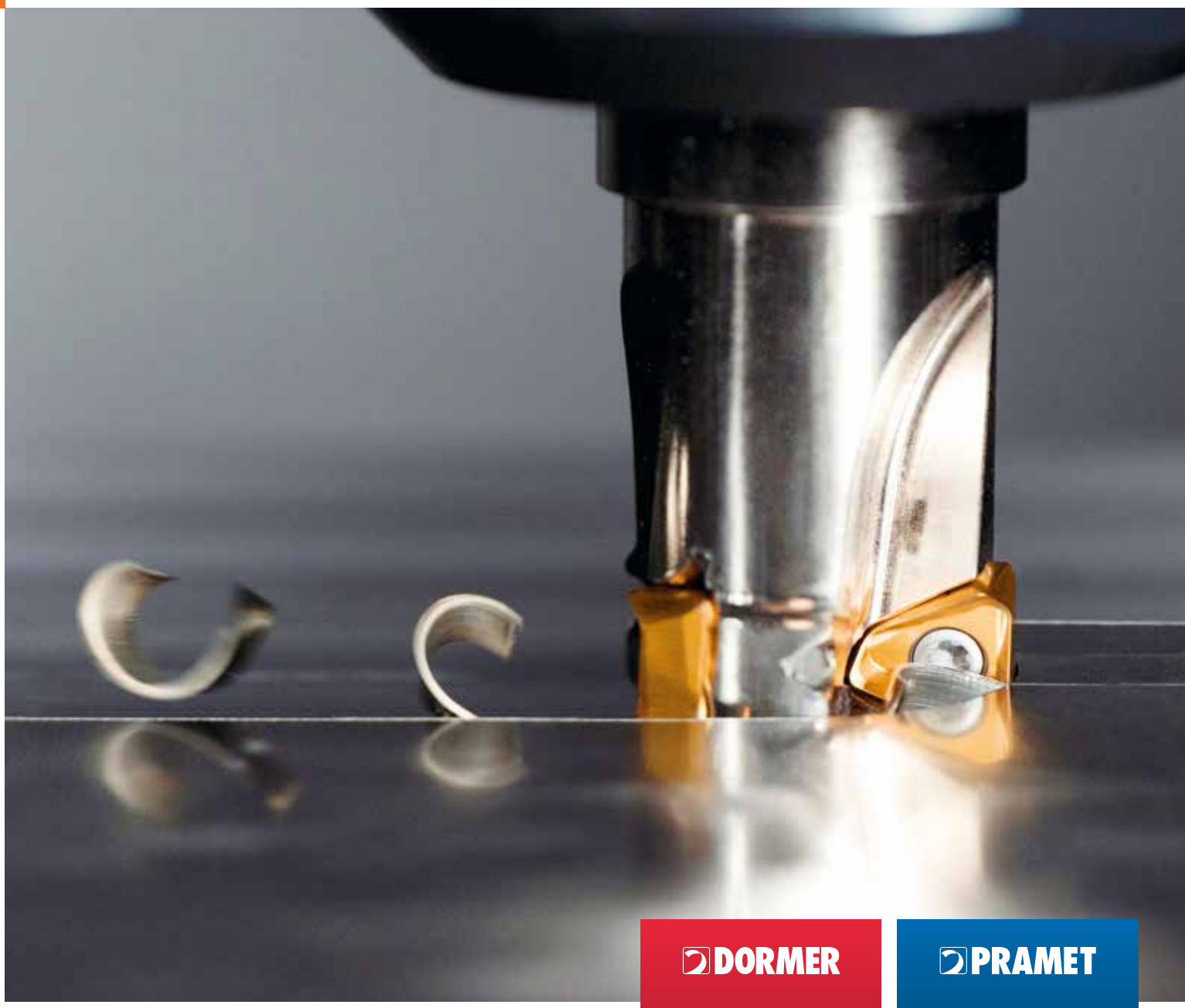
DORMER PRAMET

MILLING

2024



DORMER

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RDGT 12	553
RDGT 12IM	405

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RDMT 12	554
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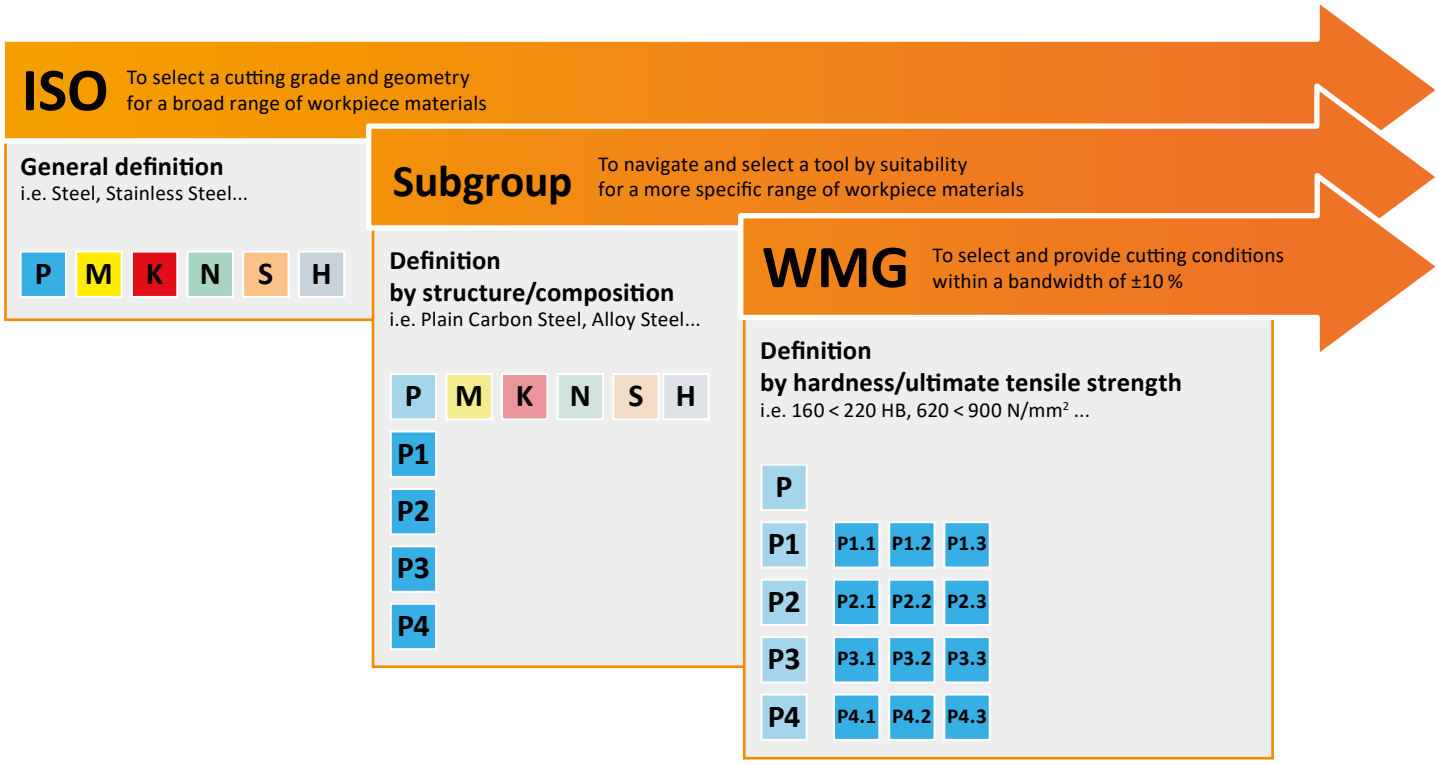
WORKPIECE MATERIAL GROUPS (WMG)



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 colored groups;

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

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

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

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

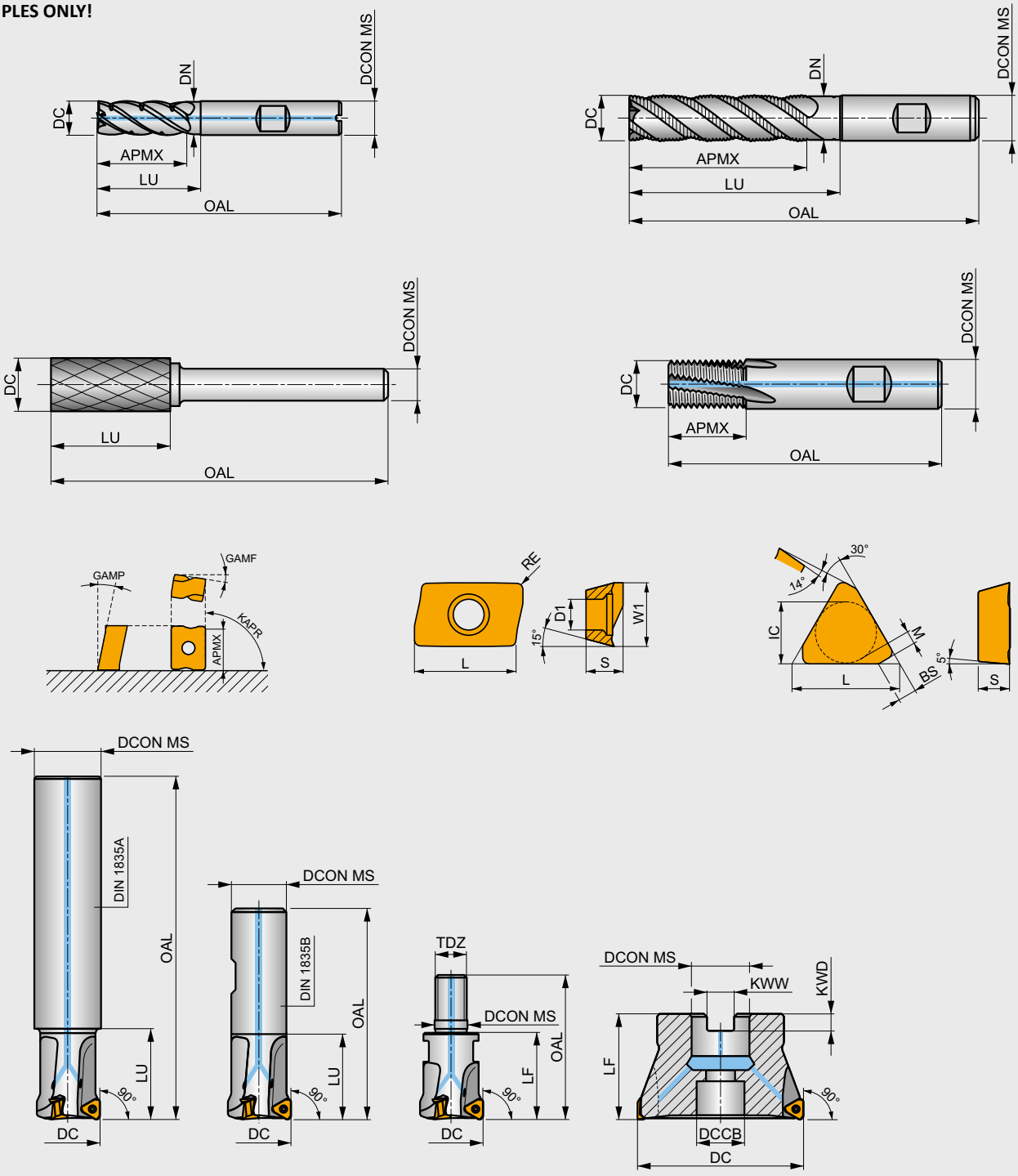
ISO group		WMG (Work Material Group)			Hardness (HB or HRC)	Ultimate Tensile Strength (MPa)
P	P1	P1.1	Free machining steel (carbon steels with increased machinability)	Sulfurized	< 240 HB	≤ 830
		P1.2		Sulfurized and phosphorized	< 180 HB	≤ 620
		P1.3		Sulfurized/phosphorized and leaded	< 180 HB	≤ 620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

CUTTING TOOL PARAMETERS ACCORDING TO ISO 13399

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

1 **C273**

DORMER

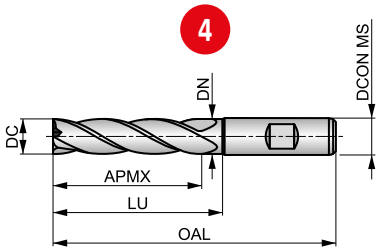
2

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.

3

4



HSS-E PM	N	NOF 4-6
	λ 30°	γ 12°
DIN 1835B	Bright	DC k10
	DIN 844L	

5

6

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 221.

P1.1 ■46 C	P1.2 ■52 C	P1.3 ■54 C	P2.1 ■40 C	P2.2 ■35 C	P3.1 ◪32 C	P3.2 ◪26 B	P4.1 ◪19 B	M1.1 ◪14 C	M1.2 ◪12 C	M2.1 ◪12 C	M2.2 ◪10 B	K1.1 ◪25 C	K1.2 ◪19 C
K1.3 ◪14 C	K2.1 ◪49 C	K2.2 ◪40 C	K2.3 ◪32 B	K3.1 ◪44 C	K3.2 ◪33 C	K3.3 ◪27 A	K4.1 ◪40 B	K4.2 ◪30 B	K4.3 ◪22 B	K4.4 ◪19 A	K4.5 ◪16 A	K5.1 ◪46 B	K5.2 ◪34 B
K5.3 ◪27 B	N1.1 ◪81 E	N1.2 ◪60 D	N1.3 ◪41 D	N2.1 ◪41 C	N2.2 ◪37 C	N2.3 ◪26 C	N3.1 ■43 C	N3.2 ■25 C	N3.3 ■13 C	N4.1 ◪43 C	S1.1 ■25 B	S1.2 ◪20 B	S2.1 ◪13 A
S3.1 ◪10 A	S4.1 ◪8 A												

7

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

Typical page with solid mill displayed – specific page details will differ.

SOLID MILLS – PAGE OVERVIEW

Pos.	Description
1	Designation of solid mills
2	Product description
3	Illustrative picture
4	Schematic drawing of tool
5	Product features

Pos.	Description
6	Milling operations
7	Material group recommendations incl. speed and feed guidance
8	Product code
9	Product dimensions

SOLID HM & HSS MILLS – ICONS OVERVIEW

General icons

■	Primary use
◪	Possible use

Material code (BMC)

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

Mill Profile

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

Number of flutes (NOF)

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

SOLID HM & HSS MILLS – ICONS OVERVIEW

Cut length

	Cut Length, Extra Short
	Cut Length, 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 Cylindrical Shank
	DIN 1835 – B (Weldon) or D (Threaded) Shank
	DIN 1835D Threaded Shank
	DIN 1835B Weldon Shank
	DIN 6535 HA Cylindrical Shank
	DIN 6535 HB Weldon Shank

SOLID HM & HSS MILLS – ICONS OVERVIEW

Coating

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

Cutting Diameter Tolerance Class (TCDC)

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

Cutting Direction

	Radial
	Radial, Diagonal
	Radial, Diagonal, Axial
	Radial

Basic Standard Group (BSG)

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

SOLID HM & HSS MILLS – ICONS OVERVIEW

Cooling (CSP)

	Through Tool Coolant

Operations Milling

	Deep Shoulder Milling
	Deep Slot Milling
	Shallow Slot Milling
	Shallow Shoulder Milling
	P9 Slotting (Keyway)
	Ramping
	Plunge Milling
	Trochoidal Milling
	Progressive Plunging
	Drilling
	Helical Interpolation
	Turn Milling
	Contoured Surfaces (Copy Milling)
	Face Milling
	Chamfer Milling
	Rear Face Milling
	T-Slot Milling
	Dovetail Milling
	Inverse Dovetail Milling
	Woodruff Slot Milling
	Milling – Tube Sawing
	Milling – Cut-off Sawing

SOLID HM MILLS – TOOL MATERIALS AND SURFACE COATINGS NAVIGATOR

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

Surface Treatments		
Bright (uncoated)		Bright finish (uncoated surface) improves chip flow in soft or non-ferrous materials and maintains sharp cutting edges in abrasive materials.
Polished Bright Surface Finish		Bright polished surface finish greatly improves chip flow in soft or gummy non-ferrous materials. Polishing facilitates chip evacuation and prevents material from sticking to cutting edges and in flutes.

Surface Coatings		
Aluminum Chromium Nitride Coating (AlCrN)		The Alcrona (AlCrN) family of coatings are aluminum chromium nitride coatings mostly used for milling cutters. The two unique properties of these coatings are high hot hardness and high oxidation resistance. When used on tools for machining applications involving heavy mechanical and thermal stresses, these properties translate into superior wear resistance. Multiple levels or specific versions of these coatings are available and specific for various tools and applications.
Titanium Silicon Nitride Coating (TiSiN)		TiSiN is designed for extreme cutting conditions and high speed machining of hard materials. This multi-layered coating has a nano-composite outer layer with Si_3N_4 nano-crystallites in a crystalline TiN matrix and is engineered to protect the cutting edge from heat transfer, oxidation and abrasion. TiSiN coatings can perform well at minimum to zero lubrication conditions.
Titanium Aluminum Nitride Coating (TiAlN)		Titanium Aluminum 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 Aluminum Nitride Coatings (X-CEED)		X-CEED type TiAlN coating, also known as Futura-Nano coating is a nanolayered coating designed for higher hot hardness and higher stress applications.
Aluminum Titanium Nitride (AlTiN)		Aluminum Titanium Nitride (AlTiN) is a nanolayered broad based coating technology which is an upgrade to the conventional TiAlN coatings and can offer superior toughness, high hot hardness and oxidation resistance.
Diamond Like Coating (DLC)		Diamond Like Coating, also known as Diamond Like Carbon (DLC) provides the highest lubricity when used on carbide tools and avoids built up edge when machining graphite or soft non-ferrous materials.

SOLID HM MILLS – FAMILIES

With our assortment of Solid HM Mills we can offer solutions to machine material for practically any WMG.

Our Solid HM Mills families:

Line	Description
S7xx	With rake angle value from 7° to 10° offers a wide usage in medium strength steel and cast steels, medium strength stainless steels, cast irons and medium strength high temperature alloys.
S2xx	With rake angle value from 3° to 4° suits best for high alloyed steels > 1200 to 1620 N/mm^2, medium strength stainless steels > 850 N/mm^2 and medium to high strength super alloys > 900 N/mm^2.
S5xx	With an negative rake angle is suited for hardened materials above 54 HRC (S501 – S511 are not in).
S6xx	With high rake angle are ideal for non-ferrous materials with one exception: S612 is only for abrasive materials such as graphite.
S8xx **S501** **S511**	Rake angle 10° suit for a multiapplication usage in mild up to medium strength steel and cast steels, mild to medium strength stainless steels, cast irons and non-ferrous materials such as aluminum 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	N	N	N
Number of flutes (NOF)	NOF 2	NOF 2	NOF 2	NOF 2	NOF 2	NOF 2	NOF 2	NOF 2	NOF 2	NOF 2	NOF 2	NOF 2	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 28°	λ 28°	λ 28°
Radial rake angle (GAMF)	γ 10°	γ 10°	γ 8°	γ 10°	γ 10°	γ 10°	γ 10°	γ 10°	γ 12°	γ 12°	γ 9°	γ 9°	γ 9°
Shank								DIN 6535HA	DIN 6535HA	DIN 6535HB	DIN 6535HA	DIN 6535HA	DIN 6535HB
Coating	Bright	Bright	TiAlN	Bright	Bright	TiAlN	Bright	AlCrN	Bright	TiAlN	AlCrN	AlCrN	AlCrN
Cutting diameter tolerance class (TCDC)	DC ANSI +.000 -.002	DC ANSI +.000 -.002	DC ANSI +.000 -.002	DC ANSI +.000 -.002	DC ANSI +.000 -.002	DC ANSI +.000 -.002	DC ANSI +.000 -.002	DC h9	DC h10	DC h10	DC h9	DC h9	DC h9
Direction													
Basic standard group (BSG)	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DIN 6527L	DIN 6527L
Cooling (CSP)													
Product Family Code	**S116**	**S108**	**S208**	**S110**	**S111**	**S211**	**S109**	**S710**	**S902**	**S922**	**S822**	**S812HA**	**S812HB**
PSF cutting diameters range	1/8 - 3/8	1/16 - 1"	1/16 - 5/8	1/8 - 1/2	1/8 - 1/2	1/8 - 1/2	2.00 - 25.00	1.00 - 20.00	2.00 - 20.00	2.00 - 20.00	2.00 - 20.00	2.00 - 20.00	2.00 - 20.00
	27	28	29	30	31	32	33	34	35	36	37	38	39
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

	S802HA	S802HB	S112	S212	S114	S115	S215	S113	S213	S501	S229	S231	S233	S739	S740
	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM
	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	NOF 2	NOF 2	NOF 2	NOF 2	NOF 2	NOF 2	NOF 2	NOF 2	NOF 2	NOF 2	NOF 2	NOF 2	NOF 2	NOF 2	NOF 2
	λ 28°	λ 28°	λ 30°	λ 30°	λ 30°	λ 30°	λ 30°	λ 30°	λ 30°	λ 30°	λ 30°	λ 30°	λ 30°	λ 40°	λ 40°
	γ 9°	γ 9°	γ 10°	γ 10°	γ 10°	γ 10°	γ 10°	γ 10°	γ 10°	γ 10°	γ 3°	γ 3°	γ 3°	γ 10°	γ 10°
	DIN 6535HA	DIN 6535HB								DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA
	AlCrN	AlCrN	Bright	TiAlN	Bright	Bright	TiAlN	Bright	TiAlN	X-CEED	TiSiN	TiSiN	TiSiN	AlTiN	AlTiN
	DC h9	DC h9	DC ANSI +.000 -.002	DC ANSI +.000 -.002	DC ANSI +.000 -.002	DC ANSI +.000 -.002	DC ANSI +.000 -.002	DC ANSI +.000 -.002	DC ANSI +.000 -.002	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9
	DIN 6527K	DIN 6527K	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER
	1.00 - 20.00	2.00 - 20.00	1/16 - 1/2	1/16 - 1/2	1/8 - 5/8	1/8 - 1/2	1/8 - 1/2	2.00 - 20.00	3.00 - 12.00	1.00 - 16.00	1.50 - 16.00	1.50 - 16.00	2.00 - 16.00	3.00 - 20.00	3.00 - 20.00
	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54
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

		S121	S221	S713	S714	S715	S903	S933	S823	S813HA	S813HB	S803HA	S803HB	S791
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	N	N	N
Number of flutes (NOF)		3	3	3	3	3	3	3	3	3	3	3	3	3-4
Cut length														
Flute Helix (FHA)		λ 30°	λ 30°	λ 40°	λ 40°	λ 40°	λ 30°	λ 30°	λ 28°	λ 28°	λ 28°	λ 28°	λ 28°	λ 30°
Radial rake angle (GAMF)		γ 10°	γ 10°	γ 10°	γ 10°	γ 10°	γ 12°	γ 12°	γ 9°	γ 9°	γ 9°	γ 9°	γ 9°	γ 8°
Shank				DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HB	DIN 6535HA	DIN 6535HA	DIN 6535HB	DIN 6535HA	DIN 6535HB	DIN 6535HA
Coating		Bright	TiAlN	AlCrN	AlCrN	AlCrN	Bright	TiAlN	AlCrN	AlCrN	AlCrN	AlCrN	AlCrN	AlCrN
Cutting diameter tolerance class (TCDC)		DC ANSI +.000 -.002	DC ANSI +.000 -.002	DC h9	DC h9	DC h9	DC h10	DC h10	DC h9	DC h9	DC h9	DC h9	DC h9	
Direction														
Basic standard group (BSG)		DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DIN 6527L	DIN 6527L	DIN 6527K	DIN 6527K	DORMER
Cooling (CSP)														
Product Family Code		S121	S221	S713	S714	S715	S903	S933	S823	S813HA	S813HB	S803HA	S803HB	S791
PSF cutting diameters range		1/16 - 1/2	1/16 - 1/2	1.50 - 20.00	3.00 - 20.00	3.00 - 20.00	2.00 - 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	6.00 - 16.00
		55	56	57	58	59	60	61	62	63	64	65	66	68
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

	S129	S134	S234	S136	S236	S137	S237	S135	S235	S761	S716	S260	S717	S219	S718
HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM
N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
NOF 4	NOF 4	NOF 4	NOF 4	NOF 4	NOF 4	NOF 4	NOF 4	NOF 4	NOF 4	NOF 4≠	NOF 4	NOF 4≠	NOF 4	NOF 4	NOF 4
λ 30°	λ 30°	λ 30°	λ 30°	λ 30°	λ 30°	λ 30°	λ 30°	λ 30°	λ 30°	λ 40°	λ 40°	λ 40°	λ 40°	λ 40°	λ 40°
γ 10°	γ 10°	γ 10°	γ 10°	γ 10°	γ 10°	γ 10°	γ 10°	γ 10°	γ 10°	γ 10°	γ 10°	γ 4°	γ 10°	γ 3°	γ 10°
										DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA
Bright	Bright	TiAlN	Bright	TiAlN	Bright	TiAlN	Bright	TiAlN	AlCrN	AlCrN	AlCrN	AlCrN	AlTiN	AlCrN	
DC ANSI +.000 -.002	DC ANSI +.000 -.002	DC ANSI +.000 -.002	DC ANSI +.000 -.002	DC ANSI +.000 -.002	DC ANSI +.000 -.002	DC ANSI +.000 -.002	DC ANSI +.000 -.002	DC ANSI +.000 -.002	DC ANSI +.000 -.002	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	DORMER
1/8 - 1/2	1/16 - 1"	1/16 - 1"	1/8 - 3/4	1/8 - 3/4	1/8 - 1"	1/8 - 1"	2.00 - 25.00	2.00 - 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	
69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	
P1 ■	P1 ■	P1 ■	P1 ■	P1 ■	P1 ■	P1 ■	P1 ■	P1 ■	P1 ■	P1 ■		P1 ■		P1 ■	
P2 ■	P2 ■	P2 ■	P2 ■	P2 ■	P2 ■	P2 ■	P2 ■	P2 ■	P2 ■	P2 ■		P2 ■		P2 ■	
P3 ■	P3 ■	P3 ■	P3 ■	P3 ■	P3 ■	P3 ■	P3 ■	P3 ■	P3 ■	P3 ■		P3 ■		P3 ■	
P4 ■	P4 ■	P4 ■	P4 ■	P4 ■	P4 ■	P4 ■	P4 ■	P4 ■	P4 ■	P4 ■		P4 ■	P4 ◪	P4 ■	
M1 ■	M1 ■	M1 ■	M1 ■	M1 ■	M1 ■	M1 ■	M1 ■	M1 ■	M1 ■	M1 ■		M1 ■		M1 ■	
M2 ■	M2 ■	M2 ■	M2 ■	M2 ■	M2 ■	M2 ■	M2 ■	M2 ■	M2 ■	M2 ■	M2 ■	M2 ■	M2 ■	M2 ■	
M3 ■	M3 ■	M3 ■	M3 ■	M3 ■	M3 ■	M3 ■	M3 ■	M3 ■	M3 ■	M3 ■	M3 ■	M3 ■	M3 ■	M3 ■	
M4 ■	M4 ■	M4 ■	M4 ■	M4 ■	M4 ■	M4 ■	M4 ■	M4 ■			M4 ■		M4 ■		
K1 ◪	K1 ◪	K1 ■	K1 ◪	K1 ■	K1 ◪	K1 ■	K1 ◪	K1 ■	K1 ■	K1 ■		K1 ■		K1 ■	
K2 ■	K2 ■	K2 ■	K2 ■	K2 ■	K2 ■	K2 ■	K2 ■	K2 ■	K2 ■	K2 ■		K2 ■		K2 ■	
K3 ■	K3 ■	K3 ■	K3 ■	K3 ■	K3 ■	K3 ■	K3 ■	K3 ■	K3 ■	K3 ■		K3 ■		K3 ■	
K4 ◪	K4 ◪	K4 ■	K4 ◪	K4 ■	K4 ◪	K4 ■	K4 ◪	K4 ■	K4 ■	K4 ■		K4 ■		K4 ■	
K5 ■	K5 ■	K5 ■	K5 ■	K5 ■	K5 ■	K5 ■	K5 ■	K5 ■	K5 ■	K5 ■		K5 ■		K5 ■	
N1 ◪	N1 ◪		N1 ◪		N1 ◪		N1 ◪					N1 ◪		N1 ◪	
N2 ◪	N2 ◪		N2 ◪		N2 ◪		N2 ◪					N2 ◪		N2 ◪	
N3 ■	N3 ■		N3 ■		N3 ■		N3 ■					N3 ◪		N3 ◪	
N4	N4														
N5	N5														
S1	S1	S1 ◪	S1	S1 ◪	S1	S1 ◪	S1	S1 ◪	S1 ■	S1 ■	S1 ■	S1 ■	S1 ■	S1 ■	
S2	S2	S2 ◪	S2	S2 ◪	S2	S2 ◪	S2	S2 ◪	S2 ■	S2 ■	S2 ■	S2 ■	S2 ■	S2 ■	
S3	S3	S3 ◪	S3	S3 ◪	S3	S3 ◪	S3	S3 ◪	S3 ■	S3 ■	S3 ■	S3 ■	S3 ■	S3 ■	
S4	S4	S4 ◪	S4	S4 ◪	S4	S4 ◪	S4	S4 ◪	S4 ■	S4 ■	S4 ■	S4 ■	S4 ■	S4 ■	
H1	H1		H1		H1		H1					H1 ■			
H2	H2		H2		H2		H2					H2 ■			
H3	H3		H3		H3		H3					H3 ■			
H4	H4														

■ Primary use ◪ Possible use

Material code (BMC)	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM
Mill Profile	N	N	N	NRA	NRA	N	N	N	N	N	N	N	N	N
Number of flutes (NOF)	4	4	4≠	4≠	4≠	4	4	4	4	4	4	4	4≠	4≠
Cut length														
Flute Helix (FHA)	λ 30°	λ 30°	λ ≠	λ 40°	λ 40°	λ 34°	λ 34°	λ 34°	λ 34°	λ ≠	λ ≠	λ 40°	λ ≠
Radial rake angle (GAMF)	γ 12°	γ 12°	γ 10°	γ 10°	γ 10°	γ 9°	γ 9°	γ 9°	γ 9°	γ 8°	γ 8°	γ 7°	γ 10°
Shank	DIN 6535HA	DIN 6535HB	DIN 6535HA	DIN 6535HA	DIN 6535HB	DIN 6535HA	DIN 6535HB	DIN 6535HA	DIN 6535HB	DIN 6535HA	DIN 6535HB	DIN 6535HB	DIN 6535HA
Coating	Bright	TiAlN	TiSiN	AlCrN	AlCrN	AlCrN	AlCrN	AlCrN	AlCrN	AlTiN	AlTiN	AlCrN	TiSiN
Cutting diameter tolerance class (TCDC)	DC h12	DC h12	DC h9	DC h9	DC h9	DC h10	DC h10	DC h10	DC h10	DC ANSI +.000 -.002	DC ANSI +.000 -.002	DC h9	DC h9
Direction													
Basic standard group (BSG)	DORMER	DORMER	DORMER	DORMER	DORMER	DIN 6527L	DIN 6527L	DIN 6527K	DIN 6527K	DORMER	DORMER	DORMER	DORMER
Cooling (CSP)													
														
Product Family Code	S904	S944	S766	S765	S765HB	S814HA	S814HB	S804HA	S804HB	S223HA	S223HB	S722HB	S767
PSF cutting diameters range	2.00 - 20.00	2.00 - 20.00	4.00 - 20.00	6.00 - 20.00	6.00 - 20.00	2.00 - 25.00	2.00 - 25.00	2.00 - 25.00	2.00 - 25.00	1/8 - 1"	1/8 - 1"	3.00 - 20.00	4.00 - 20.00
	84	85	86	87	88	89	90	91	92	93	94	95	96
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

	S768	S763	S262	S138	S238	S139	S239	S146	S246	S147	S247	S511	S248HA	S248HB	S770HB
HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM
N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
NOF	4≠	4≠	4≠	4	4	4	4	4	4	4	4	4	4	5	5	5
λ	≠	40°	40°	30°	30°	30°	30°	30°	30°	30°	30°	30°	≠	≠	≠	≠
γ	10°	10°	4°	10°	10°	10°	10°	10°	10°	10°	10°	10°	8°	8°	10°	
	DIN 6535HA	DIN 6535HA	DIN 6535HA									DIN 6535HA	DIN 6535HA	DIN 6535HB	DIN 6535HB	
	TiSiN	AlCrN	AlCrN	Bright	TiAlN	Bright	TiAlN	Bright	TiAlN	Bright	TiAlN	X-CEED	AlTiN	AlTiN	AlCrN	
DC	h9	h9	h9	ANSI +.000 -.002	ANSI +.000 -.002	ANSI +.000 -.002	ANSI +.000 -.002	ANSI +.000 -.002	ANSI +.000 -.002	ANSI +.000 -.002	ANSI +.000 -.002	h9	ANSI +.000 -.002	ANSI +.000 -.002	h9	
	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	
	4.00 - 20.00	3.00 - 20.00	3.00 - 20.00	1/16 - 3/4	1/16 - 3/4	2.00 - 12.00	2.00 - 12.00	1/4 - 5/8	1/4 - 5/8	1/8 - 5/8	1/8 - 5/8	3.00 - 16.00	5/16 - 3/4	5/16 - 1"	10.00 - 20.00	
	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	
P1	■	■		■	■	■	■	■	■	■	■	■	■	■	■	
P2	■	■		■	■	■	■	■	■	■	■	■	■	■	■	
P3	■	■		■	■	■	■	■	■	■	■	■	■	■	■	
P4	■	■		■	■	■	■	■	■	■	■	■	■	■	■	
M1	■	■		■	■	■	■	■	■	■	■	■	■	■	■	
M2	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
M3	■	■	■	■	■	■	■	■	■	■	■	◪	■	■	■	
M4			■	■	■	■	■	■	■	■	■	◪	■	■		
K1	■	■		◪	■	◪	■	◪	■	◪	■	■	■	■	■	
K2	■	■		■	■	■	■	■	■	■	■	■	■	■	■	
K3	■	■		■	■	■	■	■	■	■	■	■	■	■	■	
K4	■	■		◪	■	◪	■	◪	■	◪	■	■	■	■	■	
K5	■	■		■	■	■	■	■	■	■	■	■	■	■	■	
N1				◪		◪		◪		◪		◪				
N2				◪		◪		◪		◪		◪				
N3				■		■		■		■		■				
N4												◪				
N5																
S1	■	■	■		◪		◪		◪		◪	◪	■	■	■	
S2	■	■	■		◪		◪		◪		◪	◪	■	■	■	
S3	■	■	■		◪		◪		◪		◪	◪	■	■	■	
S4	■	■	■		◪		◪		◪		◪	◪	■	■	■	
H1			■										■	■		
H2			■										■	■		
H3			■										■	■		
H4													◪	◪		

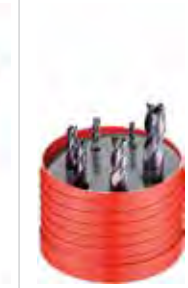
■ Primary use ◪ Possible use

Material code (BMC)	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM
Mill Profile	FS	N	FS	N	N	N	W	W	W	W	W	W	W
Number of flutes (NOF)	5	5	5	6-8	6-8	6-8	1	2	2	2	2	2	2
Cut length													
Flute Helix (FHA)	≠	≠	≠	50°	50°	50°	25°	45°	45°	37°	30°	30°	30°
Radial rake angle (GAMF)	10°	10°	10°	3°	3°	3°	20°	8°	10°	8°	20°	20°	20°
Shank	DIN 6535HB	DIN 6535HB	DIN 6535HB	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA				DIN 6535HA	DIN 6535HA	DIN 6535HA
Coating	AlCrN	AlCrN	AlCrN	AlTiN	AlTiN	AlTiN	Hi	Bright	ZrN	ZrN	Hi	Hi	Hi
Cutting diameter tolerance class (TCDC)	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9	DC ANSI +.000 -.002	DC ANSI +.000 -.002	DC ANSI +.000 -.002	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	S771HB	S772HB	S773HB	S225	S226	S227	S637	S106	S206	S207	S638	S610	S611
PSF cutting diameters range	10.00 - 20.00	10.00 - 20.00	10.00 - 20.00	3.00 - 20.00	3.00 - 20.00	6.00 - 20.00	2.00 - 12.00	1/4 - 3/4	1/4 - 3/4	1/8 - 3/4	6.20 - 20.30	2.00 - 20.00	3.00 - 20.00
	113	114	115	116	117	118	119	120	121	122	123	124	125
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

	S629	S614	S650	S654	S662	S612	S561	S525	S526	S527	S523	S521	S524	S536	S529
	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM
	W	W	W	W NRA	W	N	N	N	N	N	N	N	N	N	N
	NOF 2	NOF 3	NOF 3 ≠	NOF 3 ≠	NOF 4 ≠	NOF 4	NOF 4 ≠	NOF 6-8	NOF 6-8	NOF 6-8	NOF 4	NOF 4	NOF 4	NOF 4-6	NOF 2
	λ 30°	λ 40°	λ 40°	λ 40°	λ 40°	λ 40°	λ 40°	λ 50°	λ 50°	λ 50°	λ 40°	λ 45°	λ 40°	λ 25°	λ 30°
	γ 15°	γ 13°	γ 13°	γ 15°	γ 10°	γ 10°	γ -6°	γ -26°	γ -26°	γ -26°	γ -6°	γ -10°	γ -6°	γ 0°	γ -10°
	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
	Bright	Bright	Bright	Bright	Bright	Diamond	TiSiN	TiSiN	TiSiN	TiSiN	TiSiN	TiSiN	TiSiN	TiSiN	TiSiN
	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9	DC h9
	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER
	1.00 - 20.00	3.00 - 16.00	1.00 - 20.00	6.00 - 20.00	3.00 - 20.00	1.00 - 12.00	1.00 - 20.00	3.00 - 20.00	3.00 - 20.00	3.00 - 20.00	1.50 - 16.00	3.00 - 16.00	3.00 - 16.00	6.00 - 12.00	1.50 - 16.00
	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
P1															
P2															
P3															
P4															
M1															
M2															
M3															
M4															
K1															
K2															
K3															
K4															
K5															
N1	■	■	■	■	■										
N2	■	■	■	■	■										
N3	■	■	■	■	■										
N4	■	■	■	■	■										
N5						■									
S1															
S2															
S3															
S4															
H1							■	■	■	■	■	■	■	■	■
H2							■	■	■	■	■	■	■	■	■
H3							■	■	■	■	■	■	■	■	■
H4							■	■	■	■	■	■	■	■	■

■ Primary use ◪ Possible use

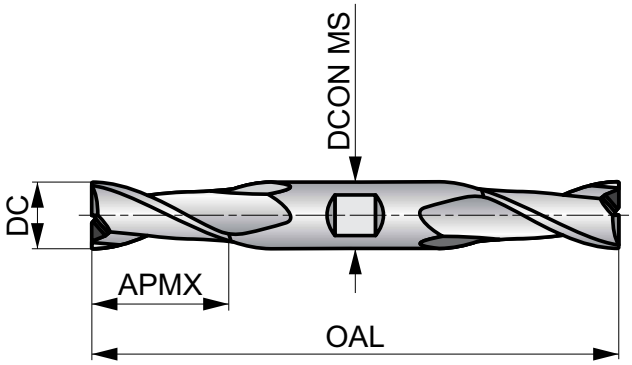
Material code (BMC)		HM	HM	HM	HM	HM							
Mill Profile		N	N	N	N								
Number of flutes (NOF)		NOF 2	NOF 2	NOF 4	NOF 4								
Cut length													
Flute Helix (FHA)		λ 30°	λ 30°	λ 30°	λ 30°								
Radial rake angle (GAMF)		γ -10°	γ -10°	γ -10°	γ -10°								
Shank		DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA								
Coating		TiSiN	TiSiN	TiSiN	TiSiN								
Cutting diameter tolerance class (TCDC)		DC h9	DC h9	DC h9	DC h9								
Direction													
Basic standard group (BSG)		DORMER	DORMER	DORMER	DORMER								
Cooling (CSP)													
													
Product Family Code		S531	S533	S534	S535	S991							
PSF cutting diameters range		1.50 - 16.00	2.00 - 16.00	3.00 - 16.00	3.00 - 16.00	Set							
		141	142	143	144	145							
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

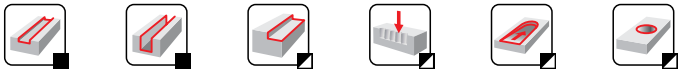
S116

2-Flute Solid Carbide Double Side End Mill

Regular length, 2-flute double end design with 30° helix provides two cutting ends in one tool with bright finish, improves chip flow in soft and non-ferrous materials.



HM	N	NOF 2
	λ 30°	γ 10°
	Bright	DORMER



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■ 276 K	■ 308 K	■ 322 K	■ 236 K	■ 207 K	■ 184 J	■ 220 K	■ 177 J	■ 151 J	■ 131 J	■ 112 J	◪ 92 J	■ 256 K	■ 217 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**
■ 230 K	■ 187 J	◪ 154 J	■ 154 J	■ 131 J	■ 118 J	■ 102 J	◪ 85 J	■ 348 K	◪ 256 K	◪ 194 K	■ 364 K	■ 295 K	◪ 236 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**
■ 325 K	■ 246 K	◪ 197 J	■ 299 J	■ 226 J	◪ 164 J	◪ 141 J	◪ 118 J	■ 338 J	■ 253 J	◪ 197 J	◪ 1394 K	◪ 1047 K	◪ 699 K
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**								
◪ 932 K	◪ 837 K	◪ 604 K	■ 784 K	■ 463 K	■ 233 K								

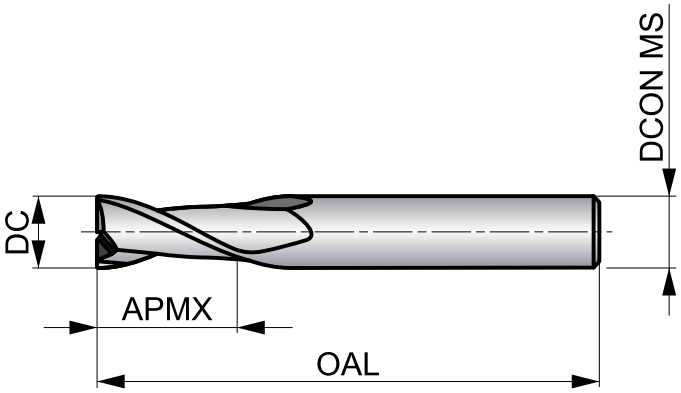
Product	DC (inch)	DC (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	NOF	Pack Qty	MID
S1161/8	1/8	.1250	3/8	3/8	3″	2	1	7648650
S1165/32	5/32	.1563	3/8	7/16	3″	2	1	7648651
S1163/16	3/16	.1875	3/8	1/2	3″	2	1	7648652
S1161/4	1/4	.2500	3/8	5/8	3″	2	1	7648653
S1165/16	5/16	.3125	3/8	3/4	3.1/2	2	1	7648654
S1163/8	3/8	.3750	3/8	3/4	3.1/2	2	1	7648655

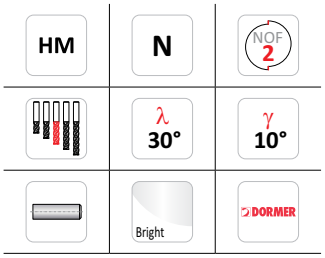
S108

DORMER

2-Flute Solid Carbide End Mill

Regular length, 2-flute design with 30° helix and bright finish, improves chip flow in soft and non-ferrous materials.





Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

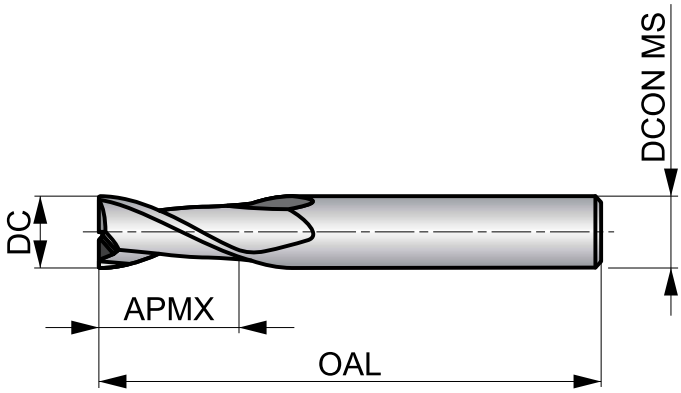
P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■295 K	■331 K	■344 K	■253 K	■223 K	■197 J	■236 K	■190 J	■161 J	■141 J	■121 J	◪98 J	◪276 K	◪233 K
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
◪246 K	◪200 J	◪167 J	◪164 J	◪141 J	◪128 J	◪108 J	◪92 J	■374 K	◪276 K	◪207 K	■390 K	■318 K	◪253 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**
■348 K	■266 K	◪213 J	■322 J	■243 J	◪177 J	◪151 J	◪128 J	■364 J	■272 J	◪210 J	◪1499 K	◪1125 K	◪751 K
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**								
◪1001 K	◪899 K	◪650 K	■843 K	■499 K	■249 K								

Product	DC (inch)	DC (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	NOF	Pack Qty	MID
S1081/16	1/16	.0625	1/8	1/4	1.1/2	2	1	7648526
S1085/64	5/64	.0781	1/8	1/4	1.1/2	2	1	7648527
S1083/32	3/32	.0938	1/8	3/8	1.1/2	2	1	7648528
S1081/8	1/8	.1250	1/8	1/2	1.1/2	2	1	7648529
S1089/64	9/64	.1406	3/16	9/16	2″	2	1	7648530
S1085/32	5/32	.1563	3/16	9/16	2″	2	1	7648531
S10811/64	11/64	.1719	3/16	9/16	2″	2	1	7648532
S1083/16	3/16	.1875	3/16	5/8	2″	2	1	7648533
S1087/32	7/32	.2188	1/4	5/8	2.1/2	2	1	7648534
S1081/4	1/4	.2500	1/4	3/4	2.1/2	2	1	7648535
S1085/16	5/16	.3125	5/16	7/8	2.1/2	2	1	7648536
S1083/8	3/8	.3750	3/8	7/8	2.1/2	2	1	7648537
S1087/16	7/16	.4375	7/16	1″	2.1/2	2	1	7648538
S1081/2	1/2	.5000	1/2	1″	3″	2	1	7648539
S1089/16	9/16	.5625	9/16	1.1/4	3.1/2	2	1	7648540
S1085/8	5/8	.6250	5/8	1.1/4	3.1/2	2	1	7648541
S1083/4	3/4	.7500	3/4	1.1/2	4″	2	1	7648542
S1081	1″	1.0000	1″	1.1/2	4″	2	1	7648543

S208

2-Flute Solid Carbide End Mill

Regular length, 2-flute design with 30° helix and ALTiN coating increases surface hardness,improves chip flow and tool life allowing higher metal removal rates.



HM	N	NOF 2
	λ 30°	γ 8°
	TiAlN	DORMER

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■ 397 K	■ 443 K	■ 459 K	■ 338 K	■ 299 K	■ 262 J	■ 338 K	■ 272 J	■ 230 J	■ 203 J	■ 171 J	■ 141 J	■ 446 K	■ 377 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**
■ 397 K	■ 325 J	◪ 272 J	■ 259 J	■ 223 J	■ 200 J	■ 174 J	◪ 151 J	■ 551 K	◪ 407 K	◪ 305 K	■ 646 K	■ 525 K	◪ 417 J
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.1**	**S1.2**	**S1.3**
■ 571 K	■ 436 K	◪ 354 J	■ 528 J	■ 400 J	◪ 292 J	◪ 249 J	◪ 210 J	■ 600 J	■ 449 J	◪ 348 J	■ 230 J	◪ 200 J	◪ 190 J
S2.1	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**								
◪ 213 J	◪ 138 J	◪ 161 J	◪ 98 J	◪ 125 J	◪ 79 J								

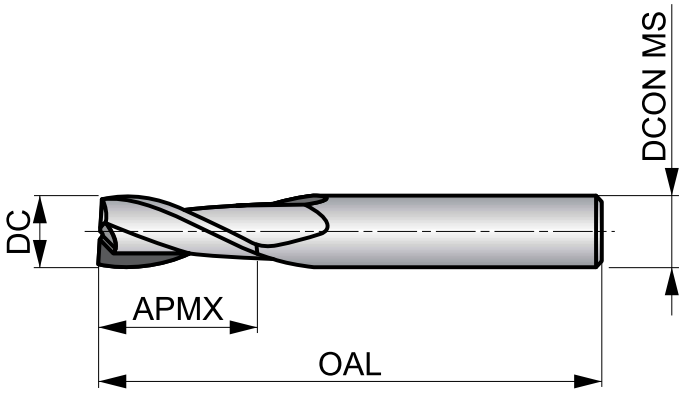
Product	DC (inch)	DC (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	NOF	Pack Qty	MID
S2081/16	1/16	.0625	1/8	1/4	1.1/2	2	1	7648544
S2085/64	5/64	.0781	1/8	1/4	1.1/2	2	1	7648545
S2083/32	3/32	.0938	1/8	3/8	1.1/2	2	1	7648546
S2081/8	1/8	.1250	1/8	1/2	1.1/2	2	1	7648547
S2085/32	5/32	.1563	3/16	9/16	2″	2	1	7648548
S2083/16	3/16	.1875	3/16	5/8	2″	2	1	7648549
S2087/32	7/32	.2188	1/4	5/8	2.1/2	2	1	7648550
S2081/4	1/4	.2500	1/4	3/4	2.1/2	2	1	7648551
S2085/16	5/16	.3125	5/16	7/8	2.1/2	2	1	7648552
S2083/8	3/8	.3750	3/8	7/8	2.1/2	2	1	7648553
S2087/16	7/16	.4375	7/16	1″	2.1/2	2	1	7648554
S2081/2	1/2	.5000	1/2	1″	3″	2	1	7648555
S2089/16	9/16	.5625	9/16	1.1/4	3.1/2	2	1	7648556
S2085/8	5/8	.6250	5/8	1.1/4	3.1/2	2	1	7648557

S110

DORMER

2-Flute Solid Carbide End Mill

Long length, 2-flute design with 30° helix and bright finish, improves chip flow in soft and non-ferrous materials.



HM	N	NOF 2
	λ 30°	γ 10°
	Bright	DORMER

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■276 K	■308 K	■322 K	■236 K	■207 K	■184 J	■220 K	■177 J	■151 J	■131 J	■112 J	◪92 J	■256 K	■217 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**
■230 K	■187 J	◪154 J	■154 J	■131 J	■118 J	■102 J	◪85 J	■348 K	◪256 K	◪194 K	■364 K	■295 K	◪236 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**
■325 K	■246 K	◪197 J	■299 J	■226 J	◪164 J	◪141 J	◪118 J	■338 J	■253 J	◪197 J	◪1394 K	◪1047 K	◪699 K
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**								
◪932 K	◪837 K	◪604 K	■784 K	■463 K	■233 K								

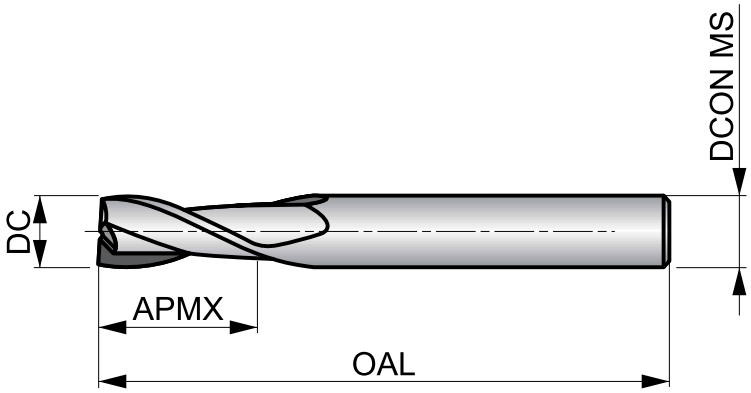
Product	DC (inch)	DC (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	NOF	Pack Qty	MID
S1101/8	1/8	.1250	1/8	3/4	2″	2	1	7648575
S1103/16	3/16	.1875	3/16	3/4	2.1/2	2	1	7648576
S1101/4	1/4	.2500	1/4	1.1/8	3″	2	1	7648577
S1103/8	3/8	.3750	3/8	1.1/8	3″	2	1	7648578
S1101/2	1/2	.5000	1/2	2″	4″	2	1	7648579

S111

DORMER

2-Flute Solid Carbide End Mill

Extra-long length, 2-flute design with 30° helix and bright finish, improves chip flow in soft and non-ferrous materials.



HM	N	NOF 2
	λ 30°	γ 10°
	Bright	DORMER

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■ 266 K	■ 299 K	■ 308 K	■ 226 K	■ 200 K	■ 177 J	■ 213 K	■ 171 J	■ 144 J	■ 128 J	■ 108 J	◪ 89 J	■ 246 K	■ 210 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**
■ 220 K	■ 180 J	◪ 151 J	■ 125 J	■ 108 J	■ 98 J	■ 98 J	◪ 85 J	■ 299 K	◪ 220 K	◪ 167 K	■ 305 K	■ 249 K	◪ 200 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**
■ 272 K	■ 207 K	◪ 167 J	■ 253 J	■ 190 J	◪ 138 J	◪ 118 J	◪ 98 J	■ 285 J	■ 213 J	◪ 164 J	◪ 1348 K	◪ 1010 K	◪ 676 K
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**								
◪ 899 K	◪ 807 K	◪ 584 K	■ 761 K	■ 449 K	■ 226 K								

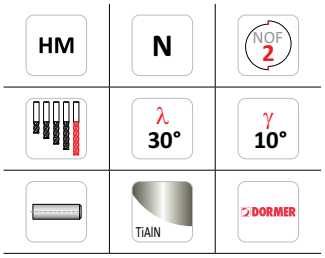
Product	DC (inch)	DC (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	NOF	Pack Qty	MID
S1111/8	1/8	.1250	1/8	1″	3″	2	1	7648580
S1113/16	3/16	.1875	3/16	1.1/8	3″	2	1	7648581
S1111/4	1/4	.2500	1/4	1.1/2	4″	2	1	7648582
S1115/16	5/16	.3125	5/16	1.5/8	4″	2	1	7648583
S1113/8	3/8	.3750	3/8	1.3/4	4″	2	1	7648584
S1111/2	1/2	.5000	1/2	3″	6″	2	1	7648585

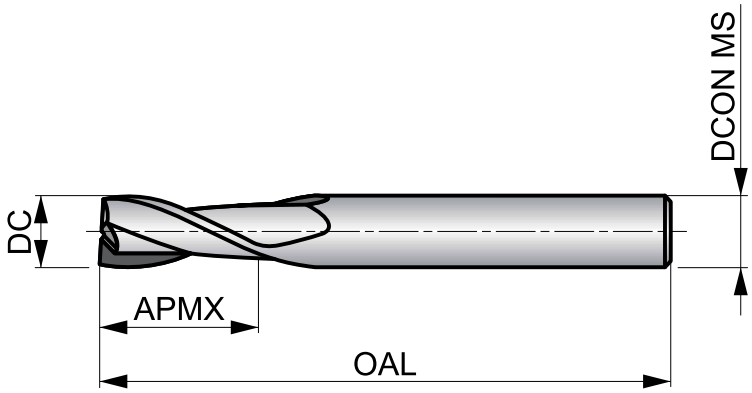
S211

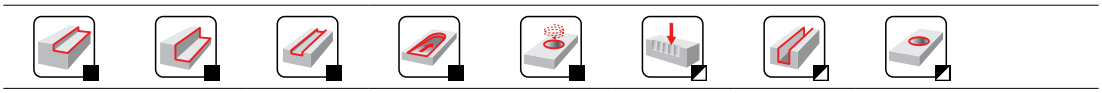
DORMER

2-Flute Solid Carbide End Mill

Extra-long length, 2-flute design with 30° helix and ALTiN coating increases surface hardness, improves chip flow and tool life allowing higher metal removal rates.







Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■358 K	■400 K	■413 K	■305 K	■269 K	■240 J	■295 K	■236 J	■200 J	■177 J	■148 J	■121 J	■410 K	■348 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**
■364 K	■299 J	◪ J	■210 J	■180 J	■164 J	■171 J	◪148 J	■499 K	■371 K	■276 K	■492 K	■400 K	■318 J
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.1**	**S1.2**	**S1.3**
■436 K	■331 K	■269 J	■404 J	■305 J	■223 J	■190 J	■161 J	■456 J	■344 J	■266 J	■200 J	◪180 J	◪174 J
S2.1	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**								
◪187 J	◪121 J	◪141 J	◪85 J	◪112 J	◪69 J								

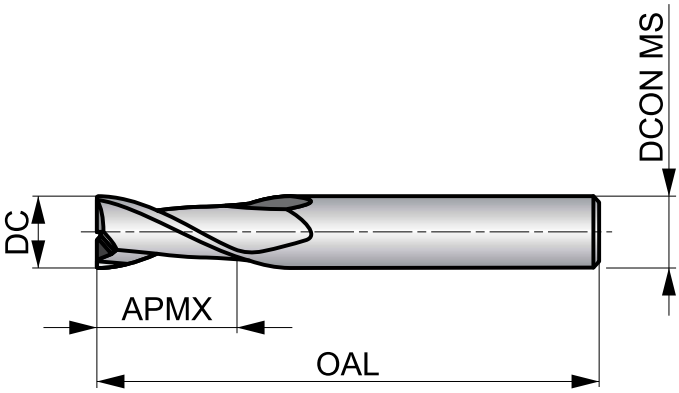
Product	DC (inch)	DC (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	NOF	Pack Qty	MID
S2111/8	1/8	.1250	1/8	1″	3″	2	1	7648586
S2113/16	3/16	.1875	3/16	1.1/8	3″	2	1	7648587
S2111/4	1/4	.2500	1/4	1.1/2	4″	2	1	7648588
S2113/8	3/8	.3750	3/8	1.3/4	4″	2	1	7648589
S2111/2	1/2	.5000	1/2	3″	6″	2	1	7648590

S109

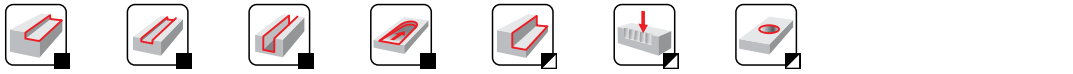
DORMER

2-Flute Solid Carbide Metric End Mill

Regular length, 2-flute design with 30° helix in metric sizes and bright finish, improves chip flow in soft and non-ferrous materials.



HM	N	NOF 2
	λ 30°	γ 10°
	Bright	DORMER



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■ 295 K	■ 331 K	■ 344 K	■ 253 K	■ 223 K	■ 197 J	■ 236 K	■ 190 J	■ 161 J	■ 141 J	■ 121 J	◪ 98 J	◪ 276 K	◪ 233 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**
◪ 246 K	◪ 200 J	◪ 167 J	◪ 164 J	◪ 141 J	◪ 128 J	◪ 108 J	◪ 92 J	■ 374 K	◪ 276 K	◪ 207 K	■ 390 K	■ 318 K	◪ 253 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**
■ 348 K	■ 266 K	◪ 213 J	■ 322 J	■ 243 J	◪ 177 J	◪ 151 J	◪ 128 J	■ 364 J	■ 272 J	◪ 210 J	◪ 1499 K	◪ 1125 K	◪ 751 K
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**								
◪ 1001 K	◪ 899 K	◪ 650 K	■ 843 K	■ 499 K	■ 249 K								

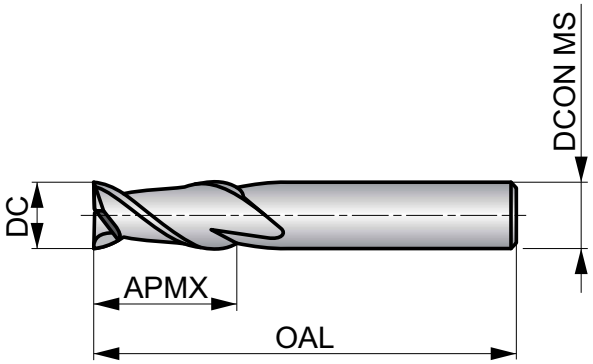
Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S1092.0	2.00	.0787	3.00	6.00	38.0	2	1	7648558
S1092.5	2.50	.0984	3.00	7.00	38.0	2	1	7648559
S1093.0	3.00	.1181	3.00	12.00	38.0	2	1	7648560
S1094.0	4.00	.1575	4.00	14.00	50.0	2	1	7648561
S1094.5	4.50	.1772	5.00	14.00	50.0	2	1	7648562
S1095.0	5.00	.1969	5.00	16.00	50.0	2	1	7648563
S1096.0	6.00	.2362	6.00	19.00	63.0	2	1	7648564
S1097.0	7.00	.2756	8.00	19.00	63.0	2	1	7648565
S1098.0	8.00	.3150	8.00	20.00	63.0	2	1	7648566
S1099.0	9.00	.3543	10.00	22.00	70.0	2	1	7648567
S10910.0	10.00	.3937	10.00	22.00	70.0	2	1	7648568
S10911.0	11.00	.4331	11.00	25.00	70.0	2	1	7648569
S10912.0	12.00	.4724	12.00	25.00	75.0	2	1	7648570
S10914.0	14.00	.5512	14.00	30.00	88.0	2	1	7648571
S10916.0	16.00	.6299	16.00	32.00	88.0	2	1	7648572
S10920.0	20.00	.7874	20.00	38.00	100.0	2	1	7648573
S10925.0	25.00	.9843	25.00	38.00	100.0	2	1	7648574

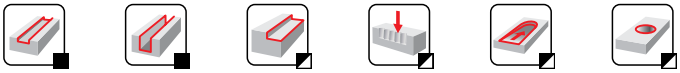
S710

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
653 K	732 K	755 K	558 K	492 K	436 J	453 K	364 J	308 J	269 J	230 J	377 K	318 K	335 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**
276 J	308 J	266 J	643 K	476 K	358 K	663 K	538 K	430 J	584 K	446 K	361 J	541 J	410 J
K4.3	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.2**	**S2.1**	**S3.1**	**S4.1**				
299 J	256 J	213 J	614 J	463 J	358 J	226 J	174 J	131 J	102 J				

DCON MS tolerance h6.

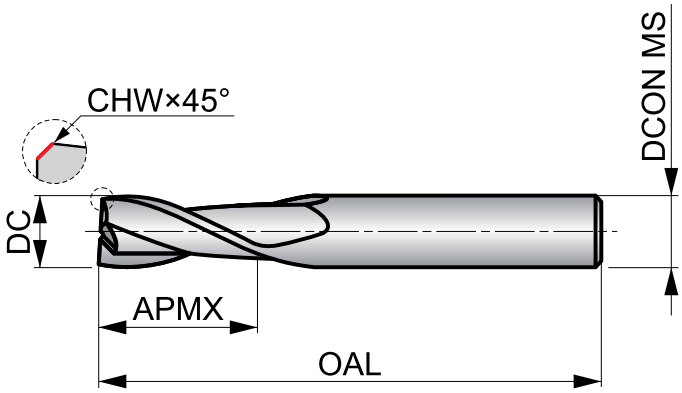
Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S7101.0	1.00	.0394	3.00	3.00	40.0	2	1	6706982
S7101.5	1.50	.0591	3.00	4.50	40.0	2	1	6706983
S7102.0	2.00	.0787	3.00	6.50	40.0	2	1	6706984
S7102.5	2.50	.0984	3.00	6.50	40.0	2	1	6706985
S7103.0	3.00	.1181	6.00	9.00	50.0	2	1	6706986
S7104.0	4.00	.1575	6.00	12.00	50.0	2	1	6706987
S7105.0	5.00	.1969	6.00	15.00	50.0	2	1	6706988
S7106.0	6.00	.2362	6.00	20.00	60.0	2	1	6706989
S7108.0	8.00	.3150	8.00	20.00	64.0	2	1	6706990
S71010.0	10.00	.3937	10.00	22.00	75.0	2	1	6706991
S71012.0	12.00	.4724	12.00	25.00	75.0	2	1	6706992
S71016.0	16.00	.6299	16.00	32.00	90.0	2	1	6706994
S71020.0	20.00	.7874	20.00	38.00	100.0	2	1	6706995

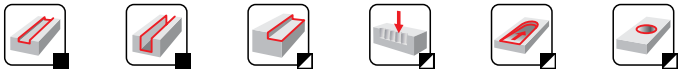
S902

2-Flute Solid Carbide End Mill

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

HM	N	NOF 2
	λ 30°	γ 12°
DIN 6535HA	Bright	DC h10
	DORMER	





Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■ 348 K	■ 390 K	■ 404 K	■ 299 K	■ 262 K	◪ 233 J	■ 217 K	■ 174 J	◪ 148 J	■ 131 J	◪ 112 J	■ 262 K	◪ 194 K	◪ 144 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**
■ 322 K	■ 262 K	◪ 210 J	■ 285 K	■ 220 K	◪ 177 J	■ 266 J	■ 200 J	◪ 148 J	◪ 125 J	◪ 105 J	■ 299 J	■ 226 J	◪ 174 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**
◪ 1165 K	■ 876 K	■ 587 K	■ 587 K	◪ 525 K	◪ 377 K	■ 614 K	■ 358 K	■ 184 K	◪ 614 K	◪ 236 K	■ 125 J	◪ 118 J	◪ 49 J

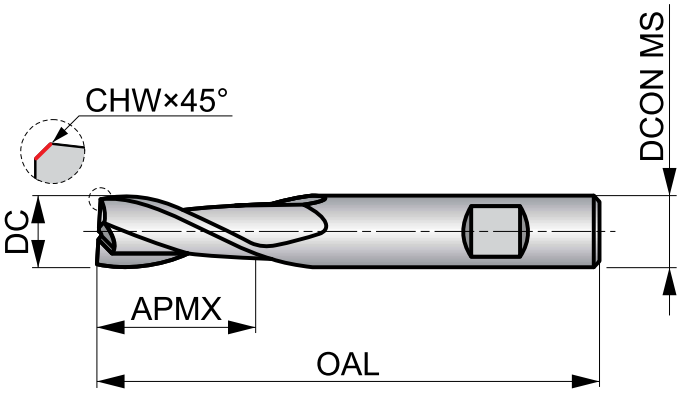
DCON MS tolerance h6; DC≤10.00 mm: CHW ± 0.03X45° mm; DC>10.00 mm: CHW ± 0.05X45° mm.

Product	DC (mm)	DC (inch)	CHW (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S9022.0	2.00	.0787	0.08	3.00	6.00	38.0	2	1	5983010
S9022.5	2.50	.0984	0.08	3.00	9.00	38.0	2	1	5983013
S9023.0	3.00	.1181	0.08	3.00	12.00	38.0	2	1	5983021
S9024.0	4.00	.1575	0.08	4.00	14.00	50.0	2	1	5983029
S9025.0	5.00	.1969	0.13	5.00	16.00	50.0	2	1	5983033
S9026.0	6.00	.2362	0.13	6.00	19.00	57.0	2	1	5983037
S9027.0	7.00	.2756	0.13	8.00	19.00	63.0	2	1	5983041
S9028.0	8.00	.3150	0.13	8.00	19.00	63.0	2	1	5983046
S9029.0	9.00	.3543	0.13	10.00	21.00	72.0	2	1	5983050
S90210.0	10.00	.3937	0.18	10.00	22.00	72.0	2	1	5982997
S90212.0	12.00	.4724	0.20	12.00	25.00	73.0	2	1	5982999
S90214.0	14.00	.5512	0.20	14.00	30.00	83.0	2	1	5983001
S90216.0	16.00	.6299	0.20	16.00	32.00	92.0	2	1	5983004
S90218.0	18.00	.7087	0.20	18.00	32.00	92.0	2	1	5983007
S90220.0	20.00	.7874	0.30	20.00	38.00	104.0	2	1	5983017

S922

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■ 433 K	■ 486 K	■ 502 K	■ 371 K	■ 328 K	■ 289 J	■ 322 K	■ 259 J	■ 220 J	■ 194 J	■ 164 J	◪ 135 J	■ 328 K	■ 243 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**
■ 184 K	■ 351 K	■ 285 K	■ 230 J	■ 312 K	■ 236 K	■ 194 J	■ 289 J	■ 220 J	■ 161 J	■ 138 J	■ 115 J	■ 328 J	■ 246 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**
■ 190 J	◪ 971 K	◪ 728 K	■ 489 K	■ 489 K	■ 436 K	■ 315 K	■ 512 K	■ 299 K	◪ 154 K	◪ 512 K	◪ 197 K	◪ 210 K	■ 154 J
S1.2	**S1.3**												
◪ 148 J	◪ 66 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)	DC (inch)	CHW (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S9222.0 [1]	2.00	.0787	0.08	3.00	6.00	38.0	2	1	5982753
S9222.5 [1]	2.50	.0984	0.08	3.00	9.00	38.0	2	1	5982756
S9223.0 [1]	3.00	.1181	0.08	3.00	12.00	38.0	2	1	5982761
S9224.0 [1]	4.00	.1575	0.08	4.00	14.00	50.0	2	1	5982764
S9225.0 [1]	5.00	.1969	0.13	5.00	16.00	50.0	2	1	5982767
S9226.0	6.00	.2362	0.13	6.00	19.00	57.0	2	1	5982770
S9227.0	7.00	.2756	0.13	8.00	19.00	63.0	2	1	5982774
S9228.0	8.00	.3150	0.13	8.00	19.00	63.0	2	1	5982778
S9229.0	9.00	.3543	0.13	10.00	21.00	72.0	2	1	5982786
S92210.0	10.00	.3937	0.18	10.00	22.00	72.0	2	1	5982944
S92212.0	12.00	.4724	0.20	12.00	25.00	73.0	2	1	5982949
S92214.0	14.00	.5512	0.20	14.00	30.00	83.0	2	1	5982954
S92216.0	16.00	.6299	0.20	16.00	32.00	92.0	2	1	5982958
S92218.0	18.00	.7087	0.20	18.00	32.00	92.0	2	1	5982750
S92220.0	20.00	.7874	0.30	20.00	38.00	104.0	2	1	5982759

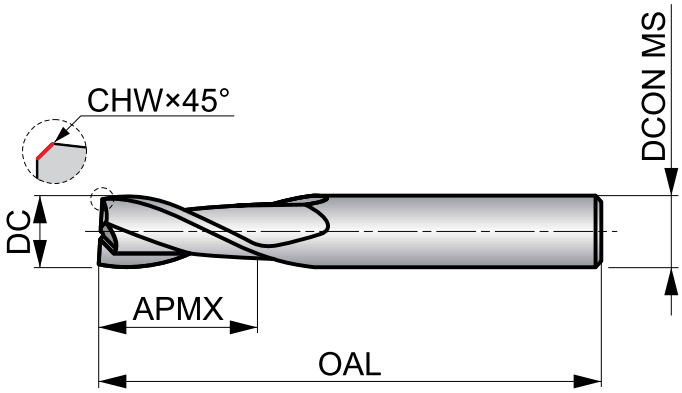
[1] Cylindrical shank.

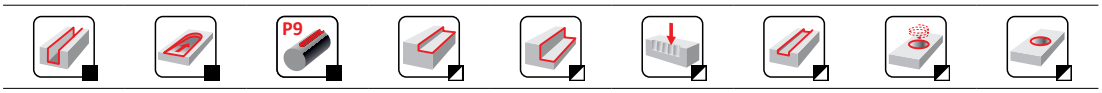
S822

2-Flute Solid Carbide Slot End Mill

Medium cut length, 2-flute design provides high rigidity for milling standard slots to a P9 tolerance and ramping operation. AlCrN coating improves performance and extends the tool life.

HM	N	NOF 2
	λ 28°	γ 9°
DIN 6535HA	AlCrN	
DORMER		





Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■ 479 K	■ 538 K	■ 554 K	■ 410 K	■ 361 K	■ 322 J	■ 331 K	■ 269 J	■ 226 J	■ 200 J	■ 171 J	■ 135 J	■ 279 K	■ 236 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**
■ 249 K	■ 203 J	■ 230 J	■ 197 J	■ 177 J	■ 174 J	■ 476 K	■ 354 K	■ 266 K	■ 492 K	■ 400 K	■ 318 J	■ 436 K	■ 335 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**
■ 269 J	■ 404 J	■ 305 J	■ 223 J	■ 194 J	■ 157 J	■ 456 J	■ 344 J	■ 266 J	◪ 942 K	◪ 709 K	■ 472 K	■ 472 K	■ 423 K
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**S1.1**	**S1.2**	**S2.1**	**S3.1**	**S4.1**			
■ 305 K	■ 499 K	■ 289 K	◪ 148 K	◪ 499 K	◪ 194 K	■ 190 J	■ 167 J	■ 128 J	■ 95 J	■ 75 J			

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

Product	DC (mm)	DC (inch)	CHW (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S8222.0	2.00	.0787	–	6.00	8.00	57.0	2	1	7106954
S8222.5	2.50	.0984	0.08	6.00	12.00	57.0	2	1	7106955
S8223.0	3.00	.1181	0.08	6.00	12.00	57.0	2	1	7106956
S8224.0	4.00	.1575	0.13	6.00	14.00	57.0	2	1	7106957
S8225.0	5.00	.1969	0.13	6.00	16.00	57.0	2	1	7106958
S8226.0	6.00	.2362	0.13	6.00	19.00	57.0	2	1	7106959
S8227.0	7.00	.2756	0.13	8.00	19.00	63.0	2	1	7106960
S8228.0	8.00	.3150	0.20	8.00	19.00	63.0	2	1	7106961
S8229.0	9.00	.3543	0.20	10.00	21.00	72.0	2	1	7106962
S82210.0	10.00	.3937	0.20	10.00	22.00	72.0	2	1	7106963
S82212.0	12.00	.4724	0.20	12.00	25.00	83.0	2	1	7106964
S82214.0	14.00	.5512	0.20	14.00	30.00	83.0	2	1	7106965
S82216.0	16.00	.6299	0.20	16.00	32.00	92.0	2	1	7106966
S82218.0	18.00	.7087	0.20	18.00	32.00	92.0	2	1	7106967
S82220.0	20.00	.7874	0.30	20.00	38.00	104.0	2	1	7106968

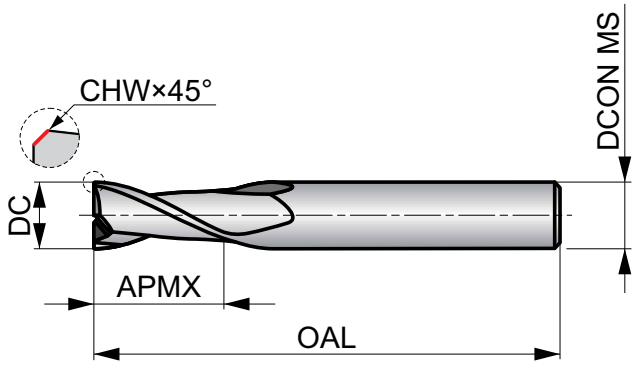
S812HA

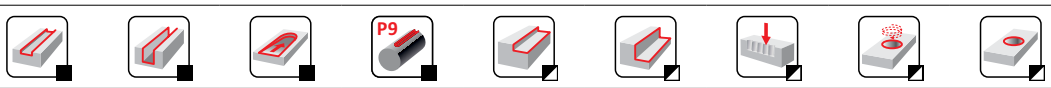
DORMER

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■545 K	■610 K	■630 K	■466 K	■410 K	■364 J	■377 K	■305 J	■256 J	■223 J	■194 J	■154 J	■318 K	■266 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**
■279 K	■233 J	■259 J	■223 J	■200 J	■197 J	■545 K	■404 K	■302 K	■558 K	■453 K	■361 J	■492 K	■377 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**
■305 J	■459 J	■344 J	■253 J	■217 J	■184 J	■522 J	■387 J	■302 J	◪1083 K	◪810 K	■545 K	■545 K	■486 K
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**S1.1**	**S1.2**	**S2.1**	**S3.1**	**S4.1**			
■351 K	■568 K	■331 K	◪171 K	◪568 K	◪220 K	■236 J	■210 J	■161 J	■125 J	■98 J			

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

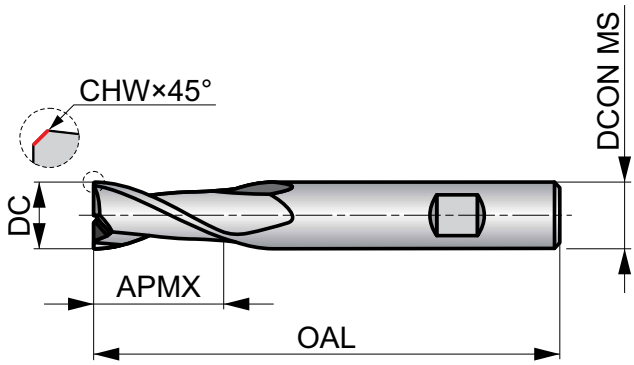
Product	DC (mm)	DC (inch)	CHW (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S812HA2.0	2.00	.0787	–	6.00	6.00	57.0	2	1	5983509
S812HA2.5	2.50	.0984	0.08	6.00	7.00	57.0	2	1	5983512
S812HA3.0	3.00	.1181	0.08	6.00	7.00	57.0	2	1	5983517
S812HA3.5	3.50	.1378	0.08	6.00	7.00	57.0	2	1	5983522
S812HA4.0	4.00	.1575	0.13	6.00	8.00	57.0	2	1	5983525
S812HA4.5	4.50	.1772	0.13	6.00	8.00	57.0	2	1	5983526
S812HA5.0	5.00	.1969	0.13	6.00	10.00	57.0	2	1	5983529
S812HA6.0	6.00	.2362	0.13	6.00	10.00	57.0	2	1	5983532
S812HA7.0	7.00	.2756	0.13	8.00	13.00	63.0	2	1	5983535
S812HA8.0	8.00	.3150	0.20	8.00	16.00	63.0	2	1	5983538
S812HA9.0	9.00	.3543	0.20	10.00	16.00	72.0	2	1	5983541
S812HA10.0	10.00	.3937	0.20	10.00	19.00	72.0	2	1	5983501
S812HA12.0	12.00	.4724	0.20	12.00	22.00	83.0	2	1	5983502
S812HA14.0	14.00	.5512	0.20	14.00	22.00	83.0	2	1	5983503
S812HA16.0	16.00	.6299	0.20	16.00	26.00	92.0	2	1	5983505
S812HA18.0	18.00	.7087	0.20	18.00	26.00	92.0	2	1	5983507
S812HA20.0	20.00	.7874	0.30	20.00	32.00	104.0	2	1	5983514

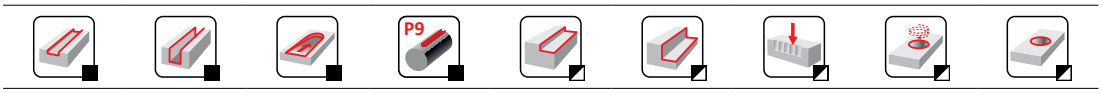
S812HB

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■ 545 K	■ 610 K	■ 630 K	■ 466 K	■ 410 K	■ 364 J	■ 377 K	■ 305 J	■ 256 J	■ 223 J	■ 194 J	■ 154 J	■ 318 K	■ 266 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**
■ 279 K	■ 233 J	■ 259 J	■ 223 J	■ 200 J	■ 197 J	■ 545 K	■ 404 K	■ 302 K	■ 558 K	■ 453 K	■ 361 J	■ 492 K	■ 377 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**
■ 305 J	■ 459 J	■ 344 J	■ 253 J	■ 217 J	■ 184 J	■ 522 J	■ 387 J	■ 302 J	◪ 1083 K	◪ 810 K	■ 545 K	■ 545 K	■ 486 K
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**S1.1**	**S1.2**	**S2.1**	**S3.1**	**S4.1**			
■ 351 K	■ 568 K	■ 331 K	◪ 171 K	◪ 568 K	◪ 220 K	■ 236 J	■ 210 J	■ 161 J	■ 125 J	■ 98 J			

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

Product	DC (mm)	DC (inch)	CHW (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S812HB2.0	2.00	.0787	0.00	6.00	6.00	57.0	2	1	5983562
S812HB2.5	2.50	.0984	0.08	6.00	7.00	57.0	2	1	5983565
S812HB3.0	3.00	.1181	0.08	6.00	7.00	57.0	2	1	5983571
S812HB3.5	3.50	.1378	0.08	6.00	7.00	57.0	2	1	5983574
S812HB4.0	4.00	.1575	0.13	6.00	8.00	57.0	2	1	5983578
S812HB4.5	4.50	.1772	0.13	6.00	8.00	57.0	2	1	5983581
S812HB5.0	5.00	.1969	0.13	6.00	10.00	57.0	2	1	5983587
S812HB6.0	6.00	.2362	0.13	6.00	10.00	57.0	2	1	5983590
S812HB7.0	7.00	.2756	0.13	8.00	13.00	63.0	2	1	5983593
S812HB8.0	8.00	.3150	0.20	8.00	16.00	63.0	2	1	5983596
S812HB9.0	9.00	.3543	0.20	10.00	16.00	72.0	2	1	5983598
S812HB10.0	10.00	.3937	0.20	10.00	19.00	72.0	2	1	5983544
S812HB12.0	12.00	.4724	0.20	12.00	22.00	83.0	2	1	5983547
S812HB14.0	14.00	.5512	0.20	14.00	22.00	83.0	2	1	5983553
S812HB16.0	16.00	.6299	0.20	16.00	26.00	92.0	2	1	5983556
S812HB18.0	18.00	.7087	0.20	18.00	26.00	92.0	2	1	5983559
S812HB20.0	20.00	.7874	0.30	20.00	32.00	104.0	2	1	5983568

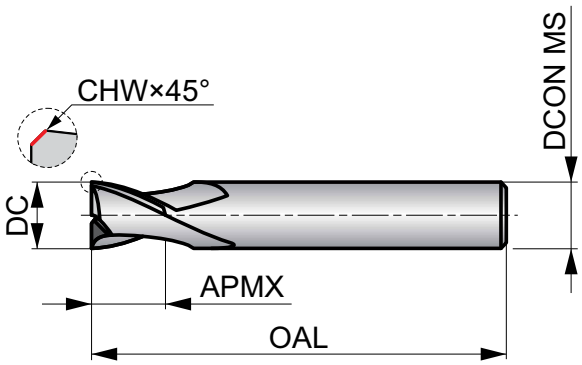
S802HA

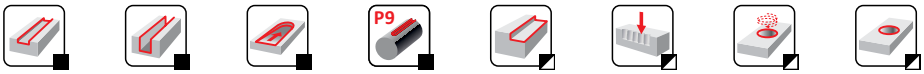
DORMER

2-Flute Solid Carbide Slot End Mill, DIN 6535 HA Shank

Extra short cut length, 2-flute design provides high rigidity for milling shallow slots to a P9 tolerance and ramping operation. AlCrN coating improves performance and extends the tool life.

HM	N	NOF 2
	λ 28°	γ 9°
DIN 6535HA	AlCrN	
DIN 6527K		





Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■676 K	■755 K	■781 K	■577 K	■509 K	■449 J	■469 K	■374 J	■318 J	■276 J	■236 J	■190 J	■397 K	■335 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**
■351 K	■292 J	◪246 J	■325 J	■279 J	◪249 J	◪246 J	◪207 J	■673 K	■499 K	■374 K	■689 K	■561 K	■449 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**
■610 K	■469 K	■377 J	■568 J	■430 J	■312 J	■269 J	■223 J	■643 J	■482 J	■374 J	◪1339 K	◪1007 K	■676 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**	
■676 K	■604 K	■433 K	■705 K	■410 K	◪210 K	◪705 K	◪272 K	◪266 J	◪233 J	◪180 J	◪135 J	◪105 J	

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

Product	DC (mm)	DC (inch)	CHW (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S802HA1.0	1.00	.0394	–	3.00	3.00	38.0	2	1	5983331
S802HA1.5	1.50	.0591	–	3.00	3.00	38.0	2	1	5983336
S802HA2.0	2.00	.0787	–	6.00	3.00	50.0	2	1	5983401
S802HA2.5	2.50	.0984	0.08	6.00	3.00	50.0	2	1	5983408
S802HA3.0	3.00	.1181	0.08	6.00	4.00	50.0	2	1	5983429
S802HA3.5	3.50	.1378	0.08	6.00	4.00	50.0	2	1	5983432
S802HA4.0	4.00	.1575	0.13	6.00	5.00	54.0	2	1	5983441
S802HA4.5	4.50	.1772	0.13	6.00	5.00	54.0	2	1	5983445
S802HA5.0	5.00	.1969	0.13	6.00	6.00	54.0	2	1	5983453
S802HA6.0	6.00	.2362	0.13	6.00	7.00	54.0	2	1	5983462
S802HA7.0	7.00	.2756	0.13	8.00	8.00	58.0	2	1	5983467
S802HA8.0	8.00	.3150	0.20	8.00	9.00	58.0	2	1	5983471
S802HA9.0	9.00	.3543	0.20	10.00	10.00	66.0	2	1	5983473
S802HA10.0	10.00	.3937	0.20	10.00	11.00	66.0	2	1	5983349
S802HA12.0	12.00	.4724	0.20	12.00	12.00	73.0	2	1	5983362
S802HA14.0	14.00	.5512	0.20	14.00	14.00	75.0	2	1	5983371
S802HA16.0	16.00	.6299	0.20	16.00	16.00	82.0	2	1	5983383
S802HA18.0	18.00	.7087	0.20	18.00	18.00	84.0	2	1	5983391
S802HA20.0	20.00	.7874	0.30	20.00	20.00	92.0	2	1	5983424

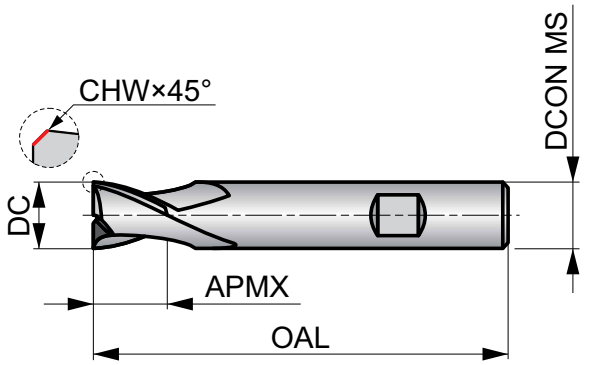
S802HB

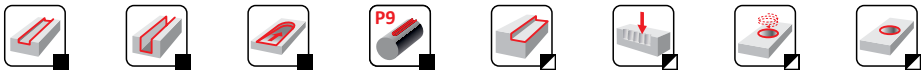
DORMER

2-Flute Solid Carbide Slot End Mill, DIN 6535 HB Shank

Extra short cut length, 2-flute design provides high rigidity for milling shallow slots to a P9 tolerance and ramping operation. The Weldon shank prevents the end mill from slipping in the toolholder. AlCrN coating improves performance and extends the tool life.

HM	N	NOF 2
	λ 28°	γ 9°
DIN 6535HB	AlCrN	
DIN 6527K		





Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■ 676 K	■ 755 K	■ 781 K	■ 577 K	■ 509 K	■ 449 J	■ 469 K	■ 374 J	■ 318 J	■ 276 J	■ 236 J	■ 190 J	■ 397 K	■ 335 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**
■ 351 K	■ 292 J	◪ 246 J	■ 325 J	■ 279 J	◪ 249 J	◪ 246 J	◪ 207 J	■ 673 K	■ 499 K	■ 374 K	■ 689 K	■ 561 K	■ 449 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**
■ 610 K	■ 469 K	■ 377 J	■ 568 J	■ 430 J	■ 312 J	■ 269 J	■ 223 J	■ 643 J	■ 482 J	■ 374 J	◪ 1339 K	◪ 1007 K	■ 676 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**	
■ 676 K	■ 604 K	■ 433 K	■ 705 K	■ 410 K	◪ 210 K	◪ 705 K	◪ 272 K	◪ 266 J	◪ 233 J	◪ 180 J	◪ 135 J	◪ 105 J	

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

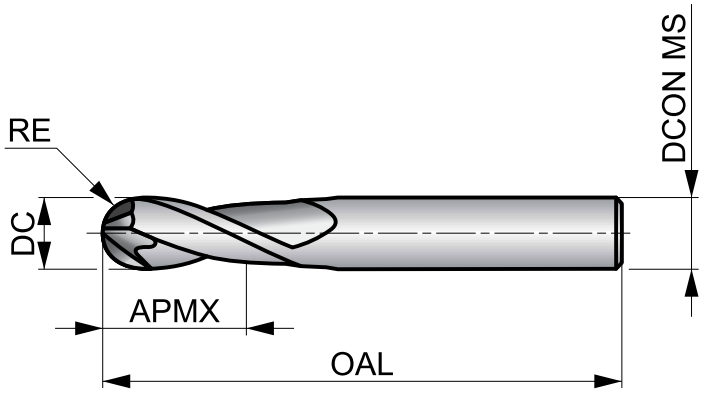
Product	DC (mm)	DC (inch)	CHW (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S802HB2.0	2.00	.0787	–	6.00	3.00	50.0	2	1	5983439
S802HB2.5	2.50	.0984	0.08	6.00	3.00	50.0	2	1	5983443
S802HB3.0	3.00	.1181	0.08	6.00	4.00	50.0	2	1	5983250
S802HB3.5	3.50	.1378	0.08	6.00	4.00	50.0	2	1	5983252
S802HB4.0	4.00	.1575	0.13	6.00	5.00	54.0	2	1	5983262
S802HB4.5	4.50	.1772	0.13	6.00	5.00	54.0	2	1	5983266
S802HB5.0	5.00	.1969	0.13	6.00	6.00	54.0	2	1	5983274
S802HB6.0	6.00	.2362	0.13	6.00	7.00	54.0	2	1	5983284
S802HB7.0	7.00	.2756	0.13	8.00	8.00	58.0	2	1	5983290
S802HB8.0	8.00	.3150	0.20	8.00	9.00	58.0	2	1	5983294
S802HB9.0	9.00	.3543	0.20	10.00	10.00	66.0	2	1	5983297
S802HB10.0	10.00	.3937	0.20	10.00	11.00	66.0	2	1	5983480
S802HB12.0	12.00	.4724	0.20	12.00	12.00	73.0	2	1	5983486
S802HB14.0	14.00	.5512	0.20	14.00	14.00	75.0	2	1	5983282
S802HB16.0	16.00	.6299	0.20	16.00	16.00	82.0	2	1	5983372
S802HB18.0	18.00	.7087	0.20	18.00	18.00	84.0	2	1	5983430
S802HB20.0	20.00	.7874	0.30	20.00	20.00	92.0	2	1	5983248

S112

DORMER

2-Flute Solid Carbide Ball Nosed End Mill

Regular length, 2-flute design with 30° helix, ball nosed geometry is designed for contouring of complex surfaces. Bright finish, improves chip flow in soft and non-ferrous materials.



HM	N	NOF 2
	λ 30°	γ 10°
	Bright	DORMER

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

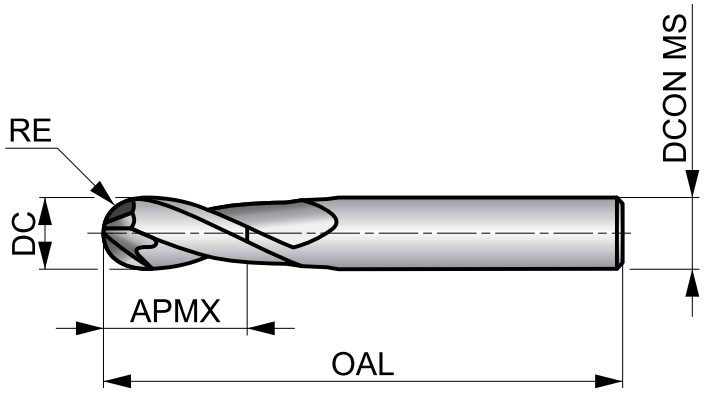
P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 295 F	■ 331 F	■ 344 F	■ 253 F	■ 223 F	■ 197 F	■ 236 F	■ 190 F	■ 161 F	■ 141 F	■ 121 F	◪ 98 F	■ 276 F	■ 233 F
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
■ 246 F	■ 200 F	■ 167 F	■ 164 F	■ 141 F	■ 128 E	■ 108 E	■ 92 E	■ 374 F	◪ 276 F	◪ 207 F	■ 390 F	■ 318 F	◪ 253 F
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**
■ 348 F	■ 266 F	◪ 213 F	■ 322 F	■ 243 F	◪ 177 F	◪ 151 E	◪ 128 E	■ 364 F	■ 272 F	◪ 210 F	◪ 1499 G	◪ 1125 G	◪ 751 G
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**								
◪ 1001 F	◪ 899 F	◪ 650 F	■ 843 F	■ 499 F	■ 249 F								

Product	DC (inch)	DC (inch)	RE (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	NOF	Pack Qty	MID
S1121/16	1/16	.0625	1/32	1/8	1/4	1.1/2	2	1	7648591
S1123/32	3/32	.0938	3/64	1/8	3/8	1.1/2	2	1	7648592
S1121/8	1/8	.1250	1/16	1/8	1/2	1.1/2	2	1	7648593
S1125/32	5/32	.1563	5/64	3/16	9/16	2″	2	1	7648594
S1123/16	3/16	.1875	3/32	3/16	5/8	2″	2	1	7648595
S1127/32	7/32	.2188	7/64	1/4	5/8	2.1/2	2	1	7648596
S1121/4	1/4	.2500	1/8	1/4	3/4	2.1/2	2	1	7648597
S1125/16	5/16	.3125	5/32	5/16	7/8	2.1/2	2	1	7648598
S1123/8	3/8	.3750	3/16	3/8	7/8	2.1/2	2	1	7648599
S1121/2	1/2	.5000	1/4	1/2	1″	3″	2	1	7648600

S212

2-Flute Solid Carbide Ball Nosed End Mill

Regular length, 2-flute design with 30° helix, ball nosed geometry is designed for high efficiency contouring of complex surfaces. ALTiN coating increases surface hardness, improves chip flow and tool life allowing higher metal removal rates.



HM	N	NOF 2
	λ 30°	γ 10°
	TiAlN	DORMER

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■ 397 F	■ 443 F	■ 459 F	■ 338 F	■ 299 F	■ 262 F	■ 338 F	■ 272 F	■ 230 F	■ 203 F	■ 171 F	■ 141 F	■ 446 F	■ 377 F
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**
■ 397 F	■ 325 F	■ 272 F	■ 259 F	■ 223 F	■ 200 E	■ 174 E	■ 151 E	■ 551 F	◪ 407 F	◪ 305 F	■ 646 F	■ 525 F	◪ 417 F
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.1**	**S1.2**	**S1.3**
■ 571 F	■ 436 F	◪ 354 F	■ 528 F	■ 400 F	◪ 292 F	◪ 249 E	◪ 210 E	■ 600 F	■ 449 F	◪ 348 F	■ 230 F	◪ 200 F	◪ 190 E
S2.1	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**								
◪ 213 E	◪ 138 E	◪ 161 E	◪ 98 E	◪ 125 E	◪ 79 E								

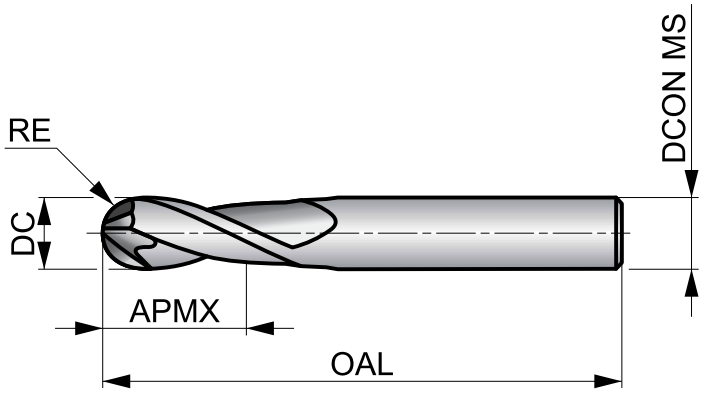
Product	DC (inch)	DC (inch)	RE (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	NOF	Pack Qty	MID
S2121/16	1/16	.0625	1/32	1/8	1/4	1.1/2	2	1	7648601
S2121/8	1/8	.1250	1/16	1/8	1/2	1.1/2	2	1	7648602
S2123/16	3/16	.1875	3/32	3/16	5/8	2″	2	1	7648603
S2127/32	7/32	.2188	7/64	1/4	5/8	2.1/2	2	1	7648604
S2121/4	1/4	.2500	1/8	1/4	3/4	2.1/2	2	1	7648605
S2123/8	3/8	.3750	3/16	3/8	7/8	2.1/2	2	1	7648607
S2121/2	1/2	.5000	1/4	1/2	1″	3″	2	1	7648608

S114

DORMER

2-Flute Solid Carbide Ball Nosed End Mill

Long length, 2-flute design with 30° helix, ball nosed geometry is designed for contouring of complex surfaces. Bright finish, improves chip flow in soft and non-ferrous materials.



HM	N	NOF 2
	λ 30°	γ 10°
	Bright	DORMER

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

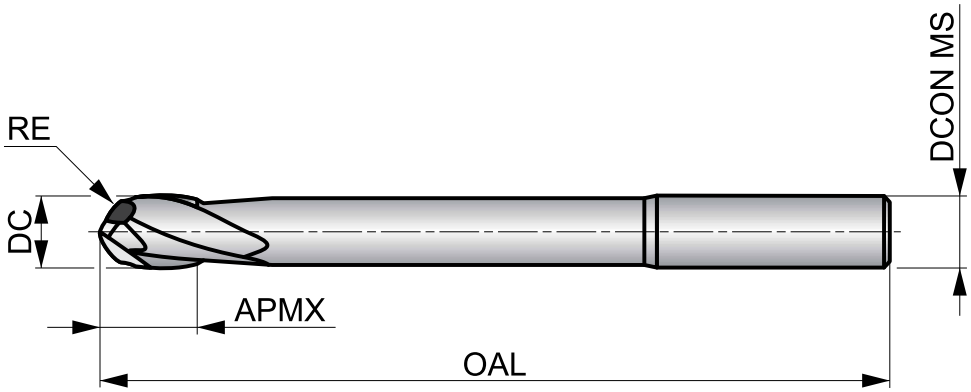
P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 276 F	■ 308 F	■ 322 F	■ 236 F	■ 207 F	■ 184 F	■ 220 F	■ 177 F	■ 151 F	■ 131 F	■ 112 F	◪ 92 F	■ 256 F	■ 217 F
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
■ 230 F	■ 187 F	◪ 154 F	■ 154 F	■ 131 F	■ 118 E	■ 102 E	◪ 85 E	■ 348 F	◪ 256 F	◪ 194 F	■ 364 F	■ 295 F	◪ 236 F
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**
■ 325 F	■ 246 F	◪ 197 F	■ 299 F	■ 226 F	◪ 164 F	◪ 141 E	◪ 118 E	■ 338 F	■ 253 F	◪ 197 F	◪ 1394 G	◪ 1047 G	◪ 699 G
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**								
◪ 932 F	◪ 837 F	◪ 604 F	■ 784 F	■ 463 F	■ 233 F								

Product	DC (inch)	DC (inch)	RE (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	NOF	Pack Qty	MID
S1141/8	1/8	.1250	1/16	1/8	3/4	2″	2	1	7648631
S1143/16	3/16	.1875	3/32	3/16	3/4	2.1/2	2	1	7648632
S1141/4	1/4	.2500	1/8	1/4	1.1/8	3″	2	1	7648633
S1145/16	5/16	.3125	5/32	5/16	1.1/8	3″	2	1	7648634
S1143/8	3/8	.3750	3/16	3/8	1.1/8	3″	2	1	7648635
S1141/2	1/2	.5000	1/4	1/2	2″	4″	2	1	7648636
S1145/8	5/8	.6250	5/16	5/8	2.1/4	5″	2	1	7648637

S115

2-Flute Solid Carbide Ball Nosed End Mill

Extra-long length, 2-flute design with 30° helix, ball nosed geometry is designed for contouring of complex surfaces. Bright finish, improves chip flow in soft and non-ferrous materials.



HM	N	NOF 2
	λ 30°	γ 10°
	Bright	DORMER

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■ 266 F	■ 299 F	■ 308 F	■ 226 F	■ 200 F	■ 177 F	■ 213 F	■ 171 F	■ 144 F	■ 128 F	■ 108 F	◪ 89 F	■ 246 F	■ 210 F
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**
■ 220 F	■ 180 F	■ 151 F	■ 125 F	■ 108 F	■ 98 E	■ 98 E	■ 85 E	■ 299 F	◪ 220 F	◪ 167 F	■ 305 F	■ 249 F	◪ 200 F
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**
■ 272 F	■ 207 F	◪ 167 F	■ 253 F	■ 190 F	◪ 138 F	◪ 118 E	◪ 98 E	■ 285 F	■ 213 F	◪ 164 F	◪ 1348 G	◪ 1010 G	◪ 676 G
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**								
◪ 899 F	◪ 807 F	◪ 584 F	■ 761 F	■ 449 F	■ 226 F								

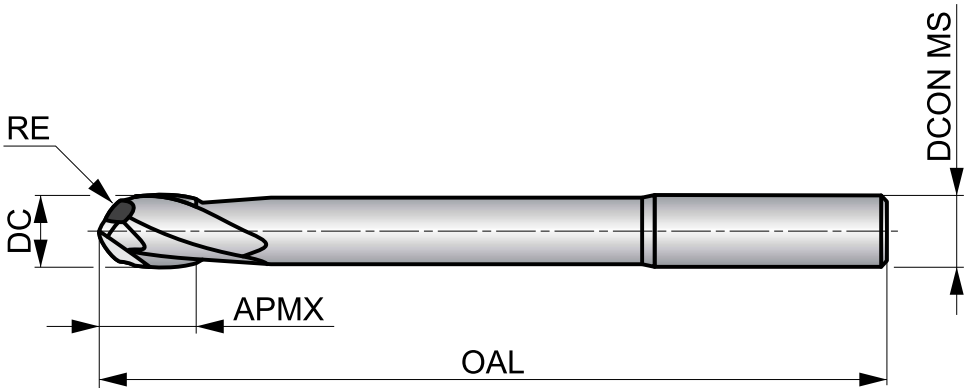
Product	DC (inch)	DC (inch)	RE (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	NOF	Pack Qty	MID
S1151/8	1/8	.1250	1/16	1/8	1″	3″	2	1	7648638
S1153/16	3/16	.1875	3/32	3/16	1.1/8	3″	2	1	7648639
S1151/4	1/4	.2500	1/8	1/4	1.1/2	4″	2	1	7648640
S1155/16	5/16	.3125	5/32	5/16	1.5/8	4″	2	1	7648641
S1153/8	3/8	.3750	3/16	3/8	1.3/4	4″	2	1	7648642
S1151/2	1/2	.5000	1/4	1/2	3″	6″	2	1	7648643

S215

DORMER

2-Flute Solid Carbide Ball Nosed End Mill

Extra-long length, 2-flute design with 30° helix, ball nosed geometry is designed for high efficiency contouring of complex surfaces. ALTiN coating increases surface hardness,improves chip flow and tool life allowing higher metal removal rates.



HM	N	NOF 2
	λ 30°	γ 10°
	TiAlN	DORMER

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

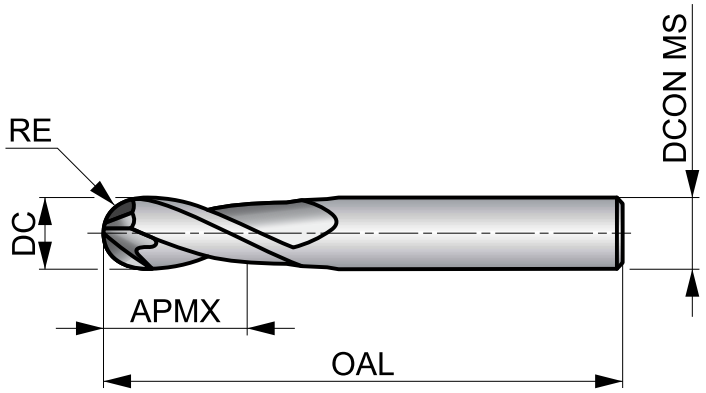
P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 358 F	■ 400 F	■ 413 F	■ 305 F	■ 269 F	■ 240 F	■ 295 F	■ 236 F	■ 200 F	■ 177 F	■ 148 F	■ 121 F	■ 410 F	■ 348 F
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
■ 364 F	■ 299 F	■ 249 F	■ 210 F	■ 180 F	■ 164 E	■ 171 E	■ 148 E	■ 499 F	■ 371 F	■ 276 F	■ 492 F	■ 400 F	■ 318 F
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.1**	**S1.2**	**S1.3**
■ 436 F	■ 331 F	■ 269 F	■ 404 F	■ 305 F	■ 223 F	■ 190 E	■ 161 E	■ 456 F	■ 344 F	■ 266 F	■ 200 F	◪ 180 F	◪ 174 E
S2.1	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**								
◪ 187 E	◪ 121 E	◪ 141 E	◪ 85 E	◪ 112 E	◪ 69 E								

Product	DC (inch)	DC (inch)	RE (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	NOF	Pack Qty	MID
S2151/8	1/8	.1250	1/16	1/8	1"	3"	2	1	7648644
S2153/16	3/16	.1875	3/32	3/16	1.1/8	3"	2	1	7648645
S2151/4	1/4	.2500	1/8	1/4	1.1/2	4"	2	1	7648646
S2155/16	5/16	.3125	5/32	5/16	1.5/8	4"	2	1	7648647
S2153/8	3/8	.3750	3/16	3/8	1.3/4	4"	2	1	7648648
S2151/2	1/2	.5000	1/4	1/2	3"	6"	2	1	7648649

S113

2-Flute Solid Carbide Metric Ball Nosed End Mill

Regular length, 2-flute design with 30° helix in metric sizes, ball nosed geometry is designed for contouring of complex surfaces. Bright finish, improves chip flow in soft and non-ferrous materials.



HM	N	NOF 2
	λ 30°	γ 10°
	Bright	DORMER

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■ 295 F	■ 331 F	■ 344 F	■ 253 F	■ 223 F	■ 197 F	■ 236 F	■ 190 F	■ 161 F	■ 141 F	■ 121 F	◪ 98 F	■ 276 F	■ 233 F
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**
■ 246 F	■ 200 F	■ 167 F	■ 164 F	■ 141 F	■ 128 E	■ 108 E	■ 92 E	■ 374 F	◪ 276 F	◪ 207 F	■ 390 F	■ 318 F	◪ 253 F
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**
■ 348 F	■ 266 F	◪ 213 F	■ 322 F	■ 243 F	◪ 177 F	◪ 151 E	◪ 128 E	■ 364 F	■ 272 F	◪ 210 F	◪ 1499 G	◪ 1125 G	◪ 751 G
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**								
◪ 1001 F	◪ 899 F	◪ 650 F	■ 843 F	■ 499 F	■ 249 F								

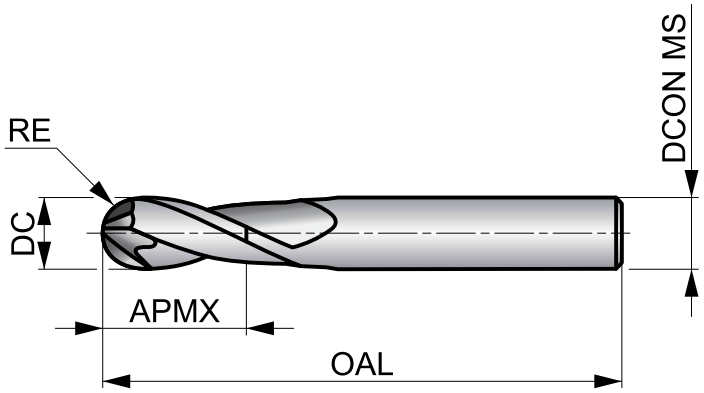
Product	DC (mm)	DC (inch)	RE (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S1132.0	2.00	.0787	1.00	3.00	6.00	38.0	2	1	7648609
S1132.5	2.50	.0984	1.25	3.00	6.00	38.0	2	1	7648610
S1133.0	3.00	.1181	1.50	3.00	12.00	38.0	2	1	7648611
S1134.0	4.00	.1575	2.00	4.00	14.00	50.0	2	1	7648612
S1135.0	5.00	.1969	2.50	5.00	16.00	50.0	2	1	7648613
S1136.0	6.00	.2362	3.00	6.00	19.00	63.0	2	1	7648614
S1137.0	7.00	.2756	3.50	8.00	19.00	63.0	2	1	7648615
S1138.0	8.00	.3150	4.00	8.00	19.00	63.0	2	1	7648616
S1139.0	9.00	.3543	4.50	10.00	22.00	70.0	2	1	7648617
S11310.0	10.00	.3937	5.00	10.00	22.00	70.0	2	1	7648618
S11312.0	12.00	.4724	6.00	12.00	25.00	75.0	2	1	7648619
S11316.0	16.00	.6299	8.00	16.00	32.00	88.0	2	1	7648620
S11320.0	20.00	.7874	10.00	20.00	38.00	100.0	2	1	7648621

S213

DORMER

2-Flute Solid Carbide Metric Ball Nosed End Mill

Regular length, 2-flute design with 30° helix in metric sizes, ball nosed geometry is designed for high efficiency contouring of complex surfaces. ALTiN coating increases surface hardness,improves chip flow and tool life allowing higher metal removal rates.



HM	N	NOF 2
	λ 30°	γ 10°
	TiAlN	DORMER

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■ 397 F	■ 443 F	■ 459 F	■ 338 F	■ 299 F	■ 262 F	■ 338 F	■ 272 F	■ 230 F	■ 203 F	■ 171 F	■ 141 F	■ 446 F	■ 377 F
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**
■ 397 F	■ 325 F	■ 272 F	■ 259 F	■ 223 F	■ 200 E	■ 174 E	■ 151 E	■ 551 F	◪ 407 F	◪ 305 F	■ 646 F	■ 525 F	◪ 417 F
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.1**	**S1.2**	**S1.3**
■ 571 F	■ 436 F	◪ 354 F	■ 528 F	■ 400 F	◪ 292 F	◪ 249 E	◪ 210 E	■ 600 F	■ 449 F	◪ 348 F	■ 230 F	◪ 200 F	◪ 190 E
S2.1	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**								
◪ 213 E	◪ 138 E	◪ 161 E	◪ 98 E	◪ 125 E	◪ 79 E								

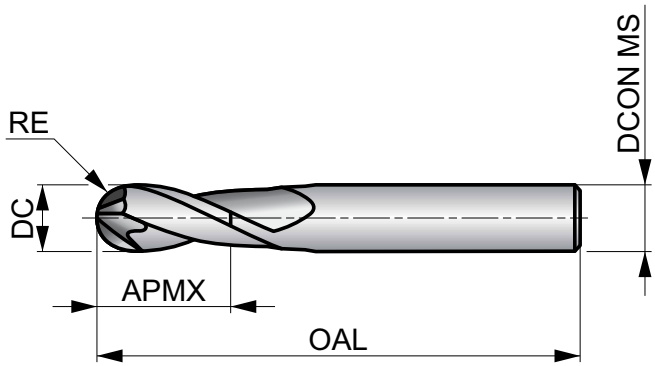
Product	DC (mm)	DC (inch)	RE (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S2133.0	3.00	.1181	1.50	3.00	12.00	38.0	2	1	7648622
S2134.0	4.00	.1575	2.00	4.00	14.00	50.0	2	1	7648623
S2135.0	5.00	.1969	2.50	5.00	16.00	50.0	2	1	7648624
S2136.0	6.00	.2362	3.00	6.00	19.00	63.0	2	1	7648625
S2137.0	7.00	.2756	3.50	8.00	19.00	63.0	2	1	7648626
S2138.0	8.00	.3150	4.00	8.00	19.00	63.0	2	1	7648627
S2139.0	9.00	.3543	4.50	10.00	22.00	70.0	2	1	7648628
S21310.0	10.00	.3937	5.00	10.00	22.00	70.0	2	1	7648629
S21312.0	12.00	.4724	6.00	12.00	25.00	75.0	2	1	7648630

S501

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■ 528 F	■ 594 F	■ 610 F	■ 453 F	■ 397 F	■ 354 F	■ 367 F	■ 295 F	■ 249 F	■ 217 F	■ 187 F	◪ 151 F	■ 308 F	■ 259 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**
■ 272 F	■ 226 F	◪ 253 F	◪ 217 F	◪ 194 E	◪ 190 E	■ 528 F	■ 390 F	■ 292 F	■ 541 F	■ 440 F	■ 351 F	■ 479 F	■ 367 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**
■ 295 F	■ 446 F	■ 335 F	■ 246 F	■ 210 E	■ 177 E	■ 505 F	■ 377 F	■ 292 F	◪ 1165 G	◪ 876 G	◪ 587 G	◪ 587 F	◪ 525 F
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**S1.1**	**S1.2**	**S2.1**	**S3.1**	**S4.1**			
◪ 377 F	■ 614 F	■ 358 F	◪ 184 F	◪ 614 F	◪ 236 F	◪ 413 F	◪ 367 F	◪ 282 E	◪ 213 E	◪ 167 E			

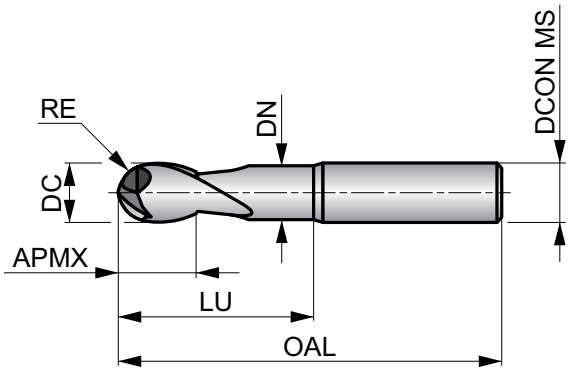
DCON MS tolerance h6; RE ±0.01 mm.

Product	DC (mm)	DC (inch)	RE (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S5011.0	1.00	.0394	0.50	3.00	3.00	38.0	2	1	5983112
S5011.5	1.50	.0591	0.75	3.00	3.00	38.0	2	1	5983117
S5012.0	2.00	.0787	1.00	3.00	6.00	38.0	2	1	5983137
S5012.5	2.50	.0984	1.25	3.00	7.00	38.0	2	1	5983142
S5013.0	3.00	.1181	1.50	3.00	7.00	38.0	2	1	5983149
S5014.0	4.00	.1575	2.00	6.00	8.00	57.0	2	1	5983153
S5015.0	5.00	.1969	2.50	6.00	10.00	57.0	2	1	5983163
S5016.0	6.00	.2362	3.00	6.00	10.00	57.0	2	1	5983168
S5017.0	7.00	.2756	3.50	8.00	13.00	63.0	2	1	5983172
S5018.0	8.00	.3150	4.00	8.00	16.00	63.0	2	1	5983177
S5019.0	9.00	.3543	4.50	10.00	16.00	72.0	2	1	5983182
S50110.0	10.00	.3937	5.00	10.00	19.00	72.0	2	1	5983122
S50112.0	12.00	.4724	6.00	12.00	22.00	83.0	2	1	5983127
S50116.0	16.00	.6299	8.00	16.00	26.00	92.0	2	1	5983132

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.



HM	N	NOF 2
	λ 30°	γ 3°
DIN 6535HA	TiSiN	DC h9
	DORMER	

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

P4.3	M2.3	M3.3	M4.1	M4.2	S1.3	S2.2	S3.2	S4.2
262 F	262 F	269 F	262 F	223 F	190 F	154 F	108 F	89 F

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

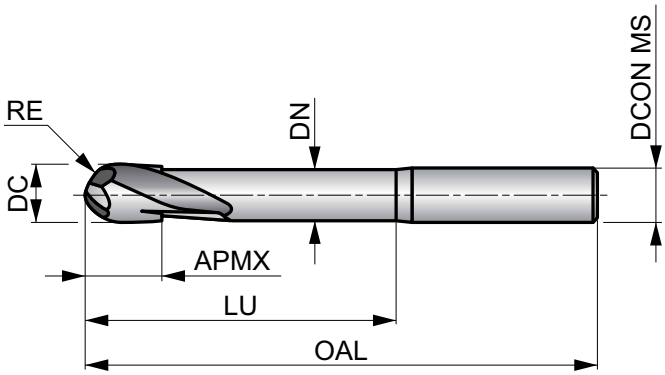
Product	DC (mm)	DC (inch)	RE (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
S2291.5XD4	1.50	.0591	0.75	4.00	3.00	50.0	2	6.00	1.40	1	6706514
S2292.0XD3	2.00	.0787	1.00	3.00	4.00	50.0	2	8.00	1.90	1	6706516
S2292.0XD4	2.00	.0787	1.00	4.00	4.00	50.0	2	8.00	1.90	1	6706517
S2293.0XD3	3.00	.1181	1.50	3.00	5.00	50.0	2	14.00	2.80	1	6706518
S2293.0XD6	3.00	.1181	1.50	6.00	5.00	50.0	2	14.00	2.80	1	6706519
S2294.0XD4	4.00	.1575	2.00	4.00	8.00	50.0	2	20.00	3.70	1	6706520
S2294.0XD6	4.00	.1575	2.00	6.00	8.00	50.0	2	20.00	3.70	1	6706521
S2295.0XD5	5.00	.1969	2.50	5.00	9.00	50.0	2	20.00	4.60	1	6706522
S2295.0XD6	5.00	.1969	2.50	6.00	9.00	50.0	2	20.00	4.60	1	6706523
S2296.0	6.00	.2362	3.00	6.00	10.00	50.0	2	20.00	5.50	1	6706524
S2298.0	8.00	.3150	4.00	8.00	12.00	64.0	2	30.00	7.40	1	6706525
S22910.0	10.00	.3937	5.00	10.00	14.00	70.0	2	32.00	9.20	1	6706526
S22912.0	12.00	.4724	6.00	12.00	16.00	75.0	2	38.00	11.00	1	6706527
S22914.0	14.00	.5512	7.00	14.00	32.00	90.0	2	44.00	13.00	1	6706528
S22916.0	16.00	.6299	8.00	16.00	32.00	90.0	2	46.00	15.00	1	6706529

S231

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

P4.3	M2.3	M3.3	M4.1	M4.2	S1.3	S2.2	S3.2	S4.2
210 F	210 F	213 F	210 F	177 F	151 F	125 F	85 F	72 F

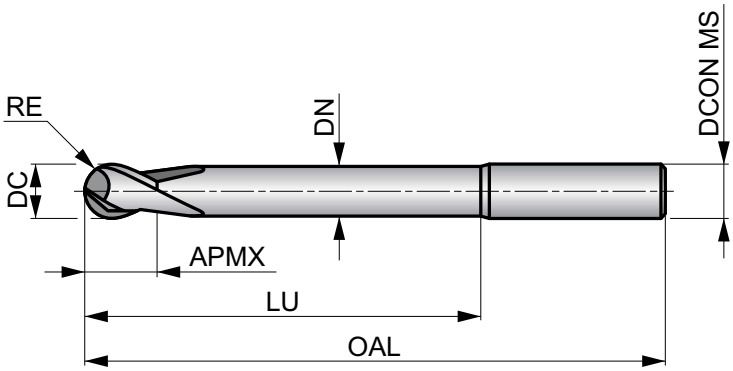
DCON MS tolerance h6; RE +0/-0.02 mm.

Product	DC (mm)	DC (inch)	RE (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
S2311.5XD4	1.50	.0591	0.75	4.00	3.00	75.0	2	10.00	1.40	1	6706515
S2312.0XD3	2.00	.0787	1.00	3.00	4.00	60.0	2	14.00	1.90	1	6706486
S2312.0XD4	2.00	.0787	1.00	4.00	4.00	75.0	2	14.00	1.90	1	6706487
S2313.0XD3	3.00	.1181	1.50	3.00	5.00	60.0	2	21.00	2.80	1	6706488
S2313.0XD6	3.00	.1181	1.50	6.00	5.00	75.0	2	21.00	2.80	1	6706489
S2314.0XD4	4.00	.1575	2.00	4.00	8.00	60.0	2	28.00	3.70	1	6706490
S2314.0XD6	4.00	.1575	2.00	6.00	8.00	75.0	2	28.00	3.70	1	6706491
S2315.0	5.00	.1969	2.50	5.00	9.00	60.0	2	32.00	4.60	1	6706492
S2316.0	6.00	.2362	3.00	6.00	10.00	75.0	2	40.00	5.50	1	6706493
S2318.0	8.00	.3150	4.00	8.00	10.00	75.0	2	40.00	7.40	1	6706494
S23110.0	10.00	.3937	5.00	10.00	12.00	75.0	2	40.00	9.20	1	6706495
S23112.0	12.00	.4724	6.00	12.00	16.00	100.0	2	60.00	11.00	1	6706496
S23116.0	16.00	.6299	8.00	16.00	32.00	125.0	2	80.00	15.00	1	6706498

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.



HM	N	NOF 2
	λ 30°	γ 3°
DIN 6535HA	TiSiN	DC h9
	DORMER	

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

P4.3	M2.3	M3.3	M4.1	M4.2	S1.3	S2.2	S3.2	S4.2
131 F	131 F	135 F	131 F	112 F	95 F	79 F	56 F	46 F

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

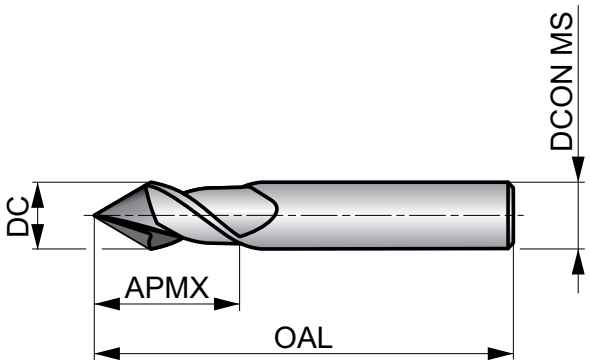
Product	DC (mm)	DC (inch)	RE (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
S2332.0XD3	2.00	.0787	1.00	3.00	4.00	100.0	2	20.00	1.90	1	6706553
S2332.0XD4	2.00	.0787	1.00	4.00	4.00	100.0	2	20.00	1.90	1	6706554
S2333.0XD3	3.00	.1181	1.50	3.00	5.00	100.0	2	30.00	2.80	1	6706555
S2333.0XD6	3.00	.1181	1.50	6.00	5.00	100.0	2	30.00	2.80	1	6706556
S2334.0XD4	4.00	.1575	2.00	4.00	8.00	100.0	2	40.00	3.70	1	6706557
S2334.0XD6	4.00	.1575	2.00	6.00	8.00	100.0	2	40.00	3.70	1	6706558
S2335.0	5.00	.1969	2.50	5.00	9.00	100.0	2	50.00	4.60	1	6706559
S2336.0	6.00	.2362	3.00	6.00	10.00	100.0	2	60.00	5.50	1	6706560
S2338.0	8.00	.3150	4.00	8.00	12.00	100.0	2	60.00	7.40	1	6706561
S23310.0	10.00	.3937	5.00	10.00	14.00	125.0	2	85.00	9.20	1	6706562
S23312.0	12.00	.4724	6.00	12.00	16.00	125.0	2	85.00	11.00	1	6706563
S23314.0	14.00	.5512	7.00	14.00	32.00	150.0	2	110.00	13.00	1	6706564
S23316.0	16.00	.6299	8.00	16.00	32.00	150.0	2	110.00	15.00	1	6706565

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
	DORMER	



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■ 653 K	■ 732 K	■ 755 K	■ 558 K	■ 492 K	■ 436 J	■ 453 K	■ 364 J	■ 308 J	■ 269 J	■ 230 J	■ 377 K	■ 318 K	■ 335 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**
■ 276 J	■ 308 J	■ 266 J	■ 643 K	■ 476 K	■ 358 K	■ 663 K	■ 538 K	■ 430 J	■ 584 K	■ 446 K	■ 361 J	■ 541 J	■ 410 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**
■ 299 J	■ 256 J	■ 213 J	■ 614 J	■ 463 J	■ 358 J	◪ 1165 N	■ 876 N	■ 587 N	■ 587 K	■ 525 K	■ 377 K	■ 614 K	■ 358 K
N3.3	**S1.2**	**S2.1**	**S3.1**	**S4.1**									
◪ 184 K	■ 226 J	■ 174 J	■ 131 J	■ 102 J									

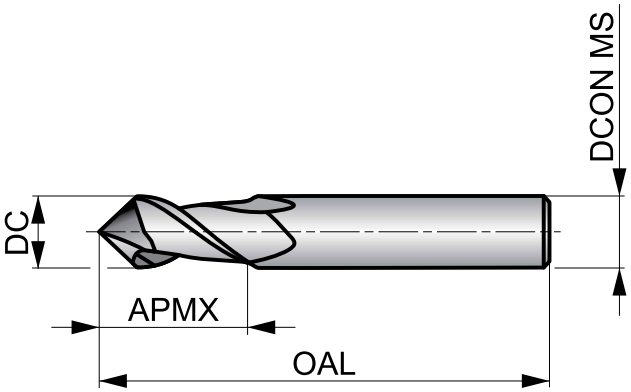
DCON MS tolerance h6.

Product	KAPR (°)	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S7393.0	60	3.00	.1181	3.00	9.00	40.0	2	1	6706886
S7394.0	60	4.00	.1575	4.00	12.00	50.0	2	1	6706887
S7395.0	60	5.00	.1969	5.00	15.00	50.0	2	1	6706888
S7396.0	60	6.00	.2362	6.00	16.00	50.0	2	1	6706889
S7398.0	60	8.00	.3150	8.00	20.00	64.0	2	1	6706890
S73910.0	60	10.00	.3937	10.00	22.00	70.0	2	1	6706891
S73912.0	60	12.00	.4724	12.00	25.00	75.0	2	1	6706892
S73916.0	60	16.00	.6299	16.00	32.00	90.0	2	1	6706893
S73920.0	60	20.00	.7874	20.00	38.00	100.0	2	1	6706894

S740

2-Flute Solid Carbide Chamfering End Mill, 90°

Short cut length, 2-flute design provides high rigidity and reduces vibrations. The 90° point is designed for chamfer milling on CNC machines. AlTiN coating increases tool life and improves performance.



HM	N	NOF 2
	λ 40°	γ 10°
DIN 6535HA	AlTiN	DC h9
	DORMER	

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
653 K	732 K	755 K	558 K	492 K	436 J	453 K	364 J	308 J	269 J	230 J	377 K	318 K	335 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**
276 J	308 J	266 J	643 K	476 K	358 K	663 K	538 K	430 J	584 K	446 K	361 J	541 J	410 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**
299 J	256 J	213 J	614 J	463 J	358 J	1165 N	876 N	587 N	587 K	525 K	377 K	614 K	358 K
N3.3	**S1.2**	**S2.1**	**S3.1**	**S4.1**									
184 K	226 J	174 J	131 J	102 J									

DCON MS tolerance h6.

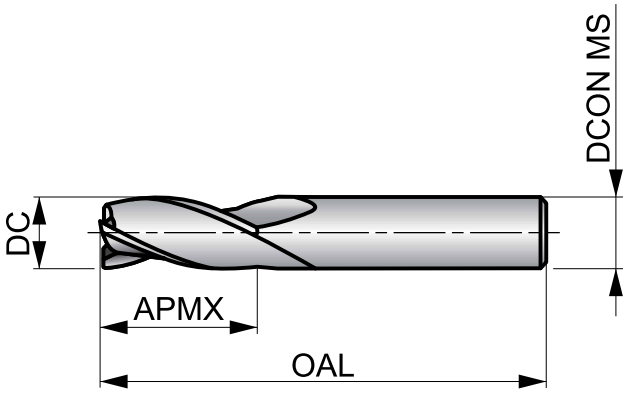
Product	KAPR (°)	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S7403.0	90	3.00	.1181	3.00	9.00	40.0	2	1	6706895
S7404.0	90	4.00	.1575	4.00	12.00	50.0	2	1	6706896
S7405.0	90	5.00	.1969	5.00	15.00	50.0	2	1	6706897
S7406.0	90	6.00	.2362	6.00	16.00	50.0	2	1	6706898
S7408.0	90	8.00	.3150	8.00	20.00	64.0	2	1	6706899
S74010.0	90	10.00	.3937	10.00	22.00	70.0	2	1	6706900
S74012.0	90	12.00	.4724	12.00	25.00	75.0	2	1	6706901
S74016.0	90	16.00	.6299	16.00	32.00	90.0	2	1	6706902
S74020.0	90	20.00	.7874	20.00	38.00	100.0	2	1	6706903

S121

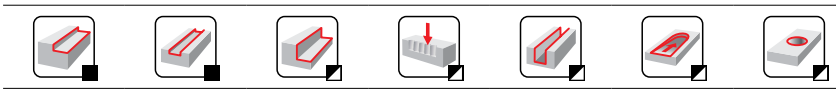
DORMER

3-Flute Solid Carbide End Mill

Regular length, 3-flute design with 30° helix provides high rigidity for milling. Bright finish, improves chip flow in soft and non-ferrous materials.



HM	N	NOF 3
	λ 30°	γ 10°
	Bright	DORMER



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■ 295 J	■ 331 J	■ 344 J	■ 253 J	■ 223 J	■ 197 I	■ 236 J	■ 190 I	■ 161 I	■ 141 I	■ 121 I	◪ 98 I	■ 276 J	■ 233 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**
■ 246 J	■ 200 I	■ 164 I	■ 141 I	■ 128 I	■ 108 I	■ 374 J	◪ 276 J	◪ 207 J	■ 390 J	■ 318 J	◪ 253 I	■ 348 I	■ 266 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**
◪ 213 I	■ 322 I	■ 243 I	◪ 177 I	◪ 151 I	◪ 128 I	■ 364 I	■ 272 I	◪ 210 I	◪ 1499 K	◪ 1125 K	◪ 751 K	◪ 1001 J	◪ 899 J
N2.3	**N3.1**	**N3.2**	**N3.3**										
◪ 650 J	■ 843 J	■ 499 J	■ 249 J										

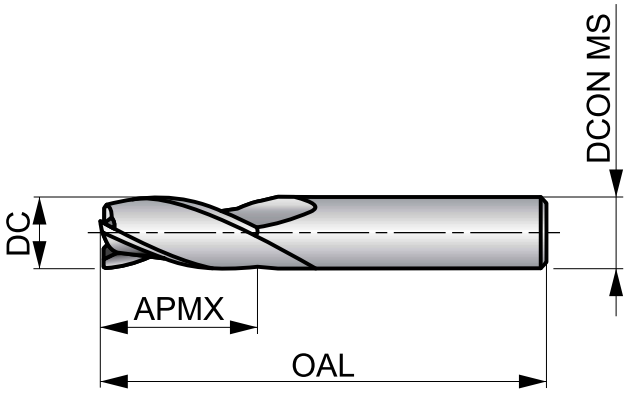
Product	DC (inch)	DC (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	NOF	Pack Qty	MID
S1211/16	1/16	.0625	1/8	1/4	1.1/2	3	1	7648657
S1213/32	3/32	.0938	1/8	3/8	1.1/2	3	1	7648658
S1211/8	1/8	.1250	1/8	1/2	1.1/2	3	1	7648659
S1215/32	5/32	.1563	3/16	9/16	2″	3	1	7648660
S1213/16	3/16	.1875	3/16	5/8	2″	3	1	7648661
S1211/4	1/4	.2500	1/4	3/4	2.1/2	3	1	7648662
S1215/16	5/16	.3125	5/16	7/8	2.1/2	3	1	7648663
S1213/8	3/8	.3750	3/8	7/8	2.1/2	3	1	7648664
S1211/2	1/2	.5000	1/2	1″	3″	3	1	7648665

S221

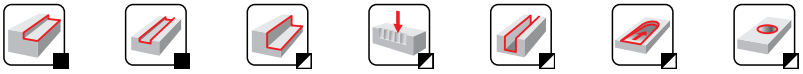
DORMER

3-Flute Solid Carbide End Mill

Regular length, 3-flute design with 30° helix provides high rigidity for milling. ALTiN coating increases surface hardness, improves chip flow and tool life allowing higher metal removal rates.



HM	N	NOF 3
	λ 30°	γ 10°
	TiAlN	DORMER



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■ 397 J	■ 443 J	■ 459 J	■ 338 J	■ 299 J	■ 262 I	■ 338 J	■ 272 I	■ 230 I	■ 203 I	■ 171 I	■ 141 I	■ 446 J	■ 377 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**
■ 397 J	■ 325 I	■ 259 I	■ 223 I	■ 200 I	■ 174 I	■ 551 J	◪ 407 J	◪ 305 J	■ 646 J	■ 525 J	◪ 417 I	■ 571 I	■ 436 J
K3.3	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**
◪ 354 I	■ 528 I	■ 400 I	◪ 292 I	◪ 249 I	◪ 210 I	■ 600 I	■ 449 I	◪ 348 I	■ 230 I	◪ 200 I	◪ 190 I	◪ 213 I	◪ 138 I
S3.1	**S3.2**	**S4.1**	**S4.2**										
◪ 161 I	◪ 98 I	◪ 125 I	◪ 79 I										

Product	DC (inch)	DC (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	NOF	Pack Qty	MID
S2211/16	1/16	.0625	1/8	1/4	1.1/2	3	1	7648666
S2213/32	3/32	.0938	1/8	3/8	1.1/2	3	1	7648667
S2211/8	1/8	.1250	1/8	1/2	1.1/2	3	1	7648668
S2215/32	5/32	.1563	3/16	9/16	2″	3	1	7648669
S2213/16	3/16	.1875	3/16	5/8	2″	3	1	7648670
S2211/4	1/4	.2500	1/4	3/4	2.1/2	3	1	7648671
S2215/16	5/16	.3125	5/16	7/8	2.1/2	3	1	7648672
S2213/8	3/8	.3750	3/8	7/8	2.1/2	3	1	7648673
S2211/2	1/2	.5000	1/2	1″	3″	3	1	7648674

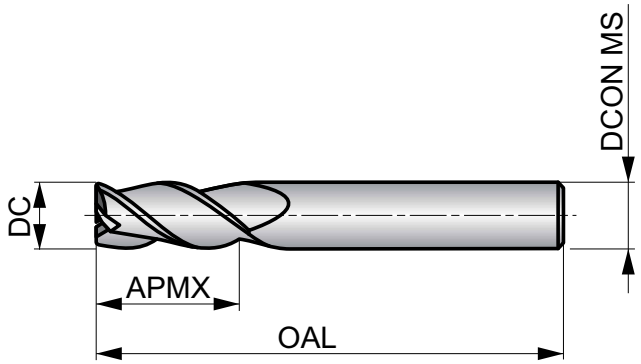
S713

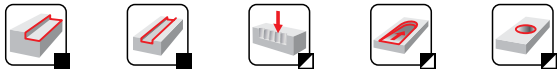
DORMER

3-Flute Solid Carbide End Mill

Short cut length, 3-flute design with 40° helix provides high rigidity for milling standard slots. AlCrN coating improves performance and extends the tool life.

HM	N	NOF 3
	λ 40°	γ 10°
DIN 6535HA	AlCrN	DC h9
	DORMER	





Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■653 J	■732 J	■755 J	■558 J	■492 J	■436 I	■453 J	■364 I	■308 I	■269 I	■230 I	■377 J	■318 J	■335 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**
■276 I	■308 I	■266 I	■643 J	■476 J	■358 J	■663 J	■538 J	■430 I	■584 J	■446 J	■361 I	■541 I	■410 I
K4.3	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.2**	**S2.1**	**S3.1**	**S4.1**				
■299 I	■256 I	■213 I	■614 I	■463 I	■358 I	■226 I	■174 I	■131 I	■102 I				

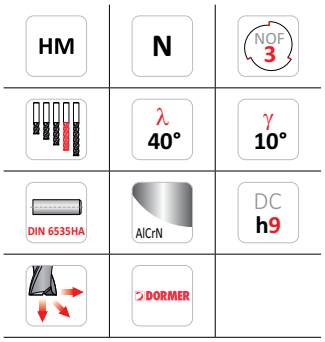
DCON MS tolerance h6.

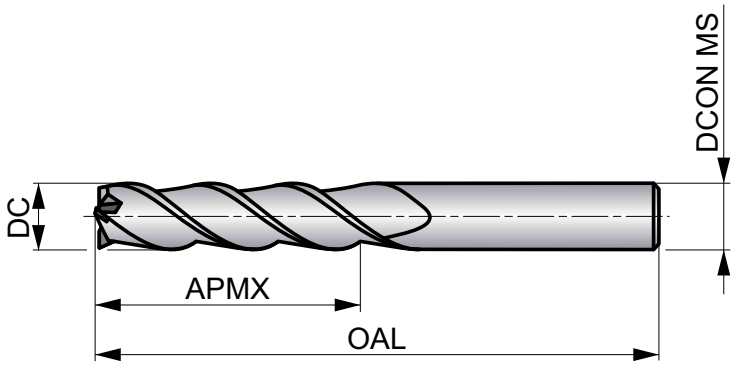
Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S7131.5	1.50	.0591	4.00	4.50	40.0	3	1	7002449
S7132.0	2.00	.0787	4.00	6.50	40.0	3	1	7002450
S7133.0	3.00	.1181	3.00	9.00	40.0	3	1	7002451
S7134.0	4.00	.1575	4.00	12.00	50.0	3	1	7002452
S7135.0	5.00	.1969	5.00	15.00	50.0	3	1	7002453
S7136.0	6.00	.2362	6.00	16.00	50.0	3	1	7002454
S7138.0	8.00	.3150	8.00	20.00	64.0	3	1	7002455
S71310.0	10.00	.3937	10.00	22.00	70.0	3	1	7002456
S71312.0	12.00	.4724	12.00	25.00	75.0	3	1	7002457
S71314.0	14.00	.5512	14.00	32.00	90.0	3	1	7002458
S71316.0	16.00	.6299	16.00	32.00	90.0	3	1	7002459
S71318.0	18.00	.7087	18.00	38.00	100.0	3	1	7002460
S71320.0	20.00	.7874	20.00	38.00	100.0	3	1	7002461

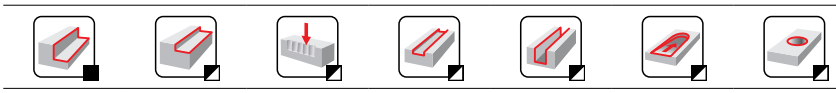
S714

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■459 J	■515 J	■531 J	■394 J	■348 J	■308 I	■318 J	■256 I	■217 I	■190 I	■161 I	■266 J	■223 J	■233 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**
■194 I	■217 I	■187 I	■453 J	■335 J	■253 J	■466 J	■377 J	■302 I	■410 J	■315 J	■256 I	■381 I	■289 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**
■210 I	■180 I	■151 I	■433 I	■325 I	■253 I	◪817 K	◪614 K	◪410 K	◪410 J	◪367 J	◪266 J	◪430 J	◪249 J
N3.3	**S1.2**	**S2.1**	**S3.1**	**S4.1**									
◪128 J	■161 I	■121 I	■92 I	■72 I									

DCON MS tolerance h6.

Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S7143.0	3.00	.1181	3.00	19.00	60.0	3	1	6706616
S7144.0	4.00	.1575	4.00	19.00	60.0	3	1	6706617
S7145.0	5.00	.1969	5.00	19.00	60.0	3	1	6706618
S7146.0	6.00	.2362	6.00	31.00	75.0	3	1	6706619
S7148.0	8.00	.3150	8.00	31.00	75.0	3	1	6706620
S71410.0	10.00	.3937	10.00	31.00	75.0	3	1	6706621
S71412.0	12.00	.4724	12.00	50.00	100.0	3	1	6706622
S71414.0	14.00	.5512	14.00	57.00	125.0	3	1	6706623
S71416.0	16.00	.6299	16.00	57.00	125.0	3	1	6706624
S71418.0	18.00	.7087	18.00	57.00	125.0	3	1	6706625
S71420.0	20.00	.7874	20.00	57.00	125.0	3	1	6706626

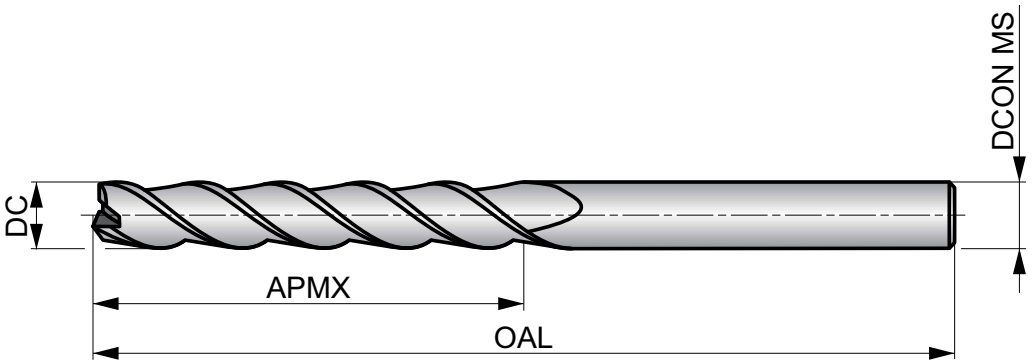
S715

DORMER

3-Flute Solid Carbide End Mill, Extra Long Series

Extra long cut length, 3-flute design with 40° helix provides high rigidity for profile milling extra deep walls. AlCrN coating improves performance and extends the tool life.

HM	N	NOF 3
	λ 40°	γ 10°
DIN 6535HA	AlCrN	DC h9
	DORMER	



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■289 J	■322 J	■331 J	■246 J	■217 J	■194 I	■200 J	■161 I	■135 I	■118 I	■102 I	■164 J	■138 J	■144 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
■118 I	■135 I	■115 I	■282 J	■210 J	■157 J	■292 J	■236 J	■190 I	■259 J	■197 J	■161 I	■240 I	■180 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
■131 I	■115 I	■95 I	■272 I	■203 I	■157 I	◪584 K	◪440 K	◪295 K	◪295 J	◪262 J	◪190 J	◪308 J	◪180 J
N3.3	S1.2	S2.1	S3.1	S4.1									
◪92 J	■98 I	■75 I	■59 I	■46 I									

DCON MS tolerance h6.

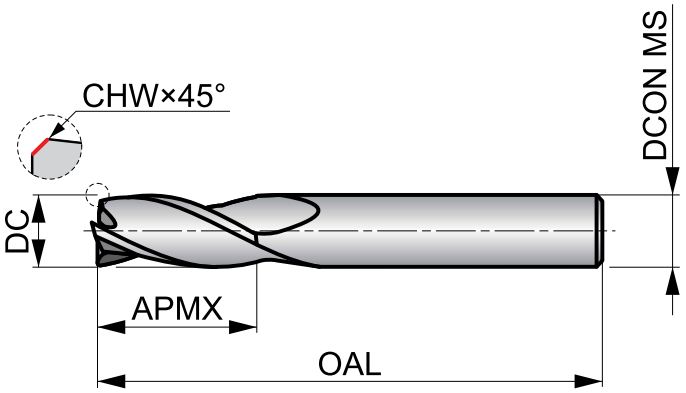
Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S7153.0	3.00	.1181	3.00	25.00	100.0	3	1	6706627
S7154.0	4.00	.1575	4.00	31.00	100.0	3	1	6706628
S7155.0	5.00	.1969	5.00	31.00	100.0	3	1	6706629
S7156.0	6.00	.2362	6.00	38.00	100.0	3	1	6706630
S7158.0	8.00	.3150	8.00	41.00	100.0	3	1	6706631
S71510.0	10.00	.3937	10.00	57.00	125.0	3	1	6706632
S71512.0	12.00	.4724	12.00	75.00	150.0	3	1	6706633
S71514.0	14.00	.5512	14.00	75.00	150.0	3	1	6706634
S71516.0	16.00	.6299	16.00	75.00	150.0	3	1	6706635
S71518.0	18.00	.7087	18.00	75.00	150.0	3	1	6706636
S71520.0	20.00	.7874	20.00	75.00	150.0	3	1	6706637

S903

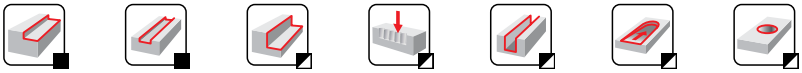
DORMER

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■348 J	■390 J	■404 J	■299 J	■262 J	◪233 I	■217 J	■174 I	◪148 I	■131 I	◪112 I	■262 J	◪194 J	◪144 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**
■322 J	■262 J	◪210 I	■285 J	■220 J	◪177 I	■266 I	■200 I	◪148 I	◪125 I	◪105 I	■299 I	■226 I	◪174 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**
◪1165 K	■876 K	■587 K	■587 J	◪525 J	◪377 J	■614 J	■358 J	■184 J	◪614 J	◪236 J	■125 I	◪118 I	◪141 I

DCON MS tolerance h6; DC≤9.00 mm: CHW ± 0.03X45° mm; DC>9.00 mm: CHW ± 0.05X45° mm.

