 K 13	20	20	20	25	125	12	113	0	0	0.38	GI211	SV22
	SVXCR 2020 K 16-M-A	20	20	20	25	125	28	98	0	0	0.41	GI017	SV10
	SVXCR 2525 M 16-M-A	25	25	25	32	150	32	98	0	0	0.68	GI017	SV10
	SVXCR 3225 P 16-M-A	32	25	32	32	170	32	98	0	0	1.00	GI017	SV10
L	SVXBL 1212 F 11	12	12	12	16	80	20	98	0	0	0.09	GI194	SO1
	SVXBL 1616 H 11	16	16	16	20	100	14	98	0	0	0.19	GI194	SO1
	SVXCL 2020 K 13	20	20	20	25	125	12	113	0	0	0.38	GI211	SV22
	SVXCL 2020 K 16-M-A	20	20	20	25	125	28	98	0	0	0.38	GI017	SV10
	SVXCL 2525 M 16-M-A	25	25	25	32	150	32	98	0	0	0.69	GI017	SV10
	SVXCL 3225 P 16-M-A	32	25	32	32	170	32	98	0	0	0.99	GI017	SV10

GI017	VB.. 1604..	VC.. 1604..
GI194	VB.. 1103..	VC.. 1103..
GI211	–	VC.. 1303..

		Nm						
SO1	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
SV10	US 3512-T15P	3.0	M 3.5	12.6	SVN 160304	MS 3510	FLAG T15P	HXK 3.5
SV22	DVF 0573	1.5	M 3	10.3	DAP 0331	DVT 0332	PT-8002	174.1-870

C.-SVHB(RL) EXT

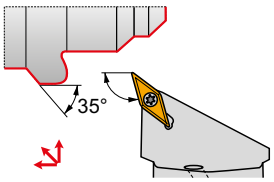
P M K N S H

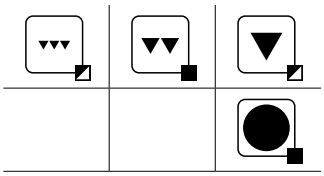
PRAMET

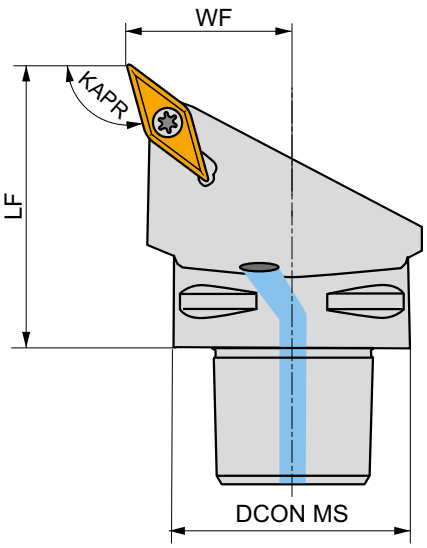
S

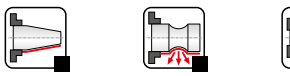
Ext. PSC Quick Change Tool, Screw Lock, 107.5° Cutting Angle, VB/VC.. Inserts

External Right/Left hand tool, through coolant, for screw type positive VB.. 16 and VC.. 16 inserts. Suited for external longitudinal turning with shoulder, taper, copy turning up to 35° and chamfer turning. Available with PSC (Polygon Shank Coupling) size C4 up to C6. Body treated for longer tool life.









	Product	DCON MS [mm]	WF [mm]	LF [mm]	KAPR [°]	LAMS [°]	GAMO [°]		kg		
R	C4-SVHBR-27050-16	40	27	50	107.5	0	0	✓	0.35	GI017	C-SV16S-1
	C5-SVHBR-35060-16	50	35	60	107.5	0	0	✓	0.64	GI017	C-SV16S-2
	C6-SVHBR-45065-16	63	45	65	107.5	0	0	✓	1.13	GI017	C-SV16S-2
L	C4-SVHBL-27050-16	40	27	50	107.5	0	0	✓	0.35	GI017	C-SV16S-1
	C5-SVHBL-35060-16	50	35	60	107.5	0	0	✓	0.64	GI017	C-SV16S-2
	C6-SVHBL-45065-16	63	45	65	107.5	0	0	✓	1.12	GI017	C-SV16S-2

GI017	VB.. 1604..	VC.. 1604..

		Nm						
C-SV16S-1	US 2001-T15P	3.0	M 3.5	12.1	SVS 270-01	MS 9001	FLAG T15P/3,5	CN 034-01
C-SV16S-2	US 2001-T15P	3.0	M 3.5	12.1	SVS 270-01	MS 9001	FLAG T15P/3,5	CN 034-02

C.-SVJB(RL) EXT

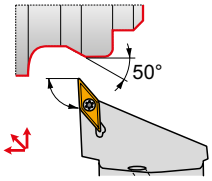
P M K N S H

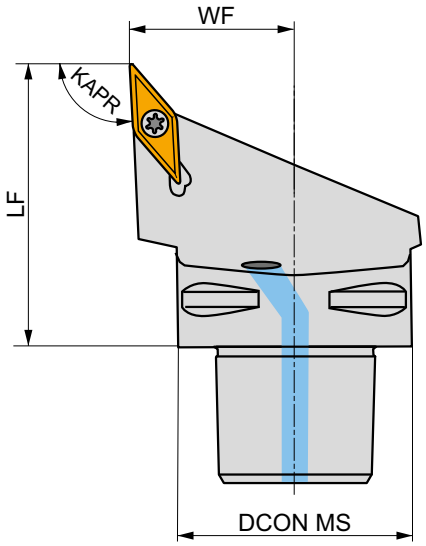
PRAMET

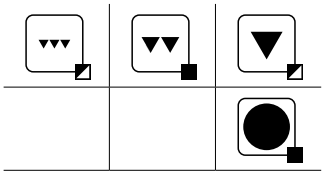
S

Ext. PSC Quick Change Tool, Screw Lock, 93° Cutting Angle for VB/VC.. Inserts

External Right/Left hand tool, through coolant, for screw type positive VB.. 11 or 16 and VC.. 11 up to 16 inserts. Suited for external longitudinal turning with shoulder, taper, copy turning up to 50° and chamfer turning. Available with PSC (Polygon Shank Coupling) size C3 up to C6. Body treated for longer tool life.







	Product	DCON MS [mm]	WF [mm]	LF [mm]	KAPR [°]	LAMS [°]	GAMO [°]		kg		
R	C3-SVJBR-22040-11-B1	32	22	40	93	0	0	✓	0.17	GI194	C-SV11
	C4-SVJBR-27050-11-B1	40	27	50	93	0	0	✓	0.34	GI194	C-SV11
	C4-SVJBR-27050-16	40	27	50	93	0	0	✓	0.35	GI017	C-SV16S-1
	C5-SVJBR-35060-16	50	35	60	93	0	0	✓	0.63	GI017	C-SV16S-2
	C6-SVJBR-45065-16	63	45	65	93	0	0	✓	1.11	GI017	C-SV16S-2
L	C4-SVJBL-27050-16	40	27	50	93	0	0	✓	0.35	GI017	C-SV16S-1
	C5-SVJBL-35060-16	50	35	60	93	0	0	✓	0.64	GI017	C-SV16S-2
	C6-SVJBL-45065-16	63	45	65	93	0	0	✓	1.11	GI017	C-SV16S-2

GI017	VB.. 1604..	VC.. 1604..
GI194	VB.. 1103..	VC.. 1103..

		Nm						
C-SV11	US 2003-T07P	0.8	M 2.5	6.5	–	–	FLAG T07P	CN 034-01
C-SV16S-1	US 2001-T15P	3.0	M 3.5	12.1	SVS 270-01	MS 9001	FLAG T15P/3,5	CN 034-01
C-SV16S-2	US 2001-T15P	3.0	M 3.5	12.1	SVS 270-01	MS 9001	FLAG T15P/3,5	CN 034-02

C.-SVVBN EXT

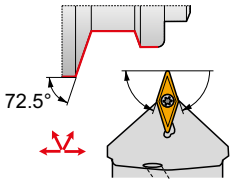
P M K N S H

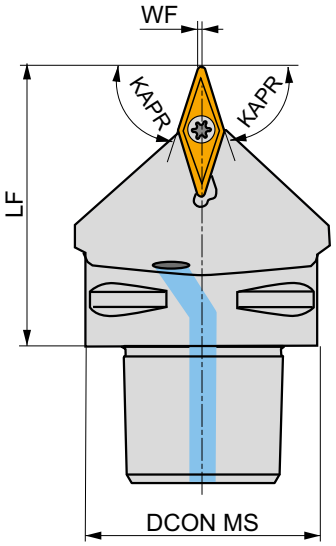
PRAMET

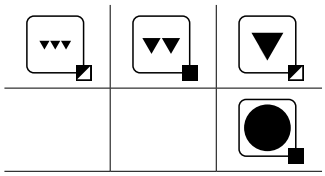
S

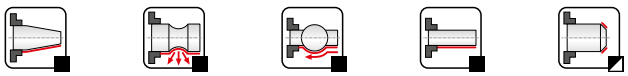
Ext. PSC Quick Change Tool, Screw Lock, 72.5° Cutting Angle, VB/VC.. Inserts

External neutral tool, through coolant, for screw type positive VB.. 16 and VC.. 16 inserts. Suited for external longitudinal turning without shoulder, taper, copy turning up to 72.5° and chamfer turning. Available with PSC (Polygon Shank Coupling) size C4 up to C6. Body treated for longer tool life.









	Product	DCON MS [mm]	WF [mm]	LF [mm]	KAPR [°]	LAMS [°]	GAMO [°]		kg		
N	C4-SVVBN-00050-16	40	0.6	50	72.5	0	0	✓	0.32	GI017	C-SV16S-1
	C5-SVVBN-00060-16	50	0.6	60	72.5	0	0	✓	0.56	GI017	C-SV16S-2
	C6-SVVBN-00065-16	63	0.6	65	72.5	0	0	✓	0.99	GI017	C-SV16S-2

GI017	VB.. 1604..	VC.. 1604..

		Nm						
C-SV16S-1	US 2001-T15P	3.0	M 3.5	12.1	SVS 270-01	MS 9001	FLAG T15P/3,5	CN 034-01
C-SV16S-2	US 2001-T15P	3.0	M 3.5	12.1	SVS 270-01	MS 9001	FLAG T15P/3,5	CN 034-02

SVJB(RL) INT

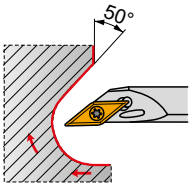
P M K N S H

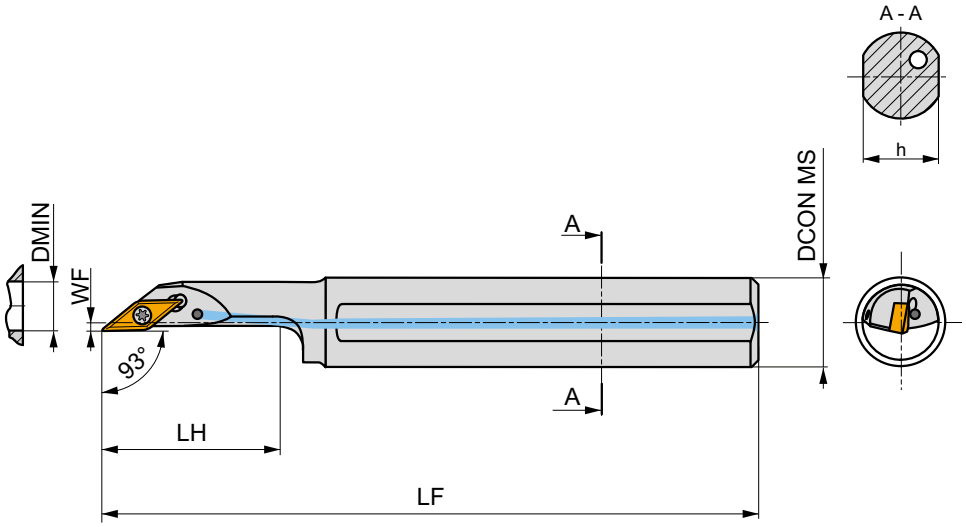
PRAMET

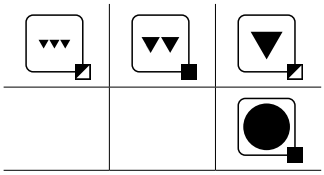
S

Internal Screw Lock Boring Bar with 93° Cutting Angle for VB/VC.. Inserts

Internal Right/Left hand boring bar, through coolant, with 93° cutting angle for screw type VB.. 11 and VC.. 11 inserts. Minimum internal turning diameter Ø25 mm. Suited for face copy turning under 50°. Available with shank size Ø20 and Ø25 mm. Body treated for longer tool life.







	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	H [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]		kg		
R	A20R-SVJBR 11	20	25	2	18	200	40	-5	-5	✓	0.44	GI194	S07
	A25S-SVJBR 11	25	32	3.5	23	250	50	-5	-5	✓	0.82	GI194	S07
L	A20R-SVJBL 11	20	25	2	18	200	40	-5	-5	✓	0.42	GI194	S07
	A25S-SVJBL 11	25	32	3.5	23	250	50	-5	-5	✓	0.82	GI194	S07

GI194	VB.. 1103..	VC.. 1103..

S07	US 2506-T07P	0.9 Nm	M 2.5	6.3	FLAG T07P

SVQB(C)(RL) INT

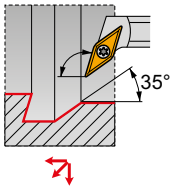
P M K N S H

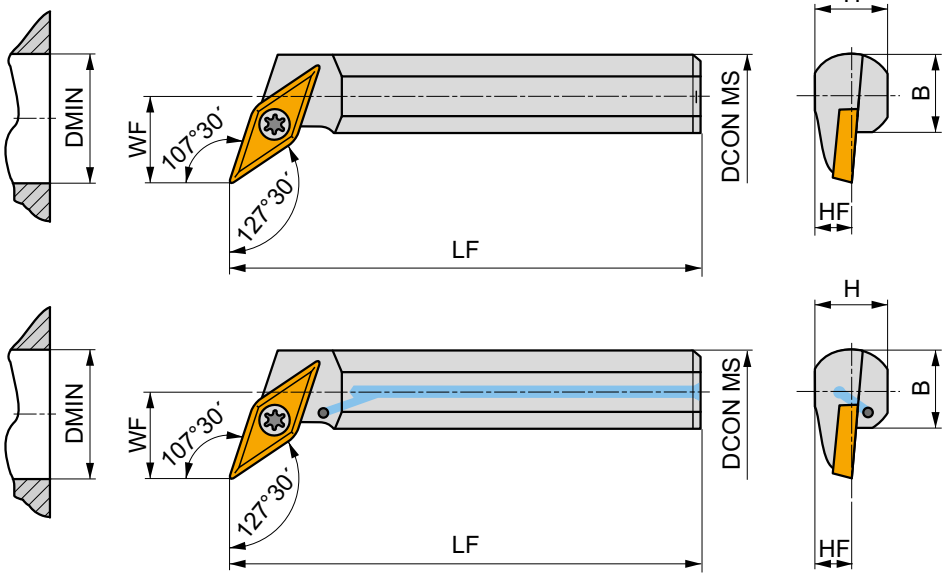
PRAMET

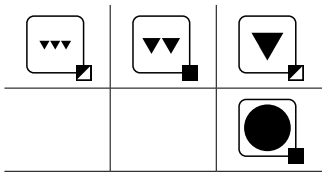
S

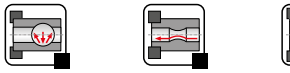
Internal Screw Lock Boring Bar with 107.5° Cutting Angle for VB/VC.. Inserts

Internal Right/Left hand boring bar, through coolant available, with 107.5° cutting angle for screw type VB../VC.. 11 and 16 inserts. Minimum internal turning diameter Ø20 mm. Suited for a wide range of internal turning operations. Available with shank size Ø16 up to Ø40 mm.









	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	H [mm]	B [mm]	LF [mm]	LAMS [°]	GAMO [°]		kg		
R	A16R-SVQBR 11	16	20	11	14.5	15	200	-5	0	✓	0.33	GI194	S01
	A20S-SVQBR 11	20	25	13	18	18.5	250	-4	0	✓	0.58	GI194	S01
	A16R-SVQCR 13	16	21	11	15	15	200	-6	0	✓	0.30	GI211	SV21
	A20S-SVQCR 13	20	25	13	18	18.5	250	-4	0	✓	0.12	GI211	SV21
	S25T-SVQCR 16	25	32	17	23	23	300	-7	0	–	1.10	GI017	S08
	S32U-SVQCR 16	32	40	22	30	30	350	-5	0	–	2.07	GI017	S08
	S40V-SVQCR 16-A	40	50	27	38	38	400	-5	0	–	3.80	GI017	SV10
L	A16R-SVQBL 11	16	20	11	14.5	15	200	-5	0	✓	0.33	GI194	S01
	A20S-SVQBL 11	20	25	13	18	18.5	250	-4	0	✓	0.58	GI194	S01
	A16R-SVQCL 13	16	21	11	15	15	200	-6	0	✓	0.29	GI211	SV21
	A20S-SVQCL 13	20	25	13	18	18.5	250	-4	0	✓	0.54	GI211	SV21
	S25T-SVQCL 16	25	32	17	23	23	300	-7	0	–	1.09	GI017	S08
	S32U-SVQCL 16	32	40	22	30	30	350	-5	0	–	2.07	GI017	S08
	S40V-SVQCL 16-A	40	50	27	38	38	400	-5	0	–	4.10	GI017	SV10

GI017	VB.. 1604..	VC.. 1604..
GI194	VB.. 1103..	VC.. 1103..
GI211	–	VC.. 1303..

		Nm						
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
S08	US 3510-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–
SV10	US 3512-T15P	3.0	M 3.5	12.6	SVN 160304	MS 3510	FLAG T15P	HXK 3.5
SV21	5513 020-24	1.5	M 3	8.5	–	–	PT-8002	–

SVUB(C)(RL) INT

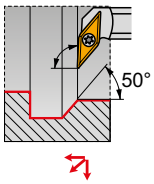
P M K N S H

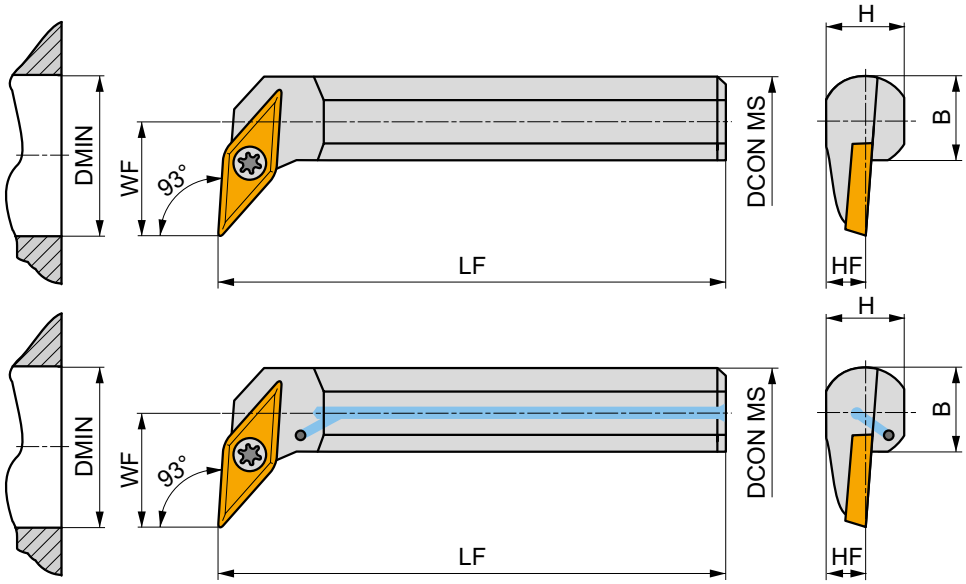
PRAMET

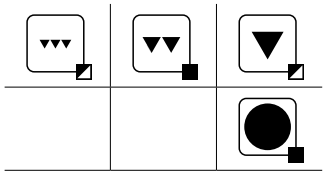
S

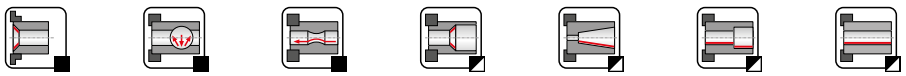
Internal Screw Lock Boring Bar with 93° Cutting Angle for VB/VC.. Inserts

Internal Right/Left hand boring bar, through coolant available, with 93° cutting angle for screw type VB../VC.. 11 and 16 inserts. Minimum internal turning diameter Ø20 mm. For a wide range of internal turning operations and copying under 50°. Ø16 up to Ø40 mm shanks available. Body treated for longer tool life.









	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	H [mm]	B [mm]	LF [mm]	LAMS [°]	GAMO [°]		kg		
R	A16R-SVUBR 11	16	20	11	14.5	15	200	-5	0	✓	0.34	GI194	S01
	A20S-SVUBR 11	20	25	13	18	18.8	250	-4	0	✓	0.58	GI194	S01
	A20S-SVUCR 13	20	25	13	19	18.5	250	-4	2	✓	0.40	GI211	SV21
	A25T-SVUCR 13	25	32	17	24	23	300	-2	2	✓	0.96	GI211	SV22
	A32T-SVUCR 13	32	40	22	30	30	300	-1	2	✓	1.70	GI211	SV22
	S25T-SVUCR 16	25	32	17	23	23	300	-7	0	–	1.10	GI017	S08
	S32U-SVUCR 16	32	40	22	30	30	350	-5	0	–	2.10	GI017	S08
	S40V-SVUCR 16-A	40	50	27	38	38	400	-5	0	–	4.10	GI017	SV10
L	A16R-SVUBL 11	16	20	11	14.5	15	200	-5	0	✓	0.34	GI194	S01
	A20S-SVUBL 11	20	25	13	18	18.5	250	-4	0	✓	0.58	GI194	S01
	A20S-SVUCL 13	20	25	13	19	18.5	250	-4	2	✓	0.32	GI211	SV21
	A25T-SVUCL 13	25	32	17	24	23	300	-2	2	✓	0.96	GI211	SV22
	A32T-SVUCL 13	32	40	22	30	30	300	-1	2	✓	1.70	GI211	SV22
	S25T-SVUCL 16	25	32	17	23	23	300	-7	0	–	1.10	GI017	S08
	S32U-SVUCL 16	32	40	22	30	30	350	-5	0	–	2.10	GI017	S08
	S40V-SVUCL 16-A	40	50	27	38	38	400	-5	0	–	4.10	GI017	SV10

GI017	VB.. 1604..	VC.. 1604..
GI194	VB.. 1103..	VC.. 1103..
GI211	–	VC.. 1303..

		Nm						
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
S08	US 3510-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–
SV10	US 3512-T15P	3.0	M 3.5	12.6	SVN 160304	MS 3510	FLAG T15P	HXK 3.5
SV21	5513 020-24	1.5	M 3	8.5	–	–	PT-8002	–
SV22	DVF 0573	1.5	M 3	10.3	DAP 0331	DVT 0332	PT-8002	174.1-870

C.-SVQB(RL) INT

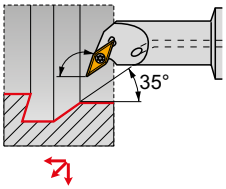
P M K N S H

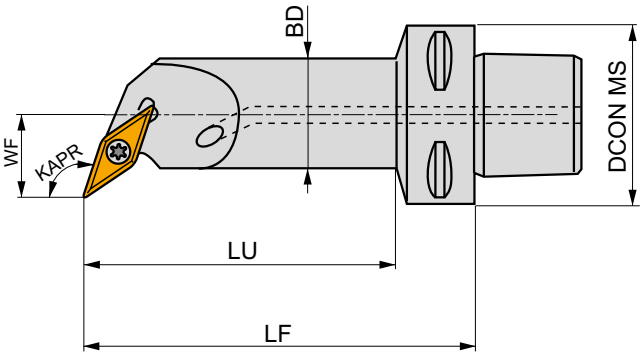
PRAMET

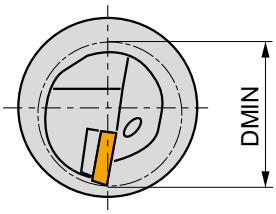
S

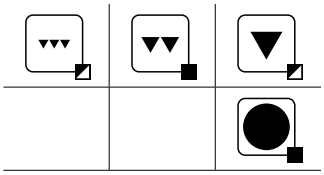
Int. PSC Quick Change Tool, Screw Lock, 107.5° Cutting Angle, VB/VC.. Inserts

Internal Right/Left hand tool, through coolant, with 107.5° cutting angle for screw type VB.. 16 or VC.. 16 inserts. Minimum internal turning diameter Ø33 mm. Suited for a wide range of internal turning operations. PSC shank (Polygon Shank Coupling) size C4 and C5 with choice of lengths. Body treated for longer tool life.









	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	LF [mm]	LU [mm]	BD [mm]	KAPR [°]	LAMS [°]	GAMO [°]		kg		
R	C4-SVQBR-18090-16	40	33	18	90	68	25	107.5	-7.2	0	✓	0.48	GI017	SV16
	C5-SVQBR-18090-16	50	33	18	90	67	25	107.5	-7.2	0	✓	0.67	GI017	SV16
L	C4-SVQBL-18090-16	40	33	18	90	68	25	107.5	-7.2	0	✓	0.48	GI017	SV16
	C5-SVQBL-18090-16	50	33	18	90	67	25	107.5	-7.2	0	✓	0.68	GI017	SV16

GI017	VB.. 1604..	VC.. 1604..

SV16	US 2010-T15P	3.0	M 3.5	10.1	FLAG T15P/3,5

VC

07/ 11/ 13/ 16

CARBIDE INSERTS

VCGT

186

VCGW

189

VCGX

189

VCMT

190

VCMW

191

PCD INSERTS

VCMW PCD

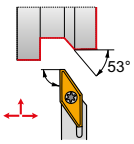
192

MATCH THE RIGHT SIZE (example)

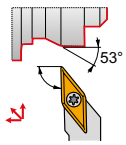
Insert	Tool Holder
VCGT **07**0204E-FF2	SVGCR 1010 M **07**

ISO TURNING – EXTERNAL

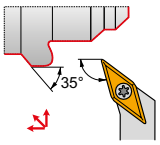
SVAC(RL)-DC EXT

90°	VC..
	13
10×10 25×25	
193	186 – 192

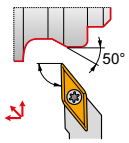
SVGC(RL) EXT

90°	VC..
	07
08×08 16×16	
194	186 – 192

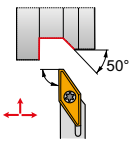
SVHB(C)(RL) EXT

107°30´	VB, VC..
	11 16
16×16 25×25	
195	168 – 171 186 – 192

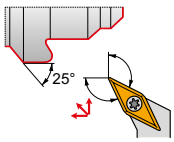
SVJB(C)(RL) EXT

93°	VB, VC..
	11 13 16
12×12 32×25	
196	168 – 171 186 – 192

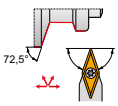
SVJC(RL)-DC EXT

93°	VC..
	13
10×10 25×25	
197	186 – 192

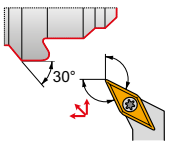
SVPB(C)(RL) EXT

117°30´	VB, VC..
	11 16
16×16 32×25	
198	168 – 171 186 – 192

SVVB(C)N EXT

72°30´	VB, VC..
	11 13 16
12×12 32×25	
199	168 – 171 186 – 192

SVXB(C)(RL) EXT

98°	VB, VC..
	11 13 16
12×12 32×25	
200	168 – 171 186 – 192

VC

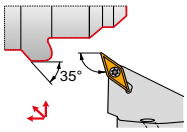
07/ 11/ 13/ 16

C.-SVHB(RL) EXT

107°30´

VB, VC..

16



C4 / C6

201

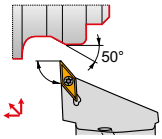
168 – 171
186 – 192

C.-SVJB(RL) EXT

93°

VB, VC..

11
16



C3 / C6

202

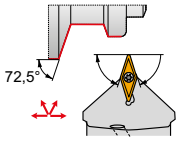
168 – 171
186 – 192

C.-SVVBN EXT

72°30´

VB, VC..

16



C4 / C6

203

168 – 171
186 – 192

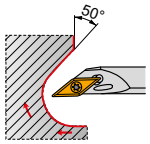
ISO TURNING – INTERNAL

SVJB(RL) INT

93°

VB, VC..

11



ØDmin

25 / 32

204

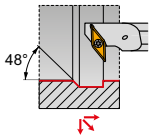
168 – 171
186 – 192

SVLC(RL) INT

95°

VC..

13



ØDmin

27 / 43

205

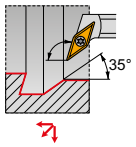
186 – 192

SVQB(C)(RL) INT

107°30´

VB, VC..

11
13
16



ØDmin

20 / 50

206

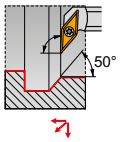
168 – 171
186 – 192

SVUB(C)(RL) INT

93°

VB, VC..

11
13
16



ØDmin

20 / 50

207

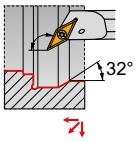
168 – 171
186 – 192

SVXC(RL) INT

113°

VC..

07



ØDmin

12,5 / 17,5

208

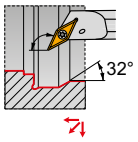
186 – 192

SVXC(RL)-E INT

113°

VC..

07



ØDmin

12,5 / 17,5

209

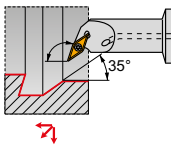
186 – 192

C.-SVQB(C)(RL) INT

108°

VB, VC..

16



ØDmin

33

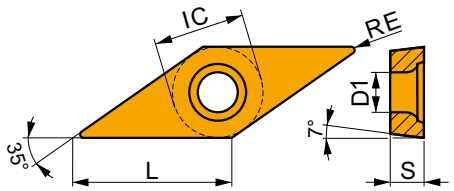
210

168 – 171
186 – 192

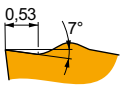
VCGT

PRAMET

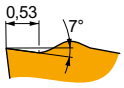
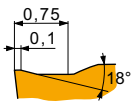
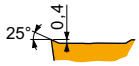
	IC [mm]	D1 [mm]	L [mm]	S [mm]
0702	3.970	2.20	6.90	2.38
1102-SF3	6.350	2.80	11.10	2.58
1103	6.350	2.80	11.10	3.18
1103-SF3	6.350	2.80	11.10	3.43
1303	7.940	3.40	13.80	3.18
1303-AL	7.940	3.40	13.80	3.43
1303-SF3	7.940	3.40	13.80	3.43
1604	9.525	4.40	16.60	4.76
1604-SF3	9.525	4.40	16.60	5.01



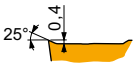
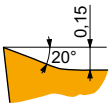
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]
AL geometry with highly positive design for fine-finish to rough machining, and continuous to slightly interrupted cuts.																				
VCGT 070202F-AL	**HF7**	0.2	–	–	–	–	–	–	–	–	–	315	0.12	1.0	–	–	–	–	–	–
VCGT 110302F-AL	**HF7**	0.2	–	–	–	–	–	–	–	–	–	300	0.12	1.5	–	–	–	–	–	–
	T0315	0.2	–	–	–	–	–	–	–	–	–	465	0.12	0.8	–	–	–	–	–	–
VCGT 110304F-AL	**HF7**	0.4	–	–	–	–	–	–	–	–	–	240	0.24	1.5	–	–	–	–	–	–
	T0315	0.4	–	–	–	–	–	–	–	–	–	375	0.24	0.8	–	–	–	–	–	–
VCGT 130302F-AL	**HF7**	0.2	–	–	–	–	–	–	–	–	–	285	0.12	1.7	–	–	–	–	–	–
	T0315	0.2	–	–	–	–	–	–	–	–	–	420	0.12	1.7	–	–	–	–	–	–
VCGT 130304F-AL	**HF7**	0.4	–	–	–	–	–	–	–	–	–	240	0.24	1.7	–	–	–	–	–	–
	T0315	0.4	–	–	–	–	–	–	–	–	–	345	0.24	1.7	–	–	–	–	–	–
VCGT 130308F-AL	**HF7**	0.8	–	–	–	–	–	–	–	–	–	210	0.48	1.7	–	–	–	–	–	–
	T0315	0.8	–	–	–	–	–	–	–	–	–	315	0.48	1.7	–	–	–	–	–	–
VCGT 160402F-AL	**HF7**	0.2	–	–	–	–	–	–	–	–	–	285	0.12	2.4	–	–	–	–	–	–
	T0315	0.2	–	–	–	–	–	–	–	–	–	420	0.12	2.4	–	–	–	–	–	–
VCGT 160404F-AL	**HF7**	0.4	–	–	–	–	–	–	–	–	–	225	0.24	2.4	–	–	–	–	–	–
	T0315	0.4	–	–	–	–	–	–	–	–	–	330	0.24	2.4	–	–	–	–	–	–
VCGT 160408F-AL	**HF7**	0.8	–	–	–	–	–	–	–	–	–	210	0.48	2.4	–	–	–	–	–	–
	T0315	0.8	–	–	–	–	–	–	–	–	–	300	0.48	2.4	–	–	–	–	–	–
VCGT 160412F-AL	**HF7**	1.2	–	–	–	–	–	–	–	–	–	180	0.72	2.4	–	–	–	–	–	–
	T0315	1.2	–	–	–	–	–	–	–	–	–	270	0.72	2.4	–	–	–	–	–	–
																				
FF2 geometry with positive design for fine-finish to finish machining, and continuous to slightly interrupted cuts.																				
VCGT 070202E-FF2	**T8315**	0.2	150	0.05	0.8	–	–	–	140	0.05	0.8	–	–	–	–	–	–	–	–	–
	T8330	0.2	145	0.05	0.8	–	–	–	135	0.05	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.2	190	0.05	0.8	–	–	–	155	0.05	0.8	–	–	–	–	–	–	–	–	–
VCGT 070204E-FF2	**T8315**	0.4	125	0.12	0.8	–	–	–	115	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8330	0.4	120	0.12	0.8	–	–	–	110	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	145	0.12	0.8	–	–	–	120	0.12	0.8	–	–	–	–	–	–	–	–	–
VCGT 130302E-FF2	**T5315**	0.2	250	0.05	1.0	–	–	–	235	0.05	1.0	–	–	–	–	–	–	–	–	–
	T7325	0.2	165	0.05	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.2	140	0.05	1.0	–	–	–	130	0.05	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.2	185	0.05	1.0	–	–	–	150	0.05	1.0	–	–	–	–	–	–	–	–	–
	T9315	0.2	265	0.05	1.0	–	–	–	250	0.05	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.2	240	0.05	1.0	–	–	–	225	0.05	1.0	–	–	–	–	–	–	–	–	–
	TT010	0.2	240	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
		[mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]
																				
			FF2 geometry with positive design for fine-finish to finish machining, and continuous to slightly interrupted cuts.																	
VCGT 130304E-FF2	**T5315**	0.4	◪ 195	0.12	1.0	–	–	–	■ 185	0.12	1.0	–	–	–	–	–	–	–	–	–
	T7325	0.4	◪ 135	0.12	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	■ 115	0.12	1.0	–	–	–	■ 105	0.12	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.4	■ 140	0.12	1.0	–	–	–	◪ 115	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9315	0.4	■ 195	0.12	1.0	–	–	–	◪ 185	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 175	0.12	1.0	–	–	–	◪ 165	0.12	1.0	–	–	–	–	–	–	–	–	–
	TT010	0.4	■ 245	0.06	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
VCGT 130308E-FF2	**T7325**	0.8	◪ 145	0.17	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9315	0.8	■ 200	0.17	1.0	–	–	–	◪ 190	0.17	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 180	0.17	1.0	–	–	–	◪ 170	0.17	1.0	–	–	–	–	–	–	–	–	–
	TT010	0.8	■ 245	0.10	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
																				
			FM2 geometry for finish to medium machining, and continuous to interrupted cuts.																	
VCGT 130308E-FM2	**T8330**	0.8	■ 125	0.17	1.0	◪ 75	0.15	1.0	■ 115	0.17	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.8	■ 145	0.17	1.0	◪ 80	0.15	1.0	◪ 120	0.17	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 180	0.17	1.0	◪ 105	0.15	1.0	◪ 170	0.17	1.0	–	–	–	–	–	–	–	–	–
			NF2 geometry with positive design for fine-finish to semi-rough machining, and continuous cuts.																	
VCGT 130302E-NF2	**H07**	0.2	–	–	–	◪ 60	0.09	1.0	◪ 95	0.10	1.0	◪ 310	0.12	1.0	■ 30	0.07	0.8	–	–	–
	T6310	0.2	◪ 125	0.07	1.0	■ 90	0.06	1.0	◪ 100	0.07	1.0	◪ 375	0.08	1.0	■ 35	0.06	0.8	–	–	–
	T7325	0.2	◪ 150	0.07	1.0	■ 115	0.06	1.0	–	–	–	–	–	–	■ 45	0.06	0.8	–	–	–
	T7335	0.2	◪ 150	0.07	1.0	■ 115	0.06	1.0	–	–	–	–	–	–	■ 45	0.06	0.8	–	–	–
	T9315	0.2	◪ 200	0.10	1.0	–	–	–	◪ 190	0.10	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.2	◪ 210	0.07	1.0	■ 125	0.06	1.0	◪ 195	0.07	1.0	–	–	–	◪ 45	0.06	0.8	–	–	–
	T9335	0.2	◪ 155	0.10	1.0	■ 90	0.09	1.0	–	–	–	–	–	–	◪ 30	0.07	0.8	–	–	–
	TT010	0.2	◪ 240	0.05	0.5	◪ 140	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–
VCGT 130304E-NF2	**H07**	0.4	–	–	–	◪ 60	0.11	1.0	◪ 95	0.12	1.0	◪ 310	0.14	1.0	■ 30	0.11	0.8	–	–	–
	T5315	0.4	◪ 195	0.12	1.0	–	–	–	◪ 185	0.12	1.0	–	–	–	–	–	–	–	–	–
	T6310	0.4	◪ 115	0.12	1.0	■ 80	0.11	1.0	◪ 90	0.12	1.0	◪ 345	0.14	1.0	■ 30	0.11	0.8	–	–	–
	T7325	0.4	◪ 135	0.12	1.0	■ 105	0.11	1.0	–	–	–	–	–	–	■ 40	0.08	0.8	–	–	–
	T7335	0.4	◪ 135	0.12	1.0	■ 105	0.11	1.0	–	–	–	–	–	–	■ 40	0.08	0.8	–	–	–
	T9315	0.4	◪ 210	0.10	1.0	–	–	–	◪ 195	0.10	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.4	◪ 175	0.12	1.0	■ 105	0.11	1.0	◪ 165	0.12	1.0	–	–	–	◪ 35	0.08	0.8	–	–	–
	T9335	0.4	◪ 150	0.12	1.0	■ 90	0.11	1.0	–	–	–	–	–	–	◪ 30	0.11	0.8	–	–	–
	TT010	0.4	◪ 245	0.06	0.5	◪ 145	0.06	0.5	–	–	–	–	–	–	–	–	–	–	–	–
VCGT 130308E-NF2	**T5315**	0.8	◪ 205	0.17	1.0	–	–	–	◪ 190	0.17	1.0	–	–	–	–	–	–	–	–	–
	T6310	0.8	◪ 125	0.17	1.0	■ 90	0.15	1.0	◪ 100	0.17	1.0	◪ 375	0.20	1.0	■ 35	0.12	0.8	–	–	–
	T7325	0.8	◪ 145	0.17	1.0	■ 110	0.15	1.0	–	–	–	–	–	–	■ 45	0.12	0.8	–	–	–
	T7335	0.8	◪ 140	0.17	1.0	■ 105	0.15	1.0	–	–	–	–	–	–	■ 45	0.12	0.8	–	–	–
	T9315	0.8	◪ 200	0.17	1.0	–	–	–	◪ 190	0.17	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	◪ 180	0.17	1.0	■ 105	0.15	1.0	◪ 170	0.17	1.0	–	–	–	◪ 40	0.12	0.8	–	–	–
	T9335	0.8	◪ 155	0.18	1.0	■ 90	0.16	1.0	–	–	–	–	–	–	◪ 30	0.16	0.8	–	–	–
	TT010	0.8	◪ 245	0.10	0.8	◪ 145	0.09	0.8	–	–	–	–	–	–	–	–	–	–	–	–
																				
			SF2 geometry with highly positive design for fine to finish machining, and continuous cuts.																	
VCGT 130301E-SF2	**H07**	0.1	–	–	–	◪ 80	0.05	1.0	–	–	–	◪ 405	0.06	1.0	■ 40	0.04	0.8	–	–	–
	T6310	0.1	◪ 140	0.05	1.0	■ 100	0.05	1.0	–	–	–	◪ 420	0.06	1.0	■ 40	0.04	0.8	–	–	–

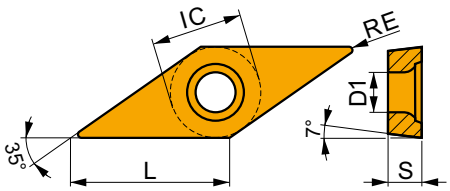
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
SF2 geometry with highly positive design for fine to finish machining, and continuous cuts.																				
VCGT 130302E-SF2	**H07**	0.2	–	–	–	80	0.05	1.0	–	–	–	405	0.06	1.0	40	0.04	0.8	–	–	–
	HF7	0.2	–	–	–	90	0.05	1.0	–	–	–	450	0.06	1.0	–	–	–	–	–	–
	T6310	0.2	140	0.05	1.0	100	0.05	1.0	–	–	–	420	0.06	1.0	40	0.04	0.8	–	–	–
VCGT 130304E-SF2	**H07**	0.4	–	–	–	65	0.09	1.0	–	–	–	335	0.12	1.0	30	0.07	0.8	–	–	–
	HF7	0.4	–	–	–	75	0.09	1.0	–	–	–	375	0.12	1.0	–	–	–	–	–	–
	T6310	0.4	125	0.10	1.0	90	0.09	1.0	–	–	–	375	0.12	1.0	35	0.07	0.8	–	–	–
VCGT 130308E-SF2	**H07**	0.8	–	–	–	75	0.09	1.0	–	–	–	390	0.12	1.0	35	0.08	0.8	–	–	–
	HF7	0.8	–	–	–	85	0.09	1.0	–	–	–	435	0.12	1.0	–	–	–	–	–	–
	T6310	0.8	145	0.10	1.0	100	0.09	1.0	–	–	–	435	0.12	1.0	40	0.08	0.8	–	–	–
																				
SF3 geometry with highly positive design for fine to finish machining, and continuous cuts.																				
VCGT 070202E-SF3	**H07**	0.2	–	–	–	80	0.05	0.8	130	0.05	0.8	415	0.06	0.8	40	0.04	0.6	–	–	–
	T6310	0.2	145	0.05	0.8	100	0.05	0.8	115	0.05	0.8	435	0.06	0.8	40	0.04	0.6	25	0.15	1.0
VCGT 070204E-SF3	**T6310**	0.4	125	0.10	0.8	90	0.09	0.8	100	0.10	0.8	375	0.12	0.8	35	0.07	0.6	25	0.15	1.0
VCGT 110201E-SF3	**T6310**	0.1	140	0.05	0.5	100	0.05	0.5	110	0.05	0.5	420	0.06	0.5	40	0.04	0.4	25	0.15	1.0
VCGT 110202E-SF3	**H07**	0.2	–	–	–	80	0.05	0.8	130	0.05	0.8	415	0.06	0.8	40	0.04	0.6	–	–	–
	T6310	0.2	145	0.05	0.8	100	0.05	0.8	115	0.05	0.8	435	0.06	0.8	40	0.04	0.6	25	0.15	1.0
	T8315	0.2	150	0.05	0.8	90	0.05	0.8	140	0.05	0.8	450	0.06	0.8	35	0.04	0.6	30	0.15	1.0
VCGT 110204E-SF3	**H07**	0.4	–	–	–	65	0.09	0.8	105	0.10	0.8	335	0.12	0.8	30	0.07	0.6	–	–	–
	T6310	0.4	125	0.10	0.8	90	0.09	0.8	100	0.10	0.8	375	0.12	0.8	35	0.07	0.6	25	0.15	1.0
	T8315	0.4	135	0.10	0.8	80	0.09	0.8	125	0.10	0.8	405	0.12	0.8	30	0.07	0.6	25	0.15	1.0
VCGT 110301E-SF3	**T6310**	0.1	140	0.05	0.5	100	0.05	0.5	110	0.05	0.5	420	0.06	0.5	40	0.04	0.4	25	0.15	1.0
VCGT 110302E-SF3	**T6310**	0.2	145	0.05	0.8	100	0.05	0.8	115	0.05	0.8	435	0.06	0.8	40	0.04	0.6	25	0.15	1.0
VCGT 110304E-SF3	**T6310**	0.4	125	0.10	0.8	90	0.09	0.8	100	0.10	0.8	375	0.12	0.8	35	0.07	0.6	25	0.15	1.0
VCGT 130302E-SF3	**H07**	0.2	–	–	–	80	0.05	0.8	130	0.05	0.8	415	0.06	0.8	40	0.04	0.6	–	–	–
	T6310	0.2	145	0.05	0.8	100	0.05	0.8	115	0.05	0.8	435	0.06	0.8	40	0.04	0.6	25	0.15	1.0
	T8315	0.2	150	0.05	0.8	90	0.05	0.8	140	0.05	0.8	450	0.06	0.8	35	0.04	0.6	30	0.15	1.0
VCGT 130304E-SF3	**H07**	0.4	–	–	–	65	0.09	1.0	105	0.10	1.0	335	0.12	1.0	30	0.07	0.8	–	–	–
	T6310	0.4	125	0.10	1.0	90	0.09	1.0	100	0.10	1.0	375	0.12	1.0	35	0.07	0.8	25	0.15	1.0
	T8315	0.4	130	0.10	1.0	75	0.09	1.0	120	0.10	1.0	390	0.12	1.0	30	0.07	0.8	25	0.15	1.0
VCGT 130308E-SF3	**H07**	0.8	–	–	–	75	0.09	1.0	120	0.10	1.0	390	0.12	1.0	35	0.08	0.8	–	–	–
	T6310	0.8	145	0.10	1.0	100	0.09	1.0	115	0.10	1.0	435	0.12	1.0	40	0.08	0.8	25	0.15	1.0
	T8315	0.8	155	0.10	1.0	90	0.09	1.0	145	0.10	1.0	465	0.12	1.0	35	0.08	0.8	30	0.15	1.0
VCGT 160402E-SF3	**T6310**	0.2	145	0.05	0.8	100	0.05	0.8	115	0.05	0.8	435	0.06	0.8	40	0.04	0.6	25	0.15	1.0
VCGT 160404E-SF3	**H07**	0.4	–	–	–	65	0.09	1.0	105	0.10	1.0	335	0.12	1.0	30	0.07	0.8	–	–	–
	T6310	0.4	125	0.10	1.0	90	0.09	1.0	100	0.10	1.0	375	0.12	1.0	35	0.07	0.8	25	0.15	1.0
	T8315	0.4	130	0.10	1.0	75	0.09	1.0	120	0.10	1.0	390	0.12	1.0	30	0.07	0.8	25	0.15	1.0
VCGT 160408E-SF3	**H07**	0.8	–	–	–	75	0.09	1.2	120	0.10	1.2	390	0.12	1.2	35	0.08	1.0	–	–	–
	T6310	0.8	145	0.10	1.2	100	0.09	1.2	115	0.10	1.2	435	0.12	1.2	40	0.08	1.0	25	0.15	1.0
	T8315	0.8	155	0.10	1.2	90	0.09	1.2	145	0.10	1.2	465	0.12	1.2	35	0.08	1.0	30	0.15	1.0
VCGT 160412E-SF3	**H07**	1.2	–	–	–	60	0.18	1.2	95	0.20	1.2	310	0.24	1.2	30	0.14	1.0	–	–	–
	T6310	1.2	125	0.20	1.2	90	0.18	1.2	100	0.20	1.2	375	0.24	1.2	35	0.14	1.0	25	0.15	1.0

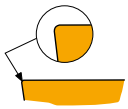
VCGW

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
1303	7.940	3.40	13.80	3.18



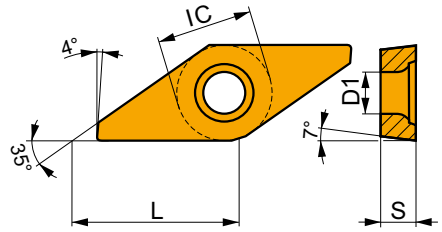
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			E																	
			For fine-finish to semi-rough machining, and continuous to slightly interrupted cuts.																	
VCGW 130302	T5305	0.2	–	–	–	–	–	–	■ 170	0.08	1.3	–	–	–	–	–	–	◪ 35	0.15	1.0
VCGW 130304	T5305	0.4	–	–	–	–	–	–	■ 165	0.10	1.3	–	–	–	–	–	–	◪ 35	0.15	1.0
VCGW 130308	T5305	0.8	–	–	–	–	–	–	■ 160	0.18	1.3	–	–	–	–	–	–	◪ 30	0.15	1.0

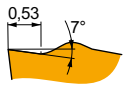
VCGX

PRAMET

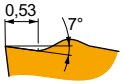
	IC [mm]	D1 [mm]	L [mm]	S [mm]
1303	7.940	3.40	13.80	3.18



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			U		E															
			FR-FF2 geometry with positive right-handed design for fine-finish to finish machining, and continuous cuts.																	
VCGX 130300FR-FF2	T6310	0.0	■ 140	0.05	1.0	–	–	–	■ 110	0.05	1.0	–	–	–	–	–	–	–	–	–
	T8315	0.0	◪ 150	0.05	1.0	–	–	–	■ 140	0.05	1.0	–	–	–	–	–	–	–	–	–
	TT010	0.0	■ 240	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
VCGX 130301FR-FF2	T6310	0.1	■ 140	0.05	1.0	–	–	–	■ 110	0.05	1.0	–	–	–	–	–	–	–	–	–
	T8315	0.1	◪ 150	0.05	1.0	–	–	–	■ 140	0.05	1.0	–	–	–	–	–	–	–	–	–
	TT010	0.1	■ 240	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

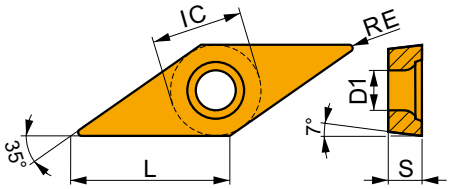
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
FL-FF2 geometry with positive left-handed design for fine-finish to finish machining, and continuous cuts.																				
VCGX 130300FL-FF2	**T6310**	0.0	140	0.05	1.0	–	–	–	110	0.05	1.0	–	–	–	–	–	–	–	–	–
	T8315	0.0	150	0.05	1.0	–	–	–	140	0.05	1.0	–	–	–	–	–	–	–	–	–
	TT010	0.0	240	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
VCGX 130301FL-FF2	**T6310**	0.1	140	0.05	1.0	–	–	–	110	0.05	1.0	–	–	–	–	–	–	–	–	–
	T8315	0.1	150	0.05	1.0	–	–	–	140	0.05	1.0	–	–	–	–	–	–	–	–	–

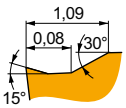
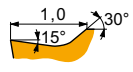
VCMT

PRAMET

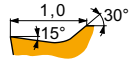
	IC	D1	L	S
	[mm]	[mm]	[mm]	[mm]
1103	6.350	2.80	11.10	3.18
1604	9.525	4.40	16.60	4.76



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
FM geometry for finish to semi-rough machining, and continuous to slightly interrupted cuts.																				
VCMT 160404E-FM	**T7325**	0.4	125	0.19	1.2	95	0.17	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	130	0.12	1.2	75	0.11	1.2	120	0.12	1.2	390	0.14	1.2	–	–	–	–	–	–
	T8430	0.4	150	0.12	1.2	80	0.11	1.2	125	0.12	1.2	420	0.14	1.2	–	–	–	–	–	–
	T9315	0.4	210	0.12	1.2	–	–	–	195	0.12	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.4	155	0.19	1.2	90	0.17	1.2	145	0.19	1.2	–	–	–	–	–	–	–	–	–
VCMT 160408E-FM	**T7325**	0.8	155	0.17	1.2	120	0.15	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	135	0.17	1.2	80	0.15	1.2	125	0.17	1.2	405	0.20	1.2	–	–	–	–	–	–
	T8430	0.8	155	0.17	1.2	85	0.15	1.2	130	0.17	1.2	435	0.20	1.2	–	–	–	–	–	–
	T9315	0.8	220	0.17	1.2	–	–	–	205	0.17	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.8	195	0.17	1.2	115	0.15	1.2	185	0.17	1.2	–	–	–	–	–	–	–	–	–
																				
UR geometry for fine to finish machining, and continuous to slightly interrupted cuts.																				
VCMT 110304E-UR	**T7325**	0.4	110	0.19	0.8	85	0.17	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	110	0.12	0.8	65	0.11	0.8	100	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	135	0.12	0.8	75	0.11	0.8	110	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	190	0.12	0.8	–	–	–	180	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	140	0.19	0.8	80	0.17	0.8	130	0.19	0.8	–	–	–	–	–	–	–	–	–
VCMT 110308E-UR	**T7325**	0.8	140	0.17	0.8	105	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	125	0.17	0.8	75	0.15	0.8	115	0.17	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.8	140	0.17	0.8	75	0.15	0.8	115	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.8	195	0.17	0.8	–	–	–	185	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.8	175	0.17	0.8	105	0.15	0.8	165	0.17	0.8	–	–	–	–	–	–	–	–	–

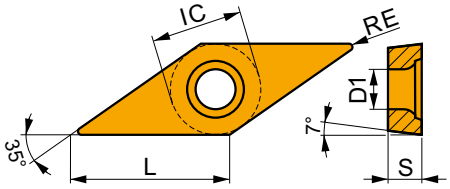
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
UR geometry for fine to finish machining, and continuous to slightly interrupted cuts.																				
VCMT 160404E-UR	**T7325**	0.4	110	0.19	1.2	85	0.17	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	110	0.12	1.2	65	0.11	1.2	100	0.12	1.2	–	–	–	–	–	–	–	–	–
	T8430	0.4	130	0.12	1.2	70	0.11	1.2	105	0.12	1.2	–	–	–	–	–	–	–	–	–
	T9315	0.4	180	0.12	1.2	–	–	–	170	0.12	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.4	135	0.19	1.2	80	0.17	1.2	125	0.19	1.2	–	–	–	–	–	–	–	–	–
VCMT 160408E-UR	**T7325**	0.8	135	0.17	1.2	105	0.15	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	115	0.17	1.2	65	0.15	1.2	105	0.17	1.2	–	–	–	–	–	–	–	–	–
	T8430	0.8	135	0.17	1.2	75	0.15	1.2	110	0.17	1.2	–	–	–	–	–	–	–	–	–
	T9315	0.8	190	0.17	1.2	–	–	–	180	0.17	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.8	170	0.17	1.2	100	0.15	1.2	160	0.17	1.2	–	–	–	–	–	–	–	–	–

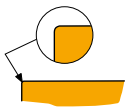
VCMW

PRAMET

	IC	D1	L	S
	[mm]	[mm]	[mm]	[mm]
1103	6.350	2.80	11.10	3.18
1604	9.525	4.40	16.60	4.76



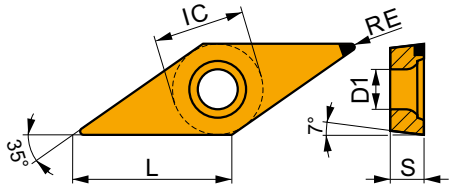
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
For fine-finish to semi-rough machining, and continuous to slightly interrupted cuts.																				
VCMW 110302	**T5305**	0.2	–	–	–	–	–	–	170	0.08	1.2	–	–	–	–	–	–	35	0.15	1.0
	T5315	0.2	–	–	–	–	–	–	145	0.08	1.2	–	–	–	–	–	–	30	0.15	1.0
	T6310	0.2	–	–	–	–	–	–	70	0.08	1.2	–	–	–	–	–	–	15	0.15	1.0
VCMW 110304	**T5305**	0.4	–	–	–	–	–	–	165	0.10	1.2	–	–	–	–	–	–	35	0.15	1.0
	T5315	0.4	–	–	–	–	–	–	145	0.10	1.2	–	–	–	–	–	–	30	0.15	1.0
	T6310	0.4	–	–	–	–	–	–	70	0.10	1.2	–	–	–	–	–	–	15	0.15	1.0
VCMW 160404	**T5305**	0.4	–	–	–	–	–	–	165	0.10	1.5	–	–	–	–	–	–	35	0.15	1.0
	T5315	0.4	–	–	–	–	–	–	140	0.10	1.5	–	–	–	–	–	–	30	0.15	1.0
	T6310	0.4	–	–	–	–	–	–	70	0.10	1.5	–	–	–	–	–	–	15	0.15	1.0
VCMW 160408	**T5305**	0.8	–	–	–	–	–	–	155	0.18	1.5	–	–	–	–	–	–	30	0.15	1.0
	T5315	0.8	–	–	–	–	–	–	135	0.18	1.5	–	–	–	–	–	–	25	0.15	1.0
	T6310	0.8	–	–	–	–	–	–	70	0.18	1.5	–	–	–	–	–	–	15	0.15	1.0

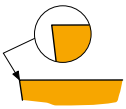
VCMW PCD

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
1604	9.525	4.40	16.60	4.76



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			HSC F																	
PCD tipped for finish to semi-rough machining, high speeds and stable cutting conditions.																				
VCMW 160404FN	**PD1**	0.4	–	–	–	–	–	–	–	–	–	900	0.12	0.5	–	–	–	–	–	–
VCMW 160408FN	**PD1**	0.8	–	–	–	–	–	–	–	–	–	1050	0.12	1.0	–	–	–	–	–	–

SVAC(RL)-DC EXT

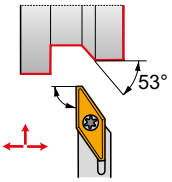
P M K N S H

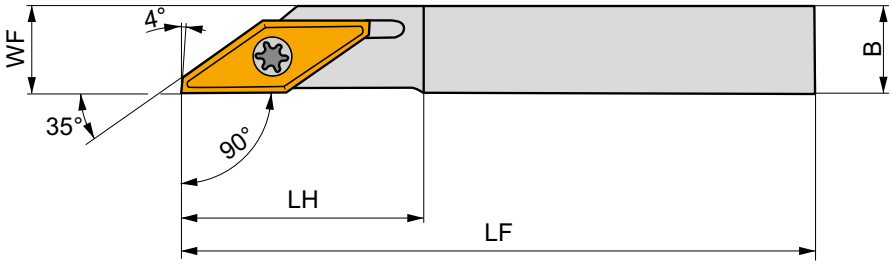
PRAMET

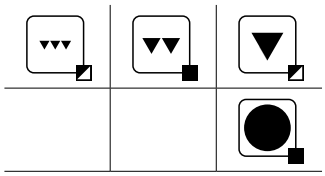
S

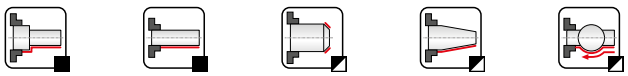
Ext. Screw Lock Swiss Style Tool Holder, 90° Cutting Angle for VCGX 13 Insert

External Right/Left hand tool holder for screw type positive VCGX 13 Swiss style inserts. Suited for external face and longitudinal turning with shoulder, taper, copy turning up to 53° and chamfer turning. Available with shank size 10x10 up to 25x25mm. Body treated for longer tool life.









	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	SVACR 1010 L 13-DC	10	10	10	10	140	25	0	0	0.12	GI222	SV20
	SVACR 1212 L 13-DC	12	12	12	12	140	25	0	0	0.17	GI222	SV20
	SVACR 1616 M 13-DC	16	16	16	16	150	25	0	0	0.29	GI222	SV20
	SVACR 2020 M 13-DC	20	20	20	20	150	25	0	0	0.46	GI222	SV20
	SVACR 2525 M 13-DC	25	25	25	25	150	25	0	0	0.67	GI222	SV20
L	SVACL 1010 L 13-DC	10	10	10	10	140	25	0	0	0.10	GI222	SV20
	SVACL 1212 L 13-DC	12	12	12	12	140	25	0	0	0.19	GI222	SV20
	SVACL 1616 M 13-DC	16	16	16	16	150	25	0	0	0.29	GI222	SV20
	SVACL 2020 M 13-DC	20	20	20	20	150	25	0	0	0.43	GI222	SV20
	SVACL 2525 M 13-DC	25	25	25	25	150	25	0	0	0.67	GI222	SV20

GI222	VCGX 1303..

		Nm			
SV20	5513 020-24	1.5	M 3	8.5	PT-8002

SVGC(RL) EXT

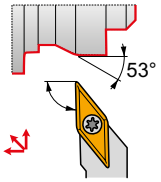
P M K N S H

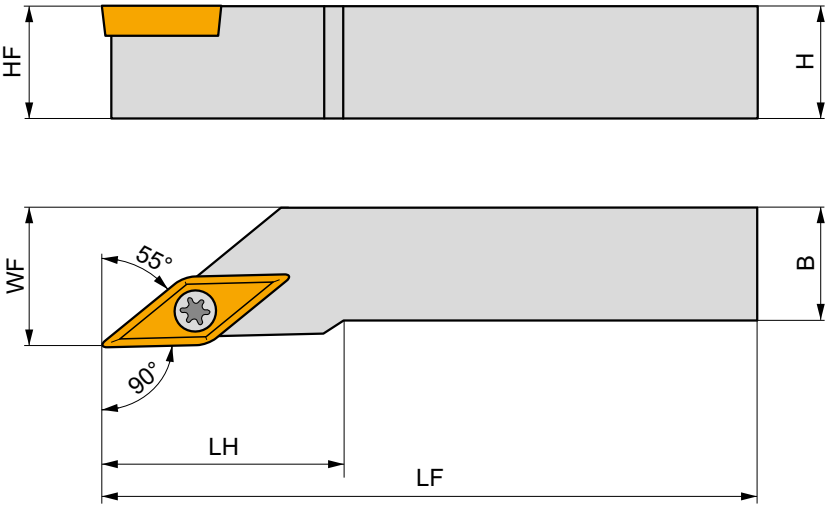
PRAMET

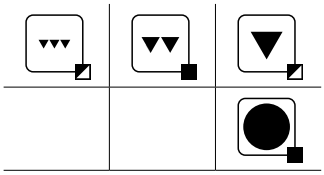
S

External Screw Lock Tool Holder with 90° Cutting Angle for VC.. Insert

External Right/Left hand tool holder for screw type positive VC.. 07 inserts. Suited for external longitudinal turning with shoulder, taper, copy turning up to 53° and chamfer turning. Available with shank size 08x08 up to 16x16 mm. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	SVGCR 0808 K 07	8	8	8	8.5	125	15	0	0	0.07	GI234	SV23
	SVGCR 1010 M 07	10	10	10	10.5	150	15	0	0	0.13	GI234	SV23
	SVGCR 1212 M 07	12	12	12	12.5	150	18	0	0	0.17	GI234	SV23
	SVGCR 1616 P 07	16	16	16	16.3	170	23	0	0	0.33	GI234	SV23
L	SVGCL 0808 K 07	8	8	8	8.5	125	15	0	0	0.07	GI234	SV23
	SVGCL 1010 M 07	10	10	10	10.5	150	15	0	0	0.13	GI234	SV23
	SVGCL 1212 M 07	12	12	12	12.5	150	18	0	0	0.17	GI234	SV23
	SVGCL 1616 P 07	16	16	16	16.3	170	23	0	0	0.33	GI234	SV23

GI234	VC.. 0702..

		Nm			
SV23	DVF 3584	0.6	M 2	5.5	DMD 1650

SVHB(C)(RL) EXT

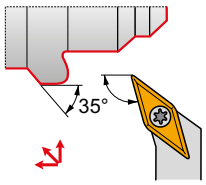
P M K N S H

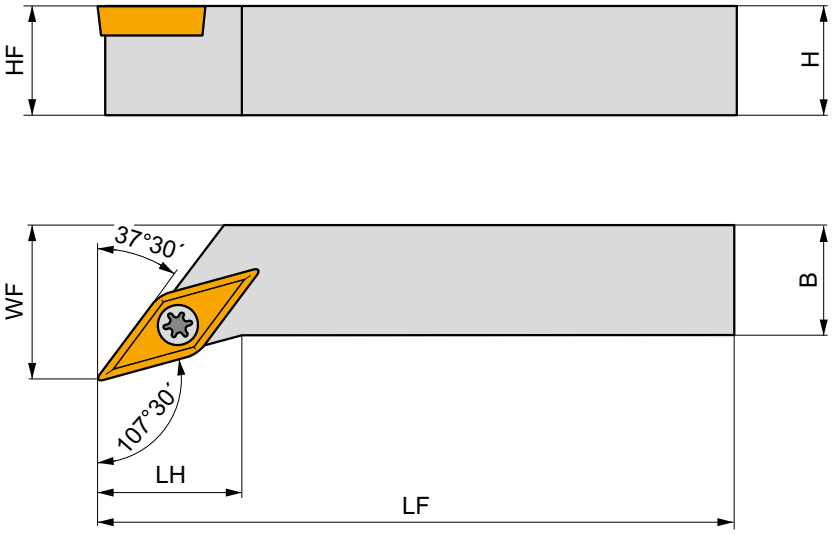
PRAMET

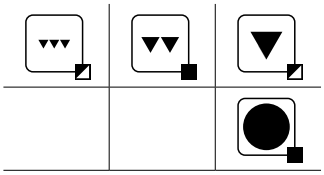
S

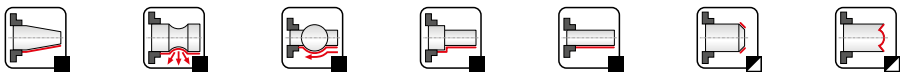
Ext. Screw Lock Tool Holder with 107.5° Cutting Angle for VB/VC.. Inserts

External Right/Left hand tool holder for screw type positive VB.. 11 or 16 and VC.. 11 or 16 inserts. Suited for external face and longitudinal turning with shoulder, taper, face and longitudinal copy turning up to 35° and chamfer turning. Available with shank size 16x16 up to 25x25 mm. Body treated for longer tool life.









	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	**SVHBR 1616 H 11**	16	16	16	20	100	14	0	0	0.21	GI194	S01
	SVHCR 2020 K 16-M-A	20	20	20	25	125	20	0	0	0.40	GI017	SV10
	SVHCR 2525 M 16-M-A	25	25	25	32	150	20	0	0	0.68	GI017	SV10
L	**SVHBL 1616 H 11**	16	16	16	20	100	14	0	0	0.19	GI194	S01
	SVHCL 2020 K 16-M-A	20	20	20	25	125	20	0	0	0.40	GI017	SV10
	SVHCL 2525 M 16-M-A	25	25	25	32	150	20	0	0	0.07	GI017	SV10

GI017	VB.. 1604..	VC.. 1604..
GI194	VB.. 1103..	VC.. 1103..

		Nm						
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
SV10	US 3512-T15P	3.0	M 3.5	12.6	SVN 160304	MS 3510	FLAG T15P	HXK 3.5

SVJB(C)(RL) EXT

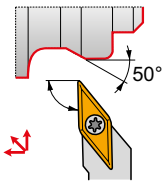
P M K N S H

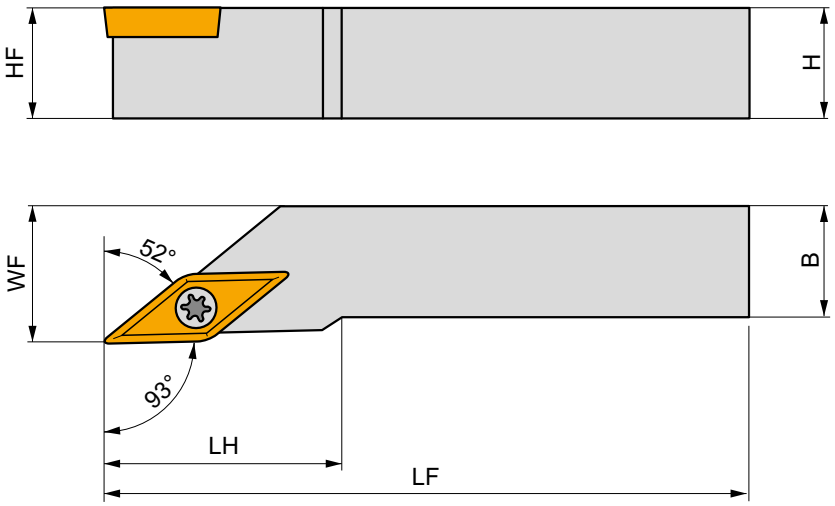
PRAMET

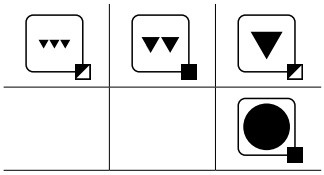
S

External Screw Lock Tool Holder with 93° Cutting Angle for VB/VC.. Inserts

External Right/Left hand tool holder for screw type positive VB.. 11 or 16 and VC.. 11 up to 16 inserts. Suited for external longitudinal turning with shoulder, taper, copy turning up to 50° and chamfer turning. Available with shank size 12x12 up to 32x25 mm. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	SVJBR 1212 F 11	12	12	12	16	80	20	0	0	0.09	GI194	S01
	SVJBR 1616 H 11	16	16	16	20	100	20	0	0	0.20	GI194	S01
	SVJCR 1212 N 13	12	12	12	16	160	27	0	0	0.19	GI211	SV21
	SVJCR 1616 H 13	16	16	16	20	100	30	0	0	0.20	GI211	SV21
	SVJCR 2020 K 13	20	20	20	25	125	30	0	0	0.37	GI211	SV22
	SVJCR 2525 M 13	25	25	25	32	150	30	0	0	0.67	GI211	SV22
	SVJCR 2020 K 16-M-A	20	20	20	25	125	28	0	0	0.35	GI017	SV10
	SVJCR 2525 M 16-M-A	25	25	25	32	150	32	0	0	0.68	GI017	SV10
	SVJCR 3225 P 16-M-A	32	25	32	32	170	32	0	0	0.99	GI017	SV10
L	SVJBL 1212 F 11	12	12	12	16	80	20	0	0	0.09	GI194	S01
	SVJBL 1616 H 11	16	16	16	20	100	20	0	0	0.19	GI194	S01
	SVJCL 1212 N 13	12	12	12	16	160	27	0	0	0.19	GI211	SV21
	SVJCL 1616 H 13	16	16	16	20	100	30	0	0	0.20	GI211	SV21
	SVJCL 2020 K 13	20	20	20	25	125	30	0	0	0.37	GI211	SV22
	SVJCL 2525 M 13	25	25	25	32	150	30	0	0	0.67	GI211	SV22
	SVJCL 2020 K 16-M-A	20	20	20	25	125	28	0	0	0.40	GI017	SV10
	SVJCL 2525 M 16-M-A	25	25	25	32	150	32	0	0	0.70	GI017	SV10
	SVJCL 3225 P 16-M-A	32	25	32	32	170	32	0	0	0.99	GI017	SV10

GI017	VB.. 1604..	VC.. 1604..
GI194	VB.. 1103..	VC.. 1103..
GI211	–	VC.. 1303..

		Nm						
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
SV10	US 3512-T15P	3.0	M 3.5	12.6	SVN 160304	MS 3510	FLAG T15P	HXK 3.5
SV21	5513 020-24	1.5	M 3	8.5	–	–	PT-8002	–
SV22	DVF 0573	1.5	M 3	10.3	DAP 0331	DVT 0332	PT-8002	174.1-870

SVJC(RL)-DC EXT

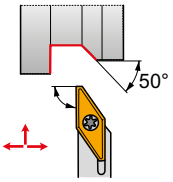
P M K N S H

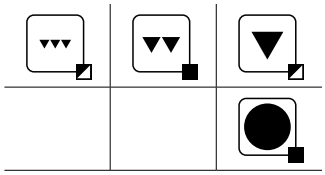
PRAMET

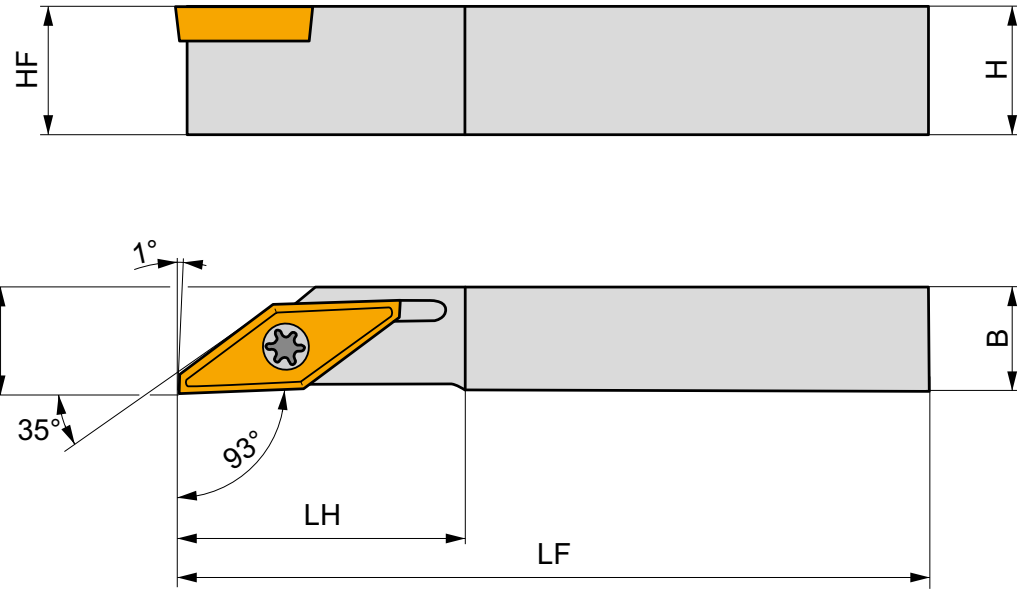
S

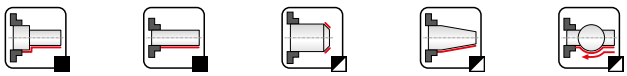
Ext. Screw Lock Swiss Style Tool Holder, 93° Cutting Angle for VCGX 13 Insert

External Right/Left hand tool holder for screw type positive VCGX 13 Swiss style inserts. Suited for external face and longitudinal turning with shoulder, taper, copy turning up to 50° and chamfer turning. Available with shank size 10x10 up to 25x25 mm. Body treated for longer tool life.









	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	SVJCR 1010 L 13-DC	10	10	10	0	140	25	0	0	0.12	GI222	SV20
	SVJCR 1212 L 13-DC	12	12	12	0	140	25	0	0	0.17	GI222	SV20
	SVJCR 1616 M 13-DC	16	16	16	0	150	25	0	0	0.29	GI222	SV20
	SVJCR 2020 M 13-DC	20	20	20	0	150	25	0	0	0.45	GI222	SV20
	SVJCR 2525 M 13-DC	25	25	25	0	150	25	0	0	0.68	GI222	SV20
L	SVJCL 1010 L 13-DC	10	10	10	0	140	25	0	0	0.12	GI222	SV20
	SVJCL 1212 L 13-DC	12	12	12	0	140	25	0	0	0.17	GI222	SV20
	SVJCL 1616 M 13-DC	16	16	16	0	150	25	0	0	0.30	GI222	SV20
	SVJCL 2020 M 13-DC	20	20	20	0	150	25	0	0	0.47	GI222	SV20
	SVJCL 2525 M 13-DC	25	25	25	0	150	25	0	0	0.69	GI222	SV20

GI222	VCGX 1303..

SV20	5513 020-24	1.5	M 3	8.5	PT-8002

SVPB(C)(RL) EXT

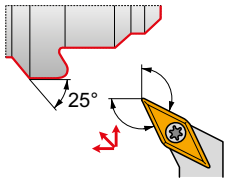
P M K N S H

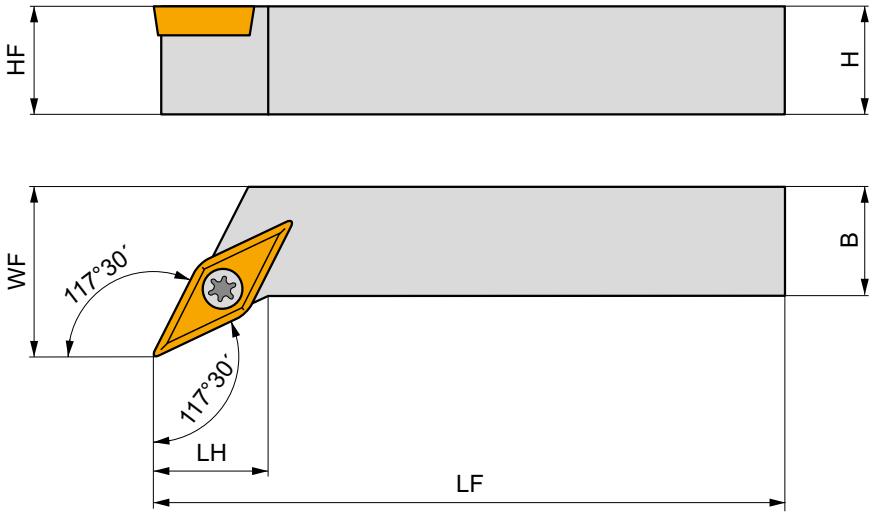
PRAMET

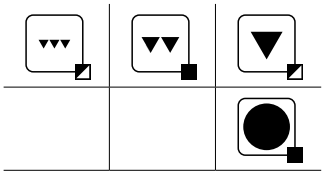
S

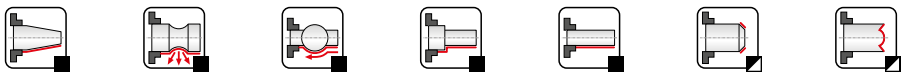
External Screw Lock Tool Holder, 117.5° Cutting Angle for VB/VC.. Inserts

External Right/Left hand tool holder for screw type positive VB.. 11 or 16 and VC.. 11 or 16 inserts. Suited for external face and longitudinal turning with shoulder, taper, face copy turning up to 25° and chamfer turning. Available with shank size 16x16 up to 32x25 mm. Body treated for longer tool life.









	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	SVPBR 1616 H 11	16	16	16	20	100	12	0	0	0.20	GI194	S01
	SVPBR 2020 K 11	20	20	20	25	125	12	0	0	0.41	GI194	S01
	SVPCR 2020 K 16-M-A	20	20	20	25	125	20	0	0	0.40	GI017	SV10
	SVPCR 2525 M 16-M-A	25	25	25	32	150	25	0	0	0.75	GI017	SV10
	SVPCR 3225 P 16-M-A	32	25	32	32	170	25	0	0	1.10	GI017	SV10
L	SVPBL 1616 H 11	16	16	16	20	100	12	0	0	0.20	GI194	S01
	SVPBL 2020 K 11	20	20	20	25	125	12	0	0	0.39	GI194	S01
	SVPCL 2020 K 16-M-A	20	20	20	25	125	20	0	0	0.70	GI017	SV10
	SVPCL 2525 M 16-M-A	25	25	25	32	150	25	0	0	0.70	GI017	SV10
	SVPCL 3225 P 16-M-A	32	25	32	32	170	25	0	0	1.10	GI017	SV10

GI017	VB.. 1604..	VC.. 1604..
GI194	VB.. 1103..	VC.. 1103..

		Nm						
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
SV10	US 3512-T15P	3.0	M 3.5	12.6	SVN 160304	MS 3510	FLAG T15P	HXK 3.5

SVVB(C)N EXT

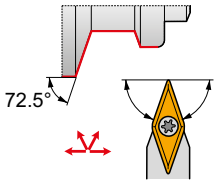
P M K N S H

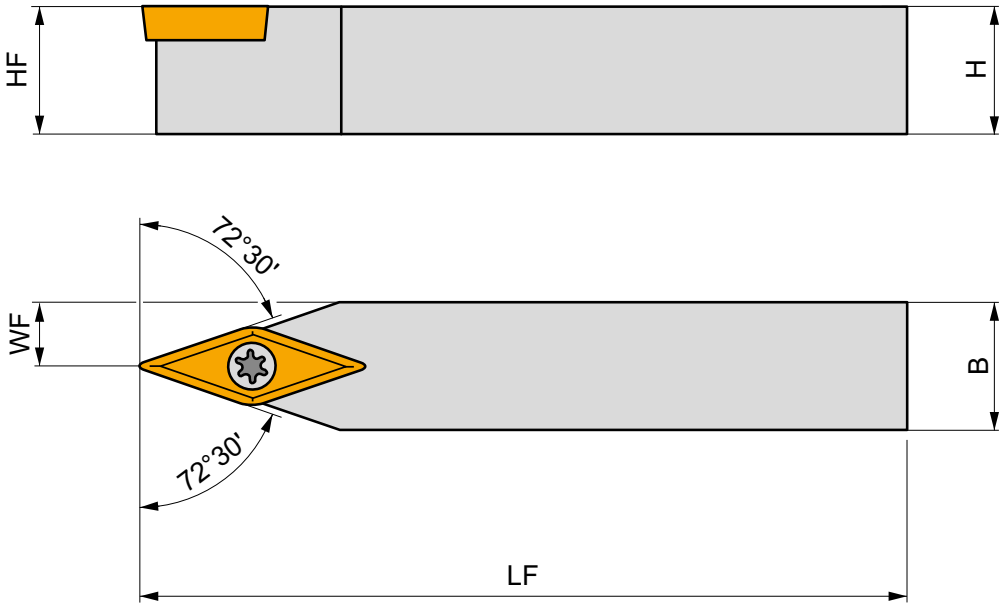
PRAMET

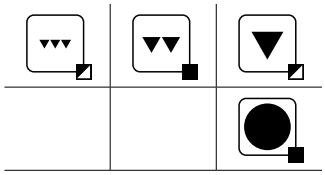
S

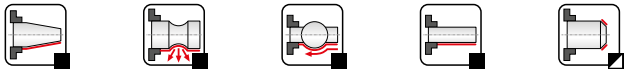
External Screw Lock Tool Holder, 72.5° Cutting Angle for VB/VC.. Inserts

External neutral tool holder for screw type positive VB.. 11 or 16 and VC.. 11 up to 16 inserts. Suited for external longitudinal turning without shoulder, taper, copy turning up to 72.5° and chamfer turning. Available with shank size 12x12 up to 32x25 mm. Body treated for longer tool life.









	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
N	**SVVBN 1212 F 11**	12	12	12	6	80	–	0	0	0.11	GI194	S01
	SVVBN 1616 H 11	16	16	16	8	100	–	0	0	0.18	GI194	S01
	SVVBN 2020 K 11	20	20	20	10	125	–	0	0	0.38	GI194	S01
	SVVCN 1212 N 13	12	12	12	6	160	–	0	0	0.19	GI211	SV21
	SVVCN 1616 H 13	16	16	16	8	100	–	0	0	0.20	GI211	SV21
	SVVCN 2020 K 13	20	20	20	10	125	–	0	0	0.36	GI211	SV22
	SVVCN 2525 M 13	25	25	25	12.5	150	–	0	0	0.66	GI211	SV22
	SVVCN 2020 K 16-M-A	20	20	20	10	125	–	0	0	0.34	GI017	SV10
	SVVCN 2525 M 16-M-A	25	25	25	12.5	150	–	0	0	0.68	GI017	SV10
	SVVCN 3225 P 16-M-A	32	25	32	12.5	170	–	0	0	0.98	GI017	SV10

GI017	VB.. 1604..	VC.. 1604..
GI194	VB.. 1103..	VC.. 1103..
GI211	–	VC.. 1303..

		Nm						
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
SV10	US 3512-T15P	3.0	M 3.5	12.6	SVN 160304	MS 3510	FLAG T15P	HXK 3.5
SV21	5513 020-24	1.5	M 3	8.5	–	–	PT-8002	–
SV22	DVF 0573	1.5	M 3	10.3	DAP 0331	DVT 0332	PT-8002	174.1-870

SVXB(C)(RL) EXT

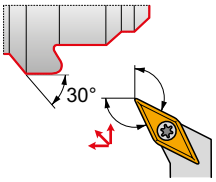
P M K N S H

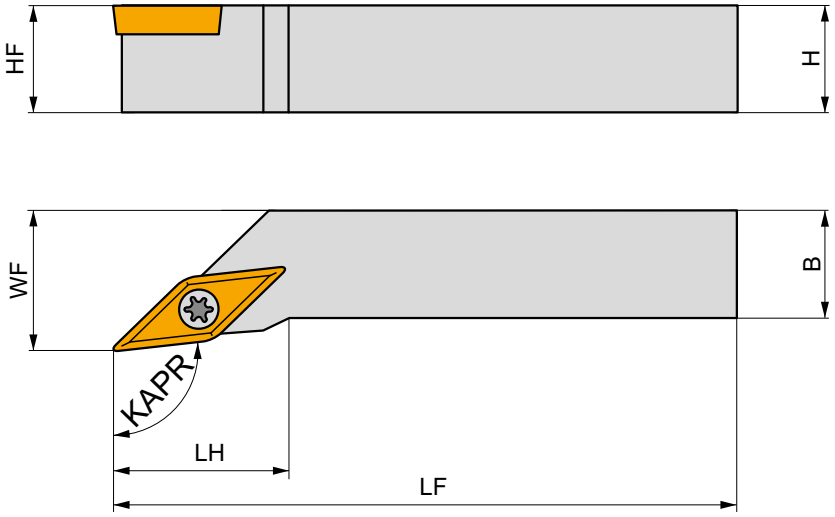
PRAMET

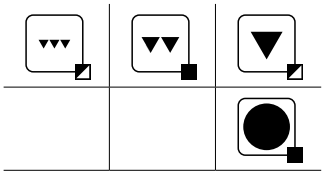
S

External Screw Lock Tool Holder 98/113° Cutting Angle for VB/VC.. Inserts

External Right/Left hand tool holder for screw type positive VB.. 11 or 16 and VC.. 11 up to 16 inserts. Suited for external longitudinal turning with shoulder, taper, copy turning up to 30° and chamfer turning. Available with shank size 12x12 up to 32x25 mm. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	KAPR [°]	LAMS [°]	GAMO [°]	kg		
R	SVXBR 1212 F 11	12	12	12	16	80	20	98	0	0	0.09	GI194	SO1
	SVXBR 1616 H 11	16	16	16	20	100	14	98	0	0	0.19	GI194	SO1
	SVXCR 2020 K 13	20	20	20	25	125	12	113	0	0	0.38	GI211	SV22
	SVXCR 2020 K 16-M-A	20	20	20	25	125	28	98	0	0	0.41	GI017	SV10
	SVXCR 2525 M 16-M-A	25	25	25	32	150	32	98	0	0	0.68	GI017	SV10
	SVXCR 3225 P 16-M-A	32	25	32	32	170	32	98	0	0	1.00	GI017	SV10
L	SVXBL 1212 F 11	12	12	12	16	80	20	98	0	0	0.09	GI194	SO1
	SVXBL 1616 H 11	16	16	16	20	100	14	98	0	0	0.19	GI194	SO1
	SVXCL 2020 K 13	20	20	20	25	125	12	113	0	0	0.38	GI211	SV22
	SVXCL 2020 K 16-M-A	20	20	20	25	125	28	98	0	0	0.38	GI017	SV10
	SVXCL 2525 M 16-M-A	25	25	25	32	150	32	98	0	0	0.69	GI017	SV10
	SVXCL 3225 P 16-M-A	32	25	32	32	170	32	98	0	0	0.99	GI017	SV10

GI017	VB.. 1604..	VC.. 1604..
GI194	VB.. 1103..	VC.. 1103..
GI211	–	VC.. 1303..

		Nm						
SO1	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
SV10	US 3512-T15P	3.0	M 3.5	12.6	SVN 160304	MS 3510	FLAG T15P	HXK 3.5
SV22	DVF 0573	1.5	M 3	10.3	DAP 0331	DVT 0332	PT-8002	174.1-870

C.-SVHB(RL) EXT

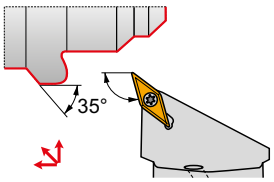
P M K N S H

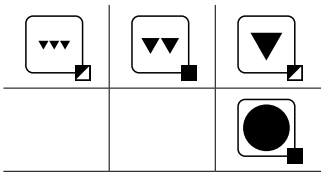
PRAMET

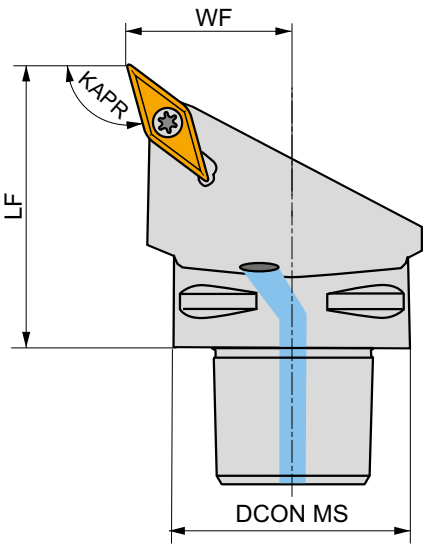
S

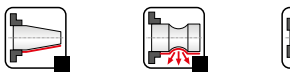
Ext. PSC Quick Change Tool, Screw Lock, 107.5° Cutting Angle, VB/VC.. Inserts

External Right/Left hand tool, through coolant, for screw type positive VB.. 16 and VC.. 16 inserts. Suited for external longitudinal turning with shoulder, taper, copy turning up to 35° and chamfer turning. Available with PSC (Polygon Shank Coupling) size C4 up to C6. Body treated for longer tool life.









	Product	DCON MS [mm]	WF [mm]	LF [mm]	KAPR [°]	LAMS [°]	GAMO [°]		kg		
R	C4-SVHBR-27050-16	40	27	50	107.5	0	0	✓	0.35	GI017	C-SV16S-1
	C5-SVHBR-35060-16	50	35	60	107.5	0	0	✓	0.64	GI017	C-SV16S-2
	C6-SVHBR-45065-16	63	45	65	107.5	0	0	✓	1.13	GI017	C-SV16S-2
L	C4-SVHBL-27050-16	40	27	50	107.5	0	0	✓	0.35	GI017	C-SV16S-1
	C5-SVHBL-35060-16	50	35	60	107.5	0	0	✓	0.64	GI017	C-SV16S-2
	C6-SVHBL-45065-16	63	45	65	107.5	0	0	✓	1.12	GI017	C-SV16S-2

GI017	VB.. 1604..	VC.. 1604..

		Nm						
C-SV16S-1	US 2001-T15P	3.0	M 3.5	12.1	SVS 270-01	MS 9001	FLAG T15P/3,5	CN 034-01
C-SV16S-2	US 2001-T15P	3.0	M 3.5	12.1	SVS 270-01	MS 9001	FLAG T15P/3,5	CN 034-02

C.-SVJB(RL) EXT

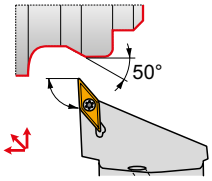
P M K N S H

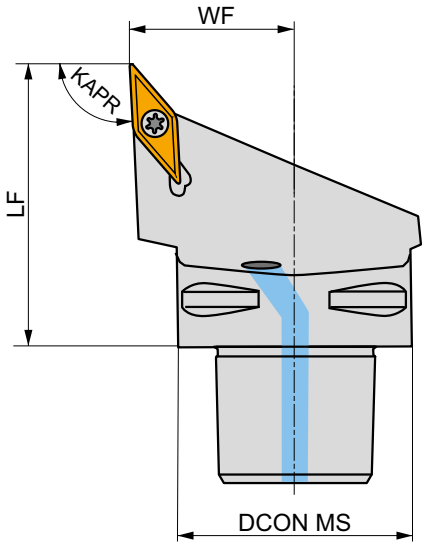
PRAMET

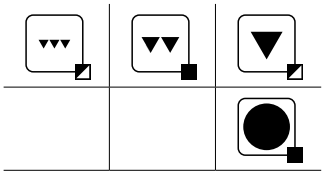
S

Ext. PSC Quick Change Tool, Screw Lock, 93° Cutting Angle for VB/VC.. Inserts

External Right/Left hand tool, through coolant, for screw type positive VB.. 11 or 16 and VC.. 11 up to 16 inserts. Suited for external longitudinal turning with shoulder, taper, copy turning up to 50° and chamfer turning. Available with PSC (Polygon Shank Coupling) size C3 up to C6. Body treated for longer tool life.







	Product	DCON MS [mm]	WF [mm]	LF [mm]	KAPR [°]	LAMS [°]	GAMO [°]		kg		
R	C3-SVJBR-22040-11-B1	32	22	40	93	0	0	✓	0.17	GI194	C-SV11
	C4-SVJBR-27050-11-B1	40	27	50	93	0	0	✓	0.34	GI194	C-SV11
	C4-SVJBR-27050-16	40	27	50	93	0	0	✓	0.35	GI017	C-SV16S-1
	C5-SVJBR-35060-16	50	35	60	93	0	0	✓	0.63	GI017	C-SV16S-2
	C6-SVJBR-45065-16	63	45	65	93	0	0	✓	1.11	GI017	C-SV16S-2
L	C4-SVJBL-27050-16	40	27	50	93	0	0	✓	0.35	GI017	C-SV16S-1
	C5-SVJBL-35060-16	50	35	60	93	0	0	✓	0.64	GI017	C-SV16S-2
	C6-SVJBL-45065-16	63	45	65	93	0	0	✓	1.11	GI017	C-SV16S-2

GI017	VB.. 1604..	VC.. 1604..
GI194	VB.. 1103..	VC.. 1103..

		Nm						
C-SV11	US 2003-T07P	0.8	M 2.5	6.5	–	–	FLAG T07P	CN 034-01
C-SV16S-1	US 2001-T15P	3.0	M 3.5	12.1	SVS 270-01	MS 9001	FLAG T15P/3,5	CN 034-01
C-SV16S-2	US 2001-T15P	3.0	M 3.5	12.1	SVS 270-01	MS 9001	FLAG T15P/3,5	CN 034-02

C.-SVVBN EXT

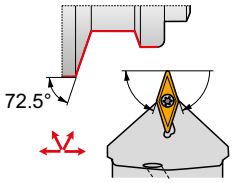
P M K N S H

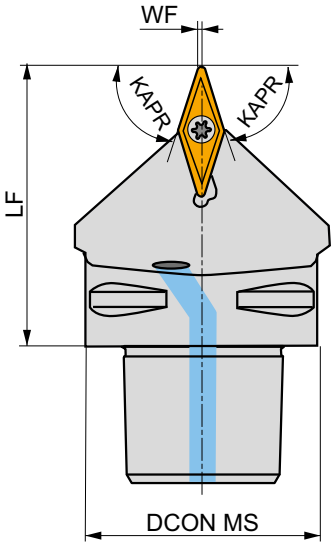
PRAMET

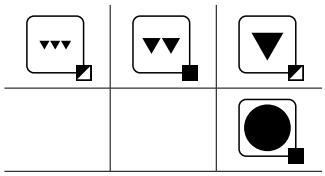
S

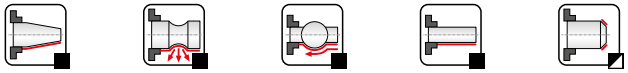
Ext. PSC Quick Change Tool, Screw Lock, 72.5° Cutting Angle, VB/VC.. Inserts

External neutral tool, through coolant, for screw type positive VB.. 16 and VC.. 16 inserts. Suited for external longitudinal turning without shoulder, taper, copy turning up to 72.5° and chamfer turning. Available with PSC (Polygon Shank Coupling) size C4 up to C6. Body treated for longer tool life.









	Product	DCON MS [mm]	WF [mm]	LF [mm]	KAPR [°]	LAMS [°]	GAMO [°]		kg		
N	**C4-SVVBN-00050-16**	40	0.6	50	72.5	0	0	✓	0.32	GI017	C-SV16S-1
	C5-SVVBN-00060-16	50	0.6	60	72.5	0	0	✓	0.56	GI017	C-SV16S-2
	C6-SVVBN-00065-16	63	0.6	65	72.5	0	0	✓	0.99	GI017	C-SV16S-2

GI017	VB.. 1604..	VC.. 1604..

		Nm						
C-SV16S-1	US 2001-T15P	3.0	M 3.5	12.1	SVS 270-01	MS 9001	FLAG T15P/3,5	CN 034-01
C-SV16S-2	US 2001-T15P	3.0	M 3.5	12.1	SVS 270-01	MS 9001	FLAG T15P/3,5	CN 034-02

SVJB(RL) INT

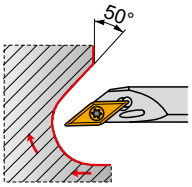
P M K N S H

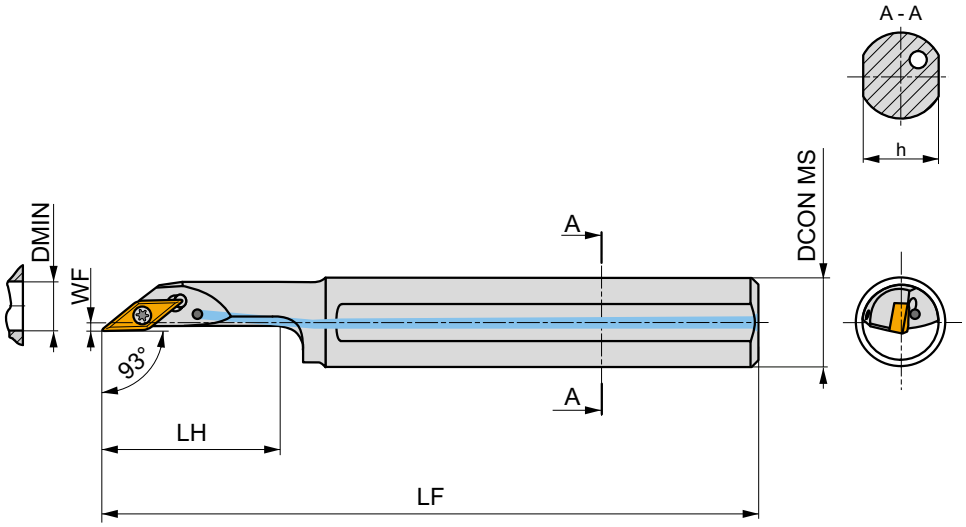
PRAMET

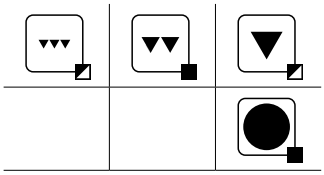
S

Internal Screw Lock Boring Bar with 93° Cutting Angle for VB/VC.. Inserts

Internal Right/Left hand boring bar, through coolant, with 93° cutting angle for screw type VB.. 11 and VC.. 11 inserts. Minimum internal turning diameter Ø25 mm. Suited for face copy turning under 50°. Available with shank size Ø20 and Ø25 mm. Body treated for longer tool life.







	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	H [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]		kg		
R	A20R-SVJBR 11	20	25	2	18	200	40	-5	-5	✓	0.44	GI194	S07
	A25S-SVJBR 11	25	32	3.5	23	250	50	-5	-5	✓	0.82	GI194	S07
L	A20R-SVJBL 11	20	25	2	18	200	40	-5	-5	✓	0.42	GI194	S07
	A25S-SVJBL 11	25	32	3.5	23	250	50	-5	-5	✓	0.82	GI194	S07

GI194	VB.. 1103..	VC.. 1103..

S07	US 2506-T07P	0.9 Nm	M 2.5	6.3	FLAG T07P

SVLC(RL) INT

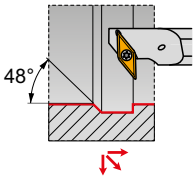
P M K N S H

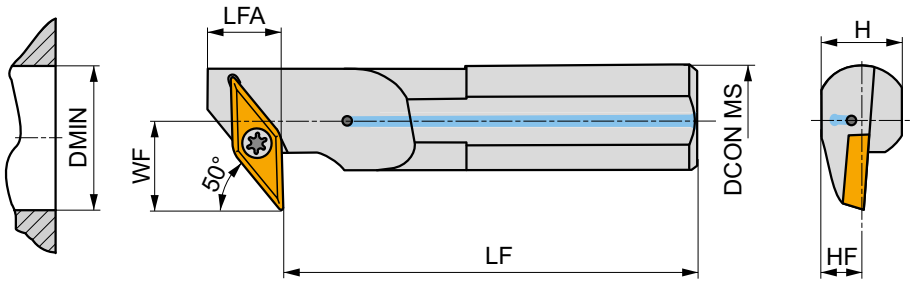
PRAMET

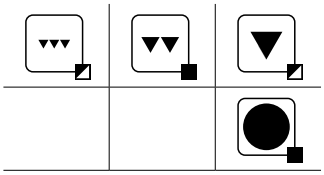
S

Internal Screw Lock Boring Bar with 50° Cutting Angle for VC.. Insert

Internal Right/Left hand boring bar, through coolant, with 50° cutting angle for screw type VC.. 13 inserts. Minimum internal turning diameter Ø27 mm. Suited for a wide range of internal pulling turning operations and copying under 48° . Available with shank size Ø20 up to Ø32 mm. Body treated for longer tool life.







	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	H [mm]	LF [mm]	HF [mm]	LFA [mm]	LAMS [°]	GAMO [°]		kg		
R	**A20S-SVLCR 13-X**	20	27	15	18	250	9	15	-4	-2	✓	0.57	GI211	SV21
	A25T-SVLCR 13-X	25	35	20	24	300	12	18	-2	-2	✓	1.01	GI211	SV22
	A32T-SVLCR 13-X	32	43	25	30	300	15	18	-1	-2	✓	1.75	GI211	SV22
L	**A20S-SVLCL 13-X**	20	27	15	18	250	9	15	-4	-2	✓	0.57	GI211	SV21
	A25T-SVLCL 13-X	25	35	20	24	300	12	18	-2	-2	✓	0.05	GI211	SV22
	A32T-SVLCL 13-X	32	43	25	30	300	15	18	-1	-2	✓	1.75	GI211	SV22

GI211	VC.. 1303..

		Nm						
SV21	5513 020-24	1.5	M 3	8.5	–	–	PT-8002	–
SV22	DVF 0573	1.5	M 3	10.3	DAP 0331	DVT 0332	PT-8002	174.1-870

SVQB(C)(RL) INT

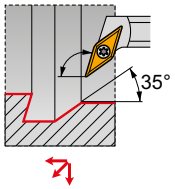
P M K N S H

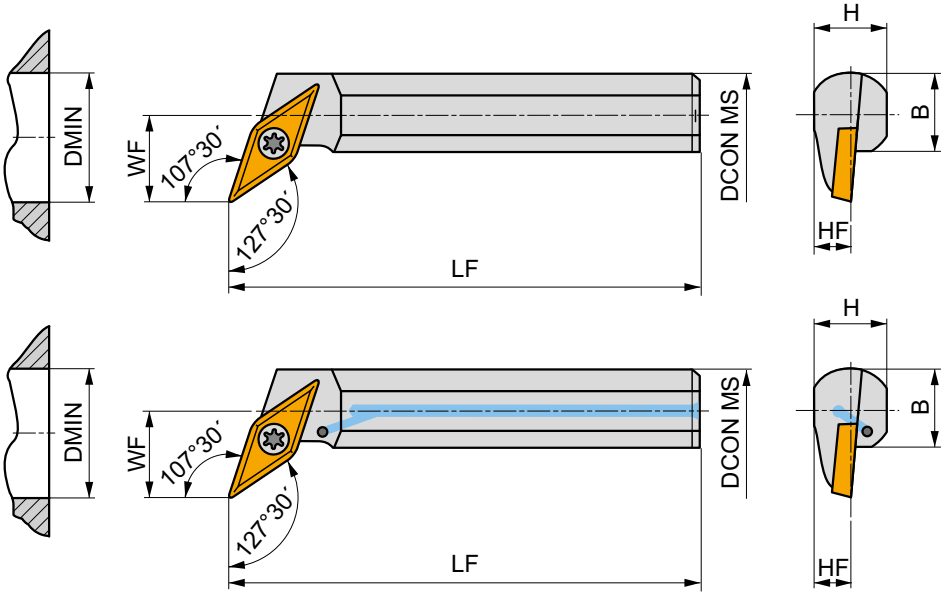
PRAMET

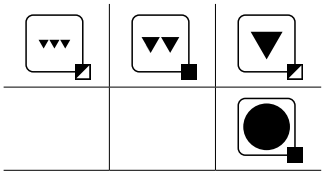
S

Internal Screw Lock Boring Bar with 107.5° Cutting Angle for VB/VC.. Inserts

Internal Right/Left hand boring bar, through coolant available, with 107.5° cutting angle for screw type VB../VC.. 11 and 16 inserts. Minimum internal turning diameter Ø20 mm. Suited for a wide range of internal turning operations. Available with shank size Ø16 up to Ø40 mm.







	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	H [mm]	B [mm]	LF [mm]	LAMS [°]	GAMO [°]		kg		
R	A16R-SVQBR 11	16	20	11	14.5	15	200	-5	0	✓	0.33	GI194	S01
	A20S-SVQBR 11	20	25	13	18	18.5	250	-4	0	✓	0.58	GI194	S01
	A16R-SVQCR 13	16	21	11	15	15	200	-6	0	✓	0.30	GI211	SV21
	A20S-SVQCR 13	20	25	13	18	18.5	250	-4	0	✓	0.12	GI211	SV21
	S25T-SVQCR 16	25	32	17	23	23	300	-7	0	–	1.10	GI017	S08
	S32U-SVQCR 16	32	40	22	30	30	350	-5	0	–	2.07	GI017	S08
	S40V-SVQCR 16-A	40	50	27	38	38	400	-5	0	–	3.80	GI017	SV10
L	A16R-SVQBL 11	16	20	11	14.5	15	200	-5	0	✓	0.33	GI194	S01
	A20S-SVQBL 11	20	25	13	18	18.5	250	-4	0	✓	0.58	GI194	S01
	A16R-SVQCL 13	16	21	11	15	15	200	-6	0	✓	0.29	GI211	SV21
	A20S-SVQCL 13	20	25	13	18	18.5	250	-4	0	✓	0.54	GI211	SV21
	S25T-SVQCL 16	25	32	17	23	23	300	-7	0	–	1.09	GI017	S08
	S32U-SVQCL 16	32	40	22	30	30	350	-5	0	–	2.07	GI017	S08
	S40V-SVQCL 16-A	40	50	27	38	38	400	-5	0	–	4.10	GI017	SV10

GI017	VB.. 1604..	VC.. 1604..
GI194	VB.. 1103..	VC.. 1103..
GI211	–	VC.. 1303..

		Nm						
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
S08	US 3510-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–
SV10	US 3512-T15P	3.0	M 3.5	12.6	SVN 160304	MS 3510	FLAG T15P	HXK 3.5
SV21	5513 020-24	1.5	M 3	8.5	–	–	PT-8002	–

SVUB(C)(RL) INT

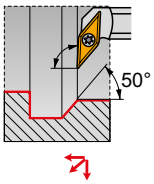
P M K N S H

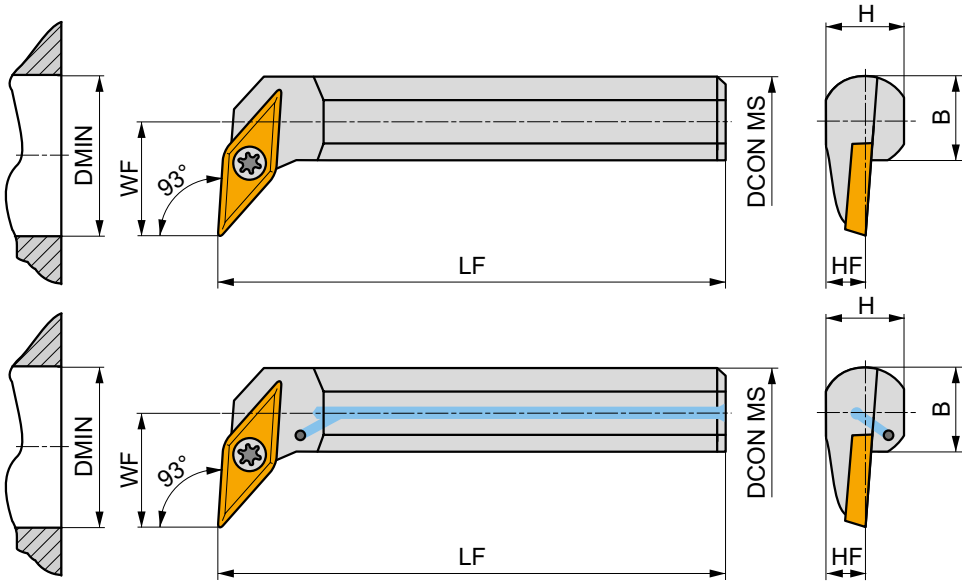
PRAMET

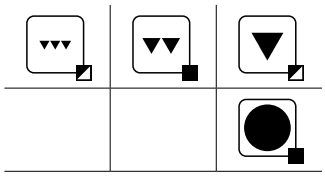
S

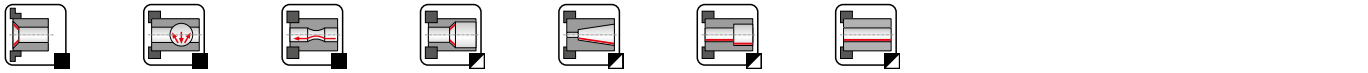
Internal Screw Lock Boring Bar with 93° Cutting Angle for VB/VC.. Inserts

Internal Right/Left hand boring bar, through coolant available, with 93° cutting angle for screw type VB../VC.. 11 and 16 inserts. Minimum internal turning diameter Ø20 mm. For a wide range of internal turning operations and copying under 50°. Ø16 up to Ø40 mm shanks available. Body treated for longer tool life.









	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	H [mm]	B [mm]	LF [mm]	LAMS [°]	GAMO [°]		kg		
R	A16R-SVUBR 11	16	20	11	14.5	15	200	-5	0	✓	0.34	GI194	S01
	A20S-SVUBR 11	20	25	13	18	18.8	250	-4	0	✓	0.58	GI194	S01
	A20S-SVUCR 13	20	25	13	19	18.5	250	-4	2	✓	0.40	GI211	SV21
	A25T-SVUCR 13	25	32	17	24	23	300	-2	2	✓	0.96	GI211	SV22
	A32T-SVUCR 13	32	40	22	30	30	300	-1	2	✓	1.70	GI211	SV22
	S25T-SVUCR 16	25	32	17	23	23	300	-7	0	–	1.10	GI017	S08
	S32U-SVUCR 16	32	40	22	30	30	350	-5	0	–	2.10	GI017	S08
	S40V-SVUCR 16-A	40	50	27	38	38	400	-5	0	–	4.10	GI017	SV10
L	A16R-SVUBL 11	16	20	11	14.5	15	200	-5	0	✓	0.34	GI194	S01
	A20S-SVUBL 11	20	25	13	18	18.5	250	-4	0	✓	0.58	GI194	S01
	A20S-SVUCL 13	20	25	13	19	18.5	250	-4	2	✓	0.32	GI211	SV21
	A25T-SVUCL 13	25	32	17	24	23	300	-2	2	✓	0.96	GI211	SV22
	A32T-SVUCL 13	32	40	22	30	30	300	-1	2	✓	1.70	GI211	SV22
	S25T-SVUCL 16	25	32	17	23	23	300	-7	0	–	1.10	GI017	S08
	S32U-SVUCL 16	32	40	22	30	30	350	-5	0	–	2.10	GI017	S08
	S40V-SVUCL 16-A	40	50	27	38	38	400	-5	0	–	4.10	GI017	SV10

GI017	VB.. 1604..	VC.. 1604..
GI194	VB.. 1103..	VC.. 1103..
GI211	–	VC.. 1303..

		Nm						
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
S08	US 3510-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–
SV10	US 3512-T15P	3.0	M 3.5	12.6	SVN 160304	MS 3510	FLAG T15P	HXK 3.5
SV21	5513 020-24	1.5	M 3	8.5	–	–	PT-8002	–
SV22	DVF 0573	1.5	M 3	10.3	DAP 0331	DVT 0332	PT-8002	174.1-870

SVXC(RL) INT

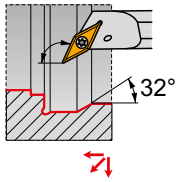
P M K N S H

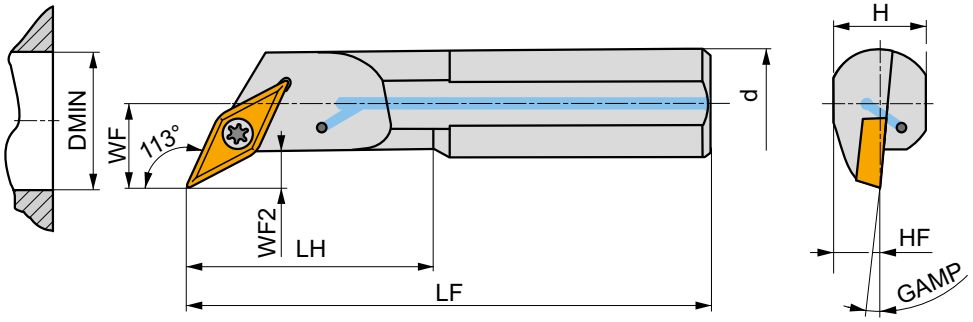
PRAMET

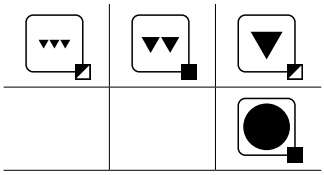
S

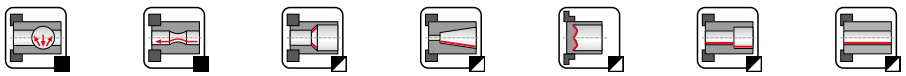
Internal Screw Lock Boring Bar with 113° Cutting Angle for VC.. Insert

Internal Right/Left hand boring bar, through coolant, with 113° cutting angle for screw type VC.. 07 inserts. Minimum internal turning diameter Ø12.5 mm. Suited for a wide range of internal turning operations and copying under 32° . Available with shank size Ø10 up to Ø16 mm. Body treated for longer tool life.









	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	H [mm]	LF [mm]	HF [mm]	LH [mm]	WF2 [mm]	GAMP [°]		kg		
R	A10H-SVXCR 07	10	12.5	7	9	100	4.5	22	3	-10	✓	0.06	GI234	SV23
	A12K-SVXCR 07	12	15.5	9	11	125	5.5	28	3	-8	✓	0.11	GI234	SV23
	A16M-SVXCR 07	16	17.5	11	15	150	7.5	36	3	-6	✓	0.19	GI234	SV23
L	A10H-SVXCL 07	10	12.5	7	9	100	4.5	22	3	-10	✓	0.06	GI234	SV23
	A12K-SVXCL 07	12	15.5	9	11	125	5.5	28	3	-8	✓	0.11	GI234	SV23
	A16M-SVXCL 07	16	17.5	11	15	150	7.5	36	3	-6	✓	0.20	GI234	SV23

GI234	VC.. 0702..

SV23	DVF 3584	0.6	M 2	5.5	DMD 1650

SVXC(RL)-E INT

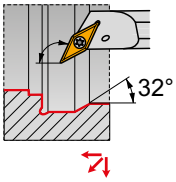
P M K N S H

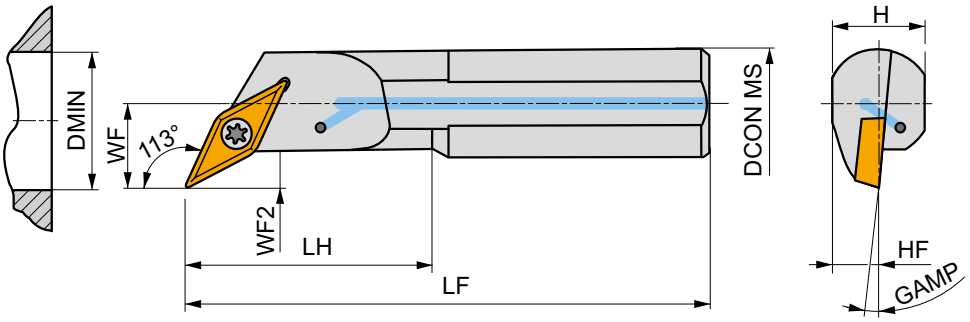
PRAMET

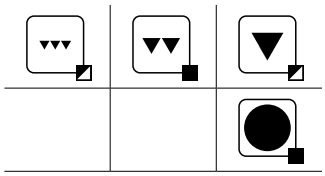
S

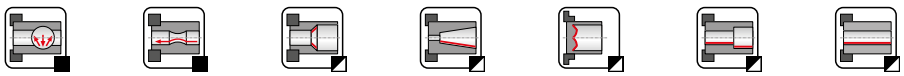
Internal Carbide Screw Lock Boring Bar, 113° Cutting Angle for VC.. Insert

Internal Right/Left hand carbide boring bar, through coolant, with 113° cutting angle for screw type VC.. 07 inserts. Minimum internal turning diameter Ø12.5 mm. Suited for a wide range of internal turning operations and copying under 32° . Available with shank size Ø10 up to Ø16 mm. For tool overhang >3xD.









	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	H [mm]	HF [mm]	LF [mm]	LH [mm]	WF2 [mm]	GAMP [°]		kg		
R	**E10H-SVXCR 07**	10	12.5	7	9	4.5	100	22	3	-10	✓	0.10	GI234	SV23
	E12K-SVXCR 07	12	15.5	9	11	5.5	125	28	3	-8	✓	0.19	GI234	SV23
	E16M-SVXCR 07	16	17.5	11	15	7.5	150	36	3	-6	✓	0.33	GI234	SV23
L	**E10H-SVXCL 07**	10	12.5	7	9	4.5	100	22	3	-10	✓	0.10	GI234	SV23
	E12K-SVXCL 07	12	15.5	9	11	5.5	125	28	3	-8	✓	0.19	GI234	SV23
	E16M-SVXCL 07	16	17.5	11	15	7.5	150	36	3	-6	✓	0.33	GI234	SV23

GI234	VC.. 0702..

		Nm			
SV23	DVF 3584	0.6	M 2	5.5	DMD 1650

C.-SVQB(RL) INT

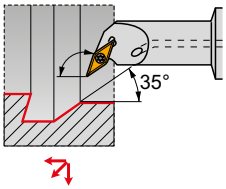
P M K N S H

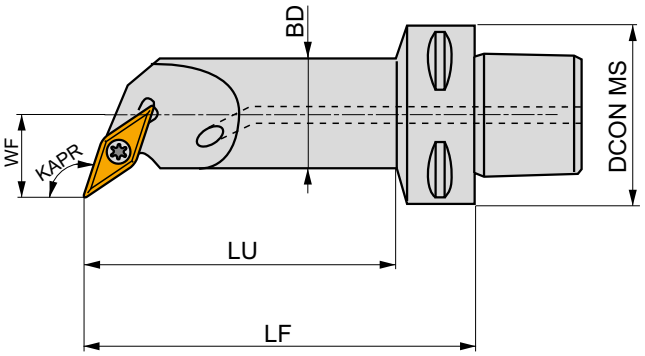
PRAMET

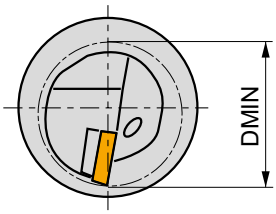
S

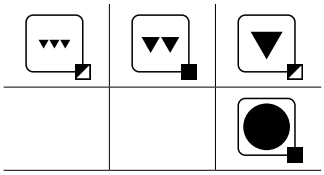
Int. PSC Quick Change Tool, Screw Lock, 107.5° Cutting Angle, VB/VC.. Inserts

Internal Right/Left hand tool, through coolant, with 107.5° cutting angle for screw type VB.. 16 or VC.. 16 inserts. Minimum internal turning diameter Ø33 mm. Suited for a wide range of internal turning operations. PSC shank (Polygon Shank Coupling) size C4 and C5 with choice of lengths. Body treated for longer tool life.









	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	LF [mm]	LU [mm]	BD [mm]	KAPR [°]	LAMS [°]	GAMO [°]		kg		
R	C4-SVQBR-18090-16	40	33	18	90	68	25	107.5	-7.2	0	✓	0.48	GI017	SV16
	C5-SVQBR-18090-16	50	33	18	90	67	25	107.5	-7.2	0	✓	0.67	GI017	SV16
L	C4-SVQBL-18090-16	40	33	18	90	68	25	107.5	-7.2	0	✓	0.48	GI017	SV16
	C5-SVQBL-18090-16	50	33	18	90	67	25	107.5	-7.2	0	✓	0.68	GI017	SV16

GI017	VB.. 1604..	VC.. 1604..

		Nm			
SV16	US 2010-T15P	3.0	M 3.5	10.1	FLAG T15P/3,5

WC

02/ 06/ 08/ 16

CARBIDE INSERTS

WCGT

212

WCGX

213

WCMT

213

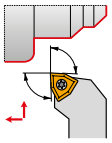
MATCH THE RIGHT SIZE (example)

Insert	Tool Holder
WCGT 020102E-FF2	A0508H-SWUCR 02

ISO TURNING – EXTERNAL

SWLC(RL) EXT

95°



WC..

06
08

16×16
25×25

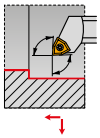
215

212 – 214

ISO TURNING – INTERNAL

SWLC(RL) INT

95°



WC..

06
08

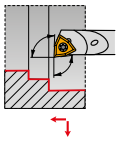
ØDmin 25 / 40

216

212 – 214

SWUC(RL) INT

93°



WC..

02

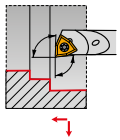
ØDmin 5,8 / 7,8

217

212 – 214

SWUC(RL)-E INT

93°



WC..

02

ØDmin 5,8 / 7,8

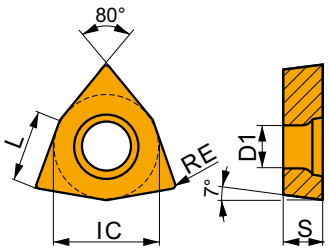
218

212 – 214

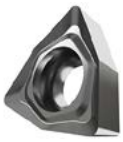
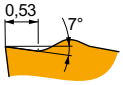
WCGT

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
0201	3.970	2.20	2.70	1.59
06T3	9.525	4.40	6.50	3.97
0804	12.700	5.50	8.70	4.76



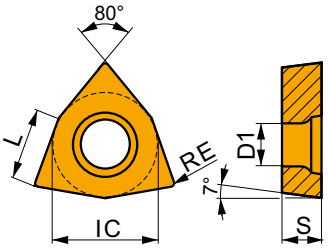
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
																				
			F																	
AL geometry with highly positive design for fine-finish to rough machining, and continuous to slightly interrupted cuts.																				
WCGT 06T302F-AL	**HF7**	0.2	–	–	–	–	–	–	–	–	–	■ 450	0.12	1.0	–	–	–	–	–	–
WCGT 06T304F-AL	**HF7**	0.4	–	–	–	–	–	–	–	–	–	■ 360	0.24	1.0	–	–	–	–	–	–
	T0315	0.4	–	–	–	–	–	–	–	–	–	■ 525	0.24	1.0	–	–	–	–	–	–
WCGT 06T308F-AL	**HF7**	0.8	–	–	–	–	–	–	–	–	–	■ 315	0.48	1.5	–	–	–	–	–	–
WCGT 080412F-AL	**HF7**	1.2	–	–	–	–	–	–	–	–	–	■ 255	0.72	2.4	–	–	–	–	–	–
	T0315	1.2	–	–	–	–	–	–	–	–	–	■ 375	0.72	2.4	–	–	–	–	–	–
																				
			U E																	
FF2 geometry with positive design for fine-finish to finish machining, and continuous to slightly interrupted cuts.																				
WCGT 020102E-FF2	**HF7**	0.2	–	–	–	–	–	–	■ 210	0.05	0.8	–	–	–	–	–	–	–	–	–
	T8330	0.2	■ 205	0.05	0.8	–	–	–	■ 190	0.05	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.2	■ 280	0.05	0.8	–	–	–	◪ 230	0.05	0.8	–	–	–	–	–	–	–	–	–
	TT010	0.2	■ 345	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
WCGT 020104E-FF2	**HF7**	0.4	–	–	–	–	–	–	■ 155	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8330	0.4	■ 170	0.12	0.8	–	–	–	■ 160	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	■ 205	0.12	0.8	–	–	–	◪ 170	0.12	0.8	–	–	–	–	–	–	–	–	–
	TT010	0.4	■ 350	0.06	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

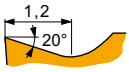
WCGX

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
0201	3.970	2.20	2.70	1.59



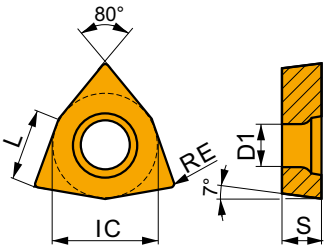
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			JZ geometry with left-handed design for fine-finish machining, and continuous cuts.																	
WCGX 020102FL-JZ	**TT010**	0.2	■ 330	0.06	0.5	◪ 195	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–

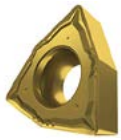
WCMT

PRAMET

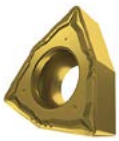
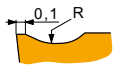
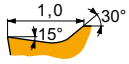
	IC [mm]	D1 [mm]	L [mm]	S [mm]
06T3	9.525	4.40	6.50	3.97
0804	12.700	5.50	8.70	4.76



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			FM geometry for finish to semi-rough machining, and continuous to slightly interrupted cuts.																	
WCMT 06T304E-FM	**T7325**	0.4	◪ 195	0.15	1.2	■ 150	0.15	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.4	◪ 190	0.15	1.2	■ 145	0.15	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	◪ 180	0.15	1.2	■ 105	0.14	1.2	◪ 170	0.15	1.2	◪ 540	0.18	1.2	–	–	–	–	–	–
	T8330	0.4	■ 170	0.15	1.2	■ 100	0.14	1.2	◪ 160	0.15	1.2	◪ 510	0.18	1.2	–	–	–	–	–	–
	T8430	0.4	■ 200	0.15	1.2	■ 110	0.14	1.2	◪ 165	0.15	1.2	◪ 555	0.18	1.2	–	–	–	–	–	–
	T9315	0.4	■ 275	0.15	1.2	–	–	–	◪ 260	0.15	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 245	0.15	1.2	■ 145	0.15	1.2	◪ 230	0.15	1.2	–	–	–	–	–	–	–	–	–
WCMT 06T308E-FM	**T7325**	0.8	◪ 215	0.20	1.2	■ 165	0.18	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.8	◪ 205	0.20	1.2	■ 155	0.18	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	◪ 195	0.20	1.2	■ 115	0.18	1.2	◪ 185	0.20	1.2	◪ 585	0.24	1.2	–	–	–	–	–	–
	T8330	0.8	■ 185	0.20	1.2	■ 110	0.18	1.2	◪ 175	0.20	1.2	◪ 555	0.24	1.2	–	–	–	–	–	–
	T8430	0.8	■ 210	0.20	1.2	■ 115	0.18	1.2	◪ 175	0.20	1.2	◪ 585	0.24	1.2	–	–	–	–	–	–
	T9315	0.8	■ 290	0.20	1.2	–	–	–	◪ 275	0.20	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 260	0.20	1.2	■ 155	0.18	1.2	◪ 245	0.20	1.2	–	–	–	–	–	–	–	–	–

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
			FM geometry for finish to semi-rough machining, and continuous to slightly interrupted cuts.																	
WCMT 080404E-FM	**T7325**	0.4	◪ 190	0.15	1.7	■ 145	0.15	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	◪ 170	0.15	1.7	■ 100	0.14	1.7	◪ 160	0.15	1.7	◪ 510	0.18	1.7	–	–	–	–	–	–
	T8330	0.4	■ 165	0.15	1.7	■ 95	0.14	1.7	◪ 155	0.15	1.7	◪ 495	0.18	1.7	–	–	–	–	–	–
	T8430	0.4	■ 195	0.15	1.7	■ 105	0.14	1.7	◪ 160	0.15	1.7	◪ 540	0.18	1.7	–	–	–	–	–	–
	T9315	0.4	■ 265	0.15	1.7	–	–	–	◪ 250	0.15	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 240	0.15	1.7	■ 140	0.15	1.7	◪ 225	0.15	1.7	–	–	–	–	–	–	–	–	–
WCMT 080408E-FM	**T7325**	0.8	◪ 205	0.20	1.7	■ 155	0.18	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.8	◪ 200	0.20	1.7	■ 155	0.18	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	◪ 190	0.20	1.7	■ 110	0.18	1.7	◪ 180	0.20	1.7	◪ 570	0.24	1.7	–	–	–	–	–	–
	T8330	0.8	■ 180	0.20	1.7	■ 105	0.18	1.7	◪ 170	0.20	1.7	◪ 540	0.24	1.7	–	–	–	–	–	–
	T8430	0.8	■ 205	0.20	1.7	■ 110	0.18	1.7	◪ 170	0.20	1.7	◪ 570	0.24	1.7	–	–	–	–	–	–
	T9315	0.8	■ 280	0.20	1.7	–	–	–	◪ 265	0.20	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 250	0.20	1.7	■ 150	0.18	1.7	◪ 235	0.20	1.7	–	–	–	–	–	–	–	–	–
WCMT 080412E-FM	**T8330**	1.2	■ 175	0.27	1.7	■ 105	0.24	1.7	◪ 165	0.27	1.7	◪ 525	0.32	1.7	–	–	–	–	–	–
	T8430	1.2	■ 190	0.27	1.7	■ 105	0.24	1.7	◪ 155	0.27	1.7	◪ 525	0.32	1.7	–	–	–	–	–	–
	T9325	1.2	■ 235	0.27	1.7	■ 140	0.24	1.7	◪ 220	0.27	1.7	–	–	–	–	–	–	–	–	–
	 I.C. R 9,525 1,5 12,7 2,5																			
			RF geometry for semi-rough to rough machining, and continuous to interrupted cuts.																	
WCMT 06T308E-RF	**T7335**	0.8	◪ 165	0.20	1.5	◪ 125	0.18	1.5	–	–	–	–	–	–	–	–	–	–	–	–
WCMT 080412E-RF	**T7335**	1.2	◪ 160	0.22	2.2	◪ 120	0.22	2.2	–	–	–	–	–	–	–	–	–	–	–	–
																				
			UR geometry for fine to finish machining, and continuous to slightly interrupted cuts.																	
WCMT 06T308E-UR	**T7325**	0.8	◪ 185	0.20	1.2	◪ 140	0.18	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T9315	0.8	■ 250	0.20	1.2	–	–	–	◪ 235	0.20	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 225	0.20	1.2	◪ 135	0.18	1.2	◪ 210	0.20	1.2	–	–	–	–	–	–	–	–	–

SWLC(RL) EXT

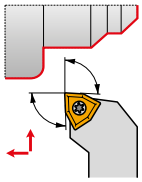
P M K N S H

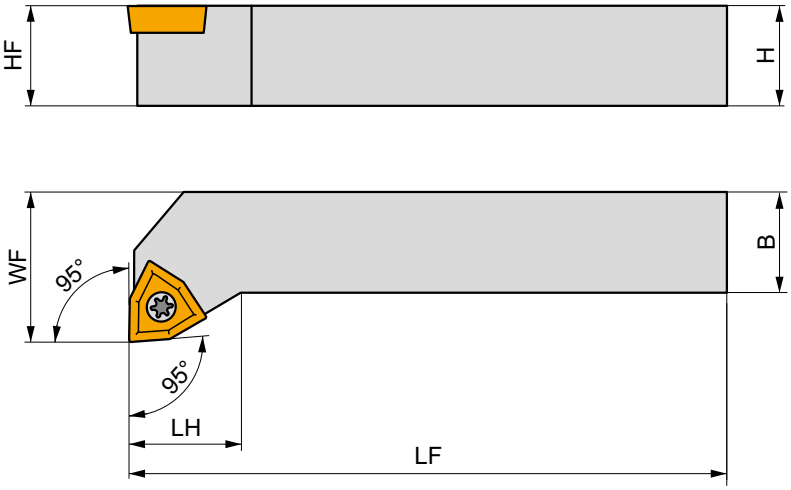
PRAMET

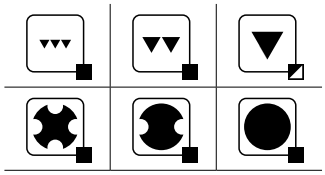
S

External Screw Lock Tool Holder with 95° Cutting Angle for WC.. Insert

External Right/Left hand tool holder for screw type positive screw type WC.. 06 or 08 inserts. Suited for face and longitudinal turning with shoulder, taper and chamfer turning. Available with shank size 16x16 up to 25x25 mm. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	SWLCR 1616 H 06	16	16	16	20	100	15	0	0	0.24	GI055	S04
	SWLCR 2020 K 06	20	20	20	25	125	15	0	0	0.40	GI055	S04
	SWLCR 2525 M 08	25	25	25	32	150	20	0	0	0.77	GI049	S09
L	SWLCL 1616 H 06	16	16	16	20	100	15	0	0	0.23	GI055	S04
	SWLCL 2020 K 06	20	20	20	25	125	15	0	0	0.40	GI055	S04
	SWLCL 2525 M 08	25	25	25	32	150	20	0	0	0.75	GI049	S09

GI049	WC.. 0804..
GI055	WC.. 06T3..

		Nm			
S04	US 3510-T15P	3.0	M 3.5	10.6	FLAG T15P
S09	US 4512-T15P	5.0	M 4.5	12.2	FLAG T15P

SWLC(RL) INT

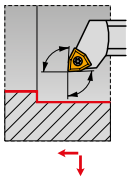
P M K N S H

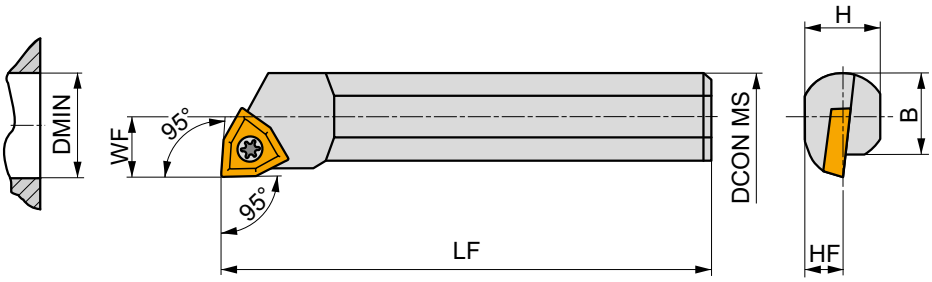
PRAMET

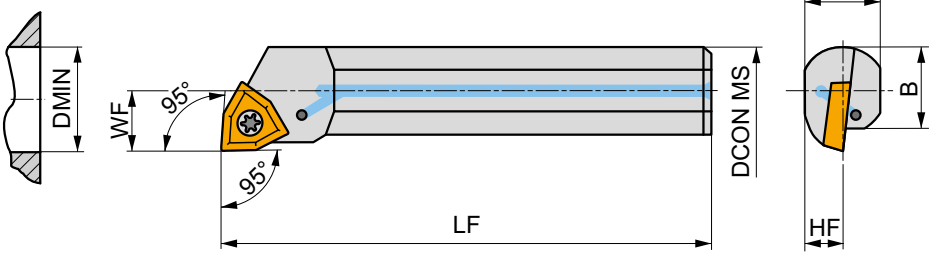
S

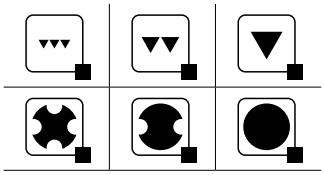
Internal Screw Lock Boring Bar with 95° Cutting Angle for WC.. Insert

Internal Right/Left hand boring bar, through coolant available, 95° cutting angle for screw type WC.. 06 and 08 inserts. Minimum internal turning diameter Ø25 mm. For internal taper and longitudinal turning with shoulder and chamfer turning. Available with shank size Ø20 to Ø32mm. Body treated for longer tool life.









	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	H [mm]	B [mm]	LF [mm]	LAMS [°]	GAMO [°]		kg		
R	A20Q-SWLCR 06	20	25	13	18	18.5	180	-7	0	✓	0.37	GI055	S04
	S20S-SWLCR 06	20	25	13	18	18.5	250	-7	0	–	0.62	GI055	S04
	A25R-SWLCR 06	25	32	17	23	23	200	-7	0	✓	0.70	GI055	S04
	S25T-SWLCR 06	25	32	17	23	23	300	-7	0	–	1.15	GI055	S04
	A25R-SWLCR 08	25	32	17	23	23	200	-7	0	✓	0.70	GI049	S04
	A32S-SWLCR 08	32	40	22	30	30	250	-5	0	✓	1.32	GI049	S09
	S32U-SWLCR 08	32	40	22	30	30	350	-5	0	–	2.05	GI049	S09
L	A20Q-SWLCL 06	20	25	13	18	18.5	180	-7	0	✓	0.00	GI055	S04
	S20S-SWLCL 06	20	25	13	18	18.5	250	-7	0	–	0.60	GI055	S04
	A25R-SWLCL 06	25	32	17	23	23	200	-7	0	✓	0.70	GI055	S04
	S25T-SWLCL 06	25	32	17	23	23	300	-7	0	–	1.15	GI055	S04
	A25R-SWLCL 08	25	32	17	23	23	200	-7	0	✓	0.70	GI049	S04
	A32S-SWLCL 08	32	40	22	30	30	250	-5	0	✓	1.32	GI049	S09
	S32U-SWLCL 08	32	40	22	30	30	350	-5	0	–	4.10	GI049	S09

GI049	WC.. 0804..
GI055	WC.. 06T3..

		Nm			
S04	US 3510-T15P	3.0	M 3.5	10.6	FLAG T15P
S09	US 4512-T15P	5.0	M 4.5	12.2	FLAG T15P

SWUC(RL) INT

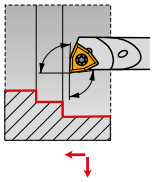
P M K N S H

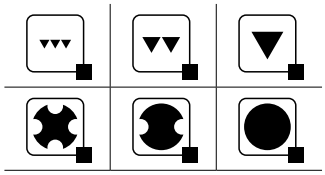
PRAMET

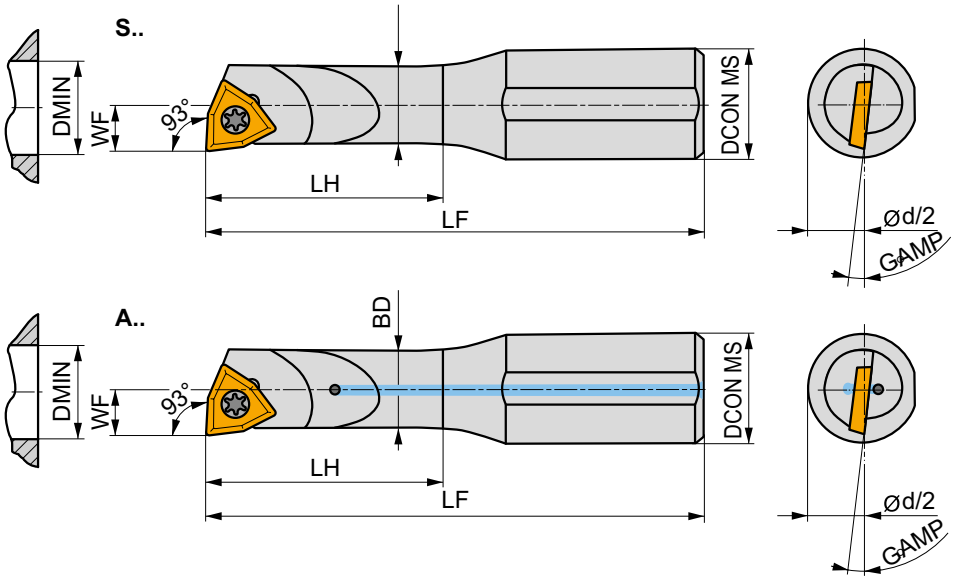
S

Internal Screw Lock Boring Bar with 93° Cutting Angle for WC.. Insert

Internal Right/Left hand boring bar, through coolant available, 93° cutting angle for screw type WC.. 0201 inserts. Minimum internal turning diameter Ø5.8 mm. Suited for internal taper and longitudinal turning with shoulder and chamfer turning. Available with shank size Ø8 mm only. Body treated for longer tool life.







	Product	DCON MS [mm]	DMIN [mm]	BD [mm]	WF [mm]	LF [mm]	LH [mm]	GAMP [°]		kg		
R	A0508H-SWUCR 02	8	5.8	5	2.9	100	18	-17	✓	0.09	GI221	SW21
	S0508H-SWUCR 02	8	5.8	5	2.9	100	18	-17	–	0.04	GI221	SW21
	A0608H-SWUCR 02	8	7.8	6	3.9	100	24	-12	✓	0.04	GI221	SW21
	S0608H-SWUCR 02	8	7.8	6	3.9	100	24	-12	–	0.04	GI221	SW21
L	A0508H-SWUCL 02	8	5.8	5	2.9	100	18	-17	✓	0.04	GI221	SW21
	S0508H-SWUCL 02	8	5.8	5	2.9	100	18	-17	–	0.04	GI221	SW21
	A0608H-SWUCL 02	8	7.8	6	3.9	100	24	-12	✓	0.04	GI221	SW21
	S0608H-SWUCL 02	8	7.8	6	3.9	100	24	-12	–	0.04	GI221	SW21

GI221	WC.. 0201..

		Nm			
SW21	T20.037	0.6	M 2	3.7	DMD 1650

SWUC(RL)-E INT

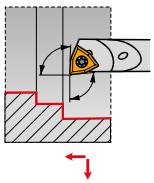
P M K N S H

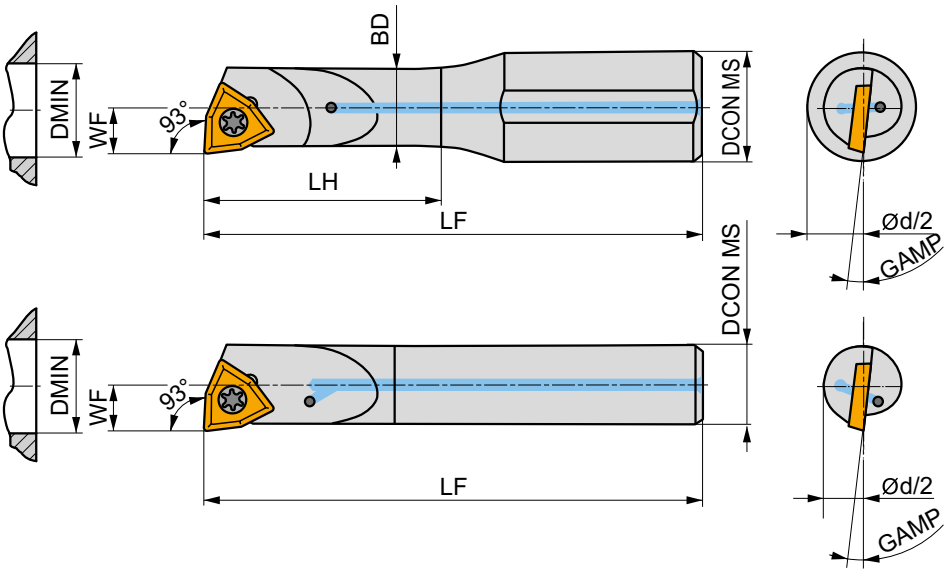
PRAMET

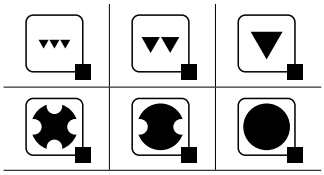
S

Internal carbide Screw Lock Boring Bar with 93° Cutting Angle for WC.. Insert

Internal Right/Left hand carbide boring bar, through coolant, with 93° cutting angle for screw type WC.. 0201 inserts. Minimum internal turning diameter Ø5.8 mm. Suited for internal taper and longitudinal turning with shoulder and chamfer turning. Available with shank size Ø5 up to Ø8 mm. For tool overhang >3xD.







	Product	DCON MS [mm]	DMIN [mm]	BD [mm]	WF [mm]	LF [mm]	LH [mm]	GAMP [°]		kg		
R	E0508H-SWUCR 02	8	5.8	5	2.9	100	24	-17	✓	0.06	GI221	SW21
	E05F-SWUCR 02	5	5.8	–	2.9	85	–	-17	✓	0.03	GI221	SW21
	E0608H-SWUCR 02	8	7.8	6	3.9	100	32	-12	✓	0.06	GI221	SW21
	E06G-SWUCR 02	6	7.8	–	3.9	95	–	-12	✓	0.04	GI221	SW21
L	E0508H-SWUCL 02	8	5.8	5	2.9	100	24	-17	✓	0.07	GI221	SW21
	E05F-SWUCL 02	5	5.8	–	2.9	85	–	-17	✓	0.03	GI221	SW21
	E0608H-SWUCL 02	8	7.8	6	3.9	100	32	-12	✓	0.06	GI221	SW21
	E06G-SWUCL 02	6	7.8	–	3.9	95	–	-12	✓	0.04	GI221	SW21

GI221	WC.. 0201..

		Nm			
SW21	T20.037	0.6	M 2	3.7	DMD 1650

NEGATIVE INSERTS

CN

09/ 12/ 16/ 19/ 25

CARBIDE INSERTS

CNGG

222

CNMA

222

CNMG

223

CNMM

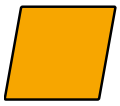
234

CER AND CBN INSERTS

CNGA CER

238

CNGN CER



238

CNGA CBN

239

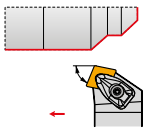
MATCH THE RIGHT SIZE (example)	
Insert	**Tool Holder**
CNMM 120412E-OR	DCBNR 2525 M 12

ISO TURNING – EXTERNAL

DCBN(RL) EXT

75°

CN..: 12, 16, 19



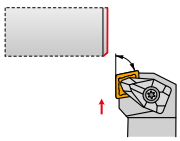
20×20 / 40×40

240 | 222 – 239

DCKN(RL) EXT

75°

CN..: 12, 16



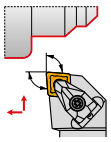
20×20 / 32×32

242 | 222 – 239

DCLN(RL) EXT

95°

CN..: 09, 12, 16, 19



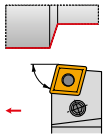
16×16 / 40×40

243 | 222 – 239

PCBN(RL) EXT

75°

CN..: 12, 16, 19, 25



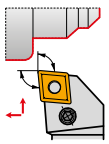
20×20 / 50×50

245 | 222 – 239

PCLN(RL) EXT

95°

CN..: 12, 16, 19, 25



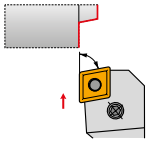
20×20 / 50×50

247 | 222 – 239

PCKN(RL) EXT

75°

CN..: 12, 16, 19



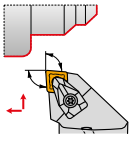
20×20 / 40×40

246 | 222 – 239

C.-DCLN(RL) EXT

95°

CN..: 12, 16, 19



C3 / C8

249 | 222 – 239

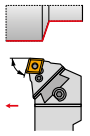
CN

09/ 12/ 16/ 19/ 25

ISO TURNING – HEAVY ROUGHING – EXTERNAL

KHP-CBNR + DKH(RL)

75°



40×50
60×80

CN..

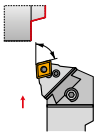
25

251, 253

222 – 239

KHP-CBNL + DKH(RL)

75°



40×50
60×80

CN..

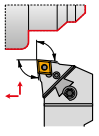
25

251, 253

222 – 239

KHP-CLNR/L + DKH(RL)

95°



40×50
60×80

CN..

19
25

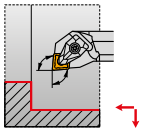
252, 253

222 – 239

ISO TURNING – INTERNAL

DCLN(RL) INT

95°



32
50

CN..

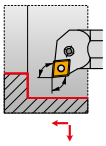
09
12

254

222 – 239

PCLN(RL) INT

95°



20
80

CN..

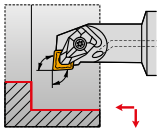
09
12
16
19

255

222 – 239

C.-DCLN(RL) INT

95°



25
50

CN..

09
12
16

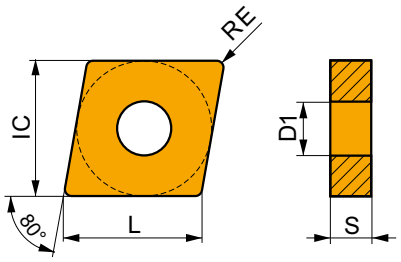
257

222 – 239

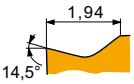
CNGG

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
1204	12.700	5.16	12.90	4.76



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

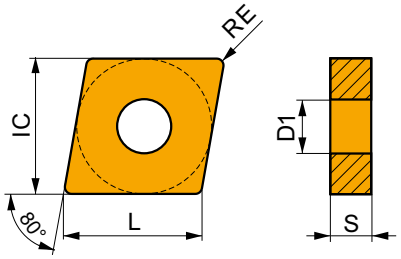
Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc	M f	M ap	K vc	K f	K ap	N vc	N f	N ap	S vc	S f	S ap	H vc	H f	H ap
																				
CNGG 120402E-SF	**H07**	0.2	–	–	–	105	0.09	1.0	165	0.10	1.0	525	0.12	1.0	50	0.08	0.8	–	–	–
	T6310	0.2	195	0.10	1.0	140	0.09	1.0	155	0.10	1.0	585	0.12	1.0	55	0.08	0.8	35	0.15	1.0
	T8315	0.2	205	0.10	1.0	120	0.09	1.0	190	0.10	1.0	615	0.12	1.0	50	0.08	0.8	40	0.15	1.0
	T8330	0.2	195	0.10	1.0	115	0.09	1.0	185	0.10	1.0	585	0.12	1.0	45	0.08	0.8	35	0.15	1.0
	T8430	0.2	240	0.10	1.0	130	0.09	1.0	195	0.10	1.0	660	0.12	1.0	50	0.08	0.8	40	0.15	1.0

SF geometry with positive design for fine-finish machining of thin walls in continuous cuts.

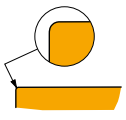
CNMA

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
1204	12.700	5.16	12.90	4.76
1606	15.875	6.35	16.10	6.35
1906	19.050	7.94	19.30	6.35

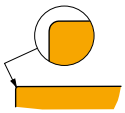
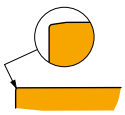


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc	M f	M ap	K vc	K f	K ap	N vc	N f	N ap	S vc	S f	S ap	H vc	H f	H ap
																				
CNMA 120404	**T5305**	0.4	–	–	–	–	–	–	235	0.10	4.0	–	–	–	–	–	–	50	0.15	1.0
	T5315	0.4	–	–	–	–	–	–	200	0.10	4.0	–	–	–	–	–	–	40	0.15	1.0
CNMA 120408	**T5305**	0.8	–	–	–	–	–	–	220	0.20	4.0	–	–	–	–	–	–	45	0.15	1.0
	T5315	0.8	–	–	–	–	–	–	190	0.20	4.0	–	–	–	–	–	–	40	0.15	1.0
	T6310	0.8	–	–	–	–	–	–	100	0.20	4.0	–	–	–	–	–	–	25	0.15	1.0
CNMA 120412	**T5305**	1.2	–	–	–	–	–	–	195	0.30	4.0	–	–	–	–	–	–	40	0.15	1.0
	T5315	1.2	–	–	–	–	–	–	180	0.30	4.0	–	–	–	–	–	–	35	0.15	1.0
	T6310	1.2	–	–	–	–	–	–	95	0.30	4.0	–	–	–	–	–	–	20	0.15	1.0
CNMA 120416	**T5305**	1.6	–	–	–	–	–	–	190	0.40	4.0	–	–	–	–	–	–	40	0.15	1.0
	T5315	1.6	–	–	–	–	–	–	170	0.40	4.0	–	–	–	–	–	–	35	0.15	1.0

For fine-finish to semi-rough machining, and continuous to slightly interrupted cuts.

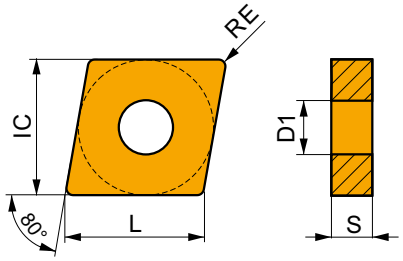
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
			For fine-finish to semi-rough machining, and continuous to slightly interrupted cuts.																	
CNMA 160612	**T5305**	1.2	–	–	–	–	–	–	190	0.30	5.0	–	–	–	–	–	–	40	0.15	1.0
	T5315	1.2	–	–	–	–	–	–	175	0.30	5.0	–	–	–	–	–	–	35	0.15	1.0
	T6310	1.2	–	–	–	–	–	–	90	0.30	5.0	–	–	–	–	–	–	20	0.15	1.0
CNMA 160616	**T5305**	1.6	–	–	–	–	–	–	185	0.40	5.0	–	–	–	–	–	–	35	0.15	1.0
	T5315	1.6	–	–	–	–	–	–	165	0.40	5.0	–	–	–	–	–	–	35	0.15	1.0
CNMA 190612	**T5305**	1.2	–	–	–	–	–	–	190	0.30	6.0	–	–	–	–	–	–	40	0.15	1.0
	T5315	1.2	–	–	–	–	–	–	170	0.30	6.0	–	–	–	–	–	–	35	0.15	1.0
	T6310	1.2	–	–	–	–	–	–	85	0.30	6.0	–	–	–	–	–	–	20	0.15	1.0
CNMA 190616	**T5305**	1.6	–	–	–	–	–	–	180	0.40	6.0	–	–	–	–	–	–	35	0.15	1.0
	T5315	1.6	–	–	–	–	–	–	160	0.40	6.0	–	–	–	–	–	–	30	0.15	1.0
																				
			For fine-finish to semi-rough machining, and continuous to slightly interrupted cuts.																	
CNMA 120408S	**T5305**	0.8	–	–	–	–	–	–	220	0.20	4.0	–	–	–	–	–	–	45	0.15	1.0
CNMA 120412S	**T5305**	1.2	–	–	–	–	–	–	190	0.40	4.0	–	–	–	–	–	–	40	0.15	1.0
CNMA 160612S	**T5305**	1.2	–	–	–	–	–	–	190	0.30	5.0	–	–	–	–	–	–	40	0.15	1.0
CNMA 190616S	**T5305**	1.6	–	–	–	–	–	–	180	0.40	6.0	–	–	–	–	–	–	35	0.15	1.0

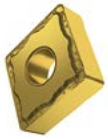
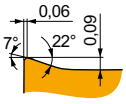
CNMG

PRAMET

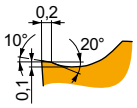
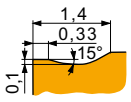
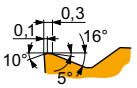
	IC	D1	L	S
	[mm]	[mm]	[mm]	[mm]
0903	9.525	3.81	9.70	3.18
1204	12.700	5.16	12.90	4.76
1606	15.880	6.35	16.10	6.35
1906	19.050	7.94	19.30	6.35
2509	25.400	9.12	25.80	9.53



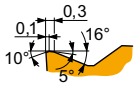
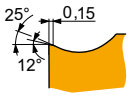
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
			FF geometry with highly positive design for fine-finish machining, and continuous to slightly interrupted cuts.																	
CNMG 120404E-FF	**T7325**	0.4	235	0.12	1.0	180	0.11	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	220	0.12	1.0	130	0.11	1.0	205	0.12	1.0	–	–	–	–	–	–	–	–	–
CNMG 120408E-FF	**T7325**	0.8	265	0.15	1.0	205	0.14	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	245	0.15	1.0	145	0.14	1.0	230	0.15	1.0	–	–	–	–	–	–	–	–	–

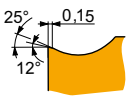
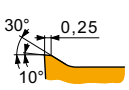
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]
																				
FM geometry with positive design for finish to semi-rough machining, and continuous to slightly interrupted cuts.																				
CNMG 090304E-FM	**T7325**	0.4	195	0.20	1.4	150	0.18	1.4	–	–	–	–	–	–	60	0.16	1.1	–	–	–
	T8330	0.4	175	0.20	1.4	105	0.18	1.4	165	0.20	1.4	–	–	–	40	0.14	1.1	–	–	–
	T8430	0.4	195	0.20	1.4	105	0.18	1.4	160	0.20	1.4	–	–	–	40	0.14	1.1	–	–	–
	T9315	0.4	265	0.20	1.4	–	–	–	250	0.20	1.4	–	–	–	–	–	–	–	–	–
	T9325	0.4	240	0.20	1.4	140	0.18	1.4	225	0.20	1.4	–	–	–	50	0.16	1.1	–	–	–
CNMG 090308E-FM	**T7325**	0.8	235	0.20	1.4	180	0.18	1.4	–	–	–	–	–	–	75	0.16	1.1	–	–	–
	T8330	0.8	205	0.20	1.4	120	0.18	1.4	190	0.20	1.4	–	–	–	50	0.14	1.1	–	–	–
	T8430	0.8	235	0.20	1.4	125	0.18	1.4	190	0.20	1.4	–	–	–	50	0.14	1.1	–	–	–
	T9315	0.8	315	0.20	1.4	–	–	–	295	0.20	1.4	–	–	–	–	–	–	–	–	–
	T9325	0.8	285	0.20	1.4	170	0.18	1.4	270	0.20	1.4	–	–	–	60	0.16	1.1	–	–	–
CNMG 120404E-FM	**T7325**	0.4	185	0.20	2.1	140	0.18	2.1	–	–	–	–	–	–	60	0.16	1.7	–	–	–
	T7335	0.4	180	0.20	2.1	140	0.18	2.1	–	–	–	–	–	–	55	0.16	1.7	–	–	–
	T8315	0.4	175	0.20	2.1	105	0.18	2.1	165	0.20	2.1	–	–	–	40	0.14	1.7	–	–	–
	T8330	0.4	165	0.20	2.1	95	0.18	2.1	155	0.20	2.1	–	–	–	40	0.14	1.7	–	–	–
	T8430	0.4	190	0.20	2.1	105	0.18	2.1	155	0.20	2.1	–	–	–	40	0.14	1.7	–	–	–
	T9310	0.4	285	0.20	2.1	–	–	–	270	0.20	2.1	–	–	–	–	–	–	–	–	–
	T9315	0.4	255	0.20	2.1	–	–	–	240	0.20	2.1	–	–	–	–	–	–	–	–	–
	T9325	0.4	230	0.20	2.1	135	0.18	2.1	215	0.20	2.1	–	–	–	50	0.16	1.7	–	–	–
	TT310	0.4	260	0.20	2.1	155	0.18	2.1	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 120408E-FM	**T7325**	0.8	220	0.20	2.1	170	0.18	2.1	–	–	–	–	–	–	70	0.16	1.7	–	–	–
	T7335	0.8	215	0.20	2.1	165	0.18	2.1	–	–	–	–	–	–	65	0.16	1.7	–	–	–
	T8315	0.8	205	0.20	2.1	120	0.18	2.1	190	0.20	2.1	–	–	–	50	0.16	1.7	–	–	–
	T8330	0.8	195	0.20	2.1	115	0.18	2.1	185	0.20	2.1	–	–	–	45	0.16	1.7	–	–	–
	T8430	0.8	225	0.20	2.1	120	0.18	2.1	185	0.20	2.1	–	–	–	45	0.16	1.7	–	–	–
	T9310	0.8	335	0.20	2.1	–	–	–	315	0.20	2.1	–	–	–	–	–	–	–	–	–
	T9315	0.8	305	0.20	2.1	–	–	–	285	0.20	2.1	–	–	–	–	–	–	–	–	–
	T9325	0.8	275	0.20	2.1	165	0.18	2.1	260	0.20	2.1	–	–	–	60	0.16	1.7	–	–	–
	TT310	0.8	310	0.20	2.1	185	0.18	2.1	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 120412E-FM	**T7325**	1.2	210	0.27	2.1	160	0.24	2.1	–	–	–	–	–	–	65	0.19	1.7	–	–	–
	T9315	1.2	285	0.27	2.1	–	–	–	270	0.27	2.1	–	–	–	–	–	–	–	–	–
	T9325	1.2	255	0.27	2.1	150	0.24	2.1	240	0.27	2.1	–	–	–	55	0.19	1.7	–	–	–
																				
KR geometry for semi-rough to rough machining, and continuous to interrupted cuts.																				
CNMG 120408E-KR	**T5305**	0.8	255	0.35	4.0	–	–	–	240	0.35	4.0	–	–	–	–	–	–	50	0.15	1.0
	T5315	0.8	225	0.35	4.0	–	–	–	210	0.35	4.0	–	–	–	–	–	–	45	0.15	1.0
CNMG 120412E-KR	**T5305**	1.2	255	0.40	4.0	–	–	–	240	0.40	4.0	–	–	–	–	–	–	50	0.15	1.0
	T5315	1.2	230	0.40	4.0	–	–	–	215	0.40	4.0	–	–	–	–	–	–	45	0.15	1.0
																				
M geometry for finish to semi-rough machining, and continuous to interrupted cuts.																				
CNMG 090308E-M	**T9315**	0.8	230	0.32	1.8	–	–	–	215	0.32	1.8	–	–	–	–	–	–	45	0.15	1.0
	T9325	0.8	205	0.32	1.8	–	–	–	190	0.32	1.8	–	–	–	–	–	–	–	–	–
	T9335	0.8	180	0.32	1.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 120404E-M	**T5315**	0.4	245	0.20	2.1	–	–	–	230	0.20	2.1	–	–	–	–	–	–	45	0.15	1.0
	T9310	0.4	260	0.20	2.1	–	–	–	245	0.20	2.1	–	–	–	–	–	–	50	0.15	1.0
	T9315	0.4	235	0.20	2.1	–	–	–	220	0.20	2.1	–	–	–	–	–	–	45	0.15	1.0
	T9325	0.4	210	0.20	2.1	–	–	–	195	0.20	2.1	–	–	–	–	–	–	–	–	–
	T9335	0.4	180	0.20	2.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

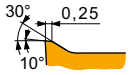
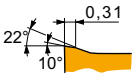
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
			M geometry for finish to semi-rough machining, and continuous to interrupted cuts.																	
CNMG 120408E-M	**6640**	0.8	■	165	0.32	2.1	–	–	–	■	155	0.32	2.1	–	–	–	–	–	–	–	–	–
	T5305	0.8	◪	280	0.32	2.1	–	–	–	■	265	0.32	2.1	–	–	–	–	–	–	◪	55	0.15	1.0
	T5315	0.8	◪	250	0.32	2.1	–	–	–	■	235	0.32	2.1	–	–	–	–	–	–	◪	50	0.15	1.0
	T8330	0.8	■	155	0.32	2.1	–	–	–	■	145	0.32	2.1	–	–	–	–	–	–	◪	30	0.15	1.0
	T8430	0.8	■	170	0.32	2.1	–	–	–	◪	135	0.32	2.1	–	–	–	–	–	–	◪	25	0.15	1.0
	T9310	0.8	■	245	0.32	2.1	–	–	–	◪	230	0.32	2.1	–	–	–	–	–	–	◪	45	0.15	1.0
	T9315	0.8	■	225	0.32	2.1	–	–	–	◪	210	0.32	2.1	–	–	–	–	–	–	◪	45	0.15	1.0
	T9325	0.8	■	200	0.32	2.1	–	–	–	◪	190	0.32	2.1	–	–	–	–	–	–		–	–	–
	T9335	0.8	■	180	0.32	2.1	–	–	–		–	–	–	–	–	–	–	–	–		–	–	–
CNMG 120412E-M	**T5305**	1.2	◪	275	0.40	2.1	–	–	–	■	260	0.40	2.1	–	–	–	–	–	–	◪	55	0.15	1.0
	T5315	1.2	◪	245	0.40	2.1	–	–	–	■	230	0.40	2.1	–	–	–	–	–	–	◪	45	0.15	1.0
	T9310	1.2	■	235	0.40	2.1	–	–	–	◪	220	0.40	2.1	–	–	–	–	–	–	◪	45	0.15	1.0
	T9315	1.2	■	220	0.40	2.1	–	–	–	◪	205	0.40	2.1	–	–	–	–	–	–	◪	40	0.15	1.0
	T9325	1.2	■	195	0.40	2.1	–	–	–	◪	185	0.40	2.1	–	–	–	–	–	–		–	–	–
	T9335	1.2	■	170	0.40	2.1	–	–	–		–	–	–	–	–	–	–	–	–		–	–	–
CNMG 120416E-M	**T9325**	1.6	■	200	0.40	2.1	–	–	–	◪	190	0.40	2.1	–	–	–	–	–	–		–	–	–
	T9335	1.6	■	175	0.40	2.1	–	–	–		–	–	–	–	–	–	–	–	–		–	–	–
CNMG 160608E-M	**T9310**	0.8	■	235	0.32	3.6	–	–	–	◪	220	0.32	3.6	–	–	–	–	–	–	◪	45	0.15	1.0
	T9315	0.8	■	215	0.32	3.6	–	–	–	◪	200	0.32	3.6	–	–	–	–	–	–	◪	40	0.15	1.0
	T9325	0.8	■	190	0.32	3.6	–	–	–	◪	180	0.32	3.6	–	–	–	–	–	–		–	–	–
	T9335	0.8	■	170	0.32	3.6	–	–	–		–	–	–	–	–	–	–	–	–		–	–	–
CNMG 160612E-M	**T9315**	1.2	■	210	0.40	3.6	–	–	–	◪	195	0.40	3.6	–	–	–	–	–	–	◪	40	0.15	1.0
	T9325	1.2	■	185	0.40	3.6	–	–	–	◪	175	0.40	3.6	–	–	–	–	–	–		–	–	–
	T9335	1.2	■	160	0.40	3.6	–	–	–		–	–	–	–	–	–	–	–	–		–	–	–
CNMG 160616E-M	**T9325**	1.6	■	190	0.40	3.6	–	–	–	◪	180	0.40	3.6	–	–	–	–	–	–		–	–	–
	T9335	1.6	■	165	0.40	3.6	–	–	–		–	–	–	–	–	–	–	–	–		–	–	–
CNMG 190608E-M	**T9315**	0.8	■	210	0.32	4.2	–	–	–	◪	195	0.32	4.2	–	–	–	–	–	–	◪	40	0.15	1.0
	T9325	0.8	■	190	0.32	4.2	–	–	–	◪	180	0.32	4.2	–	–	–	–	–	–		–	–	–
	T9335	0.8	■	165	0.32	4.2	–	–	–		–	–	–	–	–	–	–	–	–		–	–	–
CNMG 190612E-M	**6640**	1.2	■	145	0.40	4.2	–	–	–	■	135	0.40	4.2	–	–	–	–	–	–		–	–	–
	T9310	1.2	■	220	0.40	4.2	–	–	–	◪	205	0.40	4.2	–	–	–	–	–	–	◪	40	0.15	1.0
	T9315	1.2	■	205	0.40	4.2	–	–	–	◪	190	0.40	4.2	–	–	–	–	–	–	◪	40	0.15	1.0
	T9325	1.2	■	185	0.40	4.2	–	–	–	◪	175	0.40	4.2	–	–	–	–	–	–		–	–	–
	T9335	1.2	■	160	0.40	4.2	–	–	–		–	–	–	–	–	–	–	–	–		–	–	–
CNMG 190616E-M	**T9310**	1.6	■	230	0.40	4.2	–	–	–	◪	215	0.40	4.2	–	–	–	–	–	–	◪	45	0.15	1.0
	T9315	1.6	■	215	0.40	4.2	–	–	–	◪	200	0.40	4.2	–	–	–	–	–	–	◪	40	0.15	1.0
	T9325	1.6	■	190	0.40	4.2	–	–	–	◪	180	0.40	4.2	–	–	–	–	–	–		–	–	–
	T9335	1.6	■	165	0.40	4.2	–	–	–		–	–	–	–	–	–	–	–	–		–	–	–
																				
			NF geometry with highly positive design for fine-finish to medium machining, and continuous cuts.																	
CNMG 090304E-NF	**T6310**	0.4	■	190	0.17	0.8	■	135	0.15	0.8	◪	150	0.17	0.8	◪	570	0.20	0.8	◪	55	0.12	0.6	–	–	–
	T7335	0.4	◪	210	0.18	0.8	■	160	0.16	0.8		–	–	–		–	–	–	◪	65	0.16	0.6	–	–	–
	T8315	0.4	◪	200	0.17	0.8	■	120	0.15	0.8	◪	190	0.17	0.8	◪	600	0.20	0.8	◪	50	0.12	0.6	–	–	–
	T8430	0.4	■	225	0.17	0.8	■	120	0.15	0.8	◪	185	0.17	0.8	◪	615	0.20	0.8	◪	45	0.12	0.6	–	–	–
	T9325	0.4	■	265	0.18	0.8	■	155	0.16	0.8	◪	250	0.18	0.8		–	–	–	◪	55	0.16	0.6	–	–	–
CNMG 090308E-NF	**T6310**	0.8	■	215	0.19	1.0	■	150	0.17	1.0	◪	170	0.19	1.0	◪	645	0.23	1.0	◪	60	0.15	0.8	–	–	–
	T7335	0.8	◪	240	0.19	1.0	■	185	0.17	1.0		–	–	–		–	–	–	◪	75	0.15	0.8	–	–	–
	T8330	0.8	■	215	0.19	1.0	■	125	0.17	1.0	◪	200	0.19	1.0	◪	645	0.23	1.0	◪	50	0.15	0.8	–	–	–
	T8430	0.8	■	245	0.19	1.0	■	135	0.17	1.0	◪	200	0.19	1.0	◪	675	0.23	1.0	◪	50	0.15	0.8	–	–	–
	T9325	0.8	■	300	0.19	1.0	■	180	0.17	1.0	◪	285	0.19	1.0		–	–	–	◪	65	0.15	0.8	–	–	–

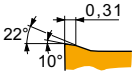
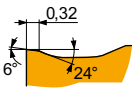
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
NF geometry with highly positive design for fine-finish to medium machining, and continuous cuts.																				
CNMG 120404E-NF	**HF7**	0.4	–	–	–	95	0.15	1.7	155	0.17	1.7	495	0.20	1.7	–	–	–	–	–	–
	T6310	0.4	180	0.17	1.7	125	0.15	1.7	145	0.17	1.7	540	0.20	1.7	50	0.14	1.4	–	–	–
	T7325	0.4	200	0.18	1.7	155	0.16	1.7	–	–	–	–	–	–	65	0.16	1.4	–	–	–
	T7335	0.4	195	0.18	1.7	150	0.16	1.7	–	–	–	–	–	–	60	0.16	1.4	–	–	–
	T8315	0.4	185	0.17	1.7	110	0.15	1.7	175	0.17	1.7	555	0.20	1.7	45	0.14	1.4	–	–	–
	T8330	0.4	180	0.17	1.7	105	0.15	1.7	170	0.17	1.7	540	0.20	1.7	45	0.14	1.4	–	–	–
	T8430	0.4	200	0.17	1.7	110	0.15	1.7	165	0.17	1.7	555	0.20	1.7	40	0.14	1.4	–	–	–
	T9315	0.4	285	0.17	1.7	–	–	–	270	0.17	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.4	250	0.18	1.7	150	0.16	1.7	235	0.18	1.7	–	–	–	55	0.16	1.4	–	–	–
CNMG 120408E-NF	**HF7**	0.8	–	–	–	110	0.17	1.7	180	0.19	1.7	570	0.23	1.7	–	–	–	–	–	–
	T6310	0.8	200	0.19	1.7	140	0.17	1.7	160	0.19	1.7	600	0.23	1.7	60	0.15	1.4	–	–	–
	T7325	0.8	235	0.19	1.7	180	0.17	1.7	–	–	–	–	–	–	75	0.15	1.4	–	–	–
	T7335	0.8	225	0.19	1.7	175	0.17	1.7	–	–	–	–	–	–	70	0.15	1.4	–	–	–
	T8315	0.8	215	0.19	1.7	125	0.17	1.7	200	0.19	1.7	645	0.23	1.7	50	0.15	1.4	–	–	–
	T8330	0.8	200	0.19	1.7	120	0.17	1.7	190	0.19	1.7	600	0.23	1.7	50	0.15	1.4	–	–	–
	T8430	0.8	235	0.19	1.7	125	0.17	1.7	190	0.19	1.7	645	0.23	1.7	50	0.15	1.4	–	–	–
	T9315	0.8	320	0.19	1.7	–	–	–	300	0.19	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.8	285	0.19	1.7	170	0.17	1.7	270	0.19	1.7	–	–	–	60	0.15	1.4	–	–	–
CNMG 120412E-NF	**T6310**	1.2	185	0.30	2.1	130	0.27	2.1	145	0.30	2.1	555	0.36	2.1	55	0.21	1.7	–	–	–
	T7325	1.2	205	0.30	2.1	155	0.27	2.1	–	–	–	–	–	–	65	0.21	1.7	–	–	–
	T7335	1.2	200	0.30	2.1	155	0.27	2.1	–	–	–	–	–	–	65	0.21	1.7	–	–	–
	T8330	1.2	185	0.30	2.1	110	0.27	2.1	175	0.30	2.1	555	0.36	2.1	45	0.21	1.7	–	–	–
	T8430	1.2	200	0.30	2.1	110	0.27	2.1	165	0.30	2.1	555	0.36	2.1	40	0.21	1.7	–	–	–
	T9315	1.2	275	0.30	2.1	–	–	–	260	0.30	2.1	–	–	–	–	–	–	–	–	–
	T9325	1.2	245	0.30	2.1	145	0.27	2.1	230	0.30	2.1	–	–	–	55	0.21	1.7	–	–	–
																				
NM geometry with highly positive design for fine-finish, medium and rough machining, with continuous cuts.																				
CNMG 120404E-NM	**T7325**	0.4	195	0.20	2.1	150	0.18	2.1	–	–	–	–	–	–	60	0.16	1.7	–	–	–
	T7335	0.4	190	0.20	2.1	145	0.18	2.1	–	–	–	–	–	–	60	0.16	1.7	–	–	–
	T8315	0.4	180	0.20	2.1	105	0.18	2.1	–	–	–	540	0.24	2.1	45	0.16	1.7	–	–	–
	T8330	0.4	170	0.20	2.1	100	0.18	2.1	–	–	–	510	0.24	2.1	40	0.16	1.7	–	–	–
	T8430	0.4	195	0.20	2.1	105	0.18	2.1	–	–	–	540	0.24	2.1	40	0.16	1.7	–	–	–
	T9315	0.4	270	0.20	2.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.4	240	0.20	2.1	140	0.18	2.1	–	–	–	–	–	–	50	0.16	1.7	–	–	–
CNMG 120408E-NM	**T7325**	0.8	215	0.25	2.1	165	0.23	2.1	–	–	–	–	–	–	65	0.20	1.7	–	–	–
	T7335	0.8	210	0.25	2.1	160	0.23	2.1	–	–	–	–	–	–	65	0.20	1.7	–	–	–
	T8315	0.8	205	0.25	2.1	120	0.23	2.1	–	–	–	615	0.30	2.1	50	0.20	1.7	–	–	–
	T8330	0.8	195	0.25	2.1	115	0.23	2.1	–	–	–	585	0.30	2.1	45	0.20	1.7	–	–	–
	T8430	0.8	210	0.25	2.1	115	0.23	2.1	–	–	–	585	0.30	2.1	45	0.20	1.7	–	–	–
	T9315	0.8	290	0.25	2.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	260	0.25	2.1	155	0.23	2.1	–	–	–	–	–	–	55	0.20	1.7	–	–	–
CNMG 120412E-NM	**T7325**	1.2	215	0.30	2.1	165	0.27	2.1	–	–	–	–	–	–	65	0.24	1.7	–	–	–
	T7335	1.2	210	0.30	2.1	160	0.27	2.1	–	–	–	–	–	–	65	0.24	1.7	–	–	–
	T8315	1.2	205	0.30	2.1	120	0.27	2.1	–	–	–	615	0.36	2.1	50	0.24	1.7	–	–	–
	T8330	1.2	195	0.30	2.1	115	0.27	2.1	–	–	–	585	0.36	2.1	45	0.24	1.7	–	–	–
	T8430	1.2	210	0.30	2.1	115	0.27	2.1	–	–	–	585	0.36	2.1	45	0.24	1.7	–	–	–
	T9315	1.2	285	0.30	2.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	1.2	255	0.30	2.1	150	0.27	2.1	–	–	–	–	–	–	55	0.24	1.7	–	–	–
CNMG 160608E-NM	**T7325**	0.8	195	0.30	3.6	150	0.27	3.6	–	–	–	–	–	–	60	0.27	2.9	–	–	–
	T7335	0.8	190	0.30	3.6	145	0.27	3.6	–	–	–	–	–	–	60	0.27	2.9	–	–	–
	T8315	0.8	185	0.30	3.6	110	0.27	3.6	–	–	–	555	0.36	3.6	45	0.27	2.9	–	–	–
	T8330	0.8	170	0.30	3.6	100	0.27	3.6	–	–	–	510	0.36	3.6	40	0.27	2.9	–	–	–
	T8430	0.8	185	0.30	3.6	100	0.27	3.6	–	–	–	510	0.36	3.6	40	0.27	2.9	–	–	–
	T9325	0.8	225	0.30	3.6	135	0.27	3.6	–	–	–	–	–	–	50	0.27	2.9	–	–	–

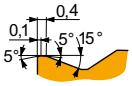
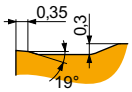
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]
																				
			NM geometry with highly positive design for fine-finish, medium and rough machining, with continuous cuts.																	
CNMG 160612E-NM	**T7325**	1.2	◪ 205	0.30	3.6	■ 155	0.27	3.6	–	–	–	–	–	–	■ 65	0.27	2.9	–	–	–
	T7335	1.2	◪ 200	0.30	3.6	■ 155	0.27	3.6	–	–	–	–	–	–	■ 65	0.27	2.9	–	–	–
	T8315	1.2	◪ 195	0.30	3.6	■ 115	0.27	3.6	–	–	–	◪ 585	0.36	3.6	◪ 45	0.27	2.9	–	–	–
	T9325	1.2	■ 240	0.30	3.6	■ 140	0.27	3.6	–	–	–	–	–	–	◪ 50	0.27	2.9	–	–	–
CNMG 190612E-NM	**T7325**	1.2	◪ 195	0.35	4.2	■ 150	0.32	4.2	–	–	–	–	–	–	■ 60	0.32	3.4	–	–	–
	T7335	1.2	◪ 180	0.35	4.2	■ 140	0.32	4.2	–	–	–	–	–	–	■ 55	0.32	3.4	–	–	–
	T8315	1.2	◪ 180	0.35	4.2	■ 105	0.32	4.2	–	–	–	◪ 540	0.42	4.2	◪ 45	0.32	3.4	–	–	–
	T8330	1.2	■ 170	0.35	4.2	■ 100	0.32	4.2	–	–	–	◪ 510	0.42	4.2	◪ 40	0.32	3.4	–	–	–
	T8430	1.2	■ 180	0.35	4.2	■ 95	0.32	4.2	–	–	–	◪ 495	0.42	4.2	◪ 35	0.32	3.4	–	–	–
	T9325	1.2	■ 220	0.35	4.2	■ 130	0.32	4.2	–	–	–	–	–	–	◪ 45	0.32	3.4	–	–	–
																				
			NMR geometry with positive design for medium to rough machining, and continuous cuts.																	
CNMG 090308E-NMR	**T7325**	0.8	◪ 175	0.35	1.6	■ 135	0.32	1.6	–	–	–	–	–	–	■ 55	0.25	1.3	–	–	–
	T7335	0.8	◪ 170	0.35	1.6	■ 130	0.32	1.6	–	–	–	–	–	–	■ 55	0.25	1.3	–	–	–
	T9325	0.8	■ 200	0.35	1.6	■ 120	0.32	1.6	–	–	–	–	–	–	◪ 45	0.25	1.3	–	–	–
CNMG 120404E-NMR	**T6310**	0.4	■ 140	0.25	2.7	■ 100	0.23	2.7	–	–	–	–	–	–	■ 40	0.20	2.2	–	–	–
	T7325	0.4	◪ 155	0.25	2.7	■ 120	0.23	2.7	–	–	–	–	–	–	■ 50	0.20	2.2	–	–	–
	T7335	0.4	◪ 155	0.25	2.0	■ 120	0.23	2.0	–	–	–	–	–	–	■ 50	0.20	1.6	–	–	–
	T8330	0.4	■ 140	0.25	2.0	■ 80	0.23	2.0	–	–	–	–	–	–	◪ 35	0.20	1.6	–	–	–
	T8430	0.4	■ 150	0.25	2.7	■ 80	0.23	2.7	–	–	–	–	–	–	◪ 30	0.20	2.2	–	–	–
	T9315	0.4	■ 215	0.25	2.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 190	0.25	2.0	■ 110	0.23	2.0	–	–	–	–	–	–	◪ 40	0.20	1.6	–	–	–
CNMG 120408E-NMR	**T6310**	0.8	■ 150	0.35	2.7	■ 105	0.32	2.7	–	–	–	–	–	–	■ 45	0.25	2.2	–	–	–
	T7325	0.8	◪ 170	0.35	2.7	■ 130	0.32	2.7	–	–	–	–	–	–	■ 55	0.25	2.2	–	–	–
	T7335	0.8	◪ 160	0.35	2.7	■ 120	0.32	2.7	–	–	–	–	–	–	■ 50	0.25	2.2	–	–	–
	T8330	0.8	■ 150	0.35	2.7	■ 90	0.32	2.7	–	–	–	–	–	–	◪ 35	0.25	2.2	–	–	–
	T8430	0.8	■ 155	0.35	2.7	■ 85	0.32	2.7	–	–	–	–	–	–	◪ 30	0.25	2.2	–	–	–
	T9315	0.8	■ 210	0.35	2.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 190	0.35	2.7	■ 110	0.32	2.7	–	–	–	–	–	–	◪ 40	0.25	2.2	–	–	–
CNMG 120412E-NMR	**T6310**	1.2	■ 150	0.40	2.7	■ 105	0.36	2.7	–	–	–	–	–	–	■ 45	0.28	2.2	–	–	–
	T7325	1.2	◪ 170	0.40	2.7	■ 130	0.36	2.7	–	–	–	–	–	–	■ 55	0.28	2.2	–	–	–
	T7335	1.2	◪ 160	0.40	2.7	■ 120	0.36	2.7	–	–	–	–	–	–	■ 50	0.28	2.2	–	–	–
	T8330	1.2	■ 150	0.40	2.7	■ 90	0.36	2.7	–	–	–	–	–	–	◪ 35	0.28	2.2	–	–	–
	T8430	1.2	■ 155	0.40	2.7	■ 85	0.36	2.7	–	–	–	–	–	–	◪ 30	0.28	2.2	–	–	–
	T9315	1.2	■ 215	0.40	2.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 190	0.40	2.7	■ 110	0.36	2.7	–	–	–	–	–	–	◪ 40	0.28	2.2	–	–	–
CNMG 120416E-NMR	**T7325**	1.6	◪ 170	0.45	2.7	■ 130	0.41	2.7	–	–	–	–	–	–	■ 55	0.32	2.2	–	–	–
	T7335	1.6	◪ 160	0.45	2.7	■ 120	0.41	2.7	–	–	–	–	–	–	■ 50	0.32	2.2	–	–	–
	T9325	1.6	■ 190	0.45	2.7	■ 110	0.41	2.7	–	–	–	–	–	–	◪ 40	0.32	2.2	–	–	–
CNMG 160608E-NMR	**T7325**	0.8	◪ 160	0.35	4.0	■ 120	0.32	4.0	–	–	–	–	–	–	■ 50	0.25	3.2	–	–	–
	T7335	0.8	◪ 150	0.35	4.0	■ 115	0.32	4.0	–	–	–	–	–	–	■ 45	0.25	3.2	–	–	–
	T9315	0.8	■ 205	0.35	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 185	0.35	4.0	■ 110	0.32	4.0	–	–	–	–	–	–	◪ 40	0.25	3.2	–	–	–
CNMG 160612E-NMR	**T7325**	1.2	◪ 165	0.40	4.0	■ 125	0.36	4.0	–	–	–	–	–	–	■ 50	0.28	3.2	–	–	–
	T7335	1.2	◪ 155	0.40	4.0	■ 120	0.36	4.0	–	–	–	–	–	–	■ 50	0.28	3.2	–	–	–
	T8330	1.2	■ 145	0.40	4.0	■ 85	0.36	4.0	–	–	–	–	–	–	◪ 35	0.28	3.2	–	–	–
	T8430	1.2	■ 150	0.40	4.0	■ 80	0.36	4.0	–	–	–	–	–	–	◪ 30	0.28	3.2	–	–	–
	T9315	1.2	■ 205	0.40	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 185	0.40	4.0	■ 110	0.36	4.0	–	–	–	–	–	–	◪ 40	0.28	3.2	–	–	–

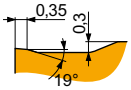
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
NMR geometry with positive design for medium to rough machining, and continuous cuts.																				
CNMG 160616E-NMR	**T7325**	1.6	165	0.45	4.0	125	0.41	4.0	–	–	–	–	–	–	50	0.32	3.2	–	–	–
	T7335	1.6	155	0.45	4.0	120	0.41	4.0	–	–	–	–	–	–	50	0.32	3.2	–	–	–
	T8330	1.6	145	0.45	4.0	85	0.41	4.0	–	–	–	–	–	–	35	0.32	3.2	–	–	–
	T8430	1.6	150	0.45	4.0	80	0.41	4.0	–	–	–	–	–	–	30	0.32	3.2	–	–	–
	T9315	1.6	200	0.45	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	1.6	180	0.45	4.0	105	0.41	4.0	–	–	–	–	–	–	40	0.32	3.2	–	–	–
CNMG 190608E-NMR	**T6310**	0.8	140	0.35	5.2	100	0.32	5.2	–	–	–	–	–	–	40	0.25	4.2	–	–	–
	T7325	0.8	155	0.35	5.2	120	0.32	5.2	–	–	–	–	–	–	50	0.25	4.2	–	–	–
	T7335	0.8	150	0.35	5.2	115	0.32	5.2	–	–	–	–	–	–	45	0.25	4.2	–	–	–
	T9315	0.8	195	0.35	5.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	180	0.35	5.2	105	0.32	5.2	–	–	–	–	–	–	40	0.25	4.2	–	–	–
CNMG 190612E-NMR	**T6310**	1.2	140	0.40	5.2	100	0.36	5.2	–	–	–	–	–	–	40	0.28	4.2	–	–	–
	T7325	1.2	160	0.40	5.2	120	0.36	5.2	–	–	–	–	–	–	50	0.28	4.2	–	–	–
	T7335	1.2	150	0.40	5.2	115	0.36	5.2	–	–	–	–	–	–	45	0.28	4.2	–	–	–
	T8330	1.2	140	0.40	5.2	80	0.36	5.2	–	–	–	–	–	–	35	0.28	4.2	–	–	–
	T8430	1.2	145	0.40	5.2	80	0.36	5.2	–	–	–	–	–	–	30	0.28	4.2	–	–	–
	T9315	1.2	200	0.40	5.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	1.2	180	0.40	5.2	105	0.36	5.2	–	–	–	–	–	–	40	0.28	4.2	–	–	–
CNMG 190616E-NMR	**T7325**	1.6	160	0.45	5.2	120	0.41	5.2	–	–	–	–	–	–	50	0.32	4.2	–	–	–
	T7335	1.6	150	0.45	5.2	115	0.41	5.2	–	–	–	–	–	–	45	0.32	4.2	–	–	–
	T9315	1.6	195	0.45	5.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	1.6	175	0.45	5.2	105	0.41	5.2	–	–	–	–	–	–	35	0.32	4.2	–	–	–
																				
NRM geometry with positive design for semi-rough to rough machining, and continuous to moderate interrupted cuts.																				
CNMG 120408-NRM	**T7325**	0.8	160	0.35	4.0	120	0.32	4.0	–	–	–	–	–	–	50	0.28	3.2	–	–	–
	T7335	0.8	150	0.35	4.0	115	0.32	4.0	–	–	–	–	–	–	45	0.28	3.2	–	–	–
	T9315	0.8	205	0.35	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 120412-NRM	**T7325**	1.2	165	0.40	4.0	125	0.36	4.0	–	–	–	–	–	–	50	0.28	3.2	–	–	–
	T7335	1.2	155	0.40	4.0	120	0.36	4.0	–	–	–	–	–	–	50	0.28	3.2	–	–	–
	T9315	1.2	205	0.40	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 120416-NRM	**T7325**	1.6	165	0.45	4.0	125	0.41	4.0	–	–	–	–	–	–	50	0.36	3.2	–	–	–
	T7335	1.6	155	0.45	4.0	120	0.41	4.0	–	–	–	–	–	–	50	0.36	3.2	–	–	–
	T9315	1.6	200	0.45	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 160608-NRM	**T7325**	0.8	155	0.35	6.0	120	0.32	6.0	–	–	–	–	–	–	50	0.28	4.8	–	–	–
	T7335	0.8	145	0.35	6.0	110	0.32	6.0	–	–	–	–	–	–	45	0.28	4.8	–	–	–
	T9315	0.8	195	0.35	6.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 160612-NRM	**T7325**	1.2	155	0.40	6.0	120	0.36	6.0	–	–	–	–	–	–	50	0.32	4.8	–	–	–
	T7335	1.2	150	0.40	6.0	115	0.36	6.0	–	–	–	–	–	–	45	0.32	4.8	–	–	–
	T9315	1.2	200	0.40	6.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 160616-NRM	**T7325**	1.6	155	0.45	6.0	120	0.41	6.0	–	–	–	–	–	–	50	0.36	4.8	–	–	–
	T7335	1.6	150	0.45	6.0	115	0.41	6.0	–	–	–	–	–	–	45	0.36	4.8	–	–	–
	T9315	1.6	195	0.45	6.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 190608-NRM	**T7325**	0.8	150	0.35	8.0	115	0.32	8.0	–	–	–	–	–	–	45	0.28	6.4	–	–	–
	T7335	0.8	140	0.35	8.0	105	0.32	8.0	–	–	–	–	–	–	45	0.28	6.4	–	–	–
	T9315	0.8	190	0.35	8.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 190612-NRM	**T7325**	1.2	155	0.40	8.0	120	0.36	8.0	–	–	–	–	–	–	50	0.32	6.4	–	–	–
	T7335	1.2	145	0.40	8.0	110	0.36	8.0	–	–	–	–	–	–	45	0.32	6.4	–	–	–
	T9315	1.2	190	0.40	8.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 190616-NRM	**T7325**	1.6	150	0.45	8.0	115	0.41	8.0	–	–	–	–	–	–	45	0.36	6.4	–	–	–
	T7335	1.6	145	0.45	8.0	110	0.41	8.0	–	–	–	–	–	–	45	0.36	6.4	–	–	–
	T9315	1.6	190	0.45	8.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 250924-NRM	**T7325**	2.4	95	0.70	10.0	70	0.63	10.0	–	–	–	–	–	–	30	0.49	8.0	–	–	–
	T7335	2.4	90	0.70	10.0	70	0.63	10.0	–	–	–	–	–	–	25	0.49	8.0	–	–	–
	T9315	2.4	115	0.70	10.0	–	–	–	105	0.70	10.0	–	–	–	–	–	–	–	–	–

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

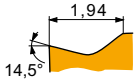
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
			R geometry for semi-rough to rough machining, and continuous to interrupted cuts.																	
CNMG 120408E-R	**6640**	0.8	■	140	0.40	4.0	–	–	–	■	130	0.40	4.0	–	–	–	–	–	–	–	–	–
	T5305	0.8	◪	240	0.40	4.0	–	–	–	■	225	0.40	4.0	–	–	–	–	–	–	◪	45	0.15	1.0
	T5315	0.8	◪	215	0.40	4.0	–	–	–	■	200	0.40	4.0	–	–	–	–	–	–	◪	40	0.15	1.0
	T9310	0.8	■	205	0.40	4.0	–	–	–	◪	190	0.40	4.0	–	–	–	–	–	–	◪	40	0.15	1.0
	T9315	0.8	■	190	0.40	4.0	–	–	–	◪	180	0.40	4.0	–	–	–	–	–	–	◪	35	0.15	1.0
	T9325	0.8	■	175	0.40	4.0	–	–	–	◪	165	0.40	4.0	–	–	–	–	–	–		–	–	–
	T9335	0.8	■	150	0.40	4.0	–	–	–		–	–	–	–	–	–	–	–	–		–	–	–
CNMG 120412E-R	**T5305**	1.2	◪	245	0.45	4.0	–	–	–	■	230	0.45	4.0	–	–	–	–	–	–	◪	45	0.15	1.0
	T5315	1.2	◪	220	0.45	4.0	–	–	–	■	205	0.45	4.0	–	–	–	–	–	–	◪	40	0.15	1.0
	T9315	1.2	■	195	0.45	4.0	–	–	–	◪	185	0.45	4.0	–	–	–	–	–	–	◪	35	0.15	1.0
	T9325	1.2	■	175	0.45	4.0	–	–	–	◪	165	0.45	4.0	–	–	–	–	–	–		–	–	–
	T9335	1.2	■	155	0.45	4.0	–	–	–		–	–	–	–	–	–	–	–	–		–	–	–
CNMG 120416E-R	**T5315**	1.6	◪	225	0.50	4.0	–	–	–	■	210	0.50	4.0	–	–	–	–	–	–	◪	45	0.15	1.0
	T9335	1.6	■	150	0.50	4.0	–	–	–		–	–	–	–	–	–	–	–	–		–	–	–
CNMG 160608E-R	**T5315**	0.8	◪	210	0.40	5.5	–	–	–	■	195	0.40	5.5	–	–	–	–	–	–	◪	40	0.15	1.0
CNMG 160612E-R	**T5305**	1.2	◪	235	0.45	5.5	–	–	–	■	220	0.45	5.5	–	–	–	–	–	–	◪	45	0.15	1.0
	T5315	1.2	◪	215	0.45	5.5	–	–	–	■	200	0.45	5.5	–	–	–	–	–	–	◪	40	0.15	1.0
	T7335	1.2	◪	145	0.45	5.5	–	–	–		–	–	–	–	–	–	–	–	–		–	–	–
	T9310	1.2	■	205	0.45	5.5	–	–	–	◪	190	0.45	5.5	–	–	–	–	–	–	◪	40	0.15	1.0
	T9315	1.2	■	190	0.45	5.5	–	–	–	◪	180	0.45	5.5	–	–	–	–	–	–	◪	35	0.15	1.0
	T9325	1.2	■	170	0.45	5.5	–	–	–	◪	160	0.45	5.5	–	–	–	–	–	–		–	–	–
CNMG 160616E-R	**T5305**	1.6	◪	240	0.50	5.5	–	–	–	■	225	0.50	5.5	–	–	–	–	–	–	◪	45	0.15	1.0
CNMG 190608E-R	**T5315**	0.8	◪	205	0.40	7.0	–	–	–	■	190	0.40	7.0	–	–	–	–	–	–	◪	40	0.15	1.0
CNMG 190612E-R	**6640**	1.2	■	135	0.45	7.0	–	–	–	■	125	0.45	7.0	–	–	–	–	–	–		–	–	–
	T5305	1.2	◪	230	0.45	7.0	–	–	–	■	215	0.45	7.0	–	–	–	–	–	–	◪	45	0.15	1.0
	T5315	1.2	◪	210	0.45	7.0	–	–	–	■	195	0.45	7.0	–	–	–	–	–	–	◪	40	0.15	1.0
	T9315	1.2	■	185	0.45	7.0	–	–	–	◪	175	0.45	7.0	–	–	–	–	–	–	◪	35	0.15	1.0
	T9325	1.2	■	165	0.45	7.0	–	–	–	◪	155	0.45	7.0	–	–	–	–	–	–		–	–	–
	T9335	1.2	■	145	0.45	7.0	–	–	–		–	–	–	–	–	–	–	–	–		–	–	–
CNMG 190616E-R	**6640**	1.6	■	130	0.50	7.0	–	–	–	■	120	0.50	7.0	–	–	–	–	–	–		–	–	–
	T5305	1.6	◪	235	0.50	7.0	–	–	–	■	220	0.50	7.0	–	–	–	–	–	–	◪	45	0.15	1.0
	T5315	1.6	◪	210	0.50	7.0	–	–	–	■	195	0.50	7.0	–	–	–	–	–	–	◪	40	0.15	1.0
	T9310	1.6	■	195	0.50	7.0	–	–	–	◪	185	0.50	7.0	–	–	–	–	–	–	◪	35	0.15	1.0
	T9315	1.6	■	180	0.50	7.0	–	–	–	◪	170	0.50	7.0	–	–	–	–	–	–	◪	35	0.15	1.0
	T9325	1.6	■	165	0.50	7.0	–	–	–	◪	155	0.50	7.0	–	–	–	–	–	–		–	–	–
	T9335	1.6	■	145	0.50	7.0	–	–	–		–	–	–	–	–	–	–	–	–		–	–	–
			RM geometry for semi-rough to rough machining, and continuous to interrupted cuts.																	
CNMG 120408E-RM	**T5305**	0.8	◪	275	0.40	4.0		–	–	–	◪	260	0.40	4.0	–	–	–	–	–	–	–	–	–
	T5315	0.8	◪	250	0.40	4.0		–	–	–	◪	235	0.40	4.0	–	–	–	–	–	–	–	–	–
	T6310	0.8	■	155	0.40	4.0	◪	110	0.36	4.0	◪	125	0.40	4.0	–	–	–	–	–	–	–	–	–
	T7325	0.8	◪	180	0.40	4.0	◪	140	0.36	4.0		–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.8	◪	165	0.40	4.0	◪	125	0.36	4.0		–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	◪	165	0.40	4.0	◪	95	0.36	4.0	◪	155	0.40	4.0	–	–	–	–	–	–	–	–	–
	T8330	0.8	■	155	0.40	4.0	◪	90	0.36	4.0	◪	145	0.40	4.0	–	–	–	–	–	–	–	–	–
	T8430	0.8	■	165	0.40	4.0	◪	90	0.36	4.0	◪	135	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9310	0.8	■	240	0.40	4.0		–	–	–	◪	225	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9315	0.8	■	220	0.40	4.0		–	–	–	◪	205	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	■	200	0.40	4.0	◪	120	0.36	4.0	◪	190	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	■	170	0.40	4.0	◪	100	0.36	4.0		–	–	–	–	–	–	–	–	–	–	–	–

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]
			RM geometry for semi-rough to rough machining, and continuous to interrupted cuts.																	
CNMG 120412E-RM	**T5305**	1.2	◪ 280	0.45	4.0	–	–	–	◪ 265	0.45	4.0	–	–	–	–	–	–	–	–	–
	T5315	1.2	◪ 250	0.45	4.0	–	–	–	◪ 235	0.45	4.0	–	–	–	–	–	–	–	–	–
	T6310	1.2	■ 160	0.45	4.0	◪ 115	0.41	4.0	◪ 125	0.45	4.0	–	–	–	–	–	–	–	–	–
	T7325	1.2	◪ 180	0.45	4.0	◪ 140	0.41	4.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	1.2	◪ 170	0.45	4.0	◪ 130	0.41	4.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	1.2	◪ 170	0.45	4.0	◪ 100	0.41	4.0	◪ 160	0.45	4.0	–	–	–	–	–	–	–	–	–
	T8330	1.2	■ 160	0.45	4.0	◪ 95	0.41	4.0	◪ 150	0.45	4.0	–	–	–	–	–	–	–	–	–
	T8430	1.2	■ 170	0.45	4.0	◪ 90	0.41	4.0	◪ 135	0.45	4.0	–	–	–	–	–	–	–	–	–
	T9310	1.2	■ 240	0.45	4.0	–	–	–	◪ 225	0.45	4.0	–	–	–	–	–	–	–	–	–
	T9315	1.2	■ 220	0.45	4.0	–	–	–	◪ 205	0.45	4.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 200	0.45	4.0	◪ 120	0.41	4.0	◪ 190	0.45	4.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	■ 175	0.45	4.0	◪ 105	0.41	4.0	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 120416E-RM	**T5305**	1.6	◪ 280	0.50	4.0	–	–	–	◪ 265	0.50	4.0	–	–	–	–	–	–	–	–	–
	T5315	1.6	◪ 255	0.50	4.0	–	–	–	◪ 240	0.50	4.0	–	–	–	–	–	–	–	–	–
	T7325	1.6	◪ 185	0.50	4.0	◪ 140	0.45	4.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	1.6	◪ 175	0.50	4.0	◪ 135	0.45	4.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	1.6	■ 160	0.50	4.0	◪ 95	0.45	4.0	◪ 150	0.50	4.0	–	–	–	–	–	–	–	–	–
	T8430	1.6	■ 170	0.50	4.0	◪ 90	0.45	4.0	◪ 135	0.50	4.0	–	–	–	–	–	–	–	–	–
	T9310	1.6	■ 240	0.50	4.0	–	–	–	◪ 225	0.50	4.0	–	–	–	–	–	–	–	–	–
	T9315	1.6	■ 220	0.50	4.0	–	–	–	◪ 205	0.50	4.0	–	–	–	–	–	–	–	–	–
	T9325	1.6	■ 205	0.50	4.0	◪ 120	0.45	4.0	◪ 190	0.50	4.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	■ 175	0.50	4.0	◪ 105	0.45	4.0	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 160608E-RM	**T5305**	0.8	◪ 265	0.40	6.0	–	–	–	◪ 250	0.40	6.0	–	–	–	–	–	–	–	–	–
	T5315	0.8	◪ 240	0.40	6.0	–	–	–	◪ 225	0.40	6.0	–	–	–	–	–	–	–	–	–
	T8330	0.8	■ 150	0.40	6.0	◪ 90	0.36	6.0	◪ 140	0.40	6.0	–	–	–	–	–	–	–	–	–
	T8430	0.8	■ 155	0.40	6.0	◪ 85	0.36	6.0	◪ 130	0.40	6.0	–	–	–	–	–	–	–	–	–
	T9315	0.8	■ 215	0.40	6.0	–	–	–	◪ 200	0.40	6.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 190	0.40	6.0	◪ 110	0.36	6.0	◪ 180	0.40	6.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 165	0.40	6.0	◪ 95	0.36	6.0	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 160612E-RM	**T5305**	1.2	◪ 270	0.45	6.0	–	–	–	◪ 255	0.45	6.0	–	–	–	–	–	–	–	–	–
	T5315	1.2	◪ 245	0.45	6.0	–	–	–	◪ 230	0.45	6.0	–	–	–	–	–	–	–	–	–
	T6310	1.2	■ 155	0.45	6.0	◪ 110	0.41	6.0	◪ 125	0.45	6.0	–	–	–	–	–	–	–	–	–
	T7325	1.2	◪ 170	0.45	6.0	◪ 130	0.41	6.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	1.2	◪ 165	0.45	6.0	◪ 125	0.41	6.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	1.2	■ 155	0.45	6.0	◪ 90	0.41	6.0	◪ 145	0.45	6.0	–	–	–	–	–	–	–	–	–
	T8430	1.2	■ 155	0.45	6.0	◪ 85	0.41	6.0	◪ 130	0.45	6.0	–	–	–	–	–	–	–	–	–
	T9310	1.2	■ 230	0.45	6.0	–	–	–	◪ 215	0.45	6.0	–	–	–	–	–	–	–	–	–
	T9315	1.2	■ 215	0.45	6.0	–	–	–	◪ 200	0.45	6.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 195	0.45	6.0	◪ 115	0.41	6.0	◪ 185	0.45	6.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	■ 165	0.45	6.0	◪ 95	0.41	6.0	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 160616E-RM	**T5305**	1.6	◪ 270	0.50	6.0	–	–	–	◪ 255	0.50	6.0	–	–	–	–	–	–	–	–	–
	T5315	1.6	◪ 245	0.50	6.0	–	–	–	◪ 230	0.50	6.0	–	–	–	–	–	–	–	–	–
	T7325	1.6	◪ 175	0.50	6.0	◪ 135	0.45	6.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	1.6	◪ 165	0.50	6.0	◪ 125	0.45	6.0	–	–	–	–	–	–	–	–	–	–	–	–
	T9310	1.6	■ 225	0.50	6.0	–	–	–	◪ 210	0.50	6.0	–	–	–	–	–	–	–	–	–
	T9315	1.6	■ 215	0.50	6.0	–	–	–	◪ 200	0.50	6.0	–	–	–	–	–	–	–	–	–
	T9325	1.6	■ 190	0.50	6.0	◪ 110	0.45	6.0	◪ 180	0.50	6.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	■ 165	0.50	6.0	◪ 95	0.45	6.0	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 190608E-RM	**T5305**	0.8	◪ 260	0.40	7.5	–	–	–	◪ 245	0.40	7.5	–	–	–	–	–	–	–	–	–
	T5315	0.8	◪ 230	0.40	7.5	–	–	–	◪ 215	0.40	7.5	–	–	–	–	–	–	–	–	–
	T7335	0.8	◪ 155	0.40	7.5	◪ 120	0.36	7.5	–	–	–	–	–	–	–	–	–	–	–	–
	T9315	0.8	■ 210	0.40	7.5	–	–	–	◪ 195	0.40	7.5	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 190	0.40	7.5	◪ 110	0.36	7.5	◪ 180	0.40	7.5	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 160	0.40	7.5	◪ 95	0.36	7.5	–	–	–	–	–	–	–	–	–	–	–	–

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

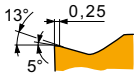
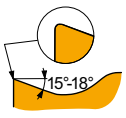
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
CNMG 190612E-RM	**T5305**	1.2	260	0.45	7.5	–	–	–	245	0.45	7.5	–	–	–	–	–	–	–	–	–
	T5315	1.2	240	0.45	7.5	–	–	–	225	0.45	7.5	–	–	–	–	–	–	–	–	–
	T6310	1.2	155	0.45	7.5	110	0.41	7.5	125	0.45	7.5	–	–	–	–	–	–	–	–	–
	T7325	1.2	170	0.45	7.5	130	0.41	7.5	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	1.2	160	0.45	7.5	120	0.41	7.5	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	1.2	155	0.45	7.5	90	0.41	7.5	145	0.45	7.5	–	–	–	–	–	–	–	–	–
	T8430	1.2	150	0.45	7.5	80	0.41	7.5	125	0.45	7.5	–	–	–	–	–	–	–	–	–
	T9310	1.2	220	0.45	7.5	–	–	–	205	0.45	7.5	–	–	–	–	–	–	–	–	–
	T9315	1.2	210	0.45	7.5	–	–	–	195	0.45	7.5	–	–	–	–	–	–	–	–	–
	T9325	1.2	185	0.45	7.5	110	0.41	7.5	175	0.45	7.5	–	–	–	–	–	–	–	–	–
	T9335	1.2	165	0.45	7.5	95	0.41	7.5	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 190616E-RM	**T5305**	1.6	265	0.50	7.5	–	–	–	250	0.50	7.5	–	–	–	–	–	–	–	–	–
	T5315	1.6	240	0.50	7.5	–	–	–	225	0.50	7.5	–	–	–	–	–	–	–	–	–
	T6310	1.6	155	0.50	7.5	110	0.45	7.5	125	0.50	7.5	–	–	–	–	–	–	–	–	–
	T7325	1.6	175	0.50	7.5	135	0.45	7.5	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	1.6	160	0.50	7.5	120	0.45	7.5	–	–	–	–	–	–	–	–	–	–	–	–
	T9310	1.6	225	0.50	7.5	–	–	–	210	0.50	7.5	–	–	–	–	–	–	–	–	–
	T9315	1.6	210	0.50	7.5	–	–	–	195	0.50	7.5	–	–	–	–	–	–	–	–	–
	T9325	1.6	190	0.50	7.5	110	0.45	7.5	180	0.50	7.5	–	–	–	–	–	–	–	–	–
	T9335	1.6	160	0.50	7.5	95	0.45	7.5	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 250924E-RM	**T7325**	2.4	105	0.80	12.0	80	0.72	12.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	2.4	100	0.80	12.0	75	0.72	12.0	–	–	–	–	–	–	–	–	–	–	–	–
	T9226	2.4	90	0.80	12.0	50	0.72	12.0	85	0.80	12.0	–	–	–	–	–	–	–	–	–
	T9315	2.4	120	0.80	12.0	–	–	–	110	0.80	12.0	–	–	–	–	–	–	–	–	–
	T9325	2.4	105	0.80	12.0	60	0.72	12.0	95	0.80	12.0	–	–	–	–	–	–	–	–	–
	T9335	2.4	85	0.80	12.0	50	0.72	12.0	–	–	–	–	–	–	–	–	–	–	–	–



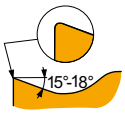
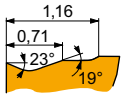
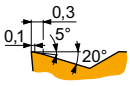
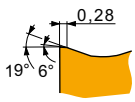
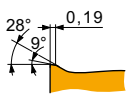
SF geometry with positive design for fine-finish machining of thin walls and continuous cuts.

