DORMER PRAMET

MILLING

2021 – 2022

⏮

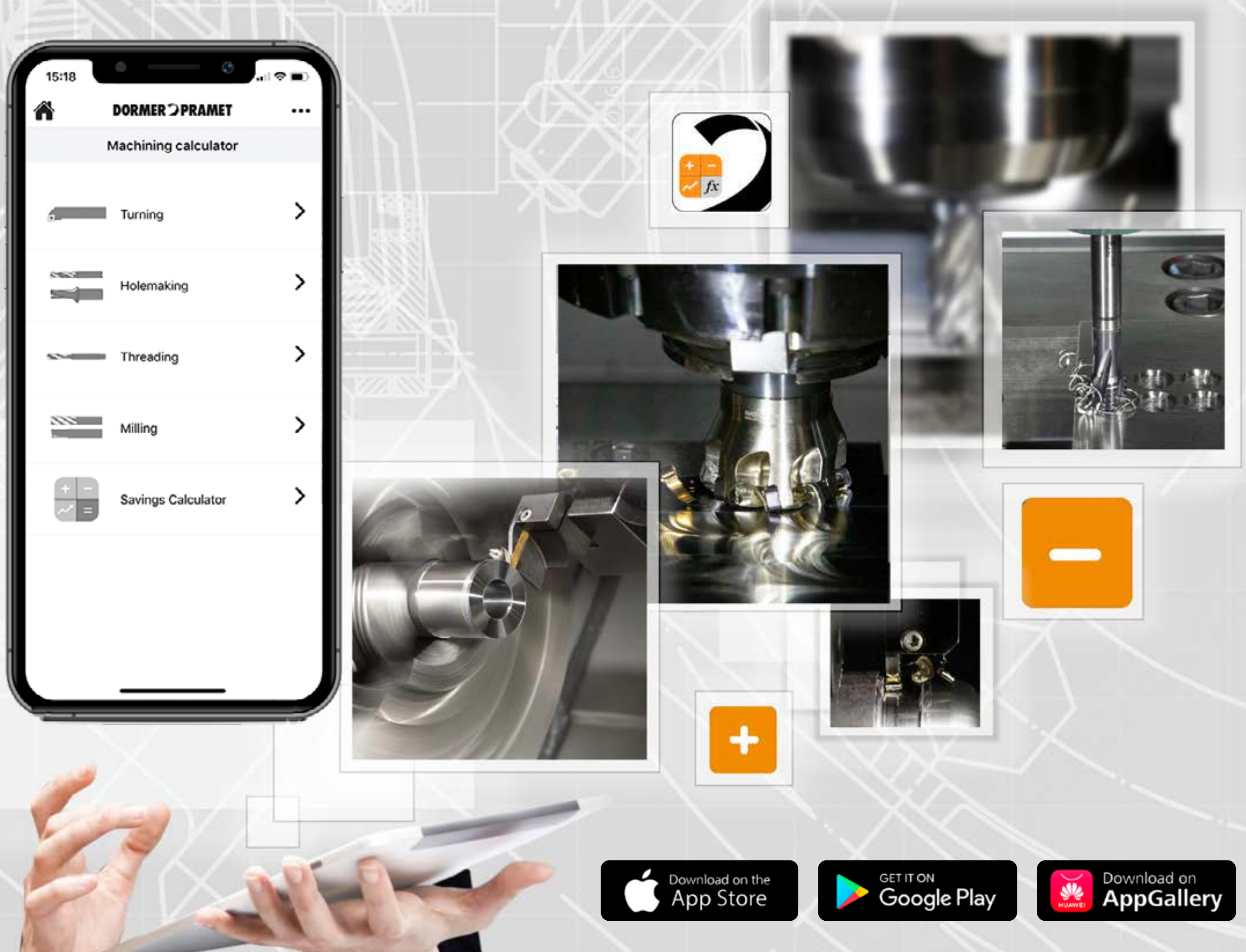
MILLING – GENERAL CONTENT

PRAMET

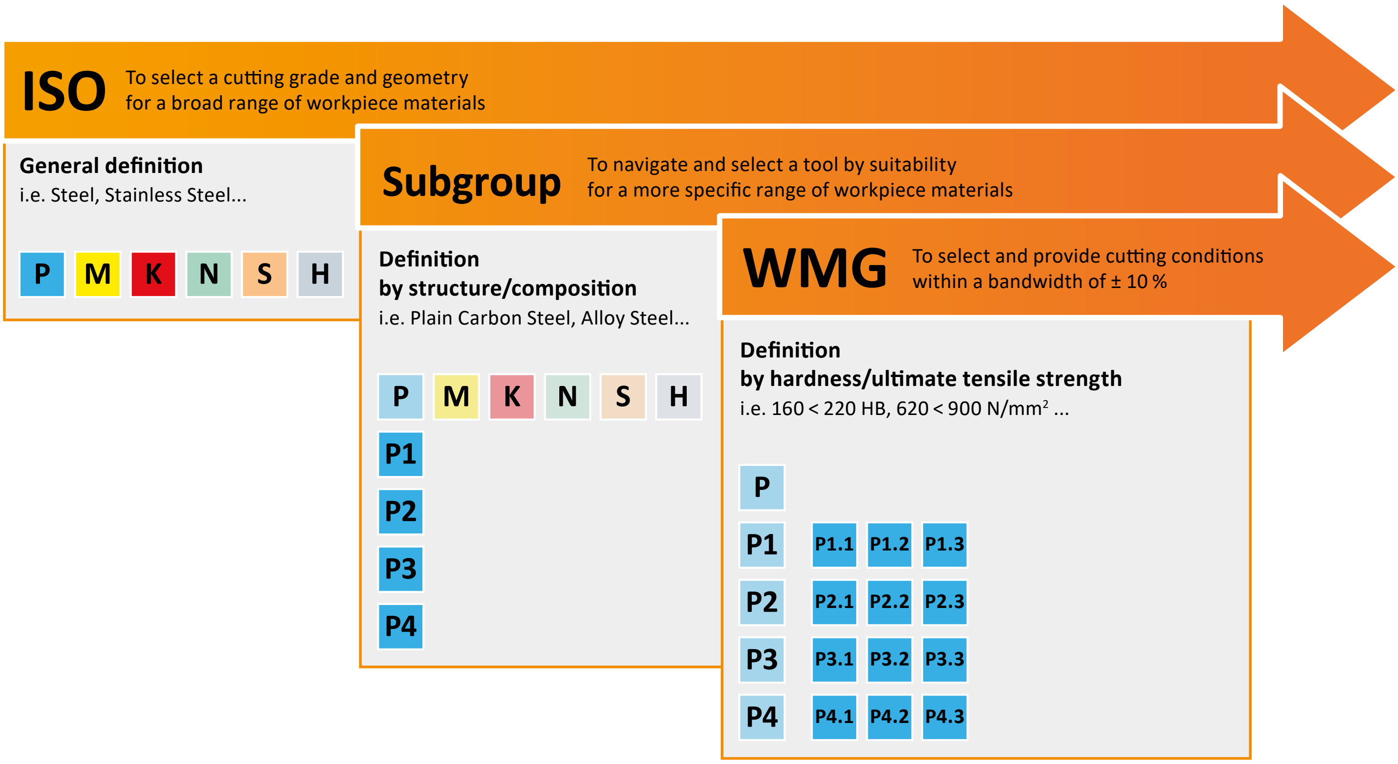
INDEXABLE TOOLS – CONTENT (ALPHABETICAL)

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.**



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)

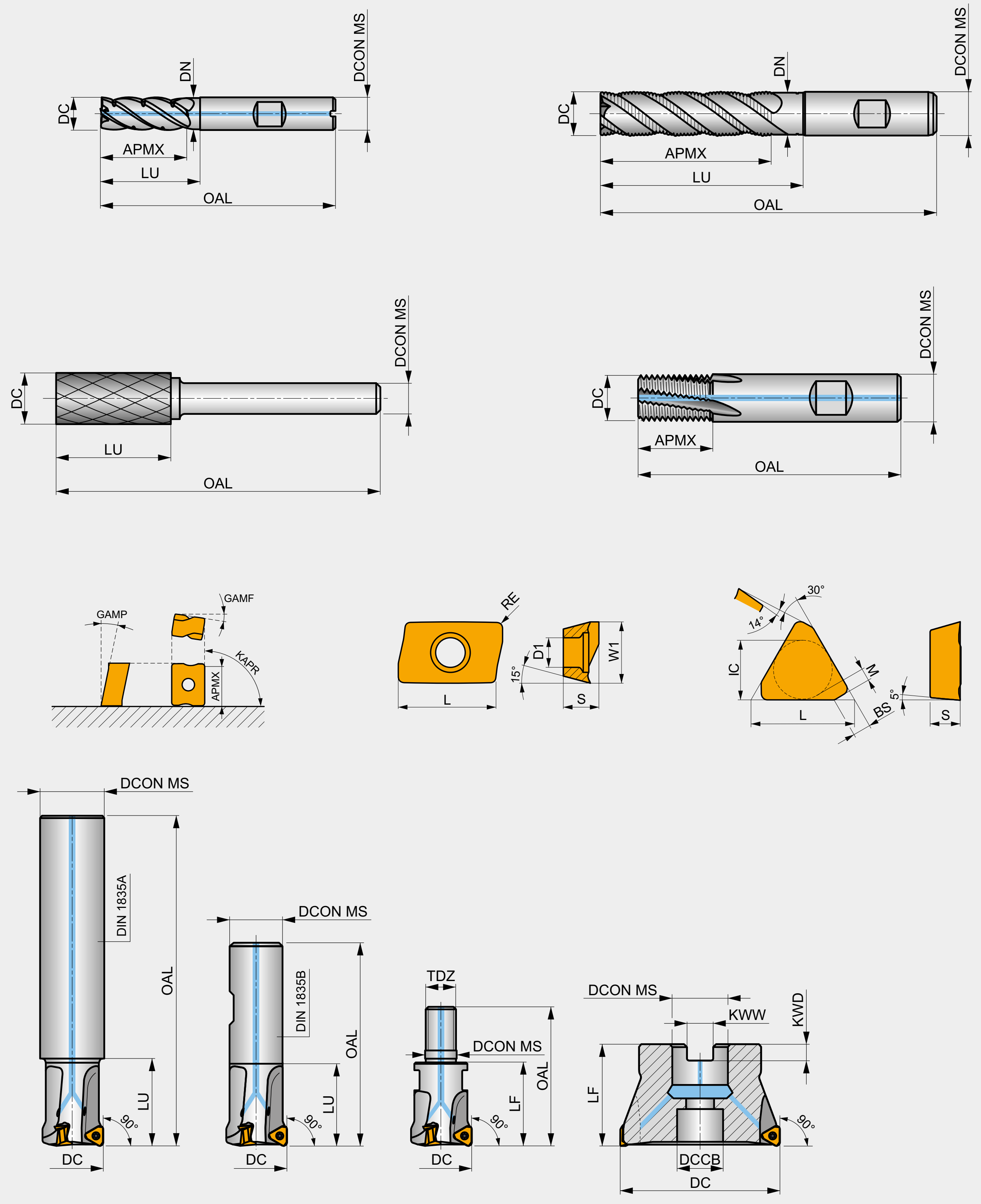
ISO group	WMG (Work Material Group)				Hardness (HB or HRC)	Ultimate Tensile Strength (MPa)
P	P1	P1.1	Free machining steel (carbon steels with increased machinability)	Sulfurized	< 240 HB	≤ 830
		P1.2		Sulfurized and phosphorized	< 180 HB	≤ 620
		P1.3		Sulfurized/phosphorized and leaded	< 180 HB	≤ 620
	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

1 **C273**

DORMER


3

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.

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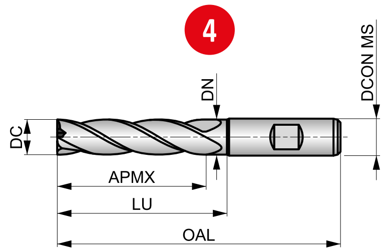
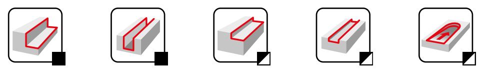


HSS-E PM	N	NOF 4-6
	λ 30°	γ 12°
DIN 1835B	5 Bright	DC k10
	DIN 844L	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Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

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 7	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 8	DC [inch]	DC [mm]	DCON MS [mm]	APMX [mm] 9	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

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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

General icons

■	Primary use
◩	Possible use

Material code (BMC)

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

Mill Profile

N	General Purpose Cutter Type for Low to High Resistance Materials	NR	Coarse Pitch Rounded Profile Chipbreaker		Coarse Pitch
W	Non-ferrous Cutter Type for Soft Malleable Materials	HRA	Fine Pitch Asymmetrical Rounded Profile Chipbreaker		Fine Pitch
FS	Semi-finishing Profile Chipbreaker	NRA	Coarse Pitch Asymmetrical Rounded Profile Chipbreaker		
NF	Coarse Pitch Flat Profile Chipbreaker	W NRA	Non-ferrous Cutter Type with Coarse Pitch Asymmetrical Rounded Profile Chipbreaker		

Number of flutes (NOF)

NOF 1	Number of Flutes = 1 (single tooth)	NOF 4-5	Number of Flutes = 4 – 5 (teeth)	NOF 16-24	Number of Flutes = 16 – 24 (teeth)
NOF 2	Number of Flutes = 2 (teeth)	NOF 5	Number of Flutes = 5 (teeth)	28-44 NOF	Number of Teeth = 28 – 44 (teeth)
NOF 3	Number of Flutes = 3 (teeth)	NOF 4-6	Number of Flutes = 4 – 6 (teeth)	32-100 NOF	Number of Teeth = 32 – 100 (teeth)
NOF 3≠	Number of Flutes = 3 (differential pitch)	NOF 4-8	Number of Flutes = 4 – 8 (teeth)	48-200 NOF	Number of Teeth = 48 – 200 (teeth)
NOF 3-4	Number of Flutes = 3 – 4 (teeth)	NOF 6-8	Number of Flutes = 6 – 8 (teeth)	100-140 NOF	Number of Teeth = 100 – 140 (teeth)
NOF 3-5	Number of Flutes = 3 – 5 (teeth)	NOF 6-12	Number of Flutes = 6 – 12 (teeth)	110-180 NOF	Number of Teeth = 110 – 180 (teeth)
NOF 3-6	Number of Flutes = 3 – 6 (teeth)	NOF 8	Number of Flutes = 8 (teeth)	130-220 NOF	Number of Teeth = 130 – 220 (teeth)
NOF 4	Number of Flutes = 4 (teeth)	NOF 8-12	Number of Flutes = 8 – 12 (teeth)	160-350 NOF	Number of Teeth = 160 – 350 (teeth)
NOF 4≠	Number of Flutes = 4 (differential pitch)	NOF 10-12	Number of Flutes = 10 – 12 (teeth)		

SOLID HM & HSS MILLS – ICONS OVERVIEW

Cut length

	Cut Length, Extra Short
	Cut Length, Short
	Cut Length, Medium
	Cut Length, Long
	Cut Length, Extra long

Flute Helix (FHA)

λ ≠	Unequal (Variable) Helix
λ 0°	0° Helix Angle (Straight Flute)
λ 10°	10° Helix Angle (Flute)
λ 12°	12° Helix Angle (Flute)
λ 15°	15° Helix Angle (Flute)
λ 25°	25° Helix Angle (Flute)
λ 28°	28° Helix Angle (Flute)
λ 30°	30° Helix Angle (Flute)
λ 34°	34° Helix Angle (Flute)
λ 35°	35° Helix Angle (Flute)
λ 40°	40° Helix Angle (Flute)
λ 45°	45° Helix Angle (Flute)
λ 50°	50° Helix Angle (Flute)

Radial rake angle (GAMF)

γ -26°	-26° Radial Rake Angle (cutting)
γ -10°	-10° Radial Rake Angle (cutting)
γ -6°	-6° Radial Rake Angle (cutting)
γ 0°	0° Radial Rake Angle (Neutral)
γ 3°	3° Radial Rake Angle (cutting)
γ 4°	4° Radial Rake Angle (cutting)
γ 5°	5° Radial Rake Angle (cutting)
γ 7°	7° Radial Rake Angle (cutting)
γ 8°	8° Radial Rake Angle (cutting)
γ 9°	9° Radial Rake Angle (cutting)
γ 10°	10° Radial Rake Angle (cutting)
γ 12°	12° Radial Rake Angle (cutting)
γ 13°	13° Radial Rake Angle (cutting)
γ 15°	15° Radial Rake Angle (cutting)
γ 18°	18° Radial Rake Angle (cutting)
γ 20°	20° Radial Rake Angle (cutting)
γ 25°	25° Radial Rake Angle (cutting)

Shank

DIN 1835A	DIN 1835A Cylindrical Shank
D B DIN 1835	DIN 1835 – B (Weldon) or D (Threaded) Shank
DIN 1835D	DIN 1835D Threaded Shank
DIN 1835B	DIN 1835B Weldon Shank
DIN 6535HA	DIN 6535 HA Cylindrical Shank
DIN 6535HB	DIN 6535 HB Weldon Shank

Coating

Alcrona	Aluminium Chromium Nitride Coating	AlCrN	Aluminium Chromium Nitride Coating	TiSiN	Titanium Silicon Nitride Coating
Bright	Bright (uncoated)	AlTiN	Aluminium Titanium Nitride Coating	X-CEED	Special AlTiN Coating (with highest oxidation resistance)
ST	Steam Tempered (Steam Oxide) Surface Treatment	Hi	Polished Bright Surface Finish	Diamond	Diamond Like Coating
TiCN	Titanium Carbonitride Coating	TiAlN	Titanium Aluminium Nitride Coating		

Cutting Diameter Tolerance Class (TCDC)

DC d11	d11 – Industry Standard Tool Tolerance Zone (based on diameter range)	DC h11	h11 – Industry Standard Tool Tolerance Zone (based on diameter range)	DC k10	k10 – Industry Standard Tool Tolerance Zone (based on diameter range)
DC e8	e8 – Industry Standard Tool Tolerance Zone (based on diameter range)	DC h12	h12 – Industry Standard Tool Tolerance Zone (based on diameter range)	DC k12	k12 – Industry Standard Tool Tolerance Zone (based on diameter range)
DC h9	h9 – Industry Standard Tool Tolerance Zone (based on diameter range)	DC js14	js14 – Industry Standard Tool Tolerance Zone (based on diameter range)		
DC h10	h10 – Industry Standard Tool Tolerance Zone (based on diameter range)	DC js16	js16 – Industry Standard Tool Tolerance Zone (based on diameter range)		

Cutting Direction

Radial	Radial, Diagonal, Axial
Radial, Diagonal	Radial

Basic Standard Group (BSG)

BS 122/4	BS 122/4 – Screwed Shank End Mill Standards	DIN 1880	DIN 1880 – Shell Mill Standards	DIN 851	DIN 851 – T-Slot Cutter Standards
DIN 1833C	DIN 1833 C – Dovetail Cutter Standards	DIN 327D	DIN 327 D – Slot Drill Standards	DIN 885A	DIN 885 A – Side & Face Mill Standards
DIN 1833D	DIN 1833 D – Inverted Dovetail Cutter Standards	DIN 844K	DIN 844 K – End Mill Standards	DIN 6527K	DIN 6527 K – Carbide End Mill Standards
DIN 1837	DIN 1837 – Fine Slitting Saw Standards	DIN 844L	DIN 844 L – HSS End Mills Standards	DIN 6527L	DIN 6527 L – Carbide End Mill Standards
DIN 1838	DIN 1838 – Coarse Slitting Saw Standards	DIN 850	DIN 850 – Keyseat Cutter 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

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SOLID HM MILLS

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	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	Hi	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)	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	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)	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	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)	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	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≠	4≠	5	5	5	5	3-4	2	2	4	4	4	4	6-8	6-8
λ	≠	≠	≠	≠	≠	≠	30°	40°	40°	40°	40°	40°	40°	50°	50°
γ	10°	10°	10°	10°	10°	10°	8°	10°	10°	3°	3°	3°	3°	3°	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								
	S767	S768	S770HB	S771HB	S772HB	S773HB	S791	S739	S740	S216	S217	S218	S219	S225	S226
	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

		S227	S229	S231	S233	S260	S262	S264	S521	S523	S524	S525	S526	S527
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	2	2	4	4	4-6	4=	1	2	2	3	2	2	3=	3=
λ	30°	30°	30°	30°	30°	25°	40°	25°	30°	30°	40°	30°	30°	40°	40°
γ	-10°	-10°	-10°	-10°	-10°	0°	-6°	20°	20°	20°	13°	15°	20°	13°	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	h9	h9	h9	h9	h9	h9	h9	h9	h9	h9	h9	h9	h9	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

	S662	S612	S802HA	S802HB	S812HA	S812HB	S822	S803HA	S803HB	S813HA	S813HB	S823	S804HA
Material code (BMC)	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
Number of flutes (NOF)	4=	4	2	2	2	2	2	3	3	3	3	3	4
Cut length													
Flute Helix (FHA)	40°	40°	28°	28°	28°	28°	28°	28°	28°	28°	28°	28°	34°
Radial rake angle (GAMF)	10°	10°	9°	9°	9°	9°	9°	9°	9°	9°	9°	9°	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)													
	NEW												
Product Family Code	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	4	4	2	4	2	2	3	3	4	4	
λ	34°	34°	34°	30°	30°	30°	30°	30°	30°	30°	30°	
γ	9°	9°	9°	10°	10°	12°	12°	12°	12°	12°	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	h10	h10	h9	h9	h10	h10	h10	h10	h12	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												

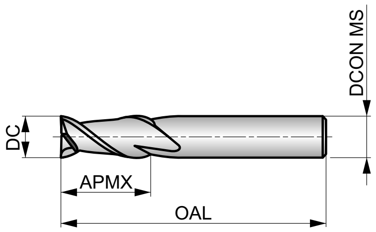
■ Primary use ◩ Possible use

S710

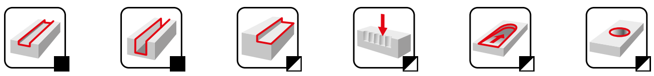
DORMER

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.

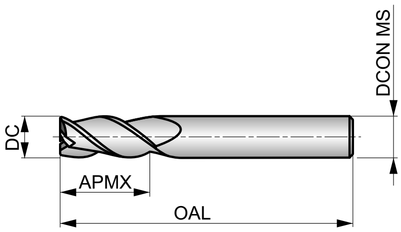
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S7101.0	1.00	3.00	3.00	40.0	2
S7101.5	1.50	3.00	4.50	40.0	2
S7102.0	2.00	3.00	6.50	40.0	2
S7102.5	2.50	3.00	6.50	40.0	2
S7103.0	3.00	6.00	9.00	50.0	2
S7104.0	4.00	6.00	12.00	50.0	2
S7105.0	5.00	6.00	15.00	50.0	2
S7106.0	6.00	6.00	20.00	60.0	2
S7108.0	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

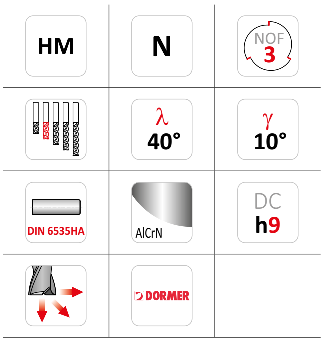
⏮

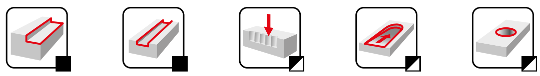
S713

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.







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				

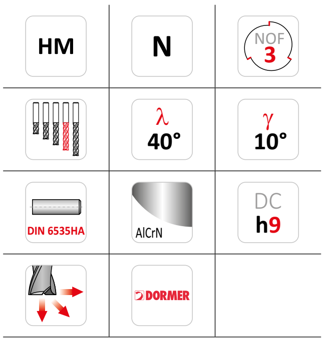
DCON MS tolerance h6.

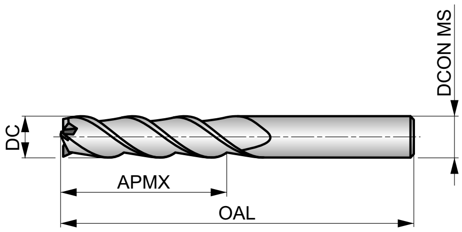
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S7131.5	1.50	4.00	4.50	40.0	3
S7132.0	2.00	4.00	6.50	40.0	3
S7133.0	3.00	3.00	9.00	40.0	3
S7134.0	4.00	4.00	12.00	50.0	3
S7135.0	5.00	5.00	15.00	50.0	3
S7136.0	6.00	6.00	16.00	50.0	3
S7138.0	8.00	8.00	20.00	64.0	3
S71310.0	10.00	10.00	22.00	70.0	3
S71312.0	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

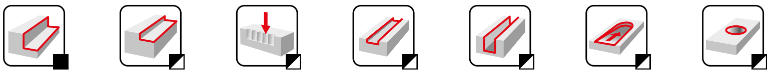
DORMER

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.







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									

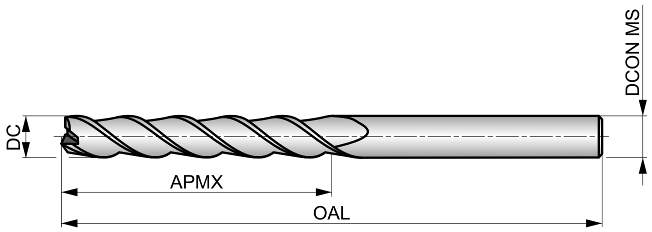
DCON MS tolerance h6.

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

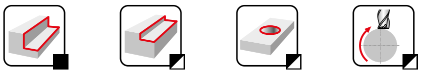
S715

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									

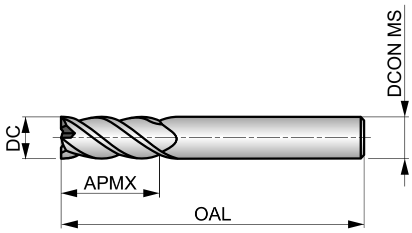
DCON MS tolerance h6.

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

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.

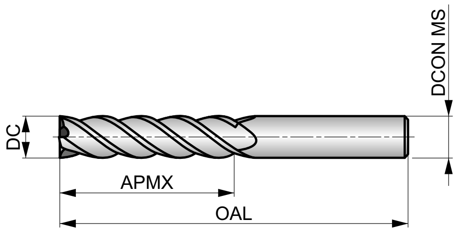
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S7162.0	2.00	4.00	6.50	40.0	4
S7163.0	3.00	3.00	9.00	40.0	4
S7164.0	4.00	4.00	12.00	50.0	4
S7165.0	5.00	5.00	15.00	50.0	4
S7166.0	6.00	6.00	16.00	50.0	4
S7168.0	8.00	8.00	20.00	64.0	4
S71610.0	10.00	10.00	22.00	70.0	4
S71612.0	12.00	12.00	25.00	75.0	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.

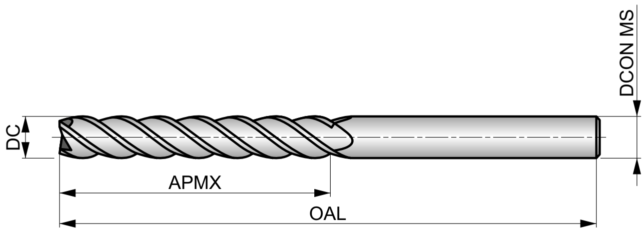
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S7173.0	3.00	3.00	19.00	60.0	4
S7174.0	4.00	4.00	19.00	60.0	4
S7175.0	5.00	5.00	19.00	60.0	4
S7176.0	6.00	6.00	31.00	75.0	4
S7178.0	8.00	8.00	31.00	75.0	4
S71710.0	10.00	10.00	31.00	75.0	4
S71712.0	12.00	12.00	50.00	100.0	4
S71714.0	14.00	14.00	57.00	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

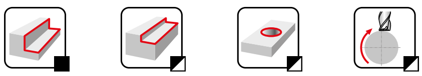
DORMER

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.

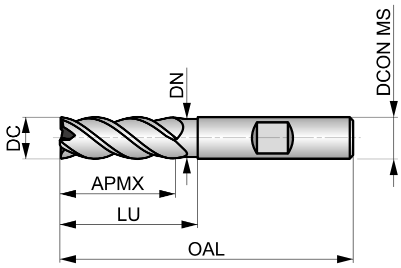
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S7183.0	3.00	3.00	25.00	100.0	4
S7184.0	4.00	4.00	31.00	100.0	4
S7185.0	5.00	5.00	31.00	100.0	4
S7186.0	6.00	6.00	38.00	100.0	4
S7188.0	8.00	8.00	41.00	100.0	4
S71810.0	10.00	10.00	57.00	125.0	4
S71812.0	12.00	12.00	75.00	150.0	4
S71814.0	14.00	14.00	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

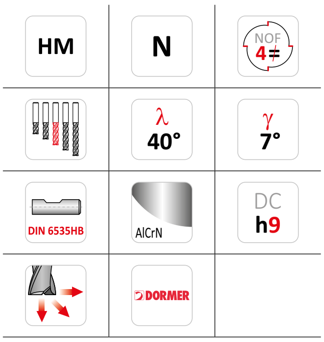
S722HB

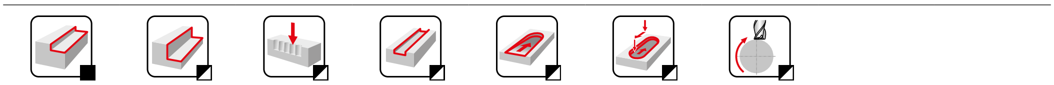
DORMER

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.







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

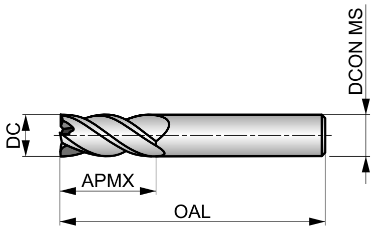
S761

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.

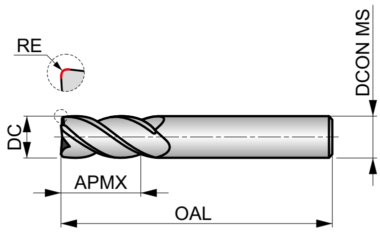
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S7613.0	3.00	6.00	9.00	57.0	4
S7614.0	4.00	6.00	12.00	57.0	4
S7615.0	5.00	6.00	13.00	57.0	4
S7616.0	6.00	6.00	13.00	57.0	4
S7618.0	8.00	8.00	20.00	64.0	4
S76110.0	10.00	10.00	22.00	72.0	4
S76112.0	12.00	12.00	26.00	83.0	4
S76114.0	14.00	14.00	32.00	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

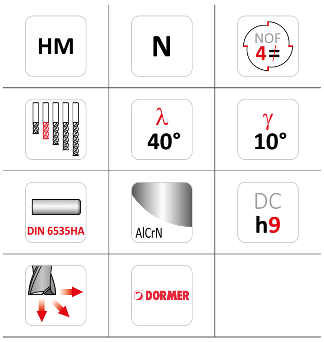
S763

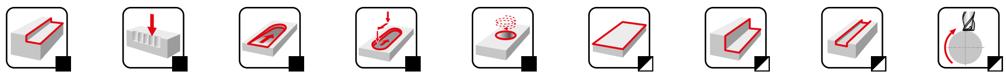
DORMER

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.







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.

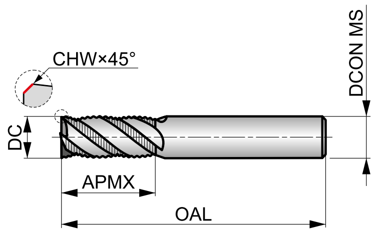
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S7633.0XR0.3	3.00	0.30	3.00	9.00	40.0	4
S7634.0XR0.3	4.00	0.30	4.00	12.00	50.0	4
S7634.0XR0.5	4.00	0.50	4.00	12.00	50.0	4
S7635.0XR0.3	5.00	0.30	5.00	15.00	50.0	4
S7635.0XR0.5	5.00	0.50	5.00	15.00	50.0	4
S7636.0XR0.5	6.00	0.50	6.00	16.00	50.0	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

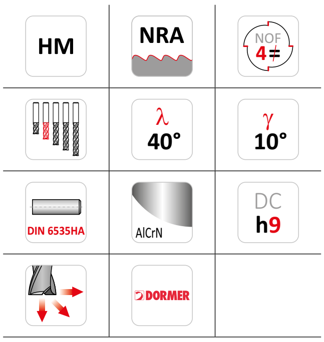
S765

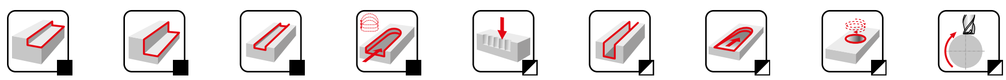
DORMER

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.







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.

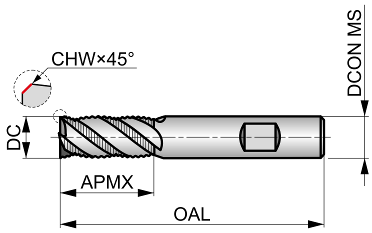
Product	DC [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S7656.0	6.00	0.10	6.00	16.00	50.0	4
S7658.0	8.00	0.20	8.00	20.00	64.0	4
S76510.0	10.00	0.20	10.00	22.00	70.0	4
S76512.0	12.00	0.20	12.00	26.00	75.0	4
S76514.0	14.00	0.30	14.00	32.00	90.0	4
S76516.0	16.00	0.30	16.00	32.00	90.0	4
S76518.0	18.00	0.30	18.00	38.00	100.0	4
S76520.0	20.00	0.40	20.00	38.00	100.0	4

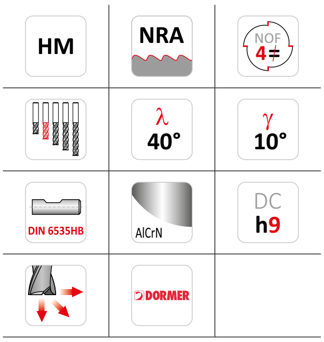
S765HB

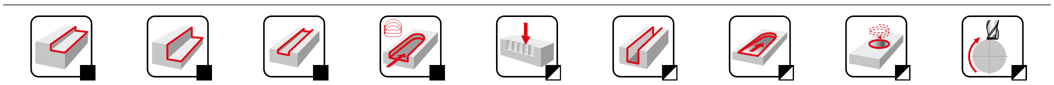
DORMER

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.







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				

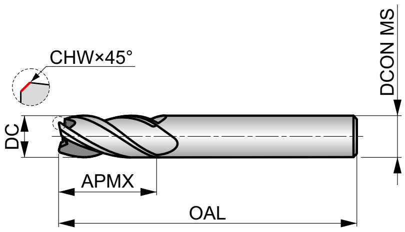
DCON MS tolerance h6; CHW ± 0.02X45° mm.

Product	DC [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
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

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.

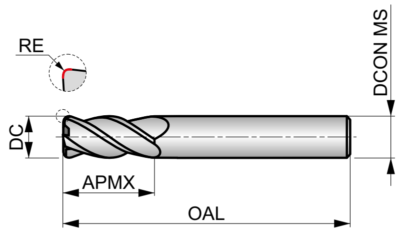
Product	DC [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S7664.0	4.00	0.10	6.00	11.00	57.0	4
S7665.0	5.00	0.10	6.00	13.00	57.0	4
S7666.0	6.00	0.10	6.00	13.00	57.0	4
S7668.0	8.00	0.20	8.00	20.00	64.0	4
S76610.0	10.00	0.20	10.00	22.00	72.0	4
S76612.0	12.00	0.20	12.00	26.00	83.0	4
S76614.0	14.00	0.30	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

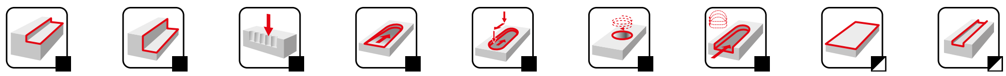
DORMER

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.

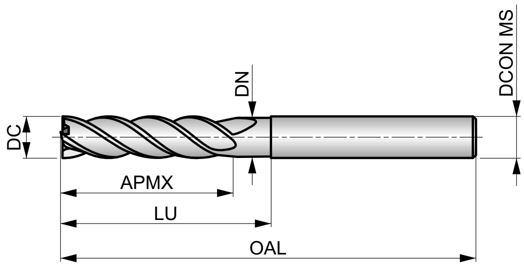
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S7674.0XR0.3	4.00	0.30	6.00	11.00	57.0	4
S7674.0XR0.5	4.00	0.50	6.00	11.00	57.0	4
S7675.0XR0.3	5.00	0.30	6.00	13.00	57.0	4
S7675.0XR0.5	5.00	0.50	6.00	13.00	57.0	4
S7676.0XR0.3	6.00	0.30	6.00	13.00	57.0	4
S7676.0XR0.5	6.00	0.50	6.00	13.00	57.0	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.

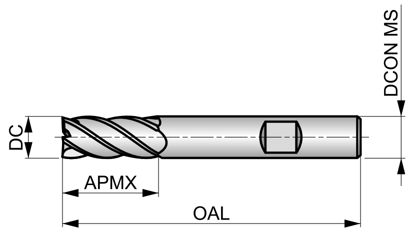
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S7684.0	4.00	0.10	6.00	19.00	75.0	4	32.00	3.70
S7685.0	5.00	0.10	6.00	19.00	75.0	4	32.00	4.60
S7686.0	6.00	0.10	6.00	25.00	75.0	4	32.00	5.50
S7688.0	8.00	0.20	8.00	30.00	75.0	4	38.00	7.40
S76810.0	10.00	0.20	10.00	40.00	100.0	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.

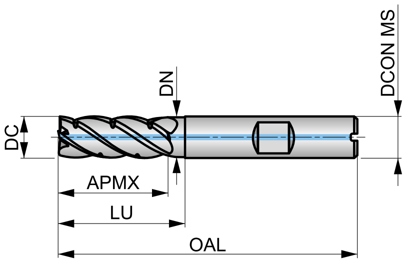
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S770HB10.0	10.00	0.20	10.00	22.00	72.0	5
S770HB12.0	12.00	0.30	12.00	26.00	83.0	5
S770HB16.0	16.00	0.30	16.00	32.00	92.0	5
S770HB20.0	20.00	0.30	20.00	38.00	104.0	5

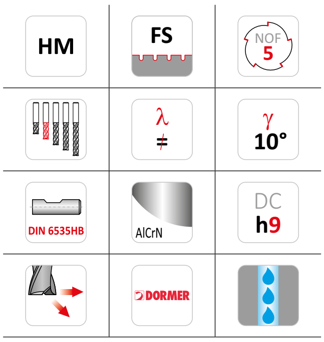
S771HB

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.

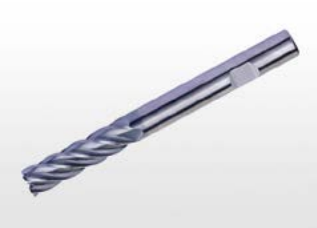
P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■222 J	■248 J	■255 J	■189 J	■166 J	■147 I	■153 J	■123 I	■104 I	■90 I	■78 I	■128 I	■108 I	■113 I
M2.2	M3.1	M3.2	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	K3.3	K4.1	K4.2
■93 I	■105 I	■90 I	■218 J	■162 J	■122 J	■225 J	■183 J	■146 I	■198 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 [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [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

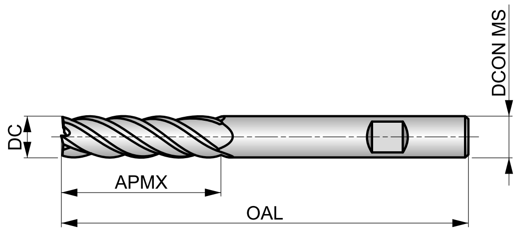
DORMER



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.

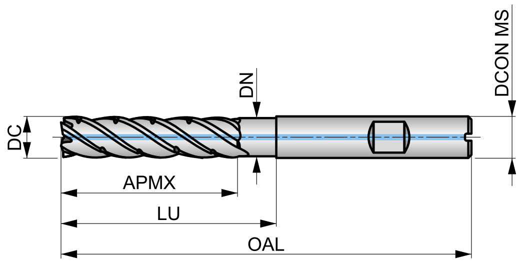
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S772HB10.0	10.00	0.20	10.00	38.00	100.0	5
S772HB12.0	12.00	0.30	12.00	45.00	100.0	5
S772HB16.0	16.00	0.30	16.00	55.00	125.0	5
S772HB20.0	20.00	0.30	20.00	65.00	125.0	5

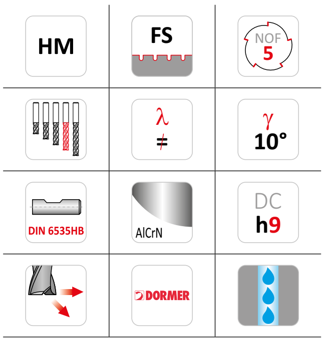
S773HB

DORMER

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.

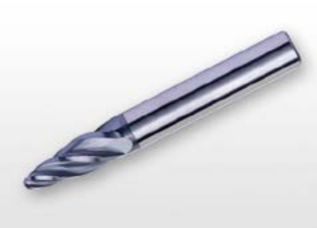
P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
■155 G	■173 G	■179 G	■132 G	■117 G	■103 F	■107 G	■86 F	■72 F	■63 F	■55 F	■89 F	■76 F	■80 F
M2.2	M3.1	M3.2	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	K3.3	K4.1	K4.2
■65 F	■74 F	■63 F	■153 G	■113 G	■85 G	■158 G	■128 G	■102 F	■139 G	■107 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 [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [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

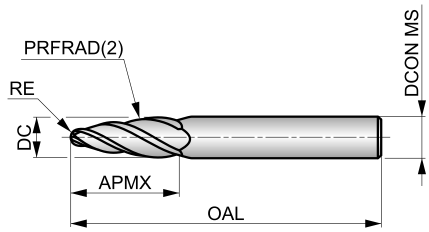
S791

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			

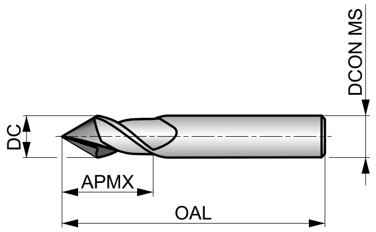
DCON MS tolerance h6; RE ±0.01 mm; PRFRAD(2) ±0.01 mm.

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

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

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.

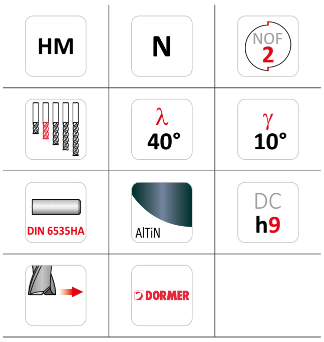
Product	KAPR [°]	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S7393.0	60	3.00	3.00	9.00	40.0	2
S7394.0	60	4.00	4.00	12.00	50.0	2
S7395.0	60	5.00	5.00	15.00	50.0	2
S7396.0	60	6.00	6.00	16.00	50.0	2
S7398.0	60	8.00	8.00	20.00	64.0	2
S73910.0	60	10.00	10.00	22.00	70.0	2
S73912.0	60	12.00	12.00	25.00	75.0	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

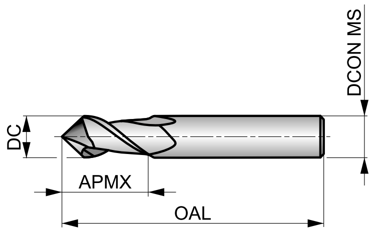
S740

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.





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									

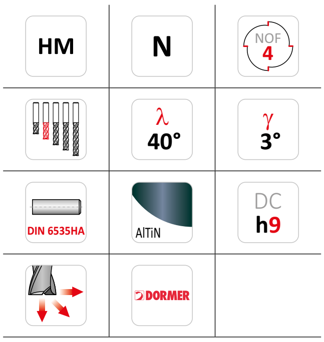
DCON MS tolerance h6.

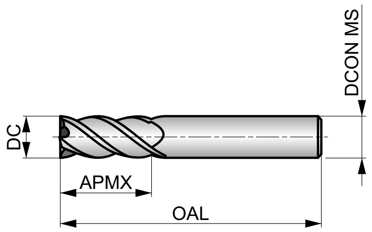
Product	KAPR [°]	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S7403.0	90	3.00	3.00	9.00	40.0	2
S7404.0	90	4.00	4.00	12.00	50.0	2
S7405.0	90	5.00	5.00	15.00	50.0	2
S7406.0	90	6.00	6.00	16.00	50.0	2
S7408.0	90	8.00	8.00	20.00	64.0	2
S74010.0	90	10.00	10.00	22.00	70.0	2
S74012.0	90	12.00	12.00	25.00	75.0	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

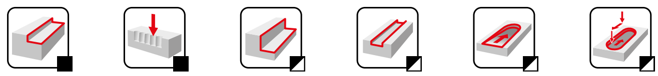
S216

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.







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.

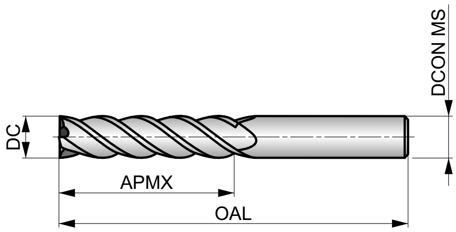
P4.3	M2.3	M3.3	M4.1	M4.2	S1.3	S2.2	S3.2	S4.2
■ 80 J	■ 80 J	■ 82 I	■ 80 I	■ 68 I	■ 58 I	■ 47 I	■ 33 I	■ 27 I

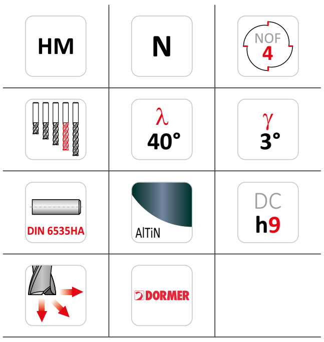
DCON MS tolerance h6.

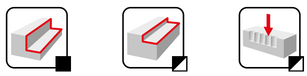
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S2162.0	2.00	4.00	6.50	40.0	4
S2163.0XD3	3.00	3.00	9.00	40.0	4
S2163.0XD6	3.00	6.00	9.00	50.0	4
S2164.0XD4	4.00	4.00	12.00	50.0	4
S2164.0XD6	4.00	6.00	12.00	50.0	4
S2165.0	5.00	5.00	15.00	50.0	4
S2166.0	6.00	6.00	16.00	50.0	4
S2168.0	8.00	8.00	20.00	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

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.







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.

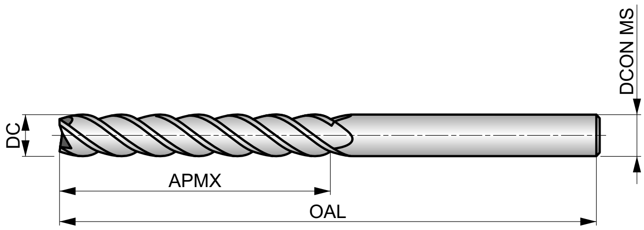
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S2173.0XD3	3.00	3.00	19.00	60.0	4
S2173.0XD6	3.00	6.00	19.00	75.0	4
S2174.0XD4	4.00	4.00	19.00	60.0	4
S2174.0XD6	4.00	6.00	19.00	75.0	4
S2175.0	5.00	5.00	19.00	60.0	4
S2176.0	6.00	6.00	31.00	75.0	4
S2178.0	8.00	8.00	31.00	75.0	4
S21710.0	10.00	10.00	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

DORMER

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.

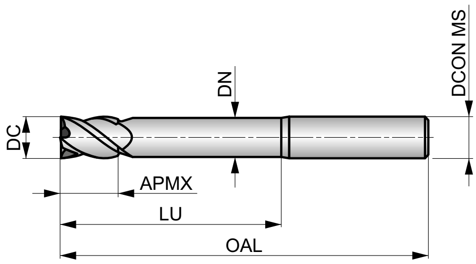
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S2183.0	3.00	3.00	25.00	100.0	4
S2184.0	4.00	4.00	31.00	100.0	4
S2185.0	5.00	5.00	31.00	100.0	4
S2186.0	6.00	6.00	38.00	100.0	4
S2188.0	8.00	8.00	41.00	100.0	4
S21810.0	10.00	10.00	57.00	125.0	4
S21812.0	12.00	12.00	75.00	150.0	4
S21814.0	14.00	14.00	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.

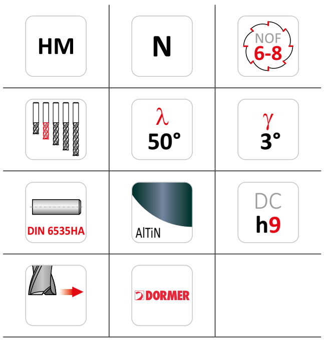
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S2193.0	3.00	3.00	5.00	60.0	4	30.00	2.80
S2194.0	4.00	4.00	8.00	60.0	4	32.00	3.70
S2195.0	5.00	5.00	9.00	60.0	4	32.00	4.60
S2196.0	6.00	6.00	10.00	75.0	4	40.00	5.50
S2198.0	8.00	8.00	12.00	75.0	4	40.00	7.40
S21910.0	10.00	10.00	14.00	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

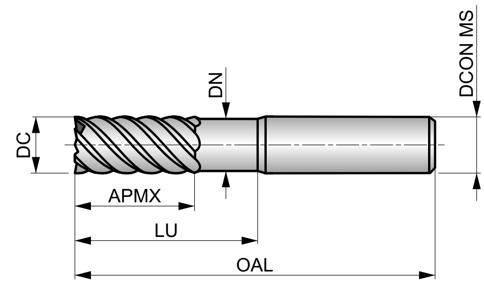
S225

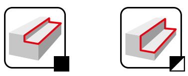
DORMER

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.







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

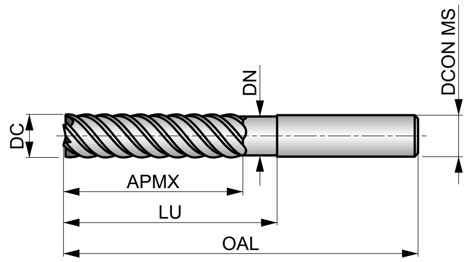
DCON MS tolerance h6.

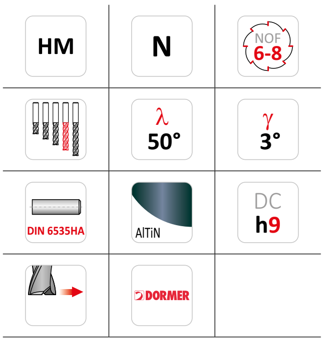
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S2253.0	3.00	6.00	8.00	50.0	6	20.00	2.80
S2254.0	4.00	6.00	11.00	50.0	6	20.00	3.70
S2256.0	6.00	6.00	15.00	50.0	6	20.00	5.50
S2258.0	8.00	8.00	20.00	64.0	6	30.00	7.40
S22510.0	10.00	10.00	22.00	70.0	6	32.00	9.20
S22512.0	12.00	12.00	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

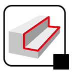
S226

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.







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.

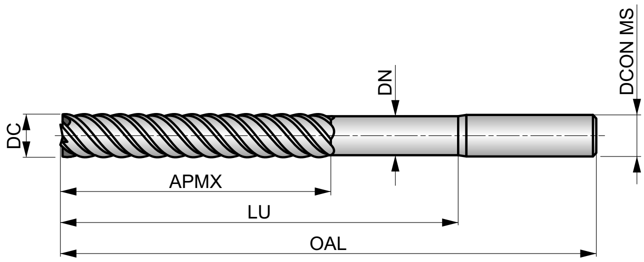
P4.3	M2.3	M3.3	M4.1	M4.2	S1.3	S2.2	S3.2	S4.2
■ 64 G	■ 64 G	■ 65 F	■ 64 F	■ 54 F	■ 46 F	■ 38 F	■ 26 F	■ 22 F

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

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.

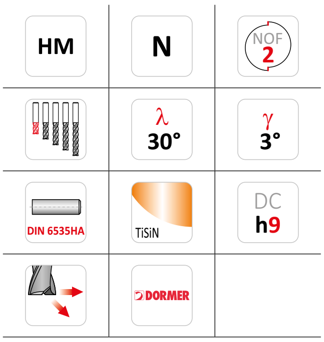
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S2276.0	6.00	6.00	38.00	100.0	6	60.00	5.50
S2278.0	8.00	8.00	41.00	100.0	6	60.00	7.40
S22710.0	10.00	10.00	57.00	125.0	6	85.00	9.20
S22712.0	12.00	12.00	75.00	150.0	6	110.00	11.00
S22714.0	14.00	14.00	75.00	150.0	6	110.00	13.00
S22716.0	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

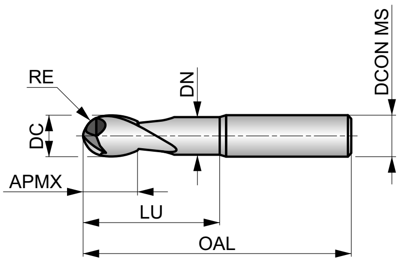
⏮

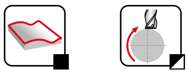
S229

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.







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.

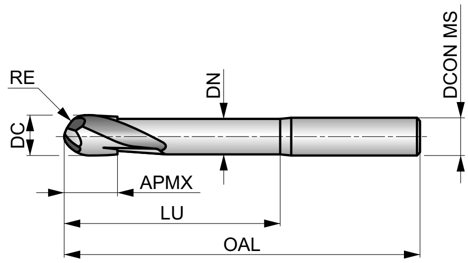
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S2291.5XD4	1.50	0.75	4.00	3.00	50.0	2	6.00	1.40
S2292.0XD3	2.00	1.00	3.00	4.00	50.0	2	8.00	1.90
S2292.0XD4	2.00	1.00	4.00	4.00	50.0	2	8.00	1.90
S2293.0XD3	3.00	1.50	3.00	5.00	50.0	2	14.00	2.80
S2293.0XD6	3.00	1.50	6.00	5.00	50.0	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

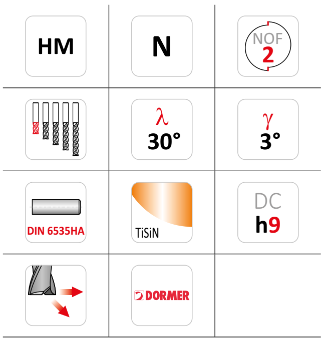
DCON MS tolerance h6; RE +0/-0.02 mm.

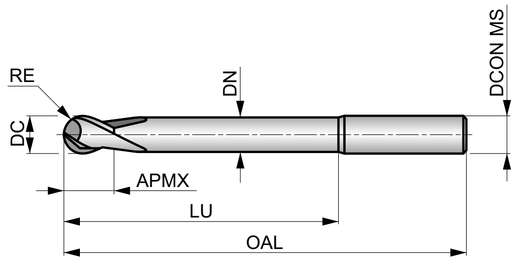
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S2311.5XD4	1.50	0.75	4.00	3.00	75.0	2	10.00	1.40
S2312.0XD3	2.00	1.00	3.00	4.00	60.0	2	14.00	1.90
S2312.0XD4	2.00	1.00	4.00	4.00	75.0	2	14.00	1.90
S2313.0XD3	3.00	1.50	3.00	5.00	60.0	2	21.00	2.80
S2313.0XD6	3.00	1.50	6.00	5.00	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

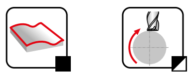
S233

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.







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

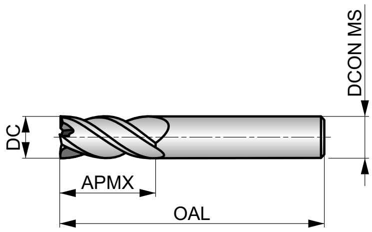
DCON MS tolerance h6; RE +0/-0.02 mm.

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

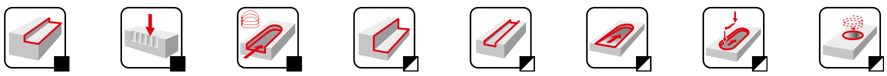
DORMER

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.

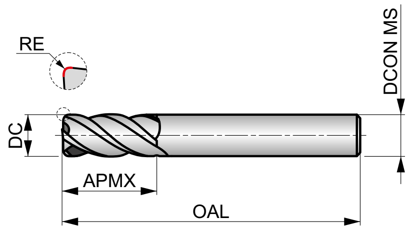
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S2603.0	3.00	6.00	9.00	57.0	4
S2604.0	4.00	6.00	12.00	57.0	4
S2605.0	5.00	6.00	13.00	57.0	4
S2606.0	6.00	6.00	13.00	57.0	4
S2608.0	8.00	8.00	20.00	64.0	4
S26010.0	10.00	10.00	22.00	72.0	4
S26012.0	12.00	12.00	26.00	83.0	4
S26014.0	14.00	14.00	32.00	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

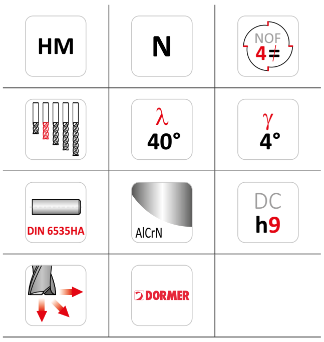
S262

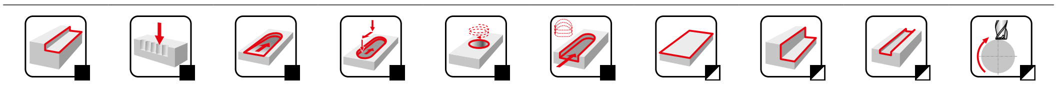
DORMER

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.







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.

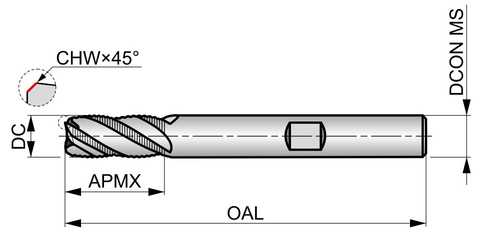
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S2623.0XR0.3	3.00	0.30	6.00	9.00	50.0	4
S2623.0XR0.5	3.00	0.50	6.00	9.00	50.0	4
S2624.0XR0.3	4.00	0.30	6.00	12.00	57.0	4
S2624.0XR0.5	4.00	0.50	6.00	12.00	57.0	4
S2624.0XR1.0	4.00	1.00	6.00	12.00	57.0	4
S2625.0XR0.3	5.00	0.30	6.00	15.00	57.0	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

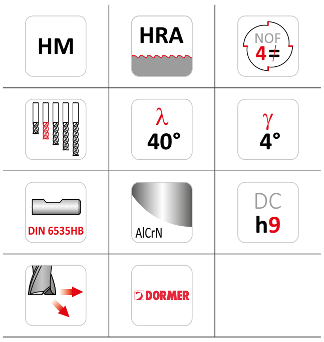
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S26216.0XR0.3	16.00	0.30	16.00	32.00	92.0	4
S26216.0XR0.5	16.00	0.50	16.00	32.00	92.0	4
S26216.0XR1.0	16.00	1.00	16.00	32.00	92.0	4
S26216.0XR2.0	16.00	2.00	16.00	32.00	92.0	4
S26216.0XR2.5	16.00	2.50	16.00	32.00	92.0	4
S26216.0XR3.0	16.00	3.00	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

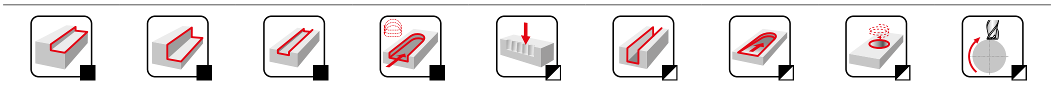
S264

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.







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.

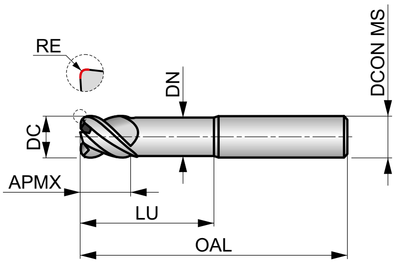
Product	DC [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S2646.0	6.00	0.10	6.00	13.00	57.0	4
S2648.0	8.00	0.20	8.00	20.00	64.0	4
S26410.0	10.00	0.20	10.00	22.00	72.0	4
S26412.0	12.00	0.20	12.00	26.00	83.0	4
S26414.0	14.00	0.30	14.00	26.00	83.0	4
S26416.0	16.00	0.30	16.00	32.00	92.0	4
S26418.0	18.00	0.30	18.00	32.00	92.0	4
S26420.0	20.00	0.40	20.00	38.00	104.0	4

S521

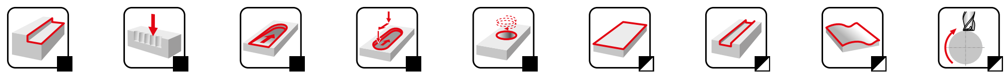
DORMER

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.

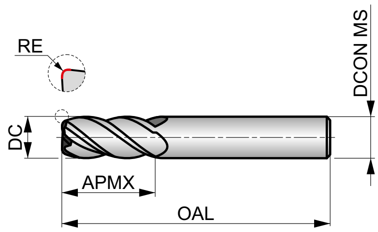
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S5213.0XR0.3	3.00	0.30	6.00	4.00	60.0	4	14.00	2.80
S5214.0XR0.3	4.00	0.30	6.00	5.00	60.0	4	16.00	3.70
S5214.0XR0.5	4.00	0.50	6.00	5.00	60.0	4	16.00	3.70
S5215.0XR0.3	5.00	0.30	6.00	6.00	60.0	4	18.00	4.60
S5215.0XR0.5	5.00	0.50	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

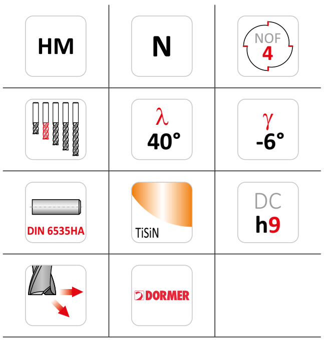
S523

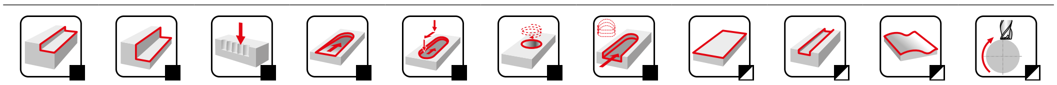
DORMER

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.







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

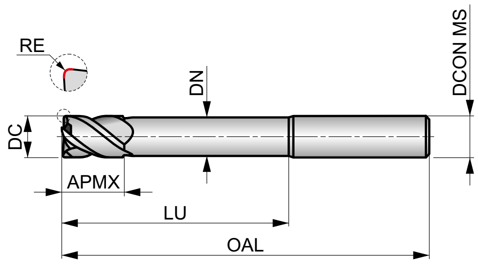
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S52316.0XR1.0	16.00	1.00	16.00	32.00	90.0	4
S52316.0XR2.0	16.00	2.00	16.00	32.00	90.0	4
S52316.0XR3.0	16.00	3.00	16.00	32.00	90.0	4

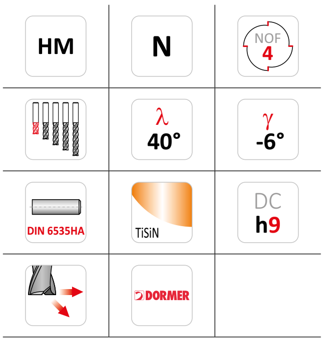
S524

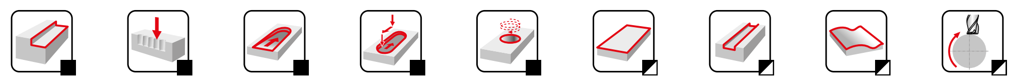
DORMER

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.







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.

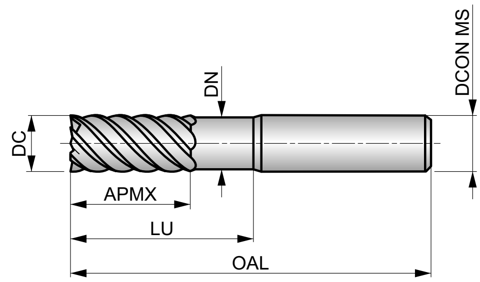
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S5243.0XR0.3	3.00	0.30	6.00	5.00	75.0	4	30.00	2.80
S5244.0XR0.3	4.00	0.30	6.00	8.00	75.0	4	32.00	3.70
S5244.0XR0.5	4.00	0.50	6.00	8.00	75.0	4	32.00	3.70
S5245.0XR0.3	5.00	0.30	6.00	9.00	75.0	4	32.00	4.60
S5245.0XR0.5	5.00	0.50	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

DORMER

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.

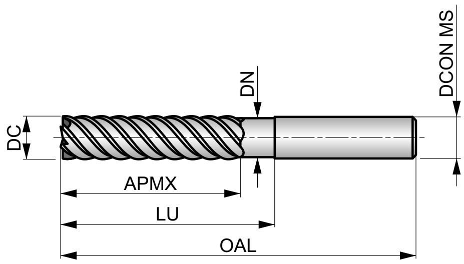
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S5253.0	3.00	6.00	8.00	50.0	6	20.00	2.80
S5254.0	4.00	6.00	11.00	50.0	6	20.00	3.70
S5256.0	6.00	6.00	15.00	50.0	6	20.00	5.50
S5258.0	8.00	8.00	20.00	64.0	6	30.00	7.40
S52510.0	10.00	10.00	22.00	70.0	6	32.00	9.20
S52512.0	12.00	12.00	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

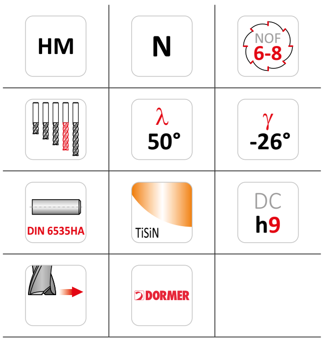
S526

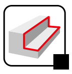
DORMER

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.







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

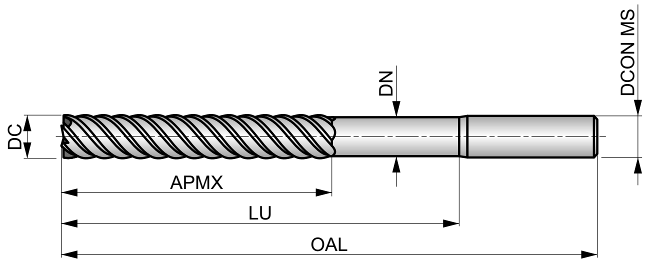
DCON MS tolerance h6.

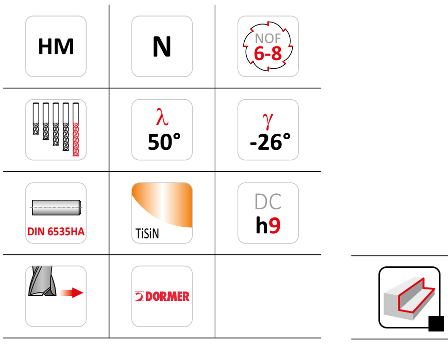
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S5263.0	3.00	6.00	19.00	75.0	6	30.00	2.80
S5264.0	4.00	6.00	19.00	75.0	6	32.00	3.70
S5266.0	6.00	6.00	31.00	75.0	6	40.00	5.50
S5268.0	8.00	8.00	31.00	75.0	6	40.00	7.40
S52610.0	10.00	10.00	45.00	100.0	6	60.00	9.20
S52612.0	12.00	12.00	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.





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.

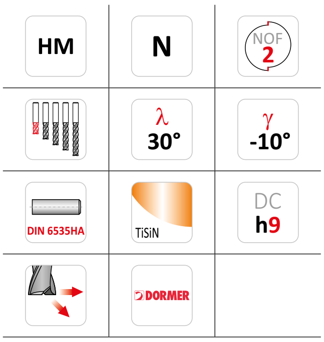
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S5273.0	3.00	6.00	25.00	100.0	6	60.00	2.80
S5274.0	4.00	6.00	31.00	100.0	6	60.00	3.70
S5276.0	6.00	6.00	38.00	100.0	6	60.00	5.50
S5278.0	8.00	8.00	41.00	100.0	6	60.00	7.40
S52710.0	10.00	10.00	57.00	125.0	6	85.00	9.20
S52712.0	12.00	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

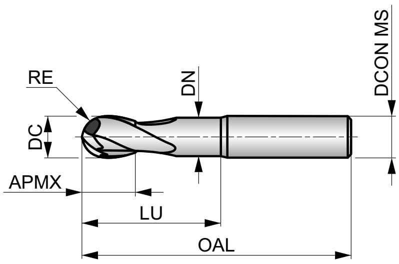
S529

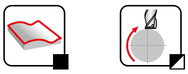
DORMER

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.







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.

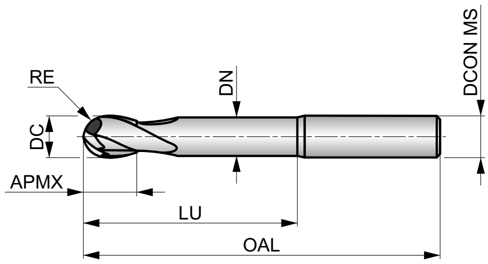
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S5291.5	1.50	0.75	6.00	3.00	50.0	2	6.00	1.40
S5292.0XD4	2.00	1.00	4.00	4.00	50.0	2	8.00	1.90
S5292.0XD6	2.00	1.00	6.00	4.00	50.0	2	8.00	1.90
S5293.0XD3	3.00	1.50	3.00	5.00	50.0	2	14.00	2.80
S5293.0XD6	3.00	1.50	6.00	5.00	50.0	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

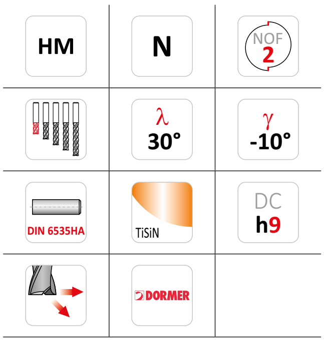
S531

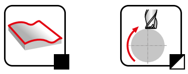
DORMER

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.







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

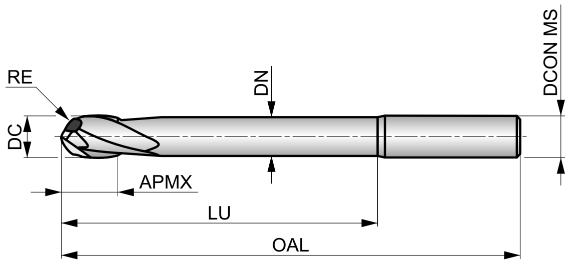
DCON MS tolerance h6; RE +0/-0.02 mm.

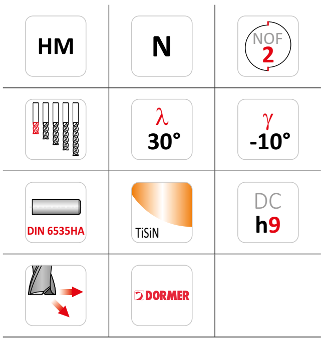
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S5311.5	1.50	0.75	6.00	3.00	75.0	2	10.00	1.40
S5312.0XD4	2.00	1.00	4.00	4.00	75.0	2	14.00	1.90
S5312.0XD6	2.00	1.00	6.00	4.00	75.0	2	14.00	1.90
S5313.0XD3	3.00	1.50	3.00	5.00	60.0	2	21.00	2.80
S5313.0XD6	3.00	1.50	6.00	5.00	75.0	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

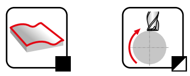
S533

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.







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.

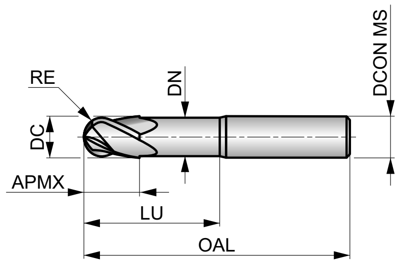
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S5332.0XD4	2.00	1.00	4.00	4.00	100.0	2	20.00	1.90
S5332.0XD6	2.00	1.00	6.00	4.00	100.0	2	20.00	1.90
S5333.0XD4	3.00	1.50	4.00	5.00	100.0	2	30.00	2.80
S5333.0XD6	3.00	1.50	6.00	5.00	100.0	2	30.00	2.80
S5334.0XD4	4.00	2.00	4.00	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

DORMER

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.

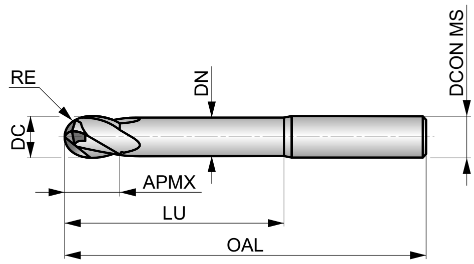
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S5343.0	3.00	1.50	6.00	5.00	50.0	4	14.00	2.80
S5344.0	4.00	2.00	6.00	8.00	50.0	4	20.00	3.70
S5345.0	5.00	2.50	6.00	9.00	50.0	4	20.00	4.60
S5346.0	6.00	3.00	6.00	10.00	50.0	4	20.00	5.50
S5348.0	8.00	4.00	8.00	12.00	64.0	4	30.00	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

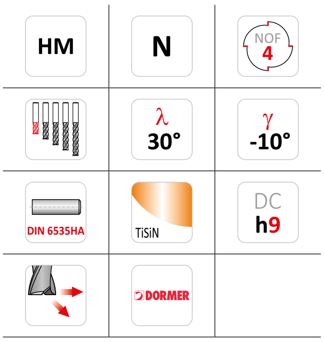
S535

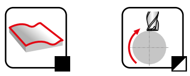
DORMER

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.







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.

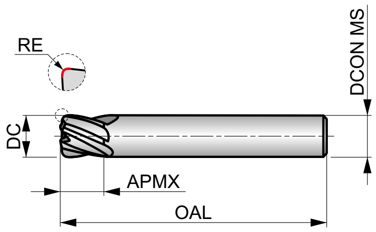
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S5353.0	3.00	1.50	6.00	5.00	75.0	4	21.00	2.80
S5354.0	4.00	2.00	6.00	8.00	75.0	4	28.00	3.70
S5355.0	5.00	2.50	6.00	9.00	75.0	4	32.00	4.60
S5356.0	6.00	3.00	6.00	10.00	75.0	4	40.00	5.50
S5358.0	8.00	4.00	8.00	12.00	75.0	4	40.00	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

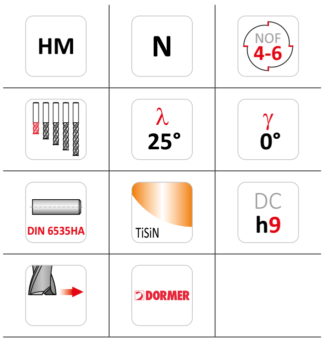
S536

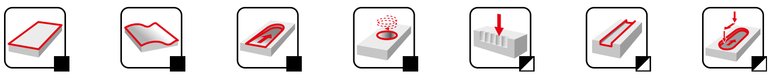
DORMER

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.







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.

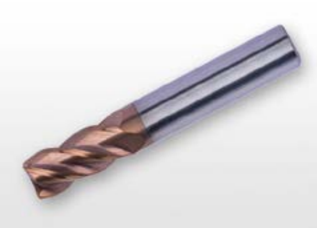
H1.1	H2.1	H2.2	H3.1	H3.2	H4.1	H4.2
■ 205 E	■ 122 E	■ 104 D	■ 135 E	■ 111 E	■ 86 D	■ 73 D

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

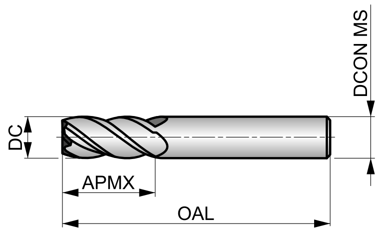
S561

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.

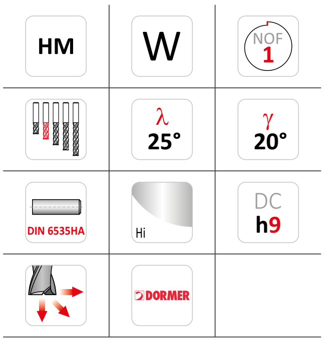
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S5611.0	1.00	6.00	3.00	50.0	4
S5611.5	1.50	6.00	4.50	50.0	4
S5612.0	2.00	6.00	6.50	50.0	4
S5612.5	2.50	6.00	6.50	50.0	4
S5613.0	3.00	6.00	9.00	50.0	4
S5614.0	4.00	6.00	12.00	50.0	4
S5615.0	5.00	6.00	15.00	50.0	4
S5616.0	6.00	6.00	20.00	60.0	4
S5618.0	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

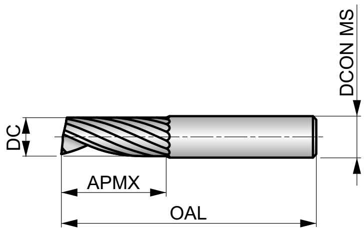
S637

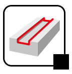
DORMER

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.







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

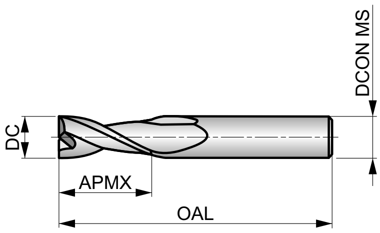
DCON MS tolerance h6.

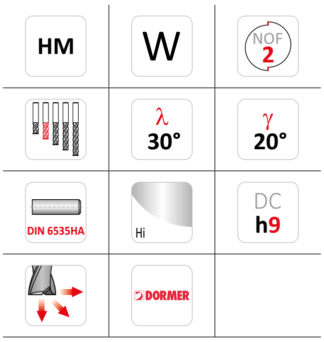
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S6372.0	2.00	2.00	10.00	40.0	1
S6373.0	3.00	3.00	12.00	40.0	1
S6374.0	4.00	4.00	15.00	50.0	1
S6375.0	5.00	5.00	16.00	50.0	1
S6376.0	6.00	6.00	20.00	60.0	1
S6378.0	8.00	8.00	22.00	63.0	1
S63710.0	10.00	10.00	25.00	72.0	1
S63712.0	12.00	12.00	30.00	83.0	1

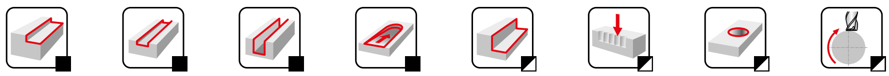
S610

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.







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 0	■320 0	■229 0	■373 0	■219 0	■112 0	■373 R	■144 R

DCON MS tolerance h6; RE ±0.02 mm.

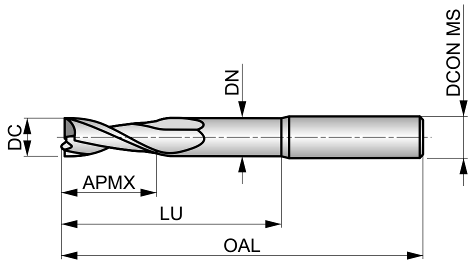
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S6102.0	2.00	0.10	4.00	6.50	40.0	2
S6103.0XD3	3.00	0.10	3.00	9.00	40.0	2
S6103.0XD6	3.00	0.10	6.00	9.00	50.0	2
S6104.0XD4	4.00	0.10	4.00	12.00	50.0	2
S6104.0XD6	4.00	0.10	6.00	12.00	50.0	2
S6105.0	5.00	0.10	6.00	15.00	50.0	2
S6106.0	6.00	0.10	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

DORMER

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.

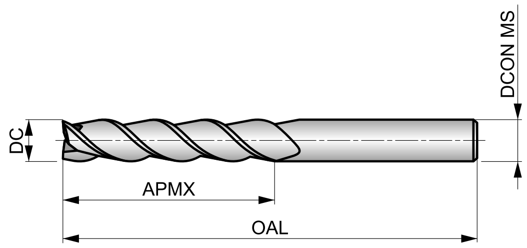
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S6113.0XD3	3.00	0.10	3.00	9.00	40.0	2	15.00	2.80
S6113.0XD6	3.00	0.10	6.00	9.00	50.0	2	15.00	2.80
S6114.0XD4	4.00	0.10	4.00	12.00	50.0	2	20.00	3.70
S6114.0XD6	4.00	0.10	6.00	12.00	50.0	2	20.00	3.70
S6115.0	5.00	0.10	6.00	15.00	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

DORMER

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.

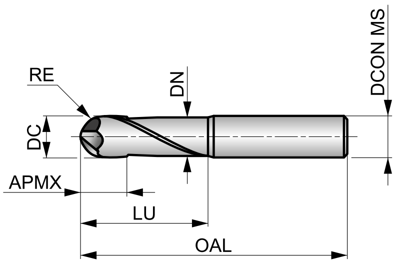
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S6143.0XD3	3.00	3.00	19.00	60.0	3
S6143.0XD6	3.00	6.00	19.00	75.0	3
S6144.0XD4	4.00	4.00	19.00	60.0	3
S6144.0XD6	4.00	6.00	19.00	75.0	3
S6145.0	5.00	6.00	19.00	75.0	3
S6146.0	6.00	6.00	31.00	75.0	3
S6148.0	8.00	8.00	41.00	100.0	3
S61410.0	10.00	10.00	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.

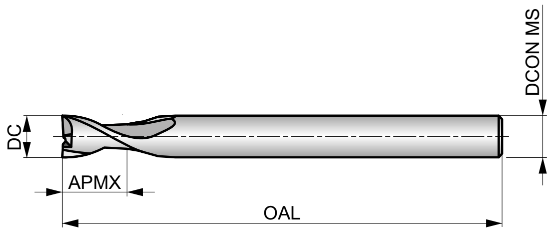
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S6291.0 1)	1.00	0.50	4.00	0.80	50.0	2	10.00	0.90
S6291.5 1)	1.50	0.75	4.00	1.20	50.0	2	12.00	1.40
S6292.0 1)	2.00	1.00	4.00	1.60	60.0	2	18.00	1.90
S6293.0	3.00	1.50	6.00	5.00	57.0	2	20.00	2.80
S6294.0	4.00	2.00	6.00	6.00	57.0	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

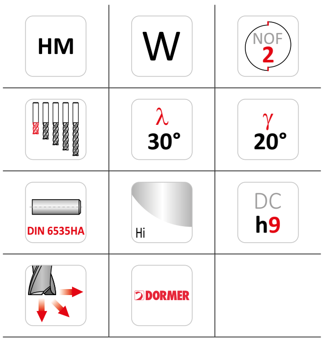
1) rake angle 11°.

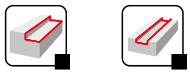
S638

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.







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 0	■144 0

Reduced shank; DCON MS tolerance h6; RE ±0.02 mm.

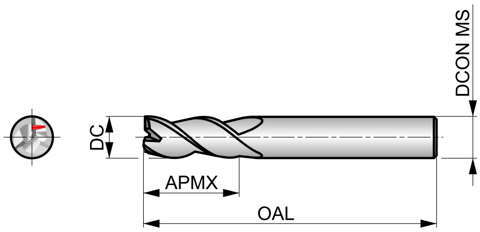
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S6386.2	6.20	0.10	6.00	8.00	100.0	2
S6388.2	8.20	0.10	8.00	10.00	100.0	2
S63810.3	10.30	0.10	10.00	14.00	125.0	2
S63812.3	12.30	0.10	12.00	16.00	125.0	2
S63816.3	16.30	0.10	16.00	20.00	125.0	2
S63820.3	20.30	0.10	20.00	25.00	125.0	2

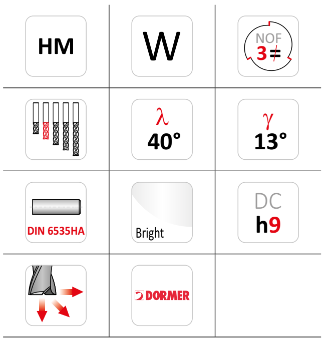
S650

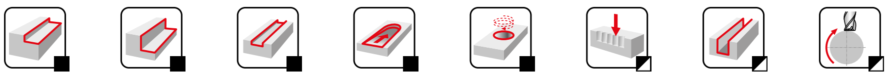
DORMER

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

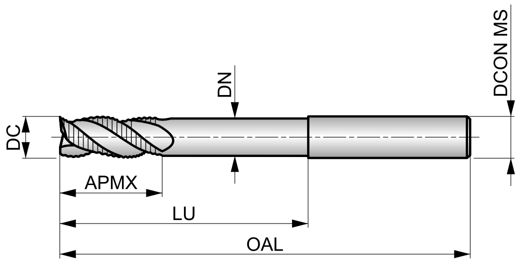
[1] No differential pitch and chip divider.

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

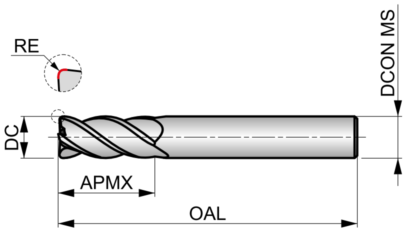
DCON MS tolerance h6; RE ±0.02 mm.

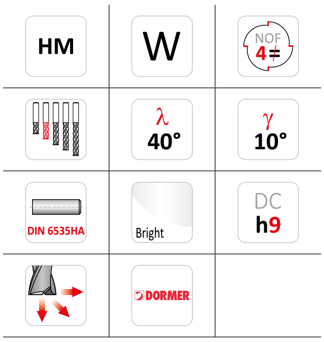
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
S6546.0	6.00	0.10	6.00	13.00	75.0	3	40.00	5.50
S6548.0	8.00	0.10	8.00	20.00	75.0	3	40.00	7.40
S65410.0	10.00	0.10	10.00	22.00	100.0	3	60.00	9.20
S65412.0	12.00	0.12	12.00	26.00	100.0	3	60.00	11.00
S65416.0	16.00	0.16	16.00	32.00	125.0	3	75.00	15.00
S65420.0	20.00	0.20	20.00	40.00	150.0	3	100.00	19.00

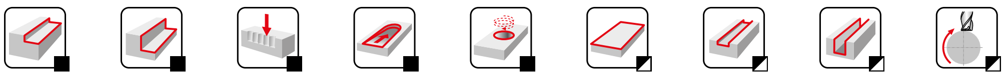
S662

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.







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.

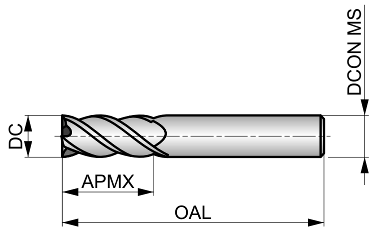
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S6623.0XR0.3	3.00	0.30	6.00	9.00	57.0	4
S6624.0XR0.3	4.00	0.30	6.00	12.00	57.0	4
S6624.0XR0.5	4.00	0.50	6.00	12.00	57.0	4
S6625.0XR0.3	5.00	0.30	6.00	15.00	57.0	4
S6625.0XR0.5	5.00	0.50	6.00	15.00	57.0	4
S6626.0XR0.5	6.00	0.50	6.00	16.00	57.0	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

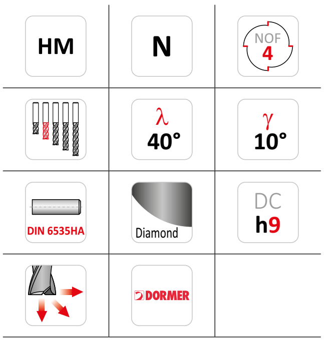
S612

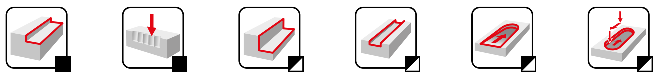
DORMER

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.







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.

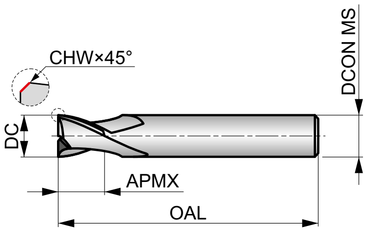
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S6121.0	1.00	3.00	3.00	50.0	4
S6121.5	1.50	3.00	4.50	50.0	4
S6122.0	2.00	3.00	6.50	50.0	4
S6122.5	2.50	3.00	6.50	50.0	4
S6123.0	3.00	3.00	9.00	50.0	4
S6124.0	4.00	4.00	12.00	50.0	4
S6125.0	5.00	5.00	15.00	50.0	4
S6126.0	6.00	6.00	20.00	60.0	4
S6128.0	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		

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
■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.

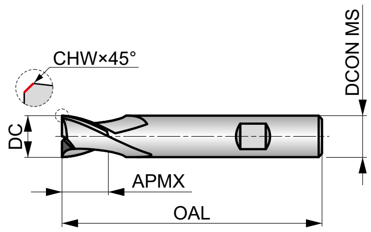
Product	DC [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S802HA1.0	1.00	–	3.00	3.00	38.0	2
S802HA1.5	1.50	–	3.00	3.00	38.0	2
S802HA2.0	2.00	–	6.00	3.00	50.0	2
S802HA2.5	2.50	0.08	6.00	3.00	50.0	2
S802HA3.0	3.00	0.08	6.00	4.00	50.0	2
S802HA3.5	3.50	0.08	6.00	4.00	50.0	2
S802HA4.0	4.00	0.13	6.00	5.00	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

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
■ 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.

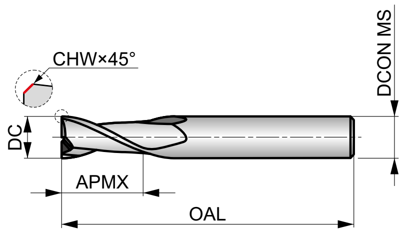
Product	DC [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S802HB2.0	2.00	–	6.00	3.00	50.0	2
S802HB2.5	2.50	0.08	6.00	3.00	50.0	2
S802HB3.0	3.00	0.08	6.00	4.00	50.0	2
S802HB3.5	3.50	0.08	6.00	4.00	50.0	2
S802HB4.0	4.00	0.13	6.00	5.00	54.0	2
S802HB4.5	4.50	0.13	6.00	5.00	54.0	2
S802HB5.0	5.00	0.13	6.00	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

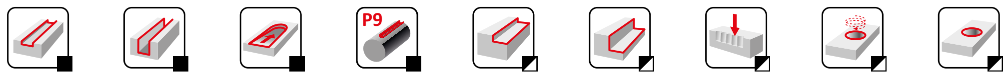
DORMER

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.

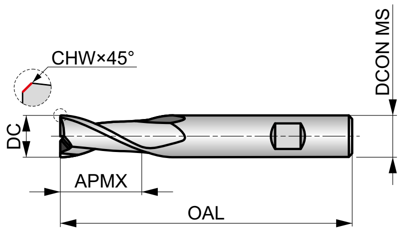
Product	DC [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S812HA2.0	2.00	–	6.00	6.00	57.0	2
S812HA2.5	2.50	0.08	6.00	7.00	57.0	2
S812HA3.0	3.00	0.08	6.00	7.00	57.0	2
S812HA3.5	3.50	0.08	6.00	7.00	57.0	2
S812HA4.0	4.00	0.13	6.00	8.00	57.0	2
S812HA4.5	4.50	0.13	6.00	8.00	57.0	2
S812HA5.0	5.00	0.13	6.00	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

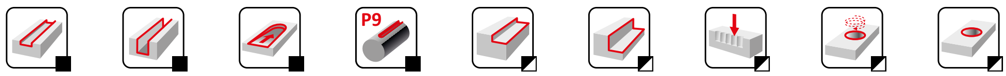
DORMER

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			

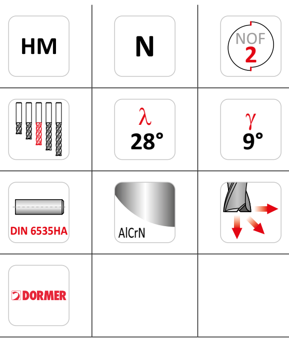
DCON MS tolerance h6; DC≤7.00 mm: CHW ± 0.03X45° mm; DC>7.00 mm: CHW ± 0.05X45° mm.

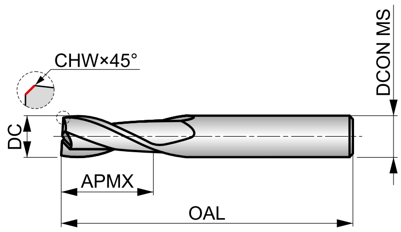
Product	DC [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S812HB2.0	2.00	0.00	6.00	6.00	57.0	2
S812HB2.5	2.50	0.08	6.00	7.00	57.0	2
S812HB3.0	3.00	0.08	6.00	7.00	57.0	2
S812HB3.5	3.50	0.08	6.00	7.00	57.0	2
S812HB4.0	4.00	0.13	6.00	8.00	57.0	2
S812HB4.5	4.50	0.13	6.00	8.00	57.0	2
S812HB5.0	5.00	0.13	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

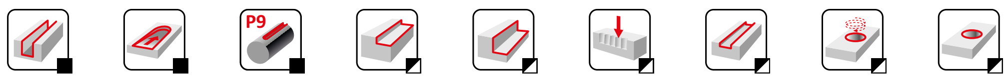
S822

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.







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.

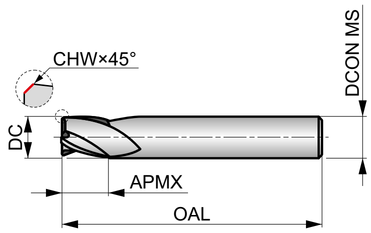
Product	DC [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S8222.0	2.00	–	6.00	8.00	57.0	2
S8222.5	2.50	0.08	6.00	12.00	57.0	2
S8223.0	3.00	0.08	6.00	12.00	57.0	2
S8224.0	4.00	0.13	6.00	14.00	57.0	2
S8225.0	5.00	0.13	6.00	16.00	57.0	2
S8226.0	6.00	0.13	6.00	19.00	57.0	2
S8227.0	7.00	0.13	8.00	19.00	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

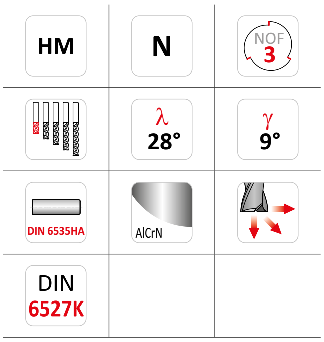
S803HA

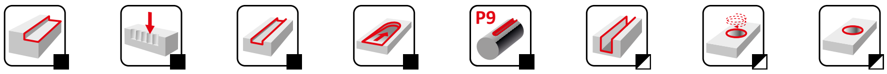
DORMER

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.







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.

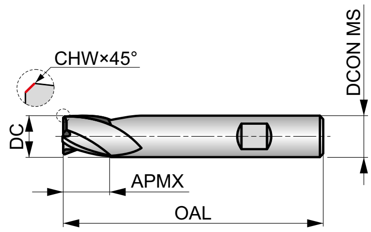
Product	DC [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S803HA1.0	1.00	–	3.00	3.00	38.0	3
S803HA1.5	1.50	–	3.00	3.00	38.0	3
S803HA2.0	2.00	–	6.00	3.00	50.0	3
S803HA2.5	2.50	0.08	6.00	3.00	50.0	3
S803HA2.8	2.80	0.08	6.00	4.00	50.0	3
S803HA3.0	3.00	0.08	6.00	4.00	50.0	3
S803HA3.5	3.50	0.08	6.00	4.00	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

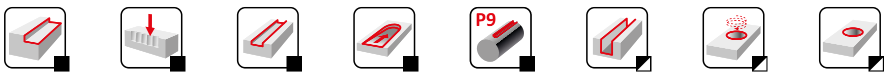
DORMER

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	

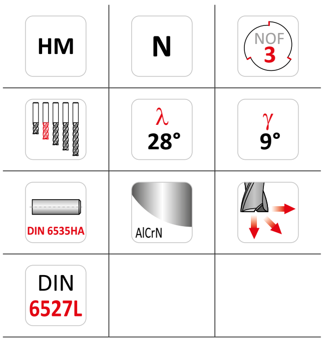
DCON MS tolerance h6; DC≤7.75 mm: CHW ± 0.03X45° mm; DC>7.75 mm: CHW ± 0.05X45° mm.

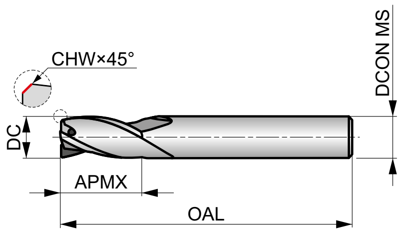
Product	DC [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S803HB2.0	2.00	–	6.00	3.00	50.0	3
S803HB2.5	2.50	0.08	6.00	3.00	50.0	3
S803HB2.8	2.80	0.08	6.00	4.00	50.0	3
S803HB3.0	3.00	0.08	6.00	4.00	50.0	3
S803HB3.5	3.50	0.08	6.00	4.00	50.0	3
S803HB3.8	3.80	0.08	6.00	5.00	54.0	3
S803HB4.0	4.00	0.13	6.00	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

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.





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

HM | N | NOF 3

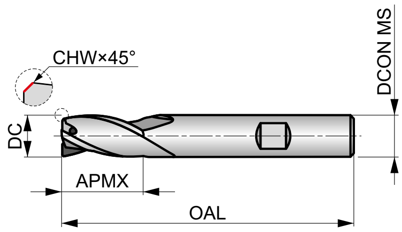
λ 28° | γ 9°

DIN 6535HB | AlCrN

DIN 6527L

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.



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
■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			

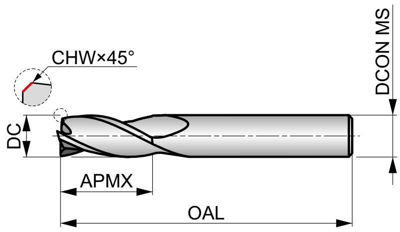
DCON MS tolerance h6; DC≤7.00 mm: CHW ± 0.03X45° mm; DC>7.00 mm: CHW ± 0.05X45° mm.

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

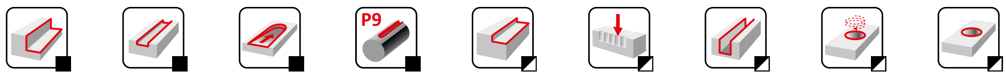
S823

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.

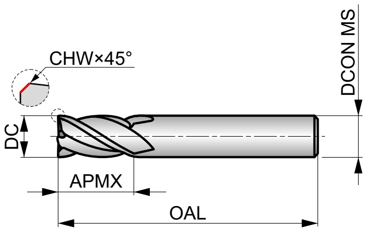
Product	DC [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S8232.0	2.00	–	6.00	8.00	57.0	3
S8232.5	2.50	0.08	6.00	12.00	57.0	3
S8233.0	3.00	0.08	6.00	12.00	57.0	3
S8234.0	4.00	0.13	6.00	14.00	57.0	3
S8235.0	5.00	0.13	6.00	16.00	57.0	3
S8236.0	6.00	0.13	6.00	19.00	57.0	3
S8237.0	7.00	0.13	8.00	19.00	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

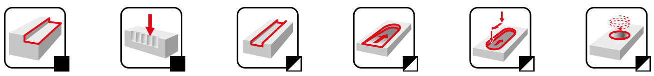
DORMER

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.

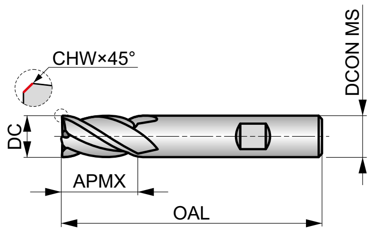
Product	DC [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S804HA2.0	2.00	–	6.00	4.00	50.0	4
S804HA3.0	3.00	0.08	6.00	5.00	50.0	4
S804HA4.0	4.00	0.13	6.00	8.00	54.0	4
S804HA5.0	5.00	0.13	6.00	9.00	54.0	4
S804HA6.0	6.00	0.13	6.00	10.00	54.0	4
S804HA8.0	8.00	0.13	8.00	12.00	58.0	4
S804HA10.0	10.00	0.20	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

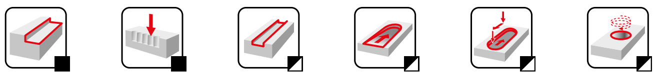
DORMER

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.

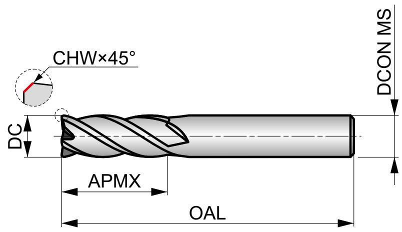
Product	DC [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S804HB2.0	2.00	–	6.00	4.00	50.0	4
S804HB3.0	3.00	0.08	6.00	5.00	50.0	4
S804HB4.0	4.00	0.13	6.00	8.00	54.0	4
S804HB5.0	5.00	0.13	6.00	9.00	54.0	4
S804HB6.0	6.00	0.13	6.00	10.00	54.0	4
S804HB8.0	8.00	0.13	8.00	12.00	58.0	4
S804HB10.0	10.00	0.20	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

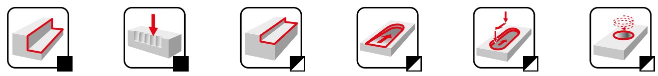
DORMER

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			

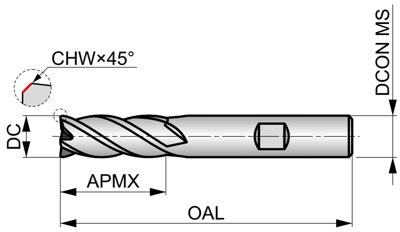
DCON MS tolerance h6; DC≤8.00 mm: CHW ± 0.03X45° mm; DC>8.00 mm: CHW ± 0.05X45° mm.

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

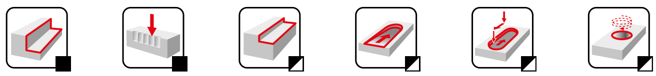
S814HB

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.

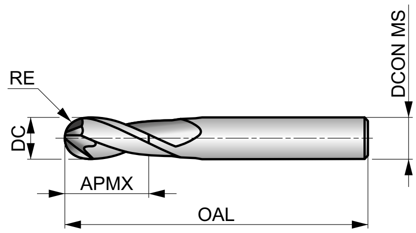
Product	DC [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S814HB2.0	2.00	0.00	6.00	7.00	57.0	4
S814HB3.0	3.00	0.08	6.00	8.00	57.0	4
S814HB4.0	4.00	0.13	6.00	11.00	57.0	4
S814HB5.0	5.00	0.13	6.00	13.00	57.0	4
S814HB6.0	6.00	0.13	6.00	13.00	57.0	4
S814HB8.0	8.00	0.13	8.00	19.00	63.0	4
S814HB10.0	10.00	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.

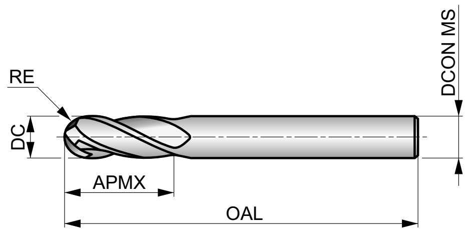
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S5011.0	1.00	0.50	3.00	3.00	38.0	2
S5011.5	1.50	0.75	3.00	3.00	38.0	2
S5012.0	2.00	1.00	3.00	6.00	38.0	2
S5012.5	2.50	1.25	3.00	7.00	38.0	2
S5013.0	3.00	1.50	3.00	7.00	38.0	2
S5014.0	4.00	2.00	6.00	8.00	57.0	2
S5015.0	5.00	2.50	6.00	10.00	57.0	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			

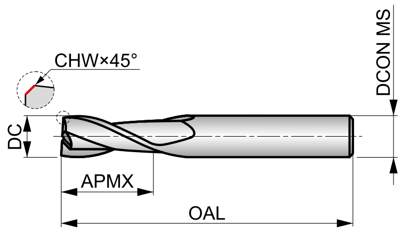
DCON MS tolerance h6; RE +0/-0.01 mm.

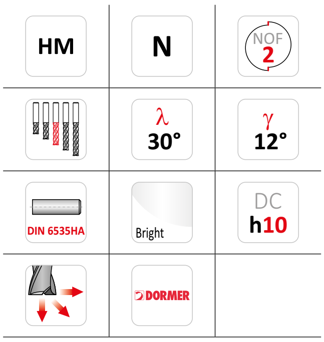
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S5113.0	3.00	1.50	6.00	8.00	80.0	4
S5114.0	4.00	2.00	6.00	11.00	80.0	4
S5115.0	5.00	2.50	6.00	13.00	80.0	4
S5116.0	6.00	3.00	6.00	13.00	80.0	4
S5117.0	7.00	3.50	8.00	16.00	100.0	4
S5118.0	8.00	4.00	8.00	19.00	100.0	4
S5119.0	9.00	4.50	10.00	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

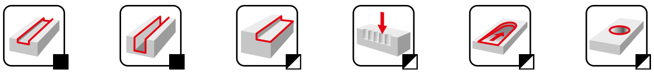
DORMER

2-Flute Solid Carbide End Mill

Medium cut length, 2-flute design with 30° helix provides high rigidity for milling standard slots.







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.

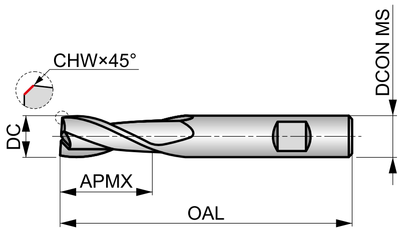
Product	DC [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S9022.0	2.00	0.08	3.00	6.00	38.0	2
S9022.5	2.50	0.08	3.00	9.00	38.0	2
S9023.0	3.00	0.08	3.00	12.00	38.0	2
S9024.0	4.00	0.08	4.00	14.00	50.0	2
S9025.0	5.00	0.13	5.00	16.00	50.0	2
S9026.0	6.00	0.13	6.00	19.00	57.0	2
S9027.0	7.00	0.13	8.00	19.00	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

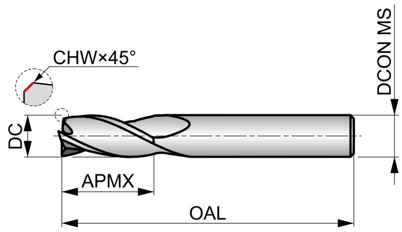
1) Cylindrical shank.

S903

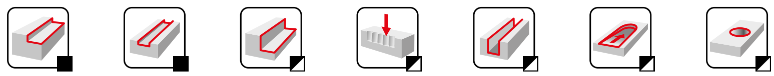
DORMER

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.

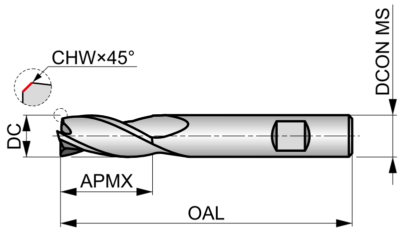
Product	DC [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S9032.0	2.00	0.08	3.00	6.00	38.0	3
S9032.5	2.50	0.08	3.00	9.00	38.0	3
S9033.0	3.00	0.08	3.00	12.00	38.0	3
S9034.0	4.00	0.08	4.00	14.00	50.0	3
S9035.0	5.00	0.13	5.00	16.00	50.0	3
S9036.0	6.00	0.13	6.00	19.00	57.0	3
S9037.0	7.00	0.13	8.00	19.00	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

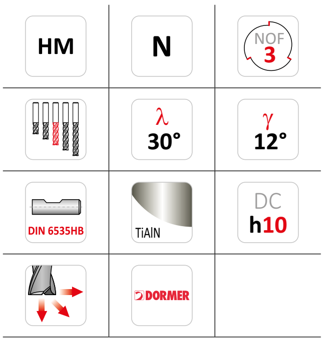
S933

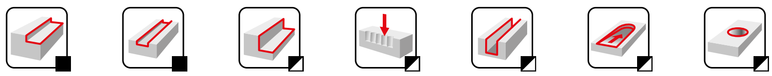
DORMER

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.







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.

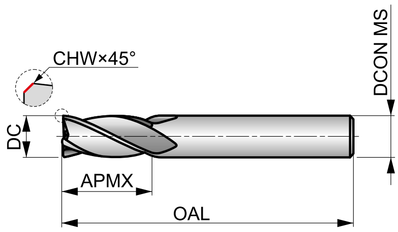
Product	DC [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S9332.0 1)	2.00	0.08	3.00	6.00	38.0	3
S9332.5 1)	2.50	0.08	3.00	9.00	38.0	3
S9333.0 1)	3.00	0.08	3.00	12.00	38.0	3
S9334.0 1)	4.00	0.08	4.00	14.00	50.0	3
S9335.0 1)	5.00	0.13	5.00	16.00	50.0	3
S9336.0	6.00	0.13	6.00	19.00	57.0	3
S9337.0	7.00	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.

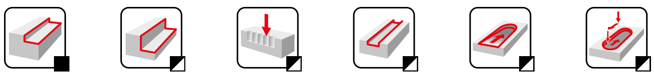
S904

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.

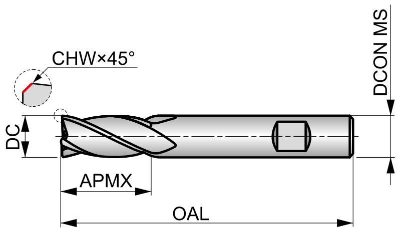
Product	DC [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
S9042.0	2.00	0.08	3.00	6.00	38.0	4
S9042.5	2.50	0.08	3.00	9.00	38.0	4
S9043.0	3.00	0.08	3.00	12.00	38.0	4
S9044.0	4.00	0.08	4.00	14.00	50.0	4
S9045.0	5.00	0.13	5.00	16.00	50.0	4
S9046.0	6.00	0.13	6.00	19.00	57.0	4
S9047.0	7.00	0.13	8.00	19.00	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

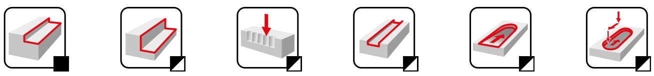
DORMER

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 [mm]	CHW [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF
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

DORMER

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

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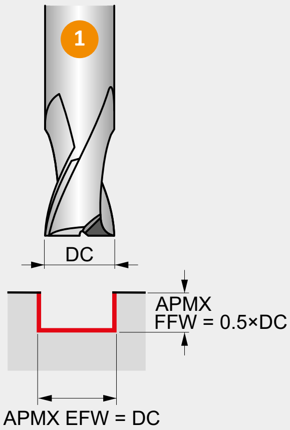
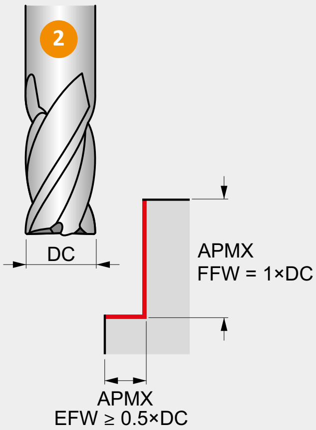
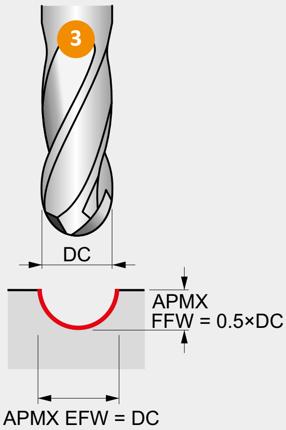






Feed per tooth (f_z in mm/rev) depending on the working conditions it might be necessary to adjust these values ± 25%.

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).

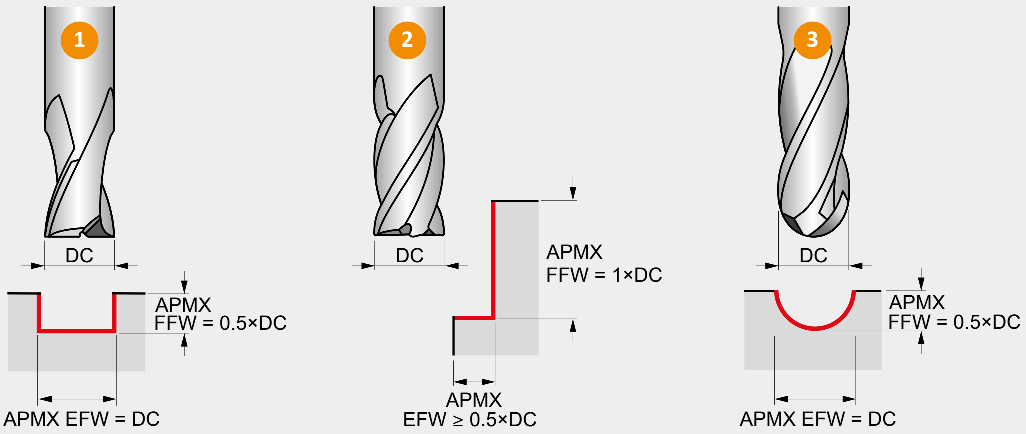
How to use this table to find the feed per tooth (f_z):

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.

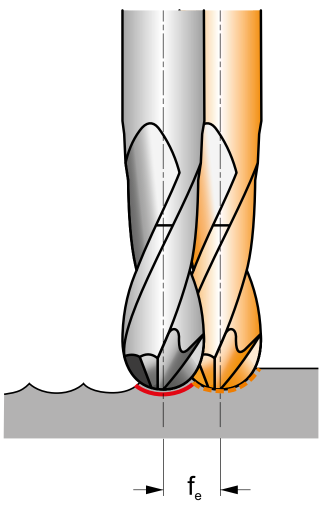
3a Plain Copy Milling (with Ball Nose Cutters)

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

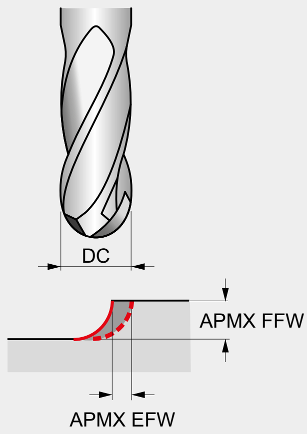
Line offset f_e (step-over distance) for achieving a theorectical surface roughness R_{th}



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.

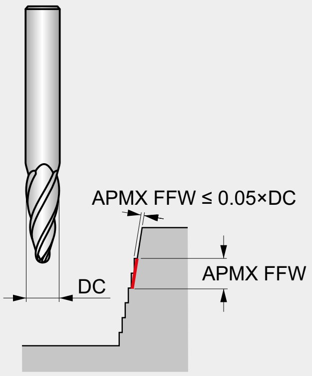
Example for plain copy milling:

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.

Surface Treatments

Bright (uncoated)	Bright	Bright finish (uncoated surface) improves chip flow in soft or non-ferrous materials and maintains sharp cutting edges in abrasive materials.
Steam Tempering	ST	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)	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)	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

	C122	C346	C299	C907	C920	C247	C246	C273	C295	C333	C922	C428	C492	C407	C908
	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

	C948	C400	C413	C403	C500	C505	C800	C810	C825	C801	C837	C835	C830
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	D B 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	4	4-6	6-12	6-12	16-24	28-44	32-100	48-200
λ	0°	0°	0°	10°	12°	15°	15°		
γ	0°	0°	0°	10°	10°	10°	10°	15°	5°
	DIN 1835B	DIN 1835D	DIN 1835B	D B 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		

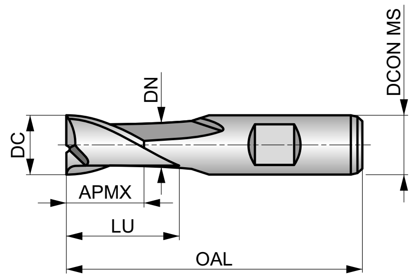
■ Primary use ◩ Possible use

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 [inch]	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [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

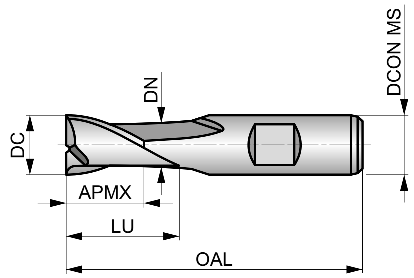
[1] DC tolerance h10; available in HSS-E only.
[2] DC tolerance h10; slot not in P9 tolerance.

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	

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

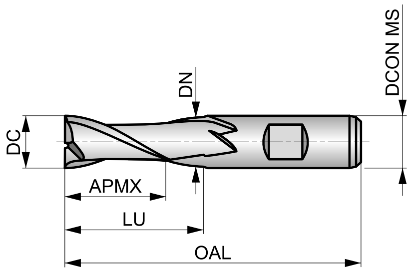
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C12614.0	14.00	12.00	16.00	73.0	2	27.50	11.50
C12615.0	15.00	12.00	16.00	73.0	2	27.50	11.50
C12616.0	16.00	16.00	19.00	79.0	2	30.50	15.50
C12618.0	18.00	16.00	19.00	79.0	2	30.50	15.50
C12620.0	20.00	20.00	22.00	88.0	2	37.50	19.50
C12622.0	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

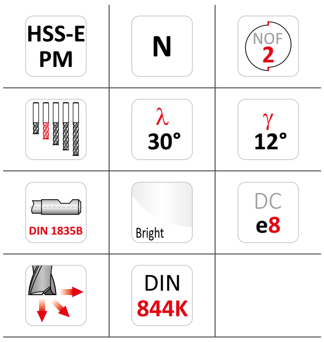
C123

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.





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 [inch]	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [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

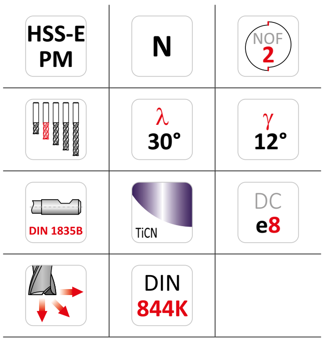
[1)] DC tolerance -0.0005 inches / -0.0013 inches.

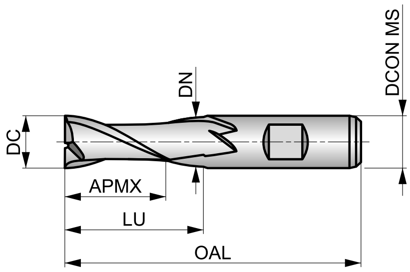
C139

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.





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		

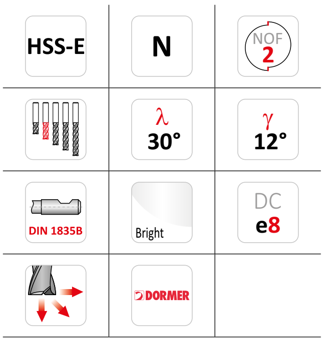
DCON MS tolerance h6.

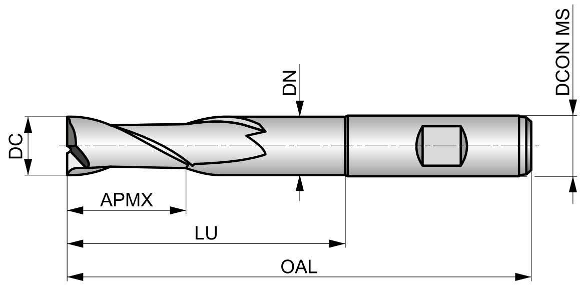
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C1392.0	2.00	6.00	7.00	51.0	2	–	–
C1393.0	3.00	6.00	8.00	52.0	2	–	–
C1394.0	4.00	6.00	11.00	55.0	2	–	–
C1395.0	5.00	6.00	13.00	57.0	2	–	–
C1395.5	5.50	6.00	13.00	57.0	2	–	–
C1396.0	6.00	6.00	13.00	57.0	2	–	–
C1396.5	6.50	10.00	16.00	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

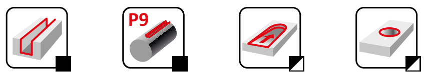
C135

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.







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.

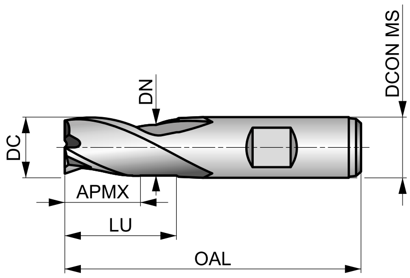
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C1352.0	2.00	6.00	7.00	54.0	2	18.00	1.80
C1353.0	3.00	6.00	8.00	56.0	2	20.00	2.80
C1354.0	4.00	6.00	11.00	63.0	2	27.00	3.70
C1355.0	5.00	6.00	13.00	68.0	2	32.00	4.70
C1356.0	6.00	6.00	13.00	68.0	2	32.00	5.70
C1358.0	8.00	10.00	19.00	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

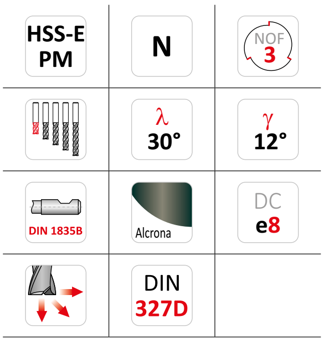
DCON MS tolerance h6.

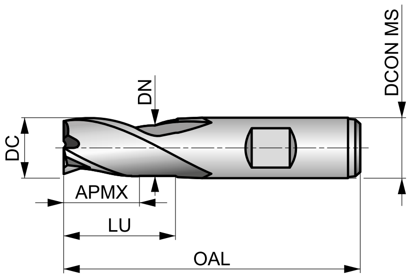
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C3063.0	3.00	6.00	5.00	49.0	3	–	–
C3064.0	4.00	6.00	7.00	51.0	3	–	–
C3065.0	5.00	6.00	8.00	52.0	3	–	–
C3066.0	6.00	6.00	8.00	52.0	3	–	–
C3067.0	7.00	10.00	10.00	60.0	3	–	–
C3068.0	8.00	10.00	11.00	61.0	3	–	–
C3069.0	9.00	10.00	11.00	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

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.





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

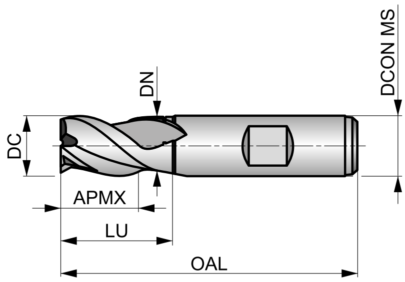
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C35322.0	22.00	20.00	22.00	88.0	3	37.50	19.50
C35325.0	25.00	25.00	26.00	102.0	3	45.50	24.50
C35328.0	28.00	25.00	26.00	102.0	3	45.50	24.50
C35330.0	30.00	25.00	26.00	102.0	3	45.50	24.50

[1)] DC tolerance h10.

C367

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.

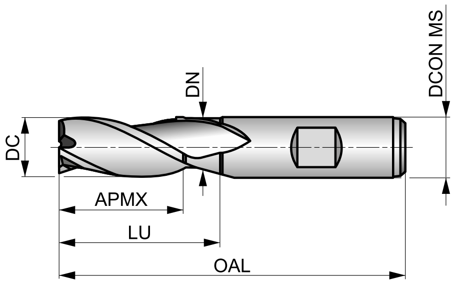
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C3672.0	2.00	6.00	4.00	48.0	3	–	–
C3673.0	3.00	6.00	5.00	49.0	3	–	–
C3674.0	4.00	6.00	7.00	51.0	3	–	–
C3675.0	5.00	6.00	8.00	52.0	3	–	–
C3676.0	6.00	6.00	8.00	52.0	3	–	–
C3677.0	7.00	10.00	10.00	60.0	3	–	–
C3678.0	8.00	10.00	11.00	61.0	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.

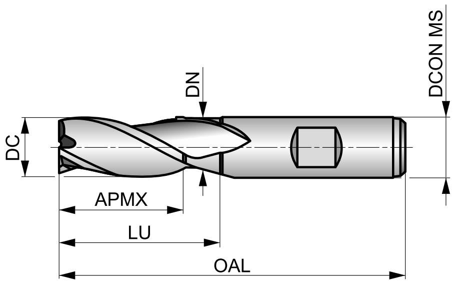
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C3052.0	2.00	6.00	7.00	51.0	3	–	–
C3052.5	2.50	6.00	8.00	52.0	3	–	–
C3053.0	3.00	6.00	8.00	52.0	3	–	–
C3053.5	3.50	6.00	10.00	54.0	3	–	–
C3054.0	4.00	6.00	11.00	55.0	3	–	–
C3054.5	4.50	6.00	11.00	55.0	3	–	–
C3055.0	5.00	6.00	13.00	57.0	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 [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [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

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.

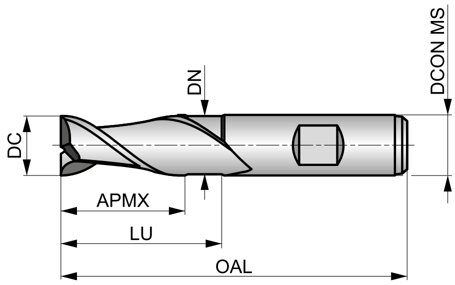
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C3523.0	3.00	6.00	8.00	52.0	3	–	–
C3524.0	4.00	6.00	11.00	55.0	3	–	–
C3525.0	5.00	6.00	13.00	57.0	3	–	–
C3526.0	6.00	6.00	13.00	57.0	3	–	–
C3528.0	8.00	10.00	19.00	69.0	3	–	–
C35210.0	10.00	10.00	22.00	72.0	3	31.50	9.50
C35212.0	12.00	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

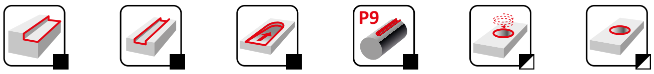
DORMER

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.

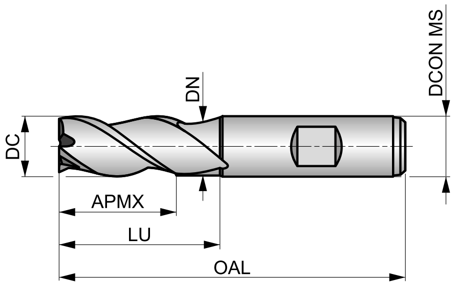
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C1592.0	2.00	6.00	7.00	51.0	2	–	–
C1593.0	3.00	6.00	8.00	52.0	2	–	–
C1594.0	4.00	6.00	11.00	55.0	2	–	–
C1595.0	5.00	6.00	13.00	57.0	2	–	–
C1596.0	6.00	6.00	13.00	57.0	2	–	–
C1598.0	8.00	10.00	19.00	69.0	2	–	–
C15910.0	10.00	10.00	22.00	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

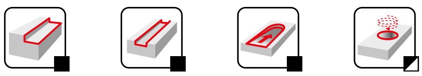
DORMER

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

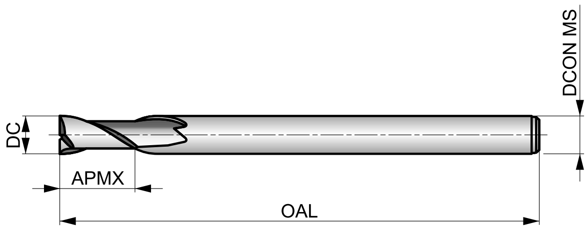
C167

DORMER

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

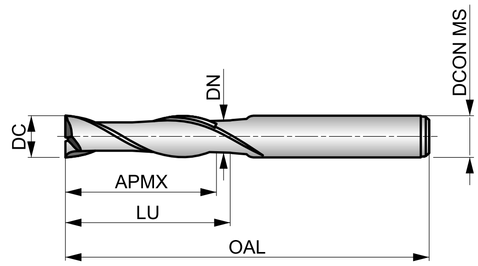
C122

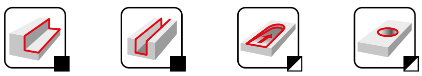
DORMER

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.

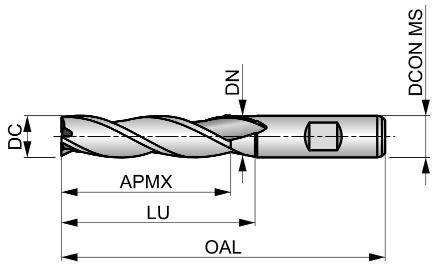
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C1225.0	5.00	5.00	22.00	65.0	2	–	–
C1226.0	6.00	6.00	27.00	75.0	2	–	–
C1227.0	7.00	8.00	33.00	85.0	2	–	–
C1228.0	8.00	8.00	33.00	85.0	2	–	–
C12210.0	10.00	10.00	40.00	95.0	2	–	–
C12212.0	12.00	12.00	45.00	110.0	2	–	–
C12214.0	14.00	12.00	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

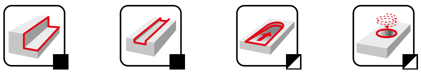
DORMER

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.