Product	DC (mm)	DC (inch)	CHW (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S9032.0	2.00	.0787	0.08	3.00	6.00	38.0	3	1	5983082
S9032.5	2.50	.0984	0.08	3.00	9.00	38.0	3	1	5983086
S9033.0	3.00	.1181	0.08	3.00	12.00	38.0	3	1	5983095
S9034.0	4.00	.1575	0.08	4.00	14.00	50.0	3	1	5983099
S9035.0	5.00	.1969	0.13	5.00	16.00	50.0	3	1	5983105
S9036.0	6.00	.2362	0.13	6.00	19.00	57.0	3	1	5983108
S9037.0	7.00	.2756	0.13	8.00	19.00	63.0	3	1	5983115
S9038.0	8.00	.3150	0.13	8.00	19.00	63.0	3	1	5983118
S9039.0	9.00	.3543	0.13	10.00	21.00	72.0	3	1	5983129
S90310.0	10.00	.3937	0.20	10.00	22.00	72.0	3	1	5983055
S90312.0	12.00	.4724	0.20	12.00	25.00	73.0	3	1	5983060
S90314.0	14.00	.5512	0.20	14.00	30.00	83.0	3	1	5983064
S90316.0	16.00	.6299	0.20	16.00	32.00	92.0	3	1	5983068
S90318.0	18.00	.7087	0.20	18.00	32.00	92.0	3	1	5983077
S90320.0	20.00	.7874	0.30	20.00	38.00	104.0	3	1	5983091

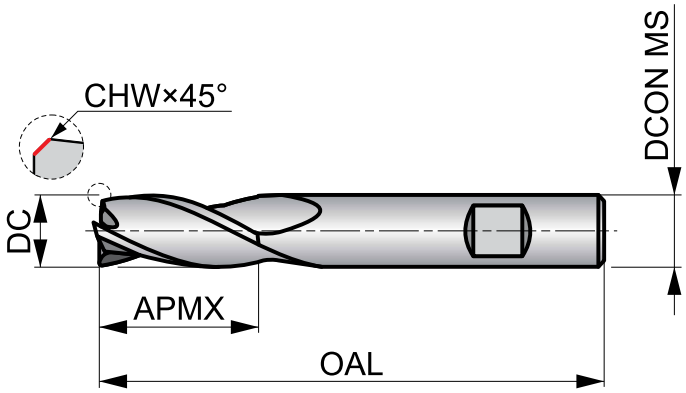
S933

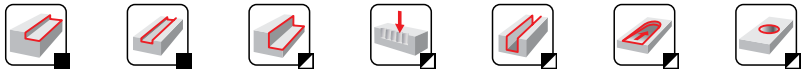
DORMER

3-Flute Solid Carbide End Mill

Medium cut length, 3-flute design with 30° helix provides high rigidity for milling standard slots. Cylindrical shank for cutting diameter up to 5 mm. TiALN coating for higher temperature resistance and longer tool life.

HM	N	NOF 3
	λ 30°	γ 12°
DIN 6535HB	TiAlN	DC h10
	DORMER	





Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■433 J	■486 J	■502 J	■371 J	■328 J	■289 I	■322 J	■259 I	■220 I	■194 I	■164 I	◪135 I	■328 J	■243 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**
■184 J	■351 J	■285 J	■230 I	■312 J	■236 J	■194 I	■289 I	■220 I	■161 I	■138 I	■115 I	■328 I	■246 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**
■190 I	◪971 K	◪728 K	■489 K	■489 J	■436 J	■315 J	■512 J	■299 J	◪154 J	◪512 J	◪197 J	◪210 J	■154 I
S1.2	**S1.3**												
◪148 I	◪66 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)	DC (inch)	CHW (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S9332.0 [1]	2.00	.0787	0.08	3.00	6.00	38.0	3	1	5982812
S9332.5 [1]	2.50	.0984	0.08	3.00	9.00	38.0	3	1	5982817
S9333.0 [1]	3.00	.1181	0.08	3.00	12.00	38.0	3	1	5982826
S9334.0 [1]	4.00	.1575	0.08	4.00	14.00	50.0	3	1	5982835
S9335.0 [1]	5.00	.1969	0.13	5.00	16.00	50.0	3	1	5982840
S9336.0	6.00	.2362	0.13	6.00	19.00	57.0	3	1	5982844
S9337.0	7.00	.2756	0.13	8.00	19.00	63.0	3	1	5982851
S9338.0	8.00	.3150	0.13	8.00	19.00	63.0	3	1	5982856
S9339.0	9.00	.3543	0.13	10.00	21.00	72.0	3	1	5982860
S93310.0	10.00	.3937	0.20	10.00	22.00	72.0	3	1	5982790
S93312.0	12.00	.4724	0.20	12.00	25.00	73.0	3	1	5982794
S93314.0	14.00	.5512	0.20	14.00	30.00	83.0	3	1	5982798
S93316.0	16.00	.6299	0.20	16.00	32.00	92.0	3	1	5982802
S93318.0	18.00	.7087	0.20	18.00	32.00	92.0	3	1	5982807
S93320.0	20.00	.7874	0.30	20.00	38.00	104.0	3	1	5982820

[1] Cylindrical shank.

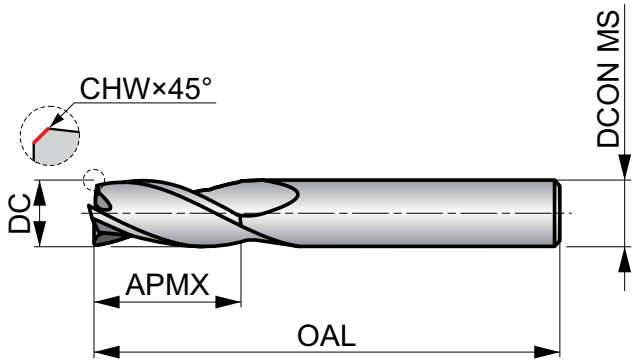
S823

DORMER

3-Flute Solid Carbide Slot End Mill

Medium cut length, 3-flute design provides high rigidity for milling standard slots to a P9 tolerance and ramping operation. AlCrN coating improves performance and extends the tool life.

HM	N	NOF 3
	λ 28°	γ 9°
DIN 6535HA	AlCrN	
DORMER		



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■476 J	■531 J	■548 J	■407 J	■358 J	■318 I	■328 J	■266 I	■223 I	■197 I	■167 I	◪135 I	■276 J	■233 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**
■246 J	■200 I	◪226 I	◪194 I	◪174 I	◪171 I	■472 J	■351 J	■262 J	■489 J	■397 J	■315 I	■433 J	■331 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**
■266 I	■400 I	■302 I	■220 I	■190 I	■157 I	■453 I	■341 I	■262 I	◪932 K	◪702 K	■469 K	■469 J	■420 J
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**S1.1**	**S1.2**	**S2.1**	**S3.1**	**S4.1**			
■302 J	■492 J	■285 J	◪148 J	◪492 J	◪190 J	◪371 I	◪328 I	◪253 I	◪190 I	◪148 I			

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

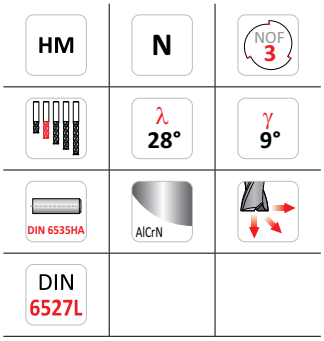
Product	DC (mm)	DC (inch)	CHW (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S8232.0	2.00	.0787	–	6.00	8.00	57.0	3	1	7106969
S8232.5	2.50	.0984	0.08	6.00	12.00	57.0	3	1	7106970
S8233.0	3.00	.1181	0.08	6.00	12.00	57.0	3	1	7106971
S8234.0	4.00	.1575	0.13	6.00	14.00	57.0	3	1	7106972
S8235.0	5.00	.1969	0.13	6.00	16.00	57.0	3	1	7106973
S8236.0	6.00	.2362	0.13	6.00	19.00	57.0	3	1	7106974
S8237.0	7.00	.2756	0.13	8.00	19.00	63.0	3	1	7106975
S8238.0	8.00	.3150	0.20	8.00	19.00	63.0	3	1	7106976
S8239.0	9.00	.3543	0.20	10.00	21.00	72.0	3	1	7106977
S82310.0	10.00	.3937	0.20	10.00	22.00	72.0	3	1	7106978
S82312.0	12.00	.4724	0.20	12.00	25.00	83.0	3	1	7106979
S82314.0	14.00	.5512	0.20	14.00	30.00	83.0	3	1	7106980
S82316.0	16.00	.6299	0.20	16.00	32.00	92.0	3	1	7106981
S82318.0	18.00	.7087	0.20	18.00	32.00	92.0	3	1	7106982
S82320.0	20.00	.7874	0.30	20.00	38.00	104.0	3	1	7106983

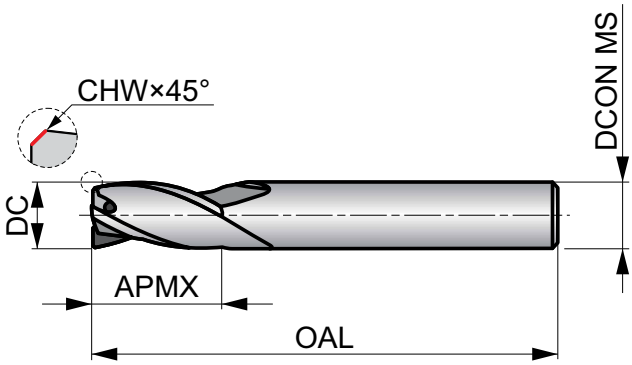
S813HA

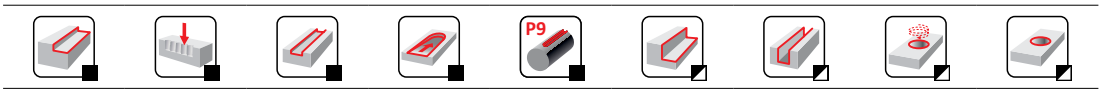
DORMER

3-Flute Solid Carbide Slot End Mill, DIN 6535 HA Shank

Short cut length, 3-flute design provides high rigidity for milling standard slots to a P9 tolerance. AlCrN coating increases service life and improves performance. Also suited for plunging and ramping milling.







Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■ 545 J	■ 610 J	■ 630 J	■ 466 J	■ 410 J	■ 364 I	■ 377 J	■ 305 I	■ 256 I	■ 223 I	■ 194 I	◪ 154 I	■ 318 J	■ 266 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**
■ 279 J	■ 233 I	◪ 259 I	◪ 223 I	◪ 200 I	◪ 197 I	■ 545 J	■ 404 J	■ 302 J	■ 558 J	■ 453 J	■ 361 I	■ 492 J	■ 377 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**
■ 305 I	■ 459 I	■ 344 I	■ 253 I	■ 217 I	■ 184 I	■ 522 I	■ 387 I	■ 302 I	◪ 1083 K	◪ 810 K	■ 545 K	■ 545 J	■ 486 J
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**S1.1**	**S1.2**	**S2.1**	**S3.1**	**S4.1**			
■ 351 J	■ 568 J	■ 331 J	◪ 171 J	◪ 568 J	◪ 220 J	◪ 236 I	◪ 210 I	◪ 161 I	◪ 125 I	◪ 98 I			

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

Product	DC (mm)	DC (inch)	CHW (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S813HA2.0	2.00	.0787	0.00	6.00	6.00	57.0	3	1	5983619
S813HA2.5	2.50	.0984	0.08	6.00	7.00	57.0	3	1	5983504
S813HA3.0	3.00	.1181	0.08	6.00	7.00	57.0	3	1	5983567
S813HA3.5	3.50	.1378	0.08	6.00	7.00	57.0	3	1	5983600
S813HA4.0	4.00	.1575	0.13	6.00	8.00	57.0	3	1	5983633
S813HA4.5	4.50	.1772	0.13	6.00	8.00	57.0	3	1	5983637
S813HA5.0	5.00	.1969	0.13	6.00	10.00	57.0	3	1	5983639
S813HA6.0	6.00	.2362	0.13	6.00	10.00	57.0	3	1	5983641
S813HA7.0	7.00	.2756	0.13	8.00	13.00	63.0	3	1	5983644
S813HA8.0	8.00	.3150	0.20	8.00	16.00	63.0	3	1	5983506
S813HA9.0	9.00	.3543	0.20	10.00	16.00	72.0	3	1	5983508
S813HA10.0	10.00	.3937	0.20	10.00	19.00	72.0	3	1	5983601
S813HA12.0	12.00	.4724	0.20	12.00	22.00	83.0	3	1	5983605
S813HA14.0	14.00	.5512	0.20	14.00	22.00	83.0	3	1	5983608
S813HA16.0	16.00	.6299	0.20	16.00	26.00	92.0	3	1	5983611
S813HA18.0	18.00	.7087	0.20	18.00	26.00	92.0	3	1	5983614
S813HA20.0	20.00	.7874	0.30	20.00	32.00	104.0	3	1	5983536

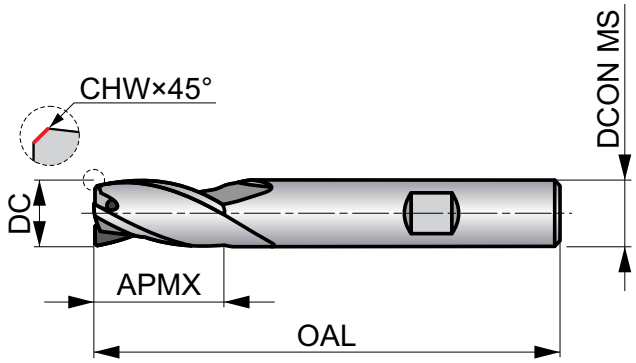
S813HB

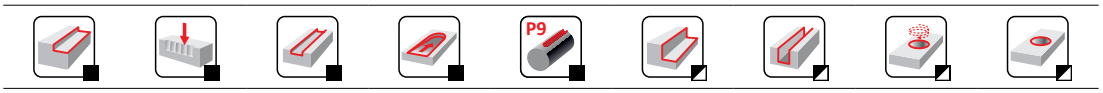
DORMER

3-Flute Solid Carbide Slot End Mill, DIN 6535 HB Shank

Short cut length, 3-flute design provides high rigidity for milling standard slots to a P9 tolerance. The Weldon shank prevents the end mill from slipping in the toolholder. AlCrN coating improves performance and extends the tool life. Also suited for plunging and ramping milling.

HM	N	NOF 3
	λ 28°	γ 9°
DIN 6535HB	AlCrN	
DIN 6527L		





Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■ 545 J	■ 610 J	■ 630 J	■ 466 J	■ 410 J	■ 364 I	■ 377 J	■ 305 I	■ 256 I	■ 223 I	■ 194 I	◪ 154 I	■ 318 J	■ 266 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**
■ 279 J	■ 233 I	◪ 259 I	◪ 223 I	◪ 200 I	◪ 197 I	■ 545 J	■ 404 J	■ 302 J	■ 558 J	■ 453 J	■ 361 I	■ 492 J	■ 377 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**
■ 305 I	■ 459 I	■ 344 I	■ 253 I	■ 217 I	■ 184 I	■ 522 I	■ 387 I	■ 302 I	◪ 1083 K	◪ 810 K	■ 545 K	■ 545 J	■ 486 J
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**S1.1**	**S1.2**	**S2.1**	**S3.1**	**S4.1**			
■ 351 J	■ 568 J	■ 331 J	◪ 171 J	◪ 568 J	◪ 220 J	◪ 236 I	◪ 210 I	◪ 161 I	◪ 125 I	◪ 98 I			

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

Product	DC (mm)	DC (inch)	CHW (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S813HB2.0	2.00	.0787	0.00	6.00	6.00	57.0	3	1	5983527
S813HB2.5	2.50	.0984	0.08	6.00	7.00	57.0	3	1	5983530
S813HB3.0	3.00	.1181	0.08	6.00	7.00	57.0	3	1	5983539
S813HB3.5	3.50	.1378	0.08	6.00	7.00	57.0	3	1	5983542
S813HB4.0	4.00	.1575	0.13	6.00	8.00	57.0	3	1	5983545
S813HB4.5	4.50	.1772	0.13	6.00	8.00	57.0	3	1	5983548
S813HB5.0	5.00	.1969	0.13	6.00	10.00	57.0	3	1	5983549
S813HB6.0	6.00	.2362	0.13	6.00	10.00	57.0	3	1	5983552
S813HB7.0	7.00	.2756	0.13	8.00	13.00	63.0	3	1	5983555
S813HB8.0	8.00	.3150	0.20	8.00	16.00	63.0	3	1	5983558
S813HB9.0	9.00	.3543	0.20	10.00	16.00	72.0	3	1	5983561
S813HB10.0	10.00	.3937	0.20	10.00	19.00	72.0	3	1	5983511
S813HB12.0	12.00	.4724	0.20	12.00	22.00	83.0	3	1	5983513
S813HB14.0	14.00	.5512	0.20	14.00	22.00	83.0	3	1	5983516
S813HB16.0	16.00	.6299	0.20	16.00	26.00	92.0	3	1	5983520
S813HB18.0	18.00	.7087	0.20	18.00	26.00	92.0	3	1	5983523
S813HB20.0	20.00	.7874	0.30	20.00	32.00	104.0	3	1	5983533

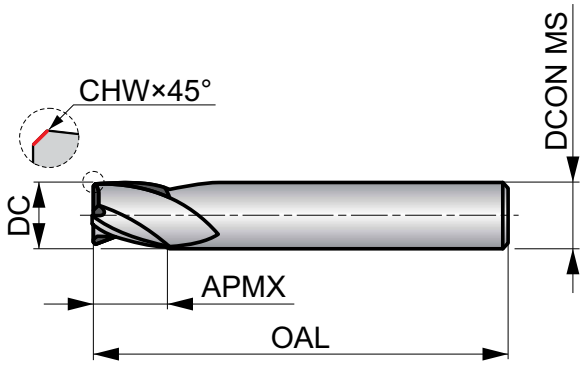
S803HA

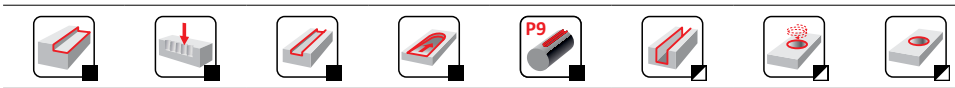
DORMER

3-Flute Solid Carbide Slot End Mill, DIN 6535 HA Shank

Extra short cut length, 3-flute design provides high rigidity for milling shallow slots to a P9 tolerance. AlCrN coating increases service life and improves performance. Also suited for plunging and ramping milling.

HM	N	NOF 3
	λ 28°	γ 9°
DIN 6535HA	AlCrN	
DIN 6527K		





Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■676 J	■755 J	■781 J	■577 J	■509 J	■449 I	■469 J	■374 I	■318 I	■276 I	■236 I	■190 I	■397 J	■335 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**
■351 J	■292 I	◪246 I	■325 I	■279 I	◪249 I	◪246 I	◪207 I	■673 J	■499 J	■374 J	■689 J	■561 J	■449 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**
■610 J	■469 J	■377 I	■568 I	■430 I	■312 I	■269 I	■223 I	■643 I	■482 I	■374 I	◪1339 K	◪1007 K	■676 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**	
■676 J	■604 J	■433 J	■705 J	■410 J	◪210 J	◪705 J	◪272 J	◪266 I	◪233 I	◪180 I	◪135 I	◪105 I	

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

Product	DC (mm)	DC (inch)	CHW (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S803HA1.0	1.00	.0394	–	3.00	3.00	38.0	3	1	5983303
S803HA1.5	1.50	.0591	–	3.00	3.00	38.0	3	1	5983307
S803HA2.0	2.00	.0787	–	6.00	3.00	50.0	3	1	5983375
S803HA2.5	2.50	.0984	0.08	6.00	3.00	50.0	3	1	5983379
S803HA2.8	2.80	.1102	0.08	6.00	4.00	50.0	3	1	5983382
S803HA3.0	3.00	.1181	0.08	6.00	4.00	50.0	3	1	5983392
S803HA3.5	3.50	.1378	0.08	6.00	4.00	50.0	3	1	5983397
S803HA3.8	3.80	.1496	0.08	6.00	5.00	54.0	3	1	5983402
S803HA4.0	4.00	.1575	0.13	6.00	5.00	54.0	3	1	5983405
S803HA4.5	4.50	.1772	0.13	6.00	5.00	54.0	3	1	5983410
S803HA4.8	4.80	.1890	0.13	6.00	6.00	54.0	3	1	5983415
S803HA5.0	5.00	.1969	0.13	6.00	6.00	54.0	3	1	5983425
S803HA6.0	6.00	.2362	0.13	6.00	7.00	54.0	3	1	5982537
S803HA7.0	7.00	.2756	0.13	8.00	8.00	58.0	3	1	5982576
S803HA8.0	8.00	.3150	0.20	8.00	9.00	58.0	3	1	5982600
S803HA9.0	9.00	.3543	0.20	10.00	10.00	66.0	3	1	5982602
S803HA10.0	10.00	.3937	0.20	10.00	11.00	66.0	3	1	5983320
S803HA12.0	12.00	.4724	0.20	12.00	12.00	73.0	3	1	5983333
S803HA14.0	14.00	.5512	0.20	14.00	14.00	75.0	3	1	5983343
S803HA16.0	16.00	.6299	0.20	16.00	16.00	82.0	3	1	5983352
S803HA18.0	18.00	.7087	0.20	18.00	18.00	84.0	3	1	5983363
S803HA20.0	20.00	.7874	0.30	20.00	20.00	92.0	3	1	5983387

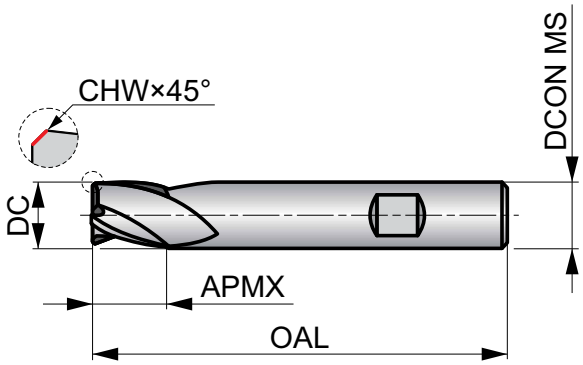
S803HB

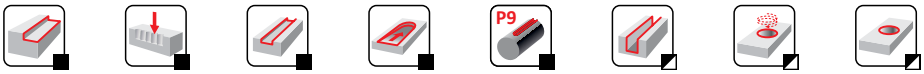
DORMER

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■676 J	■755 J	■781 J	■577 J	■509 J	■449 I	■469 J	■374 I	■318 I	■276 I	■236 I	■190 I	■397 J	■335 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**
■351 J	■292 I	◪246 I	■325 I	■279 I	◪249 I	◪246 I	◪207 I	■673 J	■499 J	■374 J	■689 J	■561 J	■449 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**
■610 J	■469 J	■377 I	■568 I	■430 I	■312 I	■269 I	■223 I	■643 I	■482 I	■374 I	◪1339 K	◪1007 K	■676 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**	
■676 J	■604 J	■433 J	■705 J	■410 J	◪210 J	◪705 J	◪272 J	◪266 I	◪233 I	◪180 I	◪135 I	◪105 I	

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

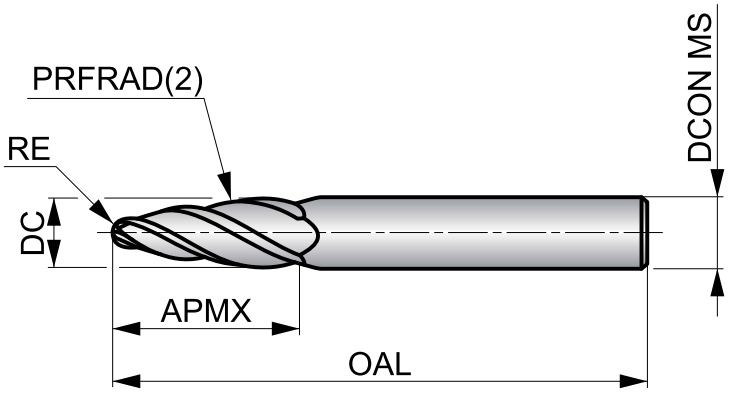
Product	DC (mm)	DC (inch)	CHW (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S803HB2.0	2.00	.0787	–	6.00	3.00	50.0	3	1	5982539
S803HB2.5	2.50	.0984	0.08	6.00	3.00	50.0	3	1	5982542
S803HB2.8	2.80	.1102	0.08	6.00	4.00	50.0	3	1	5982544
S803HB3.0	3.00	.1181	0.08	6.00	4.00	50.0	3	1	5982548
S803HB3.5	3.50	.1378	0.08	6.00	4.00	50.0	3	1	5982549
S803HB3.8	3.80	.1496	0.08	6.00	5.00	54.0	3	1	5982551
S803HB4.0	4.00	.1575	0.13	6.00	5.00	54.0	3	1	5982553
S803HB4.5	4.50	.1772	0.13	6.00	5.00	54.0	3	1	5982555
S803HB4.8	4.80	.1890	0.13	6.00	6.00	54.0	3	1	5982557
S803HB5.0	5.00	.1969	0.13	6.00	6.00	54.0	3	1	5982561
S803HB5.75	5.75	.2264	0.13	6.00	7.00	54.0	3	1	5982563
S803HB6.0	6.00	.2362	0.13	6.00	7.00	54.0	3	1	5982565
S803HB6.75	6.75	.2657	0.13	8.00	8.00	58.0	3	1	5982567
S803HB7.0	7.00	.2756	0.13	8.00	8.00	58.0	3	1	5982569
S803HB7.75	7.75	.3051	0.13	8.00	9.00	58.0	3	1	5982571
S803HB8.0	8.00	.3150	0.20	8.00	9.00	58.0	3	1	5982572
S803HB9.0	9.00	.3543	0.20	10.00	10.00	66.0	3	1	5982573
S803HB9.7	9.70	.3819	0.20	10.00	11.00	66.0	3	1	5982574
S803HB10.0	10.00	.3937	0.20	10.00	11.00	66.0	3	1	5982517
S803HB11.7	11.70	.4606	0.20	12.00	12.00	73.0	3	1	5982519
S803HB12.0	12.00	.4724	0.20	12.00	12.00	73.0	3	1	5982521

Product	DC	DC	CHW	DCON MS	APMX	OAL	NOF	Pack Qty	MID
	(mm)	(inch)	(mm)	(mm)	(mm)	(mm)			
S803HB14.0	14.00	.5512	0.20	14.00	14.00	75.0	3	1	5982525
S803HB16.0	16.00	.6299	0.20	16.00	16.00	82.0	3	1	5982529
S803HB18.0	18.00	.7087	0.20	18.00	18.00	84.0	3	1	5982532
S803HB20.0	20.00	.7874	0.30	20.00	20.00	92.0	3	1	5982546

S791

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■ 528 F	■ 594 F	■ 610 F	■ 453 F	■ 397 F	■ 354 E	■ 367 F	■ 295 E	■ 249 E	■ 217 E	■ 187 E	◪ 151 E	■ 308 F	■ 259 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**
■ 272 F	■ 226 E	◪ 253 E	◪ 217 E	◪ 194 E	◪ 190 E	■ 528 F	■ 390 F	■ 292 F	■ 541 F	■ 440 F	■ 351 E	■ 479 F	■ 367 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**
■ 295 E	■ 446 E	■ 335 E	■ 246 E	■ 210 E	■ 177 E	■ 505 E	■ 377 E	■ 292 E	◪ 1165 I	◪ 876 I	◪ 587 I	◪ 587 F	◪ 525 F
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**S1.1**	**S1.2**	**S2.1**	**S3.1**	**S4.1**			
◪ 377 F	■ 614 F	■ 358 F	◪ 184 F	◪ 614 F	◪ 236 F	◪ 190 E	◪ 184 E	◪ 141 E	◪ 108 E	◪ 85 E			

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

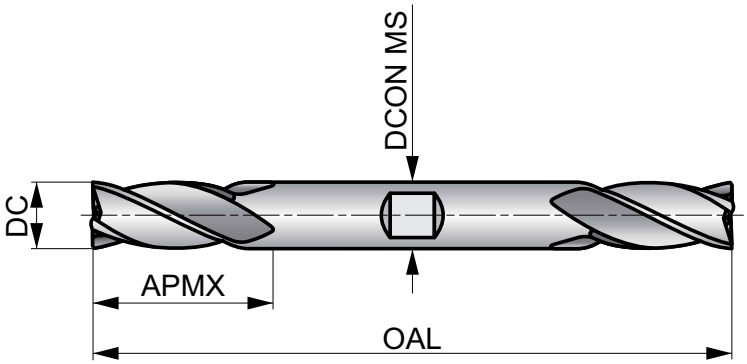
Product	DC (mm)	DC (inch)	RE (mm)	PRFRAD(2) (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S7916.0	6.00	.2362	1.00	95.0	6.00	22.00	67.0	3	1	8030338
S7918.0	8.00	.3150	1.00	90.0	8.00	25.00	75.0	3	1	8030339
S79110.0	10.00	.3937	2.00	85.0	10.00	26.00	75.0	4	1	8030340
S79112.0	12.00	.4724	2.00	80.0	12.00	28.00	83.0	4	1	8030341
S79116.0	16.00	.6299	3.00	75.0	16.00	31.00	90.0	4	1	8030342

S129

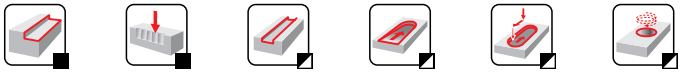
DORMER

4-Flute Solid Carbide Double Side End Mill

Regular length, 4-flute double end design with 30° helix provides two cutting ends in one tool with bright finish, improves chip flow in soft and non-ferrous materials.



HM	N	NOF 4
	λ 30°	γ 10°
	Bright	DORMER



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■ 276 J	■ 308 J	■ 322 J	■ 236 J	■ 207 J	■ 184 I	■ 220 J	■ 177 I	■ 151 I	■ 131 I	■ 112 I	◪ 92 I	■ 256 J	■ 217 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**
■ 230 J	■ 187 I	■ 154 I	■ 154 I	■ 131 I	■ 118 I	■ 102 I	■ 85 I	■ 348 J	◪ 256 J	◪ 194 J	■ 364 J	■ 295 J	◪ 236 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**
■ 325 I	■ 246 J	◪ 197 I	■ 299 I	■ 226 I	◪ 164 I	◪ 141 I	◪ 118 I	■ 338 I	■ 253 I	◪ 197 I	◪ 1394 J	◪ 1047 J	◪ 699 J
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**								
◪ 932 J	◪ 837 J	◪ 604 J	■ 784 J	■ 463 J	■ 233 J								

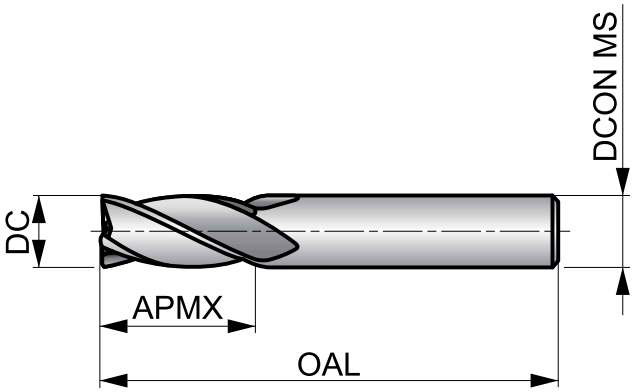
Product	DC (inch)	DC (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	NOF	Pack Qty	MID
S1291/8	1/8	.1250	3/8	3/8	3″	4	1	7648719
S1295/32	5/32	.1563	3/8	7/16	3″	4	1	7648720
S1293/16	3/16	.1875	3/8	1/2	3″	4	1	7648721
S1291/4	1/4	.2500	3/8	5/8	3″	4	1	7648722
S1295/16	5/16	.3125	3/8	3/4	3.1/2	4	1	7648723
S1293/8	3/8	.3750	3/8	3/4	3.1/2	4	1	7648724
S1291/2	1/2	.5000	1/2	1″	4″	4	1	7648725

S134

DORMER

4-Flute Solid Carbide End Mill

Regular length, 4-flute design with 30° helix provides high rigidity for milling. Bright finish, improves chip flow in soft and non-ferrous materials.



HM	N	NOF 4
	λ 30°	γ 10°
	Bright	DORMER

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■ 295 J	■ 331 J	■ 344 J	■ 253 J	■ 223 J	■ 197 I	■ 236 J	■ 190 I	■ 161 I	■ 141 I	■ 121 I	◪ 98 I	■ 276 J	■ 233 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**
■ 246 J	■ 200 I	■ 167 I	■ 164 I	■ 141 I	■ 128 I	■ 108 I	■ 92 I	■ 374 J	◪ 276 J	◪ 207 J	■ 390 J	■ 318 J	◪ 253 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**
■ 348 I	■ 266 J	◪ 213 I	■ 322 I	■ 243 I	◪ 177 I	◪ 151 I	◪ 128 I	■ 364 I	■ 272 I	◪ 210 I	◪ 1499 J	◪ 1125 J	◪ 751 J
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**								
◪ 1001 J	◪ 899 J	◪ 650 J	■ 843 J	■ 499 J	■ 249 J								

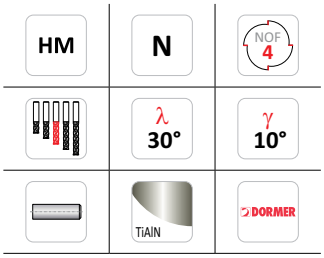
Product	DC (inch)	DC (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	NOF	Pack Qty	MID
S1341/16	1/16	.0625	1/8	1/4	1.1/2	4	1	7648726
S1345/64	5/64	.0781	1/8	1/4	1.1/2	4	1	7648727
S1343/32	3/32	.0938	1/8	3/8	1.1/2	4	1	7648728
S1347/64	7/64	.1094	1/8	3/8	1.1/2	4	1	7648729
S1341/8	1/8	.1250	1/8	1/2	1.1/2	4	1	7648730
S1349/64	9/64	.1406	3/16	9/16	2″	4	1	7648731
S1345/32	5/32	.1563	3/16	9/16	2″	4	1	7648732
S13411/64	11/64	.1719	3/16	9/16	2″	4	1	7648733
S1343/16	3/16	.1875	3/16	5/8	2″	4	1	7648734
S13413/64	13/64	.2031	1/4	5/8	2.1/2	4	1	7648735
S1347/32	7/32	.2188	1/4	5/8	2.1/2	4	1	7648736
S1341/4	1/4	.2500	1/4	3/4	2.1/2	4	1	7648737
S1345/16	5/16	.3125	5/16	7/8	2.1/2	4	1	7648738
S1343/8	3/8	.3750	3/8	7/8	2.1/2	4	1	7648739
S1347/16	7/16	.4375	7/16	1″	2.1/2	4	1	7648740
S1341/2	1/2	.5000	1/2	1″	3″	4	1	7648741
S1349/16	9/16	.5625	9/16	1.1/4	3.1/2	4	1	7648742
S1345/8	5/8	.6250	5/8	1.1/4	3.1/2	4	1	7648743
S13411/16	11/16	.6875	3/4	1.1/2	4″	4	1	7648744
S1343/4	3/4	.7500	3/4	1.1/2	4″	4	1	7648745
S1347/8	7/8	.8750	7/8	1.1/2	4″	4	1	7648746
S1341	1″	1.0000	1″	1.1/2	4″	4	1	7648747

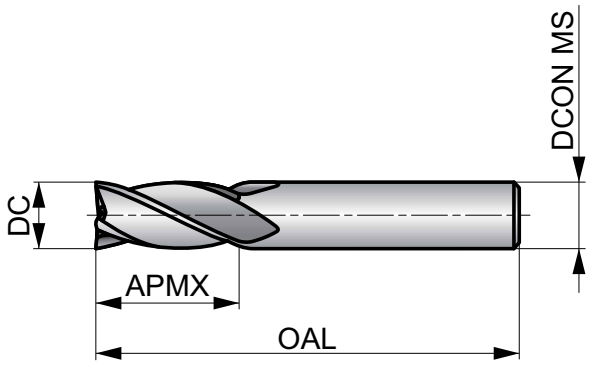
S234

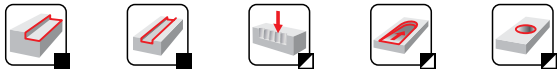
DORMER

4-Flute Solid Carbide End Mill

Regular length, 4-flute design with 30° helix provides high rigidity for milling. ALTiN coating increases surface hardness, improves chip flow and tool life allowing higher metal removal rates.







Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■397 J	■443 J	■459 J	■338 J	■299 J	■262 I	■338 J	■272 I	■230 I	■203 I	■171 I	■141 I	■446 J	■377 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**
■397 J	■325 I	■272 I	■259 I	■223 I	■200 I	■174 I	■151 I	■551 J	■407 J	■305 J	■646 J	■525 J	■417 I
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.1**	**S1.2**	**S1.3**
■571 I	■436 J	■354 I	■528 I	■400 I	■292 I	■249 I	■210 I	■600 I	■449 I	■348 I	■230 I	◪200 I	◪190 I
S2.1	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**								
◪213 I	◪138 I	◪161 I	◪98 I	◪125 I	◪79 I								

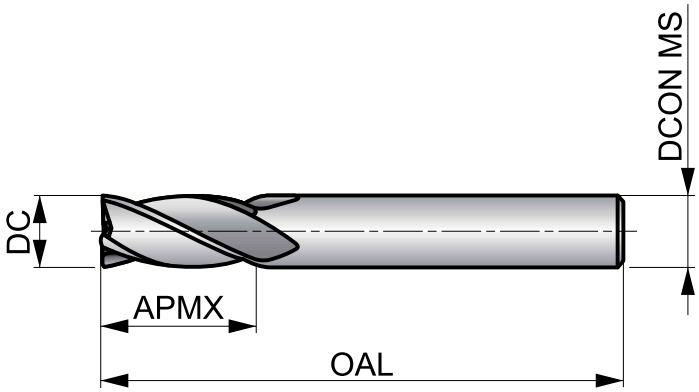
Product	DC (inch)	DC (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	NOF	Pack Qty	MID
S2341/16	1/16	.0625	1/8	1/4	1.1/2	4	1	7648748
S2345/64	5/64	.0781	1/8	1/4	1.1/2	4	1	7648749
S2343/32	3/32	.0938	1/8	3/8	1.1/2	4	1	7648750
S2347/64	7/64	.1094	1/8	3/8	1.1/2	4	1	7648751
S2341/8	1/8	.1250	1/8	1/2	1.1/2	4	1	7648752
S2349/64	9/64	.1406	3/16	9/16	2″	4	1	7648753
S2345/32	5/32	.1563	3/16	9/16	2″	4	1	7648754
S23411/64	11/64	.1719	3/16	9/16	2″	4	1	7648755
S2343/16	3/16	.1875	3/16	5/8	2″	4	1	7648756
S2347/32	7/32	.2188	1/4	5/8	2.1/2	4	1	7648758
S2341/4	1/4	.2500	1/4	3/4	2.1/2	4	1	7648759
S2345/16	5/16	.3125	5/16	7/8	2.1/2	4	1	7648760
S2343/8	3/8	.3750	3/8	7/8	2.1/2	4	1	7648761
S2347/16	7/16	.4375	7/16	1″	2.1/2	4	1	7648762
S2341/2	1/2	.5000	1/2	1″	3″	4	1	7648763
S2349/16	9/16	.5625	9/16	1.1/4	3.1/2	4	1	7648764
S2345/8	5/8	.6250	5/8	1.1/4	3.1/2	4	1	7648765
S23411/16	11/16	.6875	3/4	1.1/2	4″	4	1	7648766
S2343/4	3/4	.7500	3/4	1.1/2	4″	4	1	7648767
S2347/8	7/8	.8750	7/8	1.1/2	4″	4	1	7648768
S2341	1″	1.0000	1″	1.1/2	4″	4	1	7648769

S136

DORMER

4-Flute Solid Carbide End Mill

Long length, 4-flute design with 30° helix provides high rigidity for milling. Bright finish, improves chip flow in soft and non-ferrous materials.



HM	N	NOF 4
	λ 30°	γ 10°
	Bright	DORMER

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■276 J	■308 J	■322 J	■236 J	■207 J	■184 I	■220 J	■177 I	■151 I	■131 I	■112 I	◪92 I	■256 J	■217 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**
■230 J	■187 I	■154 I	■154 I	■131 I	■118 I	■102 I	■85 I	■348 J	◪256 J	◪194 J	■364 J	■295 J	◪236 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**
■325 I	■246 J	◪197 I	■299 I	■226 I	◪164 I	◪141 I	◪118 I	■338 I	■253 I	◪197 I	◪1394 J	◪1047 J	◪699 J
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**								
◪932 J	◪837 J	◪604 J	■784 J	■463 J	■233 J								

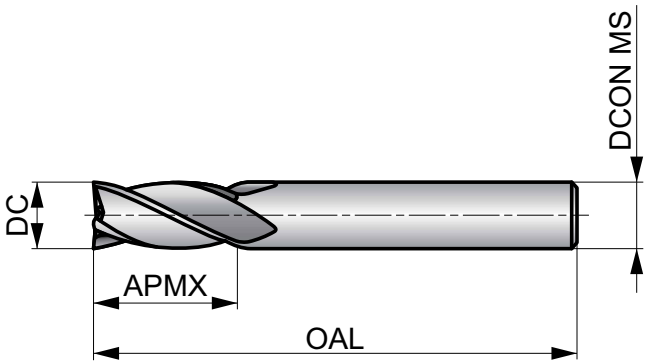
Product	DC (inch)	DC (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	NOF	Pack Qty	MID
S1361/8	1/8	.1250	1/8	3/4	2″	4	1	7648807
S1363/16	3/16	.1875	3/16	3/4	2.1/2	4	1	7648808
S1361/4	1/4	.2500	1/4	1.1/8	3″	4	1	7648809
S1365/16	5/16	.3125	5/16	1.1/8	3″	4	1	7648810
S1363/8	3/8	.3750	3/8	1.1/8	3″	4	1	7648811
S1367/16	7/16	.4375	7/16	2″	4″	4	1	7648812
S1361/2	1/2	.5000	1/2	2″	4″	4	1	7648813
S1365/8	5/8	.6250	5/8	2.1/4	5″	4	1	7648814
S1363/4	3/4	.7500	3/4	2.1/4	5″	4	1	7648815

S236

DORMER

4-Flute Solid Carbide End Mill

Long length, 4-flute design with 30° helix provides high rigidity for milling. ALTiN coating increases surface hardness, improves chip flow and tool life allowing higher metal removal rates.



HM	N	NOF 4
	λ 30°	γ 10°
	TiAlN	DORMER

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■371 J	■413 J	■427 J	■315 J	■279 J	■243 I	■315 J	■253 I	■213 I	■190 I	■157 I	■131 I	■413 J	■351 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**
■371 J	■302 I	■253 I	■240 I	■207 I	■187 I	■161 I	■141 I	■512 J	■377 J	■282 J	■600 J	■489 J	■387 I
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.1**	**S1.2**	**S1.3**
■531 I	■407 J	■328 I	■492 I	■371 I	■272 I	■233 I	■197 I	■558 I	■417 I	■325 I	◪213 I	◪187 I	◪177 I
S2.1	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**								
◪197 I	◪128 I	◪151 I	◪92 I	◪115 I	◪72 I								

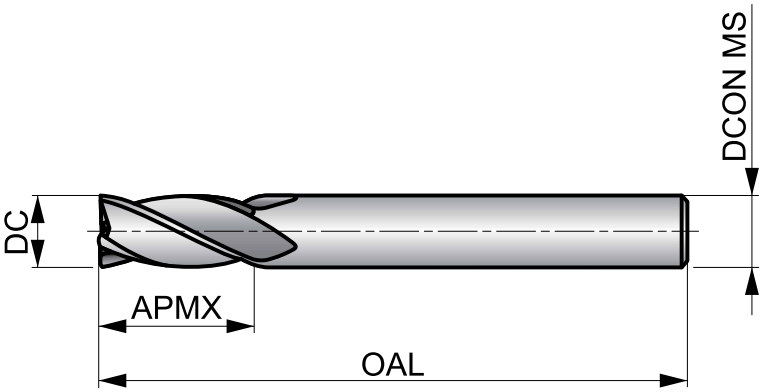
Product	DC (inch)	DC (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	NOF	Pack Qty	MID
S2361/8	1/8	.1250	1/8	3/4	2″	4	1	7648816
S2363/16	3/16	.1875	3/16	3/4	2.1/2	4	1	7648817
S2361/4	1/4	.2500	1/4	1.1/8	3″	4	1	7648818
S2365/16	5/16	.3125	5/16	1.1/8	3″	4	1	7648819
S2363/8	3/8	.3750	3/8	1.1/8	3″	4	1	7648820
S2367/16	7/16	.4375	7/16	2″	4″	4	1	7648821
S2361/2	1/2	.5000	1/2	2″	4″	4	1	7648822
S2365/8	5/8	.6250	5/8	2.1/4	5″	4	1	7648823
S2363/4	3/4	.7500	3/4	2.1/4	5″	4	1	7648824

S137

DORMER

4-Flute Solid Carbide End Mill

Extra-long length, 4-flute design with 30° helix provides high rigidity for milling. Bright finish, improves chip flow in soft and non-ferrous materials.



HM	N	NOF 4
	λ 30°	γ 10°
	Bright	DORMER

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

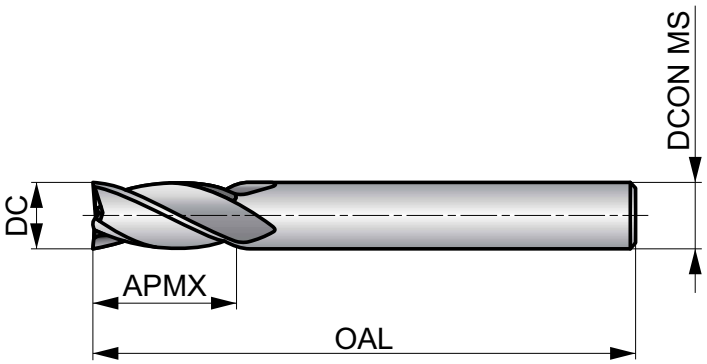
P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 266 J	■ 299 J	■ 308 J	■ 226 J	■ 200 J	■ 177 I	■ 213 J	■ 171 I	■ 144 I	■ 128 I	■ 108 I	◪ 89 I	■ 246 J	■ 210 J
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
■ 220 J	■ 180 I	■ 151 I	■ 125 I	■ 108 I	■ 98 I	■ 98 I	■ 85 I	■ 299 J	◪ 220 J	◪ 167 J	■ 305 J	■ 249 J	◪ 200 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**
■ 272 I	■ 207 J	◪ 167 I	■ 253 I	■ 190 I	◪ 138 I	◪ 118 I	◪ 98 I	■ 285 I	■ 213 I	◪ 164 I	◪ 1348 J	◪ 1010 J	◪ 676 J
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**								
◪ 899 J	◪ 807 J	◪ 584 J	■ 761 J	■ 449 J	■ 226 J								

Product	DC (inch)	DC (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	NOF	Pack Qty	MID
S1371/8	1/8	.1250	1/8	1″	3″	4	1	7648825
S1373/16	3/16	.1875	3/16	1.1/8	3″	4	1	7648826
S1371/4	1/4	.2500	1/4	1.1/2	4″	4	1	7648827
S1375/16	5/16	.3125	5/16	1.5/8	4″	4	1	7648828
S1373/8	3/8	.3750	3/8	1.3/4	4″	4	1	7648829
S1377/16	7/16	.4375	7/16	3″	6″	4	1	7648830
S1371/2	1/2	.5000	1/2	3″	6″	4	1	7648831
S1375/8	5/8	.6250	5/8	3″	6″	4	1	7648832
S1373/4	3/4	.7500	3/4	3″	6″	4	1	7648833
S1371	1″	1.0000	1″	3″	6″	4	1	7648834

S237

4-Flute Solid Carbide End Mill

Extra-long length, 4-flute design with 30° helix provides high rigidity for milling. ALTiN coating increases surface hardness, improves chip flow and tool life allowing higher metal removal rates.



HM	N	NOF 4
	λ 30°	γ 10°
	TiAlN	DORMER

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■358 J	■400 J	■413 J	■305 J	■269 J	■240 I	■295 J	■236 I	■200 I	■177 I	■148 I	■121 I	■410 J	■348 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**
■364 J	■299 I	■249 I	■210 I	■180 I	■164 I	■171 I	■148 I	■499 J	■371 J	■276 J	■492 J	■400 J	■318 I
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.1**	**S1.2**	**S1.3**
■436 I	■331 J	■269 I	■404 I	■305 I	■223 I	■190 I	■161 I	■456 I	■344 I	■266 I	◪200 I	◪180 I	◪174 I
S2.1	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**								
◪187 I	◪121 I	◪141 I	◪85 I	◪112 I	◪69 I								

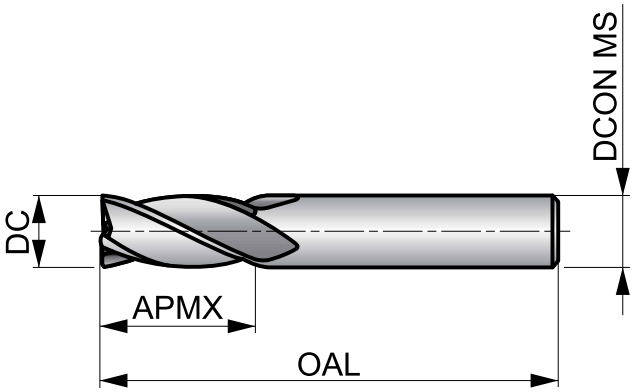
Product	DC (inch)	DC (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	NOF	Pack Qty	MID
S2371/8	1/8	.1250	1/8	1″	3″	4	1	7648835
S2373/16	3/16	.1875	3/16	1.1/8	3″	4	1	7648836
S2371/4	1/4	.2500	1/4	1.1/2	4″	4	1	7648837
S2375/16	5/16	.3125	5/16	1.5/8	4″	4	1	7648838
S2373/8	3/8	.3750	3/8	1.3/4	4″	4	1	7648839
S2377/16	7/16	.4375	7/16	3″	6″	4	1	7648840
S2371/2	1/2	.5000	1/2	3″	6″	4	1	7648841
S2375/8	5/8	.6250	5/8	3″	6″	4	1	7648842
S2373/4	3/4	.7500	3/4	3″	6″	4	1	7648843
S2371	1″	1.0000	1″	3″	6″	4	1	7648844

S135

DORMER

4-Flute Solid Carbide Metric End Mill

Regular length, 4-flute design with 30° helix in metric sizes provides high rigidity for milling. Bright finish, improves chip flow in soft and non-ferrous materials.



HM	N	NOF 4
	λ 30°	γ 10°
	Bright	DORMER

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■ 295 J	■ 331 J	■ 344 J	■ 253 J	■ 223 J	■ 197 I	■ 236 J	■ 190 I	■ 161 I	■ 141 I	■ 121 I	◪ 98 I	■ 276 J	■ 233 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**
■ 246 J	■ 200 I	■ 167 I	■ 164 I	■ 141 I	■ 128 I	■ 108 I	■ 92 I	■ 374 J	◪ 276 J	◪ 207 J	■ 390 J	■ 318 J	◪ 253 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**
■ 348 I	■ 266 J	◪ 213 I	■ 322 I	■ 243 I	◪ 177 I	◪ 151 I	◪ 128 I	■ 364 I	■ 272 I	◪ 210 I	◪ 1499 J	◪ 1125 J	◪ 751 J
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**								
◪ 1001 J	◪ 899 J	◪ 650 J	■ 843 J	■ 499 J	■ 249 J								

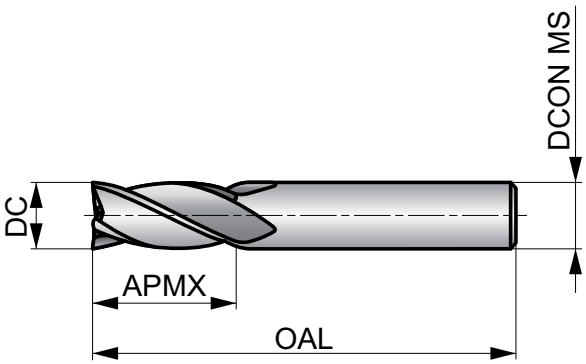
Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S1352.0	2.00	.0787	3.00	6.00	38.0	4	1	7648770
S1352.5	2.50	.0984	3.00	7.00	38.0	4	1	7648771
S1353.0	3.00	.1181	3.00	12.00	38.0	4	1	7648772
S1354.0	4.00	.1575	4.00	14.00	50.0	4	1	7648774
S1354.5	4.50	.1772	5.00	14.00	50.0	4	1	7648775
S1355.0	5.00	.1969	5.00	16.00	50.0	4	1	7648776
S1356.0	6.00	.2362	6.00	19.00	63.0	4	1	7648777
S1357.0	7.00	.2756	8.00	19.00	63.0	4	1	7648778
S1358.0	8.00	.3150	8.00	19.00	63.0	4	1	7648779
S1359.0	9.00	.3543	10.00	22.00	70.0	4	1	7648780
S13510.0	10.00	.3937	10.00	22.00	70.0	4	1	7648781
S13511.0	11.00	.4331	11.00	25.00	70.0	4	1	7648782
S13512.0	12.00	.4724	12.00	25.00	75.0	4	1	7648783
S13514.0	14.00	.5512	14.00	30.00	88.0	4	1	7648784
S13516.0	16.00	.6299	16.00	32.00	88.0	4	1	7648785
S13518.0	18.00	.7087	18.00	36.00	100.0	4	1	7648786
S13520.0	20.00	.7874	20.00	38.00	100.0	4	1	7648787
S13525.0	25.00	.9843	25.00	38.00	100.0	4	1	7648788

S235

DORMER

4-Flute Solid Carbide Metric End Mill

Regular length, 4-flute design with 30° helix in metric sizes provides high rigidity for milling. ALTiN coating increases surface hardness, improves chip flow and tool life allowing higher metal removal rates.



HM	N	NOF 4
	λ 30°	γ 10°
	TiAlN	DORMER

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■397 J	■443 J	■459 J	■338 J	■299 J	■262 I	■338 J	■272 I	■230 I	■203 I	■171 I	■141 I	■446 J	■377 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**
■397 J	■325 I	■272 I	■259 I	■223 I	■200 I	■174 I	■151 I	■551 J	■407 J	■305 J	■646 J	■525 J	■417 I
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.1**	**S1.2**	**S1.3**
■571 I	■436 J	■354 I	■528 I	■400 I	■292 I	■249 I	■210 I	■600 I	■449 I	■348 I	■230 I	◪200 I	◪190 I
S2.1	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**								
◪213 I	◪138 I	◪161 I	◪98 I	◪125 I	◪79 I								

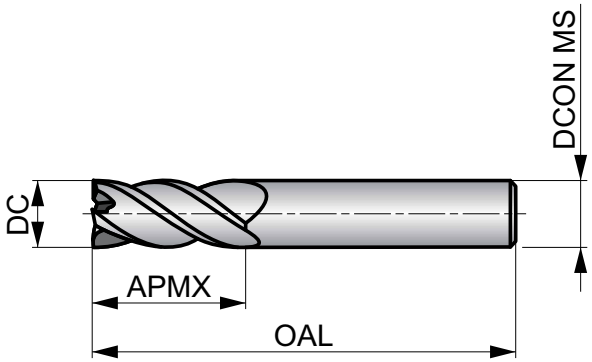
Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S2352.0	2.00	.0787	3.00	6.00	38.0	4	1	7648789
S2352.5	2.50	.0984	3.00	7.00	38.0	4	1	7648790
S2353.0	3.00	.1181	3.00	12.00	38.0	4	1	7648791
S2353.5	3.50	.1378	4.00	12.00	50.0	4	1	7648792
S2354.0	4.00	.1575	4.00	14.00	50.0	4	1	7648793
S2354.5	4.50	.1772	5.00	14.00	50.0	4	1	7648794
S2355.0	5.00	.1969	5.00	16.00	50.0	4	1	7648795
S2356.0	6.00	.2362	6.00	19.00	63.0	4	1	7648796
S2357.0	7.00	.2756	8.00	19.00	63.0	4	1	7648797
S2358.0	8.00	.3150	8.00	19.00	63.0	4	1	7648798
S2359.0	9.00	.3543	10.00	22.00	70.0	4	1	7648799
S23510.0	10.00	.3937	10.00	22.00	70.0	4	1	7648800
S23511.0	11.00	.4331	11.00	25.00	70.0	4	1	7648801
S23512.0	12.00	.4724	12.00	25.00	75.0	4	1	7648802
S23514.0	14.00	.5512	14.00	30.00	88.0	4	1	7648803
S23516.0	16.00	.6299	16.00	32.00	88.0	4	1	7648804
S23518.0	18.00	.7087	18.00	36.00	100.0	4	1	7648805
S23520.0	20.00	.7874	20.00	38.00	100.0	4	1	7648806

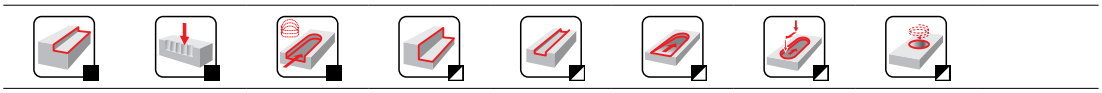
S761

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■692 J	■774 J	■797 J	■591 J	■518 J	■459 I	■479 J	■384 I	■325 I	■282 I	■243 I	■400 J	■338 J	■354 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**
■292 I	■328 I	■282 I	■682 J	■505 J	■381 J	■702 J	■571 J	■456 I	■620 J	■476 J	■384 I	■577 I	■433 I
K4.3	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.2**	**S2.1**	**S3.1**	**S4.1**				
■318 I	■272 I	■226 I	■653 I	■489 I	■381 I	■236 I	■184 I	■138 I	■108 I				

DCON MS tolerance h6.

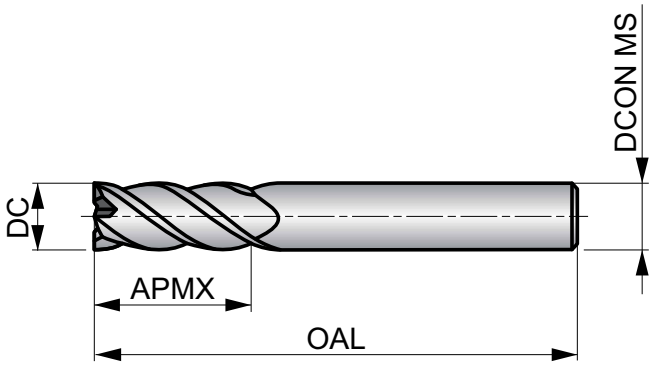
Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S7613.0	3.00	.1181	6.00	9.00	57.0	4	1	6706996
S7614.0	4.00	.1575	6.00	12.00	57.0	4	1	6706997
S7615.0	5.00	.1969	6.00	13.00	57.0	4	1	6706998
S7616.0	6.00	.2362	6.00	13.00	57.0	4	1	6706999
S7618.0	8.00	.3150	8.00	20.00	64.0	4	1	6707000
S76110.0	10.00	.3937	10.00	22.00	72.0	4	1	6707001
S76112.0	12.00	.4724	12.00	26.00	83.0	4	1	6707002
S76114.0	14.00	.5512	14.00	32.00	83.0	4	1	6707003
S76116.0	16.00	.6299	16.00	32.00	92.0	4	1	6707004
S76120.0	20.00	.7874	20.00	38.00	104.0	4	1	6707005

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■653 J	■732 J	■755 J	■558 J	■492 J	■436 I	■453 J	■364 I	■308 I	■269 I	■230 I	■377 J	■318 J	■335 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**
■276 I	■308 I	■266 I	■643 J	■476 J	■358 J	■663 J	■538 J	■430 I	■584 J	■446 J	■361 I	■541 I	■410 I
K4.3	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.2**	**S2.1**	**S3.1**	**S4.1**				
■299 I	■256 I	■213 I	■614 I	■463 I	■358 I	■226 I	■174 I	■131 I	■102 I				

DCON MS tolerance h6.

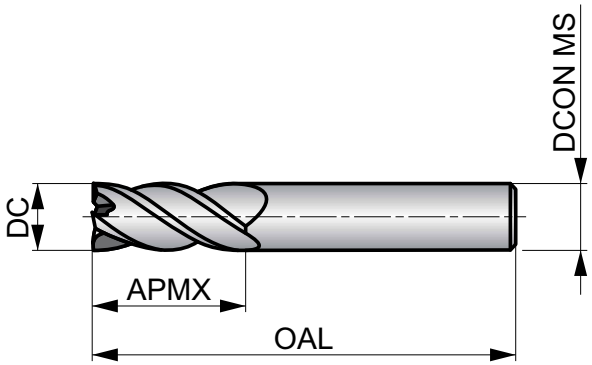
Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S7162.0	2.00	.0787	4.00	6.50	40.0	4	1	7002462
S7163.0	3.00	.1181	3.00	9.00	40.0	4	1	7002463
S7164.0	4.00	.1575	4.00	12.00	50.0	4	1	7002464
S7165.0	5.00	.1969	5.00	15.00	50.0	4	1	7002465
S7166.0	6.00	.2362	6.00	16.00	50.0	4	1	7002466
S7168.0	8.00	.3150	8.00	20.00	64.0	4	1	7002467
S71610.0	10.00	.3937	10.00	22.00	70.0	4	1	7002468
S71612.0	12.00	.4724	12.00	25.00	75.0	4	1	7002469
S71614.0	14.00	.5512	14.00	32.00	90.0	4	1	7002470
S71616.0	16.00	.6299	16.00	32.00	90.0	4	1	7002471
S71618.0	18.00	.7087	18.00	38.00	100.0	4	1	7002472
S71620.0	20.00	.7874	20.00	38.00	100.0	4	1	7002473

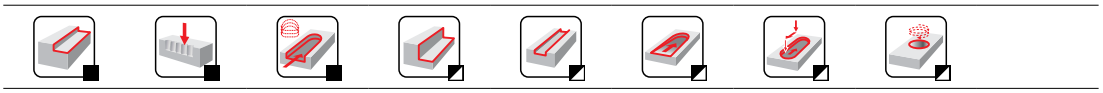
S260

4-Flute Solid Carbide End Mill

Short cut length, 4-flute design provides high rigidity for standard profile milling. AlCrN coating improves performance and extends the tool life when milling difficult to machine materials. The 40° helix with differential pitch reduces vibrations and maximizes productivity and tool life.

HM	N	NOF 4
	λ 40°	γ 4°
DIN 6535HA	AlCrN	DC h9
	DORMER	





Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
318 J	318 J	325 I	318 I	272 I	230 I	184 I	131 I	105 I	587 I	348 G	387 G	318 G

DCON MS tolerance h6.

Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S2603.0	3.00	.1181	6.00	9.00	57.0	4	1	6706913
S2604.0	4.00	.1575	6.00	12.00	57.0	4	1	6706914
S2605.0	5.00	.1969	6.00	13.00	57.0	4	1	6706915
S2606.0	6.00	.2362	6.00	13.00	57.0	4	1	6706916
S2608.0	8.00	.3150	8.00	20.00	64.0	4	1	6706917
S26010.0	10.00	.3937	10.00	22.00	72.0	4	1	6706918
S26012.0	12.00	.4724	12.00	26.00	83.0	4	1	6706919
S26014.0	14.00	.5512	14.00	32.00	83.0	4	1	6706920
S26016.0	16.00	.6299	16.00	32.00	92.0	4	1	6706921
S26018.0	18.00	.7087	18.00	38.00	92.0	4	1	6706922
S26020.0	20.00	.7874	20.00	38.00	104.0	4	1	6706923

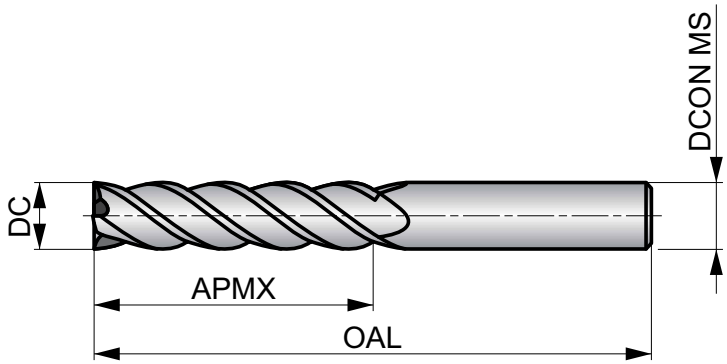
S717

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■459 J	■515 J	■531 J	■394 J	■348 J	■308 I	■318 J	■256 I	■217 I	■190 I	■161 I	■266 J	■223 J	■233 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**
■194 I	■217 I	■187 I	■453 J	■335 J	■253 J	■466 J	■377 J	■302 I	■410 J	■315 J	■256 I	■381 I	■289 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**
■210 I	■180 I	■151 I	■433 I	■325 I	■253 I	◪817 K	◪614 K	◪410 K	◪410 J	◪367 J	◪266 J	◪430 J	◪249 J
N3.3	**S1.2**	**S2.1**	**S3.1**	**S4.1**									
◪128 J	■161 I	■121 I	■92 I	■72 I									

DCON MS tolerance h6.

Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S7173.0	3.00	.1181	3.00	19.00	60.0	4	1	6706699
S7174.0	4.00	.1575	4.00	19.00	60.0	4	1	6706700
S7175.0	5.00	.1969	5.00	19.00	60.0	4	1	6706701
S7176.0	6.00	.2362	6.00	31.00	75.0	4	1	6706702
S7178.0	8.00	.3150	8.00	31.00	75.0	4	1	6706703
S71710.0	10.00	.3937	10.00	31.00	75.0	4	1	6706704
S71712.0	12.00	.4724	12.00	50.00	100.0	4	1	6706705
S71714.0	14.00	.5512	14.00	57.00	125.0	4	1	6706706
S71716.0	16.00	.6299	16.00	57.00	125.0	4	1	6706707
S71718.0	18.00	.7087	18.00	57.00	125.0	4	1	6706708
S71720.0	20.00	.7874	20.00	57.00	125.0	4	1	6706709

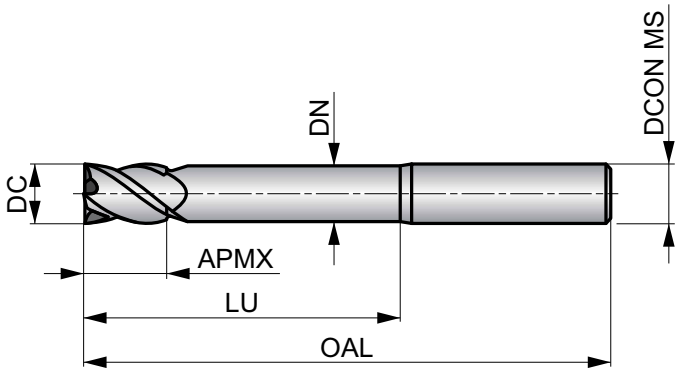
S219

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

P4.3	M2.3	M3.3	M4.1	M4.2	S1.3	S2.2	S3.2	S4.2
■ 210 J	■ 210 J	■ 213 I	■ 210 I	■ 177 I	■ 151 I	■ 125 I	■ 85 I	■ 72 I

DCON MS tolerance h6.

Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
S2193.0	3.00	.1181	3.00	5.00	60.0	4	30.00	2.80	1	6706638
S2194.0	4.00	.1575	4.00	8.00	60.0	4	32.00	3.70	1	6706639
S2195.0	5.00	.1969	5.00	9.00	60.0	4	32.00	4.60	1	6706640
S2196.0	6.00	.2362	6.00	10.00	75.0	4	40.00	5.50	1	6706641
S2198.0	8.00	.3150	8.00	12.00	75.0	4	40.00	7.40	1	6706642
S21910.0	10.00	.3937	10.00	14.00	75.0	4	40.00	9.20	1	6706643
S21912.0	12.00	.4724	12.00	16.00	100.0	4	60.00	11.00	1	6706644
S21914.0	14.00	.5512	14.00	22.00	125.0	4	85.00	13.00	1	6706645
S21916.0	16.00	.6299	16.00	22.00	125.0	4	85.00	15.00	1	6706646
S21918.0	18.00	.7087	18.00	26.00	125.0	4	85.00	17.00	1	6706647
S21920.0	20.00	.7874	20.00	26.00	125.0	4	85.00	19.00	1	6706648

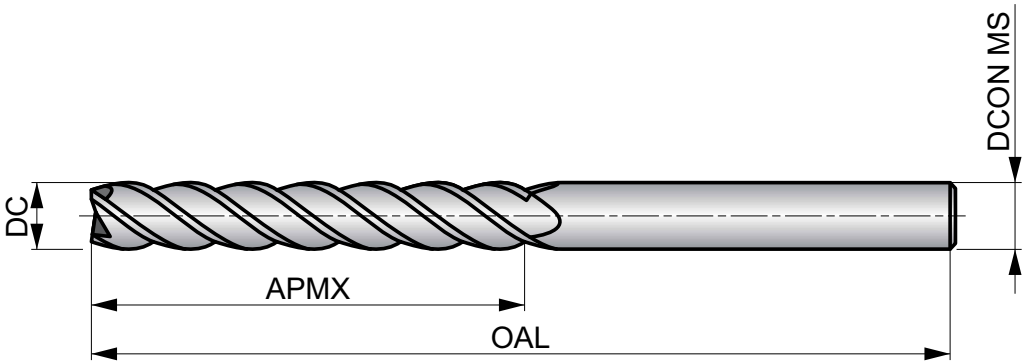
S718

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■289 J	■322 J	■331 J	■246 J	■217 J	■194 I	■200 J	■161 I	■135 I	■118 I	■102 I	■164 J	■138 J	■144 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**
■118 I	■135 I	■115 I	■282 J	■210 J	■157 J	■292 J	■236 J	■190 I	■259 J	■197 J	■161 I	■240 I	■180 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**
■131 I	■115 I	■95 I	■272 I	■203 I	■157 I	◪584 K	◪440 K	◪295 K	◪295 J	◪262 J	◪190 J	◪308 J	◪180 J
N3.3	**S1.2**	**S2.1**	**S3.1**	**S4.1**									
◪92 J	■98 I	■75 I	■59 I	■46 I									

DCON MS tolerance h6.

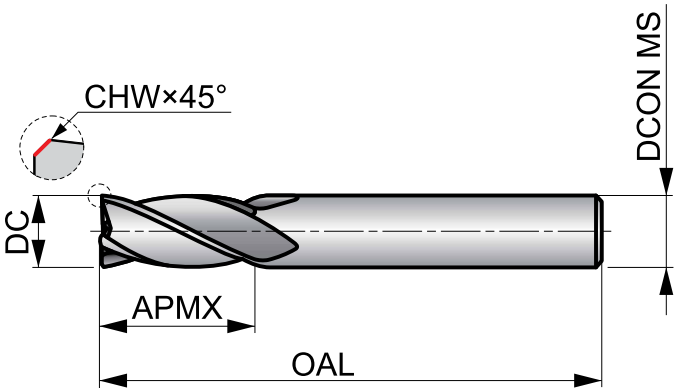
Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S7183.0	3.00	.1181	3.00	25.00	100.0	4	1	6706769
S7184.0	4.00	.1575	4.00	31.00	100.0	4	1	6706770
S7185.0	5.00	.1969	5.00	31.00	100.0	4	1	6706771
S7186.0	6.00	.2362	6.00	38.00	100.0	4	1	6706772
S7188.0	8.00	.3150	8.00	41.00	100.0	4	1	6706773
S71810.0	10.00	.3937	10.00	57.00	125.0	4	1	6706774
S71812.0	12.00	.4724	12.00	75.00	150.0	4	1	6706775
S71814.0	14.00	.5512	14.00	75.00	150.0	4	1	6706776
S71816.0	16.00	.6299	16.00	75.00	150.0	4	1	6706777
S71818.0	18.00	.7087	18.00	75.00	150.0	4	1	6706778
S71820.0	20.00	.7874	20.00	75.00	150.0	4	1	6706779

S904

DORMER

4-Flute Solid Carbide End Mill

Medium cut length, 4-flute design with 30° helix provides high rigidity for milling standard slots.



HM	N	NOF 4
	λ 30°	γ 12°
DIN 6535HA	Bright	DC h12
	DORMER	

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■348 J	■390 J	■404 J	■299 J	■262 J	◪233 I	■217 J	■174 I	◪148 I	■131 I	◪112 I	◪59 I	■262 J	◪194 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**
◪144 J	■322 J	■262 J	◪210 I	■285 J	■220 J	◪177 I	■266 I	■200 I	◪148 I	◪125 I	◪105 I	■299 I	■226 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**
◪174 I	◪1165 J	■876 J	■587 J	■587 J	◪525 J	◪377 J	■614 J	■358 J	■184 J	◪614 J	◪236 J	■125 I	◪118 I
S1.3	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**							
◪141 I	◪131 I	◪115 I	◪98 I	◪82 I	◪75 I	◪66 I							

DCON MS tolerance h6; DC≤9.00 mm: CHW ± 0.03X45° mm; DC>9.00 mm: CHW ± 0.05X45° mm.

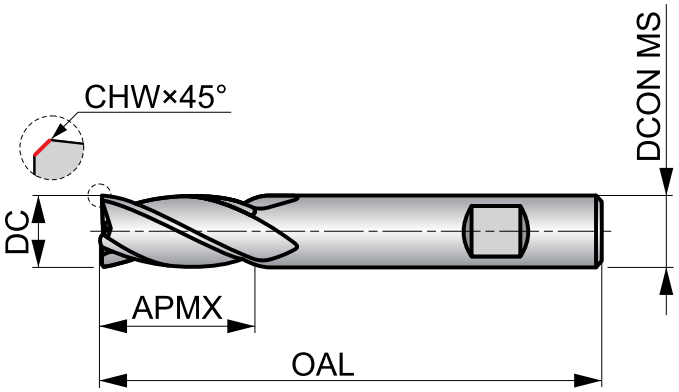
Product	DC (mm)	DC (inch)	CHW (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S9042.0	2.00	.0787	0.08	3.00	6.00	38.0	4	1	5983157
S9042.5	2.50	.0984	0.08	3.00	9.00	38.0	4	1	5983162
S9043.0	3.00	.1181	0.08	3.00	12.00	38.0	4	1	5983176
S9044.0	4.00	.1575	0.08	4.00	14.00	50.0	4	1	5983186
S9045.0	5.00	.1969	0.13	5.00	16.00	50.0	4	1	5982745
S9046.0	6.00	.2362	0.13	6.00	19.00	57.0	4	1	5982782
S9047.0	7.00	.2756	0.13	8.00	19.00	63.0	4	1	5982831
S9048.0	8.00	.3150	0.13	8.00	19.00	63.0	4	1	5982883
S9049.0	9.00	.3543	0.13	10.00	21.00	72.0	4	1	5982934
S90410.0	10.00	.3937	0.20	10.00	22.00	72.0	4	1	5983133
S90412.0	12.00	.4724	0.20	12.00	25.00	73.0	4	1	5983138
S90414.0	14.00	.5512	0.20	14.00	30.00	83.0	4	1	5983145
S90416.0	16.00	.6299	0.20	16.00	32.00	92.0	4	1	5983148
S90418.0	18.00	.7087	0.20	18.00	32.00	92.0	4	1	5983152
S90420.0	20.00	.7874	0.30	20.00	38.00	104.0	4	1	5983167

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■433 J	■486 J	■502 J	■371 J	■328 J	■289 I	■322 J	■259 I	■220 I	■194 I	■164 I	◪135 I	■328 J	■243 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**
■184 J	■351 J	■285 J	■230 I	■312 J	■236 J	■194 I	■289 I	■220 I	■161 I	■138 I	■115 I	■328 I	■246 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**
■190 I	◪971 J	◪728 J	■489 J	■489 J	■436 J	■315 J	■512 J	■299 J	◪154 J	◪512 J	◪197 J	◪210 J	■154 I
S1.2	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**						
◪148 I	◪148 I	◪197 I	◪161 I	◪148 I	◪115 I	◪115 I	◪92 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)	DC (inch)	CHW (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S9442.0 [1]	2.00	.0787	0.08	3.00	6.00	38.0	4	1	5982894
S9442.5 [1]	2.50	.0984	0.08	3.00	9.00	38.0	4	1	5982897
S9443.0 [1]	3.00	.1181	0.08	3.00	12.00	38.0	4	1	5982906
S9444.0 [1]	4.00	.1575	0.08	4.00	14.00	50.0	4	1	5982912
S9445.0 [1]	5.00	.1969	0.13	5.00	16.00	50.0	4	1	5982915
S9446.0	6.00	.2362	0.13	6.00	19.00	57.0	4	1	5982920
S9447.0	7.00	.2756	0.13	8.00	19.00	63.0	4	1	5982925
S9448.0	8.00	.3150	0.13	8.00	19.00	63.0	4	1	5982929
S9449.0	9.00	.3543	0.13	10.00	21.00	72.0	4	1	5982939
S94410.0	10.00	.3937	0.20	10.00	22.00	72.0	4	1	5982862
S94412.0	12.00	.4724	0.20	12.00	25.00	73.0	4	1	5982867
S94414.0	14.00	.5512	0.20	14.00	30.00	83.0	4	1	5982871
S94416.0	16.00	.6299	0.20	16.00	32.00	92.0	4	1	5982876
S94418.0	18.00	.7087	0.20	18.00	32.00	92.0	4	1	5982888
S94420.0	20.00	.7874	0.30	20.00	38.00	104.0	4	1	5982901

[1] Cylindrical shank.

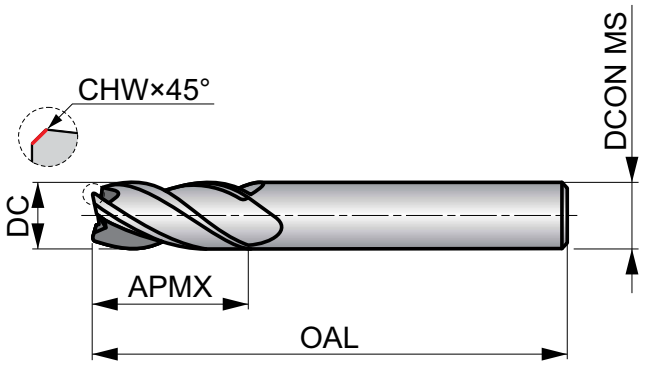
S766

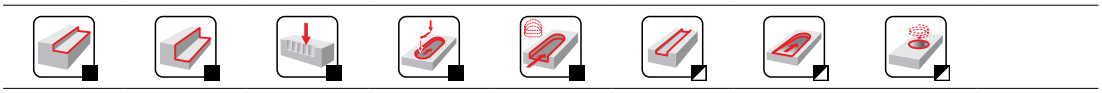
DORMER

4-Flute Solid Carbide End Mill

Short cut length, 4-flute design with unequal helix and differential pitch to reduce vibrations and improve surface finish in profile milling. TiSiN coating increases tool life and improves performance. Also suited for plunging, ramping and trochoidal milling.

HM	N	NOF 4
	λ ≠	γ 10°
DIN 6535HA	TiSiN	DC h9
	DORMER	





Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■692 J	■774 J	■797 J	■591 J	■518 J	■459 I	■479 J	■384 I	■325 I	■282 I	■243 I	■400 J	■338 J	■354 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**
■292 I	■328 I	■282 I	■682 J	■505 J	■381 J	■702 J	■571 J	■456 I	■620 J	■476 J	■384 I	■577 I	■433 I
K4.3	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.2**	**S2.1**	**S3.1**	**S4.1**				
■318 I	■272 I	■226 I	■653 I	■489 I	■381 I	■236 I	■184 I	■138 I	■108 I				

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

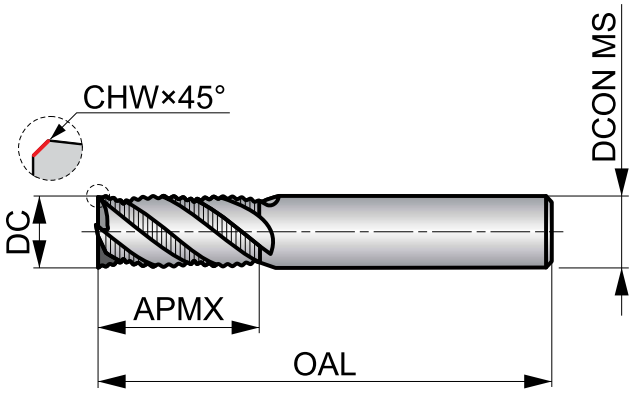
Product	DC (mm)	DC (inch)	CHW (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S7664.0	4.00	.1575	0.10	6.00	11.00	57.0	4	1	6707006
S7665.0	5.00	.1969	0.10	6.00	13.00	57.0	4	1	6707007
S7666.0	6.00	.2362	0.10	6.00	13.00	57.0	4	1	6707008
S7668.0	8.00	.3150	0.20	8.00	20.00	64.0	4	1	6707009
S76610.0	10.00	.3937	0.20	10.00	22.00	72.0	4	1	6707010
S76612.0	12.00	.4724	0.20	12.00	26.00	83.0	4	1	6707011
S76614.0	14.00	.5512	0.30	14.00	26.00	83.0	4	1	6707012
S76616.0	16.00	.6299	0.30	16.00	32.00	92.0	4	1	6707013
S76620.0	20.00	.7874	0.40	20.00	38.00	104.0	4	1	6707014

S765

DORMER

4-Flute Solid Carbide Roughing End Mill, DIN 6535 HA Shank

Short cut length, 4-flute design with 40° helix and differential pitch to reduce vibrations. The NRA profile is designed to break chips for efficient roughing applications. AlCrN coating improves performance and extends the tool life. Also suited for slotting and trochoidal roughing operation.



HM	NRA	NOF 4
	λ 40°	γ 10°
DIN 6535HA	AlCrN	DC h9
	DORMER	

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■692 J	■774 J	■797 J	■591 J	■518 J	■459 J	■479 J	■384 J	■325 J	■282 J	■243 J	■400 J	■338 J	■354 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**
■292 J	■328 J	■282 J	■682 J	■505 J	■381 J	■702 J	■571 J	■456 J	■620 J	■476 J	■384 J	■577 J	■433 J
K4.3	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.2**	**S2.1**	**S3.1**	**S4.1**				
■318 J	■272 l	■226 l	■653 J	■489 J	■381 J	■236 J	■184 l	■138 l	■108 l				

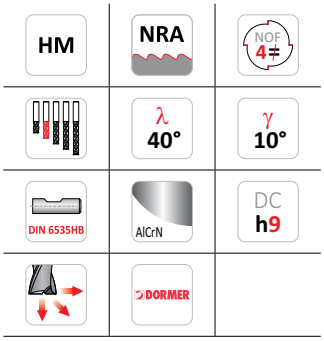
DCON MS tolerance h6; CHW ± 0.02X45° mm.

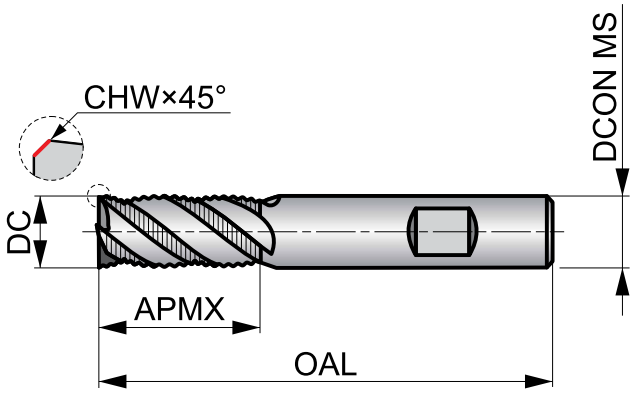
Product	DC (mm)	DC (inch)	CHW (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S7656.0	6.00	.2362	0.10	6.00	16.00	50.0	4	1	6706864
S7658.0	8.00	.3150	0.20	8.00	20.00	64.0	4	1	6706865
S76510.0	10.00	.3937	0.20	10.00	22.00	70.0	4	1	6706866
S76512.0	12.00	.4724	0.20	12.00	26.00	75.0	4	1	6706867
S76514.0	14.00	.5512	0.30	14.00	32.00	90.0	4	1	6706868
S76516.0	16.00	.6299	0.30	16.00	32.00	90.0	4	1	6706869
S76518.0	18.00	.7087	0.30	18.00	38.00	100.0	4	1	6706870
S76520.0	20.00	.7874	0.40	20.00	38.00	100.0	4	1	6706871

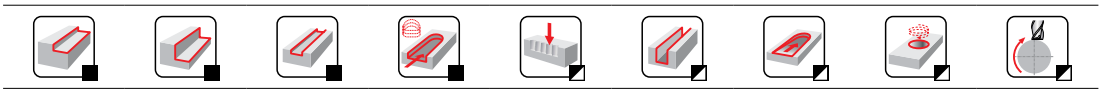
S765HB

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■692 J	■774 J	■797 J	■591 J	■518 J	■459 J	■479 J	■384 J	■325 J	■282 J	■243 J	■400 J	■338 J	■354 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**
■292 J	■328 J	■282 J	■682 J	■505 J	■381 J	■702 J	■571 J	■456 J	■620 J	■476 J	■384 J	■577 J	■433 J
K4.3	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.2**	**S2.1**	**S3.1**	**S4.1**				
■318 J	■272 I	■226 I	■653 J	■489 J	■381 J	■236 J	■184 I	■138 I	■108 I				

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

Product	DC (mm)	DC (inch)	CHW (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S765HB6.0	6.00	.2362	0.10	6.00	16.00	50.0	4	1	8030362
S765HB8.0	8.00	.3150	0.20	8.00	20.00	64.0	4	1	8030363
S765HB10.0	10.00	.3937	0.20	10.00	22.00	70.0	4	1	8030364
S765HB12.0	12.00	.4724	0.20	12.00	26.00	75.0	4	1	8030365
S765HB14.0	14.00	.5512	0.30	14.00	32.00	90.0	4	1	8030366
S765HB16.0	16.00	.6299	0.30	16.00	32.00	90.0	4	1	8030367
S765HB18.0	18.00	.7087	0.30	18.00	38.00	100.0	4	1	8030368
S765HB20.0	20.00	.7874	0.40	20.00	38.00	100.0	4	1	8030369

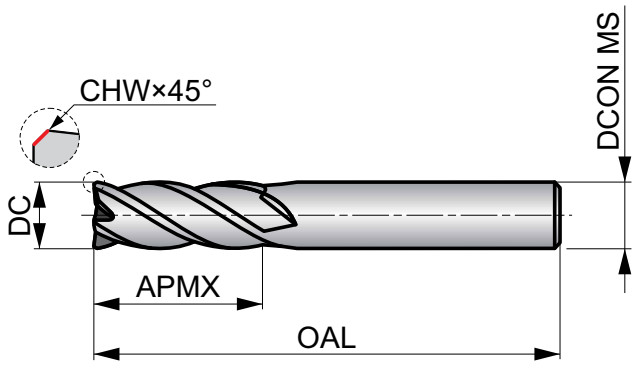
S814HA

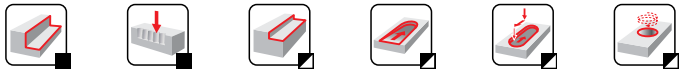
DORMER

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■ 545 J	■ 610 J	■ 630 J	■ 466 J	■ 410 J	■ 364 I	■ 377 J	■ 305 I	■ 256 I	■ 223 I	■ 194 I	◪ 154 I	■ 318 J	■ 266 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**
■ 279 J	■ 233 I	◪ 259 I	◪ 223 I	◪ 200 I	◪ 197 I	■ 545 J	■ 404 J	■ 302 J	■ 558 J	■ 453 J	■ 361 I	■ 492 J	■ 377 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**
■ 305 I	■ 459 I	■ 344 I	■ 253 I	■ 217 I	■ 184 I	■ 522 I	■ 387 I	■ 302 I	◪ 1083 J	◪ 810 J	◪ 545 J	◪ 545 J	◪ 486 J
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**S1.1**	**S1.2**	**S2.1**	**S3.1**	**S4.1**			
◪ 351 J	■ 568 J	■ 331 J	◪ 171 J	◪ 568 J	◪ 220 J	◪ 236 I	◪ 210 I	◪ 161 I	◪ 125 I	◪ 98 I			

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

Product	DC (mm)	DC (inch)	CHW (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S814HA2.0	2.00	.0787	0.00	6.00	7.00	57.0	4	1	5983576
S814HA3.0	3.00	.1181	0.08	6.00	8.00	57.0	4	1	5983585
S814HA4.0	4.00	.1575	0.13	6.00	11.00	57.0	4	1	5983588
S814HA5.0	5.00	.1969	0.13	6.00	13.00	57.0	4	1	5983591
S814HA6.0	6.00	.2362	0.13	6.00	13.00	57.0	4	1	5983594
S814HA8.0	8.00	.3150	0.13	8.00	19.00	63.0	4	1	5983597
S814HA10.0	10.00	.3937	0.20	10.00	22.00	72.0	4	1	5983564
S814HA12.0	12.00	.4724	0.20	12.00	26.00	83.0	4	1	5983570
S814HA16.0	16.00	.6299	0.20	16.00	32.00	92.0	4	1	5983573
S814HA20.0	20.00	.7874	0.30	20.00	38.00	104.0	4	1	5983579
S814HA25.0	25.00	.9843	0.30	25.00	45.00	121.0	4	1	5983582

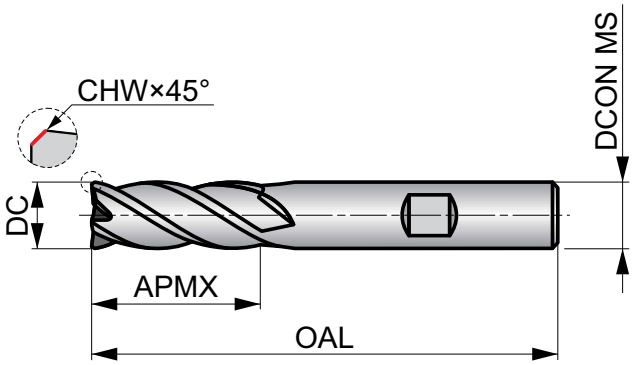
S814HB

DORMER

4-Flute Solid Carbide End Mill, DIN 6535 HB Shank

Short cut length, 4-flute design provides high rigidity for general profile and plunge milling applications. The Weldon shank prevents the end mill from slipping in the toolholder. AlCrN coating improves performance and extends the tool life.

HM	N	NOF 4
	λ 34°	γ 9°
DIN 6535HB	AlCrN	DC h10
	DIN 6527L	



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■ 545 J	■ 610 J	■ 630 J	■ 466 J	■ 410 J	■ 364 I	■ 377 J	■ 305 I	■ 256 I	■ 223 I	■ 194 I	◪ 154 I	■ 318 J	■ 266 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**
■ 279 J	■ 233 I	◪ 259 I	◪ 223 I	◪ 200 I	◪ 197 I	■ 545 J	■ 404 J	■ 302 J	■ 558 J	■ 453 J	■ 361 I	■ 492 J	■ 377 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**
■ 305 I	■ 459 I	■ 344 I	■ 253 I	■ 217 I	■ 184 I	■ 522 I	■ 387 I	■ 302 I	◪ 1083 J	◪ 810 J	◪ 545 J	◪ 545 J	◪ 486 J
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**S1.1**	**S1.2**	**S2.1**	**S3.1**	**S4.1**			
◪ 351 J	■ 568 J	■ 331 J	◪ 171 J	◪ 568 J	◪ 220 J	◪ 236 I	◪ 210 I	◪ 161 I	◪ 125 I	◪ 98 I			

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

Product	DC (mm)	DC (inch)	CHW (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S814HB2.0	2.00	.0787	0.00	6.00	7.00	57.0	4	1	5983612
S814HB3.0	3.00	.1181	0.08	6.00	8.00	57.0	4	1	5983621
S814HB4.0	4.00	.1575	0.13	6.00	11.00	57.0	4	1	5983624
S814HB5.0	5.00	.1969	0.13	6.00	13.00	57.0	4	1	5983627
S814HB6.0	6.00	.2362	0.13	6.00	13.00	57.0	4	1	5983630
S814HB8.0	8.00	.3150	0.13	8.00	19.00	63.0	4	1	5983635
S814HB10.0	10.00	.3937	0.20	10.00	22.00	72.0	4	1	5983604
S814HB12.0	12.00	.4724	0.20	12.00	26.00	83.0	4	1	5983607
S814HB16.0	16.00	.6299	0.20	16.00	32.00	92.0	4	1	5983609
S814HB20.0	20.00	.7874	0.30	20.00	38.00	104.0	4	1	5983615
S814HB25.0	25.00	.9843	0.30	25.00	45.00	121.0	4	1	5983618

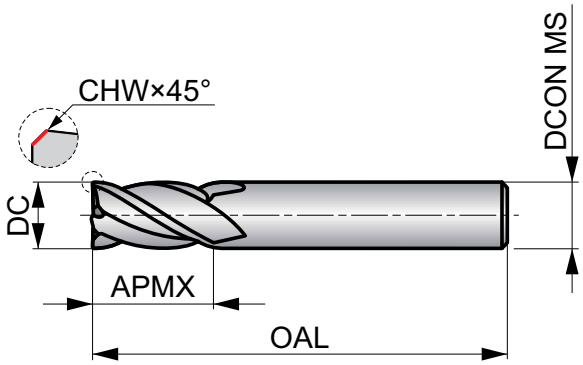
S804HA

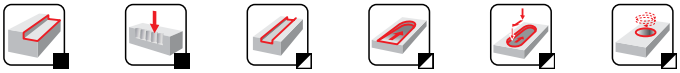
DORMER

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■676 J	■755 J	■781 J	■577 J	■509 J	■449 I	■469 J	■374 I	■318 I	■276 I	■236 I	■190 I	■397 J	■335 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**
■351 J	■292 I	◪246 I	■325 I	■279 I	◪249 I	◪246 I	◪207 I	■673 J	■499 J	■374 J	■689 J	■561 J	■449 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**
■610 J	■469 J	■377 I	■568 I	■430 I	■312 I	■269 I	■223 I	■643 I	■482 I	■374 I	◪1339 J	◪1007 J	◪676 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**	
◪676 J	◪604 J	◪433 J	■705 J	■410 J	◪210 J	◪705 J	◪272 J	◪266 I	◪233 I	◪180 I	◪135 I	◪105 I	

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

Product	DC (mm)	DC (inch)	CHW (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S804HA2.0	2.00	.0787	–	6.00	4.00	50.0	4	1	5982579
S804HA3.0	3.00	.1181	0.08	6.00	5.00	50.0	4	1	5982584
S804HA4.0	4.00	.1575	0.13	6.00	8.00	54.0	4	1	5982586
S804HA5.0	5.00	.1969	0.13	6.00	9.00	54.0	4	1	5982588
S804HA6.0	6.00	.2362	0.13	6.00	10.00	54.0	4	1	5982592
S804HA8.0	8.00	.3150	0.13	8.00	12.00	58.0	4	1	5982594
S804HA10.0	10.00	.3937	0.20	10.00	14.00	66.0	4	1	5982575
S804HA12.0	12.00	.4724	0.20	12.00	16.00	73.0	4	1	5982577
S804HA16.0	16.00	.6299	0.20	16.00	22.00	82.0	4	1	5982578
S804HA20.0	20.00	.7874	0.30	20.00	26.00	92.0	4	1	5982581
S804HA25.0	25.00	.9843	0.30	25.00	32.00	121.0	4	1	5982582

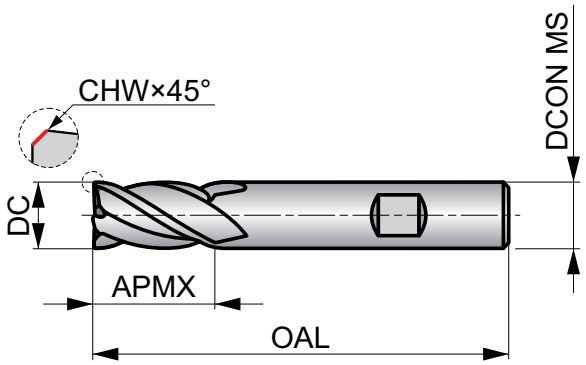
S804HB

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■676 J	■755 J	■781 J	■577 J	■509 J	■449 I	■469 J	■374 I	■318 I	■276 I	■236 I	■190 I	■397 J	■335 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**
■351 J	■292 I	◪246 I	■325 I	■279 I	◪249 I	◪246 I	◪207 I	■673 J	■499 J	■374 J	■689 J	■561 J	■449 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**
■610 J	■469 J	■377 I	■568 I	■430 I	■312 I	■269 I	■223 I	■643 I	■482 I	■374 I	◪1339 J	◪1007 J	◪676 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**	
◪676 J	◪604 J	◪433 J	■705 J	■410 J	◪210 J	◪705 J	◪272 J	◪266 I	◪233 I	◪180 I	◪135 I	◪105 I	

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

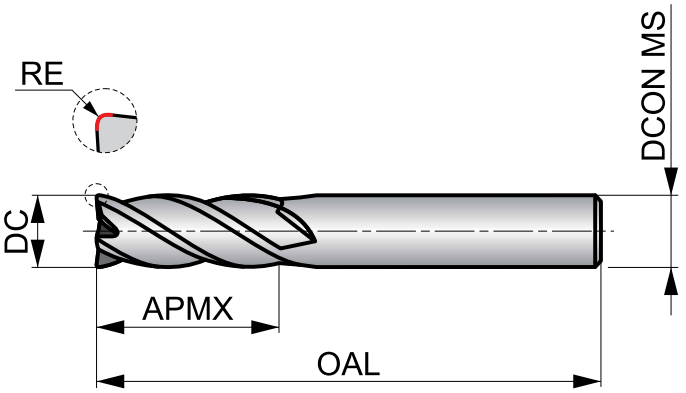
Product	DC (mm)	DC (inch)	CHW (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S804HB2.0	2.00	.0787	–	6.00	4.00	50.0	4	1	5983550
S804HB3.0	3.00	.1181	0.08	6.00	5.00	50.0	4	1	5983622
S804HB4.0	4.00	.1575	0.13	6.00	8.00	54.0	4	1	5983625
S804HB5.0	5.00	.1969	0.13	6.00	9.00	54.0	4	1	5983628
S804HB6.0	6.00	.2362	0.13	6.00	10.00	54.0	4	1	5983632
S804HB8.0	8.00	.3150	0.13	8.00	12.00	58.0	4	1	5983500
S804HB10.0	10.00	.3937	0.20	10.00	14.00	66.0	4	1	5982598
S804HB12.0	12.00	.4724	0.20	12.00	16.00	73.0	4	1	5983499
S804HB16.0	16.00	.6299	0.20	16.00	22.00	82.0	4	1	5983519
S804HB20.0	20.00	.7874	0.30	20.00	26.00	92.0	4	1	5983584
S804HB25.0	25.00	.9843	0.30	25.00	32.00	121.0	4	1	5983616

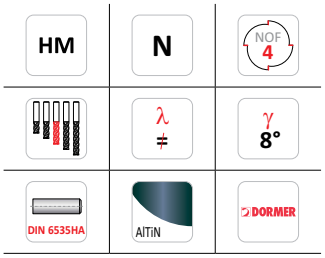
S223HA

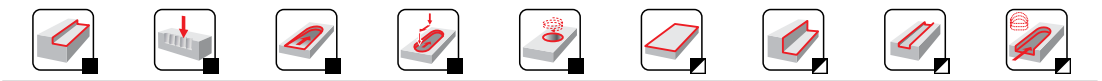
DORMER

4-Flute Solid Carbide End Mill HA Shank

Regular length, 4-flute design with unequal helix and corner radius to reduce vibrations and improve surface finish. ALTiN coating increases surface hardness, improves tool life allows higher metal removal rates. Excellent for milling tough alloys and hardened steels.







Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■696 J	■778 J	■801 J	■594 J	■522 J	■463 I	■482 J	■387 I	■328 I	■285 I	■243 I	■197 I	■489 J	■413 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**
■433 J	■358 I	■302 I	■400 I	■344 I	■308 I	■302 I	■256 I	■771 J	■571 J	■430 J	■794 J	■646 J	■515 I
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.1**	**S1.2**	**S1.3**
■702 J	■538 J	■433 I	■650 I	■492 I	■361 I	■308 I	■256 I	■735 I	■554 I	■430 I	■522 I	■463 I	■387 I
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**	
■358 I	■315 I	■269 I	■223 I	■210 I	■180 I	■348 I	■207 G	◪177 E	■230 G	■187 G	◪148 E	◪125 B	

Product	DC (inch)	DC (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	RE (inch)	NOF	Pack Qty	MID
S223HA1/8XR.015	1/8	.1250	1/8	3/8	1.1/2	.0150	4	1	7648675
S223HA1/8XR.030	1/8	.1250	1/8	3/8	1.1/2	.0300	4	1	7648676
S223HA3/16XR.015	3/16	.1875	3/16	7/16	2"	.0150	4	1	7648677
S223HA3/16XR.030	3/16	.1875	3/16	7/16	2"	.0300	4	1	7648678
S223HA1/4XR.015	1/4	.2500	1/4	5/8	2.1/2	.0150	4	1	7648679
S223HA1/4XR.030	1/4	.2500	1/4	5/8	2.1/2	.0300	4	1	7648680
S223HA5/16XR.015	5/16	.3125	5/16	1/2	2"	.0150	4	1	7648681
S223HA5/16XR.030	5/16	.3125	5/16	1/2	2"	.0300	4	1	7648682
S223HA3/8XR.015	3/8	.3750	3/8	7/8	2.1/2	.0150	4	1	7648683
S223HA3/8XR.030	3/8	.3750	3/8	7/8	2.1/2	.0300	4	1	7648684
S223HA7/16XR.020	7/16	.4375	7/16	5/8	2.1/2	.0200	4	1	7648685
S223HA1/2XR.030	1/2	.5000	1/2	1.1/4	3"	.0300	4	1	7648687
S223HA1/2XR.060	1/2	.5000	1/2	1.1/4	3"	.0600	4	1	7648688
S223HA9/16XR.045	9/16	.5625	9/16	1.1/8	3.1/2	.0450	4	1	7648689
S223HA5/8XR.060	5/8	.6250	5/8	1.1/4	3.1/2	.0600	4	1	7648691
S223HA5/8XR.090 [1]	5/8	.6250	5/8	2.1/4	5"	.0900	4	1	7648692
S223HA3/4XR.030	3/4	.7500	3/4	1.1/2	4"	.0300	4	1	7648693
S223HA3/4XR.060	3/4	.7500	3/4	1.1/2	4"	.0600	4	1	7648694
S223HA1XR.030 [1]	1"	1.0000	1"	2.1/4	5"	.0300	4	1	7648695

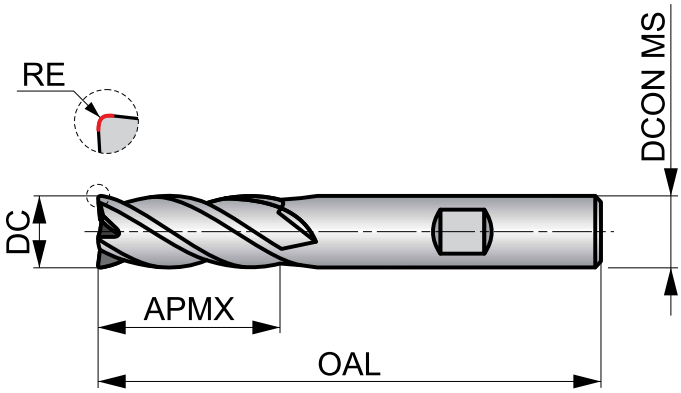
[1] Will require a reduction of 30% - 60% in cutting speed.

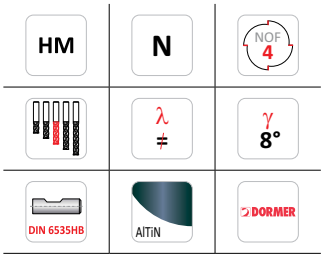
S223HB

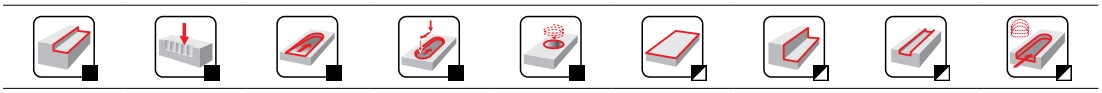
DORMER

4-Flute Solid Carbide End Mill HB Shank

Regular length, 4-flute design , Weldon shank with unequal helix and corner radius to reduce vibrations and improve surface finish. ALTiN coating increases surface hardness, improves tool life allows higher metal removal rates. Excellent for milling tough alloys and hardened steels.







Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■696 J	■778 J	■801 J	■594 J	■522 J	■463 I	■482 J	■387 I	■328 I	■285 I	■243 I	■197 I	■489 J	■413 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**
■433 J	■358 I	■302 I	■400 I	■344 I	■308 I	■302 I	■256 I	■771 J	■571 J	■430 J	■794 J	■646 J	■515 I
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.1**	**S1.2**	**S1.3**
■702 J	■538 J	■433 I	■650 I	■492 I	■361 I	■308 I	■256 I	■735 I	■554 I	■430 I	■522 I	■463 I	■387 I
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**	
■358 I	■315 I	■269 I	■223 I	■210 I	■180 I	■348 I	■207 G	◪177 E	■230 G	■187 G	◪148 E	◪125 B	

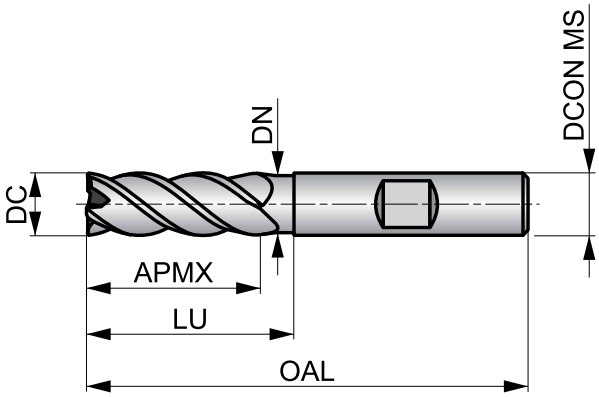
Product	DC (inch)	DC (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	RE (inch)	NOF	Pack Qty	MID
S223HB1/8XR.015	1/8	.1250	1/8	3/8	1.1/2	.0150	4	1	7648697
S223HB3/16XR.015	3/16	.1875	3/16	7/16	2″	.0150	4	1	7648699
S223HB3/16XR.030	3/16	.1875	3/16	7/16	2″	.0300	4	1	7648700
S223HB1/4XR.015	1/4	.2500	1/4	5/8	2.1/2	.0150	4	1	7648701
S223HB1/4XR.030	1/4	.2500	1/4	5/8	2.1/2	.0300	4	1	7648702
S223HB5/16XR.015	5/16	.3125	5/16	1/2	2″	.0150	4	1	7648703
S223HB5/16XR.030	5/16	.3125	5/16	1/2	2″	.0300	4	1	7648704
S223HB3/8XR.015	3/8	.3750	3/8	7/8	2.1/2	.0150	4	1	7648705
S223HB3/8XR.030	3/8	.3750	3/8	7/8	2.1/2	.0300	4	1	7648706
S223HB7/16XR.020	7/16	.4375	7/16	5/8	2.1/2	.0200	4	1	7648707
S223HB1/2XR.030	1/2	.5000	1/2	1.1/4	3″	.0300	4	1	7648709
S223HB1/2XR.060	1/2	.5000	1/2	1.1/4	3″	.0600	4	1	7648710
S223HB5/8XR.090 [1]	5/8	.6250	5/8	2.1/4	5″	.0900	4	1	7648714
S223HB3/4XR.030	3/4	.7500	3/4	1.1/2	4″	.0300	4	1	7648715
S223HB3/4XR.060	3/4	.7500	3/4	1.1/2	4″	.0600	4	1	7648716
S223HB1XR.030 [1]	1″	1.0000	1″	2.1/4	5″	.0300	4	1	7648717

[1] Will require a reduction of 30% - 60% in cutting speed.

S722HB

4-Flute Solid Carbide End Mill

Medium cut length, 4-flute design with 40° helix, differential pitch and Weldon shank provides high rigidity for profile milling deep walls. Neck recess to avoid work contact with the wall and extend reach. AlCrN coating improves performance and extends the tool life.



HM	N	NOF 4
	λ 40°	γ 7°
DIN 6535HB	AlCrN	DC h9
	DORMER	

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■653 J	■732 J	■755 J	■558 J	■492 J	■436 I	■453 J	■364 I	■308 I	■269 I	■230 I	■377 J	■318 J	■335 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**
■276 I	■308 I	■266 I	■643 J	■476 J	■358 J	■663 J	■538 J	■430 I	■584 J	■446 J	■361 I	■541 I	■410 I
K4.3	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.2**	**S2.1**	**S3.1**	**S4.1**				
■299 I	■256 I	■213 I	■614 I	■463 I	■358 I	■226 I	■174 I	■131 I	■102 I				

DCON MS tolerance h6; RE ±0.02 mm.

Product	DC (mm)	DC (inch)	RE (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
S722HB3.0	3.00	.1181	0.10	6.00	9.00	50.0	4	15.00	2.80	1	8030351
S722HB4.0	4.00	.1575	0.10	6.00	11.00	57.0	4	20.00	3.70	1	8030352
S722HB5.0	5.00	.1969	0.10	6.00	13.00	57.0	4	20.00	4.60	1	8030353
S722HB6.0	6.00	.2362	0.10	6.00	20.00	60.0	4	25.00	5.50	1	8030354
S722HB8.0	8.00	.3150	0.20	8.00	20.00	64.0	4	26.00	7.40	1	8030355
S722HB10.0	10.00	.3937	0.20	10.00	27.00	70.0	4	32.00	9.20	1	8030356
S722HB12.0	12.00	.4724	0.20	12.00	26.00	83.0	4	37.00	11.00	1	8030357
S722HB14.0	14.00	.5512	0.20	14.00	26.00	83.0	4	37.00	13.00	1	8030358
S722HB16.0	16.00	.6299	0.20	16.00	32.00	92.0	4	42.00	15.00	1	8030359
S722HB18.0	18.00	.7087	0.20	18.00	32.00	92.0	4	42.00	17.00	1	8030360
S722HB20.0	20.00	.7874	0.20	20.00	38.00	104.0	4	50.00	19.00	1	8030361

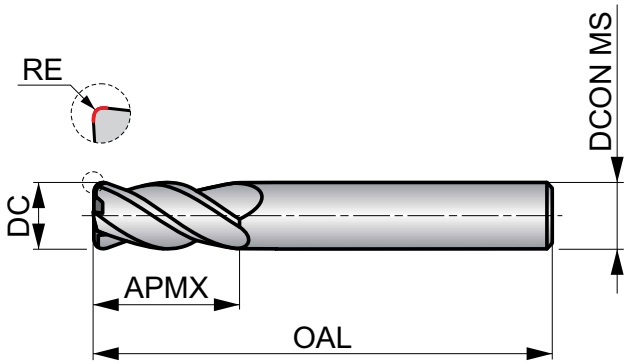
S767

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■692 J	■774 J	■797 J	■591 J	■518 J	■459 I	■479 J	■384 I	■325 I	■282 I	■243 I	■400 J	■338 J	■354 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**
■292 I	■328 I	■282 I	■682 J	■505 J	■381 J	■702 J	■571 J	■456 I	■620 J	■476 J	■384 I	■577 I	■433 I
K4.3	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.2**	**S2.1**	**S3.1**	**S4.1**				
■318 I	■272 I	■226 I	■653 I	■489 I	■381 I	■236 I	■184 I	■138 I	■108 I				

DCON MS tolerance h6; RE ±0.01 mm.

Product	DC (mm)	DC (inch)	RE (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S7674.0XR0.3	4.00	.1575	0.30	6.00	11.00	57.0	4	1	6707015
S7674.0XR0.5	4.00	.1575	0.50	6.00	11.00	57.0	4	1	6707016
S7675.0XR0.3	5.00	.1969	0.30	6.00	13.00	57.0	4	1	6707017
S7675.0XR0.5	5.00	.1969	0.50	6.00	13.00	57.0	4	1	6707018
S7676.0XR0.3	6.00	.2362	0.30	6.00	13.00	57.0	4	1	6707019
S7676.0XR0.5	6.00	.2362	0.50	6.00	13.00	57.0	4	1	6707020
S7676.0XR1.0	6.00	.2362	1.00	6.00	13.00	57.0	4	1	6707021
S7678.0XR0.3	8.00	.3150	0.30	8.00	20.00	64.0	4	1	6707022
S7678.0XR0.5	8.00	.3150	0.50	8.00	20.00	64.0	4	1	6707023
S7678.0XR1.0	8.00	.3150	1.00	8.00	20.00	64.0	4	1	6707024
S76710.0XR0.3	10.00	.3937	0.30	10.00	22.00	72.0	4	1	6707025
S76710.0XR0.5	10.00	.3937	0.50	10.00	22.00	72.0	4	1	6707026
S76710.0XR1.0	10.00	.3937	1.00	10.00	22.00	72.0	4	1	6707027
S76712.0XR0.3	12.00	.4724	0.30	12.00	26.00	83.0	4	1	6707028
S76712.0XR0.5	12.00	.4724	0.50	12.00	26.00	83.0	4	1	6707029
S76712.0XR1.0	12.00	.4724	1.00	12.00	26.00	83.0	4	1	6707030
S76712.0XR2.0	12.00	.4724	2.00	12.00	26.00	83.0	4	1	6707031
S76716.0XR0.3	16.00	.6299	0.30	16.00	32.00	92.0	4	1	6707032
S76716.0XR0.5	16.00	.6299	0.50	16.00	32.00	92.0	4	1	6707033
S76716.0XR1.0	16.00	.6299	1.00	16.00	32.00	92.0	4	1	6707034
S76716.0XR2.0	16.00	.6299	2.00	16.00	32.00	92.0	4	1	6707035
S76720.0XR0.3	20.00	.7874	0.30	20.00	38.00	104.0	4	1	6707036
S76720.0XR0.5	20.00	.7874	0.50	20.00	38.00	104.0	4	1	6707037

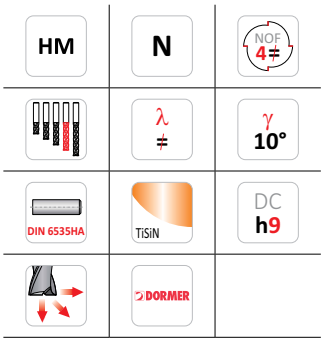
Product	DC (mm)	DC (inch)	RE (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S76720.0XR1.0	20.00	.7874	1.00	20.00	38.00	104.0	4	1	6707038
S76720.0XR2.0	20.00	.7874	2.00	20.00	38.00	104.0	4	1	6707039

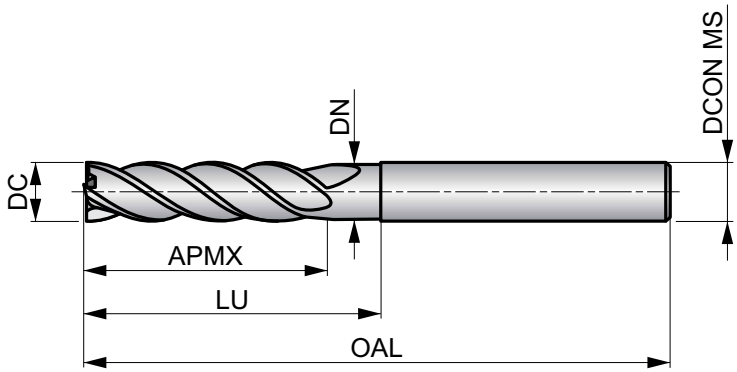
S768

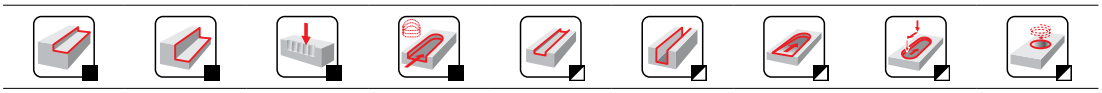
DORMER

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.







Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■486 I	■541 I	■558 I	■413 I	■364 I	■322 G	■335 I	■269 G	■226 G	■197 G	■171 G	■279 I	■236 I	■249 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**
■203 I	■230 I	■197 I	■479 I	■354 I	■266 I	■492 I	■400 I	■318 G	■433 I	■335 I	■269 G	■404 G	■302 G
K4.3	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.2**	**S2.1**	**S3.1**	**S4.1**				
■223 G	■190 I	■157 I	■456 G	■341 G	■266 G	■164 I	■128 G	■95 G	■75 G				

DCON MS tolerance h6; RE ±0.01 mm.

Product	DC (mm)	DC (inch)	RE (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
S7684.0	4.00	.1575	0.10	6.00	19.00	75.0	4	32.00	3.70	1	8030343
S7685.0	5.00	.1969	0.10	6.00	19.00	75.0	4	32.00	4.60	1	8030344
S7686.0	6.00	.2362	0.10	6.00	25.00	75.0	4	32.00	5.50	1	8030345
S7688.0	8.00	.3150	0.20	8.00	30.00	75.0	4	38.00	7.40	1	8030346
S76810.0	10.00	.3937	0.20	10.00	40.00	100.0	4	50.00	9.20	1	8030347
S76812.0	12.00	.4724	0.30	12.00	45.00	100.0	4	55.00	11.00	1	8030348
S76816.0	16.00	.6299	0.30	16.00	65.00	125.0	4	75.00	15.00	1	8030349
S76820.0	20.00	.7874	0.30	20.00	65.00	125.0	4	75.00	19.00	1	8030350

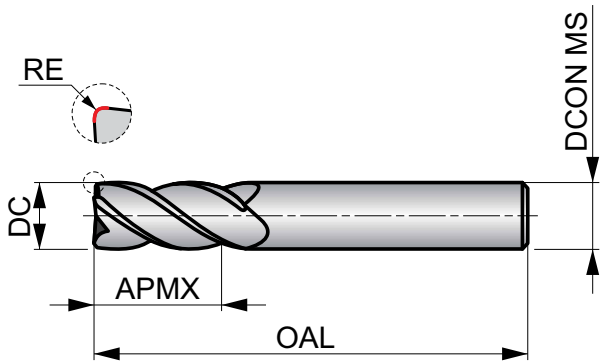
S763

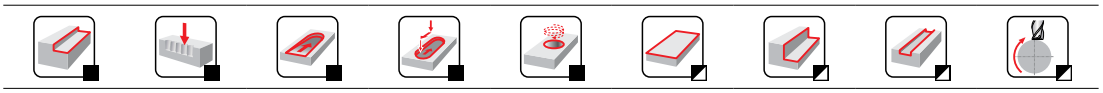
DORMER

4-Flute Solid Carbide Corner Radius End Mill

Short cut length, 4-flute design with different corner radius available, 40° helix with differential pitch to reduce vibrations and improve surface finish, when milling contours where a corner radius is required. AlCrN coating improves performance. Also suited for plunging, ramping, z-level roughing and helical interpolation.

HM	N	NOF 4
	λ 40°	γ 10°
DIN 6535HA	AlCrN	DC h9
	DORMER	





Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■692 J	■774 J	■797 J	■591 J	■518 J	■459 I	■479 J	■384 I	■325 I	■282 I	■243 I	■400 J	■338 J	■354 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**
■292 I	■328 I	■282 I	■682 J	■505 J	■381 J	■702 J	■571 J	■456 I	■620 J	■476 J	■384 I	■577 I	■433 I
K4.3	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.2**	**S2.1**	**S3.1**	**S4.1**				
■318 I	■272 I	■226 I	■653 I	■489 I	■381 I	■236 I	■184 I	■138 I	■108 I				

DCON MS tolerance h6; RE ±0.01 mm.

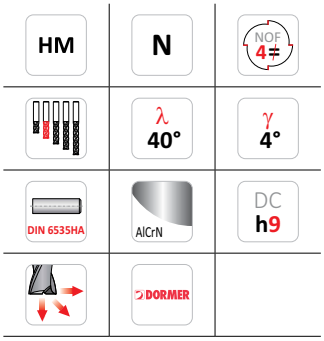
Product	DC (mm)	DC (inch)	RE (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S7633.0XR0.3	3.00	.1181	0.30	3.00	9.00	40.0	4	1	6706843
S7634.0XR0.3	4.00	.1575	0.30	4.00	12.00	50.0	4	1	6706844
S7634.0XR0.5	4.00	.1575	0.50	4.00	12.00	50.0	4	1	6706845
S7635.0XR0.3	5.00	.1969	0.30	5.00	15.00	50.0	4	1	6706846
S7635.0XR0.5	5.00	.1969	0.50	5.00	15.00	50.0	4	1	6706847
S7636.0XR0.5	6.00	.2362	0.50	6.00	16.00	50.0	4	1	6706848
S7636.0XR1.0	6.00	.2362	1.00	6.00	16.00	50.0	4	1	6706849
S7638.0XR0.5	8.00	.3150	0.50	8.00	20.00	64.0	4	1	6706850
S7638.0XR1.0	8.00	.3150	1.00	8.00	20.00	64.0	4	1	6706851
S76310.0XR0.5	10.00	.3937	0.50	10.00	22.00	70.0	4	1	6706852
S76310.0XR1.0	10.00	.3937	1.00	10.00	22.00	70.0	4	1	6706853
S76310.0XR2.0	10.00	.3937	2.00	10.00	22.00	70.0	4	1	6706854
S76312.0XR1.0	12.00	.4724	1.00	12.00	25.00	75.0	4	1	6706856
S76312.0XR2.0	12.00	.4724	2.00	12.00	25.00	75.0	4	1	6706857
S76312.0XR3.0	12.00	.4724	3.00	12.00	25.00	75.0	4	1	6706855
S76314.0XR1.5	14.00	.5512	1.50	14.00	32.00	90.0	4	1	6706858
S76316.0XR1.0	16.00	.6299	1.00	16.00	32.00	90.0	4	1	6706861
S76316.0XR2.0	16.00	.6299	2.00	16.00	32.00	90.0	4	1	6706859
S76316.0XR3.0	16.00	.6299	3.00	16.00	32.00	90.0	4	1	6706860
S76318.0XR2.0	18.00	.7087	2.00	18.00	38.00	100.0	4	1	6706862
S76320.0XR3.0	20.00	.7874	3.00	20.00	38.00	100.0	4	1	6706863

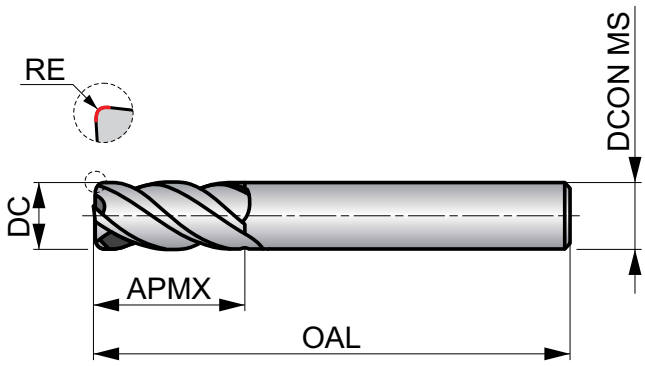
S262

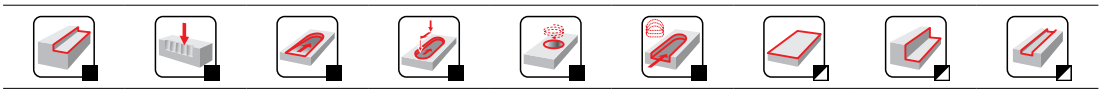
DORMER

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■318 J	■318 J	■325 I	■318 I	■272 I	■230 I	■184 I	■131 I	■105 I	■587 I	■348 G	■387 G	■318 G

DCON MS tolerance h6; RE ±0.01 mm.

Product	DC (mm)	DC (inch)	RE (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S2623.0XR0.3	3.00	.1181	0.30	6.00	9.00	50.0	4	1	6706924
S2623.0XR0.5	3.00	.1181	0.50	6.00	9.00	50.0	4	1	6706925
S2624.0XR0.3	4.00	.1575	0.30	6.00	12.00	57.0	4	1	6706926
S2624.0XR0.5	4.00	.1575	0.50	6.00	12.00	57.0	4	1	6706927
S2624.0XR1.0	4.00	.1575	1.00	6.00	12.00	57.0	4	1	6706928
S2625.0XR0.3	5.00	.1969	0.30	6.00	15.00	57.0	4	1	6706929
S2625.0XR0.5	5.00	.1969	0.50	6.00	15.00	57.0	4	1	6706930
S2626.0XR0.3	6.00	.2362	0.30	6.00	16.00	57.0	4	1	6706931
S2626.0XR0.5	6.00	.2362	0.50	6.00	16.00	57.0	4	1	6706932
S2626.0XR1.0	6.00	.2362	1.00	6.00	16.00	57.0	4	1	6706933
S2628.0XR0.3	8.00	.3150	0.30	8.00	20.00	64.0	4	1	6706934
S2628.0XR0.5	8.00	.3150	0.50	8.00	20.00	64.0	4	1	6706935
S2628.0XR1.0	8.00	.3150	1.00	8.00	20.00	64.0	4	1	6706936
S2628.0XR1.5	8.00	.3150	1.50	8.00	20.00	64.0	4	1	6706937
S2628.0XR2.0	8.00	.3150	2.00	8.00	20.00	64.0	4	1	6706938
S26210.0XR0.3	10.00	.3937	0.30	10.00	22.00	72.0	4	1	6706939
S26210.0XR0.5	10.00	.3937	0.50	10.00	22.00	72.0	4	1	6706940
S26210.0XR1.0	10.00	.3937	1.00	10.00	22.00	72.0	4	1	6706941
S26210.0XR1.5	10.00	.3937	1.50	10.00	22.00	72.0	4	1	6706942
S26210.0XR2.0	10.00	.3937	2.00	10.00	22.00	72.0	4	1	6706943
S26212.0XR0.3	12.00	.4724	0.30	12.00	26.00	83.0	4	1	6706944
S26212.0XR0.5	12.00	.4724	0.50	12.00	26.00	83.0	4	1	6706945
S26212.0XR1.0	12.00	.4724	1.00	12.00	26.00	83.0	4	1	6706946
S26212.0XR2.0	12.00	.4724	2.00	12.00	26.00	83.0	4	1	6706947
S26212.0XR2.5	12.00	.4724	2.50	12.00	26.00	83.0	4	1	6706948

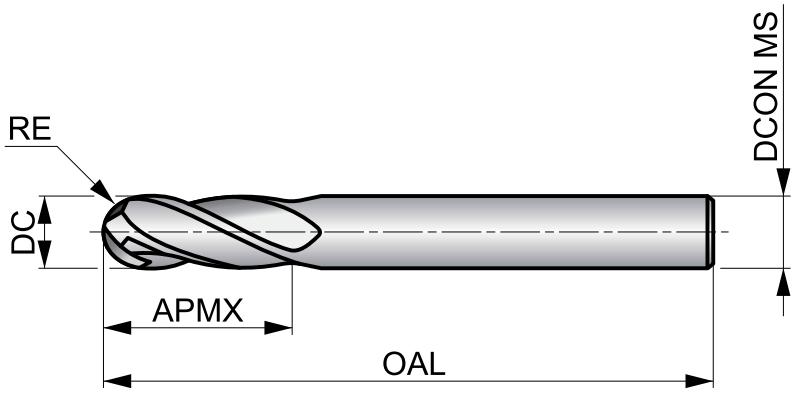
Product	DC (mm)	DC (inch)	RE (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S26212.0XR3.0	12.00	.4724	3.00	12.00	26.00	83.0	4	1	6706949
S26214.0XR0.3	14.00	.5512	0.30	14.00	32.00	83.0	4	1	6706950
S26214.0XR0.5	14.00	.5512	0.50	14.00	32.00	83.0	4	1	6706951
S26214.0XR1.0	14.00	.5512	1.00	14.00	32.00	83.0	4	1	6706952
S26214.0XR2.0	14.00	.5512	2.00	14.00	32.00	83.0	4	1	6706953
S26214.0XR3.0	14.00	.5512	3.00	14.00	32.00	83.0	4	1	6706954
S26216.0XR0.3	16.00	.6299	0.30	16.00	32.00	92.0	4	1	6706955
S26216.0XR0.5	16.00	.6299	0.50	16.00	32.00	92.0	4	1	6706956
S26216.0XR1.0	16.00	.6299	1.00	16.00	32.00	92.0	4	1	6706957
S26216.0XR2.0	16.00	.6299	2.00	16.00	32.00	92.0	4	1	6706958
S26216.0XR2.5	16.00	.6299	2.50	16.00	32.00	92.0	4	1	6706959
S26216.0XR3.0	16.00	.6299	3.00	16.00	32.00	92.0	4	1	6706960
S26216.0XR4.0	16.00	.6299	4.00	16.00	32.00	92.0	4	1	6706961
S26218.0XR0.3	18.00	.7087	0.30	18.00	38.00	92.0	4	1	6706962
S26218.0XR0.5	18.00	.7087	0.50	18.00	38.00	92.0	4	1	6706963
S26218.0XR1.0	18.00	.7087	1.00	18.00	38.00	92.0	4	1	6706964
S26218.0XR2.0	18.00	.7087	2.00	18.00	38.00	92.0	4	1	6706965
S26218.0XR3.0	18.00	.7087	3.00	18.00	38.00	92.0	4	1	6706966
S26220.0XR0.3	20.00	.7874	0.30	20.00	38.00	104.0	4	1	6706967
S26220.0XR0.5	20.00	.7874	0.50	20.00	38.00	104.0	4	1	6706968
S26220.0XR1.0	20.00	.7874	1.00	20.00	38.00	104.0	4	1	6706969
S26220.0XR2.0	20.00	.7874	2.00	20.00	38.00	104.0	4	1	6706970
S26220.0XR2.5	20.00	.7874	2.50	20.00	38.00	104.0	4	1	6706971
S26220.0XR3.0	20.00	.7874	3.00	20.00	38.00	104.0	4	1	6706972
S26220.0XR4.0	20.00	.7874	4.00	20.00	38.00	104.0	4	1	6706973

S138

DORMER

4-Flute Solid Carbide Ball Nosed End Mill

Regular length, 4-flute design with 30° helix, ball nosed geometry is designed for contouring of complex surfaces. Bright finish, improves chip flow in soft and non-ferrous materials.



HM	N	NOF 4
	λ 30°	γ 10°
	Bright	DORMER

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■ 295 E	■ 331 E	■ 344 E	■ 253 E	■ 223 E	■ 197 E	■ 236 E	■ 190 E	■ 161 E	■ 141 E	■ 121 E	◪ 98 E	■ 276 E	■ 233 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**
■ 246 E	■ 200 E	■ 167 E	■ 164 E	■ 141 E	■ 128 D	■ 108 D	■ 92 D	■ 374 E	◪ 276 E	◪ 207 E	■ 390 E	■ 318 E	◪ 253 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**
■ 348 E	■ 266 E	◪ 213 E	■ 322 E	■ 243 E	◪ 177 E	◪ 151 D	◪ 128 D	■ 364 E	■ 272 E	◪ 210 E	◪ 1499 F	◪ 1125 F	◪ 751 F
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**								
◪ 1001 E	◪ 899 E	◪ 650 E	■ 843 E	■ 499 E	■ 249 E								

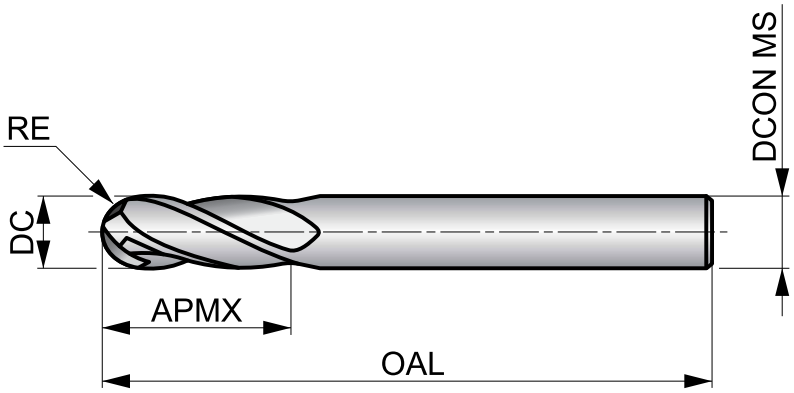
Product	DC (inch)	DC (inch)	RE (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	NOF	Pack Qty	MID
S1381/16	1/16	.0625	1/32	1/8	1/4	1.1/2	4	1	7648845
S1383/32	3/32	.0938	3/64	1/8	3/8	1.1/2	4	1	7648846
S1381/8	1/8	.1250	1/16	1/8	1/2	1.1/2	4	1	7648847
S1385/32	5/32	.1563	5/64	3/16	9/16	2″	4	1	7648848
S1383/16	3/16	.1875	3/32	3/16	5/8	2″	4	1	7648849
S1381/4	1/4	.2500	1/8	1/4	3/4	2.1/2	4	1	7648850
S1385/16	5/16	.3125	5/32	5/16	7/8	2.1/2	4	1	7648851
S1383/8	3/8	.3750	3/16	3/8	7/8	2.1/2	4	1	7648852
S1387/16	7/16	.4375	7/32	7/16	1″	2.1/2	4	1	7648853
S1381/2	1/2	.5000	1/4	1/2	1″	3″	4	1	7648854
S1385/8	5/8	.6250	5/16	5/8	1.1/4	3.1/2	4	1	7648855
S1383/4	3/4	.7500	3/8	3/4	1.1/2	4″	4	1	7648856

S238

DORMER

4-Flute Solid Carbide Ball Nosed End Mill

Regular length, 4-flute design with 30° helix, ball nosed geometry is designed for highefficiency contouring of complex surfaces. ALTiN coating increases surface hardness,improves chip flow and tool life allowing higher metal removal rates.



HM	N	NOF 4
	λ 30°	γ 10°
	TiAlN	DORMER

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■ 397 E	■ 443 E	■ 459 E	■ 338 E	■ 299 E	■ 262 E	■ 338 E	■ 272 E	■ 230 E	■ 203 E	■ 171 E	■ 141 E	■ 446 E	■ 377 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**
■ 397 E	■ 325 E	■ 272 E	■ 259 E	■ 223 E	■ 200 D	■ 174 D	■ 151 D	■ 551 E	■ 407 E	■ 305 E	■ 646 E	■ 525 E	■ 417 E
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.1**	**S1.2**	**S1.3**
■ 571 E	■ 436 E	■ 354 E	■ 528 E	■ 400 E	■ 292 E	■ 249 D	■ 210 D	■ 600 E	■ 449 E	■ 348 E	◪ 230 E	◪ 200 E	◪ 190 D
S2.1	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**								
◪ 213 D	◪ 138 D	◪ 161 D	◪ 98 D	◪ 125 D	◪ 79 D								

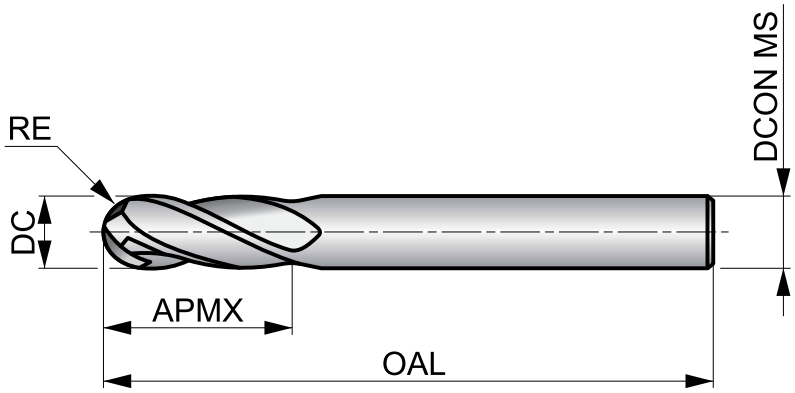
Product	DC (inch)	DC (inch)	RE (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	NOF	Pack Qty	MID
S2381/16	1/16	.0625	1/32	1/8	1/4	1.1/2	4	1	7648857
S2383/32	3/32	.0938	3/64	1/8	3/8	1.1/2	4	1	7648858
S2381/8	1/8	.1250	1/16	1/8	1/2	1.1/2	4	1	7648859
S2385/32	5/32	.1563	5/64	3/16	9/16	2"	4	1	7648860
S2383/16	3/16	.1875	3/32	3/16	5/8	2"	4	1	7648861
S2381/4	1/4	.2500	1/8	1/4	3/4	2.1/2	4	1	7648862
S2385/16	5/16	.3125	5/32	5/16	7/8	2.1/2	4	1	7648863
S2383/8	3/8	.3750	3/16	3/8	7/8	2.1/2	4	1	7648864
S2387/16	7/16	.4375	7/32	7/16	1"	2.1/2	4	1	7648865
S2381/2	1/2	.5000	1/4	1/2	1"	3"	4	1	7648866
S2385/8	5/8	.6250	5/16	5/8	1.1/4	3.1/2	4	1	7648867
S2383/4	3/4	.7500	3/8	3/4	1.1/2	4"	4	1	7648868

S139

DORMER

4-Flute Solid Carbide Metric Ball Nosed End Mill

Regular length, 4-flute design with 30° helix in metric sizes, ball nosed geometry is designed for contouring of complex surfaces. Bright finish, improves chip flow in soft and non-ferrous materials.



HM	N	NOF 4
	λ 30°	γ 10°
	Bright	DORMER

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■ 295 E	■ 331 E	■ 344 E	■ 253 E	■ 223 E	■ 197 E	■ 236 E	■ 190 E	■ 161 E	■ 141 E	■ 121 E	◪ 98 E	■ 276 E	■ 233 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**
■ 246 E	■ 200 E	■ 167 E	■ 164 E	■ 141 E	■ 128 D	■ 108 D	■ 92 D	■ 374 E	◪ 276 E	◪ 207 E	■ 390 E	■ 318 E	◪ 253 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**
■ 348 E	■ 266 E	◪ 213 E	■ 322 E	■ 243 E	◪ 177 E	◪ 151 D	◪ 128 D	■ 364 E	■ 272 E	◪ 210 E	◪ 1499 F	◪ 1125 F	◪ 751 F
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**								
◪ 1001 E	◪ 899 E	◪ 650 E	■ 843 E	■ 499 E	■ 249 E								

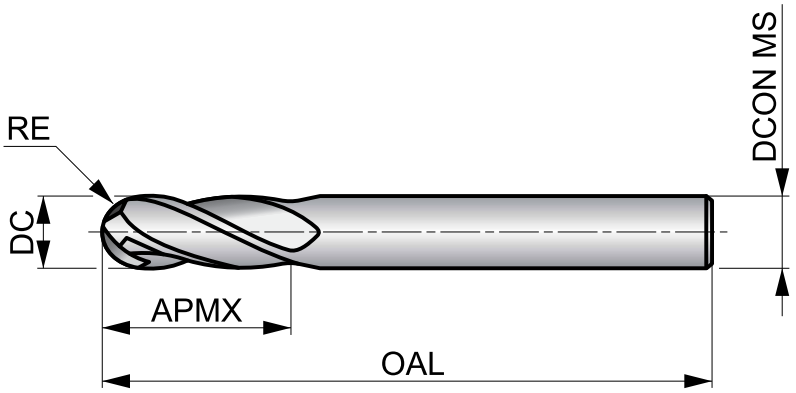
Product	DC (mm)	DC (inch)	RE (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S1392.0	2.00	.0787	1.00	3.00	6.00	38.0	4	1	7648877
S1393.0	3.00	.1181	1.50	3.00	12.00	38.0	4	1	7648876
S1394.0	4.00	.1575	2.00	4.00	14.00	50.0	4	1	7648875
S1394.5	4.50	.1772	2.25	5.00	14.00	50.0	4	1	7648874
S1395.0	5.00	.1969	2.50	5.00	16.00	50.0	4	1	7648873
S1396.0	6.00	.2362	3.00	6.00	19.00	63.0	4	1	7648872
S1398.0	8.00	.3150	4.00	8.00	19.00	63.0	4	1	7648871
S13910.0	10.00	.3937	5.00	10.00	22.00	70.0	4	1	7648870
S13912.0	12.00	.4724	6.00	12.00	25.00	75.0	4	1	7648869

S239

DORMER

4-Flute Solid Carbide Metric Ball Nosed End Mill

Regular length, 4-flute design with 30° helix in metric sizes, ball nosed geometry is designed for high efficiency contouring of complex surfaces. ALTiN coating increases surface hardness, improves chip flow and tool life allowing higher metal removal rates.



HM	N	NOF 4
	λ 30°	γ 10°
	TiAlN	DORMER

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■ 397 E	■ 443 E	■ 459 E	■ 338 E	■ 299 E	■ 262 E	■ 338 E	■ 272 E	■ 230 E	■ 203 E	■ 171 E	■ 141 E	■ 446 E	■ 377 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**
■ 397 E	■ 325 E	■ 272 E	■ 259 E	■ 223 E	■ 200 D	■ 174 D	■ 151 D	■ 551 E	■ 407 E	■ 305 E	■ 646 E	■ 525 E	■ 417 E
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.1**	**S1.2**	**S1.3**
■ 571 E	■ 436 E	■ 354 E	■ 528 E	■ 400 E	■ 292 E	■ 249 D	■ 210 D	■ 600 E	■ 449 E	■ 348 E	◪ 230 E	◪ 200 E	◪ 190 D
S2.1	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**								
◪ 213 D	◪ 138 D	◪ 161 D	◪ 98 D	◪ 125 D	◪ 79 D								

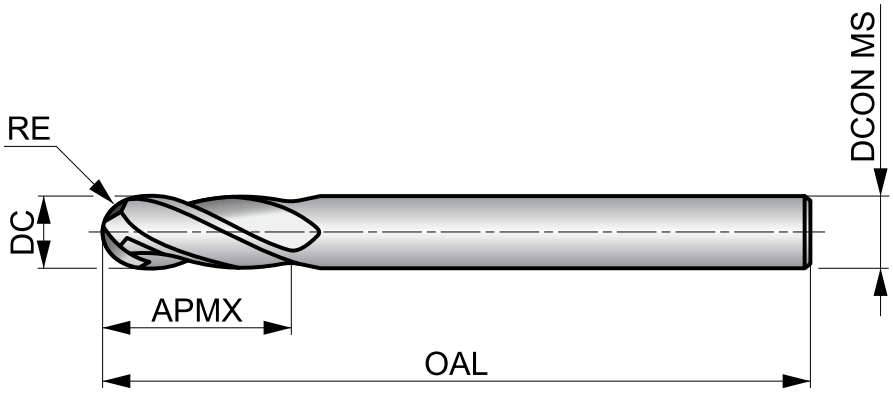
Product	DC (mm)	DC (inch)	RE (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S2392.0	2.00	.0787	1.00	3.00	6.00	38.0	4	1	7648878
S2393.0	3.00	.1181	1.50	3.00	12.00	38.0	4	1	7648879
S2394.0	4.00	.1575	2.00	4.00	14.00	50.0	4	1	7648880
S2395.0	5.00	.1969	2.50	5.00	16.00	50.0	4	1	7648881
S2396.0	6.00	.2362	3.00	6.00	19.00	63.0	4	1	7648882
S2398.0	8.00	.3150	4.00	8.00	19.00	63.0	4	1	7648883
S23910.0	10.00	.3937	5.00	10.00	22.00	70.0	4	1	7648884
S23912.0	12.00	.4724	6.00	12.00	25.00	75.0	4	1	7648885

S146

DORMER

4-Flute Solid Carbide Ball Nosed End Mill

Long length, 4-flute design with 30° helix, ball nosed geometry is designed for contouring of complex surfaces. Bright finish, improves chip flow in soft and non-ferrous materials.