CNMG 120404E-SF	**H07**	0.4	–	–	–	90	0.14	1.0	145	0.15	1.0	470	0.18	1.0	45	0.12	0.8	–	–	–
	T6310	0.4	180	0.15	1.0	125	0.14	1.0	145	0.15	1.0	540	0.18	1.0	50	0.12	0.8	35	0.15	1.0
	T7325	0.4	205	0.17	1.0	155	0.15	1.0	–	–	–	–	–	–	65	0.15	0.8	–	–	–
	T7335	0.4	200	0.17	1.0	155	0.15	1.0	–	–	–	–	–	–	65	0.15	0.8	–	–	–
	T8315	0.4	195	0.15	1.0	115	0.14	1.0	185	0.15	1.0	585	0.18	1.0	45	0.12	0.8	35	0.15	1.0
	T8330	0.4	180	0.15	1.0	105	0.14	1.0	170	0.15	1.0	540	0.18	1.0	45	0.12	0.8	35	0.15	1.0
	T8430	0.4	220	0.15	1.0	120	0.14	1.0	180	0.15	1.0	600	0.18	1.0	45	0.12	0.8	35	0.15	1.0
	T9315	0.4	300	0.15	1.0	–	–	–	285	0.15	1.0	–	–	–	–	–	–	60	0.15	1.0
	T9325	0.4	255	0.17	1.0	150	0.15	1.0	240	0.17	1.0	–	–	–	55	0.15	0.8	–	–	–
CNMG 120408E-SF	**H07**	0.8	–	–	–	95	0.18	1.0	155	0.20	1.0	495	0.24	1.0	50	0.14	0.8	–	–	–
	T6310	0.8	200	0.20	1.0	140	0.18	1.0	160	0.20	1.0	600	0.24	1.0	60	0.14	0.8	40	0.15	1.0
	T7325	0.8	230	0.20	1.0	175	0.18	1.0	–	–	–	–	–	–	70	0.16	0.8	–	–	–
	T7335	0.8	220	0.20	1.0	170	0.18	1.0	–	–	–	–	–	–	70	0.16	0.8	–	–	–
	T8315	0.8	210	0.20	1.0	125	0.18	1.0	195	0.20	1.0	630	0.24	1.0	50	0.14	0.8	40	0.15	1.0
	T8330	0.8	200	0.20	1.0	120	0.18	1.0	190	0.20	1.0	600	0.24	1.0	50	0.14	0.8	40	0.15	1.0
	T8430	0.8	230	0.20	1.0	125	0.18	1.0	185	0.20	1.0	630	0.24	1.0	45	0.14	0.8	35	0.15	1.0
	T9315	0.8	315	0.20	1.0	–	–	–	295	0.20	1.0	–	–	–	–	–	–	60	0.15	1.0
	T9325	0.8	280	0.20	1.0	165	0.18	1.0	265	0.20	1.0	–	–	–	60	0.16	0.8	–	–	–
CNMG 120412E-SF	**T6310**	1.2	190	0.25	1.5	135	0.23	1.5	150	0.25	1.5	570	0.30	1.5	55	0.18	1.2	35	0.15	1.0
	T7325	1.2	220	0.25	1.5	170	0.23	1.5	–	–	–	–	–	–	70	0.18	1.2	–	–	–
	T8315	1.2	200	0.25	1.5	120	0.23	1.5	190	0.25	1.5	600	0.30	1.5	50	0.18	1.2	40	0.15	1.0
	T8430	1.2	210	0.25	1.5	115	0.23	1.5	175	0.25	1.5	585	0.30	1.5	45	0.18	1.2	35	0.15	1.0

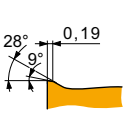
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
SM geometry with positive design for medium machining, and continuous to interrupted cuts.																				
CNMG 120404E-SM	**T6310**	0.4	155	0.22	2.0	110	0.20	2.0	125	0.22	2.0	465	0.26	2.0	45	0.20	1.6	30	0.15	1.0
	T7325	0.4	175	0.22	2.0	135	0.20	2.0	–	–	–	–	–	–	55	0.20	1.6	–	–	–
	T7335	0.4	170	0.22	2.0	130	0.20	2.0	–	–	–	–	–	–	55	0.20	1.6	–	–	–
	T8330	0.4	155	0.22	2.0	90	0.20	2.0	145	0.22	2.0	465	0.26	2.0	35	0.20	1.6	30	0.15	1.0
	T8430	0.4	170	0.22	2.0	90	0.20	2.0	135	0.22	2.0	465	0.26	2.0	35	0.20	1.6	25	0.15	1.0
	T9315	0.4	245	0.20	2.0	–	–	–	230	0.20	2.0	–	–	–	–	–	–	45	0.15	1.0
	T9325	0.4	210	0.22	2.0	125	0.20	2.0	195	0.22	2.0	–	–	–	45	0.20	1.6	–	–	–
CNMG 120408E-SM	**T6310**	0.8	175	0.25	2.0	125	0.23	2.0	140	0.25	2.0	525	0.30	2.0	50	0.20	1.6	35	0.15	1.0
	T7325	0.8	200	0.25	2.0	155	0.23	2.0	–	–	–	–	–	–	65	0.20	1.6	–	–	–
	T7335	0.8	190	0.25	2.0	145	0.23	2.0	–	–	–	–	–	–	60	0.20	1.6	–	–	–
	T8330	0.8	175	0.25	2.0	105	0.23	2.0	165	0.25	2.0	525	0.30	2.0	40	0.20	1.6	35	0.15	1.0
	T8430	0.8	195	0.25	2.0	105	0.23	2.0	160	0.25	2.0	540	0.30	2.0	40	0.20	1.6	30	0.15	1.0
	T9315	0.8	265	0.25	2.0	–	–	–	250	0.25	2.0	–	–	–	–	–	–	50	0.15	1.0
	T9325	0.8	235	0.25	2.0	140	0.23	2.0	220	0.25	2.0	–	–	–	50	0.20	1.6	–	–	–
CNMG 120412E-SM	**T6310**	1.2	175	0.30	2.0	125	0.27	2.0	140	0.30	2.0	525	0.36	2.0	50	0.24	1.6	35	0.15	1.0
	T7325	1.2	195	0.30	2.0	150	0.27	2.0	–	–	–	–	–	–	60	0.24	1.6	–	–	–
	T7335	1.2	190	0.30	2.0	145	0.27	2.0	–	–	–	–	–	–	60	0.24	1.6	–	–	–
	T8330	1.2	175	0.30	2.0	105	0.27	2.0	165	0.30	2.0	525	0.36	2.0	40	0.24	1.6	35	0.15	1.0
	T8430	1.2	190	0.30	2.0	105	0.27	2.0	155	0.30	2.0	525	0.36	2.0	40	0.24	1.6	30	0.15	1.0
	T9315	1.2	260	0.30	2.0	–	–	–	245	0.30	2.0	–	–	–	–	–	–	50	0.15	1.0
	T9325	1.2	235	0.30	2.0	140	0.27	2.0	220	0.30	2.0	–	–	–	50	0.24	1.6	–	–	–
CNMG 160608E-SM	**T7325**	0.8	185	0.26	3.0	140	0.23	3.0	–	–	–	–	–	–	60	0.23	2.4	–	–	–
	T7335	0.8	180	0.26	3.0	140	0.23	3.0	–	–	–	–	–	–	55	0.23	2.4	–	–	–
	T8330	0.8	165	0.26	3.0	95	0.23	3.0	155	0.26	3.0	495	0.31	3.0	40	0.23	2.4	30	0.15	1.0
	T8430	0.8	180	0.26	3.0	95	0.23	3.0	145	0.26	3.0	495	0.31	3.0	35	0.23	2.4	30	0.15	1.0
	T9325	0.8	225	0.26	3.0	135	0.23	3.0	210	0.26	3.0	–	–	–	50	0.23	2.4	–	–	–
CNMG 160612E-SM	**T6310**	1.2	170	0.30	3.0	120	0.27	3.0	135	0.30	3.0	510	0.36	3.0	50	0.27	2.4	30	0.15	1.0
	T7325	1.2	190	0.30	3.0	145	0.27	3.0	–	–	–	–	–	–	60	0.27	2.4	–	–	–
	T7335	1.2	180	0.30	3.0	140	0.27	3.0	–	–	–	–	–	–	55	0.27	2.4	–	–	–
	T9315	1.2	250	0.30	3.0	–	–	–	235	0.30	3.0	–	–	–	–	–	–	50	0.15	1.0
	T9325	1.2	225	0.30	3.0	135	0.27	3.0	210	0.30	3.0	–	–	–	50	0.27	2.4	–	–	–
CNMG 190612E-SM	**T6310**	1.2	165	0.30	4.0	115	0.27	4.0	130	0.30	4.0	495	0.36	4.0	45	0.27	3.2	30	0.15	1.0
	T7325	1.2	185	0.30	4.0	140	0.27	4.0	–	–	–	–	–	–	60	0.27	3.2	–	–	–
	T7335	1.2	175	0.30	4.0	135	0.27	4.0	–	–	–	–	–	–	55	0.27	3.2	–	–	–
	T9315	1.2	245	0.30	4.0	–	–	–	230	0.30	4.0	–	–	–	–	–	–	45	0.15	1.0
	T9325	1.2	220	0.30	4.0	130	0.27	4.0	205	0.30	4.0	–	–	–	45	0.27	3.2	–	–	–
																				
ER-SI geometry with positive right-handed design for fine-finish to semi-rough machining, and continuous cuts.																				
CNMG 120404ER-SI	**T7325**	0.4	220	0.20	1.7	170	0.18	1.7	–	–	–	–	–	–	70	0.18	1.4	–	–	–
	T7335	0.4	215	0.20	1.7	165	0.18	1.7	–	–	–	–	–	–	65	0.18	1.4	–	–	–
	T8330	0.4	195	0.20	1.7	115	0.18	1.7	–	–	–	585	0.24	1.7	45	0.18	1.4	–	–	–
	T8430	0.4	225	0.20	1.7	120	0.18	1.7	–	–	–	615	0.24	1.7	45	0.18	1.4	–	–	–
	T9325	0.4	270	0.20	1.7	160	0.18	1.7	–	–	–	–	–	–	60	0.18	1.4	–	–	–
CNMG 120408ER-SI	**T7325**	0.8	215	0.35	1.7	165	0.32	1.7	–	–	–	–	–	–	65	0.25	1.4	–	–	–
	T7335	0.8	205	0.35	1.7	155	0.32	1.7	–	–	–	–	–	–	65	0.25	1.4	–	–	–
	T8315	0.8	205	0.35	1.7	120	0.32	1.7	–	–	–	615	0.42	1.7	50	0.25	1.4	–	–	–
	T8330	0.8	195	0.35	1.7	115	0.32	1.7	–	–	–	585	0.42	1.7	45	0.25	1.4	–	–	–
	T8430	0.8	210	0.35	1.7	115	0.32	1.7	–	–	–	585	0.42	1.7	45	0.25	1.4	–	–	–
	T9325	0.8	255	0.35	1.7	150	0.32	1.7	–	–	–	–	–	–	55	0.25	1.4	–	–	–
CNMG 120412ER-SI	**T8430**	1.2	225	0.35	1.7	120	0.32	1.7	–	–	–	615	0.42	1.7	45	0.25	1.4	–	–	–

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
			E																	
			EL-SI geometry with positive left-handed design for fine-finish to semi-rough machining, and continuous cuts.																	
CNMG 120404EL-SI	**T7325**	0.4	◪ 220	0.20	1.7	■ 170	0.18	1.7	–	–	–	–	–	–	◪ 70	0.18	1.4	–	–	–
	T7335	0.4	◪ 215	0.20	1.7	■ 165	0.18	1.7	–	–	–	–	–	–	◪ 65	0.18	1.4	–	–	–
	T8330	0.4	■ 195	0.20	1.7	■ 115	0.18	1.7	–	–	–	◪ 585	0.24	1.7	◪ 45	0.18	1.4	–	–	–
	T8430	0.4	■ 225	0.20	1.7	■ 120	0.18	1.7	–	–	–	◪ 615	0.24	1.7	◪ 45	0.18	1.4	–	–	–
	T9325	0.4	■ 270	0.20	1.7	■ 160	0.18	1.7	–	–	–	–	–	–	◪ 60	0.18	1.4	–	–	–
CNMG 120408EL-SI	**T7325**	0.8	◪ 215	0.35	1.7	■ 165	0.32	1.7	–	–	–	–	–	–	◪ 65	0.25	1.4	–	–	–
	T7335	0.8	◪ 205	0.35	1.7	■ 155	0.32	1.7	–	–	–	–	–	–	◪ 65	0.25	1.4	–	–	–
	T8315	0.8	◪ 205	0.35	1.7	■ 120	0.32	1.7	–	–	–	◪ 615	0.42	1.7	◪ 50	0.25	1.4	–	–	–
	T8330	0.8	■ 195	0.35	1.7	■ 115	0.32	1.7	–	–	–	◪ 585	0.42	1.7	◪ 45	0.25	1.4	–	–	–
	T8430	0.8	■ 210	0.35	1.7	■ 115	0.32	1.7	–	–	–	◪ 585	0.42	1.7	◪ 45	0.25	1.4	–	–	–
	T9325	0.8	■ 255	0.35	1.7	■ 150	0.32	1.7	–	–	–	–	–	–	◪ 55	0.25	1.4	–	–	–
CNMG 120412EL-SI	**T8430**	1.2	■ 225	0.35	1.7	■ 120	0.32	1.7	–	–	–	◪ 615	0.42	1.7	◪ 45	0.25	1.4	–	–	–
																				
			W E																	
			W-F wiper geometry for fine to finish machining with increased feed rates and improved surface finish.																	
CNMG 120408W-F	**T9315**	0.8	■ 215	0.45	0.8	–	–	–	◪ 200	0.45	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 190	0.45	0.8	–	–	–	◪ 180	0.45	0.8	–	–	–	–	–	–	–	–	–
																				
			W S																	
			W-M wiper geometry for semi-rough to rough machining with increased feed rates and improved surface finish.																	
CNMG 120408W-M	**T5315**	0.8	◪ 230	0.45	1.5	–	–	–	◪ 215	0.45	1.5	–	–	–	–	–	–	–	–	–
	T9315	0.8	■ 200	0.45	1.5	–	–	–	◪ 190	0.45	1.5	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 185	0.45	1.5	–	–	–	◪ 175	0.45	1.5	–	–	–	–	–	–	–	–	–
CNMG 120412W-M	**T5315**	1.2	◪ 230	0.55	1.5	–	–	–	◪ 215	0.55	1.5	–	–	–	–	–	–	–	–	–
	T9315	1.2	■ 200	0.55	1.5	–	–	–	◪ 190	0.55	1.5	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 180	0.55	1.5	–	–	–	◪ 170	0.55	1.5	–	–	–	–	–	–	–	–	–
																				
			W S																	
			W-MR wiper geometry for finish to rough machining with increased feed rates and improved surface finish.																	
CNMG 120404W-MR	**T9315**	0.4	■ 200	0.30	1.5	–	–	–	◪ 190	0.30	1.5	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 180	0.30	1.5	◪ 105	0.27	1.5	◪ 170	0.30	1.5	–	–	–	–	–	–	–	–	–
CNMG 120408W-MR	**T5315**	0.8	◪ 230	0.45	1.5	–	–	–	◪ 215	0.45	1.5	–	–	–	–	–	–	–	–	–
	T9310	0.8	■ 215	0.45	1.5	–	–	–	◪ 200	0.45	1.5	–	–	–	–	–	–	–	–	–
	T9315	0.8	■ 200	0.45	1.5	–	–	–	◪ 190	0.45	1.5	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 185	0.45	1.5	◪ 110	0.41	1.5	◪ 175	0.45	1.5	–	–	–	–	–	–	–	–	–
CNMG 120412W-MR	**T5315**	1.2	◪ 230	0.55	1.5	–	–	–	◪ 215	0.55	1.5	–	–	–	–	–	–	–	–	–
	T9310	1.2	■ 210	0.55	1.5	–	–	–	◪ 195	0.55	1.5	–	–	–	–	–	–	–	–	–
	T9315	1.2	■ 200	0.55	1.5	–	–	–	◪ 190	0.55	1.5	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 180	0.55	1.5	◪ 105	0.50	1.5	◪ 170	0.55	1.5	–	–	–	–	–	–	–	–	–
																				
			W 1 U S																	
			W-NM wiper geometry for finish to rough machining with increased feed rates and improved surface finish.																	
CNMG 120404W-NM	**T7325**	0.4	◪ 195	0.20	2.1	◪ 150	0.18	2.1	–	–	–	–	–	–	◪ 60	0.16	1.7	–	–	–
	T7335	0.4	◪ 190	0.20	2.1	◪ 145	0.18	2.1	–	–	–	–	–	–	◪ 60	0.16	1.7	–	–	–
	T9315	0.4	■ 270	0.20	2.1	–	–	–	◪ 255	0.20	2.1	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 240	0.20	2.1	◪ 140	0.18	2.1	◪ 225	0.20	2.1	–	–	–	◪ 50	0.16	1.7	–	–	–

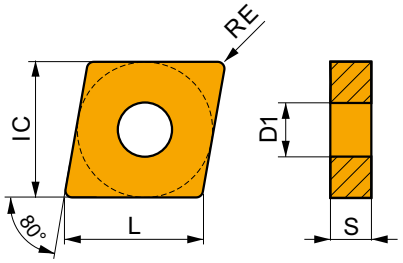
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
			W 1 U S																	
W-NM wiper geometry for finish to rough machining with increased feed rates and improved surface finish.																				
CNMG 120408W-NM	**T7325**	0.8	215	0.25	2.1	165	0.23	2.1	–	–	–	–	–	–	65	0.20	1.7	–	–	–
	T7335	0.8	210	0.25	2.1	160	0.23	2.1	–	–	–	–	–	–	65	0.20	1.7	–	–	–
	T9315	0.8	290	0.25	2.1	–	–	–	275	0.25	2.1	–	–	–	–	–	–	–	–	–
	T9325	0.8	260	0.25	2.1	155	0.23	2.1	245	0.25	2.1	–	–	–	55	0.20	1.7	–	–	–
CNMG 120412W-NM	**T7325**	1.2	215	0.30	2.1	165	0.27	2.1	–	–	–	–	–	–	65	0.24	1.7	–	–	–
	T7335	1.2	210	0.30	2.1	160	0.27	2.1	–	–	–	–	–	–	65	0.24	1.7	–	–	–
	T9315	1.2	285	0.30	2.1	–	–	–	270	0.30	2.1	–	–	–	–	–	–	–	–	–
	T9325	1.2	255	0.30	2.1	150	0.27	2.1	240	0.30	2.1	–	–	–	55	0.24	1.7	–	–	–

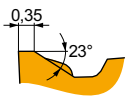
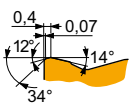
CNMM

PRAMET

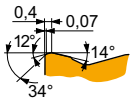
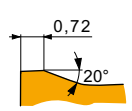
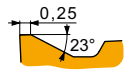
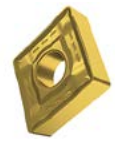
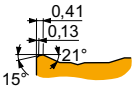
	IC	D1	L	S
	[mm]	[mm]	[mm]	[mm]
1204	12.700	5.16	12.90	4.76
1606	15.875	6.35	16.10	6.35
1906	19.050	7.94	19.30	6.35
2509	25.400	9.12	25.80	9.53



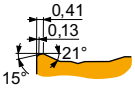
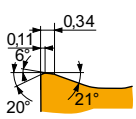
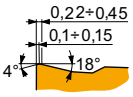
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
			S																	
DR geometry for semi-rough to rough machining, and continuous to interrupted cuts.																				
CNMM 160612E-DR	**T9315**	1.2	225	0.45	6.0	–	–	–	210	0.45	6.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	200	0.45	6.0	120	0.41	6.0	190	0.45	6.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	170	0.45	6.0	100	0.41	6.0	–	–	–	–	–	–	–	–	–	–	–	–
CNMM 190608E-DR	**T9315**	0.8	215	0.40	8.0	–	–	–	200	0.40	8.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	190	0.40	8.0	110	0.36	8.0	180	0.40	8.0	–	–	–	–	–	–	–	–	–
CNMM 190612E-DR	**T9315**	1.2	220	0.45	8.0	–	–	–	205	0.45	8.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	195	0.45	8.0	115	0.41	8.0	185	0.45	8.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	170	0.45	8.0	100	0.41	8.0	–	–	–	–	–	–	–	–	–	–	–	–
CNMM 190616E-DR	**T9325**	1.6	195	0.50	9.0	115	0.45	9.0	185	0.50	9.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	170	0.50	9.0	100	0.45	9.0	–	–	–	–	–	–	–	–	–	–	–	–
			P																	
HR geometry for rough to heavy-rough machining, and continuous to interrupted cuts.																				
CNMM 190616E-HR	**6640**	1.6	75	0.60	10.0	45	0.54	10.0	70	0.60	10.0	–	–	–	–	–	–	–	–	–
	T8345	1.6	55	0.60	10.0	30	0.54	10.0	50	0.60	10.0	–	–	–	–	–	–	–	–	–
	T9325	1.6	105	0.60	10.0	60	0.54	10.0	95	0.60	10.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	80	0.60	10.0	45	0.54	10.0	–	–	–	–	–	–	–	–	–	–	–	–
CNMM 190624E-HR	**T8345**	2.4	60	0.65	10.0	35	0.59	10.0	55	0.65	10.0	–	–	–	–	–	–	–	–	–
	T9315	2.4	115	0.65	10.0	–	–	–	105	0.65	10.0	–	–	–	–	–	–	–	–	–
	T9325	2.4	100	0.65	10.0	60	0.59	10.0	95	0.65	10.0	–	–	–	–	–	–	–	–	–
	T9335	2.4	85	0.65	10.0	50	0.59	10.0	–	–	–	–	–	–	–	–	–	–	–	–

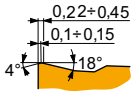
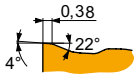
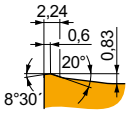
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
		[mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]
																				
			HR geometry for rough to heavy-rough machining, and continuous to interrupted cuts.																	
CNMM 250924E-HR	**6640**	2.4	■ 75	0.65	14.0	◪ 45	0.59	14.0	■ 70	0.65	14.0	–	–	–	–	–	–	–	–	–
	T8345	2.4	■ 55	0.65	14.0	◪ 30	0.59	14.0	◪ 50	0.65	14.0	–	–	–	–	–	–	–	–	–
	T9315	2.4	■ 110	0.65	14.0	–	–	–	◪ 100	0.65	14.0	–	–	–	–	–	–	–	–	–
	T9325	2.4	■ 100	0.65	14.0	◪ 60	0.59	14.0	◪ 95	0.65	14.0	–	–	–	–	–	–	–	–	–
	T9335	2.4	■ 80	0.65	14.0	◪ 45	0.59	14.0	–	–	–	–	–	–	–	–	–	–	–	–
																				
			HR2 geometry for rough to heavy-rough machining, and continuous to interrupted cuts.																	
CNMM 190616-HR2	**T9226**	1.6	■ 85	0.65	10.0	◪ 50	0.59	10.0	◪ 80	0.65	10.0	–	–	–	–	–	–	–	–	–
	T9315	1.6	■ 110	0.65	10.0	–	–	–	◪ 100	0.65	10.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	■ 80	0.65	10.0	◪ 45	0.59	10.0	–	–	–	–	–	–	–	–	–	–	–	–
CNMM 190624-HR2	**T9226**	2.4	■ 80	0.85	10.0	◪ 45	0.77	10.0	◪ 75	0.85	10.0	–	–	–	–	–	–	–	–	–
	T9315	2.4	■ 100	0.85	10.0	–	–	–	◪ 95	0.85	10.0	–	–	–	–	–	–	–	–	–
	T9335	2.4	■ 75	0.85	10.0	◪ 45	0.77	10.0	–	–	–	–	–	–	–	–	–	–	–	–
CNMM 250924-HR2	**T9315**	2.4	■ 100	0.85	12.0	–	–	–	◪ 95	0.85	12.0	–	–	–	–	–	–	–	–	–
	T9335	2.4	■ 75	0.85	12.0	◪ 45	0.77	12.0	–	–	–	–	–	–	–	–	–	–	–	–
																				
			NR geometry for semi-rough to rough machining, and continuous to interrupted cuts.																	
CNMM 120408E-NR	**6640**	0.8	■ 155	0.40	3.0	■ 90	0.36	3.0	◪ 145	0.40	3.0	–	–	–	–	–	–	–	–	–
	T7325	0.8	◪ 175	0.40	3.0	■ 135	0.36	3.0	–	–	–	–	–	–	◪ 55	0.28	2.4	–	–	–
	T7335	0.8	◪ 165	0.40	3.0	■ 125	0.36	3.0	–	–	–	–	–	–	◪ 50	0.28	2.4	–	–	–
	T8330	0.8	■ 155	0.40	3.0	■ 90	0.36	3.0	◪ 145	0.40	3.0	–	–	–	◪ 35	0.28	2.4	–	–	–
	T8430	0.8	■ 165	0.40	3.0	■ 90	0.36	3.0	◪ 135	0.40	3.0	–	–	–	◪ 35	0.28	2.4	–	–	–
	T9315	0.8	■ 215	0.40	3.0	–	–	–	◪ 200	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 195	0.40	3.0	■ 115	0.36	3.0	◪ 185	0.40	3.0	–	–	–	◪ 40	0.28	2.4	–	–	–
CNMM 120412E-NR	**T7325**	1.2	◪ 185	0.40	3.0	■ 140	0.36	3.0	–	–	–	–	–	–	◪ 60	0.28	2.4	–	–	–
	T7335	1.2	◪ 175	0.40	3.0	■ 135	0.36	3.0	–	–	–	–	–	–	◪ 55	0.28	2.4	–	–	–
	T8330	1.2	■ 165	0.40	3.0	■ 95	0.36	3.0	◪ 155	0.40	3.0	–	–	–	◪ 40	0.28	2.4	–	–	–
	T8430	1.2	■ 170	0.40	3.0	■ 90	0.36	3.0	◪ 135	0.40	3.0	–	–	–	◪ 35	0.28	2.4	–	–	–
	T9325	1.2	■ 205	0.40	3.0	■ 120	0.36	3.0	◪ 190	0.40	3.0	–	–	–	◪ 45	0.28	2.4	–	–	–
																				
			NR2 geometry for semi-rough to rough machining, and continuous to interrupted cuts.																	
CNMM 120408E-NR2	**T7325**	0.8	◪ 165	0.40	5.0	■ 125	0.36	5.0	–	–	–	–	–	–	◪ 50	0.28	4.0	–	–	–
	T7335	0.8	◪ 155	0.40	5.0	■ 120	0.36	5.0	–	–	–	–	–	–	◪ 50	0.28	4.0	–	–	–
	T8330	0.8	■ 150	0.40	5.0	■ 90	0.36	5.0	◪ 140	0.40	5.0	–	–	–	◪ 35	0.28	4.0	–	–	–
	T8430	0.8	■ 150	0.40	5.0	■ 80	0.36	5.0	◪ 125	0.40	5.0	–	–	–	◪ 30	0.28	4.0	–	–	–
	T9315	0.8	■ 205	0.40	5.0	–	–	–	◪ 190	0.40	5.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 185	0.40	5.0	■ 110	0.36	5.0	◪ 175	0.40	5.0	–	–	–	◪ 40	0.28	4.0	–	–	–
CNMM 120412E-NR2	**T7335**	1.2	◪ 155	0.45	5.0	■ 120	0.41	5.0	–	–	–	–	–	–	◪ 50	0.32	4.0	–	–	–
	T8330	1.2	■ 150	0.45	5.0	■ 90	0.41	5.0	◪ 140	0.45	5.0	–	–	–	◪ 35	0.32	4.0	–	–	–
	T8430	1.2	■ 150	0.45	5.0	■ 80	0.41	5.0	◪ 125	0.45	5.0	–	–	–	◪ 30	0.32	4.0	–	–	–
	T9315	1.2	■ 205	0.45	5.0	–	–	–	◪ 190	0.45	5.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 185	0.45	5.0	■ 110	0.41	5.0	◪ 175	0.45	5.0	–	–	–	◪ 40	0.32	4.0	–	–	–
CNMM 160608E-NR2	**T8330**	0.8	■ 145	0.40	6.0	■ 85	0.36	6.0	◪ 135	0.40	6.0	–	–	–	◪ 35	0.32	4.8	–	–	–
	T8430	0.8	■ 150	0.40	6.0	■ 80	0.36	6.0	◪ 125	0.40	6.0	–	–	–	◪ 30	0.32	4.8	–	–	–
	T9325	0.8	■ 180	0.40	6.0	■ 105	0.36	6.0	◪ 170	0.40	6.0	–	–	–	◪ 40	0.32	4.8	–	–	–

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
NR2 geometry for semi-rough to rough machining, and continuous to interrupted cuts.																				
CNMM 160612E-NR2	**T7325**	1.2	165	0.45	6.0	125	0.41	6.0	–	–	–	–	–	–	50	0.36	4.8	–	–	–
	T7335	1.2	155	0.45	6.0	120	0.41	6.0	–	–	–	–	–	–	50	0.36	4.8	–	–	–
	T8330	1.2	145	0.45	6.0	85	0.41	6.0	135	0.45	6.0	–	–	–	35	0.36	4.8	–	–	–
	T8430	1.2	150	0.45	6.0	80	0.41	6.0	125	0.45	6.0	–	–	–	30	0.36	4.8	–	–	–
	T9315	1.2	205	0.45	6.0	–	–	–	190	0.45	6.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	185	0.45	6.0	110	0.41	6.0	175	0.45	6.0	–	–	–	40	0.36	4.8	–	–	–
CNMM 160616E-NR2	**T7325**	1.6	165	0.50	6.0	125	0.45	6.0	–	–	–	–	–	–	50	0.40	4.8	–	–	–
	T7335	1.6	160	0.50	6.0	120	0.45	6.0	–	–	–	–	–	–	50	0.40	4.8	–	–	–
	T9325	1.6	180	0.50	6.0	105	0.45	6.0	170	0.50	6.0	–	–	–	40	0.40	4.8	–	–	–
CNMM 190612E-NR2	**T7325**	1.2	155	0.45	9.0	120	0.41	9.0	–	–	–	–	–	–	50	0.36	7.2	–	–	–
	T7335	1.2	145	0.45	9.0	110	0.41	9.0	–	–	–	–	–	–	45	0.36	7.2	–	–	–
	T8330	1.2	140	0.45	9.0	80	0.41	9.0	130	0.45	9.0	–	–	–	35	0.36	7.2	–	–	–
	T8430	1.2	140	0.45	9.0	75	0.41	9.0	115	0.45	9.0	–	–	–	30	0.36	7.2	–	–	–
	T9325	1.2	175	0.45	9.0	105	0.41	9.0	165	0.45	9.0	–	–	–	35	0.36	7.2	–	–	–
CNMM 190616E-NR2	**T7325**	1.6	160	0.50	9.0	120	0.45	9.0	–	–	–	–	–	–	50	0.40	7.2	–	–	–
	T7335	1.6	150	0.50	9.0	115	0.45	9.0	–	–	–	–	–	–	45	0.40	7.2	–	–	–
	T8330	1.6	140	0.50	9.0	80	0.45	9.0	130	0.50	9.0	–	–	–	35	0.40	7.2	–	–	–
	T8430	1.6	140	0.50	9.0	75	0.45	9.0	115	0.50	9.0	–	–	–	30	0.40	7.2	–	–	–
	T9315	1.6	195	0.50	9.0	–	–	–	185	0.50	9.0	–	–	–	–	–	–	–	–	–
	T9325	1.6	175	0.50	9.0	105	0.45	9.0	165	0.50	9.0	–	–	–	35	0.40	7.2	–	–	–
CNMM 190624E-NR2	**T7335**	2.4	130	0.80	9.0	100	0.72	9.0	–	–	–	–	–	–	40	0.56	7.2	–	–	–
	T9325	2.4	150	0.80	9.0	90	0.72	9.0	140	0.80	9.0	–	–	–	30	0.56	7.2	–	–	–
CNMM 250924E-NR2	**T7325**	2.4	100	0.80	12.0	75	0.72	12.0	–	–	–	–	–	–	30	0.56	9.6	–	–	–
	T7335	2.4	95	0.80	12.0	70	0.72	12.0	–	–	–	–	–	–	30	0.56	9.6	–	–	–
	T8430	2.4	80	0.80	12.0	45	0.72	12.0	65	0.80	12.0	–	–	–	15	0.56	9.6	–	–	–
	T9315	2.4	110	0.80	12.0	–	–	–	100	0.80	12.0	–	–	–	–	–	–	–	–	–
	T9325	2.4	100	0.80	12.0	60	0.72	12.0	95	0.80	12.0	–	–	–	20	0.56	9.6	–	–	–
																				
NRM geometry with positive design for semi-rough to rough machining, and continuous to interrupted cuts.																				
CNMM 250924-NRM	**T7325**	2.4	95	0.70	10.0	70	0.63	10.0	–	–	–	–	–	–	30	0.49	8.0	–	–	–
	T7335	2.4	90	0.70	10.0	70	0.63	10.0	–	–	–	–	–	–	25	0.49	8.0	–	–	–
	T9315	2.4	115	0.70	10.0	–	–	–	105	0.70	10.0	–	–	–	–	–	–	–	–	–
																				
OR geometry for semi-rough to rough machining, and continuous to interrupted cuts.																				
CNMM 120408E-OR	**T8330**	0.8	150	0.40	5.0	90	0.36	5.0	140	0.40	5.0	–	–	–	35	0.28	4.0	–	–	–
	T8430	0.8	150	0.40	5.0	80	0.36	5.0	125	0.40	5.0	–	–	–	30	0.28	4.0	–	–	–
	T9315	0.8	205	0.40	5.0	–	–	–	190	0.40	5.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	185	0.40	5.0	110	0.36	5.0	175	0.40	5.0	–	–	–	40	0.28	4.0	–	–	–
	T9335	0.8	160	0.40	5.0	95	0.36	5.0	–	–	–	–	–	–	35	0.28	4.0	–	–	–
CNMM 120412E-OR	**T9315**	1.2	205	0.45	5.0	–	–	–	190	0.45	5.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	185	0.45	5.0	110	0.41	5.0	175	0.45	5.0	–	–	–	40	0.36	4.0	–	–	–
	T9335	1.2	165	0.45	5.0	95	0.41	5.0	–	–	–	–	–	–	35	0.36	4.0	–	–	–
CNMM 120416E-OR	**T9325**	1.6	190	0.50	5.0	110	0.45	5.0	180	0.50	5.0	–	–	–	40	0.40	4.0	–	–	–
	T9335	1.6	165	0.50	5.0	95	0.45	5.0	–	–	–	–	–	–	35	0.40	4.0	–	–	–
CNMM 160608E-OR	**T9315**	0.8	205	0.40	6.0	–	–	–	190	0.40	6.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	180	0.40	6.0	105	0.36	6.0	170	0.40	6.0	–	–	–	40	0.32	4.8	–	–	–
	T9335	0.8	160	0.40	6.0	95	0.36	6.0	–	–	–	–	–	–	35	0.32	4.8	–	–	–
CNMM 160612E-OR	**T8430**	1.2	150	0.45	6.0	80	0.41	6.0	125	0.45	6.0	–	–	–	30	0.36	4.8	–	–	–
	T9315	1.2	205	0.45	6.0	–	–	–	190	0.45	6.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	185	0.45	6.0	110	0.41	6.0	175	0.45	6.0	–	–	–	40	0.36	4.8	–	–	–

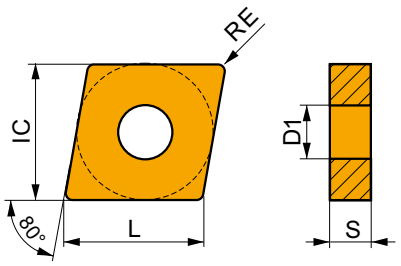
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
OR geometry for semi-rough to rough machining, and continuous to interrupted cuts.																				
CNMM 160616E-OR	**T9315**	1.6	■	205	0.50	6.0		–	–	–	◪	190	0.50	6.0		–	–	–		–	–	–		–	–	–
	T9325	1.6	■	180	0.50	6.0	◪	105	0.45	6.0	◪	170	0.50	6.0		–	–	–	◪	40	0.40	4.8		–	–	–
CNMM 190612E-OR	**T8330**	1.2	■	140	0.45	9.0	◪	80	0.41	9.0	■	130	0.45	9.0		–	–	–	◪	35	0.36	7.2		–	–	–
	T8430	1.2	■	140	0.45	9.0	◪	75	0.41	9.0	◪	115	0.45	9.0		–	–	–	◪	30	0.36	7.2		–	–	–
	T9315	1.2	■	195	0.45	9.0		–	–	–	◪	185	0.45	9.0		–	–	–		–	–	–		–	–	–
	T9325	1.2	■	175	0.45	9.0	◪	105	0.41	9.0	◪	165	0.45	9.0		–	–	–	◪	35	0.36	7.2		–	–	–
	T9335	1.2	■	150	0.45	9.0	◪	90	0.41	9.0		–	–	–		–	–	–	◪	30	0.36	7.2		–	–	–
CNMM 190616E-OR	**T8330**	1.6	■	140	0.50	9.0	◪	80	0.45	9.0	■	130	0.50	9.0		–	–	–	◪	35	0.40	7.2		–	–	–
	T8345	1.6	■	120	0.50	9.0	◪	70	0.45	9.0	◪	110	0.50	9.0		–	–	–	◪	30	0.40	7.2		–	–	–
	T8430	1.6	■	140	0.50	9.0	◪	75	0.45	9.0	◪	115	0.50	9.0		–	–	–	◪	30	0.40	7.2		–	–	–
	T9315	1.6	■	195	0.50	9.0		–	–	–	◪	185	0.50	9.0		–	–	–		–	–	–		–	–	–
	T9325	1.6	■	175	0.50	9.0	◪	105	0.45	9.0	◪	165	0.50	9.0		–	–	–	◪	35	0.40	7.2		–	–	–
	T9335	1.6	■	155	0.50	9.0	◪	90	0.45	9.0		–	–	–		–	–	–	◪	30	0.40	7.2		–	–	–
CNMM 190624E-OR	**T9315**	2.4	■	165	0.80	9.0		–	–	–	◪	155	0.80	9.0		–	–	–		–	–	–		–	–	–
	T9325	2.4	■	150	0.80	9.0	◪	90	0.72	9.0	◪	140	0.80	9.0		–	–	–	◪	30	0.56	7.2		–	–	–
CNMM 250924E-OR	**T8330**	2.4	■	75	1.00	12.0	◪	45	0.90	12.0	■	70	1.00	12.0		–	–	–	◪	15	0.70	9.6		–	–	–
	T8430	2.4	■	75	1.00	12.0	◪	40	0.90	12.0	◪	60	1.00	12.0		–	–	–	◪	15	0.70	9.6		–	–	–
	T9315	2.4	■	100	1.00	12.0		–	–	–	◪	95	1.00	12.0		–	–	–		–	–	–		–	–	–
	T9325	2.4	■	95	1.00	12.0	◪	55	0.90	12.0	◪	90	1.00	12.0		–	–	–	◪	20	0.70	9.6		–	–	–
	T9335	2.4	■	75	1.00	12.0	◪	45	0.90	12.0		–	–	–		–	–	–	◪	15	0.70	9.6		–	–	–
																				
OR1 geometry for semi-rough to heavy-rough machining, and continuous to interrupted cuts.																				
CNMM 190616E-OR1	**T9325**	1.6	■	175	0.50	9.0	◪	105	0.45	9.0	◪	165	0.50	9.0		–	–	–	◪	35	0.35	7.2		–	–	–
	T9335	1.6	■	155	0.50	9.0	◪	90	0.45	9.0		–	–	–		–	–	–	◪	30	0.35	7.2		–	–	–
																				
Geometry 923 for semi-rough to heavy-rough machining, and continuous to heavy interrupted cuts.																				
CNMM 250924S-923	**T8330**	2.4	■	75	0.85	12.0	■	45	0.77	12.0	◪	70	0.85	12.0		–	–	–	◪	15	0.60	9.6		–	–	–
	T8430	2.4	■	75	0.85	12.0	■	40	0.77	12.0	◪	60	0.85	12.0		–	–	–	◪	15	0.60	9.6		–	–	–
	T9335	2.4	■	75	0.85	12.0	■	45	0.77	12.0		–	–	–		–	–	–	◪	15	0.60	9.6		–	–	–

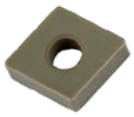
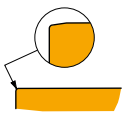
CNGA CER

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
1204	12.700	5.16	12.90	4.76



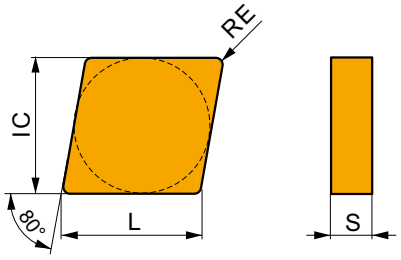
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
  HSC T																				
For machining with high speeds and continuous cuts.																				
CNGA 120404 T02020	**TC100**	0.4	–	–	–	–	–	–	590	0.10	2.0	–	–	–	–	–	–	–	–	–
CNGA 120408 T01020	**TC100**	0.8	–	–	–	–	–	–	550	0.20	2.0	–	–	–	–	–	–	–	–	–
CNGA 120412 T01020	**TC100**	1.2	–	–	–	–	–	–	540	0.25	2.0	–	–	–	–	–	–	–	–	–

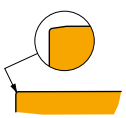
CNGN CER

PRAMET

	IC [mm]	L [mm]	S [mm]
1204	12.700	12.90	4.76
1207	12.700	12.90	7.94



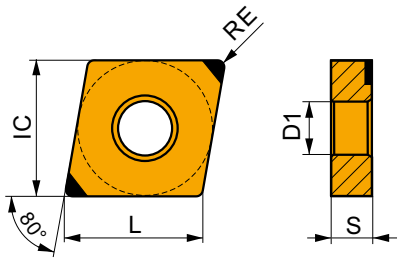
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
 HSC T																				
For machining with high speeds and continuous cuts.																				
CNGN 120408 T01020	**TC100**	0.8	–	–	–	–	–	–	550	0.20	2.0	–	–	–	–	–	–	–	–	–
CNGN 120708 T01020	**TC100**	0.8	–	–	–	–	–	–	550	0.20	2.0	–	–	–	–	–	–	–	–	–
CNGN 120712 T01020	**TC100**	1.2	–	–	–	–	–	–	540	0.25	2.0	–	–	–	–	–	–	–	–	–

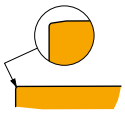
CNGA CBN

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
1204	12.700	5.16	12.90	4.76



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			HSC		S															
			For finish machining and continuous cuts.																	
CNGA 120404S01020B	TB310	0.4	–	–	–	–	–	–	510	0.10	0.4	–	–	–	135	0.07	0.3	105	0.15	1.0
CNGA 120408S01020B	TB310	0.8	–	–	–	–	–	–	530	0.15	0.6	–	–	–	140	0.11	0.5	110	0.15	1.0

DCBN(RL) EXT

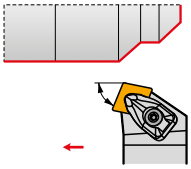
P M K N S H

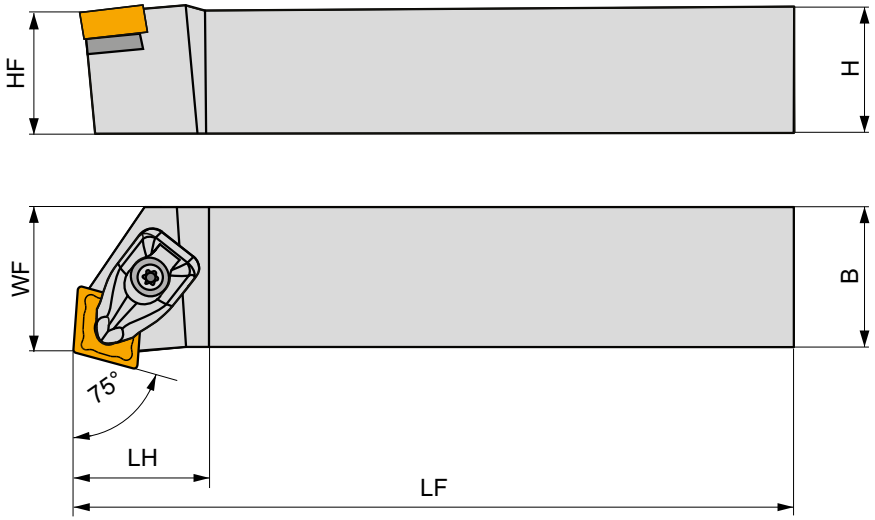
PRAMET

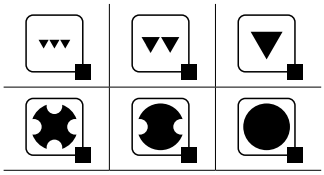
D

External Double Clamp Turning Holder with 75° Cutting Angle for CN.. Insert

External Right/Left hand double clamp 75° tool holder. Suited for longitudinal and face turning without shoulder and chamfering with negative CN.. 12 up to 19 size inserts. Available with shanks 20x20 up to 40x40 mm. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg			
R	DCBNR 2020 K 12	20	20	20	17	125	34.2	-6	-6	0.43	GI043	DC12	AT001
	DCBNR 2525 M 12	25	25	25	22	150	34.6	-6	-6	0.76	GI043	DC12	AT001
	DCBNR 3225 P 12	32	25	32	22	170	34.6	-6	-6	1.09	GI043	DC12	AT001
	DCBNR 2525 M 16	25	25	25	22	150	41.5	-6	-6	0.80	GI050	DC16	AT005
	DCBNR 3225 P 16	32	25	32	22	170	32	-6	-6	1.11	GI050	DC16	AT005
	DCBNR 3232 P 19	32	32	32	27	170	46.1	-6	-6	1.39	GI042	DC19	–
	DCBNR 4040 S 19	40	40	40	35	250	46.7	-6	-6	3.16	GI042	DC19	–
L	DCBNL 2020 K 12	20	20	20	17	125	34.2	-6	-6	0.43	GI043	DC12	AT001
	DCBNL 2525 M 12	25	25	25	22	150	34.6	-6	-6	0.76	GI043	DC12	AT001
	DCBNL 3225 P 12	32	25	32	22	170	34.6	-6	-6	1.09	GI043	DC12	AT001
	DCBNL 2525 M 16	25	25	25	22	150	41.5	-6	-6	0.79	GI050	DC16	AT005
	DCBNL 3225 P 16	32	25	32	22	170	32	-6	-6	1.11	GI050	DC16	AT005
	DCBNL 3232 P 19	32	32	32	27	170	46.1	-6	-6	1.39	GI042	DC19	–

GI042	CN.. 1906..
GI043	CN.. 1204..
GI050	CN.. 1606..

		Nm				
DC12	DCS 12	3.9	DCS 234-01	US 2002-T15P	FLAG T15P/3,5	–
DC16	DCS 16	6.4	DCS 234-03	US 2007-T20P	–	LK T20P
DC19	DCS 19	6.4	DCS 236-01	US 2007-T20P	–	LK T20P

AT001a	CN.. 1207..	–	DCS 234-02
AT005a	CN.. 1607..	–	DCS 234-04
AT001b	CER CN.N 1204..	DCS 12C4	–
AT001c	CER CN.A 1204..	DCS 12C2	–
AT005b	CER CN.N 1606..	DCS 16C4	–
AT005c	CER CN.A 1606..	DCS 16C2	–

DCKN(RL) EXT

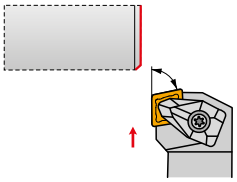
P M K N S H

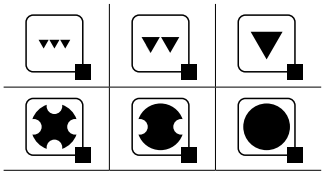
PRAMET

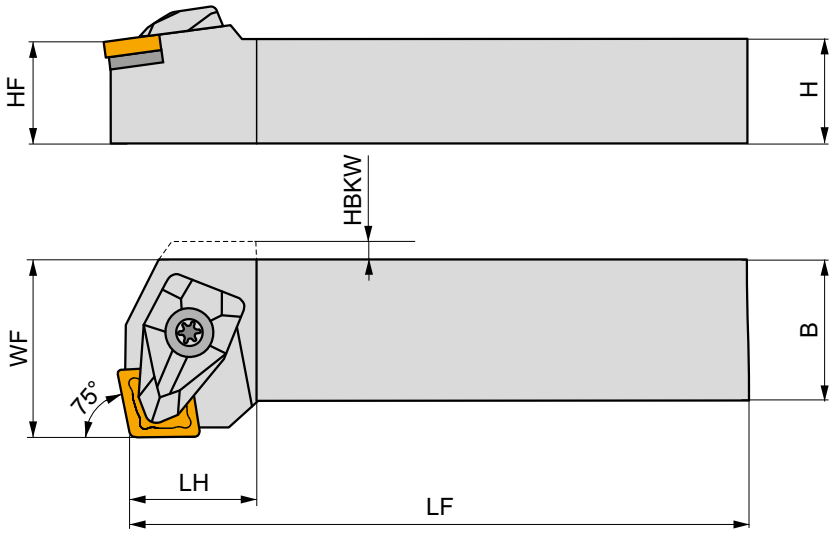
D

External Double Clamp Holder, 75° (Face) Cutting Angle for CN.. Insert

External Right/Left hand double clamp 75° tool holder. Suited for face turning and occasionally chamfering with negative CN.. 12 or 16 size inserts. Available with shanks 20x20 up to 32x32 mm. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	HBKW [mm]	LAMS [°]	GAMO [°]	kg			
R	DCKNR 2020 K 12	20	20	20	25	125	21.2	4.5	-6	-6	0.46	GI043	DC12	AT001
	DCKNR 2525 M 12	25	25	25	32	150	21.1	–	-6	-6	0.80	GI043	DC12	AT001
	DCKNR 3225 P 12	32	25	32	32	170	21.1	–	-6	-6	1.14	GI043	DC12	AT001
	DCKNR 3232 P 16	32	32	32	40	170	26	–	-6	-6	1.46	GI050	DC16	AT005
L	DCKNL 2020 K 12	20	20	20	25	125	21.2	4.5	-6	-6	0.46	GI043	DC12	AT001
	DCKNL 2525 M 12	25	25	25	32	150	21.1	–	-6	-6	0.80	GI043	DC12	AT001
	DCKNL 3225 P 12	32	25	32	32	170	21.1	–	-6	-6	1.13	GI043	DC12	AT001
	DCKNL 3232 P 16	32	32	32	40	170	26	–	-6	-6	1.46	GI050	DC16	AT005

GI043	CN.. 1204..
GI050	CN.. 1606..

DC12	DCS 12	3.9	DCS 234-01	US 2002-T15P	FLAG T15P/3,5	–
DC16	DCS 16	6.4	DCS 234-03	US 2007-T20P	–	LK T20P

AT001a	CN.. 1207..	–	DCS 234-02
AT005a	CN.. 1607..	–	DCS 234-04
AT001b	CER CN.N 1204..	DCS 12C4	–
AT001c	CER CN.A 1204..	DCS 12C2	–
AT005b	CER CN.N 1606..	DCS 16C4	–
AT005c	CER CN.A 1606..	DCS 16C2	–

DCLN(RL) EXT

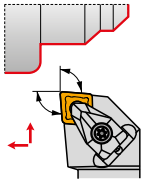
P M K N S H

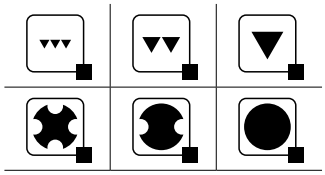
PRAMET

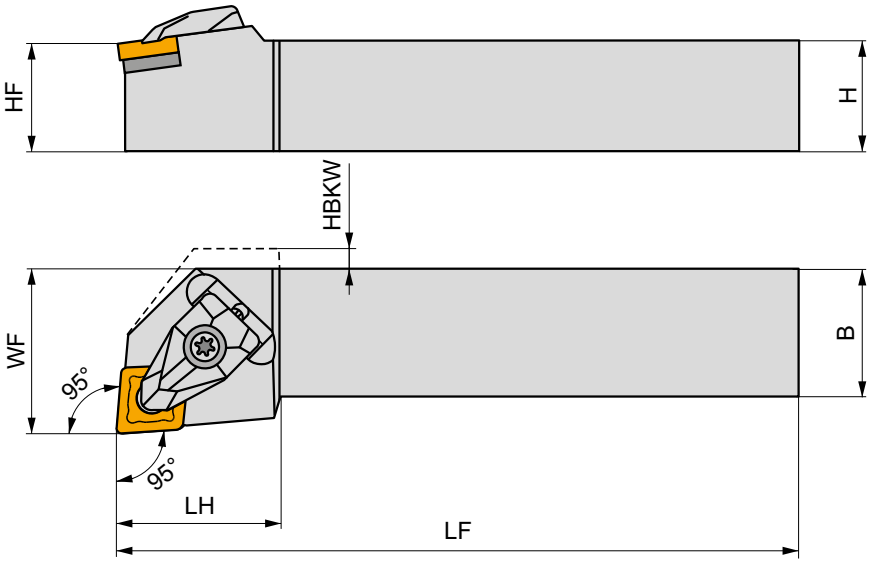
D

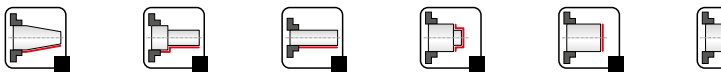
External Double Clamp Turning Holder with 95° Cutting Angle for CN.. Insert

External Right/Left hand double clamp 95° tool holder. Suited for longitudinal turning, chamfering and facing with shoulder, using negative CN.. 09 up to 19 size inserts and available in 16x16 up to 40x40 mm shanks. Body treated for longer tool life.









	Product	H	B	HF	WF	LF	LH	HBKW	LAMS	GAMO	kg			
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[°]	[°]				
R	DCLNR 1616 H 09	16	16	16	20	100	25	–	-6	-6	0.27	GI133	DC09	–
	DCLNR 2020 K 09	20	20	20	25	125	25	–	-6	-6	0.44	GI133	DC09	–
	DCLNR 2525 M 09	25	25	25	32	150	25	–	-6	-6	0.78	GI133	DC09	–
	DCLNR 1616 H 12	16	16	16	20	100	32.3	4.5	-6	-6	0.26	GI043	DCI12	AT001
	DCLNR 2020 K 12	20	20	20	25	125	30	–	-6	-6	0.44	GI043	DC12	AT001
	DCLNR 2525 M 12	25	25	25	32	150	30	–	-6	-6	0.78	GI043	DC12	AT001
	DCLNR 3225 P 12	32	25	32	32	170	30	–	-6	-6	1.10	GI043	DC12	AT001
	DCLNR 2525 M 16	25	25	25	32	150	39	–	-6	-6	0.81	GI050	DC16	AT005
	DCLNR 3225 P 16	32	25	32	32	170	35	–	-6	-6	1.20	GI050	DC16	AT005
	DCLNR 3232 P 19	32	32	32	40	170	40	–	-6	-6	1.55	GI042	DC19	–
	DCLNR 4040 S 19	40	40	40	50	250	43.4	–	-6	-6	3.26	GI042	DC19	–
L	DCLNL 1616 H 09	16	16	16	20	100	24.8	–	-6	-6	0.22	GI133	DC09	–
	DCLNL 2020 K 09	20	20	20	25	125	24.8	–	-6	-6	0.42	GI133	DC09	–
	DCLNL 2525 M 09	25	25	25	32	150	24.8	–	-6	-6	0.76	GI133	DC09	–
	DCLNL 1616 H 12	16	16	16	20	100	32.2	4.5	-6	-6	0.26	GI043	DCI12	AT001
	DCLNL 2020 K 12	20	20	20	25	125	32	–	-6	-6	0.44	GI043	DC12	AT001
	DCLNL 2525 M 12	25	25	25	32	150	32	–	-6	-6	0.78	GI043	DC12	AT001
	DCLNL 3225 P 12	32	25	32	32	170	32	–	-6	-6	1.10	GI043	DC12	AT001
	DCLNL 2525 M 16	25	25	25	32	150	39	–	-6	-6	0.81	GI050	DC16	AT005
	DCLNL 3225 P 16	32	25	32	32	170	39	–	-6	-6	1.20	GI050	DC16	AT005
	DCLNL 3232 P 19	32	32	32	40	170	43.2	–	-6	-6	1.51	GI042	DC19	–
	DCLNL 4040 S 19	40	40	40	50	250	43.4	–	-6	-6	3.26	GI042	DC19	–

GI042	CN.. 1906..
GI043	CN.. 1204..

GI050	CN.. 1606..
GI133	CN.. 0903..

		Nm				
DC09	DCS 09	1.7	DCS 236-04	US 2004-T09P	FLAG T09P	–
DC12	DCS 12	3.9	DCS 234-01	US 2002-T15P	FLAG T15P/3,5	–
DC16	DCS 16	6.4	DCS 234-03	US 2007-T20P	–	LK T20P
DC19	DCS 19	6.4	DCS 236-01	US 2007-T20P	–	LK T20P
DCI12	DCS 12	3.9	DCS 236-03	US 2002-T15P	FLAG T15P/3,5	–

AT001a	CN.. 1207..	–	DCS 234-02
AT005a	CN.. 1607..	–	DCS 234-04
AT001b	CER CN.N 1204..	DCS 12C4	–
AT001c	CER CN.A 1204..	DCS 12C2	–
AT005b	CER CN.N 1606..	DCS 16C4	–
AT005c	CER CN.A 1606..	DCS 16C2	–

PCBN(RL) EXT

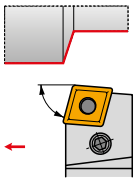
P M K N S H

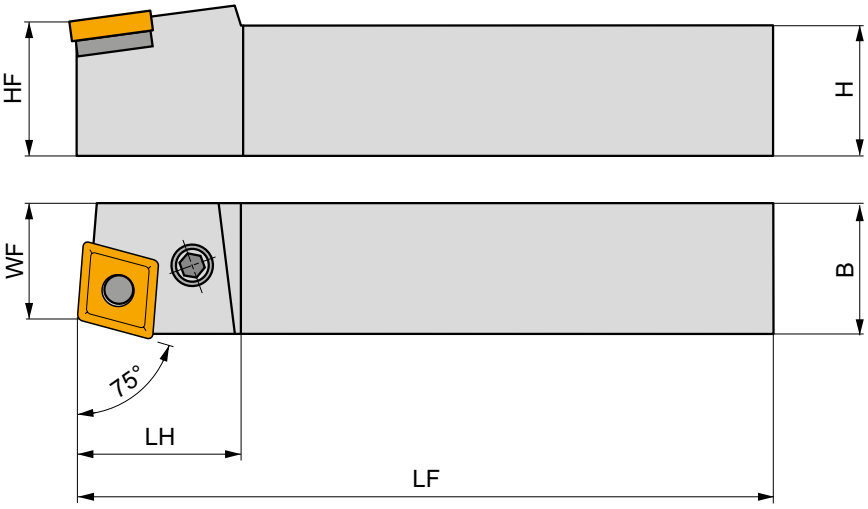
PRAMET

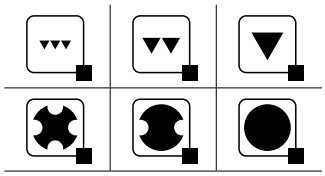
P

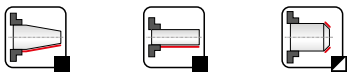
External Lever Lock Turning Holder with 75° Cutting Angle for CN.. Insert

External Right/Left hand lever lock 75° tool holder. Suited for external chamfering, taper and longitudinal turning without shoulder, using negative CN.. 12, 16, 19 or 25 size inserts. Available in 20x20 up to 50x50 mm shanks. Body treated for longer tool life.









	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	PCBNR 2020 K 12	20	20	20	17	125	36	-6	-6	0.43	GI043	PC22
	PCBNR 2525 M 12	25	25	25	22	150	36	-6	-6	0.63	GI043	PC20
	PCBNR 3225 P 12	32	25	32	22	170	36	-6	-6	0.70	GI043	PC20
	PCBNR 3232 P 16	32	32	32	27	170	40	-6	-6	1.36	GI050	PC40
	PCBNR 3232 P 19	32	32	32	27	170	45	-6	-6	1.10	GI042	PC50
	PCBNR 4040 S 19	40	40	40	35	250	45	-6	-6	3.15	GI042	PC50
	PCBNR 4040 S 25	40	40	40	35	250	45	-6	-6	3.10	GI062	PC60
	PCBNR 5050 T 25	50	50	50	43	300	50	-6	-6	5.80	GI062	PC60
L	PCBNL 2020 K 12	20	20	20	17	125	36	-6	-6	0.38	GI043	PC22
	PCBNL 2525 M 12	25	25	25	22	150	36	-6	-6	0.73	GI043	PC20
	PCBNL 3225 P 12	32	25	32	22	170	36	-6	-6	0.70	GI043	PC20
	PCBNL 3232 P 16	32	32	32	27	170	40	-6	-6	1.25	GI050	PC40
	PCBNL 3232 P 19	32	32	32	27	170	45	-6	-6	1.10	GI042	PC50
	PCBNL 4040 S 19	40	40	40	35	250	45	-6	-6	3.15	GI042	PC50
	PCBNL 4040 S 25	40	40	40	35	250	45	-6	-6	3.15	GI062	PC60
	PCBNL 5050 T 25	50	50	50	43	300	50	-6	-6	5.80	GI062	PC60

GI042	CN.. 1906..
GI043	CN.. 1204..
GI050	CN.. 1606..
GI062	CN.. 2509..

				Nm					
PC20	CNU 120312	PU 02	US 35	6.0	M 8x1	22.5	NT 05	MT 05	HXK 4
PC22	CNU 120312	PU 02	US 42	6.0	M 8x1	21	NT 05	MT 05	HXK 4
PC40	CNU 150312	PU 04	US 36	6.0	M 8x1	26	NT 07	MT 07	HXK 4
PC50	CNU 190416	PU 05	US 38	8.0	M 10x1	29	NT 06	MT 06	HXK 5
PC60	CNU 250620	PU 06	US 39	8.0	M 10x1	33	NT 08	MT 08	HXK 5

PCKN(RL) EXT

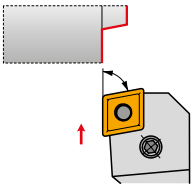
P M K N S H

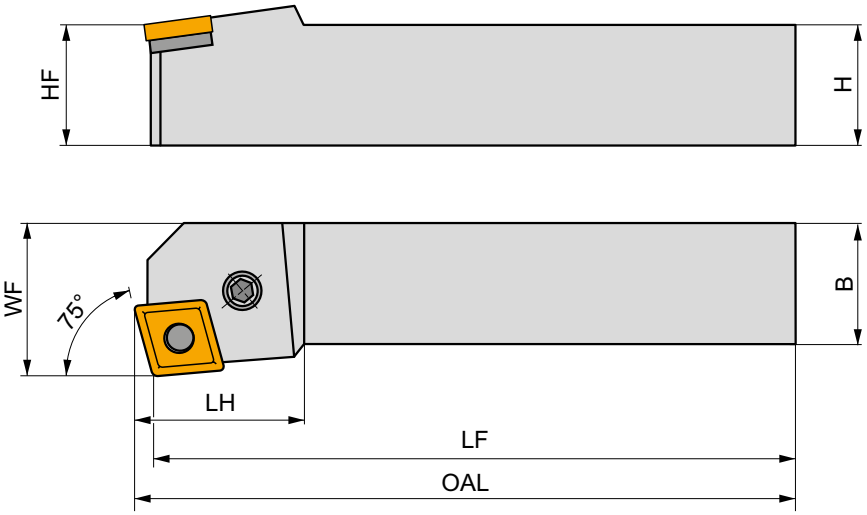
PRAMET

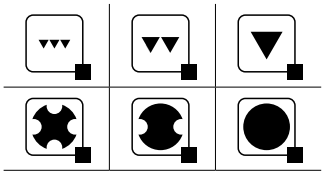
P

External Lever Lock Holder, 75° (Face Turning) Cutting Angle for CN.. Insert

External Right/Left hand lever lock 75° tool holder. Suited for external chamfering and face turning with shoulder using negative CN.. 12, 16 or 19 size inserts. Available in 20x20 up to 40x40 mm shanks. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	PCKNR 2020 K 12	20	20	20	25	125	36	-6	-6	0.42	GI043	PC22
	PCKNR 2525 M 12	25	25	25	32	150	36	-6	-6	0.79	GI043	PC20
	PCKNR 3225 P 12	32	25	32	32	170	36	-6	-6	0.85	GI043	PC20
	PCKNR 3232 P 16	32	32	32	40	170	40	-6	-6	1.43	GI050	PC40
	PCKNR 3232 P 19	32	32	32	40	170	45	-6	-6	1.40	GI042	PC50
	PCKNR 4040 S 19	40	40	40	50	250	45	-6	-6	3.25	GI042	PC50
L	PCKNL 2020 K 12	20	20	20	25	125	36	-6	-6	0.42	GI043	PC22
	PCKNL 2525 M 12	25	25	25	32	150	36	-6	-6	0.78	GI043	PC20
	PCKNL 3225 P 12	32	25	32	32	170	36	-6	-6	1.15	GI043	PC20
	PCKNL 3232 P 16	32	32	32	40	170	40	-6	-6	1.40	GI050	PC40
	PCKNL 3232 P 19	32	32	32	40	170	45	-6	-6	1.40	GI042	PC50
	PCKNL 4040 S 19	40	40	40	50	250	45	-6	-6	3.27	GI042	PC50

GI042	CN.. 1906..
GI043	CN.. 1204..
GI050	CN.. 1606..

				Nm					
PC20	CNU 120312	PU 02	US 35	6.0	M 8x1	22.5	NT 05	MT 05	HXK 4
PC22	CNU 120312	PU 02	US 42	6.0	M 8x1	21	NT 05	MT 05	HXK 4
PC40	CNU 150312	PU 04	US 36	6.0	M 8x1	26	NT 07	MT 07	HXK 4
PC50	CNU 190416	PU 05	US 38	8.0	M 10x1	29	NT 06	MT 06	HXK 5

PCLN(RL) EXT

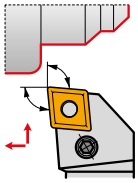
P M K N S H

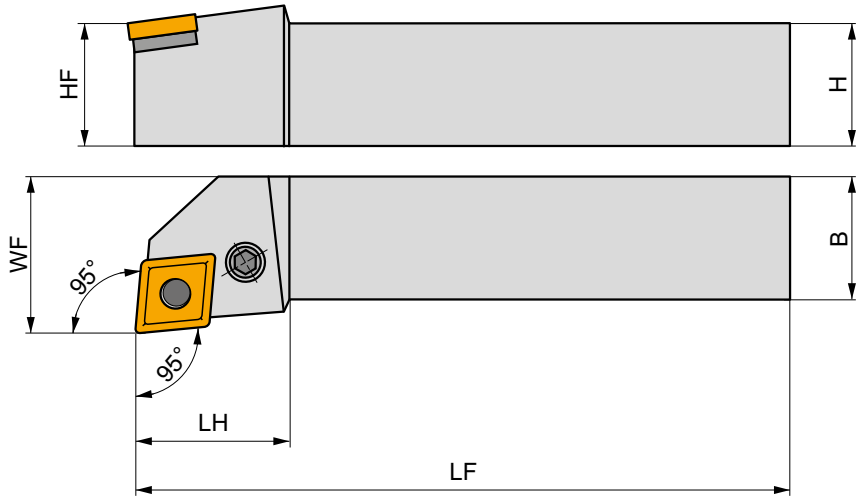
PRAMET

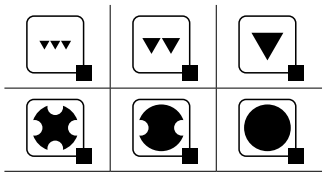
P

External Lever Lock Turning Holder with 95° Cutting Angle for CN.. Insert

External Right/Left hand lever lock 95° tool holder. Suited for external taper, face, longitudinal with shoulder turning and chamfering with negative CN.. 12, 16 , 19 or 25 size inserts. Available in 20x20 up to 50x50 mm shanks. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	PCLNR 2020 K 12	20	20	20	25	125	36	-6	-6	0.44	GI043	PC22
	PCLNR 2525 M 12	25	25	25	32	150	36	-6	-6	0.68	GI043	PC20
	PCLNR 3225 P 12	32	25	32	32	170	36	-6	-6	0.98	GI043	PC20
	PCLNR 3225 P 16	32	25	32	32	170	40	-6	-6	1.10	GI050	PC40
	PCLNR 3232 P 19	32	32	32	40	170	45	-6	-6	1.40	GI042	PC50
	PCLNR 4040 R 19	40	40	40	50	200	45	-6	-6	2.50	GI042	PC50
	PCLNR 4040 S 19	40	40	40	50	250	45	-6	-6	3.19	GI042	PC50
	PCLNR 4040 S 25	40	40	40	50	250	45	-6	-6	3.15	GI062	PC60
	PCLNR 5050 T 25	50	50	50	60	300	50	-6	-6	5.90	GI062	PC60
L	PCLNL 2020 K 12	20	20	20	25	125	36	-6	-6	0.42	GI043	PC22
	PCLNL 2525 M 12	25	25	25	32	150	36	-6	-6	0.75	GI043	PC20
	PCLNL 3225 P 12	32	25	32	32	170	36	-6	-6	1.10	GI043	PC20
	PCLNL 3225 P 16	32	25	32	32	170	40	-6	-6	1.10	GI050	PC40
	PCLNL 3232 P 19	32	32	32	40	170	45	-6	-6	1.42	GI042	PC50
	PCLNL 4040 R 19	40	40	40	50	200	45	-6	-6	2.60	GI042	PC50
	PCLNL 4040 S 19	40	40	40	50	250	45	-6	-6	3.19	GI042	PC50
	PCLNL 4040 S 25	40	40	40	50	250	45	-6	-6	2.45	GI062	PC60
	PCLNL 5050 T 25	50	50	50	60	300	50	-6	-6	5.90	GI062	PC60

GI042	CN.. 1906..
GI043	CN.. 1204..
GI050	CN.. 1606..
GI062	CN.. 2509..

				Nm					
PC20	CNU 120312	PU 02	US 35	6.0	M 8x1	22.5	NT 05	MT 05	HXK 4
PC22	CNU 120312	PU 02	US 42	6.0	M 8x1	21	NT 05	MT 05	HXK 4
PC40	CNU 150312	PU 04	US 36	6.0	M 8x1	26	NT 07	MT 07	HXK 4
PC50	CNU 190416	PU 05	US 38	8.0	M 10x1	29	NT 06	MT 06	HXK 5
PC60	CNU 250620	PU 06	US 39	8.0	M 10x1	33	NT 08	MT 08	HXK 5

C.-DCLN(RL) EXT

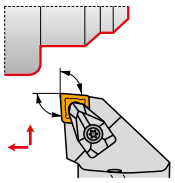
P M K N S H

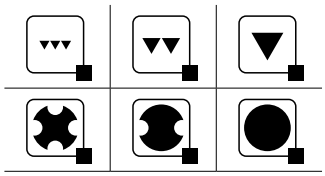
PRAMET

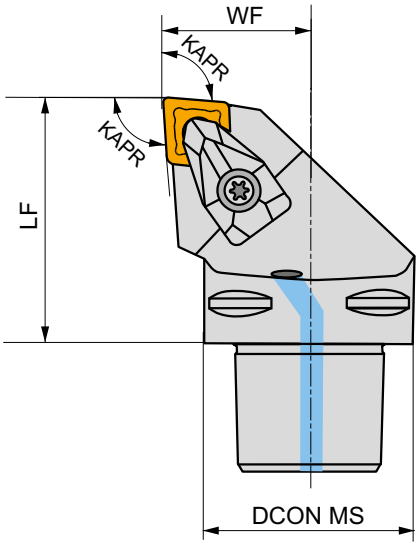
D

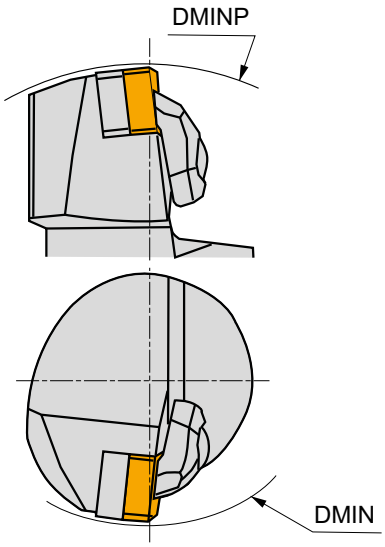
Ext. PSC Quick Change Tool, Double Clamp, 95° Cutting Angle for CN.. Insert

External Right/Left hand double clamp tool, through coolant, with 95° cutting angle for longitudinal turning, chamfering and face turning with shoulder, using negative CN.. 12 up to 19 size inserts. Available with PSC (Polygon Shank Coupling) C3 up to C8. Body treated for longer tool life.









	Product	DCON MS [mm]	DMIN [mm]	DMINP [mm]	WF [mm]	LF [mm]	KAPR [°]	LAMS [°]	GAMO [°]		kg			
R	C3-DCLNR-22045-12	32	60	121	22	45	95	-6	-6	✓	0.25	GI043	C-DC12	AT001
	C4-DCLNR-27050-12	40	110	140	27	50	95	-6	-6	✓	0.44	GI043	C-DC12	AT001
	C4-DCLNR-27055-16	40	125	145	27	55	95	-6	-6	✓	0.47	GI050	C-DC16	AT005
	C5-DCLNR-35060-12	50	110	165	35	60	95	-6	-6	✓	0.79	GI043	C-DC12	AT001
	C5-DCLNR-35060-16	50	125	165	35	60	95	-6	-6	✓	0.80	GI050	C-DC16	AT005
	C6-DCLNR-45065-12	63	110	190	45	65	95	-6	-6	✓	1.32	GI043	C-DC12	AT001
	C6-DCLNR-45065-16	63	125	190	45	65	95	-6	-6	✓	1.34	GI050	C-DC16	AT005
	C6-DCLNR-45065-19	63	81	190	45	65	95	-6	-6	✓	1.34	GI042	C-DC19	–
	C8-DCLNR-55080-19	80	100	250	55	80	95	-6	-6	✓	2.58	GI042	C-DC19	–
L	C4-DCLNL-27050-12	40	110	140	27	50	95	-6	-6	✓	0.44	GI043	C-DC12	AT001
	C4-DCLNL-27055-16	40	125	145	27	55	95	-6	-6	✓	0.48	GI050	C-DC16	AT005
	C5-DCLNL-35060-12	50	110	165	35	60	95	-6	-6	✓	0.79	GI043	C-DC12	AT001
	C5-DCLNL-35060-16	50	125	165	35	60	95	-6	-6	✓	0.80	GI050	C-DC16	AT005
	C6-DCLNL-45065-12	63	110	190	45	65	95	-6	-6	✓	1.32	GI043	C-DC12	AT001
	C6-DCLNL-45065-16	63	125	190	45	65	95	-6	-6	✓	1.34	GI050	C-DC16	AT005
	C6-DCLNL-45065-19	63	81	190	45	65	95	-6	-6	✓	1.34	GI042	C-DC19	–
	C8-DCLNL-55080-16	80	125	250	55	80	95	-6	-6	✓	2.58	GI050	C-DC16	AT005
	C8-DCLNL-55080-19	80	100	250	55	80	95	-6	-6	✓	2.58	GI042	C-DC19	–

GI042	CN.. 1906..
GI043	CN.. 1204..
GI050	CN.. 1606..

C-DC12	DCS 12	3.9	DCS 234-01	US 2002-T15P	FLAG T15P/3,5	–	CN 045-01
C-DC16	DCS 16	6.4	DCS 234-03	US 2007-T20P	–	LK T20P	CN 045-01
C-DC19	DCS 19	6.4	DCS 236-01	US 2007-T20P	–	LK T20P	CN 045-01

AT001a	CN.. 1207..	–	DCS 234-02
AT005a	CN.. 1607..	–	DCS 234-04
AT001b	CER CN.N 1204..	DCS 12C4	–
AT001c	CER CN.A 1204..	DCS 12C2	–
AT005b	CER CN.N 1606..	DCS 16C4	–
AT005c	CER CN.A 1606..	DCS 16C2	–

KHP-CBN(RL)

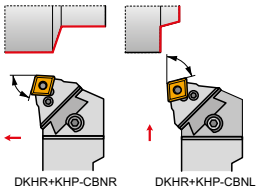
P M K

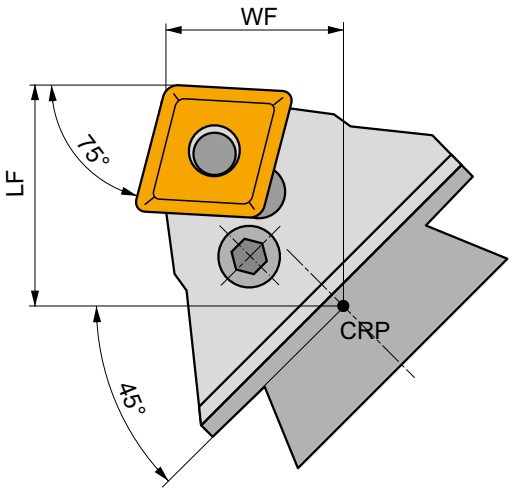
PRAMET

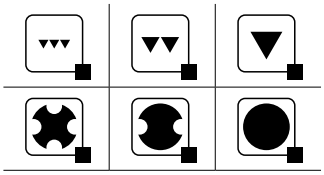
P

Modular KHP Lever Lock Turning Cartridge, 75° Cutting Angle for CN.. Inserts

Dovetailed Right/Left hand lever lock turning cartridge, 75° Cutting Angle, for mounting on DKH tool holder shank. Suited for heavy longitudinal turning without shoulder, face turning, taper and chamfer turning with negative CN.. 25 inserts. Tool holder treated for longer tool life.







	Product	WF [mm]	LF [mm]	LAMS [°]	GAMO [°]	kg		
R	KHP-CBNR 25	32	47	-6	-6	1.54	GI062	PC60
L	KHP-CBNL 25	32	47	-6	-6	1.56	GI062	PC60

GI062	CN.. 2509..

PC60	CNU 250620	PU 06	US 39	8.0 Nm	M 10x1	33	NT 08	MT 08	HXK 5

KHP-CLN(RL)

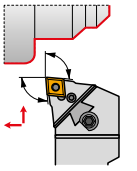
P M K

PRAMET

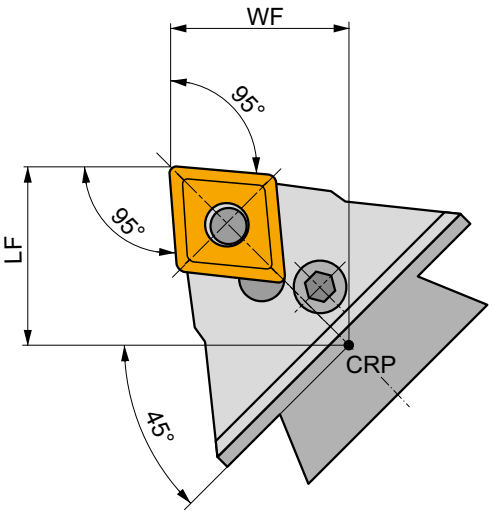
P

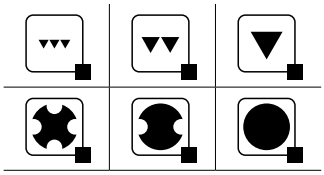
Modular KHP Lever Lock Turning Cartridge, 95° Cutting Angle for CN.. Inserts

Dovetailed Right/Left hand lever lock turning cartridge, 95° Cutting Angle, for mounting on DKH tool holder shank. Suited for heavy longitudinal turning with shoulder, face turning with shoulder, taper and chamfer turning with negative CN.. 19 or 25 insert. Tool holder treated for longer tool life.



DKHR+KHP-CLNR





	Product	WF [mm]	LF [mm]	LAMS [°]	GAMO [°]	kg		
R	**KHP-CLNR 19**	35	45	-6	-6	1.30	GI042	PC50
	KHP-CLNR 25	35	45	-6	-6	1.25	GI062	PC60
L	**KHP-CLNL 19**	35	45	-6	-6	1.30	GI042	PC50
	KHP-CLNL 25	35	45	-6	-6	1.25	GI062	PC60

GI042	CN.. 1906..
GI062	CN.. 2509..

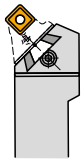
				Nm					
PC50	CNU 190416	PU 05	US 38	8.0	M 10x1	29	NT 06	MT 06	HXK 5
PC60	CNU 250620	PU 06	US 39	8.0	M 10x1	33	NT 08	MT 08	HXK 5

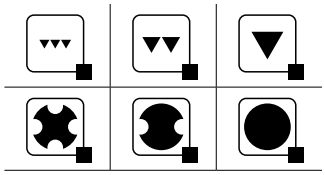
DKH(RL)

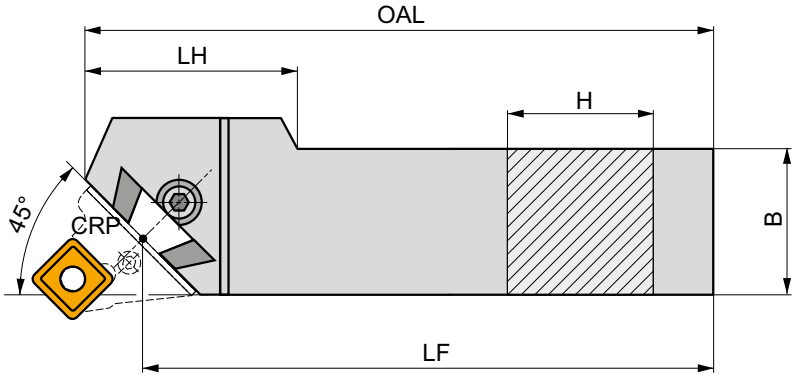
PRAMET

External Tool Holder Shank for KHP/KHS Heavy Turning Cartridges

Dovetailed Right/Left hand modular tool shank for KHP/KHS cartridges. Suited for heavy turning applications. Available with shank size 40x50 up to 60x80 mm. Body treated for longer tool life.







	Product	H [mm]	B [mm]	LF [mm]	OAL [mm]	LH [mm]	kg		
R	**DKHR 4050 V**	40	50	400	425	100	7.10	GI098	DKH10
	DKHR 5060 W	50	60	450	475	110	11.30	GI098	DKH10
	DKHR 6080 W-A	60	80	450	485	90	19.65	GI098	DKH10
L	**DKHL 4050 V**	40	50	400	425	100	7.10	GI098	DKH10
	DKHL 5060 W	50	60	450	475	110	11.30	GI098	DKH10
	DKHL 6080 W-A	60	80	450	485	90	19.28	GI098	DKH10

GI098	KHP	KHS

DKH10	SR 14	HXK 10

DCLN(RL) INT

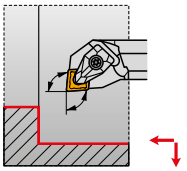
P M K N S H

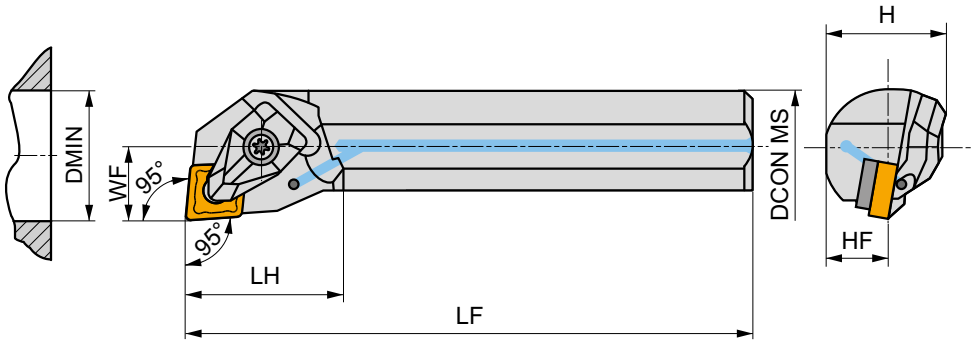
PRAMET

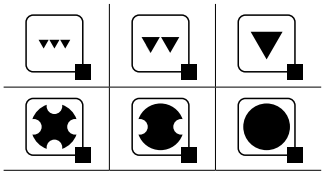
D

Internal Double Clamp Boring Bar with 95° Cutting Angle for CN.. Insert

Internal Right/Left hand double clamp boring bar, through coolant, 95° cutting angle for CN.. 09 and 12 inserts. Minimum internal turning diameter Ø32 mm. For internal taper and longitudinal turning with shoulder and chamfer turning. Available with shank size Ø25 up to Ø40 mm. Body treated for longer tool life.







	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	H [mm]	HF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]		kg		
R	A25T-DCLNR 09	25	32	17	23	11.5	300	31	-11	-6	✓	1.13	GI133	DC09
	A25T-DCLNR 12	25	32	17	23	11.5	300	31	-12	-6	✓	1.12	GI043	DCI12
	A32T-DCLNR 12	32	40	22	30	15	300	30	-10	-6	✓	1.68	GI043	DCI12
	A40T-DCLNR 12	40	50	27	37	18.5	300	32	-15	-6	✓	2.56	GI043	DC12
L	A25T-DCLNL 09	25	32	17	23	11.5	300	31	-11	-6	✓	1.12	GI133	DC09
	A25T-DCLNL 12	25	32	17	23	11.5	300	31	-12	-6	✓	1.11	GI043	DCI12
	A32T-DCLNL 12	32	40	22	30	15	300	30	-10	-6	✓	1.68	GI043	DCI12
	A40T-DCLNL 12	40	50	27	37	18.5	300	32	-15	-6	✓	2.56	GI043	DC12

GI043	CN.. 1204..
GI133	CN.. 0903..

		Nm			
DC09	DCS 09	1.7	DCS 236-04	US 2004-T09P	FLAG T09P
DC12	DCS 12	3.9	DCS 234-01	US 2002-T15P	FLAG T15P/3,5
DCI12	DCS 12	3.9	DCS 236-03	US 2002-T15P	FLAG T15P/3,5

PCLN(RL) INT

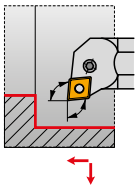
P M K N S H

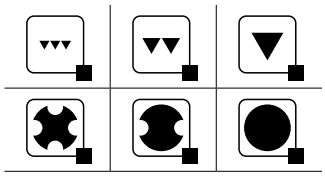
PRAMET

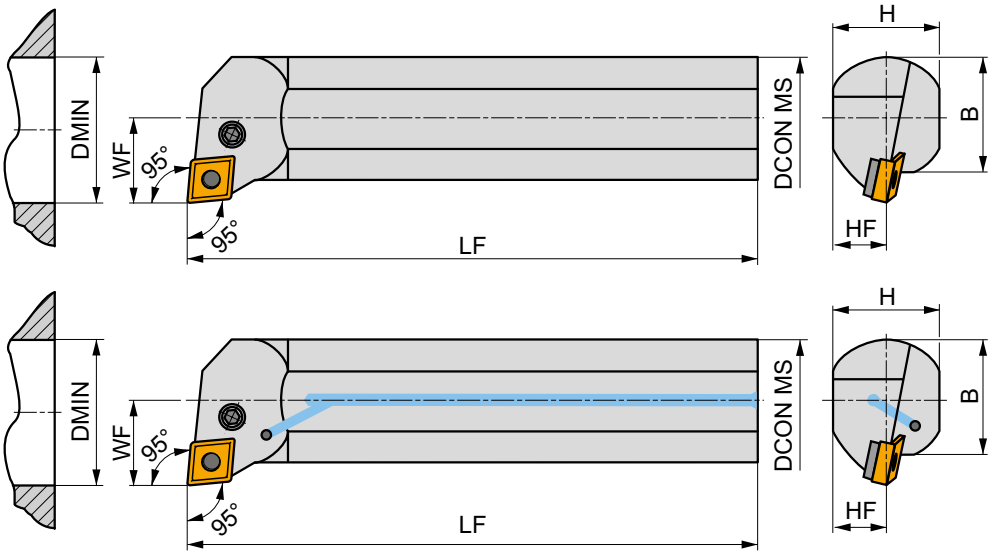
P

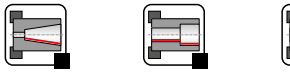
Internal Lever Lock Boring Bar with 95° Cutting Angle for CN.. Insert

Internal Right/Left hand lever lock boring bar, through coolant available, 95° cutting angle for CN.. 09, 12, 16 and 19 inserts. Minimum internal turning diameter Ø20 mm. For internal taper and longitudinal turning with shoulder and chamfer turning. Ø16 to Ø60 mm shanks available. Body treated for longer tool life.









	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	H [mm]	B [mm]	LF [mm]	LAMS [°]	GAMO [°]		kg		
R	A16M-PCLNR 09	16	20	11	15	15	150	-13.5	-5	✓	0.22	GI133	PC09
	A20Q-PCLNR 09	20	25	13	18	18	180	-13.5	-5	✓	0.36	GI133	PC09
	A25R-PCLNR 12	25	32	17	23	23	200	-13	-7	✓	0.65	GI043	PC25
	S25T-PCLNR 12	25	32	17	23	23	300	-13	-7	–	1.10	GI043	PC25
	A32S-PCLNR 12	32	40	22	30	30	250	-12	-6	✓	1.48	GI043	PC21
	A40T-PCLNR 12	40	50	27	38	38	300	-12	-6	✓	2.40	GI043	PC20
	A40T-PCLNR 16	40	50	27	38	38	300	-12	-6	✓	2.90	GI050	PC41
	A50U-PCLNR 16	50	63	35	47	48.5	350	-12	-6	✓	5.20	GI050	PC40
	A60V-PCLNR 16	60	80	43	57	58.5	400	-12	-6	✓	8.70	GI050	PC40
	A50U-PCLNR 19	50	63	35	47	48.5	350	-12	-6	✓	5.20	GI042	PC50
	A60V-PCLNR 19	60	80	43	57	58.5	400	-12	-6	✓	8.22	GI042	PC50
L	A16M-PCLNL 09	16	20	11	15	15	150	-13.5	-5	✓	0.20	GI133	PC09
	A20Q-PCLNL 09	20	25	13	18	18	180	-13.5	-5	✓	0.34	GI133	PC09
	A25R-PCLNL 12	25	32	17	23	23	200	-13	-7	✓	0.65	GI043	PC25
	S25T-PCLNL 12	25	32	17	23	23	300	-13	-7	–	1.15	GI043	PC25
	A32S-PCLNL 12	32	40	22	30	30	250	-12	-6	✓	1.48	GI043	PC21
	A40T-PCLNL 12	40	50	27	38	38	300	-12	-6	✓	2.58	GI043	PC20
	A40T-PCLNL 16	40	50	27	38	38	300	-12	-6	✓	2.58	GI050	PC41
	A50U-PCLNL 16	50	63	35	47	48.5	350	-12	-6	✓	4.95	GI050	PC40
	A60V-PCLNL 16	60	80	43	57	58.5	400	-12	-6	✓	8.70	GI050	PC40
	A50U-PCLNL 19	50	63	35	47	48.5	350	-12	-6	✓	5.20	GI042	PC50
	A60V-PCLNL 19	60	80	43	57	58.5	400	-12	-6	✓	8.40	GI042	PC50

GI042	CN.. 1906..
GI043	CN.. 1204..

GI050	CN.. 1606..
GI133	CN.. 0903..

PC09	–	PU 8451	PS 8290	2.0	M 5	12	–	–	HXK 2
PC20	CNU 120312	PU 02	US 35	6.0	M 8x1	22.5	NT 05	MT 05	HXK 4
PC21	CNU 120312	PU 02	US 41	6.0	M 8x1	17	NT 05	MT 05	HXK 4
PC25	–	PU 32	US 46	5.0	M 6x0.75	13.2	–	–	HXK 3
PC40	CNU 150312	PU 04	US 36	6.0	M 8x1	26	NT 07	MT 07	HXK 4
PC41	CNU 150312	PU 04	US 40	6.0	M 8x1	20.5	NT 07	MT 07	HXK 4
PC50	CNU 190416	PU 05	US 38	8.0	M 10x1	29	NT 06	MT 06	HXK 5

C.-DCLN(RL) INT

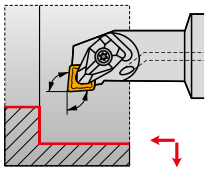
P M K N S H

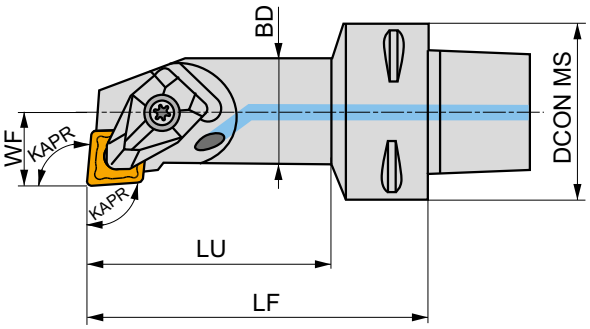
PRAMET

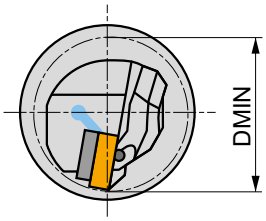
D

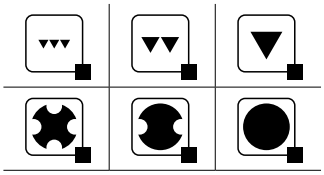
Int. PSC Quick Change Tool, Double Clamp, 95° Cutting Angle for CN.. Insert

Internal Right/Left hand double clamp tool, through coolant, with 95° cutting angle for negative CN.. 09 up to 16 inserts, Suited for a wide range of internal turning applications, minimum diameter Ø25mm. PSC shank (Polygon Shank Coupling) size C4 up to C6 with choice of lengths. Body treated for longer tool life.









	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	LF [mm]	LU [mm]	BD [mm]	KAPR [°]	LAMS [°]	GAMO [°]		kg		
R	C4-DCLNR-13080-09	40	25	13	80	57	20	95	-14	-6	✓	0.43	GI133	DC09
	C4-DCLNR-17090-12	40	32	17	90	68	25	95	-12	-6	✓	0.53	GI043	DCI12
	C5-DCLNR-17090-12	50	32	17	90	66	25	95	-12	-6	✓	0.72	GI043	DCI12
	C6-DCLNR-17100-12	63	32	17	100	72	25	95	-12	-6	✓	1.15	GI043	DCI12
	C6-DCLNR-27140-16	63	50	27	140	114	40	95	-16	-6	✓	1.81	GI050	DC16
L	C4-DCLNL-17090-12	40	32	17	90	68	25	95	-12	-6	✓	0.53	GI043	DCI12
	C5-DCLNL-17090-12	50	32	17	90	66	25	95	-12	-6	✓	0.72	GI043	DCI12

GI043	CN.. 1204..
GI050	CN.. 1606..
GI133	CN.. 0903..

		Nm				
DC09	DCS 09	1.7	DCS 236-04	US 2004-T09P	FLAG T09P	–
DC16	DCS 16	6.4	DCS 234-03	US 2007-T20P	–	LK T20P
DCI12	DCS 12	3.9	DCS 236-03	US 2002-T15P	FLAG T15P/3,5	–

DN

CARBIDE INSERTS

DNMA

260

DNMG

260

DNMM

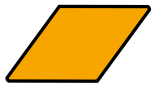
270

CER AND CBN INSERTS

DNGA CER

271

DNGN CER



271

DNGA CBN

272

MATCH THE RIGHT SIZE (example)

Insert	Tool Holder
DNMG 150404E-SF	DDJNL 2020 K 15

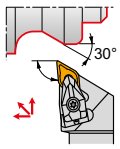
ISO TURNING – EXTERNAL

DDJN(RL) EXT

93°

DN..

11
15



20×20
32×32

273

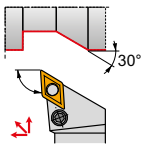
260 – 272

PDJN(RL) EXT

93°

DN..

11
15



20×20
32×32

274

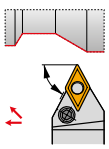
260 – 272

PDNN(RL) EXT

62°30´

DN..

11
15



20×20
32×25

275

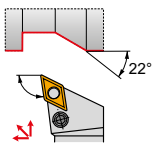
260 – 272

PDXN(RL) EXT

98°

DN..

15



20×20
32×25

276

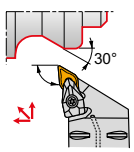
260 – 272

C.-DDJN(RL) EXT

93°

DN..

11
15



C4
C6

277

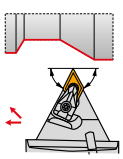
260 – 272

C.-DDNNN EXT

62,5°

DN..

15



C5
C6

278

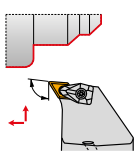
260 – 272

C.-DDUN(RL) EXT

93°

DN..

15



C5
C6

279

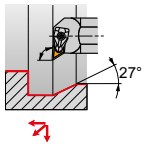
260 – 272

DN

ISO TURNING – INTERNAL

DDUN(RL) INT

93°



25 / 50

280

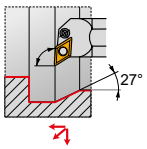
DN..

11
15

260 – 272

PDUN(RL) INT

93°



25 / 60

281

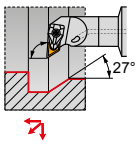
DN..

11
15

260 – 272

C.-DDUN(RL) INT

93°



12

282

DN..

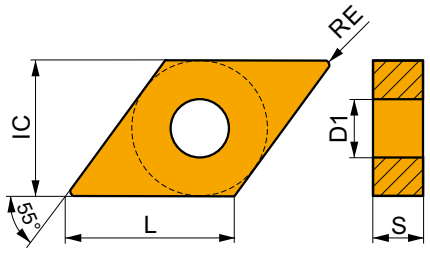
11

260 – 272

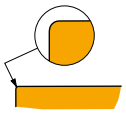
DNMA

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
1504	12.700	5.16	15.50	4.76
1506	12.700	5.16	15.50	4.76



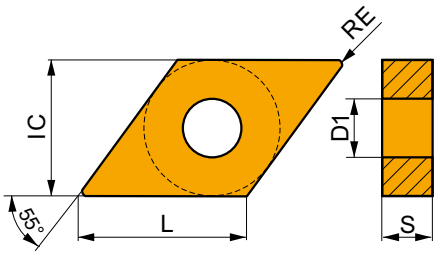
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			E																	
			For fine-finish to semi-rough machining, and continuous to slightly interrupted cuts.																	
DNMA 150404	**T5305**	0.4	–	–	–	–	–	–	205	0.10	1.7	–	–	–	–	–	–	40	0.15	1.0
DNMA 150408	**T5305**	0.8	–	–	–	–	–	–	190	0.20	1.7	–	–	–	–	–	–	40	0.15	1.0
	T5315	0.8	–	–	–	–	–	–	165	0.20	1.7	–	–	–	–	–	–	35	0.15	1.0
DNMA 150604	**T5305**	0.4	–	–	–	–	–	–	205	0.10	1.7	–	–	–	–	–	–	40	0.15	1.0
	T5315	0.4	–	–	–	–	–	–	180	0.10	1.7	–	–	–	–	–	–	35	0.15	1.0
	T6310	0.4	–	–	–	–	–	–	85	0.10	1.7	–	–	–	–	–	–	20	0.15	1.0
DNMA 150608	**T5305**	0.8	–	–	–	–	–	–	190	0.20	1.7	–	–	–	–	–	–	40	0.15	1.0
	T5315	0.8	–	–	–	–	–	–	165	0.20	1.7	–	–	–	–	–	–	35	0.15	1.0
	T6310	0.8	–	–	–	–	–	–	85	0.20	1.7	–	–	–	–	–	–	20	0.15	1.0
DNMA 150612	**T5305**	1.2	–	–	–	–	–	–	200	0.20	1.7	–	–	–	–	–	–	40	0.15	1.0
	T5315	1.2	–	–	–	–	–	–	175	0.20	1.7	–	–	–	–	–	–	35	0.15	1.0

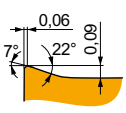
DNMG

PRAMET

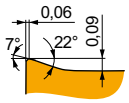
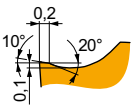
	IC [mm]	D1 [mm]	L [mm]	S [mm]
1104	9.525	3.81	11.60	4.76
1504	12.700	5.16	15.50	4.76
1506	12.700	5.16	15.50	4.76



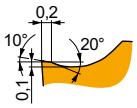
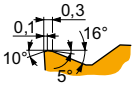
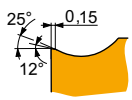
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			U	S																
			FF geometry with highly positive design for fine-finish machining and continuous to slightly interrupted cuts.																	
DNMG 110402E-FF	**T8315**	0.2	175	0.10	0.8	105	0.09	0.8	165	0.10	0.8	–	–	–	–	–	–	–	–	–
DNMG 110404E-FF	**T8315**	0.4	175	0.12	0.8	105	0.11	0.8	165	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8330	0.4	165	0.12	0.8	95	0.11	0.8	155	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	205	0.12	0.8	110	0.11	0.8	170	0.12	0.8	–	–	–	–	–	–	–	–	–
DNMG 110408E-FF	**T8315**	0.8	200	0.15	0.8	120	0.14	0.8	190	0.15	0.8	–	–	–	–	–	–	–	–	–

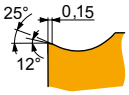
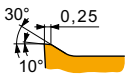
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]
																				
			FF geometry with highly positive design for fine-finish machining and continuous to slightly interrupted cuts.																	
DNMG 150404E-FF	T8315	0.4	175	0.12	1.0	105	0.11	1.0	165	0.12	1.0	–	–	–	–	–	–	–	–	–
DNMG 150604E-FF	T7325	0.4	190	0.12	1.0	145	0.11	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	175	0.12	1.0	105	0.11	1.0	165	0.12	1.0	–	–	–	–	–	–	–	–	–
DNMG 150608E-FF	T7325	0.8	210	0.15	1.0	160	0.14	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	195	0.15	1.0	115	0.14	1.0	185	0.15	1.0	–	–	–	–	–	–	–	–	–
																				
			FM geometry with positive design for finish to semi-rough machining, and continuous to slightly interrupted cuts.																	
DNMG 110404E-FM	T7325	0.4	165	0.20	0.8	125	0.18	0.8	–	–	–	–	–	–	50	0.20	0.6	–	–	–
	T8315	0.4	150	0.20	0.8	90	0.18	0.8	140	0.20	0.8	–	–	–	35	0.14	0.6	–	–	–
	T8330	0.4	145	0.20	0.8	85	0.18	0.8	135	0.20	0.8	–	–	–	35	0.14	0.6	–	–	–
	T8430	0.4	165	0.20	0.8	90	0.18	0.8	135	0.20	0.8	–	–	–	35	0.14	0.6	–	–	–
	T9310	0.4	245	0.20	0.8	–	–	–	230	0.20	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	225	0.20	0.8	–	–	–	210	0.20	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	200	0.20	0.8	120	0.18	0.8	190	0.20	0.8	–	–	–	45	0.20	0.6	–	–	–
DNMG 110408E-FM	T7325	0.8	200	0.20	0.8	155	0.18	0.8	–	–	–	–	–	–	65	0.16	0.6	–	–	–
	T8315	0.8	180	0.20	0.8	105	0.18	0.8	170	0.20	0.8	–	–	–	45	0.14	0.6	–	–	–
	T8330	0.8	175	0.20	0.8	105	0.18	0.8	165	0.20	0.8	–	–	–	40	0.14	0.6	–	–	–
	T8430	0.8	195	0.20	0.8	105	0.18	0.8	160	0.20	0.8	–	–	–	40	0.14	0.6	–	–	–
	T9310	0.8	295	0.20	0.8	–	–	–	280	0.20	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.8	270	0.20	0.8	–	–	–	255	0.20	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.8	240	0.20	0.8	140	0.18	0.8	225	0.20	0.8	–	–	–	50	0.16	0.6	–	–	–
DNMG 150404E-FM	T7325	0.4	150	0.20	1.7	115	0.18	1.7	–	–	–	–	–	–	45	0.20	1.4	–	–	–
	T8330	0.4	135	0.20	1.7	80	0.18	1.7	125	0.20	1.7	–	–	–	30	0.14	1.4	–	–	–
	T8430	0.4	150	0.20	1.7	80	0.18	1.7	125	0.20	1.7	–	–	–	30	0.14	1.4	–	–	–
	T9315	0.4	210	0.20	1.7	–	–	–	195	0.20	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.4	190	0.20	1.7	110	0.18	1.7	180	0.20	1.7	–	–	–	40	0.20	1.4	–	–	–
DNMG 150408E-FM	T7325	0.8	180	0.20	1.7	140	0.18	1.7	–	–	–	–	–	–	55	0.16	1.4	–	–	–
	T8330	0.8	160	0.20	1.7	95	0.18	1.7	150	0.20	1.7	–	–	–	40	0.16	1.4	–	–	–
	T8430	0.8	185	0.20	1.7	100	0.18	1.7	150	0.20	1.7	–	–	–	40	0.16	1.4	–	–	–
	T9315	0.8	250	0.20	1.7	–	–	–	235	0.20	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.8	225	0.20	1.7	135	0.18	1.7	210	0.20	1.7	–	–	–	50	0.16	1.4	–	–	–
DNMG 150604E-FM	T7325	0.4	150	0.20	1.7	115	0.18	1.7	–	–	–	–	–	–	45	0.20	1.4	–	–	–
	T7335	0.4	150	0.20	1.7	115	0.18	1.7	–	–	–	–	–	–	45	0.20	1.4	–	–	–
	T8315	0.4	140	0.20	1.7	80	0.18	1.7	130	0.20	1.7	–	–	–	35	0.14	1.4	–	–	–
	T8330	0.4	135	0.20	1.7	80	0.18	1.7	125	0.20	1.7	–	–	–	30	0.14	1.4	–	–	–
	T8430	0.4	150	0.20	1.7	80	0.18	1.7	125	0.20	1.7	–	–	–	30	0.14	1.4	–	–	–
	T9310	0.4	230	0.20	1.7	–	–	–	215	0.20	1.7	–	–	–	–	–	–	–	–	–
	T9315	0.4	210	0.20	1.7	–	–	–	195	0.20	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.4	190	0.20	1.7	110	0.18	1.7	180	0.20	1.7	–	–	–	40	0.20	1.4	–	–	–
	TT310	0.4	210	0.20	1.7	125	0.18	1.7	–	–	–	–	–	–	–	–	–	–	–	–
DNMG 150608E-FM	T7325	0.8	180	0.20	1.7	140	0.18	1.7	–	–	–	–	–	–	55	0.16	1.4	–	–	–
	T7335	0.8	175	0.20	1.7	135	0.18	1.7	–	–	–	–	–	–	55	0.16	1.4	–	–	–
	T8315	0.8	170	0.20	1.7	100	0.18	1.7	160	0.20	1.7	–	–	–	40	0.16	1.4	–	–	–
	T8330	0.8	160	0.20	1.7	95	0.18	1.7	150	0.20	1.7	–	–	–	40	0.16	1.4	–	–	–
	T8430	0.8	185	0.20	1.7	100	0.18	1.7	150	0.20	1.7	–	–	–	40	0.16	1.4	–	–	–
	T9310	0.8	275	0.20	1.7	–	–	–	260	0.20	1.7	–	–	–	–	–	–	–	–	–
	T9315	0.8	250	0.20	1.7	–	–	–	235	0.20	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.8	225	0.20	1.7	135	0.18	1.7	210	0.20	1.7	–	–	–	50	0.16	1.4	–	–	–
	TT310	0.8	250	0.20	1.7	150	0.18	1.7	–	–	–	–	–	–	–	–	–	–	–	–
DNMG 150612E-FM	T7325	1.2	180	0.25	1.7	140	0.23	1.7	–	–	–	–	–	–	55	0.18	1.4	–	–	–
	T8430	1.2	175	0.25	1.7	95	0.23	1.7	140	0.25	1.7	–	–	–	35	0.18	1.4	–	–	–
	T9310	1.2	260	0.25	1.7	–	–	–	245	0.25	1.7	–	–	–	–	–	–	–	–	–
	T9315	1.2	240	0.25	1.7	–	–	–	225	0.25	1.7	–	–	–	–	–	–	–	–	–
	T9325	1.2	215	0.25	1.7	125	0.23	1.7	200	0.25	1.7	–	–	–	45	0.18	1.4	–	–	–

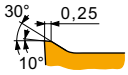
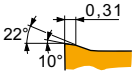
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]
																				
FM geometry with positive design for finish to semi-rough machining, and continuous to slightly interrupted cuts.																				
DNMG 150616E-FM	**T9315**	1.6	■ 235	0.30	1.7	–	–	–	◪ 220	0.30	1.7	–	–	–	–	–	–	–	–	–
	T9325	1.6	■ 210	0.30	1.7	◪ 125	0.27	1.7	◪ 195	0.30	1.7	–	–	–	◪ 45	0.21	1.4	–	–	–
																				
M geometry for finish to semi-rough machining, and continuous to interrupted cuts.																				
DNMG 110404E-M	**T5315**	0.4	◪ 210	0.20	1.2	–	–	–	■ 195	0.20	1.2	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9315	0.4	■ 195	0.20	1.2	–	–	–	◪ 185	0.20	1.2	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9325	0.4	■ 175	0.20	1.2	–	–	–	◪ 165	0.20	1.2	–	–	–	–	–	–	–	–	–
	T9335	0.4	■ 150	0.20	1.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
DNMG 110408E-M	**T5315**	0.8	◪ 215	0.30	1.2	–	–	–	■ 200	0.30	1.2	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9315	0.8	■ 200	0.30	1.2	–	–	–	◪ 190	0.30	1.2	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9325	0.8	■ 175	0.30	1.2	–	–	–	◪ 165	0.30	1.2	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 155	0.30	1.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
DNMG 110412E-M	**T9315**	1.2	■ 185	0.40	1.2	–	–	–	◪ 175	0.40	1.2	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9325	1.2	■ 165	0.40	1.2	–	–	–	◪ 155	0.40	1.2	–	–	–	–	–	–	–	–	–
	T9335	1.2	■ 140	0.40	1.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
DNMG 150404E-M	**T5315**	0.4	◪ 200	0.20	1.9	–	–	–	■ 190	0.20	1.9	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9315	0.4	■ 190	0.20	1.9	–	–	–	◪ 180	0.20	1.9	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9325	0.4	■ 170	0.20	1.9	–	–	–	◪ 160	0.20	1.9	–	–	–	–	–	–	–	–	–
	T9335	0.4	■ 145	0.20	1.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
DNMG 150408E-M	**T5315**	0.8	◪ 205	0.30	1.9	–	–	–	■ 190	0.30	1.9	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9315	0.8	■ 190	0.30	1.9	–	–	–	◪ 180	0.30	1.9	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9325	0.8	■ 170	0.30	1.9	–	–	–	◪ 160	0.30	1.9	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 145	0.30	1.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
DNMG 150412E-M	**T5315**	1.2	◪ 200	0.40	1.9	–	–	–	■ 190	0.40	1.9	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9315	1.2	■ 175	0.40	1.9	–	–	–	◪ 165	0.40	1.9	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9325	1.2	■ 160	0.40	1.9	–	–	–	◪ 150	0.40	1.9	–	–	–	–	–	–	–	–	–
DNMG 150604E-M	**T5315**	0.4	◪ 200	0.20	1.9	–	–	–	■ 190	0.20	1.9	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9315	0.4	■ 190	0.20	1.9	–	–	–	◪ 180	0.20	1.9	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9325	0.4	■ 170	0.20	1.9	–	–	–	◪ 160	0.20	1.9	–	–	–	–	–	–	–	–	–
	T9335	0.4	■ 145	0.20	1.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
DNMG 150608E-M	**T5315**	0.8	◪ 205	0.30	1.9	–	–	–	■ 190	0.30	1.9	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9310	0.8	■ 205	0.30	1.9	–	–	–	◪ 190	0.30	1.9	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9315	0.8	■ 190	0.30	1.9	–	–	–	◪ 180	0.30	1.9	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9325	0.8	■ 170	0.30	1.9	–	–	–	◪ 160	0.30	1.9	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 145	0.30	1.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
DNMG 150612E-M	**T5315**	1.2	◪ 200	0.40	1.9	–	–	–	■ 190	0.40	1.9	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9310	1.2	■ 190	0.40	1.9	–	–	–	◪ 180	0.40	1.9	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9315	1.2	■ 175	0.40	1.9	–	–	–	◪ 165	0.40	1.9	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9325	1.2	■ 160	0.40	1.9	–	–	–	◪ 150	0.40	1.9	–	–	–	–	–	–	–	–	–
	T9335	1.2	■ 140	0.40	1.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
																				
NF geometry with highly positive design for fine-finish to medium machining, and continuous cuts.																				
DNMG 110404E-NF	**T6310**	0.4	■ 155	0.15	0.8	■ 110	0.14	0.8	◪ 125	0.15	0.8	◪ 465	0.18	0.8	◪ 45	0.12	0.6	–	–	–
	T7325	0.4	◪ 170	0.18	0.8	■ 130	0.16	0.8	–	–	–	–	–	–	◪ 55	0.16	0.6	–	–	–
	T7335	0.4	◪ 165	0.18	0.8	■ 125	0.16	0.8	–	–	–	–	–	–	◪ 50	0.16	0.6	–	–	–
	T8330	0.4	■ 160	0.15	0.8	■ 95	0.14	0.8	◪ 150	0.15	0.8	◪ 480	0.18	0.8	◪ 40	0.12	0.6	–	–	–
	T8430	0.4	■ 190	0.15	0.8	■ 105	0.14	0.8	◪ 155	0.15	0.8	◪ 525	0.18	0.8	◪ 40	0.12	0.6	–	–	–
	T9315	0.4	■ 255	0.15	0.8	–	–	–	◪ 240	0.15	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 210	0.18	0.8	■ 125	0.16	0.8	◪ 195	0.18	0.8	–	–	–	◪ 45	0.16	0.6	–	–	–

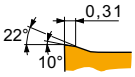
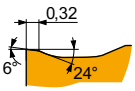
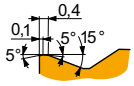
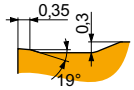
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
NF geometry with highly positive design for fine-finish to medium machining, and continuous cuts.																				
DNMG 110408E-NF	**T6310**	0.8	■	175	0.17	1.0	■	125	0.15	1.0	◪	140	0.17	1.0	◪	525	0.20	1.0	◪	50	0.14	0.8	–	–	–
	T7325	0.8	◪	200	0.18	1.0	■	155	0.16	1.0		–	–	–		–	–	–	◪	65	0.16	0.8	–	–	–
	T7335	0.8	◪	195	0.18	1.0	■	150	0.16	1.0		–	–	–		–	–	–	◪	60	0.16	0.8	–	–	–
	T8330	0.8	■	175	0.17	1.0	■	105	0.15	1.0	◪	165	0.17	1.0	◪	525	0.20	1.0	◪	40	0.14	0.8	–	–	–
	T8430	0.8	■	205	0.17	1.0	■	110	0.15	1.0	◪	170	0.17	1.0	◪	570	0.20	1.0	◪	45	0.14	0.8	–	–	–
	T9315	0.8	■	280	0.17	1.0		–	–	–	◪	265	0.17	1.0		–	–	–		–	–	–	–	–
	T9325	0.8	■	250	0.18	1.0	■	150	0.16	1.0	◪	235	0.18	1.0		–	–	–	◪	55	0.16	0.8	–	–	–
DNMG 150404E-NF	**T6310**	0.4	■	140	0.17	1.7	■	100	0.15	1.7	◪	110	0.17	1.7	◪	420	0.20	1.7	◪	40	0.15	1.4	–	–	–
	T7325	0.4	◪	160	0.18	1.7	■	120	0.16	1.7		–	–	–		–	–	–	◪	50	0.16	1.4	–	–	–
	T7335	0.4	◪	155	0.18	1.7	■	120	0.16	1.7		–	–	–		–	–	–	◪	50	0.16	1.4	–	–	–
	T8330	0.4	■	140	0.17	1.7	■	80	0.15	1.7	◪	130	0.17	1.7	◪	420	0.20	1.7	◪	35	0.15	1.4	–	–	–
	T8430	0.4	■	165	0.17	1.7	■	90	0.15	1.7	◪	135	0.17	1.7	◪	450	0.20	1.7	◪	35	0.15	1.4	–	–	–
	T9315	0.4	■	235	0.15	1.7		–	–	–	◪	220	0.15	1.7		–	–	–		–	–	–	–	–	–
	T9325	0.4	■	200	0.18	1.7	■	120	0.16	1.7	◪	190	0.18	1.7		–	–	–	◪	45	0.16	1.4	–	–	–
DNMG 150408E-NF	**T6310**	0.8	■	165	0.18	1.7	■	115	0.16	1.7	◪	130	0.18	1.7	◪	495	0.22	1.7	◪	45	0.16	1.4	–	–	–
	T7325	0.8	◪	190	0.18	1.7	■	145	0.16	1.7		–	–	–		–	–	–	◪	60	0.16	1.4	–	–	–
	T7335	0.8	◪	185	0.18	1.7	■	140	0.16	1.7		–	–	–		–	–	–	◪	60	0.16	1.4	–	–	–
	T8330	0.8	■	165	0.18	1.7	■	95	0.16	1.7	◪	155	0.18	1.7	◪	495	0.22	1.7	◪	40	0.16	1.4	–	–	–
	T8430	0.8	■	190	0.18	1.7	■	105	0.16	1.7	◪	155	0.18	1.7	◪	525	0.22	1.7	◪	40	0.16	1.4	–	–	–
	T9315	0.8	■	270	0.17	1.7		–	–	–	◪	255	0.17	1.7		–	–	–		–	–	–	–	–	–
	T9325	0.8	■	235	0.18	1.7	■	140	0.16	1.7	◪	220	0.18	1.7		–	–	–	◪	50	0.16	1.4	–	–	–
DNMG 150604E-NF	**HF7**	0.4		–	–	–	◪	80	0.14	1.9	◪	130	0.15	1.9	◪	420	0.18	1.9		–	–	–	–	–	–
	T6310	0.4	■	140	0.17	1.9	■	100	0.15	1.9	◪	110	0.17	1.9	◪	420	0.20	1.9	◪	40	0.15	1.5	–	–	–
	T7325	0.4	◪	155	0.18	1.9	■	120	0.16	1.9		–	–	–		–	–	–	◪	50	0.16	1.5	–	–	–
	T7335	0.4	◪	150	0.18	1.9	■	115	0.16	1.9		–	–	–		–	–	–	◪	45	0.16	1.5	–	–	–
	T8315	0.4	◪	145	0.17	1.9	■	85	0.15	1.9	◪	135	0.17	1.9	◪	435	0.20	1.9	◪	35	0.15	1.5	–	–	–
	T8330	0.4	■	140	0.17	1.9	■	80	0.15	1.9	◪	130	0.17	1.9	◪	420	0.20	1.9	◪	35	0.15	1.5	–	–	–
	T8430	0.4	■	165	0.17	1.9	■	90	0.15	1.9	◪	135	0.17	1.9	◪	450	0.20	1.9	◪	35	0.15	1.5	–	–	–
	T9315	0.4	■	235	0.15	1.9		–	–	–	◪	220	0.15	1.9		–	–	–		–	–	–	–	–	–
	T9325	0.4	■	195	0.18	1.9	■	115	0.16	1.9	◪	185	0.18	1.9		–	–	–	◪	40	0.16	1.5	–	–	–
DNMG 150608E-NF	**HF7**	0.8		–	–	–	◪	90	0.15	1.9	◪	145	0.17	1.9	◪	465	0.20	1.9		–	–	–	–	–	–
	T6310	0.8	■	165	0.18	1.9	■	115	0.16	1.9	◪	130	0.18	1.9	◪	495	0.22	1.9	◪	45	0.16	1.5	–	–	–
	T7325	0.8	◪	185	0.18	1.9	■	140	0.16	1.9		–	–	–		–	–	–	◪	60	0.16	1.5	–	–	–
	T7335	0.8	◪	180	0.18	1.9	■	140	0.16	1.9		–	–	–		–	–	–	◪	55	0.16	1.5	–	–	–
	T8315	0.8	◪	175	0.18	1.9	■	105	0.16	1.9	◪	165	0.18	1.9	◪	525	0.22	1.9	◪	40	0.16	1.5	–	–	–
	T8330	0.8	■	165	0.18	1.9	■	95	0.16	1.9	◪	155	0.18	1.9	◪	495	0.22	1.9	◪	40	0.16	1.5	–	–	–
	T8430	0.8	■	190	0.18	1.9	■	105	0.16	1.9	◪	155	0.18	1.9	◪	525	0.22	1.9	◪	40	0.16	1.5	–	–	–
	T9315	0.8	■	265	0.17	1.9		–	–	–	◪	250	0.17	1.9		–	–	–		–	–	–	–	–	–
	T9325	0.8	■	230	0.18	1.9	■	135	0.16	1.9	◪	215	0.18	1.9		–	–	–	◪	50	0.16	1.5	–	–	–
DNMG 150612E-NF	**T6310**	1.2	■	150	0.30	1.5	■	105	0.27	1.5	◪	120	0.30	1.5	◪	450	0.36	1.5	◪	45	0.21	1.2	–	–	–
	T8430	1.2	■	165	0.30	1.5	■	90	0.27	1.5	◪	135	0.30	1.5	◪	450	0.36	1.5	◪	35	0.21	1.2	–	–	–
	T9325	1.2	■	200	0.30	1.5	■	120	0.27	1.5	◪	190	0.30	1.5		–	–	–	◪	45	0.21	1.2	–	–	–
																				
NM geometry with highly positive design for fine-finish, medium to rough machining, and continuous cuts.																				
DNMG 110404E-NM	**T7325**	0.4	◪	175	0.20	0.8	■	135	0.18	0.8		–	–	–		–	–	–	■	55	0.20	0.6	–	–	–
	T7335	0.4	◪	165	0.20	0.8	■	125	0.18	0.8		–	–	–		–	–	–	■	50	0.20	0.6	–	–	–
	T8315	0.4	◪	160	0.20	0.8	■	95	0.18	0.8		–	–	–	◪	480	0.24	0.8	◪	40	0.20	0.6	–	–	–
	T8330	0.4	■	150	0.20	0.8	■	90	0.18	0.8		–	–	–	◪	450	0.24	0.8	◪	35	0.20	0.6	–	–	–
	T8430	0.4	■	175	0.20	0.8	■	95	0.18	0.8		–	–	–	◪	480	0.24	0.8	◪	35	0.20	0.6	–	–	–
	T9325	0.4	■	210	0.20	0.8	■	125	0.18	0.8		–	–	–		–	–	–	◪	45	0.20	0.6	–	–	–

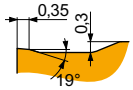
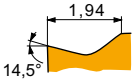
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]
																				
NM geometry with highly positive design for fine-finish, medium to rough machining, and continuous cuts.																				
DNMG 110408E-NM	**T7325**	0.8	190	0.25	0.8	145	0.23	0.8	–	–	–	–	–	–	60	0.20	0.6	–	–	–
	T7335	0.8	185	0.25	0.8	140	0.23	0.8	–	–	–	–	–	–	60	0.20	0.6	–	–	–
	T8315	0.8	180	0.25	0.8	105	0.23	0.8	–	–	–	540	0.30	0.8	45	0.20	0.6	–	–	–
	T8330	0.8	170	0.25	0.8	100	0.23	0.8	–	–	–	510	0.30	0.8	40	0.20	0.6	–	–	–
	T8430	0.8	190	0.25	0.8	105	0.23	0.8	–	–	–	525	0.30	0.8	40	0.20	0.6	–	–	–
	T9325	0.8	230	0.25	0.8	135	0.23	0.8	–	–	–	–	–	–	50	0.20	0.6	–	–	–
DNMG 150408E-NM	**T7335**	0.8	170	0.25	1.9	130	0.23	1.9	–	–	–	–	–	–	55	0.20	1.5	–	–	–
	T8330	0.8	155	0.25	1.9	90	0.23	1.9	–	–	–	465	0.30	1.9	35	0.20	1.5	–	–	–
	T8430	0.8	175	0.25	1.9	95	0.23	1.9	–	–	–	480	0.30	1.9	35	0.20	1.5	–	–	–
	T9325	0.8	210	0.25	1.9	125	0.23	1.9	–	–	–	–	–	–	45	0.20	1.5	–	–	–
DNMG 150604E-NM	**T7325**	0.4	160	0.20	1.9	120	0.18	1.9	–	–	–	–	–	–	50	0.20	1.5	–	–	–
	T7335	0.4	150	0.20	1.9	115	0.18	1.9	–	–	–	–	–	–	45	0.20	1.5	–	–	–
	T8315	0.4	150	0.20	1.9	90	0.18	1.9	–	–	–	450	0.24	1.9	35	0.20	1.5	–	–	–
	T8330	0.4	135	0.20	1.9	80	0.18	1.9	–	–	–	405	0.24	1.9	30	0.20	1.5	–	–	–
	T8430	0.4	155	0.20	1.9	85	0.18	1.9	–	–	–	435	0.24	1.9	30	0.20	1.5	–	–	–
	T9315	0.4	220	0.20	1.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.4	195	0.20	1.9	115	0.18	1.9	–	–	–	–	–	–	40	0.20	1.5	–	–	–
DNMG 150608E-NM	**T7325**	0.8	175	0.25	1.9	135	0.23	1.9	–	–	–	–	–	–	55	0.20	1.5	–	–	–
	T7335	0.8	170	0.25	1.9	130	0.23	1.9	–	–	–	–	–	–	55	0.20	1.5	–	–	–
	T8315	0.8	165	0.25	1.9	95	0.23	1.9	–	–	–	495	0.30	1.9	40	0.20	1.5	–	–	–
	T8330	0.8	155	0.25	1.9	90	0.23	1.9	–	–	–	465	0.30	1.9	35	0.20	1.5	–	–	–
	T8430	0.8	175	0.25	1.9	95	0.23	1.9	–	–	–	480	0.30	1.9	35	0.20	1.5	–	–	–
	T9315	0.8	235	0.25	1.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	210	0.25	1.9	125	0.23	1.9	–	–	–	–	–	–	45	0.20	1.5	–	–	–
DNMG 150612E-NM	**T7325**	1.2	175	0.30	1.9	135	0.27	1.9	–	–	–	–	–	–	55	0.24	1.5	–	–	–
	T7335	1.2	170	0.30	1.9	130	0.27	1.9	–	–	–	–	–	–	55	0.24	1.5	–	–	–
	T8315	1.2	165	0.30	1.9	95	0.27	1.9	–	–	–	495	0.36	1.9	40	0.24	1.5	–	–	–
	T9325	1.2	205	0.30	1.9	120	0.27	1.9	–	–	–	–	–	–	45	0.24	1.5	–	–	–
																				
NMR geometry with positive design for medium to rough machining, and continuous cuts.																				
DNMG 110404E-NMR	**T7325**	0.4	150	0.20	0.8	115	0.18	0.8	–	–	–	–	–	–	45	0.18	0.6	–	–	–
	T9315	0.4	205	0.20	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.4	185	0.20	0.8	110	0.18	0.8	–	–	–	–	–	–	40	0.18	0.6	–	–	–
DNMG 110408E-NMR	**T7325**	0.8	155	0.30	0.8	120	0.27	0.8	–	–	–	–	–	–	50	0.24	0.6	–	–	–
	T9315	0.8	205	0.30	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	185	0.30	0.8	110	0.27	0.8	–	–	–	–	–	–	40	0.24	0.6	–	–	–
DNMG 110412E-NMR	**T7325**	1.2	155	0.30	1.6	120	0.27	1.6	–	–	–	–	–	–	50	0.24	1.3	–	–	–
	T9315	1.2	200	0.30	1.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	1.2	180	0.30	1.6	105	0.27	1.6	–	–	–	–	–	–	40	0.24	1.3	–	–	–
DNMG 150404E-NMR	**T7325**	0.4	140	0.20	1.9	105	0.18	1.9	–	–	–	–	–	–	45	0.18	1.5	–	–	–
	T7335	0.4	130	0.20	1.9	100	0.18	1.9	–	–	–	–	–	–	40	0.18	1.5	–	–	–
	T9325	0.4	170	0.20	1.9	100	0.18	1.9	–	–	–	–	–	–	35	0.18	1.5	–	–	–
DNMG 150408E-NMR	**T7325**	0.8	145	0.30	1.9	110	0.27	1.9	–	–	–	–	–	–	45	0.24	1.5	–	–	–
	T7335	0.8	140	0.30	1.9	105	0.27	1.9	–	–	–	–	–	–	45	0.24	1.5	–	–	–
	T8330	0.8	125	0.30	1.9	75	0.27	1.9	–	–	–	–	–	–	30	0.24	1.5	–	–	–
	T8430	0.8	135	0.30	1.9	75	0.27	1.9	–	–	–	–	–	–	25	0.24	1.5	–	–	–
	T9315	0.8	190	0.30	1.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	170	0.30	1.9	100	0.27	1.9	–	–	–	–	–	–	35	0.24	1.5	–	–	–
DNMG 150604E-NMR	**T7325**	0.4	140	0.20	1.9	105	0.18	1.9	–	–	–	–	–	–	45	0.18	1.5	–	–	–
	T7335	0.4	130	0.20	1.9	100	0.18	1.9	–	–	–	–	–	–	40	0.18	1.5	–	–	–
	T8330	0.4	120	0.20	1.9	70	0.18	1.9	–	–	–	–	–	–	30	0.18	1.5	–	–	–
	T8430	0.4	135	0.20	1.9	75	0.18	1.9	–	–	–	–	–	–	25	0.18	1.5	–	–	–
	T9315	0.4	190	0.20	1.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.4	170	0.20	1.9	100	0.18	1.9	–	–	–	–	–	–	35	0.18	1.5	–	–	–

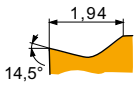
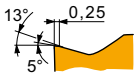
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
		[mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]
																				
NMR geometry with positive design for medium to rough machining, and continuous cuts.																				
DNMG 150608E-NMR	**T6310**	0.8	■ 125	0.30	1.9	■ 90	0.27	1.9	–	–	–	–	–	–	■ 35	0.24	1.5	–	–	–
	T7325	0.8	◪ 145	0.30	1.9	■ 110	0.27	1.9	–	–	–	–	–	–	■ 45	0.24	1.5	–	–	–
	T7335	0.8	◪ 140	0.30	1.9	■ 105	0.27	1.9	–	–	–	–	–	–	■ 45	0.24	1.5	–	–	–
	T8330	0.8	■ 125	0.30	1.9	■ 75	0.27	1.9	–	–	–	–	–	–	◪ 30	0.24	1.5	–	–	–
	T8430	0.8	■ 135	0.30	1.9	■ 75	0.27	1.9	–	–	–	–	–	–	◪ 25	0.24	1.5	–	–	–
	T9315	0.8	■ 190	0.30	1.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 170	0.30	1.9	■ 100	0.27	1.9	–	–	–	–	–	–	◪ 35	0.24	1.5	–	–	–
DNMG 150612E-NMR	**T7325**	1.2	◪ 155	0.30	1.9	■ 120	0.27	1.9	–	–	–	–	–	–	■ 50	0.24	1.5	–	–	–
	T7335	1.2	◪ 145	0.30	1.9	■ 110	0.27	1.9	–	–	–	–	–	–	■ 45	0.24	1.5	–	–	–
	T8330	1.2	■ 135	0.30	1.9	■ 80	0.27	1.9	–	–	–	–	–	–	◪ 30	0.24	1.5	–	–	–
	T8430	1.2	■ 145	0.30	1.9	■ 80	0.27	1.9	–	–	–	–	–	–	◪ 30	0.24	1.5	–	–	–
	T9315	1.2	■ 200	0.30	1.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 180	0.30	1.9	■ 105	0.27	1.9	–	–	–	–	–	–	◪ 40	0.24	1.5	–	–	–
																				
NRM geometry with positive design for semi-rough to rough machining, and continuous to moderate interrupted cuts.																				
DNMG 150408-NRM	**T7325**	0.8	◪ 140	0.30	3.0	■ 105	0.27	3.0	–	–	–	–	–	–	■ 45	0.24	2.4	–	–	–
	T7335	0.8	◪ 130	0.30	3.0	■ 100	0.27	3.0	–	–	–	–	–	–	■ 40	0.24	2.4	–	–	–
	T9315	0.8	■ 180	0.30	3.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
DNMG 150604-NRM	**T7325**	0.4	◪ 130	0.20	3.0	■ 100	0.18	3.0	–	–	–	–	–	–	■ 40	0.20	2.4	–	–	–
	T7335	0.4	◪ 130	0.20	3.0	■ 100	0.18	3.0	–	–	–	–	–	–	■ 40	0.20	2.4	–	–	–
	T9315	0.4	■ 180	0.20	3.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
DNMG 150608-NRM	**T7325**	0.8	◪ 140	0.30	3.0	■ 105	0.27	3.0	–	–	–	–	–	–	■ 45	0.24	2.4	–	–	–
	T7335	0.8	◪ 130	0.30	3.0	■ 100	0.27	3.0	–	–	–	–	–	–	■ 40	0.24	2.4	–	–	–
	T9315	0.8	■ 180	0.30	3.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
DNMG 150612-NRM	**T7325**	1.2	◪ 145	0.30	3.0	■ 110	0.27	3.0	–	–	–	–	–	–	■ 45	0.27	2.4	–	–	–
	T7335	1.2	◪ 140	0.30	3.0	■ 105	0.27	3.0	–	–	–	–	–	–	■ 45	0.27	2.4	–	–	–
	T9315	1.2	■ 190	0.30	3.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
																				
R geometry for semi-rough to rough machining, and continuous to interrupted cuts.																				
DNMG 150408E-R	**T5315**	0.8	◪ 175	0.40	3.0	–	–	–	■ 165	0.40	3.0	–	–	–	–	–	–	◪ 35	0.15	1.0
DNMG 150608E-R	**T5305**	0.8	◪ 200	0.40	3.0	–	–	–	■ 190	0.40	3.0	–	–	–	–	–	–	◪ 40	0.15	1.0
	T5315	0.8	◪ 175	0.40	3.0	–	–	–	■ 165	0.40	3.0	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9310	0.8	■ 170	0.40	3.0	–	–	–	◪ 160	0.40	3.0	–	–	–	–	–	–	◪ 30	0.15	1.0
	T9315	0.8	■ 155	0.40	3.0	–	–	–	◪ 145	0.40	3.0	–	–	–	–	–	–	◪ 30	0.15	1.0
	T9325	0.8	■ 140	0.40	3.0	–	–	–	◪ 130	0.40	3.0	–	–	–	–	–	–	–	–	–
DNMG 150612E-R	**T5305**	1.2	◪ 210	0.40	3.0	–	–	–	■ 195	0.40	3.0	–	–	–	–	–	–	◪ 40	0.15	1.0
	T5315	1.2	◪ 185	0.40	3.0	–	–	–	■ 175	0.40	3.0	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9310	1.2	■ 180	0.40	3.0	–	–	–	◪ 170	0.40	3.0	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9315	1.2	■ 165	0.40	3.0	–	–	–	◪ 155	0.40	3.0	–	–	–	–	–	–	◪ 30	0.15	1.0
	T9325	1.2	■ 150	0.40	3.0	–	–	–	◪ 140	0.40	3.0	–	–	–	–	–	–	–	–	–
DNMG 150616E-R	**T9325**	1.6	■ 155	0.40	3.0	–	–	–	◪ 145	0.40	3.0	–	–	–	–	–	–	–	–	–
																				
RM geometry for semi-rough to rough machining, and continuous to interrupted cuts.																				
DNMG 110408E-RM	**T9315**	0.8	■ 190	0.40	2.0	–	–	–	◪ 180	0.40	2.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 170	0.40	2.0	◪ 100	0.36	2.0	◪ 160	0.40	2.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 145	0.40	2.0	◪ 85	0.36	2.0	–	–	–	–	–	–	–	–	–	–	–	–
DNMG 110412E-RM	**T9315**	1.2	■ 230	0.30	2.0	–	–	–	◪ 215	0.30	2.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 205	0.30	2.0	◪ 120	0.27	2.0	◪ 190	0.30	2.0	–	–	–	–	–	–	–	–	–

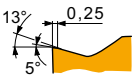
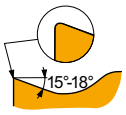
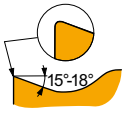
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]
																				
			RM geometry for semi-rough to rough machining, and continuous to interrupted cuts.																	
DNMG 150408E-RM	**T9315**	0.8	■ 180	0.40	3.0	–	–	–	◪ 170	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 165	0.40	3.0	◪ 95	0.36	3.0	◪ 155	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 140	0.40	3.0	◪ 80	0.36	3.0	–	–	–	–	–	–	–	–	–	–	–	–
DNMG 150412E-RM	**T7325**	1.2	◪ 155	0.40	3.0	◪ 120	0.36	3.0	–	–	–	–	–	–	–	–	–	–	–	–
	T9315	1.2	■ 190	0.40	3.0	–	–	–	◪ 180	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 170	0.40	3.0	◪ 100	0.36	3.0	◪ 160	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	■ 150	0.40	3.0	◪ 90	0.36	3.0	–	–	–	–	–	–	–	–	–	–	–	–
DNMG 150608E-RM	**T5305**	0.8	◪ 230	0.40	3.0	–	–	–	◪ 215	0.40	3.0	–	–	–	–	–	–	–	–	–
	T5315	0.8	◪ 205	0.40	3.0	–	–	–	◪ 190	0.40	3.0	–	–	–	–	–	–	–	–	–
	T7325	0.8	◪ 145	0.40	3.0	◪ 110	0.36	3.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.8	◪ 135	0.40	3.0	◪ 105	0.36	3.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	◪ 135	0.40	3.0	◪ 80	0.36	3.0	◪ 125	0.40	3.0	–	–	–	–	–	–	–	–	–
	T8330	0.8	■ 130	0.40	3.0	◪ 75	0.36	3.0	◪ 120	0.40	3.0	–	–	–	–	–	–	–	–	–
	T8430	0.8	■ 135	0.40	3.0	◪ 75	0.36	3.0	◪ 110	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9310	0.8	■ 200	0.40	3.0	–	–	–	◪ 190	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9315	0.8	■ 180	0.40	3.0	–	–	–	◪ 170	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 165	0.40	3.0	◪ 95	0.36	3.0	◪ 155	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 140	0.40	3.0	◪ 80	0.36	3.0	–	–	–	–	–	–	–	–	–	–	–	–
DNMG 150612E-RM	**T5305**	1.2	◪ 240	0.40	3.0	–	–	–	◪ 225	0.40	3.0	–	–	–	–	–	–	–	–	–
	T5315	1.2	◪ 215	0.40	3.0	–	–	–	◪ 200	0.40	3.0	–	–	–	–	–	–	–	–	–
	T7325	1.2	◪ 155	0.40	3.0	◪ 120	0.36	3.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	1.2	◪ 145	0.40	3.0	◪ 110	0.36	3.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	1.2	■ 135	0.40	3.0	◪ 80	0.36	3.0	◪ 125	0.40	3.0	–	–	–	–	–	–	–	–	–
	T8430	1.2	■ 140	0.40	3.0	◪ 75	0.36	3.0	◪ 115	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9310	1.2	■ 210	0.40	3.0	–	–	–	◪ 195	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9315	1.2	■ 190	0.40	3.0	–	–	–	◪ 180	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 170	0.40	3.0	◪ 100	0.36	3.0	◪ 160	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	■ 150	0.40	3.0	◪ 90	0.36	3.0	–	–	–	–	–	–	–	–	–	–	–	–
DNMG 150616E-RM	**T5315**	1.6	◪ 225	0.40	3.0	–	–	–	◪ 210	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9315	1.6	■ 200	0.40	3.0	–	–	–	◪ 190	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9325	1.6	■ 180	0.40	3.0	◪ 105	0.36	3.0	◪ 170	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	■ 155	0.40	3.0	◪ 90	0.36	3.0	–	–	–	–	–	–	–	–	–	–	–	–
																				
			SF geometry with positive design for fine-finish machining of thin walls and continuous cuts.																	
DNMG 110404E-SF	**T6310**	0.4	■ 150	0.15	0.8	■ 105	0.14	0.8	■ 120	0.15	0.8	◪ 450	0.18	0.8	■ 45	0.12	0.6	■ 30	0.15	1.0
	T7325	0.4	◪ 165	0.17	0.8	■ 125	0.15	0.8	–	–	–	–	–	–	■ 50	0.15	0.6	–	–	–
	T8315	0.4	◪ 160	0.15	0.8	■ 95	0.14	0.8	■ 150	0.15	0.8	◪ 480	0.18	0.8	◪ 40	0.12	0.6	■ 30	0.15	1.0
	T8430	0.4	■ 180	0.15	0.8	■ 95	0.14	0.8	◪ 145	0.15	0.8	◪ 495	0.18	0.8	◪ 35	0.12	0.6	◪ 30	0.15	1.0
	T9315	0.4	■ 245	0.15	0.8	–	–	–	◪ 230	0.15	0.8	–	–	–	–	–	–	◪ 45	0.15	1.0
	T9325	0.4	■ 210	0.17	0.8	■ 125	0.15	0.8	◪ 195	0.17	0.8	–	–	–	◪ 45	0.15	0.6	–	–	–
DNMG 110408E-SF	**T6310**	0.8	■ 175	0.17	0.8	■ 125	0.15	0.8	■ 140	0.17	0.8	◪ 525	0.20	0.8	■ 50	0.14	0.6	■ 35	0.15	1.0
	T7325	0.8	◪ 195	0.17	0.8	■ 150	0.15	0.8	–	–	–	–	–	–	■ 60	0.15	0.6	–	–	–
	T7335	0.8	◪ 195	0.17	0.8	■ 150	0.15	0.8	–	–	–	–	–	–	■ 60	0.15	0.6	–	–	–
	T8315	0.8	◪ 180	0.17	0.8	■ 105	0.15	0.8	■ 170	0.17	0.8	◪ 540	0.20	0.8	◪ 45	0.14	0.6	■ 35	0.15	1.0
	T8430	0.8	■ 200	0.17	0.8	■ 110	0.15	0.8	◪ 165	0.17	0.8	◪ 555	0.20	0.8	◪ 40	0.14	0.6	◪ 35	0.15	1.0
	T9325	0.8	■ 250	0.17	0.8	■ 150	0.15	0.8	◪ 235	0.17	0.8	–	–	–	◪ 55	0.15	0.6	–	–	–
DNMG 150404E-SF	**T6310**	0.4	■ 140	0.15	1.5	■ 100	0.14	1.5	■ 110	0.15	1.5	◪ 420	0.18	1.5	■ 40	0.12	1.2	■ 25	0.15	1.0
	T8315	0.4	◪ 150	0.15	1.5	■ 90	0.14	1.5	■ 140	0.15	1.5	◪ 450	0.18	1.5	◪ 35	0.12	1.2	■ 30	0.15	1.0
	T8430	0.4	■ 165	0.15	1.5	■ 90	0.14	1.5	◪ 135	0.15	1.5	◪ 450	0.18	1.5	◪ 35	0.12	1.2	◪ 25	0.15	1.0
	T9325	0.4	■ 195	0.17	1.5	■ 115	0.15	1.5	◪ 185	0.17	1.5	–	–	–	◪ 40	0.15	1.2	–	–	–

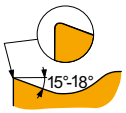
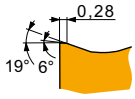
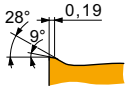
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
			SF geometry with positive design for fine-finish machining of thin walls and continuous cuts.																	
DNMG 150408E-SF	**T6310**	0.8	■	160	0.17	1.5	■	115	0.15	1.5	■	125	0.17	1.5	◪	480	0.20	1.5	■	45	0.14	1.2	■	30	0.15	1.0
	T8315	0.8	◪	170	0.17	1.5	■	100	0.15	1.5	■	160	0.17	1.5	◪	510	0.20	1.5	◪	40	0.14	1.2	■	30	0.15	1.0
	T8330	0.8	■	160	0.17	1.5	■	95	0.15	1.5	■	150	0.17	1.5	◪	480	0.20	1.5	◪	40	0.14	1.2	◪	30	0.15	1.0
	T8430	0.8	■	190	0.17	1.5	■	105	0.15	1.5	◪	155	0.17	1.5	◪	525	0.20	1.5	◪	40	0.14	1.2	◪	30	0.15	1.0
	T9325	0.8	■	235	0.17	1.5	■	140	0.15	1.5	◪	220	0.17	1.5		–	–	–	◪	50	0.15	1.2		–	–	–
DNMG 150604E-SF	**H07**	0.4		–	–	–	◪	70	0.14	1.5	■	115	0.15	1.5	◪	360	0.18	1.5	■	35	0.12	1.2		–	–	–
	T6310	0.4	■	140	0.15	1.5	■	100	0.14	1.5	■	110	0.15	1.5	◪	420	0.18	1.5	■	40	0.12	1.2	■	25	0.15	1.0
	T7325	0.4	◪	155	0.17	1.5	■	120	0.15	1.5		–	–	–		–	–	–	■	50	0.15	1.2		–	–	–
	T7335	0.4	◪	150	0.17	1.5	■	115	0.15	1.5		–	–	–		–	–	–	■	45	0.15	1.2		–	–	–
	T8315	0.4	◪	150	0.15	1.5	■	90	0.14	1.5	■	140	0.15	1.5	◪	450	0.18	1.5	◪	35	0.12	1.2	■	30	0.15	1.0
	T8330	0.4	■	140	0.15	1.5	■	80	0.14	1.5	■	130	0.15	1.5	◪	420	0.18	1.5	◪	35	0.12	1.2	◪	25	0.15	1.0
	T8430	0.4	■	165	0.15	1.5	■	90	0.14	1.5	◪	135	0.15	1.5	◪	450	0.18	1.5	◪	35	0.12	1.2	◪	25	0.15	1.0
	T9315	0.4	■	230	0.15	1.5		–	–	–	◪	215	0.15	1.5		–	–	–		–	–	–	◪	45	0.15	1.0
	T9325	0.4	■	195	0.17	1.5	■	115	0.15	1.5	◪	185	0.17	1.5		–	–	–	◪	40	0.15	1.2		–	–	–
DNMG 150608E-SF	**H07**	0.8		–	–	–	◪	80	0.15	1.5	■	130	0.17	1.5	◪	415	0.20	1.5	■	40	0.14	1.2		–	–	–
	T6310	0.8	■	160	0.17	1.5	■	115	0.15	1.5	■	125	0.17	1.5	◪	480	0.20	1.5	■	45	0.14	1.2	■	30	0.15	1.0
	T7325	0.8	◪	185	0.17	1.5	■	140	0.15	1.5		–	–	–		–	–	–	■	60	0.15	1.2		–	–	–
	T7335	0.8	◪	180	0.17	1.5	■	140	0.15	1.5		–	–	–		–	–	–	■	55	0.15	1.2		–	–	–
	T8315	0.8	◪	170	0.17	1.5	■	100	0.15	1.5	■	160	0.17	1.5	◪	510	0.20	1.5	◪	40	0.14	1.2	■	30	0.15	1.0
	T8330	0.8	■	160	0.17	1.5	■	95	0.15	1.5	■	150	0.17	1.5	◪	480	0.20	1.5	◪	40	0.14	1.2	◪	30	0.15	1.0
	T8430	0.8	■	190	0.17	1.5	■	105	0.15	1.5	◪	155	0.17	1.5	◪	525	0.20	1.5	◪	40	0.14	1.2	◪	30	0.15	1.0
	T9315	0.8	■	255	0.17	1.5		–	–	–	◪	240	0.17	1.5		–	–	–		–	–	–	◪	50	0.15	1.0
	T9325	0.8	■	235	0.17	1.5	■	140	0.15	1.5	◪	220	0.17	1.5		–	–	–	◪	50	0.15	1.2		–	–	–
DNMG 150612E-SF	**T6310**	1.2	■	145	0.30	1.5	■	100	0.27	1.5	■	115	0.30	1.5	◪	435	0.36	1.5	■	40	0.21	1.2	■	25	0.15	1.0
	T7325	1.2	◪	165	0.30	1.5	■	125	0.27	1.5		–	–	–		–	–	–	■	50	0.21	1.2		–	–	–
	T9315	1.2	■	210	0.30	1.5		–	–	–	◪	195	0.30	1.5		–	–	–		–	–	–	◪	40	0.15	1.0
																				
			SM geometry with positive design for medium machining, and continuous to interrupted cuts.																	
DNMG 110404E-SM	**T6310**	0.4	■	140	0.20	0.8	■	100	0.18	0.8	■	110	0.20	0.8	◪	420	0.24	0.8	■	40	0.20	0.6	◪	25	0.15	1.0
	T7325	0.4	◪	160	0.20	0.8	■	120	0.18	0.8		–	–	–		–	–	–	■	50	0.20	0.6		–	–	–
	T7335	0.4	◪	150	0.20	0.8	■	115	0.18	0.8		–	–	–		–	–	–	■	45	0.20	0.6		–	–	–
	T8430	0.4	■	155	0.20	0.8	■	85	0.18	0.8	◪	130	0.20	0.8	◪	435	0.24	0.8	◪	30	0.20	0.6	◪	25	0.15	1.0
	T9325	0.4	■	190	0.20	0.8	■	110	0.18	0.8	◪	180	0.20	0.8		–	–	–	◪	40	0.20	0.6		–	–	–
DNMG 110408E-SM	**T6310**	0.8	■	150	0.25	1.2	■	105	0.23	1.2	■	120	0.25	1.2	◪	450	0.30	1.2	■	45	0.20	1.0	◪	30	0.15	1.0
	T7325	0.8	◪	170	0.25	1.2	■	130	0.23	1.2		–	–	–		–	–	–	■	55	0.20	1.0		–	–	–
	T7335	0.8	◪	160	0.25	1.2	■	120	0.23	1.2		–	–	–		–	–	–	■	50	0.20	1.0		–	–	–
	T8330	0.8	■	150	0.25	1.2	■	90	0.23	1.2	■	140	0.25	1.2	◪	450	0.30	1.2	◪	35	0.20	1.0	◪	30	0.15	1.0
	T8430	0.8	■	170	0.25	1.2	■	90	0.23	1.2	◪	135	0.25	1.2	◪	465	0.30	1.2	◪	35	0.20	1.0	◪	25	0.15	1.0
	T9325	0.8	■	200	0.25	1.2	■	120	0.23	1.2	◪	190	0.25	1.2		–	–	–	◪	45	0.20	1.0		–	–	–
DNMG 150404E-SM	**T6310**	0.4	■	125	0.22	1.7	■	90	0.20	1.7	■	100	0.22	1.7	◪	375	0.26	1.7	■	35	0.20	1.4	◪	25	0.15	1.0
DNMG 150408E-SM	**T6310**	0.8	■	140	0.25	2.1	■	100	0.23	2.1	■	110	0.25	2.1	◪	420	0.30	2.1	■	40	0.20	1.7	◪	25	0.15	1.0
DNMG 150604E-SM	**T6310**	0.4	■	125	0.22	1.7	■	90	0.20	1.7	■	100	0.22	1.7	◪	375	0.26	1.7	■	35	0.20	1.4	◪	25	0.15	1.0
	T7325	0.4	◪	140	0.22	1.7	■	105	0.20	1.7		–	–	–		–	–	–	■	45	0.20	1.4		–	–	–
	T7335	0.4	◪	140	0.22	1.7	■	105	0.20	1.7		–	–	–		–	–	–	■	45	0.20	1.4		–	–	–
	T8330	0.4	■	125	0.22	1.7	■	75	0.20	1.7	■	115	0.22	1.7	◪	375	0.26	1.7	◪	30	0.20	1.4	◪	25	0.15	1.0
	T8430	0.4	■	140	0.22	1.7	■	75	0.20	1.7	◪	115	0.22	1.7	◪	390	0.26	1.7	◪	30	0.20	1.4	◪	20	0.15	1.0
	T9315	0.4	■	200	0.20	1.7		–	–	–	◪	190	0.20	1.7		–	–	–		–	–	–	◪	40	0.15	1.0
	T9325	0.4	■	170	0.22	1.7	■	100	0.20	1.7	◪	160	0.22	1.7		–	–	–	◪	35	0.20	1.4		–	–	–

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
SM geometry with positive design for medium machining, and continuous to interrupted cuts.																				
DNMG 150608E-SM	**T6310**	0.8	140	0.25	1.7	100	0.23	1.7	110	0.25	1.7	420	0.30	1.7	40	0.20	1.4	25	0.15	1.0
	T7325	0.8	160	0.25	1.7	120	0.23	1.7	–	–	–	–	–	–	50	0.20	1.4	–	–	–
	T7335	0.8	155	0.25	1.7	120	0.23	1.7	–	–	–	–	–	–	50	0.20	1.4	–	–	–
	T8330	0.8	140	0.25	1.7	80	0.23	1.7	130	0.25	1.7	420	0.30	1.7	35	0.20	1.4	25	0.15	1.0
	T8430	0.8	155	0.25	1.7	85	0.23	1.7	130	0.25	1.7	435	0.30	1.7	30	0.20	1.4	25	0.15	1.0
	T9315	0.8	215	0.25	1.7	–	–	–	200	0.25	1.7	–	–	–	–	–	–	40	0.15	1.0
	T9325	0.8	195	0.25	1.7	115	0.23	1.7	185	0.25	1.7	–	–	–	40	0.20	1.4	–	–	–
DNMG 150612E-SM	**T6310**	1.2	145	0.30	1.7	100	0.27	1.7	115	0.30	1.7	435	0.36	1.7	40	0.24	1.4	25	0.15	1.0
	T7325	1.2	160	0.30	1.7	120	0.27	1.7	–	–	–	–	–	–	50	0.24	1.4	–	–	–
	T7335	1.2	155	0.30	1.7	120	0.27	1.7	–	–	–	–	–	–	50	0.24	1.4	–	–	–
	T8330	1.2	145	0.30	1.7	85	0.27	1.7	135	0.30	1.7	435	0.36	1.7	35	0.24	1.4	25	0.15	1.0
	T8430	1.2	155	0.30	1.7	85	0.27	1.7	130	0.30	1.7	435	0.36	1.7	30	0.24	1.4	25	0.15	1.0
	T9315	1.2	210	0.30	1.7	–	–	–	195	0.30	1.7	–	–	–	–	–	–	40	0.15	1.0
	T9325	1.2	190	0.30	1.7	110	0.27	1.7	180	0.30	1.7	–	–	–	40	0.24	1.4	–	–	–
																				
ER-SI geometry with positive right-handed design for fine-finish to semi-rough machining, and continuous cuts.																				
DNMG 110404ER-SI	**T7325**	0.4	185	0.20	1.0	140	0.18	1.0	–	–	–	–	–	–	60	0.18	0.8	–	–	–
	T7335	0.4	180	0.20	1.0	140	0.18	1.0	–	–	–	–	–	–	55	0.18	0.8	–	–	–
	T8330	0.4	160	0.20	1.0	95	0.18	1.0	–	–	–	480	0.24	1.0	40	0.18	0.8	–	–	–
	T8430	0.4	185	0.20	1.0	100	0.18	1.0	–	–	–	510	0.24	1.0	40	0.18	0.8	–	–	–
	T9325	0.4	225	0.20	1.0	135	0.18	1.0	–	–	–	–	–	–	50	0.18	0.8	–	–	–
DNMG 110408ER-SI	**T7335**	0.8	175	0.35	1.0	135	0.32	1.0	–	–	–	–	–	–	55	0.25	0.8	–	–	–
	T8330	0.8	165	0.35	1.0	95	0.32	1.0	–	–	–	495	0.42	1.0	40	0.25	0.8	–	–	–
	T8430	0.8	180	0.35	1.0	95	0.32	1.0	–	–	–	495	0.42	1.0	35	0.25	0.8	–	–	–
	T9325	0.8	210	0.35	1.0	125	0.32	1.0	–	–	–	–	–	–	45	0.25	0.8	–	–	–
DNMG 150404ER-SI	**T8330**	0.4	155	0.20	1.5	90	0.18	1.5	–	–	–	465	0.24	1.5	35	0.18	1.2	–	–	–
	T8430	0.4	175	0.20	1.5	95	0.18	1.5	–	–	–	480	0.24	1.5	35	0.18	1.2	–	–	–
	T9325	0.4	220	0.20	1.5	130	0.18	1.5	–	–	–	–	–	–	45	0.18	1.2	–	–	–
DNMG 150408ER-SI	**T8330**	0.8	160	0.35	1.5	95	0.32	1.5	–	–	–	480	0.42	1.5	40	0.25	1.2	–	–	–
	T8430	0.8	170	0.35	1.5	90	0.32	1.5	–	–	–	465	0.42	1.5	35	0.25	1.2	–	–	–
	T9325	0.8	200	0.35	1.5	120	0.32	1.5	–	–	–	–	–	–	45	0.25	1.2	–	–	–
DNMG 150604ER-SI	**T7325**	0.4	180	0.20	1.5	140	0.18	1.5	–	–	–	–	–	–	55	0.18	1.2	–	–	–
	T7335	0.4	170	0.20	1.5	130	0.18	1.5	–	–	–	–	–	–	55	0.18	1.2	–	–	–
	T8315	0.4	165	0.20	1.5	95	0.18	1.5	–	–	–	495	0.24	1.5	40	0.18	1.2	–	–	–
	T8330	0.4	155	0.20	1.5	90	0.18	1.5	–	–	–	465	0.24	1.5	35	0.18	1.2	–	–	–
	T8430	0.4	175	0.20	1.5	95	0.18	1.5	–	–	–	480	0.24	1.5	35	0.18	1.2	–	–	–
	T9325	0.4	220	0.20	1.5	130	0.18	1.5	–	–	–	–	–	–	45	0.18	1.2	–	–	–
	T9335	0.4	185	0.20	1.5	110	0.18	1.5	–	–	–	–	–	–	40	0.18	1.2	–	–	–
DNMG 150608ER-SI	**T7325**	0.8	180	0.35	1.5	140	0.32	1.5	–	–	–	–	–	–	55	0.25	1.2	–	–	–
	T7335	0.8	170	0.35	1.5	130	0.32	1.5	–	–	–	–	–	–	55	0.25	1.2	–	–	–
	T8315	0.8	165	0.35	1.5	95	0.32	1.5	–	–	–	495	0.42	1.5	40	0.25	1.2	–	–	–
	T8330	0.8	160	0.35	1.5	95	0.32	1.5	–	–	–	480	0.42	1.5	40	0.25	1.2	–	–	–
	T8430	0.8	170	0.35	1.5	90	0.32	1.5	–	–	–	465	0.42	1.5	35	0.25	1.2	–	–	–
	T9325	0.8	200	0.35	1.5	120	0.32	1.5	–	–	–	–	–	–	45	0.25	1.2	–	–	–
	T9335	0.8	180	0.35	1.5	105	0.32	1.5	–	–	–	–	–	–	40	0.25	1.2	–	–	–
																				
EL-SI geometry with positive left-handed design, for fine-finish to semi-rough machining, and continuous cuts.																				
DNMG 110404EL-SI	**T7335**	0.4	180	0.20	1.0	140	0.18	1.0	–	–	–	–	–	–	55	0.18	0.8	–	–	–
	T8330	0.4	160	0.20	1.0	95	0.18	1.0	–	–	–	480	0.24	1.0	40	0.18	0.8	–	–	–
	T8430	0.4	185	0.20	1.0	100	0.18	1.0	–	–	–	510	0.24	1.0	40	0.18	0.8	–	–	–
	T9325	0.4	225	0.20	1.0	135	0.18	1.0	–	–	–	–	–	–	50	0.18	0.8	–	–	–

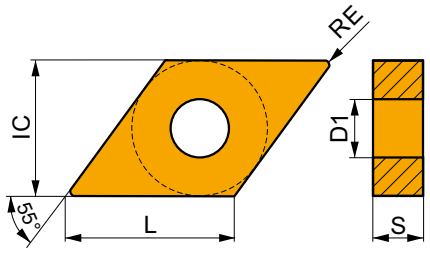
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]
		[mm]	E																	
EL-SI geometry with positive left-handed design, for fine-finish to semi-rough machining, and continuous cuts.																				
DNMG 110408EL-SI	**T7325**	0.8	185	0.35	1.0	140	0.32	1.0	–	–	–	–	–	–	60	0.25	0.8	–	–	–
	T8330	0.8	165	0.35	1.0	95	0.32	1.0	–	–	–	495	0.42	1.0	40	0.25	0.8	–	–	–
	T8430	0.8	180	0.35	1.0	95	0.32	1.0	–	–	–	495	0.42	1.0	35	0.25	0.8	–	–	–
	T9325	0.8	210	0.35	1.0	125	0.32	1.0	–	–	–	–	–	–	45	0.25	0.8	–	–	–
DNMG 150404EL-SI	**T8330**	0.4	155	0.20	1.5	90	0.18	1.5	–	–	–	465	0.24	1.5	35	0.18	1.2	–	–	–
	T8430	0.4	175	0.20	1.5	95	0.18	1.5	–	–	–	480	0.24	1.5	35	0.18	1.2	–	–	–
	T9325	0.4	220	0.20	1.5	130	0.18	1.5	–	–	–	–	–	–	45	0.18	1.2	–	–	–
DNMG 150408EL-SI	**T7335**	0.8	170	0.35	1.5	130	0.32	1.5	–	–	–	–	–	–	55	0.25	1.2	–	–	–
	T8330	0.8	160	0.35	1.5	95	0.32	1.5	–	–	–	480	0.42	1.5	40	0.25	1.2	–	–	–
	T8430	0.8	170	0.35	1.5	90	0.32	1.5	–	–	–	465	0.42	1.5	35	0.25	1.2	–	–	–
	T9325	0.8	200	0.35	1.5	120	0.32	1.5	–	–	–	–	–	–	45	0.25	1.2	–	–	–
DNMG 150604EL-SI	**T7325**	0.4	180	0.20	1.5	140	0.18	1.5	–	–	–	–	–	–	55	0.18	1.2	–	–	–
	T7335	0.4	170	0.20	1.5	130	0.18	1.5	–	–	–	–	–	–	55	0.18	1.2	–	–	–
	T8315	0.4	165	0.20	1.5	95	0.18	1.5	–	–	–	495	0.24	1.5	40	0.18	1.2	–	–	–
	T8330	0.4	155	0.20	1.5	90	0.18	1.5	–	–	–	465	0.24	1.5	35	0.18	1.2	–	–	–
	T8430	0.4	175	0.20	1.5	95	0.18	1.5	–	–	–	480	0.24	1.5	35	0.18	1.2	–	–	–
	T9325	0.4	220	0.20	1.5	130	0.18	1.5	–	–	–	–	–	–	45	0.18	1.2	–	–	–
	T9335	0.4	185	0.20	1.5	110	0.18	1.5	–	–	–	–	–	–	40	0.18	1.2	–	–	–
DNMG 150608EL-SI	**T7325**	0.8	180	0.35	1.5	140	0.32	1.5	–	–	–	–	–	–	55	0.25	1.2	–	–	–
	T7335	0.8	170	0.35	1.5	130	0.32	1.5	–	–	–	–	–	–	55	0.25	1.2	–	–	–
	T8315	0.8	165	0.35	1.5	95	0.32	1.5	–	–	–	495	0.42	1.5	40	0.25	1.2	–	–	–
	T8330	0.8	160	0.35	1.5	95	0.32	1.5	–	–	–	480	0.42	1.5	40	0.25	1.2	–	–	–
	T8430	0.8	170	0.35	1.5	90	0.32	1.5	–	–	–	465	0.42	1.5	35	0.25	1.2	–	–	–
	T9325	0.8	200	0.35	1.5	120	0.32	1.5	–	–	–	–	–	–	45	0.25	1.2	–	–	–
	T9335	0.8	180	0.35	1.5	105	0.32	1.5	–	–	–	–	–	–	40	0.25	1.2	–	–	–
			W S																	
W-MR wiper geometry for finish to rough machining with increased feed rates and improved surface finish.																				
DNMG 150608W-MR	**T5315**	0.8	190	0.40	1.5	–	–	–	180	0.40	1.5	–	–	–	–	–	–	–	–	–
	T9315	0.8	170	0.40	1.5	–	–	–	160	0.40	1.5	–	–	–	–	–	–	–	–	–
	T9325	0.8	155	0.40	1.5	90	0.36	1.5	145	0.40	1.5	–	–	–	–	–	–	–	–	–
DNMG 150612W-MR	**T9310**	1.2	175	0.50	1.5	–	–	–	165	0.50	1.5	–	–	–	–	–	–	–	–	–
	T9315	1.2	160	0.50	1.5	–	–	–	150	0.50	1.5	–	–	–	–	–	–	–	–	–
	T9325	1.2	145	0.50	1.5	85	0.45	1.5	135	0.50	1.5	–	–	–	–	–	–	–	–	–
			W S																	
W-NM wiper geometry for finish to rough machining with increased feed rates and improved surface finish.																				
DNMX 150604W-NM	**T7325**	0.4	145	0.30	1.5	110	0.27	1.5	–	–	–	–	–	–	45	0.21	1.2	–	–	–
	T7335	0.4	135	0.30	1.5	105	0.27	1.5	–	–	–	–	–	–	40	0.21	1.2	–	–	–
	T9315	0.4	185	0.30	1.5	–	–	–	175	0.30	1.5	–	–	–	–	–	–	–	–	–
DNMX 150608W-NM	**T7325**	0.8	155	0.40	1.5	120	0.36	1.5	–	–	–	–	–	–	50	0.28	1.2	–	–	–
	T7335	0.8	145	0.40	1.5	110	0.36	1.5	–	–	–	–	–	–	45	0.28	1.2	–	–	–
	T9315	0.8	195	0.40	1.5	–	–	–	185	0.40	1.5	–	–	–	–	–	–	–	–	–
	T9325	0.8	175	0.40	1.5	105	0.36	1.5	165	0.40	1.5	–	–	–	35	0.28	1.2	–	–	–

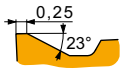
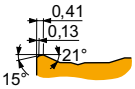
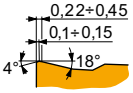
DNMM

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
1504	12.700	5.16	15.50	4.76
1506	12.700	5.16	15.50	6.35



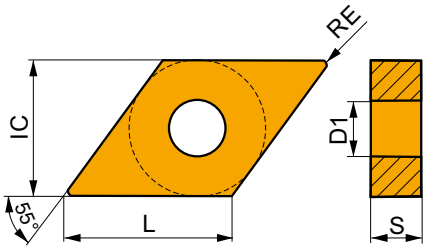
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
																				
			NR geometry for semi-rough to rough machining, and continuous to interrupted cuts.																	
DNMM 150408E-NR	**T9325**	0.8	■ 155	0.40	3.0	■ 90	0.36	3.0	◪ 145	0.40	3.0	–	–	–	◪ 30	0.28	2.4	–	–	–
DNMM 150608E-NR	**T7325**	0.8	◪ 140	0.40	3.0	■ 105	0.36	3.0	–	–	–	–	–	–	◪ 45	0.28	2.4	–	–	–
	T8330	0.8	■ 125	0.40	3.0	■ 75	0.36	3.0	◪ 115	0.40	3.0	–	–	–	◪ 30	0.28	2.4	–	–	–
	T8430	0.8	■ 130	0.40	3.0	■ 70	0.36	3.0	◪ 105	0.40	3.0	–	–	–	◪ 25	0.28	2.4	–	–	–
	T9325	0.8	■ 155	0.40	3.0	■ 90	0.36	3.0	◪ 145	0.40	3.0	–	–	–	◪ 30	0.28	2.4	–	–	–
																				
			NR2 geometry for semi-rough to rough machining, and continuous to interrupted cuts.																	
DNMM 150608E-NR2	**T9325**	0.8	■ 155	0.40	3.0	■ 90	0.36	3.0	◪ 145	0.40	3.0	–	–	–	◪ 30	0.32	2.4	–	–	–
																				
			OR geometry for semi-rough to rough machining, and continuous to interrupted cuts.																	
DNMM 150608E-OR	**T9325**	0.8	■ 155	0.40	3.0	◪ 90	0.36	3.0	◪ 145	0.40	3.0	–	–	–	◪ 30	0.28	2.4	–	–	–
DNMM 150612E-OR	**T9315**	1.2	■ 180	0.40	3.0	–	–	–	◪ 170	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 165	0.40	3.0	◪ 95	0.36	3.0	◪ 155	0.40	3.0	–	–	–	◪ 35	0.32	2.4	–	–	–
	T9335	1.2	■ 145	0.40	3.0	◪ 85	0.36	3.0	–	–	–	–	–	–	◪ 30	0.32	2.4	–	–	–
DNMM 150616E-OR	**T9325**	1.6	■ 165	0.45	3.0	◪ 95	0.41	3.0	◪ 155	0.45	3.0	–	–	–	◪ 35	0.41	2.4	–	–	–

DNGA CER

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
1504	12.700	5.16	15.50	4.76



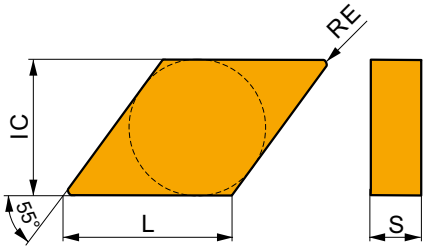
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			HSC S																		
			For machining with high speeds and continuous cuts.																		
DNGA 150408 S02020	TC100	0.8	–	–	–	–	–	–	450	0.20	1.5	–	–	–	–	–	–	–	–	–
			HSC T																		
			For machining with high speeds and continuous cuts.																		
DNGA 150404 T01020	TC100	0.4	–	–	–	–	–	–	475	0.10	1.5	–	–	–	–	–	–	–	–	–
DNGA 150408 T00520	TC100	0.8	–	–	–	–	–	–	450	0.20	1.5	–	–	–	–	–	–	–	–	–

DNGN CER

PRAMET

	IC [mm]	L [mm]	S [mm]
1504	12.700	15.50	4.76



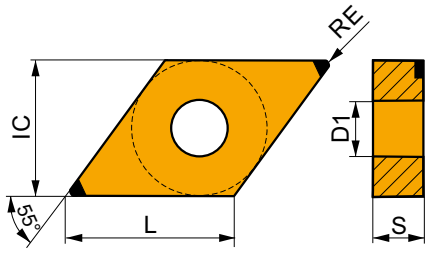
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			HSC T																		
			For machining with high speeds and continuous cuts.																		
DNGN 150408 T01020	TC100	0.8	–	–	–	–	–	–	450	0.20	1.5	–	–	–	–	–	–	–	–	–

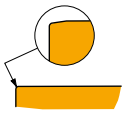
DNGA CBN

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
1506	12.700	5.16	15.50	6.35



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			HSC		S															
			For finish machining and continuous cuts.																	
DNGA 150608S01020B	**TB310**	0.8	–	–	–	–	–	–	420	0.15	0.6	–	–	–	110	0.11	0.5	85	0.15	1.0

DDJN(RL) EXT

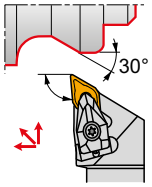
P M K N S H

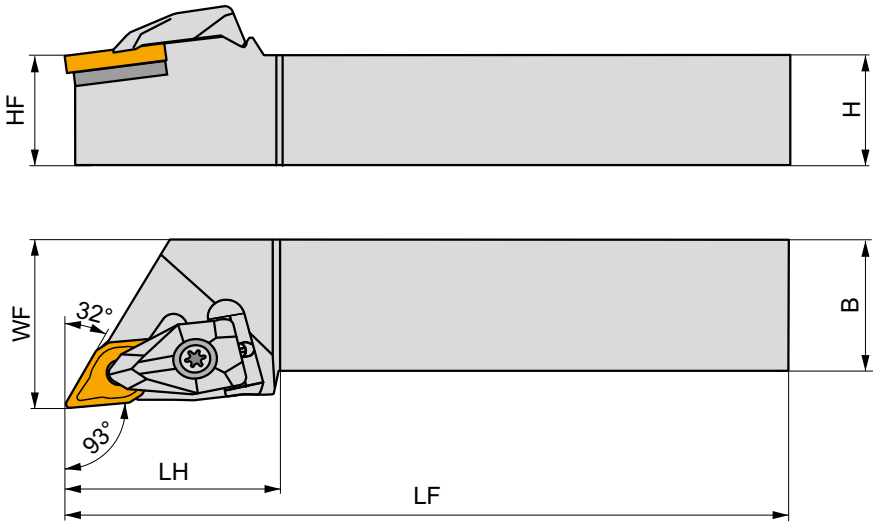
PRAMET

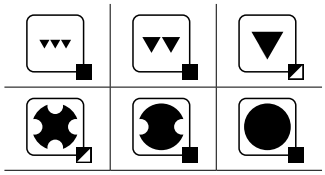
D

External Double Clamp Turning Holder with 93° Cutting Angle for DN.. Insert

External Right/Left hand double clamp tool holder with 93° cutting angle. Suited for longitudinal turning with shoulder, copying, chamfering and facing with negative DN.. 11 or 15 size inserts. Available with shank size 20x20 up to 32x32 mm. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg			
R	DDJNR 2020 K 11	20	20	20	25	125	30.2	-7	-6	0.45	GI046	DD11	–
	DDJNR 2525 M 11	25	25	25	32	150	30.2	-7	-6	0.77	GI046	DD11	–
	DDJNR 2020 K 15	20	20	20	25	125	39.4	-7	-6	0.42	GI044	DD154	AT002
	DDJNR 2525 M 15	25	25	25	32	150	39.4	-7	-6	0.74	GI044	DD154	AT002
	DDJNR 3225 P 15	32	25	32	32	170	39.4	-7	-6	1.12	GI044	DD154	AT002
	DDJNR 3232 P 15	32	32	32	40	170	39.4	-7	-6	1.33	GI044	DD154	AT002
L	DDJNL 2020 K 11	20	20	20	25	125	30.2	-7	-6	0.45	GI046	DD11	–
	DDJNL 2525 M 11	25	25	25	32	150	30.2	-7	-6	0.77	GI046	DD11	–
	DDJNL 2020 K 15	20	20	20	25	125	39.4	-7	-6	0.42	GI044	DD154	AT002
	DDJNL 2525 M 15	25	25	25	32	150	39.4	-7	-6	0.74	GI044	DD154	AT002
	DDJNL 3225 P 15	32	25	32	32	170	39.4	-7	-6	1.01	GI044	DD154	AT002
	DDJNL 3232 P 15	32	32	32	40	170	39.4	-7	-6	1.34	GI044	DD154	AT002

GI044	DN.. 1506..
GI046	DN.. 1104..