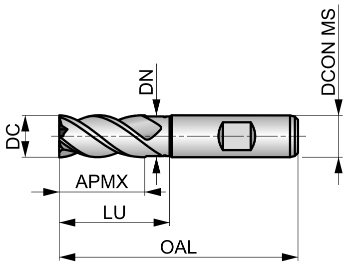
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C3463.0	3.00	6.00	12.00	56.0	3	–	–
C3464.0	4.00	6.00	19.00	63.0	3	–	–
C3465.0	5.00	6.00	24.00	68.0	3	–	–
C3466.0	6.00	6.00	24.00	68.0	3	–	–
C3467.0	7.00	10.00	30.00	80.0	3	–	–
C3468.0	8.00	10.00	38.00	88.0	3	–	–
C3469.0	9.00	10.00	38.00	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

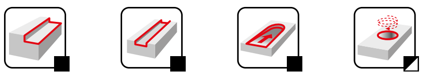
DORMER

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												

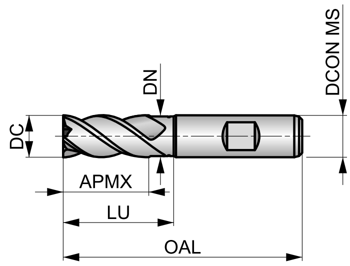
DCON MS tolerance h6.

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

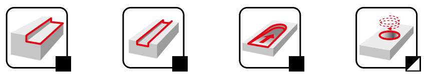
C907

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.

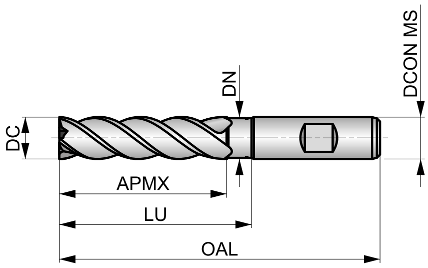
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C9073.0	3.00	6.00	8.00	52.0	3	–	–
C9074.0	4.00	6.00	11.00	55.0	3	–	–
C9075.0	5.00	6.00	13.00	57.0	3	–	–
C9076.0	6.00	6.00	13.00	57.0	3	–	–
C9078.0	8.00	10.00	19.00	69.0	4	–	–
C90710.0	10.00	10.00	22.00	72.0	4	31.50	9.50
C90712.0	12.00	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

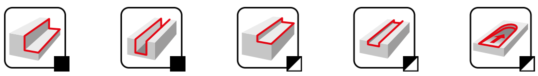
DORMER

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												

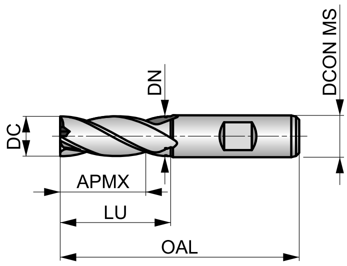
DCON MS tolerance h6.

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

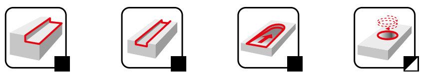
C247

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

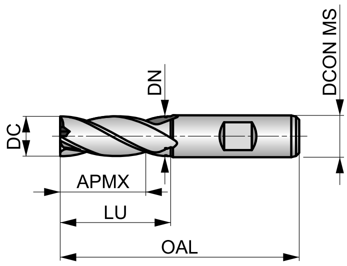
Product	DC [inch]	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C24713.0	–	13.00	12.00	26.00	83.0	4	37.50	11.50
C24714.0	–	14.00	12.00	26.00	83.0	4	37.50	11.50
C2479/16 [2)]	9/16	14.29	12.00	26.00	83.0	4	37.50	11.50
C24715.0	–	15.00	12.00	26.00	83.0	4	37.50	11.50
C2475/8 [2)]	5/8	15.88	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.

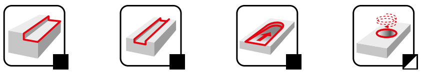
C246

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.

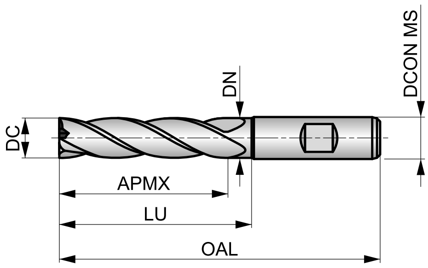
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C2462.0	2.00	6.00	7.00	51.0	4	–	–
C2463.0	3.00	6.00	8.00	52.0	4	–	–
C2464.0	4.00	6.00	11.00	55.0	4	–	–
C2465.0	5.00	6.00	13.00	57.0	4	–	–
C2466.0	6.00	6.00	13.00	57.0	4	–	–
C2467.0	7.00	10.00	16.00	66.0	4	–	–
C2468.0	8.00	10.00	19.00	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

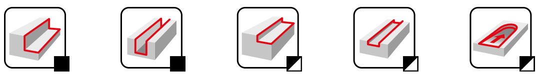
DORMER

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 [inch]	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [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.

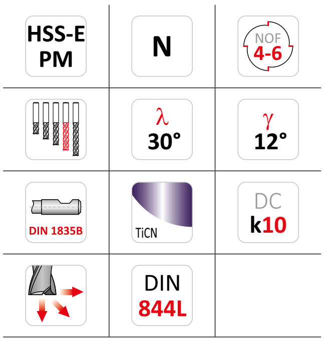
⏮

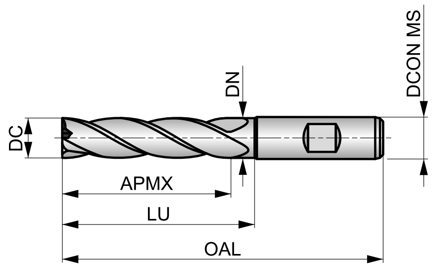
C295

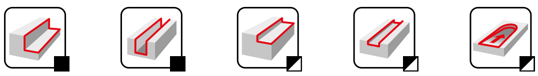
DORMER

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.







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

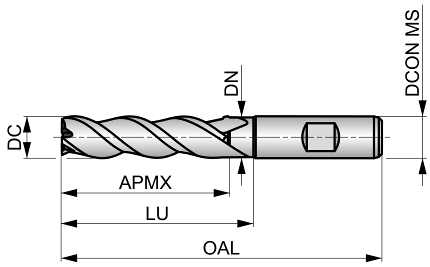
[1] Available in HSS-E only; no centre cutting.

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.

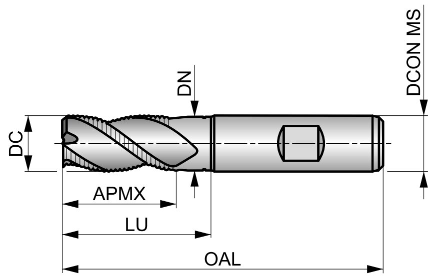
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C33310.0	10.00	10.00	45.00	95.0	3	54.50	9.50
C33312.0	12.00	12.00	53.00	110.0	3	64.50	11.50
C33314.0	14.00	12.00	53.00	110.0	3	64.50	11.50
C33316.0	16.00	16.00	63.00	123.0	3	74.50	15.50
C33318.0	18.00	16.00	63.00	123.0	3	74.50	15.50
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

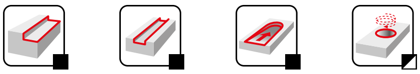
DORMER

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												

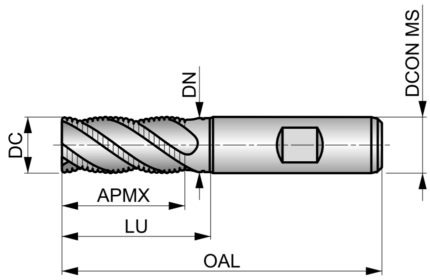
DCON MS tolerance h6.

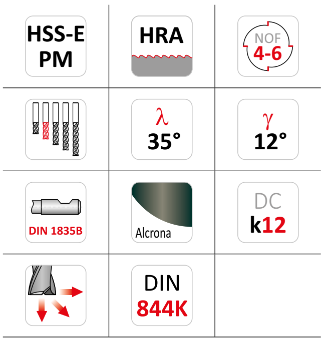
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C9226.0	6.00	6.00	13.00	57.0	3	–	–
C9227.0	7.00	10.00	16.00	66.0	3	–	–
C9228.0	8.00	10.00	19.00	69.0	3	–	–
C9229.0	9.00	10.00	19.00	69.0	3	–	–
C92210.0	10.00	10.00	22.00	72.0	3	31.50	9.50
C92211.0	11.00	12.00	22.00	79.0	3	–	–
C92212.0	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

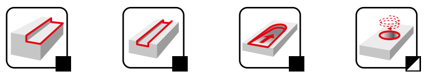
C428

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.







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.

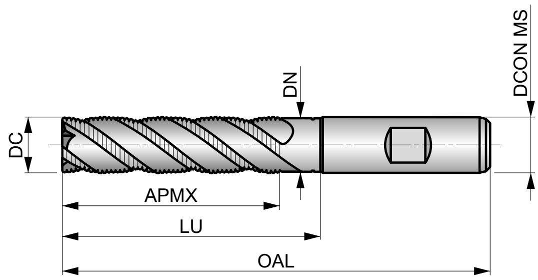
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C4286.0	6.00	6.00	13.00	57.0	4	–	–
C4287.0	7.00	10.00	16.00	66.0	4	–	–
C4288.0	8.00	10.00	19.00	69.0	4	–	–
C4289.0	9.00	10.00	19.00	69.0	4	–	–
C42810.0	10.00	10.00	22.00	72.0	4	31.50	9.50
C42811.0	11.00	12.00	22.00	79.0	4	–	–
C42812.0	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

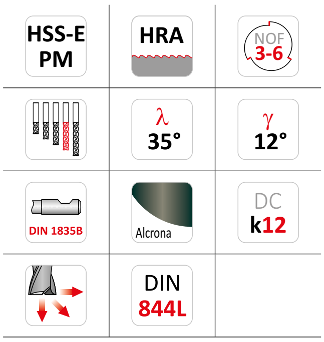
C492

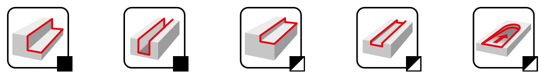
DORMER

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.







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.

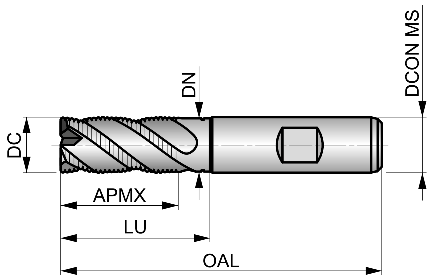
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C4926.0	6.00	6.00	24.00	68.0	3	–	–
C4928.0	8.00	10.00	38.00	88.0	3	–	–
C49210.0	10.00	10.00	45.00	95.0	4	54.50	9.50
C49212.0	12.00	12.00	53.00	110.0	4	64.50	11.50
C49214.0	14.00	12.00	53.00	110.0	4	64.50	11.50
C49216.0	16.00	16.00	63.00	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

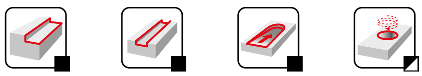
DORMER

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.

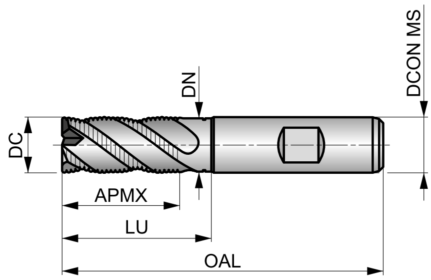
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C4076.0	6.00	6.00	13.00	57.0	4	–	–
C4077.0	7.00	10.00	16.00	66.0	4	–	–
C4078.0	8.00	10.00	19.00	69.0	4	–	–
C4079.0	9.00	10.00	19.00	69.0	4	–	–
C40710.0	10.00	10.00	22.00	72.0	4	31.50	9.50
C40711.0	11.00	12.00	22.00	79.0	4	–	–
C40712.0	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

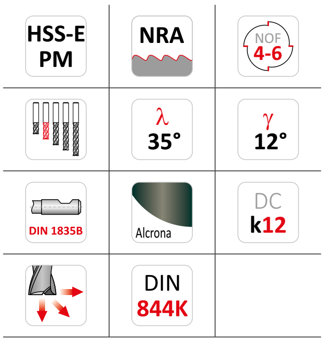
C908

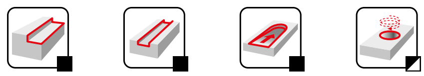
DORMER

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.







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.

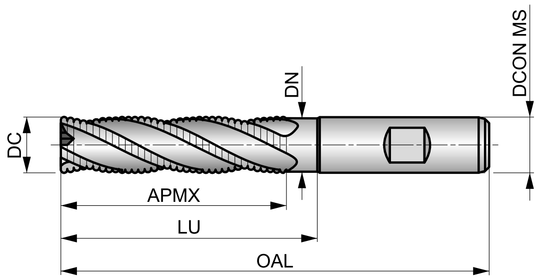
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C9086.0	6.00	6.00	13.00	57.0	4	–	–
C9087.0	7.00	10.00	16.00	66.0	4	–	–
C9088.0	8.00	10.00	19.00	69.0	4	–	–
C9089.0	9.00	10.00	19.00	69.0	4	–	–
C90810.0	10.00	10.00	22.00	72.0	4	31.50	9.50
C90811.0	11.00	12.00	22.00	79.0	4	–	–
C90812.0	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

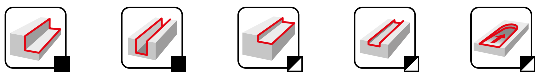
DORMER

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.

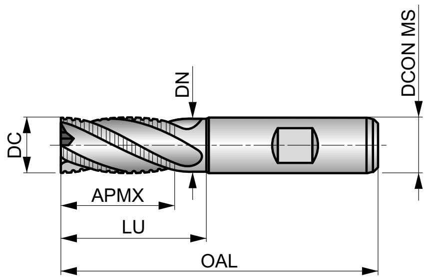
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C9486.0	6.00	6.00	24.00	68.0	4	–	–
C9488.0	8.00	10.00	38.00	88.0	4	–	–
C94810.0	10.00	10.00	45.00	95.0	4	54.50	9.50
C94812.0	12.00	12.00	53.00	110.0	4	64.50	11.50
C94814.0	14.00	12.00	53.00	110.0	4	64.50	11.50
C94816.0	16.00	16.00	63.00	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.

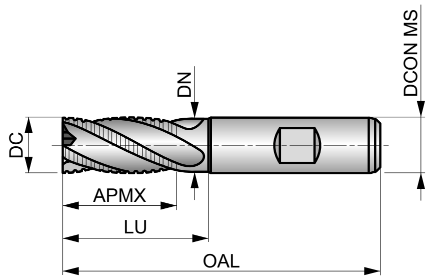
Product	DC [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C4006.0	6.00	6.00	13.00	57.0	4	–	–
C4008.0	8.00	10.00	19.00	69.0	4	–	–
C40010.0	10.00	10.00	22.00	72.0	4	–	–
C40012.0	12.00	12.00	26.00	83.0	4	–	–
C40014.0	14.00	12.00	26.00	83.0	4	37.50	11.50
C40016.0	16.00	16.00	32.00	92.0	4	43.50	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

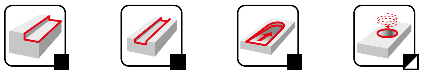
DORMER

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				

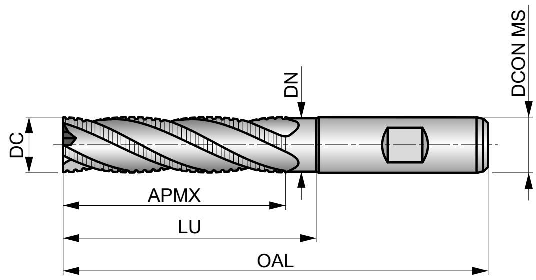
DCON MS tolerance h6.

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

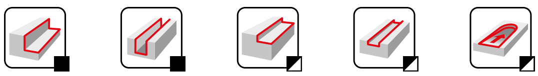
C403

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

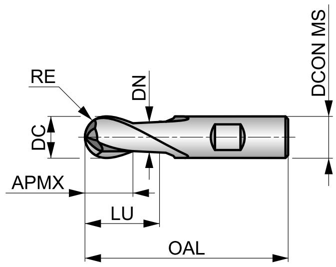
DCON MS tolerance h6.

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

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.

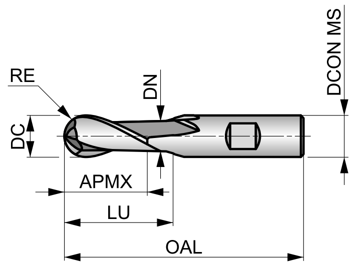
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C5002.0	2.00	1.00	6.00	4.00	48.0	2	–	–
C5003.0	3.00	1.50	6.00	5.00	49.0	2	–	–
C5004.0	4.00	2.00	6.00	7.00	51.0	2	–	–
C5005.0	5.00	2.50	6.00	8.00	52.0	2	–	–
C5006.0	6.00	3.00	6.00	8.00	52.0	2	–	–
C5007.0	7.00	3.50	10.00	10.00	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.

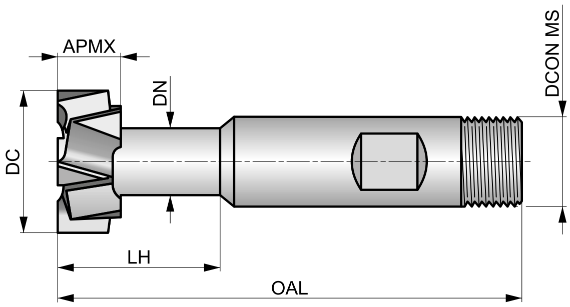
Product	DC [mm]	RE [mm]	DCON MS [mm]	APMX [mm]	OAL [mm]	NOF	LU [mm]	DN [mm]
C5053.0	3.00	1.50	6.00	8.00	52.0	2	–	–
C5054.0	4.00	2.00	6.00	11.00	55.0	2	–	–
C5055.0	5.00	2.50	6.00	13.00	57.0	2	–	–
C5056.0	6.00	3.00	6.00	13.00	57.0	2	–	–
C5058.0	8.00	4.00	10.00	19.00	69.0	2	–	–
C50510.0	10.00	5.00	10.00	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°	D B 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

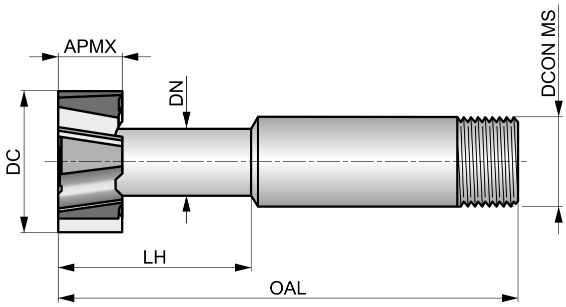
C810

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.

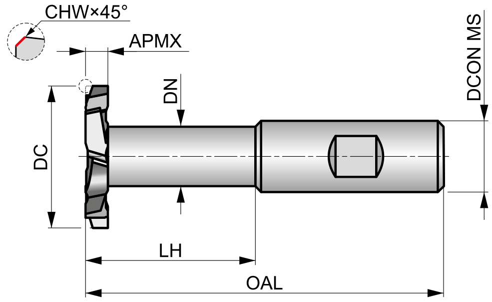
Product	APMX [inch]	APMX [mm]	DC [inch]	DC [mm]	T DIN650	DN [mm]	LH [mm]	OAL [mm]	DCONMS [inch]	DCON MS [mm]	NOF
C8106.0	–	6.00	–	12.50	6.0	5.00	17.0	57.0	–	10.00	6
C8108.0	–	8.00	–	16.00	8.0	7.00	21.0	61.0	–	10.00	6
C81010.0	–	8.00	–	18.00	10.0	8.00	25.0	65.0	–	12.00	6
C81012.0	–	9.00	–	21.00	12.0	10.00	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

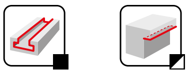
DORMER

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.

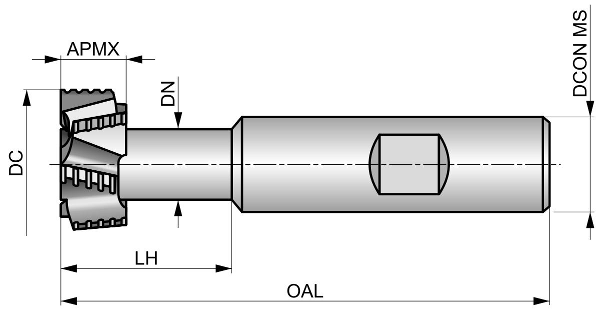
Product	APMX [mm]	DC [mm]	CHW [mm]	DN [mm]	LH [mm]	OAL [mm]	DCON MS [mm]	NOF
C8253.0X40.0	3.00	40.00	0.15	19.20	49.0	100.0	20.00	8
C8254.0X40.0	4.00	40.00	0.15	19.20	49.0	100.0	20.00	8
C8255.0X40.0	5.00	40.00	0.15	19.20	49.0	100.0	20.00	8
C8256.0X40.0	6.00	40.00	0.15	19.20	49.0	100.0	20.00	8
C8258.0X40.0	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.

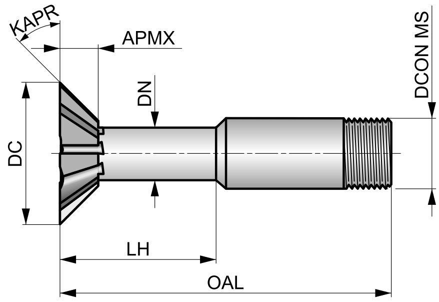
Product	APMX [mm]	DC [mm]	T DIN650	DN [mm]	LH [mm]	OAL [mm]	DCON MS [mm]	NOF
C80116.0X8.0	8.00	16.00	8	7.00	18.0	62.0	10.00	6
C80118.0X10.0	8.00	18.00	10	8.00	21.0	70.0	12.00	6
C80121.0X12.0	9.00	21.00	12	10.00	25.0	74.0	12.00	6
C80125.0X14.0	11.00	25.00	14	12.00	28.0	82.0	16.00	8
C80132.0X18.0	14.00	32.00	18	15.00	36.0	90.0	16.00	8

C837

DORMER

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.

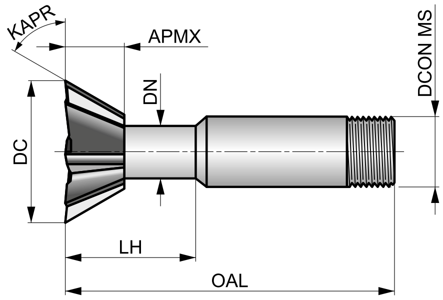
Product	KAPR [°]	APMX [mm]	DC [inch]	DC [mm]	DN [mm]	LH [mm]	OAL [mm]	DCONMS [inch]	DCON MS [mm]	NOF
C83713.0	45	3.00	–	13.00	4.75	19.5	63.5	–	12.00	6
C8375/8 [1]	45	4.00	5/8	15.88	6.35	21.5	66.5	1/2	12.70	6
C83716.0	45	4.00	–	16.00	6.35	21.5	66.5	–	12.00	6
C83719.0	45	5.50	–	19.00	6.35	21.5	66.5	–	12.00	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

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 [mm]	DC [inch]	DC [mm]	DN [mm]	LH [mm]	OAL [mm]	DCONMS [inch]	DCON MS [mm]	NOF
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

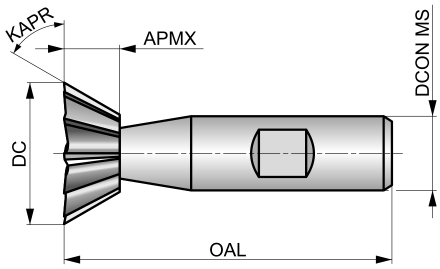
[1] Standard - BS 122/4.

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.

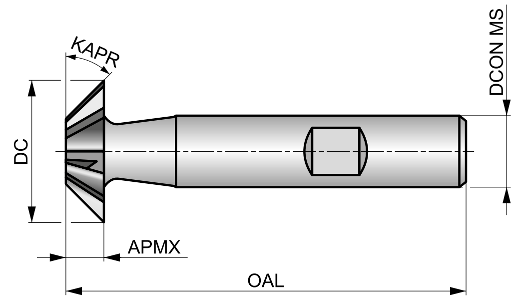
Product	KAPR [°]	APMX [mm]	DC [mm]	OAL [mm]	DCON MS [mm]	NOF
C83012.0X45	45	3.50	12.00	54.0	10.00	10
C83016.0X45	45	4.00	16.00	60.0	12.00	10
C83020.0X45	45	5.00	20.00	63.0	12.00	10
C83025.0X45	45	6.30	25.00	67.0	12.00	10
C83032.0X45	45	8.00	32.00	71.0	16.00	12
C83012.0X60	60	5.00	12.00	54.0	10.00	10
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

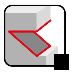
DORMER

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

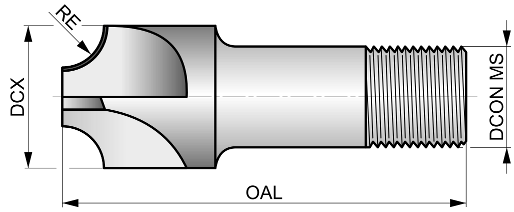
DCON MS tolerance h6.

Product	KAPR [°]	APMX [mm]	DC [mm]	OAL [mm]	DCON MS [mm]	NOF
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

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.

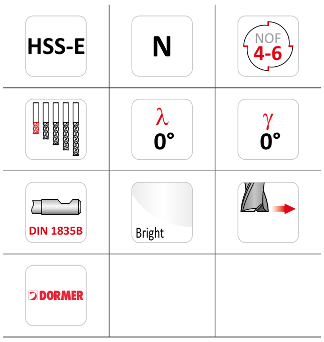
Product	RE [inch]	DCX [inch]	DCONMS [inch]	DCON MS [mm]	OAL [mm]	NOF
C7101/16	1/16	3/8	3/8	9.53	60.5	4
C7101/8	1/8	1/2	1/2	12.70	60.5	4
C7105/32	5/32	9/16	1/2	12.70	60.5	4
C7103/16	3/16	5/8	5/8	15.88	60.5	4
C7101/4	1/4	7/8	5/8	15.88	63.5	4
C7103/8	3/8	1.1/16	1”	25.40	76.0	4
C7101/2	1/2	1.3/8	1”	25.40	82.5	4

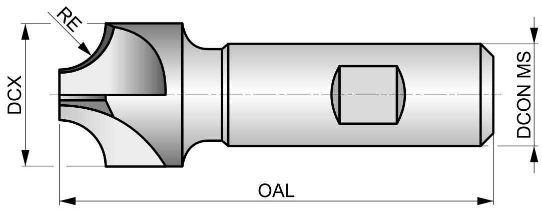
C700

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.





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	

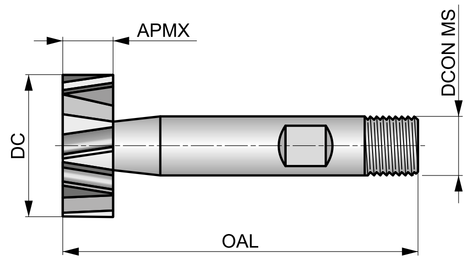
DCON MS tolerance h6.

Product	RE [mm]	DCX [mm]	DCON MS [mm]	OAL [mm]	NOF
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

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°	D B 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.

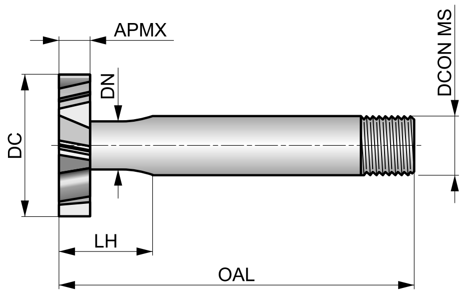
Product	APMX [mm]	DC [mm]	OAL [mm]	DCON MS [mm]	NOF
C8224.5X1.0	1.00	4.50	50.0	6.00	6
C8227.5X1.5	1.50	7.50	50.0	6.00	6
C8227.5X2.0	2.00	7.50	50.0	6.00	6
C82210.5X2.0	2.00	10.50	50.0	6.00	8
C82210.5X2.5	2.50	10.50	50.0	6.00	8
C82210.5X3.0	3.00	10.50	50.0	6.00	8
C82213.5X3.0	3.00	13.50	56.0	10.00	8
C82213.5X4.0	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 [inch]	APMX [mm]	DC [inch]	DC [mm]	DN [mm]	LH [mm]	OAL [mm]	DCONMS [inch]	DCON MS [mm]	NOF
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

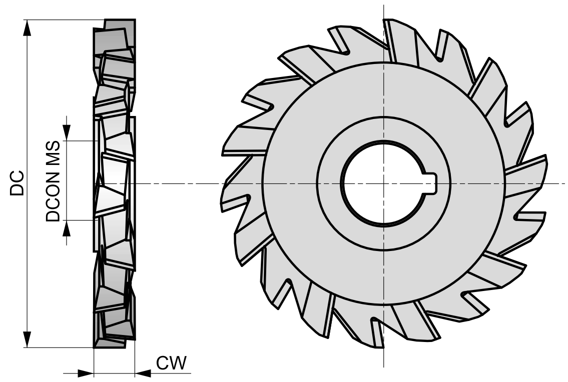
[1] Standard - BS 122/4.

D200

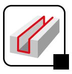
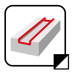
DORMER

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

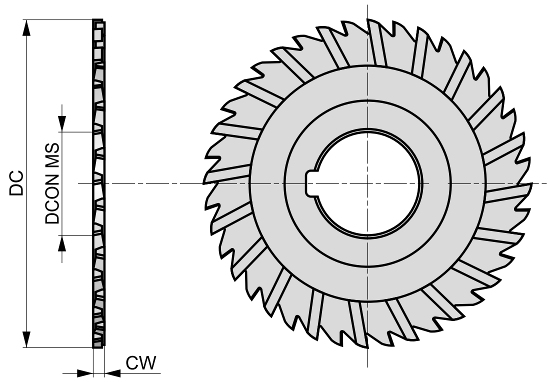
Product	DC [mm]	CW [mm]	DCON MS [mm]	NOF
D20050.0X4.0	50.00	4.0	16.00	16
D20050.0X5.0	50.00	5.0	16.00	16
D20063.0X6.0	63.00	6.0	22.00	18
D20063.0X8.0	63.00	8.0	22.00	18
D20080.0X6.0	80.00	6.0	27.00	20
D20080.0X8.0	80.00	8.0	27.00	20
D20080.0X10.0	80.00	10.0	27.00	18
D200100.0X8.0	100.00	8.0	32.00	22
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

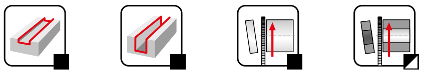
DORMER

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.

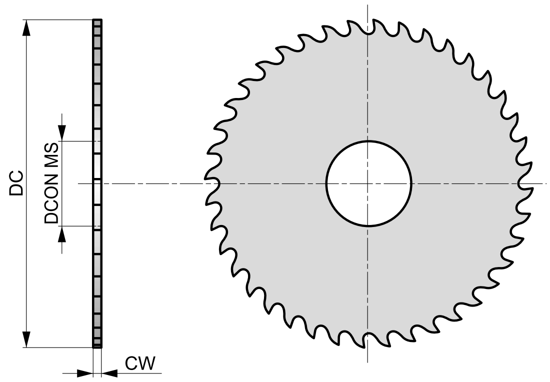
P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■46 X	■52 X	■54 X	■40 X	■35 X	■31 X	■29 X	■24 X	■20 X	■18 X	■15 X	■12 X	■41 X	■35 X
M2.1	M2.2	M3.1	M3.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2
■37 X	■30 X	■23 X	■20 X	■18 X	■10 X	■30 X	■22 X	■17 X	■49 X	■40 X	■32 X	■44 X	■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

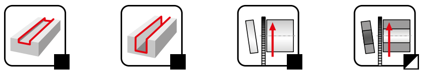
D745

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

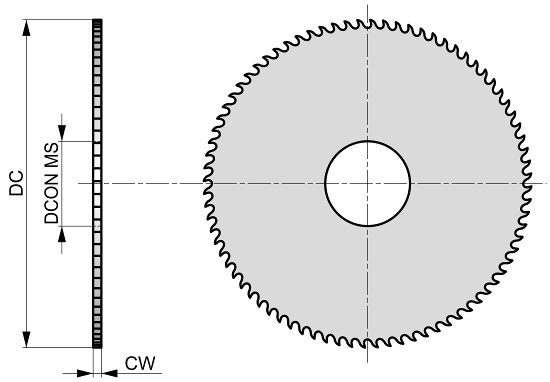
Product	DC [mm]	CW [mm]	DCON MS [mm]	NOF
D745100.0X2.5	100.00	2.5	22.00	48
D745100.0X3.0	100.00	3.0	22.00	40
D745100.0X4.0	100.00	4.0	22.00	40
D745125.0X1.0	125.00	1.0	22.00	80
D745125.0X1.2	125.00	1.2	22.00	64
D745125.0X1.5	125.00	1.5	22.00	64
D745125.0X1.6	125.00	1.6	22.00	64
D745125.0X2.0	125.00	2.0	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

⏮

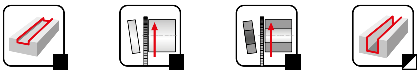
D747

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

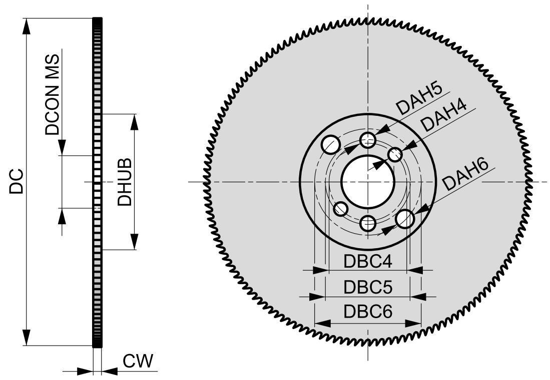
Product	DC [mm]	CW [mm]	DCON MS [mm]	NOF
D74750.0X1.6	50.00	1.6	13.00	64
D74750.0X2.0	50.00	2.0	13.00	64
D74750.0X2.5	50.00	2.5	13.00	64
D74750.0X3.0	50.00	3.0	13.00	48
D74763.0X.5	63.00	0.5	16.00	128
D74763.0X.6	63.00	0.6	16.00	100
D74763.0X.8	63.00	0.8	16.00	100
D74763.0X1.0	63.00	1.0	16.00	100
D74763.0X1.2	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

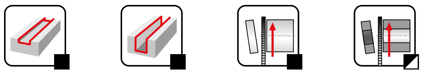
DORMER

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.



HSS | 110-180 NOF | γ 18° | ST | 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	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							

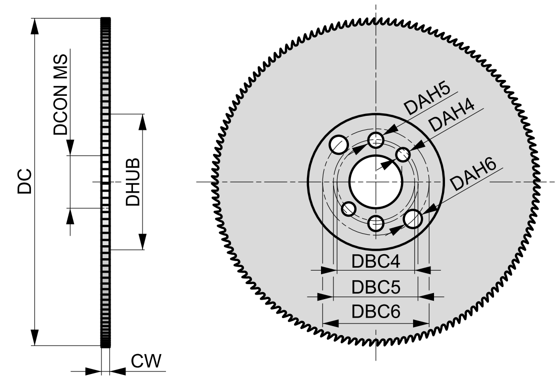
Product	DC [mm]	CW [mm]	DCON MS [mm]	NOF	P [mm]	DHUB [mm]	DAH4 [mm]	DBC4 [mm]	DAH5 [mm]	DBC5 [mm]	DAH6 [mm]	DBC6 [mm]
D752250.0X2.0X128	250.00	2.0	32.00	128	6	100	8	45	9	50	11	63
D752275.0X2.5X110	275.00	2.5	32.00	110	8	100	8	45	9	50	11	63
D752300.0X2.5X160	300.00	2.5	32.00	160	6	100	8	45	9	50	11	63
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

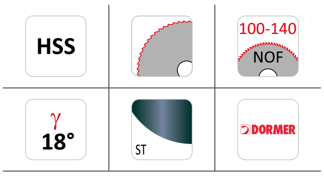
D753

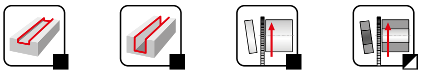
DORMER

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.

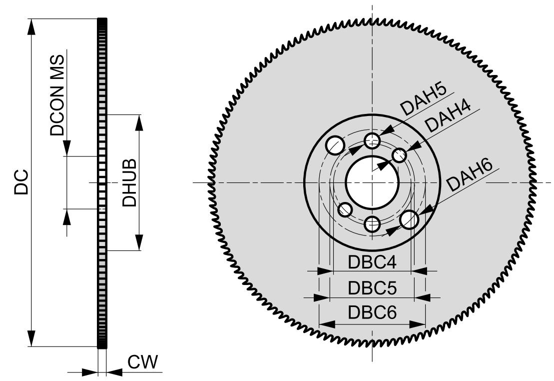
P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2
■ 40 Q	■ 45 Q	■ 46 Q	■ 34 Q	■ 30 Q	■ 29 P	■ 24 P	■ 18 P	◩ 14 P	◩ 12 P	◩ 12 P	◩ 10 P	◩ 12 P	◩ 10 P
K1.1	K1.2	K1.3	K2.1	K2.2	K3.1	K3.2	K4.1	K4.2	K5.1	K5.2	N1.1	N1.2	N1.3
■ 40 Q	■ 30 Q	■ 22 Q	■ 37 Q	■ 30 Q	■ 33 Q	■ 25 Q	■ 30 P	■ 23 P	■ 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							

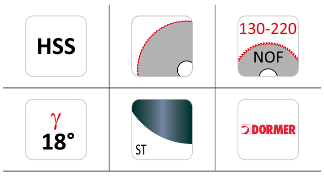
Product	DC [mm]	CW [mm]	DCON MS [mm]	NOF	P [mm]	DHUB [mm]	DAH4 [mm]	DBC4 [mm]	DAH5 [mm]	DBC5 [mm]	DAH6 [mm]	DBC6 [mm]
D753250.0X2.0	250.00	2.0	32.00	100	8	100	8	45	9	50	11	63
D753300.0X2.5	300.00	2.5	32.00	120	8	100	8	45	9	50	11	63
D753315.0X2.5	315.00	2.5	32.00	120	8	100	8	45	9	50	11	63
D753350.0X2.5	350.00	2.5	32.00	140	8	120	8	45	9	50	11	63

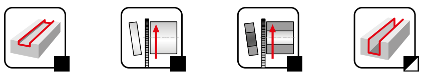
D750

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.

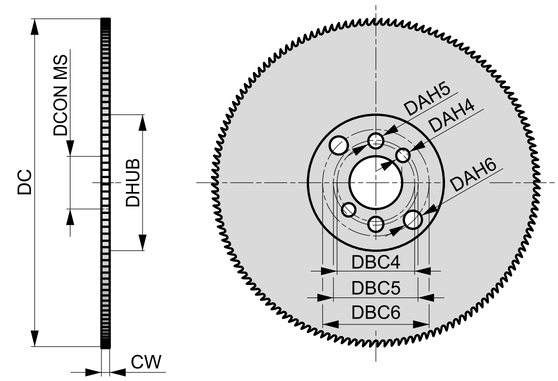
P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2
■ 40 Q	■ 45 Q	■ 46 Q	■ 34 Q	■ 30 Q	■ 29 P	■ 24 P	■ 18 P	◪ 14 P	◪ 12 P	◪ 12 P	◪ 10 P	◪ 12 P	◪ 10 P
K1.1	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K3.1**	**K3.2**	**K4.1**	**K4.2**	**K5.1**	**K5.2**	**N1.1**	**N1.2**	**N1.3**
■ 40 Q	■ 30 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							

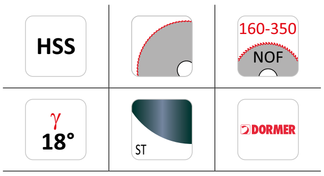
Product	DC [mm]	CW [mm]	DCON MS [mm]	NOF	P [mm]	DHUB [mm]	DAH4 [mm]	DBC4 [mm]	DAH5 [mm]	DBC5 [mm]	DAH6 [mm]	DBC6 [mm]
D750200.0X1.8	200.00	1.8	32.00	130	5	100	8	45	9	50	11	63
D750225.0X2.0	225.00	2.0	32.00	140	5	100	8	45	9	50	11	63
D750250.0X2.0	250.00	2.0	32.00	160	5	100	8	45	9	50	11	63
D750275.0X2.5	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

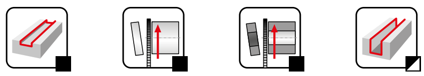
D751

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.

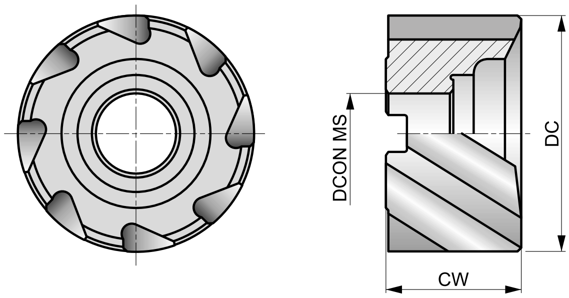
P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2
■ 40 Q	■ 45 Q	■ 46 Q	■ 34 Q	■ 30 Q	■ 29 P	■ 24 P	■ 18 P	◩ 14 P	◩ 12 P	◩ 12 P	◩ 10 P	◩ 12 P	◩ 10 P
K1.1	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K3.1**	**K3.2**	**K4.1**	**K4.2**	**K5.1**	**K5.2**	**N1.1**	**N1.2**	**N1.3**
■ 40 Q	■ 30 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

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

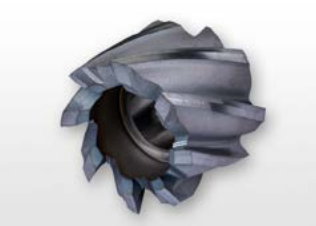
Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

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

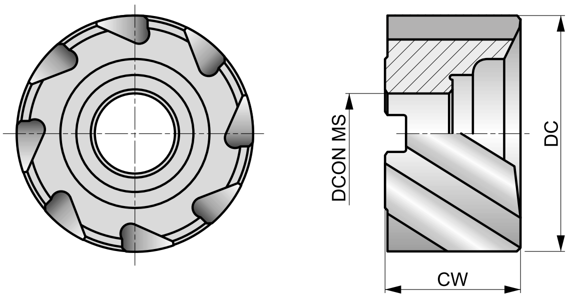
D420

DORMER

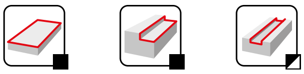


HSS-E Shell Cutter, TiCN Coating

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												

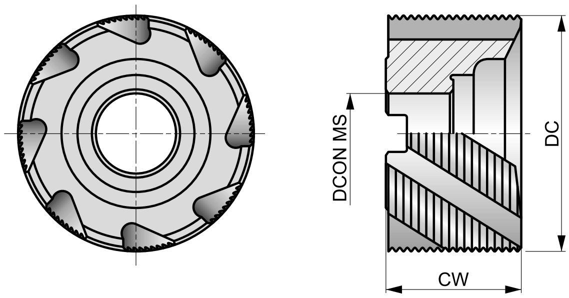
Product	DC [mm]	CW [mm]	DCON MS [mm]	NOF
D42040.0	40.00	32.0	16.00	8
D42050.0	50.00	36.0	22.00	8
D42063.0	63.00	40.0	27.00	8

D402

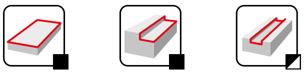
DORMER

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



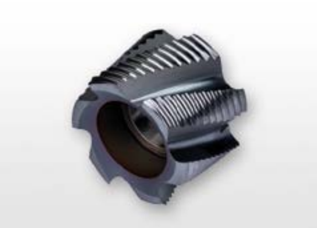
Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

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

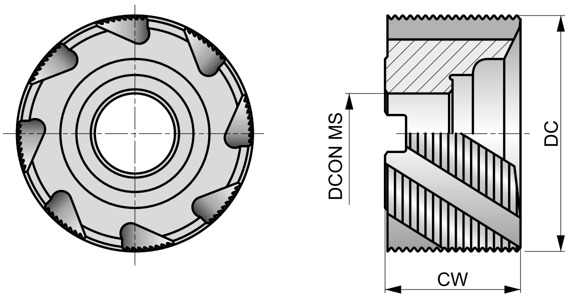
D422

DORMER

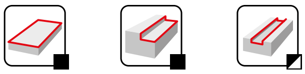


HSS-E Roughing Shell Cutter, TiCN Coating

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

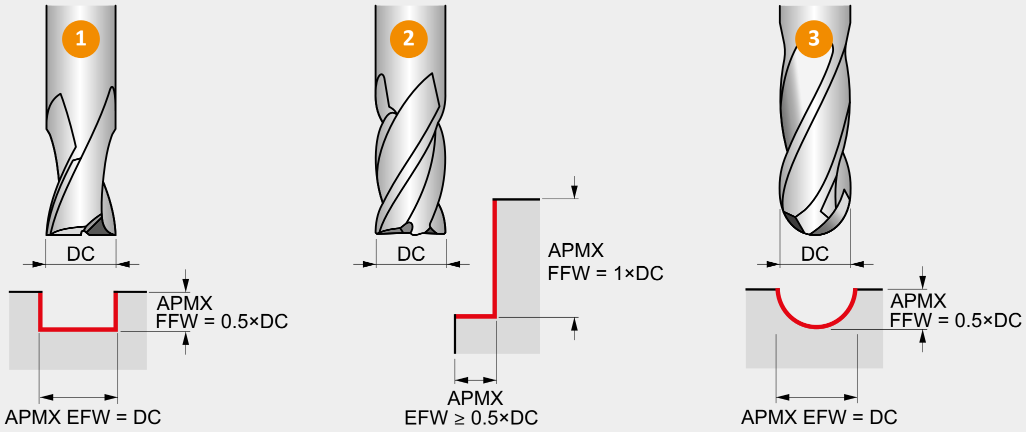


Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 194.

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):

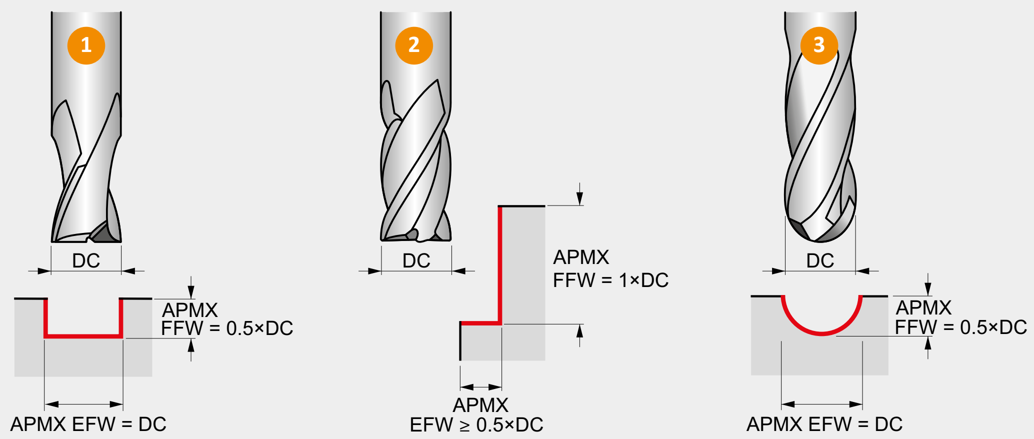
1. Find your Alpha Code on the product page (example: 48C, "C" is the Alpha Code).
2. Find the closest diameter for your cutting application in the top row of the table.
3. Find your Alpha Code in the left column of the table.
4. The intersection (cell) of the Diameter and Alpha Code is the feed per 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
Feed rates		.0625	.0938	.1250	.1563	.1875	.2188	.2500	.3125	.3750	.4375	.5000	.5625	.6250	.7500	.8750	1,0000	1,1250	1,2500	1,5000
	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)

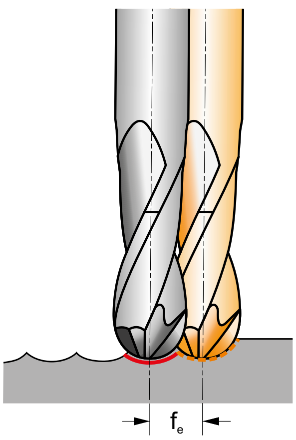
Correction factors for cutting speed v_c for plain copy milling at different depths of cut.

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

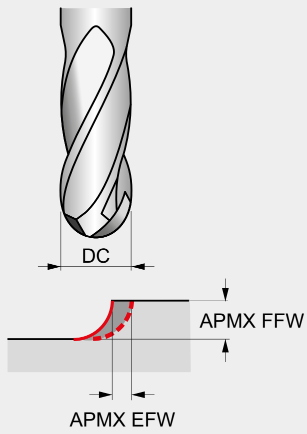
Line offset f_e (step-over distance) for achieving a theorectical surface roughness R_{th}.

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 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:

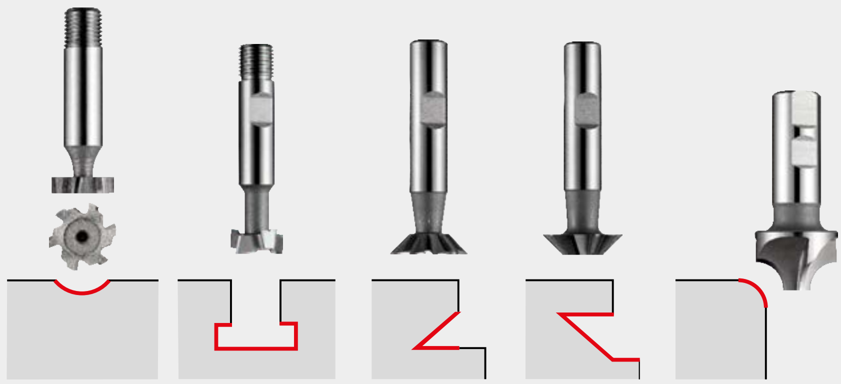
1. Applying an 8 mm ball nose cutter with a depth of cut of 0.8 mm (APMX FFW), the aim is to achieve a theoretical surface roughness of 32 µm.
2. The correction factor for cutting speed with an axial immersion of 10% = 1.67 can be found in table 3a.
3. The step-over distance for a R_{th} of 32 µm = 1.01 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.

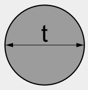
		ø DC [mm]															
		10.00	**12.00**	**16.00**	**20.00**	**25.00**	**32.00**	**38.00**	**50.00**	**63.00**	**80.00**	**100.00**	**125.00**	**160.00**	**200.00**	**300.00**	**350.00**
Feed rates	**P**	–	–	–	–	–	0.200	–	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
	Q	–	–	–	–	–	0.040	–	0.040	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

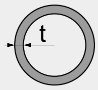
Tooth pitch choices for slitting saws D750, D751, D752, D753

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

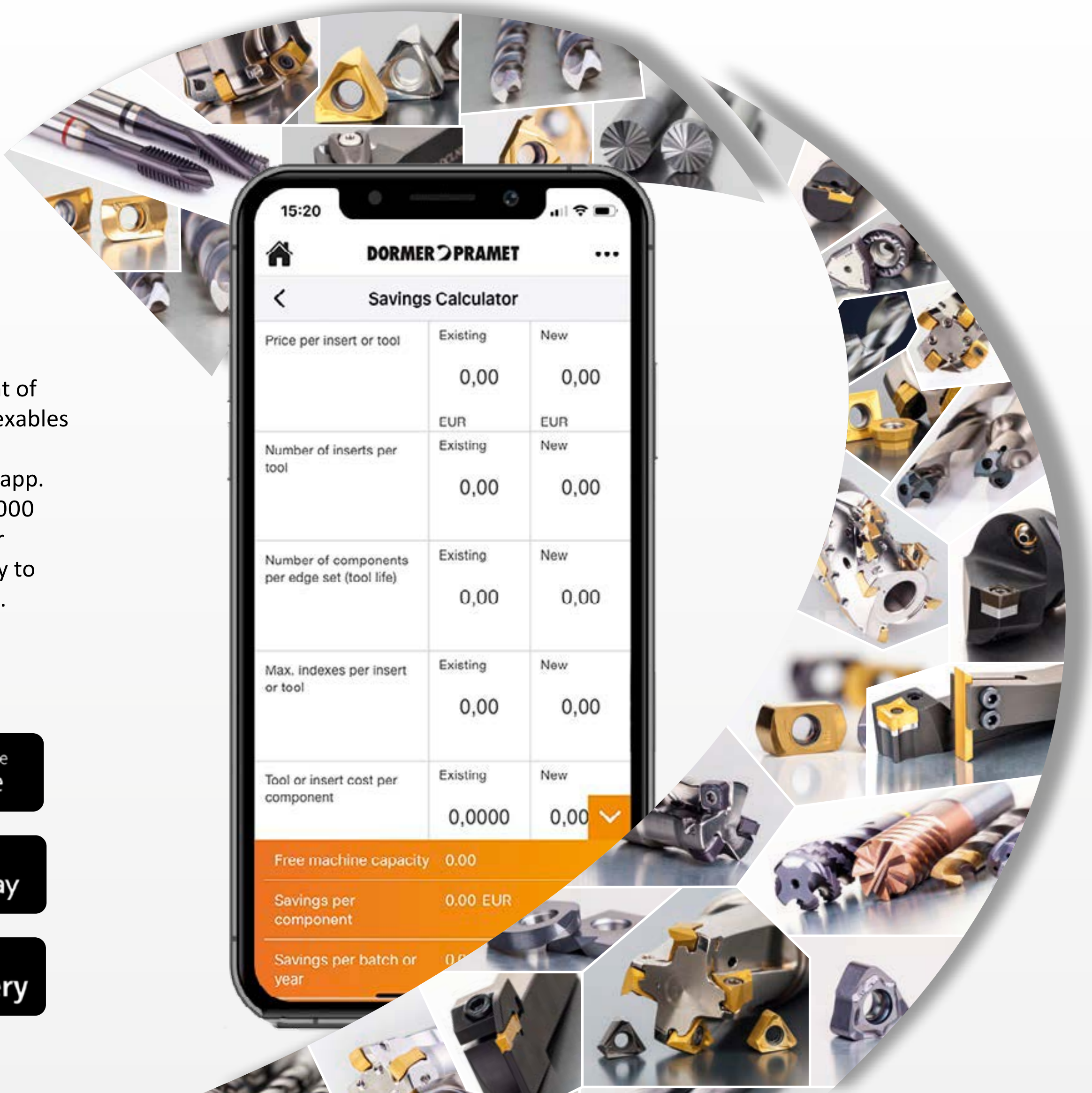


Wall Thickness (t)	Saw Pitch (P) 2,5	3	4	5	6	8
1		P M	N K			
1,5			P M	N K		
2				P M	N K	
3					P M	N K
> 4					P M	N K

- 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



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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	Bright finish (uncoated surface) improves chip flow in soft or non-ferrous materials and maintains sharp cutting edges in abrasive materials.
Steam Tempering	ST	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.

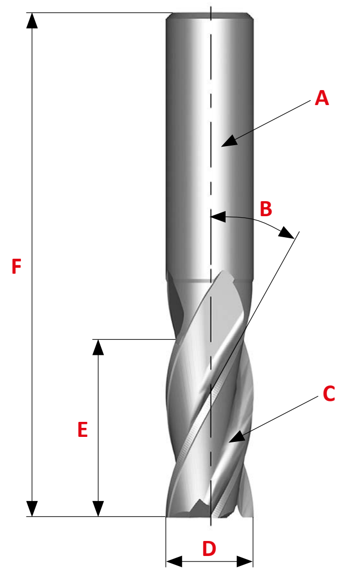
Surface Coatings

Titanium Carbon Nitride Coating (TiCN)	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)	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)	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)	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	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.

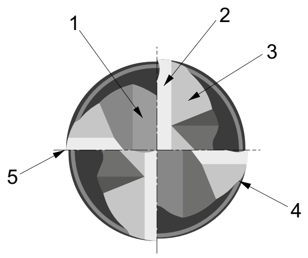
Surface treatment / Coating properties examples

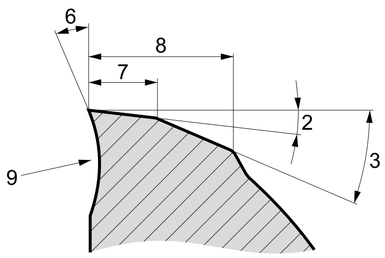
Surface Treaments	Color	Coating material	Hardness [HV]	Thickness [µm]	Coating structure	Frict. coeff. against steel	Max. appl. temp. [°C]
ST	Dark grey	Fe_3O_4	400	max. 5	Conversion into the surface	–	550
TiCN	Blue grey	TiCN	3000	1 – 4	Multi-layer gradient	0.4	500
TiAlN	Black grey	TiAlN	3300	3	Nano structured	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)

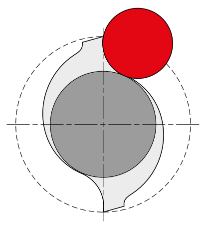
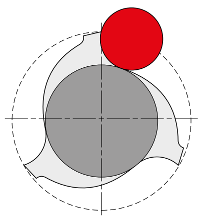
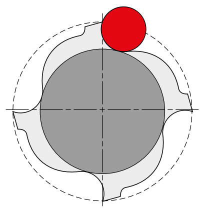




- **1** Gash
- **2** Primary Relief Angle
- **3** Secondary Relief Angle
- **4** Heel
- **5** Cutting Edge
- **6** Rake Angle
- **7** Width of Primary Relief Land
- **8** Width of Secondary Relief Land
- **9** Undercut Face

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

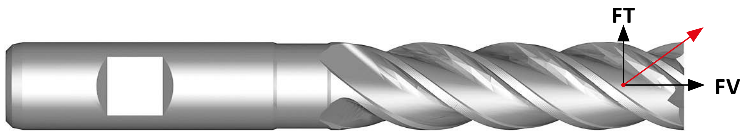
2 Flutes	3 Flutes	4 Flutes (or multi-flutes)
		
LOW ←	DEFLECTION STRENGTH	→ HIGH
BIG ←	CHIP SPACE	→ SMALL
• Large chip space. • Easy chip ejection. • Good for slot milling. • Good for heavy duty milling. • Less rigidity due to small section area. • Lower quality surface finish	• Chip space almost as 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.

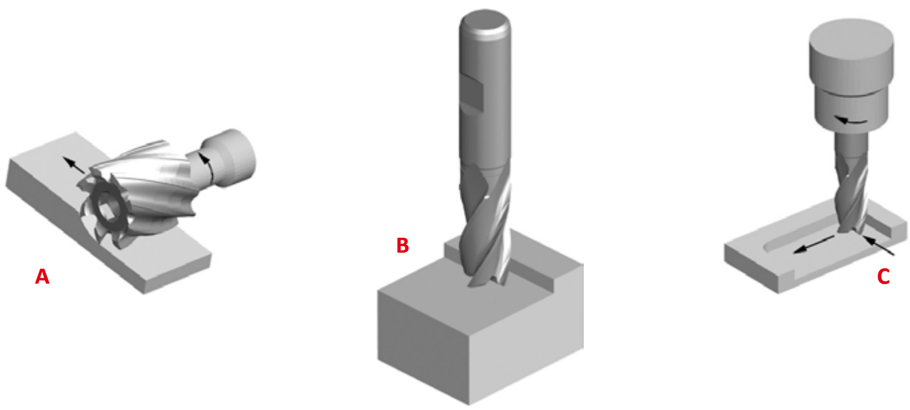


General hints on milling

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.

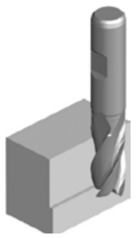
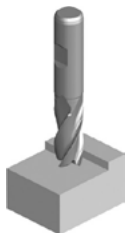
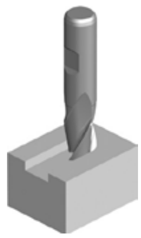
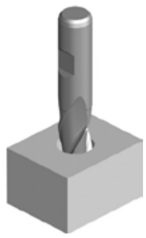
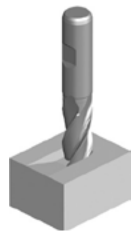
In face milling, the cutter is mounted on a spindle with an axis of rotation perpendicular to the workpiece surface. The milled surface results from the action of cutting edges located on the periphery and face of the cutter.

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.

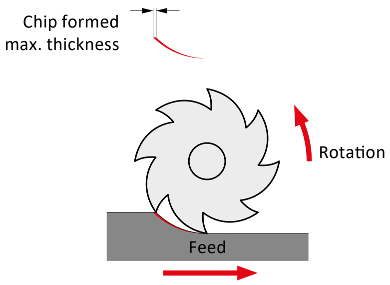
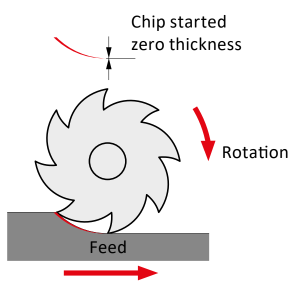
The recent Dormer catalogue was produced with simple icons that show the different applications.

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

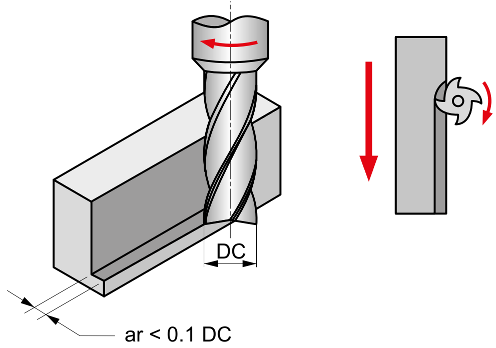
Types Of Cuts

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.

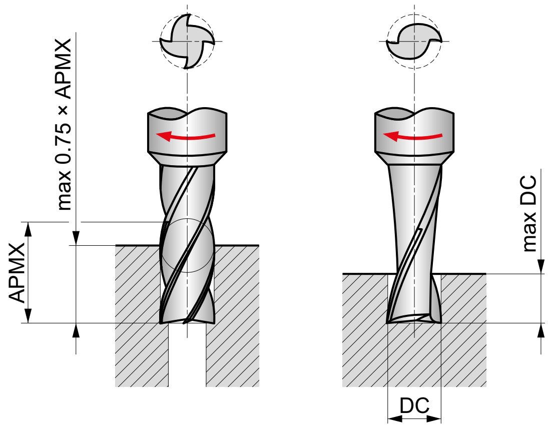
PERIPHERAL (CYLINDRICAL, SLAB) MILLING

Peripheral Milling The milling of a surface which is parallel to the end mill axis.



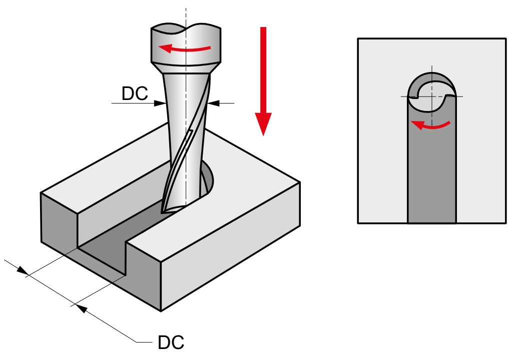
The radial depth of cut should be less than 0.1 of the diameter of the mill: ar < 0.1 ***DC***.

Plunge Milling The direct movement between the workpiece and the centre line of the end mill when the end mill sinks directly into the work-piece.



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.

OPERATING FORMULAS

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	[m/min]	**Cutting speed**	SFM	[ft/min]	
$V_c = \frac{n \times DC \times \pi}{1000}$	n	[rev/min]	**Spindle speed**	RPM	[rev/min]	$SFM = \frac{RPM \times DC \times \pi}{12}$
	V_f	[mm/min]	**Feed rate**	IPM	[in/min]	
$n = \frac{v_c \times 1000}{DC \times \pi}$	f_z	[mm/z]	**Feed per tooth**	IPT	[in/T]	$RPM = \frac{SFM \times 12}{DC \times \pi}$
$V_f = f_z \times z \times n$	DC	[mm]	**Cutting diameter**	DC	[in]	$IPM = IPT \times T \times RPM$
$f_z = \frac{V_f}{z \times n}$	z	[–]	**Number of teeth**	T	[–]	$IPT = \frac{IPM}{T \times RPM}$
	$APMX\ FFW$	[mm]	**Depth of cut**	DOC	[in]	
$Q = \frac{V_f \times APMX\ FFW \times APMX\ EFW}{1000}$	$APMX\ EFW$	[mm]	**Width of cut**	WOC	[in]	$MRR = IPM \times DOC \times WOC$
	Q	[cm^3/min]	**Metal removal rate**	MRR	in^3/min	

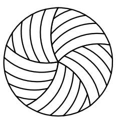
Problem	Solution	
Chipping of the Cutting Edge	• Try air blow or coolant • Reduce depth of cut • Check amount of wear on collet • Reduce feed per tooth • If wet cutting, change to dry cutting	• Check tool runout • Improve the stability of the work-holding
Extreme Flank Wear	• Use coated end mill • If 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	

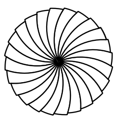
ROTARY BURRS


ST

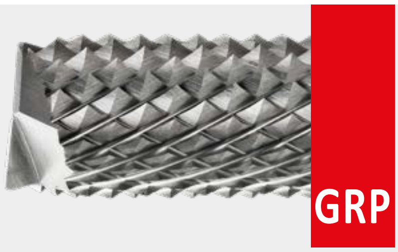

VA

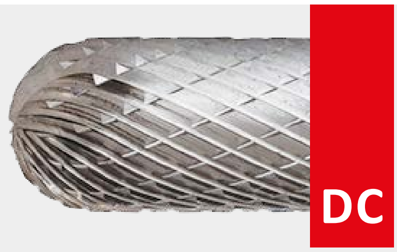

AL



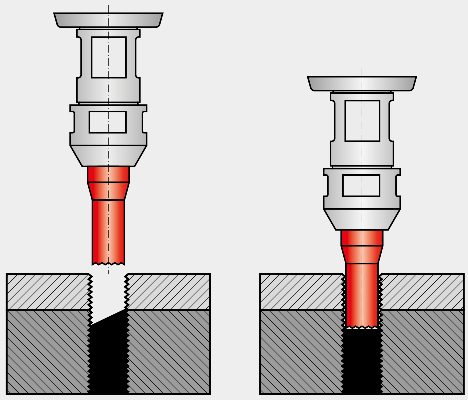



AS

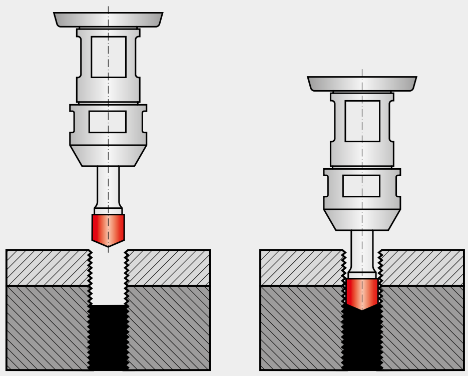

GRP


DC

1

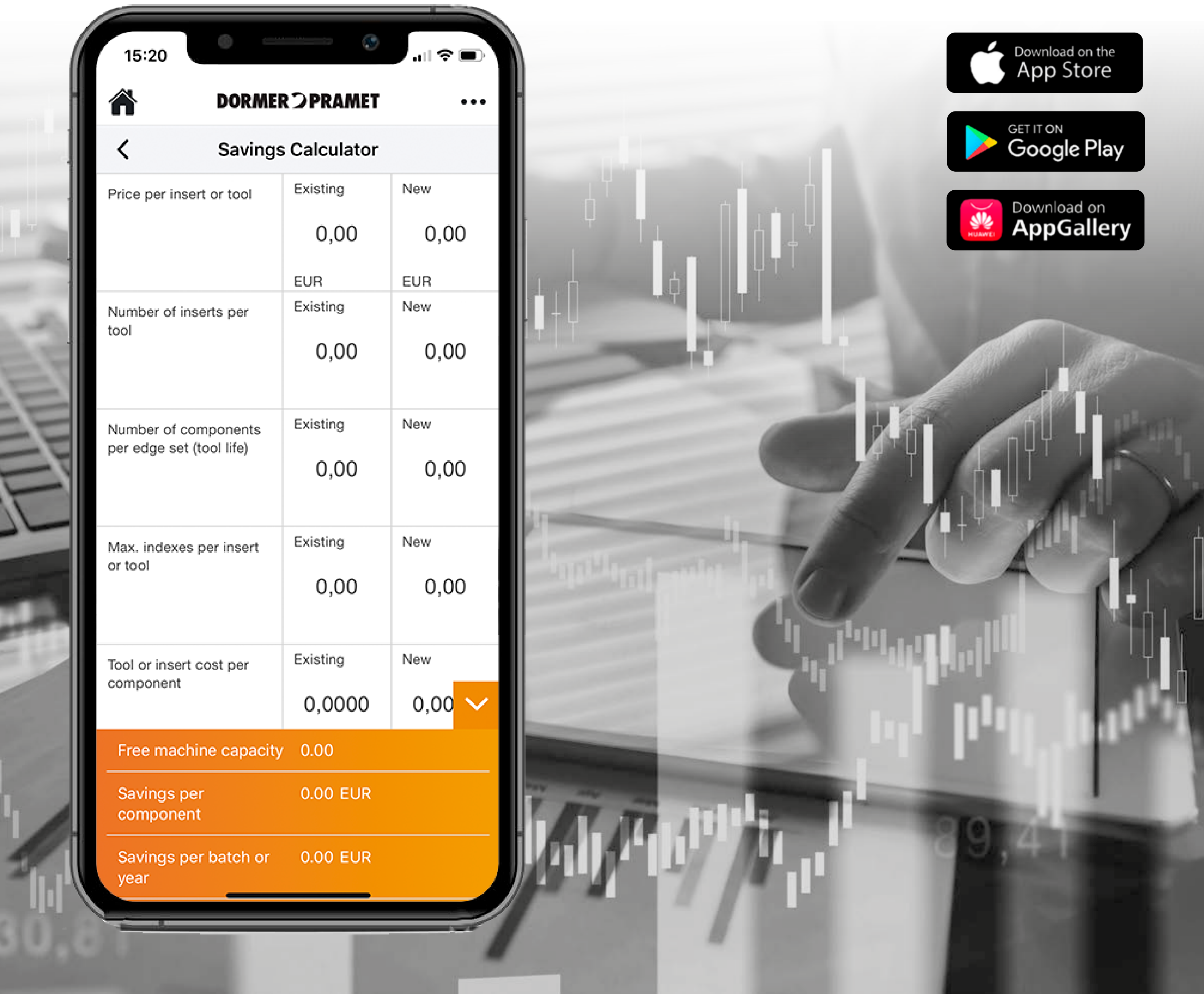


2



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.**



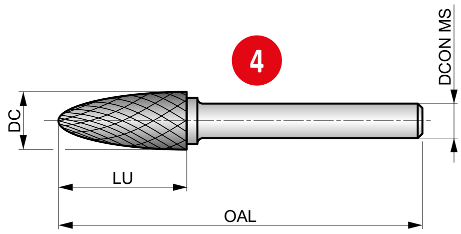
1 **P811**

DORMER

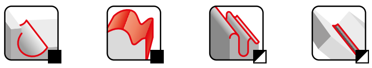
3

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.



HM	F	Bright
DC	5 DORMER	



6

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

General Icons

■	Primary use
◪	Possible use

Material Code (BMC)

HM	Hard Material (Solid Carbide)

Burr Shape

A	Cylinder Shape without endcut	F	Ball Nosed Tree Shape	L	Ball Nosed Cone Shape
B	Cylinder Shape with endcut	G	Pointed Tree Shape	M	Cone Shape
C	Ball Nosed Cylinder Shape	H	Flame Shape	N	Inverted Cone Shape
D	Ball Shape	J	60° Countersink Shape		
E	Oval Shape	K	90° Countersink 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

Application Angle

60°	60° Countersink
90°	90° Countersink
135°	Drill Point 135°
180°	Drill Point 180°
150°	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	Dormer Standards

Operations Deburring

	Deburring - Bolt removal operation 1
	Deburring - Bolt removal operation 2
	Closed groove deburring and carving
	Composite fibre routing
	Curved surface deburring and carving
	Fillet radii deburring
	Free hand deburring and carving
	Chamfer deburring
	Inverted back deburring
	Plain surface deburring
	Shoulder 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.

Surface Treatments

Bright (uncoated)	Bright	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)	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.

		P801	P801C	P803	P803C	P805	P805C	P807	P807C	P809	P811	P811C	P813	P813C
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

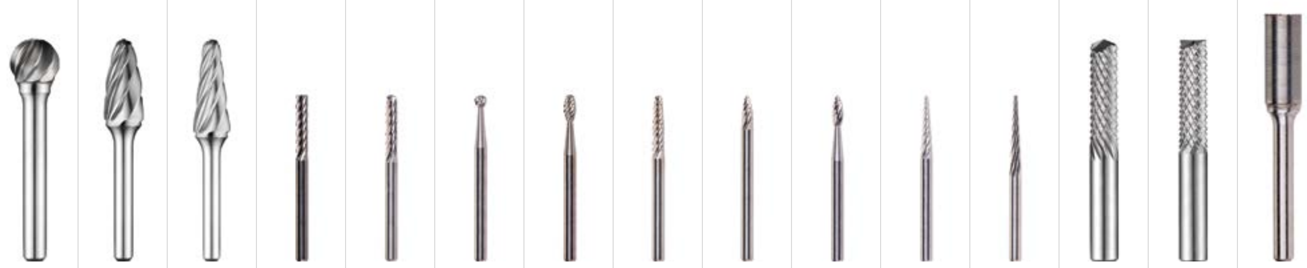
	P815	P815C	P817	P819	P821	P821C	P823	P825	P701	P703	P705	P707	P709	P711	P713
	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM
	H	H	J	K	L	L	M	N	A	B	C	D	E	F	G
	Bright	TiAlN	Bright	Bright	Bright	TiAlN	Bright	Bright	Bright	Bright	Bright	Bright	Bright	Bright	Bright
			60°	90°											
	DC	DC	DC	DC	DC	DC	DC	DC	ST	ST	ST	ST	ST	ST	ST
	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

		P715	P721	P601	P605	P607	P609	P611	P613	P615	P621	P831	P833	P835
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
	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

	P101	P880	P890
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

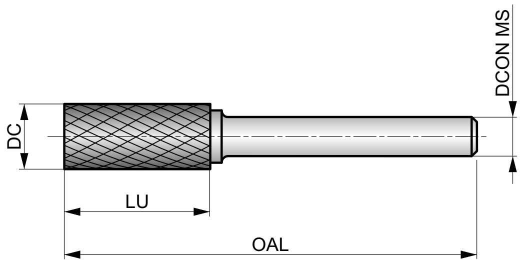
ISO		RPM DC [mm]
		3
S	min	60 000
	max	80 000

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												
■	■												

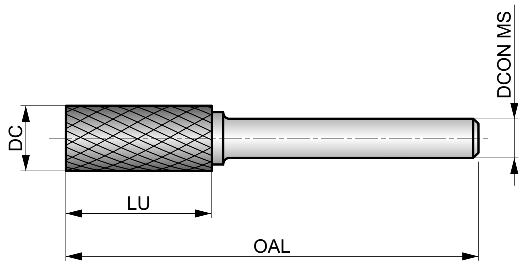
DC≤6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.
Products from this series are also available in set. Please see P880.

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

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.

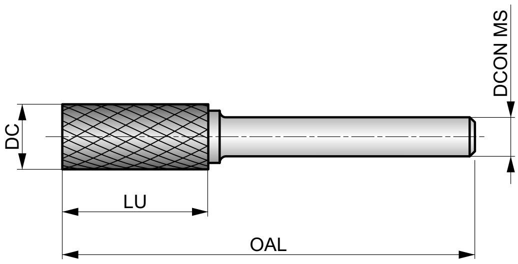
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P801C3.0X3.0	3.00	3.00	14.00	38.0
P801C6.0X6.0	6.00	6.00	18.00	50.0
P801C8.0X6.0	8.00	6.00	19.00	64.0
P801C9.6X6.0	9.60	6.00	19.00	64.0
P801C12.7X6.0	12.70	6.00	25.00	70.0

P803

DORMER

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 | DC | Bright

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.

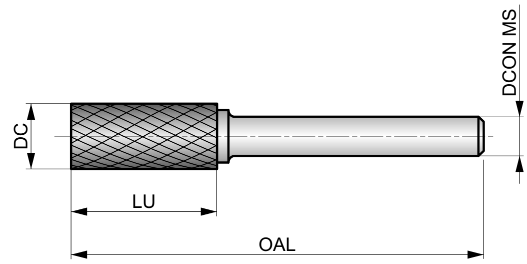
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P8033.0X3.0	3.00	3.00	14.00	38.0
P8036.3X3.0	6.30	3.00	12.70	45.0
P8036.0X6.0	6.00	6.00	18.00	50.0
P8038.0X6.0	8.00	6.00	19.00	64.0
P8039.6X6.0	9.60	6.00	19.00	64.0
P80312.7X6.0	12.70	6.00	25.00	70.0
P80316.0X6.0	16.00	6.00	25.00	70.0

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 | DC | TiAlN | 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.

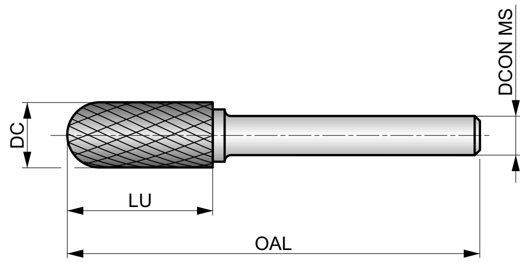
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P803C3.0X3.0	3.00	3.00	14.00	38.0
P803C6.0X6.0	6.00	6.00	18.00	50.0
P803C8.0X6.0	8.00	6.00	19.00	64.0
P803C9.6X6.0	9.60	6.00	19.00	64.0
P803C12.7X6.0	12.70	6.00	25.00	70.0

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.

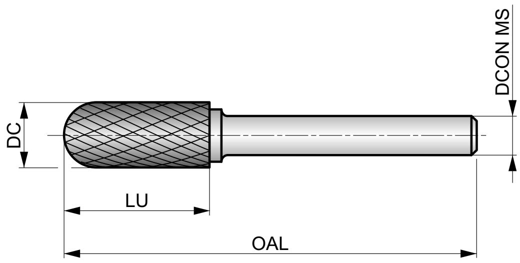
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P8053.0X3.0	3.00	3.00	14.00	38.0
P8056.3X3.0	6.30	3.00	12.70	45.0
P8056.0X6.0	6.00	6.00	18.00	50.0
P8058.0X6.0	8.00	6.00	19.00	64.0
P8059.6X6.0	9.60	6.00	19.00	64.0
P80512.7X6.0	12.70	6.00	25.00	70.0
P80516.0X6.0	16.00	6.00	25.00	70.0

P805C

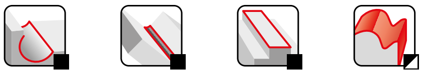
DORMER

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.

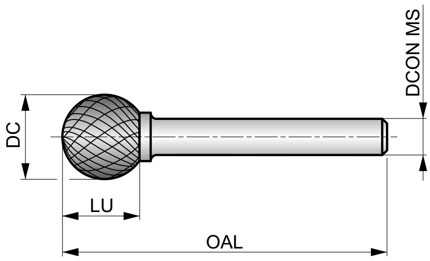
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P805C3.0X3.0	3.00	3.00	14.00	38.0
P805C6.0X6.0	6.00	6.00	18.00	50.0
P805C8.0X6.0	8.00	6.00	19.00	64.0
P805C9.6X6.0	9.60	6.00	19.00	64.0
P805C12.7X6.0	12.70	6.00	25.00	70.0

P807

DORMER

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.

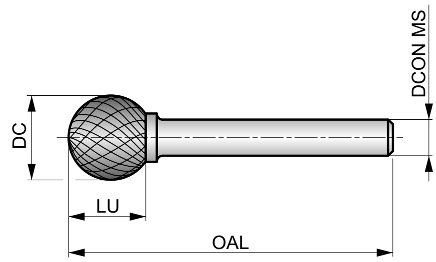
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P8073.0X3.0	3.00	3.00	2.50	38.0
P8074.0X3.0	4.00	3.00	3.40	38.0
P8076.3X3.0	6.30	3.00	5.00	38.0
P8076.0X6.0	6.00	6.00	4.70	50.0
P8078.0X6.0	8.00	6.00	6.00	52.0
P8079.6X6.0	9.60	6.00	8.00	54.0
P80712.7X6.0	12.70	6.00	11.00	56.0
P80716.0X6.0	16.00	6.00	14.00	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.

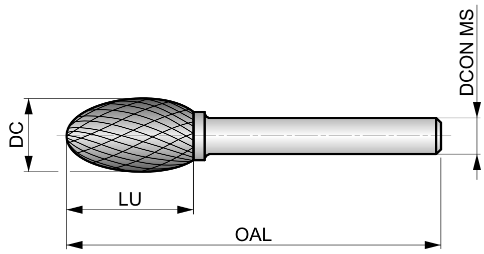
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P807C3.0X3.0	3.00	3.00	2.50	38.0
P807C6.0X6.0	6.00	6.00	4.70	50.0
P807C8.0X6.0	8.00	6.00	6.00	52.0
P807C9.6X6.0	9.60	6.00	8.00	54.0
P807C12.7X6.0	12.70	6.00	11.00	56.0

P809

DORMER

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												
■	■												

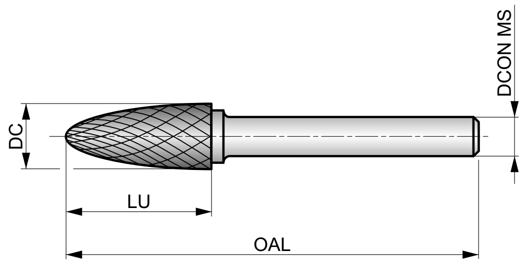
DC≤6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.
Products from this series are also available in set. Please see P880.

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

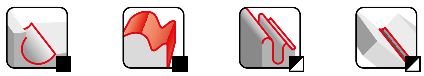
P811

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.

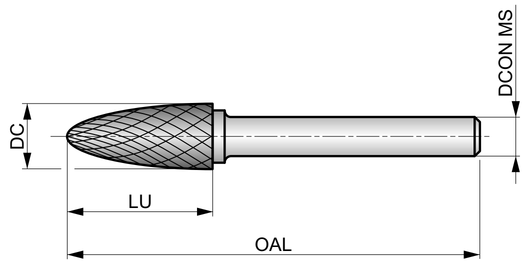
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P8113.0X3.0	3.00	3.00	14.00	38.0
P8116.3X3.0	6.30	3.00	12.70	45.0
P8116.0X6.0	6.00	6.00	18.00	50.0
P8118.0X6.0	8.00	6.00	20.00	65.0
P8119.6X6.0	9.60	6.00	19.00	64.0
P81112.7X6.0	12.70	6.00	25.00	70.0
P81116.0X6.0	16.00	6.00	25.00	70.0

P811C

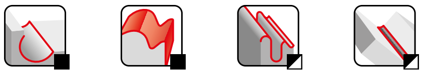
DORMER

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

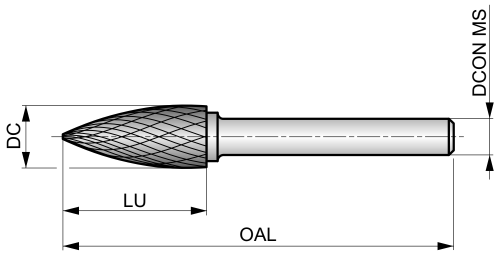
⏮

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												
■	■												

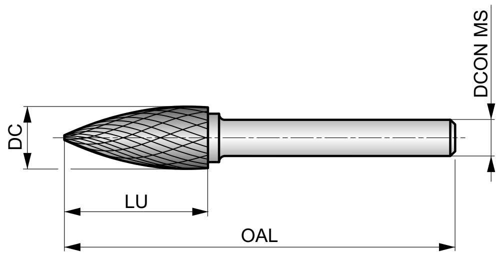
DC≤6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.
Products from this series are also available in set. Please see P880 or P890.

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

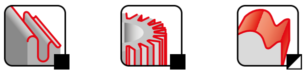
P813C

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.

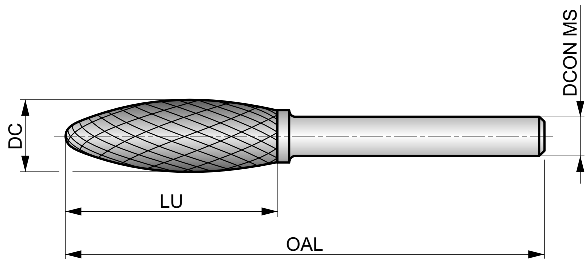
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P813C3.0X3.0	3.00	3.00	14.00	38.0
P813C6.0X6.0	6.00	6.00	18.00	50.0
P813C9.6X6.0	9.60	6.00	19.00	64.0
P813C12.7X6.0	12.70	6.00	25.00	70.0

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.

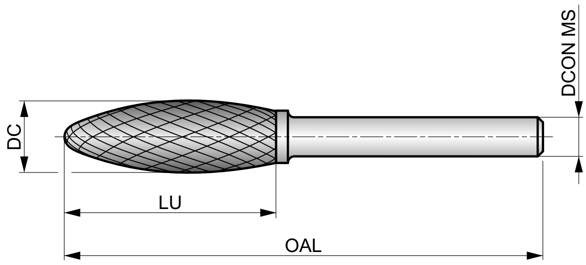
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P8153.0X3.0	3.00	3.00	6.00	38.0
P8156.0X6.0	6.00	6.00	14.00	50.0
P8158.0X6.0	8.00	6.00	19.00	64.0
P8159.6X6.0	9.60	6.00	19.00	65.0
P81512.7X6.0	12.70	6.00	32.00	77.0
P81516.0X6.0	16.00	6.00	36.00	81.0

P815C

DORMER

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												
■	■												

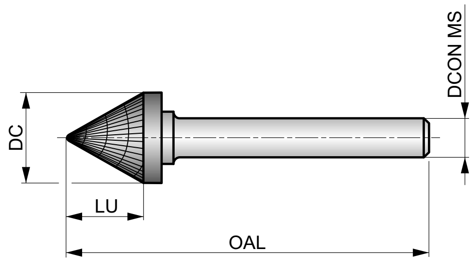
Brazed on Steel Shank with DCON MS tolerance h7.

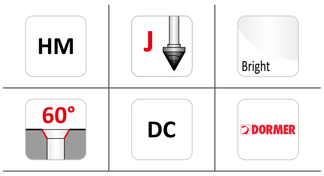
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P815C8.0X6.0	8.00	6.00	19.00	64.0
P815C12.7X6.0	12.70	6.00	32.00	77.0

P817

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.





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

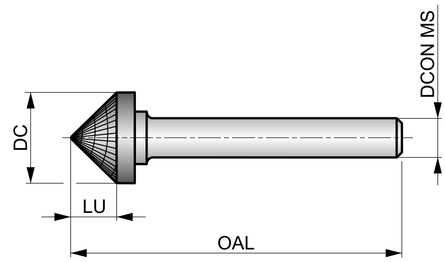
⏮

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

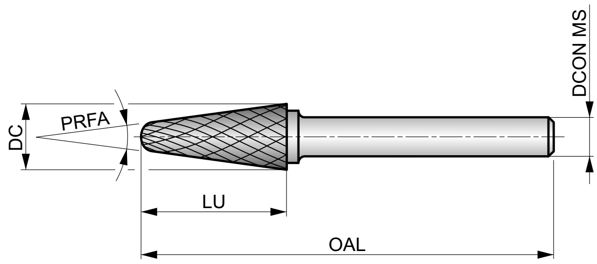
⏮

P821

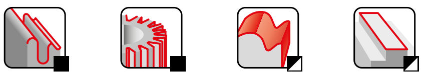
DORMER

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.

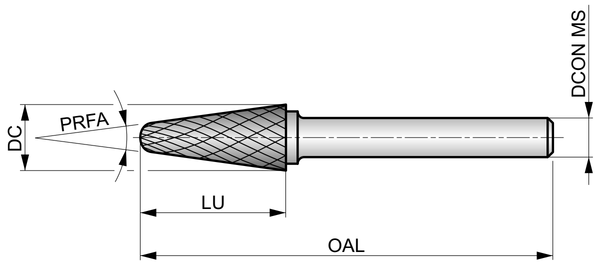
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]	PRFA [°]
P8213.0X3.0	3.00	3.00	14.00	38.0	8
P8216.0X6.0	6.00	6.00	18.00	50.0	14
P8218.0X6.0	8.00	6.00	25.40	70.0	14
P8219.6X6.0	9.60	6.00	30.00	76.0	14
P82112.7X6.0	12.70	6.00	32.00	77.0	14
P82116.0X6.0	16.00	6.00	33.00	78.0	14

P821C

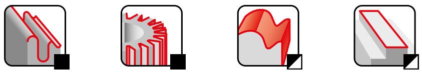
DORMER

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.

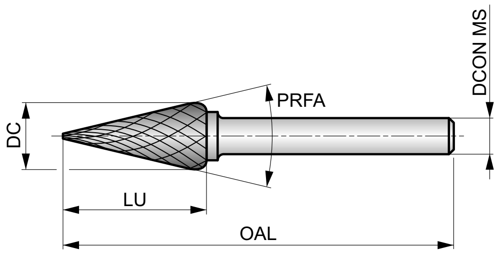
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]	PRFA [°]
P821C3.0X3.0	3.00	3.00	14.00	38.0	8
P821C12.7X6.0	12.70	6.00	32.00	77.0	14

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												
■	■												

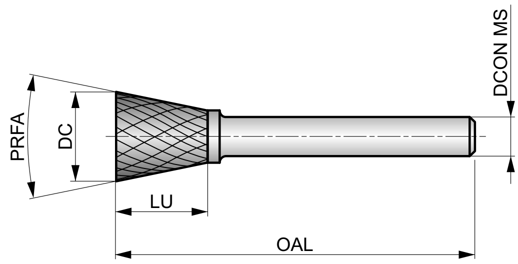
DC≤6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.
Products from this series are also available in set. Please see P880.

Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]	PRFA [°]
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.

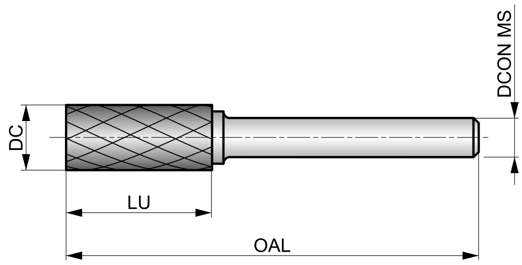
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]	PRFA [°]
P8253.0X3.0	3.00	3.00	4.00	38.0	10
P8256.3X3.0	6.30	3.00	6.00	39.0	12
P8256.0X6.0	6.00	6.00	8.00	50.0	10
P8259.6X6.0	9.60	6.00	9.50	55.0	16
P82512.7X6.0	12.70	6.00	12.70	58.0	28
P82516.0X6.0	16.00	6.00	19.00	64.0	18

P701

DORMER

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.

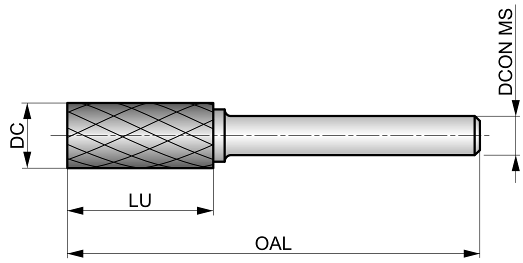
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P7016.0X6.0	6.00	6.00	18.00	50.0
P7018.0X6.0	8.00	6.00	19.00	64.0
P7019.6X6.0	9.60	6.00	19.00	64.0
P70112.7X6.0	12.70	6.00	25.00	70.0

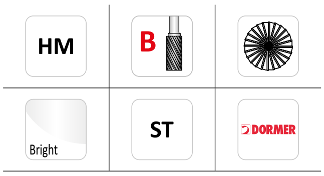
P703

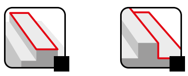
DORMER

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.







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
■	■	■	■	■	■	■	■	■	■	■	■

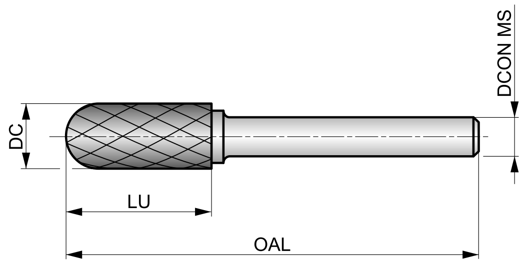
DC=6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.
Products from this series are also available in set. Please see P880.

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

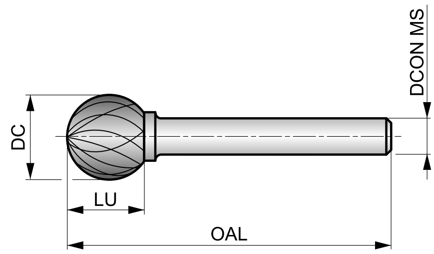
⏮

P707

DORMER

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
■	■	■	■	■	■	■	■	■	■	■	■

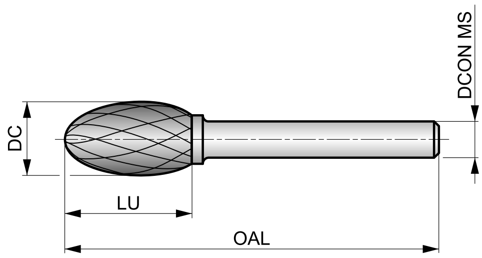
DC=6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.
Products from this series are also available in set. Please see P880.

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

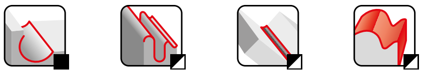
P709

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
■	■	■	■	■	■	■	■	■	■	■	■

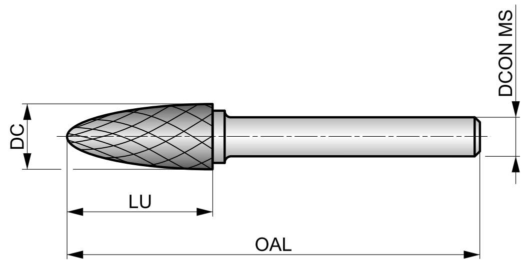
Brazed on Steel Shank with DCON MS tolerance h7.

Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P70912.7X6.0	12.70	6.00	22.00	67.0

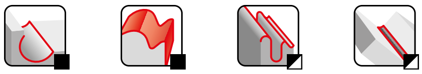
P711

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
■	■	■	■	■	■	■	■	■	■	■	■

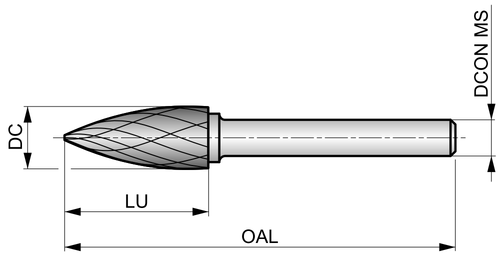
DC=6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.
Products from this series are also available in set. Please see P880.

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

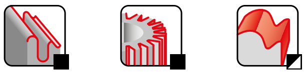
Rotary Burr - Pointed Tree, Shape G

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.

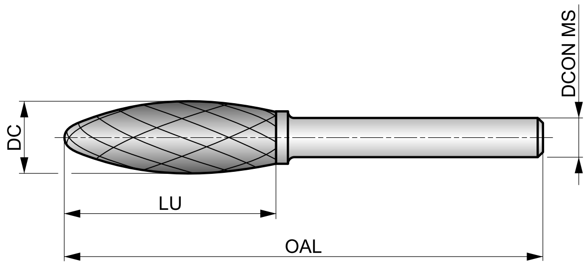
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P7136.0X6.0	6.00	6.00	18.00	50.0
P7138.0X6.0	8.00	6.00	19.00	64.0
P7139.6X6.0	9.60	6.00	19.00	64.0
P71312.7X6.0	12.70	6.00	25.00	70.0

P715

DORMER

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.

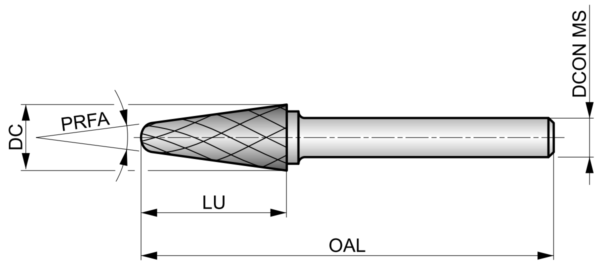
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P7158.0X6.0	8.00	6.00	19.00	64.0
P71512.7X6.0	12.70	6.00	32.00	77.0

P721

DORMER

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.

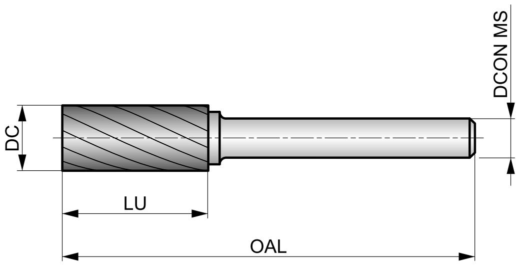
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]	PRFA [°]
P72110.0X6.0	10.00	6.00	20.00	65.0	14
P7219.6X6.0	9.60	6.00	30.00	76.0	14
P72112.7X6.0	12.70	6.00	32.00	77.0	14

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.

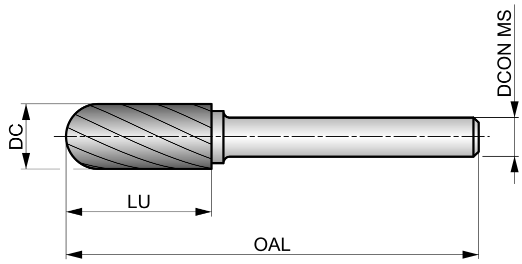
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P6013.0X3.0	3.00	3.00	14.00	38.0
P6016.3X3.0	6.30	3.00	12.70	45.0
P6016.0X6.0	6.00	6.00	18.00	50.0
P6018.0X6.0	8.00	6.00	19.00	64.0
P6019.6X6.0	9.60	6.00	19.00	64.0
P60112.7X6.0	12.70	6.00	25.00	70.0

P605

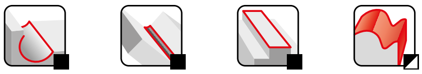
DORMER

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.

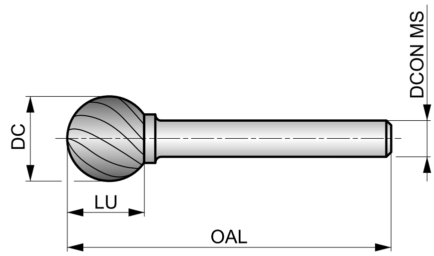
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P6053.0X3.0	3.00	3.00	14.00	38.0
P6056.3X3.0	6.30	3.00	12.70	45.0
P6056.0X6.0	6.00	6.00	18.00	50.0
P6058.0X6.0	8.00	6.00	19.00	64.0
P6059.6X6.0	9.60	6.00	19.00	64.0
P60512.7X6.0	12.70	6.00	25.00	70.0

P607

DORMER

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
■	■	■	■	■	■	■	■	■	■	◩	◩

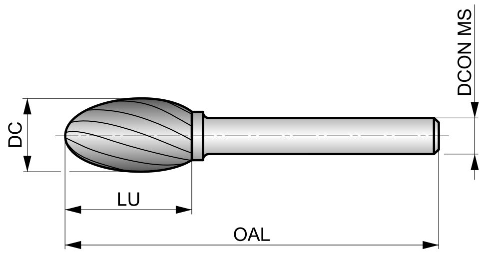
DC≤6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.
Products from this series are also available in set. Please see P880.

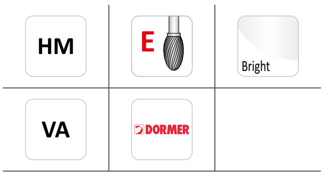
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P6073.0X3.0	3.00	3.00	2.50	38.0
P6076.3X3.0	6.30	3.00	5.00	38.0
P6076.0X6.0	6.00	6.00	4.70	50.0
P6078.0X6.0	8.00	6.00	6.00	52.0
P6079.6X6.0	9.60	6.00	8.00	54.0
P60712.7X6.0	12.70	6.00	11.00	56.0

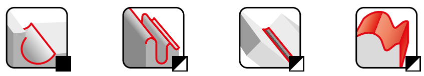
P609

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.







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
■	■	■	■	■	■	■	■	■	■	◩	◩

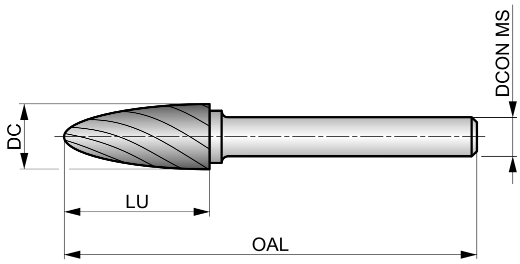
Brazed on Steel Shank with DCON MS tolerance h7.

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

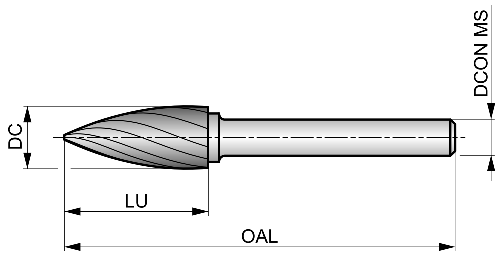
⏮

P613

DORMER

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	M2.1	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.

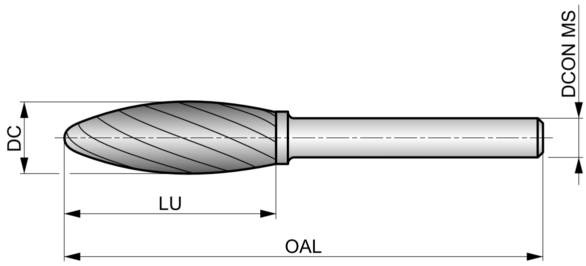
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P6136.0X6.0	6.00	6.00	18.00	50.0
P6138.0X6.0	8.00	6.00	19.00	64.0
P6139.6X6.0	9.60	6.00	19.00	64.0
P61312.7X6.0	12.70	6.00	25.00	70.0

P615

DORMER

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.

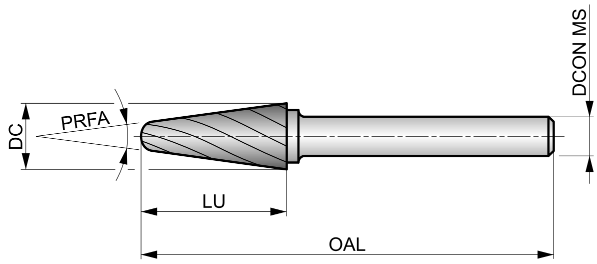
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P6158.0X6.0	8.00	6.00	19.00	64.0
P6159.6X6.0	9.60	6.00	19.00	65.0
P61512.7X6.0	12.70	6.00	32.00	77.0

P621

DORMER

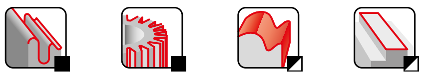
Rotary Burr - Ball Nosed Cone, Shape L

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.

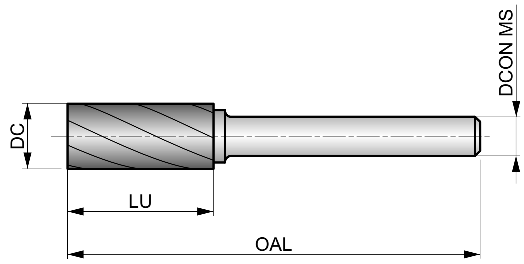
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]	PRFA [°]
P6218.0X6.0	8.00	6.00	25.40	70.0	14
P62110.0X6.0	10.00	6.00	20.00	65.0	14
P62112.7X6.0	12.70	6.00	32.00	77.0	14

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.

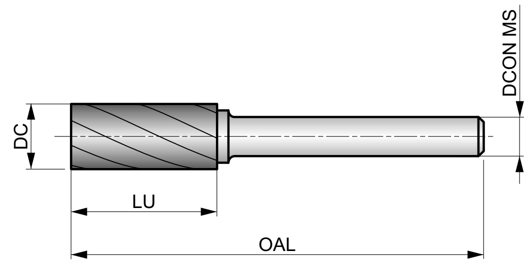
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P8316.0X6.0	6.00	6.00	18.00	50.0
P8319.6X6.0	9.60	6.00	19.00	64.0
P83112.7X6.0	12.70	6.00	25.00	70.0

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.



HM | B | AL | Bright | 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
■	■	■	■	■	■	◩	◩	■	■	◩	◩

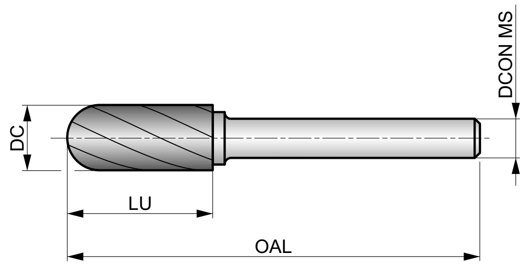
DC=6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.

Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
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.

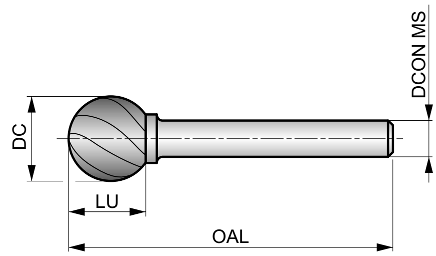
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P8356.0X6.0	6.00	6.00	18.00	50.0
P8359.6X6.0	9.60	6.00	19.00	64.0
P83512.7X6.0	12.70	6.00	25.00	70.0

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
■	■	■	■	■	■	◩	◩	■	■	◩	◩

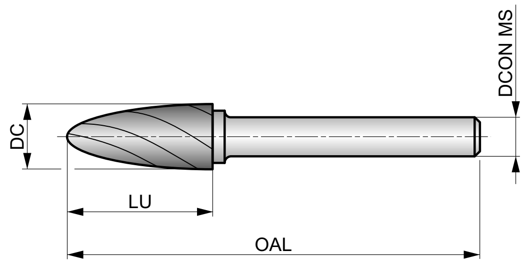
DC=6.00 mm: DCON MS tolerance h6; DC>6.00 mm: Brazed on steel shank with DCON MS tolerance h7.

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

DORMER

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.

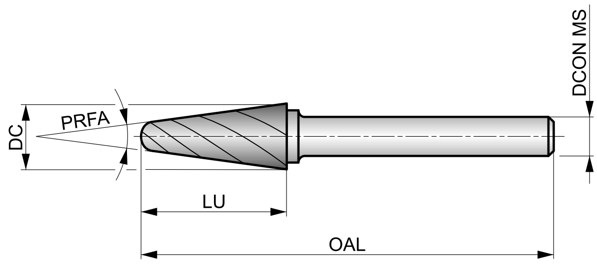
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P8416.0X6.0	6.00	6.00	18.00	50.0
P8419.6X6.0	9.60	6.00	19.00	64.0
P84112.7X6.0	12.70	6.00	25.00	70.0

P842

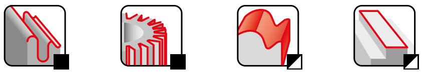
DORMER

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.

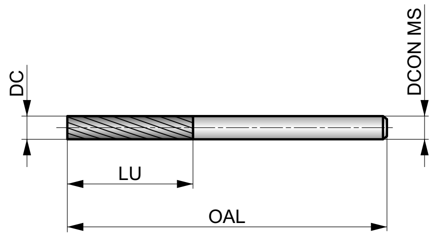
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]	PRFA [°]
P8426.0X6.0	6.00	6.00	18.00	50.0	14
P8429.6X6.0	9.60	6.00	30.00	76.0	14
P84212.7X6.0	12.70	6.00	32.00	77.0	14

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.

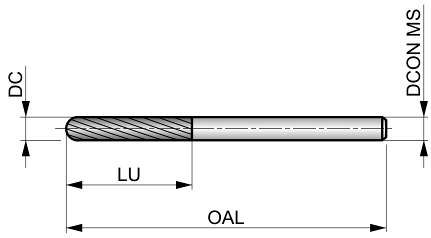
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P5013.0X3.0	3.00	3.00	12.00	38.0

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.

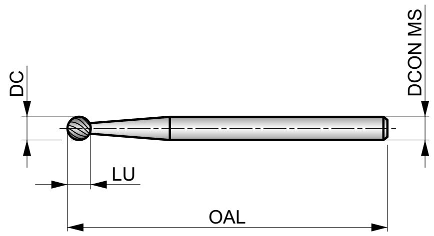
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P5053.0X3.0	3.00	3.00	14.00	38.0

P507

DORMER

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.

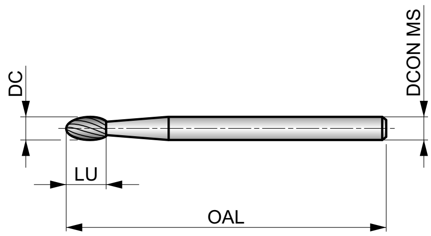
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P5073.0X3.0	3.00	3.00	2.50	38.0

P509

DORMER

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.

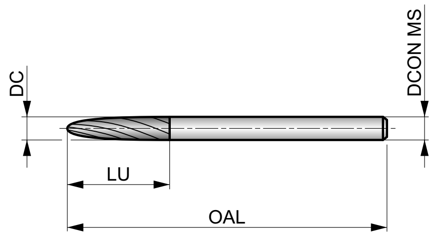
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P5093.0X3.0	3.00	3.00	6.00	38.0

P511

DORMER

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.

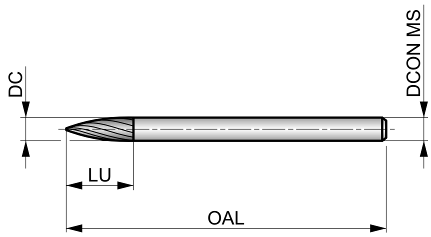
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P5113.0X3.0	3.00	3.00	14.00	38.0

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
◩	◩	◩	◩	◩	■	■	■	■	■	■	■	■	■

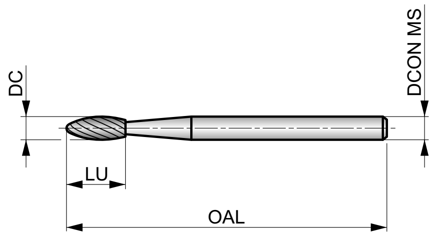
DCON MS tolerance h6.
Products from this series are also available in set. Please see P880.

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

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.

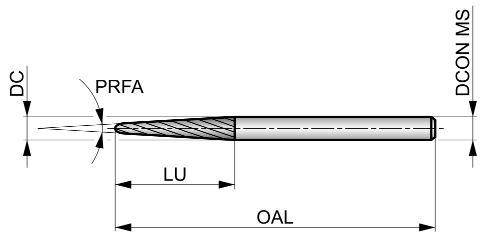
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P5153.0X3.0	3.00	3.00	6.00	38.0

P521

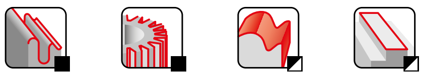
DORMER

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.

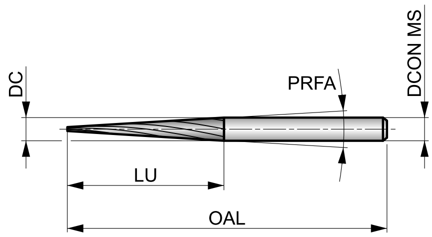
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]	PRFA [°]
P5213.0X3.0	3.00	3.00	14.00	38.0	8

P523

DORMER

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.

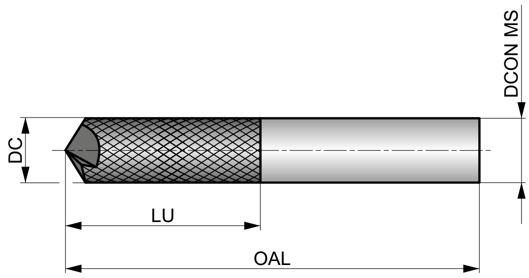
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]	PRFA [°]
P5233.0X3.0	3.00	3.00	15.00	38.0	7

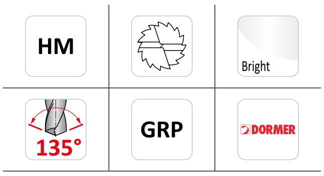
P843

DORMER

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.





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

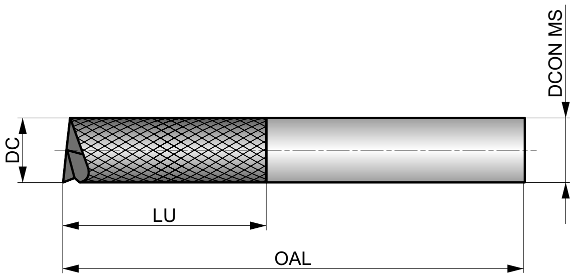
⏮

P844

DORMER

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.

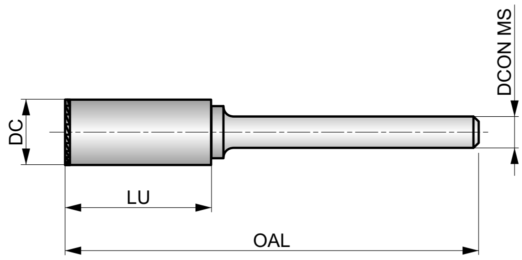
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]
P8443.0X3.0	3.00	3.00	13.00	45.0
P8446.0X6.0	6.00	6.00	19.00	63.0
P8448.0X8.0	8.00	8.00	25.00	63.0

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									
■	■	■	■	■									

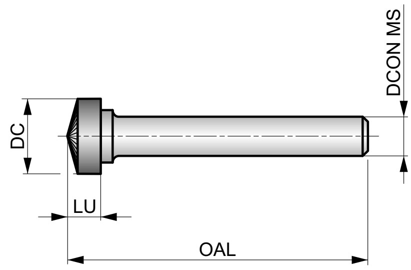
Product	DC [mm]	DCON MS [mm]	LU [mm]	OAL [mm]	
P1004.9	4.90	6.00	20.00	50.0	1/4-20; 24; 28; M6
P1006.4	6.40	6.00	5.00	50.0	5/16-18; 24; 32; M8
P1007.8	7.80	6.00	19.00	65.0	3/8-16; 24; M10
P1009.3	9.30	6.00	19.00	65.0	7/16-14; 20; M12
P10010.7	10.70	6.00	25.00	70.0	1/2-13; 20; M14

P101

DORMER

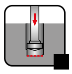
2nd Stage Rotary Burr for Broken Bolt Removal, 150° Countersink

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 [mm]	DCON MS [mm]	LU [mm]	OAL [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

DORMER

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.

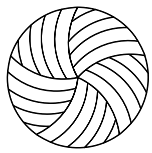
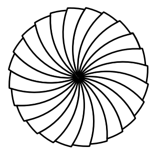
Product	Nr.	A	B	C
P89001	Nr01	P803 + P805 + P811 + P813 + P821	40	P803 (6.0 × 6.0; 8.0 × 6.0; 9.6 × 6.0; 12.7 × 6.0) × 2 P805 (6.0 × 6.0; 8.0 × 6.0; 9.6 × 6.0; 12.7 × 6.0) × 2 P811 (6.0 × 6.0; 8.0 × 6.0; 9.6 × 6.0; 12.7 × 6.0) × 2 P813 (6.0 × 6.0; 8.0 × 6.0; 9.6 × 6.0; 12.7 × 6.0) × 2 P821 (6.0 × 6.0; 8.0 × 6.0; 9.6 × 6.0; 12.7 × 6.0) × 2

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!

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.

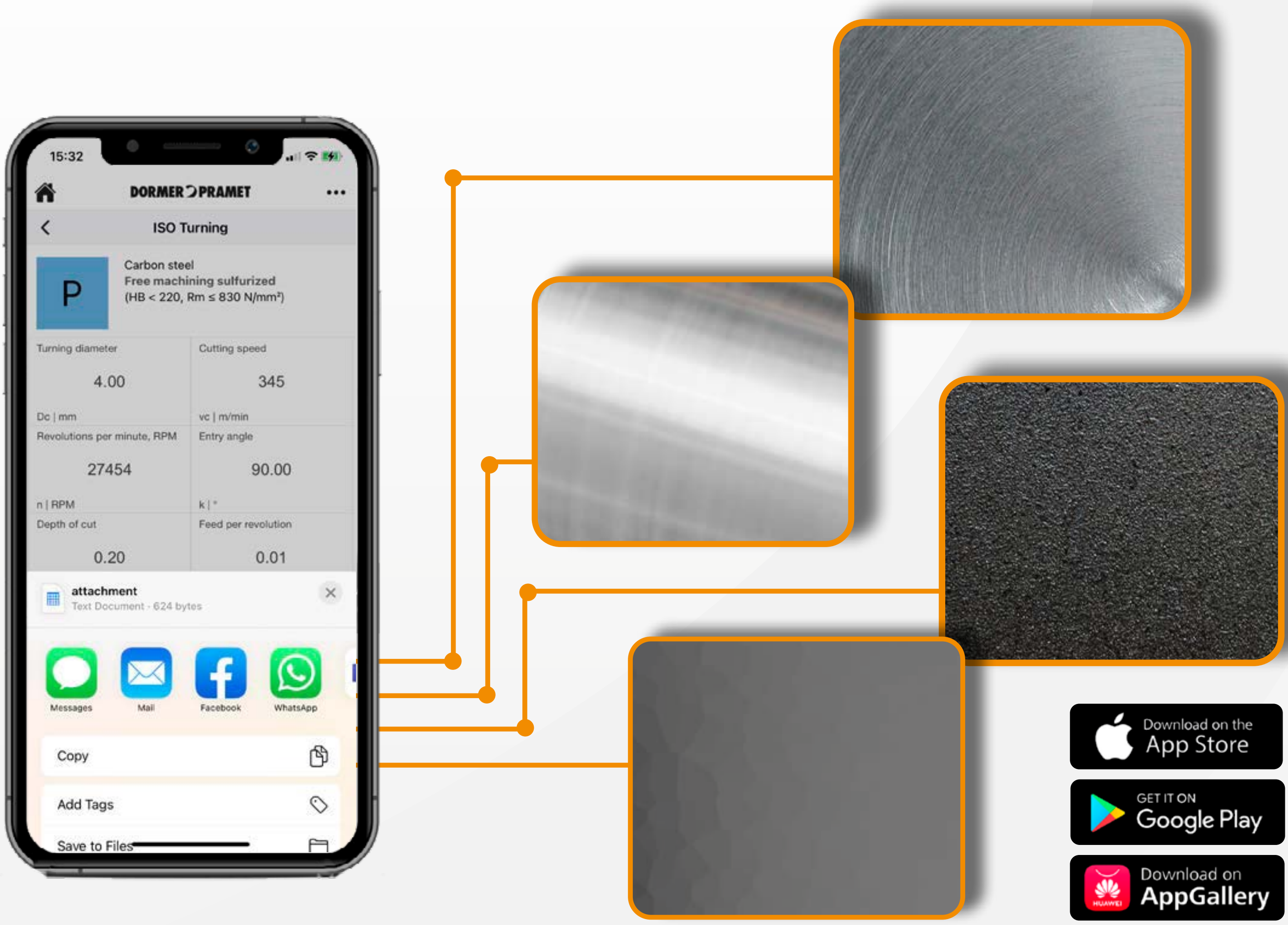
Trouble shooting using burrs

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.**



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THREAD MILLS

MILLING – GENERAL CONTENT

1

J205

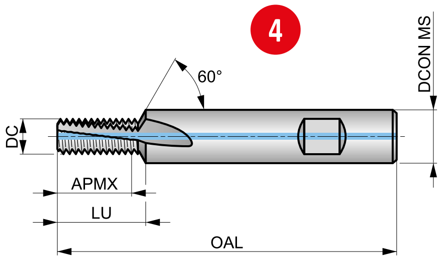
DORMER

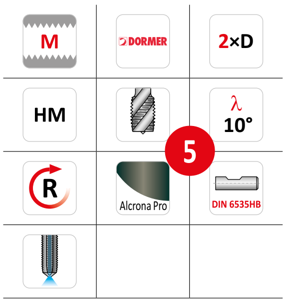
3

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.

4





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 309.

6

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.

7 8

Item	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

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	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

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)	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)										

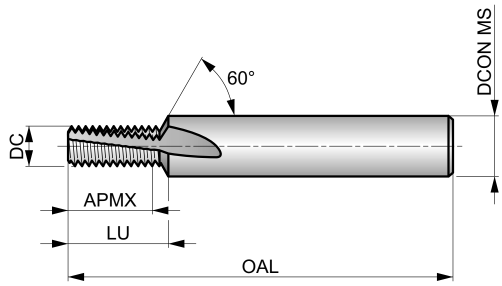
Product Family Code	J200	J205	J210	J215	J220	J225	J235	J245	J280	J260
	M4 - M16	M8 - M16	M6 - M16	M6 - M16	M6 - M24	M10 - M18	1/4 - 3/4	1/4 - 3/4	1/8 - 3"	1/8 - 2"
	299	300	301	302	303	304	305	306	307	308
P P1	■	■	■	■	■	■	■	■	■	■
P2	■	■	■	■	■	■	■	■	■	■
P3	■	■	■	■	■	■	■	■	■	■
P4	■	■	■	■	■	■	■	■	■	■
M 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

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.



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.

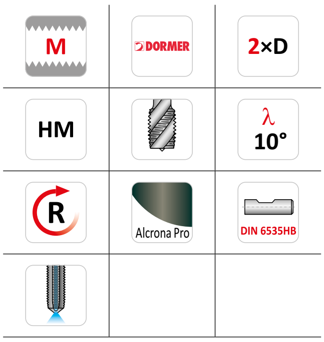
Product	TDZ	TP [mm]	DC [mm]	APMX [mm]	OAL [mm]	DCON MS [mm]	NOF	LU [mm]
J2003.2X.7	M4	0.70	3.20	8.40	57.0	6.00	3	9.50
J2004.1X.8	M5	0.80	4.10	11.20	57.0	6.00	3	12.10
J2004.8X1.0	M6	1.00	4.80	13.00	63.0	8.00	3	14.40
J2006.5X1.25	M8	1.25	6.50	17.50	72.0	10.00	3	19.10
J2008.2X1.5	M10	1.50	8.20	21.00	83.0	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

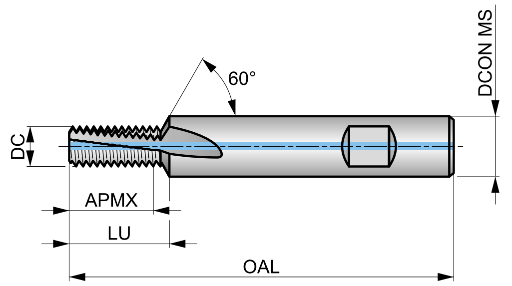
J205

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.





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									

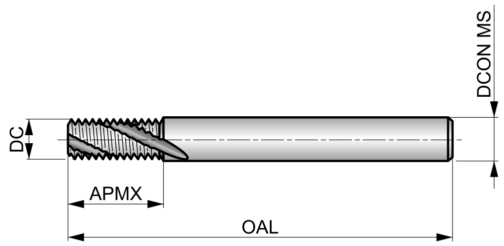
Internal Thread.

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

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.



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.

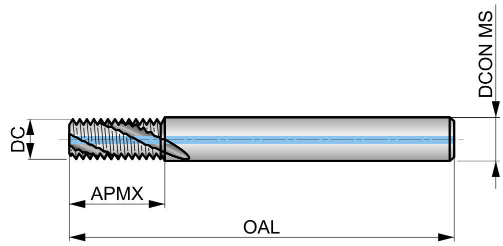
Product	TDZ	TP [mm]	DC [mm]	APMX [mm]	OAL [mm]	DCON MS [mm]	NOF
J2104.5X1.0	M6	1.00	4.50	13.00	57.0	6.00	3
J2106.0X1.25	M8	1.25	6.00	17.50	65.0	6.00	3
J2107.5X1.5	M10	1.50	7.50	21.00	72.0	8.00	3
J2109.5X1.75	M12	1.75	9.50	26.25	80.0	10.00	3
J21010.0X2.0	M14	2.00	10.00	30.00	83.0	10.00	4
J21012.0X2.0	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.



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

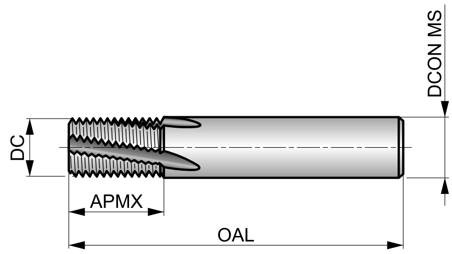
⏮

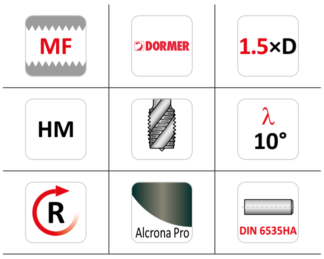
J220

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.





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.

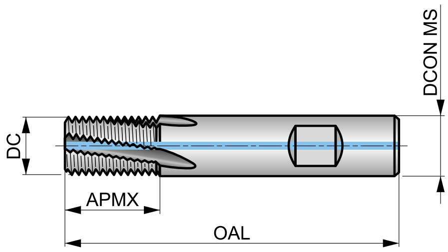
Product	TDZ	TP [mm]	DC [mm]	APMX [mm]	OAL [mm]	DCON MS [mm]	NOF
J2204.8X.5	M6	0.50	4.80	10.00	57.0	6.00	3
J2206.0X.75	M8	0.75	6.00	12.00	57.0	6.00	3
J2206.0X1.0	M8	1.00	6.00	12.00	57.0	6.00	3
J2208.0X1.0	M10	1.00	8.00	16.00	63.0	8.00	4
J22010.0X1.0	M12	1.00	10.00	20.00	72.0	10.00	4
J22010.0X1.5	M12	1.50	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

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 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								

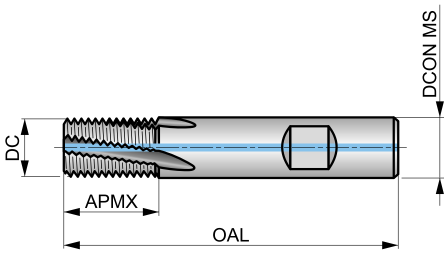
Internal Thread.

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

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								

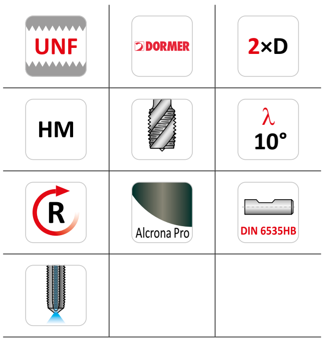
Internal Thread.

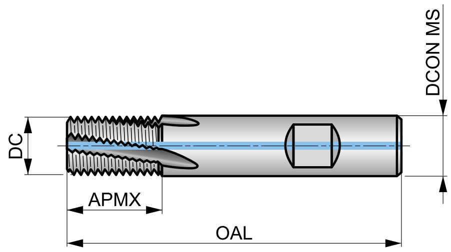
Product	TDZ	TPI	DC [mm]	APMX [mm]	OAL [mm]	DCON MS [mm]	NOF
J2354.8-20	1/4	20	4.80	14.00	57.0	6.00	3
J2355.5-18	5/16	18	5.50	14.00	57.0	6.00	3
J2357.5-16	3/8	16	7.50	19.00	63.0	8.00	4
J2358.0-14	7/16	14	8.00	19.00	63.0	8.00	4
J23510.0-13	1/2	13	10.00	22.00	72.0	10.00	4
J23510.0-12	9/16	12	10.00	22.00	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.





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.