HM	N	NOF 4
	λ 30°	γ 10°
	Bright	DORMER

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■276 E	■308 E	■322 E	■236 E	■207 E	■184 E	■220 E	■177 E	■151 E	■131 E	■112 E	◪92 E	■256 E	■217 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**
■230 E	■187 E	■154 E	■131 E	■118 D	■102 D	■348 E	◪256 E	◪194 E	■364 E	■295 E	◪236 E	■325 E	■246 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**
◪197 E	■299 E	■226 E	◪164 E	◪141 D	◪118 D	■338 E	■253 E	◪197 E	◪1394 F	◪1047 F	◪699 F	◪932 E	◪837 E
N2.3	**N3.1**	**N3.2**	**N3.3**										
◪604 E	■784 E	■463 E	■233 E										

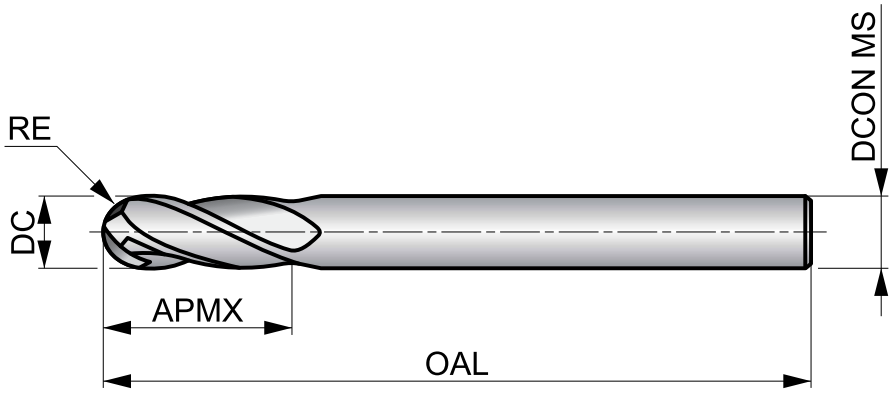
Product	DC (inch)	DC (inch)	RE (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	NOF	Pack Qty	MID
S1461/4	1/4	.2500	1/8	1/4	1.1/8	3"	4	1	7648886
S1463/8	3/8	.3750	3/16	3/8	1.1/8	3"	4	1	7648887
S1461/2	1/2	.5000	1/4	1/2	2"	4"	4	1	7648888
S1465/8	5/8	.6250	5/16	5/8	2.1/4	5"	4	1	7648889

S246

DORMER

4-Flute Solid Carbide Ball Nosed End Mill

Long length, 4-flute design with 30° helix, ball nosed geometry is designed for highefficiency contouring of complex surfaces. ALTiN coating increases surface hardness,improves chip flow and tool life allowing higher metal removal rates.



HM	N	NOF 4
	λ 30°	γ 10°
	TiAlN	DORMER

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■ 371 E	■ 413 E	■ 427 E	■ 315 E	■ 279 E	■ 243 E	■ 315 E	■ 253 E	■ 213 E	■ 190 E	■ 157 E	■ 131 E	■ 413 E	■ 351 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**
■ 371 E	■ 302 E	■ 253 E	■ 240 E	■ 207 E	■ 187 D	■ 161 D	■ 141 D	■ 512 E	■ 377 E	■ 282 E	■ 600 E	■ 489 E	■ 387 E
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.1**	**S1.2**	**S1.3**
■ 531 E	■ 407 E	■ 328 E	■ 492 E	■ 371 E	■ 272 E	■ 233 D	■ 197 D	■ 558 E	■ 417 E	■ 325 E	◪ 213 E	◪ 187 E	◪ 177 D
S2.1	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**								
◪ 197 D	◪ 128 D	◪ 151 D	◪ 92 D	◪ 115 D	◪ 72 D								

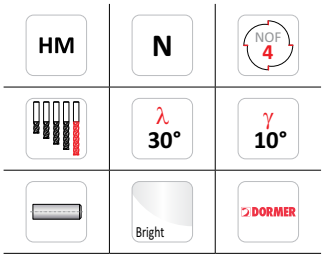
Product	DC (inch)	DC (inch)	RE (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	NOF	Pack Qty	MID
S2461/4	1/4	.2500	1/8	1/4	1.1/8	3″	4	1	7648890
S2463/8	3/8	.3750	3/16	3/8	1.1/8	3″	4	1	7648891
S2461/2	1/2	.5000	1/4	1/2	2″	4″	4	1	7648892
S2465/8	5/8	.6250	5/16	5/8	2.1/4	5″	4	1	7648893

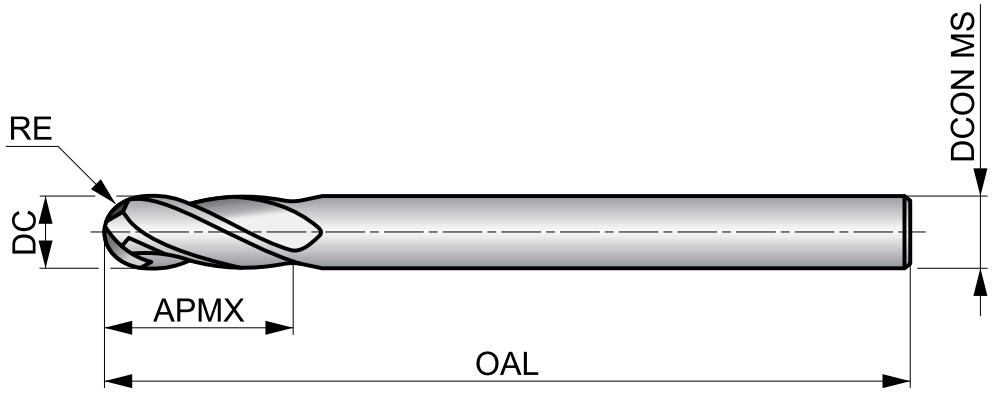
S147

DORMER

4-Flute Solid Carbide Ball Nosed End Mill

Extra-long length, 4-flute design with 30° helix, ball nosed geometry is designed for contouring of complex surfaces. Bright finish, improves chip flow in soft and non-ferrous materials.





Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

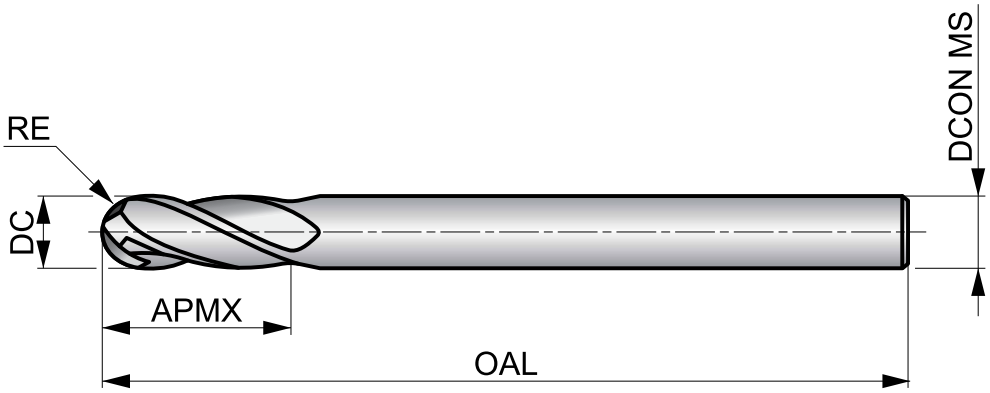
P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 276 E	■ 308 E	■ 322 E	■ 236 E	■ 207 E	■ 184 E	■ 220 E	■ 177 E	■ 151 E	■ 131 E	■ 112 E	◪ 92 E	■ 256 E	■ 217 E
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
■ 230 E	■ 187 E	■ 154 E	■ 131 E	■ 118 D	■ 102 D	■ 348 E	◪ 256 E	◪ 194 E	■ 364 E	■ 295 E	◪ 236 E	■ 325 E	■ 246 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**
◪ 197 E	■ 299 E	■ 226 E	◪ 164 E	◪ 141 D	◪ 118 D	■ 338 E	■ 253 E	◪ 197 E	◪ 1394 F	◪ 1047 F	◪ 699 F	◪ 932 E	◪ 837 E
N2.3	**N3.1**	**N3.2**	**N3.3**										
◪ 604 E	■ 784 E	■ 463 E	■ 233 E										

Product	DC (inch)	DC (inch)	RE (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	NOF	Pack Qty	MID
S1471/8	1/8	.1250	1/16	1/8	1″	3″	4	1	7648894
S1473/16	3/16	.1875	3/32	3/16	1.1/8	3″	4	1	7648895
S1471/4	1/4	.2500	1/8	1/4	1.1/2	4″	4	1	7648896
S1475/16	5/16	.3125	5/32	5/16	1.5/8	4″	4	1	7648897
S1473/8	3/8	.3750	3/16	3/8	1.3/4	4″	4	1	7648898
S1471/2	1/2	.5000	1/4	1/2	3″	6″	4	1	7648899
S1475/8	5/8	.6250	5/16	5/8	3″	6″	4	1	7648900

S247

4-Flute Solid Carbide Ball Nosed End Mill

Extra-long length, 4-flute design with 30° helix, ball nosed geometry is designed for highefficiency contouring of complex surfaces. ALTiN coating increases surface hardness,improves chip flow and tool life allowing higher metal removal rates.



HM	N	NOF 4
	λ 30°	γ 10°
	TiAlN	DORMER

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■ 358 E	■ 400 E	■ 413 E	■ 305 E	■ 269 E	■ 240 E	■ 295 E	■ 236 E	■ 200 E	■ 177 E	■ 148 E	■ 121 E	■ 410 E	■ 348 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**
■ 364 E	■ 299 E	■ 249 E	■ 210 E	■ 180 E	■ 164 D	■ 171 D	■ 148 D	■ 499 E	■ 371 E	■ 276 E	■ 492 E	■ 400 E	■ 318 E
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.1**	**S1.2**	**S1.3**
■ 436 E	■ 331 E	■ 269 E	■ 404 E	■ 305 E	■ 223 E	■ 190 D	■ 161 D	■ 456 E	■ 344 E	■ 266 E	◪ 200 E	◪ 180 E	◪ 174 D
S2.1	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**								
◪ 187 D	◪ 121 D	◪ 141 D	◪ 85 D	◪ 112 D	◪ 69 D								

Product	DC (inch)	DC (inch)	RE (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	NOF	Pack Qty	MID
S2471/8	1/8	.1250	1/16	1/8	1″	3″	4	1	7648901
S2473/16	3/16	.1875	3/32	3/16	1.1/8	3″	4	1	7648902
S2471/4	1/4	.2500	1/8	1/4	1.1/2	4″	4	1	7648903
S2475/16	5/16	.3125	5/32	5/16	1.5/8	4″	4	1	7648904
S2473/8	3/8	.3750	3/16	3/8	1.3/4	4″	4	1	7648905
S2471/2	1/2	.5000	1/4	1/2	3″	6″	4	1	7648906
S2475/8	5/8	.6250	5/16	5/8	3″	6″	4	1	7648907

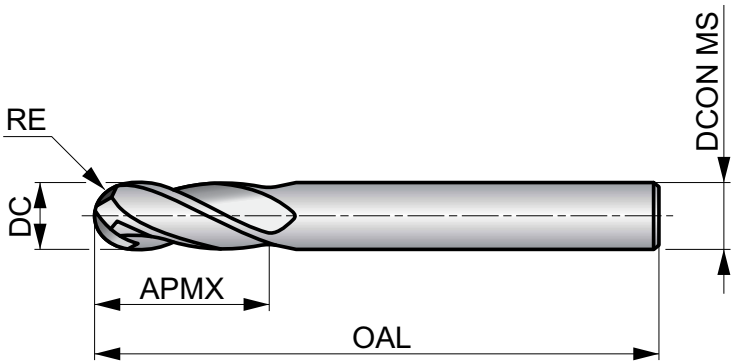
S511

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■ 528 E	■ 594 E	■ 610 E	■ 453 E	■ 397 E	■ 354 E	■ 367 E	■ 295 E	■ 249 E	■ 217 E	■ 187 E	◪ 151 E	■ 308 E	■ 259 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**
■ 272 E	■ 226 E	◪ 253 E	◪ 217 E	◪ 194 D	◪ 190 D	■ 528 E	■ 390 E	■ 292 E	■ 541 E	■ 440 E	■ 351 E	■ 479 E	■ 367 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**
■ 295 E	■ 446 E	■ 335 E	■ 246 E	■ 210 D	■ 177 D	■ 505 E	■ 377 E	■ 292 E	◪ 1165 F	◪ 876 F	◪ 587 F	◪ 587 E	◪ 525 E
N2.3	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**N4.2**	**S1.1**	**S1.2**	**S2.1**	**S3.1**	**S4.1**			
◪ 377 E	■ 614 E	■ 358 E	◪ 184 E	◪ 614 E	◪ 236 E	◪ 413 E	◪ 367 E	◪ 282 D	◪ 213 D	◪ 167 D			

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

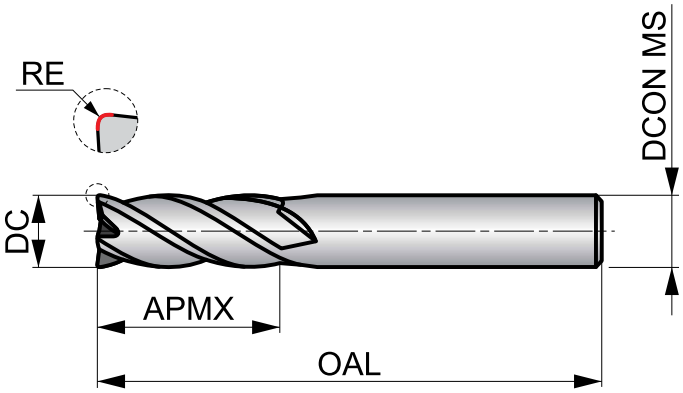
Product	DC (mm)	DC (inch)	RE (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S5113.0	3.00	.1181	1.50	6.00	8.00	80.0	4	1	5982858
S5114.0	4.00	.1575	2.00	6.00	11.00	80.0	4	1	5982864
S5115.0	5.00	.1969	2.50	6.00	13.00	80.0	4	1	5982869
S5116.0	6.00	.2362	3.00	6.00	13.00	80.0	4	1	5982873
S5117.0	7.00	.2756	3.50	8.00	16.00	100.0	4	1	5982878
S5118.0	8.00	.3150	4.00	8.00	19.00	100.0	4	1	5982882
S5119.0	9.00	.3543	4.50	10.00	19.00	100.0	4	1	5982895
S51110.0	10.00	.3937	5.00	10.00	22.00	100.0	4	1	5982845
S51112.0	12.00	.4724	6.00	12.00	26.00	100.0	4	1	5982849
S51116.0	16.00	.6299	8.00	16.00	32.00	100.0	4	1	5982854

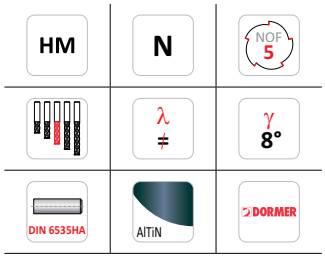
S248HA

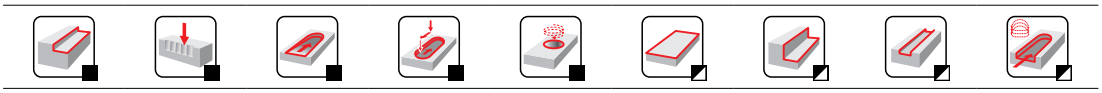
DORMER

5-Flute Solid Carbide End Mill HA Shank

Regular length, 5-flute design with unequal helix and corner radius to reduce vibrations and improve surface finish. ALTiN coating increases surface hardness, improves tool life allows higher metal removal rates. Excellent for milling tough alloys and hardened steels.







Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■696 J	■778 J	■801 J	■594 J	■522 J	■463 I	■482 J	■387 I	■328 I	■285 I	■243 I	■197 I	■489 J	■413 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**
■433 J	■358 I	■302 I	■400 I	■344 I	■308 I	■302 I	■256 I	■456 J	■338 J	■253 J	■469 J	■381 J	■305 I
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.1**	**S1.2**	**S1.3**
■417 J	■318 J	■256 I	■384 I	■292 I	■213 I	■184 I	■151 I	■436 I	■328 I	■253 I	■236 I	■230 I	■197 I
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**	
■184 I	■184 I	■138 I	■131 I	■108 I	■105 I	■673 I	■400 G	◪341 E	■443 G	■364 G	◪282 E	◪240 B	

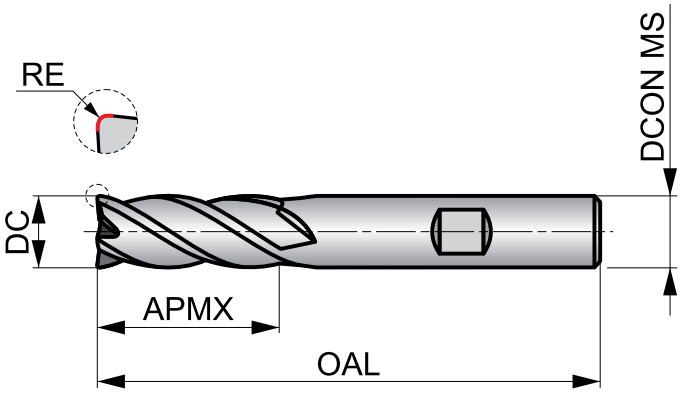
Product	DC (inch)	DC (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	RE (inch)	NOF	Pack Qty	MID
S248HA5/16XR.015	5/16	.3125	5/16	13/16	2.1/2	.0150	5	1	7648908
S248HA5/16XR.030	5/16	.3125	5/16	13/16	2.1/2	.0300	5	1	7648909
S248HA3/8XR.015	3/8	.3750	3/8	7/8	2.1/2	.0150	5	1	7648910
S248HA3/8XR.030	3/8	.3750	3/8	7/8	2.1/2	.0300	5	1	7648911
S248HA1/2X1XR.030	1/2	.5000	1/2	1"	3"	.0300	5	1	7648914
S248HA1/2X1.1/4XR.030	1/2	.5000	1/2	1.1/4	3"	.0300	5	1	7648915
S248HA1/2X1.1/4XR.060	1/2	.5000	1/2	1.1/4	3"	.0600	5	1	7648916
S248HA5/8XR.045	5/8	.6250	5/8	1.1/4	3.1/2	.0450	5	1	7648920
S248HA5/8XR.060	5/8	.6250	5/8	1.1/4	3.1/2	.0600	5	1	7648921
S248HA3/4XR.030	3/4	.7500	3/4	1.1/2	4"	.0300	5	1	7648923
S248HA3/4XR.060	3/4	.7500	3/4	1.1/2	4"	.0600	5	1	7648924

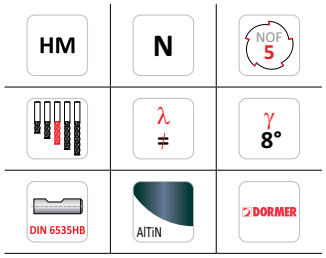
S248HB

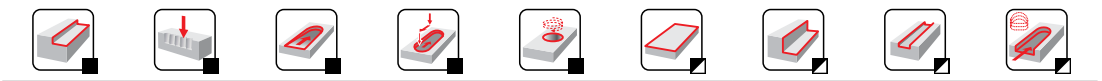
DORMER

5-Flute Solid Carbide End Mill HB Shank

Regular length, 5-flute design , Weldon shank with unequal helix and corner radius to reduce vibrations and improve surface finish. ALTiN coating increases surface hardness, improves tool life allows higher metal removal rates. Excellent for milling tough alloys and hardened steels.







Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■696 J	■778 J	■801 J	■594 J	■522 J	■463 I	■482 J	■387 I	■328 I	■285 I	■243 I	■197 I	■489 J	■413 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**
■433 J	■358 I	■302 I	■400 I	■344 I	■308 I	■302 I	■256 I	■456 J	■338 J	■253 J	■469 J	■381 J	■305 I
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.1**	**S1.2**	**S1.3**
■417 J	■318 J	■256 I	■384 I	■292 I	■213 I	■184 I	■151 I	■436 I	■328 I	■253 I	■236 I	■230 I	■197 I
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**	
■184 I	■184 I	■138 I	■131 I	■108 I	■105 I	■673 I	■400 G	◪341 E	■443 G	■364 G	◪282 E	◪240 B	

Product	DC (inch)	DC (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	RE (inch)	NOF	Pack Qty	MID
S248HB5/16XR.015	5/16	.3125	5/16	13/16	2.1/2	.0150	5	1	7648927
S248HB5/16XR.030	5/16	.3125	5/16	13/16	2.1/2	.0300	5	1	7648928
S248HB3/8XR.015	3/8	.3750	3/8	7/8	2.1/2	.0150	5	1	7648929
S248HB3/8XR.030	3/8	.3750	3/8	7/8	2.1/2	.0300	5	1	7648930
S248HB7/16XR.045	7/16	.4375	7/16	5/8	2.1/2	.0450	5	1	7648932
S248HB1/2X1XR.030	1/2	.5000	1/2	1″	3″	.0300	5	1	7648933
S248HB1/2X1.1/4XR.030	1/2	.5000	1/2	1.1/4	3″	.0300	5	1	7648934
S248HB9/16XR.020	9/16	.5625	9/16	1.1/8	3.1/2	.0200	5	1	7648936
S248HB5/8XR.045	5/8	.6250	5/8	1.1/4	3.1/2	.0450	5	1	7648939
S248HB5/8XR.090	5/8	.6250	5/8	1.1/4	3.1/2	.0900	5	1	7648941
S248HB3/4XR.030	3/4	.7500	3/4	1.1/2	4″	.0300	5	1	7648942
S248HB1XR.030 [1]	1″	1.0000	1″	2.1/4	5″	.0300	5	1	7648944

[1] Will require a reduction of 30% - 60% in cutting speed.

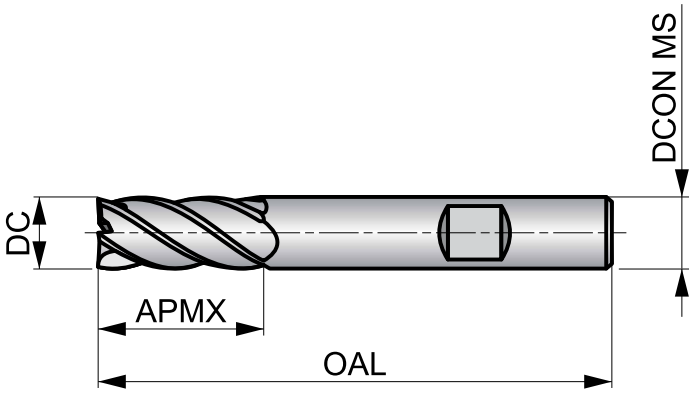
S770HB

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■692 I	■774 I	■797 I	■591 I	■518 I	■459 I	■479 I	■384 I	■325 I	■282 I	■243 I	■400 I	■338 I	■354 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**
■292 I	■328 I	■282 I	■682 I	■505 I	■381 I	■702 I	■571 I	■456 I	■620 I	■476 I	■384 I	■577 I	■433 I
K4.3	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.2**	**S2.1**	**S3.1**	**S4.1**				
■318 I	■272 G	■226 G	■653 I	■489 I	■381 I	■236 I	■184 G	■138 G	■108 G				

DCON MS tolerance h6; RE ±0.01 mm.

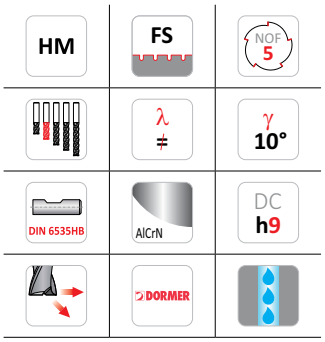
Product	DC (mm)	DC (inch)	RE (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S770HB10.0	10.00	.3937	0.20	10.00	22.00	72.0	5	1	8030386
S770HB12.0	12.00	.4724	0.30	12.00	26.00	83.0	5	1	8030387
S770HB16.0	16.00	.6299	0.30	16.00	32.00	92.0	5	1	8030388
S770HB20.0	20.00	.7874	0.30	20.00	38.00	104.0	5	1	8030389

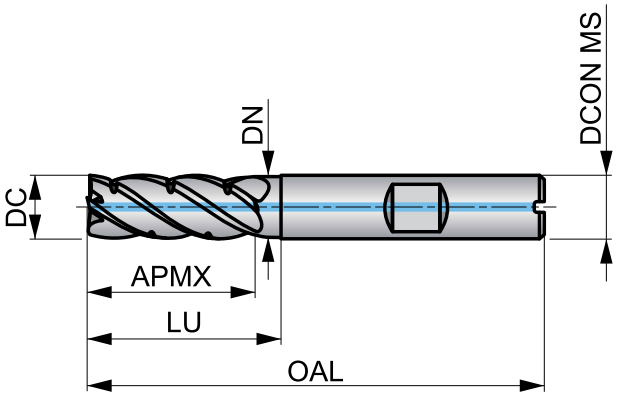
S771HB

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■728 J	■814 J	■837 J	■620 J	■545 J	■482 I	■502 J	■404 I	■341 I	■295 I	■256 I	■420 I	■354 I	■371 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**
■305 I	■344 I	■295 I	■715 J	■531 J	■400 J	■738 J	■600 J	■479 I	■650 J	■499 I	■404 I	■607 I	■456 I
K4.3	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.2**	**S2.1**	**S3.1**	**S4.1**				
■335 I	■285 I	■236 I	■686 I	■512 I	■400 I	■249 I	■194 I	■144 G	■115 G				

DCON MS tolerance h6; RE ±0.01 mm.

Product	DC (mm)	DC (inch)	RE (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
S771HB10.0	10.00	.3937	0.20	10.00	25.00	72.0	5	30.00	9.70	1	8030394
S771HB12.0	12.00	.4724	0.20	12.00	30.00	83.0	5	38.00	11.70	1	8030395
S771HB16.0	16.00	.6299	0.30	16.00	39.00	92.0	5	44.00	15.70	1	8030396
S771HB20.0	20.00	.7874	0.30	20.00	48.00	104.0	5	54.00	19.70	1	8030397

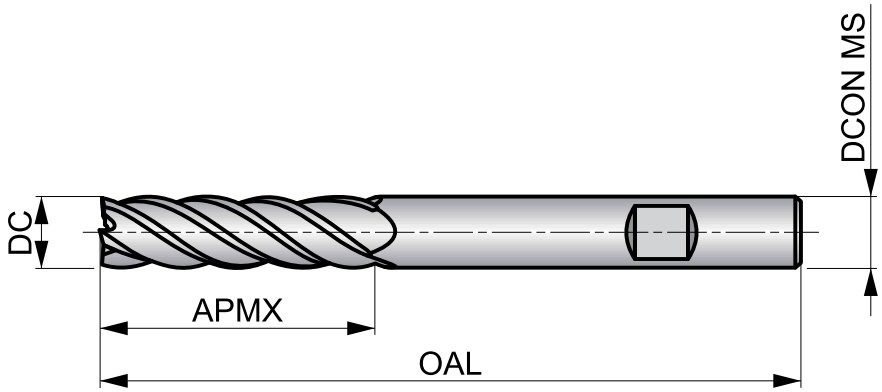
S772HB

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■ 486 G	■ 541 G	■ 558 G	■ 413 G	■ 364 G	■ 322 F	■ 335 G	■ 269 F	■ 226 F	■ 197 F	■ 171 F	■ 279 G	■ 236 G	■ 249 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**
■ 203 G	■ 230 G	■ 197 G	■ 479 G	■ 354 G	■ 266 G	■ 492 G	■ 400 G	■ 318 F	■ 433 G	■ 335 G	■ 269 F	■ 404 F	■ 302 F
K4.3	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.2**	**S2.1**	**S3.1**	**S4.1**				
■ 223 F	■ 190 G	■ 157 G	■ 456 F	■ 341 F	■ 266 F	■ 164 F	■ 128 F	■ 95 F	■ 75 F				

DCON MS tolerance h6; RE ±0.01 mm.

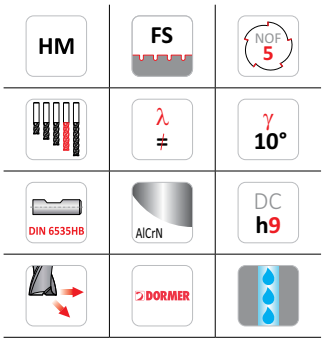
Product	DC (mm)	DC (inch)	RE (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S772HB10.0	10.00	.3937	0.20	10.00	38.00	100.0	5	1	8030390
S772HB12.0	12.00	.4724	0.30	12.00	45.00	100.0	5	1	8030391
S772HB16.0	16.00	.6299	0.30	16.00	55.00	125.0	5	1	8030392
S772HB20.0	20.00	.7874	0.30	20.00	65.00	125.0	5	1	8030393

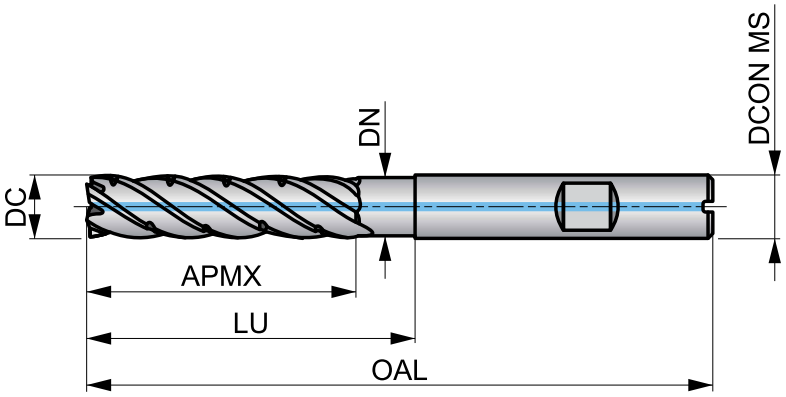
S773HB

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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
■ 509 G	■ 568 G	■ 587 G	■ 433 G	■ 384 G	■ 338 F	■ 351 G	■ 282 F	■ 236 F	■ 207 F	■ 180 F	■ 292 F	■ 249 F	■ 262 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**
■ 213 F	■ 243 F	■ 207 F	■ 502 G	■ 371 G	■ 279 G	■ 518 G	■ 420 G	■ 335 F	■ 456 G	■ 351 G	■ 282 F	■ 423 F	■ 318 F
K4.3	**K4.4**	**K4.5**	**K5.1**	**K5.2**	**K5.3**	**S1.2**	**S2.1**	**S3.1**	**S4.1**				
■ 233 F	■ 200 F	■ 164 F	■ 479 F	■ 358 F	■ 279 F	■ 174 F	■ 135 F	■ 98 F	■ 79 F				

DCON MS tolerance h6; RE ±0.01 mm.

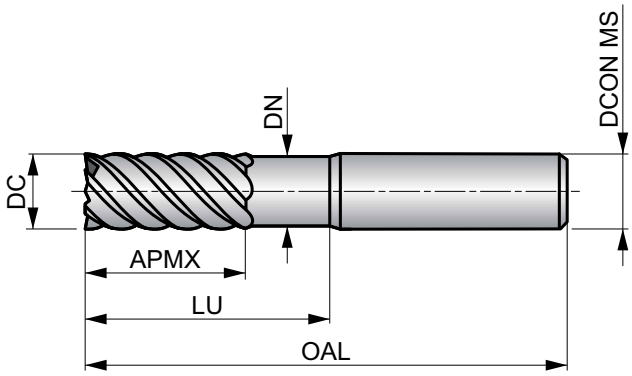
Product	DC (mm)	DC (inch)	RE (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
S773HB10.0	10.00	.3937	0.20	10.00	42.00	100.0	5	52.00	9.70	1	8030398
S773HB12.0	12.00	.4724	0.20	12.00	42.00	100.0	5	54.00	11.70	1	8030399
S773HB16.0	16.00	.6299	0.30	16.00	60.00	125.0	5	68.00	15.70	1	8030400
S773HB20.0	20.00	.7874	0.30	20.00	67.00	125.0	5	75.00	19.70	1	8030401

S225

Multi-Flute Solid Carbide Finishing End Mill

Short cut length, 6 or 8 flute design provides high rigidity for profile finishing of deep walls. Neck recess to avoid work contact with the wall and extend reach. AlTiN coating increases tool life and improves performance when milling difficult to machine materials. The 50° helix is designed for high surface finish quality.

HM	N	NOF 6-8
	λ 50°	γ 3°
DIN 6535HA	AlTiN	DC h9
	DORMER	



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

P4.3	M2.3	M3.3	M4.1	M4.2	S1.3	S2.2	S3.2	S4.2
262 G	262 G	269 F	262 F	223 F	190 F	154 F	108 F	89 F

DCON MS tolerance h6.

Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
S2253.0	3.00	.1181	6.00	8.00	50.0	6	20.00	2.80	1	6706799
S2254.0	4.00	.1575	6.00	11.00	50.0	6	20.00	3.70	1	6706800
S2256.0	6.00	.2362	6.00	15.00	50.0	6	20.00	5.50	1	6706801
S2258.0	8.00	.3150	8.00	20.00	64.0	6	30.00	7.40	1	6706802
S22510.0	10.00	.3937	10.00	22.00	70.0	6	32.00	9.20	1	6706803
S22512.0	12.00	.4724	12.00	25.00	75.0	6	37.00	11.00	1	6706804
S22514.0	14.00	.5512	14.00	30.00	90.0	6	44.00	13.00	1	6706805
S22516.0	16.00	.6299	16.00	30.00	90.0	8	46.00	15.00	1	6706806
S22518.0	18.00	.7087	18.00	35.00	100.0	8	53.00	17.00	1	6706807
S22520.0	20.00	.7874	20.00	38.00	100.0	8	58.00	19.00	1	6706808

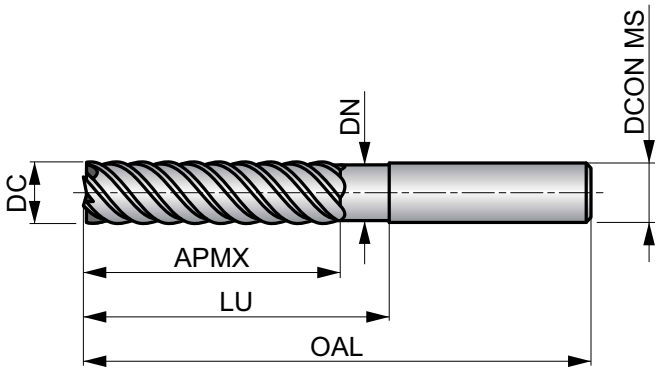
S226

DORMER

Multi-Flute Solid Carbide Finishing End Mill, Long Series

Long cut length, 6 or 8 flute design provides high rigidity for finishing of deeper walls. Neck recess to avoid work contact with the wall and extend reach. AlTiN coating increases service life and improves performance when milling difficult to machine materials. The 50° helix is designed for high surface finish quality.

HM	N	NOF 6-8
	λ 50°	γ 3°
DIN 6535HA	AlTiN	DC h9
	DORMER	



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

P4.3	M2.3	M3.3	M4.1	M4.2	S1.3	S2.2	S3.2	S4.2
■210 G	■210 G	■213 F	■210 F	■177 F	■151 F	■125 F	■85 F	■72 F

DCON MS tolerance h6.

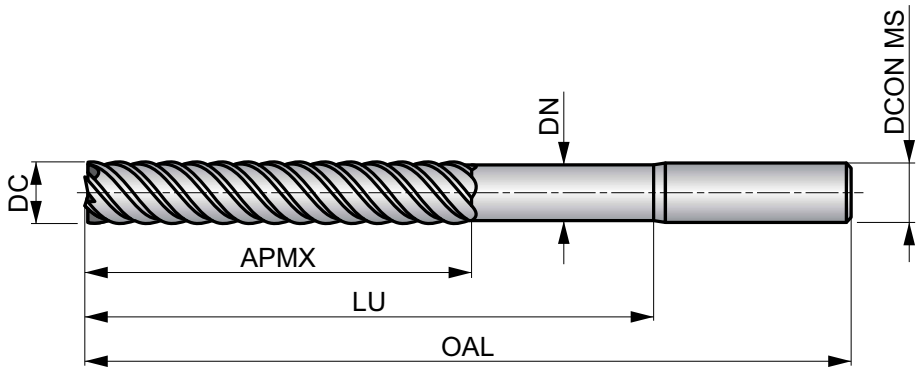
Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
S2263.0	3.00	.1181	6.00	19.00	75.0	6	30.00	2.80	1	6706780
S2264.0	4.00	.1575	6.00	19.00	75.0	6	32.00	3.70	1	6706781
S2266.0	6.00	.2362	6.00	31.00	75.0	6	40.00	5.50	1	6706782
S2268.0	8.00	.3150	8.00	31.00	75.0	6	40.00	7.40	1	6706783
S22610.0	10.00	.3937	10.00	45.00	100.0	6	60.00	9.20	1	6706784
S22612.0	12.00	.4724	12.00	50.00	100.0	6	60.00	11.00	1	6706785
S22614.0	14.00	.5512	14.00	57.00	125.0	6	85.00	13.00	1	6706786
S22616.0	16.00	.6299	16.00	57.00	125.0	8	85.00	15.00	1	6706787
S22618.0	18.00	.7087	18.00	57.00	125.0	8	85.00	17.00	1	6706788
S22620.0	20.00	.7874	20.00	57.00	125.0	8	85.00	19.00	1	6706789

S227

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

P4.3	M2.3	M3.3	M4.1	M4.2	S1.3	S2.2	S3.2	S4.2
131 G	131 G	135 F	131 F	112 F	95 F	79 F	56 F	46 F

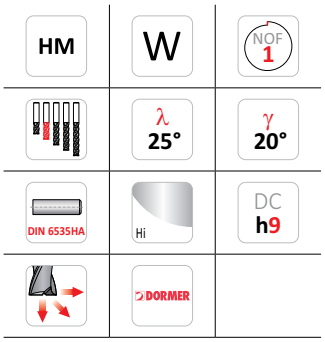
DCON MS tolerance h6.

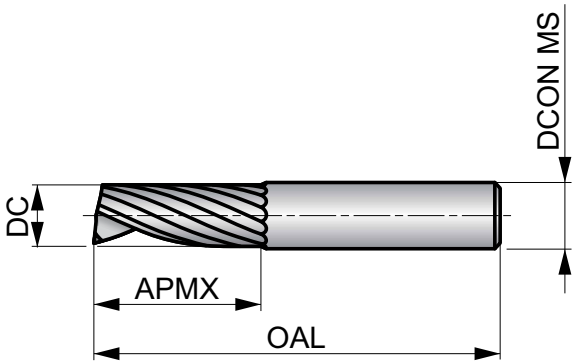
Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
S2276.0	6.00	.2362	6.00	38.00	100.0	6	60.00	5.50	1	6706820
S2278.0	8.00	.3150	8.00	41.00	100.0	6	60.00	7.40	1	6706821
S22710.0	10.00	.3937	10.00	57.00	125.0	6	85.00	9.20	1	6706822
S22712.0	12.00	.4724	12.00	75.00	150.0	6	110.00	11.00	1	6706823
S22714.0	14.00	.5512	14.00	75.00	150.0	6	110.00	13.00	1	6706824
S22716.0	16.00	.6299	16.00	75.00	150.0	8	110.00	15.00	1	6706825
S22718.0	18.00	.7087	18.00	75.00	150.0	8	110.00	17.00	1	6706826
S22720.0	20.00	.7874	20.00	75.00	150.0	8	110.00	19.00	1	6706827

S637

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2
■ 2326 R	■ 1749 R	■ 1171 R	■ 1171 P	■ 1050 P	■ 751 P	■ 1224 P	■ 719 P	■ 367 P	■ 1224 S	■ 472 S

DCON MS tolerance h6.

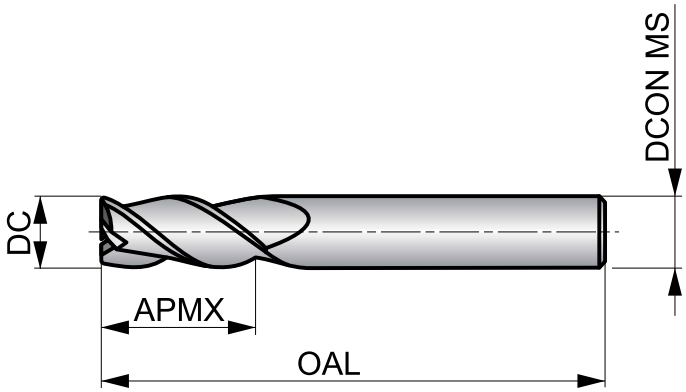
Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S6372.0	2.00	.0787	2.00	10.00	40.0	1	1	6706872
S6373.0	3.00	.1181	3.00	12.00	40.0	1	1	6706873
S6374.0	4.00	.1575	4.00	15.00	50.0	1	1	6706874
S6375.0	5.00	.1969	5.00	16.00	50.0	1	1	6706875
S6376.0	6.00	.2362	6.00	20.00	60.0	1	1	6706876
S6378.0	8.00	.3150	8.00	22.00	63.0	1	1	6706877
S63710.0	10.00	.3937	10.00	25.00	72.0	1	1	6706878
S63712.0	12.00	.4724	12.00	30.00	83.0	1	1	6706879

S106

DORMER

2-Flute Solid Carbide End Mill

Regular length, 2-flute design with 45° helix, double gullet flute design allows for fast, efficient evacuation of chips in soft and non-ferrous materials



HM	W	NOF 2
	λ 45°	γ 8°
	Bright	DORMER

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.2	N3.3	N4.1	N4.2
■ 2326 P	■ 1749 P	■ 1171 P	■ 1171 O	■ 1050 O	■ 751 O	■ 1224 O	■ 719 O	■ 367 O	■ 1224 R	■ 472 R

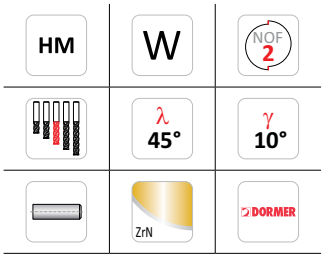
Product	DC (inch)	DC (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	NOF	Pack Qty	MID
S1061/4	1/4	.2500	1/4	1″	2.1/2	2	1	7648490
S1063/8	3/8	.3750	3/8	1″	2.1/2	2	1	7648492
S1061/2	1/2	.5000	1/2	1.1/4	3″	2	1	7648493
S1065/8	5/8	.6250	5/8	1.5/8	3.1/2	2	1	7648494
S1063/4	3/4	.7500	3/4	1.3/4	4″	2	1	7648495

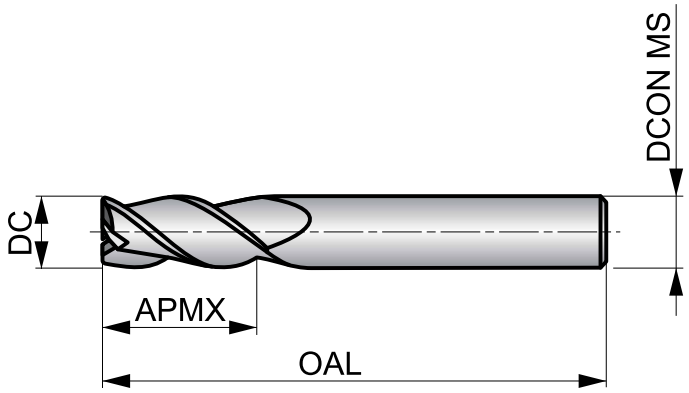
S206

DORMER

2-Flute Solid Carbide End Mill

Regular length, 2-flute design with 45° helix allows for fast, efficient evacuation ofchips. Zirconium coating increases surface hardness, tool life allowing for higher removal rates in soft and non-ferrous materials





Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2
■2326 P	■1749 P	■1171 P	■1171 0	■1050 0	■751 0	■1224 0	■719 0	■367 0	■1224 R	■472 R

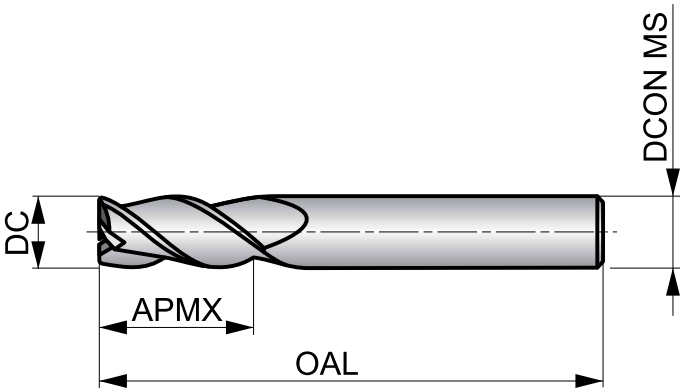
Product	DC (inch)	DC (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	NOF	Pack Qty	MID
S2061/4	1/4	.2500	1/4	1″	2.1/2	2	1	7648497
S2065/16	5/16	.3125	5/16	1″	3″	2	1	7648498
S2063/8	3/8	.3750	3/8	1″	3.1/2	2	1	7648499
S2061/2	1/2	.5000	1/2	1.1/4	3″	2	1	7648500
S2065/8	5/8	.6250	5/8	1.5/8	3.1/2	2	1	7648501
S2063/4	3/4	.7500	3/4	1.3/4	4″	2	1	7648502

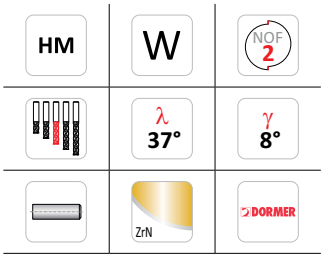
S207

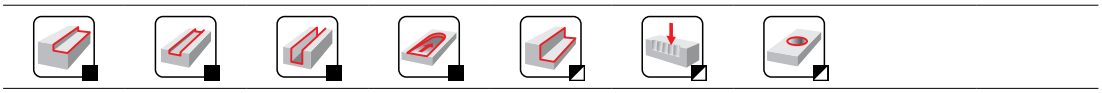
DORMER

2-Flute Solid Carbide End Mill

Regular length, 2-flute design with 37° helix allows for fast, efficient evacuation ofchips. Zirconium coating increases surface hardness, tool life allowing for higher removal rates in soft and non-ferrous materials







Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	N4.3
■ 2093 P	■ 1575 P	■ 1056 P	■ 1056 O	■ 945 O	■ 676 O	■ 1102 O	■ 646 O	■ 331 O	■ 1102 R	■ 427 R	◪ 456 R

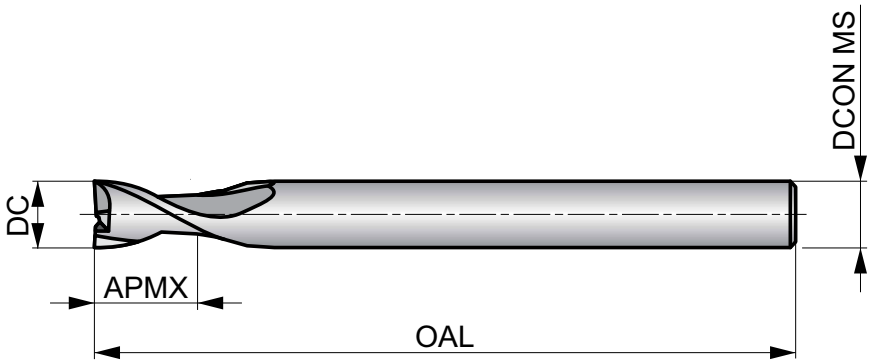
Product	DC (inch)	DC (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	NOF	Pack Qty	MID
S2071/8X1/2	1/8	.1250	1/8	1/2	1.1/2	2	1	7648504
S2071/8X3/4	1/8	.1250	1/8	3/4	2″	2	1	7648505
S2073/16X3/4	3/16	.1875	3/16	3/4	2″	2	1	7648507
S2073/16X1.1/8	3/16	.1875	3/16	1.1/8	3″	2	1	7648508
S2071/4X1	1/4	.2500	1/4	1″	2.1/2	2	1	7648509
S2071/4X1.1/2	1/4	.2500	1/4	1.1/2	4″	2	1	7648510
S2075/16X3/4	5/16	.3125	5/16	3/4	2.1/2	2	1	7648511
S2075/16X1.5/8	5/16	.3125	5/16	1.5/8	4″	2	1	7648512
S2073/8X1	3/8	.3750	3/8	1″	2.1/2	2	1	7648513
S2073/8X2	3/8	.3750	3/8	2″	4″	2	1	7648514
S2077/16X1	7/16	.4375	7/16	1″	2.1/2	2	1	7648515
S2071/2X1	1/2	.5000	1/2	1″	3″	2	1	7648517
S2071/2X3	1/2	.5000	1/2	3″	6″	2	1	7648518
S2079/16X1.1/4	9/16	.5625	9/16	1.1/4	3″	2	1	7648519
S2075/8X1.5/8	5/8	.6250	5/8	1.5/8	3.1/2	2	1	7648520
S2075/8X2.1/4	5/8	.6250	5/8	2.1/4	5″	2	1	7648521
S2073/4X1.3/4	3/4	.7500	3/4	1.3/4	4″	2	1	7648522
S2073/4X3	3/4	.7500	3/4	3″	6″	2	1	7648523

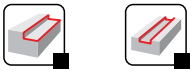
S638

2-Flute Solid Carbide End Mill, Extra Long Reach

Extra short cut length, 2-flute reduced shank provides clearance when machining against deep walls. The S638, with high hook geometry, is designed for high speed machining in non-ferrous materials. Polished surface prevents workpiece material from sticking to the cutting edge.

HM	W	NOF 2
	λ 30°	γ 20°
DIN 6535HA	Hi	DC h9
	DORMER	





Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2
2326 N	1749 N	1171 N	1171 N	1050 N	751 N	1224 N	719 N	367 N	1224 O	472 O

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

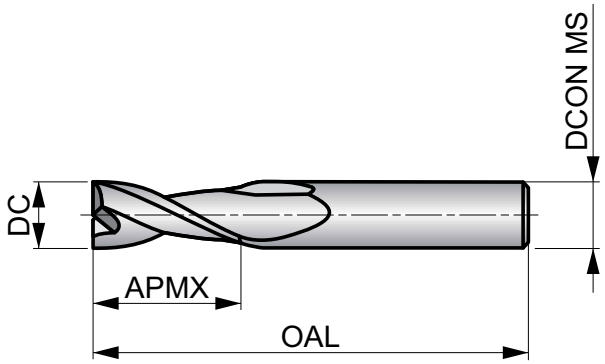
Product	DC (mm)	DC (inch)	RE (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S6386.2	6.20	.2441	0.10	6.00	8.00	100.0	2	1	6706880
S6388.2	8.20	.3228	0.10	8.00	10.00	100.0	2	1	6706881
S63810.3	10.30	.4055	0.10	10.00	14.00	125.0	2	1	6706882
S63812.3	12.30	.4843	0.10	12.00	16.00	125.0	2	1	6706883
S63816.3	16.30	.6417	0.10	16.00	20.00	125.0	2	1	6706884
S63820.3	20.30	.7992	0.10	20.00	25.00	125.0	2	1	6706885

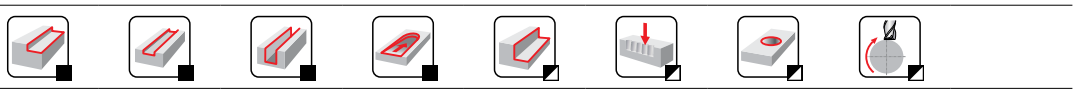
S610

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.

HM	W	NOF 2
	λ 30°	γ 20°
DIN 6535HA	Hi	DC h9
	DORMER	





Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2
2326 P	1749 P	1171 P	1171 0	1050 0	751 0	1224 0	719 0	367 0	1224 R	472 R

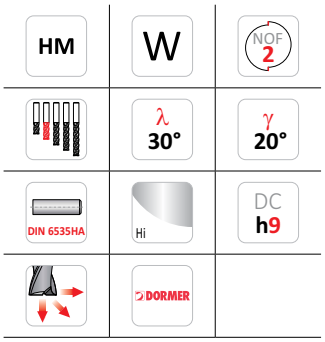
DCON MS tolerance h6; RE ±0.02 mm.

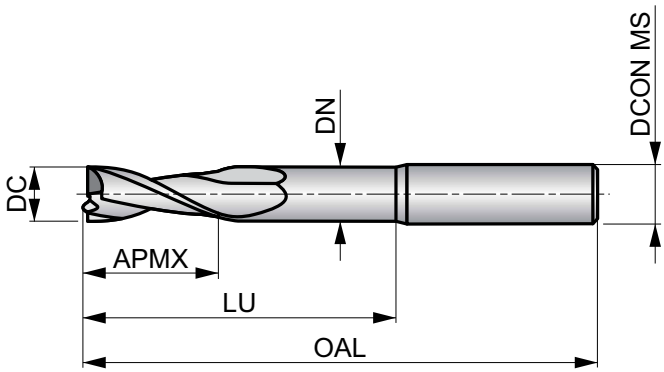
Product	DC (mm)	DC (inch)	RE (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S6102.0	2.00	.0787	0.10	4.00	6.50	40.0	2	1	8030270
S6103.0XD3	3.00	.1181	0.10	3.00	9.00	40.0	2	1	6706592
S6103.0XD6	3.00	.1181	0.10	6.00	9.00	50.0	2	1	6706593
S6104.0XD4	4.00	.1575	0.10	4.00	12.00	50.0	2	1	6706594
S6104.0XD6	4.00	.1575	0.10	6.00	12.00	50.0	2	1	6706595
S6105.0	5.00	.1969	0.10	6.00	15.00	50.0	2	1	6706596
S6106.0	6.00	.2362	0.10	6.00	20.00	50.0	2	1	6706597
S6108.0	8.00	.3150	0.10	8.00	20.00	64.0	2	1	6706598
S61010.0	10.00	.3937	0.10	10.00	22.00	75.0	2	1	6706599
S61012.0	12.00	.4724	0.10	12.00	25.00	75.0	2	1	6706600
S61014.0	14.00	.5512	0.10	14.00	32.00	90.0	2	1	6706601
S61016.0	16.00	.6299	0.10	16.00	32.00	90.0	2	1	6706602
S61020.0	20.00	.7874	0.10	20.00	38.00	100.0	2	1	6706604

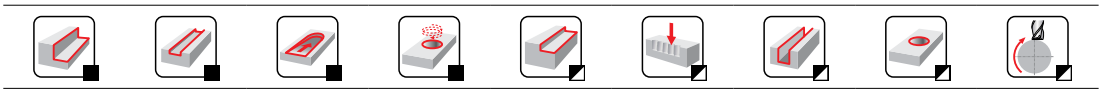
S611

2-Flute Solid Carbide End Mill, Extra Long Reach

Short cut length, 2-flute design with neck recess provides high rigidity for milling and profiling in hard to reach areas. The S611, with high hook geometry, is designed for high performance machining in non-ferrous materials. Polished surface prevents workpiece material from sticking to the cutting edge.







Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2
■ 2093 P	■ 1575 P	■ 1053 P	■ 1053 0	■ 945 0	■ 676 0	■ 1102 0	■ 646 0	■ 331 0	■ 1102 R	■ 427 R

DCON MS tolerance h6; RE ±0.02 mm.

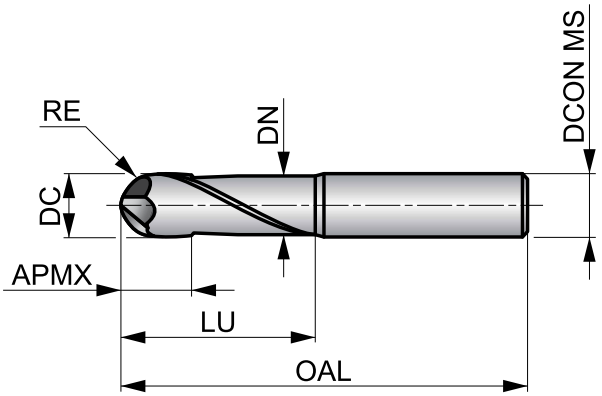
Product	DC (mm)	DC (inch)	RE (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
S6113.0XD3	3.00	.1181	0.10	3.00	9.00	40.0	2	15.00	2.80	1	8030271
S6113.0XD6	3.00	.1181	0.10	6.00	9.00	50.0	2	15.00	2.80	1	8030272
S6114.0XD4	4.00	.1575	0.10	4.00	12.00	50.0	2	20.00	3.70	1	8030273
S6114.0XD6	4.00	.1575	0.10	6.00	12.00	50.0	2	20.00	3.70	1	8030274
S6115.0	5.00	.1969	0.10	6.00	15.00	50.0	2	20.00	4.60	1	8030275
S6116.0	6.00	.2362	0.10	6.00	16.00	80.0	2	40.00	5.50	1	6706584
S6118.0	8.00	.3150	0.10	8.00	20.00	80.0	2	40.00	7.40	1	6706585
S61110.0	10.00	.3937	0.10	10.00	22.00	100.0	2	60.00	9.20	1	6706586
S61112.0	12.00	.4724	0.10	12.00	25.00	100.0	2	60.00	11.00	1	6706587
S61114.0	14.00	.5512	0.10	14.00	32.00	125.0	2	75.00	13.00	1	6706588
S61116.0	16.00	.6299	0.10	16.00	32.00	125.0	2	75.00	15.00	1	6706589
S61120.0	20.00	.7874	0.10	20.00	38.00	125.0	2	75.00	19.00	1	6706591

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2
2326 N	1749 N	1171 N	1171 N	1050 N	751 N	1224 N	719 N	367 N	1224 O	472 O

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

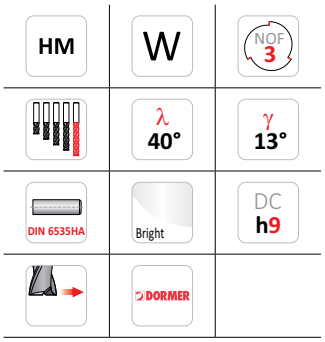
Product	DC (mm)	DC (inch)	RE (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
S6291.0 [1]	1.00	.0394	0.50	4.00	0.80	50.0	2	10.00	0.90	1	8030276
S6291.5 [1]	1.50	.0591	0.75	4.00	1.20	50.0	2	12.00	1.40	1	8030277
S6292.0 [1]	2.00	.0787	1.00	4.00	1.60	60.0	2	18.00	1.90	1	8030278
S6293.0	3.00	.1181	1.50	6.00	5.00	57.0	2	20.00	2.80	1	6706530
S6294.0	4.00	.1575	2.00	6.00	6.00	57.0	2	20.00	3.70	1	6706531
S6295.0	5.00	.1969	2.50	6.00	7.00	57.0	2	20.00	4.60	1	6706532
S6296.0	6.00	.2362	3.00	6.00	8.00	57.0	2	20.00	5.50	1	6706533
S6298.0	8.00	.3150	4.00	8.00	10.00	64.0	2	25.00	7.40	1	6706534
S62910.0	10.00	.3937	5.00	10.00	12.00	75.0	2	35.00	9.20	1	6706535
S62912.0	12.00	.4724	6.00	12.00	14.00	75.0	2	35.00	11.00	1	6706536
S62916.0	16.00	.6299	8.00	16.00	18.00	90.0	2	45.00	15.00	1	6706537
S62920.0	20.00	.7874	10.00	20.00	22.00	100.0	2	50.00	19.00	1	6706538

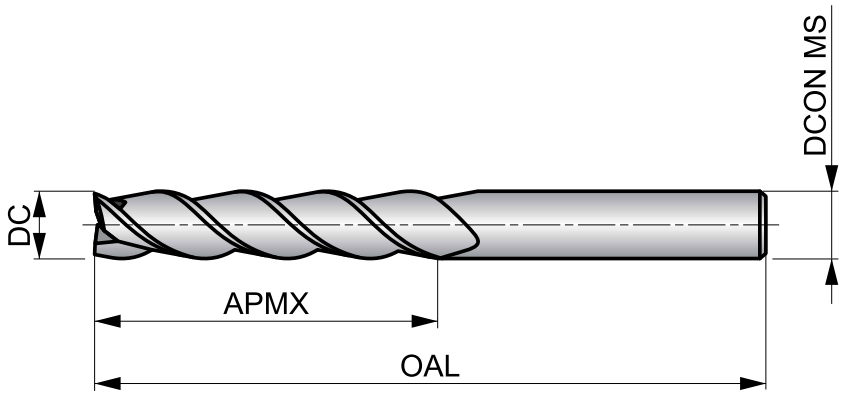
[1] rake angle 11°.

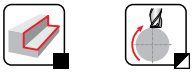
S614

3-Flute Solid Carbide End Mill, Extra Long Series

Extra long cut length, 3-flute design for light profiling applications in hard to reach areas. The S614, with high hook geometry, is designed for high performance machining in non-ferrous materials.







Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2
■2093 G	■1575 G	■1053 G	■1053 F	■945 F	■676 F	■1102 F	■646 F	■331 F	■1102 I	■427 I

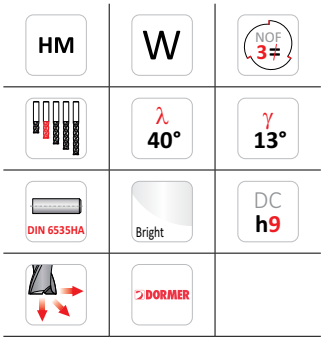
DCON MS tolerance h6.

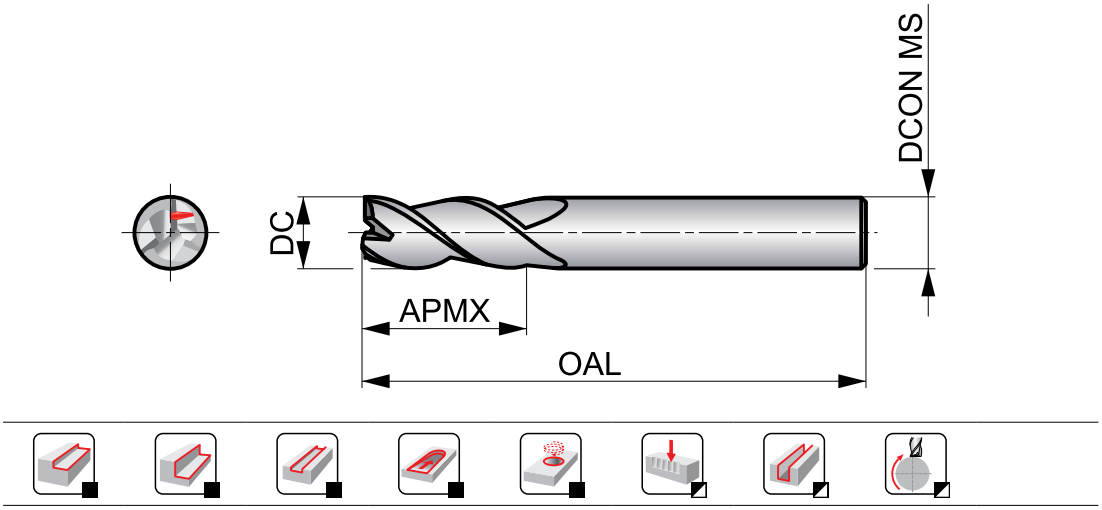
Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S6143.0XD3	3.00	.1181	3.00	19.00	60.0	3	1	8030295
S6143.0XD6	3.00	.1181	6.00	19.00	75.0	3	1	8030296
S6144.0XD4	4.00	.1575	4.00	19.00	60.0	3	1	8030297
S6144.0XD6	4.00	.1575	6.00	19.00	75.0	3	1	8030298
S6145.0	5.00	.1969	6.00	19.00	75.0	3	1	8030299
S6146.0	6.00	.2362	6.00	31.00	75.0	3	1	8030300
S6148.0	8.00	.3150	8.00	41.00	100.0	3	1	8030301
S61410.0	10.00	.3937	10.00	50.00	100.0	3	1	8030302
S61412.0	12.00	.4724	12.00	50.00	100.0	3	1	8030303
S61414.0	14.00	.5512	14.00	57.00	125.0	3	1	8030304
S61416.0	16.00	.6299	16.00	57.00	125.0	3	1	8030305

S650

3-Flute Solid Carbide End Mill

Short cut length, 3-flute with differential pitch is designed to reduce vibrations, spindle load and improve surface finish when milling. The single chip divider helps to break swarf into manageable pieces for a better evacuation in non-ferrous materials.





Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2
2559 O	1995 O	1289 O	1289 N	1155 N	827 N	1345 N	791 N	404 N	1345 P	518 P

DCON MS tolerance h6.

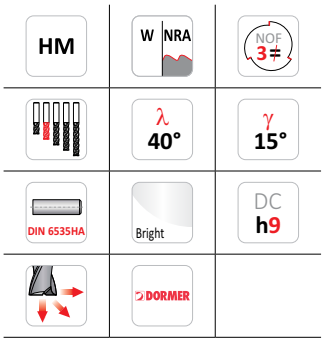
Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S6501.0	1.00	.0394	4.00	3.00	40.0	3	1	8030279
S6501.5	1.50	.0591	4.00	4.50	40.0	3	1	8030280
S6502.0	2.00	.0787	4.00	6.50	40.0	3	1	8030281
S6502.5	2.50	.0984	4.00	6.50	40.0	3	1	8030282
S6503.0XD3	3.00	.1181	3.00	9.00	40.0	3	1	8030283
S6503.0XD6	3.00	.1181	6.00	9.00	50.0	3	1	8030284
S6504.0XD4	4.00	.1575	4.00	12.00	50.0	3	1	8030285
S6504.0XD6	4.00	.1575	6.00	12.00	50.0	3	1	8030286
S6505.0	5.00	.1969	6.00	15.00	50.0	3	1	8030287
S6506.0	6.00	.2362	6.00	16.00	50.0	3	1	8030288
S6508.0	8.00	.3150	8.00	20.00	64.0	3	1	8030289
S65010.0	10.00	.3937	10.00	22.00	70.0	3	1	8030290
S65012.0	12.00	.4724	12.00	25.00	75.0	3	1	8030291
S65014.0	14.00	.5512	14.00	32.00	90.0	3	1	8030292
S65016.0	16.00	.6299	16.00	32.00	90.0	3	1	8030293
S65020.0 [1]	20.00	.7874	20.00	38.00	100.0	3	1	8030294

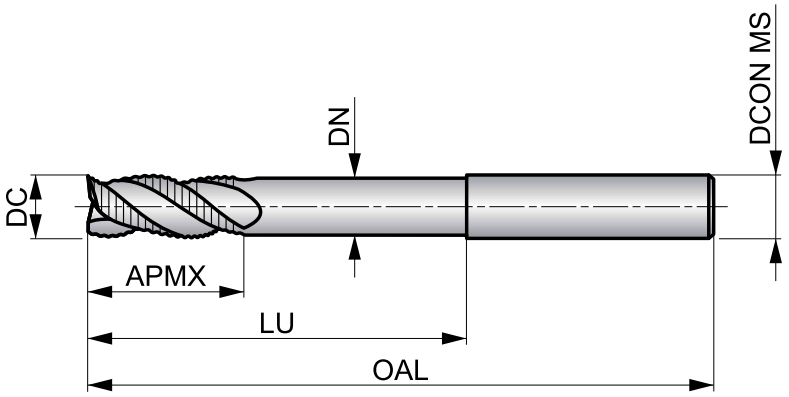
[1] No differential pitch and chip divider.

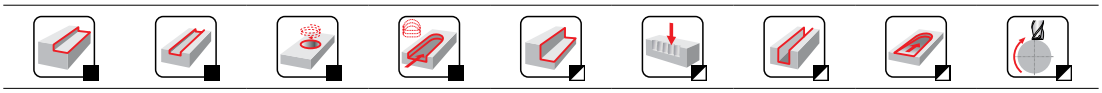
S654

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.







Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2
■2326 O	■1749 O	■1171 O	■1171 N	■1050 N	■751 N	■1224 N	■719 N	■367 N	■1224 P	■472 P

DCON MS tolerance h6; RE ±0.02 mm.

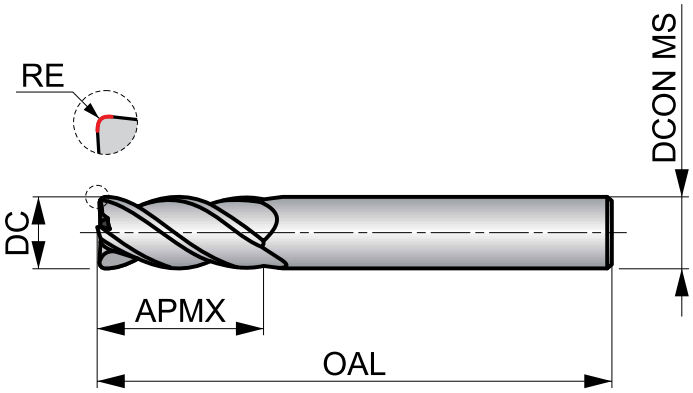
Product	DC (mm)	DC (inch)	RE (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
S6546.0	6.00	.2362	0.10	6.00	13.00	75.0	3	40.00	5.50	1	8030306
S6548.0	8.00	.3150	0.10	8.00	20.00	75.0	3	40.00	7.40	1	8030307
S65410.0	10.00	.3937	0.10	10.00	22.00	100.0	3	60.00	9.20	1	8030308
S65412.0	12.00	.4724	0.12	12.00	26.00	100.0	3	60.00	11.00	1	8030309
S65416.0	16.00	.6299	0.16	16.00	32.00	125.0	3	75.00	15.00	1	8030310
S65420.0	20.00	.7874	0.20	20.00	40.00	150.0	3	100.00	19.00	1	8030311

S662

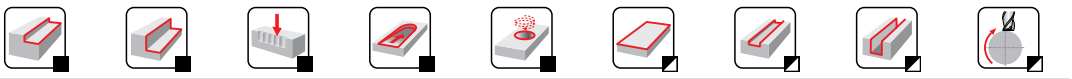
DORMER

4-Flute Solid Carbide Corner Radius End Mill

Short cut length, 4-flute design with differential pitch and different corner radius available, for profile milling where a corner radius is required. The S662, with high hook geometry, is designed for high performance machining in non-ferrous materials.



HM	W	NOF 4
	λ 40°	γ 10°
DIN 6535HA	Bright	DC h9
	DORMER	



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2
2326 O	1749 O	1171 O	1171 N	1050 N	751 N	1224 N	719 N	367 N	1224 P	472 P

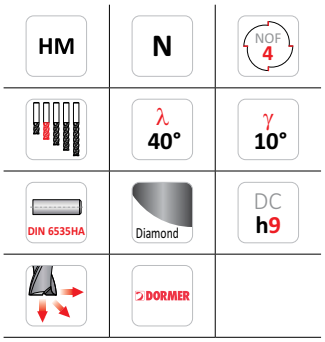
DCON MS tolerance h6; RE ±0.01 mm.

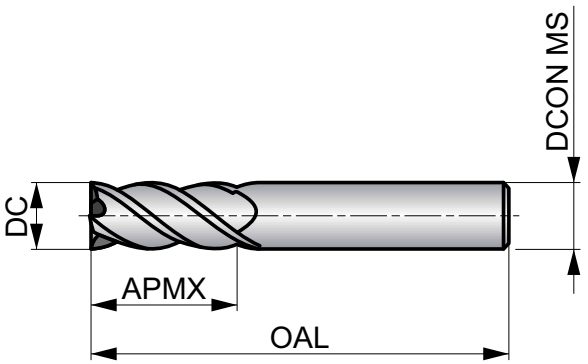
Product	DC (mm)	DC (inch)	RE (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S6623.0XR0.3	3.00	.1181	0.30	6.00	9.00	57.0	4	1	8030312
S6624.0XR0.3	4.00	.1575	0.30	6.00	12.00	57.0	4	1	8030313
S6624.0XR0.5	4.00	.1575	0.50	6.00	12.00	57.0	4	1	8030314
S6625.0XR0.3	5.00	.1969	0.30	6.00	15.00	57.0	4	1	8030315
S6625.0XR0.5	5.00	.1969	0.50	6.00	15.00	57.0	4	1	8030316
S6626.0XR0.5	6.00	.2362	0.50	6.00	16.00	57.0	4	1	8030317
S6626.0XR1.0	6.00	.2362	1.00	6.00	16.00	57.0	4	1	8030318
S6626.0XR2.0	6.00	.2362	2.00	6.00	16.00	57.0	4	1	8030319
S6628.0XR0.5	8.00	.3150	0.50	8.00	20.00	64.0	4	1	8030320
S6628.0XR1.0	8.00	.3150	1.00	8.00	20.00	64.0	4	1	8030321
S6628.0XR2.0	8.00	.3150	2.00	8.00	20.00	64.0	4	1	8030322
S66210.0XR0.5	10.00	.3937	0.50	10.00	22.00	72.0	4	1	8030323
S66210.0XR1.0	10.00	.3937	1.00	10.00	22.00	72.0	4	1	8030324
S66210.0XR2.0	10.00	.3937	2.00	10.00	22.00	72.0	4	1	8030325
S66212.0XR1.0	12.00	.4724	1.00	12.00	26.00	83.0	4	1	8030326
S66212.0XR2.0	12.00	.4724	2.00	12.00	26.00	83.0	4	1	8030327
S66212.0XR2.5	12.00	.4724	2.50	12.00	26.00	83.0	4	1	8030328
S66212.0XR3.0	12.00	.4724	3.00	12.00	26.00	83.0	4	1	8030329
S66216.0XR1.0	16.00	.6299	1.00	16.00	32.00	92.0	4	1	8030330
S66216.0XR2.0	16.00	.6299	2.00	16.00	32.00	92.0	4	1	8030331
S66216.0XR3.0	16.00	.6299	3.00	16.00	32.00	92.0	4	1	8030332
S66216.0XR4.0	16.00	.6299	4.00	16.00	32.00	92.0	4	1	8030333
S66220.0XR2.0	20.00	.7874	2.00	20.00	38.00	104.0	4	1	8030334
S66220.0XR4.0	20.00	.7874	4.00	20.00	38.00	104.0	4	1	8030335

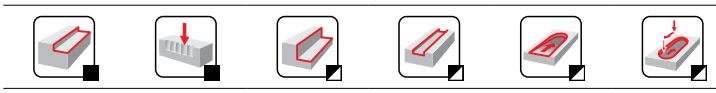
S612

4-Flute Solid Carbide End Mill

Short cut length, 4-flute design provides high rigidity for standard profile milling. Diamond like coating increases service life and improves performance. For milling abrasive materials.







Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

N5.1

■ 1148 G

DCON MS tolerance h6.

Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S6121.0	1.00	.0394	3.00	3.00	50.0	4	1	6706605
S6121.5	1.50	.0591	3.00	4.50	50.0	4	1	6706606
S6122.0	2.00	.0787	3.00	6.50	50.0	4	1	6706607
S6122.5	2.50	.0984	3.00	6.50	50.0	4	1	6706608
S6123.0	3.00	.1181	3.00	9.00	50.0	4	1	6706609
S6124.0	4.00	.1575	4.00	12.00	50.0	4	1	6706610
S6125.0	5.00	.1969	5.00	15.00	50.0	4	1	6706611
S6126.0	6.00	.2362	6.00	20.00	60.0	4	1	6706612
S6128.0	8.00	.3150	8.00	20.00	64.0	4	1	6706613
S61210.0	10.00	.3937	10.00	22.00	70.0	4	1	6706614
S61212.0	12.00	.4724	12.00	25.00	75.0	4	1	6706615

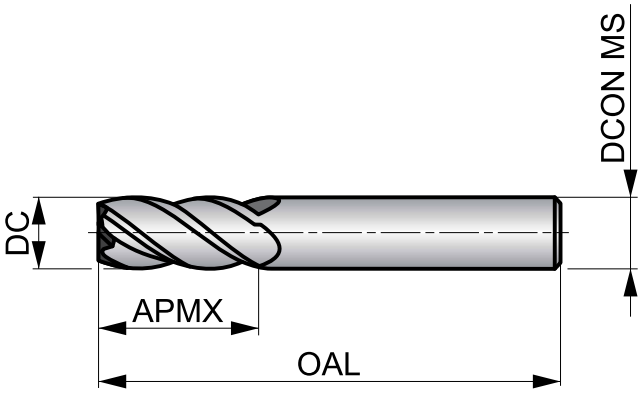
S561

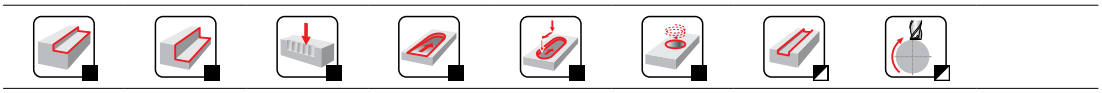
DORMER

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

H1.1	H2.1	H2.2	H3.1	H3.2	H4.1	H4.2
390 I	230 G	197 E	256 G	210 G	164 E	138 B

DCON MS tolerance h6.

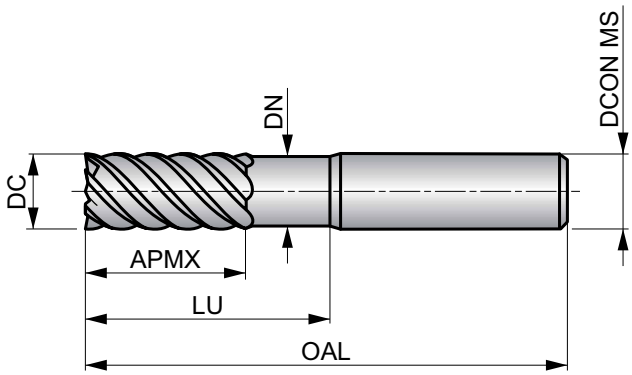
Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S5611.0	1.00	.0394	6.00	3.00	50.0	4	1	8030370
S5611.5	1.50	.0591	6.00	4.50	50.0	4	1	8030371
S5612.0	2.00	.0787	6.00	6.50	50.0	4	1	8030372
S5612.5	2.50	.0984	6.00	6.50	50.0	4	1	8030373
S5613.0	3.00	.1181	6.00	9.00	50.0	4	1	8030374
S5614.0	4.00	.1575	6.00	12.00	50.0	4	1	8030375
S5615.0	5.00	.1969	6.00	15.00	50.0	4	1	8030376
S5616.0	6.00	.2362	6.00	20.00	60.0	4	1	8030377
S5618.0	8.00	.3150	8.00	20.00	64.0	4	1	8030378
S56110.0	10.00	.3937	10.00	22.00	70.0	4	1	8030379
S56112.0	12.00	.4724	12.00	25.00	75.0	4	1	8030380
S56114.0	14.00	.5512	14.00	32.00	90.0	4	1	8030381
S56116.0	16.00	.6299	16.00	32.00	90.0	4	1	8030382
S56118.0	18.00	.7087	18.00	38.00	100.0	4	1	8030383
S56120.0	20.00	.7874	20.00	38.00	100.0	4	1	8030384

S525

Multi-Flute Solid Carbide Finishing End Mill

Short cut length, 6 or 8 flute design with 50° helix provides high rigidity for finishing of deep walls. Neck recess to avoid work contact with the wall and extend reach. TiSiN coating increases tool life and improves performance when milling hardened materials up to 63HRC.

HM	N	NOF 6-8
	λ 50°	γ -26°
DIN 6535HA	TiSiN	DC h9
	DORMER	



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

H1.1	H2.1	H2.2	H3.1	H3.2	H4.1	H4.2
390 G	230 G	197 E	256 G	210 G	164 E	138 A

DCON MS tolerance h6.

Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
S5253.0	3.00	.1181	6.00	8.00	50.0	6	20.00	2.80	1	6706809
S5254.0	4.00	.1575	6.00	11.00	50.0	6	20.00	3.70	1	6706811
S5256.0	6.00	.2362	6.00	15.00	50.0	6	20.00	5.50	1	6706812
S5258.0	8.00	.3150	8.00	20.00	64.0	6	30.00	7.40	1	6706813
S52510.0	10.00	.3937	10.00	22.00	70.0	6	32.00	9.20	1	6706814
S52512.0	12.00	.4724	12.00	25.00	75.0	6	37.00	11.00	1	6706815
S52514.0	14.00	.5512	14.00	30.00	90.0	6	44.00	13.00	1	6706816
S52516.0	16.00	.6299	16.00	30.00	90.0	8	46.00	15.00	1	6706817
S52518.0	18.00	.7087	18.00	35.00	100.0	8	53.00	17.00	1	6706818
S52520.0	20.00	.7874	20.00	38.00	100.0	8	58.00	19.00	1	6706819

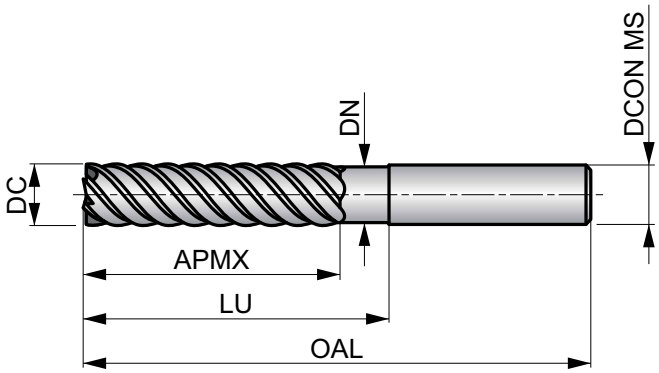
S526

DORMER

Multi-Flute Solid Carbide Finishing End Mill, Long Series

Long cut length, 6 or 8 flute design with 50° helix provides high rigidity for finishing of deeper walls. Neck recess to avoid work contact with the wall and extend reach. TiSiN coating increases tool life and improves performance when milling hardened materials up to 63HRC.

HM	N	NOF 6-8
	λ 50°	γ -26°
DIN 6535HA	TiSiN	DC h9
	DORMER	



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

H1.1	H2.1	H2.2	H3.1	H3.2	H4.1	H4.2
315 G	187 G	161 E	207 G	171 G	131 E	112 A

DCON MS tolerance h6.

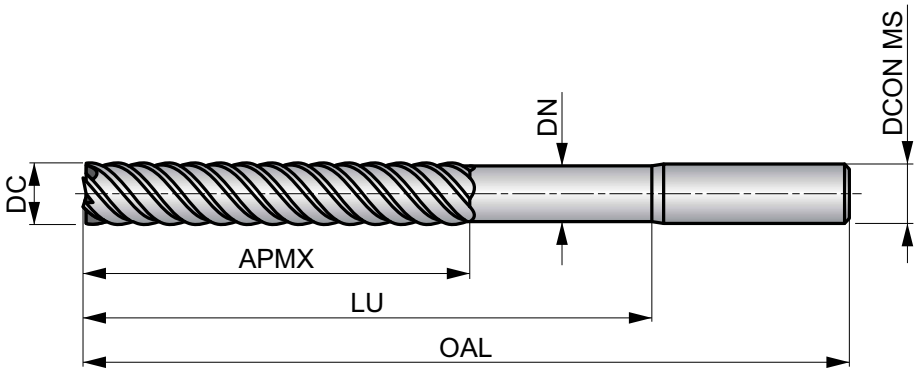
Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
S5263.0	3.00	.1181	6.00	19.00	75.0	6	30.00	2.80	1	6706810
S5264.0	4.00	.1575	6.00	19.00	75.0	6	32.00	3.70	1	6706790
S5266.0	6.00	.2362	6.00	31.00	75.0	6	40.00	5.50	1	6706791
S5268.0	8.00	.3150	8.00	31.00	75.0	6	40.00	7.40	1	6706792
S52610.0	10.00	.3937	10.00	45.00	100.0	6	60.00	9.20	1	6706793
S52612.0	12.00	.4724	12.00	50.00	100.0	6	60.00	11.00	1	6706794
S52614.0	14.00	.5512	14.00	57.00	125.0	6	85.00	13.00	1	6706795
S52616.0	16.00	.6299	16.00	57.00	125.0	8	85.00	15.00	1	6706796
S52618.0	18.00	.7087	18.00	57.00	125.0	8	85.00	17.00	1	6706797
S52620.0	20.00	.7874	20.00	57.00	125.0	8	85.00	19.00	1	6706798

S527

Multi-Flute Solid Carbide Finishing End Mill, Extra Long Series

Extra long cut length, 6 or 8 flute design with 50° helix provides high rigidity for finishing of extra deep walls. Neck recess to avoid work contact with the wall and extend reach. TiSiN coating increases service life and improves performance when milling hardened materials up to 63HRC.

HM	N	NOF 6-8
	λ 50°	γ -26°
DIN 6535HA	TiSiN	DC h9
	DORMER	



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

H1.1	H2.1	H2.2	H3.1	H3.2	H4.1	H4.2
194 G	115 G	98 E	128 G	105 G	82 E	69 A

DCON MS tolerance h6.

Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
S5273.0	3.00	.1181	6.00	25.00	100.0	6	60.00	2.80	1	6706828
S5274.0	4.00	.1575	6.00	31.00	100.0	6	60.00	3.70	1	6706829
S5276.0	6.00	.2362	6.00	38.00	100.0	6	60.00	5.50	1	6706830
S5278.0	8.00	.3150	8.00	41.00	100.0	6	60.00	7.40	1	6706831
S52710.0	10.00	.3937	10.00	57.00	125.0	6	85.00	9.20	1	6706832
S52712.0	12.00	.4724	12.00	75.00	150.0	6	110.00	11.00	1	6706833
S52716.0	16.00	.6299	16.00	75.00	150.0	8	110.00	15.00	1	6706835
S52720.0	20.00	.7874	20.00	75.00	150.0	8	110.00	19.00	1	6706837

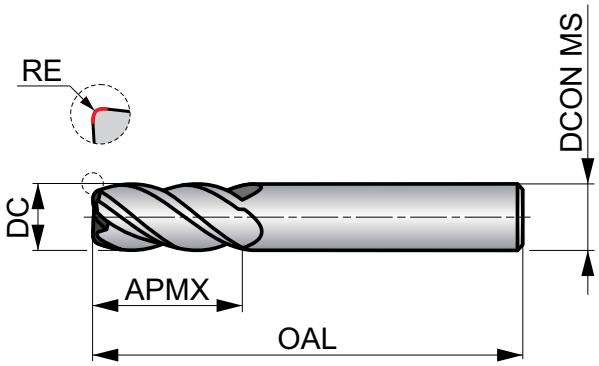
S523

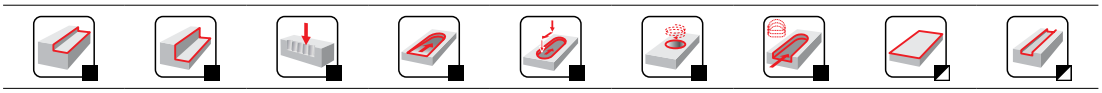
DORMER

4-Flute Solid Carbide Corner Radius End Mill

Short cut length, 4-flute design with different corner radius available provides high rigidity for standard profile milling where a corner radius is required. TiSiN coating improves performance and 40° helix is designed for high performance machining in hardened materials up to 63HRC.

HM	N	NOF 4
	λ 40°	γ -6°
DIN 6535HA	TiSiN	DC h9
	DORMER	





Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

H1.1	H2.1	H2.2	H3.1	H3.2	H4.1	H4.2
390 I	230 G	197 E	256 G	210 G	164 E	138 B

DCON MS tolerance h6; RE ±0.01 mm.

Product	DC (mm)	DC (inch)	RE (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S5231.5XR0.2	1.50	.0591	0.20	6.00	4.50	50.0	4	1	6706724
S5232.0XR0.2	2.00	.0787	0.20	6.00	6.50	50.0	4	1	6706725
S5233.0XR0.2XD3	3.00	.1181	0.20	3.00	9.00	50.0	4	1	6706727
S5233.0XR0.3XD3	3.00	.1181	0.30	3.00	9.00	50.0	4	1	6706726
S5233.0XR0.2XD6	3.00	.1181	0.20	6.00	9.00	50.0	4	1	6706728
S5233.0XR0.3XD6	3.00	.1181	0.30	6.00	9.00	50.0	4	1	6706729
S5233.0XR0.5XD6	3.00	.1181	0.50	6.00	9.00	50.0	4	1	6706730
S5234.0XR0.3XD4	4.00	.1575	0.30	4.00	12.00	50.0	4	1	6706731
S5234.0XR0.5XD4	4.00	.1575	0.50	4.00	12.00	50.0	4	1	6706732
S5234.0XR0.3XD6	4.00	.1575	0.30	6.00	12.00	50.0	4	1	6706733
S5234.0XR0.5XD6	4.00	.1575	0.50	6.00	12.00	50.0	4	1	6706734
S5235.0XR0.3XD5	5.00	.1969	0.30	5.00	15.00	50.0	4	1	6706735
S5235.0XR0.5XD5	5.00	.1969	0.50	5.00	15.00	50.0	4	1	6706736
S5235.0XR0.3XD6	5.00	.1969	0.30	6.00	15.00	50.0	4	1	6706737
S5235.0XR0.5XD6	5.00	.1969	0.50	6.00	15.00	50.0	4	1	6706738
S5236.0XR0.3	6.00	.2362	0.30	6.00	16.00	50.0	4	1	6706741
S5236.0XR0.5	6.00	.2362	0.50	6.00	16.00	50.0	4	1	6706739

Product	DC (mm)	DC (inch)	RE (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S5236.0XR1.0	6.00	.2362	1.00	6.00	16.00	50.0	4	1	6706740
S5238.0XR0.3	8.00	.3150	0.30	8.00	20.00	64.0	4	1	6706744
S5238.0XR0.5	8.00	.3150	0.50	8.00	20.00	64.0	4	1	6706742
S5238.0XR1.0	8.00	.3150	1.00	8.00	20.00	64.0	4	1	6706743
S5238.0XR2.0	8.00	.3150	2.00	8.00	20.00	64.0	4	1	6706745
S52310.0XR0.5	10.00	.3937	0.50	10.00	22.00	70.0	4	1	6706746
S52310.0XR1.0	10.00	.3937	1.00	10.00	22.00	70.0	4	1	6706747
S52310.0XR1.5	10.00	.3937	1.50	10.00	22.00	70.0	4	1	6706749
S52310.0XR2.0	10.00	.3937	2.00	10.00	22.00	70.0	4	1	6706748
S52312.0XR0.5	12.00	.4724	0.50	12.00	25.00	75.0	4	1	6706751
S52312.0XR1.0	12.00	.4724	1.00	12.00	25.00	75.0	4	1	6706750
S52312.0XR2.0	12.00	.4724	2.00	12.00	25.00	75.0	4	1	6706752
S52312.0XR3.0	12.00	.4724	3.00	12.00	25.00	75.0	4	1	6706753
S52316.0XR0.5	16.00	.6299	0.50	16.00	32.00	90.0	4	1	6706757
S52316.0XR1.0	16.00	.6299	1.00	16.00	32.00	90.0	4	1	6706754
S52316.0XR2.0	16.00	.6299	2.00	16.00	32.00	90.0	4	1	6706755
S52316.0XR3.0	16.00	.6299	3.00	16.00	32.00	90.0	4	1	6706756

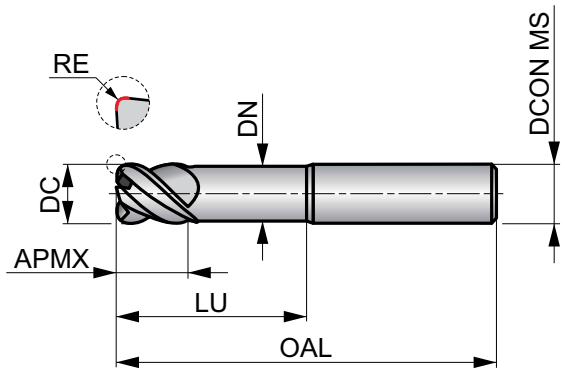
S521

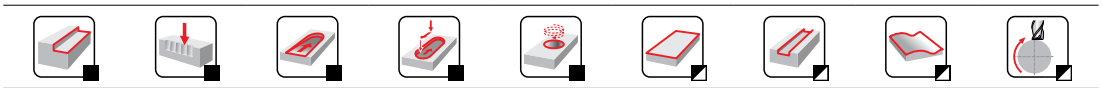
DORMER

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

H1.1	H2.1	H2.2	H3.1	H3.2	H4.1	H4.2
390 I	230 G	197 E	256 G	210 G	164 E	138 B

DCON MS tolerance h6; RE ±0.01 mm.

Product	DC (mm)	DC (inch)	RE (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
S5213.0XR0.3	3.00	.1181	0.30	6.00	4.00	60.0	4	14.00	2.80	1	6706670
S5214.0XR0.3	4.00	.1575	0.30	6.00	5.00	60.0	4	16.00	3.70	1	6706671
S5214.0XR0.5	4.00	.1575	0.50	6.00	5.00	60.0	4	16.00	3.70	1	6706672
S5215.0XR0.3	5.00	.1969	0.30	6.00	6.00	60.0	4	18.00	4.60	1	6706673
S5215.0XR0.5	5.00	.1969	0.50	6.00	6.00	60.0	4	18.00	4.60	1	6706674
S5216.0XR0.5	6.00	.2362	0.50	6.00	7.00	60.0	4	20.00	5.50	1	6706675
S5216.0XR1.0	6.00	.2362	1.00	6.00	7.00	60.0	4	20.00	5.50	1	6706676
S5218.0XR0.5	8.00	.3150	0.50	8.00	9.00	64.0	4	26.00	7.40	1	6706677
S5218.0XR1.0	8.00	.3150	1.00	8.00	9.00	64.0	4	26.00	7.40	1	6706678
S52110.0XR1.0	10.00	.3937	1.00	10.00	11.00	70.0	4	31.00	9.20	1	6706679
S52110.0XR2.0	10.00	.3937	2.00	10.00	11.00	70.0	4	31.00	9.20	1	6706680
S52112.0XR1.0	12.00	.4724	1.00	12.00	13.00	75.0	4	37.00	11.00	1	6706682
S52112.0XR2.0	12.00	.4724	2.00	12.00	13.00	75.0	4	37.00	11.00	1	6706681
S52116.0XR1.0	16.00	.6299	1.00	16.00	17.00	90.0	4	43.00	15.00	1	6706683
S52116.0XR2.0	16.00	.6299	2.00	16.00	17.00	90.0	4	43.00	15.00	1	6706684
S52116.0XR3.0	16.00	.6299	3.00	16.00	17.00	90.0	4	43.00	15.00	1	6706685

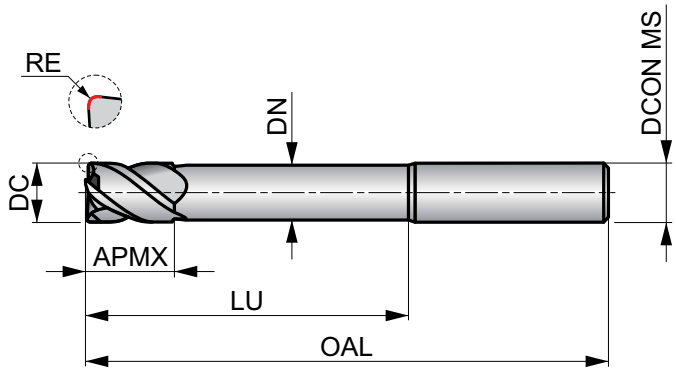
S524

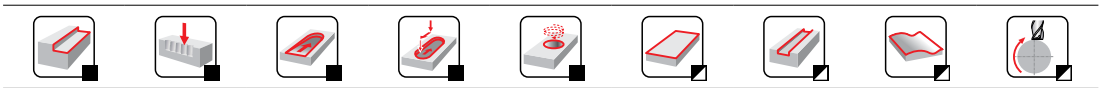
DORMER

4-Flute Solid Carbide Corner Radius End Mill, Long Reach

Extra short cut length, 4-flute design with different corner radius available and 40° helix provides high rigidity for profile milling in hard to reach areas where a corner radius is required. Neck recess to avoid work contact with the wall. TiSiN coating improves performance machining in hardened materials up to 63HRC.

HM	N	NOF 4
	λ 40°	γ -6°
DIN 6535HA	TiSiN	DC h9
	DORMER	





Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

H1.1	H2.1	H2.2	H3.1	H3.2	H4.1	H4.2
390 I	230 G	197 E	256 G	210 G	164 E	138 B

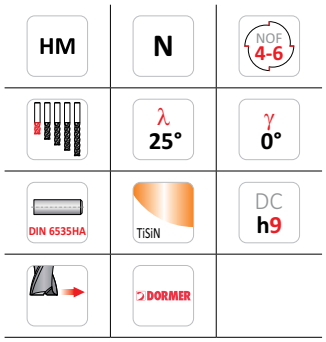
DCON MS tolerance h6; RE ±0.01 mm.

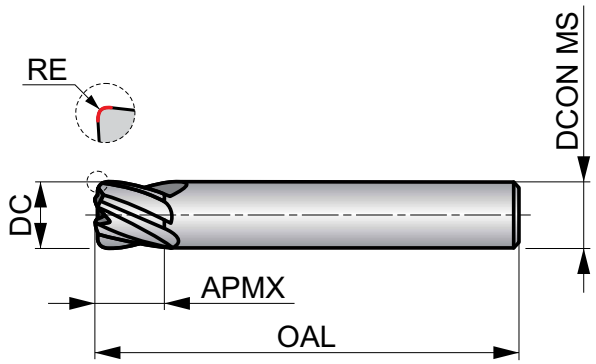
Product	DC (mm)	DC (inch)	RE (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
S5243.0XR0.3	3.00	.1181	0.30	6.00	5.00	75.0	4	30.00	2.80	1	6706649
S5244.0XR0.3	4.00	.1575	0.30	6.00	8.00	75.0	4	32.00	3.70	1	6706650
S5244.0XR0.5	4.00	.1575	0.50	6.00	8.00	75.0	4	32.00	3.70	1	6706651
S5245.0XR0.3	5.00	.1969	0.30	6.00	9.00	75.0	4	32.00	4.60	1	6706652
S5245.0XR0.5	5.00	.1969	0.50	6.00	9.00	75.0	4	32.00	4.60	1	6706653
S5246.0XR0.3	6.00	.2362	0.30	6.00	10.00	75.0	4	40.00	5.50	1	6706656
S5246.0XR0.5	6.00	.2362	0.50	6.00	10.00	75.0	4	40.00	5.50	1	6706654
S5246.0XR1.0	6.00	.2362	1.00	6.00	10.00	75.0	4	40.00	5.50	1	6706655
S5248.0XR0.3	8.00	.3150	0.30	8.00	12.00	75.0	4	40.00	7.40	1	6706659
S5248.0XR0.5	8.00	.3150	0.50	8.00	12.00	75.0	4	40.00	7.40	1	6706657
S5248.0XR1.0	8.00	.3150	1.00	8.00	12.00	75.0	4	40.00	7.40	1	6706658
S52410.0XR0.5	10.00	.3937	0.50	10.00	14.00	75.0	4	40.00	9.20	1	6706660
S52410.0XR1.0	10.00	.3937	1.00	10.00	14.00	75.0	4	40.00	9.20	1	6706661
S52410.0XR2.0	10.00	.3937	2.00	10.00	14.00	75.0	4	40.00	9.20	1	6706662
S52412.0XR0.5	12.00	.4724	0.50	12.00	16.00	100.0	4	60.00	11.00	1	6706665
S52412.0XR1.0	12.00	.4724	1.00	12.00	16.00	100.0	4	60.00	11.00	1	6706664
S52412.0XR2.0	12.00	.4724	2.00	12.00	16.00	100.0	4	60.00	11.00	1	6706663
S52416.0XR0.5	16.00	.6299	0.50	16.00	22.00	125.0	4	85.00	15.00	1	6706669
S52416.0XR1.0	16.00	.6299	1.00	16.00	22.00	125.0	4	85.00	15.00	1	6706666
S52416.0XR2.0	16.00	.6299	2.00	16.00	22.00	125.0	4	85.00	15.00	1	6706667
S52416.0XR3.0	16.00	.6299	3.00	16.00	22.00	125.0	4	85.00	15.00	1	6706668

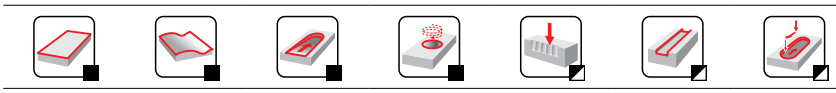
S536

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

H1.1	H2.1	H2.2	H3.1	H3.2	H4.1	H4.2
■673 E	■400 E	■341 D	■443 E	■364 E	■282 D	■240 D

DCON MS tolerance h6; RE ±0.01 mm.

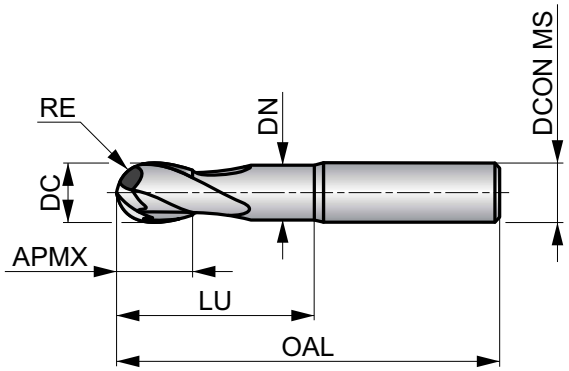
Product	DC (mm)	DC (inch)	RE (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
S5366.0XR1.0	6.00	.2362	1.00	6.00	6.00	60.0	4	1	6766502
S5368.0XR2.0	8.00	.3150	2.00	8.00	8.00	64.0	6	1	6706839
S53610.0XR2.0	10.00	.3937	2.00	10.00	10.00	75.0	6	1	6706840
S53612.0XR2.0	12.00	.4724	2.00	12.00	12.00	75.0	6	1	6706841

S529

2-Flute Solid Carbide Ball-Nosed End Mill

Extra short cut length, 2-flute design with neck recess provides high rigidity and reduces vibrations. Ball nosed geometry is designed for high performance contouring of complex surfaces. TiSiN coating increases tool life and improves performance when machining hardened materials up to 63HRC.

HM	N	NOF 2
	λ 30°	γ -10°
DIN 6535HA	TiSiN	DC h9
	DORMER	



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

H1.1	H2.1	H2.2	H3.1	H3.2	H4.1	H4.2
390 F	230 E	197 D	256 E	210 E	164 D	138 A

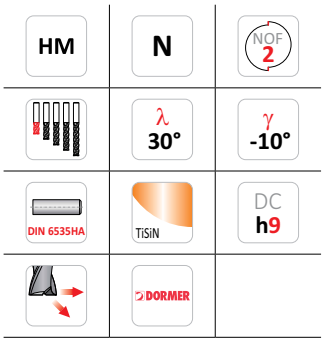
DCON MS tolerance h6; RE +0/-0.02 mm.

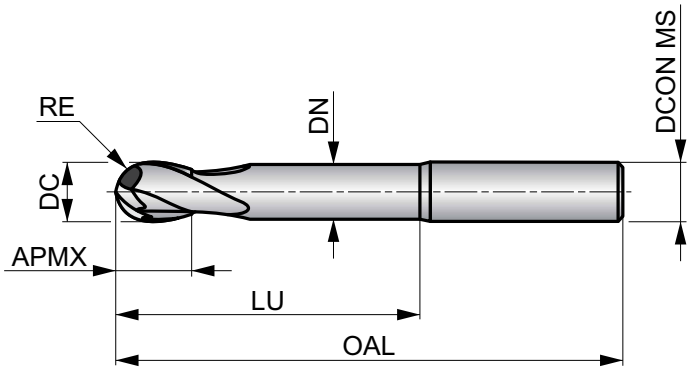
Product	DC (mm)	DC (inch)	RE (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
S5291.5	1.50	.0591	0.75	6.00	3.00	50.0	2	6.00	1.40	1	6706499
S5292.0XD4	2.00	.0787	1.00	4.00	4.00	50.0	2	8.00	1.90	1	6706500
S5292.0XD6	2.00	.0787	1.00	6.00	4.00	50.0	2	8.00	1.90	1	6706501
S5293.0XD3	3.00	.1181	1.50	3.00	5.00	50.0	2	14.00	2.80	1	6706502
S5293.0XD6	3.00	.1181	1.50	6.00	5.00	50.0	2	14.00	2.80	1	6706503
S5294.0XD4	4.00	.1575	2.00	4.00	8.00	50.0	2	20.00	3.70	1	6706504
S5294.0XD6	4.00	.1575	2.00	6.00	8.00	50.0	2	20.00	3.70	1	6706505
S5295.0XD5	5.00	.1969	2.50	5.00	9.00	50.0	2	20.00	4.60	1	6706506
S5295.0XD6	5.00	.1969	2.50	6.00	9.00	50.0	2	20.00	4.60	1	6706507
S5296.0	6.00	.2362	3.00	6.00	10.00	50.0	2	20.00	5.50	1	6706508
S5298.0	8.00	.3150	4.00	8.00	12.00	64.0	2	30.00	7.40	1	6706509
S52910.0	10.00	.3937	5.00	10.00	14.00	70.0	2	32.00	9.20	1	6706510
S52912.0	12.00	.4724	6.00	12.00	16.00	75.0	2	38.00	11.00	1	6706511
S52916.0	16.00	.6299	8.00	16.00	32.00	90.0	2	46.00	15.00	1	6706513

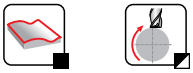
S531

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

H1.1	H2.1	H2.2	H3.1	H3.2	H4.1	H4.2
315 F	187 E	161 D	207 E	171 E	131 D	112 A

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

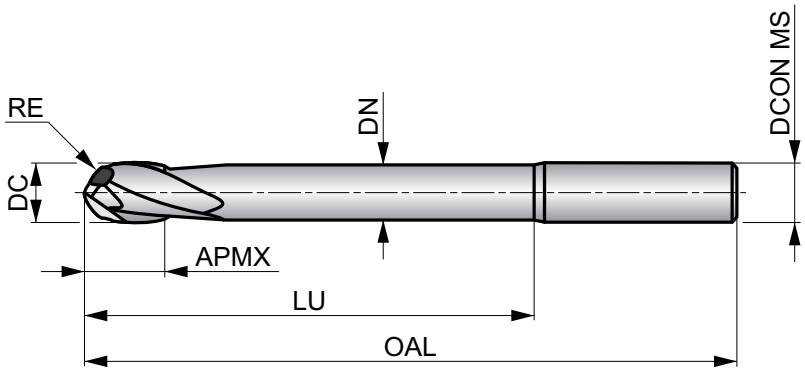
Product	DC (mm)	DC (inch)	RE (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
S5311.5	1.50	.0591	0.75	6.00	3.00	75.0	2	10.00	1.40	1	6706471
S5312.0XD4	2.00	.0787	1.00	4.00	4.00	75.0	2	14.00	1.90	1	6706472
S5312.0XD6	2.00	.0787	1.00	6.00	4.00	75.0	2	14.00	1.90	1	6706473
S5313.0XD3	3.00	.1181	1.50	3.00	5.00	60.0	2	21.00	2.80	1	6706474
S5313.0XD6	3.00	.1181	1.50	6.00	5.00	75.0	2	21.00	2.80	1	6706475
S5314.0XD4	4.00	.1575	2.00	4.00	8.00	60.0	2	28.00	3.70	1	6706476
S5314.0XD6	4.00	.1575	2.00	6.00	8.00	75.0	2	28.00	3.70	1	6706477
S5315.0XD5	5.00	.1969	2.50	5.00	9.00	60.0	2	32.00	4.60	1	6706478
S5315.0XD6	5.00	.1969	2.50	6.00	9.00	75.0	2	32.00	4.60	1	6706479
S5316.0	6.00	.2362	3.00	6.00	10.00	75.0	2	40.00	5.50	1	6706480
S5318.0	8.00	.3150	4.00	8.00	12.00	75.0	2	40.00	7.40	1	6706481
S53110.0	10.00	.3937	5.00	10.00	14.00	75.0	2	40.00	9.20	1	6706482
S53112.0	12.00	.4724	6.00	12.00	16.00	100.0	2	60.00	11.00	1	6706483
S53116.0	16.00	.6299	8.00	16.00	32.00	125.0	2	80.00	15.00	1	6706485

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.

HM	N	NOF 2
	λ 30°	γ -10°
DIN 6535HA	TiSiN	DC h9
	DORMER	



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

H1.1	H2.1	H2.2	H3.1	H3.2	H4.1	H4.2
194 F	115 E	98 D	128 E	105 E	82 D	69 A

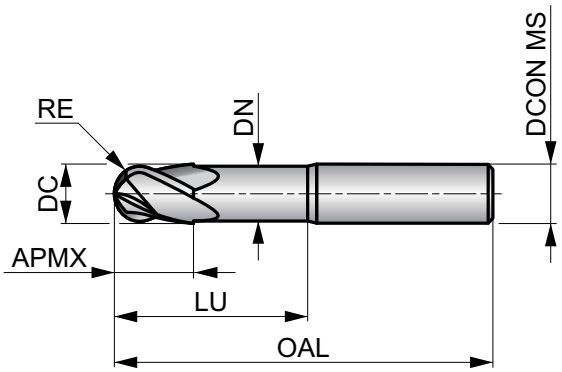
DCON MS tolerance h6; RE +0/-0.02 mm.

Product	DC (mm)	DC (inch)	RE (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
S5332.0XD4	2.00	.0787	1.00	4.00	4.00	100.0	2	20.00	1.90	1	6706539
S5332.0XD6	2.00	.0787	1.00	6.00	4.00	100.0	2	20.00	1.90	1	6706540
S5333.0XD4	3.00	.1181	1.50	4.00	5.00	100.0	2	30.00	2.80	1	6734333
S5333.0XD6	3.00	.1181	1.50	6.00	5.00	100.0	2	30.00	2.80	1	6706542
S5334.0XD4	4.00	.1575	2.00	4.00	8.00	100.0	2	40.00	3.70	1	6706543
S5334.0XD6	4.00	.1575	2.00	6.00	8.00	100.0	2	40.00	3.70	1	6706544
S5335.0XD5	5.00	.1969	2.50	5.00	9.00	100.0	2	50.00	4.60	1	6706545
S5335.0XD6	5.00	.1969	2.50	6.00	9.00	100.0	2	50.00	4.60	1	6706546
S5336.0	6.00	.2362	3.00	6.00	10.00	100.0	2	60.00	5.50	1	6706547
S5338.0	8.00	.3150	4.00	8.00	12.00	100.0	2	60.00	7.40	1	6706548
S53310.0	10.00	.3937	5.00	10.00	14.00	125.0	2	85.00	9.20	1	6706549
S53312.0	12.00	.4724	6.00	12.00	16.00	125.0	2	85.00	11.00	1	6706550
S53314.0	14.00	.5512	7.00	14.00	32.00	150.0	2	110.00	13.00	1	6706551
S53316.0	16.00	.6299	8.00	16.00	32.00	150.0	2	110.00	15.00	1	6706552

S534

4-Flute Solid Carbide Ball-Nosed End Mill

Extra short cut length, 4-flute design with neck recess reduces vibrations and provides high rigidity. Ball nosed geometry is designed for high performance contouring of complex surfaces. TiSiN coating increases tool life and improves performance when machining hardened materials up to 63HRC.



HM	N	NOF 4
	λ 30°	γ -10°
DIN 6535HA	TiSiN	DC h9
	DORMER	

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

H1.1	H2.1	H2.2	H3.1	H3.2	H4.1	H4.2
390 E	230 D	197 C	256 D	210 D	164 C	138 A

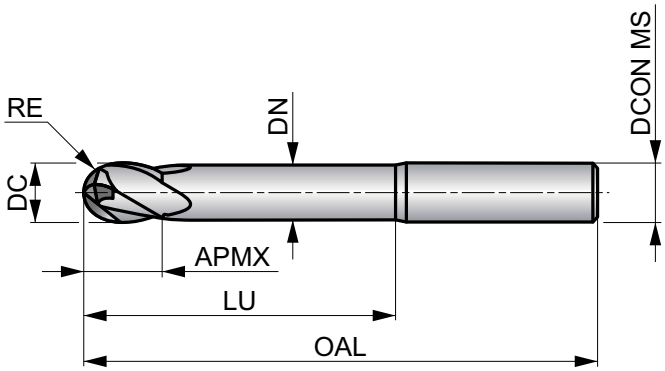
DCON MS tolerance h6; RE +0/-0.02 mm.

Product	DC (mm)	DC (inch)	RE (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
S5343.0	3.00	.1181	1.50	6.00	5.00	50.0	4	14.00	2.80	1	6706575
S5344.0	4.00	.1575	2.00	6.00	8.00	50.0	4	20.00	3.70	1	6706576
S5345.0	5.00	.1969	2.50	6.00	9.00	50.0	4	20.00	4.60	1	6706577
S5346.0	6.00	.2362	3.00	6.00	10.00	50.0	4	20.00	5.50	1	6706578
S5348.0	8.00	.3150	4.00	8.00	12.00	64.0	4	30.00	7.40	1	6706579
S53410.0	10.00	.3937	5.00	10.00	14.00	70.0	4	32.00	9.20	1	6706580
S53412.0	12.00	.4724	6.00	12.00	16.00	75.0	4	38.00	11.00	1	6706581
S53414.0	14.00	.5512	7.00	14.00	32.00	90.0	4	44.00	13.00	1	6706582
S53416.0	16.00	.6299	8.00	16.00	32.00	90.0	4	46.00	15.00	1	6706583

S535

4-Flute Solid Carbide Ball-Nosed End Mill, Long Reach

Extra short cut length, long reach, 4-flute design with neck recess reduces vibrations and provides high rigidity. Ball nosed geometry is designed for high performance contouring of complex surfaces. TiSiN coating increases tool life and improves performance when machining hardened materials up to 63HRC.



HM	N	NOF 4
	λ 30°	γ -10°
DIN 6535HA	TiSiN	DC h9
	DORMER	

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

H1.1	H2.1	H2.2	H3.1	H3.2	H4.1	H4.2
315 E	187 D	161 C	207 D	171 D	131 C	112 A

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

Product	DC (mm)	DC (inch)	RE (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
S5353.0	3.00	.1181	1.50	6.00	5.00	75.0	4	21.00	2.80	1	6706566
S5354.0	4.00	.1575	2.00	6.00	8.00	75.0	4	28.00	3.70	1	6706567
S5355.0	5.00	.1969	2.50	6.00	9.00	75.0	4	32.00	4.60	1	6706568
S5356.0	6.00	.2362	3.00	6.00	10.00	75.0	4	40.00	5.50	1	6706569
S5358.0	8.00	.3150	4.00	8.00	12.00	75.0	4	40.00	7.40	1	6706570
S53510.0	10.00	.3937	5.00	10.00	14.00	75.0	4	40.00	9.20	1	6706571
S53512.0	12.00	.4724	6.00	12.00	16.00	100.0	4	60.00	11.00	1	6706572
S53514.0	14.00	.5512	7.00	14.00	32.00	125.0	4	80.00	13.00	1	6706573
S53516.0	16.00	.6299	8.00	16.00	32.00	125.0	4	80.00	15.00	1	6706574

S991

Set of Solid Carbide End Mills

Sets of solid carbide End Mills with TiALN coating. Range of S922, S933 or S944 (2, 3 or 4 flute). Sets contain Ø3, 4, 5, 6, 8 and 10 mm. Carried in a plastic container for good overview.

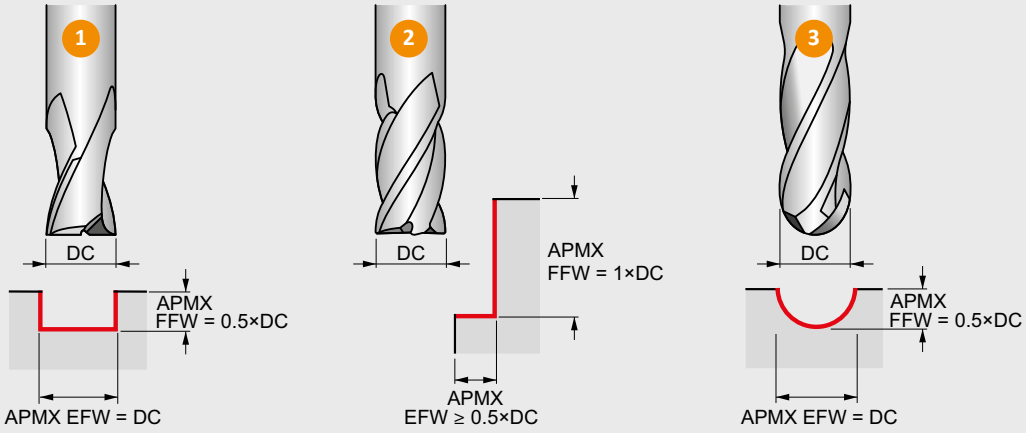
HM		

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 146.

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

Product	A	B	C	Pack Qty	MID
S991SET922	S922	6	Ø 3.00 mm, 4.00 mm, 5.00 mm, 6.00 mm, 8.00 mm, 10.00 mm	1	5983269
S991SET933	S933	6	Ø 3.00 mm, 4.00 mm, 5.00 mm, 6.00 mm, 8.00 mm, 10.00 mm	1	5983273
S991SET944	S944	6	Ø 3.00 mm, 4.00 mm, 5.00 mm, 6.00 mm, 8.00 mm, 10.00 mm	1	5983277

SOLID HM MILLS – FEED PER TOOTH TABLE



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

ONLY if plunging into solid material with a center cutting end mill the values in this table should be considered as f_n (feed per revolution).

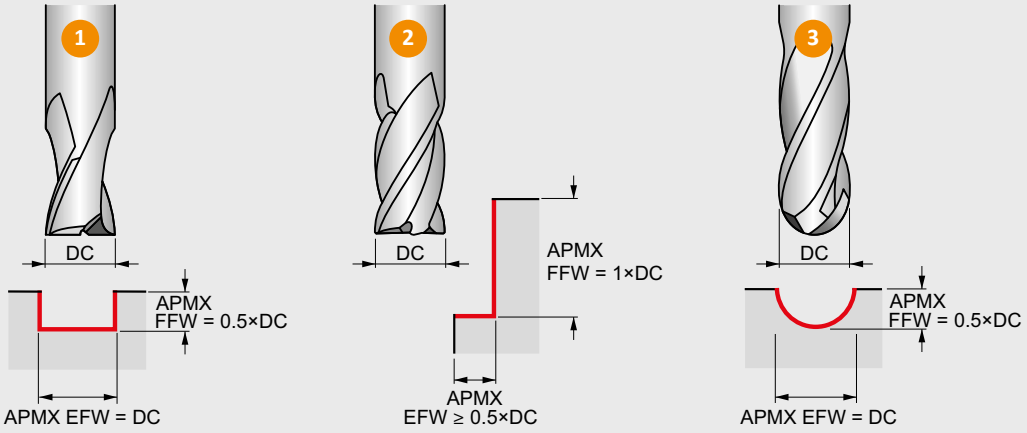
How to use this table to find the feed per tooth f_z:

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	.002	.003	.004	.005	.006	.007	.008	.009	.010	.011	.014	.015	.017	.019	.021	.025	.028
	B	.002	.003	.004	.005	.006	.007	.008	.009	.010	.011	.014	.015	.017	.019	.021	.025	.028
	C	.002	.003	.004	.005	.006	.007	.008	.009	.010	.011	.014	.015	.017	.019	.021	.025	.028
	D	.002	.003	.004	.005	.007	.008	.009	.010	.011	.012	.014	.015	.017	.019	.021	.025	.028
	E	.002	.003	.004	.008	.009	.012	.013	.014	.015	.016	.019	.021	.024	.026	.028	.030	.034
	F	.002	.003	.006	.010	.013	.016	.017	.019	.021	.022	.026	.029	.032	.035	.039	.042	.047
	G	.002	.005	.008	.014	.018	.022	.024	.026	.028	.031	.035	.040	.044	.048	.053	.057	.064
	I	.003	.006	.011	.019	.024	.030	.032	.036	.039	.042	.049	.054	.061	.066	.073	.079	.088
	J	.004	.009	.014	.026	.033	.041	.044	.048	.053	.057	.066	.074	.083	.090	.099	.107	.120
	K	.006	.012	.019	.035	.044	.054	.059	.064	.070	.076	.088	.098	.110	.120	.132	.142	.160
	N	.008	.016	.025	.047	.058	.072	.078	.086	.094	.101	.117	.131	.146	.160	.175	.189	.212
	O	.010	.021	.034	.062	.078	.096	.104	.114	.124	.135	.156	.174	.195	.213	.233	.252	.283
	P	.014	.028	.045	.083	.104	.128	.138	.152	.166	.180	.207	.231	.259	.283	.311	.335	.376
	R	.018	.037	.060	.110	.138	.170	.184	.202	.221	.239	.276	.308	.345	.377	.414	.446	.501
	S	.024	.049	.080	.147	.183	.226	.245	.269	.294	.318	.367	.410	.459	.502	.550	.593	.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 center 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 (in)															
		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 %
	1.25	1.00	.75	.50
	1.25	1.00	.75	.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 %
	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.00
	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.

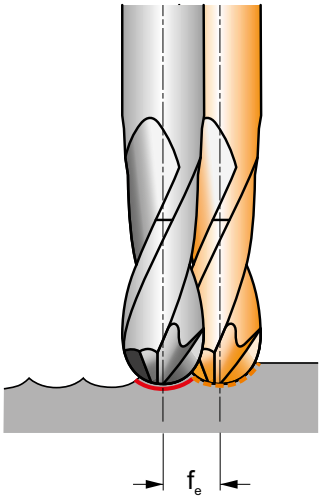
3a Plain Copy Milling (with Ball Nose Cutters)

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 %
	2.29	1.67	1.40	1.25	1.15	1.09	1.02	1.00

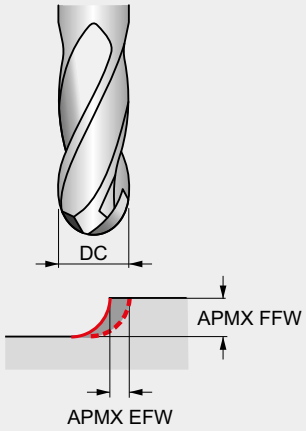
3b

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
.079		.005	.007	.010	.014	.020	.028	.038	.052
.118		.006	.009	.012	.017	.024	.034	.047	.065
.157		.007	.010	.014	.020	.028	.039	.055	.076
.197		.008	.011	.016	.022	.031	.044	.061	.086
.236		.009	.012	.017	.024	.034	.048	.067	.094
.315		.010	.014	.020	.028	.040	.056	.078	.109
.394		.011	.016	.022	.031	.044	.062	.087	.123
.472		.012	.017	.024	.035	.049	.068	.096	.135
.551		.013	.019	.026	.037	.053	.074	.104	.146
.630		.014	.020	.028	.040	.056	.079	.111	.156
.709		.015	.021	.030	.042	.060	.084	.118	.166
.787		.016	.022	.031	.044	.063	.088	.124	.175
.866		.017	.023	.033	.047	.066	.093	.130	.183
.984		.018	.025	.035	.050	.070	.099	.139	.196
1.102		.019	.026	.037	.053	.074	.104	.147	.207

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.
2. Find your closert axial immersion (APMX FFW / DC) for your cutting application in the left column of the table.
3. The intersection (cell) of the radial and axial immersions is the correction factor for the feed per tooth.

Example for plain copy milling:

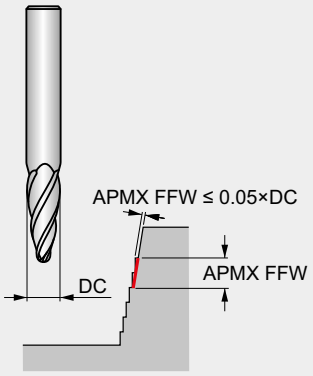
1. Applying an 8 mm ball nose cutter with a depth of cut of 0.8 mm (APMX FFW), the aim is to achieve a theoretical surface roughness of 32 µm.
2. The correction factor for cutting speed with an axial immersion of 10 % = 1.67 can be found in table 3a.
3. The step-over distance for a R_{th} of 32 µm = 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 off 10°– 15°.

SOLID HM BARREL-SHAPE MILL – FEED PER TOOTH TABLE



Feed per tooth f_z (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**	.030	.039	.053	.067	.096
	F	.037	.050	.064	.083	.118
	I	.062	.084	.111	.141	.203

SOLID HSS MILLS – TOOL MATERIALS NAVIGATOR

Tool materials		
High Speed Steel	HSS	A medium-alloyed high speed steel that has good machinability and good performance. HSS exhibits hardness, toughness and wear resistance characteristics that make it attractive in a wide range of applications, for example in drills and taps.
Cobalt High Speed Steel	HSS-E	This high speed steel contains cobalt for increased hot hardness. The composition of HSCo is a good combination of toughness and hardness. It has good machinability and good wear resistance, which makes it usable for drills, taps, milling cutters and reamers.
Cobalt Powder Metallurgy Steel	HSS-E PM	Sintered Cobalt High Speed Steel (HSCo powder metal) is a substrate produced using powder metallurgy technology. Tools using substrates produced by this method exhibit superior toughness and grindability.

SOLID HSS MILLS – SURFACE TREATMENTS AND COATINGS NAVIGATOR

Surface Treatments		
Bright (uncoated)		Bright finish (uncoated surface) improves chip flow in soft or non-ferrous materials and maintains sharp cutting edges in abrasive materials.
Steam Tempering		Steam tempering gives a strongly adhering blue oxide surface that acts to retain cutting fluid and prevent chip to tool welding, thereby counteracting the formation of a built-up edge. Steam tempering can be applied to any bright tool but is most effective on drills and taps.

Surface Coatings		
Alcrona Coating (Alcrona)		The Alcrona (AlCrN) family of coatings are 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 Carbon Nitride Coating (TiCN)		Titanium Carbon Nitride is a ceramic coating applied by PVD coating technology. TiCN is harder than TiN and has a lower coefficient of friction. Its hardness and toughness in combination with good wear resistance ensures that it finds its principal application in the field of milling to enhance the performance of milling cutters.

Material code (BMC)	HSS	HSS	HSS	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
Mill Profile	N	N	N	N	N	N	N	N	W	N	N	N	N
Number of flutes (NOF)	NOF 2	NOF 2	NOF 2	NOF 2	NOF 2	NOF 2	NOF 2	NOF 2	NOF 2	NOF 2	NOF 2	NOF 2	NOF 2
Cut length													
Flute Helix (FHA)	λ 30°	λ 30°	λ 30°	λ 30°	λ 30°	λ 30°	λ 30°	λ 30°	λ 40°	λ 30°	λ 30°	λ 30°	λ 30°
Radial rake angle (GAMF)	γ 8°	γ 8°	γ 8°	γ 12°	γ 12°	γ 12°	γ 12°	γ 12°	γ 20°	γ 12°	γ 12°	γ 12°	γ 12°
Shank				DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835A	DIN 1835A	DIN 1835B	DIN 1835B
Coating	Bright	Bright	Bright	Bright	TiCN	Bright	TiCN	Bright	Bright	Bright	Bright	Bright	Bright
Cutting diameter tolerance class (TCDC)		DC +.003 -.000	DC +.0001 -.0015	DC e8	DC e8	DC e8	DC e8	DC e8	DC e8	DC js14	DC e8	DC e8	DC e8
Direction													
Basic standard group (BSG)	ANSI	ANSI	ANSI	DIN 327D	DIN 327D	DIN 844K	DIN 844K	DORMER	DIN 844K	DORMER	DORMER	DIN 327D	DIN 844K
Product Family Code	C600	C601	C602	C110	C126	C123	C139	C135	C159	C167	C122	C500	C505
PSF cutting diameters range	1/8 - 3/4	1/8 - 1.1/8	1/8 - 1"	1.00 - 40.00	1.00 - 25.00	1/16 - 30.00	2.00 - 22.00	2.00 - 20.00	2.00 - 20.00	6.00 - 16.00	5.00 - 22.00	2.00 - 20.00	3.00 - 30.00
	159	160	161	162	164	165	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

	C346	C306	C353	C367	C305	C352	C299	C922	C907	C920	C492	C614	C615	C609	C618
	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	HSS	HSS-E	HSS-E
	N	N	N	N	N	N	N	HRA	N	N	HRA	N	N	HRA	N
	NOF 3	NOF 3	NOF 3	NOF 3	NOF 3	NOF 3	NOF 3-4	NOF 3-4	NOF 3-6	NOF 3-5	NOF 3-6	NOF 4	NOF 4	NOF 4-5	NOF 4
	λ 30°	λ 30°	λ 30°	λ 40°	λ 30°	λ 30°	λ 45°	λ 35°	λ 45°	λ 45°	λ 35°	λ 30°	λ 30°	λ 30°	λ 30°
	γ 12°	γ 12°	γ 12°	γ 15°	γ 12°	γ 12°	γ 12°	γ 12°	γ 12°	γ 12°	γ 12°	γ 8°	γ 8°	γ 15°	γ 10°
	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B				
	Bright	Bright	Alcrona	Alcrona	Bright	Alcrona	Bright	Alcrona	Alcrona	Alcrona	Alcrona	Bright	Bright	TiCN	Bright
	DC e8	DC e8	DC e8	DC e8	DC e8	DC e8	DC k10	DC k12	DC k10	DC k10	DC k12		DC +.003 -.000	DC +.005 -.000	DC +.003 -.000
	DIN 844L	DIN 327D	DIN 327D	DIN 327D	DIN 844K	DIN 844K	DIN 844K	DIN 844K	DIN 844K	DIN 844L	DIN 844L	ANSI	ANSI	ANSI	ANSI
	3.00 - 20.00	3.00 - 30.00	3.00 - 30.00	2.00 - 20.00	2.00 - 32.00	3.00 - 20.00	3.00 - 20.00	6.00 - 24.00	3.00 - 32.00	6.00 - 25.00	6.00 - 30.00	1/8 - 3/4	1/8 - 1"	1/4 - 1"	1/8 - 1"
	174	175	176	177	178	180	181	182	183	184	185	186	187	188	189
P1	■	■	■	■	■	■						■	■	■	■
P2	◪	■	■	◪	■	■	■	◪	■	■	■	■	■	■	■
P3	◪	◪	■	◪	◪	■	■	■	■	■	■	◪	◪	◪	◪
P4	◪	◪	■	◪	◪	■	■	■	■	■	■	◪	◪	◪	◪
M1	◪	◪	◪	■	◪	◪	■	■	■	■	■	◪	◪	◪	◪
M2	◪	◪	◪	■	◪	◪	■	■	■	■	■	◪	◪	◪	◪
M3			◪	■		◪	◪	■	■	■	■				
M4			◪	■		◪	■	■	■	■	■				
K1	◪	◪	■		◪	■	■	■	■	■	■	◪	◪	◪	◪
K2	◪	◪	■		◪	■	■	■	■	■	■	◪	◪	◪	◪
K3	◪	◪	■		◪	■	■	■	■	■	■	◪	◪	◪	◪
K4	◪	◪	■		◪	■	■	■	■	■	■	◪	◪	◪	◪
K5	◪	◪	■		◪	■	■	■	■	■	■	◪	◪	◪	◪
N1	◪	◪	◪	■	◪	◪						◪	◪	◪	◪
N2		◪	◪	◪	◪	◪						◪	◪	◪	◪
N3	■	■	■	◪	■	■	■	■	■	■	■	■	■	■	■
N4	◪	◪	◪	◪	◪	◪						◪	◪	◪	◪
N5															
S1	◪	◪	■	◪	◪	■	■	■	■	■	■	◪	◪	◪	◪
S2	◪	◪	◪		■	◪	■	■	■	■	■	◪	◪	◪	◪
S3	◪	◪	◪		■	◪	■	■	■	■	■	◪	◪	◪	◪
S4	◪	◪	◪		■	◪	■	■	■	■	■	◪	◪	◪	◪
H1															
H2															
H3															
H4															

■ Primary use ◪ Possible use

Material code (BMC)	HSS-E	HSS-E	HSS-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	HSS-E
Mill Profile	NF	NF	NRA	N	N	N	HRA	NRA	NRA	N	N	N
Number of flutes (NOF)	4	4	4	4-5	4-6	4-6	4-6	4-6	4-6	4-6	6-8	10-12
Cut length												
Flute Helix (FHA)	λ 30°	λ 30°	λ 35°	λ 30°	λ 30°	λ 30°	λ 35°	λ 35°	λ 35°	λ 30°	λ 15°	λ 0°
Radial rake angle (GAMF)	γ 12°	γ 12°	γ 12°	γ 12°	γ 12°	γ 12°	γ 12°	γ 12°	γ 12°	γ 12°	γ 10°	γ 0°
Shank	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835B	DIN 1835	DIN 1835B
Coating	Bright	TiCN	Bright	TiCN	Bright	TiCN	Alcrona	Alcrona	Alcrona	Bright	Bright	Bright
Cutting diameter tolerance class (TCDC)	DC k12	DC k12	DC k12	DC k10	DC k10	DC k10	DC k12	DC k12	DC k12	DC k10	DC d11	DC js16
Direction												
Basic standard group (BSG)	DIN 844K	DIN 844K	DIN 844K	DIN 844K	DIN 844L	DIN 844L	DIN 844K	DIN 844K	DIN 844L	DIN 844K	DIN 851	DIN 1833C
												
Product Family Code	C400	C413	C407	C246	C273	C295	C428	C908	C948	C247	C800	C830
PSF cutting diameters range	6.00 - 20.00	6.00 - 20.00	6.00 - 20.00	2.00 - 25.00	2.00 - 40.00	2.00 - 40.00	6.00 - 32.00	6.00 - 32.00	6.00 - 32.00	2.00 - 40.00	11.00 - 32.00	12.00 - 32.00
	190	191	192	193	194	196	197	198	199	200	202	203
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

	C700	C822	D400	D420	D402	D763	D745	D747
	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS	HSS
	N	N	N	N	NR			
	NOF 4-5	NOF 6-12	NOF 8	NOF 8	NOF 8			
	λ 0°	λ 10°	λ 30°	λ 30°	λ 30°	λ 15°		
	γ 0°	γ 10°	γ 12°	γ 12°	γ 12°	γ 10°	γ 15°	γ 5°
	DIN 1835B	D B DIN 1835						
	Bright	Bright	Bright	TiCN	Bright	Bright	Bright	Bright
		DC h11	DC js16	DC js16	DC js16	DC js16		
	DORMER	DIN 850	DIN 1880	DIN 1880	DIN 1880	DIN 885A	DIN 1838	DIN 1837
	1.00 - 15.00	4.50 - 45.50	40.00 - 50.00	63.00	63.00	63.00 - 125.00	50.00 - 250.00	32.00 - 200.00
	204	205	206	207	208	209	210	212
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					
Mill Profile										
Number of flutes (NOF)										
Cut length										
Flute Helix (FHA)										
Radial rake angle (GAMF)		γ 18°	γ 18°	γ 18°	γ 18°					
Shank										
Coating		ST	ST	ST	ST					
Cutting diameter tolerance class (TCDC)										
Direction										
Basic standard group (BSG)		DORMER	DORMER	DORMER	DORMER					
										
Product Family Code		D752	D753	D750	D751					
PSF cutting diameters range		250.00 - 350.00	250.00 - 350.00	200.00 - 350.00	200.00 - 350.00					
		214	215	216	217					
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									

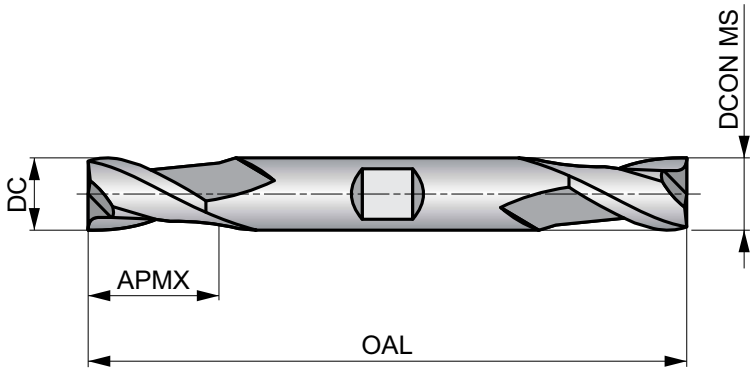
■ Primary use ◪ Possible use

C600

DORMER

2-Flute HSS Double Side, End Mill

Regular length, Weldon shank, 2-flute, double end design with 30° helix provides two cutting ends in one tool with bright finish, improves chip flow in soft and non-ferrous materials.



HSS	N	NOF 2
	λ 30°	γ 8°
	Bright	ANSI

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

P1.1	P1.2	P1.3	P2.1	P2.2	K1.1	K1.2	K1.3	K2.1	K2.2	K3.1	K3.2	K4.1	K4.2
■ 102 C	■ 112 C	■ 115 C	■ 85 C	◪ 75 C	◪ 82 C	◪ 62 C	◪ 46 C	◪ 102 C	◪ 82 C	◪ 89 C	◪ 69 C	◪ 82 B	◪ 62 B
K5.1	**K5.2**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**S1.1**	**S1.2**
◪ 95 B	◪ 69 B	◪ 180 E	◪ 135 D	◪ 92 D	◪ 92 C	◪ 82 C	◪ 59 C	◪ 95 C	◪ 56 C	◪ 30 C	◪ 95 C	◪ 59 B	◪ 49 B
S2.1	**S3.1**	**S4.1**											
◪ 26 A	◪ 20 A	◪ 16 A											

Product	DC (inch)	DC (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	NOF	Pack Qty	MID
C6001/8	1/8	.1250	3/8	3/8	3.1/16	2	1	7647759
C6005/32	5/32	.1563	3/8	7/16	3.1/8	2	1	7647820
C6003/16	3/16	.1875	3/8	7/16	3.1/4	2	1	7647821
C6001/4	1/4	.2500	3/8	1/2	3.3/8	2	1	7647822
C6009/32	9/32	.2813	3/8	9/16	3.3/8	2	1	7647823
C6005/16	5/16	.3125	3/8	9/16	3.1/2	2	1	7647824
C6003/8	3/8	.3750	3/8	9/16	3.1/2	2	1	7647826
C60013/32	13/32	.4063	1/2	13/16	4.1/8	2	1	7647827
C6007/16	7/16	.4375	1/2	13/16	4.1/8	2	1	7647828
C6001/2	1/2	.5000	1/2	13/16	4.1/8	2	1	7647829
C6005/8	5/8	.6250	5/8	1.1/8	5″	2	1	7647830
C6003/4	3/4	.7500	3/4	1.5/16	5.5/8	2	1	7647831

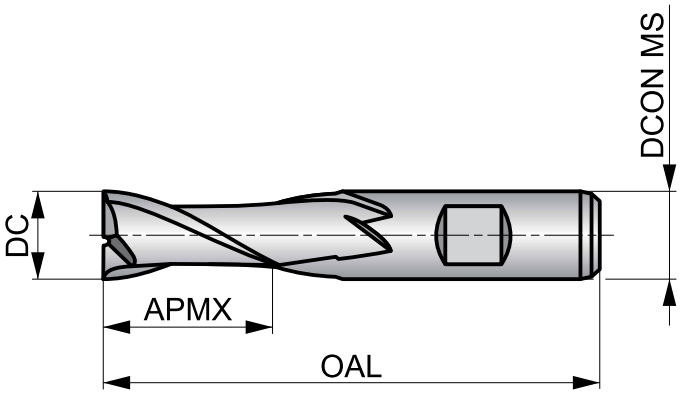
C601

DORMER

2-Flute HSS End Mill Bright Finish

Regular length, Weldon shank, 2-flute with 30° helix and bright finish, improves chip flow in soft and non-ferrous materials.

HSS	N	NOF 2
	λ 30°	γ 8°
	Bright	DC +.003 -.000
ANSI		



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

P1.1	P1.2	P1.3	P2.1	P2.2	K1.1	K1.2	K1.3	K2.1	K2.2	K3.1	K3.2	K4.1	K4.2
■ 102 D	■ 112 D	■ 115 D	■ 85 D	◪ 75 D	◪ 82 D	◪ 62 D	◪ 46 D	◪ 102 D	◪ 82 D	◪ 89 D	◪ 69 D	◪ 82 C	◪ 62 C
K5.1	**K5.2**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**S1.1**	**S1.2**
◪ 95 C	◪ 69 C	◪ 180 F	◪ 135 E	◪ 92 E	◪ 92 D	◪ 82 D	◪ 59 D	◪ 95 D	◪ 56 D	◪ 30 D	◪ 95 D	◪ 59 C	◪ 49 C
S2.1	**S3.1**	**S4.1**											
◪ 26 B	◪ 20 B	◪ 16 B											

Product	DC (inch)	DC (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	NOF	Pack Qty	MID
C6011/8X3/8	1/8	.1250	3/8	3/8	2.5/16	2	1	7647832
C6013/16X3/8	3/16	.1875	3/8	7/16	2.3/8	2	1	7647833
C6011/4X3/8	1/4	.2500	3/8	1/2	2.7/16	2	1	7647834
C6015/16X3/8	5/16	.3125	3/8	9/16	2.1/2	2	1	7647835
C6013/8X3/8	3/8	.3750	3/8	9/16	2.1/2	2	1	7647836
C6017/16X3/8	7/16	.4375	3/8	13/16	2.11/16	2	1	7647837
C6011/2X3/8	1/2	.5000	3/8	13/16	2.11/16	2	1	7647838
C6011/2X1/2	1/2	.5000	1/2	1″	3.1/4	2	1	7647839
C6019/16X1/2	9/16	.5625	1/2	1.1/8	3.3/8	2	1	7647840
C6015/8X1/2	5/8	.6250	1/2	1.1/8	3.3/8	2	1	7647841
C6015/8X5/8	5/8	.6250	5/8	1.5/16	3.3/4	2	1	7647844
C60111/16X1/2	11/16	.6875	1/2	1.5/16	3.5/8	2	1	7647842
C6013/4X1/2	3/4	.7500	1/2	1.5/16	3.5/8	2	1	7647843
C6013/4X5/8	3/4	.7500	5/8	1.5/16	3.3/4	2	1	7647846
C6013/4X3/4	3/4	.7500	3/4	1.5/16	3.7/8	2	1	7647859
C60113/16X5/8	13/16	.8125	5/8	1.1/2	4″	2	1	7647847
C6017/8X5/8	7/8	.8750	5/8	1.1/2	4″	2	1	7647848
C6017/8X3/4	7/8	.8750	3/4	1.1/2	4.1/8	2	1	7647860
C6017/8X7/8	7/8	.8750	7/8	1.1/2	4.1/8	2	1	7647851
C6011X5/8	1″	1.0000	5/8	1.1/2	4″	2	1	7647850
C6011X3/4	1″	1.0000	3/4	1.1/2	4.1/8	2	1	7647861
C6011X1	1″	1.0000	1″	1.5/8	4.1/2	2	1	7647853
C6011.1/8X3/4	1.1/8	1.1250	3/4	1.5/8	4.1/4	2	1	7647862

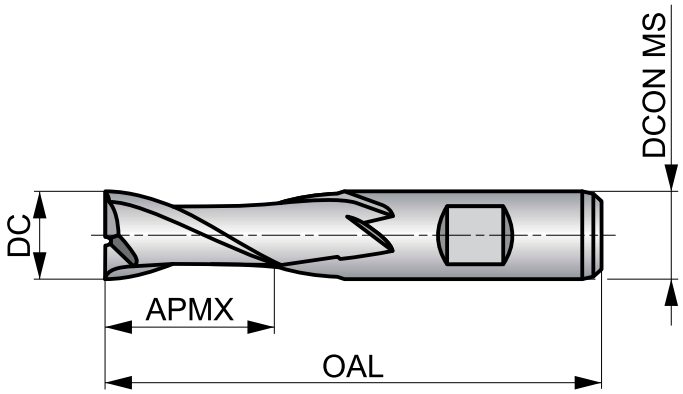
C602

DORMER

2-Flute HSS End Mill Bright Finish

Regular length, Weldon shank, 2-flute with 30° helix for Keyway machining with close tolerance (+0.0000"/-0.0015").Bright finish, improves chip flow in soft and non-ferrous materials.