		Nm			
DD11	DCS 09	1.7	DDS 267-01	US 2004-T09P	FLAG T09P
DD154	DCS 12	3.9	DDS 266-02	US 2002-T15P	FLAG T15P/3,5

AT002a	DN.. 1504..	–	DDS 266-01
AT002b	CER DN.N 1506..	DCS 12C4	–
AT002c	CER DN.A 1506..	DCS 12C2	–

PDJN(RL) EXT

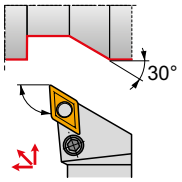
P M K N S H

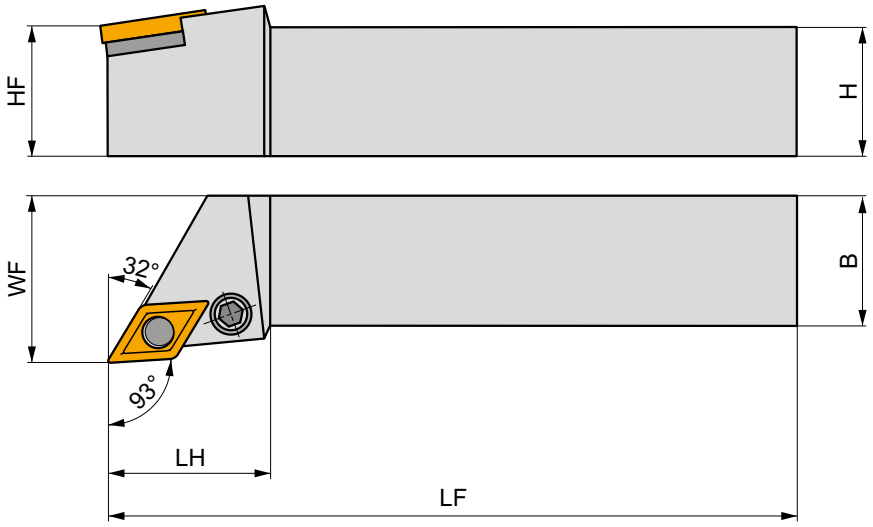
PRAMET

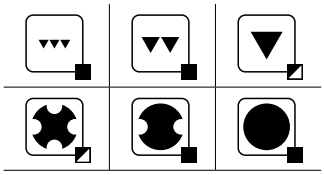
P

External Lever Lock Turning Holder with 93° Cutting Angle for DN.. Insert

External Right/Left hand lever lock tool holder with 93° cutting angle. Suited for longitudinal turning with shoulder, copy turning up to 30°, and chamfering with negative DN.. 11 and 15 size inserts. Available with shank size 20x20 up to 32x32 mm. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	PDJNR 2020 K 11	20	20	20	25	125	30	-6	-6	0.43	GI046	PD60
	PDJNR 2525 M 11	25	25	25	32	150	30	-6	-6	0.73	GI046	PD60
	PDJNR 3225 P 11	32	25	32	32	170	30	-6	-6	1.10	GI046	PD60
	PDJNR 2020 K 15	20	20	20	25	125	40	-6	-6	0.44	GI044	PD31
	PDJNR 2525 M 15	25	25	25	32	150	40	-6	-6	0.73	GI044	PD30
	PDJNR 3225 P 15	32	25	32	32	170	40	-6	-6	1.05	GI044	PD30
	PDJNR 3232 P 15	32	32	32	40	170	40	-6	-6	1.30	GI044	PD30
L	PDJNL 2020 K 11	20	20	20	25	125	30	-6	-6	0.41	GI046	PD60
	PDJNL 2525 M 11	25	25	25	32	150	30	-6	-6	0.73	GI046	PD60
	PDJNL 3225 P 11	32	25	32	32	170	30	-6	-6	1.10	GI046	PD60
	PDJNL 2020 K 15	20	20	20	25	125	40	-6	-6	0.42	GI044	PD31
	PDJNL 2525 M 15	25	25	25	32	150	40	-6	-6	0.73	GI044	PD30
	PDJNL 3225 P 15	32	25	32	32	170	40	-6	-6	0.98	GI044	PD30
	PDJNL 3232 P 15	32	32	32	40	170	40	-6	-6	1.30	GI044	PD30

GI044	DN.. 1506..
GI046	DN.. 1104..

				Nm					
PD30	DNU 150308	PU 03	US 36	6.0	M 8x1	26	NT 05	MT 05	HXK 4
PD31	DNU 150308	PU 03	US 40	6.0	M 8x1	20.5	NT 05	MT 05	HXK 4
PD60	PDN 110308	PU 3512	PS 0616	3.0	M 6	16	NT 5153	MT 0912	HXK 2.5

PDNN(RL) EXT

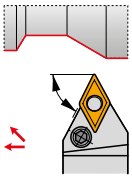
P M K N S H

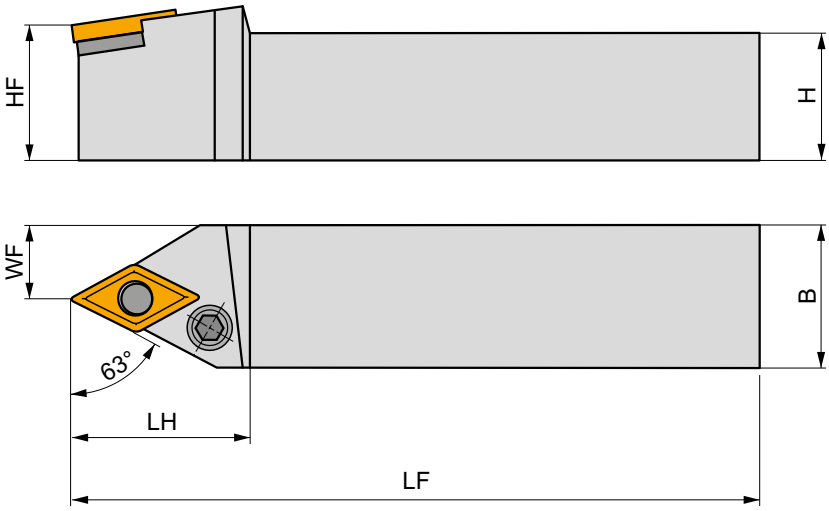
PRAMET

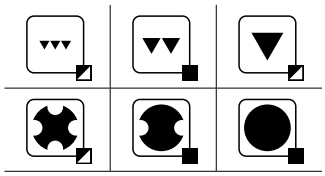
P

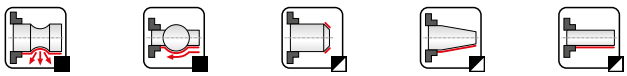
External Lever Lock Turning Holder with 63° Cutting Angle for DN.. Insert

External Right/Left hand lever lock 63° (neutral) tool holder. Suited for longitudinal turning without shoulder, taper, copy, and chamfer turning with negative DN.. 15 size inserts. Available with shank size 20x20 up to 32x25 mm. Body treated for longer tool life.









	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	PDNNR 2020 K 11	20	20	20	10	125	24	-6	-6	0.39	GI046	PD60
	PDNNR 2525 M 11	25	25	25	12.5	150	30	-6	-6	0.60	GI046	PD60
	PDNNR 2525 M 15	25	25	25	12.5	150	40	-6	-6	0.64	GI044	PD30
	PDNNR 3225 P 15	32	25	32	12.5	170	40	-6	-6	1.05	GI044	PD30
L	PDNNL 2020 K 11	20	20	20	10	125	24	-6	-6	0.40	GI046	PD60
	PDNNL 2525 M 11	25	25	25	12.5	150	30	-6	-6	0.60	GI046	PD60
	PDNNL 2525 M 15	25	25	25	12.5	150	40	-6	-6	0.07	GI044	PD30
	PDNNL 3225 P 15	32	25	32	12.5	170	40	-6	-6	1.05	GI044	PD30

GI044	DN.. 1506..
GI046	DN.. 1104..

				Nm					
PD30	DNU 150308	PU 03	US 36	6.0	M 8x1	26	NT 05	MT 05	HXK 4
PD60	PDN 110308	PU 3512	PS 0616	3.0	M 6	16	NT 5153	MT 0912	HXK 2.5

PDXN(RL) EXT

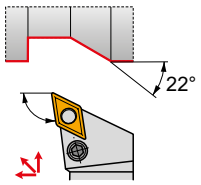
P M K N S H

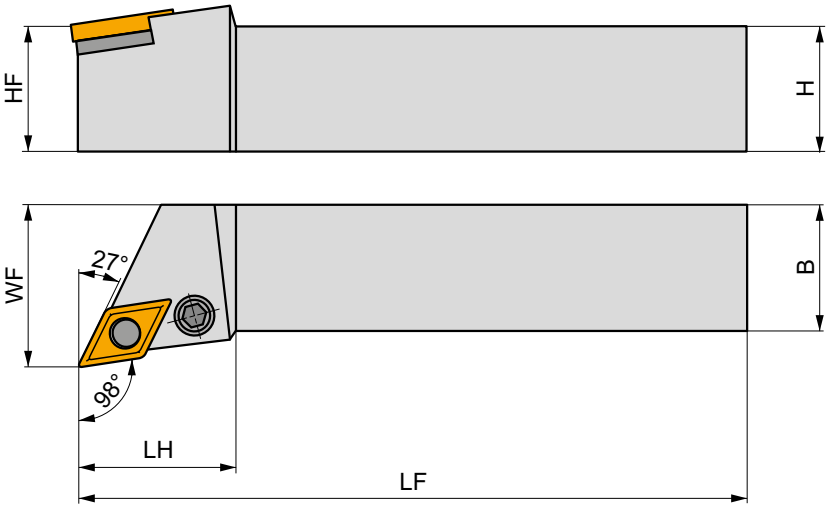
PRAMET

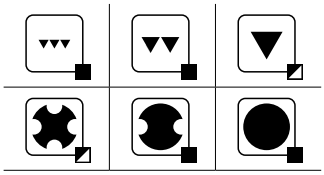
P

External Lever Lock Turning Holder with 98° Cutting Angle for DN.. Insert

External Right/Left hand lever lock tool holder with 98° cutting angle. Suited for taper, longitudinal turning with shoulder, copy turning up to 22° and chamfering with negative DN.. 15 size inserts. Available in 20x20 up to 32x25 mm shanks. Body treated for longer tool life.







	Product	H	B	HF	WF	LF	LH	LAMS	GAMO			
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[°]	[°]	kg		
R	**PDXNR 2020 K 15**	20	20	20	25	125	40	-6	-6	0.43	GI044	PD31
	PDXNR 2525 M 15	25	25	25	32	150	40	-6	-6	0.73	GI044	PD30
	PDXNR 3225 P 15	32	25	32	32	170	40	-6	-6	0.80	GI044	PD30
L	**PDXNL 2020 K 15**	20	20	20	25	125	40	-6	-6	0.42	GI044	PD31
	PDXNL 2525 M 15	25	25	25	32	150	40	-6	-6	0.71	GI044	PD30
	PDXNL 3225 P 15	32	25	32	32	170	40	-6	-6	0.95	GI044	PD30

GI044	DN.. 1506..

				Nm					
PD30	DNU 150308	PU 03	US 36	6.0	M 8x1	26	NT 05	MT 05	HXK 4
PD31	DNU 150308	PU 03	US 40	6.0	M 8x1	20.5	NT 05	MT 05	HXK 4

C.-DDJN(RL) EXT

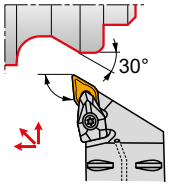
P M K N S H

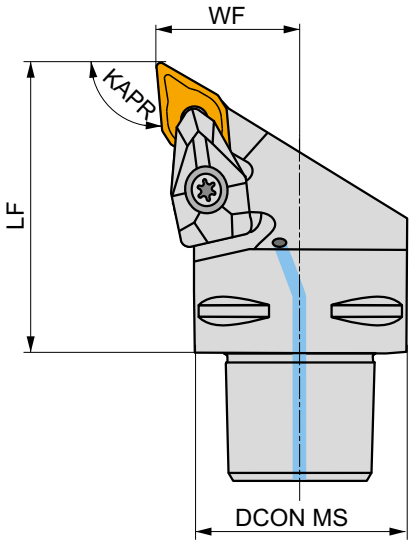
PRAMET

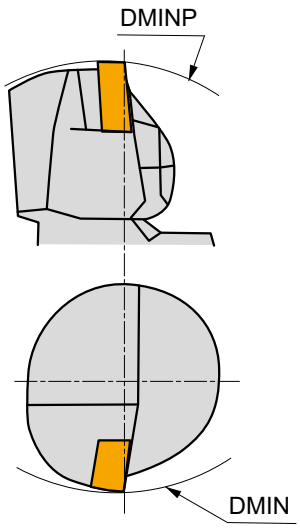
D

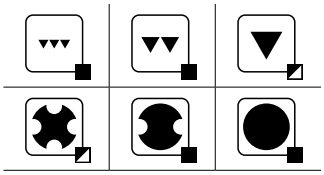
Ext. PSC Quick Change Tool, Double Clamp, 93° Cutting Angle for DN.. Insert

External Right/Left hand double clamp tool, through coolant, with 93° cutting angle for taper and longitudinal turning with shoulder, copying and chamfering with negative DN.. 11 or 15 size inserts. Available with PSC (Polygon Shank Coupling) C4 up to C6 coupling. Body treated for longer tool life.









	Product	DCON MS [mm]	DMIN [mm]	DMINP [mm]	WF [mm]	LF [mm]	KAPR [°]	LAMS [°]	GAMO [°]		kg			
R	**C4-DDJNR-27050-11**	40	60	140	27	50	93	-7	-6	✓	0.38	GI046	C-DD11	–
	C4-DDJNR-27055-15	40	110	145	27	55	93	-7	-6	✓	0.43	GI044	C-DD154-1	AT002
	C5-DDJNR-35060-15	50	110	165	35	60	93	-7	-6	✓	0.72	GI044	C-DD154-2	AT002
	C6-DDJNR-45065-15	63	110	190	45	65	93	-7	-6	✓	1.18	GI044	C-DD154-3	AT002
L	**C4-DDJNL-27050-11**	40	60	140	27	50	93	-7	-6	✓	0.39	GI046	C-DD11	–
	C4-DDJNL-27055-15	40	110	145	27	55	93	-7	-6	✓	0.43	GI044	C-DD154-1	AT002
	C5-DDJNL-35060-15	50	110	165	35	60	93	-7	-6	✓	0.72	GI044	C-DD154-2	AT002
	C6-DDJNL-45065-15	63	110	190	45	65	93	-7	-6	✓	1.18	GI044	C-DD154-3	AT002

GI044	DN.. 1506..
GI046	DN.. 1104..

		Nm				
C-DD11	DCS 09	1.7	DDS 267-01	US 2004-T09P	FLAG T09P	CN 034-01
C-DD154-1	DCS 12	3.9	DDS 266-02	US 2002-T15P	FLAG T15P/3,5	CN 034-01
C-DD154-2	DCS 12	3.9	DDS 266-02	US 2002-T15P	FLAG T15P/3,5	CN 045-01
C-DD154-3	DCS 12	3.9	DDS 266-02	US 2002-T15P	FLAG T15P/3,5	CN 034-02

AT002a	DN.. 1504..	–	DDS 266-01
AT002b	CER DN.N 1506..	DCS 12C4	–
AT002c	CER DN.A 1506..	DCS 12C2	–
AT002d	CER DN.N 1504..	DCS 12C4	DDS 266-01
AT002e	CER DN.A 1504..	DCS 12C2	DDS 266-01

C.-DDNNN EXT

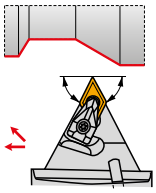
P M K N S H

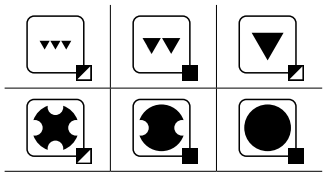
PRAMET

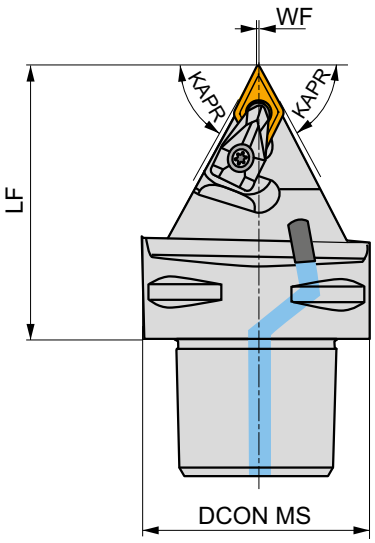
D

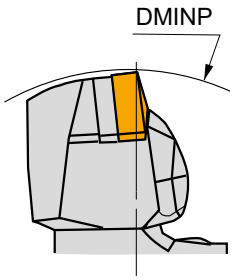
Ext. PSC Quick Change Tool, Double Clamp, 62.5° Cutting Angle for DN.. Insert

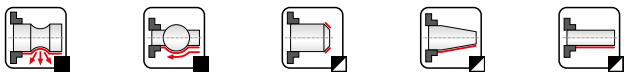
External Right/Left hand double clamp tool, through coolant, with 62.5° cutting angle for taper and longitudinal turning without shoulder, copying and chamfering with negative DN.. 15 size inserts. Available with PSC (Polygon Shank Coupling) C5 and C6 coupling. Body treated for longer tool life.











	Product	DCON MS [mm]	DMINP [mm]	WF [mm]	LF [mm]	KAPR [°]	LAMS [°]	GAMO [°]		kg			
N	**C5-DDNNN-00060-15**	50	165	0.5	60	62.5	-9	-5	✓	0.62	GI044	C-DD154-2	AT002
	C6-DDNNN-00065-15	63	190	0.5	65	62.5	-9	-5	✓	1.06	GI044	C-DD154-2	AT002

GI044	DN.. 1506..

C-DD154-2	DCS 12	3.9 Nm	DDS 266-02	US 2002-T15P	FLAG T15P/3,5	CN 045-01

AT002a	DN.. 1504..	–	DDS 266-01
AT002b	CER DN.N 1506..	DCS 12C4	–
AT002c	CER DN.A 1506..	DCS 12C2	–
AT002d	CER DN.N 1504..	DCS 12C4	DDS 266-01
AT002e	CER DN.A 1504..	DCS 12C2	DDS 266-01

C.-DDUN(RL) EXT

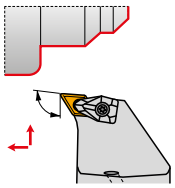
P M K N S H

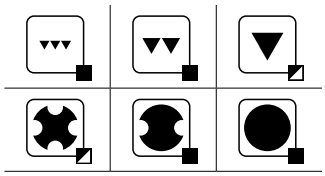
PRAMET

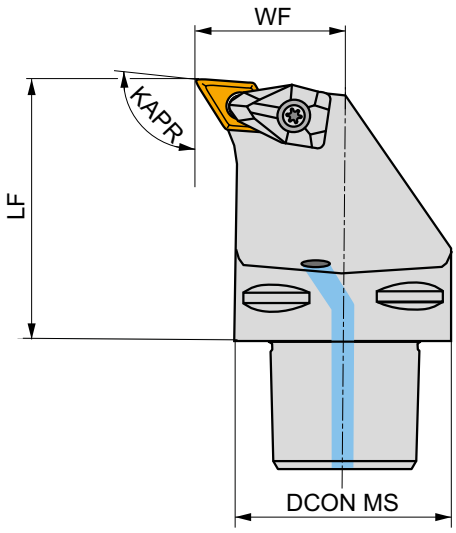
D

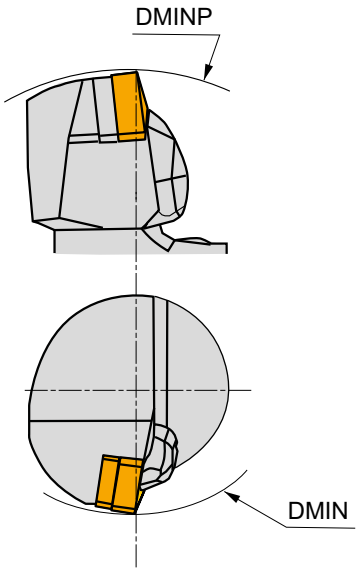
Ext. PSC Quick Change Tool, Double Clamp, 93° (Face) Cutting Angle, DN.. Ins

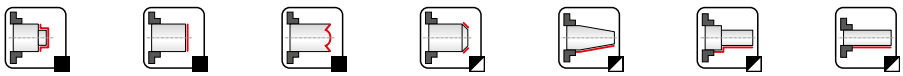
External Right/Left hand double clamp tool, through coolant, with 93° cutting angle for face turning with shoulder, face copy turning, taper turning, longitudinal turning and chamfering with negative DN.. 15 size inserts. Available with PSC (Polygon Shank Coupling) C5 and C6 coupling. Body treated for longer tool life.











	Product	DCON MS [mm]	DMIN [mm]	DMINP [mm]	WF [mm]	LF [mm]	KAPR [°]	LAMS [°]	GAMO [°]		kg			
R	C5-DDUNR-35060-15	50	110	165	35	60	93	-7	-6	✓	0.82	GI044	C-DD154-3	AT002
	C6-DDUNR-45065-15	63	110	190	45	65	93	-7	-6	✓	1.39	GI044	C-DD154-3	AT002
L	C5-DDUNL-35060-15	50	110	165	35	60	93	-7	-6	✓	0.82	GI044	C-DD154-3	AT002

GI044	DN.. 1506..

C-DD154-3	DCS 12	3.9	DDS 266-02	US 2002-T15P	FLAG T15P/3,5	CN 034-02

AT002a	DN.. 1504..	–	DDS 266-01
AT002b	CER DN.N 1506..	DCS 12C4	–
AT002c	CER DN.A 1506..	DCS 12C2	–
AT002d	CER DN.N 1504..	DCS 12C4	DDS 266-01
AT002e	CER DN.A 1504..	DCS 12C2	DDS 266-01

DDUN(RL) INT

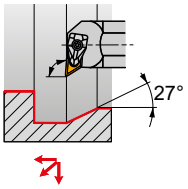
P M K N S H

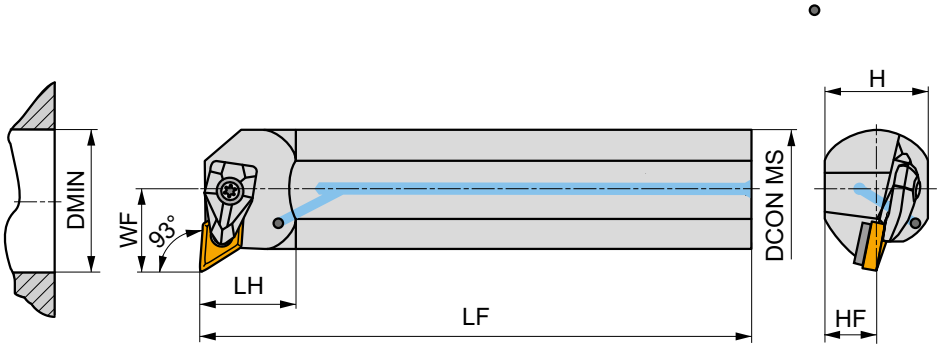
PRAMET

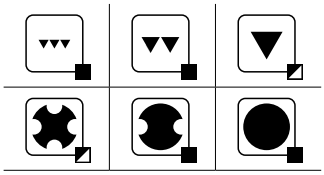
D

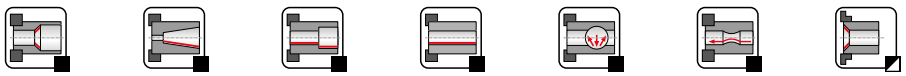
Internal Double Clamp Boring Bar with 93° Cutting Angle for DN.. Insert

Internal Right/Left hand double clamp boring bar, through coolant, 93° cutting angle for DN.. 11 and 15 inserts. Minimum internal turning diameter Ø32 mm. Suited for wide range of internal turning applications, copy turning up to 27°. Available with shank size Ø25 up to Ø50 mm. Body treated for longer tool life.









	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	H [mm]	HF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]		kg			
R	A25T-DDUNR 11	25	32	17	23	11.5	300	28	-12	-6	✓	0.96	GI046	DD11	–
	A32T-DDUNR 11	32	40	22	30	15	300	30	-10	-6	✓	1.68	GI046	DD11	–
	A40T-DDUNR 15	40	50	27	37	18.5	300	36	-11	-6	✓	2.59	GI044	DD154	AT002
	A50U-DDUNR 15	50	63	35	47	23.5	350	39	-8	-6	✓	5.23	GI044	DD154	AT002
L	A25T-DDUNL 11	25	32	17	23	11.5	300	28	-12	-6	✓	0.96	GI046	DD11	–
	A32T-DDUNL 11	32	40	22	30	15	300	30	-10	-6	✓	1.69	GI046	DD11	–
	A40T-DDUNL 15	40	50	27	37	18.5	300	36	-11	-6	✓	2.59	GI044	DD154	AT002
	A50U-DDUNL 15	50	63	35	47	23.5	350	39	-8	-6	✓	5.25	GI044	DD154	AT002

GI044	DN.. 1506..
GI046	DN.. 1104..

		Nm			
DD11	DCS 09	1.7	DDS 267-01	US 2004-T09P	FLAG T09P
DD154	DCS 12	3.9	DDS 266-02	US 2002-T15P	FLAG T15P/3,5

AT002a	DN.. 1504..	–	DDS 266-01
AT002b	CER DN.N 1506..	DCS 12C4	–
AT002c	CER DN.A 1506..	DCS 12C2	–

PDUN(RL) INT

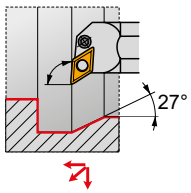
P M K N S H

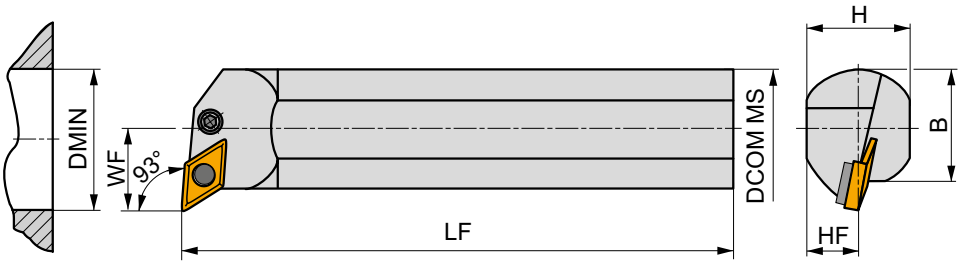
PRAMET

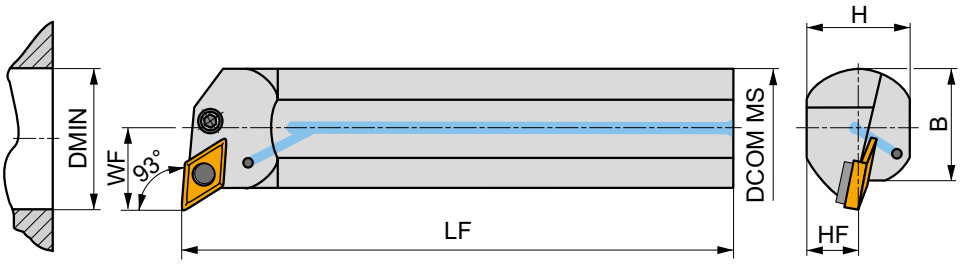
P

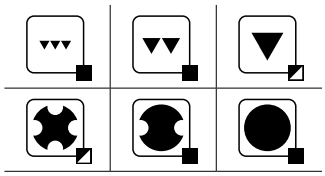
Internal Lever Lock Boring Bar with 93° Cutting Angle for DN.. Insert

Internal Right/Left hand lever lock boring bar, through coolant available, 93° cutting angle for DN.. 11 and 15 inserts. Minimum internal turning diameter Ø32 mm. For a wide range of internal turning applications, copy turning up to 27°. Available with shank size Ø25 up to Ø60 mm. Body treated for longer tool life.









	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	H [mm]	B [mm]	LF [mm]	LAMS [°]	GAMO [°]		kg		
R	**S25T-PDUNR 11-A**	25	32	17	23	23	300	-12	-6	–	1.10	GI046	PD61
	S32U-PDUNR 11	32	40	22	30	30	350	-12	-6	–	2.10	GI046	PD60
	A32S-PDUNR 15	32	40	32	30	30	250	-12	-6	✓	1.47	GI097	PD33
	A40T-PDUNR 15	40	50	27	38	38	300	-12	-6	✓	2.40	GI097	PD30
	A50U-PDUNR 15	50	63	35	47	48.5	350	-12	-6	✓	4.95	GI097	PD30
	A60V-PDUNR 15	60	80	43	57	58.5	400	-12	-6	✓	8.22	GI097	PD30
L	**S25T-PDUNL 11-A**	25	32	17	23	23	300	-12	-6	–	1.11	GI046	PD61
	S32U-PDUNL 11	32	40	22	30	30	350	-12	-6	–	2.09	GI046	PD60
	A32S-PDUNL 15	32	40	32	30	30	250	-12	-6	✓	1.47	GI097	PD33
	A40T-PDUNL 15	40	50	27	38	38	300	-12	-6	✓	2.56	GI097	PD30
	A50U-PDUNL 15	50	63	35	47	48.5	350	-12	-6	✓	5.20	GI097	PD30
	A60V-PDUNL 15	60	80	43	57	58.5	400	-12	-6	✓	8.16	GI097	PD30

GI046	DN.. 1104..
GI097	DN.. 1504..

				Nm					
PD30	DNU 150308	PU 03	US 36	6.0	M 8x1	26	NT 05	MT 05	HXK 4
PD33	–	PU 03-A	US 41	6.0	M 8x1	17	NT 15	MT 05	HXK 4
PD60	PDN 110308	PU 3512	PS 0616	3.0	M 6	16	NT 5153	MT 0912	HXK 2.5
PD61	–	PU 3611-A	PS 0512-A	2.0	M 5	12	–	–	HXK 2

C.-DDUN(RL) INT

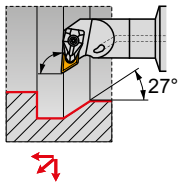
P M K N S H

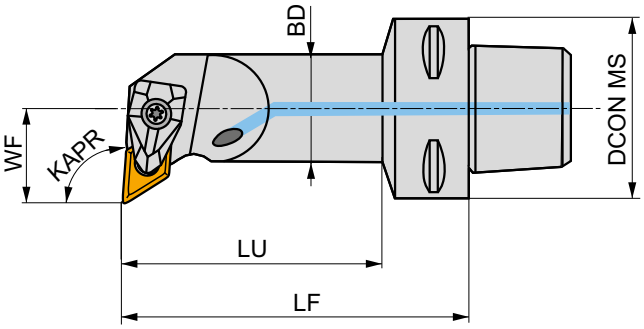
PRAMET

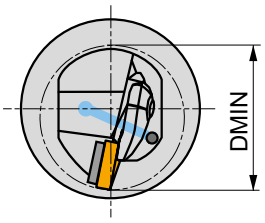
D

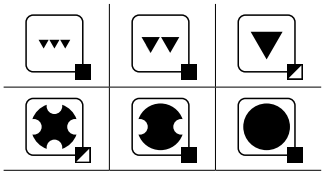
Int. PSC Quick Change Tool, Double Clamp, 93° Cutting Angle for DN.. Insert

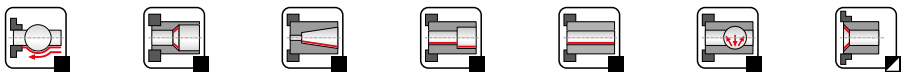
Internal Right/Left hand double clamp tool, through coolant, with 93° cutting angle for internal turning applications including copy turning up to 27° with DN.. 11 inserts, minimum internal diameter Ø32mm. PSC shank (Polygon Shank Coupling) size C4 with turning length of 68 mm. Body treated for longer tool life.











	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	LF [mm]	LU [mm]	BD [mm]	KAPR [°]	LAMS [°]	GAMO [°]		kg		
R	C4-DDUNR-17090-11	40	32	17	90	68	25	93	-12	-6	✓	0.51	GI046	DD11
L	C4-DDUNL-17090-11	40	32	17	90	68	25	93	-12	-6	✓	0.51	GI046	DD11

GI046	DN.. 1104..

DD11	DCS 09	1.7	DDS 267-01	US 2004-T09P	FLAG T09P

KN 16

CARBIDE INSERTS

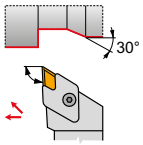
KNUX

284

MATCH THE RIGHT SIZE (example)	
Insert	**Tool Holder**
KNUX 160405L-22	CKJNR 2020 K 16

ISO TURNING – EXTERNAL

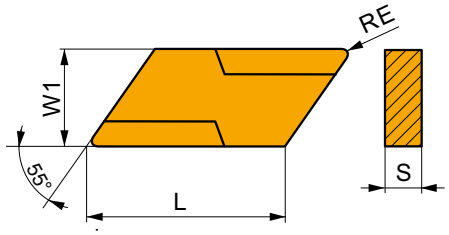
CKJN(RL) EXT

93°	KN..
	16
20×20 32×25	
287	284 – 286

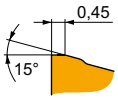
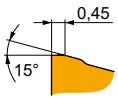
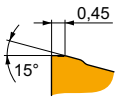
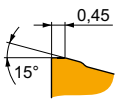
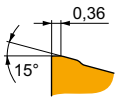
KNUX

PRAMET

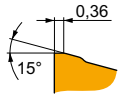
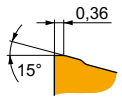
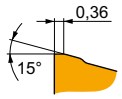
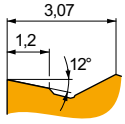
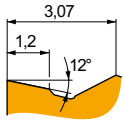
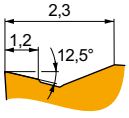
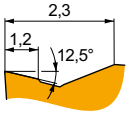
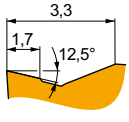
	W1 [mm]	L [mm]	S [mm]
1604	9.525	19.50	4.76



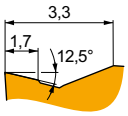
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			U E																	
			L-22 geometry with left-handed design for finish to semi-rough machining, and continuous cuts.																	
KNUX 160405L-22	**T5315**	0.5	◪ 190	0.25	2.7	–	–	–	◪ 180	0.25	2.7	–	–	–	–	–	–	–	–	–
	T7325	0.5	◪ 130	0.25	2.7	◪ 100	0.25	2.7	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.5	◪ 125	0.25	2.7	◪ 95	0.25	2.7	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.5	■ 155	0.25	2.7	◪ 90	0.25	2.7	◪ 145	0.25	2.7	–	–	–	–	–	–	–	–	–
	T9335	0.5	■ 135	0.25	2.7	◪ 80	0.25	2.7	–	–	–	–	–	–	–	–	–	–	–	–
			U E																	
			R-22 geometry with right-handed design for finish to semi-rough machining, and continuous cuts.																	
KNUX 160405R-22	**T5315**	0.5	◪ 190	0.25	2.7	–	–	–	◪ 180	0.25	2.7	–	–	–	–	–	–	–	–	–
	T7325	0.5	◪ 130	0.25	2.7	◪ 100	0.25	2.7	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.5	◪ 125	0.25	2.7	◪ 95	0.25	2.7	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.5	■ 155	0.25	2.7	◪ 90	0.25	2.7	◪ 145	0.25	2.7	–	–	–	–	–	–	–	–	–
	T9335	0.5	■ 135	0.25	2.7	◪ 80	0.25	2.7	–	–	–	–	–	–	–	–	–	–	–	–
			U E																	
			L-22 geometry with left-handed design for finish to semi-rough machining, and continuous cuts.																	
KNUX 160410L-22	**T9335**	1.0	■ 155	0.32	2.7	◪ 90	0.29	2.7	–	–	–	–	–	–	–	–	–	–	–	–
			U E																	
			R-22 geometry with right-handed design for finish to semi-rough machining, and continuous cuts.																	
KNUX 160410R-22	**T9335**	1.0	■ 155	0.32	2.7	◪ 90	0.29	2.7	–	–	–	–	–	–	–	–	–	–	–	–
			U E																	
			L-32 geometry with left-handed design for finish to semi-rough machining, and continuous cuts.																	
KNUX 160405L-32	**T5315**	0.5	◪ 190	0.25	2.7	–	–	–	◪ 180	0.25	2.7	–	–	–	–	–	–	–	–	–
	T7325	0.5	◪ 130	0.25	2.7	◪ 100	0.25	2.7	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.5	◪ 125	0.25	2.7	◪ 95	0.25	2.7	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.5	■ 155	0.25	2.7	◪ 90	0.25	2.7	◪ 145	0.25	2.7	–	–	–	–	–	–	–	–	–
	T9335	0.5	■ 135	0.25	2.7	◪ 80	0.25	2.7	–	–	–	–	–	–	–	–	–	–	–	–

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
																				
			R-32 geometry with right-handed design for finish to semi-rough machining, and continuous cuts.																	
KNUX 160405R-32	**T5315**	0.5	◪ 190	0.25	2.7	–	–	–	◪ 180	0.25	2.7	–	–	–	–	–	–	–	–	–
	T7325	0.5	◪ 130	0.25	2.7	◪ 100	0.25	2.7	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.5	◪ 125	0.25	2.7	◪ 95	0.25	2.7	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.5	■ 155	0.25	2.7	◪ 90	0.25	2.7	◪ 145	0.25	2.7	–	–	–	–	–	–	–	–	–
	T9335	0.5	■ 135	0.25	2.7	◪ 80	0.25	2.7	–	–	–	–	–	–	–	–	–	–	–	–
																				
			L-32 geometry with left-handed design for finish to semi-rough machining, and continuous cuts.																	
KNUX 160410L-32	**T9325**	1.0	■ 175	0.32	2.7	◪ 105	0.29	2.7	◪ 165	0.32	2.7	–	–	–	–	–	–	–	–	–
	T9335	1.0	■ 155	0.32	2.7	◪ 90	0.29	2.7	–	–	–	–	–	–	–	–	–	–	–	–
																				
			R-32 geometry with right-handed design for finish to semi-rough machining, and continuous cuts.																	
KNUX 160410R-32	**T9325**	1.0	■ 175	0.32	2.7	◪ 105	0.29	2.7	◪ 165	0.32	2.7	–	–	–	–	–	–	–	–	–
	T9335	1.0	■ 155	0.32	2.7	◪ 90	0.29	2.7	–	–	–	–	–	–	–	–	–	–	–	–
																				
			ER-72 geometry with right-handed design for fine to finish machining, and continuous cuts.																	
KNUX 160405ER-72	**T5315**	0.5	◪ 250	0.20	2.0	–	–	–	■ 235	0.20	2.0	–	–	–	–	–	–	–	–	–
	T9325	0.5	■ 215	0.20	2.0	◪ 125	0.18	2.0	◪ 200	0.20	2.0	–	–	–	◪ 45	0.16	1.6	–	–	–
	T9335	0.5	■ 185	0.20	2.0	◪ 110	0.18	2.0	–	–	–	–	–	–	◪ 40	0.16	1.6	–	–	–
																				
			EL-72 geometry with left-handed design for fine to finish machining, and continuous cuts.																	
KNUX 160405EL-72	**T5315**	0.5	◪ 250	0.20	2.0	–	–	–	■ 235	0.20	2.0	–	–	–	–	–	–	–	–	–
	T9325	0.5	■ 215	0.20	2.0	◪ 125	0.18	2.0	◪ 200	0.20	2.0	–	–	–	◪ 45	0.16	1.6	–	–	–
	T9335	0.5	■ 185	0.20	2.0	◪ 110	0.18	2.0	–	–	–	–	–	–	◪ 40	0.16	1.6	–	–	–
																				
			ER-73 geometry with right-handed design for finish to semi-rough machining, and continuous cuts.																	
KNUX 160405SR-73	**6640**	0.5	■ 150	0.25	3.0	◪ 90	0.23	3.0	■ 140	0.25	3.0	–	–	–	–	–	–	–	–	–
KNUX 160410SR-73	**6640**	1.0	■ 150	0.40	3.0	◪ 90	0.36	3.0	■ 140	0.40	3.0	–	–	–	–	–	–	–	–	–
	T5315	1.0	◪ 235	0.40	3.0	–	–	–	■ 220	0.40	3.0	–	–	–	–	–	–	–	–	–
																				
			EL-73 geometry with left-handed design for finish to semi-rough machining, and continuous cuts.																	
KNUX 160405SL-73	**6640**	0.5	■ 150	0.25	3.0	◪ 90	0.23	3.0	■ 140	0.25	3.0	–	–	–	–	–	–	–	–	–
KNUX 160410SL-73	**6640**	1.0	■ 150	0.40	3.0	◪ 90	0.36	3.0	■ 140	0.40	3.0	–	–	–	–	–	–	–	–	–
																				
			ER-74 geometry with right-handed design for finish to rough machining, and continuous cuts.																	
KNUX 160415SR-74	**6640**	1.5	■ 155	0.45	3.0	◪ 90	0.41	3.0	■ 145	0.45	3.0	–	–	–	–	–	–	–	–	–

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
EL-74 geometry with left-handed design for finish to rough machining, and continuous cuts.																				
KNUX 160415SL-74	**6640**	1.5	155	0.45	3.0	90	0.41	3.0	145	0.45	3.0	–	–	–	–	–	–	–	–	–

CKJN(RL) EXT

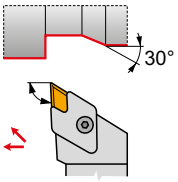
P M K N S H

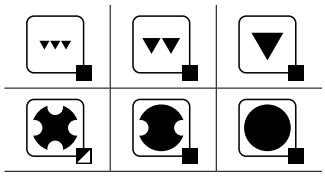
PRAMET

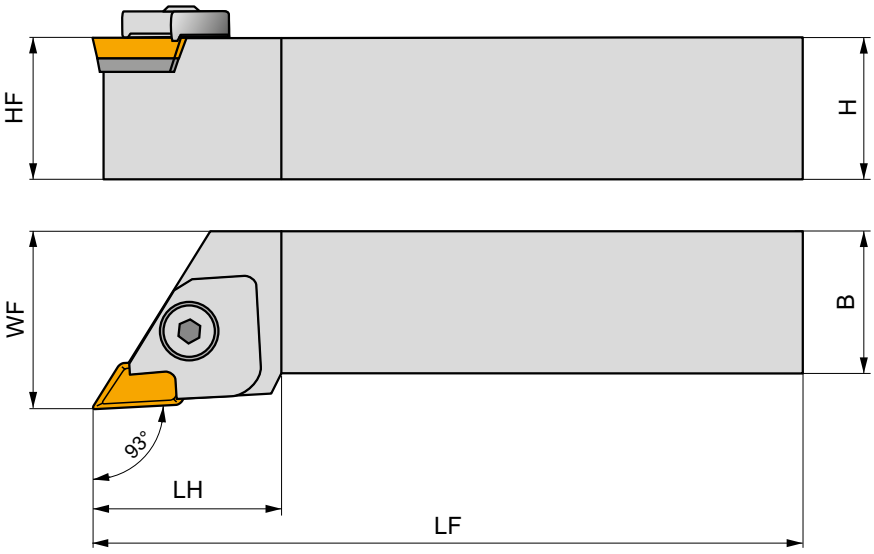
C

External Top Clamp Turning Holder with 93° Cutting Angle for KN.. 16 Insert

External Right/Left hand top clamp tool holder with 93° cutting angle. Suited for taper, longitudinal turning with shoulder, copy turning up to 30° and chamfering with negative KN.. 16 size inserts. Available in 20x20 up to 32x25 mm shanks. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	**CKJNR 2020 K 16**	20	20	20	30	125	34	1	-5	0.43	GI066	R1
	CKJNR 2525 M 16	25	25	25	32	150	34	1	-5	0.70	GI066	R
	CKJNR 3225 P 16	32	25	32	32	170	34	1	-5	1.05	GI066	R
L	**CKJNL 2020 K 16**	20	20	20	30	125	34	1	-5	0.43	GI067	L1
	CKJNL 2525 M 16	25	25	25	32	150	34	1	-5	0.74	GI067	L
	CKJNL 3225 P 16	32	25	32	32	170	34	1	-5	1.06	GI067	L

GI066	KN.X 1604…R
GI067	KN.X 1604…L

						Nm			
L	KNN 190412L	NT 03	–	UP 26	US 83	6.0	PR 07	K 23	HXK 4
L1	KNN 190412L	NT 03	–	UP 26	US 83	6.0	PR 07	K 22	HXK 4
R	KNN 190412R	NT 03	UP 25	–	US 83	6.0	PR 07	K 23	HXK 4
R1	KNN 190412R	NT 03	UP 25	–	US 83	6.0	PR 07	K 22	HXK 4

LN

19/ 30/ 40/ 50

CARBIDE INSERTS

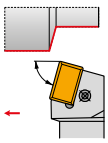
LNUX 40, LN.X 50

289

MATCH THE RIGHT SIZE (example)	
Insert	**Tool Holder**
LNUX **40**-1129003	KHP-LBNR **40**-A

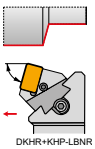
ISO TURNING – EXTERNAL

PLBN(RL) EXT

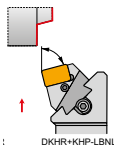
75°	LN..
	40 50
60×60	
290	289

ISO TURNING – HEAVY ROUGHING – EXTERNAL

KHP-LBNR + DKH(RL)

75°	LN..
 DKHR+KHP-LBNR	40
40×50 60×80	
291, 292	289

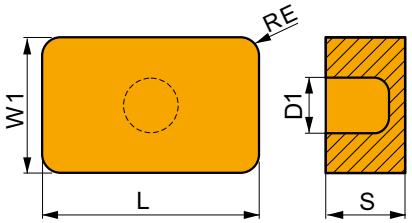
KHP-LBNL + DKH(RL)

75°	LN..
 DKHR+KHP-LBNL	40
40×50 60×80	
291, 292	289

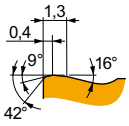
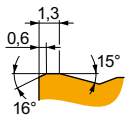
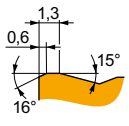
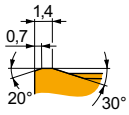
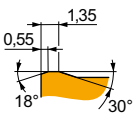
LNUX 40, LN.X 50

PRAMET

	W1 [mm]	D1 [mm]	L [mm]	S [mm]
40-1	25.200	9.30	40.00	14.00
50-1	25.400	9.30	50.80	14.00
50-2	25.400	6.45	50.80	14.00
5014	25.400	6.35	50.80	14.00



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			For heavy rough machining and continuous to interrupted cuts.																	
LNUX 40-1129002	**T9226**	3.2	■ 45	1.35	25.0	–	–	–	◪ 40	1.35	25.0	–	–	–	–	–	–	–	–	–
	T9325	3.2	■ 55	1.35	25.0	–	–	–	◪ 50	1.35	25.0	–	–	–	–	–	–	–	–	–
	T9335	3.2	■ 40	1.35	25.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			For heavy rough machining and continuous to interrupted cuts.																	
LNUX 40-1129003	**T9226**	3.2	■ 45	1.35	25.0	–	–	–	◪ 40	1.35	25.0	–	–	–	–	–	–	–	–	–
	T9325	3.2	■ 55	1.35	25.0	–	–	–	◪ 50	1.35	25.0	–	–	–	–	–	–	–	–	–
	T9335	3.2	■ 40	1.35	25.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			For heavy rough machining and continuous to interrupted cuts.																	
LNUX 50-1275000	**T9226**	3.2	■ 45	1.35	25.0	–	–	–	◪ 40	1.35	25.0	–	–	–	–	–	–	–	–	–
	T9325	3.2	■ 55	1.35	25.0	–	–	–	◪ 50	1.35	25.0	–	–	–	–	–	–	–	–	–
			Design for heavy rough machining and continuous to heavy interrupted cuts.																	
LNMX 501432E	**T9335**	3.2	■ 45	1.50	25.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			For heavy rough machining and continuous to interrupted cuts.																	
LNMX 50-2284000	**T9315**	3.2	■ 60	1.50	25.0	–	–	–	◪ 55	1.50	25.0	–	–	–	–	–	–	–	–	–

PLBN(RL) EXT

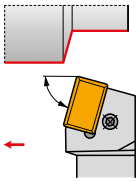
P M K

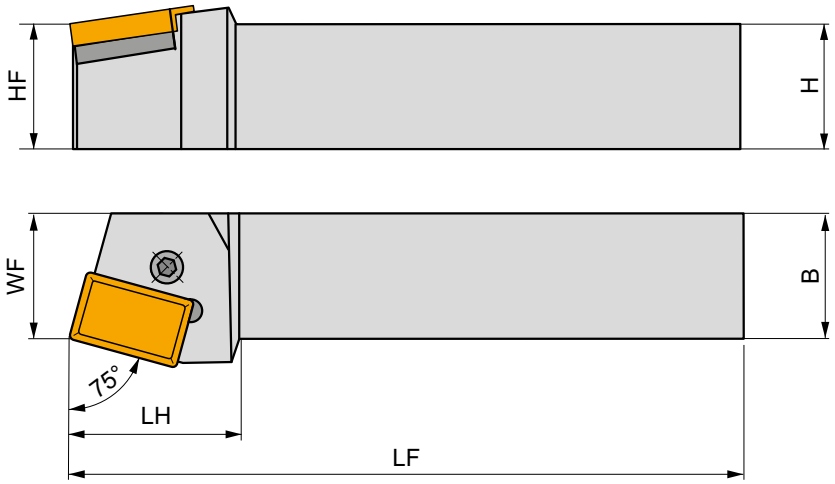
PRAMET

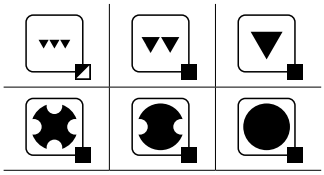
P

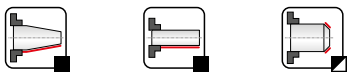
External Lever Lock Heavy Turning Holder, 75° Cutting Angle for LNUX Insert

External Right/Left hand lever lock tool holder with 75° cutting angle for heavy turning. Suited for longitudinal turning without shoulder, taper and chamfer turning with negative LN.. 40 and 50 size inserts. Available in 60x60 mm shank. Body treated for longer tool life.









	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	**PLBNR 6060 V 40-A**	60	60	60	60	400	64	-6	-6	13.00	GI102	PL71
	PLBNR 6060 V 50	60	60	60	60	400	70	-6	-6	12.75	GI145	PL72
	PLBNR 6060 V 50-2	60	60	60	60	400	70	-6	-6	11.60	GI291	PL73
L	**PLBNL 6060 V 40-A**	60	60	60	60	400	64	-6	-6	11.14	GI102	PL71
	PLBNL 6060 V 50	60	60	60	60	400	70	-6	-6	13.09	GI145	PL72

GI102	LNUX 40....
GI145	LNUX 50....
GI291	LNMX 50....

				Nm							
PL71	LNX 400632	PU 06	PS 12040	8.0	M 12x1	40	NT 08	MT 08	HXK 5	–	–
PL72	LNX 500632	PU 06	PS 12040	8.0	M 12x1	40	NT 08	MT 08	HXK 5	–	–
PL73	LNX 500432P	–	–	–	–	–	–	–	–	UP 1515A-T15P	SDR T15P

KHP-LBN(RL)

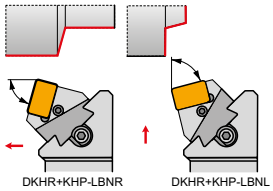
P M K

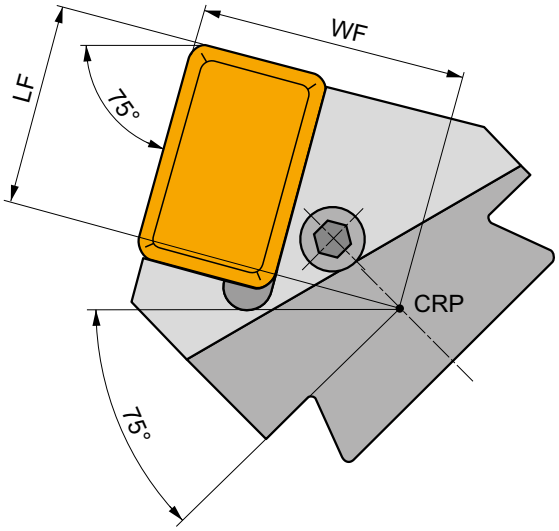
PRAMET

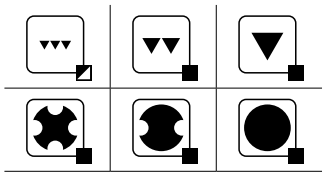
P

Modular KHP Lever Lock Turning Cartridge, 75° Cutting Angle for LNUX Inserts

Dovetailed Right/Left hand lever lock turning cartridge, 75° Cutting Angle, for mounting on DKH tool holder shank. Suited for heavy longitudinal turning without shoulder, taper and chamfer turning with negative LNUX 40 inserts. Tool holder treated for longer tool life.







	Product	WF [mm]	LF [mm]	LAMS [°]	GAMO [°]	kg		
L	**KHP-LBNR 40-A**	48	36	-6	-6	1.50	GI102	PL71
	KHP-LBNL 40-A	48	36	-6	-6	1.47	GI102	PL71

GI102	LNUX 40....

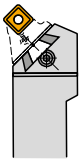
PL71	LNX 400632	PU 06	PS 12040	8.0 Nm	M 12x1	40	NT 08	MT 08	HXK 5

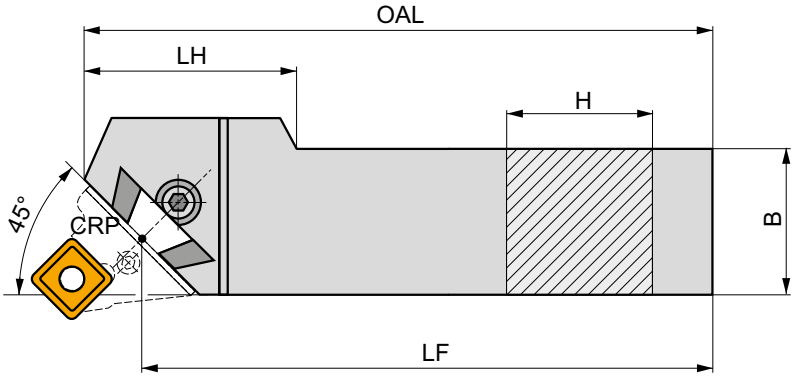
DKH(RL)

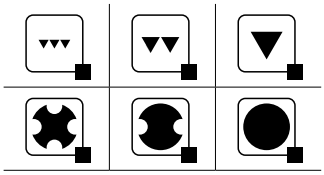
PRAMET

External Tool Holder Shank for KHP/KHS Heavy Turning Cartridges

Dovetailed Right/Left hand modular tool shank for KHP/KHS cartridges. Suited for heavy turning applications. Available with shank size 40x50 up to 60x80 mm. Body treated for longer tool life.







	Product	H [mm]	B [mm]	LF [mm]	OAL [mm]	LH [mm]	kg		
R	**DKHR 4050 V**	40	50	400	425	100	7.10	GI098	DKH10
	DKHR 5060 W	50	60	450	475	110	11.30	GI098	DKH10
	DKHR 6080 W-A	60	80	450	485	90	19.65	GI098	DKH10
L	**DKHL 4050 V**	40	50	400	425	100	7.10	GI098	DKH10
	DKHL 5060 W	50	60	450	475	110	11.30	GI098	DKH10
	DKHL 6080 W-A	60	80	450	485	90	19.28	GI098	DKH10

GI098	KHP	KHS

DKH10	SR 14	HXK 10

RN

09/ 12/ 15/ 19/ 25

CARBIDE INSERTS

RNMG

294

CER INSERTS

RNGN CER

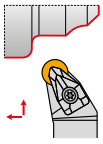
294

MATCH THE RIGHT SIZE (example)	
Insert	**Tool Holder**
RNMG 120400E-08	DRSNR 2525 M 12

ISO TURNING – EXTERNAL

DRSN(RL) EXT

RN..
12

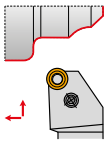


25×25

295 | 294

PRSN(RL) EXT

RN..
12 15 19

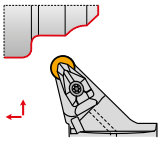


25×25 40×40

296 | 294

C.-DRSN(RL) EXT

RN..
12



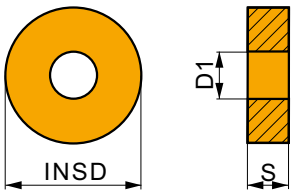
C6

297 | 294

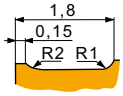
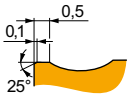
RNMG

PRAMET

	INSD [mm]	D1 [mm]	S [mm]
1204	12.700	5.16	4.76
1506	15.875	6.35	6.35
1906	19.050	7.94	6.35
2509	25.400	9.12	9.53



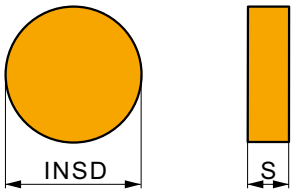
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			HFC S																	
Geometry 08 for semi-rough to heavy-rough machining, and continuous to interrupted cuts.																				
RNMG 120400E-08	**T5305**	–	195	0.70	3.0	–	–	–	185	0.70	3.0	–	–	–	–	–	–	35	0.15	1.0
	T9315	–	150	0.70	3.0	–	–	–	140	0.70	3.0	–	–	–	–	–	–	30	0.15	1.0
	T9325	–	135	0.70	3.0	–	–	–	125	0.70	3.0	–	–	–	–	–	–	–	–	–
RNMG 150600E-08	**T5305**	–	295	0.70	3.0	–	–	–	280	0.70	3.0	–	–	–	–	–	–	55	0.15	1.0
	T9315	–	225	0.70	3.0	–	–	–	210	0.70	3.0	–	–	–	–	–	–	45	0.15	1.0
	T9325	–	205	0.70	3.0	–	–	–	190	0.70	3.0	–	–	–	–	–	–	–	–	–
RNMG 190600E-08	**T9315**	–	150	0.70	3.0	–	–	–	140	0.70	3.0	–	–	–	–	–	–	30	0.15	1.0
	T9325	–	135	0.70	3.0	–	–	–	125	0.70	3.0	–	–	–	–	–	–	–	–	–
			HFC P																	
Geometry 081 for rough to heavy-rough machining, and continuous to interrupted cuts.																				
RNMG 250900E-081	**T9315**	–	145	0.90	5.0	–	–	–	135	0.90	5.0	–	–	–	–	–	–	25	0.15	1.0
	T9325	–	130	0.90	5.0	–	–	–	120	0.90	5.0	–	–	–	–	–	–	–	–	–

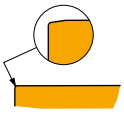
RNGN CER

PRAMET

	INSD [mm]	S [mm]
0903	9.525	3.18
1204	12.700	4.76
1207	12.700	7.94



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

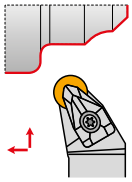
Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			HSC T																	
For machining with high speeds and continuous cuts.																				
RNGN 090300 T01020	**TC100**	–	–	–	–	–	–	–	460	0.20	1.2	–	–	–	–	–	–	–	–	–
RNGN 120400 T01020	**TC100**	–	–	–	–	–	–	–	455	0.20	1.5	–	–	–	–	–	–	–	–	–
RNGN 120700 T01020	**TC100**	–	–	–	–	–	–	–	455	0.20	1.5	–	–	–	–	–	–	–	–	–
RNGN 120700 T15015	**TC100**	–	–	–	–	–	–	–	455	0.20	1.5	–	–	–	–	–	–	–	–	–

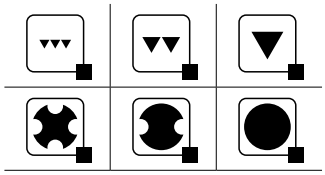
DRSN(RL) EXT

P M K H

PRAMET

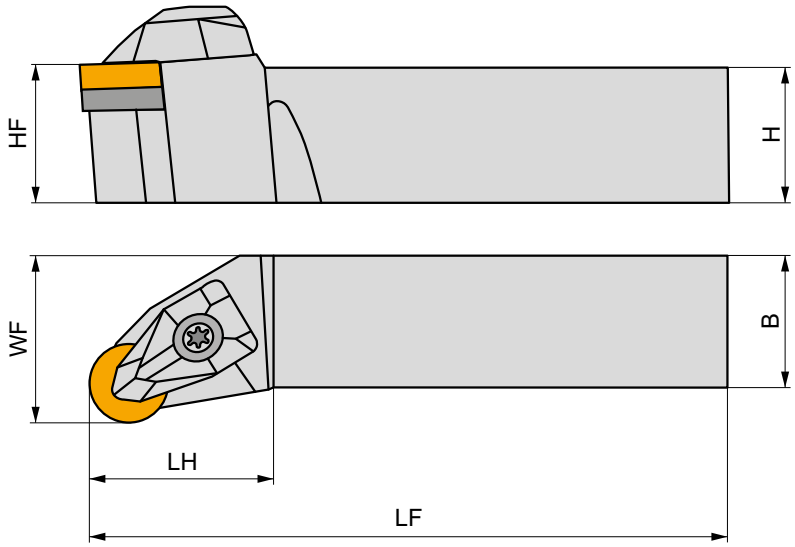
D

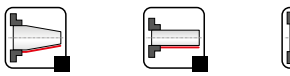




External Double Clamp Holder for RN.. Insert

External Right/Left hand double clamp tool holder. Suited for longitudinal turning without shoulder, copy turning, taper and chamfer turning with negative round RN.. 12 size inserts. Available in 25x25 mm shank. Body treated for longer tool life.





	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	DRSNR 2525 M 12	25	25	25	32	150	31.6	-6	-6	0.74	GI083	DR12
L	DRSNL 2525 M 12	25	25	25	32	150	31.6	-6	-6	0.75	GI083	DR12

GI083	RN.. 120400

DR12	DCS 12	3.9 Nm	DRS 155-02	US 2002-T15P	FLAG T15P/3,5

PRSN(RL) EXT

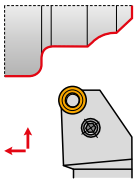
P M K H

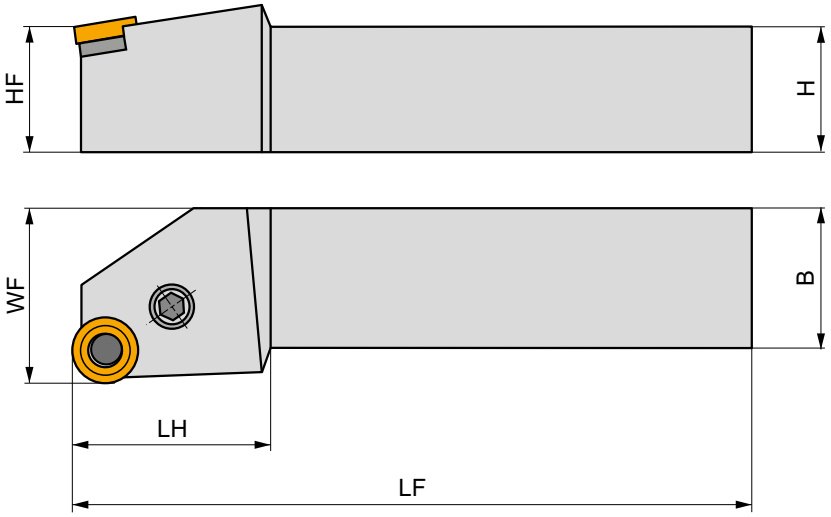
PRAMET

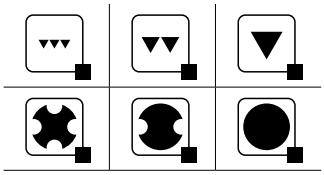
P

External Lever Lock Holder for RN.. Insert

External Right/Left hand lever lock tool holder. Suited for longitudinal turning, copy turning up to 90°, taper and chamfer turning with negative round RN.. 12, 15 and 19 size inserts. Available in 25x25 up to 40x40 mm shank. Body treated for longer tool life.







	Product	H	B	HF	WF	LF	LH	LAMS	GAMO	kg		
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[°]	[°]			
R	PRSNR 2525 M 12	25	25	25	32	150	32	-6	-6	0.68	GI083	PR20
	PRSNR 3232 P 15	32	32	32	40	170	38	-6	-6	1.40	GI105	PR40
	PRSNR 4040 R 19	40	40	40	50	200	40	-6	-6	2.49	GI106	PR50
L	PRSNL 2525 M 12	25	25	25	32	150	32	-6	-6	0.74	GI083	PR20
	PRSNL 3232 P 15	32	32	32	40	170	38	-6	-6	1.40	GI105	PR40
	PRSNL 4040 R 19	40	40	40	50	200	40	-6	-6	2.48	GI106	PR50

GI083	RN.. 120400
GI105	RN.. 150600
GI106	RN.. 190600

				Nm					
PR20	RNU 120300	PU 02	US 35	6.0	M 8x1	22.5	NT 05	MT 05	HXK 4
PR40	RNU 150300	PU 04	US 36	6.0	M 8x1	26	NT 07	MT 07	HXK 4
PR50	RNU 190400	PU 05	US 38	8.0	M 10x1	29	NT 06	MT 06	HXK 5

C.-DRSN(RL) EXT

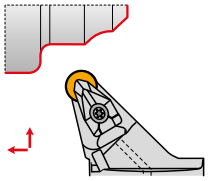
P M K H

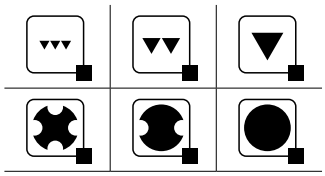
PRAMET

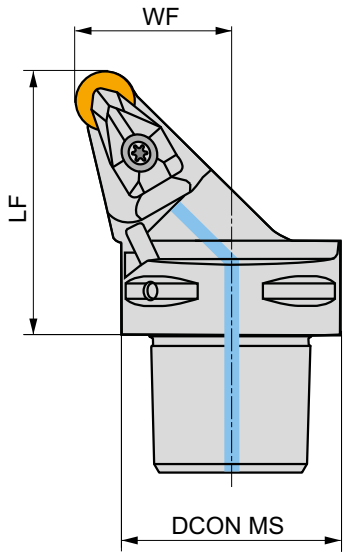
D

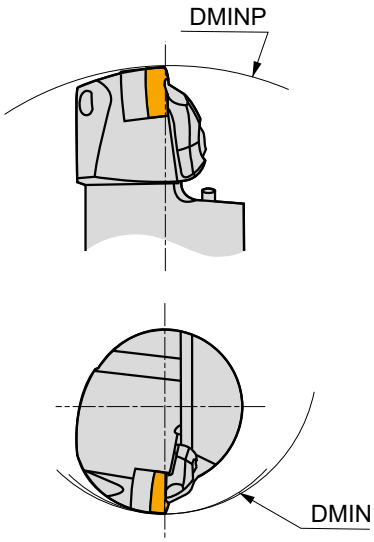
External PSC Quick Change Tool, Double Clamp for RN.. Insert

External Right/Left hand double clamp tool, through coolant, for longitudinal turning without shoulder, copy turning, taper and chamfer turning with negative round RN.. 12 size inserts. Available with PSC (Polygon Shank Coupling) C6 shank. Body treated for longer tool life.









	Product	DCON MS [mm]	DMIN [mm]	DMINP [mm]	WF [mm]	LF [mm]	LAMS [°]	GAMO [°]		kg			
R	C6-DRSNR-45065-12	63	110	190	45	65	-6	-6	✓	1.11	GI083	C-DR12	–
L	C6-DRSNL-45065-12	63	110	190	45	65	-6	-6	✓	1.10	GI083	C-DR12	–

GI083	RN.. 120400

C-DR12	DCS 12	3.9 Nm	DRS 155-02	US 2002-T15P	FLAG T15P/3,5	CN 045-01

SN

09/ 12/ 15/ 19/ 25

CARBIDE INSERTS

SNMA

300

SNMG

301

SNMM

307

SNMX

311

CER INSERTS

SNGA CER

311

SNGN CER

312

MATCH THE RIGHT SIZE (example)

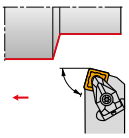
Insert	Tool Holder
SNMG 190616E-RM	DSDNN 3232 P 19

ISO TURNING – EXTERNAL

DSBN(RL) EXT

75°

SN..: 12, 15, 19



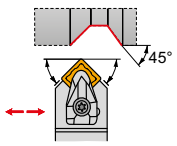
20×20, 40×40

313 | 300 – 312

DSDNN EXT

45°

SN..: 12, 15, 19, 25



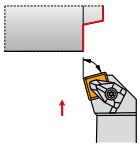
20×20, 40×40

315 | 300 – 312

DSKN(RL) EXT

75°

SN..: 12, 19



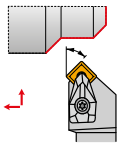
25×25, 32×32

316 | 300 – 312

DSSN(RL) EXT

45°

SN..: 12, 15, 19



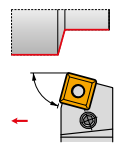
20×20, 40×40

317 | 300 – 312

PSBN(RL) EXT

75°

SN..: 12, 15, 19, 25



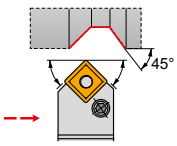
20×20, 50×50

318 | 300 – 312

PSDNN EXT

45°

SN..: 12, 15, 19, 25



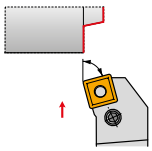
20×20, 50×50

320 | 300 – 312

PSKN(RL) EXT

75°

SN..: 12, 15, 19, 25



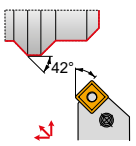
20×20, 50×50

321 | 300 – 312

PSSN(RL) EXT

45°

SN..: 19, 25



40×40, 50×50

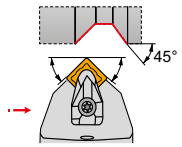
323 | 300 – 312

SN

09/ 12/ 15/ 19/ 25

C.-DSDNN EXT

45°



SN..

12
19

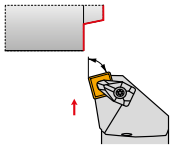
C4
C6

324

300 – 312

C.-DSKN(RL) EXT

75°



SN..

12

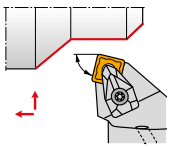
C4

325

300 – 312

C.-DSRN(RL) EXT

75°



SN..

12
19

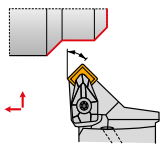
C4
C6

326

300 – 312

C.-DSSN(RL) EXT

45°



SN..

12

C4
C5

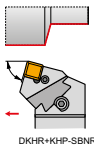
327

300 – 312

ISO TURNING – HEAVY ROUGHING – EXTERNAL

KHP-SBNR + DKH(RL)

75°



SN..

25

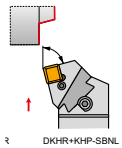
40×50
60×80

328, 330

300 – 312

KHP-SBNL + DKH(RL)

75°



SN..

25

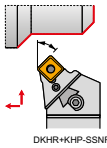
40×50
60×80

328, 330

300 – 312

KHP-SSNR/L + DKH(RL)

45°



SN..

19
25

40×50
60×80

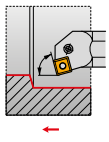
329, 330

300 – 312

ISO TURNING – INTERNAL

PSKN(RL) INT

93°



SN..

11
15

32
80

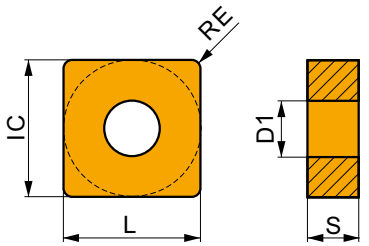
331

300 – 312

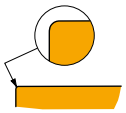
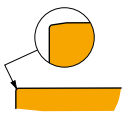
SNMA

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
1204	12.700	5.16	12.70	4.76
1506	15.875	6.35	15.875	6.35
1906	19.050	7.94	19.05	6.35
2507	25.400	9.12	25.40	7.94
2509	25.400	9.12	25.40	9.525



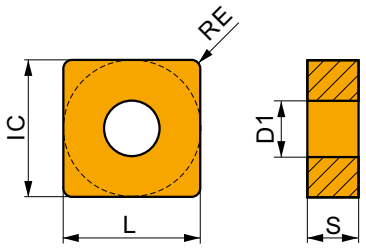
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			E																	
			For fine-finish to semi-rough machining, and continuous to slightly interrupted cuts.																	
SNMA 120408	**T5305**	0.8	–	–	–	–	–	–	230	0.20	4.0	–	–	–	–	–	–	45	0.15	1.0
	T5315	0.8	–	–	–	–	–	–	200	0.20	4.0	–	–	–	–	–	–	40	0.15	1.0
	T6310	0.8	–	–	–	–	–	–	100	0.20	4.0	–	–	–	–	–	–	25	0.15	1.0
SNMA 120412	**T5305**	1.2	–	–	–	–	–	–	205	0.30	4.0	–	–	–	–	–	–	40	0.15	1.0
	T5315	1.2	–	–	–	–	–	–	190	0.30	4.0	–	–	–	–	–	–	40	0.15	1.0
SNMA 150612	**T5305**	1.2	–	–	–	–	–	–	200	0.30	5.0	–	–	–	–	–	–	40	0.15	1.0
	T5315	1.2	–	–	–	–	–	–	185	0.30	5.0	–	–	–	–	–	–	35	0.15	1.0
SNMA 190612	**T5305**	1.2	–	–	–	–	–	–	195	0.30	6.0	–	–	–	–	–	–	40	0.15	1.0
	T5315	1.2	–	–	–	–	–	–	180	0.30	6.0	–	–	–	–	–	–	35	0.15	1.0
SNMA 190616	**T5305**	1.6	–	–	–	–	–	–	190	0.40	6.0	–	–	–	–	–	–	40	0.15	1.0
	T5315	1.6	–	–	–	–	–	–	170	0.40	6.0	–	–	–	–	–	–	35	0.15	1.0
SNMA 250724	**T5305**	2.4	–	–	–	–	–	–	95	0.60	8.0	–	–	–	–	–	–	20	0.15	1.0
	T5315	2.4	–	–	–	–	–	–	90	0.60	8.0	–	–	–	–	–	–	15	0.15	1.0
SNMA 250924	**T5305**	2.4	–	–	–	–	–	–	95	0.60	8.0	–	–	–	–	–	–	20	0.15	1.0
	T5315	2.4	–	–	–	–	–	–	90	0.60	8.0	–	–	–	–	–	–	15	0.15	1.0
			S																	
			For fine-finish to semi-rough machining, and continuous to slightly interrupted cuts.																	
SNMA 120412S	**T5305**	1.2	–	–	–	–	–	–	205	0.30	4.0	–	–	–	–	–	–	40	0.15	1.0
SNMA 190616S	**T5305**	1.6	–	–	–	–	–	–	195	0.30	6.0	–	–	–	–	–	–	40	0.15	1.0
SNMA 250724S	**T5305**	2.4	–	–	–	–	–	–	95	0.60	8.0	–	–	–	–	–	–	20	0.15	1.0
SNMA 250924S	**T5305**	2.4	–	–	–	–	–	–	95	0.60	8.0	–	–	–	–	–	–	20	0.15	1.0

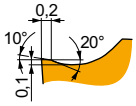
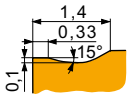
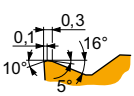
SNMG

PRAMET

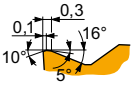
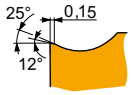
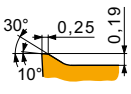
	IC [mm]	D1 [mm]	L [mm]	S [mm]
1204	12.700	5.16	12.70	4.76
1506	15.875	6.35	15.875	6.35
1906	19.050	7.94	19.05	6.35
2507	25.400	9.12	25.40	7.94
2509	25.400	9.12	25.40	9.525



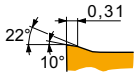
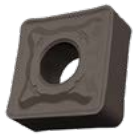
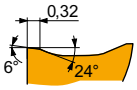
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
																				
			FM geometry with positive design for finish to semi-rough machining, and continuous to slightly interrupted cuts.																	
SNMG 120404E-FM	**T6310**	0.4	■ 175	0.20	2.1	◪ 125	0.18	2.1	■ 140	0.20	2.1	–	–	–	◪ 50	0.14	1.7	–	–	–
	T7325	0.4	◪ 195	0.20	2.1	◪ 150	0.18	2.1	–	–	–	–	–	–	◪ 60	0.16	1.7	–	–	–
	T8315	0.4	◪ 180	0.20	2.1	◪ 105	0.18	2.1	■ 170	0.20	2.1	–	–	–	◪ 45	0.14	1.7	–	–	–
	T8330	0.4	■ 175	0.20	2.1	◪ 105	0.18	2.1	■ 165	0.20	2.1	–	–	–	◪ 40	0.14	1.7	–	–	–
	T8430	0.4	■ 195	0.20	2.1	◪ 105	0.18	2.1	◪ 160	0.20	2.1	–	–	–	◪ 40	0.14	1.7	–	–	–
	T9315	0.4	■ 270	0.20	2.1	–	–	–	◪ 255	0.20	2.1	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 240	0.20	2.1	◪ 140	0.18	2.1	◪ 225	0.20	2.1	–	–	–	◪ 50	0.16	1.7	–	–	–
SNMG 120408E-FM	**T7325**	0.8	◪ 235	0.20	2.1	◪ 180	0.18	2.1	–	–	–	–	–	–	◪ 75	0.16	1.7	–	–	–
	T8315	0.8	◪ 215	0.20	2.1	◪ 125	0.18	2.1	■ 200	0.20	2.1	–	–	–	◪ 50	0.16	1.7	–	–	–
	T8330	0.8	■ 205	0.20	2.1	◪ 120	0.18	2.1	■ 190	0.20	2.1	–	–	–	◪ 50	0.16	1.7	–	–	–
	T8430	0.8	■ 235	0.20	2.1	◪ 125	0.18	2.1	◪ 190	0.20	2.1	–	–	–	◪ 50	0.16	1.7	–	–	–
	T9310	0.8	■ 355	0.20	2.1	–	–	–	◪ 335	0.20	2.1	–	–	–	–	–	–	–	–	–
	T9315	0.8	■ 320	0.20	2.1	–	–	–	◪ 300	0.20	2.1	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 290	0.20	2.1	◪ 170	0.18	2.1	◪ 275	0.20	2.1	–	–	–	◪ 65	0.16	1.7	–	–	–
SNMG 120412E-FM	**T8330**	1.2	■ 200	0.27	2.1	◪ 120	0.24	2.1	■ 190	0.27	2.1	–	–	–	◪ 50	0.19	1.7	–	–	–
	T8430	1.2	■ 220	0.27	2.1	◪ 120	0.24	2.1	◪ 180	0.27	2.1	–	–	–	◪ 45	0.19	1.7	–	–	–
	T9315	1.2	■ 300	0.27	2.1	–	–	–	◪ 285	0.27	2.1	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 270	0.27	2.1	◪ 160	0.24	2.1	◪ 255	0.27	2.1	–	–	–	◪ 60	0.19	1.7	–	–	–
SNMG 120416E-FM	**T8330**	1.6	■ 200	0.32	2.1	◪ 120	0.29	2.1	■ 190	0.32	2.1	–	–	–	◪ 50	0.22	1.7	–	–	–
	T8430	1.6	■ 220	0.32	2.1	◪ 120	0.29	2.1	◪ 180	0.32	2.1	–	–	–	◪ 45	0.22	1.7	–	–	–
	T9325	1.6	■ 260	0.32	2.1	◪ 155	0.29	2.1	◪ 245	0.32	2.1	–	–	–	◪ 55	0.22	1.7	–	–	–
																				
			KR geometry for semi-rough to rough machining, and continuous to interrupted cuts.																	
SNMG 120408E-KR	**T5305**	0.8	◪ 265	0.35	3.8	–	–	–	■ 250	0.35	3.8	–	–	–	–	–	–	◪ 50	0.15	1.0
	T5315	0.8	◪ 235	0.35	3.8	–	–	–	■ 220	0.35	3.8	–	–	–	–	–	–	◪ 45	0.15	1.0
SNMG 120412E-KR	**T5305**	1.2	◪ 265	0.40	3.8	–	–	–	■ 250	0.40	3.8	–	–	–	–	–	–	◪ 50	0.15	1.0
	T5315	1.2	◪ 240	0.40	3.8	–	–	–	■ 225	0.40	3.8	–	–	–	–	–	–	◪ 45	0.15	1.0
																				
			M geometry for finish to semi-rough machining, and continuous to interrupted cuts.																	
SNMG 120408E-M	**T5305**	0.8	◪ 290	0.32	2.1	–	–	–	■ 275	0.32	2.1	–	–	–	–	–	–	◪ 55	0.15	1.0
	T5315	0.8	◪ 260	0.32	2.1	–	–	–	■ 245	0.32	2.1	–	–	–	–	–	–	◪ 50	0.15	1.0
	T9310	0.8	■ 255	0.32	2.1	–	–	–	◪ 240	0.32	2.1	–	–	–	–	–	–	◪ 50	0.15	1.0
	T9315	0.8	■ 235	0.32	2.1	–	–	–	◪ 220	0.32	2.1	–	–	–	–	–	–	◪ 45	0.15	1.0
	T9325	0.8	■ 210	0.32	2.1	–	–	–	◪ 195	0.32	2.1	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 185	0.32	2.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

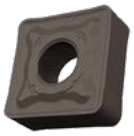
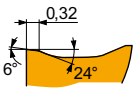
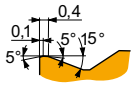
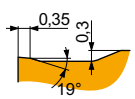
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]
																				
M geometry for finish to semi-rough machining, and continuous to interrupted cuts.																				
SNMG 120412E-M	**T9315**	1.2	■ 230	0.40	2.1	–	–	–	◪ 215	0.40	2.1	–	–	–	–	–	–	◪ 45	0.15	1.0
	T9325	1.2	■ 200	0.40	2.1	–	–	–	◪ 190	0.40	2.1	–	–	–	–	–	–	–	–	–
	T9335	1.2	■ 175	0.40	2.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
SNMG 120416E-M	**T9325**	1.6	■ 210	0.40	2.1	–	–	–	◪ 195	0.40	2.1	–	–	–	–	–	–	–	–	–
SNMG 150612E-M	**T9315**	1.2	■ 220	0.40	3.4	–	–	–	◪ 205	0.40	3.4	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9325	1.2	■ 195	0.40	3.4	–	–	–	◪ 185	0.40	3.4	–	–	–	–	–	–	–	–	–
	T9335	1.2	■ 170	0.40	3.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
SNMG 190612E-M	**T9315**	1.2	■ 215	0.40	4.0	–	–	–	◪ 200	0.40	4.0	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9325	1.2	■ 190	0.40	4.0	–	–	–	◪ 180	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	■ 165	0.40	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
SNMG 190616E-M	**T9315**	1.6	■ 225	0.40	4.0	–	–	–	◪ 210	0.40	4.0	–	–	–	–	–	–	◪ 45	0.15	1.0
	T9325	1.6	■ 200	0.40	4.0	–	–	–	◪ 190	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	■ 175	0.40	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
																				
NF geometry with highly positive design for fine-finish to medium machining, and continuous cuts.																				
SNMG 120404E-NF	**T6310**	0.4	■ 185	0.17	1.7	■ 130	0.15	1.7	◪ 145	0.17	1.7	◪ 555	0.20	1.7	◪ 55	0.14	1.4	–	–	–
	T7325	0.4	◪ 210	0.18	1.7	■ 160	0.16	1.7	–	–	–	–	–	–	◪ 65	0.16	1.4	–	–	–
	T7335	0.4	◪ 205	0.18	1.7	■ 155	0.16	1.7	–	–	–	–	–	–	◪ 65	0.16	1.4	–	–	–
	T8330	0.4	■ 185	0.17	1.7	■ 110	0.15	1.7	◪ 175	0.17	1.7	◪ 555	0.20	1.7	◪ 45	0.14	1.4	–	–	–
	T8430	0.4	■ 210	0.17	1.7	■ 115	0.15	1.7	◪ 175	0.17	1.7	◪ 585	0.20	1.7	◪ 45	0.14	1.4	–	–	–
	T9315	0.4	■ 300	0.17	1.7	–	–	–	◪ 285	0.17	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 260	0.18	1.7	■ 155	0.16	1.7	◪ 245	0.18	1.7	–	–	–	◪ 55	0.16	1.4	–	–	–
SNMG 120408E-NF	**HF7**	0.8	–	–	–	◪ 120	0.17	1.7	◪ 190	0.19	1.7	◪ 600	0.23	1.7	–	–	–	–	–	–
	T6310	0.8	■ 210	0.19	1.7	■ 150	0.17	1.7	◪ 165	0.19	1.7	◪ 630	0.23	1.7	◪ 60	0.15	1.4	–	–	–
	T7325	0.8	◪ 245	0.19	1.7	■ 190	0.17	1.7	–	–	–	–	–	–	◪ 75	0.15	1.4	–	–	–
	T7335	0.8	◪ 240	0.19	1.7	■ 185	0.17	1.7	–	–	–	–	–	–	◪ 75	0.15	1.4	–	–	–
	T8315	0.8	◪ 230	0.19	1.7	■ 135	0.17	1.7	◪ 215	0.19	1.7	◪ 690	0.23	1.7	◪ 55	0.15	1.4	–	–	–
	T8330	0.8	■ 210	0.19	1.7	■ 125	0.17	1.7	◪ 195	0.19	1.7	◪ 630	0.23	1.7	◪ 50	0.15	1.4	–	–	–
	T8430	0.8	■ 250	0.19	1.7	■ 135	0.17	1.7	◪ 205	0.19	1.7	◪ 690	0.23	1.7	◪ 50	0.15	1.4	–	–	–
	T9315	0.8	■ 340	0.19	1.7	–	–	–	◪ 320	0.19	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 300	0.19	1.7	■ 180	0.17	1.7	◪ 285	0.19	1.7	–	–	–	◪ 65	0.15	1.4	–	–	–
																				
NM geometry with highly positive design for fine-finish, medium and rough machining, in continuous cuts.																				
SNMG 120408E-NM	**T7325**	0.8	◪ 225	0.25	2.1	■ 175	0.23	2.1	–	–	–	–	–	–	■ 70	0.20	1.7	–	–	–
	T7335	0.8	◪ 220	0.25	2.1	■ 170	0.23	2.1	–	–	–	–	–	–	■ 70	0.20	1.7	–	–	–
	T8315	0.8	◪ 215	0.25	2.1	■ 125	0.23	2.1	–	–	–	◪ 645	0.30	2.1	◪ 50	0.20	1.7	–	–	–
	T8330	0.8	■ 205	0.25	2.1	■ 120	0.23	2.1	–	–	–	◪ 615	0.30	2.1	◪ 50	0.20	1.7	–	–	–
	T8430	0.8	■ 225	0.25	2.1	■ 120	0.23	2.1	–	–	–	◪ 615	0.30	2.1	◪ 45	0.20	1.7	–	–	–
	T9325	0.8	■ 275	0.25	2.1	■ 165	0.23	2.1	–	–	–	–	–	–	◪ 60	0.20	1.7	–	–	–
SNMG 120412E-NM	**T7325**	1.2	◪ 225	0.30	2.1	■ 175	0.27	2.1	–	–	–	–	–	–	■ 70	0.24	1.7	–	–	–
	T7335	1.2	◪ 220	0.30	2.1	■ 170	0.27	2.1	–	–	–	–	–	–	■ 70	0.24	1.7	–	–	–
	T8315	1.2	◪ 215	0.30	2.1	■ 125	0.27	2.1	–	–	–	◪ 645	0.36	2.1	◪ 50	0.24	1.7	–	–	–
	T9325	1.2	■ 270	0.30	2.1	■ 160	0.27	2.1	–	–	–	–	–	–	◪ 60	0.24	1.7	–	–	–

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
NMR geometry with positive design for medium to rough machining, and continuous cuts.																				
SNMG 120408E-NMR	**T6310**	0.8	■	155	0.35	2.6	■	110	0.32	2.6	–	–	–	–	–	–	■	45	0.25	2.1	–	–	–
	T7325	0.8	◪	175	0.35	2.6	■	135	0.32	2.6	–	–	–	–	–	–	■	55	0.25	2.1	–	–	–
	T7335	0.8	◪	165	0.35	2.6	■	125	0.32	2.6	–	–	–	–	–	–	■	50	0.25	2.1	–	–	–
	T8330	0.8	■	155	0.35	2.6	■	90	0.32	2.6	–	–	–	–	–	–	◪	35	0.25	2.1	–	–	–
	T8430	0.8	■	165	0.35	2.6	■	90	0.32	2.6	–	–	–	–	–	–	◪	35	0.25	2.1	–	–	–
	T9315	0.8	■	225	0.35	2.6		–	–	–	–	–	–	–	–	–		–	–	–	–	–	–
	T9325	0.8	■	200	0.35	2.6	■	120	0.32	2.6	–	–	–	–	–	–	◪	45	0.25	2.1	–	–	–
SNMG 120412E-NMR	**T6310**	1.2	■	160	0.40	2.6	■	115	0.36	2.6	–	–	–	–	–	–	■	45	0.28	2.1	–	–	–
	T7325	1.2	◪	175	0.40	2.6	■	135	0.36	2.6	–	–	–	–	–	–	■	55	0.28	2.1	–	–	–
	T7335	1.2	◪	165	0.40	2.6	■	125	0.36	2.6	–	–	–	–	–	–	■	50	0.28	2.1	–	–	–
	T9315	1.2	■	225	0.40	2.6		–	–	–	–	–	–	–	–	–		–	–	–	–	–	–
	T9325	1.2	■	200	0.40	2.6	■	120	0.36	2.6	–	–	–	–	–	–	◪	45	0.28	2.1	–	–	–
SNMG 120416E-NMR	**T7325**	1.6	◪	180	0.45	2.6	■	140	0.41	2.6	–	–	–	–	–	–	■	55	0.32	2.1	–	–	–
	T7335	1.6	◪	170	0.45	2.6	■	130	0.41	2.6	–	–	–	–	–	–	■	55	0.32	2.1	–	–	–
	T9325	1.6	■	200	0.45	2.6	■	120	0.41	2.6	–	–	–	–	–	–	◪	45	0.32	2.1	–	–	–
SNMG 150612E-NMR	**T6310**	1.2	■	150	0.40	3.8	■	105	0.36	3.8	–	–	–	–	–	–	■	45	0.28	3.0	–	–	–
	T7325	1.2	◪	170	0.40	3.8	■	130	0.36	3.8	–	–	–	–	–	–	■	55	0.28	3.0	–	–	–
	T9315	1.2	■	215	0.40	3.8		–	–	–	–	–	–	–	–	–		–	–	–	–	–	–
	T9325	1.2	■	190	0.40	3.8	■	110	0.36	3.8	–	–	–	–	–	–	◪	40	0.28	3.0	–	–	–
SNMG 190612E-NMR	**T6310**	1.2	■	145	0.40	5.2	■	100	0.36	5.2	–	–	–	–	–	–	■	40	0.28	4.2	–	–	–
	T7325	1.2	◪	165	0.40	5.2	■	125	0.36	5.2	–	–	–	–	–	–	■	50	0.28	4.2	–	–	–
	T7335	1.2	◪	155	0.40	5.2	■	120	0.36	5.2	–	–	–	–	–	–	■	50	0.28	4.2	–	–	–
	T9315	1.2	■	210	0.40	5.2		–	–	–	–	–	–	–	–	–		–	–	–	–	–	–
	T9325	1.2	■	185	0.40	5.2	■	110	0.36	5.2	–	–	–	–	–	–	◪	40	0.28	4.2	–	–	–
SNMG 190616E-NMR	**T6310**	1.6	■	150	0.45	5.2	■	105	0.41	5.2	–	–	–	–	–	–	■	45	0.32	4.2	–	–	–
	T7325	1.6	◪	170	0.45	5.2	■	130	0.41	5.2	–	–	–	–	–	–	■	55	0.32	4.2	–	–	–
	T7335	1.6	◪	155	0.45	5.2	■	120	0.41	5.2	–	–	–	–	–	–	■	50	0.32	4.2	–	–	–
	T9315	1.6	■	205	0.45	5.2		–	–	–	–	–	–	–	–	–		–	–	–	–	–	–
	T9325	1.6	■	185	0.45	5.2	■	110	0.41	5.2	–	–	–	–	–	–	◪	40	0.32	4.2	–	–	–
																				
NRM geometry with positive design for semi-rough to rough machining, and continuous to moderate interrupted cuts.																				
SNMG 120408-NRM	**T7325**	0.8	◪	175	0.35	2.6	■	135	0.32	2.6	–	–	–	–	–	–	■	55	0.28	2.1	–	–	–
	T7335	0.8	◪	165	0.35	2.6	■	125	0.32	2.6	–	–	–	–	–	–	■	50	0.28	2.1	–	–	–
	T9315	0.8	■	225	0.35	2.6		–	–	–	–	–	–	–	–	–		–	–	–	–	–	–
SNMG 120412-NRM	**T7325**	1.2	◪	175	0.40	3.0	■	135	0.36	3.0	–	–	–	–	–	–	■	55	0.28	2.4	–	–	–
	T7335	1.2	◪	165	0.40	3.0	■	125	0.36	3.0	–	–	–	–	–	–	■	50	0.28	2.4	–	–	–
	T9315	1.2	■	220	0.40	3.0		–	–	–	–	–	–	–	–	–		–	–	–	–	–	–
SNMG 150612-NRM	**T7325**	1.2	◪	170	0.40	4.0	■	130	0.36	4.0	–	–	–	–	–	–	■	55	0.32	3.2	–	–	–
	T7335	1.2	◪	160	0.40	4.0	■	120	0.36	4.0	–	–	–	–	–	–	■	50	0.32	3.2	–	–	–
	T9315	1.2	■	215	0.40	4.0		–	–	–	–	–	–	–	–	–		–	–	–	–	–	–
SNMG 150616-NRM	**T7325**	1.6	◪	170	0.45	5.0	■	130	0.41	5.0	–	–	–	–	–	–	■	55	0.36	4.0	–	–	–
	T7335	1.6	◪	155	0.45	5.0	■	120	0.41	5.0	–	–	–	–	–	–	■	50	0.36	4.0	–	–	–
	T9315	1.6	■	205	0.45	5.0		–	–	–	–	–	–	–	–	–		–	–	–	–	–	–
SNMG 190612-NRM	**T7325**	1.2	◪	165	0.40	5.2	■	125	0.36	5.2	–	–	–	–	–	–	■	50	0.32	4.2	–	–	–
	T7335	1.2	◪	155	0.40	5.2	■	120	0.36	5.2	–	–	–	–	–	–	■	50	0.32	4.2	–	–	–
	T9315	1.2	■	210	0.40	5.2		–	–	–	–	–	–	–	–	–		–	–	–	–	–	–
SNMG 190616-NRM	**T7325**	1.6	◪	170	0.45	5.2	■	130	0.41	5.2	–	–	–	–	–	–	■	55	0.36	4.2	–	–	–
	T7335	1.6	◪	155	0.45	5.2	■	120	0.41	5.2	–	–	–	–	–	–	■	50	0.36	4.2	–	–	–
	T9315	1.6	■	205	0.45	5.2		–	–	–	–	–	–	–	–	–		–	–	–	–	–	–
SNMG 250724-NRM	**T7325**	2.4	◪	105	0.65	9.0	■	80	0.59	9.0	–	–	–	–	–	–	■	30	0.46	7.2	–	–	–
	T7335	2.4	◪	100	0.65	9.0	■	75	0.59	9.0	–	–	–	–	–	–	■	30	0.46	7.2	–	–	–
	T9315	2.4	■	120	0.65	9.0		–	–	–	◪	110	0.65	9.0	–	–	–	–	–	–	–	–	–

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

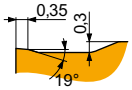
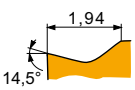
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
SNMG 250924-NRM	**T7325**	2.4	105	0.70	9.0	80	0.63	9.0	–	–	–	–	–	–	30	0.49	7.2	–	–	–
	T7335	2.4	95	0.70	9.0	70	0.63	9.0	–	–	–	–	–	–	30	0.49	7.2	–	–	–
	T9315	2.4	120	0.70	9.0	–	–	–	110	0.70	9.0	–	–	–	–	–	–	–	–	–
																				
SNMG 120408E-R	**6640**	0.8	145	0.40	3.8	–	–	–	135	0.40	3.8	–	–	–	–	–	–	–	–	–
	T5305	0.8	250	0.40	3.8	–	–	–	235	0.40	3.8	–	–	–	–	–	–	50	0.15	1.0
	T9315	0.8	200	0.40	3.8	–	–	–	190	0.40	3.8	–	–	–	–	–	–	40	0.15	1.0
	T9325	0.8	180	0.40	3.8	–	–	–	170	0.40	3.8	–	–	–	–	–	–	–	–	–
	T9335	0.8	155	0.40	3.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
SNMG 120412E-R	**T5305**	1.2	255	0.45	3.8	–	–	–	240	0.45	3.8	–	–	–	–	–	–	50	0.15	1.0
	T9310	1.2	220	0.45	3.8	–	–	–	205	0.45	3.8	–	–	–	–	–	–	40	0.15	1.0
	T9325	1.2	180	0.45	3.8	–	–	–	170	0.45	3.8	–	–	–	–	–	–	–	–	–
	T9335	1.2	160	0.45	3.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
SNMG 120416E-R	**T9315**	1.6	205	0.50	3.8	–	–	–	190	0.50	3.8	–	–	–	–	–	–	40	0.15	1.0
	T9325	1.6	185	0.50	3.8	–	–	–	175	0.50	3.8	–	–	–	–	–	–	–	–	–
SNMG 150612E-R	**T5305**	1.2	250	0.45	4.5	–	–	–	235	0.45	4.5	–	–	–	–	–	–	50	0.15	1.0
	T5315	1.2	230	0.45	4.5	–	–	–	215	0.45	4.5	–	–	–	–	–	–	45	0.15	1.0
	T9315	1.2	200	0.45	4.5	–	–	–	190	0.45	4.5	–	–	–	–	–	–	40	0.15	1.0
	T9325	1.2	180	0.45	4.5	–	–	–	170	0.45	4.5	–	–	–	–	–	–	–	–	–
SNMG 150616E-R	**T5315**	1.6	230	0.50	4.5	–	–	–	215	0.50	4.5	–	–	–	–	–	–	45	0.15	1.0
	T9325	1.6	180	0.50	4.5	–	–	–	170	0.50	4.5	–	–	–	–	–	–	–	–	–
SNMG 190612E-R	**6640**	1.2	140	0.45	6.0	–	–	–	130	0.45	6.0	–	–	–	–	–	–	–	–	–
	T9310	1.2	210	0.45	6.0	–	–	–	195	0.45	6.0	–	–	–	–	–	–	40	0.15	1.0
	T9315	1.2	195	0.45	6.0	–	–	–	185	0.45	6.0	–	–	–	–	–	–	35	0.15	1.0
	T9325	1.2	175	0.45	6.0	–	–	–	165	0.45	6.0	–	–	–	–	–	–	–	–	–
SNMG 190616E-R	**T9310**	1.6	205	0.50	6.0	–	–	–	190	0.50	6.0	–	–	–	–	–	–	40	0.15	1.0
	T9315	1.6	195	0.50	6.0	–	–	–	185	0.50	6.0	–	–	–	–	–	–	35	0.15	1.0
	T9325	1.6	175	0.50	6.0	–	–	–	165	0.50	6.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	150	0.50	6.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
																				
SNMG 120408E-RM	**T5305**	0.8	290	0.40	4.0	–	–	–	275	0.40	4.0	–	–	–	–	–	–	–	–	–
	T5315	0.8	260	0.40	4.0	–	–	–	245	0.40	4.0	–	–	–	–	–	–	–	–	–
	T6310	0.8	165	0.40	4.0	115	0.36	4.0	130	0.40	4.0	–	–	–	–	–	–	–	–	–
	T7325	0.8	185	0.40	4.0	140	0.36	4.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.8	175	0.40	4.0	135	0.36	4.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	175	0.40	4.0	105	0.36	4.0	165	0.40	4.0	–	–	–	–	–	–	–	–	–
	T8330	0.8	165	0.40	4.0	95	0.36	4.0	155	0.40	4.0	–	–	–	–	–	–	–	–	–
	T8430	0.8	175	0.40	4.0	95	0.36	4.0	140	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9310	0.8	250	0.40	4.0	–	–	–	235	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9315	0.8	235	0.40	4.0	–	–	–	220	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	210	0.40	4.0	125	0.36	4.0	195	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	180	0.40	4.0	105	0.36	4.0	–	–	–	–	–	–	–	–	–	–	–	–

NRM geometry with positive design for semi-rough to rough machining, and continuous to moderate interrupted cuts.

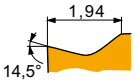
R geometry for semi-rough to rough machining, and continuous to interrupted cuts.

RM geometry for semi-rough to rough machining, and continuous to interrupted cuts.

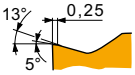
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
			RM geometry for semi-rough to rough machining, and continuous to interrupted cuts.																	
SNMG 120412E-RM	**T5305**	1.2	◪ 295	0.45	4.0	–	–	–	◪ 280	0.45	4.0	–	–	–	–	–	–	–	–	–
	T5315	1.2	◪ 265	0.45	4.0	–	–	–	◪ 250	0.45	4.0	–	–	–	–	–	–	–	–	–
	T6310	1.2	■ 165	0.45	4.0	◪ 115	0.41	4.0	◪ 130	0.45	4.0	–	–	–	–	–	–	–	–	–
	T7325	1.2	◪ 190	0.45	4.0	◪ 145	0.41	4.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	1.2	◪ 180	0.45	4.0	◪ 140	0.41	4.0	–	–	–	–	–	–	–	–	–	–	–	–
	T9310	1.2	■ 250	0.45	4.0	–	–	–	◪ 235	0.45	4.0	–	–	–	–	–	–	–	–	–
	T9315	1.2	■ 235	0.45	4.0	–	–	–	◪ 220	0.45	4.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 210	0.45	4.0	◪ 125	0.41	4.0	◪ 195	0.45	4.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	■ 185	0.45	4.0	◪ 110	0.41	4.0	–	–	–	–	–	–	–	–	–	–	–	–
SNMG 120416E-RM	**T5315**	1.6	◪ 270	0.50	4.0	–	–	–	◪ 255	0.50	4.0	–	–	–	–	–	–	–	–	–
	T7335	1.6	◪ 180	0.50	4.0	◪ 140	0.45	4.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	1.6	■ 170	0.50	4.0	◪ 100	0.45	4.0	◪ 160	0.50	4.0	–	–	–	–	–	–	–	–	–
	T8430	1.6	■ 175	0.50	4.0	◪ 95	0.45	4.0	◪ 140	0.50	4.0	–	–	–	–	–	–	–	–	–
	T9315	1.6	■ 230	0.50	4.0	–	–	–	◪ 215	0.50	4.0	–	–	–	–	–	–	–	–	–
	T9325	1.6	■ 215	0.50	4.0	◪ 125	0.45	4.0	◪ 200	0.50	4.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	■ 180	0.50	4.0	◪ 105	0.45	4.0	–	–	–	–	–	–	–	–	–	–	–	–
SNMG 150612E-RM	**T5315**	1.2	◪ 255	0.45	5.0	–	–	–	◪ 240	0.45	5.0	–	–	–	–	–	–	–	–	–
	T6310	1.2	■ 165	0.45	5.0	◪ 115	0.41	5.0	◪ 130	0.45	5.0	–	–	–	–	–	–	–	–	–
	T7325	1.2	◪ 185	0.45	5.0	◪ 140	0.41	5.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	1.2	◪ 175	0.45	5.0	◪ 135	0.41	5.0	–	–	–	–	–	–	–	–	–	–	–	–
	T9310	1.2	■ 245	0.45	5.0	–	–	–	◪ 230	0.45	5.0	–	–	–	–	–	–	–	–	–
	T9315	1.2	■ 225	0.45	5.0	–	–	–	◪ 210	0.45	5.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 205	0.45	5.0	◪ 120	0.41	5.0	◪ 190	0.45	5.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	■ 180	0.45	5.0	◪ 105	0.41	5.0	–	–	–	–	–	–	–	–	–	–	–	–
SNMG 150616E-RM	**T7335**	1.6	◪ 175	0.50	5.0	◪ 135	0.45	5.0	–	–	–	–	–	–	–	–	–	–	–	–
	T9315	1.6	■ 230	0.50	5.0	–	–	–	◪ 215	0.50	5.0	–	–	–	–	–	–	–	–	–
	T9325	1.6	■ 205	0.50	5.0	◪ 120	0.45	5.0	◪ 190	0.50	5.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	■ 180	0.50	5.0	◪ 105	0.45	5.0	–	–	–	–	–	–	–	–	–	–	–	–
SNMG 190612E-RM	**T5305**	1.2	◪ 275	0.45	7.0	–	–	–	◪ 260	0.45	7.0	–	–	–	–	–	–	–	–	–
	T5315	1.2	◪ 250	0.45	7.0	–	–	–	◪ 235	0.45	7.0	–	–	–	–	–	–	–	–	–
	T7325	1.2	◪ 180	0.45	7.0	◪ 140	0.41	7.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	1.2	◪ 165	0.45	7.0	◪ 125	0.41	7.0	–	–	–	–	–	–	–	–	–	–	–	–
	T9310	1.2	■ 240	0.45	7.0	–	–	–	◪ 225	0.45	7.0	–	–	–	–	–	–	–	–	–
	T9315	1.2	■ 220	0.45	7.0	–	–	–	◪ 205	0.45	7.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 195	0.45	7.0	◪ 115	0.41	7.0	◪ 185	0.45	7.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	■ 175	0.45	7.0	◪ 105	0.41	7.0	–	–	–	–	–	–	–	–	–	–	–	–
SNMG 190616E-RM	**T5305**	1.6	◪ 285	0.50	7.0	–	–	–	◪ 270	0.50	7.0	–	–	–	–	–	–	–	–	–
	T5315	1.6	◪ 250	0.50	7.0	–	–	–	◪ 235	0.50	7.0	–	–	–	–	–	–	–	–	–
	T6310	1.6	■ 160	0.50	7.0	◪ 115	0.45	7.0	◪ 125	0.50	7.0	–	–	–	–	–	–	–	–	–
	T7335	1.6	◪ 170	0.50	7.0	◪ 130	0.45	7.0	–	–	–	–	–	–	–	–	–	–	–	–
	T9310	1.6	■ 240	0.50	7.0	–	–	–	◪ 225	0.50	7.0	–	–	–	–	–	–	–	–	–
	T9315	1.6	■ 220	0.50	7.0	–	–	–	◪ 205	0.50	7.0	–	–	–	–	–	–	–	–	–
	T9325	1.6	■ 200	0.50	7.0	◪ 120	0.45	7.0	◪ 190	0.50	7.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	■ 175	0.50	7.0	◪ 105	0.45	7.0	–	–	–	–	–	–	–	–	–	–	–	–
SNMG 250924E-RM	**T7325**	2.4	◪ 110	0.80	12.0	◪ 85	0.72	12.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	2.4	◪ 105	0.80	12.0	◪ 80	0.72	12.0	–	–	–	–	–	–	–	–	–	–	–	–
	T9226	2.4	■ 95	0.80	12.0	◪ 55	0.72	12.0	◪ 90	0.80	12.0	–	–	–	–	–	–	–	–	–
	T9315	2.4	■ 125	0.80	12.0	–	–	–	◪ 115	0.80	12.0	–	–	–	–	–	–	–	–	–
	T9325	2.4	■ 110	0.80	12.0	◪ 65	0.72	12.0	◪ 100	0.80	12.0	–	–	–	–	–	–	–	–	–
	T9335	2.4	■ 90	0.80	12.0	◪ 50	0.72	12.0	–	–	–	–	–	–	–	–	–	–	–	–
																				
			SF geometry with positive design for fine-finish machining of thin walls and continuous cuts.																	
SNMG 120404E-SF	**T7325**	0.4	◪ 215	0.17	1.0	■ 165	0.15	1.0	–	–	–	–	–	–	■ 65	0.15	0.8	–	–	–
	T9325	0.4	■ 265	0.17	1.0	■ 155	0.15	1.0	◪ 250	0.17	1.0	–	–	–	◪ 55	0.15	0.8	–	–	–

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]
																				

SF geometry with positive design for fine-finish machining of thin walls and continuous cuts.

SNMG 120408E-SF	**H07**	0.8	–	–	–	◩	105	0.18	1.0	■	165	0.20	1.0	◩	525	0.24	1.0	■	50	0.14	0.8	–	–	–
	T6310	0.8	■	210	0.20	1.0	■	150	0.18	1.0	■	165	0.20	1.0	◩	630	0.24	1.0	■	60	0.14	0.8	■	40	0.15	1.0
	T7325	0.8	◩	245	0.20	1.0	■	190	0.18	1.0		–	–	–		–	–	–	■	75	0.16	0.8		–	–	–
	T7335	0.8	◩	235	0.20	1.0	■	180	0.18	1.0		–	–	–		–	–	–	■	75	0.16	0.8		–	–	–
	T8315	0.8	◩	225	0.20	1.0	■	135	0.18	1.0	■	210	0.20	1.0	◩	675	0.24	1.0	◩	55	0.14	0.8	■	45	0.15	1.0
	T8330	0.8	■	210	0.20	1.0	■	125	0.18	1.0	■	195	0.20	1.0	◩	630	0.24	1.0	◩	50	0.14	0.8	◩	40	0.15	1.0
	T8430	0.8	■	245	0.20	1.0	■	135	0.18	1.0	◩	200	0.20	1.0	◩	675	0.24	1.0	◩	50	0.14	0.8	◩	40	0.15	1.0
	T9325	0.8	■	295	0.20	1.0	■	175	0.18	1.0	◩	280	0.20	1.0		–	–	–	◩	65	0.16	0.8		–	–	–
SNMG 120412E-SF	**T6310**	1.2	■	200	0.25	1.5	■	140	0.23	1.5	■	160	0.25	1.5	◩	600	0.30	1.5	■	60	0.18	1.2	■	40	0.15	1.0
	T7325	1.2	◩	230	0.25	1.5	■	175	0.23	1.5		–	–	–		–	–	–	■	70	0.18	1.2		–	–	–
	T8330	1.2	■	200	0.25	1.5	■	120	0.23	1.5	■	190	0.25	1.5	◩	600	0.30	1.5	◩	50	0.18	1.2	◩	40	0.15	1.0
	T8430	1.2	■	225	0.25	1.5	■	120	0.23	1.5	◩	185	0.25	1.5	◩	615	0.30	1.5	◩	45	0.18	1.2	◩	35	0.15	1.0
																						

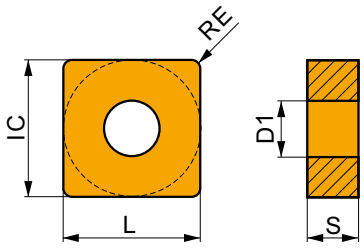
SM geometry with positive design for medium machining and continuous to interrupted cuts.

SNMG 120408E-SM	**T6310**	0.8	■	185	0.25	1.8	■	130	0.23	1.8	■	145	0.25	1.8	◩	555	0.30	1.8	■	55	0.20	1.4	◩	35	0.15	1.0
	T7325	0.8	◩	210	0.25	1.8	■	160	0.23	1.8		–	–	–		–	–	–	■	65	0.20	1.4		–	–	–
	T7335	0.8	◩	205	0.25	1.8	■	155	0.23	1.8		–	–	–		–	–	–	■	65	0.20	1.4		–	–	–
	T8330	0.8	■	185	0.25	1.8	■	110	0.23	1.8	■	175	0.25	1.8	◩	555	0.30	1.8	◩	45	0.20	1.4	◩	35	0.15	1.0
	T8430	0.8	■	205	0.25	1.8	■	110	0.23	1.8	◩	170	0.25	1.8	◩	570	0.30	1.8	◩	45	0.20	1.4	◩	35	0.15	1.0
	T9315	0.8	■	280	0.25	1.8		–	–	–	◩	265	0.25	1.8		–	–	–		–	–	–	◩	55	0.15	1.0
	T9325	0.8	■	255	0.25	1.8	■	150	0.23	1.8	◩	240	0.25	1.8		–	–	–	◩	55	0.20	1.4		–	–	–
SNMG 120412E-SM	**T7325**	1.2	◩	210	0.30	1.8	■	160	0.27	1.8		–	–	–		–	–	–	■	65	0.24	1.4		–	–	–
	T7335	1.2	◩	200	0.30	1.8	■	155	0.27	1.8		–	–	–		–	–	–	■	65	0.24	1.4		–	–	–
	T9315	1.2	■	275	0.30	1.8		–	–	–	◩	260	0.30	1.8		–	–	–		–	–	–	◩	55	0.15	1.0
	T9325	1.2	■	245	0.30	1.8	■	145	0.27	1.8	◩	230	0.30	1.8		–	–	–	◩	55	0.24	1.4		–	–	–
SNMG 190612E-SM	**T6310**	1.2	■	175	0.30	4.0	■	125	0.27	4.0	■	140	0.30	4.0	◩	525	0.36	4.0	■	50	0.27	3.2	◩	35	0.15	1.0
	T7325	1.2	◩	195	0.30	4.0	■	150	0.27	4.0		–	–	–		–	–	–	■	60	0.27	3.2		–	–	–
	T7335	1.2	◩	185	0.30	4.0	■	140	0.27	4.0		–	–	–		–	–	–	■	60	0.27	3.2		–	–	–
	T9325	1.2	■	230	0.30	4.0	■	135	0.27	4.0	◩	215	0.30	4.0		–	–	–	◩	50	0.27	3.2		–	–	–
SNMG 190616E-SM	**T7325**	1.6	◩	190	0.40	4.0	■	145	0.36	4.0		–	–	–		–	–	–	■	60	0.32	3.2		–	–	–
	T7335	1.6	◩	175	0.40	4.0	■	135	0.36	4.0		–	–	–		–	–	–	■	55	0.32	3.2		–	–	–
	T9325	1.6	■	210	0.40	4.0	■	125	0.36	4.0	◩	195	0.40	4.0		–	–	–	◩	45	0.32	3.2		–	–	–

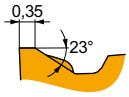
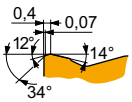
SNMM

PRAMET

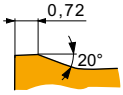
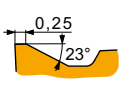
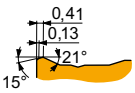
	IC [mm]	D1 [mm]	L [mm]	S [mm]
1204	12.700	5.16	12.70	4.76
1506	15.875	6.35	15.875	6.35
1906	19.050	7.94	19.05	6.35
2507	25.400	9.12	25.40	7.94
2509	25.400	9.12	25.40	9.525



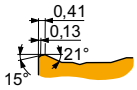
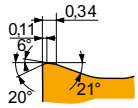
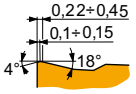
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
																				
			DR geometry for semi-rough to rough machining, and continuous to interrupted cuts.																	
SNMM 120412E-DR	**T9315**	1.2	245	0.45	4.7	–	–	–	230	0.45	4.7	–	–	–	–	–	–	–	–	–
	T9325	1.2	220	0.45	4.7	130	0.41	4.7	205	0.45	4.7	–	–	–	–	–	–	–	–	–
	T9335	1.2	185	0.45	4.7	110	0.41	4.7	–	–	–	–	–	–	–	–	–	–	–	–
SNMM 150612E-DR	**T9325**	1.2	210	0.45	6.0	125	0.41	6.0	195	0.45	6.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	180	0.45	6.0	105	0.41	6.0	–	–	–	–	–	–	–	–	–	–	–	–
SNMM 190612E-DR	**6640**	1.2	170	0.45	6.0	100	0.41	6.0	160	0.45	6.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	210	0.45	6.0	125	0.41	6.0	195	0.45	6.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	180	0.45	6.0	105	0.41	6.0	–	–	–	–	–	–	–	–	–	–	–	–
SNMM 190616E-DR	**T9325**	1.6	210	0.50	6.0	125	0.45	6.0	195	0.50	6.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	185	0.50	6.0	110	0.45	6.0	–	–	–	–	–	–	–	–	–	–	–	–
																				
			HR geometry for rough to heavy-rough machining, and continuous to interrupted cuts.																	
SNMM 190616E-HR	**T8345**	1.6	60	0.60	9.0	35	0.54	9.0	55	0.60	9.0	–	–	–	–	–	–	–	–	–
	T9325	1.6	110	0.60	9.0	65	0.54	9.0	100	0.60	9.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	85	0.60	9.0	50	0.54	9.0	–	–	–	–	–	–	–	–	–	–	–	–
SNMM 190624E-HR	**T8345**	2.4	60	0.65	9.0	35	0.59	9.0	55	0.65	9.0	–	–	–	–	–	–	–	–	–
	T9315	2.4	120	0.65	9.0	–	–	–	110	0.65	9.0	–	–	–	–	–	–	–	–	–
	T9325	2.4	115	0.65	9.0	65	0.59	9.0	105	0.65	9.0	–	–	–	–	–	–	–	–	–
	T9335	2.4	90	0.65	9.0	50	0.59	9.0	–	–	–	–	–	–	–	–	–	–	–	–
SNMM 250716E-HR	**T8345**	1.6	60	0.60	13.0	35	0.54	13.0	55	0.60	13.0	–	–	–	–	–	–	–	–	–
	T9325	1.6	100	0.60	13.0	60	0.54	13.0	95	0.60	13.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	85	0.60	13.0	50	0.54	13.0	–	–	–	–	–	–	–	–	–	–	–	–
SNMM 250724E-HR	**6640**	2.4	80	0.65	13.0	45	0.59	13.0	75	0.65	13.0	–	–	–	–	–	–	–	–	–
	T8345	2.4	55	0.65	13.0	30	0.59	13.0	50	0.65	13.0	–	–	–	–	–	–	–	–	–
	T9315	2.4	120	0.65	13.0	–	–	–	110	0.65	13.0	–	–	–	–	–	–	–	–	–
	T9325	2.4	105	0.65	13.0	60	0.59	13.0	95	0.65	13.0	–	–	–	–	–	–	–	–	–
	T9335	2.4	85	0.65	13.0	50	0.59	13.0	–	–	–	–	–	–	–	–	–	–	–	–
SNMM 250732E-HR	**T9325**	3.2	95	0.80	13.0	55	0.72	13.0	90	0.80	13.0	–	–	–	–	–	–	–	–	–
SNMM 250924E-HR	**T8345**	2.4	55	0.65	13.0	30	0.59	13.0	50	0.65	13.0	–	–	–	–	–	–	–	–	–
	T9315	2.4	120	0.65	13.0	–	–	–	110	0.65	13.0	–	–	–	–	–	–	–	–	–
	T9325	2.4	105	0.65	13.0	60	0.59	13.0	95	0.65	13.0	–	–	–	–	–	–	–	–	–
	T9335	2.4	85	0.65	13.0	50	0.59	13.0	–	–	–	–	–	–	–	–	–	–	–	–
SNMM 250932E-HR	**T9325**	3.2	95	0.80	13.0	55	0.72	13.0	90	0.80	13.0	–	–	–	–	–	–	–	–	–

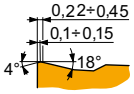
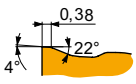
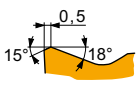
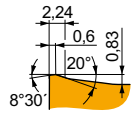
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]
																				
HR2 geometry for rough to heavy-rough machining, and continuous to interrupted cuts.																				
SNMM 190616-HR2	**T9315**	1.6	■ 115	0.65	8.9	–	–	–	◪ 105	0.65	8.9	–	–	–	–	–	–	–	–	–
	T9335	1.6	■ 85	0.65	8.9	◪ 50	0.59	8.9	–	–	–	–	–	–	–	–	–	–	–	–
SNMM 190624-HR2	**T9315**	2.4	■ 105	0.85	8.9	–	–	–	◪ 95	0.85	8.9	–	–	–	–	–	–	–	–	–
	T9335	2.4	■ 80	0.85	8.9	◪ 45	0.77	8.9	–	–	–	–	–	–	–	–	–	–	–	–
SNMM 250724-HR2	**T9226**	2.4	■ 85	0.85	11.0	◪ 50	0.77	11.0	◪ 80	0.85	11.0	–	–	–	–	–	–	–	–	–
	T9315	2.4	■ 105	0.85	11.0	–	–	–	◪ 95	0.85	11.0	–	–	–	–	–	–	–	–	–
	T9335	2.4	■ 80	0.85	11.0	◪ 45	0.77	11.0	–	–	–	–	–	–	–	–	–	–	–	–
SNMM 250732-HR2	**T9315**	3.2	■ 95	1.00	11.0	–	–	–	◪ 90	1.00	11.0	–	–	–	–	–	–	–	–	–
SNMM 250924-HR2	**T9226**	2.4	■ 85	0.85	11.0	◪ 50	0.77	11.0	◪ 80	0.85	11.0	–	–	–	–	–	–	–	–	–
	T9315	2.4	■ 105	0.85	11.0	–	–	–	◪ 95	0.85	11.0	–	–	–	–	–	–	–	–	–
	T9335	2.4	■ 80	0.85	11.0	◪ 45	0.77	11.0	–	–	–	–	–	–	–	–	–	–	–	–
SNMM 250932-HR2	**T9315**	3.2	■ 95	1.00	11.0	–	–	–	◪ 90	1.00	11.0	–	–	–	–	–	–	–	–	–
	T9335	3.2	■ 75	1.00	11.0	◪ 45	0.90	11.0	–	–	–	–	–	–	–	–	–	–	–	–
																				
NR geometry for semi-rough to rough machining, and continuous to interrupted cuts.																				
SNMM 120408E-NR	**T7325**	0.8	◪ 185	0.40	3.0	■ 140	0.36	3.0	–	–	–	–	–	–	◪ 60	0.28	2.4	–	–	–
	T7335	0.8	◪ 175	0.40	3.0	■ 135	0.36	3.0	–	–	–	–	–	–	◪ 55	0.28	2.4	–	–	–
	T8330	0.8	■ 160	0.40	3.0	■ 95	0.36	3.0	◪ 150	0.40	3.0	–	–	–	◪ 40	0.28	2.4	–	–	–
	T8430	0.8	■ 170	0.40	3.0	■ 90	0.36	3.0	◪ 135	0.40	3.0	–	–	–	◪ 35	0.28	2.4	–	–	–
	T9325	0.8	■ 205	0.40	3.0	■ 120	0.36	3.0	◪ 190	0.40	3.0	–	–	–	◪ 45	0.28	2.4	–	–	–
																				
NR2 geometry for semi-rough to rough machining, and continuous to interrupted cuts.																				
SNMM 120408E-NR2	**T7325**	0.8	◪ 175	0.40	4.7	■ 135	0.36	4.7	–	–	–	–	–	–	◪ 55	0.32	3.8	–	–	–
	T7335	0.8	◪ 170	0.40	4.7	■ 130	0.36	4.7	–	–	–	–	–	–	◪ 55	0.32	3.8	–	–	–
	T8330	0.8	■ 155	0.40	4.7	■ 90	0.36	4.7	◪ 145	0.40	4.7	–	–	–	◪ 35	0.32	3.8	–	–	–
	T8430	0.8	■ 165	0.40	4.7	■ 90	0.36	4.7	◪ 135	0.40	4.7	–	–	–	◪ 35	0.32	3.8	–	–	–
	T9325	0.8	■ 195	0.40	4.7	■ 115	0.36	4.7	◪ 185	0.40	4.7	–	–	–	◪ 40	0.32	3.8	–	–	–
SNMM 120412E-NR2	**T7335**	1.2	◪ 165	0.45	4.7	■ 125	0.41	4.7	–	–	–	–	–	–	◪ 50	0.36	3.8	–	–	–
	T8330	1.2	■ 160	0.45	4.7	■ 95	0.41	4.7	◪ 150	0.45	4.7	–	–	–	◪ 40	0.36	3.8	–	–	–
	T8430	1.2	■ 165	0.45	4.7	■ 90	0.41	4.7	◪ 135	0.45	4.7	–	–	–	◪ 35	0.36	3.8	–	–	–
	T9325	1.2	■ 200	0.45	4.7	■ 120	0.41	4.7	◪ 190	0.45	4.7	–	–	–	◪ 45	0.36	3.8	–	–	–
SNMM 150612E-NR2	**T7325**	1.2	◪ 170	0.45	6.0	■ 130	0.41	6.0	–	–	–	–	–	–	◪ 55	0.36	4.8	–	–	–
	T7335	1.2	◪ 165	0.45	6.0	■ 125	0.41	6.0	–	–	–	–	–	–	◪ 50	0.36	4.8	–	–	–
	T8330	1.2	■ 155	0.45	6.0	■ 90	0.41	6.0	◪ 145	0.45	6.0	–	–	–	◪ 35	0.36	4.8	–	–	–
	T8430	1.2	■ 165	0.45	6.0	■ 90	0.41	6.0	◪ 135	0.45	6.0	–	–	–	◪ 35	0.36	4.8	–	–	–
	T9325	1.2	■ 195	0.45	6.0	■ 115	0.41	6.0	◪ 185	0.45	6.0	–	–	–	◪ 40	0.36	4.8	–	–	–
SNMM 150616E-NR2	**T7335**	1.6	◪ 165	0.50	6.0	■ 125	0.45	6.0	–	–	–	–	–	–	◪ 50	0.40	4.8	–	–	–
	T9325	1.6	■ 190	0.50	6.0	■ 110	0.45	6.0	◪ 180	0.50	6.0	–	–	–	◪ 40	0.40	4.8	–	–	–
SNMM 190612E-NR2	**T7335**	1.2	◪ 160	0.45	8.0	■ 120	0.41	8.0	–	–	–	–	–	–	◪ 50	0.36	6.4	–	–	–
	T9325	1.2	■ 190	0.45	8.0	■ 110	0.41	8.0	◪ 180	0.45	8.0	–	–	–	◪ 40	0.36	6.4	–	–	–
SNMM 190616E-NR2	**T7325**	1.6	◪ 175	0.50	8.0	■ 135	0.45	8.0	–	–	–	–	–	–	◪ 55	0.40	6.4	–	–	–
	T7335	1.6	◪ 160	0.50	8.0	■ 120	0.45	8.0	–	–	–	–	–	–	◪ 50	0.40	6.4	–	–	–
	T8330	1.6	■ 155	0.50	8.0	■ 90	0.45	8.0	◪ 145	0.50	8.0	–	–	–	◪ 35	0.40	6.4	–	–	–
	T8430	1.6	■ 155	0.50	8.0	■ 85	0.45	8.0	◪ 130	0.50	8.0	–	–	–	◪ 30	0.40	6.4	–	–	–
	T9315	1.6	■ 210	0.50	8.0	–	–	–	◪ 195	0.50	8.0	–	–	–	–	–	–	–	–	–
	T9325	1.6	■ 185	0.50	8.0	■ 110	0.45	8.0	◪ 175	0.50	8.0	–	–	–	◪ 40	0.40	6.4	–	–	–
SNMM 190624E-NR2	**T7325**	2.4	◪ 155	0.80	8.0	■ 120	0.72	8.0	–	–	–	–	–	–	◪ 50	0.56	6.4	–	–	–
	T7335	2.4	◪ 145	0.80	8.0	■ 110	0.72	8.0	–	–	–	–	–	–	◪ 45	0.56	6.4	–	–	–
	T9325	2.4	■ 165	0.80	8.0	■ 95	0.72	8.0	◪ 155	0.80	8.0	–	–	–	◪ 35	0.56	6.4	–	–	–

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]
			NR2 geometry for semi-rough to rough machining, and continuous to interrupted cuts.																	
SNMM 250724E-NR2	**T7335**	2.4	100	0.80	12.0	75	0.72	12.0	–	–	–	–	–	–	30	0.56	9.6	–	–	–
	T8330	2.4	85	0.80	12.0	50	0.72	12.0	80	0.80	12.0	–	–	–	20	0.56	9.6	–	–	–
	T8430	2.4	85	0.80	12.0	45	0.72	12.0	70	0.80	12.0	–	–	–	15	0.56	9.6	–	–	–
	T9226	2.4	95	0.80	12.0	55	0.72	12.0	90	0.80	12.0	–	–	–	20	0.56	9.6	–	–	–
	T9315	2.4	120	0.80	12.0	–	–	–	110	0.80	12.0	–	–	–	–	–	–	–	–	–
	T9325	2.4	105	0.80	12.0	60	0.72	12.0	95	0.80	12.0	–	–	–	20	0.56	9.6	–	–	–
SNMM 250924E-NR2	**T7325**	2.4	105	0.80	12.0	80	0.72	12.0	–	–	–	–	–	–	30	0.56	9.6	–	–	–
	T7335	2.4	100	0.80	12.0	75	0.72	12.0	–	–	–	–	–	–	30	0.56	9.6	–	–	–
	T9226	2.4	95	0.80	12.0	55	0.72	12.0	90	0.80	12.0	–	–	–	20	0.56	9.6	–	–	–
	T9315	2.4	120	0.80	12.0	–	–	–	110	0.80	12.0	–	–	–	–	–	–	–	–	–
	T9325	2.4	105	0.80	12.0	60	0.72	12.0	95	0.80	12.0	–	–	–	20	0.56	9.6	–	–	–
			NRM geometry with positive design for semi-rough to rough machining, and continuous to moderate interrupted cuts.																	
SNMM 250716-NRM	**T7325**	1.6	115	0.45	9.0	85	0.41	9.0	–	–	–	–	–	–	35	0.36	7.2	–	–	–
	T7335	1.6	110	0.45	9.0	85	0.41	9.0	–	–	–	–	–	–	35	0.36	7.2	–	–	–
	T9315	1.6	135	0.45	9.0	–	–	–	125	0.45	9.0	–	–	–	–	–	–	–	–	–
SNMM 250724-NRM	**T7325**	2.4	105	0.65	9.0	80	0.59	9.0	–	–	–	–	–	–	30	0.46	7.2	–	–	–
	T7335	2.4	100	0.65	9.0	75	0.59	9.0	–	–	–	–	–	–	30	0.46	7.2	–	–	–
	T9315	2.4	120	0.65	9.0	–	–	–	110	0.65	9.0	–	–	–	–	–	–	–	–	–
SNMM 250924-NRM	**T7325**	2.4	105	0.70	9.0	80	0.63	9.0	–	–	–	–	–	–	30	0.49	7.2	–	–	–
	T7335	2.4	95	0.70	9.0	70	0.63	9.0	–	–	–	–	–	–	30	0.49	7.2	–	–	–
	T9315	2.4	120	0.70	9.0	–	–	–	110	0.70	9.0	–	–	–	–	–	–	–	–	–
			OR geometry for semi-rough to rough machining, and continuous to interrupted cuts.																	
SNMM 120408E-OR	**T9315**	0.8	220	0.40	4.7	–	–	–	205	0.40	4.7	–	–	–	–	–	–	–	–	–
	T9325	0.8	195	0.40	4.7	115	0.36	4.7	185	0.40	4.7	–	–	–	40	0.32	3.8	–	–	–
	T9335	0.8	175	0.40	4.7	105	0.36	4.7	–	–	–	–	–	–	35	0.32	3.8	–	–	–
SNMM 120412E-OR	**T9315**	1.2	225	0.45	4.7	–	–	–	210	0.45	4.7	–	–	–	–	–	–	–	–	–
	T9325	1.2	200	0.45	4.7	120	0.41	4.7	190	0.45	4.7	–	–	–	45	0.36	3.8	–	–	–
SNMM 120416E-OR	**T9325**	1.6	200	0.50	4.7	120	0.45	4.7	190	0.50	4.7	–	–	–	45	0.40	3.8	–	–	–
SNMM 150608E-OR	**T9325**	0.8	185	0.45	6.0	110	0.41	6.0	175	0.45	6.0	–	–	–	40	0.41	4.8	–	–	–
	T9335	0.8	170	0.40	6.0	100	0.36	6.0	–	–	–	–	–	–	35	0.36	4.8	–	–	–
SNMM 150612E-OR	**T9325**	1.2	195	0.45	6.0	115	0.41	6.0	185	0.45	6.0	–	–	–	40	0.36	4.8	–	–	–
	T9335	1.2	165	0.45	6.0	95	0.41	6.0	–	–	–	–	–	–	35	0.36	4.8	–	–	–
SNMM 150616E-OR	**T9315**	1.6	215	0.50	6.0	–	–	–	200	0.50	6.0	–	–	–	–	–	–	–	–	–
	T9325	1.6	190	0.50	6.0	110	0.45	6.0	180	0.50	6.0	–	–	–	40	0.40	4.8	–	–	–
SNMM 190612E-OR	**T8330**	1.2	150	0.45	8.0	90	0.41	8.0	140	0.45	8.0	–	–	–	35	0.36	6.4	–	–	–
	T8430	1.2	150	0.45	8.0	80	0.41	8.0	125	0.45	8.0	–	–	–	30	0.36	6.4	–	–	–
	T9315	1.2	210	0.45	8.0	–	–	–	195	0.45	8.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	190	0.45	8.0	110	0.41	8.0	180	0.45	8.0	–	–	–	40	0.36	6.4	–	–	–
	T9335	1.2	165	0.45	8.0	95	0.41	8.0	–	–	–	–	–	–	35	0.36	6.4	–	–	–
SNMM 190616E-OR	**T8330**	1.6	155	0.50	8.0	90	0.45	8.0	145	0.50	8.0	–	–	–	35	0.40	6.4	–	–	–
	T8345	1.6	125	0.50	8.0	75	0.45	8.0	115	0.50	8.0	–	–	–	30	0.40	6.4	–	–	–
	T8430	1.6	155	0.50	8.0	85	0.45	8.0	130	0.50	8.0	–	–	–	30	0.40	6.4	–	–	–
	T9315	1.6	210	0.50	8.0	–	–	–	195	0.50	8.0	–	–	–	–	–	–	–	–	–
	T9325	1.6	185	0.50	8.0	110	0.45	8.0	175	0.50	8.0	–	–	–	40	0.40	6.4	–	–	–
	T9335	1.6	160	0.50	8.0	95	0.45	8.0	–	–	–	–	–	–	35	0.40	6.4	–	–	–
SNMM 190624E-OR	**T9315**	2.4	180	0.80	8.0	–	–	–	170	0.80	8.0	–	–	–	–	–	–	–	–	–
	T9325	2.4	165	0.80	8.0	95	0.72	8.0	155	0.80	8.0	–	–	–	35	0.56	6.4	–	–	–
SNMM 250716E-OR	**T9226**	1.6	115	0.50	12.0	65	0.45	12.0	105	0.50	12.0	–	–	–	20	0.45	9.6	–	–	–
	T9325	1.6	120	0.55	12.0	70	0.50	12.0	110	0.55	12.0	–	–	–	25	0.50	9.6	–	–	–

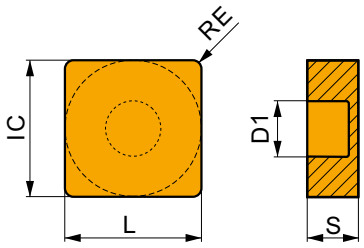
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
OR geometry for semi-rough to rough machining, and continuous to interrupted cuts.																				
SNMM 250724E-OR	**T8330**	2.4	80	1.00	12.0	45	0.90	12.0	75	1.00	12.0	–	–	–	20	0.70	9.6	–	–	–
	T8345	2.4	55	1.00	12.0	30	0.90	12.0	50	1.00	12.0	–	–	–	10	0.70	9.6	–	–	–
	T8430	2.4	80	1.00	12.0	45	0.90	12.0	65	1.00	12.0	–	–	–	15	0.70	9.6	–	–	–
	T9315	2.4	105	1.00	12.0	–	–	–	95	1.00	12.0	–	–	–	–	–	–	–	–	–
	T9325	2.4	100	1.00	12.0	60	0.90	12.0	95	1.00	12.0	–	–	–	20	0.70	9.6	–	–	–
	T9335	2.4	80	1.00	12.0	45	0.90	12.0	–	–	–	–	–	–	15	0.70	9.6	–	–	–
SNMM 250924E-OR	**T8430**	2.4	80	1.00	12.0	45	0.90	12.0	65	1.00	12.0	–	–	–	15	0.70	9.6	–	–	–
	T9226	2.4	85	1.00	12.0	50	0.90	12.0	80	1.00	12.0	–	–	–	15	0.70	9.6	–	–	–
	T9315	2.4	105	1.00	12.0	–	–	–	95	1.00	12.0	–	–	–	–	–	–	–	–	–
	T9325	2.4	100	1.00	12.0	60	0.90	12.0	95	1.00	12.0	–	–	–	20	0.70	9.6	–	–	–
	T9335	2.4	80	1.00	12.0	45	0.90	12.0	–	–	–	–	–	–	15	0.70	9.6	–	–	–
																				
OR1 geometry for semi-rough to heavy-rough machining, and continuous to interrupted cuts.																				
SNMM 190616E-OR1	**T9325**	1.6	185	0.50	8.0	110	0.45	8.0	175	0.50	8.0	–	–	–	40	0.35	6.4	–	–	–
	T9335	1.6	160	0.50	8.0	95	0.45	8.0	–	–	–	–	–	–	35	0.35	6.4	–	–	–
																				
SR geometry for rough to heavy-rough machining, and continuous to interrupted cuts.																				
SNMM 250724S-SR	**6640**	2.4	60	1.00	12.0	35	0.90	12.0	55	1.00	12.0	–	–	–	–	–	–	–	–	–
	T9226	2.4	70	1.00	12.0	40	0.90	12.0	65	1.00	12.0	–	–	–	–	–	–	–	–	–
	T9325	2.4	80	1.00	12.0	45	0.90	12.0	75	1.00	12.0	–	–	–	–	–	–	–	–	–
SNMM 250924S-SR	**T9335**	2.4	65	1.00	14.0	35	0.90	14.0	–	–	–	–	–	–	–	–	–	–	–	–
																				
Geometry 923 for semi-rough to heavy-rough machining, and continuous to heavy interrupted cuts.																				
SNMM 190616S-923	**T8330**	1.6	125	0.65	8.9	75	0.59	8.9	115	0.65	8.9	–	–	–	30	0.52	7.1	–	–	–
	T8345	1.6	100	0.65	8.9	60	0.59	8.9	95	0.65	8.9	–	–	–	25	0.52	7.1	–	–	–
	T8430	1.6	125	0.65	8.9	65	0.59	8.9	100	0.65	8.9	–	–	–	25	0.52	7.1	–	–	–
	T9335	1.6	130	0.65	8.9	75	0.59	8.9	–	–	–	–	–	–	25	0.52	7.1	–	–	–
SNMM 250724S-923	**T8330**	2.4	80	0.85	11.0	45	0.77	11.0	75	0.85	11.0	–	–	–	20	0.60	8.8	–	–	–
	T8430	2.4	80	0.85	11.0	45	0.77	11.0	65	0.85	11.0	–	–	–	15	0.60	8.8	–	–	–
	T9335	2.4	80	0.85	11.0	45	0.77	11.0	–	–	–	–	–	–	15	0.60	8.8	–	–	–
SNMM 250924S-923	**T8345**	2.4	55	0.85	11.0	30	0.77	11.0	50	0.85	11.0	–	–	–	10	0.60	8.8	–	–	–
	T8430	2.4	80	0.85	11.0	45	0.77	11.0	65	0.85	11.0	–	–	–	15	0.60	8.8	–	–	–
	T9226	2.4	85	0.85	11.0	50	0.77	11.0	80	0.85	11.0	–	–	–	15	0.60	8.8	–	–	–
	T9315	2.4	105	0.85	11.0	–	–	–	95	0.85	11.0	–	–	–	–	–	–	–	–	–
	T9335	2.4	80	0.85	11.0	45	0.77	11.0	–	–	–	–	–	–	15	0.60	8.8	–	–	–
SNMM 250932S-923	**T9226**	3.2	80	1.00	11.0	45	0.90	11.0	75	1.00	11.0	–	–	–	15	0.70	8.8	–	–	–

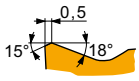
SNMX

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
2512	25.400	9.17	25.40	12.00



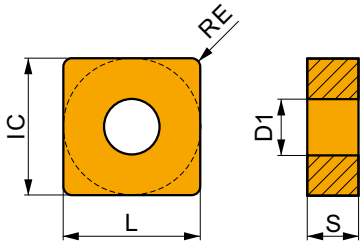
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
																				
SR geometry for rough to heavy-rough machining, and continuous to interrupted cuts.																				
SNMX 251224S-SR	**T8345**	2.4	45	1.00	14.0	25	0.90	14.0	40	1.00	14.0	–	–	–	–	–	–	–	–	–
	T9325	2.4	80	1.00	14.0	45	0.90	14.0	75	1.00	14.0	–	–	–	–	–	–	–	–	–
	T9335	2.4	65	1.00	14.0	35	0.90	14.0	–	–	–	–	–	–	–	–	–	–	–	–

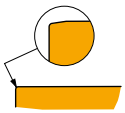
SNGA CER

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
1204	12.700	5.16	12.70	4.76

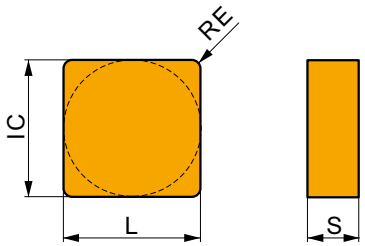


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

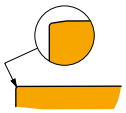
Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
																				
For machining with high speeds and continuous cuts.																				
SNGA 120408 T01025	**TC100**	0.8	–	–	–	–	–	–	575	0.20	2.0	–	–	–	–	–	–	–	–	–
SNGA 120412 T01020	**TC100**	1.2	–	–	–	–	–	–	565	0.25	2.0	–	–	–	–	–	–	–	–	–

SNGN CER

	IC [mm]	L [mm]	S [mm]
0903	9.525	9.525	3.18
1204	12.700	12.70	4.76
1207	12.700	12.70	7.94



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			HSC		T	For machining with high speeds and continuous cuts.															
SNGN 090308 T01020	**TC100**	0.8	–	–	–	–	–	–	◪	580	0.20	1.8	–	–	–	–	–	–	–	–	–
SNGN 090312 T01020	**TC100**	1.2	–	–	–	–	–	–	◪	565	0.25	1.8	–	–	–	–	–	–	–	–	–
SNGN 120404 T01020	**TC100**	0.4	–	–	–	–	–	–	◪	620	0.10	2.0	–	–	–	–	–	–	–	–	–
SNGN 120408 T01020	**TC100**	0.8	–	–	–	–	–	–	◪	575	0.20	2.0	–	–	–	–	–	–	–	–	–
SNGN 120708 T01020	**TC100**	0.8	–	–	–	–	–	–	◪	575	0.20	2.0	–	–	–	–	–	–	–	–	–
SNGN 120712 T01020	**TC100**	1.2	–	–	–	–	–	–	◪	565	0.25	2.0	–	–	–	–	–	–	–	–	–

DSBN(RL) EXT

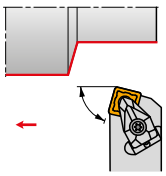
P M K N S H

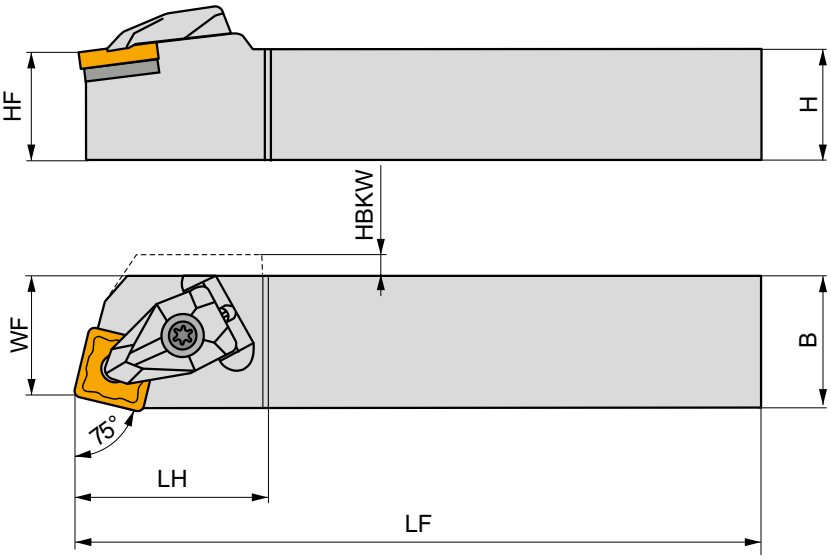
PRAMET

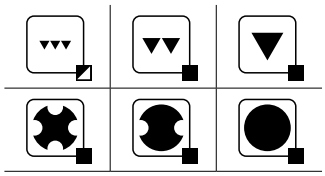
D

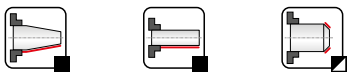
External Double Clamp Holder with 75° Cutting Angle for SN.. Insert

External Right/Left hand double clamp tool holder with 75° cutting angle. Suited for longitudinal turning without shoulder, taper and chamfer turning with negative SN.. 12, 15 or 19 size inserts. Available in 20x20 up to 40x40 mm shanks. Body treated for longer tool life.









	Product	H	B	HF	WF	LF	LH	HBKW	LAMS	GAMO	kg			
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[°]	[°]				
R	**DSBNR 2020 K 12**	20	20	20	17	125	34.2	2.5	-6	-6	0.43	GI029	DS12	AT003
	DSBNR 2525 M 12	25	25	25	22	150	34.3	–	-6	-6	0.74	GI029	DS12	AT003
	DSBNR 2525 M 15	25	25	25	22	150	41.6	2	-6	-6	0.80	GI082	DS15	AT006
	DSBNR 3225 P 15	32	25	32	22	170	41.7	2	-6	-6	1.07	GI082	DS15	AT006
	DSBNR 3232 P 19	32	32	32	27	170	46.4	–	-6	-6	1.38	GI026	DS19	–
	DSBNR 4040 S 19	40	40	40	35	250	46.5	–	-6	-6	3.18	GI026	DS19	–
L	**DSBNL 2525 M 12**	25	25	25	22	150	34.3	–	-6	-6	0.74	GI029	DS12	AT003
	DSBNL 2525 M 15	25	25	25	22	150	41.6	2	-6	-6	0.80	GI082	DS15	AT006
	DSBNL 3225 P 15	32	25	32	22	170	41.7	2	-6	-6	1.16	GI082	DS15	AT006
	DSBNL 3232 P 19	32	32	32	27	170	46.4	–	-6	-6	1.38	GI026	DS19	–
	DSBNL 4040 S 19	40	40	40	35	250	46.5	–	-6	-6	3.18	GI026	DS19	–

GI026	SN.. 1906..
GI029	SN.. 1204..
GI082	SN.. 1506..

		Nm				
DS12	DCS 12	3.9	DSS 425-01	US 2002-T15P	FLAG T15P/3,5	–
DS15	DCS 16	6.4	DSS 425-03	US 2007-T20P	–	LK T20P
DS19	DCS 19	6.4	DSS 425-04	US 2007-T20P	–	LK T20P

AT003a	SN.. 1207..	–	DSS 425-02
AT006a	SN.. 1507..	–	DSS 425-05
AT003b	CER SN.N 1204..	DCS 12C4	–
AT003c	CER SN.A 1204..	DCS 12C2	–
AT006b	CER CN.N 1606..	DCS 16C4	–
AT006c	CER CN.A 1606..	DCS 16C2	–

DSDNN EXT

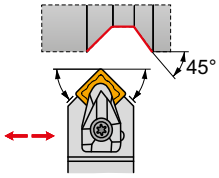
P M K N S H

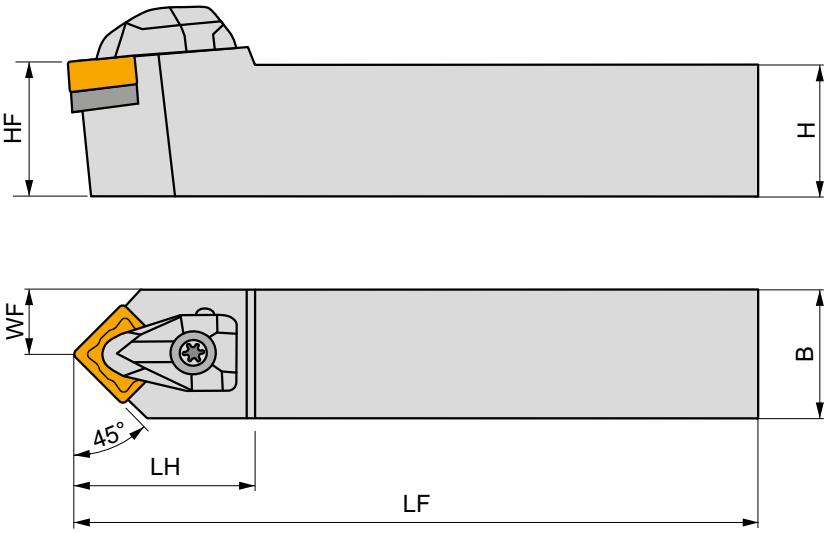
PRAMET

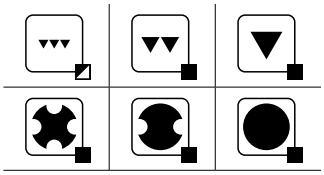
D

External Double Clamp Holder with 45° Cutting Angle for SN.. Insert

External neutral double clamp tool holder with 45° cutting angle. Suited for longitudinal turning without shoulder, copy, taper and chamfer turning with negative SN.. 12, 15, 19 or 25 size inserts. Available in 25x25 up to 40x40 mm shanks. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg			
N	**DSDNN 2525 M 12**	25	25	25	12.8	150	36.5	-6	-6	0.74	GI029	DS12	AT003
	DSDNN 2525 M 15	25	25	25	12.8	150	44.8	-6	-6	0.76	GI082	DS15	AT006
	DSDNN 3232 P 19	32	32	32	16.5	170	49.5	-6	-6	1.36	GI026	DS19	–
	DSDNN 4040 S 25	40	40	40	21	250	57.2	-6	-6	3.13	GI027	DS25	–

GI026	SN.. 1906..
GI027	SN.. 2507..
GI029	SN.. 1204..
GI082	SN.. 1506..

		Nm				
DS12	DCS 12	3.9	DSS 425-01	US 2002-T15P	FLAG T15P/3,5	–
DS15	DCS 16	6.4	DSS 425-03	US 2007-T20P	–	LK T20P
DS19	DCS 19	6.4	DSS 425-04	US 2007-T20P	–	LK T20P
DS25	DCS 25	9.5	DSS 425-07	US 2008-T25P	–	LK T25P

AT003a	SN.. 1207..	–	DSS 425-02
AT006a	SN.. 1507..	–	DSS 425-05
AT003b	CER SN.N 1204..	DCS 12C4	–
AT003c	CER SN.A 1204..	DCS 12C2	–
AT006b	CER CN.N 1606..	DCS 16C4	–
AT006c	CER CN.A 1606..	DCS 16C2	–

DSKN(RL) EXT

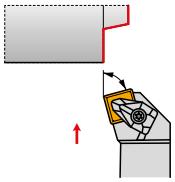
P M K N S H

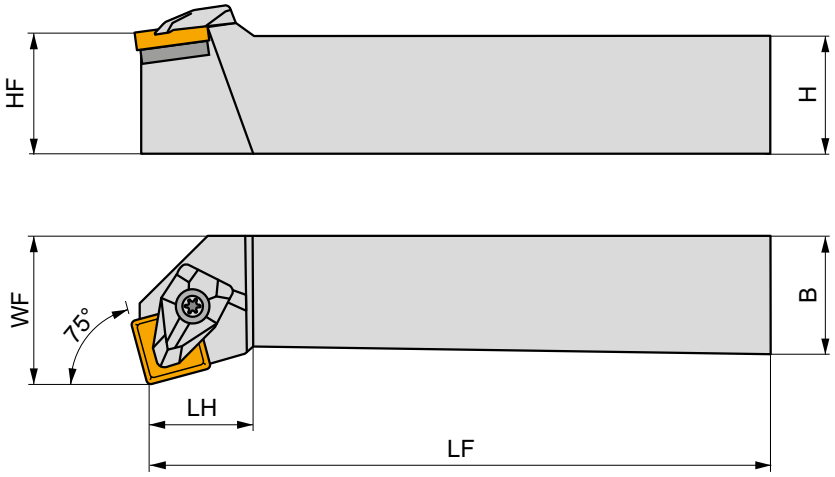
PRAMET

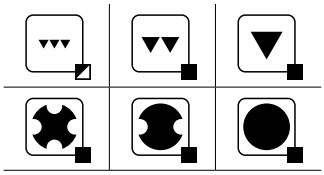
D

External Double Clamp Holder with 75° (Face) Cutting Angle for SN.. Insert

External Right/Left hand double clamp tool holder with 75° cutting angle. Suited for facing without shoulder and chamfering with SN.. 12.. or 19.. size inserts. Available in 25x25 up to 32x32 mm shank. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg			
R	**DSKNR 2525 M 12**	25	25	25	32	150	23.6	-6	-6	0.79	GI029	DS12	AT003
	DSKNR 3232 P 19	32	32	32	40	170	32.1	-6	-6	1.46	GI026	DS19	–
L	**DSKNL 2525 M 12**	25	25	25	32	150	23.6	-6	-6	0.79	GI029	DS12	AT003
	DSKNL 3232 P 19	32	32	32	40	170	32.1	-6	-6	1.46	GI026	DS19	–

GI026	SN.. 1906..
GI029	SN.. 1204..

		Nm				
DS12	DCS 12	3.9	DSS 425-01	US 2002-T15P	FLAG T15P/3,5	–
DS19	DCS 19	6.4	DSS 425-04	US 2007-T20P	–	LK T20P

AT003a	SN.. 1207..	–	DSS 425-02
AT003b	CER SN.N 1204..	DCS 12C4	–
AT003c	CER SN.A 1204..	DCS 12C2	–

DSSN(RL) EXT

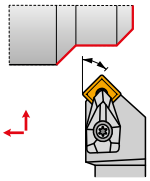
P M K N S H

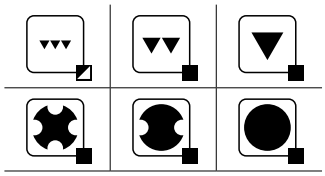
PRAMET

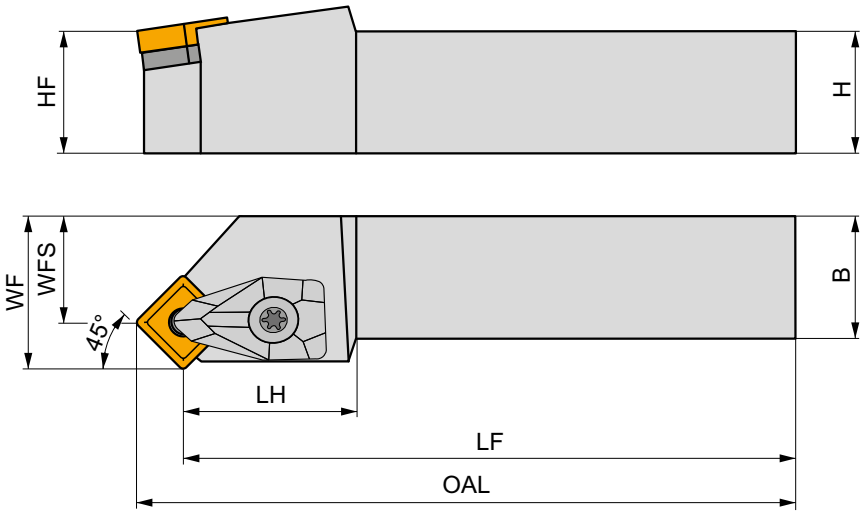
D

External Double Clamp Holder with 45° Cutting Angle for SN.. Insert

External Right/Left hand double clamp tool holder with 45° cutting angle. Suited for longitudinal and facing without shoulder, taper, copy turning and chamfering with negative SN.. 12, 15 or 19 size inserts. Available in 20x20 up to 40x40 mm shank. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	WFS [mm]	LF [mm]	OAL [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg			
R	**DSSNR 2020 K 12**	20	20	20	25	16.7	125	133.3	27.5	0	-8	0.45	GI029	DS12	AT003
	DSSNR 2525 M 12	25	25	25	32	23.7	150	158.3	27.5	0	-8	0.80	GI029	DS12	AT003
	DSSNR 2525 M 15	25	25	25	32	21.8	150	160.2	32	0	-8	0.83	GI082	DS15	AT006
	DSSNR 3225 P 15	32	25	32	32	21.8	170	180.2	34.9	0	-8	1.16	GI082	DS15	AT006
	DSSNR 3232 P 19	32	32	32	40	27.5	170	182.5	37	0	-8	1.48	GI026	DS19	–
	DSSNR 4040 S 19	40	40	40	50	37.5	250	262.5	37.7	0	-8	3.27	GI026	DS19	–
L	**DSSNL 2020 K 12**	20	20	20	25	16.7	125	133.3	27.5	0	-8	0.45	GI029	DS12	AT003
	DSSNL 2525 M 12	25	25	25	32	23.7	150	158.3	27.5	0	-8	0.19	GI029	DS12	AT003
	DSSNL 2525 M 15	25	25	25	32	21.8	150	160.2	32	0	-8	0.83	GI082	DS15	AT006
	DSSNL 3225 P 15	32	25	32	32	21.8	170	180.2	34.9	0	-8	1.16	GI082	DS15	AT006
	DSSNL 3232 P 19	32	32	32	40	27.5	170	182.5	37	0	-8	1.48	GI026	DS19	–
	DSSNL 4040 S 19	40	40	40	50	37.5	250	262.5	37.7	0	-8	3.27	GI026	DS19	–

GI026	SN.. 1906..
GI029	SN.. 1204..
GI082	SN.. 1506..

		Nm				
DS12	DCS 12	3.9	DSS 425-01	US 2002-T15P	FLAG T15P/3,5	–
DS15	DCS 16	6.4	DSS 425-03	US 2007-T20P	–	LK T20P
DS19	DCS 19	6.4	DSS 425-04	US 2007-T20P	–	LK T20P

AT003a	SN.. 1207..	–	DSS 425-02
AT006a	SN.. 1507..	–	DSS 425-05
AT003b	CER SN.N 1204..	DCS 12C4	–
AT003c	CER SN.A 1204..	DCS 12C2	–
AT006b	CER CN.N 1606..	DCS 16C4	–
AT006c	CER CN.A 1606..	DCS 16C2	–

PSBN(RL) EXT

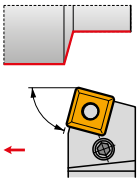
P M K N S H

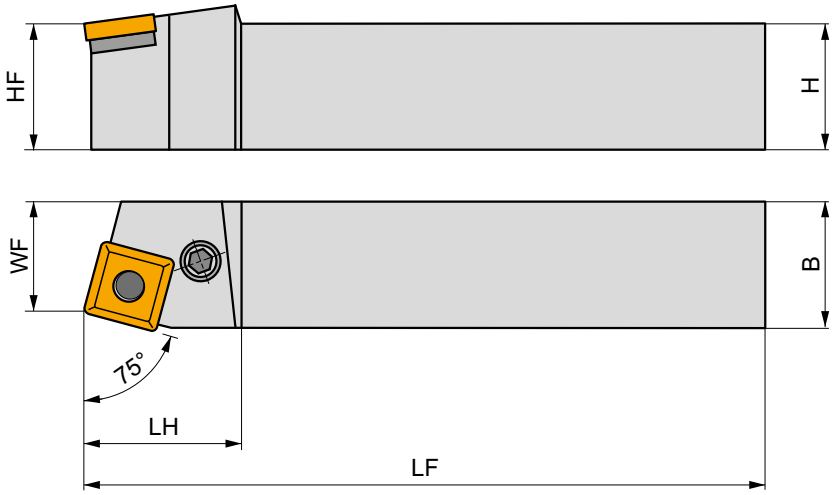
PRAMET

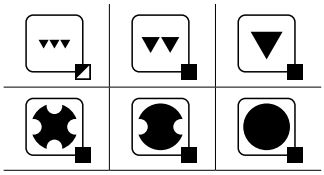
P

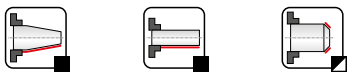
External Lever Lock Holder with 75° Cutting Angle for SN.. Insert

External Right/Left hand lever lock tool holder with 75° cutting angle. Suited for longitudinal turning without shoulder, taper turning and chamfering with negative SN.. 12, 15, 19 or 25 size inserts. Available in 20x20 up to 50x50 mm shank. Body treated for longer tool life.









	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	PSBNR 2020 K 12	20	20	20	17	125	36	-6	-6	0.43	GI029	PS22
	PSBNR 2525 M 12	25	25	25	22	150	36	-6	-6	0.75	GI029	PS20
	PSBNR 3225 P 15	32	25	32	22	170	40	-6	-6	1.05	GI082	PS40
	PSBNR 3232 P 19	32	32	32	27	170	45	-6	-6	1.30	GI026	PS50
	PSBNR 4040 R 19	40	40	40	35	200	45	-6	-6	2.40	GI026	PS50
	PSBNR 4040 S 19	40	40	40	35	250	45	-6	-6	3.12	GI026	PS50
	PSBNR 4040 R 25	40	40	40	35	200	45	-6	-6	2.45	GI027	PS60
	PSBNR 4040 S 25	40	40	40	35	250	50	-6	-6	2.85	GI027	PS60
	PSBNR 4040 S 2509	40	40	40	35	250	50	-6	-6	2.50	GI040	PS70
	PSBNR 4040 S 2512-A	40	40	40	35	250	50	-6	-6	3.08	GI162	PS72
	PSBNR 5050 S 25	50	50	50	43	250	50	-6	-6	4.70	GI027	PS60
	PSBNR 5050 T 25	50	50	50	43	300	50	-6	-6	5.83	GI027	PS60
	PSBNR 5050 T 2509	50	50	50	43	300	50	-6	-6	5.50	GI040	PS70
	PSBNR 5050 T 2512-A	50	50	50	43	300	50	-6	-6	5.83	GI162	PS72
L	PSBNL 2020 K 12	20	20	20	17	125	36	-6	-6	0.42	GI029	PS22
	PSBNL 2525 M 12	25	25	25	22	150	36	-6	-6	0.75	GI029	PS20
	PSBNL 3225 P 15	32	25	32	22	170	40	-6	-6	1.05	GI082	PS40
	PSBNL 3232 P 19	32	32	32	27	170	45	-6	-6	1.36	GI026	PS50
	PSBNL 4040 R 19	40	40	40	35	200	45	-6	-6	2.50	GI026	PS50
	PSBNL 4040 S 19	40	40	40	35	250	45	-6	-6	3.13	GI026	PS50
	PSBNL 4040 R 25	40	40	40	35	200	45	-6	-6	2.45	GI027	PS60
	PSBNL 4040 S 25	40	40	40	35	250	50	-6	-6	3.10	GI027	PS60
	PSBNL 4040 S 2509	40	40	40	35	250	50	-6	-6	2.50	GI040	PS70
	PSBNL 4040 S 2512-A	40	40	40	35	250	50	-6	-6	3.11	GI162	PS72
	PSBNL 5050 S 25	50	50	50	43	250	50	-6	-6	4.70	GI027	PS60
	PSBNL 5050 T 25	50	50	50	43	300	50	-6	-6	5.84	GI027	PS60
	PSBNL 5050 T 2509	50	50	50	43	300	50	-6	-6	5.80	GI040	PS70

	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
L	**PSBNL 5050 T 2512-A**	50	50	50	43	300	50	-6	-6	5.82	GI162	PS72

GI026	SN.. 1906..
GI027	SN.. 2507..
GI029	SN.. 1204..
GI040	SN.. 2509..
GI082	SN.. 1506..
GI162	SN.. 2512..

				Nm					
PS20	SNU 120312	PU 02	US 35	6.0	M 8x1	22.5	NT 05	MT 05	HXK 4
PS22	SNU 120312	PU 02	US 42	6.0	M 8x1	21	NT 05	MT 05	HXK 4
PS40	SNU 150312	PU 04	US 36	6.0	M 8x1	26	NT 07	MT 07	HXK 4
PS50	SNU 190416	PU 05	US 38	8.0	M 10x1	29	NT 06	MT 06	HXK 5
PS60	SNU 250624	PU 06	US 39	8.0	M 10x1	33	NT 08	MT 08	HXK 5
PS70	SNU 250624	PU 06	US 47	8.0	M 12x1	36	NT 08	MT 08	HXK 5
PS72	SNU 250624	PU 10-N	PS 12040	8.0	M 12x1	40	NT 08	MT 08	HXK 5

PSDNN EXT

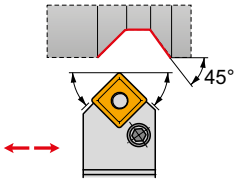
P M K N S H

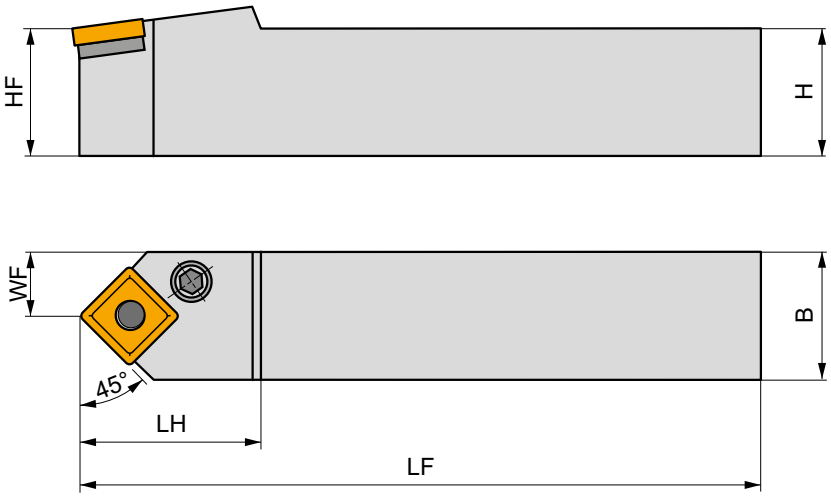
PRAMET

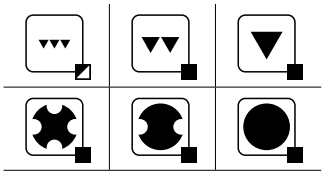
P

External Lever Lock Holder with 45° Cutting Angle for SN.. Insert

External neutral lever lock tool holder with 45° cutting angle. Suited for longitudinal turning without shoulder, copy and taper turning and chamfering with negative SN.. 12, 15, 19 or 25 size inserts. Available in 20x20 up to 50x50 mm shank. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
N	**PSDNN 2020 K 12**	20	20	20	10	125	36	-6	-6	0.42	GI029	PS22
	PSDNN 2525 M 12	25	25	25	12.5	150	36	-6	-6	0.68	GI029	PS20
	PSDNN 3232 P 15	32	32	32	16	170	40	-6	-6	1.32	GI082	PS40
	PSDNN 3232 P 19	32	32	32	16	170	45	-6	-6	1.25	GI026	PS50
	PSDNN 4040 S 19	40	40	40	20	250	45	-6	-6	3.05	GI026	PS50
	PSDNN 4040 S 25	40	40	40	20	250	50	-6	-6	3.02	GI027	PS60
	PSDNN 5050 T 25	50	50	50	25	300	50	-6	-6	5.65	GI027	PS60

GI026	SN.. 1906..
GI027	SN.. 2507..
GI029	SN.. 1204..
GI082	SN.. 1506..

				Nm					
PS20	SNU 120312	PU 02	US 35	6.0	M 8x1	22.5	NT 05	MT 05	HXK 4
PS22	SNU 120312	PU 02	US 42	6.0	M 8x1	21	NT 05	MT 05	HXK 4
PS40	SNU 150312	PU 04	US 36	6.0	M 8x1	26	NT 07	MT 07	HXK 4
PS50	SNU 190416	PU 05	US 38	8.0	M 10x1	29	NT 06	MT 06	HXK 5
PS60	SNU 250624	PU 06	US 39	8.0	M 10x1	33	NT 08	MT 08	HXK 5

PSKN(RL) EXT

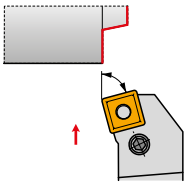
P M K N S H

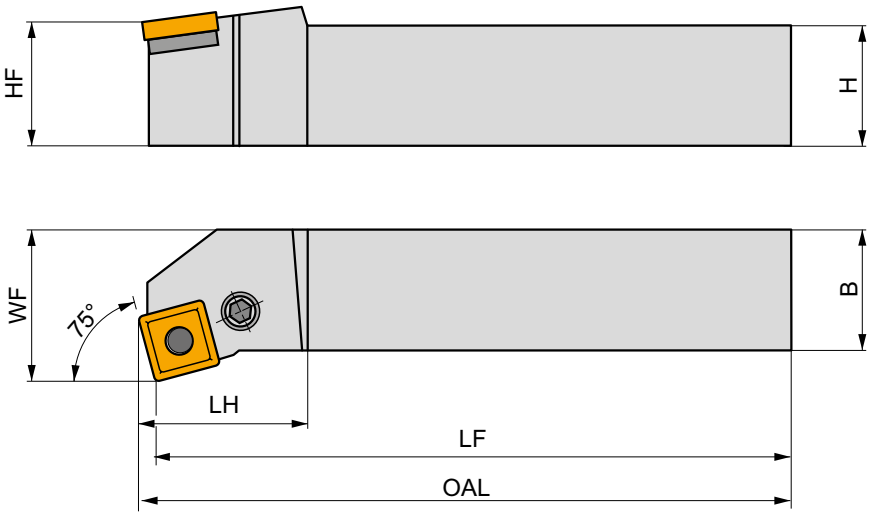
PRAMET

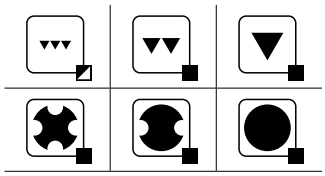
P

External Lever Lock Holder, 75° (Face Turning) Cutting Angle for SN.. Insert

External Right/Left hand lever lock tool holder with 75° cutting angle. Suited for face turning without shoulder and chamfering with negative SN.. 12, 15, 19 or 25 size inserts. Available in 20x20 up to 50x50 mm shank. Body treated for longer tool life.







	Product	H	B	HF	WF	LF	OAL	LH	LAMS	GAMO			
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[°]	[°]	kg		
R	**PSKNR 2020 K 12**	20	20	20	25	125	128.1	36	-6	-6	0.43	GI029	PS22
	PSKNR 2525 M 12	25	25	25	32	150	153.1	36	-6	-6	0.79	GI029	PS20
	PSKNR 3225 P 15	32	25	32	32	170	173.9	40	-6	-6	0.40	GI082	PS40
	PSKNR 3232 P 19	32	32	32	40	170	174.6	45	-6	-6	1.40	GI026	PS50
	PSKNR 4040 S 19	40	40	40	50	250	254.6	45	-6	-6	3.25	GI026	PS50
	PSKNR 4040 S 25	40	40	40	50	250	256.5	50	-6	-6	3.40	GI027	PS60
	PSKNR 5050 T 25	50	50	50	60	300	306.5	50	-6	-6	6.05	GI027	PS60
	PSKNR 5050 T 2509	50	50	50	60	300	306.5	50	-6	-6	6.20	GI040	PS70
L	**PSKNL 2020 K 12**	20	20	20	25	125	128.1	36	-6	-6	0.43	GI029	PS22
	PSKNL 2525 M 12	25	25	25	32	150	153.1	36	-6	-6	0.79	GI029	PS20
	PSKNL 3225 P 15	32	25	32	32	170	173.9	40	-6	-6	1.05	GI082	PS40
	PSKNL 3232 P 19	32	32	32	40	170	174.6	45	-6	-6	1.40	GI026	PS50
	PSKNL 4040 S 19	40	40	40	50	250	254.6	45	-6	-6	3.26	GI026	PS50
	PSKNL 4040 S 25	40	40	40	50	250	256.5	50	-6	-6	3.40	GI027	PS60
	PSKNL 5050 T 25	50	50	50	60	300	306.5	50	-6	-6	6.00	GI027	PS60
	PSKNL 5050 T 2509	50	50	50	60	300	306.5	50	-6	-6	6.20	GI040	PS70

GI026	SN.. 1906..
GI027	SN.. 2507..
GI029	SN.. 1204..
GI040	SN.. 2509..
GI082	SN.. 1506..

PS20	SNU 120312	PU 02	US 35	6.0	M 8x1	22.5	NT 05	MT 05	HXK 4
PS22	SNU 120312	PU 02	US 42	6.0	M 8x1	21	NT 05	MT 05	HXK 4
PS40	SNU 150312	PU 04	US 36	6.0	M 8x1	26	NT 07	MT 07	HXK 4
PS50	SNU 190416	PU 05	US 38	8.0	M 10x1	29	NT 06	MT 06	HXK 5
PS60	SNU 250624	PU 06	US 39	8.0	M 10x1	33	NT 08	MT 08	HXK 5
PS70	SNU 250624	PU 06	US 47	8.0	M 12x1	36	NT 08	MT 08	HXK 5

PSSN(RL) EXT

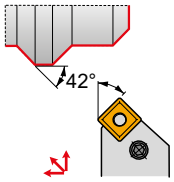
P M K N S H

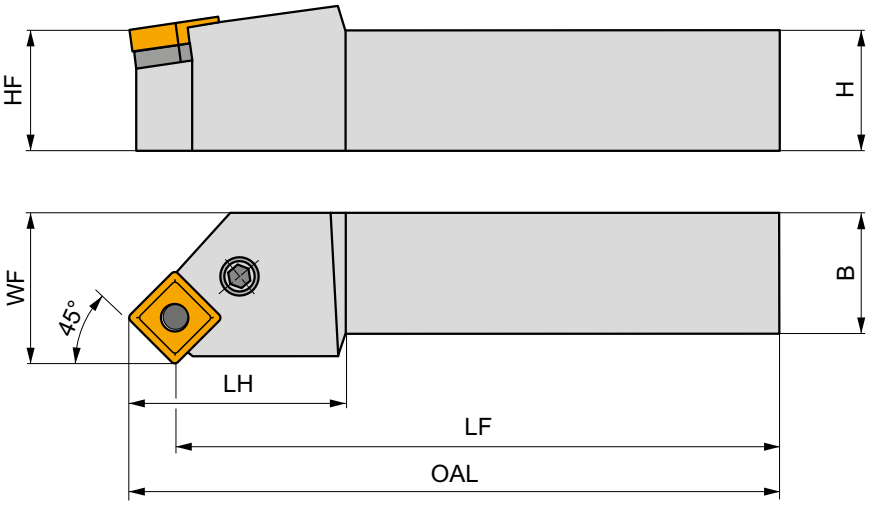
PRAMET

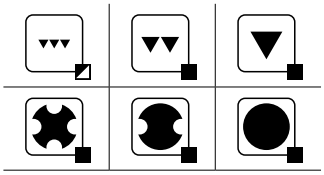
P

External Lever Lock Holder with 45° Cutting Angle for SN.. Insert

External Right/Left hand lever lock tool holder with 45° cutting angle. Suited for longitudinal and face turning without shoulder, copy and taper turning and chamfering with negative SN.. 12, 15, 19 or 25 size inserts. Available in 20x20 up to 50x50 mm shank. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	OAL [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	**PSSNR 2020 K 12**	20	20	20	25	125	133.3	36	0	-8	0.41	GI029	PS22
	PSSNR 2525 M 12	25	25	25	32	150	158.3	36	0	-8	0.75	GI029	PS20
	PSSNR 3225 P 15	32	25	32	32	170	180.2	40	0	-8	1.13	GI082	PS40
	PSSNR 3232 P 19	32	32	32	40	170	182.5	45	0	-8	1.34	GI026	PS50
	PSSNR 4040 R 19	40	40	40	50	200	212.5	45	0	-8	2.50	GI026	PS50
	PSSNR 5050 T 25	50	50	50	60	300	316	50	0	-8	6.00	GI027	PS60
	PSSNR 5050 T 2509	50	50	50	60	300	316	50	0	-8	6.05	GI040	PS70
L	**PSSNL 2020 K 12**	20	20	20	25	125	133.3	36	0	-8	0.41	GI029	PS22
	PSSNL 2525 M 12	25	25	25	32	150	158.3	36	0	-8	0.67	GI029	PS20
	PSSNL 3225 P 15	32	25	32	32	170	180.2	40	0	-8	1.15	GI082	PS40
	PSSNL 3232 P 19	32	32	32	40	170	182.5	45	0	-8	1.44	GI026	PS50
	PSSNL 4040 R 19	40	40	40	50	200	212.5	45	0	-8	2.58	GI026	PS50
	PSSNL 5050 T 25	50	50	50	60	300	316	50	0	-8	6.00	GI027	PS60
	PSSNL 5050 T 2509	50	50	50	60	300	316	50	0	-8	6.08	GI040	PS70

GI026	SN.. 1906..
GI027	SN.. 2507..
GI029	SN.. 1204..
GI040	SN.. 2509..
GI082	SN.. 1506..

				Nm					
PS20	SNU 120312	PU 02	US 35	6.0	M 8x1	22.5	NT 05	MT 05	HXK 4
PS22	SNU 120312	PU 02	US 42	6.0	M 8x1	21	NT 05	MT 05	HXK 4
PS40	SNU 150312	PU 04	US 36	6.0	M 8x1	26	NT 07	MT 07	HXK 4
PS50	SNU 190416	PU 05	US 38	8.0	M 10x1	29	NT 06	MT 06	HXK 5
PS60	SNU 250624	PU 06	US 39	8.0	M 10x1	33	NT 08	MT 08	HXK 5
PS70	SNU 250624	PU 06	US 47	8.0	M 12x1	36	NT 08	MT 08	HXK 5

C.-DSDNN EXT

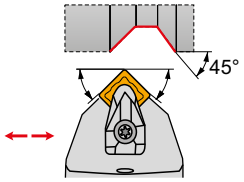
P M K N S H

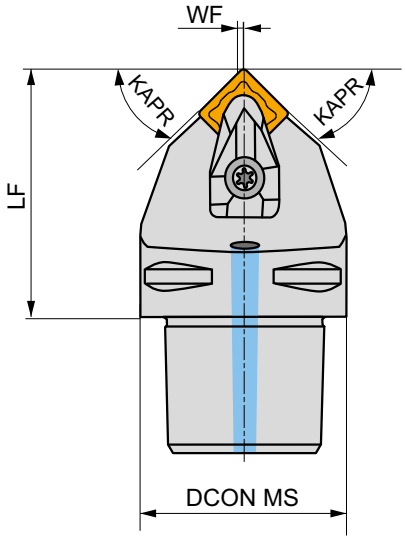
PRAMET

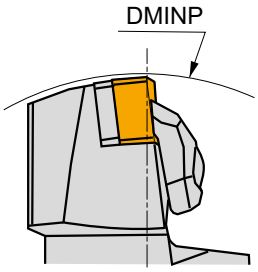
D

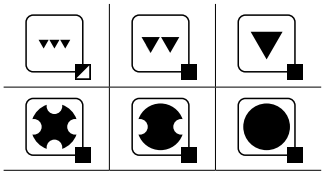
External PSC Quick Change Tool, Double Clamp, 45° Cutting Angle, SN.. Insert

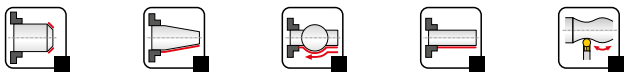
External neutral double clamp tool, through coolant, with 45° cutting angle for longitudinal turning without shoulder, copy turning, taper turning and chamfer turning with negative SN.. 12 or 19 size inserts. Available with PSC (Polygon Shank Coupling) C4 up to C6 shank. Body treated for longer tool life.











	Product	DCON MS [mm]	DMINP [mm]	WF [mm]	LF [mm]	KAPR [°]	LAMS [°]	GAMO [°]		kg			
N	C4-DSDNN-00050-12	40	140	0.3	50	45	-6	-6	✓	0.39	GI029	C-DS12-2	AT003
	C5-DSDNN-00060-12	50	165	0.3	60	45	-6	-6	✓	0.69	GI029	C-DS12-2	AT003
	C6-DSDNN-00070-19	63	195	0.5	70	45	-6	-6	✓	1.28	GI026	C-DS19	–

GI026	SN.. 1906..
GI029	SN.. 1204..

		Nm					
C-DS12-2	DCS 12	3.9	DSS 425-01	US 2002-T15P	FLAG T15P/3,5	–	CN 045-01
C-DS19	DCS 19	6.4	DSS 425-04	US 2007-T20P	–	LK T20P	CN 045-01

AT003a	SN.. 1207..	–	DSS 425-02
AT003b	CER SN.N 1204..	DCS 12C4	–
AT003c	CER SN.A 1204..	DCS 12C2	–

C.-DSKN(RL) EXT

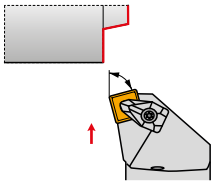
P M K N S H

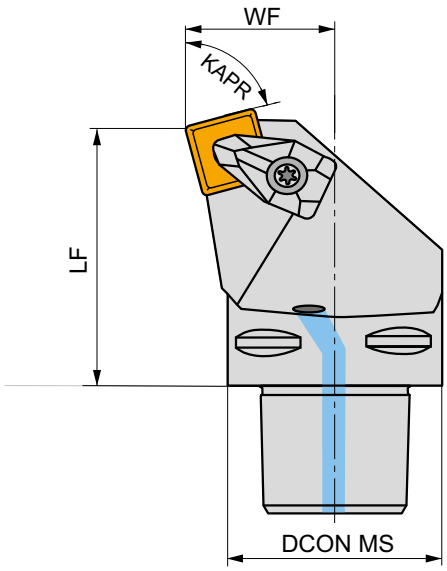
PRAMET

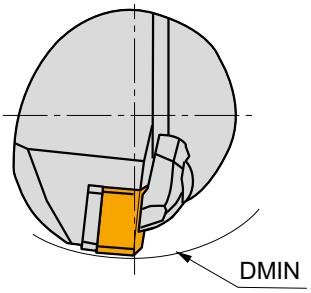
D

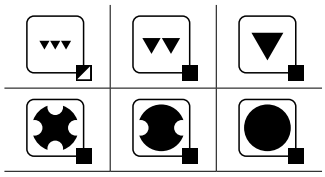
Ext. PSC Quick Change Tool, Double Clamp, 75° (Face) Cutting Angle, SN.. Ins

External Right/Left hand double clamp tool, through coolant, with 75° cutting angle for face turning without shoulder and chamfering with negative SN.. 12.. size inserts. Available with PSC (Polygon Shank Coupling) C4. Body treated for longer tool life.









	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	LF [mm]	KAPR [°]	LAMS [°]	GAMO [°]		kg			
R	C4-DSKNR-27050-12	40	110	27	50	75	-6	-6	✓	0.46	GI029	C-DS12-1	AT003
L	C4-DSKNL-27050-12	40	110	27	50	75	-6	-6	✓	0.46	GI029	C-DS12-1	AT003

GI029	SN.. 1204..

C-DS12-1	DCS 12	3.9 Nm	DSS 425-01	US 2002-T15P	FLAG T15P/3,5	CN 034-01

AT003a	SN.. 1207..	–	DSS 425-02
AT003b	CER SN.N 1204..	DCS 12C4	–
AT003c	CER SN.A 1204..	DCS 12C2	–

C.-DSRN(RL) EXT

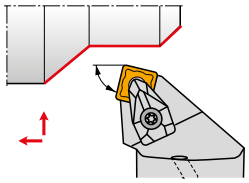
P M K N S H

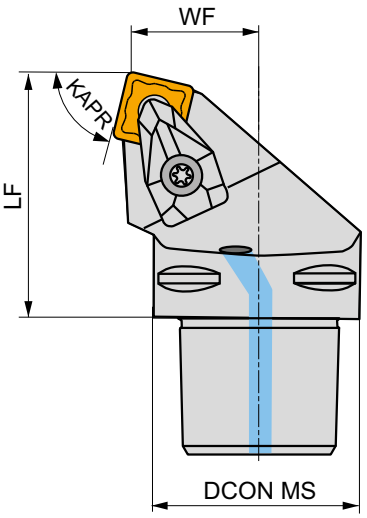
PRAMET

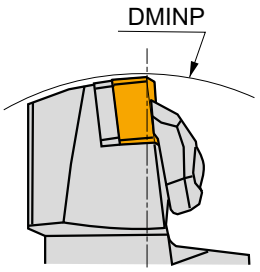
D

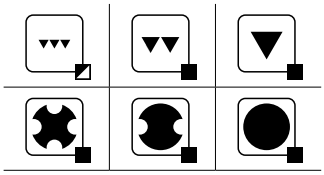
External PSC Quick Change Tool, Double Clamp, 75° Cutting Angle, SN.. Insert

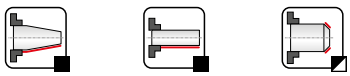
External Right/Left hand double clamp tool, through coolant, with 75° cutting angle for longitudinal turning without shoulder, taper turning and chamfering with negative SN.. 12 or 19 size inserts. Available with PSC (Polygon Shank Coupling) C4 up to C6 shank. Body treated for longer tool life.











	Product	DCON MS [mm]	DMINP [mm]	WF [mm]	LF [mm]	KAPR [°]	LAMS [°]	GAMO [°]		kg			
R	C4-DSRNR-22050-12	40	140	22	50	75	-6	-6	✓	0.40	GI029	C-DS12-1	AT003
	C6-DSRNR-35065-19	63	190	35	65	75	-6	-6	✓	1.30	GI026	C-DS19	–
L	C4-DSRNL-22050-12	40	140	22	50	75	-6	-6	✓	0.42	GI029	C-DS12-1	AT003
	C6-DSRNL-35065-19	63	190	35	65	75	-6	-6	✓	1.30	GI026	C-DS19	–

GI026	SN.. 1906..
GI029	SN.. 1204..

		Nm					
C-DS12-1	DCS 12	3.9	DSS 425-01	US 2002-T15P	FLAG T15P/3,5	–	CN 034-01
C-DS19	DCS 19	6.4	DSS 425-04	US 2007-T20P	–	LK T20P	CN 045-01

AT003a	SN.. 1207..	–	DSS 425-02
AT003b	CER SN.N 1204..	DCS 12C4	–
AT003c	CER SN.A 1204..	DCS 12C2	–

C.-DSSN(RL) EXT

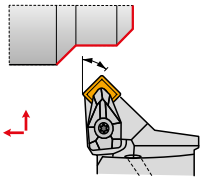
P M K N S H

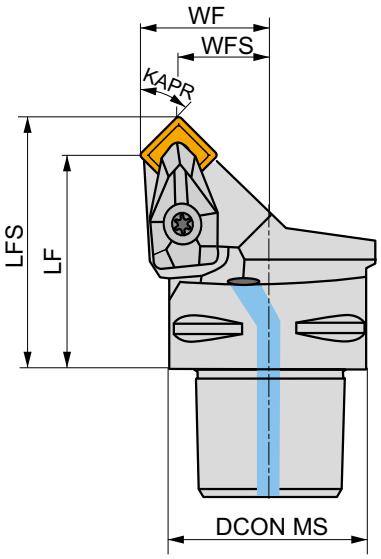
PRAMET

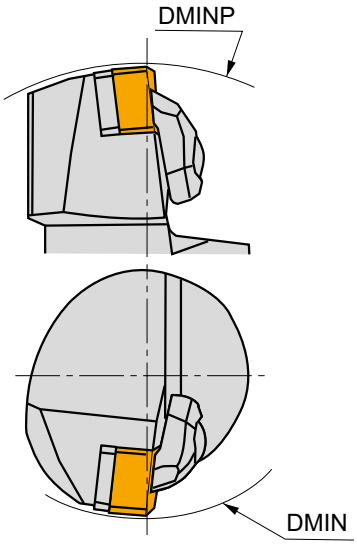
D

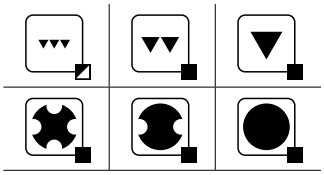
External PSC Quick Change Tool, Double Clamp, 45° Cutting Angle, SN.. Insert

External Right/Left hand double clamp tool, through coolant, with 45° cutting angle for longitudinal and face turning without shoulder, taper turning, copy turning and chamfering with negative SN.. 12, 15 or 19 size insert. Available with PSC (Polygon Shank Coupling) C4 and C5 shank. Body treated for longer tool life.









	Product	DCON MS [mm]	DMIN [mm]	DMINP [mm]	WF [mm]	WFS [mm]	LF [mm]	LFS [mm]	KAPR [°]	LAMS [°]	GAMO [°]		kg			
R	**C4-DSSNR-27042-12**	40	110	140	27	18.7	42	50.3	45	0	-8	✓	0.38	GI029	C-DS12-1	AT003
	C5-DSSNR-35052-12	50	110	165	35	26.7	52	60.3	45	0	-8	✓	0.68	GI029	C-DS12-3	AT003
L	**C4-DSSNL-27042-12**	40	110	140	27	18.7	42	50.3	45	0	-8	✓	0.36	GI029	C-DS12-1	AT003
	C5-DSSNL-35052-12	50	110	165	35	26.7	52	60.3	45	0	-8	✓	0.69	GI029	C-DS12-3	AT003

GI029	SN.. 1204..

		Nm				
C-DS12-1	DCS 12	3.9	DSS 425-01	US 2002-T15P	FLAG T15P/3,5	CN 034-01
C-DS12-3	DCS 12	3.9	DSS 425-01	US 2002-T15P	FLAG T15P/3,5	CN 034-02

AT003a	SN.. 1207..	–	DSS 425-02
AT003b	CER SN.N 1204..	DCS 12C4	–
AT003c	CER SN.A 1204..	DCS 12C2	–

KHP-SBN(RL)

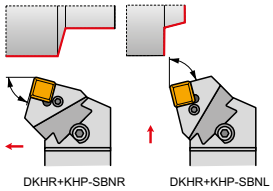
P M K

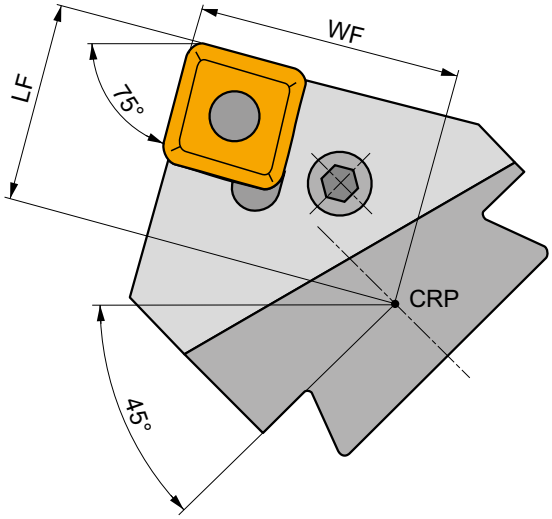
PRAMET

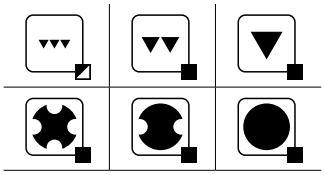
P

Modular KHP Lever Lock Turning Cartridge, 75° Cutting Angle for SN.. Inserts

Dovetailed Right/Left hand lever lock turning cartridge, 75° Cutting Angle, for mounting on DKH tool holder shank. Suited for heavy longitudinal turning without shoulder, face turning, taper and chamfer turning with negative SN.. 19 or 25 inserts. Tool holder treated for longer tool life.







	Product	WF [mm]	LF [mm]	LAMS [°]	GAMO [°]	kg		
R	**KHP-SBNR 19**	47	36	-6	-6	1.51	GI026	PS50
	KHP-SBNR 25	47	36	-6	-6	1.47	GI027	PS60
	KHP-SBNR 2509	47	36	-6	-6	1.45	GI040	PS70
	KHP-SBNR 2512-A	47	36	-6	-6	1.71	GI162	PS72
L	**KHP-SBNL 19**	47	36	-6	-6	1.96	GI026	PS50
	KHP-SBNL 25	47	36	-6	-6	1.48	GI027	PS60
	KHP-SBNL 2509	47	36	-6	-6	1.46	GI040	PS70
	KHP-SBNL 2512-A	47	36	-6	-6	1.45	GI162	PS72

GI026	SN.. 1906..
GI027	SN.. 2507..
GI040	SN.. 2509..
GI162	SN.. 2512..

				Nm					
PS50	SNU 190416	PU 05	US 38	8.0	M 10x1	29	NT 06	MT 06	HXK 5
PS60	SNU 250624	PU 06	US 39	8.0	M 10x1	33	NT 08	MT 08	HXK 5
PS70	SNU 250624	PU 06	US 47	8.0	M 12x1	36	NT 08	MT 08	HXK 5
PS72	SNU 250624	PU 10-N	PS 12040	8.0	M 12x1	40	NT 08	MT 08	HXK 5

KHP-SSN(RL)

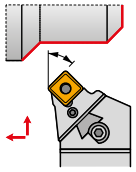
P M K

PRAMET

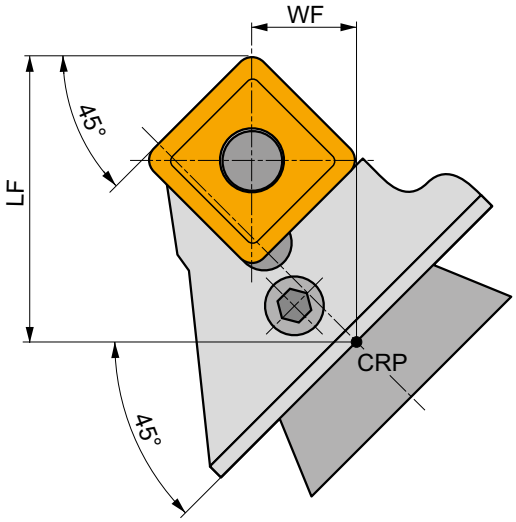
P

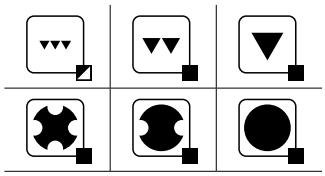
Modular KHP Lever Lock Turning Cartridge, 45° Cutting Angle for SN.. Inserts

Dovetailed Right/Left hand lever lock turning cartridge, 45° Cutting Angle, for mounting on DKH tool holder shank. Suited for heavy longitudinal turning without shoulder, face turning, copy, taper and chamfer turning with negative SN.. 19 or 25 inserts. Tool holder treated for longer tool life.