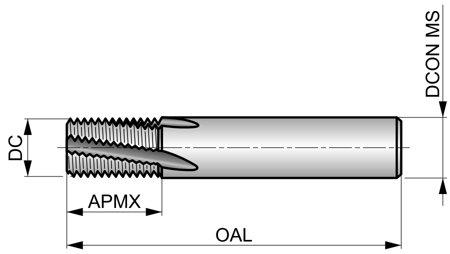
Product	TDZ	TPI	DC [mm]	APMX [mm]	OAL [mm]	DCON MS [mm]	NOF
J2454.8-28	1/4	28	4.80	14.00	57.0	6.00	3
J2456.0-24	5/16. 3/8	24	6.00	14.00	57.0	6.00	3
J2458.0-20	7/16. 1/2	20	8.00	19.00	63.0	8.00	4
J24510.0-18	9/16. 5/8	18	10.00	22.00	72.0	10.00	4
J24514.0-16	3/4	16	14.00	32.00	83.0	14.00	5

J280

DORMER

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.



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 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.

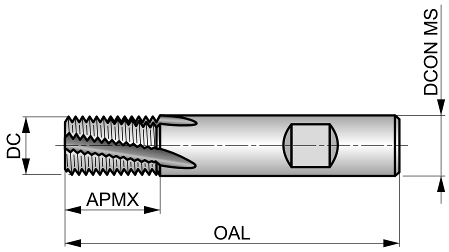
Product	TDZ	TPI	DC [mm]	APMX [mm]	OAL [mm]	DCON MS [mm]	NOF
J2806.0-28	1/8	28	6.00	15.00	57.0	6.00	3
J28010.0-19	1/4	19	10.00	20.00	72.0	10.00	4
J28014.0-19	3/8	19	14.00	26.00	83.0	14.00	5
J28016.0-14	1/2. 5/8	14	16.00	30.00	92.0	16.00	5
J28020.0-14	5/8. 3/4. 7/8	14	20.00	35.00	104.0	20.00	5
J28025.0-11	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.



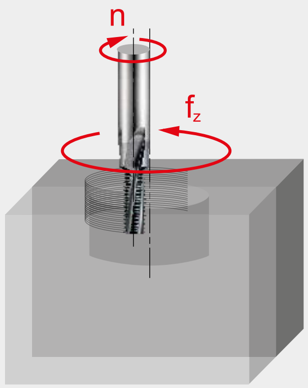
Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 309.

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:

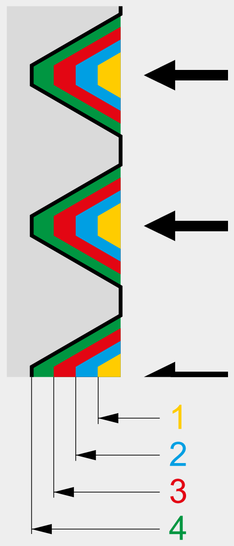
5. In case the thread is being machined in **2 passes** the feed values mentioned in the table should be increased by **30 to 40%**.
6. In case the thread is being machined in **3 passes** the feed values mentioned in the table should be increased by **55 to 65%**.
7. In case the thread is being machined 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	–
1 2 3 /1"				**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	–	–	–	–	–	–	–
1 2 3 /1"				**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	–	–	–	–	–	–	–
1 2 3 /1"						**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
1 2 3 /1"										**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°).

1 2 3 / 1"		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]			
		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]			
		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

THREAD MILLS – GENERAL HINTS

General hints on thread milling

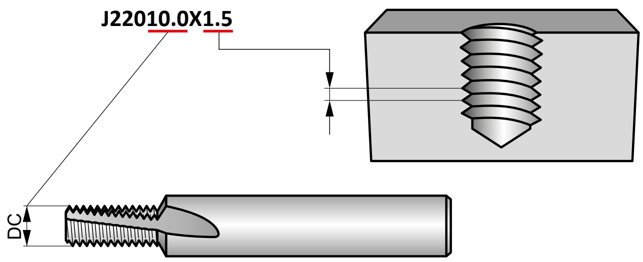
1. Thread milling is the process of generating a thread by the circular interpolation of a milling cutter with a specific thread geometry ground around it's periphery.
2. To be able to use a thread milling cutter it is necessary to have a CNC machine that can make circular paths.
3. Most modern CNC machines 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.**

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INDEXABLE MILLS

MILLING – GENERAL CONTENT

1 **SAD11E**

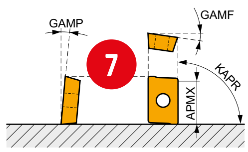
P M K N S H 2

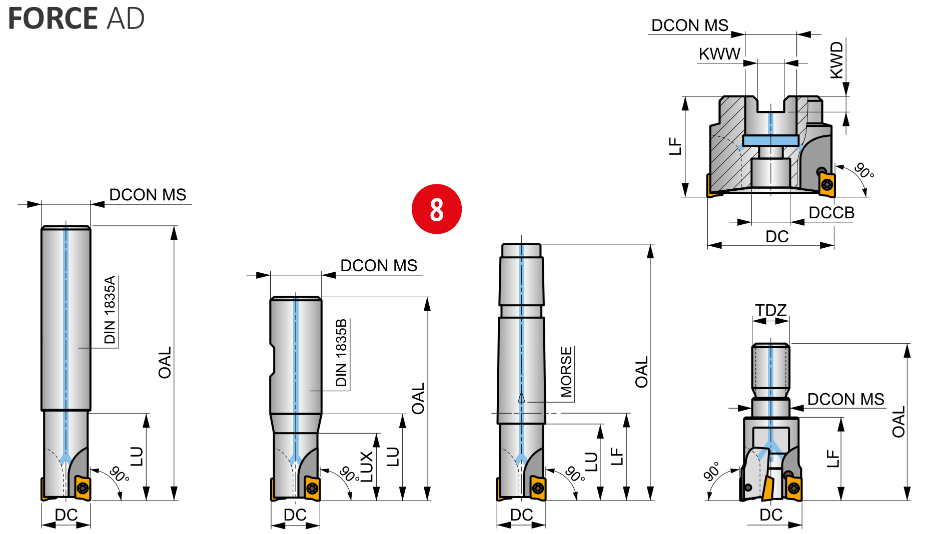
PRAMET 3 S

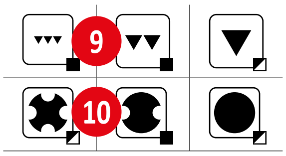
FORCE AD11 Square Shoulder Mill with Internal Coolant 5

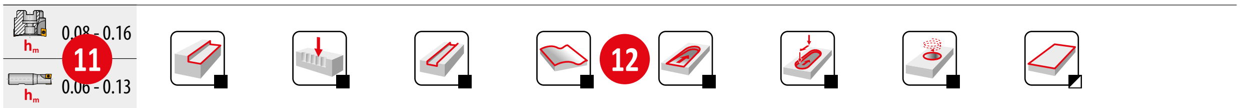
90° end and shell mills utilising positive AD.. 11 style insert with APMX of 9 mm. Suitable for face, shoulder, slot, helical, trochoidal, ramping and plunge milling. Available in cylindrical, Weldon, Morse taper, modular and arbor (with differential tooth pitch) style, in Ø16 up to Ø125 mm. Body treated for longer tool life.

KAPR	6	90°
APMX		9.0 mm









	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			
13 DIN 1835A	16A2R024[illegible]SAD11E-C 14	16	160	14	–	24	– 15	[illegible]	–	–	–	–	-12.8	4	16	17	18	19	20	21	22	23
	16A2R024A16-SAD11E-C	16	135	16	–	24	–	–	–	–	–	–	-12.8	4	2	[illegible]	30100	[illegible]	0.19	[illegible]	SQ025	[illegible]
	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	–
	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	Pos.	Description
1	Designation of cutter	14	ISO code of cutter
2	Material group recommendations	15	Dimensions [mm], angles [1] [°] and connection size code
3	Clamping system of insert	16	Number of teeth
4	Illustrative picture	17	Irregular teeth pitch
5	Tool description	18	Maximum revolutions of cutter
6	Setting angle and maximum theoretical depth of cut [mm]	19	Internal supply of coolant
7	Tool geometry	20	Weight [kg]
8	Schematic drawing of tool	21	Group of compatible inserts [2]
9	Achievable quality of surface	22	Group of spare parts [2]
10	Character of cut/working conditions	23	Group of special accessories [2]
11	Maximum range of mean chip thickness [mm] for end milling cutters and/or shell milling cutters	24	Compatible inserts
12	Product applications	25	Spare parts
13	Shank type	26	Special accessories

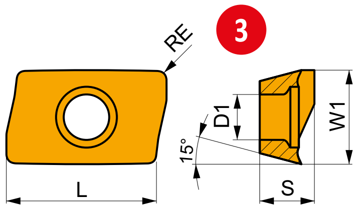
1) γ_f = Radial rake setting angle (***GAMF***) of insert pocket – see indexable mills technical information
γ_p = Axial rake setting angle (***GAMP***) of insert pocket – see indexable mills technical information

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.

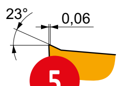
ADMX 11

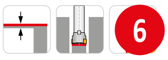
PRAMET

	W1 [mm]	D1 [mm]	L [mm]	S [mm]
11T3	6.530	2.90	11.00	3.97

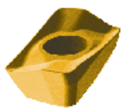
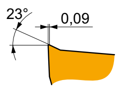


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.



F geometry with very sharp positive design for light machining.

M geometry with positive design for light to medium machining.

Product	Grade	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]
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	–	–	–
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.

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.

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

ISO 6462 DIN 8030	Shell mill DIN 8030
ISO 6462 DIN 8030	Shell mill DIN 8030 – helical mill
ISO 6462 DIN 8030	Shell mill DIN 8030 – disc mill
DIN 1835A	DIN 1835A Cylindrical Shank

DIN 1835B	DIN 1835B Weldon Shank
DIN 228A	Morse shank DIN 228-1
PSC	Polygon shank coupling ISO 26623-1
ISO 297	Arbor DIN 2080-1

ISO/DIS 7388-1	Arbor DIN 69871-1
JIS B 6339	Arbor MAS BT (JIS-B-6339)
MODULAR	Threaded coupling

INDEXABLE MILLS – ICONS OVERVIEW

Features

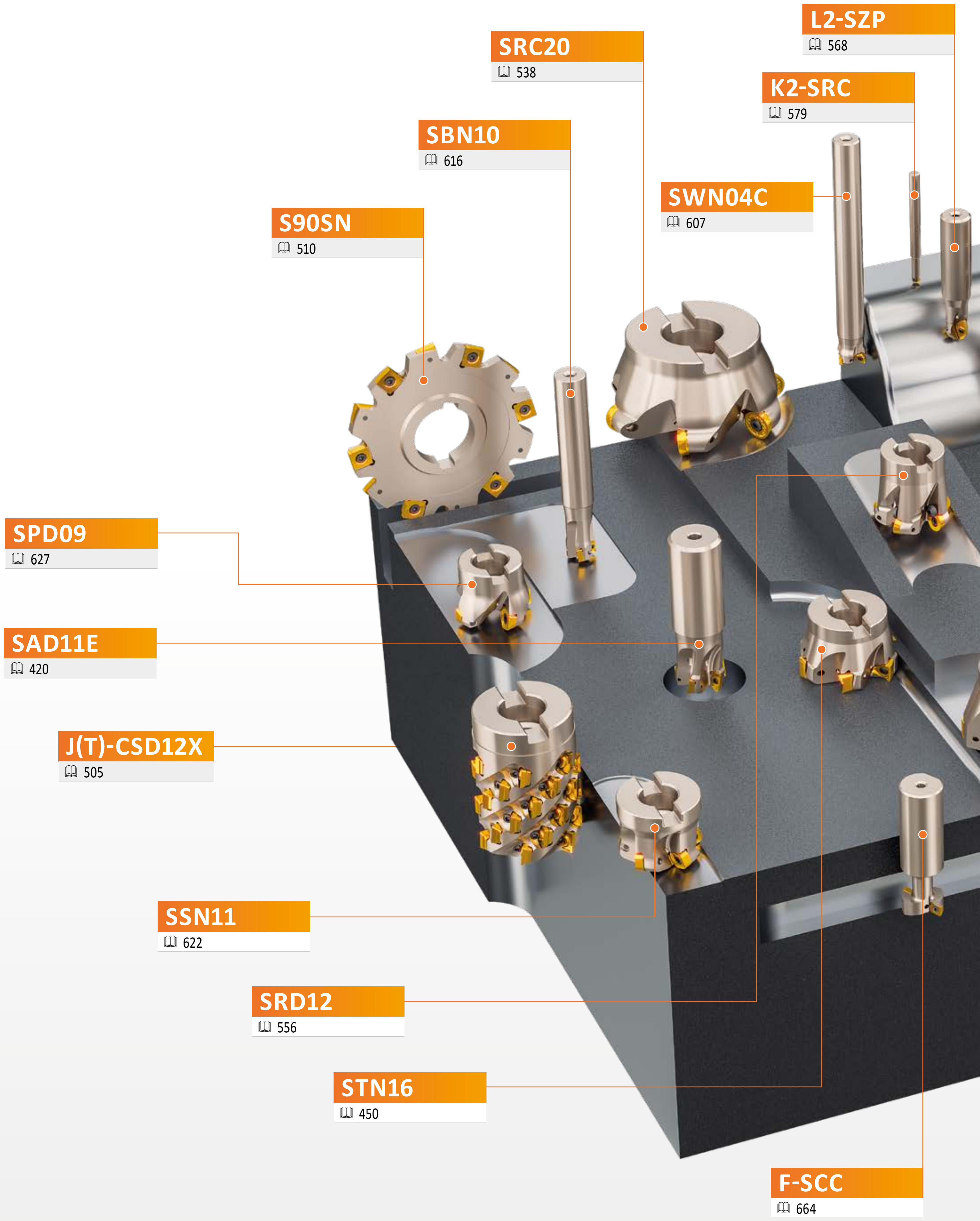
- First choice
- Heavy working conditions
- High Feed Cutting
- Insert with Wiper geometry
- Long overhang
- Thin-walled and slim workpieces
- Universal wide range option
- Sharp edge
- Rounded edge
- Edge with facet
- Rounded edge with facet
- Rounded edge with double facet

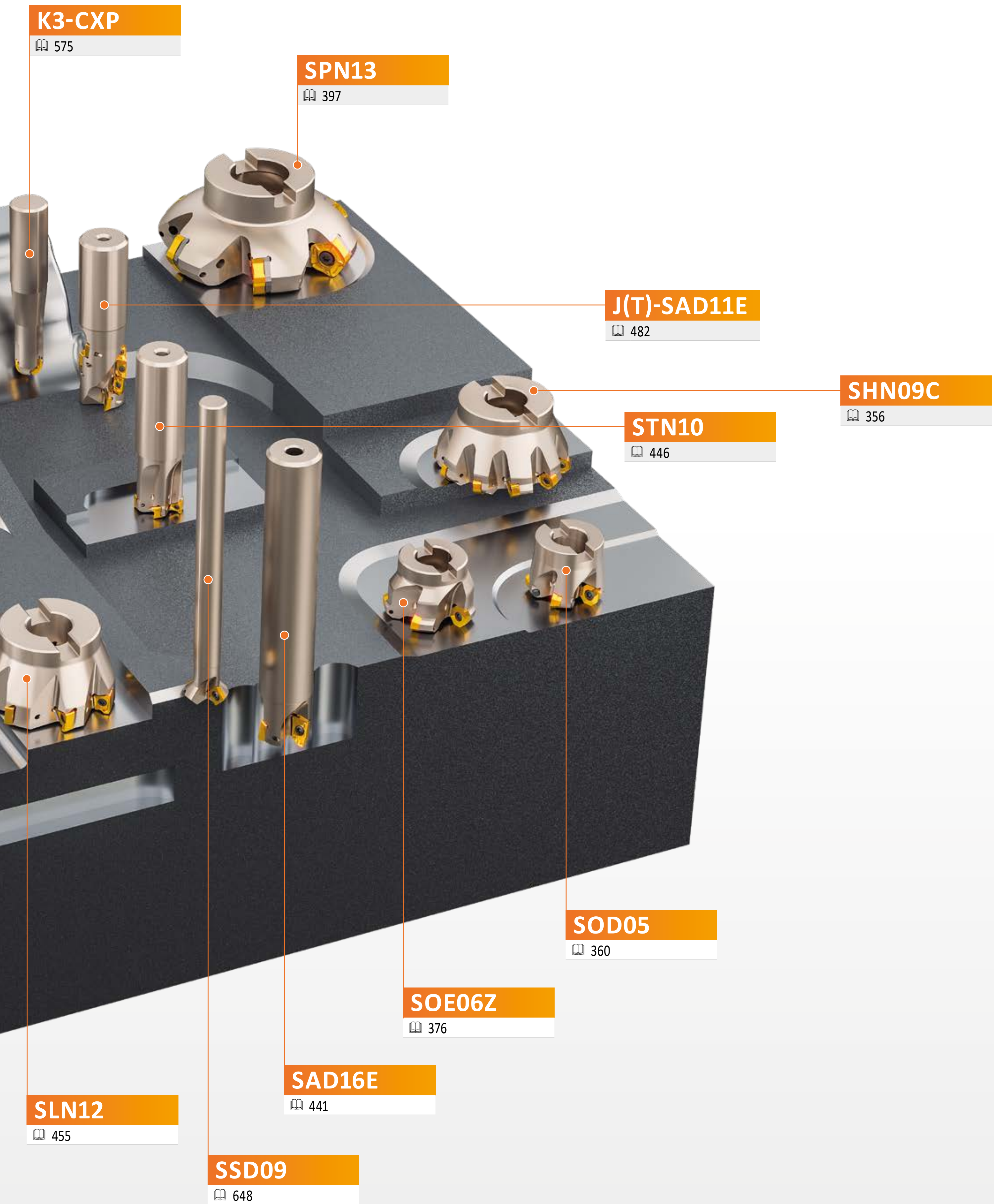
Others

- 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

INDEXABLE MILLING GRADES – NAVIGATOR

Group	Cemented carbide with MTCVD	Cemented carbide with PVD	Uncoated
P01		M8310	
P05	M9315	M8310	
P10	M9315, M9325	M8310, 8215	
P15	M9315, M9325	8215	
P20	M9315, M9325	8215, M8330	
P25	M9315, M9325	M8330, M8340	
P30	M9325	M8330, M8340	
P35		M8330, M8340, M8345	
P40		M8330, M8340, M8345	
P45		M8340, M8345	
P50		M8340, M8345	

Group	Cemented carbide with MTCVD	Cemented carbide with PVD	Uncoated
M01			
M05			
M10			
M15			
M20		M6330, M8340	
M25		M6330, M8340	
M30	M9340	M6330, M8340, M8345	
M35	M9340	M6330, M8340, M8345	
M40	M9340	M8340, M8345	
M45			
M50			

Group	Cemented carbide with MTCVD	Cemented carbide with PVD	Uncoated
K01		M4303, M8310	
K05	M5315	M4303, M8310, M4310	
K10	M5315	M4310, 8215	
K15	M5315	M4310, 8215	
K20	M5315	8215, M8330	
K25	M5315	8215, M8330	
K30		M8330	
K35		M8330	
K40		M8330	
K45			
K50			

Group	Cemented carbide with MTCVD	Cemented carbide with PVD	Uncoated
N01			
N05		M0315	
N10		M0315, 8215	HF7
N15		M0315, 8215	HF7
N20		M0315, 8215	HF7
N25		M0315, 8215	HF7
N30			
N35			
N40			
N45			
N50			

Group	Cemented carbide with MTCVD	Cemented carbide with PVD	Uncoated
S01			
S05			
S10			
S15	M9340		
S20	M9340	M6330, M8340, M8345	
S25		M6330, M8340, M8345	
S30		M6330, M8340, M8345	
S35			
S40			
S45			
S50			

Group	Cemented carbide with MTCVD	Cemented carbide with PVD	Uncoated
H01		M4303	
H05	M5315	M4303, 2003, M4310, M8310	
H10	M5315	M4303, 2003, M4310, M8310, 8215	
H15	M5315	2003, M4310, M8310, 8215	
H20	M5315	8215	
H25			
H30			
H35			
H40			
H45			
H50			

Grade Identification	Area of Application	Application	Feed	Cutting speed	Resistance to adverse Working Conditions	Coating	Colour	Substrate	Coolant benefit	Grade description
M9315	P05 – P25	■				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.
	K10 – K30	■								
	H10 – H20	◩								
M9325	P10 – P30	■				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.
	K10 – K30	■								
	H15 – H20	◩								
M9340	P35 – P50	■				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.
	M30 – M40	■								
	S15 – S20	■								
M5315	P05 – P20	◩				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.
	K05 – K25	■								
	H05 – H20	■								
M8310	P01 – P10	■				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).
	M01 – M10	◩								
	K01 – K10	■								
	H05 – H15	◩								
8215	P10 – P20	■				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.
	M10 – M20	◩								
	K10 – K25	■								
	N10 – N25	■								
	S10 – S15	◩								
	H10 – H15	■								
M8325	P20 – P40	■				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.
	M15 – M30	◩								
M8330	P20 – P40	■				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.
	M20 – M35	■								
	K20 – K40	■								
	N15 – N30	◩								
	S15 – S25	◩								
	H15 – H25	◩								
M8340	P25 – P50	■				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).
	M20 – M40	■								
	K20 – K40	◩								
	S20 – S30	■								

Grade Identification	Area of Application	Application	Feed	Cutting speed	Resistance to adverse Working Conditions	Coating	Colour	Substrate	Coolant benefit	Grade description
M8345	P30 – P50	■	■■■■■	■■□□□	■■■■■+	PVD		H	-	This grade has exceptional operational reliability and is designed for heavy cuts in unfavourable conditions in difficult and tough materials.
	M30 – M40	■								
M6330	P20 – P35	■	■■■■■	■■□□□	■■■■■	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.
	M20 – M35	■								
	S20 – S30	■								
M4303	P01 – P10	◩	■■■■□	■■■■■	■■■□□	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.
	K01 – K10	■								
	N01 – N10	◩								
	H01 – H10	■								
M4310	P05 – P15	◩	■■■■■	■■■■□	■■■■□	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.
	M05 – M15	◩								
	K05 – K15	■								
	S05 – S10	■								
	H05 – H15	■								
2003	P01 – P10	◩	■■■■□	■■■■□	■■■□□	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.
	M01 – M10	◩								
	K01 – K10	■								
	S05 – S10	■								
	H05 – H15	◩								
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	◩	■■■■■	■□□□□	■■■■□	–		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.
	K10 – K25	■								
	N10 – N25	■								

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

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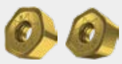
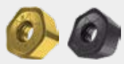
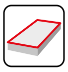
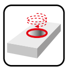
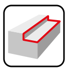
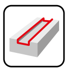
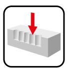
	SHN06C	SHN09C	SOD05	SOD06D	SOE06Z
	45°	45°	45°	45°	43°
	APMX [mm] 3.0	APMX [mm] 5.0	APMX [mm] 2.7 (10.0)	APMX [mm] 3.1 (8, 6)	APMX [mm] 3.3 (9.9)
	DC [mm] 25 – 125	DC [mm] 50 – 315	DCX [mm] 32 – 125	DC [mm] 63 – 160	DC [mm] 50 – 200
Cylindrical shank			 DCX = 32 – 40 [mm]		
Weldon	 DC = 25 – 32 [mm]				
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 			■		

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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

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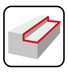
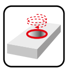
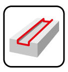
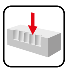
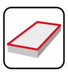
	SAD07D	SAD11E	SAD16E	SAP10D	SAP16D
	90°	90°	90°	90°	90°
	APMX [mm] 5.0	APMX [mm] 9.0	APMX [mm] 13.0	APMX [mm] 9.0	APMX [mm] 13.0
	DC [mm] 10 – 32	DC [mm] 16 – 125	DC [mm] 25 – 175	DC [mm] 10 – 63	DC [mm] 25 – 160
Cylindrical shank	 DC = 10 – 25 [mm]	 DC = 16 – 35 [mm]	 DC = 25 – 32 [mm]		
Weldon		 DC = 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) 	◩	■	■		

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SQUARE SHOULDER MILLING

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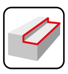
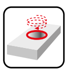
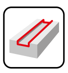
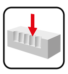
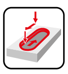
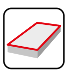
	STN10	STN16	SLN12	SLN16	SSO05O	SSO09
	90°	90°	90°	90°	90°	90°
APMX [mm]	5.0	10.0	9.0	13.0	4.5	8.0
DC [mm]	18 – 32	25 – 175	25 – 125	63 – 175	12 – 40	20 – 125
	 DC = 18 – 35 [mm]	 DC = 25 – 35 [mm]	 DC = 25 – 32 [mm]		 DC = 12 – 25 [mm]	
	 DC = 20 – 32 [mm]	 DC = 25 – 40 [mm]	 DC = 25 – 40 [mm]		 DC = 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
	■	■	■	■	■	■
	◩	◩	◩			
	■	■	■	■	■	■
	◩		■	■	■	■
	◩		◩			
	◩		◩			
	■	■	◩			◩
			◩	◩	■	

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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

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	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	◪	◪	◪	◪	

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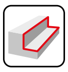
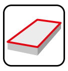
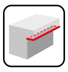
DEEP SHOULDER MILLING

	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

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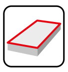
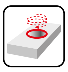
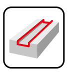
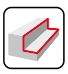
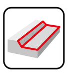
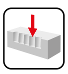
	SRC10	SRC12	SRC16	SRC20	SRD05
	–	–	–	–	–
	APMX [mm] 5.0	APMX [mm] 6.0	APMX [mm] 8.0	APMX [mm] 10.0	APMX [mm] 1.5
	DCX [mm] 25 – 66	DCX [mm] 40 – 100	DCX [mm] 63 – 160	DCX [mm] 80 – 160	DCX [mm] 10 – 15
Cylindrical shank	 DCX = 25 – 32 [mm]				
Weldon					
Modular	 DCX = 25 – 42 [mm]				
Shell mill	 DCX = 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
	■	■	■	■	■	■
	■	■	■	■		
	■	■	■	■		
	■	■	■	■		
	■	■	■	■		
						
						
						
						

<<<

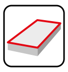
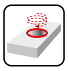
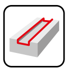
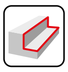
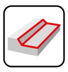
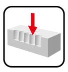
COPY MILLING

>>>

	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					■

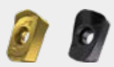
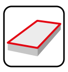
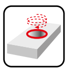
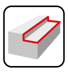
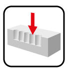
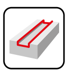
<<<

COPY 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 	◪	◪	◪	◪	◪

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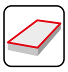
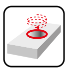
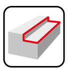
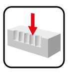
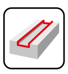
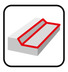
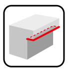
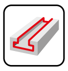
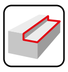
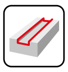
HIGH FEED MILLING

	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					
	■					
	◩					
	◩					
	◩					
	◩					
						
	◩					
	◩					

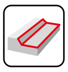
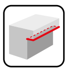
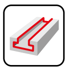
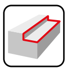
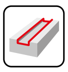
CHAMFER, T-SLOT MILLING

>>>

	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 					

<<<

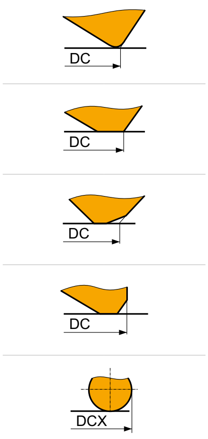
CHAMFER, T-SLOT MILLING

	F-SCC					
	90°					
	APMX [mm] 11.0 – 18.0					
	DC [mm] 25 – 40					
						
	664					
	P M K					
						
	CCMX					
	2					
						
	■					
	■					
	◩					
	◩					

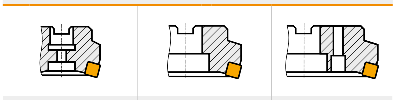
ISO CODE DESIGNATION – SHELL MILL BODIES

	1	2	3	4		5	6	7	8	9	10	11	12
ISO	63	A	06	R	–		S	90	A	D	16	E	
	1	2	3	4		5	6	7	8	9	10	11	12
ANSI	300	F	04	N	–	I	S	90	S	N	12	N	4

1 Cutting diameter

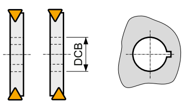


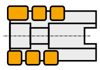
2 Cutting type, designation and/or size of clamping



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		

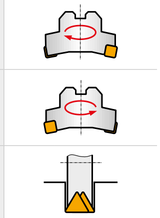




3 No. of working edges

4 Direction of cut

R	
L	
N	

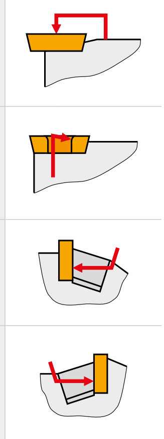


5 Standard

I	["]

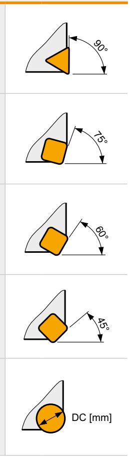
6 Clamping designation

C
S
W
F



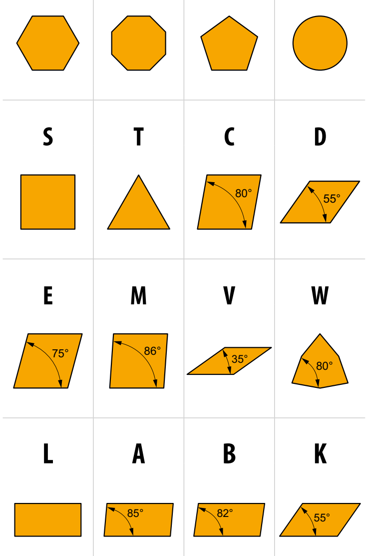
7 Setting angle [KAPR]

90°
75°
60°
45°
MO



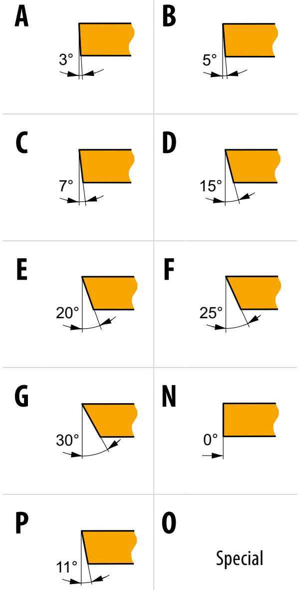
8 Insert shape

H	O	P	R
S	T	C	D
E	M	V	W
L	A	B	K

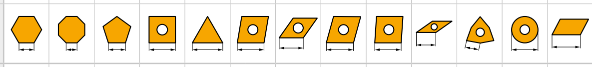


9 Insert clearance angle

A	B
C	D
E	F
G	N
P	O Special

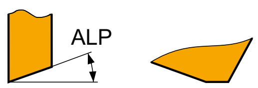


10 Cutting edge length



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″						

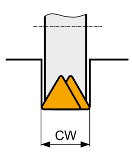
11 Wiper edge clearance angle



N ALP = 0°	C ALP = 7°	P ALP = 11°
D ALP = 15°	E ALP = 20°	F ALP = 25°

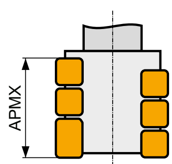
12 Cutting edge length (width)

CW [mm]/["]



CW	1/16″
0.156	2.5
0.187	3
0.250	4
0.313	5
0.375	6

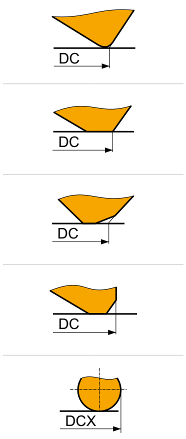
APMX



ISO CODE DESIGNATION – END SHOULDER MILL BODIES

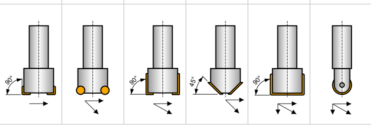
	1	2	3	4	5	6	7		8	9	10	11	12	13
ISO	32	A	4	R	042	B	32	-		S	A	D	11	E
ANSI	125	A	4	R	150	W	125	-	I	S	A	D	11	E

1 – Cutting diameter



2 – Cutter type and setting angle

A	E	J	N	H	K



5 – Overhang

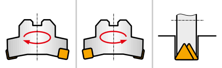
[mm]

["]

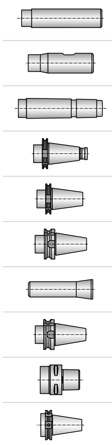
3 – No. of working edges

4 – Direction of cut

R	L	N



6 – Shank designation

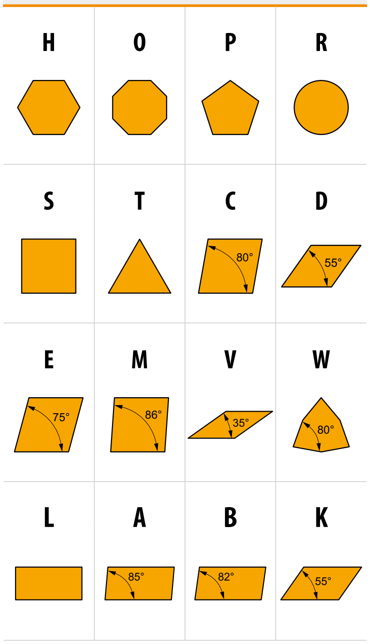


ISO	ANSI	Standard
A	C	DIN 1835A
B	W	ISO 3338-2, DIN 1835B
E	-	ISO 296, DIN 228-1
G	-	ISO 297, DIN 208-1
H	-	ISO/DIS 7388-1, DIN 69871-1
N	-	ISO 12 164-1, DIN 69893
-	R8	R8
X	-	MAS BT
XC	-	CAPTO
-	CA	ANSI B5.50

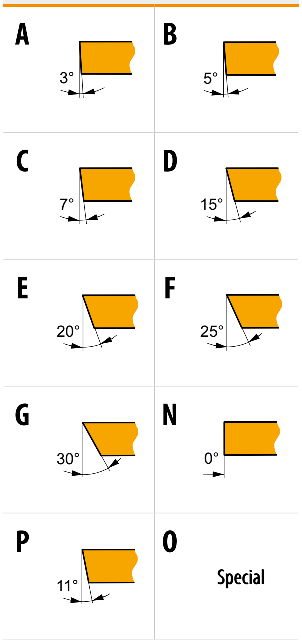
7 – Shank size

ISO	ANSI
6 – 40 mm	.250" – 1.250"
6 – 50 mm	.375" – 2.000"
1 – 6	–
40 – 50 mm	–
30 – 50 mm	–
25 – 100 mm	–
–	1.250"
30 – 50	–
3 – 10	–
–	40 / 50

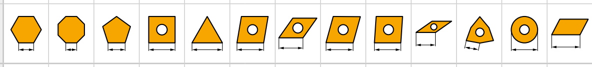
8 – Insert shape



9 – Insert clearance angle



10 – Cutting edge length

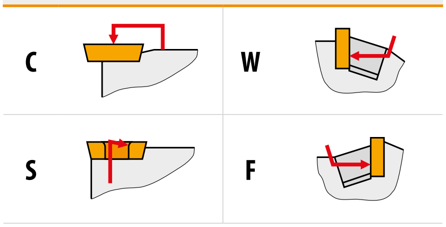


IC [mm]	IC ["]	H	O	P	S	T	C	D	E	M	V	W	R	K
3,97					03	06		04			06	02		
	5/32"							1.2"						
4,76					04	08	04	05	04	04	08	L3		
	3/16"							1.5"						
5,56					05	09	05	06	05	05	09	03		
	7/32"							1.8"						
6,35		03	02	04	08	11	06	07	08	08	11	04	06	
	1/4"							2"						
7,94		04	03	05	07	13	08	09	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"						

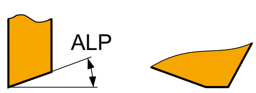
8 – Standard

ISO	ANSI
I	["]

9 – Clamping designation

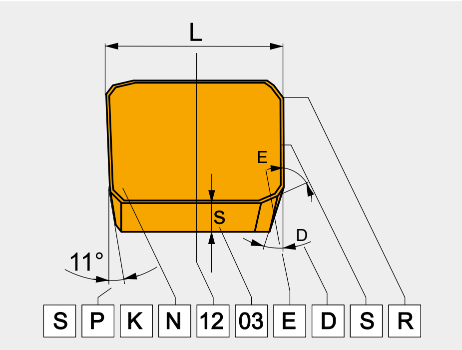


13 – Wiper edge clearance angle



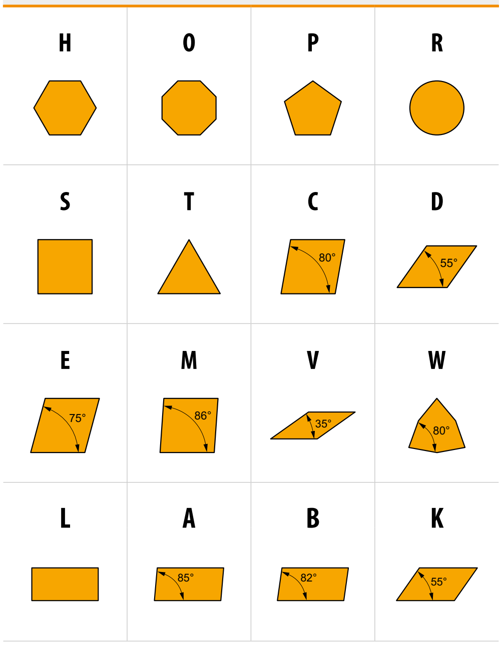
N ALP = 0°	C ALP = 7°	P ALP = 11°
D ALP = 15°	E ALP = 20°	F ALP = 25°

ISO CODE DESIGNATION – MILLING INSERTS

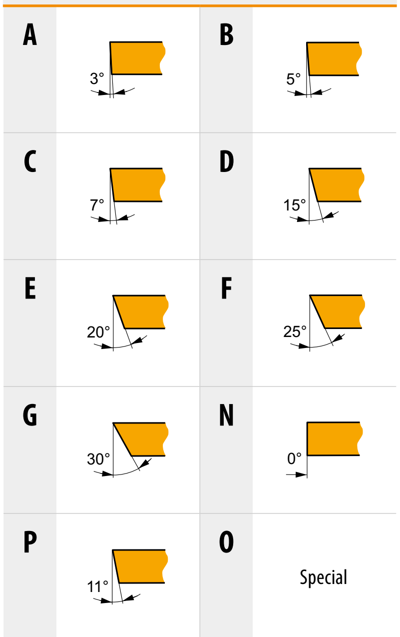


	1	2	3	4
ISO	S	P	G	N
	S	P	K	N
ANSI	S	P	G	
	S	P	K	N

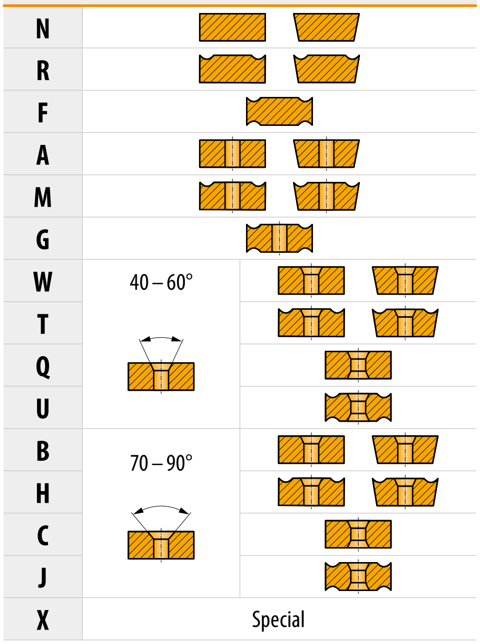
1 / 1 Insert shape



2 / 2 Insert clearance angle

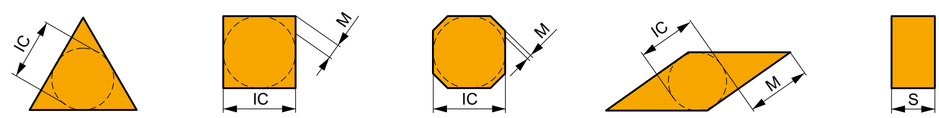


4 / 4 Insert type



3 / 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

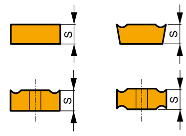
5	6	7	8	9		10
12	03	08			-	
12	03	ED	S	R		

5a	6a	7a	8	9		
4	2	2			-	
4	2	ED	S	R		

5 — Cutting edge length

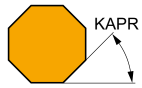
I.C. [mm]	["]	H	O	P	S	T	C	D	E	M	V	W	R	K
3.97					03	06		04			06	02		
	5/32″							1.2″						
4.76					04	08	04	05	04	04	08	L3		
	3/16″							1.5″						
5.56					05	09	05	06	05	05	09	03		
	7/32″							1.8″						
6.35		03	02	04	08	11	06	07	08	08	11	04	06	
	1/4″							2″						
7.94		04	03	05	07	13	08	09	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″						

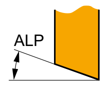
6 — Thickness



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



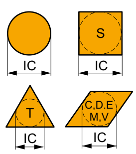


	KAPR		ALP
A	45°	A	3°
D	60°	B	5°
E	75°	C	7°
F	85°	D	15°
P	90°	E	20°
Z	Special	F	25°
		G	30°
		N	0°
		P	11°
		Z	Special

ZZ – Special

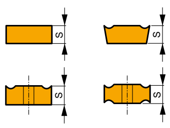
ANSI

5a — Inscribed circle



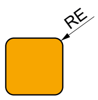
Symbol	I.C. [mm]	I.C. ["]
1	3.175	1/8″
1.2	3.969	5/32″
1.5	4.763	3/16″
1.8	5.556	7/32″
2	6.350	1/4″
2.5	7.938	5/16″
3	9.525	3/8″
4	12.700	1/2″
5	15.875	5/8″
6	19.050	3/4″
7	22.225	7/8″
8	25.400	1″
10	31.750	5/4″
12	38.100	6/4″

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



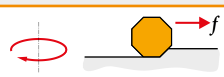
Symbol	RE [mm]	RE ["]
0	0	0″
0.2	0.099	1/256″
0.5	0.198	1/128″
1	0.397	1/64″
2	0.794	1/32″
3	1.191	3/64″
4	1.588	1/16″
5	1.984	5/64″
6	2.381	3/32″
7	2.778	7/64″
8	3.175	1/8″
10	3.969	5/32″
12	4.763	3/16″
14	5.556	7/32″
16	6.350	1/4″

8 — Cutting edge design

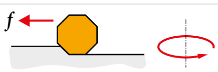
F	Sharp edges	E	Rounded edges
T	Edges with facet	S	Rounded edges with facet
K	Edges with double facet	P	Rounded edges with double facet

9 — Feed direction

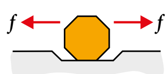
R



L



N



10 — Chip breaker designation

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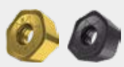
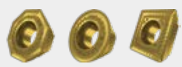
INDEXABLE FACE MILLS

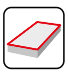
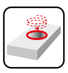
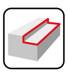
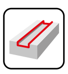
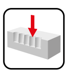
FACE MILLING

>>>

	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

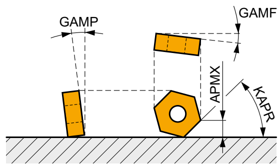
P M K H

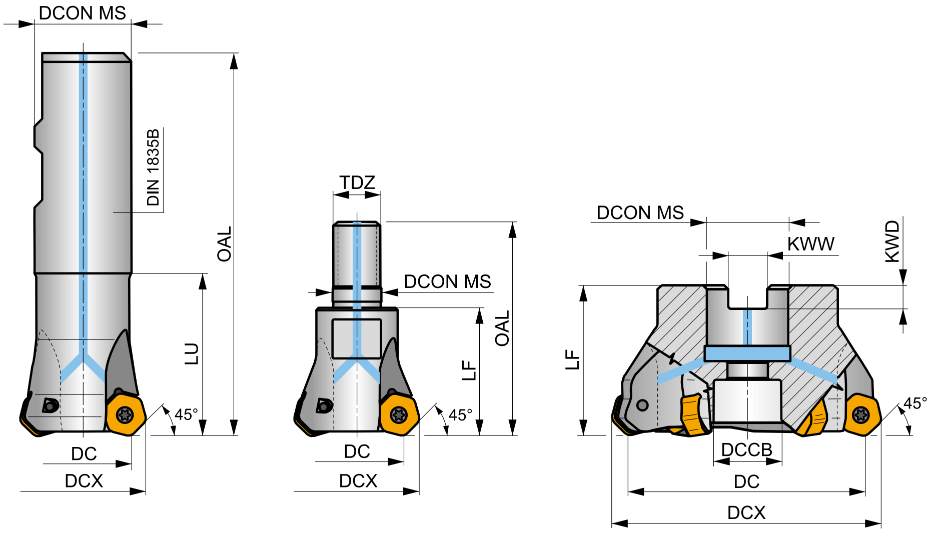
PRAMET S

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	DCX	OAL	DCON MS	DCCB	LU	LF	TDZ	KWW	KWD	GAMF	GAMP			max.		kg			
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]	[°]	[°]								
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	–
ISO 6462 DIN 8030	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	–
	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

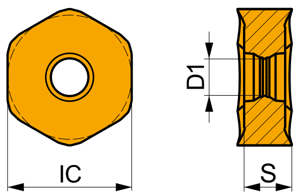
FA013	US 3007-T09P	2.0	M 3	7.3	D-T07P/T09P	FG-15	–	HS 1030C

AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

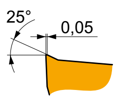
HNGX 06

PRAMET

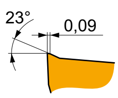
	IC [mm]	D1 [mm]	S [mm]
0604	10.500	3.70	4.76



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

F geometry with highly positive design for light machining.

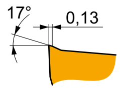



M geometry with highly positive design for medium machining.

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-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	–	–	–	–	–	–	–	–	–	–	–	–
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.

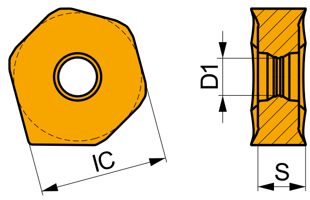
Product	Grade	RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
HNGX 0604ANSN-R	8215	–	■ 280	0.18	1.8	◩ 165	0.18	1.8	■ 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



R geometry with highly positive design for medium to heavy machining.

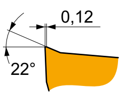
XNGX 06

	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.

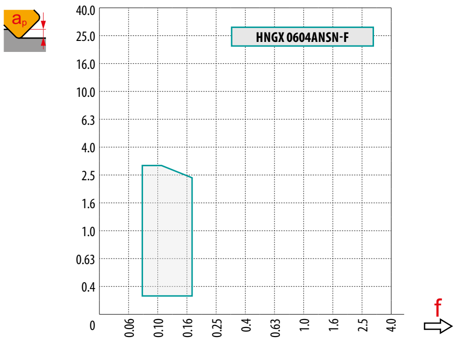
Product	Grade	RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
XNGX 0604ANSN	8215	–	■ 290	0.13	1.8	◩ 170	0.12	1.8	■ 275	0.13	1.8	–	–	–	–	–	–	–	–	–

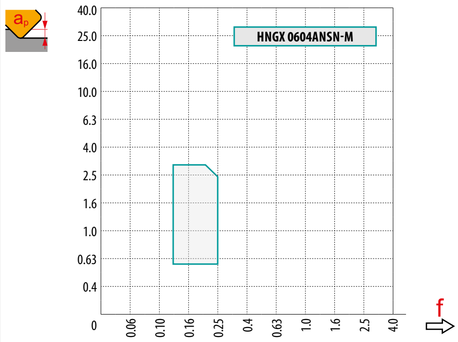


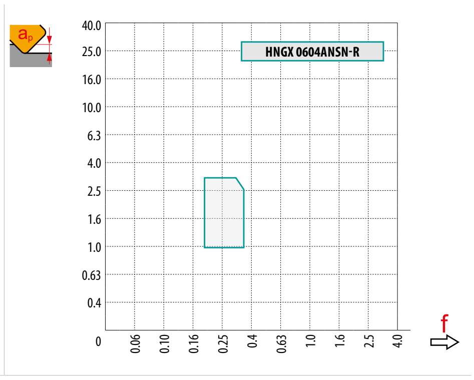
Wiper design for improved surface finish.

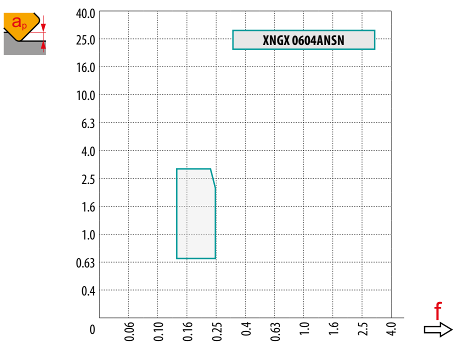
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	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/l
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

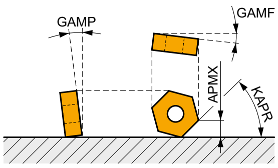
P M K H

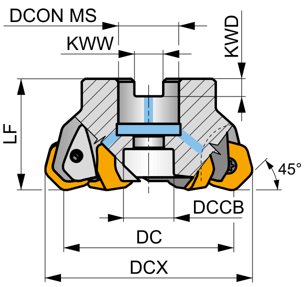
PRAMET S

ECON HN09 45° Face Mill with Double Negative Design and Internal Coolant

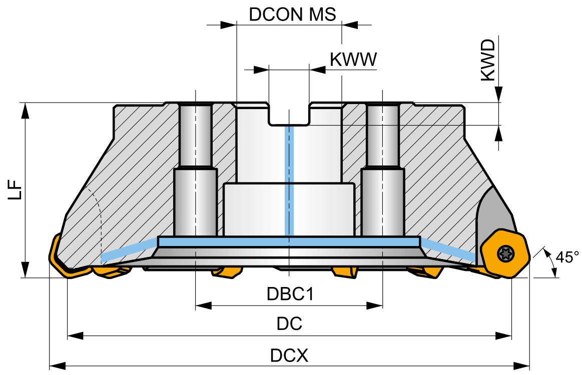
Highly productive 45° face mill utilising double sided HN.. 09 style inserts with APMX of 5 mm. Roughing, finishing and chamfering. Economical insert with 12 cutting edges. Differential tooth pitch. Arbor style only in range from Ø50 up to Ø315 mm. Body treated for longer tool life.

KAPR	45°
APMX	5.0 mm





DC 50 - 125 mm



DC 160 - 315 mm

h_m 0.08 - 0.25

Product	DC	DCX	LF	DCON MS	DCCB	DBC1	KWW	KWD	GAMF	GAMP			max.		kg			
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[°]	[°]								
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
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	–

ISO 6462 DIN 8030

GI252	HNGX 0906AN..	XNGX 0906AN..

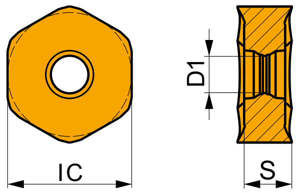
		Nm										
FA021	US 54511-T15P	5.0	M 4.5	11	D-T08P/T15P	FG-15	–	–	–	–	–	–
FA023	US 54511-T15P	5.0	M 4.5	11	D-T08P/T15P	FG-15	HS 1030C	–	–	–	–	–
FA026	US 54511-T15P	5.0	M 4.5	11	D-T08P/T15P	FG-15	HS 1240C	CAC 160C	HSD 0825C	HXK 5	–	–
FA027	US 54511-T15P	5.0	M 4.5	11	D-T08P/T15P	FG-15	HS 1655C	CAC 200C	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

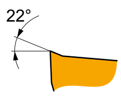
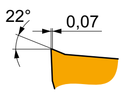
HNGX 09

PRAMET

	IC [mm]	D1 [mm]	S [mm]
0906	16.500	4.90	6.35

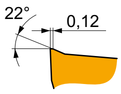


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

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]
  E — 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	–	–	–	–	–	–	–	–	–	–	–	–
  S — 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	–	–	–	–	–	–	–	–	–	–	–	–

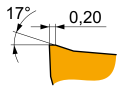
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
		[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]
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	–	–	–	–	–	–	–	–	–	–	–	–



M geometry with highly positive design for medium machining.

Product		RE	P			M			K			N			S			H		
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

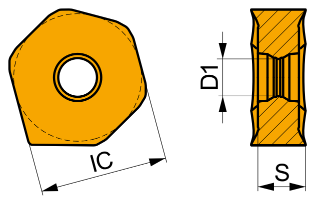


R geometry with positive design for medium to heavy machining.

XNGX 09

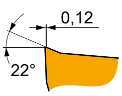
PRAMET

	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.

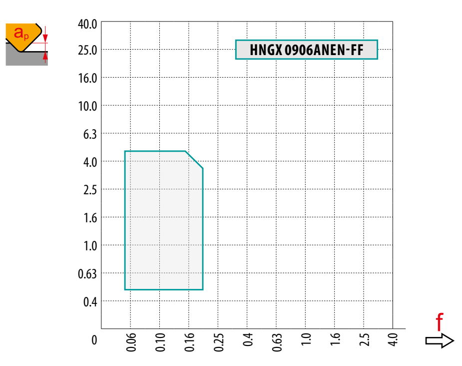
Product		RE	P			M			K			N			S			H		
		[mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]
XNGX 0906ANSN	8215	–	■ 245	0.20	2.7	◪ 145	0.18	2.7	■ 230	0.20	2.7	–	–	–	–	–	–	–	–	–
	M8330	–	■ 245	0.20	2.7	◪ 145	0.18	2.7	■ 230	0.20	2.7	–	–	–	–	–	–	–	–	–

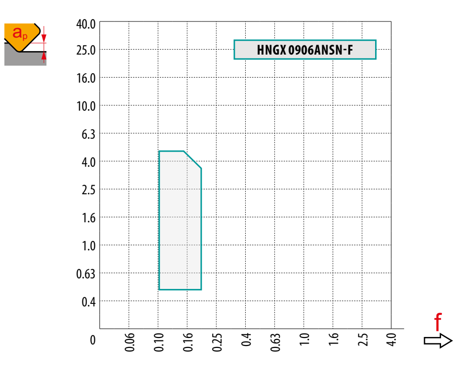


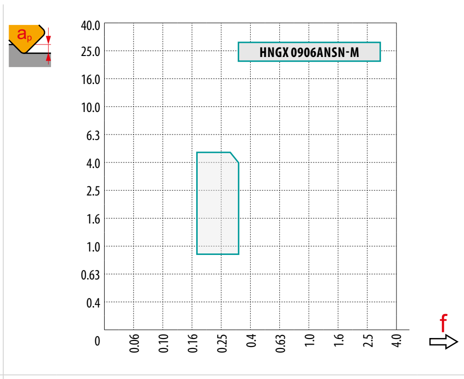
Wiper design for improved surface finish.

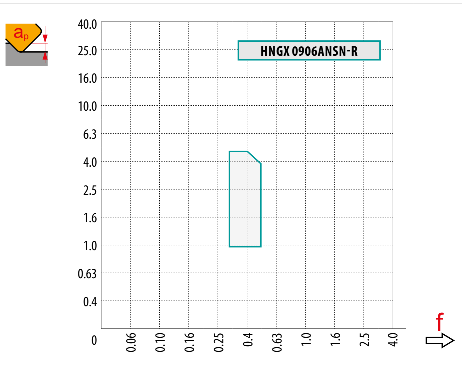
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

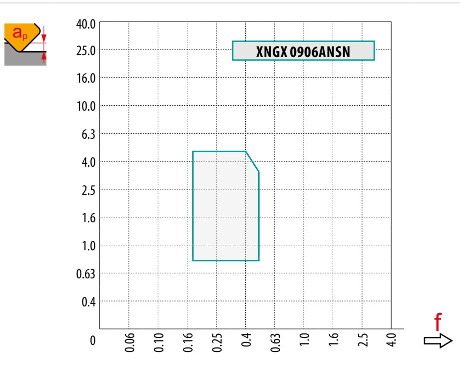
	HNGX 09-FF	HNGX 09-F	HNGX 09-M	HNGX 09-R	XNGX 09
RE	–	–	–	–	–
BS	1.50	1.17	1.17	1.17	7.53











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/l
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

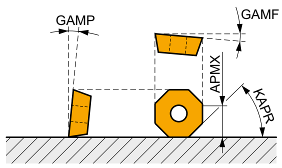
P M K N

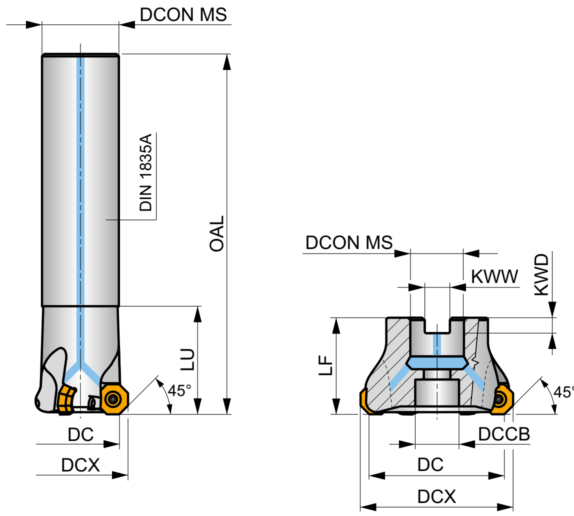
PRAMET S

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-SOD05-C	32	24.7	130	25	–	45	–	45	–	–	-10	8	3	–	17700	✓	0.41	GI326	FA049	–
	40N3R045A32-SOD05-C	40	32.6	150	32	–	45	–	45	–	–	-7	8	3	–	15800	✓	0.86	GI326	FA040	–
ISO 6462 DIN 8030	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	–
	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

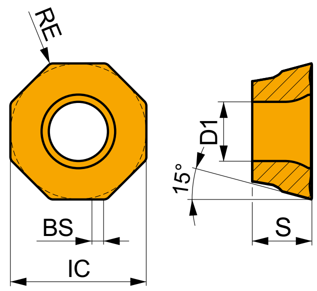
		Nm					
FA040	US 45014-T20P	5.0	M 5	13	Flag T20P	–	–
FA041	US 45014-T20P	5.0	M 5	13	–	SDR T20P-T	–
FA042	US 45014-T20P	5.0	M 5	13	–	SDR T20P-T	HS 90835
FA043	US 45014-T20P	5.0	M 5	13	–	SDR T20P-T	HS 1030C
FA049	US 45011-T20P	5.0	M 5	11	Flag T20P	–	–

AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

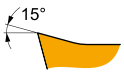
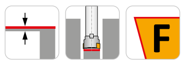
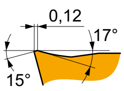
ODKT 05IM

PRAMET

	IC [mm]	D1 [mm]	S [mm]	BS [mm]
0505	12.700	5.50	5.56	1.00



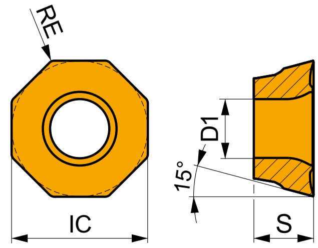
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	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

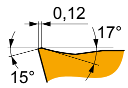
PRAMET

	IC [mm]	D1 [mm]	S [mm]
0505	12.700	5.50	5.56

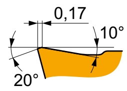


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product	Grade	RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	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]
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		–	–	–	–	–	–	–	–	–	–	–	–
ODMT 050508SN-R	M8330	0.8	■	190	0.25	2.5		–	–	–	■	180	0.25	2.5	–	–	–	–	–	–	–	–	–
	M9340	0.8	■	210	0.25	2.5		–	–	–		–	–	–	–	–	–	–	–	–	–	–	–



FM geometry, 45° face milling insert, with positive design for light to medium machining.

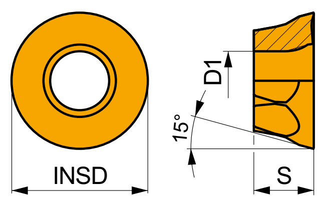


R geometry, 45° face milling insert, with positive design for unstable cutting conditions.

RDGT 12IM

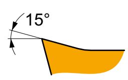
PRAMET

	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.

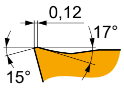
Product	Grade	RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
RDGT 120500FN-F	M8310	–	■	210	0.20	1.5	◪	105	0.18	1.5	–	–	–	–	–	–	–	–	–	–	–	–



F geometry with highly positive design for light 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 [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	–	–	–	–	–	–	–	–	–	–	–	–

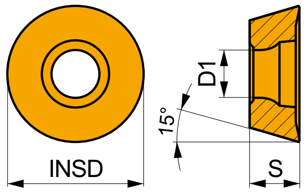


FM geometry with positive design for light to medium machining.

RDMT 12IM

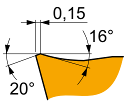
PRAMET

	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	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

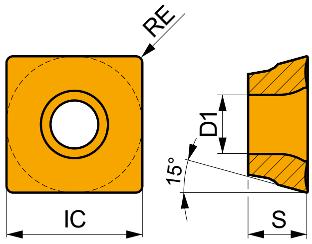


R geometry, copy and profile milling insert, with positive design for unstable cutting conditions.

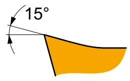
SDKT 12IM

PRAMET

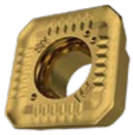
	IC [mm]	D1 [mm]	S [mm]
1205	12.700	5.50	5.56

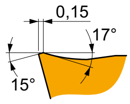


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.



F geometry, 90° shoulder milling insert, with highly positive design for light machining.





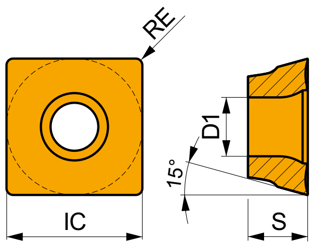
FM geometry, 90° shoulder milling insert, with positive design for light to medium machining.

Product	Grade	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]
SDKT 1205PDFR-F	8215	0.8	■ 285	0.10	4.0	◩ 170	0.09	4.0	–	–	–	◩ 855	0.12	4.0	–	–	–	–	–	–
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	–	–	–	–	–	–	–	–	–	–	–	–

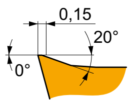
SDMT 12IM

PRAMET

	IC [mm]	D1 [mm]	S [mm]
1205	12.700	5.50	5.56



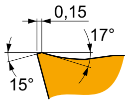
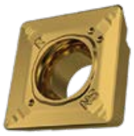
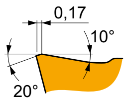
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.



F geometry, 90° shoulder milling insert, with positive design for light to medium machining.

Product	Grade	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 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.

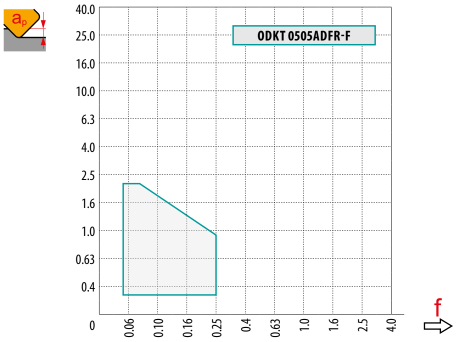
Product	Grade	RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
  FM geometry, 90° shoulder milling insert, with positive design for medium machining.																										
SDMT 120508SN-FM	**M8345**	0.8	■	175	0.15	4.0	◩	105	0.15	4.0		–	–	–		–	–	–		–	–	–		–	–	–
  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		–	–	–		–	–	–		–	–	–

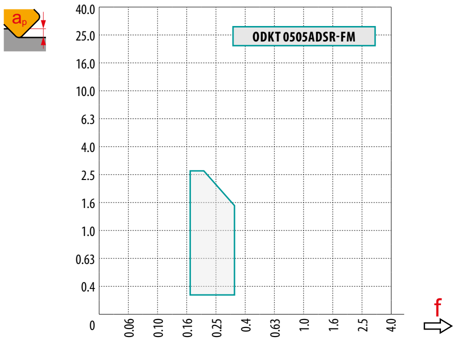
a_e/DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

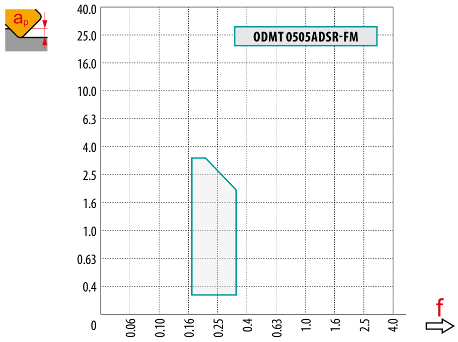
	ODKT 05-F	ODKT 05-FM	ODMT 05-FM	ODMT 05-R
RE	0.4	0.8	0.8	0.8
BS	1.00	1.00	–	–

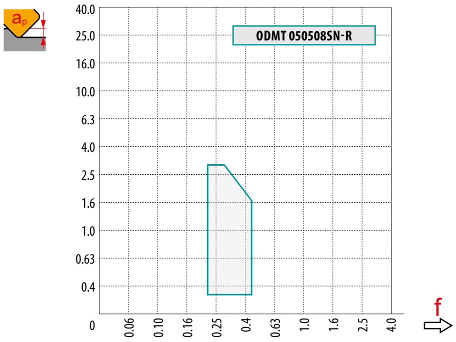
	RDGT 12-F	RDGT 12-FM	RDGT 12-R
RE	6.35	6.35	6.35
BS	–	–	–

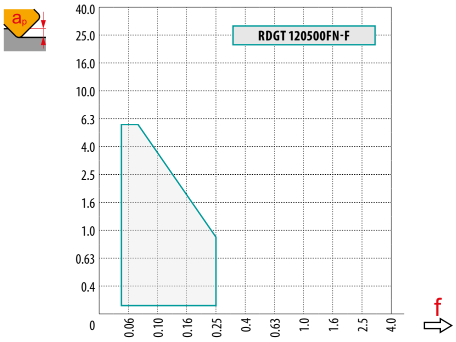
	SDKT 12-F	SDKT 12-FM	SDMT 12-F	SDMT 12-R
RE	0.8	0.8	0.8	0.8
BS	2.30	2.30	–	–

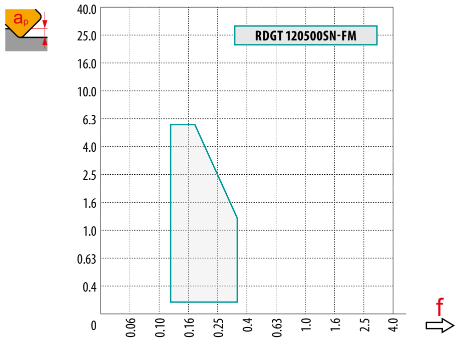


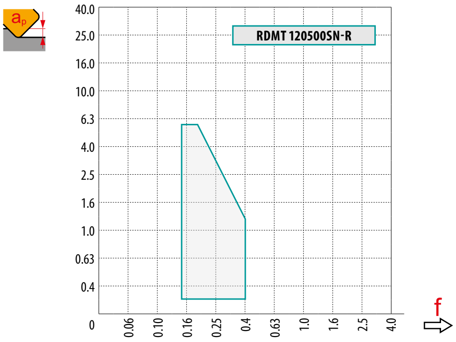


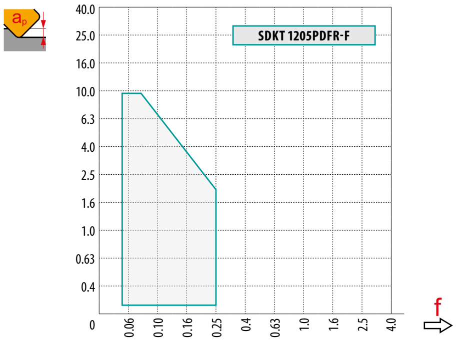


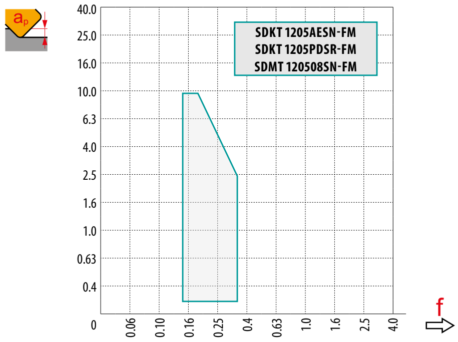


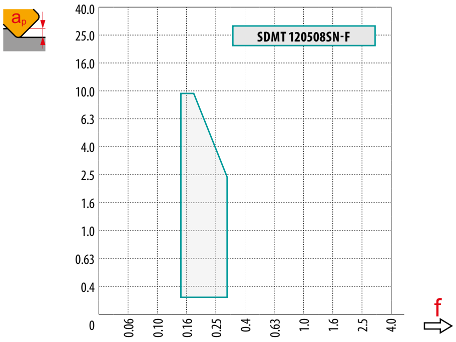


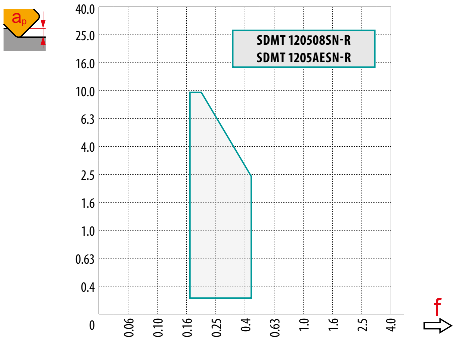












DCX		R												
	ap	0.25	0.50	0.60	0.70	0.80	1.00	1.25	1.50	2.00	3.00	4.00	5.00	6.00
32	DEF	23.43	24.80	25.23	25.62	25.99	26.63	27.33	27.94	28.94	30.39	31.31	31.83	32.00
40		31.43	32.80	33.23	33.62	33.99	34.63	35.33	35.94	36.94	38.39	39.31	39.83	40.00
50		41.43	42.80	43.23	43.62	43.99	44.63	45.33	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
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

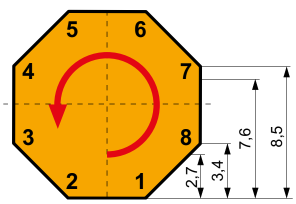
	O	R
a_p	2.4	2.3

		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

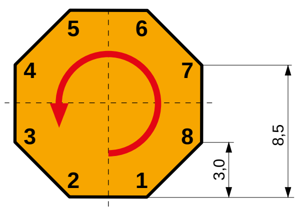
i

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

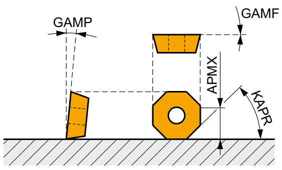
PRAMET

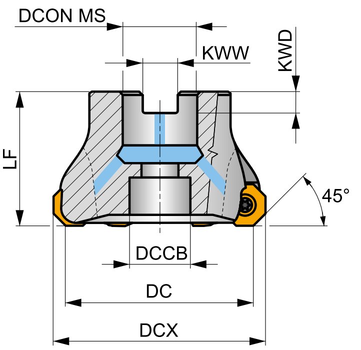
S

Universal Face Mill with Positive Design and Internal Coolant

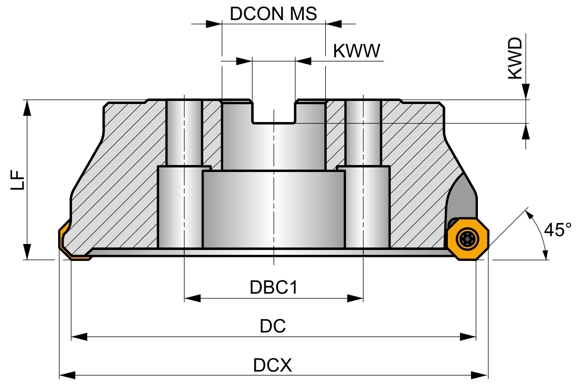
Highly productive universal face mill utilising single sided positive inserts with APMX of up to 3.5 mm. Unique insert seat fits OD.. 06 and RP.. 15 style inserts, suited for face milling and chamfering. Arbor style only in range from Ø63 up to Ø160 mm with differential tooth pitch. Body treated for 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		
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

ISO 6462 DIN 8030

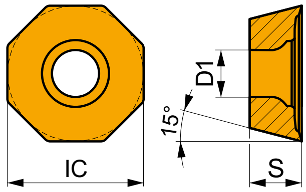
GI059	OD.. 0605ZZ..	RP.. 1505MO..

		Nm			
FA071	US 4511-T20	5.0	M 4.5	11	SDR T20-T

ODMT 06

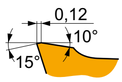
PRAMET

	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]
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		–	–	–		–	–	–		–	–	–



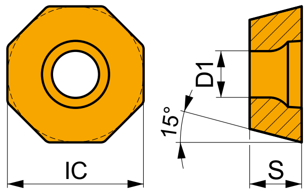
1 S

Slightly positive design, 45° face milling insert, for medium machining.

ODEW 06

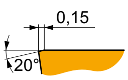
PRAMET

	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]
ODEW 0605ZZN	M8330	–	◩	210	0.26	2.5		–	–	–	■	195	0.26	2.5		–	–	–		–	–	–	◩	40	0.15	1.0



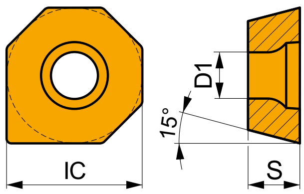
S

Zero rake angle design, 45° face milling insert, for medium machining.

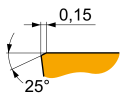
ODMX 06

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.



W S

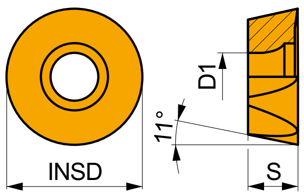
Wiper design for improved surface finish.

Product		RE [mm]	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]
ODMX 0605ZZ	**M8330**	–	◩	205	0.28	2.5		–	–	–	■	190	0.28	2.5		–	–	–		–	–	–	◩	40	0.15	1.0

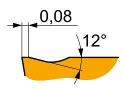
RPET 15

PRAMET

	INSD [mm]	D1 [mm]	S [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.



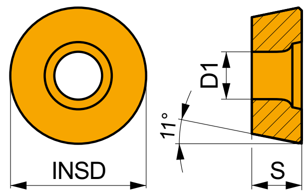
HFC S

M geometry, copy and profile mill insert, with positive design for light to rough machining.

Product		RE [mm]	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]
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		–	–	–

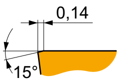
RPEW 15

	INSD [mm]	D1 [mm]	S [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 [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]
RPEW 1505M0S	**M8330**	–	◩ 300	0.20	1.0	–	–	–	■ 285	0.20	1.0	–	–	–	–	–	–	◩ 60	0.15	1.0

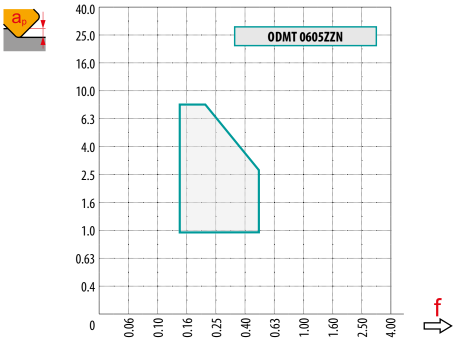


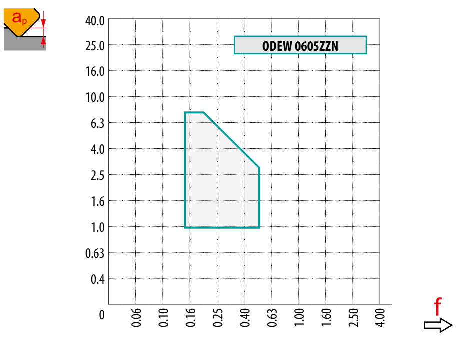
HFC S

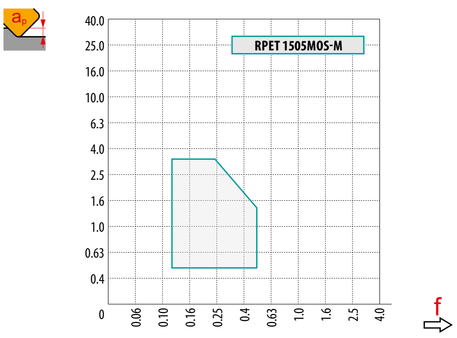
Zero rake angle design, copy and profile mill insert, for medium machining.

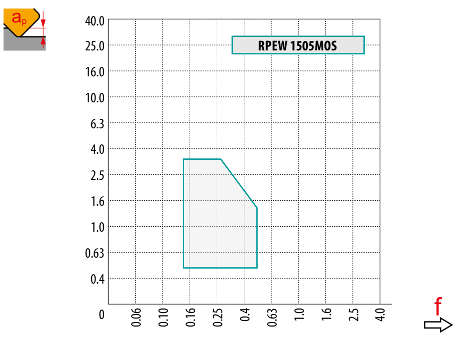
a_e/DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	ODMT 06	ODEW 06	ODMX 06	RPET 15-M	RPEW 15
RE	–	–	–	7.89	7.89
BS	1.73	5.92	9.91	–	–



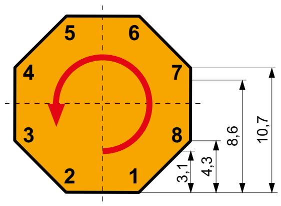






DC	R									
	a_p	0.00	0.50	0.75	1.25	1.50	2.00	2.50	3.00	4.00
63	DEF	56.63	62.17	63.36	65.18	65.91	67.16	68.19	69.05	70.41
80		73.63	79.17	80.36	82.18	82.91	84.16	85.19	86.05	87.41
100		93.63	99.17	100.36	102.18	102.91	104.16	105.19	106.05	107.41
125		118.63	124.17	125.36	127.18	127.91	129.16	130.19	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

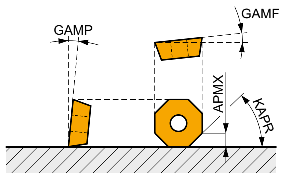
PRAMET

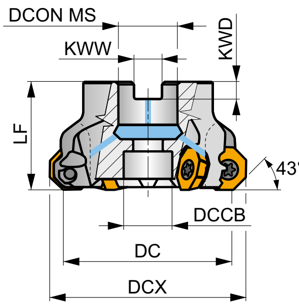
S

Universal Face Mill with Positive Design and Internal Coolant

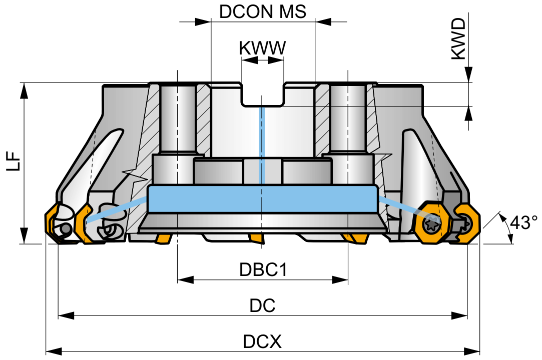
Highly productive universal face mill utilising positive single sided inserts with APMX of 4 mm for RE.. 16. Unique insert seat fits OE.. 06, RE.. 16 and XE.. 06 style inserts, suited for a wide range of applications. Arbor style only in range from Ø50 up to Ø200 mm with differential tooth pitch. Body 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-S45OE06Z-C	50	60.2	40	22	18	–	10.4	6.3	6	10	4	✓	10700	✓	0.48	GI283	FA053	–
50A05R-S45OE06Z-C	50	60	40	22	18	–	10.4	6.3	1	10	5	✓	10700	✓	0.48	GI283	FA053	–
56A05R-S45OE06Z-C	56	66	40	22	18	–	10.4	6.3	6	10	5	✓	10100	✓	0.54	GI283	FA053	–
63A04R-S45OE06Z-C	63	73.2	40	22	18	–	10.4	6.3	6	10	4	✓	9600	✓	0.59	GI283	FA053	–
63A06R-S45OE06Z-C	63	73	40	22	18	–	10.4	6.3	1	10	6	✓	9600	✓	0.61	GI283	FA053	–
70A06R-S45OE06Z-C	70	80	40	22	18	–	10.4	6.3	6	10	6	✓	9100	✓	0.69	GI283	FA053	–
80A05R-S45OE06Z-C	80	90.2	50	27	38	–	12.4	7	6	10	5	✓	8500	✓	1.03	GI283	FA051	AC001
80A06R-S45OE06Z-C	80	90.2	50	27	38	–	12.4	7	6	10	6	✓	8500	✓	1.07	GI283	FA051	AC001
90A07R-S45OE06Z-C	90	100	50	32	45	–	14.4	8	6	10	7	✓	8000	✓	1.63	GI283	FA051	AC002
100A06R-S45OE06Z-C	100	110.2	50	32	45	–	14.4	8	6	10	6	✓	7600	✓	1.90	GI283	FA051	AC002
100A08R-S45OE06Z-C	100	109.9	50	32	45	–	14.4	8	1	10	8	✓	7600	✓	1.92	GI283	FA051	AC002
125A07R-S45OE06Z-C	125	135.2	63	40	56	–	16.4	9	6	10	7	✓	6800	✓	3.35	GI283	FA051	AC003
125A09R-S45OE06Z-C	125	134.9	63	40	56	–	16.4	9	1	10	9	✓	6800	✓	3.35	GI283	FA051	AC003
160C09R-S45OE06Z-C	160	170.2	63	40	–	66.7	16.4	9	6	10	9	✓	6000	✓	7.11	GI283	FA056	–
160C12R-S45OE06Z-C	160	169.9	63	40	–	66.7	16.4	9	1	10	12	✓	6000	✓	7.06	GI283	FA056	–
200C11R-S45OE06Z-C	200	210.2	63	60	–	101.6	25.7	14	6	10	11	✓	5300	✓	10.80	GI283	FA057	–
200C14R-S45OE06Z-C	200	209.9	63	60	–	101.6	25.7	14	1	10	14	✓	5300	✓	11.17	GI283	FA057	–

ISO 6462 DIN 8030

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	–	–	–

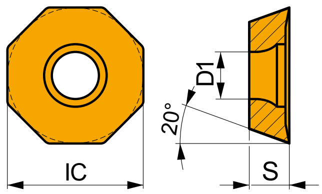
FA056	US 5011-T20P	5.0	M 5	11	SDR T20P-T	HS 1240C	CAC 160C	HSD 0825C	HXK 5
FA057	US 5011-T20P	5.0	M 5	11	SDR T20P-T	HS 1655C	CAC 200C	HSD 1025C	HXK 7

AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

OEHT 06

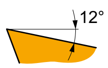
PRAMET

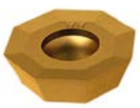
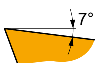
	IC [mm]	D1 [mm]	S [mm]
0604	16.050	5.50	4.76

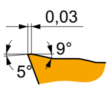


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/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]
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	–	–	–
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	–	–	–
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	–	–	–

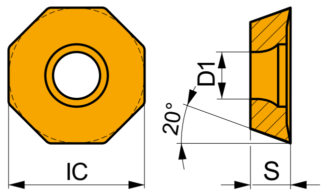



⏮

OEHT 06-FA

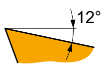
PRAMET

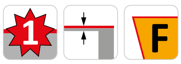
	IC [mm]	D1 [mm]	S [mm]
0604	16.050	5.50	4.76



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	–	–	–	–	–	–



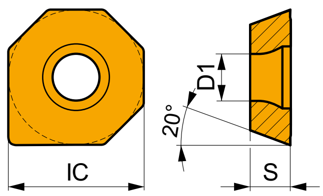


FA geometry, 45° face milling insert, with highly positive design for fine-finish to medium machining.

XEHT 06

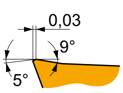
PRAMET

	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	–	–	–	–	–	–	–	–	–	–	–	–

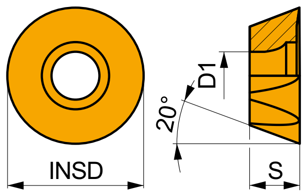


Slightly poisitive wiper design for improved surface finish.

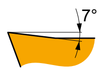
REHT 16

PRAMET

	INSD [mm]	D1 [mm]	S [mm]
1604	16.0	5.50	4.76



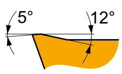
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.



E

MM geometry, copy and profile mill insert, with slightly positive design for light to medium machining.

Product	Grade	RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
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		–	–	–



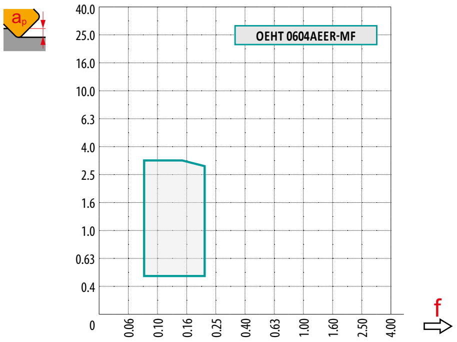
S

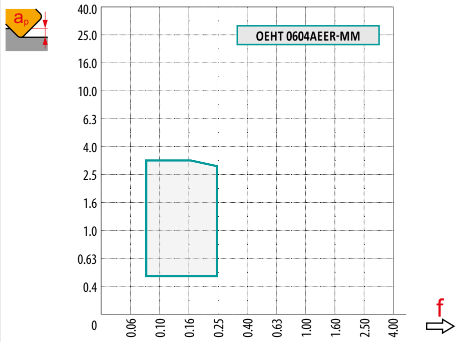
M geometry, copy and profile mill insert, with positive design for light to medium machining.

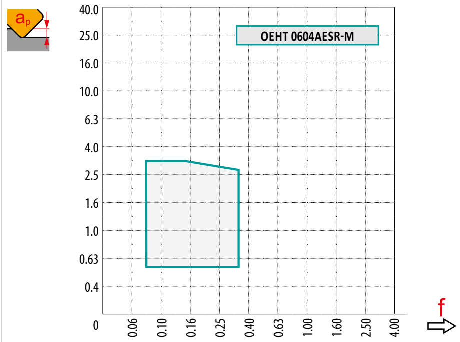
Product	Grade	RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
REHT 1604M0SN-M	**M8310**	–	■	275	0.35	2.0	◩	140	0.32	2.0		–	–	–		–	–	–		–	–	–		–	–	–
	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		–	–	–		–	–	–		–	–	–		–	–	–		–	–	–

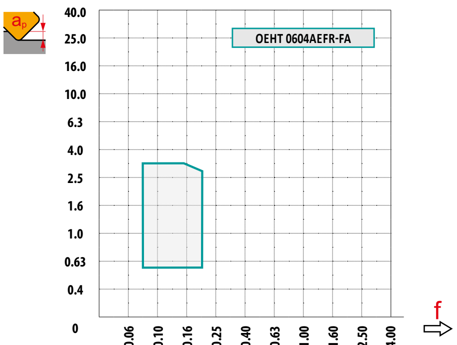
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

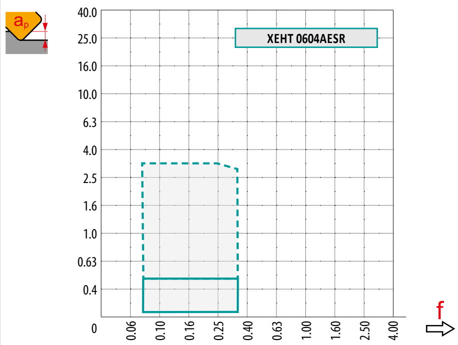
	OEHT 06-MF	OEHT 06-MM	OEHT 06-M	OEHT 06-FA	XEHT 06	REHT 16-MM	REHT 16-M
RE	–	–	–	–	–	8.00	8.00
BS	1.36	1.36	1.36	1.36	9.91	–	–

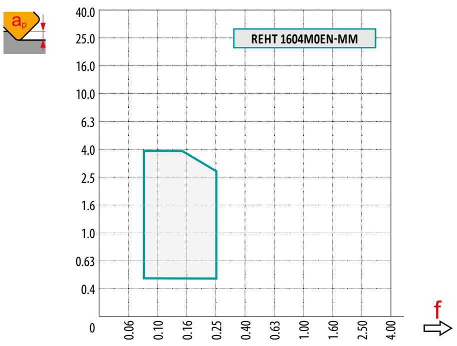


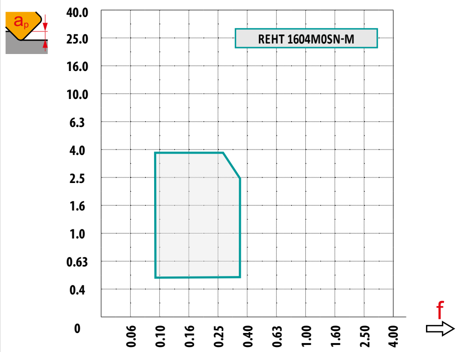












DC	a_p	R 0.00	0.50	0.75	1.25	1.50	2.00	2.50	3.00	4.00
50	DEF	43.90	49.47	50.66	52.49	53.23	54.48	55.52	56.39	57.76
56		49.80	55.37	56.56	58.39	59.13	60.38	61.42	62.29	63.66
63		56.90	62.47	63.66	65.49	66.23	67.48	68.52	69.39	70.76
70		63.80	69.37	70.56	72.39	73.13	74.38	75.42	76.29	77.66
80		73.90	79.47	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 O	DCX R	O RPMX	O APMX/l	R RPMX	R APMX/l
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 O	DCX R	O DMIN	O DMAX	O SMAX DMIN	O SMAX DMAX	R DMIN	R DMAX	R SMAX DMIN	R 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

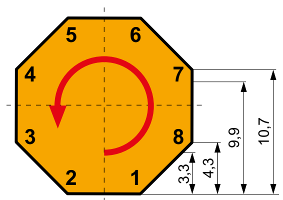
	O	R
a_p	3.1	3.0

R

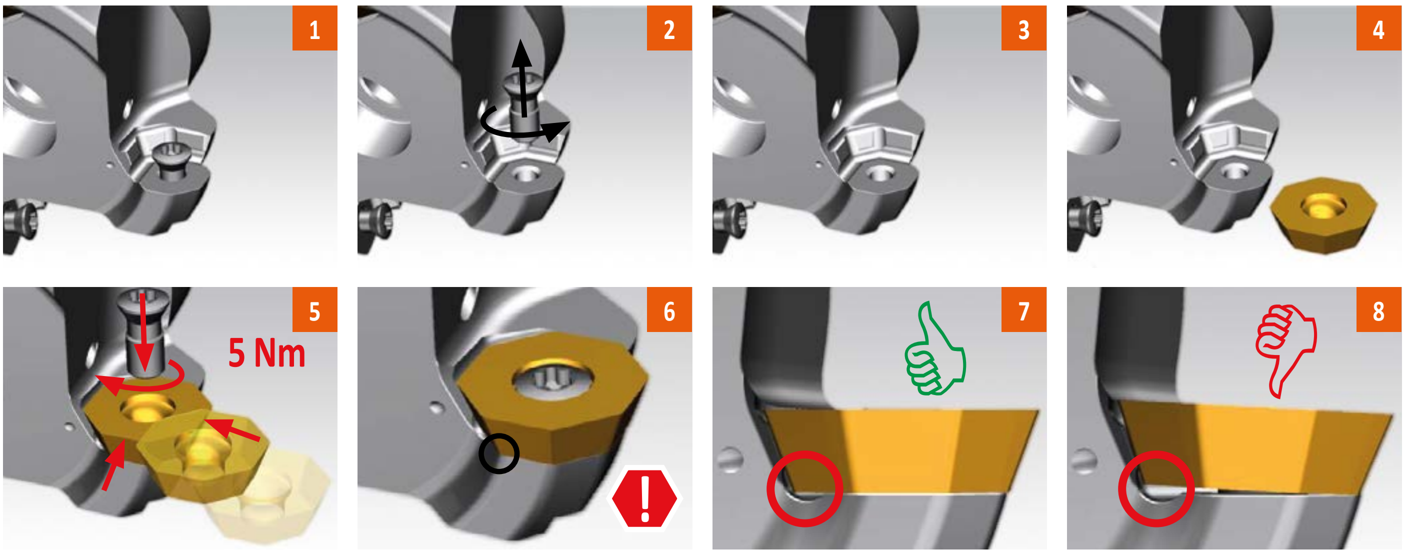
DCX	µm	3	5	10	15	20	30	40	50	60	80	100
59.9	FE	0.848	1.095	1.548	1.896	2.189	2.681	3.096	3.461	3.792	4.378	4.895
65.8		0.889	1.147	1.622	1.987	2.294	2.810	3.245	3.628	3.974	4.589	5.130
72.9		0.935	1.207	1.708	2.091	2.415	2.958	3.415	3.818	4.183	4.830	5.400
79.8		0.979	1.263	1.787	2.188	2.527	3.095	3.573	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

i



a_p	
-> 3.3	8
-> 4.3	7
-> 9.9	4
-> 10.7	2



SOE09Z

P M N S

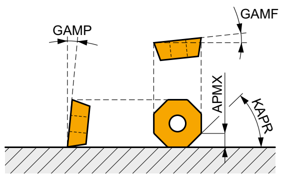
PRAMET

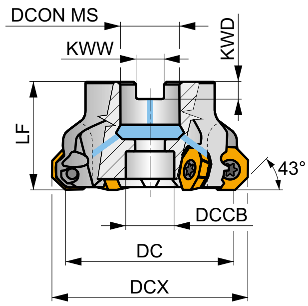
S

Universal Face Mill with Positive Design and Internal Coolant

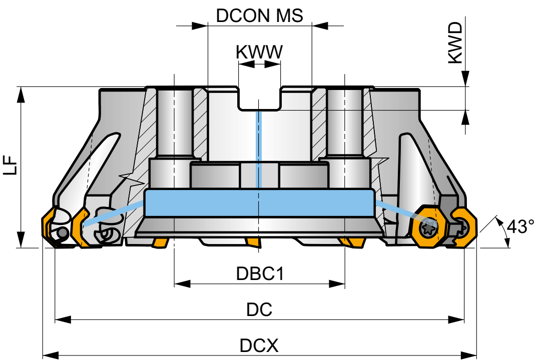
Highly productive universal face mill utilising positive single sided inserts with APMX of 6 mm for RE.. 24. Unique insert seat fits OE.. 09, RE.. 24 and XE.. 09 style inserts. Suited for a wide range of applications. Arbor style only in range from Ø80 up to Ø315 mm with differential tooth pitch. Body 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			
80A05R-S450E09Z-C	80	95	50	27	22	–	12.4	7	6	10	5	✓	6100	✓	1.32	GI293	FA064	–
100A06R-S450E09Z-C	100	115	50	32	45	–	14.4	8	6	10	6	✓	5400	✓	1.90	GI293	FA061	AC002
125A07R-S450E09Z-C	125	140	63	40	56	–	16.4	9	6	10	7	✓	4800	✓	3.38	GI293	FA061	AC003
160C08R-S450E09Z-C	160	175	63	40	–	66.7	16.4	9	6	10	8	✓	4300	✓	6.12	GI293	FA066	–
200C10R-S450E09Z-C	200	215	63	60	–	101.6	25.7	14	1	10	10	✓	3800	✓	11.50	GI293	FA067	–
250C12R-S450E09Z-C	250	265	63	60	–	101.6	25.7	14	1	10	12	✓	3400	✓	18.50	GI293	FA068	–
315C14R-S450E09Z-C	315	330	80	60	–	101.6	25.7	14	1	10	14	✓	3000	✓	36.00	GI293	FA069	–

ISO 6462 DIN 8030

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 3150C	RRH 34

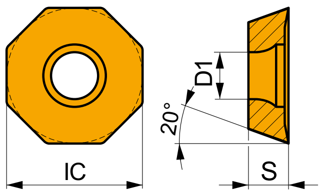
AC002	KS 1635	K.FMH32

AC003	KS 2040	K.FMH40

OEHT 09

	IC [mm]	D1 [mm]	S [mm]
0906	24.100	8.60	7.15

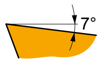
PRAMET



Suitability and 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 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		–	–	–
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		–	–	–		–	–	–		–	–	–		–	–	–		–	–	–

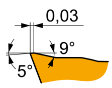
OEHT 0906AEER-MM



1 E

MM geometry, 45° face milling insert, with sharp positive design for light to medium and potentially heavy machining.

OEHT 0906AESR-M



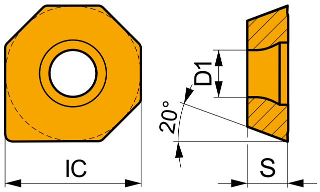
S

M geometry, 45° face milling insert, with positive design for light to medium and potentially heavy machining.

XEHT 09

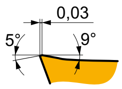
PRAMET

	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]
XEHT 0906AESR	**M8310**	–	■ 235	0.35	3.5	◩ 115	0.32	3.5	–	–	–	–	–	–	–	–	–	–	–	–



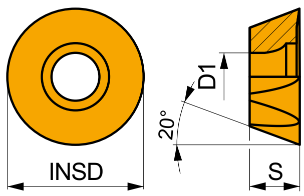
W S

Slightly positive wiper design for improved surface finish.

REHT 24

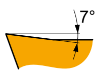
PRAMET

	INSD [mm]	D1 [mm]	S [mm]
2406	24.0	8.60	7.15



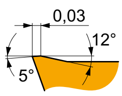
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

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]
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	–	–	–
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	–	–	–



E

MM geometry, copy and profile mill insert, with slightly positive design for light to medium and potentially heavy machining.

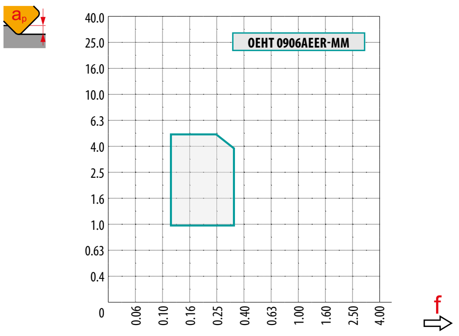


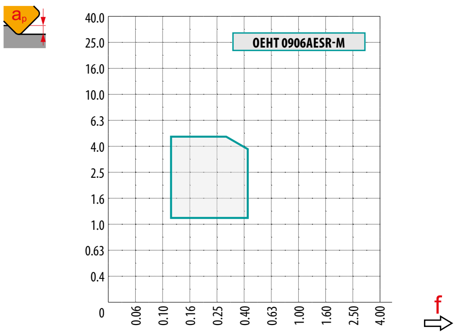
S

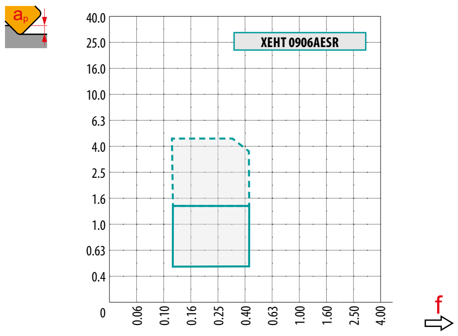
M geometry, copy and profile mill insert, with slightly positive design for light to medium and potentially heavy machining.

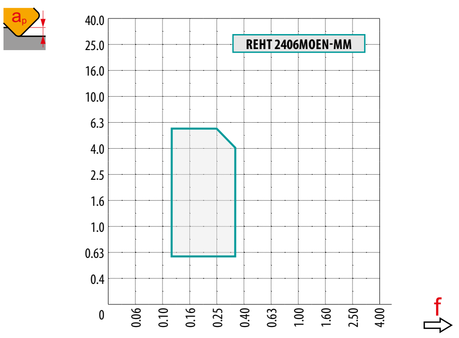
a_e/DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
x.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

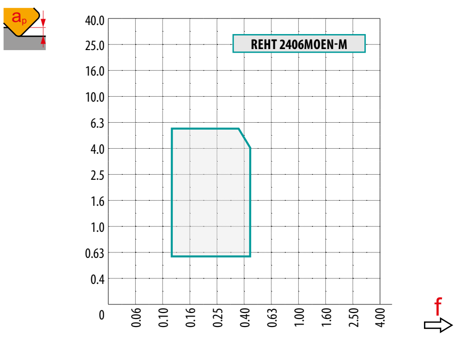
	OEHT 09-MM	OEHT 09-M	XEHT 09	REHT 24-MM	REHT 24-M
RE	–	–	–	12.00	12.00
BS	2.00	2.00	14.80	–	–











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
		R										
80	DEF	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

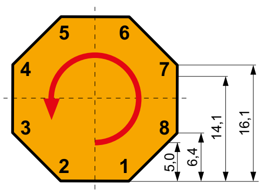
DC	DCX	O		R	
O	R	RPMX	APMX/l	RPMX	APMX/l
80	94.9	4.9	8.4/100	5.0	8.6/100
100	114.9	3.7	6.3/100	3.7	6.3/100
125	139.9	2.8	4.7/100	2.8	4.7/100
160	174.9	2.1	3.5/100	2.1	3.5/100
200	214.9	1.6	2.6/100	1.6	2.6/100

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

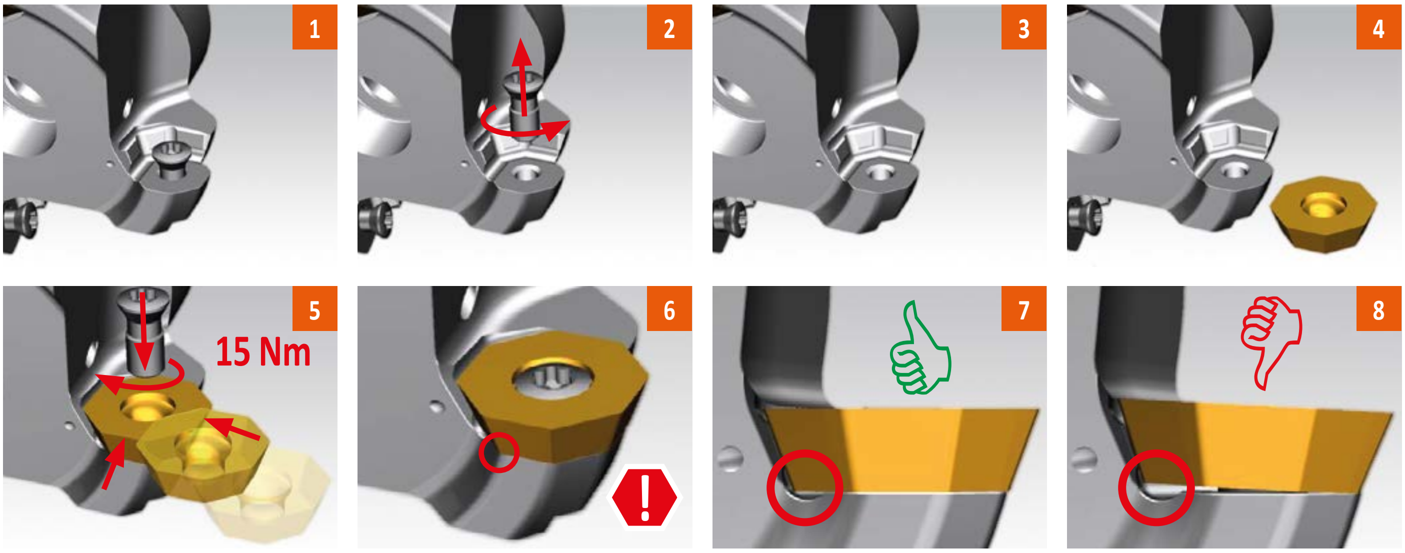
	O	R
a_p	5.5	5.4

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

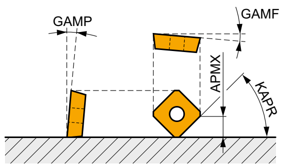
PRAMET

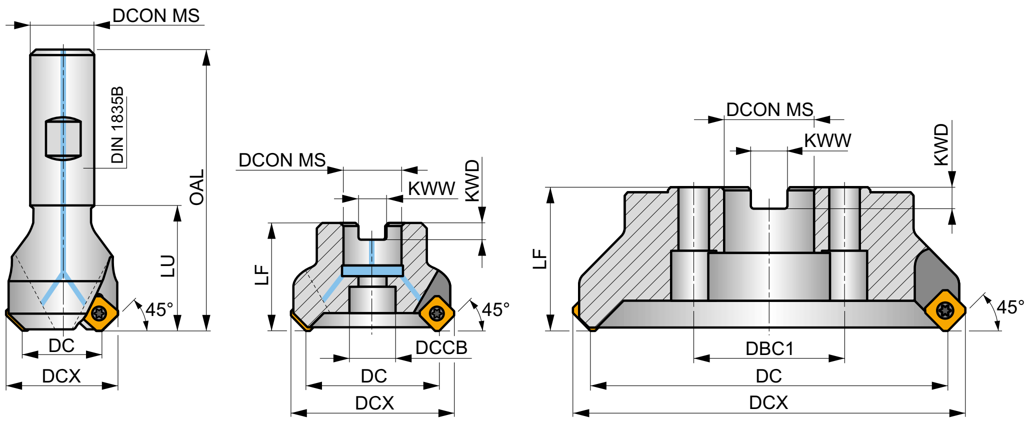
S

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
	0.06 - 0.18

	Product	DC	DCX	OAL	DCON MS	DCCB	DBC1	LU	LF	KWW	KWD	GAMF	GAMP			max.		kg			
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[°]	[°]								
DIN 1835B	20N2R032B20-SSE09-C	20	29.8	82	20	–	–	32	–	–	–	-5	20	2	–	24600	✓	0.26	GI147	FA010	–
	25N3R042B25-SSE09-C	25	34.8	98	25	–	–	42	–	–	–	-5	20	3	–	22000	✓	0.44	GI147	FA010	–
	32N4R042B32-SSE09-C	32	42	102	32	–	–	42	–	–	–	-5	20	4	–	19400	✓	0.68	GI147	FA010	–
ISO 6462 DIN 8030	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	–
	80A06R-S45SE09F-C	80	89.6	–	27	38	–	–	50	12.4	7	-5	20	6	✓	12300	✓	1.14	GI147	FA011	AC001
	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

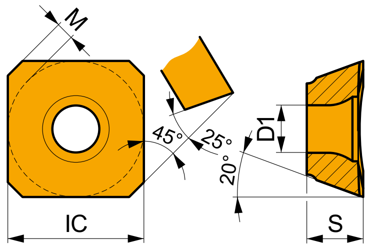
FA013	US 3007-T09P	2.0	M 3	7.3	D-T07P/T09P	FG-15	–	HS 1030C
FA014	US 3007-T09P	2.0	M 3	7.3	D-T07P/T09P	FG-15	–	HS 1240C

AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

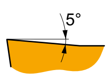
SEET 09

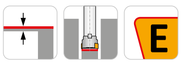
PRAMET

	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.





Positive design for light to medium machining.

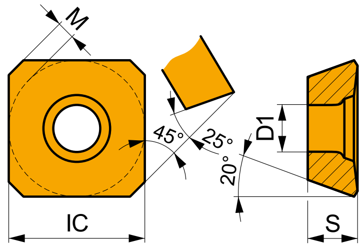
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
SEET 09T3AFEN	8215	–	■ 300	0.14	2.5	◩ 180	0.13	2.5	–	–	–	–	–	–	◩ 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	–	–	–

⏮

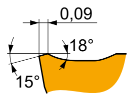
SEMT 09

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.

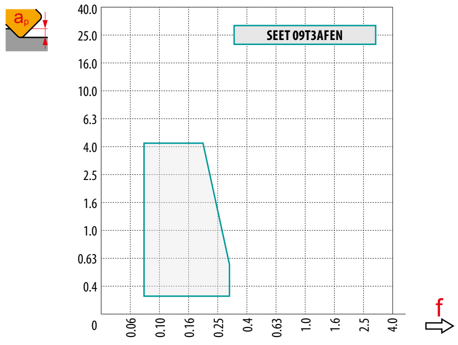


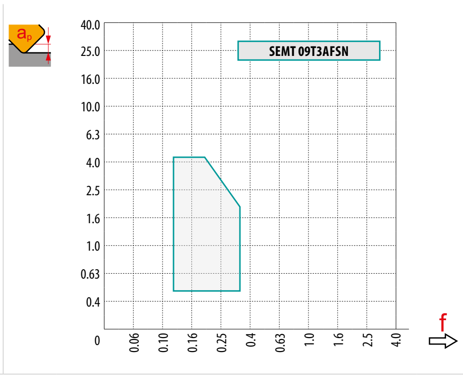
Positive design for light to medium machining.

Product	Grade	RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
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

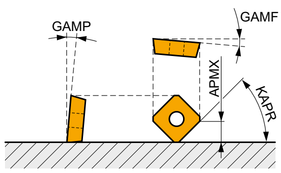
PRAMET

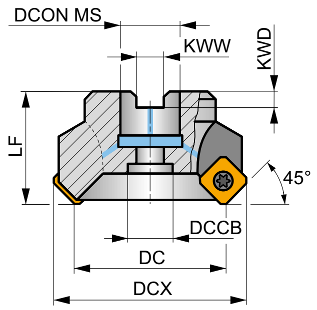
S

45° Face Mill with Positive Design and Internal Coolant

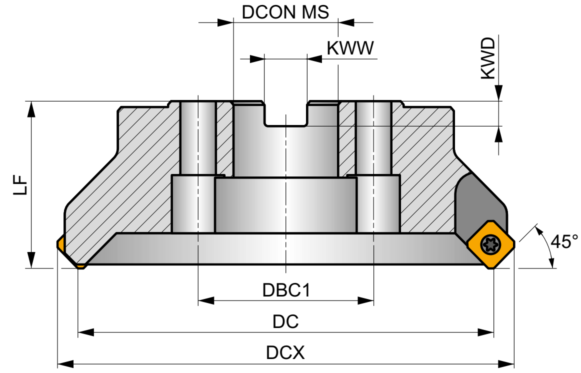
Highly productive 45° face mill utilising single sided SN.. 12 style inserts with APMX of 6.5 mm. Suited for face milling and chamfering. Arbor style only in range from Ø50 up to Ø250 mm. Body treated for longer tool life.

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			
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	–

ISO 6462 DIN 8030

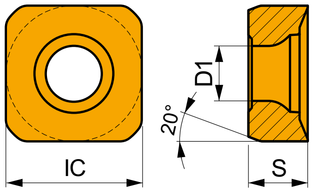
GI156	SNKT 1205AZ..	SNMT 1205AZ..

		Nm			
FA071	US 4511-T20	5.0	M 4.5	11	SDR T20-T

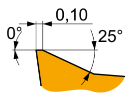
AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

SNMT 12

	IC [mm]	D1 [mm]	S [mm]
1205	12.700	5.20	5.56

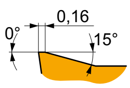


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.



M geometry with highly positive design for medium machining.

Product	Grade	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]
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	–	–	–	–	–	–	–	–	–

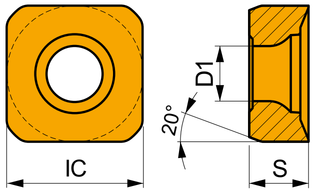


R geometry with positive design for medium to heavy machining.

Product	Grade	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]
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	–	–	–	–	–	–	–	–	–

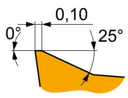
SNKT 12

	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.

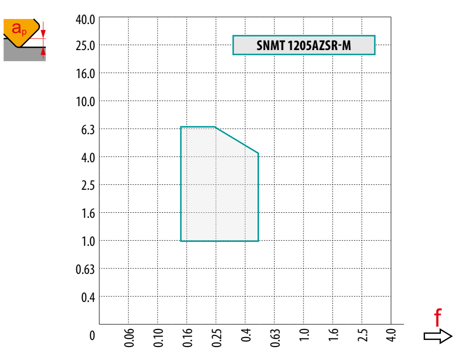
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
SNKT 1205AZSR-M	**M8330**	–	■ 305	0.24	3.2	■ 180	0.22	3.2	◩ 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	–	–	–

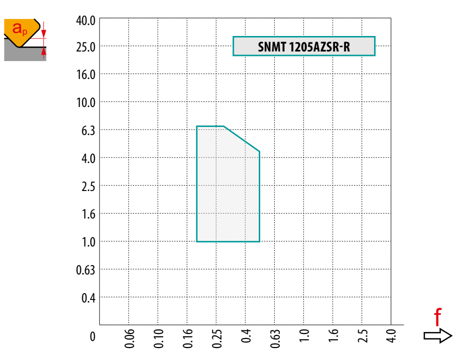


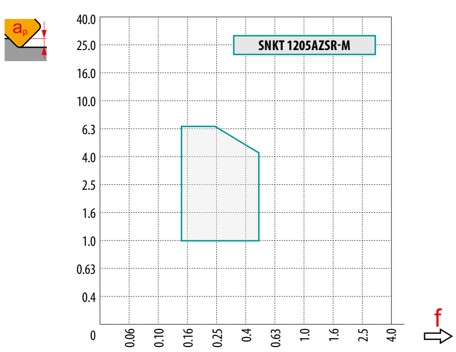
M geometry with highly positive design for medium machining.

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

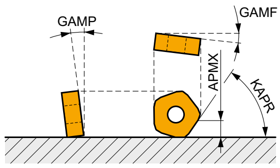
S

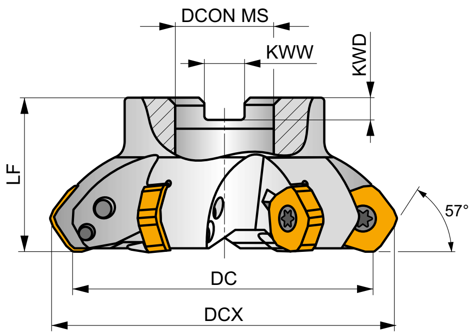
PENTA HD 57° Face Mill with Double Negative Design for Heavy Face Milling

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.

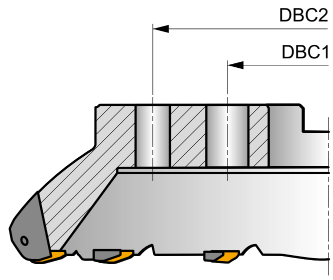
PENTA HD

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			
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	–

ISO 6462 DIN 8030

GI261	PNMU 1308DN..	XNGX 1308DNSN	PNMQ 1308DN..

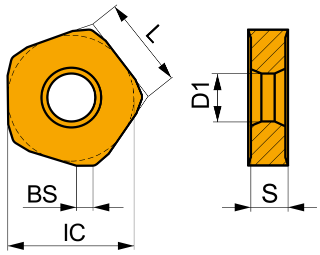
					Nm			
FA081	SPN 13T3DN	US 64010-T15P	SDR T15P	US 68026-T30P	15.0	M 8	26	SDR T30P-T

AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

PNMU 13

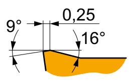
PRAMET

	BS [mm]	IC [mm]	D1 [mm]	L [mm]	S [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 [mm]	P	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H	H vc [m/min]	H f [mm/tooth]	H ap [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		–	–	–

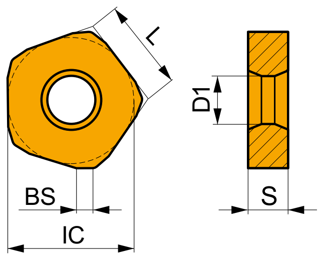


M geometry with positive design for rough machining.

PNMQ 13

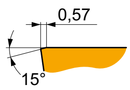
PRAMET

	BS [mm]	IC [mm]	D1 [mm]	L [mm]	S [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 [mm]	P	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H	H vc [m/min]	H f [mm/tooth]	H ap [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		–	–	–		–	–	–		–	–	–		–	–	–		–	–	–

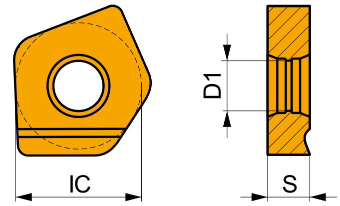


Zero rake angle design particularly suited to rough machining.

XNGX 13

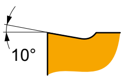
PRAMET

☐	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.

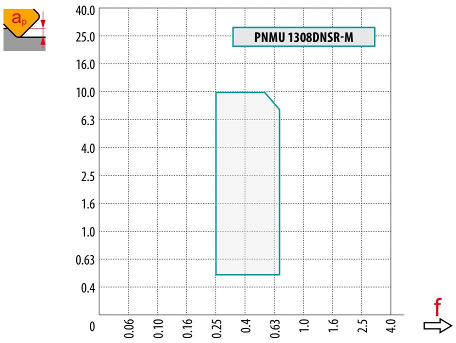
Product		RE [mm]	P				M				K				N				S				H			
				vc [m/min]	f [mm/tooth]	ap [mm]		vc [m/min]	f [mm/tooth]	ap [mm]		vc [m/min]	f [mm/tooth]	ap [mm]		vc [m/min]	f [mm/tooth]	ap [mm]		vc [m/min]	f [mm/tooth]	ap [mm]		vc [m/min]	f [mm/tooth]	ap [mm]
XNGX 1308DNSN	M8330	–	■	245	0.45	2.5		–	–	–	■	230	0.45	2.5		–	–	–		–	–	–		–	–	–

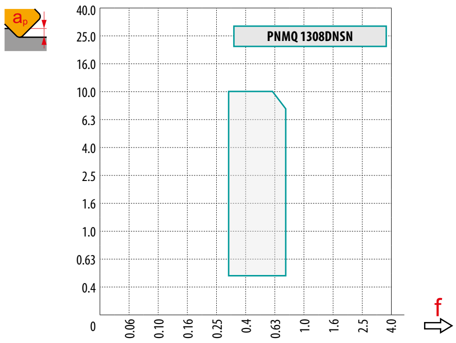


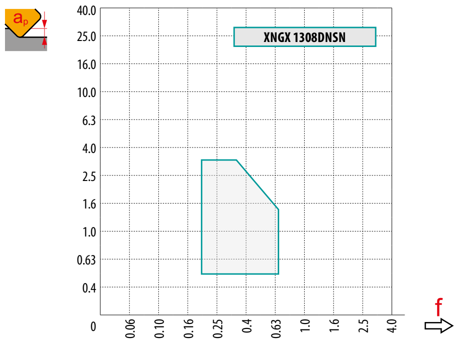
Wiper design for improved surface finish.

ae / 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

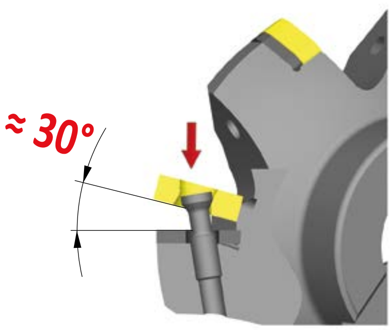




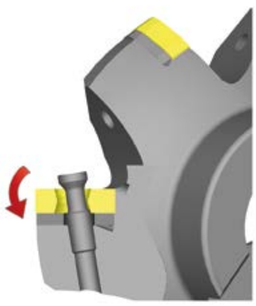


i

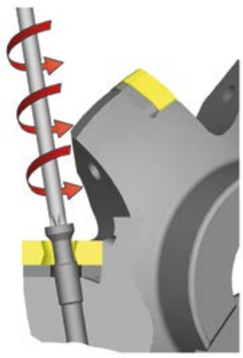
1



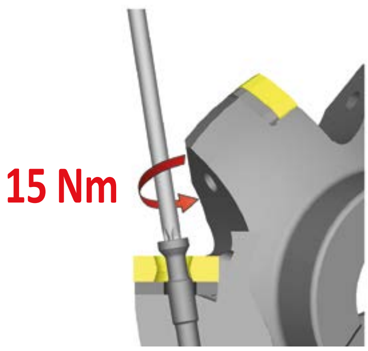
2



3



4



CHN09

K

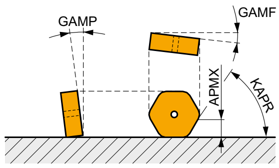
PRAMET

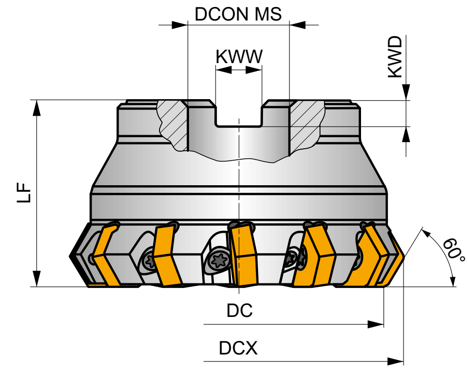
C

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

ISO 6462 DIN 8030

Product	DC	DCX	LF	DCON MS	KWW	KWD	GAMF	GAMP			max.		kg		
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[°]	[°]							
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

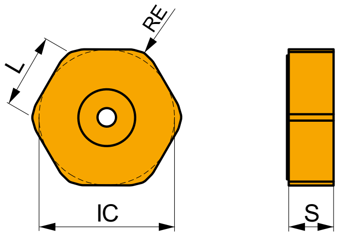
GI262	HNEF 0905..	HNMF 0905..

		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

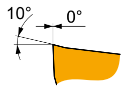
HNEF 09

PRAMET

	IC [mm]	L [mm]	S [mm]
0905	16.200	9.40	5.64

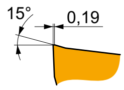


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.



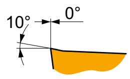
F geometry with positive design for light machining.

Product	Grade	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	–	–	–	–	–	–	–	–	–



M geometry with positive design for light to medium machining.

Product	Grade	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 090508EN-M	M5315	0.8	–	–	–	–	–	–	290	0.18	3.0	–	–	–	–	–	–	–	–	–
	M9325	0.8	–	–	–	–	–	–	275	0.18	3.0	–	–	–	–	–	–	–	–	–



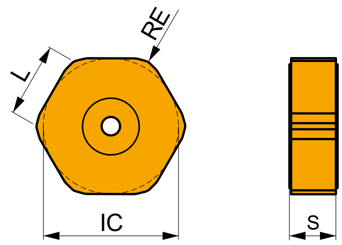
W geometry positive design for finishing.

Product	Grade	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 0905ZZR-W	8215	0.8	–	–	–	–	–	–	275	0.18	1.0	–	–	–	–	–	–	–	–	–
	M5315	0.8	–	–	–	–	–	–	370	0.18	1.0	–	–	–	–	–	–	–	–	–

HNMF 09

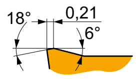
PRAMET

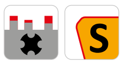
	IC [mm]	L [mm]	S [mm]
0905	16.200	9.40	5.64



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	Grade	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]
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	–	–	–	–	–	–	–	–	–

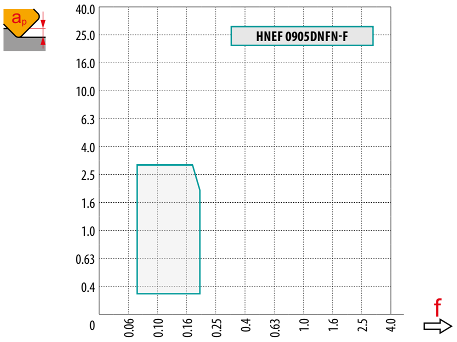


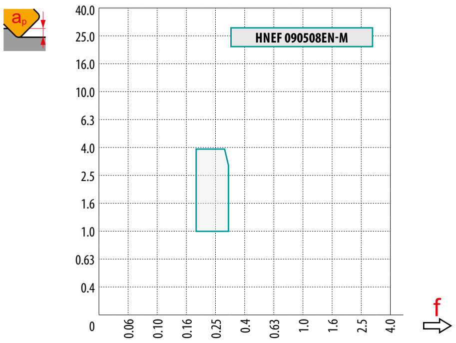


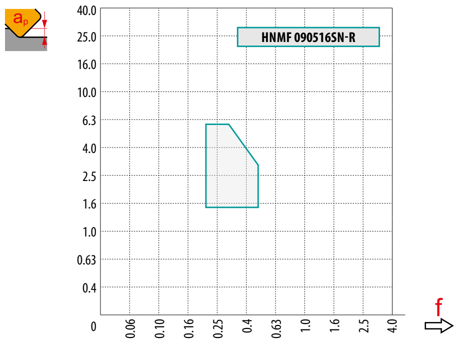
R geometry with negative design for light and heavy machining.

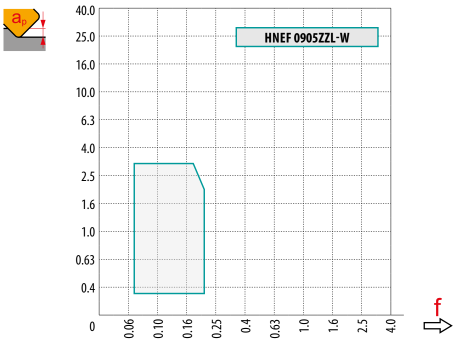
ae / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

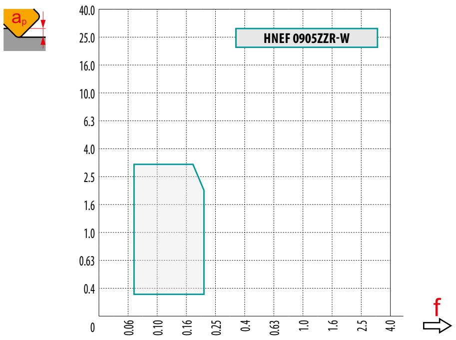
	HNEF 09-F	HNEF 09-M	HNMF 09-R	HNEF 09 ZZL-W	HNEF 09 ZZR-W
RE	–	–	–	–	–
BS	1.20	–	–	1.26	1.26

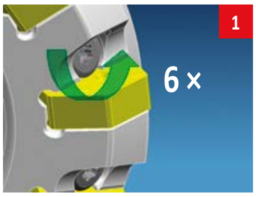


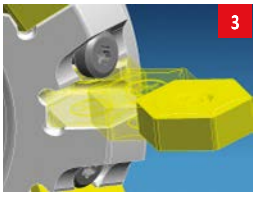


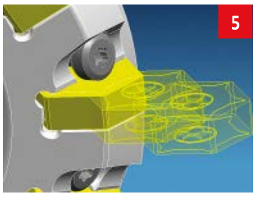












FSB22X

P M K

PRAMET

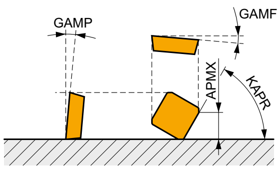
F

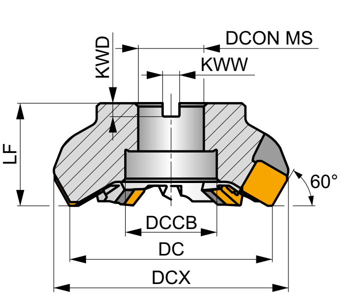
ROUGH SB 60° Face Mill with Positive Design for Heavy Face Milling

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.

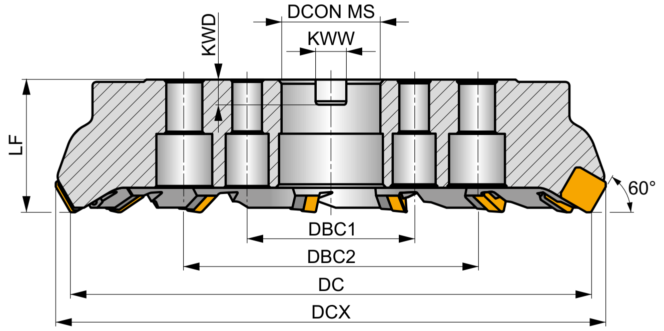
ROUGH SB

KAPR	60°
APMX	15.0 mm

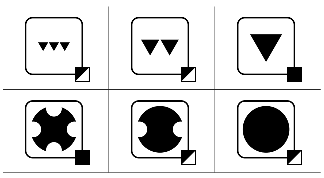




DC 125 mm



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	–
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	–

ISO 6462 DIN 8030

GI144	SBKX 2207DZ..	SBMR 2207DZ..