HSS	N	NOF 2
	λ 30°	γ 8°
	Bright	DC +.0001 -.0015
ANSI		



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

P1.1	P1.2	P1.3	P2.1	P2.2	K1.1	K1.2	K1.3	K2.1	K2.2	K3.1	K3.2	K4.1	K4.2
■ 102 D	■ 112 D	■ 115 D	■ 85 D	◪ 75 D	◪ 82 D	◪ 62 D	◪ 46 D	◪ 102 D	◪ 82 D	◪ 89 D	◪ 69 D	◪ 82 C	◪ 62 C
K5.1	**K5.2**	**N1.1**	**N1.2**	**N1.3**	**N2.1**	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**	**S1.1**	**S1.2**
◪ 95 C	◪ 69 C	◪ 180 F	◪ 135 E	◪ 92 E	◪ 92 D	◪ 82 D	◪ 59 D	◪ 95 D	◪ 56 D	◪ 30 D	◪ 95 D	◪ 59 C	◪ 49 C
S2.1	**S3.1**	**S4.1**											
◪ 26 B	◪ 20 B	◪ 16 B											

Product	DC (inch)	DC (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	NOF	Pack Qty	MID
C6021/8	1/8	.1250	3/8	3/8	2.5/16	2	1	7647864
C6023/16	3/16	.1875	3/8	7/16	2.3/8	2	1	7647865
C6021/4	1/4	.2500	3/8	1/2	2.7/16	2	1	7647866
C6025/16	5/16	.3125	3/8	9/16	2.1/2	2	1	7647867
C6023/8	3/8	.3750	3/8	9/16	2.1/2	2	1	7647868
C6021/2	1/2	.5000	1/2	1"	3.1/4	2	1	7647869
C6025/8	5/8	.6250	5/8	1.5/16	3.3/4	2	1	7647870
C6023/4	3/4	.7500	3/4	1.5/16	3.7/8	2	1	7647871
C6027/8	7/8	.8750	7/8	1.1/2	4.1/8	2	1	7647872
C6021	1"	1.0000	1"	1.5/8	4.1/2	2	1	7647873

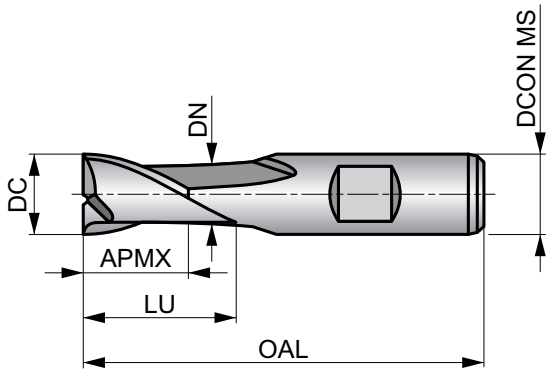
C110

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■ 174 E	■ 194 E	■ 200 E	■ 148 E	◪ 131 E	◪ 121 E	◪ 98 D	◪ 72 D	◪ 135 E	◪ 115 E	◪ 121 E	◪ 98 D	◪ 115 E	◪ 85 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**
◪ 62 E	◪ 203 E	◪ 164 E	◪ 131 D	◪ 177 E	◪ 138 E	◪ 112 D	◪ 164 D	◪ 125 D	◪ 92 D	◪ 79 C	◪ 66 C	◪ 187 D	◪ 141 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**
◪ 108 D	◪ 312 G	◪ 233 F	◪ 157 F	◪ 157 E	◪ 141 E	◪ 102 E	■ 164 E	■ 95 E	■ 49 E	◪ 164 E	■ 115 D	◪ 82 D	◪ 66 C
S3.1	**S4.1**												
◪ 49 C	◪ 39 C												

DCON MS tolerance h6.

Product	DC (inch)	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
C1101.0	–	1.00	.0394	6.00	2.50	47.0	2	–	–	1	5983761
C1101.5	–	1.50	.0591	6.00	3.00	47.0	2	–	–	1	5983771
C1101/16	1/16	1.59	.0625	6.00	3.00	47.0	2	–	–	1	5983776
C1101.8	–	1.80	.0709	6.00	4.00	48.0	2	–	–	1	5983773
C1102.0	–	2.00	.0787	6.00	4.00	48.0	2	–	–	1	5983863
C1103/32	3/32	2.38	.0938	6.00	5.00	49.0	2	–	–	1	5983902
C1102.5	–	2.50	.0984	6.00	5.00	49.0	2	–	–	1	5983866
C1102.8	–	2.80	.1102	6.00	5.00	49.0	2	–	–	1	5983869
C1103.0	–	3.00	.1181	6.00	5.00	49.0	2	–	–	1	5984089
C1101/8	1/8	3.18	.1250	6.00	6.00	50.0	2	–	–	1	5983788
C1103.5	–	3.50	.1378	6.00	6.00	50.0	2	–	–	1	5984094
C1103.8	–	3.80	.1496	6.00	7.00	51.0	2	–	–	1	5984099
C1104.0	–	4.00	.1575	6.00	7.00	51.0	2	–	–	1	5983914
C1104.5	–	4.50	.1772	6.00	7.00	51.0	2	–	–	1	5983917
C1103/16	3/16	4.76	.1875	6.00	8.00	52.0	2	–	–	1	5984103
C1105.0	–	5.00	.1969	6.00	8.00	52.0	2	–	–	1	5983933
C1105.5	–	5.50	.2165	6.00	8.00	52.0	2	–	–	1	5983937
C1105.75 [2)]	–	5.75	.2264	6.00	8.00	52.0	2	–	–	1	5983941
C1106.0	–	6.00	.2362	6.00	8.00	52.0	2	–	–	1	5983958
C1101/4	1/4	6.35	.2500	10.00	10.00	60.0	2	–	–	1	5983785
C1106.5	–	6.50	.2559	10.00	10.00	60.0	2	–	–	1	5983962

Product	DC	DC	DC	DCON MS	APMX	OAL	NOF	LU	DN	Pack Qty	MID
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)		(mm)	(mm)		
C1107.0	–	7.00	.2756	10.00	10.00	60.0	2	–	–	1	5983976
C1107.5	–	7.50	.2953	10.00	10.00	60.0	2	–	–	1	5983981
C1107.75 [2]	–	7.75	.3051	10.00	11.00	61.0	2	–	–	1	5983986
C1105/16	5/16	7.94	.3125	10.00	11.00	61.0	2	–	–	1	5983946
C1108.0	–	8.00	.3150	10.00	11.00	61.0	2	–	–	1	5984003
C1108.5	–	8.50	.3346	10.00	11.00	61.0	2	–	–	1	5984007
C1109.0	–	9.00	.3543	10.00	11.00	61.0	2	–	–	1	5984012
C1109.5	–	9.50	.3740	10.00	11.00	61.0	2	–	–	1	5984017
C1103/8	3/8	9.52	.3750	10.00	13.00	63.0	2	22.50	9.50	1	5983905
C11010.0	–	10.00	.3937	10.00	13.00	63.0	2	22.50	9.50	1	5983791
C11013/32	13/32	10.32	.4063	12.00	13.00	70.0	2	–	–	1	5983827
C11010.5	–	10.50	.4134	12.00	13.00	70.0	2	–	–	1	5983794
C11011.0	–	11.00	.4331	12.00	13.00	70.0	2	–	–	1	5983797
C1107/16	7/16	11.11	.4375	12.00	13.00	70.0	2	–	–	1	5983991
C11011.5	–	11.50	.4528	12.00	13.00	70.0	2	–	–	1	5983800
C11012.0	–	12.00	.4724	12.00	16.00	73.0	2	27.50	11.50	1	5983811
C11012.5	–	12.50	.4921	12.00	16.00	73.0	2	27.50	11.50	1	5983816
C1101/2	1/2	12.70	.5000	12.00	16.00	73.0	2	27.50	11.50	1	5983782
C11013.0	–	13.00	.5118	12.00	16.00	73.0	2	27.50	11.50	1	5983821
C11017/32	17/32	13.49	.5313	12.00	16.00	73.0	2	27.50	11.50	1	5983852
C11014.0	–	14.00	.5512	12.00	16.00	73.0	2	27.50	11.50	1	5983831
C1109/16	9/16	14.29	.5625	12.00	16.00	73.0	2	27.50	11.50	1	5984032
C11015.0	–	15.00	.5906	12.00	16.00	73.0	2	27.50	11.50	1	5983834
C1105/8	5/8	15.88	.6250	16.00	19.00	79.0	2	30.50	15.50	1	5983949
C11016.0	–	16.00	.6299	16.00	19.00	79.0	2	30.50	15.50	1	5983840
C11017.0	–	17.00	.6693	16.00	19.00	79.0	2	30.50	15.50	1	5983843
C11011/16	11/16	17.46	.6875	16.00	19.00	79.0	2	30.50	15.50	1	5983808
C11018.0	–	18.00	.7087	16.00	19.00	79.0	2	30.50	15.50	1	5983855
C11019.0	–	19.00	.7480	16.00	19.00	79.0	2	30.50	15.50	1	5983857
C1103/4	3/4	19.05	.7500	20.00	22.00	88.0	2	37.50	18.50	1	5983903
C11020.0	–	20.00	.7874	20.00	22.00	88.0	2	37.50	19.50	1	5983872
C11022.0	–	22.00	.8661	20.00	22.00	88.0	2	37.50	19.50	1	5983881
C1107/8	7/8	22.22	.8750	20.00	22.00	88.0	2	37.50	19.50	1	5983996
C11024.0	–	24.00	.9449	25.00	26.00	102.0	2	45.50	23.50	1	5983901
C11025.0	–	25.00	.9843	25.00	26.00	102.0	2	45.50	24.50	1	5983967
C1101	1″	25.40	1.0000	25.00	26.00	102.0	2	45.50	24.50	1	5983749
C11026.0	–	26.00	1.0236	25.00	26.00	102.0	2	45.50	24.50	1	5984022
C11028.0	–	28.00	1.1024	25.00	26.00	102.0	2	45.50	24.50	1	5984079
C11030.0	–	30.00	1.1811	25.00	26.00	102.0	2	45.50	24.50	1	5983906
C11032.0	–	32.00	1.2598	32.00	32.00	112.0	2	51.50	31.50	1	5983908
C11035.0 [1]	–	35.00	1.3780	32.00	32.00	112.0	2	51.50	31.50	1	5983910
C11036.0 [1]	–	36.00	1.4173	32.00	32.00	112.0	2	51.50	31.50	1	5983912
C11040.0 [1]	–	40.00	1.5748	40.00	38.00	130.0	2	59.50	39.00	1	5983925

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

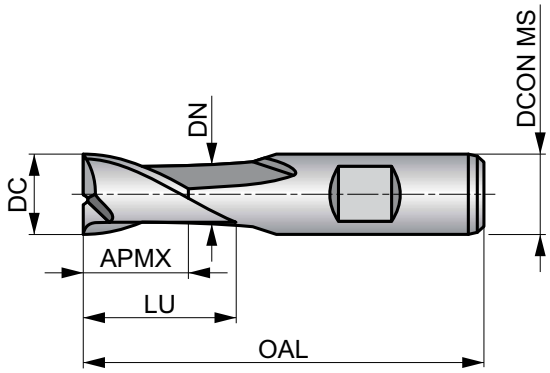
C126

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■413 E	■463 E	■479 E	■354 E	■312 E	◪276 D	■266 E	■213 D	◪180 D	■157 D	◪135 D	◪112 D	◪203 E	◪171 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**
◪180 E	◪148 D	◪85 C	◪82 C	■197 E	■144 E	■108 E	■364 E	■295 E	■236 D	■322 E	■246 E	■200 D	■299 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**
■223 D	■164 D	■141 C	■118 C	■338 D	■253 D	■197 D	◪581 G	◪436 F	◪292 F	◪292 E	■262 E	■187 E	■305 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**		
■180 E	■92 E	◪305 E	■148 D	■131 D	◪49 C	■108 C	◪46 C	■82 C	◪33 C	■66 C	◪26 C		

DCON MS tolerance h6.

Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
C1261.0	1.00	.0394	6.00	2.50	47.0	2	–	–	1	5983805
C1261.5	1.50	.0591	6.00	3.00	47.0	2	–	–	1	5983810
C1262.0	2.00	.0787	6.00	4.00	48.0	2	–	–	1	5983861
C1262.5	2.50	.0984	6.00	5.00	49.0	2	–	–	1	5983865
C1263.0	3.00	.1181	6.00	5.00	49.0	2	–	–	1	5983882
C1263.5	3.50	.1378	6.00	6.00	50.0	2	–	–	1	5983884
C1264.0	4.00	.1575	6.00	7.00	51.0	2	–	–	1	5983887
C1264.5	4.50	.1772	6.00	7.00	51.0	2	–	–	1	5983889
C1265.0	5.00	.1969	6.00	8.00	52.0	2	–	–	1	5983892
C1265.5	5.50	.2165	6.00	8.00	52.0	2	–	–	1	5983893
C1266.0	6.00	.2362	6.00	8.00	52.0	2	–	–	1	5983896
C1266.5	6.50	.2559	10.00	10.00	60.0	2	–	–	1	5984475
C1267.0	7.00	.2756	10.00	10.00	60.0	2	–	–	1	5984530
C1267.5	7.50	.2953	10.00	10.00	60.0	2	–	–	1	5984582
C1268.0	8.00	.3150	10.00	11.00	61.0	2	–	–	1	5984645
C1268.5	8.50	.3346	10.00	11.00	61.0	2	–	–	1	5984647

Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
C1269.0	9.00	.3543	10.00	11.00	61.0	2	–	–	1	5984648
C12610.0	10.00	.3937	10.00	13.00	63.0	2	22.50	9.50	1	5983813
C12610.5	10.50	.4134	12.00	13.00	70.0	2	–	–	1	5983817
C12611.0	11.00	.4331	12.00	13.00	70.0	2	–	–	1	5983823
C12611.5	11.50	.4528	12.00	13.00	70.0	2	–	–	1	5983826
C12612.0	12.00	.4724	12.00	16.00	73.0	2	27.50	11.50	1	5983832
C12612.5	12.50	.4921	12.00	16.00	73.0	2	27.50	11.50	1	5983835
C12613.0	13.00	.5118	12.00	16.00	73.0	2	27.50	11.50	1	5983838
C12614.0	14.00	.5512	12.00	16.00	73.0	2	27.50	11.50	1	5983847
C12615.0	15.00	.5906	12.00	16.00	73.0	2	27.50	11.50	1	5983850
C12616.0	16.00	.6299	16.00	19.00	79.0	2	30.50	15.50	1	5983856
C12618.0	18.00	.7087	16.00	19.00	79.0	2	30.50	15.50	1	5983858
C12620.0	20.00	.7874	20.00	22.00	88.0	2	37.50	19.50	1	5983868
C12622.0	22.00	.8661	20.00	22.00	88.0	2	37.50	19.50	1	5983871
C12624.0	24.00	.9449	25.00	26.00	102.0	2	45.50	23.50	1	5983874
C12625.0	25.00	.9843	25.00	26.00	102.0	2	45.50	24.50	1	5983880

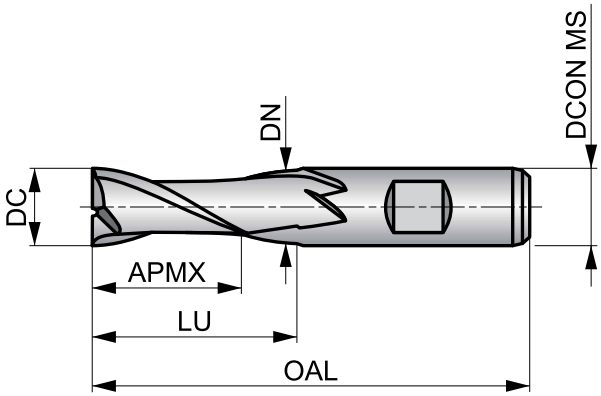
C123

DORMER

2-Flute HSS-E-PM Slot End Mill, Bright Finish

Short cut length, 2-flute design provides high rigidity. Suitable for milling shallow slots and ramping. The accurate diameter means the tools are designed for milling standard keyway slots to a P9 tolerance. Versatile and can be used in mild steels, non-ferrous materials and medium strength titanium alloys.

HSS-E PM	N	NOF 2
	λ 30°	γ 12°
DIN 1835B	Bright	DC e8
	DIN 844K	



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■174 D	■194 D	■200 D	■148 D	■131 D	■121 D	■98 C	■72 C	◪112 D	◪95 D	◪102 D	◪82 C	◪98 D	◪72 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**
◪56 D	◪180 D	◪148 D	◪118 C	◪161 D	◪121 D	◪98 B	◪148 C	◪112 C	◪82 C	◪72 B	◪59 B	◪167 C	◪128 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**
◪98 C	◪312 F	◪233 E	◪157 E	◪157 D	◪141 D	◪102 D	■164 D	■95 D	■49 D	◪164 D	■98 C	◪82 C	◪66 B
S3.1	**S4.1**												
◪49 B	◪39 B												

DCON MS tolerance h6.

Product	DC (inch)	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
C1231/16 [1]	1/16	1.59	.0625	6.00	7.00	51.0	2	–	–	1	5984309
C1232.0	–	2.00	.0787	6.00	7.00	51.0	2	–	–	1	5984368
C1232.5	–	2.50	.0984	6.00	8.00	52.0	2	–	–	1	5984375
C1233.0	–	3.00	.1181	6.00	8.00	52.0	2	–	–	1	5984385
C1231/8 [1]	1/8	3.18	.1250	6.00	10.00	54.0	2	–	–	1	5984329
C1233.5	–	3.50	.1378	6.00	10.00	54.0	2	–	–	1	5984387
C1235/32 [1]	5/32	3.97	.1563	6.00	11.00	55.0	2	–	–	1	5983899
C1234.0	–	4.00	.1575	6.00	11.00	55.0	2	–	–	1	5983807
C1234.5	–	4.50	.1772	6.00	11.00	55.0	2	–	–	1	5983844
C1233/16 [1]	3/16	4.76	.1875	6.00	13.00	57.0	2	–	–	1	5984389
C1235.0	–	5.00	.1969	6.00	13.00	57.0	2	–	–	1	5983895
C1235.5	–	5.50	.2165	6.00	13.00	57.0	2	–	–	1	5983897
C1236.0	–	6.00	.2362	6.00	13.00	57.0	2	–	–	1	5983778
C1231/4 [1]	1/4	6.35	.2500	10.00	16.00	66.0	2	–	–	1	5984319
C1236.5	–	6.50	.2559	10.00	16.00	66.0	2	–	–	1	5983781
C1237.0	–	7.00	.2756	10.00	16.00	66.0	2	–	–	1	5983784
C1237.5	–	7.50	.2953	10.00	16.00	66.0	2	–	–	1	5983787
C1235/16 [1]	5/16	7.94	.3125	10.00	19.00	69.0	2	–	–	1	5983898
C1238.0	–	8.00	.3150	10.00	19.00	69.0	2	–	–	1	5983790
C1238.5	–	8.50	.3346	10.00	19.00	69.0	2	–	–	1	5983793
C1239.0	–	9.00	.3543	10.00	19.00	69.0	2	–	–	1	5983796

Product	DC	DC	DC	DCON MS	APMX	OAL	NOF	LU	DN	Pack Qty	MID
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)		(mm)	(mm)		
C1239.5	–	9.50	.3740	10.00	19.00	69.0	2	–	–	1	5983799
C1233/8 [1)]	3/8	9.52	.3750	10.00	22.00	72.0	2	31.50	9.50	1	5984393
C12310.0	–	10.00	.3937	10.00	22.00	72.0	2	31.50	9.50	1	5984334
C12311.0	–	11.00	.4331	12.00	22.00	79.0	2	–	–	1	5984339
C12312.0	–	12.00	.4724	12.00	26.00	83.0	2	37.50	11.50	1	5984343
C1231/2 [1)]	1/2	12.70	.5000	12.00	26.00	83.0	2	37.50	11.50	1	5984314
C12313.0	–	13.00	.5118	12.00	26.00	83.0	2	37.50	11.50	1	5984348
C12314.0	–	14.00	.5512	12.00	26.00	83.0	2	37.50	11.50	1	5984352
C12315.0	–	15.00	.5906	12.00	26.00	83.0	2	37.50	11.50	1	5984356
C12316.0	–	16.00	.6299	16.00	32.00	92.0	2	43.50	15.50	1	5984360
C12318.0	–	18.00	.7087	16.00	32.00	92.0	2	43.50	15.50	1	5984364
C12320.0	–	20.00	.7874	20.00	38.00	104.0	2	53.50	19.50	1	5984378
C12322.0	–	22.00	.8661	20.00	38.00	104.0	2	53.50	19.50	1	5984381
C12325.0	–	25.00	.9843	25.00	45.00	121.0	2	64.50	24.50	1	5984384
C12330.0	–	30.00	1.1811	25.00	45.00	121.0	2	64.50	24.50	1	5984394

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

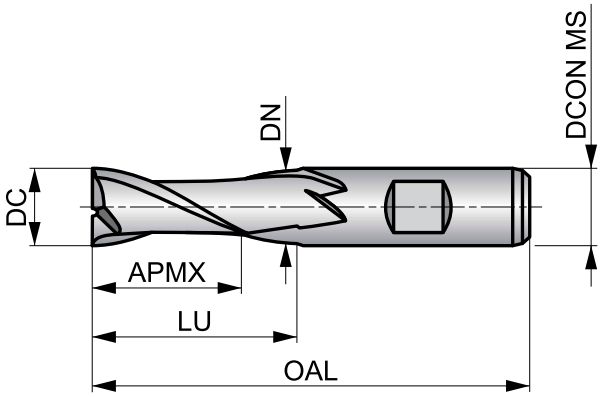
C139

DORMER

2-Flute HSS-E-PM Slot End Mill, TiCN Coating

Short cut length, 2-flute design provides high rigidity. Suitable for milling shallow slots and ramping. The accurate diameter means the tools are designed for milling standard keyway slots to a P9 tolerance. TiCN coating increases the life of the cutter and improves performance when milling hard and abrasive materials.

HSS-E PM	N	NOF 2
	λ 30°	γ 12°
DIN 1835B	TiCN	DC e8
	DIN 844K	



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■371 D	■413 D	■430 D	■318 D	■279 D	◪246 C	■243 D	■194 C	◪164 C	■144 C	◪121 C	◪102 C	◪203 D	◪171 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**
◪180 D	◪148 C	◪85 B	◪82 B	■180 D	■135 D	■102 D	■322 D	■262 D	■210 C	■285 D	■220 D	■177 B	■266 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**
■200 C	■148 C	■125 B	■105 B	■299 C	■226 C	■174 C	◪522 F	◪394 E	◪262 E	◪262 D	■236 D	■167 D	■276 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**		
■164 D	■82 D	◪276 D	■148 C	■115 C	◪49 B	■108 B	◪46 B	■82 B	◪33 B	■66 B	◪26 B		

DCON MS tolerance h6.

Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
C1392.0	2.00	.0787	6.00	7.00	51.0	2	–	–	1	5984150
C1393.0	3.00	.1181	6.00	8.00	52.0	2	–	–	1	5983982
C1394.0	4.00	.1575	6.00	11.00	55.0	2	–	–	1	5983999
C1395.0	5.00	.1969	6.00	13.00	57.0	2	–	–	1	5984011
C1395.5	5.50	.2165	6.00	13.00	57.0	2	–	–	1	5984021
C1396.0	6.00	.2362	6.00	13.00	57.0	2	–	–	1	5984026
C1396.5	6.50	.2559	10.00	16.00	66.0	2	–	–	1	5984031
C1397.0	7.00	.2756	10.00	16.00	66.0	2	–	–	1	5984036
C1397.5	7.50	.2953	10.00	16.00	66.0	2	–	–	1	5984040
C1398.0	8.00	.3150	10.00	19.00	69.0	2	–	–	1	5984045
C1398.5	8.50	.3346	10.00	19.00	69.0	2	–	–	1	5984050

Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
C1399.0	9.00	.3543	10.00	19.00	69.0	2	–	–	1	5984055
C13910.0	10.00	.3937	10.00	22.00	72.0	2	31.50	9.50	1	5983955
C13911.0	11.00	.4331	12.00	22.00	79.0	2	–	–	1	5984016
C13912.0	12.00	.4724	12.00	26.00	83.0	2	37.50	11.50	1	5984069
C13913.0	13.00	.5118	12.00	26.00	83.0	2	37.50	11.50	1	5984119
C13914.0	14.00	.5512	12.00	26.00	83.0	2	37.50	11.50	1	5984145
C13915.0	15.00	.5906	12.00	26.00	83.0	2	37.50	11.50	1	5984147
C13916.0	16.00	.6299	16.00	32.00	92.0	2	43.50	15.50	1	5984148
C13918.0	18.00	.7087	16.00	32.00	92.0	2	43.50	15.50	1	5984149
C13920.0	20.00	.7874	20.00	38.00	104.0	2	53.50	19.50	1	5983968
C13922.0	22.00	.8661	20.00	38.00	104.0	2	53.50	19.50	1	5983972

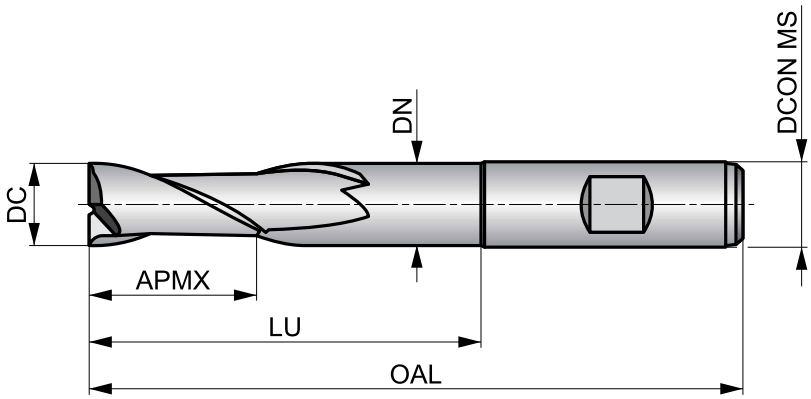
C135

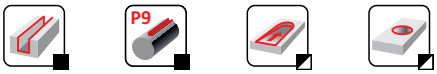
DORMER

2-Flute HSS-E Extra Long Reach Slot End Mill, Bright Finish

Short cut length, 2-flute design provides high rigidity for milling standard keyway slots to a P9 tolerance. Provides increased strength and reduced vibrations in difficult to reach areas. This can be used in mild steels and non-ferrous materials.

HSS-E	N	NOF 2
	λ 30°	γ 12°
DIN 1835B	Bright	DC e8
	DORMER	





Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■ 151 C	■ 171 C	■ 177 C	■ 131 C	◪ 115 C	◪ 105 C	◪ 85 B	◪ 62 B	◪ 112 C	◪ 95 C	◪ 102 C	◪ 82 B	◪ 98 C	◪ 72 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**
◪ 56 C	◪ 161 C	◪ 131 C	◪ 105 B	◪ 144 C	◪ 108 C	◪ 89 A	◪ 131 B	◪ 98 B	◪ 72 B	◪ 62 A	◪ 52 A	◪ 151 B	◪ 112 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**
◪ 89 B	◪ 266 E	◪ 197 D	◪ 135 D	◪ 135 C	◪ 121 C	◪ 85 C	■ 141 C	■ 82 C	■ 43 C	◪ 141 C	◪ 98 B	◪ 82 B	◪ 66 A
S3.1	**S4.1**												
◪ 49 A	◪ 39 A												

DCON MS tolerance h6.

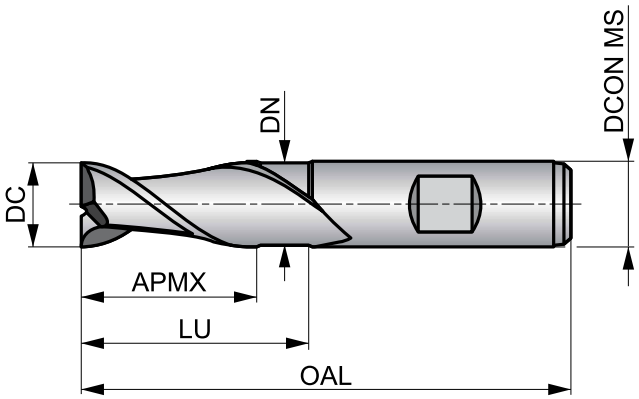
Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
C1352.0	2.00	.0787	6.00	7.00	54.0	2	18.00	1.80	1	5984629
C1353.0	3.00	.1181	6.00	8.00	56.0	2	20.00	2.80	1	5984634
C1354.0	4.00	.1575	6.00	11.00	63.0	2	27.00	3.70	1	5984638
C1355.0	5.00	.1969	6.00	13.00	68.0	2	32.00	4.70	1	5984640
C1356.0	6.00	.2362	6.00	13.00	68.0	2	32.00	5.70	1	5984642
C1358.0	8.00	.3150	10.00	19.00	88.0	2	48.00	7.50	1	5984644
C13510.0	10.00	.3937	10.00	22.00	95.0	2	54.50	9.50	1	5984587
C13512.0	12.00	.4724	12.00	26.00	110.0	2	64.50	11.50	1	5984598
C13514.0	14.00	.5512	12.00	26.00	110.0	2	64.50	11.50	1	5984605
C13516.0	16.00	.6299	16.00	32.00	123.0	2	74.50	15.50	1	5984613
C13518.0	18.00	.7087	16.00	32.00	123.0	2	74.50	15.50	1	5984622
C13520.0	20.00	.7874	20.00	38.00	141.0	2	90.50	19.50	1	5984631

C159

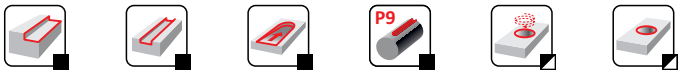
DORMER

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
◪151 D	◪171 D	◪177 D	◪131 D	◪115 D	◪105 D	◪89 D	◪92 D	◪75 C	◪72 C	◪62 C	■466 F	■351 E	■236 E

N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	S1.1
■236 D	■210 D	◪151 D	■246 D	■144 D	■72 D	■246 D	■95 D	◪92 C

DCON MS tolerance h6.

Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
C1592.0	2.00	.0787	6.00	7.00	51.0	2	–	–	1	5984124
C1593.0	3.00	.1181	6.00	8.00	52.0	2	–	–	1	5984130
C1594.0	4.00	.1575	6.00	11.00	55.0	2	–	–	1	5984136
C1595.0	5.00	.1969	6.00	13.00	57.0	2	–	–	1	5984138
C1596.0	6.00	.2362	6.00	13.00	57.0	2	–	–	1	5984140
C1598.0	8.00	.3150	10.00	19.00	69.0	2	–	–	1	5984143
C15910.0	10.00	.3937	10.00	22.00	72.0	2	–	–	1	5984088
C15912.0	12.00	.4724	12.00	26.00	83.0	2	–	–	1	5984098
C15914.0	14.00	.5512	12.00	26.00	83.0	2	37.50	11.50	1	5984107
C15916.0	16.00	.6299	16.00	32.00	92.0	2	43.50	15.50	1	5984115
C15918.0	18.00	.7087	16.00	32.00	92.0	2	43.50	15.50	1	5984121
C15920.0	20.00	.7874	20.00	38.00	104.0	2	53.50	19.50	1	5984128

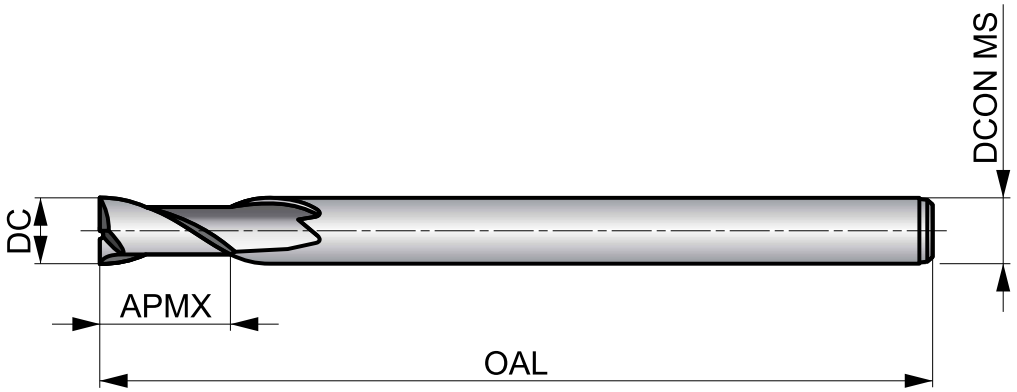
C167

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■ 151 C	■ 171 C	■ 177 C	■ 131 C	◪ 115 C	◪ 105 C	◪ 85 B	◪ 62 B	◪ 112 C	◪ 95 C	◪ 102 C	◪ 82 B	◪ 98 C	◪ 72 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**
◪ 56 C	◪ 161 C	◪ 131 C	◪ 105 B	◪ 144 C	◪ 108 C	◪ 89 A	◪ 131 B	◪ 98 B	◪ 72 B	◪ 62 A	◪ 52 A	◪ 151 B	◪ 112 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**
◪ 89 B	◪ 266 E	◪ 197 D	◪ 135 D	◪ 135 C	◪ 121 C	◪ 85 C	■ 141 C	■ 82 C	■ 43 C	◪ 141 C	◪ 98 B	◪ 82 B	◪ 66 A
S3.1	**S4.1**												
◪ 49 A	◪ 39 A												

DCON MS tolerance h6.

Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	Pack Qty	MID
C1676.0	6.00	.2362	6.00	13.00	180.0	2	1	5984425
C1678.0	8.00	.3150	8.00	19.00	180.0	2	1	5984428
C16710.0	10.00	.3937	10.00	22.00	200.0	2	1	5984414
C16712.0	12.00	.4724	12.00	26.00	200.0	2	1	5984420
C16716.0	16.00	.6299	16.00	32.00	200.0	2	1	5984422

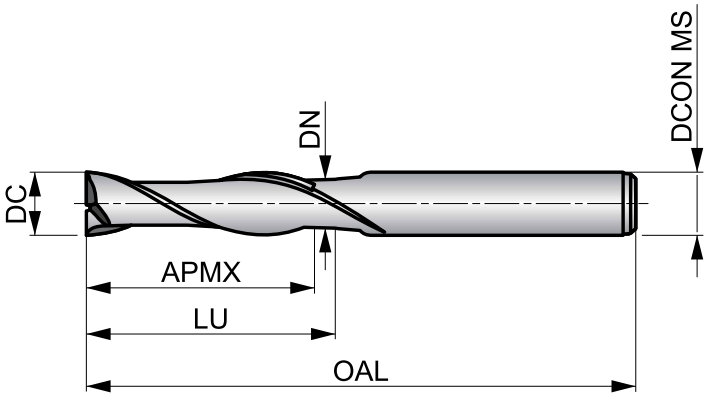
C122

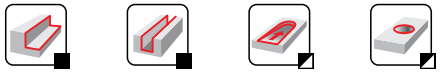
DORMER

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■135 C	■151 C	■157 C	■115 C	◪102 C	◪92 C	◪75 B	◪56 B	◪89 C	◪75 C	◪79 C	◪66 B	◪82 C	◪62 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**
◪46 C	◪144 C	◪118 C	◪95 B	◪128 C	◪98 C	◪79 A	◪118 B	◪89 B	◪66 B	◪56 A	◪46 A	◪135 B	◪102 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**
◪79 B	◪249 E	◪187 D	◪125 D	◪125 C	◪112 C	◪82 C	■131 C	■75 C	■39 C	◪131 C	◪82 B	◪66 B	◪49 A
S3.1	**S4.1**												
◪36 A	◪30 A												

DCON MS tolerance h6.

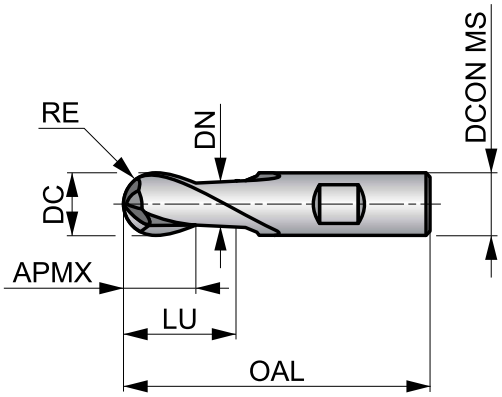
Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
C1225.0	5.00	.1969	5.00	22.00	65.0	2	–	–	1	5984281
C1226.0	6.00	.2362	6.00	27.00	75.0	2	–	–	1	5984286
C1227.0	7.00	.2756	8.00	33.00	85.0	2	–	–	1	5984291
C1228.0	8.00	.3150	8.00	33.00	85.0	2	–	–	1	5984294
C12210.0	10.00	.3937	10.00	40.00	95.0	2	–	–	1	5984230
C12212.0	12.00	.4724	12.00	45.00	110.0	2	–	–	1	5984235
C12214.0	14.00	.5512	12.00	52.00	125.0	2	–	–	1	5984240
C12216.0	16.00	.6299	16.00	58.00	140.0	2	69.50	15.50	1	5984246
C12218.0	18.00	.7087	16.00	65.00	150.0	2	76.50	15.50	1	5984252
C12220.0	20.00	.7874	20.00	70.00	160.0	2	85.50	19.50	1	5984257
C12222.0	22.00	.8661	20.00	75.00	170.0	2	90.50	19.50	1	5984262

C500

DORMER

2-Flute HSS-E Ball-Nosed End Mill, Bright Finish

Extra short cut length, 2-flute design provides high rigidity for increased strength and reduced vibrations. Geometry designed for contouring complex surfaces on CNC m/c, suited for mild steels, mild non-ferrous materials and medium strength titanium alloys. Neck recess on cutting diameter equal to 14 mm and above.



HSS-E	N	NOF 2
	λ 30°	γ 12°
DIN 1835B	Bright	DC e8
	DIN 327D	

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■ 174 E	■ 194 E	■ 200 E	■ 148 E	◪ 131 E	◪ 118 E	◪ 95 D	◪ 72 D	◪ 112 E	◪ 95 E	◪ 102 E	◪ 82 D	◪ 98 E	◪ 72 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**
◪ 56 E	◪ 180 E	◪ 148 E	◪ 118 D	◪ 161 E	◪ 121 E	◪ 98 D	◪ 148 D	◪ 112 D	◪ 82 D	◪ 72 C	◪ 59 C	◪ 167 D	◪ 128 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**
◪ 98 D	◪ 312 G	◪ 233 F	◪ 157 F	◪ 157 E	◪ 141 E	◪ 102 E	■ 164 E	■ 95 E	■ 49 E	◪ 164 E	■ 98 D	◪ 82 D	◪ 66 C
S3.1	**S4.1**												
◪ 49 C	◪ 39 C												

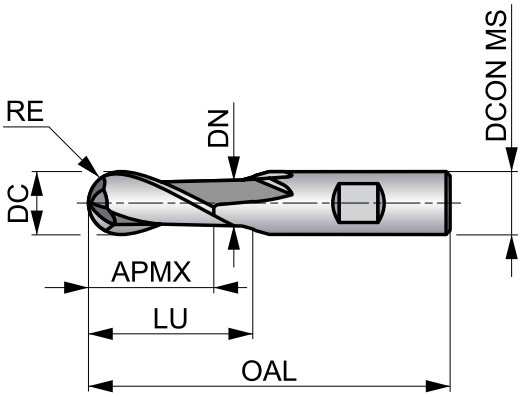
DCON MS tolerance h6; RE ±0.05 mm.

Product	DC (mm)	DC (inch)	RE (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
C5002.0	2.00	.0787	1.00	6.00	4.00	48.0	2	–	–	1	5985037
C5003.0	3.00	.1181	1.50	6.00	5.00	49.0	2	–	–	1	5985052
C5004.0	4.00	.1575	2.00	6.00	7.00	51.0	2	–	–	1	5985057
C5005.0	5.00	.1969	2.50	6.00	8.00	52.0	2	–	–	1	5985062
C5006.0	6.00	.2362	3.00	6.00	8.00	52.0	2	–	–	1	5985067
C5007.0	7.00	.2756	3.50	10.00	10.00	60.0	2	–	–	1	5985074
C5008.0	8.00	.3150	4.00	10.00	11.00	61.0	2	–	–	1	5985081
C50010.0	10.00	.3937	5.00	10.00	13.00	63.0	2	–	–	1	5984992
C50012.0	12.00	.4724	6.00	12.00	16.00	73.0	2	–	–	1	5985003
C50014.0	14.00	.5512	7.00	12.00	16.00	73.0	2	27.50	11.50	1	5985013
C50015.0	15.00	.5906	7.50	12.00	16.00	73.0	2	27.50	11.50	1	5985018
C50016.0	16.00	.6299	8.00	16.00	19.00	79.0	2	30.50	15.50	1	5985028
C50018.0	18.00	.7087	9.00	16.00	19.00	79.0	2	30.50	15.50	1	5985033
C50020.0	20.00	.7874	10.00	20.00	22.00	88.0	2	37.50	19.50	1	5985042

C505

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■151 D	■171 D	■177 D	■131 D	◪115 D	◪105 D	◪85 C	◪62 C	◪112 D	◪95 D	◪102 D	◪82 C	◪98 D	◪72 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**
◪56 D	◪161 D	◪131 D	◪105 C	◪144 D	◪108 D	◪89 B	◪131 C	◪98 C	◪72 C	◪62 B	◪52 B	◪151 C	◪112 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**
◪89 C	◪266 F	◪197 E	◪135 E	◪135 D	◪121 D	◪85 D	■141 D	■82 D	■43 D	◪141 D	■98 C	◪82 C	◪66 B
S3.1	**S4.1**												
◪49 B	◪39 B												

DCON MS tolerance h6; RE ±0.05 mm.

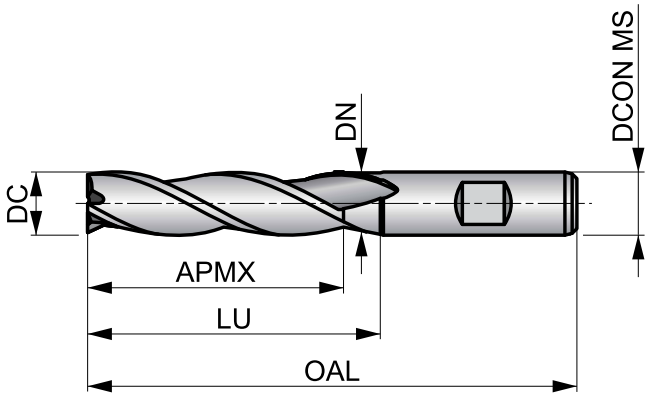
Product	DC (mm)	DC (inch)	RE (mm)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
C5053.0	3.00	.1181	1.50	6.00	8.00	52.0	2	–	–	1	5985500
C5054.0	4.00	.1575	2.00	6.00	11.00	55.0	2	–	–	1	5985506
C5055.0	5.00	.1969	2.50	6.00	13.00	57.0	2	–	–	1	5985510
C5056.0	6.00	.2362	3.00	6.00	13.00	57.0	2	–	–	1	5985514
C5058.0	8.00	.3150	4.00	10.00	19.00	69.0	2	–	–	1	5985530
C50510.0	10.00	.3937	5.00	10.00	22.00	72.0	2	–	–	1	5985462
C50512.0	12.00	.4724	6.00	12.00	26.00	83.0	2	–	–	1	5985466
C50514.0	14.00	.5512	7.00	12.00	26.00	83.0	2	37.50	11.50	1	5985470
C50516.0	16.00	.6299	8.00	16.00	32.00	92.0	2	43.50	15.50	1	5985473
C50520.0	20.00	.7874	10.00	20.00	38.00	104.0	2	53.50	19.50	1	5985485
C50522.0	22.00	.8661	11.00	20.00	38.00	104.0	2	53.50	19.50	1	5985488
C50530.0	30.00	1.1811	15.00	25.00	45.00	121.0	2	64.50	24.50	1	5985503

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■ 131 C	■ 148 C	■ 151 C	■ 112 C	◪ 98 C	◪ 92 C	◪ 72 B	◪ 52 B	◪ 89 C	◪ 75 C	◪ 79 C	◪ 66 B	◪ 82 C	◪ 62 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**
◪ 46 C	◪ 141 C	◪ 115 C	◪ 92 B	◪ 125 C	◪ 95 C	◪ 79 A	◪ 115 B	◪ 89 B	◪ 66 B	◪ 56 A	◪ 46 A	◪ 131 B	◪ 98 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**	
◪ 75 B	◪ 249 E	◪ 187 D	◪ 125 D	■ 131 C	■ 75 C	■ 39 C	◪ 131 C	■ 82 B	◪ 66 B	◪ 43 A	◪ 33 A	◪ 26 A	

DCON MS tolerance h6.

Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
C3463.0	3.00	.1181	6.00	12.00	56.0	3	–	–	1	5984057
C3464.0	4.00	.1575	6.00	19.00	63.0	3	–	–	1	5984062
C3465.0	5.00	.1969	6.00	24.00	68.0	3	–	–	1	5984067
C3466.0	6.00	.2362	6.00	24.00	68.0	3	–	–	1	5984075
C3467.0	7.00	.2756	10.00	30.00	80.0	3	–	–	1	5984080
C3468.0	8.00	.3150	10.00	38.00	88.0	3	–	–	1	5984085
C3469.0	9.00	.3543	10.00	38.00	88.0	3	–	–	1	5984090
C34610.0	10.00	.3937	10.00	45.00	95.0	3	–	–	1	5984009
C34611.0	11.00	.4331	12.00	45.00	102.0	3	–	–	1	5984014
C34612.0	12.00	.4724	12.00	53.00	110.0	3	–	–	1	5984019
C34613.0	13.00	.5118	12.00	53.00	110.0	3	64.50	11.50	1	5984024
C34615.0	15.00	.5906	12.00	53.00	110.0	3	64.50	11.50	1	5984034
C34616.0	16.00	.6299	16.00	63.00	123.0	3	74.50	15.50	1	5984044
C34620.0	20.00	.7874	20.00	75.00	141.0	3	90.50	19.50	1	5984052

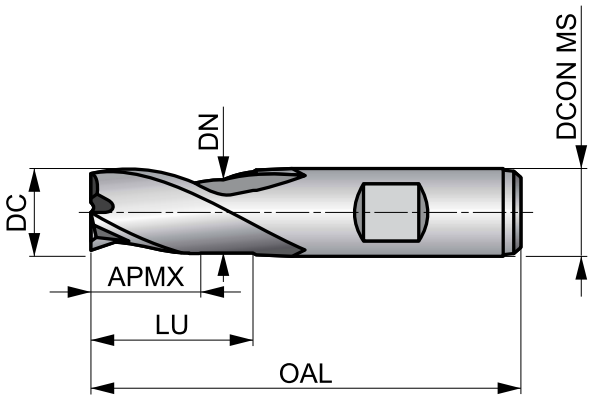
C306

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■ 177 E	■ 200 E	■ 207 E	■ 154 E	■ 135 E	◪ 125 E	◪ 102 D	◪ 75 D	◪ 118 E	◪ 98 E	◪ 105 E	◪ 85 D	◪ 105 E	◪ 79 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**
◪ 59 E	◪ 194 E	◪ 157 E	◪ 125 D	◪ 171 E	◪ 131 E	◪ 105 D	◪ 157 D	◪ 121 D	◪ 89 D	◪ 75 C	◪ 62 C	◪ 180 D	◪ 135 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**
◪ 105 D	◪ 164 F	◪ 164 E	◪ 148 E	◪ 105 E	■ 171 E	■ 98 E	■ 52 E	◪ 171 E	■ 108 D	◪ 85 D	◪ 66 C	◪ 49 C	◪ 39 C

DCON MS tolerance h6.

Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
C3063.0	3.00	.1181	6.00	5.00	49.0	3	–	–	1	5984765
C3064.0	4.00	.1575	6.00	7.00	51.0	3	–	–	1	5984792
C3065.0	5.00	.1969	6.00	8.00	52.0	3	–	–	1	5984815
C3066.0	6.00	.2362	6.00	8.00	52.0	3	–	–	1	5984830
C3067.0	7.00	.2756	10.00	10.00	60.0	3	–	–	1	5984838
C3068.0	8.00	.3150	10.00	11.00	61.0	3	–	–	1	5984855
C3069.0	9.00	.3543	10.00	11.00	61.0	3	–	–	1	5983935
C30610.0	10.00	.3937	10.00	13.00	63.0	3	22.50	9.50	1	5984676
C30611.0	11.00	.4331	12.00	13.00	70.0	3	–	–	1	5984679
C30612.0	12.00	.4724	12.00	16.00	73.0	3	27.50	11.50	1	5984686
C30614.0	14.00	.5512	12.00	16.00	73.0	3	27.50	11.50	1	5984697
C30615.0	15.00	.5906	12.00	16.00	73.0	3	27.50	11.50	1	5984705
C30616.0	16.00	.6299	16.00	19.00	79.0	3	30.50	15.50	1	5984713
C30618.0	18.00	.7087	16.00	19.00	79.0	3	30.50	15.50	1	5984721
C30620.0	20.00	.7874	20.00	22.00	88.0	3	37.50	19.50	1	5984739
C30622.0	22.00	.8661	20.00	22.00	88.0	3	37.50	19.50	1	5984743
C30625.0	25.00	.9843	25.00	26.00	102.0	3	45.50	24.50	1	5984756
C30630.0	30.00	1.1811	25.00	26.00	102.0	3	45.50	24.50	1	5984778

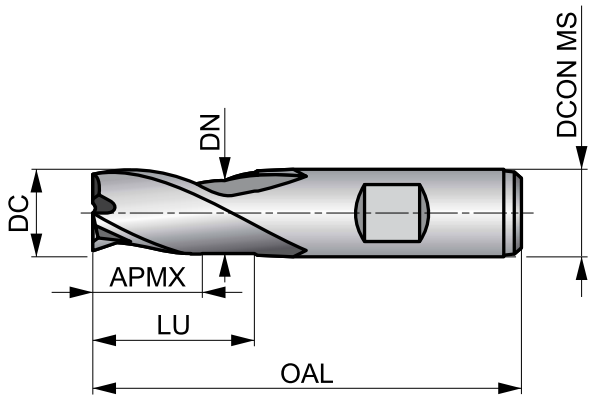
C353

DORMER

3-Flute HSS-E-PM Slot End Mill, Alcrona Coating

Extra short cut length, 3-flute design provides high rigidity and is suitable for milling shallow slots and ramping. The accurate diameter means the tools are designed for milling standard keyway slots to a P9 tolerance. Alcrona coating improves performance and extends the tool life.

HSS-E PM	N	NOF 3
	λ 30°	γ 12°
DIN 1835B	Alcrona	DC e8
	DIN 327D	



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■ 436 E	■ 486 E	■ 505 E	■ 374 E	■ 328 E	■ 289 D	■ 289 E	■ 233 D	■ 197 D	■ 174 D	■ 148 D	◪ 121 D	◪ 226 E	◪ 190 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**
◪ 200 E	◪ 164 D	◪ 171 D	◪ 148 D	◪ 135 C	◪ 98 C	■ 213 E	■ 157 E	■ 118 E	■ 384 E	■ 312 E	■ 249 D	■ 338 E	■ 259 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**
■ 210 D	■ 315 D	■ 236 D	■ 174 D	■ 148 C	■ 125 C	■ 354 D	■ 269 D	■ 207 D	◪ 292 F	◪ 292 E	■ 262 E	■ 187 E	■ 305 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**		
■ 180 E	■ 92 E	◪ 305 E	■ 164 D	■ 131 D	◪ 66 C	■ 131 C	◪ 69 C	■ 98 C	◪ 49 C	■ 75 C	◪ 39 C		

DCON MS tolerance h6.

Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
C3533.0	3.00	.1181	6.00	5.00	49.0	3	–	–	1	5984013
C3533.5	3.50	.1378	6.00	6.00	50.0	3	–	–	1	5984018
C3534.0	4.00	.1575	6.00	7.00	51.0	3	–	–	1	5984033
C3534.5	4.50	.1772	6.00	7.00	51.0	3	–	–	1	5984038
C3535.0	5.00	.1969	6.00	8.00	52.0	3	–	–	1	5984048
C3535.5	5.50	.2165	6.00	8.00	52.0	3	–	–	1	5984051
C3536.0	6.00	.2362	6.00	8.00	52.0	3	–	–	1	5984061
C3536.5	6.50	.2559	10.00	10.00	60.0	3	–	–	1	5984066
C3537.0	7.00	.2756	10.00	10.00	60.0	3	–	–	1	5984071
C3537.5	7.50	.2953	10.00	10.00	60.0	3	–	–	1	5984076
C3538.0	8.00	.3150	10.00	11.00	61.0	3	–	–	1	5984092
C3538.5	8.50	.3346	10.00	11.00	61.0	3	–	–	1	5984097
C3539.0	9.00	.3543	10.00	11.00	61.0	3	–	–	1	5984101
C3539.5	9.50	.3740	10.00	11.00	61.0	3	–	–	1	5984106

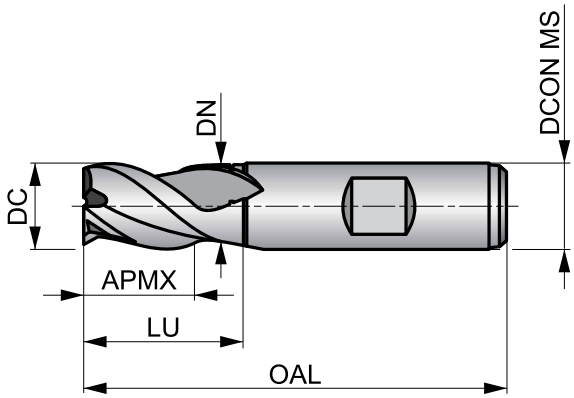
Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
C35310.0	10.00	.3937	10.00	13.00	63.0	3	22.50	9.50	1	5983932
C35311.0	11.00	.4331	12.00	13.00	70.0	3	–	–	1	5983936
C35312.0	12.00	.4724	12.00	16.00	73.0	3	27.50	11.50	1	5983944
C35313.0	13.00	.5118	12.00	16.00	73.0	3	27.50	11.50	1	5983948
C35314.0	14.00	.5512	12.00	16.00	73.0	3	27.50	11.50	1	5983956
C35315.0	15.00	.5906	12.00	16.00	73.0	3	27.50	11.50	1	5983960
C35316.0	16.00	.6299	16.00	19.00	79.0	3	30.50	15.50	1	5983979
C35318.0	18.00	.7087	16.00	19.00	79.0	3	30.50	15.50	1	5983984
C35320.0	20.00	.7874	20.00	22.00	88.0	3	37.50	19.50	1	5983994
C35322.0	22.00	.8661	20.00	22.00	88.0	3	37.50	19.50	1	5983998
C35325.0	25.00	.9843	25.00	26.00	102.0	3	45.50	24.50	1	5984002
C35328.0	28.00	1.1024	25.00	26.00	102.0	3	45.50	24.50	1	5984008
C35330.0	30.00	1.1811	25.00	26.00	102.0	3	45.50	24.50	1	5984023

C367

DORMER

3-Flute HSS-E-PM Slot End Mill, Alcrona Coating

Extra short cut length, 3-flute design with a 40° helix. The sharp geometry is designed to machine mild steels, especially medium to high strength stainless steels and mild non-ferrous materials. The accurate diameter means that standard keyway slots to P9 tolerance can be milled. Alcrona coating extends tool life.



HSS-E PM	N	NOF 3
	λ 40°	γ 15°
DIN 1835B	Alcrona	DC e8
	DIN 327D	

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■ 443 E	■ 495 E	■ 515 E	■ 381 E	◪ 335 E	◪ 308 E	◪ 246 D	◪ 184 D	■ 302 E	■ 256 E	■ 269 E	■ 220 D	■ 184 D	■ 210 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**
■ 180 D	■ 164 C	■ 115 C	■ 98 C	■ 581 G	■ 436 F	◪ 292 F	◪ 292 E	◪ 262 E	◪ 187 E	◪ 305 E	◪ 180 E	■ 92 E	◪ 305 E
S1.1													
◪ 164 D													

DCON MS tolerance h6.

Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
C3672.0	2.00	.0787	6.00	4.00	48.0	3	–	–	1	5984010
C3673.0	3.00	.1181	6.00	5.00	49.0	3	–	–	1	5984025
C3674.0	4.00	.1575	6.00	7.00	51.0	3	–	–	1	5984030
C3675.0	5.00	.1969	6.00	8.00	52.0	3	–	–	1	5984035
C3676.0	6.00	.2362	6.00	8.00	52.0	3	–	–	1	5984041
C3677.0	7.00	.2756	10.00	10.00	60.0	3	–	–	1	5984046
C3678.0	8.00	.3150	10.00	11.00	61.0	3	–	–	1	5984053
C36710.0	10.00	.3937	10.00	13.00	63.0	3	22.50	9.50	1	5983973
C36711.0	11.00	.4331	12.00	13.00	70.0	3	–	–	1	5983978
C36712.0	12.00	.4724	12.00	16.00	73.0	3	27.50	11.50	1	5983983
C36714.0	14.00	.5512	12.00	16.00	73.0	3	27.50	11.50	1	5983992
C36716.0	16.00	.6299	16.00	19.00	79.0	3	30.50	15.50	1	5984001
C36718.0	18.00	.7087	16.00	19.00	79.0	3	30.50	15.50	1	5984005
C36720.0	20.00	.7874	20.00	22.00	88.0	3	37.50	19.50	1	5984020

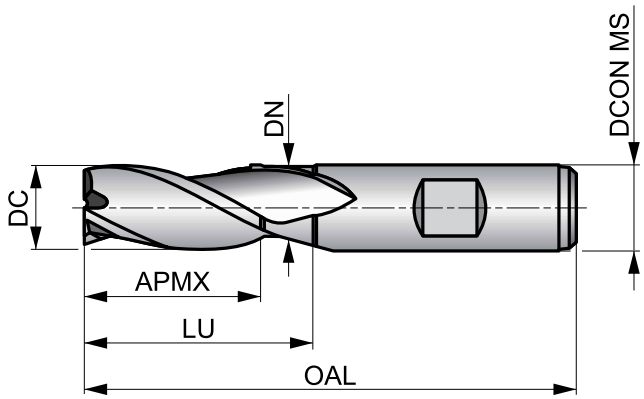
C305

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■ 171 D	■ 190 D	■ 197 D	■ 144 D	■ 128 D	◪ 118 D	◪ 95 C	◪ 69 C	◪ 118 D	◪ 98 D	◪ 105 D	◪ 85 C	◪ 98 D	◪ 72 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**
◪ 56 D	◪ 180 D	◪ 148 D	◪ 118 C	◪ 161 D	◪ 121 D	◪ 98 B	◪ 148 C	◪ 112 C	◪ 82 C	◪ 72 B	◪ 59 B	◪ 167 C	◪ 128 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**
◪ 98 C	◪ 157 E	◪ 157 D	◪ 141 D	◪ 102 D	■ 164 D	■ 95 D	■ 49 D	◪ 164 D	■ 95 C	◪ 79 C	■ 56 B	■ 43 B	■ 33 B

DCON MS tolerance h6.

Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
C3052.0	2.00	.0787	6.00	7.00	51.0	3	–	–	1	5984345
C3052.5	2.50	.0984	6.00	8.00	52.0	3	–	–	1	5984349
C3053.0	3.00	.1181	6.00	8.00	52.0	3	–	–	1	5984369
C3053.5	3.50	.1378	6.00	10.00	54.0	3	–	–	1	5984373
C3054.0	4.00	.1575	6.00	11.00	55.0	3	–	–	1	5984664
C3054.5	4.50	.1772	6.00	11.00	55.0	3	–	–	1	5984701
C3055.0	5.00	.1969	6.00	13.00	57.0	3	–	–	1	5984751
C3055.5	5.50	.2165	6.00	13.00	57.0	3	–	–	1	5984801
C3056.0	6.00	.2362	6.00	13.00	57.0	3	–	–	1	5984851
C3056.5	6.50	.2559	10.00	16.00	66.0	3	–	–	1	5984859
C3057.0	7.00	.2756	10.00	16.00	66.0	3	–	–	1	5984862
C3057.5	7.50	.2953	10.00	16.00	66.0	3	–	–	1	5984866
C3058.0	8.00	.3150	10.00	19.00	69.0	3	–	–	1	5984869
C3058.5	8.50	.3346	10.00	19.00	69.0	3	–	–	1	5984668
C3059.0	9.00	.3543	10.00	19.00	69.0	3	–	–	1	5984671
C30510.0	10.00	.3937	10.00	22.00	72.0	3	31.50	9.50	1	5984283
C30511.0	11.00	.4331	12.00	22.00	79.0	3	–	–	1	5984289
C30512.0	12.00	.4724	12.00	26.00	83.0	3	37.50	11.50	1	5984295
C30513.0	13.00	.5118	12.00	26.00	83.0	3	37.50	11.50	1	5984301
C30514.0	14.00	.5512	12.00	26.00	83.0	3	37.50	11.50	1	5984307
C30515.0	15.00	.5906	12.00	26.00	83.0	3	37.50	11.50	1	5984313
C30516.0	16.00	.6299	16.00	32.00	92.0	3	43.50	15.50	1	5984318
C30517.0	17.00	.6693	16.00	32.00	92.0	3	43.50	15.50	1	5984323

Product	DC	DC	DCON MS	APMX	OAL	NOF	LU	DN	Pack Qty	MID
	(mm)	(inch)	(mm)	(mm)	(mm)		(mm)	(mm)		
C30518.0	18.00	.7087	16.00	32.00	92.0	3	43.50	15.50	1	5984328
C30519.0	19.00	.7480	16.00	32.00	92.0	3	43.50	15.50	1	5984338
C30520.0	20.00	.7874	20.00	38.00	104.0	3	53.50	19.50	1	5984353
C30522.0	22.00	.8661	20.00	38.00	104.0	3	53.50	19.50	1	5984357
C30525.0	25.00	.9843	25.00	45.00	121.0	3	–	–	1	5984361
C30528.0	28.00	1.1024	25.00	45.00	121.0	3	–	–	1	5984365
C30532.0	32.00	1.2598	32.00	53.00	133.0	3	–	–	1	5984383

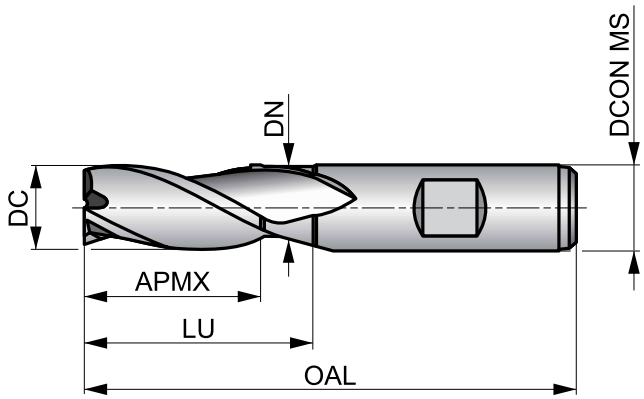
C352

DORMER

3-Flute HSS-E-PM Slot End Mill, Alcrona Coating

Short cut length, 3-flute design provides high rigidity for milling slots whilst the accurate diameter means that standard keyway slots to P9 tolerance can be milled. Suitable also for ramping and profile milling in mild materials. Alcrona coating improves performance and extends the tool life.

HSS-E PM	N	NOF 3
	λ 30°	γ 12°
DIN 1835B	Alcrona	DC e8
	DIN 844K	



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■ 413 D	■ 463 D	■ 479 D	■ 354 D	■ 312 D	■ 276 C	■ 266 D	■ 213 C	■ 180 C	■ 157 C	■ 135 C	◪ 112 C	◪ 226 D	◪ 190 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**
◪ 200 D	◪ 164 C	◪ 154 C	◪ 131 C	◪ 118 B	◪ 82 B	■ 197 D	■ 144 D	■ 108 D	■ 364 D	■ 295 D	■ 236 C	■ 322 D	■ 246 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**
■ 200 B	■ 299 C	■ 223 C	■ 164 C	■ 141 B	■ 118 B	■ 338 C	■ 253 C	■ 197 C	◪ 292 E	◪ 292 D	■ 262 D	■ 187 D	■ 305 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**		
■ 180 D	■ 92 D	◪ 305 D	■ 148 C	■ 115 C	◪ 49 B	■ 108 B	◪ 46 B	■ 82 B	◪ 33 B	■ 66 B	◪ 26 B		

DCON MS tolerance h6.

Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
C3523.0	3.00	.1181	6.00	8.00	52.0	3	–	–	1	5984134
C3524.0	4.00	.1575	6.00	11.00	55.0	3	–	–	1	5984137
C3525.0	5.00	.1969	6.00	13.00	57.0	3	–	–	1	5984139
C3526.0	6.00	.2362	6.00	13.00	57.0	3	–	–	1	5984141
C3528.0	8.00	.3150	10.00	19.00	69.0	3	–	–	1	5983927
C35210.0	10.00	.3937	10.00	22.00	72.0	3	31.50	9.50	1	5984100
C35212.0	12.00	.4724	12.00	26.00	83.0	3	37.50	11.50	1	5983923
C35214.0	14.00	.5512	12.00	26.00	83.0	3	37.50	11.50	1	5983974
C35216.0	16.00	.6299	16.00	32.00	92.0	3	43.50	15.50	1	5984028
C35218.0	18.00	.7087	16.00	32.00	92.0	3	43.50	15.50	1	5984081
C35220.0	20.00	.7874	20.00	38.00	104.0	3	53.50	19.50	1	5984127

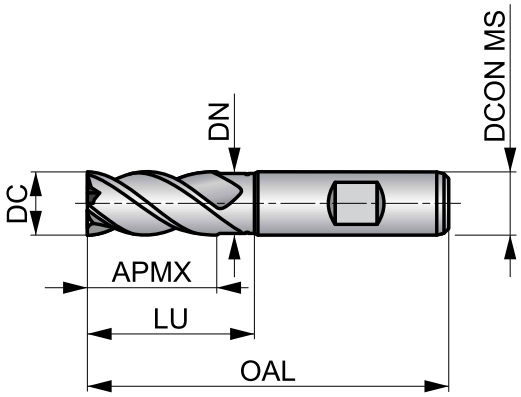
C299

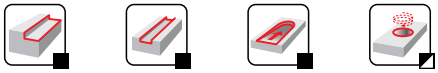
DORMER

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■121 D	■108 C	■105 D	■85 C	■72 C	■62 C	■52 C	◪43 C	■118 D	■98 D	■105 D	■85 C	◪79 C	◪69 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**
■62 B	■43 B	■98 D	■72 D	■56 D	■180 D	■148 D	■118 C	■161 D	■121 D	■98 B	■148 C	■112 C	■82 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**
■72 B	■59 B	■167 C	■128 C	■98 C	■141 D	■82 D	◪95 C	■187 C	■33 B	■56 B	■23 B	■43 B	■16 B
S4.1	**S4.2**												
■33 B	■13 B												

DCON MS tolerance h6.

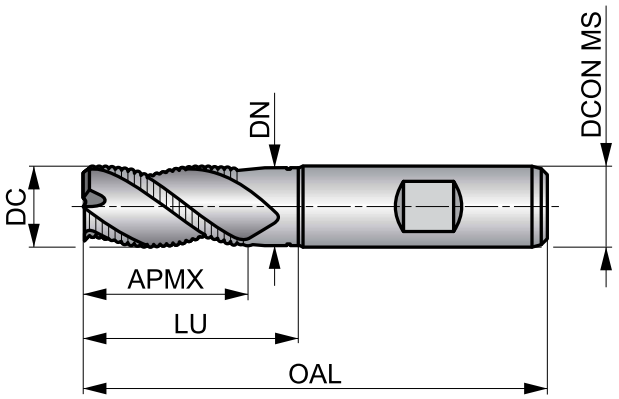
Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
C2993.0	3.00	.1181	6.00	8.00	52.0	3	–	–	1	5984187
C2994.0	4.00	.1575	6.00	11.00	55.0	3	–	–	1	5984191
C2995.0	5.00	.1969	6.00	13.00	57.0	3	–	–	1	5984195
C2996.0	6.00	.2362	6.00	13.00	57.0	3	–	–	1	5984199
C2998.0	8.00	.3150	10.00	19.00	69.0	4	–	–	1	5984203
C29910.0	10.00	.3937	10.00	22.00	72.0	4	31.50	9.50	1	5984380
C29912.0	12.00	.4724	12.00	26.00	83.0	4	37.50	11.50	1	5984386
C29914.0	14.00	.5512	12.00	26.00	83.0	4	37.50	11.50	1	5984388
C29916.0	16.00	.6299	16.00	32.00	92.0	4	43.50	15.50	1	5984390
C29920.0	20.00	.7874	20.00	38.00	104.0	4	53.50	19.50	1	5984179

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
◪ 312 F	■ 276 E	■ 266 F	■ 213 E	■ 180 E	■ 157 E	■ 135 E	■ 112 E	■ 226 F	■ 190 F	■ 200 F	■ 164 E	■ 154 E	■ 131 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**
■ 118 D	■ 82 D	■ 197 F	■ 144 F	■ 108 F	■ 364 F	■ 295 F	■ 236 E	■ 322 F	■ 246 F	■ 200 E	■ 299 E	■ 223 E	■ 164 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**
■ 141 D	■ 118 D	■ 338 E	■ 253 E	■ 197 E	■ 305 F	■ 180 F	◪ 148 E	■ 115 E	■ 49 D	■ 108 D	■ 46 D	■ 82 D	■ 33 D
S4.1	**S4.2**												
■ 66 D	■ 26 D												

DCON MS tolerance h6.

Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
C9226.0	6.00	.2362	6.00	13.00	57.0	3	–	–	1	5984942
C9227.0	7.00	.2756	10.00	16.00	66.0	3	–	–	1	5984947
C9228.0	8.00	.3150	10.00	19.00	69.0	3	–	–	1	5984951
C9229.0	9.00	.3543	10.00	19.00	69.0	3	–	–	1	5984960
C92210.0	10.00	.3937	10.00	22.00	72.0	3	31.50	9.50	1	5985816
C92211.0	11.00	.4331	12.00	22.00	79.0	3	–	–	1	5985825
C92212.0	12.00	.4724	12.00	26.00	83.0	3	37.50	11.50	1	5984914
C92213.0	13.00	.5118	12.00	26.00	83.0	3	37.50	11.50	1	5984955
C92214.0	14.00	.5512	12.00	26.00	83.0	3	37.50	11.50	1	5985001
C92215.0	15.00	.5906	12.00	26.00	83.0	3	37.50	11.50	1	5985055
C92216.0	16.00	.6299	16.00	32.00	92.0	3	43.50	15.50	1	5985108
C92218.0	18.00	.7087	16.00	32.00	92.0	3	43.50	15.50	1	5985117
C92220.0	20.00	.7874	20.00	38.00	104.0	3	53.50	19.50	1	5985122
C92222.0	22.00	.8661	20.00	38.00	104.0	3	53.50	19.50	1	5985125
C92224.0	24.00	.9449	25.00	45.00	121.0	4	64.50	23.50	1	5985128

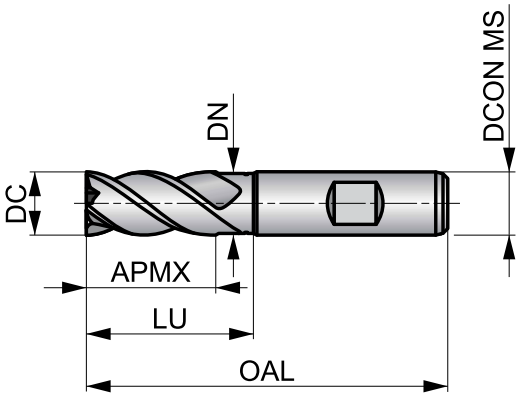
C907

DORMER

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■312 D	■276 C	■266 D	■213 C	■180 C	■157 C	■135 C	■112 C	■226 D	■190 D	■200 D	■164 C	■154 C	■131 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**
■118 B	■82 B	■197 D	■144 D	■108 D	■364 D	■295 D	■236 C	■322 D	■246 D	■200 B	■299 C	■223 C	■164 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**
■141 B	■118 B	■338 C	■253 C	■197 C	■305 D	■180 D	◪148 C	■279 C	■49 B	■108 B	■46 B	■82 B	■33 B
S4.1	**S4.2**												
■66 B	■26 B												

DCON MS tolerance h6.

Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
C9073.0	3.00	.1181	6.00	8.00	52.0	3	–	–	1	5985644
C9074.0	4.00	.1575	6.00	11.00	55.0	3	–	–	1	5985685
C9075.0	5.00	.1969	6.00	13.00	57.0	3	–	–	1	5985727
C9076.0	6.00	.2362	6.00	13.00	57.0	3	–	–	1	5985772
C9078.0	8.00	.3150	10.00	19.00	69.0	4	–	–	1	5985820
C90710.0	10.00	.3937	10.00	22.00	72.0	4	31.50	9.50	1	5985635
C90712.0	12.00	.4724	12.00	26.00	83.0	4	37.50	11.50	1	5985636
C90714.0	14.00	.5512	12.00	26.00	83.0	4	37.50	11.50	1	5985637
C90716.0	16.00	.6299	16.00	32.00	92.0	4	43.50	15.50	1	5985638
C90718.0	18.00	.7087	16.00	32.00	92.0	4	43.50	15.50	1	5985639
C90720.0	20.00	.7874	20.00	38.00	104.0	4	53.50	19.50	1	5985640
C90722.0	22.00	.8661	20.00	38.00	104.0	5	53.50	19.50	1	5985641
C90725.0	25.00	.9843	25.00	45.00	121.0	5	64.50	24.50	1	5985642
C90728.0	28.00	1.1024	25.00	45.00	121.0	6	64.50	24.50	1	5985643
C90730.0	30.00	1.1811	25.00	45.00	121.0	6	64.50	24.50	1	5985646
C90732.0	32.00	1.2598	32.00	53.00	133.0	6	72.50	31.50	1	5985654

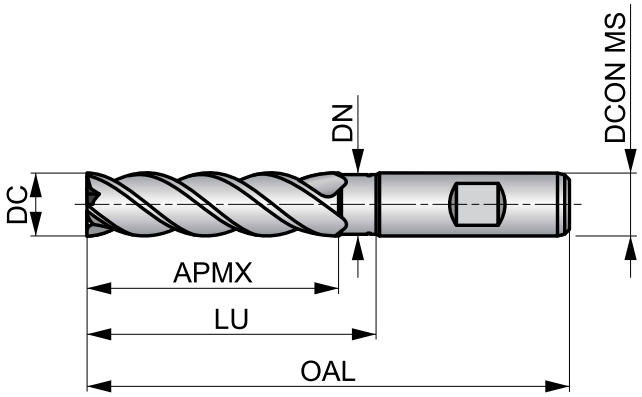
C920

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■ 279 C	■ 246 B	■ 243 C	■ 194 B	■ 164 B	■ 144 B	■ 121 B	■ 102 B	■ 203 C	■ 171 C	■ 180 C	■ 148 B	■ 135 B	■ 115 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**
■ 105 A	■ 82 A	■ 180 C	■ 135 C	■ 102 C	■ 322 C	■ 262 C	■ 210 B	■ 285 C	■ 220 C	■ 177 A	■ 266 B	■ 200 B	■ 148 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**
■ 125 A	■ 105 A	■ 299 B	■ 226 B	■ 174 B	■ 272 C	■ 161 C	◪ 131 B	■ 115 B	■ 49 A	■ 108 A	■ 46 A	■ 82 A	■ 33 A
S4.1	**S4.2**												
■ 66 A	■ 26 A												

DCON MS tolerance h6.

Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
C9206.0	6.00	.2362	6.00	24.00	68.0	3	–	–	1	5985748
C9208.0	8.00	.3150	10.00	38.00	88.0	4	–	–	1	5985751
C92010.0	10.00	.3937	10.00	45.00	95.0	4	54.50	9.50	1	5985711
C92012.0	12.00	.4724	12.00	53.00	110.0	4	64.50	11.50	1	5985715
C92014.0	14.00	.5512	12.00	53.00	110.0	4	64.50	11.50	1	5985719
C92016.0	16.00	.6299	16.00	63.00	123.0	4	74.50	15.50	1	5985723
C92020.0	20.00	.7874	20.00	75.00	141.0	4	90.50	19.50	1	5985736
C92025.0	25.00	.9843	25.00	90.00	166.0	5	109.50	24.50	1	5985744

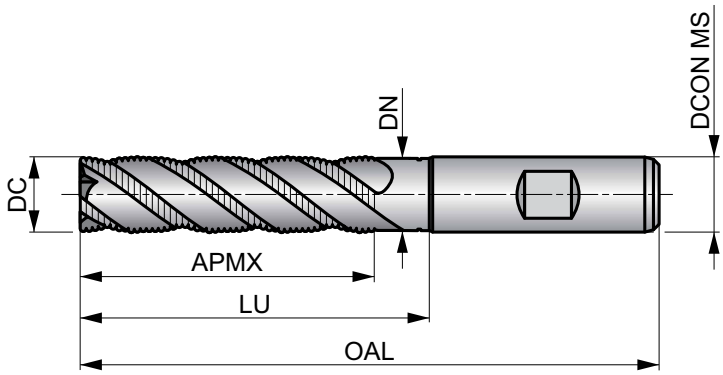
C492

DORMER

Multi-Flute HSS-E-PM Long Series Roughing End Mill, Alcrona Coating

Long cut length, 3, 4 or 6 flute design with an HRA profile to break chips for efficient roughing of deep profiles. Neck recess on cutting diameter equal to 10 mm and above. A 35° helix reduces vibration and improves performance when roughing. Alcrona coating improves performance and extends tool life.

HSS-E PM	HRA	NOF 3-6
	λ 35°	γ 12°
DIN 1835B	Alcrona	DC k12
	DIN 844L	



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■272 E	■240 D	■236 E	■190 D	■161 D	■141 D	■121 D	■98 D	■194 E	■164 E	■174 E	■141 D	■138 D	■118 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**
■105 C	■75 C	■180 E	■135 E	■102 E	■318 E	■259 E	■207 D	■282 E	■217 E	■174 D	■262 D	■197 D	■144 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**
■125 C	■102 C	■295 D	■223 D	■171 D	■341 E	■200 E	◪135 D	■112 D	■49 C	■105 C	■46 C	■79 C	■33 C
S4.1	**S4.2**												
■62 C	■26 C												

DCON MS tolerance h6.

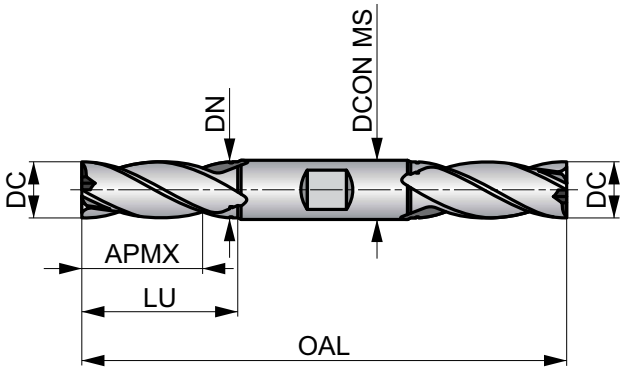
Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
C4926.0	6.00	.2362	6.00	24.00	68.0	3	–	–	1	5984967
C4928.0	8.00	.3150	10.00	38.00	88.0	3	–	–	1	5984976
C49210.0	10.00	.3937	10.00	45.00	95.0	4	54.50	9.50	1	5984933
C49212.0	12.00	.4724	12.00	53.00	110.0	4	64.50	11.50	1	5984937
C49214.0	14.00	.5512	12.00	53.00	110.0	4	64.50	11.50	1	5984941
C49216.0	16.00	.6299	16.00	63.00	123.0	4	74.50	15.50	1	5984945
C49218.0	18.00	.7087	16.00	63.00	123.0	4	74.50	15.50	1	5984949
C49220.0	20.00	.7874	20.00	75.00	141.0	4	90.50	19.50	1	5984953
C49222.0	22.00	.8661	20.00	75.00	141.0	4	90.50	19.50	1	5984957
C49225.0	25.00	.9843	25.00	90.00	166.0	6	109.50	24.50	1	5984961
C49230.0	30.00	1.1811	25.00	90.00	166.0	6	109.50	24.50	1	5984965

C614

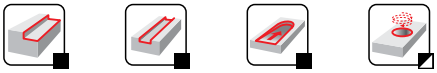
DORMER

4-Flute HSS Double Side, End Mill

Regular length, Weldon shank, 4-flute, double end design with 30° helix provides two cutting ends in one tool with bright finish, improves chip flow in soft and non-ferrous materials.



HSS	N	NOF 4
	λ 30°	γ 8°
	Bright	ANSI



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■ 105 C	■ 118 C	■ 121 C	■ 89 C	■ 79 C	◪ 72 C	◪ 59 B	◪ 43 B	◪ 72 C	◪ 62 C	◪ 66 C	◪ 52 B	◪ 92 C	◪ 69 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**
◪ 52 C	◪ 112 C	◪ 92 C	◪ 72 B	◪ 98 C	◪ 75 C	◪ 62 A	◪ 92 B	◪ 69 B	◪ 52 B	◪ 43 A	◪ 36 A	◪ 105 B	◪ 79 B
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**
◪ 62 B	◪ 92 D	◪ 92 C	◪ 82 C	◪ 59 C	■ 95 C	■ 56 C	■ 30 C	◪ 95 C	■ 62 B	◪ 52 B	◪ 26 A	◪ 20 A	◪ 16 A

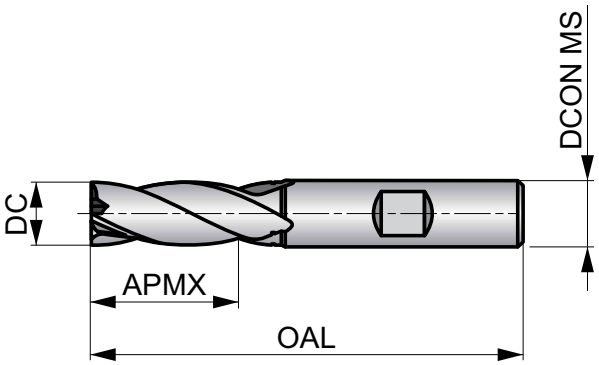
Product	DC (inch)	DC (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	NOF	Pack Qty	MID
C6141/8	1/8	.1250	3/8	3/8	3.1/16	4	1	7647965
C6143/16	3/16	.1875	3/8	1/2	3.1/4	4	1	7647966
C6141/4	1/4	.2500	3/8	5/8	3.3/8	4	1	7647967
C6145/16	5/16	.3125	3/8	3/4	3.1/2	4	1	7647968
C6143/8	3/8	.3750	3/8	3/4	3.1/2	4	1	7647969
C6141/2	1/2	.5000	1/2	1"	4.1/8	4	1	7647970
C6145/8	5/8	.6250	5/8	1.3/8	5"	4	1	7647971
C6143/4	3/4	.7500	3/4	1.5/8	5.5/8	4	1	7647972

C615

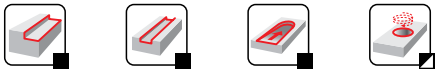
DORMER

4-Flute HSS End Mill Bright Finish

Regular length, Weldon shank, 4-flute with 30° helix and bright finish, which improves chip flow in soft and non-ferrous materials.



HSS	N	NOF 4
	λ 30°	γ 8°
	Bright	ANSI



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■151 D	■171 D	■177 D	■131 D	■115 D	◪105 D	◪85 C	◪62 C	◪105 D	◪89 D	◪92 D	◪75 C	◪92 D	◪69 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**
◪52 D	◪161 D	◪131 D	◪105 C	◪144 D	◪108 D	◪89 B	◪131 C	◪98 C	◪72 C	◪62 B	◪52 B	◪151 C	◪112 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**
◪89 C	◪266 F	◪197 E	◪135 E	◪135 D	◪121 D	◪85 D	■141 D	■82 D	■43 D	◪141 D	■92 C	◪75 C	◪56 B
S3.1	**S4.1**												
◪43 B	◪33 B												

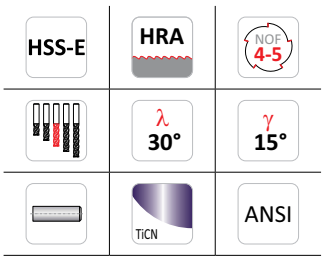
Product	DC (inch)	DC (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	NOF	Pack Qty	MID
C6151/8	1/8	.1250	3/8	3/8	2.5/16	4	1	7647973
C6153/16	3/16	.1875	3/8	1/2	2.3/8	4	1	7647974
C6151/4	1/4	.2500	3/8	5/8	2.7/16	4	1	7647975
C6155/16	5/16	.3125	3/8	3/4	2.1/2	4	1	7647976
C6153/8	3/8	.3750	3/8	3/4	2.1/2	4	1	7647977
C6151/2	1/2	.5000	1/2	1.1/4	3.1/4	4	1	7647978
C6155/8	5/8	.6250	5/8	1.5/8	3.3/4	4	1	7647979
C6153/4	3/4	.7500	3/4	1.5/8	3.7/8	4	1	7647981
C6157/8	7/8	.8750	7/8	1.7/8	4.1/8	4	1	7647982
C6151	1″	1.0000	1″	2″	4.1/2	4	1	7647983

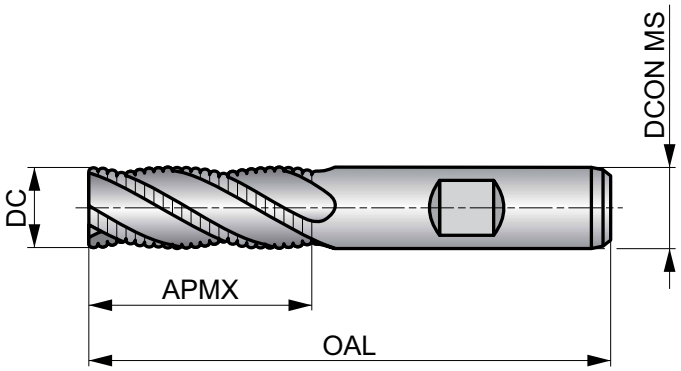
C609

DORMER

Multi-Flute HSS-E Roughing End Mill TiCN Coating

Regular length, Weldon shank, cobalt based, 4 or 5-flute with 30° helix and an HRA profile to break up the chips for efficient roughing application. TiCN coating improves performance and extends the tool life.





Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■ 213 F	■ 240 F	■ 246 F	■ 184 F	■ 161 F	◪ 148 F	◪ 118 E	◪ 89 E	◪ 144 F	◪ 121 F	◪ 128 F	◪ 105 E	◪ 128 F	◪ 95 F
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**
◪ 72 F	◪ 226 F	◪ 184 F	◪ 148 E	◪ 200 F	◪ 154 F	◪ 125 E	◪ 184 E	◪ 141 E	◪ 102 E	◪ 89 D	◪ 72 D	◪ 210 E	◪ 157 E
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**
◪ 121 E	◪ 161 G	◪ 161 F	◪ 144 F	◪ 105 F	■ 167 F	■ 98 F	◪ 49 F	◪ 167 F	◪ 128 E	◪ 105 E	◪ 79 D	◪ 59 D	◪ 46 D

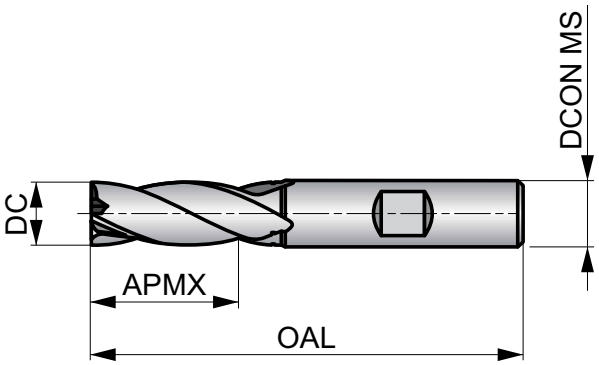
Product	DC (inch)	DC (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	NOF	Pack Qty	MID
C6091/4	1/4	.2500	3/8	5/8	2.7/16	4	1	7647927
C6095/16	5/16	.3125	3/8	3/4	2.1/2	4	1	7647928
C6093/8	3/8	.3750	3/8	3/4	2.1/2	4	1	7647929
C6091/2	1/2	.5000	1/2	1.1/4	3.1/4	4	1	7647931
C6095/8	5/8	.6250	5/8	1.5/8	3.3/4	4	1	7647932
C6093/4	3/4	.7500	3/4	1.5/8	3.7/8	4	1	7647933
C6091	1″	1.0000	1″	2″	4.1/2	5	1	7647934

C618

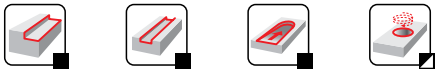
DORMER

Multi-Flute HSS-E End Mill Bright Finish

Regular length, Weldon shank, cobalt based, 4-flute with 30° helix and bright finish, which improves chip flow in soft and non-ferrous materials.



HSS-E	N	NOF 4
	λ 30°	γ 10°
	Bright	ANSI



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■ 151 D	■ 171 D	■ 177 D	■ 131 D	■ 115 D	◪ 105 D	◪ 85 C	◪ 62 C	◪ 105 D	◪ 89 D	◪ 92 D	◪ 75 C	◪ 92 D	◪ 69 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**
◪ 52 D	◪ 161 D	◪ 131 D	◪ 105 C	◪ 144 D	◪ 108 D	◪ 89 B	◪ 131 C	◪ 98 C	◪ 72 C	◪ 62 B	◪ 52 B	◪ 151 C	◪ 112 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**
◪ 89 C	◪ 266 F	◪ 197 E	◪ 135 E	◪ 135 D	◪ 121 D	◪ 85 D	■ 141 D	■ 82 D	■ 43 D	◪ 141 D	■ 92 C	◪ 75 C	◪ 56 B
S3.1	**S4.1**												
◪ 43 B	◪ 33 B												

Product	DC (inch)	DC (inch)	DCON MS (inch)	APMX (inch)	OAL (inch)	NOF	Pack Qty	MID
C6181/8	1/8	.1250	3/8	3/8	2.5/16	4	1	7648008
C6183/16	3/16	.1875	3/8	1/2	2.3/8	4	1	7648009
C6181/4	1/4	.2500	3/8	5/8	2.7/16	4	1	7648010
C6185/16	5/16	.3125	3/8	3/4	2.1/2	4	1	7648011
C6183/8	3/8	.3750	3/8	3/4	2.1/2	4	1	7648012
C6181/2	1/2	.5000	1/2	1.1/4	3.1/4	4	1	7648013
C6185/8	5/8	.6250	5/8	1.5/8	3.3/4	4	1	7648014
C6183/4	3/4	.7500	3/4	1.5/8	3.7/8	4	1	7648015
C6181	1″	1.0000	1″	2″	4.1/2	4	1	7648016

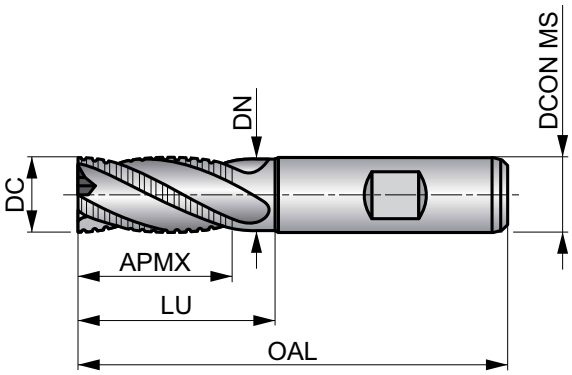
C400

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■ 151 E	■ 171 E	■ 177 E	■ 131 E	■ 115 E	◪ 105 E	◪ 85 D	◪ 62 D	◪ 112 E	◪ 95 E	◪ 102 E	◪ 82 D	◪ 98 E	◪ 72 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**
◪ 56 E	◪ 161 E	◪ 131 E	◪ 105 D	◪ 144 E	◪ 108 E	◪ 89 D	◪ 131 D	◪ 98 D	◪ 72 D	◪ 62 C	◪ 52 C	◪ 151 D	◪ 112 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**
◪ 89 D	◪ 135 F	◪ 135 E	◪ 121 E	◪ 85 E	■ 141 E	■ 82 E	◪ 43 E	◪ 141 E	◪ 98 D	◪ 82 D	◪ 66 C	◪ 49 C	◪ 39 C

DCON MS tolerance h6.

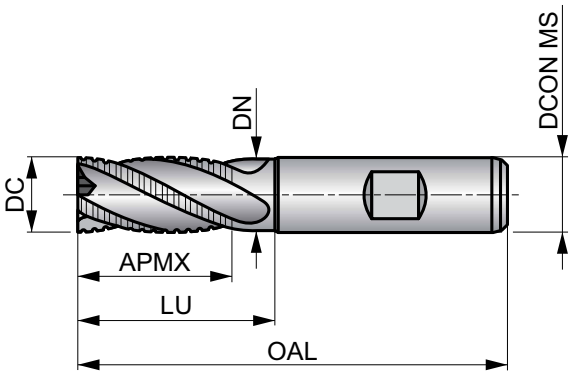
Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
C4006.0	6.00	.2362	6.00	13.00	57.0	4	–	–	1	5985048
C4008.0	8.00	.3150	10.00	19.00	69.0	4	–	–	1	5984989
C40010.0	10.00	.3937	10.00	22.00	72.0	4	–	–	1	5984954
C40012.0	12.00	.4724	12.00	26.00	83.0	4	–	–	1	5984962
C40014.0	14.00	.5512	12.00	26.00	83.0	4	37.50	11.50	1	5984970
C40016.0	16.00	.6299	16.00	32.00	92.0	4	43.50	15.50	1	5984978
C40018.0	18.00	.7087	16.00	32.00	92.0	4	43.50	15.50	1	5984982
C40020.0	20.00	.7874	20.00	38.00	104.0	4	53.50	19.50	1	5984988

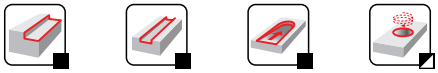
C413

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■ 305 E	■ 341 E	■ 354 E	■ 262 E	■ 230 E	◪ 203 D	■ 194 E	■ 154 D	◪ 131 D	■ 115 D	◪ 98 D	◪ 79 D	◪ 157 E	◪ 135 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**
◪ 141 E	◪ 115 D	◪ 69 C	◪ 66 C	■ 148 E	■ 108 E	■ 82 E	■ 262 E	■ 213 E	■ 171 D	■ 233 E	■ 177 E	■ 144 D	■ 217 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**
■ 161 D	■ 118 D	■ 102 C	■ 85 C	■ 243 D	■ 184 D	■ 141 D	◪ 269 F	◪ 269 E	■ 243 E	■ 171 E	■ 282 E	■ 164 E	◪ 85 E
N4.1	**S1.1**	**S1.2**	**S1.3**	**S2.1**	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**				
◪ 282 E	◪ 115 D	■ 98 D	◪ 33 C	■ 89 C	◪ 46 C	■ 66 C	◪ 33 C	■ 52 C	◪ 26 C				

DCON MS tolerance h6.

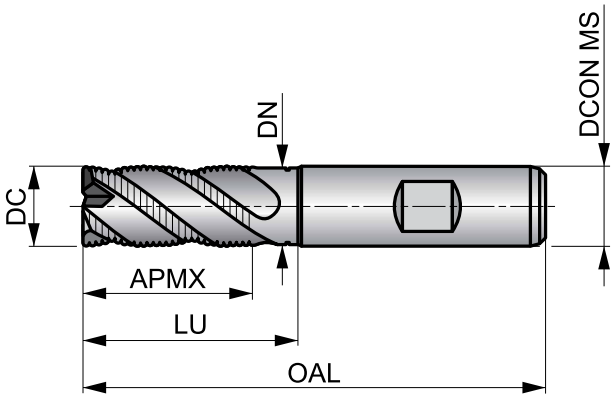
Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
C4136.0	6.00	.2362	6.00	13.00	57.0	4	–	–	1	5984416
C4138.0	8.00	.3150	10.00	19.00	69.0	4	–	–	1	5984419
C41310.0	10.00	.3937	10.00	22.00	72.0	4	–	–	1	5984409
C41312.0	12.00	.4724	12.00	26.00	83.0	4	–	–	1	5984448
C41314.0	14.00	.5512	12.00	26.00	83.0	4	37.50	11.50	1	5984499
C41316.0	16.00	.6299	16.00	32.00	92.0	4	43.50	15.50	1	5984550
C41318.0	18.00	.7087	16.00	32.00	92.0	4	43.50	15.50	1	5984600
C41320.0	20.00	.7874	20.00	38.00	104.0	4	53.50	19.50	1	5984608

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■164 G	■184 G	■190 G	■141 G	■125 G	■112 F	■105 G	■85 F	■72 F	■62 F	■52 F	◪43 F	■112 G	■95 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**
■102 G	■82 F	◪79 F	◪69 F	■62 E	■43 E	■98 G	■72 G	■56 G	■177 G	■144 G	■115 F	■157 G	■121 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**
■98 F	■144 F	■108 F	■82 F	■69 E	■59 E	■164 F	■125 F	■95 F	■141 G	■82 G	◪98 F	■82 F	■36 E
S2.1	**S2.2**	**S3.1**	**S3.2**	**S4.1**	**S4.2**								
■62 E	■26 E	■46 E	■20 E	■36 E	■16 E								

DCON MS tolerance h6.

Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
C4076.0	6.00	.2362	6.00	13.00	57.0	4	–	–	1	5985137
C4077.0	7.00	.2756	10.00	16.00	66.0	4	–	–	1	5985138
C4078.0	8.00	.3150	10.00	19.00	69.0	4	–	–	1	5985139
C4079.0	9.00	.3543	10.00	19.00	69.0	4	–	–	1	5985140
C40710.0	10.00	.3937	10.00	22.00	72.0	4	31.50	9.50	1	5985082
C40711.0	11.00	.4331	12.00	22.00	79.0	4	–	–	1	5985086
C40712.0	12.00	.4724	12.00	26.00	83.0	4	37.50	11.50	1	5985091
C40713.0	13.00	.5118	12.00	26.00	83.0	4	37.50	11.50	1	5985101
C40714.0	14.00	.5512	12.00	26.00	83.0	4	37.50	11.50	1	5985106
C40716.0	16.00	.6299	16.00	32.00	92.0	4	43.50	15.50	1	5985115
C40718.0	18.00	.7087	16.00	32.00	92.0	4	43.50	15.50	1	5985119
C40720.0	20.00	.7874	20.00	38.00	104.0	4	53.50	19.50	1	5985120

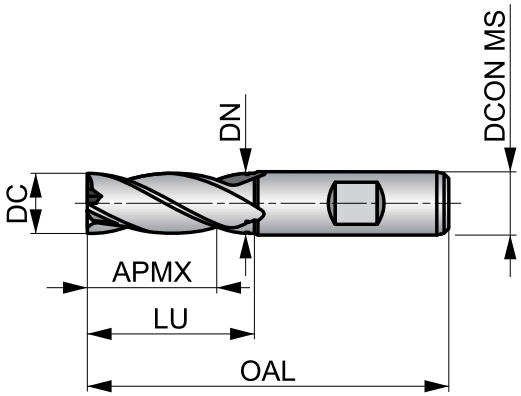
C246

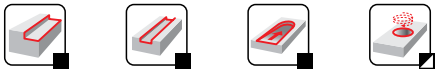
DORMER

Multi-Flute HSS-E-PM End Mill, TiCN Coating

Short cut length, 4 or 5 flute design provides high rigidity for general profile and ramp milling applications. TiCN coating increases the life of the cutter and improves performance when milling hard and abrasive materials.

HSS-E PM	N	NOF 4-5
	λ 30°	γ 12°
DIN 1835B	TiCN	DC k10
	DIN 844K	





Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■371 D	■413 D	■430 D	■318 D	■279 D	◪246 C	■243 D	■194 C	◪164 C	■144 C	◪121 C	◪102 C	◪203 D	◪171 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**
◪180 D	◪148 C	◪85 B	◪82 B	■180 D	■135 D	■102 D	■318 D	■259 D	■207 C	■282 D	■217 D	■174 B	■262 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**
■197 C	■144 C	■125 B	■102 B	■295 C	■223 C	■171 C	◪522 F	◪394 E	◪262 E	◪262 D	■236 D	■167 D	■276 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**		
■164 D	■82 D	◪276 D	■141 C	■115 C	◪49 B	■105 B	◪46 B	■79 B	◪33 B	■62 B	◪26 B		

DCON MS tolerance h6.

Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
C2462.0	2.00	.0787	6.00	7.00	51.0	4	–	–	1	5984163
C2463.0	3.00	.1181	6.00	8.00	52.0	4	–	–	1	5984184
C2464.0	4.00	.1575	6.00	11.00	55.0	4	–	–	1	5984197
C2465.0	5.00	.1969	6.00	13.00	57.0	4	–	–	1	5984200
C2466.0	6.00	.2362	6.00	13.00	57.0	4	–	–	1	5984204
C2467.0	7.00	.2756	10.00	16.00	66.0	4	–	–	1	5984208
C2468.0	8.00	.3150	10.00	19.00	69.0	4	–	–	1	5984217
C24610.0	10.00	.3937	10.00	22.00	72.0	4	31.50	9.50	1	5984152
C24611.0	11.00	.4331	12.00	22.00	79.0	4	–	–	1	5984153
C24612.0	12.00	.4724	12.00	26.00	83.0	4	37.50	11.50	1	5984154
C24613.0	13.00	.5118	12.00	26.00	83.0	4	37.50	11.50	1	5984155
C24614.0	14.00	.5512	12.00	26.00	83.0	4	37.50	11.50	1	5984157
C24615.0	15.00	.5906	12.00	26.00	83.0	4	37.50	11.50	1	5984159
C24616.0	16.00	.6299	16.00	32.00	92.0	4	43.50	15.50	1	5984160
C24618.0	18.00	.7087	16.00	32.00	92.0	4	43.50	15.50	1	5984162
C24620.0	20.00	.7874	20.00	38.00	104.0	4	53.50	19.50	1	5984166
C24622.0	22.00	.8661	20.00	38.00	104.0	5	53.50	19.50	1	5984172
C24625.0	25.00	.9843	25.00	45.00	121.0	5	64.50	24.50	1	5984176

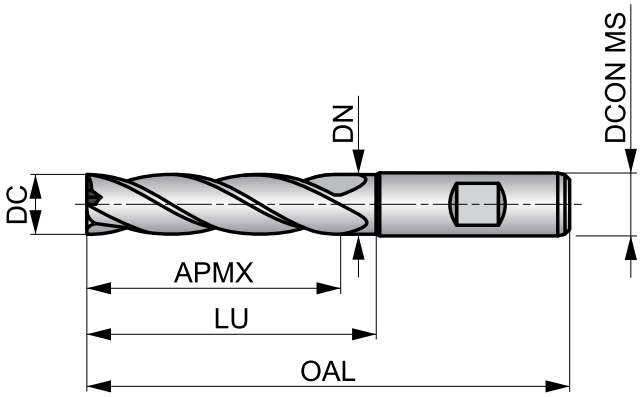
C273

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■ 151 C	■ 171 C	■ 177 C	■ 131 C	■ 115 C	◪ 105 C	◪ 85 B	◪ 62 B	◪ 46 C	◪ 39 C	◪ 39 C	◪ 33 B	◪ 82 C	◪ 62 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**
◪ 46 C	◪ 161 C	◪ 131 C	◪ 105 B	◪ 144 C	◪ 108 C	◪ 89 A	◪ 131 B	◪ 98 B	◪ 72 B	◪ 62 A	◪ 52 A	◪ 151 B	◪ 112 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**
◪ 89 B	◪ 266 E	◪ 197 D	◪ 135 D	◪ 135 C	◪ 121 C	◪ 85 C	■ 141 C	■ 82 C	■ 43 C	◪ 141 C	■ 82 B	◪ 66 B	◪ 43 A
S3.1	**S4.1**												
◪ 33 A	◪ 26 A												

DCON MS tolerance h6.

Product	DC (inch)	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
C2732.0	–	2.00	.0787	6.00	10.00	54.0	4	–	–	1	5984621
C2732.5	–	2.50	.0984	6.00	12.00	56.0	4	–	–	1	5984625
C2733.0	–	3.00	.1181	6.00	12.00	56.0	4	–	–	1	5984695
C2731/8 [2)]	1/8	3.18	.1250	6.00	15.00	59.0	4	–	–	1	5984576
C2733.5	–	3.50	.1378	6.00	15.00	59.0	4	–	–	1	5984736
C2734.0	–	4.00	.1575	6.00	19.00	63.0	4	–	–	1	5984662
C2734.5	–	4.50	.1772	6.00	19.00	63.0	4	–	–	1	5984665
C2733/16 [2)]	3/16	4.76	.1875	6.00	24.00	68.0	4	–	–	1	5984791
C2735.0	–	5.00	.1969	6.00	24.00	68.0	4	–	–	1	5984670
C2735.5	–	5.50	.2165	6.00	24.00	68.0	4	–	–	1	5984673
C2736.0	–	6.00	.2362	6.00	24.00	68.0	4	–	–	1	5984680
C2731/4 [2)]	1/4	6.35	.2500	10.00	30.00	80.0	4	–	–	1	5984571
C2737.0	–	7.00	.2756	10.00	30.00	80.0	4	–	–	1	5984683
C2738.0	–	8.00	.3150	10.00	38.00	88.0	4	–	–	1	5984692
C2739.0	–	9.00	.3543	10.00	38.00	88.0	4	–	–	1	5984699
C2733/8 [2)]	3/8	9.52	.3750	10.00	45.00	95.0	4	54.50	9.50	1	5984850
C27310.0	–	10.00	.3937	10.00	45.00	95.0	4	54.50	9.50	1	5984584
C27311.0	–	11.00	.4331	12.00	45.00	102.0	4	–	–	1	5984588
C27312.0	–	12.00	.4724	12.00	53.00	110.0	4	64.50	11.50	1	5984597
C2731/2 [2)]	1/2	12.70	.5000	12.00	53.00	110.0	4	64.50	11.50	1	5984566
C27313.0	–	13.00	.5118	12.00	53.00	110.0	4	64.50	11.50	1	5984603

Product	DC	DC	DC	DCON MS	APMX	OAL	NOF	LU	DN	Pack Qty	MID
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)		(mm)	(mm)		
C27314.0	–	14.00	.5512	12.00	53.00	110.0	4	64.50	11.50	1	5984606
C27315.0	–	15.00	.5906	12.00	53.00	110.0	4	64.50	11.50	1	5984610
C2735/8 [2]	5/8	15.88	.6250	16.00	63.00	123.0	4	74.50	15.50	1	5984677
C27316.0	–	16.00	.6299	16.00	63.00	123.0	4	74.50	15.50	1	5984614
C27318.0	–	18.00	.7087	16.00	63.00	123.0	4	74.50	15.50	1	5984618
C2733/4 [2]	3/4	19.05	.7500	20.00	75.00	141.0	4	90.50	18.50	1	5984843
C27320.0	–	20.00	.7874	20.00	75.00	141.0	4	90.50	19.50	1	5984626
C27322.0	–	22.00	.8661	20.00	75.00	141.0	5	90.50	19.50	1	5984628
C27325.0	–	25.00	.9843	25.00	90.00	166.0	5	109.50	24.50	1	5984632
C2731 [2]	1″	25.40	1.0000	25.00	90.00	166.0	5	109.50	24.50	1	5984556
C27330.0	–	30.00	1.1811	25.00	90.00	166.0	6	109.50	24.50	1	5984854
C27332.0	–	32.00	1.2598	32.00	106.00	186.0	6	125.50	31.50	1	5984857
C27340.0 [1]	–	40.00	1.5748	40.00	125.00	217.0	6	146.50	39.00	1	5984667

[1] Available in HSS-E only; no centre cutting.
[2] DC tolerance +0.0025 inches / -0.0005 inches.

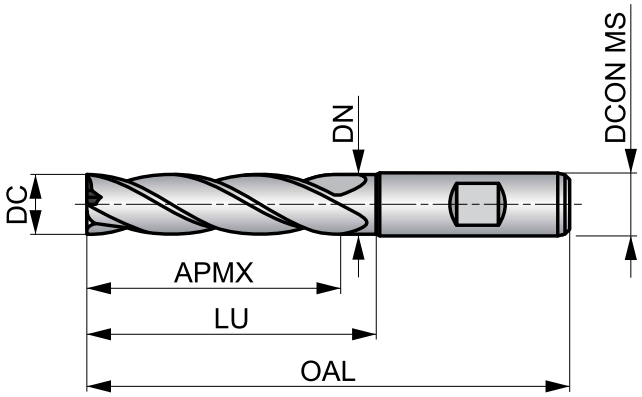
C295

DORMER

Multi-Flute HSS-E-PM Long Series End Mill, TiCN Coating

Long cut length, 4, 5 or 6 flute design provides high rigidity for finishing deep profiles. TiCN coating increases the life of the cutter and improves performance when milling hard and abrasive materials.

HSS-E PM	N	NOF 4-6
	λ 30°	γ 12°
DIN 1835B	TiCN	DC k10
	DIN 844L	



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■ 325 C	■ 364 C	■ 377 C	■ 279 C	■ 246 C	◪ 217 B	■ 217 C	■ 174 B	◪ 148 B	■ 131 B	◪ 112 B	◪ 89 B	◪ 180 C	◪ 151 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**
◪ 161 C	◪ 131 B	◪ 69 A	◪ 66 A	■ 164 C	■ 121 C	■ 92 C	■ 282 C	■ 230 C	■ 184 B	■ 249 C	■ 190 C	■ 154 A	■ 233 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**
■ 174 B	■ 128 B	■ 108 A	■ 92 A	■ 262 B	■ 197 B	■ 151 B	◪ 456 E	◪ 344 D	◪ 230 D	◪ 230 C	■ 207 C	■ 148 C	■ 240 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**		
■ 141 C	■ 72 C	◪ 240 C	■ 131 B	■ 98 B	◪ 49 A	■ 89 A	◪ 46 A	■ 66 A	◪ 33 A	■ 52 A	◪ 26 A		

DCON MS tolerance h6.

Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
C2952.0	2.00	.0787	6.00	10.00	54.0	4	–	–	1	5983833
C2953.0	3.00	.1181	6.00	12.00	56.0	4	–	–	1	5983848
C2954.0	4.00	.1575	6.00	19.00	63.0	4	–	–	1	5983859
C2955.0	5.00	.1969	6.00	24.00	68.0	4	–	–	1	5983867
C2956.0	6.00	.2362	6.00	24.00	68.0	4	–	–	1	5984174
C2957.0	7.00	.2756	10.00	30.00	80.0	4	–	–	1	5984219
C2958.0	8.00	.3150	10.00	38.00	88.0	4	–	–	1	5984273
C2959.0	9.00	.3543	10.00	38.00	88.0	4	–	–	1	5984333
C29510.0	10.00	.3937	10.00	45.00	95.0	4	54.50	9.50	1	5983809
C29512.0	12.00	.4724	12.00	53.00	110.0	4	64.50	11.50	1	5983815
C29515.0	15.00	.5906	12.00	53.00	110.0	4	64.50	11.50	1	5983822
C29516.0	16.00	.6299	16.00	63.00	123.0	4	74.50	15.50	1	5983825
C29518.0	18.00	.7087	16.00	63.00	123.0	4	74.50	15.50	1	5983828
C29520.0	20.00	.7874	20.00	75.00	141.0	4	90.50	19.50	1	5983836
C29525.0	25.00	.9843	25.00	90.00	166.0	5	109.50	24.50	1	5983842
C29530.0	30.00	1.1811	25.00	90.00	166.0	6	109.50	24.50	1	5983851
C29532.0	32.00	1.2598	32.00	106.00	186.0	6	125.50	31.50	1	5983854
C29540.0 [1)]	40.00	1.5748	40.00	125.00	217.0	6	146.50	39.00	1	5983862

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

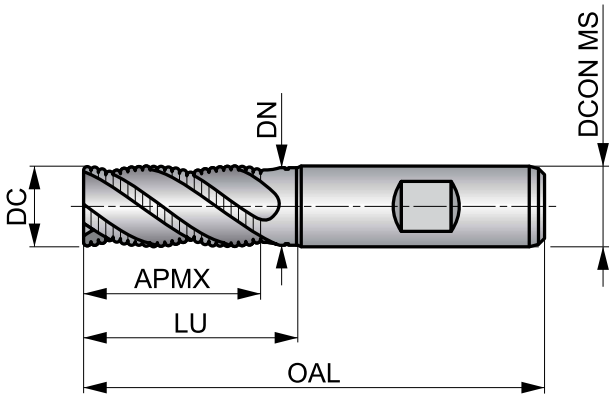
C428

DORMER

Multi-Flute HSS-E-PM Roughing End Mill, Alcrona Coating

Short cut length, 4 or 6 flute design with neck recess on big cutting diameter sizes and an HRA profile to break chips for efficient roughing application. A 35° helix reduces vibration and improves performance. Alcrona coating improves performance and extends the tool life.

HSS-E PM	HRA	NOF 4-6
	λ 35°	γ 12°
DIN 1835B	Alcrona	DC k12
	DIN 844K	



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
◪ 305 F	■ 269 E	■ 262 F	■ 210 E	■ 177 E	■ 157 E	■ 131 E	■ 108 E	■ 217 F	■ 184 F	■ 194 F	■ 157 E	■ 154 E	■ 131 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**
■ 118 D	■ 85 D	■ 200 F	■ 148 F	■ 112 F	■ 354 F	■ 289 F	■ 230 E	■ 315 F	■ 240 F	■ 194 E	■ 292 E	■ 220 E	■ 161 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**
■ 138 D	■ 115 D	■ 328 E	■ 249 E	■ 190 E	■ 381 F	■ 223 F	◪ 151 E	■ 121 E	■ 52 D	■ 118 D	■ 52 D	■ 89 D	■ 36 D
S4.1	**S4.2**												
■ 69 D	■ 30 D												

DCON MS tolerance h6.

Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
C4286.0	6.00	.2362	6.00	13.00	57.0	4	–	–	1	5984956
C4287.0	7.00	.2756	10.00	16.00	66.0	4	–	–	1	5984959
C4288.0	8.00	.3150	10.00	19.00	69.0	4	–	–	1	5984963
C4289.0	9.00	.3543	10.00	19.00	69.0	4	–	–	1	5984969
C42810.0	10.00	.3937	10.00	22.00	72.0	4	31.50	9.50	1	5985054
C42811.0	11.00	.4331	12.00	22.00	79.0	4	–	–	1	5985099
C42812.0	12.00	.4724	12.00	26.00	83.0	4	37.50	11.50	1	5985107
C42813.0	13.00	.5118	12.00	26.00	83.0	4	37.50	11.50	1	5985110
C42814.0	14.00	.5512	12.00	26.00	83.0	4	37.50	11.50	1	5985114
C42815.0	15.00	.5906	12.00	26.00	83.0	4	37.50	11.50	1	5985118
C42816.0	16.00	.6299	16.00	32.00	92.0	4	43.50	15.50	1	5984915
C42818.0	18.00	.7087	16.00	32.00	92.0	4	43.50	15.50	1	5984918
C42820.0	20.00	.7874	20.00	38.00	104.0	4	53.50	19.50	1	5984922
C42822.0	22.00	.8661	20.00	38.00	104.0	4	53.50	19.50	1	5984925
C42825.0	25.00	.9843	25.00	45.00	121.0	6	64.50	24.50	1	5984929
C42828.0	28.00	1.1024	25.00	45.00	121.0	6	64.50	24.50	1	5984932
C42830.0	30.00	1.1811	25.00	45.00	121.0	6	64.50	24.50	1	5984936
C42832.0	32.00	1.2598	32.00	53.00	133.0	6	72.50	31.50	1	5984940

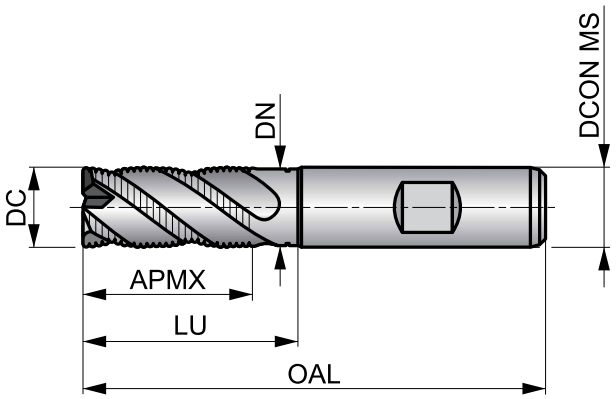
C908

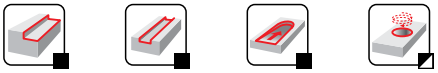
DORMER

Multi-Flute HSS-E-PM Roughing End Mill, Alcrona Coating

Short cut length, 4 or 6 flute design with neck recess on big cutting diameter sizes and an NRA profile to break chips for efficient roughing application. A 35° helix reduces vibration and improves performance in roughing operations. Alcrona coating improves performance and extends the tool life.

HSS-E PM	NRA	NOF 4-6
	λ 35°	γ 12°
DIN 1835B	Alcrona	DC k12
	DIN 844K	





Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■ 305 G	■ 269 F	■ 262 G	■ 210 F	■ 177 F	■ 157 F	■ 131 F	◪ 108 F	■ 217 G	■ 184 G	■ 194 G	■ 157 F	■ 154 F	■ 131 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**
■ 118 E	■ 85 E	■ 200 G	■ 148 G	■ 112 G	■ 354 G	■ 289 G	■ 230 F	■ 315 G	■ 240 G	■ 194 F	■ 292 F	■ 220 F	■ 161 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**
■ 138 E	■ 115 E	■ 328 F	■ 249 F	■ 190 F	■ 305 G	■ 180 G	◪ 151 F	■ 121 F	■ 52 E	■ 118 E	■ 52 E	■ 89 E	■ 36 E
S4.1	**S4.2**												
■ 69 E	■ 30 E												

DCON MS tolerance h6.

Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
C9086.0	6.00	.2362	6.00	13.00	57.0	4	–	–	1	5985697
C9087.0	7.00	.2756	10.00	16.00	66.0	4	–	–	1	5985701
C9088.0	8.00	.3150	10.00	19.00	69.0	4	–	–	1	5985704
C9089.0	9.00	.3543	10.00	19.00	69.0	4	–	–	1	5985708
C90810.0	10.00	.3937	10.00	22.00	72.0	4	31.50	9.50	1	5985830
C90811.0	11.00	.4331	12.00	22.00	79.0	4	–	–	1	5985834
C90812.0	12.00	.4724	12.00	26.00	83.0	4	37.50	11.50	1	5985838
C90813.0	13.00	.5118	12.00	26.00	83.0	4	37.50	11.50	1	5985841
C90814.0	14.00	.5512	12.00	26.00	83.0	4	37.50	11.50	1	5985657
C90816.0	16.00	.6299	16.00	32.00	92.0	4	43.50	15.50	1	5985661
C90818.0	18.00	.7087	16.00	32.00	92.0	4	43.50	15.50	1	5985663
C90820.0	20.00	.7874	20.00	38.00	104.0	4	53.50	19.50	1	5985665
C90822.0	22.00	.8661	20.00	38.00	104.0	4	53.50	19.50	1	5985667
C90825.0	25.00	.9843	25.00	45.00	121.0	6	64.50	24.50	1	5985670
C90830.0	30.00	1.1811	25.00	45.00	121.0	6	64.50	24.50	1	5985677
C90832.0	32.00	1.2598	32.00	53.00	133.0	6	72.50	31.50	1	5985681

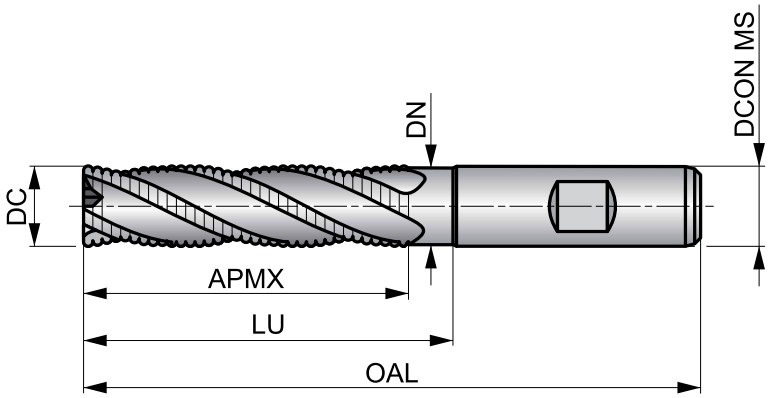
C948

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■272 F	■240 E	■236 F	■190 E	■161 E	■141 E	■121 E	■98 E	■194 F	■164 F	■174 F	■141 E	■138 E	■118 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**
■105 D	■75 D	■180 F	■135 F	■102 F	■318 F	■259 F	■207 E	■282 F	■217 F	■174 E	■262 E	■197 E	■144 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**
■125 D	■102 D	■295 E	■223 E	■171 E	■272 F	■161 F	◪135 E	■112 E	■49 D	■105 D	■46 D	■79 D	■33 D
S4.1	**S4.2**												
■62 D	■26 D												

DCON MS tolerance h6.

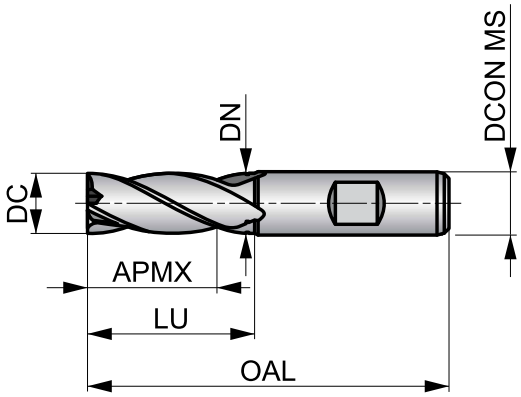
Product	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
C9486.0	6.00	.2362	6.00	24.00	68.0	4	–	–	1	5985214
C9488.0	8.00	.3150	10.00	38.00	88.0	4	–	–	1	5985222
C94810.0	10.00	.3937	10.00	45.00	95.0	4	54.50	9.50	1	5985181
C94812.0	12.00	.4724	12.00	53.00	110.0	4	64.50	11.50	1	5985184
C94814.0	14.00	.5512	12.00	53.00	110.0	4	64.50	11.50	1	5985188
C94816.0	16.00	.6299	16.00	63.00	123.0	4	74.50	15.50	1	5985192
C94818.0	18.00	.7087	16.00	63.00	123.0	4	74.50	15.50	1	5985196
C94820.0	20.00	.7874	20.00	75.00	141.0	4	90.50	19.50	1	5985200
C94825.0	25.00	.9843	25.00	90.00	166.0	6	109.50	24.50	1	5985204
C94832.0	32.00	1.2598	32.00	106.00	186.0	6	125.50	31.50	1	5985211

C247

DORMER

Multi-Flute HSS-E-PM End Mill, Brigh Finish

Short cut length, 4, 5 or 6 flute design provides high rigidity for general profile and ramp milling applications in mild steels and non-ferrous materials.



HSS-E PM	N	NOF 4-6
	λ 30°	γ 12°
DIN 1835B	Bright	DC k10
	DIN 844K	

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■ 174 D	■ 194 D	■ 200 D	■ 148 D	■ 131 D	◪ 118 D	◪ 95 C	◪ 72 C	◪ 112 D	◪ 95 D	◪ 102 D	◪ 82 C	◪ 98 D	◪ 72 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**
◪ 56 D	◪ 180 D	◪ 148 D	◪ 118 C	◪ 161 D	◪ 121 D	◪ 98 B	◪ 148 C	◪ 112 C	◪ 82 C	◪ 72 B	◪ 59 B	◪ 167 C	◪ 128 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**
◪ 98 C	◪ 312 F	◪ 233 E	◪ 157 E	◪ 157 D	◪ 141 D	◪ 102 D	■ 164 D	■ 95 D	■ 49 D	◪ 164 D	■ 98 C	◪ 82 C	◪ 66 B
S3.1	**S4.1**												
◪ 49 B	◪ 39 B												

DCON MS tolerance h6.

Product	DC (inch)	DC (mm)	DC (inch)	DCON MS (mm)	APMX (mm)	OAL (mm)	NOF	LU (mm)	DN (mm)	Pack Qty	MID
C2472.0	–	2.00	.0787	6.00	7.00	51.0	4	–	–	1	5984300
C2472.5	–	2.50	.0984	6.00	8.00	52.0	4	–	–	1	5984305
C2473.0	–	3.00	.1181	6.00	8.00	52.0	4	–	–	1	5984880
C2471/8 [2)]	1/8	3.18	.1250	6.00	10.00	54.0	4	–	–	1	5984242
C2473.5	–	3.50	.1378	6.00	10.00	54.0	4	–	–	1	5984882
C2474.0	–	4.00	.1575	6.00	11.00	55.0	4	–	–	1	5984712
C2474.5	–	4.50	.1772	6.00	11.00	55.0	4	–	–	1	5984716
C2473/16 [2)]	3/16	4.76	.1875	6.00	13.00	57.0	4	–	–	1	5984884
C2475.0	–	5.00	.1969	6.00	13.00	57.0	4	–	–	1	5984724
C2475.5	–	5.50	.2165	6.00	13.00	57.0	4	–	–	1	5984728
C2476.0	–	6.00	.2362	6.00	13.00	57.0	4	–	–	1	5984747
C2471/4 [2)]	1/4	6.35	.2500	10.00	16.00	66.0	4	–	–	1	5984237
C2476.5	–	6.50	.2559	10.00	16.00	66.0	4	–	–	1	5984752
C2477.0	–	7.00	.2756	10.00	16.00	66.0	4	–	–	1	5984757
C2477.5	–	7.50	.2953	10.00	16.00	66.0	4	–	–	1	5984762
C2475/16 [2)]	5/16	7.94	.3125	10.00	19.00	69.0	4	–	–	1	5984731
C2478.0	–	8.00	.3150	10.00	19.00	69.0	4	–	–	1	5984775
C2478.5	–	8.50	.3346	10.00	19.00	69.0	4	–	–	1	5984780
C2479.0	–	9.00	.3543	10.00	19.00	69.0	4	–	–	1	5984785
C2479.5	–	9.50	.3740	10.00	19.00	69.0	4	–	–	1	5984794
C2473/8 [2)]	3/8	9.52	.3750	10.00	22.00	72.0	4	31.50	9.50	1	5984696

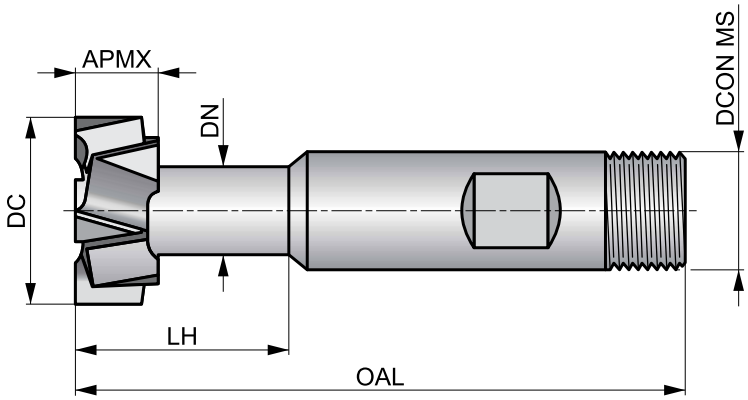
Product	DC	DC	DC	DCON MS	APMX	OAL	NOF	LU	DN	Pack Qty	MID
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)		(mm)	(mm)		
C24710.0	–	10.00	.3937	10.00	22.00	72.0	4	31.50	9.50	1	5984245
C24711.0	–	11.00	.4331	12.00	22.00	79.0	4	–	–	1	5984250
C24712.0	–	12.00	.4724	12.00	26.00	83.0	4	37.50	11.50	1	5984256
C2471/2 [2]	1/2	12.70	.5000	12.00	26.00	83.0	4	37.50	11.50	1	5984233
C24713.0	–	13.00	.5118	12.00	26.00	83.0	4	37.50	11.50	1	5984261
C24714.0	–	14.00	.5512	12.00	26.00	83.0	4	37.50	11.50	1	5984271
C2479/16 [2]	9/16	14.29	.5625	12.00	26.00	83.0	4	37.50	11.50	1	5984799
C24715.0	–	15.00	.5906	12.00	26.00	83.0	4	37.50	11.50	1	5984275
C2475/8 [2]	5/8	15.88	.6250	16.00	32.00	92.0	4	43.50	15.50	1	5984738
C24716.0	–	16.00	.6299	16.00	32.00	92.0	4	43.50	15.50	1	5984280
C24717.0	–	17.00	.6693	16.00	32.00	92.0	4	43.50	15.50	1	5984285
C24718.0	–	18.00	.7087	16.00	32.00	92.0	4	43.50	15.50	1	5984290
C24719.0	–	19.00	.7480	16.00	32.00	92.0	4	43.50	15.50	1	5984296
C2473/4 [2]	3/4	19.05	.7500	20.00	38.00	104.0	4	53.50	18.50	1	5984886
C24720.0	–	20.00	.7874	20.00	38.00	104.0	4	53.50	19.50	1	5984310
C24721.0	–	21.00	.8268	20.00	38.00	104.0	4	53.50	19.50	1	5984315
C24722.0	–	22.00	.8661	20.00	38.00	104.0	5	53.50	19.50	1	5984325
C2477/8 [2]	7/8	22.22	.8750	20.00	38.00	104.0	5	53.50	19.50	1	5984767
C24723.0	–	23.00	.9055	20.00	38.00	104.0	5	53.50	19.50	1	5984690
C24724.0	–	24.00	.9449	25.00	45.00	121.0	5	64.50	23.50	1	5984734
C24725.0	–	25.00	.9843	25.00	45.00	121.0	5	64.50	24.50	1	5984789
C2471 [2]	1″	25.40	1.0000	25.00	45.00	121.0	5	64.50	24.50	1	5984228
C24726.0	–	26.00	1.0236	25.00	45.00	121.0	6	64.50	24.50	1	5984840
C24728.0	–	28.00	1.1024	25.00	45.00	121.0	6	64.50	24.50	1	5984876
C24730.0	–	30.00	1.1811	25.00	45.00	121.0	6	64.50	24.50	1	5984700
C24732.0	–	32.00	1.2598	32.00	53.00	133.0	6	72.50	31.50	1	5984703
C24736.0 [1]	–	36.00	1.4173	32.00	53.00	133.0	6	72.50	31.50	1	5984707
C24740.0 [1]	–	40.00	1.5748	40.00	63.00	155.0	6	84.50	39.00	1	5984720

[1] Available in HSS-E only; no centre cutting.
[2] DC tolerance +0.0025 inches / -0.0005 inches.

C800

HSS-E T-Slot Cutter

Suitable for milling T-slots. For accurate and stable holding in all types of toolholder, it has a combination shank and is capable of milling T-slots to accept standard T-bolts. The bright finish prevents workpiece material from sticking to the cutting edges of the tool.



HSS-E	N	NOF 6-8
λ 15°	γ 10°	DIN 1835
Bright	DC d11	
DIN 851		

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
131 V	148 V	151 V	112 V	98 U	89 T	95 U	79 U	66 T	59 U	49 T	39 T	89 S	75 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**
79 S	66 S	56 S	49 S	46 S	33 S	66 V	49 V	36 V	121 U	98 U	79 U	108 U	82 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**
66 U	98 S	75 S	56 S	46 S	39 S	112 U	85 U	66 U	233 Y	174 Y	118 Y	118 Y	105 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**
75 Y	125 V	72 V	36 W	125 Y	98 V	66 V	33 U	43 U	23 T	33 U	16 T	26 U	13 T

DCON MS tolerance h6.

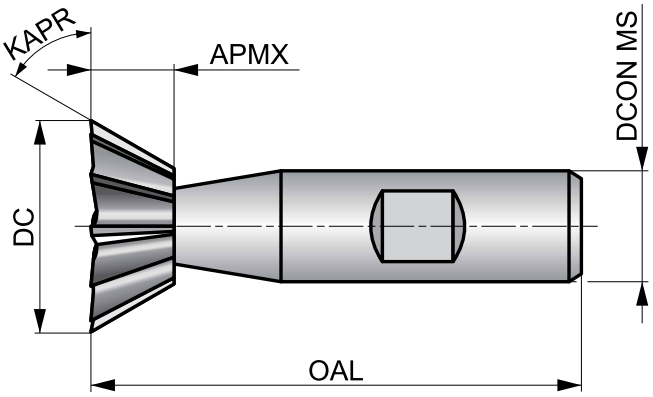
Product	APMX (mm)	DC (mm)	DC (inch)	T DIN650	DN (mm)	LH (mm)	OAL (mm)	DCON MS (mm)	NOF	Pack Qty	MID
C80011.0X5.0	4.00	11.00	.4331	5	4.00	10.5	53.5	10.00	6	1	5985489
C80012.5X6.0	6.00	12.50	.4921	6	5.00	15.0	57.0	10.00	6	1	5985492
C80016.0X8.0	8.00	16.00	.6299	8	7.00	20.0	62.0	10.00	6	1	5985495
C80018.0X10.0	8.00	18.00	.7087	10	8.00	23.0	70.0	12.00	6	1	5985499
C80021.0X12.0	9.00	21.00	.8268	12	10.00	27.0	74.0	12.00	8	1	5985504
C80025.0X14.0	11.00	25.00	.9843	14	12.00	31.0	82.0	16.00	8	1	5985507
C80032.0X18.0	14.00	32.00	1.2598	18	15.00	40.0	90.0	16.00	8	1	5985518

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■ 108 Y	■ 121 Y	■ 125 Y	■ 92 Y	■ 82 X	■ 72 X	■ 72 X	■ 59 X	■ 49 X	■ 43 X	■ 36 X	■ 30 X	■ 89 W	■ 75 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**
■ 79 W	■ 66 W	■ 56 W	■ 49 W	■ 46 W	■ 33 W	■ 66 Y	■ 49 Y	■ 36 Y	■ 102 X	■ 82 X	■ 66 X	■ 89 X	■ 69 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**
■ 56 X	■ 82 W	■ 62 W	■ 46 W	■ 39 W	■ 33 W	■ 95 X	■ 69 X	■ 56 X	■ 194 Z	■ 144 Z	■ 98 Z	■ 98 Z	■ 89 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**
■ 62 Z	■ 102 Y	■ 59 Y	■ 30 Z	■ 102 Z	■ 82 Y	■ 49 Y	■ 33 X	■ 43 W	■ 23 W	■ 33 W	■ 16 W	■ 26 W	■ 13 W

DCON MS tolerance h6.

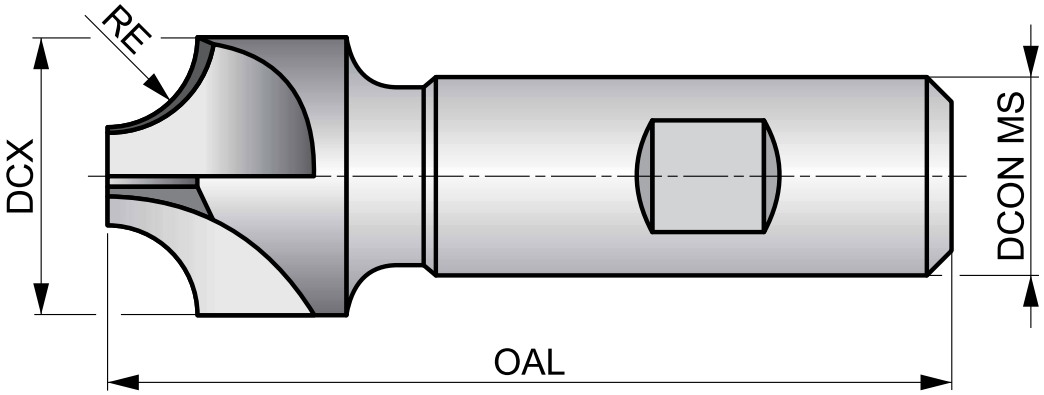
Product	KAPR (°)	APMX (mm)	DC (mm)	DC (inch)	OAL (mm)	DCON MS (mm)	NOF	Pack Qty	MID
C83012.0X45	45	3.50	12.00	.4724	54.0	10.00	10	1	5985782
C83016.0X45	45	4.00	16.00	.6299	60.0	12.00	10	1	5985790
C83020.0X45	45	5.00	20.00	.7874	63.0	12.00	10	1	5985801
C83025.0X45	45	6.30	25.00	.9843	67.0	12.00	10	1	5985809
C83032.0X45	45	8.00	32.00	1.2598	71.0	16.00	12	1	5985822
C83012.0X60	60	5.00	12.00	.4724	54.0	10.00	10	1	5985786
C83016.0X60	60	6.30	16.00	.6299	60.0	12.00	10	1	5985796
C83020.0X60	60	8.00	20.00	.7874	63.0	12.00	10	1	5985803
C83025.0X60	60	10.00	25.00	.9843	67.0	12.00	10	1	5985817
C83032.0X60	60	12.50	32.00	1.2598	71.0	16.00	12	1	5985828

C700

DORMER

HSS-E Corner Rounding Cutter

With an accurate ground radius, suitable for producing accurate corner radii around the perimeter of components. The Weldon shank ensures stable holding to improve radius surface finish. Suitable for corner radius milling. Bright finish.



HSS-E	N	NOF 4-5
	λ 0°	γ 0°
DIN 1835B	Bright	
DORMER		

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■ 108 W	■ 121 W	■ 125 W	■ 92 W	■ 82 W	■ 72 W	■ 72 W	■ 59 W	■ 49 W	■ 43 W	■ 36 W	■ 30 W	■ 89 U	■ 75 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**
■ 79 U	■ 66 U	■ 56 U	■ 49 U	■ 46 U	■ 33 U	■ 66 W	■ 49 W	■ 36 W	■ 102 W	■ 82 W	■ 66 W	■ 89 W	■ 69 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**
■ 56 W	■ 82 U	■ 62 U	■ 46 U	■ 39 U	■ 33 U	■ 95 W	■ 69 W	■ 56 W	■ 187 X	■ 141 X	■ 95 X	■ 95 X	■ 85 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**	
■ 62 X	■ 98 X	■ 56 X	■ 30 X	■ 82 U	■ 66 U	■ 33 U	■ 43 U	■ 23 U	■ 33 U	■ 16 U	■ 26 U	■ 13 U	

DCON MS tolerance h6.

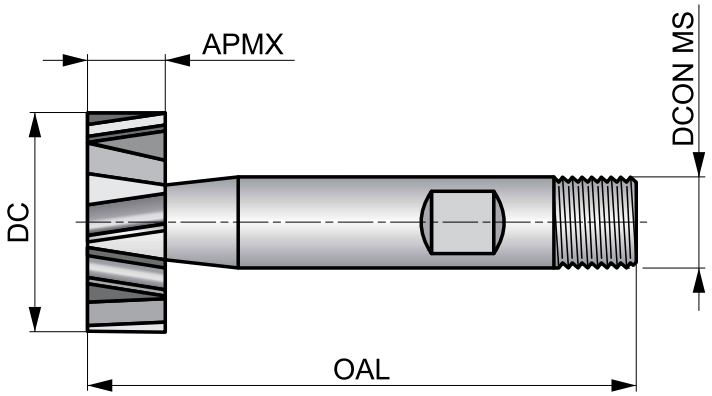
Product	RE (mm)	RE (inch)	DCX (mm)	DCX (inch)	DCON MS (mm)	OAL (mm)	NOF	Pack Qty	MID
C7001.0	1.00	.0394	10.00	.394	10.00	60.0	4	1	5985388
C7001.5	1.50	.0591	10.00	.394	10.00	60.0	4	1	5985389
C7002.0	2.00	.0787	10.00	.394	10.00	60.0	4	1	5985469
C7002.5	2.50	.0984	10.00	.394	10.00	60.0	4	1	5985513
C7003.0	3.00	.1181	12.00	.472	12.00	60.0	4	1	5985612
C7003.5	3.50	.1378	12.00	.472	12.00	60.0	4	1	5985618
C7004.0	4.00	.1575	15.00	.591	12.00	60.0	4	1	5985621
C7005.0	5.00	.1969	18.00	.709	16.00	70.0	4	1	5985624
C7006.0	6.00	.2362	21.00	.827	16.00	70.0	4	1	5985628
C7007.0	7.00	.2756	24.00	.945	16.00	70.0	4	1	5985430
C7008.0	8.00	.3150	24.00	.945	16.00	70.0	4	1	5985433
C7009.0	9.00	.3543	28.00	1.102	20.00	85.0	4	1	5985436
C70010.0	10.00	.3937	28.00	1.102	20.00	85.0	4	1	5985390
C70012.0	12.00	.4724	35.00	1.378	20.00	100.0	4	1	5985391
C70012.5	12.50	.4921	35.00	1.378	20.00	100.0	4	1	5985392
C70015.0	15.00	.5906	48.00	1.89	25.00	105.0	5	1	5985395

C822

DORMER

HSS-E Woodruff Cutter

Suitable for milling Woodruff keys in spindles and shafts. The combination shank provides stable and accurate holding in all types of holders. The bright finish prevents workpiece material from sticking to the cutting edges of the tool.



HSS-E	N	NOF 6-12
λ 10°	γ 10°	DIN 1835
Bright	DC h11	
DIN 850		

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■131 V	■148 V	■151 V	■112 V	■98 U	■89 T	■95 U	■79 U	■66 T	■59 U	■49 T	■39 T	■112 S	■95 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**
■102 S	■82 S	■56 S	■49 S	■46 S	■49 S	■82 V	■62 V	■46 V	■121 U	■98 U	■79 U	■108 U	■82 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**
■66 U	■98 S	■75 S	■56 S	■46 S	■39 S	■112 U	■85 U	■66 U	■233 Y	■174 Y	■118 Y	■118 Y	■105 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**
■75 Y	■125 V	■72 V	■36 W	■125 Y	■98 V	■66 V	■33 U	■43 U	■23 T	■33 U	■16 T	■26 U	■13 T

DCON MS tolerance h6.