DKHR+KHP-SSNR





	Product	WF [mm]	LF [mm]	LAMS [°]	GAMO [°]	kg		
R	**KHP-SSNR 19**	15	45	-6	-6	1.28	GI026	PS50
	KHP-SSNR 25	15	45	-6	-6	0.98	GI027	PS60
L	**KHP-SSNL 19**	15	45	-6	-6	1.03	GI026	PS50
	KHP-SSNL 25	15	45	-6	-6	1.30	GI027	PS60

GI026	SN.. 1906..
GI027	SN.. 2507..

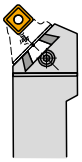
				Nm					
PS50	SNU 190416	PU 05	US 38	8.0	M 10x1	29	NT 06	MT 06	HXK 5
PS60	SNU 250624	PU 06	US 39	8.0	M 10x1	33	NT 08	MT 08	HXK 5

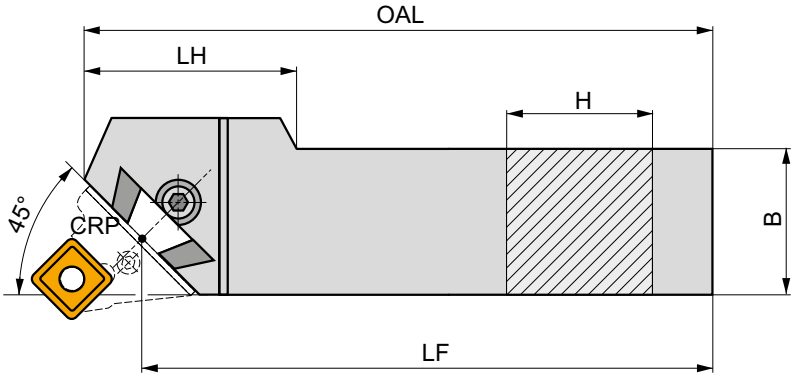
DKH(RL)

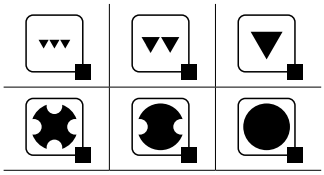
PRAMET

External Tool Holder Shank for KHP/KHS Heavy Turning Cartridges

Dovetailed Right/Left hand modular tool shank for KHP/KHS cartridges. Suited for heavy turning applications. Available with shank size 40x50 up to 60x80 mm. Body treated for longer tool life.







	Product	H [mm]	B [mm]	LF [mm]	OAL [mm]	LH [mm]	kg		
R	**DKHR 4050 V**	40	50	400	425	100	7.10	GI098	DKH10
	DKHR 5060 W	50	60	450	475	110	11.30	GI098	DKH10
	DKHR 6080 W-A	60	80	450	485	90	19.65	GI098	DKH10
L	**DKHL 4050 V**	40	50	400	425	100	7.10	GI098	DKH10
	DKHL 5060 W	50	60	450	475	110	11.30	GI098	DKH10
	DKHL 6080 W-A	60	80	450	485	90	19.28	GI098	DKH10

GI098	KHP	KHS

DKH10	SR 14	HXK 10

PSKN(RL) INT

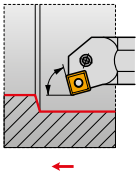
P M K N S H

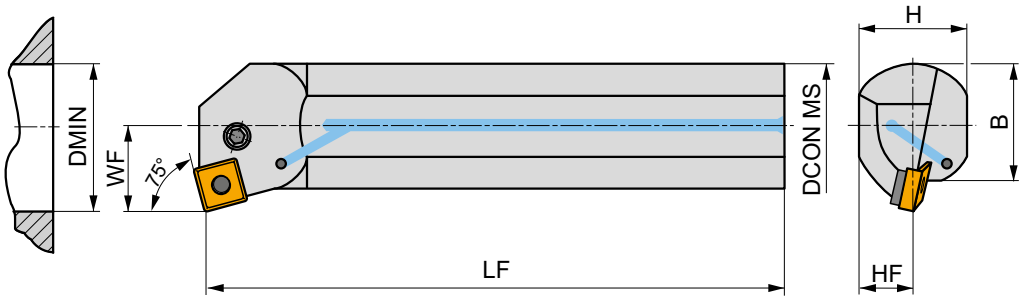
PRAMET

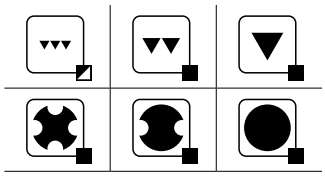
P

Internal Lever Lock Boring Bar with 75° Cutting Angle for SN.. Insert

Internal Right/Left hand lever lock boring bar, through coolant, 75° cutting angle for SN.. 12, 15 and 19 inserts. Minimum internal turning diameter Ø40 mm. For internal taper and longitudinal turning without shoulder and chamfer turning. Available with shank size Ø32 up to Ø60 mm. Body treated for longer tool life.







	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	H [mm]	B [mm]	LF [mm]	LAMS [°]	GAMO [°]		kg		
R	**A32S-PSKNR 12**	32	40	22	30	30	250	-12	-6	✓	1.50	GI029	PS21
	A40T-PSKNR 15	40	50	27	38	38	300	-12	-6	✓	2.90	GI082	PS41
	A50U-PSKNR 15	50	63	35	47	48.5	350	-12	-6	✓	5.20	GI082	PS40
	A50U-PSKNR 19	50	63	35	47	48.5	350	-12	-6	✓	5.20	GI026	PS50
	A60V-PSKNR 19	60	80	43	57	58.5	400	-12	-6	✓	8.70	GI026	PS50
L	**A32S-PSKNL 12**	32	40	22	30	30	250	-12	-6	✓	1.40	GI029	PS21
	A40T-PSKNL 15	40	50	27	38	38	300	-12	-6	✓	2.90	GI082	PS41
	A50U-PSKNL 15	50	63	35	47	48.5	350	-12	-6	✓	5.20	GI082	PS40
	A50U-PSKNL 19	50	63	35	47	48.5	350	-12	-6	✓	5.20	GI026	PS50

GI026	SN.. 1906..
GI029	SN.. 1204..
GI082	SN.. 1506..

				Nm					
PS21	SNU 120312	PU 02	US 41	6.0	M 8x1	17	NT 05	MT 05	HXK 4
PS40	SNU 150312	PU 04	US 36	6.0	M 8x1	26	NT 07	MT 07	HXK 4
PS41	SNU 150312	PU 04	US 40	6.0	M 8x1	20.5	NT 07	MT 07	HXK 4
PS50	SNU 190416	PU 05	US 38	8.0	M 10x1	29	NT 06	MT 06	HXK 5

TN

16/ 22/ 27/ 33

CARBIDE INSERTS

TNMA

334

TNMG

335

TNMM

342

CER AND CBN INSERTS

TNGA CER

343

TNGN CER

344

TNGA CBN

344

MATCH THE RIGHT SIZE (example)

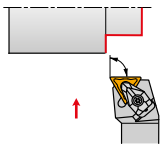
Insert	Tool Holder
TNMM 160412E-OR	DTFNR 2525 M 16

ISO TURNING – EXTERNAL

DTFN(RL) EXT

90°

TN..: 16, 22



20×20 / 25×25

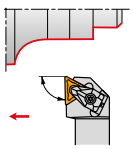
345

334 – 344

DTGN(RL) EXT

90°

TN..: 16, 22



20×20 / 32×25

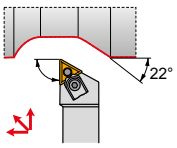
346

334 – 344

MTJN(RL) EXT

93°

TN..: 16, 22



16×16 / 32×32

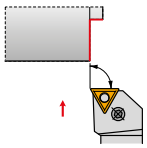
347

334 – 344

PTFN(RL) EXT

90°

TN..: 16, 22, 27



16×16 / 40×40

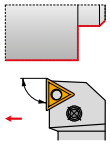
348

334 – 344

PTGN(RL) EXT

90°

TN..: 16, 22, 27



16×16 / 40×40

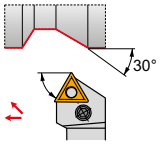
349

334 – 344

PTTN(RL) EXT

60°

TN..: 16, 22



20×20 / 32×25

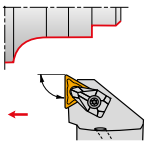
350

334 – 344

C.-DTJN(RL) EXT

93°

TN..: 16



C4 / C5

351

334 – 344

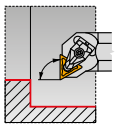
TN

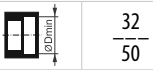
16/ 22/ 27/ 33

ISO TURNING – INTERNAL

DTFN(RL) INT

90°





32 / 50

TN..

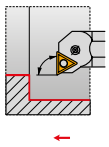
16
22

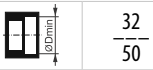
352

334 – 344

PTFN(RL) INT

90°





32 / 50

TN..

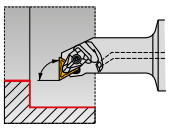
16
22

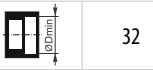
353

334 – 344

C.-DTFN(RL) INT

91°





32

TN..

16

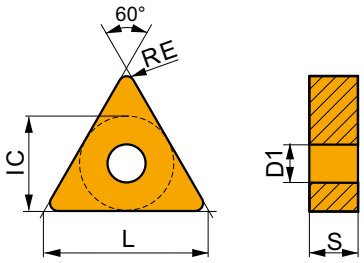
354

334 – 344

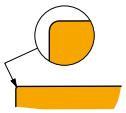
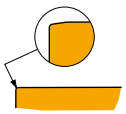
TNMA

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
1604	9.525	3.81	16.50	4.76
2204	12.700	5.16	22.00	4.76



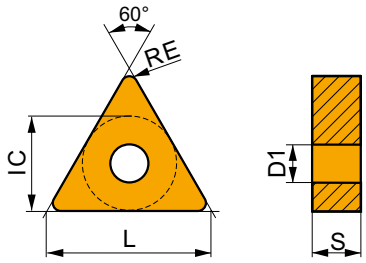
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			E																	
			For fine-finish to semi-rough machining, and continuous to slightly interrupted cuts.																	
TNMA 160404	**T5305**	0.4	–	–	–	–	–	–	220	0.10	1.5	–	–	–	–	–	–	45	0.15	1.0
	T5315	0.4	–	–	–	–	–	–	190	0.10	1.5	–	–	–	–	–	–	40	0.15	1.0
TNMA 160408	**T5305**	0.8	–	–	–	–	–	–	205	0.20	1.5	–	–	–	–	–	–	40	0.15	1.0
	T5315	0.8	–	–	–	–	–	–	180	0.20	1.5	–	–	–	–	–	–	35	0.15	1.0
	T6310	0.8	–	–	–	–	–	–	90	0.20	1.5	–	–	–	–	–	–	20	0.15	1.0
TNMA 160412	**T5305**	1.2	–	–	–	–	–	–	215	0.20	1.5	–	–	–	–	–	–	45	0.15	1.0
	T5315	1.2	–	–	–	–	–	–	190	0.20	1.5	–	–	–	–	–	–	40	0.15	1.0
TNMA 220408	**T5305**	0.8	–	–	–	–	–	–	195	0.20	2.0	–	–	–	–	–	–	40	0.15	1.0
	T5315	0.8	–	–	–	–	–	–	175	0.20	2.0	–	–	–	–	–	–	35	0.15	1.0
	T6310	0.8	–	–	–	–	–	–	90	0.20	2.0	–	–	–	–	–	–	20	0.15	1.0
TNMA 220412	**T5305**	1.2	–	–	–	–	–	–	205	0.20	2.0	–	–	–	–	–	–	40	0.15	1.0
	T5315	1.2	–	–	–	–	–	–	185	0.20	2.0	–	–	–	–	–	–	35	0.15	1.0
			S																	
			For fine-finish to semi-rough machining, and continuous to slightly interrupted cuts.																	
TNMA 160408S	**T5305**	0.8	–	–	–	–	–	–	205	0.20	1.5	–	–	–	–	–	–	40	0.15	1.0

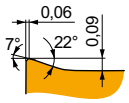
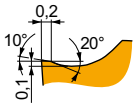
TNMG

PRAMET

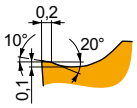
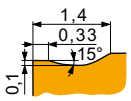
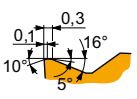
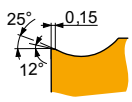
	IC [mm]	D1 [mm]	L [mm]	S [mm]
1604	9.525	3.81	16.50	4.76
2204	12.700	5.16	22.00	4.76
2706	15.875	6.35	27.50	6.35
3309	19.050	7.94	33.00	9.525



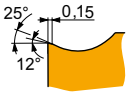
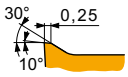
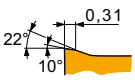
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			U S																	
FF geometry with highly positive design for fine-finish machining, and continuous to slightly interrupted cuts.																				
TNMG 160404E-FF	**T7325**	0.4	200	0.12	1.0	155	0.11	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	185	0.12	1.0	110	0.11	1.0	175	0.12	1.0	–	–	–	–	–	–	–	–	–
	T8330	0.4	175	0.12	1.0	105	0.11	1.0	165	0.12	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.4	210	0.12	1.0	115	0.11	1.0	175	0.12	1.0	–	–	–	–	–	–	–	–	–
TNMG 160408E-FF	**T7325**	0.8	225	0.15	1.0	175	0.14	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	205	0.15	1.0	120	0.14	1.0	190	0.15	1.0	–	–	–	–	–	–	–	–	–
			1 S																	
FM geometry with positive design for finish to semi-rough machining, and continuous to slightly interrupted cuts.																				
TNMG 160404E-FM	**T7325**	0.4	160	0.20	1.7	120	0.18	1.7	–	–	–	–	–	–	50	0.20	1.4	–	–	–
	T7335	0.4	160	0.20	1.7	120	0.18	1.7	–	–	–	–	–	–	50	0.20	1.4	–	–	–
	T8315	0.4	150	0.20	1.7	90	0.18	1.7	140	0.20	1.7	–	–	–	35	0.14	1.4	–	–	–
	T8330	0.4	145	0.20	1.7	85	0.18	1.7	135	0.20	1.7	–	–	–	35	0.14	1.4	–	–	–
	T8430	0.4	165	0.20	1.7	90	0.18	1.7	135	0.20	1.7	–	–	–	35	0.14	1.4	–	–	–
	T9310	0.4	245	0.20	1.7	–	–	–	230	0.20	1.7	–	–	–	–	–	–	–	–	–
	T9315	0.4	220	0.20	1.7	–	–	–	205	0.20	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.4	200	0.20	1.7	120	0.18	1.7	190	0.20	1.7	–	–	–	45	0.20	1.4	–	–	–
	TT310	0.4	225	0.20	1.7	135	0.18	1.7	–	–	–	–	–	–	–	–	–	–	–	–
TNMG 160408E-FM	**T7325**	0.8	195	0.20	1.7	150	0.18	1.7	–	–	–	–	–	–	60	0.16	1.4	–	–	–
	T7335	0.8	190	0.20	1.7	145	0.18	1.7	–	–	–	–	–	–	60	0.16	1.4	–	–	–
	T8315	0.8	180	0.20	1.7	105	0.18	1.7	170	0.20	1.7	–	–	–	45	0.16	1.4	–	–	–
	T8330	0.8	170	0.20	1.7	100	0.18	1.7	160	0.20	1.7	–	–	–	40	0.16	1.4	–	–	–
	T8430	0.8	195	0.20	1.7	105	0.18	1.7	160	0.20	1.7	–	–	–	40	0.16	1.4	–	–	–
	T9310	0.8	290	0.20	1.7	–	–	–	275	0.20	1.7	–	–	–	–	–	–	–	–	–
	T9315	0.8	265	0.20	1.7	–	–	–	250	0.20	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.8	235	0.20	1.7	140	0.18	1.7	220	0.20	1.7	–	–	–	50	0.16	1.4	–	–	–
	TT310	0.8	270	0.20	1.7	160	0.18	1.7	–	–	–	–	–	–	–	–	–	–	–	–
TNMG 160412E-FM	**T7325**	1.2	190	0.25	1.7	145	0.23	1.7	–	–	–	–	–	–	60	0.18	1.4	–	–	–
	T8330	1.2	165	0.25	1.7	95	0.23	1.7	155	0.25	1.7	–	–	–	40	0.18	1.4	–	–	–
	T8430	1.2	185	0.25	1.7	100	0.23	1.7	150	0.25	1.7	–	–	–	40	0.18	1.4	–	–	–
	T9310	1.2	280	0.25	1.7	–	–	–	265	0.25	1.7	–	–	–	–	–	–	–	–	–
	T9315	1.2	255	0.25	1.7	–	–	–	240	0.25	1.7	–	–	–	–	–	–	–	–	–
	T9325	1.2	225	0.25	1.7	135	0.23	1.7	210	0.25	1.7	–	–	–	50	0.18	1.4	–	–	–
TNMG 220404E-FM	**T8330**	0.4	145	0.20	1.7	85	0.18	1.7	135	0.20	1.7	–	–	–	35	0.20	1.4	–	–	–
	T8430	0.4	150	0.24	1.7	80	0.22	1.7	125	0.24	1.7	–	–	–	30	0.22	1.4	–	–	–
	T9315	0.4	220	0.20	1.7	–	–	–	205	0.20	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.4	200	0.20	1.7	120	0.18	1.7	190	0.20	1.7	–	–	–	45	0.20	1.4	–	–	–

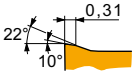
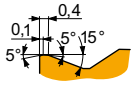
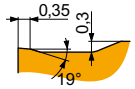
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]
																				
FM geometry with positive design for finish to semi-rough machining, and continuous to slightly interrupted cuts.																				
TNMG 220408E-FM	**T8330**	0.8	■ 170	0.20	1.7	◪ 100	0.18	1.7	■ 160	0.20	1.7	–	–	–	◪ 40	0.16	1.4	–	–	–
	T8430	0.8	■ 195	0.20	1.7	◪ 105	0.18	1.7	◪ 160	0.20	1.7	–	–	–	◪ 40	0.16	1.4	–	–	–
	T9315	0.8	■ 265	0.20	1.7	–	–	–	◪ 250	0.20	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 235	0.20	1.7	◪ 140	0.18	1.7	◪ 220	0.20	1.7	–	–	–	◪ 50	0.16	1.4	–	–	–
																				
KR geometry for semi-rough to rough machining, and continuous to interrupted cuts.																				
TNMG 160408E-KR	**T5305**	0.8	◪ 220	0.35	3.0	–	–	–	■ 205	0.35	3.0	–	–	–	–	–	–	◪ 40	0.15	1.0
	T5315	0.8	◪ 200	0.35	3.0	–	–	–	■ 190	0.35	3.0	–	–	–	–	–	–	◪ 40	0.15	1.0
																				
M geometry for finish to semi-rough machining, and continuous to interrupted cuts.																				
TNMG 160404E-M	**T5315**	0.4	◪ 215	0.20	1.6	–	–	–	■ 200	0.20	1.6	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9315	0.4	■ 205	0.20	1.6	–	–	–	◪ 190	0.20	1.6	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9325	0.4	■ 180	0.20	1.6	–	–	–	◪ 170	0.20	1.6	–	–	–	–	–	–	–	–	–
	T9335	0.4	■ 155	0.20	1.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
TNMG 160408E-M	**T5305**	0.8	◪ 250	0.30	1.6	–	–	–	■ 235	0.30	1.6	–	–	–	–	–	–	◪ 50	0.15	1.0
	T5315	0.8	◪ 225	0.30	1.6	–	–	–	■ 210	0.30	1.6	–	–	–	–	–	–	◪ 45	0.15	1.0
	T9310	0.8	■ 220	0.30	1.6	–	–	–	◪ 205	0.30	1.6	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9315	0.8	■ 205	0.30	1.6	–	–	–	◪ 190	0.30	1.6	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9325	0.8	■ 185	0.30	1.6	–	–	–	◪ 175	0.30	1.6	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 160	0.30	1.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
TNMG 160412E-M	**T5315**	1.2	◪ 215	0.40	1.6	–	–	–	■ 200	0.40	1.6	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9315	1.2	■ 190	0.40	1.6	–	–	–	◪ 180	0.40	1.6	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9325	1.2	■ 170	0.40	1.6	–	–	–	◪ 160	0.40	1.6	–	–	–	–	–	–	–	–	–
	T9335	1.2	■ 145	0.40	1.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
TNMG 220408E-M	**T5305**	0.8	◪ 245	0.30	2.1	–	–	–	■ 230	0.30	2.1	–	–	–	–	–	–	◪ 45	0.15	1.0
	T5315	0.8	◪ 215	0.30	2.1	–	–	–	■ 200	0.30	2.1	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9310	0.8	■ 215	0.30	2.1	–	–	–	◪ 200	0.30	2.1	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9315	0.8	■ 200	0.30	2.1	–	–	–	◪ 190	0.30	2.1	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9325	0.8	■ 180	0.30	2.1	–	–	–	◪ 170	0.30	2.1	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 155	0.30	2.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
TNMG 220412E-M	**T5315**	1.2	◪ 205	0.40	2.1	–	–	–	■ 190	0.40	2.1	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9315	1.2	■ 185	0.40	2.1	–	–	–	◪ 175	0.40	2.1	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9325	1.2	■ 165	0.40	2.1	–	–	–	◪ 155	0.40	2.1	–	–	–	–	–	–	–	–	–
	T9335	1.2	■ 140	0.40	2.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
																				
NF geometry with highly positive design for fine-finish to medium machining, and continuous cuts.																				
TNMG 160404E-NF	**HF7**	0.4	–	–	–	◪ 90	0.14	1.4	◪ 140	0.15	1.4	◪ 450	0.18	1.4	–	–	–	–	–	–
	T6310	0.4	■ 150	0.17	1.4	■ 105	0.15	1.4	◪ 120	0.17	1.4	◪ 450	0.20	1.4	◪ 45	0.15	1.1	–	–	–
	T7325	0.4	◪ 170	0.18	1.4	■ 130	0.16	1.4	–	–	–	–	–	–	◪ 55	0.16	1.1	–	–	–
	T7335	0.4	◪ 165	0.18	1.4	■ 125	0.16	1.4	–	–	–	–	–	–	◪ 50	0.16	1.1	–	–	–
	T8315	0.4	◪ 160	0.17	1.4	■ 95	0.15	1.4	◪ 150	0.17	1.4	◪ 480	0.20	1.4	◪ 40	0.15	1.1	–	–	–
	T8330	0.4	■ 155	0.17	1.4	■ 90	0.15	1.4	◪ 145	0.17	1.4	◪ 465	0.20	1.4	◪ 35	0.15	1.1	–	–	–
	T8430	0.4	■ 175	0.17	1.4	■ 95	0.15	1.4	◪ 140	0.17	1.4	◪ 480	0.20	1.4	◪ 35	0.15	1.1	–	–	–
	T9315	0.4	■ 255	0.15	1.4	–	–	–	◪ 240	0.15	1.4	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 215	0.18	1.4	■ 125	0.16	1.4	◪ 200	0.18	1.4	–	–	–	◪ 45	0.16	1.1	–	–	–

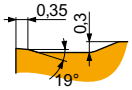
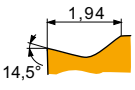
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
		[mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]
																				
			NF geometry with highly positive design for fine-finish to medium machining, and continuous cuts.																	
TNMG 160408E-NF	**HF7**	0.8	–	–	–	100	0.15	1.4	160	0.17	1.4	510	0.20	1.4	–	–	–	–	–	–
	T6310	0.8	180	0.18	1.4	125	0.16	1.4	145	0.18	1.4	540	0.22	1.4	50	0.16	1.1	–	–	–
	T7325	0.8	200	0.18	1.4	155	0.16	1.4	–	–	–	–	–	–	65	0.16	1.1	–	–	–
	T7335	0.8	195	0.18	1.4	150	0.16	1.4	–	–	–	–	–	–	60	0.16	1.1	–	–	–
	T8315	0.8	190	0.18	1.4	110	0.16	1.4	180	0.18	1.4	570	0.22	1.4	45	0.16	1.1	–	–	–
	T8330	0.8	180	0.18	1.4	105	0.16	1.4	170	0.18	1.4	540	0.22	1.4	45	0.16	1.1	–	–	–
	T8430	0.8	205	0.18	1.4	110	0.16	1.4	170	0.18	1.4	570	0.22	1.4	45	0.16	1.1	–	–	–
	T9315	0.8	290	0.17	1.4	–	–	–	275	0.17	1.4	–	–	–	–	–	–	–	–	–
	T9325	0.8	255	0.18	1.4	150	0.16	1.4	240	0.18	1.4	–	–	–	55	0.16	1.1	–	–	–
																				
			NM geometry with highly positive design for fine-finish, medium and rough machining, in continuous cuts.																	
TNMG 160404E-NM	**T7325**	0.4	170	0.20	1.9	130	0.18	1.9	–	–	–	–	–	–	55	0.20	1.5	–	–	–
	T7335	0.4	160	0.20	1.9	120	0.18	1.9	–	–	–	–	–	–	50	0.20	1.5	–	–	–
	T8315	0.4	160	0.20	1.9	95	0.18	1.9	–	–	–	480	0.24	1.9	40	0.20	1.5	–	–	–
	T8330	0.4	145	0.20	1.9	85	0.18	1.9	–	–	–	435	0.24	1.9	35	0.20	1.5	–	–	–
	T8430	0.4	170	0.20	1.9	90	0.18	1.9	–	–	–	465	0.24	1.9	35	0.20	1.5	–	–	–
	T9325	0.4	210	0.20	1.9	125	0.18	1.9	–	–	–	–	–	–	45	0.20	1.5	–	–	–
TNMG 160408E-NM	**T7325**	0.8	190	0.25	1.9	145	0.23	1.9	–	–	–	–	–	–	60	0.20	1.5	–	–	–
	T7335	0.8	180	0.25	1.9	140	0.23	1.9	–	–	–	–	–	–	55	0.20	1.5	–	–	–
	T8315	0.8	175	0.25	1.9	105	0.23	1.9	–	–	–	525	0.30	1.9	40	0.20	1.5	–	–	–
	T8330	0.8	165	0.25	1.9	95	0.23	1.9	–	–	–	495	0.30	1.9	40	0.20	1.5	–	–	–
	T8430	0.8	185	0.25	1.9	100	0.23	1.9	–	–	–	510	0.30	1.9	40	0.20	1.5	–	–	–
	T9315	0.8	250	0.25	1.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	225	0.25	1.9	135	0.23	1.9	–	–	–	–	–	–	50	0.20	1.5	–	–	–
TNMG 220408E-NM	**T7325**	0.8	190	0.25	1.7	145	0.23	1.7	–	–	–	–	–	–	60	0.20	1.4	–	–	–
	T7335	0.8	185	0.25	1.7	140	0.23	1.7	–	–	–	–	–	–	60	0.20	1.4	–	–	–
	T8315	0.8	175	0.25	1.7	105	0.23	1.7	–	–	–	525	0.30	1.7	40	0.20	1.4	–	–	–
	T8330	0.8	165	0.25	1.7	95	0.23	1.7	–	–	–	495	0.30	1.7	40	0.20	1.4	–	–	–
	T8430	0.8	185	0.25	1.7	100	0.23	1.7	–	–	–	510	0.30	1.7	40	0.20	1.4	–	–	–
	T9315	0.8	255	0.25	1.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	225	0.25	1.7	135	0.23	1.7	–	–	–	–	–	–	50	0.20	1.4	–	–	–
TNMG 220412E-NM	**T7325**	1.2	190	0.30	1.7	145	0.27	1.7	–	–	–	–	–	–	60	0.24	1.4	–	–	–
	T7335	1.2	180	0.30	2.1	140	0.27	2.1	–	–	–	–	–	–	55	0.24	1.7	–	–	–
	T9325	1.2	215	0.30	2.1	125	0.27	2.1	–	–	–	–	–	–	45	0.24	1.7	–	–	–
																				
			NMR geometry with positive design for medium to rough machining, and continuous cuts.																	
TNMG 160404E-NMR	**T6310**	0.4	130	0.20	1.7	90	0.18	1.7	–	–	–	–	–	–	35	0.18	1.4	–	–	–
	T7325	0.4	145	0.20	1.7	110	0.18	1.7	–	–	–	–	–	–	45	0.18	1.4	–	–	–
	T7335	0.4	145	0.20	1.7	110	0.18	1.7	–	–	–	–	–	–	45	0.18	1.4	–	–	–
	T8330	0.4	130	0.20	1.7	75	0.18	1.7	–	–	–	–	–	–	30	0.18	1.4	–	–	–
	T8430	0.4	145	0.20	1.7	80	0.18	1.7	–	–	–	–	–	–	30	0.18	1.4	–	–	–
	T9315	0.4	200	0.20	1.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.4	180	0.20	1.7	105	0.18	1.7	–	–	–	–	–	–	40	0.18	1.4	–	–	–
TNMG 160408E-NMR	**T6310**	0.8	140	0.30	1.7	100	0.27	1.7	–	–	–	–	–	–	40	0.24	1.4	–	–	–
	T7325	0.8	155	0.30	1.7	120	0.27	1.7	–	–	–	–	–	–	50	0.24	1.4	–	–	–
	T7335	0.8	145	0.30	1.7	110	0.27	1.7	–	–	–	–	–	–	45	0.24	1.4	–	–	–
	T8330	0.8	140	0.30	1.7	80	0.27	1.7	–	–	–	–	–	–	35	0.24	1.4	–	–	–
	T8430	0.8	150	0.30	1.7	80	0.27	1.7	–	–	–	–	–	–	30	0.24	1.4	–	–	–
	T9315	0.8	205	0.30	1.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	185	0.30	1.7	110	0.27	1.7	–	–	–	–	–	–	40	0.24	1.4	–	–	–

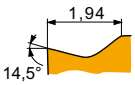
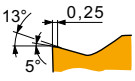
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]
																				
NMR geometry with positive design for medium to rough machining, and continuous cuts.																				
TNMG 160412E-NMR	**T7325**	1.2	165	0.30	1.7	125	0.27	1.7	–	–	–	–	–	–	50	0.24	1.4	–	–	–
	T9315	1.2	215	0.30	1.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	1.2	195	0.30	1.7	115	0.27	1.7	–	–	–	–	–	–	40	0.24	1.4	–	–	–
TNMG 220408E-NMR	**T6310**	0.8	135	0.30	2.1	95	0.27	2.1	–	–	–	–	–	–	40	0.24	1.7	–	–	–
	T7325	0.8	150	0.30	2.1	115	0.27	2.1	–	–	–	–	–	–	45	0.24	1.7	–	–	–
	T7335	0.8	145	0.30	2.1	110	0.27	2.1	–	–	–	–	–	–	45	0.24	1.7	–	–	–
	T8330	0.8	135	0.30	2.1	80	0.27	2.1	–	–	–	–	–	–	30	0.24	1.7	–	–	–
	T8430	0.8	145	0.30	2.1	80	0.27	2.1	–	–	–	–	–	–	30	0.24	1.7	–	–	–
	T9315	0.8	200	0.30	2.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	180	0.30	2.1	105	0.27	2.1	–	–	–	–	–	–	40	0.24	1.7	–	–	–
TNMG 220412E-NMR	**T6310**	1.2	140	0.30	2.1	100	0.27	2.1	–	–	–	–	–	–	40	0.24	1.7	–	–	–
	T7325	1.2	160	0.30	2.1	120	0.27	2.1	–	–	–	–	–	–	50	0.24	1.7	–	–	–
	T9315	1.2	210	0.30	2.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	1.2	190	0.30	2.1	110	0.27	2.1	–	–	–	–	–	–	40	0.24	1.7	–	–	–
																				
R geometry for semi-rough to rough machining, and continuous to interrupted cuts.																				
TNMG 160408E-R	**T5305**	0.8	210	0.40	3.0	–	–	–	195	0.40	3.0	–	–	–	–	–	–	40	0.15	1.0
	T5315	0.8	185	0.40	3.0	–	–	–	175	0.40	3.0	–	–	–	–	–	–	35	0.15	1.0
	T9310	0.8	185	0.40	3.0	–	–	–	175	0.40	3.0	–	–	–	–	–	–	35	0.15	1.0
	T9315	0.8	165	0.40	3.0	–	–	–	155	0.40	3.0	–	–	–	–	–	–	30	0.15	1.0
	T9325	0.8	150	0.40	3.0	–	–	–	140	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	130	0.40	3.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
TNMG 160412E-R	**T5315**	1.2	195	0.40	3.0	–	–	–	185	0.40	3.0	–	–	–	–	–	–	35	0.15	1.0
	T9310	1.2	195	0.40	3.0	–	–	–	185	0.40	3.0	–	–	–	–	–	–	35	0.15	1.0
	T9325	1.2	160	0.40	3.0	–	–	–	150	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	140	0.40	3.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
TNMG 220408E-R	**T9315**	0.8	165	0.40	4.0	–	–	–	155	0.40	4.0	–	–	–	–	–	–	30	0.15	1.0
	T9325	0.8	145	0.40	4.0	–	–	–	135	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	125	0.40	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
TNMG 220412E-R	**T9310**	1.2	185	0.40	4.0	–	–	–	175	0.40	4.0	–	–	–	–	–	–	35	0.15	1.0
	T9315	1.2	170	0.40	4.0	–	–	–	160	0.40	4.0	–	–	–	–	–	–	30	0.15	1.0
	T9325	1.2	155	0.40	4.0	–	–	–	145	0.40	4.0	–	–	–	–	–	–	–	–	–
TNMG 220416E-R	**T9315**	1.6	180	0.40	4.0	–	–	–	170	0.40	4.0	–	–	–	–	–	–	35	0.15	1.0
	T9325	1.6	165	0.40	4.0	–	–	–	155	0.40	4.0	–	–	–	–	–	–	–	–	–
																				
RM geometry for semi-rough to rough machining, and continuous to interrupted cuts.																				
TNMG 160408E-RM	**T5305**	0.8	245	0.40	3.0	–	–	–	230	0.40	3.0	–	–	–	–	–	–	–	–	–
	T5315	0.8	215	0.40	3.0	–	–	–	200	0.40	3.0	–	–	–	–	–	–	–	–	–
	T7325	0.8	155	0.40	3.0	120	0.36	3.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.8	145	0.40	3.0	110	0.36	3.0	–	–	–	–	–	–	–	–	–	–	–	–
	T9310	0.8	210	0.40	3.0	–	–	–	195	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9315	0.8	195	0.40	3.0	–	–	–	185	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	175	0.40	3.0	105	0.36	3.0	165	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	150	0.40	3.0	90	0.36	3.0	–	–	–	–	–	–	–	–	–	–	–	–

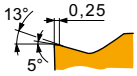
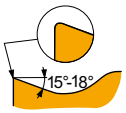
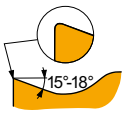
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
			RM geometry for semi-rough to rough machining, and continuous to interrupted cuts.																	
TNMG 160412E-RM	**T5305**	1.2	255	0.40	3.0	–	–	–	240	0.40	3.0	–	–	–	–	–	–	–	–	–
	T5315	1.2	225	0.40	3.0	–	–	–	210	0.40	3.0	–	–	–	–	–	–	–	–	–
	T7325	1.2	165	0.40	3.0	125	0.36	3.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	1.2	155	0.40	3.0	120	0.36	3.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	1.2	145	0.40	3.0	85	0.36	3.0	135	0.40	3.0	–	–	–	–	–	–	–	–	–
	T8430	1.2	150	0.40	3.0	80	0.36	3.0	125	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9315	1.2	205	0.40	3.0	–	–	–	190	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	185	0.40	3.0	110	0.36	3.0	175	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	160	0.40	3.0	95	0.36	3.0	–	–	–	–	–	–	–	–	–	–	–	–
TNMG 220408E-RM	**T5305**	0.8	235	0.40	4.0	–	–	–	220	0.40	4.0	–	–	–	–	–	–	–	–	–
	T5315	0.8	210	0.40	4.0	–	–	–	195	0.40	4.0	–	–	–	–	–	–	–	–	–
	T7325	0.8	150	0.40	4.0	115	0.36	4.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.8	140	0.40	4.0	105	0.36	4.0	–	–	–	–	–	–	–	–	–	–	–	–
	T9310	0.8	200	0.40	4.0	–	–	–	190	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9315	0.8	190	0.40	4.0	–	–	–	180	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	170	0.40	4.0	100	0.36	4.0	160	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	145	0.40	4.0	85	0.36	4.0	–	–	–	–	–	–	–	–	–	–	–	–
TNMG 220412E-RM	**T5305**	1.2	245	0.40	4.0	–	–	–	230	0.40	4.0	–	–	–	–	–	–	–	–	–
	T5315	1.2	220	0.40	4.0	–	–	–	205	0.40	4.0	–	–	–	–	–	–	–	–	–
	T7325	1.2	160	0.40	4.0	120	0.36	4.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	1.2	150	0.40	4.0	115	0.36	4.0	–	–	–	–	–	–	–	–	–	–	–	–
	T9315	1.2	200	0.40	4.0	–	–	–	190	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	180	0.40	4.0	105	0.36	4.0	170	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	155	0.40	4.0	90	0.36	4.0	–	–	–	–	–	–	–	–	–	–	–	–
TNMG 220416E-RM	**T7325**	1.6	165	0.40	4.0	125	0.36	4.0	–	–	–	–	–	–	–	–	–	–	–	–
	T9315	1.6	210	0.40	4.0	–	–	–	195	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9325	1.6	185	0.40	4.0	110	0.36	4.0	175	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	160	0.40	4.0	95	0.36	4.0	–	–	–	–	–	–	–	–	–	–	–	–
TNMG 270612E-RM	**T7325**	1.2	110	0.40	6.0	85	0.36	6.0	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	1.2	120	0.40	6.0	70	0.36	6.0	110	0.40	6.0	–	–	–	–	–	–	–	–	–
TNMG 270616E-RM	**T7325**	1.6	115	0.40	6.0	85	0.36	6.0	–	–	–	–	–	–	–	–	–	–	–	–
	T9226	1.6	115	0.40	6.0	65	0.36	6.0	105	0.40	6.0	–	–	–	–	–	–	–	–	–
	T9315	1.6	135	0.40	6.0	–	–	–	125	0.40	6.0	–	–	–	–	–	–	–	–	–
	T9325	1.6	125	0.40	6.0	75	0.36	6.0	115	0.40	6.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	100	0.40	6.0	60	0.36	6.0	–	–	–	–	–	–	–	–	–	–	–	–
TNMG 270624E-RM	**T7325**	2.4	115	0.50	6.0	85	0.45	6.0	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	2.4	120	0.50	6.0	70	0.45	6.0	110	0.50	6.0	–	–	–	–	–	–	–	–	–
	T9335	2.4	95	0.50	6.0	55	0.45	6.0	–	–	–	–	–	–	–	–	–	–	–	–
TNMG 270632E-RM	**T9335**	3.2	90	0.60	6.0	50	0.54	6.0	–	–	–	–	–	–	–	–	–	–	–	–
TNMG 330924E-RM	**T9226**	2.4	100	0.50	10.0	60	0.45	10.0	95	0.50	10.0	–	–	–	–	–	–	–	–	–
	T9335	2.4	90	0.50	10.0	50	0.45	10.0	–	–	–	–	–	–	–	–	–	–	–	–
			SF geometry with positive design for fine-finish machining of thin walls and continuous cuts.																	
TNMG 160404E-SF	**H07**	0.4	–	–	–	75	0.14	1.3	120	0.15	1.3	390	0.18	1.3	35	0.12	1.0	–	–	–
	T6310	0.4	150	0.15	1.3	105	0.14	1.3	120	0.15	1.3	450	0.18	1.3	45	0.12	1.0	30	0.15	1.0
	T7325	0.4	170	0.17	1.3	130	0.15	1.3	–	–	–	–	–	–	55	0.15	1.0	–	–	–
	T7335	0.4	165	0.17	1.3	125	0.15	1.3	–	–	–	–	–	–	50	0.15	1.0	–	–	–
	T8315	0.4	160	0.15	1.3	95	0.14	1.3	150	0.15	1.3	480	0.18	1.3	40	0.12	1.0	30	0.15	1.0
	T8330	0.4	150	0.15	1.3	90	0.14	1.3	140	0.15	1.3	450	0.18	1.3	35	0.12	1.0	30	0.15	1.0
	T8430	0.4	180	0.15	1.3	95	0.14	1.3	145	0.15	1.3	495	0.18	1.3	35	0.12	1.0	30	0.15	1.0
	T9315	0.4	245	0.15	1.3	–	–	–	230	0.15	1.3	–	–	–	–	–	–	45	0.15	1.0
	T9325	0.4	210	0.17	1.3	125	0.15	1.3	195	0.17	1.3	–	–	–	45	0.15	1.0	–	–	–

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
SF geometry with positive design for fine-finish machining of thin walls and continuous cuts.																				
TNMG 160408E-SF	**H07**	0.8	–	–	–	85	0.15	1.3	140	0.17	1.3	445	0.20	1.3	45	0.14	1.0	–	–	–
	T6310	0.8	175	0.17	1.3	125	0.15	1.3	140	0.17	1.3	525	0.20	1.3	50	0.14	1.0	35	0.15	1.0
	T7325	0.8	200	0.17	1.3	155	0.15	1.3	–	–	–	–	–	–	65	0.15	1.0	–	–	–
	T7335	0.8	195	0.17	1.3	150	0.15	1.3	–	–	–	–	–	–	60	0.15	1.0	–	–	–
	T8315	0.8	185	0.17	1.3	110	0.15	1.3	175	0.17	1.3	555	0.20	1.3	45	0.14	1.0	35	0.15	1.0
	T8330	0.8	175	0.17	1.3	105	0.15	1.3	165	0.17	1.3	525	0.20	1.3	40	0.14	1.0	35	0.15	1.0
	T8430	0.8	205	0.17	1.3	110	0.15	1.3	170	0.17	1.3	570	0.20	1.3	45	0.14	1.0	35	0.15	1.0
	T9315	0.8	275	0.17	1.3	–	–	–	260	0.17	1.3	–	–	–	–	–	–	55	0.15	1.0
	T9325	0.8	250	0.17	1.3	150	0.15	1.3	235	0.17	1.3	–	–	–	55	0.15	1.0	–	–	–
TNMG 160412E-SF	**T6310**	1.2	160	0.30	1.3	115	0.27	1.3	125	0.30	1.3	480	0.36	1.3	45	0.21	1.0	30	0.15	1.0
	T7325	1.2	175	0.30	1.3	135	0.27	1.3	–	–	–	–	–	–	55	0.21	1.0	–	–	–
	T9325	1.2	205	0.30	1.3	120	0.27	1.3	190	0.30	1.3	–	–	–	45	0.21	1.0	–	–	–
TNMG 220404E-SF	**T6310**	0.4	145	0.17	1.7	100	0.15	1.7	115	0.17	1.7	435	0.20	1.7	40	0.15	1.4	25	0.15	1.0
	T7325	0.4	160	0.17	1.7	120	0.15	1.7	–	–	–	–	–	–	50	0.15	1.4	–	–	–
	T9325	0.4	205	0.17	1.7	120	0.15	1.7	190	0.17	1.7	–	–	–	45	0.15	1.4	–	–	–
TNMG 220408E-SF	**T6310**	0.8	170	0.17	1.7	120	0.15	1.7	135	0.17	1.7	510	0.20	1.7	50	0.15	1.4	30	0.15	1.0
	T8315	0.8	180	0.17	1.7	105	0.15	1.7	170	0.17	1.7	540	0.20	1.7	45	0.15	1.4	35	0.15	1.0
	T8430	0.8	195	0.17	1.7	105	0.15	1.7	160	0.17	1.7	540	0.20	1.7	40	0.15	1.4	30	0.15	1.0
TNMG 220412E-SF	**T6310**	1.2	155	0.30	1.7	110	0.27	1.7	125	0.30	1.7	465	0.36	1.7	45	0.21	1.4	30	0.15	1.0
	T7325	1.2	170	0.30	1.7	130	0.27	1.7	–	–	–	–	–	–	55	0.21	1.4	–	–	–
	T9325	1.2	205	0.30	1.7	120	0.27	1.7	190	0.30	1.7	–	–	–	45	0.21	1.4	–	–	–
																				
SM geometry with positive design for medium machining, and continuous to interrupted cuts.																				
TNMG 160404E-SM	**T6310**	0.4	135	0.22	1.7	95	0.20	1.7	105	0.22	1.7	405	0.26	1.7	40	0.20	1.4	25	0.15	1.0
	T7325	0.4	150	0.22	1.7	115	0.20	1.7	–	–	–	–	–	–	45	0.20	1.4	–	–	–
	T7335	0.4	145	0.22	1.7	110	0.20	1.7	–	–	–	–	–	–	45	0.20	1.4	–	–	–
	T8330	0.4	135	0.22	1.7	80	0.20	1.7	125	0.22	1.7	405	0.26	1.7	30	0.20	1.4	25	0.15	1.0
	T8430	0.4	145	0.22	1.7	80	0.20	1.7	120	0.22	1.7	405	0.26	1.7	30	0.20	1.4	25	0.15	1.0
	T9315	0.4	210	0.20	1.7	–	–	–	195	0.20	1.7	–	–	–	–	–	–	40	0.15	1.0
	T9325	0.4	185	0.22	1.7	110	0.20	1.7	175	0.22	1.7	–	–	–	40	0.20	1.4	–	–	–
TNMG 160408E-SM	**T6310**	0.8	150	0.25	1.7	105	0.23	1.7	120	0.25	1.7	450	0.30	1.7	45	0.20	1.4	30	0.15	1.0
	T7325	0.8	170	0.25	1.7	130	0.23	1.7	–	–	–	–	–	–	55	0.20	1.4	–	–	–
	T7335	0.8	165	0.25	1.7	125	0.23	1.7	–	–	–	–	–	–	50	0.20	1.4	–	–	–
	T8330	0.8	150	0.25	1.7	90	0.23	1.7	140	0.25	1.7	450	0.30	1.7	35	0.20	1.4	30	0.15	1.0
	T8430	0.8	170	0.25	1.7	90	0.23	1.7	135	0.25	1.7	465	0.30	1.7	35	0.20	1.4	25	0.15	1.0
	T9315	0.8	230	0.25	1.7	–	–	–	215	0.25	1.7	–	–	–	–	–	–	45	0.15	1.0
	T9325	0.8	205	0.25	1.7	120	0.23	1.7	190	0.25	1.7	–	–	–	45	0.20	1.4	–	–	–
TNMG 160412E-SM	**T6310**	1.2	155	0.30	1.7	110	0.27	1.7	125	0.30	1.7	465	0.36	1.7	45	0.24	1.4	30	0.15	1.0
	T7325	1.2	170	0.30	1.7	130	0.27	1.7	–	–	–	–	–	–	55	0.24	1.4	–	–	–
	T7335	1.2	165	0.30	1.7	125	0.27	1.7	–	–	–	–	–	–	50	0.24	1.4	–	–	–
	T9325	1.2	205	0.30	1.7	120	0.27	1.7	190	0.30	1.7	–	–	–	45	0.24	1.4	–	–	–
TNMG 220404E-SM	**T6310**	0.4	130	0.24	1.7	90	0.22	1.7	100	0.24	1.7	390	0.29	1.7	35	0.22	1.4	25	0.15	1.0
	T7325	0.4	145	0.24	1.7	110	0.22	1.7	–	–	–	–	–	–	45	0.22	1.4	–	–	–
	T8330	0.4	130	0.24	1.7	75	0.22	1.7	120	0.24	1.7	390	0.29	1.7	30	0.22	1.4	25	0.15	1.0
	T8430	0.4	145	0.24	1.7	80	0.22	1.7	120	0.24	1.7	405	0.29	1.7	30	0.22	1.4	25	0.15	1.0
	T9325	0.4	175	0.24	1.7	105	0.22	1.7	165	0.24	1.7	–	–	–	35	0.22	1.4	–	–	–
TNMG 220408E-SM	**T6310**	0.8	150	0.25	1.7	105	0.23	1.7	120	0.25	1.7	450	0.30	1.7	45	0.20	1.4	30	0.15	1.0
	T7325	0.8	170	0.25	1.7	130	0.23	1.7	–	–	–	–	–	–	55	0.20	1.4	–	–	–
	T7335	0.8	165	0.25	1.7	125	0.23	1.7	–	–	–	–	–	–	50	0.20	1.4	–	–	–
	T8330	0.8	150	0.25	1.7	90	0.23	1.7	140	0.25	1.7	450	0.30	1.7	35	0.20	1.4	30	0.15	1.0
	T8430	0.8	170	0.25	1.7	90	0.23	1.7	135	0.25	1.7	465	0.30	1.7	35	0.20	1.4	25	0.15	1.0
	T9315	0.8	230	0.25	1.7	–	–	–	215	0.25	1.7	–	–	–	–	–	–	45	0.15	1.0
	T9325	0.8	205	0.25	1.7	120	0.23	1.7	190	0.25	1.7	–	–	–	45	0.20	1.4	–	–	–

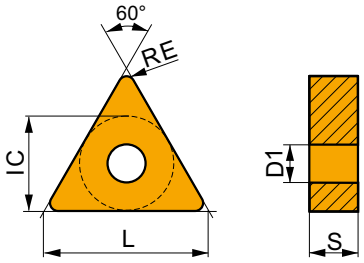
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
		[mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]
			S																	
			SM geometry with positive design for medium machining, and continuous to interrupted cuts.																	
TNMG 220412E-SM	**T6310**	1.2	■ 155	0.30	1.7	■ 110	0.27	1.7	■ 125	0.30	1.7	◪ 465	0.36	1.7	■ 45	0.24	1.4	◪ 30	0.15	1.0
	T7325	1.2	◪ 170	0.30	1.7	■ 130	0.27	1.7	–	–	–	–	–	–	■ 55	0.24	1.4	–	–	–
	T7335	1.2	◪ 165	0.30	1.7	■ 125	0.27	1.7	–	–	–	–	–	–	■ 50	0.24	1.4	–	–	–
	T9315	1.2	■ 225	0.30	1.7	–	–	–	◪ 210	0.30	1.7	–	–	–	–	–	–	◪ 45	0.15	1.0
	T9325	1.2	■ 205	0.30	1.7	■ 120	0.27	1.7	◪ 190	0.30	1.7	–	–	–	◪ 45	0.24	1.4	–	–	–
			E																	
			ER-SI geometry with positive right-handed design for fine-finish to semi-rough machining, and continuous cuts.																	
TNMG 160404ER-SI	**T7325**	0.4	◪ 190	0.20	1.5	■ 145	0.18	1.5	–	–	–	–	–	–	◪ 60	0.18	1.2	–	–	–
	T7335	0.4	◪ 180	0.20	1.5	■ 140	0.18	1.5	–	–	–	–	–	–	◪ 55	0.18	1.2	–	–	–
	T8315	0.4	◪ 175	0.20	1.5	■ 105	0.18	1.5	–	–	–	◪ 525	0.24	1.5	◪ 40	0.18	1.2	–	–	–
	T8330	0.4	■ 165	0.20	1.5	■ 95	0.18	1.5	–	–	–	◪ 495	0.24	1.5	◪ 40	0.18	1.2	–	–	–
	T8430	0.4	■ 185	0.20	1.5	■ 100	0.18	1.5	–	–	–	◪ 510	0.24	1.5	◪ 40	0.18	1.2	–	–	–
	T9325	0.4	■ 230	0.20	1.5	■ 135	0.18	1.5	–	–	–	–	–	–	◪ 50	0.18	1.2	–	–	–
	T9335	0.4	■ 195	0.20	1.5	■ 115	0.18	1.5	–	–	–	–	–	–	◪ 40	0.18	1.2	–	–	–
TNMG 160408ER-SI	**T7325**	0.8	◪ 190	0.35	1.5	■ 145	0.32	1.5	–	–	–	–	–	–	◪ 60	0.25	1.2	–	–	–
	T7335	0.8	◪ 180	0.35	1.5	■ 140	0.32	1.5	–	–	–	–	–	–	◪ 55	0.25	1.2	–	–	–
	T8315	0.8	◪ 175	0.35	1.5	■ 105	0.32	1.5	–	–	–	◪ 525	0.42	1.5	◪ 40	0.25	1.2	–	–	–
	T8330	0.8	■ 170	0.35	1.5	■ 100	0.32	1.5	–	–	–	◪ 510	0.42	1.5	◪ 40	0.25	1.2	–	–	–
	T8430	0.8	■ 180	0.35	1.5	■ 95	0.32	1.5	–	–	–	◪ 495	0.42	1.5	◪ 35	0.25	1.2	–	–	–
	T9325	0.8	■ 215	0.35	1.5	■ 125	0.32	1.5	–	–	–	–	–	–	◪ 45	0.25	1.2	–	–	–
	T9335	0.8	■ 190	0.35	1.5	■ 110	0.32	1.5	–	–	–	–	–	–	◪ 40	0.25	1.2	–	–	–
			E																	
			EL-SI geometry with positive left-handed design for fine-finish to semi-rough machining, and continuous cuts.																	
TNMG 160404EL-SI	**T7325**	0.4	◪ 190	0.20	1.5	■ 145	0.18	1.5	–	–	–	–	–	–	◪ 60	0.18	1.2	–	–	–
	T7335	0.4	◪ 180	0.20	1.5	■ 140	0.18	1.5	–	–	–	–	–	–	◪ 55	0.18	1.2	–	–	–
	T8315	0.4	◪ 175	0.20	1.5	■ 105	0.18	1.5	–	–	–	◪ 525	0.24	1.5	◪ 40	0.18	1.2	–	–	–
	T8330	0.4	■ 165	0.20	1.5	■ 95	0.18	1.5	–	–	–	◪ 495	0.24	1.5	◪ 40	0.18	1.2	–	–	–
	T8430	0.4	■ 185	0.20	1.5	■ 100	0.18	1.5	–	–	–	◪ 510	0.24	1.5	◪ 40	0.18	1.2	–	–	–
	T9325	0.4	■ 230	0.20	1.5	■ 135	0.18	1.5	–	–	–	–	–	–	◪ 50	0.18	1.2	–	–	–
	T9335	0.4	■ 195	0.20	1.5	■ 115	0.18	1.5	–	–	–	–	–	–	◪ 40	0.18	1.2	–	–	–
TNMG 160408EL-SI	**T7325**	0.8	◪ 190	0.35	1.5	■ 145	0.32	1.5	–	–	–	–	–	–	◪ 60	0.25	1.2	–	–	–
	T7335	0.8	◪ 180	0.35	1.5	■ 140	0.32	1.5	–	–	–	–	–	–	◪ 55	0.25	1.2	–	–	–
	T8315	0.8	◪ 175	0.35	1.5	■ 105	0.32	1.5	–	–	–	◪ 525	0.42	1.5	◪ 40	0.25	1.2	–	–	–
	T8330	0.8	■ 170	0.35	1.5	■ 100	0.32	1.5	–	–	–	◪ 510	0.42	1.5	◪ 40	0.25	1.2	–	–	–
	T8430	0.8	■ 180	0.35	1.5	■ 95	0.32	1.5	–	–	–	◪ 495	0.42	1.5	◪ 35	0.25	1.2	–	–	–
	T9325	0.8	■ 215	0.35	1.5	■ 125	0.32	1.5	–	–	–	–	–	–	◪ 45	0.25	1.2	–	–	–
	T9335	0.8	■ 190	0.35	1.5	■ 110	0.32	1.5	–	–	–	–	–	–	◪ 40	0.25	1.2	–	–	–

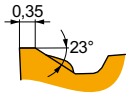
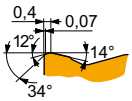
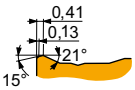
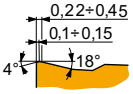
TNMM

PRAMET

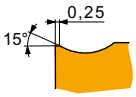
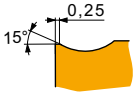
	IC [mm]	D1 [mm]	L [mm]	S [mm]
1604	9.525	3.81	16.50	4.76
2204	12.700	5.16	22.00	4.76
2706	15.875	6.35	27.50	6.35



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
																				
			DR geometry for semi-rough to rough machining, and continuous to interrupted cuts.																	
TNMM 160408E-DR	**T9325**	0.8	175	0.40	4.0	105	0.36	4.0	165	0.40	4.0	–	–	–	–	–	–	–	–	–
TNMM 220408E-DR	**T9325**	0.8	175	0.40	4.0	105	0.36	4.0	165	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	155	0.40	4.0	90	0.36	4.0	–	–	–	–	–	–	–	–	–	–	–	–
TNMM 220412E-DR	**T9315**	1.2	205	0.40	4.0	–	–	–	190	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	185	0.40	4.0	110	0.36	4.0	175	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	160	0.40	4.0	95	0.36	4.0	–	–	–	–	–	–	–	–	–	–	–	–
TNMM 220416E-DR	**T9325**	1.6	195	0.40	4.0	115	0.36	4.0	185	0.40	4.0	–	–	–	–	–	–	–	–	–
TNMM 270616E-DR	**T9325**	1.6	135	0.40	4.0	80	0.36	4.0	125	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	110	0.40	4.0	65	0.36	4.0	–	–	–	–	–	–	–	–	–	–	–	–
																				
			HR geometry for rough to heavy-rough machining, and continuous to interrupted cuts.																	
TNMM 270616E-HR	**T9325**	1.6	90	0.60	7.0	50	0.54	7.0	85	0.60	7.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	75	0.60	7.0	45	0.54	7.0	–	–	–	–	–	–	–	–	–	–	–	–
TNMM 270624E-HR	**T9226**	2.4	80	0.65	7.0	45	0.59	7.0	75	0.65	7.0	–	–	–	–	–	–	–	–	–
																				
			NR2 geometry for semi-rough to rough machining, and continuous to interrupted cuts.																	
TNMM 160408E-NR2	**T9325**	0.8	165	0.40	3.0	95	0.36	3.0	155	0.40	3.0	–	–	–	35	0.28	2.4	–	–	–
TNMM 220408E-NR2	**T7325**	0.8	145	0.40	4.0	110	0.36	4.0	–	–	–	–	–	–	45	0.28	3.2	–	–	–
	T9325	0.8	160	0.40	4.0	95	0.36	4.0	150	0.40	4.0	–	–	–	35	0.28	3.2	–	–	–
TNMM 220412E-NR2	**T7325**	1.2	150	0.40	4.0	115	0.36	4.0	–	–	–	–	–	–	45	0.32	3.2	–	–	–
	T8330	1.2	135	0.40	4.0	80	0.36	4.0	125	0.40	4.0	–	–	–	30	0.32	3.2	–	–	–
	T8430	1.2	140	0.40	4.0	75	0.36	4.0	115	0.40	4.0	–	–	–	30	0.32	3.2	–	–	–
	T9325	1.2	170	0.40	4.0	100	0.36	4.0	160	0.40	4.0	–	–	–	35	0.32	3.2	–	–	–
																				
			OR geometry for semi-rough to rough machining, and continuous to interrupted cuts.																	
TNMM 160408E-OR	**T9315**	0.8	185	0.40	3.0	–	–	–	175	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	165	0.40	3.0	95	0.36	3.0	155	0.40	3.0	–	–	–	35	0.28	2.4	–	–	–
TNMM 160412E-OR	**T9325**	1.2	175	0.40	3.0	105	0.36	3.0	165	0.40	3.0	–	–	–	35	0.32	2.4	–	–	–
TNMM 220408E-OR	**T9315**	0.8	180	0.40	4.0	–	–	–	170	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	160	0.40	4.0	95	0.36	4.0	150	0.40	4.0	–	–	–	35	0.32	3.2	–	–	–
	T9335	0.8	140	0.40	4.0	80	0.36	4.0	–	–	–	–	–	–	30	0.32	3.2	–	–	–
TNMM 220412E-OR	**T9325**	1.2	175	0.40	3.0	105	0.36	3.0	165	0.40	3.0	–	–	–	35	0.32	2.4	–	–	–
	T9335	1.2	150	0.40	3.0	90	0.36	3.0	–	–	–	–	–	–	30	0.32	2.4	–	–	–

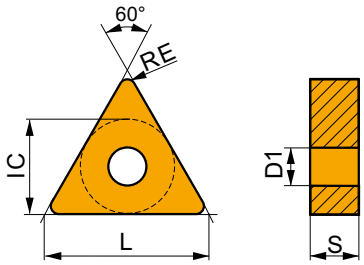
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
																				
			S																	
ER geometry with right-handed design for medium to semi-rough machining, and continuous cuts.																				
TNMM 220412ER	**T9335**	1.2	■ 190	0.35	2.1	■ 110	0.32	2.1	–	–	–	–	–	–	◪ 40	0.25	1.7	–	–	–
																				
			S																	
EL geometry with left handed design for medium to semi-rough machining, and continuous cuts.																				
TNMM 220412EL	**T9335**	1.2	■ 190	0.35	2.1	■ 110	0.32	2.1	–	–	–	–	–	–	◪ 40	0.25	1.7	–	–	–

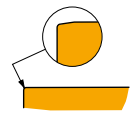
TNGA CER

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
1604	9.525	3.81	16.50	4.76



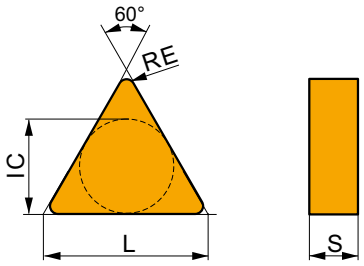
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
																				
			HSC		T															
For machining with high speeds and continuous cuts.																				
TNGA 160408 T01020	**TC100**	0.8	–	–	–	–	–	–	◪ 475	0.20	1.5	–	–	–	–	–	–	–	–	–
TNGA 160412 T01020	**TC100**	1.2	–	–	–	–	–	–	◪ 500	0.20	1.5	–	–	–	–	–	–	–	–	–

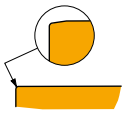
TNGN CER

PRAMET

	IC [mm]	L [mm]	S [mm]
1604	9.525	16.50	4.76
1607	9.525	16.50	7.94



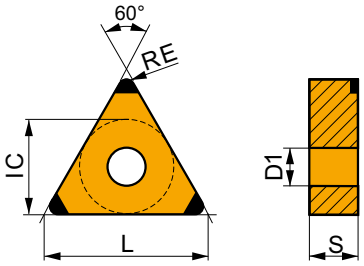
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			HSC T																	
For machining with high speeds and continuous cuts.																				
TNGN 160408 T01020	**TC100**	0.8	–	–	–	–	–	–	475	0.20	1.5	–	–	–	–	–	–	–	–	–
TNGN 160412 T01020	**TC100**	1.2	–	–	–	–	–	–	500	0.20	1.5	–	–	–	–	–	–	–	–	–
TNGN 160708 T02020	**TC100**	0.8	–	–	–	–	–	–	475	0.20	1.5	–	–	–	–	–	–	–	–	–

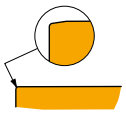
TNGA CBN

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
1604	9.525	3.81	16.50	4.76



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			HSC S																	
For finish machining and continuous cuts.																				
TNGA 160408S01020C	**TB310**	0.8	–	–	–	–	–	–	450	0.15	0.6	–	–	–	115	0.11	0.5	95	0.15	1.0

DTFN(RL) EXT

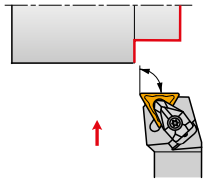
P M K N S H

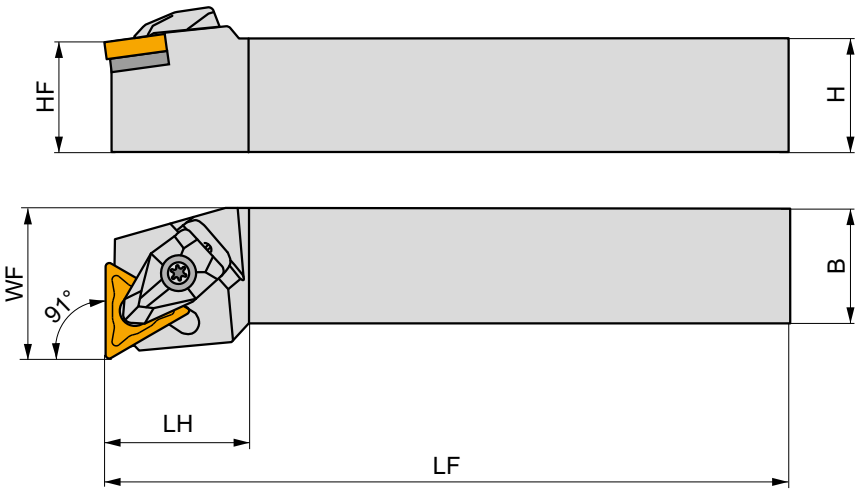
PRAMET

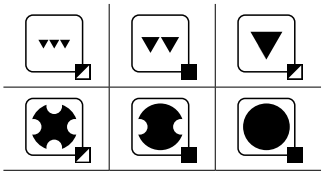
D

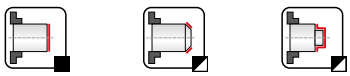
External Double Clamp Holder with 91° (Face) Cutting Angle for TN.. Insert

External Right/Left hand double clamp tool holder with 91° cutting angle. Suited for face turning with shoulder and chamfering with negative TN.. 16 or 22 size inserts. Available in 20x20 and 25x25 mm shank. Body treated for longer tool life.









	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	**DTFNR 2020 K 16**	20	20	20	25	125	23.6	-6	-6	0.43	GI024	DT16
	DTFNR 2525 M 16	25	25	25	32	150	23.6	-6	-6	0.77	GI024	DT16
	DTFNR 2525 M 22	25	25	25	32	150	30.5	-6	-6	0.79	GI025	DT22
L	**DTFNL 2020 K 16**	20	20	20	25	125	23.6	-6	-6	0.43	GI024	DT16
	DTFNL 2525 M 16	25	25	25	32	150	23.6	-6	-6	0.76	GI024	DT16
	DTFNL 2525 M 22	25	25	25	32	150	30.5	-6	-6	0.79	GI025	DT22

GI024	TN.. 1604..
GI025	TN.. 2204..

DT16	DCS 09	1.7	DTS 315-02	US 2004-T09P	FLAG T09P
DT22	DCS 12	3.9	DTS 315-04	US 2002-T15P	FLAG T15P/3,5

DTGN(RL) EXT

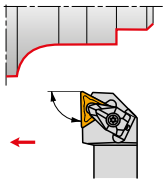
P M K N S H

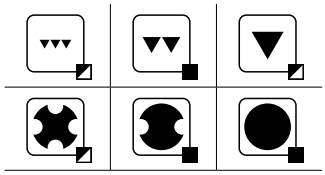
PRAMET

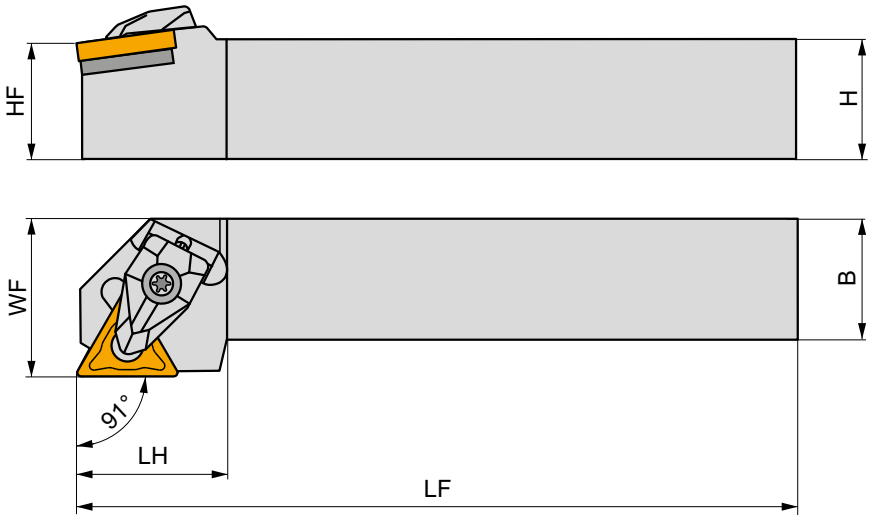
D

External Double Clamp Holder with 91° Cutting Angle for TN.. Insert

External Right/Left hand double clamp tool holder with 91° cutting angle. Suited for longitudinal turning with shoulder, taper turning and chamfering with negative TN.. 16 or 22 size inserts. Available in 20x20 up to 32x32 mm shank. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	DTGNR 2020 K 16	20	20	20	25	125	25.4	-6	-6	0.43	GI024	DT16
	DTGNR 2525 M 16	25	25	25	32	150	24.6	-6	-6	0.76	GI024	DT16
	DTGNR 2525 M 22	25	25	25	32	150	32.1	-6	-6	0.83	GI025	DT22
	DTGNR 3232 P 22	32	32	32	40	170	33.1	-6	-6	1.42	GI025	DT22
L	DTGNL 2020 K 16	20	20	20	25	125	25.4	-6	-6	0.44	GI024	DT16
	DTGNL 2525 M 16	25	25	25	32	150	24.6	-6	-6	0.78	GI024	DT16
	DTGNL 2525 M 22	25	25	25	32	150	32.1	-6	-6	0.78	GI025	DT22
	DTGNL 3232 P 22	32	32	32	40	170	33.1	-6	-6	1.42	GI025	DT22

GI024	TN.. 1604..
GI025	TN.. 2204..

DT16	DCS 09	1.7	DTS 315-02	US 2004-T09P	FLAG T09P
DT22	DCS 12	3.9	DTS 315-04	US 2002-T15P	FLAG T15P/3,5

MTJN(RL) EXT

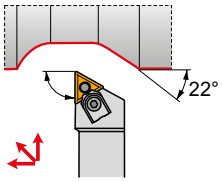
P M K N S H

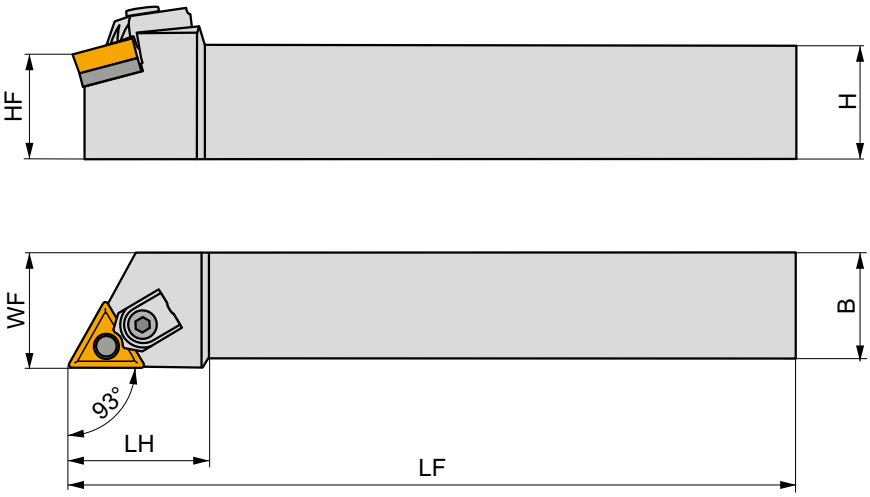
PRAMET

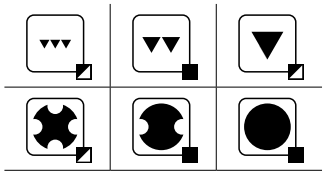
M

External Multi-Clamp Holder with 93° Cutting Angle for TN.. Insert

External Right/Left hand multi-clamp tool holder with 93° cutting angle. Suited for longitudinal turning with shoulder, taper and copy turning up to 22°, and chamfering with negative TN.. 16 or 22 size inserts. Available in 20x20 up to 32x32 mm shank. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg	GI	MT
R	**MTJNR 2020 K 16**	20	20	20	25	125	34	-6	-6	0.42	GI024	MT16
	MTJNR 2525 M 16	25	25	25	32	150	34	-6	-6	0.73	GI024	MT16
	MTJNR 3232 P 22	32	32	32	40	175	42	-6	-6	1.37	GI025	MT22
L	**MTJNL 2020 K 16**	20	20	20	25	125	34	-6	-6	0.43	GI024	MT16
	MTJNL 2525 M 16	25	25	25	32	150	34	-6	-6	0.75	GI024	MT16
	MTJNL 3232 P 22	32	32	32	40	175	42	-6	-6	1.38	GI025	MT22

GI024	TN.. 1604..
GI025	TN.. 2204..

		Nm				
MT16	UE 16	3.0	MTN 160312	UC 52	HS 93	HXK 5
MT22	UE 22	5.0	MTN 220612	UC 53	HS 94	HXK 5

PTFN(RL) EXT

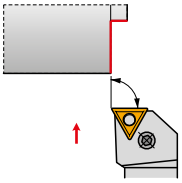
P M K N S H

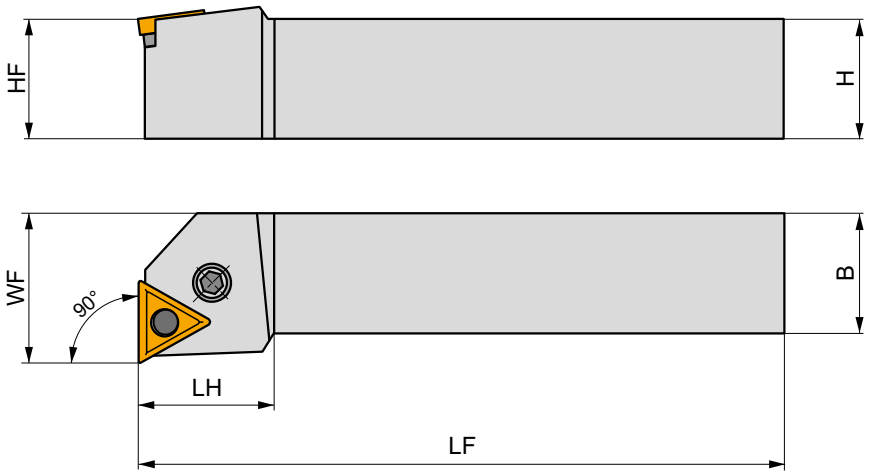
PRAMET

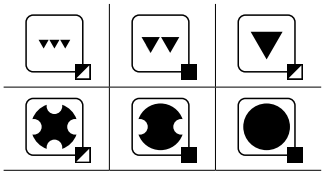
P

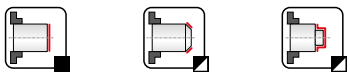
External Lever Lock Holder with 90° (Face) Cutting Angle for TN.. Insert

External Right/Left hand lever lock tool holder with 90° cutting angle. Suited for face turning with shoulder and chamfering with negative TN.. 16, 22 or 27 size inserts. Available in 16x16 up to 40x40 mm shank. Body treated for longer tool life.









	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	**PTFNR 1616 H 16**	16	16	16	20	100	32	-6	-6	0.23	GI024	PT11
	PTFNR 2020 K 16	20	20	20	25	125	32	-6	-6	0.44	GI024	PT10
	PTFNR 2525 M 16	25	25	25	32	150	32	-6	-6	0.76	GI024	PT10
	PTFNR 2525 M 22	25	25	25	32	150	36	-6	-6	0.79	GI025	PT20
	PTFNR 3225 P 22	32	25	32	32	170	36	-6	-6	1.05	GI025	PT20
	PTFNR 4040 R 27	40	40	40	50	200	40	-6	-6	2.55	GI077	PT40
L	**PTFNL 1616 H 16**	16	16	16	20	100	32	-6	-6	0.24	GI024	PT11
	PTFNL 2020 K 16	20	20	20	25	125	32	-6	-6	0.43	GI024	PT10
	PTFNL 2525 M 16	25	25	25	32	150	32	-6	-6	0.65	GI024	PT10
	PTFNL 2525 M 22	25	25	25	32	150	36	-6	-6	0.79	GI025	PT20
	PTFNL 3225 P 22	32	25	32	32	170	36	-6	-6	1.14	GI025	PT20
	PTFNL 4040 R 27	40	40	40	50	200	40	-6	-6	2.55	GI077	PT40

GI024	TN.. 1604..
GI025	TN.. 2204..
GI077	TN.. 2706..

				Nm					
PT10	TNU 160308	PU 01	US 34	5.0	M 6x0.75	19	NT 04	MT 04	HXK 3
PT11	TNU 160308	PU 01	US 46	5.0	M 6x0.75	13.2	NT 04	MT 04	HXK 3
PT20	TNU 220312	PU 02	US 35	6.0	M 8x1	22.5	NT 05	MT 05	HXK 4
PT40	TNU 270416	PU 04	US 36	6.0	M 8x1	26	NT 07	MT 07	HXK 4

PTGN(RL) EXT

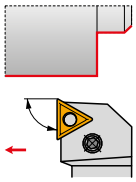
P M K N S H

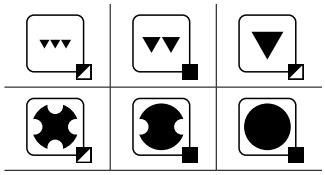
PRAMET

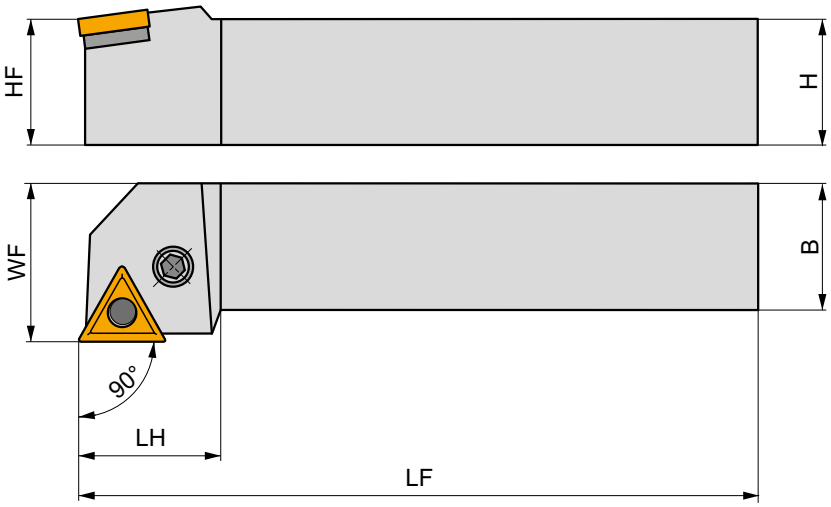
P

External Lever Lock Holder with 90° Cutting Angle for TN.. Insert

External Right/Left hand lever lock tool holder with 90° cutting angle. Suited for longitudinal turning with shoulder, taper turning and chamfering with negative TN.. 16, 22 or 27 size inserts. Available in 16x16 up to 40x40 mm shank. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	**PTGNR 1616 H 16**	16	16	16	20	100	32	-6	-6	0.24	GI024	PT11
	PTGNR 2020 K 16	20	20	20	25	125	32	-6	-6	0.40	GI024	PT10
	PTGNR 2525 M 16	25	25	25	32	150	32	-6	-6	0.73	GI024	PT10
	PTGNR 2525 M 22	25	25	25	32	150	36	-6	-6	0.75	GI025	PT20
	PTGNR 3225 P 22	32	25	32	32	170	36	-6	-6	1.11	GI025	PT20
	PTGNR 3232 P 22	32	32	32	40	170	36	-6	-6	1.39	GI025	PT20
	PTGNR 4040 R 27	40	40	40	50	200	40	-6	-6	2.55	GI077	PT40
L	**PTGNL 1616 H 16**	16	16	16	20	100	32	-6	-6	0.25	GI024	PT11
	PTGNL 2020 K 16	20	20	20	25	125	32	-6	-6	0.40	GI024	PT10
	PTGNL 2525 M 16	25	25	25	32	150	32	-6	-6	0.77	GI024	PT10
	PTGNL 2525 M 22	25	25	25	32	150	36	-6	-6	0.79	GI025	PT20
	PTGNL 3225 P 22	32	25	32	32	170	36	-6	-6	1.11	GI025	PT20
	PTGNL 3232 P 22	32	32	32	40	170	36	-6	-6	1.40	GI025	PT20
	PTGNL 4040 R 27	40	40	40	50	200	40	-6	-6	2.40	GI077	PT40

GI024	TN.. 1604..
GI025	TN.. 2204..
GI077	TN.. 2706..

				Nm					
PT10	TNU 160308	PU 01	US 34	5.0	M 6x0.75	19	NT 04	MT 04	HXK 3
PT11	TNU 160308	PU 01	US 46	5.0	M 6x0.75	13.2	NT 04	MT 04	HXK 3
PT20	TNU 220312	PU 02	US 35	6.0	M 8x1	22.5	NT 05	MT 05	HXK 4
PT40	TNU 270416	PU 04	US 36	6.0	M 8x1	26	NT 07	MT 07	HXK 4

PTTN(RL) EXT

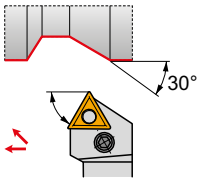
P M K N S H

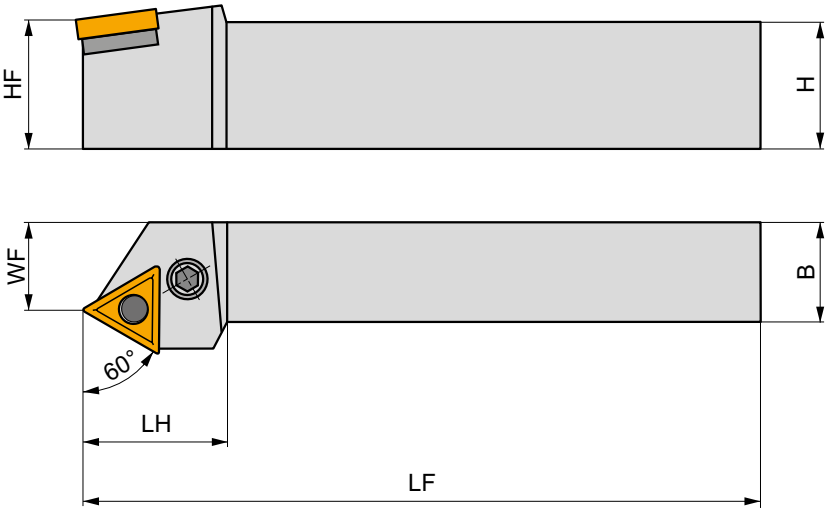
PRAMET

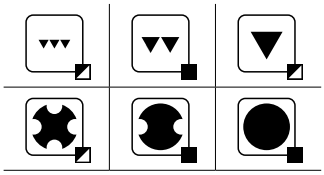
P

External Lever Lock Holder with 60° Cutting Angle for TN.. Insert

External Right/Left hand lever lock tool holder with 60° cutting angle. Suited for longitudinal turning with shoulder, taper and copy turning up to 30° and chamfering with negative TN.. 16 and 22 size inserts. Available in 20x20 up to 32x25 mm shank. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	**PTTNR 2020 K 16**	20	20	20	17	125	32	-6	-6	0.43	GI024	PT10
	PTTNR 2525 M 16	25	25	25	22	150	32	-6	-6	0.63	GI024	PT10
	PTTNR 2525 M 22	25	25	25	22	150	36	-6	-6	0.73	GI025	PT20
	PTTNR 3225 P 22	32	25	32	22	170	36	-6	-6	1.07	GI025	PT20
L	**PTTNL 2020 K 16**	20	20	20	17	125	32	-6	-6	0.38	GI024	PT10
	PTTNL 3225 P 22	32	25	32	22	170	36	-6	-6	1.04	GI025	PT20

GI024	TN.. 1604..
GI025	TN.. 2204..

				Nm					
PT10	TNU 160308	PU 01	US 34	5.0	M 6x0.75	19	NT 04	MT 04	HXK 3
PT20	TNU 220312	PU 02	US 35	6.0	M 8x1	22.5	NT 05	MT 05	HXK 4

C.-DTJN(RL) EXT

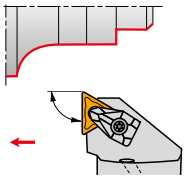
P M K N S H

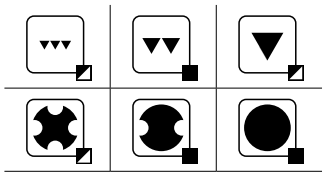
PRAMET

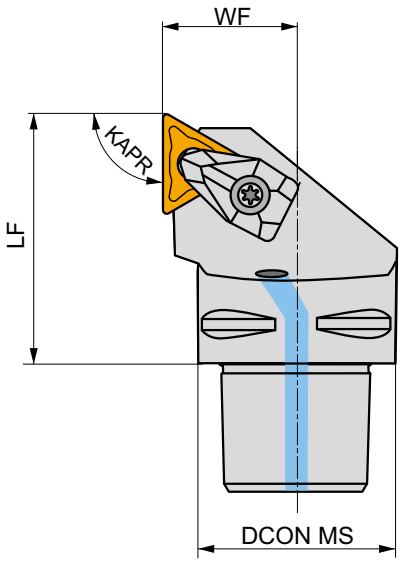
D

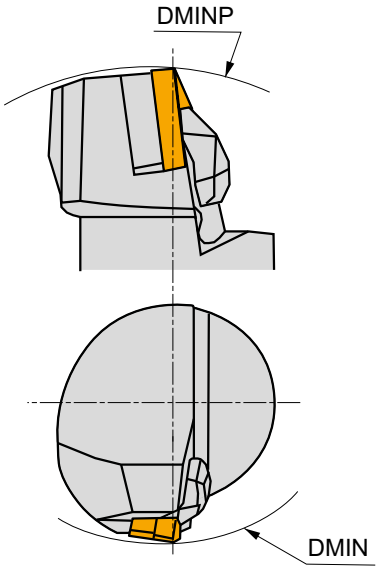
External PSC Quick Change Tool, Double Clamp, 93° Cutting Angle, TN.. Insert

External Right/Left hand double clamp tool, through coolant, with 93° cutting angle for longitudinal turning with shoulder, taper turning and chamfering with negative TN.. 16 size inserts. Available with PSC (Polygon Shank Coupling) C4 and C5 shank. Body treated for longer tool life.









	Product	DCON MS [mm]	DMIN [mm]	DMINP [mm]	WF [mm]	LF [mm]	KAPR [°]	LAMS [°]	GAMO [°]		kg		
R	**C4-DTJNR-27050-16**	40	110	140	27	50	93	-6	-6	✓	0.43	GI024	C-DT16
	C5-DTJNR-35060-16	50	110	165	35	60	93	-6	-6	✓	0.79	GI024	C-DT16
L	**C4-DTJNL-27050-16**	40	110	140	27	50	93	-6	-6	✓	0.44	GI024	C-DT16
	C5-DTJNL-35060-16	50	110	165	35	60	93	-6	-6	✓	0.79	GI024	C-DT16

GI024	TN.. 1604..

C-DT16	DCS 09	1.7	DTS 315-02	US 2004-T09P	FLAG T09P	CN 045-01

DTFN(RL) INT

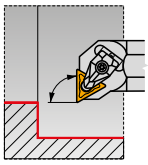
P M K N S H

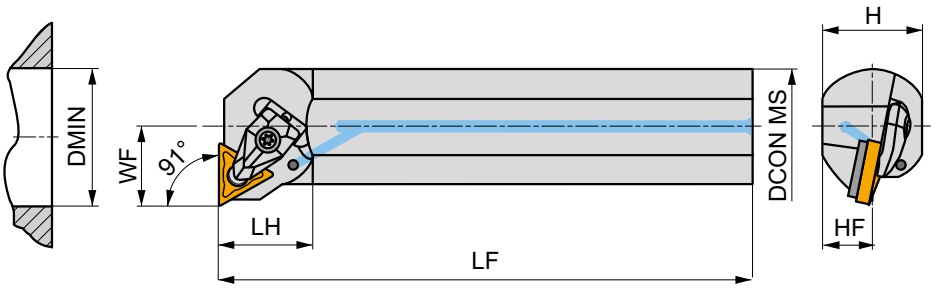
PRAMET

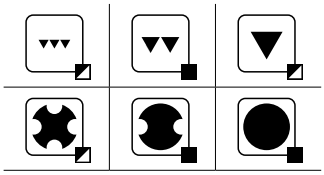
D

Internal Double Clamp Holder with 91° Cutting Angle for TN.. Insert

Internal Right/Left hand double clamp boring bar, through coolant, 91° cutting angle for TN.. 16 and 22 inserts. Minimum internal turning diameter Ø32 mm. For internal taper and longitudinal turning with shoulder and chamfer turning. Available with shank size Ø25 up to Ø40 mm. Body treated for longer tool life.







	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	H [mm]	HF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]		kg		
R	**A25T-DTFNR 16**	25	32	17	23	11.5	300	32	-12	-6	✓	0.96	GI024	DTI16
	A32T-DTFNR 16	32	40	22	30	15	300	33	-10	-6	✓	1.67	GI024	DTI16
	A40T-DTFNR 22	40	50	27	37	18.5	300	36	-13	-6	✓	2.58	GI025	DT22
L	**A25T-DTFNL 16**	25	32	17	23	11.5	300	32	-12	-6	✓	0.96	GI024	DTI16
	A32T-DTFNL 16	32	40	22	30	15	300	33	-10	-6	✓	1.67	GI024	DTI16
	A40T-DTFNL 22	40	50	27	37	18.5	300	36	-13	-6	✓	2.58	GI025	DT22

GI024	TN.. 1604..
GI025	TN.. 2204..

		Nm			
DT22	DCS 12	3.9	DTS 315-04	US 2002-T15P	FLAG T15P/3,5
DTI16	DCS 09	1.7	DTS 316-01	US 2004-T09P	FLAG T09P

PTFN(RL) INT

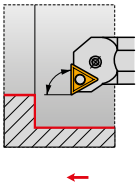
P M K N S H

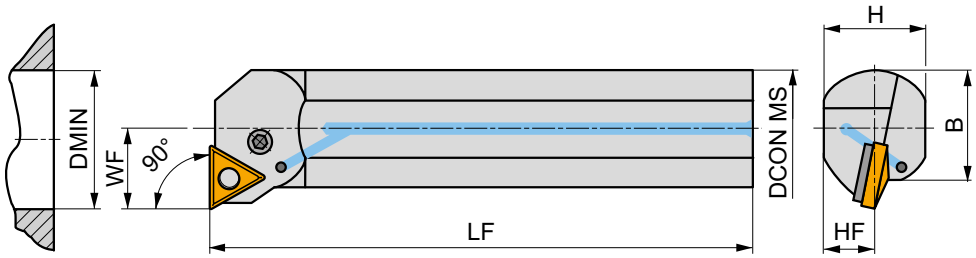
PRAMET

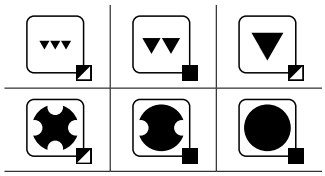
P

Internal Lever Lock Holder with 90° Cutting Angle for TN.. Insert

Internal Right/Left hand lever lock boring bar, through coolant available, 90° cutting angle for TN.. 16 and 22 inserts. Minimum internal turning diameter Ø32 mm. For internal taper and longitudinal turning with shoulder and chamfer turning. Ø25 up to Ø40 mm shanks available. Body treated for longer tool life.







	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	H [mm]	B [mm]	LF [mm]	LAMS [°]	GAMO [°]		kg		
R	**A25R-PTFNR 16**	25	32	17	23	23	200	-12	-6	✓	0.74	GI024	PT11
	A32S-PTFNR 16	32	40	22	30	30	250	-12	-6	✓	1.49	GI024	PT10
	A40T-PTFNR 22	40	50	27	38	38	300	-12	-6	✓	2.58	GI025	PT20
L	**A25R-PTFNL 16**	25	32	17	23	23	200	-12	-6	✓	0.74	GI024	PT11
	A32S-PTFNL 16	32	40	22	30	30	250	-12	-6	✓	1.48	GI024	PT10
	A40T-PTFNL 22	40	50	27	38	38	300	-12	-6	✓	2.90	GI025	PT20

GI024	TN.. 1604..
GI025	TN.. 2204..

				Nm					
PT10	TNU 160308	PU 01	US 34	5.0	M 6x0.75	19	NT 04	MT 04	HXK 3
PT11	TNU 160308	PU 01	US 46	5.0	M 6x0.75	13.2	NT 04	MT 04	HXK 3
PT20	TNU 220312	PU 02	US 35	6.0	M 8x1	22.5	NT 05	MT 05	HXK 4

C.-DTFN(RL) INT

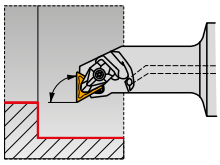
P M K N S H

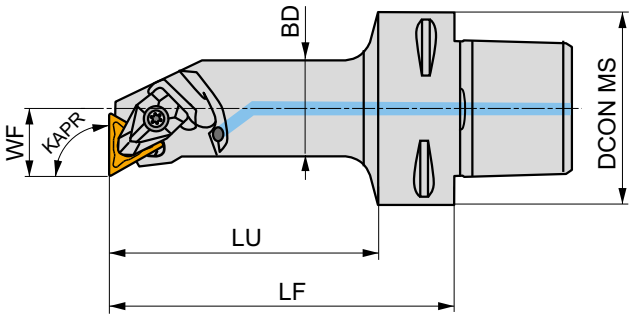
PRAMET

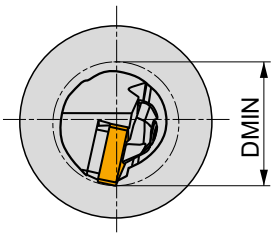
D

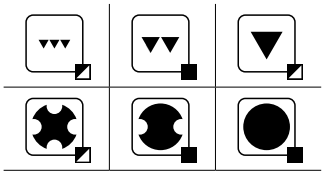
Internal PSC Quick Change Tool, Double Clamp, 91° Cutting Angle, TN.. Insert

Internal Right/Left hand double clamp tool, through coolant, with 91° cutting angle for a wide range of internal turning applications with TN.. 16 inserts, minimum turning diameter Ø32mm. PSC shank (Polygon Shank Coupling) size C4 with turning length of 68 mm. Body treated for longer tool life.









	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	LF [mm]	LU [mm]	BD [mm]	KAPR [°]	LAMS [°]	GAMO [°]		kg		
R	C4-DTFNR-17090-16	40	32	17	90	68	25	91	-12	-6	✓	0.51	GI024	DTI16

GI024	TN.. 1604..

DTI16	DCS 09	1.7 Nm	DTS 316-01	US 2004-T09P	FLAG T09P

VN 16

CARBIDE INSERTS

VNMG

356

CER AND CBN INSERTS

VNGA CER

359

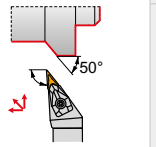
VNGA CBN

359

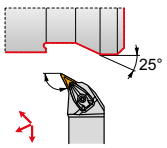
MATCH THE RIGHT SIZE (example)	
Insert	**Tool Holder**
VNMG 160404E-SF	DVJNL 2020 K 16

ISO TURNING – EXTERNAL

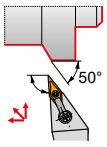
DVJN(RL) EXT

93°	VN..
	16
20×20 / 32×25	
360	356 – 359

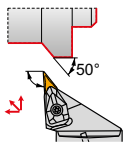
DVPN(RL) EXT

62°30´	VN..
	16
20×20 / 32×25	
361	356 – 359

MVJN(RL) EXT

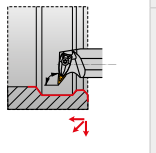
93°	VN..
	16
20×20 / 32×25	
362	356 – 359

C.-DVJN(RL) EXT

93°	VN..
	16
C4 / C6	
363	356 – 359

ISO TURNING – INTERNAL

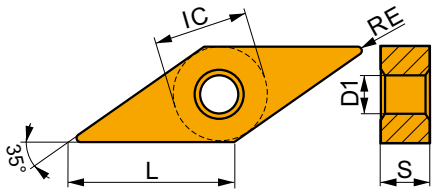
DVUN(RL) INT

	VN..
	16
ØDmin 50	
364	356 – 359

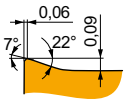
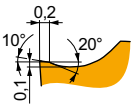
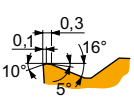
VNMG

PRAMET

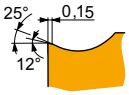
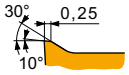
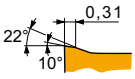
	IC [mm]	D1 [mm]	L [mm]	S [mm]
1604	9.525	3.81	16.60	4.76



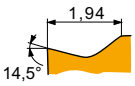
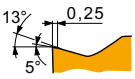
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
																				
			FF geometry with highly positive design for fine-finish machining and continuous to slightly interrupted cuts.																	
VNMG 160404E-FF	**T7325**	0.4	165	0.12	1.0	125	0.11	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	150	0.12	1.0	90	0.11	1.0	140	0.12	1.0	–	–	–	–	–	–	–	–	–
	T8330	0.4	140	0.12	1.0	80	0.11	1.0	130	0.12	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.4	175	0.12	1.0	95	0.11	1.0	140	0.12	1.0	–	–	–	–	–	–	–	–	–
																				
			FM geometry with positive design for finish to semi-rough machining and continuous to slightly interrupted cuts.																	
VNMG 160404E-FM	**T7325**	0.4	140	0.20	1.2	105	0.18	1.2	–	–	–	–	–	–	45	0.20	1.0	–	–	–
	T8330	0.4	120	0.20	1.2	70	0.18	1.2	110	0.20	1.2	–	–	–	30	0.14	1.0	–	–	–
	T8430	0.4	135	0.20	1.2	75	0.18	1.2	110	0.20	1.2	–	–	–	25	0.14	1.0	–	–	–
	T9310	0.4	210	0.20	1.2	–	–	–	195	0.20	1.2	–	–	–	–	–	–	–	–	–
	T9315	0.4	190	0.20	1.2	–	–	–	180	0.20	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.4	170	0.20	1.2	100	0.18	1.2	160	0.20	1.2	–	–	–	35	0.20	1.0	–	–	–
VNMG 160408E-FM	**T7325**	0.8	160	0.20	1.4	120	0.18	1.4	–	–	–	–	–	–	50	0.16	1.1	–	–	–
	T8330	0.8	145	0.20	1.4	85	0.18	1.4	135	0.20	1.4	–	–	–	35	0.16	1.1	–	–	–
	T8430	0.8	165	0.20	1.4	90	0.18	1.4	135	0.20	1.4	–	–	–	35	0.16	1.1	–	–	–
	T9310	0.8	245	0.20	1.4	–	–	–	230	0.20	1.4	–	–	–	–	–	–	–	–	–
	T9315	0.8	220	0.20	1.4	–	–	–	205	0.20	1.4	–	–	–	–	–	–	–	–	–
	T9325	0.8	200	0.20	1.4	120	0.18	1.4	190	0.20	1.4	–	–	–	45	0.16	1.1	–	–	–
VNMG 160412E-FM	**T7325**	1.2	165	0.22	1.4	125	0.20	1.4	–	–	–	–	–	–	50	0.18	1.1	–	–	–
	T8330	1.2	150	0.22	1.4	90	0.20	1.4	140	0.22	1.4	–	–	–	35	0.18	1.1	–	–	–
	T8430	1.2	165	0.22	1.4	90	0.20	1.4	135	0.22	1.4	–	–	–	35	0.18	1.1	–	–	–
	T9315	1.2	225	0.22	1.4	–	–	–	210	0.22	1.4	–	–	–	–	–	–	–	–	–
	T9325	1.2	200	0.22	1.4	120	0.20	1.4	190	0.22	1.4	–	–	–	45	0.18	1.1	–	–	–
																				
			M geometry for finish to semi-rough machining and continuous to interrupted cuts.																	
VNMG 160404E-M	**T5315**	0.4	180	0.20	1.2	–	–	–	170	0.20	1.2	–	–	–	–	–	–	35	0.15	1.0
	T9315	0.4	170	0.20	1.2	–	–	–	160	0.20	1.2	–	–	–	–	–	–	30	0.15	1.0
	T9325	0.4	155	0.20	1.2	–	–	–	145	0.20	1.2	–	–	–	–	–	–	–	–	–
	T9335	0.4	130	0.20	1.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
VNMG 160408E-M	**T5305**	0.8	205	0.30	1.4	–	–	–	190	0.30	1.4	–	–	–	–	–	–	40	0.15	1.0
	T5315	0.8	185	0.30	1.4	–	–	–	175	0.30	1.4	–	–	–	–	–	–	35	0.15	1.0
	T9310	0.8	185	0.30	1.4	–	–	–	175	0.30	1.4	–	–	–	–	–	–	35	0.15	1.0
	T9315	0.8	170	0.30	1.4	–	–	–	160	0.30	1.4	–	–	–	–	–	–	30	0.15	1.0
	T9325	0.8	150	0.30	1.4	–	–	–	140	0.30	1.4	–	–	–	–	–	–	–	–	–
	T9335	0.8	130	0.30	1.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
VNMG 160412E-M	**T9325**	1.2	140	0.40	1.4	–	–	–	130	0.40	1.4	–	–	–	–	–	–	–	–	–

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

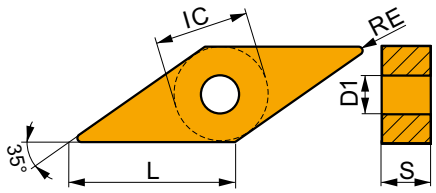
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
NF geometry with highly positive design for fine-finish to medium machining, and continuous cuts.																				
VNMG 160404E-NF	**T6310**	0.4	140	0.12	1.2	100	0.11	1.2	110	0.12	1.2	420	0.14	1.2	40	0.11	1.0	–	–	–
	T7325	0.4	140	0.18	1.2	105	0.16	1.2	–	–	–	–	–	–	45	0.16	1.0	–	–	–
	T7335	0.4	140	0.18	1.2	105	0.16	1.2	–	–	–	–	–	–	45	0.16	1.0	–	–	–
	T8315	0.4	150	0.12	1.2	90	0.11	1.2	140	0.12	1.2	450	0.14	1.2	35	0.11	1.0	–	–	–
	T8330	0.4	140	0.12	1.2	80	0.11	1.2	130	0.12	1.2	420	0.14	1.2	35	0.11	1.0	–	–	–
	T8430	0.4	175	0.12	1.2	95	0.11	1.2	140	0.12	1.2	480	0.14	1.2	35	0.11	1.0	–	–	–
	T9315	0.4	235	0.12	1.2	–	–	–	220	0.12	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.4	180	0.18	1.2	105	0.16	1.2	170	0.18	1.2	–	–	–	40	0.16	1.0	–	–	–
VNMG 160408E-NF	**T6310**	0.8	145	0.17	1.4	100	0.15	1.4	115	0.17	1.4	435	0.20	1.4	40	0.14	1.1	–	–	–
	T7325	0.8	165	0.18	1.4	125	0.16	1.4	–	–	–	–	–	–	50	0.16	1.1	–	–	–
	T7335	0.8	160	0.18	1.4	120	0.16	1.4	–	–	–	–	–	–	50	0.16	1.1	–	–	–
	T8315	0.8	160	0.17	1.4	95	0.15	1.4	150	0.17	1.4	480	0.20	1.4	40	0.14	1.1	–	–	–
	T8330	0.8	150	0.17	1.4	90	0.15	1.4	140	0.17	1.4	450	0.20	1.4	35	0.14	1.1	–	–	–
	T8430	0.8	175	0.17	1.4	95	0.15	1.4	140	0.17	1.4	480	0.20	1.4	35	0.14	1.1	–	–	–
	T9315	0.8	240	0.17	1.4	–	–	–	225	0.17	1.4	–	–	–	–	–	–	–	–	–
	T9325	0.8	210	0.18	1.4	125	0.16	1.4	195	0.18	1.4	–	–	–	45	0.16	1.1	–	–	–
																				
NM geometry with highly positive design for fine-finish, medium and rough machining, with continuous cuts.																				
VNMG 160404E-NM	**T7325**	0.4	145	0.20	1.2	110	0.18	1.2	–	–	–	–	–	–	45	0.20	1.0	–	–	–
	T7335	0.4	140	0.20	1.2	105	0.18	1.2	–	–	–	–	–	–	45	0.20	1.0	–	–	–
	T8315	0.4	135	0.20	1.2	80	0.18	1.2	–	–	–	405	0.24	1.2	30	0.20	1.0	–	–	–
	T8330	0.4	125	0.20	1.2	75	0.18	1.2	–	–	–	375	0.24	1.2	30	0.20	1.0	–	–	–
	T8430	0.4	145	0.20	1.2	80	0.18	1.2	–	–	–	405	0.24	1.2	30	0.20	1.0	–	–	–
	T9325	0.4	180	0.20	1.2	105	0.18	1.2	–	–	–	–	–	–	40	0.20	1.0	–	–	–
VNMG 160408E-NM	**T7325**	0.8	160	0.25	1.4	120	0.23	1.4	–	–	–	–	–	–	50	0.20	1.1	–	–	–
	T7335	0.8	155	0.25	1.4	120	0.23	1.4	–	–	–	–	–	–	50	0.20	1.1	–	–	–
	T8315	0.8	145	0.25	1.4	85	0.23	1.4	–	–	–	435	0.30	1.4	35	0.20	1.1	–	–	–
	T8330	0.8	140	0.25	1.4	80	0.23	1.4	–	–	–	420	0.30	1.4	35	0.20	1.1	–	–	–
	T8430	0.8	155	0.25	1.4	85	0.23	1.4	–	–	–	435	0.30	1.4	30	0.20	1.1	–	–	–
	T9325	0.8	190	0.25	1.4	110	0.23	1.4	–	–	–	–	–	–	40	0.20	1.1	–	–	–
																				
NMR geometry with positive design for medium to rough machining, and continuous cuts.																				
VNMG 160404E-NMR	**T7325**	0.4	125	0.20	1.2	95	0.18	1.2	–	–	–	–	–	–	40	0.18	1.0	–	–	–
	T7335	0.4	120	0.20	1.2	90	0.18	1.2	–	–	–	–	–	–	35	0.18	1.0	–	–	–
	T9325	0.4	155	0.20	1.2	90	0.18	1.2	–	–	–	–	–	–	30	0.18	1.0	–	–	–
VNMG 160408E-NMR	**T7325**	0.8	130	0.30	1.4	100	0.27	1.4	–	–	–	–	–	–	40	0.24	1.1	–	–	–
	T7335	0.8	125	0.30	1.4	95	0.27	1.4	–	–	–	–	–	–	40	0.24	1.1	–	–	–
	T8430	0.8	125	0.30	1.4	65	0.27	1.4	–	–	–	–	–	–	25	0.24	1.1	–	–	–
	T9315	0.8	170	0.30	1.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	150	0.30	1.4	90	0.27	1.4	–	–	–	–	–	–	30	0.24	1.1	–	–	–
VNMG 160412E-NMR	**T7325**	1.2	140	0.30	1.4	105	0.27	1.4	–	–	–	–	–	–	45	0.24	1.1	–	–	–
	T8330	1.2	120	0.30	1.4	70	0.27	1.4	–	–	–	–	–	–	30	0.24	1.1	–	–	–
	T8430	1.2	130	0.30	1.4	70	0.27	1.4	–	–	–	–	–	–	25	0.24	1.1	–	–	–
	T9325	1.2	160	0.30	1.4	95	0.27	1.4	–	–	–	–	–	–	35	0.24	1.1	–	–	–

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

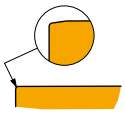
Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]
			SF geometry with positive design for fine-finish machining and for machining thin walls, with continuous cuts.																	
VNMG 160404E-SF	**T6310**	0.4	■ 135	0.12	1.2	■ 95	0.11	1.2	■ 105	0.12	1.2	◪ 405	0.14	1.2	■ 40	0.11	1.0	■ 25	0.15	1.0
	T7325	0.4	◪ 140	0.17	1.2	■ 105	0.15	1.2	–	–	–	–	–	–	■ 45	0.15	1.0	–	–	–
	T8315	0.4	◪ 140	0.12	1.2	■ 80	0.11	1.2	■ 130	0.12	1.2	◪ 420	0.14	1.2	◪ 35	0.11	1.0	■ 25	0.15	1.0
	T8330	0.4	■ 135	0.12	1.2	■ 80	0.11	1.2	■ 125	0.12	1.2	◪ 405	0.14	1.2	◪ 30	0.11	1.0	◪ 25	0.15	1.0
	T8430	0.4	■ 165	0.12	1.2	■ 90	0.11	1.2	◪ 135	0.12	1.2	◪ 450	0.14	1.2	◪ 35	0.11	1.0	◪ 25	0.15	1.0
	T9315	0.4	■ 225	0.12	1.2	–	–	–	◪ 210	0.12	1.2	–	–	–	–	–	–	◪ 45	0.15	1.0
	T9325	0.4	■ 175	0.17	1.2	■ 105	0.15	1.2	◪ 165	0.17	1.2	–	–	–	◪ 35	0.15	1.0	–	–	–
VNMG 160408E-SF	**T6310**	0.8	■ 140	0.17	1.4	■ 100	0.15	1.4	■ 110	0.17	1.4	◪ 420	0.20	1.4	■ 40	0.14	1.1	■ 25	0.15	1.0
	T8315	0.8	◪ 150	0.17	1.4	■ 90	0.15	1.4	■ 140	0.17	1.4	◪ 450	0.20	1.4	◪ 35	0.14	1.1	■ 30	0.15	1.0
	T8330	0.8	■ 145	0.17	1.4	■ 85	0.15	1.4	■ 135	0.17	1.4	◪ 435	0.20	1.4	◪ 35	0.14	1.1	◪ 25	0.15	1.0
	T8430	0.8	■ 165	0.17	1.4	■ 90	0.15	1.4	◪ 135	0.17	1.4	◪ 450	0.20	1.4	◪ 35	0.14	1.1	◪ 25	0.15	1.0
	T9315	0.8	■ 230	0.17	1.4	–	–	–	◪ 215	0.17	1.4	–	–	–	–	–	–	◪ 45	0.15	1.0
	T9325	0.8	■ 205	0.17	1.4	■ 120	0.15	1.4	◪ 190	0.17	1.4	–	–	–	◪ 45	0.15	1.1	–	–	–
VNMG 160412E-SF	**T6310**	1.2	■ 145	0.20	1.4	■ 100	0.18	1.4	■ 115	0.20	1.4	◪ 435	0.24	1.4	■ 40	0.16	1.1	■ 25	0.15	1.0
	T7325	1.2	◪ 165	0.20	1.4	■ 125	0.18	1.4	–	–	–	–	–	–	■ 50	0.16	1.1	–	–	–
			SM geometry with positive design for medium machining, and continuous to interrupted cuts.																	
VNMG 160404E-SM	**T6310**	0.4	■ 120	0.18	1.2	■ 85	0.16	1.2	■ 95	0.18	1.2	◪ 360	0.22	1.2	■ 35	0.16	1.0	◪ 20	0.15	1.0
	T7325	0.4	◪ 135	0.18	1.2	■ 105	0.16	1.2	–	–	–	–	–	–	■ 40	0.16	1.0	–	–	–
	T7335	0.4	◪ 135	0.18	1.2	■ 105	0.16	1.2	–	–	–	–	–	–	■ 40	0.16	1.0	–	–	–
	T8330	0.4	■ 120	0.18	1.2	■ 70	0.16	1.2	■ 110	0.18	1.2	◪ 360	0.22	1.2	◪ 30	0.16	1.0	◪ 20	0.15	1.0
	T8430	0.4	■ 135	0.18	1.2	■ 75	0.16	1.2	◪ 110	0.18	1.2	◪ 375	0.22	1.2	◪ 25	0.16	1.0	◪ 20	0.15	1.0
	T9315	0.4	■ 190	0.18	1.2	–	–	–	◪ 180	0.18	1.2	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9325	0.4	■ 170	0.18	1.2	■ 100	0.16	1.2	◪ 160	0.18	1.2	–	–	–	◪ 35	0.16	1.0	–	–	–
VNMG 160408E-SM	**T6310**	0.8	■ 125	0.25	1.4	■ 90	0.23	1.4	■ 100	0.25	1.4	◪ 375	0.30	1.4	■ 35	0.20	1.1	◪ 25	0.15	1.0
	T7325	0.8	◪ 145	0.25	1.4	■ 110	0.23	1.4	–	–	–	–	–	–	■ 45	0.20	1.1	–	–	–
	T8330	0.8	■ 125	0.25	1.4	■ 75	0.23	1.4	■ 115	0.25	1.4	◪ 375	0.30	1.4	◪ 30	0.20	1.1	◪ 25	0.15	1.0
	T8430	0.8	■ 140	0.25	1.4	■ 75	0.23	1.4	◪ 115	0.25	1.4	◪ 390	0.30	1.4	◪ 30	0.20	1.1	◪ 20	0.15	1.0
	T9315	0.8	■ 195	0.25	1.4	–	–	–	◪ 185	0.25	1.4	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9325	0.8	■ 170	0.25	1.4	■ 100	0.23	1.4	◪ 160	0.25	1.4	–	–	–	◪ 35	0.20	1.1	–	–	–
VNMG 160412E-SM	**T6310**	1.2	■ 125	0.30	1.4	■ 90	0.27	1.4	■ 100	0.30	1.4	◪ 375	0.36	1.4	■ 35	0.24	1.1	◪ 25	0.15	1.0

VNGA CER

	IC [mm]	D1 [mm]	L [mm]	S [mm]
1604	9.525	3.81	16.60	4.76

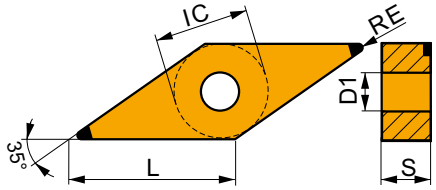


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

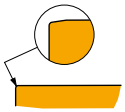
Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			HSC T																	
			For machining with high speeds and continuous cuts.																	
VNGA 160404 T01020	**TC100**	0.4	–	–	–	–	–	–	425	0.10	1.0	–	–	–	–	–	–	–	–	–
VNGA 160408 T01020	**TC100**	0.8	–	–	–	–	–	–	395	0.20	1.0	–	–	–	–	–	–	–	–	–

VNGA CBN

	IC [mm]	D1 [mm]	L [mm]	S [mm]
1604	9.525	3.81	16.00	4.76



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
			HSC S																	
			For finish machining and continuous cuts.																	
VNGA 160404S01020B	**TB310**	0.4	–	–	–	–	–	–	360	0.10	0.4	–	–	–	95	0.07	0.3	75	0.15	1.0
VNGA 160408S01020B	**TB310**	0.8	–	–	–	–	–	–	370	0.15	0.6	–	–	–	95	0.11	0.5	75	0.15	1.0

DVJN(RL) EXT

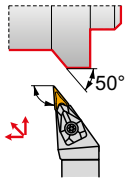
P M K N S H

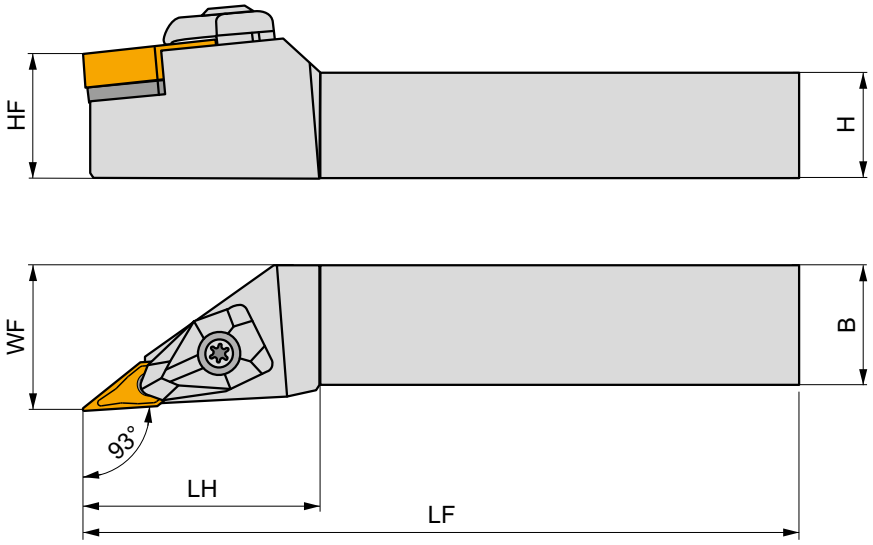
PRAMET

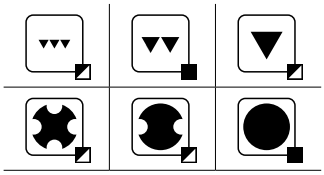
D

External Double Clamp Holder with 93° Cutting Angle for VN.. Insert

External Right/Left hand double clamp tool holder with 93° cutting angle. Suited for longitudinal turning with shoulder, copy and taper turing and chamfering with negative VN.. 16 size inserts. Available in 20x20 up to 32x32 mm shank. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	DVJNR 2020 K 16	20	20	20	25	125	46.4	-13	-4	0.43	GI048	DV16
	DVJNR 2525 M 16	25	25	25	32	150	46.4	-13	-4	0.75	GI048	DV16
	DVJNR 3225 P 16	32	25	32	32	170	46.4	-13	-4	1.05	GI048	DV16
L	DVJNL 2020 K 16	20	20	20	25	125	46.4	-13	-4	0.43	GI048	DV16
	DVJNL 2525 M 16	25	25	25	32	150	46.4	-13	-4	0.75	GI048	DV16
	DVJNL 3225 P 16	32	25	32	32	170	46.4	-13	-4	1.06	GI048	DV16

GI048	VN.. 1604..

DV16	DCS 16V	3.0	DVS 269-01	US 2009-T15P	FLAG T15P/3,5

DVPN(RL) EXT

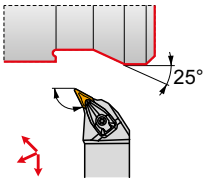
P M K N S H

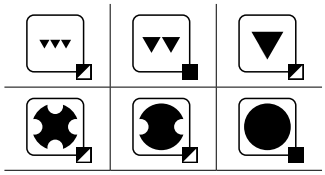
PRAMET

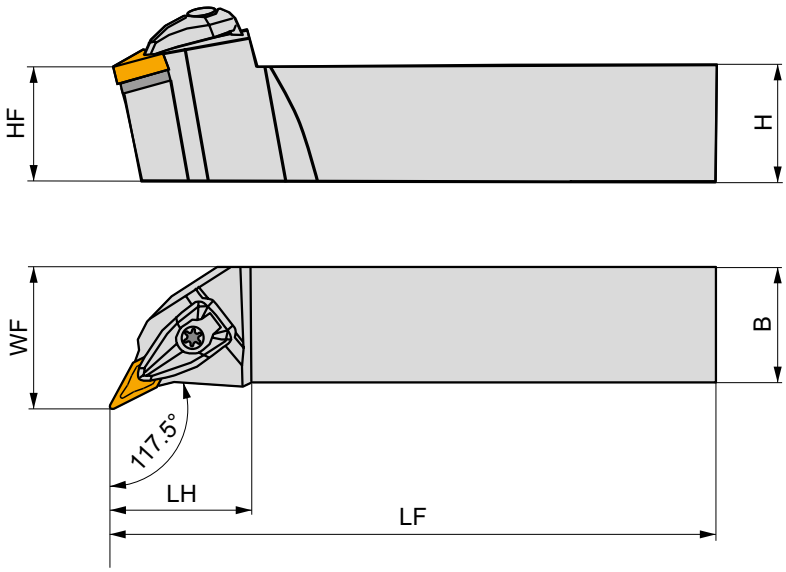
D

External Double Clamp Holder with 117.5° Cutting Angle for VN.. Insert

External Right/Left hand double clamp tool holder with 117.5° Cutting Angle. Suited for longitudinal and face turning with shoulder, copy and taper turning and chamfering with negative VN.. 16 size inserts. Available in 25x25 and 32x25 mm shank. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	**DVPNR 2525 M 16**	25	25	25	32	150	39.2	-13	-4	0.75	GI048	DV16
	DVPNR 3225 P 16	32	25	32	32	170	39.2	-13	-4	1.06	GI048	DV16
L	**DVPNL 2525 M 16**	25	25	25	32	150	39.2	-13	-4	0.74	GI048	DV16
	DVPNL 3225 P 16	32	25	32	32	170	39.2	-13	-4	1.06	GI048	DV16

GI048	VN.. 1604..

DV16	DCS 16V	3.0	DVS 269-01	US 2009-T15P	FLAG T15P/3,5

MVJN(RL) EXT

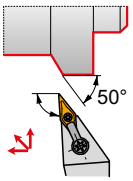
P M K N S H

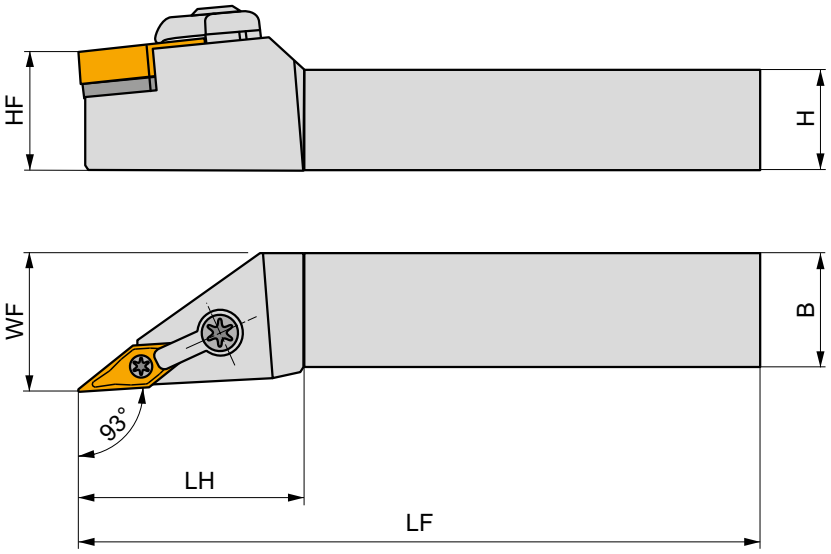
PRAMET

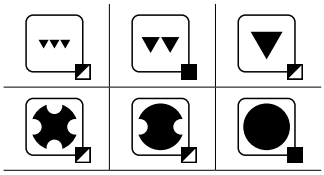
M

External Multi-Clamp Holder with 93° Cutting Angle for VN.. Insert

External Right/Left hand multi-clamp turning holder with 93° cutting angle. Suited for longitudinal turning with shoulder, copy turning up to 50°, taper and chamfer turning with negative VN.. 16 insert. Available with shank size 20x20 up to 32x25 mm. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	MVJNR 2020 K 16-A	20	20	20	25	125	41	-4.5	-13.5	0.40	GI048	MV2
	MVJNR 2525 M 16-A	25	25	25	32	150	41	-4.5	-13.5	0.70	GI048	MV2
	MVJNR 3225 P 16-A	32	25	32	32	170	41	-4.5	-13.5	0.98	GI048	MV2
L	MVJNL 2020 K 16-A	20	20	20	25	125	41	-4.5	-13.5	0.40	GI048	MV2
	MVJNL 2525 M 16-A	25	25	25	32	150	41	-4.5	-13.5	0.70	GI048	MV2
	MVJNL 3225 P 16-A	32	25	32	32	170	41	-4.5	-13.5	0.96	GI048	MV2

GI048	VN.. 1604..

MV2	UPC 22	MVN 160316	UP 0909-T09P	2.0	PS 6026-T09P	2.0	FLAG T09P

C.-DVJN(RL) EXT

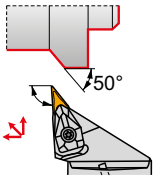
P M K N S H

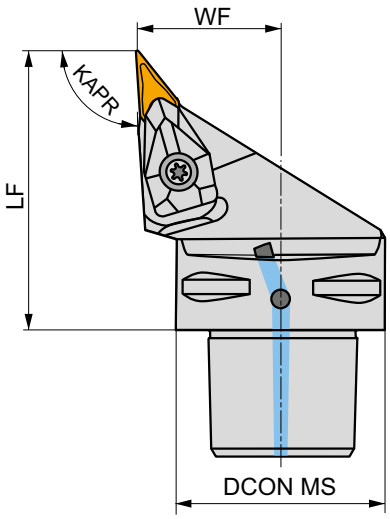
PRAMET

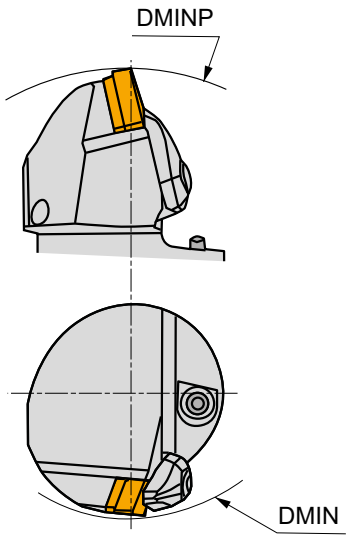
D

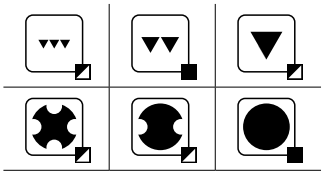
External PSC Quick Change Tool, Double Clamp, 93° Cutting Angle, VN.. Insert

External Right/Left hand double clamp tool, through coolant, with 93° cutting angle for longitudinal turning with shoulder, copy and taper turning and chamfering with negative VN.. 16 size inserts. Available with PSC (Polygon Shank Coupling) C4 up to C6 shank. Body treated for longer tool life.









	Product	DCON MS [mm]	DMIN [mm]	DMINP [mm]	WF [mm]	LF [mm]	KAPR [°]	LAMS [°]	GAMO [°]		kg		
R	**C4-DVJNR-27062-16**	40	60	152	27	62	93	-13	-4	✓	0.45	GI048	C-DV16-1
	C5-DVJNR-35065-16	50	65	170	35	65	93	-13	-4	✓	0.47	GI048	C-DV16-2
	C6-DVJNR-45065-16	63	81	190	45	65	93	-13	-4	✓	1.13	GI048	C-DV16-2
L	**C4-DVJNL-27062-16**	40	60	152	27	62	93	-13	-4	✓	0.45	GI048	C-DV16-1
	C5-DVJNL-35065-16	50	65	170	35	65	93	-13	-4	✓	0.72	GI048	C-DV16-2
	C6-DVJNL-45065-16	63	81	190	45	65	93	-13	-4	✓	1.13	GI048	C-DV16-2

GI048	VN.. 1604..

		Nm				
C-DV16-1	DCS 16V	3.0	DVS 269-01	US 2009-T15P	FLAG T15P/3,5	CN 034-01
C-DV16-2	DCS 16V	3.0	DVS 269-01	US 2009-T15P	FLAG T15P/3,5	CN 034-02

DVUN(RL) INT

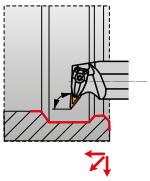
P M K N S H

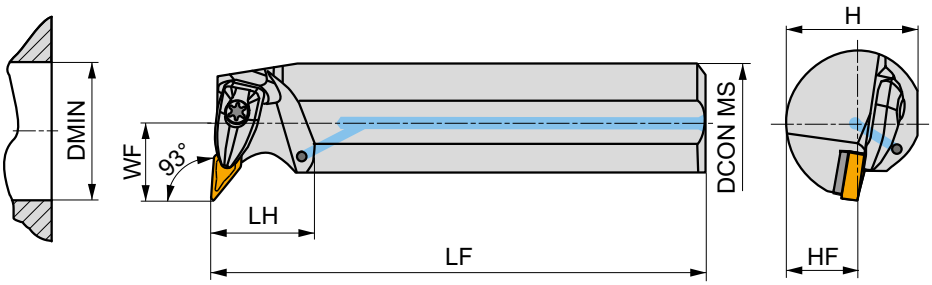
PRAMET

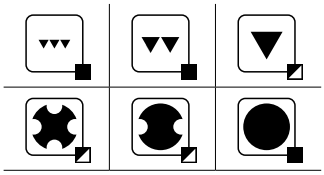
D

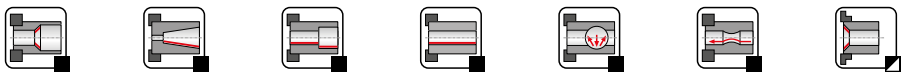
Internal Double Clamp Boring Bar with 93° Cutting Angle for VN.. Insert

Internal Right/Left hand double clamp boring bar, through coolant, with 93° cutting angle for VN.. 16 inserts. Minimum internal turning diameter Ø50 mm. Suited for internal taper, longitudinal turning with shoulder, copying and chamfer turning. Available with shank size Ø40 mm only. Body treated for longer tool life.









	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	H [mm]	HF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]		kg		
R	**A40T-DVUNR 16**	40	50	27	37	18.5	300	36	-9	-6	✓	2.59	GI048	DV16
L	**A40T-DVUNL 16**	40	50	27	37	18.5	300	36	-9	-6	✓	2.59	GI048	DV16

GI048	VN.. 1604..

DV16	DCS 16V	3.0 Nm	DVS 269-01	US 2009-T15P	FLAG T15P/3,5

WN

06/ 08/ 10/ 13

CARBIDE INSERTS

WNMA

366

WNMG

366

WNMM

375

CER AND CBN INSERTS

WNGA CBN

376

MATCH THE RIGHT SIZE (example)	
Insert	**Tool Holder**
WNMA **08**0408	DWLNL 2020 K **08**

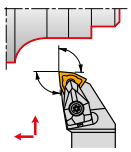
ISO TURNING – EXTERNAL

DWLN(RL) EXT

95°

WN..

06
08
10
13



16×16
40×40

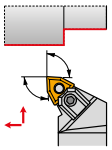
377 | 366 – 376

MWLN(RL) EXT

95°

WN..

08



25×25
40×40

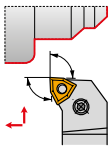
379 | 366 – 376

PWLN(RL) EXT

95°

WN..

06
08



16×16
32×25

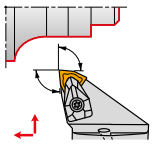
380 | 366 – 376

C.-DWLN(RL) EXT

95°

WN..

06
08



C4
C6

381 | 366 – 376

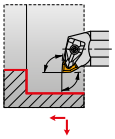
ISO TURNING – INTERNAL

DWLN(RL) INT

95°

WN..

06
08



32
63

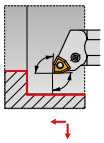
382 | 366 – 376

PWLN(RL) INT

95°

WN..

06
08



20
80

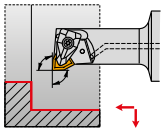
383 | 366 – 376

C.-DWLN(RL) INT

95°

WN..

06
08



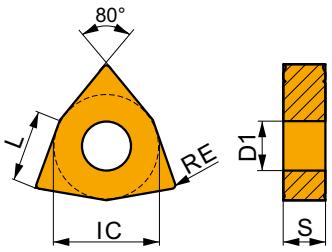
27
33

385 | 366 – 376

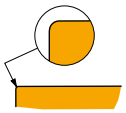
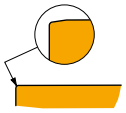
WNMA

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
0804	12.700	5.16	8.70	4.76



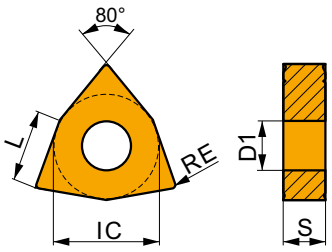
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
	E																			
	For fine-finish to semi-rough machining, and continuous to slightly interrupted cuts.																			
WNMA 080404	**T5305**	0.4	–	–	–	–	–	–	235	0.10	4.0	–	–	–	–	–	–	50	0.15	1.0
	T5315	0.4	–	–	–	–	–	–	200	0.10	4.0	–	–	–	–	–	–	40	0.15	1.0
WNMA 080408	**T5305**	0.8	–	–	–	–	–	–	220	0.20	4.0	–	–	–	–	–	–	45	0.15	1.0
	T5315	0.8	–	–	–	–	–	–	190	0.20	4.0	–	–	–	–	–	–	40	0.15	1.0
	T6310	0.8	–	–	–	–	–	–	100	0.20	4.0	–	–	–	–	–	–	25	0.15	1.0
WNMA 080412	**T5305**	1.2	–	–	–	–	–	–	195	0.30	4.0	–	–	–	–	–	–	40	0.15	1.0
	T5315	1.2	–	–	–	–	–	–	180	0.30	4.0	–	–	–	–	–	–	35	0.15	1.0
	T6310	1.2	–	–	–	–	–	–	95	0.30	4.0	–	–	–	–	–	–	20	0.15	1.0
	S																			
	For fine-finish to semi-rough machining and continuous to slightly interrupted cuts.																			
WNMA 080408S	**T5305**	0.8	–	–	–	–	–	–	220	0.20	4.0	–	–	–	–	–	–	45	0.15	1.0

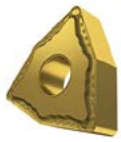
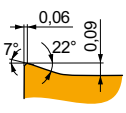
WNMG

PRAMET

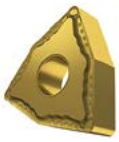
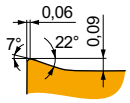
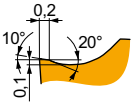
	IC [mm]	D1 [mm]	L [mm]	S [mm]
0604	9.525	3.81	6.50	4.76
06T3	9.525	3.81	6.50	3.97
0804	12.700	5.16	8.70	4.76



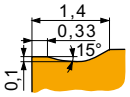
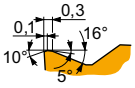
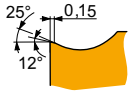
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
 	U S																			
	FF geometry with highly positive design for fine-finish machining, and continuous to slightly interrupted cuts.																			
WNMG 060402E-FF	**T8315**	0.2	215	0.10	1.0	125	0.09	1.0	200	0.10	1.0	–	–	–	–	–	–	–	–	–
WNMG 060404E-FF	**T8315**	0.4	220	0.12	1.0	130	0.11	1.0	205	0.12	1.0	–	–	–	–	–	–	–	–	–

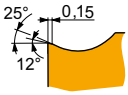
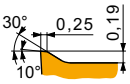
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
			FF geometry with highly positive design for fine-finish machining, and continuous to slightly interrupted cuts.																	
WNMG 080404E-FF	**T7325**	0.4	235	0.12	1.0	180	0.11	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	220	0.12	1.0	130	0.11	1.0	205	0.12	1.0	–	–	–	–	–	–	–	–	–
WNMG 080408E-FF	**T7325**	0.8	265	0.15	1.0	205	0.14	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	245	0.15	1.0	145	0.14	1.0	230	0.15	1.0	–	–	–	–	–	–	–	–	–
																				
			FM geometry with positive design for finish to semi-rough machining, and continuous to slightly interrupted cuts.																	
WNMG 060404E-FM	**T7325**	0.4	195	0.20	1.4	150	0.18	1.4	–	–	–	–	–	–	60	0.16	1.1	–	–	–
	T8315	0.4	180	0.20	1.4	105	0.18	1.4	170	0.20	1.4	–	–	–	45	0.14	1.1	–	–	–
	T8330	0.4	175	0.20	1.4	105	0.18	1.4	165	0.20	1.4	–	–	–	40	0.14	1.1	–	–	–
	T8430	0.4	195	0.20	1.4	105	0.18	1.4	160	0.20	1.4	–	–	–	40	0.14	1.1	–	–	–
	T9315	0.4	265	0.20	1.4	–	–	–	250	0.20	1.4	–	–	–	–	–	–	–	–	–
	T9325	0.4	240	0.20	1.4	140	0.18	1.4	225	0.20	1.4	–	–	–	50	0.16	1.1	–	–	–
	TT310	0.4	275	0.20	1.4	165	0.18	1.4	–	–	–	–	–	–	–	–	–	–	–	–
WNMG 060408E-FM	**T7325**	0.8	235	0.20	1.4	180	0.18	1.4	–	–	–	–	–	–	75	0.16	1.1	–	–	–
	T8330	0.8	205	0.20	1.4	120	0.18	1.4	190	0.20	1.4	–	–	–	50	0.14	1.1	–	–	–
	T8430	0.8	235	0.20	1.4	125	0.18	1.4	190	0.20	1.4	–	–	–	50	0.14	1.1	–	–	–
	T9315	0.8	315	0.20	1.4	–	–	–	295	0.20	1.4	–	–	–	–	–	–	–	–	–
	T9325	0.8	285	0.20	1.4	170	0.18	1.4	270	0.20	1.4	–	–	–	60	0.16	1.1	–	–	–
WNMG 060412E-FM	**T9315**	1.2	300	0.27	1.2	–	–	–	285	0.27	1.2	–	–	–	–	–	–	–	–	–
WNMG 06T304E-FM	**T7325**	0.4	195	0.20	1.4	150	0.18	1.4	–	–	–	–	–	–	60	0.16	1.1	–	–	–
	T8330	0.4	175	0.20	1.4	105	0.18	1.4	165	0.20	1.4	–	–	–	40	0.14	1.1	–	–	–
	T8430	0.4	195	0.20	1.4	105	0.18	1.4	160	0.20	1.4	–	–	–	40	0.14	1.1	–	–	–
	T9325	0.4	240	0.20	1.4	140	0.18	1.4	225	0.20	1.4	–	–	–	50	0.16	1.1	–	–	–
WNMG 06T308E-FM	**T8330**	0.8	205	0.20	1.4	120	0.18	1.4	190	0.20	1.4	–	–	–	50	0.14	1.1	–	–	–
	T8430	0.8	235	0.20	1.4	125	0.18	1.4	190	0.20	1.4	–	–	–	50	0.14	1.1	–	–	–
	T9325	0.8	285	0.20	1.4	170	0.18	1.4	270	0.20	1.4	–	–	–	60	0.16	1.1	–	–	–
WNMG 080404E-FM	**T7325**	0.4	190	0.20	1.9	145	0.18	1.9	–	–	–	–	–	–	60	0.16	1.5	–	–	–
	T7335	0.4	180	0.20	1.9	140	0.18	1.9	–	–	–	–	–	–	55	0.16	1.5	–	–	–
	T8315	0.4	180	0.20	1.9	105	0.18	1.9	170	0.20	1.9	–	–	–	45	0.14	1.5	–	–	–
	T8330	0.4	165	0.20	1.9	95	0.18	1.9	155	0.20	1.9	–	–	–	40	0.14	1.5	–	–	–
	T8430	0.4	190	0.20	1.9	105	0.18	1.9	155	0.20	1.9	–	–	–	40	0.14	1.5	–	–	–
	T9310	0.4	285	0.20	1.9	–	–	–	270	0.20	1.9	–	–	–	–	–	–	–	–	–
	T9315	0.4	270	0.20	1.2	–	–	–	255	0.20	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.4	245	0.20	1.2	145	0.18	1.2	230	0.20	1.2	–	–	–	55	0.16	1.0	–	–	–
WNMG 080408E-FM	**T7325**	0.8	225	0.20	1.9	175	0.18	1.9	–	–	–	–	–	–	70	0.16	1.5	–	–	–
	T7335	0.8	215	0.20	1.9	165	0.18	1.9	–	–	–	–	–	–	65	0.16	1.5	–	–	–
	T8315	0.8	210	0.20	1.9	125	0.18	1.9	195	0.20	1.9	–	–	–	50	0.16	1.5	–	–	–
	T8330	0.8	195	0.20	1.9	115	0.18	1.9	185	0.20	1.9	–	–	–	45	0.16	1.5	–	–	–
	T8430	0.8	225	0.20	1.9	120	0.18	1.9	185	0.20	1.9	–	–	–	45	0.16	1.5	–	–	–
	T9310	0.8	335	0.20	1.9	–	–	–	315	0.20	1.9	–	–	–	–	–	–	–	–	–
	T9315	0.8	310	0.20	1.9	–	–	–	290	0.20	1.9	–	–	–	–	–	–	–	–	–
	T9325	0.8	280	0.20	1.9	165	0.18	1.9	265	0.20	1.9	–	–	–	60	0.16	1.5	–	–	–
WNMG 080412E-FM	**T7325**	1.2	220	0.27	1.9	170	0.24	1.9	–	–	–	–	–	–	70	0.19	1.5	–	–	–
	T7335	1.2	205	0.27	1.9	155	0.24	1.9	–	–	–	–	–	–	65	0.19	1.5	–	–	–
	T8330	1.2	190	0.27	1.9	110	0.24	1.9	180	0.27	1.9	–	–	–	45	0.19	1.5	–	–	–
	T8430	1.2	210	0.27	1.9	115	0.24	1.9	175	0.27	1.9	–	–	–	45	0.19	1.5	–	–	–
	T9310	1.2	310	0.27	1.9	–	–	–	290	0.27	1.9	–	–	–	–	–	–	–	–	–
	T9315	1.2	285	0.27	1.9	–	–	–	270	0.27	1.9	–	–	–	–	–	–	–	–	–
	T9325	1.2	255	0.27	1.9	150	0.24	1.9	240	0.27	1.9	–	–	–	55	0.19	1.5	–	–	–

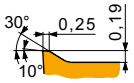
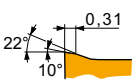
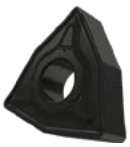
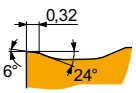
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]
																				
KR geometry for semi-rough to rough machining, and continuous to interrupted cuts.																				
WNMG 080408E-KR	**T5305**	0.8	◪ 255	0.35	3.5	–	–	–	■ 240	0.35	3.5	–	–	–	–	–	–	◪ 50	0.15	1.0
	T5315	0.8	◪ 230	0.35	3.5	–	–	–	■ 215	0.35	3.5	–	–	–	–	–	–	◪ 45	0.15	1.0
WNMG 080412E-KR	**T5305**	1.2	◪ 260	0.40	3.5	–	–	–	■ 245	0.40	3.5	–	–	–	–	–	–	◪ 50	0.15	1.0
	T5315	1.2	◪ 235	0.40	3.5	–	–	–	■ 220	0.40	3.5	–	–	–	–	–	–	◪ 45	0.15	1.0
																				
M geometry for finish to semi-rough machining, and continuous to interrupted cuts.																				
WNMG 060404E-M	**T5315**	0.4	◪ 250	0.20	1.8	–	–	–	■ 235	0.20	1.8	–	–	–	–	–	–	◪ 50	0.15	1.0
	T9315	0.4	■ 240	0.20	1.8	–	–	–	◪ 225	0.20	1.8	–	–	–	–	–	–	◪ 45	0.15	1.0
	T9325	0.4	■ 215	0.20	1.8	–	–	–	◪ 200	0.20	1.8	–	–	–	–	–	–	–	–	–
	T9335	0.4	■ 180	0.20	1.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
WNMG 060408E-M	**T5315**	0.8	◪ 255	0.32	1.8	–	–	–	■ 240	0.32	1.8	–	–	–	–	–	–	◪ 50	0.15	1.0
	T9310	0.8	■ 250	0.32	1.8	–	–	–	◪ 235	0.32	1.8	–	–	–	–	–	–	◪ 50	0.15	1.0
	T9315	0.8	■ 230	0.32	1.8	–	–	–	◪ 215	0.32	1.8	–	–	–	–	–	–	◪ 45	0.15	1.0
	T9325	0.8	■ 205	0.32	1.8	–	–	–	◪ 190	0.32	1.8	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 180	0.32	1.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
WNMG 080404E-M	**T5315**	0.4	◪ 260	0.20	1.2	–	–	–	■ 245	0.20	1.2	–	–	–	–	–	–	◪ 50	0.15	1.0
	T9315	0.4	■ 235	0.20	2.1	–	–	–	◪ 220	0.20	2.1	–	–	–	–	–	–	◪ 45	0.15	1.0
	T9325	0.4	■ 210	0.20	2.1	–	–	–	◪ 195	0.20	2.1	–	–	–	–	–	–	–	–	–
	T9335	0.4	■ 180	0.20	2.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
WNMG 080408E-M	**T5305**	0.8	◪ 280	0.32	2.1	–	–	–	■ 265	0.32	2.1	–	–	–	–	–	–	◪ 55	0.15	1.0
	T5315	0.8	◪ 250	0.32	2.1	–	–	–	■ 235	0.32	2.1	–	–	–	–	–	–	◪ 50	0.15	1.0
	T8330	0.8	■ 155	0.32	2.1	–	–	–	■ 145	0.32	2.1	–	–	–	–	–	–	◪ 30	0.15	1.0
	T8430	0.8	■ 170	0.32	2.1	–	–	–	◪ 135	0.32	2.1	–	–	–	–	–	–	◪ 25	0.15	1.0
	T9310	0.8	■ 245	0.32	2.1	–	–	–	◪ 230	0.32	2.1	–	–	–	–	–	–	◪ 45	0.15	1.0
	T9315	0.8	■ 225	0.32	2.1	–	–	–	◪ 210	0.32	2.1	–	–	–	–	–	–	◪ 45	0.15	1.0
	T9325	0.8	■ 200	0.32	2.1	–	–	–	◪ 190	0.32	2.1	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 180	0.32	2.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
WNMG 080412E-M	**T5305**	1.2	◪ 275	0.40	2.1	–	–	–	■ 260	0.40	2.1	–	–	–	–	–	–	◪ 55	0.15	1.0
	T5315	1.2	◪ 245	0.40	2.1	–	–	–	■ 230	0.40	2.1	–	–	–	–	–	–	◪ 45	0.15	1.0
	T9310	1.2	■ 235	0.40	2.1	–	–	–	◪ 220	0.40	2.1	–	–	–	–	–	–	◪ 45	0.15	1.0
	T9315	1.2	■ 220	0.40	2.1	–	–	–	◪ 205	0.40	2.1	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9325	1.2	■ 195	0.40	2.1	–	–	–	◪ 185	0.40	2.1	–	–	–	–	–	–	–	–	–
	T9335	1.2	■ 170	0.40	2.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
																				
NF geometry with highly positive design for fine-finish to medium machining, and continuous cuts.																				
WNMG 060404E-NF	**T6310**	0.4	■ 190	0.17	0.8	■ 135	0.15	0.8	◪ 150	0.17	0.8	◪ 570	0.20	0.8	◪ 55	0.12	0.6	–	–	–
	T7325	0.4	◪ 215	0.18	0.8	■ 165	0.16	0.8	–	–	–	–	–	–	◪ 65	0.16	0.6	–	–	–
	T7335	0.4	◪ 210	0.18	0.8	■ 160	0.16	0.8	–	–	–	–	–	–	◪ 65	0.16	0.6	–	–	–
	T8315	0.4	◪ 200	0.17	0.8	■ 120	0.15	0.8	◪ 190	0.17	0.8	◪ 600	0.20	0.8	◪ 50	0.12	0.6	–	–	–
	T8330	0.4	■ 190	0.17	0.8	■ 110	0.15	0.8	◪ 180	0.17	0.8	◪ 570	0.20	0.8	◪ 45	0.12	0.6	–	–	–
	T8430	0.4	■ 225	0.17	0.8	■ 120	0.15	0.8	◪ 185	0.17	0.8	◪ 615	0.20	0.8	◪ 45	0.12	0.6	–	–	–
	T9315	0.4	■ 305	0.17	0.8	–	–	–	◪ 285	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 265	0.18	0.8	■ 155	0.16	0.8	◪ 250	0.18	0.8	–	–	–	◪ 55	0.16	0.6	–	–	–
WNMG 060408E-NF	**T6310**	0.8	■ 215	0.19	1.0	■ 150	0.17	1.0	◪ 170	0.19	1.0	◪ 645	0.23	1.0	◪ 60	0.15	0.8	–	–	–
	T7325	0.8	◪ 245	0.19	1.0	■ 190	0.17	1.0	–	–	–	–	–	–	◪ 75	0.15	0.8	–	–	–
	T8330	0.8	■ 215	0.19	1.0	■ 125	0.17	1.0	◪ 200	0.19	1.0	◪ 645	0.23	1.0	◪ 50	0.15	0.8	–	–	–
	T8430	0.8	■ 245	0.19	1.0	■ 135	0.17	1.0	◪ 200	0.19	1.0	◪ 675	0.23	1.0	◪ 50	0.15	0.8	–	–	–
	T9315	0.8	■ 335	0.19	1.0	–	–	–	◪ 315	0.19	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 300	0.19	1.0	■ 180	0.17	1.0	◪ 285	0.19	1.0	–	–	–	◪ 65	0.15	0.8	–	–	–

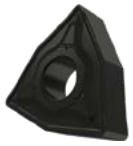
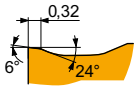
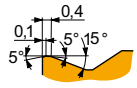
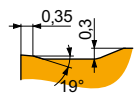
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
NF geometry with highly positive design for fine-finish to medium machining, and continuous cuts.																				
WNMG 080404E-NF	**HF7**	0.4	–	–	–	95	0.15	1.7	155	0.17	1.7	495	0.20	1.7	–	–	–	–	–	–
	T6310	0.4	180	0.17	1.7	125	0.15	1.7	145	0.17	1.7	540	0.20	1.7	50	0.14	1.4	–	–	–
	T7325	0.4	200	0.18	1.7	155	0.16	1.7	–	–	–	–	–	–	65	0.16	1.4	–	–	–
	T7335	0.4	195	0.18	1.7	150	0.16	1.7	–	–	–	–	–	–	60	0.16	1.4	–	–	–
	T8315	0.4	185	0.17	1.7	110	0.15	1.7	175	0.17	1.7	555	0.20	1.7	45	0.14	1.4	–	–	–
	T8330	0.4	180	0.17	1.7	105	0.15	1.7	170	0.17	1.7	540	0.20	1.7	45	0.14	1.4	–	–	–
	T8430	0.4	200	0.17	1.7	110	0.15	1.7	165	0.17	1.7	555	0.20	1.7	40	0.14	1.4	–	–	–
	T9315	0.4	285	0.17	1.7	–	–	–	270	0.17	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.4	250	0.18	1.7	150	0.16	1.7	235	0.18	1.7	–	–	–	55	0.16	1.4	–	–	–
WNMG 080408E-NF	**HF7**	0.8	–	–	–	110	0.17	1.7	180	0.19	1.7	570	0.23	1.7	–	–	–	–	–	–
	T6310	0.8	200	0.19	1.7	140	0.17	1.7	160	0.19	1.7	600	0.23	1.7	60	0.15	1.4	–	–	–
	T7325	0.8	235	0.19	1.7	180	0.17	1.7	–	–	–	–	–	–	75	0.15	1.4	–	–	–
	T7335	0.8	225	0.19	1.7	175	0.17	1.7	–	–	–	–	–	–	70	0.15	1.4	–	–	–
	T8315	0.8	215	0.19	1.7	125	0.17	1.7	200	0.19	1.7	645	0.23	1.7	50	0.15	1.4	–	–	–
	T8330	0.8	200	0.19	1.7	120	0.17	1.7	190	0.19	1.7	600	0.23	1.7	50	0.15	1.4	–	–	–
	T8430	0.8	235	0.19	1.7	125	0.17	1.7	190	0.19	1.7	645	0.23	1.7	50	0.15	1.4	–	–	–
	T9315	0.8	320	0.19	1.7	–	–	–	300	0.19	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.8	285	0.19	1.7	170	0.17	1.7	270	0.19	1.7	–	–	–	60	0.15	1.4	–	–	–
WNMG 080412E-NF	**T6310**	1.2	185	0.30	2.1	130	0.27	2.1	145	0.30	2.1	555	0.36	2.1	55	0.21	1.7	–	–	–
	T7325	1.2	205	0.30	2.1	155	0.27	2.1	–	–	–	–	–	–	65	0.21	1.7	–	–	–
	T8430	1.2	200	0.30	2.1	110	0.27	2.1	165	0.30	2.1	555	0.36	2.1	40	0.21	1.7	–	–	–
	T9315	1.2	275	0.30	2.1	–	–	–	260	0.30	2.1	–	–	–	–	–	–	–	–	–
	T9325	1.2	245	0.30	2.1	145	0.27	2.1	230	0.30	2.1	–	–	–	55	0.21	1.7	–	–	–
																				
NM geometry with highly positive design for fine-finish, medium and rough machining, with continuous cuts.																				
WNMG 060404E-NM	**T7325**	0.4	200	0.20	1.8	155	0.18	1.8	–	–	–	–	–	–	65	0.16	1.4	–	–	–
	T7335	0.4	195	0.20	1.8	150	0.18	1.8	–	–	–	–	–	–	60	0.16	1.4	–	–	–
	T8315	0.4	185	0.20	1.8	110	0.18	1.8	–	–	–	555	0.24	1.8	45	0.16	1.4	–	–	–
	T8330	0.4	175	0.20	1.8	105	0.18	1.8	–	–	–	525	0.24	1.8	40	0.16	1.4	–	–	–
	T8430	0.4	185	0.25	1.8	100	0.23	1.8	–	–	–	510	0.30	1.8	40	0.20	1.4	–	–	–
	T9325	0.4	245	0.20	1.8	145	0.18	1.8	–	–	–	–	–	–	55	0.16	1.4	–	–	–
WNMG 060408E-NM	**T7325**	0.8	220	0.25	1.8	170	0.23	1.8	–	–	–	–	–	–	70	0.20	1.4	–	–	–
	T7335	0.8	215	0.25	1.8	165	0.23	1.8	–	–	–	–	–	–	65	0.20	1.4	–	–	–
	T8315	0.8	205	0.25	1.8	120	0.23	1.8	–	–	–	615	0.30	1.8	50	0.20	1.4	–	–	–
	T8330	0.8	195	0.25	1.8	115	0.23	1.8	–	–	–	585	0.30	1.8	45	0.20	1.4	–	–	–
	T8430	0.8	220	0.25	1.8	120	0.23	1.8	–	–	–	600	0.30	1.8	45	0.20	1.4	–	–	–
	T9315	0.8	290	0.25	1.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	265	0.25	1.8	155	0.23	1.8	–	–	–	–	–	–	55	0.20	1.4	–	–	–
WNMG 060412E-NM	**T7325**	1.2	220	0.30	1.8	170	0.27	1.8	–	–	–	–	–	–	70	0.24	1.4	–	–	–
	T7335	1.2	220	0.30	1.2	170	0.27	1.2	–	–	–	–	–	–	70	0.24	1.0	–	–	–
	T9315	1.2	285	0.30	1.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	1.2	255	0.30	1.8	150	0.27	1.8	–	–	–	–	–	–	55	0.24	1.4	–	–	–
WNMG 080404E-NM	**T7325**	0.4	195	0.20	2.1	150	0.18	2.1	–	–	–	–	–	–	60	0.16	1.7	–	–	–
	T7335	0.4	190	0.20	2.1	145	0.18	2.1	–	–	–	–	–	–	60	0.16	1.7	–	–	–
	T8315	0.4	180	0.20	2.1	105	0.18	2.1	–	–	–	540	0.24	2.1	45	0.16	1.7	–	–	–
	T8330	0.4	170	0.20	2.1	100	0.18	2.1	–	–	–	510	0.24	2.1	40	0.16	1.7	–	–	–
	T8430	0.4	180	0.25	2.1	95	0.23	2.1	–	–	–	495	0.30	2.1	35	0.20	1.7	–	–	–
	T9315	0.4	270	0.20	2.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.4	240	0.20	2.1	140	0.18	2.1	–	–	–	–	–	–	50	0.16	1.7	–	–	–

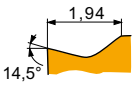
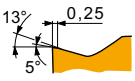
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
		[mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]
																				
NM geometry with highly positive design for fine-finish, medium and rough machining, with continuous cuts.																				
WNMG 080408E-NM	**T7325**	0.8	215	0.25	2.1	165	0.23	2.1	–	–	–	–	–	–	65	0.20	1.7	–	–	–
	T7335	0.8	210	0.25	2.1	160	0.23	2.1	–	–	–	–	–	–	65	0.20	1.7	–	–	–
	T8315	0.8	205	0.25	2.1	120	0.23	2.1	–	–	–	615	0.30	2.1	50	0.20	1.7	–	–	–
	T8330	0.8	195	0.25	2.1	115	0.23	2.1	–	–	–	585	0.30	2.1	45	0.20	1.7	–	–	–
	T8430	0.8	210	0.25	2.1	115	0.23	2.1	–	–	–	585	0.30	2.1	45	0.20	1.7	–	–	–
	T9315	0.8	290	0.25	2.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	260	0.25	2.1	155	0.23	2.1	–	–	–	–	–	–	55	0.20	1.7	–	–	–
WNMG 080412E-NM	**T7325**	1.2	215	0.30	2.1	165	0.27	2.1	–	–	–	–	–	–	65	0.24	1.7	–	–	–
	T7335	1.2	210	0.30	2.1	160	0.27	2.1	–	–	–	–	–	–	65	0.24	1.7	–	–	–
	T8315	1.2	205	0.30	2.1	120	0.27	2.1	–	–	–	615	0.36	2.1	50	0.24	1.7	–	–	–
	T9325	1.2	255	0.30	2.1	150	0.27	2.1	–	–	–	–	–	–	55	0.24	1.7	–	–	–
																				
NMR geometry with positive design for medium to rough machining, and continuous cuts.																				
WNMG 060404E-NMR	**T6310**	0.4	145	0.25	1.6	100	0.23	1.6	–	–	–	–	–	–	40	0.20	1.3	–	–	–
	T7325	0.4	160	0.25	1.6	120	0.23	1.6	–	–	–	–	–	–	50	0.20	1.3	–	–	–
	T8430	0.4	145	0.31	1.6	80	0.28	1.6	–	–	–	–	–	–	30	0.25	1.3	–	–	–
	T9325	0.4	200	0.25	1.6	120	0.23	1.6	–	–	–	–	–	–	45	0.20	1.3	–	–	–
WNMG 060408E-NMR	**T6310**	0.8	155	0.35	1.6	110	0.32	1.6	–	–	–	–	–	–	45	0.25	1.3	–	–	–
	T7325	0.8	175	0.35	1.6	135	0.32	1.6	–	–	–	–	–	–	55	0.25	1.3	–	–	–
	T7335	0.8	170	0.35	1.6	130	0.32	1.6	–	–	–	–	–	–	55	0.25	1.3	–	–	–
	T9315	0.8	225	0.35	1.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	200	0.35	1.6	120	0.32	1.6	–	–	–	–	–	–	45	0.25	1.3	–	–	–
WNMG 080404E-NMR	**T6310**	0.4	140	0.25	2.7	100	0.23	2.7	–	–	–	–	–	–	40	0.20	2.2	–	–	–
	T7325	0.4	155	0.25	2.7	120	0.23	2.7	–	–	–	–	–	–	50	0.20	2.2	–	–	–
	T7335	0.4	150	0.25	2.7	115	0.23	2.7	–	–	–	–	–	–	45	0.20	2.2	–	–	–
	T8330	0.4	140	0.25	2.7	80	0.23	2.7	–	–	–	–	–	–	35	0.20	2.2	–	–	–
	T8430	0.4	140	0.31	2.7	75	0.28	2.7	–	–	–	–	–	–	30	0.25	2.2	–	–	–
	T9315	0.4	205	0.25	2.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.4	185	0.25	2.7	110	0.23	2.7	–	–	–	–	–	–	40	0.20	2.2	–	–	–
WNMG 080408E-NMR	**T6310**	0.8	150	0.35	2.7	105	0.32	2.7	–	–	–	–	–	–	45	0.25	2.2	–	–	–
	T7325	0.8	170	0.35	2.7	130	0.32	2.7	–	–	–	–	–	–	55	0.25	2.2	–	–	–
	T7335	0.8	160	0.35	2.7	120	0.32	2.7	–	–	–	–	–	–	50	0.25	2.2	–	–	–
	T8330	0.8	150	0.35	2.7	90	0.32	2.7	–	–	–	–	–	–	35	0.25	2.2	–	–	–
	T8430	0.8	155	0.35	2.7	85	0.32	2.7	–	–	–	–	–	–	30	0.25	2.2	–	–	–
	T9315	0.8	210	0.35	2.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	190	0.35	2.7	110	0.32	2.7	–	–	–	–	–	–	40	0.25	2.2	–	–	–
WNMG 080412E-NMR	**T6310**	1.2	150	0.40	2.7	105	0.36	2.7	–	–	–	–	–	–	45	0.28	2.2	–	–	–
	T7325	1.2	170	0.40	2.7	130	0.36	2.7	–	–	–	–	–	–	55	0.28	2.2	–	–	–
	T7335	1.2	160	0.40	2.7	120	0.36	2.7	–	–	–	–	–	–	50	0.28	2.2	–	–	–
	T8330	1.2	150	0.40	2.7	90	0.36	2.7	–	–	–	–	–	–	35	0.28	2.2	–	–	–
	T8430	1.2	155	0.40	2.7	85	0.36	2.7	–	–	–	–	–	–	30	0.28	2.2	–	–	–
	T9315	1.2	215	0.40	2.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	1.2	190	0.40	2.7	110	0.36	2.7	–	–	–	–	–	–	40	0.28	2.2	–	–	–
																				
NRM geometry with positive design for semi-rough to rough machining, and continuous to moderate interrupted cuts.																				
WNMG 080404-NRM	**T7325**	0.4	155	0.25	2.7	120	0.23	2.7	–	–	–	–	–	–	50	0.18	2.2	–	–	–
	T7335	0.4	150	0.25	2.7	115	0.23	2.7	–	–	–	–	–	–	45	0.18	2.2	–	–	–
	T9315	0.4	205	0.25	2.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
WNMG 080408-NRM	**T7325**	0.8	170	0.35	2.7	130	0.32	2.7	–	–	–	–	–	–	55	0.28	2.2	–	–	–
	T7335	0.8	160	0.35	2.7	120	0.32	2.7	–	–	–	–	–	–	50	0.28	2.2	–	–	–
	T9315	0.8	210	0.35	2.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

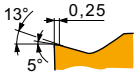
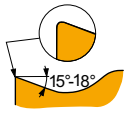
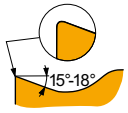
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]
																				
NRM geometry with positive design for semi-rough to rough machining, and continuous to moderate interrupted cuts.																				
WNMG 080412-NRM	**T7325**	1.2	◪ 170	0.40	2.7	■ 130	0.36	2.7	–	–	–	–	–	–	■ 55	0.28	2.2	–	–	–
	T7335	1.2	◪ 160	0.40	2.7	■ 120	0.36	2.7	–	–	–	–	–	–	■ 50	0.28	2.2	–	–	–
	T9315	1.2	■ 215	0.40	2.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
																				
R geometry for semi-rough to rough machining, and continuous to interrupted cuts.																				
WNMG 080408E-R	**T5305**	0.8	◪ 245	0.40	3.5	–	–	–	■ 230	0.40	3.5	–	–	–	–	–	–	◪ 45	0.15	1.0
	T5315	0.8	◪ 220	0.40	3.5	–	–	–	■ 205	0.40	3.5	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9310	0.8	■ 210	0.40	3.5	–	–	–	◪ 195	0.40	3.5	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9315	0.8	■ 195	0.40	3.5	–	–	–	◪ 185	0.40	3.5	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9325	0.8	■ 175	0.40	3.5	–	–	–	◪ 165	0.40	3.5	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 155	0.40	3.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
WNMG 080412E-R	**T5305**	1.2	◪ 250	0.45	3.5	–	–	–	■ 235	0.45	3.5	–	–	–	–	–	–	◪ 50	0.15	1.0
	T5315	1.2	◪ 225	0.45	3.5	–	–	–	■ 210	0.45	3.5	–	–	–	–	–	–	◪ 45	0.15	1.0
	T9310	1.2	■ 215	0.45	3.5	–	–	–	◪ 200	0.45	3.5	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9315	1.2	■ 200	0.45	3.5	–	–	–	◪ 190	0.45	3.5	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9325	1.2	■ 180	0.45	3.5	–	–	–	◪ 170	0.45	3.5	–	–	–	–	–	–	–	–	–
	T9335	1.2	■ 155	0.45	3.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
																				
RM geometry for semi-rough to rough machining, and continuous to interrupted cuts.																				
WNMG 060412E-RM	**T9310**	1.2	■ 245	0.45	3.0	–	–	–	◪ 230	0.45	3.0	–	–	–	–	–	–	–	–	–
	T9315	1.2	■ 230	0.45	3.0	–	–	–	◪ 215	0.45	3.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 230	0.45	1.2	◪ 135	0.41	1.2	◪ 215	0.45	1.2	–	–	–	–	–	–	–	–	–
WNMG 080408E-RM	**T5305**	0.8	◪ 275	0.40	4.0	–	–	–	◪ 260	0.40	4.0	–	–	–	–	–	–	–	–	–
	T5315	0.8	◪ 250	0.40	4.0	–	–	–	◪ 235	0.40	4.0	–	–	–	–	–	–	–	–	–
	T7325	0.8	◪ 180	0.40	4.0	◪ 140	0.36	4.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.8	◪ 165	0.40	4.0	◪ 125	0.36	4.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	◪ 165	0.40	4.0	◪ 95	0.36	4.0	◪ 155	0.40	4.0	–	–	–	–	–	–	–	–	–
	T8330	0.8	■ 155	0.40	4.0	◪ 90	0.36	4.0	◪ 145	0.40	4.0	–	–	–	–	–	–	–	–	–
	T8430	0.8	■ 165	0.40	4.0	◪ 90	0.36	4.0	◪ 135	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9310	0.8	■ 240	0.40	4.0	–	–	–	◪ 225	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9315	0.8	■ 220	0.40	4.0	–	–	–	◪ 205	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 200	0.40	4.0	◪ 120	0.36	4.0	◪ 190	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 170	0.40	4.0	◪ 100	0.36	4.0	–	–	–	–	–	–	–	–	–	–	–	–
WNMG 080412E-RM	**T5305**	1.2	◪ 280	0.45	4.0	–	–	–	◪ 265	0.45	4.0	–	–	–	–	–	–	–	–	–
	T5315	1.2	◪ 250	0.45	4.0	–	–	–	◪ 235	0.45	4.0	–	–	–	–	–	–	–	–	–
	T7325	1.2	◪ 180	0.45	4.0	◪ 140	0.41	4.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	1.2	◪ 170	0.45	4.0	◪ 130	0.41	4.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	1.2	◪ 170	0.45	4.0	◪ 100	0.41	4.0	◪ 160	0.45	4.0	–	–	–	–	–	–	–	–	–
	T9310	1.2	■ 240	0.45	4.0	–	–	–	◪ 225	0.45	4.0	–	–	–	–	–	–	–	–	–
	T9315	1.2	■ 220	0.45	4.0	–	–	–	◪ 205	0.45	4.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 200	0.45	4.0	◪ 120	0.41	4.0	◪ 190	0.45	4.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	■ 175	0.45	4.0	◪ 105	0.41	4.0	–	–	–	–	–	–	–	–	–	–	–	–
WNMG 080416E-RM	**T5305**	1.6	◪ 280	0.50	4.0	–	–	–	◪ 265	0.50	4.0	–	–	–	–	–	–	–	–	–
	T5315	1.6	◪ 255	0.50	4.0	–	–	–	◪ 240	0.50	4.0	–	–	–	–	–	–	–	–	–
	T7335	1.6	◪ 175	0.50	4.0	◪ 135	0.45	4.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8430	1.6	■ 170	0.50	4.0	◪ 90	0.45	4.0	◪ 135	0.50	4.0	–	–	–	–	–	–	–	–	–
	T9310	1.6	■ 240	0.50	4.0	–	–	–	◪ 225	0.50	4.0	–	–	–	–	–	–	–	–	–
	T9315	1.6	■ 220	0.50	4.0	–	–	–	◪ 205	0.50	4.0	–	–	–	–	–	–	–	–	–
	T9325	1.6	■ 205	0.50	4.0	◪ 120	0.45	4.0	◪ 190	0.50	4.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	■ 175	0.50	4.0	◪ 105	0.45	4.0	–	–	–	–	–	–	–	–	–	–	–	–

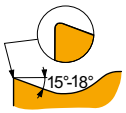
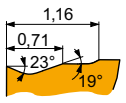
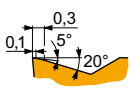
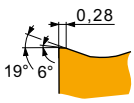
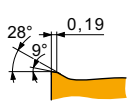
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
			E																	
SF geometry with positive design for fine-finish machining and for machining thin walls, with continuous cuts.																				
WNMG 060404E-SF	**H07**	0.4	–	–	–	90	0.14	1.0	145	0.15	1.0	470	0.18	1.0	45	0.12	0.8	–	–	–
	T6310	0.4	180	0.15	1.0	125	0.14	1.0	145	0.15	1.0	540	0.18	1.0	50	0.12	0.8	35	0.15	1.0
	T7325	0.4	205	0.17	1.0	155	0.15	1.0	–	–	–	–	–	–	65	0.15	0.8	–	–	–
	T7335	0.4	200	0.17	1.0	155	0.15	1.0	–	–	–	–	–	–	65	0.15	0.8	–	–	–
	T8315	0.4	195	0.15	1.0	115	0.14	1.0	185	0.15	1.0	585	0.18	1.0	45	0.12	0.8	35	0.15	1.0
	T8330	0.4	180	0.15	1.0	105	0.14	1.0	170	0.15	1.0	540	0.18	1.0	45	0.12	0.8	35	0.15	1.0
	T8430	0.4	220	0.15	1.0	120	0.14	1.0	180	0.15	1.0	600	0.18	1.0	45	0.12	0.8	35	0.15	1.0
	T9325	0.4	255	0.17	1.0	150	0.15	1.0	240	0.17	1.0	–	–	–	55	0.15	0.8	–	–	–
WNMG 060408E-SF	**H07**	0.8	–	–	–	95	0.18	1.0	155	0.20	1.0	495	0.24	1.0	50	0.14	0.8	–	–	–
	T6310	0.8	200	0.20	1.0	140	0.18	1.0	160	0.20	1.0	600	0.24	1.0	60	0.14	0.8	40	0.15	1.0
	T7335	0.8	220	0.20	1.0	170	0.18	1.0	–	–	–	–	–	–	70	0.16	0.8	–	–	–
	T8315	0.8	210	0.20	1.0	125	0.18	1.0	195	0.20	1.0	630	0.24	1.0	50	0.14	0.8	40	0.15	1.0
	T8330	0.8	200	0.20	1.0	120	0.18	1.0	190	0.20	1.0	600	0.24	1.0	50	0.14	0.8	40	0.15	1.0
	T8430	0.8	230	0.20	1.0	125	0.18	1.0	185	0.20	1.0	630	0.24	1.0	45	0.14	0.8	35	0.15	1.0
	T9315	0.8	315	0.20	1.0	–	–	–	295	0.20	1.0	–	–	–	–	–	–	60	0.15	1.0
	T9325	0.8	280	0.20	1.0	165	0.18	1.0	265	0.20	1.0	–	–	–	60	0.16	0.8	–	–	–
WNMG 080404E-SF	**H07**	0.4	–	–	–	90	0.14	1.0	145	0.15	1.0	470	0.18	1.0	45	0.12	0.8	–	–	–
	T6310	0.4	180	0.15	1.0	125	0.14	1.0	145	0.15	1.0	540	0.18	1.0	50	0.12	0.8	35	0.15	1.0
	T7325	0.4	205	0.17	1.0	155	0.15	1.0	–	–	–	–	–	–	65	0.15	0.8	–	–	–
	T7335	0.4	200	0.17	1.0	155	0.15	1.0	–	–	–	–	–	–	65	0.15	0.8	–	–	–
	T8315	0.4	195	0.15	1.0	115	0.14	1.0	185	0.15	1.0	585	0.18	1.0	45	0.12	0.8	35	0.15	1.0
	T8330	0.4	180	0.15	1.0	105	0.14	1.0	170	0.15	1.0	540	0.18	1.0	45	0.12	0.8	35	0.15	1.0
	T8430	0.4	220	0.15	1.0	120	0.14	1.0	180	0.15	1.0	600	0.18	1.0	45	0.12	0.8	35	0.15	1.0
	T9315	0.4	300	0.15	1.0	–	–	–	285	0.15	1.0	–	–	–	–	–	–	60	0.15	1.0
	T9325	0.4	255	0.17	1.0	150	0.15	1.0	240	0.17	1.0	–	–	–	55	0.15	0.8	–	–	–
WNMG 080408E-SF	**H07**	0.8	–	–	–	95	0.18	1.0	155	0.20	1.0	495	0.24	1.0	50	0.14	0.8	–	–	–
	T6310	0.8	200	0.20	1.0	140	0.18	1.0	160	0.20	1.0	600	0.24	1.0	60	0.14	0.8	40	0.15	1.0
	T7325	0.8	230	0.20	1.0	175	0.18	1.0	–	–	–	–	–	–	70	0.16	0.8	–	–	–
	T7335	0.8	220	0.20	1.0	170	0.18	1.0	–	–	–	–	–	–	70	0.16	0.8	–	–	–
	T8315	0.8	210	0.20	1.0	125	0.18	1.0	195	0.20	1.0	630	0.24	1.0	50	0.14	0.8	40	0.15	1.0
	T8330	0.8	200	0.20	1.0	120	0.18	1.0	190	0.20	1.0	600	0.24	1.0	50	0.14	0.8	40	0.15	1.0
	T8430	0.8	230	0.20	1.0	125	0.18	1.0	185	0.20	1.0	630	0.24	1.0	45	0.14	0.8	35	0.15	1.0
	T9315	0.8	315	0.20	1.0	–	–	–	295	0.20	1.0	–	–	–	–	–	–	60	0.15	1.0
	T9325	0.8	280	0.20	1.0	165	0.18	1.0	265	0.20	1.0	–	–	–	60	0.16	0.8	–	–	–
WNMG 080412E-SF	**T7325**	1.2	220	0.25	1.5	170	0.23	1.5	–	–	–	–	–	–	70	0.18	1.2	–	–	–
			S																	
SM geometry with positive design for medium machining, and continuous to interrupted cuts.																				
WNMG 060404E-SM	**T7325**	0.4	180	0.22	1.7	140	0.20	1.7	–	–	–	–	–	–	55	0.20	1.4	–	–	–
	T7335	0.4	175	0.22	1.7	135	0.20	1.7	–	–	–	–	–	–	55	0.20	1.4	–	–	–
	T8330	0.4	155	0.22	1.7	90	0.20	1.7	145	0.22	1.7	465	0.26	1.7	35	0.20	1.4	30	0.15	1.0
	T8430	0.4	175	0.22	1.7	95	0.20	1.7	140	0.22	1.7	480	0.26	1.7	35	0.20	1.4	30	0.15	1.0
	T9315	0.4	250	0.20	1.7	–	–	–	235	0.20	1.7	–	–	–	–	–	–	50	0.15	1.0
	T9325	0.4	215	0.22	1.7	125	0.20	1.7	200	0.22	1.7	–	–	–	45	0.20	1.4	–	–	–
WNMG 060408E-SM	**T6310**	0.8	175	0.25	1.7	125	0.23	1.7	140	0.25	1.7	525	0.30	1.7	50	0.20	1.4	35	0.15	1.0
	T7325	0.8	200	0.25	1.7	155	0.23	1.7	–	–	–	–	–	–	65	0.20	1.4	–	–	–
	T7335	0.8	195	0.25	1.7	150	0.23	1.7	–	–	–	–	–	–	60	0.20	1.4	–	–	–
	T8330	0.8	175	0.25	1.7	105	0.23	1.7	165	0.25	1.7	525	0.30	1.7	40	0.20	1.4	35	0.15	1.0
	T8430	0.8	195	0.25	1.7	105	0.23	1.7	160	0.25	1.7	540	0.30	1.7	40	0.20	1.4	30	0.15	1.0
	T9325	0.8	240	0.25	1.7	140	0.23	1.7	225	0.25	1.7	–	–	–	50	0.20	1.4	–	–	–
WNMG 060412E-SM	**T7325**	1.2	200	0.30	1.7	155	0.27	1.7	–	–	–	–	–	–	65	0.24	1.4	–	–	–
	T8330	1.2	180	0.30	1.7	105	0.27	1.7	170	0.30	1.7	540	0.36	1.7	45	0.24	1.4	35	0.15	1.0
	T8430	1.2	195	0.30	1.7	105	0.27	1.7	160	0.30	1.7	540	0.36	1.7	40	0.24	1.4	30	0.15	1.0
	T9325	1.2	240	0.30	1.7	140	0.27	1.7	225	0.30	1.7	–	–	–	50	0.24	1.4	–	–	–

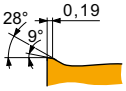
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]	vc [m/min]	f [mm/rev]	ap [mm]
																				
			SM geometry with positive design for medium machining, and continuous to interrupted cuts.																	
WNMG 080404E-SM	**T6310**	0.4	■	155	0.22	2.0	■	110	0.20	2.0	■	125	0.22	2.0	◪	465	0.26	2.0	■	45	0.20	1.6	◪	30	0.15	1.0
	T7325	0.4	◪	175	0.22	2.0	■	135	0.20	2.0		–	–	–		–	–	–	■	55	0.20	1.6		–	–	–
	T7335	0.4	◪	170	0.22	2.0	■	130	0.20	2.0		–	–	–		–	–	–	■	55	0.20	1.6		–	–	–
	T8330	0.4	■	155	0.22	2.0	■	90	0.20	2.0	■	145	0.22	2.0	◪	465	0.26	2.0	◪	35	0.20	1.6	◪	30	0.15	1.0
	T8430	0.4	■	170	0.22	2.0	■	90	0.20	2.0	◪	135	0.22	2.0	◪	465	0.26	2.0	◪	35	0.20	1.6	◪	25	0.15	1.0
	T9315	0.4	■	245	0.20	2.0		–	–	–	◪	230	0.20	2.0		–	–	–		–	–	–	◪	45	0.15	1.0
	T9325	0.4	■	210	0.22	2.0	■	125	0.20	2.0	◪	195	0.22	2.0		–	–	–	◪	45	0.20	1.6		–	–	–
WNMG 080408E-SM	**T6310**	0.8	■	175	0.25	2.0	■	125	0.23	2.0	■	140	0.25	2.0	◪	525	0.30	2.0	■	50	0.20	1.6	◪	35	0.15	1.0
	T7325	0.8	◪	200	0.25	2.0	■	155	0.23	2.0		–	–	–		–	–	–	■	65	0.20	1.6		–	–	–
	T7335	0.8	◪	190	0.25	2.0	■	145	0.23	2.0		–	–	–		–	–	–	■	60	0.20	1.6		–	–	–
	T8330	0.8	■	175	0.25	2.0	■	105	0.23	2.0	■	165	0.25	2.0	◪	525	0.30	2.0	◪	40	0.20	1.6	◪	35	0.15	1.0
	T8430	0.8	■	195	0.25	2.0	■	105	0.23	2.0	◪	160	0.25	2.0	◪	540	0.30	2.0	◪	40	0.20	1.6	◪	30	0.15	1.0
	T9315	0.8	■	265	0.25	2.0		–	–	–	◪	250	0.25	2.0		–	–	–		–	–	–	◪	50	0.15	1.0
	T9325	0.8	■	235	0.25	2.0	■	140	0.23	2.0	◪	220	0.25	2.0		–	–	–	◪	50	0.20	1.6		–	–	–
WNMG 080412E-SM	**T6310**	1.2	■	175	0.30	2.0	■	125	0.27	2.0	■	140	0.30	2.0	◪	525	0.36	2.0	■	50	0.24	1.6	◪	35	0.15	1.0
	T7325	1.2	◪	195	0.30	2.0	■	150	0.27	2.0		–	–	–		–	–	–	■	60	0.24	1.6		–	–	–
	T7335	1.2	◪	190	0.30	2.0	■	145	0.27	2.0		–	–	–		–	–	–	■	60	0.24	1.6		–	–	–
	T8330	1.2	■	175	0.30	2.0	■	105	0.27	2.0	■	165	0.30	2.0	◪	525	0.36	2.0	◪	40	0.24	1.6	◪	35	0.15	1.0
	T8430	1.2	■	190	0.30	2.0	■	105	0.27	2.0	◪	155	0.30	2.0	◪	525	0.36	2.0	◪	40	0.24	1.6	◪	30	0.15	1.0
	T9315	1.2	■	260	0.30	2.0		–	–	–	◪	245	0.30	2.0		–	–	–		–	–	–	◪	50	0.15	1.0
	T9325	1.2	■	235	0.30	2.0	■	140	0.27	2.0	◪	220	0.30	2.0		–	–	–	◪	50	0.24	1.6		–	–	–
																				
			ER-SI geometry with positive right-handed geometry for fine-finish to semi-rough machining, and continuous cuts.																	
WNMG 060404ER-SI	**T8330**	0.4	■	195	0.20	1.7	■	115	0.18	1.7		–	–	–	◪	585	0.24	1.7	◪	45	0.18	1.4		–	–	–
	T8430	0.4	■	225	0.20	1.7	■	120	0.18	1.7		–	–	–	◪	615	0.24	1.7	◪	45	0.18	1.4		–	–	–
	T9325	0.4	■	270	0.20	1.7	■	160	0.18	1.7		–	–	–		–	–	–	◪	60	0.18	1.4		–	–	–
WNMG 080404ER-SI	**T7325**	0.4	◪	220	0.20	1.7	■	170	0.18	1.7		–	–	–		–	–	–	◪	70	0.18	1.4		–	–	–
	T7335	0.4	◪	215	0.20	1.7	■	165	0.18	1.7		–	–	–		–	–	–	◪	65	0.18	1.4		–	–	–
	T8315	0.4	◪	205	0.20	1.7	■	120	0.18	1.7		–	–	–	◪	615	0.24	1.7	◪	50	0.18	1.4		–	–	–
	T8330	0.4	■	195	0.20	1.7	■	115	0.18	1.7		–	–	–	◪	585	0.24	1.7	◪	45	0.18	1.4		–	–	–
	T8430	0.4	■	225	0.20	1.7	■	120	0.18	1.7		–	–	–	◪	615	0.24	1.7	◪	45	0.18	1.4		–	–	–
	T9325	0.4	■	270	0.20	1.7	■	160	0.18	1.7		–	–	–		–	–	–	◪	60	0.18	1.4		–	–	–
WNMG 080408ER-SI	**T7325**	0.8	◪	215	0.35	1.7	■	165	0.32	1.7		–	–	–		–	–	–	◪	65	0.25	1.4		–	–	–
	T7335	0.8	◪	205	0.35	1.7	■	155	0.32	1.7		–	–	–		–	–	–	◪	65	0.25	1.4		–	–	–
	T8315	0.8	◪	205	0.35	1.7	■	120	0.32	1.7		–	–	–	◪	615	0.42	1.7	◪	50	0.25	1.4		–	–	–
	T8330	0.8	■	195	0.35	1.7	■	115	0.32	1.7		–	–	–	◪	585	0.42	1.7	◪	45	0.25	1.4		–	–	–
	T8430	0.8	■	210	0.35	1.7	■	115	0.32	1.7		–	–	–	◪	585	0.42	1.7	◪	45	0.25	1.4		–	–	–
	T9325	0.8	■	255	0.35	1.7	■	150	0.32	1.7		–	–	–		–	–	–	◪	55	0.25	1.4		–	–	–
WNMG 080412ER-SI	**T8430**	1.2	■	225	0.35	1.7	■	120	0.32	1.7		–	–	–	◪	615	0.42	1.7	◪	45	0.25	1.4		–	–	–
	T9325	1.2	■	265	0.35	1.7	■	155	0.32	1.7		–	–	–		–	–	–	◪	55	0.25	1.4		–	–	–
																				
			EL-SI geometry with positive left-handed design for fine-finish to semi-rough machining, and continuous cuts.																	
WNMG 060404EL-SI	**T8330**	0.4	■	195	0.20	1.7	■	115	0.18	1.7		–	–	–	◪	585	0.24	1.7	◪	45	0.18	1.4		–	–	–
	T8430	0.4	■	225	0.20	1.7	■	120	0.18	1.7		–	–	–	◪	615	0.24	1.7	◪	45	0.18	1.4		–	–	–
	T9325	0.4	■	270	0.20	1.7	■	160	0.18	1.7		–	–	–		–	–	–	◪	60	0.18	1.4		–	–	–
WNMG 080404EL-SI	**T7325**	0.4	◪	220	0.20	1.7	■	170	0.18	1.7		–	–	–		–	–	–	◪	70	0.18	1.4		–	–	–
	T7335	0.4	◪	215	0.20	1.7	■	165	0.18	1.7		–	–	–		–	–	–	◪	65	0.18	1.4		–	–	–
	T8315	0.4	◪	205	0.20	1.7	■	120	0.18	1.7		–	–	–	◪	615	0.24	1.7	◪	50	0.18	1.4		–	–	–
	T8330	0.4	■	195	0.20	1.7	■	115	0.18	1.7		–	–	–	◪	585	0.24	1.7	◪	45	0.18	1.4		–	–	–
	T8430	0.4	■	225	0.20	1.7	■	120	0.18	1.7		–	–	–	◪	615	0.24	1.7	◪	45	0.18	1.4		–	–	–
	T9325	0.4	■	270	0.20	1.7	■	160	0.18	1.7		–	–	–		–	–	–	◪	60	0.18	1.4		–	–	–

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
			EL-SI geometry with positive left-handed design for fine-finish to semi-rough machining, and continuous cuts.																	
WNMG 080408EL-SI	**T7325**	0.8	215	0.35	1.7	165	0.32	1.7	–	–	–	–	–	–	65	0.25	1.4	–	–	–
	T7335	0.8	205	0.35	1.7	155	0.32	1.7	–	–	–	–	–	–	65	0.25	1.4	–	–	–
	T8315	0.8	205	0.35	1.7	120	0.32	1.7	–	–	–	615	0.42	1.7	50	0.25	1.4	–	–	–
	T8330	0.8	195	0.35	1.7	115	0.32	1.7	–	–	–	585	0.42	1.7	45	0.25	1.4	–	–	–
	T8430	0.8	210	0.35	1.7	115	0.32	1.7	–	–	–	585	0.42	1.7	45	0.25	1.4	–	–	–
	T9325	0.8	255	0.35	1.7	150	0.32	1.7	–	–	–	–	–	–	55	0.25	1.4	–	–	–
WNMG 080412EL-SI	**T8430**	1.2	225	0.35	1.7	120	0.32	1.7	–	–	–	615	0.42	1.7	45	0.25	1.4	–	–	–
																				
			W-F wiper geometry for fine to finish machining with increased feed rates and improved surface finish.																	
WNMG 060408W-F	**T9315**	0.8	215	0.45	0.8	–	–	–	200	0.45	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.8	190	0.45	0.8	–	–	–	180	0.45	0.8	–	–	–	–	–	–	–	–	–
WNMG 080404W-F	**T9315**	0.4	250	0.25	0.4	–	–	–	235	0.25	0.4	–	–	–	–	–	–	–	–	–
	T9325	0.4	225	0.25	0.4	–	–	–	210	0.25	0.4	–	–	–	–	–	–	–	–	–
																				
			W-M wiper geometry for semi-rough to rough machining with increased feed rates and improved surface finish.																	
WNMG 060408W-M	**T9310**	0.8	220	0.45	1.2	–	–	–	205	0.45	1.2	–	–	–	–	–	–	–	–	–
	T9315	0.8	205	0.45	1.2	–	–	–	190	0.45	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.8	190	0.45	1.2	–	–	–	180	0.45	1.2	–	–	–	–	–	–	–	–	–
WNMG 060412W-M	**T5315**	1.2	235	0.55	1.2	–	–	–	220	0.55	1.2	–	–	–	–	–	–	–	–	–
	T9315	1.2	205	0.55	1.2	–	–	–	190	0.55	1.2	–	–	–	–	–	–	–	–	–
	T9325	1.2	180	0.55	1.2	–	–	–	170	0.55	1.2	–	–	–	–	–	–	–	–	–
WNMG 080408W-M	**T9315**	0.8	200	0.45	1.5	–	–	–	190	0.45	1.5	–	–	–	–	–	–	–	–	–
	T9325	0.8	185	0.45	1.5	–	–	–	175	0.45	1.5	–	–	–	–	–	–	–	–	–
WNMG 080412W-M	**T9325**	1.2	180	0.55	1.5	–	–	–	170	0.55	1.5	–	–	–	–	–	–	–	–	–
																				
			W-MR wiper geometry for finish to rough machining with increased feed rates and improved surface finish.																	
WNMG 060408W-MR	**T9315**	0.8	205	0.45	1.2	–	–	–	190	0.45	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.8	190	0.45	1.2	110	0.41	1.2	180	0.45	1.2	–	–	–	–	–	–	–	–	–
WNMG 080404W-MR	**T9315**	0.4	200	0.30	1.5	–	–	–	190	0.30	1.5	–	–	–	–	–	–	–	–	–
	T9325	0.4	180	0.30	1.5	105	0.27	1.5	170	0.30	1.5	–	–	–	–	–	–	–	–	–
WNMG 080408W-MR	**T5315**	0.8	230	0.45	1.5	–	–	–	215	0.45	1.5	–	–	–	–	–	–	–	–	–
	T9310	0.8	215	0.45	1.5	–	–	–	200	0.45	1.5	–	–	–	–	–	–	–	–	–
	T9315	0.8	200	0.45	1.5	–	–	–	190	0.45	1.5	–	–	–	–	–	–	–	–	–
	T9325	0.8	185	0.45	1.5	110	0.41	1.5	175	0.45	1.5	–	–	–	–	–	–	–	–	–
WNMG 080412W-MR	**T5315**	1.2	230	0.55	1.5	–	–	–	215	0.55	1.5	–	–	–	–	–	–	–	–	–
	T9310	1.2	210	0.55	1.5	–	–	–	195	0.55	1.5	–	–	–	–	–	–	–	–	–
	T9315	1.2	200	0.55	1.5	–	–	–	190	0.55	1.5	–	–	–	–	–	–	–	–	–
	T9325	1.2	180	0.55	1.5	105	0.50	1.5	170	0.55	1.5	–	–	–	–	–	–	–	–	–
																				
			W-NM wiper geometry for finish to rough machining with increased feed rates and improved surface finish.																	
WNMG 060408W-NM	**T7325**	0.8	220	0.25	1.8	170	0.23	1.8	–	–	–	–	–	–	70	0.20	1.4	–	–	–
	T7335	0.8	215	0.25	1.8	165	0.23	1.8	–	–	–	–	–	–	65	0.20	1.4	–	–	–
	T9315	0.8	290	0.25	1.8	–	–	–	275	0.25	1.8	–	–	–	–	–	–	–	–	–
	T9325	0.8	265	0.25	1.8	155	0.23	1.8	250	0.25	1.8	–	–	–	55	0.20	1.4	–	–	–

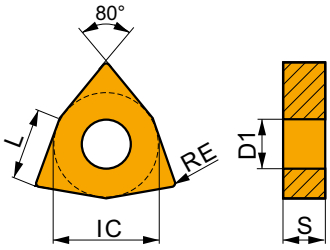
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
																				
W-NM wiper geometry for finish to rough machining with increased feed rates and improved surface finish.																				
WNMG 080404W-NM	**T7325**	0.4	◪ 195	0.20	2.1	◪ 150	0.18	2.1	–	–	–	–	–	–	◪ 60	0.16	1.7	–	–	–
	T7335	0.4	◪ 190	0.20	2.1	◪ 145	0.18	2.1	–	–	–	–	–	–	◪ 60	0.16	1.7	–	–	–
	T9315	0.4	■ 270	0.20	2.1	–	–	–	◪ 255	0.20	2.1	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 240	0.20	2.1	◪ 140	0.18	2.1	◪ 225	0.20	2.1	–	–	–	◪ 50	0.16	1.7	–	–	–
WNMG 080408W-NM	**T7325**	0.8	◪ 215	0.25	2.1	◪ 165	0.23	2.1	–	–	–	–	–	–	◪ 65	0.20	1.7	–	–	–
	T7335	0.8	◪ 210	0.25	2.1	◪ 160	0.23	2.1	–	–	–	–	–	–	◪ 65	0.20	1.7	–	–	–
	T9315	0.8	■ 290	0.25	2.1	–	–	–	◪ 275	0.25	2.1	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 260	0.25	2.1	◪ 155	0.23	2.1	◪ 245	0.25	2.1	–	–	–	◪ 55	0.20	1.7	–	–	–
WNMG 080412W-NM	**T7325**	1.2	◪ 215	0.30	2.1	◪ 165	0.27	2.1	–	–	–	–	–	–	◪ 65	0.24	1.7	–	–	–
	T7335	1.2	◪ 210	0.30	2.1	◪ 160	0.27	2.1	–	–	–	–	–	–	◪ 65	0.24	1.7	–	–	–
	T9315	1.2	■ 285	0.30	2.1	–	–	–	◪ 270	0.30	2.1	–	–	–	–	–	–	–	–	–

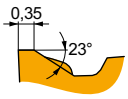
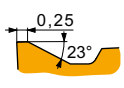
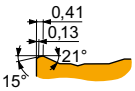
WNMM

PRAMET

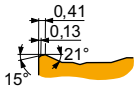
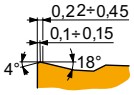
	IC [mm]	D1 [mm]	L [mm]	S [mm]
0804	12.700	5.16	8.70	4.76
1006	15.875	6.35	10.80	6.35
1306	19.050	7.94	13.00	6.35



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
																				
DR geometry for semi-rough to rough machining, and continuous to interrupted cuts.																				
WNMM 100608E-DR	**T9325**	0.8	■ 205	0.40	5.0	◪ 120	0.36	5.0	◪ 190	0.40	5.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 175	0.40	5.0	◪ 105	0.36	5.0	–	–	–	–	–	–	–	–	–	–	–	–
WNMM 130612E-DR	**T9325**	1.2	■ 200	0.45	6.0	◪ 120	0.41	6.0	◪ 190	0.45	6.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	■ 170	0.45	6.0	◪ 100	0.41	6.0	–	–	–	–	–	–	–	–	–	–	–	–
																				
NR geometry for semi-rough to rough machining, and continuous to interrupted cuts.																				
WNMM 080408E-NR	**T7325**	0.8	◪ 175	0.40	3.0	■ 135	0.36	3.0	–	–	–	–	–	–	◪ 55	0.28	2.4	–	–	–
	T8330	0.8	■ 155	0.40	3.0	■ 90	0.36	3.0	◪ 145	0.40	3.0	–	–	–	◪ 35	0.28	2.4	–	–	–
	T8430	0.8	■ 165	0.40	3.0	■ 90	0.36	3.0	◪ 135	0.40	3.0	–	–	–	◪ 35	0.28	2.4	–	–	–
	T9325	0.8	■ 195	0.40	3.0	■ 115	0.36	3.0	◪ 185	0.40	3.0	–	–	–	◪ 40	0.28	2.4	–	–	–
																				
NR2 geometry for semi-rough to rough machining, and continuous to interrupted cuts.																				
WNMM 080408E-NR2	**T7335**	0.8	◪ 160	0.40	4.0	■ 120	0.36	4.0	–	–	–	–	–	–	◪ 50	0.28	3.2	–	–	–
	T9325	0.8	■ 190	0.40	4.0	■ 110	0.36	4.0	◪ 180	0.40	4.0	–	–	–	◪ 40	0.28	3.2	–	–	–

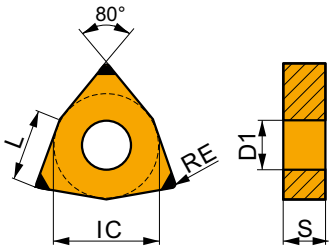
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
NR2 geometry for semi-rough to rough machining, and continuous to interrupted cuts.																				
WNMM 080412E-NR2	**T7325**	1.2	175	0.45	4.0	135	0.41	4.0	–	–	–	–	–	–	55	0.32	3.2	–	–	–
	T9325	1.2	190	0.45	4.0	110	0.41	4.0	180	0.45	4.0	–	–	–	40	0.32	3.2	–	–	–
																				
OR geometry for semi-rough to rough machining, and continuous to interrupted cuts.																				
WNMM 080408E-OR	**T8330**	0.8	150	0.40	4.0	90	0.36	4.0	140	0.40	4.0	–	–	–	35	0.28	3.2	–	–	–
	T8430	0.8	155	0.40	4.0	85	0.36	4.0	130	0.40	4.0	–	–	–	30	0.28	3.2	–	–	–
	T9325	0.8	190	0.40	4.0	110	0.36	4.0	180	0.40	4.0	–	–	–	40	0.28	3.2	–	–	–
	T9335	0.8	165	0.40	4.0	95	0.36	4.0	–	–	–	–	–	–	35	0.28	3.2	–	–	–
WNMM 080412E-OR	**T9325**	1.2	190	0.45	4.0	110	0.41	4.0	180	0.45	4.0	–	–	–	40	0.36	3.2	–	–	–
	T9335	1.2	170	0.45	4.0	100	0.41	4.0	–	–	–	–	–	–	35	0.36	3.2	–	–	–
WNMM 080416E-OR	**T9325**	1.6	195	0.50	4.0	115	0.45	4.0	185	0.50	4.0	–	–	–	40	0.40	3.2	–	–	–
WNMM 130612E-OR	**T9325**	1.2	185	0.45	6.0	110	0.41	6.0	175	0.45	6.0	–	–	–	40	0.36	4.8	–	–	–
WNMM 130616E-OR	**T9325**	1.6	180	0.50	6.0	105	0.45	6.0	170	0.50	6.0	–	–	–	40	0.40	4.8	–	–	–

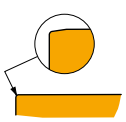
WNGA CBN

PRAMET

	IC	D1	L	S
	[mm]	[mm]	[mm]	[mm]
0804	12.700	5.16	8.70	4.76



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
For finish machining and continuous cuts.																				
WNGA 080408S01020C	**TB310**	0.8	–	–	–	–	–	–	530	0.15	0.6	–	–	–	140	0.11	0.5	110	0.15	1.0
																				
For finish machining and continuous cuts.																				
WNGA080408S01020WC	**TB310**	0.8	–	–	–	–	–	–	530	0.15	0.6	–	–	–	140	0.11	0.5	110	0.15	1.0

DWLN(RL) EXT

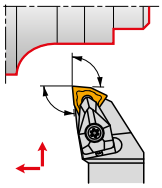
P M K N S H

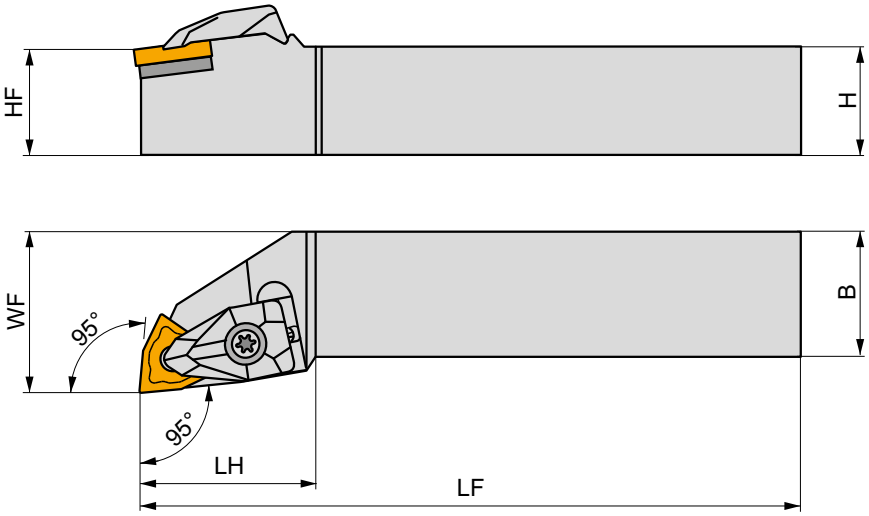
PRAMET

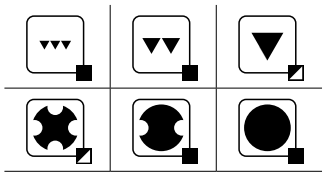
D

External Double Clamp Holder with 95° Cutting Angle for WN.. Insert

External Right/Left hand double clamp turning holder with 95° cutting angle. Suited for longitudinal turning with shoulder, face, taper and chamfer turning with negative WN.. 06 to 13 inserts. Available with shank size 16x16 up to 40x40 mm. Body treated for longer tool life.