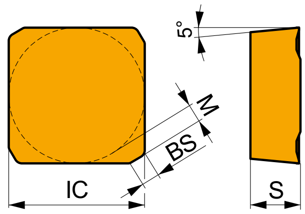
FA111	LNX 220616	US 6013-T20P	SDR T20P-T	KU SBMR 2207	DS 01Z	KL 04	–
FA114	LNX 220616	US 6013-T20P	SDR T20P-T	KU SBMR 2207	DS 01Z	KL 04	HS 1240
FA115	LNX 220616	US 6013-T20P	SDR T20P-T	KU SBMR 2207	DS 01Z	KL 04	HS 1655

AC003	KS 2040	K.FMH40

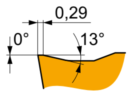
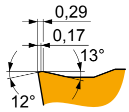
SBMR 22

PRAMET

	IC [mm]	M [mm]	S [mm]	BS [mm]
2207	22.000	3	8.00	1.99



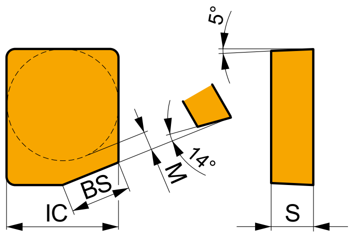
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

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	–	–	–	–	–	–	–	–	–	–	–	–

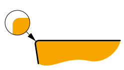
SBKX 22

PRAMET

	IC [mm]	M [mm]	S [mm]	BS [mm]
2207	22.000	3	8.00	11.84

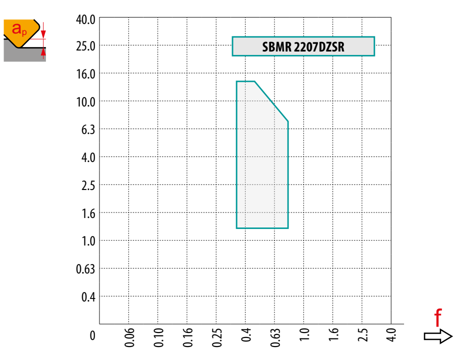


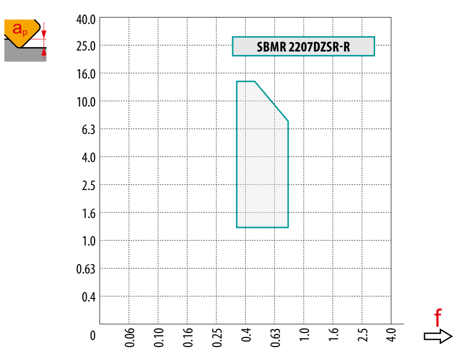
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

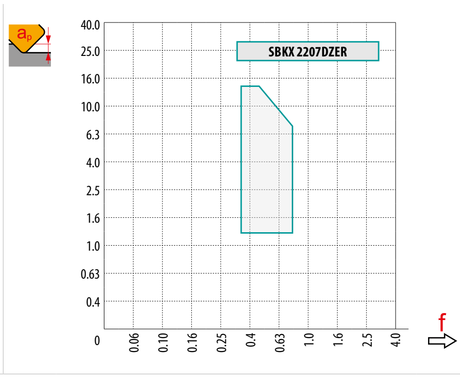
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
  Zero rake wiper design for improved surface finish.																				
SBKX 2207DZER	**M8326**	–	◪ 100	0.60	8.5	–	–	–	◪ 95	0.60	8.5	–	–	–	–	–	–	–	–	–

ae / 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

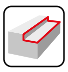
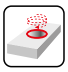
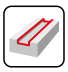
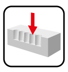
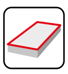
HELP IS AT HAND

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) 	◪	■	■		

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SQUARE SHOULDER MILLING

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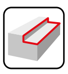
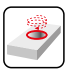
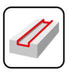
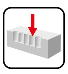
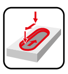
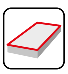
	STN10	STN16	SLN12	SLN16	SSO05O	SSO09
	90°	90°	90°	90°	90°	90°
APMX [mm]	5.0	10.0	9.0	13.0	4.5	8.0
DC [mm]	18 – 32	25 – 175	25 – 125	63 – 175	12 – 40	20 – 125
	 DC = 18 – 35 [mm]	 DC = 25 – 35 [mm]	 DC = 25 – 32 [mm]		 DC = 12 – 25 [mm]	
	 DC = 20 – 32 [mm]	 DC = 25 – 40 [mm]	 DC = 25 – 40 [mm]		 DC = 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
	■	■	■	■	■	■
	◩	◩	◩			
	■	■	■	■	■	■
	◩		■	■	■	■
	◩		◩			
	◩		◩			
	■	■	◩			◩
			◩	◩	■	

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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

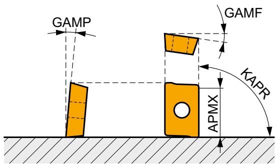
S

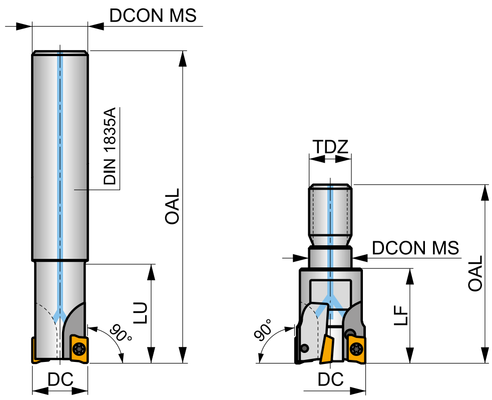
FORCE AD07 Square Shoulder Mill with Internal Coolant

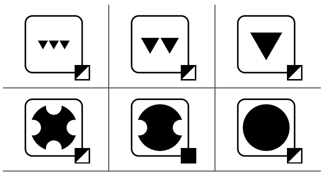
90° end mill utilising positive AD.. 07 style insert with APMX of 5 mm. Suitable for applications, including face, shoulder, slot, helical, trochoidal, ramping and plunge milling. Available in cylindrical and modular style and with differential tooth pitch, in Ø10 up to Ø32 mm. Body treated for longer tool life.

FORCE AD

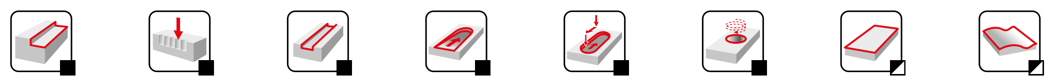
KAPR	90°
APMX	5.0 mm







h_m 0.03 - 0.08



	Product	DC	OAL	DCON MS	LU	LF	TDZ	GAMF	GAMP			max.		kg		
		[mm]	[mm]	[mm]	[mm]	[mm]		[°]	[°]							
DIN 1835A	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
	14A3R020A12-SAD07D-CF	14	140	12	20	–	–	-9	8	3	–	52100	✓	0.14	GI276	SQ010
	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
MODULAR	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
	14A3R023M08-SAD07D-CF	14	41	8.5	–	23	M8	-9	8	3	–	–	✓	0.05	GI276	SQ010
	16A4R023M08-SAD07D-C	16	41	8.5	–	23	M8	-8	8	4	✓	–	✓	0.06	GI276	SQ011
	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
32A8R043M16-SAD07D-C	32	66	17	–	43	M16	-6	8	8	✓	–	✓	0.25	GI276	SQ011

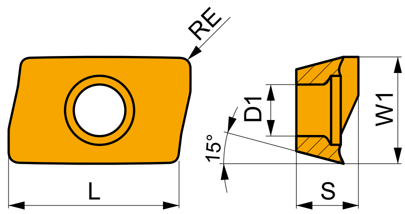
GI276	ADMX 0702..

		Nm			
SQ010	US 62003A-T06P	0.6	M 2	3	Flag T06P
SQ011	US 62004A-T06P	0.6	M 2	4	Flag T06P

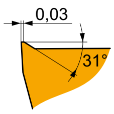
ADMX 07

PRAMET

	W1 [mm]	D1 [mm]	L [mm]	S [mm]
0702	4.482	2.20	6.95	2.48

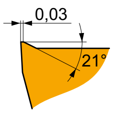


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.



F geometry with very sharp positive design for light machining.

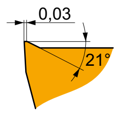
Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
ADMX 070202SR-F	M8330	0.2	■	220	0.07	2.0	■	130	0.06	2.0		–	–	–	◩	660	0.08	2.0	◩	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.

Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
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.

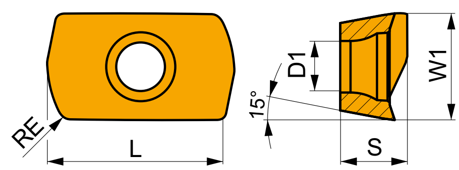


M geometry with positive design for light to medium machining.

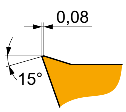
Product	Grade	RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
ADMX 070204SR-M	8215	0.4	■ 225	0.09	2.2	◩ 135	0.08	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	–	–	–

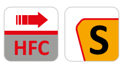
ADEX 07-HF

	W1 [mm]	D1 [mm]	L [mm]	S [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.



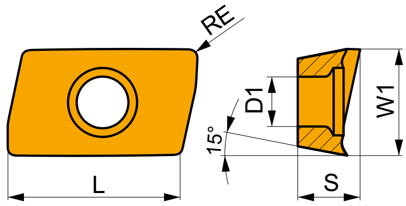


HF geometry with highly positive design for high feed machining.

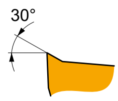
Product	Grade	RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
ADEX 070206SR-HF	M6330	0.6	■ 200	0.60	0.3	◩ 140	0.54	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	–	–	–	–	–	–	–	–	–	–	–	–

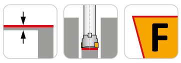
ADEX 07-FA

	W1 [mm]	D1 [mm]	L [mm]	S [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.



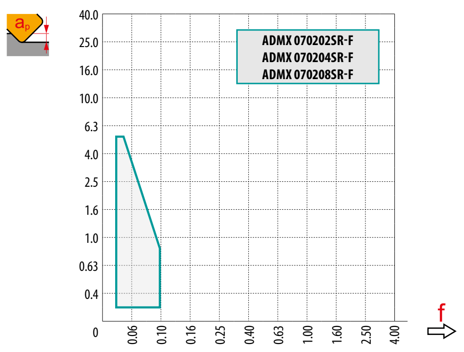


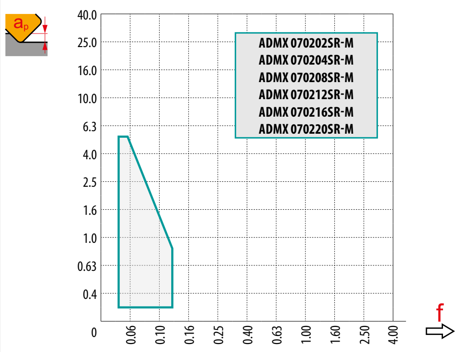
FA geometry with highly positive design for fine-finish to medium machining.

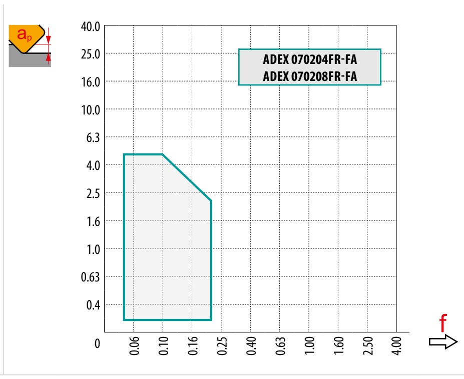
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
ADEX 070204FR-FA	**HF7**	0.4	–	–	–	–	–	–	–	–	–	■	240	0.18	3.0	–	–	–	–	–	–
	M0315	0.4	–	–	–	–	–	–	–	–	–	■	555	0.18	3.0	–	–	–	–	–	–
ADEX 070208FR-FA	**HF7**	0.8	–	–	–	–	–	–	–	–	–	■	285	0.18	3.0	–	–	–	–	–	–

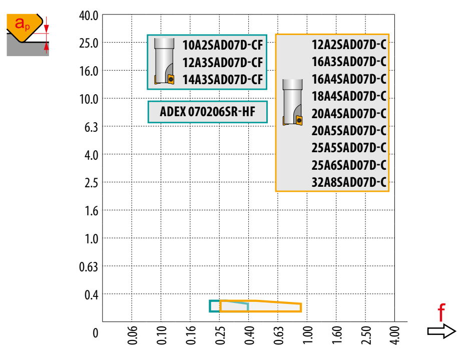
a_e/DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
x.v	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	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

DC	a_p	0	0.1	0.2	0.3
10	DEF	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		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

HFC

a_p	0.1	0.2	0.3
1 f	0.9	0.8	0.6

max
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

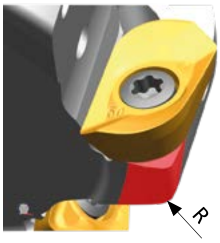
a_p
0.5

a_p	HFC
	0.3

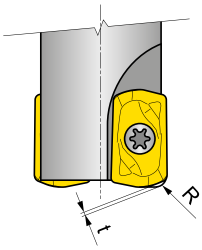
DC	µm	3	5	10	15	20	30	40	50	60	80	100
10		0.346	0.447	0.632	0.775	0.894	1.095	1.265	1.414	1.549	1.789	2.000
12		0.379	0.490	0.693	0.849	0.980	1.200	1.386	1.549	1.697	1.960	2.191
14		0.410	0.529	0.748	0.917	1.058	1.296	1.497	1.673	1.833	2.117	2.366
16	FE	0.438	0.566	0.800	0.980	1.131	1.386	1.600	1.789	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

⏮

i



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

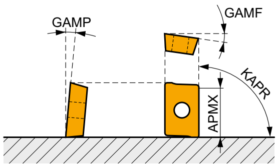
PRAMET S

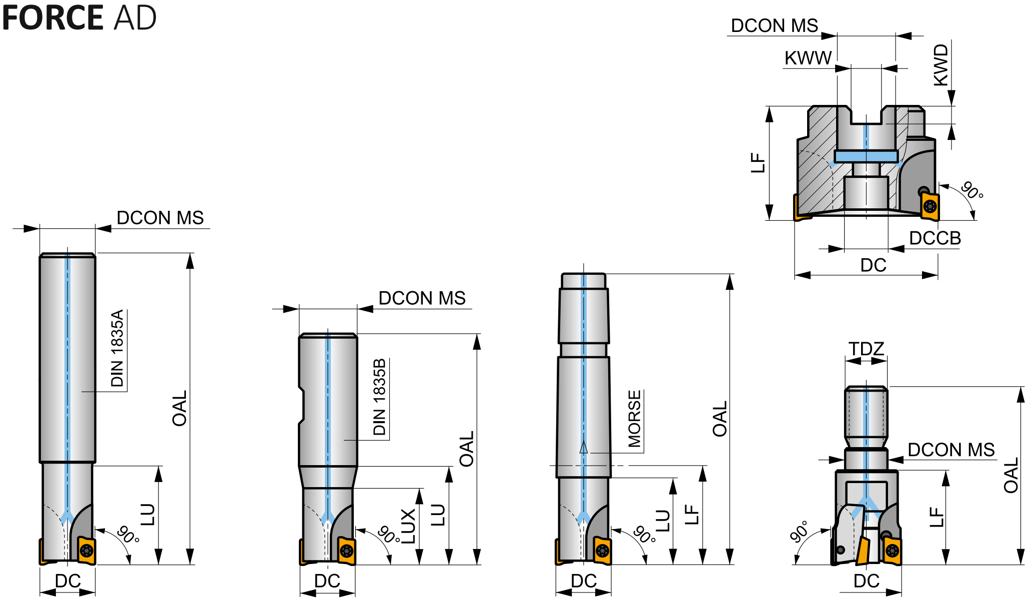
FORCE AD11 Square Shoulder Mill with Internal Coolant

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			
DIN 1835A	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	–
	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	–
DIN 1835B	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	–
	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	–
DIN 228A	16A2R030E02-SAD11E-C	16	94	–	–	25	–	30	–	2	–	–	-12.8	4	2	–	30100	✓	0.15	GI169	SQ025	–
	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	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]	[°]	[°]								
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	–
ISO 6462 DIN 8030	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	–
	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..

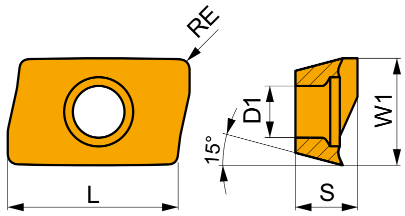
		Nm						
SQ020	US 62506-T07P	1.2	M 2.5	6	–	–	Flag T07P	–
SQ021	US 62506-T07P	1.2	M 2.5	6	D-T07P/T09P	FG-15	–	–
SQ022	US 62506-T07P	1.2	M 2.5	6	D-T07P/T09P	FG-15	–	HS 0830C
SQ023	US 62506-T07P	1.2	M 2.5	6	D-T07P/T09P	FG-15	–	HS 1030C
SQ025	US 62505-T07P	1.2	M 2.5	5	–	–	Flag T07P	–

AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

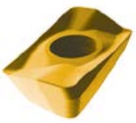
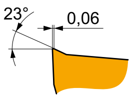
ADMX 11

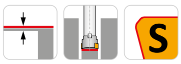
PRAMET

	W1 [mm]	D1 [mm]	L [mm]	S [mm]
11T3	6.530	2.90	11.00	3.97



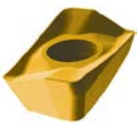
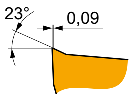
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.



F geometry with very sharp positive design for light machining.

Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
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		–	–	–

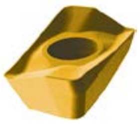



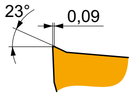
M geometry with positive design for light to medium machining.

Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
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.

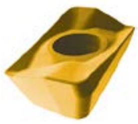
Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]

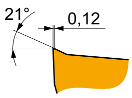




M geometry with positive design for light to medium machining.

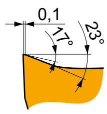
Product	Grade	RE	P	vc	f	ap	M	vc	f	ap	K	vc	f	ap	N	vc	f	ap	S	vc	f	ap	H	vc	f	ap
ADMX 11T320SR-M	**M6330**	2.0	■	240	0.15	4.0	■	170	0.14	4.0		–	–	–		–	–	–	◩	70	0.12	3.2		–	–	–
	M8330	2.0	■	280	0.15	4.0	■	165	0.14	4.0	■	265	0.15	4.0		–	–	–	◩	70	0.12	3.2		–	–	–
	M8340	2.0	■	255	0.15	4.0	■	150	0.14	4.0	◩	240	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		–	–	–





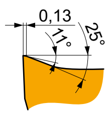
R geometry with positive design for machining conditions in less stable conditions.

Product	Grade	RE	P	vc	f	ap	M	vc	f	ap	K	vc	f	ap	N	vc	f	ap	S	vc	f	ap	H	vc	f	ap
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.

Product	Grade	RE	P	vc	f	ap	M	vc	f	ap	K	vc	f	ap	N	vc	f	ap	S	vc	f	ap	H	vc	f	ap
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		–	–	–

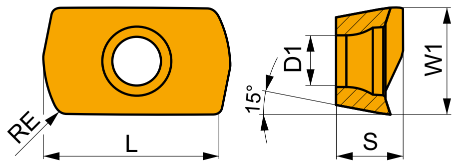


MM geometry with highly positive design for light to medium and finish to semi-rough machining.

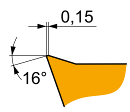
Product	Grade	RE	P	vc	f	ap	M	vc	f	ap	K	vc	f	ap	N	vc	f	ap	S	vc	f	ap	H	vc	f	ap
ADMX 11T304SR-MM	**M6330**	0.4	■	185	0.14	2.5	■	130	0.13	2.5		–	–	–		–	–	–	■	55	0.11	2.0		–	–	–
	M8340	0.4	■	195	0.14	2.5	■	115	0.13	2.5		–	–	–		–	–	–	■	45	0.11	2.0		–	–	–
	M9340	0.4	■	250	0.14	2.5	■	150	0.13	2.5		–	–	–		–	–	–	■	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 [mm]	D1 [mm]	L [mm]	S [mm]
11T3	6.450	2.90	10.67	3.82

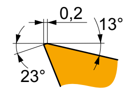


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.



HF geometry with highly positive design for high feed machining.

Product		RE [mm]	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]
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		–	–	–		–	–	–		–	–	–		–	–	–



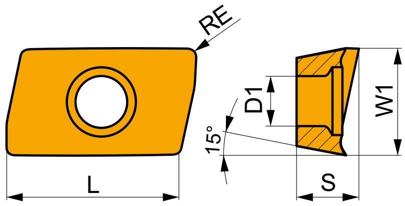
HF2 geometry with positive design for high feed machining.

Product		RE [mm]	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]
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

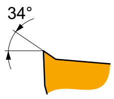
PRAMET

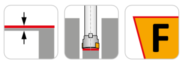
	W1 [mm]	D1 [mm]	L [mm]	S [mm]
11T3	6.450	2.90	9.70	3.91



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 [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]
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	–	–	–	–	–	–





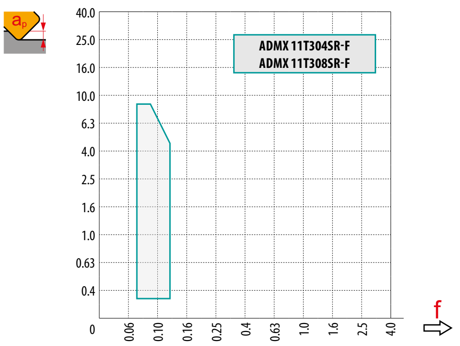
FA geometry with highly positive design for fine-finish to medium machining.

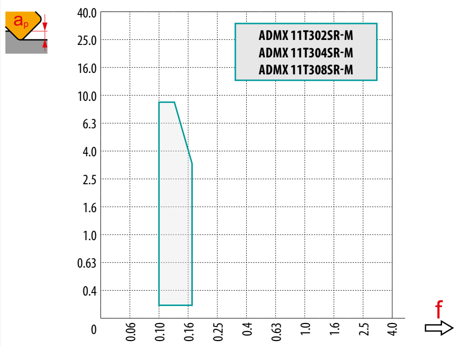
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
x.v	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

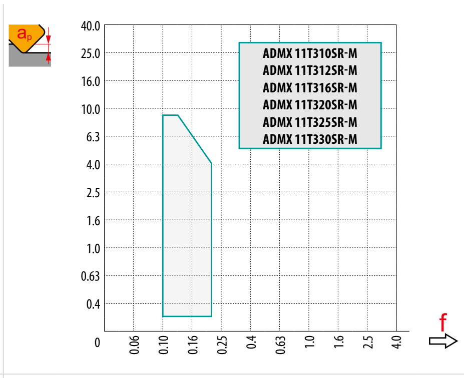
	ADMX 11-F		ADMX 11-M									ADMX 11-R		ADMX 11-MF	
RE	0.4	0.8	0.2	0.4	0.8	1.0	1.2	1.6	2.0	2.5	3.0	0.8	1.6	0.4	0.8
BS	1.89	1.48	2.09	1.89	1.48	1.27	1.08	0.68	1.61	1.13	0.66	1.48	0.68	1.89	1.48

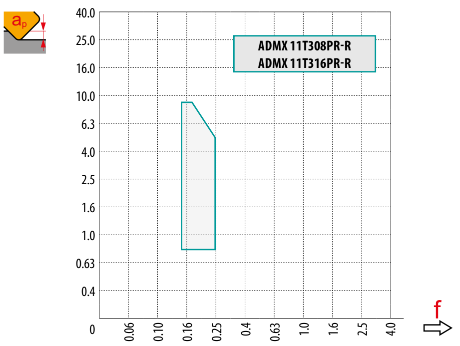
	ADMX 11-MM				ADEX 11-HF	ADEX 11-HF2	ADEX 11-FA			
RE	0.4	0.8	1.2	1.6	0.8	0.8	0.4	0.8	1.2	1.6
BS	1.89	1.48	1.08	0.61	0.17	0.17	1.77	1.39	1.0	0.62

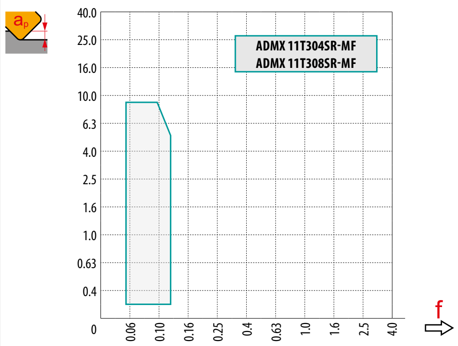
⏮

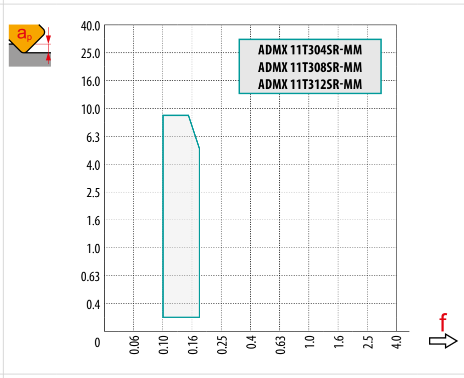


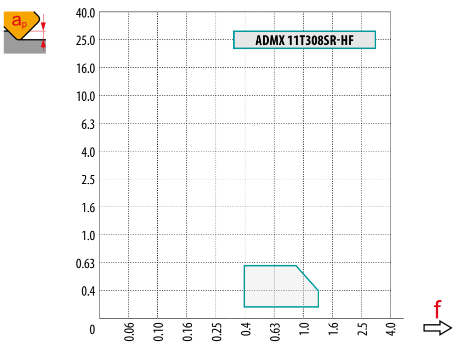


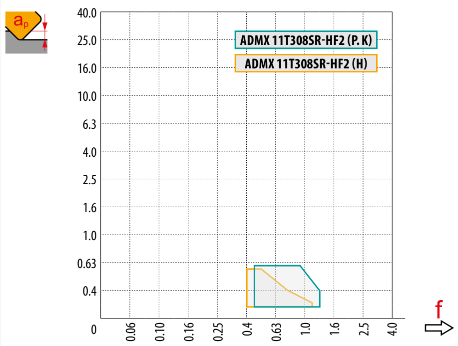


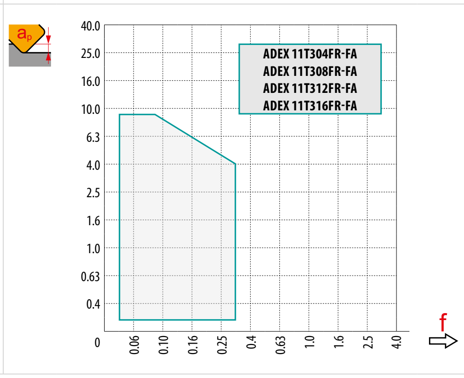












max
4.5

a_p	1.0	5.0	9.0
f	0.20	0.13	0.10

DC	RPMX	APMX/l	RPMX * (HFC)	RPMX ** (HFC)	APMX/l (HFC)
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	DMIN	DMAX	SMAX DMIN	SMAX DMAX
					HFC			
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

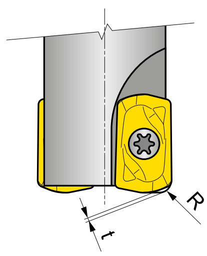
DC	µm	3	5	10	15	20	30	40	50	60	80	100
16	FE	0.438	0.566	0.800	0.980	1.131	1.386	1.600	1.789	1.960	2.263	2.530
18		0.465	0.600	0.849	1.039	1.200	1.470	1.697	1.897	2.078	2.400	2.683
20		0.490	0.632	0.894	1.095	1.265	1.549	1.789	2.000	2.191	2.530	2.828
20		0.490	0.632	0.894	1.095	1.265	1.549	1.789	2.000	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

i

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

i



ADEX 11	R	t
ADEX 11T308SR-HF	1.42	0.35
ADEX 11T308SR-HF2	1.34	0.38

SAD16E

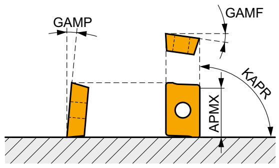
P M K N S H

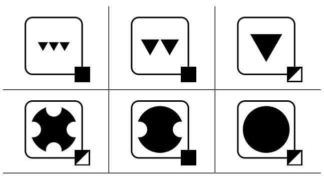
S

FORCE AD16 Square Shoulder Mill with Internal Coolant

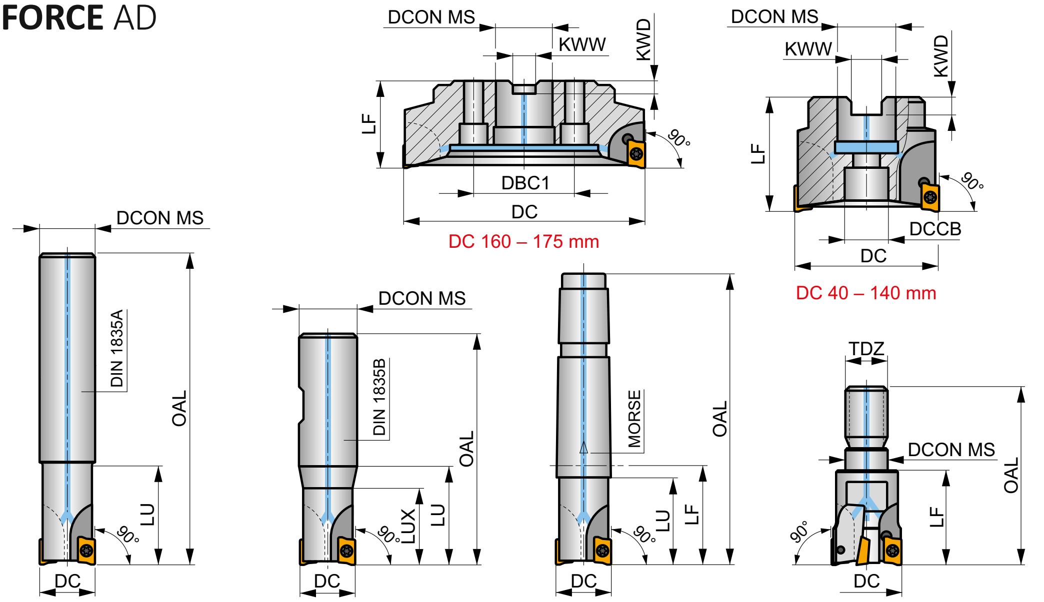
90° end and shell mills utilising positive AD.. 16 style insert with APMX of 13 mm. Suitable for face, shoulder, slot, helical, trochoidal, ramping and plunge milling. Available in cylindrical, Weldon, Morse taper, modular and arbor (with differential tooth pitch) style, in Ø25 up to Ø175 mm. Body treated for longer tool life.

KAPR	90°
APMX	13.0 mm

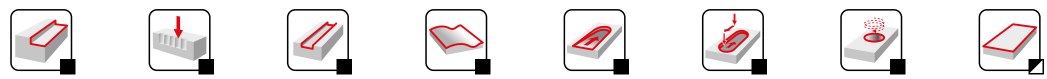




FORCE AD



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..

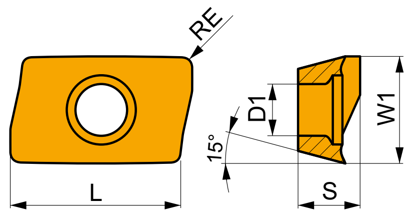
SQ030	US 4008-T15P	3.5	M 4	8	–	–	Flag T15P	–	–	–	–
SQ031	US 4011-T15P	3.5	M 4	10.6	D-T08P/T15P	FG-15	–	–	–	–	–
SQ032	US 4008-T15P	3.5	M 4	8	D-T08P/T15P	FG-15	–	HS 0830C	–	–	–
SQ033	US 4011-T15P	3.5	M 4	10.6	D-T08P/T15P	FG-15	–	HS 1030C	–	–	–
SQ036	US 4011-T15P	3.5	M 4	10.6	D-T08P/T15P	FG-15	–	HS 1240C	CAC 160C	HSD 0825C	HXK 5

AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

ADMX 16

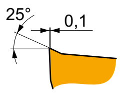
PRAMET

	W1 [mm]	D1 [mm]	L [mm]	S [mm]
1606	9.950	4.50	16.00	6.25

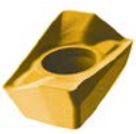


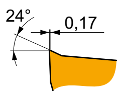
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [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		–	–	–



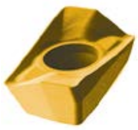
F geometry with highly positive design for light to medium machining.

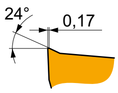




M geometry with positive design for light to medium machining.

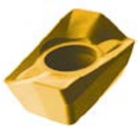
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

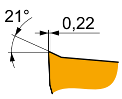




M geometry with positive design for light to medium machining.

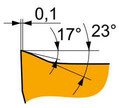
Product	Grade	RE [mm]	P	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H	H vc [m/min]	H f [mm/tooth]	H ap [mm]
ADMX 160608SR-M	**8215**	0.8	■	225	0.18	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.

Product	Grade	RE [mm]	P	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H	H vc [m/min]	H f [mm/tooth]	H ap [mm]
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

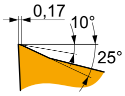


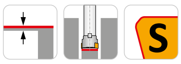
MF geometry with highly positive design for finish machining.

Product	Grade	RE [mm]	P	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H	H vc [m/min]	H f [mm/tooth]	H ap [mm]
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 [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]
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	–	–	–



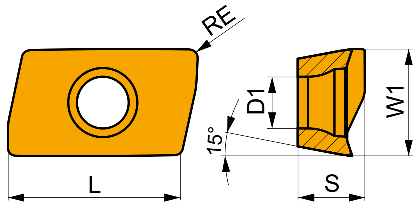


MM geometry with highly positive design for light to medium machining.

ADEX 16

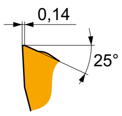
PRAMET

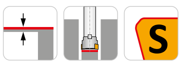
	W1 [mm]	D1 [mm]	L [mm]	S [mm]
1606	9.950	4.50	16.00	6.25



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]
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	–	–	–



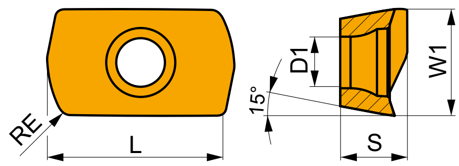


FM geometry with highly positive design for medium machining.

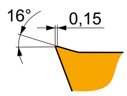
ADEX 16-HF

PRAMET

	W1 [mm]	D1 [mm]	L [mm]	S [mm]
1606	9.950	4.50	16.00	5.88

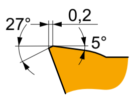


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.



HFC S

HF geometry with highly positive design for high feed machining.



HFC S

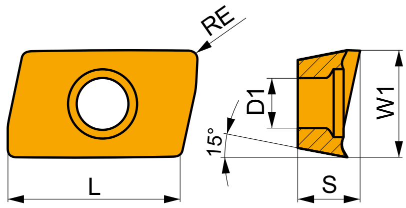
HF2 geometry with positive design for high feed machining.

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]
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	–	–	–	–	–	–	–	–	–	–	–	–
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

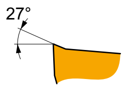
PRAMET

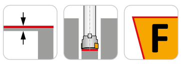
	W1 [mm]	D1 [mm]	L [mm]	S [mm]
1606	9.950	4.50	16.00	6.17



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 [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]
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	–	–	–	–	–	–



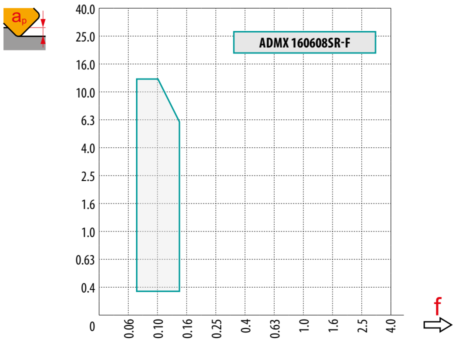


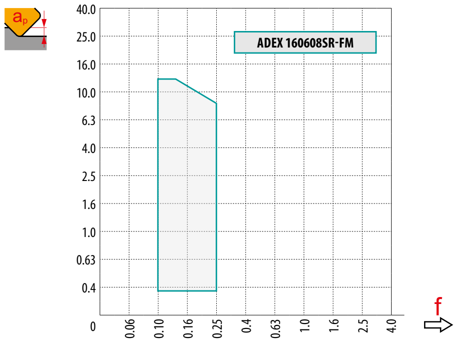
FA geometry with highly positive design for fine-finish to medium machining.

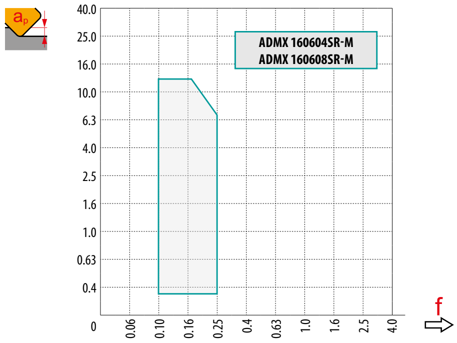
a_e/DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
x.v	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

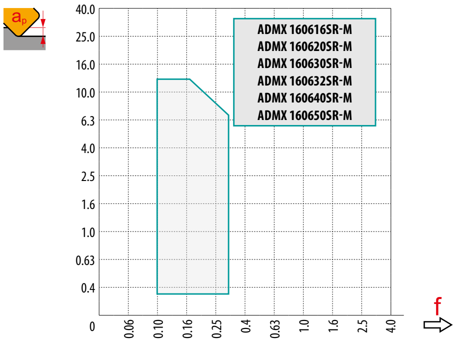
	ADMX 16-F	ADEX 16-FM	ADMX 16-M								ADMX 16-R	
RE	0.8	0.8	0.4	0.8	1.6	2.0	3.0	3.2	4.0	5.0	0.8	1.6
BS	2.99	2.18	3.39	2.99	1.62	1.23	0.28	0.09	2.69	1.52	2.99	1.62

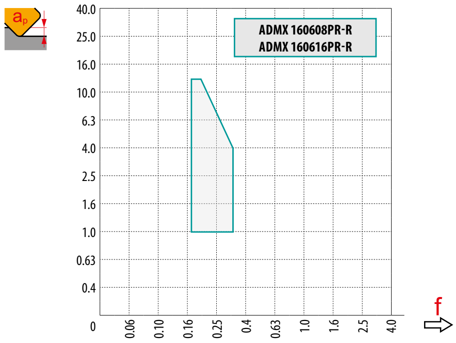
	ADMX 16-MF	ADMX 16-MM			ADEX 16-HF	ADEX 16-HF2	ADEX 16-FA			
RE	0.8	0.4	0.8	1.6	1.2	1.2	0.4	0.8	1.6	3.0
BS	2.99	3.39	2.99	1.62	0.52	0.52	2.84	2.44	1.65	0.69

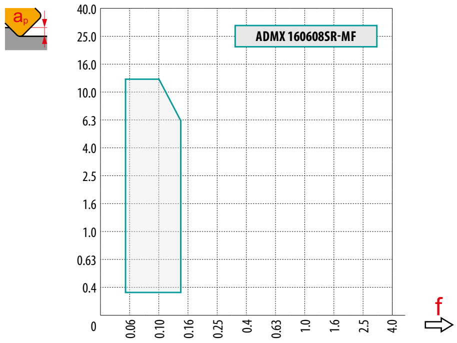


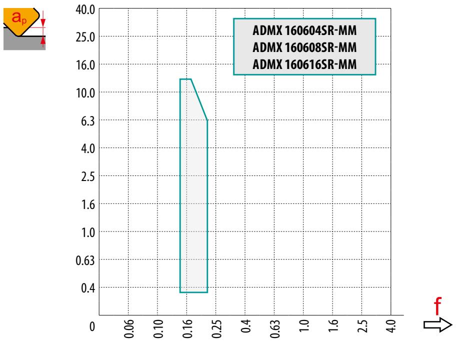


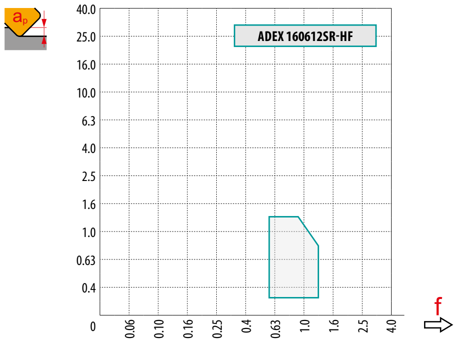


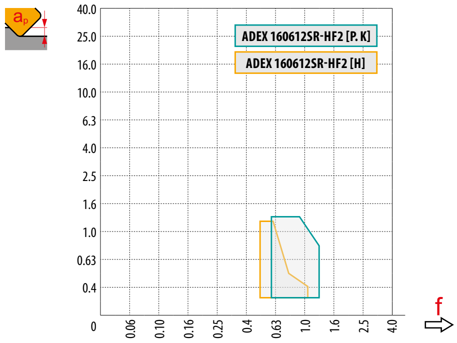


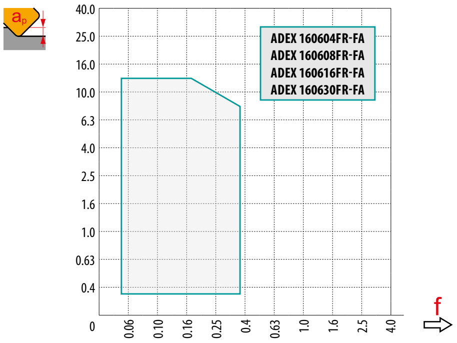












max
7.5

a_p	1.0	6.0	13.0
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

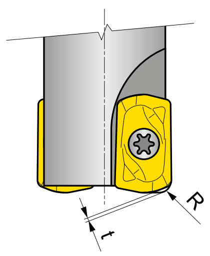
DC	µm	3	5	10	15	20	30	40	50	60	80	100
25	FE	0.548	0.707	1.000	1.225	1.414	1.732	2.000	2.236	2.449	2.828	3.162
32		0.620	0.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578
40		0.693	0.894	1.265	1.549	1.789	2.191	2.530	2.828	3.098	3.578	4.000
50		0.775	1.000	1.414	1.732	2.000	2.449	2.828	3.162	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
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

i

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

i



ADEX 16	R	t
ADEX 160612SR-HF	2.59	0.56
ADEX 160612SR-HF2	2.48	0.57

SAP10D

P M K N S

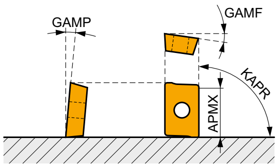
PRAMET

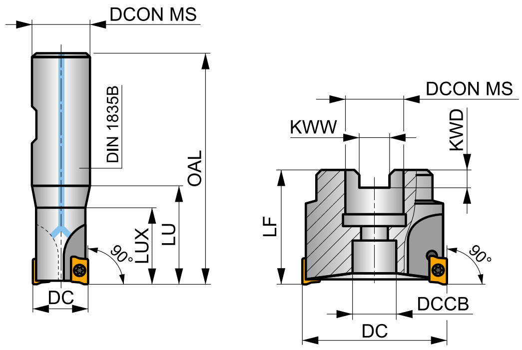
S

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

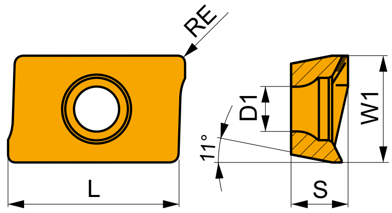
GI081	APKT 1003..

		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

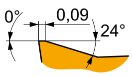
APKT 10

PRAMET

	W1 [mm]	D1 [mm]	L [mm]	S [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.



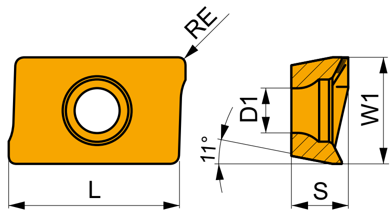
M geometry with highly positive design for light to medium machining.

Product	Grade	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 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	–	–	–

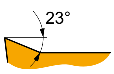
APKT 10-FA

PRAMET

	W1 [mm]	D1 [mm]	L [mm]	S [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.

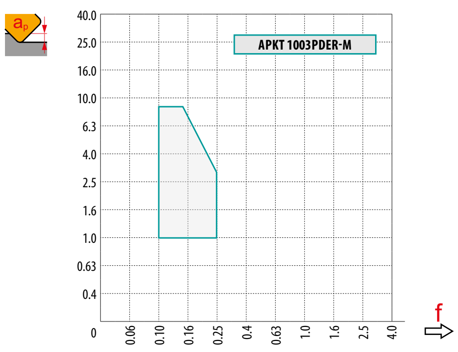


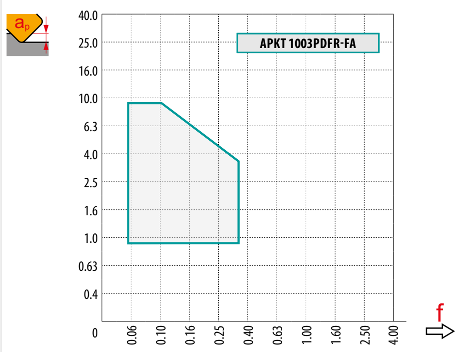
FA geometry with highly positive design for fine-finish to medium machining.

Product	Grade	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 1003PDFR-FA	**HF7**	0.5	–	–	–	–	–	–	–	–	–	■ 300	0.18	5.0	–	–	–	–	–	–

ae / 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

ap	1.0	3.0	5.0
1 f	0.20	0.13	0.10

DC	RPMX	APMX/l
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

ap
0.3

⏮

SAP16D

P M K N S

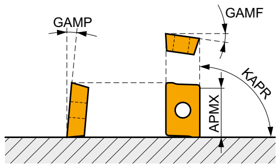
PRAMET

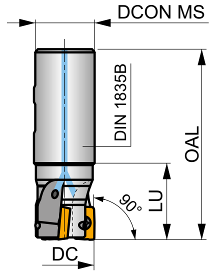
S

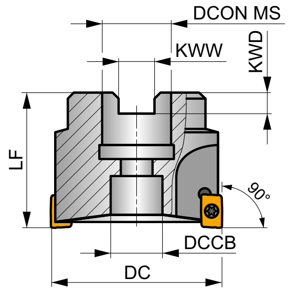
Square Shoulder Mill for APKT 16 Insert with Internal Coolant

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.

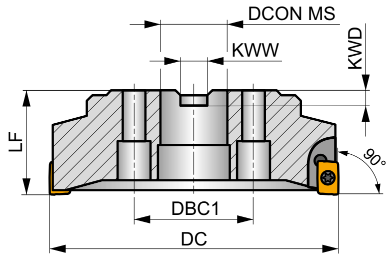
KAPR	90°
APMX	13.0 mm







DC 40 – 125 mm



DC 160 mm

h_m 0.10 - 0.22

h_m 0.06 - 0.18

	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..

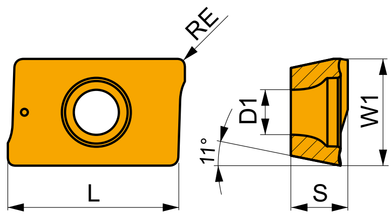
		Nm					
SQ030	US 4008-T15P	3.5	M 4	8	–	–	Flag T15P
SQ031	US 4011-T15P	3.5	M 4	10.6	D-T08P/T15P	FG-15	–
SQ220	US 4011-T15P	3.5	M 4	10.6	–	–	Flag T15P

AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

APKT 16

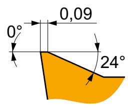
PRAMET

	W1 [mm]	D1 [mm]	L [mm]	S [mm]
1604	9.440	4.60	17.00	5.67

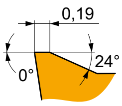


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product	Grade	RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H vc [m/min]	f [mm/tooth]	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.

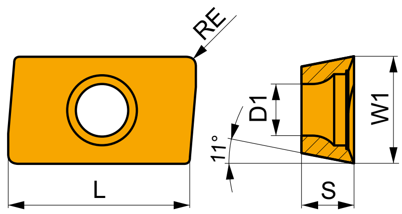



HM geometry with highly positive design for medium and less stable machining conditions.

APET 16-FA

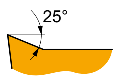
PRAMET

	W1 [mm]	D1 [mm]	L [mm]	S [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 [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]
APET 160408FR-FA	HF7	0.8	–	–	–	–	–	–	–	–	–	■ 255	0.24	8.0	–	–	–	–	–	–

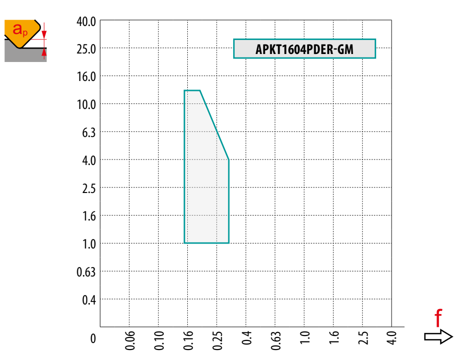


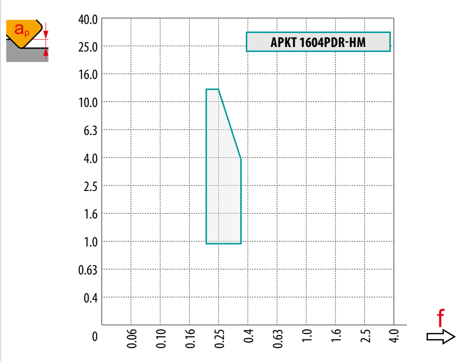
F

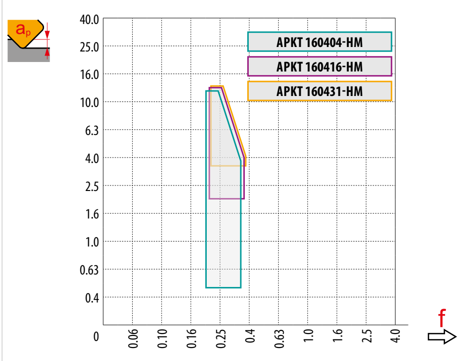
FA geometry with highly positive design for fine-finish to medium machining.

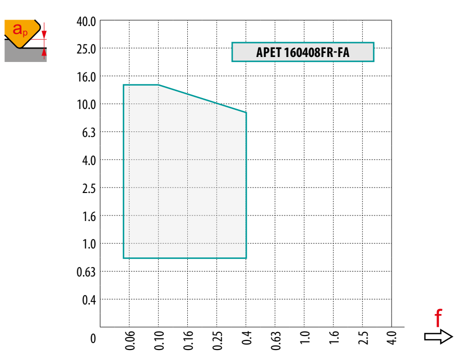
a_e/DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	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/l
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

⏮

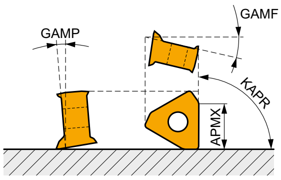
STN10

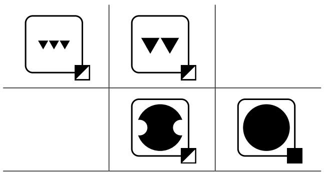
P M K N S

PRAMET

S

KAPR	90°
APMX	5.0 mm

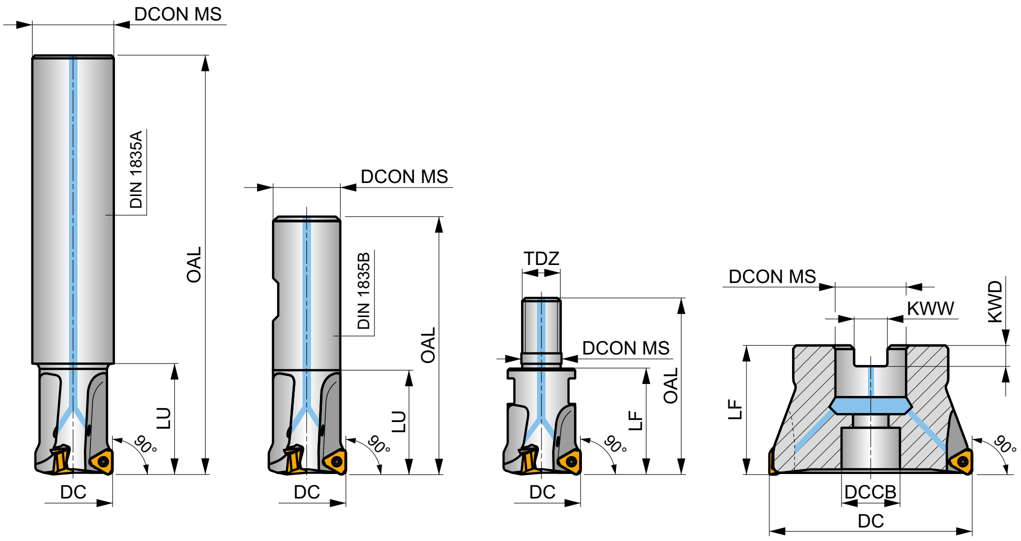




ECON TN10 Square Shoulder Mill with Internal Coolant

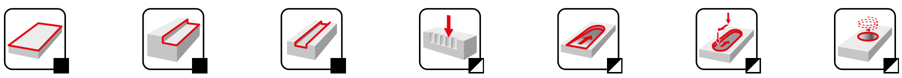
90° end and shell mills utilising double sided TNGX 10 insert with 6 cutting edges and APMX of 5 mm. Suitable for a wide range of applications. Available in cylindrical, weldon, modular and arbor style, in Ø18 up to Ø80 mm, with or without differential tooth pitch. Body treated for longer tool life.

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			
DIN 1835A	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	–
	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	–
DIN 1835B	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	–
	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	–
MODULAR	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	–
	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	–
ISO 6462 DIN 8030	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	–
	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			
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..

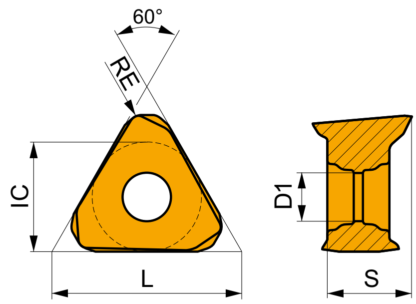
		Nm						
SQ300	US 52506-T07P	0.8	M 2.5	6	–	–	Flag T07P	–
SQ301	US 52506-T07P	0.8	M 2.5	6	D-T07P/T09P	FG-15	–	–
SQ302	US 52506-T07P	0.8	M 2.5	6	D-T07P/T09P	FG-15	–	HS 0830C
SQ303	US 52506-T07P	0.8	M 2.5	6	D-T07P/T09P	FG-15	–	HS 1030C

AC001	KS 1230	K.FMH27

TNGX 10

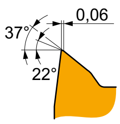
PRAMET

	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.

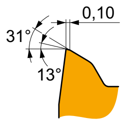
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
TNGX 100402SR-F	**M8330**	0.2	205	0.09	2.0	120	0.08	2.0	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	–	–	–	–	–	–	–	–	–	–	–	–



S

F geometry with highly positive design for light 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.



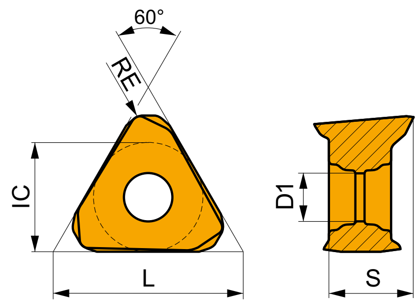
M geometry with positive design for light to medium machining.

Product	Grade	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]
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	–	–	–

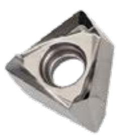
TNGX 10-FA

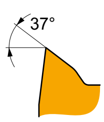
PRAMET

	IC [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.



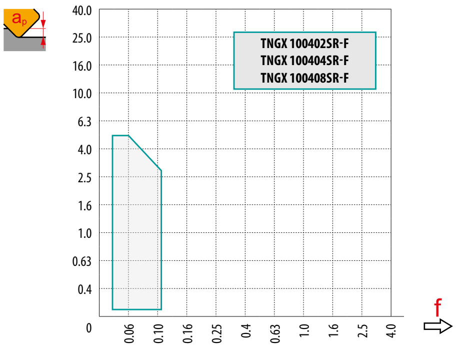


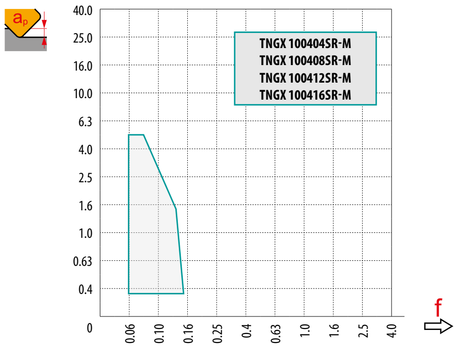
FA geometry with highly positive design for fine-finish to medium machining.

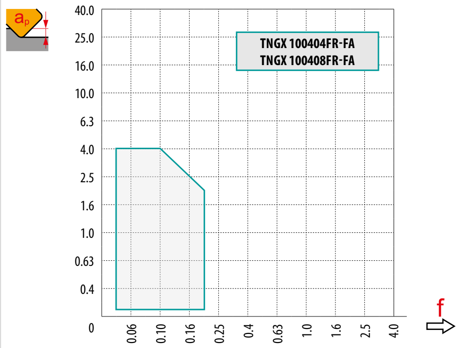
Product	Grade	RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
TNGX 100404FR-FA	HF7	0.4	–	–	–	–	–	–	–	–	–	■ 345	0.10	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
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

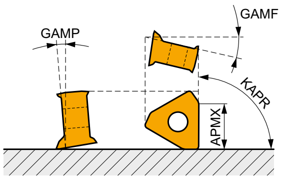
STN16

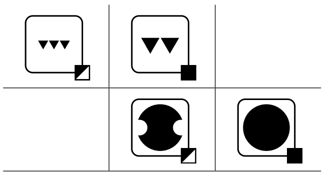
P M K N S

ECON TN16 Square Shoulder Mill with Internal Coolant

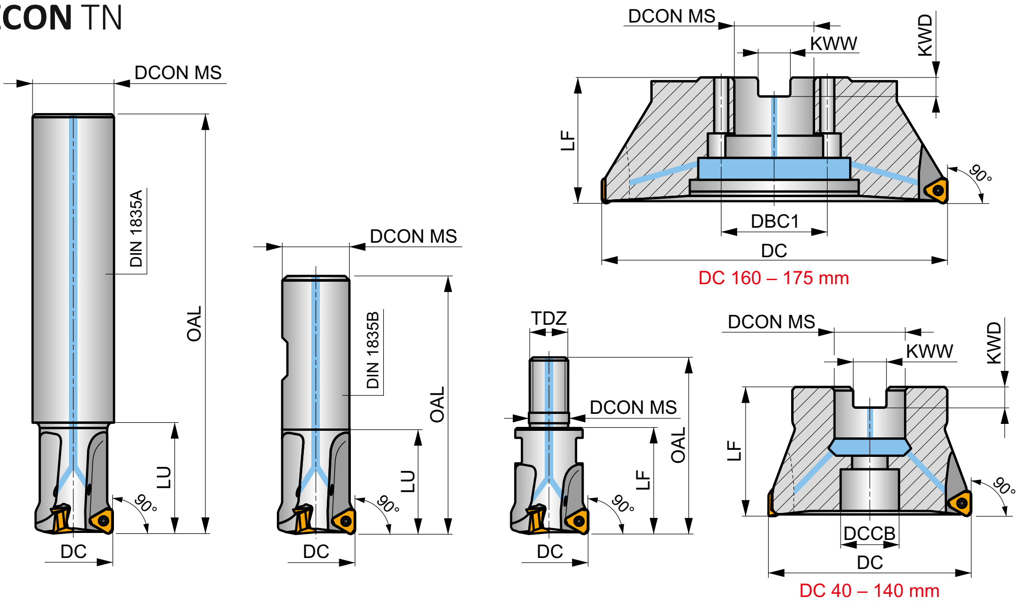
90° end and shell mills utilising double sided TNGX 16 inserts with 6 cutting edges and APMX of 10 mm. Suitable for a wide range of applications. Available in cylindrical, weldon, modular and arbor (with differential tooth pitch) style, in Ø25 up to Ø175 mm. Body treated for longer tool life.

KAPR	90°
APMX	10.0 mm





ECON TN



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 [°]	z		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		
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

ISO 6462
DIN 8030

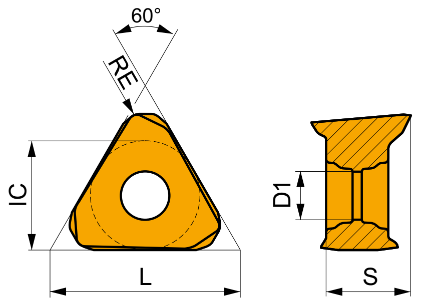
GI340	TNGX1606..

		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

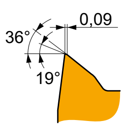
TNGX 16

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.



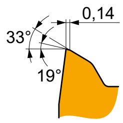
S

F geometry with highly positive design for light machining.

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]
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		
		[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]
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	–	–	–

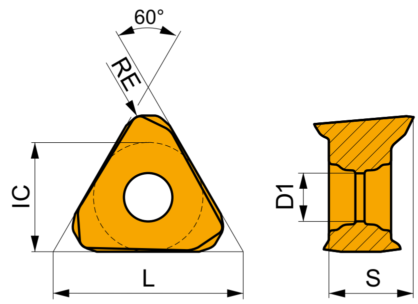


M geometry with positive design for light to medium machining.

TNGX 16-FA

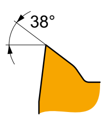
PRAMET

	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.

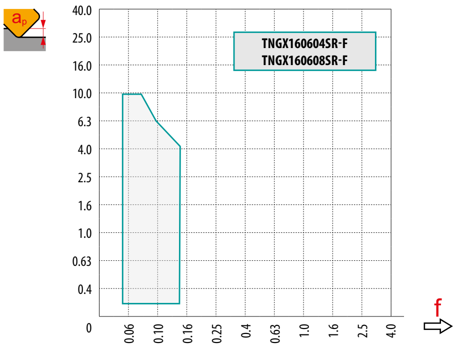
Product		RE	P			M			K			N			S			H		
		[mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]
TNGX 160604FR-FA	HF7	0.4	–	–	–	–	–	–	–	–	–	■ 255	0.14	2.0	–	–	–	–	–	–
	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	–	–	–	–	–	–

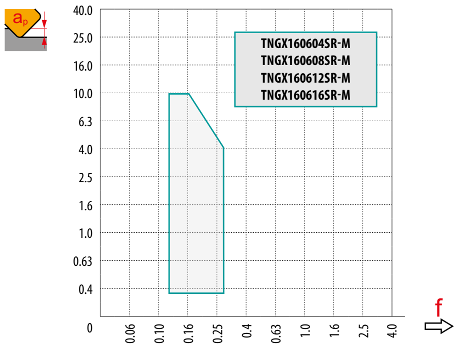


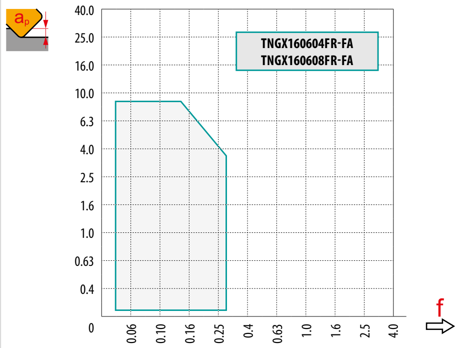
FA geometry with highly positive design for fine-finish to medium machining.

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
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



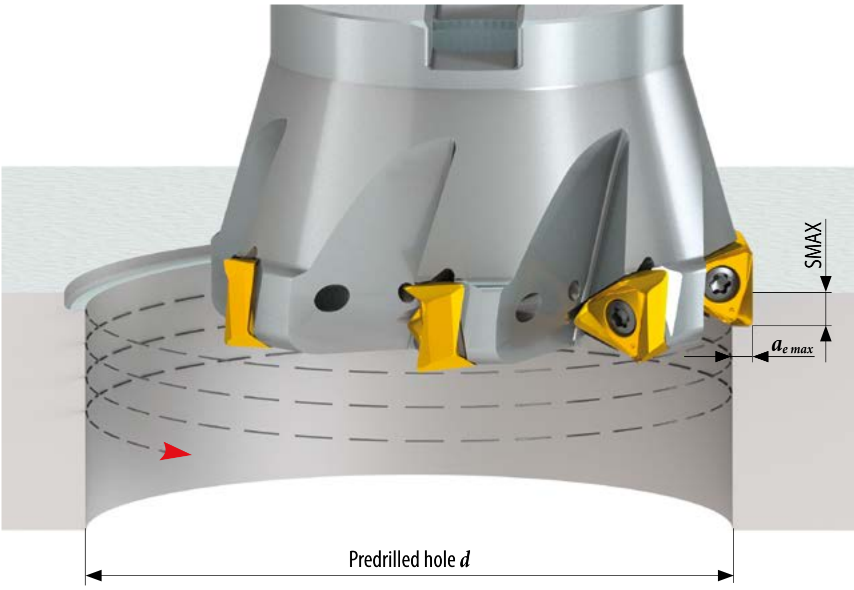




a_p	3.0	4.5	6.0
1 f	0.18	0.14	0.10

DC		d_{min} = DC *			d = 1.25 DC			d = 1.5 DC			d = 1.75 DC			d ≥ 2 DC	
	min	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

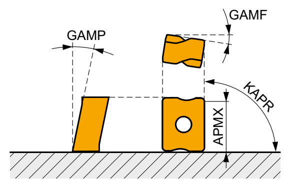
PRAMET

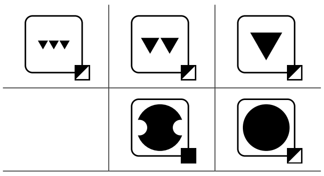
S

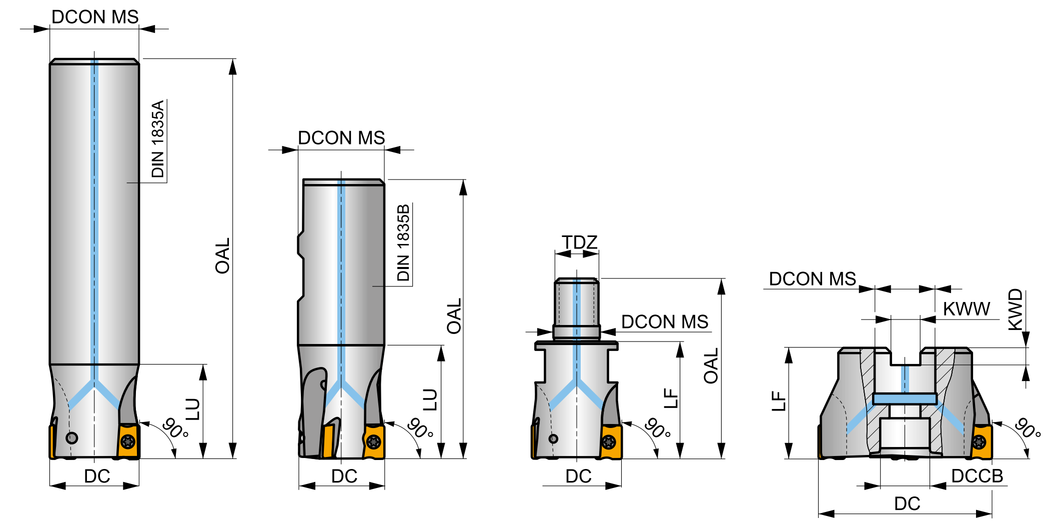
ECON LN12 Square Shoulder Mill with Internal Coolant

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.

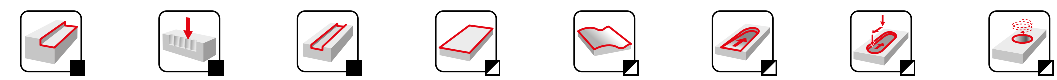
KAPR	90°
APMX	9.0 mm







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..

⏮

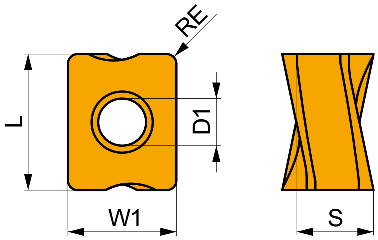
		Nm						
SQ340	US 44012-T15P	3.5	M 4	12	–	–	Flag T15P	–
SQ341	US 44012-T15P	3.5	M 4	12	D-T08P/T15P	FG-15	–	–
SQ342	US 44012-T15P	3.5	M 4	12	D-T08P/T15P	FG-15	–	HS 0830C
SQ343	US 44012-T15P	3.5	M 4	12	D-T08P/T15P	FG-15	–	HS 1030C

AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

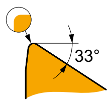
LNGX 12

PRAMET

	W1 [mm]	D1 [mm]	L [mm]	S [mm]
1205	9.500	4.50	12.00	5.96



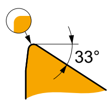
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

E

F geometry with highly positive design for light machining.

Product	Grade	RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
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		–	–	–		–	–	–		–	–	–

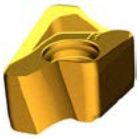
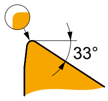
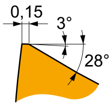
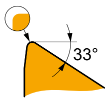
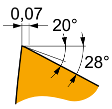



1 E

M geometry with positive design for light to medium machining.

Product	Grade	RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
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		–	–	–		–	–	–		–	–	–

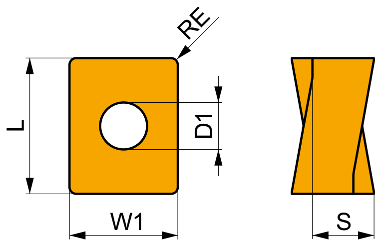
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product	Grade	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.																	
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	–	–	–	–	–	–	–	–	–	–	–	–

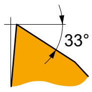
LNGU 12

PRAMET

	W1 [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.



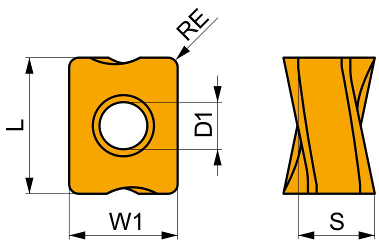
M geometry with positive design for medium machining.

Product	Grade	RE [mm]	P	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H	H vc [m/min]	H f [mm/tooth]	H ap [mm]
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		–	–	–		–	–	–		–	–	–

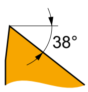
LNGX 12-FA

PRAMET

	W1 [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.



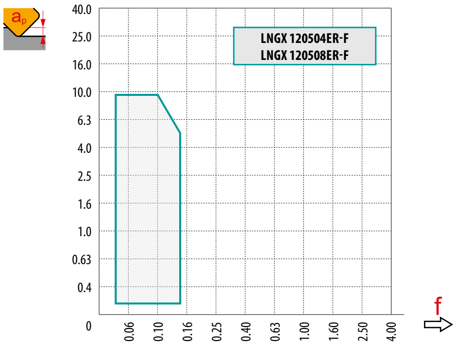
FA geometry with highly positive design for fine-finish to medium machining.

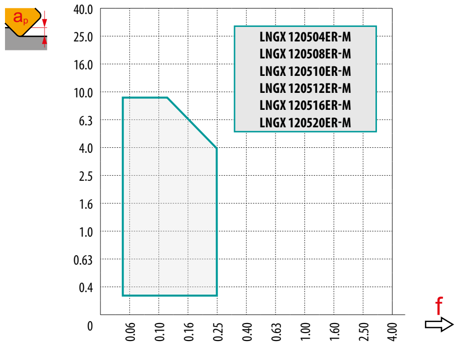
Product	Grade	RE [mm]	P	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H	H vc [m/min]	H f [mm/tooth]	H ap [mm]
LNGX 120504FR-FA	HF7	0.4		–	–	–		–	–	–		–	–	–	■	270	0.30	2.0		–	–	–		–	–	–
LNGX 120508FR-FA	HF7	0.8		–	–	–		–	–	–		–	–	–	■	315	0.30	2.0		–	–	–		–	–	–
	M0315	0.8		–	–	–		–	–	–		–	–	–	■	720	0.30	2.0		–	–	–		–	–	–

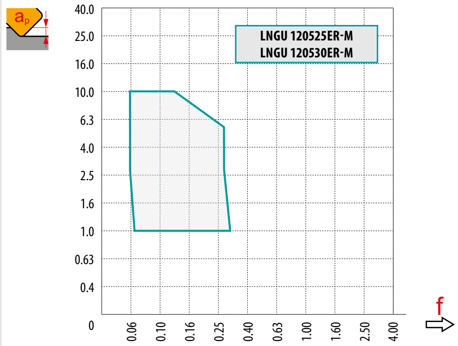
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

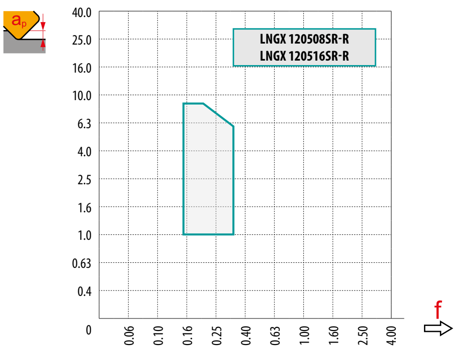
	LNGX 12-F		LNGX 12-M						LNGU 12-M	
RE	0.4	0.8	0.4	0.8	1.0	1.2	1.6	2.0	2.5	3.0
BS	2.29	1.89	2.29	1.89	1.69	1.49	1.09	0.68	0.87	0.36

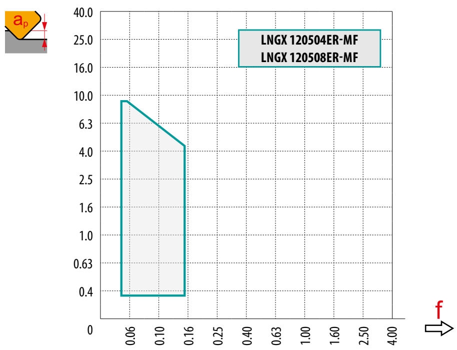
	LNGX 12-R		LNGX 12-MF		LNGX 12-MM	LNGX 12-FA	
RE	0.8	1.6	0.4	0.8	0.8	0.4	0.8
BS	1.88	1.08	2.28	1.88	1.88	2.30	1.89

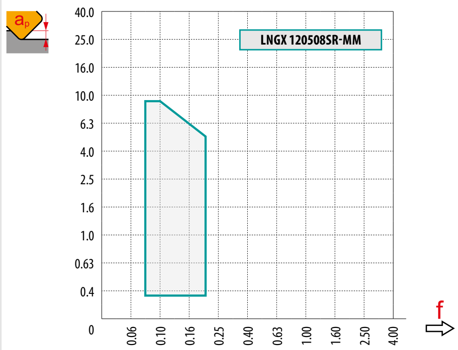


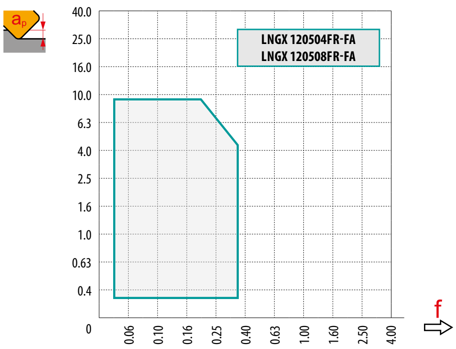












max
3.5

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

a_p
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

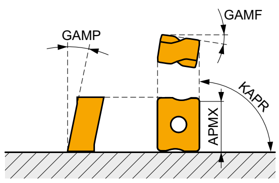
S

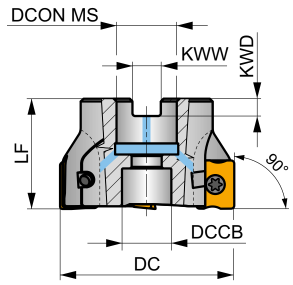
ECON LN16 Square Shoulder Mill with Internal Coolant

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.

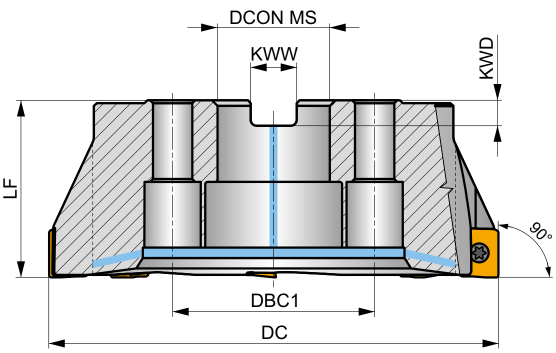
ECON LN

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			
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	–

ISO 6462 DIN 8030

GI207	LNMU 1607..	LNGU 1607..

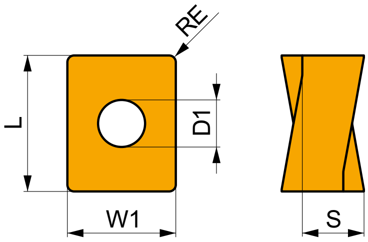
		Nm							
SQ351	US 45012-T20P	5.0	M 5	12	SDR T20P-T	–	–	–	–
SQ353	US 45012-T20P	5.0	M 5	12	SDR T20P-T	HS 1030C	–	–	–
SQ356	US 45012-T20P	5.0	M 5	12	SDR T20P-T	HS 1240C	CAC 160C	HSD 0825C	HXK 5

AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

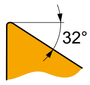
LNMU 16

PRAMET

	W1 [mm]	D1 [mm]	L [mm]	S [mm]
1607	13.200	5.70	16.60	7.50

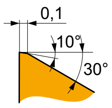


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.



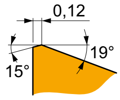
F geometry with highly positive design for light machining.

Product	Grade	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]
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	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–



M geometry with positive design for medium machining.

Product	Grade	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]
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	–	–	–	–	–	–	–	–	–

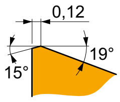


R geometry with positive stable design for medium machining.

Product	Grade	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]
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 [mm]	P	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K	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	H vc [m/min]	H f [mm/tooth]	H ap [mm]
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

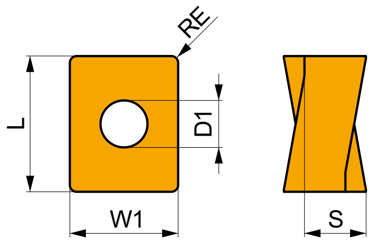


R geometry with positive stable design for medium machining.

LNGU 16

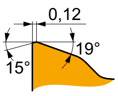
PRAMET

	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	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K	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	H vc [m/min]	H f [mm/tooth]	H ap [mm]
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

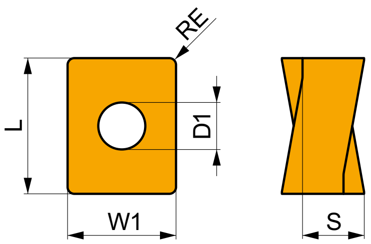


M geometry with highly positive design for medium machining.

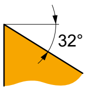
LNGU 16-FA

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.



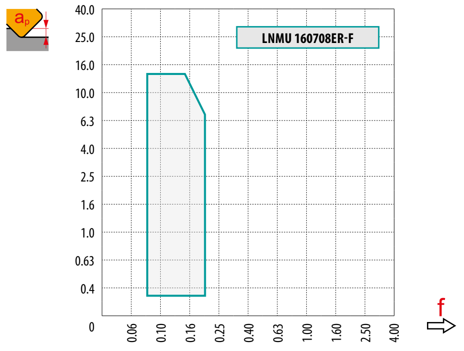
F

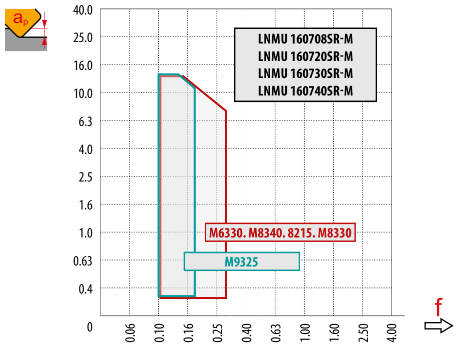
FA geometry with highly positive design for fine-finish to medium machining.

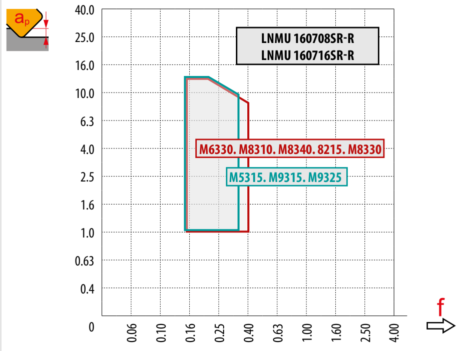
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
LNGU 160708FR-FA	**HF7**	0.8	–	–	–	–	–	–	–	–	–	■ 300	0.30	3.0	–	–	–	–	–	–

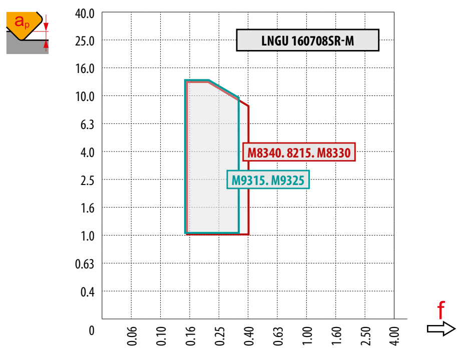
ae/DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

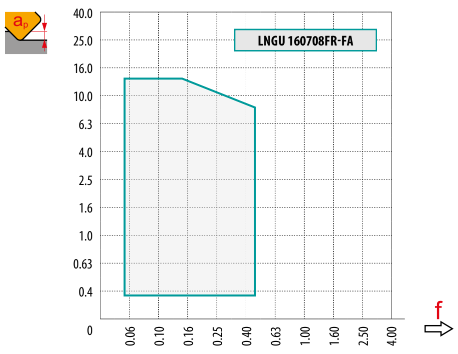
	LNMU 16-F	LNMU 16-M				LNMU 16-R		LNGU 16-M	LNGU 16-FA
RE	0.8	0.8	2.0	3.0	4.0	0.8	1.6	0.8	0.8
BS	3.30	3.30	2.11	1.12	0.10	3.30	2.50	3.24	3.30











max
7.0

ap	1.0	6.0	13.0
1 f	0.31	0.24	0.13

SSO050

P M K S

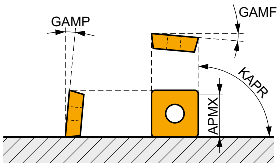
PRAMET

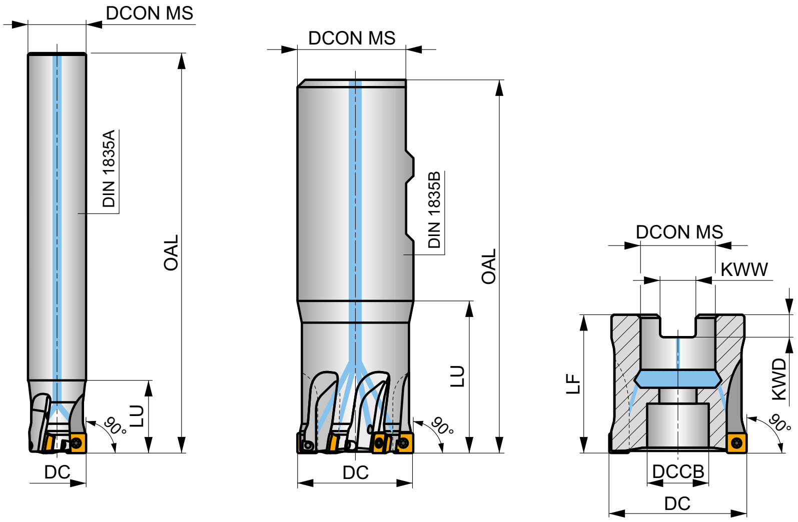
S

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

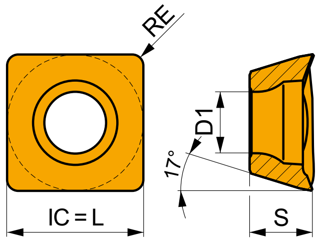
	Product	DC [mm]	OAL [mm]	DCON MS [mm]	DCCB [mm]	LU [mm]	LF [mm]	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg		
DIN 1835A	12A2R018A10-SSO050-C	12	90	10	–	18	–	–	–	-8	8	2	–	58000	✓	0.05	GI327	SQ330
	12A2R018A12-SSO050-C	12	90	12	–	18	–	–	–	-8	8	2	–	58000	✓	0.07	GI327	SQ330
	16A3R020A14-SSO050-C	16	110	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..

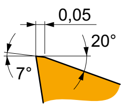
		Nm						
SQ330	US 62204-T07P	0.8	M 2.2	4.1	Flag T07P	–	–	–
SQ332	US 62204-T07P	0.8	M 2.2	4.1	–	D-T07P/T09P	FG-15	HS 90835
SQ333	US 62204-T07P	0.8	M 2.2	4.1	–	D-T07P/T09P	FG-15	HS 1030C

SOMT 05

	IC [mm]	D1 [mm]	L [mm]	S [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.

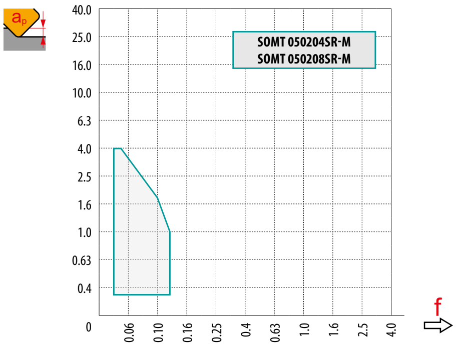


M geometry with positive design for light to medium machining.

Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
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

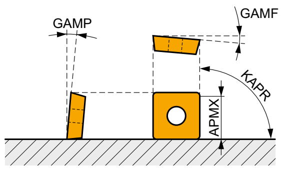
a_p	1.0	2.0	4.0
f	0.12	0.08	0.03

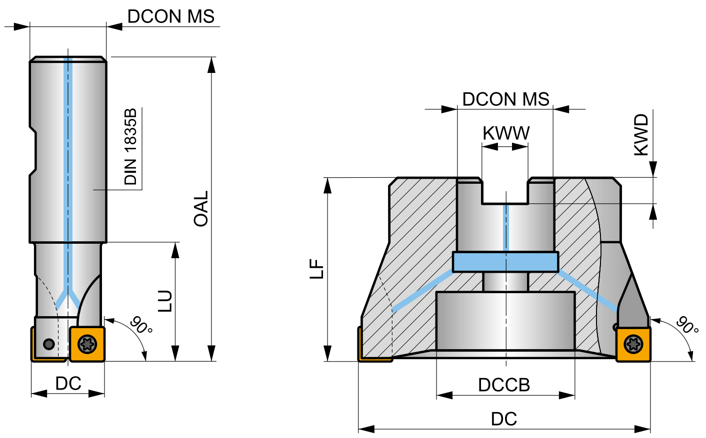
SSO09

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	OAL	DCON MS	DCCB	LU	LF	KWW	KWD	GAMF	GAMP			max.		kg			
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[°]	[°]								
DIN 1835B	20A2R032B20-SSO09-C	20	82	20	–	32	–	–	–	-12	6	2	–	23800	✓	0.21	GI146	SQ400	–
	25A3R042B25-SSO09-C	25	98	25	–	42	–	–	–	-12	6	3	–	21300	✓	0.31	GI146	SQ400	–
	32A4R042B32-SSO09-C	32	102	32	–	42	–	–	–	-10	10	4	✓	18800	✓	0.55	GI146	SQ400	–
ISO 6462 DIN 8030	40A05R-S90SO09-C	40	–	16	14	–	40	8.4	5.6	-9.1	10	5	–	16800	✓	0.29	GI146	SQ402	–
	50A06R-S90SO09-C	50	–	22	18	–	40	10.4	6.4	-8.8	10	6	–	15100	✓	0.33	GI146	SQ403	–
	63A07R-S90SO09-C	63	–	22	18	–	40	10.4	6.4	-8.6	10	7	–	13400	✓	0.86	GI146	SQ403	–
	80A09R-S90SO09-C	80	–	27	38	–	50	12.4	7	-8.1	10	9	–	11900	✓	1.03	GI146	SQ401	AC001
	100A10R-S90SO09-C	100	–	32	45	–	50	14.4	8	-8.1	10	10	–	10700	✓	1.79	GI146	SQ401	AC002
	125A12R-S90SO09-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

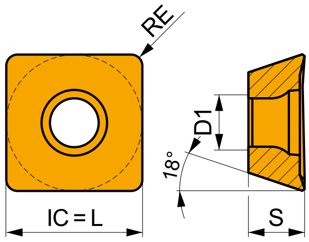
AC001	KS 1230	K.FMH27

AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

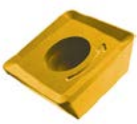
SOMT 09

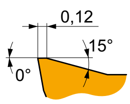
PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
09T3	9.550	3.50	9.55	3.97



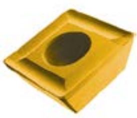
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Conditions are valid for setting angle 90°. Refer to our Machining Calculator app for further calculations.

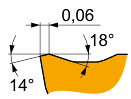




M geometry with positive design for medium machining.

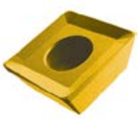
Product	Grade	RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
SOMT 09T308-M	**8215**	0.8	■ 275	0.14	2.5	◩ 165	0.13	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	–	–	–	–	–	–	–	–	–

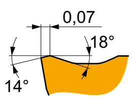




MI geometry with stable positive design for medium machining.

Product	Grade	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 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	–	–	–



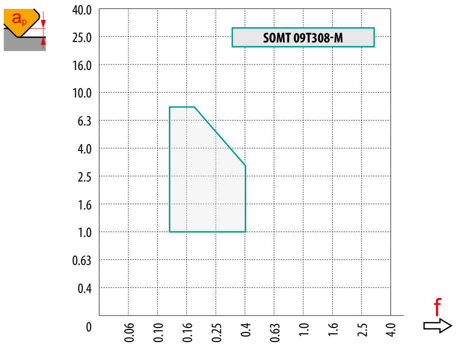


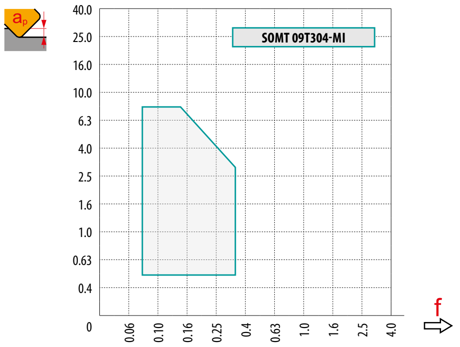
P geometry with highly positive design for medium machining.

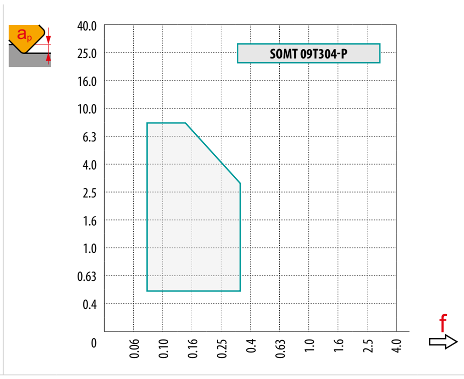
Product	Grade	RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
SOMT 09T304-P	**M8330**	0.4	■ 250	0.14	2.5	◩ 150	0.13	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	–	–	–	–	–	–	–	–	–

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

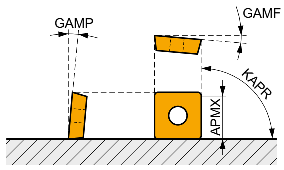
PRAMET

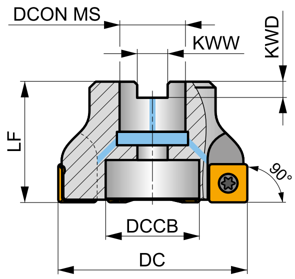
S

90° Square Shoulder Mill for SDMT 12 Insert with Internal Coolant

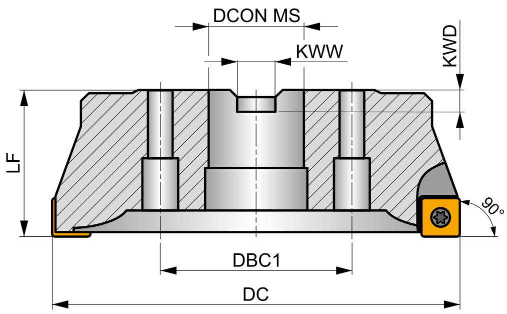
90° shell mill utilising positive SDMT 12 inserts with APMX of 10 mm. Suitable for face, shoulder, slot and plunge milling. Available in arbor style only in Ø50 up to Ø160 mm. Body treated for longer tool life.

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			
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	–

ISO 6462 DIN 8030

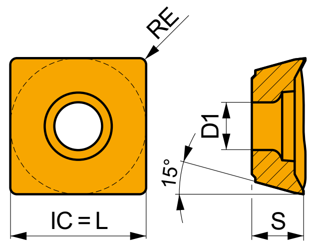
GI057	SDMT 1205..

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

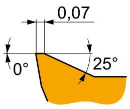
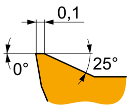
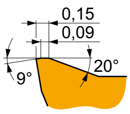
AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

SDMT 12

	IC [mm]	D1 [mm]	L [mm]	S [mm]
1205	12.700	4.40	12.70	5.00

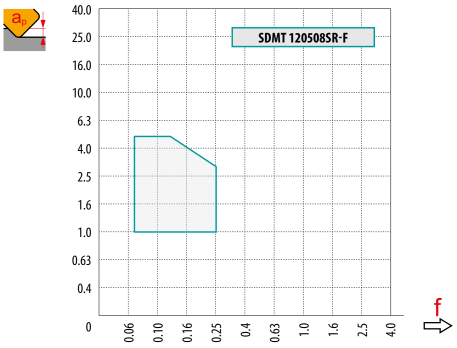


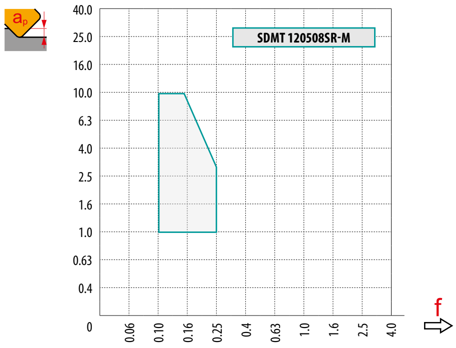
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

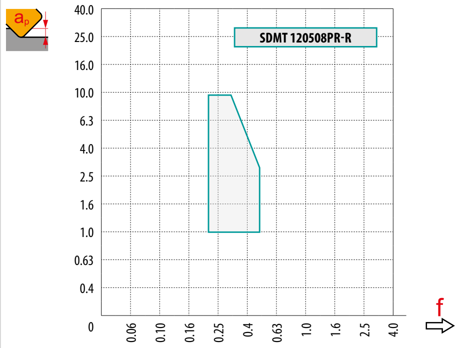
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
  F geometry with positive design for light to medium machining.																				
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	–	–	–
  M geometry with positive design for light to medium machining.																				
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	–	–	–	–	–	–	–	–	–
  R geometry with stable positive design for medium machining.																				
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
1 f	0.39	0.25	0.14

FTB27X

P M K

PRAMET

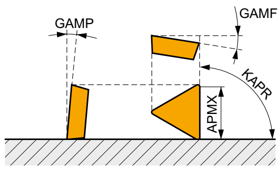
F

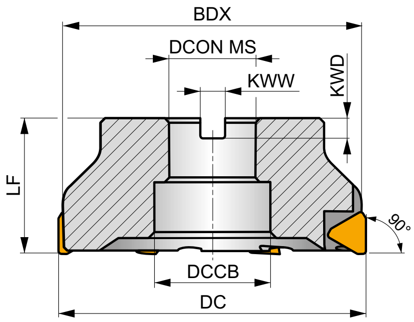
ROUGH TB Square Shoulder Face Mill for TBMR 27 Insert for Heavy Milling

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.

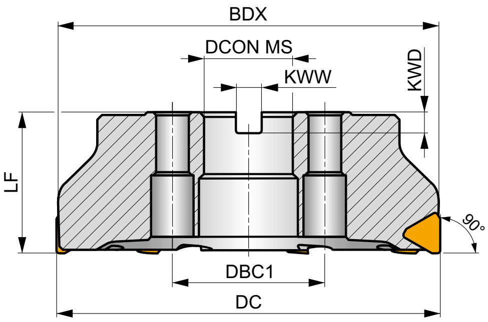
ROUGH TB

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			
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	–

ISO 6462 DIN 8030

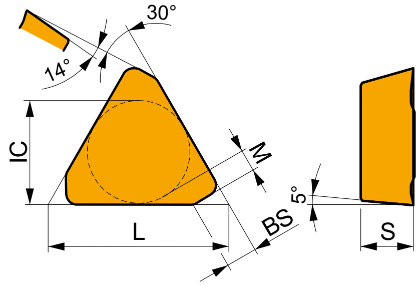
GI163	TBMR 2707PZ..

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

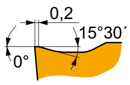
TBMR 27

	BS [mm]	IC [mm]	L [mm]	M [mm]	S [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.

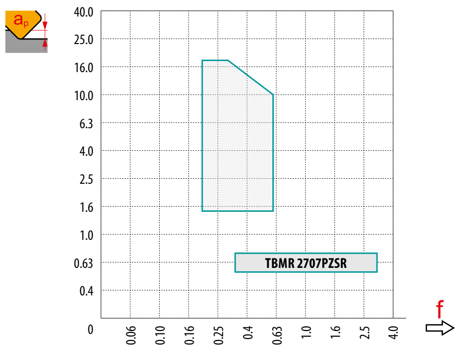
Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
TBMR 2707PZSR	**M8326**	–	◩	130	0.20	11.0		–	–	–	◩	120	0.20	11.0		–	–	–		–	–	–		–	–	–
	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
1 f	0.60	0.39	0.24

DORMER PRAMET

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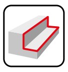
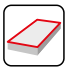
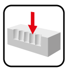
INDEXABLE DEEP SHOULDER MILLS

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

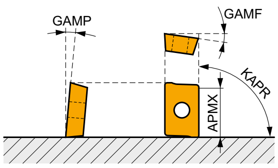
S

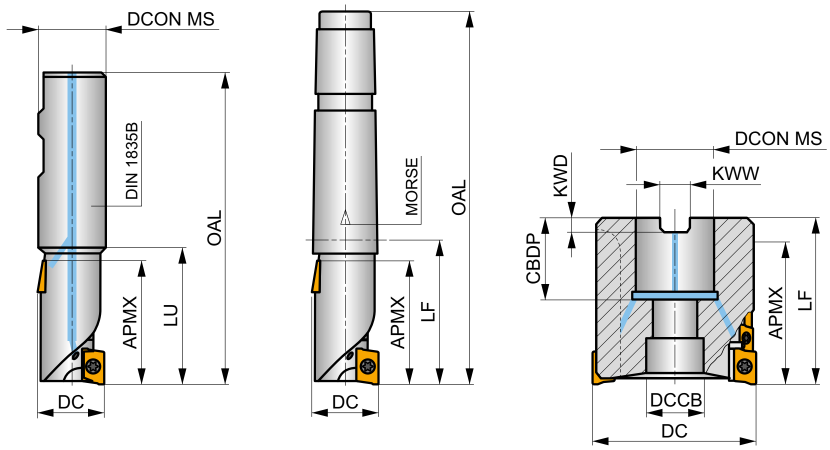
HELICAL AD11 Long Edge Mill with Internal Coolant

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





h_m	0.05 - 0.08
h_m	0.05 - 0.08

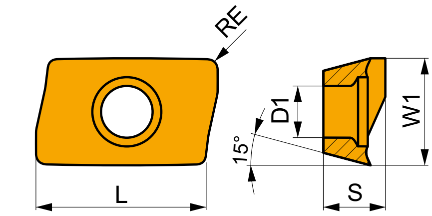
	Product	DC [mm]	OAL [mm]	DCON MS [mm]	DCCB [mm]	LU [mm]	LF [mm]	APMX [mm]	CBDP [mm]	CZC MS	GAMF [°]	GAMP [°]	NOF			max.		kg		
DIN 1835B	25J2R50B25-SAD11E38-C	25	106	25	–	50	–	38.00	–	–	-10.5	5	2	8	–	24100	✓	0.32	GI184	SQ210
	32J2R60B32-SAD11E47-C	32	120	32	–	60	–	47.00	–	–	-9	8	2	10	–	21300	✓	0.60	GI184	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

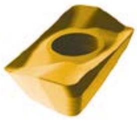
		Nm						
SQ210	US 2506-T07P	1.2	M 2.5	6.3	–	–	Flag T07P	–
SQ903	US 2506-T07P	1.2	M 2.5	6.3	D-T07P/T09P	FG-15	–	HS 1030C

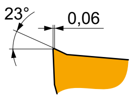
ADMX 11

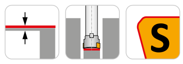
	W1 [mm]	D1 [mm]	L [mm]	S [mm]
11T3	6.530	2.90	11.00	3.97



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

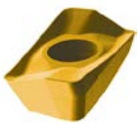


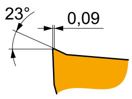




F geometry with very sharp positive design for light machining.

Product	Grade	RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
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		–	–	–



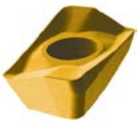
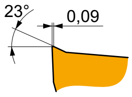


M geometry with positive design for light to medium machining.

Product	Grade	RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
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		–	–	–

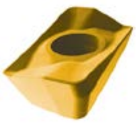
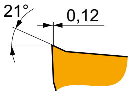
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product	Grade	RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]

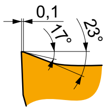
M geometry with positive design for light to medium machining.

Product	Grade	RE	P	vc	f	ap	M	vc	f	ap	K	vc	f	ap	N	vc	f	ap	S	vc	f	ap	H	vc	f	ap
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		–	–	–

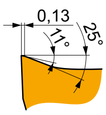
R geometry with positive design for machining conditions in less stable conditions.

Product	Grade	RE	P	vc	f	ap	M	vc	f	ap	K	vc	f	ap	N	vc	f	ap	S	vc	f	ap	H	vc	f	ap
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.

Product	Grade	RE	P	vc	f	ap	M	vc	f	ap	K	vc	f	ap	N	vc	f	ap	S	vc	f	ap	H	vc	f	ap
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		–	–	–

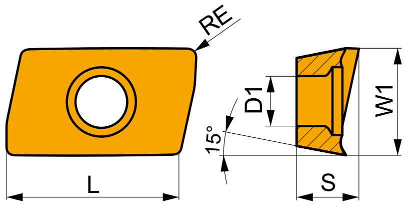



MM geometry with highly positive design for light to medium and finish to semi-rough machining.

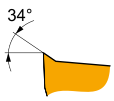
Product	Grade	RE	P	vc	f	ap	M	vc	f	ap	K	vc	f	ap	N	vc	f	ap	S	vc	f	ap	H	vc	f	ap
ADMX 11T304SR-MM	M6330	0.4	■	185	0.14	2.5	■	130	0.13	2.5		–	–	–		–	–	–	■	55	0.11	2.0		–	–	–
	M8340	0.4	■	195	0.14	2.5	■	115	0.13	2.5		–	–	–		–	–	–	■	45	0.11	2.0		–	–	–
	M9340	0.4	■	250	0.14	2.5	■	150	0.13	2.5		–	–	–		–	–	–	■	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		–	–	–

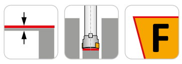
ADEX 11-FA

	W1 [mm]	D1 [mm]	L [mm]	S [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.





FA geometry with highly positive design for fine-finish to medium machining.

Product	Grade	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	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]
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

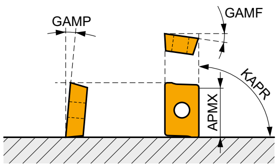
ADMX/ADEX 11	R
ADMX 11T320SR-M	1.0
ADMX 11T325SR-M	1.8
ADMX 11T330SR-M	1.8

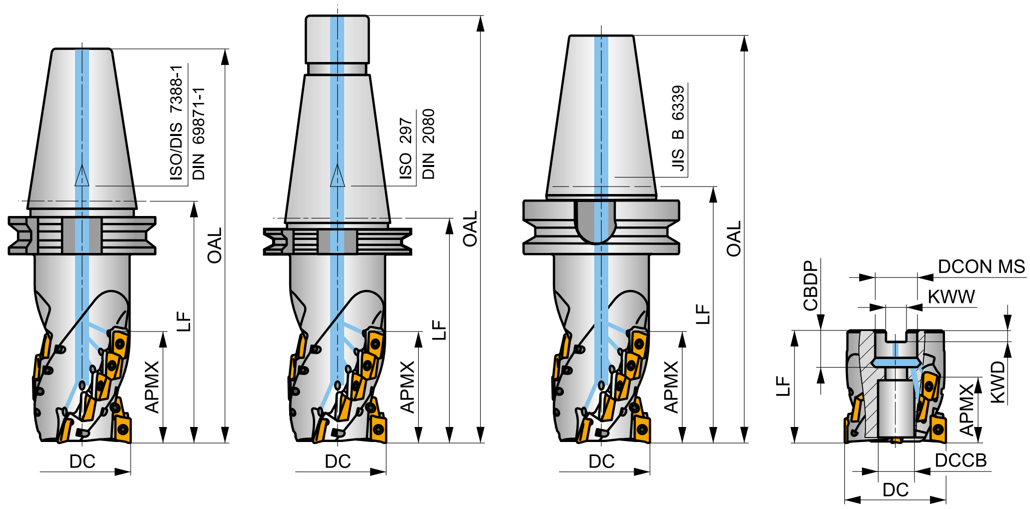
HELICAL AD16 Long Edge Mill with Internal Coolant

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.

FORCE AD

KAPR	90°
APMX	40.0 - 108.0 mm





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		
ISO/DIS 7388-1	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
	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
ISO 297	50J3R140G50-SAD16E80-C	50	267	–	–	–	140	80.00	–	50	-6	12	3	18	–	13200	✓	4.48	GI282	SQ031
	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
JIS B 6339	50J3R140X50-SAD16E68-C	50	242	–	–	–	140	68.00	–	50	-6	12	3	15	–	13200	✓	5.28	GI282	SQ031
	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
ISO 6462 DIN 8030	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
	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

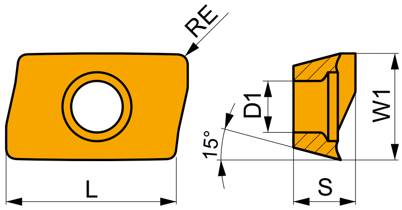
GI282	ADMX 1606..	ADEX 1606..-FA	ADEX 1606..-FM

		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

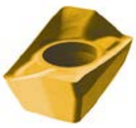
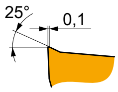
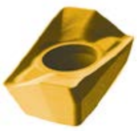
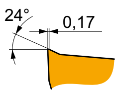
ADMX 16

PRAMET

	W1 [mm]	D1 [mm]	L [mm]	S [mm]
1606	9.950	4.50	16.00	6.25

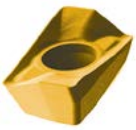
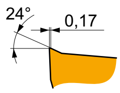


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
	 25° 0,1		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	–	–	–
	 24° 0,17		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	–	–	–

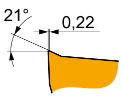
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P				M				K				N				S				H			
		[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]

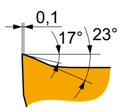
M geometry with positive design for light to medium machining.

ADMX 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		–	–	–

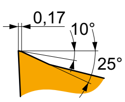
R geometry with positive design for medium to less stable machining conditions.

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		–	–	–

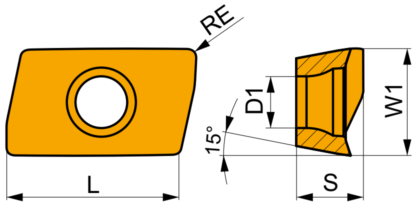
MM geometry with highly positive design for light to medium machining.

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		–	–	–

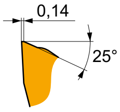
ADEX 16

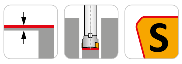
PRAMET

	W1 [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.





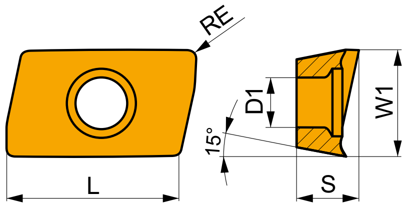
FM geometry with highly positive design for medium machining.

Product	Grade	RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
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		–	–	–

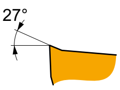
ADEX 16-FA

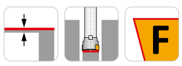
PRAMET

	W1 [mm]	D1 [mm]	L [mm]	S [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.





FA geometry with highly positive design for fine-finish to medium machining.

Product	Grade	RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
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_{emax}	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_{emax}	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

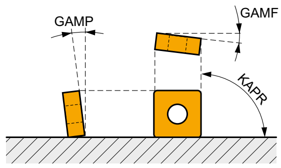
S

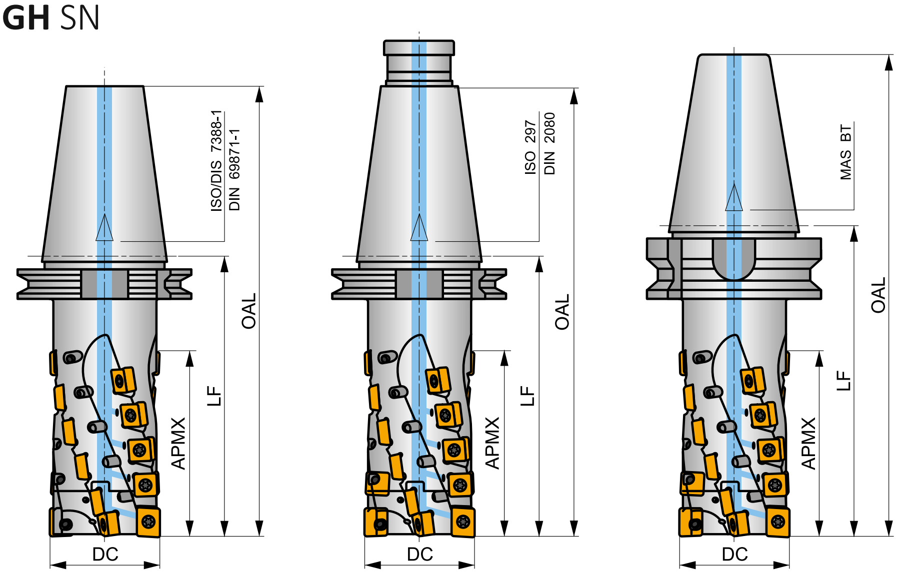
ROUGH SN Long Edge Mill for Heavy Milling with Internal Coolant

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.

ROUGH SN

KAPR	90°
APMX	104.0 - 134.0 mm





h_m 0.08 - 0.22

	Product	DC [mm]	OAL [mm]	APMX [mm]	LF [mm]	GAMF [°]	GAMP [°]	CZC MS	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

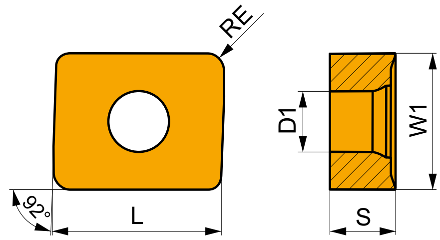
GI209	LNET 1606..	SN.. 1305..

					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

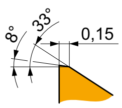
PRAMET

	W1 [mm]	D1 [mm]	L [mm]	S [mm]
1606	13.200	5.90	16.40	6.38

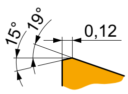


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

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]
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	–	–	–	–	–	–	–	–	–
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	–	–	–	–	–	–	–	–	–

M geometry with highly positive design for medium machining.

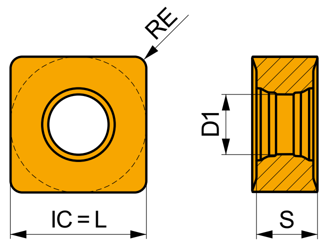



R geometry with highly positive design for medium machining.

SNGX 13

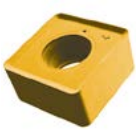
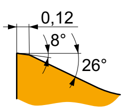
PRAMET

	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.

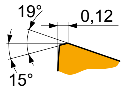
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
SNGX 130512SN-M	M8330	1.2	■ 105	0.15	12.0	–	–	–	◩ 95	0.15	12.0	–	–	–	–	–	–	–	–	–
	M8340	1.2	■ 105	0.15	12.0	–	–	–	◩ 95	0.15	12.0	–	–	–	–	–	–	–	–	–

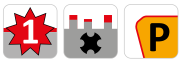



M geometry with positive design for light machining.

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 [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]
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	–	–	–	–	–	–	–	–	–

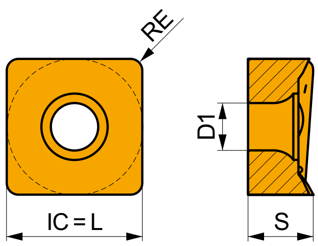


R geometry with positive design for rough machining and unstable conditions.

SNET 13

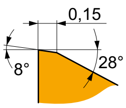
PRAMET

	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 [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]
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.

ae/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

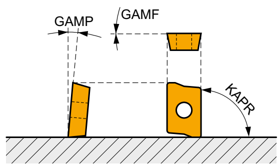
PRAMET

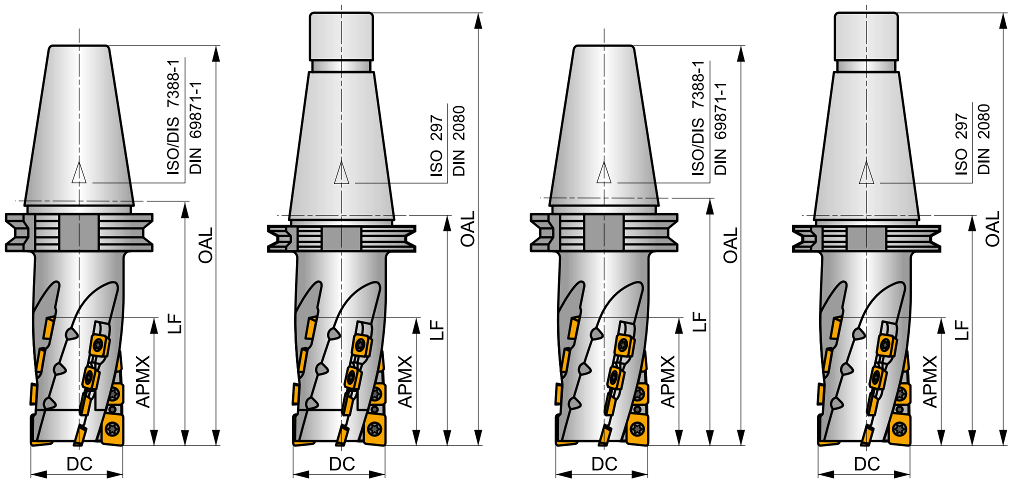
S

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 [°]	CZC MS	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

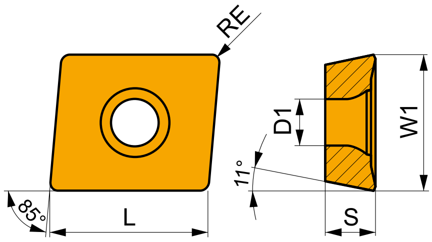
GI128	APE. 1504..	SPE. 1204..

					Nm			
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

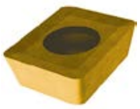
APET 15

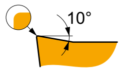
PRAMET

	W1 [mm]	D1 [mm]	L [mm]	S [mm]
1504	12.700	5.50	15.90	4.76

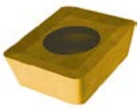


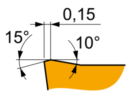
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.





EN edge preperation, positive geometry for light to medium machining.





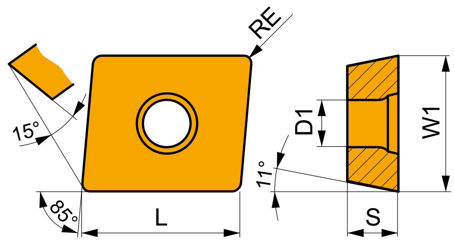
SN edge preperation, positive geometry for medium to heavy machining.

Product	Grade	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]
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	–	–	–
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	–	–	–

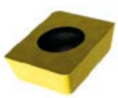
APEW 15

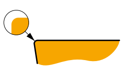
PRAMET

	W1 [mm]	D1 [mm]	L [mm]	M [mm]	S [mm]
1504	12.700	5.50	15.90	4	4.76

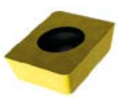


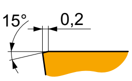
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.





ER edge preperation, zero rake angle geometry for light to medium machining.





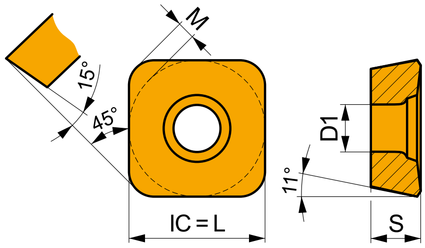
SR edge preperation, zero rake angle geometry for medium to heavy machining.

Product	Grade	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]
APEW 150412ER	M8330	1.2	◩ 200	0.20	12.0	–	–	–	■ 190	0.20	12.0	–	–	–	–	–	–	◩ 40	0.15	1.0
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

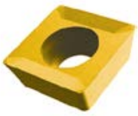
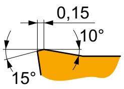
	IC [mm]	D1 [mm]	L [mm]	M [mm]	S [mm]
1204	12.700	5.50	12.70	2	4.76

PRAMET



Suitability and 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]
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	–	–	–

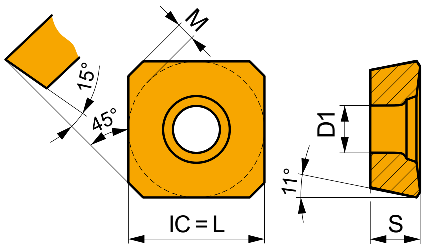
S

S edge prepartion, positive general purpose geometry.

SPET 12 AD

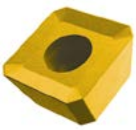
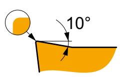
	IC [mm]	D1 [mm]	L [mm]	M [mm]	S [mm]
1204	12.700	5.50	12.70	2	4.76

PRAMET



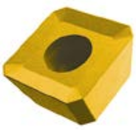
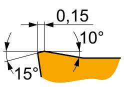
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

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]
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	–	–	–
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	–	–	–

E

ADEN edge prepartion, positive geometry for light to medium machining.

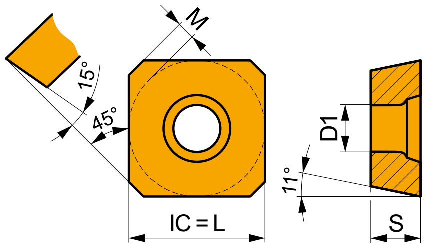
S

ADSN edge prepartion, positive geometry for medium machining.

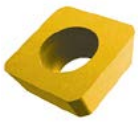
SPEW 12 AD

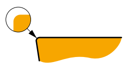
PRAMET

	IC [mm]	D1 [mm]	L [mm]	M [mm]	S [mm]
1204	12.700	5.50	12.70	2	4.76

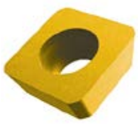


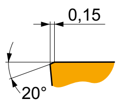
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.





ADEN edge preperation, zero rake angle geometry for light to medium machining.





ADSN edge preperation, zero rake angle geometry for medium machining.

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]
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	–	–	–	–	–	–	–	–	–
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_{emax}	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_{emax}	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		APMX	a_p
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

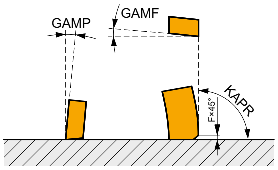
P M K N

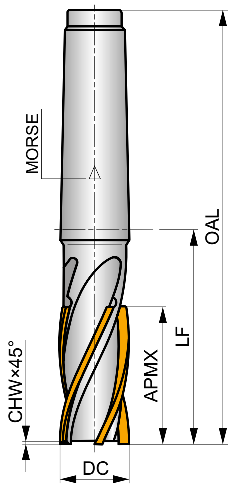
PRAMET

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]	CZC MS	NOF		max.		kg		
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	–	–

DIN 228A

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	Z	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_{emax}	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_{emax}	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

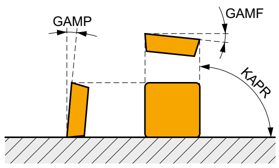
C

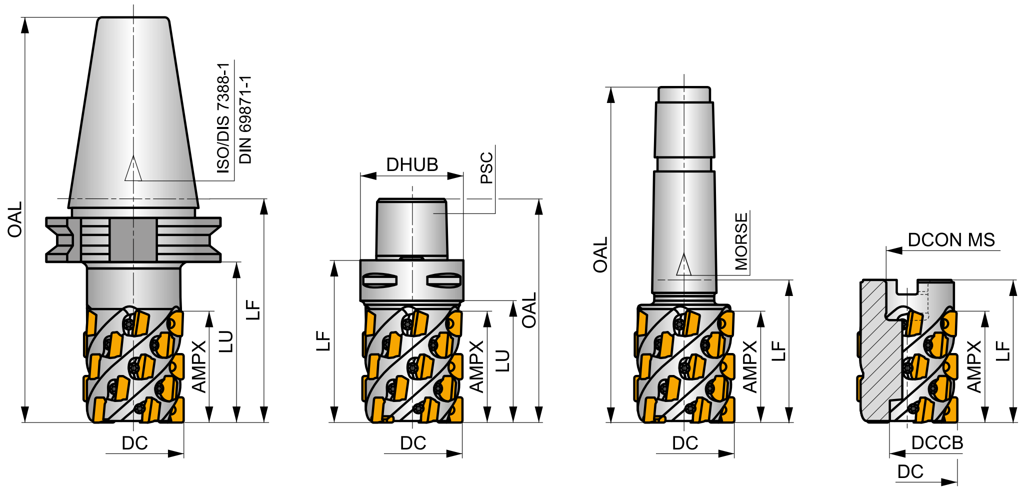
MULTISIDE SD Long Edge Mill

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	16	–	4000	–	1.16	GI271	SQ091
	50J5R100H50-CSD12X55	50	201.7	–	–	80	100	54.90	-5	8	50	5	25	–	3200	–	4.20	GI271	SQ091
	63J6R110H50-CSD12X66	63	211.7	–	–	90	110	65.70	-5	8	50	6	36	–	2500	–	4.90	GI271	SQ091
PSC	40J4R080XC5-CSD12X44	40	110	–	–	59	80	44.10	-5	8	C5	4	16	–	4000	–	1.06	GI271	SQ091
	50J5R080XC5-CSD12X55	50	110	–	–	59	80	54.90	-5	8	C5	5	25	–	3200	–	1.24	GI271	SQ091
DIN 228A	50J5R065E04-CSD12X55	50	167.5	–	–	–	65	54.90	-5	8	4	5	25	–	3200	–	1.34	GI271	SQ091
ISO 6462 DIN 8030	50T05R-C90SD12X55	50	–	22	18	–	78	54.90	-5	8	–	5	25	–	3200	–	0.95	GI271	SQ923
	63T06R-C90SD12X66	63	–	27	22	–	90	65.70	-5	8	–	6	36	–	2500	–	1.72	GI271	SQ924
	80T08R-C90SD12X88	80	–	40	36	–	115	87.30	-5	8	–	8	64	–	2000	–	3.20	GI271	SQ925

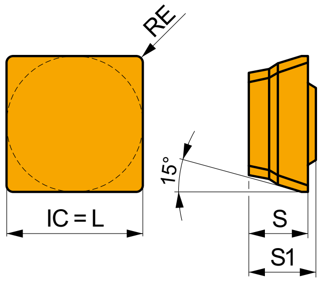
GI271	SDGX 1205..	SDMX 1205..

		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

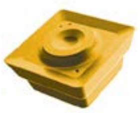
SDGX 12

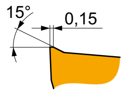
PRAMET

	IC [mm]	L [mm]	S [mm]	S1 [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.





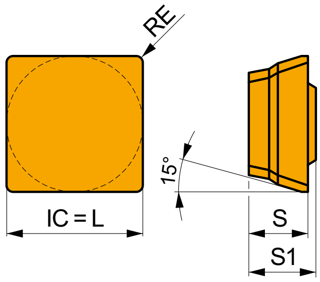
FM geometry with positive design for light to medium heavy machining.

Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [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		–	–	–

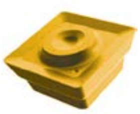
SDMX 12

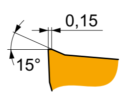
PRAMET

	IC [mm]	L [mm]	S [mm]	S1 [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.





M geometry with positive design for light to heavy machining.

Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [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		–	–	–

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

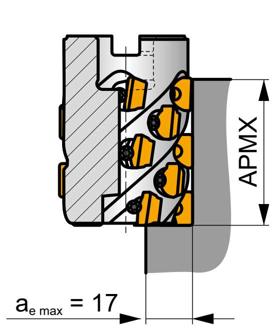
$a_{e\,max}$	1		2.5		5		7.5		10		15		20	
DC	f_{min}	f_{max}	f_{min}	f_{max}	f_{min}	f_{max}	f_{min}	f_{max}	f_{min}	f_{max}	f_{min}	f_{max}	f_{min}	f_{max}
40	0.16	0.32	0.10	0.20	0.07	0.14	0.06	0.12	0.05	0.10	0.04	0.09	0.04	0.08
50	0.18	0.35	0.11	0.23	0.08	0.16	0.07	0.13	0.06	0.12	0.05	0.10	0.04	0.09
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

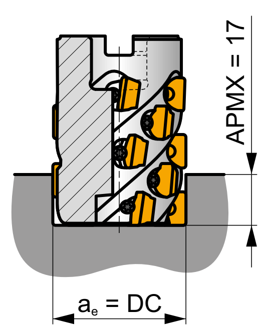
$a_{e\,max}$	25		32		40		50		63		80	
DC	f_{min}	f_{max}	f_{min}	f_{max}	f_{min}	f_{max}	f_{min}	f_{max}	f_{min}	f_{max}	f_{min}	f_{max}
40	0.04	0.07	0.03	0.07	0.04	0.08	–	–	–	–	–	–
50	0.04	0.08	0.04	0.07	0.03	0.07	0.04	0.08	–	–	–	–
63	0.04	0.09	0.04	0.08	0.04	0.07	0.03	0.07	0.04	0.08	–	–
80	0.05	0.09	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

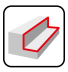
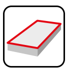
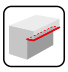
i





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

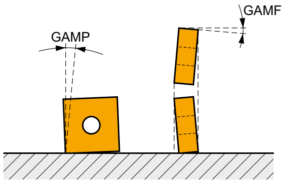
PRAMET

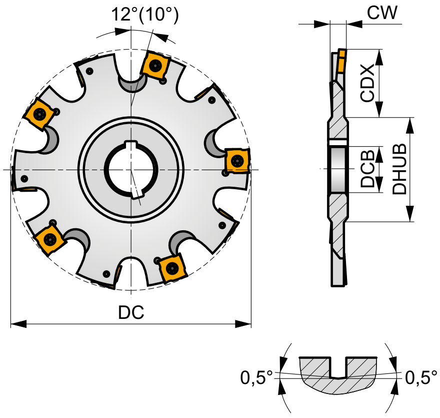
S

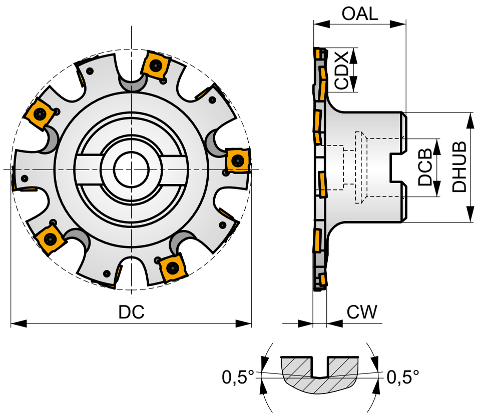
Side and Face Disk Milling Cutter

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	OAL	DCB	DHUB	CDX	CW		GAMF	GAMP			max.		kg			
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[°]	[°]								
ISO 6462 DIN 8030	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	–
	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	–
ISO 6462 DIN 8030	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	–
	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	OAL	DCB	DHUB	CDX	CW		GAMF	GAMP			max.		kg			
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[°]	[°]								
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

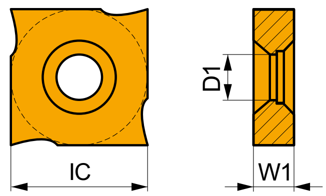
		Nm					
DI011	US 3504-T09P	3.0	M 3.5	4	D-T07P/T09P	FG-15	–
DI012	US 70	5.0	M 4	5	D-T07/T15	FG-15	–
DI013	US 71	5.0	M 4	7	D-T07/T15	FG-15	–
DI014	US 72	5.0	M 4	9	D-T07/T15	FG-15	–
DI015	US 73	5.0	M 4	11	D-T07/T15	FG-15	–
DI019	US 3505-T09P	3.0	M 3.5	5	D-T07P/T09P	FG-15	HS 0830
DI021	US 3504-T09P	3.0	M 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

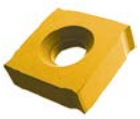
SNHQ AZ

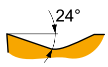
PRAMET

	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



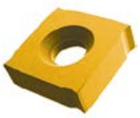
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

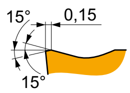




EN geometry with special design for slot milling.

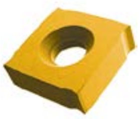
Product	Grade	RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
SNHQ 1203AZEN	8215	–	■	415	0.10	–	◩	245	0.10	–	■	390	0.10	–		–	–	–		–	–	–		–	–	–
	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	–		–	–	–		–	–	–		–	–	–

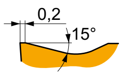




TN geometry with special design for slot milling.