Product	DC (mm)	DC (inch)	APMX (mm)	OAL (mm)	DCON MS (mm)	NOF	Pack Qty	MID
C8224.5X1.0	4.50	.1772	1.00	50.0	6.00	6	1	5986015
C8227.5X1.5	7.50	.2953	1.50	50.0	6.00	6	1	5986019
C8227.5X2.0	7.50	.2953	2.00	50.0	6.00	6	1	5986021
C82210.5X2.0	10.50	.4134	2.00	50.0	6.00	8	1	5985951
C82210.5X2.5	10.50	.4134	2.50	50.0	6.00	8	1	5985954
C82210.5X3.0	10.50	.4134	3.00	50.0	6.00	8	1	5985956
C82213.5X3.0	13.50	.5315	3.00	56.0	10.00	8	1	5985959
C82213.5X4.0	13.50	.5315	4.00	56.0	10.00	8	1	5985965
C82216.5X3.0	16.50	.6496	3.00	56.0	10.00	8	1	5985968
C82216.5X4.0	16.50	.6496	4.00	56.0	10.00	8	1	5985971
C82216.5X5.0	16.50	.6496	5.00	56.0	10.00	8	1	5985974
C82219.5X3.0	19.50	.7677	3.00	63.0	10.00	10	1	5985977

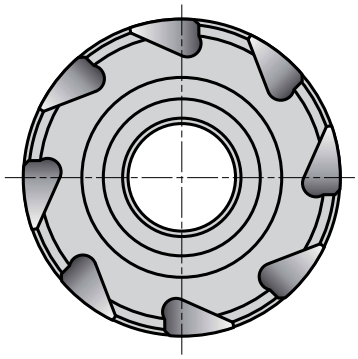
Product	DC (mm)	DC (inch)	APMX (mm)	OAL (mm)	DCON MS (mm)	NOF	Pack Qty	MID
C82219.5X4.0	19.50	.7677	4.00	63.0	10.00	10	1	5985980
C82219.5X5.0	19.50	.7677	5.00	63.0	10.00	10	1	5985983
C82222.5X5.0	22.50	.8858	5.00	63.0	10.00	10	1	5985986
C82222.5X6.0	22.50	.8858	6.00	63.0	10.00	10	1	5985989
C82222.5X8.0	22.50	.8858	8.00	63.0	10.00	10	1	5985992
C82225.5X6.0	25.50	1.0039	6.00	63.0	10.00	12	1	5985998
C82228.5X6.0	28.50	1.1220	6.00	63.0	10.00	12	1	5986004
C82228.5X8.0	28.50	1.1220	8.00	63.0	10.00	12	1	5986007
C82228.5X10.0	28.50	1.1220	10.00	71.0	12.00	12	1	5986001
C82232.5X8.0	32.50	1.2795	8.00	71.0	12.00	12	1	5986012
C82232.5X10.0	32.50	1.2795	10.00	71.0	12.00	12	1	5986009
C82245.5X10.0	45.50	1.7913	10.00	71.0	12.00	12	1	5986018

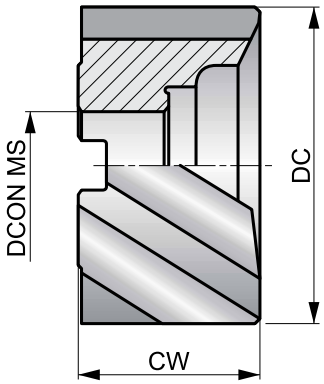
D400

DORMER

HSS-E Shell Cutter, Bright Finish

The standard bore sizes make it suitable for shell mill holders with a large diameter. 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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

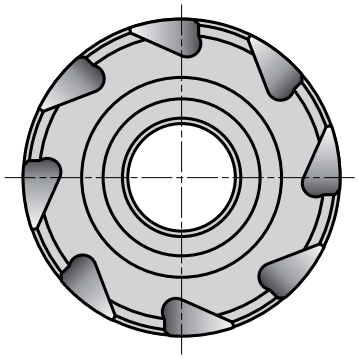
P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 131 C	■ 148 C	■ 151 C	■ 112 C	■ 98 C	◪ 89 B	■ 95 C	■ 79 B	◪ 66 B	■ 59 B	◪ 49 B	◪ 39 B	■ 112 C	■ 95 C
M2.1	**M2.2**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**	**K3.1**	**K3.2**
■ 102 C	■ 82 B	◪ 56 B	◪ 49 B	■ 46 A	■ 33 A	■ 66 C	■ 49 C	■ 36 C	■ 121 C	■ 98 C	■ 79 B	■ 108 C	■ 82 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**
■ 66 A	■ 98 B	■ 75 B	■ 56 B	■ 46 A	■ 39 A	■ 112 B	■ 85 B	■ 66 B	◪ 249 E	◪ 187 D	■ 125 D	■ 125 C	■ 112 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**
■ 82 C	■ 131 C	■ 75 C	■ 39 C	◪ 131 C	◪ 49 C	◪ 56 C	■ 98 B	◪ 66 B	◪ 33 A	◪ 43 A	◪ 23 A	◪ 33 A	◪ 16 A
S4.1	**S4.2**												
◪ 26 A	◪ 13 A												

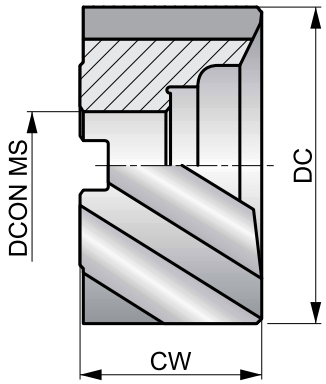
Product	DC (mm)	DC (inch)	CW (mm)	DCON MS (mm)	NOF	Pack Qty	MID
D40040.0	40.00	1.5748	32.0	16.00	8	1	5985296
D40050.0	50.00	1.9685	36.0	22.00	8	1	5985300

D420

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■ 282 C	■ 315 C	■ 328 C	■ 243 C	■ 213 C	■ 187 B	■ 171 C	■ 138 B	■ 115 B	■ 102 B	■ 85 B	■ 69 B	■ 157 C	■ 135 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**
■ 141 C	■ 115 B	■ 115 B	■ 98 B	■ 89 A	■ 66 A	■ 115 C	■ 85 C	■ 62 C	■ 203 C	■ 164 C	■ 131 B	■ 177 C	■ 138 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**
■ 112 A	■ 164 B	■ 125 B	■ 92 B	■ 79 A	■ 66 A	■ 187 B	■ 141 B	■ 108 B	◪ 522 E	◪ 394 D	■ 262 D	■ 262 C	■ 236 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**
■ 167 C	■ 276 C	■ 164 C	■ 82 C	■ 276 C	◪ 105 C	◪ 115 C	■ 115 B	■ 82 B	■ 49 A	■ 89 A	■ 46 A	■ 66 A	■ 33 A
S4.1	**S4.2**												
■ 52 A	■ 26 A												

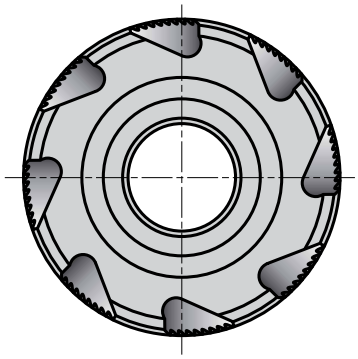
Product	DC (mm)	DC (inch)	CW (mm)	DCON MS (mm)	NOF	Pack Qty	MID
D42063.0	63.00	2.4803	40.0	27.00	8	1	5985367

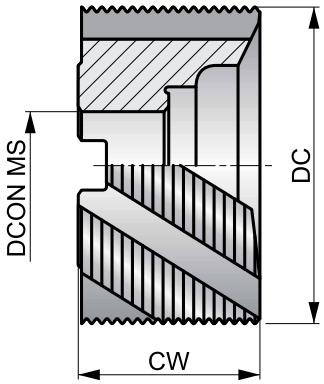
D402

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 8
λ 30°	γ 12°	Bright
DC js16		DIN 1880

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■ 131 D	■ 148 D	■ 151 D	■ 112 D	■ 98 D	◪ 89 C	■ 95 D	■ 79 C	◪ 66 C	■ 59 C	◪ 49 C	◪ 39 C	■ 112 D	■ 95 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**
■ 102 D	■ 82 C	◪ 56 C	◪ 49 C	■ 46 B	■ 33 B	■ 66 D	■ 49 D	■ 36 D	■ 121 D	■ 98 D	■ 79 C	■ 108 D	■ 82 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**
■ 66 B	■ 98 C	■ 75 C	■ 56 C	■ 46 B	■ 39 B	■ 112 C	■ 85 C	■ 66 C	◪ 249 F	◪ 187 E	■ 125 E	■ 125 D	■ 112 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**
■ 82 D	■ 131 D	■ 75 D	■ 39 D	◪ 131 D	◪ 49 D	◪ 56 D	■ 98 C	◪ 66 C	◪ 33 B	◪ 43 B	◪ 23 B	◪ 33 B	◪ 16 B
S4.1	**S4.2**												
◪ 26 B	◪ 13 B												

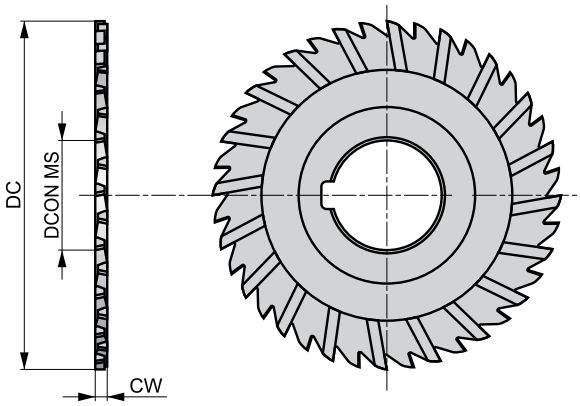
Product	DC (mm)	DC (inch)	CW (mm)	DCON MS (mm)	NOF	Pack Qty	MID
D40263.0	63.00	2.4803	40.0	27.00	8	1	5985338

D763

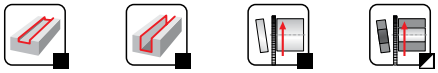
DORMER

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		λ 15°
γ 10°	Bright	DC js16
DIN 885A		



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■151 X	■171 X	■177 X	■131 X	■115 X	■102 X	■95 X	■79 X	■66 X	■59 X	■49 X	■39 X	■135 X	■115 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**
■121 X	■98 X	■75 X	■66 X	■59 X	■33 X	■98 X	■72 X	■56 X	■161 X	■131 X	■105 X	■144 X	■108 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**
■89 X	■131 X	■98 X	■72 X	■62 X	■52 X	■151 X	■112 X	■89 X	■272 X	■203 X	■138 X	■138 X	■121 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**
■89 X	■144 X	■82 X	■43 X	■144 S	■98 V	■66 W	■49 W	■66 W	■46 S	■49 W	■33 S	■39 W	■26 S

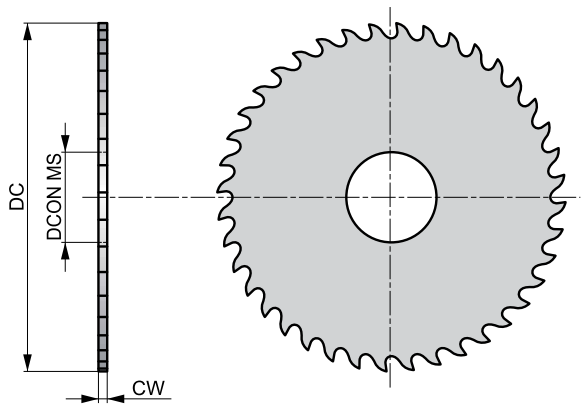
Product	DC (mm)	DC (inch)	CW (mm)	DCON MS (mm)	NOF	Pack Qty	MID
D76363.0X1.6	63.00	2.4803	1.6	22.00	32	1	5985735
D76363.0X2.0	63.00	2.4803	2.0	22.00	32	1	5985739
D76380.0X3.0	80.00	3.1496	3.0	27.00	32	1	5985771
D763100.0X2.0	100.00	3.9370	2.0	32.00	44	1	5985695
D763125.0X3.0	125.00	4.9213	3.0	32.00	44	1	5985724

D745

DORMER

HSS Slitting Saw Coarse Pitch

Designed with a coarse pitch, ideal for narrow, deep slots, whilst the dish ground and neutral tooth geometry, helps control chips and prevents rubbing when milling deep slots. Suitable for horizontal milling of slots and parting-off applications. Bright finish.



HSS | γ 15° | Bright | DIN 1838

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■ 131 Q	■ 148 Q	■ 151 Q	■ 112 Q	■ 98 Q	■ 95 P	■ 79 P	■ 59 P	◪ 46 P	◪ 39 P	◪ 39 P	◪ 33 P	◪ 39 P	◪ 33 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**
■ 131 Q	■ 98 Q	■ 72 Q	■ 121 Q	■ 98 Q	■ 108 Q	■ 82 Q	■ 98 P	■ 75 P	■ 112 Q	■ 85 Q	■ 1969 R	■ 1476 R	■ 984 R
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**							
■ 2523 R	■ 2270 R	■ 1640 R	■ 1112 R	■ 656 R	■ 328 Q	■ 197 R							

Product	DC (mm)	DC (inch)	CW (mm)	DCON MS (mm)	NOF	Pack Qty	MID
D74550.0X.5	50.00	1.9685	0.5	13.00	48	5	5985455
D74550.0X.8	50.00	1.9685	0.8	13.00	40	5	5985463
D74550.0X1.0	50.00	1.9685	1.0	13.00	40	5	5985467
D74550.0X1.2	50.00	1.9685	1.2	13.00	40	5	5985475
D74550.0X1.5	50.00	1.9685	1.5	13.00	32	5	5985478
D74550.0X1.6	50.00	1.9685	1.6	13.00	32	5	5985482
D74550.0X2.0	50.00	1.9685	2.0	13.00	32	5	5985486
D74563.0X.5	63.00	2.4803	0.5	16.00	64	5	5985498
D74563.0X.6	63.00	2.4803	0.6	16.00	48	5	5985502
D74563.0X.8	63.00	2.4803	0.8	16.00	48	5	5985508
D74563.0X1.0	63.00	2.4803	1.0	16.00	48	5	5985511
D74563.0X1.2	63.00	2.4803	1.2	16.00	40	5	5985522
D74563.0X1.5	63.00	2.4803	1.5	16.00	40	5	5985527
D74563.0X1.6	63.00	2.4803	1.6	16.00	40	5	5985532
D74563.0X2.0	63.00	2.4803	2.0	16.00	40	5	5985537
D74580.0X1.0	80.00	3.1496	1.0	22.00	48	5	5985561
D74580.0X1.2	80.00	3.1496	1.2	22.00	48	1	5985572
D74580.0X1.5	80.00	3.1496	1.5	22.00	48	1	5985888
D74580.0X1.6	80.00	3.1496	1.6	22.00	48	1	5985925
D74580.0X2.0	80.00	3.1496	2.0	22.00	40	1	5985958
D74580.0X2.5	80.00	3.1496	2.5	22.00	40	1	5985991
D74580.0X3.0	80.00	3.1496	3.0	22.00	40	1	5986024
D745100.0X1.0	100.00	3.9370	1.0	22.00	64	5	5985266

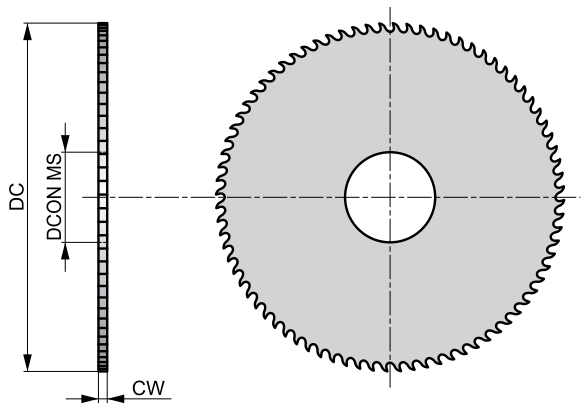
Product	DC	DC	CW	DCON MS	NOF	Pack Qty	MID
	(mm)	(inch)	(mm)	(mm)			
D745100.0X1.2	100.00	3.9370	1.2	22.00	64	1	5985270
D745100.0X1.5	100.00	3.9370	1.5	22.00	48	1	5985283
D745100.0X1.6	100.00	3.9370	1.6	22.00	48	1	5985288
D745100.0X2.0	100.00	3.9370	2.0	22.00	48	1	5985292
D745100.0X2.5	100.00	3.9370	2.5	22.00	48	1	5985297
D745100.0X3.0	100.00	3.9370	3.0	22.00	40	1	5985303
D745100.0X4.0	100.00	3.9370	4.0	22.00	40	1	5985308
D745125.0X1.0	125.00	4.9213	1.0	22.00	80	1	5985326
D745125.0X1.2	125.00	4.9213	1.2	22.00	64	1	5985331
D745125.0X1.5	125.00	4.9213	1.5	22.00	64	1	5985339
D745125.0X1.6	125.00	4.9213	1.6	22.00	64	1	5985342
D745125.0X2.0	125.00	4.9213	2.0	22.00	64	1	5985346
D745125.0X2.5	125.00	4.9213	2.5	22.00	48	1	5985349
D745125.0X3.0	125.00	4.9213	3.0	22.00	48	1	5985351
D745160.0X2.0	160.00	6.2992	2.0	32.00	64	1	5985429
D745160.0X2.5	160.00	6.2992	2.5	32.00	64	1	5985471
D745160.0X3.0	160.00	6.2992	3.0	32.00	64	1	5985516
D745200.0X1.6	200.00	7.8740	1.6	32.00	80	1	5985407
D745200.0X2.0	200.00	7.8740	2.0	32.00	80	1	5985410
D745200.0X2.5	200.00	7.8740	2.5	32.00	80	1	5985413
D745200.0X3.0	200.00	7.8740	3.0	32.00	64	1	5985415
D745250.0X2.0	250.00	9.8425	2.0	32.00	100	1	5985423

D747

DORMER

HSS Slitting Saw Fine Pitch

Designed with a neutral tooth geometry to help control chips and prevent rubbing when milling deep slots. The fine pitch design makes it ideal for narrow, deep slots, and can be used for horizontal milling slots and parting-off applications. Bright finish.



HSS | γ 5° | Bright | DIN 1837

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■131 Q	■148 Q	■151 Q	■112 Q	■98 Q	■95 P	■79 P	■59 P	◪46 P	◪39 P	◪39 P	◪33 P	◪39 P	◪33 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**
■131 Q	■98 Q	■72 Q	■121 Q	■98 Q	■108 Q	■82 Q	■98 P	■75 P	■112 Q	■85 Q	■1969 R	■1476 R	■984 R
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**							
■2523 R	■2270 R	■1640 R	■1112 R	■656 R	■328 Q	■197 R							

Product	DC (mm)	DC (inch)	CW (mm)	DCON MS (mm)	NOF	Pack Qty	MID
D74732.0X.3	32.00	1.2598	0.3	8.00	80	5	5985688
D74732.0X.4	32.00	1.2598	0.4	8.00	80	5	5985692
D74732.0X.5	32.00	1.2598	0.5	8.00	80	5	5985696
D74732.0X.6	32.00	1.2598	0.6	8.00	64	5	5985700
D74732.0X.8	32.00	1.2598	0.8	8.00	64	5	5985705
D74732.0X1.0	32.00	1.2598	1.0	8.00	64	5	5985709
D74732.0X1.2	32.00	1.2598	1.2	8.00	48	5	5985713
D74732.0X1.5	32.00	1.2598	1.5	8.00	48	5	5985721
D74732.0X1.6	32.00	1.2598	1.6	8.00	48	5	5985725
D74732.0X2.0	32.00	1.2598	2.0	8.00	48	5	5985729
D74740.0X.3	40.00	1.5748	0.3	10.00	100	5	5985741
D74740.0X.4	40.00	1.5748	0.4	10.00	100	5	5985745
D74740.0X.5	40.00	1.5748	0.5	10.00	80	5	5985749
D74740.0X.8	40.00	1.5748	0.8	10.00	80	5	5985756
D74740.0X1.0	40.00	1.5748	1.0	10.00	64	5	5985765
D74740.0X1.2	40.00	1.5748	1.2	10.00	64	5	5985770
D74740.0X1.5	40.00	1.5748	1.5	10.00	64	5	5985774
D74740.0X1.6	40.00	1.5748	1.6	10.00	64	5	5985778
D74740.0X2.0	40.00	1.5748	2.0	10.00	48	5	5985783
D74750.0X.3	50.00	1.9685	0.3	13.00	128	5	5985805
D74750.0X.4	50.00	1.9685	0.4	13.00	100	5	5985810
D74750.0X.5	50.00	1.9685	0.5	13.00	100	5	5985814
D74750.0X.6	50.00	1.9685	0.6	13.00	100	5	5985823
D74750.0X.8	50.00	1.9685	0.8	13.00	80	5	5985827

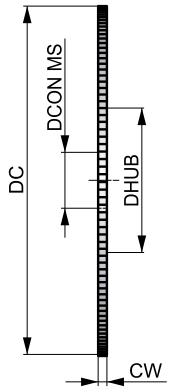
Product	DC	DC	CW	DCON MS	NOF	Pack Qty	MID
	(mm)	(inch)	(mm)	(mm)			
D74750.0X1.0	50.00	1.9685	1.0	13.00	80	5	5985831
D74750.0X1.2	50.00	1.9685	1.2	13.00	80	5	5985835
D74750.0X1.5	50.00	1.9685	1.5	13.00	64	5	5985839
D74750.0X1.6	50.00	1.9685	1.6	13.00	64	5	5985842
D74750.0X2.0	50.00	1.9685	2.0	13.00	64	5	5985845
D74750.0X2.5	50.00	1.9685	2.5	13.00	64	1	5985847
D74750.0X3.0	50.00	1.9685	3.0	13.00	48	1	5985849
D74763.0X.5	63.00	2.4803	0.5	16.00	128	5	5985969
D74763.0X.6	63.00	2.4803	0.6	16.00	100	5	5986002
D74763.0X.8	63.00	2.4803	0.8	16.00	100	5	5986008
D74763.0X1.0	63.00	2.4803	1.0	16.00	100	5	5986010
D74763.0X1.2	63.00	2.4803	1.2	16.00	80	5	5986013
D74763.0X1.5	63.00	2.4803	1.5	16.00	80	5	5986016
D74763.0X1.6	63.00	2.4803	1.6	16.00	80	5	5985874
D74763.0X2.0	63.00	2.4803	2.0	16.00	80	5	5985876
D74763.0X2.5	63.00	2.4803	2.5	16.00	64	1	5985878
D74763.0X3.0	63.00	2.4803	3.0	16.00	64	1	5985880
D74763.0X4.0	63.00	2.4803	4.0	16.00	64	1	5985882
D74780.0X.5	80.00	3.1496	0.5	22.00	128	5	5985891
D74780.0X.6	80.00	3.1496	0.6	22.00	128	5	5985895
D74780.0X.8	80.00	3.1496	0.8	22.00	128	5	5985902
D74780.0X1.0	80.00	3.1496	1.0	22.00	100	5	5985906
D74780.0X1.2	80.00	3.1496	1.2	22.00	100	1	5985909
D74780.0X1.5	80.00	3.1496	1.5	22.00	100	1	5985912
D74780.0X1.6	80.00	3.1496	1.6	22.00	100	1	5985915
D74780.0X2.0	80.00	3.1496	2.0	22.00	80	1	5985918
D74780.0X2.5	80.00	3.1496	2.5	22.00	80	1	5985921
D74780.0X3.0	80.00	3.1496	3.0	22.00	80	1	5985924
D74780.0X4.0	80.00	3.1496	4.0	22.00	64	1	5985927
D747100.0X.5	100.00	3.9370	0.5	22.00	160	5	5986034
D747100.0X.6	100.00	3.9370	0.6	22.00	160	5	5985893
D747100.0X.8	100.00	3.9370	0.8	22.00	128	5	5985896
D747100.0X1.0	100.00	3.9370	1.0	22.00	128	5	5985899
D747100.0X1.2	100.00	3.9370	1.2	22.00	128	1	5985903
D747100.0X1.5	100.00	3.9370	1.5	22.00	100	1	5985907
D747100.0X1.6	100.00	3.9370	1.6	22.00	100	1	5985910
D747100.0X2.0	100.00	3.9370	2.0	22.00	100	1	5985913
D747100.0X2.5	100.00	3.9370	2.5	22.00	100	1	5985916
D747100.0X3.0	100.00	3.9370	3.0	22.00	80	1	5985919
D747100.0X4.0	100.00	3.9370	4.0	22.00	80	1	5985922
D747125.0X1.0	125.00	4.9213	1.0	22.00	160	1	5985935
D747125.0X1.2	125.00	4.9213	1.2	22.00	128	1	5985938
D747125.0X1.5	125.00	4.9213	1.5	22.00	128	1	5985941
D747125.0X1.6	125.00	4.9213	1.6	22.00	128	1	5985944
D747125.0X2.0	125.00	4.9213	2.0	22.00	128	1	5985947
D747125.0X2.5	125.00	4.9213	2.5	22.00	100	1	5985950
D747125.0X3.0	125.00	4.9213	3.0	22.00	100	1	5985953
D747125.0X4.0	125.00	4.9213	4.0	22.00	100	1	5985955
D747160.0X1.0	160.00	6.2992	1.0	32.00	160	1	5985967
D747160.0X1.2	160.00	6.2992	1.2	32.00	160	1	5985970
D747160.0X1.5	160.00	6.2992	1.5	32.00	160	1	5985973
D747160.0X2.0	160.00	6.2992	2.0	32.00	128	1	5985979
D747160.0X2.5	160.00	6.2992	2.5	32.00	128	1	5985982
D747160.0X3.0	160.00	6.2992	3.0	32.00	128	1	5985985
D747200.0X1.0	200.00	7.8740	1.0	32.00	200	1	5986000
D747200.0X1.2	200.00	7.8740	1.2	32.00	200	1	5986003
D747200.0X2.0	200.00	7.8740	2.0	32.00	160	1	5986014
D747200.0X3.0	200.00	7.8740	3.0	32.00	128	1	5986020

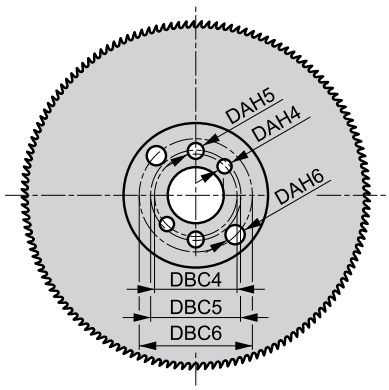
D752

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 | γ 18° | ST | DORMER

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■ 131 Q	■ 148 Q	■ 151 Q	■ 112 Q	■ 98 Q	■ 95 P	■ 79 P	■ 59 P	◪ 46 P	◪ 39 P	◪ 39 P	◪ 33 P	◪ 39 P	◪ 33 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**
■ 131 Q	■ 98 Q	■ 72 Q	■ 121 Q	■ 98 Q	■ 108 Q	■ 82 Q	■ 98 P	■ 75 P	■ 112 Q	■ 85 Q	■ 1969 R	■ 1476 R	■ 984 R
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**							
■ 2523 R	■ 2270 R	■ 1640 R	■ 1112 R	■ 656 R	■ 328 Q	■ 197 R							

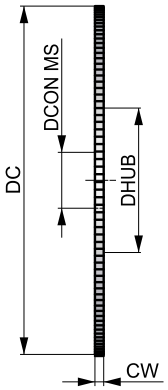
Product	DC (mm)	DC (inch)	CW (mm)	DCON MS (mm)	NOF	P (mm)	DHUB (mm)	DAH4 (mm)	DBC4 (mm)	DAH5 (mm)	DBC5 (mm)	DAH6 (mm)	DBC6 (mm)	Pack Qty	MID
D752250.0X2.0X128	250.00	9.8425	2.0	32.00	128	6	100	8	45	9	50	11	63	1	5985807
D752300.0X2.5X160	300.00	11.8110	2.5	32.00	160	6	100	8	45	9	50	11	63	1	5985821
D752315.0X2.5X160	315.00	12.4016	2.5	32.00	160	6	100	8	45	9	50	11	63	1	5985826
D752350.0X2.5X180	350.00	13.7795	2.5	32.00	180	6	120	8	45	9	50	11	63	1	5985673

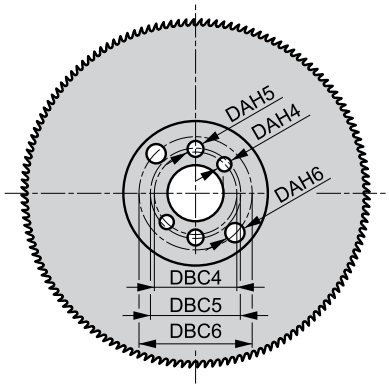
D753

DORMER

HSS Slitting Saw Coarse Pitch

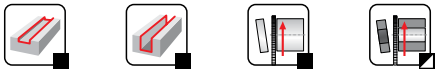
Designed with coarse pitch, ideal for thin section components. The dish ground and neutral tooth geometry, in addition to helping control chips, also prevents rubbing when slitting tubes and pipes. Suitable for slitting and cutting. The steam oxide finish acts to retain cutting fluid and prevent chip tool welding.





HSS | γ 18°

ST | DORMER



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■131 Q	■148 Q	■151 Q	■112 Q	■98 Q	■95 P	■79 P	■59 P	◪46 P	◪39 P	◪39 P	◪33 P	◪39 P	◪33 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**
■131 Q	■98 Q	■72 Q	■121 Q	■98 Q	■108 Q	■82 Q	■98 P	■75 P	■112 Q	■85 Q	■1969 R	■1476 R	■984 R
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**							
■2523 R	■2270 R	■1640 R	■1112 R	■656 R	■328 Q	■197 R							

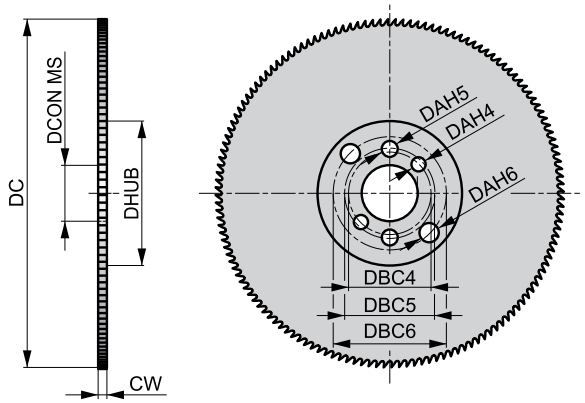
Product	DC (mm)	DC (inch)	CW (mm)	DCON MS (mm)	NOF	P (mm)	DHUB (mm)	DAH4 (mm)	DBC4 (mm)	DAH5 (mm)	DBC5 (mm)	DAH6 (mm)	DBC6 (mm)	Pack Qty	MID
D753250.0X2.0	250.00	9.8425	2.0	32.00	100	8	100	8	45	9	50	11	63	1	5985676
D753350.0X2.5	350.00	13.7795	2.5	32.00	140	8	120	8	45	9	50	11	63	1	5985691

D750

DORMER

HSS Slitting Saw Fine Pitch

Designed with fine pitch, ideal for thin section components. Suitable for slitting and cutting. With ranges from 130 to 220 teeth, the neutral tooth geometry helps control chips and prevents rubbing when slitting tubes and pipes. The steam oxide finish acts to retain cutting fluid and prevent chip tool welding.



HSS | γ 18°

ST | DORMER

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■ 131 Q	■ 148 Q	■ 151 Q	■ 112 Q	■ 98 Q	■ 95 P	■ 79 P	■ 59 P	◪ 46 P	◪ 39 P	◪ 39 P	◪ 33 P	◪ 39 P	◪ 33 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**
■ 131 Q	■ 98 Q	■ 72 Q	■ 121 Q	■ 98 Q	■ 108 Q	■ 82 Q	■ 98 P	■ 75 P	■ 112 Q	■ 85 Q	■ 1969 R	■ 1476 R	■ 984 R
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**							
■ 2523 R	■ 2270 R	■ 1640 R	■ 1112 R	■ 656 R	■ 328 Q	■ 197 R							

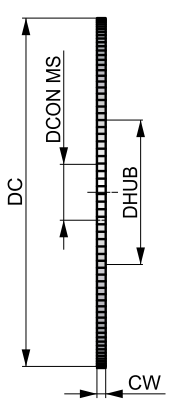
Product	DC (mm)	DC (inch)	CW (mm)	DCON MS (mm)	NOF	P (mm)	DHUB (mm)	DAH4 (mm)	DBC4 (mm)	DAH5 (mm)	DBC5 (mm)	DAH6 (mm)	DBC6 (mm)	Pack Qty	MID
D750200.0X1.8	200.00	7.8740	1.8	32.00	130	5	100	8	45	9	50	11	63	1	5985940
D750225.0X2.0	225.00	8.8583	2.0	32.00	140	5	100	8	45	9	50	11	63	1	5985943
D750250.0X2.0	250.00	9.8425	2.0	32.00	160	5	100	8	45	9	50	11	63	1	5985946
D750275.0X2.5	275.00	10.8268	2.5	32.00	180	5	100	8	45	9	50	11	63	1	5985949
D750300.0X2.5	300.00	11.8110	2.5	32.00	180	5	100	8	45	9	50	11	63	1	5985952
D750315.0X2.5	315.00	12.4016	2.5	32.00	200	5	100	8	45	9	50	11	63	1	5985957
D750350.0X2.5	350.00	13.7795	2.5	32.00	220	5	120	8	45	9	59	11	63	1	5985960

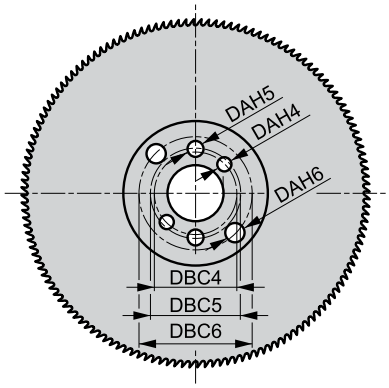
D751

DORMER

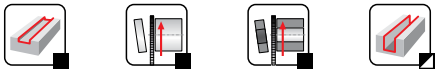
HSS Slitting Saw Fine Pitch

Designed with fine pitch, ideal for thin section components. Suitable for slitting and cutting. With ranges from 160 to 350 teeth, the neutral tooth geometry helps control chips and prevents rubbing when slitting tubes and pipes. The steam oxide finish acts to retain cutting fluid and prevent chip tool welding.





HSS | γ 18° | ST | DORMER

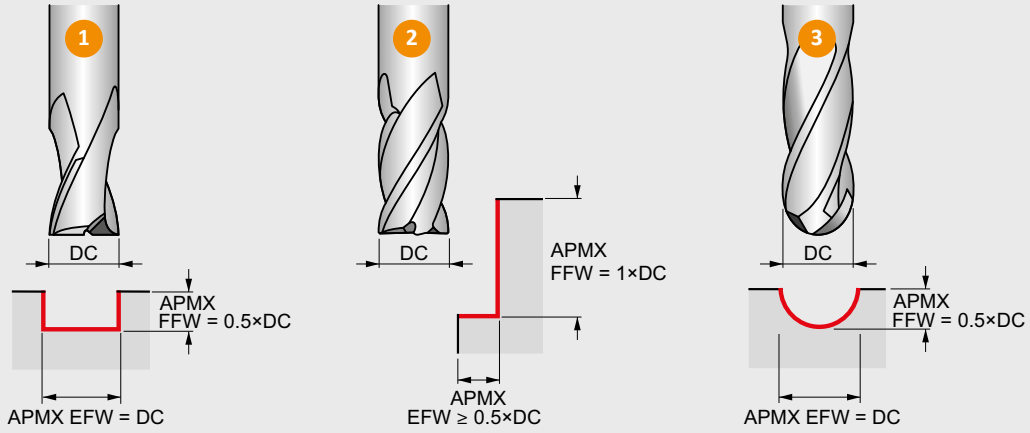


Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 218.

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
■131 Q	■148 Q	■151 Q	■112 Q	■98 Q	■95 P	■79 P	■59 P	◪46 P	◪39 P	◪39 P	◪33 P	◪39 P	◪33 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**
■131 Q	■98 Q	■72 Q	■121 Q	■98 Q	■108 Q	■82 Q	■98 P	■75 P	■112 Q	■85 Q	■1969 R	■1476 R	■984 R
N2.1	**N2.2**	**N2.3**	**N3.1**	**N3.2**	**N3.3**	**N4.1**							
■2523 R	■2270 R	■1640 R	■1112 R	■656 R	■328 Q	■197 R							

Product	DC (mm)	DC (inch)	CW (mm)	DCON MS (mm)	NOF	P (mm)	DHUB (mm)	DAH4 (mm)	DBC4 (mm)	DAH5 (mm)	DBC5 (mm)	DAH6 (mm)	DBC6 (mm)	Pack Qty	MID
D751200.0X1.8X160	200.00	7.8740	1.8	32.00	160	4	100	8	45	9	50	11	63	1	5985963
D751200.0X1.8X200	200.00	7.8740	1.8	32.00	200	3	100	8	45	9	50	11	63	1	5985966
D751225.0X2.0X180	225.00	8.8583	2.0	32.00	180	4	100	8	45	9	50	11	63	1	5985972
D751225.0X2.0X220	225.00	8.8583	2.0	32.00	220	3	100	8	45	9	50	11	63	1	5985975
D751250.0X2.0X200	250.00	9.8425	2.0	32.00	200	4	100	8	45	9	50	11	63	1	5985978
D751250.0X2.0X250	250.00	9.8425	2.0	32.00	250	3	100	8	45	9	50	11	63	1	5985981
D751275.0X2.5X220	275.00	10.8268	2.5	32.00	220	4	100	8	45	9	50	11	63	1	5985984
D751300.0X2.5X220	300.00	11.8110	2.5	32.00	220	4	100	8	45	9	50	11	63	1	5985990
D751300.0X2.5X300	300.00	11.8110	2.5	32.00	300	3	100	8	45	9	50	11	63	1	5985993
D751315.0X2.5X240	315.00	12.4016	2.5	32.00	240	4	100	8	45	9	50	11	63	1	5985996
D751350.0X2.5X280	350.00	13.7795	2.5	32.00	280	4	120	8	45	9	50	11	63	1	5986005
D751350.0X2.5X350	350.00	13.7795	2.5	32.00	350	3	120	8	45	9	50	11	63	1	5985668

SOLID HSS MILLS – FEED PER TOOTH TABLE



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

ONLY if plunging into solid material with a center 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:

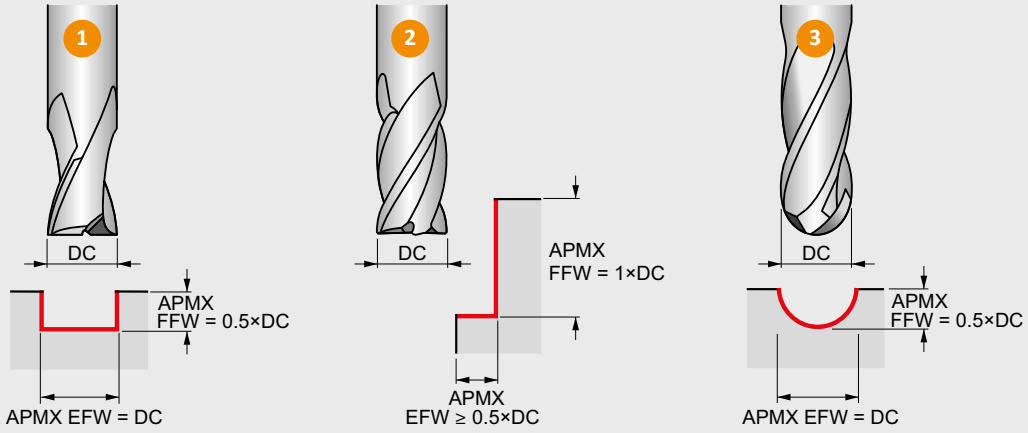
1. Find your Alpha Code on the product page (example: 48C, "**C**" is the Alpha Code).
2. Find the closest diameter for your cutting application in the top row of the table.
3. Find your Alpha Code in the left column of the table.
4. The intersection (cell) of the Diameter and Alpha Code is the feed 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	.002	.003	.003	.005	.005	.005	.007	.009	.011	.015	.018	.023	.027	.030	.033	.034	.043	.045	.042
	B	.003	.004	.004	.006	.006	.007	.009	.012	.014	.018	.023	.029	.033	.038	.041	.043	.054	.057	.052
	C	.004	.004	.005	.007	.008	.008	.011	.015	.017	.023	.029	.036	.042	.047	.051	.054	.067	.071	.065
	D	.005	.006	.006	.009	.010	.010	.014	.018	.022	.029	.036	.045	.052	.059	.064	.067	.084	.089	.082
	E	.006	.007	.008	.011	.012	.013	.017	.023	.027	.036	.045	.056	.065	.074	.080	.084	.105	.111	.102
	F	.007	.008	.010	.013	.014	.016	.020	.028	.032	.043	.054	.067	.078	.089	.096	.101	.126	.133	.122
	G	.009	.010	.012	.016	.017	.019	.024	.033	.039	.052	.065	.081	.094	.107	.115	.121	.151	.160	.147
	H	.010	.012	.014	.019	.021	.022	.029	.040	.047	.062	.078	.097	.112	.128	.138	.145	.181	.192	.176
	I	.012	.015	.017	.023	.025	.027	.035	.048	.056	.075	.093	.116	.135	.153	.166	.174	.218	.230	.212
	J	.015	.017	.020	.027	.030	.032	.042	.057	.067	.090	.112	.139	.162	.184	.199	.209	.261	.276	.254

This table is valid for end mills and shell mills.

SOLID HSS MILLS – FEED PER TOOTH TABLE



Feed per tooth *IPT* (inch/tooth) depending on the working conditions it might be necessary to adjust these values ±25 %.

ONLY if plunging into solid material with a center 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 (in)																		
		1/16	3/32	1/8	5/32	3/16	7/32	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4	7/8	1	1 1/8	1 1/4	1 1/2
		.0625	.0938	.1250	.1563	.1875	.2188	.2500	.3125	.3750	.4375	.5000	.5625	.6250	.7500	.8750	1.0000	1.1250	1.2500	1.5000
Feed rates	A	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0003	.0004	.0004	.0005	.0006	.0006	.0007	.0008	.0009	.0011	.0012	.0013
	B	.0001	.0002	.0002	.0002	.0002	.0002	.0003	.0004	.0004	.0005	.0006	.0007	.0007	.0009	.0011	.0012	.0014	.0015	.0017
	C	.0002	.0002	.0002	.0003	.0003	.0003	.0004	.0004	.0005	.0006	.0007	.0008	.0009	.0011	.0013	.0015	.0017	.0019	.0020
	D	.0002	.0002	.0002	.0004	.0004	.0004	.0004	.0006	.0007	.0008	.0009	.0010	.0011	.0013	.0017	.0019	.0021	.0023	.0026
	E	.0002	.0003	.0003	.0004	.0005	.0005	.0006	.0007	.0008	.0010	.0011	.0013	.0014	.0017	.0020	.0023	.0027	.0029	.0032
	F	.0003	.0003	.0004	.0005	.0006	.0006	.0007	.0008	.0010	.0012	.0014	.0016	.0017	.0020	.0024	.0028	.0032	.0035	.0039
	G	.0004	.0004	.0005	.0006	.0007	.0007	.0008	.0009	.0012	.0014	.0017	.0019	.0020	.0024	.0030	.0033	.0039	.0042	.0046
	H	.0004	.0005	.0006	.0007	.0008	.0008	.0009	.0011	.0014	.0017	.0020	.0022	.0024	.0029	.0035	.0040	.0046	.0050	.0056
	I	.0005	.0006	.0007	.0009	.0010	.0010	.0011	.0014	.0017	.0020	.0024	.0027	.0030	.0035	.0043	.0048	.0056	.0060	.0067
	J	.0006	.0007	.0008	.0011	.0012	.0012	.0014	.0017	.0020	.0024	.0028	.0032	.0035	.0042	.0051	.0058	.0067	.0072	.0080

This table is valid for end mills and shell mills.

1 Slot Milling

Correction factors for cutting speed v_c and feed per tooth f_z for slot milling operations at different depths of cut.

APMX FFW / DC	25 %	50 %	100 %	150 %
X.V	1.25	1.00	.75	.50
X.f	1.25	1.00	.75	.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.

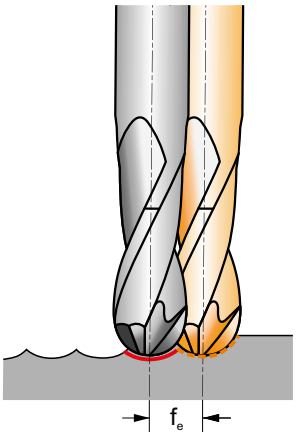
3a Plain Copy Milling (with Ball Nose Cutters)

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

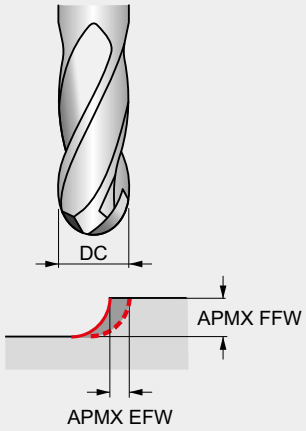
3b

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
.079		.005	.007	.010	.014	.020	.028	.038	.052
.118		.006	.009	.012	.017	.024	.034	.047	.065
.157		.007	.010	.014	.020	.028	.039	.055	.076
.197		.008	.011	.016	.022	.031	.044	.061	.086
.236		.009	.012	.017	.024	.034	.048	.067	.094
.315		.010	.014	.020	.028	.040	.056	.078	.109
.394		.011	.016	.022	.031	.044	.062	.087	.123
.472		.012	.017	.024	.035	.049	.068	.096	.135
.551		.013	.019	.026	.037	.053	.074	.104	.146
.630		.014	.020	.028	.040	.056	.079	.111	.156
.709		.015	.021	.030	.042	.060	.084	.118	.166
.787		.016	.022	.031	.044	.063	.088	.124	.175
.866		.017	.023	.033	.047	.066	.093	.130	.183
.984		.018	.025	.035	.050	.070	.099	.139	.196
1.102		.019	.026	.037	.053	.074	.104	.147	.207

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:

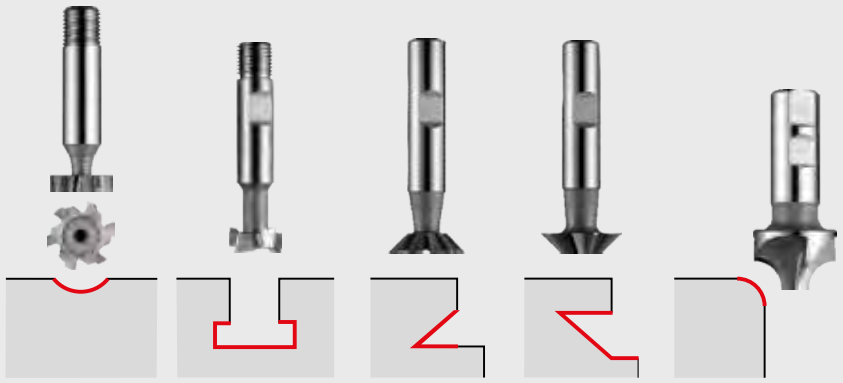
1. Applying an 8 mm ball nose cutter with a depth of cut of 0.8 mm (APMX FFW), the aim is to achieve a theoretical surface roughness of 32 µm.
2. The correction factor for cutting speed with an axial immersion of 10 % = 1.67 can be found in table 3a.
3. The step-over distance for a R_{th} of 32 µm = 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 (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)															
		10.0	12.0	16.0	20.0	25.0	32.0	38.0	50.0	63.0	80.0	100.0	125.0	160.0	200.0	300.0	350.0
Feed rates	P	–	–	–	–	–	.200	–	.200	.200	.200	.200	.200	.200	.200	.200	.200
	Q	–	–	–	–	–	.040	–	.040	.040	.040	.040	.040	.040	.040	.040	.040
	R	–	–	–	–	–	.600	–	.600	.600	.600	.600	.600	.600	.600	.600	.600
	S	.020	.020	.020	.040	.040	.040	.040	.050	.050	.060	.070	.080	.090	.100	.100	.100
	T	.020	.020	.030	.050	.050	.050	.060	.060	.060	–	–	–	–	–	–	–
	U	.030	.030	.030	.050	.060	.060	.060	.060	.060	–	–	–	–	–	–	–
	V	.030	.030	.040	.060	.060	.060	.070	.070	.070	.080	.090	.100	.110	.120	.120	.120
	W	.040	.050	.050	.060	.060	.070	.070	.070	.070	.090	.100	.110	.110	.120	.120	.120
	X	.050	.050	.060	.070	.080	.100	.110	.110	.110	.110	.110	.120	.130	.140	.140	.140
	Y	.060	.060	.070	.090	.100	.110	.130	.130	–	–	–	–	–	–	–	–
	Z	.070	.070	.090	.110	.120	.110	.150	–	–	–	–	–	–	–	–	–

Feeds f_z shown are Metric (mm) only.

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

Solid section

Diameter (t)	Saw Pitch (P) 2.5	3	4	5	6	8
0.157		P M	N K			
0.236			P M	N K		
0.315				P M	N K	
0.394				P M	N K	
0.591					P M	**N** **K**
0.787					P M	N K
1.181						P M
1.575						
2.362						

Profiles and Tubes

Wall Thickness (t)	Saw Pitch (P) 2.5	3	4	5	6	8
0.039		P M	N K			
0.059			P M	N **K**		
0.079				**P** **M**	N K	
0.118					P M	N K
> 0.157					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)

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	.9	6.4	5.0	4.2	1.8	–	HSS
HSS-E	M35	830 – 870	.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	.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)	–	.2 – 10.0	.8

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

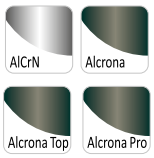
Characteristic	Higher WC content give	Higher Co content give
Hardness	Higher hardness	Lower hardness
Compressive strength (CS)	Higher CS	Lower CS
Bending strength (BS)	Lower BS	Higher BS

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

SURFACE TREATMENTS

Bright (uncoated)		Bright finish (uncoated surface) improves chip flow in soft or non-ferrous materials and maintains sharp cutting edges in abrasive materials.
Steam Tempering		Steam tempering gives a strongly adhering blue oxide surface that acts to retain cutting fluid and prevent chip to tool welding, thereby counteracting the formation of a built-up edge. Steam tempering can be applied to any bright tool but is most effective on drills and taps.

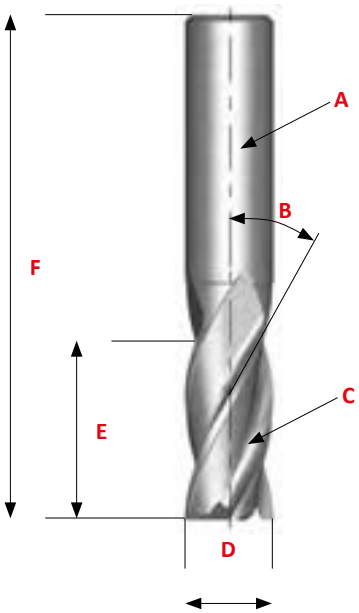
SURFACE COATINGS

Titanium Carbon Nitride Coating (TiCN)		Titanium Carbon Nitride is a ceramic coating applied by PVD coating technology. TiCN is harder than TiN and has a lower coefficient of friction. Its hardness and toughness in combination with good wear resistance ensures that it finds its principal application in the field of milling to enhance the performance of milling cutters.
Titanium Aluminum Nitride Coatings (TiAlN, TiAlN-Top & X-CEED)		Titanium Aluminum 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.
Aluminum Titanium Nitride Coating (AlTiN)		Aluminum Titanium Nitride (AlTiN) is a nanolayered broad based coating technology which is an upgrade to the conventional TiAlN coatings and can offer superior toughness, high hot hardness and oxidation resistance.
Alcrona Coatings (AlCrN, Alcrona, Alcrona-Top & Alcrona-Pro)		The Alcrona (AlCrN) family of coatings are aluminum chromium nitride coatings mostly used for milling cutters. The two unique properties of these coatings are high hot hardness and high oxidation resistance. When used on tools for machining applications involving heavy mechanical and thermal stresses, these properties translate into superior wear resistance. Multiple levels or specific versions of these coatings are available and specific for various tools and applications.
Titanium Silicon Nitride Coating (TiSiN)		TiSiN is designed for extreme cutting conditions and high speed machining of hard materials. This multi-layered coating has a nano-composite outer layer with Si3N4 nano-crystallites in a crystalline TiN matrix and is engineered to protect the cutting edge from heat transfer, oxidation and abrasion. TiSiN coatings can perform well at minimum to zero lubrication conditions.

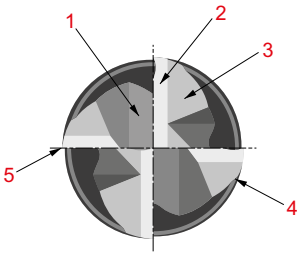
SURFACE TREATMENT/COATING PROPERTIES EXAMPLES

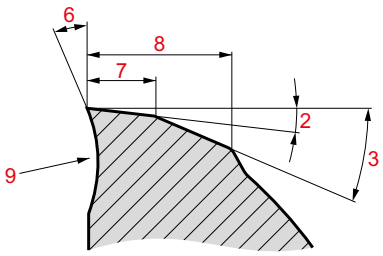
Surface Treaments	Color	Coating material	Hardness (HV)	Thickness (µm)	Coating structure	Frict. coeff. against steel	Max. appl. temp. (°C)
	Dark grey	Fe_3O_4	400	max. 5	Conversion into the surface	–	550
	Blue grey	TiCN	3000	1 – 4	Multi-layer gradient	.4	500
	Black grey	TiAlN	3300	3	Nano structured	.3 – .35	900
	Blue grey	AlCrN	3200	–	Mono-layer	.35	1100

NOMENCLATURE



A Shank
B Helix Angle
C Flute
D Outside Diameter *DC*
E Cutting Length *AP*
F Overall Length *OAL*

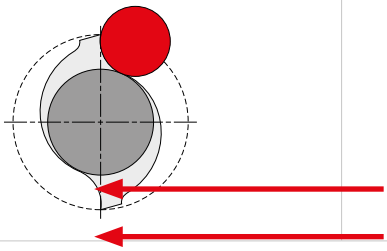
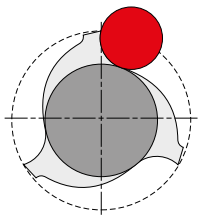
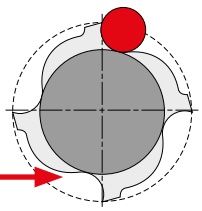




1 Gash
2 Primary Relief Angle
3 Secondary Relief Angle
4 Heel
5 Cutting Edge
6 Rake Angle
7 Width of Primary Relief Land
8 Width of Secondary Relief Land
9 Undercut Face

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:

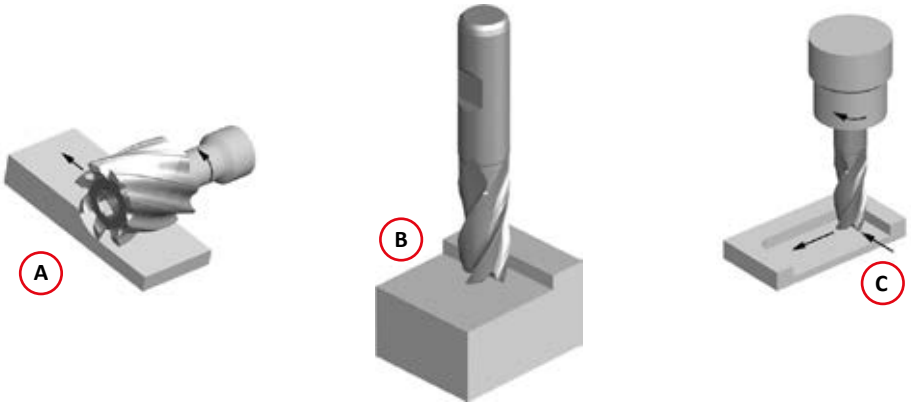
- Load problems on the spindle bearings
- Cutter movement along the spindle axis. To avoid this problem it is necessary to use Weldon or better Mechanical or Hydraulical Toolholder.

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

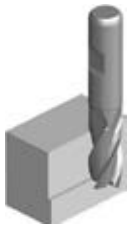
The three basic milling operations are shown below: (**A**) peripheral milling, (**B**) face milling and (**C**) end milling.



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

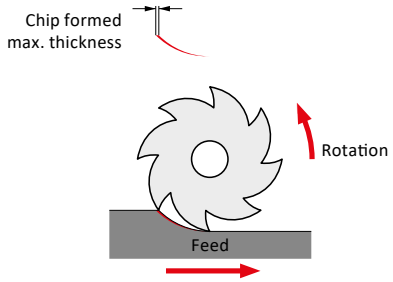
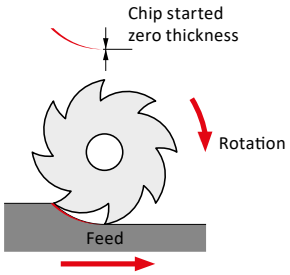
The Metal Removal Rate (MRR) and the applications are strongly related. For each different application we have a different MRR that increases with the engagement section of the cutter on the workpiece. The recent catalog was produced with simple icons that show the different applications.

Side Milling	Face Milling	Slot Milling	Plunge Milling	Ramping
				
The radial depth of cut should be less than .25 of the diameter of the end mill.	The radial depth of cut should be no more than .9 of the diameter, axial depth of cut less than .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 center. In this operation the feed has to be halved.	Both axial and radial entering into the workpiece.

MILLING EFFECTIVELY

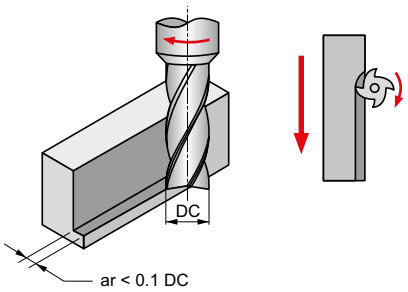
Types Of Cuts

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

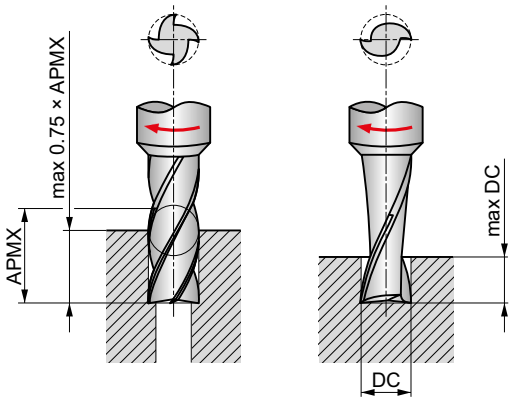
Peripheral Milling: The milling of a surface which is parallel to the end mill axis.



The radial depth of cut should be less than .1 of the diameter of the mill: *ar* < .1 *DC*.

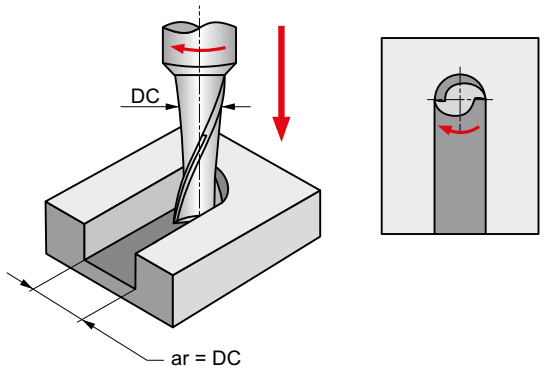
PLUNGE MILLING

The direct movement between the workpiece and the center line of the end mill when the end mill sinks directly into the workpiece.



In order to be able to “drill,” i.e. mill with axial feed, an end mill must have an end face cutting edge that goes all the way to the center. 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 .5 – 1.0 *DC*.

SLOT MILLING



The radial depth of cut is equal to the diameter of the mill: *ar* = *DC*.
All slotting applications are a combination of conventional and climb milling. Refer to adjacent section.

END MILL SELECTION

Utilize the shortest possible tool available for the application with the largest diameter permissible and the shortest flute length as depth of cut allows. Extra length end mills have excessive overhang, thus a reduction in feed up to 25 % may be required. Stub length end mills, due to their short overall and flute length, have more rigidity, thus an increase in feed rates of up to 25 % may be required.

SPEEDS

Solid Carbide end mills must be run at higher speeds than High Speed Steel end mills. Many times, lighter cuts at higher speeds can improve the finish of the workpiece.
When the application is a slotting cut, the speed should be reduced by approximately 20 %. Speeds should be decreased when milling hard or tough materials or when taking heavy cuts. Speeds should be increased when milling softer materials or when taking lighter cuts. Speeds should also be increased for finishing cuts.

COOLANTS

Coolants are recommended when milling mild steel and high temperature alloys. The purpose of the coolant media is to direct the chips away from the cutting tool and workpiece. This prevents damage to the cutting edges due to recutting the chips. When machining titanium, coolant flow must be heavy and directed at the area of cut to prevent overheating and assist in chip removal.

MILLING TERMINOLOGY/OPERATING FORMULAS

The following terms and formulas can be used to determine the appropriate operating parameters.

Formulas (Metric)			Terms	Formulas (Imperial)		
$v_c = \frac{n \times DC \times \pi}{1000}$	v_c	(m/min)	**Cutting speed**	SFM	(ft/min)	$SFM = \frac{RPM \times DC \times \pi}{12}$
$n = \frac{v_c \times 1000}{DC \times \pi}$	n	(rev/min)	**Spindle speed**	RPM	(rev/min)	$RPM = \frac{SFM \times 12}{DC \times \pi}$
$V_f = f_z \times z \times n$	V_f	(mm/min)	**Feed rate**	IPM	(in/min)	IPM = IPT × T × RPM
$f_z = \frac{V_f}{z \times n}$	f_z	(mm/tooth)	**Feed per tooth**	IPT	(in/tooth)	$IPT = \frac{IPM}{T \times RPM}$
	DC	(mm)	**Cutting diameter**	DC	(in)	
	z	(–)	**Number of teeth**	T	(–)	
	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 × DOC × 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

CARBIDE ROTARY BURRS

Our range of carbide rotary burrs is a high quality and comprehensive program. This includes a variety of designs and shapes to offer an ideal option for the majority of applications in all major industry segments.

FEATURES AND BENEFITS

- The combination of premium grade materials for both the shank and head, with the precise production process, results in the creation of a consistent and secure program of tools.
- Each CUT STYLE has been designed to be the first choice for high performance machining in the relevant material. This includes steels (ST CUT), stainless steels (VA CUT), non-ferrous materials and plastics (ALUMINUM CUT), superalloys (AS CUT), fibreglass and composite materials (GRP CUT), and general machining (DC CUT).

SHANK

- Toughened and hardened steel shanks
- Provides rigidity and strength
- Prevents bending and reduces vibration, resulting in improved tool life
- Ground to h6 (carbide) and h7 (steel) for improved holding

BRAZING

- Special brazing elements provide excellent braze strength
- Excellent impact strength to withstand high forces
- Able to withstand higher temperature without failing

CUT STYLES

ST CUT

First choice for high performance machining of **Steels**

- Material specific chip breaker design for higher machining output on steel parts
- Positive geometry, ensures smooth surface finish
- Creates less temperature which helps increase tool life

VA CUT

First choice for high performance machining of **Stainless steels**

- Sharp cutting geometry, reducing the onset of work-hardening
- Increases metal removal rate

ALUMINUM CUT

First choice for **Non ferrous materials and Plastics**

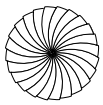
- High helix and large flute volume for rapid metal removal

CARBIDE ROTARY BURRS

BALL NOSE GEOMETRY

- Skip flute grinding
- Increased strength at the center
- Reduced chance of chip congestion
- Improved cutting action closer to the center

 **Skip**

 **Normal**

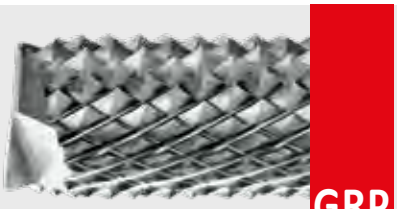
TiAlN COATING

- Increased tool life in difficult conditions
- Reduced friction improves chip evacuation
- Helps resist “built-up edge” common with cutting tools with small flute volumes

AS CUT

First choice for **Superalloys**

- Ergonomic
- High quality surface finish
- Fast and smooth cutting action



GRP CUT

First choice for **Fibreglass and Composite materials**

- Available with Drill Point and End Mill styles
- Designed to reduce splintering and improve entry and exit surface quality

DOUBLE CUT

First choice for **General machining**

- Improves ease of control
- Increases metal removal rate

CARBIDE ROTARY BURRS

FOR BOLT REMOVAL

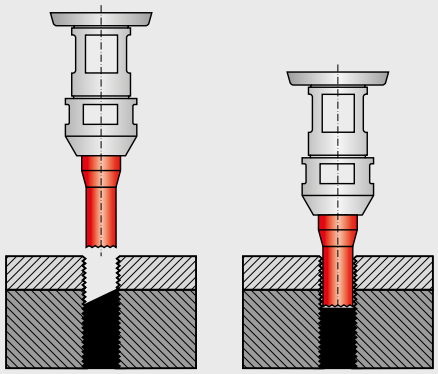
A specially designed range of burrs to prepare the surface of broken bolts to improve drill location and prevent damaging the threaded hole and component.

FEATURES AND BENEFITS

- Specific diameters and cutting lengths to suit various thread diameters
- Long reach and tapered shanks for easy access
- Developed cutting geometry for machining high tensile materials
- Reduces potential damage to existing threaded holes
- Improves drill location, ensuring damaged bolt is drilled on center
- Prevents potential scrappage of component
- Highly consistent quality

OPERATIONS

1



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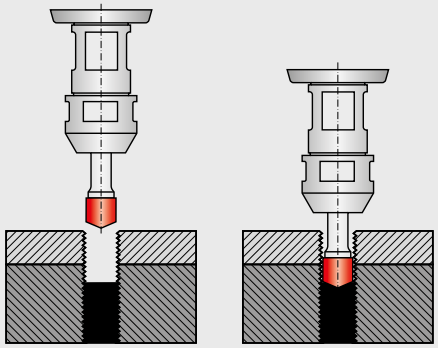


CUT STYLES

PLAIN CYLINDER WITH END CUT

150° COUNTERSINK

HOW TO USE THE TOOLS

- Choose the correct size burr for the broken bolt
- Use a right-handed die grinder
- Ensure the burr is perpendicular to the broken bolt
- Grind the broken surface flat – Operation ①
- Grind into the prepared surface to form a countersink location at the center point of the bolt – Operation ②

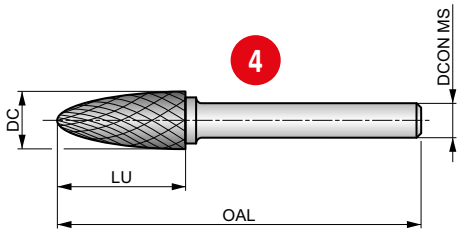
1 **P811**

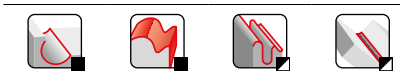
DORMER

2

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.





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.

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
P8[8]6.0	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

8 9

Typical page with rotary burrs displayed – specific page details will differ.

ROTARY BURRS – PAGE OVERVIEW

Pos.	Description
1	Designation of rotary burrs
2	Product description
3	Illustrative picture
4	Schematic drawing of tool
5	Product features

Pos.	Description
6	Deburring operations
7	Material group recommendations
8	Product code
9	Product dimensions

ROTARY BURRS – ICONS OVERVIEW

General Icons

■	Primary use
◪	Possible use

Material Code (BMC)

HM	Hard Material (Solid Carbide)

Burr Shape

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

Burr End Shot

	Drill Point Burr End
	End Cut Burr End
	End Mill Burr End

Coating

Bright	Bright (uncoated)
TiAlN	Titanium Aluminum Nitride Coating

ROTARY BURRS – ICONS OVERVIEW

Application Angle

	60° Countersink
	90° Countersink
	Drill Point 135°
	Drill Point 180°
	Spot Drill Point 150°

Burr Cut Flute Style (BTC)

DC	Double Cut Geometry
ST	Steel Cut Geometry
VA	Stainless Steel Cut Geometry
AL	Aluminum 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

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

Other Icons

	Bolt size

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

ROTARY BURRS – SURFACE AND TREATMENTS COATINGS NAVIGATOR

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

Surface Coatings		
Titanium Aluminum Nitride Coating (TiAlN)		Titanium Aluminum Nitride is a multi layer ceramic coating applied by PVD coating technology, which exhibits high toughness and oxidation stability. These properties make it ideal for higher speeds and feeds, while at the same time improving tool life. TiAlN is used in drilling, tapping, and milling applications and can be suitable for use when machining without coolant.

Material code (BMC)		HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM
Burr Shape		A	A	A	A	A	A	A	A	B	B	B	B	B
Burr end shot														
Coating		Bright	Bright	Bright	TiAlN	Bright	Bright	Bright	Bright	Bright	Bright	Bright	TiAlN	Bright
Application angle														
Burr Type Code (BTC)		DC	AL	DC	DC	ST	VA	AL	AS	DC	AL	DC	DC	ST
Basic standard group (BSG)				DORMER	DORMER	DORMER	DORMER	DORMER	DORMER			DORMER	DORMER	DORMER
Product Family Code		SA-DC	SA-FM	P801	P801C	P701	P601	P831	P501	SB-DC	SB-FM	P803	P803C	P703
PSF cutting diameters range		1/16 - 1	1/4 - 5/8	3.00 - 16.00	3.00 - 12.70	6.00 - 12.70	3.00 - 12.70	6.00 - 12.70	3.00	1/8 - 1	1/4 - 1/2	3.00 - 16.00	3.00 - 12.70	6.00 - 12.70
		253	254	255	256	257	258	259	260	261	262	263	264	265
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

	P833	SC-DC	SC-FM	P805	P805C	P705	P605	P835	P505	SD-DC	SD-FM	P807	P807C	P707	P607
HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM
	B	C	C	C	C	C	C	C	C	D	D	D	D	D	D
	Bright	Bright	Bright	Bright	TiAlN	Bright	Bright	Bright	Bright	Bright	Bright	Bright	TiAlN	Bright	Bright
	AL	DC	AL	DC	DC	ST	VA	AL	AS	DC	AL	DC	DC	ST	VA
	DORMER		DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER			DORMER	DORMER	DORMER	DORMER
	6.00 - 12.70	3/32 - 3/4	1/4 - 3/4	3.00 - 16.00	3.00 - 12.70	6.00 - 12.70	3.00 - 12.70	6.00 - 12.70	3.00	3/32 - 3/4	1/4 - 1/2	3.00 - 16.00	3.00 - 12.70	6.00 - 12.70	3.00 - 12.70
	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280
P1		■		■	■	■				■		■	■	■	
P2		■		■	■	■				■		■	■	■	
P3		■		■	■	■				■		■	■	■	
P4		■		■	■	■				■		■	■	■	
M1		■		■	■		■			■		■	■		■
M2		■		■	■		■			■		■	■		■
M3		■		■	■		■		◪	■		■	■		■
M4		■		■	■		■		◪	■		■	■		■
K1		■		■	■					■		■	■		
K2		■		■	■					■		■	■		
K3		■		■	■					■		■	■		
K4		■		■	■		◪			■		■	■		◪
K5		■		■	■					■		■	■		
N1	■		■					■			■				
N2	■		■					■			■				
N3	◪	■	◪	■	■			◪		■	◪	■	■		
N4	■		■					■			■				
N5															
S1	◪	■	◪	■	■			◪	■	■	◪	■	■		
S2		■		■	■				■	■		■	■		
S3		■		■	■				■	■		■	■		
S4		■		■	■				■	■		■	■		
H1		■		■	■					■		■	■		
H2		■		■	■					■		■	■		
H3		■		■	■					■		■	■		
H4		■		■	■					■		■	■		

■ Primary use ◪ Possible use

Material code (BMC)	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	
Burr Shape	D	D	E	E	E	E	E	E	F	F	F	F	F	
Burr end shot														
Coating	Bright	Bright	Bright	Bright	Bright	Bright	Bright	Bright	Bright	Bright	Bright	TiAlN	Bright	
Application angle														
Burr Type Code (BTC)	AL	AS	DC	AL	DC	ST	VA	AS	DC	AL	DC	DC	ST	
Basic standard group (BSG)	DORMER	DORMER			DORMER	DORMER	DORMER	DORMER			DORMER	DORMER	DORMER	
Product Family Code	P837	P507	SE-DC	SE-FM	P809	P709	P609	P509	SF-DC	SF-FM	P811	P811C	P711	
PSF cutting diameters range	6.00 - 12.70	3.00	1/8 - 5/8	3/8 - 1/2	3.00 - 16.00	12.70	8.00 - 12.70	3.00	1/8 - 3/4	1/4 - 1/2	3.00 - 16.00	3.00 - 12.70	6.00 - 12.70	
	281	282	283	284	285	286	287	288	289	290	291	292	293	
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

	P611	P841	P511	SG-DC	P813	P813C	P713	P613	P513	SH-DC	P815	P815C	P715	P615	P515
	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM
	F	F	F	G	G	G	G	G	G	H	H	H	H	H	H
	Bright	Bright	Bright	Bright	Bright	TiAlN	Bright	Bright	Bright	Bright	Bright	TiAlN	Bright	Bright	Bright
	VA	AL	AS	DC	DC	DC	ST	VA	AS	DC	DC	DC	ST	VA	AS
	DORMER	DORMER	DORMER		DORMER	DORMER	DORMER	DORMER	DORMER		DORMER	DORMER	DORMER	DORMER	DORMER
	3.00 - 12.70	6.00 - 12.70	3.00	1/8 - 3/4	3.00 - 16.00	3.00 - 12.70	6.00 - 12.70	6.00 - 12.70	3.00	1/8 - 5/8	3.00 - 16.00	8.00 - 12.70	8.00 - 12.70	8.00 - 12.70	3.00
	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308
P1				■	■	■	■			■	■	■	■		
P2				■	■	■	■			■	■	■	■		
P3				■	■	■	■			■	■	■	■		
P4				■	■	■	■			■	■	■	■		
M1	■			■	■	■		■		■	■	■		■	
M2	■			■	■	■		■		■	■	■		■	
M3	■		◪	■	■	■		■	◪	■	■	■		■	◪
M4	■		◪	■	■	■		■	◪	■	■	■		■	◪
K1				■	■	■				■	■	■		◪	
K2				■	■	■				■	■	■			
K3				■	■	■				■	■	■			
K4	◪			■	■	■		◪		■	■	■		◪	
K5				■	■	■				■	■	■			
N1		■													
N2		■													
N3		◪		■	■	■				■	■	■			
N4		■													
N5															
S1		◪	■	■	■	■			■	■	■	■			■
S2			■	■	■	■			■	■	■	■			■
S3			■	■	■	■			■	■	■	■			■
S4			■	■	■	■			■	■	■	■			■
H1				■	■	■				■	■	■			
H2				■	■	■				■	■	■			
H3				■	■	■				■	■	■			
H4				■	■	■				■	■	■			

■ Primary use ◪ Possible use

Material code (BMC)	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM
Burr Shape	J	J	K	K	L	L	L	L	L	L	L	L	M
Burr end shot													
Coating	Bright	Bright	Bright	Bright	Bright	Bright	Bright	TiAlN	Bright	Bright	Bright	Bright	Bright
Application angle	60°	60°	90°	90°									
Burr Type Code (BTC)	DC	DC	DC	DC	DC	AL	DC	DC	ST	VA	AL	AS	DC
Basic standard group (BSG)		DORMER		DORMER			DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	
Product Family Code	SJ-DC	P817	SK-DC	P819	SL-DC	SL-FM	P821	P821C	P721	P621	P842	P521	SM-DC
PSF cutting diameters range	1/8 - 5/8	3.00 - 16.00	1/8 - 5/8	3.00 - 16.00	1/8 - 5/8	3/8 - 1/2	3.00 - 16.00	3.00 - 12.70	9.60 - 12.70	8.00 - 12.70	6.00 - 12.70	3.00	1/8 - 5/8
	309	310	311	312	313	314	315	316	317	318	319	320	321
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

	P823	P523	SN-DC	P825	FGR-A	FGR-B	FGR-C	FGR-D	P844	P843	PDM-DC	P100	P101	SET-DC-12
	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM
	M	M	N	N										
	Bright	Bright	Bright	Bright	Bright	Bright	Bright	Bright	Bright	Bright	Bright	Bright	Bright	Bright
								135°	180°	135°			150°	
	DC	AS	DC	DC	GRP	GRP	GRP	GRP	GRP	GRP	DC	BR	BR	DC
	DORMER	DORMER		DORMER					DORMER	DORMER		DORMER	DORMER	
	3.00 - 16.00	3.00	1/8 - 5/8	3.00 - 16.00	1/4 - 3/8	1/4 - 1/2	1/8 - 1/4	1/4	3.00 - 8.00	3.00 - 8.00	1/8 - 1/4	4.90 - 10.70	4.90 - 10.70	12 pc. Double Cut Sets
	322	323	324	325	326	327	328	329	330	331	332	333	334	335
P1	■		■	■							■	■	■	
P2	■		■	■							■	■	■	
P3	■		■	■							■	■	■	
P4	■		■	■							■	■	■	
M1	■		■	■							■	■	■	
M2	■		■	■							■	■	■	
M3	■	◪	■	■							■	■	■	
M4	■	◪	■	■							■			
K1	■		■	■							■			
K2	■		■	■							■			
K3	■		■	■							■			
K4	■		■	■							■			
K5	■		■	■							■			
N1														
N2														
N3	■		■	■							■			
N4					■	■	■	■	■	■				
N5														
S1	■	■	■	■							■			
S2	■	■	■	■							■			
S3	■	■	■	■							■			
S4	■	■	■	■							■			
H1	■		■	■							■			
H2	■		■	■							■			
H3	■		■	■							■			
H4	■		■	■							■			

■ Primary use ◪ Possible use

Material code (BMC)		HM	HM	HM	HM					
Burr Shape										
Burr end shot										
Coating		Bright	Bright							
Application angle										
Burr Type Code (BTC)		DC	AL							
Basic standard group (BSG)										
										
Product Family Code		SET-DC-8	SET-FM-8	P880	P890					
PSF cutting diameters range		8 pc. Double Cut Set	8 pc. Aluminum Cut Set	Set	Set					
		336	337	338	339					
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

AL DC

ISO		RPM						
		DC (in)						
		0.118	0.236	0.315	0.394	0.472	0.630	0.787
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 (in)				
		0.118	0.236	0.315	0.394	0.472
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 (in)				
		0.118	0.236	0.315	0.394	0.472
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 (in)		
		0.118	0.236	0.315
N4	min.	25,000	20,000	18,000
	max.	30,000	25,000	22,000

AS

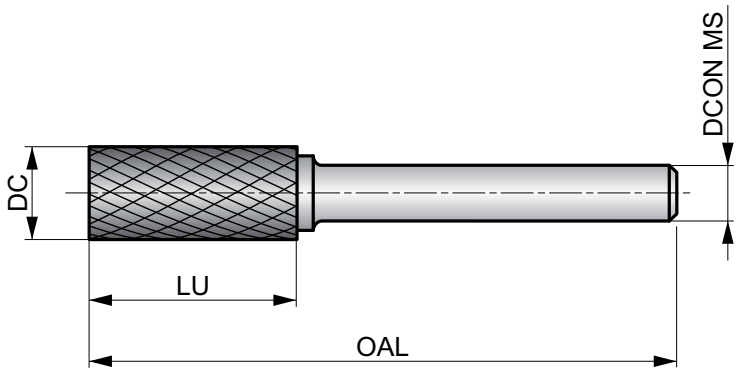
ISO		RPM
		DC (in)
		0.118
S	min.	60,000
	max.	80,000

SA-DC

PRECISION

Rotary Burr - Cylinder without end cut, Shape SA, Bright Finish

DC double cut flute plain end style with close spaced edges for trimming and deburring surfaces. Solid carbide design or brazed construction with toughened and hardened steel shank construction for general purpose use.



HM | A | Bright

DC

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

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 ■												

Products from this series are also available in set. Please see SET-DC-12 or SET-DC-8.

Product	DC (inch)	DC (inch)	DCON MS (inch)	LU (inch)	OAL (inch)	Pack Qty	MID
SA-04DC	1/16	.0625	1/8	1/4	1.1/2	1	7466184
SA-03DC	3/32	.0938	1/8	7/16	1.1/2	1	7466185
SA-02DC	1/8	.1250	1/8	9/16	1.1/2	1	7466186
SA-02DC-M	1/8	.1250	1/8	9/16	2	1	7466187
SA-02DC-L	1/8	.1250	1/8	9/16	3	1	7466188
SA-01DC-H	3/16	.1875	1/4	5/8	2	1	7466189
SA-10SDC [1]	1/4	.2500	1/8	1/2	2	1	7466210
SA-10DC	1/4	.2500	1/4	5/8	2	1	7466211
SA-10LDC	1/4	.2500	1/4	1	2	1	7466212
SA-20DC [1]	5/16	.3125	1/4	3/4	2.1/2	1	7466213
SA-30DC [1]	3/8	.3750	1/4	3/4	2.1/2	1	7466214
SA-30DCX [1]	3/8	.3750	1/4	3/4	6.3/4	1	7466215
SA-50DC [1]	1/2	.5000	1/4	1	2.3/4	1	7466216
SA-50DCX [1]	1/2	.5000	1/4	1	7	1	7466217
SA-60DC [1]	5/8	.6250	1/4	1	2.3/4	1	7466218
SA-70SDC-S [1]	3/4	.7500	1/4	3/4	2.1/2	1	7466219
SA-70DC [1]	3/4	.7500	1/4	1	2.3/4	1	7466220
SA-90DC [1]	1	1.0000	1/4	1	2.3/4	1	7466221

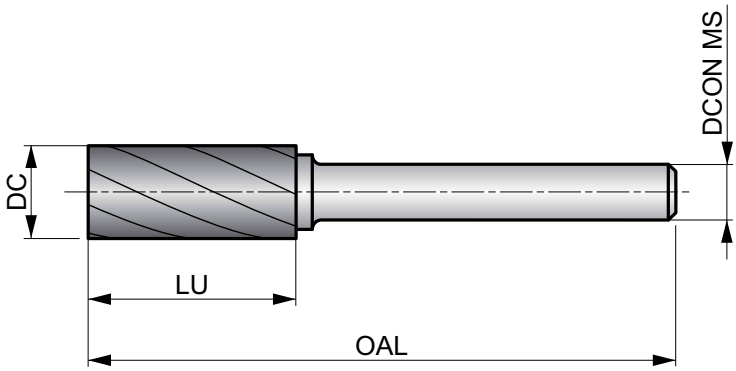
[1] Brazed on steel shank

SA-FM

PRECISION

Rotary Burr - Cylinder without end cut, Shape SA, Bright Finish

AL single cut flute plain end style with wide spaced edges for trimming and deburring surfaces. Solid carbide design or brazed construction with toughened and hardened steel shank construction. First choice for non-ferrous materials and plastics.



HM | A | Bright

AL

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N4.1	N4.2	N4.3	S1.1
■	■	■	■	■	■	◪	◪	■	■	◪	◪

Products from this series are also available in set. Please see SET-FM-8.

Product	DC (inch)	DC	DCON MS (inch)	LU (inch)	OAL (inch)	Pack Qty	MID
SA-10FM	1/4	.2500	1/4	5/8	2	1	7466222
SA-30FM [1)]	3/8	.3750	1/4	3/4	2.1/2	1	7466223
SA-50FM [1)]	1/2	.5000	1/4	1	2.3/4	1	7466224
SA-60FM [1)]	5/8	.6250	1/4	1	2.3/4	1	7466225

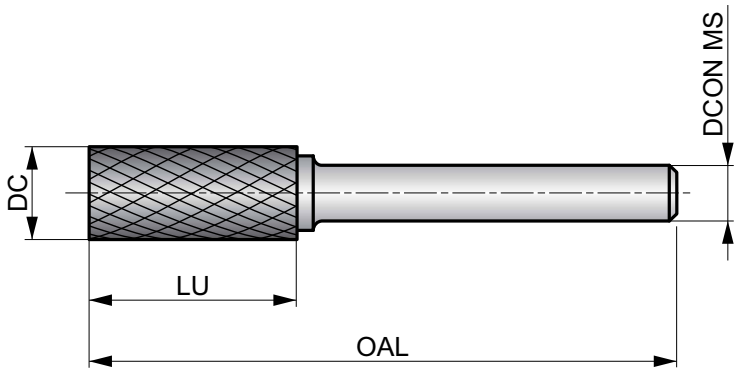
[1)] Brazed on steel shank

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 252.

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)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P8013.0X3.0	3.00	.1181	3.00	14.00	38.0	1	6814046
P8016.3X3.0 [1]	6.30	.2480	3.00	12.70	45.0	1	6814047
P8016.0X6.0	6.00	.2362	6.00	18.00	50.0	1	6814048
P8018.0X6.0 [1]	8.00	.3150	6.00	19.00	64.0	1	6814049
P8019.6X6.0 [1]	9.60	.3780	6.00	19.00	64.0	1	6814090
P80112.7X6.0 [1]	12.70	.5000	6.00	25.00	70.0	1	6814091
P80116.0X6.0 [1]	16.00	.6299	6.00	25.00	70.0	1	6814092

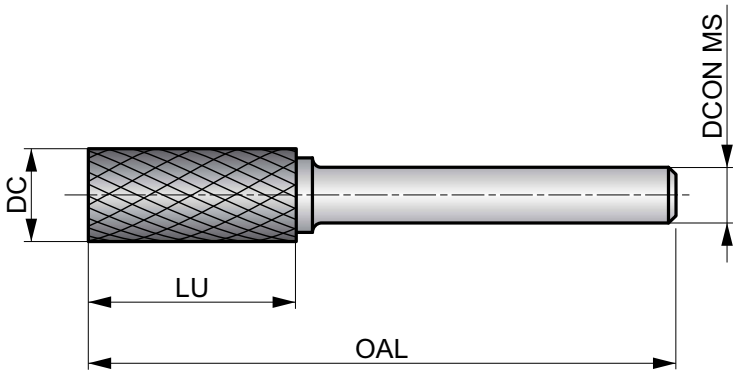
[1] Brazed on steel shank

P801C

DORMER

Rotary Burr - Cylinder without endcut, Shape A, TiAlN Coating

DC double cut flute style with close spaced edges for trimming and deburring surfaces. Carbide design for cutting diameter up to 6 mm; above 6 mm carbide head with toughened and hardened steel shank. TiALN coating for increased tool life, reduced friction and improved swarf evacuation.



HM | A | TiAlN

DC | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

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.

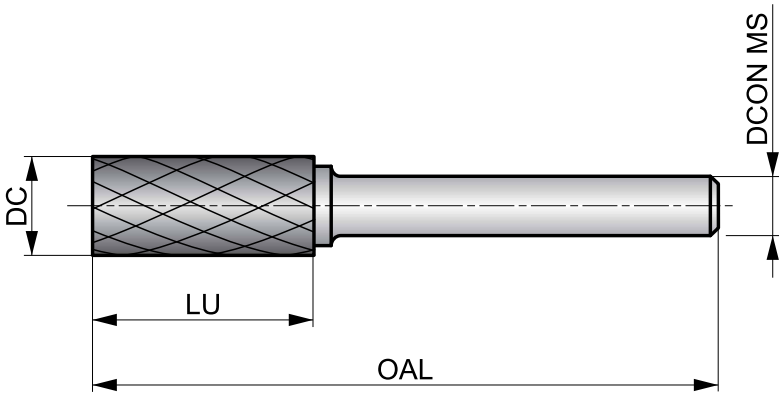
Product	DC (mm)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P801C3.0X3.0	3.00	.1181	3.00	14.00	38.0	1	6814093
P801C6.0X6.0	6.00	.2362	6.00	18.00	50.0	1	6814094
P801C8.0X6.0 [1)]	8.00	.3150	6.00	19.00	64.0	1	6814095
P801C9.6X6.0 [1)]	9.60	.3780	6.00	19.00	64.0	1	6814096
P801C12.7X6.0 [1)]	12.70	.5000	6.00	25.00	70.0	1	6814097

[1)] Brazed on steel shank

P701

Rotary Burr - Cylinder without endcut, Shape A

ST single cut flute style with chipbreakers and medium spaced edge for trimming and deburring surfaces. Carbide design for cutting diameter equal to 6 mm; above 6 mm carbide head with toughened and hardened steel shank. First choice for steels.



HM	A	Bright
ST	DORMER	

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

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)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P7016.0X6.0	6.00	.2362	6.00	18.00	50.0	1	7059539
P7018.0X6.0 [1)]	8.00	.3150	6.00	19.00	64.0	1	7059540
P7019.6X6.0 [1)]	9.60	.3780	6.00	19.00	64.0	1	7059541
P70112.7X6.0 [1)]	12.70	.5000	6.00	25.00	70.0	1	7059542

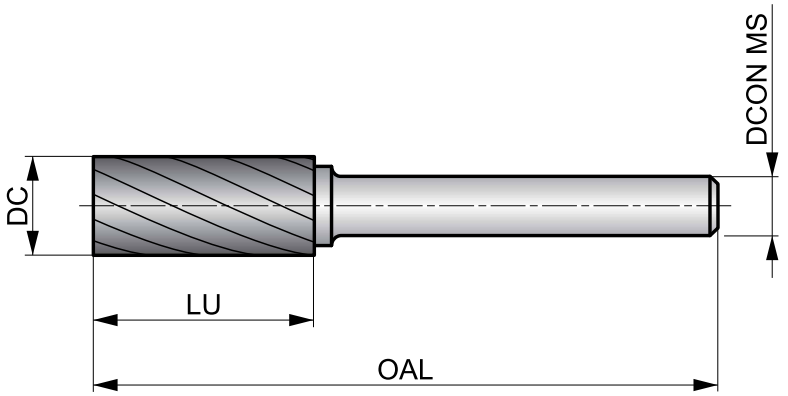
[1)] Brazed on steel shank

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 252.

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)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P6013.0X3.0	3.00	.1181	3.00	14.00	38.0	1	7059502
P6016.3X3.0 [1)]	6.30	.2480	3.00	12.70	45.0	1	7059504
P6016.0X6.0	6.00	.2362	6.00	18.00	50.0	1	7059503
P6018.0X6.0 [1)]	8.00	.3150	6.00	19.00	64.0	1	7059505
P6019.6X6.0 [1)]	9.60	.3780	6.00	19.00	64.0	1	7059506
P60112.7X6.0 [1)]	12.70	.5000	6.00	25.00	70.0	1	7059507

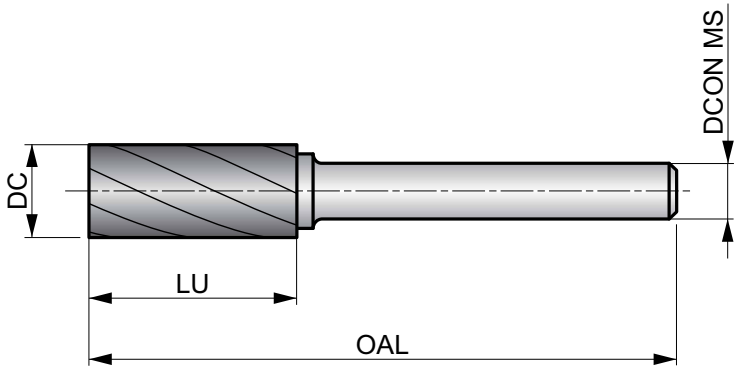
[1)] Brazed on steel shank

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 252.

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.

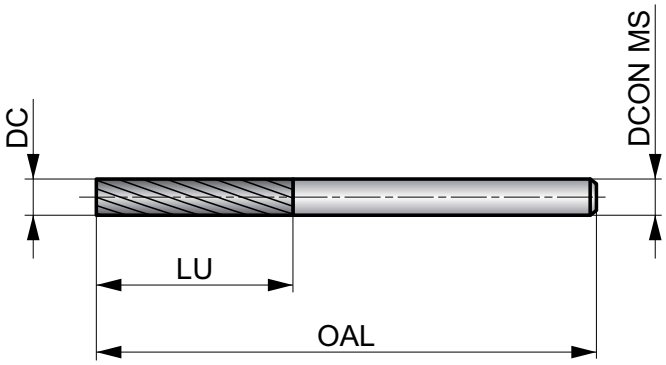
Product	DC (mm)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P8316.0X6.0	6.00	.2362	6.00	18.00	50.0	1	6814202
P8319.6X6.0 [1)]	9.60	.3780	6.00	19.00	64.0	1	6814203
P83112.7X6.0 [1)]	12.70	.5000	6.00	25.00	70.0	1	6814204

[1)] Brazed on steel shank

P501

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 252.

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.

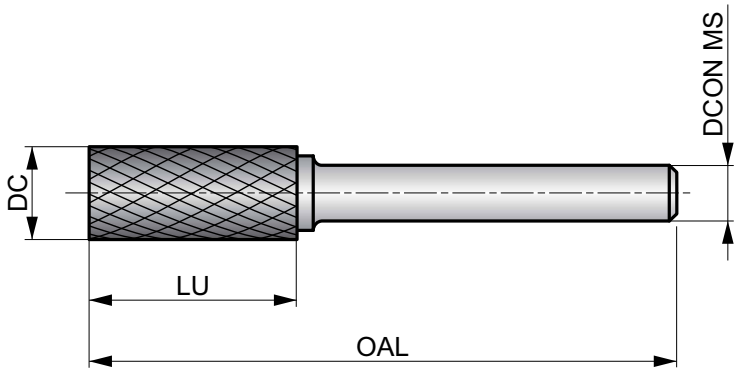
Product	DC (mm)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P5013.0X3.0	3.00	.1181	3.00	12.00	38.0	1	7806100

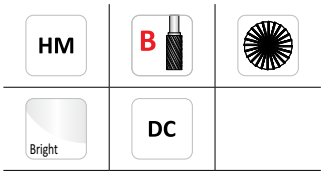
SB-DC

PRECISION

Rotary Burr - Cylinder with end cut, Shape SB, Bright Finish

DC double cut flute end cutting style with close spaced edges for trimming and deburring surfaces and right-angled corners. Solid carbide design or brazed construction with toughened and hardened steel shank construction for general purpose use.





Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

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**												
■	■												

Product	DC (inch)	DC (inch)	DCON MS (inch)	LU (inch)	OAL (inch)	Pack Qty	MID
SB-02DC	1/8	.1250	1/8	9/16	1.1/2	1	7466226
SB-02DC-M	1/8	.1250	1/8	9/16	2	1	7466227
SB-10SDC-L [1]	1/4	.2500	1/8	3/16	1.11/16	1	7466228
SB-02DC-H	1/8	.1250	1/4	5/8	2	1	7466229
SB-10DC	1/4	.2500	1/4	5/8	2	1	7466230
SB-20DC [1]	5/16	.3125	1/4	3/4	2.1/2	1	7466231
SB-30DC [1]	3/8	.3750	1/4	3/4	2.1/2	1	7466232
SB-30MDC-M [1]	3/8	.3750	1/4	1	2.3/4	1	7466233
SB-30DC-X [1]	3/8	.3750	1/4	3/4	6.3/4	1	7466234
SB-40DC [1]	7/16	.4375	1/4	1	2.3/4	1	7466235
SB-50DC [1]	1/2	.5000	1/4	1	2.3/4	1	7466236
SB-50DC-X [1]	1/2	.5000	1/4	1	7	1	7466237
SB-60DC [1]	5/8	.6250	1/4	1	2.3/4	1	7466238
SB-70DC [1]	3/4	.7500	1/4	1	2.3/4	1	7466239
SB-90DC [1]	1	1.0000	1/4	1	2.3/4	1	7466240

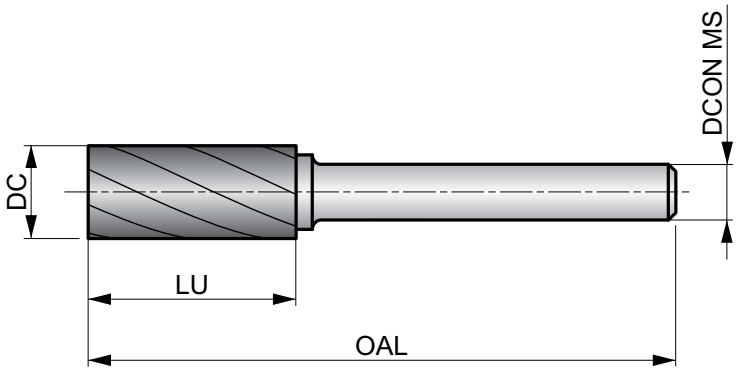
[1] Brazed on steel shank

SB-FM

PRECISION

Rotary Burr - Cylinder with end cut, Shape SB, Bright Finish

AL single cut flute end cutting style with wide spaced edges for trimming and deburring surfaces and right-angled corners. Solid carbide design or brazed construction with toughened and hardened steel shank construction. First choice for non-ferrous materials and plastics.



HM | B | Bright | AL

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N4.1	N4.2	N4.3	S1.1
■	■	■	■	■	■	◪	◪	■	■	◪	◪

Product	DC (inch)	DC (inch)	DCON MS (inch)	LU (inch)	OAL (inch)	Pack Qty	MID
SB-10FM [1]	1/4	.2500	1/4	5/8	2	1	7466241
SB-30FM	3/8	.3750	1/4	3/4	2.1/2	1	7466242
SB-50FM	1/2	.5000	1/4	1	2.3/4	1	7466243

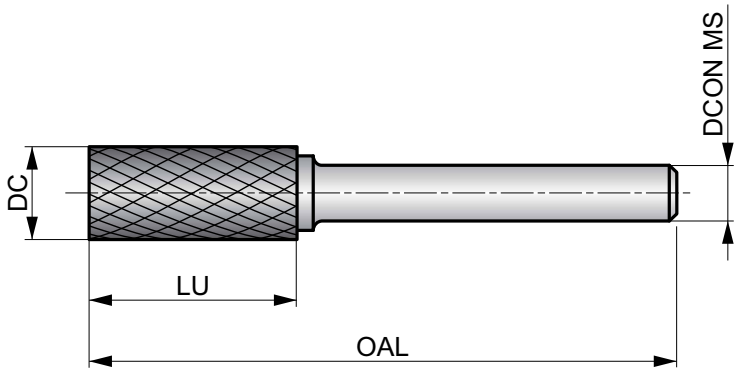
[1] Brazed on steel shank

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 | Bright | DC | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

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)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P8033.0X3.0	3.00	.1181	3.00	14.00	38.0	1	6814098
P8036.3X3.0 [1]	6.30	.2480	3.00	12.70	45.0	1	6814099
P8036.0X6.0	6.00	.2362	6.00	18.00	50.0	1	6814100
P8038.0X6.0 [1]	8.00	.3150	6.00	19.00	64.0	1	6814101
P8039.6X6.0 [1]	9.60	.3780	6.00	19.00	64.0	1	6814102
P80312.7X6.0 [1]	12.70	.5000	6.00	25.00	70.0	1	6814103
P80316.0X6.0 [1]	16.00	.6299	6.00	25.00	70.0	1	6814104

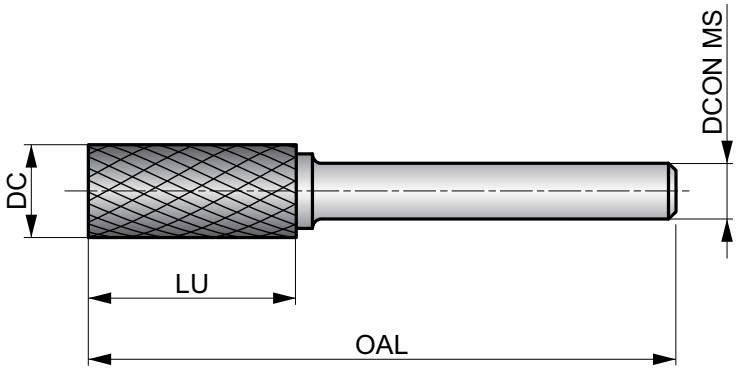
[1] Brazed on steel shank

P803C

DORMER

Rotary Burr - Cylinder with endcut, Shape B, TiAlN Coating

DC double cut flute style with close spaced edges for trimming and deburring surfaces and right-angled corners. Carbide design for cutting diameter up to 6 mm; above 6 mm carbide head with toughened and hardened steel shank. TiALN coating for increased tool life, reduced friction and improved swarf evacuation.



HM | B | TiAlN | DC | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

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)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P803C3.0X3.0	3.00	.1181	3.00	14.00	38.0	1	6814105
P803C6.0X6.0	6.00	.2362	6.00	18.00	50.0	1	6814106
P803C8.0X6.0 [1]	8.00	.3150	6.00	19.00	64.0	1	6814107
P803C9.6X6.0 [1]	9.60	.3780	6.00	19.00	64.0	1	6814108
P803C12.7X6.0 [1]	12.70	.5000	6.00	25.00	70.0	1	6814109

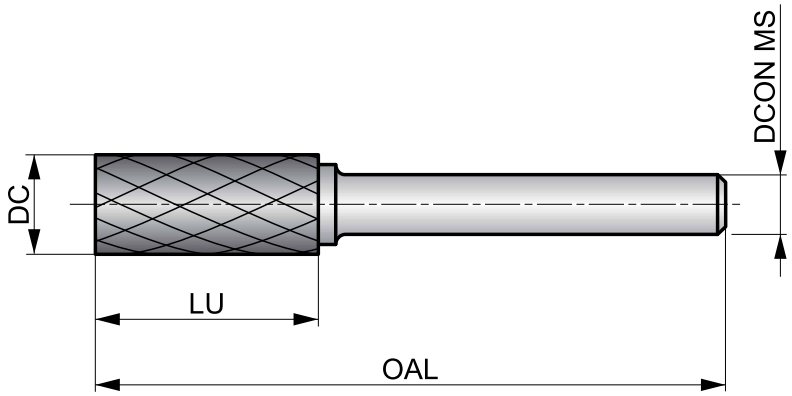
[1] Brazed on steel shank

P703

DORMER

Rotary Burr - Cylinder with endcut, Shape B

ST single cut flute style with chipbreakers and medium spaced edge for trimming and deburring surfaces and right-angled corners. Carbide design for cutting diameter equal to 6 mm; above 6 mm carbide head with toughened and hardened steel shank. First choice for steels.



HM | B | Bright | ST | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

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.

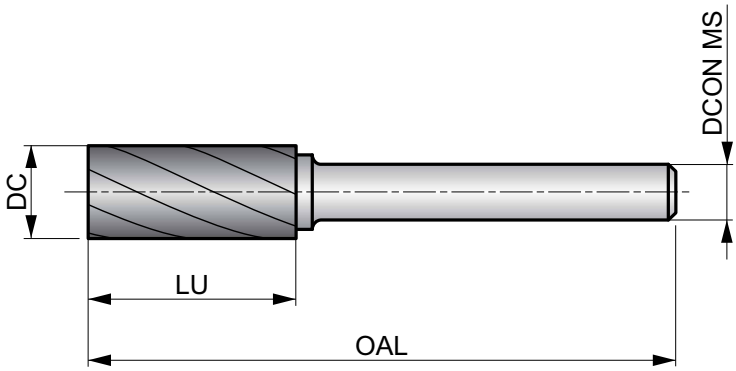
Product	DC (mm)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P7036.0X6.0	6.00	.2362	6.00	18.00	50.0	1	7059543
P7038.0X6.0 [1)]	8.00	.3150	6.00	19.00	64.0	1	7059544
P7039.6X6.0 [1)]	9.60	.3780	6.00	19.00	64.0	1	7059545
P70312.7X6.0 [1)]	12.70	.5000	6.00	25.00	70.0	1	7059546

[1)] Brazed on steel shank

P833

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 | Bright | AL | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

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)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P8336.0X6.0	6.00	.2362	6.00	18.00	50.0	1	6814205
P8339.6X6.0 [1)]	9.60	.3780	6.00	19.00	64.0	1	6814206
P83312.7X6.0 [1)]	12.70	.5000	6.00	25.00	70.0	1	6814207

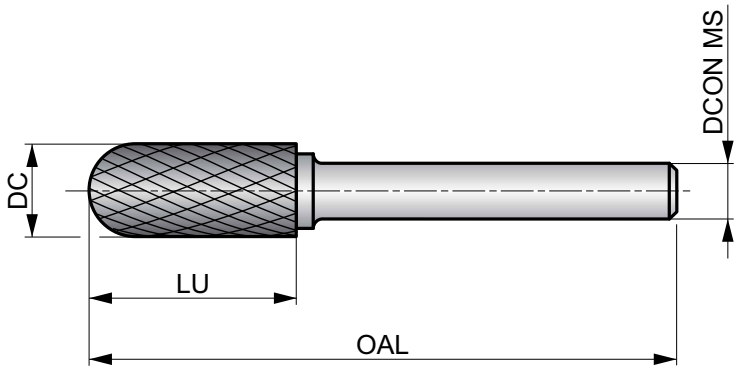
[1)] Brazed on steel shank

SC-DC

PRECISION

Rotary Burr - Ball Nosed Cylinder, Shape SC, Bright Finish

DC double cut flute style with close spaced edges for trimming and deburring contours and circular arcs. Solid carbide design or brazed construction with toughened and hardened steel shank construction for general purpose use.



HM | C | Bright

DC

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

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 ■												

Products from this series are also available in set. Please see SET-DC-12 or SET-DC-8.

Product	DC (inch)	DC (inch)	DCON MS (inch)	LU (inch)	OAL (inch)	Pack Qty	MID
SC-03DC	3/32	.0938	1/8	7/16	1.1/2	1	7466244
SC-02DC	1/8	.1250	1/8	9/16	1.1/2	1	7466245
SC-02DC-M	1/8	.1250	1/8	9/16	2	1	7466246
SC-02DC-L	1/8	.1250	1/8	9/16	3	1	7466247
SC-02MDC	1/8	.1250	1/4	5/8	2	1	7466248
SC-01DC	3/16	.1875	1/4	5/8	2	1	7466249
SC-10SDC	1/4	.2500	1/4	1/2	2	1	7466250
SC-10DC	1/4	.2500	1/4	5/8	2	1	7466251
SC-10LDC	1/4	.2500	1/4	1	2	1	7466252
SC-20DC [1]	5/16	.3125	1/4	3/4	2.1/2	1	7466253
SC-30DC [1]	3/8	.3750	1/4	3/4	2.1/2	1	7466254
SC-30DC-X [1]	3/8	.3750	1/4	3/4	6.3/4	1	7466255
SC-40DC [1]	7/16	.4375	1/4	1	2.3/4	1	7466256
SC-50DC [1]	1/2	.5000	1/4	1	2.3/4	1	7466257
SC-50DC-X [1]	1/2	.5000	1/4	1	7	1	7466258
SC-60DC [1]	5/8	.6250	1/4	1	2.3/4	1	7466259
SC-60DC-X [1]	5/8	.6250	1/4	1	7	1	7466260
SC-70DC [1]	3/4	.7500	1/4	1	2.3/4	1	7466261

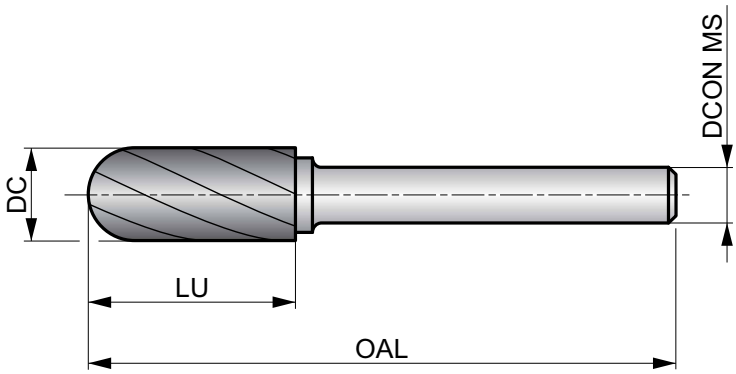
[1] Brazed on steel shank

SC-FM

PRECISION

Rotary Burr - Ball Nosed Cylinder, Shape SC, Bright Finish

AL single cut flute style with wide spaced edges for trimming and deburring contours and circular arcs. Solid carbide design or brazed construction with toughened and hardened steel shank construction. First choice for non-ferrous materials and plastics.



HM	C	Bright
AL		

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N4.1	N4.2	N4.3	S1.1
■	■	■	■	■	■	◪	◪	■	■	◪	◪

Products from this series are also available in set. Please see SET-FM-8.

Product	DC (inch)	DC (inch)	DCON MS (inch)	LU (inch)	OAL (inch)	Pack Qty	MID
SC-10SFM-R [1]	1/4	.2500	1/8	1/2	2	1	7466262
SC-10FM	1/4	.2500	1/4	5/8	2	1	7466263
SC-30FM [1]	3/8	.3750	1/4	3/4	2.1/2	1	7466264
SC-40FM [1]	7/16	.4375	1/4	1	2.3/4	1	7466265
SC-50FM [1]	1/2	.5000	1/4	1	2.3/4	1	7466266
SC-50FM-X [1]	1/2	.5000	1/4	1	7	1	7466267
SC-70FM [1]	3/4	.7500	1/4	1	2.3/4	1	7466268

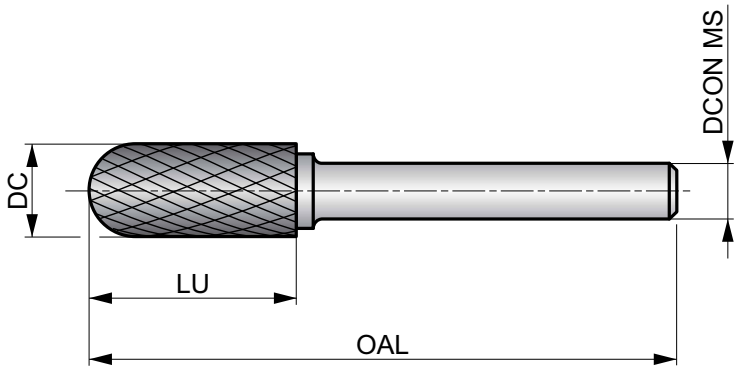
[1] Brazed on steel shank

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 252.

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.

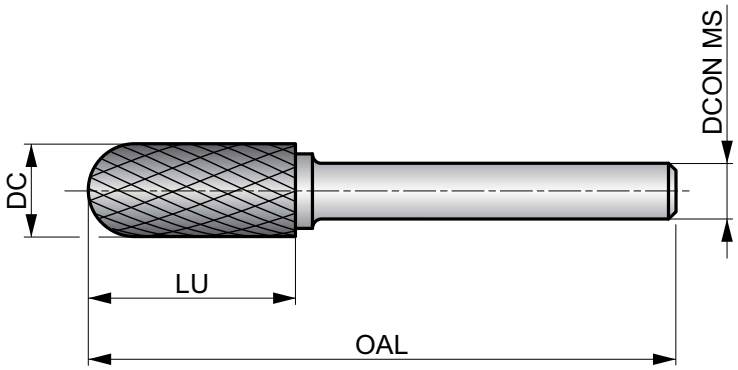
Product	DC (mm)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P8053.0X3.0	3.00	.1181	3.00	14.00	38.0	1	6814110
P8056.3X3.0 [1]	6.30	.2480	3.00	12.70	45.0	1	6814111
P8056.0X6.0	6.00	.2362	6.00	18.00	50.0	1	6814112
P8058.0X6.0 [1]	8.00	.3150	6.00	19.00	64.0	1	6814113
P8059.6X6.0 [1]	9.60	.3780	6.00	19.00	64.0	1	6814114
P80512.7X6.0 [1]	12.70	.5000	6.00	25.00	70.0	1	6814115
P80516.0X6.0 [1]	16.00	.6299	6.00	25.00	70.0	1	6814116

[1] Brazed on steel shank

P805C

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 252.

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.

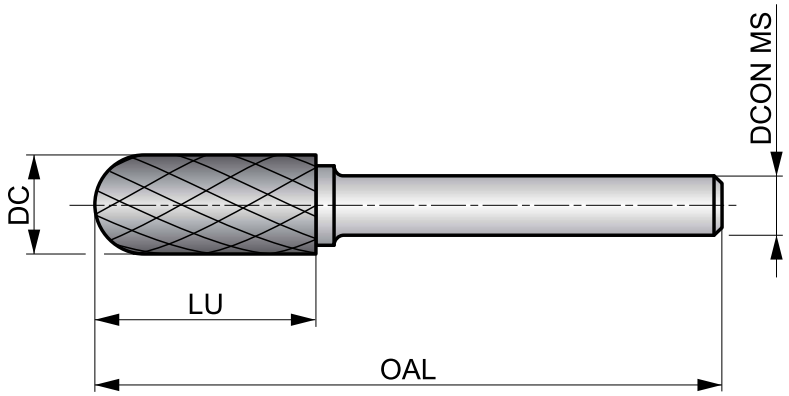
Product	DC (mm)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P805C3.0X3.0	3.00	.1181	3.00	14.00	38.0	1	6814117
P805C6.0X6.0	6.00	.2362	6.00	18.00	50.0	1	6814118
P805C8.0X6.0 [1)]	8.00	.3150	6.00	19.00	64.0	1	6814119
P805C9.6X6.0 [1)]	9.60	.3780	6.00	19.00	64.0	1	6814120
P805C12.7X6.0 [1)]	12.70	.5000	6.00	25.00	70.0	1	6814121

[1)] Brazed on steel shank

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 252.

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)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P7056.0X6.0	6.00	.2362	6.00	18.00	50.0	1	7059547
P7058.0X6.0 [1)]	8.00	.3150	6.00	19.00	64.0	1	7059548
P7059.6X6.0 [1)]	9.60	.3780	6.00	19.00	64.0	1	7059549
P70512.7X6.0 [1)]	12.70	.5000	6.00	25.00	70.0	1	7059550

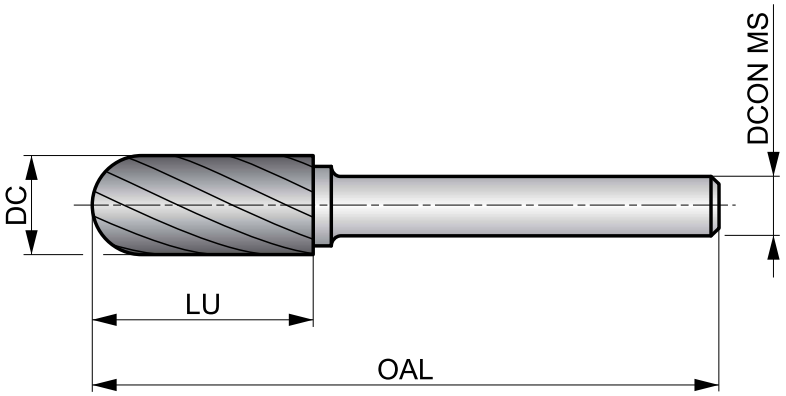
[1)] Brazed on steel shank

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 252.

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)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P6053.0X3.0	3.00	.1181	3.00	14.00	38.0	1	7059508
P6056.3X3.0 [1)]	6.30	.2480	3.00	12.70	45.0	1	7059510
P6056.0X6.0	6.00	.2362	6.00	18.00	50.0	1	7059509
P6058.0X6.0 [1)]	8.00	.3150	6.00	19.00	64.0	1	7059511
P6059.6X6.0 [1)]	9.60	.3780	6.00	19.00	64.0	1	7059512
P60512.7X6.0 [1)]	12.70	.5000	6.00	25.00	70.0	1	7059513

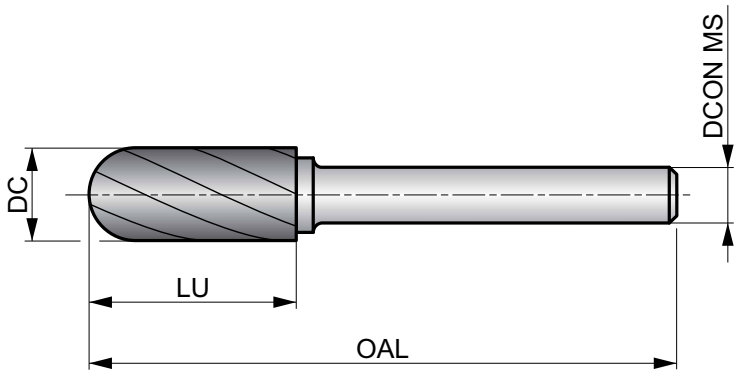
[1)] Brazed on steel shank

P835

DORMER

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 252.

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.

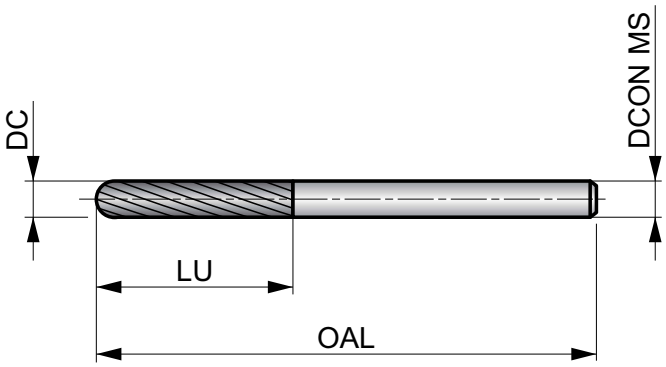
Product	DC (mm)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P8356.0X6.0	6.00	.2362	6.00	18.00	50.0	1	6814208
P8359.6X6.0 [1)]	9.60	.3780	6.00	19.00	64.0	1	6814209
P83512.7X6.0 [1)]	12.70	.5000	6.00	25.00	70.0	1	6814210

[1)] Brazed on steel shank

P505

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 252.

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.

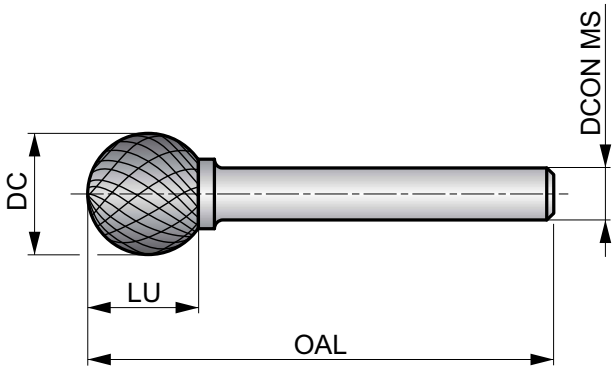
Product	DC (mm)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P5053.0X3.0	3.00	.1181	3.00	14.00	38.0	1	7806101

SD-DC

PRECISION

Rotary Burr - Ball, Shape SD, Bright Finish

DC double cut flute style with close spaced edges for intricate carving, metal engraving and welding preparation. Solid carbide design or brazed construction with toughened and hardened steel shank construction for general purpose use.



HM | D | Bright

DC

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

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**												
■	■												

Products from this series are also available in set. Please see SET-DC-12 or SET-DC-8.

Product	DC (inch)	DC (inch)	DCON MS (inch)	LU (inch)	OAL (inch)	Pack Qty	MID
SD-03DC	3/32	.0938	1/8	3/32	1.1/2	1	7466269
SD-02DC	1/8	.1250	1/8	1/8	1.1/2	1	7466270
SD-02DC-M	1/8	.1250	1/8	1/8	2	1	7466271
SD-02DC-L	1/8	.1250	1/8	1/8	3	1	7466272
SD-02SDC	1/8	.1250	1/4	3/32	2	1	7466273
SD-01DC	3/16	.1875	1/4	1/8	2	1	7466275
SD-10DC-R [1]	1/4	.2500	1/4	7/32	1.3/4	1	7466276
SD-10DC	1/4	.2500	1/4	7/32	2	1	7466277
SD-10DC-L	1/4	.2500	1/4	7/32	6	1	7466278
SD-10DC-X	1/4	.2500	1/4	7/32	6.3/4	1	7466279
SD-20DC [1]	5/16	.3125	1/4	1/4	2.1/16	1	7466280
SD-30DC [1]	3/8	.3750	1/4	5/16	2.1/8	1	7466281
SD-30DC-X [1]	3/8	.3750	1/4	5/16	6.3/8	1	7466282
SD-50DC [1]	1/2	.5000	1/4	7/16	2.1/4	1	7466283
SD-50DC-X [1]	1/2	.5000	1/4	7/16	6.1/2	1	7466284
SD-60DC [1]	5/8	.6250	1/4	9/16	2.5/16	1	7466285
SD-70DC [1]	3/4	.7500	1/4	11/16	2.1/2	1	7466286

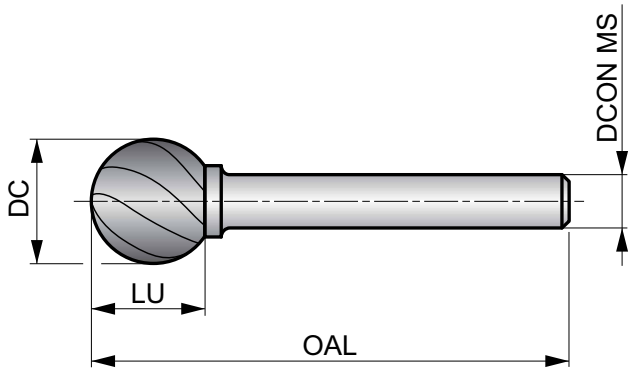
[1] Brazed on steel shank

SD-FM

PRECISION

Rotary Burr - Ball, Shape SD, Bright Finish

AL single cut flute style with wide spaced edges for intricate carving, metal engraving and welding preparation. Solid carbide design or brazed construction with toughened and hardened steel shank construction. First choice for non-ferrous materials and plastics.



HM	D	Bright
AL		



Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N4.1	N4.2	N4.3	S1.1
■	■	■	■	■	■	◪	◪	■	■	◪	◪

Products from this series are also available in set. Please see SET-FM-8.

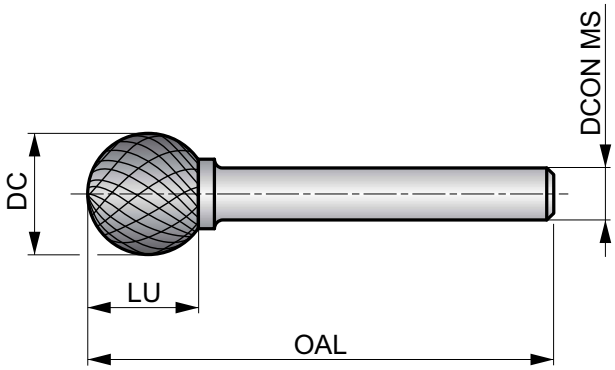
Product	DC (inch)	DC (inch)	DCON MS (inch)	LU (inch)	OAL (inch)	Pack Qty	MID
SD-10FM	1/4	.2500	1/4	7/32	2	1	7466287
SD-30FM [1]	3/8	.3750	1/4	5/16	2.1/8	1	7466288
SD-50FM [1]	1/2	.5000	1/4	7/16	2.1/4	1	7466289

[1] Brazed on steel shank

P807

Rotary Burr - Ball, Shape D, Bright Finish

DC double cut flute style with close spaced edges for intricate carving, metal engraving and welding preparation. Carbide design for cutting diameter up to 6 mm; above 6 mm carbide head with toughened and hardened steel shank.



HM | D | Bright

DC | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

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)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P8073.0X3.0	3.00	.1181	3.00	2.50	38.0	1	6814122
P8074.0X3.0	4.00	.1575	3.00	3.40	38.0	1	6814123
P8076.3X3.0 [1]	6.30	.2480	3.00	5.00	38.0	1	6814124
P8076.0X6.0	6.00	.2362	6.00	4.70	50.0	1	6814125
P8078.0X6.0 [1]	8.00	.3150	6.00	6.00	52.0	1	6814126
P8079.6X6.0 [1]	9.60	.3780	6.00	8.00	54.0	1	6814127
P80712.7X6.0 [1]	12.70	.5000	6.00	11.00	56.0	1	6814128
P80716.0X6.0 [1]	16.00	.6299	6.00	14.00	59.0	1	6814129

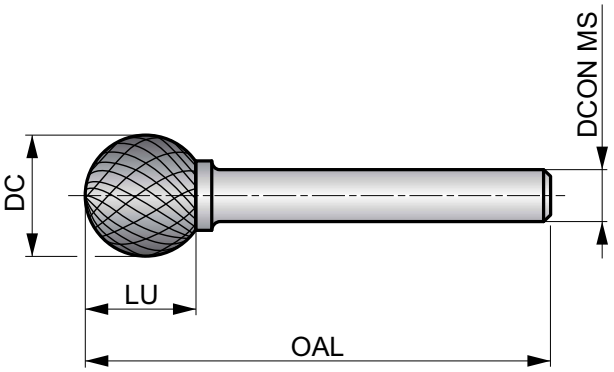
[1] Brazed on steel shank

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 252.

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)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P807C3.0X3.0	3.00	.1181	3.00	2.50	38.0	1	6814130
P807C6.0X6.0	6.00	.2362	6.00	4.70	50.0	1	6814131
P807C8.0X6.0 [1]	8.00	.3150	6.00	6.00	52.0	1	6814132
P807C9.6X6.0 [1]	9.60	.3780	6.00	8.00	54.0	1	6814133
P807C12.7X6.0 [1]	12.70	.5000	6.00	11.00	56.0	1	6814134

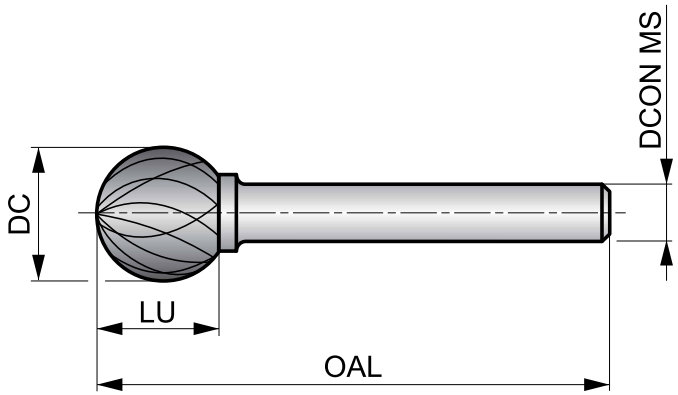
[1] Brazed on steel shank

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 252.

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.

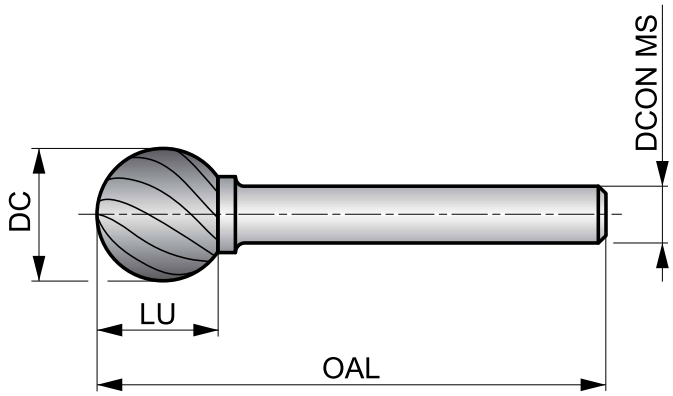
Product	DC (mm)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P7076.0X6.0	6.00	.2362	6.00	4.70	50.0	1	7059551
P7078.0X6.0 [1)]	8.00	.3150	6.00	6.00	52.0	1	7059552
P7079.6X6.0 [1)]	9.60	.3780	6.00	8.00	54.0	1	7059553
P70712.7X6.0 [1)]	12.70	.5000	6.00	11.00	56.0	1	7059554

[1)] Brazed on steel shank

P607

Rotary Burr - Ball, Shape D

VA single cut flute style with medium spaced edges for intricate carving, metal engraving and welding preparation. Carbide design for cutting diameter up to 6 mm; above 6 mm carbide head with toughened and hardened steel shank. First choice for stainless steels.



HM | D | Bright

VA | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

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)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P6073.0X3.0	3.00	.1181	3.00	2.50	38.0	1	7059514
P6076.3X3.0 [1]	6.30	.2480	3.00	5.00	38.0	1	7059516
P6076.0X6.0	6.00	.2362	6.00	4.70	50.0	1	7059515
P6078.0X6.0 [1]	8.00	.3150	6.00	6.00	52.0	1	7059517
P6079.6X6.0 [1]	9.60	.3780	6.00	8.00	54.0	1	7059518
P60712.7X6.0 [1]	12.70	.5000	6.00	11.00	56.0	1	7059519

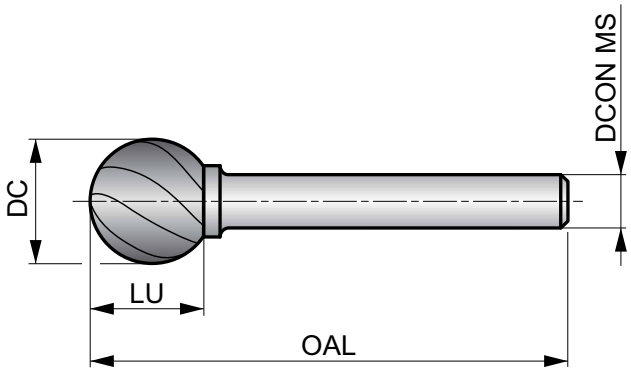
[1] Brazed on steel shank

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 252.

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.

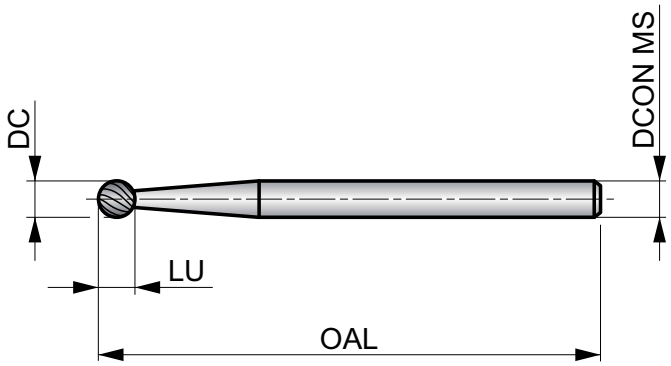
Product	DC (mm)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P8376.0X6.0	6.00	.2362	6.00	4.70	50.0	1	6814211
P8379.6X6.0 [1)]	9.60	.3780	6.00	8.00	54.0	1	6814212
P83712.7X6.0 [1)]	12.70	.5000	6.00	11.00	56.0	1	6814213

[1)] Brazed on steel shank

P507

Rotary Burr - Ball, Shape D

AS single cut flute style with light left-hand cross cut for intricate carving, metal engraving and welding preparation. Solid carbide shank for rigidity. First choice for superalloys.



HM | D | Bright

AS | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

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.

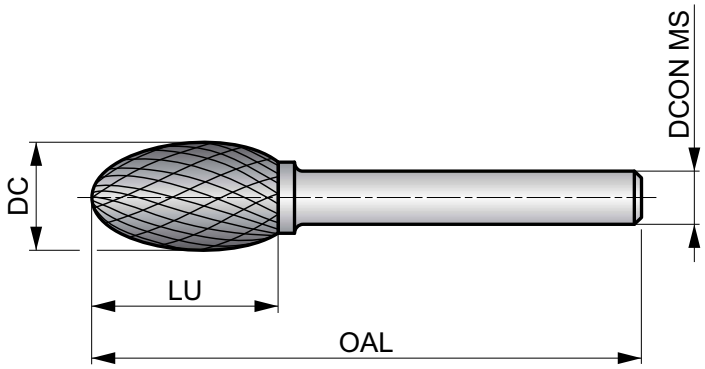
Product	DC (mm)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P5073.0X3.0	3.00	.1181	3.00	2.50	38.0	1	7806102

SE-DC

PRECISION

Rotary Burr - Oval, Shape SE, Bright Finish

DC double cut flute style with close spaced edges for round edge contouring. Solid carbide design or brazed construction with toughened and hardened steel shank construction for general purpose use.



HM | E | Bright

DC

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

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 ■												

Products from this series are also available in set. Please see SET-DC-12.

Product	DC (inch)	DC (inch)	DCON MS (inch)	LU (inch)	OAL (inch)	Pack Qty	MID
SE-02DC	1/8	.1250	1/8	7/32	1.1/2	1	7466290
SE-10DC-R [1]	1/4	.2500	1/8	3/8	1.3/4	1	7466291
SE-10DC	1/4	.2500	1/4	3/8	2	1	7466292
SE-30DC [1]	3/8	.3750	1/4	5/8	2.3/8	1	7466294
SE-30DC-X [1]	3/8	.3750	1/4	5/8	6.5/8	1	7466295
SE-50DC [1]	1/2	.5000	1/4	7/8	2.5/8	1	7466296
SE-50DC-X [1]	1/2	.5000	1/4	7/8	6.7/8	1	7466297
SE-60DC [1]	5/8	.6250	1/4	1	2.3/4	1	7466298

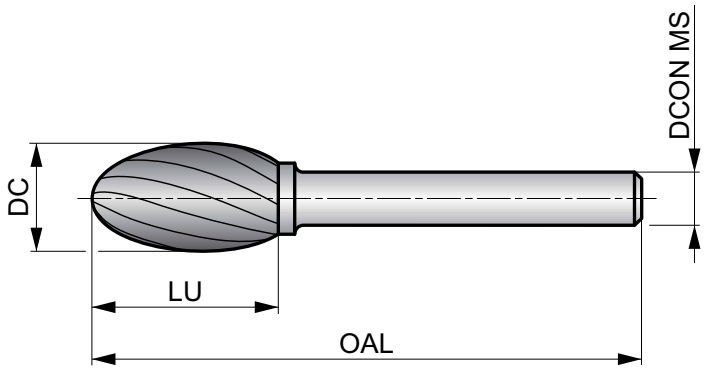
[1] Brazed on steel shank

SE-FM

PRECISION

Rotary Burr - Oval, Shape SE, Bright Finish

AL single cut flute style with close spaced edges for round edge contouring. Solid carbide design or brazed construction with toughened and hardened steel shank construction. First choice for non-ferrous materials and plastics.



HM	E	Bright
AL		

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N4.1	N4.2	N4.3	S1.1
■	■	■	■	■	■	◪	◪	■	■	◪	◪

Product	DC (inch)	DC (inch)	DCON MS (inch)	LU (inch)	OAL (inch)	Pack Qty	MID
SE-30FM [1]	3/8	.3750	1/4	5/8	2.3/8	1	7466299
SE-30FM-X [1]	3/8	.3750	1/4	3/4	6.3/4	1	7466300
SE-50FM [1]	1/2	.5000	1/4	7/8	2.5/8	1	7466301

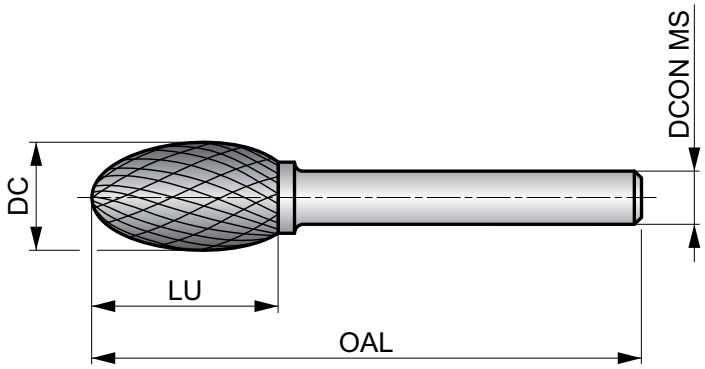
[1] Brazed on steel shank

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 252.

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.

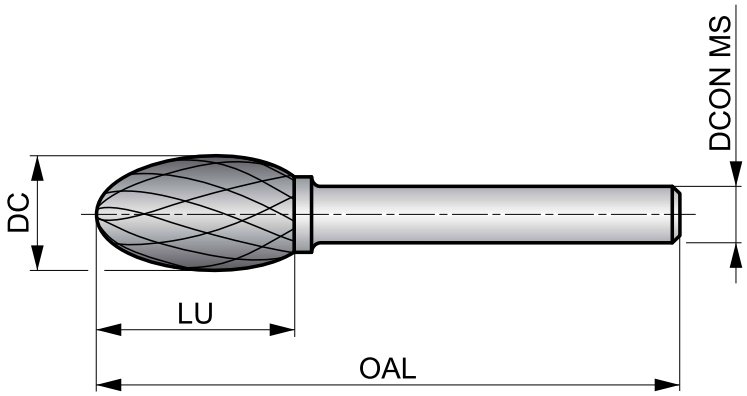
Product	DC (mm)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P8093.0X3.0	3.00	.1181	3.00	6.00	38.0	1	6814135
P8096.3X3.0 [1]	6.30	.2480	3.00	9.50	42.0	1	6814136
P8096.0X6.0	6.00	.2362	6.00	10.00	50.0	1	6814137
P8098.0X6.0 [1]	8.00	.3150	6.00	15.00	60.0	1	6814138
P8099.6X6.0 [1]	9.60	.3780	6.00	16.00	60.0	1	6814139
P80912.7X6.0 [1]	12.70	.5000	6.00	22.00	67.0	1	6814140
P80916.0X6.0 [1]	16.00	.6299	6.00	25.00	70.0	1	6814141

[1] Brazed on steel shank

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 252.

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.

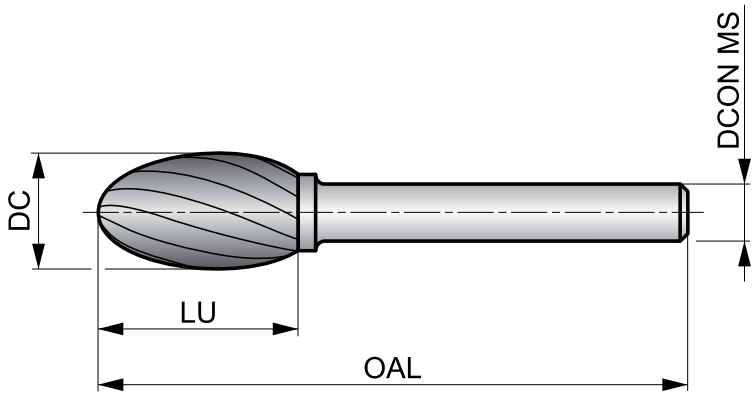
Product	DC (mm)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P70912.7X6.0 [1]	12.70	.5000	6.00	22.00	67.0	1	7059555

[1] Brazed on steel shank

P609

Rotary Burr - Oval, Shape E

VA single cut flute style with medium spaced edges for round edge contouring. Carbide head with toughened and hardened steel shank. First choice for stainless steels.



HM	E	Bright
VA	DORMER	

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

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.

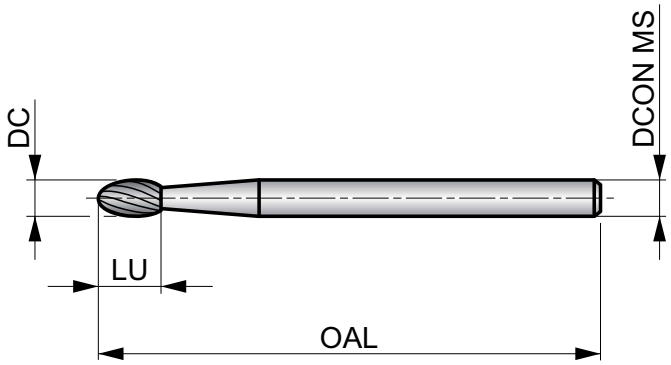
Product	DC (mm)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P6098.0X6.0 [1]	8.00	.3150	6.00	15.00	60.0	1	7059520
P6099.6X6.0 [1]	9.60	.3780	6.00	16.00	60.0	1	7059521
P60912.7X6.0 [1]	12.70	.5000	6.00	22.00	67.0	1	7059522

[1] Brazed on steel shank

P509

Rotary Burr - Oval, Shape E

AS single cut flute style with light left-hand cross cut for round edge contouring. Solid carbide shank for rigidity. First choice for superalloys.



HM | E | Bright

AS | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

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.

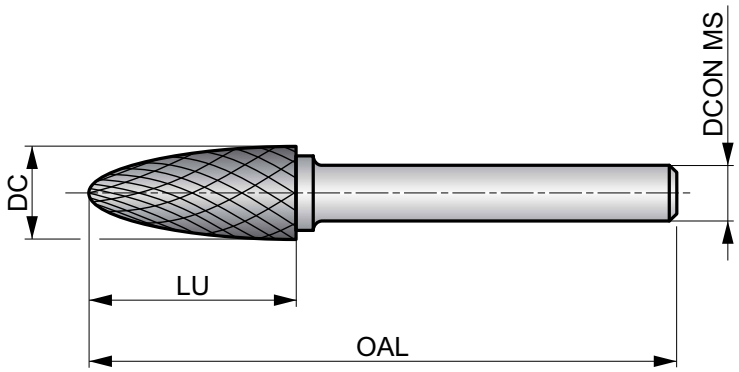
Product	DC (mm)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P5093.0X3.0	3.00	.1181	3.00	6.00	38.0	1	7806103

SF-DC

PRECISION

Rotary Burr - Ball Nosed Tree, Shape SF, 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. Solid carbide design or brazed construction with toughened and hardened steel shank construction for general purpose use.



HM | F | Bright

DC

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

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 ■												

Products from this series are also available in set. Please see SET-DC-12 or SET-DC-8.

Product	DC (inch)	DC (inch)	DCON MS (inch)	LU (inch)	OAL (inch)	Pack Qty	MID
SF-02DC	1/8	.1250	1/8	1/4	1.1/2	1	7466302
SF-02LDC	1/8	.1250	1/8	1/2	1.1/2	1	7466303
SF-10DC-R [1]	1/4	.2500	1/8	1/2	2	1	7466304
SF-10DC	1/4	.2500	1/4	5/8	2	1	7466305
SF-10DC-X	1/4	.2500	1/4	5/8	6.3/4	1	7466306
SF-30DC [1]	3/8	.3750	1/4	3/4	2.1/2	1	7466307
SF-30DC-X [1]	3/8	.3750	1/4	3/4	6.3/4	1	7466308
SF-40DC [1]	7/16	.4375	1/4	1	2.3/4	1	7466309
SF-50DC [1]	1/2	.5000	1/4	1	2.3/4	1	7466310
SF-50DC-X [1]	1/2	.5000	1/4	1	7	1	7466311
SF-60DC [1]	5/8	.6250	1/4	1	1.3/4	1	7466312
SF-70DC [1]	3/4	.7500	1/4	1	2.3/4	1	7466313

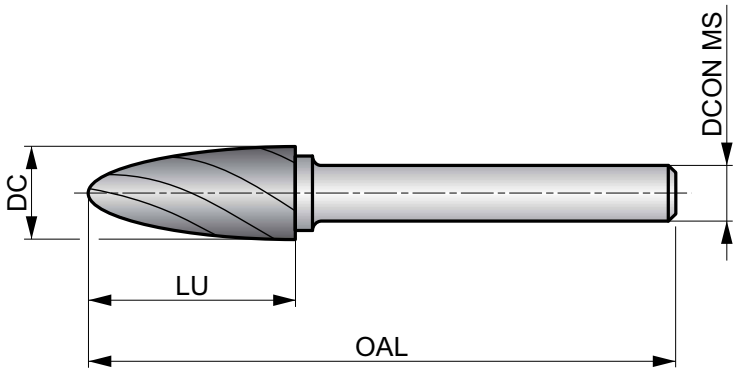
[1] Brazed on steel shank

SF-FM

PRECISION

Rotary Burr - Ball Nosed Tree, Shape SF, Bright Finish

AL single cut flute style with wide spaced edges for multi-angle contouring, rounding of edges and cutting into hard to reach areas. Solid carbide design or brazed construction with toughened and hardened steel shank construction. First choice for non-ferrous materials and plastics.



HM | F | Bright

AL

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N4.1	N4.2	N4.3	S1.1
■	■	■	■	■	■	◪	◪	■	■	◪	◪

Products from this series are also available in set. Please see SET-FM-8.

Product	DC (inch)	DC (inch)	DCON MS (inch)	LU (inch)	OAL (inch)	Pack Qty	MID
SF-10FM-R [1]	1/4	.2500	1/8	1/2	2	1	7466314
SF-10FM	1/4	.2500	1/4	5/8	2	1	7466315
SF-30FM [1]	3/8	.3750	1/4	3/4	2.1/2	1	7466316
SF-50FM [1]	1/2	.5000	1/4	1	2.3/4	1	7466317

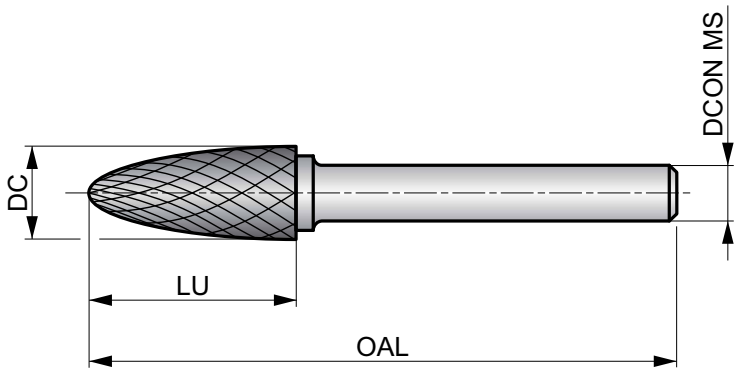
[1] Brazed on steel shank

P811

DORMER

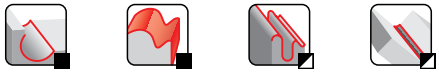
Rotary Burr - Ball Nosed Tree, Shape F, Bright Finish

DC double cut flute style with close spaced edges for multi-angle contouring, rounding of edges and cutting into hard to reach areas. Carbide design for cutting diameter up to 6 mm; above 6 mm carbide head with toughened and hardened steel shank.



HM | F | Bright

DC | DORMER



Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

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)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P8113.0X3.0	3.00	.1181	3.00	14.00	38.0	1	6814142
P8116.3X3.0 [1]	6.30	.2480	3.00	12.70	45.0	1	6814143
P8116.0X6.0	6.00	.2362	6.00	18.00	50.0	1	6814144
P8118.0X6.0 [1]	8.00	.3150	6.00	20.00	65.0	1	6814145
P8119.6X6.0 [1]	9.60	.3780	6.00	19.00	64.0	1	6814146
P81112.7X6.0 [1]	12.70	.5000	6.00	25.00	70.0	1	6814147
P81116.0X6.0 [1]	16.00	.6299	6.00	25.00	70.0	1	6814148

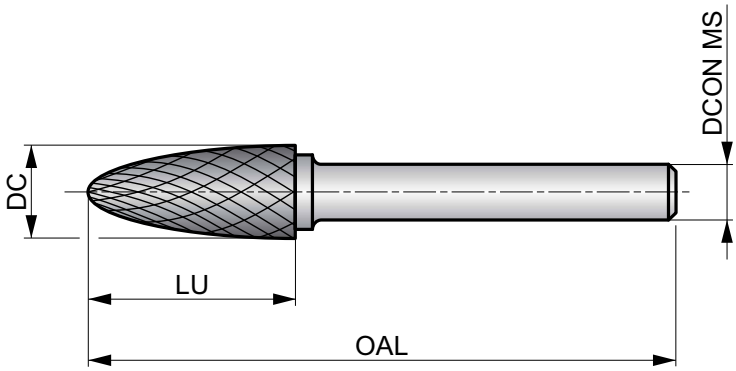
[1] Brazed on steel shank

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 252.

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.

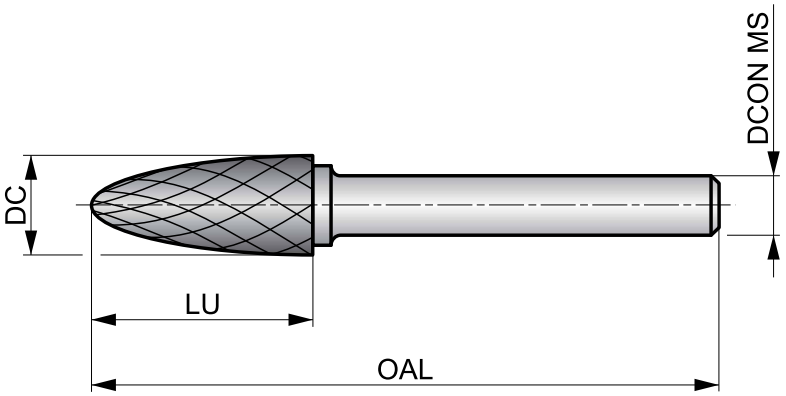
Product	DC (mm)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P811C3.0X3.0	3.00	.1181	3.00	14.00	38.0	1	6814149
P811C6.0X6.0	6.00	.2362	6.00	18.00	50.0	1	6814150
P811C9.6X6.0 [1)]	9.60	.3780	6.00	19.00	64.0	1	6814151
P811C12.7X6.0 [1)]	12.70	.5000	6.00	25.00	70.0	1	6814152

[1)] Brazed on steel shank

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 252.