	Product	H	B	HF	WF	LF	LH	LAMS	GAMO	kg			
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[°]	[°]				
R	DWLNR 1616 H 06	16	16	16	20	100	26.4	-6	-6	0.22	GI028	DW06	–
	DWLNR 2020 K 06	20	20	20	25	125	27.1	-6	-6	0.41	GI028	DW06	–
	DWLNR 2525 M 06	25	25	25	32	150	27.1	-6	-6	0.75	GI028	DW06	–
	DWLNR 2020 K 08	20	20	20	25	125	34.3	-6	-6	0.43	GI072	DW08	AT004
	DWLNR 2525 M 08	25	25	25	32	150	35	-6	-6	0.75	GI072	DW08	AT004
	DWLNR 3225 P 08	32	25	32	32	170	35	-6	-6	1.01	GI072	DW08	AT004
	DWLNR 3225 P 10	32	25	32	32	170	38	-6	-6	1.06	GI166	DW10	–
	DWLNR 3232 P 13	32	32	32	40	170	40	-6	-6	1.44	GI167	DW13	–
	DWLNR 4040 S 13	40	40	40	50	250	41	-6	-6	3.19	GI167	DW13	–
L	DWLNL 1616 H 06	16	16	16	20	100	26.4	-6	-6	0.22	GI028	DW06	–
	DWLNL 2020 K 06	20	20	20	25	125	27.1	-6	-6	0.41	GI028	DW06	–
	DWLNL 2525 M 06	25	25	25	32	150	27.1	-6	-6	0.76	GI028	DW06	–
	DWLNL 2020 K 08	20	20	20	25	125	34.3	-6	-6	0.43	GI072	DW08	AT004
	DWLNL 2525 M 08	25	25	25	32	150	35	-6	-6	0.75	GI072	DW08	AT004
	DWLNL 3225 P 08	32	25	32	32	170	35	-6	-6	1.10	GI072	DW08	AT004
	DWLNL 3225 P 10	32	25	32	32	170	38	-6	-6	1.14	GI166	DW10	–
	DWLNL 3232 P 13	32	32	32	40	170	40	-6	-6	1.45	GI167	DW13	–
	DWLNL 4040 S 13	40	40	40	50	250	41	-6	-6	3.17	GI167	DW13	–

GI028	WN.. 0604..
GI072	WN.. 0804..
GI166	WN.. 1006..
GI167	WN.. 1306..

		Nm				
DW06	DCS 09	1.7	DWS 328-01	US 2004-T09P	FLAG T09P	–
DW08	DCS 12	3.9	DWS 331-12	US 2002-T15P	FLAG T15P/3,5	–
DW10	DCS 16	6.4	DWN 100612	US 5018-T20P	–	LK T20P
DW13	DCS 19	6.4	DWN 130612	US 6013-T20P	–	LK T20P

AT004a	CER WN.N 0804..	DCS 12C4
AT004b	CER WN.A 0804..	DCS 12C2

MWLN(RL) EXT

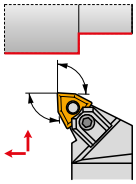
P M K N S H

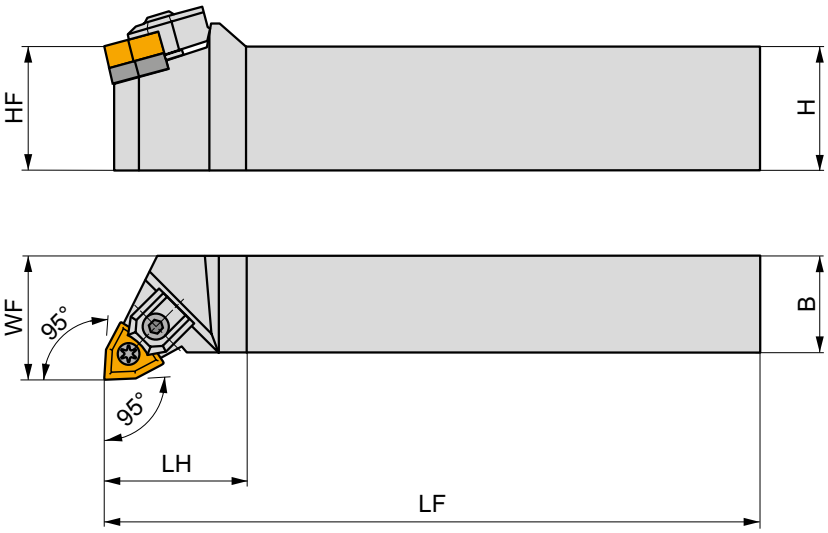
PRAMET

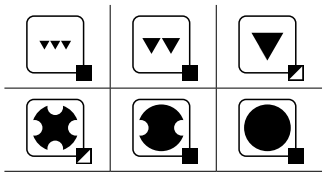
M

External Multi-Clamp Holder with 95° Cutting Angle for WN.. Insert

External Right/Left hand multi-clamp turning holder with 95° cutting angle. Suited for longitudinal turning with shoulder, face, taper and chamfer turning with negative WN.. 08 inserts. Available with shank size 25x25 up to 40x40 mm. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	MWLNR 2525 M 08	25	25	25	32	150	32	-6	-6	0.73	GI072	MW1
	MWLNR 3225 P 08	32	25	32	32	170	32	-6	-6	1.30	GI072	MW1
	MWLNR 4040 R 08	40	40	40	50	200	32	-6	-6	2.50	GI072	MW1
L	MWLNL 2525 M 08	25	25	25	32	150	32	-6	-6	0.70	GI072	MW1
	MWLNL 3225 P 08	32	25	32	32	170	32	-6	-6	1.02	GI072	MW1
	MWLNL 4040 R 08	40	40	40	50	200	32	-6	-6	2.50	GI072	MW1

GI072	WN.. 0804..

MW1	UE 05	5.0 Nm	WNW 080412	UC 51	HS 0408	HXK 3

PWLN(RL) EXT

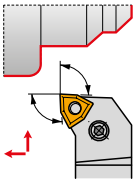
P M K N S H

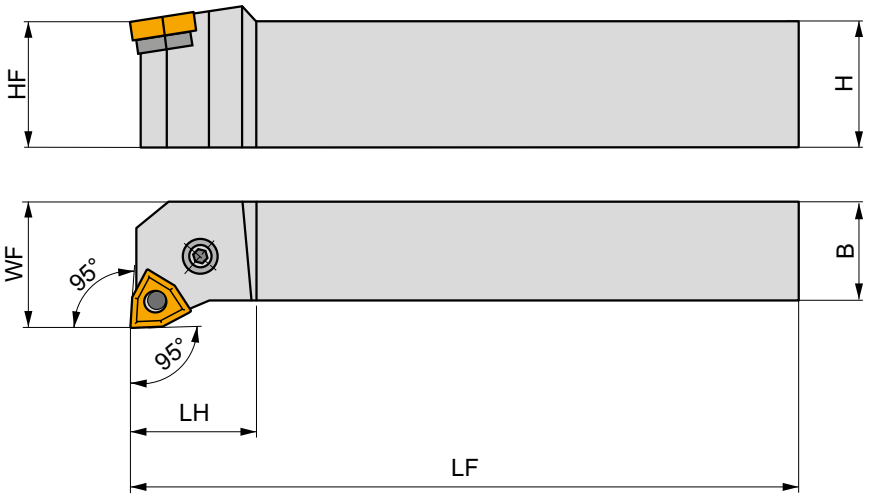
PRAMET

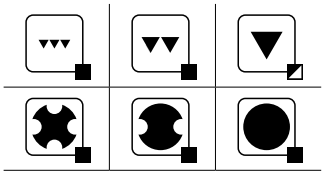
P

External Lever Lock Holder with 95° Cutting Angle for WN.. Insert

External Right/Left hand lever lock turning holder with 95° cutting angle. Suited for longitudinal turning with shoulder, face, taper and chamfer turning with negative WN.. 06 and 08 inserts. Available with shank size 16x16 up to 32x25 mm. Body treated for longer tool life.







	Product	H [mm]	B [mm]	HF [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]	kg		
R	PWLNR 1616 H 0604	16	16	16	20	100	20	-6	-6	0.23	GI028	PW11
	PWLNR 2020 K 0604	20	20	20	25	125	20	-6	-6	0.40	GI028	PW10
	PWLNR 2525 M 0604	25	25	25	32	150	20	-6	-6	0.78	GI028	PW10
	PWLNR 2020 K 08	20	20	20	25	125	22	-6	-6	0.42	GI072	PW22
	PWLNR 2525 M 08	25	25	25	32	150	22	-6	-6	0.73	GI072	PW20
	PWLNR 3225 P 08	32	25	32	32	170	22	-6	-6	1.05	GI072	PW20
L	PWLNL 1616 H 0604	16	16	16	20	100	20	-6	-6	0.21	GI028	PW11
	PWLNL 2020 K 0604	20	20	20	25	125	20	-6	-6	0.40	GI028	PW10
	PWLNL 2525 M 0604	25	25	25	32	150	20	-6	-6	0.75	GI028	PW10
	PWLNL 2020 K 08	20	20	20	25	125	22	-6	-6	0.40	GI072	PW22
	PWLNL 2525 M 08	25	25	25	32	150	22	-6	-6	0.74	GI072	PW20
	PWLNL 3225 P 08	32	25	32	32	170	22	-6	-6	1.05	GI072	PW20

GI028	WN.. 0604..
GI072	WN.. 0804..

				Nm					
PW10	WNU 060308	PU 01	US 34	5.0	M 6x0.75	19	NT 04	MT 04	HXK 3
PW11	WNU 060308	PU 01	US 46	5.0	M 6x0.75	13.2	NT 04	MT 04	HXK 3
PW20	WNU 080312	PU 02	US 35	6.0	M 8x1	22.5	NT 05	MT 05	HXK 4
PW22	WNU 080312	PU 02	US 42	6.0	M 8x1	21	NT 05	MT 05	HXK 4

C.-DWLN(RL) EXT

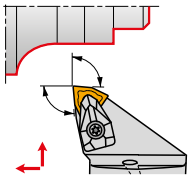
P M K N S H

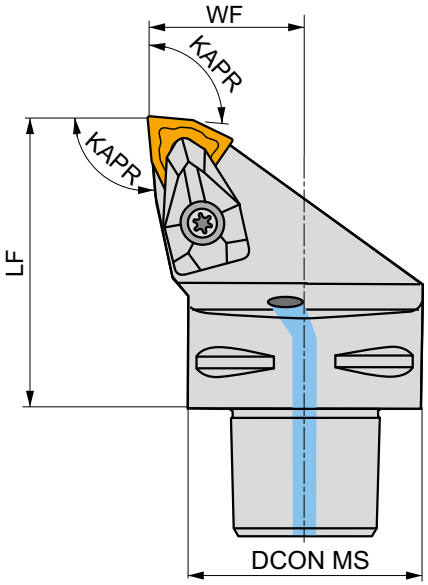
PRAMET

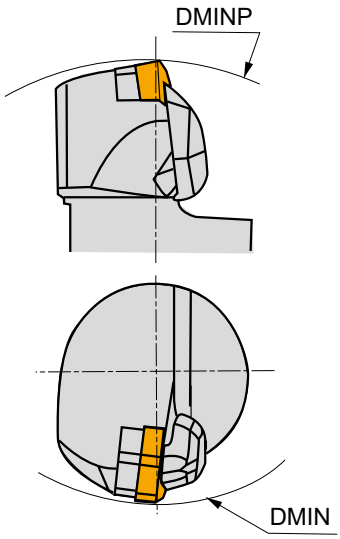
D

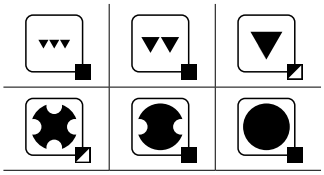
External PSC Quick Change Tool, Double Clamp, 95° Cutting Angle, WN.. Ins

External Right/Left hand double clamp tool, through coolant, with 95° cutting angle for face and longitudinal turning with shoulder, taper and chamfering with negative WN.. 06 and 08 inserts. Available with PSC (Polygon Shank Coupling) size C4 up to C6. Body treated for longer tool life.









	Product	DCON MS [mm]	DMIN [mm]	DMINP [mm]	WF [mm]	LF [mm]	KAPR [°]	LAMS [°]	GAMO [°]		kg			
R	C4-DWLNR-27050-06	40	60	140	27	50	95	-6	-6	✓	0.42	GI028	C-DW06	–
	C4-DWLNR-27050-08	40	110	140	27	50	95	-6	-6	✓	0.42	GI072	C-DW08-1	AT004
	C5-DWLNR-35060-08	50	110	165	35	60	95	-6	-6	✓	0.74	GI072	C-DW08-2	AT004
	C6-DWLNR-45065-08	63	110	190	45	65	95	-6	-6	✓	1.34	GI072	C-DW08-2	AT004
L	C4-DWLNL-27050-06	40	60	140	27	50	95	-6	-6	✓	0.43	GI028	C-DW06	–
	C4-DWLNL-27050-08	40	110	140	27	50	95	-6	-6	✓	0.42	GI072	C-DW08-1	AT004
	C5-DWLNL-35060-08	50	110	165	35	60	95	-6	-6	✓	0.76	GI072	C-DW08-2	AT004
	C6-DWLNL-45065-08	63	110	190	45	65	95	-6	-6	✓	1.34	GI072	C-DW08-2	AT004

GI028	WN.. 0604..
GI072	WN.. 0804..

		Nm				
C-DW06	DCS 09	1.7	DWS 328-01	US 2004-T09P	FLAG T09P	CN 034-01
C-DW08-1	DCS 12	3.9	DWS 331-12	US 2002-T15P	FLAG T15P/3,5	CN 034-01
C-DW08-2	DCS 12	3.9	DWS 331-12	US 2002-T15P	FLAG T15P/3,5	CN 045-01

AT004a	CER WN.N 0804..	DCS 12C4
AT004b	CER WN.A 0804..	DCS 12C2

DWLN(RL) INT

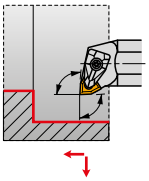
P M K N S H

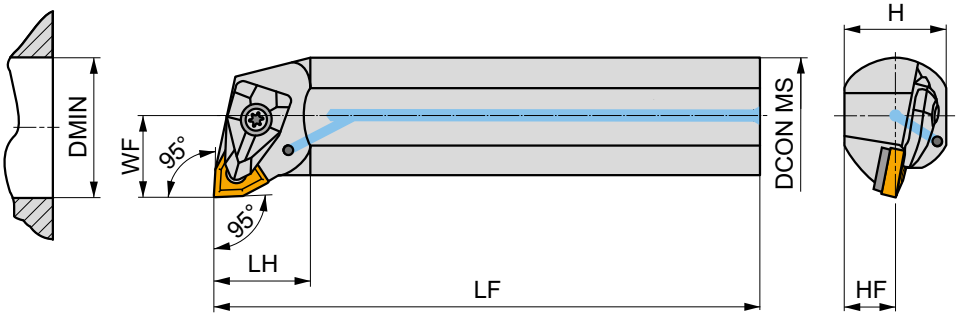
PRAMET

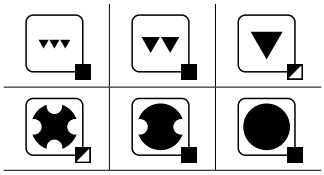
D

Internal Double Clamp Boring Bar with 95° Cutting Angle for WN.. Insert

Internal Right/Left hand double clamp boring bar, through coolant, 95° cutting angle for negative WN.. 06 and 08 inserts. Minimum internal turning diameter Ø32 mm. For internal taper, longitudinal turning with shoulder and chamfer turning. shank sizes Ø25 up to Ø50 mm available. Body treated for longer tool life.







	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	H [mm]	HF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]		kg		
R	A25T-DWLNR 06	25	32	17	23	11.5	300	31	-14	-6	✓	0.97	GI028	DW06
	A25T-DWLNR 08	25	33	17	23	11.5	300	31	-12	-6	✓	0.98	GI072	DWI08
	A32T-DWLNR 08	32	40	22	30	15	300	33	-10	-6	✓	1.71	GI072	DWI08
	A40T-DWLNR 08	40	50	27	37	18.5	300	36	-13	-6	✓	2.59	GI072	DW08
	A50U-DWLNR 08	50	63	35	47	23.5	350	39	-11	-6	✓	5.24	GI072	DW08
L	A25T-DWLNL 06	25	32	17	23	11.5	300	31	-14	-6	✓	0.97	GI028	DW06
	A25T-DWLNL 08	25	33	17	23	11.5	300	31	-12	-6	✓	0.98	GI072	DWI08
	A32T-DWLNL 08	32	40	22	30	15	300	33	-10	-6	✓	1.70	GI072	DWI08
	A40T-DWLNL 08	40	50	27	37	18.5	300	36	-13	-6	✓	2.59	GI072	DW08
	A50U-DWLNL 08	50	63	35	47	23.5	350	39	-11	-6	✓	5.25	GI072	DW08

GI028	WN.. 0604..
GI072	WN.. 0804..

		Nm			
DW06	DCS 09	1.7	DWS 328-01	US 2004-T09P	FLAG T09P
DW08	DCS 12	3.9	DWS 331-12	US 2002-T15P	FLAG T15P/3,5
DWI08	DCS 12	3.9	DWS 328-02	US 2002-T15P	FLAG T15P/3,5

PWLN(RL) INT

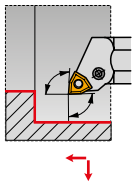
P M K N S H

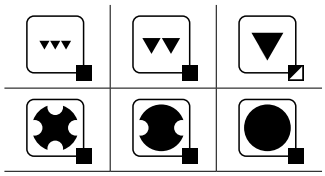
PRAMET

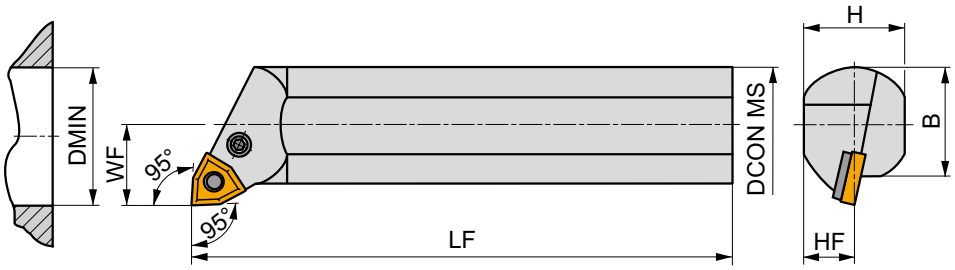
P

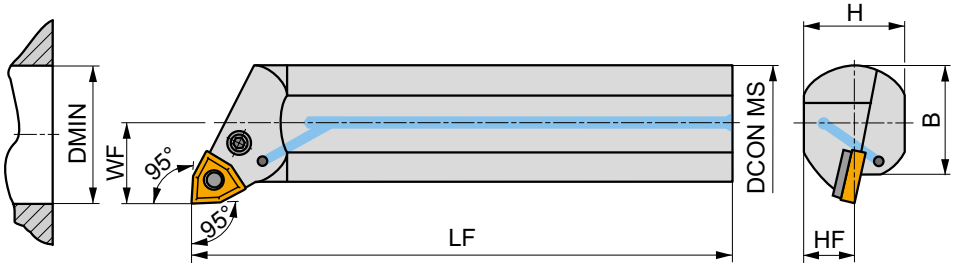
Internal Lever Lock Boring Bar with 95° Cutting Angle for WN.. Insert

Internal Right/Left hand lever lock boring bar, through coolant available, 95° cutting angle for WN.. 06 and 08 inserts. Minimum internal turning diameter Ø20 mm. For internal taper and longitudinal turning with shoulder and chamfer turning. Shank sizes Ø16 to Ø60 mm available. Body treated for longer tool life.









	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	H [mm]	B [mm]	LF [mm]	LAMS [°]	GAMO [°]		kg		
R	A16M-PWLNR 0604	16	20	11	15	15	150	-13.5	-6	✓	0.22	GI028	PW09
	A20Q-PWLNR 0604	20	27	13	18	18	180	-13.5	-6	✓	0.36	GI028	PW09
	S25T-PWLNR 0604	25	32	17	23	23	300	-12	-6	–	1.10	GI028	PW11
	A32S-PWLNR 0604	32	40	22	30	30	250	-12	-6	✓	1.30	GI028	PW11
	A25R-PWLNR 08	25	32	17	23	23	200	-12	-6	✓	0.66	GI072	PW25
	S25T-PWLNR 08	25	32	17	23	23	300	-12	-6	–	1.10	GI072	PW25
	A32S-PWLNR 08	32	40	22	30	30	250	-12	-6	✓	1.46	GI072	PW21
	S32U-PWLNR 08	32	40	22	30	30	350	-12	-6	–	2.09	GI072	PW21
	A40T-PWLNR 08	40	50	27	38	38	300	-12	-6	✓	2.40	GI072	PW20
	A50U-PWLNR 08	50	63	35	47	48.5	350	-12	-6	✓	4.88	GI072	PW20
	A60V-PWLNR 08	60	80	43	57	58.5	400	-12	-6	✓	8.10	GI072	PW20
L	A16M-PWLNL 0604	16	20	11	15	15	150	-13.5	-6	✓	0.22	GI028	PW09
	A20Q-PWLNL 0604	20	27	13	18	18	180	-13.5	-6	✓	0.36	GI028	PW09
	S25T-PWLNL 0604	25	32	17	23	23	300	-12	-6	–	0.98	GI028	PW11
	A32S-PWLNL 0604	32	40	22	30	30	250	-12	-6	✓	1.28	GI028	PW11
	A25R-PWLNL 08	25	32	17	23	23	200	-12	-6	✓	0.75	GI072	PW25
	S25T-PWLNL 08	25	32	17	23	23	300	-12	-6	–	1.01	GI072	PW25
	A32S-PWLNL 08	32	40	22	30	30	250	-12	-6	✓	1.47	GI072	PW21
	S32U-PWLNL 08	32	40	22	30	30	350	-12	-6	–	2.08	GI072	PW21
	A40T-PWLNL 08	40	50	27	38	38	300	-12	-6	✓	2.90	GI072	PW20
	A50U-PWLNL 08	50	63	35	47	48.5	350	-12	-6	✓	4.88	GI072	PW20
	A60V-PWLNL 08	60	80	43	57	58.5	400	-12	-6	✓	8.70	GI072	PW20

GI028	WN.. 0604..
GI072	WN.. 0804..

PW09	–	PU 3611-A	PS 0512-A	2.0	M 5	12	–	–	HXK 2
PW11	WNU 060308	PU 01	US 46	5.0	M 6x0.75	13.2	NT 04	MT 04	HXK 3
PW20	WNU 080312	PU 02	US 35	6.0	M 8x1	22.5	NT 05	MT 05	HXK 4
PW21	WNU 080312	PU 02	US 41	6.0	M 8x1	17	NT 05	MT 05	HXK 4
PW25	–	PU 32	US 46	5.0	M 6x0.75	13.2	–	–	HXK 3

C.-DWLN(RL) INT

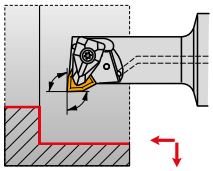
P M K N S H

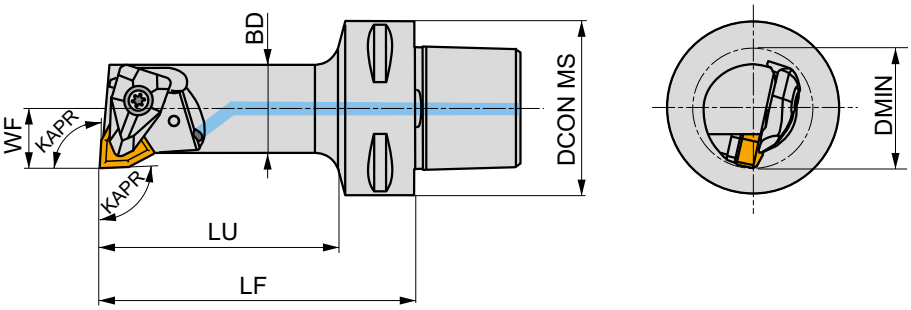
PRAMET

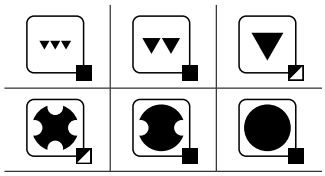
D

Internal PSC Quick Change Tool, Double Clamp, 95° Cutting Angle, WN.. Insert

Internal Right/Left hand double clamp tool, through coolant, with 95° cutting angle for internal taper and longitudinal turning with shoulder and chamfering with WN.. 06 and 08 inserts, minimum internal diameter Ø27 mm. Available with PSC shank (Polygon Shank Coupling) size C4. Body treated for longer tool life.







	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	LF [mm]	LU [mm]	BD [mm]	KAPR [°]	LAMS [°]	GAMO [°]		kg		
R	C4-DWLNR-13075-06	40	27	13	75	52	20	95	-17	-6	✓	0.42	GI028	DW06
	C4-DWLNR-17090-08	40	33	17	90	68	25	95	-12	-6	✓	0.53	GI072	DWI08
L	C4-DWLNL-13075-06	40	27	13	75	52	20	95	-17	-6	✓	0.42	GI028	DW06
	C4-DWLNL-17090-08	40	33	17	90	68	25	95	-12	-6	✓	0.53	GI072	DWI08

GI028	WN.. 0604..
GI072	WN.. 0804..

		Nm			
DW06	DCS 09	1.7	DWS 328-01	US 2004-T09P	FLAG T09P
DWI08	DCS 12	3.9	DWS 328-02	US 2002-T15P	FLAG T15P/3,5

PARTING-OFF & GROOVING

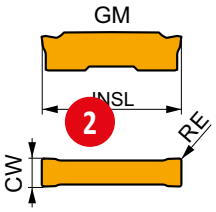
📖 6		WMG & ISO 13399
📖 10	ISO TURNING	INSTRUCTIONS
📖 18	ISO TURNING	NAVIGATORS
📖 57	ISO TURNING	POSITIVE INSERTS
📖 219	ISO TURNING	NEGATIVE INSERTS
📖 386		PARTING – OFF & GROOVING
📖 482		THREAD TURNING
📖 528		BROACHING
📖 536		GENERAL TECHNICAL INFORMATION

1 GL. D - GM

PRAMET

	CW [mm]	CWTOLL [mm]	CWTOLU [mm]	INSL [mm]
200	2.00	-0.05	0.05	25.0
300	3.00	-0.05	0.05	25.0
400	4.00	-0.05	0.05	25.0
500	5.00	-0.05	0.05	25.0
600	6.00	-0.05	0.05	25.0

3



Workpiece material suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap).

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
4																				
5																				
			6																	
			GM geometry for grooving and longitudinal turning and continuous to interrupted cuts.																	
GL2-D200M02-GM	G8330	0.2	190	0.10	0.8	110	0.09	0.8	180	0.10	0.8	–	–	–	45	0.08	0.6	–	–	–
7	T7325	9	220	0.10	0.8	170	0.09	0.8	–	–	–	–	–	–	70	0.08	0.6	–	–	–
G 00M02-GM	8	9	150	0.20	1.0	90	0.18	1.0	140	11	1.0	–	–	–	35	0.14	0.8	–	–	–
	T7325	0.2	175	0.20	1.0	135	0.18	1.0	–	–	–	–	–	–	55	0.14	0.8	–	–	–
GL3-D300M04-GM	G8330	0.4	160	0.20	1.0	95	0.18	1.0	150	0.20	1.0	–	–	–	40	0.14	0.8	–	–	–
	T7325	0.4	185	0.20	1.0	140	0.18	1.0	–	–	–	–	–	–	60	0.14	0.8	–	–	–
GL4-D400M04-GM	G8330	0.4	150	0.25	1.2	90	0.23	1.2	140	0.25	1.2	–	–	–	35	0.18	1.0	–	–	–
	T7325	0.4	170	0.25	1.2	130	0.23	1.2	–	–	–	–	–	–	55	0.18	1.0	–	–	–
GL4-D400M08-GM	G8330	0.8	180	0.25	1.2	105	0.23	1.2	170	0.25	1.2	–	–	–	45	0.18	1.0	–	–	–
	T7325	0.8	200	0.25	1.2	155	0.23	1.2	–	–	–	–	–	–	65	0.18	1.0	–	–	–
GL5-D500M08-GM	G8330	0.8	170	0.30	1.2	100	0.27	1.2	160	0.30	1.2	–	–	–	40	0.21	1.0	–	–	–
	T7325	0.8	190	0.30	1.2	145	0.27	1.2	–	–	–	–	–	–	60	0.21	1.0	–	–	–
GL6-D600M08-GM	G8330	0.8	170	0.30	1.2	100	0.27	1.2	160	0.30	1.2	–	–	–	40	0.21	1.0	–	–	–

GL5-D500M08-GM:T7325 Use full insert specification code when ordering!

- Grade
- Include colon
- ISO insert code

PARTING – OFF & GROOVING INSERTS – PAGE OVERVIEW

Pos.	Description
1	Designation of insert
2	Schematic drawing of insert
3	Table with insert sizes [mm]
4	Picture of representative insert
5	Profile of main cutting edge
6	Icons – specific features and cutting edge type

Pos.	Description
7	ISO insert code
8	Grade
9	Insert radii [mm]
10	Geometry description
11	Application area of insert

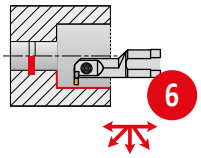
1 GG.(RL) INT

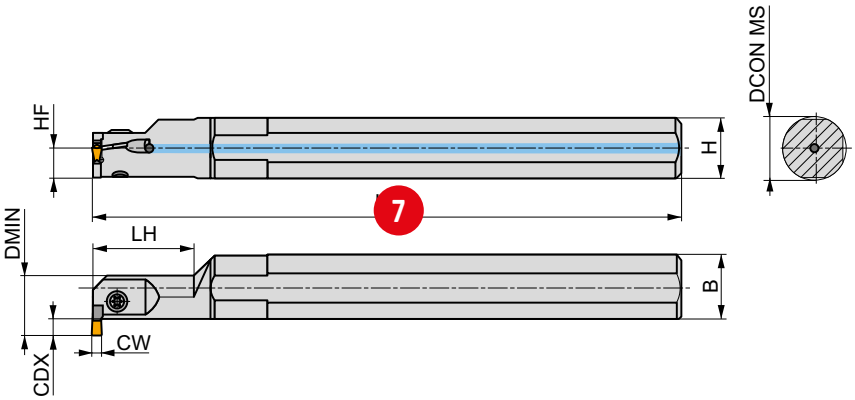
P M K N S H 2

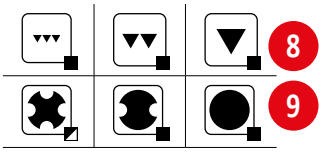
PRAMET 3 G

Internal Grooving Boring Bar for LCM. Inserts

Internal Right/Left hand grooving boring bar for grooving wi 5 0313 and 0413 inserts. Minimum internal grooving diameter Ø16 mm. Suited for internal grooving and multi-directional turning. Available with shank size Ø16 up to Ø32 mm. Body treated for longer tool life.







	Product	DCON MS [mm]	HF [mm]	H [mm]	B [mm]	LF [mm]	LH [mm]	CW [mm]	CDX [mm]	DMIN [mm]		kg		
R	A16Q-GGER 0313	16	7.5	15	15.5	180	25	3.00	3	16	✓	0.26	GI143	GL06
	A16Q-GGER 0313-04	16	7.5	15	15.5	180	25	3.00	3	16	✓	0.26	GI190	GL06
	A20R-GGFR 0313	20	9	18	19	200	30	3.00	4.5	20	✓	0.36	GI143	GL06
	A20R-GGFR 0313-04	20	9	18	19	200	30	3.00	4.5	20	✓	0.39	GI190	GL06
	A25S-GGHR 0313	25	11.5	23	24	250	40	3.00	6.5	25	✓	0.78	GI143	GL06
11	A25S-GG 12 13	25	11.5	23	24	250	40	4.00	6.5	25	14	15	16	17
	A32T-GGHR 0413	32	15	30	31	300	50	4.00	9.5	32	✓	1.59	GI170	GL06
L	A16Q-GGEL 0313	16	7.5	15	15.5	180	25	3.00	3	16	✓	0.29	GI143	GL06
	A16Q-GGEL 0313-04	16	7.5	15	15.5	180	25	3.00	3	16	✓	0.28	GI190	GL06
	A20R-GGFL 0313	20	9	18	19	200	30	3.00	4.5	20	✓	0.38	GI143	GL06
	A20R-GGFL 0313-04	20	9	18	19	200	30	3.00	4.5	20	✓	0.38	GI190	GL06
	A25S-GGHL 0313	25	11.5	23	24	250	40	3.00	6.5	25	✓	0.81	GI143	GL06
	A25S-GGFL 0413	25	11.5	23	24	250	40	4.00	6.5	25	✓	0.82	GI170	GL06
	A32T-GGHL 0413	32	15	30	31	300	50	4.00	9.5	32	✓	1.59	GI170	GL06

	18
GI143	LCM. 0313..
GI170	LCM. 0413..
GI190	LCM. 0313…..-04

		Nm	19		
GL06	SR 85011-T15P	5.0	M 5	9	FLAG T15P

Typical page with turning holders displayed – specific page details will differ.

PARTING – OFF & GROOVING HOLDERS – PAGE OVERVIEW

Pos.	Description
1	Designation of parting-off & grooving holder
2	Material group recommendations
3	Clamping system of insert
4	Illustrative picture [1]
5	Tool description
6	Workpiece profile
7	Schematic drawing of tool
8	Achievable quality of surface
9	Character of cut/working conditions
10	Product applications

Pos.	Description
11	Tool design
12	Code of holder
13	Dimensions [mm] and angles [2] [°] of holder
14	Internal coolant supply
15	Weight [kg]
16	Group of compatible inserts [3]
17	Group of spare parts [3], [4]
18	Compatible inserts
19	Spare parts

[1] Turning holder is primarily displayed in its right design (R)

[2] GAMO = orthogonal rake angle (see technical pages)
LAMS = inclination angle of main cutting edge (see technical pages)

[3] Code of Group of compatible inserts, spare parts and special accessories is used only for purposes of this catalogue. It cannot be used for orders.

[4] Spare parts and special accessories icons are designed schematically for ease of understanding. They aren't included in list of icons. Screws are, in some cases, completed with info on torque value in Nm, length of screw and size of thread.

PARTING – OFF & GROOVING – ICONS OVERVIEW

General icons

■	Primary use
◪	Possible use

▼▼▼	Finishing – very good surface quality
▼▼	Medium machining – good surface quality
▼	Roughing – unlimited surface roughness

●	Suitable for stable working conditions
●	Suitable for unstable working conditions
✖	Suitable for very unstable working conditions

Turning operations

	Copy turning (multi directional machining)
	Deep and wide axial groove (with following expansion)
	Deep axial groove
	Deep radial groove
	Face copy turning

	Internal grooving
	Internal grooving (with following expansion)
	Parting off
	Shallow and wide axial groove (with following expansion)
	Shallow axial groove

	Shallow radial groove
	Tube parting off
	Wide radial groove (with following expansion)

Features

	First choice
	Large overhang

	Universal wide range option
	Heavy working conditions

	Rounded edge
	Rounded edge with facet

Other

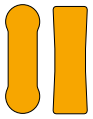
	Clamping torque of screw [Nm]

	Internal supply of coolant

GL. D

406

LCMF 13



418

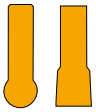
LCMF 16, LCMF 30

432

LCMF 20

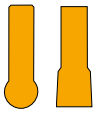
453

LCMR 13



419

LCMR 16, LCMR 30



435

LFMX

456

LFUX

464

TN R EXT

475

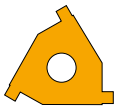
TN R INT

475

TN ZZ EXT

476

TN ZZ INT



477

X 61

468

X 61 R

469

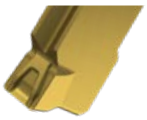
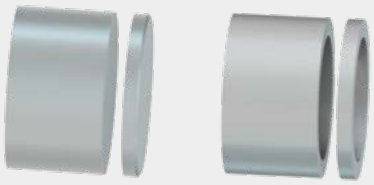
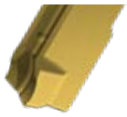
X 61 R-1

473

X 61-1

472

PARTING – OFF & GROOVING GEOMETRIES – NAVIGATOR

		Type of operation	insert family choice			
			First choice		Optional choice	
EXTERNAL		Grooving	GL. D		LCMF16, LCMF30	
			GM		F	
			406		432	
		Parting off	gL. D		LFMX	
			PM		M2	
			407		457	
		Face grooving	ICMF13		LCMF16, LCMF30	
			F		F	
			418		432	
		Copy profiling	gL. D		LCMF16, LCMF30	
			MM		MP	
			406		433	
		Circlips grooving	x61		TN ZZ EXT	
			469		476	
INTERNAL		Grooving	ICMF13			
			F			
			418			
		Copy profiling	ICMF13			
			MP			
			419			
		Circlips grooving	x61		TN ZZ INT	
			468		477	

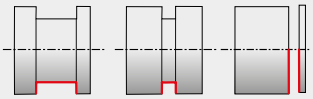
Grade Identification	Area of Application	Application	Feed	Cutting speed	Resistance to adverse Working Conditions	Coating	Colour	Substrate	Coolant benefit	Grade description
T9325	P15 - P35 M10 - M30 K15 - K35 S10 - S20	■ ■ ◪ ◪				MT-CVD		FGM	+ +	From a technological perspective this is an extremely versatile grade with high resistance to mechanical damage in adverse cutting conditions and retains excellent wear resistance. The correct application of this material requires high cutting speeds.
T7325	P15 - P35 M10 - M25 S10 - S25	◪ ■ ■				MT-CVD		FGM	+ + +	One of the most universal turning grades. Especially designed for stainless steel machining. Optimal balance between wear resistance and performance reliability. Suitable for broad variety of application in turning operations.
6640	P20 - P40 M20 - M35 K25 - K40	■ ■ ■				MT-CVD		H	+ + +	One of the toughest turning materials which can be used especially in roughing operations, or where operational reliability under adverse cutting conditions is a priority. Another ideal choice for machines working with low to medium cutting speeds and medium to high feed rates.
T8330	P25 - P40 M20 - M35 K20 - K40 N15 - N30 S15 - S25 H15 - H25	■ ■ ■ ◪ ◪ ◪				PVD		submicron H	+ + +	Versatile cutting material, this is useful for machining of all types of machined materials and is practically applicable in almost all types of turning operations. Its main benefits are its high operational reliability and very good frictional properties; it is therefore suitable for applications at medium and lower cutting speeds.
G8330	P25 - P40 M20 - M35 K20 - K40 S15 - S25	■ ■ ■ ◪				PVD		submicron H	+ + +	Universal cutting grade for grooving and parting-off applications. This grade is characterized by its exceptional reliability and versatility. Developed to fit machining conditions for most workpiece materials.

Substrat	
H	WC-Co based substrate
submicron H	WC-Co based substrate fine grained (< 1 µm)
FGM	Functionally graded substrate

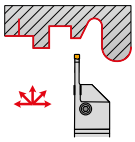
Coating	
MT-CVD	Medium-temperature chemical method of coating
PVD	Low-temperature physical method of coating

Benefits of cutting fluid	
+ + +	Use of coolant is essential
+ +	Highly recommended

PARTING-OFF & GROOVING – EXTERNAL



GLSF(RL) EXT

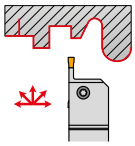


GL.D
GL2 GL3 GL4 GL5 GL6

■
20×20 25×25

410 | 406 – 408

GLSF(RL) EXT-G

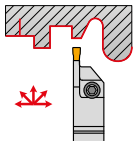


GL.D
GL2 GL3 GL4 GL5 GL6

■
20×20 25×25

412 | 406 – 408

GLSF(RL) EXT-S

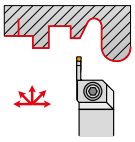


GL.D
GL2 GL3 GL4

■
12×12 16×16

413 | 406 – 408

GFK(RL) EXT

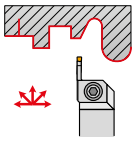


LCMF
0220

■
16×16 25×25

455 | 418 – 454

GFI(RL) EXT

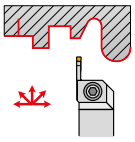


LCMF, LCMR
0316 0416 0516 0616 0830

■
16×16 32×25

437 | 418 – 454

GFM(RL) EXT

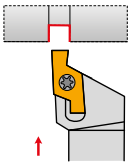


LCMF, LCMR
0316 0416 0516 0616 0830

■
20×20 32×25

439 | 418 – 454

P61 (RL) EXT

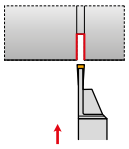


X61

■
16×16 25×25

470 | 468 – 469

XLCF(RL)

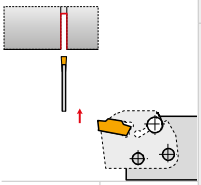


LFUX
03 04 05 06

■
16×12 32×25

465 | 464

XLCCN 25 BS + MS-EN

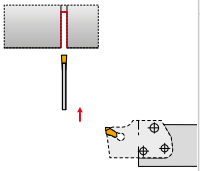


LCMF, LCMR
0316 0416 0516 0616

■
25×25 32×25

442 | 418 – 454

XLCF(NRL) BS + MS-EN

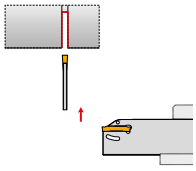


LFMX
1.50 1.60 2.00 2.20 3.10 4.10 5.10 6.35

■
12×12 32×25

461, 463 | 456 – 458

GLS B + DU, D

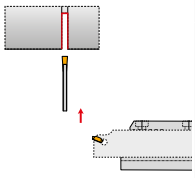


GL.D
GL2 GL3 GL4 GL5 GL6

■
20×20 32×29

414, 415 | 406 – 409

XLCCN B + DU, D

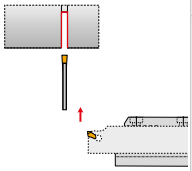


LCMF, LCMR
0316 0416 0516 0616

■
20×20 32×29

440, 441 | 418 – 454

XLCFN B + DU, D

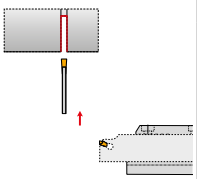


LFMX
1.50 1.60 2.00 2.20 3.10 4.10 5.10 6.35

■
20×20 40×36

459, 460 | 456 – 458

XLCFN B LFUX + DU, D

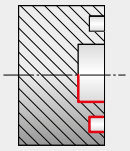


LFUX
03 04 05 06

■
20×20 40×40

466, 467 | 464

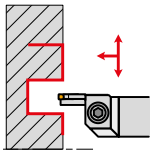
FACE GROOVING



GFIL-L AXIAL

LCMF, LCMR

0313
0316



17-30
140-230

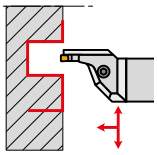
422, 444

418 – 454

GFIL-R AXIAL

LCMF, LCMR

0313
0316
0413
0416



17-30
140-230

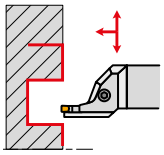
423, 445

418 – 454

GFIR-L AXIAL

LCMF, LCMR

0313
0316
0413
0416



17-30
140-230

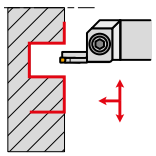
424, 446

418 – 454

GFIR-R AXIAL

LCMF, LCMR

0313
0316



17-30
140-230

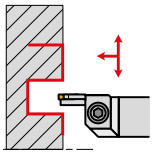
425, 447

418 – 454

GFML-L AXIAL

LCMF, LCMR

0413
0416



17-30
140-230

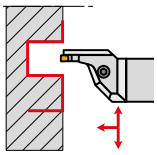
426, 448

418 – 454

GFML-R AXIAL

LCMF, LCMR

0413
0416



17-30
140-230

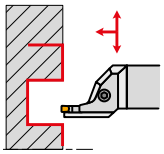
427, 449

418 – 454

GFMR-L AXIAL

LCMF, LCMR

0413
0416



17-30
140-230

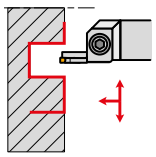
428, 450

418 – 454

GFMR-R AXIAL

LCMF, LCMR

0413
0416



17-30
140-230

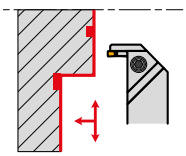
429, 451

418 – 454

GGI(RL)-90 AXIAL

LCMF, LCMR

0313
0316



17-30
110-170

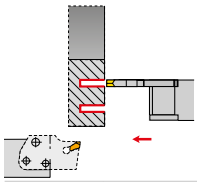
430, 452

418 – 454

XLXFL BS AXIAL + MS-EN

LFMX

3.10

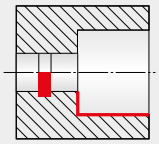


60-85
150-280

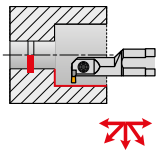
462, 463

456 – 458

GROOVING – INTERNAL



GG.(RL) INT



ØDmin	16 – 32

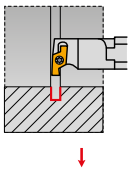
LCMF, LCMR

0313
0413

421

418 – 454

P61 (RL) INT



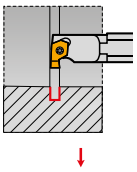
ØDmin	16 – 40

X61

471

468

P61S(RL)-1 INT



ØDmin	12.5

X61-1

474

472

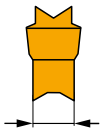
1	2		3	4	5	6	7		8
GL	3	–	D	300	G	02	L06	–	PM

1 Tool group

GL

2 Pocket size

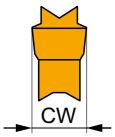
1, 2, 3, 4, 5, 6



3 Number of edges

S	One edge
D	Two edges

4 Cutting width – CW

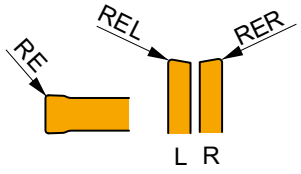


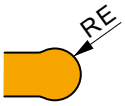
	CW
200	2.00
250	2.50
300	3.00
400	4.00
500	5.00
600	6.00

5 Edge design

G	Ground
M	Direct pressed

6 Nose radius



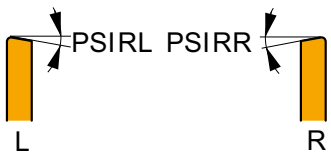


	RE, RER, REL [mm]
02	0.2
03	0.3
04	0.4
08	0.8

ROUND GEOMETRY

	RE [mm]
M0	RE = CW/2

7 Primary cutting edge angle



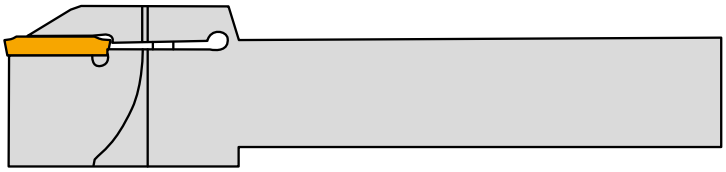
	[°]
06	6
12	12

8 Chipbreaker designation

PM
PR
GM
MM

PARTING – OFF & GROOVING HOLDERS (EXTERNAL TURNING) – GL – CODE DESIGNATION

1	2		3	4	5	6	7		8		9	10	11
GL	3	–	S	2525	M	F	L	–	20	–	R	120	090

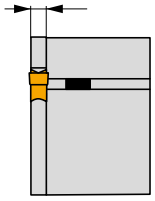


1 Tool group

GL

2 Pocket size

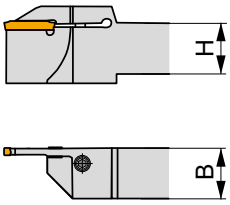
1, 2, 3, 4, 5, 6



3 Shank type

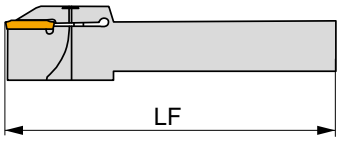
A	steel shank with internal coolant
S	steel shank without internal coolant

4 Shank dimensions



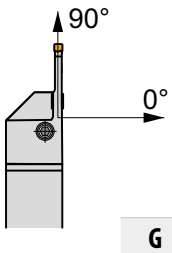
	H/B [mm]/ [mm]
1212 –	12/12
1616 –	16/16
2020 –	20/20
2525 –	25/25

5 Holder total length – LF



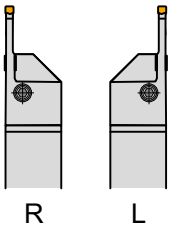
	LF [mm]
H	100
K	125
M	150
P	170

6 Tool style – cutting edge angle

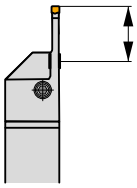


	[°]
G	0
F	90

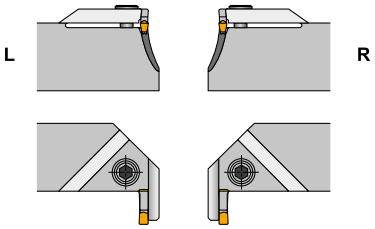
7 Version (right/left)



8 Cutting depth maximum – CDX

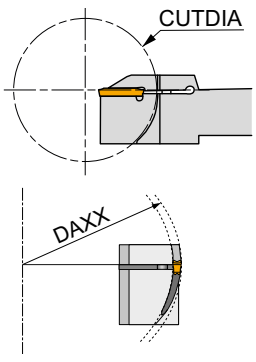


9 Blade curvature direction

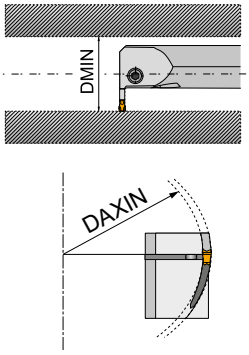


Additional information for axial turning.

10 Maximum diameter



11 Minimum diameter



PARTING – OFF & GROOVING BLADES (EXTERNAL TURNING) – GL – CODE DESIGNATION

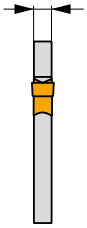
1	2		3	4	5	6
GL	3	–	S	32	M	B

1 – Tool group

GL

2 – Pocket size

1, 2, 3, 4, 5, 6



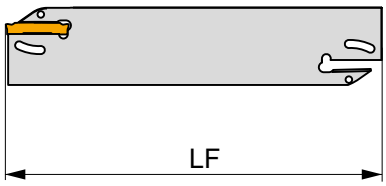
3 – Shank type

A	Steel shank with internal coolant
S	Steel shank without Internal coolant

4 – Shank dimensions

	H [mm]
26	26
32	32

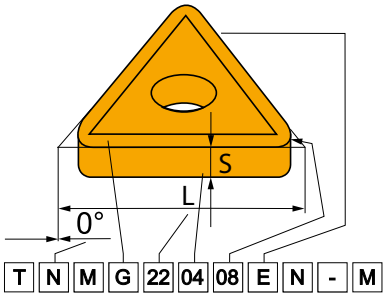
5 – Blade total length – LF



	LF [mm]	LF [″]
K	125	5.000″
M	150	6.000″

6 – Tool style

B – blade



	1	2	3	4
ISO	T T	N N	U M	N G
ANSI	T T	N N	U M	G

1 Insert shape

H	O	P	R
S	T	C 80°	D 55°
E 75°	M 86°	V 35°	W 80°
L	A 85°	B 82°	K 55°

2 Insert clearance angle

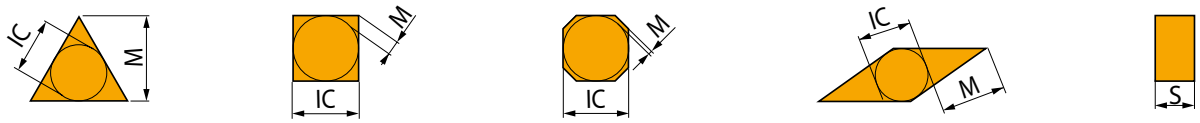
A	3°	B	5°
C	7°	D	15°
E	20°	F	25°
G	30°	N	0°
P	11°	O	Special

4 Insert type

N	
R	
F	
A	
M	
G	
W	40° – 60°
T	
Q	
U	
B	70° – 90°
H	
C	
J	
X	Special

3 Tolerances

	[mm]			[″]		
	M (±)	S (±)	IC (±)	M (±)	S (±)	IC (±)
A	0.005	0.025	0.025	.0002″	.001″	.0010″
F	0.005	0.025	0.013	.0002″	.001″	.0005″
C	0.013	0.025	0.025	.0005″	.001″	.0010″
H	0.013	0.025	0.013	.0005″	.001″	.0005″
E	0.025	0.025	0.025	.0010″	.001″	.0010″
G	0.025	0.130	0.025	.0010″	.005″	.0010″
J	0.005	0.025	0.05 – 0.13	.0002″	.001″	.002 – 0.005″
K	0.013	0.025	0.05 – 0.13	.0005″	.001″	.002 – 0.005″
L	0.025	0.025	0.05 – 0.13	.0010″	.001″	.002 – 0.005″
M	0.08 – 0.18	0.130	0.05 – 0.13	.003 – 0.007″	.005″	.002 – 0.005″
N	0.08 – 0.18	0.025	0.05 – 0.13	.003 – 0.007″	.001″	.002 – 0.005″
U	0.05 – 0.38	0.130	0.05 – 0.13	.005 – 0.015″	.005″	.003 – 0.010″

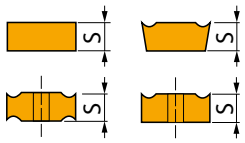


5	6	7	8	9		10
22	04	08			-	
22	04	08	E	N		M
5	6	7	8	9		10
4	3	2			-	
4	3	2	E	N		M

5 – Insert cutting edge length (insert size)

d=IC [mm]	[in]	H	O	P	S	T	C	D	E	M	V	W	R	K
3.97					03	06		04			06	02		
	5/32"	1.2												
4.76					04	08	04	05	04	04	08	L3		
	3/16"	1.5												
5.56					05	09	05	06	05	05	09	03		
	7/32"	1.8												
6.35		03	02	04	08	11	06	07	08	08	11	04	06	
	1/4"	2												
7.94		04	03	05	07	13	08	09	06	07	13	05	07	
	5/16"	2.5												
9.525		05	04	07	09	16	09	11	09	09	16	06	09	16
	3/8"	3												
12.7		07	05	09	12	22	12	15	13	12	22	08	12	
	1/2"	4												
15.875		09	06	11	15	27	16	19	16	15	27	10	15	
	5/8"	5												
19.05		11	07	13	19	33	19	23	19	19	33	13	19	
	3/4"	6												
25.40		14	10	18	25	44	25	31	26	25	44	17	25	
	1"	8												
31.75		18	13	23	31	54	32	38	32	31	54	21	31	
	1 1/4"	10												

6 – Insert thickness



	S [mm]	S ["]
01	1.59	1/16"
T1	1.98	5/64"
02	2.38	3/32"
03	3.18	1/8"
T3	3.97	5.32"
04	4.76	3/16"
05	5.56	7/32"
06	6.35	1/4"
07	7.94	5/16"
09	9.52	3/8"

7 – Insert nose radius

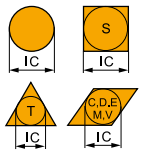
	RE [mm]	RE ["]
00	0	0"
02	0.2	1/128"
04	0.4	1/64"
08	0.8	1/32"
12	1.2	3/64"
16	1.6	1/16"
24	2.4	3/32"
32	3.2	1/8"

Round inserts

d = I.C.	
["]	00
[mm]	M0

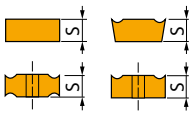
ANSI

5 – Inscribed circle



Symbol	d = I.C. [mm]	d = I.C. ["]
1	3.175	1/8"
1.2	3.969	5/32"
1.5	4.763	3/16"
1.8	5.556	7/32"
2	6.350	1/4"
2.5	7.938	5/16"
3	9.525	3/8"
4	12.700	1/2"
5	15.875	5/8"
6	19.050	3/4"
7	22.225	7/8"
8	25.400	1"
10	31.750	5/4"
12	38.100	6/4"

6 – Insert thickness



Symbol	S [mm]	S ["]
1	1.588	1/16"
1.2	1.984	5/64"
1.5	2.381	3/32"
2	3.175	1/8"
2.5	3.969	5/32"
3	4.763	3/16"
3.5	5.556	7/32"
4	6.350	1/4"
5	7.938	5/16"
6	9.525	3/8"
7	11.113	7/16"
8	12.700	1/2"
9	14.288	9/16"
10	15.875	5/8"

7 – Insert nose radius

Symbol	RE [mm]	RE ["]
0	0	0"
0.2	0.099	1/256"
0.5	0.198	1/128"
1	0.397	1/64"
2	0.794	1/32"
3	1.191	3/64"
4	1.588	1/16"
5	1.984	5/64"
6	2.381	3/32"
7	2.778	7/64"
8	3.175	1/8"
10	3.969	5/32"
12	4.763	3/16"
14	5.556	7/32"
16	6.350	1/4"

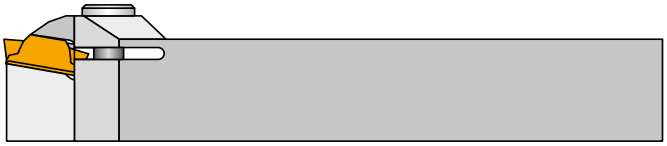
8 – Insert cutting edge design

F Sharp edges	E Rounded edges
T Edges with facet	S Rounded edges with facet
K Edges with double facet	P Rounded edges with double facet

9 – Feed direction

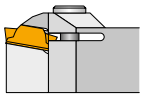
10 – Chip breaker designation

	1	2	3	4	5	6	7	8	9	10	11
ISO	G	F	I	L	25	25	M	0316	R	030	017
ANSI	1	2	3	4	5 & 6		7	8	9	10	11
	G	F	I	L	16		D	0316	R	1.18	.670

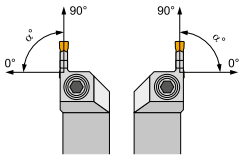


1 | 1 Clamping designation

G



2 | 2 Holder style – cutting edge angle

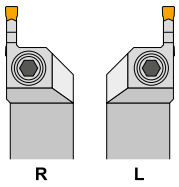


α°	
G = 0°	K = 75°
R = 15°	F = 90°
T = 30°	B = 105°
S = 45°	E = 120°
W = 60°	D = 135°

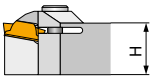
3 | 3 Cutting depth maximum – CDX

G = 2.0 × CW	N = 5.5 × CW
H = 2.5 × CW	O = 6.0 × CW
I = 3.0 × CW	P = 6.5 × CW
J = 3.5 × CW	Q = 7.0 × CW
K = 4.0 × CW	R = 7.5 × CW
L = 4.5 × CW	S = 8.0 × CW
M = 5.0 × CW	T = 8.5 × CW

4 | 4 Version (right/left) R/L

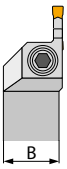


5 Shank height [mm]



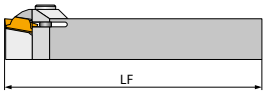
12 = 12 mm
16 = 16 mm
20 = 20 mm
etc.

6 Shank width [mm]



12 = 12 mm
16 = 16 mm
20 = 20 mm
etc.

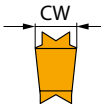
7 | 7 Holder total length



	LF [mm]
H	100
J	110
K	125
L	140
M	150
N	160
P	170
Q	180
R	200

	LF [″]
A	4.000″
B	4.500″
C	5.000″
D	6.000″
E	7.000″
F	8.000″

8 | 8 Insert width



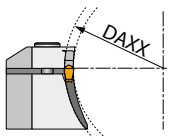
	CW [mm]	CW [″]
02	2.0	.079″
03, 0313, 0316	3.0	.118″
04, 0413, 0416	4.0	.157″
05, 0516	5.0	.197″
06, 0616	6.0	.236″
08, 0830	8.0	.315″

5 & 6

	B [″]	H [″]
05	5/16″	5/16″
06	3/8″	3/8″
08	1/2″	1/2″
10	5/8″	5/8″
12	3/4″	3/4″
16	1″	1″
85	1″	1 1/4″
86	1″	1 1/2″
20	1 1/4″	1 1/4″
24	1 1/2″	1 1/2″
32	2″	2″

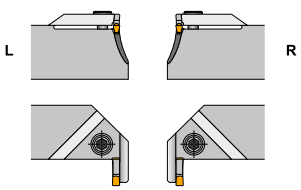
For square shanks, the number is the width or height in terms of 16ths. For rectangular shanks the first digit is the width in terms of 8ths and the second digit is the height in terms of 4ths.

10 | 10 Maximum diameter – face grooving



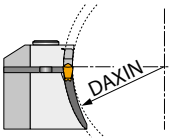
Additional information for axial turning

9 | 9 Blade curvature direction



Additional information for axial turning

11 | 11 Minimum diameter – face grooving



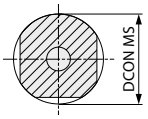
Additional information for axial turning

	1	2	3		4	5	6	7	8
ISO	A	25	S	–	G	G	H	L	0313
ANSI	A	16	S	–	G	G	H	L	0313

1 Shank

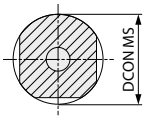
S	Steel shank
A	Steel shank with coolant hole

2 Diameter of shank



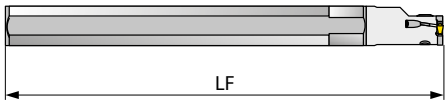
	DCON MS [mm]
12	12
16	16
20	20
25	25
32	32
40	40

2 Diameter of shank



	DCON MS [″]
08	.500″
10	.625″
12	.750″
16	1.000″
20	1.250″
24	1.500″

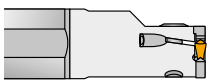
3 Holder total length



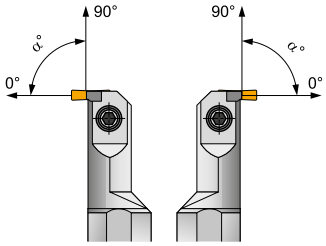
	LF [mm]	LF [″]		LF [mm]	LF [″]
M	150	6.000″	S	250	10.000″
P	170	6.250″	T	300	12.000″
Q	180	7.250″	U	350	14.000″
R	200	8.000″	V	400	15.750″

4 Clamping designation

G

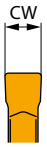


5 Tool style – cutting edge angle



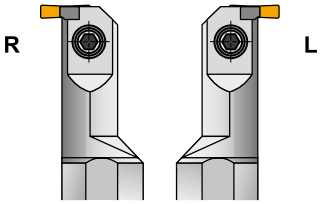
α°	
G = 0°	K = 75°
R = 15°	F = 90°
T = 30°	B = 105°
S = 45°	E = 120°
W = 60°	D = 135°

6 Cutting depth maximum – CDX

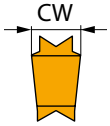


E = 1.0 × CW	J = 3.5 × CW
F = 1.5 × CW	K = 4.0 × CW
G = 2.0 × CW	L = 4.5 × CW
H = 2.5 × CW	M = 5.0 × CW
I = 3.0 × CW	N = 5.5 × CW
X = Special	

7 Version (right/left) R/L



8 Insert width

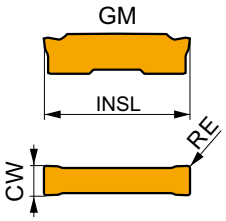


	CW [mm]
0313	3.0
0413	4.0

GL. D - GM

PRAMET

	CW	CWTOLL	CWTOLU	INSL
	[mm]	[mm]	[mm]	[mm]
200	2.00	-0.05	0.05	25.0
300	3.00	-0.05	0.05	25.0
400	4.00	-0.05	0.05	25.0
500	5.00	-0.05	0.05	25.0
600	6.00	-0.05	0.05	25.0



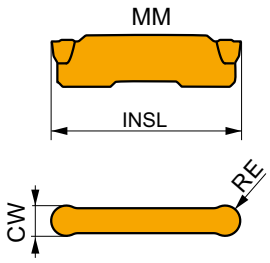
Workpiece material suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap).

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
			U E																	
GM geometry for grooving and longitudinal turning, and continuous to interrupted cuts.																				
GL2-D200M02-GM	**G8330**	0.2	190	0.10	0.8	110	0.09	0.8	180	0.10	0.8	–	–	–	45	0.08	0.6	–	–	–
	T7325	0.2	220	0.10	0.8	170	0.09	0.8	–	–	–	–	–	–	70	0.08	0.6	–	–	–
GL3-D300M02-GM	**G8330**	0.2	150	0.20	1.0	90	0.18	1.0	140	0.20	1.0	–	–	–	35	0.14	0.8	–	–	–
	T7325	0.2	175	0.20	1.0	135	0.18	1.0	–	–	–	–	–	–	55	0.14	0.8	–	–	–
GL3-D300M04-GM	**G8330**	0.4	160	0.20	1.0	95	0.18	1.0	150	0.20	1.0	–	–	–	40	0.14	0.8	–	–	–
	T7325	0.4	185	0.20	1.0	140	0.18	1.0	–	–	–	–	–	–	60	0.14	0.8	–	–	–
GL4-D400M04-GM	**G8330**	0.4	150	0.25	1.2	90	0.23	1.2	140	0.25	1.2	–	–	–	35	0.18	1.0	–	–	–
	T7325	0.4	170	0.25	1.2	130	0.23	1.2	–	–	–	–	–	–	55	0.18	1.0	–	–	–
GL4-D400M08-GM	**G8330**	0.8	180	0.25	1.2	105	0.23	1.2	170	0.25	1.2	–	–	–	45	0.18	1.0	–	–	–
	T7325	0.8	200	0.25	1.2	155	0.23	1.2	–	–	–	–	–	–	65	0.18	1.0	–	–	–
GL5-D500M08-GM	**G8330**	0.8	170	0.30	1.2	100	0.27	1.2	160	0.30	1.2	–	–	–	40	0.21	1.0	–	–	–
	T7325	0.8	190	0.30	1.2	145	0.27	1.2	–	–	–	–	–	–	60	0.21	1.0	–	–	–
GL6-D600M08-GM	**G8330**	0.8	170	0.30	1.2	100	0.27	1.2	160	0.30	1.2	–	–	–	40	0.21	1.0	–	–	–
	T7325	0.8	190	0.30	1.2	145	0.27	1.2	–	–	–	–	–	–	60	0.21	1.0	–	–	–

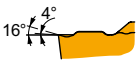
GL. D - MM

PRAMET

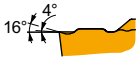
	CW	CWTOLL	CWTOLU	INSL
	[mm]	[mm]	[mm]	[mm]
200	2.00	-0.05	0.05	25.0
300	3.00	-0.05	0.05	25.0
400	4.00	-0.05	0.05	25.0
500	5.00	-0.05	0.05	26.0
600	6.00	-0.05	0.05	26.0



Workpiece material suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap).

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
			U S																	
MM geometry, with full radius shape for copy profiling and longitudinal turning, and continuous to interrupted cuts.																				
GL2-D200MM0-MM	**G8330**	1.0	250	0.10	1.0	150	0.09	1.0	235	0.10	1.0	–	–	–	60	0.08	0.8	–	–	–
	T7325	1.0	285	0.10	1.0	220	0.09	1.0	–	–	–	–	–	–	90	0.08	0.8	–	–	–

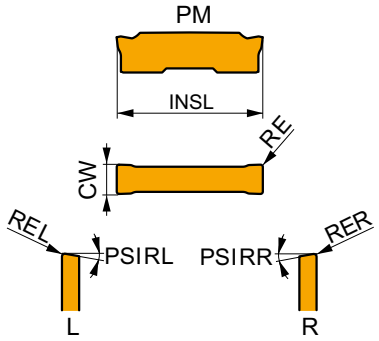
Workpiece material suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap).

Product		RE	P						M						K						N						S						H					
			vc		f		ap		vc		f		ap		vc		f		ap		vc		f		ap		vc		f		ap		vc		f		ap	
		[mm]	[m/min]		[mm/rev]		[mm]		[m/min]		[mm/rev]		[mm]		[m/min]		[mm/rev]		[mm]		[m/min]		[mm/rev]		[mm]		[m/min]		[mm/rev]		[mm]		[m/min]		[mm/rev]		[mm]	
																																						
			MM geometry, with full radius shape for copy profiling and longitudinal turning, and continuous to interrupted cuts.																																			
GL3-D300MM0-MM	**G8330**	1.5	■	210	0.20	1.2	■	125	0.18	1.2	■	195	0.20	1.2	–	–	–	◪	50	0.14	1.0	–	–	–	
	T7325	1.5	◪	240	0.20	1.2	■	185	0.18	1.2	–	–	–	–	–	–	◪	75	0.14	1.0	–	–	–	
GL4-D400MM0-MM	**G8330**	2.0	■	220	0.20	1.2	■	130	0.18	1.2	■	205	0.20	1.2	–	–	–	◪	55	0.14	1.0	–	–	–	
	T7325	2.0	◪	250	0.20	1.2	■	195	0.18	1.2	–	–	–	–	–	–	◪	80	0.14	1.0	–	–	–	
GL5-D500MM0-MM	**G8330**	2.5	■	205	0.25	1.2	■	120	0.23	1.2	■	190	0.25	1.2	–	–	–	◪	50	0.18	1.0	–	–	–	
	T7325	2.5	◪	235	0.25	1.2	■	180	0.23	1.2	–	–	–	–	–	–	◪	75	0.18	1.0	–	–	–	
GL6-D600MM0-MM	**G8330**	3.0	■	195	0.30	1.2	■	115	0.27	1.2	■	185	0.30	1.2	–	–	–	◪	45	0.21	1.0	–	–	–	
	T7325	3.0	◪	220	0.30	1.2	■	170	0.27	1.2	–	–	–	–	–	–	◪	70	0.21	1.0	–	–	–	

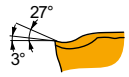
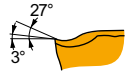
GL. D - PM

PRAMET

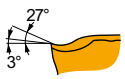
	CW	CWTOLL	CWTOLU	INSL
	[mm]	[mm]	[mm]	[mm]
200	2.00	-0.05	0.05	25.0
250	2.55	-0.05	0.05	25.0
300	3.00	-0.05	0.05	25.0
400	4.00	-0.05	0.05	25.0
500	5.00	-0.05	0.05	25.0
600	6.00	-0.05	0.05	25.0



Suitability and starting values for cutting speed (vc) and feed (f). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H			PSIRR	PSIRL
			vc		f	vc		f	vc		f	vc		f	vc		f	vc		f		
		[mm]	[m/min]		[mm/rev]	[m/min]		[mm/rev]	[m/min]		[mm/rev]	[m/min]		[mm/rev]	[m/min]		[mm/rev]	[m/min]		[mm/rev]	[°]	[°]
																						
			PM geometry, first choice for parting-off and grooving, and continuous to slightly interrupted cuts.																			
GL2-D200M02-PM	**G8330**	0.2	■	130	0.08	■	75	0.07	◪	120	0.08	–	–	◪	30	0.06	–	–	–	–	
	T7325	0.2	◪	150	0.08	■	115	0.07	–	–	–	–	–	◪	45	0.06	–	–	–	–	
GL3-D250G02-PM	**G8330**	0.2	■	130	0.10	■	75	0.09	◪	120	0.10	–	–	◪	30	0.07	–	–	–	–	
GL3-D300M02-PM	**G8330**	0.2	■	130	0.10	■	75	0.09	◪	120	0.10	–	–	◪	30	0.07	–	–	–	–	
	T7325	0.2	◪	150	0.10	■	115	0.09	–	–	–	–	–	◪	45	0.07	–	–	–	–	
GL4-D400M02-PM	**G8330**	0.2	■	130	0.12	■	75	0.11	◪	120	0.12	–	–	◪	30	0.10	–	–	–	–	
	T7325	0.2	◪	150	0.12	■	115	0.11	–	–	–	–	–	◪	45	0.10	–	–	–	–	
GL5-D500M03-PM	**G8330**	0.3	■	130	0.15	■	75	0.14	◪	120	0.15	–	–	◪	30	0.12	–	–	–	–	
GL6-D600M03-PM	**G8330**	0.3	■	130	0.15	■	75	0.14	◪	120	0.15	–	–	◪	30	0.12	–	–	–	–	
																						
			R-PM right-handed geometry, first choice for parting-off, and continuous to slightly interrupted cuts.																			
GL2-D200G02R06-PM	**G8330**	0.2	■	130	0.08	■	75	0.07	◪	120	0.08	–	–	◪	30	0.06	–	–	–	6	–
	T7325	0.2	◪	150	0.08	■	115	0.07	–	–	–	–	–	◪	45	0.06	–	–	–	6	–
GL2-D200G02R12-PM	**G8330**	0.2	■	130	0.08	■	75	0.07	◪	120	0.08	–	–	◪	30	0.06	–	–	–	12	–
GL3-D300G02R06-PM	**G8330**	0.2	■	130	0.10	■	75	0.09	◪	120	0.10	–	–	◪	30	0.07	–	–	–	6	–
	T7325	0.2	◪	150	0.10	■	115	0.09	–	–	–	–	–	◪	45	0.07	–	–	–	6	–
GL3-D300G02R12-PM	**G8330**	0.2	■	130	0.10	■	75	0.09	◪	120	0.10	–	–	◪	30	0.07	–	–	–	12	–
GL4-D400G02R06-PM	**G8330**	0.2	■	130	0.12	■	75	0.11	◪	120	0.12	–	–	◪	30	0.10	–	–	–	6	–
	T7325	0.2	◪	150	0.12	■	115	0.11	–	–	–	–	–	◪	45	0.10	–	–	–	6	–
GL4-D400G02R12-PM	**G8330**	0.2	■	130	0.12	■	75	0.11	◪	120	0.12	–	–	◪	30	0.10	–	–	–	12	–

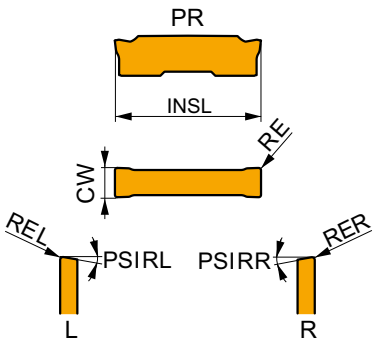
Suitability and starting values for cutting speed (vc) and feed (f). Refer to our Machining Calculator app for further calculations.

Product		RE	P				M				K				N				S				H				PSIRR	PSIRL
			vc		f		vc		f		vc		f		vc		f		vc		f		vc		f			
		[mm]	[m/min]		[mm/rev]		[m/min]		[mm/rev]		[m/min]		[mm/rev]		[m/min]		[mm/rev]		[m/min]		[mm/rev]		[m/min]		[mm/rev]		[°]	[°]
																												
L-PM left-handed geometry, first choice for parting-off and continuous to slightly interrupted cuts.																												
GL2-D200G02L06-PM	**G8330**	0.2	■	130	0.08	■	75	0.07	◪	120	0.08		–	–	◪	30	0.06		–	–		–	6
	T7325	0.2	◪	150	0.08	■	115	0.07		–	–		–	–	◪	45	0.06		–	–		–	6
GL2-D200G02L12-PM	**G8330**	0.2	■	130	0.08	■	75	0.07	◪	120	0.08		–	–	◪	30	0.06		–	–		–	12
GL3-D300G02L06-PM	**G8330**	0.2	■	130	0.10	■	75	0.09	◪	120	0.10		–	–	◪	30	0.07		–	–		–	6
	T7325	0.2	◪	150	0.10	■	115	0.09		–	–		–	–	◪	45	0.07		–	–		–	6
GL3-D300G02L12-PM	**G8330**	0.2	■	130	0.10	■	75	0.09	◪	120	0.10		–	–	◪	30	0.07		–	–		–	12
GL4-D400G02L06-PM	**G8330**	0.2	■	130	0.12	■	75	0.11	◪	120	0.12		–	–	◪	30	0.10		–	–		–	6
	T7325	0.2	◪	150	0.12	■	115	0.11		–	–		–	–	◪	45	0.10		–	–		–	6
GL4-D400G02L12-PM	**G8330**	0.2	■	130	0.12	■	75	0.11	◪	120	0.12		–	–	◪	30	0.10		–	–		–	12

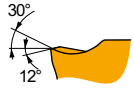
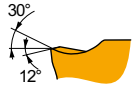
GL. D - PR

PRAMET

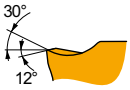
	CW	CWTOLL	CWTOLU	INSL
	[mm]	[mm]	[mm]	[mm]
200	2.00	-0.05	0.05	25.0
300	3.00	-0.05	0.05	25.0
400	4.00	-0.05	0.05	25.0
500	5.00	-0.05	0.05	25.0
600	6.00	-0.05	0.05	25.0



Suitability and starting values for cutting speed (vc) and feed (f). Refer to our Machining Calculator app for further calculations.

Product		RE	P				M				K				N				S				H				PSIRR	PSIRL
			vc		f		vc		f		vc		f		vc		f		vc		f		vc		f			
		[mm]	[m/min]		[mm/rev]		[m/min]		[mm/rev]		[m/min]		[mm/rev]		[m/min]		[mm/rev]		[m/min]		[mm/rev]		[m/min]		[mm/rev]		[°]	[°]
																												
PR geometry, first choice for parting-off and grooving, and continuous to interrupted cuts.																												
GL2-D200M02-PR	**G8330**	0.2	■	130	0.10	◪	75	0.09	■	120	0.10		–	–		–	–		–	–		–	–		–	–	–	–
	T7325	0.2	◪	150	0.10	◪	115	0.09		–	–		–	–		–	–		–	–		–	–		–	–	–	–
GL3-D300M02-PR	**G8330**	0.2	■	130	0.12	◪	75	0.11	■	120	0.12		–	–		–	–		–	–		–	–		–	–	–	–
	T7325	0.2	◪	150	0.12	◪	115	0.11		–	–		–	–		–	–		–	–		–	–		–	–	–	–
GL4-D400M02-PR	**G8330**	0.2	■	130	0.15	◪	75	0.14	■	120	0.15		–	–		–	–		–	–		–	–		–	–	–	–
	T7325	0.2	◪	150	0.15	◪	115	0.14		–	–		–	–		–	–		–	–		–	–		–	–	–	–
GL5-D500M04-PR	**G8330**	0.4	■	130	0.18	◪	75	0.16	■	120	0.18		–	–		–	–		–	–		–	–		–	–	–	–
GL6-D600M04-PR	**G8330**	0.4	■	130	0.18	◪	75	0.16	■	120	0.18		–	–		–	–		–	–		–	–		–	–	–	–
																												
R-PR right-handed geometry, first choice for parting-off, and continuous to interrupted cuts.																												
GL2-D200G02R06-PR	**G8330**	0.2	■	130	0.10	◪	75	0.09	■	120	0.10		–	–		–	–		–	–		–	–		6	–
GL2-D200G02R12-PR	**G8330**	0.2	■	130	0.10	◪	75	0.09	■	120	0.10		–	–		–	–		–	–		–	–		12	–
GL3-D300G02R06-PR	**G8330**	0.2	■	130	0.12	◪	75	0.11	■	120	0.12		–	–		–	–		–	–		–	–		6	–
GL3-D300G02R12-PR	**G8330**	0.2	■	130	0.12	◪	75	0.11	■	120	0.12		–	–		–	–		–	–		–	–		12	–
GL4-D400G02R06-PR	**G8330**	0.2	■	130	0.15	◪	75	0.14	■	120	0.15		–	–		–	–		–	–		–	–		6	–
GL4-D400G02R12-PR	**G8330**	0.2	■	130	0.15	◪	75	0.14	■	120	0.15		–	–		–	–		–	–		–	–		12	–

Suitability and starting values for cutting speed (vc) and feed (f). Refer to our Machining Calculator app for further calculations.

Product		RE	P		M		K		N		S		H		PSIRR	PSIRL
			vc [m/min]	f [mm/rev]	vc [m/min]	f [mm/rev]	vc [m/min]	f [mm/rev]	vc [m/min]	f [mm/rev]	vc [m/min]	f [mm/rev]	vc [m/min]	f [mm/rev]	[°]	[°]
			S													
			L-PR left-handed geometry, first choice for parting-off, and continuous to interrupted cuts.													
GL2-D200G02L06-PR	**G8330**	0.2	130	0.10	75	0.09	120	0.10	–	–	–	–	–	–	–	6
GL2-D200G02L12-PR	**G8330**	0.2	130	0.10	75	0.09	120	0.10	–	–	–	–	–	–	–	12
GL3-D300G02L06-PR	**G8330**	0.2	130	0.12	75	0.11	120	0.12	–	–	–	–	–	–	–	6
GL3-D300G02L12-PR	**G8330**	0.2	130	0.12	75	0.11	120	0.12	–	–	–	–	–	–	–	12
GL4-D400G02L06-PR	**G8330**	0.2	130	0.15	75	0.14	120	0.15	–	–	–	–	–	–	–	6
GL4-D400G02L12-PR	**G8330**	0.2	130	0.15	75	0.14	120	0.15	–	–	–	–	–	–	–	12

GLSF(RL) EXT

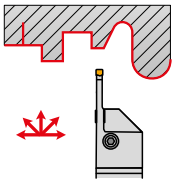
P M K N S H

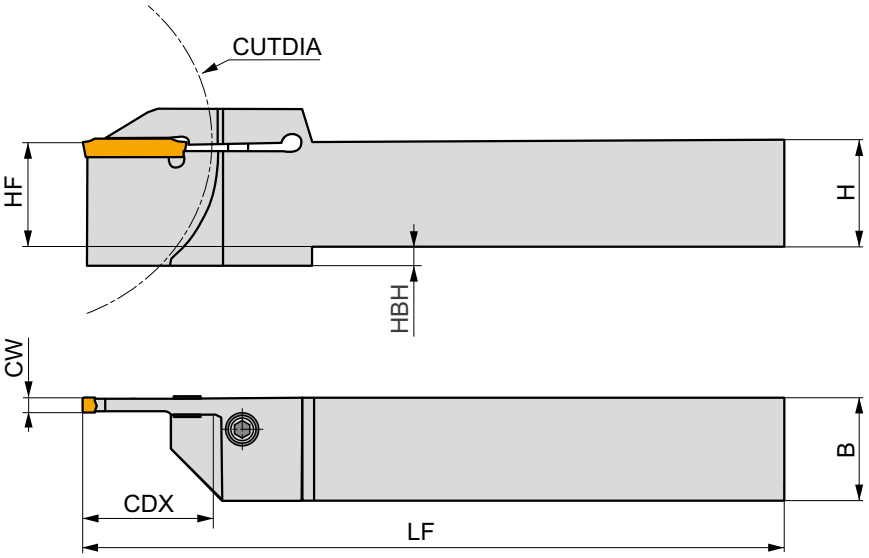
PRAMET

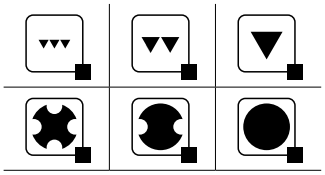
G

External V-Groove Top Clamp Grooving and Parting-Off tool for GL Inserts

External Right/Left hand radial tool holder for grooving with double-sided GL 2, 3, 4, 5, or 6 style inserts. Suited for radial grooving and parting-off applications, up to 32 mm maximum depth of cut. Available with shank size 20x20 or 25x25 mm. Reinforced body design for longer tool life and low vibrations.







	Product	HF [mm]	HBH [mm]	H [mm]	B [mm]	LF [mm]	CW [mm]	CDX [mm]	CUTDIA [mm]	kg		
R	GL2-S2020KFR-20-80	20	–	20	20	125	2.00	20	80	0.38	GI334	GL11
	GL2-S2020KFR-24-80	20	5	20	20	125	2.00	24	80	0.36	GI334	GL11
	GL2-S2525MFR-20-80	25	–	25	25	150	2.00	20	80	0.68	GI334	GL11
	GL2-S2525MFR-24-80	25	–	25	25	150	2.00	24	80	0.64	GI334	GL11
	GL3-S2020KFR-20-80	20	–	20	20	125	3.00	20	80	0.38	GI335	GL11
	GL3-S2020KFR-24-80	20	5	20	20	125	3.00	24	80	0.36	GI335	GL11
	GL3-S2525MFR-20-80	25	–	25	25	150	3.00	20	80	0.68	GI335	GL11
	GL3-S2525MFR-24-80	25	–	25	25	150	3.00	24	80	0.65	GI335	GL11
	GL3-S2525PFR-32-80	25	5	25	25	170	3.00	32	80	0.72	GI335	GL11
	GL4-S2020KFR-20-80	20	–	20	20	125	4.00	20	80	0.38	GI336	GL11
	GL4-S2020KFR-24-80	20	5	20	20	125	4.00	24	80	0.37	GI336	GL11
	GL4-S2525MFR-20-80	25	–	25	25	150	4.00	20	80	0.68	GI336	GL11
	GL4-S2525MFR-24-80	25	–	25	25	150	4.00	24	80	0.65	GI336	GL11
	GL4-S2525PFR-32-80	25	5	25	25	170	4.00	32	80	0.78	GI336	GL11
	GL5-S2020KFR-20-80	20	–	20	20	125	5.00	20	80	0.38	GI337	GL11
	GL5-S2525MFR-20-80	25	–	25	25	150	5.00	20	80	0.68	GI337	GL11
	GL5-S2525PFR-32-100	25	5	25	25	170	5.00	32	100	0.75	GI337	GL11
	GL6-S2020KFR-20-80	20	–	20	20	125	6.00	20	80	0.39	GI338	GL11
	GL6-S2525MFR-20-80	25	–	25	25	150	6.00	20	80	0.68	GI338	GL11
	GL6-S2525PFR-32-100	25	5	25	25	170	6.00	32	100	0.75	GI338	GL11
L	GL2-S2020KFL-20-80	20	–	20	20	125	2.00	20	80	0.38	GI334	GL11
	GL2-S2020KFL-24-80	20	5	20	20	125	2.00	24	80	0.36	GI334	GL11
	GL2-S2525MFL-20-80	25	–	25	25	150	2.00	20	80	0.70	GI334	GL11
	GL2-S2525MFL-24-80	25	–	25	25	150	2.00	24	80	0.64	GI334	GL11
	GL3-S2020KFL-20-80	20	–	20	20	125	3.00	20	80	0.38	GI335	GL11
	GL3-S2020KFL-24-80	20	5	20	20	125	3.00	24	80	0.36	GI335	GL11
	GL3-S2525MFL-20-80	25	–	25	25	150	3.00	20	80	0.68	GI335	GL11

	Product	HF [mm]	HBH [mm]	H [mm]	B [mm]	LF [mm]	CW [mm]	CDX [mm]	CUTDIA [mm]	kg		
L	**GL3-S2525MFL-24-80**	25	–	25	25	150	3.00	24	80	0.65	GI335	GL11
	GL3-S2525PFL-32-80	25	5	25	25	170	3.00	32	80	0.78	GI335	GL11
	GL4-S2020KFL-20-80	20	–	20	20	125	4.00	20	80	0.38	GI336	GL11
	GL4-S2020KFL-24-80	20	5	20	20	125	4.00	24	80	0.37	GI336	GL11
	GL4-S2525MFL-20-80	25	–	25	25	150	4.00	20	80	0.68	GI336	GL11
	GL4-S2525MFL-24-80	25	–	25	25	150	4.00	24	80	0.65	GI336	GL11
	GL4-S2525PFL-32-80	25	5	25	25	170	4.00	32	80	0.72	GI336	GL11
	GL5-S2020KFL-20-80	20	–	20	20	125	5.00	20	80	0.38	GI337	GL11
	GL5-S2525MFL-20-80	25	–	25	25	150	5.00	20	80	0.71	GI337	GL11
	GL5-S2525PFL-32-100	25	5	25	25	170	5.00	32	100	0.75	GI337	GL11
	GL6-S2020KFL-20-80	20	–	20	20	125	6.00	20	80	0.39	GI338	GL11
	GL6-S2525MFL-20-80	25	–	25	25	150	6.00	20	80	0.71	GI338	GL11
	GL6-S2525PFL-32-100	25	5	25	25	170	6.00	32	100	0.75	GI338	GL11

GI334	GL2..
GI335	GL3..
GI336	GL4..
GI337	GL5..
GI338	GL6..

		Nm			
GL11	US 5018-T20P	5.0	M 5	18.2	LK T20P

Cutting depths on machined diameter on page 416.

GLSF(RL) EXT-G

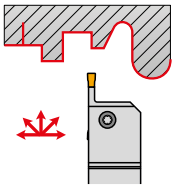
P M K N S H

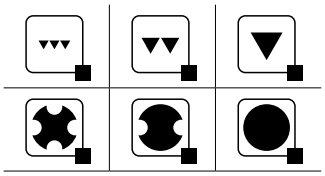
PRAMET

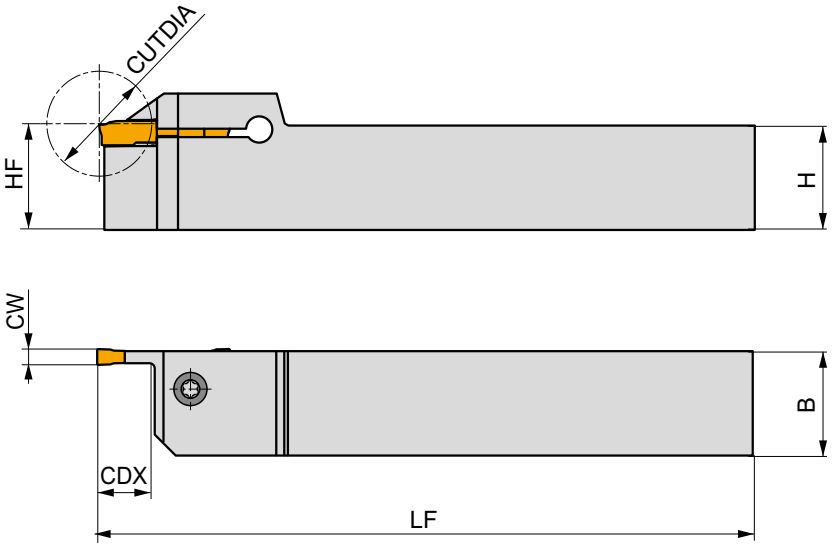
G

External V-Groove Top Clamp Grooving and Turning tool for GL Inserts

External Right/Left hand radial tool holder for grooving with double-sided GL 2, 3, 4, 5, or 6 style inserts. Suited for radial grooving, longitudinal turning and profiling applications, up to 12 mm maximum depth of cut. Available with shank size 20x20 or 25x25 mm. Body treated for longer tool life.







	Product	HF [mm]	H [mm]	B [mm]	LF [mm]	CW [mm]	CDX [mm]	CUTDIA [mm]	kg		
R	GL2-S2020KFR-10	20	20	20	125	2.00	10	20	0.38	GI334	GL11
	GL2-S2525MFR-10	25	25	25	150	2.00	10	20	0.69	GI334	GL11
	GL3-S2020KFR-10	20	20	20	125	3.00	10	20	0.36	GI335	GL11
	GL3-S2525MFR-10	25	25	25	150	3.00	10	20	0.69	GI335	GL11
	GL4-S2020KFR-12	20	20	20	125	4.00	12	24	0.37	GI336	GL11
	GL4-S2525MFR-12	25	25	25	150	4.00	12	24	0.69	GI336	GL11
	GL5-S2020KFR-12	20	20	20	125	5.00	12	24	0.36	GI337	GL11
	GL5-S2525MFR-12	25	25	25	150	5.00	12	24	0.70	GI337	GL11
	GL6-S2020KFR-12	20	20	20	125	6.00	12	24	0.36	GI338	GL11
	GL6-S2525MFR-12	25	25	25	150	6.00	12	24	0.68	GI338	GL11
L	GL2-S2020KFL-10	20	20	20	125	2.00	10	20	0.37	GI334	GL11
	GL2-S2525MFL-10	25	25	25	150	2.00	10	20	0.70	GI334	GL11
	GL3-S2020KFL-10	20	20	20	125	3.00	10	20	0.36	GI335	GL11
	GL3-S2525MFL-10	25	25	25	150	3.00	10	20	0.70	GI335	GL11
	GL4-S2020KFL-12	20	20	20	125	4.00	12	24	0.37	GI336	GL11
	GL4-S2525MFL-12	25	25	25	150	4.00	12	24	0.69	GI336	GL11
	GL5-S2020KFL-12	20	20	20	125	5.00	12	24	0.36	GI337	GL11
	GL5-S2525MFL-12	25	25	25	150	5.00	12	24	0.69	GI337	GL11
	GL6-S2020KFL-12	20	20	20	125	6.00	12	24	0.36	GI338	GL11
	GL6-S2525MFL-12	25	25	25	150	6.00	12	24	0.68	GI338	GL11

GI334	GL2..
GI335	GL3..
GI336	GL4..
GI337	GL5..
GI338	GL6..

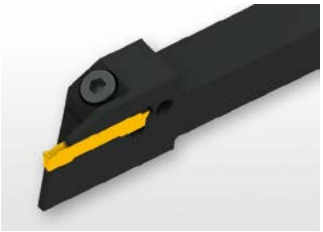
		Nm			
GL11	US 5018-T20P	5.0	M 5	18.2	LKT20P

GLSF(RL) EXT-S

P M K N S H

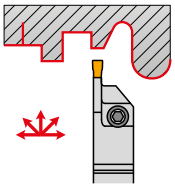
PRAMET

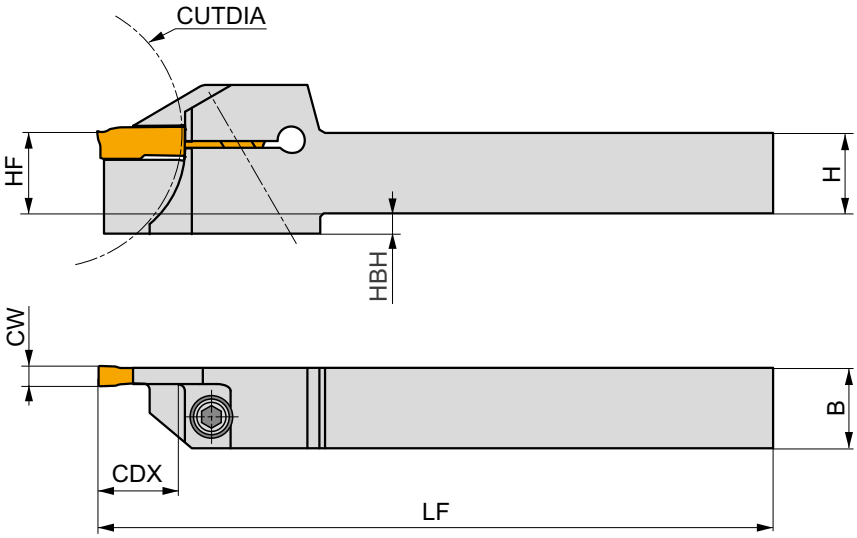
G

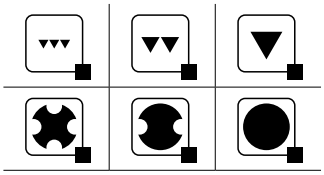


External Grooving and Parting-Off tool, GL Inserts for Sliding head machines

External Right/Left hand radial tool holder for sliding head machines GL 2, 3, 4 pocket widths. For radial grooving, profiling and parting-off applications up to 16 mm maximum depth of cut. Available with shank size 12x12 or 16x16 mm. Reinforced body design for longer tool life and low vibrations, easy access clamping.







	Product	HF [mm]	HBH [mm]	H [mm]	B [mm]	LF [mm]	CW [mm]	CDX [mm]	CUTDIA [mm]	kg		
R	**GL2-S1212HFR-12-40**	12	3	12	12	100	2.00	12	40	0.11	GI334	GL13
	GL2-S1616KFR-16-45	16	3	16	16	125	2.00	16	45	0.23	GI334	GL12
	GL3-S1212HFR-12-40	12	3	12	12	100	3.00	12	40	0.11	GI335	GL13
	GL3-S1616KFR-16-45	16	3	16	16	125	3.00	16	45	0.23	GI335	GL12
	GL4-S1616KFR-16-45	16	4	16	16	125	4.00	16	45	0.26	GI336	GL12
L	**GL2-S1212HFL-12-40**	12	3	12	12	100	2.00	12	40	0.11	GI334	GL13
	GL2-S1616KFL-16-45	16	3	16	16	125	2.00	16	45	0.23	GI334	GL12
	GL3-S1212HFL-12-40	12	3	12	12	100	3.00	12	40	0.11	GI335	GL13
	GL3-S1616KFL-16-45	16	3	16	16	125	3.00	16	45	0.23	GI335	GL12
	GL4-S1616KFL-16-45	16	4	16	16	125	4.00	16	45	0.24	GI336	GL12

GI334	GL2..
GI335	GL3..
GI336	GL4..

		Nm			
GL12	HS 0516	5.0	M 5	16	HXK 4
GL13	HS 0412	5.0	M 4	12	HXK 3

Cutting depths on machined diameter on page 416.

GLS B

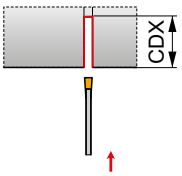
P M K N S H

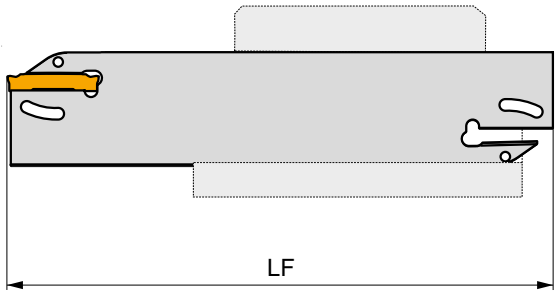
PRAMET

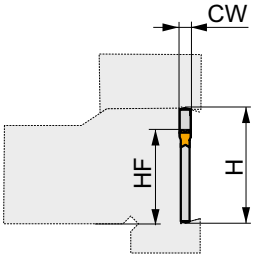
X

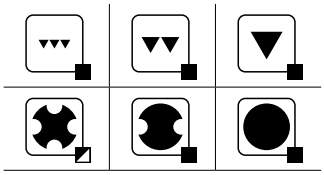
Double-Ended Parting-off Blade for GL Inserts

Blade for parting-off applications up to 60 mm maximum depth or Ø120 mm bar material. Suited for double-sided inserts GL family. Available in height of 26 and 32 mm. Can be fitted into the DU Pramet basic holders. Blade treated for longer tool life.









Product	HF [mm]	H [mm]	LF [mm]	CW [mm]	CDX [mm]	kg		
GL2-S26KB	21.4	26	125	2.00	35	0.13	GI334	KV2
GL2-S32MB	25	32	150	2.00	50	0.15	GI334	KV2
GL3-S26KB	21.4	26	125	3.00	35	0.15	GI335	KV2
GL3-S32MB	25	32	150	3.00	50	0.16	GI335	KV2
GL4-S32MB	25	32	150	4.00	50	0.16	GI336	KV2
GL5-S32MB	25	32	150	5.00	60	0.16	GI337	KV2
GL6-S32MB	25	32	150	6.00	60	0.16	GI338	KV2

GI334	GL2..
GI335	GL3..
GI336	GL4..
GI337	GL5..
GI338	GL6..

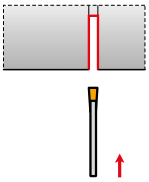
KV2	KV 15x150

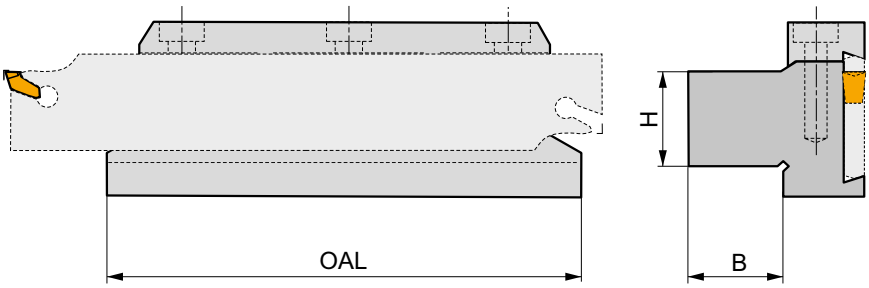
DU, D

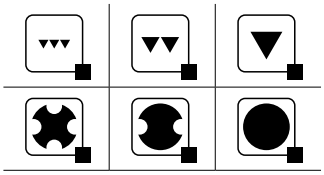
PRAMET

Tool Holder Block for Parting-off Blades

Tool holder to fit GL or XLC. blades for parting-off. Available with shank size 20x20 up to 40x40 mm. Body treated for longer tool life.







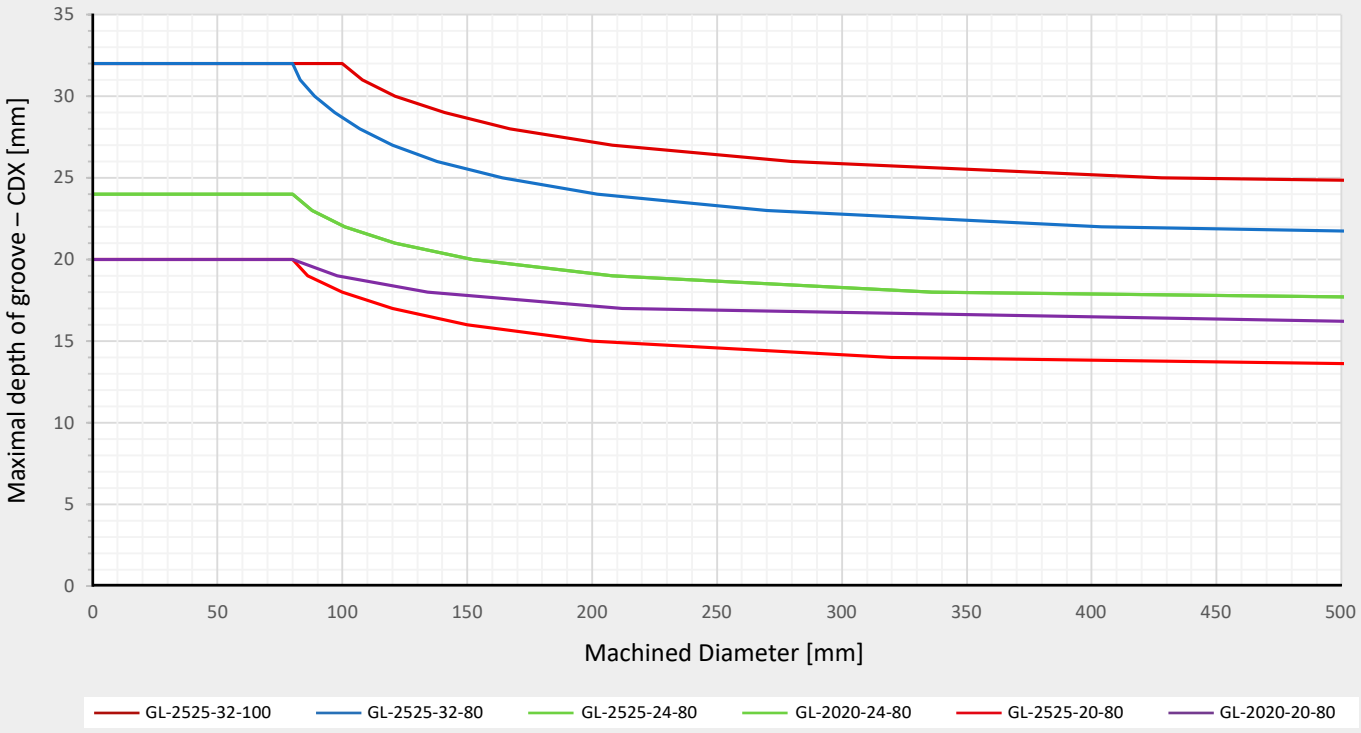
Product	H [mm]	B [mm]	LB [mm]	kg		
26-DU 2020	20	20	90	0.70	GI007	ND2
26-D 2020	20	20	100	0.82	GI007	ND2
32-DU 2523	25	23	110	1.02	GI008	ND2
32-DU 2532	25	32	110	1.10	GI008	ND2
32-DU 3229	32	29	110	1.25	GI008	ND2
32-D 2530	25	30	115	1.30	GI008	ND2
45-DU 3229	32	29	110	1.50	GI009	ND7
45-DU 4036	40	36	110	2.05	GI009	ND7
47-D 4040	40	40	150	3.88	GI091	ND3

GI007	XLC.N 26..	GL.-S26.B
GI008	XLC.N 32..	GL.-S32.B
GI009	XLC.N 45..	–
GI091	XLC.N 47..	–

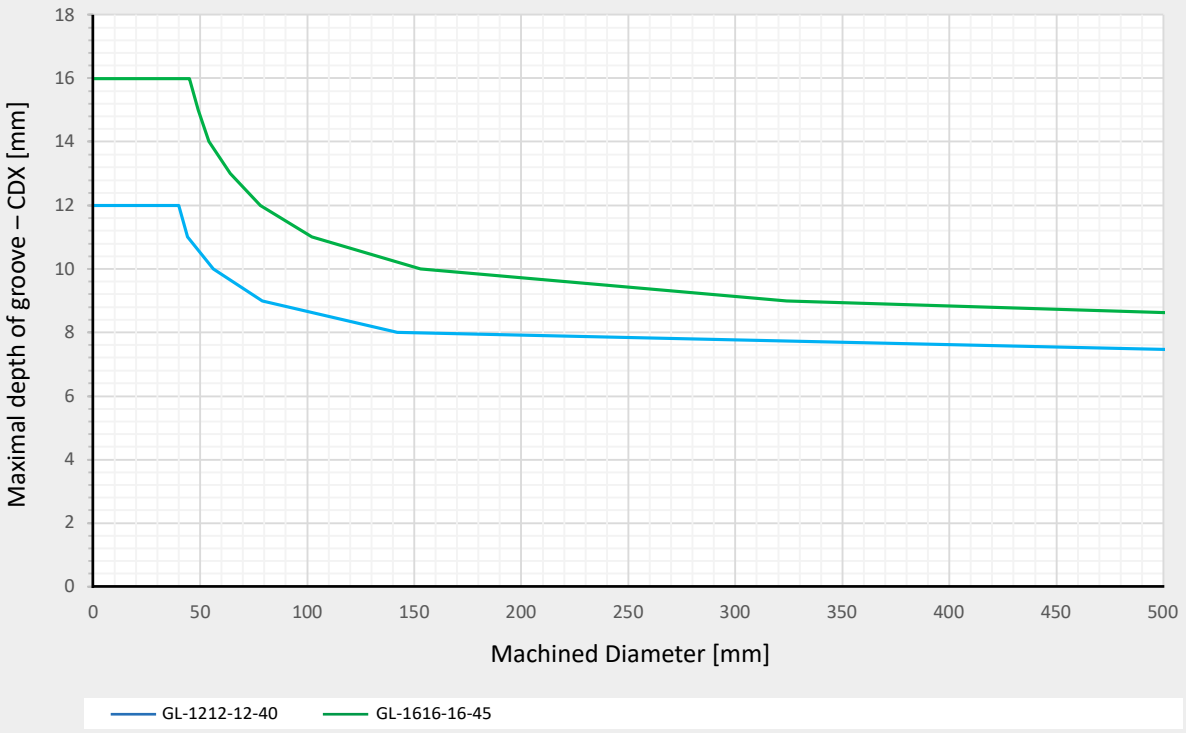
		Nm			
ND2	HS 0625	6.0	M 6	25	HXK 5
ND3	HS 1030	8.0	M 10	30	HXK 8
ND7	HS 0630	6.0	M 6	30	HXK 5

CUTTING DEPTHS DEPENDING ON MACHINED DIAMETER

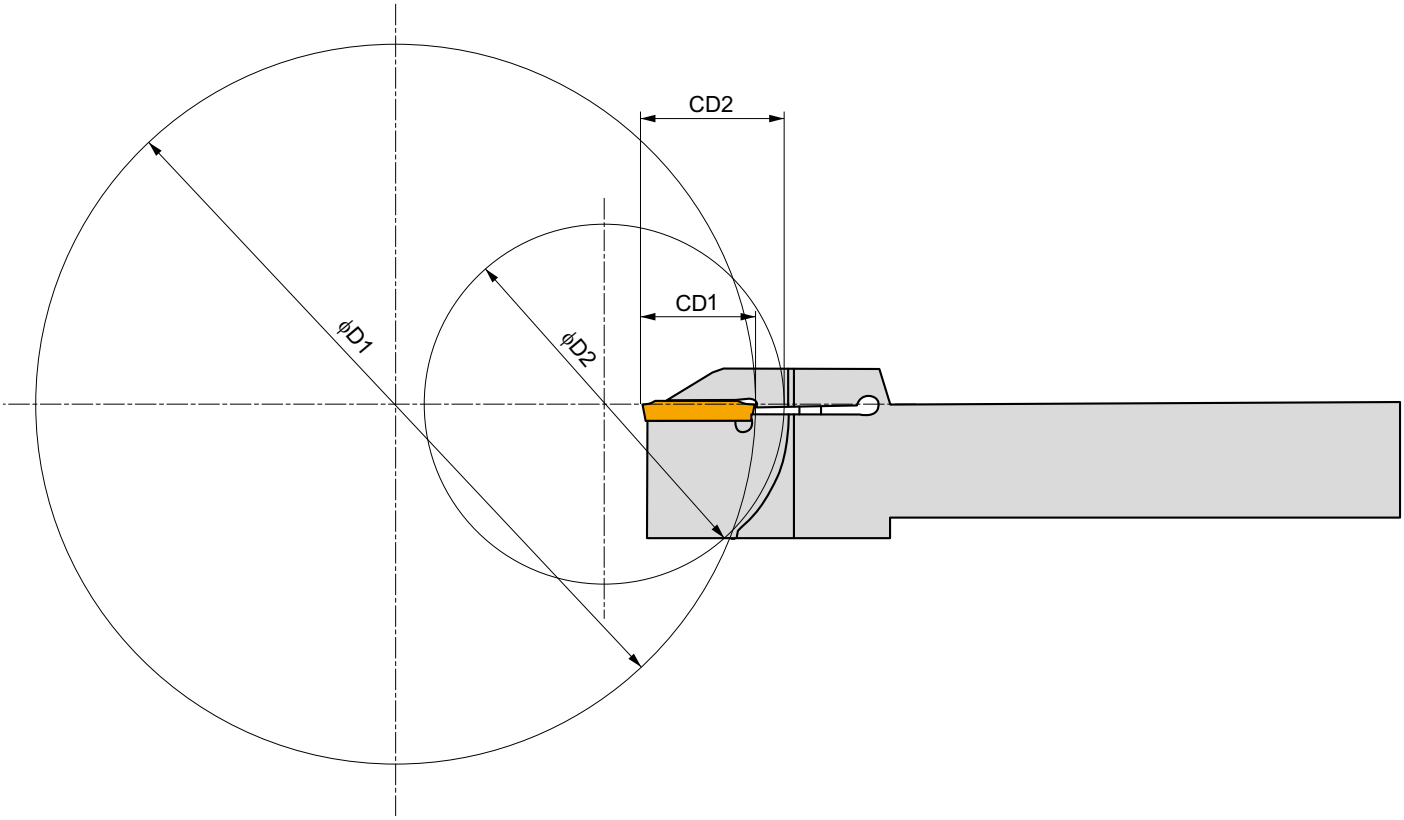
GLSF (RL) EXT



GLSF (RL) EXT-S



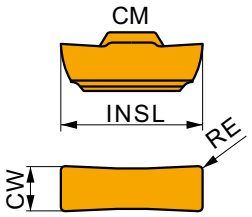
CUTTING DEPTHS DEPENDING ON MACHINED DIAMETER



LCMF 13 - CM

PRAMET

	CW	CWTOLL	CWTOLU	INSL
	[mm]	[mm]	[mm]	[mm]
0313	3.00	-0.05	0.05	12.6
0413	4.00	-0.05	0.05	12.6



Suitability and starting values for cutting speed (vc) and feed (f). Refer to our Machining Calculator app for further calculations.

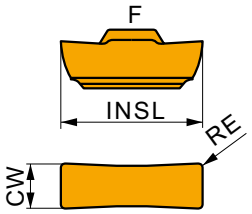
Product		RE	P		M		K		N		S		H		PSIRR	PSIRL
			vc	f	vc	f	vc	f	vc	f	vc	f	vc	f		
		[mm]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[°]	[°]
	R20 5° 5°		E													
	CM geometry and first choice for grooving.															
LCMF 031304-CM	**T8330**	0.4	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	–	–
LCMF 031304-CM-04	**T8330**[1)]	0.4	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	–	–
LCMF 041304-CM	**T8330**	0.4	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	–	–

[1)] Insert for internal holder A16Q-GGERIL0313-04, A20R-GGFRIL0313-04.

LCMF 13 - F

PRAMET

	CW	CWTOLL	CWTOLU	INSL
	[mm]	[mm]	[mm]	[mm]
0313	3.00	-0.05	0.05	12.6
0413	4.00	-0.05	0.05	12.6



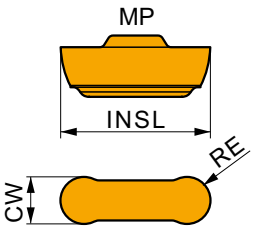
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
	0,1 0° 12° 0,1 0° 5°		U	S																
	F geometry and first choice for turning.																			
LCMF 031302-F	**T8330**	0.2	195	0.10	0.3	115	0.09	0.3	185	0.10	0.3	–	–	–	–	–	–	–	–	–
LCMF 031302-F-04	**T8330**[1)]	0.2	195	0.10	0.3	115	0.09	0.3	185	0.10	0.3	–	–	–	–	–	–	–	–	–
LCMF 031304-F	**T8330**	0.4	185	0.13	0.5	110	0.12	0.5	175	0.13	0.5	–	–	–	–	–	–	–	–	–
LCMF 031304-F-04	**T8330**[1)]	0.4	185	0.13	0.5	110	0.12	0.5	175	0.13	0.5	–	–	–	–	–	–	–	–	–
LCMF 041304-F	**T8330**	0.4	185	0.13	0.5	110	0.12	0.5	175	0.13	0.5	–	–	–	–	–	–	–	–	–
	T9325	0.4	275	0.13	0.5	165	0.12	0.5	260	0.13	0.5	–	–	–	–	–	–	–	–	–

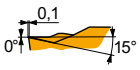
[1)] Insert for internal holder A16Q-GGERIL0313-04, A20R-GGFRIL0313-04.

LCMF 13 - MP

	CW	CWTOLL	CWTOLU	INSL
	[mm]	[mm]	[mm]	[mm]
0313	3.00	-0.05	0.05	12.6
0413	4.00	-0.05	0.05	12.6



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

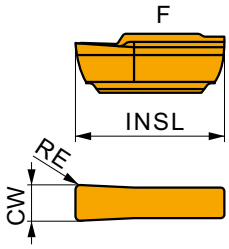
Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
LCMF 0313MO-MP	**T8330**	1.5	■ 190	0.30	0.8	◪ 110	0.27	0.8	■ 180	0.30	0.8	–	–	–	–	–	–	–	–	–
LCMF 0313MO-MP-04	**T8330**[1)]	1.5	■ 190	0.30	0.8	◪ 110	0.27	0.8	■ 180	0.30	0.8	–	–	–	–	–	–	–	–	–
LCMF 0413MO-MP	**T8330**	2.0	■ 175	0.40	1.0	◪ 105	0.36	1.0	■ 165	0.40	1.0	–	–	–	–	–	–	–	–	–

MP geometry for longitudinal turning and copy profiling, fine and finish machining, and continuous to interrupted cuts.

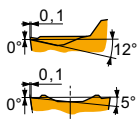
[1)] Insert for internal holder A16Q-GGERIL0313-04, A20R-GGFRIL0313-04.

LCMR 13 - F

	CW	CWTOLL	CWTOLU	INSL
	[mm]	[mm]	[mm]	[mm]
0313	3.00	-0.05	0.05	12.6
0413	4.00	-0.05	0.05	12.6



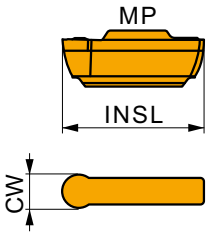
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
LCMR 031304-F	**T8330**	0.4	■ 185	0.13	0.5	◪ 110	0.12	0.5	◪ 175	0.13	0.5	–	–	–	–	–	–	–	–	–
LCMR 041304-F	**T8330**	0.4	■ 185	0.13	0.5	◪ 110	0.12	0.5	◪ 175	0.13	0.5	–	–	–	–	–	–	–	–	–

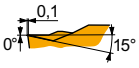
F geometry for grooving and turning, fine and finish machining, and continuous to slightly interrupted cuts.

LCMR 13 - MP

	CW	CWTOLL	CWTOLU	INSL
	[mm]	[mm]	[mm]	[mm]
0313	3.00	-0.05	0.05	12.6
0413	4.00	-0.05	0.05	12.6



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
MP geometry for longitudinal turning and copy profiling, and continuous to interrupted cuts.																				
LCMR 0313M0-MP	**T8330**	1.5	■	190	0.30	0.8	◪	110	0.27	0.8	■	180	0.30	0.8	–	–	–	–	–	–	–	–	–
LCMR 0413M0-MP	**T8330**	2.0	■	175	0.40	1.0	◪	105	0.36	1.0	■	165	0.40	1.0	–	–	–	–	–	–	–	–	–

GG.(RL) INT

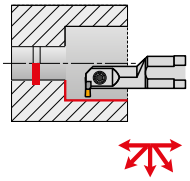
P M K N S H

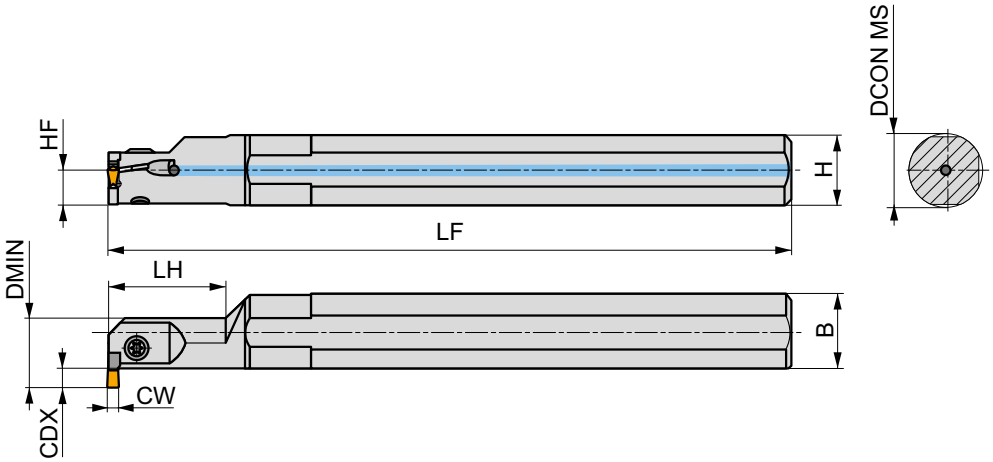
PRAMET

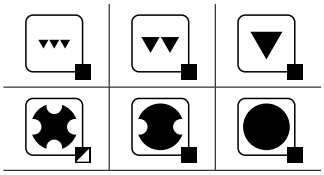
G

Internal Grooving Boring Bar for LCM. Inserts

Internal Right/Left hand grooving boring bar for grooving with LCM. 0313 and 0413 inserts. Minimum internal grooving diameter Ø16 mm. Suited for internal grooving and multi-directional turning. Available with shank size Ø16 up to Ø32 mm. Body treated for longer tool life.







	Product	DCON MS [mm]	HF [mm]	H [mm]	B [mm]	LF [mm]	LH [mm]	CW [mm]	CDX [mm]	DMIN [mm]		kg		
R	A16Q-GGER 0313	16	7.5	15	15.5	180	25	3.00	3	16	✓	0.26	GI143	GL06
	A16Q-GGER 0313-04	16	7.5	15	15.5	180	25	3.00	3	16	✓	0.26	GI190	GL06
	A20R-GGFR 0313	20	9	18	19	200	30	3.00	4.5	20	✓	0.36	GI143	GL06
	A20R-GGFR 0313-04	20	9	18	19	200	30	3.00	4.5	20	✓	0.39	GI190	GL06
	A25S-GGHR 0313	25	11.5	23	24	250	40	3.00	6.5	25	✓	0.78	GI143	GL06
	A25S-GGFR 0413	25	11.5	23	24	250	40	4.00	6.5	25	✓	0.73	GI170	GL06
	A32T-GGHR 0413	32	15	30	31	300	50	4.00	9.5	32	✓	1.59	GI170	GL06
L	A16Q-GGEL 0313	16	7.5	15	15.5	180	25	3.00	3	16	✓	0.29	GI143	GL06
	A16Q-GGEL 0313-04	16	7.5	15	15.5	180	25	3.00	3	16	✓	0.28	GI190	GL06
	A20R-GGFL 0313	20	9	18	19	200	30	3.00	4.5	20	✓	0.38	GI143	GL06
	A20R-GGFL 0313-04	20	9	18	19	200	30	3.00	4.5	20	✓	0.38	GI190	GL06
	A25S-GGHL 0313	25	11.5	23	24	250	40	3.00	6.5	25	✓	0.81	GI143	GL06
	A25S-GGFL 0413	25	11.5	23	24	250	40	4.00	6.5	25	✓	0.82	GI170	GL06
	A32T-GGHL 0413	32	15	30	31	300	50	4.00	9.5	32	✓	1.59	GI170	GL06

GI143	LCM. 0313..
GI170	LCM. 0413..
GI190	LCM. 0313.....-04

		Nm			
GL06	SR 85011-T15P	5.0	M 5	9	FLAG T15P

GFIL-L AXIAL

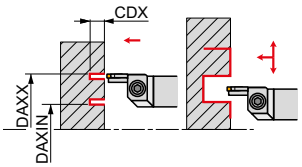
P M K N S H

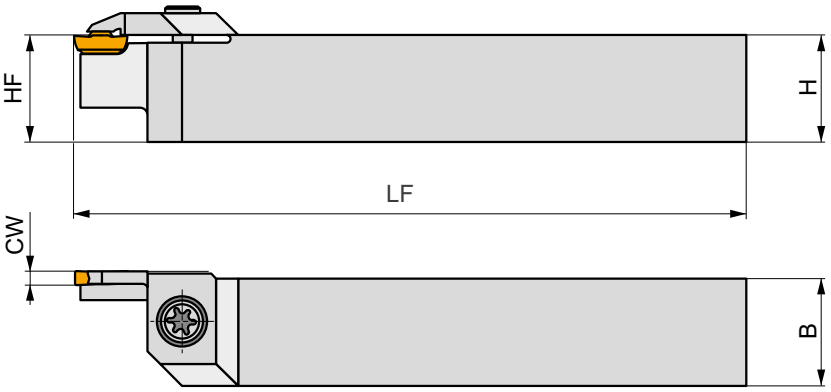
PRAMET

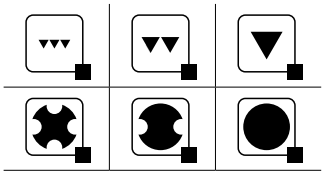
G

External Axial V-Groove Top Clamp Grooving Tool for LCM. 03 Inserts

External left-hand axial tool holder for grooving with single or double-sided LCM. 0313 or 0316 inserts. Suited for axial grooving, axial profiling or groove widening Ø17 up to Ø170 mm applications with maximum depth of cut 9 mm. Available with shank size 25x25 mm. Body treated for longer tool life.







	Product	HF [mm]	H [mm]	B [mm]	LF [mm]	CW [mm]	CDX [mm]	DAXIN	DAXX [mm]	kg		
L	**GFIL 2525 M 0313L 030017**	25	25	25	150	3.00	9	17	30	0.64	GI143	GL02
	GFIL 2525 M 0313L 039024	25	25	25	150	3.00	9	24	39	0.66	GI143	GL07
	GFIL 2525 M 0313L 050033	25	25	25	150	3.00	9	33	50	0.67	GI143	GL07
	GFIL 2525 M 0313L 060043	25	25	25	150	3.00	9	43	60	0.67	GI143	GL07
	GFIL 2525 M 0313L 076053	25	25	25	150	3.00	9	53	76	0.67	GI143	GL07
	GFIL 2525 M 0316L 100070	25	25	25	150	3.00	9	70	100	0.69	GI136	GL07
	GFIL 2525 M 0316L 130090	25	25	25	150	3.00	9	90	130	0.70	GI136	GL07
	GFIL 2525 M 0316L 170110	25	25	25	150	3.00	9	110	170	0.71	GI136	GL07

GI136	LCM. 0316..
GI143	LCM. 0313..

		Nm			
GL02	US 5015-T20P	5.0	M 5	15	FLAG T20P
GL07	US 5018-T20P	5.0	M 5	18.2	FLAG T20P

GFIL-R AXIAL

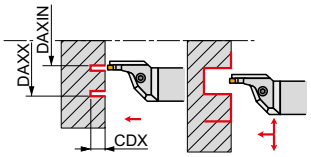
P M K N S H

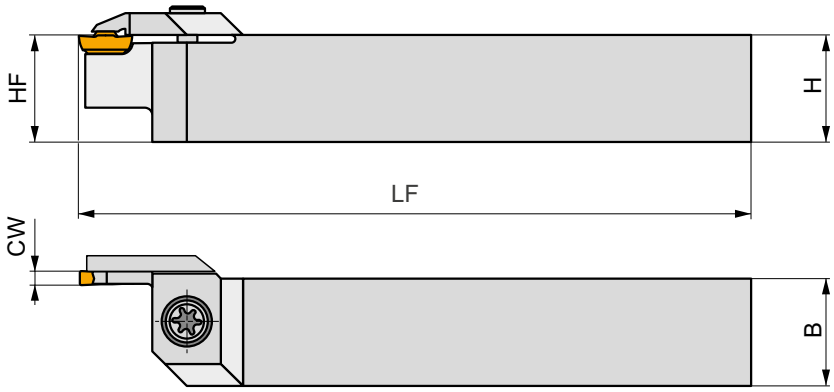
PRAMET

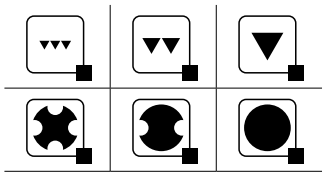
G

External Axial V-Groove Top Clamp Grooving Tool for LCM. 03 or 04 Inserts

External left-hand axial tool holder for grooving with single or double-sided LCM. 0313, 0316, 0413 or 0416 inserts. Suited for axial grooving, axial profiling or groove widening Ø17 up to Ø230 mm applications, with maximum depth of cut 12 mm. Available with shank size 25x25. Body treated for longer tool life.







	Product	HF [mm]	H [mm]	B [mm]	LF [mm]	CW [mm]	CDX [mm]	DAXIN	DAXX [mm]	kg		
	GFIL 2525 M 03R 030017-A	25	25	25	150	3.00	9	17	30	0.69	GI143	GL07
	GFIL 2525 M 03R 039024-A	25	25	25	150	3.00	9	24	39	0.69	GI143	GL07
	GFIL 2525 M 03R 050033-A	25	25	25	150	3.00	9	33	50	0.72	GI143	GL07
	GFIL 2525 M 03R 060043-A	25	25	25	150	3.00	9	43	60	0.69	GI143	GL07
	GFIL 2525 M 03R 076053-A	25	25	25	150	3.00	9	53	76	0.68	GI143	GL07
	GFIL 2525 M 03R 100070-A	25	25	25	150	3.00	9	70	100	0.79	GI136	GL08
	GFIL 2525 M 03R 130090-A	25	25	25	150	3.00	9	90	130	0.73	GI136	GL08
L	GFIL 2525 M 03R 170110-A	25	25	25	150	3.00	9	110	170	0.76	GI136	GL08
	GFIL 2525 M 04R 030017-A	25	25	25	150	3.00	9	17	30	0.71	GI170	GL07
	GFIL 2525 M 04R 034021-A	25	25	25	150	4.00	9	21	34	0.69	GI170	GL07
	GFIL 2525 M 04R 040026-A	25	25	25	150	4.00	11	26	40	0.00	GI170	GL07
	GFIL 2525 M 04R 050032-A	25	25	25	150	4.00	11	32	50	0.68	GI170	GL07
	GFIL 2525 M 04R 060042-A	25	25	25	150	4.00	11	42	60	0.66	GI170	GL07
	GFIL 2525 M 04R 075052-A	25	25	25	150	4.00	11	52	75	0.67	GI170	GL07
	GFIL 2525 M 04R 100070-A	25	25	25	150	4.00	12	70	100	0.75	GI137	GL08
L	GFIL 2525 M 04R 130090-A	25	25	25	150	4.00	12	90	130	0.75	GI137	GL08
	GFIL 2525 M 04R 170110-A	25	25	25	150	4.00	12	110	170	0.75	GI137	GL08
	GFIL 2525 M 04R 230140-A	25	25	25	150	4.00	12	140	230	0.78	GI137	GL08

GI136	LCM. 0316..
GI137	LCM. 0416..
GI143	LCM. 0313..
GI170	LCM. 0413..

		Nm				
GL07	US 5018-T20P	5.0	M 5	18.2	FLAG T20P	–
GL08	US 6020-T25P	6.0	M 6	20.2	–	SDR T25P

GFIR-L AXIAL

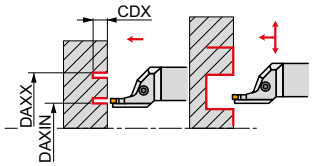
P M K N S H

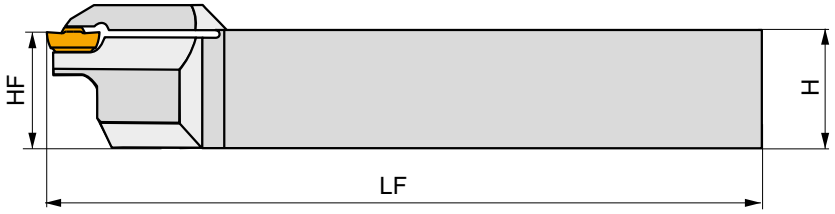
PRAMET

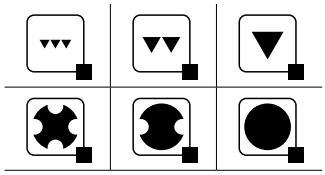
G

External Axial V-Groove Top Clamp Grooving Tool for LCM. 03 or 04 Inserts

External right-hand axial tool holder for grooving with single or double-sided LCM. 0313, 0316, 0413 or 0416 inserts. Suited for axial grooving, axial profiling or groove widening Ø17 up to Ø230 mm applications, with maximum depth of cut 12 mm. Available with shank size 25x25 mm. Body treated for longer tool life.







	Product	HF [mm]	H [mm]	B [mm]	LF [mm]	CW [mm]	CDX [mm]	DAXIN	DAXX [mm]	kg		
	GFIR 2525 M 03L 030017-A	25	25	25	150	3.00	9	17	30	0.65	GI143	GL07
	GFIR 2525 M 03L 039024-A	25	25	25	150	3.00	9	24	39	0.68	GI143	GL07
	GFIR 2525 M 03L 050033-A	25	25	25	150	3.00	9	33	50	0.65	GI143	GL07
	GFIR 2525 M 03L 060043-A	25	25	25	150	3.00	9	43	60	0.68	GI143	GL07
	GFIR 2525 M 03L 076053-A	25	25	25	150	3.00	9	53	76	0.69	GI143	GL07
	GFIR 2525 M 03L 100070-A	25	25	25	150	3.00	9	70	100	0.75	GI136	GL08
	GFIR 2525 M 03L 130090-A	25	25	25	150	3.00	9	90	130	0.76	GI136	GL08
R	GFIR 2525 M 03L 170110-A	25	25	25	150	3.00	9	110	170	0.68	GI136	GL08
	GFIR 2525 M 04L 030017-A	25	25	25	150	3.00	9	17	30	0.68	GI170	GL07
	GFIR 2525 M 04L 034021-A	25	25	25	150	4.00	9	21	34	0.68	GI170	GL07
	GFIR 2525 M 04L 040026-A	25	25	25	150	4.00	11	26	40	0.68	GI170	GL07
	GFIR 2525 M 04L 050032-A	25	25	25	150	4.00	11	32	50	0.66	GI170	GL07
	GFIR 2525 M 04L 060042-A	25	25	25	150	4.00	11	42	60	0.69	GI170	GL07
	GFIR 2525 M 04L 075052-A	25	25	25	150	4.00	11	52	75	0.67	GI170	GL07
	GFIR 2525 M 04L 100070-A	25	25	25	150	4.00	12	70	100	0.72	GI137	GL08
	GFIR 2525 M 04L 130090-A	25	25	25	150	4.00	12	90	130	0.75	GI137	GL08
R	GFIR 2525 M 04L 170110-A	25	25	25	150	4.00	12	110	170	0.72	GI137	GL08
	GFIR 2525 M 04L 230140-A	25	25	25	150	4.00	12	140	230	0.79	GI137	GL08

GI136	LCM. 0316..
GI137	LCM. 0416..
GI143	LCM. 0313..
GI170	LCM. 0413..

		Nm				
GL07	US 5018-T20P	5.0	M 5	18.2	FLAG T20P	–
GL08	US 6020-T25P	6.0	M 6	20.2	–	SDR T25P

GFIR-R AXIAL

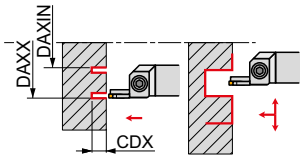
P M K N S H

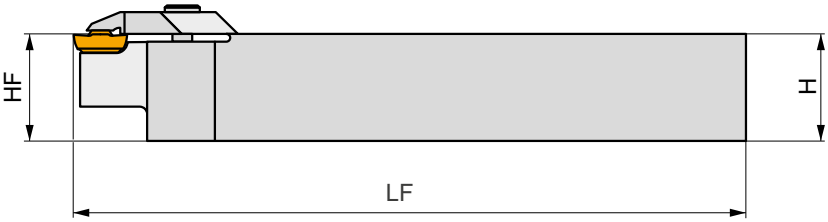
PRAMET

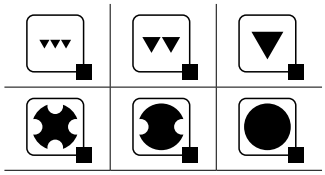
G

External Axial V-Groove Top Clamp Grooving Tool for LCM. 03 Inserts

External right-hand axial tool holder for grooving with single or double-sided LCM. 0313 or 0316 inserts. Suited for axial grooving, axial profiling or groove widening Ø17 up to Ø170 mm applications, with maximum depth of cut 9 mm. Available with shank size 25x25 mm. Body treated for longer tool life.







	Product	HF [mm]	H [mm]	B [mm]	LF [mm]	CW [mm]	CDX [mm]	DAXIN	DAXX [mm]	kg		
R	**GFIR 2525 M 0313R 030017**	25	25	25	150	3.00	9	17	30	0.65	GI143	GL02
	GFIR 2525 M 0313R 039024	25	25	25	150	3.00	9	24	39	0.66	GI143	GL07
	GFIR 2525 M 0313R 050033	25	25	25	150	3.00	9	33	50	0.68	GI143	GL07
	GFIR 2525 M 0313R 060043	25	25	25	150	3.00	9	43	60	0.68	GI143	GL07
	GFIR 2525 M 0313R 076053	25	25	25	150	3.00	9	53	76	0.68	GI143	GL07
	GFIR 2525 M 0316R 100070	25	25	25	150	3.00	9	70	100	0.69	GI136	GL07
	GFIR 2525 M 0316R 130090	25	25	25	150	3.00	9	90	130	0.70	GI136	GL07
	GFIR 2525 M 0316R 170110	25	25	25	150	3.00	9	110	170	0.70	GI136	GL07

GI136	LCM. 0316..
GI143	LCM. 0313..

		Nm			
GL02	US 5015-T20P	5.0	M 5	15	FLAG T20P
GL07	US 5018-T20P	5.0	M 5	18.2	FLAG T20P

GFML-L AXIAL

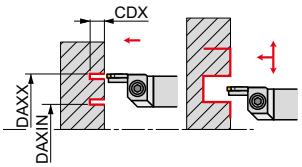
P M K N S H

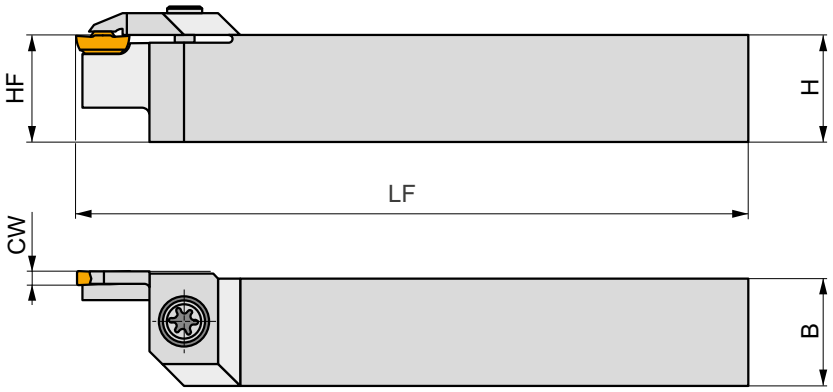
PRAMET

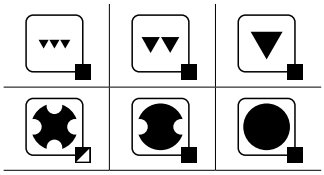
G

External Axial V-Groove Top Clamp Grooving Tool for LCM. 04 Inserts

External left-hand axial tool holder for grooving with single or double-sided LCM. 0413 or 0416 inserts. Suited for deep axial grooving, axial profiling or groove widening Ø17 up to Ø230 mm applications, with maximum depth of cut 20 mm. Available with shank size 25x25 mm. Body treated for longer tool life.







	Product	HF [mm]	H [mm]	B [mm]	LF [mm]	CW [mm]	CDX [mm]	DAXIN	DAXX [mm]	kg		
L	**GFML 2525 M 0413L 030017**	25	25	25	150	4.00	20	17	30	0.62	GI170	GL02
	GFML 2525 M 0413L 034021	25	25	25	150	4.00	20	21	34	0.63	GI170	GL07
	GFML 2525 M 0413L 040026	25	25	25	150	4.00	20	26	40	0.65	GI170	GL07
	GFML 2525 M 0413L 050032	25	25	25	150	4.00	20	32	50	0.64	GI170	GL07
	GFML 2525 M 0413L 060042	25	25	25	150	4.00	20	42	60	0.65	GI170	GL07
	GFML 2525 M 0413L 075052	25	25	25	150	4.00	20	52	75	0.66	GI170	GL07
	GFML 2525 M 0416L 100070	25	25	25	150	4.00	20	70	100	0.66	GI137	GL07
	GFML 2525 M 0416L 130090	25	25	25	150	4.00	20	90	130	0.67	GI137	GL07
	GFML 2525 M 0416L 170110	25	25	25	150	4.00	20	110	170	0.67	GI137	GL07
	GFML 2525 M 0416L 230140	25	25	25	150	4.00	20	140	230	0.67	GI137	GL07

GI137	LCM. 0416..
GI170	LCM. 0413..

		Nm			
GL02	US 5015-T20P	5.0	M 5	15	FLAG T20P
GL07	US 5018-T20P	5.0	M 5	18.2	FLAG T20P

GFML-R AXIAL

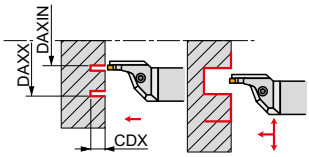
P M K N S H

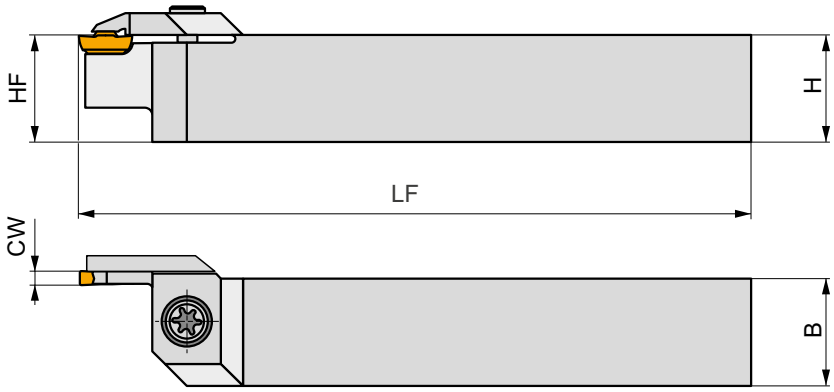
PRAMET

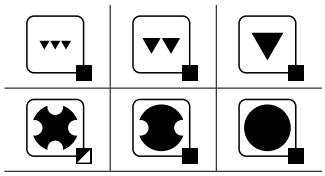
G

External Axial V-Groove Top Clamp Grooving Tool for LCM. 04 Inserts

External left-hand axial tool holder for grooving with single or double-sided LCM. 0413 or 0416 inserts. Suited for deep axial grooving, axial profiling or groove widening Ø17 up to Ø230 mm applications, with maximum depth of cut 20 mm. Available with shank size 25x25 mm. Body treated for longer tool life.







	Product	HF [mm]	H [mm]	B [mm]	LF [mm]	CW [mm]	CDX [mm]	DAXIN	DAXX [mm]	kg		
L	**GFML 2525 M 0413R 030017**	25	25	25	150	4.00	20	17	30	0.68	GI170	GL07
	GFML 2525 M 0413R 034021	25	25	25	150	4.00	20	21	34	0.69	GI170	GL07
	GFML 2525 M 0413R 040026	25	25	25	150	4.00	20	26	40	0.69	GI170	GL07
	GFML 2525 M 0413R 050032	25	25	25	150	4.00	20	32	50	0.68	GI170	GL07
	GFML 2525 M 0413R 060042	25	25	25	150	4.00	20	42	60	0.69	GI170	GL07
	GFML 2525 M 0413R 075052	25	25	25	150	4.00	20	52	75	0.69	GI170	GL07
	GFML 2525 M 0416R 100070	25	25	25	150	4.00	20	70	100	0.80	GI137	GL08
	GFML 2525 M 0416R 130090	25	25	25	150	4.00	20	90	130	0.78	GI137	GL08
	GFML 2525 M 0416R 170110	25	25	25	150	4.00	20	110	170	0.78	GI137	GL08
	GFML 2525 M 0416R 230140	25	25	25	150	4.00	20	140	230	0.78	GI137	GL08

GI137	LCM. 0416..
GI170	LCM. 0413..

		Nm				
GL07	US 5018-T20P	5.0	M 5	18.2	FLAG T20P	–
GL08	US 6020-T25P	6.0	M 6	20.2	–	SDR T25P

GFMR-L AXIAL

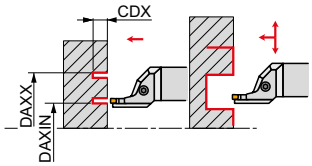
P M K N S H

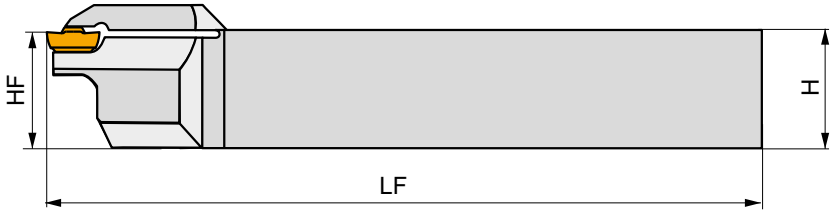
PRAMET

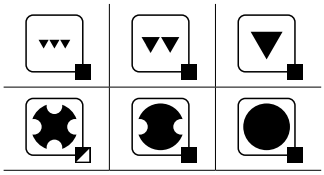
G

External Axial V-Groove Top Clamp Grooving Tool for LCM. 04 Inserts

External right-hand axial tool holder for grooving with single or double-sided LCM. 0413 or 0416 inserts. Suited for deep axial grooving, axial profiling or groove widening Ø17 up to Ø230 mm applications, with maximum depth of cut 20 mm. Available with shank size 25x25 mm. Body treated for longer tool life.







	Product	HF [mm]	H [mm]	B [mm]	LF [mm]	CW [mm]	CDX [mm]	DAXIN	DAXX [mm]	kg		
R	GFMR 2525 M 0413L 030017	25	25	25	150	4.00	20	17	30	0.70	GI170	GL07
	GFMR 2525 M 0413L 034021	25	25	25	150	4.00	20	21	34	0.66	GI170	GL07
	GFMR 2525 M 0413L 040026	25	25	25	150	4.00	20	26	40	0.66	GI170	GL07
	GFMR 2525 M 0413L 050032	25	25	25	150	4.00	20	32	50	0.68	GI170	GL07
	GFMR 2525 M 0413L 060042	25	25	25	150	4.00	20	42	60	0.66	GI170	GL07
	GFMR 2525 M 0413L 075052	25	25	25	150	4.00	20	52	75	0.69	GI170	GL07
	GFMR 2525 M 0416L 100070	25	25	25	150	4.00	20	70	100	0.88	GI137	GL08
	GFMR 2525 M 0416L 130090	25	25	25	150	4.00	20	90	130	0.78	GI137	GL08
	GFMR 2525 M 0416L 170110	25	25	25	150	4.00	20	110	170	0.81	GI137	GL08
	GFMR 2525 M 0416L 230140	25	25	25	150	4.00	20	140	230	0.78	GI137	GL08

GI137	LCM. 0416..
GI170	LCM. 0413..

		Nm				
GL07	US 5018-T20P	5.0	M 5	18.2	FLAG T20P	–
GL08	US 6020-T25P	6.0	M 6	20.2	–	SDR T25P

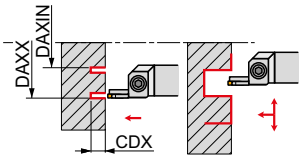
GFMR-R AXIAL

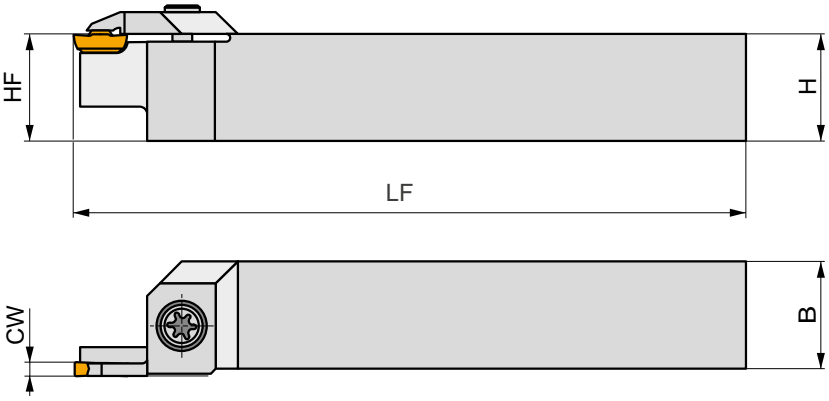
P M K N S H

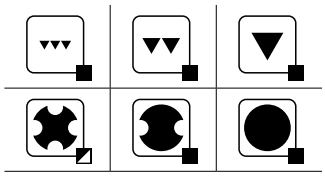
PRAMET G

External Axial V-Groove Top Clamp Grooving Tool for LCM. 04 Inserts

External right-hand axial tool holder for grooving with single or double-sided LCM. 0413 or 0416 inserts. Suited for deep axial grooving, axial profiling or groove widening Ø17 up to Ø230 mm applications, with maximum depth of cut 20 mm. Available with shank size 25x25 mm. Body treated for longer tool life.







	Product	HF [mm]	H [mm]	B [mm]	LF [mm]	CW [mm]	CDX [mm]	DAXIN	DAXX [mm]	kg		
R	**GFMR 2525 M 0413R 030017**	25	25	25	150	4.00	20	17	30	0.62	GI170	GL02
	GFMR 2525 M 0413R 034021	25	25	25	150	4.00	20	21	34	0.63	GI170	GL07
	GFMR 2525 M 0413R 040026	25	25	25	150	4.00	20	26	40	0.64	GI170	GL07
	GFMR 2525 M 0413R 050032	25	25	25	150	4.00	20	32	50	0.63	GI170	GL07
	GFMR 2525 M 0413R 060042	25	25	25	150	4.00	20	42	60	0.64	GI170	GL07
	GFMR 2525 M 0413R 075052	25	25	25	150	4.00	20	52	75	0.67	GI170	GL07
	GFMR 2525 M 0416R 100070	25	25	25	150	4.00	20	70	100	0.67	GI137	GL07
	GFMR 2525 M 0416R 130090	25	25	25	150	4.00	20	90	130	0.66	GI137	GL07
	GFMR 2525 M 0416R 170110	25	25	25	150	4.00	20	110	170	0.67	GI137	GL07
	GFMR 2525 M 0416R 230140	25	25	25	150	4.00	20	140	230	0.68	GI137	GL07

GI137	LCM. 0416..
GI170	LCM. 0413..

		Nm			
GL02	US 5015-T20P	5.0	M 5	15	FLAG T20P
GL07	US 5018-T20P	5.0	M 5	18.2	FLAG T20P

GGI(RL)-90 AXIAL

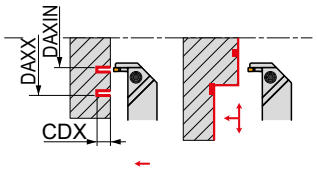
P M K N S H

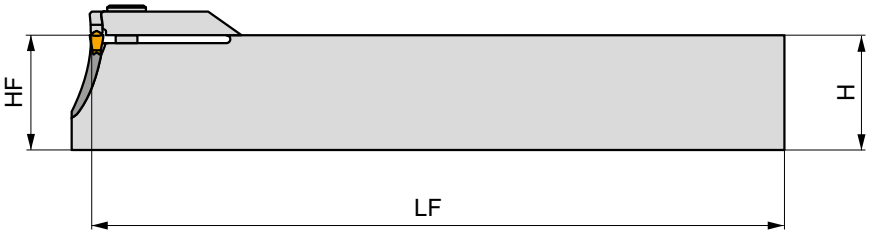
PRAMET

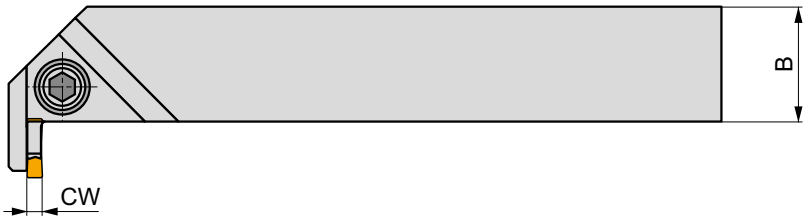
G

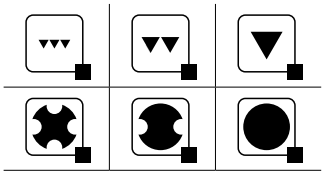
External Axial 90° V-Groove Top Clamp Grooving Tool for LCM. 03 Inserts

External Right/Left hand axial 90° tool holder for grooving with single or double-sided LCM. 0313 or 0316 inserts. Suited for axial grooving, axial profiling or groove widening Ø17 up to Ø170 mm applications, with maximum depth of cut 11 mm. Available with shank size 25x25 mm. Body treated for longer tool life.









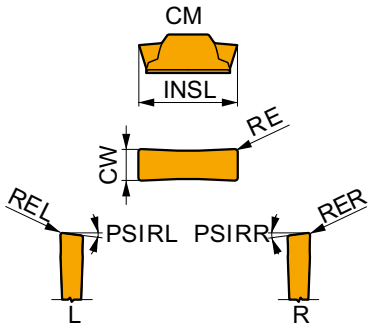
	Product	HF [mm]	H [mm]	B [mm]	LF [mm]	CW [mm]	CDX [mm]	DAXIN	DAXX [mm]	kg		
R	GGIR 2525 M 03R 030017	25	25	25	150	3.00	9.5	17	30	0.75	GI143	GL01
	GGIR 2525 M 03R 039024	25	25	25	150	3.00	9.5	24	39	0.78	GI143	GL01
	GGIR 2525 M 03R 050033	25	25	25	150	3.00	11	33	50	0.75	GI143	GL01
	GGIR 2525 M 03R 060043	25	25	25	150	3.00	11	43	60	0.78	GI143	GL01
	GGIR 2525 M 03R 076053	25	25	25	150	3.00	11	53	76	0.75	GI143	GL01
	GGIR 2525 M 03R 100070	25	25	25	150	3.00	9	70	100	0.78	GI136	GL04
	GGIR 2525 M 03R 130090	25	25	25	150	3.00	9	90	130	0.73	GI136	GL04
	GGIR 2525 M 03R 170110	25	25	25	150	3.00	9	110	170	0.76	GI136	GL04
L	GGIL 2525 M 03L 030017	25	25	25	150	3.00	9.5	17	30	0.75	GI143	GL01
	GGIL 2525 M 03L 039024	25	25	25	150	3.00	9.5	24	39	0.25	GI143	GL01
	GGIL 2525 M 03L 050033	25	25	25	150	3.00	11	33	50	0.75	GI143	GL01
	GGIL 2525 M 03L 060043	25	25	25	150	3.00	11	43	60	0.75	GI143	GL01
	GGIL 2525 M 03L 076053	25	25	25	150	3.00	11	53	76	0.75	GI143	GL01
	GGIL 2525 M 03L 100070	25	25	25	150	3.00	9	70	100	0.77	GI136	GL04
	GGIL 2525 M 03L 130090	25	25	25	150	3.00	9	90	130	0.77	GI136	GL04
	GGIL 2525 M 03L 170110	25	25	25	150	3.00	9	110	170	0.76	GI136	GL04

GI136	LCM. 0316..
GI143	LCM. 0313..

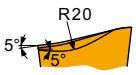
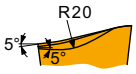
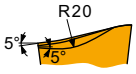
GL01	HS 0520C	5.0	M 5	20	HXK 4
GL04	HS 0620C	6.0	M 6	20	HXK 5

LCMF 16 - CM

	CW	CWTOLL	CWTOLU	INSL
	[mm]	[mm]	[mm]	[mm]
0316	3.00	-0.05	0.05	16.4
0416	4.00	-0.05	0.05	16.4
0516	5.00	-0.05	0.05	16.4
0616	6.00	-0.05	0.05	16.4



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

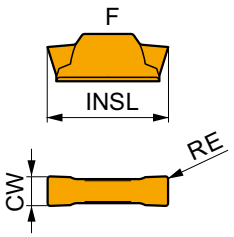
Product		RE	P		M		K		N		S		H		PSIRR	PSIRL
			vc	f	vc	f	vc	f	vc	f	vc	f	vc	f		
		[mm]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[°]	[°]
																
CM geometry, first choice for parting-off and grooving, and continuous to slightly interrupted cuts.																
LCMF 031602-CM	**T8330**	0.2	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	–	–
LCMF 031604-CM	**T8330**	0.4	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	–	–
LCMF 041602-CM	**T8330**	0.2	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	–	–
LCMF 041604-CM	**T8330**	0.4	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	–	–
LCMF 051604-CM	**T8330**	0.4	130	0.11	75	0.11	120	0.11	–	–	–	–	–	–	–	–
LCMF 061604-CM	**T8330**	0.4	130	0.11	75	0.11	120	0.11	–	–	–	–	–	–	–	–
																
R-CM geometry, right-handed design, first choice for parting-off and continuous to slightly interrupted cuts.																
LCMF 031602R15-CM	**T8330**[1)]	0.2	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	15	–
LCMF 031602R6-CM	**T8330**	0.2	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	6	–
LCMF 041602R15-CM	**T8330**[1)]	0.2	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	15	–
LCMF 041602R6-CM	**T8330**	0.2	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	6	–
																
L-CM geometry, left-handed design, first choice for parting-off and continuous to slightly interrupted cuts.																
LCMF 031602L15-CM	**T8330**[1)]	0.2	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	–	15
LCMF 031602L6-CM	**T8330**	0.2	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	–	6
LCMF 041602L15-CM	**T8330**[1)]	0.2	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	–	15
LCMF 041602L6-CM	**T8330**	0.2	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	–	6

[1)] Toolholders have to be modified.

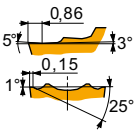
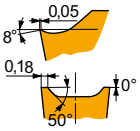
LCMF 16, LCMF 30 - F

PRAMET

	CW	CWTOLL	CWTOLU	INSL
	[mm]	[mm]	[mm]	[mm]
0316	3.00	-0.05	0.05	16.4
0416	4.00	-0.05	0.05	16.4
0516	5.00	-0.05	0.05	16.4
0616	6.00	-0.05	0.05	16.4
0830	8.00	-0.05	0.05	30.0



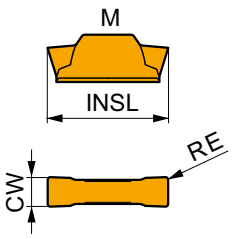
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
LCMF 031602-F	**T8330**	0.2	■ 195	0.10	0.3	◪ 115	0.09	0.3	◪ 185	0.10	0.3	–	–	–	–	–	–	–	–	–
LCMF 031604-F	**T8330**	0.4	■ 200	0.10	0.5	◪ 120	0.09	0.5	◪ 190	0.10	0.5	–	–	–	–	–	–	–	–	–
LCMF 041604-F	**T8330**	0.4	■ 185	0.13	0.5	◪ 110	0.12	0.5	◪ 175	0.13	0.5	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 275	0.13	0.5	◪ 165	0.12	0.5	◪ 260	0.13	0.5	–	–	–	–	–	–	–	–	–
LCMF 041608-F	**T8330**	0.8	■ 205	0.13	1.0	◪ 120	0.12	1.0	◪ 190	0.13	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 305	0.13	1.0	◪ 180	0.12	1.0	◪ 285	0.13	1.0	–	–	–	–	–	–	–	–	–
LCMF 051608-F	**T8330**	0.8	■ 195	0.15	1.0	◪ 115	0.14	1.0	◪ 185	0.15	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 285	0.15	1.0	◪ 170	0.14	1.0	◪ 270	0.15	1.0	–	–	–	–	–	–	–	–	–
LCMF 061608-F	**T8330**	0.8	■ 190	0.17	1.0	◪ 110	0.15	1.0	◪ 180	0.17	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 270	0.17	1.0	◪ 160	0.15	1.0	◪ 255	0.17	1.0	–	–	–	–	–	–	–	–	–
																				
LCMF 083008-F	**T8330**	0.8	■ 175	0.25	1.0	◪ 105	0.23	1.0	◪ 165	0.25	1.0	–	–	–	–	–	–	–	–	–
LCMF 083012-F	**T8330**	1.2	■ 170	0.25	1.5	◪ 100	0.23	1.5	◪ 160	0.25	1.5	–	–	–	–	–	–	–	–	–

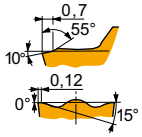
LCMF 16 - M

PRAMET

	CW	CWTOLL	CWTOLU	INSL
	[mm]	[mm]	[mm]	[mm]
0316	3.00	-0.05	0.05	16.4
0416	4.00	-0.05	0.05	16.4
0516	5.00	-0.05	0.05	16.4
0616	6.00	-0.05	0.05	16.4



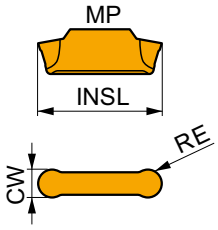
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
			U E																	
	M geometry for grooving and longitudinal turning, and continuous to interrupted cuts.																			
LCMF 031602-M	**T8330**	0.2	160	0.13	1.0	95	0.12	1.0	150	0.13	1.0	–	–	–	–	–	–	30	0.15	1.0
LCMF 031604-M	**T8330**	0.4	170	0.13	1.0	100	0.12	1.0	160	0.13	1.0	–	–	–	–	–	–	30	0.15	1.0
LCMF 041604-M	**T8330**	0.4	155	0.18	1.0	90	0.16	1.0	145	0.18	1.0	–	–	–	–	–	–	30	0.15	1.0
	T9325	0.4	225	0.18	1.0	135	0.16	1.0	210	0.18	1.0	–	–	–	–	–	–	–	–	–
LCMF 041608-M	**T8330**	0.8	185	0.18	1.0	110	0.16	1.0	175	0.18	1.0	–	–	–	–	–	–	35	0.15	1.0
	T9325	0.8	265	0.18	1.0	155	0.16	1.0	250	0.18	1.0	–	–	–	–	–	–	–	–	–
LCMF 051608-M	**T8330**	0.8	180	0.20	1.0	105	0.18	1.0	170	0.20	1.0	–	–	–	–	–	–	35	0.15	1.0
	T9325	0.8	255	0.20	1.0	150	0.18	1.0	240	0.20	1.0	–	–	–	–	–	–	–	–	–
LCMF 061608-M	**T8330**	0.8	175	0.25	1.0	105	0.23	1.0	165	0.25	1.0	–	–	–	–	–	–	35	0.15	1.0
	T9325	0.8	230	0.25	1.0	135	0.23	1.0	215	0.25	1.0	–	–	–	–	–	–	–	–	–

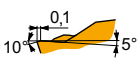
LCMF 16, LCMF 30 - MP

PRAMET

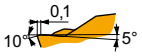
	CW	CWTOLL	CWTOLU	INSL
	[mm]	[mm]	[mm]	[mm]
0316	3.00	-0.05	0.05	17.5
0416	4.00	-0.05	0.05	17.6
0516	5.00	-0.05	0.05	18.3
0616	6.00	-0.05	0.05	18.5
0830	8.00	-0.05	0.05	30.9



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
			U S																	
	MP geometry for longitudinal turning and copy profiling, and continuous to interrupted cuts.																			
LCMF 0316MO-MP	**T8330**	1.5	190	0.30	0.8	110	0.27	0.8	180	0.30	0.8	–	–	–	–	–	–	–	–	–
LCMF 0416MO-MP	**T8330**	2.0	175	0.40	1.0	105	0.36	1.0	165	0.40	1.0	–	–	–	–	–	–	–	–	–
	T9325	2.0	220	0.40	1.0	130	0.36	1.0	205	0.40	1.0	–	–	–	–	–	–	–	–	–
LCMF 0516MO-MP	**T8330**	2.5	170	0.45	1.0	100	0.41	1.0	160	0.45	1.0	–	–	–	–	–	–	–	–	–
	T9325	2.5	205	0.45	1.0	120	0.41	1.0	190	0.45	1.0	–	–	–	–	–	–	–	–	–

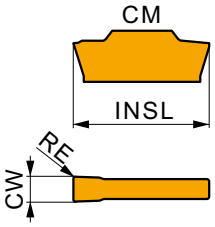
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
MP geometry for longitudinal turning and copy profiling, and continuous to interrupted cuts.																				
LCMF 0616MO-MP	**T8330**	3.0	165	0.50	1.0	95	0.45	1.0	155	0.50	1.0	–	–	–	–	–	–	–	–	–
	T9325	3.0	200	0.50	1.0	120	0.45	1.0	190	0.50	1.0	–	–	–	–	–	–	–	–	–
LCMF 0830MO-MP	**T8330**	4.0	150	0.60	1.2	90	0.54	1.2	140	0.60	1.2	–	–	–	–	–	–	–	–	–

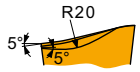
LCMR 16 - CM

PRAMET

	CW	CWTOLL	CWTOLU	INSL
	[mm]	[mm]	[mm]	[mm]
0316	3.00	-0.05	0.05	16.4
0416	4.00	-0.05	0.05	16.4



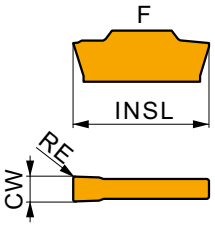
Suitability and starting values for cutting speed (vc) and feed (f). Refer to our Machining Calculator app for further calculations.

Product		RE	P		M		K		N		S		H		PSIRR	PSIRL
			vc	f	vc	f	vc	f	vc	f	vc	f	vc	f		
		[mm]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[°]	[°]
																
CM geometry, first choice for parting-off and grooving, and continuous to slightly interrupted cuts.																
LCMR 031602-CM	**T8330**	0.2	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	–	–
LCMR 041604-CM	**T8330**	0.4	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	–	–

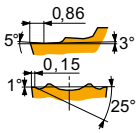
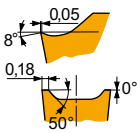
LCMR 16, LCMR 30 - F

PRAMET

	CW [mm]	CWTOLL [mm]	CWTOLU [mm]	INSL [mm]
0316	3.00	-0.05	0.05	16.4
0416	4.00	-0.05	0.05	16.4
0516	5.00	-0.05	0.05	16.4
0616	6.00	-0.05	0.05	16.4
0830	8.00	-0.05	0.05	30.0



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
																				
LCMR 031604-F	**T8330**	0.4	■ 200	0.10	0.5	◪ 120	0.09	0.5	◪ 190	0.10	0.5	–	–	–	–	–	–	–	–	–
LCMR 041604-F	**T8330**	0.4	■ 185	0.13	0.5	◪ 110	0.12	0.5	◪ 175	0.13	0.5	–	–	–	–	–	–	–	–	–
LCMR 051604-F	**T8330**	0.4	■ 180	0.15	0.5	◪ 105	0.14	0.5	◪ 170	0.15	0.5	–	–	–	–	–	–	–	–	–
LCMR 061608-F	**T8330**	0.8	■ 190	0.17	1.0	◪ 110	0.15	1.0	◪ 180	0.17	1.0	–	–	–	–	–	–	–	–	–
																				
LCMR 083008-F	**T8330**	0.8	■ 175	0.25	1.0	◪ 105	0.23	1.0	◪ 165	0.25	1.0	–	–	–	–	–	–	–	–	–

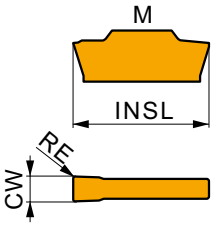
F geometry for parting-off, grooving and longitudinal turning, fine and finish machining, and continuous to slightly interrupted cuts.

F geometry for parting-off, grooving and longitudinal turning, fine and finish machining, and continuous to slightly interrupted cuts.

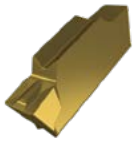
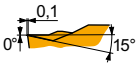
LCMR 16 - M

PRAMET

	CW [mm]	CWTOLL [mm]	CWTOLU [mm]	INSL [mm]
0316	3.00	-0.05	0.05	16.4
0416	4.00	-0.05	0.05	16.4
0516	5.00	-0.05	0.05	16.4
0616	6.00	-0.05	0.05	16.4



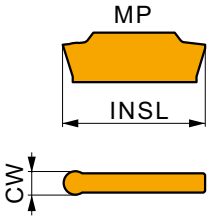
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
																				
LCMR 031604-M	**T8330**	0.4	■ 170	0.13	1.0	◪ 100	0.12	1.0	■ 160	0.13	1.0	–	–	–	–	–	–	◪ 30	0.15	1.0
LCMR 041604-M	**T8330**	0.4	■ 155	0.18	1.0	◪ 90	0.16	1.0	■ 145	0.18	1.0	–	–	–	–	–	–	◪ 30	0.15	1.0
LCMR 051604-M	**T8330**	0.4	■ 150	0.20	1.0	◪ 90	0.18	1.0	■ 140	0.20	1.0	–	–	–	–	–	–	◪ 30	0.15	1.0
LCMR 061608-M	**T8330**	0.8	■ 175	0.25	1.0	◪ 105	0.23	1.0	■ 165	0.25	1.0	–	–	–	–	–	–	◪ 35	0.15	1.0

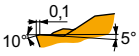
M geometry for grooving and longitudinal turning, and continuous to interrupted cuts.

LCMR 16 - MP

	CW	CWTOLL	CWTOLU	INSL
	[mm]	[mm]	[mm]	[mm]
0316	3.00	-0.05	0.05	17.4
0416	4.00	-0.05	0.05	17.5
0516	5.00	-0.05	0.05	18.1
0616	6.00	-0.05	0.05	18.3



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
			MP geometry for longitudinal turning and copy profiling, and continuous to interrupted cuts.																	
LCMR 0316M0-MP	**T8330**	1.5	■ 190	0.30	0.8	◪ 110	0.27	0.8	■ 180	0.30	0.8	–	–	–	–	–	–	–	–	–
LCMR 0416M0-MP	**T8330**	2.0	■ 175	0.40	1.0	◪ 105	0.36	1.0	■ 165	0.40	1.0	–	–	–	–	–	–	–	–	–
LCMR 0516M0-MP	**T8330**	2.5	■ 170	0.45	1.0	◪ 100	0.41	1.0	■ 160	0.45	1.0	–	–	–	–	–	–	–	–	–
LCMR 0616M0-MP	**T8330**	3.0	■ 165	0.50	1.0	◪ 95	0.45	1.0	■ 155	0.50	1.0	–	–	–	–	–	–	–	–	–

GFI(RL) EXT

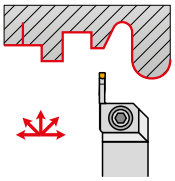
P M K N S H

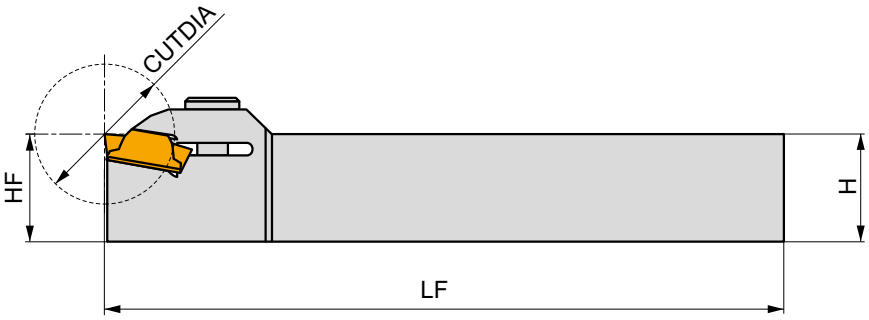
PRAMET

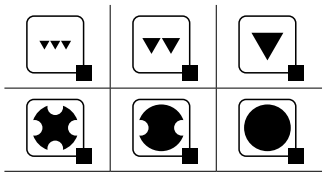
G

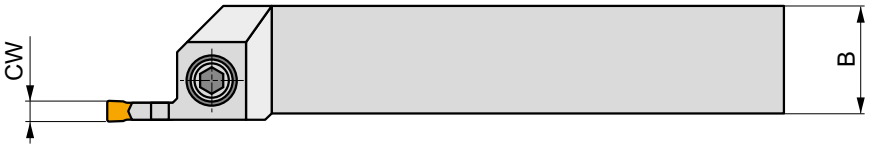
External V-Groove Top Clamp Grooving and Turning Tool for LCM. Inserts

External Right/Left hand tool holder for grooving with LCM. 0316, 0416, 0516, 0616 and 0830 inserts. Suited for parting-off up to maximum of Ø48 mm material in grooving, profiling and longitudinal turning applications. Available with shank size 16x16 up to 32x25 mm. Body treated for longer tool life.









	Product	HF [mm]	H [mm]	B [mm]	LF [mm]	CW [mm]	CUTDIA [mm]	kg		
R	**GFIR 1616 H 03**	16	16	16	100	3.00	18	0.22	GI136	GL03
	GFIR 2020 K 03	20	20	20	125	3.00	18	0.40	GI136	GL04
	GFIR 2525 M 03	25	25	25	150	3.00	18	0.73	GI136	GL05
	GFIR 1616 H 04	16	16	16	100	4.00	24	0.22	GI137	GL03
	GFIR 2020 K 04	20	20	20	125	4.00	24	0.38	GI137	GL04
	GFIR 2525 M 04	25	25	25	150	4.00	24	0.67	GI137	GL05
	GFIR 2020 K 05	20	20	20	125	5.00	28	0.38	GI138	GL04
	GFIR 2525 M 05	25	25	25	150	5.00	28	0.70	GI138	GL05
	GFIR 2020 K 06	20	20	20	125	6.00	28	0.38	GI139	GL04
	GFIR 2525 M 06	25	25	25	150	6.00	28	0.70	GI139	GL05
	GFIR 2525 M 08	25	25	25	150	8.00	48	0.74	GI193	GL09
	GFIR 3225 P 08	32	32	25	170	8.00	48	1.03	GI193	GL09
L	**GFIL 1616 H 03**	16	16	16	100	3.00	18	0.22	GI136	GL03
	GFIL 2020 K 03	20	20	20	125	3.00	18	0.39	GI136	GL04
	GFIL 2525 M 03	25	25	25	150	3.00	18	0.73	GI136	GL05
	GFIL 1616 H 04	16	16	16	100	4.00	24	0.20	GI137	GL03
	GFIL 2020 K 04	20	20	20	125	4.00	24	0.38	GI137	GL04
	GFIL 2525 M 04	25	25	25	150	4.00	24	0.69	GI137	GL05
	GFIL 2020 K 05	20	20	20	125	5.00	28	0.38	GI138	GL04
	GFIL 2525 M 05	25	25	25	150	5.00	28	0.71	GI138	GL05
	GFIL 2020 K 06	20	20	20	125	6.00	28	0.40	GI139	GL04
	GFIL 2525 M 06	25	25	25	150	6.00	28	0.70	GI139	GL05
	GFIL 2525 M 08	25	25	25	150	8.00	48	0.75	GI193	GL09
	GFIL 3225 P 08	32	32	25	170	8.00	48	1.03	GI193	GL09

GI136	LCM. 0316..
GI137	LCM. 0416..
GI138	LCM. 0516..
GI139	LCM. 0616..
GI193	LCM. 0830..

GL03	HS 0616C	6.0	M 6	16	HXK 5
GL04	HS 0620C	6.0	M 6	20	HXK 5
GL05	HS 0625C	6.0	M 6	25	HXK 5
GL09	HSI 1020	8.0	M 10	20	HXK 8

GFM(RL) EXT

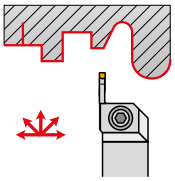
P M K N S H

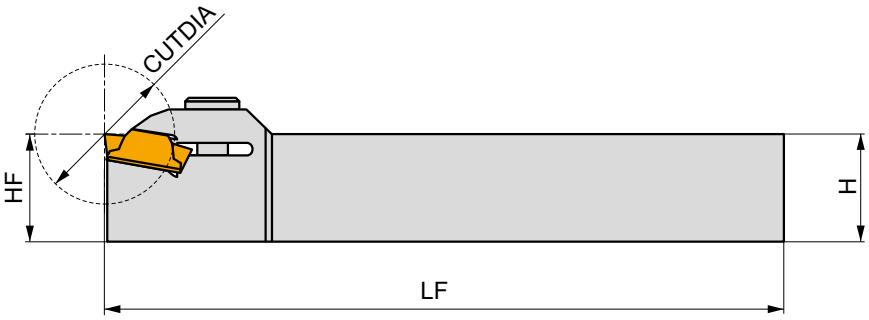
PRAMET

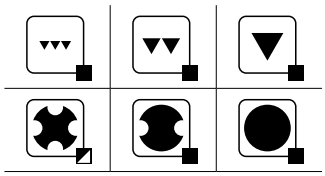
G

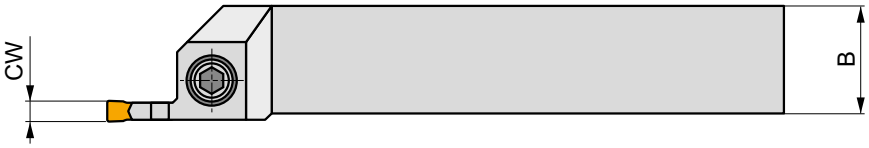
External V-Groove Top Clamp Grooving and Turning Tool for LCM. Inserts

External Right/Left hand tool holder for grooving with LCM. 0316, 0416, 0516, 0616 and 0830 inserts. Suited for parting-off up to maximum of Ø30 to Ø80 mm material in grooving, profiling and longitudinal turning applications. Available with shank size 20x20 up to 32x25 mm. Body treated for longer tool life.









	Product	HF [mm]	H [mm]	B [mm]	LF [mm]	CW [mm]	CUTDIA [mm]	kg		
R	**GFMR 2020 K 0316**	20	20	20	125	3.00	30	0.37	GI136	GL04
	GFMR 2525 M 0316	25	25	25	150	3.00	30	0.68	GI136	GL04
	GFMR 2020 K 0416	20	20	20	125	4.00	40	0.38	GI137	GL04
	GFMR 2525 M 0416	25	25	25	150	4.00	40	0.68	GI137	GL04
	GFMR 2525 M 0516	25	25	25	150	5.00	50	0.67	GI138	GL04
	GFMR 3225 P 0516	32	32	25	170	5.00	50	0.97	GI138	GL04
	GFMR 2525 M 0616	25	25	25	150	6.00	60	0.66	GI139	GL04
	GFMR 3225 P 0616	32	32	25	170	6.00	60	0.97	GI139	GL04
	GFMR 3225 P 0830	32	32	25	170	8.00	80	0.97	GI193	GL10
L	**GFML 2020 K 0316**	20	20	20	125	3.00	30	0.24	GI136	GL04
	GFML 2525 M 0316	25	25	25	150	3.00	30	0.70	GI136	GL04
	GFML 2020 K 0416	20	20	20	125	4.00	40	0.37	GI137	GL04
	GFML 2525 M 0416	25	25	25	150	4.00	40	0.69	GI137	GL04
	GFML 2525 M 0516	25	25	25	150	5.00	50	0.64	GI138	GL04
	GFML 3225 P 0516	32	32	25	170	5.00	50	0.97	GI138	GL04
	GFML 2525 M 0616	25	25	25	150	6.00	60	0.64	GI139	GL04
	GFML 3225 P 0616	32	32	25	170	6.00	60	0.95	GI139	GL04
	GFML 3225 P 0830	32	32	25	170	8.00	80	0.99	GI193	GL10

GI136	LCM. 0316..
GI137	LCM. 0416..
GI138	LCM. 0516..
GI139	LCM. 0616..
GI193	LCM. 0830..

		Nm			
GL04	HS 0620C	6.0	M 6	20	HXK 5
GL10	HSI 1020	8.0	M 10	20	HXK 8

XLCCN B

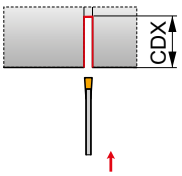
P M K N S H

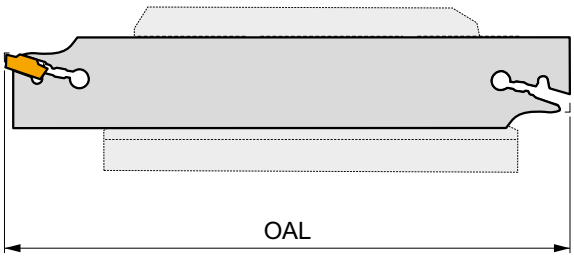
PRAMET

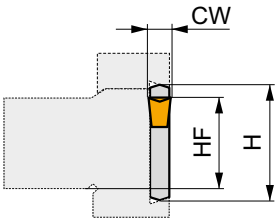
X

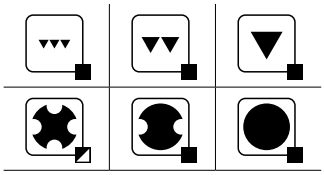
Double-Ended Parting-off Blade for LCM. Inserts

Blade for parting-off applications up to 60 mm maximum depth or Ø120 mm bar material. Suited for single or double sided LCM. inserts. Available in height of 26 or 32 mm. Can be fitted into the DU Pramet basic holders. Blade treated for longer tool life.









	Product	HF [mm]	H [mm]	LF [mm]	CW [mm]	CDX [mm]	kg		
N	**XLCCN 2602 J 0316**	21.4	26	110	3.00	35	0.09	GI136	KV1
	XLCCN 3202 M 0316	25	32	150	3.00	50	0.13	GI136	KV1
	XLCCN 3203 M 0416	25	32	150	4.00	50	0.15	GI137	KV1
	XLCCN 3204 M 0516	25	32	150	5.00	60	0.18	GI138	KV1
	XLCCN 3205 M 0616	25	32	150	6.00	60	0.17	GI139	KV1

GI136	LCM. 0316..
GI137	LCM. 0416..
GI138	LCM. 0516..
GI139	LCM. 0616..

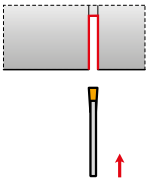
KV1	KV 5x100

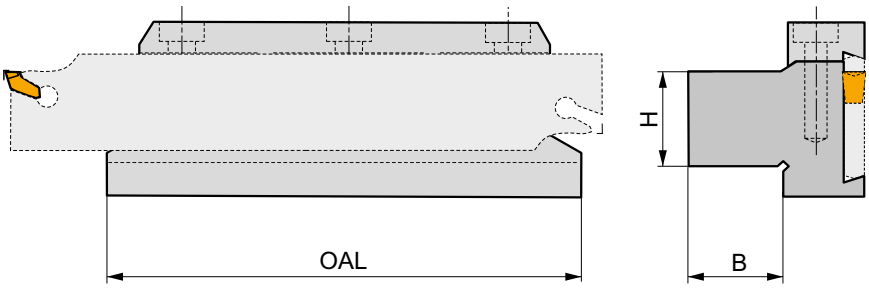
DU, D

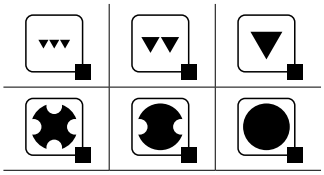
PRAMET

Tool Holder Block for Parting-off Blades

Tool holder to fit GL or XLC. blades for parting-off. Available with shank size 20x20 up to 40x40 mm. Body treated for longer tool life.







Product	H [mm]	B [mm]	LB [mm]	kg		
26-DU 2020	20	20	90	0.70	GI007	ND2
26-D 2020	20	20	100	0.82	GI007	ND2
32-DU 2523	25	23	110	1.02	GI008	ND2
32-DU 2532	25	32	110	1.10	GI008	ND2
32-DU 3229	32	29	110	1.25	GI008	ND2
32-D 2530	25	30	115	1.30	GI008	ND2
45-DU 3229	32	29	110	1.50	GI009	ND7
45-DU 4036	40	36	110	2.05	GI009	ND7
47-D 4040	40	40	150	3.88	GI091	ND3

GI007	XLC.N 26..	GL.-S26.B
GI008	XLC.N 32..	GL.-S32.B
GI009	XLC.N 45..	–
GI091	XLC.N 47..	–

		Nm			
ND2	HS 0625	6.0	M 6	25	HXK 5
ND3	HS 1030	8.0	M 10	30	HXK 8
ND7	HS 0630	6.0	M 6	30	HXK 5

XLCCN 25 BS

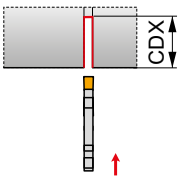
P M K N S H

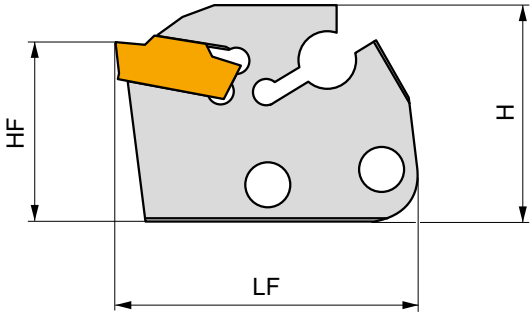
PRAMET

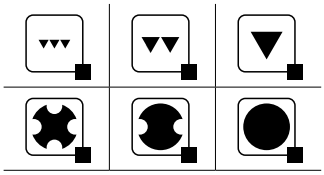
G

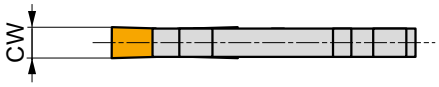
Radial Grooving Blade for Modular MS-EN Tool Holder for LCM. Inserts

Modular grooving blade for grooving with single or double-sided LCM. 0316, 0416, 0516 or 0616 inserts. Suited for grooving or parting-off (max. 25 mm cutting depth) applications. Can be fitted to MS-EN tool holder. Blades treated for longer tool life.





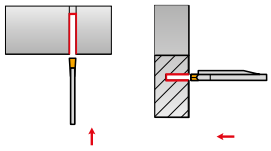


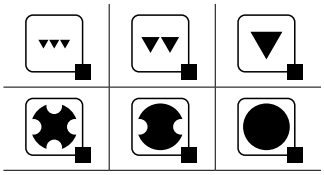


	Product	HF [mm]	H [mm]	LF [mm]	CW [mm]	CDX [mm]	kg		
N	XLCCN 250215-0316	24	29	40	3.00	15	0.01	GI136	–
	XLCCN 250225-0316	24	29	50	3.00	25	0.02	GI136	–
	XLCCN 250315-0416	24	29	40	4.00	15	0.04	GI137	–
	XLCCN 250325-0416	24	29	50	4.00	25	0.04	GI137	–
	XLCCN 250425-0516	24	29	50	5.00	25	0.03	GI138	–
	XLCCN 250525-0616	24	29	50	6.00	25	0.04	GI139	–

GI136	LCM. 0316..
GI137	LCM. 0416..
GI138	LCM. 0516..
GI139	LCM. 0616..