Product	Grade	RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
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	–		–	–	–		–	–	–		–	–	–



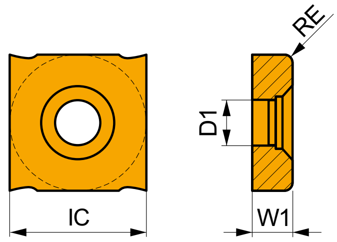


TN geometry with special design for slot milling.

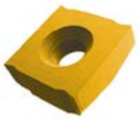
Product	Grade	RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
SNHQ 1203AZTN	M8330	–	■	345	0.20	–	◩	205	0.18	–	■	325	0.20	–		–	–	–		–	–	–		–	–	–
	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	–		–	–	–		–	–	–		–	–	–

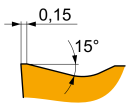
SNHQ TRL

	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.



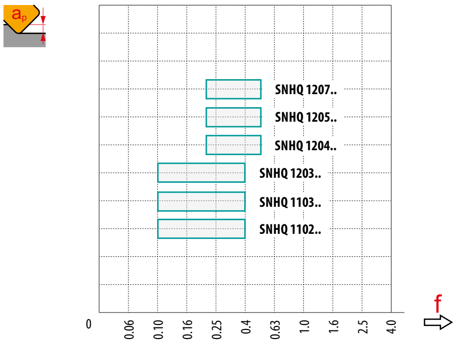


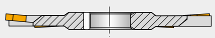
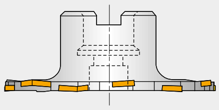
TRL geometry with special design for slot milling.

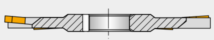
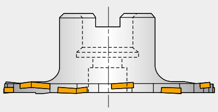
Product	Grade	RE [mm]	P	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
SNHQ 120305TRL	M8340	0.5	■	230	0.20	–	◪	135	0.18	–	◪	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	–	–	–	–	–	–	–	–	–	–

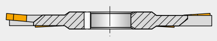
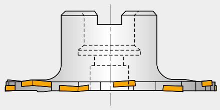
a_e / DC	0.05	0.10	0.15	0.20	0.25	0.30	0.40	0.50	0.60	0.70	0.75	0.80	0.90	1.00
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00

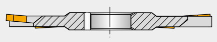
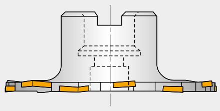
	SNHQ AZEN	SNHQ AZTN	SNHQ 12TRL
RE	–	–	0.5 – 1.5
BS	–	–	–



	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

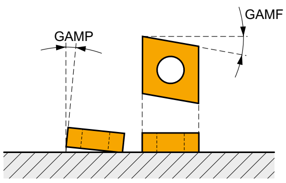
P M K

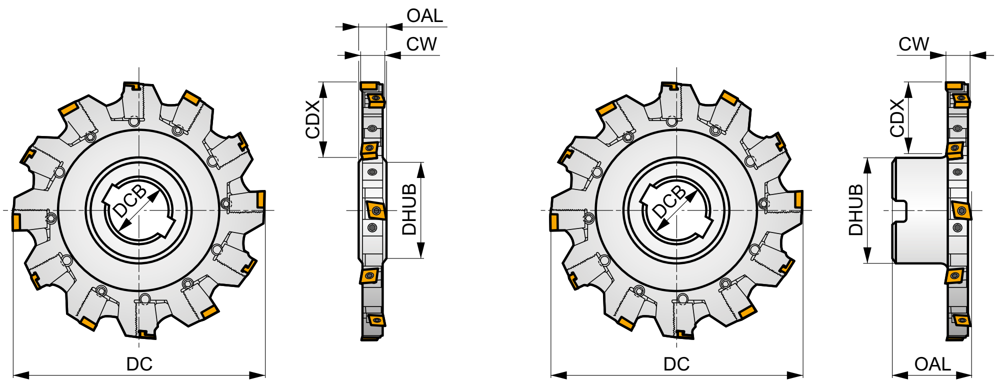
PRAMET S

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 [°]				max.		kg			
ISO 6462 DIN 8030	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	–
	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	–
ISO 6462 DIN 8030	125B04R-S90CN10N18	125	50	40	70	25	14.0 ÷ 18.5	-10	4	4	8	–	7800	–	1.65	GI195	DI071	AC003
	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..

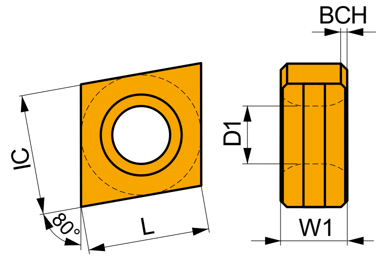
DI051	125H04N-S-14-08	KL-1418-CN10	KR-1418-CN10	KS 613F	DS 6018F	SDR T20	SS 6005-T09P	SDR T09	US 4011-T15P	3.5	M 4	10.6	SDR T15P	–
DI052	160H06N-S-14-12	KL-1418-CN10	KR-1418-CN10	KS 613F	DS 6018F	SDR T20	SS 6005-T09P	SDR T09	US 4011-T15P	3.5	M 4	10.6	SDR T15P	–
DI053	200J07N-S-14-14	KL-1418-CN10	KR-1418-CN10	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

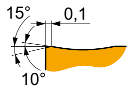
PRAMET

	BCH [mm]	IC [mm]	D1 [mm]	L [mm]	W1 [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		
		[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]
CNHQ 1005AZTN	M8330	–	■ 310	0.15	–	◩ 185	0.14	–	■ 290	0.15	–	–	–	–	–	–	–	–	–	–
	M8340	–	■ 280	0.15	–	◩ 165	0.14	–	◩ 265	0.15	–	–	–	–	–	–	–	–	–	–

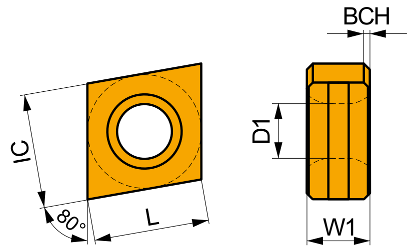


Special design for slot milling with light to heavy cutting conditions.

XNHQ

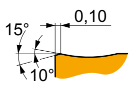
PRAMET

	BCH [mm]	IC [mm]	D1 [mm]	L [mm]	W1 [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.

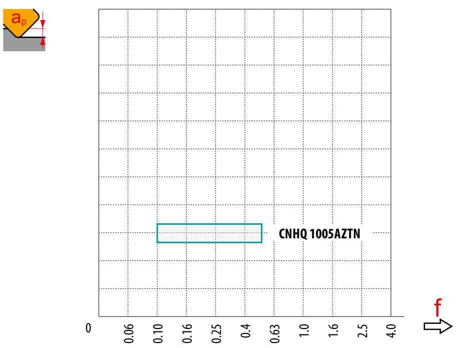
Product		RE	P			M			K			N			S			H		
		[mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]
XNHQ 1205AZTN	M8330	–	■ 310	0.15	–	◩ 185	0.14	–	■ 290	0.15	–	–	–	–	–	–	–	–	–	–
	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	–	–	–	–	–	–	–	–	–	–

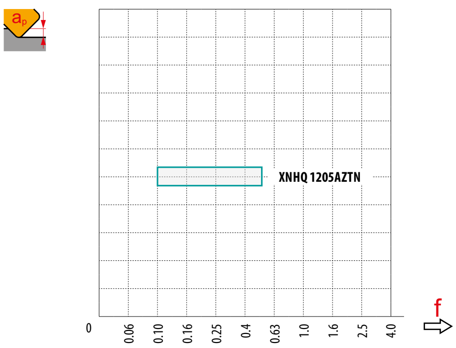


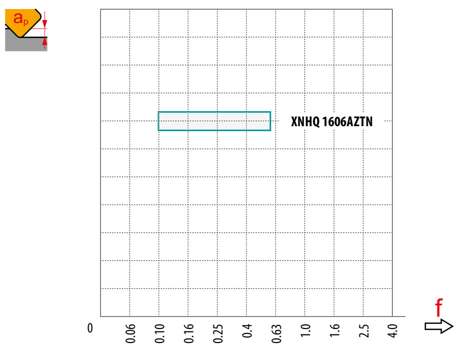
Special design for slot milling.

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	–	–	–

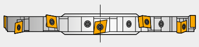
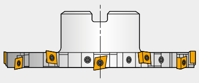


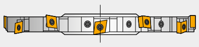
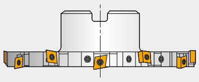




	DC		CDX	$a_{e max}$
	125	4	34	34
	160	6	50	50
	200	7	60	60
	250	9	85	85
	315	12	110	110
	125	4	25	125
	160	6	44	160
	200	7	52	200

	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

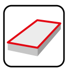
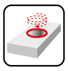
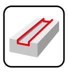
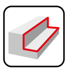
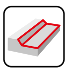
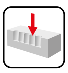
	a_e	32		40		50		63		80	
	DC	f_{min}	f_{max}	f_{min}	f_{max}	f_{min}	f_{max}	f_{min}	f_{max}	f_{min}	f_{max}
	**125**	0.15	0.19	–	–	–	–	–	–	–	–
	160	0.16	0.21	0.15	0.19	–	–	–	–	–	–
	200	0.18	0.23	0.16	0.21	0.15	0.19	–	–	–	–
	250	0.20	0.26	0.18	0.23	0.16	0.21	0.15	0.19	0.13	0.17
	315	0.22	0.29	0.20	0.26	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

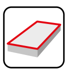
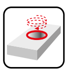
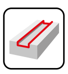
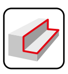
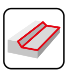
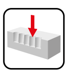
INDEXABLE COPY MILLS

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
	■	■	■	■	■	■
	■	■	■	■		
	■	■	■	■		
	■	■	■	■		
	■	■	■	■		
						
						
						
						

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COPY MILLING

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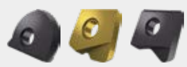
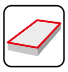
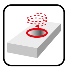
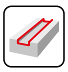
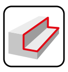
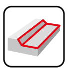
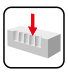
	K2-SRC	K2-SLC	K2-PPH	SVC22C	SWN04C
	–	90°	–	90°	90° (93°)
	APMX [mm] 0.6 – 3.2	APMX [mm] 1.0 – 3.0	APMX [mm] 0.3 – 4.0	APMX [mm] 3.0 (16.0)	APMX [mm] 0.5 (2.0)
	DCX [mm] 8 – 20	DCX [mm] 12 – 20	DCX [mm] 8 – 32	DC [mm] 32 – 80	DC [mm] 20 – 35
Cylindrical shank	 DCX = 8 – 20 [mm]		 DCX = 8 – 32 [mm]	 DC = 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 					■

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COPY MILLING

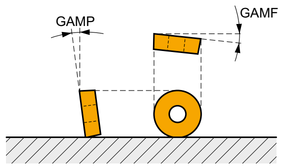
	SCN05C					
	90° (93°)					
	APMX [mm] 0.5 (1.0)					
	DC [mm] 12 – 20					
	 DC = 12 – 20 [mm]					
	 DC = 12 – 20 [mm]					
	610					
	P K H					
						
	CN.. 0502					
	4					
	■					
	■					
	■					
	■					
	■					

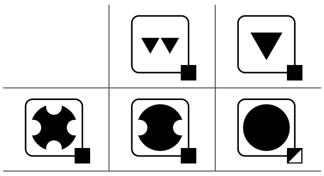
SRC10

P M K S H

PRAMET S

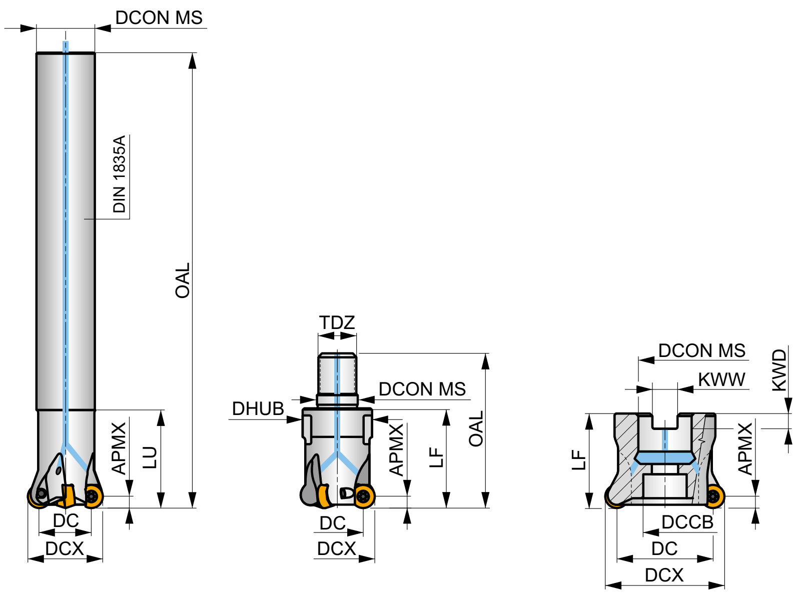
APMX	5.0 mm





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.



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

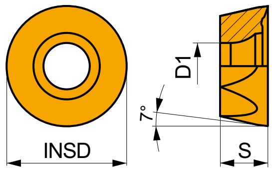
GI328	RCMT 10T3MO..

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

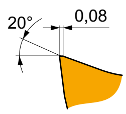
RCMT 10

PRAMET

	INSD [mm]	D1 [mm]	S [mm]
10T3	10.0	3.90	3.97

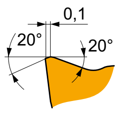


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.



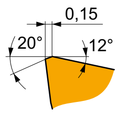
F geometry with highly positive design for light machining.

Product	Grade	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]
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	–	–	–



M geometry with highly positive design for medium machining.

Product	Grade	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]
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	–	–	–

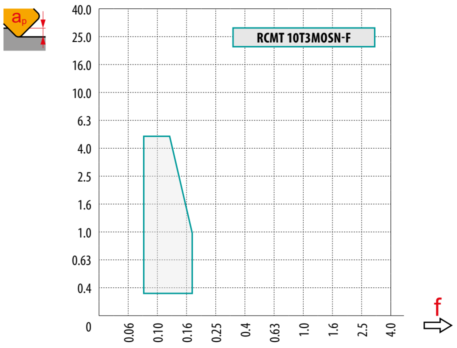


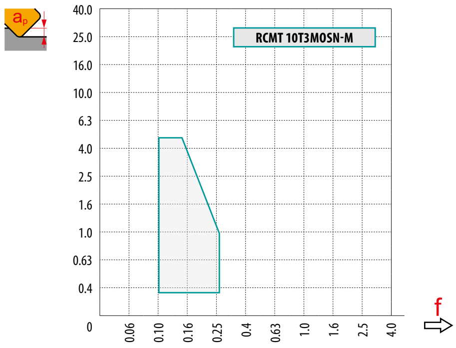
R geometry with positive design for rough copy machining.

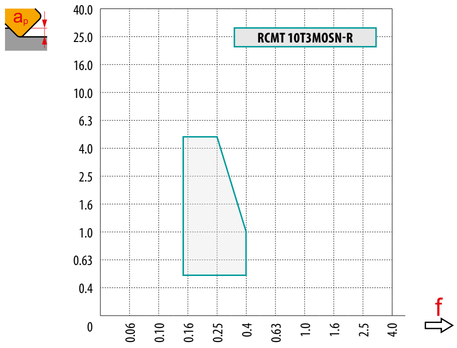
Product	Grade	RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
RCMT 10T3MOSN-R	**M5315**	–	◩ 435	0.17	1.0	–	–	–	■ 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**
	1 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

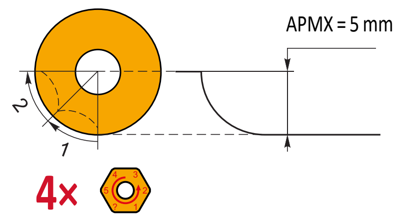
DCX	RPMX	APMX/l
25	13.2	5/23
32	12.6	5/24
35	12.3	5/24
40	9.5	5/31
42	6.5	5/45
50	6.4	5/46
52	6.1	5/48
63	4.7	5/62
66	4.4	5/66

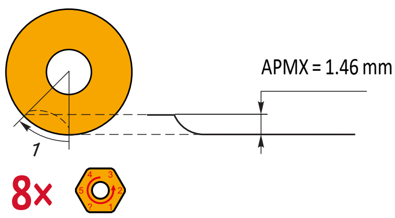
DCX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
25	32.0	50.0	3.0	3.0
32	45.0	64.0	3.0	3.0
35	51.0	70.0	3.0	3.0
40	61.0	80.0	3.0	3.0
42	65.0	84.0	3.0	3.0
50	81.0	100.0	3.0	3.0
52	85.0	104.0	3.0	3.0
63	107.0	126.0	3.0	3.0
66	113.0	132.0	3.0	3.0

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

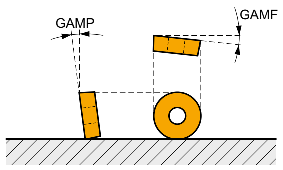
PRAMET

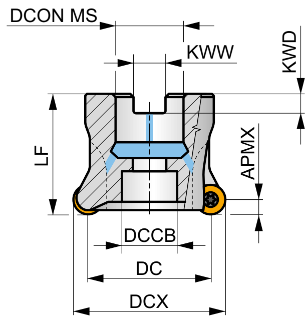
S

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 1204MO..

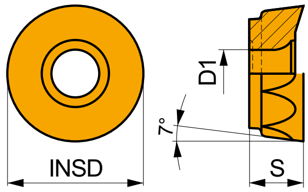
		Nm					
C0021	US 63509-T15P	3.0	M 3.5	10	D-T08P/T15P	FG-15	–
C0022	US 63509-T15P	3.0	M 3.5	10	D-T08P/T15P	FG-15	HS 90835
C0023	US 63509-T15P	3.0	M 3.5	10	D-T08P/T15P	FG-15	HS 1030C
C0024	US 63509-T15P	3.0	M 3.5	10	D-T08P/T15P	FG-15	HS 1230C

AC002	KS 1635	K.FMH32

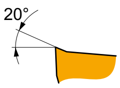
RCMT 12

PRAMET

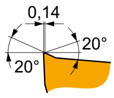
	INSD [mm]	D1 [mm]	S [mm]
1204	12.0	4.40	4.76



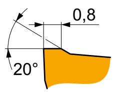
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

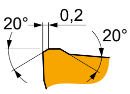
F geometry with highly positive design for light machining.

M geometry with highly positive design for medium machining.

EN-R geometry with positive design for rough copy machining.

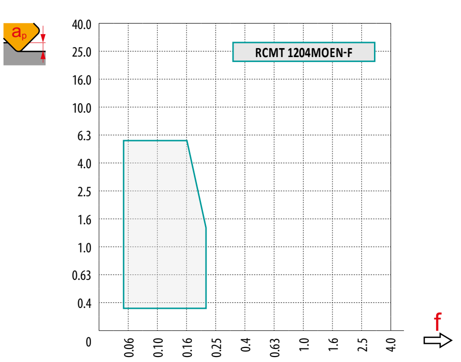



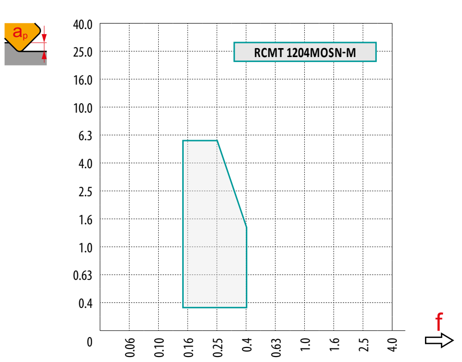
SN-R geometry with positive design for rough copy machining.

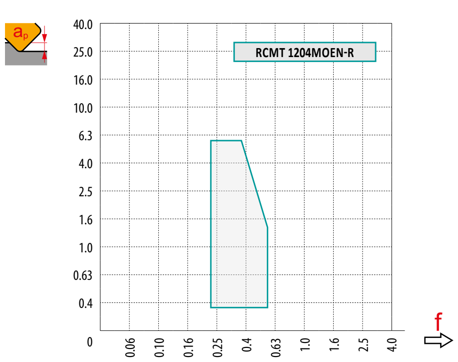
Product	Grade	RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
RCMT 1204M0EN-F	8215	–	■ 390	0.10	1.5	◩ 230	0.09	1.5	–	–	–	–	–	–	◩ 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	–	–	–
RCMT 1204M0SN-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	–	–	–
RCMT 1204M0EN-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
RCMT 1204M0SN-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

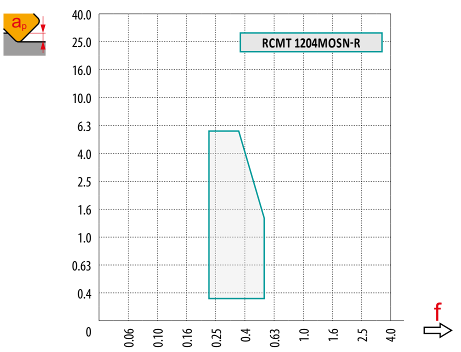
a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
x.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	RCMT 12-F	RCMT 12-M	RCMT 12 EN-R	RCMT 12 SN-R
RE	6.0	6.0	6.0	6.0
BS	–	–	–	–









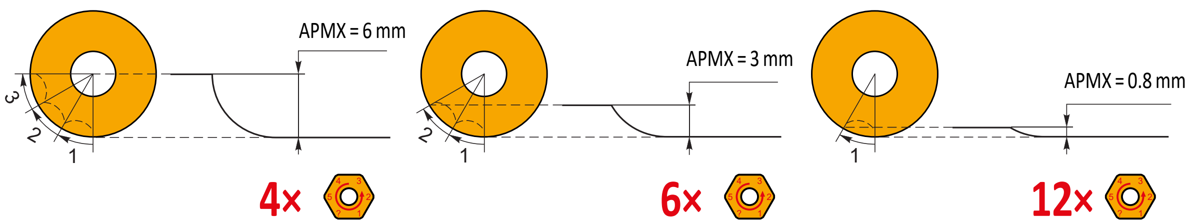
DCX	a_p	0.00	0.30	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00	6.00
40	DEF	28.0	31.7	32.8	33.8	34.6	35.3	35.9	36.9	37.7	38.4	39.3	39.8	40.0
50		38.0	41.7	42.8	43.8	44.6	45.3	45.9	46.9	47.7	48.4	49.3	49.8	50.0
52		40.0	43.7	44.8	45.8	46.6	47.3	47.9	48.9	49.7	50.4	51.3	51.8	52.0
63		51.0	54.7	55.8	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
	1 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/l
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

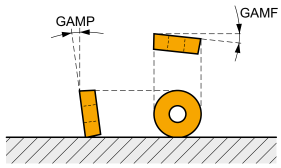
PRAMET

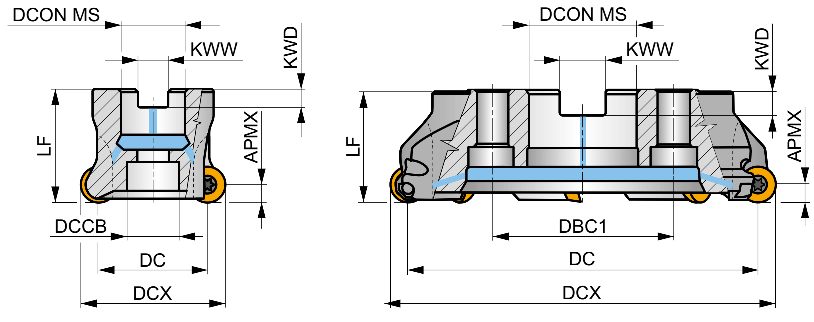
S

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





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			
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	–

ISO 6462 DIN 8030

GI280	RCMT 1606MO..

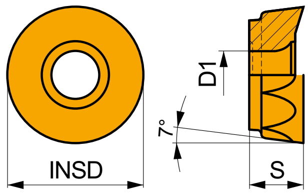
		Nm							
C0030	US 65014-T20P	5.0	M 5	14	SDR T20P-T	HS 1230C	–	–	–
C0031	US 65014-T20P	5.0	M 5	14	SDR T20P-T	–	–	–	–
C0032	US 65014-T20P	5.0	M 5	14	SDR T20P-T	HSD 2040	–	–	–
C0033	US 65014-T20P	5.0	M 5	14	SDR T20P-T	HS 1030C	–	–	–
C0034	US 65014-T20P	5.0	M 5	14	SDR T20P-T	HS 1240C	CAC 160C	HSD 0825C	HXK 5

AC002	KS 1635	K.FMH32

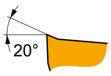
RCMT 16

PRAMET

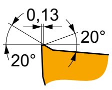
	INSD [mm]	D1 [mm]	S [mm]
1606	16.0	5.50	6.35



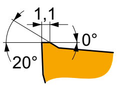
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

F geometry with highly positive design for light machining.

M geometry with highly positive design for medium machining.

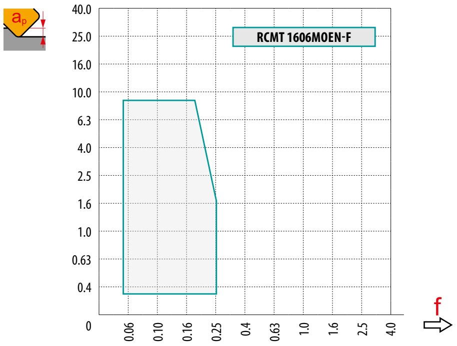



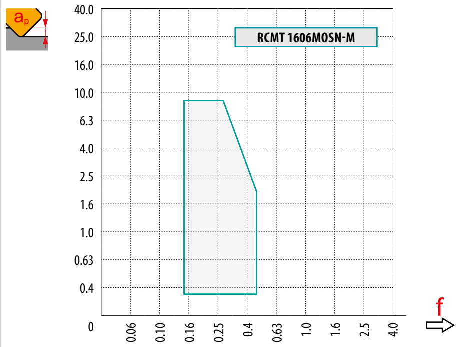
R geometry with positive design for rough copy machining.

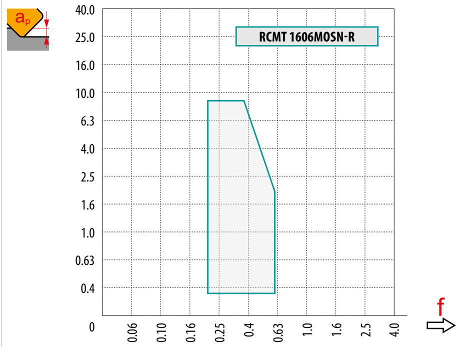
Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
RCMT 1606MOEN-F	**M8310**	–	■	410	0.10	2.0	◩	205	0.09	2.0		–	–	–		–	–	–		–	–	–		–	–	–
	M8330	–	■	370	0.10	2.0	■	220	0.09	2.0		–	–	–		–	–	–	◩	90	0.07	1.6		–	–	–
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		–	–	–
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	–	–	–







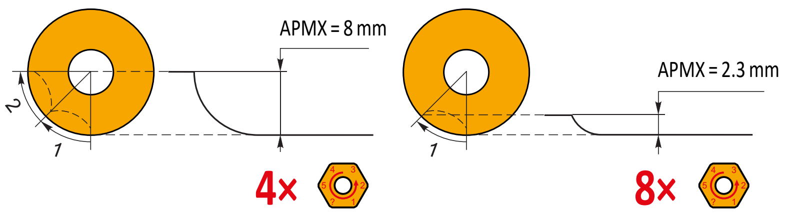
DCX	a_p	0.00	0.30	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00	6.00	7.00	8.00
63	DEF	47.0	51.3	52.6	53.8	54.7	55.6	56.3	57.6	58.6	59.5	60.9	61.8	62.5	62.9	63.0
66		50.0	54.3	55.6	56.8	57.8	58.6	59.3	60.6	61.6	62.5	63.9	64.8	65.5	65.9	66.0
80		64.0	68.3	69.6	70.8	71.7	72.6	73.3	74.6	75.6	76.5	77.9	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
	1 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/l
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

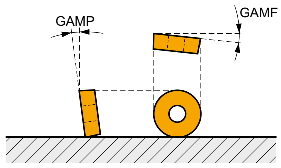
PRAMET

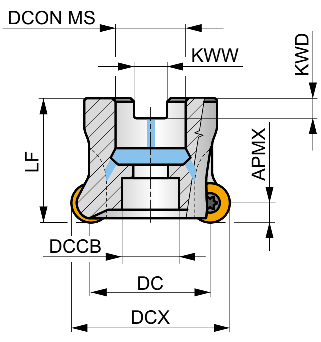
S

Copy Milling Cutter for Round Inserts RCMT 20 with Internal Coolant

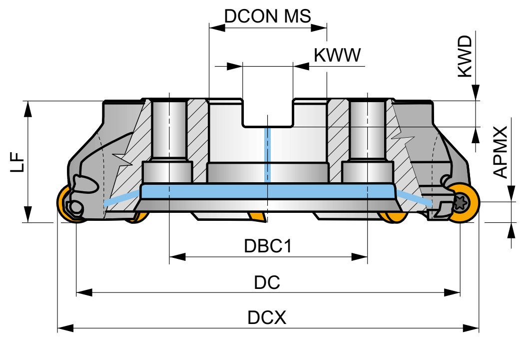
Milling cutter for heavy copy milling utilising positive RCMT 16 inserts with APMX of 10 mm. Internal coolant. Suitable for face, helical interpolation, ramping, progressive plunge and high-feed milling. Available in arbor style in range Ø80 up to Ø160 mm. Body treated for longer tool life.

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			
80A04R-SMORC20-C	80	60	27	28	–	50	12.4	7	-2.7	-7	4	–	8500	✓	0.96	GI281	C0040	–
100A05R-SMORC20-C	100	80	32	45	–	50	14.4	8	-1.7	-7	5	–	7600	✓	1.26	GI281	C0041	AC002
125A06R-SMORC20-C	125	105	40	36	–	63	16.4	9	-1	-7	6	–	6500	✓	2.96	GI281	C0042	–
160C07R-SMORC20-C	160	140	40	–	66.7	63	16.4	9	-0.9	-7	7	–	5400	✓	5.44	GI281	C0046	–

ISO 6462 DIN 8030

GI281	RCMT 2006MO..

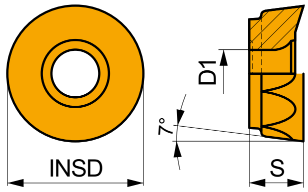
		Nm							
C0040	US 66015-T25P	7.5	M 6	15	SDR T25P-T	HS 1230C	–	–	–
C0041	US 66015-T25P	7.5	M 6	15	SDR T25P-T	–	–	–	–
C0042	US 66015-T25P	7.5	M 6	15	SDR T25P-T	HSD 2040	–	–	–
C0046	US 66015-T25P	7.5	M 6	15	SDR T25P-T	HS 1240C	CAC 160C	HSD 0825C	HXK 5

AC002	KS 1635	K.FMH32

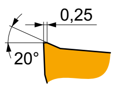
RCMT 20

PRAMET

	INSD [mm]	D1 [mm]	S [mm]
2006	20.0	6.50	6.35

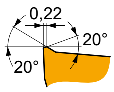


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.



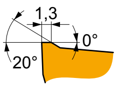
F geometry with highly positive design for light machining.

Product	Grade	RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
RCMT 2006MOSN-F	M8330	–	■	320	0.15	3.0	◪	190	0.14	3.0		–	–	–		–	–	–	◪	80	0.11	2.4		–	–	–



M geometry with highly positive design for medium machining.

Product	Grade	RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
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		–	–	–

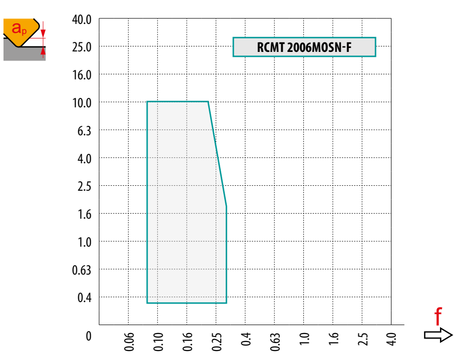


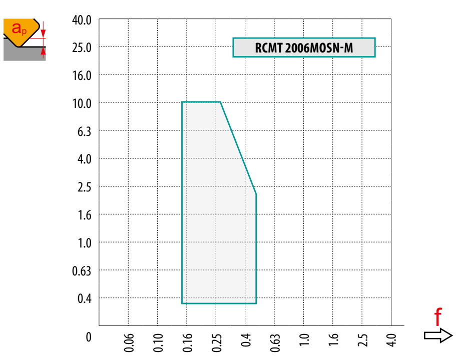
R geometry with positive design for rough copy machining.

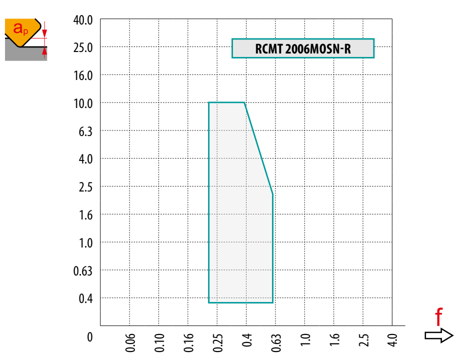
Product	Grade	RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
RCMT 2006MOSN-R	M8330	–	■	225	0.45	3.0		–	–	–	■	210	0.45	3.0		–	–	–	◪	55	0.32	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
	1 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

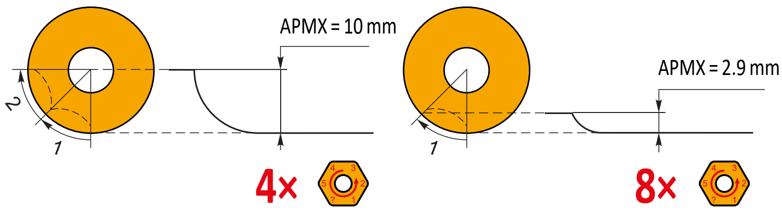
DCX	RPMX	APMX/l
80	7.0	10.0/83
100	5.0	8.6/100

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

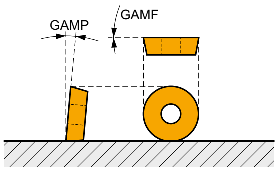
PRAMET

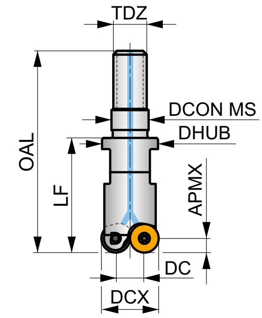
S

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		
10E2R020M06-SRD05-CF	10	5	9.8	35	20	6.5	M6	5	3	2	–	89300	✓	0.01	GI117	C0352
12E3R020M06-SRD05-CF	12	7	10	35	20	6.5	M6	0	3	3	–	81500	✓	0.01	GI117	C0352
15E4R020M08-SRD05-CF	15	10	13.5	38	20	8.5	M8	0	3	4	–	72900	✓	0.02	GI117	C0352

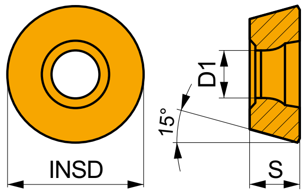
MODULAR

GI117	RD.. 0501MO..

		Nm			
C0352	US 62003B-T06P	0.9	M 2	3	Flag T06P

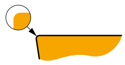
RDHX 05

	INSD [mm]	D1 [mm]	S [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 [mm]	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]
RDHX 0501MOE	**M8310**	–	◪	400	0.10	0.5		–	–	–	■	380	0.10	0.5		–	–	–		–	–	–	■	80	0.15	1.0

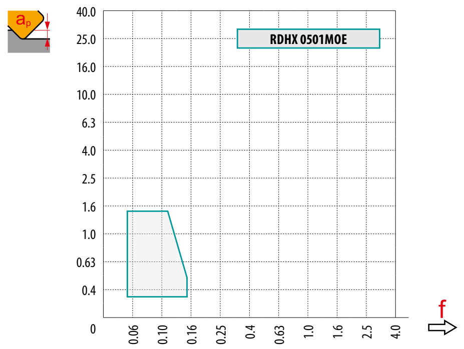


HFC E

Zero rake angle 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 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
	1 f	–	0.25	0.19	0.16	0.14	0.13	0.12	0.10	0.09

DCX	RPMX	APMX/l
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

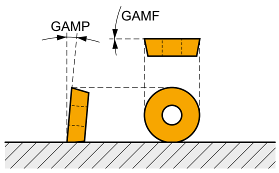
PRAMET

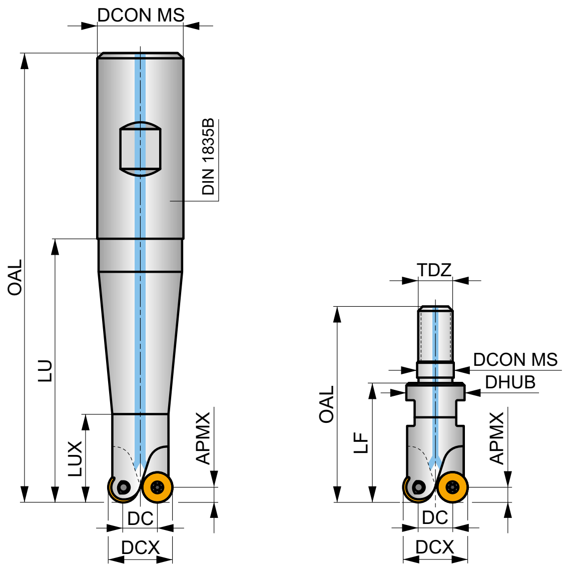
S

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

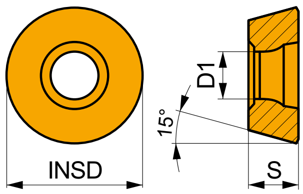
GI118	RD.. 0702MO..

		Nm			
C0354	US 42505-T07P	1.2	M 2.5	5	Flag T07P

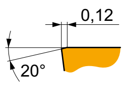
RDHX 07

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.

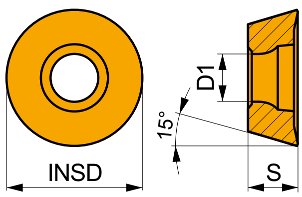
Zero rake angle design for finish machining.

Product	Grade	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]
RDHX 0702M0T	**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 07T1M0T	**M8310**	–	◩ 360	0.15	0.5	–	–	–	■ 340	0.15	0.5	–	–	–	–	–	–	■ 70	0.15	1.0
	M8325	–	◩ 275	0.15	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

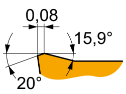
RDGT 07

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.

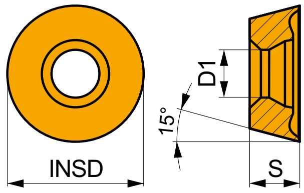
Positive design for finish machining.

Product	Grade	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 0702M0T	**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	–	–	–

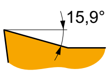
PRAMET

RDHT 07-FA

	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.



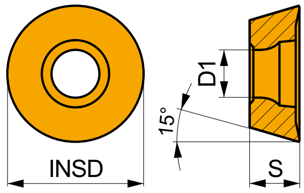
FA geometry with highly positive design for fine-finish to medium machining.

Product	Grade	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 0702M0-FA	**HF7**	–	–	–	–	–	–	–	–	–	–	■ 420	0.18	0.5	–	–	–	–	–	–

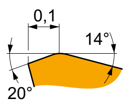
PRAMET

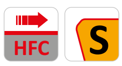
RDMT 07

	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.



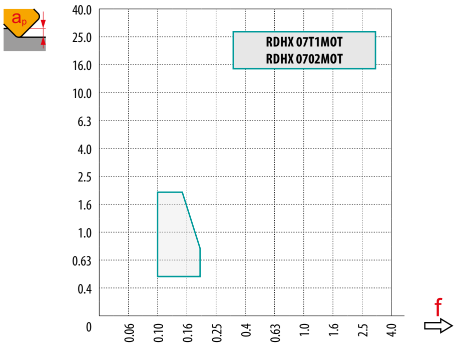


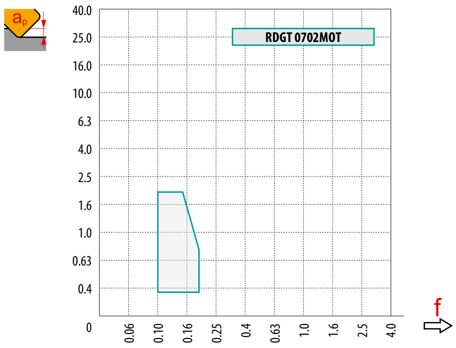
Positive design for finish machining.

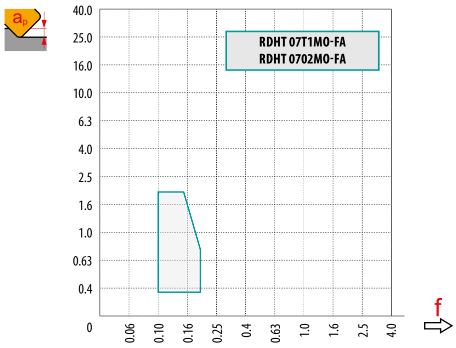
Product	Grade	RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
RDMT 0702MOT	**M8325**	–	■ 305	0.15	0.5	◪ 145	0.14	0.5	–	–	–	–	–	–	–	–	–	–	–	–

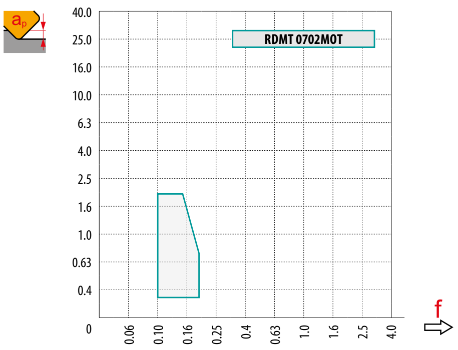
ae/DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
x.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	RDHX 07	RDGT 07	RDHT 07-FA
RE	3.5	3.5	3.5
BS	–	–	–









DCX	ap	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	DEF	13.0	15.8	16.6	17.3	17.9	18.4	18.7	19.3	19.7	19.9	20.0
25	DEF	18.0	20.8	21.6	22.3	22.9	23.4	23.7	24.3	24.7	24.9	25.0
	ap	**0.00**	**0.30**	**0.50**	**0.75**	**1.00**	**1.25**	**1.50**	**2.00**	**2.50**	**3.00**	**3.50**
	1 f	–	0.29	0.23	0.19	0.16	0.15	0.13	0.12	0.11	0.10	0.09

DCX	RPMX	APMX/l
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

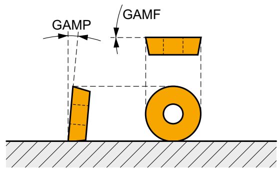
PRAMET

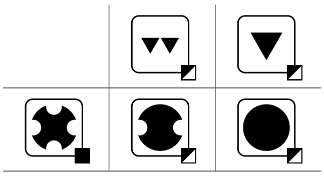
S

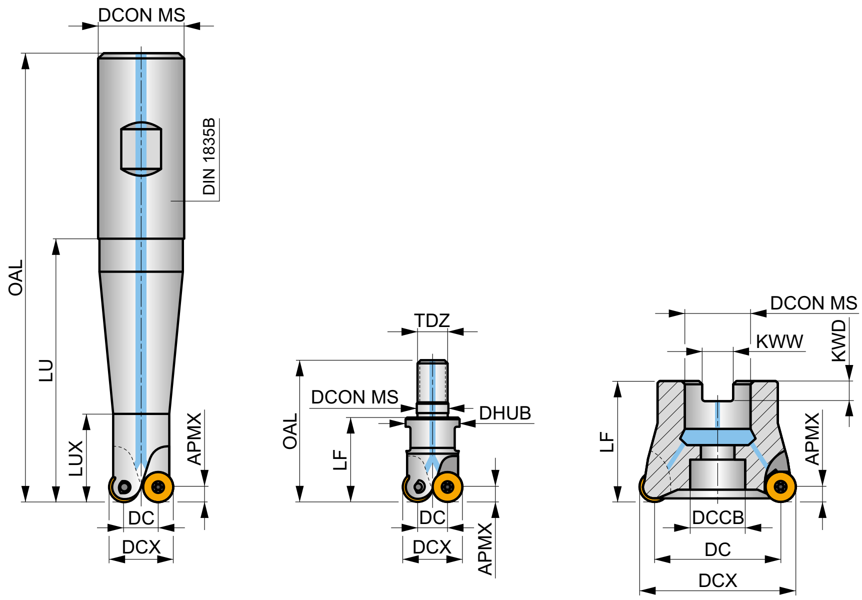
Copy Milling Cutter for Round Inserts RD.. 10 with Internal Coolant

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

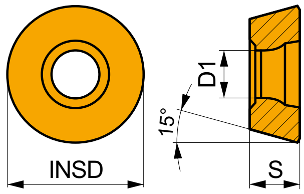
Product	DCX [mm]	DC [mm]	OAL [mm]	DCON MS [mm]	DHUB [mm]	DCCB [mm]	LU [mm]	LUX [mm]	LF [mm]	TDZ	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg		
DIN 1835B 20E2R040B20-SRD10-CF	20	10	90	20	–	–	40	20	–	–	–	–	-2	0	2	–	30800	✓	0.17	GI119	C0356
20E2R060B20-SRD10-CF	20	10	110	20	–	–	60	22	–	–	–	–	-2	0	2	–	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

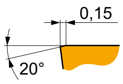
RDHX 10

	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.

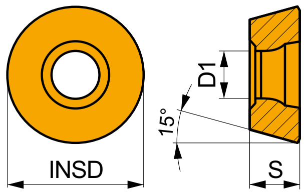
Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
RDHX 1003MOT	**M4303**	–	◩	340	0.15	1.0		–	–	–	■	320	0.15	1.0		–	–	–		–	–	–	■	65	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		–	–	–		–	–	–		–	–	–		–	–	–		–	–	–



Zero rake angle design for finish machining.

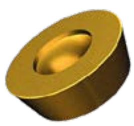
RDMX 10

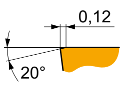
	INSD [mm]	D1 [mm]	S [mm]
1003	10.0	3.90	3.18



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]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
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		–	–	–		–	–	–		–	–	–		–	–	–		–	–	–

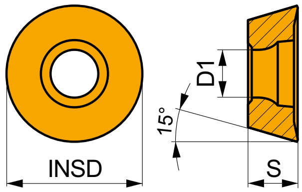




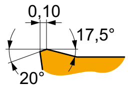
Zero rake angle design for finish machining.

RDGT 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.

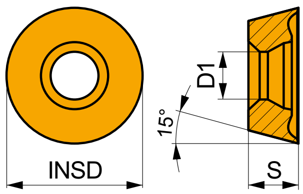



Positive design for finish machining.

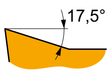
Product	Grade	RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
RDGT 1003M0T	**M6330**	–	■ 290	0.15	1.0	■ 205	0.14	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

	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.

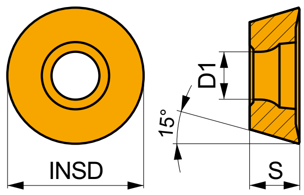
FA geometry with highly positive design for fine-finish to medium machining.

Product	Grade	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 1003M0-FA	**HF7**	–	–	–	–	–	–	–	–	–	–	■ 390	0.18	1.0	–	–	–	–	–	–

RDMT 10

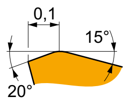
PRAMET

	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				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]
RDMT 1003M0T	M8325	–	■	280	0.15	1.0	◩	130	0.14	1.0		–	–	–		–	–	–		–	–	–		–	–	–
	M8345	–	■	250	0.15	1.0	◩	150	0.14	1.0		–	–	–		–	–	–		–	–	–		–	–	–

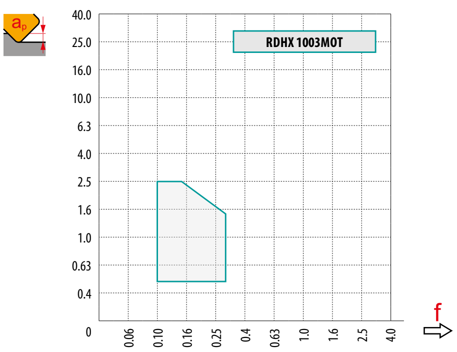


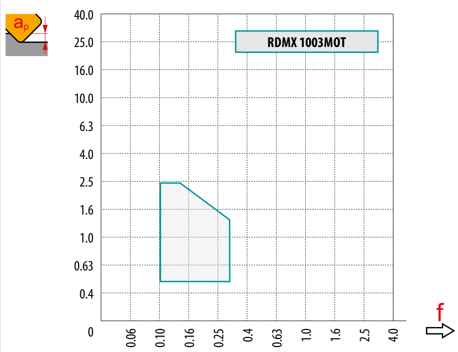
HFC S

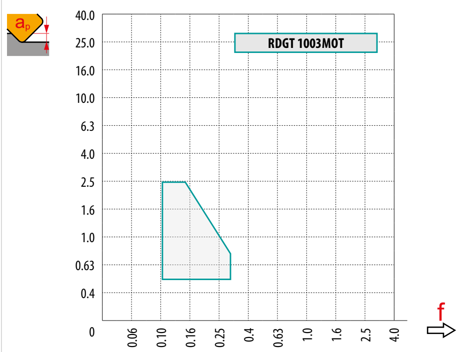
Positive design for finish machining.

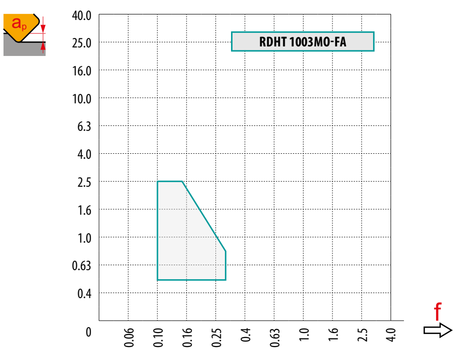
a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

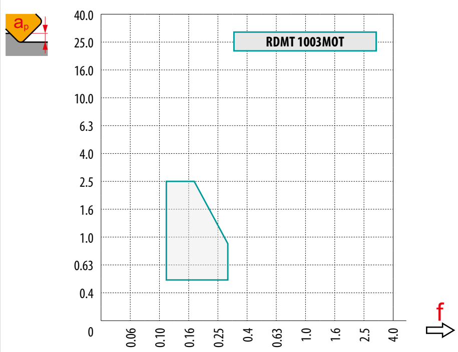
	RDHX 10	RDMX 10	RDGT 10	RDHT 10-FA
RE	5.0	5.0	5.0	5.0
BS	–	–	–	–











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
	1 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/l
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

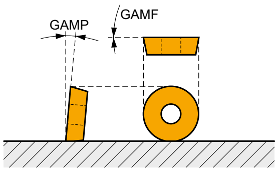
P M K N S H

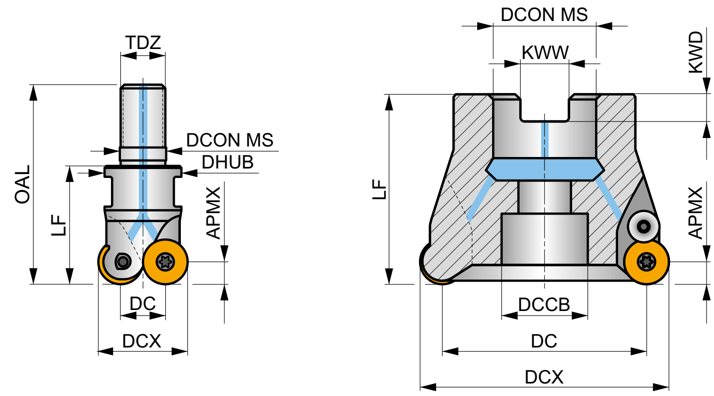
PRAMET S(C)

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-SCMORD12-CF	50	38	–	22	–	18	50	–	10.4	10.4	2	7	5	–	15200	✓	0.29	GI120	C0366
	52A05R-SCMORD12-CF	52	40	–	22	–	18	50	–	10.4	10.4	2	7	5	–	14900	✓	0.32	GI120	C0366
	66A06R-SCMORD12-CF	66	54	–	27	–	22	50	–	12.4	12.4	2	7	6	–	13200	✓	0.54	GI120	C0370
	80A07R-SCMORD12-CF	80	68	–	27	–	38	52	–	12.4	12.4	2	7	7	–	12000	✓	0.89	GI120	C0372

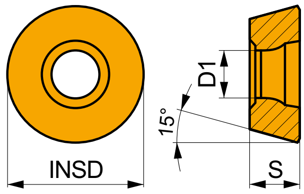
GI120	RD.. 12T3MOT	RDHT 12T3MO-FA

		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

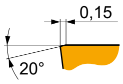
PRAMET

	INSD [mm]	D1 [mm]	S [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 [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]
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	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

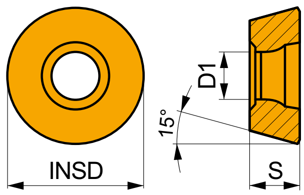


Zero rake angle design for finish machining.

RDMX 12

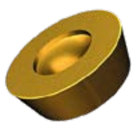
PRAMET

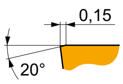
	INSD [mm]	D1 [mm]	S [mm]
12T3	12.0	3.90	3.97



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 [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]
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	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–



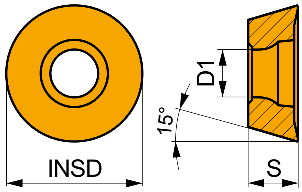


Zero rake angle design for finish machining.

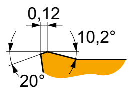
RDGT 12

PRAMET

	INSD [mm]	D1 [mm]	S [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.



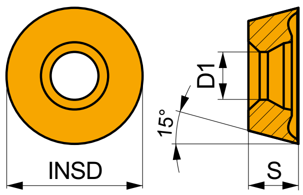
Positive design for finish machining.

Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
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		–	–	–

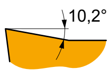
RDHT 12-FA

PRAMET

	INSD [mm]	D1 [mm]	S [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.



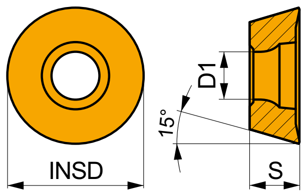
FA geometry with highly positive design for fine-finish to medium machining.

Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
RDHT 12T3M0-FA	**HF7**	–		–	–	–		–	–	–		–	–	–	■	360	0.24	1.5		–	–	–		–	–	–

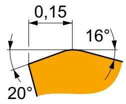
RDMT 12

PRAMET

	INSD [mm]	D1 [mm]	S [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.



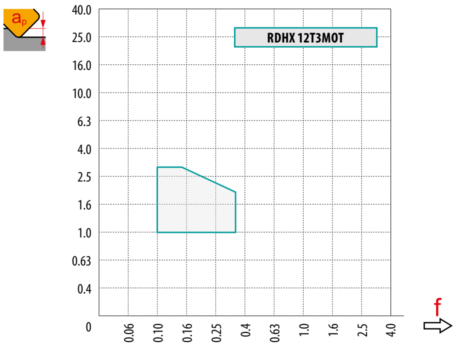
HFC S

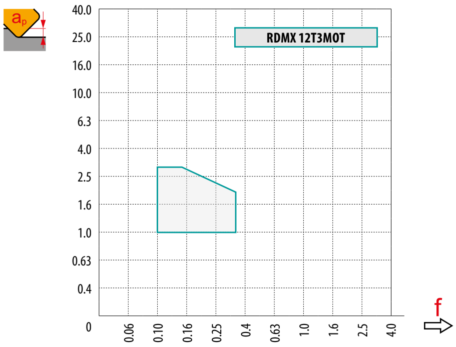
Positive design for finish machining.

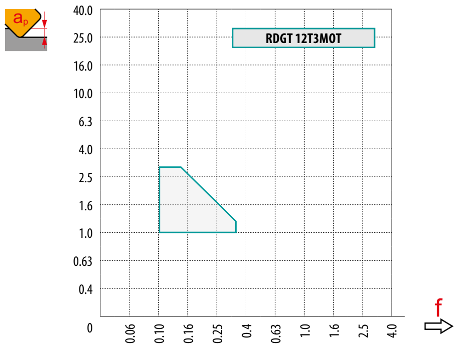
Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
RDMT 12T3MOT	**M8325**	–	■	250	0.20	1.5	◩	120	0.18	1.5		–	–	–		–	–	–		–	–	–		–	–	–
	M8345	–	■	225	0.20	1.5	◩	135	0.18	1.5		–	–	–		–	–	–		–	–	–		–	–	–

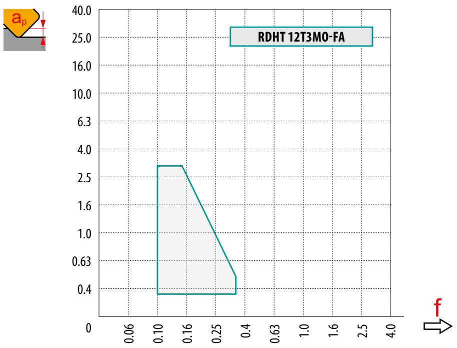
a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

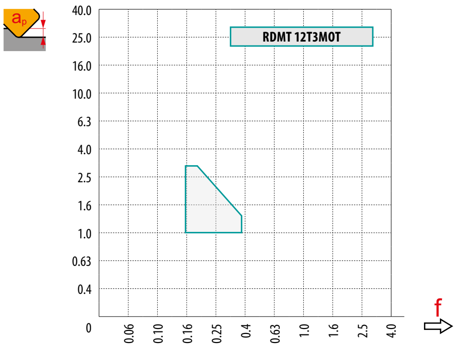
	RDHX 12	RDMX 12	RDGT 12	RDHT 12-FA
RE	6.0	6.0	6.0	6.0
a_p	–	–	–	–











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	DEF	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		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
	1 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

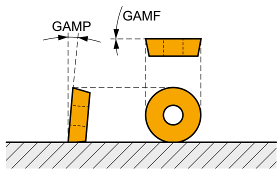
P M K N S H

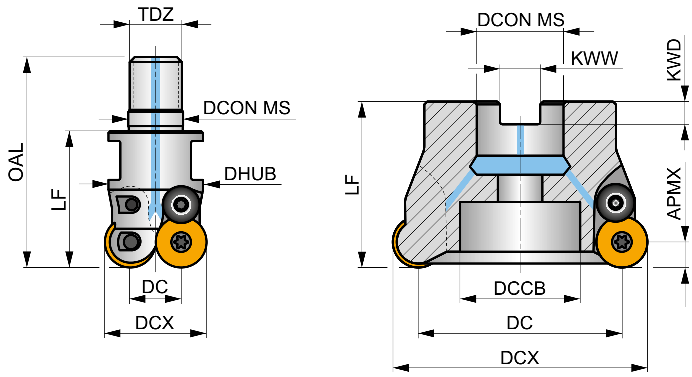
PRAMET S(C)

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
ISO 6462 DIN 8030	52A04R-SCMORD16-CF	52	36	–	22	–	16.5	50	–	10.4	10.4	0	7	4	–	9900	✓	0.28	GI121	C0376
	66A05R-SCMORD16-CF	66	50	–	27	–	22	50	–	12.4	12.4	0	7	5	–	8800	✓	0.61	GI121	C0378
	80A06R-SCMORD16-CF	80	64	–	27	–	38	52	–	12.4	12.4	0	7	6	–	8000	✓	0.75	GI121	C0380
	100A07R-SCMORD16-CF	100	84	–	32	–	45	52	–	14.4	14.4	0	7	7	–	7100	✓	1.41	GI121	C0380

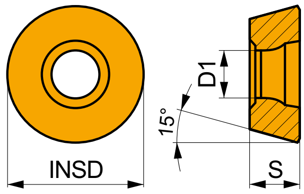
GI121	RD.. 1604MOT	RDHT 1604MO-FA

		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	–

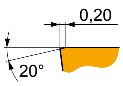
PRAMET

RDHX 16

	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.



HFC T

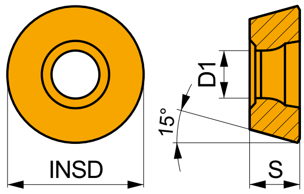
Zero rake angle design for finish machining.

Product	Grade	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]
RDHX 1604MOT	**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

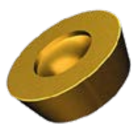
PRAMET

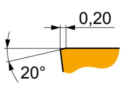
RDMX 16

	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.





HFC T

Zero rake angle design for finish machining.

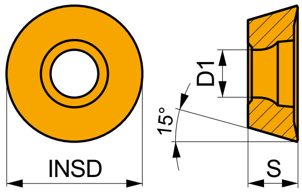
Product	Grade	RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
RDMX 1604MOT	**M8310**	–	◩ 255	0.30	2.0	–	–	–	■ 240	0.30	2.0	–	–	–	–	–	–	■ 50	0.15	1.0
	M8325	–	◩ 195	0.30	2.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	M8345	–	◩ 180	0.30	2.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

⏮

RDGT 16

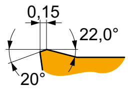
PRAMET

	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	Grade	RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
RDGT 1604MOT	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		–	–	–

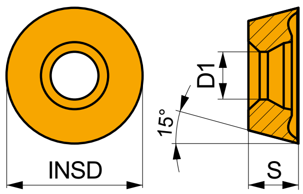


Positive design for finish machining.

RDHT 16-FA

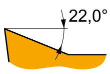
PRAMET

	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	Grade	RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
RDHT 1604MO-FA	HF7	–		–	–	–		–	–	–		–	–	–	■	315	0.36	2.0		–	–	–		–	–	–

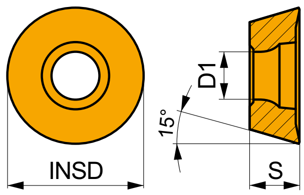


FA geometry with highly positive design for fine-finish to medium machining.

RDMT 16

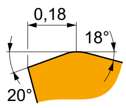
PRAMET

	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				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]
RDMT 1604M0T	**M8325**	–	■	220	0.30	2.0	◩	105	0.27	2.0		–	–	–		–	–	–		–	–	–		–	–	–
	M8345	–	■	200	0.30	2.0	◩	120	0.27	2.0		–	–	–		–	–	–		–	–	–		–	–	–

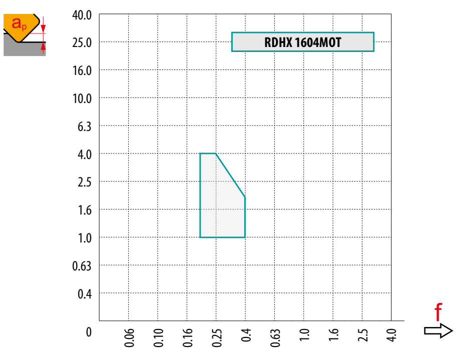


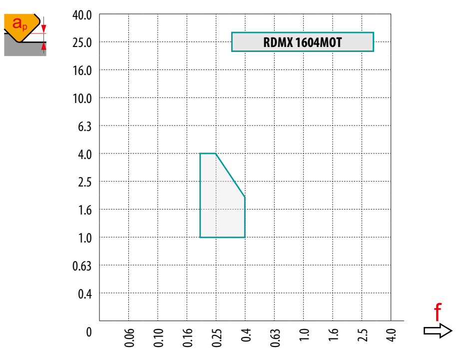
HFC S

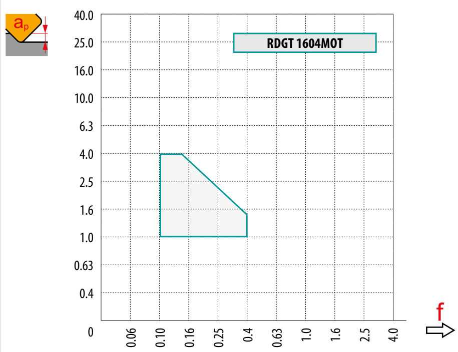
Positive design for finish machining.

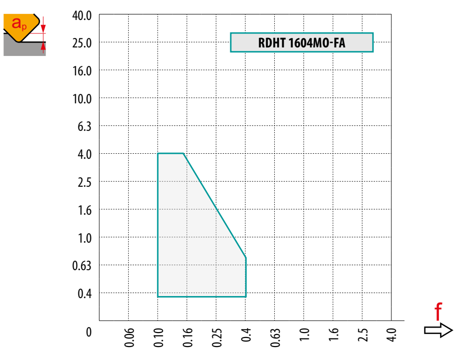
a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

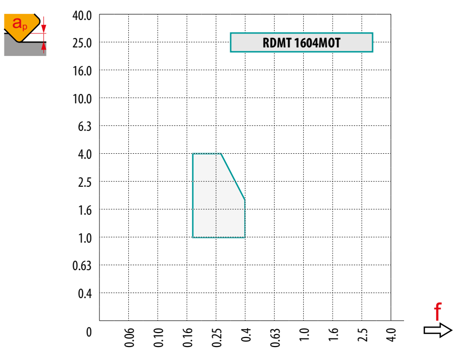
	RDHX 16	RDMX 16	RDGT 16	RDHT 16-FA
RE	8.0	8.0	8.0	8.0
BS	–	–	–	–











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/l
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

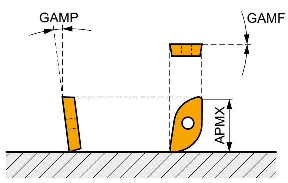
PRAMET

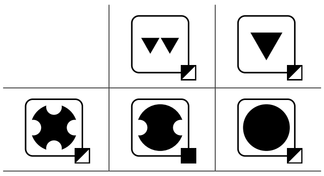
S

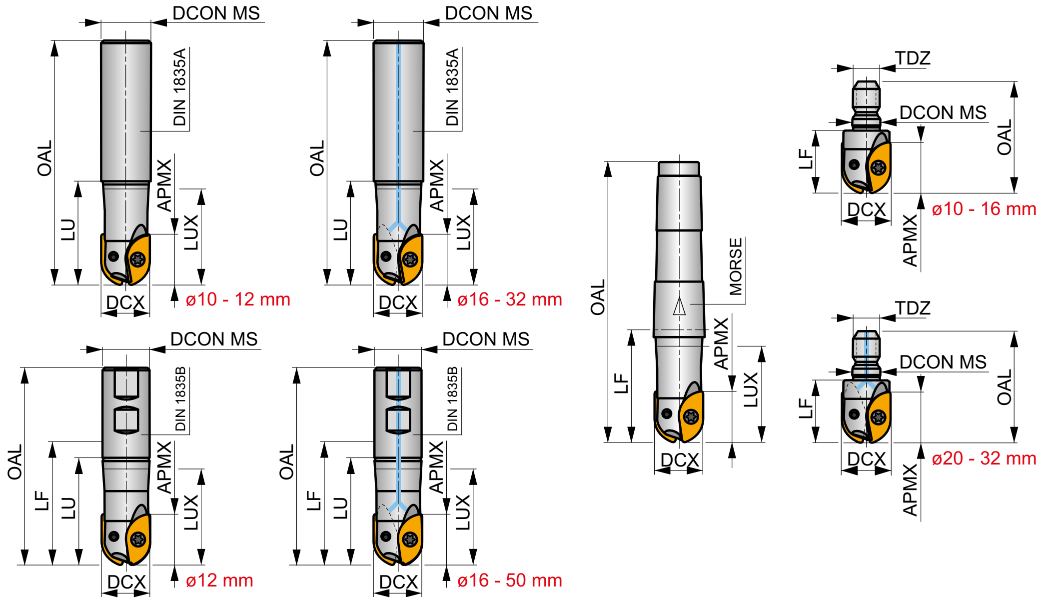
Ball nose Profile Milling Cutter for ZP.. Inserts

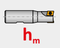
Ball nose milling cutter utilising ZP.. style inserts with APMX from 8.9 up to 44.7 mm. Suitable for profile milling. Available in cylindrical, Weldon, Morse taper and modular style, in range Ø10 up to Ø50 mm. Body treated for longer tool life.

APMX	8.9 - 44.7 mm









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		
DIN 1835A	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
	16L2R045A20-SZP16-C	16	200	20	–	29.4	–	–	–	–	0	-10	2	–	20000	✓	1.48	GI256	C0512
	20L2R050A20-SZP20-C	20	250	20	50	–	–	–	–	–	0	-10	2	–	24000	✓	0.56	GI254	C0513
	20L2R055A25-SZP20-C	20	200	25	–	36.1	–	–	–	–	0	-10	2	–	24000	✓	0.68	GI254	C0513
	20L2R055A32-SZP20-C	20	250	32	–	34.5	–	–	–	–	0	-10	2	–	24000	✓	1.34	GI254	C0513
	25L2R060A25-SZP25-C	25	250	25	60	–	–	–	–	–	0	-10	2	–	24000	✓	0.86	GI257	C0514
	25L2R065A32-SZP25-C	25	250	32	–	43	–	–	–	–	0	-10	2	–	24000	✓	1.34	GI257	C0514
	32L2R070A32-SZP32-C	32	250	32	–	–	–	–	–	–	0	-10	2	–	18500	✓	1.43	GI258	C0515
DIN 1835B	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
	25L2R060B25-SZP25-C	25	117	25	60	–	85.5	–	–	–	0	-10	2	–	24000	✓	0.36	GI257	C0514
	25L2R080B25-SZP25-C	25	137	25	80	–	105	–	–	–	0	-10	2	–	24000	✓	0.43	GI257	C0514
	32L2R070B32-SZP32-C	32	131	32	70	–	95.5	–	–	–	0	-10	2	–	18500	✓	0.72	GI258	C0515
	32L2R100B32-SZP32-C	32	161	32	100	–	125.5	–	–	–	0	-10	2	–	18500	✓	0.85	GI258	C0515
	40L2R070B32-SZP40-C	40	131	32	70	–	95.5	–	–	–	0	-10	2	–	8000	✓	0.81	GI259	C0516
	40L2R100B40-SZP40-C	40	171	40	100	–	131	–	–	–	0	-10	2	–	8000	✓	1.40	GI259	C0516
	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
	12L2R040E02-SZP12	12	104	–	–	22.5	40	–	2	–	0	-10	2	–	21000	–	0.14	GI253	C0511

	Product	DCX	OAL	DCON MS	LU	LUX	LF	TDZ	CZC MS	APMX	GAMF	GAMP			max.		kg		
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]			[mm]	[°]	[°]							
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

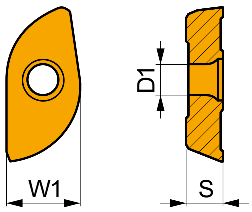
GI253	ZP 12..
GI254	ZP 20..
GI255	ZP 10..
GI256	ZP 16..
GI257	ZP 25..
GI258	ZP 32..
GI259	ZP 40..
GI260	ZP 50..

					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

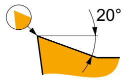
PRAMET

ZP

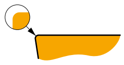
	W1 [mm]	D1 [mm]	S [mm]
10	10.000	2.20	1.70
12	12.000	2.90	2.38
16	16.000	2.90	3.18
20	20.000	4.00	3.97
25	25.000	4.70	4.76
32	32.000	5.90	6.35
40	40.000	7.00	7.94
50	50.000	9.60	7.94



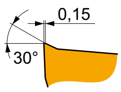
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

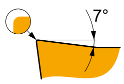
F geometry with highly positive design for light machining.

FM geometry with sharp neutral design for light to medium machining.

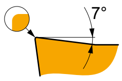
M geometry with very positive design for medium machining.

R geometry with sharp slightly positive design for light to medium machining.

Product	Grade	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]
ZP 20ER-F	M8310	–	◩ 305	0.27	1.0	◩ 155	0.24	1.0	–	–	–	–	–	–	–	–	–	–	–	–
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	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
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	–	–	–
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.



R geometry with sharp slightly positive design for light to medium machining.

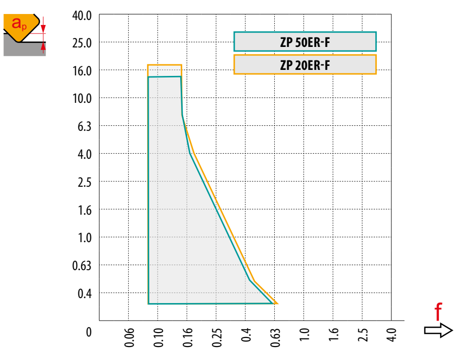
Product		RE	P				M				K				N				S				H			
		[mm]		vc [m/min]	f [mm/tooth]	ap [mm]		vc [m/min]	f [mm/tooth]	ap [mm]		vc [m/min]	f [mm/tooth]	ap [mm]		vc [m/min]	f [mm/tooth]	ap [mm]		vc [m/min]	f [mm/tooth]	ap [mm]		vc [m/min]	f [mm/tooth]	ap [mm]
ZP 25ER-R	**M8345**	–	■	180	0.45	1.3	■	105	0.41	1.3		–	–	–		–	–	–	◩	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		–	–	–

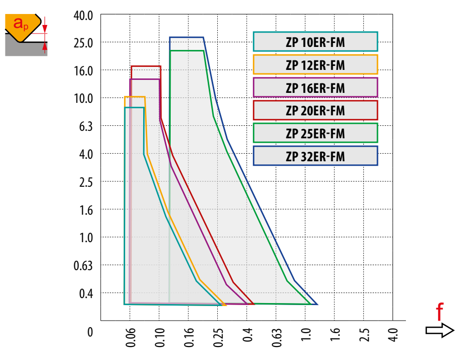
a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

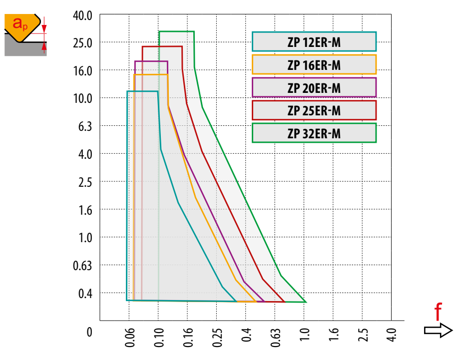
	ZP 20-F	ZP 50-F	ZP 10-FM	ZP 12-FM	ZP 16-FM	ZP 20-FM	ZP 25-FM	ZP 32-FM
RE	10.0	25.0	5.0	6.0	8.0	10.0	12.5	16.0
BS	–	–	–	–	–	–	–	–

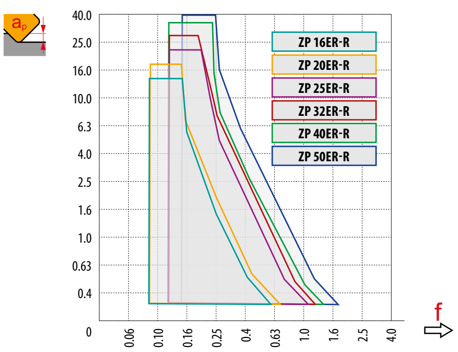
	ZP 12-M	ZP 16-M	ZP 20-M	ZP 25-M	ZP 32-M
RE	6.0	8.0	10.0	12.5	16.0
BS	–	–	–	–	–

	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	–	–	–	–	–	–

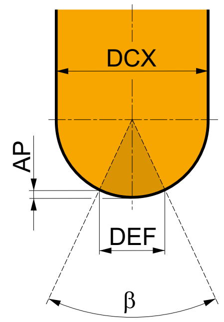








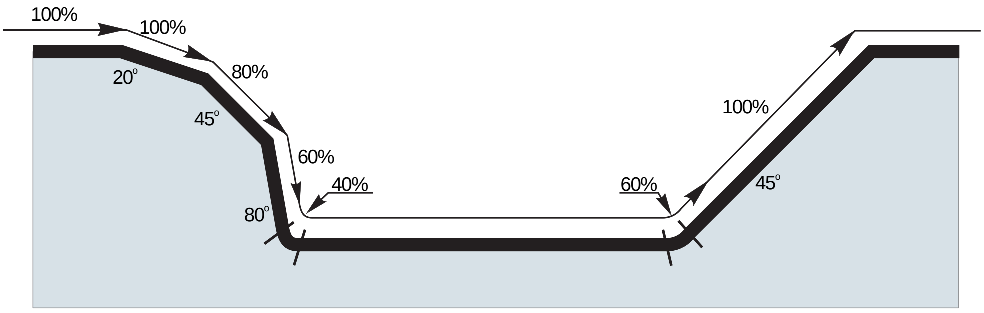
DCX	a_p	0.30	0.40	0.50	0.70	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00	6.00	8.00	10.00	12.00	15.00	16.00	20.00	22.50	25.00
10		3.4	3.9	4.4	5.1	6.0	6.6	7.1	8.0	8.7	9.2	9.8	10.0	–	–	–	–	–	–	–	–	–
12		3.7	4.3	4.8	5.6	6.6	7.3	7.9	8.9	9.7	10.4	11.3	11.8	12.0	–	–	–	–	–	–	–	–
16		4.3	5.0	5.6	6.5	7.7	8.6	9.3	10.6	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

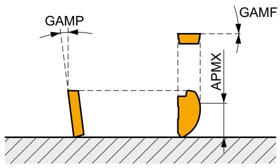
C

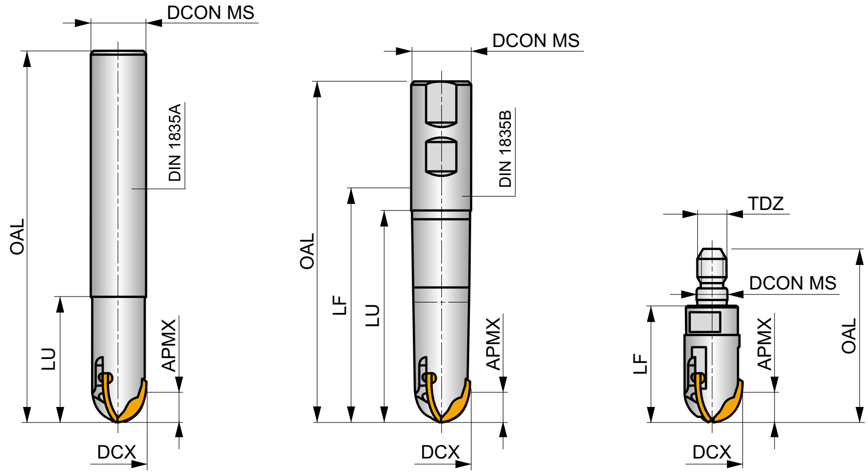
MULTISIDE XP Profile Milling Cutter

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		
DIN 1835A	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
	20K3R050A20-CXP20	20	200	20	50	–	–	–	10.00	0	-5	3	–	20000	–	0.53	GI268	C0521
	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
DIN 1835B	16K3R060B20-CXP16	16	111	20	60	–	86.5	–	8.00	0	-5	3	–	22600	–	0.24	GI267	C0520
	20K3R070B25-CXP20	20	127	25	70	–	95.5	–	10.00	0	-5	3	–	20000	–	0.41	GI268	C0521
	25K3R080B25-CXP25	25	137	25	80	–	105	–	12.50	0	-5	3	–	20000	–	0.49	GI269	C0522
MODULAR	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
	20K3R040M10-CXP20	20	–	10.5	–	–	40	M10	10.00	0	-5	3	–	–	–	0.07	GI268	C0521
	25K3R045M12-CXP25	25	–	12.5	–	–	45	M12	12.50	0	-5	3	–	–	–	0.16	GI269	C0522
	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..

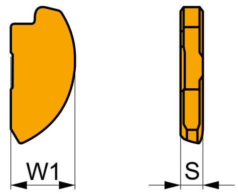
		Nm			
C0520	US 63009-T09P	1.2	M 3	9	Flag T09P
C0521	US 63513-T15P	3.0	M 3.5	12	Flag T15P

		Nm			
C0522	US 64014-T15P	3.5	M 4	14	Flag T15P
C0523	US 65017-T20P	5.0	M 5	17	Flag T20P

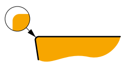
XP

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.

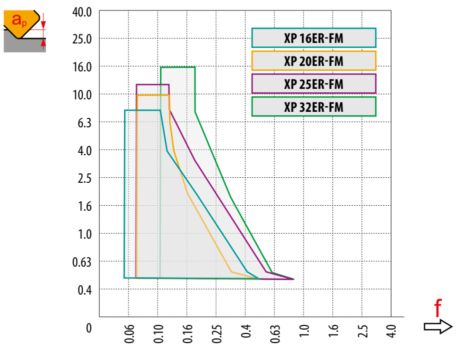


U E

FM geometry with neutral design for light machining.

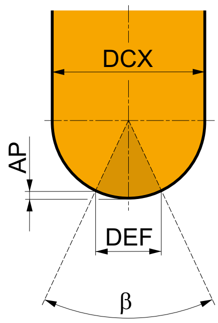
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
XP 16ER-FM	**M8310**	–	■ 285	0.27	0.8	◩ 145	0.24	0.8	■ 270	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	–	–	–	–

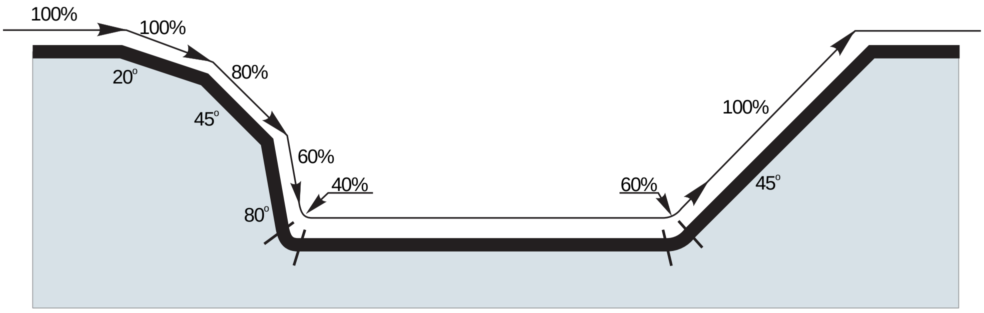
Effective area for 1 tool cutting edge.



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

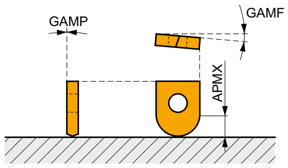
P M K H

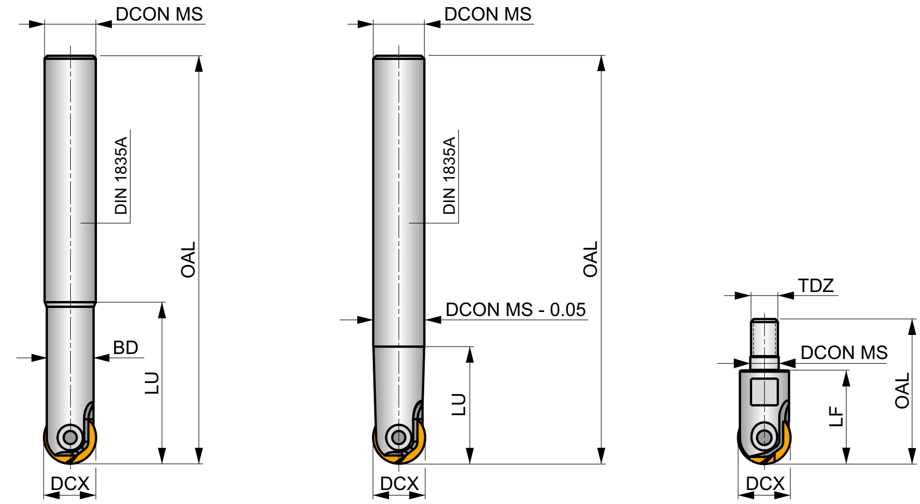
PRAMET S

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	–	–	–	–

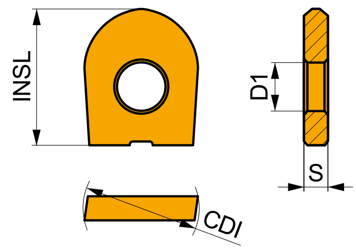
GI036	RC 32	RC 32-F	–	–	–	–
GI123	RC 08	RC 08-F	–	–	–	–
GI124	RC 10	RC 10-F	–	–	–	–
GI125	RC 12	RC 12-F	–	–	–	–

		Nm						
CO530	CS 3007-T08P	1.2	M 3	7	–	–	–	Flag T08P
CO531	CS 4008-T15P	3.0	M 4	8	–	D-T08P/T15P	FG-15	–
CO532	CS 5009-T20P	5.0	M 5	9	SDR T20P	–	–	–
CO533	CS 5013-T20P	5.0	M 5	13	SDR T20P	–	–	–
CO534	CS 5015-T20P	5.0	M 5	15	SDR T20P	–	–	–
CO535	CS 6020-T20P	7.5	M 6	20	SDR T20P	–	–	–
CO536	CS 8025-T30P	15.0	M 8	25	SDR T30P	–	–	–

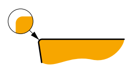
RC

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.



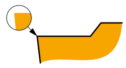
U E

Neutral face with a positive cutting edge design.

Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
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 [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
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

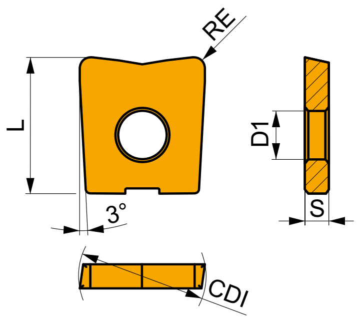


F geometry is sharp and suitable for finish machining.

LC

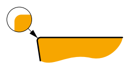
PRAMET

	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]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
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

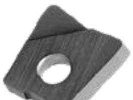


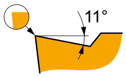
KP geometry with zero rake angle design for light to medium machining.

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 [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]
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

KP geometry with zero rake angle design for light to medium machining.



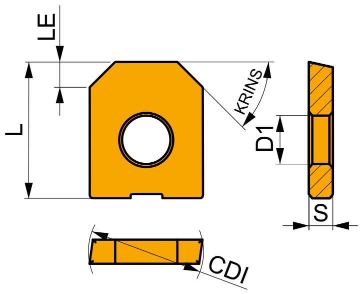


KPF geometry with positive design for light to medium machining.

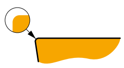
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
LC 0806-KPF	**M4310**	0.6	◩ 280	0.16	0.3	◩ 140	0.14	0.3	■ 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

	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.



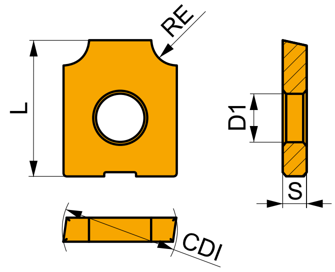
CH geometry with zero rake angle design for light to medium machining.

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]
LC 1245-CH	**M4310**	–	◩ 225	0.20	2.0	–	–	–	■ 210	0.20	2.0	–	–	–	–	–	–	■ 45	0.15	1.0

LC 12-RE

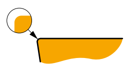
PRAMET

	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	Grade	RE [mm]	P	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H	H vc [m/min]	H f [mm/tooth]	H ap [mm]
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



U E

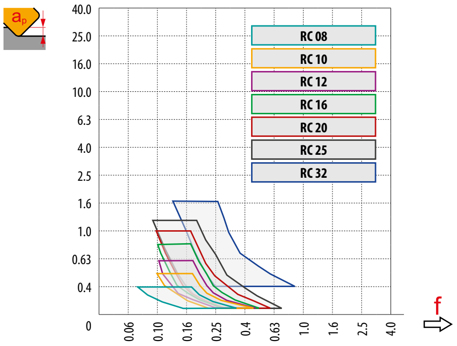
RE geometry with zero rake angle design for light to medium machining.

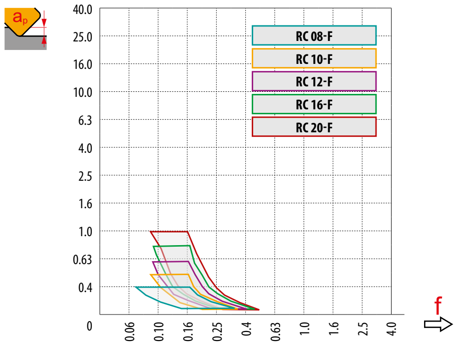
	RC 08	RC 10	RC 12	RC 16	RC 20	RC 25	RC 32
RE	4.0	5.0	6.0	8.0	10.0	12.5	16.0
BS	–	–	–	–	–	–	–

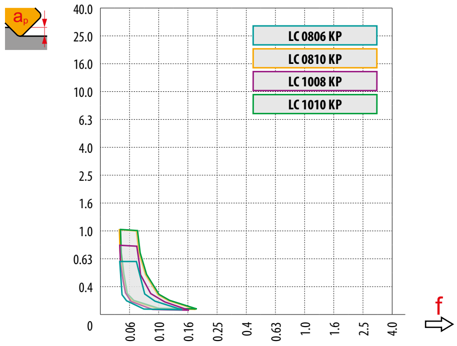
	RC 08-F	RC 10-F	RC 12-F	RC 16-F	RC 20-F
RE	4.0	5.0	6.0	8.0	10.0
BS	–	–	–	–	–

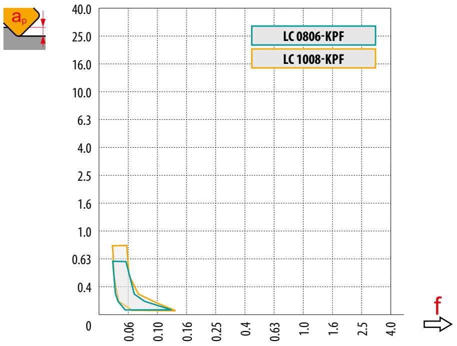
	LC 08-KP	LC 08-KP	LC 10-KP	LC 10-KP	LC 08-KPF	LC 10-KPF
RE	0.6	1.0	0.8	1.0	0.6	0.8
BS	–	–	–	–	–	–

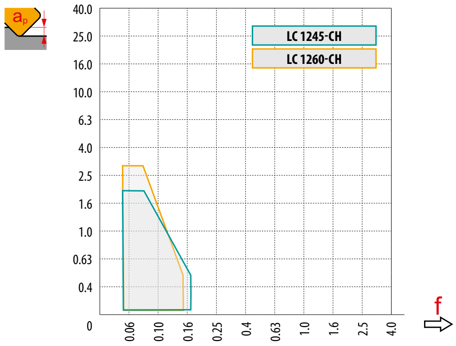
	LC 1245-CH	LC 1260-CH	LC 1210-RE	LC 1220-RE	LC 1230-RE
RE	3×45	5×60	1.0	2.0	3.0
BS	–	–	–	–	–

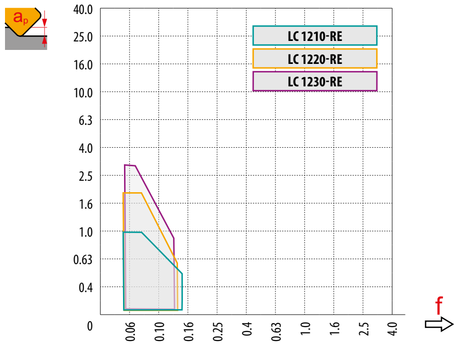








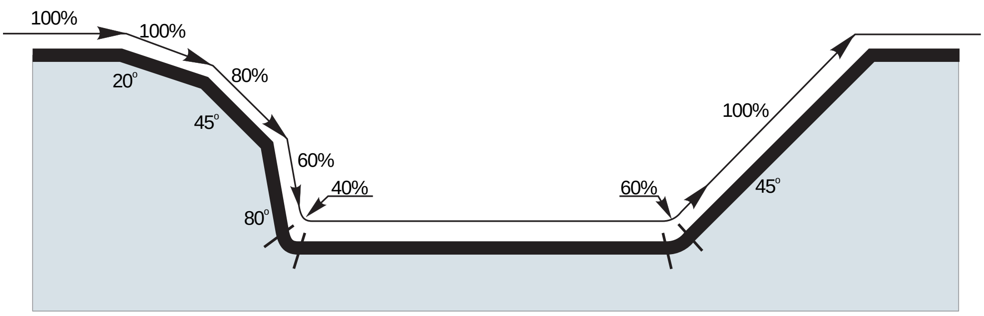




	DCX	a_p	0.3	0.4	0.5	0.7	1.0	1.25	1.5	2.0	2.5	3.0	4.0	5.0	6.0	8.0	10.0	12.0	15.0	16.0
RC 08 / RC 08-F	8		3.0	3.5	3.9	4.5	5.3	5.8	6.2	6.9	7.4	7.7	8.0	–	–	–	–	–	–	–
RC 10 / RC 10-F	10		3.4	3.9	4.4	5.1	6.0	6.6	7.1	8.0	8.7	9.2	9.8	10.0	–	–	–	–	–	–
RC 12 / RC 12-F	12		3.7	4.3	4.8	5.6	6.6	7.3	7.9	8.9	9.7	10.4	11.3	11.8	12.0	–	–	–	–	–
RC 16 / RC 16-F	16	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	–	–	–	–
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	FE	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	FE	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	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	**8**	0.6	6.8	7.8	7.9	8.0	8.0	–	–	–	–	–	–	–	–	–	–
LC 0806-KPF		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	**10**	0.8	8.4	9.6	9.8	9.9	9.9	10.0	10.0	–	–	–	–	–	–	–	–
LC 1008-KPF		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	**12**	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		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	**8**	0.6	3.0
LC 0806-KPF		0.6	2.8
LC 0810-KP		1.0	3.0
LC 1008-KP	**10**	0.8	3.8
LC 1008-KPF		0.8	3.6
LC 1010-KP		1.0	3.8
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	RPMX	APMX/l
LC 0806-KP	**8**	0.6	2.5	1.5/35
LC 0806-KPF		0.6	2.2	1.5/39
LC 0810-KP		1.0	2.4	1.5/36
LC 1008-KP	**10**	0.8	2.6	1.5/33
LC 1008-KPF		0.8	2.3	1.5/38
LC 1010-KP		1.0	2.6	1.5/33
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	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

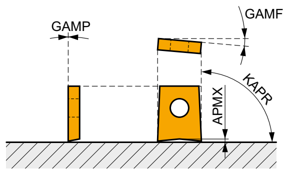
Overhang (multiple of diameter DCX)	**<3.0**	**3.0 – 3.5**	**3.6 – 4.0**	**4.1 – 4.5**	**>4.6**
Multiplication factor for speed	1.0	0.9	0.8	0.7	0.5

K2-SLC

P M K H

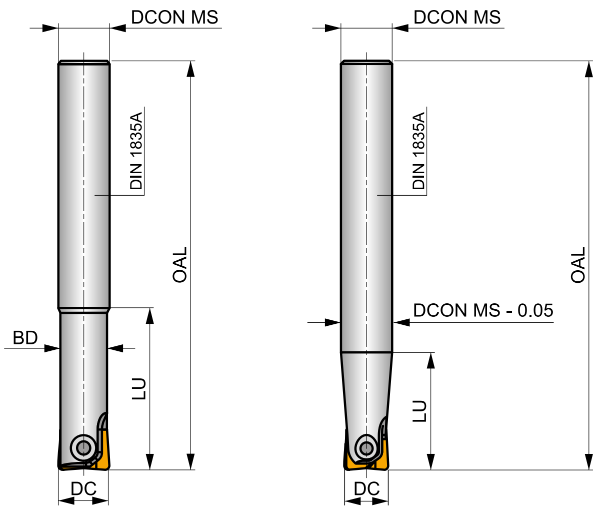
PRAMET S

APMX	1.0 - 3.0 mm



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 .



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		
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

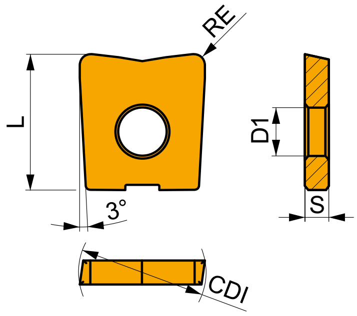
DIN 1835A

GI037	LC 12-KP	LC 12-KPF
GI038	LC 16-KP	LC 16-KPF
GI039	LC 20-KP	LC 20-KPF

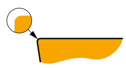
		Nm			
C0532	CS 5009-T20P	5.0	M 5	9	SDR T20P
C0533	CS 5013-T20P	5.0	M 5	13	SDR T20P
C0534	CS 5015-T20P	5.0	M 5	15	SDR T20P

LC

	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

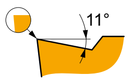


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.



KP geometry with zero rake angle design for light to medium machining.

Product	Grade	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]
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



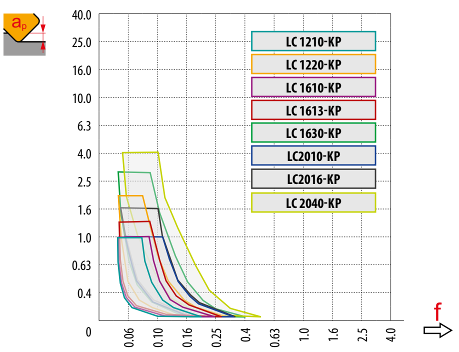
KPF geometry with positive design for light to medium machining.

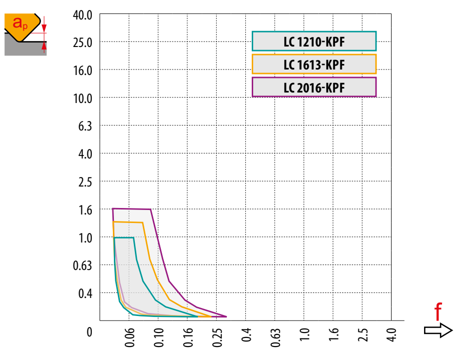
Product	Grade	RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
LC 0806-KPF	M4310	0.6	◩ 280	0.16	0.3	◩ 140	0.14	0.3	■ 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

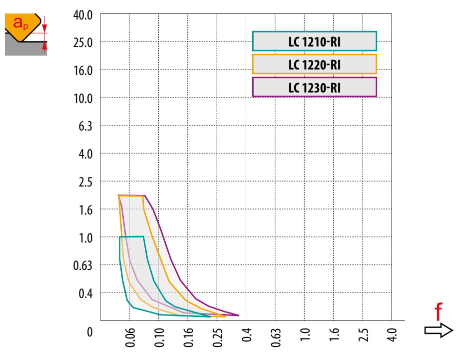
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	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	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
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

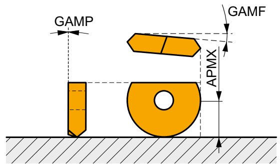
PRAMET

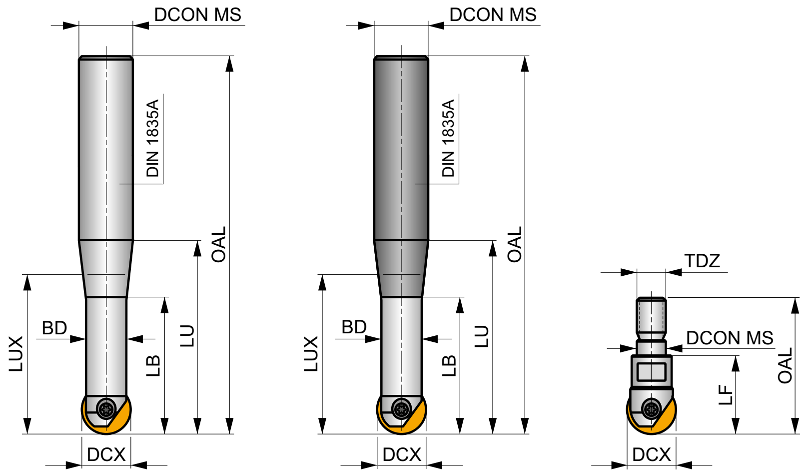
S

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	OAL	DCON MS	BD	LB	LU	LUX	LF	TDZ	Carbide	max.		kg		
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]							
DIN 1835A															
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
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

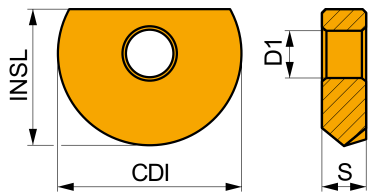
GI284	PPH 08..	–	PPHT 08..	PPHF 08..
GI285	PPH 10..	PPHE 10..	PPHT 10..	PPHF 10..
GI286	PPH 12..	PPHE 12..	PPHT 12..	PPHF 12..
GI287	PPH 16..	PPHE 16..	PPHT 16..	PPHF 16..
GI288	PPH 20..	PPHE 20..	PPHT 20..	PPHF 20..
GI289	PPH 25..	–	PPHT 25..	PPHF 25..
GI290	PPH 32..	–	–	–

		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

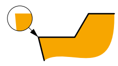
PPH

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

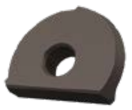
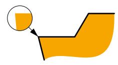


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

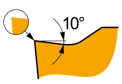
CL1 geometry with sharp design.

Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
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.

Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
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

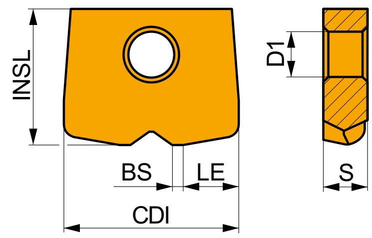
SM1 geometry with sharp design.

Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
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

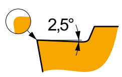
PPHF

PRAMET

	BS [mm]	LE [mm]	CDI [mm]	D1 [mm]	INSL [mm]	S [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.



HFC E

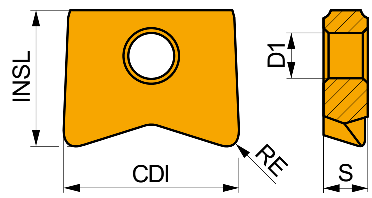
CE1 geometry with strong design for high feed machining.

Product	Grade	RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
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

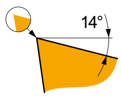
PPHT

PRAMET

	CDI [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



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

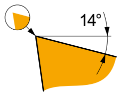


U F

A2 geometry with positive design for light to medium machining.

Product	Grade	RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
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.



A2 geometry with positive design for light to medium machining.

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]
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	–	–	–	–	–	–	–	–

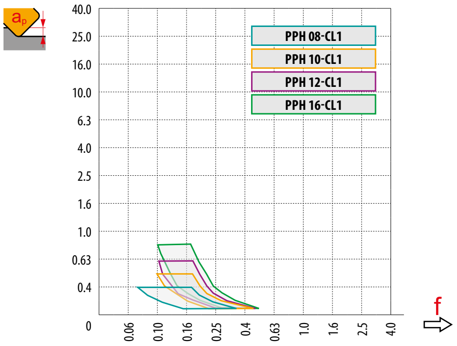
	PPH 08-CL4	PPH 10-CL4	PPH 12-CL4	PPH 16-CL4	PPH 20-CL4	PPH 25-CL4	PPH 30-CL4	PPH 32-CL4
RE	4.0	5.0	6.0	8.0	10.0	12.5	15.0	16.0
BS	–	–	–	–	–	–	–	–

	PPHE 10-SM1	PPHE 12-SM1	PPHE 16-SM1	PPHE 20-SM1
RE	5.0	6.0	8.0	10.0
BS	–	–	–	–

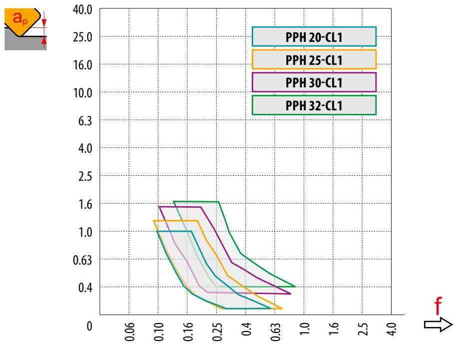
	PPHF 08-CE1	PPHF 10-CE1	PPHF 12-CE1	PPHF 16-CE1	PPHF 20-CE1	PPHF 25-CE1
RE	0.6	0.8	1.0	1.3	1.6	1.9
BS	0.40	0.50	0.60	0.80	1.00	1.20

	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	–	–	–	–	–	–	–	–	–	–	–

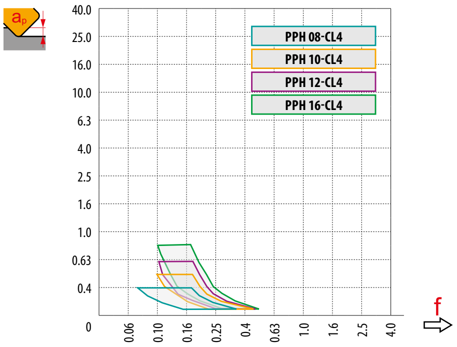
	PPHT 16-A2	PPHT 16-A2	PPHT 16-A2	PPHT 20-A2	PPHT 20-A2	PPHT 20-A2	PPHT 20-A2	PPHT 25-A2
RE	1.3	2.0	3.0	1.0	1.6	3.0	4.0	2.0
BS	–	–	–	–	–	–	–	–



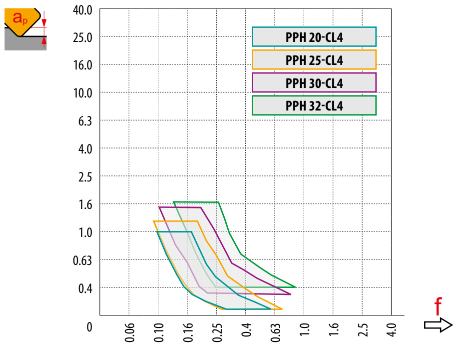
PPH 08-CL1
PPH 10-CL1
PPH 12-CL1
PPH 16-CL1
40.0 25.0 16.0 10.0 6.3 4.0 2.5 1.6 1.0 0.63 0.4 0
0.06 0.10 0.16 0.25 0.4 0.63 1.0 1.6 2.5 4.0
f



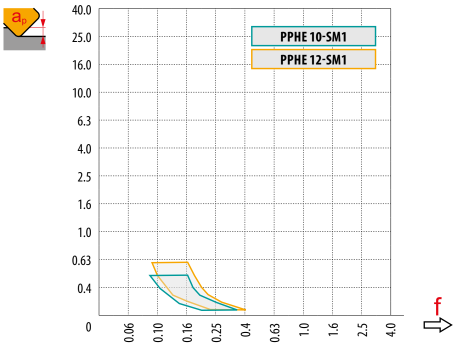
PPH 20-CL1
PPH 25-CL1
PPH 30-CL1
PPH 32-CL1
40.0 25.0 16.0 10.0 6.3 4.0 2.5 1.6 1.0 0.63 0.4 0
0.06 0.10 0.16 0.25 0.4 0.63 1.0 1.6 2.5 4.0
f



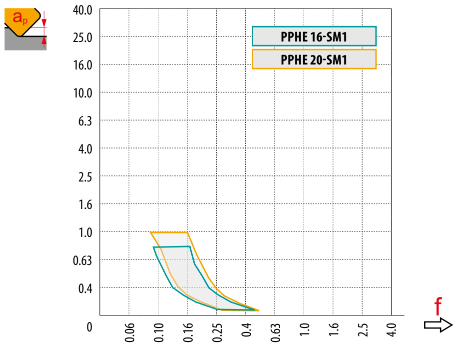
PPH 08-CL4
PPH 10-CL4
PPH 12-CL4
PPH 16-CL4
40.0 25.0 16.0 10.0 6.3 4.0 2.5 1.6 1.0 0.63 0.4 0
0.06 0.10 0.16 0.25 0.4 0.63 1.0 1.6 2.5 4.0
f



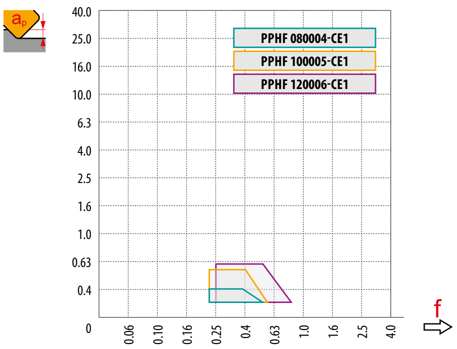
PPH 20-CL4
PPH 25-CL4
PPH 30-CL4
PPH 32-CL4
40.0 25.0 16.0 10.0 6.3 4.0 2.5 1.6 1.0 0.63 0.4 0
0.06 0.10 0.16 0.25 0.4 0.63 1.0 1.6 2.5 4.0
f



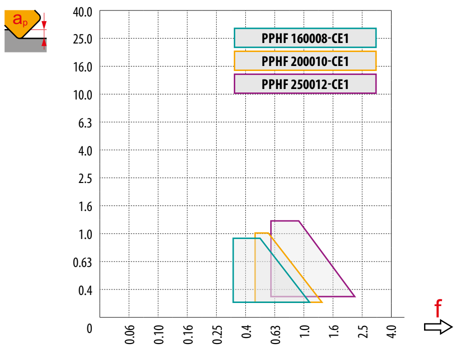
PPHE 10-SM1
PPHE 12-SM1
40.0 25.0 16.0 10.0 6.3 4.0 2.5 1.6 1.0 0.63 0.4 0
0.06 0.10 0.16 0.25 0.4 0.63 1.0 1.6 2.5 4.0
f



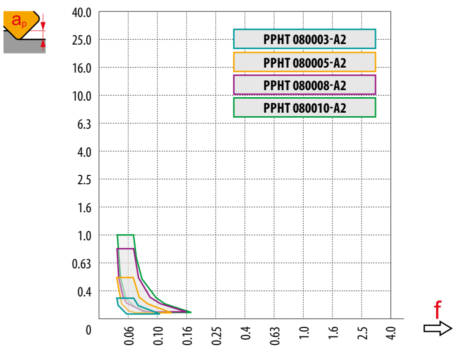
PPHE 16-SM1
PPHE 20-SM1
40.0 25.0 16.0 10.0 6.3 4.0 2.5 1.6 1.0 0.63 0.4 0
0.06 0.10 0.16 0.25 0.4 0.63 1.0 1.6 2.5 4.0
f



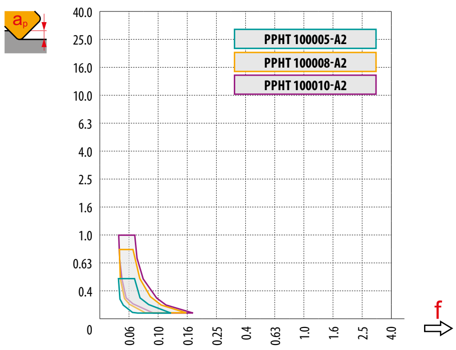
PPHF 080004-CE1
PPHF 100005-CE1
PPHF 120006-CE1
40.0 25.0 16.0 10.0 6.3 4.0 2.5 1.6 1.0 0.63 0.4 0
0.06 0.10 0.16 0.25 0.4 0.63 1.0 1.6 2.5 4.0
f



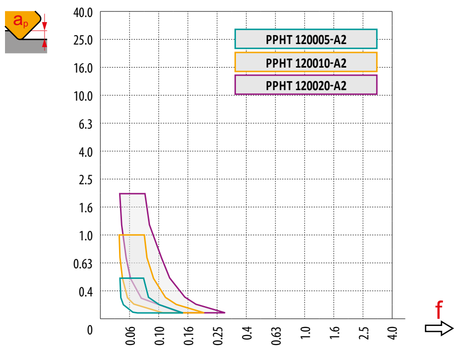
PPHF 160008-CE1
PPHF 200010-CE1
PPHF 250012-CE1
40.0 25.0 16.0 10.0 6.3 4.0 2.5 1.6 1.0 0.63 0.4 0
0.06 0.10 0.16 0.25 0.4 0.63 1.0 1.6 2.5 4.0
f



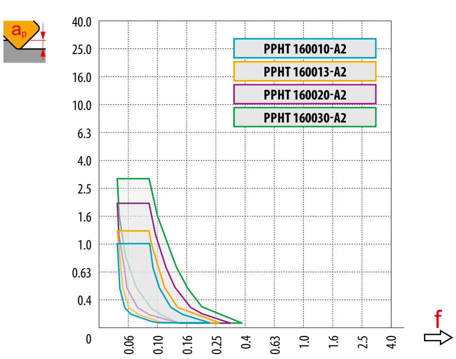
PPHT 080003-A2
PPHT 080005-A2
PPHT 080008-A2
PPHT 080010-A2
40.0 25.0 16.0 10.0 6.3 4.0 2.5 1.6 1.0 0.63 0.4 0
0.06 0.10 0.16 0.25 0.4 0.63 1.0 1.6 2.5 4.0
f

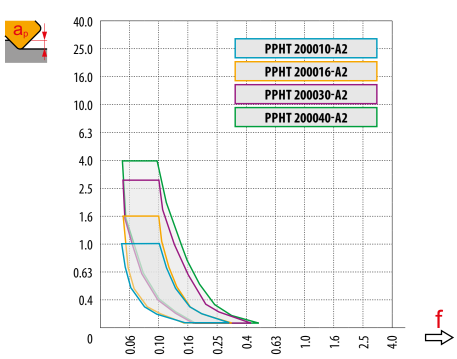


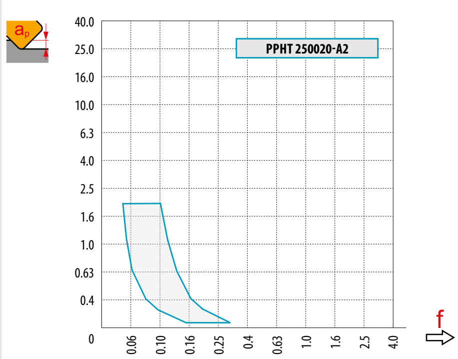
PPHT 100005-A2
PPHT 100008-A2
PPHT 100010-A2
40.0 25.0 16.0 10.0 6.3 4.0 2.5 1.6 1.0 0.63 0.4 0
0.06 0.10 0.16 0.25 0.4 0.63 1.0 1.6 2.5 4.0
f



PPHT 120005-A2
PPHT 120010-A2
PPHT 120020-A2
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







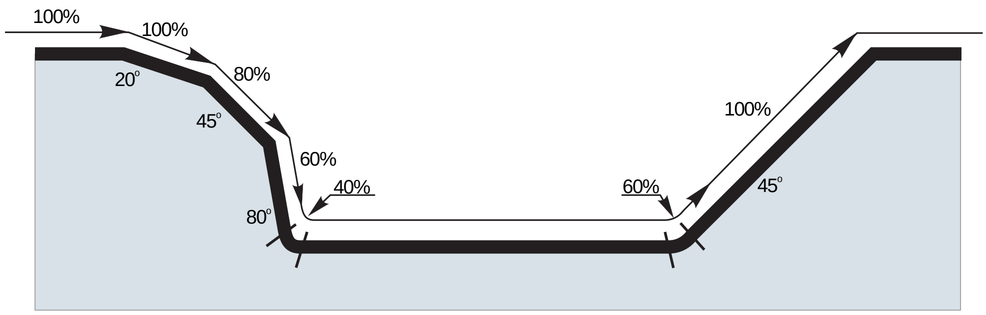
	DCX	a_p	0.3	0.4	0.5	0.7	1.0	1.25	1.5	2.0	2.5	3.0	4.0	5.0	6.0	8.0	10.0	12.0	15.0	16.0
PPH 08	**8**		3.0	3.5	3.9	4.5	5.3	5.8	6.2	6.9	7.4	7.7	8.0	–	–	–	–	–	–	–
PPH 10	**10**		3.4	3.9	4.4	5.1	6.0	6.6	7.1	8.0	8.7	9.2	9.8	10.0	–	–	–	–	–	–
PPH 12	**12**		3.7	4.3	4.8	5.6	6.6	7.3	7.9	8.9	9.7	10.4	11.3	11.8	12.0	–	–	–	–	–
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**		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**	FE	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	**8**	0.3	7.4	8.0	–	–	–	–	–	–	–	–	–	–	–	–	–
PPHT 08-A2		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	**10**	0.5	9.0	9.9	10.0	10.0	–	–	–	–	–	–	–	–	–	–	–
PPHT 10-A2		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	**12**	0.5	11.0	11.9	12.0	12.0	–	–	–	–	–	–	–	–	–	–	–
PPHT 12-A2		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	**16**	1.0	14.0	15.4	15.6	15.7	15.8	15.9	16.0	16.0	16.0	–	–	–	–	–	–
PPHT 16-A2		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	**20**	1.0	18.0	19.4	19.6	19.7	19.8	19.9	20.0	20.0	20.0	–	–	–	–	–	–
PPHT 20-A2		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

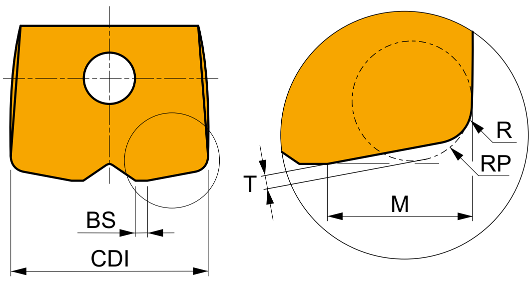
	DCX	RE	**DMIN**	**DMAX**	SMAX DMIN	SMAX DMAX
PPHT 08-A2	8	0.3	11.0	15.9	0.5	0.5
PPHT 08-A2		0.5	10.9	15.9	0.5	0.5
PPHT 08-A2		0.8	10.7	15.9	0.4	0.4
PPHT 08-A2		1.0	10.3	15.9	0.4	0.4
PPHT 10-A2	**10**	0.5	13.4	19.9	0.7	0.7
PPHT 10-A2		0.8	13.2	19.9	0.6	0.6
PPHT 10-A2		1.0	12.9	19.9	0.6	0.6
PPHT 12-A2	**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

i



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

i

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

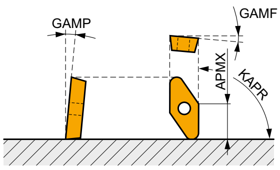
N

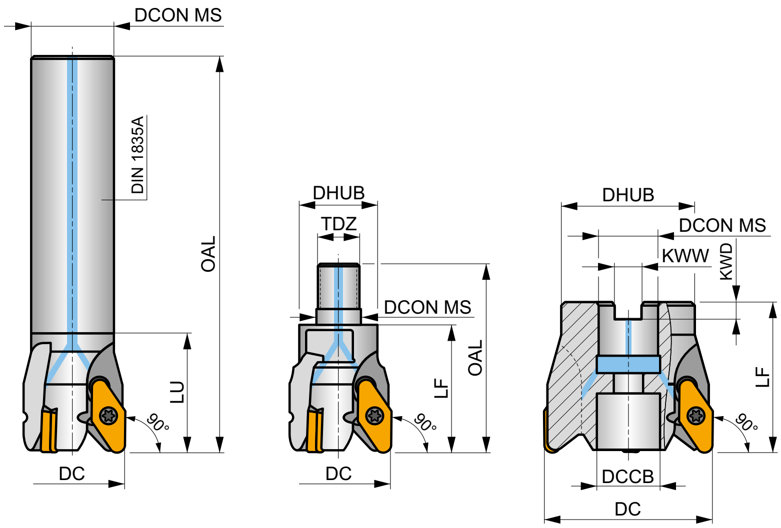
PRAMET S

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





h_m 0.03 - 0.55

h_m 0.03 - 0.5

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

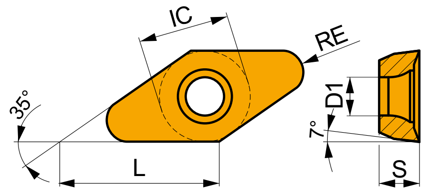
GI141	VCGT 220530F-FA

		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

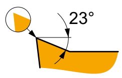
PRAMET

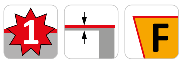
	IC [mm]	D1 [mm]	L [mm]	S [mm]
2205	12.700	5.20	22.00	5.50



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]
VCGT 220530F-FA	HF7	3.0	–	–	–	–	–	–	–	–	–	■ 210	0.48	1.0	–	–	–	–	–	–

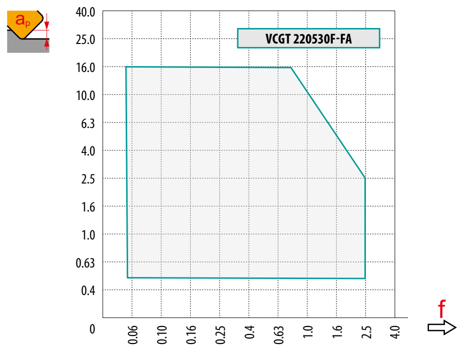




FA geometry with highly positive design for medium to rough machining.

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/l
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

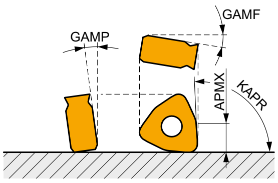
PRAMET

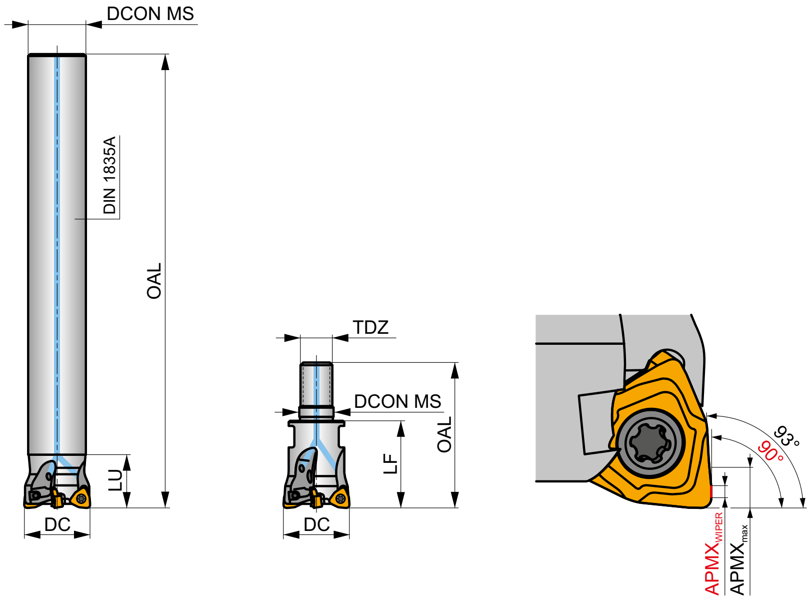
S

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

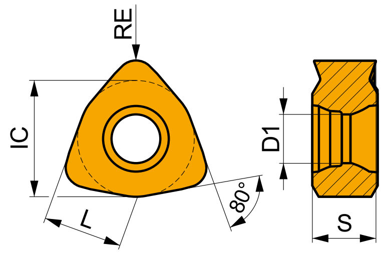
GI331	WNHX0403..

		Nm			
C0602	US 42507-T07P	1.2	M 2.5	7	Flag T07P

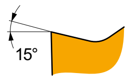
WNHX 04

PRAMET

	IC [mm]	D1 [mm]	S [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.



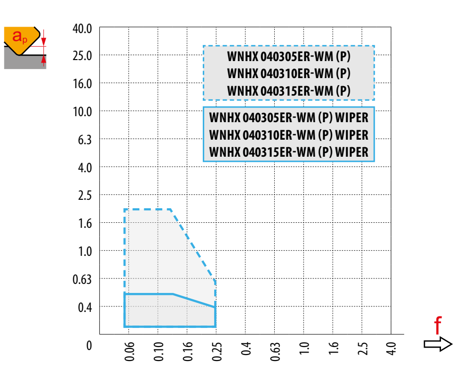
WM geometry with wiper design for semi-finish to finish machining.

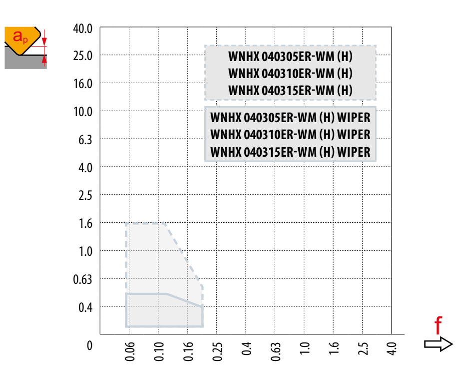
Product	Grade	RE [mm]	P	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H	H vc [m/min]	H f [mm/tooth]	H ap [mm]
WNHX 040305ER-WM	**M4310**	0.5	◪	290	0.15	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

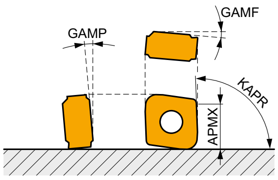
P K H

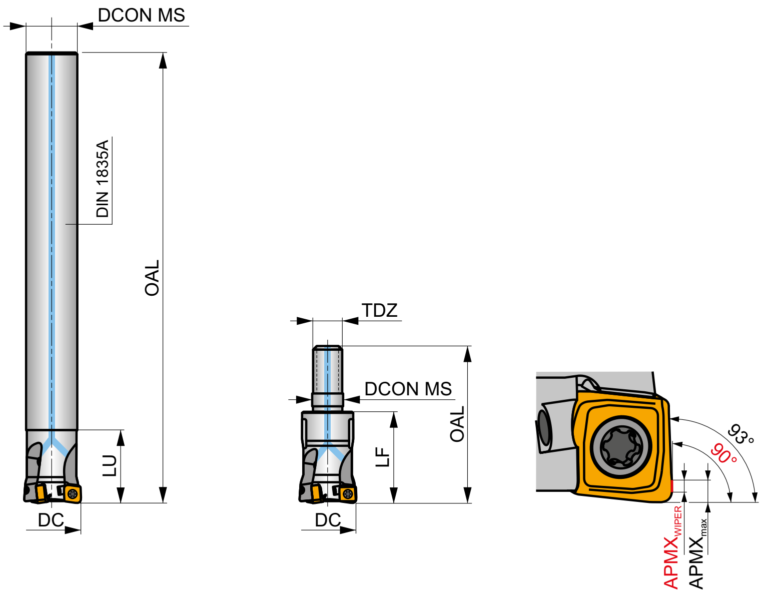
S

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

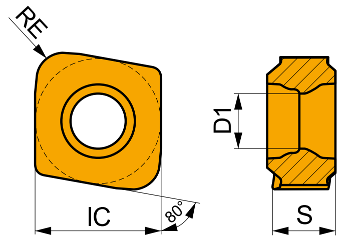
GI330	CNHX0502..

		Nm			
C0601	US 62005-T06P	0.9	M 2	4.9	Flag T06P

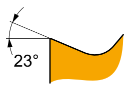
CNHX 05

	IC [mm]	D1 [mm]	S [mm]
0502	4.800	2.10	2.40

PRAMET



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.



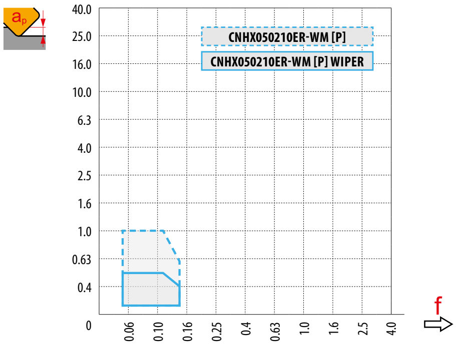
WM geometry with wiper design for semi-finish to finish machining.