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)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P7116.0X6.0	6.00	.2362	6.00	18.00	50.0	1	7059556
P7118.0X6.0 [1)]	8.00	.3150	6.00	20.00	65.0	1	7059557
P7119.6X6.0 [1)]	9.60	.3780	6.00	19.00	64.0	1	7059558
P71112.7X6.0 [1)]	12.70	.5000	6.00	25.00	70.0	1	7059559

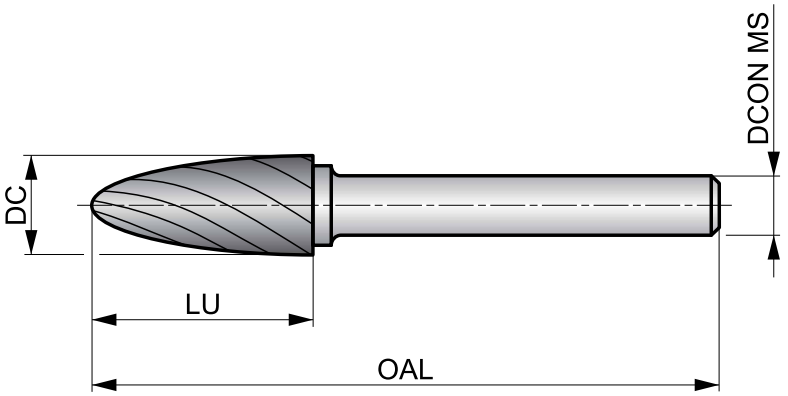
[1)] Brazed on steel shank

P611

DORMER

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 252.

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)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P6113.0X3.0	3.00	.1181	3.00	14.00	38.0	1	7059523
P6116.3X3.0 [1)]	6.30	.2480	3.00	12.70	45.0	1	7059525
P6116.0X6.0	6.00	.2362	6.00	18.00	50.0	1	7059524
P6118.0X6.0 [1)]	8.00	.3150	6.00	20.00	65.0	1	7059526
P6119.6X6.0 [1)]	9.60	.3780	6.00	19.00	64.0	1	7059527
P61112.7X6.0 [1)]	12.70	.5000	6.00	25.00	70.0	1	7059528

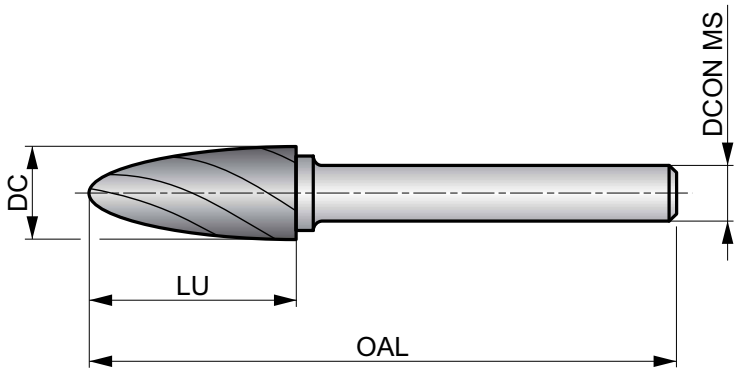
[1)] Brazed on steel shank

P841

DORMER

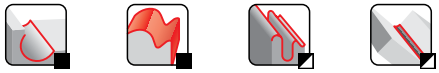
Rotary Burr - Ball Nosed Tree, Shape F

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 252.

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)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P8416.0X6.0	6.00	.2362	6.00	18.00	50.0	1	6814214
P8419.6X6.0 [1)]	9.60	.3780	6.00	19.00	64.0	1	6814215
P84112.7X6.0 [1)]	12.70	.5000	6.00	25.00	70.0	1	6814216

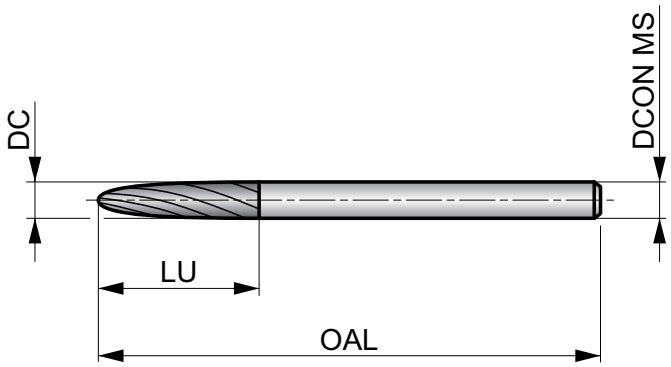
[1)] Brazed on steel shank

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 252.

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.

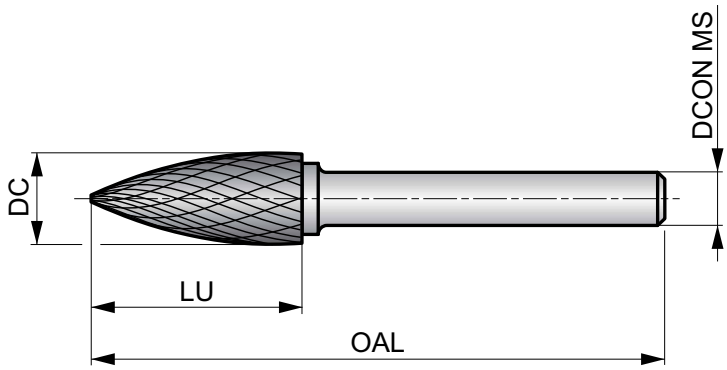
Product	DC (mm)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P5113.0X3.0	3.00	.1181	3.00	14.00	38.0	1	7806104

SG-DC

PRECISION

Rotary Burr - Pointed Tree, Shape SG, Bright Finish

DC double cut flute style with close spaced edges for multi-angle contouring and cutting narrow angles in hard to reach areas. Solid carbide design or brazed construction with toughened and hardened steel shank construction for general purpose use.



HM | G | Bright

DC

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

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 ■												

Products from this series are also available in set. Please see SET-DC-12 or SET-DC-8.

Product	DC (inch)	DC (inch)	DCON MS (inch)	LU (inch)	OAL (inch)	Pack Qty	MID
SG-02DC	1/8	.1250	1/8	1/4	1.1/2	1	7466318
SG-02MDC	1/8	.1250	1/8	3/8	1.1/2	1	7466319
SG-02LDC	1/8	.1250	1/8	1/2	1.1/2	1	7466320
SG-10DC-R [1]	1/4	.2500	1/8	1/2	2	1	7466321
SG-10DC	1/4	.2500	1/4	5/8	2	1	7466322
SG-20DC [1]	5/16	.3125	1/4	3/4	2.1/2	1	7466323
SG-30DC [1]	3/8	.3750	1/4	3/4	2.1/2	1	7466324
SG-30DC-X [1]	3/8	.3750	1/4	3/4	6.3/4	1	7466325
SG-50SDC [1]	1/2	.5000	1/4	3/4	2.1/2	1	7466326
SG-50DC [1]	1/2	.5000	1/4	1	2.3/4	1	7466327
SG-50DC-X [1]	1/2	.5000	1/4	1	7	1	7466328
SG-60DC [1]	5/8	.6250	1/4	1	2.3/4	1	7466329
SG-70DC [1]	3/4	.7500	1/4	1	2.3/4	1	7466330

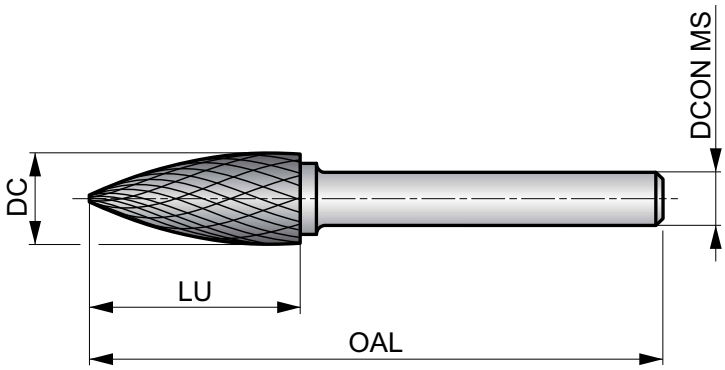
[1] Brazed on steel shank

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 252.

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)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P8133.0X3.0	3.00	.1181	3.00	14.00	38.0	1	6814153
P8136.3X3.0 [1)]	6.30	.2480	3.00	12.70	45.0	1	6814154
P8136.0X6.0	6.00	.2362	6.00	18.00	50.0	1	6814155
P8138.0X6.0 [1)]	8.00	.3150	6.00	19.00	64.0	1	6814156
P8139.6X6.0 [1)]	9.60	.3780	6.00	19.00	64.0	1	6814157
P81312.7X6.0 [1)]	12.70	.5000	6.00	25.00	70.0	1	6814158
P81316.0X6.0 [1)]	16.00	.6299	6.00	25.00	70.0	1	6814159

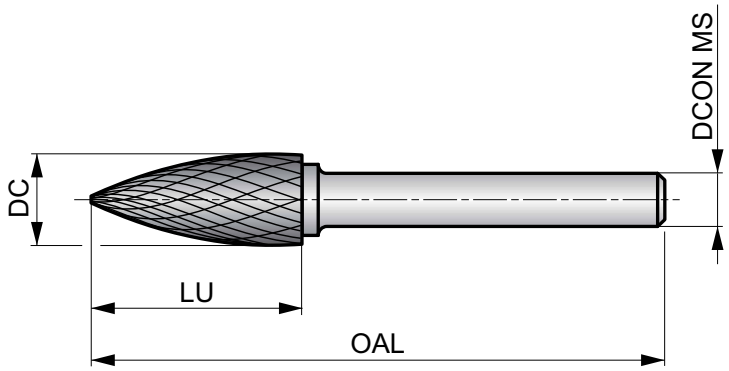
[1)] Brazed on steel shank

P813C

DORMER

Rotary Burr - Pointed Tree, Shape G, TiAlN Coating

DC double cut flute style with close spaced edges for multi-angle contouring and cutting narrow angles in hard to reach areas. Carbide design for cutting diameter up to 6 mm; above 6 mm carbide head with tough hard steel shank. TiALN coating for increased tool life, reduced friction and improved swarf evacuation.



HM | G | TiAlN

DC | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

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.

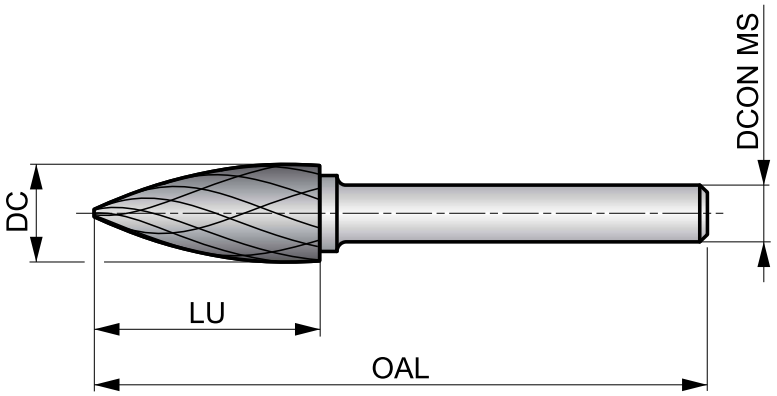
Product	DC (mm)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P813C3.0X3.0	3.00	.1181	3.00	14.00	38.0	1	6814160
P813C6.0X6.0	6.00	.2362	6.00	18.00	50.0	1	6814161
P813C9.6X6.0 [1)]	9.60	.3780	6.00	19.00	64.0	1	6814162
P813C12.7X6.0 [1)]	12.70	.5000	6.00	25.00	70.0	1	6814163

[1)] Brazed on steel shank

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 252.

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.

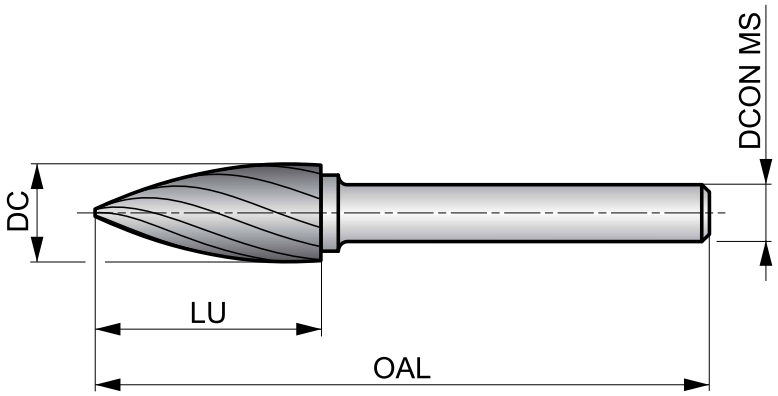
Product	DC (mm)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P7136.0X6.0	6.00	.2362	6.00	18.00	50.0	1	7059560
P7138.0X6.0 [1)]	8.00	.3150	6.00	19.00	64.0	1	7059561
P7139.6X6.0 [1)]	9.60	.3780	6.00	19.00	64.0	1	7059562
P71312.7X6.0 [1)]	12.70	.5000	6.00	25.00	70.0	1	7059563

[1)] Brazed on steel shank

P613

Rotary Burr - Pointed Tree, Shape G

VA single cut flute style with medium spaced edges for multi-angle contouring and cutting narrow angles in hard to reach areas. Carbide design for cutting diameter equal to 6 mm; above 6 mm carbide head with toughened and hardened steel shank. First choice for stainless steels.



HM | G | Bright

VA | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

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.

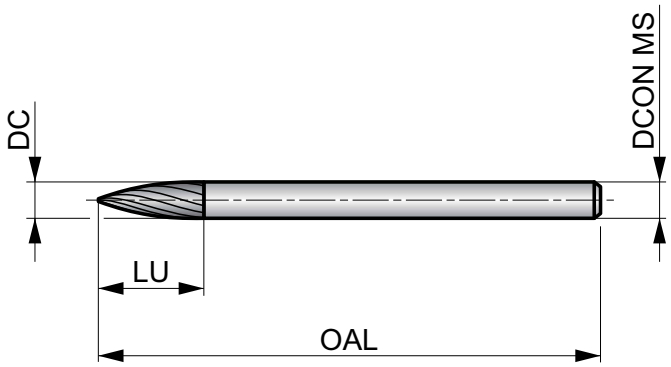
Product	DC (mm)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P6136.0X6.0	6.00	.2362	6.00	18.00	50.0	1	7059529
P6138.0X6.0 [1)]	8.00	.3150	6.00	19.00	64.0	1	7059530
P6139.6X6.0 [1)]	9.60	.3780	6.00	19.00	64.0	1	7059531
P61312.7X6.0 [1)]	12.70	.5000	6.00	25.00	70.0	1	7059532

[1)] Brazed on steel shank

P513

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 252.

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.

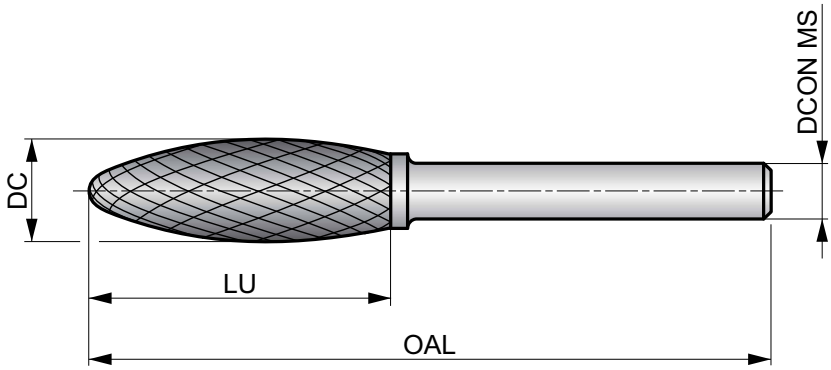
Product	DC (mm)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P5133.0X3.0X8.0	3.00	.1181	3.00	8.00	38.0	1	7806105
P5133.0X3.0X14.0	3.00	.1181	3.00	14.00	38.0	1	7806106

SH-DC

PRECISION

Rotary Burr - Flame, Shape SH, Bright Finish

DC double cut flute style with close spaced edges for round edge contouring and welding preparation. Solid Carbide design or brazed construction with toughened and hardened steel shank construction for general purpose use.



HM | H | Bright

DC

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

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 ■												

Products from this series are also available in set. Please see SET-DC-12.

Product	DC (inch)	DC (inch)	DCON MS (inch)	LU (inch)	OAL (inch)	Pack Qty	MID
SH-02DC	1/8	.1250	1/8	1/4	1.1/2	1	7466331
SH-10DC	1/4	.2500	1/4	1/2	2	1	7466332
SH-20DC [1]	5/16	.3125	1/4	3/4	2.1/2	1	7466333
SH-50DC [1]	1/2	.5000	1/4	1.1/4	3	1	7466334
SH-60DC [1]	5/8	.6250	1/4	1.7/16	3.3/16	1	7466335

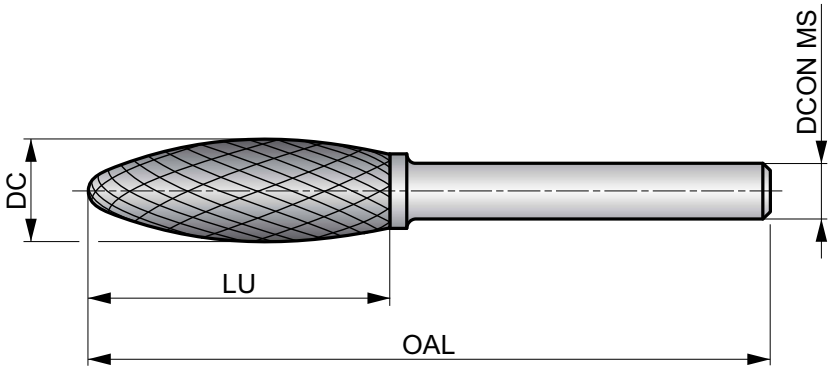
[1] Brazed on steel shank

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 252.

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)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P8153.0X3.0	3.00	.1181	3.00	6.00	38.0	1	6814164
P8156.0X6.0	6.00	.2362	6.00	14.00	50.0	1	6814165
P8158.0X6.0 [1)]	8.00	.3150	6.00	19.00	64.0	1	6814166
P8159.6X6.0 [1)]	9.60	.3780	6.00	19.00	65.0	1	6814167
P81512.7X6.0 [1)]	12.70	.5000	6.00	32.00	77.0	1	6814168
P81516.0X6.0 [1)]	16.00	.6299	6.00	36.00	81.0	1	6814169

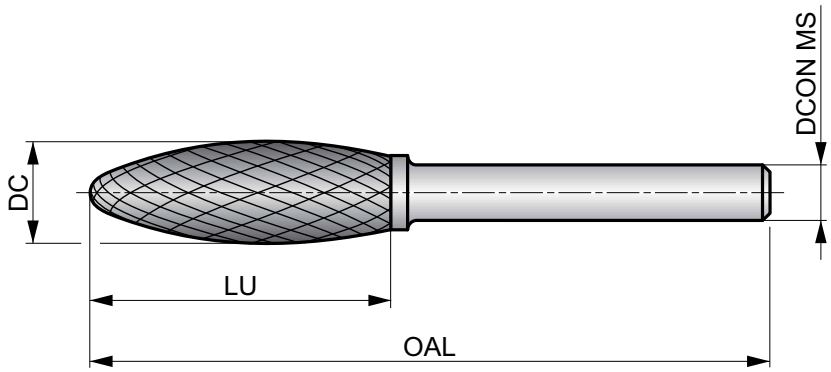
[1)] Brazed on steel shank

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 252.

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.

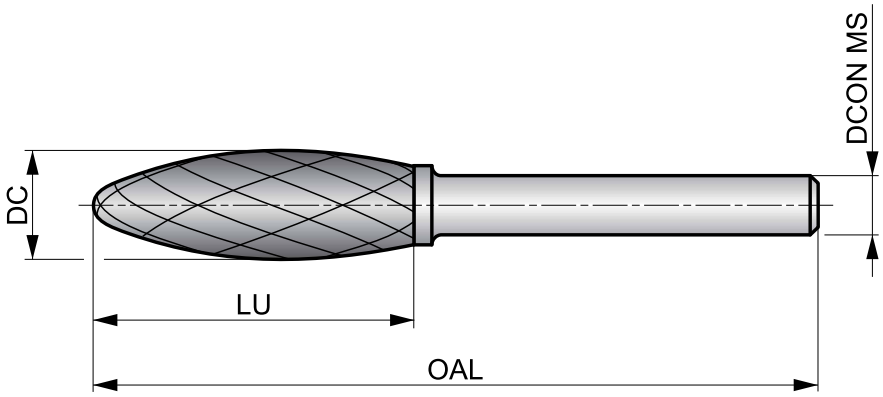
Product	DC (mm)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P815C8.0X6.0 [1]	8.00	.3150	6.00	19.00	64.0	1	6814170
P815C12.7X6.0 [1]	12.70	.5000	6.00	32.00	77.0	1	6814171

[1] Brazed on steel shank

P715

Rotary Burr - Flame, Shape H

ST single cut flute style with chipbreakers and medium spaced edge for round edge contouring and welding preparation. Carbide head with toughened and hardened steel shank. First choice for steels.



HM | H | Bright

ST | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

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.

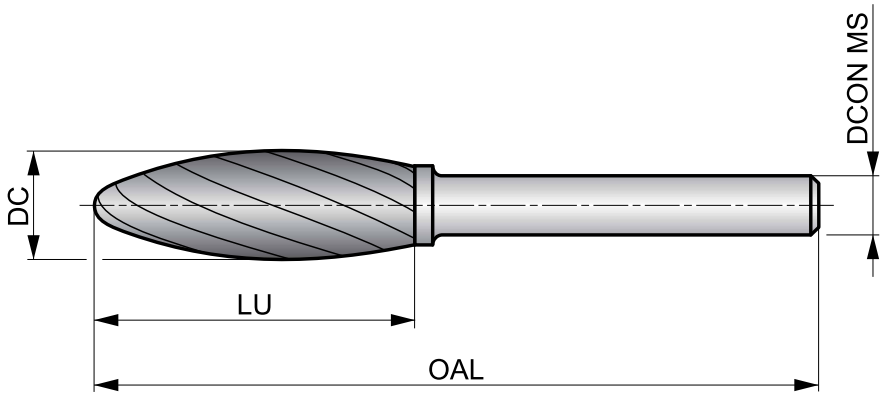
Product	DC (mm)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P7158.0X6.0 [1]	8.00	.3150	6.00	19.00	64.0	1	7059564
P71512.7X6.0 [1]	12.70	.5000	6.00	32.00	77.0	1	7059565

[1] Brazed on steel shank

P615

Rotary Burr - Flame, Shape H

VA single cut flute style with medium spaced edges for round edge contouring and welding preparation. Carbide head with toughened and hardened steel shank. First choice for stainless steels.



HM | H | Bright

VA | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

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.

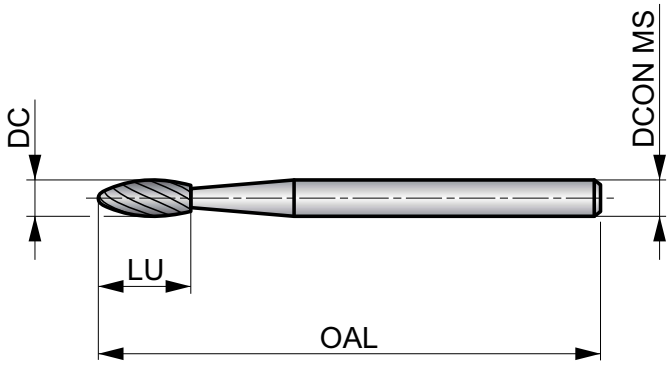
Product	DC (mm)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P6158.0X6.0 [1]	8.00	.3150	6.00	19.00	64.0	1	7059533
P6159.6X6.0 [1]	9.60	.3780	6.00	19.00	65.0	1	7059534
P61512.7X6.0 [1]	12.70	.5000	6.00	32.00	77.0	1	7059535

[1] Brazed on steel shank

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 252.

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.

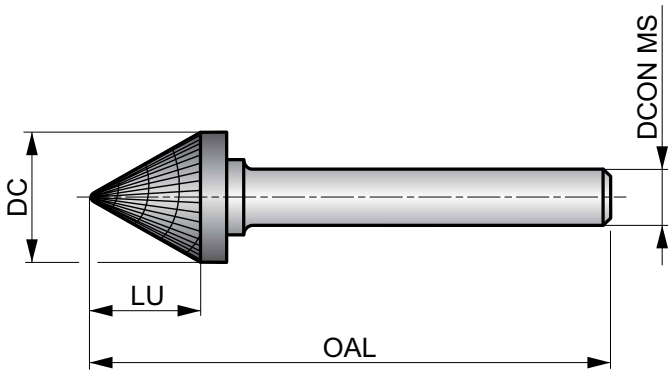
Product	DC (mm)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P5153.0X3.0	3.00	.1181	3.00	6.00	38.0	1	7806107

SJ-DC

PRECISION

Rotary Burr - 60° Countersink, Shape SJ, Bright Finish

DC double cut flute style with close spaced edges for chamfering, making v-cuts and welding preparation. Solid carbide design or brazed construction with toughened and hardened steel shank construction for general purpose use.



HM | J | Bright

60° | DC

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

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**												
■	■												

Products from this series are also available in set. Please see SET-DC-12.

Product	DC (inch)	DC (inch)	DCON MS (inch)	LU (inch)	OAL (inch)	SIG (°)	Pack Qty	MID
SJ-02DC	1/8	.1250	1/8	3/32	1.1/2	60	1	7466336
SJ-10DC	1/4	.2500	1/4	3/16	2	60	1	7466337
SJ-30DC [1)]	3/8	.3750	1/4	5/16	2.1/16	60	1	7466338
SJ-50DC [1)]	1/2	.5000	1/4	7/16	2.3/16	60	1	7466339
SJ-60DC [1)]	5/8	.6250	1/4	9/16	2.5/16	60	1	7466340

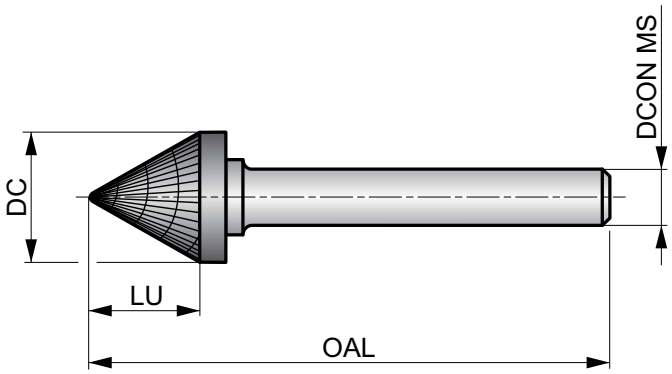
[1)] Brazed on steel shank

P817

DORMER

Rotary Burr - 60° Countersink, Shape J

DC double cut flute style with close spaced edges for chamfering, making v-cuts and welding preparation. Carbide design for cutting diameter up to 6 mm; above 6 mm carbide head with toughened and hardened steel shank.



HM | J | Bright

60° | DC | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

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)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P8173.0X3.0	3.00	.1181	3.00	2.50	38.0	1	6814172
P8176.0X6.0	6.00	.2362	6.00	4.00	50.0	1	6814173
P8179.6X6.0 [1)]	9.60	.3780	6.00	8.00	56.0	1	6814174
P81712.7X6.0 [1)]	12.70	.5000	6.00	11.00	59.0	1	6814175
P81716.0X6.0 [1)]	16.00	.6299	6.00	14.50	63.0	1	6814176

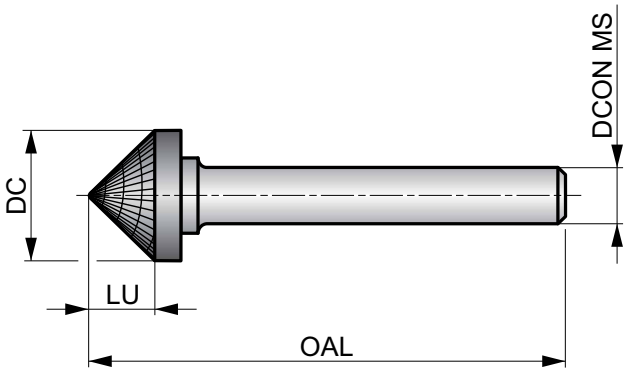
[1)] Brazed on steel shank

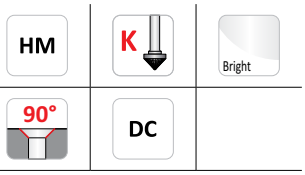
SK-DC

PRECISION

Rotary Burr - 90° Countersink, Shape SK, Bright Finish

DC double cut flute style with close spaced edges for chamfering, making v-cuts and welding preparation. Solid carbide design or brazed construction with toughened and hardened steel shank construction for general purpose use.





Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

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**												
■	■												

Products from this series are also available in set. Please see SET-DC-12.

Product	DC (inch)	DC (inch)	DCON MS (inch)	LU (inch)	OAL (inch)	SIG (°)	Pack Qty	MID
SK-02DC	1/8	.1250	1/8	1/16	1.1/2	90	1	7466341
SK-10DC	1/4	.2500	1/4	1/8	2	90	1	7466342
SK-30DC [1]	3/8	.3750	1/4	3/16	2.1/16	90	1	7466343
SK-50DC [1]	1/2	.5000	1/4	1/4	2.3/16	90	1	7466344
SK-60DC [1]	5/8	.6250	1/4	5/16	2.5/16	90	1	7466345

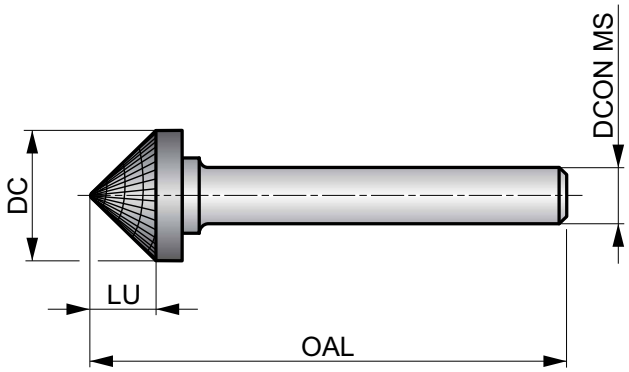
[1] Brazed on steel shank

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 252.

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)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P8193.0X3.0	3.00	.1181	3.00	1.50	38.0	1	6814177
P8196.0X6.0	6.00	.2362	6.00	3.00	50.0	1	6814178
P8199.6X6.0 [1)]	9.60	.3780	6.00	4.70	53.0	1	6814179
P81912.7X6.0 [1)]	12.70	.5000	6.00	6.30	55.0	1	6814180
P81916.0X6.0 [1)]	16.00	.6299	6.00	8.00	57.0	1	6814181

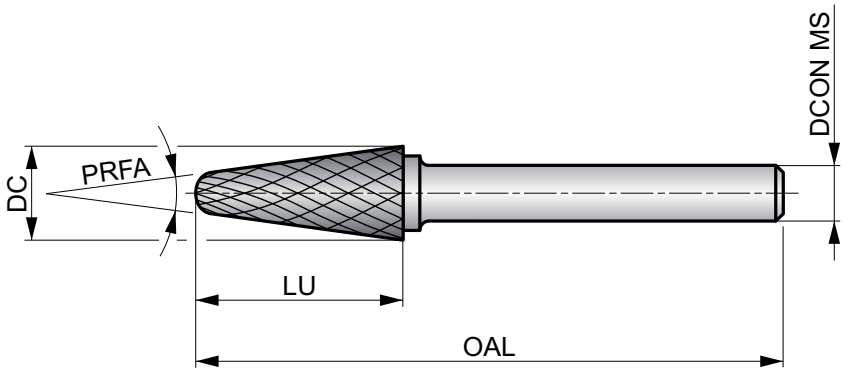
[1)] Brazed on steel shank

SL-DC

PRECISION

Rotary Burr - Ball Nosed Cone, Shape SL, 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. Solid carbide design or brazed construction with toughened and hardened steel shank construction for general purpose use.



HM | L | Bright

DC

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

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**												
■	■												

Products from this series are also available in set. Please see SET-DC-12 or SET-DC-8.

Product	DC (inch)	DC (inch)	DCON MS (inch)	LU (inch)	OAL (inch)	PRFA (°)	Pack Qty	MID
SL-02SDC	1/8	.1250	1/8	3/8	1.1/2	8	1	7466346
SL-02DC	1/8	.1250	1/8	1/2	1.1/2	8	1	7466347
SL-10DC	1/4	.2500	1/4	5/8	2	14	1	7466348
SL-20DC [1]	5/16	.3125	1/4	7/8	2.5/8	14	1	7466349
SL-30DC [1]	3/8	.3750	1/4	1.1/16	2.13/16	14	1	7466350
SL-30DC-X [1]	3/8	.3750	1/4	1.1/16	7.1/16	14	1	7466351
SL-40DC [1]	1/2	.5000	1/4	1.1/8	2.7/8	14	1	7466352
SL-40DC-X [1]	1/2	.5000	1/4	1.1/8	7.1/16	14	1	7466353
SL-50DC [1]	5/8	.6250	1/4	1.3/16	2.15/16	14	1	7466354
SL-60DC [1]	5/8	.6250	1/4	1.5/16	3.1/16	14	1	7466355

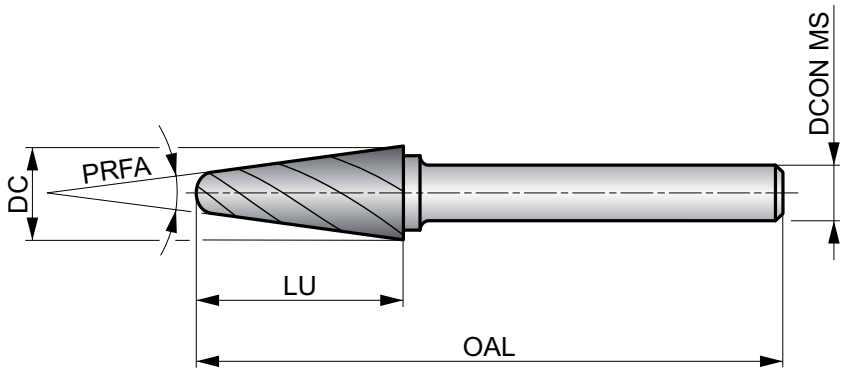
[1] Brazed on steel shank

SL-FM

PRECISION

Rotary Burr - Ball Nosed Cone, Shape SL, Bright Finish

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. Solid carbide or Brazed construction with toughened and hardened steel shank construction. First choice for non-ferrous materials and plastics.



HM	L	Bright
AL		

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N4.1	N4.2	N4.3	S1.1
■	■	■	■	■	■	◪	◪	■	■	◪	◪

Products from this series are also available in set. Please see SET-FM-8.

Product	DC (inch)	DC (inch)	DCON MS (inch)	LU (inch)	OAL (inch)	PRFA (°)	Pack Qty	MID
SL-30FM [1]	3/8	.3750	1/4	1.1/16	2.13/16	14	1	7466356
SL-40FM [1]	1/2	.5000	1/4	1.1/8	2.7/8	14	1	7466357

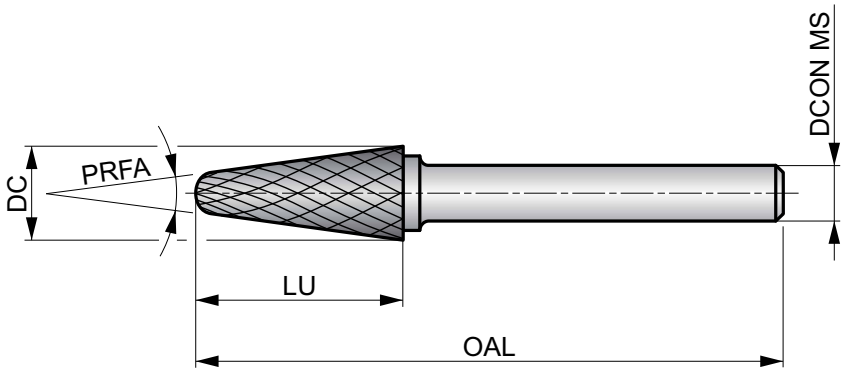
[1] Brazed on steel shank

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 252.

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)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	PRFA (°)	Pack Qty	MID
P8213.0X3.0	3.00	.1181	3.00	14.00	38.0	8	1	6814182
P8216.0X6.0	6.00	.2362	6.00	18.00	50.0	14	1	6814183
P8218.0X6.0 [1]	8.00	.3150	6.00	25.40	70.0	14	1	6814184
P8219.6X6.0 [1]	9.60	.3780	6.00	30.00	76.0	14	1	6814185
P82112.7X6.0 [1]	12.70	.5000	6.00	32.00	77.0	14	1	6814186
P82116.0X6.0 [1]	16.00	.6299	6.00	33.00	78.0	14	1	6814187

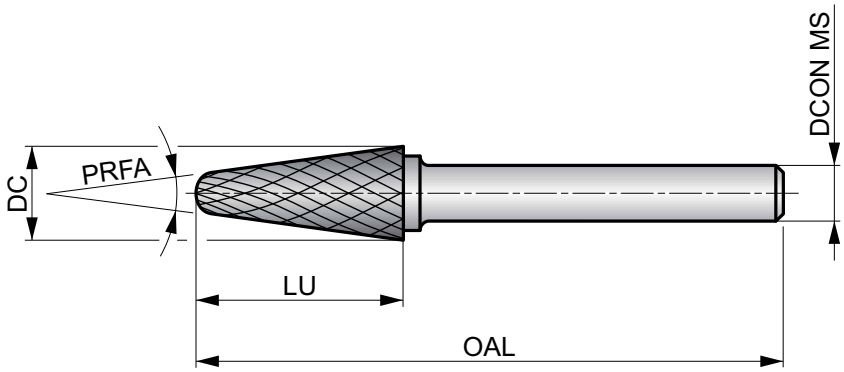
[1] Brazed on steel shank

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 252.

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.

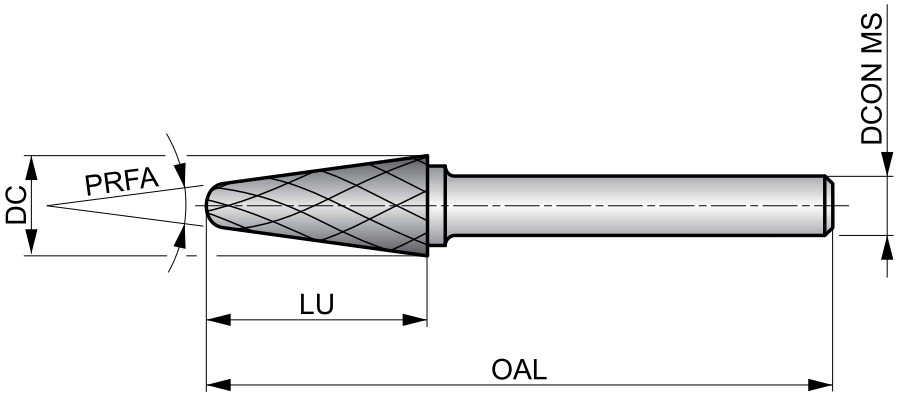
Product	DC (mm)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	PRFA (°)	Pack Qty	MID
P821C3.0X3.0	3.00	.1181	3.00	14.00	38.0	8	1	6814188
P821C12.7X6.0 [1]	12.70	.5000	6.00	32.00	77.0	14	1	6814189

[1] Brazed on steel shank

P721

Rotary Burr - Ball Nosed Cone, Shape L

ST single cut flute style with chipbreakers and medium spaced edge for enlarging holes, rounding edges and surface-finishing in tight narrow angles or other hard to reach areas. Carbide head with toughened and hardened steel shank. First choice for steels.



HM | L | Bright

ST | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

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)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	PRFA (°)	Pack Qty	MID
P72110.0X6.0 [1]	10.00	.3937	6.00	20.00	65.0	14	1	7059567
P7219.6X6.0 [1]	9.60	.3780	6.00	30.00	76.0	14	1	7059566
P72112.7X6.0 [1]	12.70	.5000	6.00	32.00	77.0	14	1	7059568

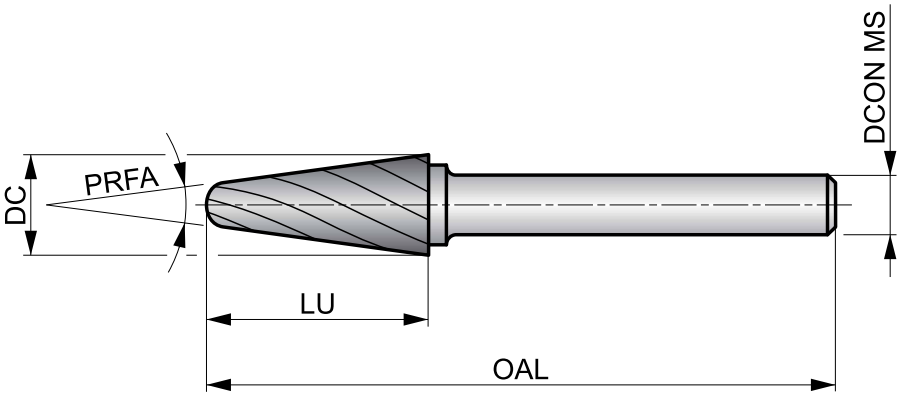
[1] Brazed on steel shank

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 252.

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)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	PRFA (°)	Pack Qty	MID
P6218.0X6.0 [1]	8.00	.3150	6.00	25.40	70.0	14	1	7059536
P62110.0X6.0 [1]	10.00	.3937	6.00	20.00	65.0	14	1	7059537
P62112.7X6.0 [1]	12.70	.5000	6.00	32.00	77.0	14	1	7059538

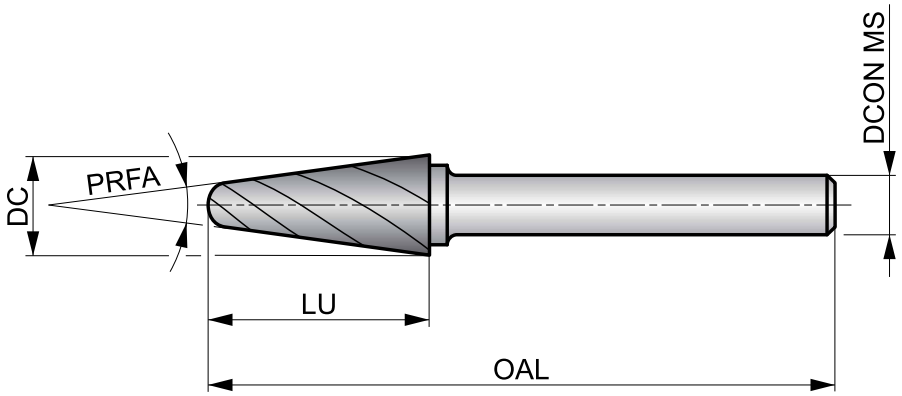
[1] Brazed on steel shank

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 252.

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)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	PRFA (°)	Pack Qty	MID
P8426.0X6.0	6.00	.2362	6.00	18.00	50.0	14	1	6814217
P8429.6X6.0 [1)]	9.60	.3780	6.00	30.00	76.0	14	1	6814218
P84212.7X6.0 [1)]	12.70	.5000	6.00	32.00	77.0	14	1	6814219

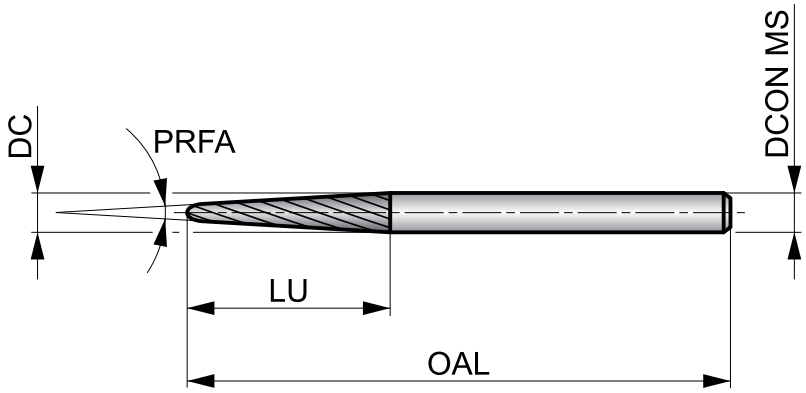
[1)] Brazed on steel shank

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 252.

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.

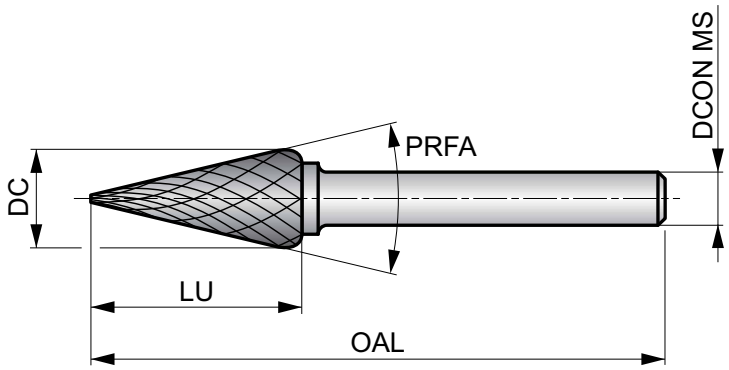
Product	DC (mm)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	PRFA (°)	Pack Qty	MID
P5213.0X3.0	3.00	.1181	3.00	14.00	38.0	8	1	7806108

SM-DC

PRECISION

Rotary Burr - Cone, Shape SM, Bright Finish

DC double cut flute style with close spaced edges for enlarging holes, and surface finishing in tight narrow angles or other in hard to reach areas. Solid carbide design or brazed construction with toughened and hardened steel shank construction for general purpose use.



HM | M | Bright

DC

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

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**												
■	■												

Products from this series are also available in set. Please see SET-DC-12.

Product	DC (inch)	DC (inch)	DCON MS (inch)	LU (inch)	OAL (inch)	PRFA (°)	Pack Qty	MID
SM-02SDC	1/8	.1250	1/8	11/32	1.1/2	12	1	7466358
SM-02DC	1/8	.1250	1/8	7/16	1.1/2	14	1	7466359
SM-02LDC	1/8	.1250	1/8	5/8	1.1/2	7	1	7466360
SM-02LDC-M	1/8	.1250	1/8	5/8	2	7	1	7466361
SM-02LDC-L	1/8	.1250	1/8	5/8	3	7	1	7466362
SM-10DC-R [1]	1/4	.2500	1/8	1/2	2.1/82	22	1	7466363
SM-10DC	1/4	.2500	1/4	1/2	2	22	1	7466364
SM-10MDC [1]	1/4	.2500	1/4	3/4	2	14	1	7466365
SM-10LDC [1]	1/4	.2500	1/4	1	2	12	1	7466366
SM-10XDC [1]	1/4	.2500	1/4	1.1/4	2	10	1	7466367
SM-30DC [1]	3/8	.3750	1/4	5/8	2.1/2	28	1	7466368
SM-50DC [1]	1/2	.5000	1/4	7/8	2.5/8	28	1	7466369
SM-60DC [1]	5/8	.6250	1/4	1	2.3/4	31	1	7466370

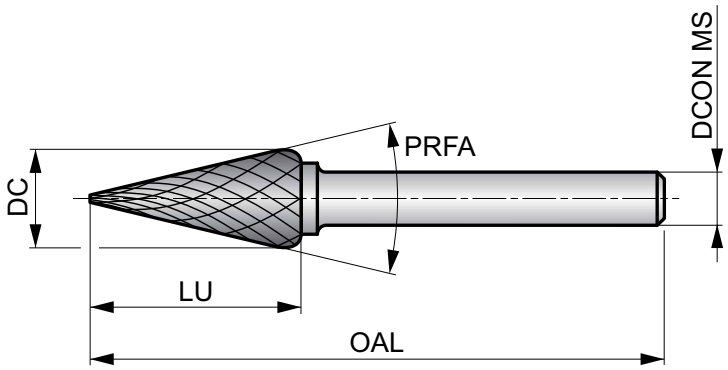
[1] Brazed on steel shank

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 252.

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.

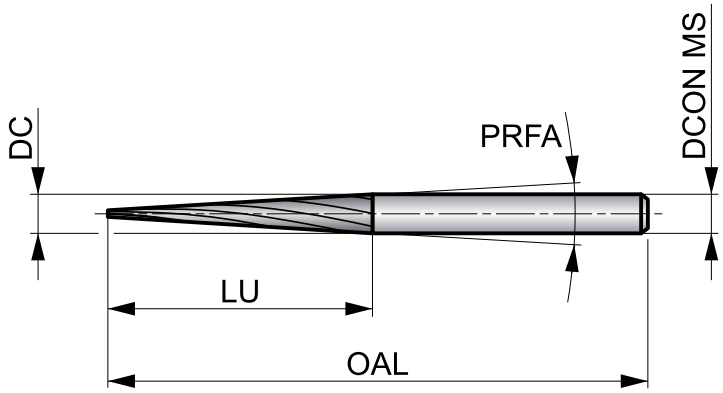
Product	DC (mm)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	PRFA (°)	Pack Qty	MID
P8233.0X3.0	3.00	.1181	3.00	11.00	38.0	14	1	6814190
P8236.3X3.0 [1]	6.30	.2480	3.00	12.70	49.0	22	1	6814191
P8236.0X6.0	6.00	.2362	6.00	20.00	50.0	14	1	6814192
P8239.6X6.0 [1]	9.60	.3780	6.00	16.00	64.0	28	1	6814193
P82312.7X6.0 [1]	12.70	.5000	6.00	22.00	71.0	28	1	6814194
P82316.0X6.0 [1]	16.00	.6299	6.00	25.00	71.0	31	1	6814195

[1] Brazed on steel shank

P523

Rotary Burr - Cone, Shape M

AS single cut flute style with light left-hand cross cut for enlarging holes, surface finishing and cutting narrow angles in hard to reach areas. Solid carbide shank for rigidity. First choice for superalloys.



HM | M | Bright

AS | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

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.

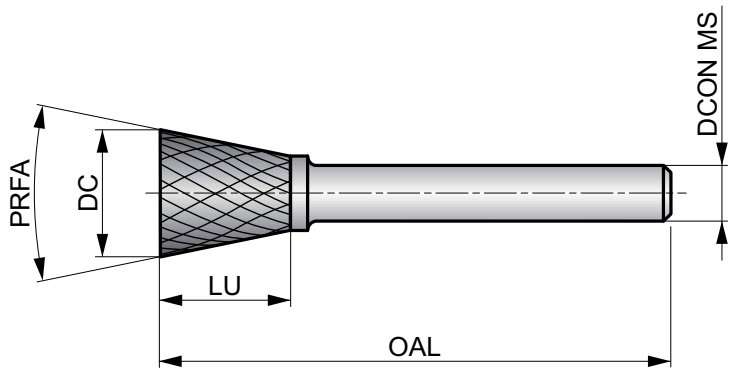
Product	DC (mm)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	PRFA (°)	Pack Qty	MID
P5233.0X3.0	3.00	.1181	3.00	15.00	38.0	7	1	7806109

SN-DC

PRECISION

Rotary Burr - Inverted Cone, Shape SN, Bright Finish

DC double cut flute style with non-cutting end has close spaced edges for making inverted v-cuts and rear side chamfering. Solid carbide design or brazed construction with toughened and hardened steel shank construction for general purpose use.



HM	N	Bright
DC		

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

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**												
■	■												

Products from this series are also available in set. Please see SET-DC-12.

Product	DC (inch)	DC (inch)	DCON MS (inch)	LU (inch)	OAL (inch)	PRFA (°)	Pack Qty	MID
SN-02DC	1/8	.1250	1/8	3/16	1.1/2	10	1	7466371
SN-10SDC [1]	1/4	.2500	1/8	1/4	1.3/4	10	1	7466372
SN-10DC	1/4	.2500	1/4	5/16	2	10	1	7466373
SN-30DC [1]	3/8	.3750	1/4	3/8	2.1/8	13	1	7466374
SN-50DC [1]	1/2	.5000	1/4	1/2	2.1/4	28	1	7466375
SN-60DC [1]	5/8	.6250	1/4	3/4	2.1/2	18	1	7466376

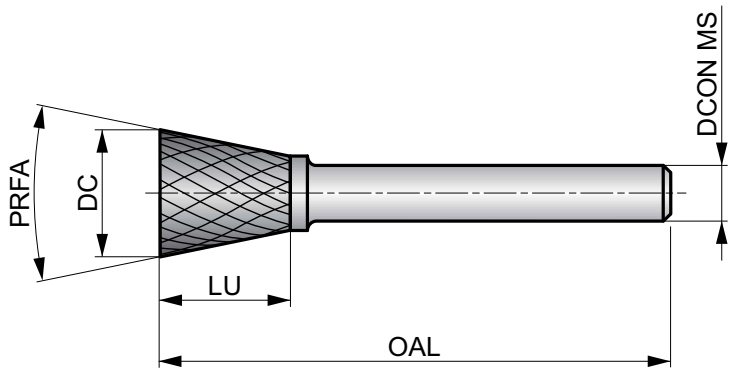
[1] Brazed on steel shank

P825

DORMER

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 252.

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)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	PRFA (°)	Pack Qty	MID
P8253.0X3.0	3.00	.1181	3.00	4.00	38.0	10	1	6814196
P8256.3X3.0 [1)]	6.30	.2480	3.00	6.00	39.0	12	1	6814197
P8256.0X6.0	6.00	.2362	6.00	8.00	50.0	10	1	6814198
P8259.6X6.0 [1)]	9.60	.3780	6.00	9.50	55.0	16	1	6814199
P82512.7X6.0 [1)]	12.70	.5000	6.00	12.70	58.0	28	1	6814200
P82516.0X6.0 [1)]	16.00	.6299	6.00	19.00	64.0	18	1	6814201

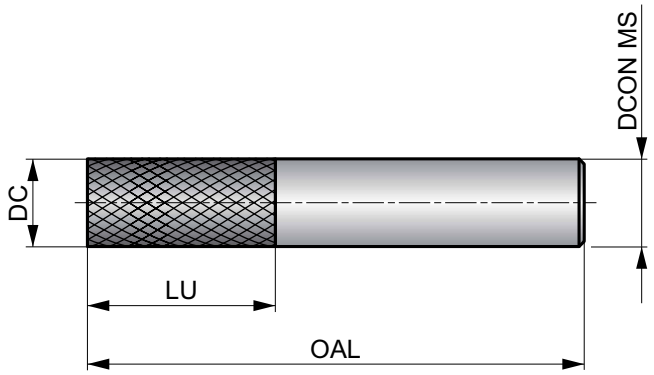
[1)] Brazed on steel shank

FGR-A

PRECISION

Diamond Cut Router - Plain End, Bright Finish

GRP diamond cut flute style with non-cutting end has medium spaced edges for contouring, groove and pocket milling and making cut-out shapes. Solid carbide construction construction for rigidity. First choice for fiberglass and composite materials.



HM	Bright	
GRP		


Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

N4.3

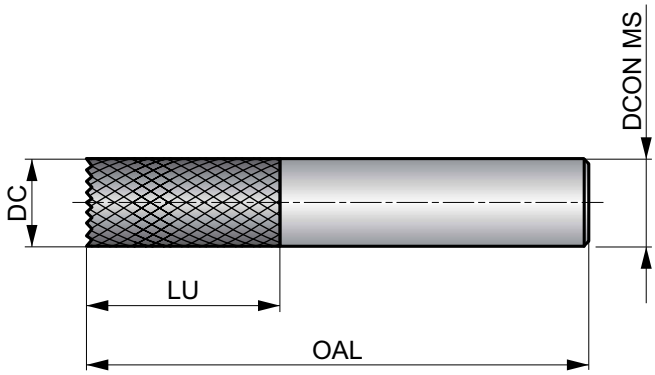
Product	DC (inch)	DC (inch)	DCON MS (inch)	LU (inch)	OAL (inch)	Pack Qty	MID
FGR-10A-L	1/4	.2500	1/4	1	3	1	7466378
FGR-30A	3/8	.3750	3/8	1	2.1/2	1	7466379

FGR-B

PRECISION

Diamond Cut Router - Burr End, Bright Finish

GRP diamond cut flute end cut style with medium spaced edges for contouring, groove and pocket milling and making cut-out shapes with end cut. Solid carbide construction construction for rigidity. First choice for fiberglass and composite materials.



HM		Bright
GRP		

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

N4.3

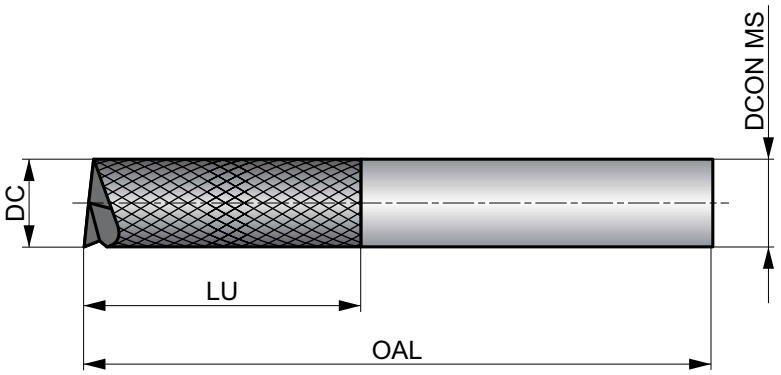
Product	DC (inch)	DC (inch)	DCON MS (inch)	LU (inch)	OAL (inch)	Pack Qty	MID
FGR-10B-L	1/4	.2500	1/4	1	3	1	7466381
FGR-50B	1/2	.5000	1/2	1	3	1	7466383

FGR-C

PRECISION

Diamond Cut Router - End Mill Cut, Bright Finish

GRP diamond cut flute end mill style with medium spaced edges for contouring, groove and pocket milling and making cut-out shapes. Solid carbide construction construction for rigidity. First choice for fiberglass and composite materials.



HM		Bright
GRP		


Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

N4.3

■

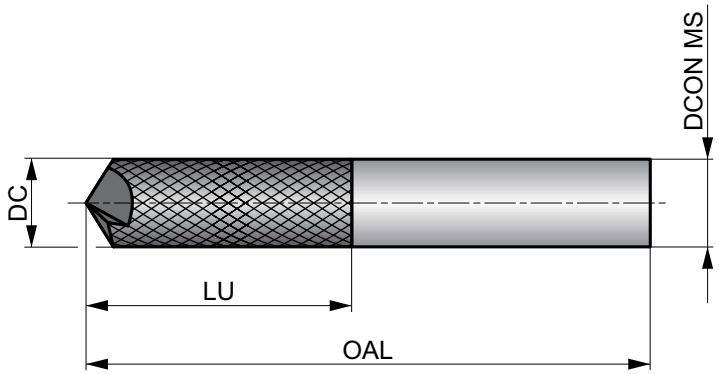
Product	DC (inch)	DC (inch)	DCON MS (inch)	LU (inch)	OAL (inch)	Pack Qty	MID
FGR-02C	1/8	.1250	1/8	1/2	1.1/2	1	7466384
FGR-10C	1/4	.2500	1/4	1	2.1/2	1	7466385
FGR-10C-L	1/4	.2500	1/4	1	3	1	7466386

FGR-D

PRECISION

Diamond Cut Router - 135° Drill Point, Bright Finish

GRP diamond cut flute drill point style with medium spaced edges for contouring, making cut-out shapes and holes. Solid carbide construction for rigidity. First choice for fiberglass and composite materials.



HM | Bright | 135° | GRP

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

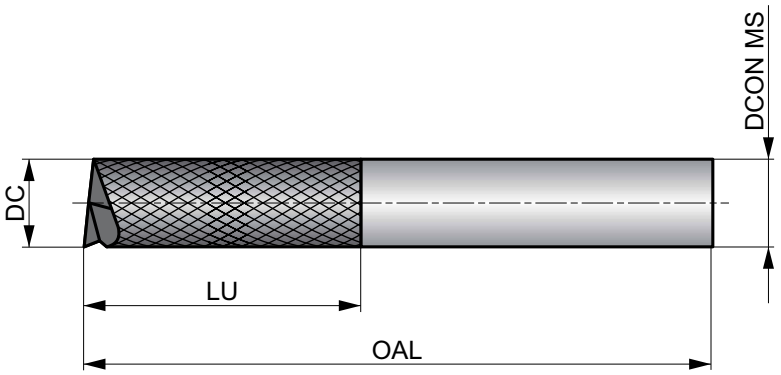
N4.3

Product	DC (inch)	DC (inch)	DCON MS (inch)	LU (inch)	OAL (inch)	Pack Qty	MID
FGR-10LD-L	1/4	.2500	1/4	1	3	1	7466387
FGR-10XD-L	1/4	.2500	1/4	1.1/2	3	1	7466389

P844

Diamond Cut Router - End Mill

GRP diamond cut flute style with medium spaced edges for contouring, groove and pocket milling and making cut-out shapes. Solid carbide shank for rigidity. First choice for fibreglass and composite materials.



HM | Bright | 180° | GRP | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

N4.3

DCON MS tolerance h6.

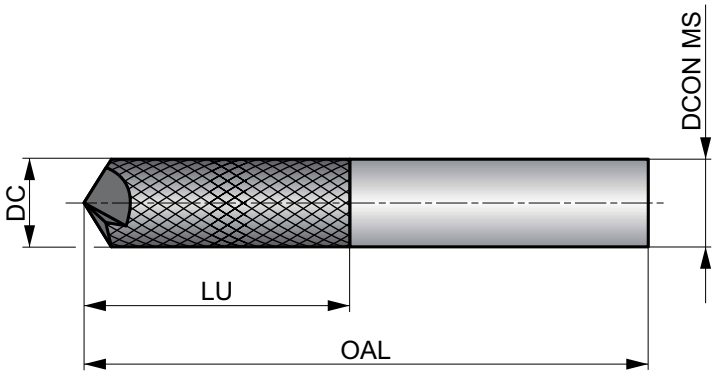
Product	DC (mm)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P8443.0X3.0	3.00	.1181	3.00	13.00	45.0	1	7059575
P8446.0X6.0	6.00	.2362	6.00	19.00	63.0	1	7059576
P8448.0X8.0	8.00	.3150	8.00	25.00	63.0	1	7059577

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.



HM | Bright | 135° | GRP | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

N4.3

DCON MS tolerance h6.

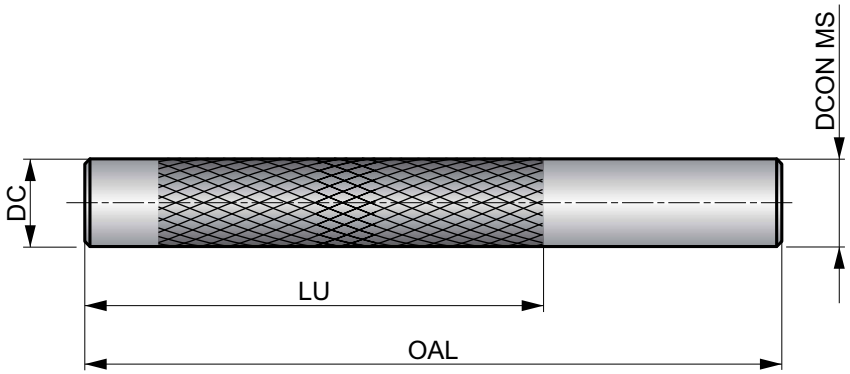
Product	DC (mm)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)	Pack Qty	MID
P8433.0X3.0	3.00	.1181	3.00	13.00	45.0	1	7059572
P8436.0X6.0	6.00	.2362	6.00	19.00	63.0	1	7059573
P8438.0X8.0	8.00	.3150	8.00	25.00	63.0	1	7059574

PDM-DC

PRECISION

Piloted Die Mill, Bright Finish

DC double cut with non-cutting pilot on one end features both left and right hand flute geometry which offers better operator control and rapid removal of material. Solid carbide construiction for rigidity. Used for general purpose and die trimming applications.



HM	Bright	DC

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

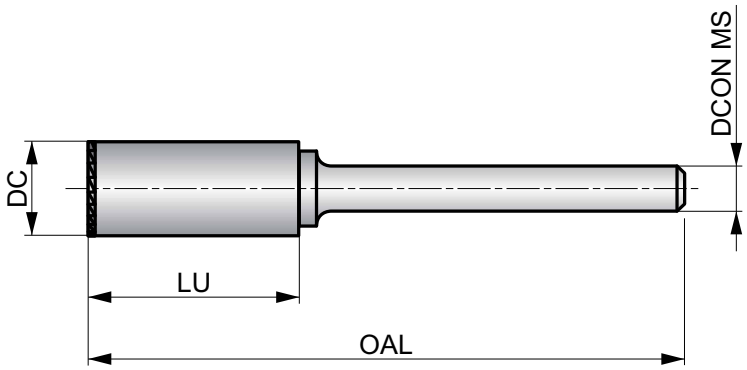
P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■	■	■	■	■	■	■	■	■	■	■	■	■	■
M2.1	**M2.2**	**M2.3**	**M3.1**	**M3.2**	**M3.3**	**M4.1**	**M4.2**	**K1.1**	**K1.2**	**K1.3**	**K2.1**	**K2.2**	**K2.3**
■	■	■	■	■	■	■	■	■	■	■	■	■	■
K3.1	**K3.2**	**K3.3**	**K4.1**	**K4.2**	**K4.3**	**K4.4**	**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**												
■	■												

Product	DC (inch)	DC (inch)	DCON MS (inch)	LU (inch)	OAL (inch)	Pack Qty	MID
PDM-02DC	1/8	.1250	1/8	1	3	1	7466390
PDM-01DC	3/16	.1875	3/16	2	3	1	7466391
PDM-10DC	1/4	.2500	1/4	1.1/4	3	1	7466392

P100

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 252 and 'how to use the tool' on page 238.

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
■	■	■	■	■	■	■	■	■	■	■	■	■	■

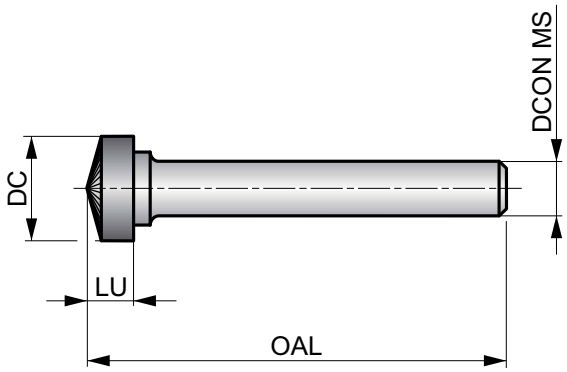
M2.2	M2.3	M3.1	M3.2	M3.3
■	■	■	■	■

Product	DC (mm)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)		Pack Qty	MID
P1004.9	4.90	.1929	6.00	20.00	50.0	1/4-20; 24; 28; M6	1	7806111
P1006.4	6.40	.2520	6.00	5.00	50.0	5/16-18; 24; 32; M8	1	7806112
P1007.8	7.80	.3071	6.00	19.00	65.0	3/8-16; 24; M10	1	7806113
P1009.3	9.30	.3661	6.00	19.00	65.0	7/16-14; 20; M12	1	7806114
P10010.7	10.70	.4213	6.00	25.00	70.0	1/2-13; 20; M14	1	7806115

P101

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

Second stage broken bolt removal solid carbide burr. When a bolt is broken and needs to be extracted, P101 creates a centerpoint into the flattened broken bolt. Prepare it for the 3rd stage, drilling the broken piece with a drill.



HM | Bright | 150°

BR | DORMER

Workpiece material group suitability. Recommended operating speed (RPM) on page 252 and 'how to use the tool' on page 238.

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)	DC (inch)	DCON MS (mm)	LU (mm)	OAL (mm)		Pack Qty	MID
P1014.9	4.90	.1929	6.00	20.00	50.0	1/4-20; 24; 28; M6	1	7806116
P1016.4	6.40	.2520	6.00	5.00	50.0	5/16-18; 24; 32; M8	1	7806117
P1017.8	7.80	.3071	6.00	5.00	50.0	3/8-16; 24; M10	1	7806118
P1019.3	9.30	.3661	6.00	5.00	50.0	7/16-14; 20; M12	1	7806119
P10110.7	10.70	.4213	6.00	5.00	50.0	1/2-13; 20; M14	1	7806120

SET-DC-12

PRECISION

Rotary Burr Set

Double cut, 12 pc set of different rotary burrs in various shapes, sizes and forms for general purpose use. Available in small and medium diameter options.

HM	Bright	DC

A=Styles in Set, B=No. in Set, C=Rotary Burrs in Set.

Product	A	B	C	Pack Qty	MID
SET-0203-DC-12	SA-DC (2) + SC-DC (2) + SD-DC + SE-DC + SF-DC + SG-DC + SH-DC + SJ-DC + SL-DC + SN-DC	12	SA-03DC + SA-02DC + SC-03DC + SC-02DC + SD-02DC + SE-02DC + SF-02DC + SG-02DC + SH-02DC + SJ-02DC + SL-02DC + SN-02DC	1	7466393
SET-10-DC-12	SA-DC + SC-DC + SD-DC + SE-DC + SF-DC + SG-DC + SH-DC + SJ-DC + SK-DC + SL-DC + SM-DC + SN-DC	12	SA-10DC + SC-10DC + SD-10DC + SE-10DC + SF-10DC + SG-10DC + SH-10DC + SJ-10DC + SK-10DC + SL-10DC + SM-10DC + SN-10DC	1	7466394

SET-DC-8

PRECISION

Rotary Burr Set

Double cut, 8 pc set of different rotary burrs in various shapes, sizes and forms for general purpose use. Available in a medium/large diameter set.

HM	Bright	DC

A=Styles in Set, B=No. in Set, C=Rotary Burrs in Set.

Product	A	B	C	Pack Qty	MID
SET-3050-DC-8	SA-DC + SC-DC (2) + SD-DC + SF-DC (2) + SG-DC + SL-DC	8	SA-50DC + SC-30DC + SC-50DC + SD-50DC + SF-30DC + SF-50DC + SG-30DC + SL-40DC	1	7466395

SET-FM-8

PRECISION

Rotary Burr Set

Aluminum cut, 8 pc set of different rotary burrs in various shapes, sizes and forms for non-ferrous materials including plastics. Available in a medium/large diameter set.

HM	Bright	AL

A=Styles in Set, B=No. in Set, C=Rotary Burrs in Set.

Product	A	B	C	Pack Qty	MID
SET-1050-FM-8	SA-FM (2) + SC-FM + SD-FM (2) + SF-FM (2) + SL-FM	8	SA-10FM + SA-50FM + SC-50FM + SD-10FM + SD-50FM + SF-10FM + SF-50FM + SL-40FM	1	7466396

P880

Rotary Burr Set

Set of different rotary burrs in various shapes, sizes and forms.

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

A=Styles in Set, B=No. in Set, C=Rotary Burrs in Set.

Product	Nr.	A	B	C	Pack Qty	MID
P88001	Nr01	P803 + P805 + P807 + P809 + P813	5	P8039.6X6.0; P8059.6X6.0; P8079.6X6.0; P8099.6X6.0; P8139.6X6.0	1	6814221
P88002	Nr02	P803C + P805C + P807C + P811C + P813C	5	P803C9.6X6.0; P805C9.6X6.0; P807C9.6X6.0; P811C9.6X6.0; P813C9.6X6.0	1	7059569
P88003	Nr03	P601 + P605 + P607 + P611 + P621	5	P6019.6X6.0; P6059.6X6.0; P6079.6X6.0; P6119.6X6.0; P62110.0X6.0	1	7059570
P88004	Nr04	P703 + P705 + P707 + P711 + P721	5	P7039.6X6.0; P7059.6X6.0; P7079.6X6.0; P7119.6X6.0; P72110.0X6.0	1	7059571
P88006	Nr06	P501 + P505 + P507 + P509 + P511 + P513 + P515 + P521 + P523	10	P5013.0×3.0; P5053.0×3.0; P5073.0×3.0; P5093.0×3.0; P5113.0×3.0; P5133.0×3.0×8.0; P5133.0×3.0×14.0; P5153.0×3.0; P5213.0×3.0; P5233.0×3.0	1	7806110

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.

Workpiece material group suitability. Recommended operating speed (RPM) on page 252.

A=Styles in Set, B=No. in Set, C=Rotary Burrs in Set.

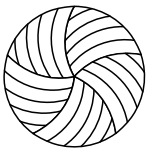
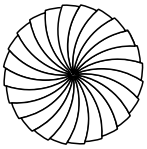
Product	Nr.	A	B	C	Pack Qty	MID
P89001	Nr01	P803 + P805 + P811 + P813 + P821	40	P803(6.0X6.0; 8.0X6.0; 9.6X6.0; 12.7X6.0) X 2; P805(6.0X6.0; 8.0X6.0; 9.6X6.0; 12.7X6.0) X 2; P811(6.0X6.0; 8.0X6.0; 9.6X6.0; 12.7X6.0) X 2; P813(6.0X6.0; 8.0X6.0; 9.6X6.0; 12.7X6.0) X 2; P821(6.0X6.0; 8.0X6.0; 9.6X6.0; 12.7X6.0) X 2	1	6814220

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), Aluminum (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 center of the burr, improving the cutting action and reducing the chances of chip 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

1 **J205**

DORMER

2

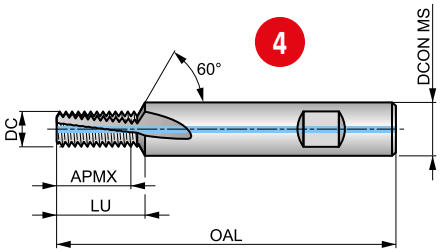
Solid Carbide Thread Mill with Through Coolant and Countersink, Metric

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.

3

5

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 308.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■172 B	■193 B	■200 B	■148 B	■130 B	■115 B	■133 B	■107 B	■90 B	■79 B	■67 B	◪55 B	■62 B	■52 B
M2.1	M2.2	M2.3	M3.1	M3.2	M3.3	M4.1	M4.2	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3
■55 B	■45 B	■38 B	■47 A	■40 A	■36 A	■30 A	◪26 A	■130 B	■96 B	■72 B	■123 B	■100 B	■80 B
K3.1	K3.2	K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3
■109 B	■83 B	■67 B	■101 A	■76 A	■56 A	■48 A	◪40 A	■114 B	■86 B	■66 B	■400 C	■300 C	■200 C
N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	N4.3	S1.1	S1.2	S1.3	S2.1	S2.2
■262 C	■235 C	■170 C	■610 C	■360 C	■180 C	■290 C	■145 C	■65 C	■40 A	■40 A	◪30 A	■33 A	◪25 A
S3.1	S3.2	S4.1	S4.2	H1.1									
■25 A	◪21 A	■20 A	◪16 A	◪60 A									

6

Internal Thread.

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
J20[7]1.50	M10	1.50	8.20	21.00	83.0	12.00	3	22.80
J20[7]1.75	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

7

8

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	Aluminum Chromium Nitride (special optimized process)

Shank

DIN 6535HA	DIN 6535 HA Cylindrical Shank	DIN 6535HB	DIN 6535 HB Weldon Shank

Coolant Exit Style (CXSC)

	Through Tool Coolant – Axial Exit

THREAD MILLS – TOOL MATERIALS AND SURFACE COATINGS NAVIGATOR

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

Surface Coatings		
Alcrona coatings (Alcrona Pro)	Alcrona Pro	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.

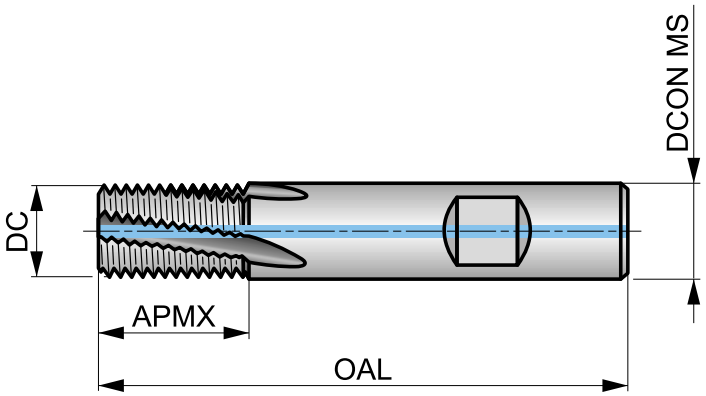
Thread form (THFT)	UNC	UNF	M	M	M	M	MF	MF	NPT	G	
Basic standard group (BSG)	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	
Usable length (ULDR)	2×D	2×D	2×D	2×D	2×D	2×D	1.5×D	1.5×D		1.5×D	
Material code (BMC)	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	
Flute Geometry (FDC)											
Flute helix angle (FHA)	λ 10°	λ 10°	λ 10°	λ 10°	λ 27°	λ 27°	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 6535HB	DIN 6535HB	DIN 6535HA	DIN 6535HB	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HB	DIN 6535HB	DIN 6535HA	
Coolant exit style (CXSC)											
Product Family Code	J235	J245	J200	J205	J210	J215	J220	J225	J260	J280	
PSF cutting diameters range	1/4 - 3/4	1/4 - 3/4	M4 - M16	M8 - M16	M6 - M16	M6 - M16	M6 - M24	M12 - M18	1/8 - 2"	1/8 - 3"	
	347	348	349	350	351	352	353	354	355	356	
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

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. Alcrona Pro coated for the best machining result and through coolant for better chip evacuation.



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 357.

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
■ 594 H	■ 666 H	■ 689 H	■ 512 H	■ 449 H	■ 397 H	■ 459 H	■ 367 H	■ 312 H	■ 272 H	■ 230 H	■ 190 H	■ 213 H	■ 180 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**
■ 190 H	■ 154 H	■ 131 H	■ 164 G	■ 138 G	■ 125 G	■ 105 G	◪ 89 G	■ 449 H	■ 331 H	■ 249 H	■ 423 H	■ 344 H	■ 276 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**
■ 377 H	■ 285 H	■ 233 H	■ 348 G	■ 262 G	■ 194 G	■ 167 G	■ 138 G	■ 394 H	■ 295 H	■ 230 H	■ 1378 I	■ 1033 I	■ 689 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**
■ 902 I	■ 810 I	■ 587 I	■ 2100 I	■ 1240 I	■ 620 I	■ 1001 I	■ 502 I	■ 226 I	■ 138 G	■ 138 G	◪ 105 G	■ 115 G	◪ 85 G
S3.1	**S3.2**	**S4.1**	**S4.2**	**H1.1**	**H3.1**								
■ 85 G	◪ 72 G	■ 69 G	◪ 56 G	■ 207 G	◪ 148 G								

Internal Thread.

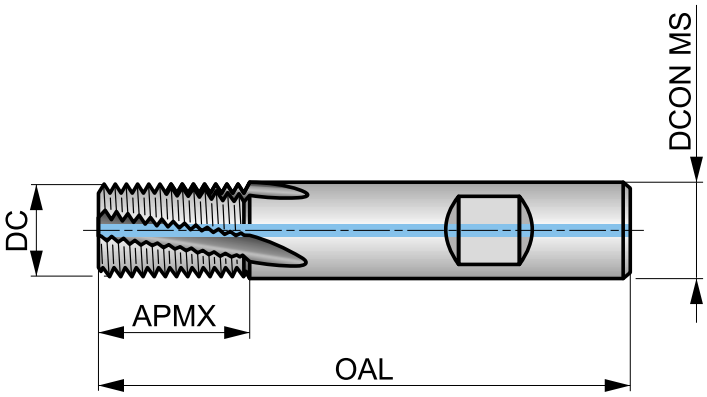
Product	TDZ	TPI	DC (inch)	APMX (inch)	OAL (inch)	DCON MS (inch)	NOF	Pack Qty	MID
J2354.8-20	1/4	20	0.1890	0.5512	2.2441	0.2362	3	1	6821334
J2355.5-18	5/16	18	0.2165	0.5512	2.2441	0.2362	3	1	6821335
J2357.5-16	3/8	16	0.2953	0.7480	2.4803	0.3150	4	1	6821336
J2358.0-14	7/16	14	0.3150	0.7480	2.4803	0.3150	4	1	6821337
J23510.0-13	1/2	13	0.3937	0.8661	2.8346	0.3937	4	1	6821339
J23510.0-12	9/16	12	0.3937	0.8661	2.8346	0.3937	4	1	6821338
J23512.0-11	5/8	11	0.4724	1.0236	3.2677	0.4724	4	1	6821340
J23514.0-10	3/4	10	0.5512	1.2598	3.2677	0.5512	5	1	6821341

J245

DORMER

Solid Carbide Thread Mill with Through Coolant, UNF

Universal high performance tool to machine same or bigger diameters than the TDZ with the same pitch. Left or right-hand, through or blind holes almost down to the bottom. Alcrona Pro coated for the best machining result and through coolant for better chip evacuation.



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 357.

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
■ 594 K	■ 666 K	■ 689 K	■ 512 K	■ 449 K	■ 397 K	■ 459 K	■ 367 K	■ 312 K	■ 272 K	■ 230 K	■ 190 K	■ 213 K	■ 180 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**
■ 190 K	■ 154 K	■ 131 K	■ 164 J	■ 138 J	■ 125 J	■ 105 J	◪ 89 J	■ 449 K	■ 331 K	■ 249 K	■ 423 K	■ 344 K	■ 276 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**
■ 377 K	■ 285 K	■ 233 K	■ 348 J	■ 262 J	■ 194 J	■ 167 J	■ 138 J	■ 394 K	■ 295 K	■ 230 K	■ 1378 L	■ 1033 L	■ 689 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**
■ 902 L	■ 810 L	■ 587 L	■ 2100 L	■ 1240 L	■ 620 L	■ 1001 L	■ 502 L	■ 226 L	■ 138 J	■ 138 J	◪ 105 J	■ 115 J	◪ 85 J
S3.1	**S3.2**	**S4.1**	**S4.2**	**H1.1**	**H3.1**								
■ 85 J	◪ 72 J	■ 69 J	◪ 56 J	■ 207 J	◪ 148 J								

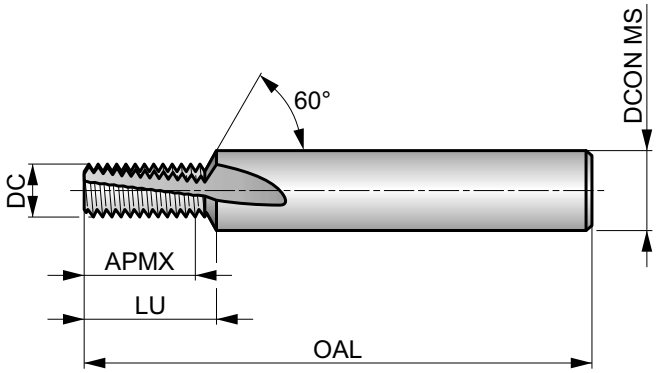
Internal Thread.

Product	TDZ	TPI	DC (inch)	APMX (inch)	OAL (inch)	DCON MS (inch)	NOF	Pack Qty	MID
J2454.8-28	1/4	28	0.1890	0.5512	2.2441	0.2362	3	1	6821344
J2456.0-24	5/16, 3/8	24	0.2362	0.5512	2.2441	0.2362	3	1	6821345
J2458.0-20	7/16, 1/2	20	0.3150	0.7480	2.4803	0.3150	4	1	6821346
J24510.0-18	9/16, 5/8	18	0.3937	0.8661	2.8346	0.3937	4	1	6821342
J24514.0-16	3/4	16	0.5512	1.2598	3.2677	0.5512	5	1	6821343

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. 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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 357.

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
■ 564 B	■ 633 B	■ 656 B	■ 486 B	■ 427 B	■ 377 B	■ 436 B	■ 351 B	■ 295 B	■ 259 B	■ 220 B	◪ 180 B	■ 203 B	■ 171 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**
■ 180 B	■ 148 B	◪ 125 B	■ 154 A	■ 131 A	◪ 118 A	■ 98 A	◪ 85 A	■ 427 B	■ 315 B	■ 236 B	■ 404 B	■ 328 B	■ 262 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**
■ 358 B	■ 272 B	■ 220 B	■ 331 A	■ 249 A	■ 184 A	■ 157 A	◪ 131 A	■ 374 B	■ 282 B	■ 217 B	■ 1312 C	■ 984 C	■ 656 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**
■ 860 C	■ 771 C	■ 558 C	■ 2001 C	■ 1181 C	■ 591 C	■ 951 C	■ 476 C	■ 213 C	■ 131 A	◪ 131 A	◪ 98 A	◪ 108 A	◪ 82 A
S3.1	**S3.2**	**S4.1**	**S4.2**	**H1.1**									
◪ 82 A	◪ 69 A	◪ 66 A	◪ 52 A	◪ 197 A									

Internal Thread.

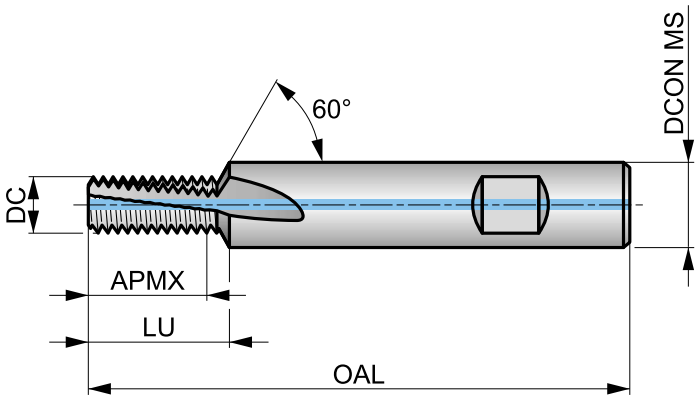
Product	TDZ	TP (mm)	DC (mm)	APMX (mm)	OAL (mm)	DCON MS (mm)	NOF	LU (mm)	Pack Qty	MID
J2003.2X.7	M4	0.70	3.20	8.40	57.0	6.00	3	9.50	1	6821169
J2004.1X.8	M5	0.80	4.10	11.20	57.0	6.00	3	12.10	1	6821290
J2004.8X1.0	M6	1.00	4.80	13.00	63.0	8.00	3	14.40	1	6821291
J2006.5X1.25	M8	1.25	6.50	17.50	72.0	10.00	3	19.10	1	6821292
J2008.2X1.5	M10	1.50	8.20	21.00	83.0	12.00	3	22.80	1	6821293
J2009.9X1.75	M12	1.75	9.90	26.25	83.0	14.00	4	28.20	1	6821294
J20011.6X2.0	M14	2.00	11.60	30.00	92.0	16.00	4	32.20	1	6821167
J20013.6X2.0	M16	2.00	13.60	34.00	92.0	18.00	4	36.20	1	6821168

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. 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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 357.

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
■564 B	■633 B	■656 B	■486 B	■427 B	■377 B	■436 B	■351 B	■295 B	■259 B	■220 B	◪180 B	■203 B	■171 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**
■180 B	■148 B	■125 B	■154 A	■131 A	■118 A	■98 A	◪85 A	■427 B	■315 B	■236 B	■404 B	■328 B	■262 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**
■358 B	■272 B	■220 B	■331 A	■249 A	■184 A	■157 A	◪131 A	■374 B	■282 B	■217 B	■1312 C	■984 C	■656 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**
■860 C	■771 C	■558 C	■2001 C	■1181 C	■591 C	■951 C	■476 C	■213 C	■131 A	■131 A	◪98 A	■108 A	◪82 A
S3.1	**S3.2**	**S4.1**	**S4.2**	**H1.1**									
■82 A	◪69 A	■66 A	◪52 A	◪197 A									

Internal Thread.

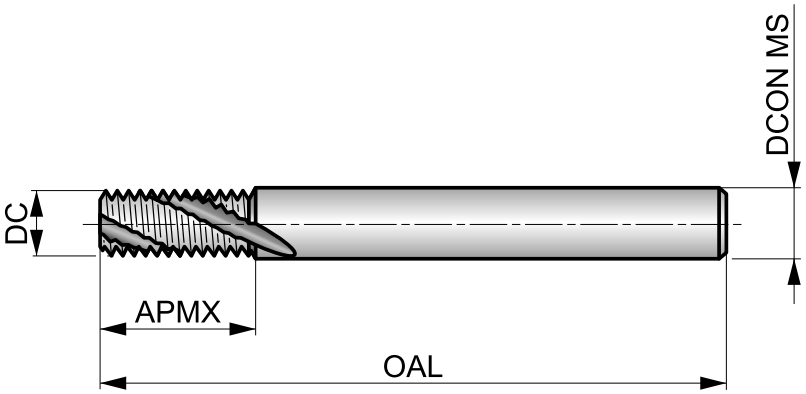
Product	TDZ	TP (mm)	DC (mm)	APMX (mm)	OAL (mm)	DCON MS (mm)	NOF	LU (mm)	Pack Qty	MID
J2056.5X1.25	M8	1.25	6.50	17.50	72.0	10.00	3	19.10	1	6821297
J2058.2X1.50	M10	1.50	8.20	21.00	83.0	12.00	3	22.80	1	6821298
J2059.9X1.75	M12	1.75	9.90	26.25	83.0	14.00	4	28.20	1	6821299
J20511.6X2.0	M14	2.00	11.60	30.00	92.0	16.00	4	32.20	1	6821295
J20513.6X2.0	M16	2.00	13.60	34.00	92.0	18.00	4	36.20	1	6821296

J210

DORMER

Solid Carbide Thread Mill with High Helix, Metric

Universal high performance tool to machine same or bigger diameters than the TDZ with the same pitch. Left or right-hand, through or blind holes almost down to the bottom. 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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 357.

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
■ 594 B	■ 666 B	■ 689 B	■ 512 B	■ 449 B	■ 397 B	■ 459 B	■ 367 B	■ 312 B	■ 272 B	■ 230 B	◪ 190 B	■ 213 B	■ 180 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**
■ 190 B	■ 154 B	◪ 131 B	■ 164 A	■ 138 A	◪ 125 A	■ 105 A	◪ 89 A	■ 449 B	■ 331 B	■ 249 B	■ 423 B	■ 344 B	■ 276 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**
■ 377 B	■ 285 B	■ 233 B	■ 348 A	■ 262 A	■ 194 A	■ 167 A	◪ 138 A	■ 394 B	■ 295 B	■ 230 B	■ 1378 C	■ 1033 C	■ 689 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**
■ 902 C	■ 810 C	■ 587 C	■ 2100 C	■ 1240 C	■ 620 C	■ 1001 C	■ 502 C	■ 226 C	■ 138 A	◪ 138 A	◪ 105 A	◪ 115 A	◪ 85 A
S3.1	**S3.2**	**S4.1**	**S4.2**	**H1.1**	**H3.1**								
◪ 85 A	◪ 72 A	◪ 69 A	◪ 56 A	■ 207 A	◪ 148 A								

Internal Thread.

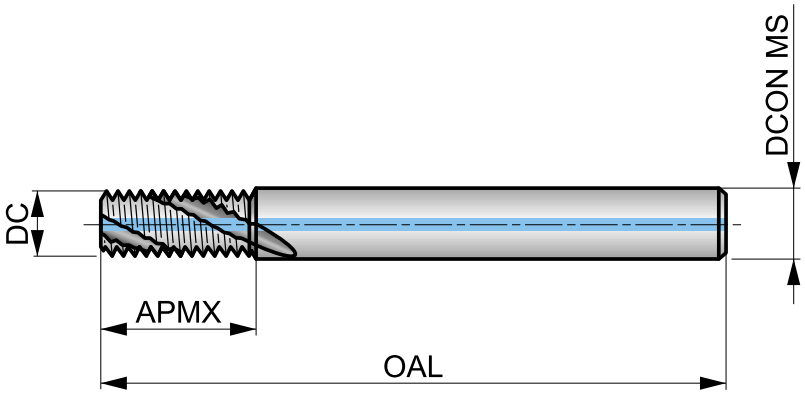
Product	TDZ	TP (mm)	DC (mm)	APMX (mm)	OAL (mm)	DCON MS (mm)	NOF	Pack Qty	MID
J2104.5X1.0	M6	1.00	4.50	13.00	57.0	6.00	3	1	6821302
J2106.0X1.25	M8	1.25	6.00	17.50	65.0	6.00	3	1	6821303
J2107.5X1.5	M10	1.50	7.50	21.00	72.0	8.00	3	1	6821304
J2109.5X1.75	M12	1.75	9.50	26.25	80.0	10.00	3	1	6821305
J21010.0X2.0	M14	2.00	10.00	30.00	83.0	10.00	4	1	6821300
J21012.0X2.0	M16	2.00	12.00	34.00	92.0	12.00	4	1	6821301

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 (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 357.

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
■594 B	■666 B	■689 B	■512 B	■449 B	■397 B	■459 B	■367 B	■312 B	■272 B	■230 B	■190 B	■213 B	■180 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**
■190 B	■154 B	■131 B	■164 A	■138 A	■125 A	■105 A	◪89 A	■449 B	■331 B	■249 B	■423 B	■344 B	■276 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**
■377 B	■285 B	■233 B	■348 A	■262 A	■194 A	■167 A	■138 A	■394 B	■295 B	■230 B	■1378 C	■1033 C	■689 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**
■902 C	■810 C	■587 C	■2100 C	■1240 C	■620 C	■1001 C	■502 C	■226 C	■138 A	■138 A	◪105 A	■115 A	◪85 A
S3.1	**S3.2**	**S4.1**	**S4.2**	**H1.1**	**H3.1**								
■85 A	◪72 A	■69 A	◪56 A	■207 A	◪148 A								

Internal Thread.

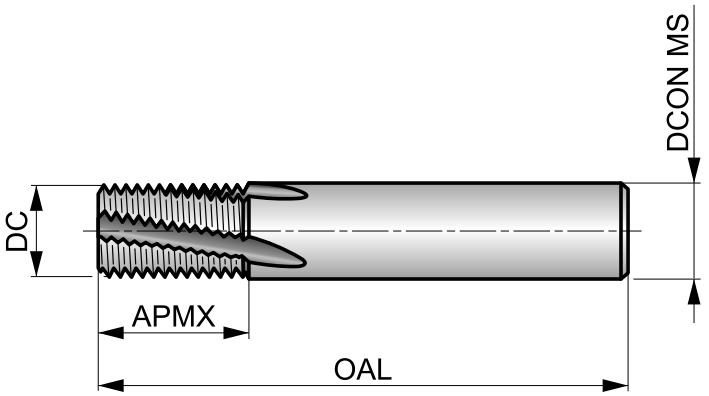
Product	TDZ	TP (mm)	DC (mm)	APMX (mm)	OAL (mm)	DCON MS (mm)	NOF	Pack Qty	MID
J2154.5X1.0	M6	1.00	4.50	13.00	57.0	6.00	3	1	6821308
J2156.0X1.25	M8	1.25	6.00	17.50	65.0	6.00	3	1	6821309
J2157.5X1.5	M10	1.50	7.50	21.00	72.0	8.00	3	1	6821310
J2159.5X1.75	M12	1.75	9.50	26.25	80.0	10.00	3	1	6821311
J21510.0X2.0	M14	2.00	10.00	30.00	83.0	10.00	4	1	6821306
J21512.0X2.0	M16	2.00	12.00	34.00	92.0	12.00	4	1	6821307

J220

DORMER

Solid Carbide Thread Mill, Metric Fine

Universal high performance tool to machine same or bigger diameters than the TDZ with the same pitch. Left or right-hand, through or blind holes almost down to the bottom. Alcrona Pro coated for the best machining result in a wide range of materials.



MF	DORMER	1.5×D
HM		λ 10°
R	Alcrona Pro	DIN 6535HA

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 357.

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
■ 623 E	■ 696 E	■ 794 E	■ 535 E	■ 469 E	■ 417 E	■ 479 E	■ 387 E	■ 325 E	■ 285 E	■ 243 E	■ 200 E	■ 226 E	■ 190 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**
■ 200 E	■ 164 E	◪ 138 E	■ 171 D	■ 144 D	◪ 131 D	■ 108 D	◪ 95 D	■ 469 E	■ 348 E	■ 262 E	■ 446 E	■ 361 E	■ 289 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**
■ 394 E	■ 299 E	■ 243 E	■ 364 D	■ 276 D	■ 203 D	■ 174 D	◪ 144 D	■ 413 E	■ 312 E	■ 240 E	■ 1444 F	■ 1083 F	■ 722 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**
■ 945 F	■ 850 F	■ 614 F	■ 2201 F	■ 1299 F	■ 650 F	■ 1047 F	■ 525 F	■ 236 F	■ 144 D	◪ 144 D	◪ 108 D	◪ 118 D	◪ 92 D
S3.1	**S3.2**	**S4.1**	**S4.2**	**H1.1**	**H3.1**								
◪ 92 D	◪ 75 D	◪ 72 D	◪ 59 D	■ 217 D	◪ 157 D								

Internal Thread.

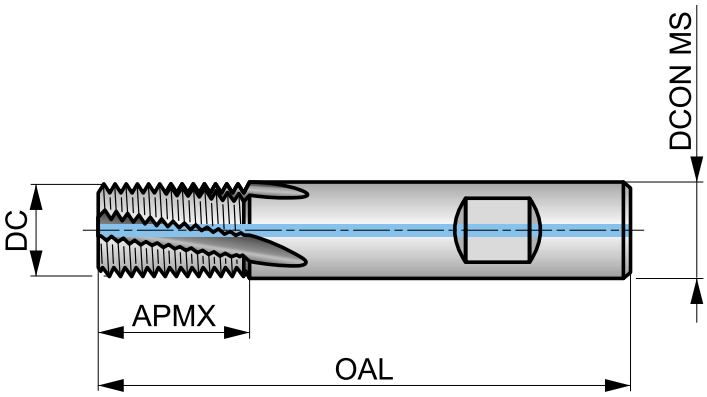
Product	TDZ	TP (mm)	DC (mm)	APMX (mm)	OAL (mm)	DCON MS (mm)	NOF	Pack Qty	MID
J2204.8X.5	M6	0.50	4.80	10.00	57.0	6.00	3	1	6821322
J2206.0X.75	M8	0.75	6.00	12.00	57.0	6.00	3	1	6821323
J2206.0X1.0	M8	1.00	6.00	12.00	57.0	6.00	3	1	6821324
J2208.0X1.0	M10	1.00	8.00	16.00	63.0	8.00	4	1	6821325
J22010.0X1.0	M12	1.00	10.00	20.00	72.0	10.00	4	1	6821312
J22010.0X1.5	M12	1.50	10.00	20.00	72.0	10.00	4	1	6821313
J22012.0X1.0	M14	1.00	12.00	22.00	83.0	12.00	4	1	6821314
J22012.0X1.5	M14	1.50	12.00	22.00	83.0	12.00	4	1	6821315
J22014.0X1.0	M16	1.00	14.00	26.00	83.0	14.00	5	1	6821316
J22014.0X1.5	M16	1.50	14.00	26.00	83.0	14.00	5	1	6821317
J22016.0X2.0	M20	2.00	16.00	30.00	92.0	16.00	5	1	6821318
J22016.0X2.5	M20	2.50	16.00	42.50	105.0	16.00	5	1	6821319
J22019.0X3.0	M24	3.00	19.00	50.00	125.0	20.00	5	1	6821320
J22020.0X2.0	M24	2.00	20.00	35.00	104.0	20.00	5	1	6821321

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. Alcrona Pro coated for the best machining result and through coolant for better chip evacuation.



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 357.

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
■623 E	■696 E	■794 E	■535 E	■469 E	■417 E	■479 E	■387 E	■325 E	■285 E	■243 E	■200 E	■226 E	■190 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**
■200 E	■164 E	■138 E	■171 D	■144 D	■131 D	■108 D	◪95 D	■469 E	■348 E	■262 E	■446 E	■361 E	■289 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**
■394 E	■299 E	■243 E	■364 D	■276 D	■203 D	■174 D	■144 D	■413 E	■312 E	■240 E	■1444 F	■1083 F	■722 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**
■945 F	■850 F	■614 F	■2201 F	■1299 F	■650 F	■1047 F	■525 F	■236 F	■144 D	■144 D	◪108 D	■118 D	◪92 D
S3.1	**S3.2**	**S4.1**	**S4.2**	**H1.1**	**H3.1**								
■92 D	◪75 D	■72 D	◪59 D	■217 D	◪157 D								

Internal Thread.

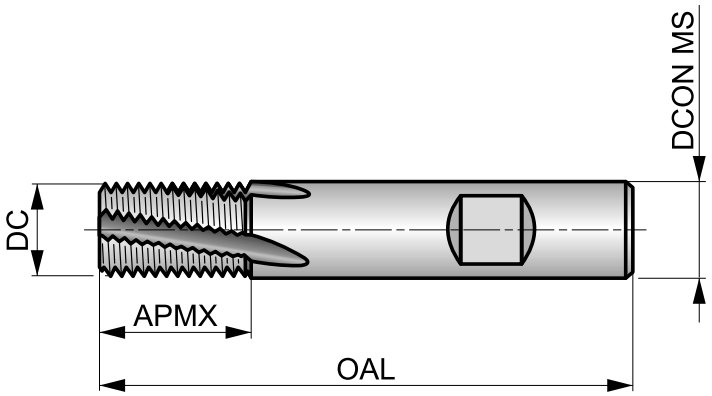
Product	TDZ	TP (mm)	DC (mm)	APMX (mm)	OAL (mm)	DCON MS (mm)	NOF	Pack Qty	MID
J22510.0X1.5	M12	1.50	10.00	20.00	72.0	10.00	4	1	6821331
J22512.0X1.0	M14	1.00	12.00	22.00	83.0	12.00	4	1	6821332
J22514.0X1.5	M16	1.50	14.00	26.00	83.0	14.00	5	1	6821327
J22516.0X1.5	M18	1.50	16.00	30.00	92.0	16.00	5	1	6821328

J260

DORMER

Solid Carbide Thread Mill, NPT

Universal high performance tool to machine same or bigger diameters than the TDZ with the same pitch. Left or right-hand, through or blind holes almost down to the bottom. Alcrona Pro coated for the best machining result in a wide range of materials.



NPT | DORMER | HM

 | λ 10° | R

 Alcrona Pro | DIN 6535HB

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 357.

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
■ 623 R	■ 696 R	■ 794 R	■ 535 R	■ 469 R	■ 417 R	■ 479 R	■ 387 R	■ 325 R	■ 285 R	■ 243 R	■ 200 R	■ 226 R	■ 190 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**
■ 200 R	■ 164 R	■ 138 R	■ 171 Q	■ 144 Q	■ 131 Q	■ 108 Q	◪ 95 Q	■ 469 R	■ 348 R	■ 262 R	■ 446 R	■ 361 R	■ 289 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**
■ 394 R	■ 299 R	■ 243 R	■ 364 Q	■ 276 Q	■ 203 Q	■ 174 Q	■ 144 Q	■ 413 R	■ 312 R	■ 240 R	■ 1444 S	■ 1083 S	■ 722 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**
■ 945 S	■ 850 S	■ 614 S	■ 2201 S	■ 1299 S	■ 650 S	■ 1047 S	■ 525 S	■ 236 S	■ 144 Q	■ 144 Q	◪ 108 Q	■ 118 Q	◪ 92 Q
S3.1	**S3.2**	**S4.1**	**S4.2**	**H1.1**	**H3.1**								
■ 92 Q	◪ 75 Q	■ 72 Q	◪ 59 Q	■ 217 Q	◪ 157 Q								

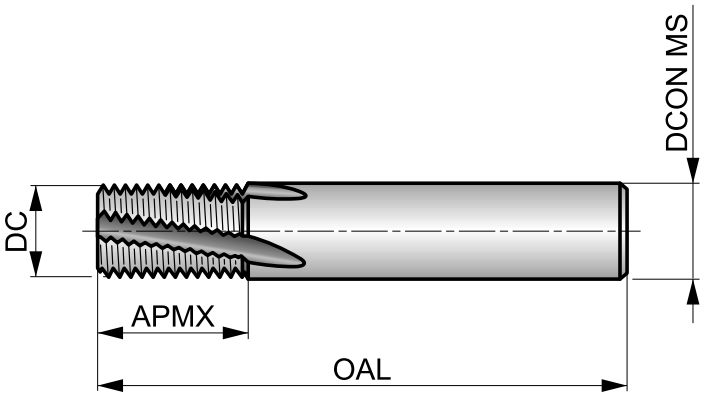
Internal Thread.

Product	TDZ	TPI	DC (inch)	APMX (inch)	OAL (inch)	DCON MS (inch)	NOF	Pack Qty	MID
J2607.9-27	1/8	27	0.3110	0.4528	2.2835	0.3150	3	1	6821349
J2609.9-18	1/4, 3/8	18	0.3898	0.6268	2.5984	0.3937	3	1	6821350
J26015.9-14	1/2, 3/4	14	0.6260	0.8055	3.2283	0.6299	4	1	6821347
J26019.9-11.5	1", 2"	11.5	0.7835	1.0677	3.6220	0.7874	5	1	6821348

J280

Solid Carbide Thread Mill, G(BSP)

Universal high performance tool to machine same or bigger diameters than the TDZ with the same pitch. Left or right-hand, through or blind holes almost down to the bottom. Alcrona Pro coated for the best machining result in a wide range of materials. Suited for producing internal and external threads.

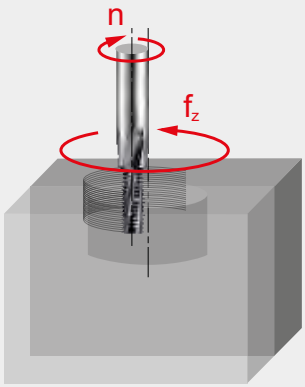


Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 357.

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
■623 N	■696 N	■794 N	■535 N	■469 N	■417 N	■479 N	■387 N	■325 N	■285 N	■243 N	■200 N	■226 N	■190 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**
■200 N	■164 N	■138 N	■171 M	■144 M	■131 M	■108 M	◪95 M	■469 N	■348 N	■262 N	■446 N	■361 N	■289 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**
■394 N	■299 N	■243 N	■364 M	■276 M	■203 M	■174 M	■144 M	■413 N	■312 N	■249 N	■1444 0	■1083 0	■722 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**
■945 0	■850 0	■614 0	■2201 0	■1299 0	■650 0	■1047 0	■525 0	■236 0	■144 M	■144 M	◪108 M	■118 M	◪92 M
S3.1	**S3.2**	**S4.1**	**S4.2**	**H1.1**	**H3.1**								
■92 M	◪75 M	■72 M	◪59 M	■217 M	◪157 M								

Internal and External Thread.

Product	TDZ	TPI	DC (inch)	APMX (inch)	OAL (inch)	DCON MS (inch)	NOF	Pack Qty	MID
J2806.0-28	1/8	28	0.2362	0.5906	2.2441	0.2362	3	1	6821356
J28010.0-19	1/4	19	0.3937	0.7874	2.8346	0.3937	4	1	6821351
J28014.0-19	3/8	19	0.5512	1.0236	3.2677	0.5512	5	1	6821352
J28016.0-14	1/2, 5/8	14	0.6299	1.1811	3.6220	0.6299	5	1	6821353
J28020.0-14	5/8, 3/4, 7/8	14	0.7874	1.3780	4.0945	0.7874	5	1	6821354
J28025.0-11	1", 3"	11	0.9843	1.7717	4.7638	0.9843	6	1	6821355



Feed per tooth per revolution f_z (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.

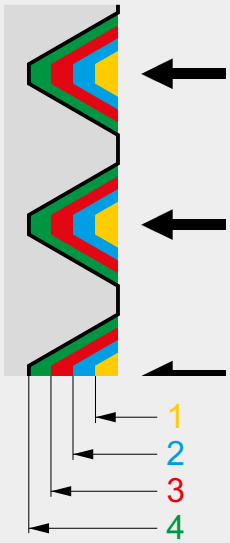
Correction of the feed per tooth for multiple passes:

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

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**	–	**2.00**	**2.00**	–	**2.00**	–	–	–	–	–	–	–	–
A	0.017	0.022	0.023	0.024	–	0.024	–	0.029	0.036	–	–	0.040	0.044	0.047	0.053	–	0.056	0.068	–	0.071	–	–	–	–	–	–	–	–
B	0.022	0.029	0.031	0.032	–	0.032	–	0.038	0.048	–	–	0.053	0.059	0.063	0.070	–	0.075	0.090	–	0.095	–	–	–	–	–	–	–	–
C	0.028	0.036	0.039	0.040	–	0.040	–	0.048	0.060	–	–	0.066	0.074	0.079	0.088	–	0.094	0.113	–	0.119	–	–	–	–	–	–	–	–
	–	–	–	**0.50**	–	**0.75**	**1.00**	–	–	–	**1.00**	–	–	–	**1.00**	**1.50**		**1.00**	**1.50**	–	**1.00**	**1.50**	**1.50**	**2.00**	**2.50**	**3.00**	**2.00**	–
D	–	–	–	0.044	–	0.041	0.036	–	–	–	0.057	–	–	–	0.075	0.067		0.079	0.071	–	0.083	0.071	0.092	0.081	0.073	0.067	0.096	–
E	–	–	–	0.058	–	0.055	0.048	–	–	–	0.076	–	–	–	0.100	0.089	–	0.105	0.094	–	0.110	0.095	0.122	0.108	0.097	0.089	0.128	–
F	–	–	–	0.073	–	0.069	0.060	–	–	–	0.095	–	–	–	0.125	0.111	–	0.131	0.118	–	0.138	0.119	0.153	0.135	0.121	0.111	0.160	–
	–	–	–	**20**	**18**	–	–	–	**16**	–	**14**	–	–	–	**13**	**12**	–	**11**	–	–	**10**	–	–	–	–	–	–	–
G	–	–	–	0.019	0.023	–	–	–	0.030	–	0.034	–	–	–	0.053	0.051	–	0.055	–	–	0.066	–	–	–	–	–	–	–
H	–	–	–	0.025	0.030	–	–	–	0.040	–	0.045	–	–	–	0.071	0.068	–	0.073	–	–	0.088	–	–	–	–	–	–	–
I	–	–	–	0.031	0.038	–	–	–	0.050	–	0.056	–	–	–	0.089	0.085	–	0.091	–	–	0.110	–	–	–	–	–	–	–
	–	–	–	**28**	–	**24**	–	–	–	–	**20**	–	–	–	**18**	–	–	–	–	–	**16**	–	–	–	–	–	–	–
J	–	–	–	0.023	–	0.026	–	–	–	–	0.041	–	–	–	0.062	–	–	–	–	–	0.083	–	–	–	–	–	–	–
K	–	–	–	0.030	–	0.035	–	–	–	–	0.054	–	–	–	0.083	–	–	–	–	–	0.110	–	–	–	–	–	–	–
L	–	–	–	0.038	–	0.044	–	–	–	–	0.068	–	–	–	0.104	–	–	–	–	–	0.138	–	–	–	–	–	–	–
	–	–	–	–	–	**28**	–	–	–	–	–	–	–	–	**19**	–	–	–	–	–	**19**	–	**14**	–	–	–	**14**	**11**
M	–	–	–	–	–	0.029	–	–	–	–	–	–	–	–	0.064	–	–	–	–	–	0.080	–	0.083	–	–	–	0.116	0.131
N	–	–	–	–	–	0.038	–	–	–	–	–	–	–	–	0.085	–	–	–	–	–	0.106	–	0.111	–	–	–	0.155	0.175
O	–	–	–	–	–	0.048	–	–	–	–	–	–	–	–	0.106	–	–	–	–	–	0.133	–	0.139	–	–	–	0.194	0.219
	–	–	–	–	–	–	–	–	–	**27**	–	–	–	**18**	–	–	–	–	–	–	**14**	**11.5**	–	–	–	–	–	–
Q	–	–	–	–	–	–	–	–	–	0.039	–	–	–	0.044	–	–	–	–	–	–	0.079	0.115	–	–	–	–	–	–
R	–	–	–	–	–	–	–	–	–	0.052	–	–	–	0.059	–	–	–	–	–	–	0.105	0.153	–	–	–	–	–	–
S	–	–	–	–	–	–	–	–	–	0.065	–	–	–	0.074	–	–	–	–	–	–	0.131	0.191	–	–	–	–	–	–



How to use the tables to find the depth increments per pass:

1. Select the table for your thread profile (example: "M12" is a metric thread).
2. Find the column matching your thread pitch in the top row of the table.
3. Find in that column below the recommended number of passes and for each pass the increment radial depth of cut. (example: for a pitch of 1.75 the recommended number of passes is 5 and radial depth of the 1st pass is 0.277 mm, the 2nd 0.228 mm etc.).
4. It is recommended to increase the number of passes for more difficult to machine materials.
5. For super-finishing result it is best practice to repeat the final pass.

Recommended number of passes and radial depth of cut per pass for female metric thread (60°).

		Radial depth of cut per pass (mm)										
		0.50	**0.70**	**0.75**	**0.80**	**1.00**	**1.25**	**1.50**	**1.75**	**2.00**	**2.50**	**3.00**
No. of passes	**1**	0.158	0.221	0.168	0.224	0.224	0.228	0.237	0.277	0.283	0.323	0.387
	2	0.131	0.183	0.138	0.185	0.185	0.188	0.196	0.228	0.234	0.267	0.320
	3	–	–	0.127	0.135	0.168	0.173	0.179	0.209	0.214	0.244	0.293
	4	–	–	–	–	–	0.133	0.138	0.161	0.164	0.187	0.225
	5	–	–	–	–	–	–	0.116	0.135	0.138	0.158	0.189
	6	–	–	–	–	–	–	–	–	0.122	0.139	0.167
	7	–	–	–	–	–	–	–	–	–	0.125	0.151
Acc. depth		0.289	0.404	0.433	0.544	0.577	0.722	0.866	1.010	1.155	1.443	1.732

Recommended number of passes and radial depth of cut per pass for female unified thread (60°).

		Radial depth of cut per pass (mm)									
		28	**24**	**20**	**18**	**16**	**14**	**13**	**12**	**11**	**10**
No. of passes	**1**	0.203	0.237	0.232	0.258	0.251	0.287	0.309	0.299	0.327	0.328
	2	0.167	0.195	0.191	0.213	0.207	0.237	0.255	0.247	0.270	0.271
	3	0.154	0.179	0.175	0.195	0.190	0.217	0.234	0.226	0.247	0.248
	4	–	–	0.135	0.149	0.146	0.166	0.179	0.174	0.189	0.190
	5	–	–	–	–	0.123	0.140	0.151	0.146	0.160	0.160
	6	–	–	–	–	–	–	–	0.130	0.140	0.141
	7	–	–	–	–	–	–	–	–	–	0.128
Acc. Depth		0.524	0.611	0.733	0.815	0.917	1.047	1.128	1.222	1.333	1.466

Recommended number of passes and radial depth of cut per pass for female G (BSP) thread (55°).

1 2 3 / 1"		Radial depth of cut per pass (mm)			
		28	**19**	**14**	**11**
No. of passes	**1**	0.225	0.271	0.318	0.362
	2	0.186	0.224	0.263	0.299
	3	0.170	0.205	0.241	0.274
	4	–	0.156	0.185	0.210
	5	–	–	0.155	0.177
	6	–	–	–	0.157
	7	–	–	–	–
Acc. Depth		0.581	0.856	1.162	1.479

Recommended number of passes and radial depth of cut per pass for female NPT thread (60°).

1 2 3 / 1"		Radial depth of cut per pass (mm)			
		27	**18**	**14**	**11.5**
No. of passes	**1**	0.283	0.348	0.390	0.423
	2	0.233	0.287	0.322	0.349
	3	0.214	0.263	0.295	0.320
	4	–	0.202	0.226	0.246
	5	–	–	0.190	0.207
	6	–	–	–	0.183
	7	–	–	–	–
Acc. Depth		0.730	1.100	1.423	1.728

General hints on thread milling

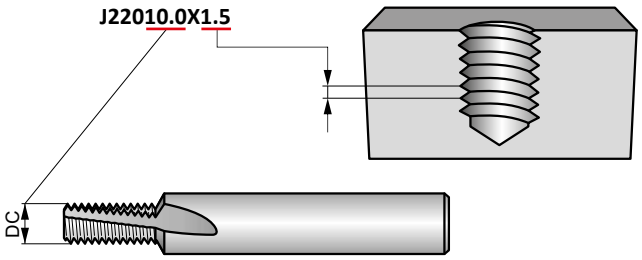
1. Thread milling is the process of generating a thread by the circular interpolation of a milling cutter with a specific thread geometry ground around it's periphery.
2. To be able to use a thread milling cutter it is necessary to have a CNC machine that can make circular paths.
3. Most modern CNC machines are equipped with machining cycles for thread milling.
4. Consult the manual or contact the machine supplier for information.

Features and benefits

1. Thread milling gives increased reliability and tool life.
2. Threadmills produce small chips resulting in problem free threading.
3. Tolerance adjustments can be made using exact co-ordinates.
4. You can generate a complete thread to the bottom of the hole.
5. Capable of machining a wide variety of materials.
6. The same cutter can produce different size threads provided the pitch is the same.
7. Both right and left hand threads can be created with the same tool.
8. Some thread mills can also machine the entry chamfer (J200 and J205).

Choosing your tool

Thread milling cutters have an item code based on the type, diameter *DC* and pitch *TP*.
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.
- 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 chip removal.
- When threading more difficult materials, it is recommended to take multiple passes.

1 **SAD11E**

P M K N S H 2

PRAMET 3 S

5


4

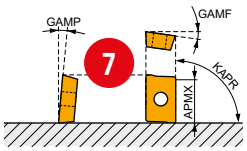
FORCE AD11 Square Shoulder Mill with Internal Coolant

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.

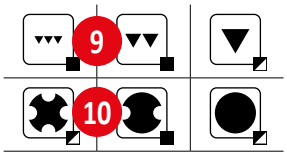
FORCE AD

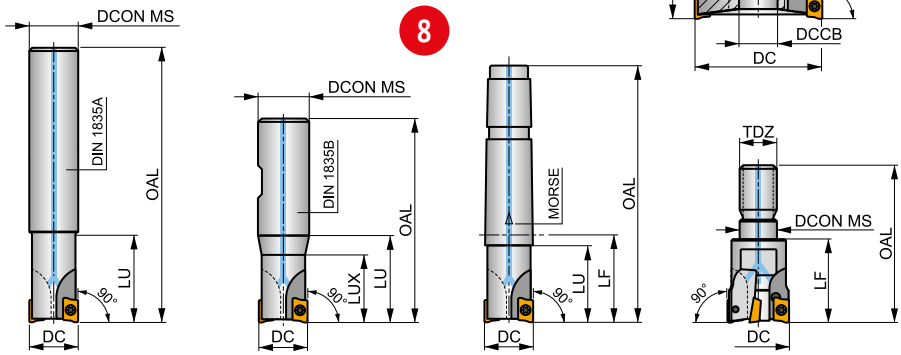
KAPR	90°
APMX	9.0 mm

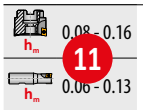
6



7


9 10





11


12

	Product	DC (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	LU (mm)	LUX (mm)	LF (mm)	TDZ (mm)	CZC MS (mm)	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)	16	17	18 max.	19	20 kg	21	22	23
13	14 **16A2R024A16-SAD11E-C**	16	160	14	–	24	–	–	–	–	–	–	-12.8	4								
	16A2R024A16-SAD11E-C	16	135	16	–	24	–	–	–	–	–	–	-12.8	4	2		30100		0.19		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	–

15

GI169	ADMX 11T3..	ADEX 11T3..

24

		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	–

25

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

26

Typical page with indexable mills cutter displayed – specific page details will differ.

INDEXABLE MILLS – PAGE OVERVIEW

Pos.	Description
1	Designation of cutter
2	Material group recommendations
3	Clamping system of insert
4	Illustrative picture
5	Tool description
6	Setting angle and maximum theoretical depth of cut (mm)
7	Tool geometry
8	Schematic drawing of tool
9	Achievable quality of surface
10	Character of cut/working conditions
11	Maximum range of mean chip thickness (mm) for end milling cutters and/or shell milling cutters
12	Product applications
13	Shank type

Pos.	Description
14	ISO code of cutter
15	Dimensions (mm), angles [1] (°) and connection size code
16	Number of teeth
17	Irregular teeth pitch
18	Maximum revolutions of cutter
19	Internal supply of coolant
20	Weight (kg)
21	Group of compatible inserts [2]
22	Group of spare parts [2]
23	Group of special accessories [2]
24	Compatible inserts
25	Spare parts
26	Special accessories

[1] γ_f = Radial rake setting angle (GAMF) of insert pocket – see indexable mills technical information

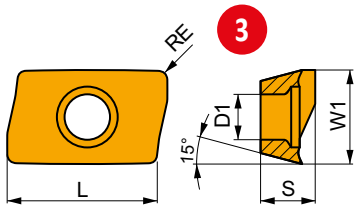
γ_p = Axial rake setting angle (GAMP) of insert pocket – see indexable mills technical information

[2] Spare parts and special accessories icons are designed schematically for their ease of understanding. They aren't included in the list of icons. Screws are, in some cases, completed with info on torque value in Nm, length of screw and size of thread.

1 ADMX 11

PRAMET

	W1 (mm)	D1 (mm)	L (mm)	S (mm)
11T3	6.530	2.90	11.00	3.97



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

Product		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
4	23° 0,06 5		6																	
			F geometry with very sharp positive design for light machining. 10																	
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	–	–	–	–	–	–	–	–	–
7	8 9	0.4	240	0.10	2.0	140	0.09	2.0	225	0.10	2.0 11	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	–	–	–
	23° 0,09		1 U S																	
			M geometry with positive design for light to medium machining.																	
ADMX 11T302SR-M	M8330	0.2	190	0.15	4.0	110	0.14	4.0	180	0.15	4.0	–	–	–	45	0.12	3.2	–	–	–
	M8340	0.2	170	0.15	4.0	100	0.14	4.0	160	0.15	4.0	–	–	–	40	0.12	3.2	–	–	–
ADMX 11T304SR-M	8215	0.4	205	0.15	4.0	120	0.14	4.0	190	0.15	4.0	–	–	–	50	0.12	3.2	–	–	–
	M8310	0.4	220	0.15	4.0	110	0.14	4.0	205	0.15	4.0	–	–	–	–	–	–	–	–	–

ADMX 11T304SR-M:M8310

- Use full insert specification code when ordering!
- Grade
- Include colon
- ISO insert code

Typical page with milling inserts displayed – specific page details will differ. Most of inserts can be found in this catalogue just immediately after the relevant milling cutter or, alternatively, in the separate inserts chapter.

MILLING INSERTS – PAGE OVERVIEW

Pos.	Description
1	Designation of insert
2	Table with insert sizes (mm)
3	Schematic drawing of insert
4	Picture of representative insert
5	Profile of main cutting edge
6	Icons – specific features and cutting edge type

Pos.	Description
7	ISO insert code
8	Grade
9	Insert radii (mm)
10	Geometry description
11	Application area of insert [1]

[1] Recommendations for cutting speed corrections can be found at the end of Milling chapter in the technical section.

Technical information follows immediately after the milling cutter pages, their compatible inserts and info on starting cutting speeds. These will help you to use the tools in the correct way. If you are unsure how to use or interpret this information, either refer to the technical section at the end of the milling chapter or contact your Dormer Pramet representative.