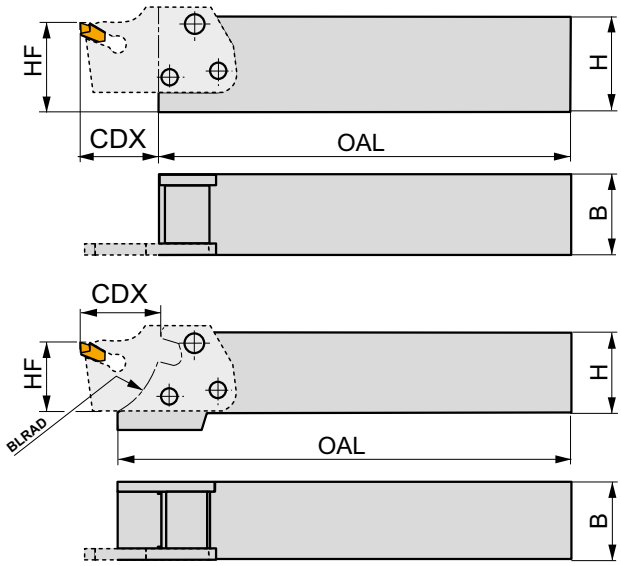
MS-EN





Modular Tool Holder for XLCCN, XLCF(NRL) or XLXFL Grooving Blade

Tool holder to fit modular grooving blades from the XLC 25 BS, XLCF(NRL) BS, XLXFL BS axial grooving blade. Available with shank size 12x12 up to 32x25 mm. Body treated for longer tool life.



Product	HF [mm]	H [mm]	B [mm]	OAL [mm]	CDX [mm]	BLRAD [mm]	kg		
MS-EN-1212 F	12	12	12	75	15	–	0.13	GI006	ND4
MS-EN-1616 H	16	16	16	90	15	–	0.21	GI006	ND4
MS-EN-2020 K	20	20	20	115	15	–	0.23	GI003	ND5
MS-EN-2020 KS	20	20	20	129	15	25	0.42	GI060	ND5
MS-EN-2525 M	25	25	25	140	15	–	0.65	GI003	ND5
MS-EN-2525 MS	25	25	25	153	15	25	0.74	GI060	ND5
MS-EN-3225 P	32	32	25	160	15	–	0.95	GI003	ND5
MS-EN-3225 PS	32	32	25	174	15	25	1.00	GI060	ND5

GI003	XLC.. 25..15...	XLXFL 25…	XLC.. 25..25…
GI006	XLCF. 16..15…	XLCF. 16..20…	–
GI060	XLC.. 25..15…	XLC.. 25..25…	–

		Nm				Nm			
ND4	US 4011-T15P	3.5	M 4	10.6	–	–	–	–	FLAG T15P
ND5	US 45013-T20P	5.0	M 5	13	US 46017-T20P	5.0	M6	17	FLAG T15P

ND4 =3 x US 4011-T15P; ND5=2 x US 45013-T20P

GFIL-L AXIAL

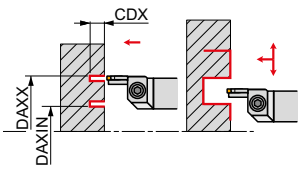
P M K N S H

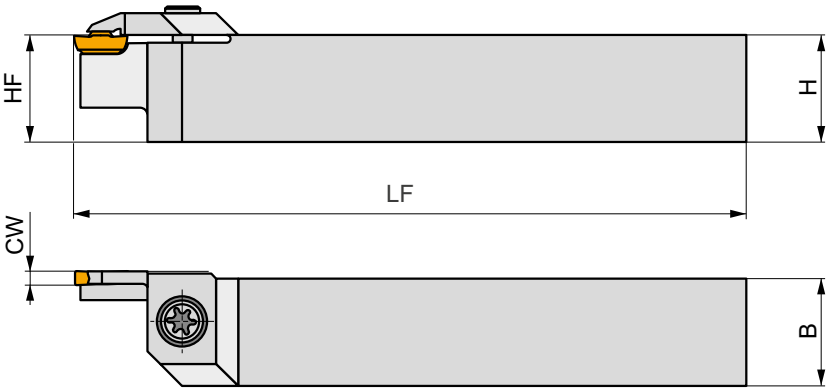
PRAMET

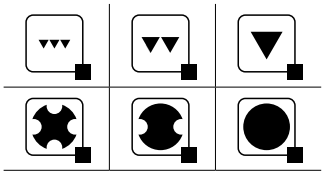
G

External Axial V-Groove Top Clamp Grooving Tool for LCM. 03 Inserts

External left-hand axial tool holder for grooving with single or double-sided LCM. 0313 or 0316 inserts. Suited for axial grooving, axial profiling or groove widening Ø17 up to Ø170 mm applications with maximum depth of cut 9 mm. Available with shank size 25x25 mm. Body treated for longer tool life.







	Product	HF [mm]	H [mm]	B [mm]	LF [mm]	CW [mm]	CDX [mm]	DAXIN	DAXX [mm]	kg		
L	**GFIL 2525 M 0313L 030017**	25	25	25	150	3.00	9	17	30	0.64	GI143	GL02
	GFIL 2525 M 0313L 039024	25	25	25	150	3.00	9	24	39	0.66	GI143	GL07
	GFIL 2525 M 0313L 050033	25	25	25	150	3.00	9	33	50	0.67	GI143	GL07
	GFIL 2525 M 0313L 060043	25	25	25	150	3.00	9	43	60	0.67	GI143	GL07
	GFIL 2525 M 0313L 076053	25	25	25	150	3.00	9	53	76	0.67	GI143	GL07
	GFIL 2525 M 0316L 100070	25	25	25	150	3.00	9	70	100	0.69	GI136	GL07
	GFIL 2525 M 0316L 130090	25	25	25	150	3.00	9	90	130	0.70	GI136	GL07
	GFIL 2525 M 0316L 170110	25	25	25	150	3.00	9	110	170	0.71	GI136	GL07

GI136	LCM. 0316..
GI143	LCM. 0313..

		Nm			
GL02	US 5015-T20P	5.0	M 5	15	FLAG T20P
GL07	US 5018-T20P	5.0	M 5	18.2	FLAG T20P

GFIL-R AXIAL

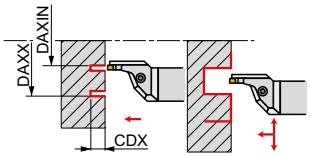
P M K N S H

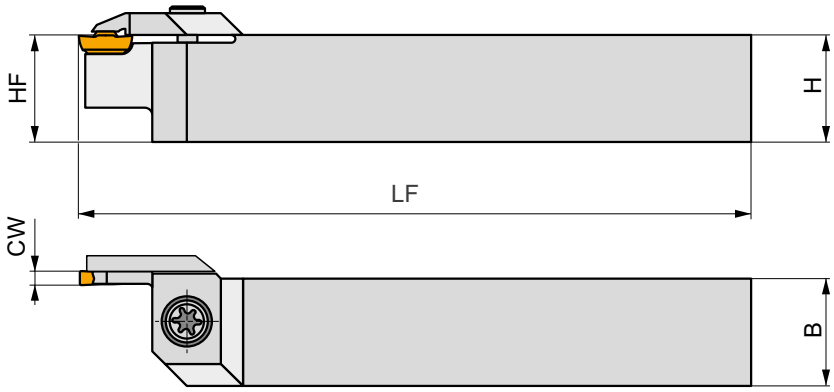
PRAMET

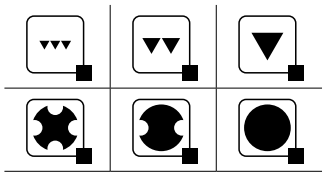
G

External Axial V-Groove Top Clamp Grooving Tool for LCM. 03 or 04 Inserts

External left-hand axial tool holder for grooving with single or double-sided LCM. 0313, 0316, 0413 or 0416 inserts. Suited for axial grooving, axial profiling or groove widening Ø17 up to Ø230 mm applications, with maximum depth of cut 12 mm. Available with shank size 25x25. Body treated for longer tool life.







	Product	HF [mm]	H [mm]	B [mm]	LF [mm]	CW [mm]	CDX [mm]	DAXIN	DAXX [mm]	kg		
	GFIL 2525 M 03R 030017-A	25	25	25	150	3.00	9	17	30	0.69	GI143	GL07
	GFIL 2525 M 03R 039024-A	25	25	25	150	3.00	9	24	39	0.69	GI143	GL07
	GFIL 2525 M 03R 050033-A	25	25	25	150	3.00	9	33	50	0.72	GI143	GL07
	GFIL 2525 M 03R 060043-A	25	25	25	150	3.00	9	43	60	0.69	GI143	GL07
	GFIL 2525 M 03R 076053-A	25	25	25	150	3.00	9	53	76	0.68	GI143	GL07
	GFIL 2525 M 03R 100070-A	25	25	25	150	3.00	9	70	100	0.79	GI136	GL08
	GFIL 2525 M 03R 130090-A	25	25	25	150	3.00	9	90	130	0.73	GI136	GL08
L	GFIL 2525 M 03R 170110-A	25	25	25	150	3.00	9	110	170	0.76	GI136	GL08
	GFIL 2525 M 04R 030017-A	25	25	25	150	3.00	9	17	30	0.71	GI170	GL07
	GFIL 2525 M 04R 034021-A	25	25	25	150	4.00	9	21	34	0.69	GI170	GL07
	GFIL 2525 M 04R 040026-A	25	25	25	150	4.00	11	26	40	0.00	GI170	GL07
	GFIL 2525 M 04R 050032-A	25	25	25	150	4.00	11	32	50	0.68	GI170	GL07
	GFIL 2525 M 04R 060042-A	25	25	25	150	4.00	11	42	60	0.66	GI170	GL07
	GFIL 2525 M 04R 075052-A	25	25	25	150	4.00	11	52	75	0.67	GI170	GL07
	GFIL 2525 M 04R 100070-A	25	25	25	150	4.00	12	70	100	0.75	GI137	GL08
L	GFIL 2525 M 04R 130090-A	25	25	25	150	4.00	12	90	130	0.75	GI137	GL08
	GFIL 2525 M 04R 170110-A	25	25	25	150	4.00	12	110	170	0.75	GI137	GL08
	GFIL 2525 M 04R 230140-A	25	25	25	150	4.00	12	140	230	0.78	GI137	GL08

GI136	LCM. 0316..
GI137	LCM. 0416..
GI143	LCM. 0313..
GI170	LCM. 0413..

		Nm				
GL07	US 5018-T20P	5.0	M 5	18.2	FLAG T20P	–
GL08	US 6020-T25P	6.0	M 6	20.2	–	SDR T25P

GFIR-L AXIAL

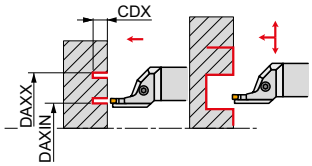
P M K N S H

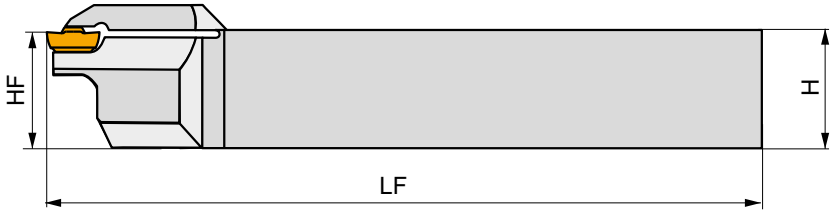
PRAMET

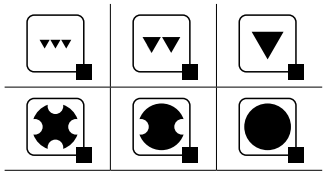
G

External Axial V-Groove Top Clamp Grooving Tool for LCM. 03 or 04 Inserts

External right-hand axial tool holder for grooving with single or double-sided LCM. 0313, 0316, 0413 or 0416 inserts. Suited for axial grooving, axial profiling or groove widening Ø17 up to Ø230 mm applications, with maximum depth of cut 12 mm. Available with shank size 25x25 mm. Body treated for longer tool life.







	Product	HF [mm]	H [mm]	B [mm]	LF [mm]	CW [mm]	CDX [mm]	DAXIN	DAXX [mm]	kg		
	GFIR 2525 M 03L 030017-A	25	25	25	150	3.00	9	17	30	0.65	GI143	GL07
	GFIR 2525 M 03L 039024-A	25	25	25	150	3.00	9	24	39	0.68	GI143	GL07
	GFIR 2525 M 03L 050033-A	25	25	25	150	3.00	9	33	50	0.65	GI143	GL07
	GFIR 2525 M 03L 060043-A	25	25	25	150	3.00	9	43	60	0.68	GI143	GL07
	GFIR 2525 M 03L 076053-A	25	25	25	150	3.00	9	53	76	0.69	GI143	GL07
	GFIR 2525 M 03L 100070-A	25	25	25	150	3.00	9	70	100	0.75	GI136	GL08
	GFIR 2525 M 03L 130090-A	25	25	25	150	3.00	9	90	130	0.76	GI136	GL08
R	GFIR 2525 M 03L 170110-A	25	25	25	150	3.00	9	110	170	0.68	GI136	GL08
	GFIR 2525 M 04L 030017-A	25	25	25	150	3.00	9	17	30	0.68	GI170	GL07
	GFIR 2525 M 04L 034021-A	25	25	25	150	4.00	9	21	34	0.68	GI170	GL07
	GFIR 2525 M 04L 040026-A	25	25	25	150	4.00	11	26	40	0.68	GI170	GL07
	GFIR 2525 M 04L 050032-A	25	25	25	150	4.00	11	32	50	0.66	GI170	GL07
	GFIR 2525 M 04L 060042-A	25	25	25	150	4.00	11	42	60	0.69	GI170	GL07
	GFIR 2525 M 04L 075052-A	25	25	25	150	4.00	11	52	75	0.67	GI170	GL07
	GFIR 2525 M 04L 100070-A	25	25	25	150	4.00	12	70	100	0.72	GI137	GL08
	GFIR 2525 M 04L 130090-A	25	25	25	150	4.00	12	90	130	0.75	GI137	GL08
R	GFIR 2525 M 04L 170110-A	25	25	25	150	4.00	12	110	170	0.72	GI137	GL08
	GFIR 2525 M 04L 230140-A	25	25	25	150	4.00	12	140	230	0.79	GI137	GL08

GI136	LCM. 0316..
GI137	LCM. 0416..
GI143	LCM. 0313..
GI170	LCM. 0413..

		Nm				
GL07	US 5018-T20P	5.0	M 5	18.2	FLAG T20P	–
GL08	US 6020-T25P	6.0	M 6	20.2	–	SDR T25P

GFIR-R AXIAL

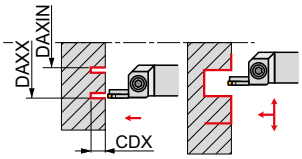
P M K N S H

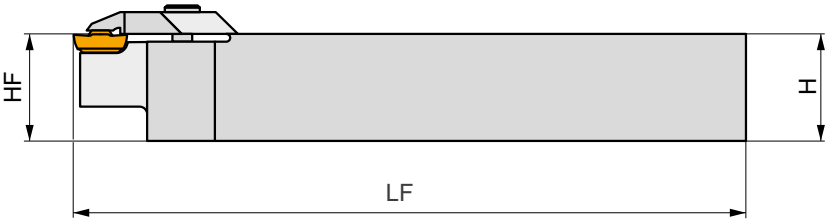
PRAMET

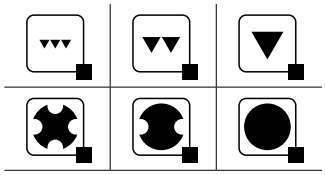
G

External Axial V-Groove Top Clamp Grooving Tool for LCM. 03 Inserts

External right-hand axial tool holder for grooving with single or double-sided LCM. 0313 or 0316 inserts. Suited for axial grooving, axial profiling or groove widening Ø17 up to Ø170 mm applications, with maximum depth of cut 9 mm. Available with shank size 25x25 mm. Body treated for longer tool life.







	Product	HF [mm]	H [mm]	B [mm]	LF [mm]	CW [mm]	CDX [mm]	DAXIN	DAXX [mm]	kg		
R	**GFIR 2525 M 0313R 030017**	25	25	25	150	3.00	9	17	30	0.65	GI143	GL02
	GFIR 2525 M 0313R 039024	25	25	25	150	3.00	9	24	39	0.66	GI143	GL07
	GFIR 2525 M 0313R 050033	25	25	25	150	3.00	9	33	50	0.68	GI143	GL07
	GFIR 2525 M 0313R 060043	25	25	25	150	3.00	9	43	60	0.68	GI143	GL07
	GFIR 2525 M 0313R 076053	25	25	25	150	3.00	9	53	76	0.68	GI143	GL07
	GFIR 2525 M 0316R 100070	25	25	25	150	3.00	9	70	100	0.69	GI136	GL07
	GFIR 2525 M 0316R 130090	25	25	25	150	3.00	9	90	130	0.70	GI136	GL07
	GFIR 2525 M 0316R 170110	25	25	25	150	3.00	9	110	170	0.70	GI136	GL07

GI136	LCM. 0316..
GI143	LCM. 0313..

		Nm			
GL02	US 5015-T20P	5.0	M 5	15	FLAG T20P
GL07	US 5018-T20P	5.0	M 5	18.2	FLAG T20P

GFML-L AXIAL

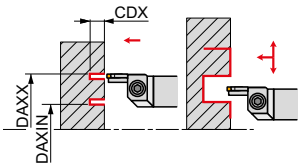
P M K N S H

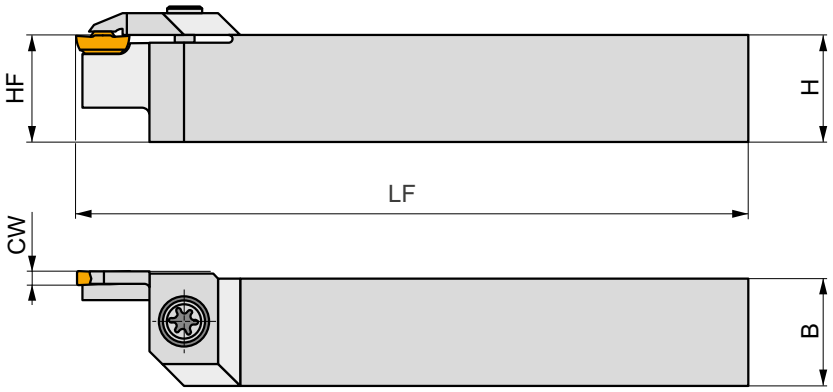
PRAMET

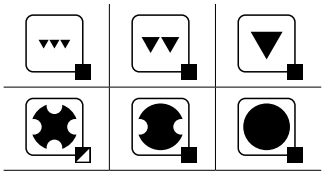
G

External Axial V-Groove Top Clamp Grooving Tool for LCM. 04 Inserts

External left-hand axial tool holder for grooving with single or double-sided LCM. 0413 or 0416 inserts. Suited for deep axial grooving, axial profiling or groove widening Ø17 up to Ø230 mm applications, with maximum depth of cut 20 mm. Available with shank size 25x25 mm. Body treated for longer tool life.







	Product	HF [mm]	H [mm]	B [mm]	LF [mm]	CW [mm]	CDX [mm]	DAXIN	DAXX [mm]	kg		
L	**GFML 2525 M 0413L 030017**	25	25	25	150	4.00	20	17	30	0.62	GI170	GL02
	GFML 2525 M 0413L 034021	25	25	25	150	4.00	20	21	34	0.63	GI170	GL07
	GFML 2525 M 0413L 040026	25	25	25	150	4.00	20	26	40	0.65	GI170	GL07
	GFML 2525 M 0413L 050032	25	25	25	150	4.00	20	32	50	0.64	GI170	GL07
	GFML 2525 M 0413L 060042	25	25	25	150	4.00	20	42	60	0.65	GI170	GL07
	GFML 2525 M 0413L 075052	25	25	25	150	4.00	20	52	75	0.66	GI170	GL07
	GFML 2525 M 0416L 100070	25	25	25	150	4.00	20	70	100	0.66	GI137	GL07
	GFML 2525 M 0416L 130090	25	25	25	150	4.00	20	90	130	0.67	GI137	GL07
	GFML 2525 M 0416L 170110	25	25	25	150	4.00	20	110	170	0.67	GI137	GL07
	GFML 2525 M 0416L 230140	25	25	25	150	4.00	20	140	230	0.67	GI137	GL07

GI137	LCM. 0416..
GI170	LCM. 0413..

		Nm			
GL02	US 5015-T20P	5.0	M 5	15	FLAG T20P
GL07	US 5018-T20P	5.0	M 5	18.2	FLAG T20P

GFML-R AXIAL

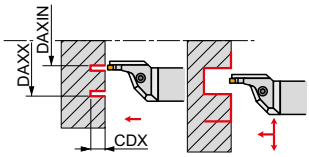
P M K N S H

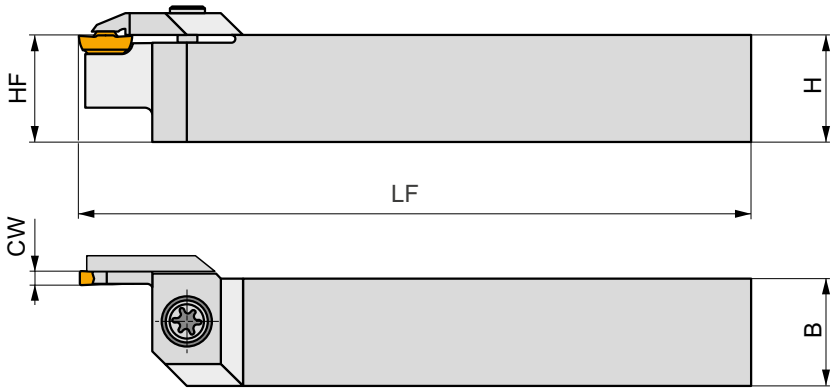
PRAMET

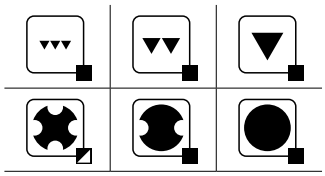
G

External Axial V-Groove Top Clamp Grooving Tool for LCM. 04 Inserts

External left-hand axial tool holder for grooving with single or double-sided LCM. 0413 or 0416 inserts. Suited for deep axial grooving, axial profiling or groove widening Ø17 up to Ø230 mm applications, with maximum depth of cut 20 mm. Available with shank size 25x25 mm. Body treated for longer tool life.







	Product	HF [mm]	H [mm]	B [mm]	LF [mm]	CW [mm]	CDX [mm]	DAXIN	DAXX [mm]	kg		
L	**GFML 2525 M 0413R 030017**	25	25	25	150	4.00	20	17	30	0.68	GI170	GL07
	GFML 2525 M 0413R 034021	25	25	25	150	4.00	20	21	34	0.69	GI170	GL07
	GFML 2525 M 0413R 040026	25	25	25	150	4.00	20	26	40	0.69	GI170	GL07
	GFML 2525 M 0413R 050032	25	25	25	150	4.00	20	32	50	0.68	GI170	GL07
	GFML 2525 M 0413R 060042	25	25	25	150	4.00	20	42	60	0.69	GI170	GL07
	GFML 2525 M 0413R 075052	25	25	25	150	4.00	20	52	75	0.69	GI170	GL07
	GFML 2525 M 0416R 100070	25	25	25	150	4.00	20	70	100	0.80	GI137	GL08
	GFML 2525 M 0416R 130090	25	25	25	150	4.00	20	90	130	0.78	GI137	GL08
	GFML 2525 M 0416R 170110	25	25	25	150	4.00	20	110	170	0.78	GI137	GL08
	GFML 2525 M 0416R 230140	25	25	25	150	4.00	20	140	230	0.78	GI137	GL08

GI137	LCM. 0416..
GI170	LCM. 0413..

		Nm				
GL07	US 5018-T20P	5.0	M 5	18.2	FLAG T20P	–
GL08	US 6020-T25P	6.0	M 6	20.2	–	SDR T25P

GFMR-L AXIAL

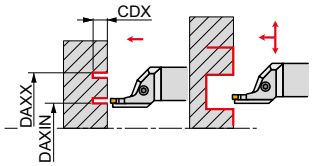
P M K N S H

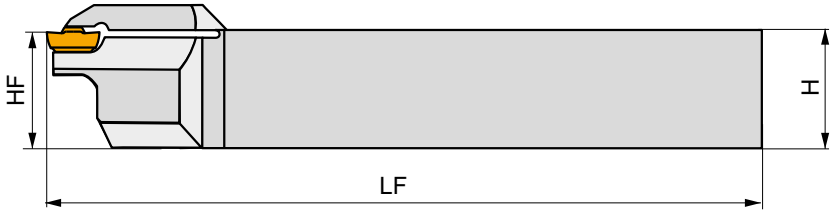
PRAMET

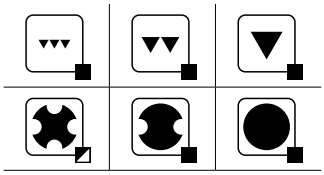
G

External Axial V-Groove Top Clamp Grooving Tool for LCM. 04 Inserts

External right-hand axial tool holder for grooving with single or double-sided LCM. 0413 or 0416 inserts. Suited for deep axial grooving, axial profiling or groove widening Ø17 up to Ø230 mm applications, with maximum depth of cut 20 mm. Available with shank size 25x25 mm. Body treated for longer tool life.







	Product	HF [mm]	H [mm]	B [mm]	LF [mm]	CW [mm]	CDX [mm]	DAXIN	DAXX [mm]	kg		
R	**GFMR 2525 M 0413L 030017**	25	25	25	150	4.00	20	17	30	0.70	GI170	GL07
	GFMR 2525 M 0413L 034021	25	25	25	150	4.00	20	21	34	0.66	GI170	GL07
	GFMR 2525 M 0413L 040026	25	25	25	150	4.00	20	26	40	0.66	GI170	GL07
	GFMR 2525 M 0413L 050032	25	25	25	150	4.00	20	32	50	0.68	GI170	GL07
	GFMR 2525 M 0413L 060042	25	25	25	150	4.00	20	42	60	0.66	GI170	GL07
	GFMR 2525 M 0413L 075052	25	25	25	150	4.00	20	52	75	0.69	GI170	GL07
	GFMR 2525 M 0416L 100070	25	25	25	150	4.00	20	70	100	0.88	GI137	GL08
	GFMR 2525 M 0416L 130090	25	25	25	150	4.00	20	90	130	0.78	GI137	GL08
	GFMR 2525 M 0416L 170110	25	25	25	150	4.00	20	110	170	0.81	GI137	GL08
	GFMR 2525 M 0416L 230140	25	25	25	150	4.00	20	140	230	0.78	GI137	GL08

GI137	LCM. 0416..
GI170	LCM. 0413..

		Nm				
GL07	US 5018-T20P	5.0	M 5	18.2	FLAG T20P	–
GL08	US 6020-T25P	6.0	M 6	20.2	–	SDR T25P

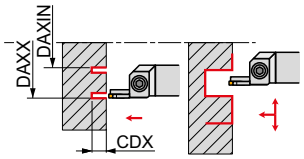
GFMR-R AXIAL

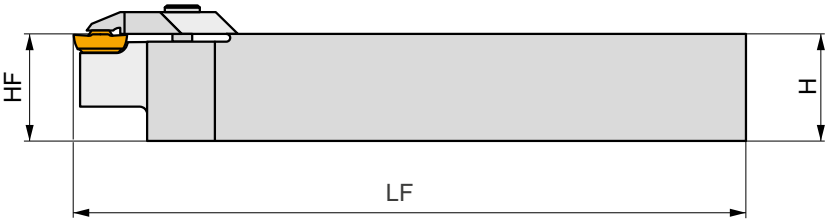
P M K N S H

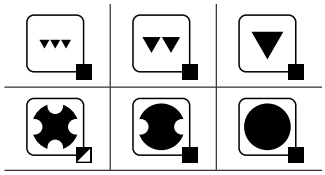
PRAMET G

External Axial V-Groove Top Clamp Grooving Tool for LCM. 04 Inserts

External right-hand axial tool holder for grooving with single or double-sided LCM. 0413 or 0416 inserts. Suited for deep axial grooving, axial profiling or groove widening Ø17 up to Ø230 mm applications, with maximum depth of cut 20 mm. Available with shank size 25x25 mm. Body treated for longer tool life.







	Product	HF [mm]	H [mm]	B [mm]	LF [mm]	CW [mm]	CDX [mm]	DAXIN	DAXX [mm]	kg		
R	**GFMR 2525 M 0413R 030017**	25	25	25	150	4.00	20	17	30	0.62	GI170	GL02
	GFMR 2525 M 0413R 034021	25	25	25	150	4.00	20	21	34	0.63	GI170	GL07
	GFMR 2525 M 0413R 040026	25	25	25	150	4.00	20	26	40	0.64	GI170	GL07
	GFMR 2525 M 0413R 050032	25	25	25	150	4.00	20	32	50	0.63	GI170	GL07
	GFMR 2525 M 0413R 060042	25	25	25	150	4.00	20	42	60	0.64	GI170	GL07
	GFMR 2525 M 0413R 075052	25	25	25	150	4.00	20	52	75	0.67	GI170	GL07
	GFMR 2525 M 0416R 100070	25	25	25	150	4.00	20	70	100	0.67	GI137	GL07
	GFMR 2525 M 0416R 130090	25	25	25	150	4.00	20	90	130	0.66	GI137	GL07
	GFMR 2525 M 0416R 170110	25	25	25	150	4.00	20	110	170	0.67	GI137	GL07
	GFMR 2525 M 0416R 230140	25	25	25	150	4.00	20	140	230	0.68	GI137	GL07

GI137	LCM. 0416..
GI170	LCM. 0413..

		Nm			
GL02	US 5015-T20P	5.0	M 5	15	FLAG T20P
GL07	US 5018-T20P	5.0	M 5	18.2	FLAG T20P

GGI(RL)-90 AXIAL

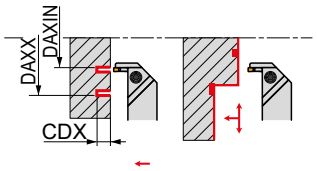
P M K N S H

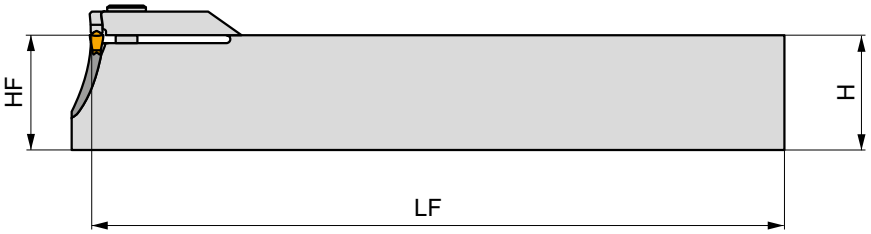
PRAMET

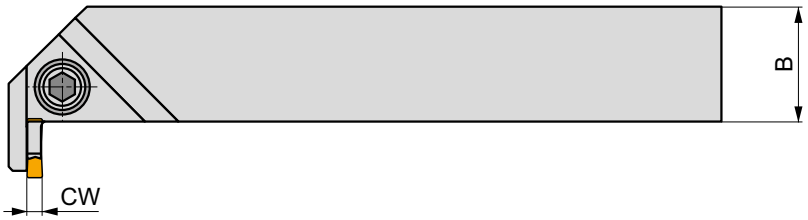
G

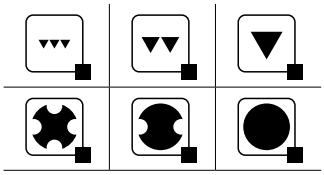
External Axial 90° V-Groove Top Clamp Grooving Tool for LCM. 03 Inserts

External Right/Left hand axial 90° tool holder for grooving with single or double-sided LCM. 0313 or 0316 inserts. Suited for axial grooving, axial profiling or groove widening Ø17 up to Ø170 mm applications, with maximum depth of cut 11 mm. Available with shank size 25x25 mm. Body treated for longer tool life.









	Product	HF [mm]	H [mm]	B [mm]	LF [mm]	CW [mm]	CDX [mm]	DAXIN	DAXX [mm]	kg		
R	GGIR 2525 M 03R 030017	25	25	25	150	3.00	9.5	17	30	0.75	GI143	GL01
	GGIR 2525 M 03R 039024	25	25	25	150	3.00	9.5	24	39	0.78	GI143	GL01
	GGIR 2525 M 03R 050033	25	25	25	150	3.00	11	33	50	0.75	GI143	GL01
	GGIR 2525 M 03R 060043	25	25	25	150	3.00	11	43	60	0.78	GI143	GL01
	GGIR 2525 M 03R 076053	25	25	25	150	3.00	11	53	76	0.75	GI143	GL01
	GGIR 2525 M 03R 100070	25	25	25	150	3.00	9	70	100	0.78	GI136	GL04
	GGIR 2525 M 03R 130090	25	25	25	150	3.00	9	90	130	0.73	GI136	GL04
	GGIR 2525 M 03R 170110	25	25	25	150	3.00	9	110	170	0.76	GI136	GL04
L	GGIL 2525 M 03L 030017	25	25	25	150	3.00	9.5	17	30	0.75	GI143	GL01
	GGIL 2525 M 03L 039024	25	25	25	150	3.00	9.5	24	39	0.25	GI143	GL01
	GGIL 2525 M 03L 050033	25	25	25	150	3.00	11	33	50	0.75	GI143	GL01
	GGIL 2525 M 03L 060043	25	25	25	150	3.00	11	43	60	0.75	GI143	GL01
	GGIL 2525 M 03L 076053	25	25	25	150	3.00	11	53	76	0.75	GI143	GL01
	GGIL 2525 M 03L 100070	25	25	25	150	3.00	9	70	100	0.77	GI136	GL04
	GGIL 2525 M 03L 130090	25	25	25	150	3.00	9	90	130	0.77	GI136	GL04
	GGIL 2525 M 03L 170110	25	25	25	150	3.00	9	110	170	0.76	GI136	GL04

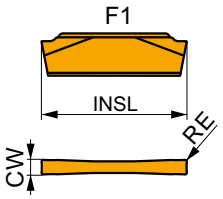
GI136	LCM. 0316..
GI143	LCM. 0313..

GL01	HS 0520C	5.0	M 5	20	HXK 4
GL04	HS 0620C	6.0	M 6	20	HXK 5

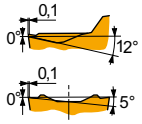
LCMF 20 - F1

PRAMET

	CW	CWTOLL	CWTOLU	INSL
	[mm]	[mm]	[mm]	[mm]
0220	2.00	-0.03	0.03	19.5



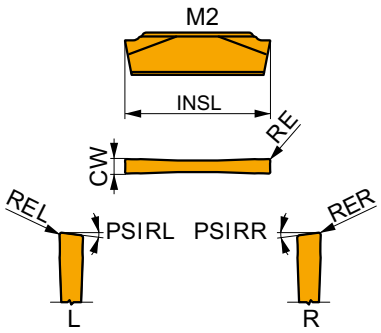
Suitability and starting values for cutting speed (vc) and feed (f). Refer to our Machining Calculator app for further calculations.

Product		RE	P		M		K		N		S		H		PSIRR	PSIRL
			vc [m/min]	f [mm/rev]	vc [m/min]	f [mm/rev]	vc [m/min]	f [mm/rev]	vc [m/min]	f [mm/rev]	vc [m/min]	f [mm/rev]	vc [m/min]	f [mm/rev]	[°]	[°]
		[mm]														
F1 geometry for parting-off and grooving, fine and finish machining, and continuous to slightly interrupted cuts.																
LCMF 022002-F1	**T8330**	0.2	205	0.09	120	0.08	190	0.09	–	–	–	–	–	–	–	–

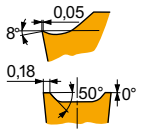
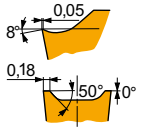
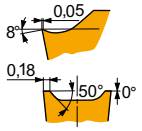
LCMF 20 - M2

PRAMET

	CW	CWTOLL	CWTOLU	INSL
	[mm]	[mm]	[mm]	[mm]
0220	2.00	-0.03	0.03	19.5

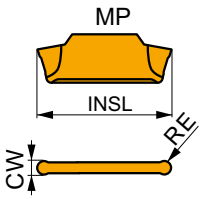


Suitability and starting values for cutting speed (vc) and feed (f). Refer to our Machining Calculator app for further calculations.

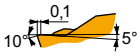
Product		RE	P		M		K		N		S		H		PSIRR	PSIRL
			vc [m/min]	f [mm/rev]	vc [m/min]	f [mm/rev]	vc [m/min]	f [mm/rev]	vc [m/min]	f [mm/rev]	vc [m/min]	f [mm/rev]	vc [m/min]	f [mm/rev]	[°]	[°]
		[mm]														
M2 geometry for parting-off and grooving, fine and finish machining, and continuous to slightly interrupted cuts.																
LCMF 022002-M2	**T8330**	0.2	180	0.12	105	0.11	170	0.12	–	–	–	–	–	–	–	–
																
R-M2 geometry, with right-handed design, for parting-off, and continuous to slightly interrupted cuts.																
LCMF 022002R6-M2	**T8330**	0.2	130	0.12	75	0.11	120	0.12	–	–	–	–	–	–	6	–
																
L-M2 geometry, with left-handed design, for parting-off and continuous to slightly interrupted cuts.																
LCMF 022002L6-M2	**T8330**	0.2	130	0.12	75	0.11	120	0.12	–	–	–	–	–	–	–	6

LCMF 20 - MP

	CW	CWTOLL	CWTOLU	INSL
	[mm]	[mm]	[mm]	[mm]
0220	2.00	-0.03	0.03	19.5



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
																				
MP geometry for longitudinal turning and copy profiling, fine and finish machining, and continuous to interrupted cuts.																				
LCMF 0220MO-MP	**T8330**	1.0	200	0.30	0.5	120	0.27	0.5	190	0.30	0.5	–	–	–	–	–	–	–	–	–

GFK(RL) EXT

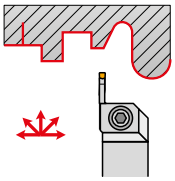
P M K N S H

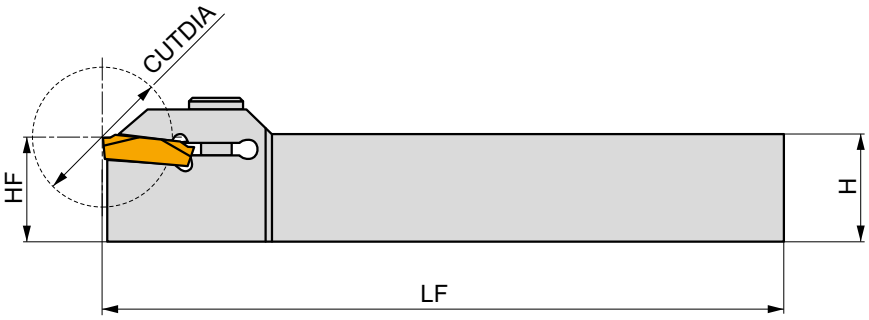
PRAMET

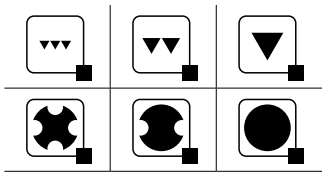
G

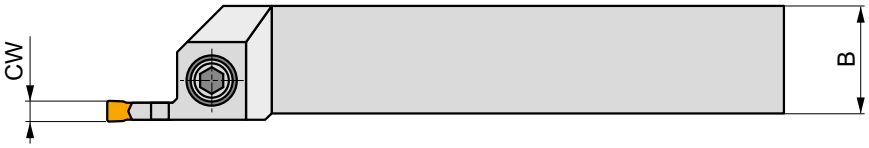
External V-Groove Top Clamp Grooving and Parting-Off tool, LCMF 0220 Ins

External Right/Left hand tool holder for grooving with LCMF 0220 inserts. Suited for parting-off, grooving and profiling applications up to 16 mm maximum depth of cut. Available with shank size 16x16 up to 25x25 mm. Body treated for longer tool life.









	Product	HF [mm]	H [mm]	B [mm]	LF [mm]	CW [mm]	CUTDIA [mm]	kg		
R	**GFKR 1616 H 02**	16	16	16	100	2.00	32	0.20	GI168	GL03
	GFKR 2020 K 02	20	20	20	125	2.00	32	0.38	GI168	GL04
	GFKR 2525 M 02	25	25	25	150	2.00	32	0.68	GI168	GL05
L	**GFKL 1616 H 02**	16	16	16	100	2.00	32	0.20	GI168	GL03
	GFKL 2020 K 02	20	20	20	125	2.00	32	0.38	GI168	GL04
	GFKL 2525 M 02	25	25	25	150	2.00	32	0.68	GI168	GL05

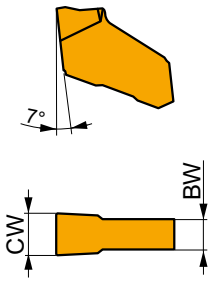
GI168	LCMF 0220..

		Nm			
GL03	HS 0616C	6.0	M 6	16	HXK 5
GL04	HS 0620C	6.0	M 6	20	HXK 5
GL05	HS 0625C	6.0	M 6	25	HXK 5

LFMX - F1

PRAMET

	CW	CWTOLL	CWTOLU	BW
	[mm]	[mm]	[mm]	[mm]
1.5	1.50	-0.03	0.03	1.30
1.6	1.60	-0.03	0.03	1.30
2.0	2.00	-0.03	0.03	1.60
3.1	3.10	-0.04	0.04	2.60
4.1	4.10	-0.04	0.04	3.60



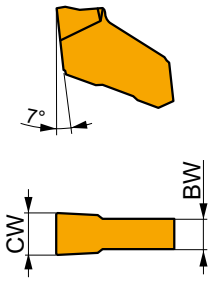
Suitability and starting values for cutting speed (vc) and feed (f). Refer to our Machining Calculator app for further calculations.

Product		RE	P		M		K		N		S		H		PSIRR	PSIRL
			vc	f	vc	f	vc	f	vc	f	vc	f	vc	f		
		[mm]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[°]	[°]
			E													
			F1 geometry for parting-off and grooving, and continuous cuts.													
LFMX 1.5-.16ENF1	**T8330**	0.2	130	0.08	75	0.07	120	0.08	–	–	–	–	–	–	–	–
LFMX 1.6-.16ENF1	**T8330**	0.2	130	0.08	75	0.07	120	0.08	–	–	–	–	–	–	–	–
LFMX 2.0-.16ENF1	**T8330**	0.2	130	0.08	75	0.07	120	0.08	–	–	–	–	–	–	–	–
LFMX 3.1-.20ENF1	**T8330**	0.2	130	0.10	75	0.09	120	0.10	–	–	–	–	–	–	–	–
LFMX 4.1-.20ENF1	**T8330**	0.2	130	0.10	75	0.09	120	0.10	–	–	–	–	–	–	–	–

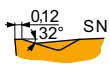
LFMX - F2

PRAMET

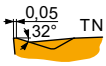
	CW	CWTOLL	CWTOLU	BW
	[mm]	[mm]	[mm]	[mm]
1.6	1.60	-0.03	0.03	1.30
2.0	2.00	-0.03	0.03	1.60
3.1	3.10	-0.04	0.04	2.60
4.1	4.10	-0.04	0.04	3.60
5.1	5.10	-0.04	0.04	4.60
6.35	6.35	-0.04	0.04	5.80



Suitability and starting values for cutting speed (vc) and feed (f). Refer to our Machining Calculator app for further calculations.

Product		RE	P		M		K		N		S		H		PSIRR	PSIRL
			vc	f	vc	f	vc	f	vc	f	vc	f	vc	f		
		[mm]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[°]	[°]
			S													
			SN-F2 geometry for parting-off and grooving, and continuous cuts.													
LFMX 1.6-.16SNF2	**T8330**	0.2	130	0.10	75	0.09	120	0.10	–	–	–	–	–	–	–	–
LFMX 2.0-.16SNF2	**6640**	0.2	150	0.10	90	0.09	140	0.10	–	–	–	–	–	–	–	–
	T8330	0.2	130	0.10	75	0.09	120	0.10	–	–	–	–	–	–	–	–
LFMX 3.1-.20SNF2	**6640**	0.2	150	0.10	90	0.09	140	0.10	–	–	–	–	–	–	–	–
	T8330	0.2	130	0.10	75	0.09	120	0.10	–	–	–	–	–	–	–	–
LFMX 4.1-.20SNF2	**T8330**	0.2	130	0.12	75	0.11	120	0.12	–	–	–	–	–	–	–	–
LFMX 5.1-.20SNF2	**T8330**	0.2	130	0.12	75	0.11	120	0.12	–	–	–	–	–	–	–	–
LFMX 6.35-.20SNF2	**T8330**	0.2	130	0.15	75	0.14	120	0.15	–	–	–	–	–	–	–	–

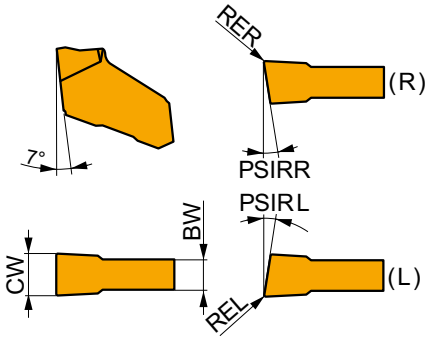
Suitability and starting values for cutting speed (vc) and feed (f). Refer to our Machining Calculator app for further calculations.

Product		RE	P vc [m/min]	P f [mm/rev]	M vc [m/min]	M f [mm/rev]	K vc [m/min]	K f [mm/rev]	N vc [m/min]	N f [mm/rev]	S vc [m/min]	S f [mm/rev]	H vc [m/min]	H f [mm/rev]	PSIRR [°]	PSIRL [°]
																
			TN-F2 geometry for parting-off and grooving, and continuous cuts.													
LFMX 3.1-.20TNF2	**6640**	0.2	150	0.10	90	0.09	140	0.10	–	–	–	–	–	–	–	–
	T8330	0.2	130	0.10	75	0.09	120	0.10	–	–	–	–	–	–	–	–
LFMX 4.1-.20TNF2	**T8330**	0.2	130	0.12	75	0.11	120	0.12	–	–	–	–	–	–	–	–

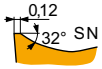
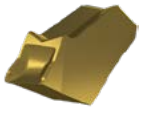
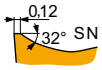
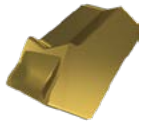
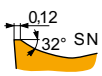
LFMX - M2

PRAMET

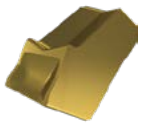
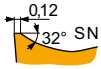
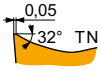
	CW [mm]	CWTOLL [mm]	CWTOLU [mm]	BW [mm]
2.0	2.00	-0.03	0.03	1.60
2.2	2.20	-0.03	0.03	1.60
3.1	3.10	-0.04	0.04	2.60
4.1	4.10	-0.04	0.04	3.60
5.1	5.10	-0.04	0.04	4.60
6.35	6.35	-0.04	0.04	5.80



Suitability and starting values for cutting speed (vc) and feed (f). Refer to our Machining Calculator app for further calculations.

Product		RE	P vc [m/min]	P f [mm/rev]	M vc [m/min]	M f [mm/rev]	K vc [m/min]	K f [mm/rev]	N vc [m/min]	N f [mm/rev]	S vc [m/min]	S f [mm/rev]	H vc [m/min]	H f [mm/rev]	PSIRR [°]	PSIRL [°]
																
			SN-M2 geometry for parting-off and grooving, and continuous to slightly interrupted cuts.													
LFMX 2.0-.16SNM2	**6640**	0.2	150	0.11	90	0.10	140	0.11	–	–	–	–	–	–	–	–
	T8330	0.2	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	–	–
LFMX 2.2-.16SNM2	**6640**	0.2	150	0.11	90	0.10	140	0.11	–	–	–	–	–	–	–	–
	T8330	0.2	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	–	–
LFMX 3.1-.20SNM2	**6640**	0.2	150	0.15	90	0.14	140	0.15	–	–	–	–	–	–	–	–
	T8330	0.2	130	0.15	75	0.14	120	0.15	–	–	–	–	–	–	–	–
LFMX 4.1-.20SNM2	**6640**	0.2	150	0.15	90	0.14	140	0.15	–	–	–	–	–	–	–	–
	T8330	0.2	130	0.15	75	0.14	120	0.15	–	–	–	–	–	–	–	–
LFMX 5.1-.20SNM2	**6640**	0.2	150	0.20	90	0.18	140	0.20	–	–	–	–	–	–	–	–
	T8330	0.2	130	0.20	75	0.18	120	0.20	–	–	–	–	–	–	–	–
LFMX 6.35-.20SNM2	**6640**	0.2	150	0.20	90	0.18	140	0.20	–	–	–	–	–	–	–	–
	T8330	0.2	130	0.20	75	0.18	120	0.20	–	–	–	–	–	–	–	–
																
			SR-M2 geometry, with right-handed design, for parting-off, and continuous to slightly interrupted cuts.													
LFMX 2.0-.16SR12M2	**T8330**	0.2	130	0.09	75	0.08	120	0.09	–	–	–	–	–	–	12	–
LFMX 2.0-.16SR6M2	**T8330**	0.2	130	0.09	75	0.08	120	0.09	–	–	–	–	–	–	6	–
LFMX 3.1-.20SR8M2	**T8330**	0.2	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	8	–
LFMX 4.1-.20SR8M2	**T8330**	0.2	130	0.15	75	0.14	120	0.15	–	–	–	–	–	–	8	–
																
			M2-SL geometry, with left-handed design, for parting-off, and continuous to slightly interrupted cuts.													
LFMX 2.0-.16SL12M2	**T8330**	0.2	130	0.09	75	0.08	120	0.09	–	–	–	–	–	–	–	12
LFMX 2.0-.16SL6M2	**T8330**	0.2	130	0.09	75	0.08	120	0.09	–	–	–	–	–	–	–	6

Suitability and starting values for cutting speed (vc) and feed (f). Refer to our Machining Calculator app for further calculations.

Product		RE	P				M				K				N				S				H				PSIRR	PSIRL
			vc		f		vc		f		vc		f		vc		f		vc		f		vc		f			
		[mm]	[m/min]		[mm/rev]		[m/min]		[mm/rev]		[m/min]		[mm/rev]		[m/min]		[mm/rev]		[m/min]		[mm/rev]		[m/min]		[mm/rev]		[°]	[°]
																												
M2-SL geometry, with left-handed design, for parting-off, and continuous to slightly interrupted cuts.																												
LFMX 3.1-.20SL8M2	**T8330**	0.2	■	130	0.11	◪	75	0.10	◪	120	0.11		–	–		–	–		–	–		–	–		–	8
LFMX 4.1-.20SL8M2	**T8330**	0.2	■	130	0.15	◪	75	0.14	◪	120	0.15		–	–		–	–		–	–		–	–		–	8
																												
TN-M2 geometry for parting-off and grooving, and continuous to slightly interrupted cuts.																												
LFMX 3.1-.20TNM2	**6640**	0.2	■	150	0.15	◪	90	0.14	◪	140	0.15		–	–		–	–		–	–		–	–		–	–
	T8330	0.2	■	130	0.15	◪	75	0.14	◪	120	0.15		–	–		–	–		–	–		–	–		–	–
LFMX 4.1-.20TNM2	**6640**	0.2	■	150	0.15	◪	90	0.14	◪	140	0.15		–	–		–	–		–	–		–	–		–	–
	T8330	0.2	■	130	0.15	◪	75	0.14	◪	120	0.15		–	–		–	–		–	–		–	–		–	–

XLCFN B

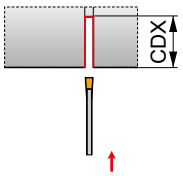
P M K N S H

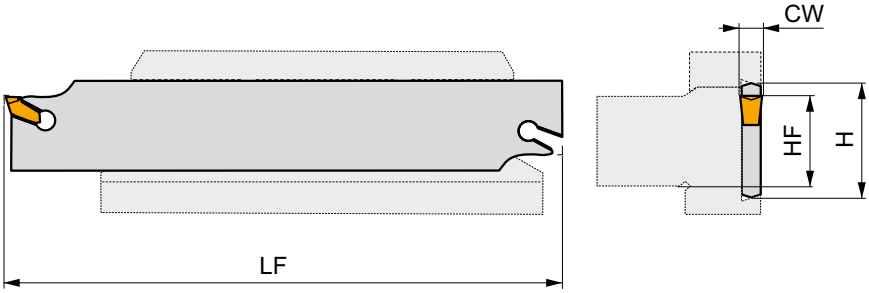
PRAMET

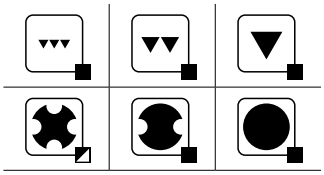
X

Double-Ended Parting-off Blade for LFMX Inserts

Blade for parting-off applications up to 80 mm maximum depth or Ø160 mm bar material. Suited for single-sided LFMX inserts. Available in heights of 26, 32 or 45 mm. Can be fitted into the DU Pramet basic holders. Blade treated for longer tool life.







	Product	HF [mm]	H [mm]	LF [mm]	CW [mm]	CDX [mm]	kg		
N	**XLCFN 2601 J 1.60**	21.4	26	110	1.50	15	0.03	GI132	KV
	XLCFN 2601 J 2.00	21.4	26	110	2.00	25	0.04	GI061	KV
	XLCFN 2602 J 3.00	21.4	26	110	3.10	37.5	0.05	GI001	KV
	XLCFN 2603 J 4.00	21.4	26	110	4.10	40	0.06	GI002	KV
	XLCFN 3201 M 1.60	25	32	150	1.50	15	0.06	GI132	KV
	XLCFN 3201 M 2.00	25	32	150	2.00	25	0.11	GI061	KV
	XLCFN 3202 M 3.00	25	32	150	3.10	50	0.08	GI001	KV
	XLCFN 3203 M 4.00	25	32	150	4.10	50	0.11	GI002	KV
	XLCFN 3204 M 5.00	25	32	150	5.10	60	0.14	GI004	KV
	XLCFN 3205 M 6.35	25	32	150	6.35	60	0.17	GI005	KV
	XLCFN 4502 S 3.00	32	45	250	3.10	80	0.12	GI001	KV
	XLCFN 4503 S 4.00	32	45	250	4.10	80	0.19	GI002	KV
	XLCFN 4504 S 5.00	32	45	250	5.10	80	0.28	GI004	KV
	XLCFN 4505 S 6.35	32	45	250	6.35	80	0.40	GI005	KV

GI001	LFMX 3.1-.	–
GI002	LFMX 4.1-.	–
GI004	LFMX 5.1-.	–
GI005	LFMX 6.35-.	–
GI061	LFMX 2.0-.	LFMX 2.2-.
GI132	LFMX 1.5-.	LFMX 1.6-.

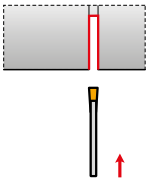
KV	KV 5x70

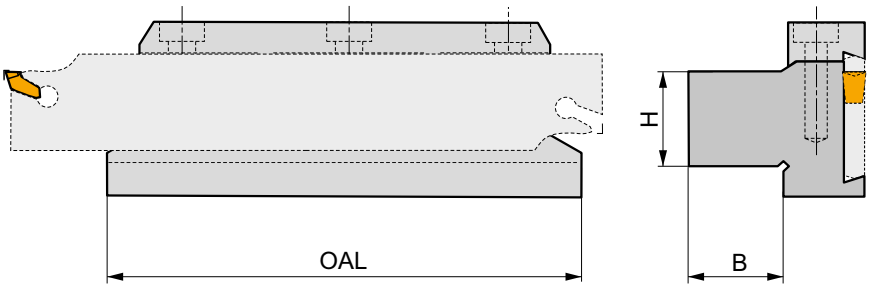
DU, D

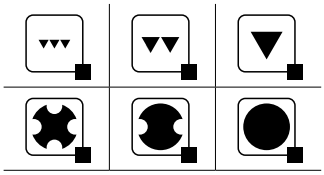
PRAMET

Tool Holder Block for Parting-off Blades

Tool holder to fit GL or XLC. blades for parting-off. Available with shank size 20x20 up to 40x40 mm. Body treated for longer tool life.







	Product	H [mm]	B [mm]	LB [mm]	kg		
	26-DU 2020	20	20	90	0.70	GI007	ND2
	26-D 2020	20	20	100	0.82	GI007	ND2
	32-DU 2523	25	23	110	1.02	GI008	ND2
	32-DU 2532	25	32	110	1.10	GI008	ND2
	32-DU 3229	32	29	110	1.25	GI008	ND2
	32-D 2530	25	30	115	1.30	GI008	ND2
	45-DU 3229	32	29	110	1.50	GI009	ND7
	45-DU 4036	40	36	110	2.05	GI009	ND7
	47-D 4040	40	40	150	3.88	GI091	ND3

GI007	XLC.N 26..	GL.-S26.B
GI008	XLC.N 32..	GL.-S32.B
GI009	XLC.N 45..	–
GI091	XLC.N 47..	–

		Nm			
ND2	HS 0625	6.0	M 6	25	HXK 5
ND3	HS 1030	8.0	M 10	30	HXK 8
ND7	HS 0630	6.0	M 6	30	HXK 5

XLCF(NRL) BS

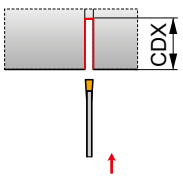
P M K N S H

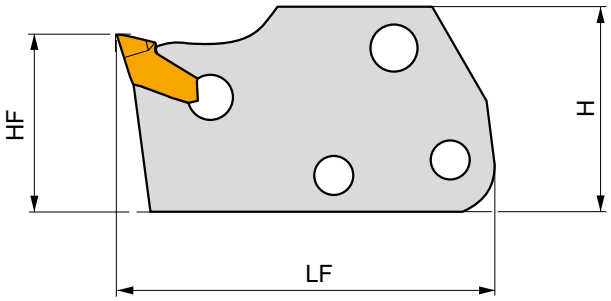
PRAMET

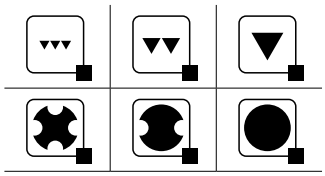
X

Radial Grooving Blade for Modular MS-EN Tool Holder for LFMX Inserts

Modular grooving blade for grooving with single-sided LFMX inserts. Suited for grooving or parting-off (max. 25 mm cutting depth) applications. Blades treated for longer tool life.







	Product	HF [mm]	H [mm]	LF [mm]	CW [mm]	CDX [mm]	kg		
R	XLCFR 160115-1.60	12	25	35	1.50	15	0.01	GI132	KV
	XLCFR 160115-2.00	12	25	35	2.00	15	0.01	GI061	KV
	XLCFR 250115-1.60	24	29	40	1.50	15	0.01	GI132	KV
	XLCFR 250115-2.00	24	29	40	2.00	15	0.05	GI061	KV
L	XLCFL 160115-1.60	12	25	35	1.50	15	0.01	GI132	KV
	XLCFL 160115-2.00	12	25	35	2.00	15	0.04	GI061	KV
	XLCFL 250115-1.60	24	29	40	1.50	15	0.01	GI132	KV
	XLCFL 250115-2.00	24	29	40	2.00	15	0.05	GI061	KV
N	XLCFN 160215-3.00	12	25	35	3.10	15	0.01	GI001	KV
	XLCFN 160220-3.00	12	25	40	3.10	20	0.02	GI001	KV
	XLCFN 250215-3.00	24	29	40	3.10	15	0.02	GI001	KV
	XLCFN 250225-3.00	24	29	50	3.10	25	0.02	GI001	KV
	XLCFN 250315-4.00	24	29	40	4.10	15	0.02	GI002	KV
	XLCFN 250325-4.00	24	29	50	4.10	25	0.03	GI002	KV
	XLCFN 250425-5.00	24	29	50	5.10	25	0.04	GI004	KV
	XLCFN 250525-6.35	24	29	50	6.35	25	0.04	GI005	KV

GI001	LFMX 3.1-.	–
GI002	LFMX 4.1-.	–
GI004	LFMX 5.1-.	–
GI005	LFMX 6.35-.	–
GI061	LFMX 2.0-.	LFMX 2.2-.
GI132	LFMX 1.5-.	LFMX 1.6-.

KV	KV 5x70

XLXFL BS AXIAL

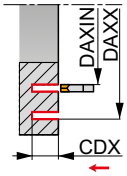
P M K N S H

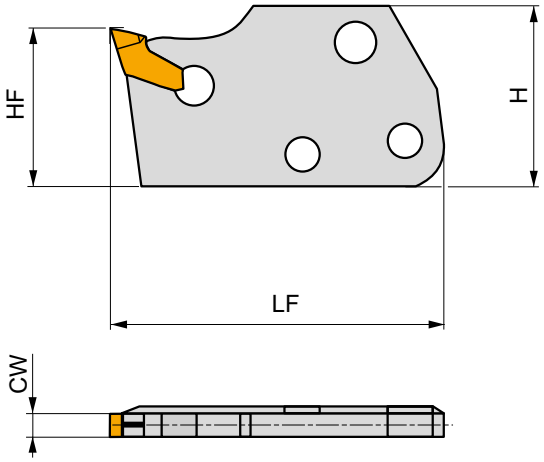
PRAMET

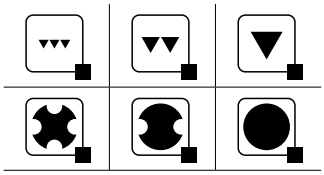
X

Axial Grooving Blade for Modular MS-EN Tool Holder for LFMX Inserts

Modular grooving blade for grooving with single-sided LFMX 3.1 inserts. Suited for axial grooving (max. 20 mm cutting depth) applications. Can be fitted to MS-EN tool holder. Blades treated for longer tool life.







	Product	H [mm]	HF [mm]	LF [mm]	CW [mm]	CDX [mm]	DAXIN	DAXX [mm]	kg		
L	XLXFL 250220-3.00-60	29	24	46	3.10	20	60	85	0.07	GI001	KV
	XLXFL 250220-3.00-80	29	24	46	3.10	20	80	105	0.05	GI001	KV
	XLXFL 250220-3.00-100	29	24	46	3.10	20	100	155	0.03	GI001	KV
	XLXFL 250220-3.00-150	29	24	46	3.10	20	150	280	0.03	GI001	KV

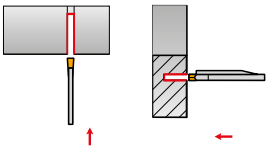
GI001	LFMX 3.1-.

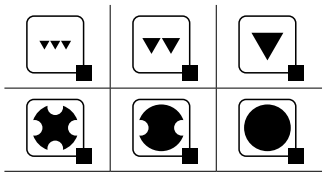
KV	KV 5x70

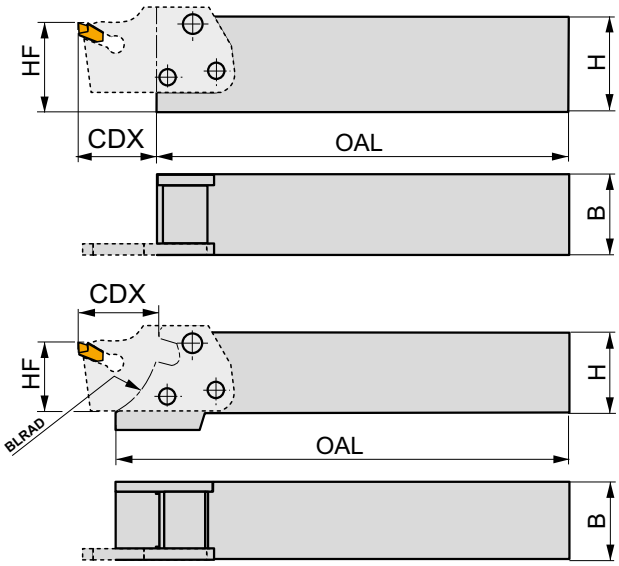
MS-EN

Modular Tool Holder for XLCCN, XLCF(NRL) or XLXFL Grooving Blade

Tool holder to fit modular grooving blades from the XLC 25 BS, XLCF(NRL) BS, XLXFL BS axial grooving blade. Available with shank size 12x12 up to 32x25 mm. Body treated for longer tool life.







Product	HF [mm]	H [mm]	B [mm]	OAL [mm]	CDX [mm]	BLRAD [mm]	kg		
MS-EN-1212 F	12	12	12	75	15	–	0.13	GI006	ND4
MS-EN-1616 H	16	16	16	90	15	–	0.21	GI006	ND4
MS-EN-2020 K	20	20	20	115	15	–	0.23	GI003	ND5
MS-EN-2020 KS	20	20	20	129	15	25	0.42	GI060	ND5
MS-EN-2525 M	25	25	25	140	15	–	0.65	GI003	ND5
MS-EN-2525 MS	25	25	25	153	15	25	0.74	GI060	ND5
MS-EN-3225 P	32	32	25	160	15	–	0.95	GI003	ND5
MS-EN-3225 PS	32	32	25	174	15	25	1.00	GI060	ND5

GI003	XLC.. 25..15...	XLXFL 25…	XLC.. 25..25…
GI006	XLCF. 16..15…	XLCF. 16..20…	–
GI060	XLC.. 25..15…	XLC.. 25..25…	–

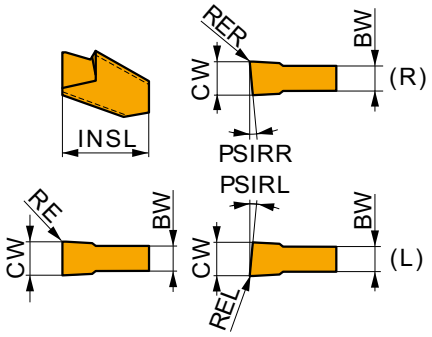
		Nm				Nm			
ND4	US 4011-T15P	3.5	M 4	10.6	–	–	–	–	FLAG T15P
ND5	US 45013-T20P	5.0	M 5	13	US 46017-T20P	5.0	M6	17	FLAG T15P

ND4 =3 x US 4011-T15P; ND5=2 x US 45013-T20P

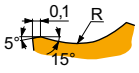
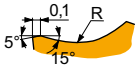
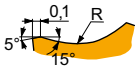
LFUX

PRAMET

	CW [mm]	BW [mm]	INSL [mm]
0308	3.00	2.51	11.5
0408	4.00	3.44	11.5
0508	5.00	4.30	11.5
0608	6.00	5.30	11.5



Suitability and starting values for cutting speed (vc) and feed (f). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	M vc [m/min]	M f [mm/rev]	K vc [m/min]	K f [mm/rev]	N vc [m/min]	N f [mm/rev]	S vc [m/min]	S f [mm/rev]	H vc [m/min]	H f [mm/rev]	PSIRR [°]	PSIRL [°]
																
TN geometry for parting-off and grooving, and continuous to slightly interrupted cuts.																
LFUX 030802TN	**6640**	0.2	150	0.10	–	–	140	0.10	–	–	–	–	–	–	–	–
	T8330	0.2	130	0.10	–	–	120	0.10	–	–	–	–	–	–	–	–
LFUX 040802TN	**6640**	0.2	150	0.12	–	–	140	0.12	–	–	–	–	–	–	–	–
	T8330	0.2	130	0.12	–	–	120	0.12	–	–	–	–	–	–	–	–
LFUX 050802TN	**6640**	0.2	150	0.15	–	–	140	0.15	–	–	–	–	–	–	–	–
	T8330	0.2	130	0.15	–	–	120	0.15	–	–	–	–	–	–	–	–
LFUX 060802TN	**6640**	0.2	150	0.20	–	–	140	0.20	–	–	–	–	–	–	–	–
	T8330	0.2	130	0.20	–	–	120	0.20	–	–	–	–	–	–	–	–
																
TR geometry, right-handed, for parting-off and continuous to slightly interrupted cuts.																
LFUX 030800TR	**6640**	0.2	150	0.10	–	–	140	0.10	–	–	–	–	–	–	5	–
	T8330	0.2	130	0.10	–	–	120	0.10	–	–	–	–	–	–	5	–
LFUX 040800TR	**6640**	0.2	150	0.12	–	–	140	0.12	–	–	–	–	–	–	5	–
	T8330	0.2	130	0.12	–	–	120	0.12	–	–	–	–	–	–	5	–
																
TL geometry, left-handed, for parting-off and continuous to slightly interrupted cuts.																
LFUX 030800TL	**6640**	0.2	150	0.10	–	–	140	0.10	–	–	–	–	–	–	–	5
	T8330	0.2	130	0.10	–	–	120	0.10	–	–	–	–	–	–	–	5

XLCF(RL)

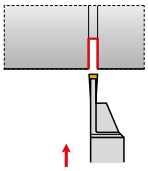
P M K N S H

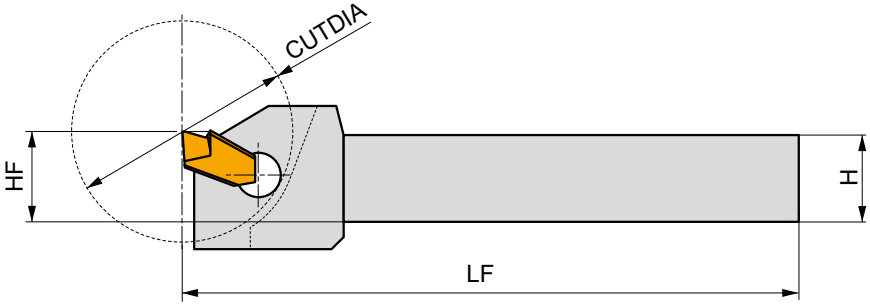
PRAMET

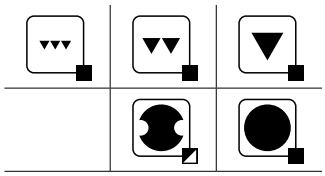
X

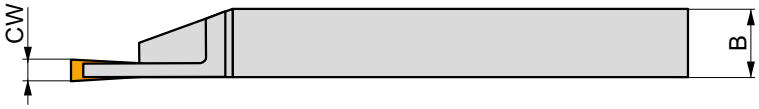
External Grooving and Parting-Off tool for LFUX Inserts

External Right/Left hand radial tool holder for grooving with single-sided LFUX 0308, 0408, 0508 or 0608 inserts. Suited for parting-off up to a maximum of Ø65 mm. Available with shank size 16x12 up to 32x25 mm. Body treated for longer tool life.









	Product	HF [mm]	H [mm]	B [mm]	LF [mm]	CW [mm]	CUTDIA [mm]	kg		
R	**XLCFR 1612 H 03**	16	16	12	100	3.00	40	0.14	GI018	KV
	XLCFR 2016 K 03	20	20	16	130	3.00	50	0.30	GI018	KV
	XLCFR 2520 K 03	25	25	20	130	3.00	50	0.44	GI018	KV
	XLCFR 2016 K 04	20	20	16	130	4.00	50	0.30	GI019	KV
	XLCFR 2520 K 04	25	25	20	130	4.00	50	0.43	GI019	KV
	XLCFR 2520 K 05	25	25	20	130	5.00	50	0.45	GI020	KV
	XLCFR 3225 P 05	32	32	25	170	5.00	65	0.90	GI020	KV
	XLCFR 3225 P 06	32	32	25	170	6.00	65	0.91	GI021	KV
L	**XLCFL 1612 H 03**	16	16	12	100	3.00	40	0.15	GI018	KV
	XLCFL 2016 K 03	20	20	16	130	3.00	50	0.30	GI018	KV
	XLCFL 2520 K 03	25	25	20	130	3.00	50	0.47	GI018	KV
	XLCFL 2016 K 04	20	20	16	130	4.00	50	0.30	GI019	KV
	XLCFL 2520 K 04	25	25	20	130	4.00	50	0.46	GI019	KV
	XLCFL 2520 K 05	25	25	20	130	5.00	50	0.50	GI020	KV
	XLCFL 3225 P 05	32	32	25	170	5.00	65	0.95	GI020	KV
	XLCFL 3225 P 06	32	32	25	170	6.00	65	0.70	GI021	KV

GI018	LFUX 0308..
GI019	LFUX 0408..
GI020	LFUX 0508..
GI021	LFUX 0608..

KV	KV 5x70

XLCFN B LFUX

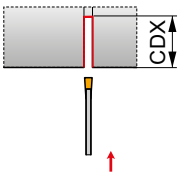
P M K N S H

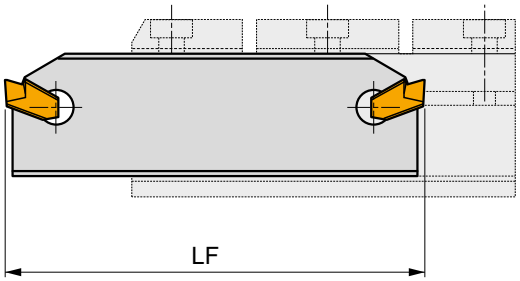
PRAMET

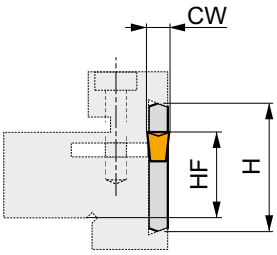
X

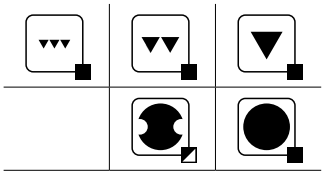
Double-Ended Parting-off Blade for LFUX Inserts

Blade for parting-off applications up to 100 mm maximum depth or Ø200 mm bar material. Suited for single sided LFUX inserts. Available in heights of 26, 32 or 47 mm. Can be fitted into the DU, D Pramet basic holders. Blade treated for longer tool life.









	Product	HF [mm]	H [mm]	LF [mm]	CW [mm]	CDX [mm]	kg		
N	**XLCFN 2603 J 03**	21.4	26	110	3.10	37.5	0.06	GI018	KV
	XLCFN 3202 M 03	25	32	150	3.10	50	0.09	GI018	KV
	XLCFN 3203 M 04	25	32	150	4.10	50	0.11	GI019	KV
	XLCFN 3204 M 05	25	32	150	5.10	60	0.14	GI020	KV
	XLCFN 4704 S 05	38	47	270	5.10	100	0.47	GI020	KV
	XLCFN 4705 S 06	38	47	270	6.10	100	0.50	GI021	KV

GI018	LFUX 0308..
GI019	LFUX 0408..
GI020	LFUX 0508..
GI021	LFUX 0608..

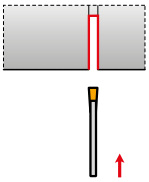
KV	KV 5x70

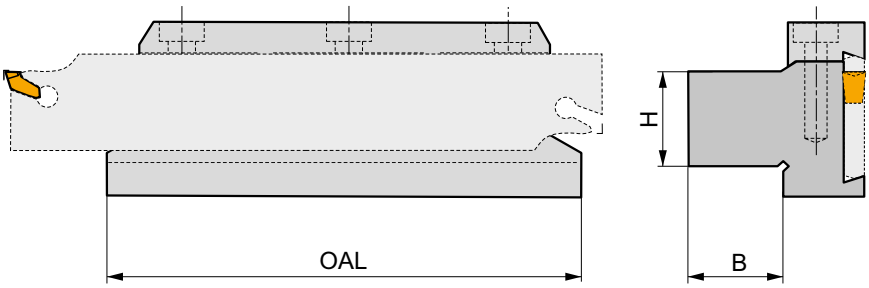
DU, D

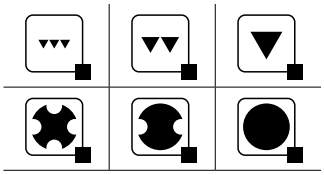
PRAMET

Tool Holder Block for Parting-off Blades

Tool holder to fit GL or XLC. blades for parting-off. Available with shank size 20x20 up to 40x40 mm. Body treated for longer tool life.







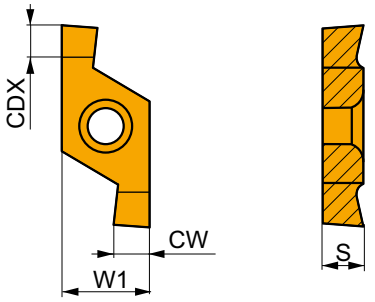
Product	H [mm]	B [mm]	LB [mm]	kg		
26-DU 2020	20	20	90	0.70	GI007	ND2
26-D 2020	20	20	100	0.82	GI007	ND2
32-DU 2523	25	23	110	1.02	GI008	ND2
32-DU 2532	25	32	110	1.10	GI008	ND2
32-DU 3229	32	29	110	1.25	GI008	ND2
32-D 2530	25	30	115	1.30	GI008	ND2
45-DU 3229	32	29	110	1.50	GI009	ND7
45-DU 4036	40	36	110	2.05	GI009	ND7
47-D 4040	40	40	150	3.88	GI091	ND3

GI007	XLC.N 26..	GL.-S26.B
GI008	XLC.N 32..	GL.-S32.B
GI009	XLC.N 45..	–
GI091	XLC.N 47..	–

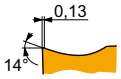
		Nm			
ND2	HS 0625	6.0	M 6	25	HXK 5
ND3	HS 1030	8.0	M 10	30	HXK 8
ND7	HS 0630	6.0	M 6	30	HXK 5

X 61

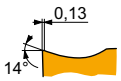
	W1	CWTOLL	CWTOLU	S
	[mm]	[mm]	[mm]	[mm]
0602	6.350	-0.03	0.03	2.33



Suitability and starting values for cutting speed (vc) and feed (f). Refer to our Machining Calculator app for further calculations.

Product		RE	P vc	P f	M vc	M f	K vc	K f	N vc	N f	S vc	S f	H vc	H f	CW	CDX
		[mm]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[mm]	[mm]
																
X61 R																

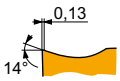
X 61-R external and internal, right-handed geometry, for o-ring and circlip groove machining, with continuous cuts.

X61 0602-080 R	**6640**	–	195	0.06	115	0.05	185	0.06	–	–	–	–	–	–	0.85	0.8
	G8330	–	145	0.06	85	0.05	135	0.06	–	–	–	–	–	–	0.85	0.8
X61 0602-090 R	**6640**	–	195	0.06	115	0.05	185	0.06	–	–	–	–	–	–	0.95	0.8
	G8330	–	145	0.06	85	0.05	135	0.06	–	–	–	–	–	–	0.95	0.8
X61 0602-100 R	**6640**	–	195	0.06	115	0.05	185	0.06	–	–	–	–	–	–	1.05	0.8
	G8330	–	145	0.06	85	0.05	135	0.06	–	–	–	–	–	–	1.05	0.8
X61 0602-110 R	**6640**	–	185	0.06	110	0.05	175	0.06	–	–	–	–	–	–	1.15	1.2
	G8330	–	140	0.06	80	0.05	130	0.06	–	–	–	–	–	–	1.15	1.2
X61 0602-130 R	**6640**	–	185	0.06	110	0.05	175	0.06	–	–	–	–	–	–	1.35	1.4
	G8330	–	140	0.06	80	0.05	130	0.06	–	–	–	–	–	–	1.35	1.4
X61 0602-150 R	**6640**	–	180	0.06	105	0.05	170	0.06	–	–	–	–	–	–	1.55	1.6
	G8330	–	135	0.06	80	0.05	125	0.06	–	–	–	–	–	–	1.55	1.6
X61 0602-160 R	**6640**	–	180	0.06	105	0.05	170	0.06	–	–	–	–	–	–	1.65	1.7
	G8330	–	135	0.06	80	0.05	125	0.06	–	–	–	–	–	–	1.65	1.7
X61 0602-185 R	**6640**	–	150	0.09	90	0.08	140	0.09	–	–	–	–	–	–	1.90	2
	G8330	–	120	0.09	70	0.08	110	0.09	–	–	–	–	–	–	1.90	2
X61 0602-200 R	**G8330**	–	115	0.09	65	0.08	105	0.09	–	–	–	–	–	–	2.05	2.2
X61 0602-215 R	**6640**	–	145	0.09	85	0.08	135	0.09	–	–	–	–	–	–	2.20	2.4
	G8330	–	115	0.09	65	0.08	105	0.09	–	–	–	–	–	–	2.20	2.4
X61 0602-250 R	**G8330**	–	115	0.09	65	0.08	105	0.09	–	–	–	–	–	–	2.55	2.6
X61 0602-265 R	**6640**	–	125	0.12	75	0.11	115	0.12	–	–	–	–	–	–	2.70	2.7
	G8330	–	105	0.12	60	0.11	95	0.12	–	–	–	–	–	–	2.70	2.7
X61 0602-300 R	**6640**	–	125	0.12	75	0.11	115	0.12	–	–	–	–	–	–	3.05	3
	G8330	–	105	0.12	60	0.11	95	0.12	–	–	–	–	–	–	3.05	3
X61 0602-315 R	**6640**	–	125	0.12	75	0.11	115	0.12	–	–	–	–	–	–	3.20	3
	G8330	–	105	0.12	60	0.11	95	0.12	–	–	–	–	–	–	3.20	3
																
X61 L																

X 61-L external and internal, left-handed geometry, for o-ring and circlip groove machining, with continuous cuts.

X61 0602-080 L	**6640**	–	195	0.06	115	0.05	185	0.06	–	–	–	–	–	–	0.85	0.8
	G8330	–	145	0.06	85	0.05	135	0.06	–	–	–	–	–	–	0.85	0.8
X61 0602-090 L	**6640**	–	195	0.06	115	0.05	185	0.06	–	–	–	–	–	–	0.95	0.8
	G8330	–	145	0.06	85	0.05	135	0.06	–	–	–	–	–	–	0.95	0.8
X61 0602-100 L	**6640**	–	195	0.06	115	0.05	185	0.06	–	–	–	–	–	–	1.05	0.8
	G8330	–	145	0.06	85	0.05	135	0.06	–	–	–	–	–	–	1.05	0.8
X61 0602-110 L	**6640**	–	185	0.06	110	0.05	175	0.06	–	–	–	–	–	–	1.15	1.2
	G8330	–	140	0.06	80	0.05	130	0.06	–	–	–	–	–	–	1.15	1.2
X61 0602-130 L	**6640**	–	185	0.06	110	0.05	175	0.06	–	–	–	–	–	–	1.35	1.4
	G8330	–	140	0.06	80	0.05	130	0.06	–	–	–	–	–	–	1.35	1.4

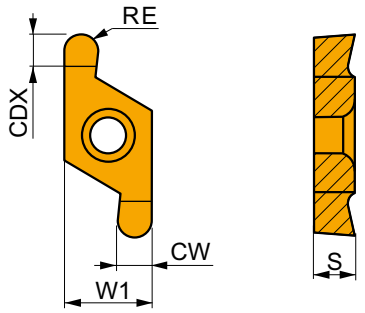
Suitability and starting values for cutting speed (vc) and feed (f). Refer to our Machining Calculator app for further calculations.

Product		RE	P vc	P f	M vc	M f	K vc	K f	N vc	N f	S vc	S f	H vc	H f	CW	CDX
		[mm]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[mm]	[mm]
			U S													
	X 61-L external and internal, left-handed geometry, for o-ring and circlip groove machining, with continuous cuts.															
X61 0602-150 L	**6640**	–	180	0.06	105	0.05	170	0.06	–	–	–	–	–	–	1.55	1.6
	G8330	–	135	0.06	80	0.05	125	0.06	–	–	–	–	–	–	1.55	1.6
X61 0602-160 L	**6640**	–	180	0.06	105	0.05	170	0.06	–	–	–	–	–	–	1.65	1.7
	G8330	–	135	0.06	80	0.05	125	0.06	–	–	–	–	–	–	1.65	1.7
X61 0602-185 L	**6640**	–	150	0.09	90	0.08	140	0.09	–	–	–	–	–	–	1.90	2
	G8330	–	120	0.09	70	0.08	110	0.09	–	–	–	–	–	–	1.90	2
X61 0602-200 L	**G8330**	–	115	0.09	65	0.08	105	0.09	–	–	–	–	–	–	2.05	2.2
X61 0602-215 L	**6640**	–	145	0.09	85	0.08	135	0.09	–	–	–	–	–	–	2.20	2.4
	G8330	–	115	0.09	65	0.08	105	0.09	–	–	–	–	–	–	2.20	2.4
X61 0602-250 L	**G8330**	–	115	0.09	65	0.08	105	0.09	–	–	–	–	–	–	2.55	2.6
X61 0602-265 L	**6640**	–	125	0.12	75	0.11	115	0.12	–	–	–	–	–	–	2.70	2.7
	G8330	–	105	0.12	60	0.11	95	0.12	–	–	–	–	–	–	2.70	2.7
X61 0602-300 L	**6640**	–	125	0.12	75	0.11	115	0.12	–	–	–	–	–	–	3.05	3
	G8330	–	105	0.12	60	0.11	95	0.12	–	–	–	–	–	–	3.05	3
X61 0602-315 L	**6640**	–	125	0.12	75	0.11	115	0.12	–	–	–	–	–	–	3.20	3
	G8330	–	105	0.12	60	0.11	95	0.12	–	–	–	–	–	–	3.20	3

X 61 R

PRAMET

	W1	CWTOLL	CWTOLU	S
	[mm]	[mm]	[mm]	[mm]
0602	6.350	-0.03	0.03	2.33



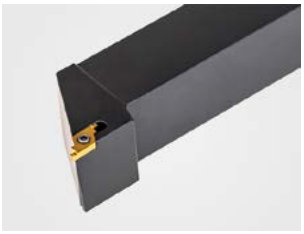
Suitability and starting values for cutting speed (vc) and feed (f). Refer to our Machining Calculator app for further calculations.

Product		RE	P vc	P f	M vc	M f	K vc	K f	N vc	N f	S vc	S f	H vc	H f	CW	CDX
		[mm]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[m/min]	[mm/rev]	[mm]	[mm]
			U E													
	X 61 R-R external and internal, right-handed geometry, for o-ring and circlip groove machining, with continuous cuts.															
X61 0602-R100 R	**6640**	1.0	170	0.06	100	0.05	160	0.06	–	–	–	–	–	–	2.09	3
	G8330	1.0	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	2.09	3
X61 0602-R150 R	**6640**	1.5	170	0.06	100	0.05	160	0.06	–	–	–	–	–	–	3.09	3
	G8330	1.5	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	3.09	3
			U E													
	X 61 R-L external and internal, left-handed geometry, for o-ring and circlip groove machining, with continuous cuts.															
X61 0602-R100 L	**6640**	1.0	170	0.06	100	0.05	160	0.06	–	–	–	–	–	–	2.09	3
	G8330	1.0	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	2.09	3
X61 0602-R150 L	**6640**	1.5	170	0.06	100	0.05	160	0.06	–	–	–	–	–	–	3.09	3
	G8330	1.5	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	3.09	3

P61(RL) EXT

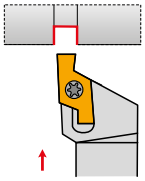
P M K N S

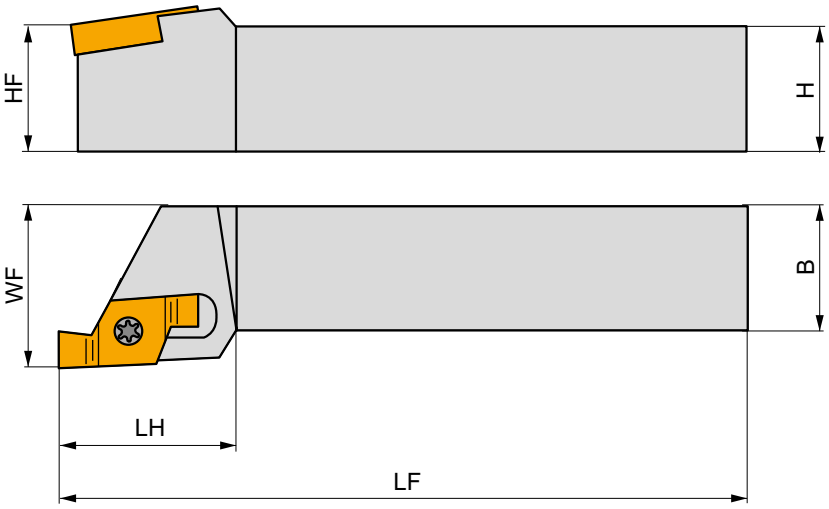
PRAMET S

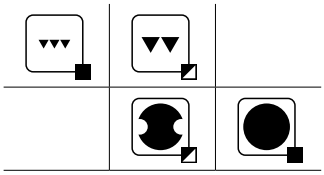


External Grooving Tool Holder for X61 Circlips and O-Ring Inserts

External Right/Left hand radial tool holder for grooving with X61 double-sided circlip or O-ring inserts. Gives smooth cutting action for high tolerated dimensions. Available with shank size 16x16 up to 25x25 mm. Body treated for longer tool life.







	Product	HF [mm]	H [mm]	B [mm]	WF [mm]	LF [mm]	LH [mm]	kg		
R	P61.SFR-1616H-06	16	16	16	20	100	21	0.23	GI332	SV11
	P61.SFR-2020K-06	20	20	20	25	125	25	0.40	GI332	SV11
	P61.SFR-2525M-06	25	25	25	32	150	32	0.73	GI332	SV11
L	P61.SFL-1616H-06	16	16	16	20	100	21	0.23	GI332	SV11
	P61.SFL-2020K-06	20	20	20	25	125	25	0.42	GI332	SV11
	P61.SFL-2525M-06	25	25	25	32	150	32	0.73	GI332	SV11

GI332	X61 0602..

		Nm			
SV11	US 2003-T07P	0.8	M 2.5	6.5	FLAG T07P

P61(RL) INT

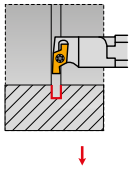
P M K N S

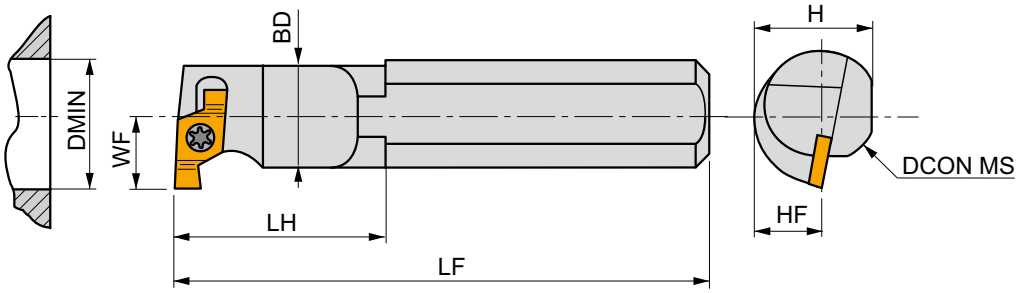
PRAMET

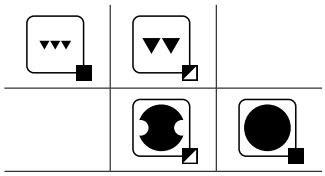
S

Internal Circlip Grooving Boring bar for X61 Insert

Internal Right/Left hand grooving boring bar for grooving with X61 double-sided inserts. Minimum internal grooving diameter Ø16 mm. Suited for internal cutting of circlip or O-ring grooves. Available with shank size Ø12 up to Ø32 mm. Body treated for longer tool life.







	Product	DCON MS [mm]	DMIN [mm]	BD [mm]	WF [mm]	H [mm]	LF [mm]	LH [mm]	KAPR [°]		kg		
R	P61.SGR-0012M-06	12	16	11.5	9	11	150	22	0	–	0.17	GI332	SV11
	P61.SGR-A-0016M-06	16	20	15	11	15	150	29	0	✓	0.21	GI332	SV11
	P61.SGR-A-0020P-06	20	25	19	13	18	170	29	0	✓	0.38	GI332	SV11
	P61.SGR-A-0025R-06	25	32	24	17	23	200	31	0	✓	0.70	GI332	SV11
	P61.SGR-A-0032T-06	32	40	31	22	30	300	49	0	✓	1.72	GI332	SV11
L	P61.SGL-0012M-06	12	16	11.5	9	11	150	22	0	–	0.17	GI332	SV11
	P61.SGL-A-0016M-06	16	20	15	11	15	150	29	0	✓	0.24	GI332	SV11
	P61.SGL-A-0020P-06	20	25	19	13	18	170	29	0	✓	0.40	GI332	SV11
	P61.SGL-A-0025R-06	25	32	24	17	23	200	31	0	✓	0.72	GI332	SV11
	P61.SGL-A-0032T-06	32	40	31	22	30	300	49	0	✓	1.72	GI332	SV11

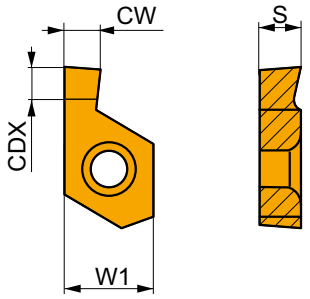
GI332	X61 0602..

		Nm			
SV11	US 2003-T07P	0.8	M 2.5	6.5	FLAG T07P

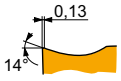
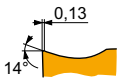
Left hand insert mount to righ hand boring bar.

X 61-1

	W1	CWTOLL	CWTOLU	S
	[mm]	[mm]	[mm]	[mm]
0602	6.350	-0.03	0.03	2.33

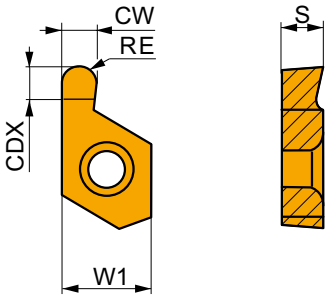


Suitability and starting values for cutting speed (vc) and feed (f). Refer to our Machining Calculator app for further calculations.

Product		RE	P		M		K		N		S		H		CW	CDX
			vc [m/min]	f [mm/rev]	vc [m/min]	f [mm/rev]	vc [m/min]	f [mm/rev]	vc [m/min]	f [mm/rev]	vc [m/min]	f [mm/rev]	vc [m/min]	f [mm/rev]	[mm]	[mm]
																
			X 61-1-R internal, right-handed design, with one cutting edge for o-ring and circlip groove machining, with continuous cuts.													
X61 0602-080 R1	**6640**	–	■ 195	0.06	◪ 115	0.05	◪ 185	0.06	–	–	–	–	–	–	0.85	0.8
X61 0602-090 R1	**6640**	–	■ 195	0.06	◪ 115	0.05	◪ 185	0.06	–	–	–	–	–	–	0.95	0.8
X61 0602-110 R1	**6640**	–	■ 185	0.06	◪ 110	0.05	◪ 175	0.06	–	–	–	–	–	–	1.15	1.2
X61 0602-130 R1	**6640**	–	■ 185	0.06	◪ 110	0.05	◪ 175	0.06	–	–	–	–	–	–	1.35	1.4
X61 0602-160 R1	**6640**	–	■ 180	0.06	◪ 105	0.05	◪ 170	0.06	–	–	–	–	–	–	1.65	1.7
X61 0602-185 R1	**6640**	–	■ 150	0.09	◪ 90	0.08	◪ 140	0.09	–	–	–	–	–	–	1.90	2
X61 0602-215 R1	**6640**	–	■ 145	0.09	◪ 85	0.08	◪ 135	0.09	–	–	–	–	–	–	2.20	2.2
																
			X 61-1-L internal, left-handed design, with one cutting edge for o-ring and circlip groove machining, with continuous cuts.													
X61 0602-080 L1	**6640**	–	■ 195	0.06	◪ 115	0.05	◪ 185	0.06	–	–	–	–	–	–	0.85	0.8
X61 0602-090 L1	**6640**	–	■ 195	0.06	◪ 115	0.05	◪ 185	0.06	–	–	–	–	–	–	0.95	0.8
X61 0602-110 L1	**6640**	–	■ 185	0.06	◪ 110	0.05	◪ 175	0.06	–	–	–	–	–	–	1.15	1.2
X61 0602-130 L1	**6640**	–	■ 185	0.06	◪ 110	0.05	◪ 175	0.06	–	–	–	–	–	–	1.35	1.4
X61 0602-160 L1	**6640**	–	■ 180	0.06	◪ 105	0.05	◪ 170	0.06	–	–	–	–	–	–	1.65	1.7
X61 0602-185 L1	**6640**	–	■ 150	0.09	◪ 90	0.08	◪ 140	0.09	–	–	–	–	–	–	1.90	2
X61 0602-215 L1	**6640**	–	■ 145	0.09	◪ 85	0.08	◪ 135	0.09	–	–	–	–	–	–	2.20	2.2

X 61 R-1

	W1	CWTOLL	CWTOLU	S
	[mm]	[mm]	[mm]	[mm]
0602	6.350	-0.03	0.03	2.33



Suitability and starting values for cutting speed (vc) and feed (f). Refer to our Machining Calculator app for further calculations.

Product		RE	P		M		K		N		S		H		CW	CDX
			vc [m/min]	f [mm/rev]	vc [m/min]	f [mm/rev]	vc [m/min]	f [mm/rev]	vc [m/min]	f [mm/rev]	vc [m/min]	f [mm/rev]	vc [m/min]	f [mm/rev]	[mm]	[mm]
X61 0602-R050 R1	6640	0.5	■ 185	0.06	◪ 110	0.05	◪ 175	0.06	–	–	–	–	–	–	1.09	1.3
X61 0602-R100 R1	6640	1.0	■ 170	0.06	◪ 100	0.05	◪ 160	0.06	–	–	–	–	–	–	2.09	2.8
X61 0602-R050 L1	6640	0.5	■ 185	0.06	◪ 110	0.05	◪ 175	0.06	–	–	–	–	–	–	1.09	1.3
X61 0602-R100 L1	6640	1.0	■ 170	0.06	◪ 100	0.05	◪ 160	0.06	–	–	–	–	–	–	2.09	2.8

X 61 R-1-R internal, right-handed design, with one cutting edge for o-ring and circlip groove machining, with continuous cuts.

X 61 R-1-L internal, left-handed design, with one cutting edge for o-ring and circlip groove machining, with continuous cuts.

P61S(RL)-1 INT

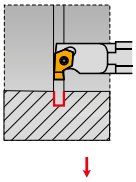
P M K N S

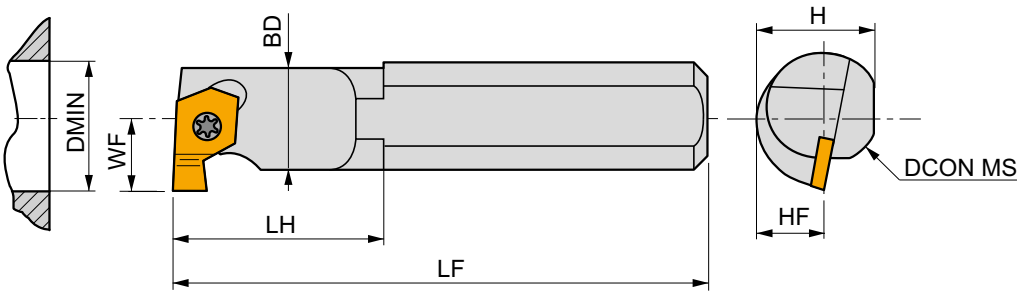
PRAMET

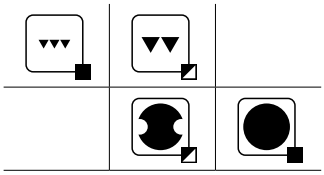
S

Internal Circlip Grooving Boring Bar for X61-1 Insert

Internal Right/Left hand grooving boring bar for grooving with single-sided X61-1 inserts. Minimum internal grooving diameter Ø12.5 mm. Suited for internal cutting of circlip or O-ring grooves. Available with shank size Ø10 and Ø12 mm. Body treated for longer tool life.







	Product	DCON MS [mm]	DMIN [mm]	BD [mm]	WF [mm]	H [mm]	LF [mm]	LH [mm]	KAPR [°]	kg		
R	P61.SGR-0010M-06/1	10	12.5	10	7.5	9	150	19	0	0.24	GI333	SV11
	P61.SGR-0012M-06/1	12	12.5	10	7.5	11	150	19	0	0.17	GI333	SV11
L	P61.SGL-0010M-06/1	10	12.5	10	7.5	9	150	19	0	0.13	GI333	SV11
	P61.SGL-0012M-06/1	12	12.5	10	7.5	11	150	19	0	0.17	GI333	SV11

GI333	X61 0602..-1

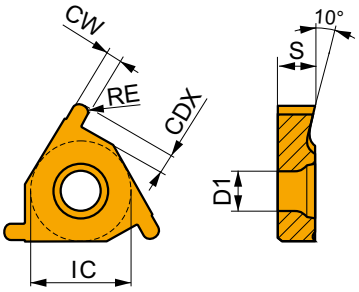
		Nm			
SV11	US 2003-T07P	0.8	M 2.5	6.5	FLAG T07P

Left hand insert mount to righ hand boring bar.

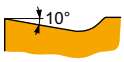
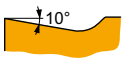
TN R EXT

PRAMET

	IC [mm]	D1 [mm]	S [mm]	CWTOLL [mm]	CWTOLU [mm]
16	9.525	3.90	3.58	0.00	0.05
22	12.700	4.90	4.70	0.00	0.05



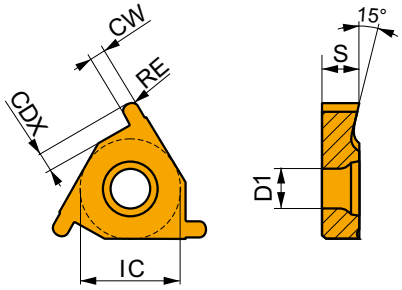
Suitability and starting values for cutting speed (vc) and feed (f). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	M vc [m/min]	M f [mm/rev]	K vc [m/min]	K f [mm/rev]	N vc [m/min]	N f [mm/rev]	S vc [m/min]	S f [mm/rev]	H vc [m/min]	H f [mm/rev]	CW [mm]	CDX [mm]
			U E													
			TN ER-R external, right-handed geometry, for o-ring and circlip groove machining, with continuous cuts.													
TN 16ER-R050	**T8330**	0.5	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	1.00	1.3
TN 16ER-R100	**T8330**	1.0	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	2.00	1.85
TN 22ER-R150	**T8330**	1.5	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	3.00	2.2
			U E													
			TN EL-R external, left-handed geometry, for o-ring and circlip groove machining, with continuous cuts.													
TN 16EL-R050	**T8330**	0.5	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	1.00	1.3
TN 16EL-R100	**T8330**	1.0	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	2.00	1.85
TN 22EL-R150	**T8330**	1.5	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	3.00	2.2

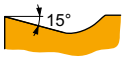
TN R INT

PRAMET

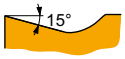
	IC [mm]	D1 [mm]	S [mm]	CWTOLL [mm]	CWTOLU [mm]
11	6.350	2.80	3.10	0.00	0.05
16	9.525	3.90	3.58	0.00	0.05
22	12.700	4.90	4.70	0.00	0.05



Suitability and starting values for cutting speed (vc) and feed (f). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	M vc [m/min]	M f [mm/rev]	K vc [m/min]	K f [mm/rev]	N vc [m/min]	N f [mm/rev]	S vc [m/min]	S f [mm/rev]	H vc [m/min]	H f [mm/rev]	CW [mm]	CDX [mm]
			U E													
			TN NR-R internal, right-handed geometry, for o-ring and circlip groove machining, with continuous cuts.													
TN 11NR-R050	**T8330**	0.5	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	1.00	1.3
TN 16NR-R100	**T8330**	1.0	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	2.00	1.85
TN 22NR-R150	**T8330**	1.5	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	3.00	2.2

Suitability and starting values for cutting speed (vc) and feed (f). Refer to our Machining Calculator app for further calculations.

Product		RE	P				M				K				N				S				H				CW	CDX
			vc		f		vc		f		vc		f		vc		f		vc		f		vc		f			
		[mm]	[m/min]		[mm/rev]		[m/min]		[mm/rev]		[m/min]		[mm/rev]		[m/min]		[mm/rev]		[m/min]		[mm/rev]		[m/min]		[mm/rev]		[mm]	[mm]
																												

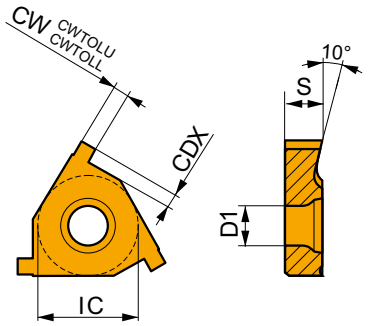
TN NL-R internal, left-handed geometry, for o-ring and circlip groove machining, with continuous cuts.

TN 11NL-R050	T8330	0.5	■	130	0.06	◪	75	0.05	◪	120	0.06		–	–		–	–		–	–		–	–	1.00	1.3
TN 16NL-R100	T8330	1.0	■	130	0.06	◪	75	0.05	◪	120	0.06		–	–		–	–		–	–		–	–	2.00	1.85
TN 22NL-R150	T8330	1.5	■	130	0.06	◪	75	0.05	◪	120	0.06		–	–		–	–		–	–		–	–	3.00	2.2

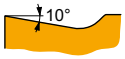
TN ZZ EXT

PRAMET

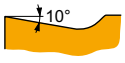
	IC	D1	S
	[mm]	[mm]	[mm]
16	9.525	3.90	3.40
22	12.700	4.90	4.70



Suitability and starting values for cutting speed (vc) and feed (f). Refer to our Machining Calculator app for further calculations..

Product		RE	P				M				K				N				S				H				CW	CWTOLL	CWTOLU	CDX
			vc		f		vc		f		vc		f		vc		f		vc		f		vc		f					
		[mm]	[m/min]		[mm/rev]		[m/min]		[mm/rev]		[m/min]		[mm/rev]		[m/min]		[mm/rev]		[m/min]		[mm/rev]		[m/min]		[mm/rev]		[mm]	[mm]	[mm]	[mm]
																														

TN ER-ZZ external, right-handed geometry, for o-ring and circlip groove machining, with continuous cuts.

TN 16ER090ZZ	T8330	–	■	130	0.09	◪	75	0.08	◪	120	0.09		–	–		–	–		–	–		–	–	0.90	0.05	0.10	0.9
TN 16ER110ZZ	T8330	–	■	130	0.09	◪	75	0.08	◪	120	0.09		–	–		–	–		–	–		–	–	1.10	0.05	0.10	1.3
TN 16ER130ZZ	T8330	–	■	130	0.09	◪	75	0.08	◪	120	0.09		–	–		–	–		–	–		–	–	1.30	0.05	0.10	1.6
TN 16ER160ZZ	T8330	–	■	130	0.09	◪	75	0.08	◪	120	0.09		–	–		–	–		–	–		–	–	1.60	0.05	0.10	1.85
TN 16ER185ZZ	T8330	–	■	130	0.09	◪	75	0.08	◪	120	0.09		–	–		–	–		–	–		–	–	1.85	0.05	0.10	1.85
TN 16ER215ZZ	T8330	–	■	130	0.09	◪	75	0.08	◪	120	0.09		–	–		–	–		–	–		–	–	2.15	0.05	0.10	1.85
TN 16ER265ZZ	T8330	–	■	130	0.12	◪	75	0.11	◪	120	0.12		–	–		–	–		–	–		–	–	2.65	0.05	0.10	2.05
TN 22ER265ZZ	T8330	–	■	130	0.12	◪	75	0.11	◪	120	0.12		–	–		–	–		–	–		–	–	2.65	0.08	0.13	2.2
TN 22ER315ZZ	T8330	–	■	130	0.12	◪	75	0.11	◪	120	0.12		–	–		–	–		–	–		–	–	3.15	0.08	0.13	2.2
TN 22ER415ZZ	T8330	–	■	130	0.12	◪	75	0.11	◪	120	0.12		–	–		–	–		–	–		–	–	4.15	0.08	0.13	2.4
																														

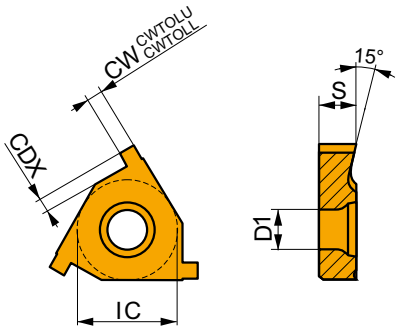
TN EL-ZZ external, left-handed geometry, for o-ring and circlip groove machining, with continuous cuts.

TN 16EL090ZZ	T8330	–	■	130	0.06	◪	75	0.05	◪	120	0.06		–	–		–	–		–	–		–	–	0.90	0.05	0.10	0.9
TN 16EL110ZZ	T8330	–	■	130	0.06	◪	75	0.05	◪	120	0.06		–	–		–	–		–	–		–	–	1.10	0.05	0.10	1.3
TN 16EL130ZZ	T8330	–	■	130	0.06	◪	75	0.05	◪	120	0.06		–	–		–	–		–	–		–	–	1.30	0.05	0.10	1.6
TN 16EL160ZZ	T8330	–	■	130	0.06	◪	75	0.05	◪	120	0.06		–	–		–	–		–	–		–	–	1.60	0.05	0.10	1.85
TN 16EL185ZZ	T8330	–	■	130	0.06	◪	75	0.05	◪	120	0.06		–	–		–	–		–	–		–	–	1.85	0.05	0.10	1.85
TN 16EL215ZZ	T8330	–	■	130	0.09	◪	75	0.08	◪	120	0.09		–	–		–	–		–	–		–	–	2.15	0.05	0.10	1.85
TN 16EL265ZZ	T8330	–	■	130	0.09	◪	75	0.08	◪	120	0.09		–	–		–	–		–	–		–	–	2.65	0.05	0.10	2.05
TN 22EL265ZZ	T8330	–	■	130	0.12	◪	75	0.11	◪	120	0.12		–	–		–	–		–	–		–	–	2.65	0.08	0.13	2.2
TN 22EL315ZZ	T8330	–	■	130	0.12	◪	75	0.11	◪	120	0.12		–	–		–	–		–	–		–	–	3.15	0.08	0.13	2.2
TN 22EL415ZZ	T8330	–	■	130	0.12	◪	75	0.11	◪	120	0.12		–	–		–	–		–	–		–	–	4.15	0.08	0.13	2.4

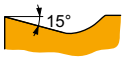
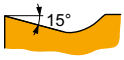
TN ZZ INT

PRAMET

	IC [mm]	D1 [mm]	S [mm]
11	6.350	2.80	3.00
16	9.525	3.90	3.40
22	12.700	4.90	4.70



Suitability and starting values for cutting speed (vc) and feed (f). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	M vc [m/min]	M f [mm/rev]	K vc [m/min]	K f [mm/rev]	N vc [m/min]	N f [mm/rev]	S vc [m/min]	S f [mm/rev]	H vc [m/min]	H f [mm/rev]	CW [mm]	CWTOLL [mm]	CWTOLU [mm]	CDX [mm]
																		
TN NR-ZZ internal, right-handed geometry, for o-ring and circlip groove machining, with continuous cuts.																		
TN 11NR090ZZ	**T8330**	–	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	0.90	0.05	0.10	0.9
TN 11NR110ZZ	**T8330**	–	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	1.10	0.05	0.10	1.3
TN 16NR090ZZ	**T8330**	–	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	0.90	0.05	0.10	0.9
TN 16NR110ZZ	**T8330**	–	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	1.10	0.05	0.10	1.3
TN 16NR130ZZ	**T8330**	–	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	1.30	0.05	0.10	1.6
TN 16NR160ZZ	**T8330**	–	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	1.60	0.05	0.10	1.85
TN 16NR185ZZ	**T8330**	–	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	1.85	0.05	0.10	1.85
TN 16NR215ZZ	**T8330**	–	130	0.09	75	0.08	120	0.09	–	–	–	–	–	–	2.15	0.05	0.10	1.85
TN 16NR265ZZ	**T8330**	–	130	0.12	75	0.11	120	0.12	–	–	–	–	–	–	2.65	0.05	0.10	2.05
TN 22NR265ZZ	**T8330**	–	130	0.12	75	0.11	120	0.12	–	–	–	–	–	–	2.65	0.08	0.13	2.2
TN 22NR315ZZ	**T8330**	–	130	0.12	75	0.11	120	0.12	–	–	–	–	–	–	3.15	0.08	0.13	2.2
TN 22NR415ZZ	**T8330**	–	130	0.12	75	0.11	120	0.12	–	–	–	–	–	–	4.15	0.08	0.13	2.4
																		
TN NL-ZZ internal, left-handed geometry, for o-ring and circlip groove machining, with continuous cuts.																		
TN 11NL090ZZ	**T8330**	–	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	0.90	0.05	0.10	0.9
TN 11NL110ZZ	**T8330**	–	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	1.10	0.05	0.10	1.3
TN 16NL090ZZ	**T8330**	–	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	0.90	0.05	0.10	0.9
TN 16NL110ZZ	**T8330**	–	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	1.10	0.05	0.10	1.3
TN 16NL130ZZ	**T8330**	–	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	1.30	0.05	0.10	1.6
TN 16NL160ZZ	**T8330**	–	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	1.60	0.05	0.10	1.85
TN 16NL185ZZ	**T8330**	–	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	1.85	0.05	0.10	1.85
TN 16NL215ZZ	**T8330**	–	130	0.09	75	0.08	120	0.09	–	–	–	–	–	–	2.15	0.05	0.10	1.85
TN 16NL265ZZ	**T8330**	–	130	0.09	75	0.08	120	0.09	–	–	–	–	–	–	2.65	0.05	0.10	2.05
TN 22NL265ZZ	**T8330**	–	130	0.12	75	0.11	120	0.12	–	–	–	–	–	–	2.65	0.08	0.13	2.2
TN 22NL315ZZ	**T8330**	–	130	0.12	75	0.11	120	0.12	–	–	–	–	–	–	3.15	0.08	0.13	2.2
TN 22NL415ZZ	**T8330**	–	130	0.12	75	0.11	120	0.12	–	–	–	–	–	–	4.15	0.08	0.13	2.4

SE(RL)

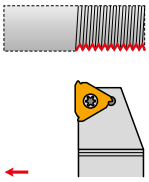
P M K N S H

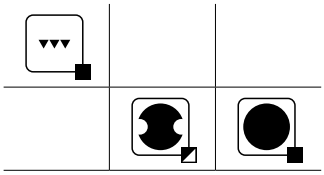
PRAMET

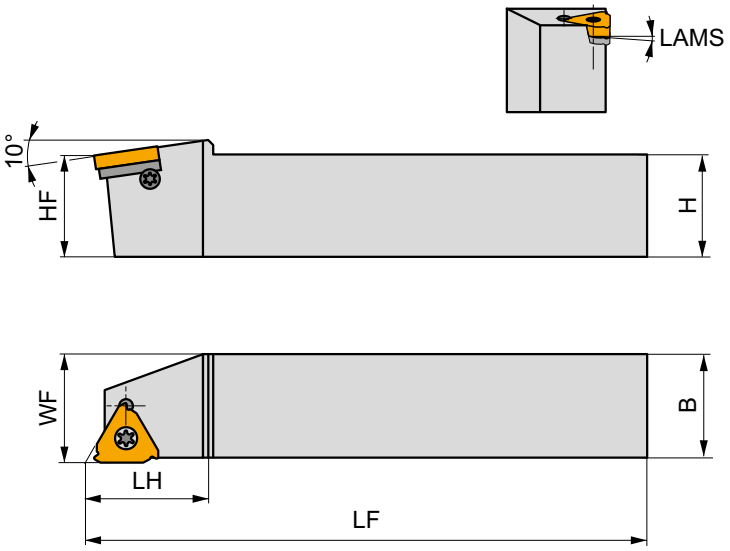
S

External Screw Clamped Threading Holder for TN 16 or 22 Insert

Right/Left hand screw lock tool holder for external threading with TN16 or 22 ER/EL inserts. Suited for threading in metric or inch profile. Also suited for shallow grooving. Body treated for longer tool life.







	Product	H [mm]	HF [mm]	B [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]		
R	**SER 2020 K 16**	20	20	20	20	125	22.5	–	GI068	Z12
	SER 2525 M 16	25	25	25	25	150	24	–	GI068	Z12
	SER 3225 P 16	32	32	25	25	170	24.5	–	GI068	Z12
	SER 2525 M 22-A	25	25	25	25	150	25.5	–	GI071	Z13
	SER 3225 P 22-A	32	32	25	25	170	25.5	–	GI071	Z13
L	**SEL 2020 K 16**	20	20	20	20	125	22.5	–	GI068	Z12
	SEL 2525 M 16	25	25	25	25	150	24	–	GI068	Z12
	SEL 3225 P 16	32	32	25	25	170	24.5	–	GI068	Z12
	SEL 2525 M 22-A	25	25	25	25	150	25.5	–	GI071	Z13
	SEL 3225 P 22-A	32	32	25	25	170	25.5	–	GI071	Z13

GI068	TN 16ER..	TN 16EL..
GI071	TN 22ER..	TN 22EL..

		Nm							
Z12	US 3512A-T15P	3.0	M 3.5	12.7	–	HS 0304	FLAG T15P	HXK 2.5	Page xx
Z13	US 4514A-T20	5.0	M 4.5	14	SP 0405	–	FLAG T20	–	Page xx

SI(RL)

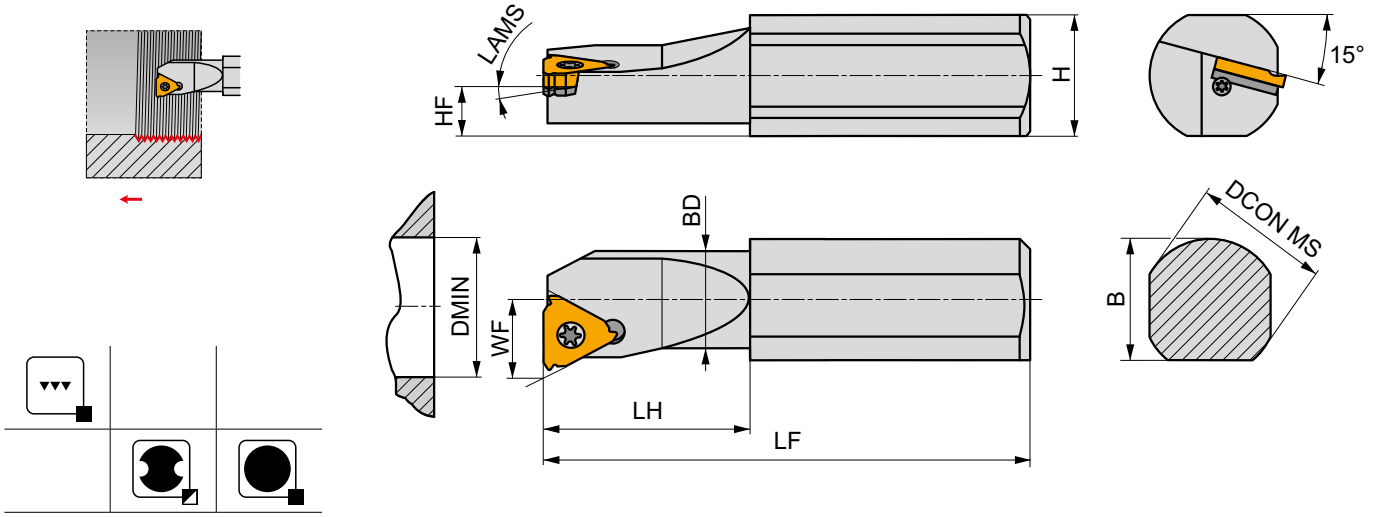
P M K N S H

PRAMET

S

Internal Screw Clamped Threading Holder for TN 11, 16 or 22 Insert

Right/Left hand screw lock boring bar for internal threading with TN11, 16 or 22 ER/EL inserts. Suited for threading in metric or inch profile. Minimum internal diameter Ø13 mm. Also suited for shallow grooving. Available with shank size Ø16 up to Ø40 mm. Body treated for longer tool life.



	Product	B	DCON MS	DMIN	BD	WF	H	HF	LF	LH	LAMS			
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[°]			
R	SIR 0010 K 11-0	14.5	16	13	10	7.45	14	7	125	25	0	–	GI085	Z11
	SIR 0010 K 11-1	14.5	16	13	10	7.45	14	7	125	25	1	–	GI085	Z11
	SIR 0013 M 11-0	14.5	16	16	13	9	14	7	150	32	0	–	GI085	Z11
	SIR 0013 M 11-1	14.5	16	16	13	9	14	7	150	32	1	–	GI085	Z11
	SIR 1416 N 16-0	14	16	22	17	11.4	14.5	7.5	160	–	0	–	GI022	Z9
	SIR 1416 N 16-1	14	16	22	17	11.4	14.5	7.5	160	–	1	–	GI022	Z9
	SIR 1416 N 16-2	14	16	16.5	15.5	10.6	14.5	7.5	160	40	2	✓	GI022	Z10
	SIR 1820 P 16	18.5	20	27	21	13.85	18	9	170	–	–	–	GI022	Z12
	SIR 2325 Q 16	23.5	25	29	26	16.55	23	11.5	180	–	–	–	GI022	Z12
	SIR 2532 S 16	30	32	36	32	19.75	25	12.5	250	–	–	–	GI022	Z12
	SIR 2532 S 22-2	30	32	25	25	16.65	25	12.5	250	80	2	✓	GI076	Z14
	SIR 2532 S 22-A	30	32	36	32	21.65	25	12.5	250	–	–	–	GI076	Z13
	SIR 3240 T 22-A	38	40	48	40	25.85	32	16	300	–	–	–	GI076	Z13
L	SIL 0010 K 11-0	14.5	16	13	10	7.45	14	7	125	25	0	–	GI085	Z11
	SIL 0010 K 11-1	14.5	16	13	10	7.55	14	7	125	25	1	–	GI085	Z11
	SIL 0013 M 11-0	14.5	16	16	13	9	14	7	150	32	0	–	GI085	Z11
	SIL 0013 M 11-1	14.5	16	16	13	9	14	7	150	32	1	–	GI085	Z11
	SIL 1416 N 16-0	14	16	22	17	11.4	14.5	7.5	160	–	0	–	GI022	Z9
	SIL 1416 N 16-1	14	16	22	17	11.4	14.5	7.5	160	–	1	–	GI022	Z9
	SIL 1416 N 16-2	14	16	16.5	15.5	10.6	14.5	7.5	160	40	2	✓	GI022	Z10
	SIL 1820 P 16	18.5	20	27	21	13.85	18	9	170	–	–	–	GI022	Z12
	SIL 2325 Q 16	23.5	25	29	26	16.55	23	11.5	180	–	–	–	GI022	Z12
	SIL 2532 S 16	30	32	36	32	19.75	25	12.5	250	–	–	–	GI022	Z12
	SIL 2532 S 22-2	30	32	25	25	16.65	25	12.5	250	80	2	✓	GI076	Z14
	SIL 2532 S 22-A	30	32	36	32	21.65	25	12.5	250	–	–	–	GI076	Z13
	SIL 3240 T 22-A	38	40	48	40	25.85	32	16	300	–	–	–	GI076	Z13

GI022	TN 16NR..	TN 16NL..
GI076	TN 22NR..	TN 22NL..
GI085	TN 11NR..	TN 11NL..

Z10	US 3510A-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–	–
Z11	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–	–
Z12	US 3512A-T15P	3.0	M 3.5	12.7	–	HS 0304	FLAG T15P	HXK 2.5	Page xx
Z13	US 4514A-T20	5.0	M 4.5	14	SP 0405	–	FLAG T20	–	Page xx
Z14	US 4514A-T20	5.0	M 4.5	14	–	–	FLAG T20	–	–
Z9	US 3510A-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–	P-16

Choice of shim

Helix angle λ	Positive					Negative		for grooving inserts TN16.. ... ZZ, TN22.. ... ZZ
	4,5°	3,5°	2,5°	1,5°	0,5°	-0,5°	-1,5°	
Tool holder	**Anvil specification**							
SER .... .16; SIL .... .16	PE16+4,5	PE16+3,5	PE16+2,5	**PE16+1,5**	PE16+0,5	PE16-0,5	PE16-1,5	PE16ZZ
SEL .... .16; SIR .... .16	PI16+4,5	PI16+3,5	PI16+2,5	**PI16+1,5**	PI16+0,5	PI16-0,5	PI16-1,5	PI16ZZ
SER .... .22; SIL .... .22	PE22+4,5	PE22+3,5	PE22+2,5	**PE22+1,5**	PE22+0,5	PE22-0,5	PE22-1,5	PE22ZZ
SEL .... .22; SIR .... .22	PI22+4,5	PI22+3,5	PI22+2,5	**PI22+1,5**	PI22+0,5	PI22-0,5	PI22-1,5	PI22ZZ
SER-S .... .22; SIL-S .... .22	PE22S+4,5	PE22S+3,5	PE22S+2,5	**PE22S+1,5**	PE22S+0,5	PE22S-0,5	PE22S-1,5	-
SEL-S .... .22; SIR-S .... .22	PI22S+4,5	PI22S+3,5	PI22S+2,5	**PI22S+1,5**	PI22S+0,5	PI22S-0,5	PI22S-1,5	-

Tool holders are usually supplied with a helix angle λ = 1.5°. A different helix angle can be selected by changing the anvil.
Shims for holders SER-S ...., SIR-S .... are marked with „***S***“

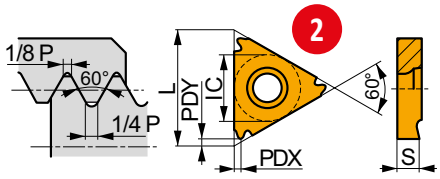
THREAD TURNING

📖 6		WMG & ISO 13399
📖 10	ISO TURNING	INSTRUCTIONS
📖 18		NAVIGATORS
📖 57		POSITIVE INSERTS
📖 219		NEGATIVE INSERTS
📖 386		PARTING-OFF & GROOVING
📖 **482**		**THREAD TURNING**
📖 528		BROACHING
📖 536		GENERAL TECHNICAL INFORMATION

1 TN M INT

	IC [mm]	L [mm]	S [mm]
11	6.350	11.00	3.00
16	9.525	16.50	3.47
22	12.700	22.00	4.71

3



Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	M vc [m/min]	K vc [m/min]	N vc [m/min]	S vc [m/min]	H vc [m/min]	TP [mm]	TPI	PDX [mm]	PDY [mm]
4	5 15°		1 U E 6									
			TN M NR internal, right-handed design, for machining ISO M 10 reads, and continuous cuts.									
TN 11NR050M	T8010	–	175	105	165	–	40	–	0.50	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	0.50	–	0.8	0.8
TN 1 7 75M	8	9	175	105	165	11	40	–	0.75	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	0.75	–	0.8	0.8
TN 11NR100M	T8010	–	175	105	165	–	40	–	1.00	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	1.00	–	0.8	0.8
TN 11NR125M	T8010	–	175	105	165	–	40	–	1.25	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	1.25	–	0.8	0.8
TN 11NR150M	T8010	–	175	105	165	–	40	–	1.50	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	1.50	–	0.8	0.8
TN 11NR200M	T8010	–	175	105	165	–	40	–	2.00	–	0.9	0.8
	T8030	–	160	95	150	480	40	–	2.00	–	0.9	0.8
TN 16NR050M	T8010	–	175	105	165	–	40	–	0.50	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	0.50	–	0.8	0.8
TN 16NR075M	T8010	–	175	105	165	–	40	–	0.75	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	0.75	–	0.8	0.8
TN 16NR100M	T8010	–	175	105	165	–	40	–	1.00	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	1.00	–	0.8	0.8
TN 16NR125M	T8010	–	175	105	165	–	40	–	1.25	–	0.8	0.8

TN 16NR075M:T8010 Use full insert specification code when ordering!

- Grade
- Include colon
- ISO insert code

Typical page with turning inserts displayed – specific page details will differ.

THREAD TURNING INSERTS – PAGE OVERVIEW

Pos.	Description
1	Designation of insert
2	Schematic drawing of insert
3	Table with insert sizes [mm]
4	Picture of representative insert
5	Profile of main cutting edge
6	Icons – specific features and cutting edge type

Pos.	Description
7	ISO insert code
8	Grade
9	Insert radii [mm]
10	Geometry description
11	Application area of insert

1 **SI(RL)**

P M K N S H 2

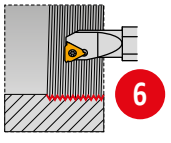
PRAMET 3 S

4

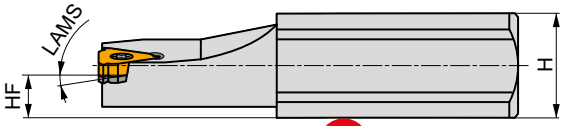
Internal Screw Clamped Threading Holder for TN 11, 16 or 22 Insert

5

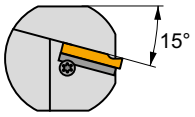
Right/Left hand screw lock boring bar for internal threading with TN 11, 16 or 22 ER/EL inserts. Suited for threading in metric or inch profile. Minimum internal diameter Ø13 mm. Also suited for shallow grooving. Available with shank size Ø16 up to Ø40 mm. Body treated for longer tool life.

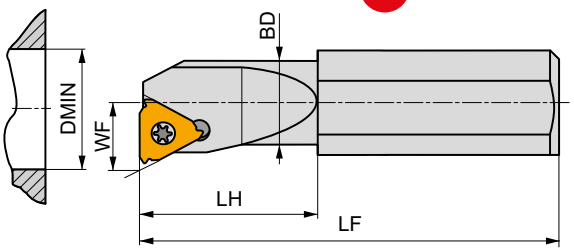


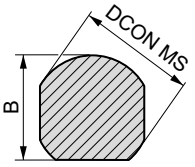
6

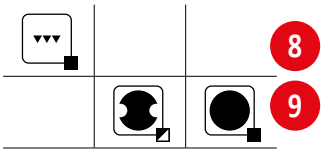


7









8 9

10

	Product	B [mm]	DCON MS [mm]	DMIN [mm]	BD [mm]	WF [mm]	H [mm]	HF [mm]	LF [mm]	LH [mm]	LAMS [°]	14	15	16
11 12	SIR 0013	14.5	16	16	13	13 9	14	7	150	32	1			
	SIR 1416 N 16-0	14	16	22	17	11.4	14.5	7.5	160	–	0	–	GI022	Z9
R	SIR 1416 N 16-1	14	16	22	17	11.4	14.5	7.5	160	–	1	–	GI022	Z9
	SIR 1416 N 16-2	14	16	16.5	15.5	10.6	14.5	7.5	160	40	2	✓	GI022	Z10
	SIR 1820 P 16	18.5	20	27	21	13.85	18	9	170	–	–	–	GI022	Z12
	SIR 2325 Q 16	23.5	25	29	26	16.55	23	11.5	180	–	–	–	GI022	Z12
	SIR 2532 S 16	30	32	36	32	19.75	25	12.5	250	–	–	–	GI022	Z12
	SIR 2532 S 22-2	30	32	25	25	16.65	25	12.5	250	80	2	✓	GI076	Z14
	SIR 2532 S 22-A	30	32	36	32	21.65	25	12.5	250	–	–	–	GI076	Z13
	SIR 3240 T 22-A	38	40	48	40	25.85	32	16	300	–	–	–	GI076	Z13

17

GI022	TN 16NR..	TN 16NL..
GI076	TN 22NR..	TN 22NL..
GI085	TN 11NR..	TN 11NL..

		Nm			18				
Z10	US 3510A-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–	–
Z11	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–	–
Z12	US 3512A-T15P	3.0	M 3.5	12.7	–	HS 0304	FLAG T15P	HXK 2.5	Page xx
Z13	US 4514A-T20	5.0	M 4.5	14	SP 0405	–	FLAG T20	–	Page xx
Z14	US 4514A-T20	5.0	M 4.5	14	–	–	FLAG T20	–	–
Z9	US 3510A-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–	P-16

Typical page with turning holders displayed – specific page details will differ.

THREAD TURNING HOLDERS – PAGE OVERVIEW

Pos.	Description
1	Designation of thread turning holder
2	Material group recommendations
3	Clamping system of insert
4	Illustrative picture [1]
5	Tool description
6	Workpiece profile
7	Schematic drawing of tool
8	Achievable quality of surface
9	Character of cut/working conditions

Pos.	Description
10	Product applications
11	Tool design
12	ISO code of holder
13	Dimensions [mm] and angles [2] [°] of holder
14	Internal coolant supply
15	Group of compatible inserts [3]
16	Group of spare parts [3], [4]
17	Compatible inserts
18	Spare parts

[1] Turning holder is primarily displayed in its right design (R)

[2] GAMO = orthogonal rake angle (see technical pages)
LAMS = inclination angle of main cutting edge (see technical pages)

[3] Code of Group of compatible inserts, spare parts and special accessories is used only for purposes of this catalogue. It cannot be used for orders.

[4] Spare parts and special accessories icons are designed schematically for ease of understanding. They aren't included in list of icons. Screws are, in some cases, completed with info on torque value in Nm, length of screw and size of thread.

THREAD TURNING – ICONS OVERVIEW

General icons

- Primary use
- Possible use
- Finishing – very good surface quality
- Medium machining – good surface quality
- Roughing – unlimited surface roughness
- Suitable for stable working conditions
- Suitable for unstable working conditions
- Suitable for very unstable working conditions

Features

Thread turning – external

Thread turning – internal

Coating

First choice

For tough materials (long chipping)

Universal wide range option

Rounded edge

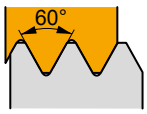
Sharp edge

Other

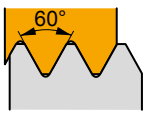
Clamping torque of screw [Nm]

Internal supply of coolant

M
Full profile

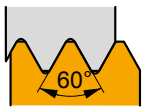
TN M EXT


495

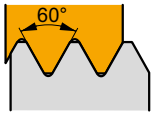
TN M INT


497

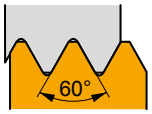
M
Partial profile

TN 60° PP EXT


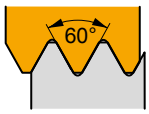
499

TN 60° PP INT


500

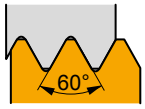
TN 60°-S PP EXT


501

TN 60°-S PP INT


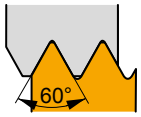
501

MJ
Full profile

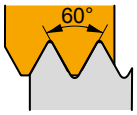
TN MJ EXT


499

UN
Full profile

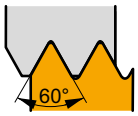
TN UN EXT


502

TN UN INT


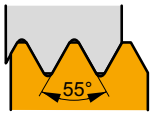
503

UNJ
Full profile

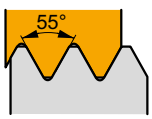
TN UNJ EXT


504

W
Full profile

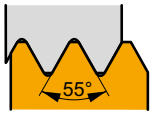
TN W EXT


505

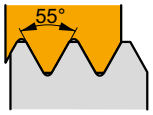
TN W INT


506

W
Partial profile

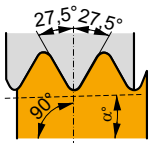
TN 55° PP EXT


508

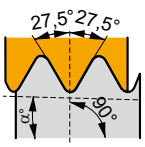
TN 55° PP INT


509

BSPT
Full profile

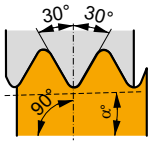
TN BSPT EXT


510

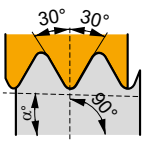
TN BSPT INT


510

NPT
Full profile

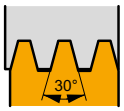
TN NPT EXT


511

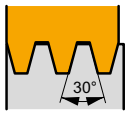
TN NPT INT


512

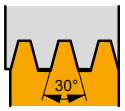
TR
Full profile

TN TR EXT


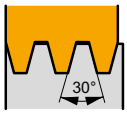
512

TN TR INT


513

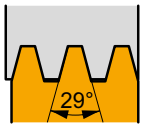
TN TR-S EXT


514

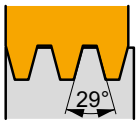
TN TR-S INT


514

ACME
Full profile

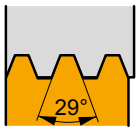
TN ACME EXT


515

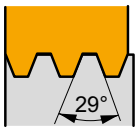
TN ACME INT


516

STACME
Full profile

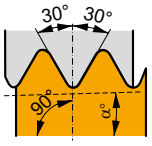
TN STACME EXT


517

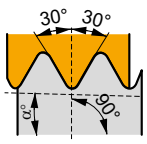
TN STACME INT


518

API RD
Full profile

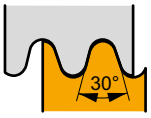
TN API RD EXT


519

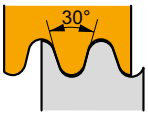
TN API RD INT


519

RD
Full profile

TN RD EXT


520

TN RD INT


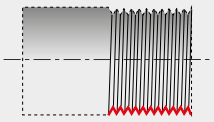
520

Grade Identification	Area of Application	Application	Feed	Cutting speed	Resistance to adverse Working Conditions	Coating	Colour	Substrate	Coolant benefit	Grade description
T8010	P05 - P15 M05 - M15 K10 - K20 S10 - S15	■ ■ ■ ◪				PVD		submicron H	+ + +	This grade is suitable for continuous high precision thread turning of steels, stainless steel, cast iron and super alloys. Offering excellent wear resistance while ensuring operational reliability
T8030	P25 - P40 M20 - M35 K20 - K40 N15 - N30 S15 - S25 H15 - H25	■ ■ ■ ◪ ◪ ◪				PVD		submicron H	+ + +	Undoubtedly the most versatile grade it is suitable for machining all types of materials and can be applied in almost all turning operations. It's main benefits are high operational reliability and excellent frictional properties; it is therefore suited to applications at medium to low cutting speeds.
HF7	M10 - M20 K10 - K25 N10 - N25	◪ ■ ■				×		submicron H	+ +	Uncoated grade which is primarily designed for machining non-ferrous metals; but can also be used for other machined materials (except steel). This material can be used in turning, milling, and even boring.

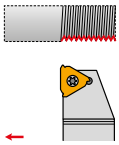
Substrat	
submicron H	WC-Co based substrate fine grained (< 1 µm)

Coating	
PVD	Low-temperature physical method of coating

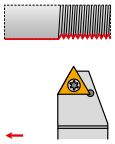
ISO THREAD TURNING – EXTERNAL



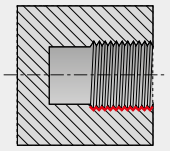
SE(RL)

	TN..
	16 22
20×20 32×25	
522	459 – 521

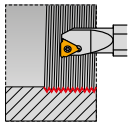
SE(RL)-S

	TN..
	22
25×25 32×25	
523	459 – 521

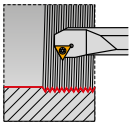
ISO THREAD TURNING – INTERNAL



SI(RL)

	TN..
	11 16 22
ØDmin 13 48	
524	459 – 521

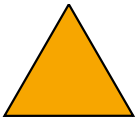
SI(RL)-S

	TN..
	22
ØDmin 39 48	
526	459 – 521

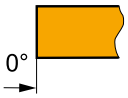
INDEXABLE CUTTING INSERTS FOR THREADING ISO – CODE DESIGNATION

	1	2	3	4	5	6	7		8
ISO	T	N	16	E	R	175	M	–	P1
ANSI	T	N	16	E	R	120	W	–	P1

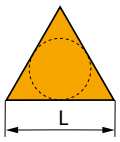
1 Insert shape

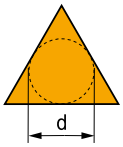
T	

2 Insert clearance angle

N	

3 Insert cutting edge length (insert size)





L		d = IC	
[mm]	[″]	[mm]	[″]
11	.433″	**6,350**	1/4″
16	.650″	**9,525**	3/8″
22	.866″	**12,7**	1/2″

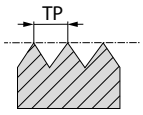
4 External – Internal

E	External
N	Internal

5 Direction of cut

R	Right
L	Left
N	Neutral

6 Thread pitch



s × 100

Thread Pitch mm × 100

6 No. of threads

No. of threads per inch × 10

7 Thread profile

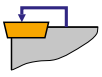
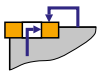
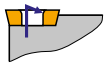
M	Metric 60°	**TR**	TR 30° ISO 2901/3–1977
MJ	SEA MA1370	**UN**	American UN 60° ISO 5864–1978
W	Whitworth 55° ISO 228–1982	**UNJ**	SEA AS8879
RD	Round 30°	**ACME**	ACME 29° ANSI B1.5–1988
BSPT	ISO 228/1 35 21 1959 ISO 7/1	**STACME**	ASME/ANSI B1.8-1988
NPT	ANSI B1.1–1983	**API RD**	API

8 Chip breaker designation

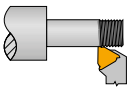
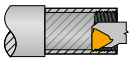
P1	Pressed
AL	For nonferous

	1	2	3		4	5	6	7		8
ISO	S	E	R	–	S	2525	M	16	–	
ANSI	1	2	3		4	5	6	7		8
	S	E	R	–	S	16	D	16	–	

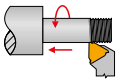
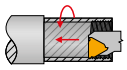
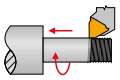
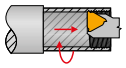
1 Clamping designation

C	
P	
M	
S	

2 Machining orientation

E	External	
I	Internal	

3 Direction of cut

R	Right	External	
		Internal	
L	Left	External	
		Internal	

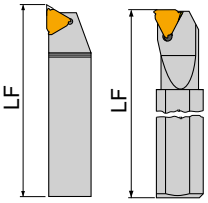
4 Type of construction

–	Normal
S	Special

5 Holder dimensions [mm]

External turning	2525	25 × 25 mm
Internal turning	1416	Shank – 14 mm Shank height Ø – 16 mm

6 Holder total length [mm]

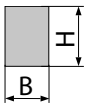


	LF [mm]
K	125
L	140
M	150
N	160
P	170
Q	180
R	200
S	250
T	300

7 Insert cutting edge length (insert size)

d = IC [mm]	d = IC [″]	T
6.350	1/4″	11
9.525	3/8″	16
12.700	1/2″	22

5 Tool dimensions [″]

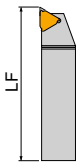


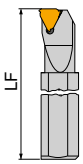
	B [″]	H [″]
10	5/8″	5/8″
12	3/4″	3/4″
16	1″	1″
85	1″	1 1/4″
86	1″	1 1/2″
20	1 1/4″	1 1/4″

	DCON [″]
08	.500″
10	.625″
12	.750″
16	1.000″
20	1.250″
24	1.500″

For square shanks, the number is the width or height in terms of 16ths. For rectangular shanks the first digit is the width in terms of 8ths and the second digit is the height in terms of 4ths.

6 Holder total length [″]





	LF [″]
C	5.000″
D	6.000″
E	7.000″
F	8.000″
K	5.000″
M	6.000″
P	6.250″
Q	7.250″
R	8.000″
S	10.000″
T	12.000″
U	14.000″

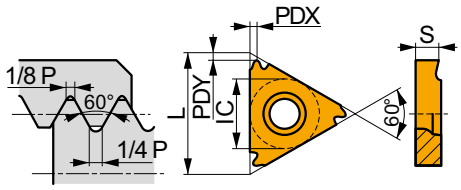
8 Helix angle λ

0	Helix angle λ = 0°
1	Helix angle λ = 1°
2	Helix angle λ = 2°

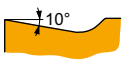
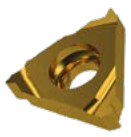
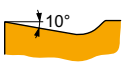
TN M EXT

PRAMET

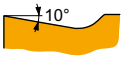
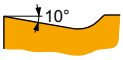
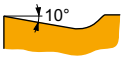
	IC [mm]	L [mm]	S [mm]
16	9.525	16.50	3.47
22	12.700	22.00	4.71



Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	M vc [m/min]	K vc [m/min]	N vc [m/min]	S vc [m/min]	H vc [m/min]	TP [mm]	TPI	PDX [mm]	PDY [mm]
												
			TN M ER external, right-handed design, for machining ISO Metric threads, and continuous cuts.									
TN 16ER050M	**T8010**	–	175	105	165	–	40	–	0.50	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	0.50	–	0.8	0.8
TN 16ER075M	**T8010**	–	175	105	165	–	40	–	0.75	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	0.75	–	0.8	0.8
TN 16ER080M	**T8010**	–	175	105	165	–	40	–	0.80	–	0.6	0.8
	T8030	–	160	95	150	480	40	–	0.80	–	0.6	0.8
TN 16ER100M	**T8010**	–	175	105	165	–	40	–	1.00	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	1.00	–	0.8	0.8
TN 16ER125M	**T8010**	–	175	105	165	–	40	–	1.25	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	1.25	–	0.8	0.8
TN 16ER150M	**T8010**	–	175	105	165	–	40	–	1.50	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	1.50	–	0.8	0.8
TN 16ER175M	**T8010**	–	175	105	165	–	40	–	1.75	–	1.5	1.2
	T8030	–	160	95	150	480	40	–	1.75	–	1.5	1.2
TN 16ER200M	**T8010**	–	175	105	165	–	40	–	2.00	–	1.5	1.2
	T8030	–	160	95	150	480	40	–	2.00	–	1.5	1.2
TN 16ER250M	**T8010**	–	175	105	165	–	40	–	2.50	–	1.5	1.2
	T8030	–	160	95	150	480	40	–	2.50	–	1.5	1.2
TN 16ER300M	**T8010**	–	175	105	165	–	40	–	3.00	–	1.5	1.2
	T8030	–	160	95	150	480	40	–	3.00	–	1.5	1.2
TN 16ER350M	**T8030**[1)]	–	160	95	150	480	40	–	3.50	–	1.7	1.2
TN 22ER350M	**T8010**	–	175	105	165	–	40	–	3.50	–	2.5	1.8
	T8030	–	160	95	150	480	40	–	3.50	–	2.5	1.8
TN 22ER400M	**T8010**	–	175	105	165	–	40	–	4.00	–	2.5	1.8
	T8030	–	160	95	150	480	40	–	4.00	–	2.5	1.8
TN 22ER450M	**T8010**	–	175	105	165	–	40	–	4.50	–	2.5	1.8
	T8030	–	160	95	150	480	40	–	4.50	–	2.5	1.8
TN 22ER500M	**T8010**	–	175	105	165	–	40	–	5.00	–	2.5	1.8
	T8030	–	160	95	150	480	40	–	5.00	–	2.5	1.8
												
			TN M EL external, left-handed design, for machining ISO Metric threads, and continuous cuts.									
TN 16EL050M	**T8030**	–	160	95	150	480	40	–	0.50	–	0.8	0.8
TN 16EL075M	**T8030**	–	160	95	150	480	40	–	0.75	–	0.8	0.8
TN 16EL080M	**T8030**	–	160	95	150	480	40	–	0.80	–	0.6	0.8
TN 16EL100M	**T8010**	–	175	105	165	–	40	–	1.00	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	1.00	–	0.8	0.8
TN 16EL125M	**T8010**	–	175	105	165	–	40	–	1.25	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	1.25	–	0.8	0.8

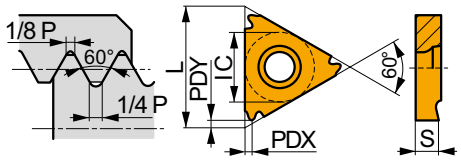
Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

Product		RE	P		M		K		N		S		H		TP	TPI	PDX	PDY
			vc		vc		vc		vc		vc		vc					
		[mm]	[m/min]		[m/min]		[m/min]		[m/min]		[m/min]		[m/min]		[mm]		[mm]	[mm]
																		
TN M EL external, left-handed design, for machining ISO Metric threads, and continuous cuts.																		
TN 16EL150M	**T8010**	–	■	175	◪	105	■	165		–	◪	40		–	1.50	–	0.8	0.8
	T8030	–	■	160	■	95	■	150	◪	480	◪	40		–	1.50	–	0.8	0.8
TN 16EL175M	**T8010**	–	■	175	◪	105	■	165		–	◪	40		–	1.75	–	1.5	1.2
	T8030	–	■	160	■	95	■	150	◪	480	◪	40		–	1.75	–	1.5	1.2
TN 16EL200M	**T8010**	–	■	175	◪	105	■	165		–	◪	40		–	2.00	–	1.5	1.2
	T8030	–	■	160	■	95	■	150	◪	480	◪	40		–	2.00	–	1.5	1.2
TN 16EL250M	**T8010**	–	■	175	◪	105	■	165		–	◪	40		–	2.50	–	1.5	1.2
	T8030	–	■	160	■	95	■	150	◪	480	◪	40		–	2.50	–	1.5	1.2
TN 16EL300M	**T8010**	–	■	175	◪	105	■	165		–	◪	40		–	3.00	–	1.5	1.2
	T8030	–	■	160	■	95	■	150	◪	480	◪	40		–	3.00	–	1.5	1.2
TN 16EL350M	**T8030**[1)]	–	■	160	■	95	■	150	◪	480	◪	40		–	3.50	–	1.7	1.2
TN 22EL350M	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	3.50	–	2.5	1.8
TN 22EL400M	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	4.00	–	2.5	1.8
TN 22EL450M	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	4.50	–	2.5	1.8
TN 22EL500M	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	5.00	–	2.5	1.8
																		
TN M-P1 ER pressed external, right-handed design, for machining ISO Metric threads, and continuous cuts.																		
TN 16ER100M-P1	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	1.00	–	0.8	0.8
TN 16ER125M-P1	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	1.25	–	0.8	0.8
TN 16ER150M-P1	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	1.50	–	0.8	0.8
TN 16ER175M-P1	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	1.75	–	1.5	1.2
TN 16ER200M-P1	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	2.00	–	1.5	1.2
TN 16ER250M-P1	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	2.50	–	1.5	1.2
TN 16ER300M-P1	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	3.00	–	1.5	1.2
																		
TN M-AL ER external, right-handed design, for machining ISO Metric threads, and continuous cuts.																		
TN 16ER050M-AL	**HF7**	–		–	◪	95		–	■	480		–		–	0.50	–	0.8	0.8
TN 16ER075M-AL	**HF7**	–		–	◪	95		–	■	480		–		–	0.75	–	0.8	0.8
TN 16ER080M-AL	**HF7**	–		–	◪	95		–	■	480		–		–	0.80	–	0.6	0.8
TN 16ER100M-AL	**HF7**	–		–	◪	95		–	■	480		–		–	1.00	–	0.8	0.8
TN 16ER125M-AL	**HF7**	–		–	◪	95		–	■	480		–		–	1.25	–	0.8	0.8
TN 16ER150M-AL	**HF7**	–		–	◪	95		–	■	480		–		–	1.50	–	0.8	0.8
TN 16ER175M-AL	**HF7**	–		–	◪	95		–	■	480		–		–	1.75	–	1.5	1.2
TN 16ER200M-AL	**HF7**	–		–	◪	95		–	■	480		–		–	2.00	–	1.5	1.2
TN 16ER250M-AL	**HF7**	–		–	◪	95		–	■	480		–		–	2.50	–	1.5	1.2
TN 16ER300M-AL	**HF7**	–		–	◪	95		–	■	480		–		–	3.00	–	1.5	1.2

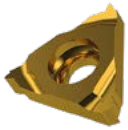
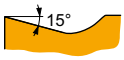
[1)] Toolholders have to be modified.

TN M INT

	IC [mm]	L [mm]	S [mm]
11	6.350	11.00	3.00
16	9.525	16.50	3.47
22	12.700	22.00	4.71



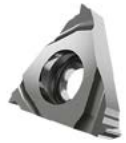
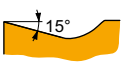
Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	M vc [m/min]	K vc [m/min]	N vc [m/min]	S vc [m/min]	H vc [m/min]	TP [mm]	TPI	PDX [mm]	PDY [mm]
												

TN M NR internal, right-handed design, for machining ISO Metric threads, and continuous cuts.

TN 11NR050M	**T8010**	–	■	175	◪	105	■	165		–	◪	40	–	0.50	–	0.8	0.8
	T8030	–	■	160	■	95	■	150	◪	480	◪	40	–	0.50	–	0.8	0.8
TN 11NR075M	**T8010**	–	■	175	◪	105	■	165		–	◪	40	–	0.75	–	0.8	0.8
	T8030	–	■	160	■	95	■	150	◪	480	◪	40	–	0.75	–	0.8	0.8
TN 11NR100M	**T8010**	–	■	175	◪	105	■	165		–	◪	40	–	1.00	–	0.8	0.8
	T8030	–	■	160	■	95	■	150	◪	480	◪	40	–	1.00	–	0.8	0.8
TN 11NR125M	**T8010**	–	■	175	◪	105	■	165		–	◪	40	–	1.25	–	0.8	0.8
	T8030	–	■	160	■	95	■	150	◪	480	◪	40	–	1.25	–	0.8	0.8
TN 11NR150M	**T8010**	–	■	175	◪	105	■	165		–	◪	40	–	1.50	–	0.8	0.8
	T8030	–	■	160	■	95	■	150	◪	480	◪	40	–	1.50	–	0.8	0.8
TN 11NR200M	**T8010**	–	■	175	◪	105	■	165		–	◪	40	–	2.00	–	0.9	0.8
	T8030	–	■	160	■	95	■	150	◪	480	◪	40	–	2.00	–	0.9	0.8
TN 16NR050M	**T8010**	–	■	175	◪	105	■	165		–	◪	40	–	0.50	–	0.8	0.8
	T8030	–	■	160	■	95	■	150	◪	480	◪	40	–	0.50	–	0.8	0.8
TN 16NR075M	**T8010**	–	■	175	◪	105	■	165		–	◪	40	–	0.75	–	0.8	0.8
	T8030	–	■	160	■	95	■	150	◪	480	◪	40	–	0.75	–	0.8	0.8
TN 16NR100M	**T8010**	–	■	175	◪	105	■	165		–	◪	40	–	1.00	–	0.8	0.8
	T8030	–	■	160	■	95	■	150	◪	480	◪	40	–	1.00	–	0.8	0.8
TN 16NR125M	**T8010**	–	■	175	◪	105	■	165		–	◪	40	–	1.25	–	0.8	0.8
	T8030	–	■	160	■	95	■	150	◪	480	◪	40	–	1.25	–	0.8	0.8
TN 16NR150M	**T8010**	–	■	175	◪	105	■	165		–	◪	40	–	1.50	–	0.8	0.8
	T8030	–	■	160	■	95	■	150	◪	480	◪	40	–	1.50	–	0.8	0.8
TN 16NR175M	**T8010**	–	■	175	◪	105	■	165		–	◪	40	–	1.75	–	1.5	1.2
	T8030	–	■	160	■	95	■	150	◪	480	◪	40	–	1.75	–	1.5	1.2
TN 16NR200M	**T8010**	–	■	175	◪	105	■	165		–	◪	40	–	2.00	–	1.5	1.2
	T8030	–	■	160	■	95	■	150	◪	480	◪	40	–	2.00	–	1.5	1.2
TN 16NR250M	**T8010**	–	■	175	◪	105	■	165		–	◪	40	–	2.50	–	1.5	1.2
	T8030	–	■	160	■	95	■	150	◪	480	◪	40	–	2.50	–	1.5	1.2
TN 16NR300M	**T8010**	–	■	175	◪	105	■	165		–	◪	40	–	3.00	–	1.5	1.2
	T8030	–	■	160	■	95	■	150	◪	480	◪	40	–	3.00	–	1.5	1.2
TN 16NR350M	**T8030**[1)]	–	■	160	■	95	■	150	◪	480	◪	40	–	3.50	–	1.6	1.2
TN 22NR350M	**T8010**	–	■	175	◪	105	■	165		–	◪	40	–	3.50	–	2.5	1.8
	T8030	–	■	160	■	95	■	150	◪	480	◪	40	–	3.50	–	2.5	1.8
TN 22NR400M	**T8010**	–	■	175	◪	105	■	165		–	◪	40	–	4.00	–	2.5	1.8
	T8030	–	■	160	■	95	■	150	◪	480	◪	40	–	4.00	–	2.5	1.8
TN 22NR450M	**T8010**	–	■	175	◪	105	■	165		–	◪	40	–	4.50	–	2.5	1.8
	T8030	–	■	160	■	95	■	150	◪	480	◪	40	–	4.50	–	2.5	1.8
TN 22NR500M	**T8010**	–	■	175	◪	105	■	165		–	◪	40	–	5.00	–	2.5	1.8
	T8030	–	■	160	■	95	■	150	◪	480	◪	40	–	5.00	–	2.5	1.8

Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

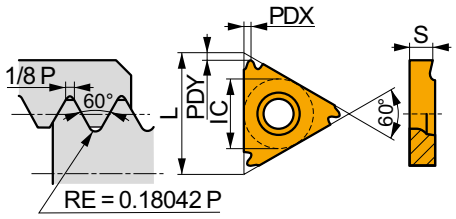
Product		RE	P		M		K		N		S		H		TP	TPI	PDX	PDY
			vc		vc		vc		vc		vc		vc					
		[mm]	[m/min]		[m/min]		[m/min]		[m/min]		[m/min]		[m/min]		[mm]		[mm]	[mm]
TN M NL internal, left-handed design, for machining ISO Metric threads, and continuous cuts.																		
TN 11NL050M	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	0.50	–	0.8	0.8
TN 11NL075M	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	0.75	–	0.8	0.8
TN 11NL100M	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	1.00	–	0.8	0.8
TN 11NL125M	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	1.25	–	0.8	0.8
TN 11NL150M	**T8010**	–	■	175	◪	105	■	165		–	◪	40		–	1.50	–	0.8	0.8
	T8030	–	■	160	■	95	■	150	◪	480	◪	40		–	1.50	–	0.8	0.8
TN 11NL200M	**T8010**	–	■	175	◪	105	■	165		–	◪	40		–	2.00	–	0.9	0.8
	T8030	–	■	160	■	95	■	150	◪	480	◪	40		–	2.00	–	0.9	0.8
TN 16NL050M	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	0.50	–	0.8	0.8
TN 16NL075M	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	0.75	–	0.8	0.8
TN 16NL100M	**T8010**	–	■	175	◪	105	■	165		–	◪	40		–	1.00	–	0.8	0.8
	T8030	–	■	160	■	95	■	150	◪	480	◪	40		–	1.00	–	0.8	0.8
TN 16NL125M	**T8010**	–	■	175	◪	105	■	165		–	◪	40		–	1.25	–	0.8	0.8
	T8030	–	■	160	■	95	■	150	◪	480	◪	40		–	1.25	–	0.8	0.8
TN 16NL150M	**T8010**	–	■	175	◪	105	■	165		–	◪	40		–	1.50	–	0.8	0.8
	T8030	–	■	160	■	95	■	150	◪	480	◪	40		–	1.50	–	0.8	0.8
TN 16NL175M	**T8010**	–	■	175	◪	105	■	165		–	◪	40		–	1.75	–	1.5	1.2
	T8030	–	■	160	■	95	■	150	◪	480	◪	40		–	1.75	–	1.5	1.2
TN 16NL200M	**T8010**	–	■	175	◪	105	■	165		–	◪	40		–	2.00	–	1.5	1.2
	T8030	–	■	160	■	95	■	150	◪	480	◪	40		–	2.00	–	1.5	1.2
TN 16NL250M	**T8010**	–	■	175	◪	105	■	165		–	◪	40		–	2.50	–	1.5	1.2
	T8030	–	■	160	■	95	■	150	◪	480	◪	40		–	2.50	–	1.5	1.2
TN 16NL300M	**T8010**	–	■	175	◪	105	■	165		–	◪	40		–	3.00	–	1.5	1.2
	T8030	–	■	160	■	95	■	150	◪	480	◪	40		–	3.00	–	1.5	1.2
TN 16NL350M	**T8030**[1)]	–	■	160	■	95	■	150	◪	480	◪	40		–	3.50	–	1.6	1.2
TN 22NL350M	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	3.50	–	2.5	1.8
TN 22NL400M	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	4.00	–	2.5	1.8
TN 22NL500M	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	5.00	–	2.5	1.8
TN M-P1 NR pressed internal, right-handed design, for machining ISO Metric threads, and continuous cuts.																		
TN 11NR100M-P1	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	1.00	–	0.8	0.8
TN 11NR150M-P1	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	1.50	–	0.8	0.8
TN 16NR100M-P1	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	1.00	–	0.8	0.8
TN 16NR150M-P1	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	1.50	–	0.8	0.8
TN 16NR200M-P1	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	2.00	–	1.5	1.2
TN 16NR250M-P1	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	2.50	–	1.5	1.2
TN 16NR300M-P1	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	3.00	–	1.5	1.2
																		
TN M-AL NR internal, right-handed design, for machining ISO Metric threads, and continuous cuts.																		
TN 16NR050M-AL	**HF7**	–		–	◪	95		–	■	480		–		–	0.50	–	0.8	0.8
TN 16NR075M-AL	**HF7**	–		–	◪	95		–	■	480		–		–	0.75	–	0.8	0.8
TN 16NR100M-AL	**HF7**	–		–	◪	95		–	■	480		–		–	1.00	–	0.8	0.8
TN 16NR125M-AL	**HF7**	–		–	◪	95		–	■	480		–		–	1.25	–	0.8	0.8
TN 16NR150M-AL	**HF7**	–		–	◪	95		–	■	480		–		–	1.50	–	0.8	0.8
TN 16NR175M-AL	**HF7**	–		–	◪	95		–	■	480		–		–	1.75	–	1.5	1.2
TN 16NR200M-AL	**HF7**	–		–	◪	95		–	■	480		–		–	2.00	–	1.5	1.2
TN 16NR250M-AL	**HF7**	–		–	◪	95		–	■	480		–		–	2.50	–	1.5	1.2
TN 16NR300M-AL	**HF7**	–		–	◪	95		–	■	480		–		–	3.00	–	1.5	1.2

[1)] Toolholders have to be modified.

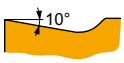
TN MJ EXT

PRAMET

	IC	L	S
	[mm]	[mm]	[mm]
16	9.525	16.50	3.47



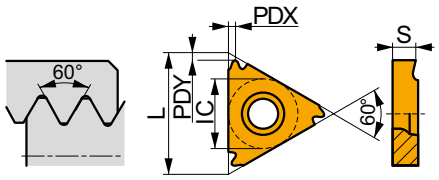
Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

Product		RE	P	M	K	N	S	H	TP	TPI	PDX	PDY
			vc	vc	vc	vc	vc	vc				
		[mm]	[m/min]	[m/min]	[m/min]	[m/min]	[m/min]	[m/min]	[mm]		[mm]	[mm]
			1 U E									
			TN MJ ER external, right-handed design, for machining Metric "J form" threads, and continuous cuts.									
TN 16ER100MJ	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	1.00	–	0.8	0.8
TN 16ER150MJ	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	1.50	–	0.8	0.8

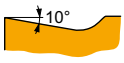
TN 60° PP EXT

PRAMET

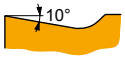
	IC	L	S
	[mm]	[mm]	[mm]
16	9.525	16.50	3.47
22	12.700	22.00	4.71



Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

Product		RE	P	M	K	N	S	H	TPN	TPX	TPIN	TPIX	PDX	PDY
			vc	vc	vc	vc	vc	vc						
		[mm]	[m/min]	[m/min]	[m/min]	[m/min]	[m/min]	[m/min]	[mm]	[mm]			[mm]	[mm]
			1 U E											
			TN M60 PP ER external, right-handed design, for machining Metric and Unified threads, and continuous cuts.											
TN 16ERA60	**T8010**	–	■ 175	◪ 105	■ 165	–	◪ 40	–	0.50	1.50	16	48	0.8	0.6
	T8030	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	0.50	1.50	16	48	0.8	0.6
TN 16ERAG60	**T8010**	–	■ 175	◪ 105	■ 165	–	◪ 40	–	0.50	3.00	8	48	1.5	1.1
	T8030	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	0.50	3.00	8	48	1.5	1.1
TN 16ERG60	**T8010**	–	■ 175	◪ 105	■ 165	–	◪ 40	–	1.75	3.00	8	14	1.5	1.1
	T8030	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	1.75	3.00	8	14	1.5	1.1
TN 22ERN60	**T8010**	–	■ 175	◪ 105	■ 165	–	◪ 40	–	3.50	5.00	5	7	2.5	1.8
	T8030	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	3.50	5.00	5	7	2.5	1.8

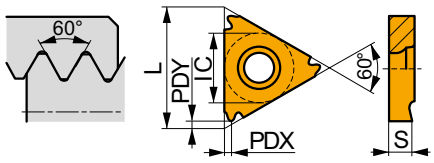
Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]		M vc [m/min]		K vc [m/min]		N vc [m/min]		S vc [m/min]		H vc [m/min]		TPN [mm]	TPX [mm]	TPIN	TPIX	PDX [mm]	PDY [mm]
																				
TN M60 PP EL external, left-handed design, for machining Metric and Unified threads, and continuous cuts.																				
TN 16ELA60	**T8030**	–	160		95		150		480		40		–		0.50	1.50	16	48	0.8	0.6
TN 16ELAG60	**T8010**	–	175		105		165		–		40		–		0.50	3.00	8	48	1.5	1.1
	T8030	–	160		95		150		480		40		–		0.50	3.00	8	48	1.5	1.1
TN 16ELG60	**T8030**	–	160		95		150		480		40		–		1.75	3.00	8	14	1.5	1.1
TN 22ELN60	**T8030**	–	160		95		150		480		40		–		3.50	5.00	5	7	2.5	1.8

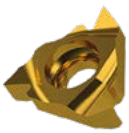
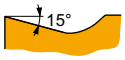
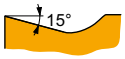
TN 60° PP INT

PRAMET

	IC [mm]	L [mm]	S [mm]
11	6.350	11.00	3.00
16	9.525	16.50	3.47
22	12.700	22.00	4.71



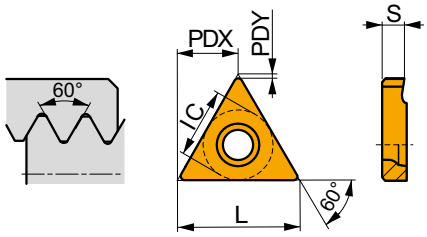
Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]		M vc [m/min]		K vc [m/min]		N vc [m/min]		S vc [m/min]		H vc [m/min]		TPN [mm]	TPX [mm]	TPIN	TPIX	PDX [mm]	PDY [mm]
																				
TN M60 PP NR internal, right-handed design, for machining Metric and Unified threads, and continuous cuts.																				
TN 11NRA60	**T8010**	–	175		105		165		–		40		–		0.50	1.50	16	48	0.8	0.7
	T8030	–	160		95		150		480		40		–		0.50	1.50	16	48	0.8	0.7
TN 16NRA60	**T8010**	–	175		105		165		–		40		–		0.50	1.50	16	48	0.8	0.7
	T8030	–	160		95		150		480		40		–		0.50	1.50	16	48	0.8	0.7
TN 16NRAG60	**T8010**	–	175		105		165		–		40		–		0.50	3.00	8	48	1.5	1.1
	T8030	–	160		95		150		480		40		–		0.50	3.00	8	48	1.5	1.1
TN 16NRG60	**T8010**	–	175		105		165		–		40		–		1.75	3.00	8	14	1.5	1.1
	T8030	–	160		95		150		480		40		–		1.75	3.00	8	14	1.5	1.1
TN 22NRN60	**T8010**	–	175		105		165		–		40		–		3.50	5.00	5	7	2.5	1.8
	T8030	–	160		95		150		480		40		–		3.50	5.00	5	7	2.5	1.8
																				
TN M60 PP NL internal, left-handed design, for machining Metric and Unified threads, and continuous cuts.																				
TN 11NLA60	**T8030**	–	160		95		150		480		40		–		0.50	1.50	16	48	0.8	0.7
TN 16NLA60	**T8030**	–	160		95		150		480		40		–		0.50	1.50	16	48	0.8	0.7
TN 16NLAG60	**T8010**	–	175		105		165		–		40		–		0.50	3.00	8	48	1.5	1.1
	T8030	–	160		95		150		480		40		–		0.50	3.00	8	48	1.5	1.1
TN 16NLG60	**T8030**	–	160		95		150		480		40		–		1.75	3.00	8	14	1.5	1.1
TN 22NLN60	**T8030**	–	160		95		150		480		40		–		3.50	5.00	5	7	2.5	1.8

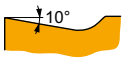
TN 60°-S PP EXT

PRAMET

	IC [mm]	L [mm]	S [mm]
22	12.700	22.00	4.60



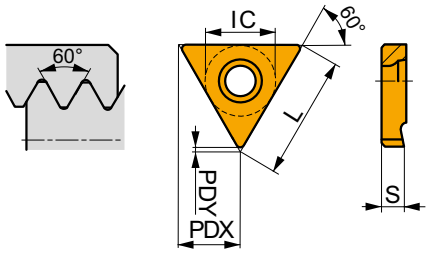
Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	M vc [m/min]	K vc [m/min]	N vc [m/min]	S vc [m/min]	H vc [m/min]	TPN [mm]	TPX [mm]	TPIN	TPIX	PDX [mm]	PDY [mm]
			TN M60-S PP EN external, left and right-handed design, for machining Metric and Unified threads, and continuous cuts.											
TN 22EN350-500M	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	3.50	5.00	5	7	11.0	0.5
TN 22EN550-800M	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	5.50	8.00	3	4.5	11.0	0.8

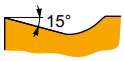
TN 60°-S PP INT

PRAMET

	IC [mm]	L [mm]	S [mm]
22	12.700	22.00	4.60

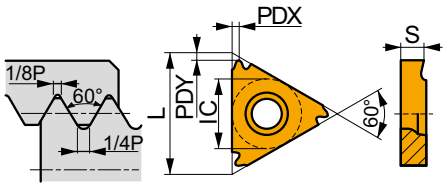


Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

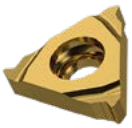
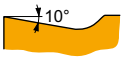
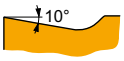
Product		RE [mm]	P vc [m/min]	M vc [m/min]	K vc [m/min]	N vc [m/min]	S vc [m/min]	H vc [m/min]	TPN [mm]	TPX [mm]	TPIN	TPIX	PDX [mm]	PDY [mm]
			TN M60-S PP NN internal, left and right-handed design, for machining Metric and Unified threads, and continuous cuts.											
TN 22NN350-500M	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	3.50	5.00	5	7	11.0	0.2
TN 22NN550-800M	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	5.50	8.00	3	4.5	11.0	0.5

TN UN EXT

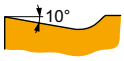
	IC [mm]	L [mm]	S [mm]
16	9.525	16.50	3.47
22	12.700	22.00	4.71



Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	M vc [m/min]	K vc [m/min]	N vc [m/min]	S vc [m/min]	H vc [m/min]	TP [mm]	TPI	PDX [mm]	PDY [mm]
												
			TN UN ER external, right-handed design, for machining Unified threads and continuous cuts.									
TN 16ER320UN	**T8030**	–	160	95	150	480	40	–	–	32.0	0.8	0.8
TN 16ER280UN	**T8030**	–	160	95	150	480	40	–	–	28.0	0.8	0.8
TN 16ER240UN	**T8030**	–	160	95	150	480	40	–	–	24.0	0.8	0.8
TN 16ER200UN	**T8010**	–	175	105	165	–	40	–	–	20.0	0.8	0.8
	T8030	–	160	95	150	480	40	–	–	20.0	0.8	0.8
TN 16ER180UN	**T8030**	–	160	95	150	480	40	–	–	18.0	0.8	0.8
TN 16ER160UN	**T8030**	–	160	95	150	480	40	–	–	16.0	0.8	0.8
TN 16ER140UN	**T8030**	–	160	95	150	480	40	–	–	14.0	1.5	1.2
TN 16ER130UN	**T8030**	–	160	95	150	480	40	–	–	13.0	1.5	1.2
TN 16ER120UN	**T8030**	–	160	95	150	480	40	–	–	12.0	1.5	1.2
TN 16ER115UN	**T8030**	–	160	95	150	480	40	–	–	11.5	1.5	1.2
TN 16ER110UN	**T8030**	–	160	95	150	480	40	–	–	11.0	1.5	1.2
TN 16ER100UN	**T8030**	–	160	95	150	480	40	–	–	10.0	1.5	1.2
TN 16ER090UN	**T8030**	–	160	95	150	480	40	–	–	9.0	1.5	1.2
TN 16ER080UN	**T8030**	–	160	95	150	480	40	–	–	8.0	1.5	1.2
TN 22ER070UN	**T8030**	–	160	95	150	480	40	–	–	7.0	2.5	1.8
TN 22ER060UN	**T8030**	–	160	95	150	480	40	–	–	6.0	2.5	1.8
TN 22ER050UN	**T8030**	–	160	95	150	480	40	–	–	5.0	2.5	1.8
												
			TN UN EL external, left-handed design, for machining Unified threads, and continuous cuts.									
TN 16EL320UN	**T8030**	–	160	95	150	480	40	–	–	32.0	0.8	0.8
TN 16EL280UN	**T8030**	–	160	95	150	480	40	–	–	28.0	0.8	0.8
TN 16EL240UN	**T8030**	–	160	95	150	480	40	–	–	24.0	0.8	0.8
TN 16EL200UN	**T8030**	–	160	95	150	480	40	–	–	20.0	0.8	0.8
TN 16EL180UN	**T8030**	–	160	95	150	480	40	–	–	18.0	0.8	0.8
TN 16EL160UN	**T8030**	–	160	95	150	480	40	–	–	16.0	0.8	0.8
TN 16EL140UN	**T8030**	–	160	95	150	480	40	–	–	14.0	1.5	1.2
TN 16EL120UN	**T8030**	–	160	95	150	480	40	–	–	12.0	1.5	1.2
TN 16EL110UN	**T8030**	–	160	95	150	480	40	–	–	11.0	1.5	1.2
TN 16EL100UN	**T8030**	–	160	95	150	480	40	–	–	10.0	1.5	1.2
TN 16EL090UN	**T8030**	–	160	95	150	480	40	–	–	9.0	1.5	1.2
TN 16EL080UN	**T8030**	–	160	95	150	480	40	–	–	8.0	1.5	1.2
TN 22EL070UN	**T8030**	–	160	95	150	480	40	–	–	7.0	2.5	1.8
TN 22EL060UN	**T8030**	–	160	95	150	480	40	–	–	6.0	2.5	1.8
TN 22EL050UN	**T8030**	–	160	95	150	480	40	–	–	5.0	2.5	1.8

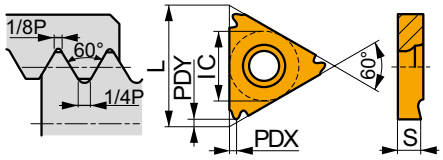
Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	M vc [m/min]	K vc [m/min]	N vc [m/min]	S vc [m/min]	H vc [m/min]	TP [mm]	TPI	PDX [mm]	PDY [mm]
												
			TN UN-P1 ER pressed external, right-handed design, for machining Unified threads, and continuous cuts.									
TN 16ER200UN-P1	**T8030**	–	160	95	150	480	40	–	–	20.0	0.8	0.8
TN 16ER180UN-P1	**T8030**	–	160	95	150	480	40	–	–	18.0	0.8	0.8
TN 16ER160UN-P1	**T8030**	–	160	95	150	480	40	–	–	16.0	0.8	0.8
TN 16ER140UN-P1	**T8030**	–	160	95	150	480	40	–	–	14.0	1.5	1.2
TN 16ER120UN-P1	**T8030**	–	160	95	150	480	40	–	–	12.0	1.5	1.2
TN 16ER080UN-P1	**T8030**	–	160	95	150	480	40	–	–	8.0	1.5	1.2

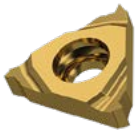
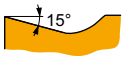
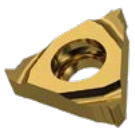
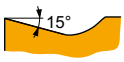
TN UN INT

PRAMET

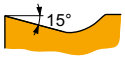
	IC [mm]	L [mm]	S [mm]
16	9.525	16.50	3.47
22	12.700	22.00	4.71



Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

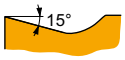
Product		RE [mm]	P vc [m/min]	M vc [m/min]	K vc [m/min]	N vc [m/min]	S vc [m/min]	H vc [m/min]	TP [mm]	TPI	PDX [mm]	PDY [mm]
												
			TN UN NR internal, right-handed design, for machining Unified threads, and continuous cuts.									
TN 16NR320UN	**T8030**	–	160	95	150	480	40	–	–	32.0	0.8	0.8
TN 16NR280UN	**T8030**	–	160	95	150	480	40	–	–	28.0	0.8	0.8
TN 16NR240UN	**T8030**	–	160	95	150	480	40	–	–	24.0	0.8	0.8
TN 16NR200UN	**T8010**	–	175	105	165	–	40	–	–	20.0	0.8	0.8
	T8030	–	160	95	150	480	40	–	–	20.0	0.8	0.8
TN 16NR180UN	**T8030**	–	160	95	150	480	40	–	–	18.0	0.8	0.8
TN 16NR160UN	**T8030**	–	160	95	150	480	40	–	–	16.0	0.8	0.8
TN 16NR140UN	**T8030**	–	160	95	150	480	40	–	–	14.0	1.5	1.2
TN 16NR130UN	**T8030**	–	160	95	150	480	40	–	–	13.0	1.5	1.2
TN 16NR120UN	**T8010**	–	175	105	165	–	40	–	–	12.0	1.5	1.2
	T8030	–	160	95	150	480	40	–	–	12.0	1.5	1.2
TN 16NR115UN	**T8030**	–	160	95	150	480	40	–	–	11.5	1.5	1.2
TN 16NR110UN	**T8030**	–	160	95	150	480	40	–	–	11.0	1.5	1.2
TN 16NR100UN	**T8030**	–	160	95	150	480	40	–	–	10.0	1.5	1.2
TN 16NR080UN	**T8010**	–	175	105	165	–	40	–	–	8.0	1.5	1.2
	T8030	–	160	95	150	480	40	–	–	8.0	1.5	1.2
TN 22NR070UN	**T8030**	–	160	95	150	480	40	–	–	7.0	2.5	1.8
TN 22NR060UN	**T8030**	–	160	95	150	480	40	–	–	6.0	2.5	1.8
TN 22NR050UN	**T8030**	–	160	95	150	480	40	–	–	5.0	2.5	1.8
												
			TN UN NL internal, left-handed design, for machining Unified threads, and continuous cuts.									
TN 16NL320UN	**T8030**	–	160	95	150	480	40	–	–	32.0	0.8	0.8

Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

Product		RE	P	M	K	N	S	H	TP	TPI	PDX	PDY
			vc	vc	vc	vc	vc	vc				
		[mm]	[m/min]	[m/min]	[m/min]	[m/min]	[m/min]	[m/min]	[mm]		[mm]	[mm]
												

TN UN NL internal, left-handed design, for machining Unified threads, and continuous cuts.

TN 16NL280UN	T8030	–	160	95	150	480	40	–	–	28.0	0.8	0.8
TN 16NL240UN	T8030	–	160	95	150	480	40	–	–	24.0	0.8	0.8
TN 16NL200UN	T8030	–	160	95	150	480	40	–	–	20.0	0.8	0.8
TN 16NL180UN	T8030	–	160	95	150	480	40	–	–	18.0	0.8	0.8
TN 16NL160UN	T8030	–	160	95	150	480	40	–	–	16.0	0.8	0.8
TN 16NL140UN	T8030	–	160	95	150	480	40	–	–	14.0	1.5	1.2
TN 16NL120UN	T8030	–	160	95	150	480	40	–	–	12.0	1.5	1.2
TN 16NL110UN	T8030	–	160	95	150	480	40	–	–	11.0	1.5	1.2
TN 16NL100UN	T8030	–	160	95	150	480	40	–	–	10.0	1.5	1.2
TN 16NL080UN	T8030	–	160	95	150	480	40	–	–	8.0	1.5	1.2
TN 22NL070UN	T8030	–	160	95	150	480	40	–	–	7.0	2.5	1.8
TN 22NL060UN	T8030	–	160	95	150	480	40	–	–	6.0	2.5	1.8



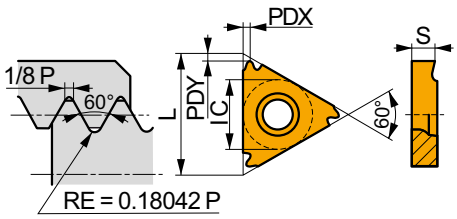
TN UN-P1 NR pressed internal, right-handed design, for machining Unified threads, and continuous cuts.

TN 16NR200UN-P1	T8030	–	160	95	150	480	40	–	–	20.0	0.8	0.8
TN 16NR180UN-P1	T8030	–	160	95	150	480	40	–	–	18.0	0.8	0.8
TN 16NR160UN-P1	T8030	–	160	95	150	480	40	–	–	16.0	0.8	0.8
TN 16NR140UN-P1	T8030	–	160	95	150	480	40	–	–	14.0	1.5	1.2
TN 16NR120UN-P1	T8030	–	160	95	150	480	40	–	–	12.0	1.5	1.2
TN 16NR080UN-P1	T8030	–	160	95	150	480	40	–	–	8.0	1.5	1.2

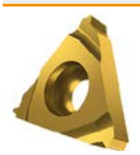
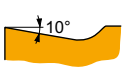
TN UNJ EXT

PRAMET

	IC	L	S
	[mm]	[mm]	[mm]
16	9.525	16.50	3.47



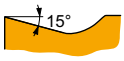
Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

Product		RE	P	M	K	N	S	H	TP	TPI	PDX	PDY
			vc	vc	vc	vc	vc	vc				
		[mm]	[m/min]	[m/min]	[m/min]	[m/min]	[m/min]	[m/min]	[mm]		[mm]	[mm]
												

TN UNJ ER external, right-handed design, for machining Unified "J form" threads, and continuous cuts.

TN 16ER320UNJ	T8030	–	160	95	150	480	40	–	–	32.0	0.8	0.8
TN 16ER280UNJ	T8030	–	160	95	150	480	40	–	–	28.0	0.8	0.8
TN 16ER240UNJ	T8030	–	160	95	150	480	40	–	–	24.0	0.8	0.8
TN 16ER200UNJ	T8030	–	160	95	150	480	40	–	–	20.0	0.8	0.8
TN 16ER180UNJ	T8030	–	160	95	150	480	40	–	–	18.0	0.8	0.8
TN 16ER160UNJ	T8030	–	160	95	150	480	40	–	–	16.0	1.5	1.2
TN 16ER120UNJ	T8030	–	160	95	150	480	40	–	–	12.0	1.5	1.2

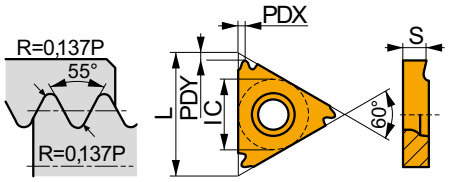
Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

Product		RE	P	M	K	N	S	H	TP	TPI	PDX	PDY
		[mm]	vc [m/min]	vc [m/min]	vc [m/min]	vc [m/min]	vc [m/min]	vc [m/min]	[mm]		[mm]	[mm]
			TN UNJ EL external, left-handed design, for machining Unified "J form" threads, and continuous cuts.									
TN 16EL320UNJ	T8030	–	160	95	150	480	40	–	–	32.0	0.8	0.8
TN 16EL280UNJ	T8030	–	160	95	150	480	40	–	–	28.0	0.8	0.8
TN 16EL240UNJ	T8030	–	160	95	150	480	40	–	–	24.0	0.8	0.8
TN 16EL200UNJ	T8030	–	160	95	150	480	40	–	–	20.0	0.8	0.8
TN 16EL180UNJ	T8030	–	160	95	150	480	40	–	–	18.0	0.8	0.8
TN 16EL160UNJ	T8030	–	160	95	150	480	40	–	–	16.0	1.5	1.2
TN 16EL120UNJ	T8030	–	160	95	150	480	40	–	–	12.0	1.5	1.2

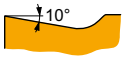
TN W EXT

PRAMET

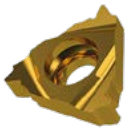
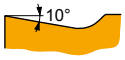
	IC	L	S
	[mm]	[mm]	[mm]
16	9.525	16.50	3.47
22	12.700	22.00	4.71



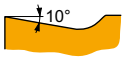
Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

Product		RE	P	M	K	N	S	H	TP	TPI	PDX	PDY
		[mm]	vc [m/min]	vc [m/min]	vc [m/min]	vc [m/min]	vc [m/min]	vc [m/min]	[mm]		[mm]	[mm]
			TN W ER external, right-handed design, for machining Whitworth form threads, and continuous cuts.									
TN 16ER280W	T8030	–	160	95	150	480	40	–	–	28.0	0.8	0.8
TN 16ER260W	T8030	–	160	95	150	480	40	–	–	26.0	0.8	0.8
TN 16ER240W	T8030	–	160	95	150	480	40	–	–	24.0	0.8	0.8
TN 16ER200W	T8030	–	160	95	150	480	40	–	–	20.0	0.8	0.8
TN 16ER190W	T8010	–	175	105	165	–	40	–	–	19.0	0.8	0.8
	T8030	–	160	95	150	480	40	–	–	19.0	0.8	0.8
TN 16ER180W	T8030	–	160	95	150	480	40	–	–	18.0	0.8	0.8
TN 16ER160W	T8030	–	160	95	150	480	40	–	–	16.0	0.8	0.8
TN 16ER140W	T8010	–	175	105	165	–	40	–	–	14.0	1.5	1.2
	T8030	–	160	95	150	480	40	–	–	14.0	1.5	1.2
TN 16ER120W	T8030	–	160	95	150	480	40	–	–	12.0	1.5	1.2
TN 16ER110W	T8010	–	175	105	165	–	40	–	–	11.0	1.5	1.2
	T8030	–	160	95	150	480	40	–	–	11.0	1.5	1.2
TN 16ER100W	T8030	–	160	95	150	480	40	–	–	10.0	1.5	1.2
TN 16ER090W	T8030	–	160	95	150	480	40	–	–	9.0	1.5	1.2
TN 16ER080W	T8030	–	160	95	150	480	40	–	–	8.0	1.5	1.2
TN 22ER070W	T8030	–	160	95	150	480	40	–	–	7.0	2.5	1.8
TN 22ER060W	T8030	–	160	95	150	480	40	–	–	6.0	2.5	1.8
TN 22ER050W	T8030	–	160	95	150	480	40	–	–	5.0	2.5	1.7

Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

Product		RE	P	M	K	N	S	H	TP	TPI	PDX	PDY
			vc	vc	vc	vc	vc	vc				
		[mm]	[m/min]	[m/min]	[m/min]	[m/min]	[m/min]	[m/min]	[mm]		[mm]	[mm]
												

TN W EL external, left-handed design, for machining Whitworth form threads, and continuous cuts.

TN 16EL280W	**T8030**	–	160	95	150	480	40	–	–	28.0	0.8	0.8
TN 16EL260W	**T8030**	–	160	95	150	480	40	–	–	26.0	0.8	0.8
TN 16EL240W	**T8030**	–	160	95	150	480	40	–	–	24.0	0.8	0.8
TN 16EL200W	**T8030**	–	160	95	150	480	40	–	–	20.0	0.8	0.8
TN 16EL190W	**T8030**	–	160	95	150	480	40	–	–	19.0	0.8	0.8
TN 16EL160W	**T8030**	–	160	95	150	480	40	–	–	16.0	0.8	0.8
TN 16EL140W	**T8030**	–	160	95	150	480	40	–	–	14.0	1.5	1.2
TN 16EL120W	**T8030**	–	160	95	150	480	40	–	–	12.0	1.5	1.2
TN 16EL110W	**T8030**	–	160	95	150	480	40	–	–	11.0	1.5	1.2
TN 16EL100W	**T8030**	–	160	95	150	480	40	–	–	10.0	1.5	1.2
TN 16EL090W	**T8030**	–	160	95	150	480	40	–	–	9.0	1.5	1.2
TN 16EL080W	**T8030**	–	160	95	150	480	40	–	–	8.0	1.5	1.2
TN 22EL070W	**T8030**	–	160	95	150	480	40	–	–	7.0	2.5	1.8
TN 22EL060W	**T8030**	–	160	95	150	480	40	–	–	6.0	2.5	1.8
TN 22EL050W	**T8030**	–	160	95	150	480	40	–	–	5.0	2.5	1.7
												

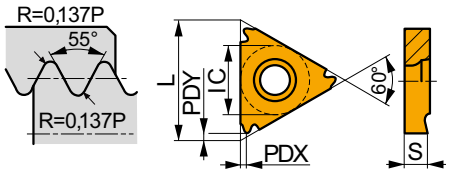
TN W-P1 ER pressed external, right-handed design, for machining Whitworth form threads, and continuous cuts.

TN 16ER190W-P1	**T8030**	–	160	95	150	480	40	–	–	19.0	0.8	0.8
TN 16ER140W-P1	**T8030**	–	160	95	150	480	40	–	–	14.0	1.5	1.2
TN 16ER110W-P1	**T8030**	–	160	95	150	480	40	–	–	11.0	1.5	1.2

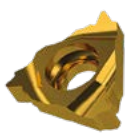
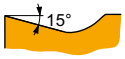
TN W INT

PRAMET

	IC	L	S
	[mm]	[mm]	[mm]
11	6.350	11.00	3.00
16	9.525	16.50	3.47
22	12.700	22.00	4.71



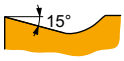
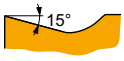
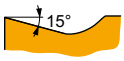
Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

Product		RE	P	M	K	N	S	H	TP	TPI	PDX	PDY
			vc	vc	vc	vc	vc	vc				
		[mm]	[m/min]	[m/min]	[m/min]	[m/min]	[m/min]	[m/min]	[mm]		[mm]	[mm]
												

TN W NR internal, right-handed design, for machining Whitworth form threads, and continuous cuts.