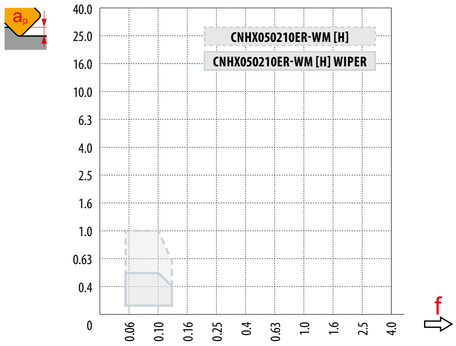
Product	Grade	RE [mm]	P	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H	H vc [m/min]	H f [mm/tooth]	H ap [mm]
CNHX 050205ER-WM	**M4310**	0.5	◩	350	0.10	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/l
12	2.4	1/25
16	1.5	1/40
20	1.1	1/54

INDEXABLE HIGH FEED MILLS

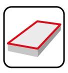
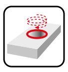
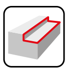
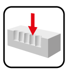
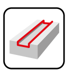
HIGH FEED MILLING

>>>

	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	◪	◪	◪	◪	◪

<<<

HIGH FEED 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					
	■					
	◩					
	◩					
	◩					
	◩					
						
	◩					
	◩					

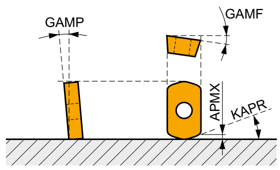
SBN10

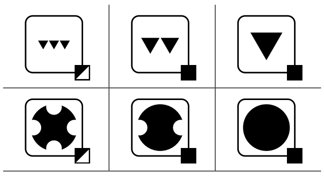
P M K S H

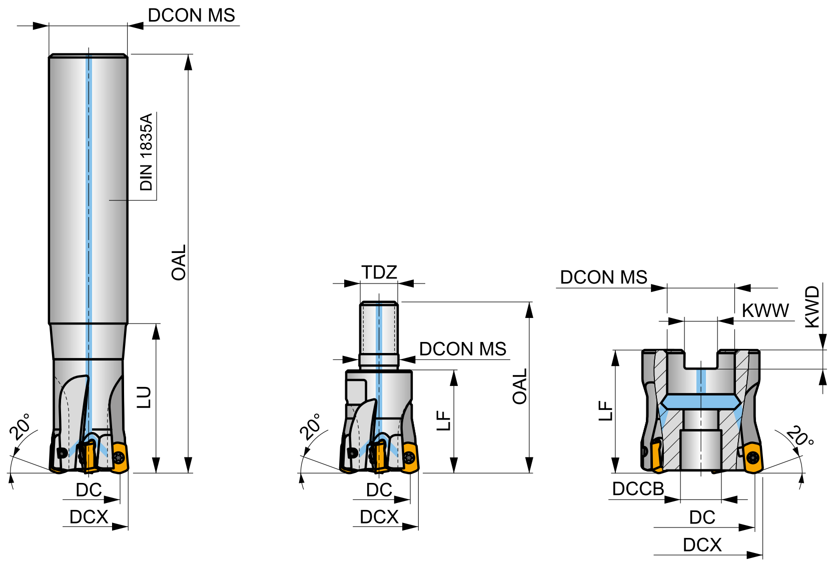
High Feed Milling Cutter for BN.. 10 inserts with Internal Coolant, Next Generation

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		
DIN 1835A	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
	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
MODULAR	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
	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
40E7R043M16-SBN10-C	40	33.4	66	17	–	–	43	M16	–	–	-7	-10	7	✓	19600	✓	0.26	GI329	C0310
ISO 6462 DIN 8030 40A05R-SMOBN10-C	40	33.4	–	16	14.1	–	40	–	8.4	5.6	-7	-10	5	✓	19600	✓	0.23	GI329	C0312
40A07R-SMOBN10-C	40	33.4	–	16	14.1	–	40	–	8.4	5.6	-7	-10	7	✓	19600	✓	0.27	GI329	C0312
42A05R-SMOBN10-C	42	35.4	–	16	14.1	–	40	–	8.4	5.6	-7	-10	5	✓	19100	✓	0.23	GI329	C0312
42A07R-SMOBN10-C	42	35.4	–	16	14.1	–	40	–	8.4	5.6	-7	-10	7	✓	19100	✓	0.26	GI329	C0312

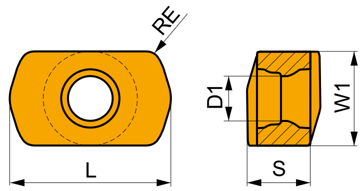
GI329	BNGX 10T3...	ANHX 10T3..

		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

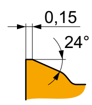
PRAMET

BNGX 10

	W1 [mm]	D1 [mm]	L [mm]	S [mm]
10T3	5.800	2.76	9.92	3.90



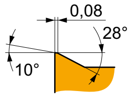
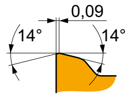
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.



M geometry with positive design for high feed machining.

Product	Grade	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]
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

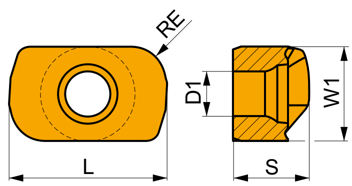
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product	Grade	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 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

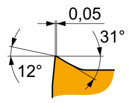
ANHX 10

PRAMET

	W1 [mm]	D1 [mm]	L [mm]	S [mm]
10T3	5.800	2.76	9.72	4.70



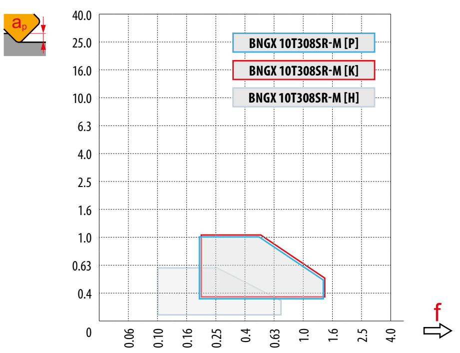
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

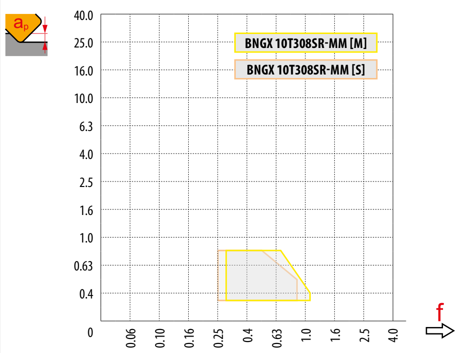
Product	Grade	RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
  F geometry with positive design for finish and semi-finish 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	–	–	–	–	–	–	–	–	–	–	–	–

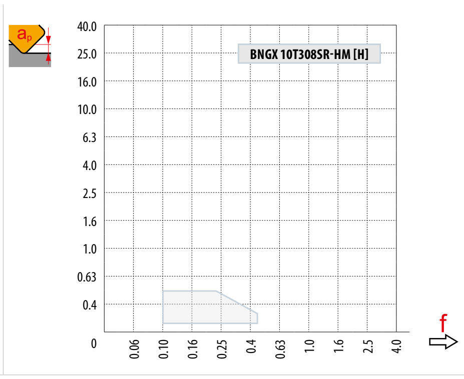
a_e/DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

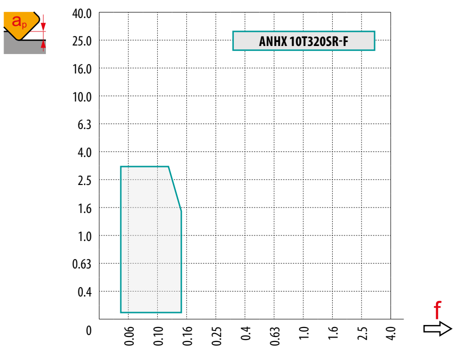
	BNGX 10-M	BNGX 10-MM	BNGX 10-HM
RE	0.8	0.8	0.8
BS	–	–	–

	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	DEF	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		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**
	1 f	–	1.30	1.10	0.90	0.80	0.72	0.68	0.65	0.50

BNGX 10		
DCX	$a_{e\,max}$	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
1 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

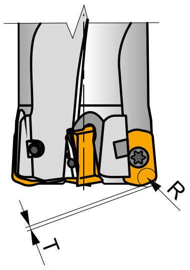
BNGX 10 (HFC)		
DCX	a_p	f_{max}
16	0.4	0.15
18	0.7	0.15
20	0.7	0.15
25	0.7	0.15
28	0.7	0.2
32	0.7	0.2
35	0.7	0.2
40	0.7	0.2
42	0.7	0.2

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

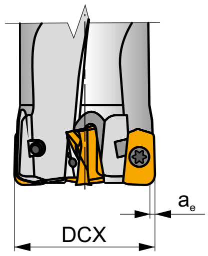
DCX	µm	3	5	10	15	20	30	40	50	60	80	100
16		0.438	0.566	0.800	0.980	1.131	1.386	1.600	1.789	1.960	2.263	2.530
18		0.465	0.600	0.849	1.039	1.200	1.470	1.697	1.897	2.078	2.400	2.683
20		0.490	0.632	0.894	1.095	1.265	1.549	1.789	2.000	2.191	2.530	2.828
25	FE	0.548	0.707	1.000	1.225	1.414	1.732	2.000	2.236	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



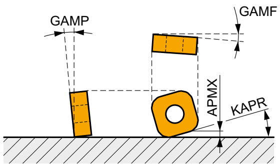
	max a_e/DCX
ANHX 10T320	0.05

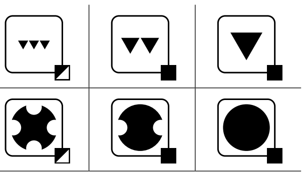
P M K S

PRAMET

S

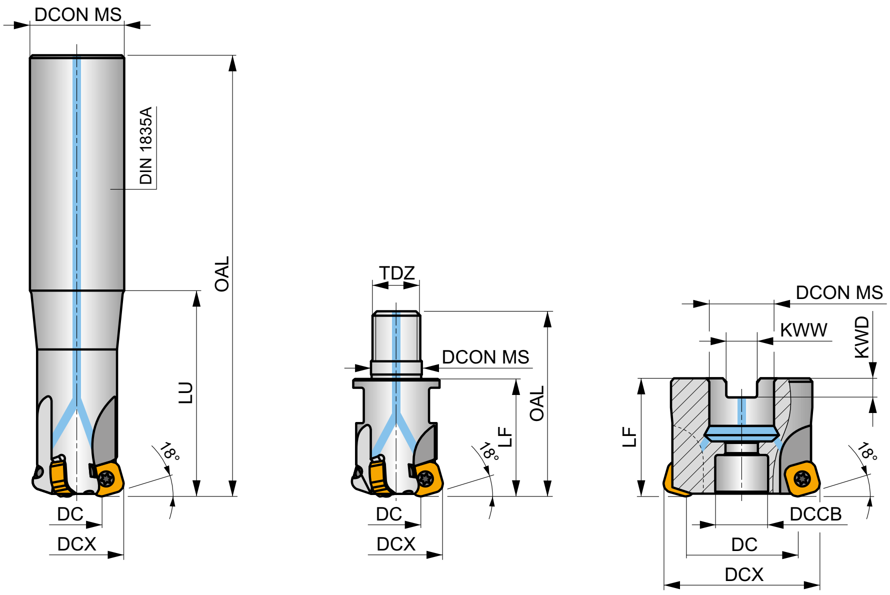
KAPR	18°
APMX	1.7 mm





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.



h_m 0.20 - 0.46

h_m 0.20 - 0.46

	Product	DCX	DC	OAL	DCON MS	DCCB	LU	LF	TDZ	KWW	KWD	GAMF	GAMP		ZNP		max.		kg			
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]	[°]	[°]									
DIN 1835A	32E3R070A32-SSN11-C	32	18.3	150	32	–	70	–	–	–	–	-11.5	-10	3	–	–	17500	✓	0.69	GI339	C0314	–
	32E3R120A32-SSN11-C	32	18.3	200	32	–	120	–	–	–	–	-11.5	-10	3	–	–	17500	✓	0.89	GI339	C0314	–
	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	–
	35E3R040M16-SSN11-C	35	21.2	63	17	–	–	40	M16	–	–	-11	-10	3	–	–	16800	✓	0.19	GI339	C0314	–
	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	–
	42A04R-SMOSN11-C	42	28.2	–	16	14.1	–	40	–	8.4	5.6	-10.5	-10	4	–	✓	15300	✓	0.21	GI339	C0318	–
	50A05R-SMOSN11-C	50	36.1	–	22	18.1	–	40	–	10.4	6.3	-10	-10	5	–	✓	14000	✓	0.31	GI339	C0320	–
	50A06R-SMOSN11-C	50	36.1	–	22	18.1	–	40	–	10.4	6.3	-10	-10	6	–	✓	14000	✓	0.31	GI339	C0320	–
	52A05R-SMOSN11-C	52	38.1	–	22	18.1	–	40	–	10.4	6.3	-10	-10	5	–	✓	13800	✓	0.34	GI339	C0320	–
	52A06R-SMOSN11-C	52	38.1	–	22	18.1	–	40	–	10.4	6.3	-10	-10	6	–	✓	13800	✓	0.33	GI339	C0320	–
	63A06R-SMOSN11-C	63	49.1	–	22	18.1	–	40	–	10.4	6.3	-10	-10	6	–	✓	12500	✓	0.46	GI339	C0320	–
	63A08R-SMOSN11-C	63	49.1	–	22	18.1	–	40	–	10.4	6.3	-10	-10	8	–	✓	12500	✓	0.47	GI339	C0320	–
	66A06R-SMOSN11-C	66	52.1	–	27	18.1	–	50	–	12.4	7	-10	-10	6	–	✓	12200	✓	0.74	GI339	C0322	–
	66A08R-SMOSN11-C	66	52.1	–	27	18.1	–	50	–	12.4	7	-10	-10	8	–	✓	12200	✓	0.75	GI339	C0322	–
	80A07R-SMOSN11-C	80	66.1	–	27	38.1	–	50	–	12.4	7	-10	-10	7	–	✓	11100	✓	0.95	GI339	C0324	AC001
	80A09R-SMOSN11-C	80	66.1	–	27	38.1	–	50	–	12.4	7	-10	-10	9	–	✓	11100	✓	1.04	GI339	C0324	AC001
	100A08R-SMOSN11-C	100	86.1	–	32	45.1	–	50	–	14.4	8	-10	-10	8	–	✓	9900	✓	1.63	GI339	C0324	AC002
	115A08R-SMOSN11-C	115	101.1	–	32	45.1	–	50	–	14.4	8	-10	-10	8	–	✓	9200	✓	2.34	GI339	C0324	AC002
	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..

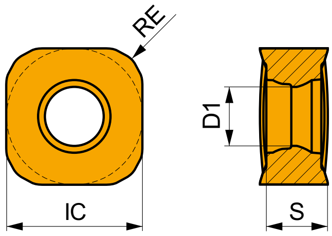
C0314	US 44012-T15P	3.5	M 4	12	–	–	Flag T15P	–
C0316	US 44012-T15P	3.5	M 4	12	D-T08P/T15P	FG-15	–	HCS 0840C
C0318	US 44012-T15P	3.5	M 4	12	D-T08P/T15P	FG-15	–	HS 90835
C0320	US 44012-T15P	3.5	M 4	12	D-T08P/T15P	FG-15	–	HS 1030C
C0322	US 44012-T15P	3.5	M 4	12	D-T08P/T15P	FG-15	–	HS 1230C
C0324	US 44012-T15P	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

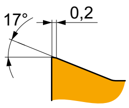
PRAMET

	IC [mm]	D1 [mm]	S [mm]
1104	10.600	4.56	4.76



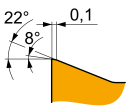
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
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		–	–	–		–	–	–		–	–	–		–	–	–		–	–	–
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		–	–	–

1 U S

M geometry with positive design for high feed machining.

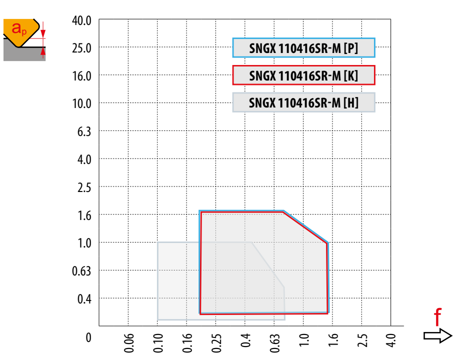



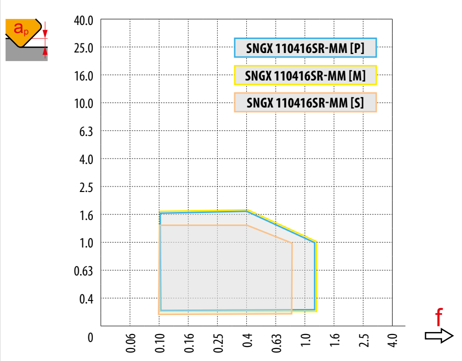
HFC S

MM geometry with highly positive design for high feed 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

	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	DEF	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		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
	1 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

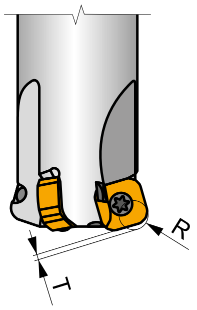
SNGX (HFC)		
DCX	RPMX	APMX/l
32	0.8	1.4/100
35	0.8	1.4/100
40	0.7	1.2/100
42	0.7	1.2/100
50	0.5	0.9/100
52	0.5	0.9/100
63	0.4	0.7/100
66	0.4	0.7/100
80	0.3	0.5/100
100	0.2	0.3/100
115	0.2	0.3/100
125	0.2	0.3/100

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**
1 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

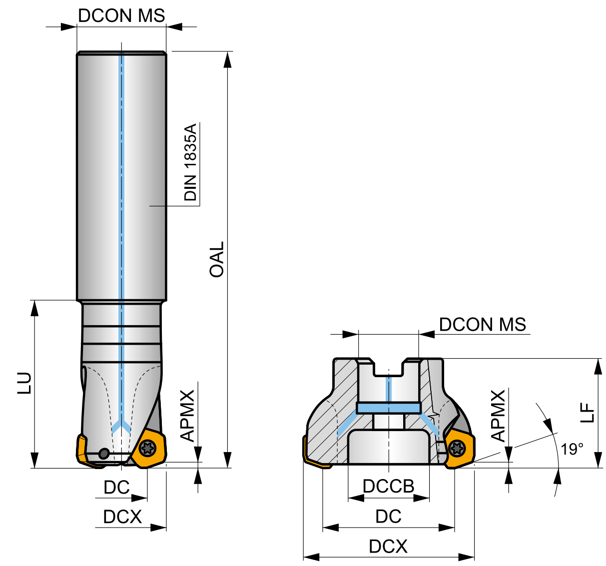
PRAMET

S

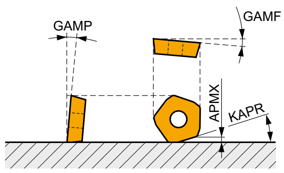
PENTA HF High-Feed Milling Cutter with Internal Coolant

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	–
	40E3R060A32-SPD09-C	40	25.5	250	32	–	60	–	-11	10	3	–	11700	✓	1.43	GI245	C0340	–
ISO 6462 DIN 8030	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	–
	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	–	–

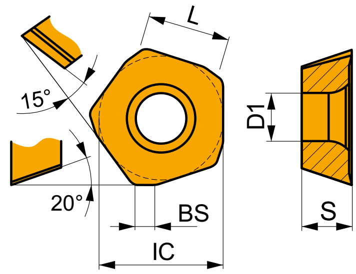
C0342	US 45011-T20P	5.0	M 5	11	SDR T20P-T	HS 90835	–
C0343	US 45011-T20P	5.0	M 5	11	SDR T20P-T	HS 1030C	–
C0344	US 45011-T20P	5.0	M 5	11	SDR T20P-T	HS 1230C	–
C0349	US 45011-T20P	5.0	M 5	11	SDR T20P-T	HSD 2040	–

AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32

PDKX 09

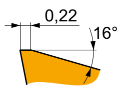
PRAMET

	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				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]
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		–	–	–

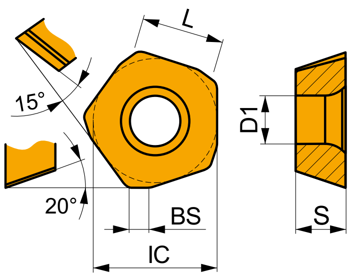


HFC S

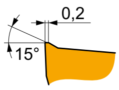
FM geometry with highly positive design for medium high feed machining.

PDMX 09

	BS [mm]	IC [mm]	D1 [mm]	L [mm]	S [mm]
0905	2.00	13.500	5.50	9.00	5.47



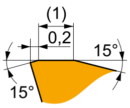
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.



HFC S

M geometry with positive design for medium high feed machining.

Product	Grade	RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N vc [m/min]	f [mm/tooth]	ap [mm]	S vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
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		–	–	–	–	–	–	–	–	–		–	–	–



HFC P

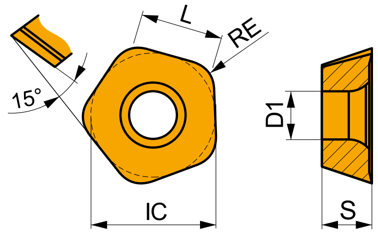
R geometry with strong design for high feed machining.

Product	Grade	RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N vc [m/min]	f [mm/tooth]	ap [mm]	S vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
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

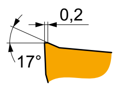
PRAMET

	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 [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]
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	–	–	–	–	–	–	–	–	–

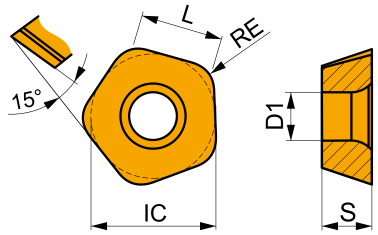


FM geometry with highly positive design for light to medium high feed machining.

PDMW 09

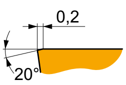
PRAMET

	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.

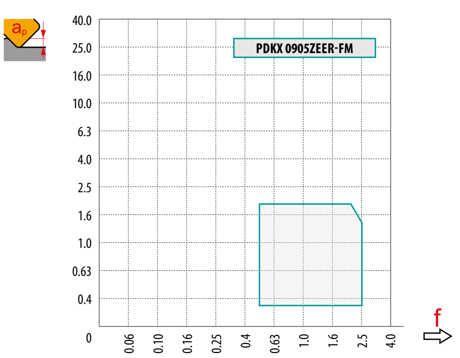
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
PDMW 090530SR	M8310	3.0	◪ 245	1.00	1.4	–	–	–	■ 230	1.00	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

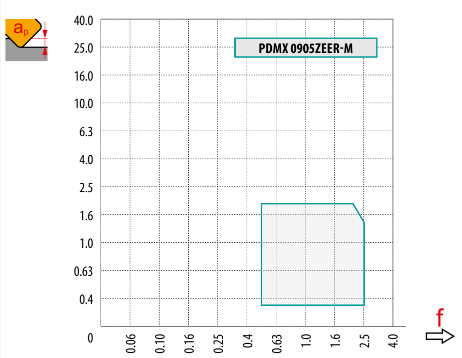


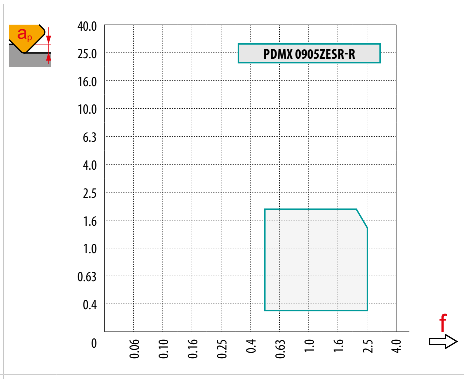
Zero rake angle design for high feed machining.

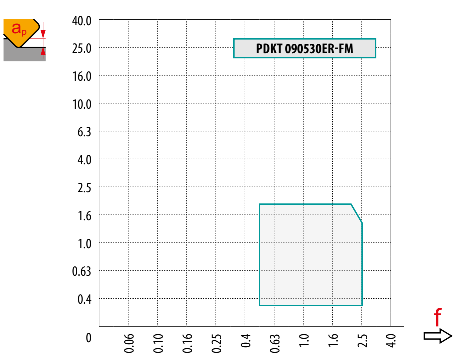
ae / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
x.v	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

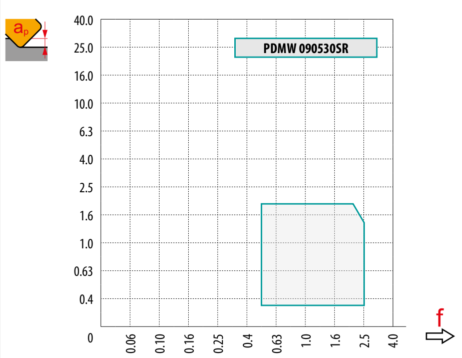
	PDKX 09-FM	PDMX 09-M	PDMX 09-R	PDKT 09-FM	PDMW 09
RE	–	–	–	3.0	3.0
BS	2.00	2.00	2.00	–	–











DCX	ap	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	DEF	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		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
	ap	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**
1 f	3.0	2.3	1.5

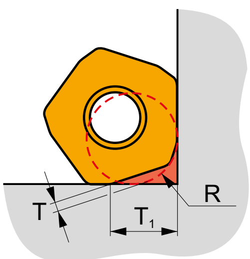
DCX	RPMX	APMX/l
40	8.0	1.80/16
42	8.0	2.00/16
50	8.0	2.00/16
52	8.0	2.00/16
63	7.0	2.00/18
66	6.0	2.00/21
80	5.0	2.00/24
100	3.0	2.00/40

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

i



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

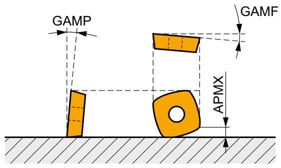
S

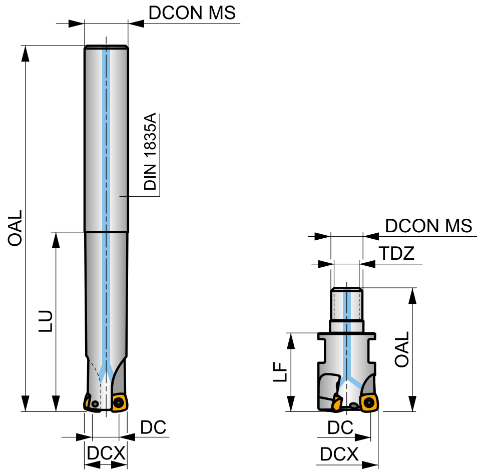
FEED ZD07 High-Feed Milling Cutter with Internal Coolant

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

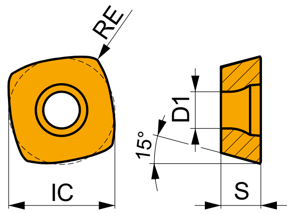
	Product	DCX [mm]	DC [mm]	OAL [mm]	DCON MS [mm]	LU [mm]	LF [mm]	TDZ	GAMF [°]	GAMP [°]			max.		kg		
DIN 1835A	16E2R030A16-SZD07	16	6	100	16	30	–	–	-5	8	2	–	47400	✓	0.13	GI201	C0350
	16E2R065A16-SZD07	16	6	145	16	65	–	–	-5	8	2	–	47400	✓	0.19	GI201	C0350
	20E3R040A20-SZD07	20	10	120	20	40	–	–	-5	8	3	–	42400	✓	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..

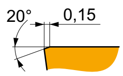
		Nm			
C0350	US 2205-T07P	0.9	M 2.2	5	Flag T07P

ZDCW 07

	IC [mm]	D1 [mm]	S [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.

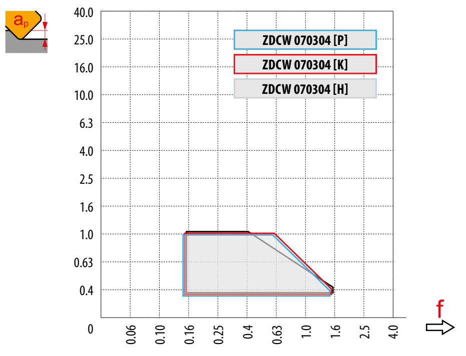


Special geometry for high feed machining.

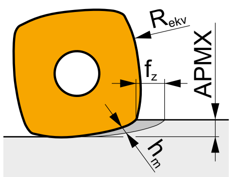
Product	Grade	RE [mm]	P	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H	H vc [m/min]	H f [mm/tooth]	H ap [mm]
ZDCW 070304	**M8310**	0.4	◪	420	0.60	0.4		–	–	–	■	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



$$f_z = h_m \sqrt{\frac{2R_{ekv.}}{APMX}}$$ [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/l
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/l
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

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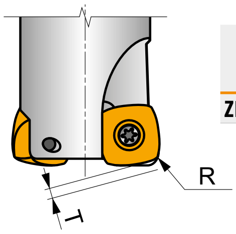


	R	T
ZDCW 070304	1.70	0.60

SZD09

P K H

PRAMET

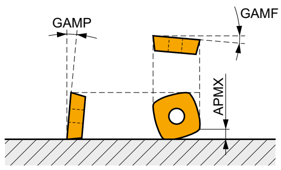
S

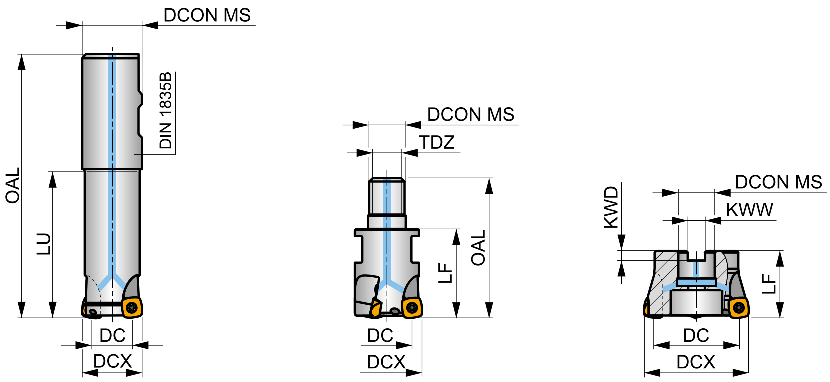
FEED ZD09 High-Feed Milling Cutter with Internal Coolant

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..

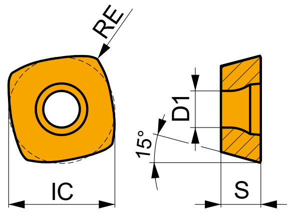
		Nm						
C0364	US 3006-T09P	2.0	M 3	6	D-T07P/T09P	FG-15	HS 1230C	–
SQ400	US 3006-T09P	2.0	M 3	6	–	–	Flag T09P	–

		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

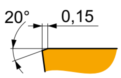
PRAMET

	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]
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	–	–	–		–	–	–	–	–	–	–	–	–		–	–	–

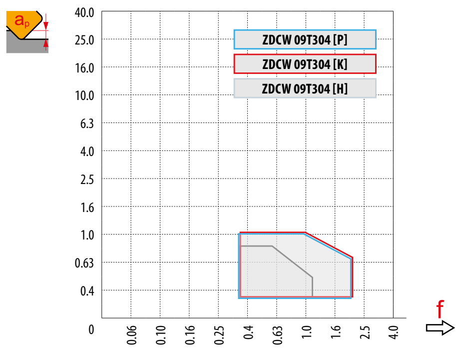


HFC S

Special geometry for high feed machining.

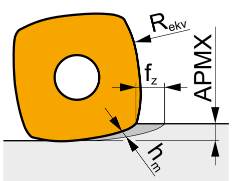
a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
x.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	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	DEF	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		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



$$f_z = h_m \sqrt{\frac{2R_{ekv.}}{APMX}}$$ [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
1 f	2.00	1.50	1.00

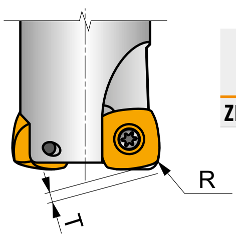
			HFC	
DCX	RPMX	APMX/l	RPMX	APMX/l
25	12.0	1.0/6	0.9	1.00/65
32	7.5	1.0/11	0.5	0.75/100
40	3.6	1.0/17	0.4	0.55/100

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

i



	R	T
ZDCW 09T304	2.27	0.52

P K H

PRAMET

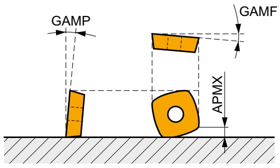
S

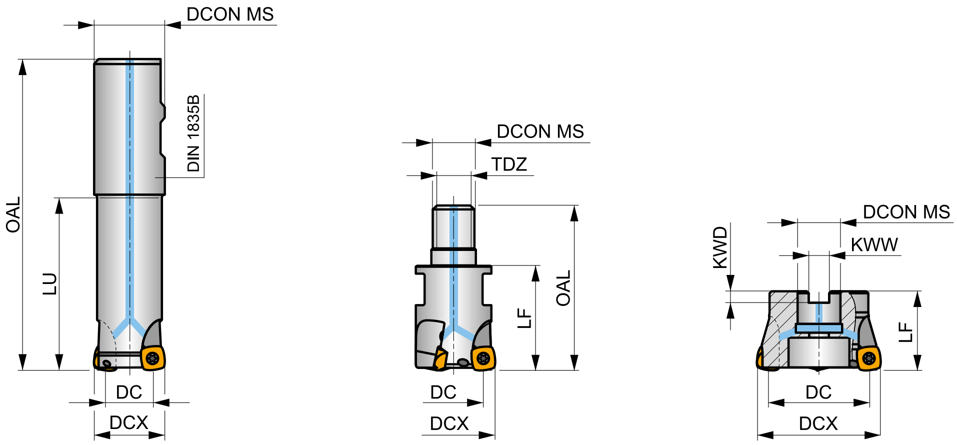
FEED ZD12 High-Feed Milling Cutter with Internal Coolant

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
	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	–
	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	–
	40E4R040M16-SZD12-C	40	22.5	63	17	–	40	M16	–	–	-6	10	4	–	–	✓	0.23	GI192	SQ220	–
ISO 6462 DIN 8030	50A04R-SMOZD12-C	50	32.5	–	22	–	40	–	10.4	6.4	-6	10	4	✓	14000	✓	0.47	GI192	SQ033	–
	63A05R-SMOZD12-C	63	45.5	–	22	–	40	–	10.4	6.4	-6	10	5	✓	12500	✓	0.63	GI192	SQ033	–
	80A05R-SMOZD12-C	80	62.5	–	27	–	50	–	12	7	-6	10	5	✓	11100	✓	1.12	GI192	C0371	AC001

GI192	ZDEW 1204..

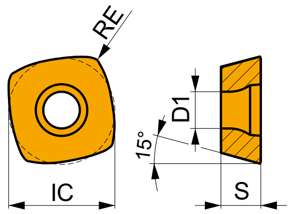
		Nm						
C0371	US 4011-T15P	3.5	M 4	10.6	D-T08P/T15P	FG-15	–	–
SQ033	US 4011-T15P	3.5	M 4	10.6	D-T08P/T15P	FG-15	–	HS 1030C
SQ220	US 4011-T15P	3.5	M 4	10.6	–	–	Flag T15P	–

AC001	KS 1230	K.FMH27

ZDEW 12

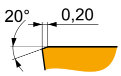
PRAMET

	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.

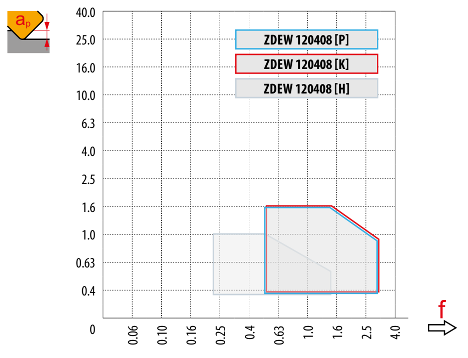
Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
ZDEW 120408	**M8310**	0.8	◩	270	1.00	1.0		–	–	–	■	255	1.00	1.0		–	–	–		–	–	–	■	50	0.15	1.0
	M8325	0.8	◩	205	1.00	1.0		–	–	–		–	–	–		–	–	–		–	–	–		–	–	–
	M8345	0.8	◩	195	1.00	1.0		–	–	–		–	–	–		–	–	–		–	–	–		–	–	–



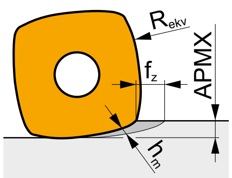
Special geometry for high feed machining.

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

	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	DEF	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		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



$$f_z = h_m \sqrt{\frac{2R_{ekv.}}{APMX}}$$ [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

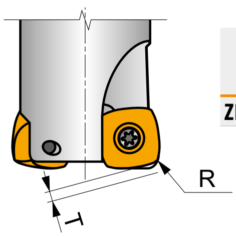
			HFC	
DCX	RPMX	APMX/l	RPMX	APMX/l
32	10	1.6/11	1.2	1.60/78
40	5.5	1.6/18	0.7	1.10/100
50	3.3	1.6/29	0.5	0.75/100
52	3.1	1.6/31	0.5	0.75/100
63	2.2	1.6/43	0.3	0.40/100
66	2.0	1.6/47	0.3	0.40/100
80	1.5	1.6/63	0.2	0.20/100

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		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	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

i



	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					

INDEXABLE CHAMFER & T-SLOTS MILLS – NAVIGATOR

<<<

CHAMFER, T-SLOT MILLING

	F-SCC
	90°
APMX [mm]	11.0 – 18.0
DC [mm]	25 – 40
	
	📖 664
	P M K
	
	CCMX
	2
	■
	■
	◩
	◩

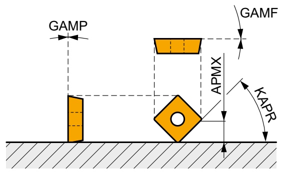
SSD09

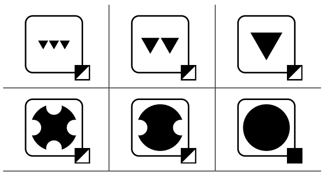
P M K S H

PRAMET

S

KAPR	45°
APMX	4.5 mm

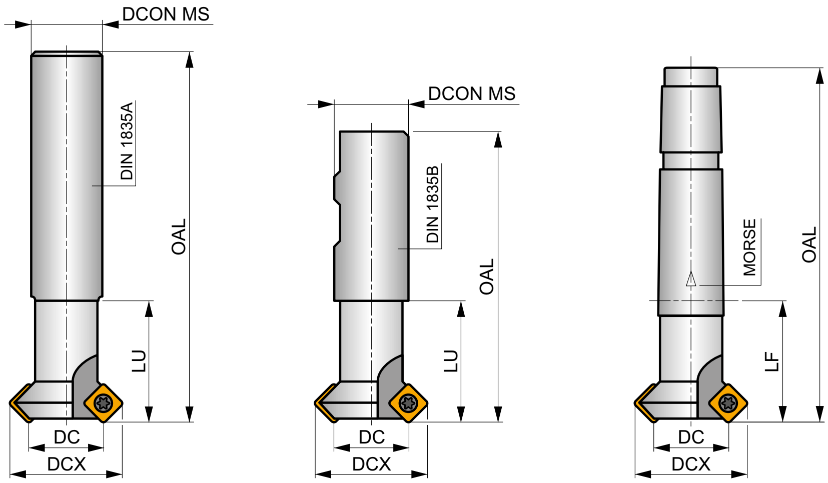




h_m 0.095 - 0.15

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.



	Product	DC [mm]	DCX [mm]	OAL [mm]	DCON MS [mm]	LU [mm]	LF [mm]	CZC MS	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

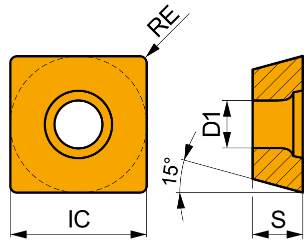
GI129	SDEW 0903..	SDEX 0903..

		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

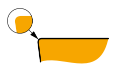
PRAMET

	IC [mm]	D1 [mm]	S [mm]
0903	9.525	4.40	3.18

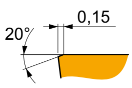


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

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]
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	–	–	–	–	–	–	–	–	–
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	–	–	–	–	–	–	–	–	–

EN geometry with zero rake angle design for 45° chamfer milling.

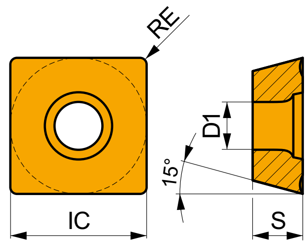



SN geometry with zero rake angle design for 45° chamfer milling.

SDEX 09

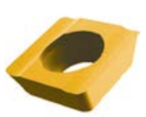
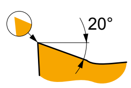
PRAMET

	IC [mm]	D1 [mm]	S [mm]
0903	9.525	4.40	3.18



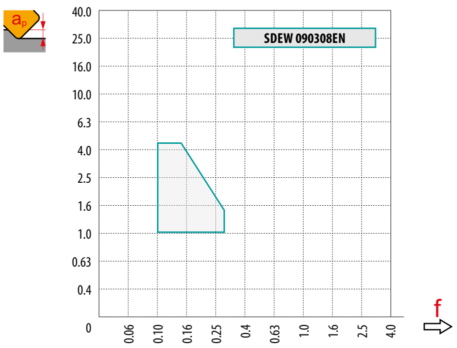
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

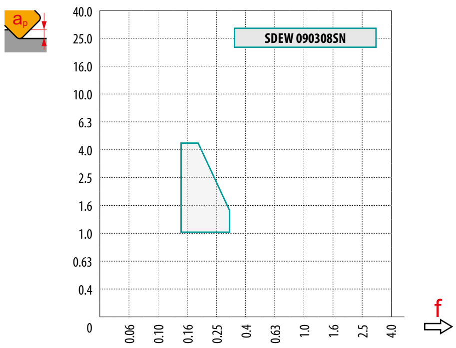
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
SDEX 090308FN-74	**M8330**	0.8	■ 305	0.12	4.5	◩ 180	0.11	4.5	◩ 285	0.12	4.5	–	–	–	◩ 75	0.11	3.6	–	–	–

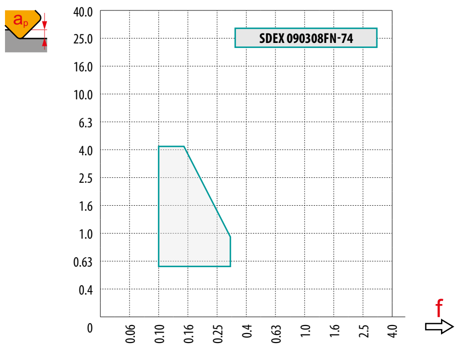



Geometry 74 with positive design for 45° chamfer milling.

	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

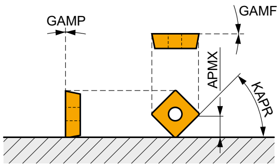
PRAMET

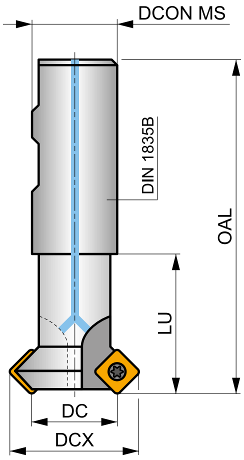
S

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
	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

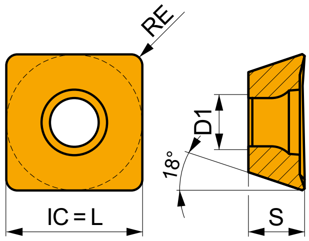
GI146	SOMT 09T3..

		Nm			
SQ500	US 3006-T09P	2.0	M 3	6	Flag T09P

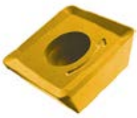
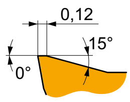
SOMT 09

	IC [mm]	D1 [mm]	L [mm]	S [mm]
09T3	9.550	3.50	9.55	3.97

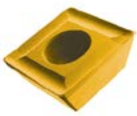
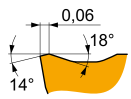
PRAMET



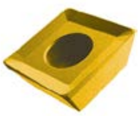
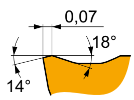
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Conditions are valid for setting angle 90°. Refer to our Machining Calculator app for further calculations.

M geometry with positive design for medium machining.

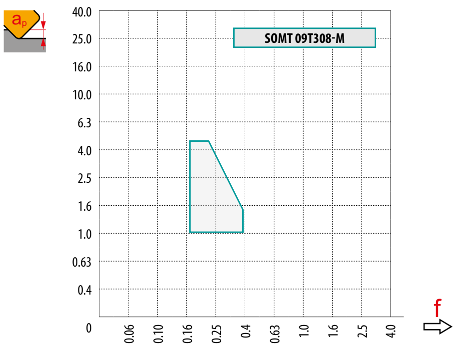
MI geometry with stable positive design for medium machining.

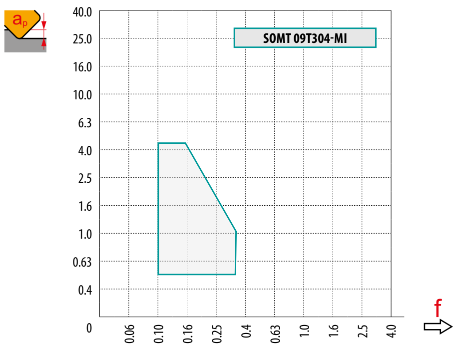



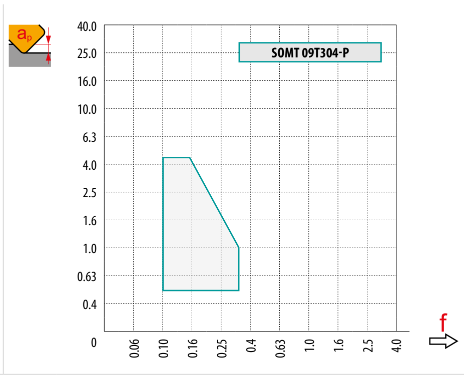
P geometry with highly positive design for medium machining.

Product	Grade	RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	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		–	–	–		–	–	–		–	–	–

	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		

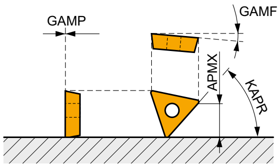
2516

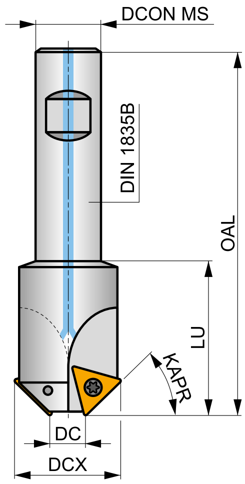
P M K N

PRAMET

S

KAPR	45°
APMX	8,5 mm





h_m 0.065 - 0.095

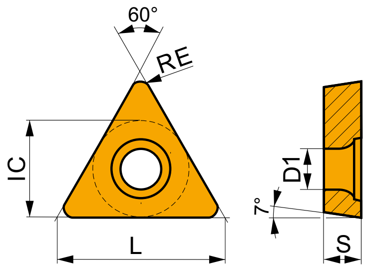
	DCX [mm]	DC [mm]	OAL [mm]	DCON MS [mm]	LU [mm]			max.		kg		
DIN 1835B **2516-45-11**	31	11	100	16	30	2	–	18100	✓	0.24	GI155	SQ220
2516-45-19	39	19	100	20	30	2	–	16200	✓	0.35	GI155	SQ220

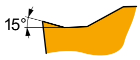
GI155	TCMT 16T308E-FM:T83..

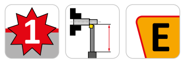
		Nm			
SQ220	US 4011-T15P	3.5	M 4	10.6	Flag T15P

TCMT

	IC [mm]	D1 [mm]	L [mm]	S [mm]
16T3	9.525	4.4	16.5	3.97

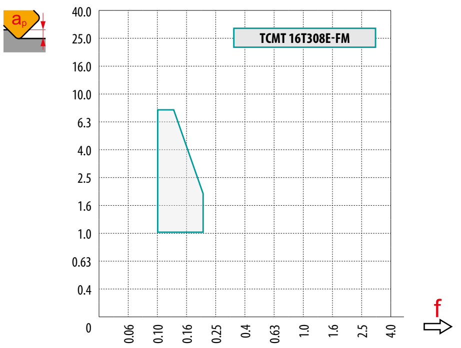






		RE [mm]	P	vc [m/min]	f [mm/rev]	ap [mm]	M	vc [m/min]	f [mm/rev]	ap [mm]	K	vc [m/min]	f [mm/rev]	ap [mm]	N	vc [m/min]	f [mm/rev]	ap [mm]	S	vc [m/min]	f [mm/rev]	ap [mm]	H	vc [m/min]	f [mm/rev]	ap [mm]
TCMT 16T308E-FM	**T8315**	0.80	◩	170	0.17	1.7	■	100	0.15	1.7	◩	160	0.17	1.7	◩	510	0.20	1.7		–	–	–		–	–	–
	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

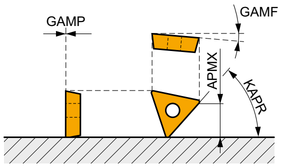
PRAMET

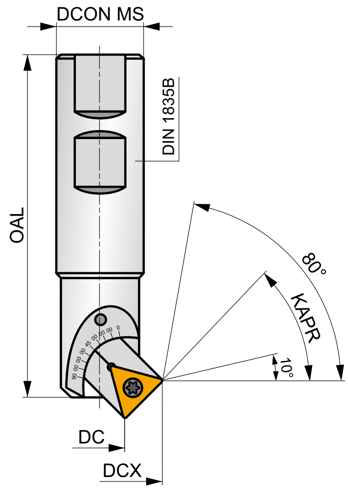
S

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

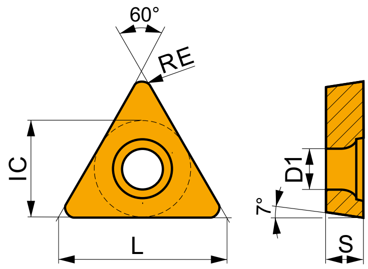
Product	DC [mm]	DCX [mm]	OAL [mm]	DCON MS [mm]	KAPR [°]	GAMF [°]	GAMP [°]			max.		kg		
2636-05-25 (DIN 1835B)	5.0	31.0	100	25	10	-8	0	1	–	18100	–	0.35	GI294	CH040
	5.5	31.0			15									
	7.0	29.5			30									
	11.0	29.5			45									
	16.0	28.5			60									
	21.0	26.5			75									
	23.0	26.0			80									

GI294	TCMT 16T304E-FM:T83..	TCMT 16T308E-FM:T83..

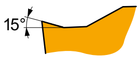
				Nm			
CH040	USI 0614	CA 2669	US 4011-T15P	3.5	M 4	10.6	Flag T15

TCMT

	IC [mm]	D1 [mm]	L [mm]	S [mm]
16T3	9.525	4.4	16.5	3.97



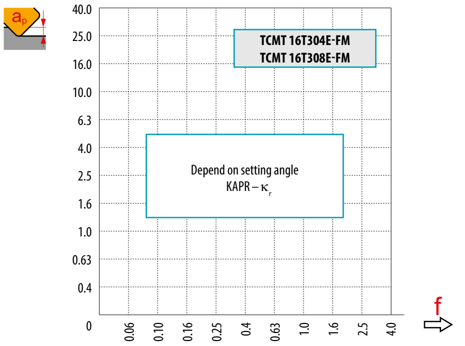
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.



FM geometry for finish to semi-rough machining, continuous to slightly interrupted cuts.

Product	Grade	RE [mm]	P	P vc [m/min]	P f [mm/rev]	P ap [mm]	M	M vc [m/min]	M f [mm/rev]	M ap [mm]	K	K vc [m/min]	K f [mm/rev]	K ap [mm]	N	N vc [m/min]	N f [mm/rev]	N ap [mm]	S	S vc [m/min]	S f [mm/rev]	S ap [mm]	H	H vc [m/min]	H f [mm/rev]	H ap [mm]
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	–	–



	ap	DC	DCX	X.V	fmin	fmax
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

ae/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

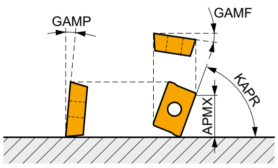
PRAMET

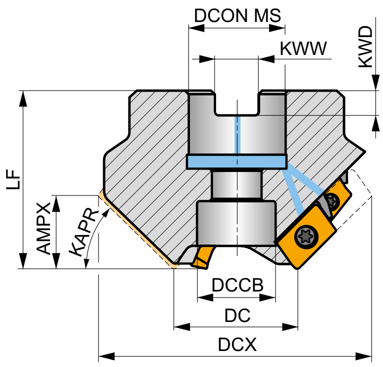
S

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
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

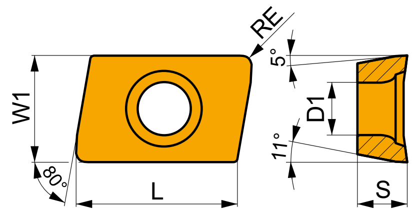
ISO 6462 DIN 8030

GI208	XPHT 1604..

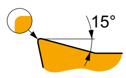
		Nm					
CH050	US 3509-T15	3.0	M 3.5	9	D-T07/T15	FG-15	HS 1230C

XPHT 16

	W1 [mm]	D1 [mm]	L [mm]	S [mm]
1604	9.525	4.40	15.88	4.76

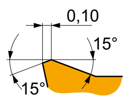


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.



E geometry with highly positive design for chamfer milling.

Product	Grade	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]
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	–	–	–	–	–	–	–	–	–

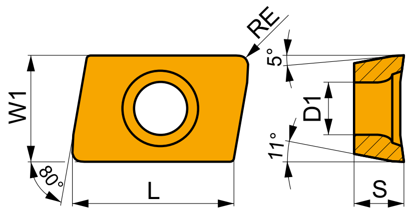


S geometry with highly positive design for chamfer milling.

Product	Grade	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]
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	–	–	–	–	–	–	–	–	–	–	–	–

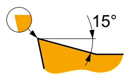
XPHT 16-FA

	W1 [mm]	D1 [mm]	L [mm]	S [mm]
1604	9.525	4.40	15.88	4.76



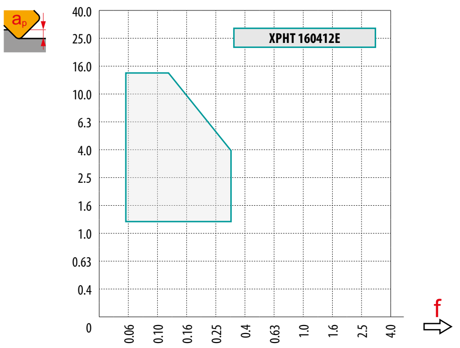
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

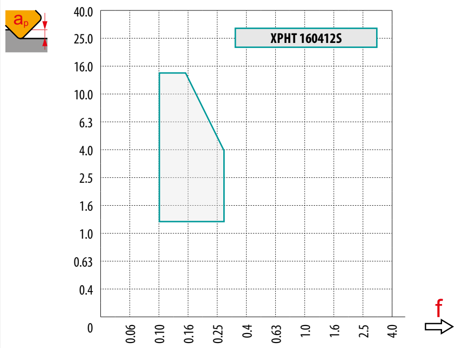
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
XPHT 160408F-FA	HF7	0.8	–	–	–	–	–	–	–	–	–	■ 255	0.12	15.0	–	–	–	–	–	–

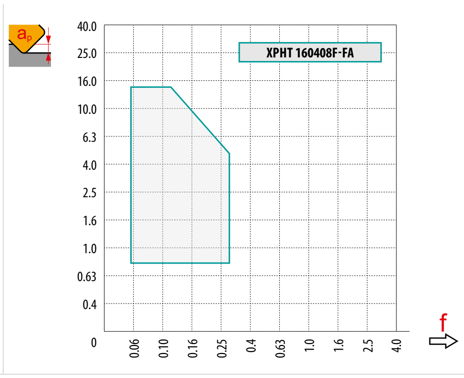


FA geometry with highly positive design for chamfer milling.

	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

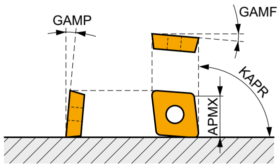
PRAMET

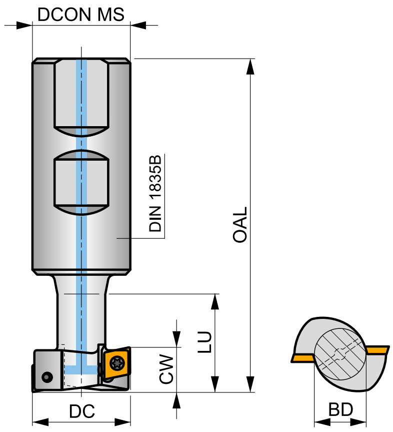
S

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

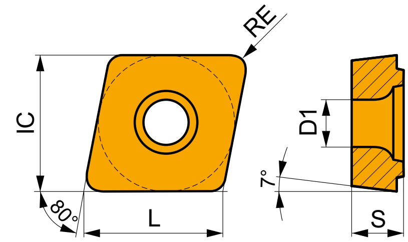
		Nm			
SQ212	US 3007-T09P	2.0	M 3	7.3	Flag T09P
SQ213	US 2506-T07P	1.2	M 2.5	6.3	Flag T07P

⏮

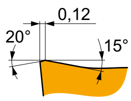
CCMX

PRAMET

	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



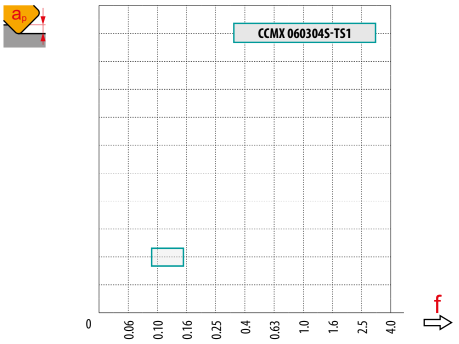
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

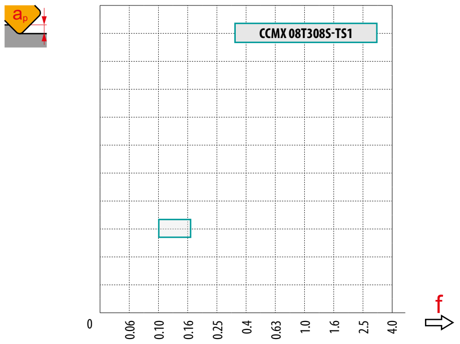


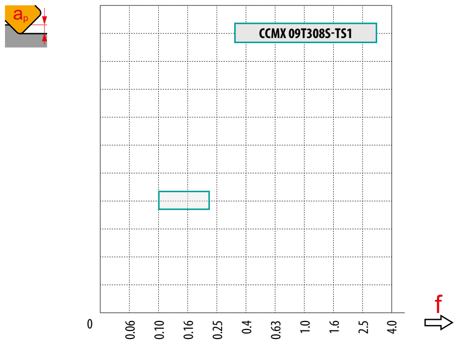
Special design for T-Slot milling fo+I250r light to medium cutting conditions.

Product	Grade	RE [mm]	P	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K	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]
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

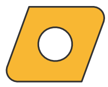
DC		APMX	$a_{e\,max}$
25	1	11	6.4
32	1	14	8.0
40	2	18	9.7

OTHER MILLING INSERTS

OTHER MILLING INSERTS – NAVIGATOR

ADKT 15	ADKX 15	APMT 16	CNM	ODMT 05
670	670	671	672	672
OFKR 07	RDET	RDEX	RDHX 20	RPET 12
673	673	674	674	675
RPEW 12	RPEX	SEEN	SEER	SEET 12
675	676	676	677	678
SEET 12-FA	SEET 12-PM	SEEW 12	SFCN	SNHF
678	679	679	680	680
SNHN	SNKX	SNUN	SPGN	SPGN 25 DZ
681	681	682	682	683
SPKN	SPKR	SPKX	SPUN	TNJF
683	684	685	685	686
TPCN 16	TPKN	TPKR	TPUN	VCGT 22-FA
687	687	688	689	690

XDHW

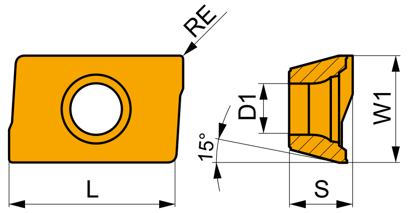


690

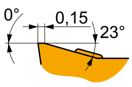
ADKT 15

PRAMET

	W1 [mm]	D1 [mm]	L [mm]	S [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.



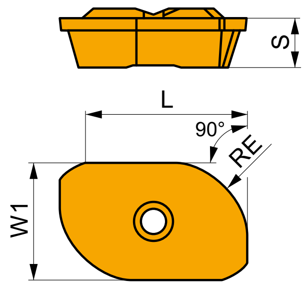
M geometry with highly positive design for medium machining.

Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [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		–	–	–		–	–	–		–	–	–

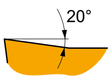
ADKX 15

PRAMET

	W1 [mm]	L [mm]	S [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.

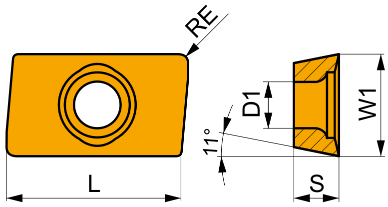


F geometry with very sharp positive design for light to medium machining.

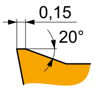
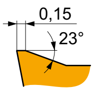
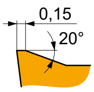
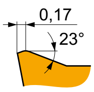
Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
ADKX 15T308ER-F	**M8330**	0.8	◩	245	0.10	10.0	■	145	0.09	10.0		–	–	–		–	–	–	◩	60	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		–	–	–

APMT 16

	W1 [mm]	D1 [mm]	L [mm]	S [mm]
1604	9.600	4.50	17.00	4.76



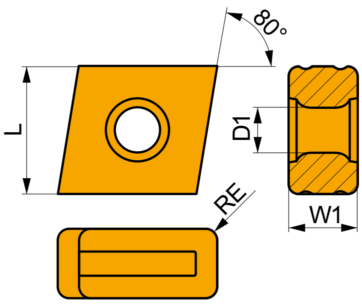
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product	Grade	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]
  0,15 20° F geometry with positive design for light machining.																				
APMT 1604PDER-F	M8330	–	■ 290	0.15	2.0	■ 170	0.14	2.0	◩ 275	0.15	2.0	–	–	–	◩ 70	0.11	1.6	–	–	–
  0,15 23° FM geometry with positive design for light to medium machining.																				
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	–	–	–
  0,15 20° ER-R geometry with positive design for rough machining.																				
APMT 1604PDER-R	M8330	–	■ 255	0.16	5.0	–	–	–	■ 240	0.16	5.0	–	–	–	–	–	–	–	–	–
	M8345	–	■ 185	0.16	5.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
  0,17 23° SR-R geometry with positive design for rough machining.																				
APMT 1604PDSR-R	M8330	–	■ 255	0.18	5.0	–	–	–	■ 240	0.18	5.0	–	–	–	–	–	–	–	–	–
	M8345	–	■ 180	0.18	5.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

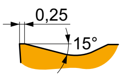
CNM

	D1 [mm]	L [mm]	S [mm]
63	5.50	15.00	8.00

PRAMET



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.



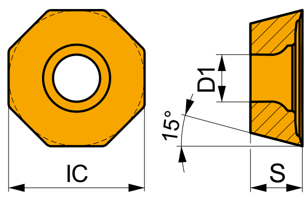
Universal geometry.

Product	Grade	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]
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	–	–	–	–	–	–	–	–	–

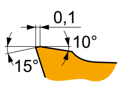
ODMT 05

	IC [mm]	D1 [mm]	S [mm]
0504	12.700	4.40	4.76

PRAMET



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.



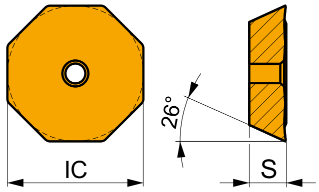
Slightly positive design for medium machining.

Product	Grade	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]
ODMT 0504ZZN	**M8340**	–	■ 195	0.25	1.5	–	–	–	◩ 185	0.25	1.5	–	–	–	–	–	–	–	–	–

PRAMET

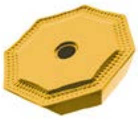
OFKR 07

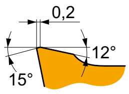
	IC [mm]	D1 [mm]	S [mm]
0704	17.845	2.65	4.56



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	Grade	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]
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	–	–	–	–	–	–	–	–	–



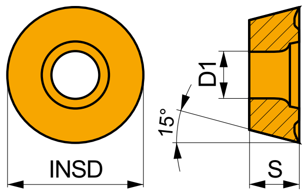


M geometry with positive design for light to medium machining.

PRAMET

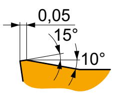
RDET

	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	Grade	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]
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	–	–	–

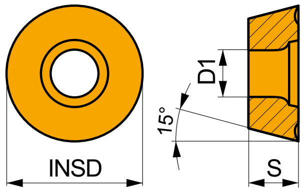


HFC S

Positive design for finish machining.

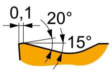
RDEX

	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	Grade	RE [mm]	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]
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	–	–	–

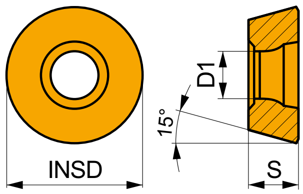


HFC S

Positive design for finish machining.

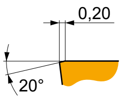
RDHX 20

	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	Grade	RE [mm]	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]
RDHX 2006MOT	**M8310**	–	◩	240	0.35	3.0		–	–	–	■	225	0.35	3.0	–	–	–		–	–	–	■ 45	0.15	1.0
	M8325	–	◩	180	0.35	3.0		–	–	–		–	–	–	–	–	–		–	–	–	–	–	–



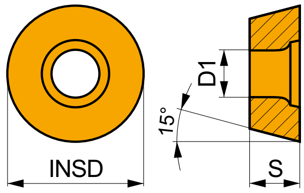
HFC T

Zero rake angle design for finish machining.

RPET 12

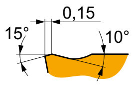
PRAMET

	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]
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	–	–	–



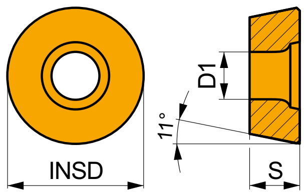
HFC S

Positive design for finish machining.

RPEW 12

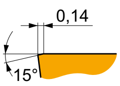
PRAMET

	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]
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	–	–	–	–	–	–	–	–	–

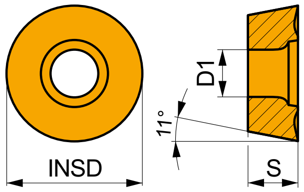


HFC S

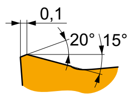
Zero rake angle design for finish machining.

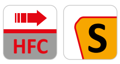
RPEX

	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.



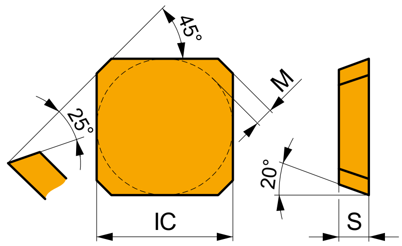


Positive design for finish machining.

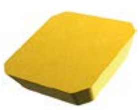
Product	Grade	RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
RPEX 1204MOSN-12	M8330	–	■ 235	0.30	1.5	◩ 140	0.27	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	–	–	–

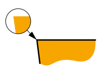
SEEN

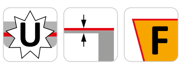
	IC [mm]	M [mm]	S [mm]
1203	12.700	2	3.18
1504	15.875	2	4.76



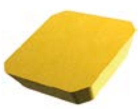
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

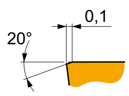


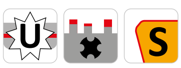




AFFN edge preperation, zero rake angle geometry for light to medium machining.





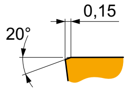


AFSN edge preperation, zero rake angle geometry for medium to heavy machining.

Product	Grade	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]
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	–	–	–	–	–	–	–	–	–
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.

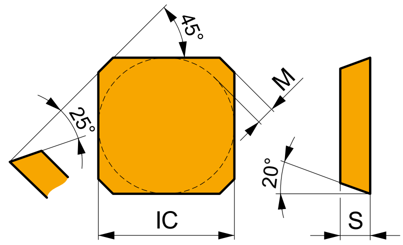
Product		RE	P			M			K			N			S			H		
		[mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]
SEEN 1504AFSN	**M8330**	–	■ 240	0.20	3.0	–	–	–	■ 225	0.20	3.0	–	–	–	–	–	–	◩ 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



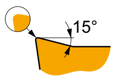
AFSN edge preperation, zero rake angle geometry for medium to heavy machining.

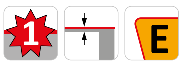
SEER

	IC [mm]	M [mm]	S [mm]
1203	12.700	2	3.18
1204	12.700	2	4.76
1504	15.875	2	4.76



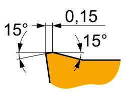
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.





AFEN edge preperation, chipbreaker geometry for medium to heavy machining.

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]
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	–	–	–



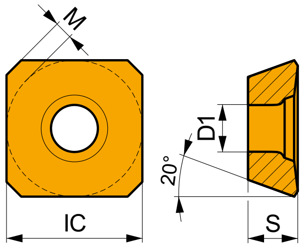
AFSN edge preperation, chipbreaker geometry for medium to heavy machining.

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]
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

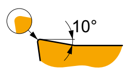
PRAMET

	IC [mm]	D1 [mm]	M [mm]	S [mm]
1204	12.700	5.50	2	4.76

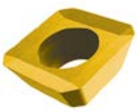
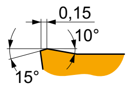


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product	Grade	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]
SEET 1204AFEN	M8330	–	■ 265	0.24	2.5	■ 155	0.22	2.5	◩ 250	0.24	2.5	–	–	–	◩ 65	0.22	2.0	–	–	–
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	–	–	–

AFEN edge preperation, positive all purpose geometry.

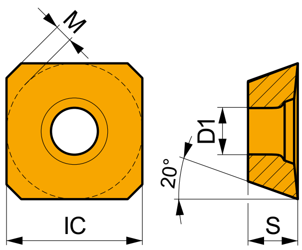



AFSN edge preperation, positive all purpose geometry.

SEET 12-FA

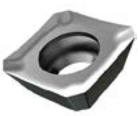
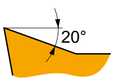
PRAMET

	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	Grade	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]
SEET 1204AFFN-FA	HF7	–	–	–	–	–	–	–	–	–	–	■ 330	0.18	3.0	–	–	–	–	–	–
	M0315	–	–	–	–	–	–	–	–	–	–	■ 780	0.18	3.0	–	–	–	–	–	–

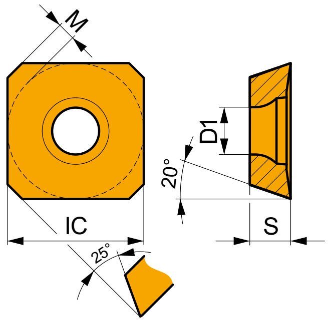



FA geometry with highly positive design for fine-finish to medium machining.

SEET 12-PM

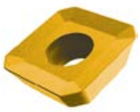
PRAMET

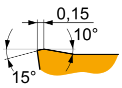
	IC [mm]	D1 [mm]	M [mm]	S [mm]
12T3	13.400	4.20	2	3.97



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]
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	–	–	–





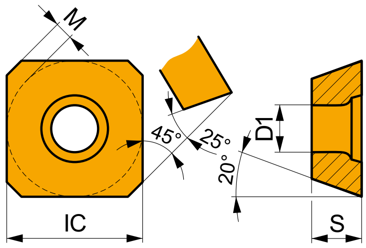
U S

PM geometry with positive all purpose design.

SEEW 12

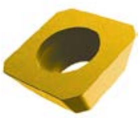
PRAMET

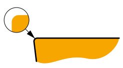
	IC [mm]	D1 [mm]	M [mm]	S [mm]
1204	12.700	5.50	2	4.76



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

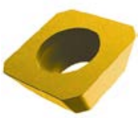
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
SEEW 1204AFEN	M8330	–	◩ 265	0.15	2.5	–	–	–	◩ 250	0.15	2.5	–	–	–	–	–	–	–	–	–
	M8340	–	◩ 240	0.15	2.5	–	–	–	◩ 225	0.15	2.5	–	–	–	–	–	–	–	–	–
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

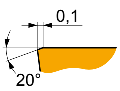




E

AFEN edge preperation with zero rake angle geometry for light to medium machining.

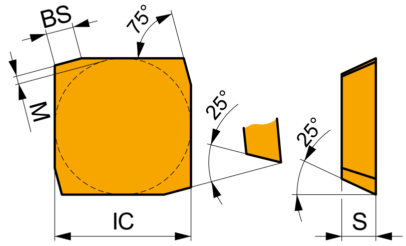




S

AFSN edge preperation with zero rake angle geometry for light to medium machining.

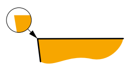
SFCN



	IC [mm]	M [mm]	S [mm]	BS [mm]
1203	12.700	1	3.18	2.00

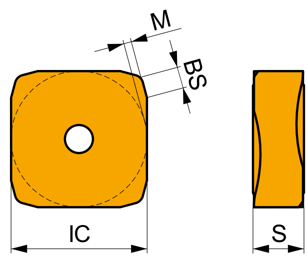
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

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]
SFCN 1203EFFR	**H10**	–	–	–	–	–	–	–	–	–	–	■ 405	0.12	3.0	–	–	–	–	–	–
	M0315	–	–	–	–	–	–	–	–	–	–	■ 765	0.12	3.0	–	–	–	–	–	–



Positive design for light to medium machining.

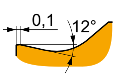
SNHF



	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]
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	–	–	–	–	–	–	–	–	–

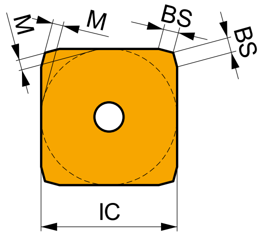


M geometry with positive design for light to medium machining.

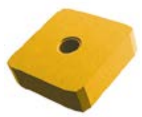
SNHN

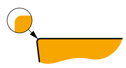
PRAMET

	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.





U E

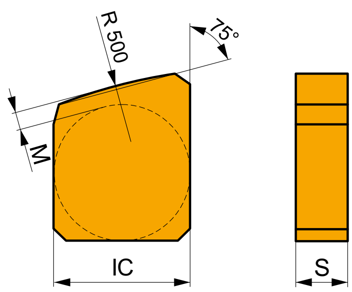
Standard negative milling geometry for 75° face milling.

Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
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		–	–	–		–	–	–		–	–	–		–	–	–		–	–	–

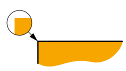
SNKX

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.



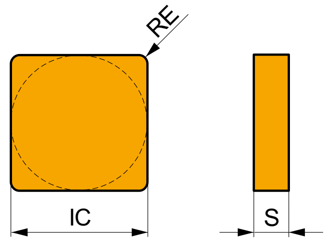
W F

Standard negative wiper geometry for 75° face milling.

Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
SNKX 1204ENFN	**H10**	–		–	–	–		–	–	–	■	115	0.15	6.0		–	–	–		–	–	–		–	–	–
SNKX 1504ENFN	**H10**	–		–	–	–		–	–	–	■	110	0.15	9.0		–	–	–		–	–	–		–	–	–

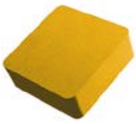
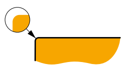
SNUN

	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]
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

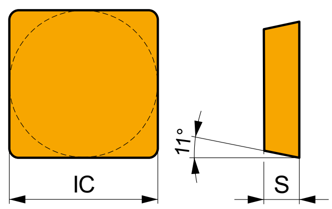



E

Negative geometry milling insert, can also be used for turning.

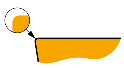
SPGN

	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]
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	–	–	–	–	–	–	–	–	–

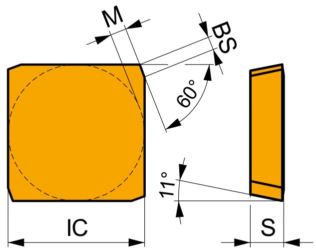
E

Zero rake angle design milling insert, can also be used for turning.

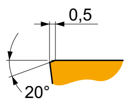
SPGN 25 DZ

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.



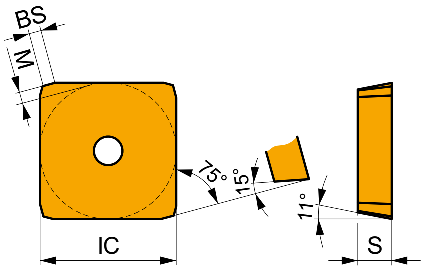
DZ geometry with zero rake angle design for heavy machining.

Product	Grade	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]
SPGN 2506DZSR	M8326	–	◩ 110	0.50	12.0	–	–	–	◩ 100	0.50	12.0	–	–	–	–	–	–	–	–	–
	M8346	–	■ 90	0.50	12.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

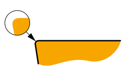
SPKN

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

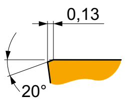


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.



EDER edge preperation with zero rake angle geometry for light to medium machining.

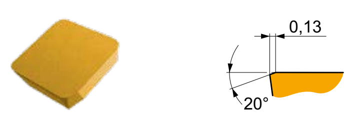
Product	Grade	RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
SPKN 1203EDER	H10	–	–	–	–	–	–	–	■ 110	0.15	4.0	–	–	–	–	–	–	–	–	–
	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.

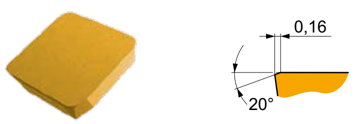
Product	Grade	RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
SPKN 1203EDSL	M8330	–	◩ 240	0.20	4.0	–	–	–	■ 225	0.20	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.



EDSR edge preperation with zero rake angle geometry for medium machining.

Product	Grade	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]
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	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–



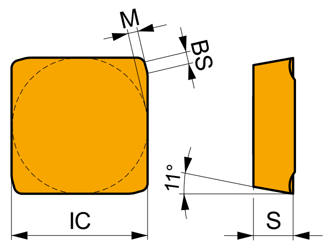
EDSR (right-hand cut) / EDSL (left-hand cut) edge preperation with zero rake angle geometry for medium machining.

Product	Grade	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]
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

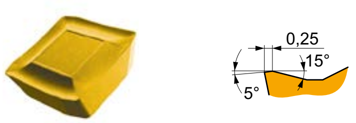
	IC [mm]	L [mm]	M [mm]	S [mm]
1203	12.700	12.70	1	3.18
1504	15.875	15.88	1	4.76



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

EDSR edge preperation, chipbreaker geometry for medium to heavy machining.

Product	Grade	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]
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	–	–	–	–	–	–	–	–	–	–	–	–



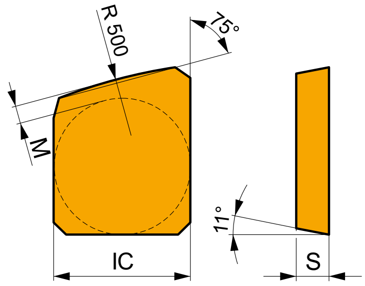
EDSR edge preperation, chipbreaker geometry for medium to heavy machining.

Product	Grade	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]
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	–	–	–	–	–	–	–	–	–

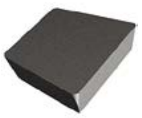
SPKX

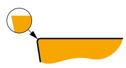
PRAMET

	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.





W F

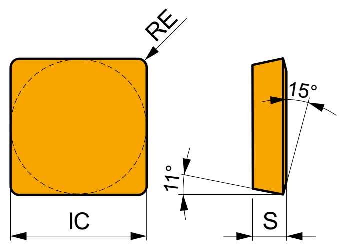
Zero rake wiper geomerty for improved surface finish

Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
SPKX 1203EDFR	**H10**	–		–	–	–		–	–	–	■	100	0.20	4.0		–	–	–		–	–	–		–	–	–
SPKX 1504EDFR	**H10**	–		–	–	–		–	–	–	■	95	0.25	5.0		–	–	–		–	–	–		–	–	–

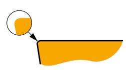
SPUN

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



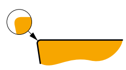
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.



E

Zero rake geometry milling insert, can also be used for turning.

Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
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		–	–	–		–	–	–		–	–	–

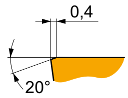
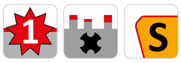


E

Zero rake geometry milling insert, can also be used for turning.

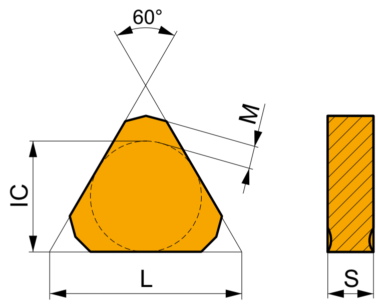
Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
SPUN 150412	**M8330**	1.2	■	225	0.20	5.0		–	–	–	◩	210	0.20	5.0		–	–	–		–	–	–		–	–	–
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.

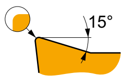
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
																				
Zero rake geometry milling insert, 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

	IC [mm]	L [mm]	M [mm]	S [mm]
1204	12.700	22.00	2	4.76



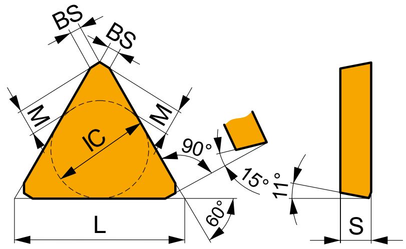
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [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 rake angle with chip breaking geometry.																				
TNJF 1204ANEN	**M8330**	–	■ 270	0.15	4.0	◩ 160	0.14	4.0	◩ 255	0.15	4.0	–	–	–	–	–	–	–	–	–

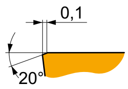
TPCN 16

PRAMET

	BS [mm]	IC [mm]	L [mm]	M [mm]	S [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.



U S

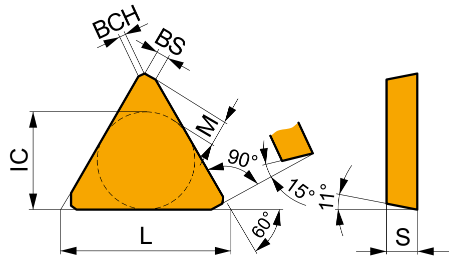
Special design for disc milling.

Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K	vc [m/min]	f [mm/tooth]	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]	f [mm/tooth]	ap [mm]
TPCN 1603PDSN	M8330	–	■	195	0.20	–	–	–	–	■	185	0.20	–	–	–	–	–	–	–		–	–	–
	M8340	–	■	175	0.20	–	–	–	–	◩	165	0.20	–	–	–	–	–	–	–		–	–	–

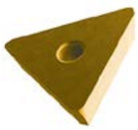
TPKN

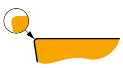
PRAMET

	IC [mm]	L [mm]	M [mm]	S [mm]	BCH [mm]	BS [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.

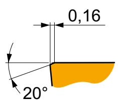




E

PDER edge preperation, zero rake angle geometry for light to medium machining.

Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K	vc [m/min]	f [mm/tooth]	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]	f [mm/tooth]	ap [mm]
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	–	–	–	–	–	–		–	–	–

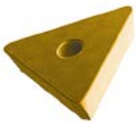


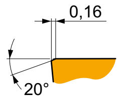
U S

PDSR edge preperation, zero rake angle geometry for medium machining.

Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K	vc [m/min]	f [mm/tooth]	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]	f [mm/tooth]	ap [mm]
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.





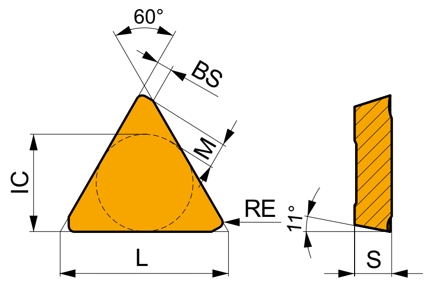
PDSR edge preperation, zero rake angle geometry for medium machining.

Product	Grade	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]
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	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

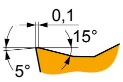
TPKR

PRAMET

	IC [mm]	L [mm]	M [mm]	S [mm]	BS [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.



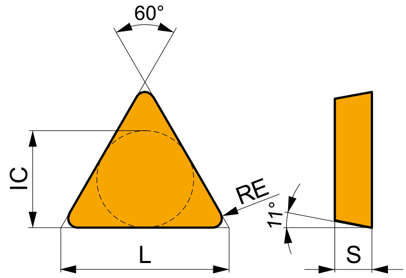
PDSR edge preperation, chipbreaker geometry for medium to heavy machining.

Product	Grade	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]
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	–	–	–	–	–	–	–	–	–	–	–	–

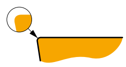
TPUN

	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

PRAMET



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.



E

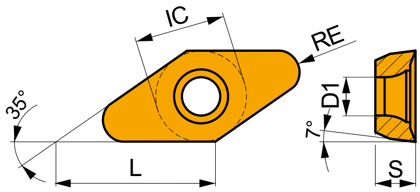
Zero rake geometry milling insert, can also be used for turning.

Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
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

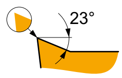
VCGT 22-FA

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.



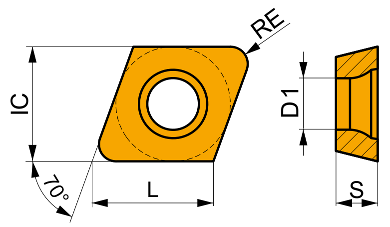
FA geometry with highly positive design for medium to rough machining.

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 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	–	–	–	–	–	–

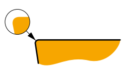
XDHW

PRAMET

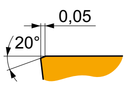
	IC [mm]	D1 [mm]	L [mm]	S [mm]
0702	6.500	2.95	6.90	2.38
10T3	10.000	3.95	10.60	3.97



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.



EN geometry with zero rake angle design for slot milling.

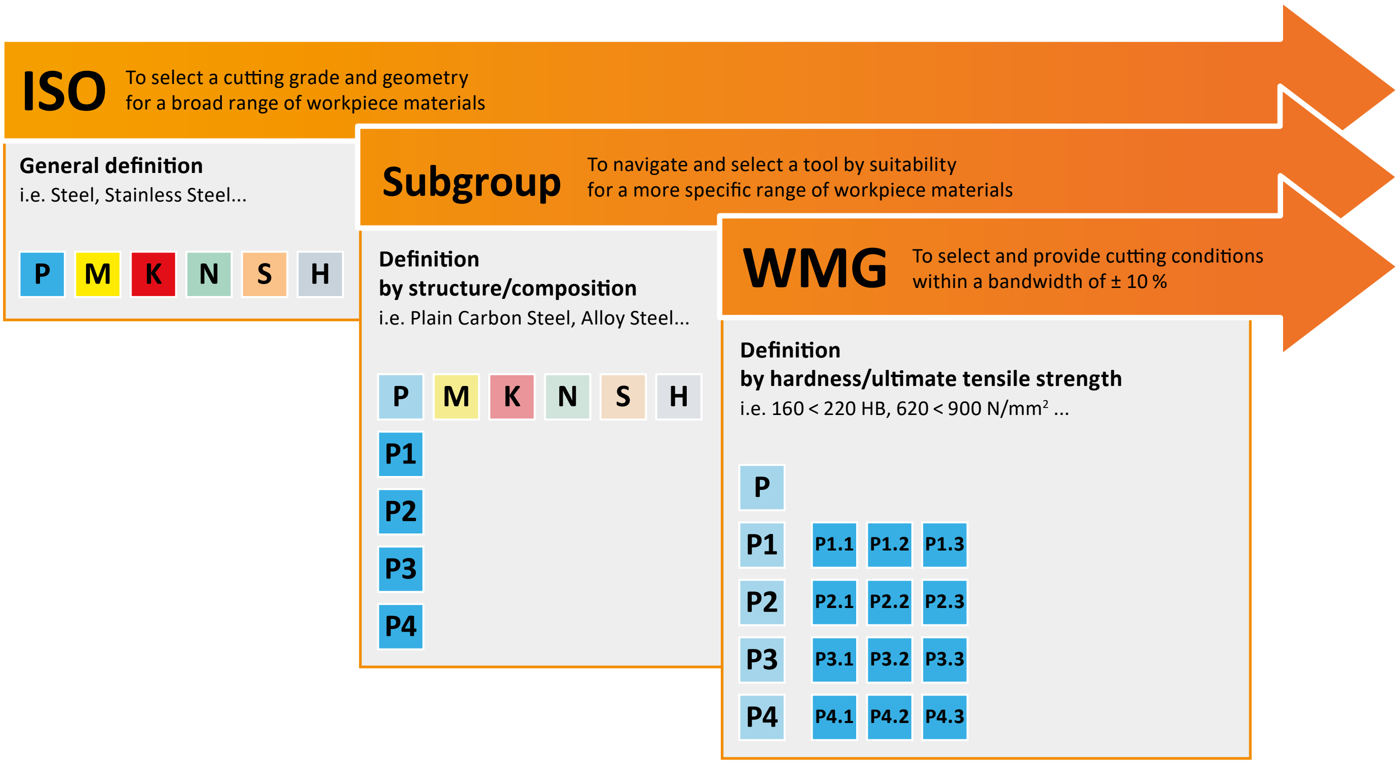


SN geometry with zero rake angle design for slot milling.

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]
XDHW 070210EN	**M8310**	1.0	◩ 310	0.10	1.0	–	–	–	■ 290	0.10	1.0	–	–	–	–	–	–	■ 60	0.15	1.0
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 < 45HRC)	**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 **AC38XГМ,** 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 **AC38XГМ,** 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 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

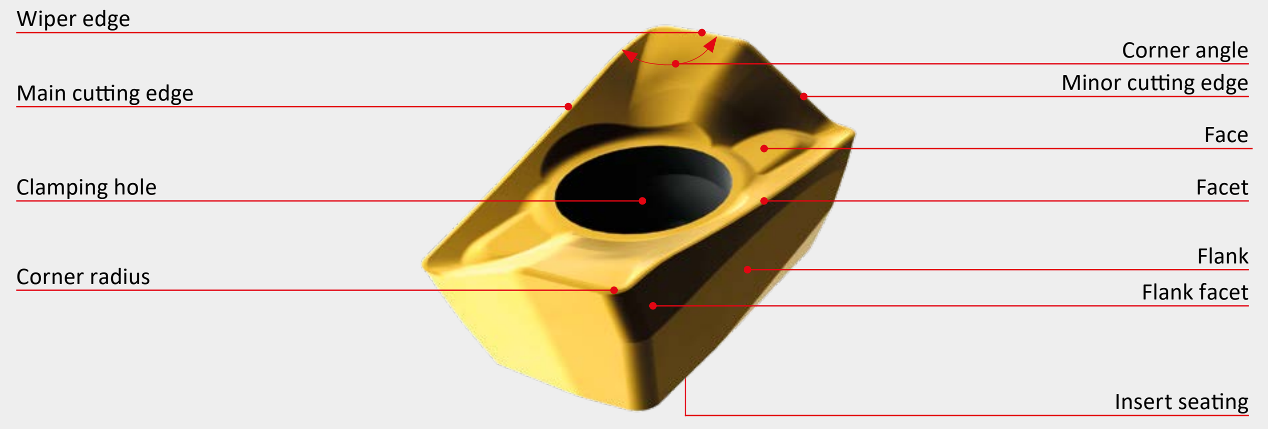
Resulting corrected cutting speed vcc

vcc = vc . kvG . Cvco . CvcT . CvcA . CvcRTC . CfzRTC

kvG - coefficient of used material

vc - starting speed from catalogue page

Parts of an Indexable Insert



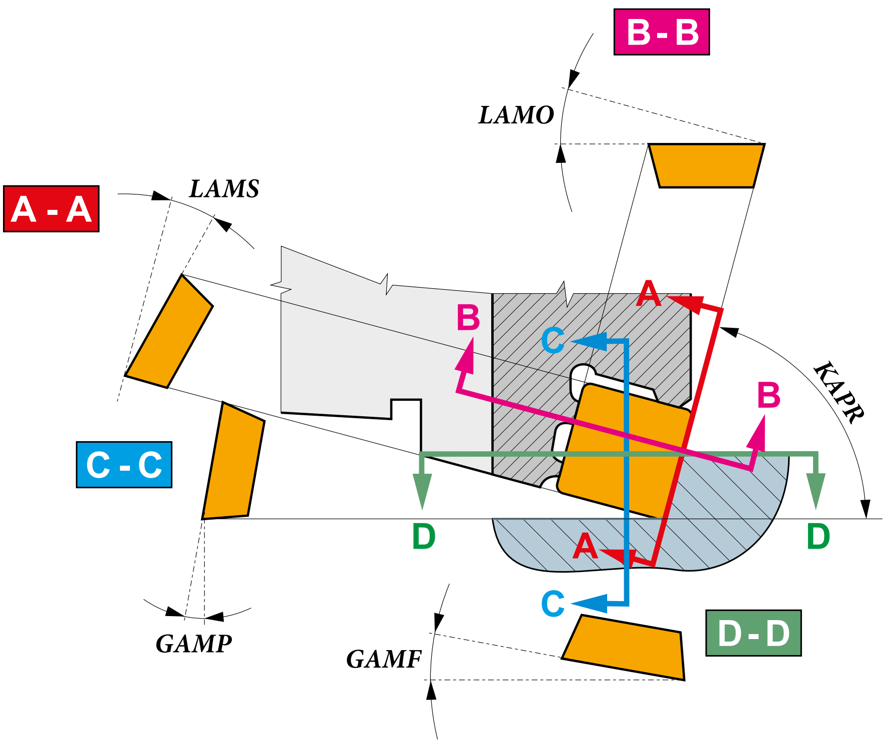
Geometry of milling tool

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.

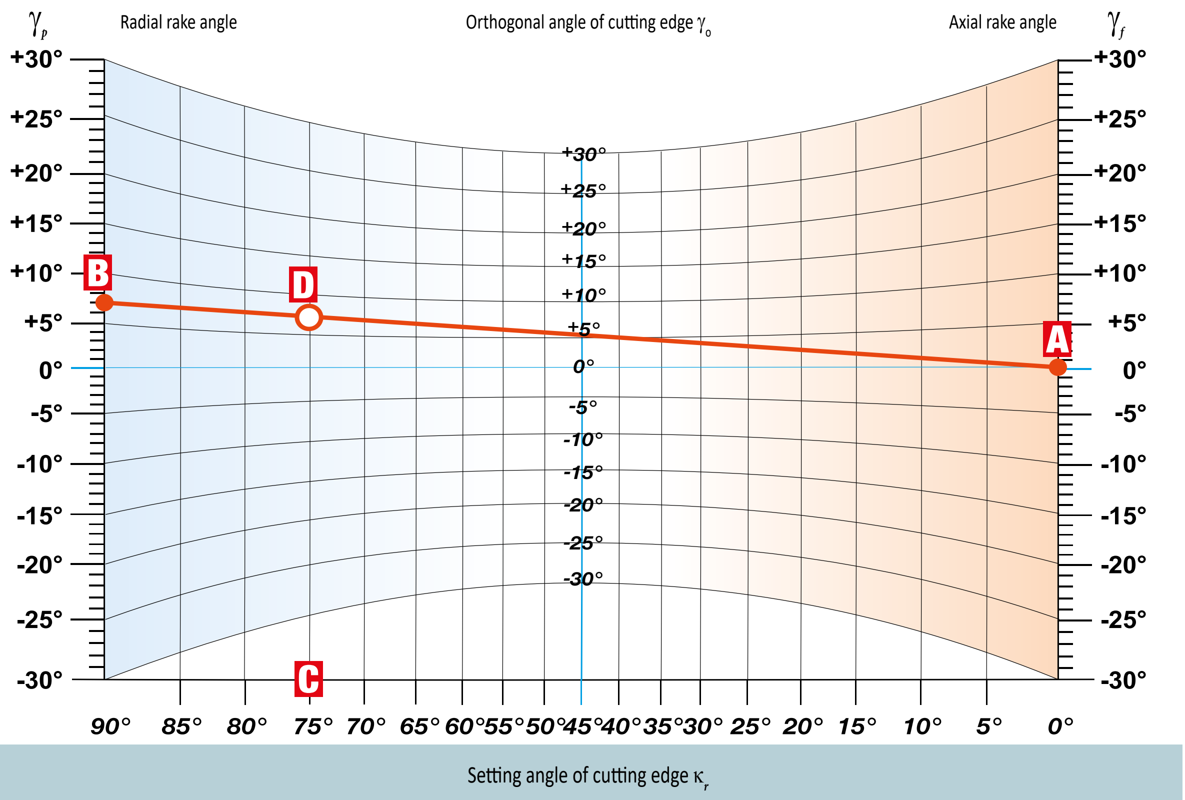
Working and constructional angles of milling tool



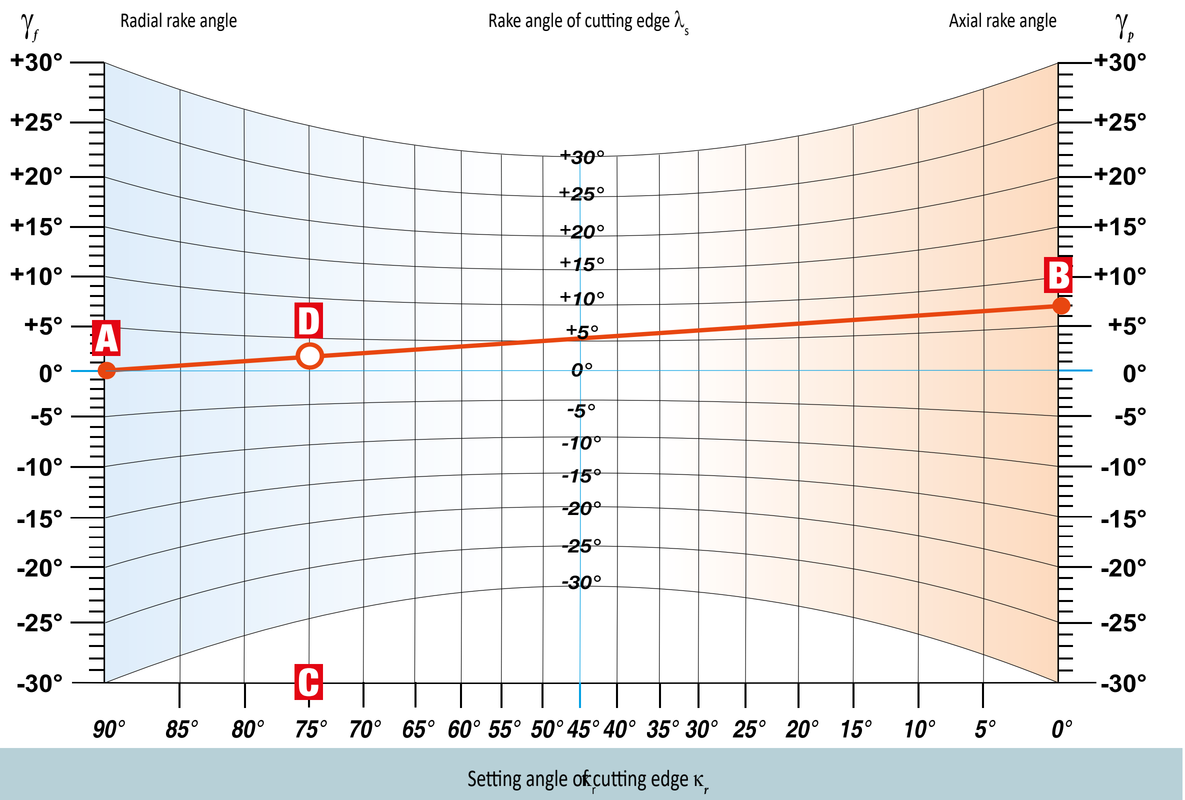
NOMOGRAM FOR CALCULATING THE WORKING GEOMETRY OF MILLING TOOL

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.

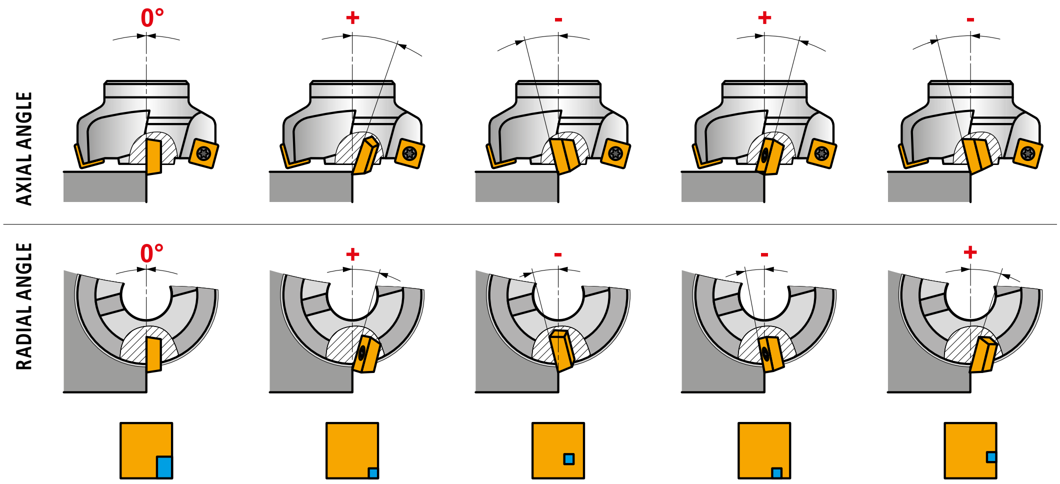
That is why we use the average value of chip thickness h_m for any calculations.

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.

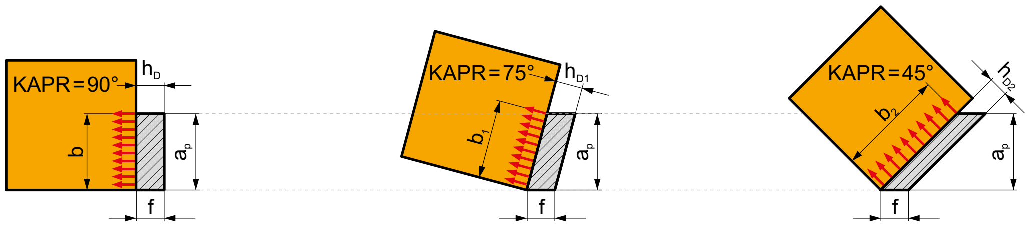
The average chip thickness h_m depends on the type of milling cutter and the cutting conditions, especially on the relation a_e/DC, feed per tooth f_z and the setting angle $KAPR$ – κ_r. See picture on the next page for an illustrative example.

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 $\boldsymbol{GAMO} - \gamma_o$, $\boldsymbol{LAMS} - \lambda_s$, $\boldsymbol{KAPR} - \kappa_r$, 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



$h_D = f$	$h_{D1} = 0{,}97f$	$h_{D2} = 0{,}71f$
$k_c = 1{,}00\ k_{c1}$	$k_c = 1{,}01\ k_{c1}$	$k_c = 1{,}09\ k_{c1}$
$k_c/b = 1{,}00$	$k_c/b_1 = 0{,}98$	$k_c/b_2 = 0{,}77$

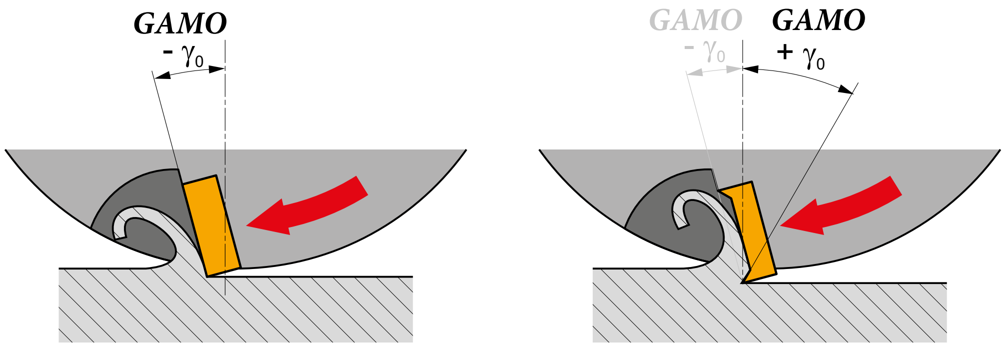
When choosing the entering angle for face milling, you should, among other things, account for the power and rigidity of the machine (size and type of tool holder), its dynamic capabilities and maximum depth of removal. For instance, if you have a high-performance (50 – 100 kW) machine at your disposal 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).

CHOICE OF TOOL

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)

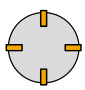
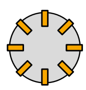
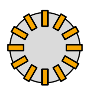


The following table lists the three basic milling cutter geometries and the approximate priority of their use with regard to the type of machined material. More detailed information about individual tool families with consideration of insert geometries can be found in the catalogue section.

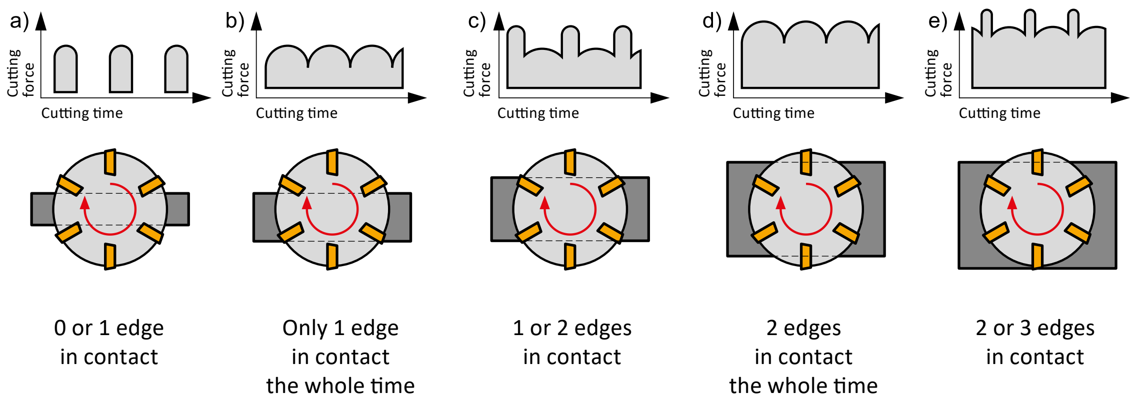
Conditions		Selection of cutter geometry according to application		
		Negative – Negative	Negative – Positive	Positive – Positive
Structural parameter of the body	*GAMP* (A.R.)	-	+	+
	GAMF (R.R.)	-	-	+
	GAMO	-	+	+
Machined material	Carbon steels, alloy steels (< 300 HB)	⬕	■	■
	Stainless steels (< 300 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

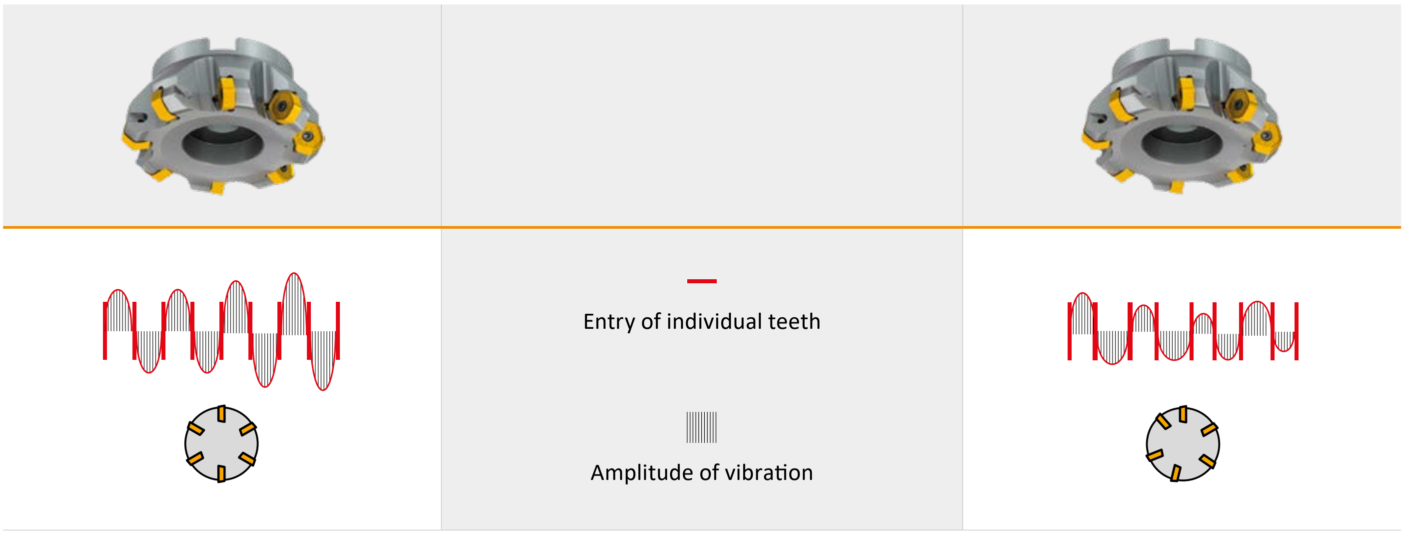
The number of teeth on the milling cutter is also important in relation to the width of the milled surface, where it determines the force (and acoustic) characteristics of the cut, as indicated in the following figure.

			
Feed per minute	+	++	+++
Tough materials	+++	++	+
Power requirement	+	++	+++
Resulting roughness	+++	++	+
			

Tooth Pitch



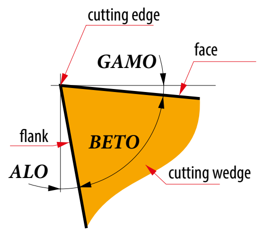
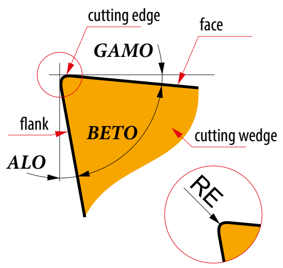
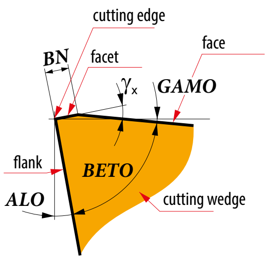
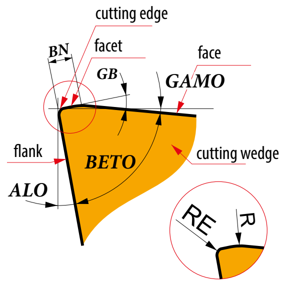
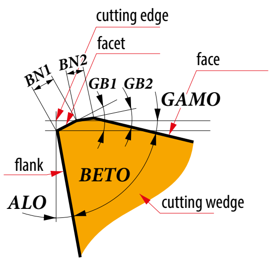
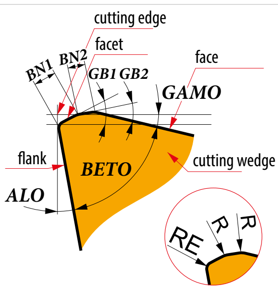
In addition, some tool families offer the option to choose between even and uneven tooth pitch. Using a tool with an uneven tooth pitch interferes with harmonic oscillation and, as a result, helps improve stability and reduce the risk of vibration. That means you should choose uneven tooth pitch if you 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.



CHOICE OF CUTTING INSERT

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.

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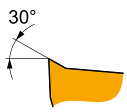
GEOMETRY OF MILLING INSERTS – CONTENT (ALPHABETICAL)

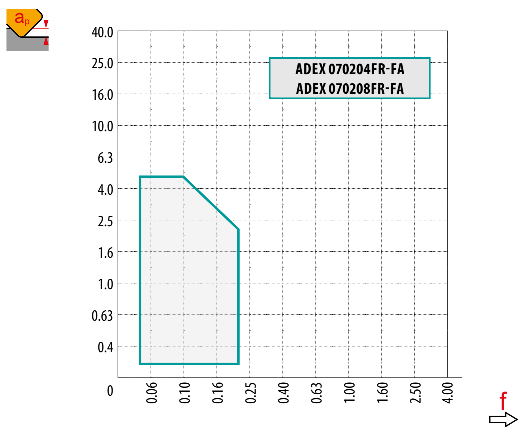
Geometry of milling inserts

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).