INDEXABLE MILLS – ICONS OVERVIEW

General icons

■	Primary use
◪	Possible use

P	Material group P
M	Material group M
K	Material group K
N	Material group N
S	Material group S
H	Material group H

▼▼▼	Finishing – very good surface quality
▼▼	Medium machining – good surface quality
▼	Roughing – unlimited surface roughness
●	Suitable for stable working conditions
●	Suitable for unstable working conditions
●	Suitable for heavy working conditions

Milling Operations

	Face Milling
	Shallow shoulder milling
	Deep shoulder milling
	Shallow slot milling
	Deep slot milling

	T-slot Milling
	Contoured Surfaces (copy milling)
	Chamfer Milling
	Helical interpolation
	Helical interpolation in a pre-drilled hole

	Plunge Milling
	Progressive Plunging
	Ramping
	Rear face milling

Shanks

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

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

	Arbor DIN 69871-1
	Arbor MAS BT (JIS-B-6339)
	Threaded coupling

INDEXABLE MILLS – ICONS OVERVIEW

Features

1	First choice
	Heavy working conditions
HFC	High Feed Cutting
W	Insert with Wiper geometry
	Long overhang
	Thin-walled and slim workpieces
U	Universal wide range option
F	Sharp edge
E	Rounded edge
T	Edge with facet
S	Rounded edge with facet
P	Rounded edge with double facet

Others

Nm	Clamping torque of screw (Nm)
x 1	Effective number of teeth
5 3 1 x 4 2	Number of teeth (helical cutters)

Technical Parts

	Chamfering angle (°)
a_p	Depth of cut
APMX/l	Maximum cutting depth over the length of cut
BS	Wiper edge length
x.f	Multiplication factor for feed (machining on center line)
x.f	Multiplication factor for feed (machining off center line)
X.V	Multiplication factor for cutting speed
DC	Diameter of cutter
DCX	Maximum diameter of cutter
DEF	Effective diameter of cutter
max	Cutting depth for plunging
CDX	Effective reach of tool
	Hole diameter
f	Feed
f_{min}	Minimal feed
f_{max}	Maximal feed
	Chipbreaker
APMX	Effective working length of tool
$a_{e\,max}$	Maximum width of machined area
	Number of edges in use
	Number of teeth
a_e / DC	Ratio (%) of radial width of cut to cutting diameter
a_e / DCX	Ratio (%) of radial width of cut to maximal cutting diameter
RE	Corner radius of insert
RPMX	Maximal angle for ramping (°)
SMAX DMAX	Maximal depth per revolution for maximal diameter of hole
SMAX DMIN	Maximal depth per revolution for minimal diameter of hole
1 f	Starting feed
FE	Contouring step in conventional milling
FE	Contouring step in up/down cross milling
µm	Roughness of machined surface R_a (µm)
	Time (min)
	Thread pitch
1 2 3 1"	Threads per inch

DORMER PRAMET

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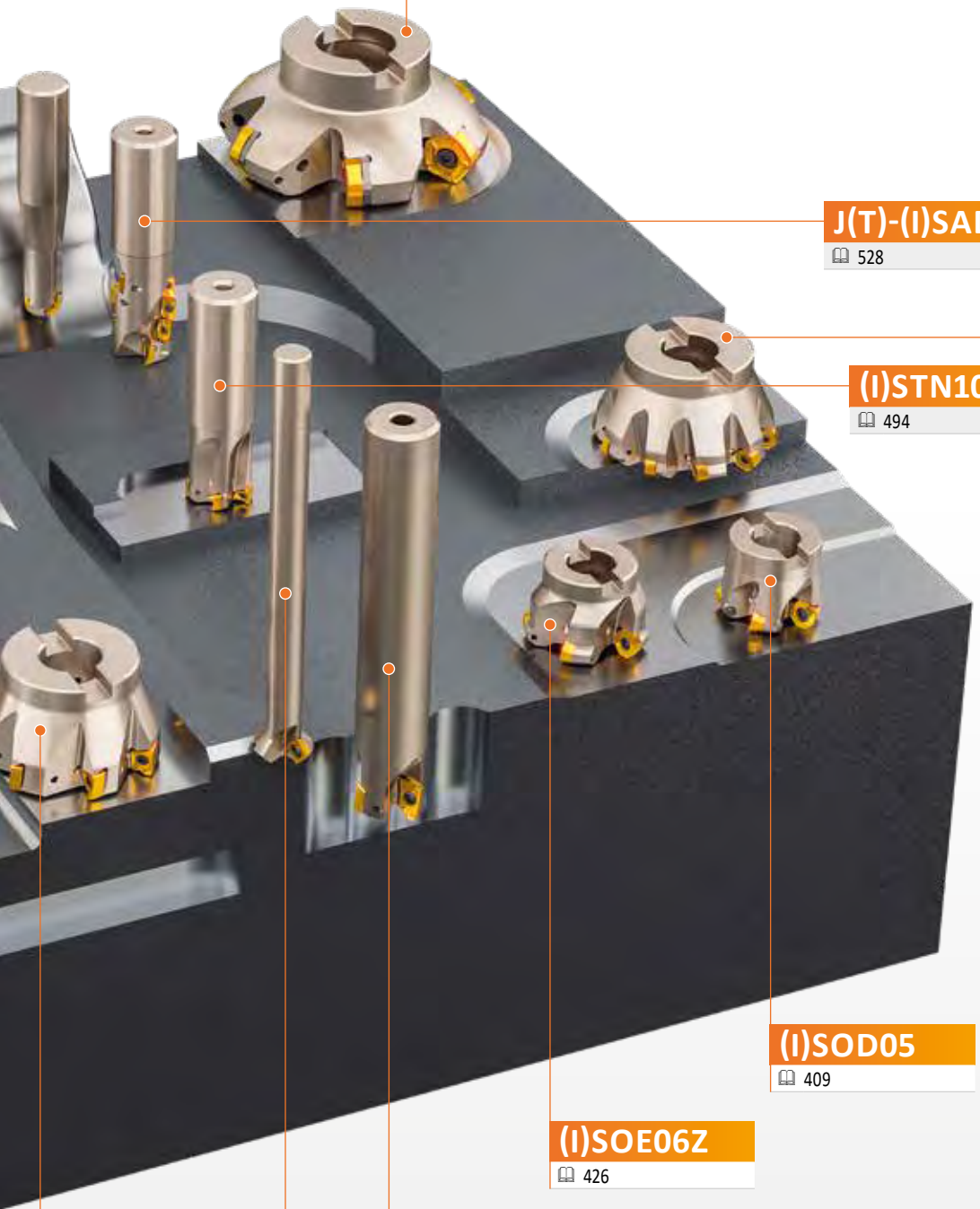
K2-SRC
568
(I)SBN10
600
SWN04C
595
S90SN
621
SPD09
612
SAD11E
469
SSN11
606
SRD12
556
STN16
498



(I)SPN13
434

J(T)-(I)SAD11E
528

(I)SHN09C
453

(I)STN10
494

(I)SOD05
409

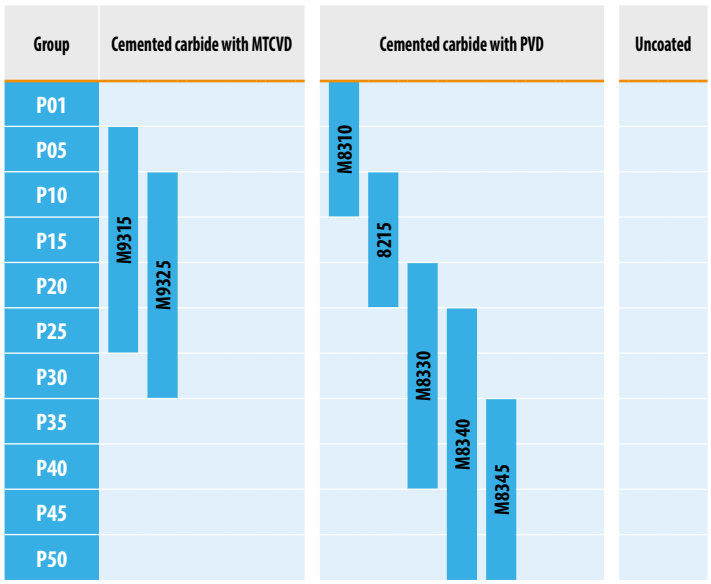
(I)SOE06Z
426

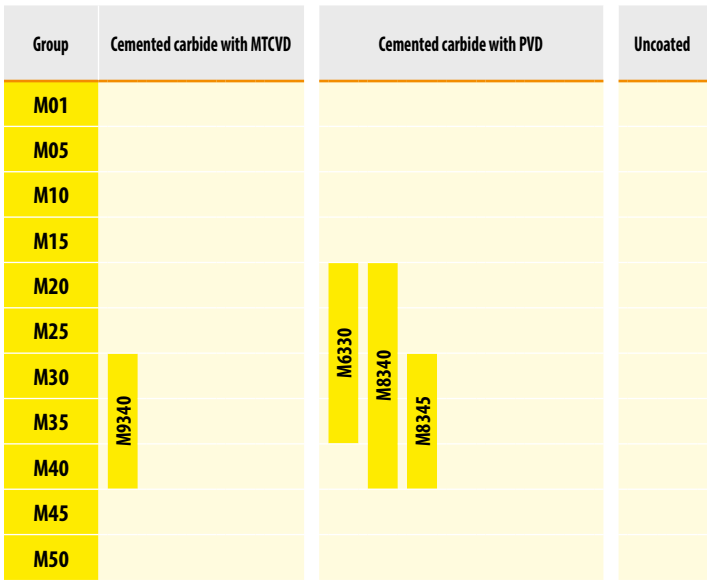
(I)SAD16E
482

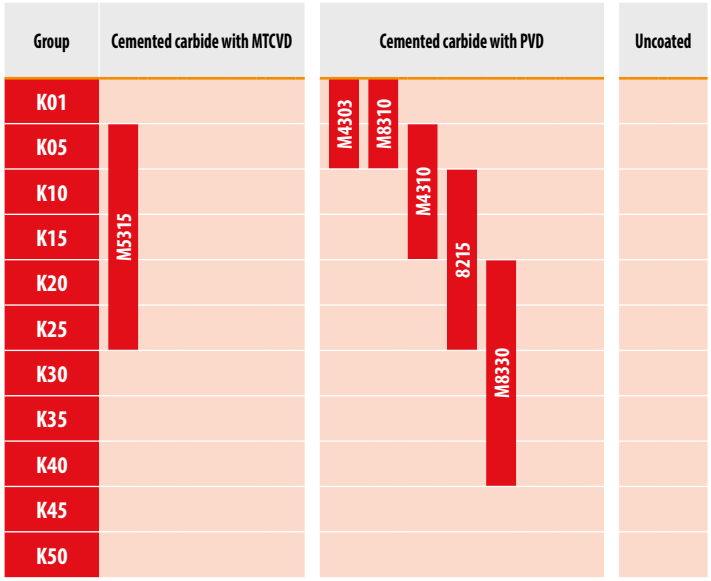
(I)SLN12
507

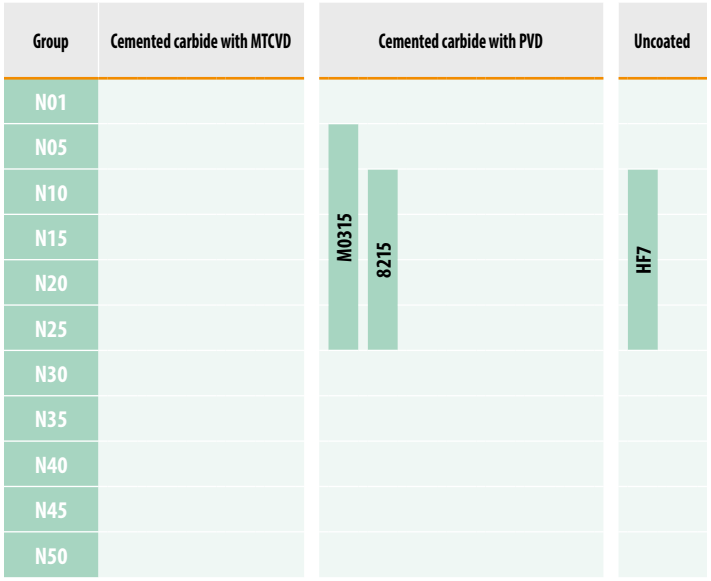
(I)SSD09
629

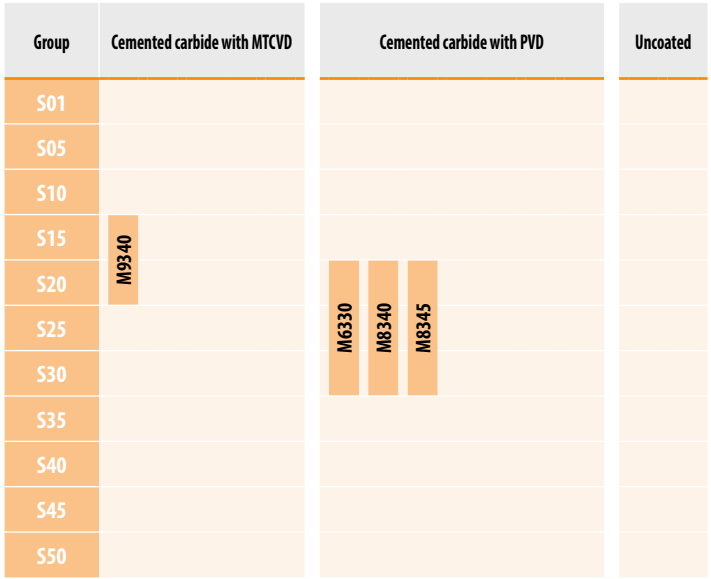
INDEXABLE MILLING GRADES – NAVIGATOR

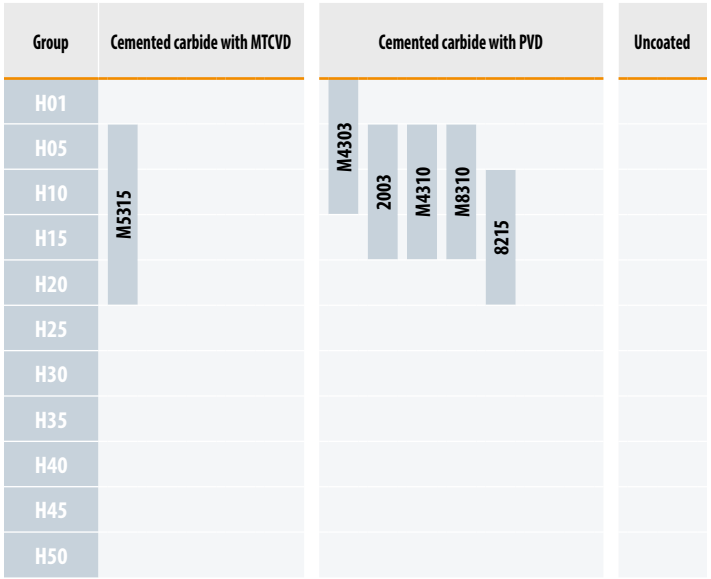












Grade Identification	Area of Application	Application	Feed	Cutting speed	Resistance to adverse Working Conditions	Coating	Color	Substrate	Coolant benefit	Grade description
M9315	P05 – P25	■				MT-CVD		H	- - -	Milling grade with high abrasion resistance even at high thermal loads, main application area 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	+ / -	One of the toughest grade dedicated for machining with lower cutting speed and unfavorable conditions. This grade is ideal for all operations where the main requirement is for a tough cutting edge.
	M20 – M40	■								
	K20 – K40	◪								
	S20 – S30	■								

Grade Identification	Area of Application	Application	Feed	Cutting speed	Resistance to adverse Working Conditions	Coating	Color	Substrate	Coolant benefit	Grade description
M8345	P30 – P50	■				PVD		H	-	This grade has exceptional operational reliability and is designed for heavy cuts in unfavorable 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 unfavorable 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 unfavorable 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

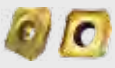
Coating	
MT-CVD	Medium-temperature chemical method of coating
PVD	Low-temperature physical method of coating
-	Uncoated grade

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

Level of influence	
	Level 1 – 5

FACE MILLING

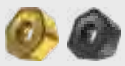
>>>

	(I)SSE09	(I)SSD13F	(I)SOD05	SOD06D	(I)SOE06Z
	45°	45°	45°	45°	43°
	APMX .177″ 4.5mm DC .750-6.00″ 20-160mm	APMX .252″ 6.4mm DC 1.25-10.0″ 32-250mm	APMX .188″(.394) 2.7 (10.0)mm DC .961-5.0″ 32 – 125mm	APMX 3.1 (8.6)mm DC 63 – 160mm	APMX .130″(.390) 3.3 (9.9)mm DC 2-8″ 50 – 200mm
Cylindrical shank			 DCX =1.25″ – 1.50″ DCX = 32 – 40 (mm)		
Weldon	 DCX =1.136″ – 1.644″ DCX = 29.8 – 42 mm	 DCX =1.76″ – 2.032″ DCX = 44.9 – 53.5 mm			
Modular					
Shell mill	 DCX = 1.878″ – 6.378″ DCX = 42 –169.6mm	 DCX = 2.032″ – 10.504″ DCX = 53.5–262.8mm			
Page	388	396	401	413	418
ISO	P M K S	P M K N S H	P M K N S	P M K S H	P M N S
Insert shape					
Inserts	SEET 09T3AF.. SEMT 09T3AF..	SDET 13T3.., SDMT 13T3.. XDET 13T3..	OD.. 0505, RD.. 1205 SD.. 1205	OD.. 0605 RPE. 1505	OEHT 0604, REHT 1604 XEHT 0604
No. of cutting edges	4/4	4/4/1	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			■		

■ Primary use ◪ Possible use

<<<

FACE MILLING

	(I)SPN13	(I)SON06C	(I)SHN06C	(I)SHN09C	(I)FSB22X	
	57°	43°	45°	45°	60°	
	APMX .394" 10mm	APMX .157(.276)" 4.0(7.0)mm	APMX .118" 3mm	APMX .197" 5mm	APMX .591" 15mm	
	DC 4-12" 100-315mm	DC 2-6" 50-250mm	DC 2-4" 25-125mm	DC 2-12" 50-315mm	DC 12" 125-250mm	
			 DC = 25 – 32 (mm)			
			 DC =2.00" – 4.00" DC = 40 – 125 (mm)			
	427	432	439	445	451	
	P M K S H	P M K S H	P M K H	P M K H	P M K	
						
	PNM. 1308 XN.. 1308	ONMX 0605.., ONMX 0605..-W.. SNMX 1705..	HNGX 0604 XNGX 0604	HNGX 0906 XNGX 0906	SB.. 2207	
	10 / 1	16/4/8	12 / 1	12 / 1	4 / 1	
	■	■	■	■	■	
		■	■	■		
		◪				
			■	■		
		◪	■	■		
						
						
						
		◪				

■ Primary use ◪ Possible use

SQUARE SHOULDER MILLING

>>>

	(I)SAD07D			(I)SAD11E			(I)SAD16E			(I)STN10			(I)STN16		
	90°			90°			90°			90°			90°		
	APMX	.197″	5mm	APMX	.177″	9mm	APMX	.512″	13mm	APMX	.197″	5mm	APMX	.394″	10mm
	DC	.50-.75″	10-32mm	DC	.750-6.00″	16-125mm	DC	1.00-6.00″	25-175mm	DC	.750-3.00″	18-80mm	DC	1.00″-5.00″	25-175mm
Cylindrical shank	 DC = .500″– .750″ DC = 10 – 25 (mm)			 DC = .625″– 1.25″ DC = 16 – 35 (mm)			 DC = 1.00″– 1.25″ DC = 25 – 32 (mm)			 DC = .75″– 1.25″ DC = 18 – 35 (mm)			 DC = 1.00″– 1.25″ DC = 25 – 35 (mm)		
Weldon				 DC = .625″– 1.25″ DC = 16 – 32 (mm)			 DC = 1.00″– 1.50″ DC = 25 – 40 (mm)			 DC = .75″– 1.25″ DC = 20 – 32 (mm)			 DC = 1.00″– 1.50″ DC = 25 – 40 (mm)		
Modular	 DC = 12 – 32 (mm)			 DC = .625″– 1.50″ DC = 16 – 40 (mm)			 DC = 1.25″– 1.50″ DC = 32 – 40 (mm)			 DC = .75″– 1.25″ DC = 20 – 32 (mm)			 DC = 1.00″– 1.50″ DC = 25 – 40 (mm)		
Shell mill				 DC = 1.50″– 5.00″ DC = 40 – 125 (mm)			 DC = 1.50″– 6.00″ DC = 40 – 175 (mm)			 DC = 1.50″– 3.00″ DC = 40 – 80 (mm)			 DC = 1.50″– 5.00″ DC = 40 – 175 (mm)		
Page	461			463			474			486			492		
ISO	P M K N S			P M K N S H			P M K N S H			P M K N			P M K N		
Insert shape															
Inserts	AD.X 0702			AD.X 11T3			AD.X 1606			TNGX 1004			TNGX 1606		
No. of cutting edges	2			2			2			6			6		
Shallow shoulder milling	■			■			■			■			■		
Helical interpolation	■			■			■			◪			◪		
Shallow slot milling	■			■			■			■			■		
Plunge milling	■			■			■			◪					
Progressive plunging	■			■			■			◪					
Ramping	■			■			■			◪					
Face milling	◪			◪			◪			■			■		
Shape surfaces milling (copy milling)	◪			■			■								
Deep shoulder milling															

■ Primary use ◪ Possible use

<<<

SQUARE SHOULDER MILLING

>>>

	(I)SLN12X	(I)SLN12	(I)SSO09	SSD12		
	90°	90°	90°	90°		
	APMX .394″ 10mm	APMX .354″ 9mm	APMX .315″ 8mm	APMX (mm) 10.0		
	DC 1.00″-5.00″ 25-125mm	DC 1.00″-5.00″ 25-125mm	DC 1.00″-3.00″ 20-80mm	DC (mm) 50 – 160		
	 DC = 1.00″ – 1.50″ DC = 25 – 32 (mm)	 DC = 1.00″ – 1.25″ DC = 25 – 32 (mm)				
	 DC = 1.00″ – 1.50″ DC = 25 – 40 (mm)	 DC = 1.00″ – 1.50″ DC = 25 – 40 (mm)	 DC = 1.00″ – 1.25″ DC = 20 – 32 (mm)			
		 DC = 1.00″ – 1.50″ DC = 25 – 40 (mm)				
	DC = 1.50″ – 5.00″ DC = 40 – 125 (mm)	 DC = 1.50″ – 5.00″ DC = 40 – 125 (mm)	 DC = 2.00″ – 3.00″ DC = 40 – 80 (mm)			
	499	506	515	519		
	P K H	P M K N	P M K S	P M K N S		
						
	LNEX 1210..	LNG. 1205	SOMT 09T3	SDMT 1205		
	4	4	4	4		
	■	■	■	■		
	◪	◪				
	■	■	■	■		
	■	■	■	■		
		◪				
	◪	◪				
	■	◪	◪	◪		
		◪				
	■					

■ Primary use ◪ Possible use

DEEP SHOULDER MILLING

>>>

	J(T)-(I)SAD11E	J(T)-(I)SAD16E
	90°	90°
	APMX 1.496"-2.205" 37-56mm	APMX 1.575"-4.252" 40-108mm
	DC 1.00"-2.00" 25-50mm	DC 2.00"-4.00" 50-100mm
Weldon	 DC = 1.00" – 1.50" DC = 25 – 40 (mm)	
Morse taper	 DC = 25 – 40 (mm)	
Arbor		 DC = 2.00" – 3.00" DC = 50 – 80 (mm)
Shell mill	 DC = 2.00" DC = 50 (mm)	 DC = 2.00" – 4.00" DC = 50 – 100 (mm)
Page	522	528
ISO	P M K N S H	P M K N S H
Insert shape		
Inserts	AD 11T3	AD.. 1606
No. of cutting edges	2	2
Deep shoulder milling	■	■
Deep slot milling	■	■
Face milling	◪	◪
Plunge milling	◪	◪

■ Primary use ◪ Possible use

COPY MILLING

>>>

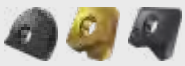
	(I)SRC10	(I)SRD10	(I)SRD12	SRD16	K2-SRC
	–	–	–	–	–
	APMX .197″ 5mm	APMX .098″ 2.5mm	APMX .1181″ 3mm	APMX (mm) 4.0	APMX (mm) 0.6 – 3.2
	DC 1.00″- 2.50″ 25-66mm	DC 1.00″- 2.00″ 20-52mm	DC 1.00″- 3.00″ 24-80mm	DCX (mm) 32 – 100	DCX (mm) 8 – 20
Cylindrical shank	 DCX = 1.00″ – 1.25″ DCX = 25 – 32 (mm)				 DCX = 8 – 20 (mm)
Weldon		 DCX = .750″ DCX = 20 (mm)			
Modular	 DCX = 1.00″ – 1.50″ DCX = 25 – 35 (mm)	 DCX = .75″ – 1.50″ DCX = 20 – 42 (mm)	 DCX = 1.00″ – 1.50″ DCX = 24 – 42 (mm)	 DCX = 32 (mm)	 DCX = 8 – 20 (mm)
Shell mill	 DCX = 1.50″ – 2.50″ DCX = 40 – 66 (mm)	 DCX = 42 – 52 (mm)	 DCX = 2.00″ – 3.00″ DCX = 50 – 80 (mm)	 DCX = 52 – 100 (mm)	
Page	536	542	550	557	562
ISO	P M K S H	P M K N S H	P M K N S H	P M K N S H	P M K H
Insert shape					
Inserts	RC 10T3	RD 1003	RD 12T3	RD 1604	RC LC
No. of cutting edges	–	–	–	–	2
Shape surfaces milling (copy milling)	■	■	■	■	■
Face milling	■	■	■	■	
Helical interpolation	■	■	■	■	
Progressive plunging	■	■	■	■	
Ramping	■	■	■	■	
Shallow slot milling					
Deep shoulder milling					
Chamfer milling					
Plunge milling					

■ Primary use ◪ Possible use

<<<

COPY MILLING

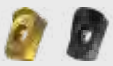
>>>

	K2-SLC	K2-PPH	SVC22C	SWN04C
	90°	–	90°	90° (93°)
	APMX (mm) 1.0 – 3.0 DCX (mm) 12 – 20	APMX (mm) 0.3 – 4.0 DCX (mm) 8 – 32	APMX (mm) 3.0 (16.0) DC (mm) 32 – 80	APMX (mm) 0.5 (2.0) DC (mm) 20 – 35
Cylindrical shank		 DCX = 8 – 32 (mm)	 DC = 32 – 40 (mm)	 DC = 20 – 32 (mm)
Weldon				
Modular		 DCX = 16 – 20 (mm)	 DC = 32 – 40 (mm)	 DC = 20 – 35 (mm)
Shell mill			 DC = 50 – 80 (mm)	
Page	570	574	586	589
ISO	P M K H	P M K S H	N	P K H
Insert shape				
Inserts	LC	PPH, PPHF, PPHT	VCGT 220530	WN.. 0403
No. of cutting edges	2	2	2	6
Shape surfaces milling (copy milling)	■	■		■
Face milling				■
Helical interpolation	◪	◪	■	
Progressive plunging	◪	◪	■	
Ramping	◪	◪	◪	■
Shallow slot milling			◪	
Deep shoulder milling			◪	■
Chamfer milling	◪	◪		
Plunge milling				■

■ Primary use ◪ Possible use

HIGH FEED MILLING

>>>

	(I)SBN10			(I)SSN11			(I)SPD09		
	20°			18°			19°		
	APMX	.197″	1 mm	APMX	.067″	1.7 mm	APMX	.079″	2 mm
	DC	1.00″- 2.50″	16-66mm	DC	1.50″- 4.00″	32-125mm	DC	1.25″- 4.00″	32-140mm
Cylindrical shank	 DCX = .625″ – 2.00″ DCX = 16 – 35 (mm)			 DCX = 32 – 35 (mm)			 DCX = 1.25″ – 1.50″ DCX = 32 – 40 (mm)		
Weldon									
Modular	 DCX = .625″ – 1.25″ DCX = 16 – 40 (mm)			 DCX = 32 – 40 (mm)					
Shell mill	 DCX = 1.50″ – 2.00″ DCX = 40 – 66 (mm)			 DCX = 1.50″ – 4.00″ DCX = 40 – 125 (mm)			 DCX = 2.00″ – 4.00″ DCX = 42 – 140 (mm)		
Page	592			600			606		
ISO	P M K S H			P M K S H			P M K S H		
Insert shape									
Inserts	BNGX 10T3 ANHX 10T3			SNGX 1104			PD.. 0905		
No. of cutting edges	4 / 2			8			5		
Face milling	■			■			■		
Helical interpolation	■			◪			■		
Shallow shoulder milling	■			■			■		
Plunge milling	■			■			■		
Progressive plunging	■			◪			■		
Ramping	■			◪			■		
Shape surfaces milling (copy milling)	■			■			◪		
Shallow slot milling	◪			◪			◪		

■ Primary use ◪ Possible use

SLOT MILLING

	(I)S90SN				
	90°				
	APMX	.156"-.375"	4-14 mm		
	DC	2.5" - 6.0"	80-160mm		
Disc	 DC = 3.00" – 6.00" DC = 80 – 200 (mm)				
Shell mill	 DC = 2.50" – 6.00" DC = 63 – 160 (mm)				
Page	615				
ISO	P M K				
Insert shape					
Inserts	SNHQ 11 SNHQ 12				
No. of cutting edges	4				
Deep slot milling 	■				
Deep shoulder milling 	◪				
Face milling 	◪				
Rear face milling 	◪				

■ Primary use ◪ Possible use

CHAMFER, T-SLOT MILLING

>>>

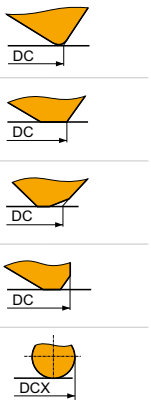
	(I)SSD09	J(T)-SXP16	J(T)-ISXP16		
	45°	15°– 75°	30°– 60°		
	APMX .177″ 4.5 mm	APMX (mm) 7.0– 28.0	APMX .276″– 1.102″		
	DC .375″ - 1.00″ 16-25mm	DC (mm) 35 – 45	DC 1.50″ – 2.00″		
Cylindrical shank	 DC = .625″ – 1.00″ DC = 16 – 25 (mm)				
Weldon	 DC = .375″ – 1.00″ DC = 10 – 25 (mm)				
Morse	 DC = 16 – 25 (mm)				
Shell mill					
Page	622	626	628		
ISO	P M K S H	P M K N	P M K N		
Insert shape					
Inserts	SDE. 0903	XPHT 1604	XPHT 1604		
No. of cutting edges	4	2	2		
Chamfer milling 	■	■	■		
Rear face milling 					
T-slot milling 					
Shallow shoulder milling 					
Shallow slot milling 					

■ Primary use ◪ Possible use

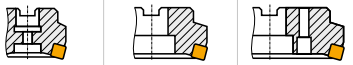
ISO CODE DESIGNATION – SHELL MILL BODIES

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

1 Cutting diameter

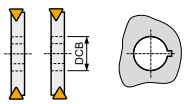


2 Cutting type, designation and/or size of clamping

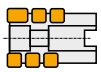


A ISO 6462/A DIN 8030/A	B ISO 6462/B DIN 8030/B	C ISO 6462/C DIN 8030/C

F	DC = 27 mm	DC = 1.000 in
G	DC = 32 mm	DC = 1.250 in
H	DC = 40 mm	–
J	DC = 50 mm	–
K	DC = 60 mm	–
M	DC = 80 mm	–



T



3 No. of working edges

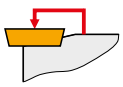
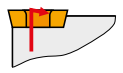
4 Direction of cut

R	
L	
N	

5 Standard

I	(")

6 Clamping designation

C	
S	
W	
F	

7 Setting angle (KAPR)

90°	
75°	
60°	
45°	
M0	

8 Insert shape

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

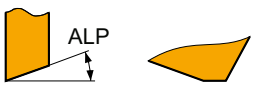
9 Insert clearance angle

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"						

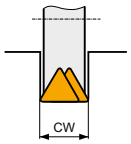
11 WIPER edge clearance angle



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

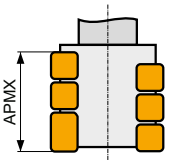
12 Cutting edge length (width)

CW (mm) / (")



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

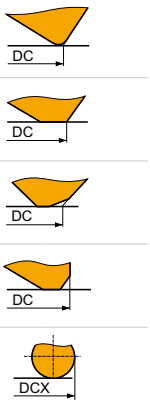
APMX



ISO CODE DESIGNATION – END SHOULDER MILL BODIES

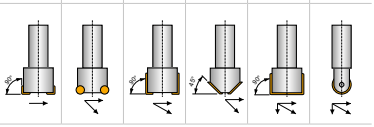
	1	2	3	4	5	6	7		8	9	10	11	12	13
ISO	32	A	4	R	042	B	32	–		S	A	D	11	E
ANSI	125	A	4	R	150	W	125	–	I	S	A	D	11	E

1 Cutting diameter



2 Cutter type and setting angle

A	E	J	N	H	K



3 No. of working edges

4 Direction of cut

R	L	N

5 Overhang

(mm)
(")

6 Shank designation

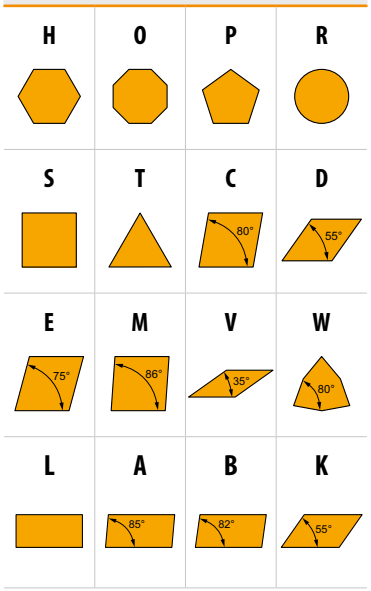
A	C	DIN 1835A	
B	W	ISO 3338-2, DIN 1835B	
E	-	ISO 296, DIN 228-1	
G	-	ISO 297, DIN 208-1	
H	-	ISO/DIS 7388-1, DIN 69871-1	
N	-	ISO 12 164-1, DIN 69893	
-	R8	R8	
X	-	MAS BT	
XC	-	CAPTO	
-	CA	ANSI B5.50	

7 Shank size

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

10 Insert shape

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



11 Insert clearance angle

A	3°	B	5°
C	7°	D	15°
E	20°	F	25°
G	30°	N	0°
P	11°	O	Special

12 Cutting edge length

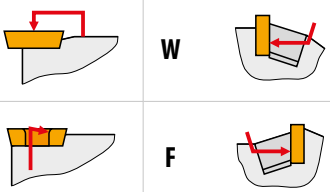
IC (mm)	IC (")	H	O	P	S	T	C	D	E	M	V	W	R	K
3.97					03	06		04			06	02		
	5/32"							1.2"						
4.76					04	08	04	05	04	04	08	L3		
	3/16"							1.5"						
5.56					05	09	05	06	05	05	09	03		
	7/32"							1.8"						
6.35		03	02	04	08	11	06	07	08	08	11	04	06	
	1/4"							2"						
7.94		04	03	05	07	13	08	09	06	07	13	05	07	
	5/16"							2.5"						
9.525		05	04	07	09	16	09	11	09	09	16	06	09	19
	3/8"							3"						
12.7		07	05	09	12	22	12	15	13	12	22	08	12	
	1/2"							4"						
15.875		09	06	11	15	27	16	19	16	15	27	10	15	
	5/8"							5"						
19.05		11	07	13	19	33	19	23	19	19	33	13	19	
	3/4"							6"						
25.4		14	10	18	25	44	25	31	26	25	44	17	25	
	5/1"							8"						
31.75		18	13	23	31	54	32	38	32	31	54	21	31	
	1 1/4"							10"						

8 Standard

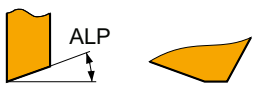
I	(")

9 Clamping designation

C		W	
S		F	

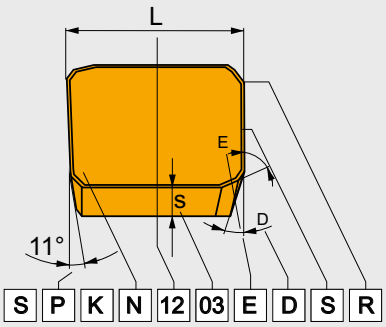


13 Wiper edge clearance angle



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

ISO CODE DESIGNATION – MILLING INSERTS



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

1 Insert shape

H	O	P	R
S	T	C (80°)	D (55°)
E (75°)	M (86°)	V (35°)	W (80°)
L	A (85°)	B (82°)	K (55°)

2 Insert clearance angle

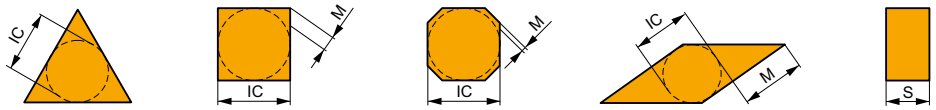
A (3°)		B (5°)	
C (7°)		D (15°)	
E (20°)		F (25°)	
G (30°)		N (0°)	
P (11°)		O	

4 Insert type

N	
R	
F	
A	
M	
G	
W	40 – 60°
T	
Q	
U	
B	70 – 90°
H	
C	
J	
X	Special

3 Tolerances

	(mm)			(")		
	M (±)	S (±)	IC (±)	M (±)	S (±)	IC (±)
A	0.005	0.025	0.025	0.0002"	0.001"	0.0010"
F	0.005	0.025	0.013	0.0002"	0.001"	0.0005"
C	0.013	0.025	0.025	0.0005"	0.001"	0.0010"
H	0.013	0.025	0.013	0.0005"	0.001"	0.0005"
E	0.025	0.025	0.025	0.0010"	0.001"	0.0010"
G	0.025	0.130	0.025	0.0010"	0.005"	0.0010"
J	0.005	0.025	0.05 – 0.13	0.0002"	0.001"	0.002" – 0.005"
K	0.013	0.025	0.05 – 0.13	0.0005"	0.001"	0.002" – 0.005"
L	0.025	0.025	0.05 – 0.13	0.0010"	0.001"	0.002" – 0.005"
M	0.08 – 0.18	0.130	0.05 – 0.13	0.003" – 0.007"	0.005"	0.002" – 0.005"
N	0.08 – 0.18	0.025	0.05 – 0.13	0.003" – 0.007"	0.001"	0.002" – 0.005"
U	0.05 – 0.38	0.130	0.05 – 0.13	0.005" – 0.015"	0.005"	0.003" – 0.010"



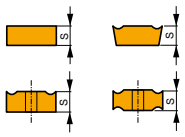
ISO CODE DESIGNATION – MILLING INSERTS

5	6	7	8	9		10
12	03	08			-	
12	03	ED	S	R		
5a	**6a**	**7a**	**8**	**9**		
4	**2**	**2**			-	
4	**2**	**ED**	**S**	**R**		

5 Cutting edge length

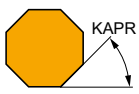
I.C. (mm)	I.C. (″)	H	O	P	S	T	C	D	E	M	V	W	R	K
3.97					03	06		04			06	02		
	5/32″							1.2″						
4.76					04	08	04	05	04	04	08	L3		
	3/16″							1.5″						
5.56					05	09	05	06	05	05	09	03		
	7/32″							1.8″						
6.35		03	02	04	08	11	06	07	08	08	11	04	06	
	1/4″							2″						
7.94		04	03	05	07	13	08	09	06	07	13	05	07	
	5/16″							2.5″						
9.525		05	04	07	09	16	09	11	09	09	16	06	09	19
	3/8″							3″						
12.7		07	05	09	12	22	12	15	13	12	22	08	12	
	1/2″							4″						
15.875		09	06	11	15	27	16	19	16	15	27	10	15	
	5/8″							5″						
19.05		11	07	13	19	33	19	23	19	19	33	13	19	
	3/4″							6″						
25.4		14	10	18	25	44	25	31	26	25	44	17	25	
	5/1″							8″						
31.75		18	13	23	31	54	32	38	32	31	54	21	31	
	1 1/4″							10″						

6 Thickness



Symbol	S (mm)	S (″)
01	1.59	1/16″
T1	1.98	5/64″
02	2.38	3/32″
03	3.18	1/8″
T3	3.97	5.32″
04	4.76	3/16″
05	5.56	7/32″
06	6.35	1/4″
07	7.94	5/16″
09	9.52	3/8″

7 Cutting edge angles / Clearance angle

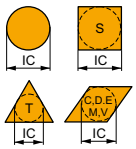


	KAPR		ALP
A	45°	A	3°
D	60°	B	5°
E	75°	C	7°
F	85°	D	15°
P	90°	E	20°
Z	Special	F	25°
		G	30°
		N	0°
		P	11°
		Z	Special

ZZ – Special

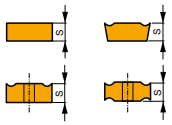
ANSI

5a Inscribed circle



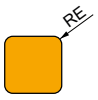
Symbol	I.C. (mm)	I.C. (″)
1	3.175	1/8″
1.2	3.969	5/32″
1.5	4.763	3/16″
1.8	5.556	7/32″
2	6.350	1/4″
2.5	7.938	5/16″
3	9.525	3/8″
4	12.700	1/2″
5	15.875	5/8″
6	19.050	3/4″
7	22.225	7/8″
8	25.400	1″
10	31.750	5/4″
12	38.100	6/4″

6a Thickness



Symbol	S (mm)	S (″)
1	1.588	1/16″
1.2	1.984	5/64″
1.5	2.381	3/32″
2	3.175	1/8″
2.5	3.969	5/32″
3	4.763	3/16″
3.5	5.556	7/32″
4	6.350	1/4″
5	7.938	5/16″
6	9.525	3/8″
7	11.113	7/16″
8	12.700	1/2″
9	14.288	9/16″
10	15.875	5/8″

7a Corner radius

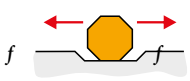


Symbol	RE (mm)	RE (″)
0	0	0″
0.2	0.099	1/256″
0.5	0.198	1/128″
1	0.397	1/64″
2	0.794	1/32″
3	1.191	3/64″
4	1.588	1/16″
5	1.984	5/64″
6	2.381	3/32″
7	2.778	7/64″
8	3.175	1/8″
10	3.969	5/32″
12	4.763	3/16″
14	5.556	7/32″
16	6.350	1/4″

8 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		N	
L			

10 Chip breaker designation

SSE09

P M K S

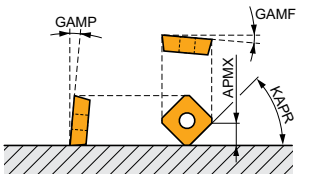
PRAMET

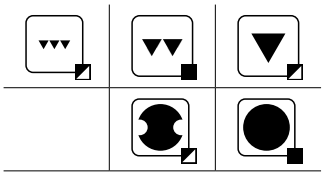
S

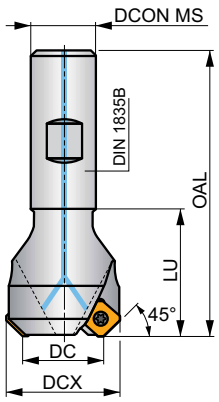
45° Face Mill with Positive Design and Internal Coolant

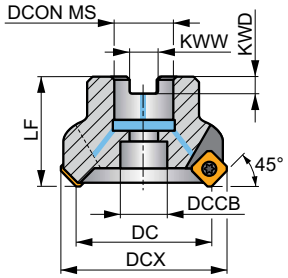
Highly productive 45° face mill utilising single sided SE.. 09 style inserts with APMX of 4.5 mm. Suited for face milling and chamfering. Weldon and arbor style available with differential tooth pitch. Body treated for longer tool life.

KAPR	45°
APMX	4.5 mm

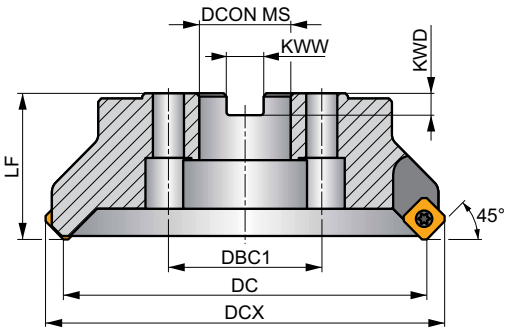








DC 32 – 125 mm



DC 160 mm

h_m	0.06 - 0.2 mm
h_m	0.06 - 0.18 mm

	Product	DC (mm)	DCX (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	DBC1 (mm)	LU (mm)	LF (mm)	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)	max.	lbs	MID
DIN 1835B	20N2R032B20-SSE09-C	20	29.8	82	20	–	–	32	–	–	–	-5	20	2	–	24600	✓	.57	GI147 FA010 –	6758314
DIN 1835B	25N3R042B25-SSE09-C	25	34.8	98	25	–	–	42	–	–	–	-5	20	3	–	22000	✓	.97	GI147 FA010 –	6758315
DIN 1835B	32N4R042B32-SSE09-C	32	42	102	32	–	–	42	–	–	–	-5	20	4	–	19400	✓	1.50	GI147 FA010 –	6758316
	32A04R-S45SE09F-C	32	42	–	16	14	–	–	40	8.4	6.4	-5	20	4	✓	19400	✓	.53	GI147 FA012 –	6761701
	40A04R-S45SE09F-C	40	53.2	–	16	14	–	–	40	8.4	6.4	-5	20	4	✓	17400	✓	.66	GI147 FA012 –	6761698
	50A05R-S45SE09F-C	50	59.6	–	22	18	–	–	40	10.4	6.4	-5	20	5	✓	15600	✓	1.21	GI147 FA013 –	6761683
	63A05R-S45SE09F-C	63	75.8	–	22	18	–	–	40	10.4	6.4	-5	20	5	✓	13900	✓	1.46	GI147 FA013 –	6761625
	63A06R-S45SE09F-C	63	75.8	–	22	18	–	–	40	10.4	6.4	-5	20	6	✓	13900	✓	1.28	GI147 FA013 –	6761702
ISO 6462 DIN 8030	80A06R-S45SE09F-C	80	89.6	–	27	38	–	–	50	12.4	7	-5	20	6	✓	12300	✓	2.51	GI147 FA011 AC001	6761668
ISO 6462 DIN 8030	80A08R-S45SE09F-C	80	89.6	–	27	38	–	–	50	12.4	7	-5	20	8	✓	12300	✓	2.49	GI147 FA011 AC001	6761684
	100A08R-S45SE09F-C	100	110	–	32	45	–	–	50	14.4	8	-5	20	8	✓	11000	✓	4.03	GI147 FA011 AC002	6761669
	100A10R-S45SE09F-C	100	110	–	32	45	–	–	50	14.4	8	-5	20	10	✓	10900	✓	4.01	GI147 FA011 AC002	6761685
	125A09R-S45SE09F-C	125	134.5	–	40	60	–	–	63	16.4	9	-5	20	9	✓	9800	✓	8.53	GI147 FA011 AC003	6761670
	125A12R-S45SE09F-C	125	134.5	–	40	60	–	–	63	16.4	9	-5	20	12	✓	9800	✓	8.53	GI147 FA011 AC003	6761699
	160C10R-S45SE09F	160	169.6	–	40	–	66.7	–	63	16.4	9	-5	20	10	✓	8700	–	13.69	GI147 FA014 –	6761671

GI147	SEET 09T3AF..	SEMT 09T3AF..

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

ISSE09

P M K S

PRAMET

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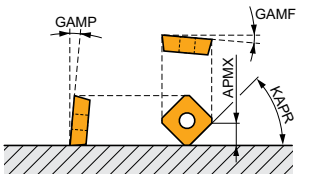
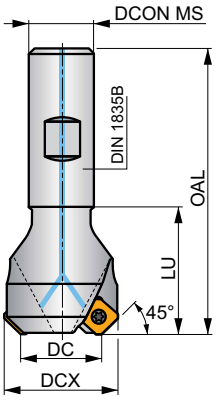
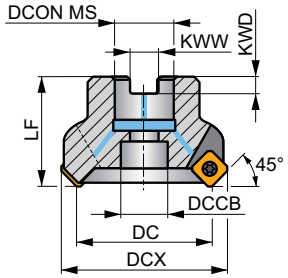
45° Face Mill with Positive Design and Internal Coolant

Highly productive 45° face mill utilizing single sided SE.. 09 style inserts with APMX of .177 inches. Suited for face milling and chamfering. Weldon and arbor style available with differential tooth pitch. Body treated for longer tool life.

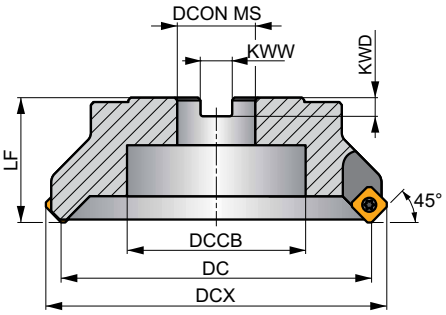
KAPR	45°
APMX	.177 in



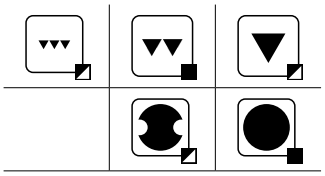




DC 1.5 – 5 in



DC 6 in



h_m	.0023-.0078 in
h_m	.0023-.0070 in

	Product	DC (inch)	DCX (inch)	OAL (inch)	DCON MS (inch)	DCCB (inch)	LU (inch)	LF (inch)	KWW (inch)	KWD (inch)	GAMF (°)	GAMP (°)			max.		lbs			MID
DIN 1835B	075N2R126W075-ISSE09-C	.750	1.136	3.331	.750	–	1.260	–	–	–	-5	20	2	–	24600	✓	.22	GI147	FA010	6789712
DIN 1835B	100N3R128W100-ISSE09-C	1.000	1.386	3.819	1.000	–	1.280	–	–	–	-5	20	3	–	22000	✓	.66	GI147	FA010	6789713
DIN 1835B	125N4R150W125-ISSE09-C	1.250	1.644	4.039	1.250	–	1.500	–	–	–	-5	20	4	–	19400	✓	1.32	GI147	FA010	6789714
	150A04R-IS45SE09F-C	1.500	1.878	–	.500	.433	–	1.575	.258	.165	-5	20	4	✓	17400	✓	.75	GI147	FA032	6789715
	200A05R-IS45SE09F-C	2.000	2.378	–	.750	.630	–	1.575	.321	.193	-5	20	5	✓	15600	✓	.84	GI147	FA033	6789716
	250A05R-IS45SE09F-C	2.500	2.878	–	.750	.630	–	1.575	.321	.193	-5	20	5	✓	13900	✓	1.19	GI147	FA033	6789717
	250A06R-IS45SE09F-C	2.500	2.878	–	.750	.630	–	1.575	.321	.193	-5	20	6	✓	13900	✓	1.23	GI147	FA033	6789718
	300A06R-IS45SE09F-C	3.000	3.378	–	1.000	.827	–	1.969	.382	.224	-5	20	6	✓	12300	✓	2.21	GI147	FA034	6789719
ISO 6462 DIN 8030	300A08R-IS45SE09F-C	3.000	3.378	–	1.000	.827	–	1.969	.382	.224	-5	20	8	✓	12300	✓	2.43	GI147	FA034	6789740
	400A08R-IS45SE09F-C	4.000	4.394	–	1.500	1.260	–	1.969	.630	.382	-5	20	8	✓	11000	✓	3.04	GI147	FA035	6789741
	400A10R-IS45SE09F-C	4.000	4.394	–	1.500	1.260	–	1.969	.630	.382	-5	20	10	✓	10900	✓	3.37	GI147	FA035	6789742
	500A09R-IS45SE09F-C	5.000	5.374	–	1.500	1.260	–	2.480	.630	.382	-5	20	9	✓	9800	✓	6.02	GI147	FA039	6789743
	500A12R-IS45SE09F-C	5.000	5.374	–	1.500	1.260	–	2.480	.630	.382	-5	20	12	✓	9800	✓	6.88	GI147	FA039	6789744
	600B10R-IS45SE09F	6.000	6.378	–	2.000	3.465	–	2.480	.756	.445	-5	20	10	✓	8700	–	1.43	GI147	FA011	6789745

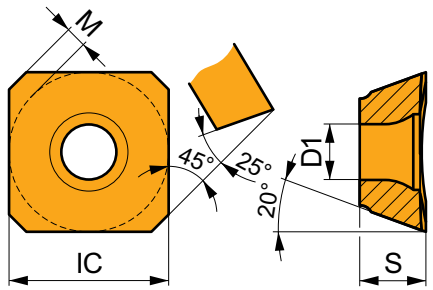
GI147	SEET 09T3AF..	SEMT 09T3AF..

FA010	US 3007-T09P	2.0	M 3	.287	–	–	Flag T09P	–
FA011	US 3007-T09P	2.0	M 3	.287	D-T07P/T09P	FG-15	–	–
FA032	US 3007-T09P	2.0	M 3	.287	D-T07P/T09P	FG-15	–	HS 025100
FA033	US 3007-T09P	2.0	M 3	.287	D-T07P/T09P	FG-15	–	HS 037100
FA034	US 3007-T09P	2.0	M 3	.287	D-T07P/T09P	FG-15	–	HS 050125
FA035	US 3007-T09P	2.0	M 3	.287	D-T07P/T09P	FG-15	–	HCS 075200
FA039	US 3007-T09P	2.0	M 3	.287	D-T07P/T09P	FG-15	–	HS 075125

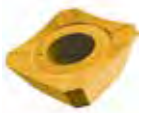
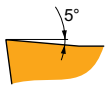
SEET 09

PRAMET

	IC	D1	M	S
	(inch)	(inch)	(inch)	(inch)
09T3	.375	.138	.048	.156

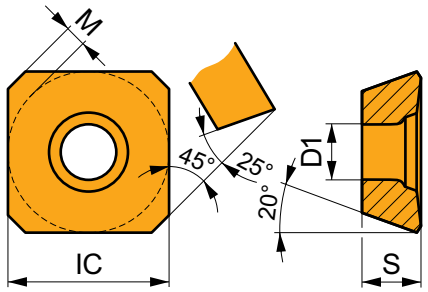


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

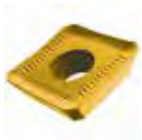
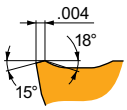
Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
		(inch)																			
																					
Positive design for light to medium machining.																					
SEET 09T3AFEN	**M6330**	–	837	.0055	.098	591	.0051	.098	–	–	–	–	–	–	246	.0039	.079	–	–	–	6925530
	M8330	–	968	.0055	.098	574	.0051	.098	–	–	–	–	–	–	230	.0039	.079	–	–	–	7451003
	M8340	–	886	.0055	.098	525	.0051	.098	–	–	–	–	–	–	213	.0039	.079	–	–	–	6800861
	M9340	–	1132	.0055	.098	673	.0051	.098	–	–	–	–	–	–	279	.0039	.079	–	–	–	6755675

SEMT 09

	IC	D1	M	S
	(inch)	(inch)	(inch)	(inch)
09T3	.375	.138	.048	.156

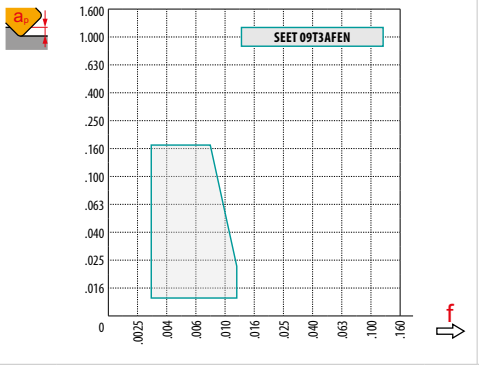


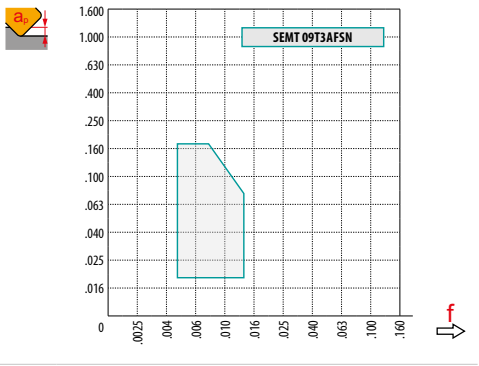
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
																					
			Positive design for light to medium machining.																		
SEMT 09T3AFSN	**8215**	–	968	.0071	.071	574	.0063	.071	919	.0071	.071	–	–	–	–	–	–	–	–	–	6753409
	M8330	–	951	.0071	.071	558	.0063	.071	902	.0071	.071	–	–	–	–	–	–	–	–	–	7451009
	M8340	–	869	.0071	.071	509	.0063	.071	820	.0071	.071	–	–	–	–	–	–	–	–	–	6800866
	M9325	–	1198	.0071	.071	–	–	–	1132	.0071	.071	–	–	–	–	–	–	–	–	–	6754570

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	.95	.85	.75	.85	.95	1.00	1.00	1.00	1.00
⇨X.f	.64	.64	.64	.64	.64	.65	.65	.67	.68	.71	.72	.74	.79	1.00

	SEET 09	SEMT 09
RE (mm)	–	–
BS (inch)	.050	.049





(inch)

DC	X.V	f_{max}
.750	.047	.007
1.000	.049	.008
1.250	.051	.009
1.500	.052	.010
2.000	.054	.011
2.500	.056	.013
3.000	.057	.014
4.000	.059	.016
5.000	.061	.018
6.000	.063	.020

SSD13F

P M K N S H

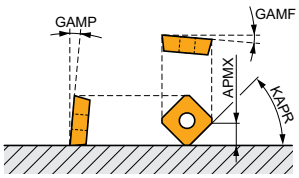
PRAMET

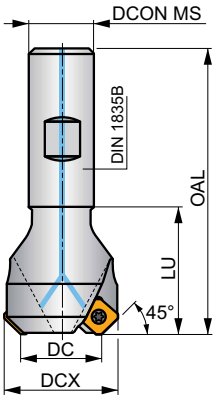
S

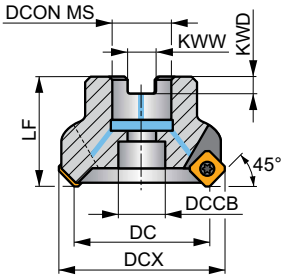
VER SD13 45° Face Mill with Positive Design and Internal Coolant

Highly versatile 45° face mill utilising single sided SD.. 13 style inserts with APMX of 6.4 mm. Suited for a wide range of applications in any workpiece material. Weldon and arbor style available, with differential tooth pitch. Body treated for longer tool life, carbide shims on seating place for process security.

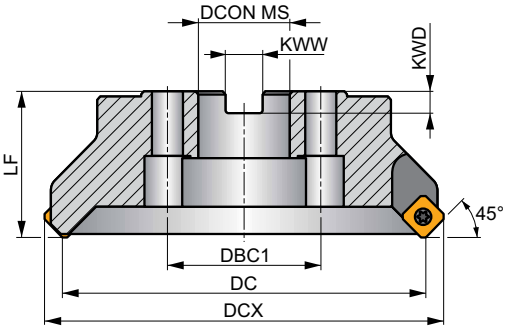
KAPR	45°
APMX	6.4 mm



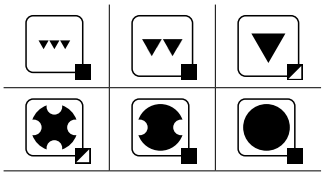




DC 40 – 125 mm



DC 160 – 250 mm



h_m	0.04 - 0.32 mm
h_m	0.04 - 0.28 mm

	Product	DC (mm)	DCX (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	DBC1 (mm)	LU (mm)	LF (mm)	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		lbs				MID
DIN 1835B	**32N3R045B25-SSD13F-C**	32	44.9	120	25	–	–	45	–	–	–	-15	15	3	–	16100	✓	.95	GI341	C0610	–	8202698
DIN 1835B	**40N3R045B32-SSD13F-C**	40	53.5	120	32	–	–	45	–	–	–	-7	15	3	–	14400	✓	1.59	GI341	C0610	–	8202699
	40A03R-S45SD13F-C	40	53.5	–	16	14	–	–	40	8.4	5.6	-7	15	3	–	14400	✓	.60	GI341	C0611	–	8205385
	50A04R-S45SD13F-C	50	63.5	–	22	18	–	–	40	10.4	6.3	-7	15	4	✓	12900	✓	1.13	GI341	C0612	–	8202730
	63A05R-S45SD13F-C	63	76.4	–	22	18	–	–	40	10.4	6.3	-7	15	5	✓	11500	✓	1.17	GI341	C0612	–	8202731
	80A07R-S45SD13F-C	80	93.4	–	27	22	–	–	50	12.4	7	-7	15	7	✓	10200	✓	2.68	GI341	C0613	AC001	8202732
	100A08R-S45SD13F-C	100	112.9	–	32	45	–	–	50	14.4	8	-12	15	8	✓	9100	✓	4.03	GI341	C0613	AC002	8202733
	100A10R-S45SD13F-C	100	112.9	–	32	45	–	–	50	14.4	8	-12	15	10	–	9100	✓	4.27	GI341	C0613	AC002	8202734
ISO 6462 DIN 8030	**125A08R-S45SD13F-C**	125	137.8	–	40	56	–	–	63	16.4	9	-12	15	8	✓	8100	✓	7.52	GI341	C0613	AC003	8202739
ISO 6462 DIN 8030	**125A12R-S45SD13F-C**	125	137.8	–	40	56	–	–	63	16.4	9	-12	15	12	–	8100	✓	7.30	GI341	C0613	AC003	8202790
	160C10R-S45SD13F-C	160	172.8	–	40	–	66.7	–	63	16.4	9	-12	15	10	✓	7200	✓	14.73	GI341	C0614	–	8202791
	160C14R-S45SD13F-C	160	172.8	–	40	–	66.7	–	63	16.4	9	-12	15	14	✓	7200	✓	14.58	GI341	C0614	–	8202792
	200C12R-S45SD13F-C	200	212.8	–	60	–	101.6	–	63	25.7	14	-12	15	12	✓	6400	✓	19.97	GI341	C0615	–	8202793
	200C16R-S45SD13F-C	200	212.8	–	60	–	101.6	–	63	25.7	14	-12	15	16	✓	6400	✓	26.14	GI341	C0615	–	8202794
	250C14R-S45SD13F-C	250	262.8	–	60	–	101.6	–	63	25.7	14	-12	15	14	✓	5700	✓	42.99	GI341	C0616	–	8202795
	250C20R-S45SD13F-C	250	262.8	–	60	–	101.6	–	63	25.7	14	-12	15	20	✓	5700	✓	42.33	GI341	C0616	–	8202796

GI341	SDET 13T3..	SDMT 13T3..	XDET 13T3..

		Nm												
C0610	US 63513-T15P	3.0	M 3.5	13	Flag T15P	–	–	–	SDW 1103AF	MS 3507	HXK 3.5	–	–	–
C0611	US 63513-T15P	3.0	M 3.5	13	–	D-T08P/T15P	FG-15	HS 0830C	SDW 1103AF	MS 3507	HXK 3.5	–	–	–
C0612	US 63513-T15P	3.0	M 3.5	13	–	D-T08P/T15P	FG-15	HSD 1025C	SDW 1103AF	MS 3507	HXK 3.5	–	–	–
C0613	US 63513-T15P	3.0	M 3.5	13	–	D-T08P/T15P	FG-15	–	SDW 1103AF	MS 3507	HXK 3.5	–	–	–
C0614	US 63513-T15P	3.0	M 3.5	13	–	D-T08P/T15P	FG-15	HS 1240C	SDW 1103AF	MS 3507	HXK 3.5	CAC 160C	HSD 0825C	HXK 5
C0615	US 63513-T15P	3.0	M 3.5	13	–	D-T08P/T15P	FG-15	HS 1655C	SDW 1103AF	MS 3507	HXK 3.5	CAC 200C	HSD 1025C	HXK 7
C0616	US 63513-T15P	3.0	M 3.5	13	–	D-T08P/T15P	FG-15	HS 1655C	SDW 1103AF	MS 3507	HXK 3.5	CAC 250C	HSD 1025C	HXK 7

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

ISSD13F

P M K N S H

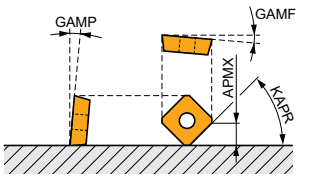
PRAMET

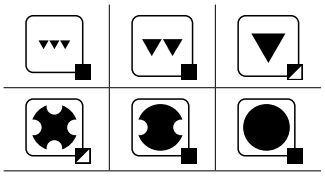
S

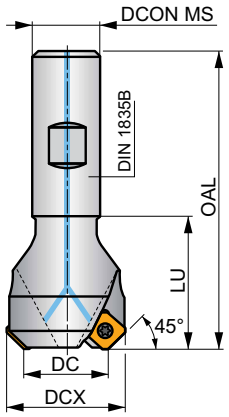
VER SD13 45° Face Mill with Positive Design and Internal Coolant

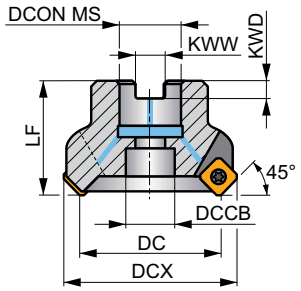
Highly versatile 45° face mill utilizing single sided SD.. 13 style inserts with APMX of .252 inches. Suited for a wide range of applications in any workpiece material. Weldon and arbor style available, with differential tooth pitch. Body treated for longer tool life, carbide shims on seating place for process security.

KAPR	45°
APMX	.252 in

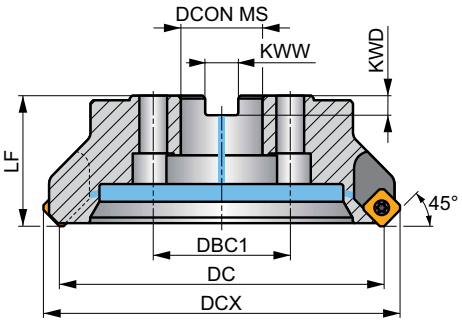








DC 1.5 – 6 in



DC 8 – 10 in

h_m	.0016-.0126 in
h_m	.0016-.0110 in

	Product	DC (inch)	DCX (inch)	OAL (inch)	DCON MS (inch)	DCCB (inch)	DBC1 (inch)	LU (inch)	LF (inch)	KWW (inch)	KWD (inch)	GAMF (°)	GAMP (°)			max.		lbs			MID
DIN 1835B	125N3R177W100-ISSD13F-C	1.250	1.76	4.724	1.000	–	–	1.772	–	–	–	-15	15	3	–	16100	✓	.99	GI341	IC0350	8202813
DIN 1835B	150N3R177W125-ISSD13F-C	1.500	2.032	4.724	1.250	–	–	1.772	–	–	–	-7	15	3	–	14400	✓	1.54	GI341	IC0350	8202814
	150A03R-IS45SD13F-C	1.500	2.032	–	.500	.433	–	–	1.575	.258	.165	-7	15	3	–	14400	✓	.55	GI341	IC0351	8202797
	200A04R-IS45SD13F-C	2.000	2.528	–	.750	.610	–	–	1.575	.321	.193	-7	15	4	✓	12900	✓	.90	GI341	IC0352	8202798
	250A05R-IS45SD13F-C	2.500	3.028	–	.750	.610	–	–	1.575	.321	.193	-7	15	5	✓	11500	✓	1.23	GI341	IC0352	8202799
	300A05R-IS45SD13F-C	3.000	3.528	–	1.000	.827	–	–	1.969	.382	.224	-7	15	5	✓	10200	✓	2.82	GI341	IC0353	8202800
	300A07R-IS45SD13F-C	3.000	3.528	–	1.000	.827	–	–	1.969	.382	.224	-7	15	7	✓	10200	✓	3.23	GI341	IC0353	8202801
	400A06R-IS45SD13F-C	4.000	4.508	–	1.500	1.417	–	–	1.969	.630	.382	-12	15	6	✓	9100	✓	4.74	GI341	IC0354	8202802
ISO 6462 DIN 8030	400A08R-IS45SD13F-C	4.000	4.508	–	1.500	1.417	–	–	1.969	.630	.382	-12	15	8	✓	9100	✓	5.25	GI341	IC0354	8202803
	500A08R-IS45SD13F-C	5.000	5.504	–	1.500	1.260	–	–	2.480	.630	.382	-12	15	8	✓	8100	✓	8.68	GI341	IC0355	8202804
	500A12R-IS45SD13F-C	5.000	5.504	–	1.500	1.260	–	–	2.480	.630	.382	-12	15	12	–	8100	✓	7.74	GI341	IC0355	8202805
	600A10R-IS45SD13F-C	6.000	6.504	–	2.000	1.654	–	–	2.480	.756	.445	-12	15	10	✓	7200	✓	14.59	GI341	IC0356	8216573
	600A14R-IS45SD13F-C	6.000	6.504	–	2.000	1.654	–	–	2.480	.756	.445	-12	15	14	✓	7200	✓	14.35	GI341	IC0356	8216574
	800C12R-IS45SD13F-C	8.000	8.504	–	2.500	–	4.000	–	2.480	1.000	.559	-12	15	12	✓	6400	✓	2.26	GI341	IC0357	8202810
	800C16R-IS45SD13F-C	8.000	8.504	–	2.500	–	4.000	–	2.480	1.000	.559	-12	15	16	✓	6400	✓	2.08	GI341	IC0357	8202811
	1000C14R-IS45SD13F-C	10.000	10.504	–	2.500	–	4.000	–	2.480	1.000	.559	-12	15	14	✓	5700	✓	35.34	GI341	IC0358	8202812

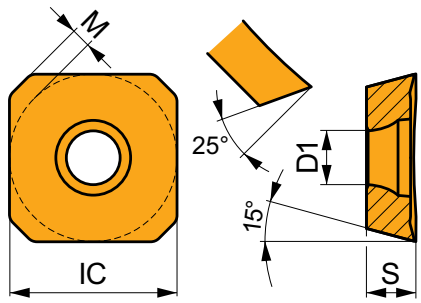
GI341	SDET 13T3..	SDMT 13T3..	XDET 13T3..

		Nm													
IC0350	US 63513-T15P	3.0	M 3.5	.512	–	–	Flag T15P	–	SDW 1103AF	MS 3507	HXK 3.5	–	–	–
IC0351	US 63513-T15P	3.0	M 3.5	.512	D-T08P/T15P	FG-15	–	HS 025100	SDW 1103AF	MS 3507	HXK 3.5	–	–	–
IC0352	US 63513-T15P	3.0	M 3.5	.512	D-T08P/T15P	FG-15	–	HCS 037125A	SDW 1103AF	MS 3507	HXK 3.5	–	–	–
IC0353	US 63513-T15P	3.0	M 3.5	.512	D-T08P/T15P	FG-15	–	HS 050125	SDW 1103AF	MS 3507	HXK 3.5	–	–	–
IC0354	US 63513-T15P	3.0	M 3.5	.512	D-T08P/T15P	FG-15	–	HCS 075175	SDW 1103AF	MS 3507	HXK 3.5	–	–	–
IC0355	US 63513-T15P	3.0	M 3.5	.512	D-T08P/T15P	FG-15	–	HS 075125	SDW 1103AF	MS 3507	HXK 3.5	–	–	–
IC0356	US 63513-T15P	3.0	M 3.5	.512	D-T08P/T15P	FG-15	–	HS 100150	SDW 1103AF	MS 3507	HXK 3.5	–	–	–
IC0357	US 63513-T15P	3.0	M 3.5	.512	D-T08P/T15P	FG-15	–	–	SDW 1103AF	MS 3507	HXK 3.5	CAC 200C	HSD 1025C	HXK 7
IC0358	US 63513-T15P	3.0	M 3.5	.512	D-T08P/T15P	FG-15	–	–	SDW 1103AF	MS 3507	HXK 3.5	CAC 250C	HSD 1025C	HXK 7

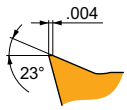
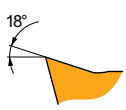
SDET 13

PRAMET

	IC	D1	S
	(inch)	(inch)	(inch)
13T3	.527	.173	.156

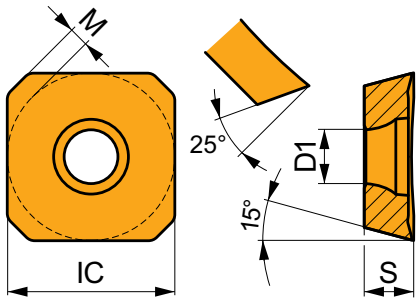


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

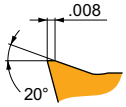
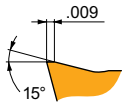
Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
			 S																		
F geometry is sharp and used for finishing, suitable for large overhang or thin walled and slim workpiece applications. Designed with highly positive rake, narrow T-land and rounding of cutting edge for light machining.																					
SDET 13T3AFSN-F	**M6330**	–	■ 820	.0059	.118	■ 574	.0055	.118	–	–	–	–	–	–	■ 230	.0043	.094	–	–	–	8202680
	M8310	–	■ 1033	.0059	.118	◪ 525	.0055	.118	◪ 968	.0059	.118	–	–	–	–	–	–	–	–	–	8202681
	M8330	–	■ 935	.0059	.118	■ 558	.0055	.118	◪ 886	.0059	.118	◪ 2805	.0071	.118	◪ 230	.0043	.094	–	–	–	8202682
	M8340	–	■ 869	.0059	.118	■ 509	.0055	.118	◪ 820	.0059	.118	–	–	–	■ 213	.0043	.094	–	–	–	8202683
	M9340	–	■ 1083	.0059	.118	■ 640	.0055	.118	–	–	–	–	–	–	■ 262	.0043	.094	–	–	–	8202684
			 F																		
FA geometry is sharp and used for non-ferrous alloys machining, suitable for large overhang or thin walled and slim workpiece applications. Polished and ground design with highly positive rake.																					
SDET 13T3AFFN-FA	**HF7**	–	–	–	–	–	–	–	–	–	–	■ 1181	.0047	.118	–	–	–	–	–	–	8202686
	M0315	–	–	–	–	–	–	–	–	–	–	■ 2756	.0047	.118	–	–	–	–	–	–	8202685

SDMT 13

	IC	D1	S
	(inch)	(inch)	(inch)
13T3	.527	.173	.156

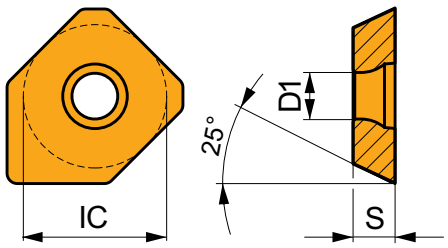


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE	P				M				K				N				S				H				MID
				vc (ft/min)	f (in/tooth)	ap (inch)		vc (ft/min)	f (in/tooth)	ap (inch)		vc (ft/min)	f (in/tooth)	ap (inch)		vc (ft/min)	f (in/tooth)	ap (inch)		vc (ft/min)	f (in/tooth)	ap (inch)		vc (ft/min)	f (in/tooth)	ap (inch)	
		(inch)																									
																											
			M geometry is versatile and the first choice for a wide range of working conditions. Designed with positive rake, medium T-land and rounding of cutting edge for medium machining.																								
SDMT 13T3AFSN-M	**8215**	–	■	804	.0118	.118	◪	476	.0106	.118	■	755	.0118	.118		–	–	–	◪	197	.0094	.094	■	148	.0083	.039	8202687
	M6330	–	■	705	.0118	.118	■	492	.0106	.118		–	–	–		–	–	–	■	197	.0094	.094		–	–	–	8202688
	M8330	–	■	804	.0118	.118	■	476	.0106	.118	■	755	.0118	.118		–	–	–	◪	197	.0094	.094	◪	148	.0083	.039	8202689
	M8340	–	■	738	.0118	.118	■	443	.0106	.118	◪	689	.0118	.118		–	–	–	■	180	.0094	.094		–	–	–	8202690
	M9325	–	■	968	.0118	.118		–	–	–	■	919	.0118	.118		–	–	–		–	–	–	◪	180	.0083	.039	8202691
	M9340	–	■	869	.0118	.118	■	509	.0106	.118		–	–	–		–	–	–	■	213	.0094	.094		–	–	–	8202692
																											
			R geometry is strong and used for roughing and heavy working conditions. Designed with slightly positive rake, wide T-land and rounding of cutting edge for rough machining.																								
SDMT 13T3AFSN-R	**M5315**	–	◪	935	.0138	.118		–	–	–	■	886	.0138	.118		–	–	–		–	–	–	■	180	.0098	.039	8202693
	M8310	–	■	837	.0138	.118	◪	427	.0126	.118	■	787	.0138	.118		–	–	–		–	–	–	■	164	.0098	.039	8202694
	M8330	–	■	787	.0138	.118	◪	459	.0126	.118	■	738	.0138	.118		–	–	–		–	–	–	◪	148	.0098	.039	8202695
	M8340	–	■	722	.0138	.118	◪	427	.0126	.118	◪	673	.0138	.118		–	–	–		–	–	–		–	–	–	8202696
	M9325	–	■	919	.0138	.118		–	–	–	■	869	.0138	.118		–	–	–		–	–	–	◪	180	.0098	.039	8202697

XDET 13

	IC	D1	S
	(inch)	(inch)	(inch)
13T3	.527	.173	.156

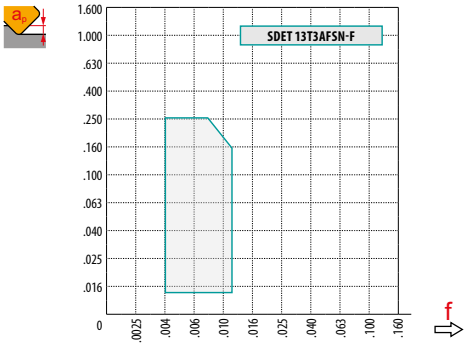


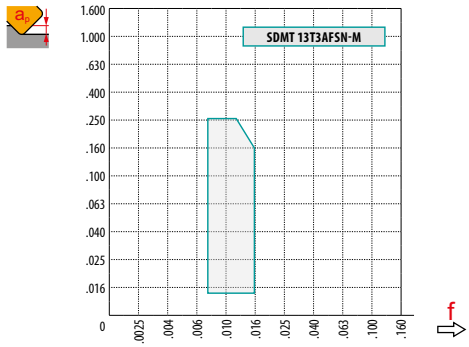
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

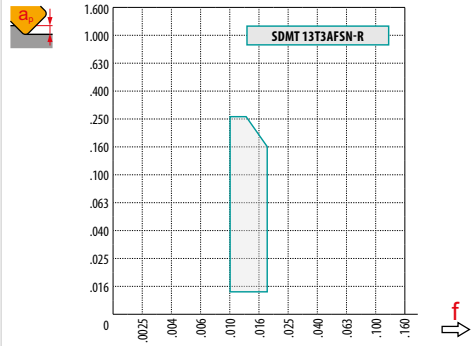
---		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
			W E																		
Wiper design for improved surface finish when machining with large cutters and high feed rates.																					
XDET 13T3AFER	**8215**	–	1378	.0039	.008	820	.0035	.008	1296	.0039	.008	–	–	–	–	–	–	–	–	–	8202815
	M8330	–	1296	.0039	.008	771	.0035	.008	1230	.0039	.008	–	–	–	–	–	–	–	–	–	8202816

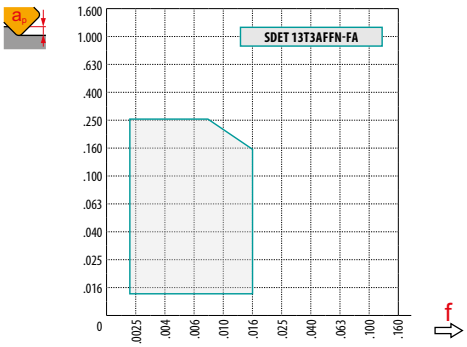
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ x.f	2.20	1.60	1.35	1.20	1.10	.95	.85	.75	.85	.95	1.00	1.00	1.00	1.00
⇨ x.f	.64	.64	.64	.64	.64	.65	.65	.67	.68	.71	.72	.74	.79	1.00

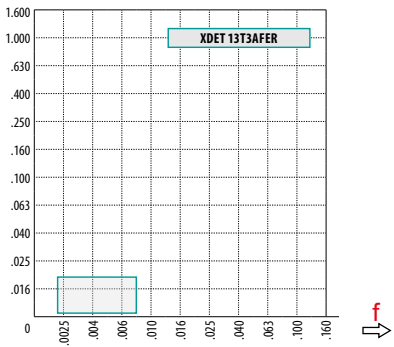
	SDET 13-F	SDMT 13-M	SDMT 13-R	SDET 13-FA	XDET 13
RE (mm)	–	–	–	–	–
BS (inch)	.069	.069	.069	.069	.322











DC	X.V	f_{max}
1.250	1.22	.006
1.500	1.26	.006
2.000	1.30	.007
2.500	1.34	.008
3.000	1.39	.009
4.000	1.43	.009
5.000	1.48	.010
6.000	1.53	.011
8.000	1.58	.013
10.000	1.63	.014

DC	RPMX	APMX/l
1.250	14.1°	.252/1.063
1.500	11.8°	.252/1.259
2.000	9.1°	.252/1.614
2.500	7.0°	.252/2.126
3.000	4.1°	.252/3.583
4.000	4.0°	.252/3.661
5.000	3.1°	.209/3.937
6.000	1.1°	.071/3.937
8.000	.4°	.022/3.937
10.000	.3°	.016/3.937

DC	DMIN	DMAX	SMAX DMIN	SMAX DMAX
1.250	2.362	3.520	.067	.067
1.500	2.953	4.064	.067	.067
2.000	3.819	5.056	.067	.067
2.500	4.803	6.055	.067	.067
3.000	5.945	7.056	.067	.067
4.000	7.795	9.016	.067	.067
5.000	9.764	11.008	.067	.067
6.000	12.087	13.008	.067	.067
8.000	16.181	17.008	.067	.067
10.000	20.197	21.008	.067	.067

a_p
.059

SOD05

P M K N

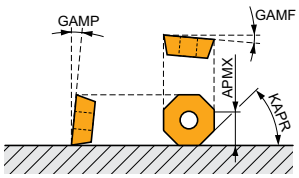
PRAMET

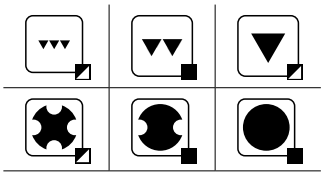
S

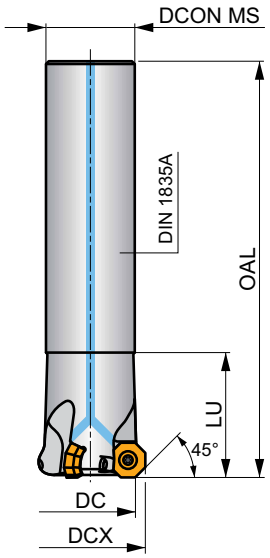
Universal Face Mill with Positive Design and Internal Coolant

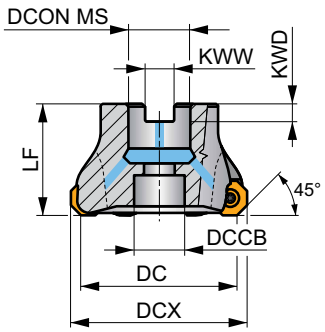
Highly productive universal face mill utilising single-sided positive inserts with APMX up to 10 mm. Unique insert seat fits OD.. 05, RD.. 12 and SD.. 12 style inserts, suited for wide range of applications. Differential tooth pitch. Arbor and cylindrical style. Body treated for longer tool life.

KAPR	45°
APMX	2.7 (10.0) mm









h_m	0.03 - 0.15 mm
h_m	0.03 - 0.12 mm

	Product	DCX (mm)	DC (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	LU (mm)	LF (mm)	KAPR (°)	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		lbs				MID
DIN 1835A	**32N3R045A25-SOD05-C**	32	24.7	130	25	–	45	–	45	–	–	-10	8	3	–	17700	✓	.90	GI326	FA049	–	7342889
DIN 1835A	**40N3R045A32-SOD05-C**	40	32.6	150	32	–	45	–	45	–	–	-7	8	3	–	15800	✓	1.91	GI326	FA040	–	7342890
	40A03R-S450D05-C	40	32.7	–	16	14	–	40	45	8.4	5.6	-10	8	3	–	15800	✓	.41	GI326	FA042	–	7342880
	50A04R-S450D05-C	50	42.6	–	22	18	–	40	45	10.4	6.3	-7	8	4	–	14100	✓	.61	GI326	FA043	–	7342881
	50A05R-S450D05-C	50	42.6	–	22	18	–	40	45	10.4	6.3	-7	8	5	–	14100	✓	.62	GI326	FA043	–	7342882
ISO 6462 DIN 8030	**63A05R-S450D05-C**	63	55.6	–	22	18	–	40	45	10.4	6.3	-7	8	5	✓	12600	✓	.87	GI326	FA043	–	7342883
ISO 6462 DIN 8030	**63A06R-S450D05-C**	63	55.6	–	22	18	–	40	45	10.4	6.3	-7	8	6	✓	12600	✓	1.09	GI326	FA043	–	7342884
	80A06R-S450D05-C	80	72.6	–	27	38	–	50	45	12.4	7	-7	8	6	✓	11100	✓	1.61	GI326	FA041	AC001	7342885
	80A08R-S450D05-C	80	72.6	–	27	38	–	50	45	12.4	7	-7	8	8	✓	11100	✓	1.46	GI326	FA041	AC001	7342886
	100A07R-S450D05-C	100	92.6	–	32	45	–	50	45	14.4	8	-7	8	7	✓	10000	✓	2.40	GI326	FA041	AC002	7342887
	125A08R-S450D05-C	125	117.6	–	40	56	–	63	45	16.4	9	-7	8	8	✓	8900	✓	4.85	GI326	FA041	AC003	7342888

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

ISOD05

P M K N S

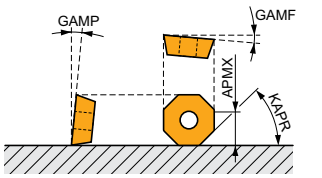
PRAMET

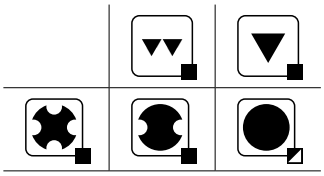
S

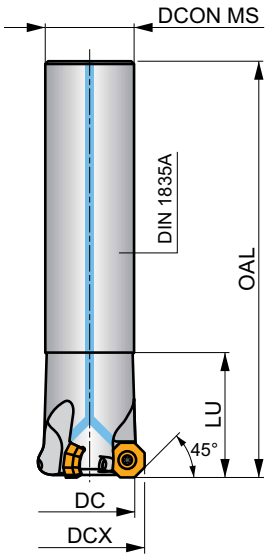
Universal Face Mill with Positive Design and Internal Coolant

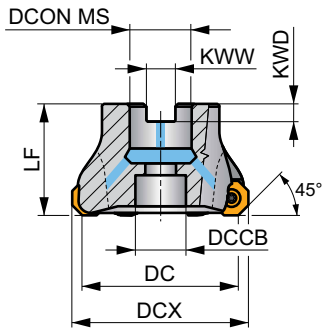
Highly productive universal face mill utilizing single-sided positive inserts with APMX up to .394 inches. Unique insert seat fits OD.. 05, RD.. 12 and SD.. 12 style inserts, for wide range of applications. Differential tooth pitch. Arbor and cylindrical style. Body treated for longer tool life.

KAPR	45°
APMX	.118 (.394) in









h_m	.001-.006 in
h_m	.001 - .005 in

	Product	DCX (inch)	DC (inch)	OAL (inch)	DCON MS (inch)	DCCB (inch)	LU (inch)	LF (inch)	KAPR (°)	KWW (inch)	KWD (inch)	GAMF (°)	GAMP (°)			max.		lbs			MID
DIN 1835A	**125N3R177C100-ISOD05-C**	1.250	.961	5.000	1.000	–	1.772	–	45	–	–	8	-10	3	–	17000	✓	.99	GI326	FA049	7546855
DIN 1835A	**150N3R177C125-ISOD05-C**	1.500	1.209	6.000	1.250	–	1.772	–	45	–	–	8	-7	3	–	15800	✓	1.83	GI326	FA040	7546856
	200A04R-IS450D05-C	2.000	1.709	–	.750	.630	–	1.575	45	.321	.193	8	-7	4	–	14100	✓	.80	GI326	FA043	7546797
	200A05R-IS450D05-C	2.000	1.709	–	.750	.630	–	1.575	45	.321	.193	8	-7	5	–	14100	✓	.78	GI326	FA043	7546798
	250A05R-IS450D05-C	2.500	2.209	–	.750	.630	–	1.575	45	.321	.193	8	-7	5	✓	12600	✓	1.04	GI326	FA043	7546799
ISO 6462 DIN 8030	**250A06R-IS450D05-C**	2.500	2.209	–	.750	.630	–	1.575	45	.321	.193	8	-7	6	✓	12600	✓	1.05	GI326	FA043	7546850
ISO 6462 DIN 8030	**300A06R-IS450D05-C**	3.000	2.709	–	1.000	.827	–	1.969	45	.382	.224	8	-7	6	✓	11100	✓	2.43	GI326	FA044	7546851
	300A08R-IS450D05-C	3.000	2.709	–	1.000	.827	–	1.969	45	.382	.224	8	-7	8	✓	11100	✓	2.23	GI326	FA044	7546852
	400A07R-IS450D05-C	4.000	3.709	–	1.500	1.417	–	1.969	45	.630	.382	8	-7	7	✓	10000	✓	4.93	GI326	FA045	7546853
	500A08R-IS450D05-C	5.000	4.709	–	1.500	1.260	–	2.480	45	.630	.382	8	-7	8	✓	8900	✓	6.98	GI326	FA046	7546854

GI326	OD.. 0505..	RD.. 1205..	SDKT 1205..	SDMT 1205..SN

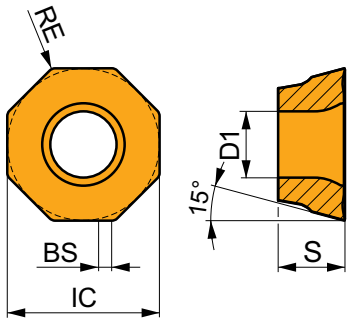
		Nm						
FA040	US 45014-T20P	5.0	M 5	.512	Flag T20P	–	–	–
FA044	US 45012-T20P	5.0	M 5	.472	SDR T20P-T	–	–	HS 050125
FA045	US 45012-T20P	5.0	M 5	.472	SDR T20P-T	–	–	HCS 075200
FA046	US 45012-T20P	5.0	M 5	.472	SDR T20P-T	–	–	HS 075125

FA043	US 45014-T20P	5.0	M 5	.512	–	SDR T20P-T	HS 1030C	–
FA049	US 45011-T20P	5.0	M 5	.433	Flag T20P	–	–	–

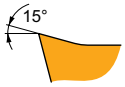
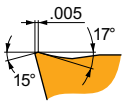
ODKT 05IM

PRAMET

	IC (inch)	D1 (inch)	S (inch)	BS (inch)
0505	.500	.217	.219	.039

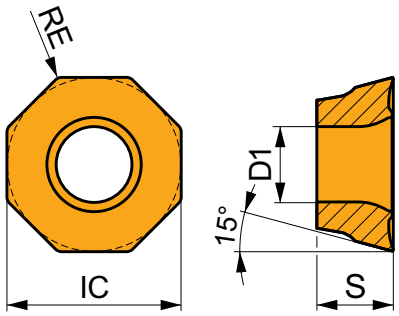


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

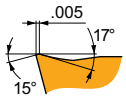
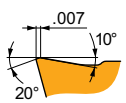
Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
																					
			F geometry, 45° face milling insert, with highly positive design for light machining.																		
ODKT 0505ADFR-F	**M8310**	.031	■ 902	.0059	.098	◪ 459	.0055	.098	–	–	–	–	–	–	–	–	–	–	–	–	7342891
																					
			FM geometry, 45° face milling insert, with positive design for light to medium machining.																		
ODKT 0505ADSR-FM	**M6330**	.031	■ 623	.0098	.098	■ 443	.0091	.098	–	–	–	–	–	–	–	–	–	–	–	–	7455503
	M8310	.031	■ 787	.0098	.098	◪ 394	.0091	.098	◪ 738	.0098	.098	–	–	–	–	–	–	–	–	–	7342892
	M8330	.031	■ 738	.0098	.098	■ 443	.0091	.098	◪ 689	.0098	.098	–	–	–	–	–	–	–	–	–	7447916
	M8345	.031	■ 525	.0098	.098	■ 312	.0091	.098	–	–	–	–	–	–	–	–	–	–	–	–	7342894
	M9340	.031	■ 804	.0098	.098	■ 476	.0091	.098	–	–	–	–	–	–	–	–	–	–	–	–	7342895

ODMT 05IM

	IC	D1	S
	(inch)	(inch)	(inch)
0505	.500	.217	.219

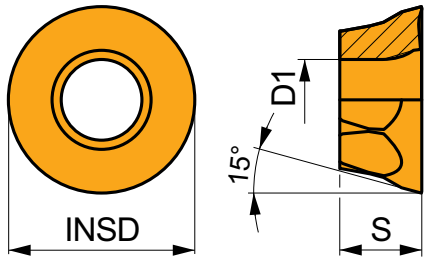


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

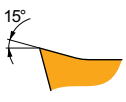
Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
																					
			FM geometry, 45° face milling insert, with positive design for light to medium machining.																		
ODMT 0505ADSR-FM	**M8340**	.031	656	.0098	.098	394	.0091	.098	623	.0098	.098	–	–	–	–	–	–	–	–	–	7342898
	M9340	.031	804	.0098	.098	476	.0091	.098	–	–	–	–	–	–	–	–	–	–	–	–	7342899
																					
			R geometry, 45° face milling insert, with positive design for unstable cutting conditions.																		
ODMT 050508SN-R	**M8330**	.031	623	.0098	.098	–	–	–	591	.0098	.098	–	–	–	–	–	–	–	–	–	7447917
	M9340	.031	689	.0098	.098	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	7342897

RDGT 12IM

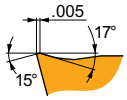
	INSD	D1	S
	(inch)	(inch)	(inch)
1205	.5	.217	.219



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

Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
																					
			F geometry with highly positive design for light machining.																		
RDGT 120500FN-F	**M8310**	–	689	.0079	.059	344	.0071	.059	–	–	–	–	–	–	–	–	–	–	–	–	7342900

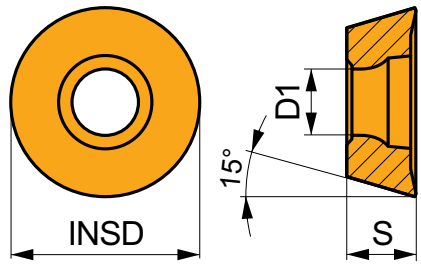
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
																					
			FM geometry with positive design for light to medium machining.																		
RDGT 120500SN-FM	**M8330**	–	■ 623	.0079	.059	◪ 361	.0071	.059	◪ 591	.0079	.059	–	–	–	–	–	–	–	–	–	7447958
	M8345	–	■ 459	.0079	.059	◪ 262	.0071	.059	–	–	–	–	–	–	–	–	–	–	–	–	7342902

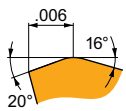
RDMT 12IM

PRAMET

	INSD (inch)	D1 (inch)	S (inch)
1205	.5	.217	.219

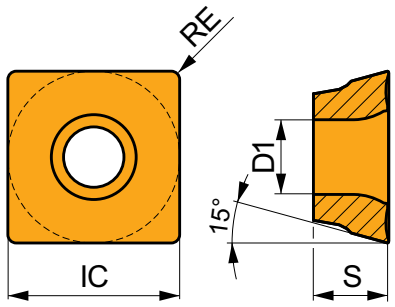


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

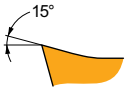
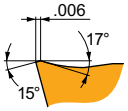
Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
																					
			R geometry, copy and profile milling insert, with positive design for unstable cutting conditions.																		
RDMT 120500SN-R	**M8330**	–	■ 574	.0118	.059	–	–	–	■ 541	.0118	.059	–	–	–	–	–	–	–	–	–	7447959
	M8340	–	■ 525	.0118	.059	–	–	–	◪ 492	.0118	.059	–	–	–	–	–	–	–	–	–	7342904

SDKT 12IM

	IC	D1	S
	(inch)	(inch)	(inch)
1205	.500	.217	.219

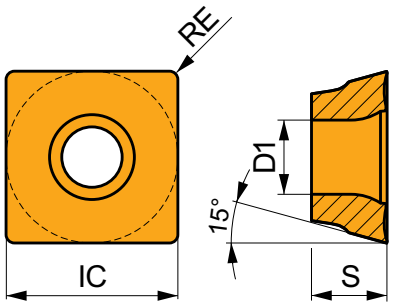


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

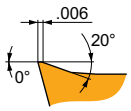
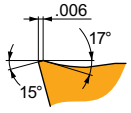
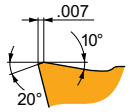
Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
			F																		
			F geometry, 90° shoulder milling insert, with highly positive design for light machining.																		
SDKT 1205PDFR-F	**8215**	.031	■ 935	.0039	.157	◪ 558	.0035	.157	–	–	–	◪ 2805	.0047	.157	–	–	–	–	–	–	7342908
			1 U S																		
			FM geometry, 90° shoulder milling insert, with positive design for light to medium machining.																		
SDKT 1205AESN-FM	**M8330**	–	■ 919	.0059	.157	◪ 541	.0059	.157	◪ 869	.0059	.157	–	–	–	–	–	–	–	–	–	7447975
	M8345	–	■ 673	.0059	.157	◪ 394	.0059	.157	–	–	–	–	–	–	–	–	–	–	–	–	7342907
SDKT 1205PDSR-FM	**M8330**	.031	■ 837	.0059	.157	◪ 492	.0059	.157	◪ 787	.0059	.157	–	–	–	–	–	–	–	–	–	7447976
	M8345	.031	■ 607	.0059	.157	◪ 361	.0059	.157	–	–	–	–	–	–	–	–	–	–	–	–	7342910

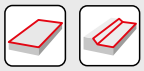
SDMT 12IM

	IC	D1	S
	(inch)	(inch)	(inch)
1205	.500	.217	.219



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

Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
			S																		
			F geometry, 90° shoulder milling insert, with positive design for light to medium machining.																		
SDMT 120508SN-F	**M8310**	.031	■ 869	.0059	.157	◪ 443	.0059	.157	–	–	–	–	–	–	–	–	–	–	–	–	7342912
	M8330	.031	■ 804	.0059	.157	◪ 476	.0059	.157	–	–	–	◪ 2411	.0071	.157	–	–	–	–	–	–	7447981
			S																		
			FM geometry, 90° shoulder milling insert, with positive design for medium machining.																		
SDMT 120508SN-FM	**M8345**	.031	■ 574	.0059	.157	◪ 344	.0059	.157	–	–	–	–	–	–	–	–	–	–	–	–	7342913
				S																	
			R geometry, 90° shoulder milling insert, with positive design for unstable cutting conditions.																		
SDMT 120508SN-R	**M8330**	.031	■ 738	.0079	.157	–	–	–	■ 689	.0079	.157	–	–	–	–	–	–	–	–	–	7447982
	M8345	.031	■ 541	.0079	.157	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	7342915
SDMT 1205AESN-R	**M8330**	–	■ 869	.0079	.157	–	–	–	■ 820	.0079	.157	–	–	–	–	–	–	–	–	–	7447980
	M8340	–	■ 787	.0079	.157	–	–	–	◪ 738	.0079	.157	–	–	–	–	–	–	–	–	–	7342918

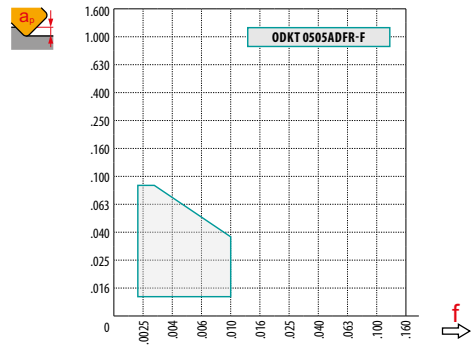


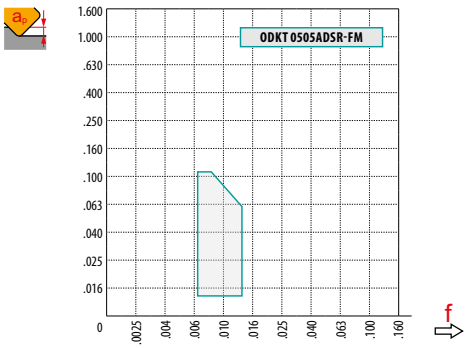
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ X.f	2.20	1.60	1.35	1.20	1.10	.95	.85	.75	.85	.95	1.00	1.00	1.00	1.00
⇨ X.f	.64	.64	.64	.64	.64	.65	.65	.67	.68	.71	.72	.74	.79	1.00

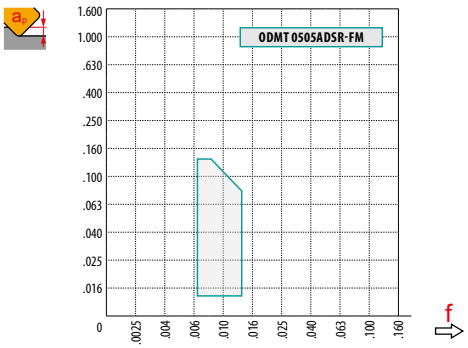
	ODKT 05-F	ODKT 05-FM	ODMT 05-FM	ODMT 05-R
RE (mm)	0.4	0.8	0.8	0.8
BS (inch)	.039	.039	–	–

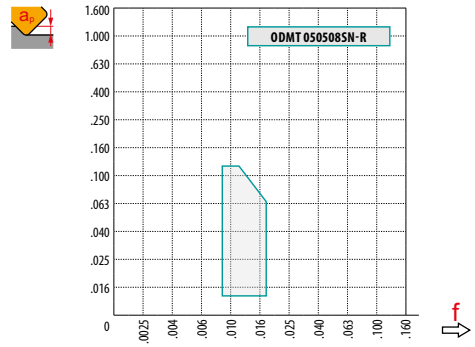
	RDGT 12-F	RDGT 12-FM	RDGT 12-R
RE (mm)	6.35	6.35	6.35
BS (inch)	–	–	–

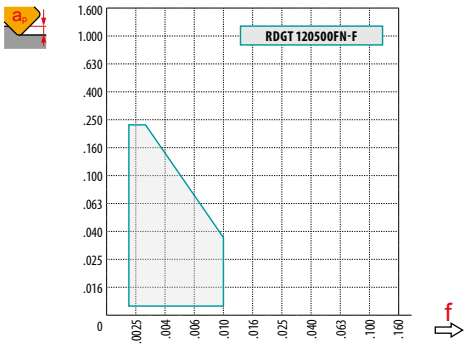
	SDKT 12-F	SDKT 12-FM	SDMT 12-F	SDMT 12-R
RE (mm)	0.8	0.8	0.8	0.8
BS (inch)	.091	.091	–	–

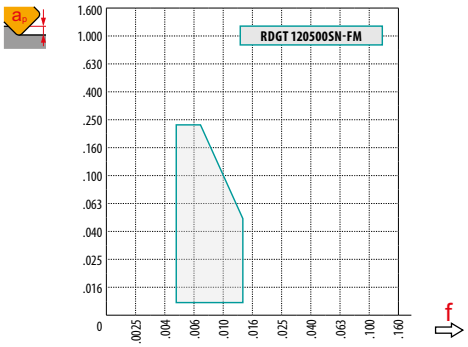


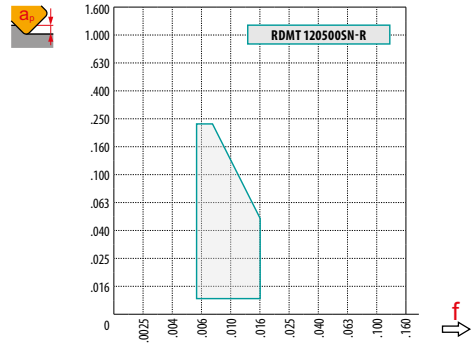


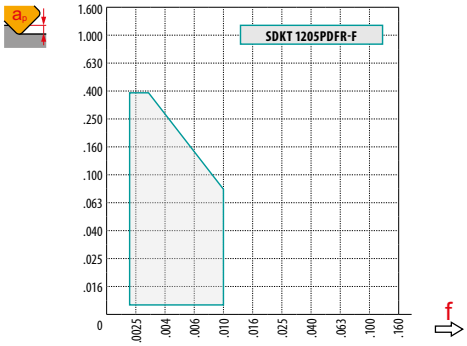


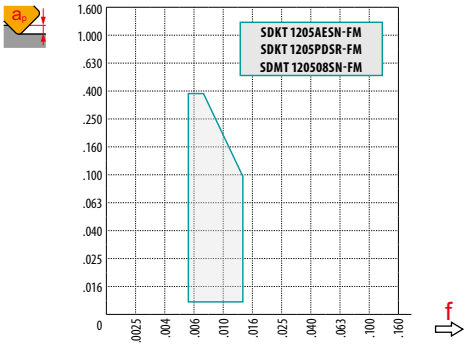


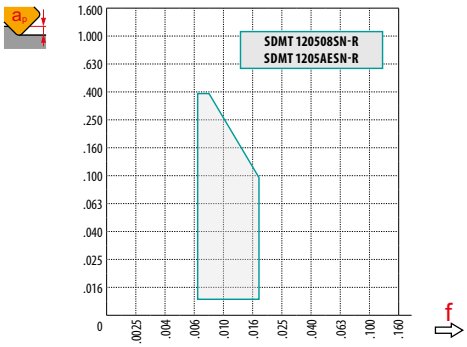












(inch)		R												
DCX	a_p	.010	.020	.024	.028	.031	.039	.049	.059	.079	.118	.157	.197	.236
1.260		.922	.976	.993	1.009	1.023	1.048	1.076	1.100	1.139	1.196	1.233	1.253	1.260
1.575		1.237	1.291	1.308	1.324	1.338	1.363	1.391	1.415	1.454	1.511	1.548	1.568	1.575
1.969		1.631	1.685	1.702	1.717	1.732	1.757	1.785	1.809	1.848	1.905	1.941	1.962	1.969
2.480	DEF	2.143	2.197	2.214	2.229	2.244	2.269	2.296	2.320	2.360	2.417	2.453	2.474	2.480
3.150		2.812	2.866	2.883	2.898	2.913	2.938	2.966	2.990	3.029	3.086	3.122	3.143	3.150
3.937		3.600	3.654	3.670	3.686	3.700	3.726	3.753	3.777	3.817	3.874	3.910	3.930	3.937
4.921		4.584	4.638	4.655	4.670	4.685	4.710	4.737	4.761	4.801	4.858	4.894	4.915	4.921

(inch)

DCX	X.V	f_{max}
1.250	1.36	.011
1.500	1.40	.012
2.000	1.43	.013
2.500	1.47	.015
3.000	1.52	.017
4.000	1.57	.019
5.000	1.62	.020

S (inch)

a_{emax}
.394

S (inch)

a_p	**.039**	**.197**	**.394**
1 f	.014	.008	.006

(inch)

O

DCX	RPMX	APMX/I
2.000	4.1°	.278/3.937
2.500	2.7°	.181/3.937
3.000	1.8°	.118/3.937
4.000	1.7°	.112/3.937
5.000	.7°	.043/3.937

R

DCX	RPMX	APMX/I
2.000	3.8°	.244/3.740
2.500	2.5°	.167/3.937
3.000	1.7°	.112/3.937
4.000	1.6°	.104/3.937
5.000	.3°	.016/3.937

(inch)

O

DCX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
2.000	3.071	3.937	.177	.177
2.500	4.134	4.961	.177	.177
3.000	5.433	6.299	.177	.177
4.000	7.008	7.874	.177	.177
5.000	9.016	9.843	.157	.177

R

DCX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
2.000	3.071	3.937	.177	.177
2.500	4.134	4.961	.177	.177
3.000	5.433	6.299	.177	.177
4.000	7.008	7.874	.177	.177
5.000	9.055	9.843	.157	.177

(inch)

	O	R
a_p	.094	.091

(inch)

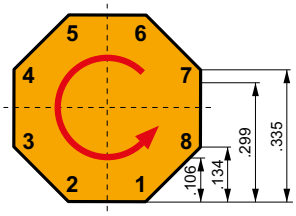
R

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
1.250	FE	.024	.031	.045	.055	.063	.077	.089	.100	.109	.126	.141
1.500		.027	.035	.050	.061	.070	.086	.100	.111	.122	.141	.157
2.000		.031	.039	.056	.068	.079	.096	.111	.124	.136	.157	.176
2.500		.034	.044	.062	.077	.088	.108	.125	.140	.153	.177	.198
3.000		.039	.050	.070	.086	.100	.122	.141	.157	.173	.199	.223
4.000		.043	.056	.079	.096	.111	.136	.157	.176	.193	.223	.249
5.000		.048	.062	.088	.108	.124	.152	.176	.197	.216	.249	.278

RE (mm)	µm	3	5	10	15	20	30	40	50	60	80	100
6.0	FE	.015	.019	.027	.033	.039	.047	.055	.061	.067	.077	.086

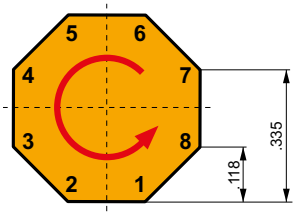
(inch)

ODKT 05



a_p	
–> .106	8
–> .134	7
–> .299	4
–> .335	2

ODMT 05



a_p	
–> .118	8
–> .335	4

SOD06D

P M K S H

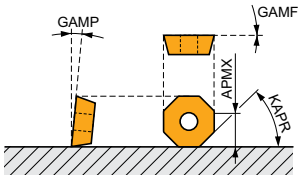
PRAMET

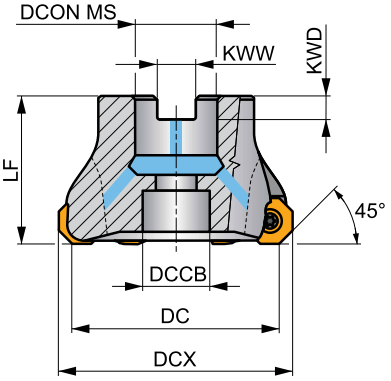
S

Universal Face Mill with Positive Design and Internal Coolant

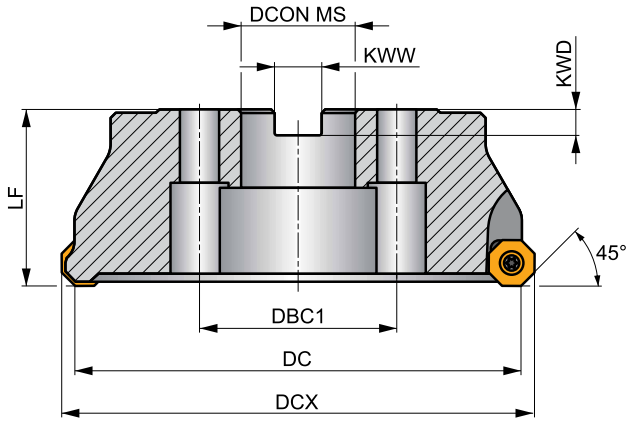
Highly productive universal face mill utilising single sided positive inserts with APMX of up to 3.5 mm. Unique insert seat fits OD.. 06 and RP.. 15 style inserts, suited for face milling and chamfering. Arbor style only with differential tooth pitch. Body treated for longer tool life.

KAPR	45°
APMX	3.1 (8.6) mm

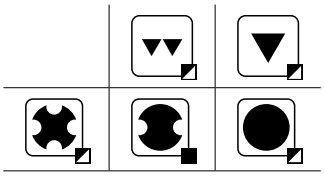




DC 63 - 125 mm



DC 160 mm



h_m 0.12 - 0.22 mm

	Product	DC (mm)	DCX (mm)	LF (mm)	DCON MS (mm)	DCCB (mm)	DBC1 (mm)	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		lbs			MID
ISO 6462 DIN 8030	**63A05R-S450D06D**	63	72.5	40	22	18	–	10.4	6.3	0	5	5	✓	8800	✓	1.23	GI059	FA071	6756816
	80A06R-S450D06D	80	89.5	50	27	20	–	12.4	7	0	5	6	✓	7800	✓	2.63	GI059	FA071	6756817
	100A07R-S450D06D	100	109.5	50	32	27	–	14.4	8	0	5	7	✓	7000	✓	4.56	GI059	FA071	6756818
	125A08R-S450D06D	125	134.5	63	40	33	–	16.4	9	0	5	8	✓	6300	✓	8.97	GI059	FA071	6756819
	160C09R-S450D06D	160	169.5	63	40	56	66.7	16.4	9	0	5	9	✓	5500	–	14.31	GI059	FA071	6756820

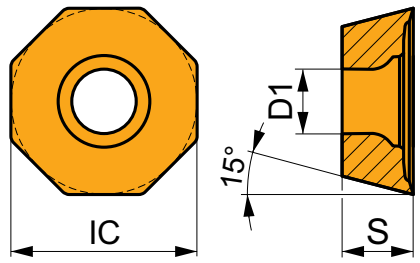
GI059	OD.. 0605ZZ..	RP.. 1505M0..

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

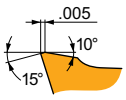
ODMT 06

PRAMET

	IC	D1	S
	(inch)	(inch)	(inch)
0605	.625	.217	.219



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

Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
		(inch)																			
																					

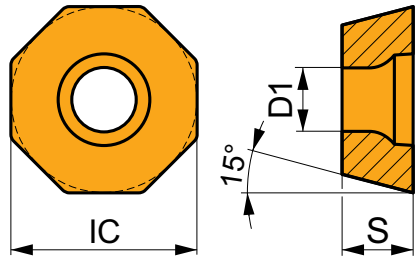
Slightly positive design, 45° face milling insert, for medium machining.

ODMT 0605ZZN	**M5315**	–	837	.0094	.118	–	–	–	787	.0094	.118	–	–	–	–	–	–	–	–	–	6754627
	M8330	–	656	.0094	.118	–	–	–	623	.0094	.118	–	–	–	–	–	–	–	–	–	7447918
	M8340	–	607	.0094	.118	–	–	–	574	.0094	.118	–	–	–	–	–	–	–	–	–	6800837
	M9325	–	804	.0094	.118	–	–	–	755	.0094	.118	–	–	–	–	–	–	–	–	–	6754560

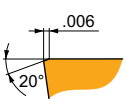
ODEW 06

PRAMET

	IC	D1	S
	(inch)	(inch)	(inch)
0605	.625	.217	.219



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

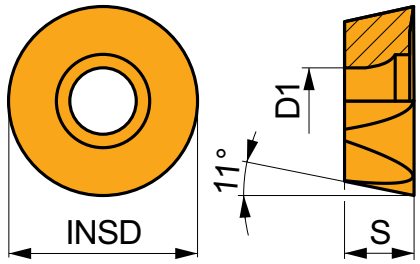
Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
		(inch)																			
																					

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

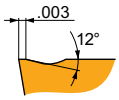
ODEW 0605ZZN	**M8330**	–	689	.0102	.098	–	–	–	640	.0102	.098	–	–	–	–	–	–	131	.0051	.039	7447915

RPET 15

	INSD	D1	S
	(inch)	(inch)	(inch)
1505	.621	.217	.219

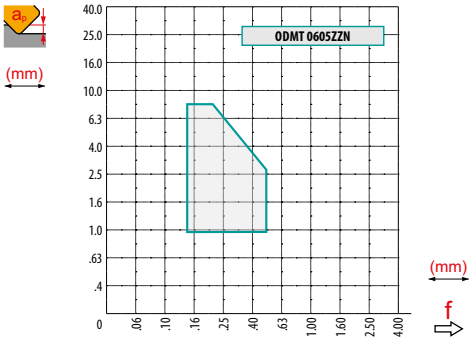


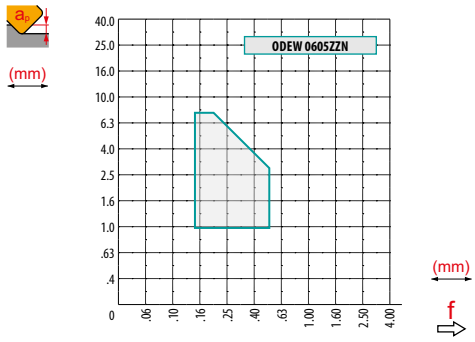
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

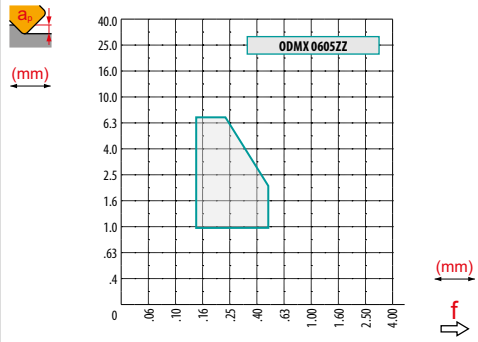
Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
			HFC S																		
			M geometry, copy and profile mill insert, with positive design for light to rough machining.																		
RPET 1505MOS-M	**M8330**	–	■ 755	.0157	.039	◪ 443	.0142	.039	◪ 705	.0157	.039	–	–	–	◪ 180	.011	.031	–	–	–	7447965

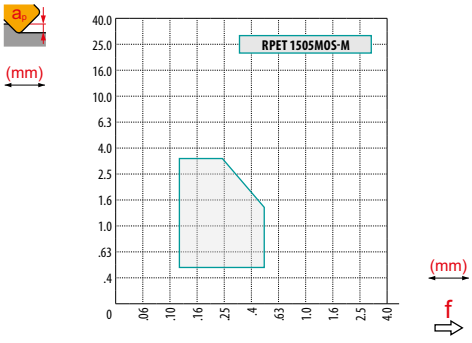
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ x.f	2.20	1.60	1.35	1.20	1.10	.95	.85	.75	.85	.95	1.00	1.00	1.00	1.00
⇨ x.f	.64	.64	.64	.64	.64	.65	.65	.67	.68	.71	.72	.74	.79	1.00

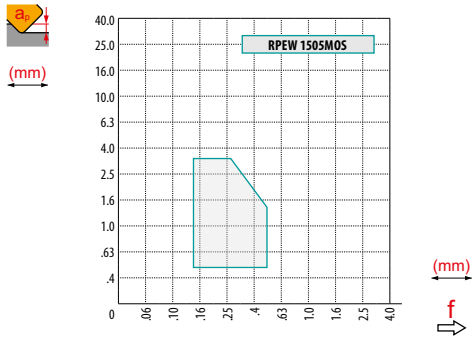
	ODMT 06	ODEW 06	ODMX 06	RPET 15-M	RPEW 15
RE (mm)	–	–	–	7.89	7.89
BS (mm)	1.73	5.92	9.91	–	–









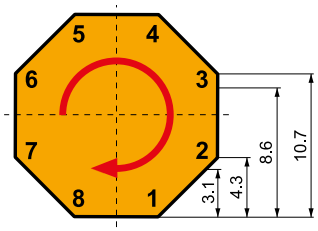


(mm)		R								
DC	a_p	.00	.50	.75	1.25	1.50	2.00	2.50	3.00	4.00
63	DEF	56.63	62.17	63.36	65.18	65.91	67.16	68.19	69.05	70.41
80		73.63	79.17	80.36	82.18	82.91	84.16	85.19	86.05	87.41
100		93.63	99.17	100.36	102.18	102.91	104.16	105.19	106.05	107.41
125		118.63	124.17	125.36	127.18	127.91	129.16	130.19	131.05	132.41
160		153.63	159.17	160.36	162.18	162.91	164.16	165.19	166.05	167.41

(mm)

DC	X.V	f_{max}
63	1.49	.78
80	1.54	.88
100	1.59	.98
125	1.64	1.10
160	1.70	1.24

(mm)



a_p	
–> 3.1	8
–> 4.3	7
–> 8.6	4
–> 10.7	2

SOE06Z

P M N S

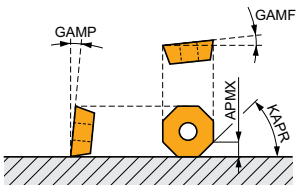
PRAMET

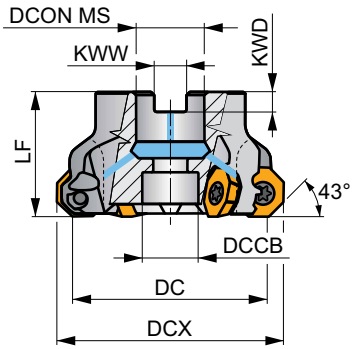
S

Universal Face Mill with Positive Design and Internal Coolant

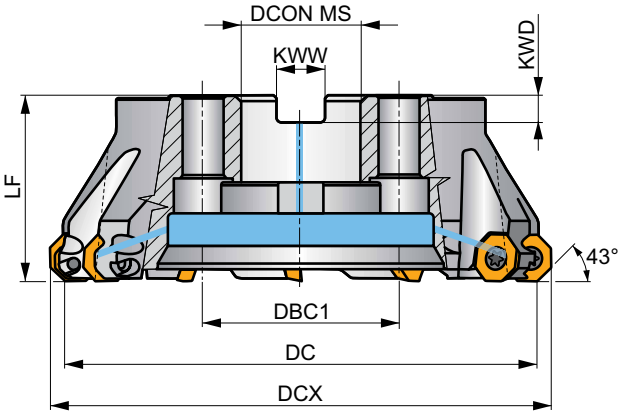
Highly productive universal face mill utilizing positive single sided inserts with APMX of 4 mm for RE.. 16. Unique insert seat fits OE.. 06, RE.. 16 and XE.. 06 style inserts, suited for a wide range of applications. Arbor style only with differential tooth pitch. Body treated for longer tool life.

KAPR	43°
APMX	3.3 (9.9) mm

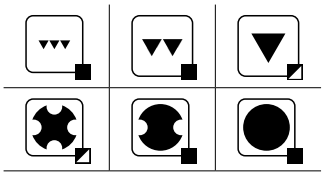




DC 50 – 125 mm



DC 160 – 200 mm



h_m 0.06 - 0.20 mm

	Product	DC (mm)	DCX (mm)	LF (mm)	DCON MS (mm)	DCCB (mm)	DBC1 (mm)	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		lbs				MID
	50A04R-S45OE06Z-C	50	60.2	40	22	18	–	10.4	6.3	6	10	4	✓	10700	✓	1.04	GI283	FA053	–	6922478
	50A05R-S45OE06Z-C	50	60	40	22	18	–	10.4	6.3	1	10	5	✓	10700	✓	1.04	GI283	FA053	–	6922479
	56A05R-S45OE06Z-C	56	66	40	22	18	–	10.4	6.3	6	10	5	✓	10100	✓	1.16	GI283	FA053	–	6922508
	63A04R-S45OE06Z-C	63	73.2	40	22	18	–	10.4	6.3	6	10	4	✓	9600	✓	1.28	GI283	FA053	–	6922500
	63A06R-S45OE06Z-C	63	73	40	22	18	–	10.4	6.3	1	10	6	✓	9600	✓	1.33	GI283	FA053	–	6922501
	70A06R-S45OE06Z-C	70	80	40	22	18	–	10.4	6.3	6	10	6	✓	9100	✓	1.51	GI283	FA053	–	6922509
	80A05R-S45OE06Z-C	80	90.2	50	27	38	–	12.4	7	6	10	5	✓	8500	✓	2.25	GI283	FA051	AC001	6922502
	80A06R-S45OE06Z-C	80	90.2	50	27	38	–	12.4	7	6	10	6	✓	8500	✓	2.28	GI283	FA051	AC001	6922503
ISO 6462 DIN 8030	**90A07R-S45OE06Z-C**	90	100	50	32	45	–	14.4	8	6	10	7	✓	8000	✓	3.50	GI283	FA051	AC002	6922510
	100A06R-S45OE06Z-C	100	110.2	50	32	45	–	14.4	8	6	10	6	✓	7600	✓	4.08	GI283	FA051	AC002	6922504
	100A08R-S45OE06Z-C	100	109.9	50	32	45	–	14.4	8	1	10	8	✓	7600	✓	4.12	GI283	FA051	AC002	6922505
	125A07R-S45OE06Z-C	125	135.2	63	40	56	–	16.4	9	6	10	7	✓	6800	✓	7.29	GI283	FA051	AC003	6922506
	125A09R-S45OE06Z-C	125	134.9	63	40	56	–	16.4	9	1	10	9	✓	6800	✓	7.39	GI283	FA051	AC003	6922507
	160C09R-S45OE06Z-C	160	170.2	63	40	–	66.7	16.4	9	6	10	9	✓	6000	✓	13.40	GI283	FA056	–	6931703
	160C12R-S45OE06Z-C	160	169.9	63	40	–	66.7	16.4	9	1	10	12	✓	6000	✓	15.56	GI283	FA056	–	6931704
	200C11R-S45OE06Z-C	200	210.2	63	60	–	101.6	25.7	14	6	10	11	✓	5300	✓	23.81	GI283	FA057	–	6931705
	200C14R-S45OE06Z-C	200	209.9	63	60	–	101.6	25.7	14	1	10	14	✓	5300	✓	24.58	GI283	FA057	–	6931706

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

ISOE06Z

P M N S

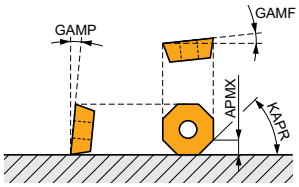
PRAMET

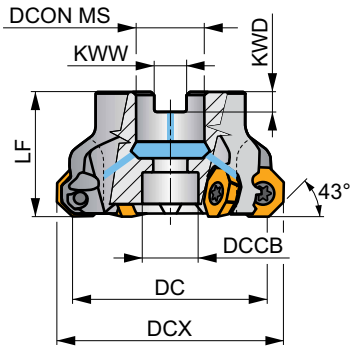
S

Universal Face Mill with Positive Design and Internal Coolant

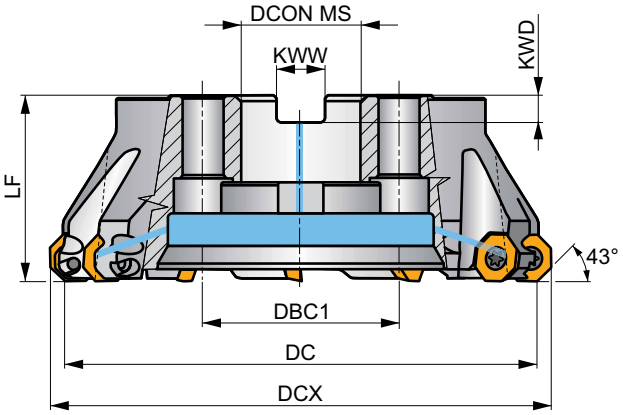
Productive universal face mill utilizing positive single sided inserts with APMX of .157 inches for RE.. 16. Unique insert seat fits OE.. 06, RE.. 16 and XE.. 06 style inserts. For a wide range of applications. Arbor style only with differential tooth pitch. Body treated for longer tool life.

KAPR	43°
APMX	.130 (.390) in

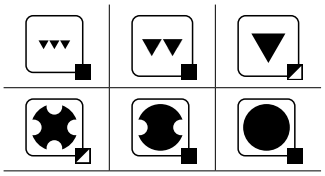




DC 2 – 6 in



DC 8 in



h_m .0024-.0079 in

	Product	DC (inch)	DCX (inch)	LF (inch)	DCON MS (inch)	DCCB (inch)	DBC1 (inch)	KWW (inch)	KWD (inch)	GAMF (°)	GAMP (°)			max.		lbs			MID
	200A04R-IS45OE06Z-C	2.000	2.402	1.575	.750	.630	–	.321	.193	10	6	4	✓	10700	✓	.82	GI283	FA073	7216301
	200A05R-IS45OE06Z-C	2.000	2.394	1.575	.750	.630	–	.321	.193	10	1	5	✓	10700	✓	.82	GI283	FA073	7216302
	250A04R-IS45OE06Z-C	2.500	2.902	1.575	.750	.630	–	.321	.193	10	6	4	✓	9600	✓	1.04	GI283	FA073	7270034
	250A06R-IS45OE06Z-C	2.500	2.894	1.575	.750	.630	–	.321	.193	10	1	6	✓	9600	✓	1.10	GI283	FA073	7270035
	300A05R-IS45OE06Z-C	3.000	3.402	1.969	1.000	.827	–	.382	.224	10	6	5	✓	8500	✓	2.18	GI283	FA074	7274857
	300A06R-IS45OE06Z-C	3.000	3.402	1.969	1.000	.827	–	.382	.224	10	6	6	✓	8500	✓	2.25	GI283	FA074	7274858
ISO 6462 DIN 8030	**400A06R-IS45OE06Z-C**	4.000	4.402	1.969	1.500	1.417	–	.630	.382	10	6	6	✓	7600	✓	4.26	GI283	FA075	7274859
	400A08R-IS45OE06Z-C	4.000	4.39	1.969	1.500	1.417	–	.630	.382	10	1	8	✓	7600	✓	4.30	GI283	FA075	7275030
	500A07R-IS45OE06Z-C	5.000	5.402	2.480	1.500	1.260	–	.630	.382	10	6	7	✓	6800	✓	7.72	GI283	FA070	7275031
	500A09R-IS45OE06Z-C	5.000	5.390	2.480	1.500	1.260	–	.630	.382	10	1	9	✓	6800	✓	7.72	GI283	FA070	7275032
	600A09R-IS45OE06Z-C	6.000	6.402	2.480	2.000	1.654	–	.756	.445	10	6	9	✓	6000	✓	12.92	GI283	FA076	7275033
	600A12R-IS45OE06Z-C	6.000	6.390	2.480	2.000	1.654	–	.756	.445	10	1	12	✓	6000	✓	13.03	GI283	FA076	7275034
	800C11R-IS45OE06Z-C	8.000	8.402	2.480	2.500	–	4.000	1.000	.559	10	6	11	✓	5300	✓	18.43	GI283	FA077	7275035
	800C14R-IS45OE06Z-C	8.000	8.390	2.480	2.500	–	4.000	1.000	.559	10	1	14	✓	5300	✓	18.65	GI283	FA077	7275036

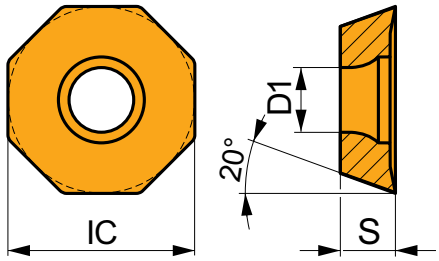
GI283	OEHT 0604AE..	REHT 1604M0..	XEHT 0604AE..

		Nm							
FA070	US 5011-T20P	5.0	M 5	.433	SDR T20P-T	HS 075125	–	–	–
FA073	US 5011-T20P	5.0	M 5	.433	SDR T20P-T	HS 037100	–	–	–
FA074	US 5011-T20P	5.0	M 5	.433	SDR T20P-T	HS 050125	–	–	–
FA075	US 5011-T20P	5.0	M 5	.433	SDR T20P-T	HCS 075200	–	–	–
FA076	US 5011-T20P	5.0	M 5	.433	SDR T20P-T	HS 100150	CAC 160C	HSD 0825C	HXK 5
FA077	US 5011-T20P	5.0	M 5	.433	SDR T20P-T	–	CAC 200C	HSD 1025C	HXK 7

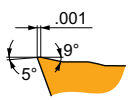
OEHT 06

PRAMET

	IC	D1	S
	(inch)	(inch)	(inch)
0604	.632	.217	.187



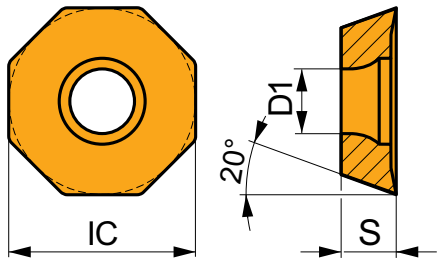
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
																					
			E																		
MF geometry, 45° face milling insert, with sharp positive design for light to medium and potentially finish machining.																					
OEHT 0604AEER-MF	**M6330**	–	837	.0047	.087	591	.0043	.087	–	–	–	–	–	–	246	.0039	.071	–	–	–	6931676
	M8330	–	968	.0047	.087	574	.0043	.087	–	–	–	2904	.0055	.087	230	.0039	.071	–	–	–	7447919
	M8340	–	902	.0047	.087	541	.0043	.087	–	–	–	–	–	–	213	.0039	.071	–	–	–	6931650
																					
			1	E																	
MM geometry, 45° face milling insert, with sharp positive design for light to medium machining.																					
OEHT 0604AEER-MM	**M6330**	–	804	.0063	.087	558	.0055	.087	–	–	–	–	–	–	230	.0043	.071	–	–	–	6931677
	M8330	–	919	.0063	.087	541	.0055	.087	–	–	–	2756	.0075	.087	230	.0043	.071	–	–	–	7447920
	M8340	–	837	.0063	.087	492	.0055	.087	–	–	–	–	–	–	197	.0043	.071	–	–	–	6931654
	M8345	–	673	.0063	.087	394	.0055	.087	–	–	–	–	–	–	164	.0043	.071	–	–	–	7051462
	M9340	–	1050	.0063	.087	623	.0055	.087	–	–	–	–	–	–	262	.0043	.071	–	–	–	7051471
																					
			S																		
M geometry, 45° face milling insert, with slightly positive design for light to medium machining.																					
OEHT 0604AESR-M	**M6330**	–	689	.0094	.126	492	.0087	.126	–	–	–	–	–	–	197	.0067	.102	–	–	–	7056846
	M8310	–	869	.0094	.126	443	.0087	.126	–	–	–	–	–	–	–	–	–	–	–	–	6931657
	M8330	–	804	.0094	.126	476	.0087	.126	–	–	–	–	–	–	197	.0067	.102	–	–	–	7447921
	M8340	–	722	.0094	.126	427	.0087	.126	–	–	–	–	–	–	180	.0067	.102	–	–	–	6931658
	M9325	–	968	.0094	.126	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6931656

OEHT 06-FA

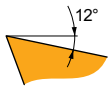
PRAMET

	IC	D1	S
	(inch)	(inch)	(inch)
0604	.632	.217	.187



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

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
OEHT 0604AEFR-FA	**HF7**	–	–	–	–	–	–	–	–	–	–	■ 1083	.0071	.079	–	–	–	–	–	–	6931668
	M0315	–	–	–	–	–	–	–	–	–	–	■ 2510	.0071	.079	–	–	–	–	–	–	6931669

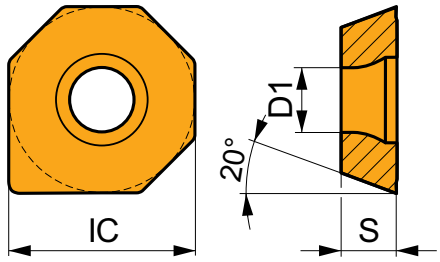


FA geometry, 45° face milling insert, with highly positive design for fine-finish to medium machining.

XEHT 06

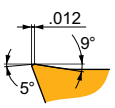
PRAMET

	IC	D1	S
	(inch)	(inch)	(inch)
0604	.632	.217	.187



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

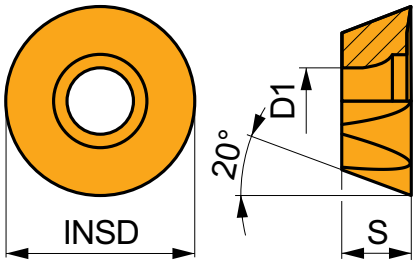
Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
XEHT 0604AESR	**M8310**	–	■ 869	.0094	.126	◪ 443	.0087	.126	–	–	–	–	–	–	–	–	–	–	–	–	6931670
	M8330	–	■ 804	.0094	.126	◪ 476	.0087	.126	–	–	–	–	–	–	–	–	–	–	–	–	7451118



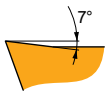
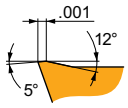
Slightly poisitive wiper design for improved surface finish.

REHT 16

	INSD	D1	S
	(inch)	(inch)	(inch)
1604	.63	.217	.187

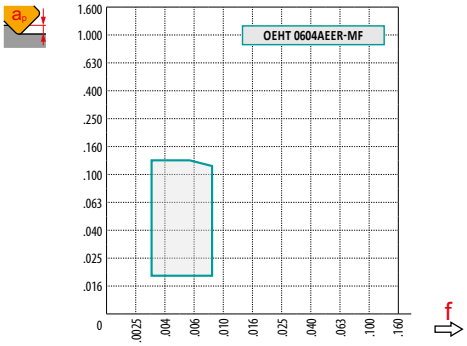


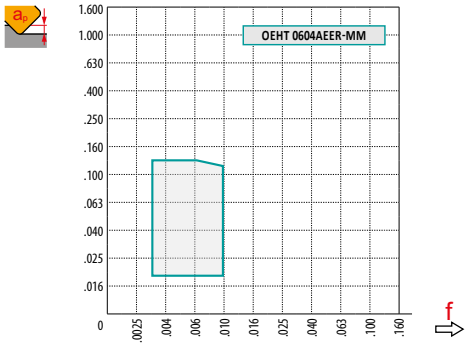
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

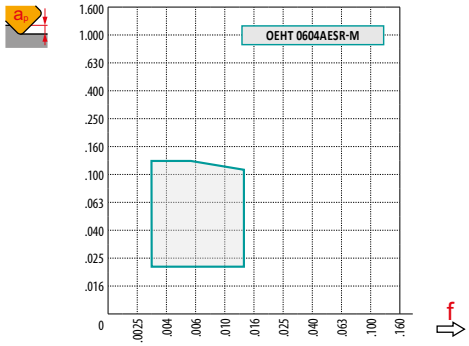
Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
			E																		
MM geometry, copy and profile mill insert, with slightly positive design for light to medium machining.																					
REHT 1604M0EN-MM	**M6330**	–	837	.0079	.079	591	.0071	.079	–	–	–	–	–	–	246	.0055	.063	–	–	–	6931678
	M8340	–	886	.0079	.079	525	.0071	.079	–	–	–	–	–	–	213	.0055	.063	–	–	–	6931662
	M9340	–	1083	.0079	.079	640	.0071	.079	–	–	–	–	–	–	262	.0055	.063	–	–	–	7051472
			S																		
M geometry, copy and profile mill insert, with positive design for light to medium machining.																					
REHT 1604M0SN-M	**M8310**	–	935	.0118	.079	476	.0106	.079	–	–	–	–	–	–	–	–	–	–	–	–	6931665
	M8330	–	886	.0118	.079	525	.0106	.079	–	–	–	–	–	–	213	.0083	.063	–	–	–	7447961
	M8340	–	804	.0118	.079	476	.0106	.079	–	–	–	–	–	–	197	.0083	.063	–	–	–	6931666

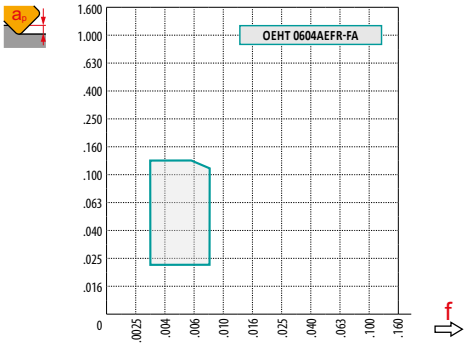
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	.95	.85	.75	.85	.95	1.00	1.00	1.00	1.00
x.f	.64	.64	.64	.64	.64	.65	.65	.67	.68	.71	.72	.74	.79	1.00

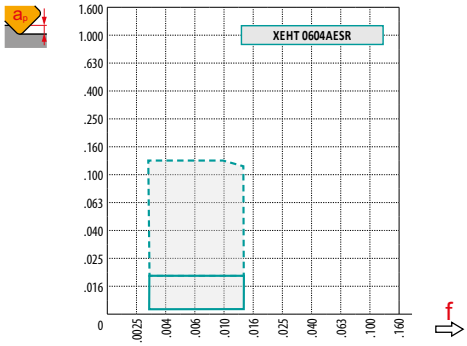
	OEHT 06-MF	OEHT 06-MM	OEHT 06-M	OEHT 06-FA	XEHT 06	REHT 16-MM	REHT 16-M
RE (mm)	–	–	–	–	–	8.0	8.0
BS (inch)	.054	.054	.054	.054	.390	–	–

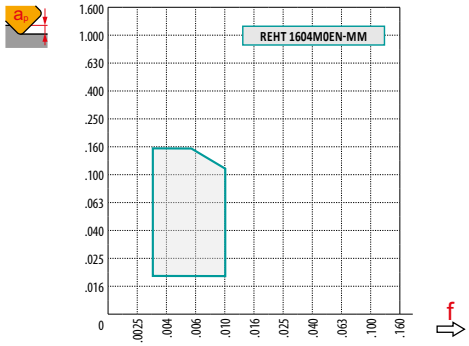


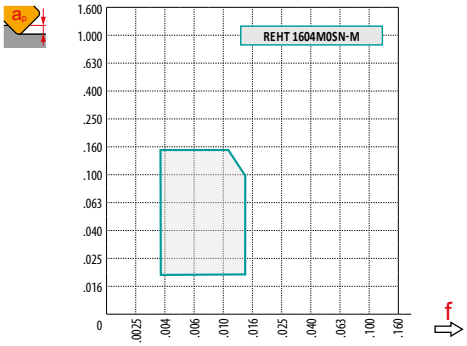












R (inch)

DC	a_p	.000	.020	.030	.049	.059	.079	.098	.118	.157
2.000	DEF	1.728	1.948	1.994	2.067	2.096	2.145	2.186	2.220	2.274
2.500		2.240	2.459	2.506	2.578	2.607	2.657	2.698	2.732	2.786
3.000		2.909	3.129	3.176	3.248	3.277	3.326	3.367	3.401	3.455
4.000		3.697	3.916	3.963	4.035	4.064	4.113	4.154	4.189	4.243
5.000		4.681	4.900	4.947	5.019	5.048	5.098	5.139	5.173	5.227
6.000		6.059	6.278	6.325	6.397	6.426	6.476	6.517	6.551	6.605
8.000		7.634	7.853	7.900	7.972	8.001	8.050	8.091	8.126	8.180

(inch)

DC	X.V	f_{max}
2.000	1.43	.013
2.500	1.47	.015
3.000	1.52	.017
4.000	1.57	.019
5.000	1.62	.020
6.000	1.68	.023
8.000	1.73	.026

(inch)

O

DC	RPMX	APMX/I
1.969	4.9°	.30/4.00
2.205	3.6°	.25/4.00
2.480	2.6°	.20/4.00
2.756	2.0°	.15/4.00
3.150	1.5°	.10/4.00

R

DCX	RPMX	APMX/I
2.358	4.6°	.30/4.00
2.591	3.0°	.20/4.00
2.870	2.2°	.15/4.00
3.142	1.8°	.12/4.00
3.539	1.3°	.08/4.00

(inch)

O

DC	DMIN	DMAX	SMAX DMIN	SMAX DMAX
2.000	3.602	4.724	.232	.232
2.500	4.622	5.748	.232	.232
3.000	5.961	7.087	.232	.232
4.000	7.535	8.661	.232	.232
5.000	9.500	1.630	.232	.232

R

DCX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
2.396	3.602	4.705	.232	.232
2.893	4.646	5.728	.232	.232
3.371	5.965	7.067	.232	.232
4.396	7.539	8.642	.232	.232
5.396	9.508	10.610	.232	.232

(inch)

	O	R
a_p	.122	.118

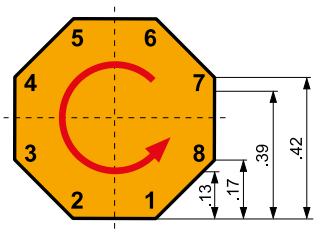
(inch)

R

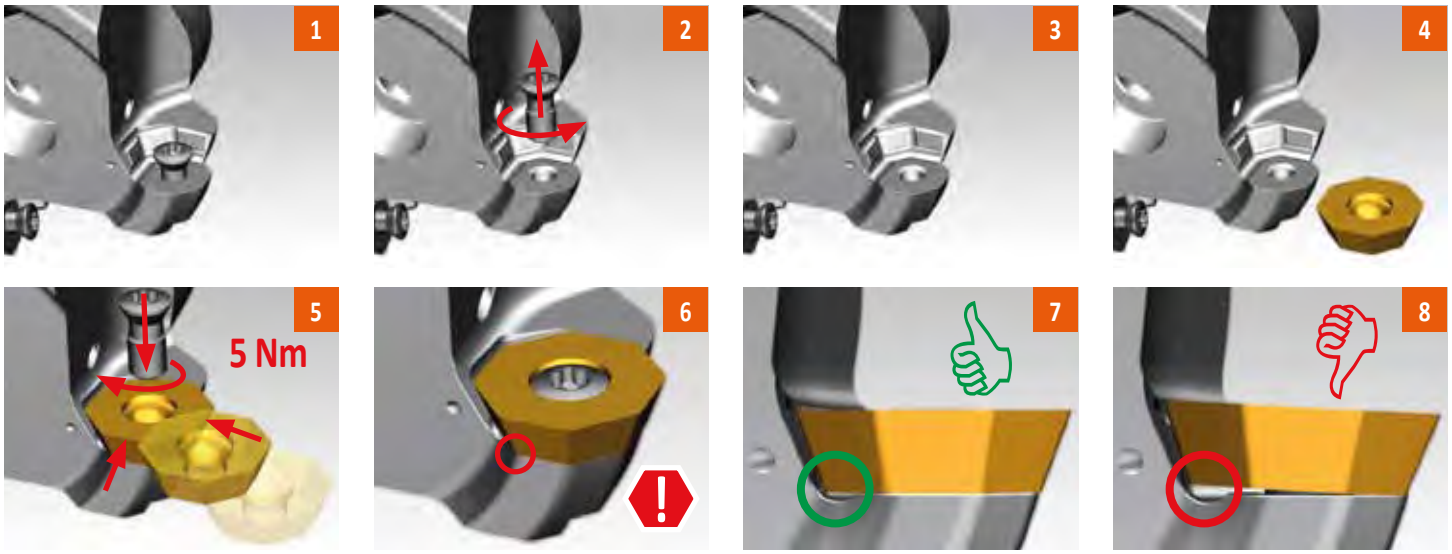
DCX	µm	3	5	10	15	20	30	40	50	60	80	100
2.358	FE	.033	.043	.061	.075	.086	.106	.122	.136	.149	.172	.193
2.591		.035	.045	.064	.078	.090	.111	.128	.143	.156	.181	.202
2.870		.037	.048	.067	.082	.095	.116	.134	.150	.165	.190	.213
3.142		.039	.050	.070	.086	.099	.122	.141	.157	.172	.199	.222
3.539		.041	.053	.075	.091	.106	.129	.149	.167	.183	.211	.236
3.929		.043	.056	.079	.096	.111	.136	.157	.176	.193	.222	.249

RE (mm)	µm	3	5	10	15	20	30	40	50	60	80	100
8.0	FE	.438	.566	.800	.980	1.131	1.386	1.600	1.789	1.960	2.263	2.530

(inch)



a_p	
–> .13	8
–> .17	7
–> .39	4
–> .42	2



SPN13

P M K S H

PRAMET

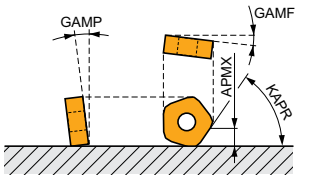
S

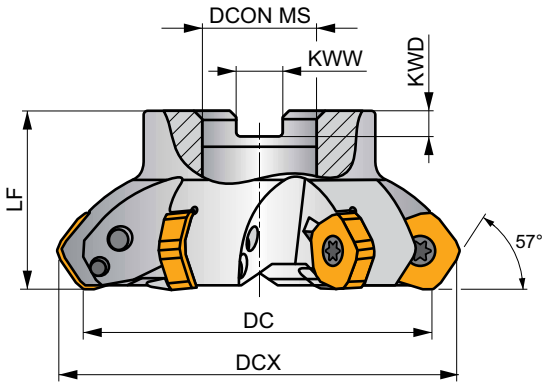
PENTA HD 57° Face Mill with Double Negative Design for Heavy Face Milling

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. An insert seat protected with a shim. Body treated for longer tool life.

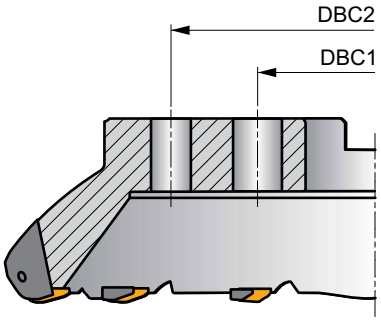
PENTA HD

KAPR	57°
APMX	10.0 mm

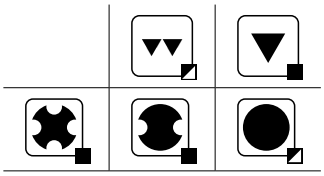




DC 100 – 125 mm



DC 160 – 315 mm



h_m 0.20 - 0.50 mm

	Product	DC (mm)	DCX (mm)	LF (mm)	DCON MS (mm)	DBC1 (mm)	DBC2 (mm)	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		lbs				MID
ISO 6462 DIN 8030	**100A05R-S57PN13**	100	115.8	50	32	–	–	14.4	8	-8.2	-4	5	–	3400	–	2.69	GI261	FA081	AC002	6761667
	125A06R-S57PN13	125	140.8	63	40	–	–	16.4	9	-7	-4	6	–	3100	–	6.15	GI261	FA081	AC003	6761673
	160C08R-S57PN13	160	175.8	63	40	66.7	–	16.4	9	-6	-4	8	–	2700	–	7.89	GI261	FA081	–	6761674
	200C10R-S57PN13	200	215.8	63	60	101.6	–	25.7	14	-5	-4	10	–	2400	–	2.22	GI261	FA081	–	6761675
	250C12R-S57PN13	250	265.8	63	60	101.6	–	25.7	14	-5	-4	12	–	2200	–	33.93	GI261	FA081	–	6761676
	315C14R-S57PN13	315	330.8	80	60	101.6	177.8	25.7	14	-5	-4	14	–	1900	–	64.31	GI261	FA081	–	6761677

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

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

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

ISPN13

P M K S H

PRAMET

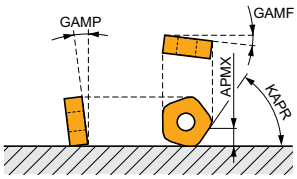
S

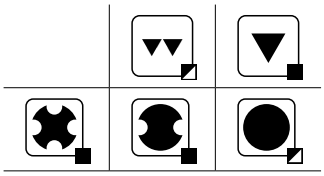
PENTA HD 57° Face Mill with Double Negative Design for Heavy Face Milling

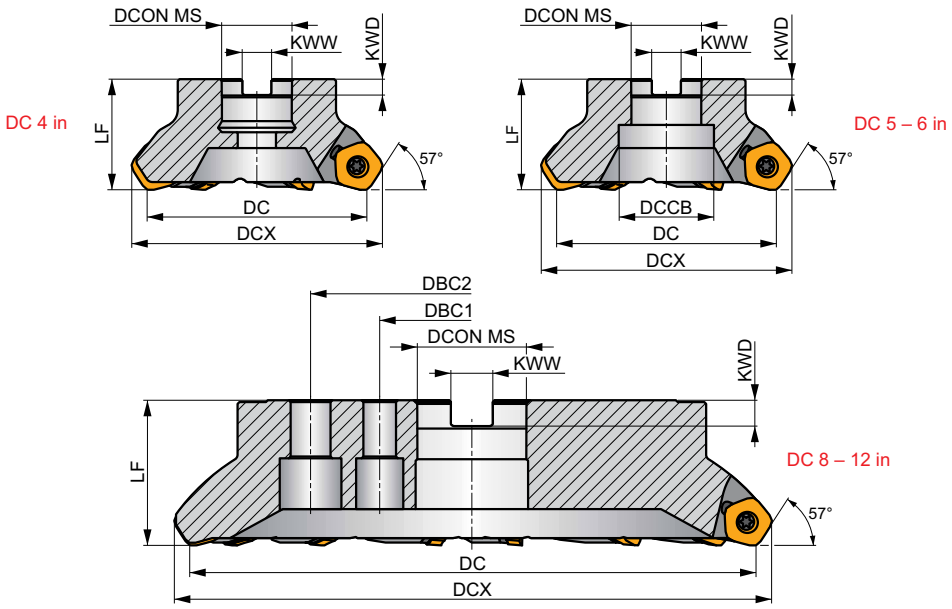
Highly productive 57° face mill utilizing double sided PN.. 13 and XN.. 13 style inserts with APMX of .394 inches. Suited for face milling. Arbor style only. An insert seat protected with a shim. Body treated for longer tool life.

PENTA HD

KAPR	57°
APMX	.394 in







h_m .0078-.0196 in

	Product	DC (inch)	DCX (inch)	LF (inch)	DCON MS (inch)	DBC1 (inch)	DBC2 (inch)	KWW (inch)	KWD (inch)	GAMF (°)	GAMP (°)			max.		lbs			MID
	400A05R-IS57PN13	4.000	4.629	1.969	1.500	–	–	.630	.382	-8.2	-4	5	–	3400	–	2.63	GI261	FA085	6792988
	500B06R-IS57PN13	5.000	5.629	2.480	1.500	2.205	–	.630	.382	-7	-4	6	–	3100	–	5.03	GI261	FA081	6792989
ISO 6462 DIN 8030	**600B08R-IS57PN13**	6.000	6.628	2.480	2.000	3.465	–	.756	.445	-6	-4	8	–	2700	–	7.04	GI261	FA081	6792990
	800C10R-IS57PN13	8.000	8.627	2.480	2.500	4.000	–	1.000	.559	-5	-4	10	–	2400	–	14.73	GI261	FA081	6792991
	1000C12R-IS57PN13	10.000	10.627	2.480	2.500	4.000	–	1.000	.559	-5	-4	12	–	2200	–	32.62	GI261	FA081	6792993
	1200C14R-IS57PN13	12.000	12.627	3.150	2.500	4.000	7.000	1.000	.559	-5	-4	14	–	1900	–	45.51	GI261	FA081	6792992

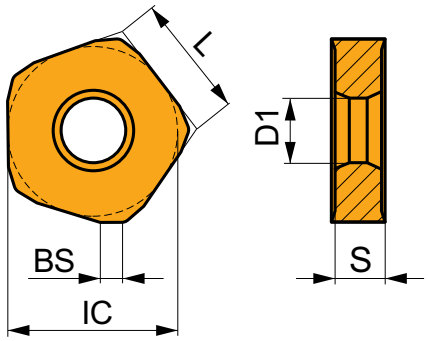
GI261	PNMU 1308DN..	XNGX 1308DNSN	PNMQ 1308DN..

					Nm			
FA081	SPN 13T3DN	US 64010-T15P	SDR T15P	US 68026-T30P	15.0	M 8	1.024	SDR T30P-T
FA085	SPN 13T3DN	US 64010-T15P	SDR T15P	US 68026-T30P	15.0	M 8	1.024	SDR T30P-T

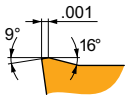
PNMU 13

PRAMET

	BS	IC	D1	L	S
	(inch)	(inch)	(inch)	(inch)	(inch)
1308	.118	.961	.394	.512	.313



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

Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
		(inch)																			
																					

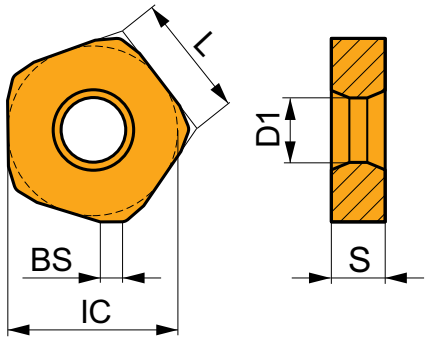
M geometry with positive design for rough machining.

PNMU 1308DNSR-M	**8215**	–	■	541	.0138	.256	◪	312	.0126	.256	■	509	.0138	.256	–	–	–	◪	131	.011	.205	◪	98	.0071	.079	6756162
	M8330	–	■	623	.0138	.256	◪	361	.0126	.256	■	591	.0138	.256	–	–	–	◪	148	.011	.205	◪	115	.0071	.079	7447929
	M8345	–	■	443	.0138	.256	◪	262	.0126	.256		–	–	–	–	–	–	◪	98	.011	.205		–	–	–	6756164
	M9315	–	■	689	.0138	.256		–	–	–	■	640	.0138	.256	–	–	–		–	–	–	◪	131	.0071	.079	6922558
	M9340	–	■	558	.0138	.256	◪	328	.0126	.256		–	–	–	–	–	–	◪	131	.011	.205		–	–	–	6756165

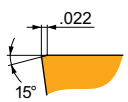
PNMQ 13

PRAMET

	BS	IC	D1	L	S
	(inch)	(inch)	(inch)	(inch)	(inch)
1308	.118	.961	.394	.512	.313



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

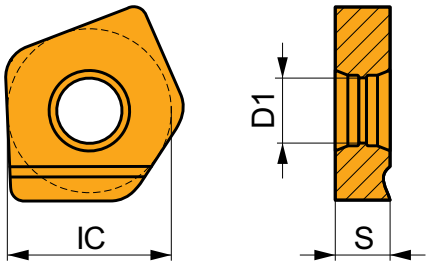
Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
		(inch)																			
																					

Zero rake angle design particularly suited to rough machining.

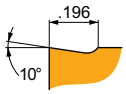
PNMQ 1308DNSN	**M8330**	–	◪	541	.0236	.256		–	–	–	■	509	.0236	.256	–	–	–		–	–	–	◪	98	.0118	.079	7447928
	M8345	–	◪	394	.0236	.256		–	–	–		–	–	–	–	–	–		–	–	–		–	–	–	6756181

XNGX 13

	IC	D1	S
	(inch)	(inch)	(inch)
1308	.952	.394	.313

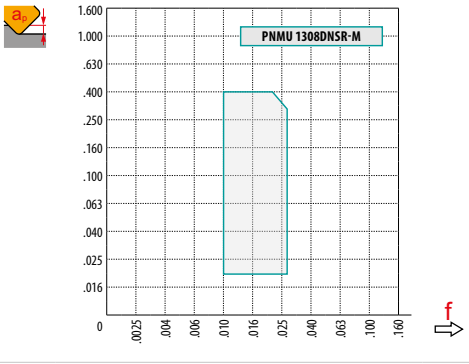


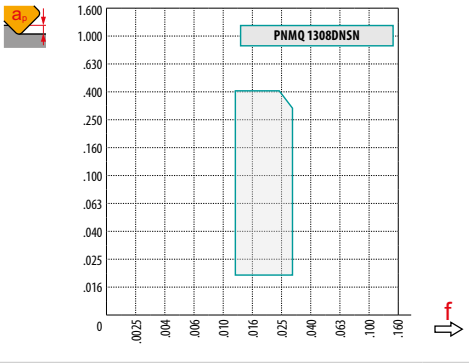
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

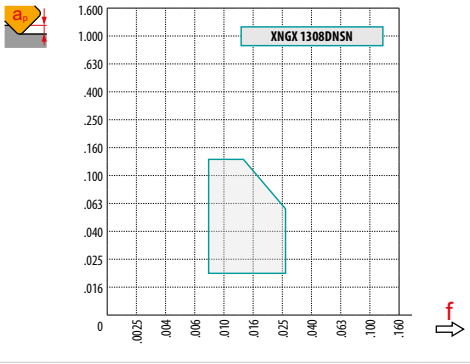
Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
			W S																		
			Wiper design for improved surface finish.																		
XNGX 1308DNSN	**M8330**	–	■ 804	.0177	.098	–	–	–	■ 755	.0177	.098	–	–	–	–	–	–	–	–	–	7606905

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	.95	.85	.75	.85	.95	1.00	1.00	1.00	1.00
⇨ X.f	.64	.64	.64	.64	.64	.65	.65	.67	.68	.71	.72	.74	.79	1.00

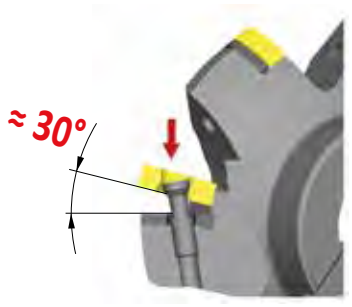
	PNMU 13-M	PNMQ 13	XNGX 13
RE (mm)	–	–	–
BS (inch)	.118	.118	.500







1



2

3

4

SON06C

P M K S H

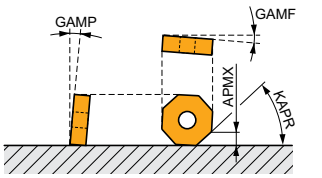
PRAMET

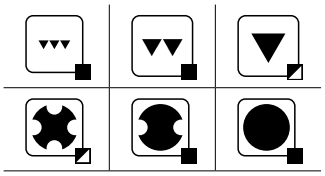
S

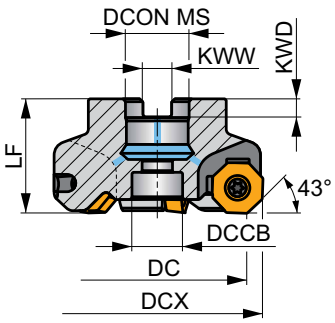
ECON ON06 43° Face Mill with Double Negative Design and Internal Coolant

Highly economical and productive face mill utilising two types of double-sided negative inserts. Economical octagonal ON..06 inserts with 16 cutting edges and APMX of 4 mm, and productive square SN.. 17 inserts with 8 cutting edges and APMX of 7 mm. Arbor style available with differential tooth pitch. Body treated for longer tool life.

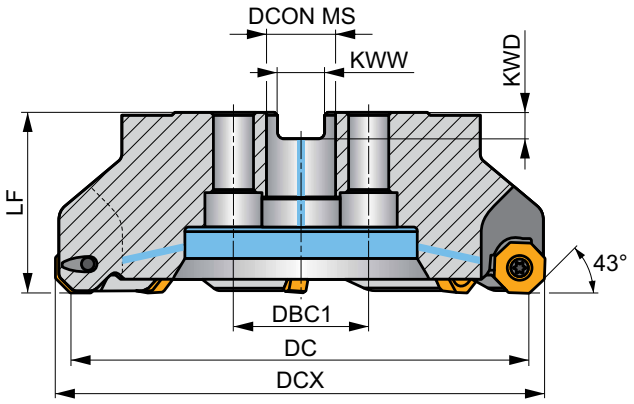
KAPR	43°
APMX	4.0 (7.0) mm







DC 50 – 125 mm



DC 160 – 250 mm

h_m 0.04 - 0.25 mm

	Product	DC (mm)	DCX (mm)	DCON MS (mm)	DCCB (mm)	DBC1 (mm)	LF (mm)	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		lbs				MID
	50A04R-S45ON06-C	50	60.8	22	16.5	–	40	10.4	6.3	-10	-5	4	✓	9400	✓	.93	GI342	C0621	–	8347567
	50A05R-S45ON06-C	50	60.8	22	16.5	–	40	10.4	6.3	-10	-5	5	–	9400	✓	.86	GI342	C0621	–	8347568
	63A05R-S45ON06-C	63	73.8	22	18.1	–	40	10.4	6.3	-10	-5	5	✓	8400	✓	1.56	GI342	C0621	–	8347569
	63A06R-S45ON06-C	63	73.8	22	18.1	–	40	10.4	6.3	-10	-5	6	✓	8400	✓	1.21	GI342	C0621	–	8347580
	80A06R-S45ON06-C	80	90.8	27	22.1	–	50	12.4	7	-10	-5	6	✓	7500	✓	2.80	GI342	C0622	–	8347581
	80A08R-S45ON06-C	80	90.8	27	22.1	–	50	12.4	7	-10	-5	8	–	7500	✓	2.62	GI342	C0622	–	8347582
	100A08R-S45ON06-C	100	110.8	32	30.1	–	50	14.4	8	-10	-5	8	✓	6700	✓	4.14	GI342	C0620	AC002	8347588
	100A10R-S45ON06-C	100	110.8	32	30.1	–	50	14.4	8	-10	-5	10	–	6700	✓	3.99	GI342	C0620	AC002	8347589
ISO 6462 DIN 8030	**125A08R-S45ON06-C**	125	135.8	40	56.1	–	63	16.4	9	-10	-5	8	✓	6000	✓	8.37	GI342	C0620	AC003	8347620
	125A10R-S45ON06-C	125	135.8	40	56.1	–	63	16.4	9	-10	-5	10	✓	6000	✓	8.05	GI342	C0620	AC003	8347621
	125A12R-S45ON06-C	125	135.8	40	56.1	–	63	16.4	9	-11	-5	12	–	6000	✓	8.16	GI342	C0620	AC003	8347622
	160C08R-S45ON06-C	160	170.8	40	–	66.7	63	16.4	9.25	-10	-5	8	✓	5700	✓	14.28	GI342	C0623	–	8347766
	160C12R-S45ON06-C	160	170.8	40	–	66.7	63	16.4	9.25	-10	-5	12	✓	5700	✓	12.65	GI342	C0623	–	8347767
	160C14R-S45ON06-C	160	170.8	40	–	66.7	63	16.4	9.25	-11	-5	14	–	5700	✓	12.46	GI342	C0623	–	8347768
	200C12R-S45ON06-C	200	210.8	60	–	101.6	63	25.8	14.25	-10	-5	12	✓	4700	✓	19.97	GI342	C0624	–	8347769
	200C16R-S45ON06-C	200	210.8	60	–	101.6	63	25.8	14.25	-10	-5	16	–	4700	✓	19.89	GI342	C0624	–	8347790
	250C14R-S45ON06-C	250	260.8	60	–	101.6	63	25.8	14.25	-10	-5	14	✓	4300	✓	34.63	GI342	C0625	–	8347791
	250C18R-S45ON06-C	250	260.8	60	–	101.6	63	25.8	14.25	-10	-5	18	–	4300	✓	34.19	GI342	C0625	–	8347792

GI342	ONMX 0605..	ONMX 0605..-W..	SNMX 1705..