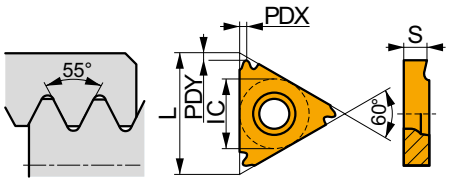
TN 11NR190W	**T8010**	–	175	105	165	–	40	–	–	19.0	0.8	0.8
	T8030	–	160	95	150	480	40	–	–	19.0	0.8	0.8
TN 11NR140W	**T8010**	–	175	105	165	–	40	–	–	14.0	0.9	0.7
	T8030	–	160	95	150	480	40	–	–	14.0	0.9	0.7
TN 16NR280W	**T8030**	–	160	95	150	480	40	–	–	28.0	0.8	0.8
TN 16NR260W	**T8030**	–	160	95	150	480	40	–	–	26.0	0.8	0.8
TN 16NR240W	**T8030**	–	160	95	150	480	40	–	–	24.0	0.8	0.8
TN 16NR200W	**T8030**	–	160	95	150	480	40	–	–	20.0	0.8	0.8

Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

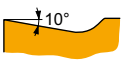
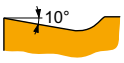
Product		RE	P		M		K		N		S		H		TP	TPI	PDX	PDY
			vc		vc		vc		vc		vc		vc					
		[mm]	[m/min]		[m/min]		[m/min]		[m/min]		[m/min]		[m/min]		[mm]		[mm]	[mm]
			TN W NR internal, right-handed design, for machining Whitworth form threads, and continuous cuts.															
TN 16NR190W	**T8010**	–	■	175	◪	105	■	165		–	◪	40		–	–	19.0	0.8	0.8
	T8030	–	■	160	■	95	■	150	◪	480	◪	40		–	–	19.0	0.8	0.8
TN 16NR160W	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	–	16.0	0.8	0.8
TN 16NR140W	**T8010**	–	■	175	◪	105	■	165		–	◪	40		–	–	14.0	1.5	1.2
	T8030	–	■	160	■	95	■	150	◪	480	◪	40		–	–	14.0	1.5	1.2
TN 16NR120W	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	–	12.0	1.5	1.2
TN 16NR110W	**T8010**	–	■	175	◪	105	■	165		–	◪	40		–	–	11.0	1.5	1.2
	T8030	–	■	160	■	95	■	150	◪	480	◪	40		–	–	11.0	1.5	1.2
TN 16NR100W	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	–	10.0	1.5	1.2
TN 16NR090W	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	–	9.0	1.5	1.2
TN 16NR080W	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	–	8.0	1.5	1.2
TN 22NR070W	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	–	7.0	2.5	1.8
TN 22NR060W	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	–	6.0	2.5	1.8
TN 22NR050W	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	–	5.0	2.5	1.7
			TN W NL internal, left-handed design, for machining Whitworth form threads, and continuous cuts.															
TN 11NL190W	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	–	19.0	0.8	0.8
TN 11NL140W	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	–	14.0	0.9	0.7
TN 16NL280W	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	–	28.0	0.8	0.8
TN 16NL260W	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	–	26.0	0.8	0.8
TN 16NL240W	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	–	24.0	0.8	0.8
TN 16NL200W	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	–	20.0	0.8	0.8
TN 16NL190W	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	–	19.0	0.8	0.8
TN 16NL160W	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	–	16.0	0.8	0.8
TN 16NL140W	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	–	14.0	1.5	1.2
TN 16NL120W	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	–	12.0	1.5	1.2
TN 16NL110W	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	–	11.0	1.5	1.2
TN 16NL100W	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	–	10.0	1.5	1.2
TN 16NL090W	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	–	9.0	1.5	1.2
TN 16NL080W	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	–	8.0	1.5	1.2
TN 22NL070W	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	–	7.0	2.5	1.8
TN 22NL060W	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	–	6.0	2.5	1.8
TN 22NL050W	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	–	5.0	2.5	1.7
			TN W-P1 NR pressed internal, right-handed design, for machining Whitworth form threads, and continuous cuts.															
TN 11NR190W-P1	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	–	19.0	0.8	0.8
TN 11NR140W-P1	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	–	14.0	0.9	0.7
TN 16NR140W-P1	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	–	14.0	1.5	1.2
TN 16NR110W-P1	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	–	11.0	1.5	1.2

TN 55° PP EXT

	IC [mm]	L [mm]	S [mm]
16	9.525	16.50	3.47
22	12.700	22.00	4.71

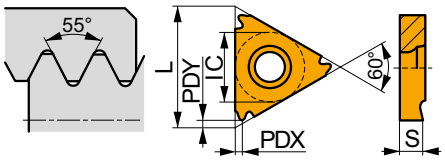


Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

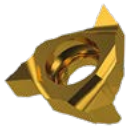
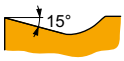
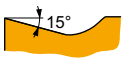
Product		RE [mm]	P vc [m/min]	M vc [m/min]	K vc [m/min]	N vc [m/min]	S vc [m/min]	H vc [m/min]	TPN [mm]	TPX [mm]	TPIN	TPIX	PDX [mm]	PDY [mm]
														
			TN W55 PP ER external, right-handed design, for machining Whitworth threads, and continuous cuts.											
TN 16ERA55	**T8030**	–	160	95	150	480	40	–	0.50	1.50	16	48	0.8	0.6
TN 16ERAG55	**T8010**	–	175	105	165	–	40	–	0.50	3.00	8	48	1.5	1.1
	T8030	–	160	95	150	480	40	–	0.50	3.00	8	48	1.5	1.1
TN 16ERG55	**T8030**	–	160	95	150	480	40	–	1.75	3.00	8	14	1.5	1.1
TN 22ERN55	**T8010**	–	175	105	165	–	40	–	3.50	5.00	5	7	2.5	1.8
	T8030	–	160	95	150	480	40	–	3.50	5.00	5	7	2.5	1.8
														
			TN W55 PP EL external, left-handed design, for machining Whitworth threads, and continuous cuts.											
TN 16ELA55	**T8030**	–	160	95	150	480	40	–	0.50	1.50	16	48	0.8	0.6
TN 16ELAG55	**T8030**	–	160	95	150	480	40	–	0.50	3.00	8	48	1.5	1.1
TN 16ELG55	**T8030**	–	160	95	150	480	40	–	1.75	3.00	8	14	1.5	1.1
TN 22ELN55	**T8030**	–	160	95	150	480	40	–	3.50	5.00	5	7	2.5	1.8

TN 55° PP INT

	IC [mm]	L [mm]	S [mm]
11	6.350	11.00	3.00
16	9.525	16.50	3.47
22	12.700	22.00	4.71



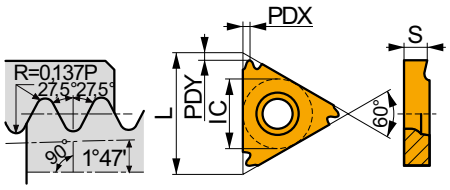
Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	M vc [m/min]	K vc [m/min]	N vc [m/min]	S vc [m/min]	H vc [m/min]	TPN [mm]	TPX [mm]	TPIN	TPIX	PDX [mm]	PDY [mm]
														
			TN W55 PP NR internal, right-handed design, for machining Whitworth threads, and continuous cuts.											
TN 11NRA55	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	0.50	1.50	16	48	0.8	0.6
TN 16NRA55	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	0.50	1.50	16	48	0.8	0.6
TN 16NRAG55	**T8010**	–	■ 175	◪ 105	■ 165	–	◪ 40	–	0.50	3.00	8	48	1.5	1.1
	T8030	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	0.50	3.00	8	48	1.5	1.1
TN 16NRG55	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	1.75	3.00	8	14	1.5	1.1
TN 22NRN55	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	3.50	5.00	5	7	2.5	1.8
														
			TN W55 PP NL internal, left-handed design, for machining Whitworth threads, and continuous cuts.											
TN 11NLA55	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	0.50	1.50	16	48	0.8	0.6
TN 16NLA55	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	0.50	1.50	16	48	0.8	0.6
TN 16NLAG55	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	0.50	3.00	8	48	1.5	1.1
TN 16NLG55	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	1.75	3.00	8	14	1.5	1.1
TN 22NLN55	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	3.50	5.00	5	7	2.5	1.8

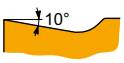
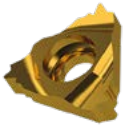
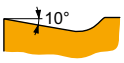
TN BSPT EXT

PRAMET

	IC [mm]	L [mm]	S [mm]
16	9.525	16.50	3.47



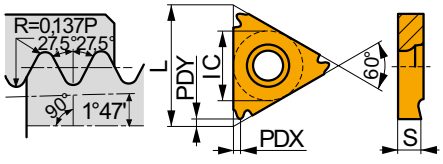
Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	M vc [m/min]	K vc [m/min]	N vc [m/min]	S vc [m/min]	H vc [m/min]	TP [mm]	TPI	PDX [mm]	PDY [mm]
												
			TN BSPT ER external, right-handed design, for machining BSPT threads, and continuous cuts.									
TN 16ER280BSPT	**T8030**	–	160	95	150	480	40	–	–	28.0	0.8	0.8
TN 16ER190BSPT	**T8030**	–	160	95	150	480	40	–	–	19.0	1.5	1.2
TN 16ER140BSPT	**T8030**	–	160	95	150	480	40	–	–	14.0	1.5	1.2
TN 16ER110BSPT	**T8030**	–	160	95	150	480	40	–	–	11.0	1.5	1.2
												
			TN BSPT EL external, left-handed design, for machining BSPT threads, and continuous cuts.									
TN 16EL280BSPT	**T8030**	–	160	95	150	480	40	–	–	28.0	0.8	0.8
TN 16EL190BSPT	**T8030**	–	160	95	150	480	40	–	–	19.0	1.5	1.2
TN 16EL140BSPT	**T8030**	–	160	95	150	480	40	–	–	14.0	1.5	1.2
TN 16EL110BSPT	**T8030**	–	160	95	150	480	40	–	–	11.0	1.5	1.2

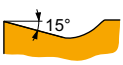
TN BSPT INT

PRAMET

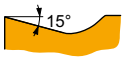
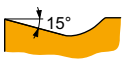
	IC [mm]	L [mm]	S [mm]
16	9.525	16.50	3.47



Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	M vc [m/min]	K vc [m/min]	N vc [m/min]	S vc [m/min]	H vc [m/min]	TP [mm]	TPI	PDX [mm]	PDY [mm]
												
			TN BSPT NR internal, right-handed design, for machining BSPT threads, and continuous cuts.									
TN 16NR280BSPT	**T8030**	–	160	95	150	480	40	–	–	28.0	0.8	0.8
TN 16NR190BSPT	**T8030**	–	160	95	150	480	40	–	–	19.0	1.5	1.2

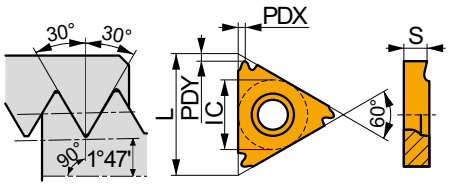
Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

Product		RE	P	M	K	N	S	H	TP	TPI	PDX	PDY
			vc	vc	vc	vc	vc	vc				
		[mm]	[m/min]	[m/min]	[m/min]	[m/min]	[m/min]	[m/min]	[mm]		[mm]	[mm]
												
TN BSPT NR internal, right-handed design, for machining BSPT threads, and continuous cuts.												
TN 16NR140BSPT	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	14.0	1.5	1.2
TN 16NR110BSPT	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	11.0	1.5	1.2
												
TN BSPT NL internal, left-handed design, for machining BSPT threads, and continuous cuts.												
TN 16NL280BSPT	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	28.0	0.8	0.8
TN 16NL190BSPT	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	19.0	1.5	1.2
TN 16NL140BSPT	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	14.0	1.5	1.2
TN 16NL110BSPT	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	11.0	1.5	1.2

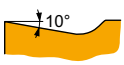
TN NPT EXT

PRAMET

	IC	L	S
	[mm]	[mm]	[mm]
16	9.525	16.50	3.47



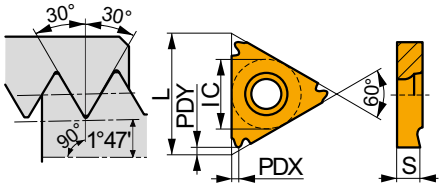
Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

Product		RE	P	M	K	N	S	H	TP	TPI	PDX	PDY
			vc	vc	vc	vc	vc	vc				
		[mm]	[m/min]	[m/min]	[m/min]	[m/min]	[m/min]	[m/min]	[mm]		[mm]	[mm]
												
TN NPT ER external, right-handed design, for machining NPT threads, and continuous cuts.												
TN 16ER270NPT	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	27.0	0.8	0.7
TN 16ER180NPT	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	18.0	0.8	0.7
TN 16ER140NPT	**T8010**	–	■ 175	◪ 105	■ 165	–	◪ 40	–	–	14.0	1.5	1.1
	T8030	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	14.0	1.5	1.1
TN 16ER115NPT	**T8010**	–	■ 175	◪ 105	■ 165	–	◪ 40	–	–	11.5	1.5	1.1
	T8030	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	11.5	1.5	1.1
TN 16ER080NPT	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	8.0	1.6	1.1

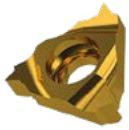
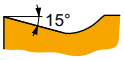
TN NPT INT

PRAMET

	IC [mm]	L [mm]	S [mm]
11	6.350	11.00	3.00
16	9.525	16.50	3.47



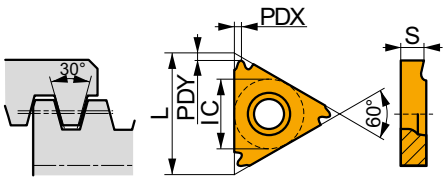
Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	M vc [m/min]	K vc [m/min]	N vc [m/min]	S vc [m/min]	H vc [m/min]	TP [mm]	TPI	PDX [mm]	PDY [mm]
			1 U E									
TN NPT NR internal, right-handed design, for machining NPT threads, and continuous cuts.												
TN 11NR180NPT	**T8030**	–	160	95	150	480	40	–	–	18.0	0.8	0.7
TN 11NR140NPT	**T8030**	–	160	95	150	480	40	–	–	14.0	1.0	0.7
TN 16NR140NPT	**T8010**	–	175	105	165	–	40	–	–	14.0	1.5	1.1
	T8030	–	160	95	150	480	40	–	–	14.0	1.5	1.1
TN 16NR115NPT	**T8010**	–	175	105	165	–	40	–	–	11.5	1.5	1.1
	T8030	–	160	95	150	480	40	–	–	11.5	1.5	1.1
TN 16NR080NPT	**T8030**	–	160	95	150	480	40	–	–	8.0	1.6	1.1

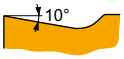
TN TR EXT

PRAMET

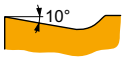
	IC [mm]	L [mm]	S [mm]
16	9.525	16.50	3.47
22	12.700	22.00	4.71



Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	M vc [m/min]	K vc [m/min]	N vc [m/min]	S vc [m/min]	H vc [m/min]	TP [mm]	TPI	PDX [mm]	PDY [mm]
			1 U E									
TN TR ER external, right-handed design, for machining Trapezoidal threads, and continuous cuts.												
TN 16ER150TR	**T8030**	–	160	95	150	480	40	–	1.50	–	0.8	0.9
TN 16ER200TR	**T8030**	–	160	95	150	480	40	–	2.00	–	1.5	1.3
TN 16ER300TR	**T8030**	–	160	95	150	480	40	–	3.00	–	1.6	1.3
TN 22ER400TR	**T8030**	–	160	95	150	480	40	–	4.00	–	2.2	1.8
TN 22ER500TR	**T8030**	–	160	95	150	480	40	–	5.00	–	2.2	1.8

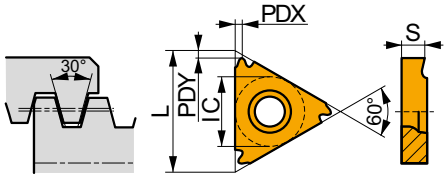
Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

Product		RE	P	M	K	N	S	H	TP	TPI	PDX	PDY
			vc	vc	vc	vc	vc	vc				
		[mm]	[m/min]	[m/min]	[m/min]	[m/min]	[m/min]	[m/min]	[mm]		[mm]	[mm]
												
			TN TR EL external, left-handed design, for machining Trapezoidal threads, and continuous cuts.									
TN 16EL150TR	**T8030**	–	160	95	150	480	40	–	1.50	–	0.8	0.9
TN 16EL200TR	**T8030**	–	160	95	150	480	40	–	2.00	–	1.5	1.3
TN 16EL300TR	**T8030**	–	160	95	150	480	40	–	3.00	–	1.6	1.3
TN 22EL400TR	**T8030**	–	160	95	150	480	40	–	4.00	–	2.2	1.8
TN 22EL500TR	**T8030**	–	160	95	150	480	40	–	5.00	–	2.2	1.8

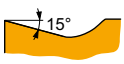
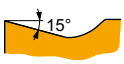
TN TR INT

PRAMET

	IC	L	S
	[mm]	[mm]	[mm]
16	9.525	16.50	3.47
22	12.700	22.00	4.71



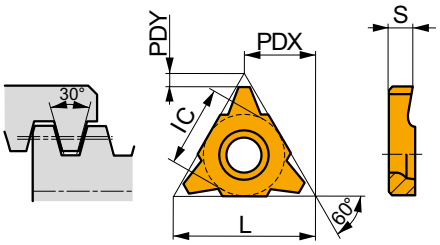
Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

Product		RE	P	M	K	N	S	H	TP	TPI	PDX	PDY
			vc	vc	vc	vc	vc	vc				
		[mm]	[m/min]	[m/min]	[m/min]	[m/min]	[m/min]	[m/min]	[mm]		[mm]	[mm]
												
			TN TR NR internal, right-handed design, for machining Trapezoidal threads, and continuous cuts.									
TN 16NR150TR	**T8030**	–	160	95	150	480	40	–	1.50	–	0.8	0.9
TN 16NR200TR	**T8030**	–	160	95	150	480	40	–	2.00	–	1.5	1.3
TN 16NR300TR	**T8030**	–	160	95	150	480	40	–	3.00	–	1.6	1.3
TN 22NR400TR	**T8030**	–	160	95	150	480	40	–	4.00	–	2.2	1.8
TN 22NR500TR	**T8030**	–	160	95	150	480	40	–	5.00	–	2.2	1.8
												
			TN TR NL internal, left-handed design, for machining Trapezoidal threads, and continuous cuts.									
TN 16NL150TR	**T8030**	–	160	95	150	480	40	–	1.50	–	0.8	0.9
TN 16NL200TR	**T8030**	–	160	95	150	480	40	–	2.00	–	1.5	1.3
TN 16NL300TR	**T8030**	–	160	95	150	480	40	–	3.00	–	1.6	1.3
TN 22NL400TR	**T8030**	–	160	95	150	480	40	–	4.00	–	2.2	1.8
TN 22NL500TR	**T8030**	–	160	95	150	480	40	–	5.00	–	2.2	1.8

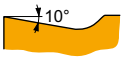
TN TR-S EXT

PRAMET

	IC [mm]	L [mm]	S [mm]
22	12.700	22.00	4.60



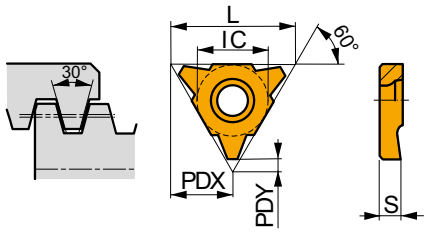
Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	M vc [m/min]	K vc [m/min]	N vc [m/min]	S vc [m/min]	H vc [m/min]	TP [mm]	TPI	PDX [mm]	PDY [mm]
												
TN TR-S PP EN external, left and right-handed design for machining Trapezoidal threads, and continuous cuts.												
TN 22EN600TR	**T8030**	–	160	95	150	480	40	–	6.00	–	11.0	1.9
TN 22EN700TR	**T8030**	–	160	95	150	480	40	–	7.00	–	11.0	2.3

TN TR-S INT

PRAMET

	IC [mm]	L [mm]	S [mm]
22	12.700	22.00	4.60

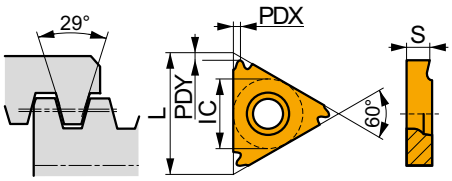


Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

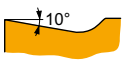
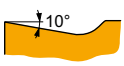
Product		RE [mm]	P vc [m/min]	M vc [m/min]	K vc [m/min]	N vc [m/min]	S vc [m/min]	H vc [m/min]	TP [mm]	TPI	PDX [mm]	PDY [mm]
TN M60-S PP NN internal, left and right-handed design, for machining Metric and Unified threads, and continuous cuts.												
TN 22NN600TR	**T8030**	–	160	95	150	480	40	–	6.00	–	11.0	1.9
TN 22NN700TR	**T8030**	–	160	95	150	480	40	–	7.00	–	11.0	2.3

TN ACME EXT

	IC [mm]	L [mm]	S [mm]
16	9.525	16.50	3.47
22	12.700	22.00	4.71

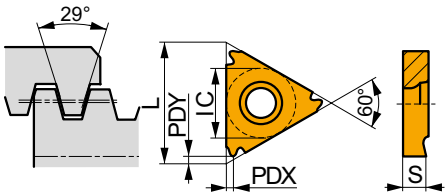


Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

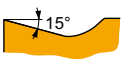
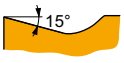
Product		RE [mm]	P vc [m/min]	M vc [m/min]	K vc [m/min]	N vc [m/min]	S vc [m/min]	H vc [m/min]	TP [mm]	TPI	PDX [mm]	PDY [mm]
												
TN ACME ER external, right-handed design, for machining ACME threads, and continuous cuts.												
TN 16ER120ACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	12.0	1.5	1.3
TN 16ER100ACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	10.0	1.5	1.3
TN 16ER080ACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	8.0	1.5	1.3
TN 22ER060ACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	6.0	2.5	2.0
TN 22ER050ACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	5.0	2.3	2.0
												
TN ACME EL external, left-handed design, for machining ACME threads, and continuous cuts.												
TN 16EL120ACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	12.0	1.5	1.3
TN 16EL100ACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	10.0	1.5	1.3
TN 16EL080ACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	8.0	1.5	1.3
TN 22EL060ACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	6.0	2.5	2.0
TN 22EL050ACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	5.0	2.3	2.0

TN ACME INT

	IC [mm]	L [mm]	S [mm]
16	9.525	16.50	3.47
22	12.700	22.00	4.71



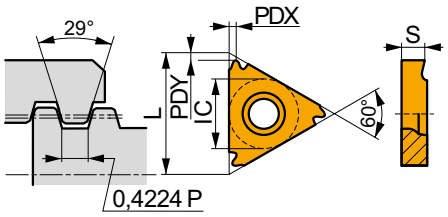
Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	M vc [m/min]	K vc [m/min]	N vc [m/min]	S vc [m/min]	H vc [m/min]	TP [mm]	TPI	PDX [mm]	PDY [mm]
												
TN ACME NR internal, right-handed design, for machining ACME threads, and continuous cuts.												
TN 16NR120ACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	12.0	1.5	1.3
TN 16NR100ACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	10.0	1.5	1.3
TN 16NR080ACME	**T8030**[1)]	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	8.0	1.5	1.3
TN 22NR060ACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	6.0	2.5	2.0
TN 22NR050ACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	5.0	2.3	2.0
												
TN ACME NL internal, left-handed design, for machining ACME threads, and continuous cuts.												
TN 16NL120ACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	12.0	1.5	1.3
TN 16NL100ACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	10.0	1.5	1.3
TN 16NL080ACME	**T8030**[1)]	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	8.0	1.5	1.3
TN 22NL060ACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	6.0	2.5	2.0
TN 22NL050ACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	5.0	2.3	2.0

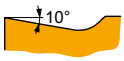
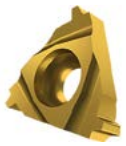
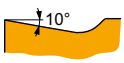
[1)] Toolholders have to be modified.

TN STACME EXT

	IC	L	S
	[mm]	[mm]	[mm]
16	9.525	16.50	3.47



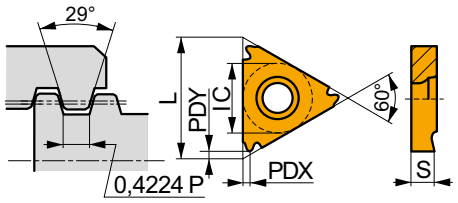
Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

Product		RE	P	M	K	N	S	H	TP	TPI	PDX	PDY
			vc	vc	vc	vc	vc	vc				
		[mm]	[m/min]	[m/min]	[m/min]	[m/min]	[m/min]	[m/min]	[mm]		[mm]	[mm]
												
TN STACME ER external, right-handed design, for machining Stub ACME threads, and continuous cuts.												
TN 16ER160STACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	16.0	0.8	0.8
TN 16ER120STACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	12.0	0.8	0.8
TN 16ER100STACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	10.0	1.5	1.3
TN 16ER080STACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	8.0	1.5	1.3
TN 16ER060STACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	6.0	1.4	1.3
												
TN STACME EL external, left-handed design, for machining Stub ACME threads, and continuous cuts.												
TN 16EL160STACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	16.0	0.8	0.8
TN 16EL120STACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	12.0	0.8	0.8
TN 16EL100STACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	10.0	1.5	1.3
TN 16EL080STACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	8.0	1.5	1.3
TN 16EL060STACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	6.0	1.4	1.3

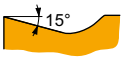
TN STACME INT

PRAMET

	IC	L	S
	[mm]	[mm]	[mm]
16	9.525	16.50	3.47



Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

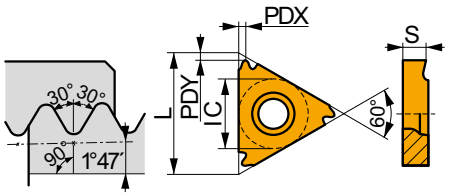
Product		RE	P	M	K	N	S	H	TP	TPI	PDX	PDY
			vc	vc	vc	vc	vc	vc				
		[mm]	[m/min]	[m/min]	[m/min]	[m/min]	[m/min]	[m/min]	[mm]		[mm]	[mm]
												
TN STACME NR internal, right-handed, design for machining Stub ACME threads, and continuous cuts.												
TN 16NR160STACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	16.0	0.8	0.8
TN 16NR120STACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	12.0	0.8	0.8
TN 16NR100STACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	10.0	1.5	1.3
TN 16NR080STACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	8.0	1.5	1.3
TN 16NR060STACME	**T8030**[1)]	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	6.0	1.3	1.3
TN STACME NL internal, left-handed design, for machining Stub ACME threads, and continuous cuts.												
TN 16NL160STACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	16.0	0.8	0.8
TN 16NL120STACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	12.0	0.8	0.8
TN 16NL100STACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	10.0	1.5	1.3
TN 16NL080STACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	8.0	1.5	1.3
TN 16NL060STACME	**T8030**[1)]	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	6.0	1.3	1.3

[1)] Toolholders have to be modified.

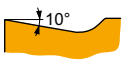
TN API RD EXT

PRAMET

	IC	L	S
	[mm]	[mm]	[mm]
16	9.525	16.50	3.47



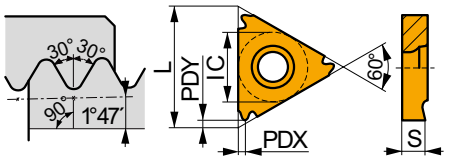
Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

Product		RE	P	M	K	N	S	H	TP	TPI	PDX	PDY
			vc	vc	vc	vc	vc	vc				
		[mm]	[m/min]	[m/min]	[m/min]	[m/min]	[m/min]	[m/min]	[mm]		[mm]	[mm]
												
			TN API ER external, right-handed design, for machining API threads, and continuous cuts.									
TN 16ER100API-RD01	**T8030**	–	160	95	150	480	40	–	–	10.0	1.5	1.2
TN 16ER080API-RD01	**T8030**	–	160	95	150	480	40	–	–	8.0	1.5	1.2

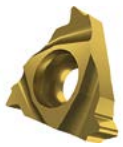
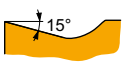
TN API RD INT

PRAMET

	IC	L	S
	[mm]	[mm]	[mm]
16	9.525	16.50	3.47



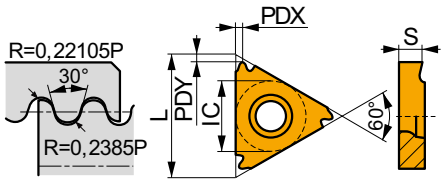
Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

Product		RE	P	M	K	N	S	H	TP	TPI	PDX	PDY
			vc	vc	vc	vc	vc	vc				
		[mm]	[m/min]	[m/min]	[m/min]	[m/min]	[m/min]	[m/min]	[mm]		[mm]	[mm]
												
			TN API NR internal, right-handed design, for machining API threads, and continuous cuts.									
TN 16NR100API-RD01	**T8030**	–	160	95	150	480	40	–	–	10.0	1.5	1.2
TN 16NR080API-RD01	**T8030**	–	160	95	150	480	40	–	–	8.0	1.5	1.2

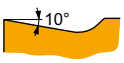
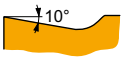
TN RD EXT

PRAMET

	IC [mm]	L [mm]	S [mm]
16	9.525	16.50	3.47
22	12.700	22.00	4.71



Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

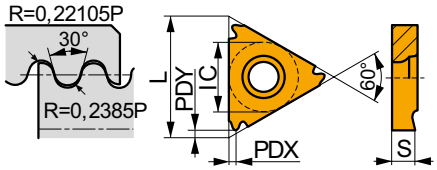
Product		RE [mm]	P vc [m/min]	M vc [m/min]	K vc [m/min]	N vc [m/min]	S vc [m/min]	H vc [m/min]	TP [mm]	TPI	PDX [mm]	PDY [mm]
												
			TN RD ER external, right-handed design, for machining Metric Round threads, and continuous cuts.									
TN 16ER100RD	**T8030**	–	160	95	150	480	40	–	–	10.0	1.5	1.2
TN 16ER080RD	**T8030**	–	160	95	150	480	40	–	–	8.0	1.5	1.2
TN 16ER060RD	**T8030**[1)]	–	160	95	150	480	40	–	–	6.0	1.5	1.2
TN 22ER060RD	**T8030**	–	160	95	150	480	40	–	–	6.0	2.5	1.8
												
			TN RD EL external, left-handed design, for machining Metric Round threads, and continuous cuts.									
TN 16EL100RD	**T8030**	–	160	95	150	480	40	–	–	10.0	1.5	1.2
TN 16EL080RD	**T8030**	–	160	95	150	480	40	–	–	8.0	1.5	1.2
TN 16EL060RD	**T8030**[1)]	–	160	95	150	480	40	–	–	6.0	1.5	1.2
TN 22EL060RD	**T8030**	–	160	95	150	480	40	–	–	6.0	2.5	1.8

[1)] Toolholders have to be modified.

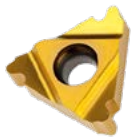
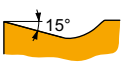
TN RD INT

PRAMET

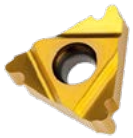
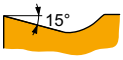
	IC [mm]	L [mm]	S [mm]
16	9.525	16.50	3.47
22	12.700	22.00	4.71



Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	M vc [m/min]	K vc [m/min]	N vc [m/min]	S vc [m/min]	H vc [m/min]	TP [mm]	TPI	PDX [mm]	PDY [mm]
												
			TN RD NR internal, right-handed design, for machining Metric Round threads, and continuous cuts.									
TN 16NR100RD	**T8030**	–	160	95	150	480	40	–	–	10.0	1.5	1.2
TN 16NR080RD	**T8030**	–	160	95	150	480	40	–	–	8.0	1.5	1.2

Suitability and starting values for cutting speed (vc). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	M vc [m/min]	K vc [m/min]	N vc [m/min]	S vc [m/min]	H vc [m/min]	TP [mm]	TPI	PDX [mm]	PDY [mm]
												
			TN RD NR internal, right-handed design, for machining Metric Round threads, and continuous cuts.									
TN 16NR060RD	**T8030**[1]	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	6.0	1.5	1.2
TN 22NR060RD	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	6.0	2.5	1.8
			TN RD NL internal, left-handed design, for machining Metric Round threads, and continuous cuts.									
TN 16NL100RD	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	10.0	1.5	1.2
TN 16NL080RD	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	8.0	1.5	1.2
TN 16NL060RD	**T8030**[1]	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	6.0	1.5	1.2
TN 22NL060RD	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	6.0	2.5	1.8

[1] Toolholders have to be modified.

SE(RL)

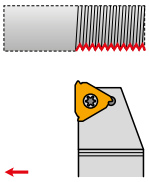
P M K N S H

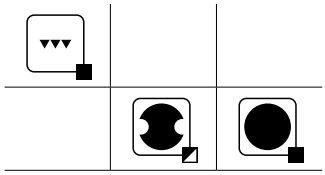
PRAMET

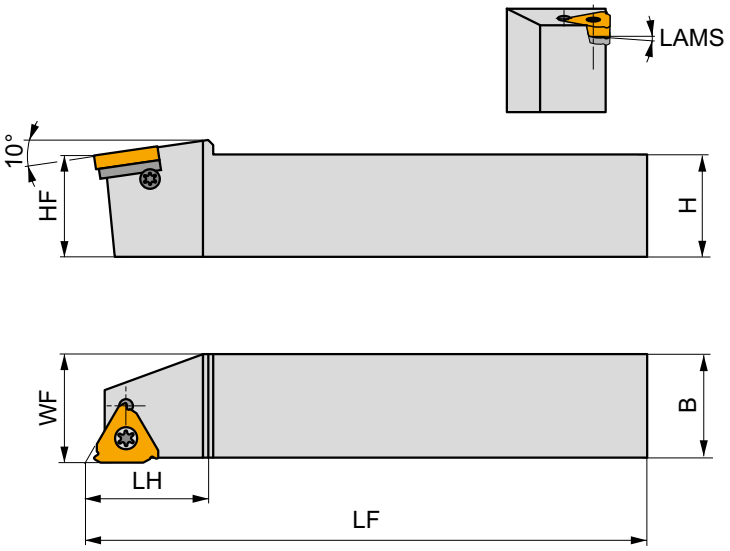
S

External Screw Clamped Threading Holder for TN 16 or 22 Insert

Right/Left hand screw lock tool holder for external threading with TN16 or 22 ER/EL inserts. Suited for threading in metric or inch profile. Also suited for shallow grooving. Body treated for longer tool life.







	Product	H [mm]	HF [mm]	B [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]		
R	**SER 2020 K 16**	20	20	20	20	125	22.5	–	GI068	Z12
	SER 2525 M 16	25	25	25	25	150	24	–	GI068	Z12
	SER 3225 P 16	32	32	25	25	170	24.5	–	GI068	Z12
	SER 2525 M 22-A	25	25	25	25	150	25.5	–	GI071	Z13
	SER 3225 P 22-A	32	32	25	25	170	25.5	–	GI071	Z13
L	**SEL 2020 K 16**	20	20	20	20	125	22.5	–	GI068	Z12
	SEL 2525 M 16	25	25	25	25	150	24	–	GI068	Z12
	SEL 3225 P 16	32	32	25	25	170	24.5	–	GI068	Z12
	SEL 2525 M 22-A	25	25	25	25	150	25.5	–	GI071	Z13
	SEL 3225 P 22-A	32	32	25	25	170	25.5	–	GI071	Z13

GI068	TN 16ER..	TN 16EL..
GI071	TN 22ER..	TN 22EL..

		Nm							
Z12	US 3512A-T15P	3.0	M 3.5	12.7	–	HS 0304	FLAG T15P	HXK 2.5	Page xx
Z13	US 4514A-T20	5.0	M 4.5	14	SP 0405	–	FLAG T20	–	Page xx

SE(RL)-S

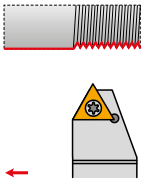
P M K N S H

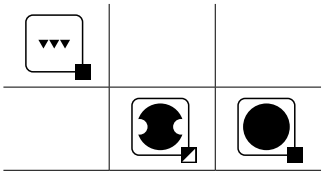
PRAMET

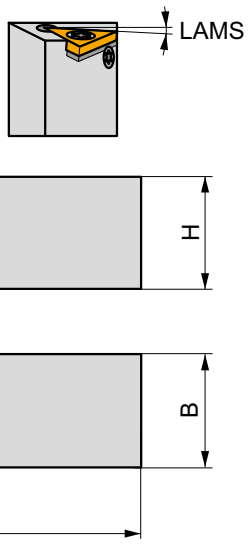
S

External Screw Clamped Threading Holder for TN 22 Neutral Insert

Right/Left hand screw lock tool holder for external large threading with TN22 EN insert. Suited for threading in metric or inch profile. Body treated for longer tool life.







	Product	H [mm]	HF [mm]	B [mm]	WF [mm]	LF [mm]	LH [mm]	LAMS [°]		
R	**SER-S 2525 M 22-A**	25	25	25	14	150	30	–	GI086	Z15
	SER-S 3225 P 22-A	32	32	25	14	170	30	–	GI086	Z15
L	**SEL-S 2525 M 22-A**	25	25	25	14	150	30	–	GI086	Z15
	SEL-S 3225 P 22-A	32	32	25	14	170	30	–	GI086	Z15

GI086	TN 22EN..

Z15	US 4514A-T20	5.0 Nm	M 4.5	14	SP 0405	FLAG T20	Page xx

SI(RL)

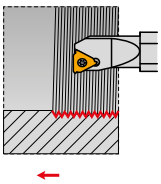
P M K N S H

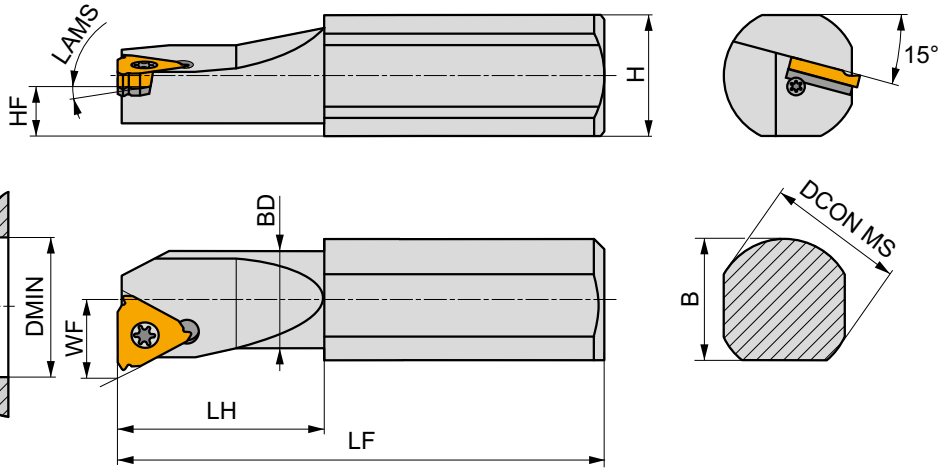
PRAMET

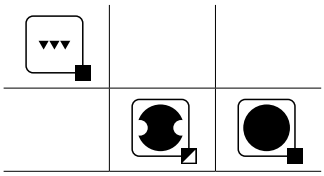
S

Internal Screw Clamped Threading Holder for TN 11, 16 or 22 Insert

Right/Left hand screw lock boring bar for internal threading with TN11, 16 or 22 ER/EL inserts. Suited for threading in metric or inch profile. Minimum internal diameter Ø13 mm. Also suited for shallow grooving. Available with shank size Ø16 up to Ø40 mm. Body treated for longer tool life.







	Product	B [mm]	DCON MS [mm]	DMIN [mm]	BD [mm]	WF [mm]	H [mm]	HF [mm]	LF [mm]	LH [mm]	LAMS [°]			
R	SIR 0010 K 11-0	14.5	16	13	10	7.45	14	7	125	25	0	–	GI085	Z11
	SIR 0010 K 11-1	14.5	16	13	10	7.45	14	7	125	25	1	–	GI085	Z11
	SIR 0013 M 11-0	14.5	16	16	13	9	14	7	150	32	0	–	GI085	Z11
	SIR 0013 M 11-1	14.5	16	16	13	9	14	7	150	32	1	–	GI085	Z11
	SIR 1416 N 16-0	14	16	22	17	11.4	14.5	7.5	160	–	0	–	GI022	Z9
	SIR 1416 N 16-1	14	16	22	17	11.4	14.5	7.5	160	–	1	–	GI022	Z9
	SIR 1416 N 16-2	14	16	16.5	15.5	10.6	14.5	7.5	160	40	2	✓	GI022	Z10
	SIR 1820 P 16	18.5	20	27	21	13.85	18	9	170	–	–	–	GI022	Z12
	SIR 2325 Q 16	23.5	25	29	26	16.55	23	11.5	180	–	–	–	GI022	Z12
	SIR 2532 S 16	30	32	36	32	19.75	25	12.5	250	–	–	–	GI022	Z12
	SIR 2532 S 22-2	30	32	25	25	16.65	25	12.5	250	80	2	✓	GI076	Z14
	SIR 2532 S 22-A	30	32	36	32	21.65	25	12.5	250	–	–	–	GI076	Z13
	SIR 3240 T 22-A	38	40	48	40	25.85	32	16	300	–	–	–	GI076	Z13
L	SIL 0010 K 11-0	14.5	16	13	10	7.45	14	7	125	25	0	–	GI085	Z11
	SIL 0010 K 11-1	14.5	16	13	10	7.55	14	7	125	25	1	–	GI085	Z11
	SIL 0013 M 11-0	14.5	16	16	13	9	14	7	150	32	0	–	GI085	Z11
	SIL 0013 M 11-1	14.5	16	16	13	9	14	7	150	32	1	–	GI085	Z11
	SIL 1416 N 16-0	14	16	22	17	11.4	14.5	7.5	160	–	0	–	GI022	Z9
	SIL 1416 N 16-1	14	16	22	17	11.4	14.5	7.5	160	–	1	–	GI022	Z9
	SIL 1416 N 16-2	14	16	16.5	15.5	10.6	14.5	7.5	160	40	2	✓	GI022	Z10
	SIL 1820 P 16	18.5	20	27	21	13.85	18	9	170	–	–	–	GI022	Z12
	SIL 2325 Q 16	23.5	25	29	26	16.55	23	11.5	180	–	–	–	GI022	Z12
	SIL 2532 S 16	30	32	36	32	19.75	25	12.5	250	–	–	–	GI022	Z12
	SIL 2532 S 22-2	30	32	25	25	16.65	25	12.5	250	80	2	✓	GI076	Z14
	SIL 2532 S 22-A	30	32	36	32	21.65	25	12.5	250	–	–	–	GI076	Z13
	SIL 3240 T 22-A	38	40	48	40	25.85	32	16	300	–	–	–	GI076	Z13

GI022	TN 16NR..	TN 16NL..
GI076	TN 22NR..	TN 22NL..
GI085	TN 11NR..	TN 11NL..

Z10	US 3510A-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–	–
Z11	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–	–
Z12	US 3512A-T15P	3.0	M 3.5	12.7	–	HS 0304	FLAG T15P	HXK 2.5	Page xx
Z13	US 4514A-T20	5.0	M 4.5	14	SP 0405	–	FLAG T20	–	Page xx
Z14	US 4514A-T20	5.0	M 4.5	14	–	–	FLAG T20	–	–
Z9	US 3510A-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–	P-16

SI(RL)-S

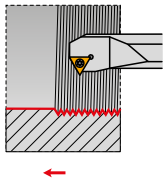
P M K N S H

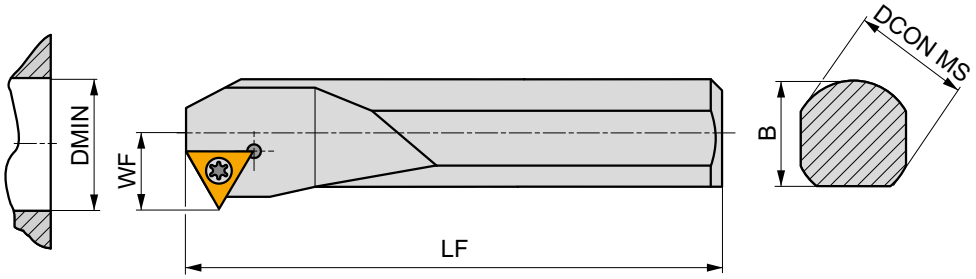
PRAMET

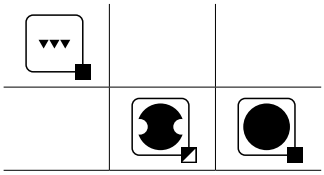
S

Internal Screw Clamped Threading Holder for TN 22 Neutral Insert

Right/Left hand screw lock boring bar for internal large threading with TN22 EN insert. Suited for threading in metric or inch profile. Minimum internal Ø39 mm. Available with shank size Ø32 up to Ø40 mm. Body treated for longer tool life.







	Product	B [mm]	DCON MS [mm]	DMIN [mm]	WF [mm]	H [mm]	HF [mm]	LF [mm]	LAMS [°]		
R	**SIR-S 2532 S 22-A**	30	32	39	22.3	25	12.5	250	–	GI107	Z15
	SIR-S 3240 T 22-A	38	40	48	27	32	16	300	–	GI107	Z15
L	**SIL-S 2532 S 22-A**	30	32	39	22.3	25	12.5	250	–	GI107	Z15
	SIL-S 3240 T 22-A	38	40	48	27	32	16	300	–	GI107	Z15

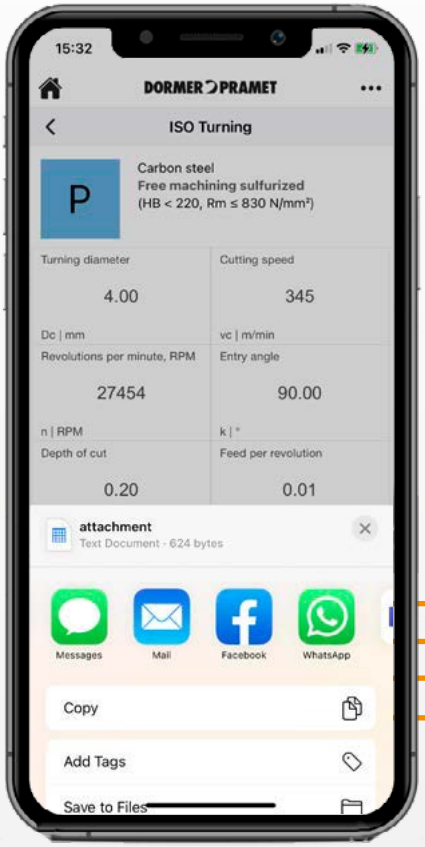
GI107	TN 22NN..

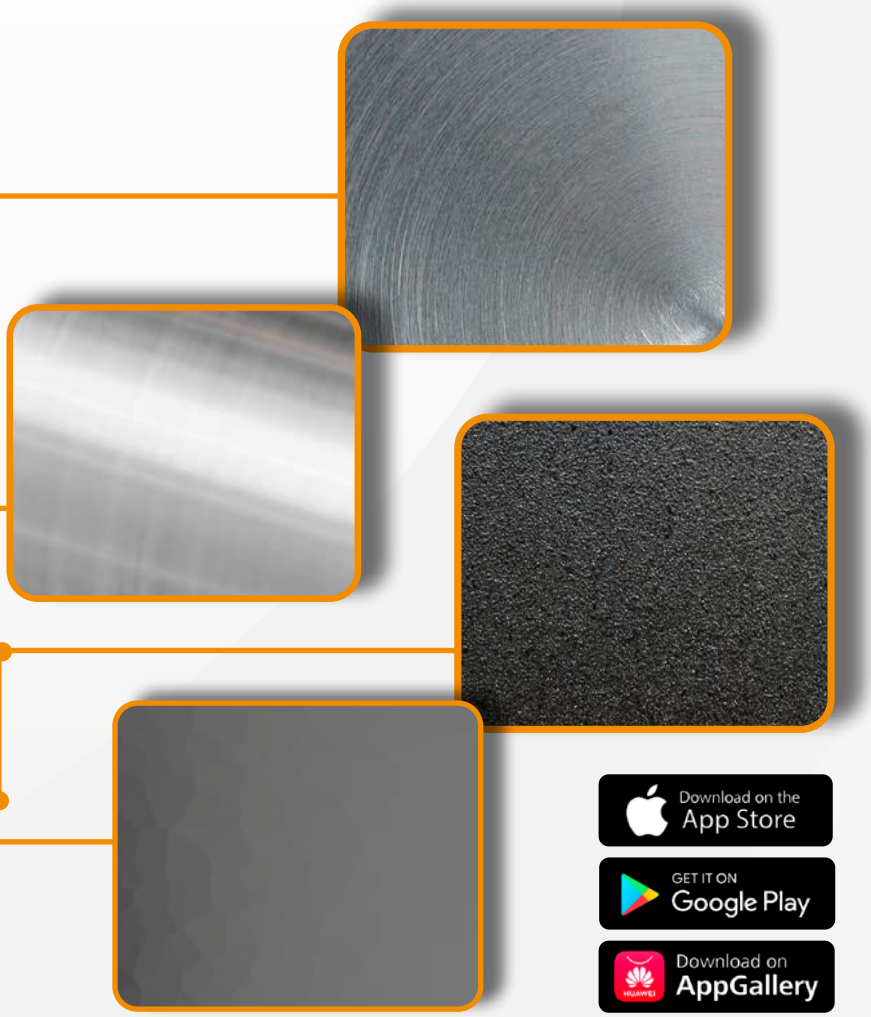
Z15	US 4514A-T20	5.0 Nm	M 4.5	14	SP 0405	FLAG T20	Page xx

DORMER PRAMET

EVERY MATERIAL

Machining steel, stainless steel, cast iron, super-alloys or non-ferrous materials, all are covered within our calculator app. Download it from your app store today. **Simply Reliable.**





Download on the App Store

GET IT ON Google Play

Download on AppGallery

BROACHING

6		WMG & ISO 13399
10	ISO TURNING	INSTRUCTIONS
18	ISO TURNING	NAVIGATORS
57	ISO TURNING	POSITIVE INSERTS
219	ISO TURNING	NEGATIVE INSERTS
386		PARTING-OFF & GROOVING
482		THREAD TURNING
528		**BROACHING**
536		GENERAL TECHNICAL INFORMATION

BROACHING – ICONS OVERVIEW

General icons

■	Primary use	▼▼▼	Finishing – very good surface quality	●	Suitable for stable working conditions
◪	Possible use	▼▼	Medium machining – good surface quality	●	Suitable for unstable working conditions
		▼	Roughing – unlimited surface roughness	●	Suitable for very unstable working conditions

Features

	Internal shaping	U	Universal wide range option	F	Sharp edge

Other

Nm	Clamping torque of screw [Nm]		Internal supply of coolant

BROACHING INSERTS – NAVIGATOR

HZ

531

HZ-2

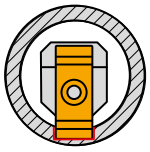
532

BROACHING HOLDERS – NAVIGATOR

PHZ

	HZ
	03 04 05 06 08 10 12
Ø 9,5 – Ø 24,7	
533	531

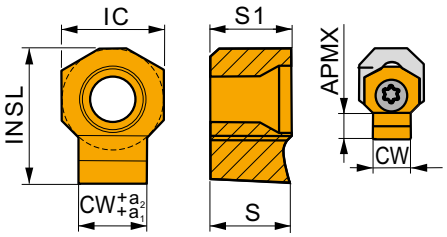
PHZ-2



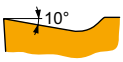
	HZ/2..
	14 16 18 20
Ø 44 – Ø 58	
534	532

HZ

	IC	INSL	APMX	S	S1	CW
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
0604-30	6.000	7.5	1.60	4.66	4.76	3.00
0604-40	6.000	8.0	2.50	4.66	4.76	4.00
0604-50	6.000	8.0	3.00	4.66	4.76	5.00
1006-60	10.000	13.5	4.20	6.25	6.35	6.00
1006-80	10.000	13.5	5.20	6.25	6.35	8.00
1309-100	13.000	18.5	6.20	9.40	9.53	10.00
1309-120	13.000	18.5	7.20	9.40	9.53	12.00

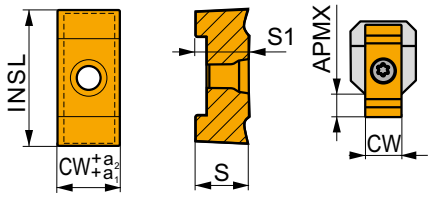


Suitability and starting values for cutting speed (vc) and feed (fz). Refer to our Machining Calculator app for further calculations.

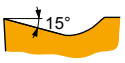
Product		RE	P		M		K		N		S		H		CW	CWTOLL	CWTOLU
			vc	fz	vc	fz	vc	fz	vc	fz	vc	fz	vc	fz			
		[mm]	[m/min]	[mm/tooth]	[m/min]	[mm/tooth]	[m/min]	[mm/tooth]	[m/min]	[mm/tooth]	[m/min]	[mm/tooth]	[m/min]	[mm/tooth]	[mm]	[mm]	[mm]
			U F														
Positive geometry for broaching (one cutting edge).																	
HZ 1006-60 C11	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	6.00	0.07	0.14
HZ 1006-60 D10	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	6.00	0.03	0.08
HZ 1006-60 H7	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	6.00	0.00	0.01
HZ 1006-60 P9	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	6.00	-0.04	-0.01
HZ 1006-80 C11	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	8.00	0.08	0.17
HZ 1006-80 D10	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	8.00	0.04	0.10
HZ 1006-80 H7	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	8.00	0.00	0.02
HZ 1006-80 P9	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	8.00	-0.05	-0.02
HZ 1309-100 C11	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	10.00	0.08	0.17
HZ 1309-100 D10	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	10.00	0.04	0.10
HZ 1309-100 H7	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	10.00	0.00	0.02
HZ 1309-100 P9	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	10.00	-0.05	-0.02
HZ 1309-120 C11	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	12.00	0.10	0.21
HZ 1309-120 D10	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	12.00	0.05	0.12
HZ 1309-120 H7	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	12.00	0.00	0.02
HZ 1309-120 P9	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	12.00	-0.06	-0.02
HZ90 0604-30 C11	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	3.00	0.06	0.12
HZ90 0604-30 D10	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	3.00	0.02	0.06
HZ90 0604-30 H7	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	3.00	0.00	0.01
HZ90 0604-30 P9	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	3.00	-0.03	-0.01
HZ90 0604-40 C11	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	4.00	0.07	0.14
HZ90 0604-40 D10	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	4.00	0.03	0.08
HZ90 0604-40 H7	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	4.00	0.00	0.01
HZ90 0604-40 P9	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	4.00	-0.04	-0.01
HZ90 0604-50 C11	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	5.00	0.07	0.14
HZ90 0604-50 D10	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	5.00	0.03	0.08
HZ90 0604-50 H7	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	5.00	0.00	0.01
HZ90 0604-50 P9	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	5.00	-0.04	-0.01

HZ-2

	INSL	APMX	S	S1	CW
	[mm]	[mm]	[mm]	[mm]	[mm]
14-14	36.0	8.00	13.90	14.00	14.00
16-16	36.0	9.00	13.90	14.00	16.00
18-18	45.0	12.00	15.90	16.00	18.00
20-20	45.0	13.00	15.90	16.00	20.00



Suitability and starting values for cutting speed (vc) and feed (fz). Refer to our Machining Calculator app for further calculations.

Product		RE	P		M		K		N		S		H		CW	CWTOLL	CWTOLU
			vc	fz	vc	fz	vc	fz	vc	fz	vc	fz	vc	fz			
		[mm]	[m/min]	[mm/tooth]	[m/min]	[mm/tooth]	[m/min]	[mm/tooth]	[m/min]	[mm/tooth]	[m/min]	[mm/tooth]	[m/min]	[mm/tooth]	[mm]	[mm]	[mm]
																	
			Positive geometry for broaching (two cutting edges).														
HZ/2 14-14 C11	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	14.00	0.10	0.21
HZ/2 14-14 H7	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	14.00	0.00	0.02
HZ/2 14-14 P9	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	14.00	-0.06	-0.02
HZ/2 16-16 C11	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	16.00	0.10	0.21
HZ/2 16-16 H7	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	16.00	0.00	0.02
HZ/2 16-16 P9	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	16.00	-0.06	-0.02
HZ/2 18-18 C11	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	18.00	0.10	0.21
HZ/2 18-18 H7	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	18.00	0.00	0.02
HZ/2 18-18 P9	**333TN**	–	50	0.10	30	0.10	45	0.10	–	–	–	–	–	–	18.00	-0.06	-0.02
HZ/2 20-20 C11	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	20.00	0.11	0.24
HZ/2 20-20 H7	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	20.00	0.00	0.02
HZ/2 20-20 P9	**333TN**	–	50	0.10	30	0.10	45	0.10	–	–	–	–	–	–	20.00	-0.07	-0.02

PHZ

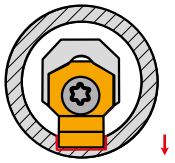
P M K N S H

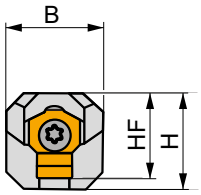
PRAMET

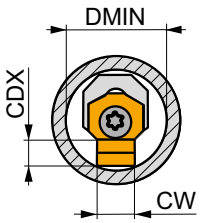
S

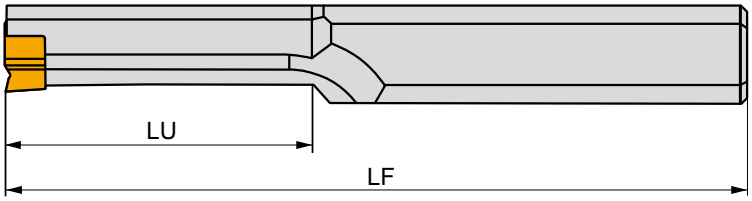
Int. Broaching Tool Holder for Small Diameters with Single-Sided HZ Inserts

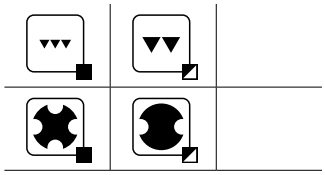
Internal tool holder for broaching up to 12 mm width. Minimum internal diameter Ø9.5 mm. Body treated for longer tool life.











	Product	H [mm]	HF [mm]	B [mm]	OAL [mm]	LU [mm]	CW [mm]	DMIN [mm]	CDX [mm]	kg		
N	**PHZ 90 1104-06**	11.3	9	8.5	160	35	3.00	9.5	1.6	0.17	GI239	SH21
	PHZ 90 1107-06	11.3	10	7	200	60	–	–	–	0.19	GI240	SH21
	PHZ 90 1111-06	11.3	12	–	200	60	–	–	–	0.19	GI240	SH21
	PHZ 1512-10	15.5	16.2	–	220	–	–	–	–	0.40	GI224	SH22
	PHZ 2014-13	20.6	21.5	–	250	–	–	–	–	0.65	GI225	SH23

GI224	HZ 1006-60	HZ 1006-80
GI225	HZ 1309-100	HZ 1309-120
GI239	HZ90 0604-30	–
GI240	HZ90 0604-40	HZ90 0604-50

SH21	DVF 3593	0.8	M 2.5	10	TX207PLUS
SH22	DVF 2260	3.6	M 4	15	TX215PLUS
SH23	5513 020-14	8.5	M 6	18	TX225PLUS

PHZ-2

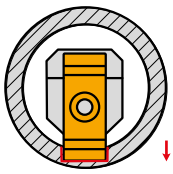
P M K N S H

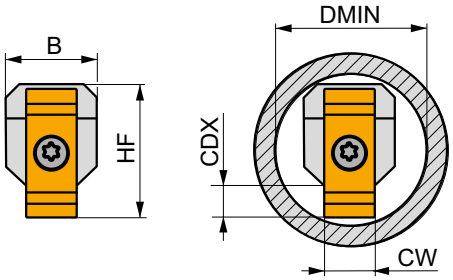
PRAMET

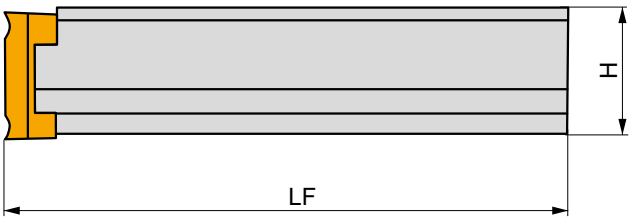
S

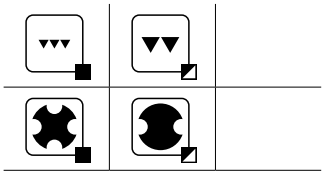
Int. Broaching Tool Holder for Larger Diameters with Double-Sided HZ Inserts

Internal tool holder for broaching up to 20 mm width. Minimum internal diameter Ø44 mm. Body treated for longer tool life.









	Product	H [mm]	HF [mm]	B [mm]	OAL [mm]	CW [mm]	DMIN [mm]	CDX [mm]	kg		
N	**PHZ/2 3625-14**	36	37.5	25	300	–	44	–	1.86	GI235	SH23
	PHZ/2 4832-18	48	50	32	400	–	58	–	2.00	GI241	SH24

GI235	HZ/2 14-14	HZ/2 16-16
GI241	HZ/2 18-18	HZ/2 20-20

		Nm			
SH23	5513 020-14	8.5	M 6	18	TX225PLUS
SH24	5513 021-03	13.0	M 8	22	DMN 3124

DORMER PRAMET

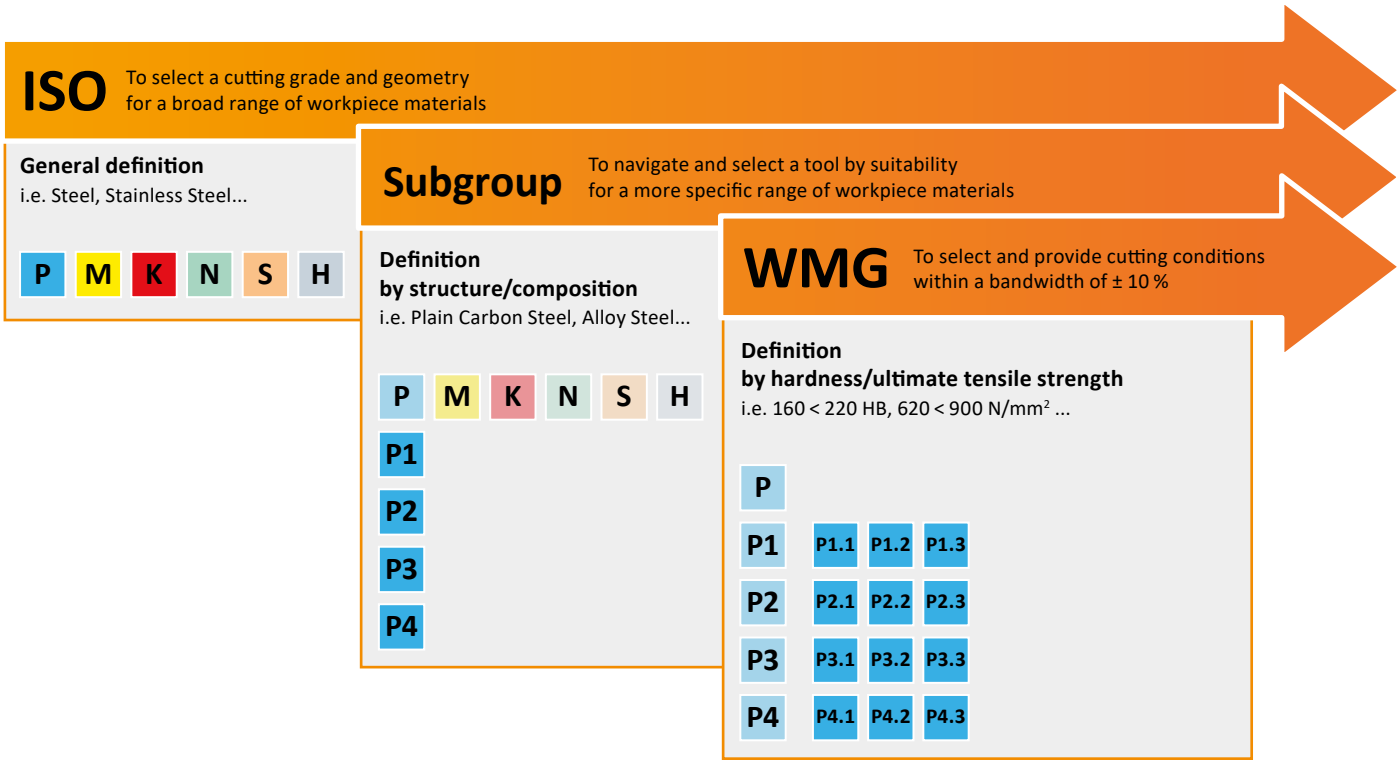
HELP IS AT HAND

Our techincal support team are always at hand to help with any technical questions or queries you have about our technical apps. Use the contact us details to reach out to your local Dormer Pramet sales office. **Simply Reliable.**

GENERAL
TECHNICAL INFORMATION

📖 6		WMG & ISO 13399
📖 10	ISO TURNING	INSTRUCTIONS
📖 18		NAVIGATORS
📖 57		POSITIVE INSERTS
📖 219		NEGATIVE INSERTS
📖 386		PARTING-OFF & GROOVING
📖 482		THREAD TURNING
📖 528		BROACHING
📖 536		GENERAL TECHNICAL INFORMATION

WORKPIECE MATERIAL GROUP (WMG)



ABOUT DORMER PRAMET'S WORKPIECE MATERIAL CLASSIFICATION

Workpiece **M**aterial **G**roups (**WMG**) are used to support easy and reliable selection of the right cutting tool and starting values for machining conditions in particular applications.
Dormer Pramet classifies workpiece materials into six different coloured groups;

- **Blue**: Steel and cast steel (P-group)
- **Yellow**: Stainless steel (M-group)
- **Red**: Cast iron (K-group)
- **Green**: Non-ferrous metals (N-group)
- **Brown**: High-temperature alloys (S-group)
- **Grey**: Hardened materials (H-group)

Each of these are divided into subgroups on the basis of their structure and/or composition. For example, P-group steel and cast steel is split into four subgroups, namely;

- **P1** – Free machining steel
- **P2** – Plain carbon steel
- **P3** – Alloy steel
- **P4** – Tool steel

A final division includes material properties, such as hardness and ultimate tensile strength. This is to provide our customers with a complete tool recommendation, including starting values for cutting speed and feed.
The table on the next page includes a description of each workpiece material group, as well as examples of commonly used designations.

ISO group		Subgroup		WMG (Work Material Group)		k_{vg}	Examples of material (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
P	**Steel and cast steel** (steels with alloy content ≤ 10 % and a hardness of < 45 HRC)	P1	Free machining steel (carbon steels with increased machinability)	P1.1	Free machining sulfurized carbon steel with a hardness of < 220 HB	1.33	AISI **1108,** EN **15S22,** DIN **1.0723,** SS **1922,** ČSN **11120,** BS **210A15,** UNE **F.210F,** GB **Y15,** AFNOR **10F1,** GOST **A30,** UNI **CF10S20**
				P1.2	Free machining sulfurized and phosphorized carbon steel with a hardness of < 180 HB	1.49	AISI **1211,** EN **11SMn30,** DIN **1.0715,** SS **1912,** ČSN **11109,** BS **230M7,** UNE **F.2111,** GB **Y15,** AFNOR **S250,** GOST **A40G,** UNI **CF9SMn28**
				P1.3	Free machining sulfurized/phosphorized and leaded carbon steel with a hardness of < 160 HB	1.53	AISI **12L13,** EN **11SMnPb30,** DIN **1.0718,** SS **1914,** ČSN **12110,** BS **210M16,** UNE **F.2114,** GB **Y15Pb,** AFNOR **S250Pb,** GOST **AS35G2,** UNI **CF10SPb20**
		P2	Plain carbon steel (steels comprised of mainly iron and carbon)	P2.1	Plain low carbon steel containing < 0.25 % C with a hardness of < 180 HB	1.14	AISI **1015,** EN **C15,** DIN **1.0401,** SS **1350,** ČSN **11301 ,** BS **080A15,** UNE **F.111,** GB **15,** AFNOR **C18RR,** GOST **St2ps,** UNI **Fe360**
				P2.2	Plain medium carbon steel containing < 0.55 %C with a hardness of < 240 HB	1.00	AISI **1030,** EN **C30,** DIN **1.0528,** SS **1550,** ČSN **12031,** BS **080M32,** UNE **F.1130,** GB **30,** AFNOR **AF50C30,** GOST **30G,** UNI **Fe590**
				P2.3	Plain high carbon steel containing > 0.55 % C, with a hardness of < 300 HB	0.89	AISI **1060,** EN **C60,** DIN **1.0601,** SS **1655,** ČSN **12061,** BS **080A62,** UNE **F513,** GB **60,** AFNOR **1C60,** GOST **60G,** UNI **C60**
		P3	Alloy steel (carbon steels with an alloying content ≤ 10 %)	P3.1	Alloy steel with a hardness of < 180 HB	0.92	AISI **5015,** EN **16Mo3,** DIN **1.5415,** SS **2912,** ČSN **15020,** BS **1501-240,** UNE **F.2601,** GB **16Mo,** AFNOR **15D3,** GOST **15M,** UNI **16Mo3KW**
				P3.2	Alloy steel with a hardness of 180 – 260 HB	0.74	AISI **4140,** EN **42CrMo4,** DIN **1.7225,** SS **2244,** ČSN **15142,** BS **708M40,** UNE **F.8232,** GB **42CrMo,** AFNOR **42CD4,** GOST **40ChFA,** UNI **42CrMo4**
				P3.3	Alloy steel with a hardness of 260 – 360 HB	0.63	AISI **4140,** EN **42CrMo4,** DIN **1.7225,** SS **2244,** ČSN **15142,** BS **708M40,** UNE **F.8232,** GB **42CrMo,** AFNOR **42CD4,** GOST **40ChFA,** UNI **42CrMo4**
		P4	Tool steel (special alloy steel for tools, dies and molds)	P4.1	Tool steel with a hardness of < 26 HRC	0.55	AISI **D2,** EN **X155CrVMo12-1,** DIN **1.2370,** SS **2736,** ČSN **19573,** BS **BD2,** UNE **F.520A,** GB **Cr12Mo1V1,** AFNOR **Z160CDV12,** GOST **Ch12MF,** UNI **X155CrVMo121KU**
				P4.2	Tool steel with a hardness of 26 – 39 HRC	0.47	AISI **D2,** EN **X155CrVMo12-1,** DIN **1.2370,** SS **2736,** ČSN **19573,** BS **BD2,** UNE **F.520A,** GB **Cr12Mo1V1,** AFNOR **Z160CDV12,** GOST **Ch12MF,** UNI **X155CrVMo121KU**
				P4.3	Tool steel with a hardness of 39 – 45 HRC	0.38	AISI **D2,** EN **X155CrVMo12-1,** DIN **1.2370,** SS **2736,** ČSN **19573,** BS **BD2,** UNE **F.520A,** GB **Cr12Mo1V1,** AFNOR **Z160CDV12,** GOST **Ch12MF,** UNI **X155CrVMo121KU**

ISO group		Subgroup		WMG (Work Material Group)		k_{vG}	Examples of material (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
M	**Stainless steel** (corrosion resistant steels with ≥ 11 % chromium content)	**M1**	Ferritic stainless steel (straight chromium non-hardenable alloys)	**M1.1**	Stainless steel, ferritic with a hardness of < 160 HB	**1.22**	AISI **S429,** EN **X7Cr14,** DIN **1.4001,** SS **2326,** BS **434S17,** UNE **F.3401,** AFNOR **Z8C12,** GOST **08Ch13,** UNI **X6CrTi12**
				M1.2	Stainless steel, ferritic with a hardness of 160 – 220 HB	**1.03**	AISI **446,** EN **X10CrAl24,** DIN **1.4762,** SS **2322,** ČSN **17113,** BS **430S17,** UNE **F.3154,** GB **10Cr17,** AFNOR **Z10CAS24,** GOST **12Ch17,** UNI **X16Cr26**
		M2	Martensitic stainless steel (straight chromium hardenable alloys)	**M2.1**	Stainless steel, martensitic with a hardness of < 200 HB	**1.08**	AISI **430F,** EN **X14CrMoS17,** DIN **1.4104,** SS **2383,** ČSN **17140,** BS **410S21,** UNE **F.3117,** AFNOR **Z10CF17,** UNI **X10CrS17**
				M2.2	Stainless steel, martensitic with a hardness of 200 – 280 HB	**0.89**	AISI **440C,** EN **X105CrMo17,** DIN **1.4125,** SS **2385,** ČSN **17023,** BS **425C11,** UNE **F.3402,** GB **102Cr17Mo,** AFNOR **Z100CD17,** GOST **95Ch18,** UNI **GX6CrNi 13 04**
				M2.3	Stainless steel, martensitic with a hardness of 280 – 380 HB	**0.75**	AISI **420,** EN **X45Cr13,** DIN **1.4034,** ČSN **17029,** BS **425C11,** UNE **F.3405,** AFNOR **Z44C14,** GOST **20X17H12,** UNI **X30Cr13**
		M3	Austenitic stainless steel (chromium-nickel and chromium-nickel-manganese alloys)	**M3.1**	Stainless steel, austenitic with a hardness of < 200 HB	**1.00**	AISI **304,** EN **X5CrNi18-12,** DIN **1.4303,** SS **2352,** ČSN **17249,** BS **305S17,** UNE **F.3513,** GB **10Cr18Ni12,** AFNOR **Z8CN18.12,** UNI **X7CrNi18 10**
				M3.2	Stainless steel, austenitic with a hardness of 200 – 260 HB	**0.86**	AISI **309,** EN **X15CrNiSi20-12,** DIN **1.4828,** ČSN **17251,** BS **309S24,** UNE **F.3312,** GB **1Cr23Ni13,** AFNOR **Z15CNS20.12,** GOST **20Ch20N14S2,** UNI **16CrNi23 14**
				M3.3	Stainless steel, austenitic with a hardness of 260 – 300 HB	**0.77**	AISI **5848,** EN **X45CrNiW18-9,** DIN **1.4873,** BS **331S40,** UNE **F.3211,** AFNOR **Z35CNWS14-4,** UNI **X45CrNiW 18 9**
		M4	Super-austenitic, Duplex or Precipitation Hardening stainless steel (austenitic alloys with > 20 % Ni, austenitic-ferritic microstructure or precipitation hardened)	**M4.1**	Stainless steel, austenitic-ferritic or super-austenitic with a hardness of < 300 HB	**0.75**	AISI **329,** EN **X1-NiCrMoCU25-20-5,** DIN **1.4539,** SS **2562,** ČSN **17265,** BS **318S13,** UNE **F.3552,** GB **022Cr25NiMo2N,** AFNOR **Z1NCDU25.20**
				M4.2	Stainless steel, precipitation hardening austenitic with a hardness of 300 – 380 HB	**0.64**	AISI **631 (17-7PH),** EN **X7CrNiAL17-7,** DIN **1.4568,** SS **2388,** ČSN **17465 ,** BS **301S13,** UNE **F.3217,** GB **07Cr17Ni7Al,** AFNOR **29CNA17-07,** GOST **09Ch17N7Ju1,** UNI **X53CrMnNiN21 9**

ISO group		Subgroup		WMG (Work Material Group)		k_{vG}	Examples of material (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
K	**Cast Iron** (castings of iron and carbon alloys with > 2 % carbon content)	**K1**	Gray iron (GG) (iron-carbon castings with a lamellar graphite microstructure)	**K1.1**	Gray iron, ferritic or ferritic-pearlitic with a hardness of < 180 HB	**1.35**	ASTM **A48 Grade 20 (F11401),** EN-**JL-100,** DIN **GG-10 (0.6010),** SS **0110,** STN **422410,** BS **Grade 150,** UNE **FG10,** GB **HAT 100,** AFNOR **Ft10D,** GOST **SC 10,** UNI **G10**
				K1.2	Gray iron, ferritic-pearlitic or pearlitic with a hardness of 180 – 240 HB	**1.00**	ASTM **A48 Grade 30 (F12101),** EN-**JL-1030,** DIN **GG-20 (0.6020),** SS **0120,** STN **422420,** BS **Grade 220,** UNE **FG20,** GB **HT200,** AFNOR **Ft20D,** GOST **СЧ20,** UNI **G20**
				K1.3	Gray iron, pearlitic with a hardness of 240 – 280 HB	**0.75**	ASTM **A48 Grade 50 (F13501),** EN-**JL-1060,** DIN **GG-35 (0.6035),** SS **0135,** STN **422435,** BS **Grade 350,** UNE **FG35,** GB **HAT300,** AFNOR **Ft35D,** GOST **SC35,** UNI **G35**
		K2	Malleable iron (GTS/GTW) (heat-treated iron-carbon castings with a graphite-free microstructure)	**K2.1**	Malleable iron, ferritic with a hardness of < 160 HB	**1.39**	ASTM **A602 Grade M3210 (F20000),** EN-**JM-1130,** DIN **GTS-35 (0.8135),** SS **0815,** BS **B340/12,** UNE **Type A,** AFNOR **MN 35-10,** GOST **КЧ35-10**
				K2.2	Malleable iron, ferritic or pearlitic with a hardness of 160 – 200 HB	**1.13**	ASTM **A602 Grade M4504 (F20001),** EN-**JM-1040,** DIN **GTS-50-05 (0.8045),** BS **P50-05,** AFNOR **MB 45-7**
				K2.3	Malleable iron, pearlitic with a hardness of 200 – 240 HB	**0.90**	ASTM **A602 Grade M7002 (F20004),** EN-**JM-1140,** DIN **GTS-45 (0.8145),** SS **0854,** STN **422540,** BS **P 45-06,** UNE **Typ B,** AFNOR **MP 50-5,** GOST **КЧ45-7,** UNI **GMN 45**
		K3	Ductile iron (GGG) (iron-carbon castings with a nodular graphite microsturcture)	**K3.1**	Ductile (nodular/spheriodal) iron, ferritic with a hardness of < 180 HB	**1.23**	ASTM **A536 Grade 60-40-18 (F32800),** EN-**JS-1030,** DIN **GGG-40 (0.7040),** SS **0717,** STN **422304,** BS **420/12,** UNE **FGE 42-12,** GB **QT 400,** AFNOR **FGS 400-12,** GOST **ВЧ40**
				K3.2	Ductile (nodular/spheriodal) iron, ferritic or pearlitic with a hardness of 180 – 220 HB	**0.94**	ASTM **A536 Grade 80-55-06 (F33800),** EN-**JS-1050,** DIN **GGG-50 (0.7050),** SS **0727,** STN **422305,** BS **500/7,** UNE **FGE 50-7,** GB **QT 500-7,** AFNOR **FGS 500-7,** GOST **ВЧ50**
				K3.3	Ductile (nodular/spheriodal) iron, pearlitic with a hardness of 220 – 260 HB	**0.76**	ASTM **A536 Grade 100-70-03 (F34800),** EN-**JS-1060,** DIN **GGG-60 (0.7060),** SS **0732,** STN **422306,** BS **600/3,** UNE **FG70-2,** GB **QT 600-3,** AFNOR **FGS 600-3,** GOST **ВЧ60**
		K4	Austenitic or austempered ductile iron (Ni-Resist/ADI) (iron-carbon alloy castings with an austenitic or ausferrite microstructure)	**K4.1**	Austenitic cast iron with a hardness of < 180 HB	**1.14**	ASTM **A436 Type 1 (L-NiCuCr 15 6 2, F41000),** EN-**JL-3011,** DIN **GGL-NiMn 13 7 (0.6652),** SS **0523,** BS **Grade F1,** AFNOR **FGL-Ni13Mn7,** GOST **S-NiMn 13 7**
				K4.2	Austenitic cast iron with a hardness of 180 – 240 HB	**0.86**	ASTM **A439 Type D-2B (S-NiCr 20 3, F43001),** EN-**JS-3021,** DIN **GGG-NiMn 23 4,** SS **0776,** BS **Grade S2M,** AFNOR **FGS Ni23 Mn4,** GOST **ЧН19Х3Ш**
				K4.3	Austempered ductile iron with a hardness of 240 – 280 HB	**0.63**	ASTM **A897 Grade 110-70-11**
				K4.4	Austempered ductile iron with a hardness of 280 – 320 HB	**0.54**	ASTM **A897 Grade 125-80-10,** EN-**JS-1100,** DIN **GGG-90 (5.3400)**
				K4.5	Austempered ductile iron with a hardness of 320 – 360 HB	**0.45**	ASTM **A897 Grade 2 (150-110-07),** EN-**JS-1110,** DIN **GGG-100 (5.3403)**
		K5	Compacted graphite iron (CGI) (iron-carbon castings with a vermicular graphite structure)	**K5.1**	Vermicular, compacted graphite iron with a hardness of < 180 HB	**1.29**	ASTM **A842 Grade 300,** EN-**GJV-300,** DIN **GGV 30,** GOST **ЧВГ30,**
				K5.2	Vermicular, compacted graphite iron with a hardness of 180 – 220 HB	**0.97**	ASTM **A842 Grade 350,** EN-**GJV-350,** DIN **GGV 35 (5.2200),** GOST **ЧВГ30,**
				K5.3	Vermicular, compacted graphite iron with a hardness of 220 – 260 HB	**0.75**	ASTM **A842 Grade 450,** EN-**GJV-450,** DIN **GGV 45,** GOST **ЧВГ45,**

ISO group		Subgroup		WMG (Work Material Group)		k_{vG}	Examples of material (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
N	**Non-ferrous metals** (metals including alloys without an appreciable amount of iron)	**N1**	Wrought aluminium	**N1.1**	Pure aluminium and wrought aluminium alloys with a hardness of < 60 HB	1.33	UNS **A91200,** EN **AL99.6,** DIN **3.0205,** SS **4010,** STN **424009,** BS **1C,** UNE **L-3001,** GB **L5,** AFNOR **A4,** GOST **АДС,** UNI **3567**
				N1.2	Wrought aluminium alloys with a hardness of 60 – 100 HB	1.00	UNS **A93004,** EN **AlMn0.5Mg0.5,** DIN **3.0505,** SS **4054,** STN **424432,** BS **N31,** UNE **L-3831,** GB **LF2,** AFNOR **A-M1,** GOST **АМц,** UNI **3568**
				N1.3	Wrought aluminium alloys with a hardness of 100 – 150 HB	0.67	UNS **A95083,** EN **AlMg4.5Mn0.7,** DIN **3.3547,** SS **4140,** STN **424415,** BS **N8,** UNE **L-3321,** GB **AlMg4.5Mn,** AFNOR **A-G4.5Mn,** GOST **Amg 4.5,** UNI **P-AlMg4.4**
		N2	Cast aluminium	**N2.1**	Cast aluminium alloys with a hardness of < 75 HB	0.67	UNS **A02080,** EN **AlCu4S,** BS **LM11,** STN **424331,** UNE **Al Si1Cu,** GOST **AMg5K,** UNI **G-AlSi7Mg**
				N2.2	Cast aluminium alloys with a hardness of 75 – 90 HB	0.60	UNS **A02420,** EN **AlCu4Ni2Mg2,** SS **AlSi7MgFe,** BS **LM6,** STN **424519,** UNE **Al-7SiMg,** AFNOR **A-S7G,** GOST **AK7,** UNI **G-AlSi7Mg**
				N2.3	Cast aluminium alloys with a hardness of 90 < 140 HB	0.43	UNS **A03360,** EN **G-ALCu4NiMg2,** SS **ALSi10Mg,** STN **424336,** BS **LM 30,** AFNOR **A-S10G,** UNI **G-AlSi9Mg**
		N3	Copper or copper alloys	**N3.1**	Free-cutting copper-alloys materials with excellent machining properties	0.70	UNS **C14700,** EN **CuPb1P,** DIN **2.1498,** STN **423214,** BS **C111,** AFNOR **CuZn35Pb2,** GOST **L63-3,** UNI **CuS(P0.01)**
				N3.2	Short-chip copper-alloys with good to moderate machining properties	0.41	UNS **C81540,** EN **CuNi2SiCr,** DIN **2.0857,** STN **423220,** BS **NS113,** UNE **CuSn12,** AFNOR **CuZn40,** GOST **L60,** UNI **P-CuZn-40**
				N3.3	Electrolytic copper and long-chip copper-alloys with moderate to poor machining properties	0.21	UNS **C10100,** EN **CuAg0.1,** DIN **2.1203,** SS **5010,** UNE **CUSi3Mn1,** AFNOR **Cu-C2,** GOST **M1f,** UNI **Cu-OF**
		N4	Polymers (synthetic or semi-synthetic materials)	**N4.1**	Thermoplastic polymers	0.70	ABS, Acryl, Duraplast, Elastomer, EP, Epoxid, FEP, Fluor, Gummi, Kautschuk, Latex, MF, MPF, PA, PAI, PC, PE, PEEK, PEI, PES, PET, PF, Phenolharze, PI, PMMA, Polyamide, Polyester, Polyolefine, Polysulfon, POM, PP, PPE, PPS, PS, PSU, PTFE, PU, PUR, PVDF, SAN, SI, Styrol, UF, Ureol
				N4.2	Thermosetting polymers	0.27	Aramid, Epoxy, Fluoropolymer, Mehacrylate, Melamine, Phenolic, Polyester, Polyimide, Polymethacrylimide, Polyurethane
				N4.3	Reinforced polymers or composites	0.29	CFK, GFK, GMT, Honeycomb, Kevlar, LFT, Organo, SMC
		N5	Graphite	**N5.1**		1.0	CGM-1, CM-00, GM-10, GM-11, GR030, GR030PI, GR060, GR060PI, GR125, MC-01, MC-01RO, MC-03, MC-03M, IG11, IG-15, IG-32, IG-43, IG-45, IG-70, ISEM-1, ISEM-2, ISEM-3, R8340, R8500X, Technograph 15, Technograph 30, ISO-63, EDM C-3, EDM1, EDM3, ISO-90, ISO-93, ISO-95, R8510, R8650,

ISO group		Subgroup		WMG (Work Material Group)		k_{vG}	Examples of material (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
S	**High-temperature alloys** (superalloys with high temperature stength and corrosion resistant surpassing that of stainless steel)	**S1**	Titanium or titanium alloys	**S1.1**	Titanium or titanium alloys, with a hardness of <200 HB	1.94	UNS **R50250 (Grade 1),** EN **Ti 99.6,** DIN **3.7035,** BS **TA.2,** UNE **Ti-Po2,** AFNOR **T-40,** GOST **BT1-00,** AISI **R50250, 3.7025, T35, 2TA1, R50400, 3.7035, 2TA2,**
				S1.2	Titanium alloys, with a hardness of 200 – 280 HB	1.72	UNS **R56404 (Grade 29),** EN **Ti2Cu,** DIN **3.7124,** BS **TA.21,** UNE **Ti-P11,** AFNOR **T-U2 ,** AISI **TA6V, Ti-6Al-4V, Ti 10.2.3, Ti5553**
				S1.3	Titanium alloys, a hardness of 280 – 360 HB	1.44	UNS **R54250 (Grade 38),** EN **TiAl6V4,** DIN **3.7165,** ČSN **TiAl6VELI,** BS **TA. 13,** UNE **Ti-P63,** AFNOR **T-A6V,** GOST **BT6,** AISI **TA6V, Ti-6Al-4V, Ti 10.2.3, Ti5553**
		S2	Fe-based high-temperature alloys	**S2.1**	High-temperature Fe-based alloys with a hardness of <200 HB	1.33	UNS **N08801 (Incoloy 801),** EN **X8 NiCrAlTi31-21,** DIN **1.4959,** BS **NA 15,** AFNOR **Z8NC33-21,** AISI **A-286, Discaloy, Haynes 556, Iconel 909, Greek Ascolloy**
				S2.2	High-temperature Fe-based alloys with a hardness of 200 – 280 HB	1.17	UNS **N19907,** EN **X6NiCrTiMoVB25-15-2,** DIN **1.4980,** SS **2570,** BS **HR52,** AFNOR **Z6NCTDV25.15B,** GOST **36HXTЮ,** AISI **A-286, Discaloy, Haynes 556, Iconel 909, Greek Ascolloy**
		S3	Ni-based high-temperature alloys	**S3.1**	High-temperature Ni-based alloys with a hardness of <280 HB	1.00	UNS **A09706 (Inconel 706),** EN **NiCr25FeAl,** DIN **2.4856,** BS **HR 6,** ČSN **Inconel 625,** UNE **F.3313,** GB **1Cr16Ni35,** AFNOR **NC22FeDNB,** GOST **XH38BT,** AISI **Inconel 718, 706 Waspalloy, Udimet 720, Inconel 625**
				S3.2	High-temperature Ni-based alloys with a hardness of 280 – 360 HB	0.83	UNS **N07001,** EN **NiCr20Co13Mo4Ti3Al,** DIN **2.4654,** BS **HR 2,** ČSN **Waspaloy,** AFNOR **NCKD 20ATV,** GOST **XH80TБЮ,** AISI **Inconel 718, 706 Waspalloy, Udimet 720, Inconel 625**
		S4	Co-based high-temperature alloys	**S4.1**	High-temperature Co-based alloys with a hardness of <240 HB	0.78	UNS **R30016 (Stellite 6b),** EN **CoCr20W15Ni,** DIN **2.4964,** AFNOR **KC 20 WN,** GOST **ЛК52,** AISI **Haynes 25, Stellite 21, 31**
				S4.2	High-temperature Co-based alloys with a hardness of 240 – 320 HB	0.67	UNS **R30016 (Stellite 6b),** EN **CoCr20W15Ni,** DIN **2.4964,** AFNOR **KC 20 WN,** GOST **ЛК52,** AISI **Haynes 25, Stellite 21, 31**

ISO group		Subgroup		WMG (Work Material Group)		k_{vG}	Examples of material (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
H	**Hardened materials** (any engineering metal with a hardness > 45 HRC)	**H1**	Chilled cast iron	**H1.1**	Chilled cast iron with a hardness of < 440 HB	**1.52**	UNS **F45001,** EN-**GJS-1050-6,** DIN **5.3406,** SS **0512,** BS **Grade 2A**
		H2	Hardened cast iron	**H2.1**	Hardened cast iron with a hardness < 55 HRC	**0.90**	UNS **F45003,** EN-**GJS-1400-1,** DIN **5.3405,** SS **0457,** BS **Grade 3D**
				H2.2	Hardened cast iron with a hardness > 55 HRC	**0.77**	UNS **F45003,** EN **G-X260NiCr4-2,** DIN **0.9620,** SS **0466,** BS **Grade S**
		H3	Hardened steel < 55 HRC	**H3.1**	Hardened steel with a hardness of < 51 HRC	**1.00**	AISI **4135,** EN **34CrMo4,** DIN **1.7220,** SS **2234,** STN **415131,** BS **198,** UNE **F.1250,** GB **35CrMo,** AFNOR **35CD4,** GOST **АС38ХГМ,** UNI **35CrMo4KB**
				H3.2	Hardened steel with a hardness of 51 – 55 HRC	**0.82**	AISI **4135,** EN **34CrMo4,** DIN **1.7220,** SS **2234,** STN **415131,** BS **198,** UNE **F.1250,** GB **35CrMo,** AFNOR **35CD4,** GOST **АС38ХГМ,** UNI **35CrMo4KB**
		H4	Hardened steel > 55 HRC	**H4.1**	Hardened steel with a hardness of 55 – 59 HRC	**0.64**	UNS **T31501,** EN **100MnCrW4,** DIN **1.2510,** SS **2140,** STN **419413,** BS **B01,** UNE **F.5220,** GB **9CrWMn,** AFNOR **90MWCrV5,** GOST **9ХВГ,** UNI **95MNWCr5KU**
				H4.2	Hardened steel with a hardness of > 59 HRC	**0.54**	UNS **T31501,** EN **100MnCrW4,** DIN **1.2510,** SS **2140,** STN **419413,** BS **B01,** UNE **F.5220,** GB **9CrWMn,** AFNOR **90MWCrV5,** GOST **9ХВГ,** UNI **95MNWCr5KU**

Correction factors for specific type of operation C_{VcO}

X.V	FF			F			M			R			HR		
a_p	0.5			1.5			2.5			5.0			12.0		
	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III
f	0.05	0.08	0.10	0.10	0.15	0.20	0.20	0.30	0.40	0.40	0.60	0.80	0.80	1.00	1.30
Chip-breakers for fine finishing (FF, FF2…)	1.15	1.00	0.95	0.85	0.80	–	–	–	–	–	–	–	–	–	–
Chip-breakers for finishing (NF, SF..)	–	–	1.20	1.05	1.00	1.05	1.00	0.90	–	–	–	–	–	–	–
Chip-breakers for medium machining (FM, M, NM, NMR, SM…)	–	–	–	–	–	1.15	1.10	1.00	0.95	0.85	–	–	–	–	–
Chip-breakers for roughing (RM, NRM, NR, R…)	–	–	–	–	–	–	–	–	1.25	1.10	1.00	0.95	0.65	–	–
Chip-breakers for heavy roughing (HR, HR2, NR2, OR…) for 45 min durability	–	–	–	–	–	–	–	–	–	1.25	1.20	1.15	1.05	1.00	0.95

Correction factors for required durability C_{VcT}

minutes	10	15	20	30	45	60
General machining operations (fine finishing up to roughing)	1.13	1.00	0.93	0.84	0.76	0.71
Heavy machining operations (heavy roughing)	–	–	–	1.10	1.00	0.93

Additional correction factors C_{VcA}

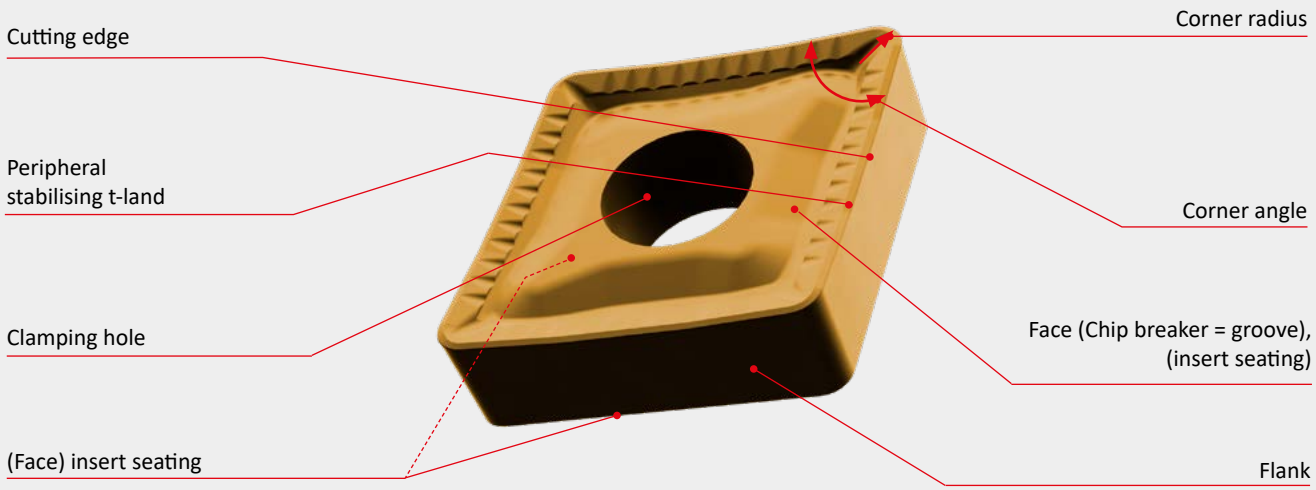
Machining environment	C_{VcA}
Condition of the work-material (hard skin due to forging or casting)	0.70
Internal turning	0.75
Parting and grooving (radial)	0.88
Face grooving	0.80
Interrupted cut	0.80
Unstable machining conditions	0.85
Common machining conditions	1.00
Stable machining conditions	1.20

Resulting corrected cutting speed v_{cC}

$$v_{cC} = v_c \cdot k_{vG} \cdot C_{VcO} \cdot C_{VcT} \cdot C_{VcA}$$

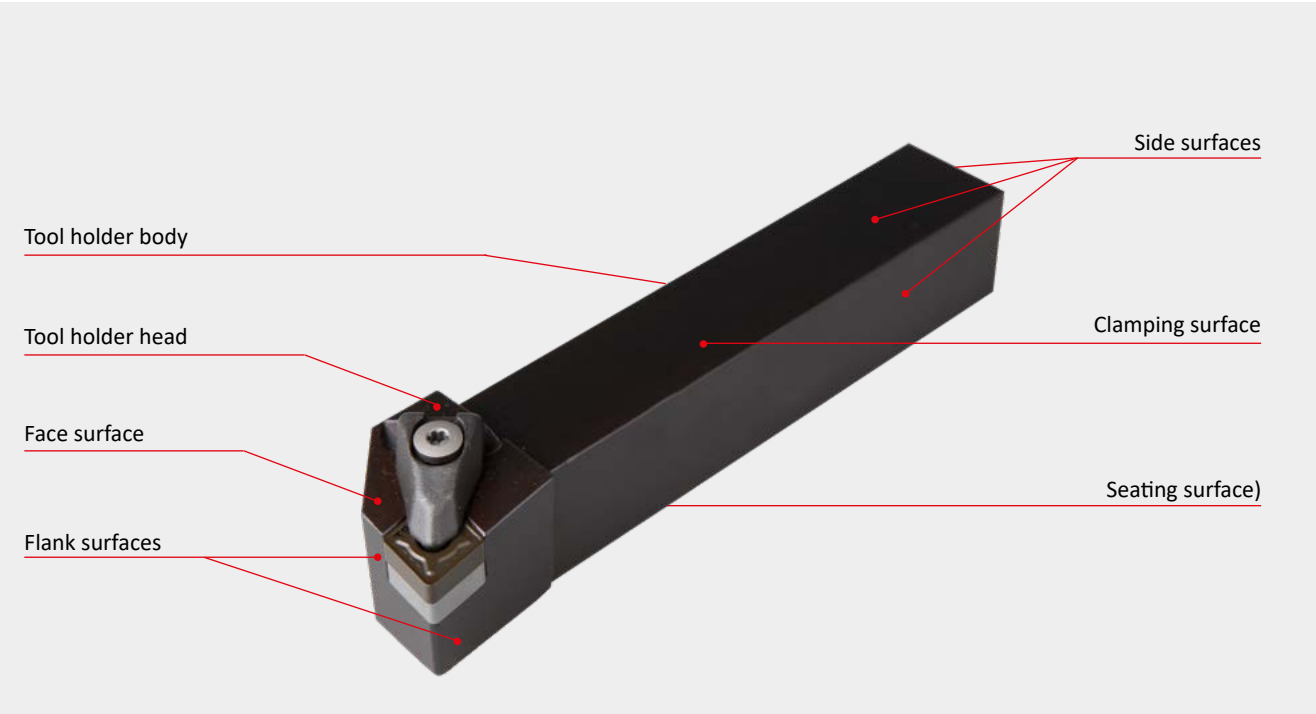
k_{vG} – coefficient of used material
v_c – starting speed from catalogue page

Insert parts



Corner radius – determines in most cases the recommended minimum depth of cut and, together with the feed, also determines the achieved roughness.
The **Cutting edge** is the intersection of face and flank surfaces. Its longitudinal roughness is one of the first evaluation criteria when assessing an insert.
The **insert corner angle** is very important with regard to the usable cutting edge length, resistance in the interrupted cut, heat dissipation from the cutting point, etc.
The **peripheral stabilising t-land** is an area located after the cutting edge. Its width is very often variable and its angle also changes regularly. In most cases, the width of the t-land, together with the adjustment angle at which the insert works, is a limiting factor for specifying the minimum feed.
The **chip breaker** – together with the t-land determines the application area (narrow grooves – finishing and materials with short chip, wide grooves – mostly roughing operations and tough materials).
The **clamping hole** – if there is no hole, the insert will definitely be designed for the ISO C clamping system. If the hole is cylindrical, the insert is designed for the ISO P, M, D + clamping systems (in nearly all cases the flank angle is 0°. If the hole is trumpet-shaped and the flank angle is positive, the insert is single-sided and is designed for the ISO S clamping system. If the hole is conical and is the same on both sides of the insert, then it is most likely a tangential insert (double-sided).
The **insert seating** – if it is formed by the same relief as the face surface, the insert is double-sided, if it is different, the insert is single-sided. It must be assessed with regard to the planned load or the type of cut. (the size and distance of the radius and the cutting edges).

Tool holder parts



The turning tool consists of two basic parts:

1) the body consisting of:
- seating surface
- clamping surface
- side surfaces (which can further be provided with adjusting screws)

Note: For external turning, the tool holder body is usually a square cross section (square or rectangle). For internal turning, the cross section of the holder body is circular and, for larger cross sections, it is provided with adjusting surfaces. But the holder body can also be formed by a special type of shank, such as CAPTO (PSC) or HSK

2) the head with:
- face
- flank surfaces

The tool holder head also includes a clamping system into which the inserts are inserted
From the face side (for radial inserts) or from the flank surface side (for tangential inserts)

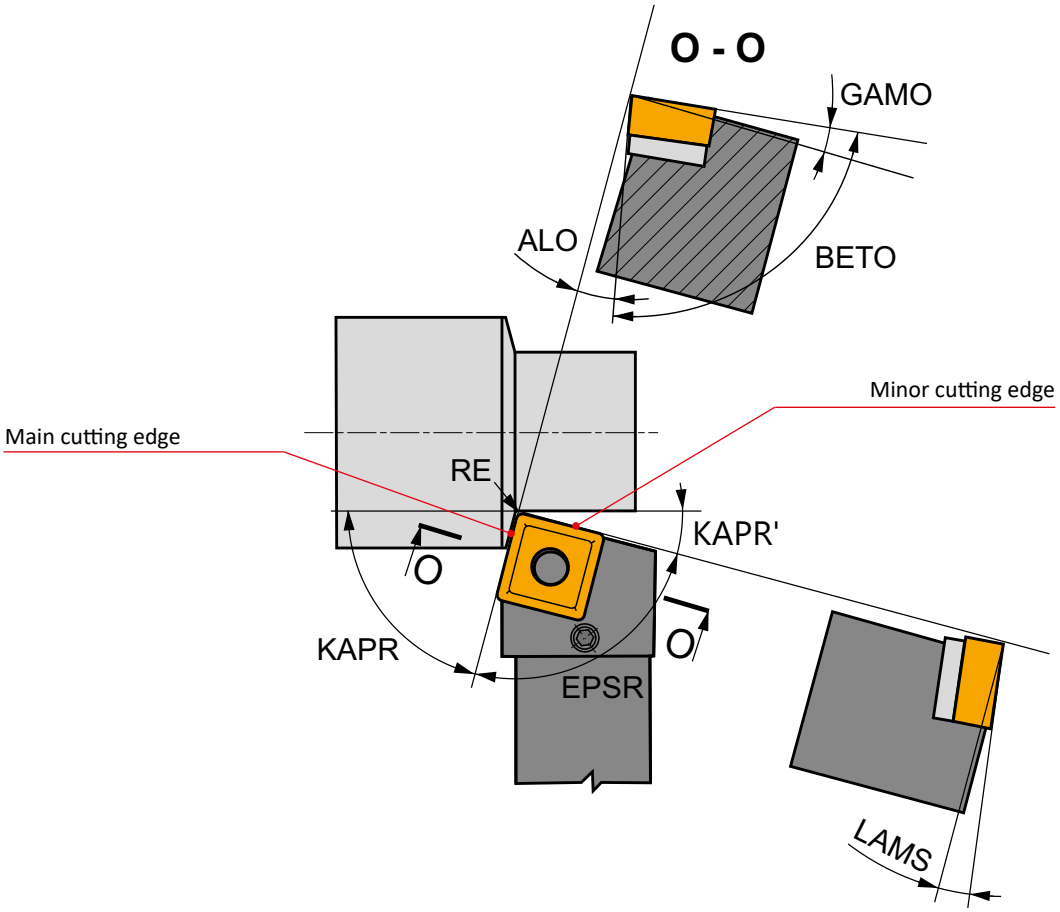
Note: the types of heads are:
- straight – allows turning in both directions
- side – distinguish between right and left design
- bent – distinguish between right and left design (allows better access when turning more complex surfaces)

Working and construction angles of turning tools

The position and orientation of the cutting edge in relation to the workpiece and its geometric shape determine the cutting angle characteristics.
The angles on the cutting edge are determined by a two coordinate system:

a) design
b) working

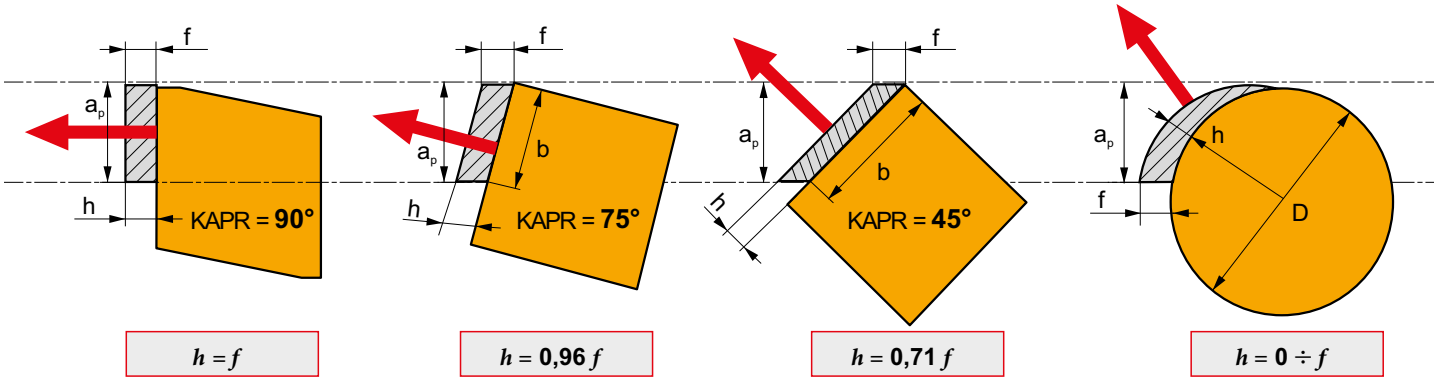
a) tool coordinate system (stationary), which is used to determine the cutting edge geometry during design, production and checking. All angles defined in this system are called tool cutting angles. All angles defined by ISO standards according to the insert shape belong in this group.



b) working coordinate system, used to determine the cutting edge geometry during the machining process. These angles are called working angles and they depend on the position of the insert clamped into the tool holder. For example, the cutting insert SNUN ..... has a tool clearance angle ***AN*** = 0° and a rake angle ***GAMP*** = 0°, however the insert is clamped in the tool holder to give a working clearance angle ***ALO*** = 6° and a working rake angle ***GAMO*** = -6°. The working angles affect the tool angles with pre-formed chip breakers. However the most important are the working angles for the cutting process.

The basic tool angles are indicated in the picture in the basic tool plane (interlaid by the bearing surface of the tool holder) and in the normal tool plane (interlaid across to cutting edge – cut O-O).
We are concerned with the following angles:
The rake angle ***GAMO*** – substantially affects the cutting process. Its size determines the progress and the intensity of plastic deformation during chip forming; it also determines the value of the cutting forces and the thermal stress on the cutting edge. The range of rake angles is wide, from ***GAMO*** = +25° to -15° for cutting tools with indexable cutting inserts for milling and turning. A positive rake angle improves the chip forming conditions, reduces the cutting forces and reduces the cutting temperature level. A negative rake angle improves the strength of the cutting edge, however it increases plastic deformation during chip forming and thereby also the cutting forces and temperatures.

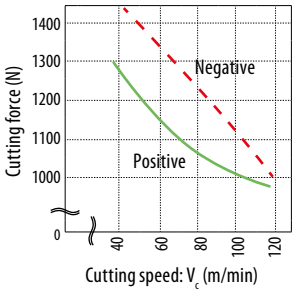
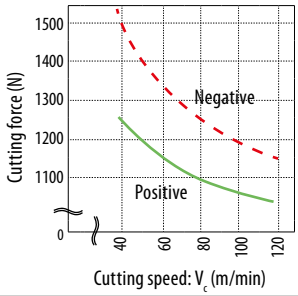
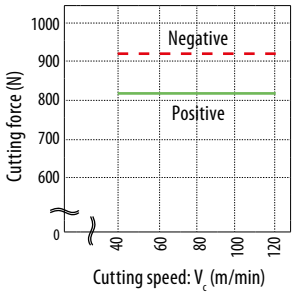
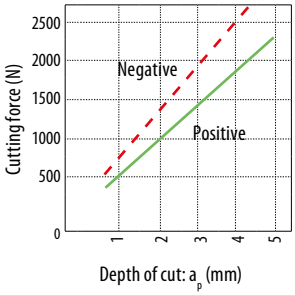
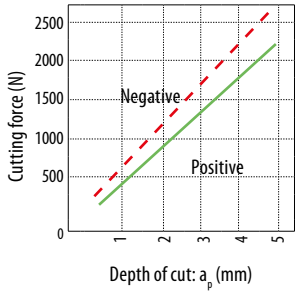
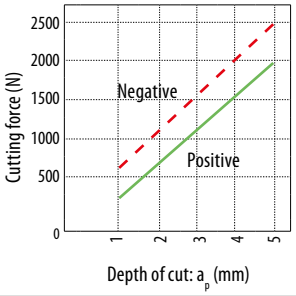
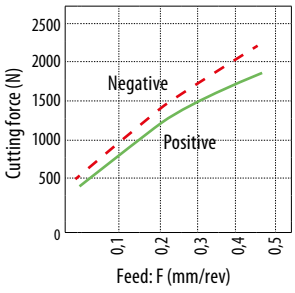
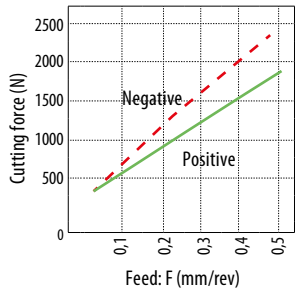
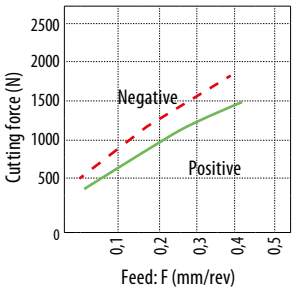
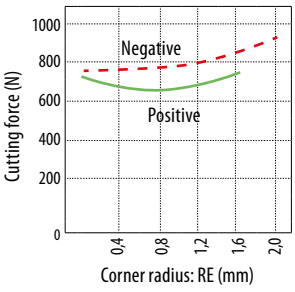
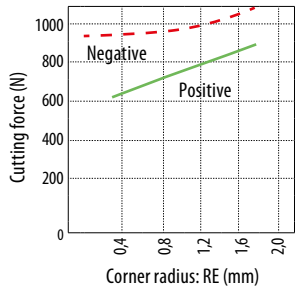
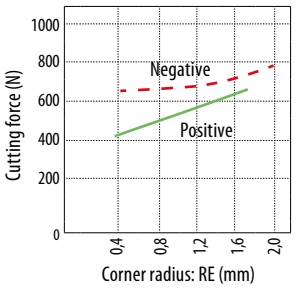
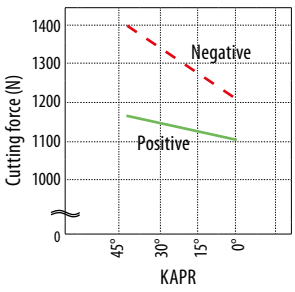
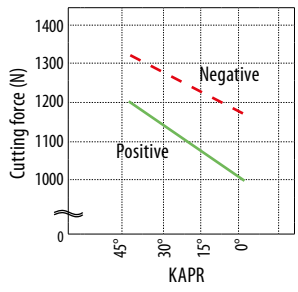
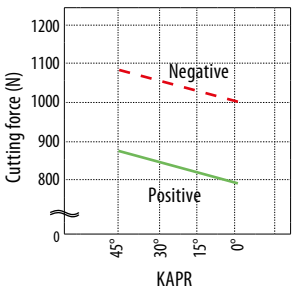
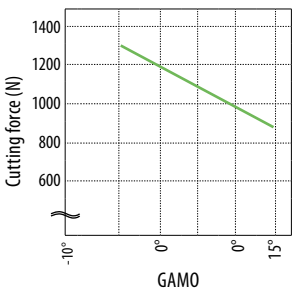
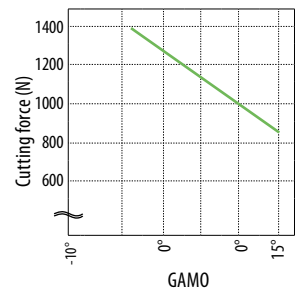
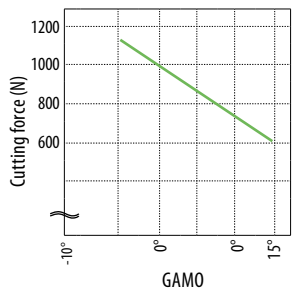
Clearance angle ***ALO*** affects the value of friction between the flank and the machined surface. Increasing the clearance angle ***ALO*** reduces this friction and thereby flank wear as well.
Wedge angle ***BETO*** is the angle of the cutting insert's wedge. Increasing angle ***BETO*** increases the strength of the cutting edge (resistance against shock), however it also increases the cutting resistance.
Inclination angle of main cutting edge ***LAMS*** – determines the point of first contact between the cutting edge and the workpiece, which is important for interrupted cut. If ***LAMS*** is positive, the point of contact is close to the nose of the cutting insert. The negative angle ***LAMS*** moves the point of first contact far from the nose and thereby affects the resistance of the cutting edge against mechanical stress. Furthermore, ***LAMS*** affects the direction of chip evacuation. If ***LAMS*** is negative, the direction of chip evacuation is towards the machined surface. Whereas if ***LAMS*** is positive, the direction of chip evacuation is away from the machined surface.
Setting angle of main cutting edge ***KAPR*** has main influence on the values of cutting forces and the cross section shape of the chip. Reducing angle ***KAPR*** makes the chip thinner at a given feed f and depth of cut a_p. Whereas if ***KAPR*** = 90° the chip thickness $h = f$ and the chip width $b = a_p$ becomes wider. Regarding the decreasing setting angle the function width of the T-land is increasing and the rake angle of insert is decreasing.
Setting angle of minor cutting edge ***KAPR´*** together with corner radius ***RE*** define the final surface quality.



$h = f$ | $h = 0{,}96\ f$ | $h = 0{,}71\ f$ | $h = 0 \div f$

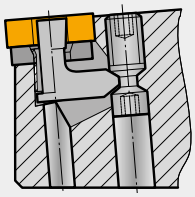
Parameter	Change	Abrasion of the flank	Crater wear formation	Tendency for plastic deformation	Resistance to adverse working conditions	Surface	Cutting forces	Tendency to vibrate	Medium cutting temperature	Chip formation
Main cutting edge angle	**Less than or greater than 90°**	Slightly reduced	Slightly reduced	Slightly reduced	Slightly improved	Effect not proven	Slightly increased	Increased	Lower	Chip is thinner and wider (b/h changes)
Minor cutting edge angle	**Decreased**	Slightly reduced	Effect not proven	Slightly increased	Very slightly improved	Improved (conditional)	Slightly increased	Increased	Very slightly higher	Insignificant effect
Corner angle	**Increased**	Effect not proven	Effect not proven	Reduced	Improved	Effect not proven	Effect not proven (-)	Slightly increased	Very slightly higher	Insignificant effect
Corner radius	**Increased**	Reduced (to certain level)	Reduced (to certain level)	Reduced	Improved	Improved (conditional)	Increased (to certain level)	Increased	Slightly higher	Softer formation (mostly – based on the chip breaker)
Flank angle	**More positive**	Reduced	Effect not proven	Very slightly Reduced	Slightly worse	Improved (conditional)	Slightly reduced	Slightly reduced	Slightly lower	Effect not proven
Face angle	**More positive**	Very slightly reduced	Reduced	Slightly reduced	Slightly worse	Effect not proven (+)	Slightly reduced	Reduced	Lower	Chip is less compressed, but is forced closer to the cutting edge
Cutting edge angle	**Positive**	Effect not proven	Slightly reduced	Slightly reduced	Slightly worse	Effect not proven (+)	Slightly reduced	Slightly reduced	Slightly lower	Deflects the chip from the workpiece
T-land width	**Wider**	Slightly increased	Slightly increased	Slightly increased	Slightly improved	Effect not proven (+)	Increased	Increased	Higher	Chip is more compressed, but presses to a larger surface
T-land angle (working)	**Positive**	Very slightly reduced	Slightly reduced	Slightly reduced	Slightly worse	Effect not proven (+)	Reduced	Reduced	Slightly lower	Chip is less compressed

What affects cutting forces and how?

Conditions	Carbon steel (HB230)	Stainless steel (HB145)	Grey cast iron (HB130)
Cutting speed and cutting force $f = 0.2$ mm/rev $a_p = 2$ mm KAPR 90° RE 0.4			
Depth of cut and cutting force $V_c = 100$ m/min $a_p = 0.2$ mm/rev KAPR 90° RE 0.4			
Cutting feed and cutting force $V_c = 100$ m/min $a_p = 2$ mm KAPR 90° RE 0.4			
Corner radius and cutting force $V_c = 100$ m/min $f = 0.2$ mm/rev $a_p = 1.2$ mm KAPR 90°			
Main cutting edge angle $V_c = 100$ m/min $f = 0.2$ mm/rev $a_p = 2$ mm KAPR 45°, 60°, 75°, 90° (values on the x axis) RE 0.4			
Rake angle and cutting force $V_c = 100$ m/min $f = 0.2$ mm/rev $a_p = 2$ mm KAPR 90° RE 0.4			

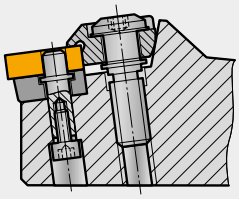
Tool holder choice with regard to the clamping technique

The PRAMET TOOLS offer includes tool holders, adjustable holders, turret heads and adjustable holders for external longitudinal, facing, copy turning, and naturally also for internal turning. Tool holders are classified according to the inserts clamping system into six groups that are schematically illustrated in the following passage.



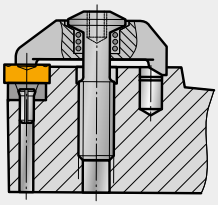
ISO P

This system serves for the clamping of negative inserts with cylindrical hole, both with chip formers and/or without them. The insert clamping is achieved as a result of an angle lever that after tightening the screw presses the insert down to the holder bed. Tool holders with this clamping system of inserts ensure a reliable and exact clamping of an insert. They perform the best and also the most frequent use at external turning operations, namely both finishing and roughing ones. Alternatively this type of clamping can be also used for holders intended for internal turning of holes with larger diameters.



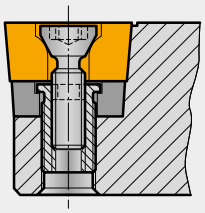
ISO M

This system is used for the clamping of cutting inserts of the same type as that of the system ISO P. In this case an insert is set onto a strong pin to which it is pressed by a clamp that is also fixing at the same time the top of insert. This clamping system is suitable mainly for holders with supposed enhanced dynamic load. These holders are used almost exclusively for the external turning.



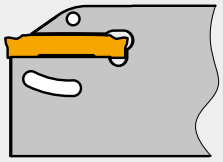
ISO C

This system serves for the clamping of both negative and positive inserts without holes, namely with both chip formers (pre-pressed, ground and side-pressed ones) and without them. The insert is fixed in the bed of a tool holder by a screw-held clamp, under which there is still embedded a side-pressed chip former at some insert types. Holders with this clamping system are used for both the external and internal surface machining. At present the clamping system C loses its importance. Especially at tools for internal turning it is replaced by the system S with benefit.



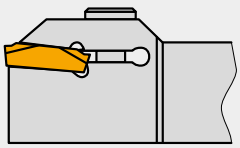
ISO S

This clamping system is mainly used for small cross-section tools, designed for both external and internal turning (drilling). In this case a special screw, going through an insert cone hole, achieves the clamping. By tightening this screw an insert is fixed in the tool bed. This solution is especially convenient because there is no obstacle for chip flow.



ISO X

This marking identifies tools with so called special clamping system (i.e. it is different at individual tool manufacturers and suppliers). In our case we have identified under this marking tool holders that use the cutting resistance to clamp an insert into the self-locking bed. This clamping system is used for tools intended for parting and recessing.

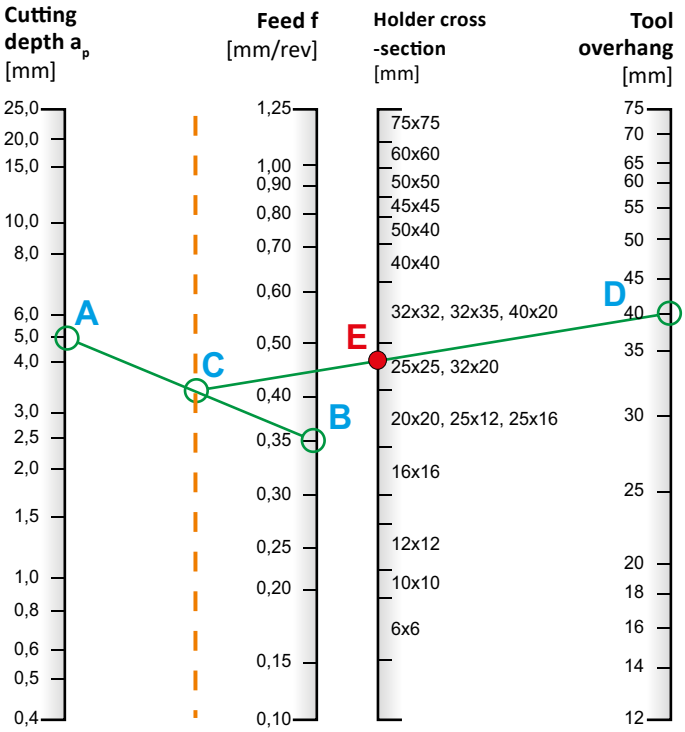


ISO G

This clamping system is used at tools for recess turning and at tools for copy turning (system CTP). The insert is pushed into the holder bed by a clamp from the top. The contact surface in the holder, in the clamp and also in the insert is shaped in such a way that it hinders the insert displacing by a feeding component of cutting speed.

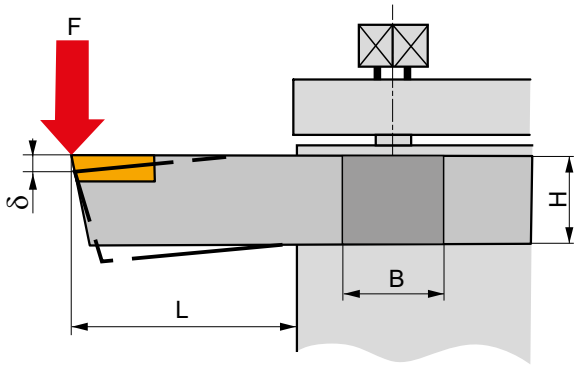
With reference to square cutting tool

External cutting tools (square cross section)



Unfortunately, we cannot offer you a similar diagram for choosing the diameter of the inner cutting tool as the situation in internal turning is complicated by the chip. Due to the larger overhang, a holder with the largest possible diameter should be chosen, but if the diameter of the holder is close to the diameter of the hole to be machined, problems can occur with the chip evacuation. It usually gets between the hole wall and the holder body damaging the surface being formed.
In general, if you use tools with a steel body, the overhang should not exceed 4xD, and if you have tools with a carbide or heavy metal body, the maximum overhang should be 6xD. Remember that for both types of tools, the portion for clamping the tool should be at least 3xD.

Use the **maximum possible cross section** with regard to clamping options and process limitations.

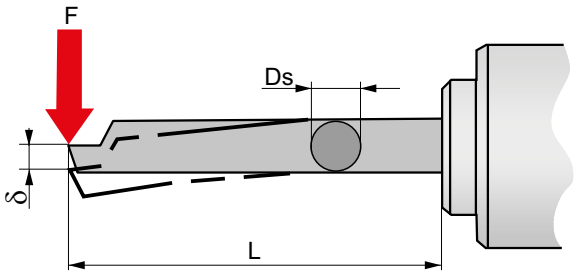


Bending stress

$$\sigma_{[MPa]} = \frac{6 . F . L}{B . H^2}$$

Tool holder deflection

$$\delta_{[mm]} = \frac{4 . F . L^3}{E . B . H^3}$$



Bending stress

$$\sigma_{[MPa]} = \frac{32 . F . L}{\pi . D_s^3}$$

Tool holder deflection

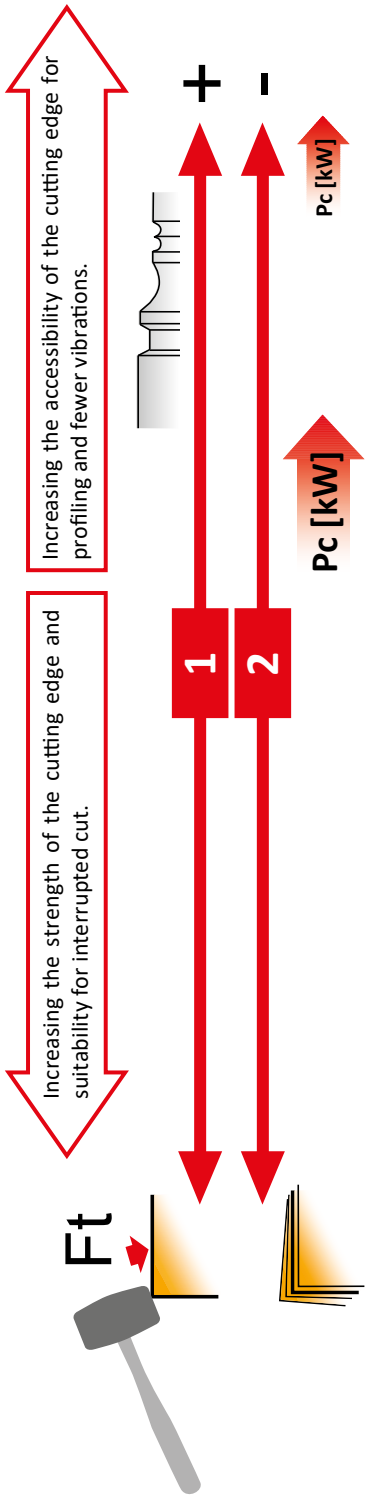
$$\delta_{[mm]} = \frac{64 . F . L^3}{3 . \pi . E . D_s^3}$$

σ	Bending stress in the body [MPa]
F	Cutting force [N]
L	Tool overhang [mm]
B	Body width [mm]
H	Body height [mm]
Ds	Body diameter [mm]
E	Body material elastic modulus [MPa]

Material	MPa [N/mm²]	[kgf/mm²]
Steel	210.000	21.000
Sintered carbide	560.000 – 620.00	56.000 – 62.00

50% reduction in overhang reduces deflection by **88%.**
1/3 increase in cross section reduces bending by **68%.**

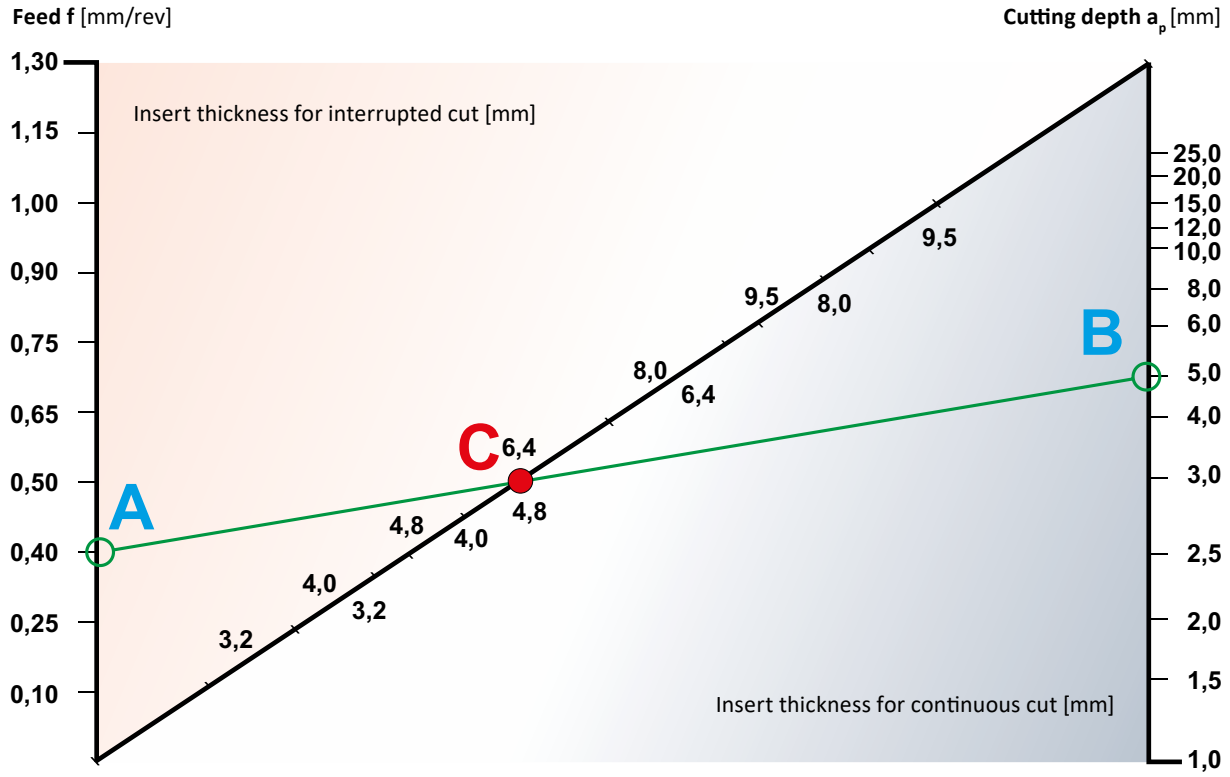
Choosing the shape and size of the insert



Priority of choice	Insert shape		Nose angle	Insert size		Maximum length of cutting edge Lmax			Roughing	Light roughing	Finishing	Profile turning	Face turning	Versatile applications	Tendency to vibrate	Hard material	Interrupted cut
				ISO	ANSI		[mm]	[″]									
		V	35°	11	2	0.25L	2.80	.110″									
				13			3.30	.130″			■	■		◪	■		
				16	3		4.20	.165″									
		D	55°	07	2	0.25L	2.00	.078″									
				11	3		2.90	.114″		■	■	■	◪	■	■		
				15	4		3.90	.153″									
		T	60°	11	2	0.33L	3.60	.141″									
				16	3		5.50	.216″									
				22	4		7.30	.287″	◪	■	■	◪	◪	◪	■	◪	
				27	5		9.10	.358″									
		W	80°	06	3	0.50L	3.30	.129″	◪	■	■	◪	■	◪	◪	◪	◪
				08	4		4.40	.173″									
		C	80°	06	2	0.66L	4.20	.165″									
				09	3		6.40	.251″									
				12	4		8.50	.334″									
				16	5		10.60	.417″	■	■	◪	◪	■	■	◪	■	■
				19	6		12.70	.500″									
				25	8		16.50	.649″									
		S	90°	09	3	0.66L	6.30	.248″									
				12	4		8.40	.330″									
				15	5		10.40	.409″	■	◪			■			■	■
				19	6		12.60	.496″									
				25	8		16.80	.661″									
		C	100°	12	4	0.66L	8.50	.334″									
				19	6		12.70	.500″	■				■			■	■
				25	8		16.50	.649″									
		R		06		0.40D	2.40	.094″									
				08			3.20	.125″									
				10			4.00	.157″									
				12			4.80	.188″									
				15			6.00	.236″	■				◪	◪		■	■
				16			6.40	.251″									
				19			7.60	.299″									
				20			8.00	.315″									
				25			10.00	.393″									
				32			12.80	.503″									

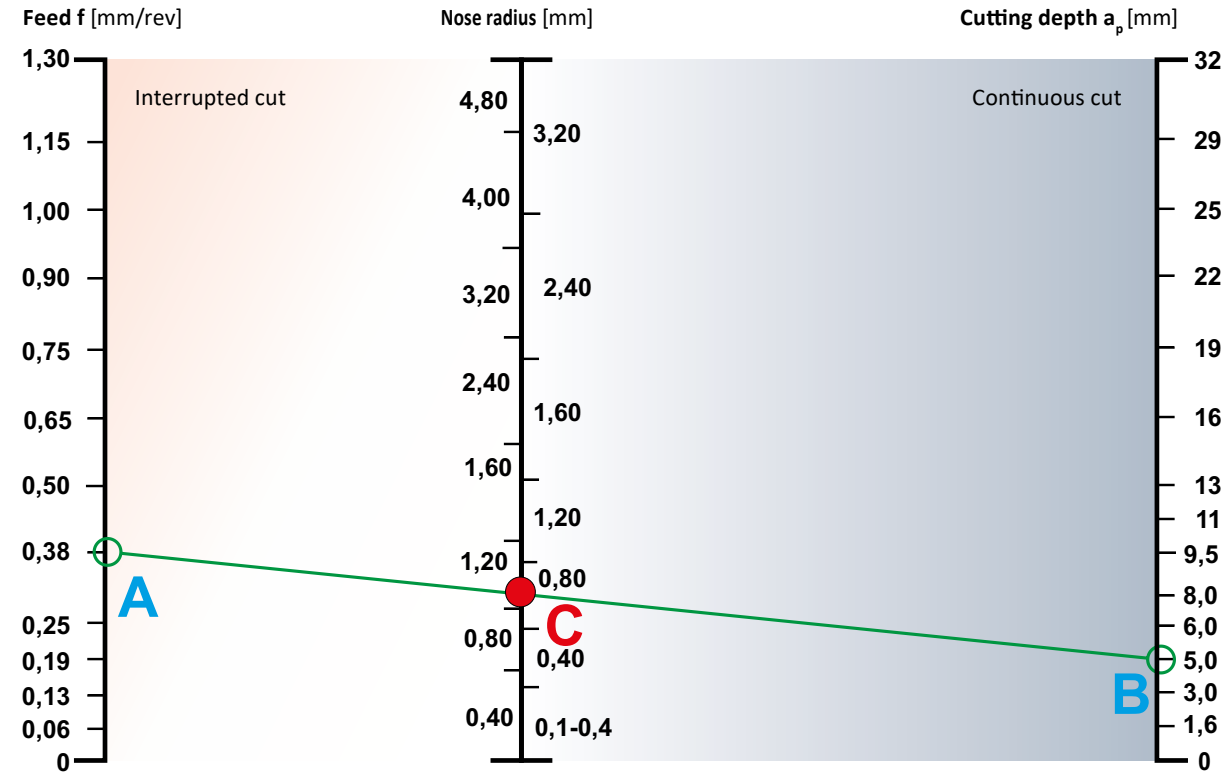
Choosing the optimum thickness of the insert

Based on practice, we recommend performing this only for interrupted cut and at a maximum load of inserts.



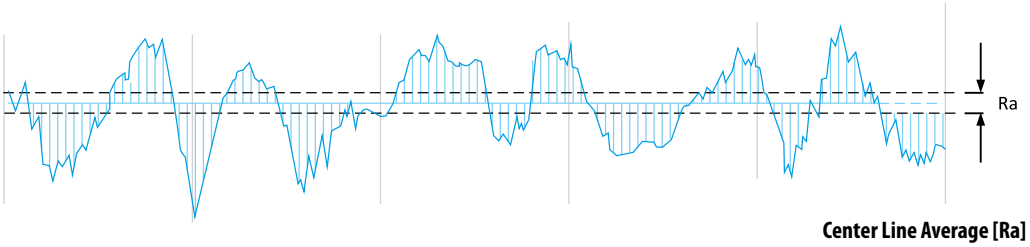
Choosing the nose radius of the insert

Based on practice, we recommend performing this only for interrupted cut and at a maximum load of inserts.



The insert radius, together with the feed and the minor cutting edge angle, is one of the main criteria for determining the roughness of the machined surface. Obviously, the properties and type of material being machined, including the cutting environment, have a significant impact.

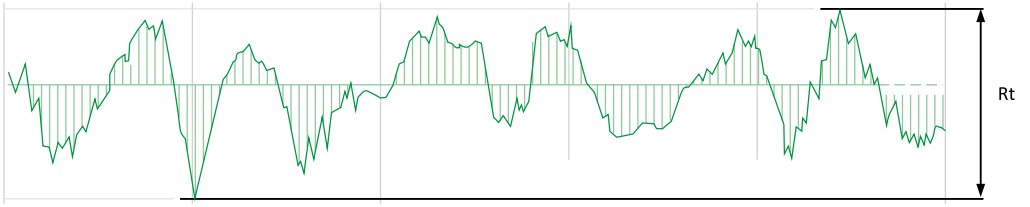
At the beginning of this section, we indicate the main roughness parameters most often specified in engineering practice.



Center Line Average [Ra]

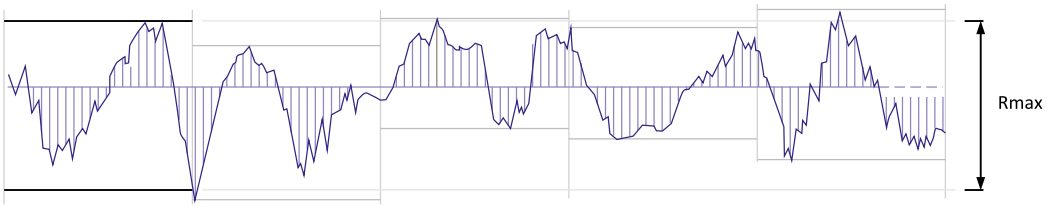
Ra – Average roughness
Ra is also known as Arithmetic Average (AA) or Center Line Average (CLA). It is the average roughness in the area between the roughness profile and its mean line. Graphically, Ra is the area between the roughness profile and its center-line divided by the evaluation length. The evaluation length is normally five sample lengths where each sample length is equal to one cut-off length. As shown in the graph.

Ra is by far the most commonly used Surface Finish parameter and a good starting point for quantifying parts even when there is no parameter callout (surface finish required). However, while common, Ra is not sufficient to completely characterize the roughness of a surface. Depending on the application, surfaces with the same roughness can perform quite differently. Lets look at the same surface roughness analysed in 3 other ways:



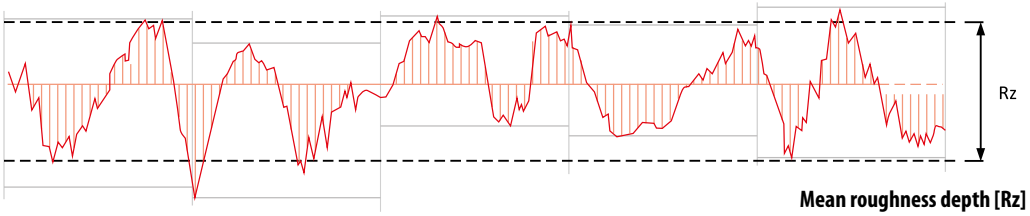
Total height of the roughness profile [Rt]

Rt – Total height of roughness profile
Difference between height of the highest peak and the depth of the deepest valley within the evaluation length as you can see in the bottom graph.



Largest single roughness depth [Rmax]

Rmax – Maximum distance from highest peak to lowest valley – of the total cut-off length
Or defining it differently but meaning the same Rmax is the largest single roughness depth measured within one of the sample lengths. Rmax is particularly sensitive to anomalies such as scratches and burrs that may not be obvious from measures such as Ra that rely on averages.



Mean roughness depth [Rz]

Rz – Mean roughness depth
Rz is often preferred to Ra in Europe and particularly Germany. Instead of measuring from center-line like Ra, Rz measures the average of the 5 largest peak to valley differences within five sampling lengths. While Ra is relatively insensitive to a few extremes, Rz is quite sensitive since it is the extremes it is designed to measure.

Surface Roughness Grades: “N” Numbers

The N numbers are common used on technical drawings to described the surface finish roughness. In the past triangles where used but the are not so concrete to explain the correct surface finish.

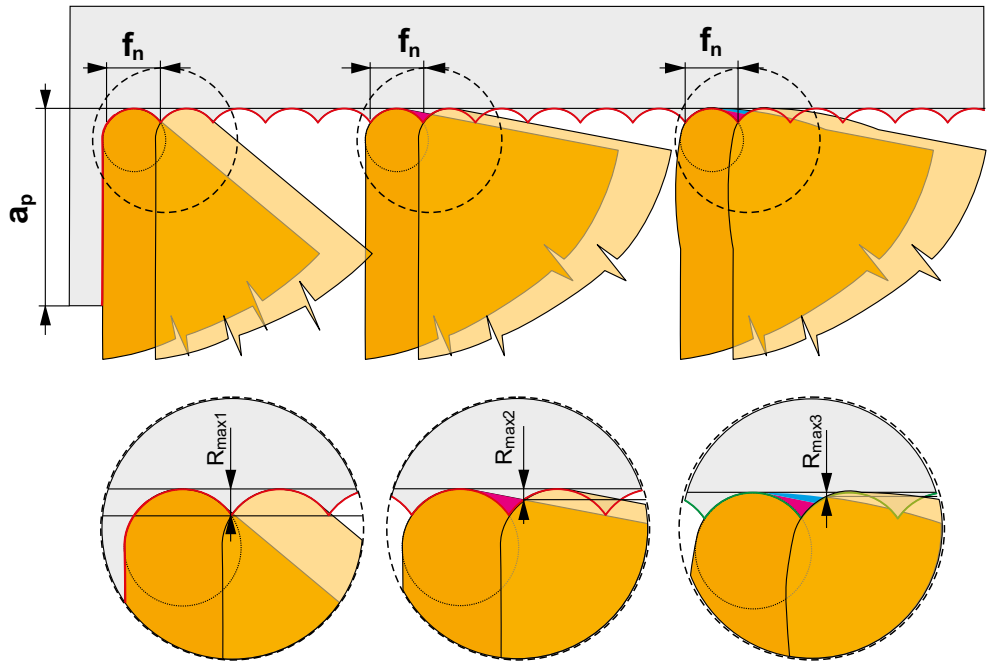
Relationship with Triangle Symbol

Arithmetical Mean Roughness Ra [µm]	Max. Height Roughness Rz [µm]	Ten PointsMean Roughness RzJIS [µm]	Roughness Grade	Note: (Relationship with Triangle)
0.025	0.1	0.1	N1	VVVV
0.05	0.2	0.2	N2	
0.1	0.4	0.4	N3	
0.2	0.8	0.8	N4	
0.4	1.6	1.6	N5	VVV
0.8	3.2	3.2	N6	
1.6	6.3	6.3	N7	
3.2	12.5	12.5	N8	VV
6.3	25	25	N9	
12.5	50	50	N10	V
25	100	100	N11	

Note: Finishing symbol (Triangle and wave~) was removed from JIS standard in the 1994 Revision.

In the market you can find some “RugoTest“ where the surface finish can be checked visually if there is no electronical equipment available. Be aware that’s only a guide and no measurement

Roughness values R_z and R_a specified in the following tables are valid for turning using inserts with larger minor cutting edge angles $KAPR'$, i.e. inserts of basic shapes **T..., S..., D...., K..., V...** In turning using inserts with shapes **C ..., W ...**, and in particular using inserts with the WIPER geometry – i.e. tools with adjustment angles $KAPR$ = 90° – 95°, usually lower roughness values R_a are achieved as compared with the data from the table. This is caused by the low value of the minor cutting edge angle $KAPR'$. In this case rough areas are cut off and theoretical maximum rough areas are reduced to $R_{max3} < R_{max2} < R_{max1}$, as evident from the comparison in picture 17 that follows.



Surface quality in turning R_{max}

$$R_{max} = \frac{f^2}{8.RE} \cdot 1000$$

f ⇨	*RE* Radius																		
	0.1	0.2	0.4	0.5	0.8	1.0	1.2	1.5	1.6	2.0	2.4	2.5	3.0	3.2	3.5	4.0	5.0	6.0	8.0
	Surface R_{max} [µm]																		
0.05	3.13	1.56	0.78	0.63	0.39	0.31	0.26	0.21	0.20	0.16	0.13	0.13	0.10	0.10	0.09	0.08	0.06	0.05	0.04
0.07	6.1	3.06	1.53	1.23	0.77	0.61	0.51	0.41	0.38	0.31	0.26	0.25	0.20	0.19	0.18	0.15	0.12	0.10	0.08
0.08	8.0	4.0	2.00	1.60	1.00	0.80	0.67	0.53	0.50	0.40	0.33	0.32	0.27	0.25	0.23	0.20	0.16	0.13	0.10
0.10		6.3	3.13	2.50	1.56	1.25	1.04	0.83	0.78	0.63	0.52	0.50	0.42	0.39	0.36	0.31	0.25	0.21	0.16
0.12		9.0	4.50	3.60	2.25	1.80	1.50	1.20	1.13	0.90	0.75	0.72	0.60	0.56	0.51	0.45	0.36	0.30	0.23
0.15		14	7.0	5.6	3.52	2.81	2.34	1.88	1.76	1.41	1.17	1.13	0.94	0.88	0.80	0.70	0.56	0.47	0.35
0.16		16	8.0	6.4	4.00	3.20	2.67	2.13	2.00	1.60	1.33	1.28	1.07	1.00	0.91	0.80	0.64	0.53	0.40
0.18		20	10.1	8.1	5.1	4.05	3.38	2.70	2.53	2.03	1.69	1.62	1.35	1.27	1.16	1.01	0.81	0.68	0.51
0.20			13	10.0	6.3	5.0	4.17	3.33	3.13	2.50	2.08	2.00	1.67	1.56	1.43	1.25	1.00	0.83	0.63
0.22			15	12.1	7.6	6.1	5.0	4.03	3.78	3.03	2.52	2.42	2.02	1.89	1.73	1.51	1.21	1.01	0.76
0.25			20	16	9.8	7.8	6.5	5.2	4.88	3.91	3.26	3.13	2.60	2.44	2.23	1.95	1.56	1.30	0.98
0.27			23	18	11.4	9.1	7.6	6.1	5.7	4.56	3.80	3.65	3.04	2.85	2.60	2.28	1.82	1.52	1.14
0.30			28	23	14	11.3	9.4	7.5	7.0	5.6	4.69	4.50	3.75	3.52	3.21	2.81	2.25	1.88	1.41
0.32			32	26	16	13	10.7	8.5	8.0	6.4	5.3	5.1	4.27	4.00	3.66	3.20	2.56	2.13	1.60
0.35			38	31	19	15	13	10.2	9.6	7.7	6.4	6.1	5.1	4.79	4.38	3.83	3.06	2.55	1.91
0.37			43	34	21	17	14	11.4	10.7	8.6	7.1	6.8	5.7	5.3	4.89	4.28	3.42	2.85	2.14
0.40				40	25	20	17	13	13	10.0	8.3	8.0	6.7	6.3	5.7	5.0	4.00	3.33	2.50
0.45				51	32	25	21	17	16	13	10.5	10.1	8.4	7.9	7.2	6.3	5.1	4.22	3.16
0.50					39	31	26	21	20	16	13	13	10.4	9.8	8.9	7.8	6.3	5.2	3.91
0.55					47	38	32	25	24	19	16	15	13	11.8	10.8	9.5	7.6	6.3	4.73
0.60					56	45	38	30	28	23	19	18	15	14	13	11.3	9.0	7.5	5.6
0.65					66	53	44	35	33	26	22	21	18	17	15	13	10.6	8.8	6.6
0.70					77	61	51	41	38	31	26	25	20	19	18	15	12.3	10.2	7.7
0.75					88	70	59	47	44	35	29	28	23	22	20	18	14	11.7	8.8
0.80						80	67	53	50	40	33	32	27	25	23	20	16	13	10.0
0.85						90	75	60	56	45	38	36	30	28	26	23	18	15	11.3
0.90						101	84	68	63	51	42	41	34	32	29	25	20	17	13
0.95						113	94	75	71	56	47	45	38	35	32	28	23	19	14
1.00							104	83	78	63	52	50	42	39	36	31	25	21	16
1.20								120	113	90	75	72	60	56	51	45	36	30	23
1.30								141	132	106	88	85	70	66	60	53	42	35	26
1.40								163	153	123	102	98	82	77	70	61	49	41	31
1.50									176	141	117	113	94	88	80	70	56	47	35
1.60										160	133	128	107	100	91	80	64	53	40
1.70										181	151	145	120	113	103	90	72	60	45
1.80										203	169	162	135	127	116	101	81	68	51
1.90										226	188	181	150	141	129	113	90	75	56
2.00											208	200	167	156	143	125	100	83	63
2.20											252	242	202	189	173	151	121	101	76
2.50													260	244	223	195	156	130	98

Danger of hard chipbreaking

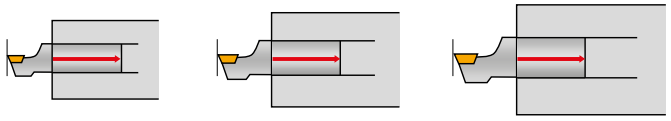
Surface quality in turning R_a

$$R_a = 43{,}9 \frac{f^{1{,}88}}{RE^{0{,}97}}$$

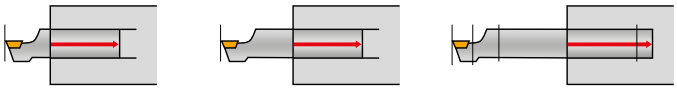
f ⇨	*RE* Radius																		
	0.1	0.2	0.4	0.5	0.8	1.0	1.2	1.5	1.6	2.0	2.4	2.5	3.0	3.2	3.5	4.0	5.0	6.0	8.0
	Surface R_a [µm]																		
0.05	1.47	0.75	0.38	0.31	0.20	0.16	0.13	0.11	0.10	0.08	0.07	0.06	0.05	0.05	0.05	0.04	0.03	0.03	0.02
0.07	2.76	1.41	0.72	0.58	0.37	0.30	0.25	0.20	0.19	0.15	0.13	0.12	0.10	0.10	0.09	0.08	0.06	0.05	0.04
0.08	3.55	1.81	0.93	0.75	0.47	0.38	0.32	0.26	0.24	0.19	0.16	0.16	0.13	0.12	0.11	0.10	0.08	0.07	0.05
0.10		2.76	1.41	1.13	0.72	0.58	0.48	0.39	0.37	0.30	0.25	0.24	0.20	0.19	0.17	0.15	0.12	0.10	0.08
0.12		3.88	1.98	1.60	1.01	0.82	0.68	0.55	0.52	0.42	0.35	0.34	0.28	0.26	0.24	0.21	0.17	0.14	0.11
0.15		5.9	3.02	2.43	1.54	1.24	1.04	0.84	0.79	0.63	0.53	0.51	0.43	0.40	0.37	0.32	0.26	0.22	0.17
0.16		6.7	3.41	2.74	1.74	1.40	1.17	0.94	0.89	0.71	0.60	0.58	0.48	0.45	0.42	0.36	0.29	0.25	0.19
0.18		8.3	4.25	3.42	2.17	1.75	1.46	1.18	1.11	0.89	0.75	0.72	0.60	0.57	0.52	0.46	0.37	0.31	0.23
0.20			5.2	4.17	2.64	2.13	1.78	1.44	1.35	1.09	0.91	0.88	0.73	0.69	0.63	0.56	0.45	0.37	0.28
0.22			6.2	4.99	3.16	2.55	2.14	1.72	1.62	1.30	1.09	1.05	0.88	0.82	0.76	0.66	0.53	0.45	0.34
0.25			7.9	6.3	4.02	3.24	2.72	2.19	2.05	1.65	1.39	1.33	1.12	1.05	0.96	0.84	0.68	0.57	0.43
0.27			9.1	7.3	4.65	3.74	3.14	2.53	2.37	1.91	1.60	1.54	1.29	1.21	1.11	0.98	0.79	0.66	0.50
0.30			11.1	8.9	5.7	4.57	3.83	3.08	2.89	2.33	1.95	1.88	1.57	1.48	1.35	1.19	0.96	0.80	0.61
0.32			13	10.1	6.4	5.2	4.32	3.48	3.27	2.63	2.20	2.12	1.78	1.67	1.53	1.34	1.08	0.91	0.69
0.35			15	11.9	7.6	6.1	5.1	4.12	3.87	3.11	2.61	2.51	2.10	1.97	1.81	1.59	1.28	1.07	0.81
0.37			16	13	8.4	6.8	5.7	4.57	4.29	3.46	2.90	2.78	2.33	2.19	2.01	1.76	1.42	1.19	0.90
0.40				15	9.7	7.8	6.6	5.3	4.97	4.00	3.35	3.22	2.70	2.54	2.33	2.04	1.65	1.38	1.04
0.45				19	12.1	9.8	8.2	6.6	6.2	4.99	4.19	4.02	3.37	3.17	2.90	2.55	2.05	1.72	1.30
0.50					15	11.9	10.0	8.0	7.6	6.1	5.1	4.90	4.11	3.86	3.54	3.11	2.50	2.10	1.59
0.55					18	14	12.0	9.6	9.0	7.3	6.1	5.9	4.92	4.62	4.23	3.72	2.99	2.51	1.90
0.60					21	17	14	11.3	10.7	8.6	7.2	6.9	5.8	5.4	4.98	4.38	3.53	2.96	2.24
0.65					24	20	16	13	12.4	10.0	8.4	8.0	6.7	6.3	5.8	5.1	4.10	3.44	2.60
0.70					28	22	19	15	14	11.5	9.6	9.2	7.7	7.3	6.7	5.9	4.71	3.95	2.99
0.75					32	26	21	17	16	13	10.9	10.5	8.8	8.3	7.6	6.7	5.4	4.50	3.40
0.80						29	24	19	18	15	12.3	11.9	9.9	9.3	8.6	7.5	6.1	5.1	3.84
0.85						32	27	22	21	17	14	13	11.1	10.5	9.6	8.4	6.8	5.7	4.30
0.90						36	30	24	23	18	15	15	12.4	11.7	10.7	9.4	7.6	6.3	4.79
0.95						40	33	27	25	20	17	16	14	13	11.8	10.4	8.4	7.0	5.3
1.00							37	30	28	22	19	18	15	14	13	11.4	9.2	7.7	5.8
1.20								42	39	32	26	25	21	20	18	16	13	10.9	8.2
1.30								49	46	37	31	30	25	23	21	19	15	13	9.6
1.40								56	52	42	35	34	28	27	25	22	17	15	11.0
1.50									60	48	40	39	32	30	28	25	20	17	13
1.60										54	45	44	37	34	32	28	22	19	14
1.70										61	51	49	41	39	35	31	25	21	16
1.80										68	57	54	46	43	39	35	28	23	18
1.90										75	63	60	51	47	44	38	31	26	20
2.00											69	66	56	52	48	42	34	28	21
2.20											83	79	67	63	57	50	41	34	26
2.50													85	80	73	64	52	43	33

Danger of hard chipbreaking

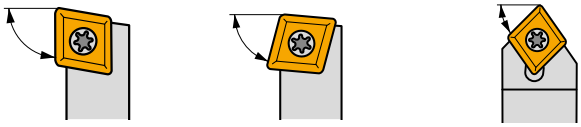
Hardness of chip formation – great attention must be paid to proper chip formation (the chip must be easily transportable from the cutting point and, at the same time, it should have the smallest possible plastic deformation, i.e. the lowest possible cutting forces).



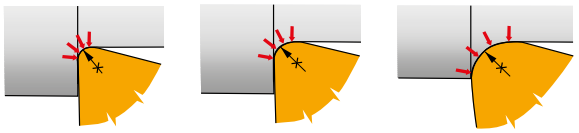
Tool body cross section (clamping rigidity) – the rigidity of the clamping itself is important. Therefore, we recommend using cutting tools with the largest possible body cross section that can be clamped. We also prefer to use monoblocks (PSC).



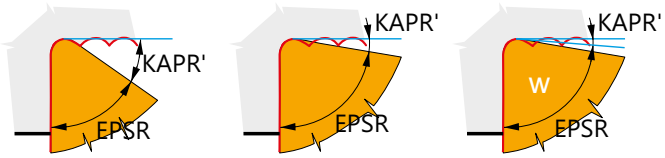
Overhang (clamping rigidity) – the tool overhang, or the rigidity of the clamping itself, is of great importance as well. Therefore, we recommend minimising the overhang.



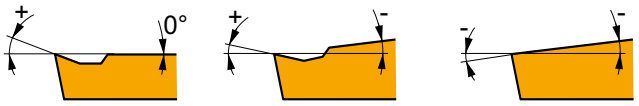
Main cutting edge angle – ideally, the tool adjustment angle should be close to 90°, i.e. the forces should be directed as much as possible to the axis of the machine spindle.



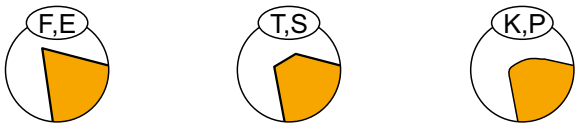
Insert radius – if there is a risk of vibration, we recommend selecting an insert with the smallest possible tip radius.



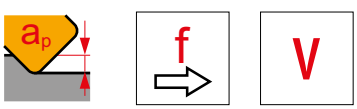
Corner angle and minor cutting edge angle – in this case it is recommended to choose an insert with the smallest possible tip angle, i.e. V (35°), D or K (55°), or T (60°).C or W shapes, or inserts with WIPER geometry, are not recommended. Please note this does not always apply (if torsional vibrations also occur, the application of these inserts can be beneficial).



Geometry – when turning thin-walled and slim parts, it is recommended to opt for positive inserts with positive geometry, then negative inserts with positive geometry, and only if there is no other choice, then negative inserts with neutral to negative geometry should be chosen.



Micro-geometry (cutting edge design) – to reduce the risk of vibration, it is necessary to select inserts with the sharpest possible cutting edge geometry. If you use inserts with t-landing, these should be as narrow and positive as possible. It is very important that the tool generates as little cutting resistance as possible.



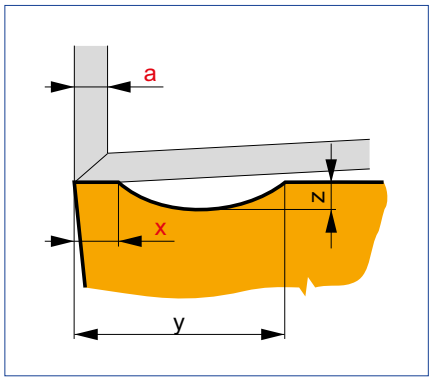
Cutting conditions:

1) When choosing the depth of cut, always make sure that the depth of cut is greater than the radius of the insert.
2) When choosing the feed, take into account that the specific cutting resistance increases with decreasing chip thickness, i.e. do not use extremely low feeds (below 0.1 mm).
3) If there are vibrations, cutting speed change (+/-) can also help – this is related to the inherent frequency of the machine.
   NOTE: It is often advantageous to reduce the depth of cut (not below the radius) and increase the feed.

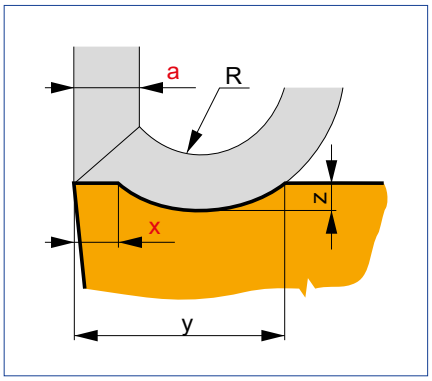
Do not use worn inserts – abrasion of the flank causes an increase in cutting forces, and thus the risk of vibration.
If tool clamping allows it, move the cutting edge above the axis (in external turning) by approx. 2% of the diameter.

Choosing the chip breaker

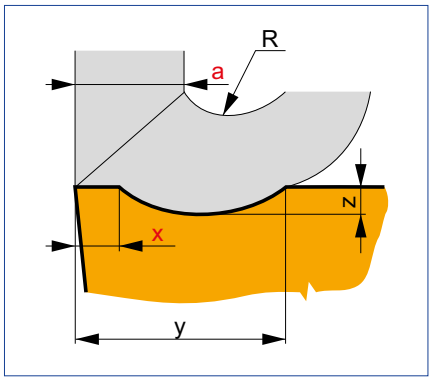
The shape of the chip depends on several factors – the properties of the machined component, material strength, toughness and microstructure, properties of the insert grade, especially the frictional properties (on the rake face), geometry of cutting edge, cutting conditions and the type of chip breaker, also static and dynamic properties of the machine.
Virtually all of these factors in the cutting process work to combine and determine the shape of the chip (shearing action, flow of the chip, or curled chip – which can gather and clog the machining area). Each chip breaker works in a defined range of feed and depth of cut.
The minimum feed at which the chip breaker functions depends on the width of Top Land „*x*“ and it's angle. The maximum feed depends on the distance from the cutting edge to the end of the chip breaker *y* and the depth of the chip breaker *z*.



If the thickness of layer „*a*“ cut away (at setting angle *KAPR* = 90°, equal to the feed) is significantly smaller than the T–land „*x*“, the chip is only in contact with the chamfer. It cannot enter the chip breaker and therefore it cannot be broken (see picture).

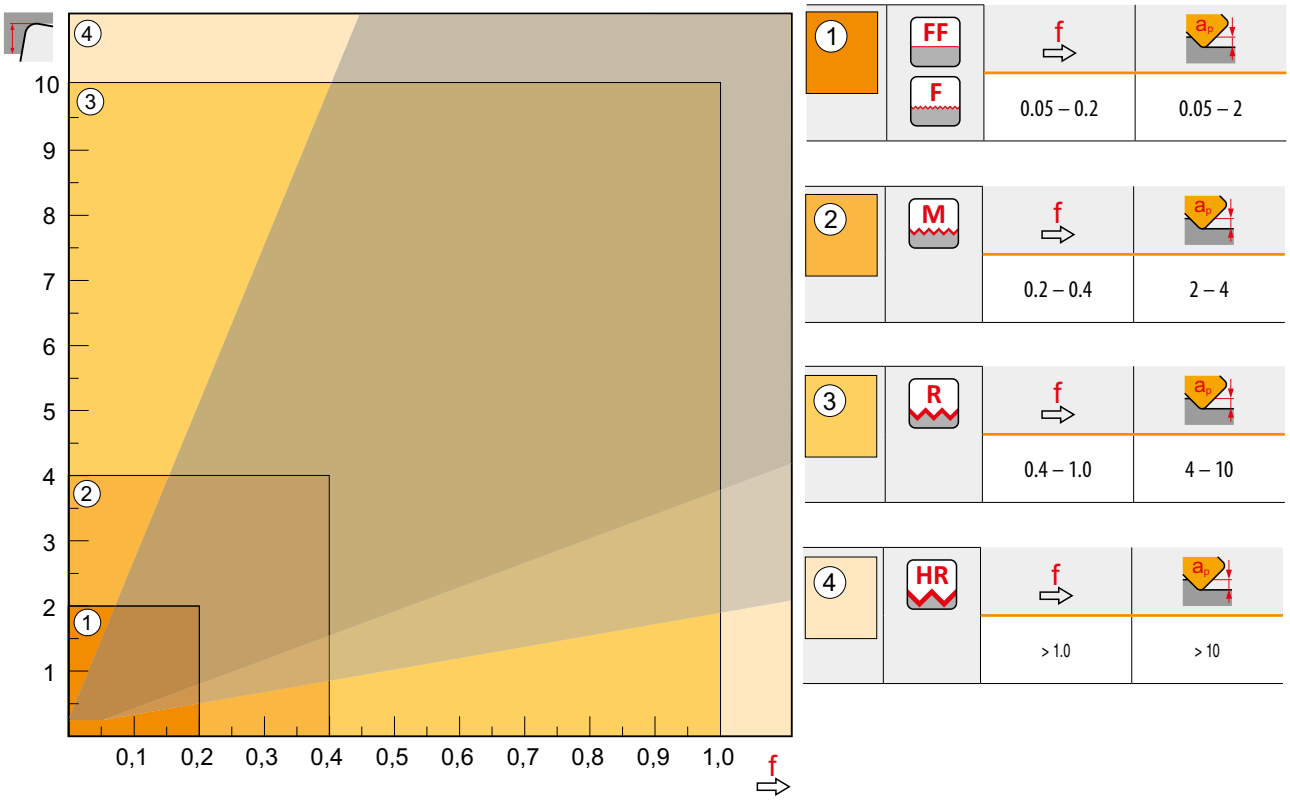


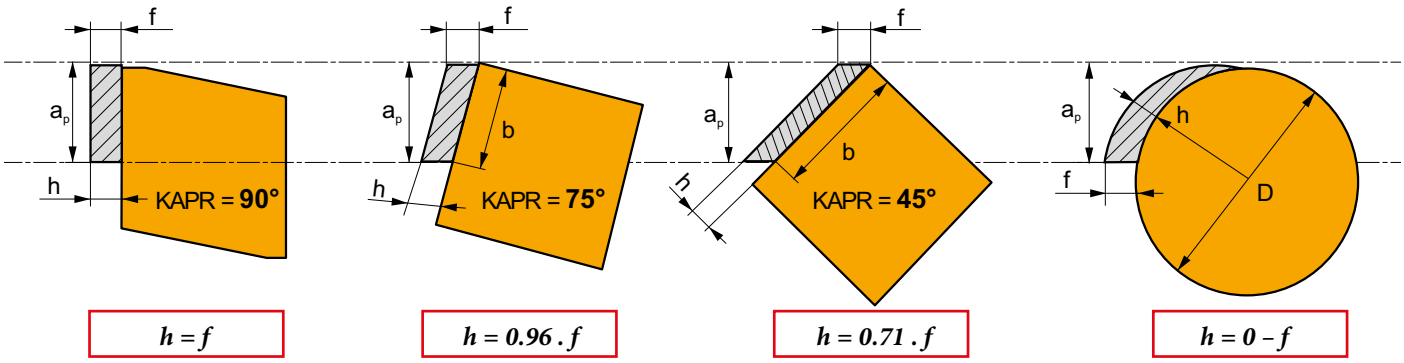
If the feed „*f*“ is greater (thickness greater than the depth of „*a*“ and *x* < *a* (*f*), the chip enters the chip breaker and is curved at specific values of radius *R* (see picture).



If *x* << *a* (see picture) the chip is excessively deformed (chip is crushed). If the chip misses the chip breaker it will not be broken.

All chip breakers work in a defined range of cutting conditions. This is why the chip breaking area is shown as a continuous range in order to define the most commonly used depth of cut and feed combinations (see following picture). The chip breaker application ranges also overlap.





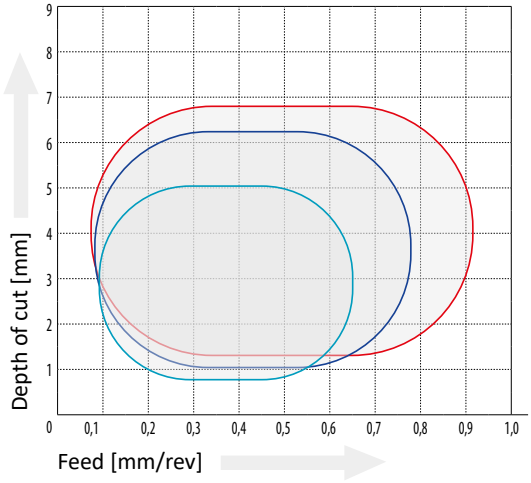
$h = f$ | $h = 0.96 \cdot f$ | $h = 0.71 \cdot f$ | $h = 0 - f$

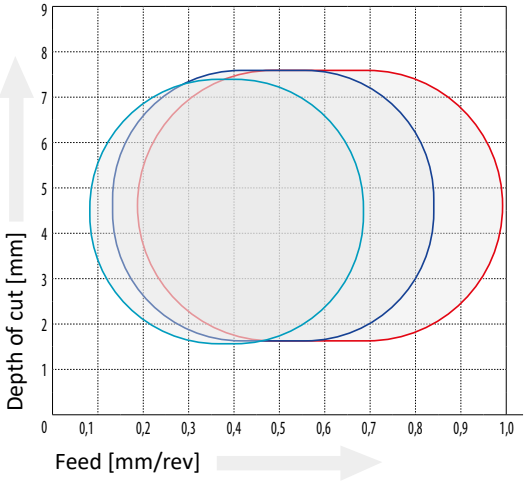
Optimal combination of depth of cut and feed varies for each material. The following table shows ranges of the optimal ratios ***b*** (chip width) to ***h*** (chip thickness). For adjustment angles close to 90°, this is essentially the ratio of depth of cut to feed. See picture.

Material		min b/h	max b/h	
P		5	15	
M		8	12	
K		3	30	
N		9	11	
S	Square chip b=h	8	12	Ribbon chip b/ h > 30
H		5	20	

As follows from the table, when choosing cutting conditions, you should avoid the so-called square chip, i.e. values where the width is close to the thickness of the chip and, on the other hand, the ribbon chip, i.e. high depths of cut in combination with low feed.
The above table shows that the most problematic chip formation relates to non-ferrous metal alloys, in particular aluminium alloys with or without a low silicon content. This is followed by superalloys and stainless steels (especially austenitic and duplex steels). Next are steels, and the best situation is with hardened materials and cast irons.

Also, keep in mind that the chip formation diagram moves slightly towards higher depths of cut (up), with increasing cutting edge length (insert size), and towards higher feeds (to the right), with increasing radius.



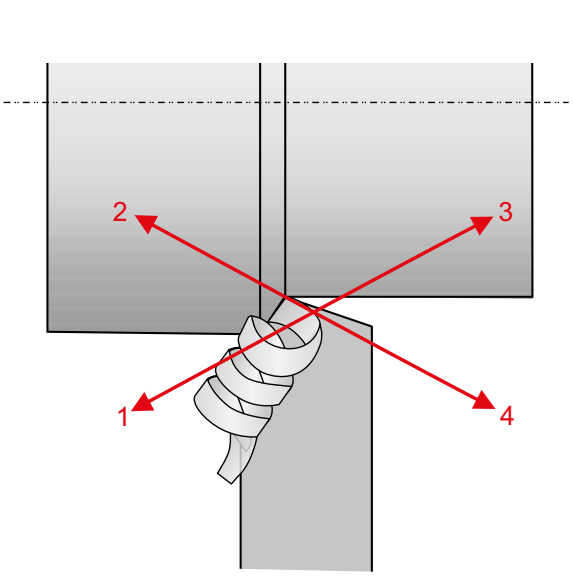


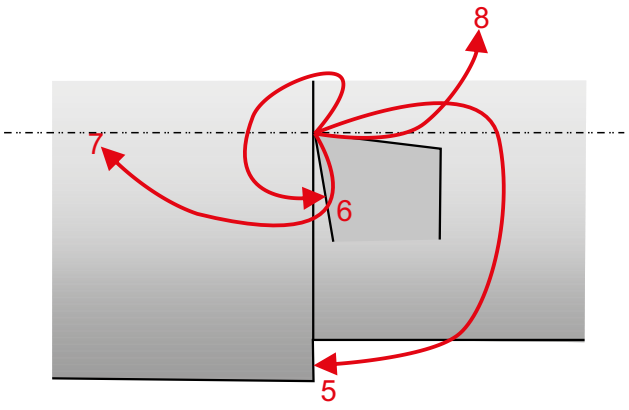
- An insert with the diameter of an inscribed circle IC = 19.050 [mm]
- An insert with the diameter of an inscribed circle IC = 15.875 [mm]
- An insert with the diameter of an inscribed circle IC = 12.700 [mm]
- An insert with the tip radius RE = 1.6 [mm]
- An insert with the tip radius RE = 1.2 [mm]
- An insert with the tip radius RE = 0.8 [mm]

Aside from shape of the chip, the direction of its evacuation is also very important. The following figure shows the basic directions of chip evacuation:

1 – from the workpiece in the feed direction,
2 – to the workpiece in the feed direction
3 – to the workpiece against the feed,
4 – from the workpiece against the feed,
5 – broken against the cutting area surface,
6 – broken against the side of the tool,
7 – broken against the surface being machined,
8 – broken against the machined surface,

Obviously, directions that can cause damage or scratching of the machined surface are undesirable.





The following section clearly specifies all the geometries we offer you in structured groups. These tables should give you an optimal and more accurate choice.

OVERVIEW OF TURNING INSERT GEOMETRIES

POSITIVE INSERTS Clamping designation ISO S	
371 (RCMT)	565
372 (RCMT)	565
...W	565
AL	565
DR4 (SCMT)	566
FF	566
FF2	566
FM	566
FM (RCMT)	567
FM2	567
NF1	567
NF2	567
OR (SCMT)	568
RF	568
RM	568
RM3	568
SF2	569
SF3	569
SI	569
SR (SCMT)	569
UR (RCMT)	570
UR	570
W-FM	570
W-UR	570
46	571
47	571
48	571
61	571
.PUN	572

POSITIVE INSERTS Clamping designation ISO P, M, D	
31 (RCMX)	573
321 (RCMX)	573
331 (RCMX)	573
361 (RCMX)	573
RF1 (RCMX)	574
RM1 (RCMX)	574
RM2 (RCM.)	574
RR2 (RCM.)	574

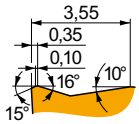
NEGATIVE INSERTS Clamping designation ISO P, M, D	
000 (LNUX)	575
002 (LNUX)	575
003 (LNUX)	575
08 (RNMG)	575
81 (RNMG)	576
432 (LNMX)	576
923	576
...A	576
DR	577
FF	577
FM	577
HR	577
HR2	578
KR	578
M	578
NF	578
NM	579
NMR	579
NR	579
NRM	579
NR2	580
OR	580
OR1	580
R	580
RM	581
SF	581
SI	581
SM	581
SR	582
W–MR	582
W–F	582
W–M	582
W-NM	583

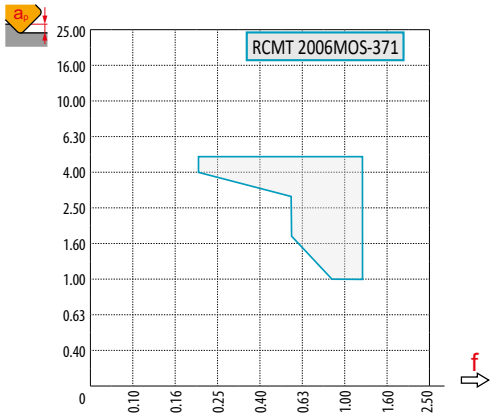
NEGATIVE INSERTS Clamping designation ISO C	
22	584
32	584
72	584
73	584
74	585

GEOMETRY OF CUTTING GROOVING INSERTS Clamping designation iso X and G	
GM (GL.D)	586
MM (GL.D)	586
PM (GL. D)	586
PR (GL. D)	586
13 CM (LCMF)	587
13 F (LCM.)	587
13 MP (LCM.)	587
16 CM (LCM.)	587
16 F (LCM.)	588
16 M (LCM.)	588
16 MP (LCM.)	588
20 F1 (LCMF)	588
20 M2 (LCMF)	589
30 F (LCM.)	589
F1 (LFMX)	589
F2 (LFMX)	589
M2 (LFMX)	590
LFUX	590
TN. EXT	591
TN. INT	591
X61	591
X61 R	591

GEOMETRY OF CUTTING POSITIVE INSERTS – CLAMPING DESIGNATION ISO S

371 (RCMT)





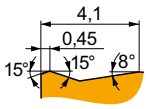
P	M	K	N	S	H
■		■			

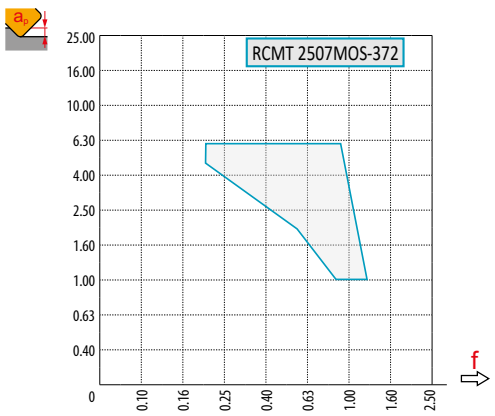
f: 0.20 – 1.20

a_p: 1.0 – 5.0

RCMT

372 (RCMT)





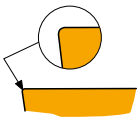
P	M	K	N	S	H
■		■			

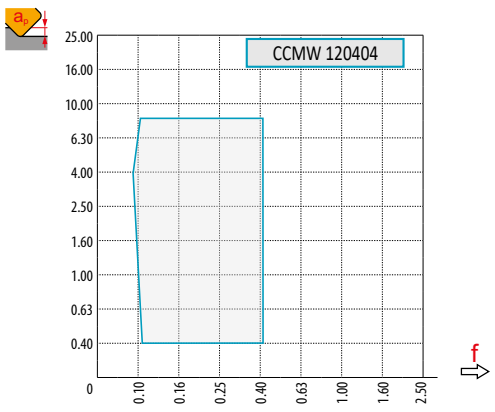
f: 0.20 – 1.20

a_p: 1.0 – 6.0

RCMT

...W





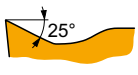
P	M	K	N	S	H
		■			◪

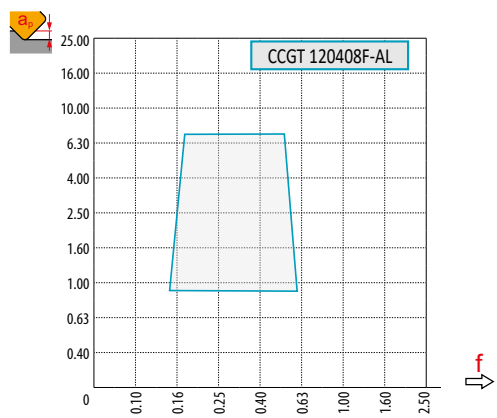
f: 0.05 – 0.60

a_p: 0.4 – 8.4

CCMW, DCMW, SCMW, RCMW, TCMW, VCMW

AL





P	M	K	N	S	H
			■	◪	

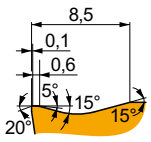
f: 0.05 – 0.60

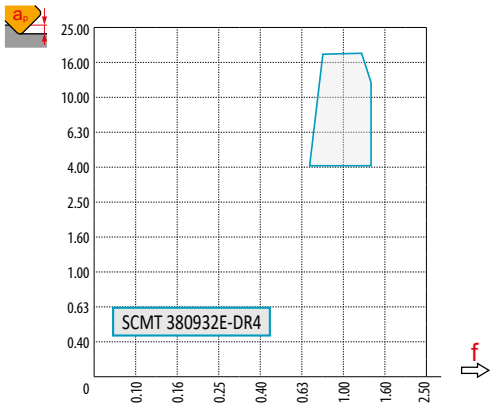
a_p: 0.2 – 7.0

CCGT, DCGT, SCGT, RCGT, TCGT, VCGT, WCGT

GEOMETRY OF CUTTING POSITIVE INSERTS – CLAMPING DESIGNATION ISO S

DR4 (SCMT)

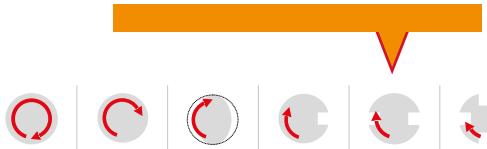




P	M	K	N	S	H
■	◪	■			

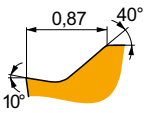
f ⇨ 0.70 – 1.40

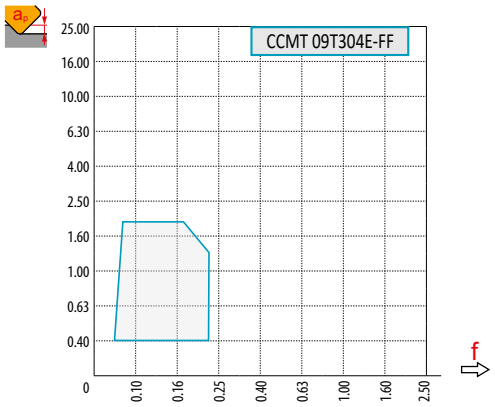
a_p 4.0 – 18.0



SCMT

FF

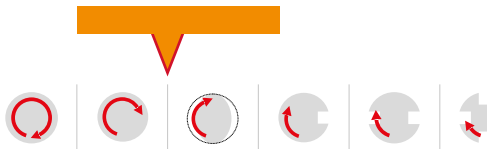




P	M	K	N	S	H
■	◪				

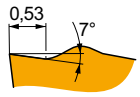
f ⇨ 0.05 – 0.23

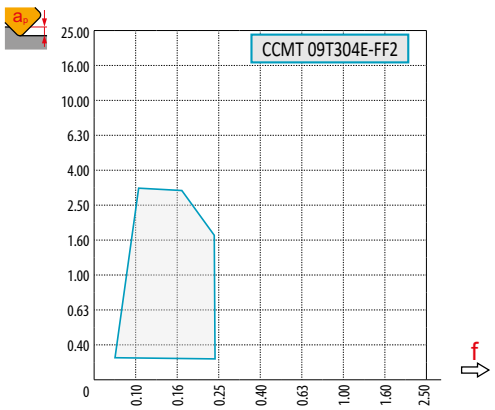
a_p 0.2 – 2.0



CCMT, DCMT

FF2





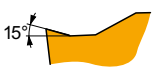
P	M	K	N	S	H
■		■			

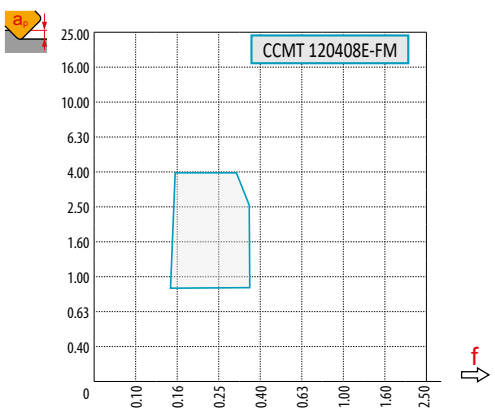
f ⇨ 0.02 – 0.28

a_p 0.20 – 3.0

CCMT, CCGT, DCGT, DCMT, SCMT, TCGT, TCMT, VBMT, VCGT, VCGX, WCGT

FM





P	M	K	N	S	H
■	■	◪	◪		

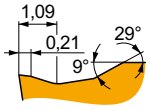
f ⇨ 0.05 – 0.45

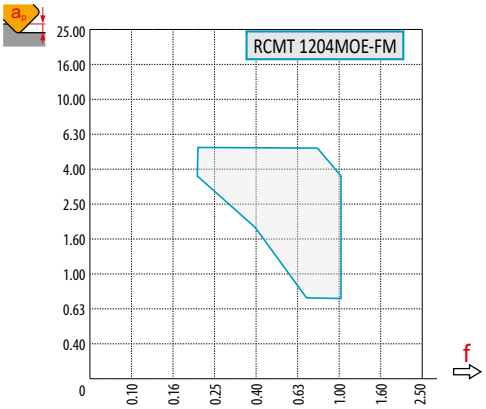
a_p 0.2 – 4.0

CCMT, DCMT, SCMT, TCMT, VBMT, WCMT

GEOMETRY OF CUTTING POSITIVE INSERTS – CLAMPING DESIGNATION ISO S

FM (RCMT)





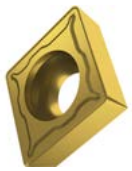
P	M	K	N	S	H
■	■	◪	◪		

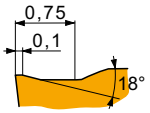
f 0.10 – 1.0

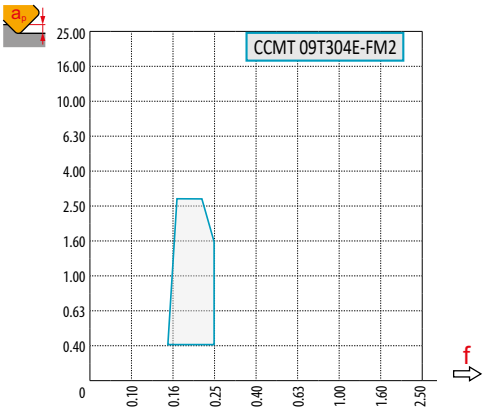
a_p 0.3 – 5.0

RCMT

FM2







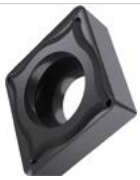
P	M	K	N	S	H
■	◪	■			

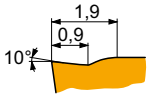
f 0.04 – 0.4

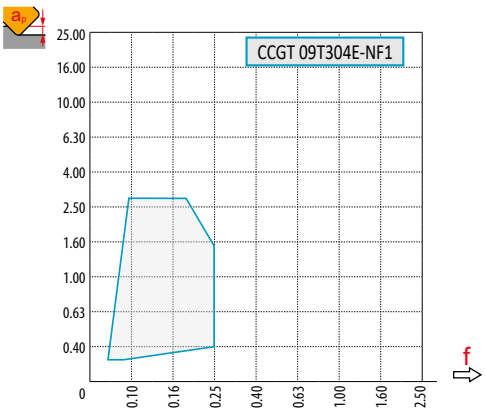
a_p 0.2 – 4.0

CCMT, DCMT, ECMT, SCMT, TCMT, VBMT, VCGT

NF1







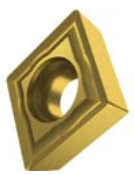
P	M	K	N	S	H
■	■		◪	■	◪

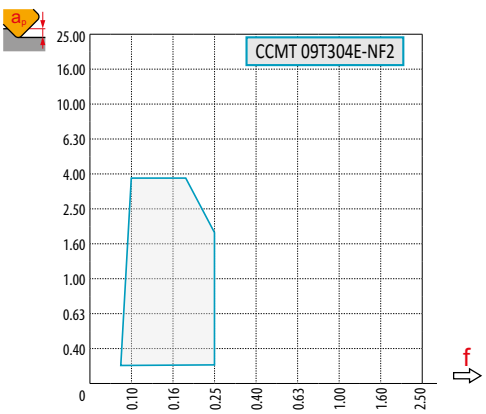
f 0.04 – 0.35

a_p 0.3 – 3.5

CCGT, DCGT, SCGT, TCGT

NF2





P	M	K	N	S	H
◪	■	◪	◪	■	

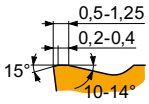
f 0.05 – 0.45

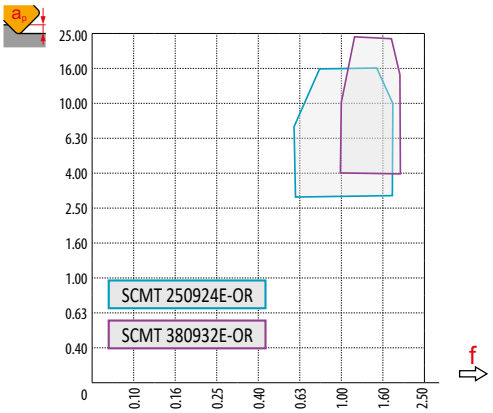
a_p 0.2 – 4.0

CCMT, EPMT, SCMT, TCMT, VCGT

GEOMETRY OF CUTTING POSITIVE INSERTS – CLAMPING DESIGNATION ISO S

OR (SCMT)





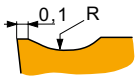
P	M	K	N	S	H
■	■	■		◪	

f ⇨ 0.60 – 2.00

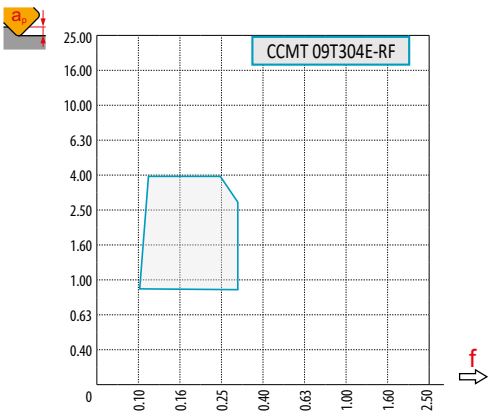
a_p 3.0 – 24.0

SCMT

RF



I.C.	R
6,35	1,0
9,525	1,5
12,7	2,5



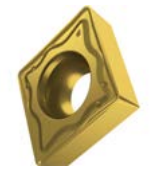
P	M	K	N	S	H
■	◪	■			◪

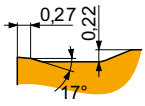
f ⇨ 0.10 – 0.60

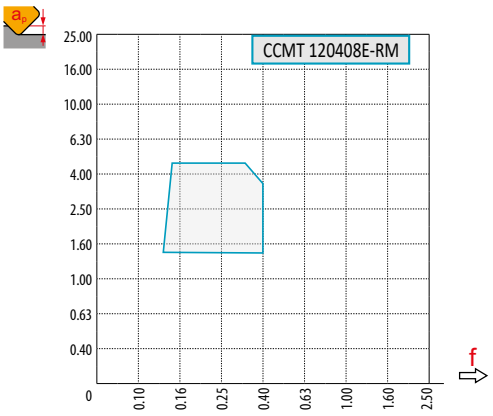
a_p 0.8 – 8.0

CCMT, DCMT, SCMT, TCMT, WCMT

RM







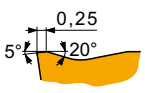
P	M	K	N	S	H
■	■	■		◪	◪

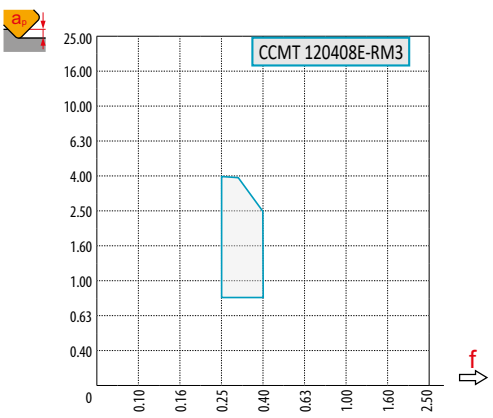
f ⇨ 0.10 – 0.50

a_p 0.8 – 4.5

CCMT, DCMT, SCMT, TCMT, VBMT

RM3





P	M	K	N	S	H
■	◪	■			◪

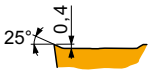
f ⇨ 0.15 – 0.90

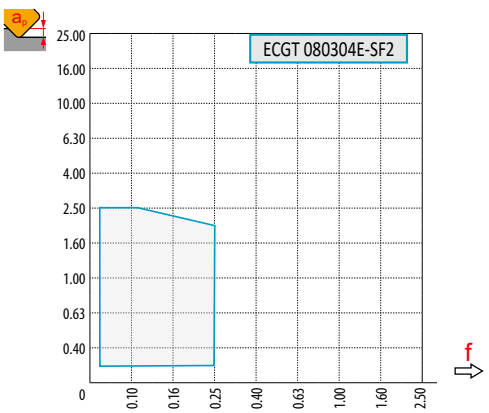
a_p 0.4 – 6.00

CCMT, SCMT, TCMT, RCMT

GEOMETRY OF CUTTING POSITIVE INSERTS – CLAMPING DESIGNATION ISO S

SF2





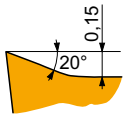
P	M	K	N	S	H
◪	■		◪	■	

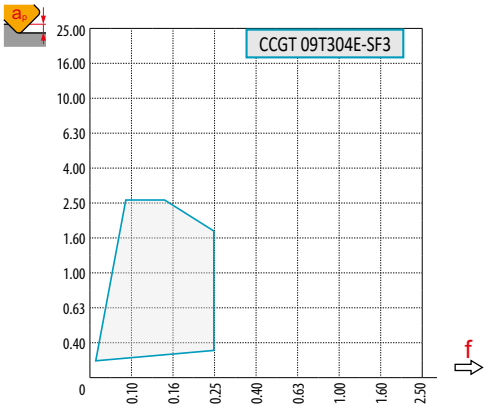
f ⇨ 0.02 – 0.28

a_p 0.1 – 2.5

ECGT, VCGT

SF3





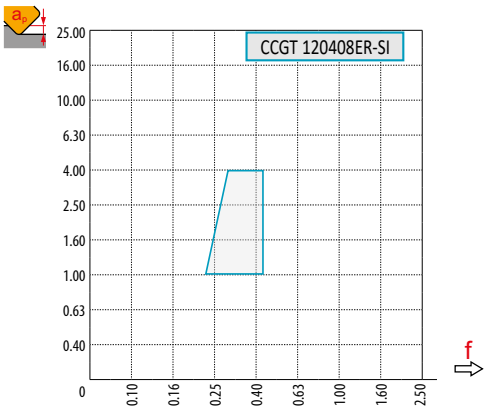
P	M	K	N	S	H
◪	■	◪	■	■	◪

f ⇨ 0.02 – 0.35

a_p 0.2 – 4.00

CCGT, DCGT, ECGT, SCGT, TCGT, VCGT

SI



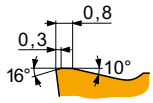
P	M	K	N	S	H
■	■	◪		■	

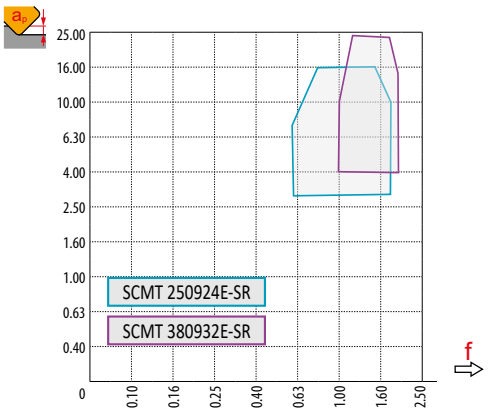
f ⇨ 0.08 – 0.45

a_p 0.4 – 4.0

CCGT, TCGT

SR (SCMT)





P	M	K	N	S	H
■	■	■			

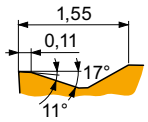
f ⇨ 0.60 – 2.0

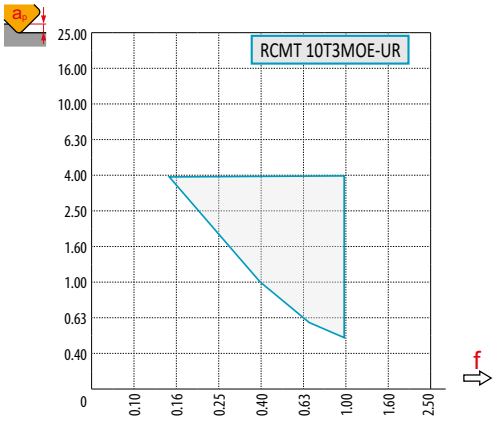
a_p 3.0 – 24.0

SCMT

GEOMETRY OF CUTTING POSITIVE INSERTS – CLAMPING DESIGNATION ISO S

UR (RCMT)

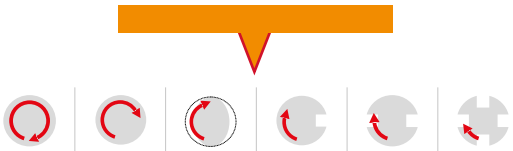




P	M	K	N	S	H
■	◪	■			

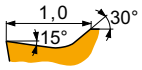
f: 0.15 – 1.00

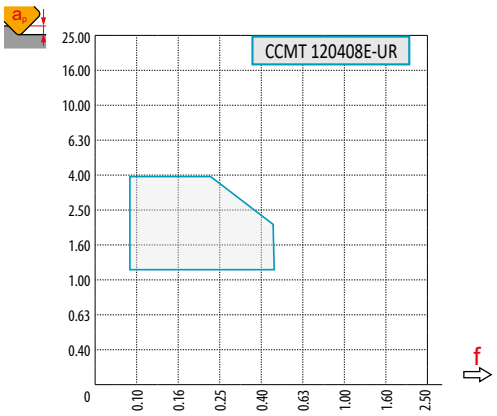
a_p: 0.5 – 5.0



RCMT

UR

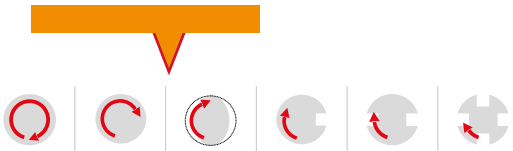




P	M	K	N	S	H
■	◪	■			

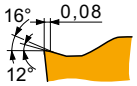
f: 0.10 – 0.40

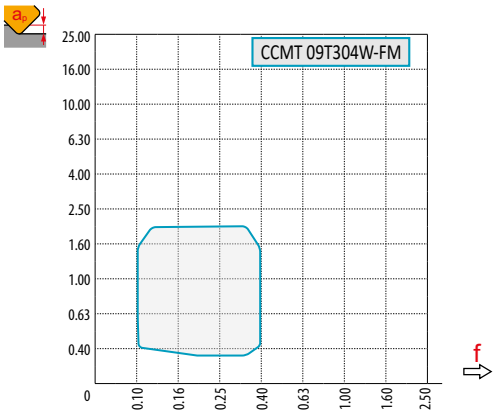
a_p: 1.0 – 4.0



CCMT, DCMT, RCMT, SCMT, TCMT, VCMT, VBMT, WCMT

W-FM





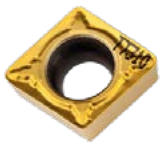
P	M	K	N	S	H
■	■	■			

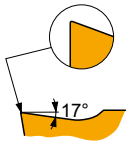
f: 0.1 – 0.4

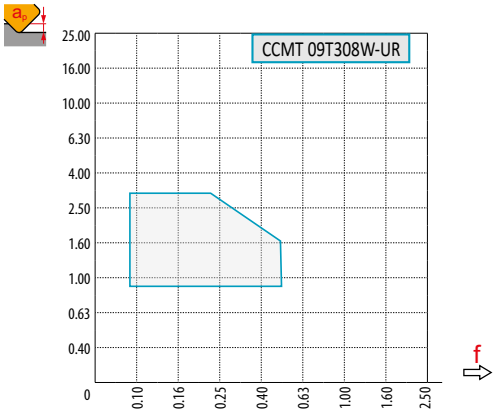
a_p: 0.3 – 3.0

CCMT, DCMX

W-UR







P	M	K	N	S	H
■	◪	■			

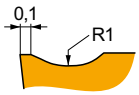
f: 0.08 – 0.5

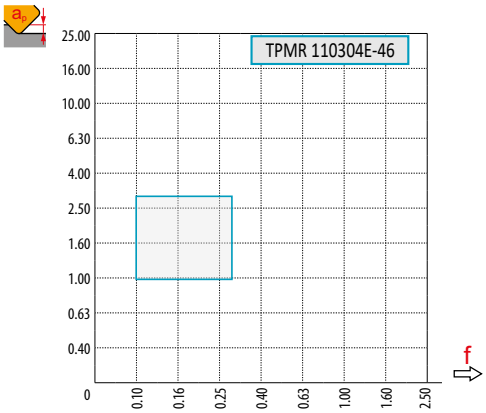
a_p: 0.4 – 3.0

CCMT

GEOMETRY OF CUTTING POSITIVE INSERTS – CLAMPING DESIGNATION ISO C

46





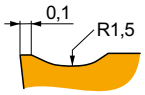
P	M	K	N	S	H
■	◪	■			

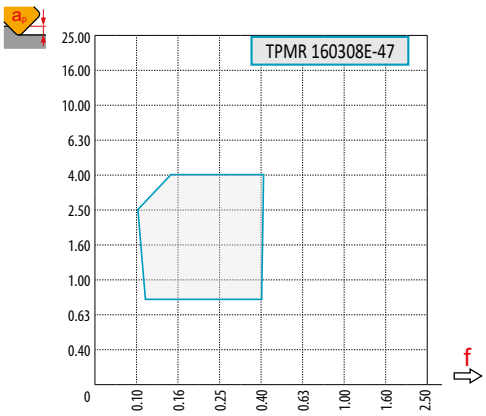
f 0.10 – 0.30

a_p 1.0 – 3.0

SPMR, TPMR

47





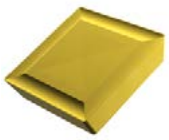
P	M	K	N	S	H
■	◪	■			

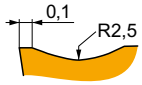
f 0.10 – 0.40

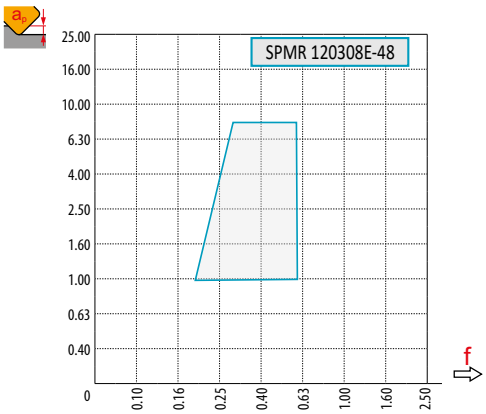
a_p 0.8 – 4.0

TPMR

48







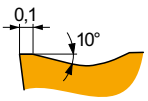
P	M	K	N	S	H
■	◪	■			

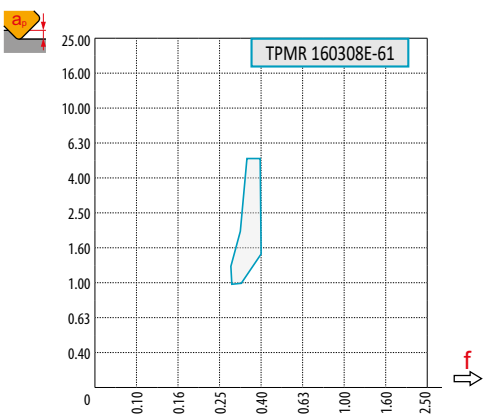
f 0.20 – 0.60

a_p 1.0 – 8.0

SPMR

61





P	M	K	N	S	H
■	◪	■			

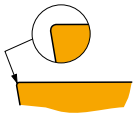
f 0.30 – 0.40

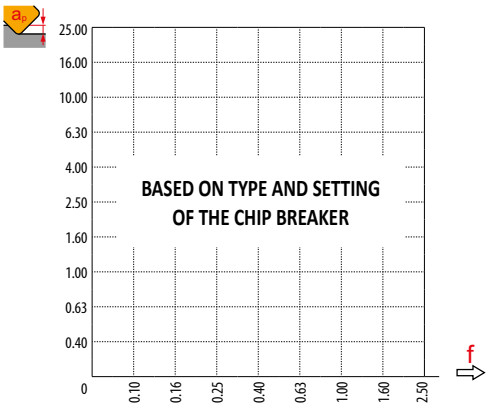
a_p 1.0 – 5.3

TPMR

GEOMETRY OF CUTTING POSITIVE INSERTS – CLAMPING DESIGNATION ISO C

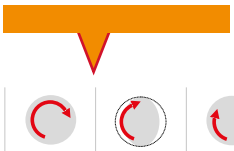
.PUN





P	M	K	N	S	H
◪		■			◪

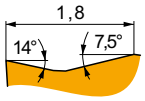
f ⇨	0.10 – 0.60
a_p	0.4 – 1.7.5

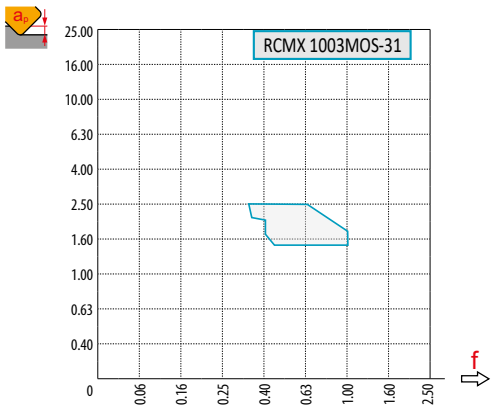


TPUN, SPUN

GEOMETRY OF CUTTING POSITIVE INSERTS – CLAMPING DESIGNATION ISO P, M, D

31 (RCMX)





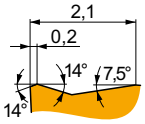
P	M	K	N	S	H
■	◪	■			

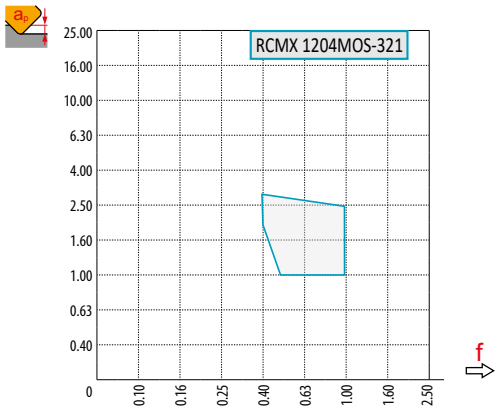
f ⇨ 0.40 – 1.00

a_p 1.5 – 2.5

RCMX

321 (RCMX)





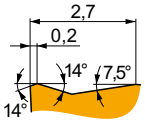
P	M	K	N	S	H
■		■			

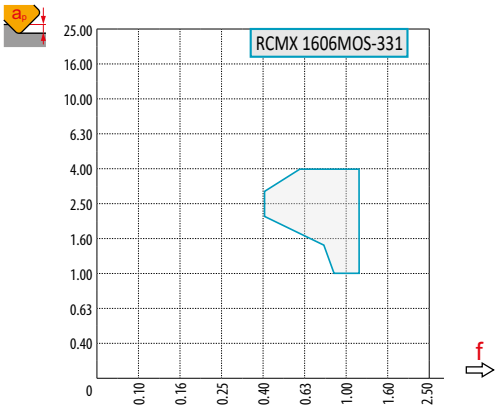
f ⇨ 0.40 – 1.00

a_p 1.0 – 3.0

RCMX

331 (RCMX)





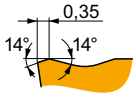
P	M	K	N	S	H
■		■			

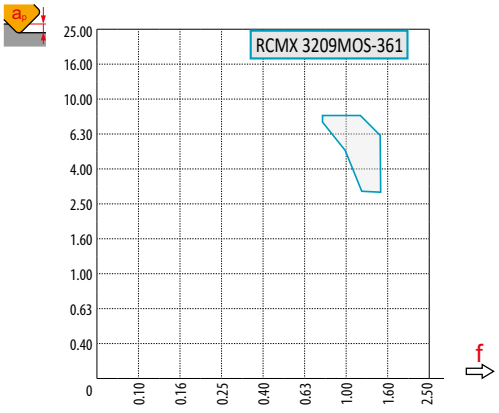
f ⇨ 0.40 – 1.20

a_p 1.0 – 4.0

RCMX

361 (RCMX)





P	M	K	N	S	H
■		■			

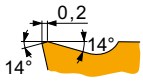
f ⇨ 0.80 – 1.50

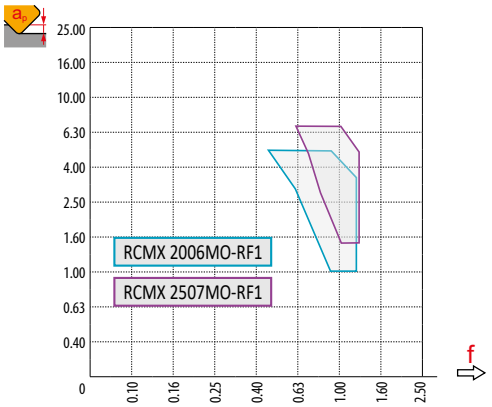
a_p 3.0 – 8.0

RCMX

GEOMETRY OF CUTTING POSITIVE INSERTS – CLAMPING DESIGNATION ISO P, M, D

RF1 (RCMX)

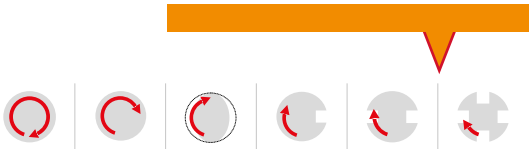


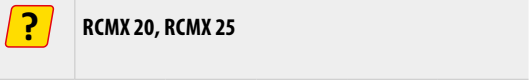


P	M	K	N	S	H
■		◪			

f ⇨ 0.45 (0.60) – 1.20 (1.25)

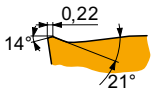
a_p 1.0 (1.5) – 5.0 (7.0)

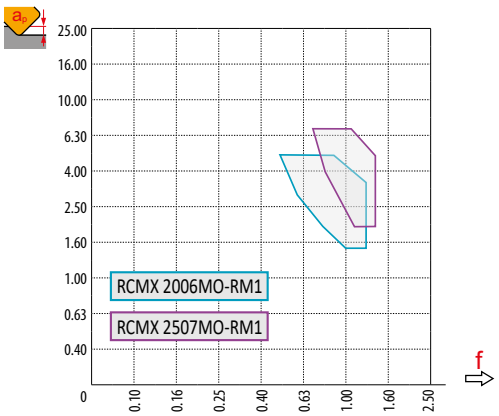




? **RCMX 20, RCMX 25**

RM1 (RCMX)

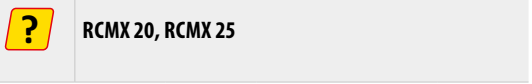




P	M	K	N	S	H
■		◪			

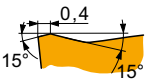
f ⇨ 0.50 (0.70) – 1.30 (1.40)

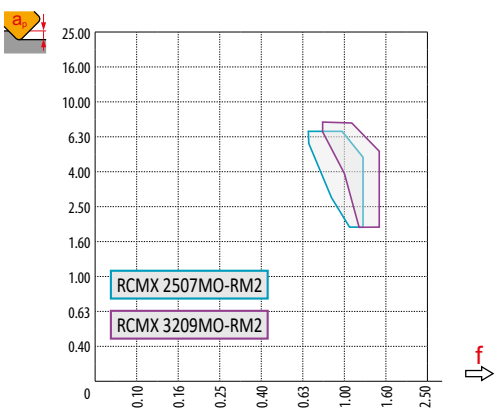
a_p 1.5 (2.0) – 5.0 (8.0)



? **RCMX 20, RCMX 25**

RM2 (RCM.)