CHOICE OF CUTTING INSERT

ADEX 07-FA



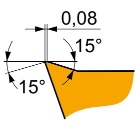


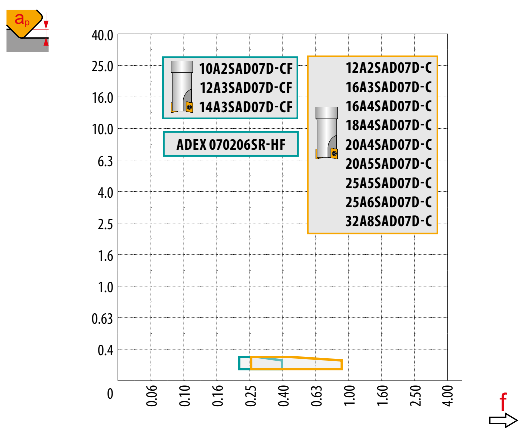
P	M	K	N	S	H
			■		

f	0.03 – 0.20
a_p	0.1 – 5.0

? ADEX 0702..FR-FA

ADEX 07-HF



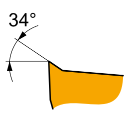


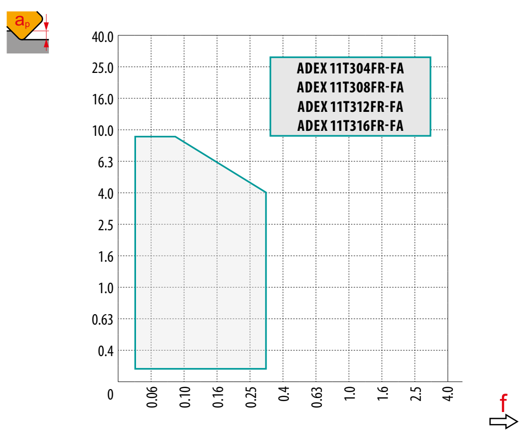
P	M	K	N	S	H
■	◩				

f	0.20 – 0.90
a_p	0.1 – 0.3

? ADEX 070206SR-HF

ADEX 11-FA



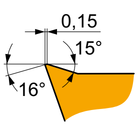


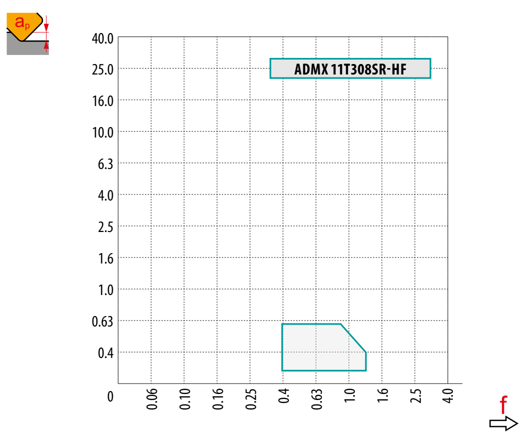
P	M	K	N	S	H
			■		

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





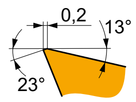
P	M	K	N	S	H
■	◩				

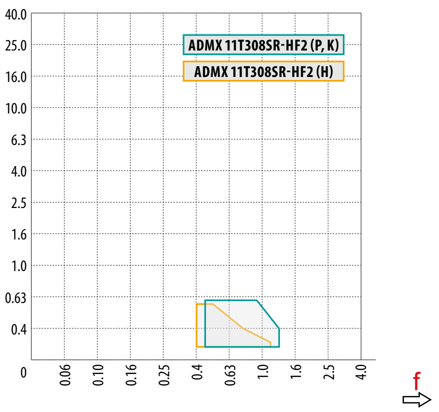
f	0.40 – 1.3
a_p	0.1 – 0.6

? ADEX 11T308SR-HF

CHOICE OF CUTTING INSERT

ADEX 11-HF2



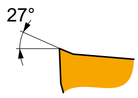


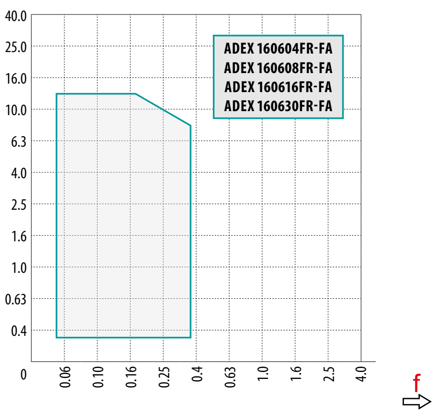
P	M	K	N	S	H
■	◪	◪		◪	◪

f	0.40 – 1.3
a_p	0.2 – 0.6

? ADEX 11T308SR-HF2

ADEX 16-FA



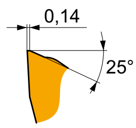


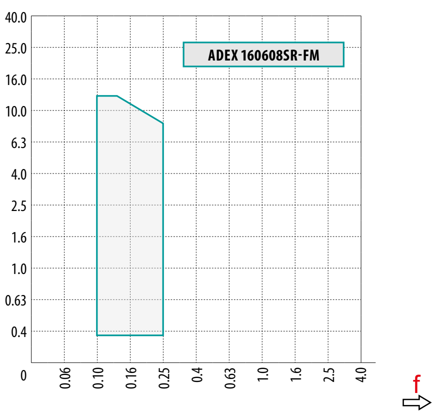
P	M	K	N	S	H
			■		

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



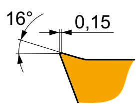


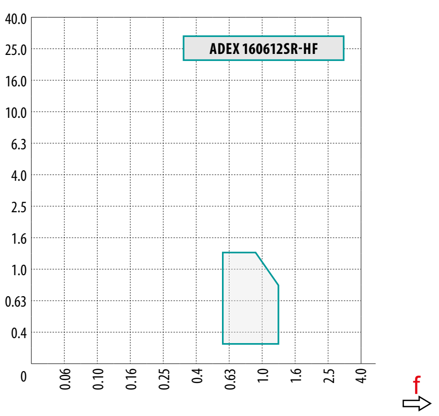
P	M	K	N	S	H
■	◪	■		◪	

f	0.10 – 0.25
a_p	0.3 – 13.0

? ADEX 160608SR-FM

ADEX 16-HF



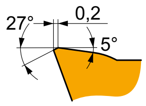


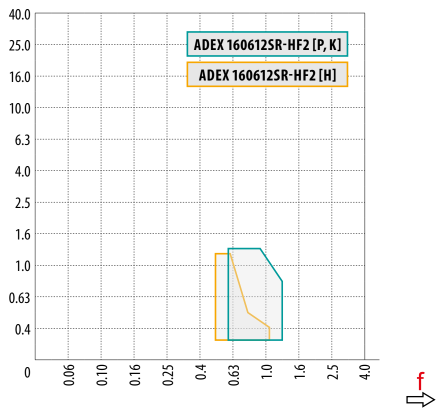
P	M	K	N	S	H
■	◪				

f	0.60 – 1.3
a_p	0.3 – 1.3

? ADEX 160612SR-HF

ADEX 16-HF2





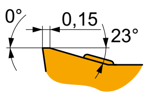
P	M	K	N	S	H
■	◪	◪		◪	◪

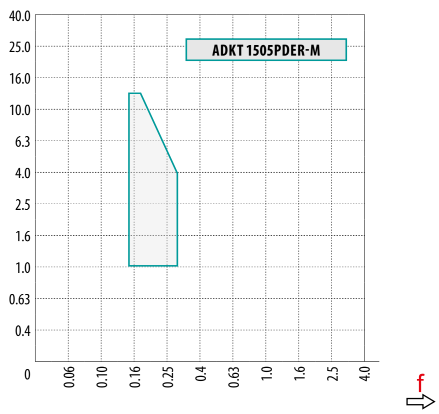
f: 0.60 – 1.3

a_p: 0.3 – 1.3

? ADEX 160612SR-HF2

ADKT 15-M





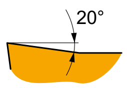
P	M	K	N	S	H
■	■	■		◪	

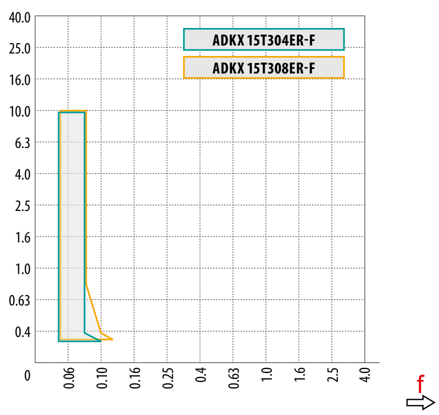
f: 0.15 – 0.30

a_p: 1.0 – 13.0

? ADKT 1505PDER-M

ADKX 15-F





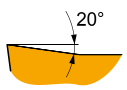
P	M	K	N	S	H
◪	■			◪	

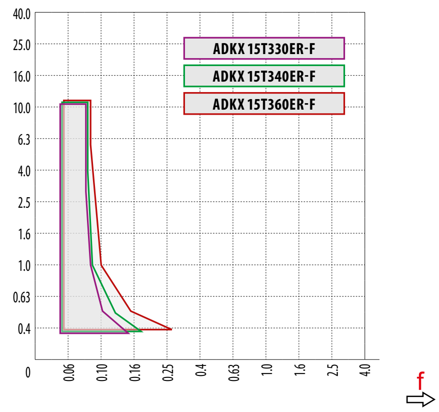
f: 0.05 – 0.12

a_p: 0.3 – 10.0

? ADKX 15T304ER-F
ADKX 15T308ER-F

ADKX 15-F (RAD)





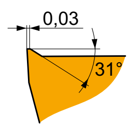
P	M	K	N	S	H
■	■			■	

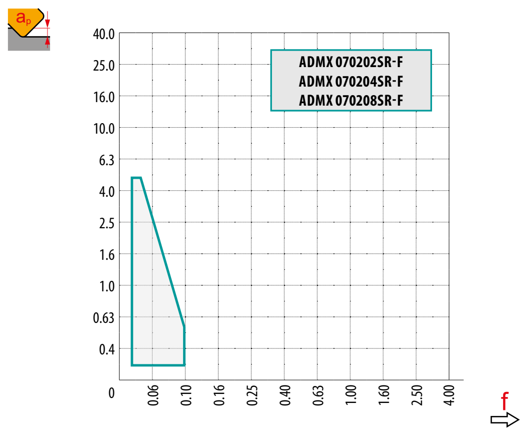
f: 0.05 – 0.26 (according to insert radii)

a_p: 0.3 – 10.0

? ADKX 15T330ER-F
ADKX 15T340ER-F
ADKX 15T360ER-F

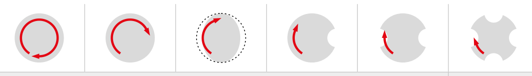
ADMX 07-F





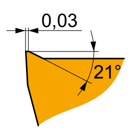
P	M	K	N	S	H
■	■		◩	◩	

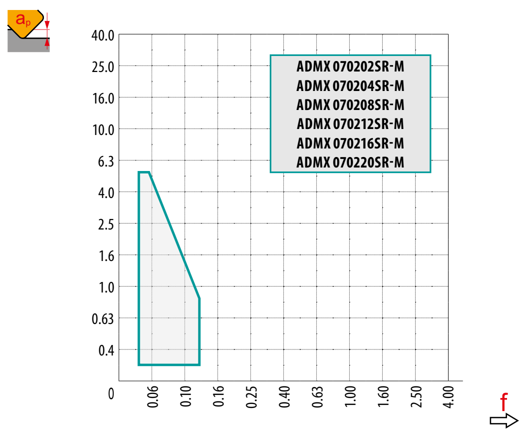
f	0.02 – 0.10
a_p	0.1 – 5.0



? ADMX 070202SR-F
ADMX 070204SR-F
ADMX 070208SR-F

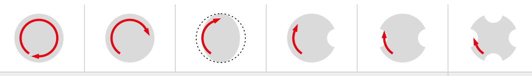
ADMX 07-M





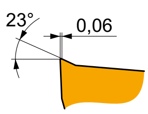
P	M	K	N	S	H
■	◩	◩	◩	◩	

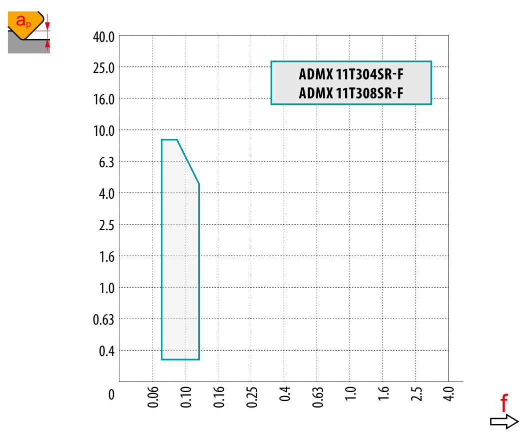
f	0.03 – 0.12
a_p	0.1 – 5.0



? ADMX 070202SR-M, ADMX 070204SR-M
ADMX 070208SR-M, ADMX 070212SR-M
ADMX 070216SR-M, ADMX 070220SR-M

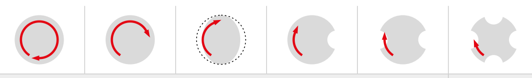
ADMX 11-F





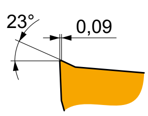
P	M	K	N	S	H
■	◩	◩	◩	◩	

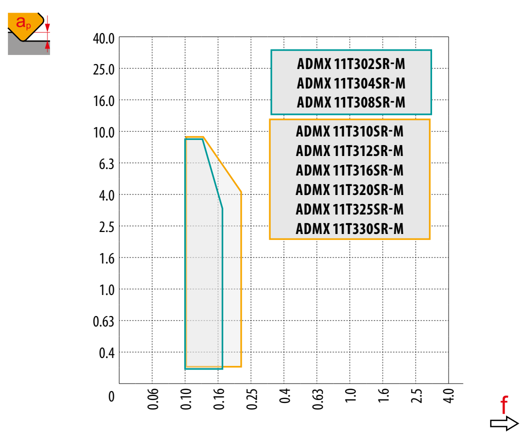
f	0.07 – 0.12
a_p	0.2 – 9.0



? ADMX 11T304SR-F
ADMX 11T308SR-F

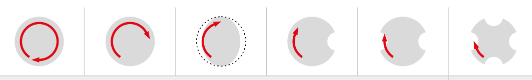
ADMX 11-M





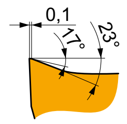
P	M	K	N	S	H
■	■	■		◩	

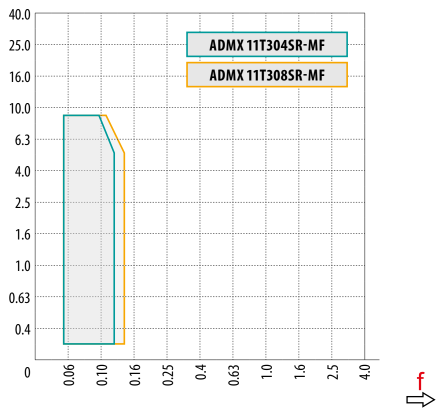
f	0.10 – 0.22
a_p	0.2 – 9.0



? ADMX 11T3..SR-M

ADMX 11-MF





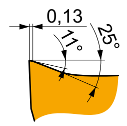
P	M	K	N	S	H
■	■		◪	■	

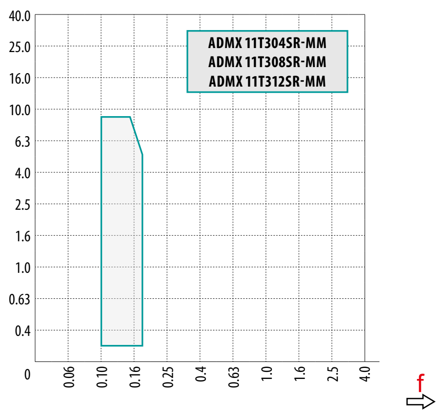
f: 0.05 – 0.14

a_p: 0.2 – 9.0

? ADMX 11T304SR-MF
ADMX 11T308SR-MF

ADMX 11-MM





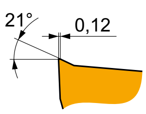
P	M	K	N	S	H
■	■		◪	■	

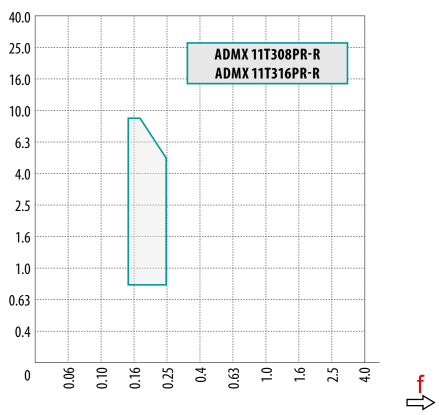
f: 0.10 – 0.18

a_p: 0.2 – 9.0

? ADMX 11T304SR-MM
ADMX 11T308SR-MM
ADMX 11T312SR-MM

ADMX 11-R





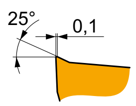
P	M	K	N	S	H
■	◪	■		◪	◪

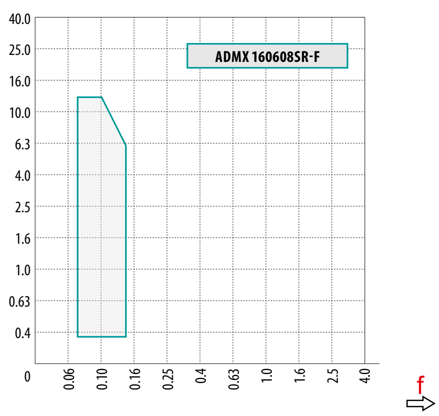
f: 0.15 – 0.25

a_p: 0.8 – 9.0

? ADMX 11T3..PR-R

ADMX 16-F





P	M	K	N	S	H
■	◪	◪	◪	◪	

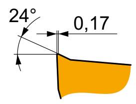
f: 0.07 – 0.15

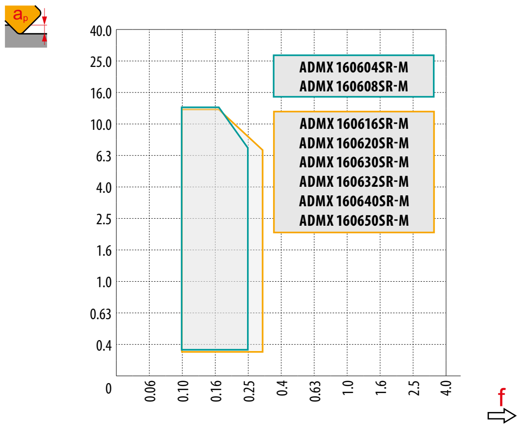
a_p: 0.3 – 13.0

? ADMX 160608SR-F

CHOICE OF CUTTING INSERT

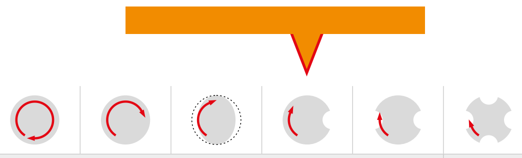
ADMX 16-M





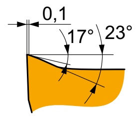
P	M	K	N	S	H
■	■	■		◩	

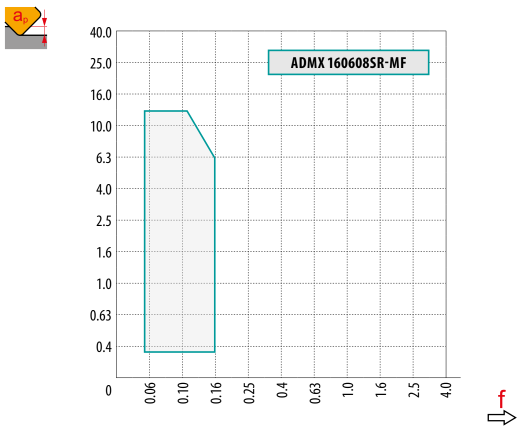
f	0.10 – 0.25
a_p	0.3 – 13.0



? ADMX 1606..SR-M

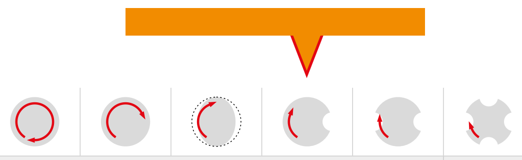
ADMX 16-MF





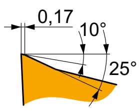
P	M	K	N	S	H
■	■		◩	■	

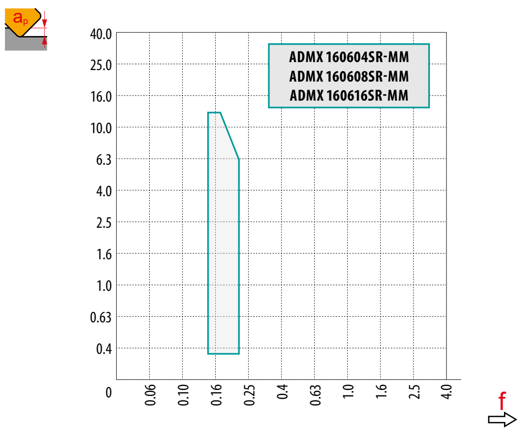
f	0.05 – 0.16
a_p	0.3 – 13.0



? ADMX 160608SR-MF

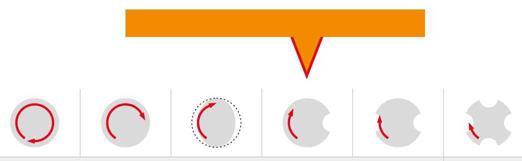
ADMX 16-MM





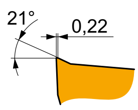
P	M	K	N	S	H
■	■		◩	■	

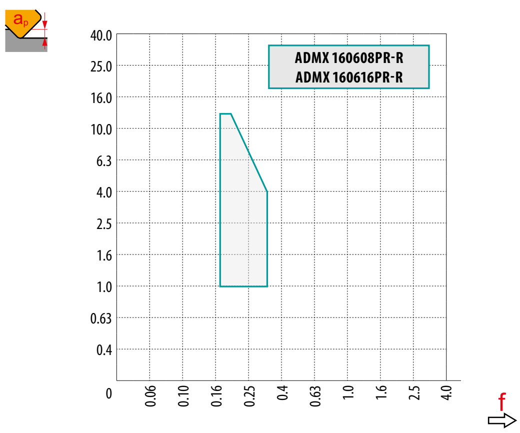
f	0.14 – 0.22
a_p	0.3 – 13.0



? ADMX 160604SR-MM
ADMX 160608SR-MM
ADMX 160616SR-MM

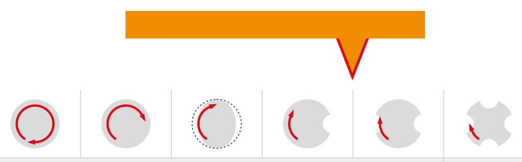
ADMX 16-R





P	M	K	N	S	H
■	◩	■		◩	◩

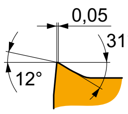
f	0.17 – 0.35
a_p	1.0 – 13.0

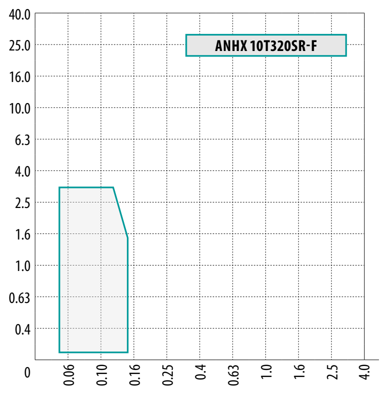


? ADMX 160608PR-R
ADMX 160616PR-R

CHOICE OF CUTTING INSERT

ANHX 10-F

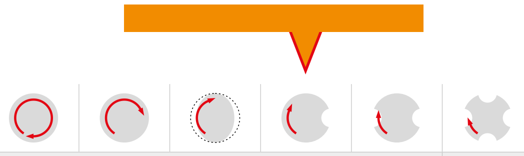




P	M	K	N	S	H
■	◪				

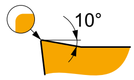
f: 0.05 – 0.15

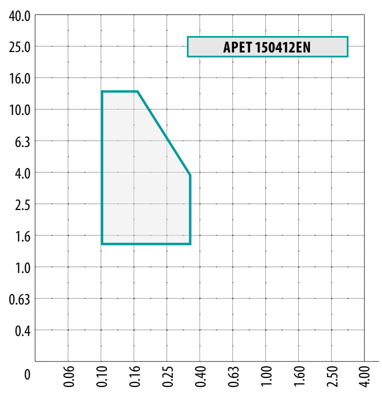
a_p: 0.1 – 3.0



? ANHX 10T320SR-F

APET 15EN

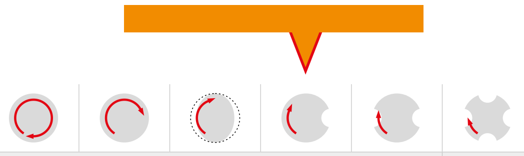




P	M	K	N	S	H
■	◪	■		◪	

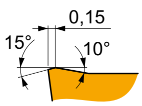
f: 0.10 – 0.35

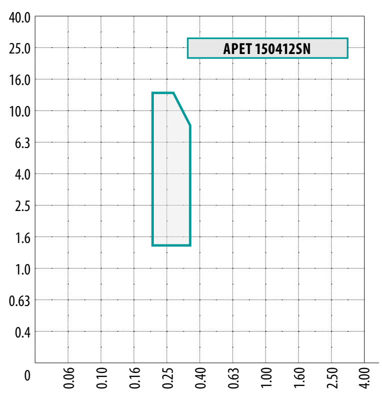
a_p: 1.5 – 12.0



? APET 150412EN

APET 15SN

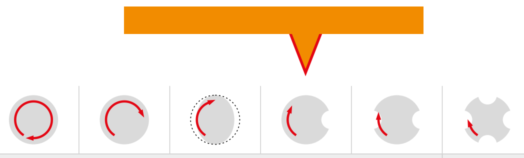




P	M	K	N	S	H
■	◪	■		◪	

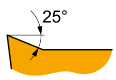
f: 0.20 – 0.35

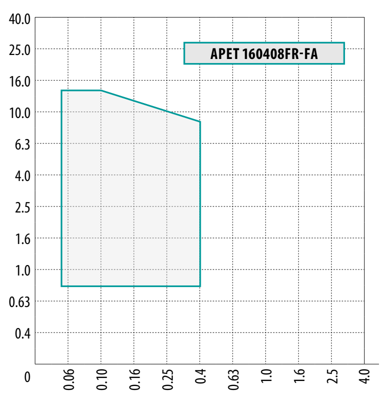
a_p: 1.5 – 12.0



? APET 150412SN

APET 16-FA

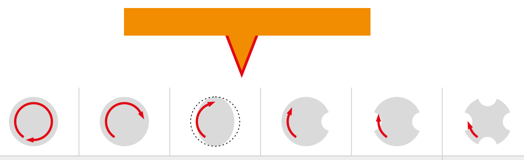




P	M	K	N	S	H
			■		

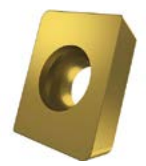
f: 0.05 – 0.40

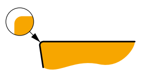
a_p: 0.8 – 15.0

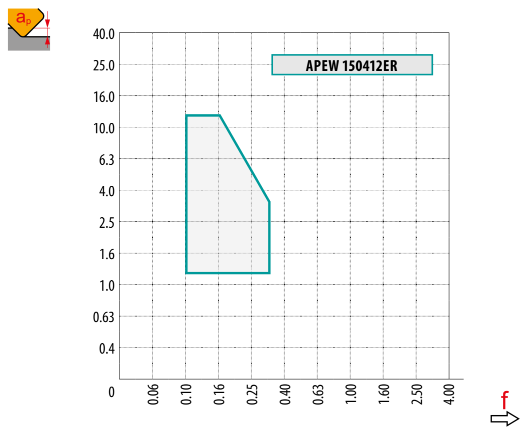


? APET 160408FR-FA

APEW 15ER

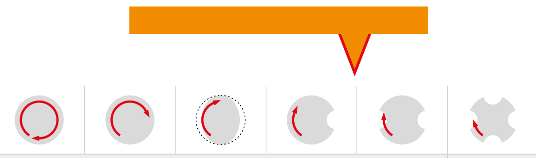






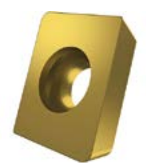
P	M	K	N	S	H
◪		■			◪

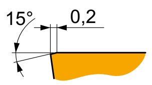
f	0.10 – 0.30
a_p	1.2 – 12.0

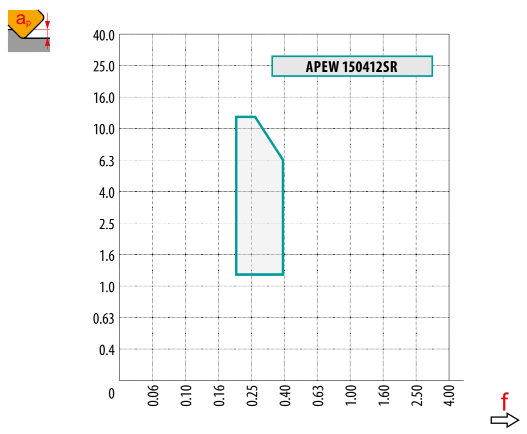


? **APEW 150412ER**

APEW 15SR

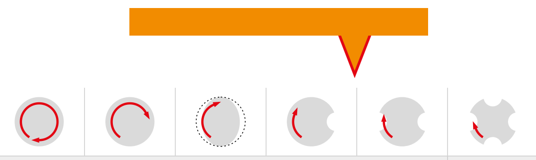






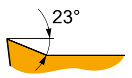
P	M	K	N	S	H
◪		■			◪

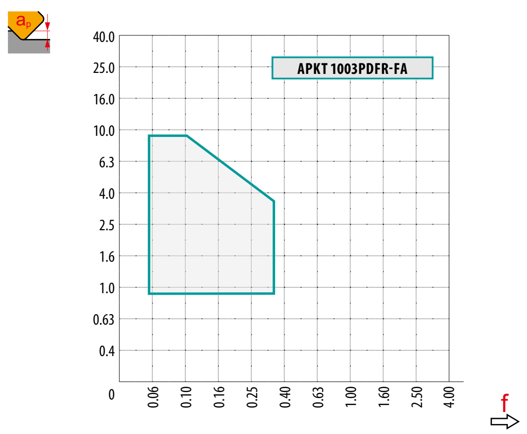
f	0.20 – 0.40
a_p	1.2 – 12.0



? **APEW 150412SR**

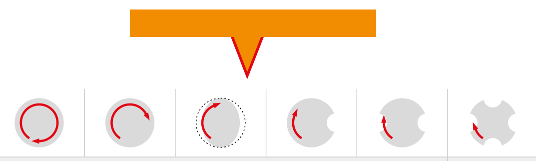
APKT 10-FA





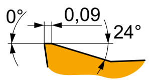
P	M	K	N	S	H
			■		

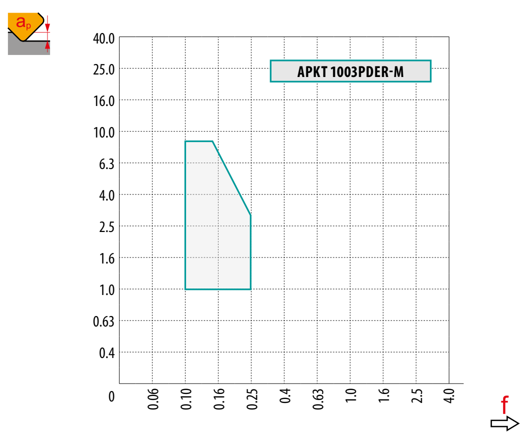
f	0.05 – 0.30
a_p	0.8 – 9.0



? **APKT 1003PDFR-FA**

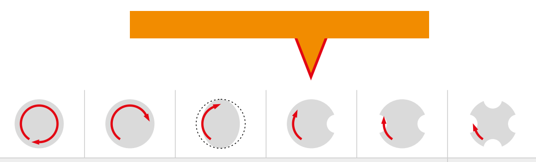
APKT 10-M





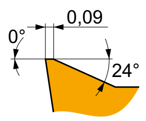
P	M	K	N	S	H
■	◪	■		◪	

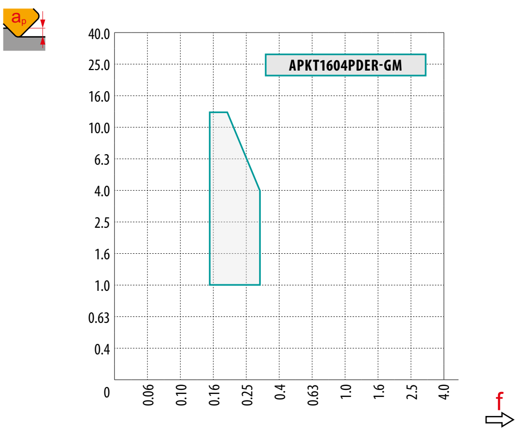
f	0.10 – 0.25
a_p	1.0 – 9.0



? **APKT 1003PDER-M**

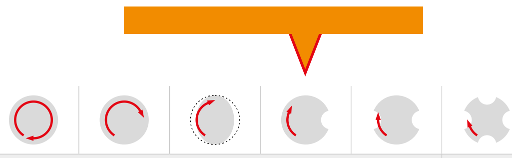
APKT 16-GM





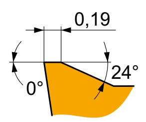
P	M	K	N	S	H
■	◩	■		◩	

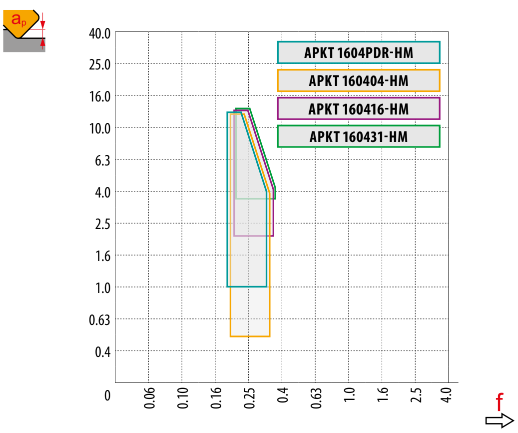
f	0.15 – 0.30
a_p	1.0 – 13.0



? APKT 1604PDR-GM

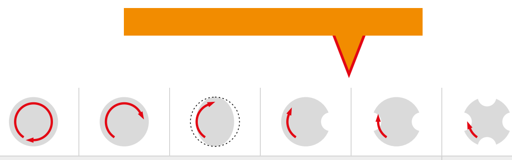
APKT 16-HM





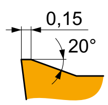
P	M	K	N	S	H
■	◩	■		◩	

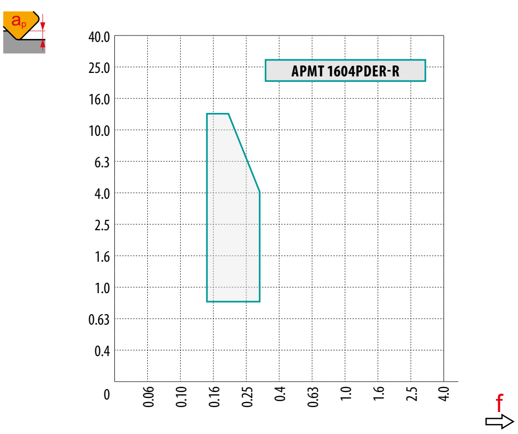
f	0.20 – 0.35
a_p	1.0 – 13.0



? APKT 1604PDR-HM, APKT 160404-HM
APKT 160416-HM, APKT 160431-HM

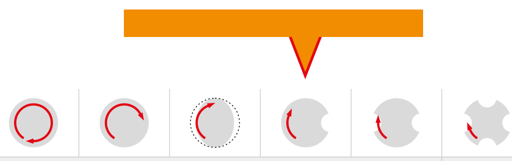
APMT 16 ER-R





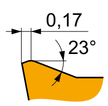
P	M	K	N	S	H
■		■			

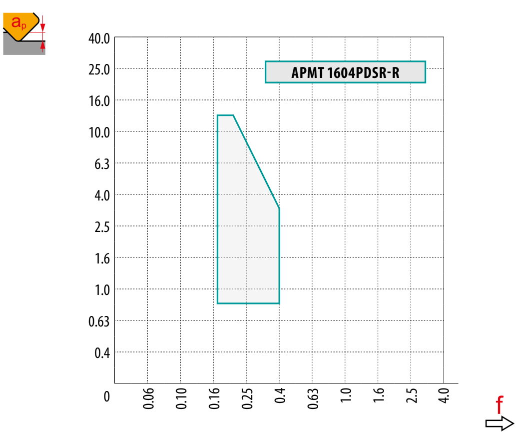
f	0.15 – 0.30
a_p	0.8 – 13.0



? APMT 1604PDER-R

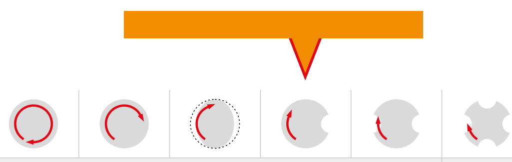
APMT 16 SR-R





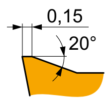
P	M	K	N	S	H
■		■			

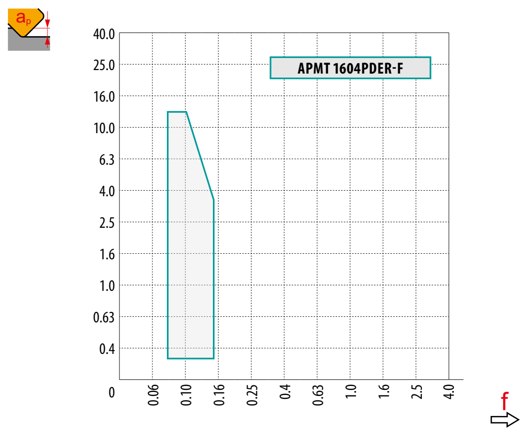
f	0.17 – 0.40
a_p	0.8 – 13.0



? APMT 1604PDSR-R

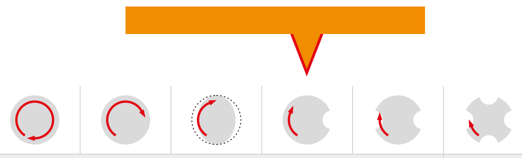
APMT 16-F





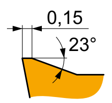
P	M	K	N	S	H
■	■	◩		◩	

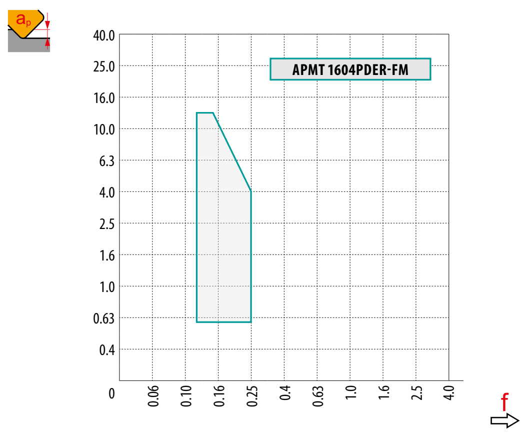
f	0.07 – 0.15
a_p	0.3 – 13.0



? APMT 1604PDER-F

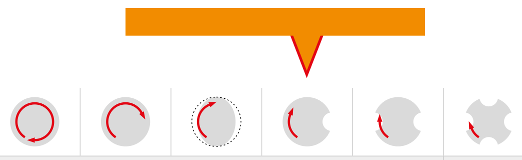
APMT 16-FM





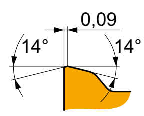
P	M	K	N	S	H
■	■	◩		◩	

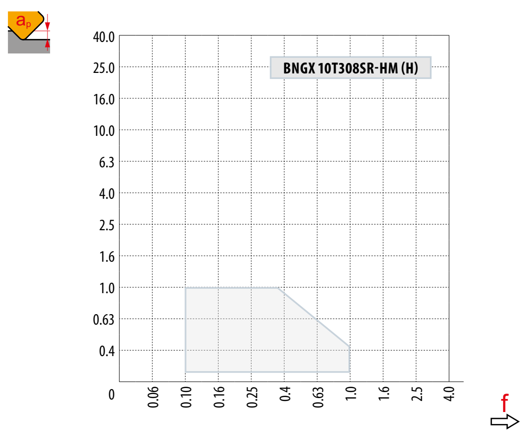
f	0.12 – 0.25
a_p	0.6 – 13.0



? APMT 1604PDER-FM

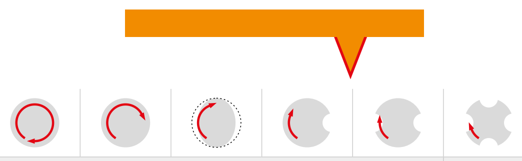
BNGX 10-HM





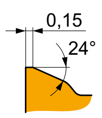
P	M	K	N	S	H
		◩			■

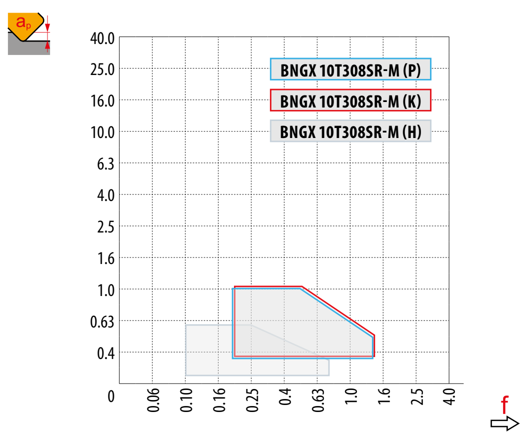
f	0.10 – 1.00
a_p	0.1 – 1.0



? BNGX 10T308SR-HM

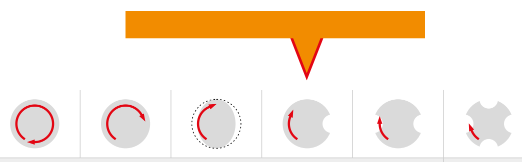
BNGX 10-M





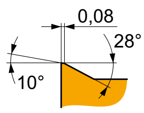
P	M	K	N	S	H
■		■			◩

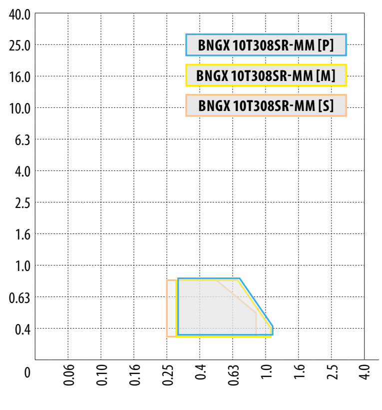
f	0.20 – 1.40
a_p	0.3 – 1.0



? BNGX 10T308SR-M

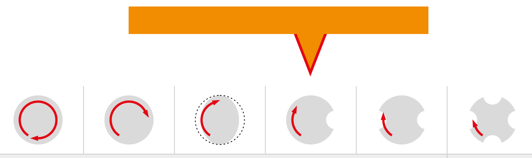
BNGX 10-MM





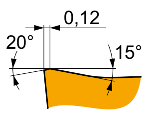
P	M	K	N	S	H
◩	■			■	

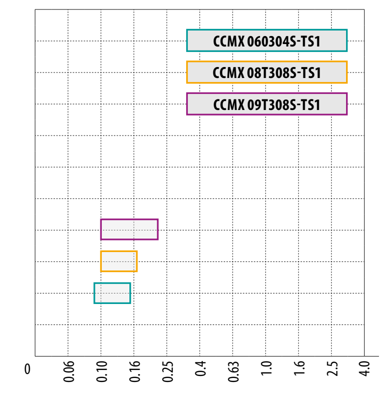
f	0.20 – 1.10
a_p	0.3 – 1.0



? BNGX 10T308SR-MM

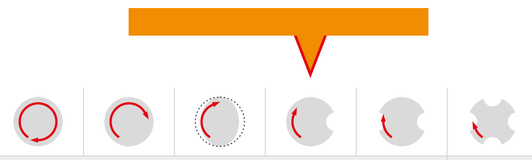
CCMX -TS1





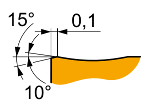
P	M	K	N	S	H
■	◩	■			

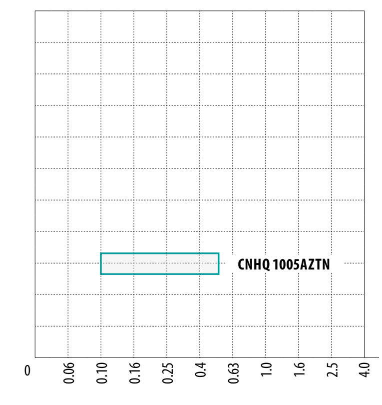
f	0.08 – 0.18 (according to insert size)
a_p	–



? CCMX 060304S-TS1
CCMX 08T308S-TS1
CCMX 09T308S-TS1

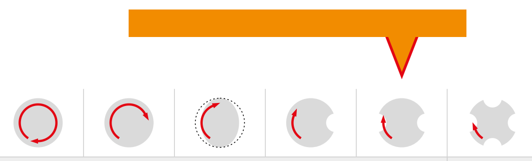
CNHQ 10





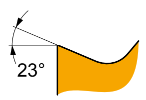
P	M	K	N	S	H
■	◩	■			

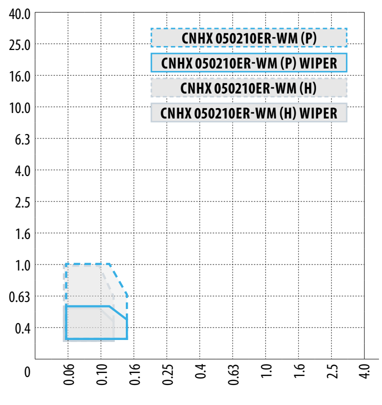
f	0.10 – 0.50
a_p	–



? CNHQ 1005AZTN

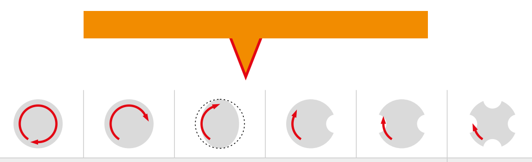
CNHX 05-WM





P	M	K	N	S	H
■		■			■

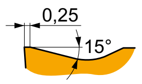
f	0.05 – 0.15
a_p	0.1 – 1.0

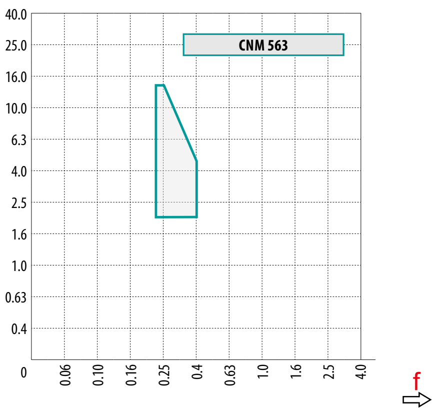


? CNHX 050210ER-WM
CNHX 050210ER-WM

CHOICE OF CUTTING INSERT

CNM 563



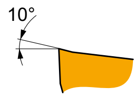


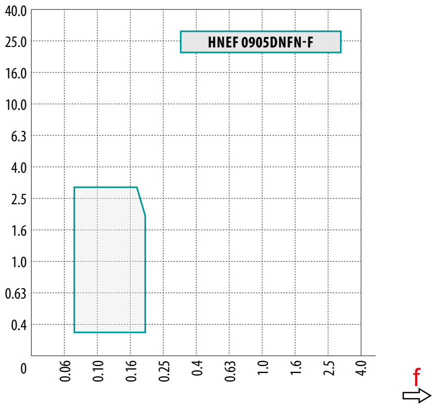
P	M	K	N	S	H
■		■			

f	0.20 – 0.40
a_p	2.0 – 14.0

? **CNM 563**

HNEF 09-F



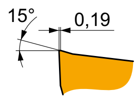


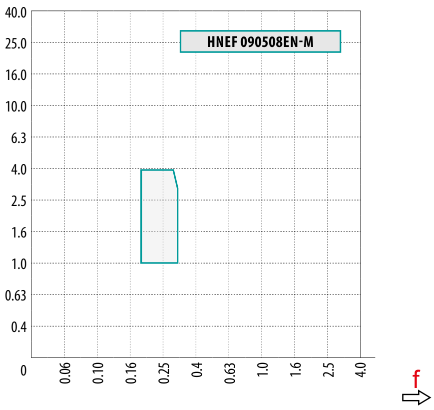
P	M	K	N	S	H
		■			

f	0.07 – 0.20
a_p	0.3 – 3.0

? **HNEF 0905DNFN-F**

HNEF 09-M



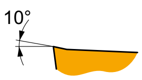


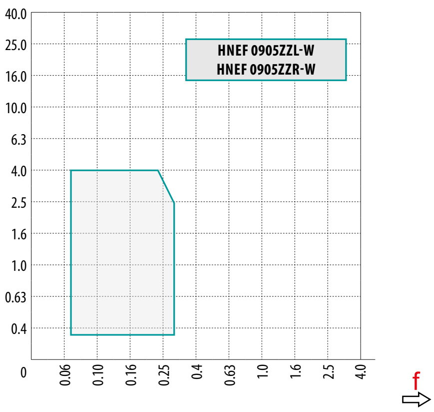
P	M	K	N	S	H
		■			

f	0.17 – 0.30
a_p	1.0 – 4.0

? **HNEF 090508EN-M**

HNEF 09-W



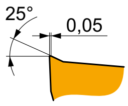


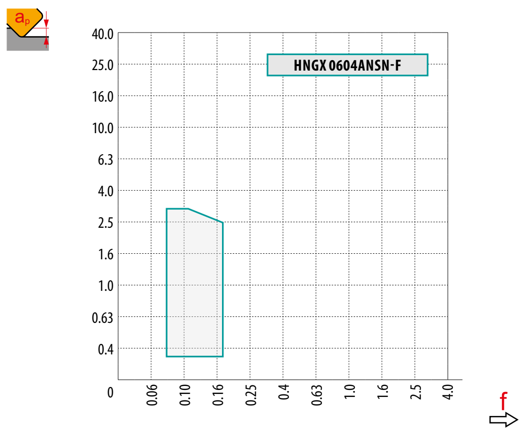
P	M	K	N	S	H
		■			

f	0.07 – 0.30
a_p	0.3 – 4.0

? **HNEF 0905ZZL-W**
HNEF 0905ZZR-W

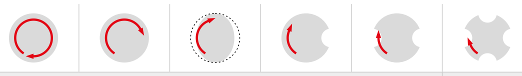
HNGX 06-F





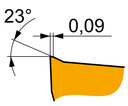
P	M	K	N	S	H
■	◩				

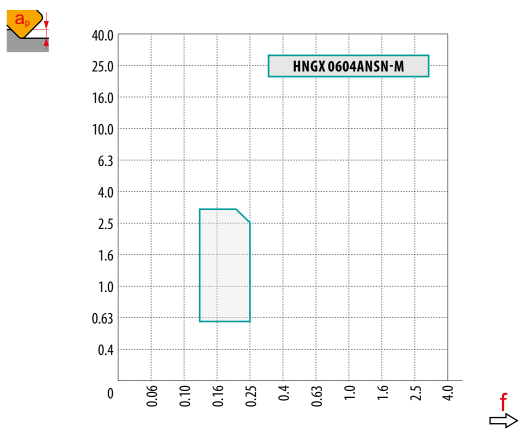
f	0.08 – 0.17
ap	0.3 – 3.0



HNGX 0604ANSN-F

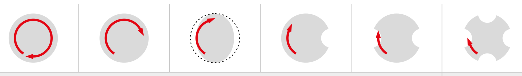
HNGX 06-M





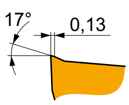
P	M	K	N	S	H
■	◩	■			

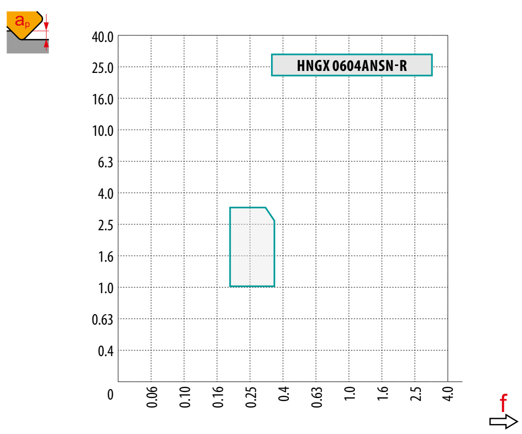
f	0.13 – 0.25
ap	0.6 – 3.0



HNGX 0604ANSN-M

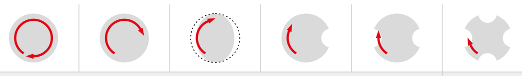
HNGX 06-R





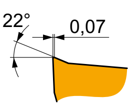
P	M	K	N	S	H
■	◩	■			◩

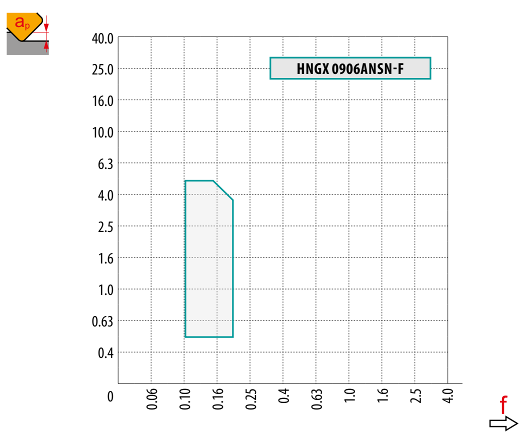
f	0.18 – 0.30
ap	1.0 – 3.0



HNGX 0604ANSN-R

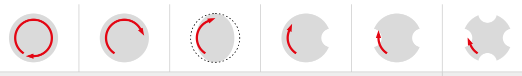
HNGX 09-F





P	M	K	N	S	H
■	■				

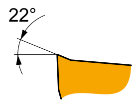
f	0.10 – 0.20
ap	0.5 – 5.0

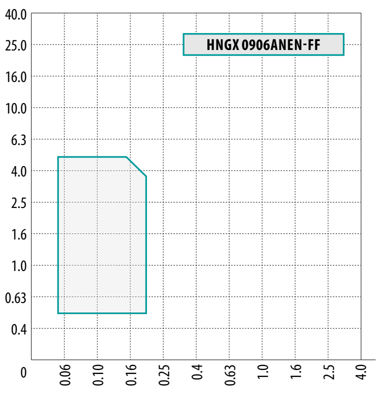


HNGX 0906ANSN-F

CHOICE OF CUTTING INSERT

HNGX 09-FF



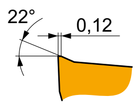


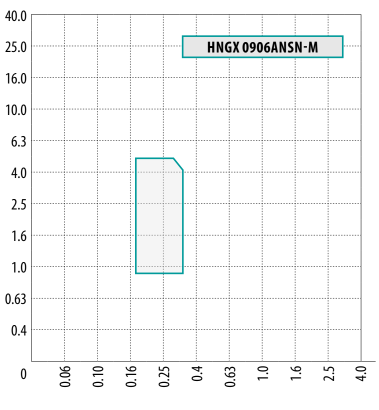
P	M	K	N	S	H
■	■				

f	0.05 – 0.20
a_p	0.5 – 5.0

? HNGX 0906ANEN-FF

HNGX 09-M



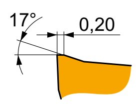


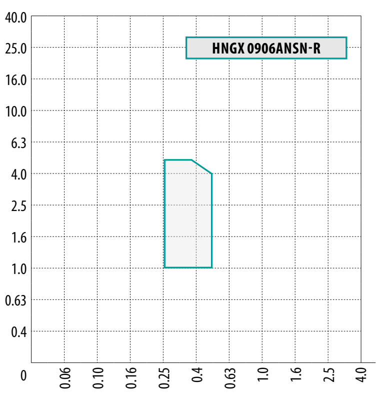
P	M	K	N	S	H
■	◩	■			

f	0.17 – 0.35
a_p	0.8 – 5.0

? HNGX 0906ANSN-M

HNGX 09-R



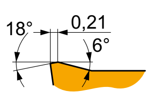


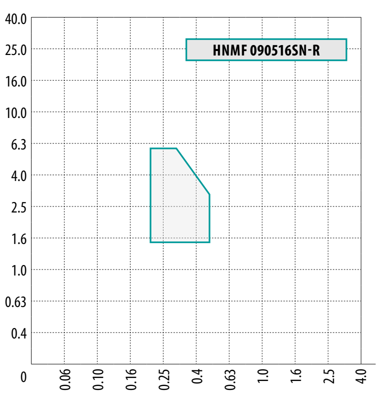
P	M	K	N	S	H
■	◩	■			◩

f	0.25 – 0.50
a_p	1.0 – 5.0

? HNGX 0906ANSN-R

HNMF 09-R





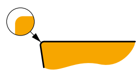
P	M	K	N	S	H
		■			

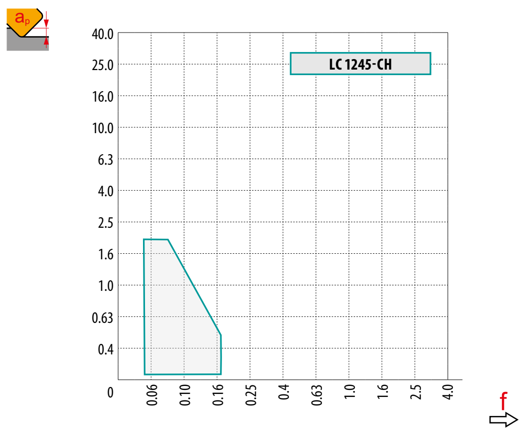
f	0.22 – 0.50
a_p	1.5 – 6.0

? HNMF 090516SN-R

CHOICE OF CUTTING INSERT

LC 12-CH

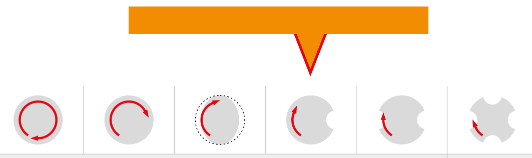




P	M	K	N	S	H
◩		■			■

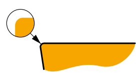
f: 0.08 – 0.25

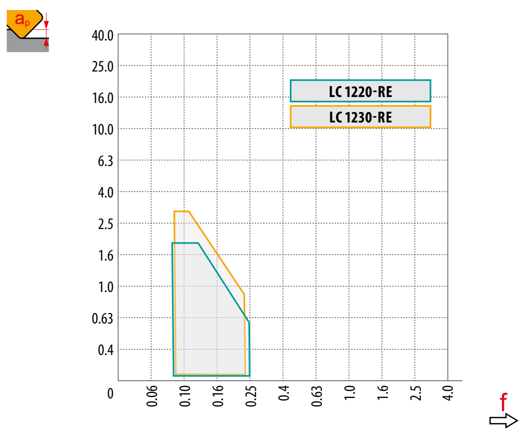
a_p: 0.1 – 2.0



? LC 1245-CH

LC 12-RE

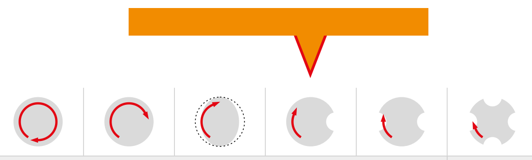




P	M	K	N	S	H
◩		■			■

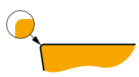
f: 0.08 – 0.25

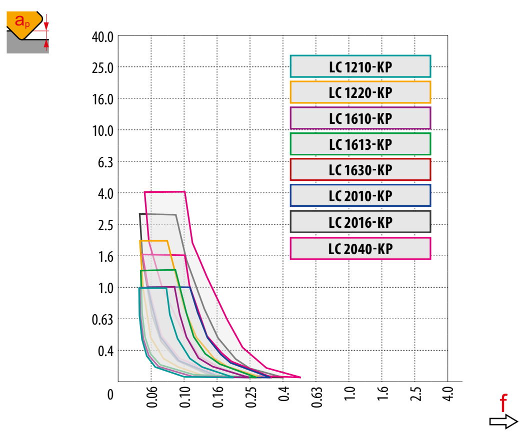
a_p: 0.1 – 3.0 (according to insert size)



? LC 1220-RE
LC 1230-RE

LC -KP

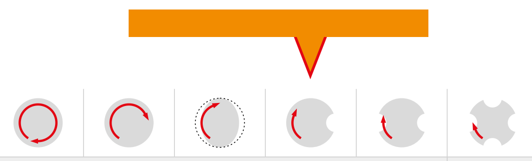




P	M	K	N	S	H
■		■			■

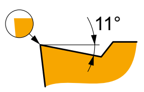
f: 0.08 – 0.35 (according to insert size)

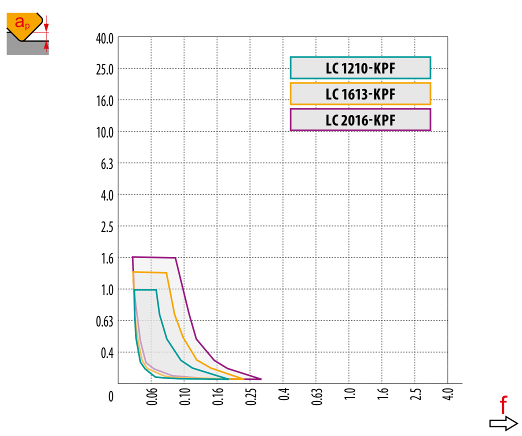
a_p: 0.1 – 4.0 (according to insert size)



? LC ....-KP

LC -KPF

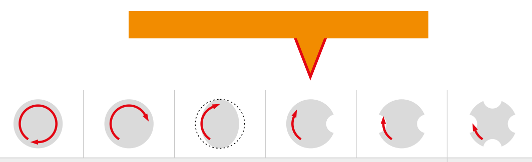




P	M	K	N	S	H
■	◩	■			■

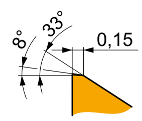
f: 0.05 – 0.30 (according to insert size and radii)

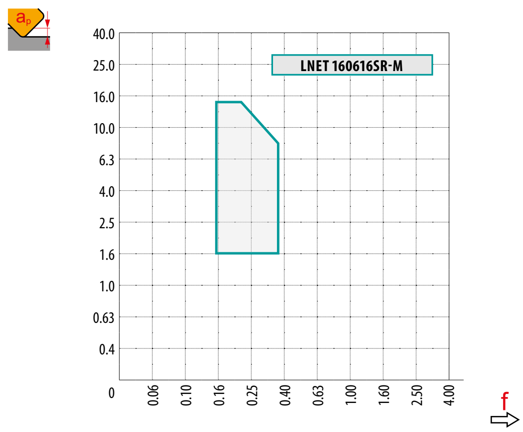
a_p: 0.1 – 1.6 (according to insert size and radii)



? LC 1210-KPF
LC 1613-KPF
LC 2016-KPF

LNET 16-M

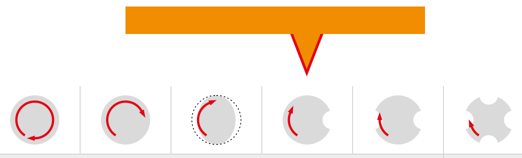




P	M	K	N	S	H
■		■			

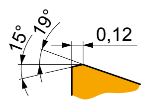
f: 0.15 – 0.35

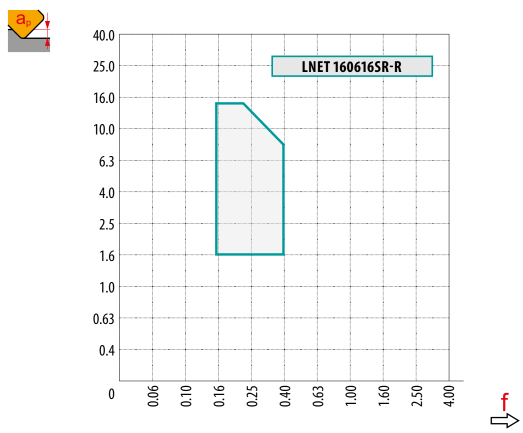
a_p: 1.6 – 15.0



? LNET 160616SR-M

LNET 16-R

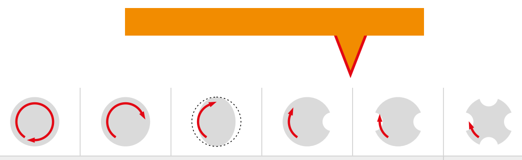




P	M	K	N	S	H
■		■			

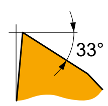
f: 0.15 – 0.40

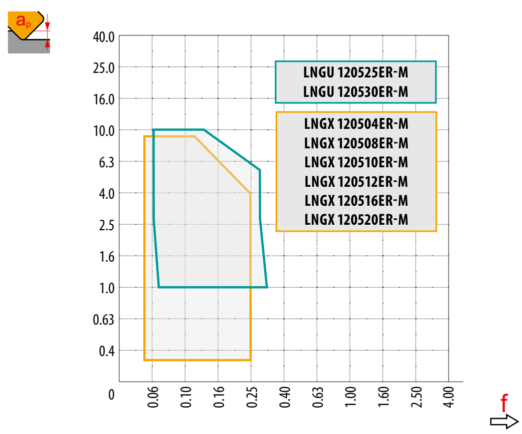
a_p: 1.6 – 15.0



? LNET 160616SR-R

LNG(U)X 12-M

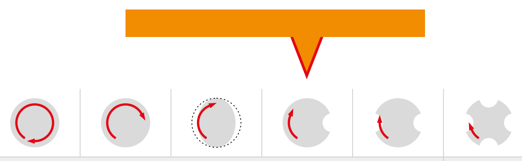




P	M	K	N	S	H
■		■			

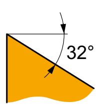
f: 0.05 – 0.25

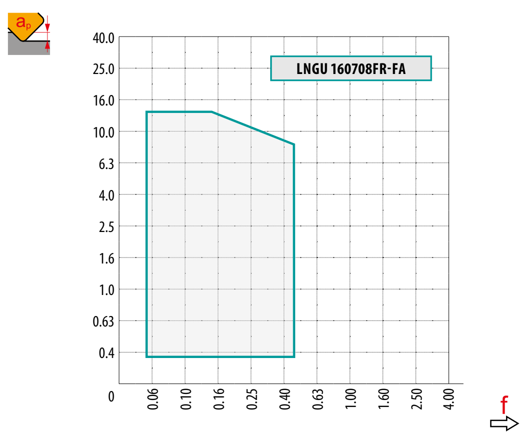
a_p: 0.2 – 9.0 (according to insert radii)



? LNGU 1205..ER-M
LNGX 1205..ER-M

LNGU 16-FA

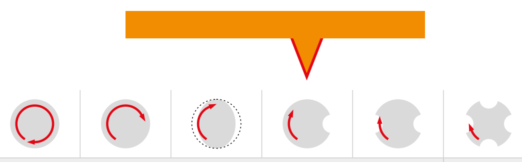




P	M	K	N	S	H
			■		

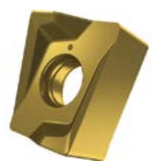
f: 0.05 – 0.45

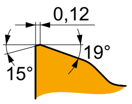
a_p: 0.3 – 13.0

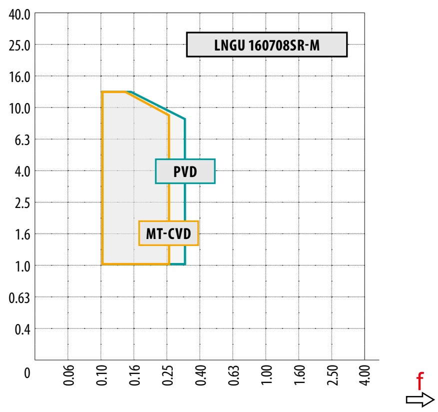


? LNGU 160708FR-FA

LNGU 16-M

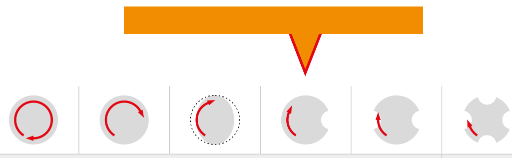






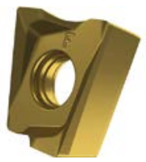
P	M	K	N	S	H
■		■			

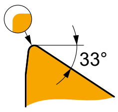
f	0.10 – 0.30 (according to insert coating)
a_p	1.0 – 13.0

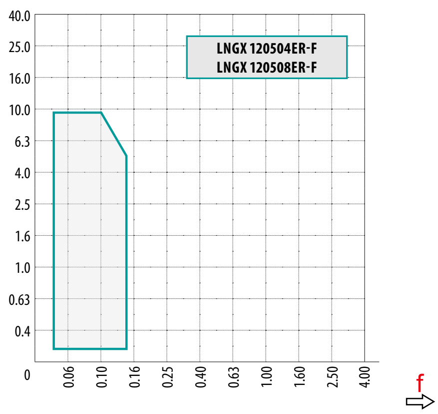


? LNGU 160708SR-M

LNGX 12-F

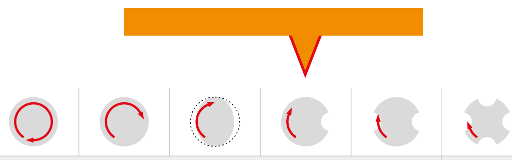






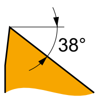
P	M	K	N	S	H
■		◪			

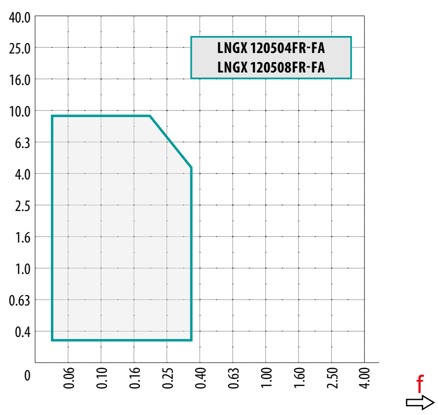
f	0.04 – 0.15
a_p	0.2 – 9.0



? LNGX 120504ER-F
LNGX 120508ER-F

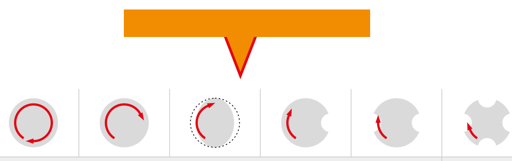
LNGX 12-FA





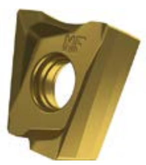
P	M	K	N	S	H
			■		

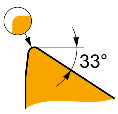
f	0.03 – 0.35
a_p	0.2 – 9.0

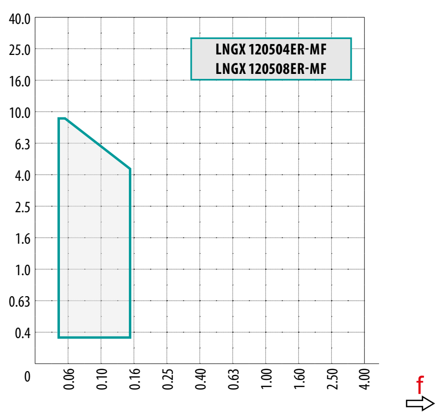


? LNGX 120504FR-FA
LNGX 120508FR-FA

LNGX 12-MF

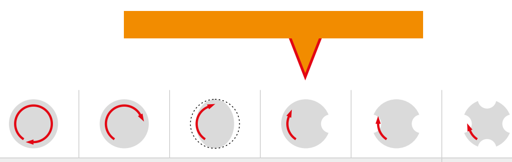






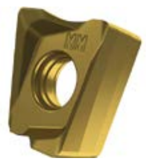
P	M	K	N	S	H
◪	■				

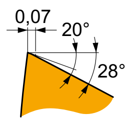
f	0.04 – 0.15
a_p	0.3 – 9.0

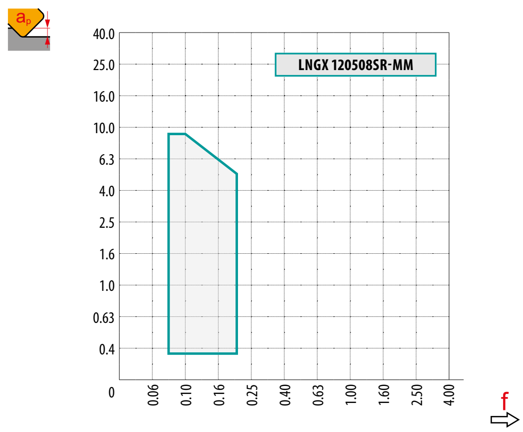


? LNGX 120504ER-MF
LNGX 120508ER-MF

LNGX 12-MM



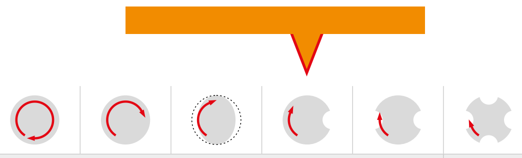




P	M	K	N	S	H
■	■				

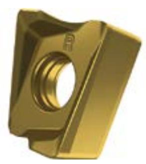
f: 0.08 – 0.20

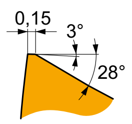
a_p: 0.3 – 9.0

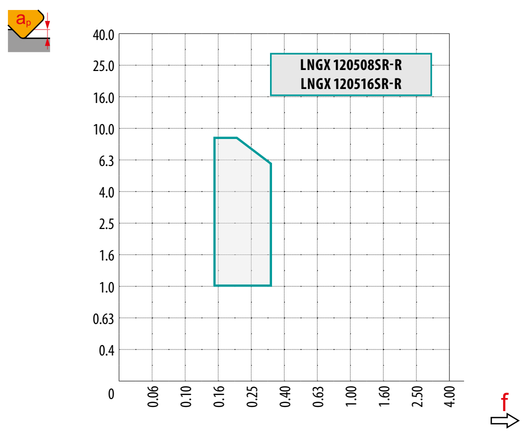


? LNGX 120508SR-MM

LNGX 12-R



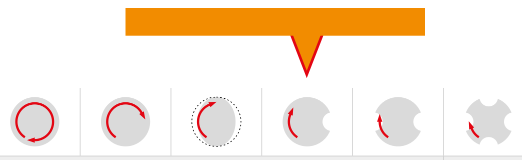




P	M	K	N	S	H
■		■			

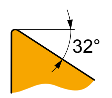
f: 0.15 – 0.35

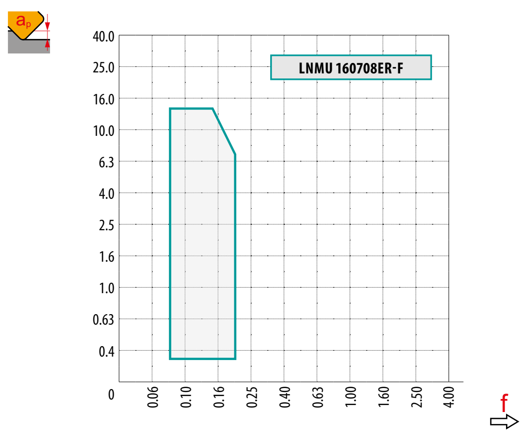
a_p: 1.0 – 9.0



? LNGX 120508SR-R
LNGX 120516SR-R

LNMU 16-F

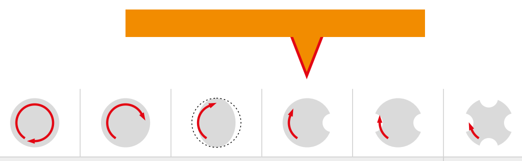




P	M	K	N	S	H
■					

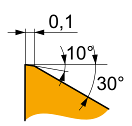
f: 0.08 – 0.20

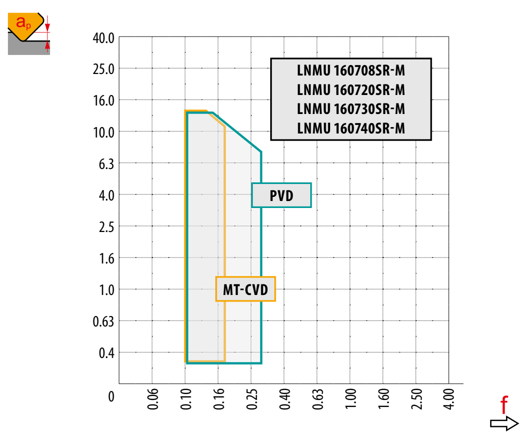
a_p: 0.3 – 13.0



? LNMU 160708ER-F

LNMU 16-M

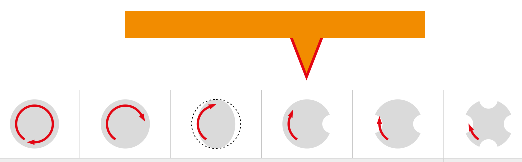




P	M	K	N	S	H
■		■			

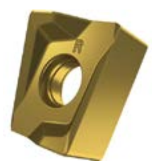
f: 0.10 – 0.30 (according to insert coating)

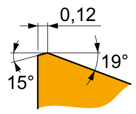
a_p: 0.3 – 13.0

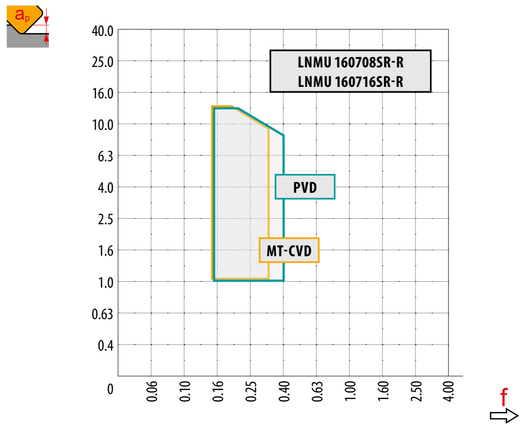


? LNMU 160708SR-M, LNMU 160720SR-M
LNMU 160730SR-M, LNMU 160740SR-M

LNMU 16-R



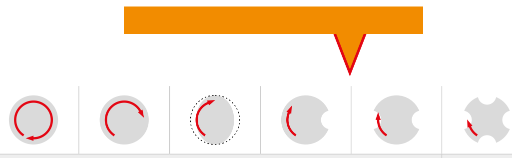




P	M	K	N	S	H
■		■			◩

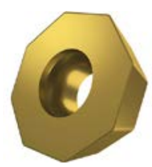
f: 0.15 – 0.40 (according to insert coating)

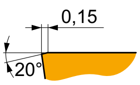
a_p: 1.0 – 13.0

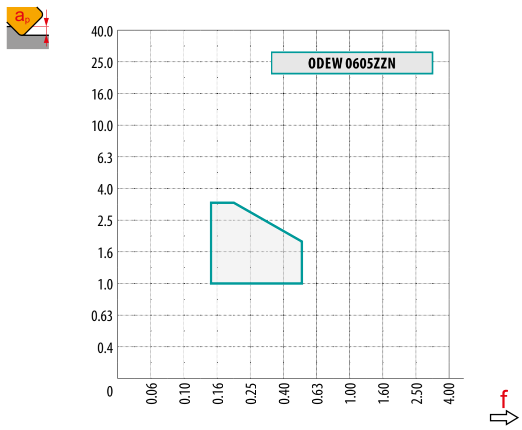


? **LNMU 160708SR-R**
LNMU 160716SR-R

ODEW 06



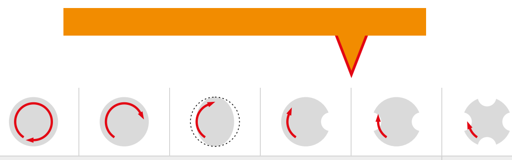




P	M	K	N	S	H
◩		■			◩

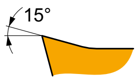
f: 0.15 – 0.45

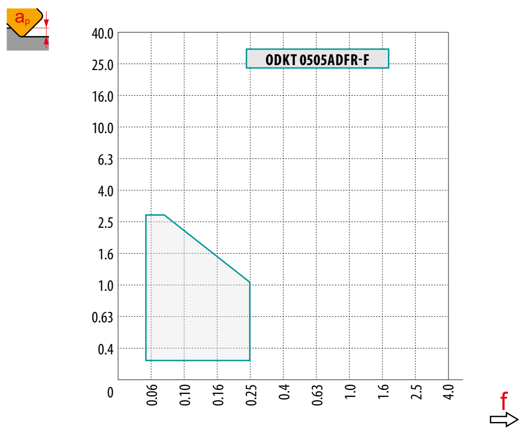
a_p: 1.0 – 3.1



? **ODEW 0605ZZN**

ODKT 05-F

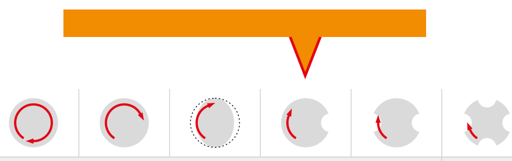




P	M	K	N	S	H
■	◩				

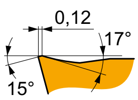
f: 0.05 – 0.25

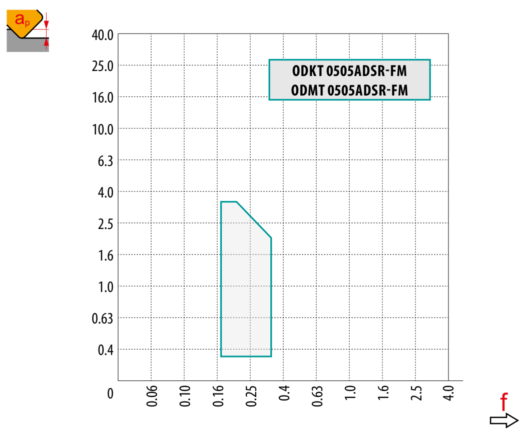
a_p: 0.2 – 2.7



? **ODKT 0505ADFR-F**

ODK(M)T 05-FM

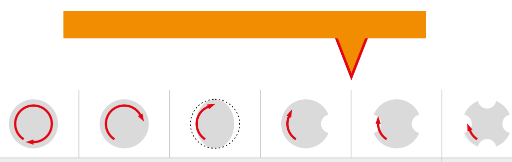




P	M	K	N	S	H
■	■	◩			

f: 0.17 – 0.35

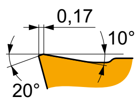
a_p: 0.3 – 3.0

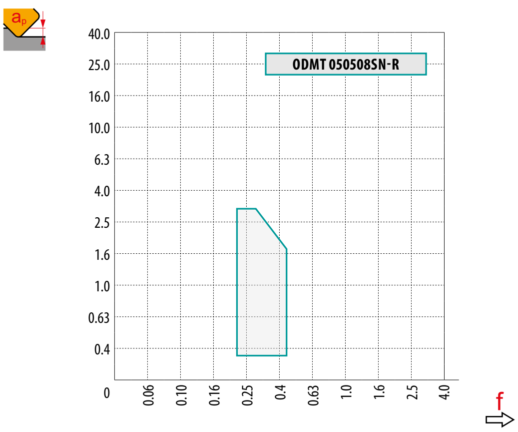


? **ODKT 0505ADSR-FM**
ODMT 0505ADSR-FM

CHOICE OF CUTTING INSERT

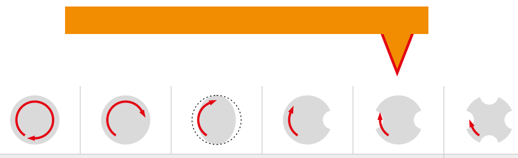
ODMT 05-R





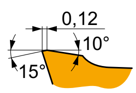
P	M	K	N	S	H
■		■			

f	0.23 – 0.45
a_p	0.3 – 3.0



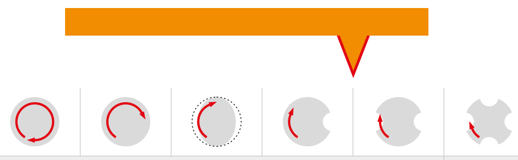
? **ODMT 050508SN-R**

ODMT 06



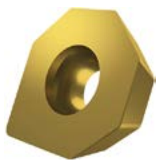
P	M	K	N	S	H
■		■			

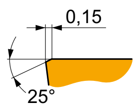
f	0.15 – 0.45
a_p	1.0 – 3.1

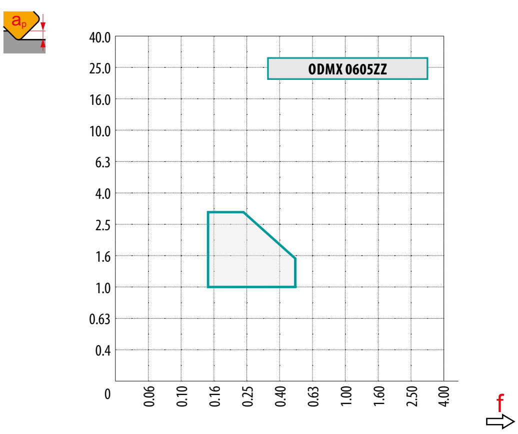


? **ODMT 0605ZZN**

ODMX 06

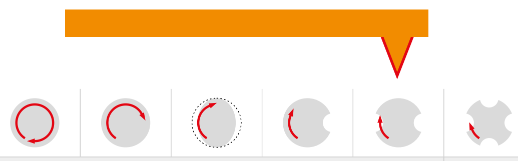






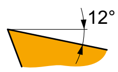
P	M	K	N	S	H
◩		■			◩

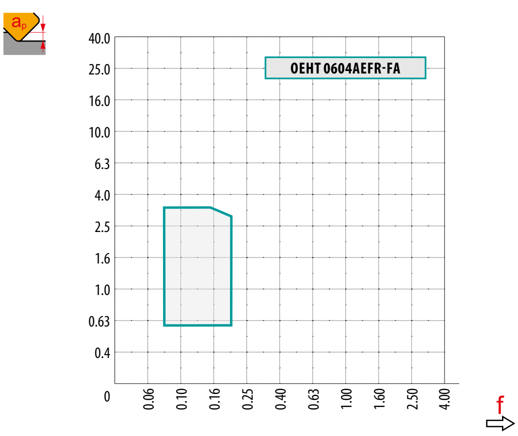
f	0.15 – 0.45
a_p	1.0 – 3.1



? **ODMX 0605ZZ**

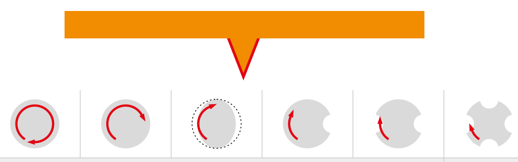
OEHT 06-FA





P	M	K	N	S	H
			■		

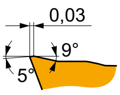
f	0.08 – 0.20
a_p	0.5 – 3.3

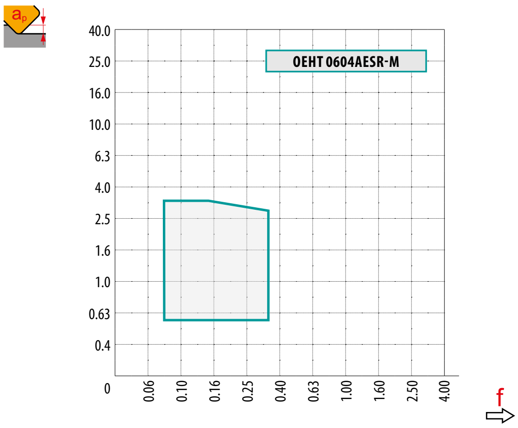


? **OEHT 0604AEFR-FA**

CHOICE OF CUTTING INSERT

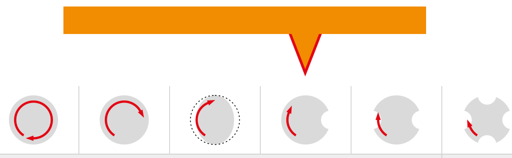
OEHT 06-M





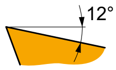
P	M	K	N	S	H
■	■			◩	

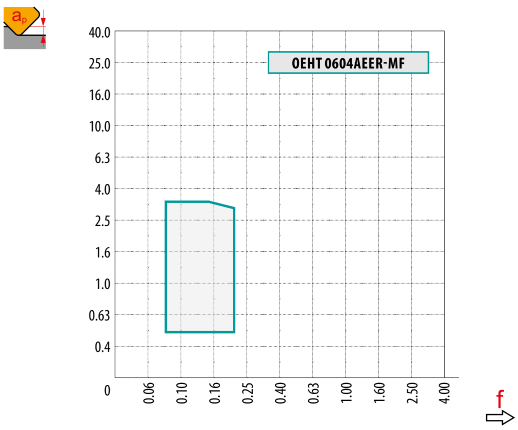
f	0.08 – 0.35
ap	0.5 – 3.3



? OEHT 0604AESR-M

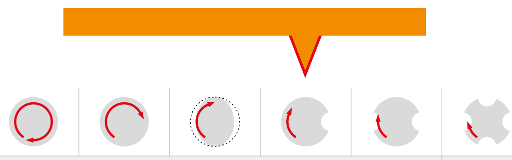
OEHT 06-MF





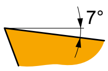
P	M	K	N	S	H
◩	■		◩	■	

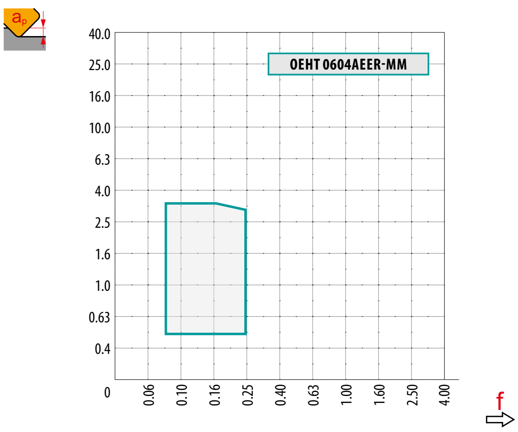
f	0.08 – 0.20
ap	0.5 – 3.3



? OEHT 0604AEER-MF

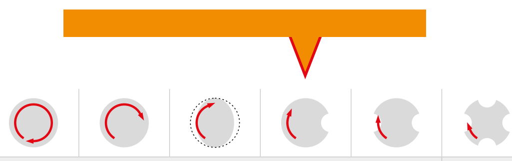
OEHT 06-MM





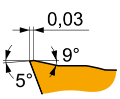
P	M	K	N	S	H
◩	■		◩	■	

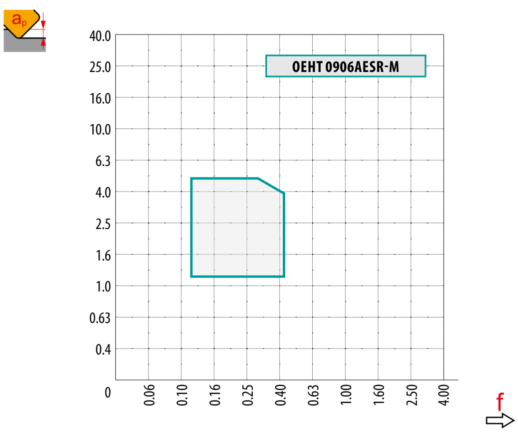
f	0.08 – 0.25
ap	0.5 – 3.3



? OEHT 0604AEER-MM

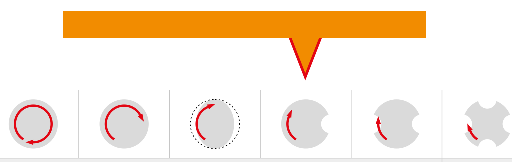
OEHT 09-M





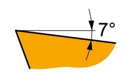
P	M	K	N	S	H
■	■			◩	

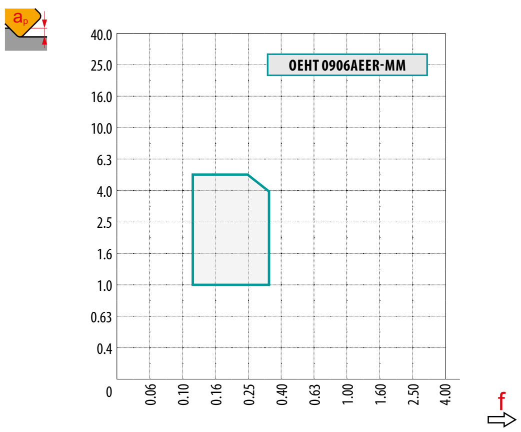
f	0.12 – 0.45
ap	1.2 – 5.0



? OEHT 0906AESR-M

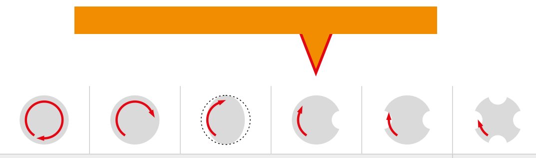
OEHT 09-MM





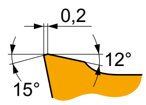
P	M	K	N	S	H
◩	■		◩	■	

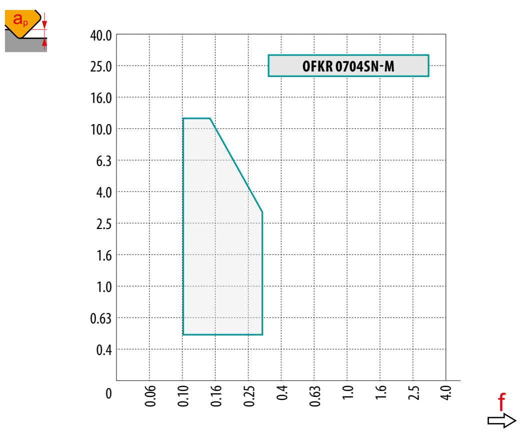
f	0.12 – 0.35
a_p	1.0 – 5.0



? OEHT 0906AEER-MM

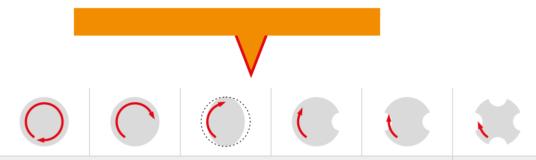
OFKR 07-M





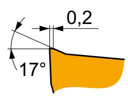
P	M	K	N	S	H
■	■	◩			

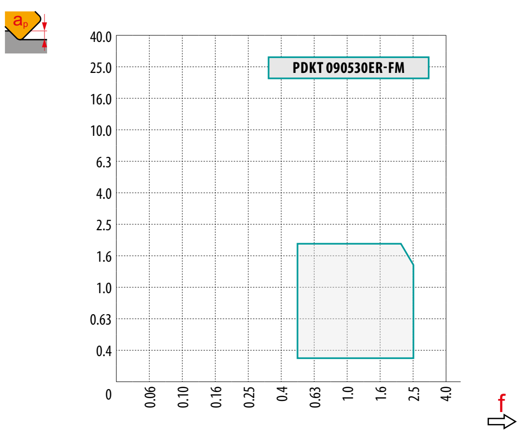
f	0.1 – 0.3
a_p	0.5 – 12.0



? OFKR 0704SN-M

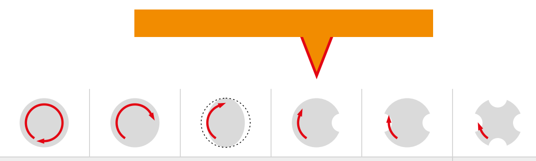
PDKT 09-FM





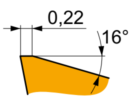
P	M	K	N	S	H
■	■	◩		■	

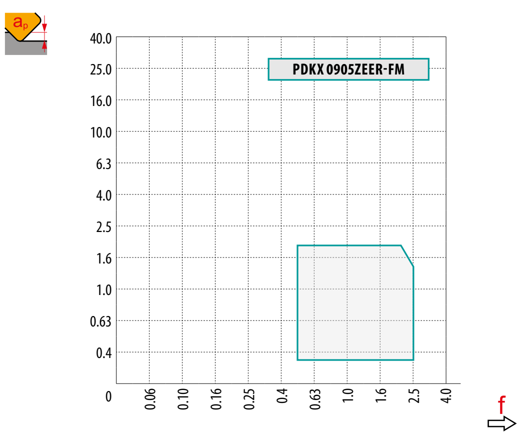
f	0.50 – 2.50
a_p	0.3 – 2.0



? PDKT 090530ER-FM

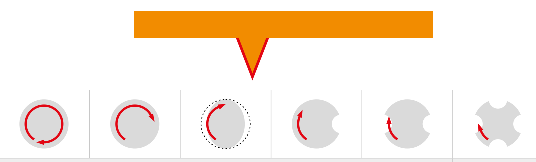
PDKX 09-FM





P	M	K	N	S	H
■	■	◩		■	

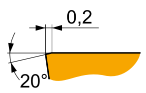
f	0.50 – 2.50
a_p	0.3 – 2.0

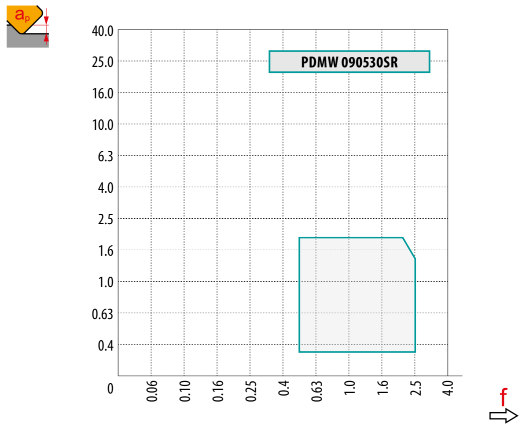


? PDKX 0905ZEER-FM

⏮

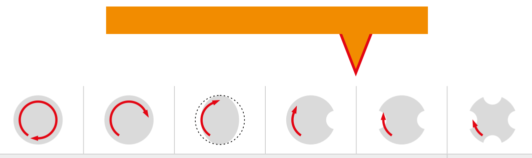
PDMW 09





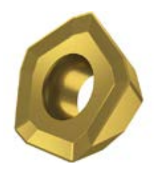
P	M	K	N	S	H
◪		■			■

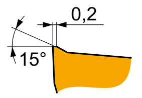
f	0.50 – 2.50
a_p	0.3 – 2.0

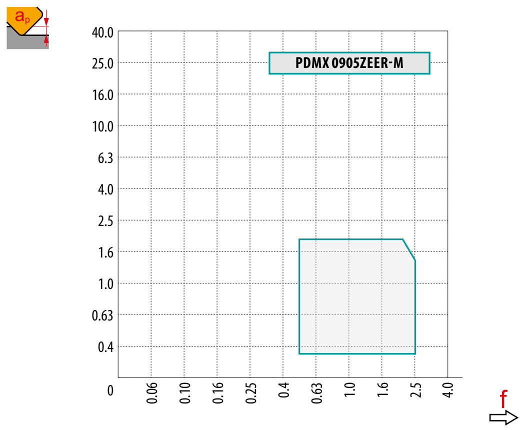


? **PDMW 090530SR**

PDMX 09-M

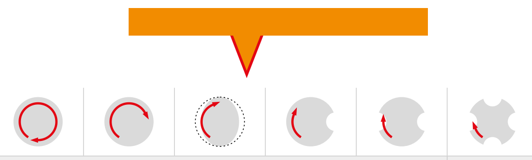






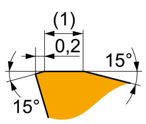
P	M	K	N	S	H
■	■	◪			

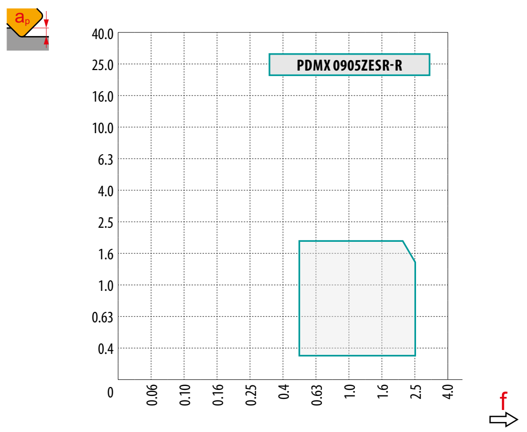
f	0.50 – 2.50
a_p	0.3 – 2.0



? **PDMX 0905ZEER-M**

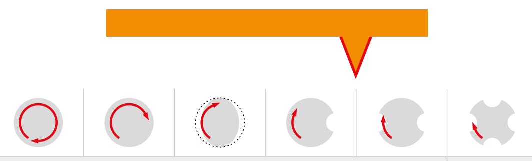
PDMX 09-R





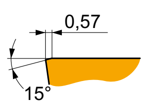
P	M	K	N	S	H
◪		■			■

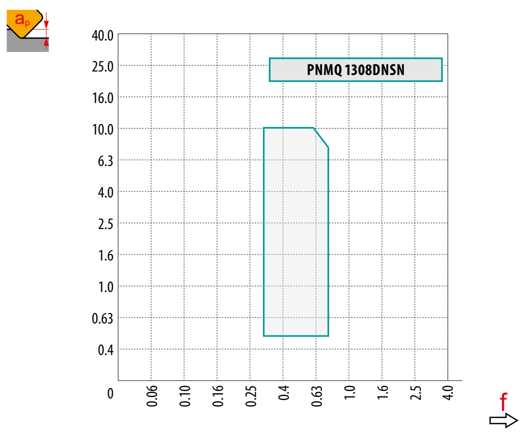
f	0.50 – 2.50
a_p	0.3 – 2.0



? **PDMX 0905ZESR-R**

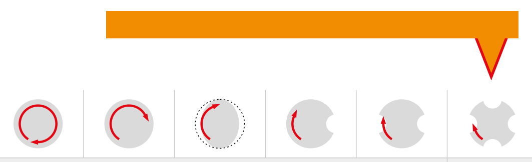
PNMQ 13





P	M	K	N	S	H
◪		■			■

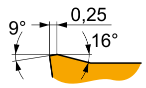
f	0.30 – 0.70
a_p	0.5 – 10.0

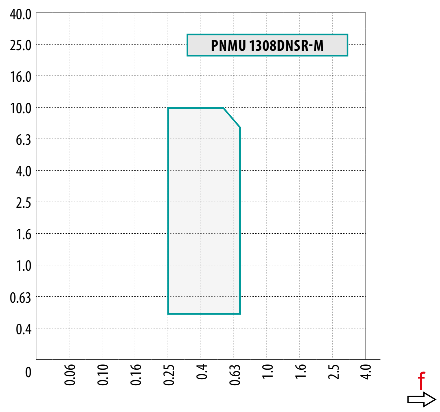


? **PNMQ 1308DNSN**

CHOICE OF CUTTING INSERT

PNMU 13-M





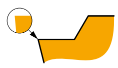
P	M	K	N	S	H
■	◩	■		◩	◩

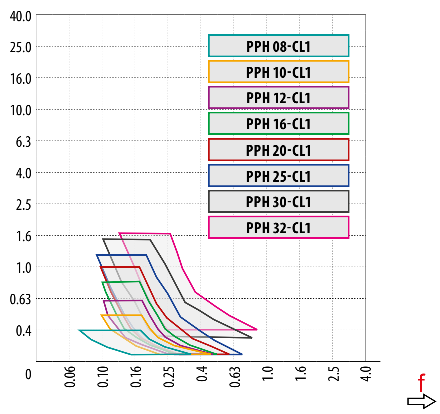
f: 0.25 – 0.70

a_p: 0.5 – 10.0

? PNMU 1308DNSR-M

PPH -CL1





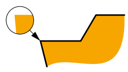
P	M	K	N	S	H
■	◩	■			◩

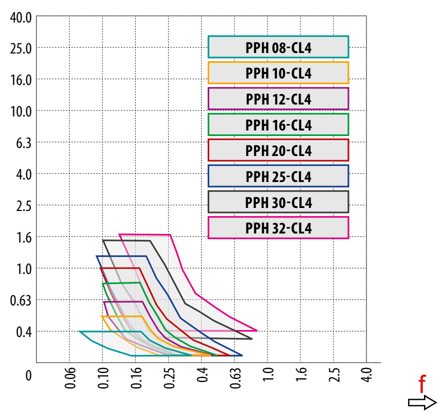
f: 0.05 – 0.60 (according to insert size)

a_p: 0.1 – 3.2 (according to insert size)

? PPH ..00-CL1

PPH -CL4





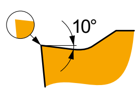
P	M	K	N	S	H
■		■			■

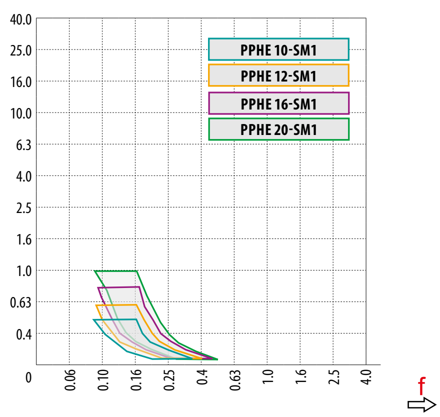
f: 0.05 – 0.60 (according to insert size)

a_p: 0.1 – 3.2 (according to insert size)

? PPH ..00-CL4

PPHE -SM1





P	M	K	N	S	H
■	◩	■			■

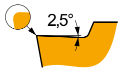
f: 0.05 – 0.50 (according to insert size)

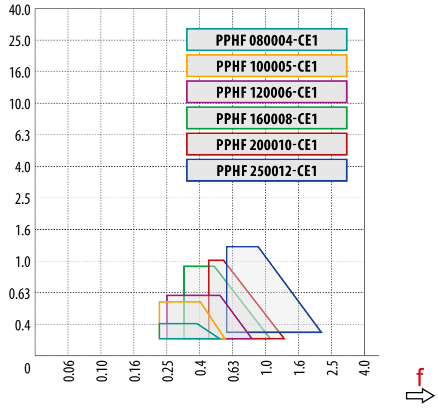
a_p: 0.1 – 2.0 (according to insert size)

? PPHE ..00-SM1

CHOICE OF CUTTING INSERT

PPHF -CE1





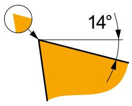
P	M	K	N	S	H
■	◩	■		◩	■

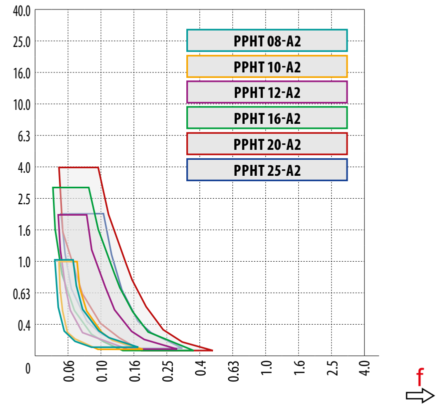
f: 0.20 – 1.50 (according to insert size)

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





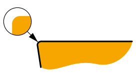
P	M	K	N	S	H
■	◩	■			■

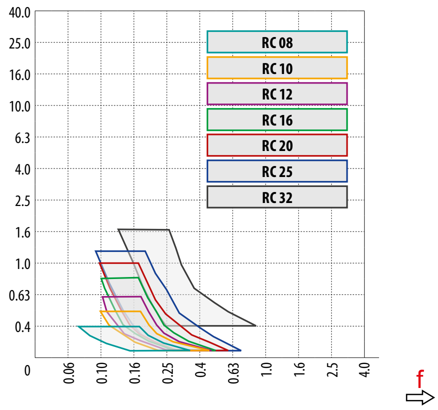
f: 0.05 – 0.50 (according to insert size and radii)

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





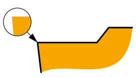
P	M	K	N	S	H
■		■			■

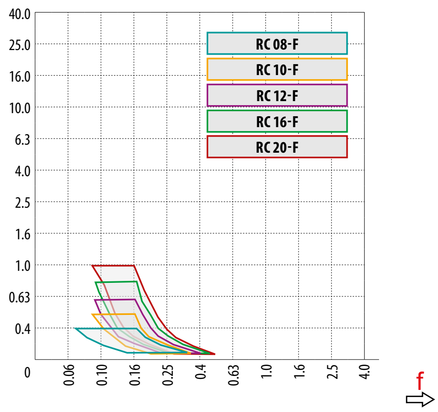
f: 0.10 – 0.60 (according to insert size)

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





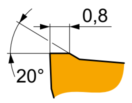
P	M	K	N	S	H
■	◩	■			■

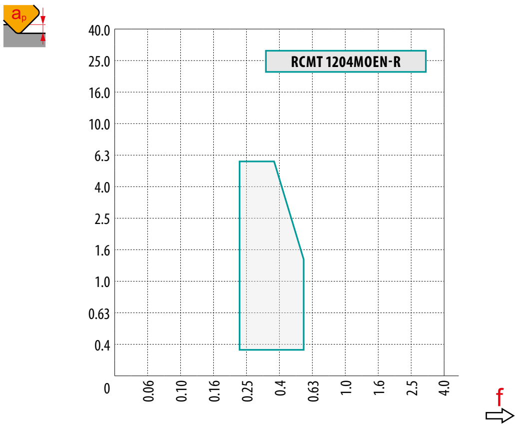
f: 0.05 – 0.60 (according to insert size)

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

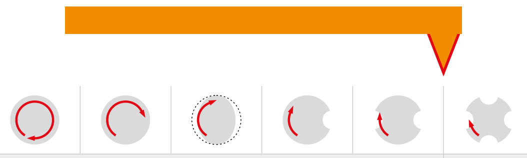




P	M	K	N	S	H
■		■		◩	■

f: 0.20 – 0.50

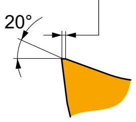
a_p: 0.3 – 6.0

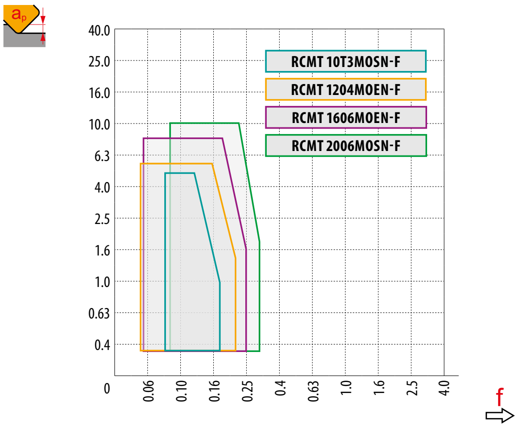


? RCMT 1204MOEN-R

RCMT-F

RCMT 10	0.08
RCMT 12	–
RCMT 16	–
RCMT 20	0.25

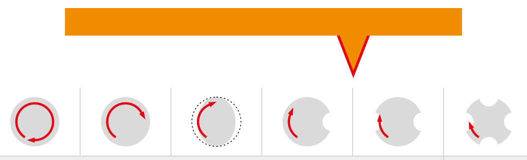




P	M	K	N	S	H
■	■			■	

f: 0.05 – 0.30 (according to insert size)

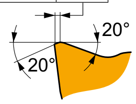
a_p: 0.3 – 10.0 (according to insert size)

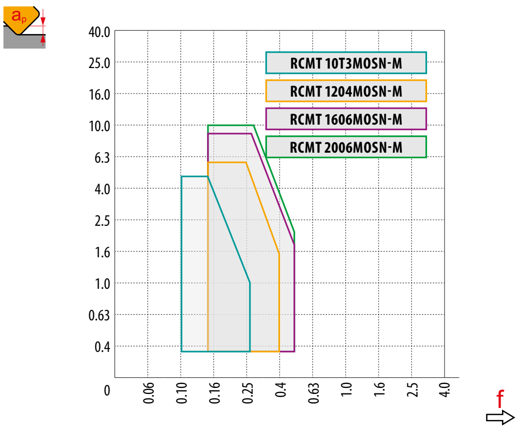


? RCMT 10T3MOSN-F, RCMT 1204MOEN-F
RCMT 1606MOEN-F, RCMT 2006MOSN-F

RCMT-M

RCMT 10	0.10
RCMT 12	0.14
RCMT 16	0.13
RCMT 20	0.22

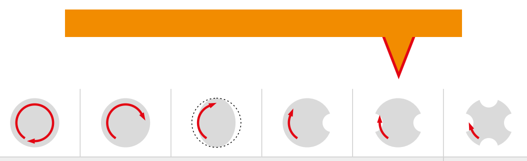




P	M	K	N	S	H
■	◩	■		■	

f: 0.10 – 0.45 (according to insert size)

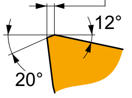
a_p: 0.3 – 10.0 (according to insert size)

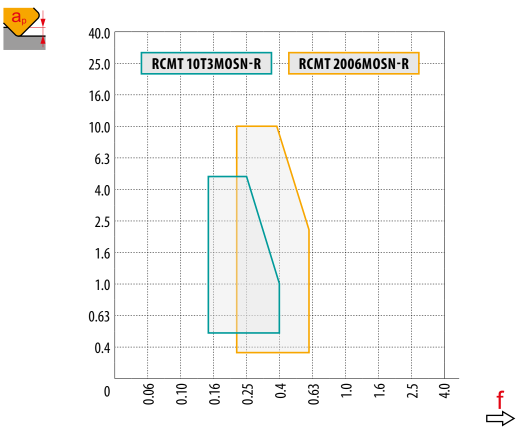


? RCMT 10T3MOSN-M, RCMT 1204MOSN-M
RCMT 1606MOSN-M, RCMT 2006MOSN-M

RCMT-R

RCMT 10	0.15
RCMT 20	0.17

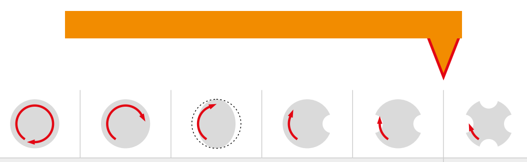




P	M	K	N	S	H
■		■		◩	■

f: 0.15 – 0.60 (according to insert size)

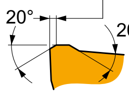
a_p: 0.3 – 10.0 (according to insert size)

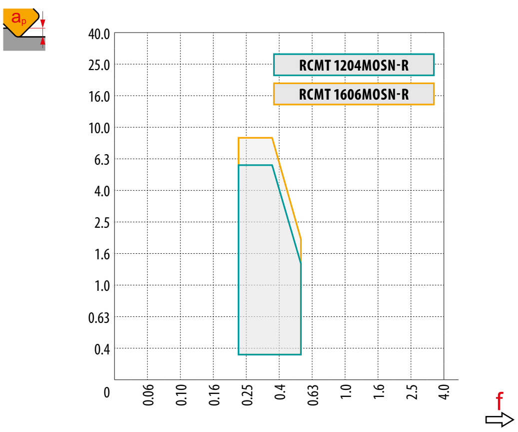


? RCMT 10T3MOSN-R
RCMT 2006MOSN-R

RCMT SN-R

RCMT 12	0.20
RCMT 16	0.13

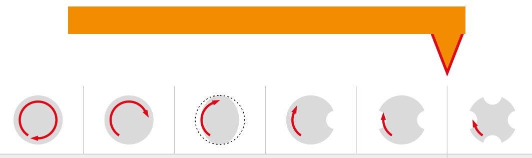




P	M	K	N	S	H
■		■		◩	■

f: 0.15 – 0.60 (according to insert size)

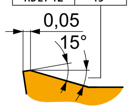
a_p: 0.3 – 10.0 (according to insert size)

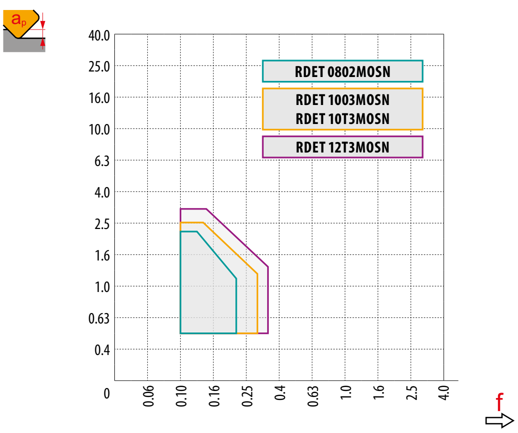


? RCMT 1204MOSN-R
RCMT 1606MOSN-R

RDET

RDET 08	10°
RDET 10	15°
RDET 12	15°

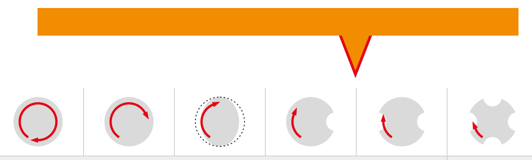




P	M	K	N	S	H
■	◩	■		◩	

f: 0.10 – 0.35 (according to insert size)

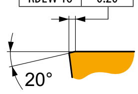
a_p: 0.5 – 3.0 (according to insert size)

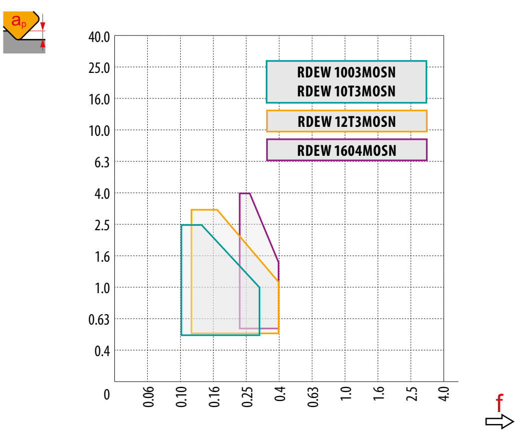


? RDET 0802MOSN, RDET 1003MOSN
RDET 10T3MOSN, RDET 12T3MOSN

RDEW

RDEW 10	0.05
RDEW 12	0.15
RDEW 16	0.20

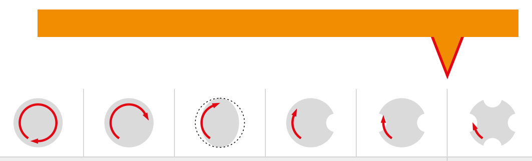




P	M	K	N	S	H
◩		■			■

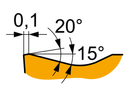
f: 0.10 – 0.40 (according to insert size)

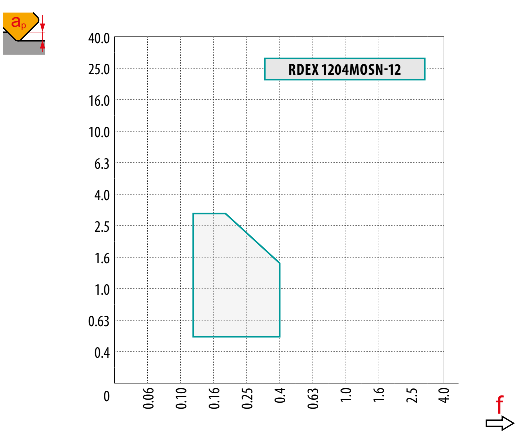
a_p: 0.5 – 4.0 (according to insert size)



? RDEW 1003MOSN, RDEW 10T3MOSN
RDEW 12T3MOSN, RDEW 1604MOSN

RDEX 12

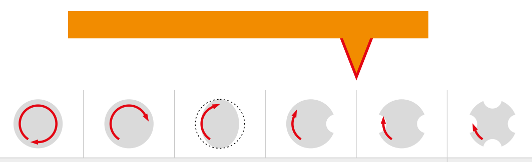




P	M	K	N	S	H
■	◩	■		◩	

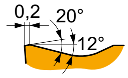
f: 0.12 – 0.40

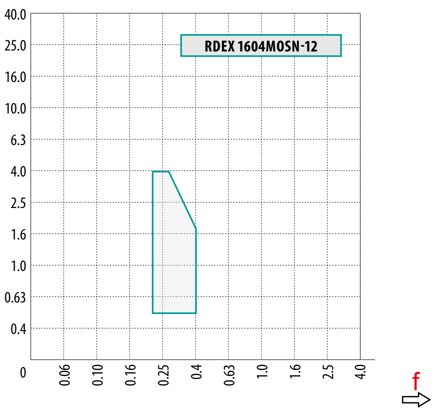
a_p: 0.5 – 3.0



? RDEX 1604MOSN-12

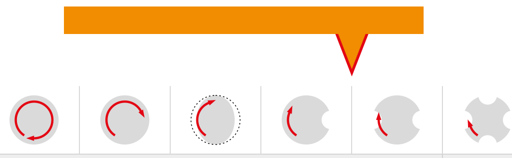
RDEX 16





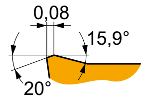
P	M	K	N	S	H
■	◪	■		◪	

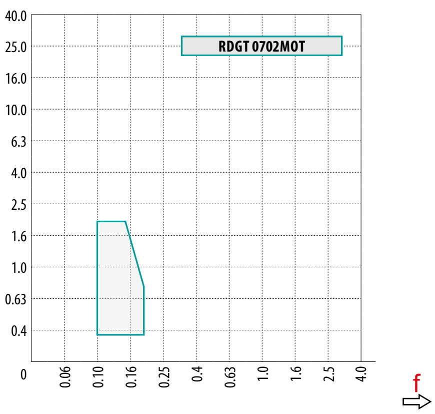
f	0.22 – 0.40
a_p	0.5 – 4.0



? **RDEX 1604MOSN-12**

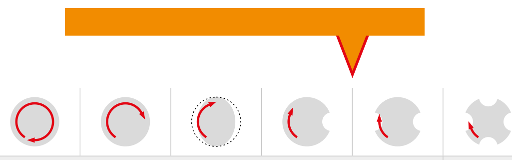
RDGT 07





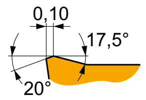
P	M	K	N	S	H
■	◪	■		◪	

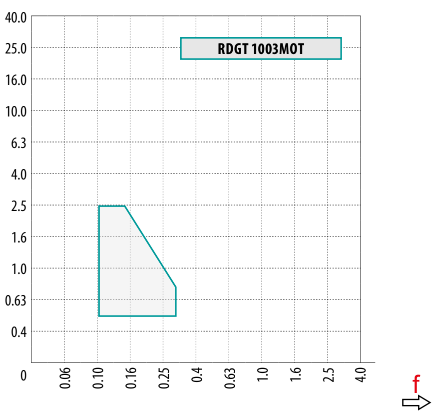
f	0.10 – 0.20
a_p	0.3 – 2.0



? **RDGT 0702MOT**

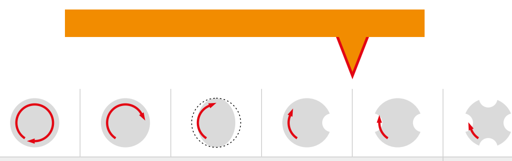
RDGT 10





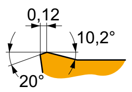
P	M	K	N	S	H
■	◪	■		◪	

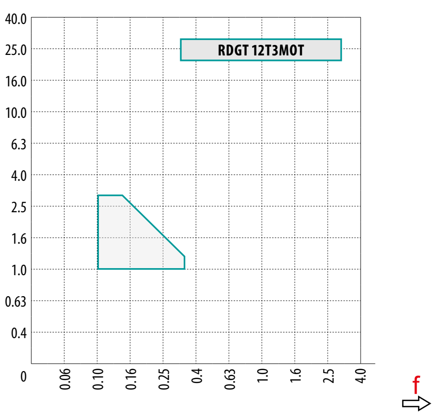
f	0.10 – 0.30
a_p	0.5 – 2.5



? **RDGT 1003MOT**

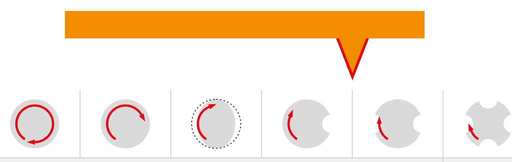
RDGT 12





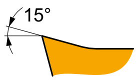
P	M	K	N	S	H
■	◪	■		◪	

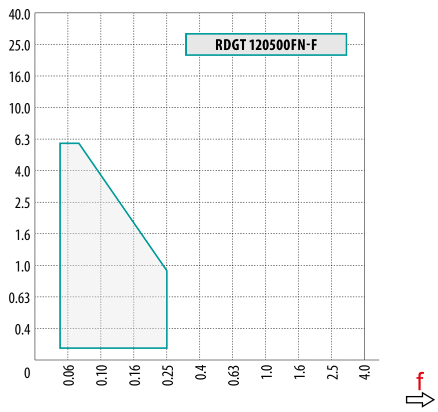
f	0.10 – 0.35
a_p	1.0 – 3.0



? **RDGT 12T3MOT**

RDGT 12-F





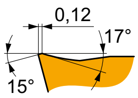
P	M	K	N	S	H
■	◩		◩		

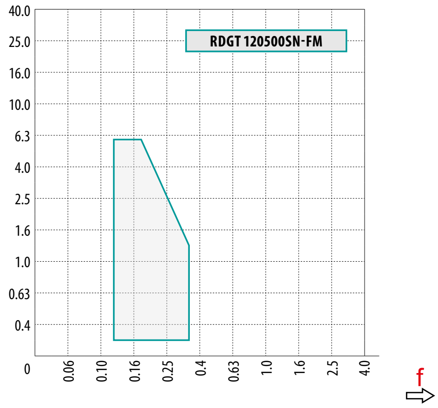
f: 0.05 – 0.25

a_p: 0.2 – 6.0

? RDGT 120500FN-F

RDGT 12-FM





P	M	K	N	S	H
■	◩	◩			

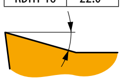
f: 0.12 – 0.35

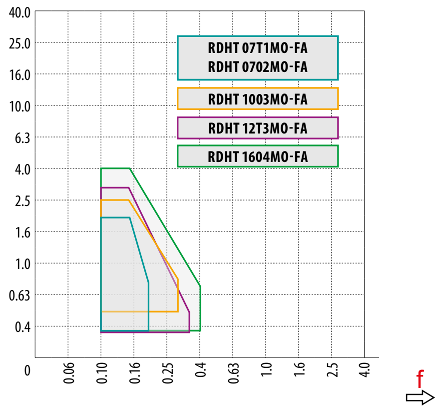
a_p: 0.2 – 6.0

? RDGT 120500SN-FM

RDHT -FA

RDHT 07	15.9°
RDHT 10	17.5°
RDHT 12	10.2°
RDHT 16	22.0°





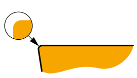
P	M	K	N	S	H
			■		

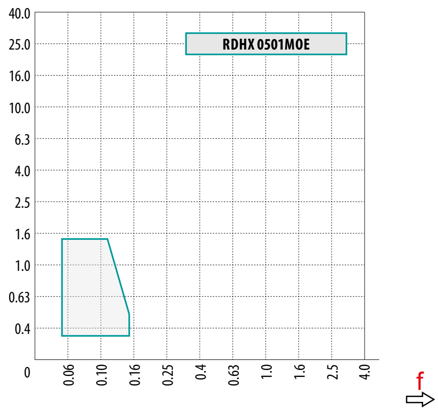
f: 0.10 – 0.40 (according to insert size)

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

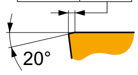
a_p: 0.3 – 1.5

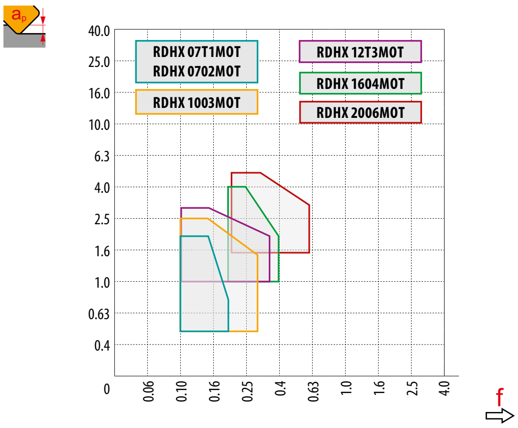
? RDHX 0501MOE

CHOICE OF CUTTING INSERT

RDHX MOT

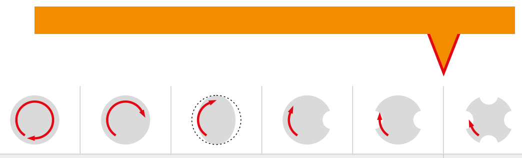
RDHX 07	0.12
RDHX 10	0.15
RDHX 12	0.15
RDHX 16	0.20
RDHX 20	0.20





P	M	K	N	S	H
◪		■			■

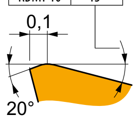
f	0.10 – 0.60 (according to insert size)
ap	0.5 – 5.0 (according to insert size)

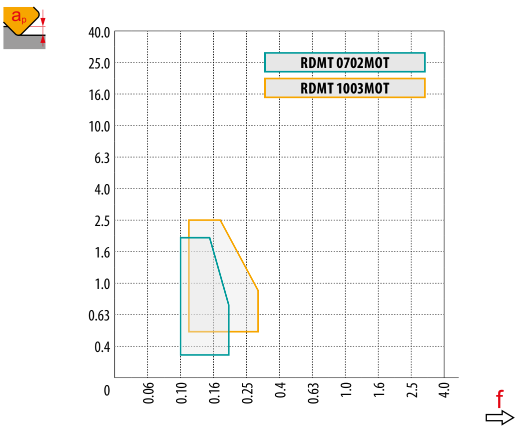


? RDHX 07T1MOT, RDHX 0702MOT
RDHX 1003MOT, RDHX 12T3MOT
RDHX 1604MOT, RDHX 2006MOT

RDMT

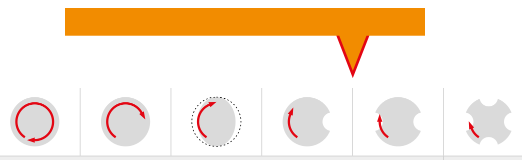
RDMT 07	14°
RDMT 10	15°





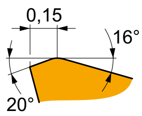
P	M	K	N	S	H
■	◪	■			

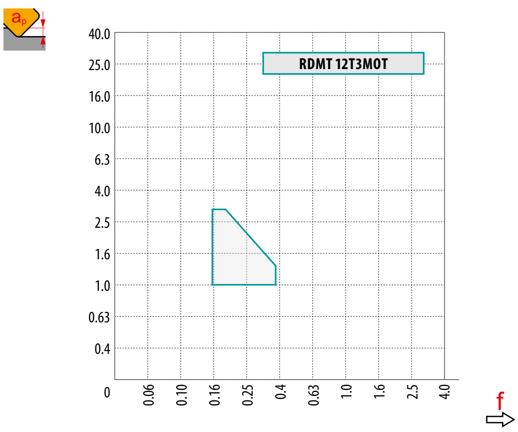
f	0.10 – 0.30 (according to insert size)
ap	0.3 – 2.5 (according to insert size)



? RDMT 0702MOT
RDMT 1003MOT

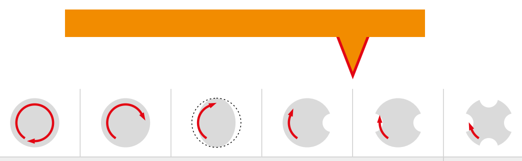
RDMT 12





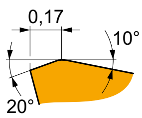
P	M	K	N	S	H
■	◪	■			

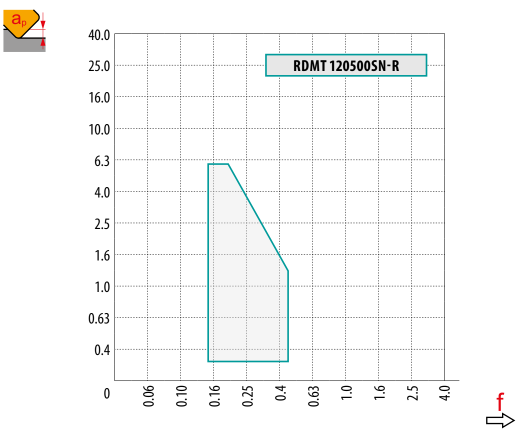
f	0.15 – 0.35
ap	1.0 – 3.0



? RDMT 12T3MOT

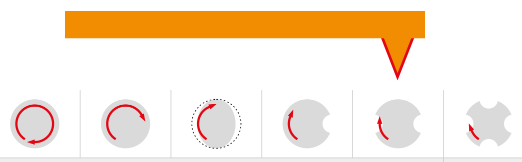
RDMT -R





P	M	K	N	S	H
■		■			

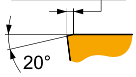
f	0.17 – 0.45
ap	0.3 – 6.0

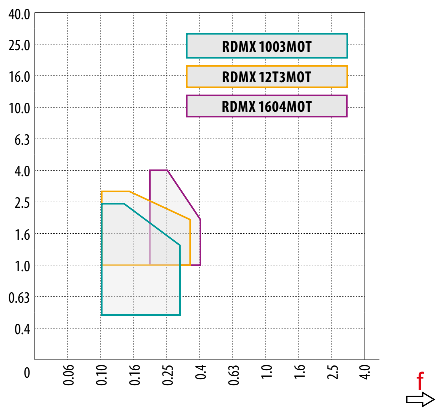


? RDMT 120500SN-R

RDMX

RDMX 10	0.12
RDMX 12	0.15
RDMX 16	0.20

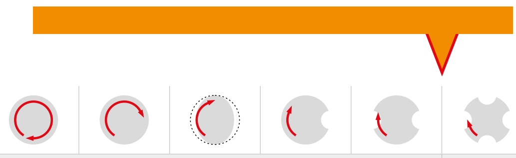




P	M	K	N	S	H
◩		■			■

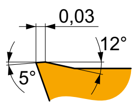
f: 0.10 – 0.40 (according to insert size)

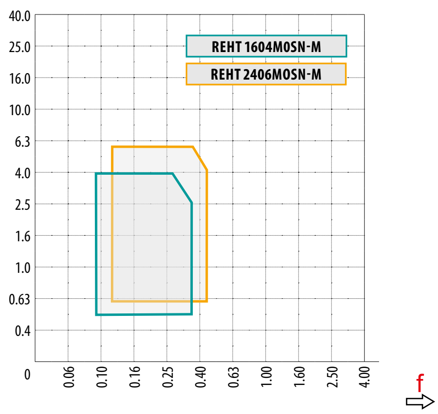
a_p: 0.5 – 4.0 (according to insert size)



? RDMX 1003MOT
RDMX 12T3MOT
RDMX 1604MOT

REHT -M

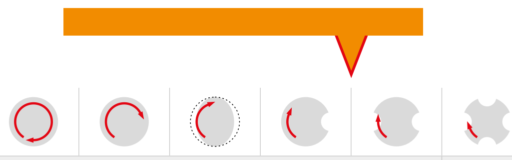




P	M	K	N	S	H
■	■			◩	

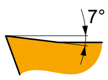
f: 0.08 – 0.45 (according to insert size)

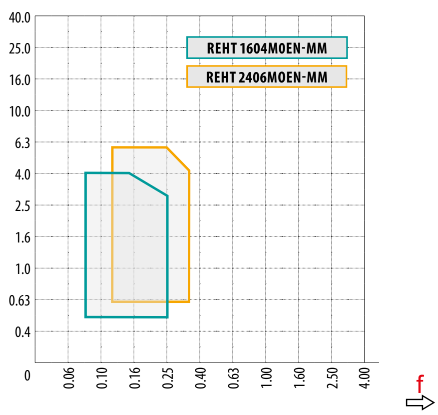
a_p: 0.5 – 6.0 (according to insert size)



? REHT 1604MOSN-M
REHT 2406MOSN-M

REHT -MM

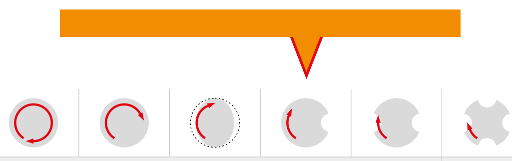




P	M	K	N	S	H
◩	■		◩	■	

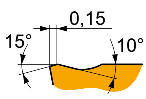
f: 0.08 – 0.35 (according to insert size)

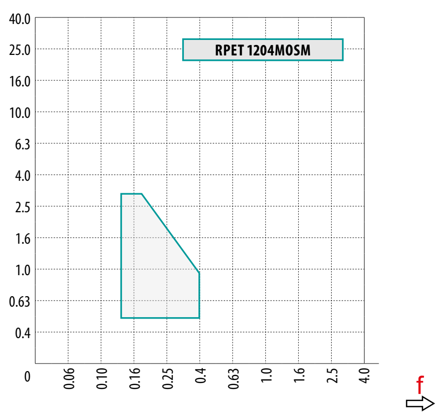
a_p: 0.5 – 6.0 (according to insert size)



? REHT 1604MOEN-MM
REHT 2406MOEN-MM

RPET 12

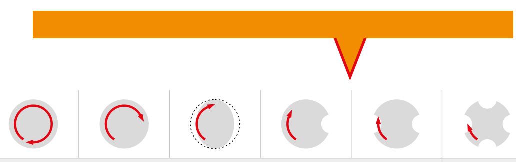




P	M	K	N	S	H
■	◩	◩		◩	

f: 0.12 – 0.40

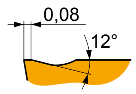
a_p: 0.5 – 3.0

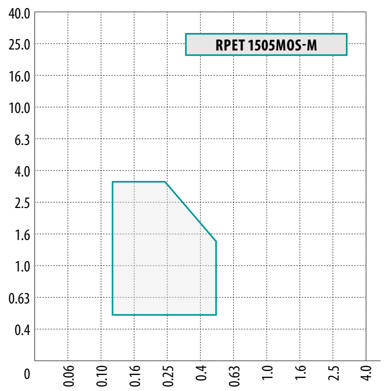


? RPET 1204MOSM

CHOICE OF CUTTING INSERT

RPET 15-M

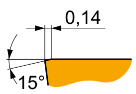


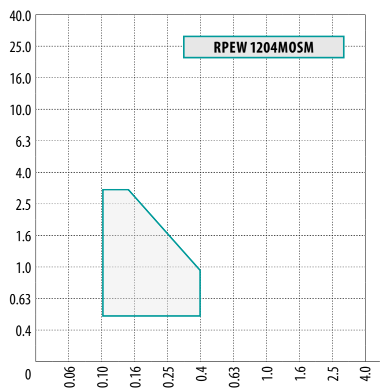


P	M	K	N	S	H
■	◩	◩		◩	

f	0.12 – 0.50
a_p	0.5 – 3.5
?	RPET 1505MOS-M

RPEW 12

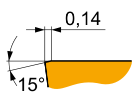


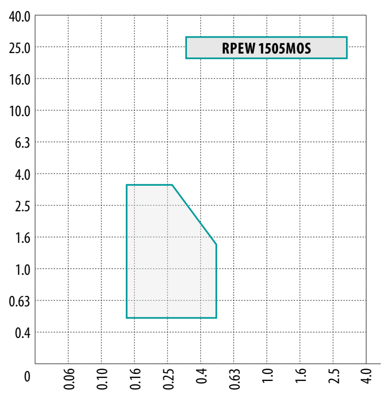


P	M	K	N	S	H
◩		■			■

f	0.10 – 0.40
a_p	0.5 – 3.0
?	RPEW 1204MOSM

RPEW 15

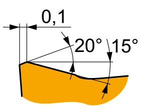


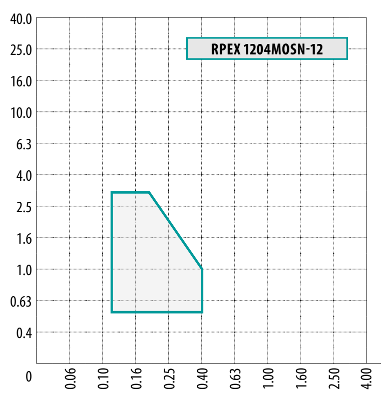


P	M	K	N	S	H
◩		■			■

f	0.15 – 0.50
a_p	0.5 – 3.5
?	RPEW 1505MOS

RPEX -12

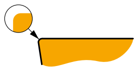


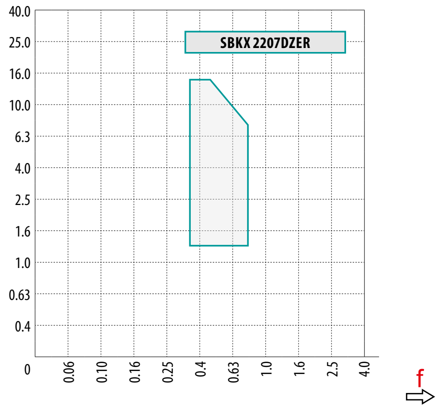


P	M	K	N	S	H
■	◩	■		◩	

f	0.12 – 0.40
a_p	0.5 – 3.0
?	RPEX 1204MOSN-12

SBKX 22

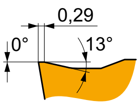


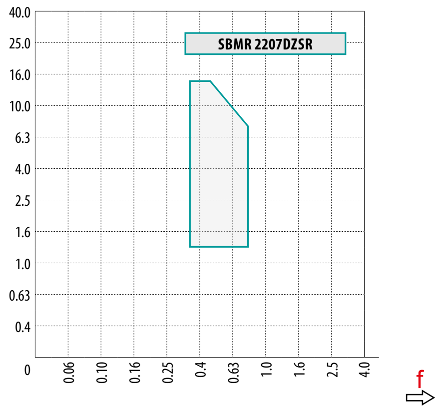


P	M	K	N	S	H
■		■			

f	0.35 – 0.80
a_p	1.5 – 15.0
?	**SBKX 2207DZER**

SBMR 22

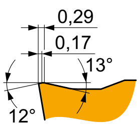


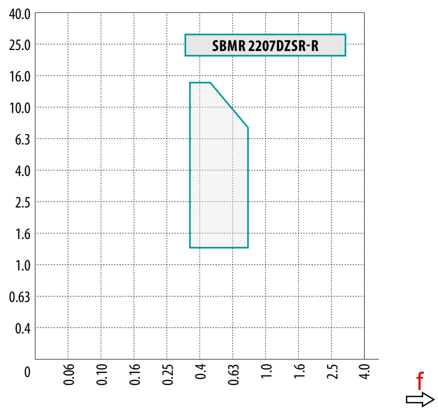


P	M	K	N	S	H
■	◩	■			

f	0.35 – 0.80
a_p	1.5 – 15.0
?	**SBMR 2207DZSR**

SBMR 22-R

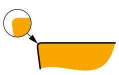


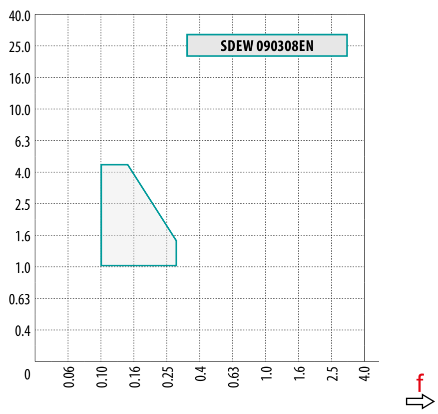


P	M	K	N	S	H
■	◩	■			

f	0.35 – 0.80
a_p	1.5 – 15.0
?	**SBMR 2207DZSR-R**

SDEW 09EN

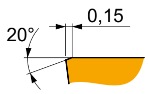


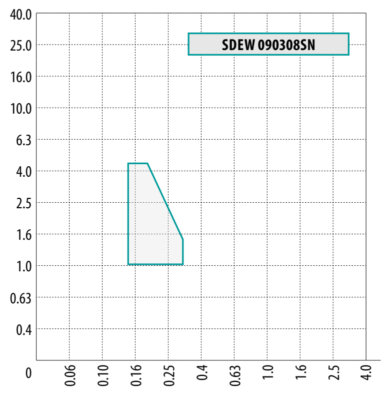


P	M	K	N	S	H
◩		■			◩

f	0.10 – 0.30
a_p	1.0 – 4.5
?	**SDEW 090308EN**

SDEW 09SN



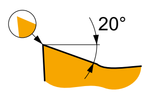


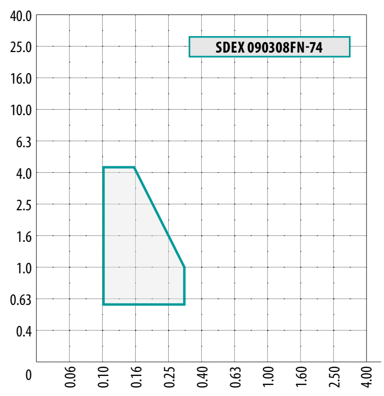
P	M	K	N	S	H
◪		■			◪

f	0.15 – 0.30
a_p	1.0 – 4.5

? SDEW 090308SN

SDEX 09-74



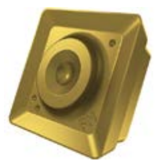


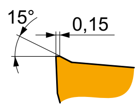
P	M	K	N	S	H
■	◪	◪		◪	

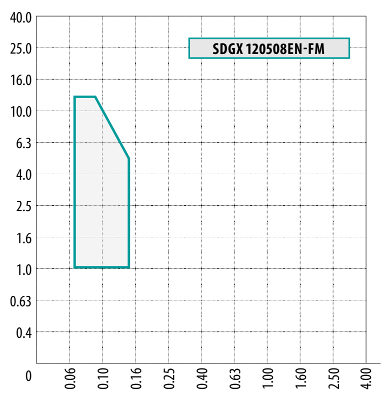
f	0.10 – 0.30
a_p	0.5 – 4.5

? SDEX 090308FN-74

SDGX 12-FM





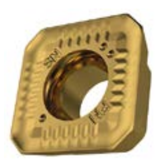


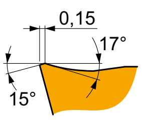
P	M	K	N	S	H
■	■			■	

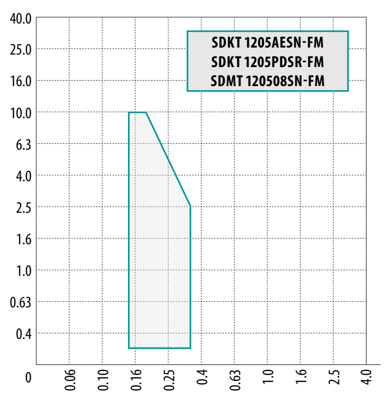
f	0.07 – 0.15
a_p	1.0 – 12.0

? SDGX 120508EN-FM

SDK(M)T 12-FM (IM)







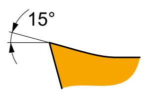
P	M	K	N	S	H
■	◪	◪			

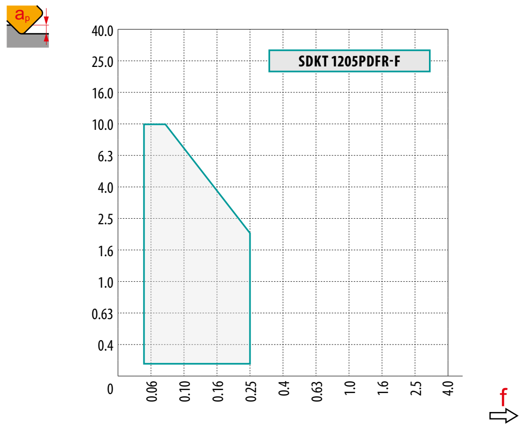
f	0.15 – 0.35
a_p	0.2 – 10.0

? SDKT 1205AESN-FM
SDKT 1205PDSR-FM
SDMT 120508SN-FM

CHOICE OF CUTTING INSERT

SDKT 12-F (IM)

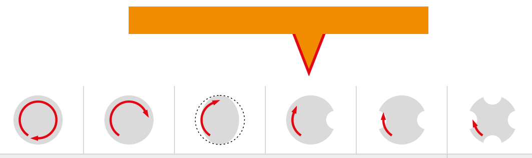




P	M	K	N	S	H
■	◩		◩		

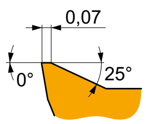
f: 0.05 – 0.25

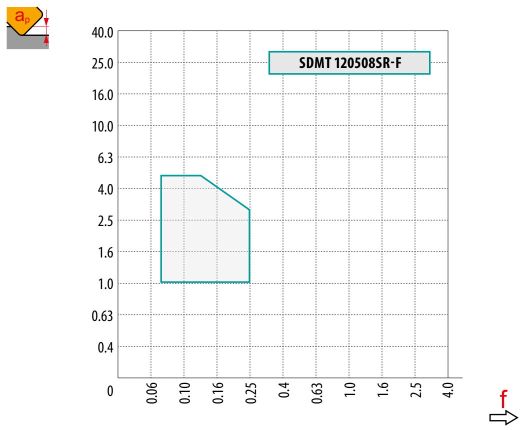
a_p: 0.2 – 10.0



? SDKT 1205PDFR-F

SDMT 12-F

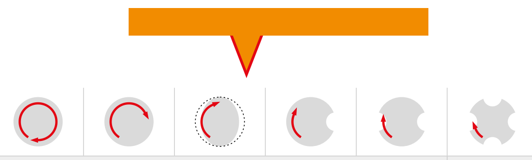




P	M	K	N	S	H
■	◩	◩	◩	◩	

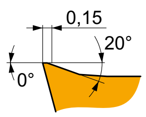
f: 0.07 – 0.25

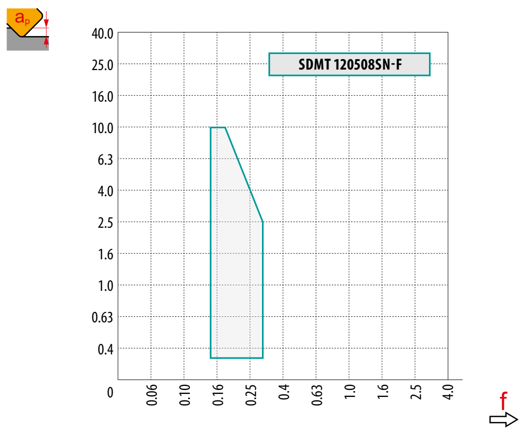
a_p: 1.0 – 5.0



? SDMT 120508SR-F

SDMT 12-F (IM)

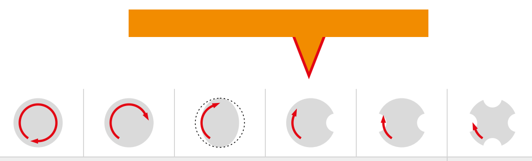




P	M	K	N	S	H
■	◩		◩		

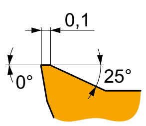
f: 0.15 – 0.30

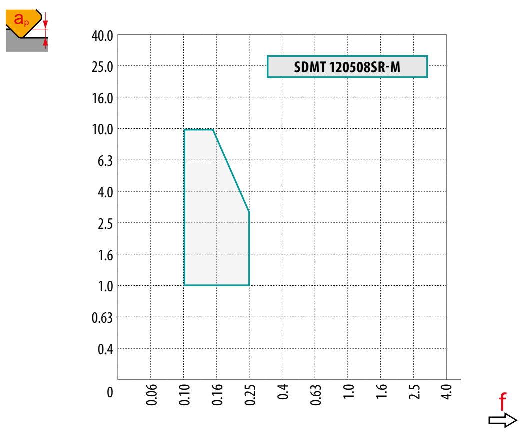
a_p: 0.3 – 10.0



? SDMT 120508SN-F

SDMT 12-M

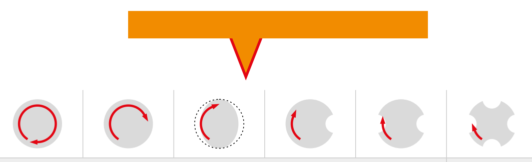




P	M	K	N	S	H
■	■	◩		◩	

f: 0.10 – 0.25

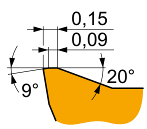
a_p: 1.0 – 10.0

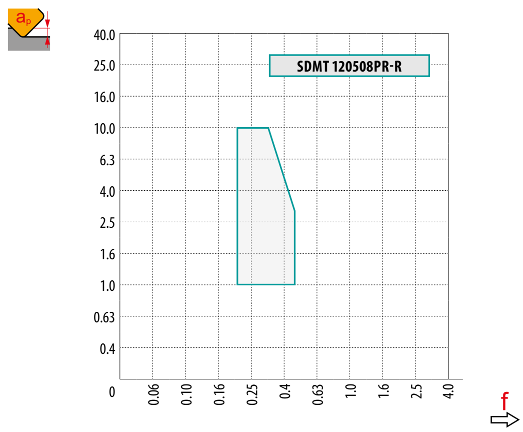


? SDMT 120508SR-M

CHOICE OF CUTTING INSERT

SDMT 12-R





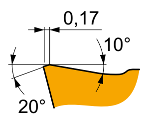
P	M	K	N	S	H
■	◩	■		◩	

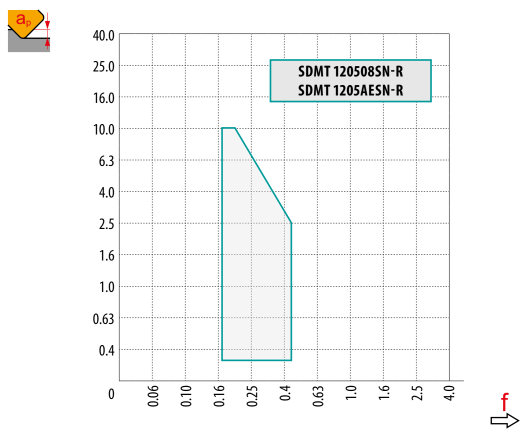
f: 0.20 – 0.45

a_p: 1.0 – 10.0

? SDMT 120508PR-R

SDMT 12-R (IM)





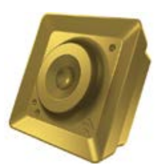
P	M	K	N	S	H
■		■			

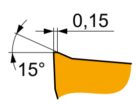
f: 0.17 – 0.45

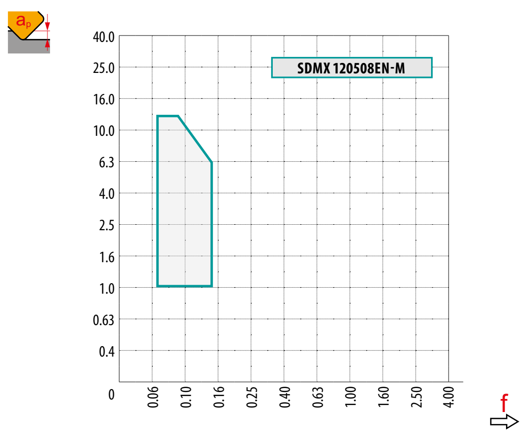
a_p: 0.3 – 10.0

? SDMT 120508SN-R
SDMT 1205AESN-R

SDMX 12-M







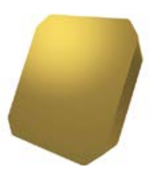
P	M	K	N	S	H
◩	■			■	

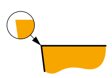
f: 0.07 – 0.15

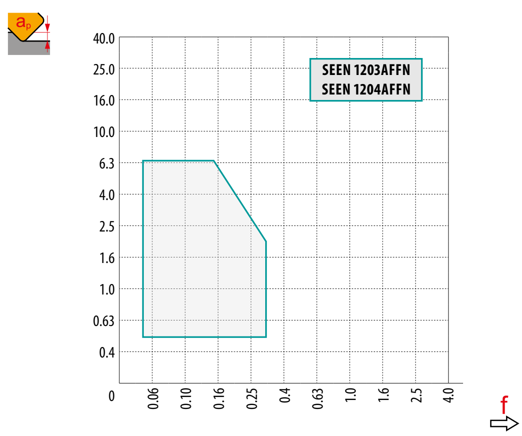
a_p: 1.0 – 12.0

? SDMX 120508EN-M

SEEN 12FN







P	M	K	N	S	H
■	◩	◩			

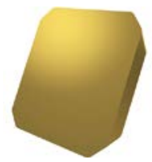
f: 0.05 – 0.40 (according to insert size)

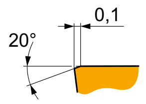
a_p: 0.5 – 6.5

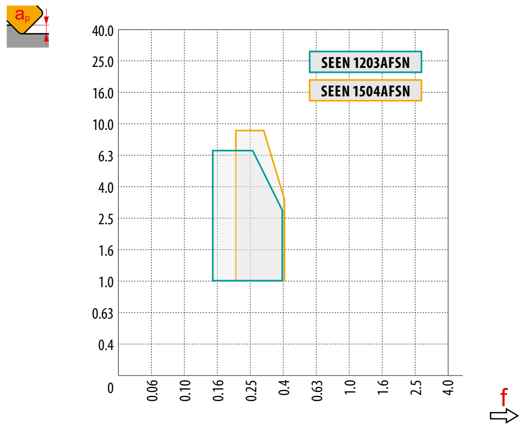
? SEEN 1203AFFN
SEEN 1204AFFN

CHOICE OF CUTTING INSERT

SEEN SN

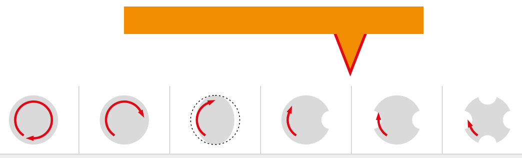






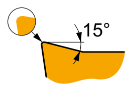
P	M	K	N	S	H
■		■			◩

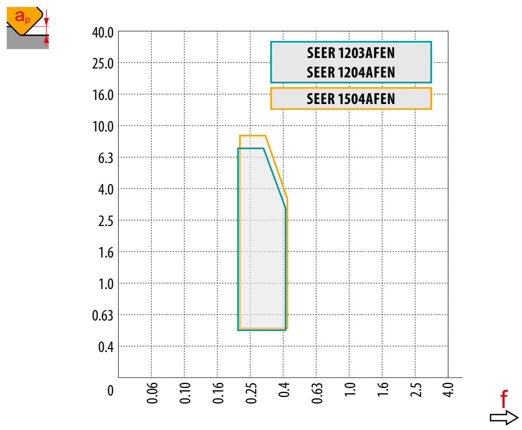
f	0.15 – 0.40 (according to insert size)
a_p	0.5 – 9.0 (according to insert size)



? SEEN 1203AFSN
SEEN 1504AFSN

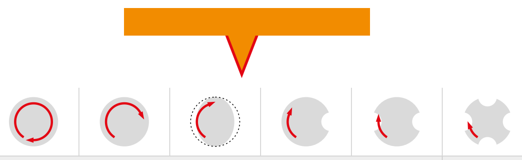
SEER EN





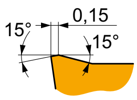
P	M	K	N	S	H
■	◩	■		◩	

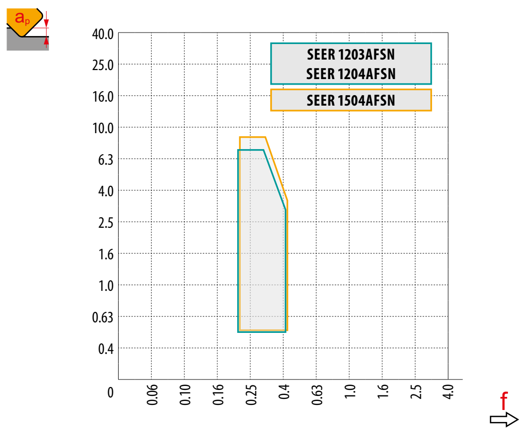
f	0.20 – 0.40 (according to insert size)
a_p	0.5 – 9.0 (according to insert size)



? SEER 1203AFEN
SEER 1204AFEN
SEER 1504AFEN

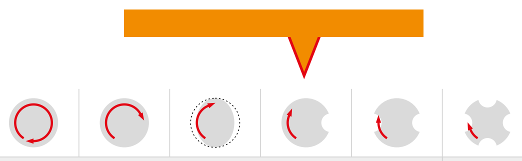
SEER SN





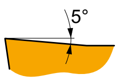
P	M	K	N	S	H
■	◩	■		◩	

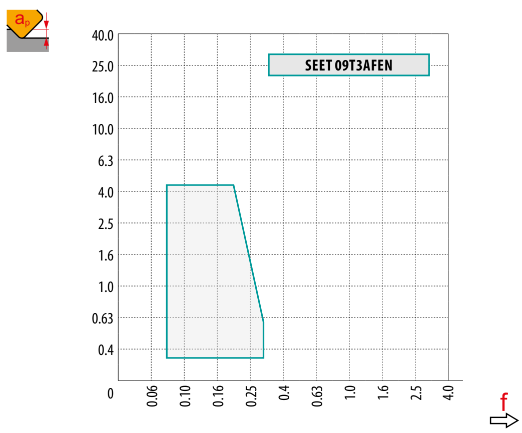
f	0.20 – 0.40 (according to insert size)
a_p	1.0 – 9.0 (according to insert size)



? SEER 1203AFSN
SEER 1204AFSN
SEER 1504AFSN

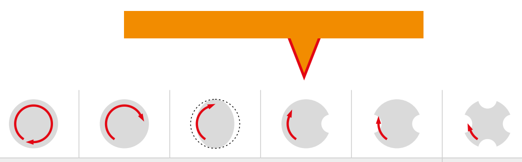
SEET 09





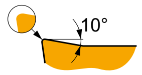
P	M	K	N	S	H
■	◩			◩	

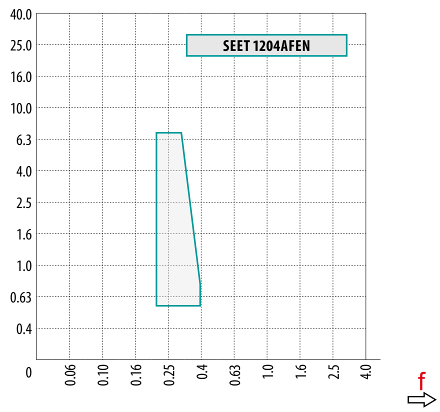
f	0.08 – 0.30
a_p	0.3 – 4.5



? SEET 09T3AFEN

SEET 12EN



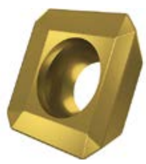


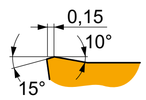
P	M	K	N	S	H
■	■	◪		◪	

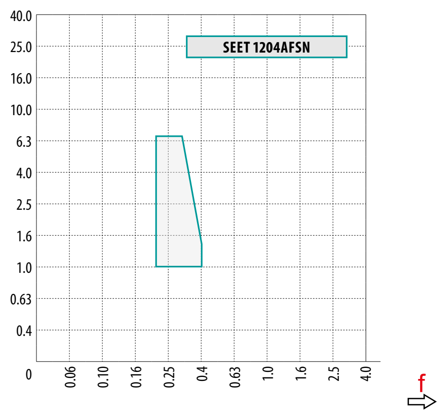
f	0.20 – 0.40
a_p	0.5 – 6.5

? SEET 1204AFEN

SEET 12SN





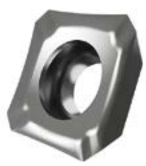


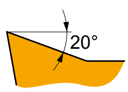
P	M	K	N	S	H
■	■	◪		◪	

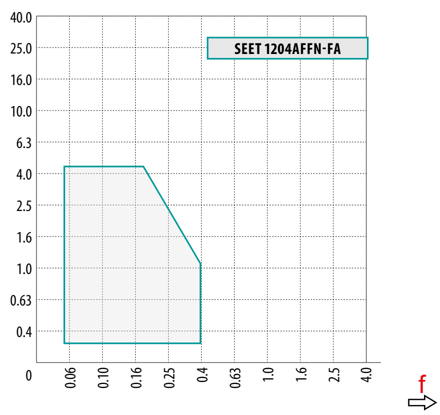
f	0.20 – 0.40
a_p	1.0 – 6.5

? SEET 1204AFSN

SEET 12-FA





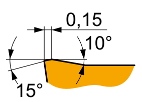


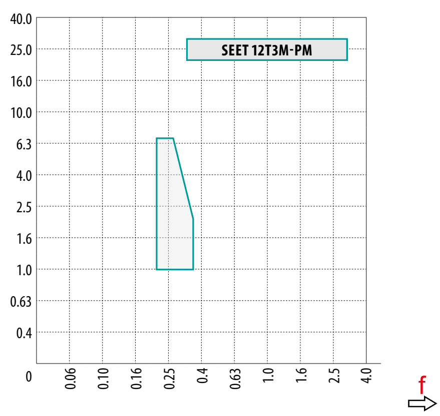
P	M	K	N	S	H
			■		

f	0.05 – 0.40
a_p	0.2 – 4.5

? SEET 1204AFFN-FA

SEET 12-PM



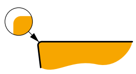


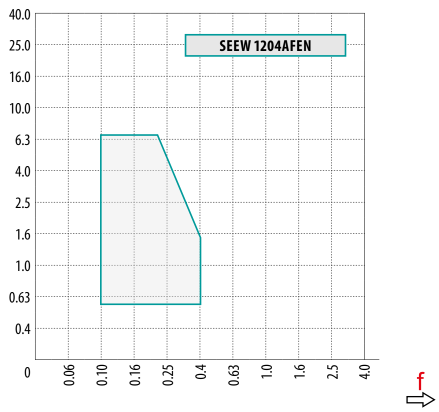
P	M	K	N	S	H
■	◪	■		◪	

f	0.20 – 0.35
a_p	1.0 – 6.5

? SEET 12T3M-PM

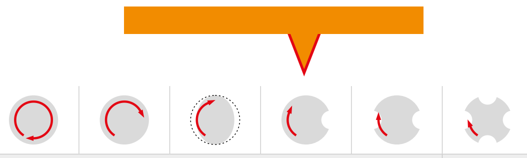
SEEW 12 EN





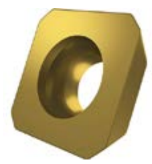
P	M	K	N	S	H
◩		◩			

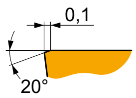
f	0.10 – 0.40
a_p	0.5 – 6.5

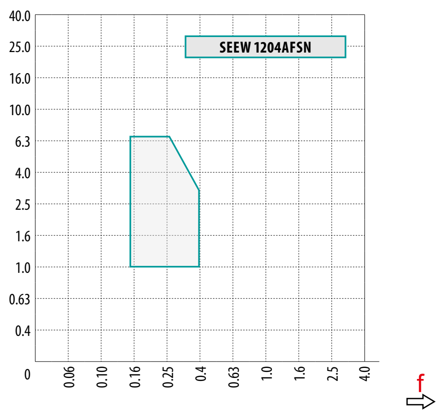


SEEW 1204AFEN

SEEW 12 SN

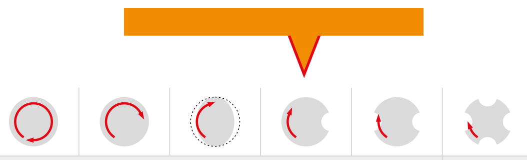






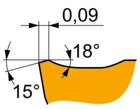
P	M	K	N	S	H
◩		■			◩

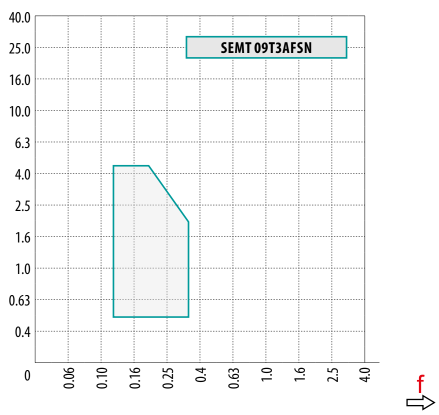
f	0.15 – 0.40
a_p	1.0 – 6.5



SEEW 1204AFSN

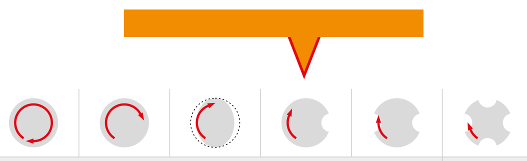
SEMT 09





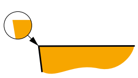
P	M	K	N	S	H
■	◩	■			

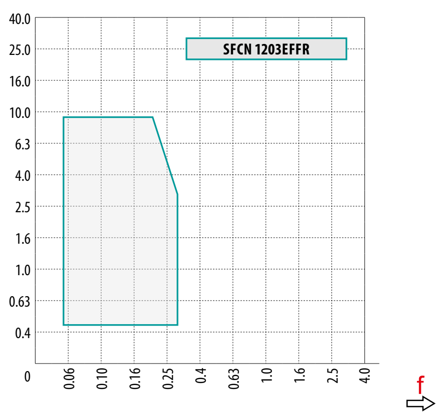
f	0.12 – 0.35
a_p	0.5 – 4.5



SEMT 09T3AFSN

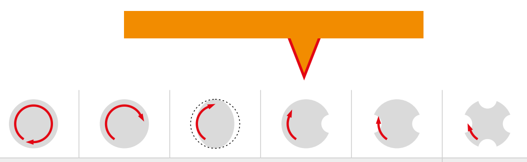
SFCN 12





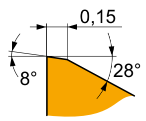
P	M	K	N	S	H
			■		

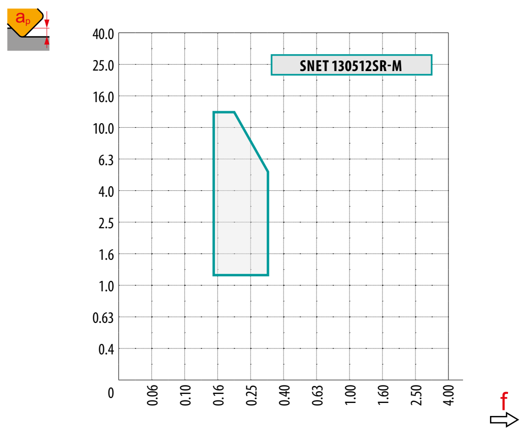
f	0.05 – 0.30
a_p	0.5 – 9.0



SFCN 1203EFFR

SNET 13-M

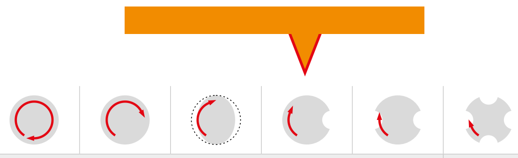




P	M	K	N	S	H
■		◪			

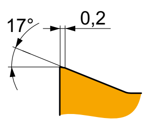
f: 0.15 – 0.35

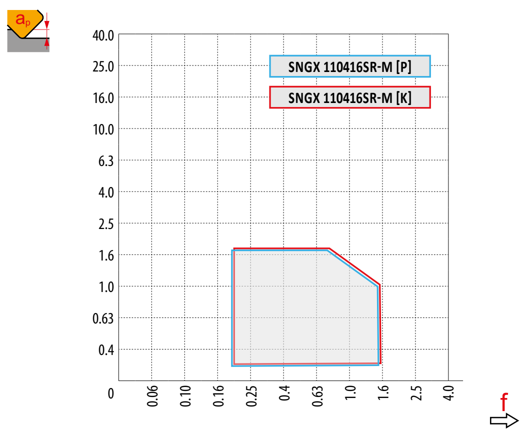
a_p: 1.2 – 12.0



? SNET 130512SR-M

SNGX 11-M

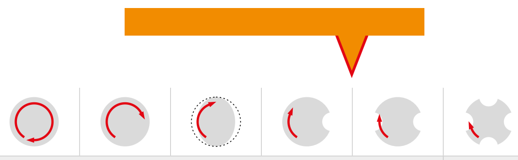




P	M	K	N	S	H
■		■			

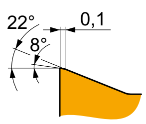
f: 0.20 – 1.50

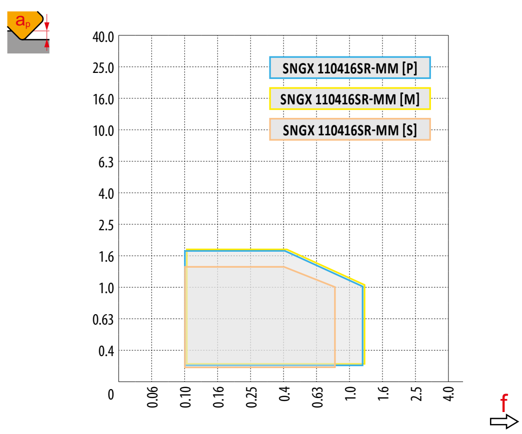
a_p: 0.2 – 1.7



? SNGX 110416SR-M

SNGX 11-MM

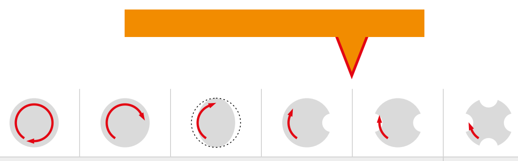




P	M	K	N	S	H
■	■			■	

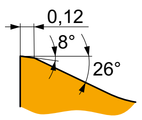
f: 0.10 – 1.20

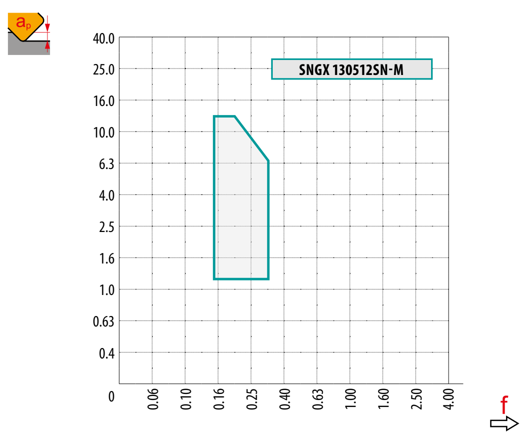
a_p: 0.2 – 1.7



? SNGX 110416SR-MM

SNGX 13-M

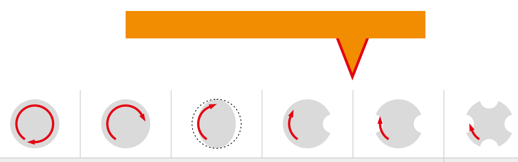




P	M	K	N	S	H
■		◪			

f: 0.15 – 0.35

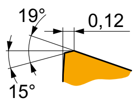
a_p: 1.2 – 12.0

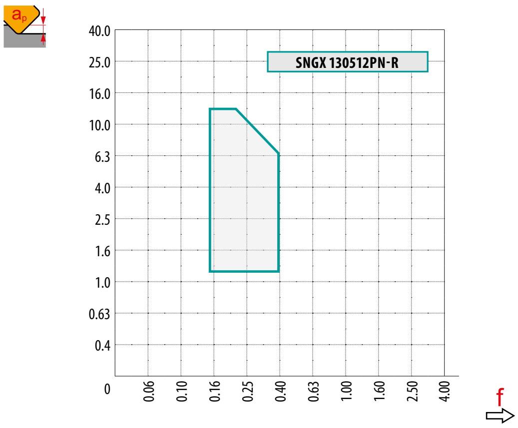


? SNGX 130512SN-M

CHOICE OF CUTTING INSERT

SNGX 13-R

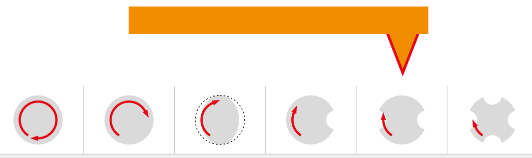




P	M	K	N	S	H
■		■			

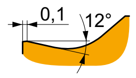
f: 0.15 – 0.40

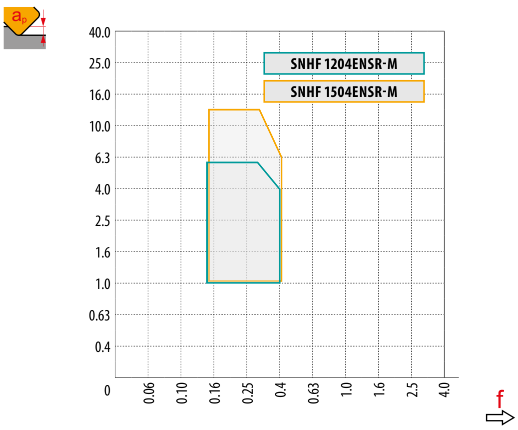
a_p: 1.2 – 12.0



? SNGX 130512PN-R

SNHF -M

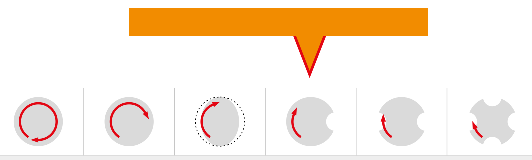




P	M	K	N	S	H
■		◩			

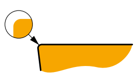
f: 0.15 – 0.40

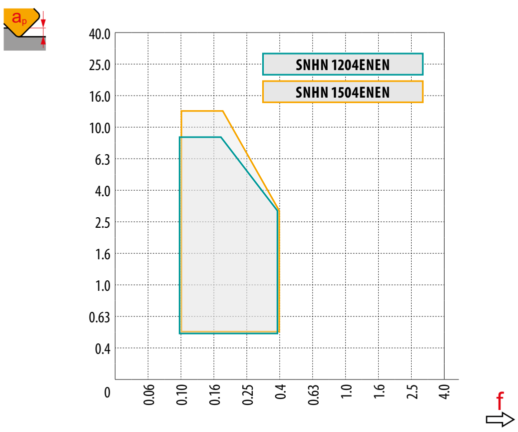
a_p: 1.0 – 13.5 (according to insert size)



? SNHF 1204ENSR-M
SNHF 1504ENSR-M

SNHN

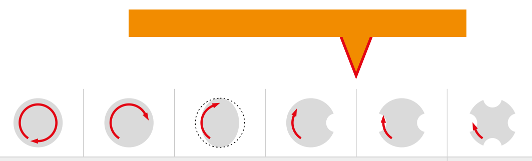




P	M	K	N	S	H
◩		■			◩

f: 0.10 – 0.40

a_p: 0.5 – 13.5 (according to insert size)



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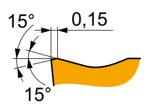
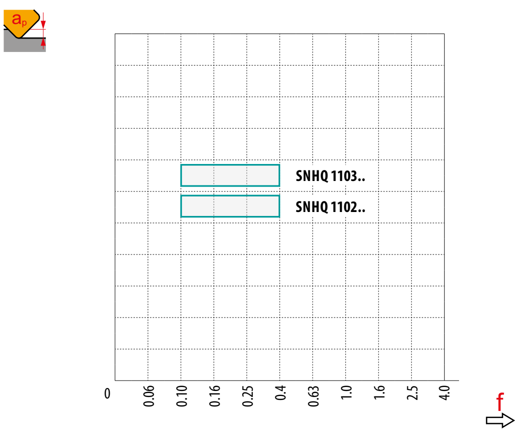
SNHQ 11

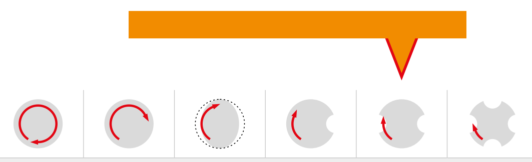




P	M	K	N	S	H
■	◩	■			

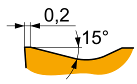
f: 0.10 – 0.40

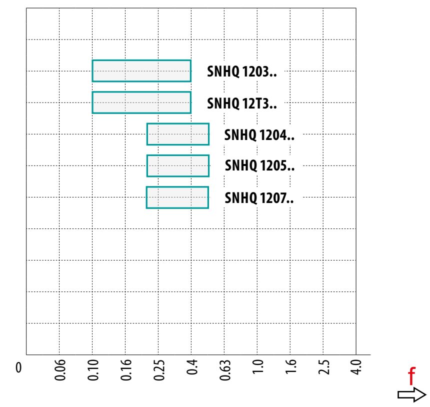
a_p: –



? SNHQ 110.AZTN

SNHQ 12TN

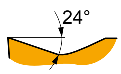


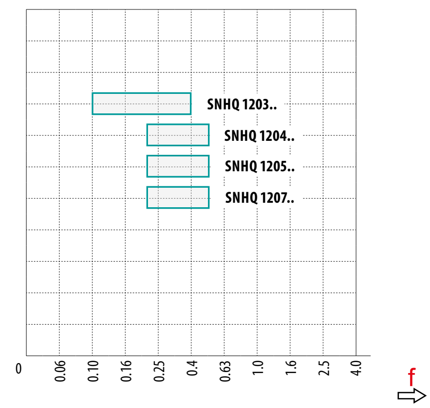


P	M	K	N	S	H
■	◩	■			

f	0.10 – 0.50 (according to insert type)
a_p	–
?	SNHQ 1203AZTN, SNHQ 12T3AZTN SNHQ 1204AZTN, SNHQ 1205AZTN SNHQ 1207AZTN

SNHQ 12EN

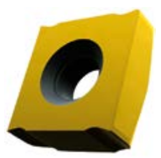


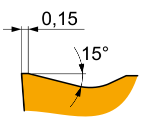


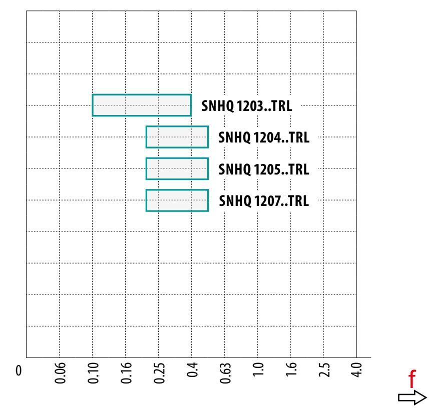
P	M	K	N	S	H
■	◩	■			

f	0.10 – 0.50 (according to insert type)
a_p	–
?	SNHQ 1203AZEN, SNHQ 1204AZEN SNHQ 1205AZEN, SNHQ 1207AZEN

SNHQ 12TRL



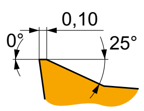


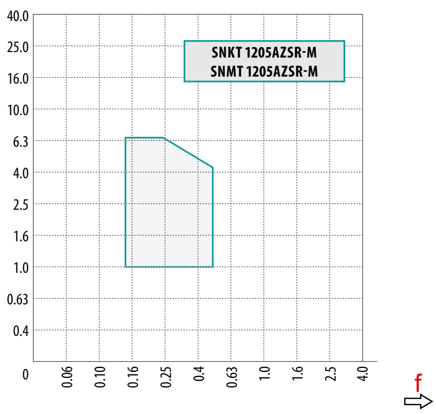


P	M	K	N	S	H
■	◩	◩			

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

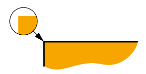


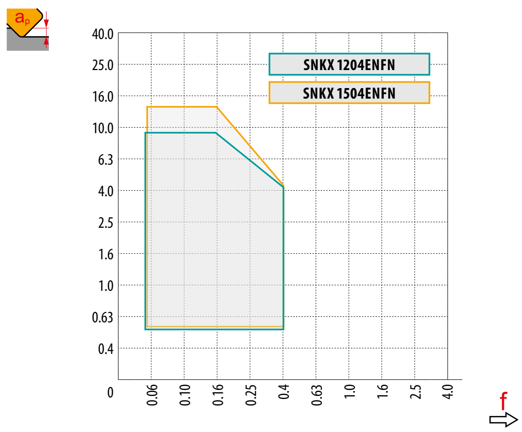


P	M	K	N	S	H
■	■	◩		◩	

f	0.15 – 0.50
a_p	1.0 – 6.5
?	SNKT 1205AZSR-M SNMT 1205AZSR-M

SNKX

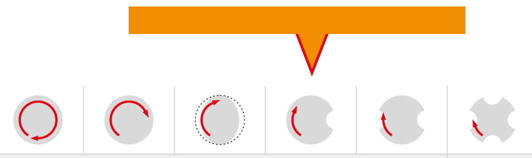




P	M	K	N	S	H
■		■			

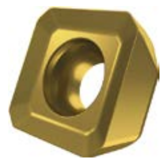
f: 0.05 – 0.40

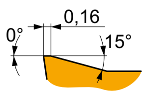
a_p: 0.5 – 13.5 (according to insert size)

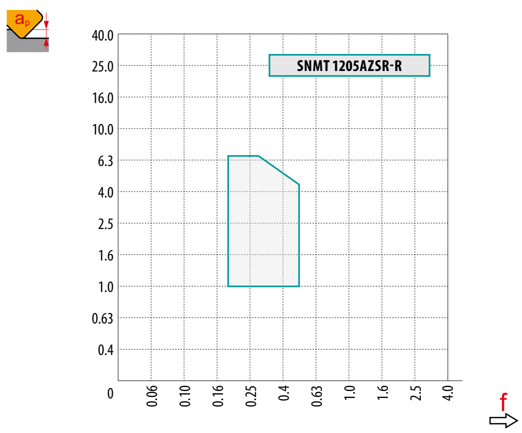


? SNKX 1204ENFN
SNKX 1504ENFN

SNMT 12-R



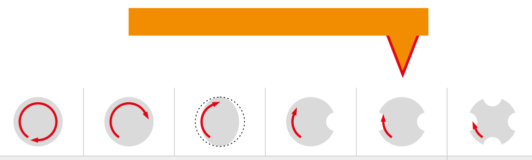




P	M	K	N	S	H
■	◩	◩		◩	

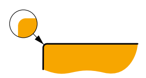
f: 0.18 – 0.50

a_p: 1.0 – 6.5



? SNMT 1205AZSR-R

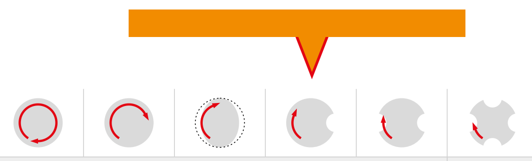
SNUN



P	M	K	N	S	H
◩		■			◩

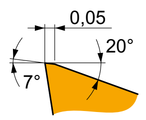
f: 0.10 – 0.40

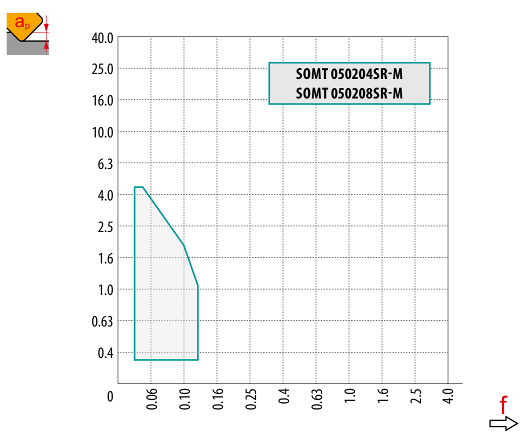
a_p: 0.5 – 13.5 (according to insert size)



? SNUN 120408
SNUN 120412
SNUN 150412

SOMT 05-M

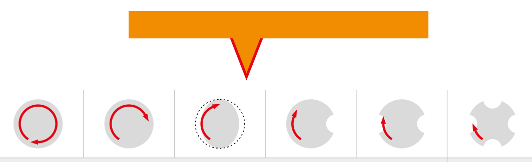




P	M	K	N	S	H
■	■	◩		◩	

f: 0.03 – 0.12

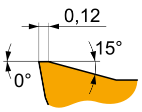
a_p: 0.4 – 4.5

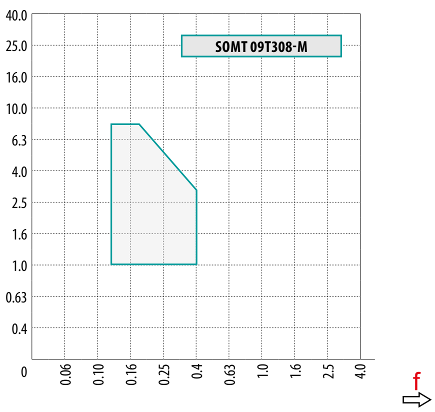


? SOMT 050204SR-M
SOMT 050208SR-M

CHOICE OF CUTTING INSERT

SOMT 09-M

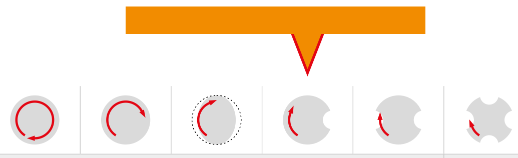




P	M	K	N	S	H
■	■	◪		◪	

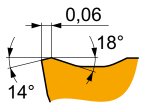
f: 0.12 – 0.40

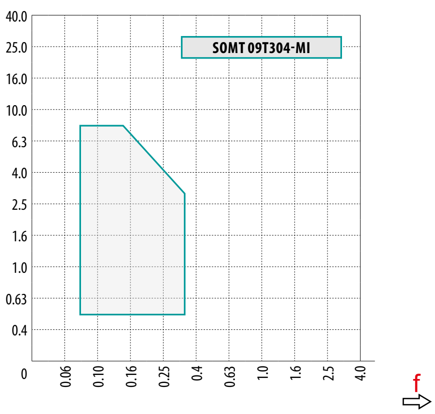
a_p: 1.0 – 8.0



? **SOMT 09T308-M**

SOMT 09-MI

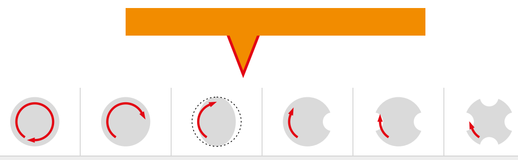




P	M	K	N	S	H
■	■	◪		◪	

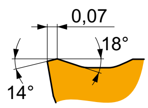
f: 0.08 – 0.35

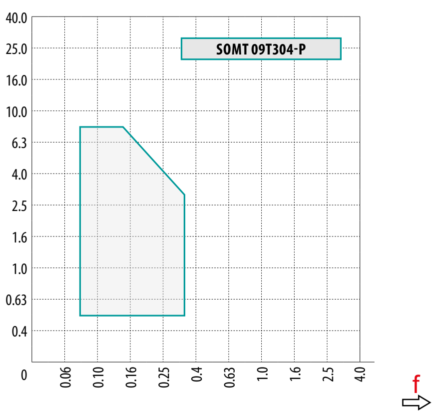
a_p: 0.5 – 8.0



? **SOMT 09T304-MI**

SOMT 09-P

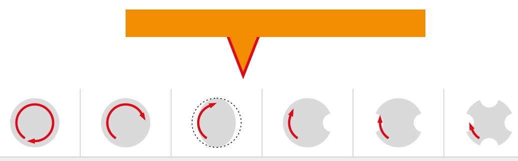




P	M	K	N	S	H
■	◪	◪		◪	

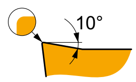
f: 0.08 – 0.35

a_p: 0.5 – 8.0



? **SOMT 09T304-P**

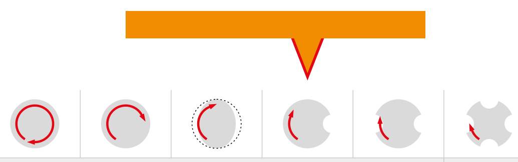
SPET 12EN



P	M	K	N	S	H
■	◪	■		◪	

f: 0.12 – 0.40

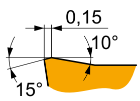
a_p: 1.0 – 12.0

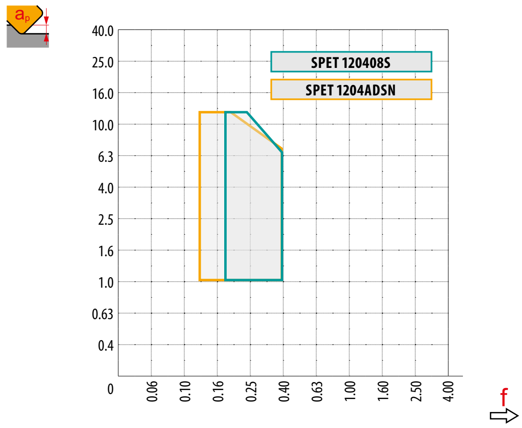


? **SPET 1204ADEN**

CHOICE OF CUTTING INSERT

SPET 12S

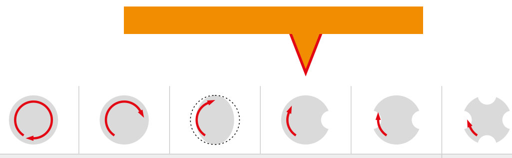




P	M	K	N	S	H
■	◩	■		◩	

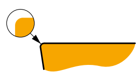
f: 0.12 – 0.40 (according to insert type)

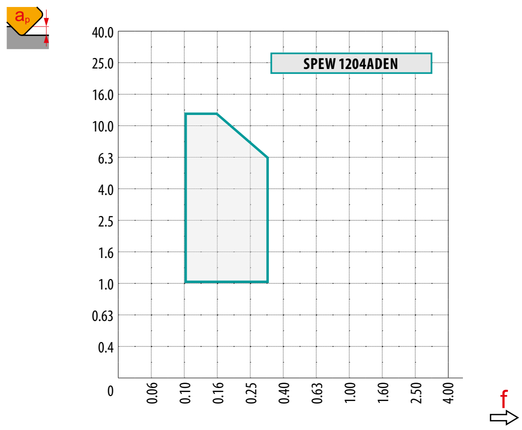
a_p: 1.0 – 12.0



? **SPET 120408S**
SPET 1204ADSN

SPEW 12EN

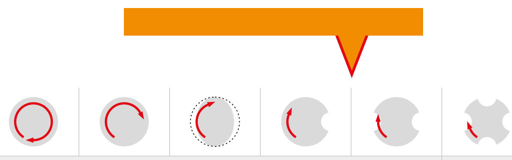




P	M	K	N	S	H
◩		■			◩

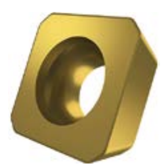
f: 0.10 – 0.35

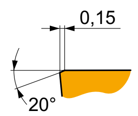
a_p: 1.0 – 12.0

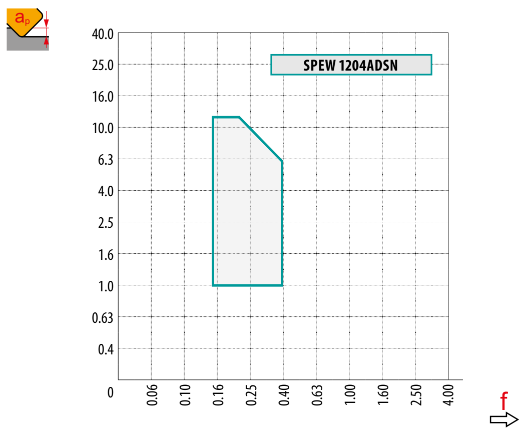


? **SPEW 1204ADEN**

SPEW 12SN



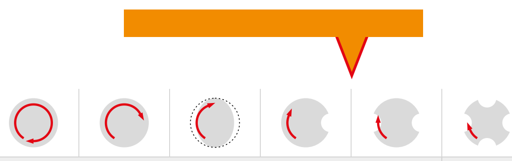




P	M	K	N	S	H
◩		■			◩

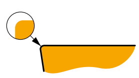
f: 0.15 – 0.40

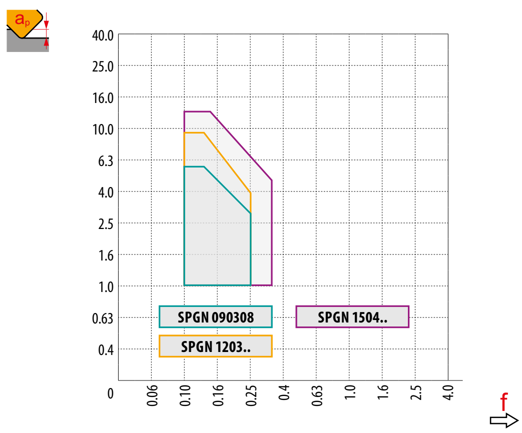
a_p: 1.0 – 12.0



? **SPEW 1204ADSN**

SPGN

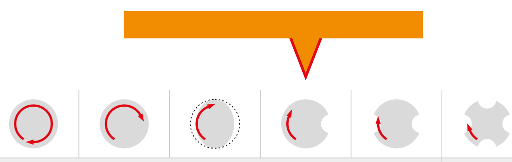




P	M	K	N	S	H
■		■			

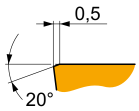
f: 0.10 – 0.35 (according to insert size)

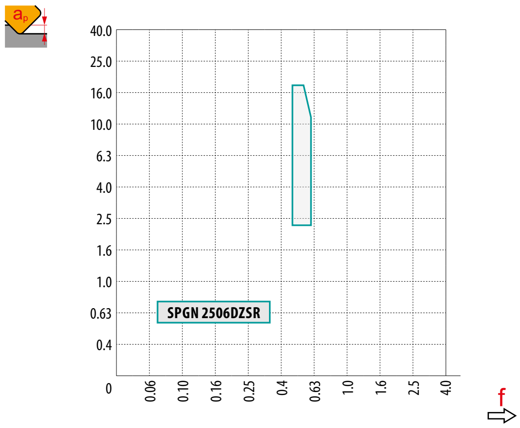
a_p: 0.5 – 13.5 (according to insert size)



? **SPGN 090308**
SPGN 1203..
SPGN 1504..

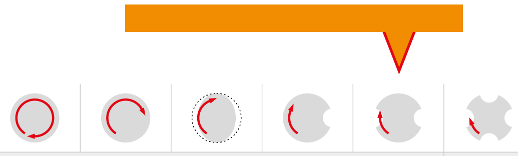
SPGN DZ





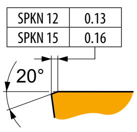
P	M	K	N	S	H
■		■			

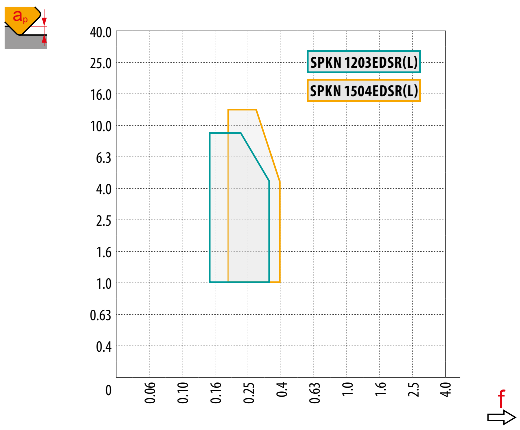
f	0.45 – 0.60
a_p	2.0 – 18.0



? SPGN 2506DZSR

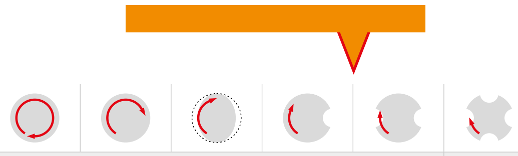
SPKN EDSR(L)





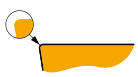
P	M	K	N	S	H
◩		■			◩

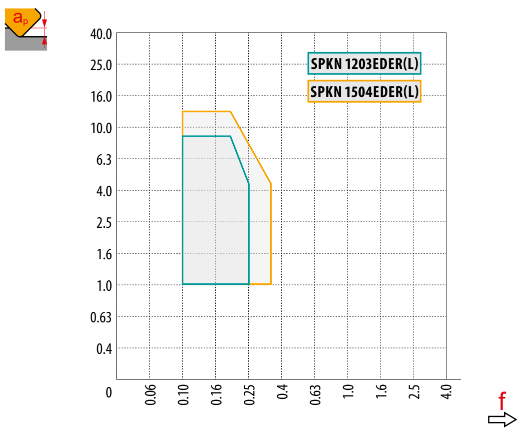
f	0.15 – 0.40 (according to insert size)
a_p	1.0 – 13.0 (according to insert size)



? SPKN 1203EDSR(L)
SPKN 1504EDSR(L)

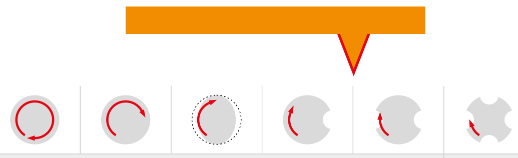
SPKN EDER(L)





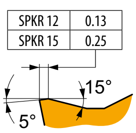
P	M	K	N	S	H
◩		■			◩

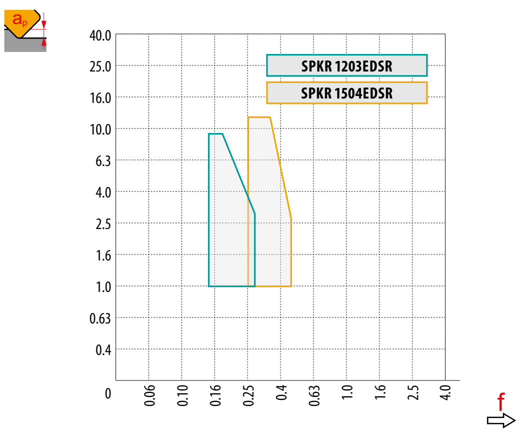
f	0.10 – 0.35 (according to insert size)
a_p	1.0 – 13.0 (according to insert size)



? SPKN 1203EDER(L)
SPKN 1504EDER(L)

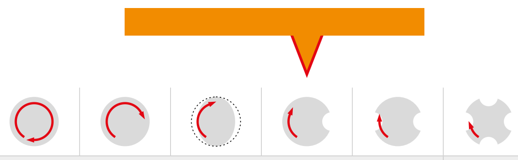
SPKR





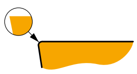
P	M	K	N	S	H
■	◩	■			

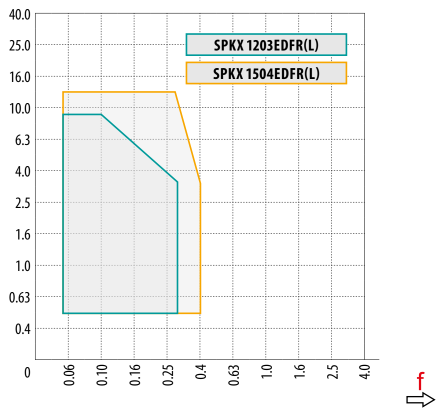
f	0.15 – 0.45 (according to insert size)
a_p	1.0 – 12.0 (according to insert size)



? SPKR 1203EDSR
SPKR 1504EDSR

SPKX

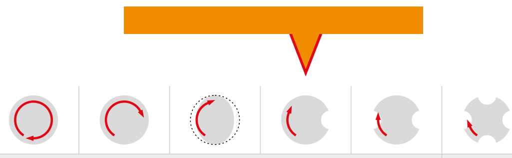




P	M	K	N	S	H
■		■			

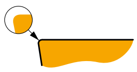
f: 0.05 – 0.40 (according to insert size)

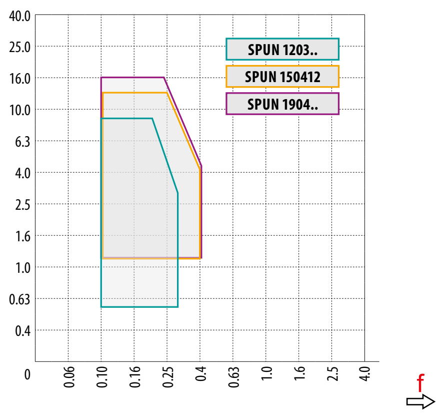
a_p: 0.5 – 13.0 (according to insert size)



? SPKX 1203EDFR(L)
SPKX 1504EDFR(L)

SPUN

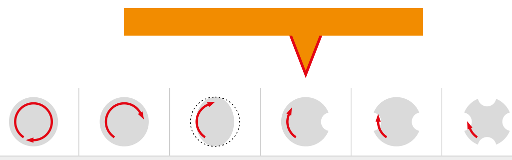




P	M	K	N	S	H
■		◩			

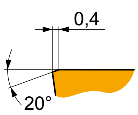
f: 0.10 – 0.40 (according to insert size)

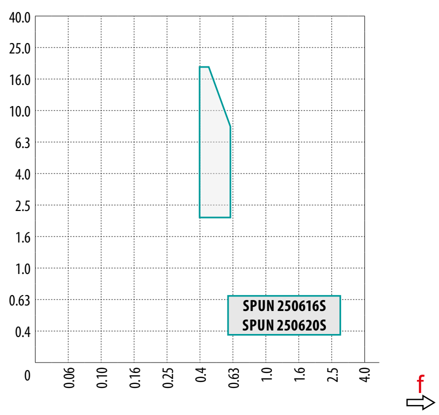
a_p: 0.5 – 16.0 (according to insert size)



? SPUN 1203..
SPUN 150412
SPUN 1904..

SPUN 25

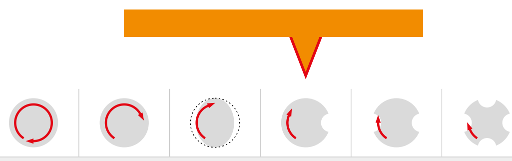




P	M	K	N	S	H
■		◩			

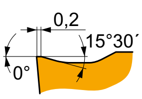
f: 0.4 – 0.6

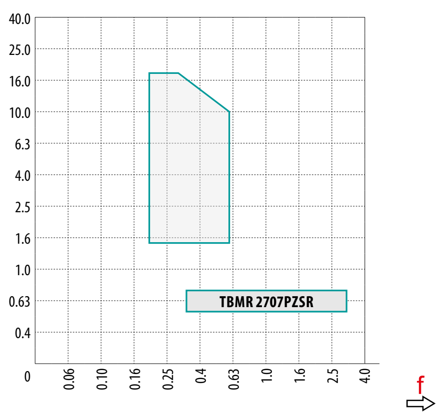
a_p: 2.0 – 18.0



? SPUN 250616S
SPUN 250620S

TBMR 27

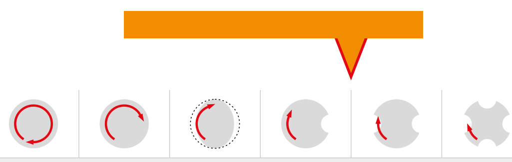




P	M	K	N	S	H
■	◩	■		◩	

f: 0.20 – 0.60

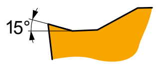
a_p: 1.5 – 18.0

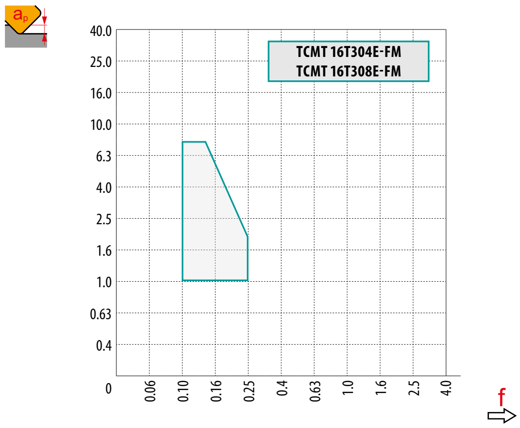


? TBMR 2707PZSR

CHOICE OF CUTTING INSERT

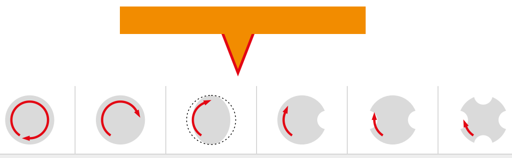
TCMT 16-FM





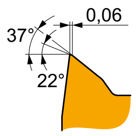
P	M	K	N	S	H
■	■	◪			

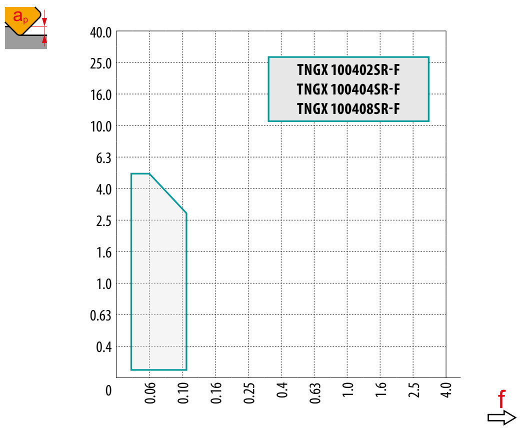
f	0.10 – 0.25
a_p	1.0 – 8.5



? TCMT 16T304E-FM
TCMT 16T308E-FM

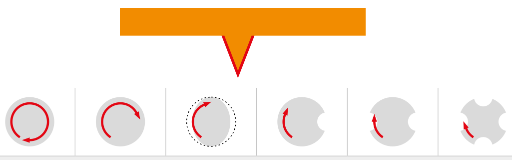
TNGX 10-F





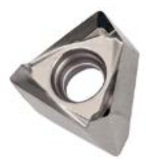
P	M	K	N	S	H
■	◪	◪			

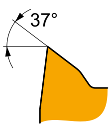
f	0.3 – 0.11
a_p	0.1 – 5.0

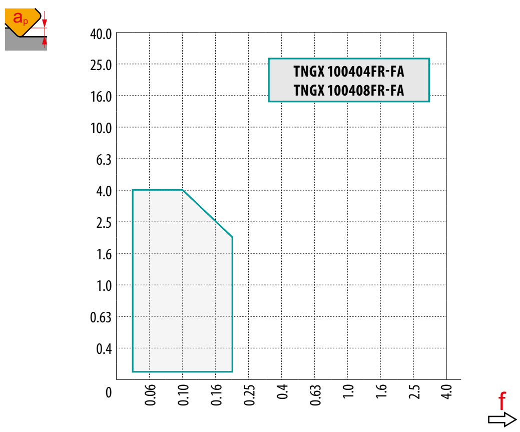


? TNGX 100402SR-F
TNGX 100404SR-F
TNGX 100408SR-F

TNGX 10-FA

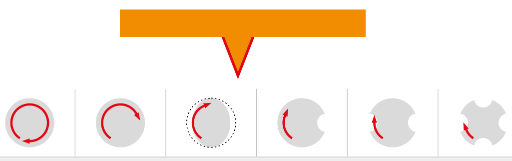






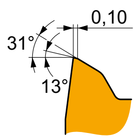
P	M	K	N	S	H
			■		

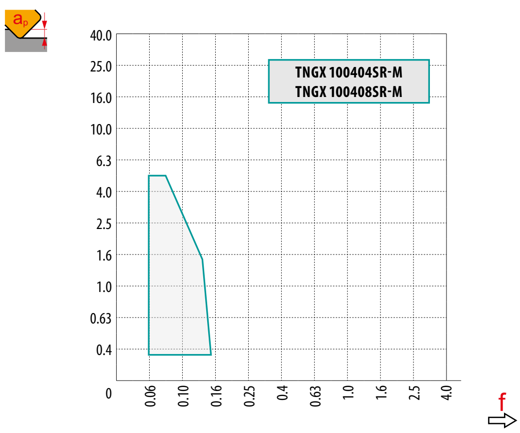
f	0.03 – 0.20
a_p	0.1 – 4.0



? TNGX 100404FR-FA
TNGX 100408FR-FA

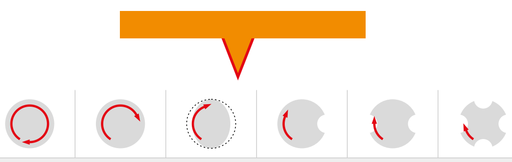
TNGX 10-M





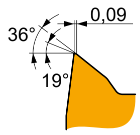
P	M	K	N	S	H
■	◪	◪		◪	

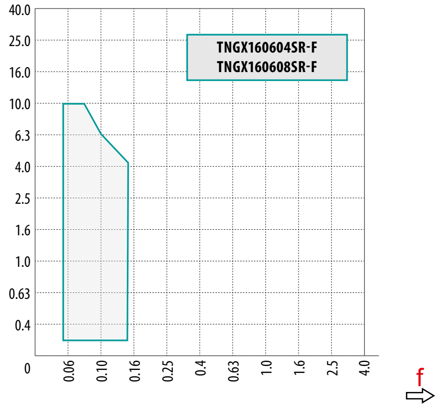
f	0.05 – 0.15
a_p	0.3 – 5.0



? TNGX 100404SR-M
TNGX 100408SR-M

TNGX 16-F





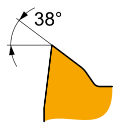
P	M	K	N	S	H
■	◩	◩			

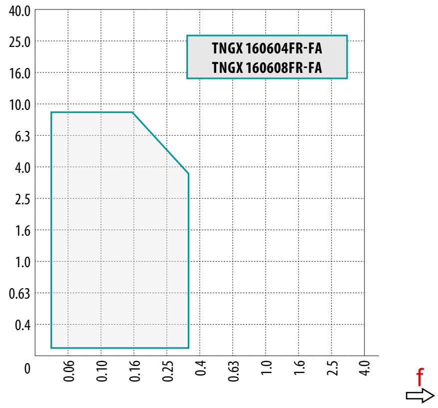
f: 0.05 – 0.15

a_p: 0.2 – 10.0

? TNGX160604SR-F
TNGX160608SR-F

TNGX 16-FA





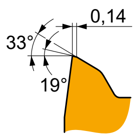
P	M	K	N	S	H
			■		

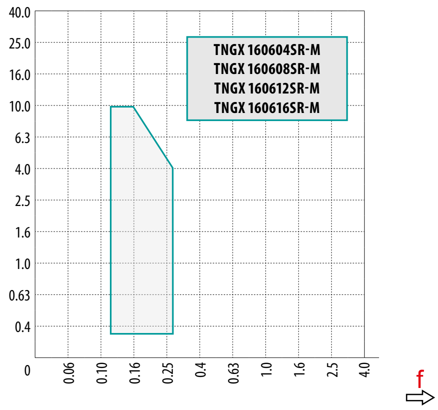
f: 0.03 – 0.36

a_p: 0.2 – 9.0

? TNGX 160604FR-FA
TNGX 160608FR-FA

TNGX 16-M





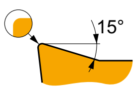
P	M	K	N	S	H
■	◩	◩		◩	

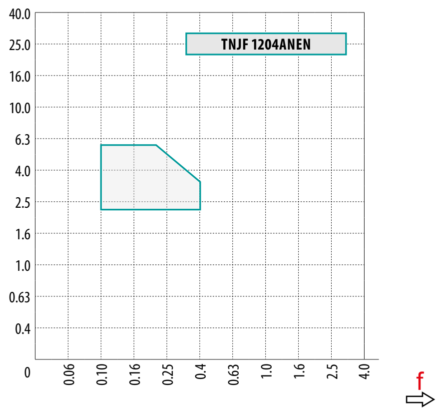
f: 0.12 – 0.28

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
■	◩	◩			

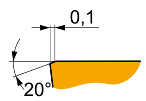
f: 0.10 – 0.40

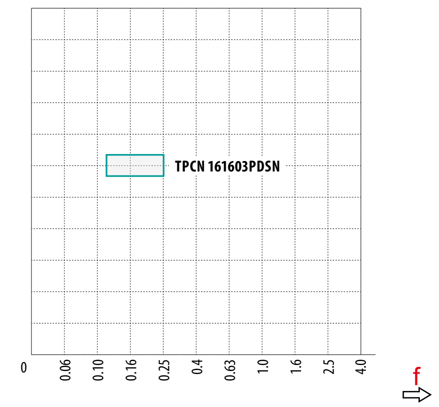
a_p: 2.0 – 6.0

? TNJF 1204ANEN

CHOICE OF CUTTING INSERT

TPCN 16



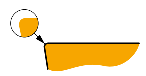


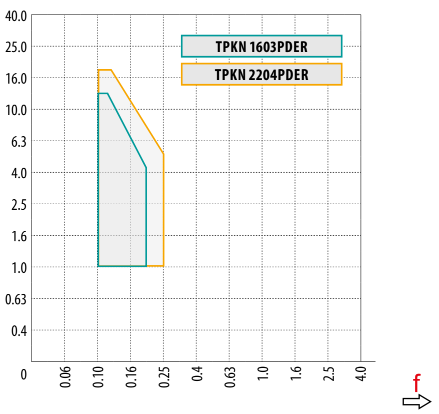
P	M	K	N	S	H
■		■			

f	0.12 – 0.25
a_p	–

? TPCN 161603PDSN

TPKN ER



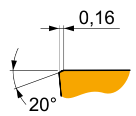


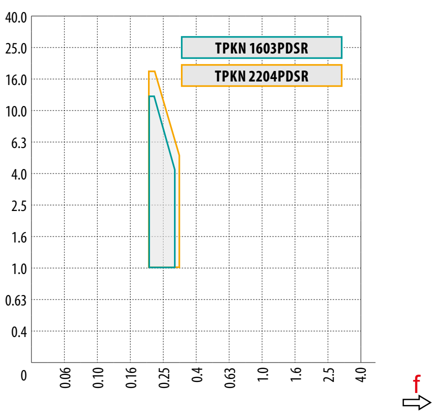
P	M	K	N	S	H
◩		◩			

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



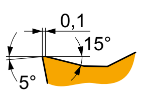


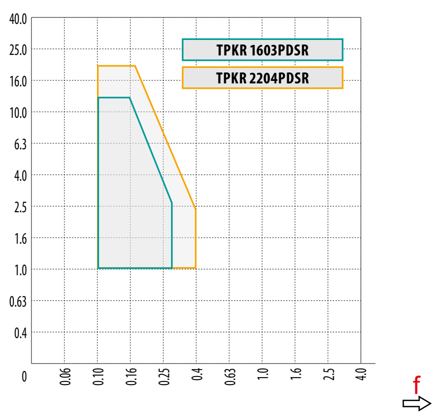
P	M	K	N	S	H
◩		◩			◩

f	0.20 – 0.35 (according to insert size)
a_p	1.0 – 17.0 (according to insert size)

? TPKN 1603PDSR
TPKN 2204PDSR

TPKR



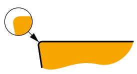


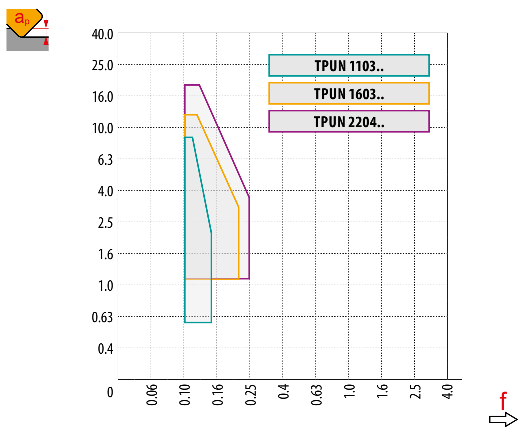
P	M	K	N	S	H
■	◩	■			

f	0.10 – 0.40 (according to insert size)
a_p	1.0 – 17.0 (according to insert size)

? TPKR 1603PDSR
TPKR 2204PDSR

TPUN

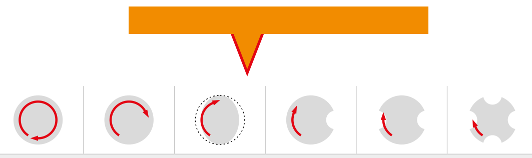




P	M	K	N	S	H
◩		◩			

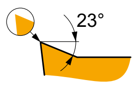
f: 0.10 – 0.25 (according to insert size)

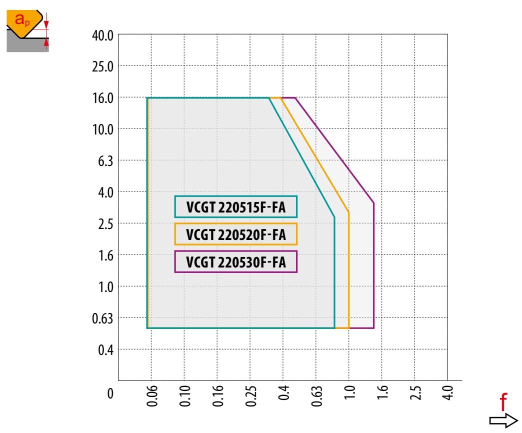
ap: 0.5 – 17.0 (according to insert size)



?
TPUN 1103..
TPUN 1603..
TPUN 2204..

VCGT 22-FA

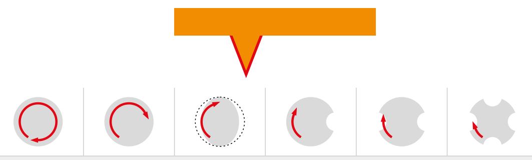




P	M	K	N	S	H
			■		

f: 0.05 – 1.5 (according to insert size)

ap: 0.5 – 16.0



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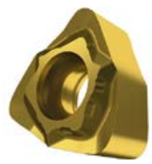
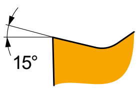
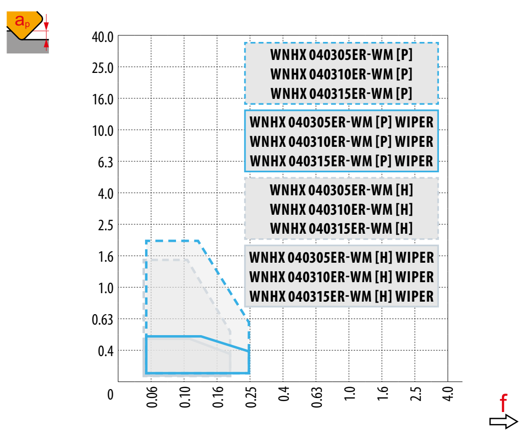
VCGT 220515F-FA
VCGT 220520F-FA
VCGT 220530F-FA

WNHX 04-WM



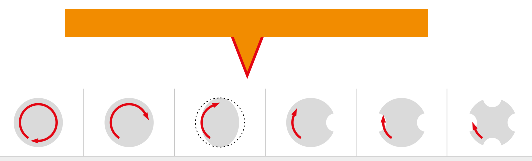




P	M	K	N	S	H
■		■			■

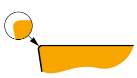
f: 0.05 – 0.25

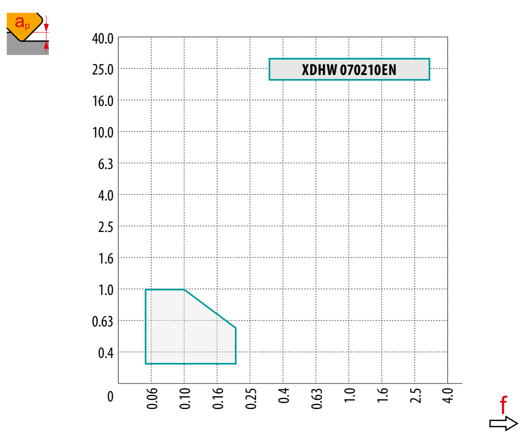
ap: 0.1 – 2.0



?
WNHX 0403..ER-WM

XDHW EN

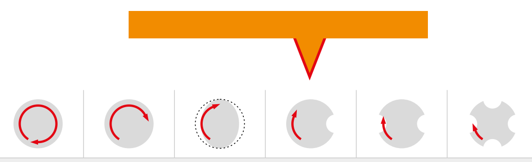




P	M	K	N	S	H
◩		■			■

f: 0.05 – 0.20

ap: 0.2 – 1.0



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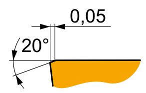
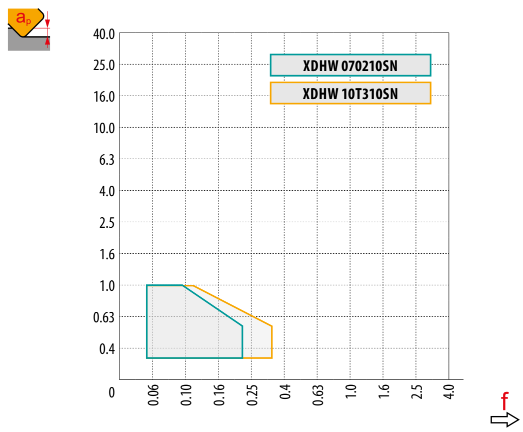
XDHW 070210EN

CHOICE OF CUTTING INSERT

XDHW SN

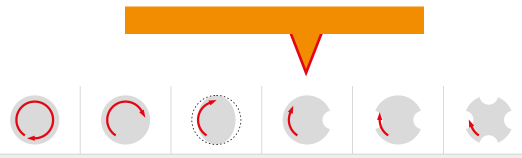




P	M	K	N	S	H
◩		■			■

f: 0.05 – 0.35 (according to insert size)

ap: 0.2 – 1.0



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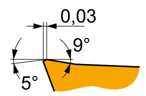
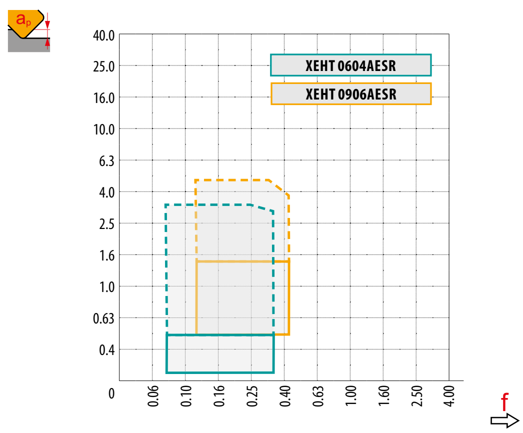
XDHW 070210SN
XDHW 10T310SN

XEHT

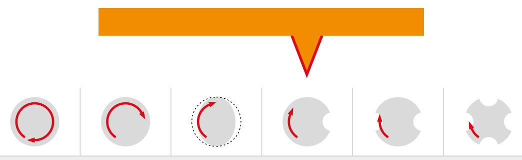




P	M	K	N	S	H
■	◩				

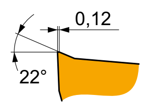
f: 0.08 – 0.45 (according to insert size)

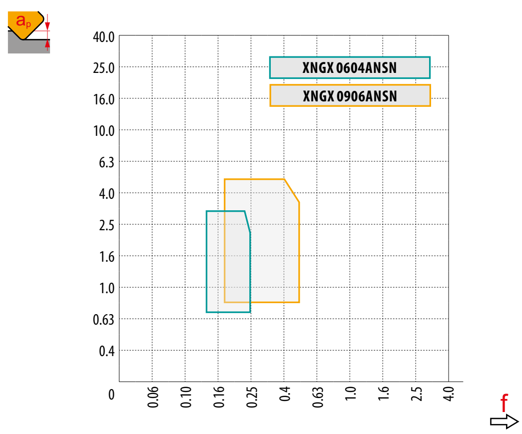
ap: 0.1 – 5.0 (according to insert size)



?
XEHT 0604AESR
XEHT 0906AESR

XNGX ANSN

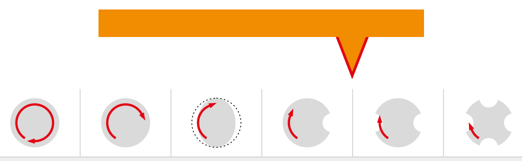




P	M	K	N	S	H
■	◩	■			

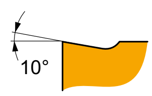
f: 0.13 – 0.50 (according to insert size)

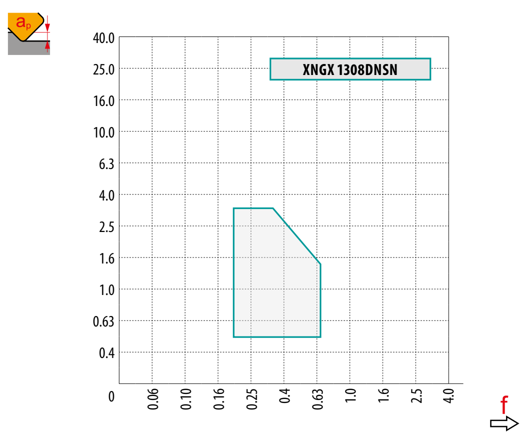
ap: 0.7 – 5.0 (according to insert size)



?
XNGX 0604ANSN
XNGX 0906ANSN

XNGX 13

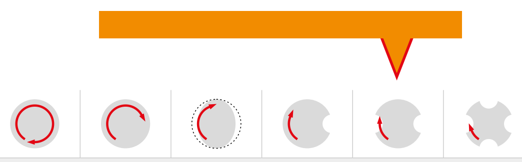




P	M	K	N	S	H
■		■			

f: 0.25 – 0.70

ap: 0.5 – 3.5



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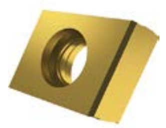
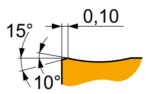
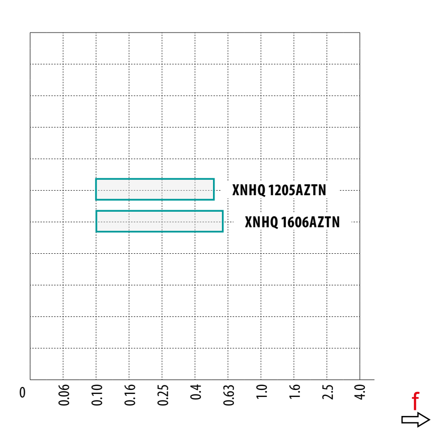
XNGX 1308DNSN

XNHQ TN







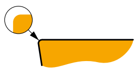
P	M	K	N	S	H
■	◩	■			

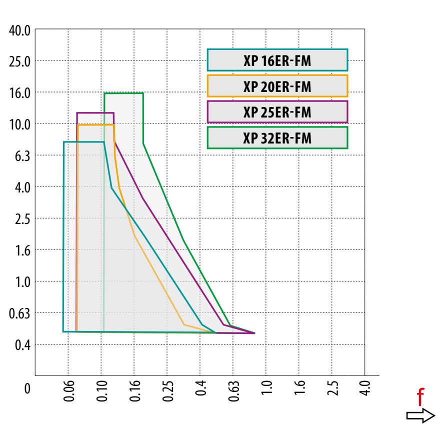
f: 0.10 – 0.60 (according to insert size)

a_p: –

XNHQ 1205AZTN
XNHQ 1606AZTN

XP ER-FM





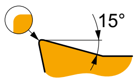
P	M	K	N	S	H
■	◩	■		◩	■

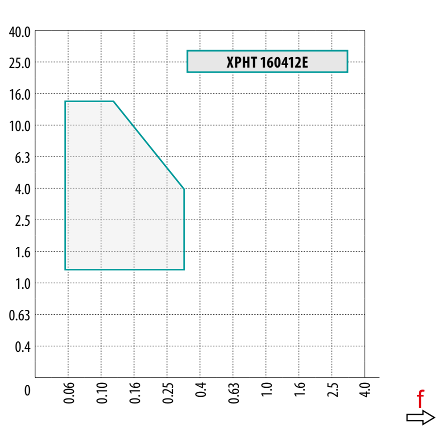
f: 0.05 – 0.25 (according to insert size)

a_p: 0.3 – 16.0 (according to insert size)

XP 16ER-FM, XP 20ER-FM
XP 25ER-FM, XP 32ER-FM

XPHT 16E





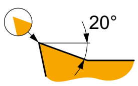
P	M	K	N	S	H
■	■	◩			

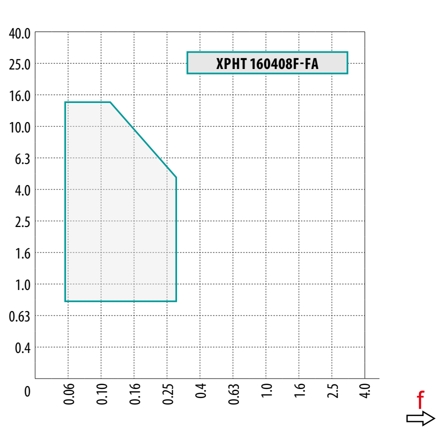
f: 0.05 – 0.30

a_p: 1.2 – 15.0

XPHT 160412E

XPHT 16-FA





P	M	K	N	S	H
			■		

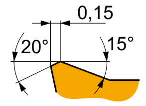
f: 0.05 – 0.30

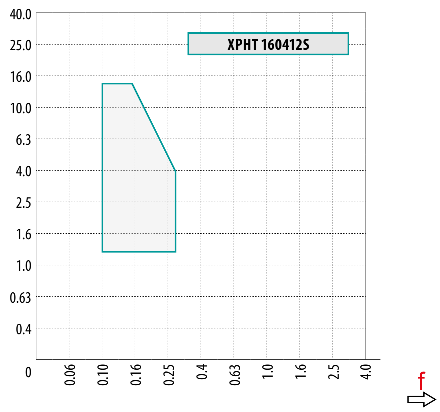
a_p: 0.8 – 15.0

XPHT 160408F-FA

CHOICE OF CUTTING INSERT

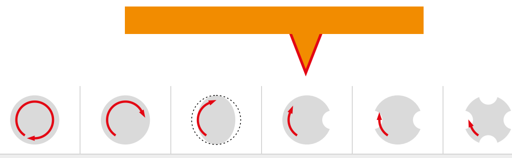
XPHT 16S





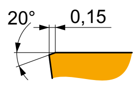
P	M	K	N	S	H
■	■	◩			

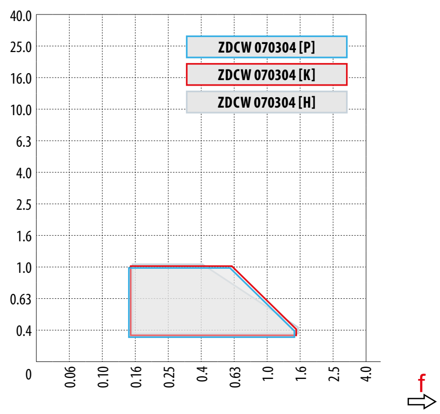
f	0.05 – 0.30
a_p	1.2 – 15.0



? **XPHT 160412S**

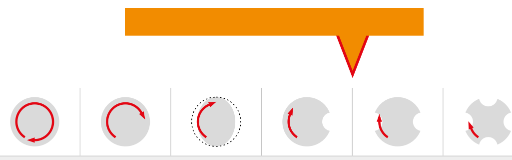
ZDCW 07





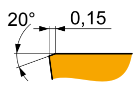
P	M	K	N	S	H
◩		■			■

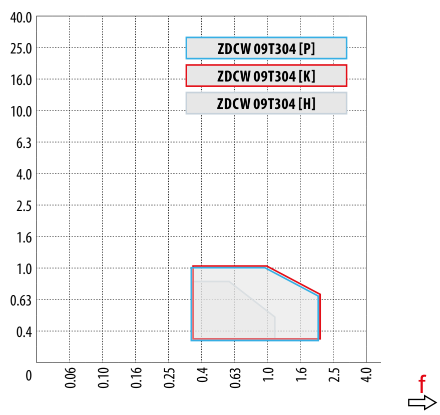
f	0.15 – 1.50
a_p	0.3 – 1.0



? **ZDCW 070304**

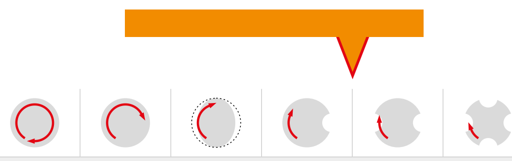
ZDCW 09





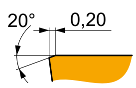
P	M	K	N	S	H
◩		■			■

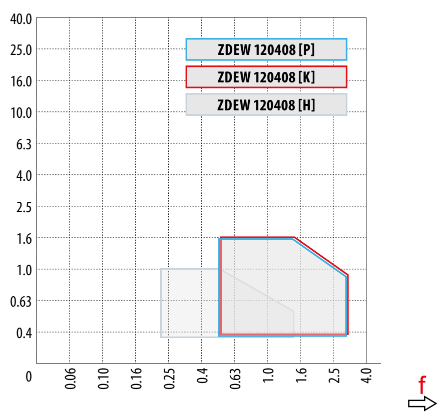
f	0.30 – 2.00
a_p	0.3 – 1.0



? **ZDCW 09T304**

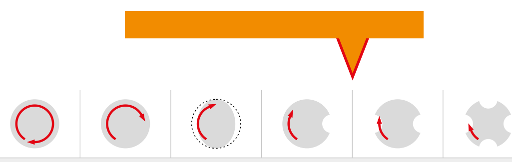
ZDEW 12





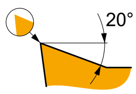
P	M	K	N	S	H
◩		■			■

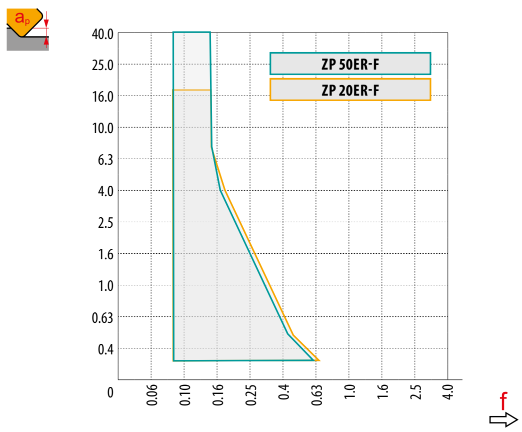
f	0.50 – 3.00
a_p	0.3 – 1.6



? **ZDEW 120408**

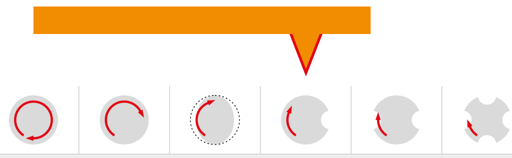
ZP ER-F





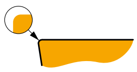
P	M	K	N	S	H
◩	◩		◩		

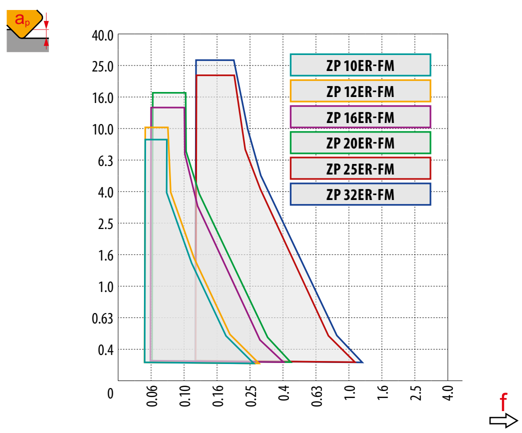
f	0.04 – 0.18 (according to insert size)
a_p	0.3 – 44.7 (according to insert size)



? ZP 50ER-F
ZP 20ER-F

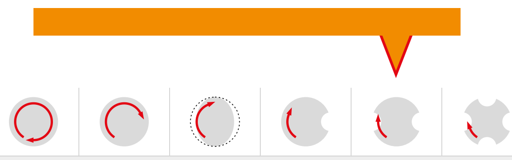
ZP ER-FM





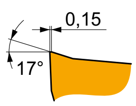
P	M	K	N	S	H
■		■			■

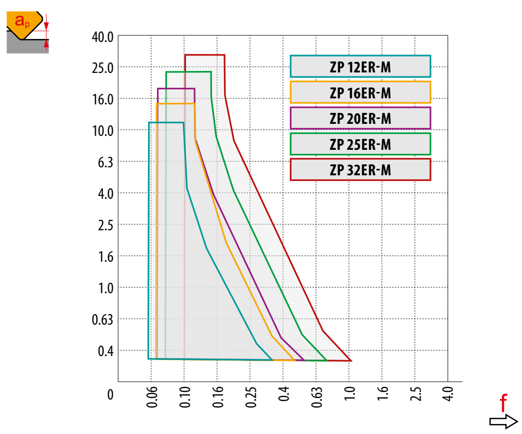
f	0.05 – 0.21 (according to insert size)
a_p	0.3 – 28.6 (according to insert size)



? ZP 10ER-FM, ZP 12ER-FM
ZP 16ER-FM, ZP 20ER-FM
ZP 25ER-FM, ZP 32ER-FM

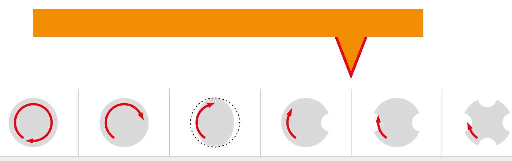
ZP ER-M





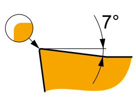
P	M	K	N	S	H
■	■	◩		◩	

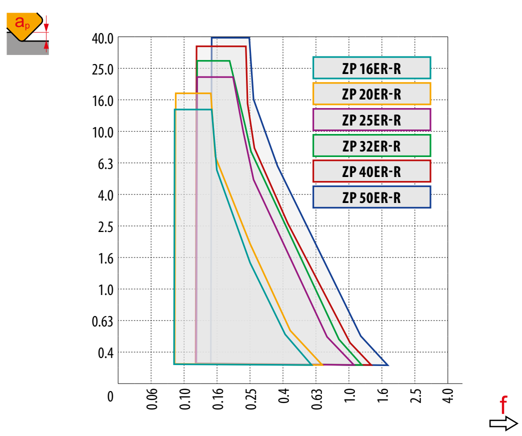
f	0.06 – 0.25 (according to insert size)
a_p	0.3 – 28.6 (according to insert size)



? ZP 12ER-M, ZP 16ER-M
ZP 20ER-M, ZP 25ER-M,
ZP 32ER-M

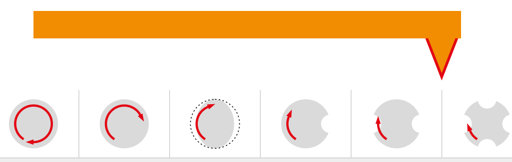
ZP ER-R





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.

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

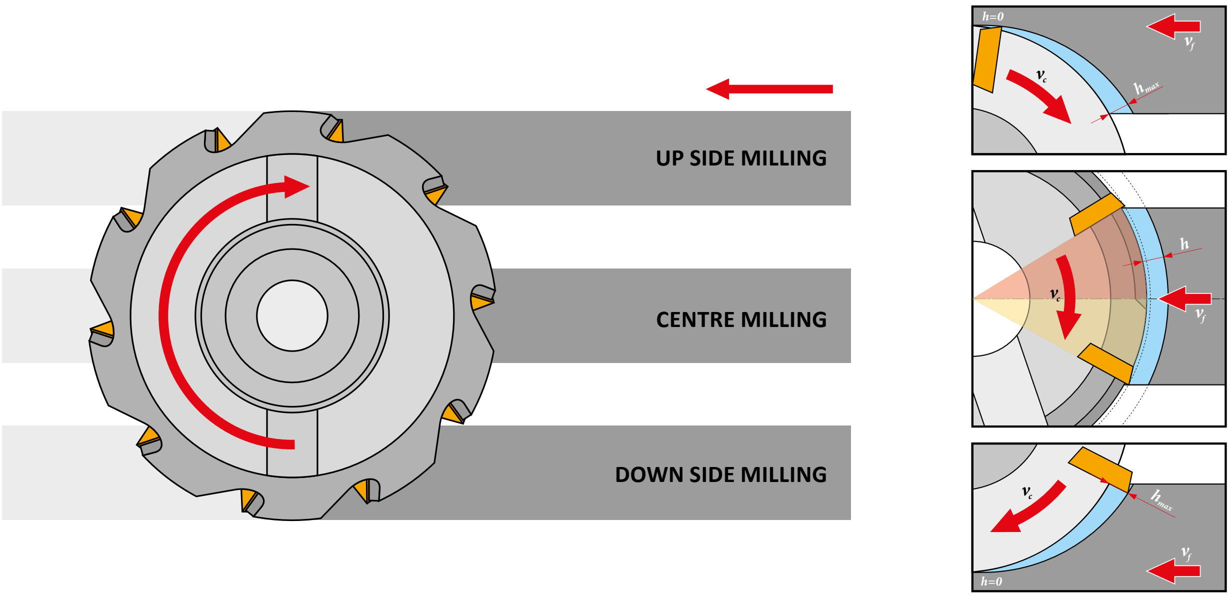
Coating	
MT-CVD	Medium-temperature chemical method of coating
PVD	Low-temperature physical method of coating
×	Uncoated grade

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

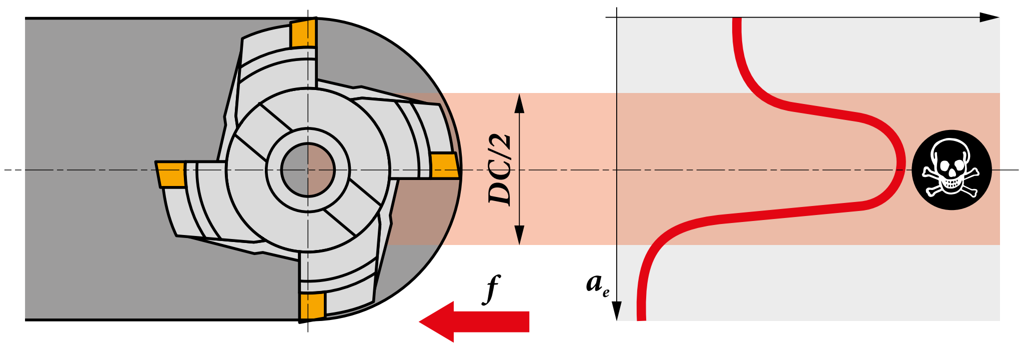
Attribute Strength	
	Level 1 – 5

WORKING CONDITION WHEN MILLING

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...).

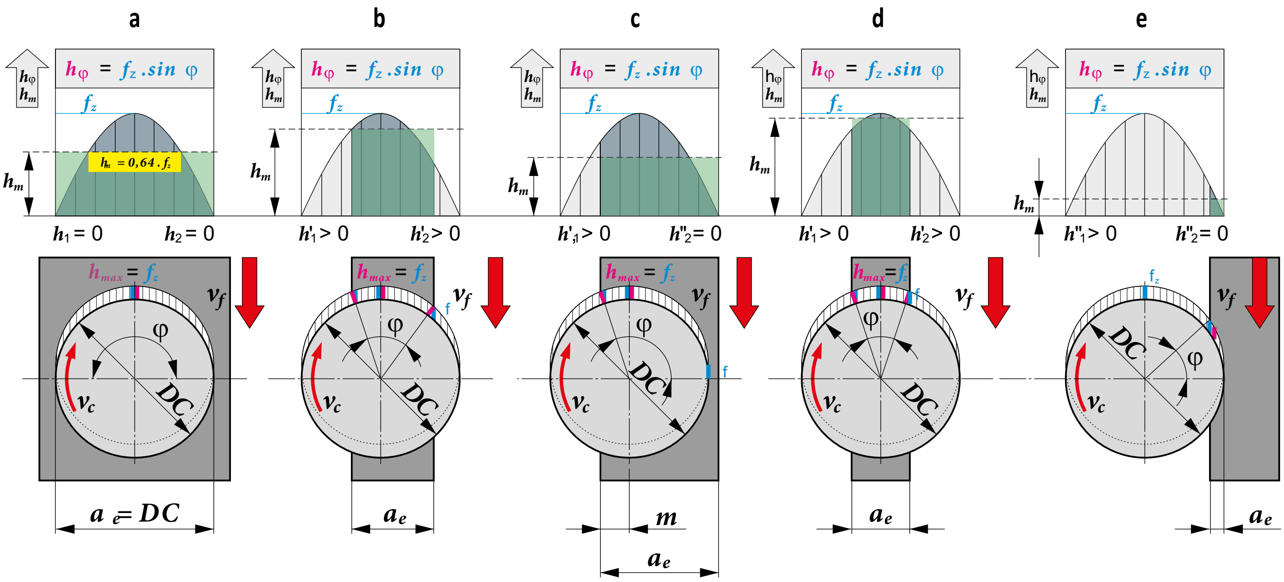


During face milling, where the width of the milled surface a_e is equal to the diameter of the milling cutter, follow the values recommended specifically for the inserts. If the engagement width is less than the diameter of the milling cutter, then the key factor is whether we machine with the centre 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:

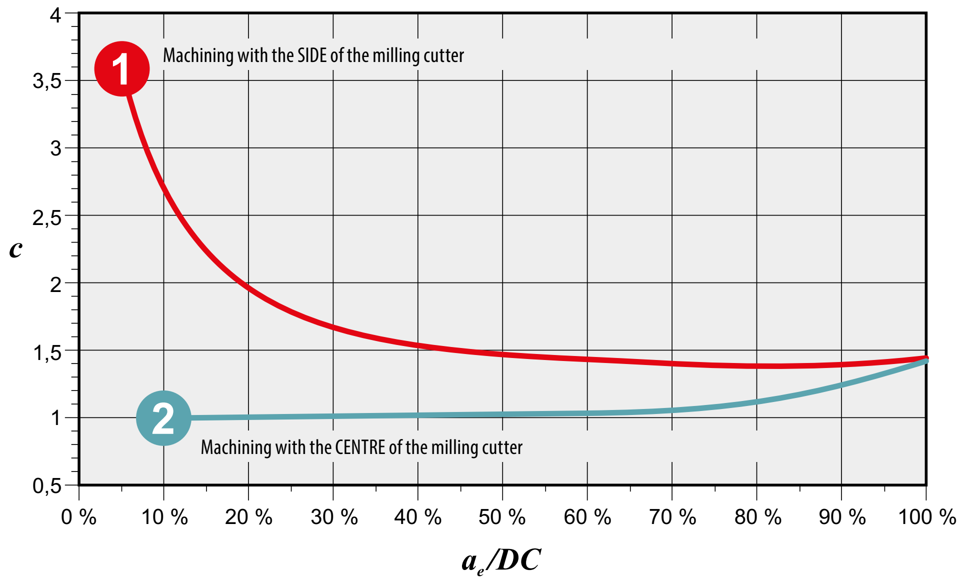
h_m	Is average chip thickness [mm]
f_z	Feed per tooth [mm/tooth]
a_e	Radial depth of cut [mm]
DC	Diameter of the milling cutter [mm]
κ_r	Entering angle of the main cutting edge ($KAPR$) [°]

WORKING CONDITION WHEN MILLING

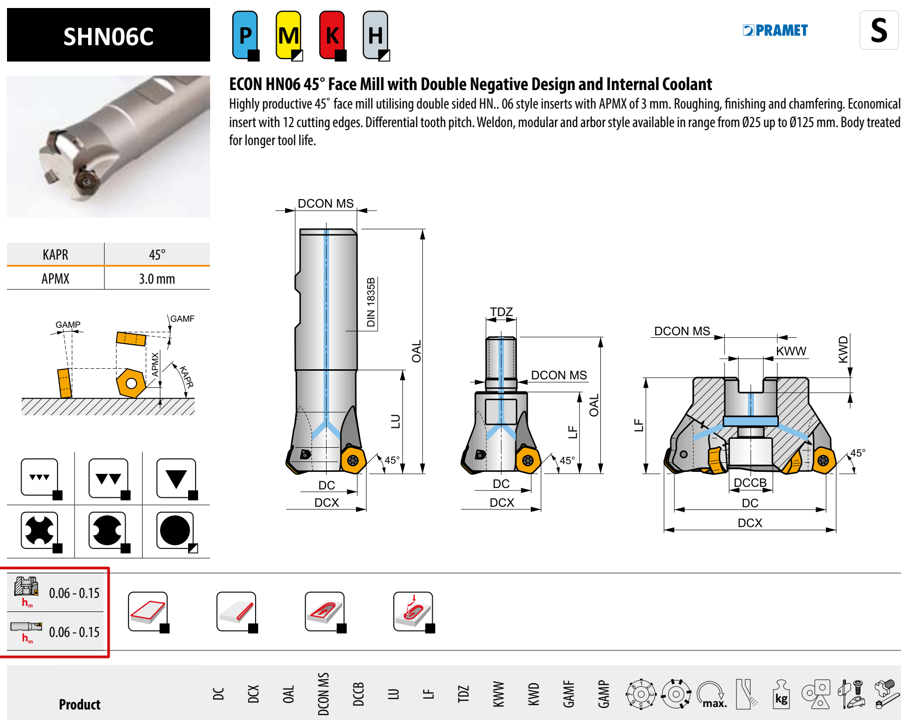
For optimal application of any milling tool, we recommend checking chip thickness, or rather, using the recommended h_m range to choose (calculate) the proper feed rate.

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.



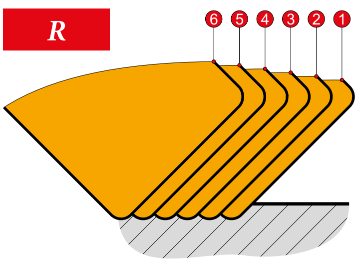
Optimum range
of average chip thickness
[mm]

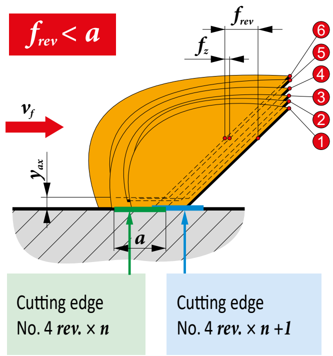
MACHINED SURFACE ROUGHNESS

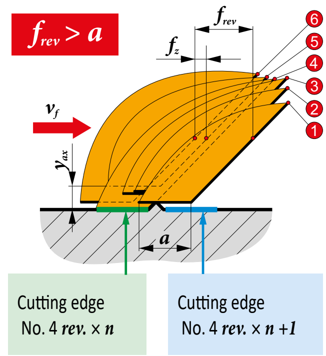
One of the key criteria in finishing operations is the resulting roughness of the machined surface. The following article will therefore provide several tips on how to approach this issue.

Face Milling

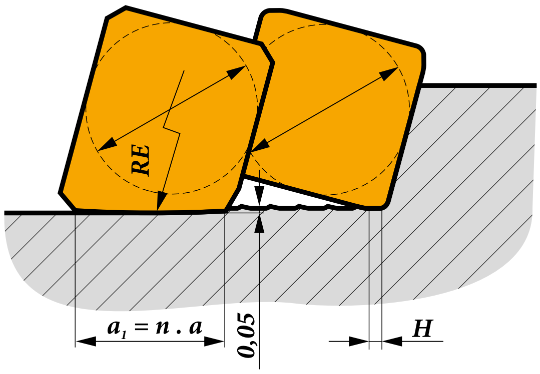
When performing any milling operation, the machined surface is shaped by multiple edges. The microgeometry of the surface is thus dependent on the axial runout of the individual edges of the milling cutter. The most axially protruding edges are the ones that shape the machined surface. The resulting 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.



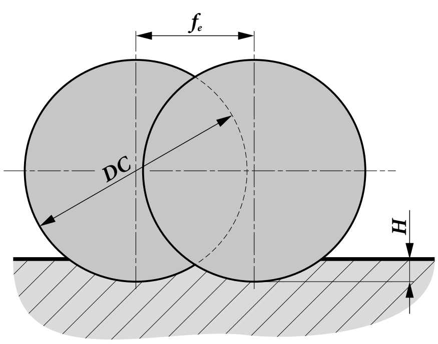




In that case, the best solution is to use a milling cutter with fewer teeth or to reduce the number of teeth on the milling cutter (only fitting an insert onto every other tooth of milling cutters with an even number of teeth). There is, however, a risk of reduced productivity. Another alternative is 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.

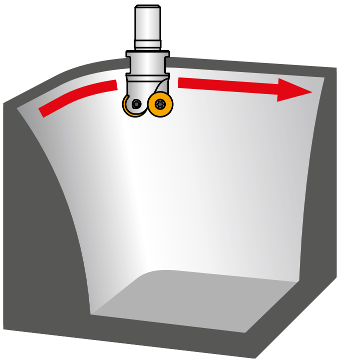


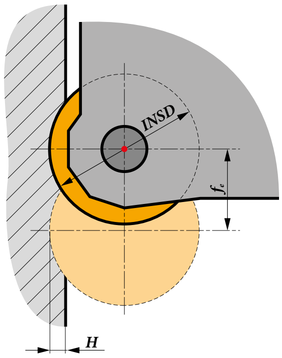
$$\boxed{H = \frac{f_e^2}{4 \cdot DC}} \rightarrow \boxed{f_e = \sqrt{4 \cdot DC \cdot H}}$$

Where and when to apply this formula:

1) When determining line spacing during peripheral linear machining with toric* or ball-nose milling cutters.

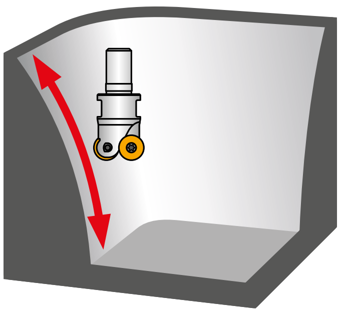
* Substitute insert diameter for ***INSD.***

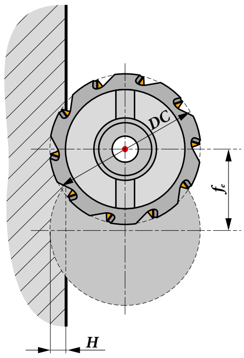




2) When determining line spacing during transverse linear machining with (not only) toric milling cutters and during plunge milling **.

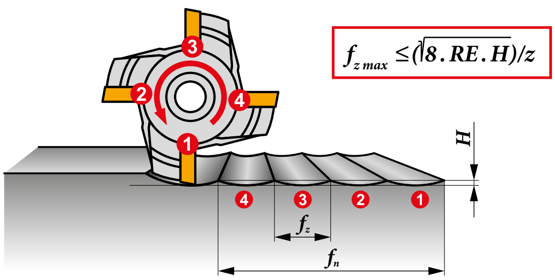
** Substitute milling cutter diameter for ***DC.***

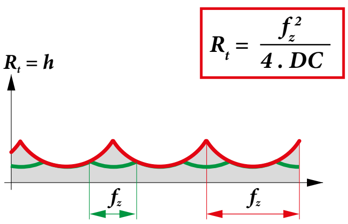




3) When determining feed per tooth during contour milling (side milling).***

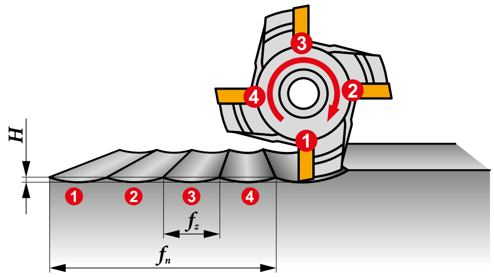
*** Substitute milling cutter diameter for ***DC*** and divide by the number of teeth.



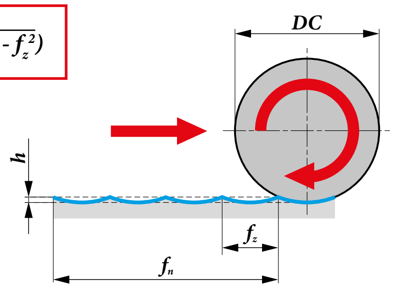


Surface roughness in the radial direction, i.e. during side milling (contour or bottom of a slot milled with a disc milling cutter) is calculated using the following formula:

Substitute milling cutter diameter for ***DC.***



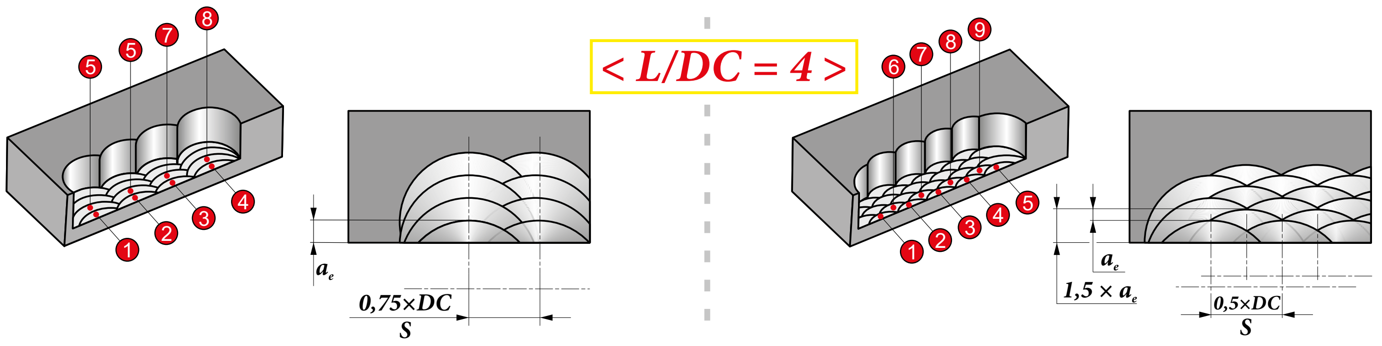
$$h = \frac{1}{2}\left(DC - \sqrt{DC^2 - f_z^2}\right)$$



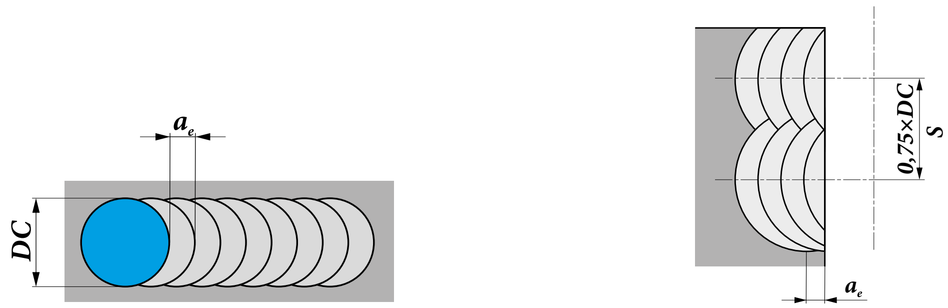
Plunge Milling (Slotting)

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:

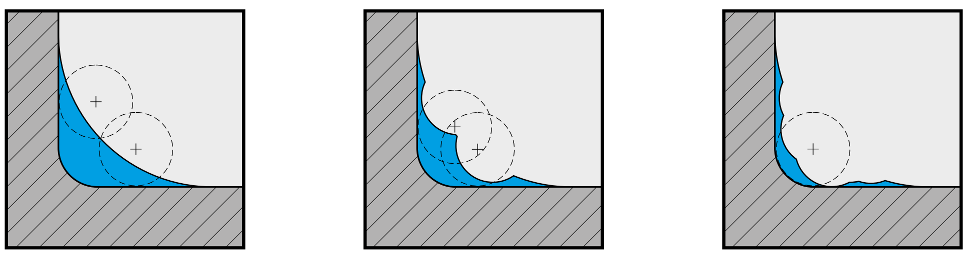
Contour milling



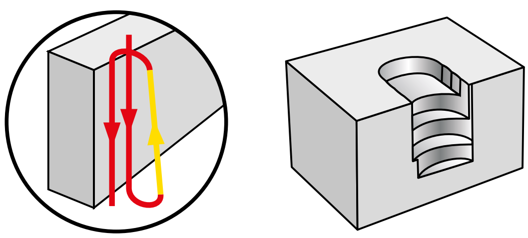
Slot milling



Shoulder milling



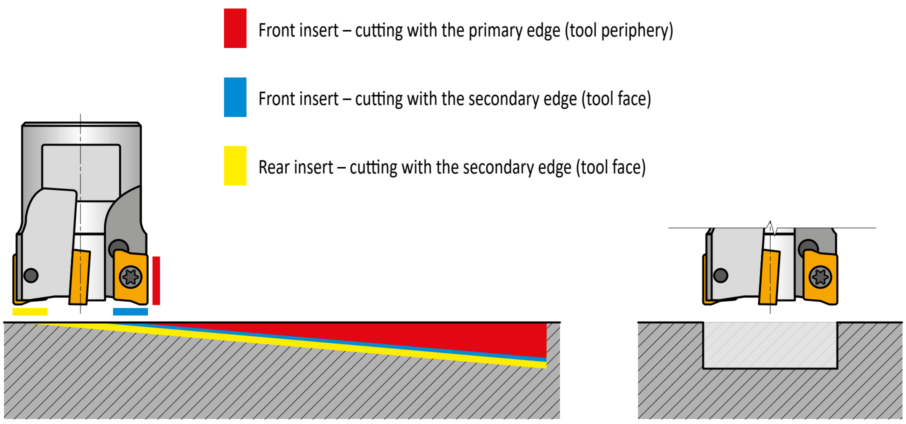
In shoulder milling, the mutual offset of paths should also not exceed ¾ of the milling cutter diameter (and should be gradually decreased towards the corner).



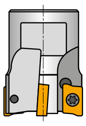
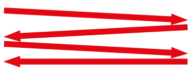
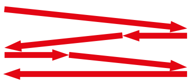
When creating programmes for this technology, you should avoid passes over already machined surfaces (bottom). In other words, we do not recommend using a so-called drilling cycle. When selecting engagement conditions, make sure that more than one tooth is engaged at all times. We also recommend gradually 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. $\boxed{X = tg\,\alpha\,(DC - W1)}$

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]

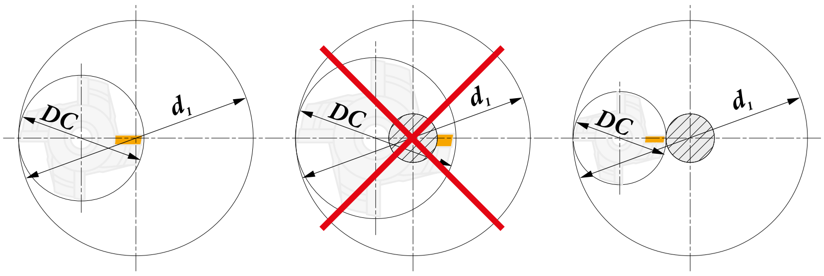
α Ramp angle [°]

DC Diameter of the milling cutter [mm]

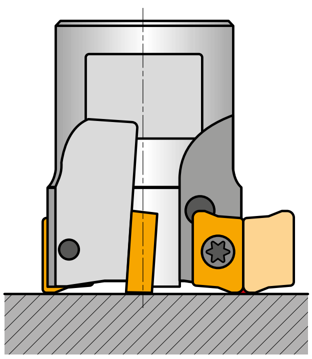
$W1$ Insert width [mm]

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

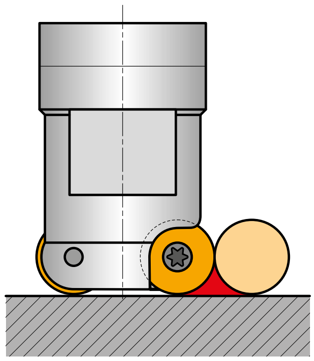
DC – Milling cutter diameter

$INSD$ – 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.

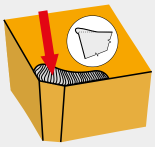
For through hole: $D_{max} = 2 . DC$		For through hole: $D_{max} = 2 . DC$

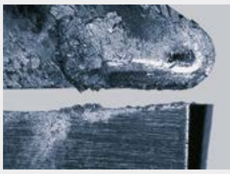
Minimum hole diameter

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).

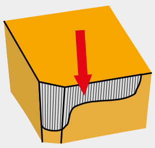
BUILT–UP EDGE

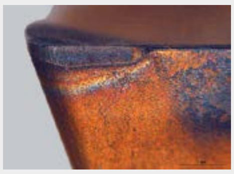




		It has no influence.
(MT)CVD PVD	++	Any coating (decisive factor is anti-adhesion effect).
f	↑	The higher the feed rate the less probability of built-up edge creation.
v	↓↑	Change (generally increase) the cutting speed.
a_p		It has no influence.
	↓↑	Use more positive geometry (built up edge is not created 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).

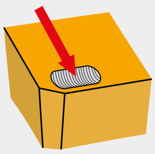
FLANK WEAR





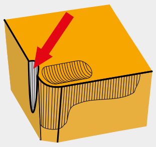
		Use a more wear resistant substrate (H).
(MT)CVD PVD	++	Any coating (decisive factor is hardness – TiC, TiCN).
f	↑	Increase feed (especially if it is under 0.1 mm).
v	↓	Decrease cutting speed.
a_p		It has no influence.
	↑	Increase the clearance angle.
	+	It can help, but only with ideal working conditions.

CRATERING



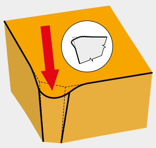
	↑	Use a more wear resistant substrate (S).
(MT)CVD PVD	++	CVD coating (decisive factor is oxidation resistance – α Al_2O_3).
f	↑	Feed has infuence on shape and position of crater.
v	↓	Decrease cutting speed.
a_p	↓	Minimal effect.
	↑	Use more positive cutting geometry.
	++	It can help, but only with ideal working conditions.

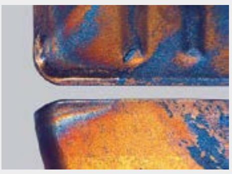
OXIDATION GROOVE ON THE MINOR EDGE



	↑	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.

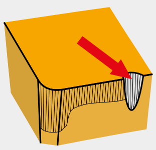
PLASTIC DEFORMATION





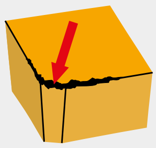
	↑	Using a more wear resistant substrate (decisive factor is content of Co).
(MT)CVD PVD	+	Any coating (decisive factor is friction).
f	↓	Decrease feed rate.
v	↓	Decrease cutting speed.
a_p	↓	Minimal effect.
	↑	Use another (more positive) cutting geometry.
	+ +	It can help, but only with ideal working conditions.

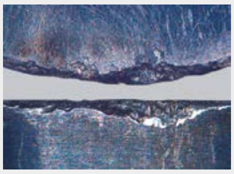
NOTCH WEAR



	↑↓	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.

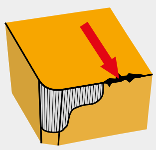
BRITTLE CRACKS AT THE CUTTING EDGE





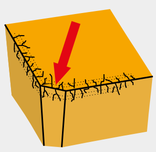
	↓	(H) grain has a great influence.
(MT)CVD PVD	+	PVD coating recommended.
f	↓	Feed has infuence on intensity, but less than the cutting speed.
v	↑↓	It is about vibrations.
a_p	↓	It has no influence.
	↑	Increase the rake angle to reduce cutting forces.
	-	No coolant (it is possible to use air to remove chips from cutting area).
		Use better working condition (a_e/DC).

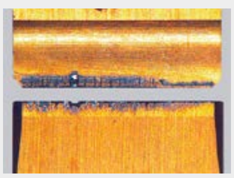
FAILURE OF CUTTING EDGE



	↓	(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.

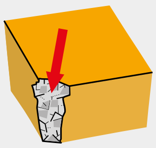
CREATION OF RACK CRACKS

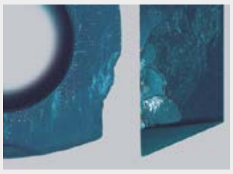




	↓	(H) grain has a great influence.
(MT)CVD PVD	+ +	PVD coating recommended.
f	↓	Feed has infuence on intensity, but less than the cutting speed.
v	↓	Lower speed means lower temperature.
a_p		It has no influence.
	↑	Use another (more positive) cutting geometry.
	- - -	No coolant (it is possible to use 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

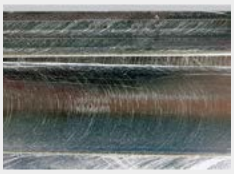
Description and cause:

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	[mm²]	$A = f_z \,.\, a_p$
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	[cm³/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	[mm²]
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	[cm³/min]
P_c	Power demand	[kW]
k_c	Cutting force per mm²	[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 [Nm]	Thread –	Length [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

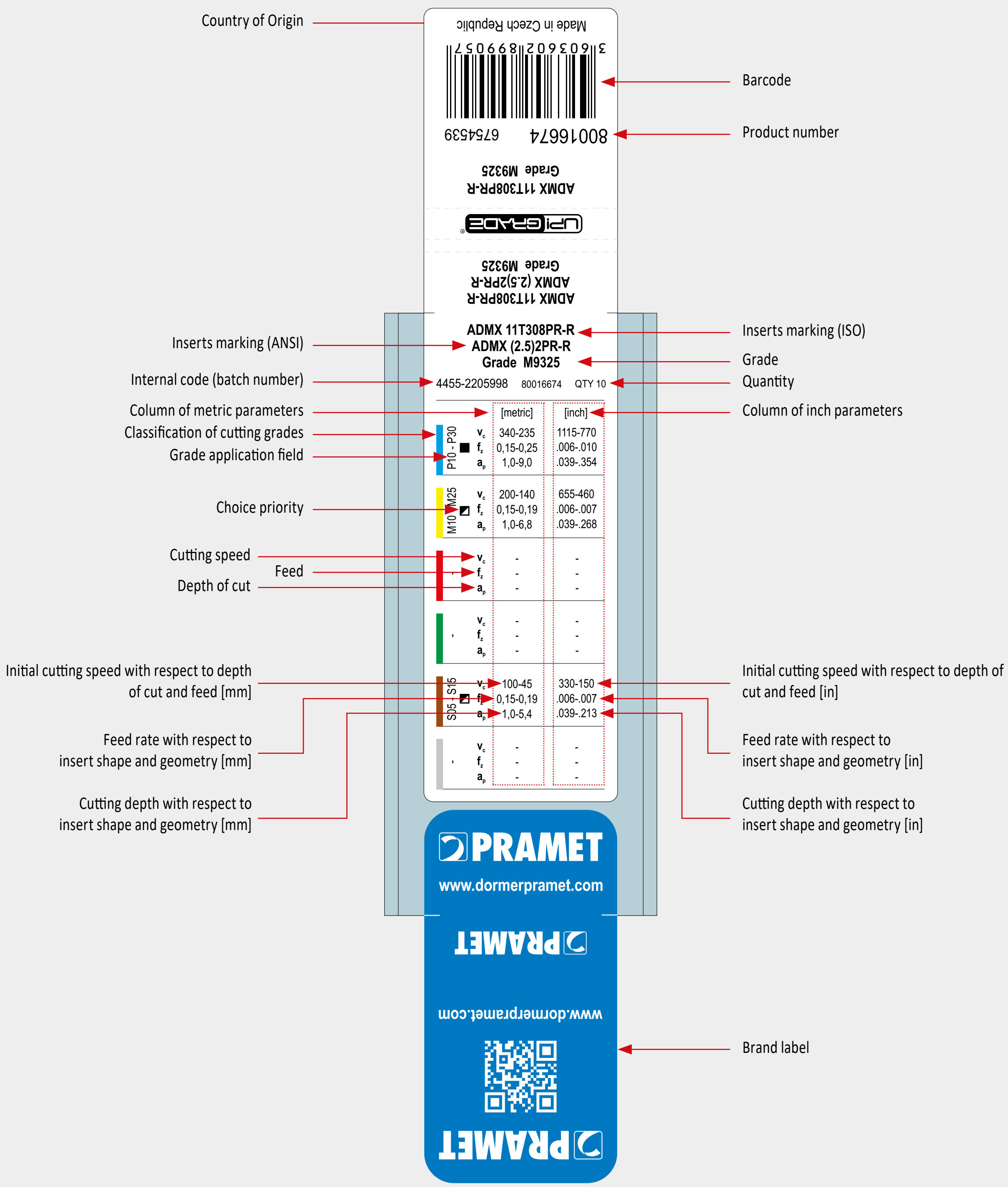
Torque handle	Torque [Nm]	Clamping screw thread
MR-0.8-2.0 Vario	0.5 – 2.0	M 2 – M 3
MR-1.0-5.0 Vario	0.8 – 5.0	M 2.5 – M 5
MR-0.9 fix	0.9	M 2
MR-2.0 fix	2.0	M 3
MR-3.0 fix	3.0	M 3.5
MR-3.5 fix	3.5	M 4
MR-5.0 fix	5.0	M 5

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
Barcode
Product number
Inserts marking (ANSI)
Inserts marking (ISO)
Grade
Quantity
Internal code (batch number)
Column of metric parameters
Column of inch parameters
Classification of cutting grades
Grade application field
Choice priority
Cutting speed
Feed
Depth of cut
Initial cutting speed with respect to depth of cut and feed [mm]
Initial cutting speed with respect to depth of cut and feed [in]
Feed rate with respect to insert shape and geometry [mm]
Feed rate with respect to insert shape and geometry [in]
Cutting depth with respect to insert shape and geometry [mm]
Cutting depth with respect to insert shape and geometry [in]
Brand label
ADMX 11T308PR-R
ADMX (2.5)2PR-R
Grade M9325
4455-2205998 80016674 QTY 10
[metric] [inch]
P10 - P30
340-235 1115-770
0,15-0,25 .006-.010
1,0-9,0 .039-.354
M10 - M25
200-140 655-460
0,15-0,19 .006-.007
1,0-6,8 .039-.268
S05 - S15
100-45 330-150
0,15-0,19 .006-.007
1,0-5,4 .039-.213
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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

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

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