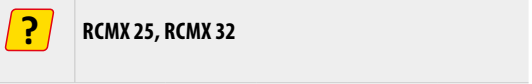




P	M	K	N	S	H
■		◪			

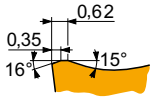
f ⇨ 0.70 (0.80) – 1.30 (1.50)

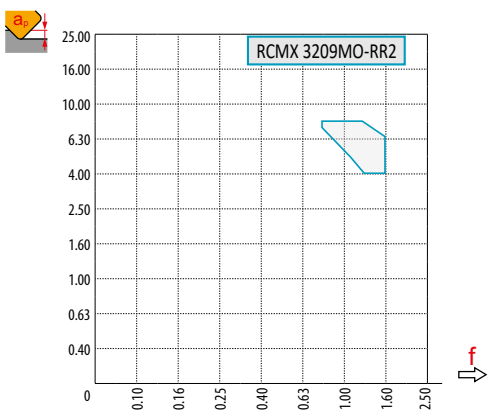
a_p 2.0 – 7.0 (8.0)



? **RCMX 25, RCMX 32**

RR2 (RCM.)

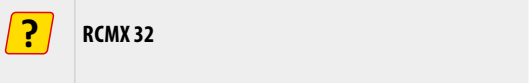




P	M	K	N	S	H
■		■			◪

f ⇨ 0.80 – 1.60

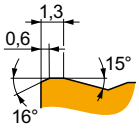
a_p 4.0 – 8.0

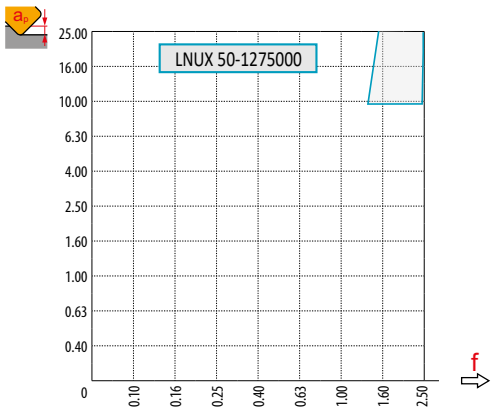


? **RCMX 32**

GEOMETRY OF CUTTING NEGATIVE INSERTS – CLAMPING DESIGNATION ISO P, M, D

000 (LNUX)





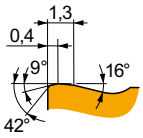
P	M	K	N	S	H
■		■			

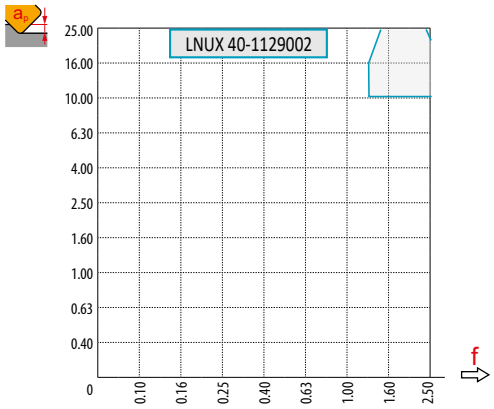
f 1.20 – 2.50

a_p 10.0 – 36.0

LNUX 50

002 (LNUX)





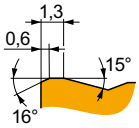
P	M	K	N	S	H
■		■			

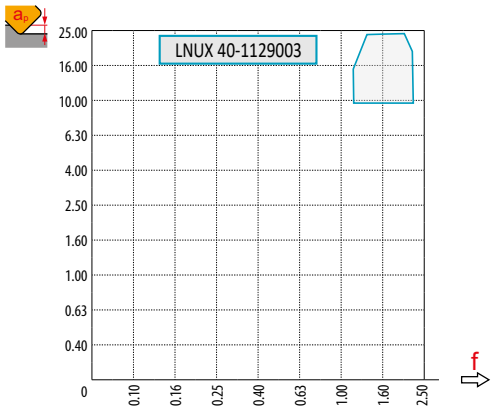
f 1.30 – 2.60

a_p 10.0 – 27.0

LNUX 40

003 (LNUX)





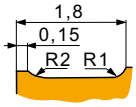
P	M	K	N	S	H
■		■			

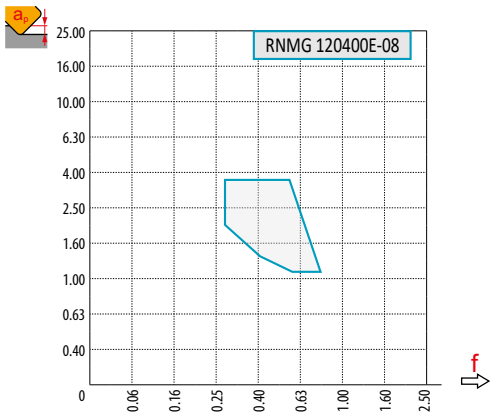
f 1.20 – 2.50

a_p 10.0 – 27.0

LNUX 40

08 (RNMG)





P	M	K	N	S	H
◪		◪			◪

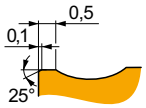
f 0.30 – 0.80

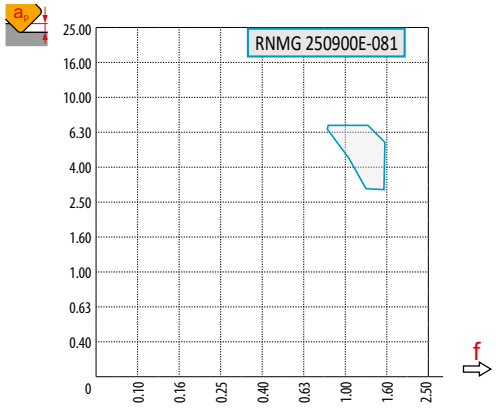
a_p 1.0 – 4.0

RNMG

GEOMETRY OF CUTTING NEGATIVE INSERTS – CLAMPING DESIGNATION ISO P, M, D

81 (RNMG)





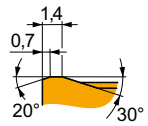
P	M	K	N	S	H
◪		◪			◪

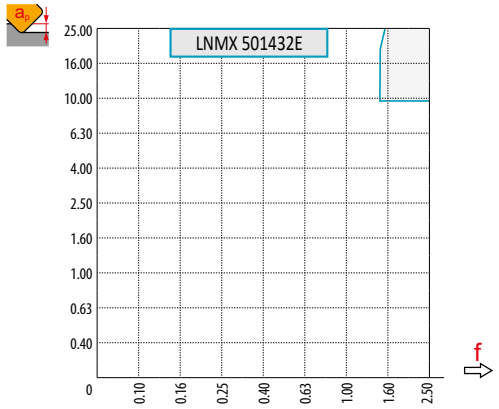
f 0.80 – 1.20

a_p 3.0 – 7.0

RNMG

432 (LNMX)





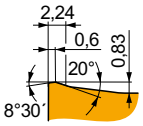
P	M	K	N	S	H
■		■			

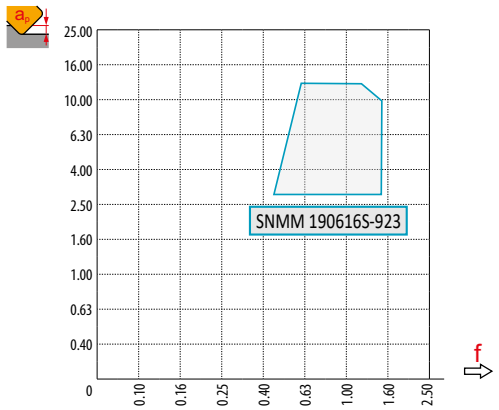
f 1.50 – 2.60

a_p 10.0 – 35.0

LNMX 50

923





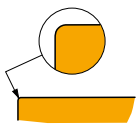
P	M	K	N	S	H
■	■	◪		◪	

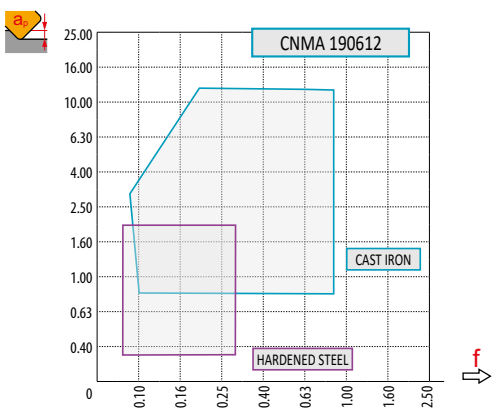
f 0.45 – 1.50

a_p 3.0 – 16.0

CNMM, SNMM

...A





P	M	K	N	S	H
		■			◪

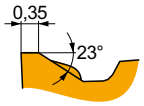
f 0.10 – 1.10

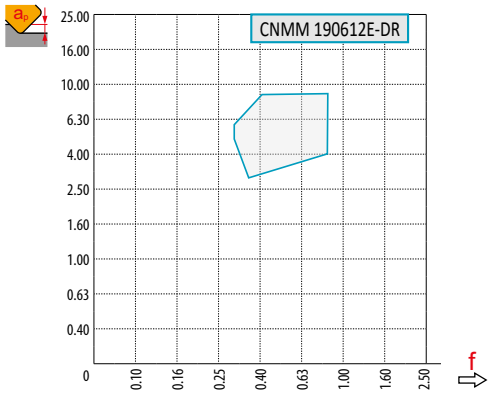
a_p 0.8 – 12.7

CNMA, DNMA, SNMA, TNMA, WNMA

GEOMETRY OF CUTTING NEGATIVE INSERTS – CLAMPING DESIGNATION ISO P, M, D

DR





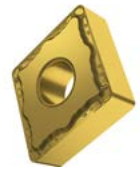
P	M	K	N	S	H
■	◪	◪			

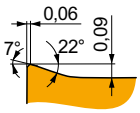
f ⇨ 0.30 – 0.85

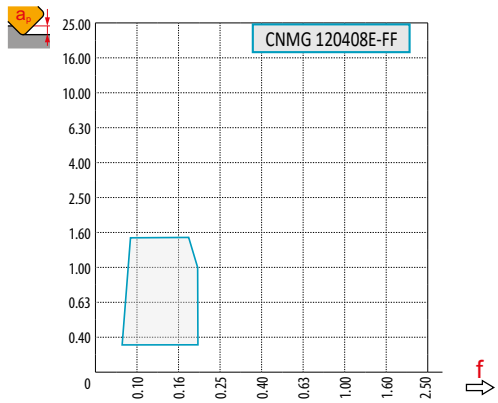
a_p 2.5 – 9.0

CNMM, DNMM, SNMM, TNMM, WNMM

FF







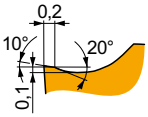
P	M	K	N	S	H
■	■	◪			

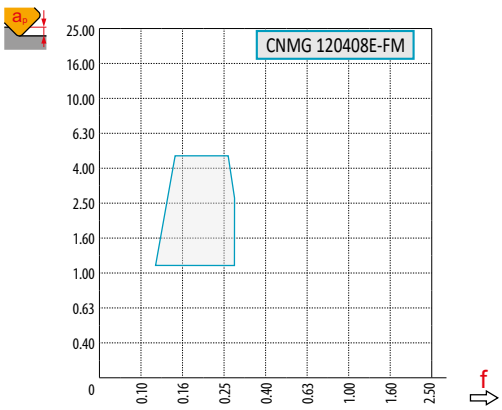
f ⇨ 0.06 – 0.25

a_p 0.2 – 1.6

CNMG, DNMG, TNMG, VNMG, WNMG

FM





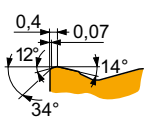
P	M	K	N	S	H
■	◪	■		◪	

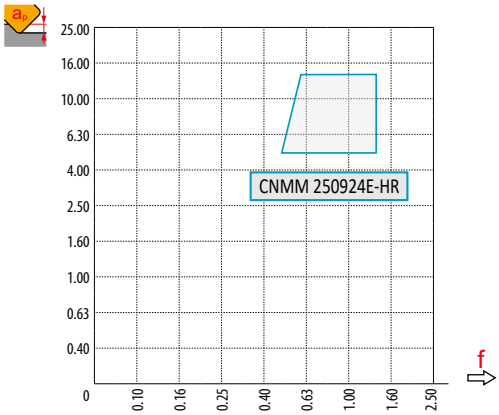
f ⇨ 0.1 – 0.5

a_p 0.4 – 5.0

CNMG, DNMG, SNMG, TNMG, VNMG, WNMG

HR





P	M	K	N	S	H
■	◪	■			

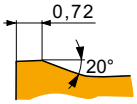
f ⇨ 0.50 – 1.40

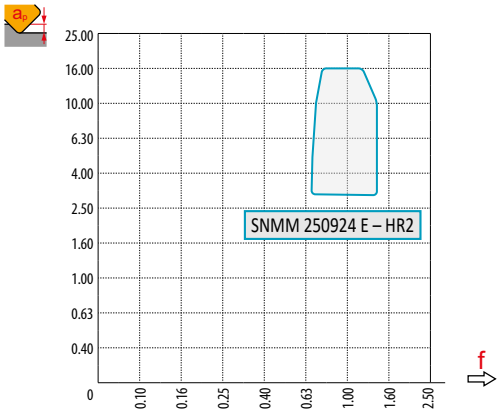
a_p 5.0 – 14.0

CNMM, SNMM, TNMM

GEOMETRY OF CUTTING NEGATIVE INSERTS – CLAMPING DESIGNATION ISO P, M, D

HR2





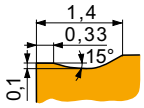
P	M	K	N	S	H
■	◪	■			

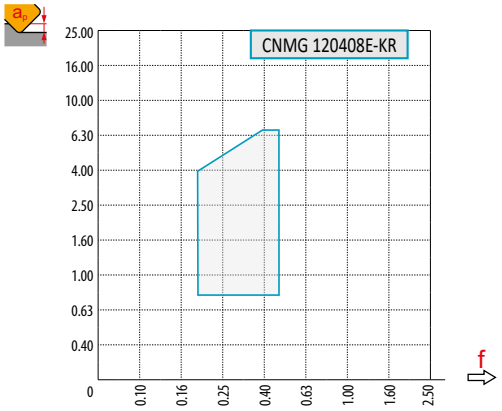
f ⇨ 0.5 – 1.4

a_p 3.0 – 16.0

CNMM, SNMM

KR





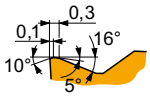
P	M	K	N	S	H
■		■			◪

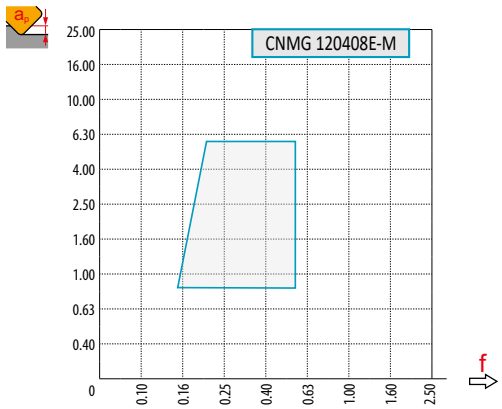
f ⇨ 0.2 – 0.7

a_p 0.4 – 7

CNMG, SNMG, TNMG, WNMG

M





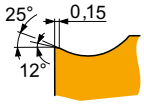
P	M	K	N	S	H
■		■			◪

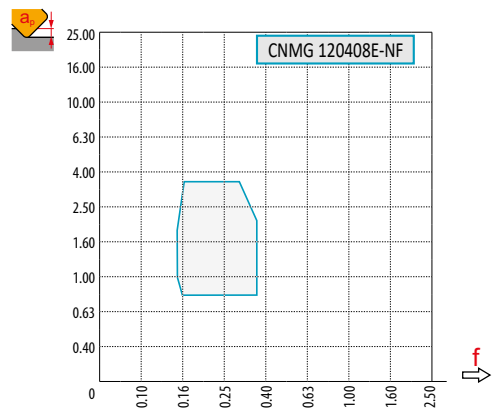
f ⇨ 0.17 – 0.80

a_p 0.8 – 8.0

CNMG, DNMG, SNMG, TNMG, VNMG, WNMG

NF





P	M	K	N	S	H
■	■	◪	◪	◪	

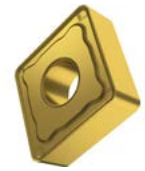
f ⇨ 0.1 – 0.35

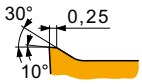
a_p 0.4 – 4.0

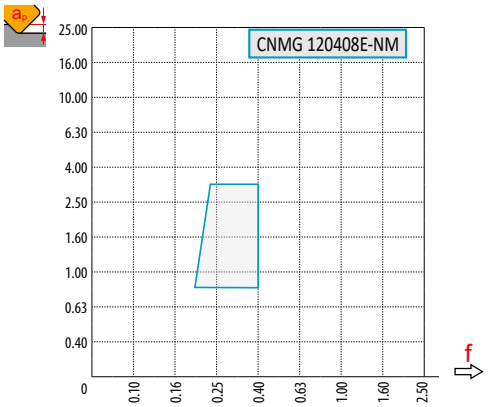
CNMG, DNMG, SNMG, TNMG, VNMG, WNMG

GEOMETRY OF CUTTING NEGATIVE INSERTS – CLAMPING DESIGNATION ISO P, M, D

NM







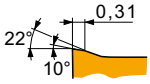
P	M	K	N	S	H
■	■		◪	■	

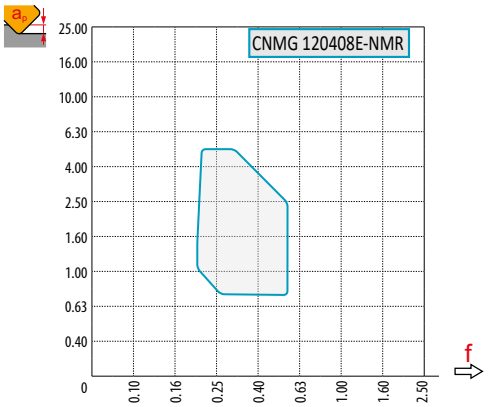
f ⇨ 0.15 – 0.55

a_p 0.5 – 8.0

CNMG, DNMG, TNMG, VNMG, WNMG

NMR





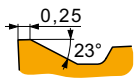
P	M	K	N	S	H
■	■			■	

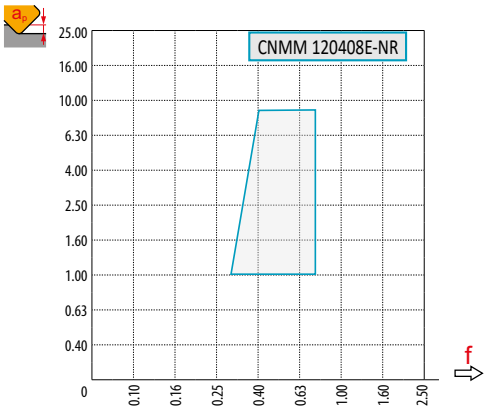
f ⇨ 0.18 – 0.70

a_p 0.4 – 8.0

CNMG, DNMG, SNMG, TNMG, VNMG, WNMG

NR





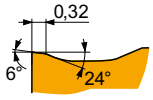
P	M	K	N	S	H
■	■	◪		◪	

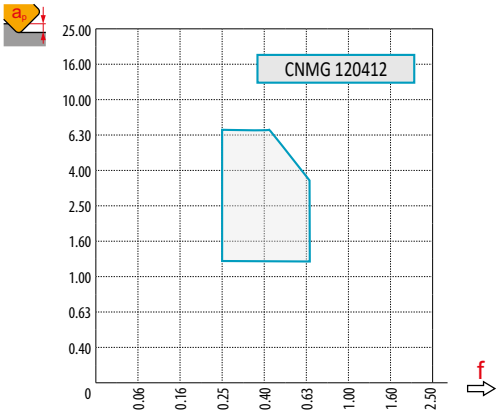
f ⇨ 0.25 – 0.80

a_p 1.0 – 9.0

CNMM, DNMM, SNMM, TNMM, WNMM

NRM





P	M	K	N	S	H
■	■			■	

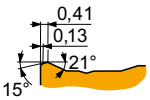
f ⇨ 0.23 – 1.0

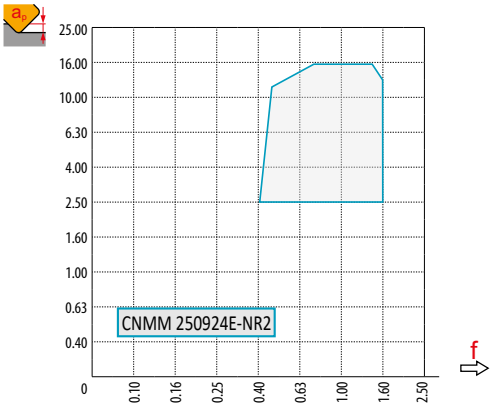
a_p 0.8 – 16.0

CNMG, CNMM, SNMG, SNMM

GEOMETRY OF CUTTING NEGATIVE INSERTS – CLAMPING DESIGNATION ISO P, M, D

NR2





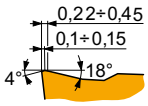
P	M	K	N	S	H
■	■	◪		◪	

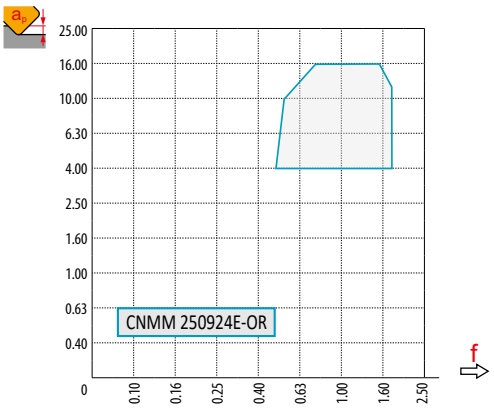
f ⇨ 0.2 – 1.6

a_p 1.0 – 16.0

CNMM, DNMM, SNMM, TNMM, WNMM

OR





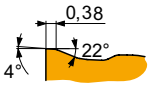
P	M	K	N	S	H
■	◪	■		◪	

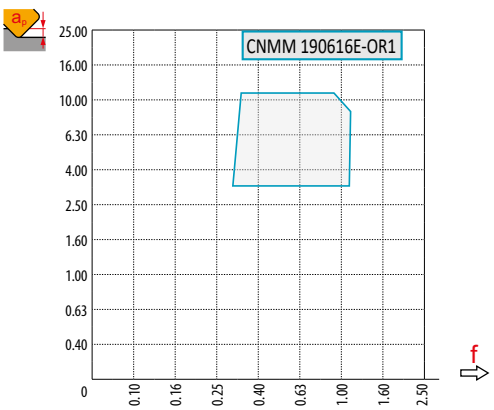
f ⇨ 0.25 – 1.70

a_p 2.0 – 16.0

CNMM, DNMM, SNMM, TNMM, WNMM, SCMT

OR1

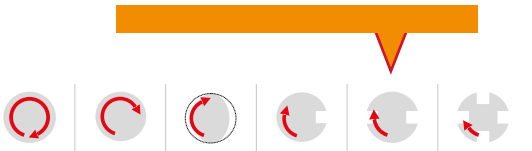




P	M	K	N	S	H
■	◪	◪		◪	

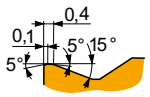
f ⇨ 0.3 – 1.0

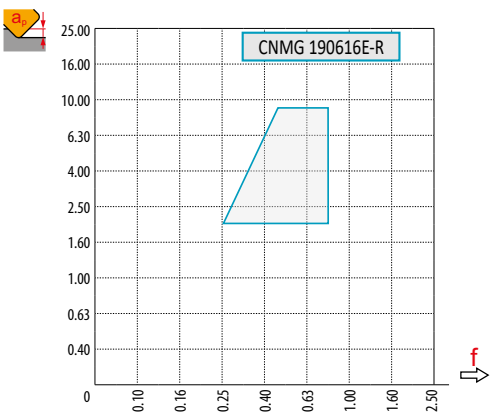
a_p 3.0 – 11.0



CNMM, SNMM

R





P	M	K	N	S	H
■		■			◪

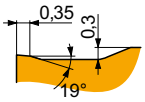
f ⇨ 0.25 – 0.80

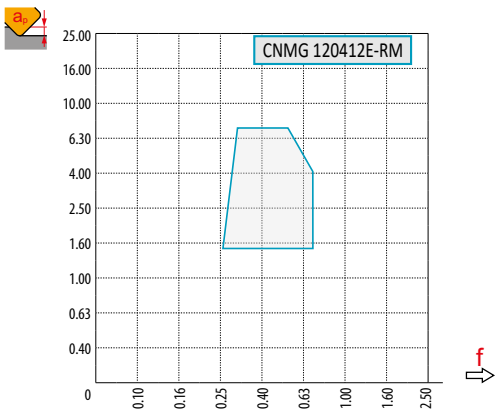
a_p 2.0 – 9.0

CNMG, DNMG, SNMG, TNMG, WNMG

GEOMETRY OF CUTTING NEGATIVE INSERTS – CLAMPING DESIGNATION ISO P, M, D

RM





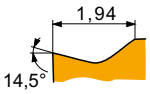
P	M	K	N	S	H
■	◪	◪			

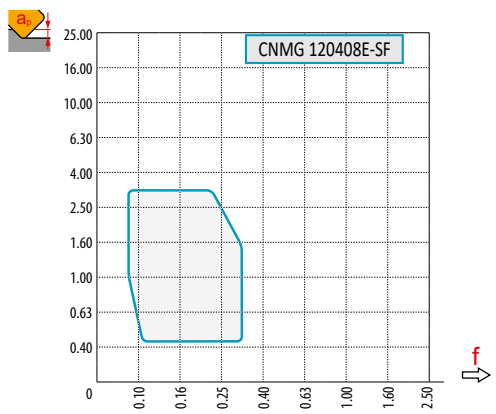
f ⇨ 0.20 – 1.20

a_p 1.0 – 15.0

CNMG. DNMG, SNMG, TNMG, WNMG

SF





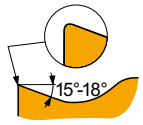
P	M	K	N	S	H
■	■	■	◪	■	■

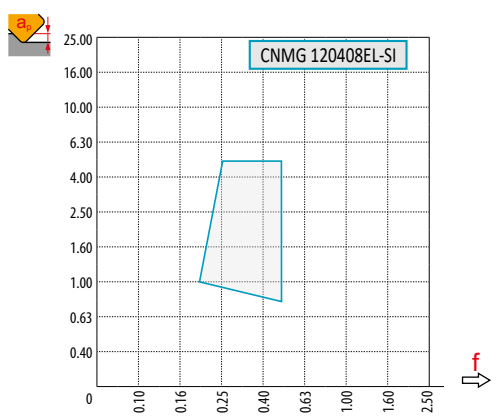
f ⇨ 0.08 – 0.35

a_p 0.2 – 3.5

CNGG, CNMG, DNMG,
SNMG, TNMG, VNMG, WNMG

SI





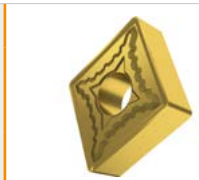
P	M	K	N	S	H
■	■		◪	◪	

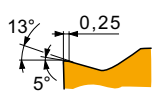
f ⇨ 0.20 – 0.50

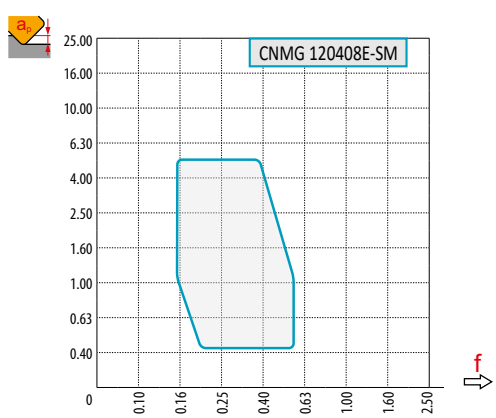
a_p 0.4 – 5.0

CNMG, DNMG, TNMG, WNMG

SM







P	M	K	N	S	H
■	■	■	◪	■	◪

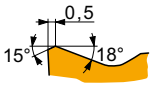
f ⇨ 0.15 – 0.55

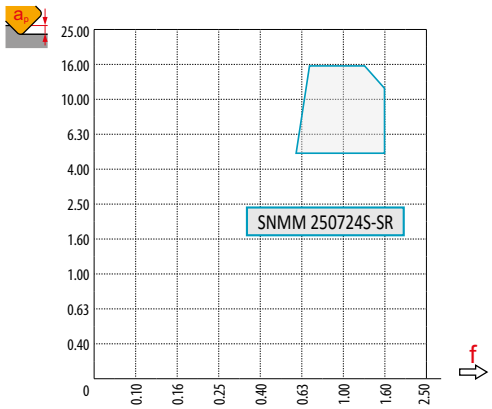
a_p 0.4 – 6.0

CNMG, DNMG, SNMG, TNMG, VNMG, WNMG

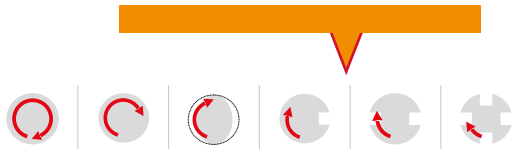
GEOMETRY OF CUTTING NEGATIVE INSERTS – CLAMPING DESIGNATION ISO P, M, D

SR



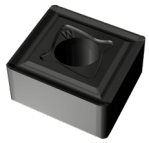


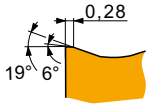
P	M	K	N	S	H
■	◪	■			
f ⇨	0.70 – 1.60				
a_p	5.0 – 16.0				

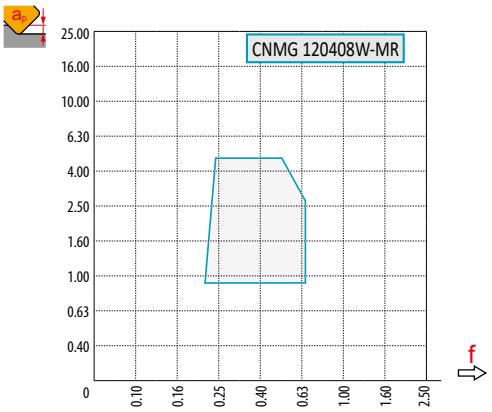


?	SNMM, SNMX

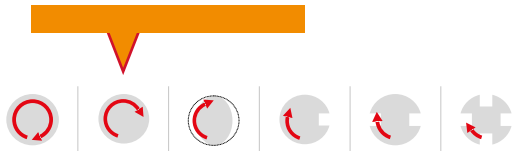
W–MR





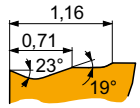


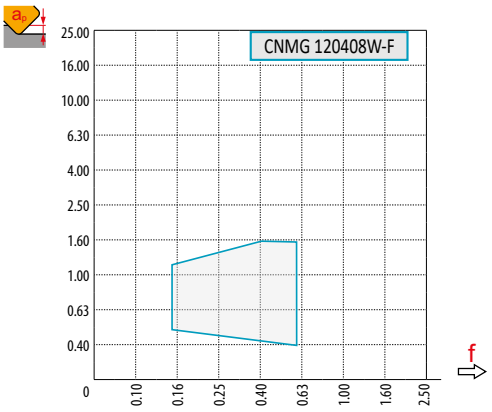
P	M	K	N	S	H
■	◪	◪			
f ⇨	0.2 – 0.75				
a_p	0.5 – 5.0				



?	CNMG, WNMG, DNMG

W–F

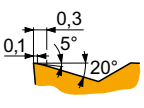


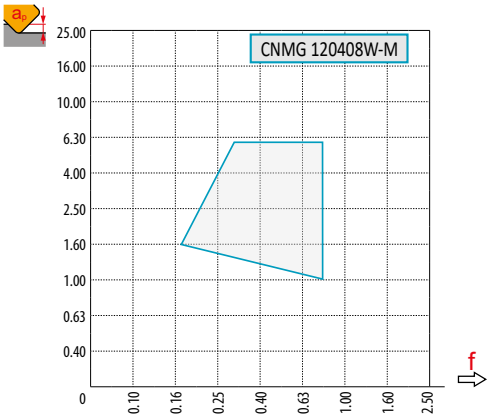


P	M	K	N	S	H
■		■			
f ⇨	0.10 – 0.60				
a_p	0.4 – 1.6				

?	CNMG, WNMG

W–M



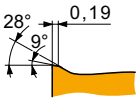


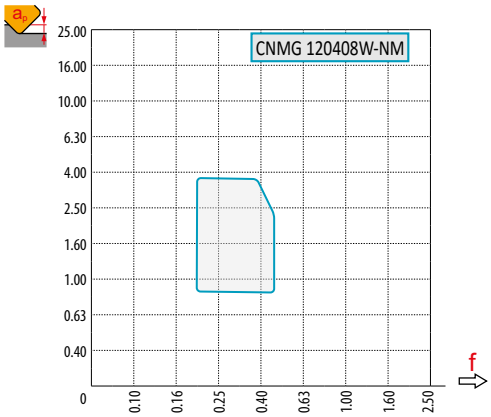
P	M	K	N	S	H
■		◪			
f ⇨	0.15 – 1.00				
a_p	0.8 – 4.0				

?	CNMG, WNMG

GEOMETRY OF CUTTING NEGATIVE INSERTS – CLAMPING DESIGNATION ISO P, M, D

W-NM





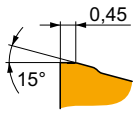
P	M	K	N	S	H
■	◪	◪		◪	

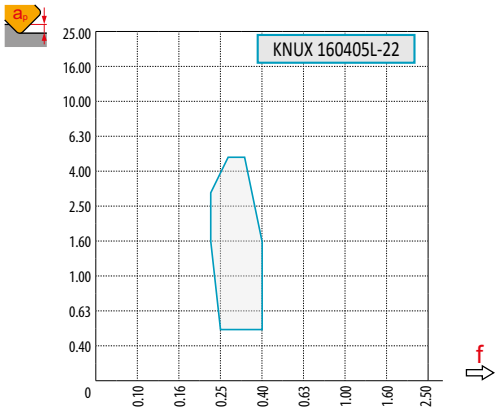
f ⇨	0.15 – 0.55
a_p	0.5 – 3.5

?	CNMG, DNMX, WNMG

GEOMETRY OF CUTTING NEGATIVE INSERTS – CLAMPING DESIGNATION ISO C

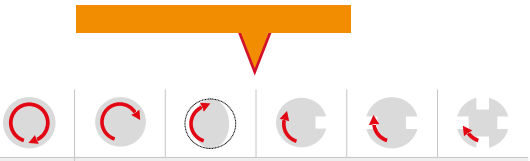
22





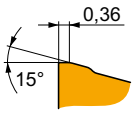
P	M	K	N	S	H
■	◪	◪			

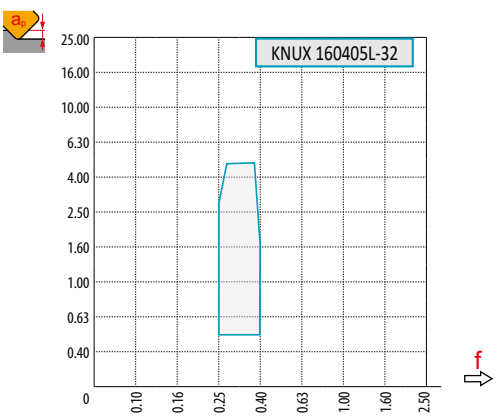
f	0.23 – 0.55
a_p	0.50 – 4.80



KNUX

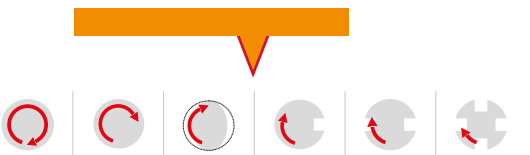
32





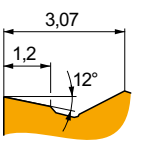
P	M	K	N	S	H
■	◪	◪			

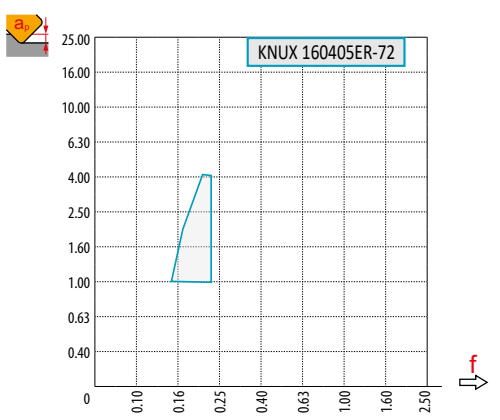
f	0.25 – 0.6
a_p	0.50 – 4.80



KNUX

72



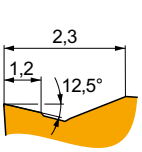


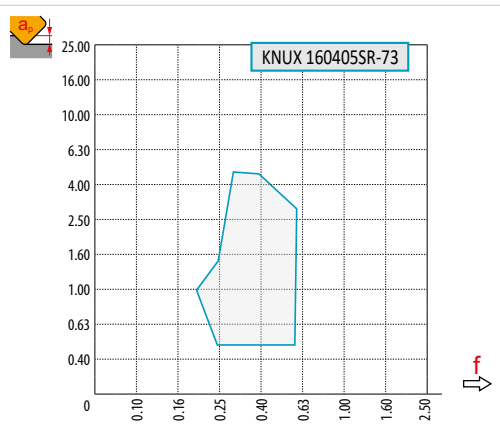
P	M	K	N	S	H
■	◪	■		◪	

f	0.15 – 0.23
a_p	1.0 – 4.0

KNUX

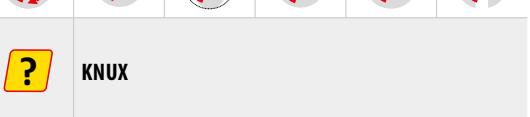
73





P	M	K	N	S	H
■	◪	■		◪	

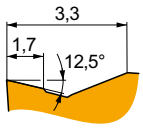
f	0.20 – 0.60
a_p	0.5 – 4.8

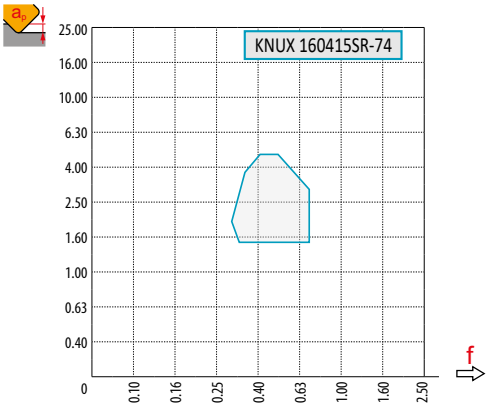


KNUX

GEOMETRY OF CUTTING NEGATIVE INSERTS – CLAMPING DESIGNATION ISO C

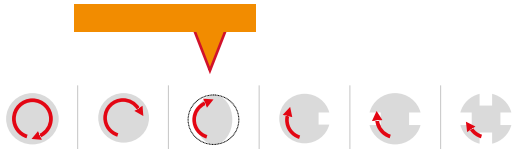
74





P	M	K	N	S	H
■	◪	■		◪	

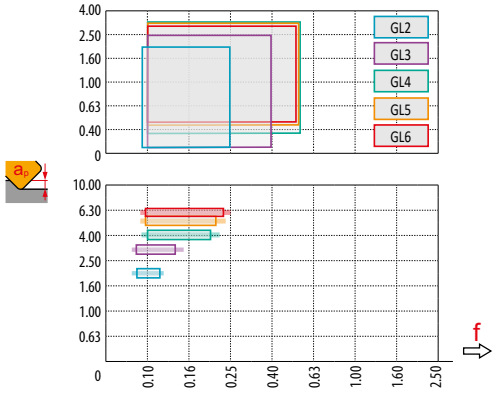
f	0.30 – 0.7
a_p	1.5 – 4.8



?	KNUX

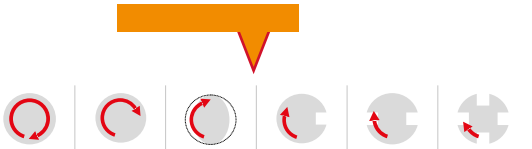
GEOMETRY OF CUTTING GROOVING INSERTS – CLAMPING DESIGNATION ISO X AND G

GM (GL.D)



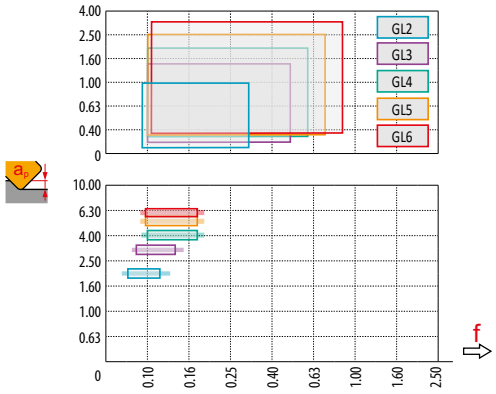
P	M	K	N	S	H
■	■	◪		◪	

f, a_p — See diagram



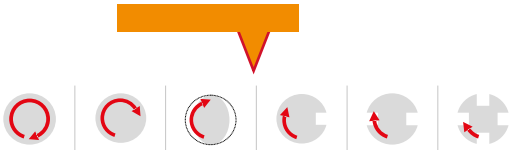
? — GL. D

MM (GL.D)



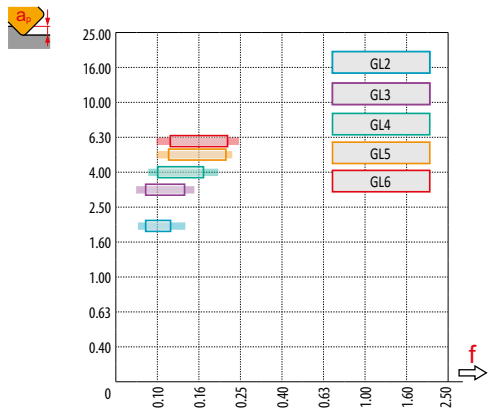
P	M	K	N	S	H
■	■	■		◪	

f, a_p — See diagram



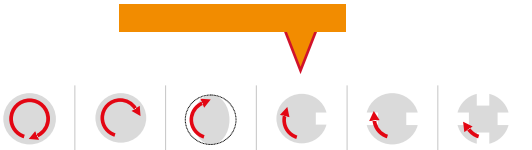
? — GL. D

PM (GL. D)



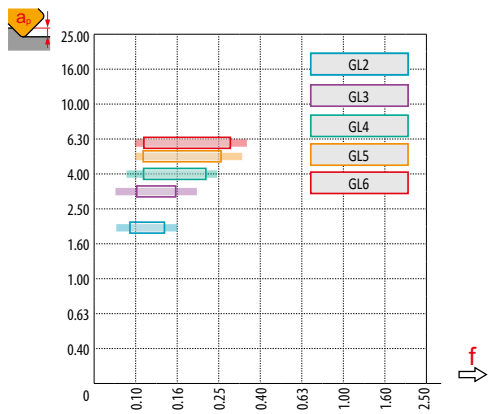
P	M	K	N	S	H
■	■	◪		◪	

f, a_p — See diagram



? — GL. D

PR (GL. D)



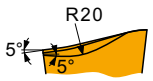
P	M	K	N	S	H
■	◪	■			

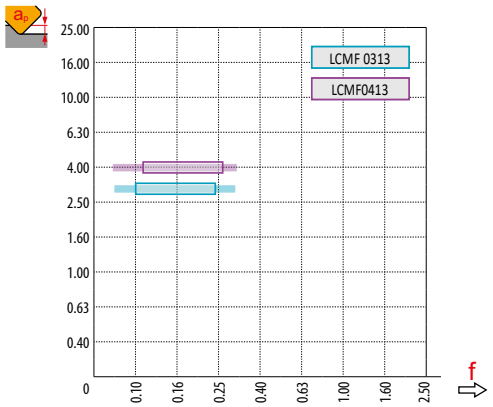
f, a_p — See diagram

? — GL. D

GEOMETRY OF CUTTING GROOVING INSERTS – CLAMPING DESIGNATION ISO X AND G

13 CM (LCMF)



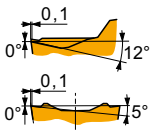


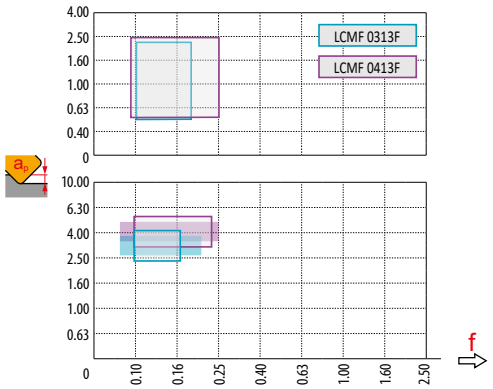
P	M	K	N	S	H
■		◪			

See diagram

LCMF 13 CM

13 F (LCM.)



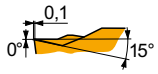


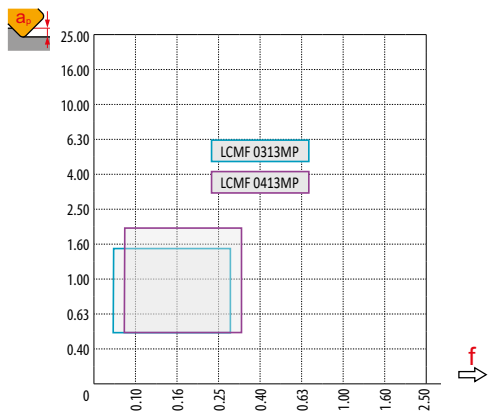
P	M	K	N	S	H
■		◪			

See diagram

LCMF 13 F, LCMR 13 F

13 MP (LCM.)



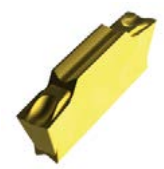


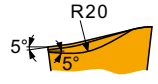
P	M	K	N	S	H
■		■			

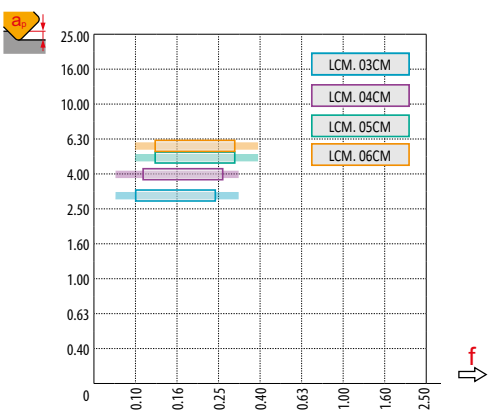
See diagram

LCMF 13 MP, LCMR 13 MP

16 CM (LCM.)







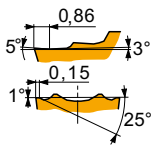
P	M	K	N	S	H
■		◪			

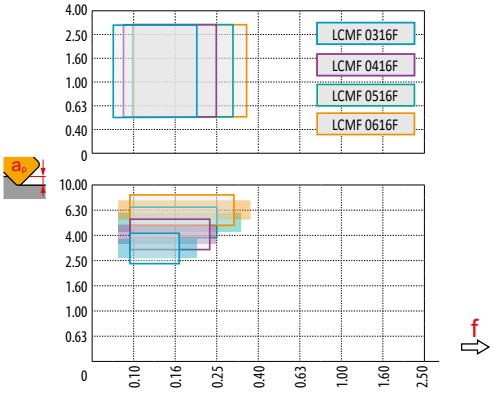
See diagram

LCMF 16 CM, LCMR 16 CM

GEOMETRY OF CUTTING GROOVING INSERTS – CLAMPING DESIGNATION ISO X AND G

16 F (LCM.)



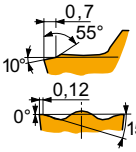


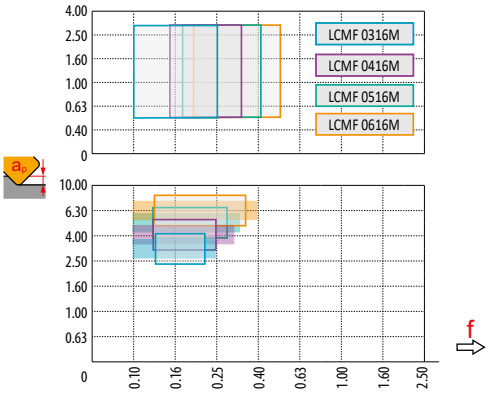
P	M	K	N	S	H
■		◪			

See diagram

LCMF 16 F, LCMR 16 F

16 M (LCM.)



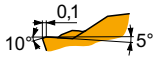


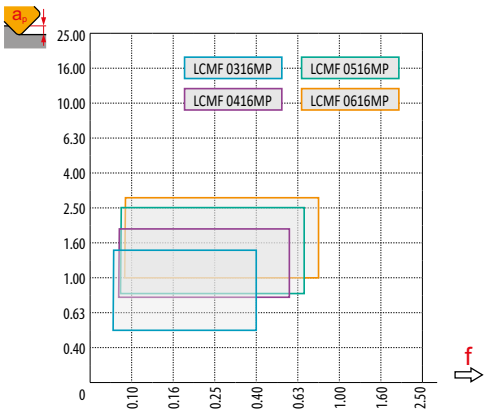
P	M	K	N	S	H
■		■			◪

See diagram

LCMF 16 M, LCMR 16 M

16 MP (LCM.)



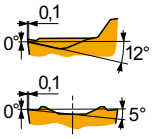


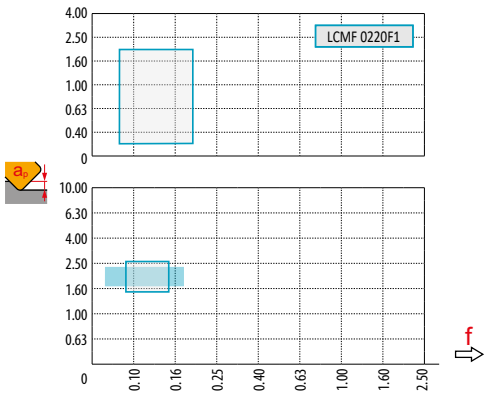
P	M	K	N	S	H
■		■			

See diagram

LCMF 16 MP, LCMR 16 MP

20 F1 (LCMF)





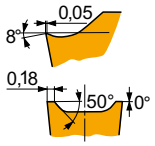
P	M	K	N	S	H
■	◪	◪			

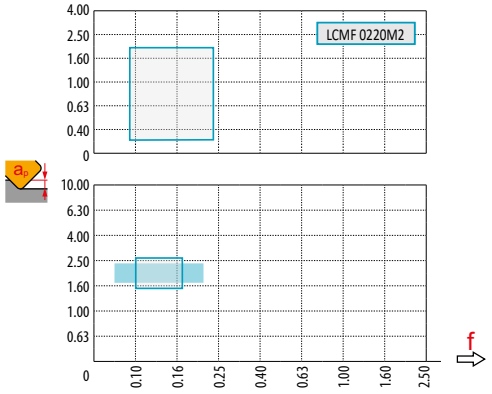
See diagram

LCMF

GEOMETRY OF CUTTING GROOVING INSERTS – CLAMPING DESIGNATION ISO X AND G

20 M2 (LCMF)

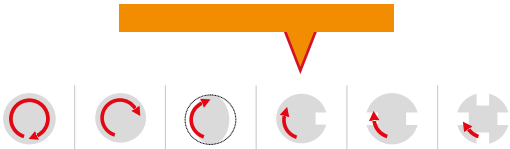




P	M	K	N	S	H
■	◪	◪			

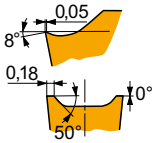
f ⇨ 0.09 – 0.23

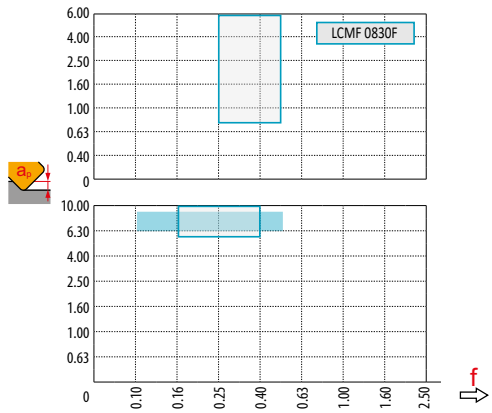
a_p 0.3 – 1.5



? **LCMF**

30 F (LCM.)

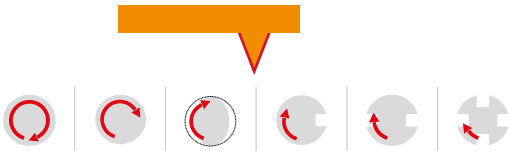




P	M	K	N	S	H
■		◪			

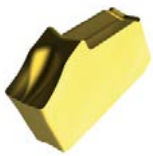
f ⇨ 0.1 – 0.5

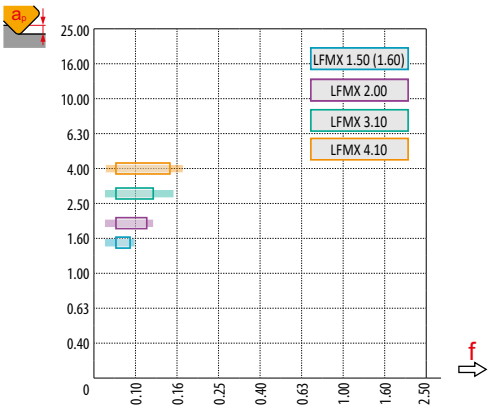
a_p 0.8 – 6.0



? **LCMF 30 F, LCMR 30 F**

F1 (LFMX)

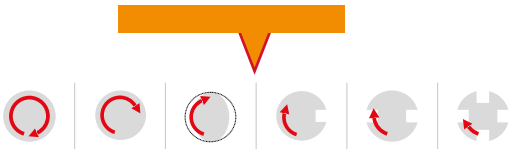




P	M	K	N	S	H
■	◪	■			

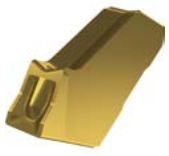
f ⇨ See diagram

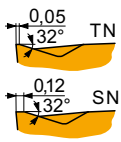
a_p

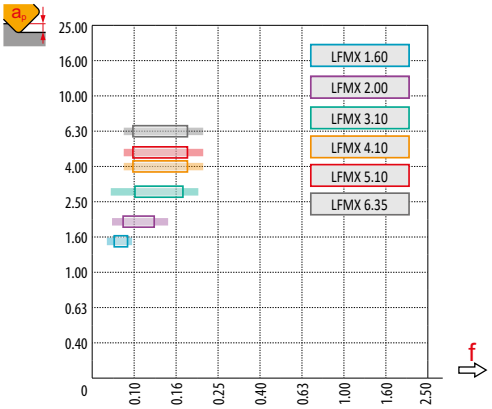


? **LFMX**

F2 (LFMX)



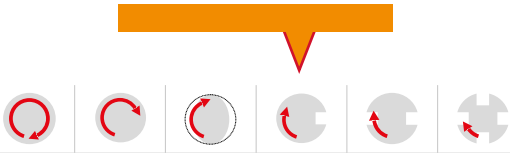




P	M	K	N	S	H
■	◪	■			

f ⇨ See diagram

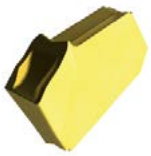
a_p

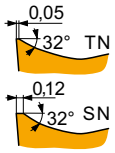


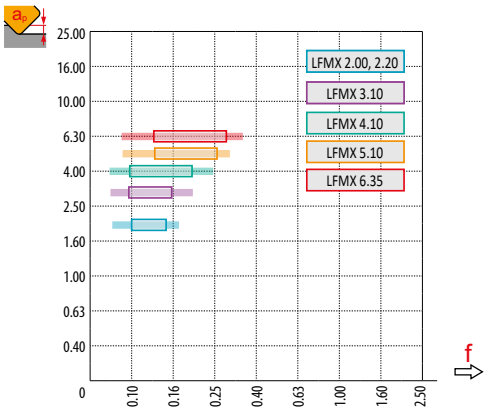
? **LFMX**

GEOMETRY OF CUTTING GROOVING INSERTS – CLAMPING DESIGNATION ISO X AND G

M2 (LFMX)

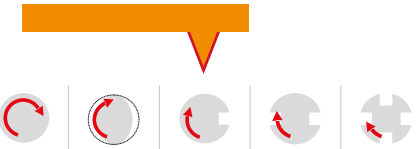






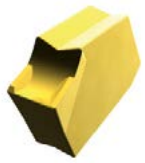
P	M	K	N	S	H
■	◪	◪			

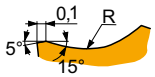
f, a_p — See diagram

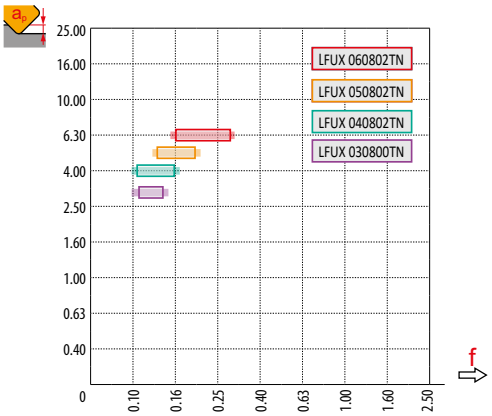


LFMX

LFUX

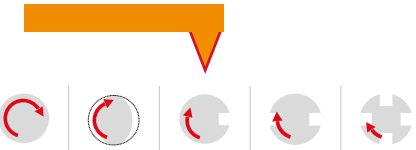






P	M	K	N	S	H
■		■			

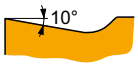
f, a_p — See diagram

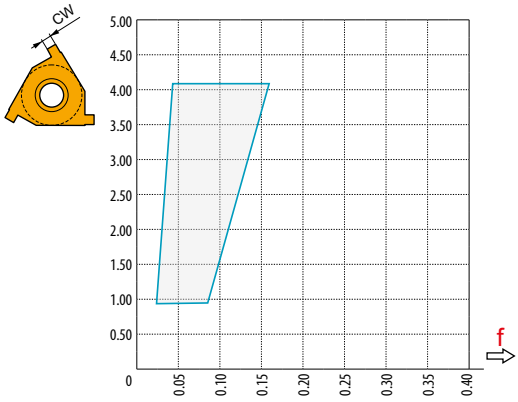


LFUX

GEOMETRY OF CUTTING GROOVING INSERTS – CLAMPING DESIGNATION ISO S

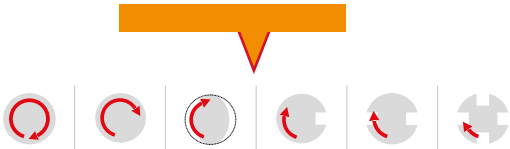
TN. EXT





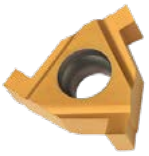
P	M	K	N	S	H
■	◪	◪			

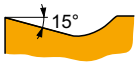
f ⇨ CW — See diagram

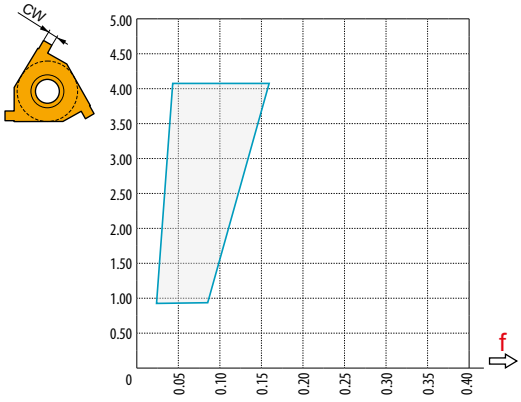


TN R EXT; TN ZZ EXT

TN. INT

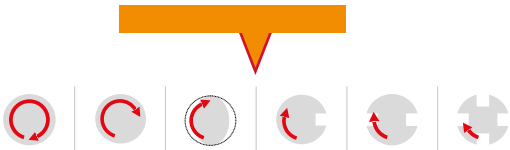






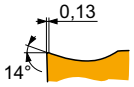
P	M	K	N	S	H
■	◪	◪			

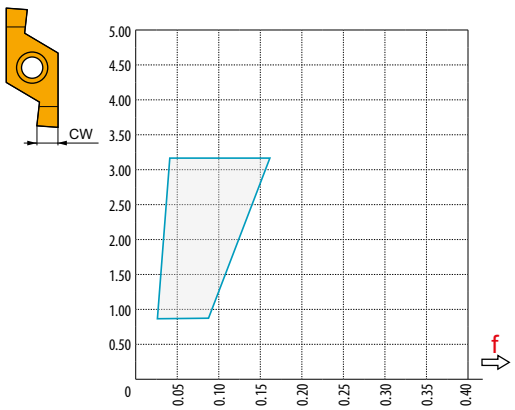
f ⇨ CW — See diagram



TN R INT; TN ZZ INT

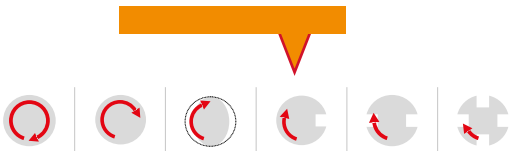
X61





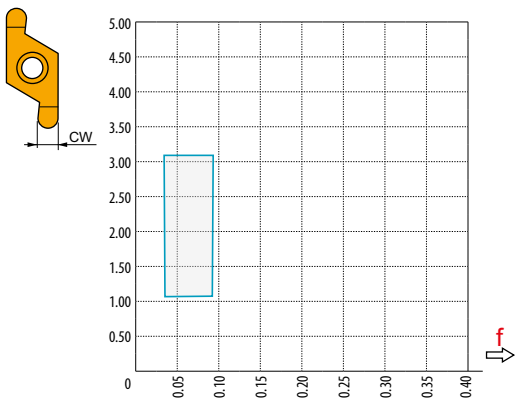
P	M	K	N	S	H
■	◪	◪			

f ⇨ CW — See diagram



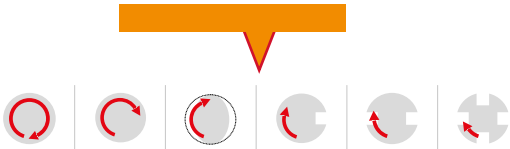
X61; X61-1

X61 R



P	M	K	N	S	H
■	◪	◪			

f ⇨ CW — See diagram



X61 R; X61 R-1

T	9	3	1	5
Operation	Coating/Substrate	Generation	ISO range	

D	Drilling
M	Milling
T	Turning
G	Grooving and Parting off

0 PVD 1 CVD	Special application
2 PVD 3 CVD	Free
4 PVD 5 CVD	Group K, H
6 PVD 7 CVD	Group M, S
8 PVD 9 CVD	Universal
B	CBN
C	Ceramic
D	PCD
T	Cermet

1 – 9

01 – 50	
	01 – 05
	05 – 10
	10 – 20
	20 – 30
	30 – 40
	40 – 50

Grade Identification	Area of Application	Application	Feed	Cutting speed	Resistance to adverse Working Conditions	Coating	Colour	Substrate	Coolant benefit	Grade description
T9226	P15 - P35 M10 - M30 K15 - K35 S15 - S25	■ ■ ◪ □	◢■■■	◢■■■	◢■□□	MT-CVD		FGM	+ + +	Grade designed for heave roughing applications. A versatile grade with high resistance to mechanical damage and retains very good wear resistance. Usable at lower cutting speeds.
T9310	P01 - P15 K05 - K20 H10 - H20	■ ◪ ◪	◢■■■	◢□■■	◢■■□	MT-CVD		FGM	+ +	Grade with high abrasion resistance which can be used for slightly interrupted cutting. It will be used for finishing or semi-roughing operations. This material can also be used for roughing operations provided the machine-tool-workpiece configuration is sufficiently rigid.
T9315	P05 - P25 K05 - K25 H10 - H20	■ ◪ ◪	◢■■■	◢□■■	◢■■□	MT-CVD		FGM	+ +	A versatile grade with excellent wear resistance properties even under intense cutting conditions. It can also be used for operations with interrupted cuts. With it's well balanced properties this grade can be first choice for a wide range of turning operations. Not suited to low cutting speeds.
T9316	P10 - P20 M05 - M15 K10 - K30 H15 - H25	■ ◪ ■ ◪	◢■■■	◢■■■	◢■□□	MT-CVD		FGM	+ + +	Grade designed for railway applications. A versatile grade with excellent wear resistance properties. Usable at lower and high cutting speeds.
T9325	P15 - P35 M10 - M30 K15 - K35 S10 - S20	■ ■ ◪ ◪	◢■■■	◢■■□	◢■■■	MT-CVD		FGM	+ +	From a technological perspective this is an extremely versatile grade with high resistance to mechanical damage in adverse cutting conditions and retains excellent wear resistance. The correct application of this material requires high cutting speeds.
T9335	P20 - P45 M15 - M40 S15 - S25	■ ■ ◪	◢■■■	◢■■□	◢■■■	MT-CVD		FGM	+ + +	One of the toughest grades which is especially suitable for adverse cutting conditions at medium to high feed rates and medium cutting speeds. Compared to its predecessors, M15 – M40 it is not only tougher, but also more abrasion resistant which will be useful when using intensive cutting conditions.
T7325	P15 - P35 M10 - M25 S10 - S25	◪ ■ ■	◢■■■	◢□■■	◢■■□	MT-CVD		FGM	+ + +	One of the most universal turning grades. Especially designed for stainless steel machining. Optimal balance between wear resistance and performance reliability. Suitable for broad variety of application in turning operations.
T7335	P20 - P40 M20 - M40 S15 - S25	◪ ■ ■	◢■■■	◢■■□	◢■■■	MT-CVD		FGM	+ + +	Grade with functionally graded substrate, featuring very high operational reliability and very good wear-resistance. It is best suited to use in the machining of very tough M20 – M40 materials.
T5305	P05 - P15 K01 - K15 H05 - H15	◪ ■ ◪	◢■■■	◢■■■	◢□□□	MT-CVD		H	+	Grade with very high resistance to chemical wear; suitable for finishing operations using high cutting speeds. With its high abrasion resistance, it is also suitable for productive K01 – K15, machining of hardened and treated materials.
T5315	P10 - P25 K10 - K25 H15 - H25	◪ ■ ◪	◢■■■	◢■■■	◢■□□	MT-CVD		H	+	Grade intended primarily for productive machining which has high abrasion resistance and good operational reliability. Due to its properties, this material is particularly suitable for roughing and finishing operations for good or slightly adverse cutting conditions.
6640	P20 - P40 M20 - M35 K25 - K40	■ ■ ■	◢■■■	◢■■□	◢■■■	MT-CVD		H	+ + +	One of the toughest turning materials which can be used especially in roughing operations, or where operational reliability under adverse cutting conditions is a priority. Another ideal choice for machines working with low to medium cutting speeds and medium to high feed rates.

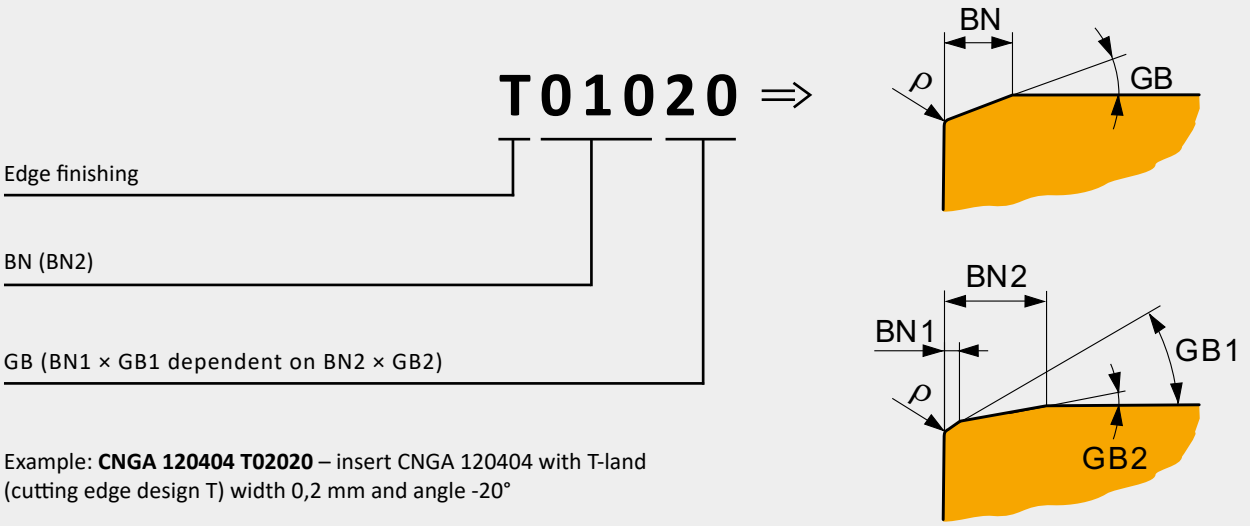
Grade Identification	Area of Application	Application	Feed	Cutting speed	Resistance to adverse Working Conditions	Coating	Colour	Substrate	Coolant benefit	Grade description
G8330	P25 - P40 M20 - M35 K20 - K40 S15 - S25	■ ■ ■ ◪	▰▰▰▰	▰▰▱▱	▰▰▰▰	PVD		submicron H	+ + +	Universal cutting grade for grooving and parting-off applications. This grade is characterized by its exceptional reliability and versatility. Developed to fit machining conditions for most workpiece materials.
T0315	N05 - N20	■	▰▰▱▱	▰▰▰▱	▰▰▰▱	PVD			+ +	Submicron grade for turning non-ferrous metals and their alloys with a balance of wear resistance and toughness. It is provided with a unique coating with excellent friction properties.
T6310	P01 - P15 M01 - M15 K05 - K20 N05 - N20 S01 - S15 H01 - H15	■ ■ ■ ■ ■ ■	▰▰▰▱	▰▰▰▱	▰▰▱▱	PVD		ultra submicron H	+ + +	High wear resistant turning grade with top PVD coating. Suitable for finishing operation and applications, where sharp cutting edge together with high flank wear resistance is of high importance
T8010	P05 - P15 M05 - M15 K10 - K20 S10 - S15	■ ■ ■ ◪	▰▰▰▱	▰▰▰▱	▰▰▰▱	PVD		submicron H	+ + +	This grade is suitable for continuous high precision thread turning of steels, stainless steel, cast iron and super alloys. Offering excellent wear resistance while ensuring operational reliability
T8030	P25 - P40 M20 - M35 K20 - K40 N15 - N30 S15 - S25	■ ■ ■ ◪ ◪	▰▰▰▰	▰▰▱▱	▰▰▰▰	PVD		submicron H	+ + +	Undoubtedly the most versatile grade it is suitable for machining all types of materials and can be applied in almost all turning operations. It's main benefits are high operational reliability and excellent frictional properties; it is therefore suited to applications at medium to low cutting speeds.
T8315	P05 - P20 M05 - M20 K05 - K25 N05 - N25 S05 - S15 H05 - H15	◪ ■ ■ ■ ◪ ■	▰▰▰▱	▰▰▰▱	▰▰▰▱	PVD		submicron H	+ +	Grade featuring excellent abrasion resistance while maintaining above average operational reliability, it is suitable for machining at medium to high cutting speeds in short chipping harder materials.
T8330	P25 - P40 M20 - M35 K20 - K40 N15 - N30 S15 - S25 H15 - H25	■ ■ ■ ◪ ◪ ◪	▰▰▰▰	▰▰▱▱	▰▰▰▰	PVD		submicron H	+ + +	Undoubtedly the most versatile cutting material, this is useful for machining of all types of machined materials and is practically applicable in almost all types of turning operations. Its main benefits are its high operational reliability and very good frictional properties; it is therefore suitable for applications at medium and lower cutting speeds.
T8430	P20 - P40 M20 - M35 K25 - K40 N15 - N30 S15 - S25 H15 - H25	■ ■ ◪ ◪ ◪ ◪	▰▰▰▰	▰▰▱▱	▰▰▰▰	PVD		submicron H	+ + +	Undoubtedly the most versatile cutting material, this is useful for machining of all types of machined materials and is practically applicable in almost all types of turning operations. Its main benefits are its high operational reliability and very good frictional properties; it is therefore suitable for applications at medium and lower cutting speeds.
T8345	P30 - P50 M20 - M40 K30 - K40 S20 - S30	■ ◪ ◪ ◪	▰▰▰▰	▰▰▱▱	▰▰▰▰+	PVD		submicron H	+ + +	This is the toughest turning grade, which is intended mainly for machining under the worst cutting conditions and in applications with the highest requirements for operating reliability. Because of these properties, this material is recommended for lower cutting speeds.
HF7	M10 - M20 K10 - K25 N10 - N25	◪ ■ ■	▰▰▰▰	▰▰▱▱	▰▰▰▱	×		submicron H	+ +	Uncoated grade which is primarily designed for machining non-ferrous metals; but can also be used for other machined materials (except steel). This material can be used in turning, milling, and even boring.

Grade Identification	Area of Application	Application	Feed	Cutting speed	Resistance to adverse Working Conditions	Coating	Colour	Substrate	Coolant benefit	Grade description
H07	M05 - M15 K10 - K25 N10 - N30 S01 - S20	◪ ■ ■ ■	▰▰▰▱	▰▰▰▱	▰▰▰▱	×		submicron H	+ +	Uncoated turning grade suitable for machining applications where oxidation resistance is not dominating criterion of tool life. Designed for machining of Ti-based alloys. Grade exhibits high strength of cutting edge together with good wear resistance.
TT310	P10 - P25 M15 - M25	■ ◪	▰▱▱▱	▰▱▱▱	▰▱▱▱	PVD		cermet	+ / –	Coated cermet used for fine and finish turning of carbon and alloy steels (including stainless). Its excellent friction properties are further improved by the coating applied using the PVD technique.
TT010	P01 - P10 M01 - M10	■ ◪	▰▱▱▱	▰▱▱▱	▰▱▱▱	×		cermet	+ / –	Uncoated cermet, which is suitable for fine machining of all types of steel (including stainless) at very low feed rates. Its main advantage is the minimal radius of the cutting edge and its high resistance to physical and chemical wear mechanisms.
TC100	K01 - K15	■	▰▰▱▱	▰▱▱▱	▰▱▱▱	×		ceramics	– -	Ceramic grade for cast iron machining. Suitable for machining with high cutting speed at stable conditions.
TB310	K01 - K10 S05 - S10 H01 - H10	■ ◪ ◪	▰▱▱▱	▰▱▱▱	▰▱▱▱	×		CBN	– -	CBN grade for machining of hardened materials. Suitable for machining with high cutting speed and small feeds at stable conditions.
PD1	N05 - N25	■	▰▱▱▱	▰▱▱▱	▰▱▱▱	×		PKD	-	PKD grade for turning non-ferrous materials. Ideal choice for working with high cutting speed and small feeds at stable conditions.
333TN	P45 - P50 M35 - M40 K35 - K40	■ ◪ ◪	▰▰▰▱	▰▱▱▱	▰▰▰▱	PVD		HSS	+ + +	Special grade composed of HSS substrate and thin hard PVD coating. The most tough cutting grade in the portfolio. Inserts with this grade are one and only used for slotting of key groove.

Substrat	
H	WC-Co based substrate
submicron H	WC-Co based substrate fine grained (< 1 µm)
ultra submicron H	WC-Co based substrate very fine grained (< 0,5 µm)
FGM	Functionally graded substrate
Cermet	Cemented carbide without WC
ceramics	Cutting ceramics
PCD	Polycrystalline Diamond
CBN	Cubic Boron Nitride
HSS	High speed steel

Coating	
MT-CVD	Medium-temperature chemical method of coating
PVD	Low-temperature physical method of coating
×	Uncoated grade

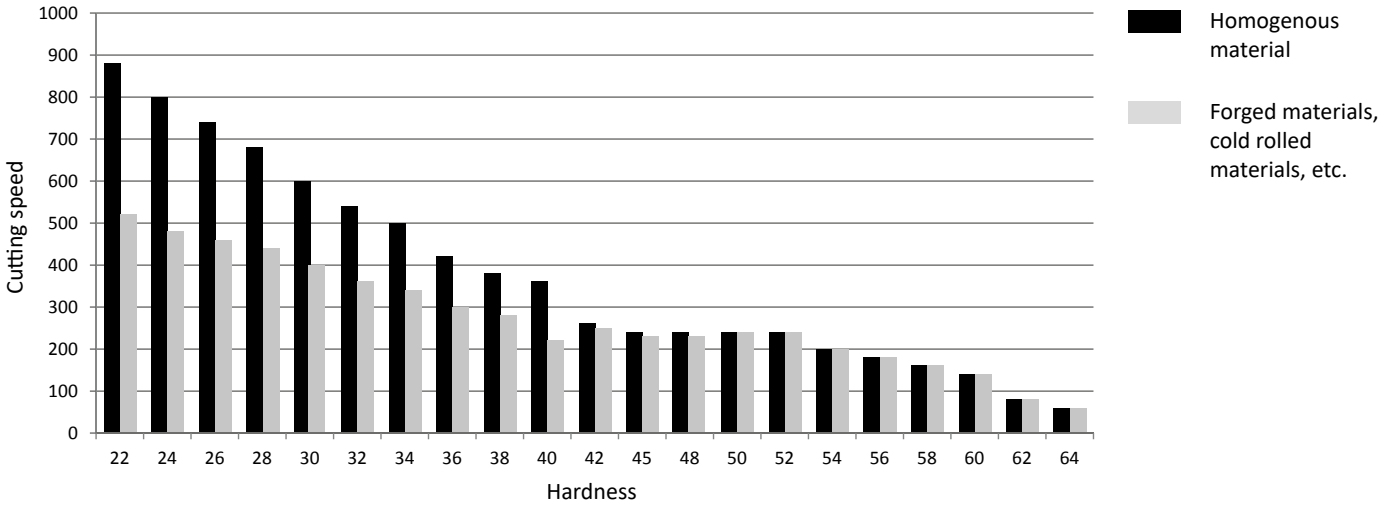
Benefits of cutting fluid	
+ + +	Use of coolant is essential
+ +	Highly recommended
+	Recommended
+ / –	Optional
– -	Do not use coolant



Example: **CNGA 120404 T02020** – insert CNGA 120404 with T-land (cutting edge design T) width 0,2 mm and angle -20°

Ceramics are materials that have one of the highest levels of thermal stability.
During their practical application, however, it is necessary to reduce the cutting speed with regard to the hardness of the machined material and its other characteristics.
For illustration purposes, we have provided a concrete example of a round insert used for finishing.

Cutting speed for RNGN (a_p = 1.5 mm)



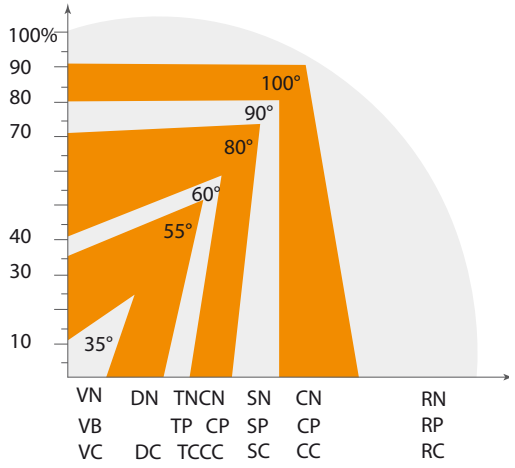
The following table provides further parameters that need to be taken into account when selecting the cutting speed to use.

Corner radius RE [mm]	**0,4**	**0,8**	**1,2**	**1,6**	**2,4**	**3**
Reduction v_c by	20 %	16 %	12 %	10 %	5 %	2 %
Main cutting edge angle	**90°**	**75°**	**60°**	**45°**	**30°**	**< 15°**
Reduction v_c by	0 %	5 %	8 %	12 %	15 %	18 %
Insert shape	**V**	**D**	**T**	**C, W**	**S**	**R**
Corner angle	35°	55°	60°	80°	90°	–
Reduction v_c by	17 %	12 %	10 %	6 %	4 %	0 %
Depth of cut a_p [mm]	**<1.4**	**3**	**6**	**10**	**13**	**20**
Reduction v_c by	5 %	8 %	13 %	16 %	18 %	20 %

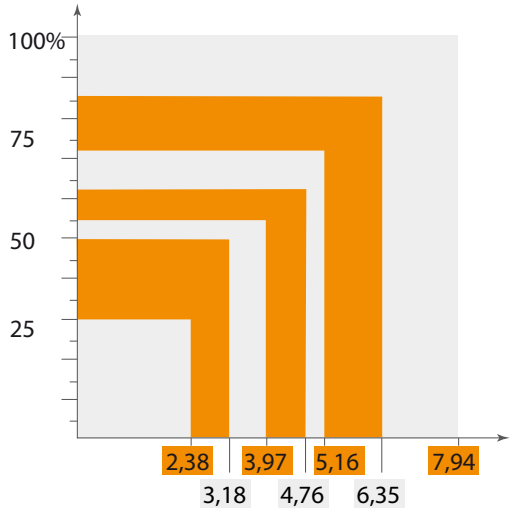
As previously stated, ceramics are materials that have one of the highest levels of abrasion resistance, yet they also have one of the lowest levels of strength.

With regard to rigidity, it is therefore also necessary to take into account other limiting criteria when selecting the right insert.

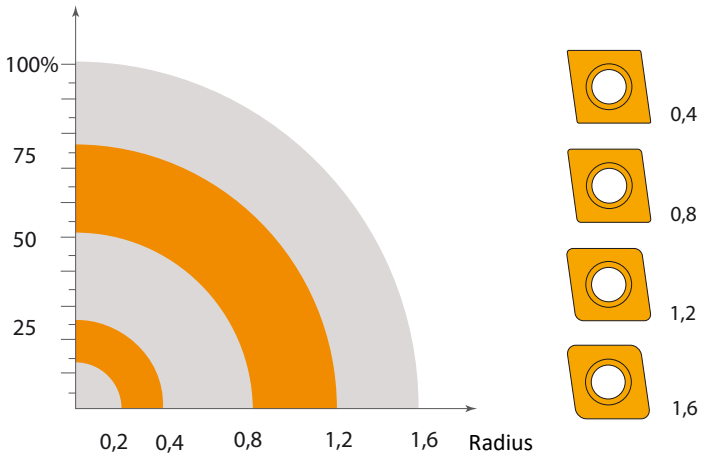
Rigidity in relation to insert shape



Rigidity in relation to insert thickness

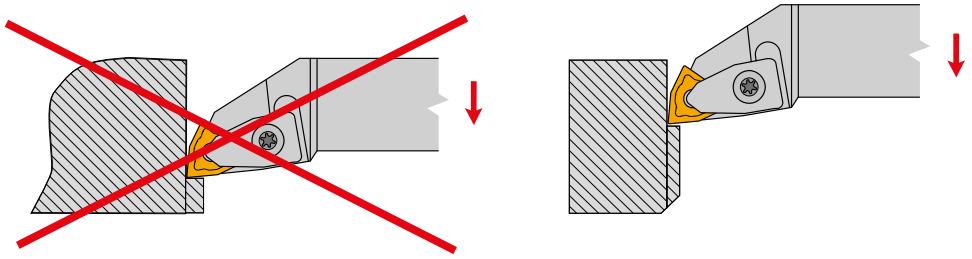


Rigidity in relation to insert radius

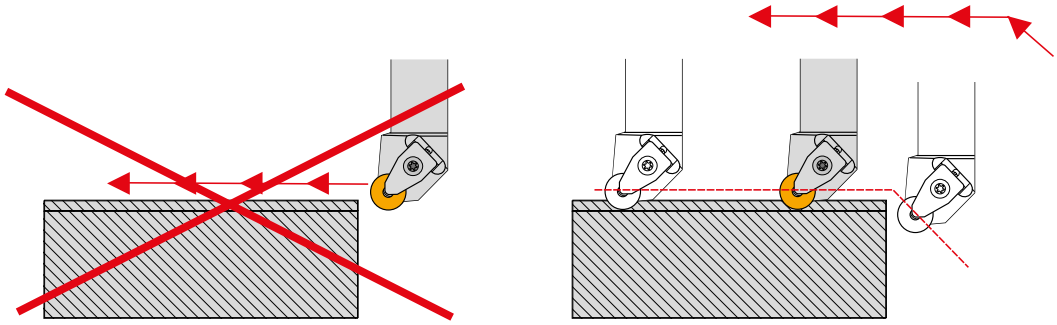


Finally, we would like to give some recommendations regarding practical application:

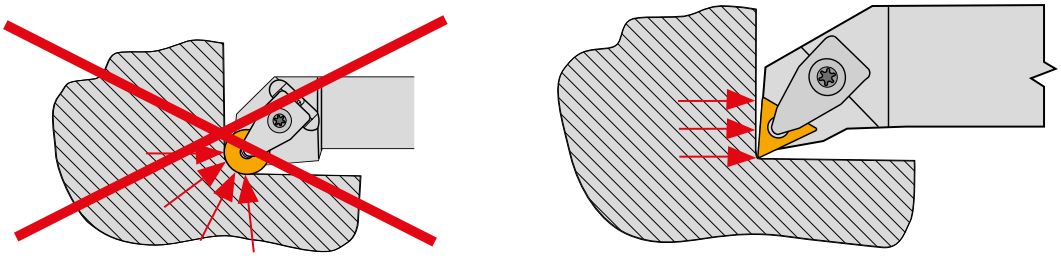
1) Burrs at the output of the tool can result in chipped edges and damage the whole insert. It is therefore necessary to bevel the edge to eliminate the burrs first.



2) It is advisable to modify the standard program (adding the material) as this slows down the creation of burrs on the edge, which increases the durability of the edge and also eliminates the need to bevel the edge.

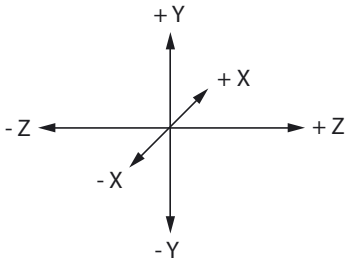


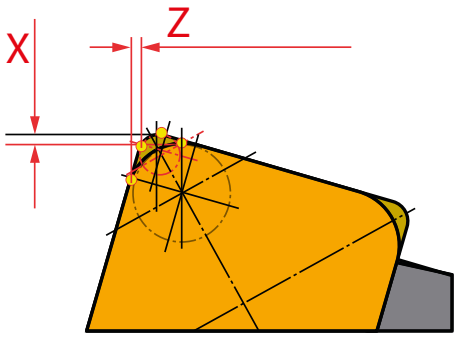
3) If there is a risk of problems occurring as a result of tool vibration, it is better to use inserts with a smaller radius to eliminate radial forces.

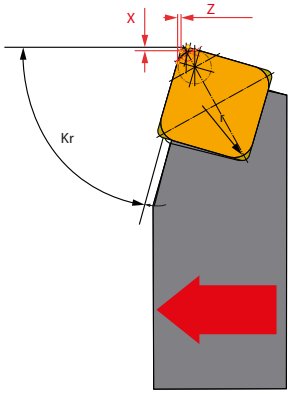


CORRECTION OF X AND Z COORDINATES BY RADIUS AND HOLDER

Correction of X and Z coordinates by radius and holder:







ATTENTION – the data is valid for right-hand holders oriented as shown in picture 19. For internal holders, left-hand holders or other orientations it is necessary to correct or mark +/– (to substitute values X/Z)

Holder		Coordinates	Radius 0,5	Radius 1,0	Radius 1,5				
External holder	CKJNR/L	x	0.443	0.000	-0.433				
		z	-0.050	0.000	0.050				

Holder		Coordinates	Radius 02	Radius 04	Radius 08	Radius 12	Radius 16	Radius 24	Radius 32
External holder	DCLNR/L	x	0.060	0.040	0.000	-0.040	-0.080	-0.160	-0.240
		z	-0.062	-0.042	0.000	0.042	0.083	0.166	0.249
	DDJNR/L	x	0.516	0.347	0.000	-0.329	-0.667	-1.343	-2.019
		z	-0.056	-0.041	0.000	0.022	0.054	0.117	0.180
	DSBNR/L	x	0.252	0.170	0.000	-0.158	-0.322	-0.649	-0.977
		z	0.422	0.280	0.000	-0.285	-0.568	-1.134	-1.700
	DSDNN	x	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		z	0.247	0.165	0.000	-0.165	-0.33	-0.659	-0.989
	DSKNR/L	x	0.134	0.089	0.000	-0.089	-0.178	-0.358	-0.537
		z	-0.167	-0.111	0.000	0.111	0.222	0.444	0.667
	DSSNR/L	x	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		z	0.245	0.162	0.000	-0.167	-0.322	-0.662	-0.992
	DTFNR/L	x	0.426	0.284	0.000	-0.284	-0.569	-1.137	-1.705
		z	0.029	0.019	0.000	-0.019	-0.04	-0.078	-0.117
	DTGNR/L	x	0.437	0.294	0.000	-0.277	-0.562	-1.133	-1.703
		z	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	DVJNR/L	x	0.063	0.042	0.000	-0.042	-0.084	-0.169	-0.253
		z	1.234	0.823	0.000	-0.823	-1.646	-3.291	-4.937
	DVPNR/L	x	0.79	0.527	0.000	-0.527	-1.054	-2.108	-3.161
		z	0.834	0.554	0.000	-0.554	-1.109	-2.217	-3.326
	DWLNR/L	x	0.061	0.044	0.000	-0.026	-0.061	-0.131	-0.200
		z	-0.063	-0.045	0.000	0.027	0.062	0.134	0.206

CORRECTION OF X AND Z COORDINATES BY RADIUS AND HOLDER

Holder		Coordinates	Radius 02	Radius 04	Radius 08	Radius 12	Radius 16	Radius 24	Radius 32
Internal holder	DCLNR/L	x	-0.053	-0.035	0.000	0.035	0.070	0.140	0.210
		z	-0.060	-0.040	0.000	0.040	0.080	0.159	0.239
	DDUNR/L	x	-0.512	-0.341	0.000	0.0341	0.683	1.365	2.047
		z	-0.073	-0.049	0.000	0.049	0.097	0.195	0.292
	DTFNR/L	x	-0.425	-0.289	0.000	0.254	0.526	1.069	1.613
		z	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	DVUNR/L	x	1.254	-0.836	0.000	0.836	1.671	3.343	5.014
		z	-0.129	-0.086	0.000	0.086	0.172	0.344	0.516
	DWLNR/L	x	-0.053	-0.035	0.000	0.035	0.07	0.14	0.21
		z	-0.06	-0.04	0.000	0.04	0.08	0.159	0.239
External holder	MTJNR/L	x	0.437	0.294	0.000	-0.277	-0.562	-1.133	-1.703
		z	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	MVJNR/L	x	1.263	0.847	0.000	-0.819	-1.651	-3.317	-4.982
		z	-0.075	-0.055	0.000	0.025	0.065	0.146	0.226
	MWLNR/L	x	0.609	0.044	0.000	-0.026	-0.061	-0.131	-0.200
		z	-0.063	-0.045	0.000	0.027	0.062	0.134	0.206
	PCBNR/L	x	0.045	0.033	0.000	-0.016	-0.040	-0.088	-0.137
		z	0.128	0.083	0.000	-0.096	-0.185	-0.364	-0.543
	PCKNR/L	x	0.171	0.115	0.000	-0.110	-0.223	-0.448	-0.672
		z	0.685	0.457	0.000	-0.457	-0.914	-1.827	-2.741
	PCLNR/L	x	0.061	0.044	0.000	-0.026	-0.061	-0.131	-0.200
		z	-0.063	-0.045	0.000	0.027	0.062	0.134	0.206
	PDJNR/L	x	0.516	0.347	0.000	-0.329	-0.667	-1.343	-2.019
		z	-0.056	-0.041	0.000	0.022	0.054	0.117	0.180
	PDNNR/L	x	0.699	0.469	0.000	-0.453	-0.915	-1.837	-2.759
		z	0.524	0.348	0.000	-0.357	-0.710	-1.415	-2.120
	PDXNR/L	x	0.453	0.305	0.000	-0.288	-0.584	-1.177	-1.770
		z	-0.156	-0.107	0.000	0.088	0.185	0.380	0.575
	PLBNR/L	x	0.137	0.094	0.000	-0.078	-0.163	-0.335	-0.507
		z	0.153	0.100	0.000	-0.110	-0.220	-0.433	-0.646
	PSBNR/L	x	0.137	0.094	0.000	-0.078	-0.163	-0.335	-0.507
		z	0.153	0.100	0.000	-0.110	-0.220	-0.433	-0.646
	PSDNN	x	0.252	0.170	0.000	-0.158	-0.322	-0.649	-0.977
		z	0.422	0.280	0.000	-0.285	-0.568	-1.134	-1.699
	PSKNR/L	x	0.140	0.094	0.000	-0.090	-0.152	-0.366	-0.550
		z	0.574	0.383	0.000	-0.384	-0.767	-1.533	-2.300
	PSSNR/L	x	0.246	0.164	0.000	-0.164	-0.328	-0.656	-0.983
		z	0.424	0.283	0.000	-0.283	-0.566	-1.131	-1.697
	PTFNR/L	x	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		z	-0.411	-0.243	0.000	0.429	0.765	1.437	2.110
	PTGNR/L	x	0.437	0.294	0.000	-0.277	-0.562	-1.133	-1.703
		z	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	PTTNR/L	x	0.601	0.403	0.000	-0.389	-0.784	-1.575	-2.367
		z	0.519	0.345	0.000	-0.354	-0.703	-1.401	-2.099
	PWLNR/L	x	0.609	0.044	0.000	-0.026	-0.061	-0.131	-0.200
		z	-0.063	-0.045	0.000	0.027	0.062	0.134	0.206
Internal holder	PCLNR/L	x	-0.061	-0.046	0.000	0.012	0.040	0.098	0.156
		z	-0.062	-0.047	0.000	0.015	0.046	0.160	0.169
	PDUNR/L	x	-0.500	-0.339	0.000	0.305	0.627	1.271	1.915
		z	-0.052	-0.040	0.000	0.006	0.029	0.076	0.122
	PSKNR/L	x	-0.153	-0.097	0.000	0.063	0.143	0.303	0.463
		z	0.137	0.098	0.000	-0.124	-0.234	-0.456	-0.677
	PTFNR/L	x	-0.425	-0.289	0.000	0.254	0.526	1.069	1.613
		z	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	PWLNR/L	x	-0.060	-0.046	0.000	0.012	0.043	0.098	0.156
		z	-0.065	-0.049	0.000	0.012	0.040	0.105	0.166

CORRECTION OF X AND Z COORDINATES BY RADIUS AND HOLDER

Holder		Coordinates	Radius 02	Radius 04	Radius 08	Radius 12	Radius 16	Radius 24	Radius 32
External holder	SCACR/L	x	0.115	0.077	0.000	-0.077	-0.153	-0.307	-0.460
		z	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SCBCR/L	x	0.042	0.028	0.000	-0.028	-0.055	-0.111	-0.166
		z	0.130	0.087	0.000	-0.087	-0.174	-0.347	-0.521
	SCDCR/L	x	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		z	-0.279	-0.186	0.000	0.186	0.372	0.745	1.117
	SCFCR/L	x	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		z	-0.124	-0.083	0.000	0.083	0.166	0.331	0.497
	SCLCR/L	x	0.060	0.040	0.000	-0.040	-0.080	-0.160	-0.240
		z	-0.062	-0.042	0.000	0.042	0.083	0.166	0.249
	SDJCR/L	x	0.520	0.346	0.000	-0.346	-0.693	-1.386	-2.078
		z	-0.060	-0.040	0.000	0.040	0.080	0.161	0.241
	SDNCN	x	0.699	0.466	0.000	-0.466	-0.933	-1.865	-2.798
		z	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEGCR/L	x	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		z	-0.182	-0.121	0.000	0.121	0.243	0.485	0.728
	SSBCR/L	x	0.135	0.090	0.000	-0.090	-0.180	-0.360	-0.539
		z	0.155	0.104	0.000	-0.104	-0.207	-0.414	-0.621
	SSDCN	x	0.249	0.166	0.000	-0.166	-0.331	-0.663	-0.994
		z	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SSKCR/L	x	-0.376	-0.517	0.000	-1.083	-1.366	-1.931	-2.497
		z	-0.135	-0.090	0.000	0.090	0.180	0.360	0.539
	STCFR/L	x	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		z	–	–	0.000	–	–	–	–
	STJCR/L	x	0.406	0.271	0.000	-0.271	-0.542	-1.084	-1.626
		z	-0.054	-0.036	0.000	0.036	0.071	0.143	-0.214
	SVACR/L	x	00 / 0	01 / – 0.107	–	–	–	–	–
		z	00 / 0	01 / – 0.107	–	–	–	–	–
	SVGCR/L	x	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		z	-1.303	-0.869	0.000	0.869	1.737	3.475	5.212
	SVHBR/L	x	1.034	0.690	0.000	-0.690	-1.379	-2.759	-4.138
		z	-0.544	-0.363	0.000	0.363	0.726	1.452	2.178
	SVHCR/L	x	1.034	0.690	0.000	-0.690	-1.379	-2.759	-4.138
		z	-0.544	-0.363	0.000	0.363	0.726	1.452	2.178
	SVJBR/L	x	1.269	0.846	0.000	-0.846	-1.692	-3.384	-5.076
		z	-0.099	-0.066	0.000	0.066	0.132	0.263	0.395
	SVJCR/L	x	1.269	0.846	0.000	-0.846	-1.692	-3.384	-5.076
		z	-0.099	-0.066	0.000	0.066	0.132	0.263	0.395
	SVPBR/L	x	0.811	0.541	0.000	-0.541	-1.081	-2.162	-3.244
		z	-0.811	-0.541	0.000	0.541	1.081	2.162	3.244
	SVPCR/L	x	0.811	0.541	0.000	-0.541	-1.081	-2.162	-3.244
		z	-0.811	-0.541	0.000	0.541	1.081	2.162	3.244
	SVVBN	x	1.395	0.930	0.000	-0.930	-1.860	-3.721	-5.581
		z	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SVVCN	x	1.395	0.930	0.000	-0.930	-1.860	-3.721	-5.581
		z	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SVXBR/L	x	1.201	0.801	0.000	-0.080	-1.601	-3.202	-4.804
		z	-0.259	-0.173	0.000	0.173	0.345	0.691	1.036
	SVXCR/L	x	1.201	0.801	0.000	-0.080	-1.601	-3.202	-4.804
		z	-0.259	-0.173	0.000	0.173	0.345	0.691	1.036
	SWLCR/L	x	0.060	0.040	0.000	-0.040	-0.080	-0.160	-0.240
		z	-0.060	-0.040	0.000	0.040	0.080	0.160	0.240

CORRECTION OF X AND Z COORDINATES BY RADIUS AND HOLDER

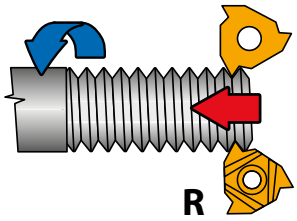
Holder		Coordinates	Radius 02	Radius 04	Radius 08	Radius 12	Radius 16	Radius 24	Radius 32
Internal holder	SCFCR/L	x	-0.420	-0.280	0.000	0.280	0.560	1.121	1.681
		z	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SCKCR/L	x	-0.040	-0.027	0.000	0.027	0.054	0.108	0.161
		z	0.130	0.087	0.000	-0.087	-0.174	-0.348	0.521
	SCLCR/L	x	-0.058	-0.039	0.000	0.039	0.078	0.155	0.233
		z	-0.062	-0.042	0.000	0.042	0.083	0.166	0.249
	SCXCR/L	x	-0.178	-0.119	0.000	0.119	0.237	0.474	0.711
		z	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SDQCR/L	x	-0.309	-0.194	0.000	0.206	0.412	0.825	1.237
		z	-0.310	-0.206	0.000	0.268	0.499	0.961	1.423
	SDUCR/L	x	-0.504	-0.336	0.000	0.336	0.672	1.344	2.016
		z	-0.059	-0.039	0.000	0.041	0.082	0.162	0.242
	SDZCR/L	x	-0.520	-0.346	0.000	0.346	0.693	0.139	2.078
		z	0.059	0.039	0.000	-0.041	-0.082	-0.162	-0.242
	SELPR/L	x	-0.126	-0.084	0.000	0.084	0.168	0.337	0.051
		z	-0.066	-0.044	0.000	0.044	0.088	0.176	0.264
	SEUCR/L	x	-0.149	-0.099	0.000	0.099	0.199	0.397	0.596
		z	-0.041	-0.027	0.000	0.027	0.053	0.107	0.160
	SEUPR/L	x	-0.148	-0.099	0.000	0.099	0.198	0.396	0.593
		z	-0.040	-0.027	0.000	0.027	0.053	0.107	0.160
	SEXPR/L	x	-0.384	-0.256	0.000	0.256	0.512	1.024	1.537
		z	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SSSCR/L	x	-0.249	-0.166	0.000	0.166	0.331	0.663	0.994
		z	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	STFCR/L	x	-0.433	-0.289	0.000	0.289	0.577	1.154	1.731
		z	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SVLCR/L	x	-1.243	-0.828	0.000	0.828	1.657	3.314	4.971
		z	0.239	0.692	0.000	-0.108	-0.215	-0.430	-0.645
	SVQBR/L	x	-1.027	-0.684	0.000	0.690	1.369	2.738	4.106
		z	-0.545	-0.363	0.000	0.363	0.726	1.452	2.178
	SVQCR/L	x	-1.027	-0.684	0.000	0.690	1.369	2.738	4.106
		z	-0.545	-0.363	0.000	0.363	0.726	1.452	2.178
	SVUBR/L	x	-1.259	-0.840	0.000	0.840	1.679	3.358	5.037
		z	0.099	-0.066	0.000	0.066	0.132	0.263	0.395
	SVUCR/L	x	-1.259	-0.840	0.000	0.840	1.679	3.358	5.037
		z	0.099	-0.066	0.000	0.066	0.132	0.263	0.395
	SVXCR/L	x	-0.917	-0.611	0.000	0.611	1.222	2.445	3.667
		z	-0.696	-0.464	0.000	0.464	0.928	1.856	2.783
	SWLCR/L	x	-0.060	-0.039	0.000	0.039	0.079	0.158	0.237
		z	-0.060	-0.040	0.000	0.040	0.080	0.160	0.240
	SWUCR/L	x	-0.080	-0.053	0.000	0.053	0.107	0.213	0.319
		z	-0.034	-0.024	0.000	0.024	0.049	0.098	0.146

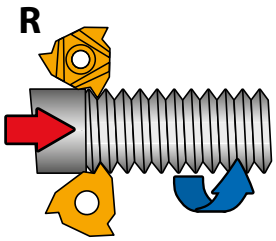
ATTENTION – the data is valid for right-hand holders oriented as shown in picture 19. For internal holders, left-hand holders or other orientations it is necessary to correct or mark +/– (to substitute values X/Z).

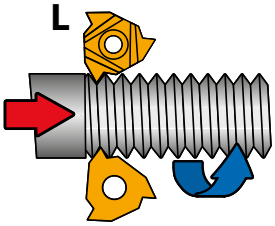
THREADING

The choice of production method is influenced by the workpiece and the machine. Workpiece – external or internal thread, right – or left-hand thread. Machine – right – or left-hand tool. For guidance, you can use table below.

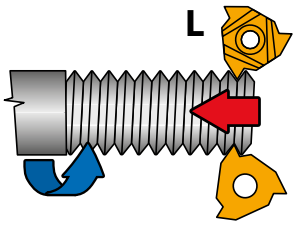
EXTERNAL THREAD, RIGHT-HAND

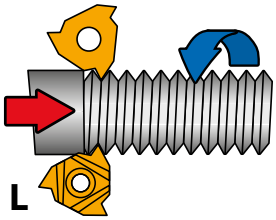


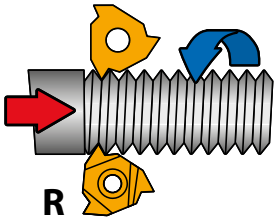




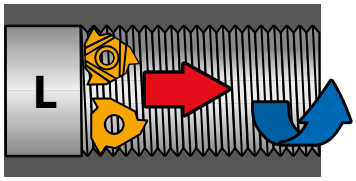
EXTERNAL THREAD, LEFT-HAND

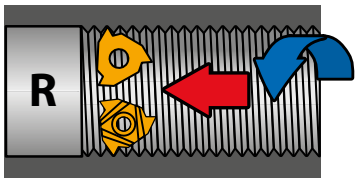




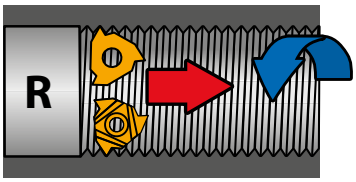


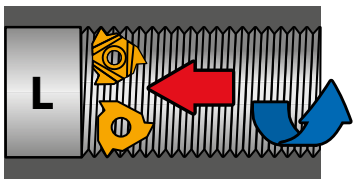
INTERNAL THREAD, RIGHT-HAND





INTERNAL THREAD, LEFT-HAND





Movement of the workpiece

Tool movement

L / R Insert design

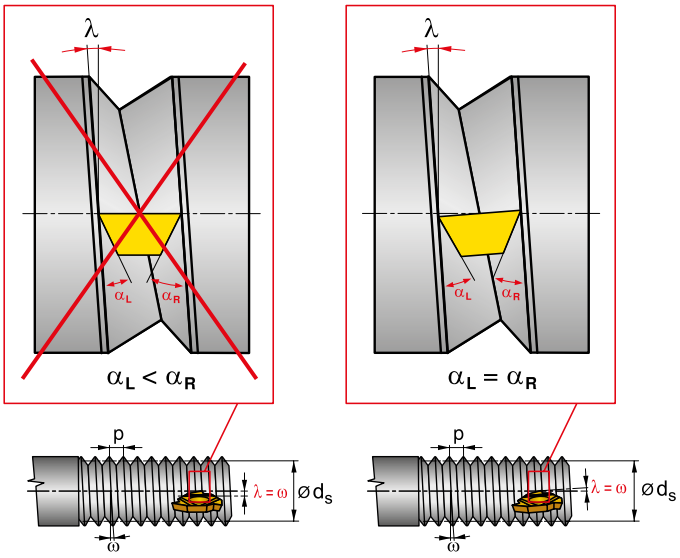
The following formula can be used to calculate the helix angle:

$$tg\,\omega = \frac{p}{d_s \cdot \pi}$$

ω helix angle [°]

p pitch [mm]

d_s pitch diameter [mm]



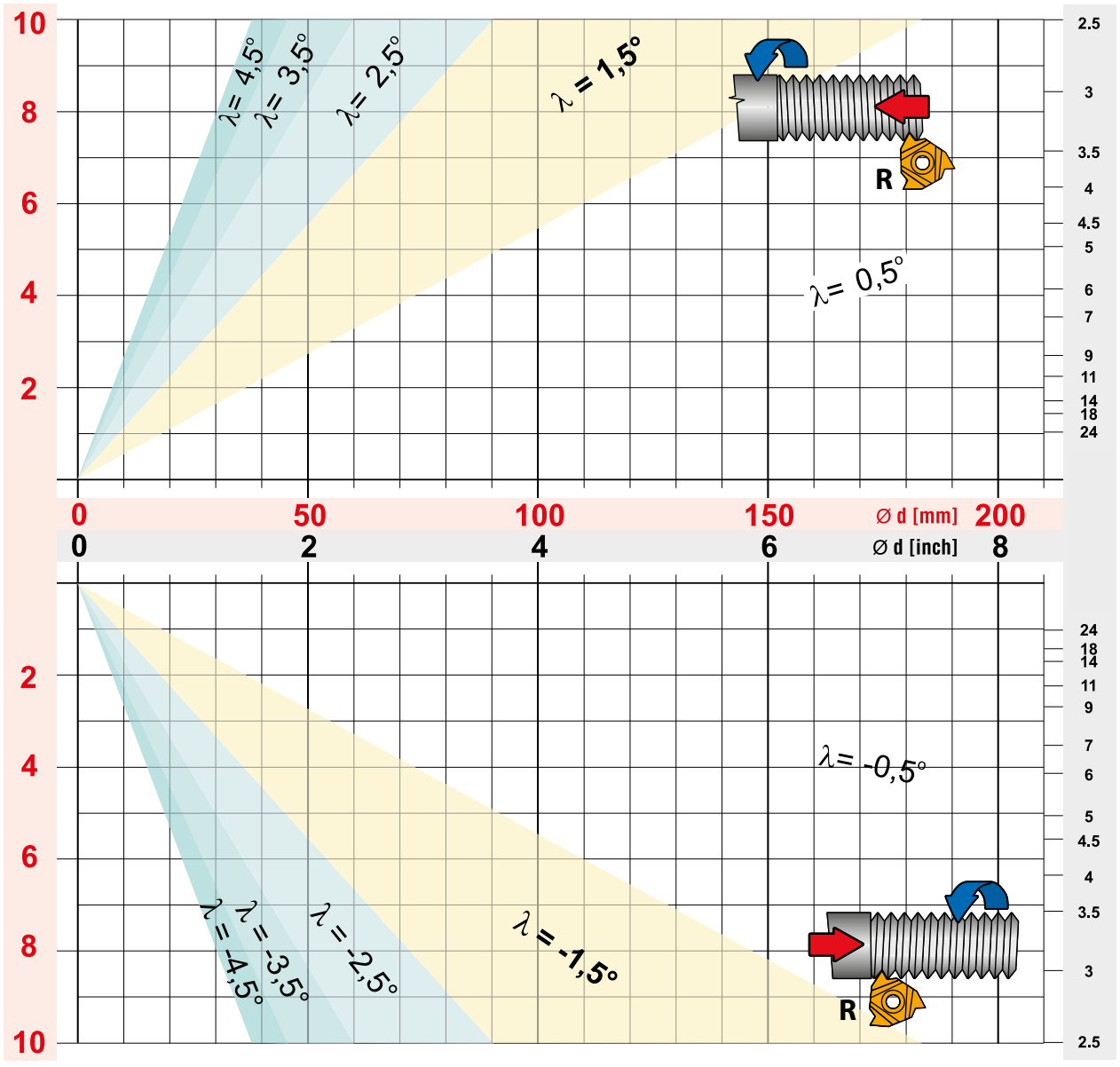
To generate the correct shape on the thread and uniform wear on the insert, the cutting edge helix angle should be equal to the thread lead angle.
Tool holders are usually supplied with a helix angle λ = 1.5°. A different helix angle can be selected by changing the anvil.
Use the following graph (picture 21) or table (table 16) to choose the correct anvil.

Choice of shim

Helix angle λ	Positive					Negative		for grooving inserts TN16.. ... ZZ, TN22.. ... ZZ
	4,5°	3,5°	2,5°	1,5°	0,5°	-0,5°	-1,5°	
Tool holder	**Anvil specification**							
SER .... .16; SIL .... .16	PE16+4,5	PE16+3,5	PE16+2,5	**PE16+1,5**	PE16+0,5	PE16-0,5	PE16-1,5	PE16ZZ
SEL .... .16; SIR .... .16	PI16+4,5	PI16+3,5	PI16+2,5	**PI16+1,5**	PI16+0,5	PI16-0,5	PI16-1,5	PI16ZZ
SER .... .22; SIL .... .22	PE22+4,5	PE22+3,5	PE22+2,5	**PE22+1,5**	PE22+0,5	PE22-0,5	PE22-1,5	PE22ZZ
SEL .... .22; SIR .... .22	PI22+4,5	PI22+3,5	PI22+2,5	**PI22+1,5**	PI22+0,5	PI22-0,5	PI22-1,5	PI22ZZ
SER-S .... .22; SIL-S .... .22	PE22S+4,5	PE22S+3,5	PE22S+2,5	**PE22S+1,5**	PE22S+0,5	PE22S-0,5	PE22S-1,5	-
SEL-S .... .22; SIR-S .... .22	PI22S+4,5	PI22S+3,5	PI22S+2,5	**PI22S+1,5**	PI22S+0,5	PI22S-0,5	PI22S-1,5	-

Tool holders are usually supplied with a helix angle λ = 1.5°. A different helix angle can be selected by changing the anvil.
Shims for holders SER-S ...., SIR-S .... are marked with „*S*“

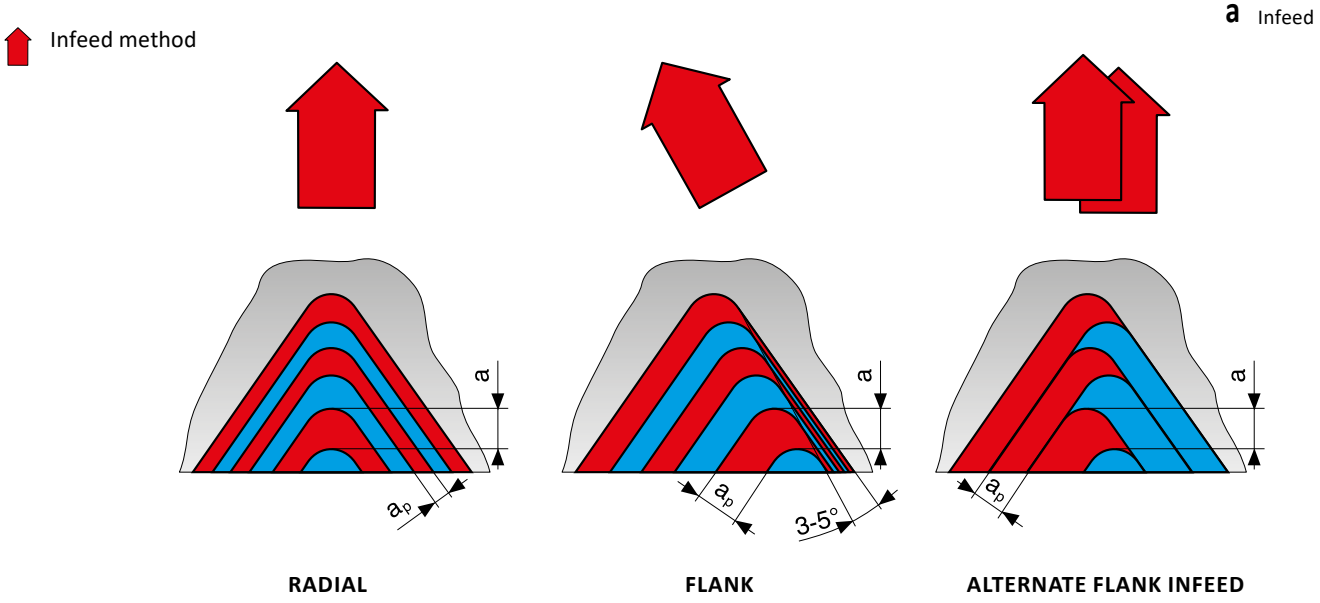
Graph for shim selection



Movement of the workpiece Tool movement **L / R** Insert design

Infeed method and depth

The choice of infeed method is most important for long chipping materials to ensure γοοδ chip control.



The choice depends on the machine type, the machined material and the pitch.

Radial infeed – the most simple and the most used. The infeed is perpendicular to the axis of rotation of the workpiece. It contributes to good chip formation and uniform wear on the cutting edge. Suitable for threads with a small pitch (p <1.5 mm). There is a risk of vibration at higher feeds. First choice for working on hard materials (e.g. austenitic stainless steels, steels with low carbon content).

Flank infeed – reduces thermal stress on the cutting edge and thereby wear. Good chip control. Suitable for threads with a pitch of p >1.5 mm for TR threads. Flank infeed with deviation 3 – 5° eliminates friction on the thread flank.

Alternate flank infeed – recommended for coarse threads and materials with poor chip formation. Long tool life. For CNC machines, higher demand on CNC programming.

Infeed method and number of passes depend on the thread pitch. The tables give basic recommendations and apply to all geometries. If the insert fractures, the infeed value should be decreased and the number of passes should be increased. The infeed depth should not be less than 0.05 mm/pass. On austenitic and soft steels the infeed depth per pass should be greater than 0.08 mm.

TUBULAR CYLINDRICAL THREAD PROFILE CORRESPONDS WITH W (WHITWORTH 55°)					
Thread marking	**No. of threads / 1″**	**Thread pitch P [mm]**	**Nominal diameter of thread [mm]**	**Small diameter of thread [mm]**	**Thread insert marking**
G 1/16″	28	0,907	7.723	6.561	**TN xxxx280W**
G 1/8″			9.728	8.566	
G 1/4″	19	1,337	13.157	11.445	**TN xxxx190W**
G 3/8″			16.662	14.950	
G 1/2″	14	1,814	20.955	18.631	**TN xxxx140W**
G 5/8″			22.911	20.587	
G 3/4″			26.441	24.117	
G 7/8″			30.201	27.877	
G 1″	11	2,309	33.249	30.291	**TN xxxx110W**
G1 1/8″			37.897	34.939	
G1 1/4″			41.910	38.952	
G1 1/2″			47.803	44.845	
G1 3/4″			53.746	50.788	
G 2″			59.614	56.656	
G2 1/4″			65.710	62.752	
G2 1/2″			75.184	72.226	
G2 3/4″			81.534	78.576	
G3″			87.884	84.926	
G3 1/2″			100.330	97.372	
G4″			113.030	110.072	
G4 1/2″			125.730	122.772	
G5″			138.430	135.472	
G5 1/2″			151.130	148.172	
G6″			163.830	160.872	

Example: for right-hand external thread on 1 ½″ tube use thread insert TN 16ER110W; 8030

INFEED DEPTH

M – metric 60° – external

Number of passes	REDUCE THE CUTTING SPEED PROPORTIONALLY TO INCREASING THE THREAD PITCH														
	Pitch [mm]														
	6.0	5.5	5.0	4.5	4.0	3.5	3.0	2.5	2.0	1.75	1.5	1.25	1.0	0.75	0.50
1	0.46	0.43	0.41	0.37	0.34	0.34	0.28	0.27	0.24	0.22	0.22	0.21	0.18	0.16	0.11
2	0.43	0.40	0.39	0.34	0.32	0.31	0.26	0.24	0.22	0.20	0.20	0.17	0.16	0.14	0.09
3	0.35	0.32	0.32	0.28	0.25	0.25	0.21	0.20	0.18	0.17	0.17	0.14	0.12	0.11	0.07
4	0.30	0.28	0.27	0.24	0.22	0.21	0.18	0.17	0.16	0.14	0.14	0.11	0.11	0.07	0.06
5	0.29	0.26	0.24	0.22	0.20	0.18	0.16	0.15	0.14	0.12	0.12	0.10	0.08		
6	0.26	0.24	0.24	0.22	0.18	0.18	0.15	0.15	0.12	0.10	0.08	0.08			
7	0.24	0.21	0.22	0.20	0.17	0.16	0.14	0.12	0.11	0.10					
8	0.23	0.20	0.20	0.18	0.15	0.15	0.13	0.11	0.08	0.08					
9	0.22	0.19	0.19	0.17	0.14	0.14	0.12	0.11							
10	0.19	0.18	0.18	0.16	0.13	0.12	0.11	0.08							
11	0.18	0.17	0.16	0.14	0.12	0.11	0.10								
12	0.16	0.15	0.15	0.13	0.12	0.08	0.08								
13	0.15	0.14	0.12	0.12	0.11										
14	0.13	0.13	0.10	0.10	0.08										
15	0.13	0.12													
16	0.10	0.10													
Total infeed depth	**3.83**	**3.52**	**3.19**	**2.87**	**2.53**	**2.23**	**1.92**	**1.60**	**1.25**	**1.13**	**0.93**	**0.81**	**0.65**	**0.48**	**0.33**

M – Metric 60° – internal

Number of passes	REDUCE THE CUTTING SPEED PROPORTIONALLY TO INCREASING THE THREAD PITCH														
	Pitch [mm]														
	6.0	5.5	5.0	4.5	4.0	3.5	3.0	2.5	2.0	1.75	1.5	1.25	1.0	0.75	0.50
1	0.46	0.43	0.42	0.37	0.34	0.32	0.28	0.26	0.23	0.22	0.20	0.17	0.17	0.16	0.10
2	0.43	0.40	0.40	0.34	0.31	0.30	0.26	0.25	0.21	0.20	0.18	0.17	0.15	0.13	0.08
3	0.35	0.33	0.32	0.28	0.24	0.24	0.21	0.18	0.17	0.15	0.15	0.14	0.11	0.10	0.07
4	0.30	0.26	0.26	0.23	0.21	0.19	0.16	0.15	0.15	0.13	0.13	0.10	0.09	0.07	0.06
5	0.26	0.22	0.22	0.21	0.18	0.17	0.14	0.13	0.12	0.10	0.11	0.09	0.08		
6	0.22	0.20	0.20	0.19	0.15	0.15	0.13	0.12	0.11	0.09	0.08	0.08			
7	0.20	0.18	0.17	0.16	0.14	0.14	0.12	0.11	0.10	0.08					
8	0.19	0.17	0.16	0.15	0.13	0.13	0.11	0.10	0.08	0.08					
9	0.18	0.16	0.16	0.14	0.12	0.12	0.10	0.10							
10	0.16	0.15	0.15	0.13	0.12	0.11	0.10	0.08							
11	0.15	0.14	0.14	0.12	0.11	0.10	0.09								
12	0.15	0.14	0.14	0.12	0.10	0.08	0.08								
13	0.14	0.13	0.12	0.11	0.10										
14	0.13	0.12	0.10	0.10	0.08										
15	0.12	0.12													
16	0.10	0.10													
Total infeed depth	**3.54**	**3.25**	**2.96**	**2.65**	**2.33**	**2.05**	**1.78**	**1.48**	**1.17**	**1.05**	**0.85**	**0.75**	**0.60**	**0.46**	**0.31**

W – Whitworth 55° – external and internal

Number of passes	REDUCE THE CUTTING SPEED PROPORTIONALLY TO INCREASING THE THREAD PITCH																
	Pitch [no of thread/inch]																
	4	4.5	5	6	7	8	9	10	11	12	14	16	18	19	20	26	28
1	0.49	0.46	0.45	0.38	0.37	0.32	0.30	0.29	0.28	0.28	0.24	0.24	0.23	0.22	0.21	0.19	0.18
2	0.46	0.43	0.43	0.36	0.35	0.30	0.28	0.27	0.26	0.26	0.22	0.22	0.22	0.22	0.21	0.18	0.17
3	0.38	0.38	0.38	0.30	0.29	0.24	0.23	0.22	0.22	0.22	0.18	0.19	0.19	0.18	0.17	0.15	0.14
4	0.36	0.33	0.32	0.26	0.25	0.21	0.20	0.19	0.19	0.18	0.15	0.16	0.16	0.14	0.14	0.12	0.12
5	0.34	0.29	0.28	0.22	0.22	0.19	0.18	0.17	0.16	0.16	0.13	0.13	0.13	0.12	0.11	0.08	0.08
6	0.31	0.25	0.25	0.21	0.19	0.17	0.15	0.15	0.14	0.14	0.11	0.11	0.08	0.08	0.08		
7	0.29	0.24	0.22	0.19	0.18	0.15	0.14	0.14	0.13	0.13	0.09	0.08					
8	0.27	0.22	0.20	0.17	0.16	0.14	0.13	0.13	0.12	0.08	0.08						
9	0.24	0.20	0.19	0.16	0.15	0.13	0.12	0.12	0.08								
10	0.22	0.18	0.18	0.15	0.14	0.12	0.12	0.08									
11	0.20	0.17	0.17	0.14	0.12	0.12	0.08										
12	0.19	0.16	0.15	0.14	0.08	0.08											
13	0.17	0.15	0.12	0.12													
14	0.15	0.14	0.10	0.10													
15	0.12	0.12															
16	0.10	0.10															
Total infeed depth	4.29	3.82	3.44	2.90	2.50	2.17	1.93	1.76	1.58	1.45	1.20	1.13	1.01	0.96	0.92	0.72	0.69

UN – UN 60° – external

Number of passes	REDUCE THE CUTTING SPEED PROPORTIONALLY TO INCREASING THE THREAD PITCH																	
	Pitch [no of thread/inch]																	
	4	4.5	5	6	7	8	9	10	11	12	13	14	16	18	20	24	28	32
1	0.47	0.45	0.43	0.36	0.35	0.30	0.28	0.27	0.27	0.27	0.25	0.23	0.22	0.23	0.20	0.19	0.17	0.17
2	0.44	0.41	0.40	0.34	0.33	0.28	0.26	0.26	0.25	0.26	0.24	0.22	0.21	0.21	0.19	0.17	0.15	0.15
3	0.40	0.39	0.36	0.27	0.26	0.25	0.21	0.20	0.20	0.20	0.18	0.17	0.16	0.16	0.15	0.14	0.11	0.13
4	0.36	0.31	0.31	0.23	0.22	0.21	0.20	0.17	0.19	0.18	0.17	0.15	0.14	0.14	0.12	0.12	0.09	0.08
5	0.32	0.26	0.26	0.22	0.21	0.18	0.17	0.16	0.16	0.15	0.14	0.13	0.13	0.12	0.10	0.08	0.08	
6	0.27	0.23	0.23	0.20	0.19	0.16	0.15	0.15	0.14	0.13	0.12	0.11	0.11	0.08	0.08			
7	0.25	0.21	0.20	0.18	0.17	0.14	0.14	0.14	0.12	0.12	0.11	0.10	0.08					
8	0.23	0.20	0.19	0.16	0.15	0.13	0.12	0.12	0.11	0.08	0.08	0.08						
9	0.22	0.18	0.19	0.15	0.14	0.12	0.12	0.11	0.08									
10	0.21	0.17	0.18	0.14	0.12	0.12	0.11	0.08										
11	0.19	0.16	0.17	0.13	0.11	0.11	0.08											
12	0.18	0.15	0.15	0.12	0.08	0.08												
13	0.16	0.14	0.12	0.11														
14	0.15	0.14	0.10	0.10														
15	0.12	0.12																
16	0.10	0.10																
Total infeed depth	**4.07**	**3.62**	**3.29**	**2.71**	**2.33**	**2.08**	**1.84**	**1.66**	**1.52**	**1.39**	**1.29**	**1.19**	**1.05**	**0.94**	**0.84**	**0.70**	**0.60**	**0.53**

INFEED DEPTH

UN – UN 60° – internal

Number of passes	REDUCE THE CUTTING SPEED PROPORTIONALLY TO INCREASING THE THREAD PITCH																	
	Pitch [no of thread/inch]																	
	4	4.5	5	6	7	8	9	10	11	12	13	14	16	18	20	24	28	32
1	0.44	0.41	0.42	0.35	0.34	0.30	0.28	0.27	0.27	0.27	0.25	0.23	0.22	0.23	0.20	0.18	0.17	0.17
2	0.41	0.38	0.38	0.33	0.32	0.28	0.26	0.25	0.23	0.23	0.20	0.18	0.18	0.17	0.16	0.15	0.14	0.14
3	0.39	0.34	0.33	0.25	0.24	0.22	0.19	0.18	0.18	0.18	0.15	0.14	0.14	0.14	0.13	0.13	0.09	0.10
4	0.33	0.28	0.27	0.21	0.21	0.18	0.16	0.15	0.15	0.15	0.13	0.13	0.12	0.12	0.10	0.10	0.08	0.08
5	0.28	0.23	0.23	0.18	0.17	0.15	0.14	0.13	0.13	0.13	0.12	0.11	0.10	0.10	0.09	0.08	0.08	
6	0.24	0.20	0.20	0.16	0.15	0.13	0.13	0.12	0.11	0.11	0.11	0.10	0.09	0.08	0.08			
7	0.22	0.19	0.18	0.15	0.14	0.12	0.12	0.11	0.11	0.10	0.10	0.09	0.08					
8	0.21	0.18	0.17	0.14	0.13	0.11	0.11	0.10	0.10	0.08	0.08	0.08						
9	0.20	0.17	0.16	0.13	0.12	0.11	0.10	0.10	0.08									
10	0.18	0.16	0.15	0.12	0.12	0.10	0.09	0.08										
11	0.17	0.15	0.14	0.12	0.11	0.10	0.08											
12	0.16	0.14	0.14	0.11	0.08	0.08												
13	0.15	0.14	0.12	0.11														
14	0.14	0.13	0.10	0.10														
15	0.12	0.12																
16	0.10	0.10																
Total infeed depth	**3.74**	**3.32**	**2.99**	**2.46**	**2.13**	**1.88**	**1.66**	**1.49**	**1.36**	**1.25**	**1.14**	**1.06**	**0.93**	**0.84**	**0.76**	**0.64**	**0.56**	**0.49**

NPT 60° – internal and external

Number of passes	REDUCE THE CUTTING SPEED PROPORTIONALLY TO INCREASING THE THREAD PITCH				
	Pitch [no of thread/inch]				
	8	11.5	14	18	27
1	0.28	0.25	0.24	0.22	0.19
2	0.25	0.22	0.22	0.18	0.15
3	0.22	0.18	0.17	0.15	0.13
4	0.19	0.16	0.15	0.14	0.11
5	0.18	0.16	0.14	0.13	0.09
6	0.18	0.14	0.13	0.12	0.08
7	0.17	0.14	0.12	0.10	
8	0.17	0.12	0.10	0.08	
9	0.16	0.12	0.10		
10	0.16	0.10	0.08		
11	0.14	0.09			
12	0.13	0.08			
13	0.12				
14	0.11				
15	0.08				
Total infeed depth	**2.54**	**1.76**	**1.45**	**1.12**	**0.75**

INFEED DEPTH

RD – RD 30° – external

Number of passes	REDUCE THE CUTTING SPEED PROPORTIONALLY TO INCREASING THE THREAD PITCH			
	Pitch [no of thread/inch]			
	4	6	8	10
1	0.44	0.33	0.29	0.26
2	0.40	0.29	0.26	0.25
3	0.34	0.25	0.21	0.23
4	0.32	0.23	0.19	0.20
5	0.28	0.20	0.18	0.16
6	0.26	0.18	0.16	0.12
7	0.24	0.16	0.14	0.10
8	0.22	0.15	0.12	0.08
9	0.20	0.14	0.10	
10	0.19	0.12	0.08	
11	0.17	0.10		
12	0.15	0.08		
13	0.12			
14	0.10			
Total infeed depth	**3.43**	**2.23**	**1.73**	**1.40**

RD – RD 30° – internal

Number of passes	REDUCE THE CUTTING SPEED PROPORTIONALLY TO INCREASING THE THREAD PITCH			
	Pitch [no of thread/inch]			
	4	6	8	10
1	0.46	0.38	0.26	0.27
2	0.43	0.34	0.22	0.26
3	0.40	0.30	0.21	0.25
4	0.35	0.25	0.19	0.22
5	0.30	0.21	0.18	0.18
6	0.26	0.19	0.16	0.13
7	0.24	0.17	0.14	0.10
8	0.22	0.16	0.12	0.08
9	0.20	0.14	0.10	
10	0.19	0.12	0.08	
11	0.17	0.10		
12	0.15	0.08		
13	0.12			
14	0.10			
Total infeed depth	**3.59**	**2.44**	**1.66**	**1.49**

INFEED DEPTH

TR 30° internal

Number of passes	REDUCE THE CUTTING SPEED PROPORTIONALLY TO INCREASING THE THREAD PITCH											
	Pitch [mm]											
	14,0	12,0	10,0	9,0	8,0	7,0	6,0	5,0	4,0	3,0	2,0	1,5
1	0.40	0.38	0.38	0.38	0.37	0.37	0.37	0.34	0.31	0.27	0.25	0.23
2	0.37	0.36	0.36	0.35	0.35	0.34	0.35	0.33	0.28	0.25	0.24	0.22
3	0.36	0.34	0.34	0.34	0.34	0.33	0.32	0.27	0.24	0.21	0.20	0.18
4	0.36	0.34	0.34	0.33	0.33	0.31	0.29	0.25	0.20	0.17	0.17	0.14
5	0.35	0.32	0.32	0.31	0.31	0.29	0.27	0.23	0.19	0.15	0.14	0.12
6	0.35	0.32	0.32	0.30	0.29	0.26	0.25	0.21	0.18	0.13	0.13	0.08
7	0.34	0.30	0.31	0.29	0.28	0.26	0.23	0.20	0.16	0.13	0.11	
8	0.34	0.30	0.29	0.28	0.27	0.26	0.22	0.20	0.15	0.12	0.09	
9	0.34	0.30	0.28	0.26	0.25	0.24	0.22	0.18	0.15	0.12		
10	0.33	0.29	0.27	0.25	0.24	0.23	0.20	0.16	0.15	0.10		
11	0.33	0.29	0.25	0.24	0.23	0.22	0.18	0.15	0.14	0.10		
12	0.32	0.29	0.24	0.23	0.21	0.22	0.17	0.14	0.13	0.08		
13	0.32	0.28	0.23	0.22	0.20	0.20	0.17	0.13	0.10			
14	0.31	0.27	0.22	0.21	0.19	0.19	0.16	0.10				
15	0.31	0.25	0.22	0.21	0.19	0.17	0.14					
16	0.30	0.25	0.20	0.19	0.18	0.16	0.12					
17	0.30	0.24	0.19	0.18	0.17	0.12						
18	0.29	0.22	0.18	0.16	0.15							
19	0.28	0.20	0.17	0.15	0.13							
20	0.27	0.20	0.16	0.15								
21	0.23	0.19	0.15	0.13								
22	0.23	0.18	0.15									
23	0.21	0.17	0.13									
24	0.19	0.16										
25	0.17	0.15										
26	0.16	0.13										
27	0.16											
28	0.15											
29	0.13											
Total infeed depth	**8.2**	**6.72**	**5.7**	**5.16**	**4.68**	**4.17**	**3.66**	**2.89**	**2.38**	**1.83**	**1.33**	**0.97**

INFEED DEPTH

TR – TR 30° – internal

Number of passes	REDUCE THE CUTTING SPEED PROPORTIONALLY TO INCREASING THE THREAD PITCH											
	Pitch [mm]											
	14,0	12,0	10,0	9,0	8,0	7,0	6,0	5,0	4,0	3,0	2,0	1,5
1	0.40	0.38	0.38	0.38	0.37	0.37	0.37	0.34	0.31	0.27	0.25	0.23
2	0.37	0.36	0.36	0.35	0.35	0.34	0.34	0.33	0.28	0.25	0.24	0.22
3	0.36	0.34	0.34	0.34	0.34	0.33	0.32	0.27	0.24	0.22	0.21	0.19
4	0.36	0.34	0.34	0.33	0.33	0.31	0.29	0.25	0.20	0.17	0.17	0.14
5	0.35	0.32	0.32	0.31	0.31	0.29	0.27	0.23	0.19	0.15	0.14	0.12
6	0.35	0.32	0.32	0.31	0.29	0.26	0.25	0.21	0.18	0.14	0.13	0.08
7	0.34	0.30	0.31	0.29	0.28	0.26	0.23	0.20	0.16	0.13	0.11	
8	0.34	0.30	0.29	0.29	0.27	0.26	0.22	0.20	0.15	0.12	0.09	
9	0.34	0.30	0.28	0.26	0.25	0.24	0.22	0.18	0.15	0.12		
10	0.33	0.29	0.27	0.25	0.24	0.23	0.20	0.16	0.15	0.10		
11	0.33	0.29	0.25	0.24	0.23	0.22	0.18	0.15	0.14	0.10		
12	0.32	0.28	0.24	0.23	0.21	0.22	0.17	0.14	0.13	0.08		
13	0.32	0.28	0.23	0.22	0.20	0.20	0.17	0.13	0.10			
14	0.31	0.27	0.22	0.21	0.19	0.19	0.16	0.10				
15	0.31	0.25	0.22	0.21	0.19	0.17	0.14					
16	0.30	0.25	0.20	0.20	0.18	0.16	0.12					
17	0.30	0.24	0.19	0.18	0.17	0.12						
18	0.29	0.22	0.18	0.16	0.15							
19	0.28	0.20	0.17	0.15	0.13							
20	0.27	0.20	0.16	0.15								
21	0.27	0.19	0.15	0.13								
22	0.23	0.18	0.15									
23	0.23	0.17	0.13									
24	0.21	0.16										
25	0.19	0.15										
26	0.17	0.13										
27	0.16											
28	0.16											
29	0.15											
30	0.13											
Total infeed depth	**8.47**	**6.71**	**5.7**	**5.19**	**4.68**	**4.17**	**3.65**	**2.89**	**2.38**	**1.85**	**1.34**	**0.98**

BSPT 55° – internal and external

Number of passes	REDUCE THE CUTTING SPEED PROPORTIONALLY TO INCREASING THE THREAD PITCH			
	Pitch [no of thread/inch]			
	11	14	19	28
1	0.22	0.19	0.19	0.15
2	0.21	0.18	0.18	0.14
3	0.20	0.17	0.17	0.13
4	0.19	0.16	0.15	0.12
5	0.18	0.15	0.13	0.08
6	0.16	0.14	0.08	
7	0.15	0.12		
8	0.13	0.08		
9	0.08			
Total infeed depth	**1.52**	**1.19**	**0.90**	**0.62**

ACME – ACME 29° – external

Number of passes	REDUCE THE CUTTING SPEED PROPORTIONALLY TO INCREASING THE THREAD PITCH							
	Pitch [no of thread/inch]							
	4	5	6	8	10	12	14	16
1	0.37	0.34	0.32	0.29	0.27	0.25	0.22	0.23
2	0.34	0.32	0.28	0.25	0.23	0.22	0.20	0.21
3	0.30	0.25	0.23	0.21	0.20	0.17	0.18	0.18
4	0.27	0.23	0.21	0.17	0.18	0.14	0.15	0.14
5	0.25	0.22	0.18	0.15	0.14	0.13	0.13	0.12
6	0.24	0.20	0.18	0.13	0.12	0.12	0.11	0.08
7	0.21	0.19	0.16	0.13	0.12	0.10	0.08	
8	0.20	0.19	0.16	0.12	0.11	0.09		
9	0.20	0.18	0.16	0.12	0.11			
10	0.18	0.16	0.15	0.11	0.09			
11	0.17	0.15	0.14	0.11				
12	0.16	0.14	0.13	0.09				
13	0.16	0.13	0.11					
14	0.15	0.11						
15	0.14							
16	0.12							
Total infeed depth	**3.46**	**2.83**	**2.41**	**1.88**	**1.57**	**1.22**	**1.07**	**0.96**

ACME – ACME 29° – internal

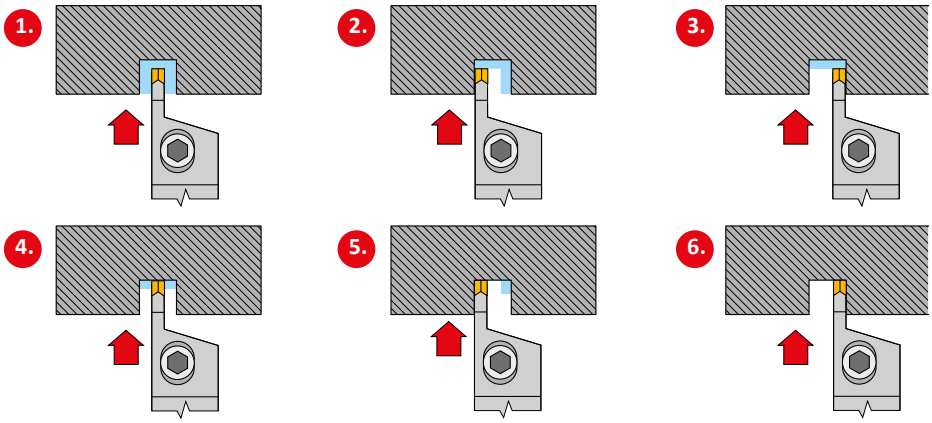
Number of passes	REDUCE THE CUTTING SPEED PROPORTIONALLY TO INCREASING THE THREAD PITCH							
	Pitch [no of thread/inch]							
	4	5	6	8	10	12	14	16
1	0.37	0.34	0.32	0.29	0.27	0.25	0.22	0.23
2	0.33	0.31	0.27	0.25	0.23	0.22	0.20	0.21
3	0.30	0.25	0.23	0.21	0.20	0.17	0.18	0.17
4	0.27	0.23	0.20	0.17	0.18	0.15	0.15	0.14
5	0.25	0.22	0.18	0.15	0.15	0.13	0.13	0.12
6	0.23	0.20	0.18	0.14	0.12	0.12	0.11	0.08
7	0.21	0.19	0.16	0.13	0.12	0.10	0.08	
8	0.20	0.19	0.15	0.12	0.11	0.09		
9	0.20	0.17	0.15	0.12	0.11			
10	0.18	0.16	0.15	0.12	0.09			
11	0.17	0.15	0.14	0.11				
12	0.16	0.14	0.13	0.09				
13	0.16	0.13	0.11					
14	0.15	0.11						
15	0.14							
16	0.12							
Total infeed dept	**3.44**	**2.78**	**2.38**	**1.90**	**1.59**	**1.23**	**1.07**	**0.95**

Recesses, parting and copy turning.

Pramet offers a comprehensive range of tools for turning shallow and deep recesses, both radially and axially (face grooving). Circular/copy profile turning can also be performed through side cutting.

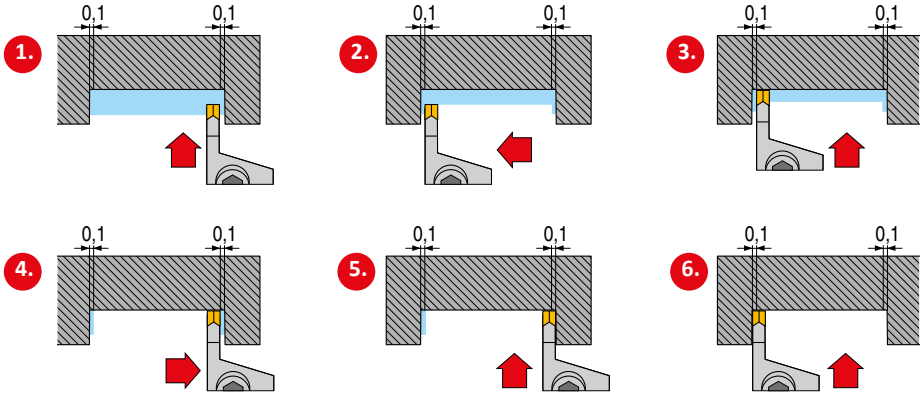
Recommendation for practical usage:

The procedure for turning a recess (deepening and widening) is shown in the following illustration.

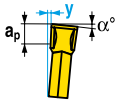


Note: To create a flat seating surface, use insert type **GL** with chip breaker **GM** or **LCMF** with chipbreaker **F.** The outboard radial grooving passes should overlap the central pass by two times the insert corner radius.

When machining a wide recess, follow the procedure shown in the following illustration.

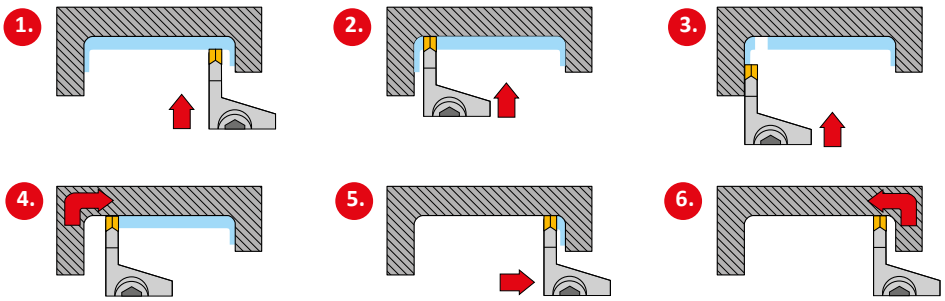


Note: Use the cutting insert LCMF with chip breaker M. You must consider the tool's deformation "*y*":

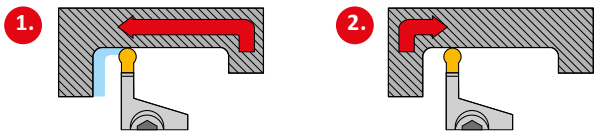


– for *f* =0,15 mm/rev; a_p = 3 mm ***y = 0,07 mm***
– for *f* =0,25 mm/rev; a_p = 3 mm ***y = 0,08 mm***
– for *f* =0,35 mm/rev; a_p = 3 mm ***y = 0,10 mm***

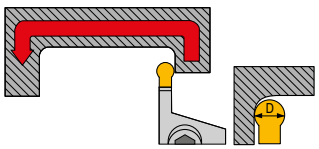
When opening up or deepening a contour using side turning, use the procedure shown in the following illustration.



Roughing of contour (insert with round cutting edge)



Finishing of contour (insert with round cutting edge)

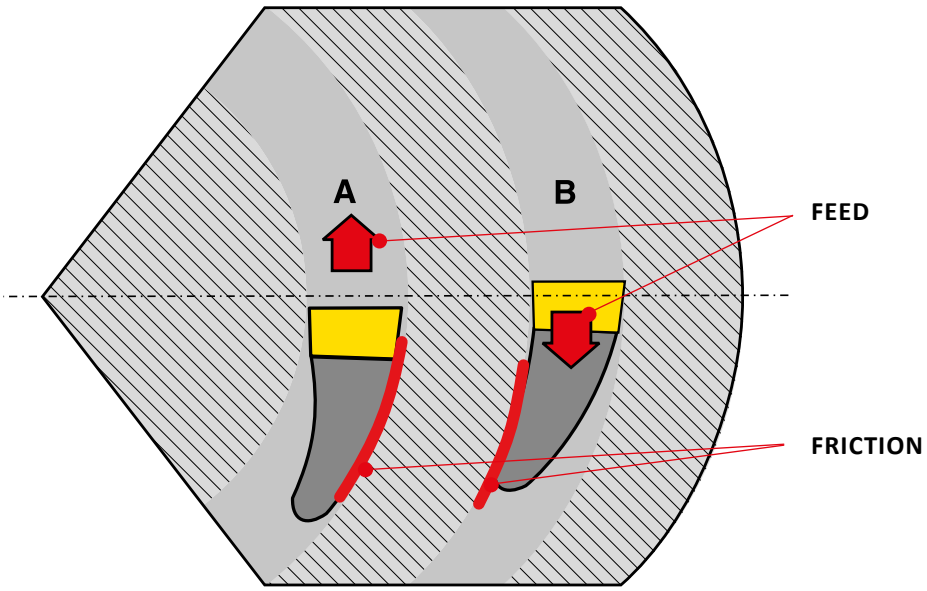


D [mm]	a_p [mm]
3	0.15
4	0.20
5	0.22
6	0.25
8	0.40

TURNING OF SLENDER SHAFTS AND INTERNAL TURNING (BORING) OF DEEP HOLES

When copy turning using indexable inserts with a round cutting edge, the maximum depth of cut is 50% of the diameter of the insert.
Choose the tool holder with the maximum cross-section and minimum tool overhang to eliminate vibrations.
The longitudinal axis of the cutting insert must be perpendicular to the axis of rotation of the workpiece (at radial recesses).
The cutting edge must be on centerline within a tolerance of + – 0,1 mm
Coolant must be applied directly onto the cutting edge, and onto the support area of the tool holder under the insert cutting edge, in sufficient quantities to guarantee effective cooling of the insert.
When face grooving it is necessary to select a tool holder with the correct range of diameters for the groove to be machined. The tool must be set parallel to the axis of rotation of the workpiece (perpendicular to the face of the groove). Otherwise there is a risk of rubbing against the wall(s) of the groove during machining.
In the event of the tool rubbing against the outer wall of the groove, it may be necessary to raise the cutting edge above centre (see example A in picture 29).

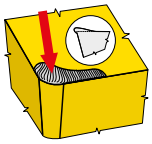
When face grooving, the tool must be set to be perpendicular to the face of the workpiece with high accuracy, otherwise the side of the tool will rub against the groove being created.

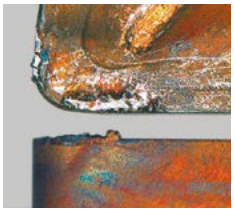


Using effective coolant, applied directly to the cutting edge in sufficient quantities, is very important. Cooling reduces the temperature of the cutting edge and also the lower part of the tool holder, in which the cutting insert is seated.

TYPES OF WEAR ON TURNING INSERTS

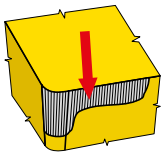
BUILT–UP EDGE

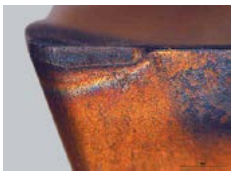




		It has no influence
(MT)CVD PVD	+ +	Any coating (decisive factor is anti-adhesion effect)
f	↑	The higher the feed rate the less probability of built-up edge creation.
v	↓↑	Change (generally increase) the cutting speed.
a_p		It has no influence
	↓↑	Use more positive geometry (built up edge is not created when the rake angle is more than 40°)
	-	Use a coolant with more effective anti-sticking properties (or no coolant at all)

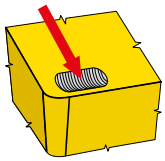
FLANK WEAR

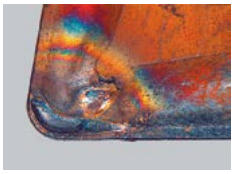




	↑	Use a more wear resistant substrate (s)
(MT)CVD PVD	+ +	Any coating (decisive factor is oxidation resistance – α al_2o_3)
f	↑	Feed has influence on shape and position of groove
v	↓	Decrease cutting speed
	↑	Minimal effect
a_p	+	Use another (more positive) cutting geometry
		Use coolant or increase its intensity

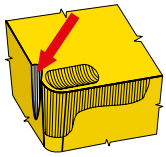
CRATERING

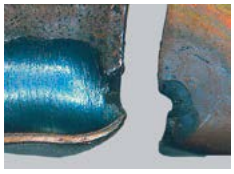




	↑	Use a more wear resistant substrate (s)
(MT)CVD PVD	+ +	Any coating (decisive factor is thermal resistance – α al_2o_3)
f	↑	Feed has influence on shape and position of crater
v	↓	Decrease cutting speed
a_p	↓	Minimal effect
	↑	Use more positive cutting geometry
	+ +	Use coolant or increase its intensity

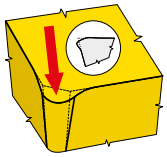
OXIDATION GROOVE ON THE MINOR EDGE

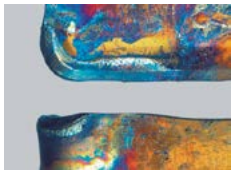




	↑	Use a more wear resistant substrate (h)
(MT)CVD / PVD	+ +	Any coating (decisive factor is hardness – tic, ticn)
f	↓	Increase feed (especially if it is under 0.1 Mm)
V	↓	Decrease cutting speed
a_p	↓	It has no influence
	↑	Increase the clearance angle
	+ +	Use a coolant or increase its intensity

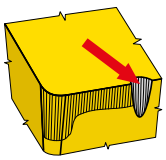
PLASTIC DEFORMATION

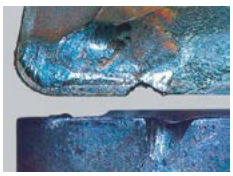




	↑	Use a more wear resistant grade (decisive factor is content of co)
(MT)CVD / PVD	+	Any coating (decisive factor is friction)
f	↓	Decrease feed rate
V	↓	Decrease cutting speed
a_p	↓	Minimal effect
	↑	Use another (more positive) cutting geometry
	+ +	Use coolant or increase its intensity

SIDE FLANK NOTCH – REMEDY

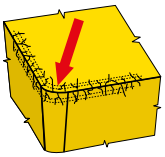


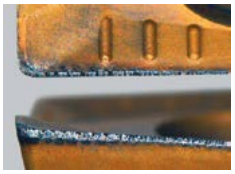


	↑ ↓	It depends on the character of the damage (abrasive – use more wear resistant substrate; breaking – use tougher substrate)
(MT)CVD / PVD	+ +	Cvd coating (decisive factor is oxidation resistance – α al_2o_3)
f	↓	Feed has influence on intensity, but less than the cutting speed
V	↓	Decrease cutting speed
a_p	↑↓	Use unequal depth of cut
	↓	Use less positive cutting geometry
	+	Use coolant or increase its intensity
		Use tool with smaller setting angle

TYPES OF WEAR ON TURNING INSERTS

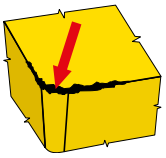
CREATION OF RACK CRACKS

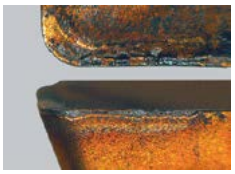




	↓	(H) grain has a great influence
(MT)CVD / PVD	+ +	Pvd coating recommended
f	↓	Feed has influence on intensity, but less than the cutting speed
V	↓	Lower speed means lower temperature
a_p		It has no influence
	↓	Use less positive cutting geometry
	- - -	No coolant (it is possible to use air to remove chips from cutting area)

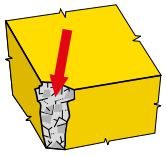
BRITTLE CRACKS AT THE CUTTING EDGE

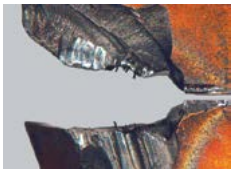




	↓	(H) grain has a great influence
(MT)CVD / PVD	+	Pvd coating recommended
f	↓	Good swarf control is very important
V	↑↓	It is about swarf control and vibration
a_p	↓	Reduces the force load (important for machining with long overhangs)
	↓	Use less positive cutting geometry
		It has no influence
		Use better working conditions, reduce feed rate until insert is in cut

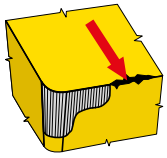
INSERT FRACTURE





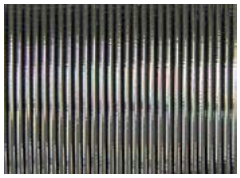
	↓	(H) grain has a great influence
(MT)CVD / PVD	+	Pvd coating recommended
f	↓	Reduces the force load
V	↑↓	It is about swarf control and vibration
a_p	↓	Reduces the force load
	↓	Use less positive cutting geometry
		It has no influence
		Use better working conditions

FAILURE OF CUTTING EDGE



	↓	(H) grain has a great influence
(MT)CVD / PVD	+	Pvd coating recommended
f	↑↓	Good swarf control is very important
V	↑↓	It is about swarf control and vibration
a_p	↑↓	Good swarf control is very important
	↓	Use less positive cutting geometry
		It has no influence
		Problem is poor swarf control or evacuation of chips

POOR SURFACE QUALITY



Description and cause:

Numerous causes depending on the workpiece material, cutting conditions (feed rate and cutting speed), the condition of the cutting edge, the extent and type of wear, and the condition and rigidity of the machine–tool–workpiece assembly.

- incorrect tool chosen
- incorrect chip thickness
- incorrect cutting speed
- coolant is needed
- high feed rate

Corrective measures:

- use a wiper insert
- use a cutting insert with the right geometry
- reduce the feed rate
- change (usually increase) the cutting speed
- use a coolant
- improve the stability of the tool and workpiece
- change the chip cross section
- select a more easy–cutting chip breaker
- increase the nose radius

VIBRATIONS

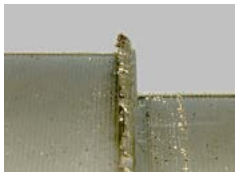
Description and cause:

This is a very common problem, which is mainly caused by an unbalanced workpiece or tool, unstable fixing of the workpiece, high cutting forces or tool overhang.

Corrective measures:

- improve the stability of the tool and workpiece
- reduce the depth of cut
- minimize tool overhang
- reduce the cutting speed
- use a tool with smaller setting angle
- reduce the chip cross section
- use a tool with a low cutting resistance
- increase the feed rate
- select a more easy–cutting chip breaker
- increase the nose radius

BURRS



Description and cause:

This usually occurs on soft steels and plastic materials.

Corrective measures:

- use a cutting insert with a sharp cutting edge
- use a cutting insert with positive geometry
- use a tool with a smaller setting angle

ERRORS IN DIMENSIONS AND SHAPE OF WORKPIECE

Description and cause:

Depends on a number of factors.

Corrective measures:

- use a wear–resistant cutting insert
- improve the stability of the cutter and workpiece
- minimize tool overhang
- use a workpiece with a suitable machining allowance

INADEQUATE CHIP FORMATION

Description and cause:

Producing a chip with a suitable shape is very important to insert durability and service life of the tool. The workpiece material, the feed rate, the depth of cut and the cutting geometry all have an effect on chip forming. A chip that is too long is unacceptable for various reasons, while a chip that is too short is undesirable as it overloads the cutting edge and causes vibrations.

Corrective measures:

- change the feed rate and depth of cut
- use a more suitable cutting geometry
- change the cutting conditions

CHECK THE SEAT CONDITION OF THE CUTTING INSERT

Before clamping a new cutting insert or changing the edge, it is necessary to clean the seat and check its condition or the condition of the anvil and wedge (especially the damage under the corner of the cutting insert).

CHECK AND SERVICE THE CLAMPING PARTS

It is also important to check the clamping parts, including clamping levers, screws, wedges and clamps. Only use original, undamaged parts (found in the catalogue). Regularly lubricate the threads and the binding surface of screws, for example using heat–resistant lubricant (Molykote G.). For assembly and disassembly, only use screwdrivers and wrenches specified in our catalogue or recommended by the tool manufacturer. Pay attention to the correct tightening (proportional) – it is advisable to use a torque wrench.

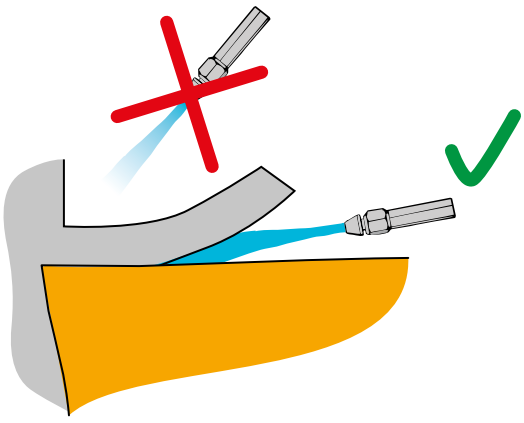
CHECK THE TIGHTENING

Before tightening, check the fit of the cutting insert on the whole of the binding surface and in the radial and axial directions. Cutting inserts and tools must always be clean and undamaged.

EFFECT OF CUTTING FLUID

Machined material – the influence of the cutting environment increases with worsening machinability of the workpiece material.
Cutting grade – the influence of the cutting environment increases with increasing toughness (Co content). Cooling is not only recommended for high-speed machining, i.e. for the application of CBN and ceramics.
Feed – the increasing feed increases the contribution of the cutting fluid to the tool life.
Cutting speed (typical for the machined material) – the higher the cutting speed, the more important the cooling effect of the cutting fluid and, conversely, the lower the cutting speed, the more important the lubricating effect of the cutting fluid.

Fluid supply is also one of the criteria that strongly affects the economy and productivity of the cutting process. In an ideal case, the liquid can be supplied to both the face and the flank of the tool. The supply of cutting fluid from the flank only affects the tool life. While the supply of fluid from the face of the tool can in some cases help you to form chips (especially in the case of high-pressure cooling). If only one of the alternatives is possible, the type of wear will indicate the right direction. If the inserts are worn on the flank, try to bring the liquid from below, i.e. to the flank of the insert. If a crater is formed, the fluid should be directed to the face of the tool (under the chip, not to its root).



FORMULA FOR CALCULATING CUTTING DATA

Value	Formula	Unit	Note
Number of revolutions	$n = \frac{v_c \cdot 1000}{D \cdot \pi}$	[1/min] [rpm]	n Number of revolutions [1/min] D Diameter (of tool or workpiece) [mm] v_c Cutting speed [m/min] f_{rev} Feed per revolution [mm/rev] f_{min} Feed per minute (Linear Feedrate) [mm/min]
Cutting speed	$v_c = \frac{\pi \cdot D \cdot n}{1000}$	[m/min]	
Feed per revolution	$f_{rev} = \frac{f_{min}}{n}$	[mm/rev]	
Feed per minute (Linear Feedrate)	$f_{min} = v_f = f_{rev} \cdot n$	[mm/min]	
Max. height of profile R_{max}	$R_{max} = \frac{125 \cdot f_{rev}^{\ 2}}{RE}$	[µm]	R_{max} max. height of profile [mm] R_a surface finish [mm] f_{rev} feed per revolution [mm/rev] RE nose radius [mm]
Surface finish R_a	$R_a = \frac{43{,}9 \cdot f_{rev}^{\ 1{,}88}}{RE^{\ 0{,}97}}$	[µm]	
Chip cross section	$A = f_{rev} \cdot a_p$	[mm²]	A Chip cross section [mm²] f_{rev} Feed per revolution [mm/rev] a_p Axial depth of cut [mm] κ_r Primary edge setting angle [°] h Chip thickness [mm] v_c Cutting speed [m/min] f_{min} Feed per minute (Linear Feedrate) [mm/min] Q Material removal rate per minute [cm³/min] $INSD$ Insert diameter [mm]
Chip thickness (For insert with straight edge)	$h = f_{rev} \cdot \sin \kappa_r$	[mm]	
Chip thickness (For round cutting insert)	$h = f_{rev} \cdot \sqrt{\frac{a_p}{INSD}}$	[mm]	
Metal removal rate	$Q = a_p \cdot f_{rev} \cdot v_c$	[cm³/min]	
Power demand	$P_c = \frac{a_p \cdot f_{rev}^{\ 1-c} \cdot k_{c1} \cdot v_c \cdot k\kappa_r}{6 \cdot 10^4 \cdot \eta}$	[kW]	P_c Power demand [kW] a_p Depth of cut [mm] f_{rev} Feed [mm/rev] c Constant KTV [1] k_c Specific cutting force [MPa] $k_{\kappa r}$ κ_r angle constant [1] η Efficiency (usually $\eta = 0{,}75$) [1] x Machined material constant [1]
Approximate power demand	$P_c = \frac{a_p \cdot f_{rev} \cdot v_c}{x}$	[kW]	

Material	Steel	Cast iron	Al
Coefficient x	20	25	100

RECOMMENDED SCREW TORQUES

Clamping screw

Screw designation	Screwdriver	Torque [Nm]
28588	MA2-8304	0.8
28992	MA2-8304	0.8
416.1-832	PT-8002	3.6
5513 020-01	PT-8004	3.6
5513 020-03	PT-8001	0.8
5513 020-04	PT-8003	1.5
5513 020-05	PT-8001	0.8
5513 020-14	TX 225PLUS	8.5
5513 020-24	PT-8002	1.5
5513 020-27	PT-8000	0.6
5513 020-28	PT-8000	0.6
5513 021-03	DMN 3124	13
CS 8601-T09P	SDR T09P	1.7
CS 8601-T15P	SDR T15P	3.9
CS 8601-T20P	SDR T20P	6.4
CS 8601-T25P	SDR T25P	9.5
DVF 0573	PT-8002	1.5
DVF 2260	TX 215PLUS	3.6
DVF 3584	DMD 1650	0.6
DVF 3593	TX 207PLUS	0.8
HS 0408	HXK 3	5
HS 0520C	HXK 4	5
HS 0616C	HXK 5	8
HS 0620	HXK 5	6
HS 0620C	HXK 5	6
HS 0625	HXK 5	6
HS 0625C	HXK 5	6
HS 0630	HXK 5	6
HS 0825	HXK 6	10
HS 0830	HXK 6	10
HS 0835	HXK 6	10
HS 0840	HXK 8	11
HS 1030	HXK 8	8
HS 1060	HXK 6	10
HS 93	HXK 5	8
HS 94	HXK 5	8
HSI 1020	HXK 6	8
PS 0512	HXK 2	2
PS 0512-A	HXK 2	2
PS 0616	HXK 2,5	4
PS 12040	HXK 5	8
PS 6026-709P	SRD T09P	2

Clamping screw

Screw designation	Screwdriver	Torque [Nm]
PS 8290	HXK 2	2
SR 14	HXK 10	10
SR 85011-T15P	SDR T15P	5
SR 85017-T09P	SDR T09P	2
SR 85020-T15P	SDR T15P	3
SR 86025-T20P	SRD T20P	5
T20.037	DMD 1650	0.6
UP 0909-T09P	SRD T09P	2
UP 1515-T15P	SDR T15P	8
US 2505-T07P	SDR T07P	0.9
US 2506-T07P	SDR T07P	0.9
US 3007-T09P	SDR T09P	2
US 34	HXK 3	5
US 35	HXK 4	6
US 3508-T15P	SDR T15P	3
US 3510A-T15P	SDR T15P	3
US 3510-T15P	SDR T15P	3
US 3512A-T15P	SDR T15P	3
US 3512-T15P	SDR T15P	3
US 36	HXK 4	6
US 38	HXK 5	8
US 39	HXK 5	8
US 40	HXK 4	6
US 4008-T15P	SDR T15P	3.5
US 4011-T15P	SDR T15P	3.5
US 41	HXK 4	6
US 42	HXK 4	6
US 45013-T20P	SDR T20P	5
US 4512-T15P	SDR T15P	5
US 4514A-T20	SDR T20	5
US 46	HXK 3	5
US 46017-T20P	SDR T20P	5
US 47	HXK 5	8
US 5012-T15P	SDR T15P	5
US 5015-T20P	SDR T20P	5
US 5018-T20P	SDR T20P	5
US 6020-T25P	SDR T25P	6
US 64518-T15P	SDR T15P	5
US 8025-T30P	SDR T20P	13
US 83	HXK 4	6
US 95	HXK 4	10

TORQUE SCREWDRIVERS

Torque handle	Torque [Nm]	Clamping screw thread
MR-0,8-2,0 vario	0.5 – 2.0	M 2 – M 3
MR-1,0-5,0 vario	0.8 – 5.0	M 2,5 – M 5
MR-0,9 fix	0.9	M 2
MR-2,0 fix	2.0	M 3
MR-3,0 fix	3.0	M 3,5
MR-3,5 fix	3.5	M 4
MR-5,0 fix	5.0	M 5

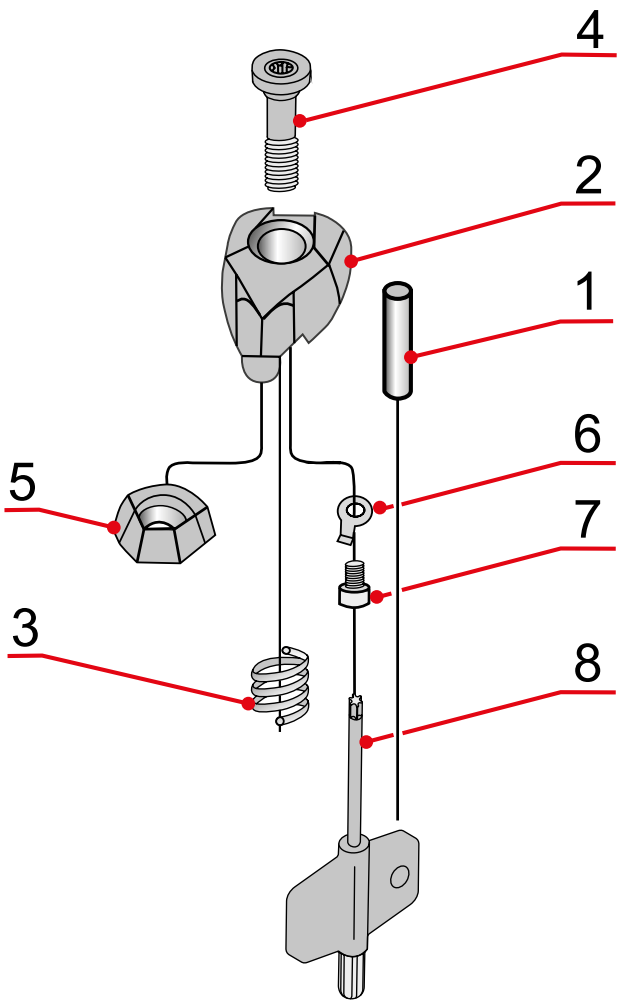
Replaceable shanks

Replaceable shanks		
D-T6	**D-T8**	**D-T15**
D-T6P	**D-T8P**	**D-T15P**
D-T7	**D-T9**	**D-T20**
D-T7P	**D-T9P**	**D-T20P**

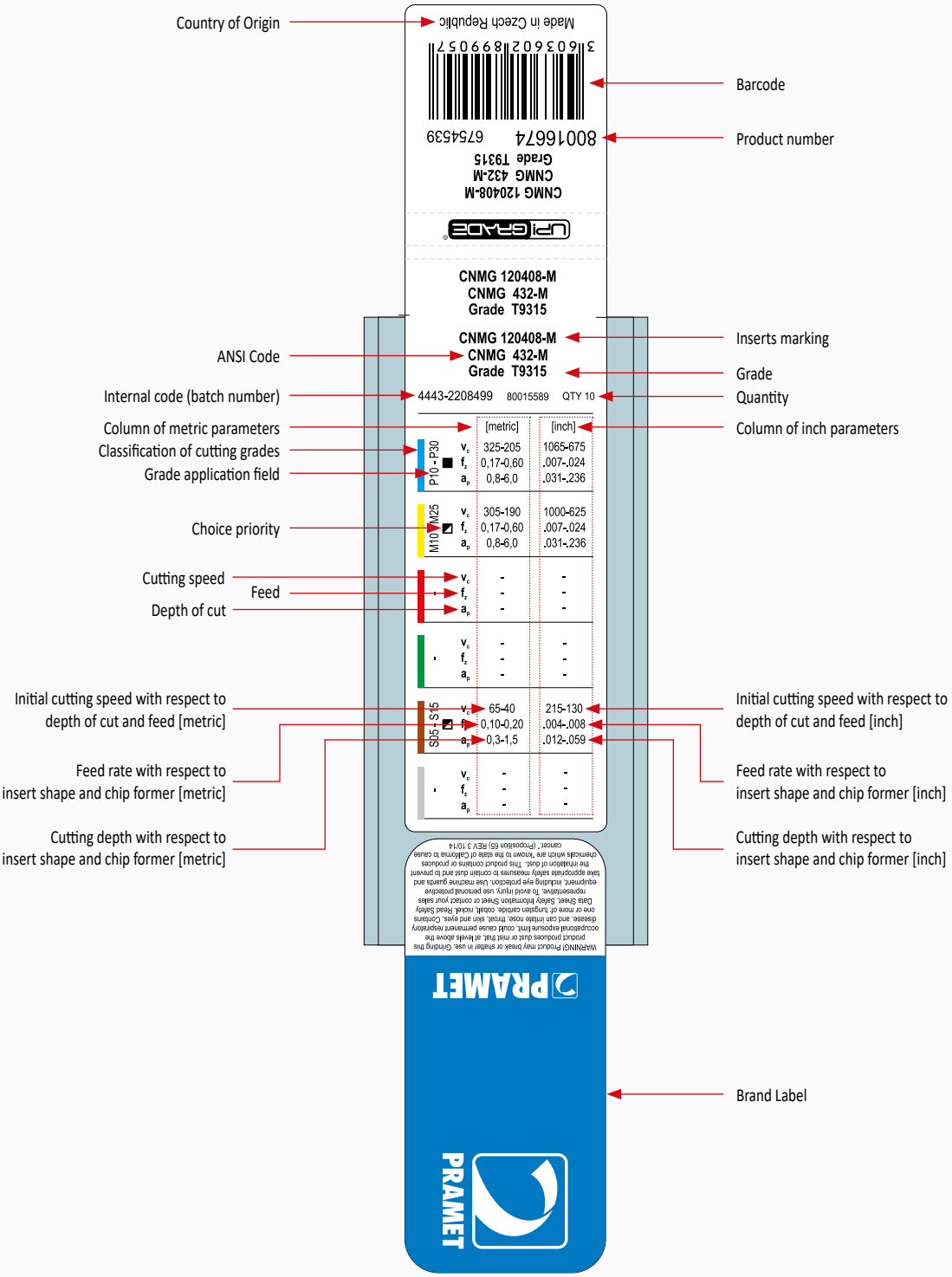
SCREW LUBRICATION

Insert clamping screws are subject to high thermal stresses. It is recommended that all screws be lubricated with a high quality paste such as MOLYKOTE 1000.

COMPLETE CLAMP SET



	1	2	3	4		5	6	7	8
					Nm				
DCS 09	CP 2655	CD 09	PR 0157	CS 8601-T09P	1.7	–	–	–	–
DCS 12	CP 2607	CD 12	PR 0158	CS 8602-T15P	3.9	–	–	–	–
DCS 16	CP 2607	CD 16	PR 0159	CS 8603-T20P	6.4	–	–	–	–
DCS 19	CP 2607	CD 19	PR 0159	CS 8603-T20P	6.4	–	–	–	–
DCS 25	CP 2607	CD 25	PR 0101	CS 8604-T25P	9.5	–	–	–	–
DCS 16V	CP 2607	CD 16V	PR 0158	CS 8602-T15P	3.9	–	–	–	–
DCS 12C2	CP 2607	CD 12C2	PR 0158	CS 8602-T15P	3.9	PP 3002	H 1201	CS 9701-T07P	FLAG T07P
DCS 16C2	CP 2607	CD 16C2	PR 0159	CS 8603-T20P	6.4	PP 3003	H 1201	CS 9701-T07P	FLAG T07P
DCS 12C4	CP 2607	CD 12C4	PR 0158	CS 8602-T15P	3.9	PP 3002	H 1201	CS 9701-T07P	FLAG T07P
DCS 16C4	CP 2607	CD 16C4	PR 0159	CS 8603-T20P	6.4	PP 3003	H 1201	CS 9701-T07P	FLAG T07P


Country of Origin
Made in Czech Republic
Barcode
Product number
800166 74
CNMG 120408-M
CNMG 432-M
Grade T9315
CNMG 120408-M
CNMG 432-M
Grade T9315
Inserts marking
ANSI Code
Grade
Internal code (batch number)
4443-2208499
80015589
QTY 10
Quantity
Column of metric parameters
Column of inch parameters
[metric]
[inch]
Classification of cutting grades
Grade application field
P10 - P30
325-205
0,17-0,60
0,8-6,0
1065-675
.007-.024
.031-.236
Choice priority
M10 - M25
305-190
0,17-0,60
0,8-6,0
1000-625
.007-.024
.031-.236
Cutting speed
Feed
Depth of cut
Initial cutting speed with respect to depth of cut and feed [metric]
Feed rate with respect to insert shape and chip former [metric]
Cutting depth with respect to insert shape and chip former [metric]
S05 - S15
65-40
0,10-0,20
0,3-1,5
215-130
.004-.008
.012-.059
Initial cutting speed with respect to depth of cut and feed [inch]
Feed rate with respect to insert shape and chip former [inch]
Cutting depth with respect to insert shape and chip former [inch]
PRAMET
Brand Label

SIMPLY RELIABLE

As a professional you can judge the quality of work by just looking at the chip. Our chip is a clean and uncomplicated shape that in itself tells a story. It is a clear and consistent signal and that's why we use it as a symbol for being **Simply Reliable**.

DORMER PRAMET

Austria
T: +31 10 2080 240
info.at@dormerpramet.com

Belgium & Luxembourg
T: +32 3 440 59 01
info.be@dormerpramet.com

Brazil
T: +55 11 5660 3000
info.br@dormerpramet.com

Canada
T: (888) 336 7637
En Français: (888) 368 8457
cs.canada@dormerpramet.com

China
T: +86 21 2416 0508
info.cn@dormerpramet.com

Croatia
T: +385 98 407 489
info.hr@dormerpramet.com

Czech Republic
T: +420 583 381 111
info.cz@dormerpramet.com

Denmark
T: 808 82106
info.se@dormerpramet.com

Finland
T: 0205 44 7003
info.fi@dormerpramet.com

France
T: +33 (0)2 47 62 57 01
info.fr@dormerpramet.com

Germany
T: +49 9131 933 08 70
info.de@dormerpramet.com

Hungary
T: +36-96 / 522-846
info.hu@dormerpramet.com

India
T: +91 11 4601 5686
info.in@dormerpramet.com

Italy
T: +39 02 30 70 54 44
info.it@dormerpramet.com

Kazakhstan
T: +7 771 305 11 45
info.kz@dormerpramet.com

Mexico
T: +52 (555) 7293981
cs.mexico@dormerpramet.com

Netherlands
T: +31 10 2080 240
info.nl@dormerpramet.com

Norway
T: 800 10 113
info.se@dormerpramet.com

Poland
T: +48 32 78-15-890
info.pl@dormerpramet.com

Portugal
T: +351 21 424 54 21
info.pt@dormerpramet.com

Romania
T: +4(0)730 015 885
info.ro@dormerpramet.com

Russia
T: +7 (495) 775 10 28
info.ru@dormerpramet.com

Slovakia
T: +421 (41) 764 54 60
info.sk@dormerpramet.com

Slovenia
T: +385 98 407 489
info.si@dormerpramet.com

Spain
T: +34 935717722
info.es@dormerpramet.com

Sweden
responsible for Iceland
T: +46 35 16 52 96
info.se@dormerpramet.com

Switzerland
T: +31 10 2080 240
info.ch@dormerpramet.com

Turkey
T: +90 533 212 45 47
info.tr@dormerpramet.com

Ukraine
T: +38 067 566 38 80
T: +38 067 566 81 51
info.ua@dormerpramet.com

United Kingdom
responsible for Ireland
T: 0870 850 4466
info.uk@dormerpramet.com

United States of America
T: (800) 877-3745
cs@dormerpramet.com

Other countries

South America
T: +55 11 5660 3000
info.br@dormerpramet.com

Adria
T: +420 583 381 527
info.rcee@dormerpramet.com

Rest of the World
Dormer Pramet International UK
T: +44 1246 571338
info.int@dormerpramet.com

Dormer Pramet International CZ
T: +420 583 381 520
info.int.cz@dormerpramet.com

DP-CAT-TURNING-2021-EN

FOLLOW US...

www.dormerpramet.com
youtube.com/dormerpramet
facebook.com/dormerprametsocial
linkedin.com/company/dormerpramet
instagram.com/dormerprametsocial
twitter.com/dormerpramet