C0620	US 45013A-T20P	5.0	M 5	13	SDR T20P-T	–	–	–	–
C0621	US 45013A-T20P	5.0	M 5	13	SDR T20P-T	HS 1030C	–	–	–
C0622	US 45013A-T20P	5.0	M 5	13	SDR T20P-T	HS 1230C	–	–	–
C0623	US 45013A-T20P	5.0	M 5	13	SDR T20P-T	HS 1240C	CAC 160C	HSD 0825C	HXK 5
C0624	US 45013A-T20P	5.0	M 5	13	SDR T20P-T	HS 1655C	CAC 200C	HSD 1025C	HXK 7
C0625	US 45013A-T20P	5.0	M 5	13	SDR T20P-T	HS 1655C	CAC 250C	HSD 1025C	HXK 7

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

ISON06C

P M K S H

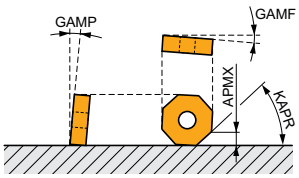
PRAMET

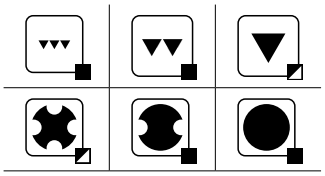
S

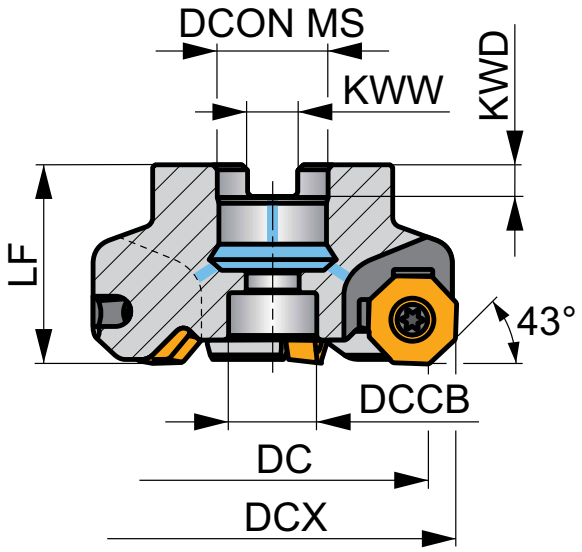
ECON ON06 43° Face Mill with Double Negative Design and Internal Coolant

Highly economical and productive face mill utilising two types of double-sided negative inserts. Economical octagonal ON..06 inserts with 16 cutting edges and APMX of .157 inches, and productive square SN.. 17 inserts with 8 cutting edges and APMX of .276 inches. Arbor style available with differential tooth pitch. Body treated for longer tool life.

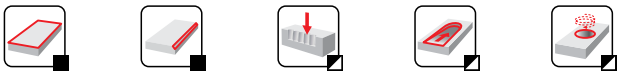
KAPR	43°
APMX	.157 (.276) in







h_m .002 - .010 in



	Product	DC (inch)	DCX (inch)	DCON MS (inch)	DCCB (inch)	DBC1 (inch)	LF (inch)	KWW (inch)	KWD (inch)	GAMF (°)	GAMP (°)			max.		lbs			MID
	200A04R-IS450N06-C	2.000	2.425	.750	.630	–	1.575	.323	.193	-10	-5	4	✓	9400	✓	.99	GI342	IC0620	8347793
	200A05R-IS450N06-C	2.000	2.425	.750	.630	–	1.575	.323	.193	-10	-5	5	–	9400	✓	.93	GI342	IC0620	8347794
	250A05R-IS450N06-C	2.500	2.925	.750	.630	–	1.575	.323	.193	-10	-5	5	✓	8400	✓	1.34	GI342	IC0620	8347795
	250A06R-IS450N06-C	2.500	2.925	.750	.630	–	1.575	.323	.193	-10	-5	6	✓	8400	✓	1.28	GI342	IC0620	8347796
	300A06R-IS450N06-C	3.000	3.425	1.000	.827	–	1.969	.382	.224	-10	-5	6	✓	7500	✓	2.71	GI342	IC0621	8347797
	300A08R-IS450N06-C	3.000	3.425	1.000	.827	–	1.969	.382	.224	-10	-5	8	–	7500	✓	2.56	GI342	IC0621	8347798
ISO 6462 DIN 8030	**400A08R-IS450N06-C**	4.000	4.425	1.500	1.417	–	1.969	.630	.382	-10	-5	8	✓	6700	✓	4.83	GI342	IC0622	8347799
	400A10R-IS450N06-C	4.000	4.425	1.500	1.417	–	1.969	.630	.382	-10	-5	10	–	6700	✓	4.65	GI342	IC0622	8347800
	500A08R-IS450N06-C	5.000	5.425	1.500	1.260	–	2.480	.630	.382	-10	-5	8	✓	6000	✓	8.93	GI342	IC0623	8348065
	500A10R-IS450N06-C	5.000	5.425	1.500	1.260	–	2.480	.630	.382	-10	-5	10	✓	6000	✓	8.91	GI342	IC0623	8348066
	500A12R-IS450N06-C	5.000	5.425	1.500	1.260	–	2.480	.630	.382	-11	-5	12	–	6000	✓	8.71	GI342	IC0623	8348067
	600A08R-IS450N06-C	6.000	6.425	2.000	1.654	–	2.480	.760	.445	-10	-5	8	✓	5700	✓	13.85	GI342	IC0624	8348068
	600A12R-IS450N06-C	6.000	6.425	2.000	1.654	–	2.480	.760	.445	-10	-5	12	✓	5700	✓	14.35	GI342	IC0624	8348069
	600A14R-IS450N06-C	6.000	6.425	2.000	1.654	–	2.480	.760	.445	-11	-5	14	–	5700	✓	14.11	GI342	IC0624	8348190

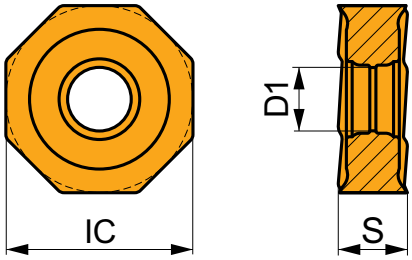
GI342	ONMX 0605..	ONMX 0605..-W..	SNMX 1705..

		Nm				
IC0620	US 45013A-T20P	5.0	M 5	.512	SDR T20P-T	HS 037100
IC0621	US 45013A-T20P	5.0	M 5	.512	SDR T20P-T	HS 050125
IC0622	US 45013A-T20P	5.0	M 5	.512	SDR T20P-T	HCS 075175
IC0623	US 45013A-T20P	5.0	M 5	.512	SDR T20P-T	HS 075125
IC0624	US 45013A-T20P	5.0	M 5	.512	SDR T20P-T	HS 100150

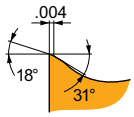
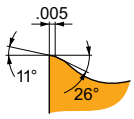
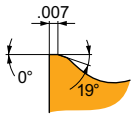
ONMX 06

PRAMET

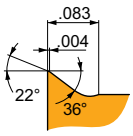
	IC	D1	S
	(inch)	(inch)	(inch)
0605	.669	.224	.279



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

Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
																					
			F geometry is sharp and used for finishing, suitable for large overhang or thin walled and slim workpiece applications. Designed with highly positive rake, narrow T-land and rounding of cutting edge for light machining.																		
ONMX 060508SR-F	**8215**	.031	902	.0039	.079	541	.0035	.079	–	–	–	–	–	–	213	.0028	.063	–	–	–	8348372
	M6330	.031	755	.0039	.079	541	.0035	.079	–	–	–	–	–	–	213	.0028	.063	–	–	–	8348373
	M8330	.031	886	.0039	.079	525	.0035	.079	–	–	–	–	–	–	213	.0028	.063	–	–	–	8348374
	M8340	.031	804	.0039	.079	476	.0035	.079	–	–	–	–	–	–	197	.0028	.063	–	–	–	8348375
	M9340	.031	1050	.0039	.079	623	.0035	.079	–	–	–	–	–	–	262	.0028	.063	–	–	–	8348376
																					
			M geometry is versatile and the first choice for a wide range of working conditions. Designed with positive rake, medium T-land and rounding of cutting edge for medium machining.																		
ONMX 060508SR-M	**8215**	.031	755	.0079	.079	443	.0071	.079	–	–	–	–	–	–	180	.0055	.063	148	.0055	.039	8348440
	M6330	.031	640	.0079	.079	459	.0071	.079	–	–	–	–	–	–	180	.0055	.063	–	–	–	8348441
	M8330	.031	755	.0079	.079	443	.0071	.079	–	–	–	–	–	–	180	.0055	.063	148	.0055	.039	8348442
	M8340	.031	689	.0079	.079	410	.0071	.079	–	–	–	–	–	–	164	.0055	.063	–	–	–	8348443
	M9325	.031	935	.0079	.079	–	–	–	–	–	–	–	–	–	–	–	–	180	.0055	.039	8348444
	M9340	.031	837	.0079	.079	492	.0071	.079	–	–	–	–	–	–	197	.0055	.063	–	–	–	8348445
																					
			R geometry is strong and used for roughing and heavy working conditions. Designed with slightly positive rake, wide T-land and rounding of cutting edge for rough machining.																		
ONMX 060508SR-R	**8215**	.031	689	.0118	.079	–	–	–	640	.0118	.079	–	–	–	–	–	–	131	.0083	.039	8348736
	M5315	.031	837	.0118	.079	–	–	–	787	.0118	.079	–	–	–	–	–	–	164	.0083	.039	8348735
	M8330	.031	689	.0118	.079	–	–	–	640	.0118	.079	–	–	–	–	–	–	131	.0083	.039	8348737
	M8340	.031	623	.0118	.079	–	–	–	591	.0118	.079	–	–	–	–	–	–	–	–	–	8348738
	M9325	.031	820	.0118	.079	–	–	–	771	.0118	.079	–	–	–	–	–	–	164	.0083	.039	8348739

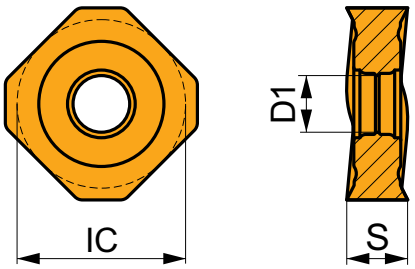
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Products		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
																					
			Wiper design for improved surface finish when machining with large cutters and high feed rate.																		
ONMX 060508SR-W	**8215**	.031	■ 1115	.0039	.012	◪ 656	.0035	.012	–	–	–	–	–	–	–	–	–	–	–	–	8348750
	M8330	.031	■ 1066	.0039	.012	■ 640	.0035	.012	–	–	–	–	–	–	–	–	–	–	–	–	8348751

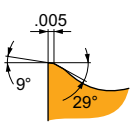
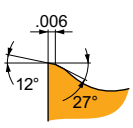
SNMX 17

PRAMET

	IC (inch)	D1 (inch)	S (inch)
1705	.669	.224	.219

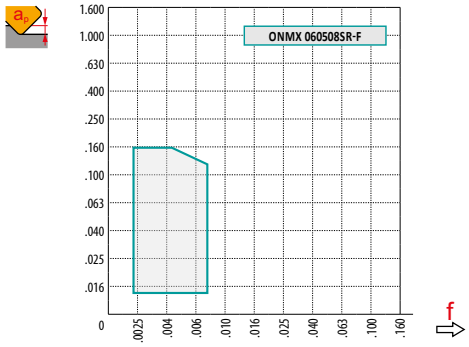


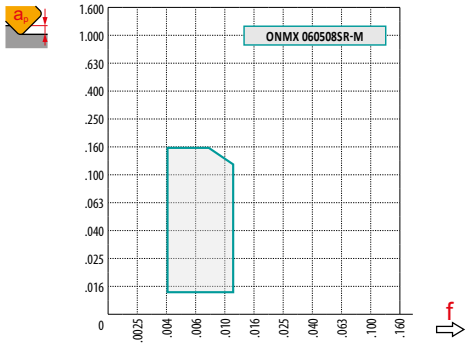
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

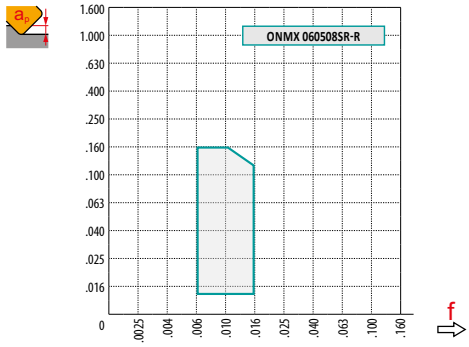
Products		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
																					
			M geometry is versatile and the first choice for a wide range of working conditions. Designed with positive rake, medium T-land and rounding of cutting edge for medium machining.																		
SNMX 170508SR-M	**8215**	.031	■ 869	.0079	.157	◪ 509	.0071	.157	–	–	–	–	–	–	◪ 213	.0055	.126	■ 164	.0055	.039	8348775
	M6330	.031	■ 738	.0079	.157	◪ 525	.0071	.157	–	–	–	–	–	–	◪ 213	.0055	.126	–	–	–	8348776
	M8330	.031	■ 869	.0079	.157	◪ 509	.0071	.157	–	–	–	–	–	–	◪ 213	.0055	.126	◪ 164	.0055	.039	8348777
	M8340	.031	■ 787	.0079	.157	◪ 459	.0071	.157	–	–	–	–	–	–	◪ 197	.0055	.126	–	–	–	8348778
	M9325	.031	■ 1066	.0079	.157	–	–	–	–	–	–	–	–	–	–	–	–	◪ 213	.0055	.039	8348779
	M9340	.031	■ 968	.0079	.157	◪ 574	.0071	.157	–	–	–	–	–	–	◪ 230	.0055	.126	–	–	–	8348790
																					
			R geometry is strong and used for roughing and heavy working conditions. Designed with slightly positive rake, wide T-land and rounding of cutting edge for rough machining.																		
SNMX 170508SR-R	**8215**	.031	■ 787	.0118	.157	–	–	–	■ 738	.0118	.157	–	–	–	–	–	–	■ 148	.0083	.039	8348792
	M5315	.031	◪ 984	.0118	.157	–	–	–	■ 935	.0118	.157	–	–	–	–	–	–	■ 197	.0083	.039	8348797
	M8330	.031	■ 787	.0118	.157	–	–	–	■ 738	.0118	.157	–	–	–	–	–	–	◪ 148	.0083	.039	8348793
	M8340	.031	■ 722	.0118	.157	–	–	–	◪ 673	.0118	.157	–	–	–	–	–	–	–	–	–	8348795
	M9325	.031	■ 951	.0118	.157	–	–	–	■ 902	.0118	.157	–	–	–	–	–	–	◪ 180	.0083	.039	8348796

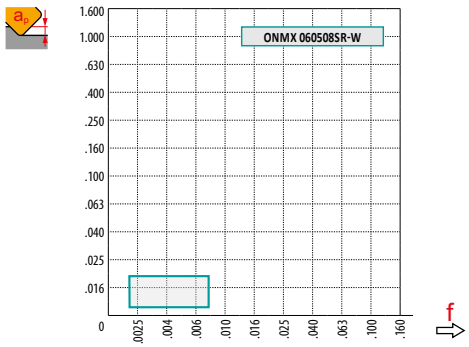
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ X.f	2.20	1.60	1.35	1.20	1.10	.95	.85	.75	.85	.95	1.00	1.00	1.00	1.00
⇨ X.f	.64	.64	.64	.64	.64	.65	.65	.67	.68	.71	.72	.74	.79	1.00

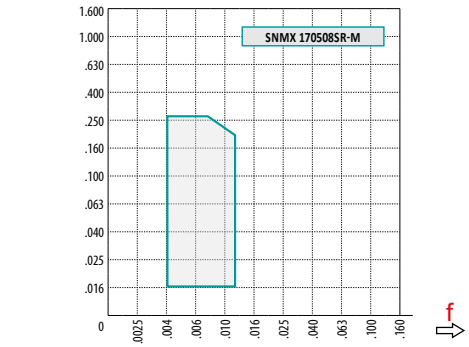
	ONMX 06-F	ONMX 06-M	ONMX 06-R	ONMX 06-W	SNMX 17-M	SNMX 17-R
RE (inch)	.031	.031	.031	.031	.031	.031
BS (inch)	.030	.030	.030	.169	.028	.028

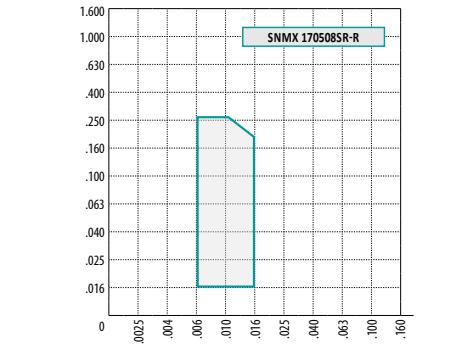












(inch)		O							
DC	a_p	.020	.039	.059	.079	.098	.118	.138	.157
2.000		2.042	2.083	2.126	2.168	2.211	2.253	2.296	2.338
2.500		2.542	2.583	2.626	2.668	2.711	2.753	2.796	2.838
3.000	DEF	3.042	3.083	3.126	3.168	3.211	3.253	3.296	3.338
4.000		4.042	4.083	4.126	4.168	4.211	4.253	4.296	4.338
5.000		5.042	5.083	5.126	5.168	5.211	5.253	5.296	5.338
6.000		6.042	6.083	6.126	6.168	6.211	6.253	6.296	6.338

(inch)

S

DC	DEF	.000	.039	.079	.118	.157	.197	.236	.276
2.000		1.891	1.976	2.062	2.147	2.232	2.318	2.403	2.488
2.500		2.391	2.476	2.562	2.647	2.732	2.818	2.903	2.988
3.000		2.891	2.976	3.062	3.147	3.232	3.318	3.403	3.488
4.000		3.891	3.976	4.062	4.147	4.232	4.318	4.403	4.488
5.000		4.891	4.976	5.062	5.147	5.232	5.318	5.403	5.488
6.000		5.891	5.976	6.062	6.147	6.232	6.318	6.403	6.488

(inch)

DC	X.V	f_{max}
2.000	1.35	.014
2.500	1.39	.016
3.000	1.44	.018
4.000	1.48	.020
5.000	1.53	.022
6.000	1.58	.025

(inch)

O

DC	RPMX	APMX/I
2.000	.3°	.014/3.937
2.500	.2°	.010/3.937
3.000	.2°	.008/3.937
4.000	.1°	.004/3.937
5.000	.1°	.004/3.937

S

DC	RPMX	APMX/I
1.891	.1°	.004/3.937
2.391	.1°	.002/3.937
2.891	.1°	.002/3.937

(inch)

O

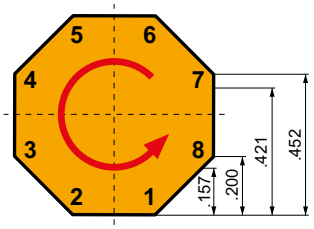
DC	DMIN	DMAX	SMAX / DMIN	SMAX / DMAX
2.000	3.898	4.331	.022	.035
2.500	4.921	5.354	.024	.035
3.000	5.906	6.693	.026	.035
4.000	7.874	8.268	.026	.033
5.000	9.882	10.236	.026	.031
6.000	11.890	12.992	.026	.031

(inch)

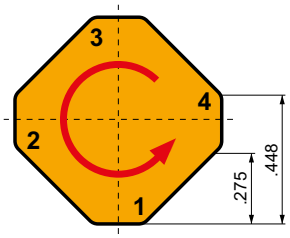
O

$a_{e\,max}$
.453

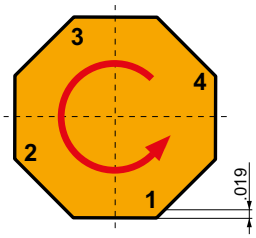
(inch)



a_p	
–> .157	16
–> .200	14
–> .421	8
–> .452	6



a_p	
–> .275	8
–> .448	4



ONMX 06-W	
a_p	
–> .019	8

SHN06C

P M K H

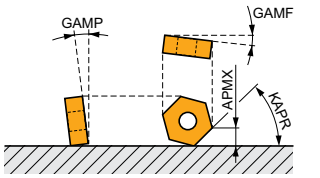
PRAMET

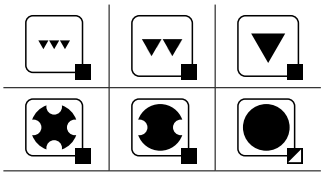
S

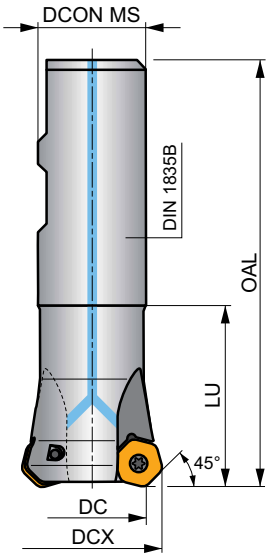
ECON HN06 45° Face Mill with Double Negative Design and Internal Coolant

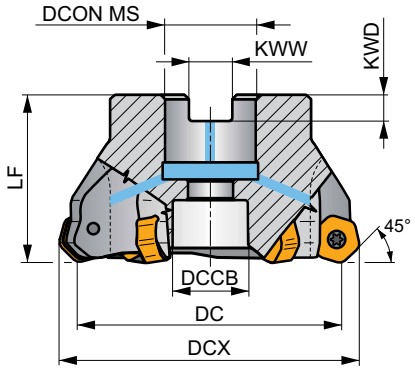
Highly productive 45° face mill utilising double sided HN.. 06 style inserts with APMX of 3 mm. Roughing, finishing and chamfering. Economical insert with 12 cutting edges. Differential tooth pitch. Weldon and arbor style available. Body treated for longer tool life.

KAPR	45°
APMX	3.0 mm









h_m	0.06 - 0.15 mm
h_m	0.06 - 0.15 mm

	Product	DC (mm)	DCX (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	LU (mm)	LF (mm)	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		lbs				MID
DIN 1835B	**25N2R042B25-SHN06C-C**	25	32.2	99	25	–	42	–	–	–	-7	-7	2	–	17400	✓	.77	GI204	FA010	–	6760283
DIN 1835B	**32N3R042B32-SHN06C-C**	32	39.3	103	32	–	42	–	–	–	-7	-7	3	–	15400	✓	1.30	GI204	FA010	–	6760284
	40A05R-S45HN06C-C	40	47.3	–	16	14	–	40	8.4	5.6	-7	-7	5	✓	13800	✓	.82	GI204	FA012	–	6760271
	50A04R-S45HN06C-C	50	57.3	–	22	18	–	40	10.4	6.3	-7	-7	4	✓	12300	✓	1.19	GI204	FA013	–	6760272
	50A06R-S45HN06C-C	50	57.3	–	22	18	–	40	10.4	6.3	-7	-7	6	✓	12300	✓	.90	GI204	FA013	–	6760269
	63A06R-S45HN06C-C	63	70.3	–	22	18	–	40	10.4	6.3	-7	-7	6	✓	11000	✓	1.49	GI204	FA013	–	6760277
ISO 6462 DIN 8030	**63A08R-S45HN06C-C**	63	70.3	–	22	18	–	40	10.4	6.3	-7	-7	8	✓	11000	✓	1.50	GI204	FA013	–	6760270
	80A07R-S45HN06C-C	80	86.8	–	27	38	–	50	12.4	7	-7	-7	7	✓	9700	✓	2.43	GI204	FA011	AC001	6760278
	80A10R-S45HN06C-C	80	86.8	–	27	38	–	50	12.4	7	-7	-7	10	✓	9700	✓	2.43	GI204	FA011	AC001	6760279
	100A08R-S45HN06C-C	100	107.1	–	32	45	–	50	14.4	8	-7	-7	8	✓	8700	✓	4.43	GI204	FA011	AC002	6760273
	100A12R-S45HN06C-C	100	107.1	–	32	45	–	50	14.4	8	-7	-7	12	✓	8700	✓	4.01	GI204	FA011	AC002	6760274
	125A10R-S45HN06C-C	125	132.2	–	40	56	–	63	16.4	9	-7	-7	10	✓	7800	✓	7.83	GI204	FA011	AC003	6760275

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	–	–

		Nm						
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

ISHN06C

P M K H

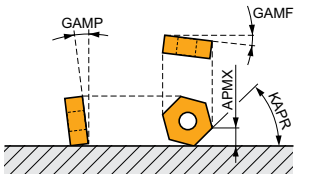
PRAMET

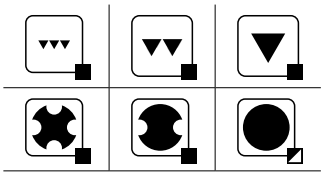
S

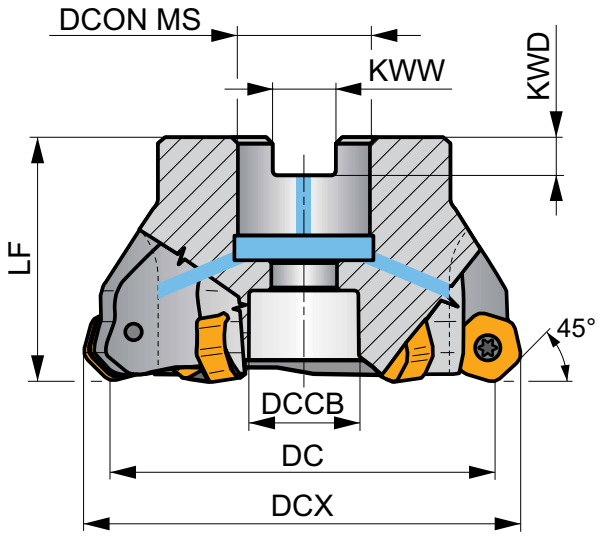
ECON HN06 45° Face Mill with Double Negative Design and Internal Coolant

Highly productive 45° face mill utilizing double sided HN.. 06 style inserts with APMX of .118 inches. Roughing, finishing and chamfering. Economical insert with 12 cutting edges. Differential tooth pitch. Body treated for longer tool life.

KAPR	45°
APMX	.118 in







h_m	.0016-.0031 in
h_m	.0016-.0024 in

	Product	DC (inch)	DCX (inch)	DCON MS (inch)	DCCB (inch)	LF (inch)	KWW (inch)	KWD (inch)	GAMF (°)	GAMP (°)			max.		lbs			MID
ISO 6462 DIN 8030	**200A04R-IS45HN06C-C**	2.000	2.287	.750	.630	1.575	.321	.193	-7	-7	4	✓	12300	✓	.93	GI204	FA033	6792927
	250A06R-IS45HN06C-C	2.500	2.287	.750	.630	1.575	.321	.193	-7	-7	6	✓	11000	✓	1.21	GI204	FA033	6792929
	300A07R-IS45HN06C-C	3.000	3.268	1.000	.827	1.969	.382	.224	-7	-7	7	✓	9700	✓	2.40	GI204	FA034	6792951
	400A08R-IS45HN06C-C	4.000	4.280	1.500	1.260	1.969	.630	.382	-7	-7	8	✓	8700	✓	3.99	GI204	FA035	6792922

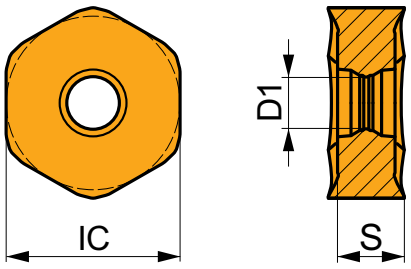
GI204	HNGX 0604AN..	XNGX 0604AN..

		Nm					
FA033	US 3007-T09P	2.0	M 3	.287	D-T07P/T09P	FG-15	HS 037100
FA034	US 3007-T09P	2.0	M 3	.287	D-T07P/T09P	FG-15	HS 050125
FA035	US 3007-T09P	2.0	M 3	.287	D-T07P/T09P	FG-15	HCS 075200

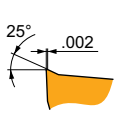
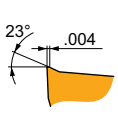
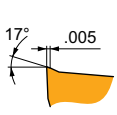
HNGX 06

PRAMET

	IC	D1	S
	(inch)	(inch)	(inch)
0604	.413	.146	.187

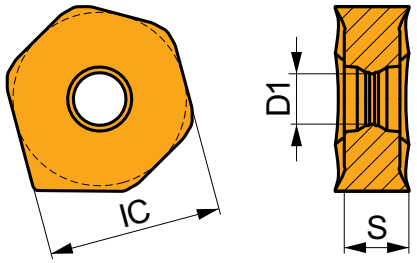


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

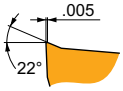
Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
																					
			F geometry with highly positive design for light machining.																		
HNGX 0604ANSN-F	**8215**	–	■ 1033	.0043	.067	◪ 607	.0039	.067	–	–	–	–	–	–	–	–	–	–	–	–	6753670
	M6330	–	■ 869	.0043	.067	◪ 607	.0039	.067	–	–	–	–	–	–	–	–	–	–	–	–	7601336
	M8330	–	■ 1001	.0043	.067	◪ 591	.0039	.067	–	–	–	–	–	–	–	–	–	–	–	–	7447877
	M8340	–	■ 935	.0043	.067	◪ 558	.0039	.067	–	–	–	–	–	–	–	–	–	–	–	–	6800829
	M9340	–	■ 1198	.0043	.067	◪ 705	.0039	.067	–	–	–	–	–	–	–	–	–	–	–	–	6755627
																					
			M geometry with highly positive design for medium machining.																		
HNGX 0604ANSN-M	**8215**	–	■ 984	.0051	.079	◪ 591	.0051	.079	■ 935	.0051	.079	–	–	–	–	–	–	–	–	–	6753676
	M5315	–	◪ 1394	.0051	.079	–	–	–	■ 1312	.0051	.079	–	–	–	–	–	–	–	–	–	6753673
	M6330	–	■ 837	.0051	.079	◪ 591	.0051	.079	–	–	–	–	–	–	–	–	–	–	–	–	7601337
	M8310	–	■ 1066	.0051	.079	◪ 541	.0051	.079	■ 1001	.0051	.079	–	–	–	–	–	–	–	–	–	6922526
	M8330	–	■ 968	.0051	.079	◪ 574	.0051	.079	■ 919	.0051	.079	–	–	–	–	–	–	–	–	–	7447878
	M8340	–	■ 869	.0051	.079	◪ 509	.0051	.079	◪ 820	.0051	.079	–	–	–	–	–	–	–	–	–	6800830
	M9315	–	■ 1345	.0051	.079	–	–	–	■ 1263	.0051	.079	–	–	–	–	–	–	–	–	–	6753674
	M9325	–	■ 1230	.0051	.079	–	–	–	■ 1165	.0051	.079	–	–	–	–	–	–	–	–	–	6753675
	M9340	–	■ 1132	.0051	.079	◪ 673	.0051	.079	–	–	–	–	–	–	–	–	–	–	–	–	6755628
																					
			R geometry with highly positive design for medium to heavy machining.																		
HNGX 0604ANSN-R	**8215**	–	■ 919	.0071	.071	◪ 541	.0071	.071	■ 869	.0071	.071	–	–	–	–	–	–	◪ 180	.0047	.039	6753659
	M5315	–	◪ 1214	.0071	.071	–	–	–	■ 1148	.0071	.071	–	–	–	–	–	–	◪ 230	.0047	.039	6753656
	M8310	–	■ 984	.0071	.071	◪ 492	.0071	.071	■ 935	.0071	.071	–	–	–	–	–	–	◪ 197	.0047	.039	6922527
	M8330	–	■ 902	.0071	.071	◪ 541	.0071	.071	■ 853	.0071	.071	–	–	–	–	–	–	◪ 180	.0047	.039	7447879
	M8340	–	■ 820	.0071	.071	◪ 492	.0071	.071	◪ 771	.0071	.071	–	–	–	–	–	–	–	–	–	6800831
	M9325	–	■ 1132	.0071	.071	–	–	–	■ 1066	.0071	.071	–	–	–	–	–	–	◪ 213	.0047	.039	6753658

XNGX 06

	IC	D1	S
	(inch)	(inch)	(inch)
0604	.413	.146	.187

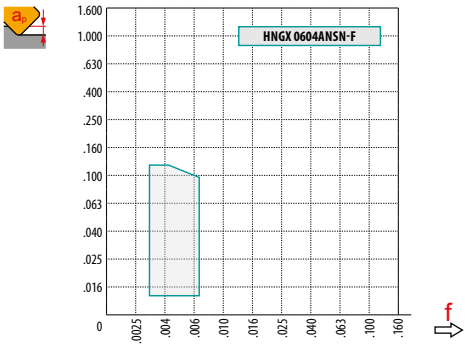


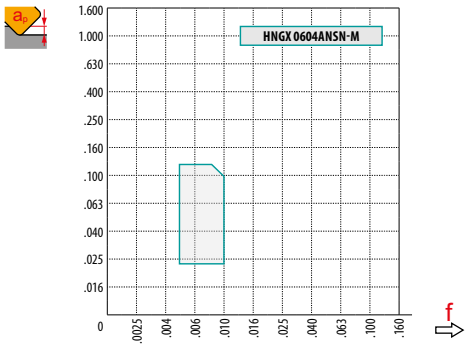
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

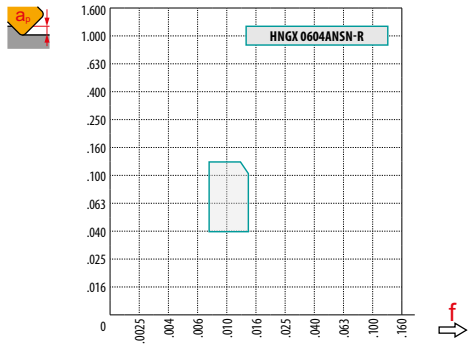
Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
			W S																		
			Wiper design for improved surface finish.																		
XNGX 0604ANSN	**8215**	–	951	.0051	.071	558	.0047	.071	902	.0051	.071	–	–	–	–	–	–	–	–	–	6753708

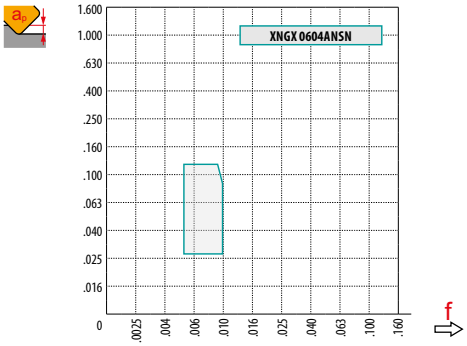
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	.95	.85	.75	.85	.95	1.00	1.00	1.00	1.00
x.f	.64	.64	.64	.64	.64	.65	.65	.67	.68	.71	.72	.74	.79	1.00

	HNGX 06-F	HNGX 06-M	HNGX 06-R	XNGX 06
RE (mm)	–	–	–	–
BS (inch)	.044	.031	.031	.163









(inch)

DC	X.V	f_{max}
1.000	1.31	.009
1.250	1.36	.011
1.500	1.40	.012
2.000	1.45	.014
2.500	1.49	.015
3.000	1.54	.017
4.000	1.59	.019
5.000	1.64	.022

(inch)

DC	RPMX	APMX/I
1.000	2.7°	.12/2.5
1.250	1.9°	.12/3.5
1.500	1.5°	.1/4.0
2.000	1.1°	.075/4.0
2.500	.9°	.06/4.0
3.000	.6°	.045/4.0
4.000	.5°	.03/4.0
5.000	.4°	.025/4.0

(inch)

a_p
.035

SHN09C

P M K H

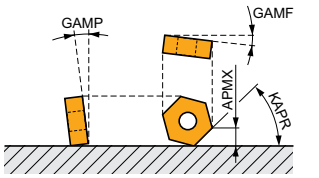
PRAMET

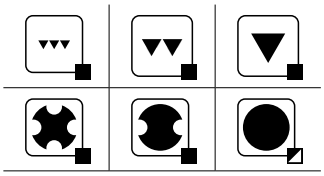
S

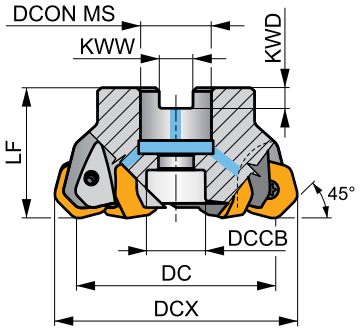
ECON HN09 45° Face Mill with Double Negative Design and Internal Coolant

Highly productive 45° face mill utilizing 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. Body treated for longer tool life.

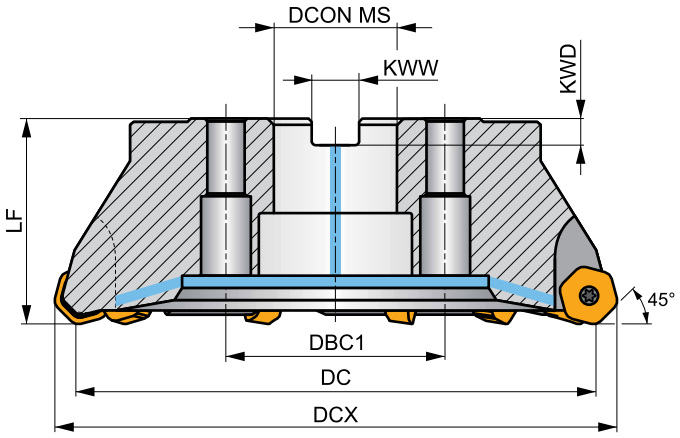
KAPR	45°
APMX	5.0 mm







DC 50 - 125 mm



DC 160 - 315 mm

h_m 0.08 - 0.25 mm

	Product	DC (mm)	DCX (mm)	LF (mm)	DCON MS (mm)	DCCB (mm)	DBC1 (mm)	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		lbs				MID
	50A04R-S45HN09C-CF	50	61.7	40	22	18	–	10.4	6.3	-7	-7	4	✓	7900	✓	.84	GI252	FA023	–	6761566
	63A06R-S45HN09C-CF	63	74.7	40	22	18	–	10.4	6.3	-7	-7	6	✓	7000	✓	1.19	GI252	FA023	–	6761565
	80A06R-S45HN09C-CF	80	91.7	50	27	38	–	12.4	7	-7	-7	6	✓	6200	✓	2.34	GI252	FA021	AC001	6761569
	80A08R-S45HN09C-CF	80	91.7	50	27	38	–	12.4	7	-7	-7	8	✓	6200	✓	2.34	GI252	FA021	AC001	6761568
	100A06R-S45HN09C-CF	100	111.7	50	32	45	–	14.4	8	-7	-7	6	✓	5600	✓	4.31	GI252	FA021	AC002	6761571
	100A08R-S45HN09C-CF	100	111.7	50	32	45	–	14.4	8	-7	-7	8	✓	5600	✓	4.40	GI252	FA021	AC002	6761572
	100A10R-S45HN09C-CF	100	111.7	50	32	45	–	14.4	8	-8	-7	10	–	5600	✓	4.39	GI252	FA021	AC002	6761570
	125A06R-S45HN09C-CF	125	136.7	63	40	56	–	16.4	9	-7	-7	6	✓	5000	✓	7.41	GI252	FA021	AC003	6761575
ISO 6462 DIN 8030	**125A08R-S45HN09C-CF**	125	136.7	63	40	56	–	16.4	9	-7	-7	8	✓	4900	✓	8.08	GI252	FA021	AC003	7049097
	125A10R-S45HN09C-CF	125	136.7	63	40	56	–	16.4	9	-7	-7	10	✓	5000	✓	7.82	GI252	FA021	AC003	6761574
	125A12R-S45HN09C-CF	125	136.7	63	40	56	–	16.4	9	-8	-7	12	–	5000	✓	7.41	GI252	FA021	AC003	6761573
	160C08R-S45HN09C-CF	160	171.7	63	40	–	66.7	16.4	9	-7	-7	8	✓	4400	✓	13.75	GI252	FA026	–	7155951
	160C12R-S45HN09C-CF	160	171.7	63	40	–	66.7	16.4	9	-7	-7	12	✓	4400	✓	14.21	GI252	FA026	–	7155952
	160C14R-S45HN09C-CF	160	171.7	63	40	–	66.7	16.4	9	-7	-7	14	✓	4400	✓	14.09	GI252	FA026	–	7155953
	200C10R-S45HN09C-CF	200	211.7	63	60	–	101.6	25.7	14	-7	-7	10	✓	3900	✓	25.06	GI252	FA027	–	7155954
	250C14R-S45HN09C-CF	250	261.7	63	60	–	101.6	25.7	14	-7	-7	14	✓	3500	✓	4.79	GI252	FA028	–	7155955
	315C16R-S45HN09C-CF	315	326.7	80	60	–	101.6	25.7	14	-7	-7	16	✓	3100	✓	81.57	GI252	FA029	–	7155956

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

ISHN09C

P M K H

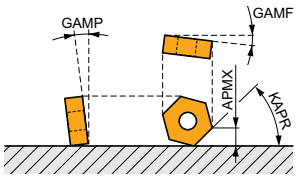
PRAMET

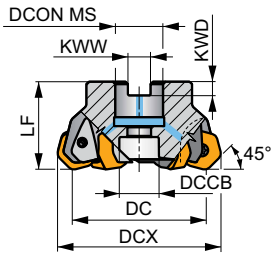
S

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

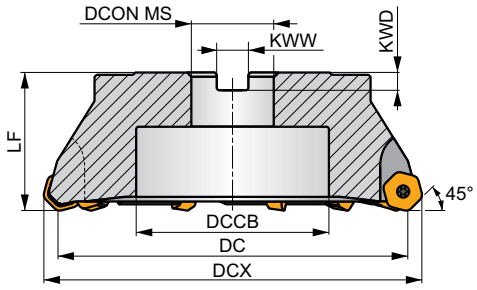
Highly productive 45° face mill utilizing double sided HN.. 09 style inserts with APMX of .197 inches. Roughing, finishing and chamfering. Economical insert with 12 cutting edges. Differential tooth pitch. Arbor style only. Body treated for longer tool life.

KAPR	45°
APMX	.197 in

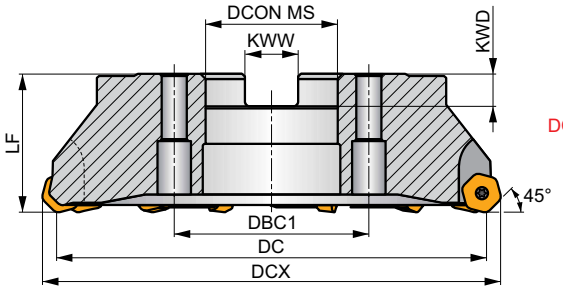




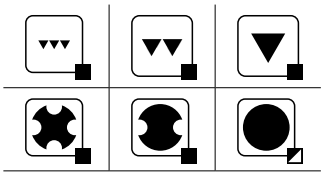
DC 2 – 5 in



DC 6 in



DC 8 – 12 in



h_m .0031-.0098 in

	Product	DC (inch)	DCX (inch)	LF (inch)	DCON MS (inch)	DCCB (inch)	DBC1 (inch)	KWW (inch)	KWD (inch)	GAMF (°)	GAMP (°)			max.		lbs			MID
	200A04R-IS45HN09C-CF	2.000	2.461	1.575	.750	.630	–	.321	.193	-7	-7	4	✓	7900	✓	.77	GI252	FA063	6790760
	250A06R-IS45HN09C-CF	2.500	2.961	1.575	.750	.630	–	.321	.193	-7	-7	6	✓	7000	✓	1.08	GI252	FA063	6790761
	300A06R-IS45HN09C-CF	3.000	3.461	1.969	1.000	.827	–	.382	.224	-7	-7	6	✓	6200	✓	2.34	GI252	FA062	6790762
	300A08R-IS45HN09C-CF	3.000	3.461	1.969	1.000	.827	–	.382	.224	-7	-7	8	✓	6200	✓	2.34	GI252	FA062	6790763
	400A06R-IS45HN09C-CF	4.000	4.461	1.969	1.500	1.260	–	.630	.382	-7	-7	6	✓	5600	✓	3.84	GI252	FA065	6790764
	400A08R-IS45HN09C-CF	4.000	4.461	1.969	1.500	1.260	–	.630	.382	-7	-7	8	✓	5600	✓	3.84	GI252	FA065	6790765
	400A10R-IS45HN09C-CF	4.000	4.461	1.969	1.500	1.260	–	.630	.382	-8	-7	10	–	5600	✓	3.84	GI252	FA065	6790766
ISO 6462 DIN 8030	**500A06R-IS45HN09C-CF**	5.000	5.461	2.480	1.500	1.260	–	.630	.382	-7	-7	6	✓	5000	✓	7.14	GI252	FA060	6790767
	500A10R-IS45HN09C-CF	5.000	5.461	2.480	1.500	1.260	–	.630	.382	-7	-7	10	✓	5000	✓	7.14	GI252	FA060	6790768
	500A12R-IS45HN09C-CF	5.000	5.461	2.480	1.500	1.260	–	.630	.382	-8	-7	12	–	5000	✓	7.14	GI252	FA060	6790769
	600B08R-IS45HN09CF	6.000	6.461	2.480	2.000	3.465	–	.756	.445	-7	-7	8	✓	4400	–	12.57	GI252	FA021	6790770
	600B12R-IS45HN09CF	6.000	6.461	2.480	2.000	3.465	–	.756	.445	-7	-7	12	✓	4400	–	12.57	GI252	FA021	6790771
	800C10R-IS45HN09CF	8.000	8.461	2.480	2.500	–	4.000	1.000	.559	-7	-7	10	✓	3900	–	19.85	GI252	FA021	6790772
	1000C14R-IS45HN09CF	10.000	10.461	2.480	2.500	–	4.000	1.000	.559	-7	-7	14	✓	3500	–	28.21	GI252	FA021	6790728
	1200C16R-IS45HN09CF	12.000	12.461	3.150	2.500	–	4.000	1.000	.559	-7	-7	16	✓	3100	–	7.99	GI252	FA021	6790729

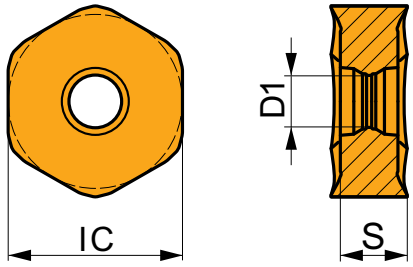
GI252	HNGX 0906AN..	XNGX 0906AN..

		Nm					
FA021	US 54511-T15P	5.0	M 4.5	.433	D-T08P/T15P	FG-15	–
FA060	US 54511-T15P	5.0	M 4.5	.433	D-T08P/T15P	FG-15	HS 075125
FA062	US 54511-T15P	5.0	M 4.5	.433	D-T08P/T15P	FG-15	HS 050125
FA063	US 54511-T15P	5.0	M 4.5	.433	D-T08P/T15P	FG-15	HS 037100
FA065	US 54511-T15P	5.0	M 4.5	.433	D-T08P/T15P	FG-15	HCS 075200

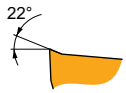
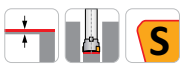
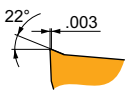
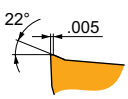
HNGX 09

PRAMET

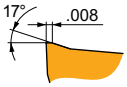
	IC	D1	S
	(inch)	(inch)	(inch)
0906	.650	.193	.250



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

Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
																					
			FF geometry with highly positive design for light machining.																		
HNGX 0906ANEN-FF	**8215**	–	1132	.0039	.039	673	.0035	.039	–	–	–	–	–	–	–	–	–	–	–	–	6755670
	M8330	–	1099	.0039	.039	656	.0035	.039	–	–	–	–	–	–	–	–	–	–	–	–	7447890
	M9340	–	1329	.0039	.039	787	.0035	.039	–	–	–	–	–	–	–	–	–	–	–	–	6755645
																					
			F geometry with highly positive design for light to medium machining.																		
HNGX 0906ANSN-F	**8215**	–	984	.0047	.083	591	.0043	.083	–	–	–	–	–	–	–	–	–	–	–	–	6753399
	M6330	–	837	.0047	.083	591	.0043	.083	–	–	–	–	–	–	–	–	–	–	–	–	7601338
	M8310	–	1083	.0047	.083	541	.0043	.083	–	–	–	–	–	–	–	–	–	–	–	–	6922528
	M8330	–	984	.0047	.083	591	.0043	.083	–	–	–	–	–	–	–	–	–	–	–	–	7447891
	M8340	–	886	.0047	.083	525	.0043	.083	–	–	–	–	–	–	–	–	–	–	–	–	6800832
																					
			M geometry with highly positive design for medium machining.																		
HNGX 0906ANSN-M	**8215**	–	837	.0079	.106	492	.0071	.106	787	.0079	.106	–	–	–	–	–	–	–	–	–	6753400
	M5315	–	1115	.0079	.106	–	–	–	1050	.0079	.106	–	–	–	–	–	–	–	–	–	6753667
	M6330	–	722	.0079	.106	509	.0071	.106	–	–	–	–	–	–	–	–	–	–	–	–	7077577
	M8310	–	919	.0079	.106	459	.0071	.106	869	.0079	.106	–	–	–	–	–	–	–	–	–	6922529
	M8330	–	837	.0079	.106	492	.0071	.106	787	.0079	.106	–	–	–	–	–	–	–	–	–	7447892
	M8340	–	771	.0079	.106	459	.0071	.106	722	.0079	.106	–	–	–	–	–	–	–	–	–	6800833
	M9315	–	1115	.0079	.106	–	–	–	1050	.0079	.106	–	–	–	–	–	–	–	–	–	6753668
	M9325	–	1033	.0079	.106	–	–	–	968	.0079	.106	–	–	–	–	–	–	–	–	–	6753669
	M9340	–	951	.0079	.106	558	.0071	.106	–	–	–	–	–	–	–	–	–	–	–	–	6755630

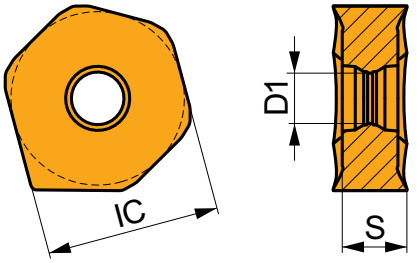
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

---		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
			R geometry with positive design for medium to heavy machining.																		
HNGX 0906ANSN-R	**8215**	–	■ 787	.0098	.118	◪ 459	.0098	.118	■ 738	.0098	.118	–	–	–	–	–	–	◪ 148	.0051	.039	6753401
	M5315	–	◪ 1001	.0098	.118	–	–	–	■ 935	.0098	.118	–	–	–	–	–	–	◪ 197	.0051	.039	6753664
	M8310	–	■ 853	.0098	.118	◪ 427	.0098	.118	■ 804	.0098	.118	–	–	–	–	–	–	◪ 164	.0051	.039	6922530
	M8330	–	■ 787	.0098	.118	◪ 459	.0098	.118	■ 738	.0098	.118	–	–	–	–	–	–	◪ 148	.0051	.039	7447893
	M8340	–	■ 722	.0098	.118	◪ 427	.0098	.118	◪ 673	.0098	.118	–	–	–	–	–	–	–	–	–	6800834
	M9315	–	■ 1017	.0098	.118	–	–	–	■ 951	.0098	.118	–	–	–	–	–	–	◪ 197	.0051	.039	6753665
	M9325	–	■ 968	.0098	.118	–	–	–	■ 919	.0098	.118	–	–	–	–	–	–	◪ 180	.0051	.039	6753666

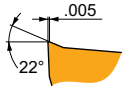
XNGX 09

PRAMET

	IC (inch)	D1 (inch)	S (inch)
0906	.650	.193	.250

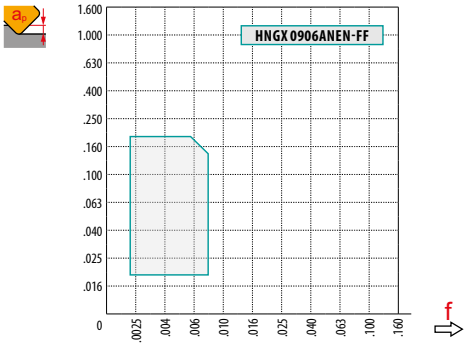


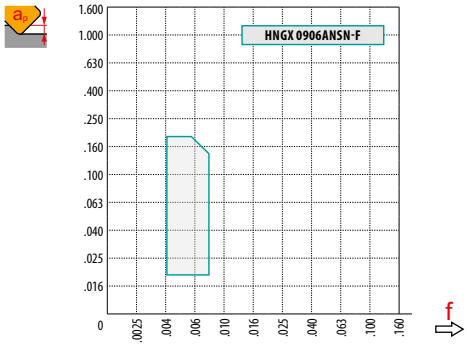
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

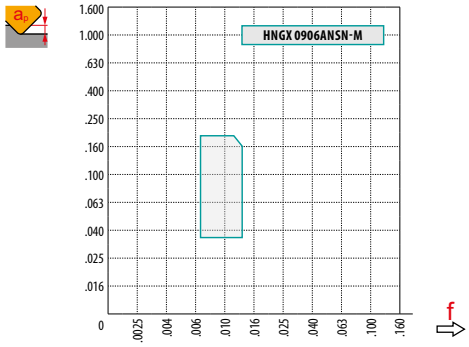
Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
			Wiper design for improved surface finish.																		
XNGX 0906ANSN	**8215**	–	■ 804	.0079	.106	◪ 476	.0071	.106	■ 755	.0079	.106	–	–	–	–	–	–	–	–	–	6753568
	M8330	–	■ 804	.0079	.106	◪ 476	.0071	.106	■ 755	.0079	.106	–	–	–	–	–	–	–	–	–	7451120

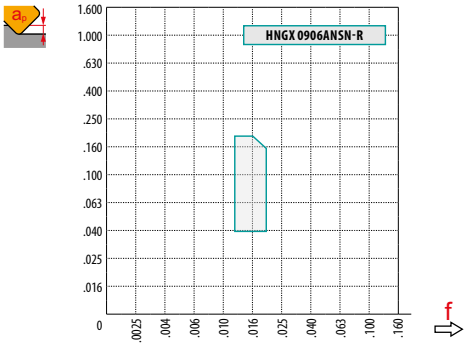
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	.95	.85	.75	.85	.95	1.00	1.00	1.00	1.00
x.f	.64	.64	.64	.64	.64	.65	.65	.67	.68	.71	.72	.74	.79	1.00

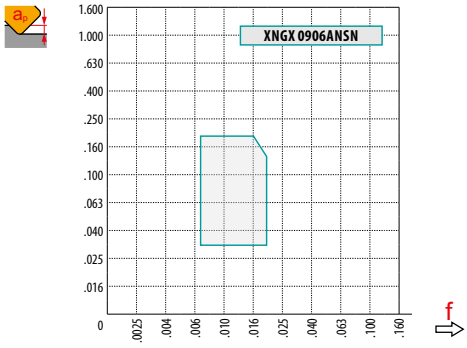
	HNGX 09-FF	HNGX 09-F	HNGX 09-M	HNGX 09-R	XNGX 09
RE (mm)	–	–	–	–	–
BS (inch)	.059	.046	.046	.046	.296











(inch)

DC	X.V	f_{max}
2.000	1.35	.014
2.500	1.39	.016
3.000	1.44	.018
4.00	1.48	.020
5.000	1.53	.022
6.000	1.58	.025
8.000	1.63	.028
10.000	1.68	.031
12.000	1.74	.035

(inch)

DC	RPMX	APMX/I
2.000	2.1°	.140/4.00
2.500	1.5°	.100/4.00
3.000	1.1°	.070/4.00
4.000	.9°	.060/4.00
5.000	.7°	.045/4.00
6.00	.5°	.030/4.00

(inch)

a_p
.075

FSB22X

P M K

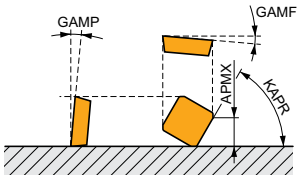
PRAMET

F

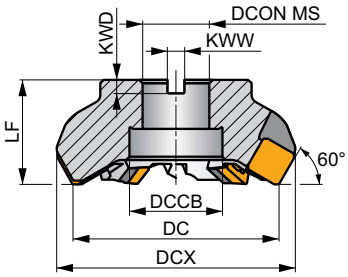
ROUGH SB 60° Face Mill with Positive Design for Heavy Face Milling

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. Body treated for longer tool life.

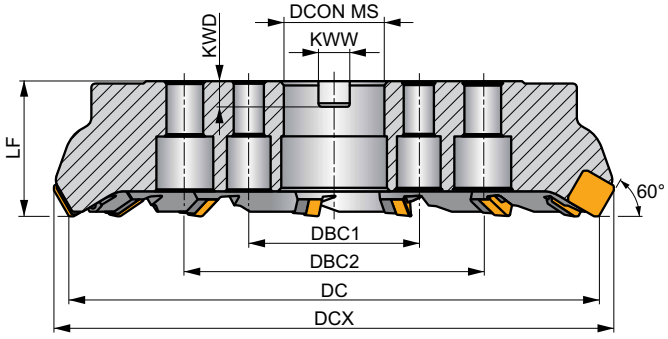
KAPR	60°
APMX	15.0 mm



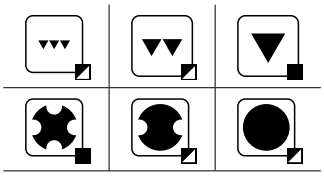
ROUGH SB



DC 125 mm



DC 160 – 315 mm



h_m 0.15 - 0.5 mm

	Product	DC (mm)	DCX (mm)	LF (mm)	DCON MS (mm)	DCCB (mm)	DBC1 (mm)	DBC2 (mm)	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		lbs				MID
ISO 6462 DIN 8030	**125B07R-F60SB22X**	125	144.4	63	40	56	–	–	16.4	9	-9	9	7	✓	–	–	8.23	GI144	FA111	AC003	6758303
	160C08R-F60SB22X	160	178.7	63	40	–	66.7	–	16.4	9	-9	9	8	✓	–	–	14.25	GI144	FA114	–	6758304
	200C08R-F60SB22X	200	217.9	63	60	–	101.6	–	25.7	14	-9	9	8	✓	–	–	23.35	GI144	FA115	–	6759709
	250C09R-F60SB22X	250	267.4	63	60	–	101.6	–	25.7	14	-9	9	9	✓	–	–	38.67	GI144	FA115	–	6759710

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

IFSB22X

P M K

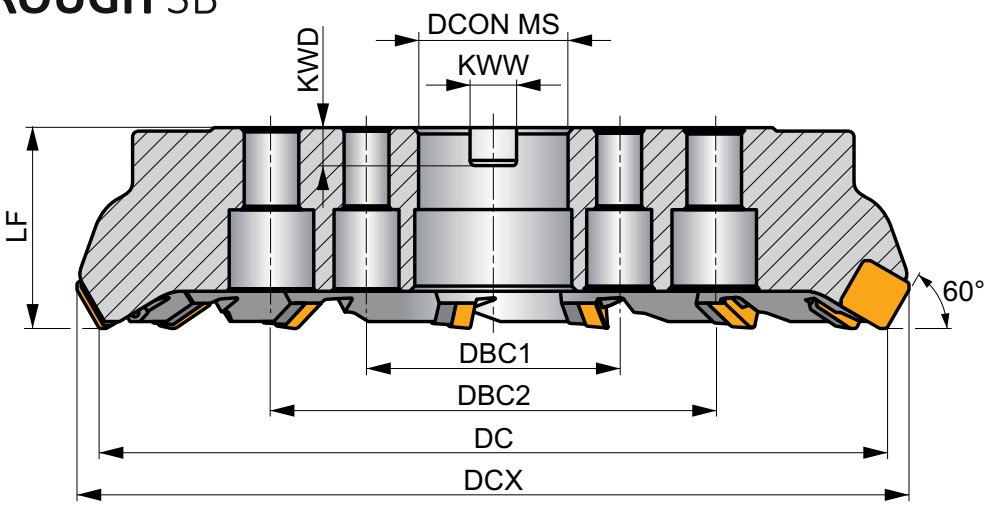
PRAMET

F

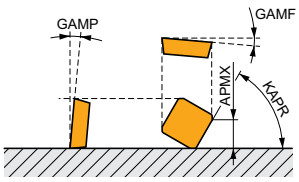
ROUGH SB 60° Face Mill with Positive Design for Heavy Face Milling

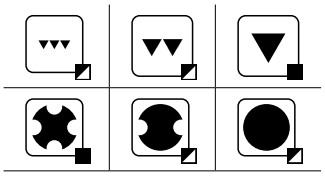
Highly productive 60° face mill utilizing single sided SB.. 22 style inserts with APMX of .591 inches. Optimized for heavy face milling with smooth cutting action. Differential tooth pitch. Arbor style only. Body treated for longer tool life.

ROUGH SB



KAPR	60°
APMX	.591 in





h_m .006-.197 in

	Product	DC (inch)	DCX (inch)	LF (inch)	DCON MS (inch)	DBC1 (inch)	DBC2 (inch)	KWW (inch)	KWD (inch)	GAMF (°)	GAMP (°)			max.		lbs			MID
ISO 6462 DIN 8030	**1200C14R-IF60SB22X**	12.000	12.661	3.150	2.500	4.000	7.000	1.000	.559	-9	9	14	✓	–	–	73.20	GI144	FA111	6789687

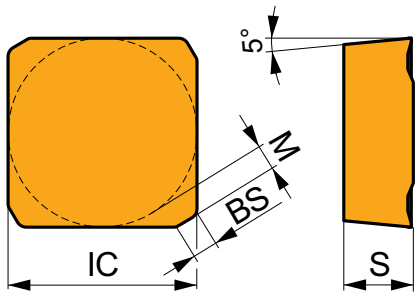
GI144	SBKX 2207DZ..	SBMR 2207DZ..

FA111	LNX 220616	US 6013-T20P	SDR T20P-T	KU SBMR 2207	DS 01Z	KL 04

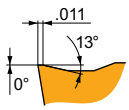
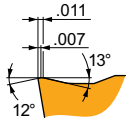
SBMR 22

PRAMET

	IC	M	S	BS
	(inch)	(inch)	(inch)	(inch)
2207	.866	.111	.315	.078



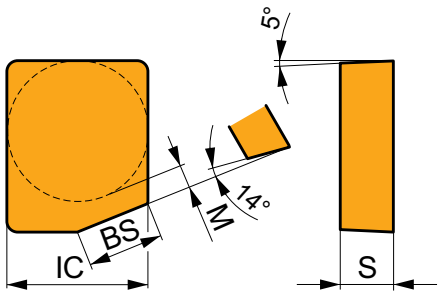
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
		(inch)																			
																					
			1		S																
Stable design for heavy machining.																					
SBMR 2207DZSR	**M8326**	–	459	.015	.335	–	–	–	427	.015	.335	–	–	–	–	–	–	–	–	–	6801308
	M8346	–	394	.015	.335	230	.015	.335	–	–	–	–	–	–	–	–	–	–	–	–	6801309
																					
			1		S																
R geometry with stable design for heavy machining.																					
SBMR 2207DZSR-R	**M5326**	–	525	.0173	.386	–	–	–	492	.0173	.386	–	–	–	–	–	–	–	–	–	6801279
	M8326	–	443	.0173	.386	–	–	–	410	.0173	.386	–	–	–	–	–	–	–	–	–	6801310
	M8346	–	377	.0173	.386	213	.0157	.386	–	–	–	–	–	–	–	–	–	–	–	–	6801311

SBKX 22

PRAMET

	IC	M	S
	(inch)	(inch)	(inch)
2207	.866	.127	.315

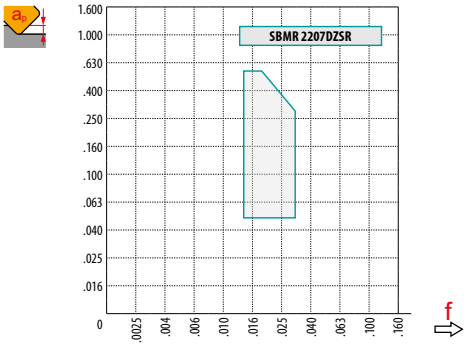


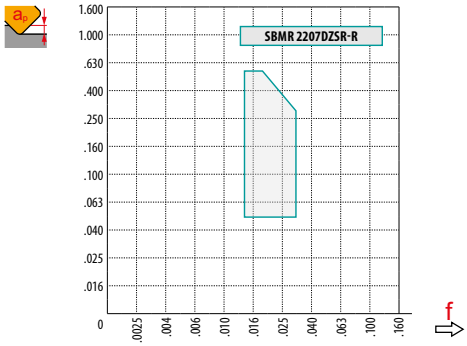
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

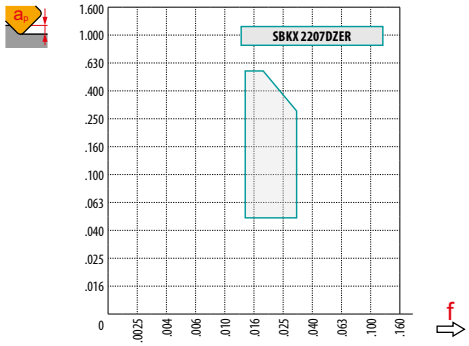
Product		RE	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
		(inch)																			
																					
			W		E																
Zero rake wiper design for improved surface finish.																					
SBKX 2207DZER	**M8326**	–	328	.0236	.335	–	–	–	312	.0236	.335	–	–	–	–	–	–	–	–	–	6801307

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	.95	.85	.75	.85	.95	1.00	1.00	1.00	1.00
x.f	.64	.64	.64	.64	.64	.65	.65	.67	.68	.71	.72	.74	.79	1.00

	SBMR 22	SBMR 22-R	SBKX 22
RE (mm)	–	–	–
BS (inch)	.78	.78	.466







SAD07D

P M K N S

PRAMET

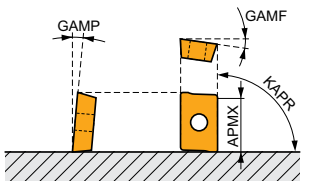
S

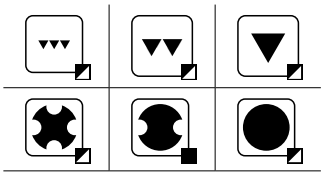
FORCE AD07 Square Shoulder Mill with Internal Coolant

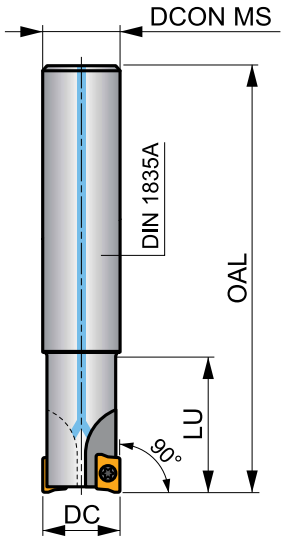
90° end mill utilizing positive AD.. 07 style insert with APMX of 5 mm. Suitable for applications, including face, shoulder, slot, helical, trochoidal, ramping and plunge milling. Available in cylindrical and modular style and with differential tooth pitch. Body treated for longer tool life.

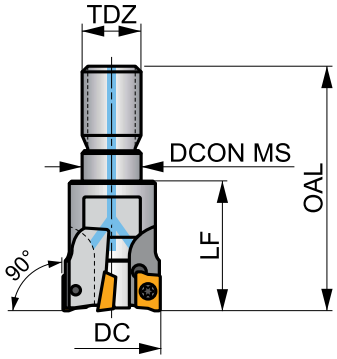
FORCE AD

KAPR	90°
APMX	5.0 mm









h_m 0.03 - 0.08 mm

	Product	DC (mm)	OAL (mm)	DCON MS (mm)	LU (mm)	LF (mm)	TDZ	GAMF (°)	GAMP (°)			max.		lbs			MID
	10A2R016A08-SAD07D-C	10	100	8	16	–	–	-12	8	2	–	61600	✓	.12	GI276	SQ010	6798637
	10A2R016A10-SAD07D-C	10	80	10	16	–	–	-12	8	2	–	61600	✓	.11	GI276	SQ010	6798626
	10A2R018A08-SAD07D-CF	10	100	8	18	–	–	-12	8	2	–	61600	✓	.13	GI276	SQ010	7607332
	10A2R018A10-SAD07D-CF	10	80	10	18	–	–	-12	8	2	–	61600	✓	.10	GI276	SQ010	7607333
	12A2R018A10-SAD07D-C	12	120	10	18	–	–	-10	8	2	–	56300	✓	.19	GI276	SQ010	6798638
	12A2R018A12-SAD07D-C	12	90	12	18	–	–	-10	8	2	–	56300	✓	.20	GI276	SQ010	6798627
	12A3R018A12-SAD07D-C	12	90	12	18	–	–	-10	8	3	–	56200	✓	.20	GI276	SQ010	6798628
	12A3R020A12-SAD07D-CF	12	90	12	20	–	–	-10	8	3	–	56200	✓	.20	GI276	SQ010	7607334
	14A3R018A12-SAD07D-C	14	140	12	18	–	–	-9	8	3	–	52100	✓	.29	GI276	SQ010	6798646
	14A3R018A14-SAD07D-C	14	90	14	18	–	–	-9	8	3	–	52100	✓	.25	GI276	SQ010	6798629
DIN 1835A	14A3R020A12-SAD07D-CF	14	140	12	20	–	–	-9	8	3	–	52100	✓	.30	GI276	SQ010	7607335
	14A3R020A14-SAD07D-CF	14	90	14	20	–	–	-9	8	3	–	52100	✓	.25	GI276	SQ010	7607336
	16A3R019A14-SAD07D-C	16	160	14	19	–	–	-8	8	3	–	48700	✓	.45	GI276	SQ011	6798639
	16A3R019A16-SAD07D-C	16	110	16	19	–	–	-8	8	3	–	48700	✓	.39	GI276	SQ011	6798630
	16A4R019A16-SAD07D-C	16	110	16	19	–	–	-8	8	4	–	48700	✓	.39	GI276	SQ011	6798631
	18A4R019A16-SAD07D-C	18	180	16	19	–	–	-7.5	8	4	✓	45900	✓	.61	GI276	SQ011	6798640
	18A4R019A18-SAD07D-C	18	110	18	19	–	–	-7.5	8	4	✓	45900	✓	.48	GI276	SQ011	6798632
	20A4R020A18-SAD07D-C	20	200	18	20	–	–	-7	8	4	✓	43600	✓	.83	GI276	SQ011	6798641
	20A4R020A20-SAD07D-C	20	125	20	20	–	–	-7	8	4	✓	43600	✓	.65	GI276	SQ011	6798633
	20A5R020A20-SAD07D-C	20	125	20	20	–	–	-7	8	5	✓	43600	✓	.65	GI276	SQ011	6798634
	25A5R024A25-SAD07D-C	25	140	25	24	–	–	-6.5	8	5	✓	39000	✓	1.12	GI276	SQ011	6798635
	25A6R024A25-SAD07D-C	25	140	25	24	–	–	-6.5	8	6	✓	39000	✓	1.13	GI276	SQ011	6798636
MODULAR	12A2R020M06-SAD07D-C	12	35	6.5	–	20	M6	-10	8	2	–	–	✓	.08	GI276	SQ010	6923284

	Product	DC (mm)	OAL (mm)	DCON MS (mm)	LU (mm)	LF (mm)	TDZ	GAMF (°)	GAMP (°)			max.		lbs			MID
MODULAR	**14A3R020M08-SAD07D-C**	14	38	8.5	–	20	M8	-9	8	3	–	–	✓	.10	GI276	SQ010	6923285
	14A3R023M08-SAD07D-CF	14	41	8.5	–	23	M8	-9	8	3	–	–	✓	.10	GI276	SQ010	7607337
	16A4R023M08-SAD07D-C	16	41	8.5	–	23	M8	-8	8	4	✓	–	✓	.11	GI276	SQ011	6798642
	20A5R030M10-SAD07D-C	20	49	10.5	–	30	M10	-7	8	5	✓	–	✓	.17	GI276	SQ011	6798643
	25A6R035M12-SAD07D-C	25	57	12.5	–	35	M12	-6.5	8	6	✓	–	✓	.28	GI276	SQ011	6798644
	32A8R043M16-SAD07D-C	32	66	17	–	43	M16	-6	8	8	✓	–	✓	.52	GI276	SQ011	6798645

GI276	ADMX 0702..	ADEX 0702..

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

ISAD07D

P M K N S

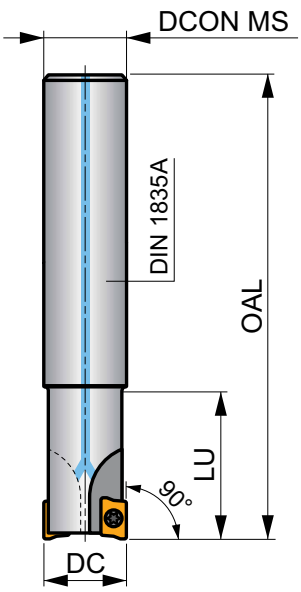
PRAMET

S

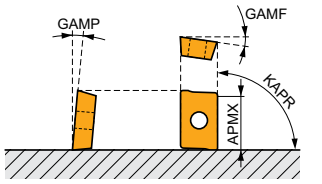
FORCE AD07 Square Shoulder Mill with Internal Coolant

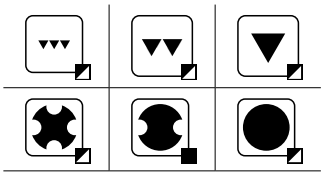
90° end mill utilizing positive AD.. 07 style insert with APMX of .197 inches. Suitable for applications, including face, shoulder, slot, helical, trochoidal, ramping and plunge milling. Available in cylindrical style and with differential tooth pitch. Body treated for longer tool life.

FORCE AD



KAPR	90°
APMX	.197 in





h_m .001 - .003 in

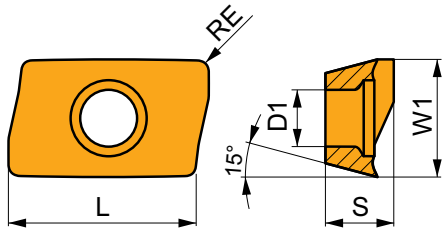
	Product	DC (inch)	OAL (inch)	DCON MS (inch)	LU (inch)	GAMF (°)	GAMP (°)				lbs			MID
DIN 1835A	050A2R071C050-ISAD07D-C	.500	3.543	.500	.709	-10	8	2	–	✓	.18	GI276	SQ010	8017218
	050A3R079C050-ISAD07D-C	.500	3.543	.500	.787	-10	8	3	–	✓	.15	GI276	SQ010	8017219
	062A3R075C062-ISAD07D-C	.625	4.330	.625	.748	-8	8	3	–	✓	.33	GI276	SQ011	8017580
	062A4R075C062-ISAD07D-C	.625	4.330	.625	.748	-8	8	4	–	✓	.33	GI276	SQ011	8017581
	075A4R079C075-ISAD07D-C	.750	4.921	.750	.787	-7	8	4	–	✓	.53	GI276	SQ011	8017582
	075A5R079C075-ISAD07D-C	.750	4.921	.750	.787	-7	8	5	–	✓	.55	GI276	SQ010	8017583

GI276	ADMX 0702..	ADEX 0702..

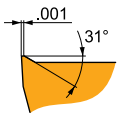
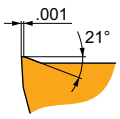
		Nm			
SQ010	US 62003A-T06P	0.6	M 2	.118	Flag T06P
SQ011	US 62004A-T06P	0.6	M 2	.157	Flag T06P

ADMX 07

	W1	D1	L	S
	(inch)	(inch)	(inch)	(inch)
0702	.176	.087	.274	.098



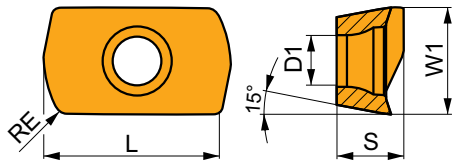
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
																					
F geometry with very sharp positive design for light machining.																					
ADMX 070202SR-F	**M8330**	.008	■ 722	.0028	.079	■ 427	.0024	.079	–	–	–	◩ 2165	.0031	.079	◩ 180	.002	.063	–	–	–	7799486
ADMX 070204SR-F	**M6330**	.016	■ 656	.0028	.079	■ 459	.0024	.079	–	–	–	–	–	–	◩ 197	.002	.063	–	–	–	7799521
	M8330	.016	■ 771	.0028	.079	■ 459	.0024	.079	–	–	–	◩ 2313	.0031	.079	◩ 180	.002	.063	–	–	–	7799489
	M8340	.016	■ 705	.0028	.079	■ 410	.0024	.079	–	–	–	–	–	–	◩ 164	.002	.063	–	–	–	7799520
ADMX 070208SR-F	**M8310**	.031	■ 1050	.0028	.079	◩ 525	.0024	.079	–	–	–	–	–	–	–	–	–	–	–	–	7799604
	M8330	.031	■ 919	.0028	.079	■ 541	.0024	.079	–	–	–	◩ 2756	.0031	.079	◩ 230	.002	.063	–	–	–	7799605
	M8340	.031	■ 837	.0028	.079	■ 492	.0024	.079	–	–	–	–	–	–	◩ 197	.002	.063	–	–	–	7799606
																					
M geometry with positive design for light to medium machining.																					
ADMX 070202SR-M	**M8330**	.008	■ 673	.0035	.087	◩ 394	.0031	.087	◩ 623	.0035	.087	◩ 2018	.0043	.087	◩ 164	.0024	.071	–	–	–	7447798
	M8340	.008	■ 607	.0035	.087	◩ 361	.0031	.087	◩ 574	.0035	.087	–	–	–	◩ 148	.0024	.071	–	–	–	6798617
ADMX 070204SR-M	**8215**	.016	■ 738	.0035	.087	◩ 443	.0031	.087	◩ 689	.0035	.087	◩ 2215	.0043	.087	◩ 180	.0024	.071	–	–	–	6798618
	M6330	.016	■ 623	.0035	.087	◩ 443	.0031	.087	–	–	–	–	–	–	◩ 180	.0024	.071	–	–	–	6925504
	M8310	.016	■ 804	.0035	.087	◩ 394	.0031	.087	◩ 755	.0035	.087	–	–	–	–	–	–	–	–	–	6922514
	M8330	.016	■ 722	.0035	.087	◩ 427	.0031	.087	◩ 673	.0035	.087	◩ 2165	.0043	.087	◩ 180	.0024	.071	–	–	–	7447799
	M8340	.016	■ 656	.0035	.087	◩ 394	.0031	.087	◩ 623	.0035	.087	–	–	–	◩ 164	.0024	.071	–	–	–	6798620
	M9340	.016	■ 869	.0035	.087	◩ 509	.0031	.087	–	–	–	–	–	–	◩ 213	.0024	.071	–	–	–	6798621
ADMX 070208SR-M	**8215**	.031	■ 886	.0035	.087	◩ 525	.0031	.087	◩ 837	.0035	.087	◩ 2657	.0043	.087	◩ 213	.0024	.071	–	–	–	6798622
	M6330	.031	■ 738	.0035	.087	◩ 525	.0031	.087	–	–	–	–	–	–	◩ 213	.0024	.071	–	–	–	7601277
	M8310	.031	■ 951	.0035	.087	◩ 476	.0031	.087	◩ 902	.0035	.087	–	–	–	–	–	–	–	–	–	6922515
	M8330	.031	■ 853	.0035	.087	◩ 509	.0031	.087	◩ 804	.0035	.087	◩ 2559	.0043	.087	◩ 213	.0024	.071	–	–	–	7447800
	M8340	.031	■ 787	.0035	.087	◩ 459	.0031	.087	◩ 738	.0035	.087	–	–	–	◩ 197	.0024	.071	–	–	–	6798624
	M9340	.031	■ 1033	.0035	.087	◩ 607	.0031	.087	–	–	–	–	–	–	◩ 246	.0024	.071	–	–	–	6798625
ADMX 070216SR-M	**M8330**	.063	■ 951	.0035	.087	◩ 558	.0031	.087	◩ 902	.0035	.087	◩ 2854	.0043	.087	◩ 230	.0024	.071	–	–	–	7799772
ADMX 070220SR-M	**M8310**	.079	■ 1115	.0035	.087	◩ 558	.0031	.087	◩ 1050	.0035	.087	–	–	–	–	–	–	–	–	–	7048987
	M8330	.079	■ 984	.0035	.087	◩ 591	.0031	.087	◩ 935	.0035	.087	◩ 2953	.0043	.087	◩ 246	.0024	.071	–	–	–	7447801
	M8340	.079	■ 902	.0035	.087	◩ 541	.0031	.087	◩ 853	.0035	.087	–	–	–	◩ 213	.0024	.071	–	–	–	6939771

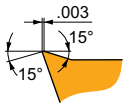
ADEX 07-HF

PRAMET

	W1	D1	L	S
	(inch)	(inch)	(inch)	(inch)
0702	.175	.087	.254	.098



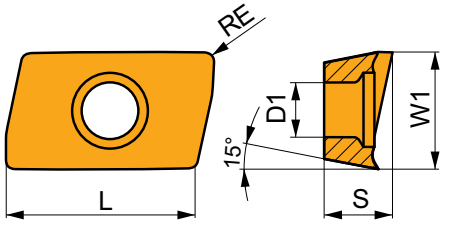
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
		(inch)	HFC S																		
HF geometry with highly positive design for high feed machining.																					
ADEX 070206SR-HF	**M6330**	.024	656	.0236	.012	459	.0213	.012	–	–	–	–	–	–	–	–	–	–	–	–	7606877
	M8330	.024	738	.0236	.012	443	.0213	.012	–	–	–	–	–	–	–	–	–	–	–	–	7606875
	M8340	.024	705	.0236	.012	410	.0213	.012	–	–	–	–	–	–	–	–	–	–	–	–	7606876

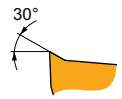
ADEX 07-FA

PRAMET

	W1	D1	L	S
	(inch)	(inch)	(inch)	(inch)
0702	.177	.087	.274	.098

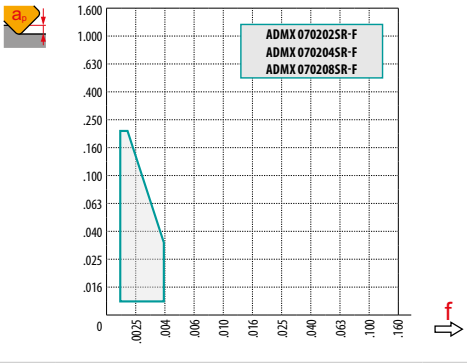


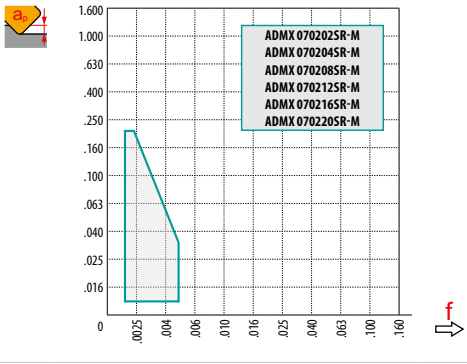
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

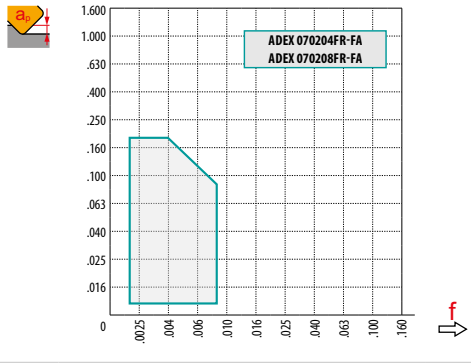
Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
		(inch)	F																		
FA geometry with highly positive design for fine-finish to medium machining.																					
ADEX 070204FR-FA	**HF7**	.016	–	–	–	–	–	–	–	–	–	787	.0071	.118	–	–	–	–	–	–	7606835
	M0315	.016	–	–	–	–	–	–	–	–	–	1821	.0071	.118	–	–	–	–	–	–	7606837
ADEX 070208FR-FA	**HF7**	.031	–	–	–	–	–	–	–	–	–	935	.0071	.118	–	–	–	–	–	–	7606836

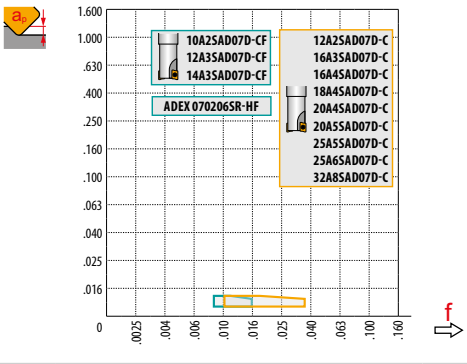
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ x.f	2.20	1.60	1.35	1.20	1.10	.95	.85	.75	.85	.95	1.00	1.00	1.00	1.00
⇨ x.f	.64	.64	.64	.64	.64	.65	.65	.67	.68	.71	.72	.74	.79	1.00

	ADMX 07-F			ADMX 07-M						ADEX 07-HF	ADEX 07-FA	
RE (mm)	.2	.4	.8	.2	.4	.8	1.2	1.6	2.0	.6	.4	.8
BS (inch)	1.38	.89	.54	1.38	.89	.54	1.07	.7	.33	–	.94	.55









(inch) DC	a_p	ADEX 07-HF .000	.004	.008	.012
.394	DEF	.220	.307	.343	.370
.472		.299	.386	.421	.449
.551		.378	.465	.500	.528
.630		.457	.543	.579	.606
.709		.535	.622	.657	.685
.787		.614	.701	.736	.764
.984		.811	.898	.933	.961
1.260		1.087	1.173	1.209	1.236

(inch) a_p	HFC .004	.008	.012
⇨ f	.035	.031	.024

(inch)

max
.118

(inch)

a_p	.039	.118	.197
1 f	.005	.003	.002

	HFC		
a_p	.004	.008	.012
1 f	.028	.024	.016

(inch)

DC	RPMX	APMX/l
.394	5.2°	.197/2.205
.472	3.4°	.197/3.386
.551	2.5°	.165/3.937
.630	1.9°	.126/3.937
.709	1.7°	.110/3.937
.787	1.5°	.098/3.937
.984	1.1°	.071/3.937
1.260	.8°	.047/3.937

	HFC	
DC	RPMX	APMX/l
.394	3.5°	.012/.236
.472	2.2°	.012/.354
.551	1.6°	.012/.472
.630	1.3°	.012/.591
.709	1.1°	.012/.669
.787	.9°	.012/.827
.984	.7°	.012/1.024
1.260	.5°	.012/1.417

(inch)

DC	DMIN	DMAX	SMAX DMIN	SMAX DMAX
.394	.472	.787	.020	.110
.472	.630	.945	.028	.087
.551	.787	1.102	.031	.075
.630	.945	1.260	.031	.063
.709	1.102	1.417	.035	.063
.787	1.260	1.575	.035	.063
.984	1.654	1.969	.039	.059
1.260	2.205	2.520	.039	.055

	HFC			
DC	DMIN	DMAX	SMAX DMIN	SMAX DMAX
.394	.472	.787	.012	.012
.472	.630	.945	.012	.012
.551	.787	1.102	.012	.012
.630	.945	1.260	.012	.012
.709	1.102	1.417	.012	.012
.787	1.260	1.575	.012	.012
.984	1.654	1.969	.012	.012
1.260	2.205	2.520	.012	.012

(inch)

a_p
.020

(inch)

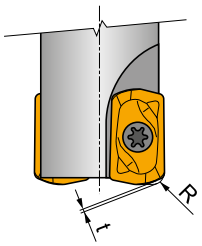
a_p	HFC
	.012

(inch)

DC	µm	3	5	10	15	20	30	40	50	60	80	100
.394		.014	.018	.025	.031	.035	.043	.050	.056	.061	.070	.079
.472		.015	.019	.027	.033	.039	.047	.055	.061	.067	.077	.086
.551		.016	.021	.029	.036	.042	.051	.059	.066	.072	.083	.093
.630	FE	.017	.022	.031	.039	.045	.055	.063	.070	.077	.089	.100
.709		.018	.024	.033	.041	.047	.058	.067	.075	.082	.094	.106
.787		.019	.025	.035	.043	.050	.061	.070	.079	.086	.100	.111
.984		.022	.028	.039	.048	.056	.068	.079	.088	.096	.111	.124
1.260		.024	.031	.045	.055	.063	.077	.089	.100	.109	.126	.141

(inch)

ADMX 07	R
ADMX 070216SR-M	.039
ADMX 070220SR-M	.059
ADEX 070206SR-HF	.039



ADEX 07	R	t
ADEX 070206SR-HF	.031	.007

SAD11E

P M K N S H

PRAMET

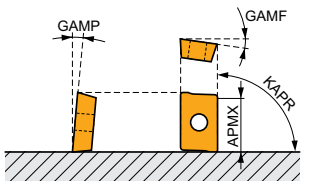
S

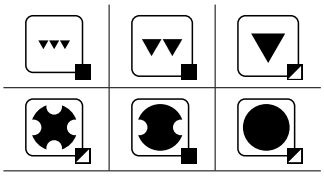
FORCE AD11 Square Shoulder Mill with Internal Coolant

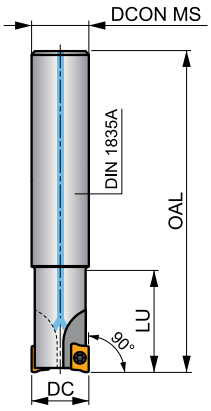
90° end and shell mills utilizing positive AD.. 11 style insert with APMX of 9 mm. Suitable for face, shoulder, slot, helical, trochoidal, ramping and plunge milling. Available in cylindrical, Weldon, morse taper, modular and arbor (with differential tooth pitch) style. Body treated for longer tool life.

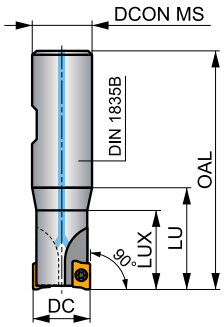
FORCE AD

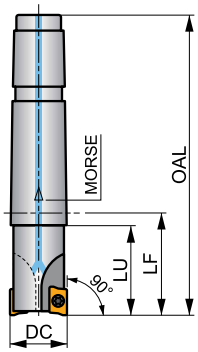
KAPR	90°
APMX	9.0 mm

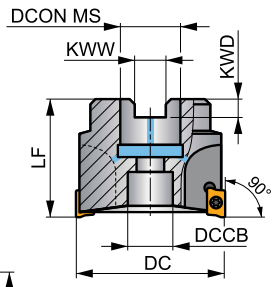


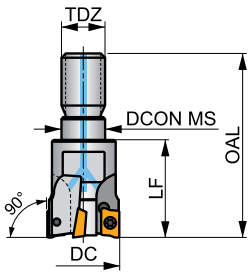












h_m	0.08 - 0.16 mm
h_m	0.06 - 0.13 mm

	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.		lbs				MID
	16A2R024A14-SAD11E-C	16	160	14	–	24	–	–	–	–	–	–	-12.8	4	2	–	30100	✓	.43	GI169	SQ025	–	6800792
	16A2R024A16-SAD11E-C	16	135	16	–	24	–	–	–	–	–	–	-12.8	4	2	–	30100	✓	.42	GI169	SQ025	–	6760210
	16A2R050A16-SAD11E-C	16	135	16	–	50	–	–	–	–	–	–	-12.8	4	2	–	30100	✓	.44	GI169	SQ025	–	6759683
	18A2R029A20-SAD11E-C	18	150	20	–	29	–	–	–	–	–	–	-12	4.5	2	–	28400	✓	.76	GI169	SQ025	–	6760318
	20A2R029A20-SAD11E-C	20	150	20	–	29	–	–	–	–	–	–	-11.5	5	2	–	27000	✓	.72	GI169	SQ020	–	6760211
	20A2R070A20-SAD11E-C	20	150	20	–	70	–	–	–	–	–	–	-11.5	5	2	–	27000	✓	.70	GI169	SQ020	–	6759684
	20A3R029A18-SAD11E-C	20	200	18	–	29	–	–	–	–	–	–	-11.5	5	3	–	27000	✓	.80	GI169	SQ025	–	6800795
	20A3R029A20-SAD11E-C	20	150	20	–	29	–	–	–	–	–	–	-11.5	5	3	–	27000	✓	.68	GI169	SQ025	–	6760212
DIN 1835A	**22A3R029A20-SAD11E-C**	22	200	20	–	29	–	–	–	–	–	–	-11.5	5	3	–	25600	✓	.99	GI169	SQ025	–	6923283
	25A3R034A25-SAD11E-C	25	170	25	–	34	–	–	–	–	–	–	-10.2	5	3	–	24100	✓	.93	GI169	SQ020	–	6760213
	25A3R080A25-SAD11E-C	25	170	25	–	80	–	–	–	–	–	–	-10.2	5	3	–	24100	✓	1.15	GI169	SQ020	–	6759682
	25A4R034A25-SAD11E-C	25	170	25	–	34	–	–	–	–	–	–	-10.2	5	4	–	24100	✓	1.23	GI169	SQ025	–	6760214
	25A4R040A25-SAD11E-C	25	250	25	–	40	–	–	–	–	–	–	-10.2	5	4	–	24100	✓	1.87	GI169	SQ025	–	7049093
	30A3R080A32-SAD11E-C	30	200	32	–	80	–	–	–	–	–	–	-9.3	7	3	–	22000	✓	2.16	GI169	SQ020	–	7049094
	32A3R090A32-SAD11E-C	32	195	32	–	90	–	–	–	–	–	–	-9	5	3	–	21300	✓	2.18	GI169	SQ020	–	6759685
	32A5R034A32-SAD11E-C	32	195	32	–	34	–	–	–	–	–	–	-9	8	5	–	21300	✓	2.27	GI169	SQ025	–	6760215
	35A5R025A32-SAD11E-C	35	200	32	–	25	–	–	–	–	–	–	-9	8	5	–	20300	✓	2.45	GI169	SQ020	–	7049095
	16A2R027B16-SAD11E-C	16	75	16	–	–	27	–	–	–	–	–	-12.8	4	2	–	30100	✓	.24	GI169	SQ025	–	6760196
	20A2R032B20-SAD11E-C	20	82	20	–	–	32	–	–	–	–	–	-11.5	5	2	–	27000	✓	.28	GI169	SQ020	–	6760205
DIN 1835B	**20A3R032B20-SAD11E-C**	20	82	20	–	–	32	–	–	–	–	–	-11.5	5	3	–	27000	✓	.28	GI169	SQ025	–	6760206
	25A3R042B25-SAD11E-C	25	98	25	–	–	42	–	–	–	–	–	-10.2	5	3	–	24100	✓	.64	GI169	SQ020	–	6760197
	25A4R042B25-SAD11E-C	25	98	25	–	–	42	–	–	–	–	–	-10.2	5	4	–	24100	✓	.68	GI169	SQ025	–	6760207
	32A4R042B32-SAD11E-C	32	102	32	–	–	42	–	–	–	–	–	-9	8	4	–	21300	✓	.60	GI169	SQ020	–	6760208

	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.		lbs				MID
DIN 1835B	**32A5R042B32-SAD11E-C**	32	102	32	–	–	42	–	–	–	–	–	-9	8	5	–	21300	✓	.70	GI169	SQ025	–	6760209
DIN 228A	**16A2R030E02-SAD11E-C**	16	94	–	–	25	–	30	–	2	–	–	-12.8	4	2	–	30100	✓	.29	GI169	SQ025	–	6758928
	20A3R035E03-SAD11E-C	20	116	–	–	30	–	35	–	3	–	–	-11.5	5	3	–	27000	✓	.60	GI169	SQ025	–	6758929
	25A4R043E03-SAD11E-C	25	124	–	–	38	–	43	–	3	–	–	-10.2	5	4	–	24100	✓	.68	GI169	SQ025	–	6758930
MODULAR	**16A2R024M08-SAD11E-C**	16	38	8.5	–	–	–	24	M8	–	–	–	-12.8	4	2	–	–	✓	.09	GI169	SQ025	–	6760221
	20A2R026M10-SAD11E-C	20	45	11	–	–	–	26	M10	–	–	–	-11.5	5	2	–	–	✓	.14	GI169	SQ020	–	6759678
	20A3R026M10-SAD11E-C	20	45	10.5	–	–	–	26	M10	–	–	–	-11.5	5	3	–	–	✓	.14	GI169	SQ025	–	6760222
	25A3R033M12-SAD11E-C	25	55	12.5	–	–	–	33	M12	–	–	–	-10.2	5	3	–	–	✓	.22	GI169	SQ020	–	6759679
	25A4R033M12-SAD11E-C	25	55	12.5	–	–	–	33	M12	–	–	–	-10.2	5	4	–	–	✓	.20	GI169	SQ025	–	6760216
	32A4R043M16-SAD11E-C	32	66	17	–	–	–	43	M16	–	–	–	-9	8	4	–	–	✓	.45	GI169	SQ020	–	6759680
	32A5R043M16-SAD11E-C	32	66	17	–	–	–	43	M16	–	–	–	-9	8	5	–	–	✓	.43	GI169	SQ025	–	6760217
	40A4R043M16-SAD11E-C	40	66	17	–	–	–	43	M16	–	–	–	-8.1	11	4	–	–	✓	.60	GI169	SQ020	–	6759681
	40A6R043M16-SAD11E-C	40	66	17	–	–	–	43	M16	–	–	–	-8.1	11	6	–	–	✓	.46	GI169	SQ020	–	6760218
ISO 6462 DIN 8030	**40A04R-S90AD11E-C**	40	–	16	14	–	–	40	–	–	8.4	5.6	-8.1	11	4	✓	19100	✓	.35	GI169	SQ022	–	6760198
	40A05R-S90AD11E-C	40	–	16	14	–	–	40	–	–	8.4	5.6	-8.1	11	5	✓	19000	✓	.69	GI169	SQ022	–	7049096
	40A06R-S90AD11E-C	40	–	16	14	–	–	40	–	–	8.4	5.6	-8.1	11	6	✓	19100	✓	.44	GI169	SQ022	–	6760199
	50A05R-S90AD11E-C	50	–	22	18	–	–	40	–	–	10.4	6.3	-7.2	12	5	✓	17000	✓	.68	GI169	SQ023	–	6760200
	50A07R-S90AD11E-C	50	–	22	18	–	–	40	–	–	10.4	6.3	-7.2	12	7	✓	17000	✓	.96	GI169	SQ023	–	6760201
	63A06R-S90AD11E-C	63	–	22	18	–	–	40	–	–	10.4	6.3	-6.5	12	6	✓	15200	✓	1.19	GI169	SQ023	–	6760202
	63A09R-S90AD11E-C	63	–	22	18	–	–	40	–	–	10.4	6.3	-6.5	12	9	✓	15200	✓	1.35	GI169	SQ023	–	6760203
	80A10R-S90AD11E-C	80	–	27	38	–	–	50	–	–	12.4	7	-6	12	10	✓	13500	✓	2.30	GI169	SQ021	AC001	6760204
	100A11R-S90AD11E-C	100	–	32	45	–	–	50	–	–	14.4	8	-5.5	12	11	✓	12100	✓	4.17	GI169	SQ021	AC002	6760219
	125A12R-S90AD11E-C	125	–	40	56	–	–	63	–	–	16.4	9	-5.2	12	12	✓	10800	✓	6.55	GI169	SQ021	AC003	6760220

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

ISAD11E

P M K N S H

PRAMET

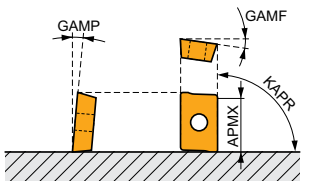
S

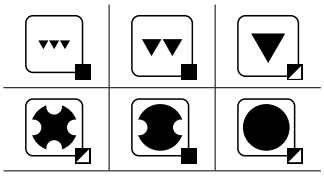
FORCE AD11 Square Shoulder Mill with Internal Coolant

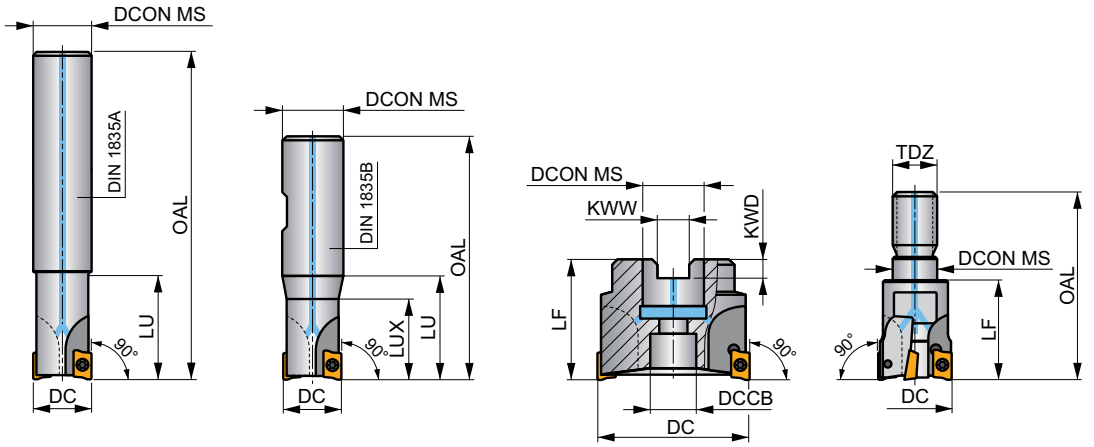
90˚ end and shell mills utilizing positive AD.. 11 style insert with APMX of .354 inches. Suitable for face, shoulder, slot, helical, trochoidal, ramping and plunge milling. Available in cylindrical, Weldon, modular and arbor (with differential tooth pitch) style. Body treated for longer tool life.

FORCE AD

KAPR	90°
APMX	.354 in







h_m	.003 - .006 in
h_m	.002 - .005 in

	Product	DC (inch)	OAL (inch)	DCON MS (inch)	DCCB (inch)	LU (inch)	LUX (inch)	LF (inch)	TDZ	KWW (inch)	KWD (inch)	GAMF (°)	GAMP (°)			max.		lbs			MID
	062A2R094C062-ISAD11E-C	.625	5.315	.625	–	.945	–	–	–	–	–	-12.8	4	2	–	30100	✓	.44	GI169	SQ025	6790623
	062A2R197C062-ISAD11E-C	.625	5.315	.625	–	1.969	–	–	–	–	–	-12.6	4	2	–	30100	✓	.44	GI169	SQ025	6790626
	075A2R114C075-ISAD11E-C	.750	5.906	.750	–	1.142	–	–	–	–	–	-11.5	5	2	–	27000	✓	.66	GI169	SQ020	6790628
	075A2R276C075-ISAD11E-C	.750	5.906	.750	–	2.756	–	–	–	–	–	-11.5	5	2	–	27000	✓	.66	GI169	SQ020	6790700
DIN 1835A	075A3R114C075-ISAD11E-C	.750	5.906	.750	–	1.142	–	–	–	–	–	-11.5	5	3	–	27000	✓	.66	GI169	SQ025	6790702
	100A3R134C100-ISAD11E-C	1.000	6.693	1.000	–	1.339	–	–	–	–	–	-10.2	5	3	–	24100	✓	1.10	GI169	SQ020	6790705
	100A3R315C100-ISAD11E-C	1.000	6.693	1.000	–	3.150	–	–	–	–	–	-10.2	5	3	–	24100	✓	1.10	GI169	SQ020	6790707
	100A4R134C100-ISAD11E-C	1.000	6.693	1.000	–	1.339	–	–	–	–	–	-10.2	5	4	–	24100	✓	1.10	GI169	SQ025	6790709
	125A3R354C125-ISAD11E-C	1.250	7.677	1.250	–	3.543	–	–	–	–	–	-9	5	3	–	21300	✓	1.98	GI169	SQ020	6790711
	125A5R134C125-ISAD11E-C	1.250	7.677	1.250	–	1.339	–	–	–	–	–	-9	8	5	–	21300	✓	1.98	GI169	SQ025	6790714
	062A2R106W062-ISAD11E-C	.625	2.969	.625	–	–	1.063	–	–	–	–	-12.8	4	2	–	30100	✓	.22	GI169	SQ025	6790625
	075A2R126W075-ISAD11E-C	.750	3.291	.750	–	–	1.26	–	–	–	–	-11.5	5	2	–	27000	✓	.44	GI169	SQ020	6790629
DIN 1835B	075A3R126W075-ISAD11E-C	.750	3.291	.750	–	–	1.26	–	–	–	–	-11.5	5	3	–	27000	✓	.44	GI169	SQ025	6790703
	100A3R128W100-ISAD11E-C	1.000	3.780	1.000	–	–	1.28	–	–	–	–	-10.2	5	3	–	24100	✓	.66	GI169	SQ020	6790704
	100A4R128W100-ISAD11E-C	1.000	3.780	1.000	–	–	1.28	–	–	–	–	-10.2	5	4	–	24100	✓	.66	GI169	SQ025	6790708
	125A4R150W125-ISAD11E-C	1.250	4.000	1.250	–	–	1.5	–	–	–	–	-9	8	4	–	21300	✓	.88	GI169	SQ020	6790712
	125A5R150W125-ISAD11E-C	1.250	4.000	1.250	–	–	1.5	–	–	–	–	-9	8	5	–	21300	✓	.88	GI169	SQ025	6790715

	Product	DC (inch)	OAL (inch)	DCON MS (inch)	DCCB (inch)	LU (inch)	LUX (inch)	LF (inch)	TDZ	KWW (inch)	KWD (inch)	GAMF (°)	GAMP (°)			max.		lbs			MID
MODULAR	**062A2R094M08-ISAD11E-C**	.625	1.496	.335	–	–	–	.945	M8	–	–	-12.8	4	2	–	–	✓	.22	GI169	SQ025	6790624
	075A2R102M10-ISAD11E-C	.750	1.772	.413	–	–	–	1.024	M10	–	–	-11.5	5	2	–	–	✓	.22	GI169	SQ020	6790627
	075A3R102M10-ISAD11E-C	.750	1.772	.413	–	–	–	1.024	M10	–	–	-11.5	5	3	–	–	✓	.22	GI169	SQ025	6790701
	100A3R138M12-ISAD11E-C	1.000	2.244	.492	–	–	–	1.378	M12	–	–	-10.2	5	3	–	–	✓	.22	GI169	SQ020	6790706
	100A4R138M12-ISAD11E-C	1.000	2.244	.492	–	–	–	1.378	M12	–	–	-10.2	5	4	–	–	✓	.22	GI169	SQ025	6790710
	125A4R169M16-ISAD11E-C	1.250	2.598	.669	–	–	–	1.693	M16	–	–	-9	8	4	–	–	✓	.22	GI169	SQ020	6790713
	125A5R169M16-ISAD11E-C	1.250	2.598	.669	–	–	–	1.693	M16	–	–	-9	8	5	–	–	✓	.22	GI169	SQ025	6790716
	150A4R169M16-ISAD11E-C	1.500	2.598	.669	–	–	–	1.693	M16	–	–	-8.1	11	4	–	–	✓	.44	GI169	SQ020	6790719
	150A6R169M16-ISAD11E-C	1.500	2.598	.669	–	–	–	1.693	M16	–	–	-8.1	11	6	–	–	✓	.44	GI169	SQ020	6790720
ISO 6462 DIN 8030	**150A04R-IS90AD11E-C**	1.500	–	.500	.433	–	–	1.575	–	.258	.165	-8.1	11	4	✓	19000	✓	.44	GI169	SQ042	6790717
	150A06R-IS90AD11E-C	1.500	–	.500	.433	–	–	1.575	–	.258	.165	-8.1	11	6	✓	19100	✓	.44	GI169	SQ042	6790718
	200A05R-IS90AD11E-C	2.000	–	.750	.630	–	–	1.575	–	.321	.193	-7.2	12	5	✓	17000	✓	1.07	GI169	SQ043	6790721
	200A07R-IS90AD11E-C	2.000	–	.750	.630	–	–	1.575	–	.321	.193	-7.2	12	7	✓	17000	✓	.66	GI169	SQ043	6790722
	250A06R-IS90AD11E-C	2.500	–	.750	.630	–	–	1.575	–	.321	.193	-6.5	12	6	✓	15200	✓	1.10	GI169	SQ043	6790723
	250A09R-IS90AD11E-C	2.500	–	.750	.630	–	–	1.575	–	.321	.193	-6.5	12	9	✓	15200	✓	1.10	GI169	SQ043	6790724
	300A10R-IS90AD11E-C	3.000	–	1.000	.827	–	–	1.969	–	.382	.224	-6	12	10	✓	13500	✓	2.21	GI169	SQ044	6790725
	400A11R-IS90AD11E-C	4.000	–	1.500	1.260	–	–	1.969	–	.634	.382	-5.5	12	11	✓	12100	✓	3.75	GI169	SQ025	6790726
	500A12R-IS90AD11E-C	5.000	–	1.500	1.260	–	–	2.480	–	.634	.382	-5.2	12	12	✓	10800	✓	7.72	GI169	SQ025	6790727

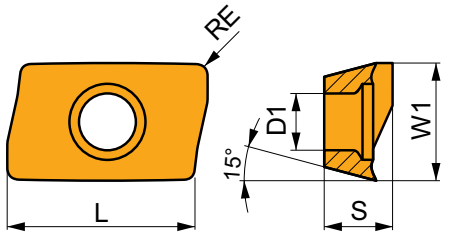
GI169	ADMX 11T3..	ADEX 11T3..

		Nm						
SQ020	US 62506-T07P	1.2	M 2.5	.236	–	–	Flag T07P	–
SQ025	US 62505-T07P	1.2	M 2.5	.197	–	–	Flag T07P	–
SQ042	US 62506-T07P	1.2	M 2.5	.236	D-T07P/T09P	FG-15	–	HS 025100
SQ043	US 62506-T07P	1.2	M 2.5	.236	D-T07P/T09P	FG-15	–	HS 037100
SQ044	US 62506-T07P	1.2	M 2.5	.236	D-T07P/T09P	FG-15	–	HS 050125

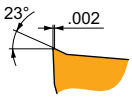
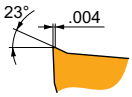
ADMX 11

PRAMET

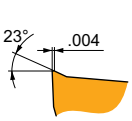
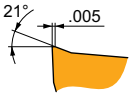
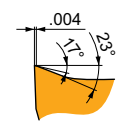
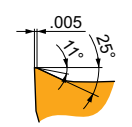
	W1	D1	L	S
	(inch)	(inch)	(inch)	(inch)
11T3	.257	.114	.433	.156



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

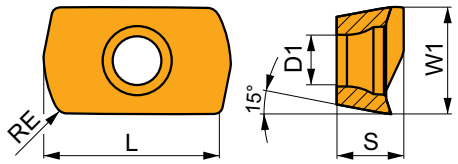
Product		RE	P			M			K			N			S			H			MID
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	
		(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	
																					
			F geometry with very sharp positive design for light machining.																		
ADMX 11T304SR-F	**8215**	.016	■ 804	.0039	.079	◪ 476	.0035	.079	◪ 755	.0039	.079	◪ 2411	.0047	.079	◪ 197	.0031	.063	–	–	–	6753383
	M8330	.016	■ 787	.0039	.079	◪ 459	.0035	.079	◪ 738	.0039	.079	◪ 2362	.0047	.079	◪ 197	.0031	.063	–	–	–	7447803
	M8340	.016	■ 722	.0039	.079	◪ 427	.0035	.079	◪ 673	.0039	.079	–	–	–	◪ 180	.0031	.063	–	–	–	6800784
	M9340	.016	■ 935	.0039	.079	◪ 558	.0035	.079	–	–	–	–	–	–	◪ 230	.0031	.063	–	–	–	6754588
ADMX 11T308SR-F	**8215**	.031	■ 951	.0039	.079	◪ 558	.0035	.079	◪ 902	.0039	.079	◪ 2854	.0047	.079	◪ 230	.0031	.063	–	–	–	6753386
	M8330	.031	■ 935	.0039	.079	◪ 558	.0035	.079	◪ 886	.0039	.079	◪ 2805	.0047	.079	◪ 230	.0031	.063	–	–	–	7447806
	M8340	.031	■ 853	.0039	.079	◪ 509	.0035	.079	◪ 804	.0039	.079	–	–	–	◪ 213	.0031	.063	–	–	–	6800787
	M9340	.031	■ 1115	.0039	.079	◪ 656	.0035	.079	–	–	–	–	–	–	◪ 279	.0031	.063	–	–	–	6754590
																					
			M geometry with positive design for light to medium machining.																		
ADMX 11T302SR-M	**M8330**	.008	■ 623	.0059	.157	■ 361	.0055	.157	■ 591	.0059	.157	–	–	–	◪ 148	.0047	.126	–	–	–	7447802
	M8340	.008	■ 558	.0059	.157	■ 328	.0055	.157	◪ 525	.0059	.157	–	–	–	◪ 131	.0047	.126	–	–	–	6800753
ADMX 11T304SR-M	**8215**	.016	■ 673	.0059	.157	◪ 394	.0055	.157	■ 623	.0059	.157	–	–	–	◪ 164	.0047	.126	–	–	–	6753384
	M8310	.016	■ 722	.0059	.157	◪ 361	.0055	.157	■ 673	.0059	.157	–	–	–	–	–	–	–	–	–	6922517
	M8330	.016	■ 673	.0059	.157	■ 394	.0055	.157	■ 623	.0059	.157	–	–	–	◪ 164	.0047	.126	–	–	–	7447804
	M8340	.016	■ 607	.0059	.157	■ 361	.0055	.157	◪ 574	.0059	.157	–	–	–	◪ 148	.0047	.126	–	–	–	6800785
	M9325	.016	■ 837	.0059	.157	–	–	–	■ 787	.0059	.157	–	–	–	–	–	–	–	–	–	6754538
	M9340	.016	■ 771	.0059	.157	■ 459	.0055	.157	–	–	–	–	–	–	◪ 180	.0047	.126	–	–	–	6754589
ADMX 11T308SR-M	**8215**	.031	■ 804	.0059	.157	◪ 476	.0055	.157	■ 755	.0059	.157	–	–	–	◪ 197	.0047	.126	–	–	–	6753387
	M5315	.031	◪ 1099	.0059	.157	–	–	–	■ 1033	.0059	.157	–	–	–	–	–	–	–	–	–	6754622
	M8310	.031	■ 869	.0059	.157	◪ 443	.0055	.157	■ 820	.0059	.157	–	–	–	–	–	–	–	–	–	6922519
	M8330	.031	■ 804	.0059	.157	■ 476	.0055	.157	■ 755	.0059	.157	–	–	–	◪ 197	.0047	.126	–	–	–	7447807
	M8340	.031	■ 722	.0059	.157	■ 427	.0055	.157	◪ 673	.0059	.157	–	–	–	◪ 180	.0047	.126	–	–	–	6800788
	M9315	.031	■ 1083	.0059	.157	–	–	–	■ 1017	.0059	.157	–	–	–	–	–	–	–	–	–	6754550
	M9325	.031	■ 1001	.0059	.157	–	–	–	■ 935	.0059	.157	–	–	–	–	–	–	–	–	–	6754540
	M9340	.031	■ 902	.0059	.157	■ 541	.0055	.157	–	–	–	–	–	–	◪ 213	.0047	.126	–	–	–	6754591
ADMX 11T310SR-M	**M8330**	.039	■ 837	.0059	.157	■ 492	.0055	.157	■ 787	.0059	.157	–	–	–	◪ 197	.0047	.126	–	–	–	7447808
	M8340	.039	■ 755	.0059	.157	■ 443	.0055	.157	◪ 705	.0059	.157	–	–	–	◪ 180	.0047	.126	–	–	–	6800755
ADMX 11T312SR-M	**8215**	.047	■ 837	.0059	.157	◪ 492	.0055	.157	■ 787	.0059	.157	–	–	–	◪ 197	.0047	.126	–	–	–	6800757
	M8330	.047	■ 837	.0059	.157	■ 492	.0055	.157	■ 787	.0059	.157	–	–	–	◪ 197	.0047	.126	–	–	–	7447809
	M8340	.047	■ 755	.0059	.157	■ 443	.0055	.157	◪ 705	.0059	.157	–	–	–	◪ 180	.0047	.126	–	–	–	6800758

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

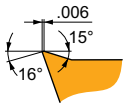
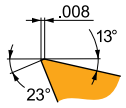
Product		RE	P						M						K						N						S						H						MID
			vc		f		ap		vc		f		ap		vc		f		ap		vc		f		ap		vc		f		ap		vc		f		ap		
		(inch)	(ft/min)		(in/tooth)		(inch)		(ft/min)		(in/tooth)		(inch)		(ft/min)		(in/tooth)		(inch)		(ft/min)		(in/tooth)		(inch)		(ft/min)		(in/tooth)		(inch)		(ft/min)		(in/tooth)		(inch)		
																																							
M geometry with positive design for light to medium machining.																																							
ADMX 11T316SR-M	**8215**	.063	■	886	.0059	.157	◪	525	.0055	.157	■	837	.0059	.157	–	–	–				◪	213	.0047	.126	–	–	–	6753388
	M6330	.063	■	755	.0059	.157	■	541	.0055	.157		–	–	–	–	–	–				◪	213	.0047	.126	–	–	–	7601278
	M8310	.063	■	968	.0059	.157	◪	492	.0055	.157	■	919	.0059	.157	–	–	–				–	–	–	–	–	–	6922520
	M8330	.063	■	886	.0059	.157	■	525	.0055	.157	■	837	.0059	.157	–	–	–				◪	213	.0047	.126	–	–	–	7447811
	M8340	.063	■	787	.0059	.157	■	459	.0055	.157	◪	738	.0059	.157	–	–	–				◪	197	.0047	.126	–	–	–	6800789
ADMX 11T320SR-M	**M6330**	.079	■	787	.0059	.157	■	558	.0055	.157		–	–	–	–	–	–				◪	230	.0047	.126	–	–	–	7601279
	M8330	.079	■	919	.0059	.157	■	541	.0055	.157	■	869	.0059	.157	–	–	–				◪	230	.0047	.126	–	–	–	7447812
	M8340	.079	■	837	.0059	.157	■	492	.0055	.157	◪	787	.0059	.157	–	–	–				◪	197	.0047	.126	–	–	–	6800770
ADMX 11T325SR-M	**M6330**	.098	■	787	.0059	.157	■	558	.0055	.157		–	–	–	–	–	–				◪	230	.0047	.126	–	–	–	7601330
	M8340	.098	■	837	.0059	.157	■	492	.0055	.157	◪	787	.0059	.157	–	–	–				◪	197	.0047	.126	–	–	–	6800772
ADMX 11T330SR-M	**M6330**	.118	■	787	.0059	.157	■	558	.0055	.157		–	–	–	–	–	–				◪	230	.0047	.126	–	–	–	7601331
	M8330	.118	■	919	.0059	.157	■	541	.0055	.157	■	869	.0059	.157	–	–	–				◪	230	.0047	.126	–	–	–	7447814
	M8340	.118	■	837	.0059	.157	■	492	.0055	.157	◪	787	.0059	.157	–	–	–				◪	197	.0047	.126	–	–	–	6800774
																																							
R geometry with positive design for machining conditions in less stable conditions.																																							
ADMX 11T308PR-R	**8215**	.031	■	755	.0071	.157	◪	443	.0063	.157	■	705	.0071	.157	–	–	–				◪	180	.0063	.126	◪	148	.0047	.028	6753385
	M5315	.031	◪	1017	.0071	.157		–	–	–	■	951	.0071	.157	–	–	–				–	–	–	–	◪	197	.0051	.028	6754621
	M8310	.031	■	820	.0071	.157	◪	410	.0063	.157	■	771	.0071	.157	–	–	–				–	–	–	–	◪	164	.0047	.028	6922518
	M8330	.031	■	755	.0071	.157	◪	443	.0063	.157	■	705	.0071	.157	–	–	–				◪	180	.0063	.126	◪	148	.0047	.028	7447805
	M8340	.031	■	689	.0071	.157	◪	410	.0063	.157	◪	640	.0071	.157	–	–	–				◪	164	.0063	.126	–	–	–	6800786
	M9315	.031	■	1017	.0071	.157		–	–	–	■	951	.0071	.157	–	–	–				–	–	–	◪	197	.0051	.028	6754549
	M9325	.031	■	951	.0071	.157		–	–	–	■	902	.0071	.157	–	–	–				–	–	–	◪	180	.0051	.028	6754539
ADMX 11T316PR-R	**8215**	.063	■	837	.0071	.157	◪	492	.0063	.157	■	787	.0071	.157	–	–	–				◪	197	.0063	.126	◪	164	.0047	.028	6800775
	M8330	.063	■	837	.0071	.157	◪	492	.0063	.157	■	787	.0071	.157	–	–	–				◪	197	.0063	.126	◪	164	.0047	.028	7447810
	M9325	.063	■	1050	.0071	.157		–	–	–	■	984	.0071	.157	–	–	–				–	–	–	◪	197	.0047	.028	6800778
																																							
MF geometry with highly positive design for light to finish machining.																																							
ADMX 11T304SR-MF	**M6330**	.016	■	705	.0031	.098	■	492	.0028	.098		–	–	–	–	–	–				■	197	.0024	.079	–	–	–	6925505
	M8340	.016	■	722	.0031	.098	■	427	.0028	.098		–	–	–	–	–	–				■	180	.0024	.079	–	–	–	6925538
ADMX 11T308SR-MF	**M6330**	.031	■	837	.0031	.098	■	591	.0028	.098		–	–	–	–	–	–				■	246	.0024	.079	–	–	–	6925506
	M8340	.031	■	869	.0031	.098	■	509	.0028	.098		–	–	–	–	–	–				■	213	.0024	.079	–	–	–	6925539
																																							
MM geometry with highly positive design for light to medium machining.																																							
ADMX 11T304SR-MM	**M6330**	.016	■	607	.0055	.098	■	427	.0051	.098		–	–	–	–	–	–				■	180	.0043	.079	–	–	–	6925507
	M8340	.016	■	640	.0055	.098	■	377	.0051	.098		–	–	–	–	–	–				■	148	.0043	.079	–	–	–	6925540
ADMX 11T308SR-MM	**M6330**	.031	■	738	.0055	.098	■	509	.0051	.098		–	–	–	–	–	–				■	213	.0043	.079	–	–	–	6925508
	M8340	.031	■	771	.0055	.098	■	459	.0051	.098		–	–	–	–	–	–				■	180	.0043	.079	–	–	–	6925541
	M8345	.031	■	623	.0055	.098	■	361	.0051	.098		–	–	–	–	–	–				■	148	.0043	.079	–	–	–	7051437
	M9340	.031	■	984	.0055	.098	■	591	.0051	.098		–	–	–	–	–	–				■	246	.0043	.079	–	–	–	7051465
ADMX 11T312SR-MM	**M6330**	.047	■	771	.0055	.098	■	541	.0051	.098		–	–	–	–	–	–				■	230	.0043	.079	–	–	–	6925509
	M8340	.047	■	804	.0055	.098	■	476	.0051	.098		–	–	–	–	–	–				■	197	.0043	.079	–	–	–	6925542

ADEX 11-HF

	W1	D1	L	S
	(inch)	(inch)	(inch)	(inch)
11T3	.254	.114	.420	.150

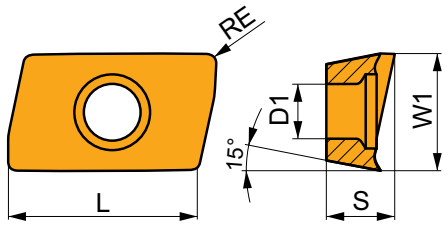


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
			HFC S																		
			HF geometry with highly positive design for high feed machining.																		
ADEX 11T308SR-HF	**8215**	.031	■ 705	.0268	.016	◪ 410	.024	.016	–	–	–	–	–	–	–	–	–	–	–	–	6800779
	M6330	.031	■ 607	.0268	.016	◪ 427	.024	.016	–	–	–	–	–	–	–	–	–	–	–	–	7601275
	M8310	.031	■ 722	.0268	.016	◪ 361	.0205	.016	–	–	–	–	–	–	–	–	–	–	–	–	6922512
	M8330	.031	■ 705	.0268	.016	◪ 410	.024	.016	–	–	–	–	–	–	–	–	–	–	–	–	7447737
	M8340	.031	■ 656	.0268	.016	◪ 394	.024	.016	–	–	–	–	–	–	–	–	–	–	–	–	6800781
	M9340	.031	■ 722	.0268	.016	◪ 427	.024	.016	–	–	–	–	–	–	–	–	–	–	–	–	7048985
			HFC S																		
			HF2 geometry with positive design for high feed machining.																		
ADEX 11T308SR-HF2	**M8310**	.031	■ 722	.0268	.016	◪ 361	.024	.016	◪ 673	.0268	.016	–	–	–	–	–	–	◪ 131	.0189	.012	7056741
	M8330	.031	■ 705	.0268	.016	◪ 410	.024	.016	◪ 656	.0268	.016	–	–	–	◪ 164	.0189	.012	◪ 131	.0189	.012	7447738
	M8340	.031	■ 656	.0268	.016	◪ 394	.024	.016	◪ 623	.0268	.016	–	–	–	◪ 164	.0189	.012	–	–	–	7056745
	M9325	.031	■ 820	.0268	.016	–	–	–	◪ 771	.0268	.016	–	–	–	–	–	–	◪ 164	.0189	.012	7056743

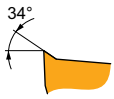
ADEX 11-FA

	W1	D1	L	S
	(inch)	(inch)	(inch)	(inch)
11T3	.254	.114	.382	.154



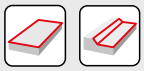
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
ADEX 11T304FR-FA	**HF7**	.016	–	–	–	–	–	–	–	–	–	■ 689	.0118	.197	–	–	–	–	–	–	6753137
	M0315	.016	–	–	–	–	–	–	–	–	–	■ 1575	.0118	.197	–	–	–	–	–	–	6800782
ADEX 11T308FR-FA	**HF7**	.031	–	–	–	–	–	–	–	–	–	■ 787	.0118	.197	–	–	–	–	–	–	6753138
	M0315	.031	–	–	–	–	–	–	–	–	–	■ 1870	.0118	.197	–	–	–	–	–	–	6800783
ADEX 11T312FR-FA	**HF7**	.047	–	–	–	–	–	–	–	–	–	■ 837	.0118	.197	–	–	–	–	–	–	7155957
ADEX 11T316FR-FA	**HF7**	.063	–	–	–	–	–	–	–	–	–	■ 886	.0071	.197	–	–	–	–	–	–	6754620



F

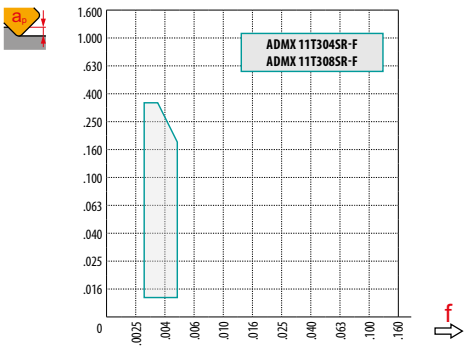
FA geometry with highly positive design for fine-finish to medium machining.

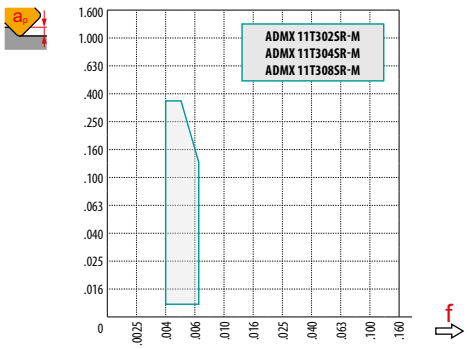


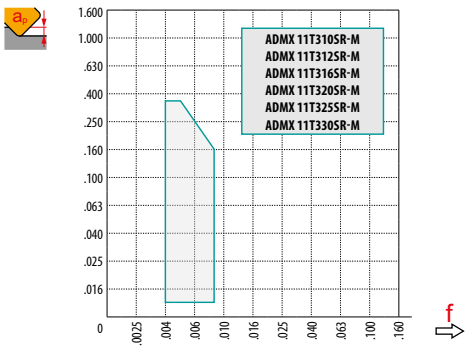
a_e/DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ X.f	2.20	1.60	1.35	1.20	1.10	.95	.85	.75	.85	.95	1.00	1.00	1.00	1.00
⇨ X.f	.64	.64	.64	.64	.64	.65	.65	.67	.68	.71	.72	.74	.79	1.00

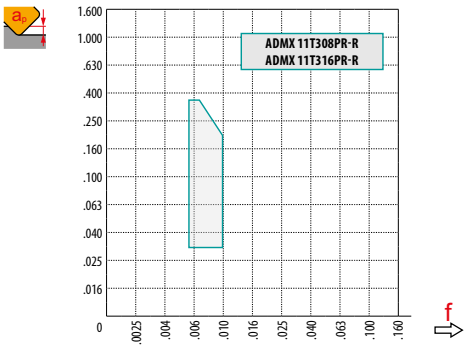
	ADMX 11-F		ADMX 11-M									ADMX 11-R		ADMX 11-MF	
RE (mm)	.4	.8	.2	.4	.8	1.0	1.2	1.6	2.0	2.5	3.0	.8	1.6	.4	.8
BS (inch)	.074	.058	.082	.074	.058	.050	.043	.027	.063	.044	.026	.058	.027	.074	.058

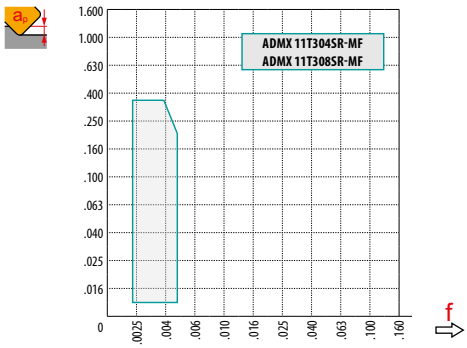
	ADMX 11-MM				ADEX 11-HF	ADEX 11-HF2	ADEX 11-FA			
RE (mm)	.4	.8	1.2	1.6	.8	.8	.4	.8	1.2	1.6
BS (inch)	.074	.058	.043	.024	.007	.007	.070	.055	.039	.024

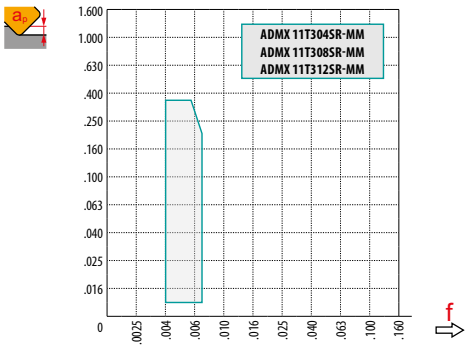


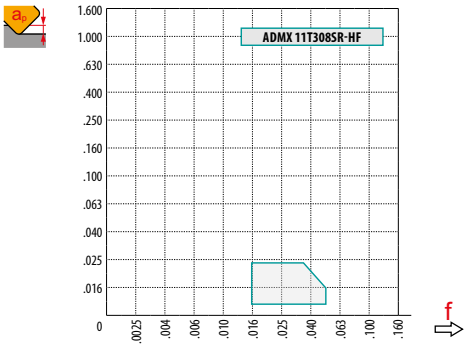


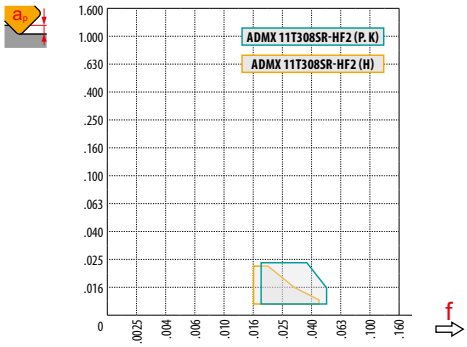


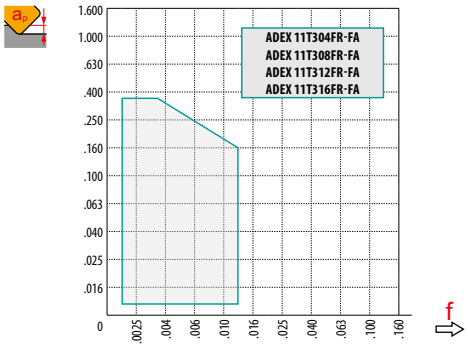












(inch)

max

.177

(inch)

a_p	.039	.197	.354
1 f	.008	.005	.004

(inch)

DC	RPMX	APMX/I
.625	13.5°	.354/1.575
.750	9.0°	.354/2.323
1.000	6.0°	.354/3.425
1.250	5.3°	.354/3.898
1.500	3.8°	.256/4.000
2.000	2.8°	.185/4.000
2.500	1.8°	.118/4.000
3.000	1.6°	.102/4.000

HFC

DC	RPMX *	RPMX **	APMX/I
.625	4.1°	5.7°	.024/.315
.750	2.8°	4.3°	.024/.591
1.000	2.3°	6.7°	.024/1.024
1.250	1.3°	4.3°	.024/1.929
1.500	.7°	2.9°	.024/4.000
2.000	.3°	2.1°	.024/4.000
2.500	.1°	–	–
3.000	–	–	–

* HFC milling
** Conventional milling

(inch)

DC	DMIN	DMAX	SMAX DMIN	SMAX DMAX
.625	1.063	1.260	.327	.354
.750	1.378	1.575	.295	.354
1.000	1.772	1.969	.256	.295
1.250	2.323	2.520	.157	.177
1.500	2.953	3.150	.059	.079
2.000	–	–	–	–

HFC

DC	DMIN	DMAX	SMAX DMIN	SMAX DMAX
.625	.827	1.260	.024	.024
.750	1.142	1.575	.024	.024
1.000	1.535	1.969	.024	.024
1.250	2.087	2.520	.024	.024
1.500	2.697	3.150	.024	.024
2.000	3.484	3.937	.024	.024

(inch)

a_p

.067

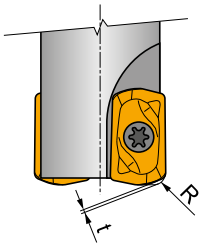
(inch)

DC	µm	3	5	10	15	20	30	40	50	60	80	100
.630		.017	.022	.031	.039	.045	.055	.063	.070	.077	.089	.100
.709		.018	.024	.033	.041	.047	.058	.067	.075	.082	.094	.106
.787		.019	.025	.035	.043	.050	.061	.070	.079	.086	.100	.111
.787		.019	.025	.035	.043	.050	.061	.070	.079	.086	.100	.111
.984	FE	.022	.028	.039	.048	.056	.068	.079	.088	.096	.111	.124
1.260		.024	.031	.045	.055	.063	.077	.089	.100	.109	.126	.141
1.575		.027	.035	.050	.061	.070	.086	.100	.111	.122	.141	.157
1.969		.031	.039	.056	.068	.079	.096	.111	.124	.136	.157	.176
2.480		.034	.044	.062	.077	.088	.108	.125	.140	.153	.177	.198
3.150		.039	.050	.070	.086	.100	.122	.141	.157	.173	.199	.223

RE	µm	3	5	10	15	20	30	40	50	60	80	100
.039		.006	.008	.011	.014	.016	.019	.022	.025	.027	.031	.035
.047		.007	.009	.012	.015	.017	.021	.024	.027	.030	.034	.039
.063	FE	.008	.010	.014	.017	.020	.024	.028	.031	.034	.040	.045
.079		.009	.011	.016	.019	.022	.027	.031	.035	.039	.045	.050
.098		.010	.012	.018	.022	.025	.031	.035	.039	.043	.050	.056
.118		.011	.014	.019	.024	.027	.033	.039	.043	.047	.055	.061

(inch)

ADMX/ADEX 11	R
ADMX 11T320SR-M	.039
ADMX 11T325SR-M	.071
ADMX 11T330SR-M	.071
ADEX 11T308SR-HF	.055
ADEX 11T308SR-HF2	.055



ADEX 11	R	t
ADEX 11T308SR-HF	.056	.014
ADEX 11T308SR-HF2	.053	.015

SAD16E

P M K N S H

PRAMET

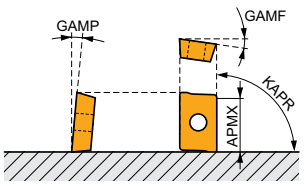
S

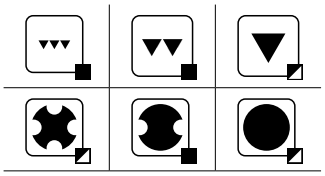
FORCE AD16 Square Shoulder Mill with Internal Coolant

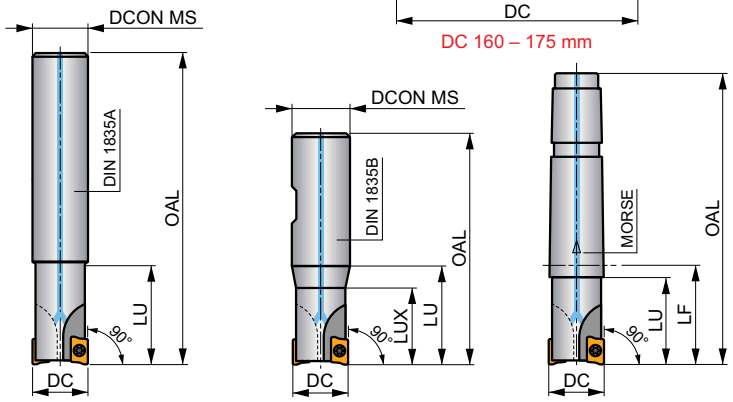
90° end and shell mills utilizing positive AD.. 16 style insert with APMX of 13 mm. Suitable for face, shoulder, slot, helical, trochoidal, ramping and plunge milling. Available in cylindrical, Weldon, morse taper, modular and arbor (with differential tooth pitch) style. Body treated for longer tool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

FORCE AD

KAPR	90°
APMX	13.0 mm







h_m	0.08 - 0.22 mm
h_m	0.06 - 0.18 mm

	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.		lbs				MID
	25A2R033A25-SAD16E-C	25	165	25	–	–	33	–	–	–	–	–	–	-13	5	2	–	18700	✓	1.15	GI165	SQ030	–	6760181
DIN 1835A	**25A2R038A25-SAD16E-C**	25	200	25	–	–	38	–	–	–	–	–	–	-13	5	2	–	18700	✓	1.46	GI165	SQ030	–	6800793
	32A3R033A32-SAD16E-C	32	195	32	–	–	33	–	–	–	–	–	–	-12	7	3	–	16500	✓	2.27	GI165	SQ030	–	6760186
	32A3R048A32-SAD16E-C	32	250	32	–	–	48	–	–	–	–	–	–	-12	7	3	–	16500	✓	2.98	GI165	SQ030	–	6800794
	25A2R042B25-SAD16E-C	25	98	25	–	–	–	42	–	–	–	–	–	-13	5	2	–	18700	✓	.64	GI165	SQ030	–	6760169
DIN 1835B	**32A3R040B32-SAD16E-C**	32	100	32	–	–	–	40	–	–	–	–	–	-12	7	3	–	16500	✓	1.13	GI165	SQ030	–	6760170
	40A3R050B32-SAD16E-C	40	110	32	–	–	–	50	–	–	–	–	–	-8.2	10.5	3	–	14800	✓	1.13	GI165	SQ030	–	6760171
	40A4R050B32-SAD16E-C	40	110	32	–	–	–	50	–	–	–	–	–	-8.2	10.5	4	–	14800	✓	1.42	GI165	SQ030	–	6760172
	25A2R043E03-SAD16E-C	25	98	–	–	–	38	–	43	–	3	–	–	-13	5	2	–	18600	✓	.68	GI165	SQ030	–	6758505
DIN 228A	**32A3R043E03-SAD16E-C**	32	100	–	–	–	38	–	43	–	3	–	–	-12	7	3	–	16500	✓	.73	GI165	SQ030	–	6758506
	40A3R054E04-SAD16E-C	40	110	–	–	–	48	–	54	–	4	–	–	-8.2	10.5	3	–	14700	✓	1.62	GI165	SQ030	–	6758507
	40A4R054E04-SAD16E-C	40	110	–	–	–	48	–	54	–	4	–	–	-8.2	10.5	4	–	14700	✓	1.54	GI165	SQ030	–	6758508
MODULAR	**32A3R043M16-SAD16E-C**	32	66	17	–	–	–	–	43	M16	–	–	–	-12	7	3	–	–	✓	.45	GI165	SQ030	–	6760167
	40A4R043M16-SAD16E-C	40	66	17	–	–	–	–	43	M16	–	–	–	-8.2	10.5	4	–	–	✓	.58	GI165	SQ030	–	6760168
	40A04R-S90AD16E-C	40	–	16	14	–	–	–	40	–	–	8.4	5.6	-8.2	10.5	4	–	14700	✓	.47	GI165	SQ032	–	6761295
	50A03R-S90AD16E-C	50	–	22	18	–	–	–	40	–	–	10.4	6.3	-7	11	3	–	13200	✓	.94	GI165	SQ033	–	6760174
	50A05R-S90AD16E-C	50	–	22	18	–	–	–	40	–	–	10.4	6.3	-7	11	5	✓	13200	✓	.88	GI165	SQ033	–	6760173
	63A04R-S90AD16E-C	63	–	22	18	–	–	–	40	–	–	10.4	6.3	-6	12	4	✓	11800	✓	1.34	GI165	SQ033	–	6760177
ISO 6462 DIN 8030	**63A06R-S90AD16E-C**	63	–	22	18	–	–	–	40	–	–	10.4	6.3	-6	12	6	✓	11800	✓	1.30	GI165	SQ033	–	6760176
	80A05R-S90AD16E-C	80	–	27	38	–	–	–	50	–	–	12.4	7	-5	12	5	✓	10400	✓	2.42	GI165	SQ031	AC001	6760178
	80A07R-S90AD16E-C	80	–	27	38	–	–	–	50	–	–	12.4	7	-5	13	7	✓	10400	✓	2.14	GI165	SQ031	AC001	6760175
	100A06R-S90AD16E-C	100	–	32	45	–	–	–	50	–	–	14.4	8	-4	12	6	✓	9300	✓	4.08	GI165	SQ031	AC002	6760187
	100A08R-S90AD16E-C	100	–	32	45	–	–	–	50	–	–	14.4	8	-4	12	8	✓	9300	✓	4.16	GI165	SQ031	AC002	6760188

	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.		lbs				MID
ISO 6462 DIN 8030	**125A09R-S90AD16E-C**	125	–	40	56	–	–	–	63	–	–	16.4	9	-3.8	12	9	✓	8400	✓	8.05	GI165	SQ031	AC003	6760189
	140A08R-S90AD16E-C	140	–	40	56	–	–	–	63	–	–	16.4	9	-3.8	12	8	✓	7900	✓	8.95	GI165	SQ031	–	6800790
	160C10R-S90AD16E-C	160	–	40	–	66.7	–	–	63	–	–	16.4	9.2	-3.8	10	10	✓	7300	✓	13.32	GI165	SQ036	–	7155929
	175C10R-S90AD16E-C	175	–	40	–	66.7	–	–	63	–	–	16.4	9.2	-3.8	12	10	✓	7000	✓	15.13	GI165	SQ036	–	7155950

GI165	ADMX 1606..	ADEX 1606..

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

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

ISAD16E

P M K N S H

PRAMET

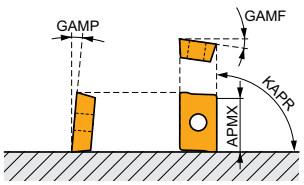
S

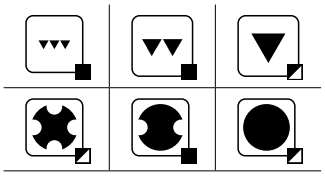
FORCE AD16 Square Shoulder Mill with Internal Coolant

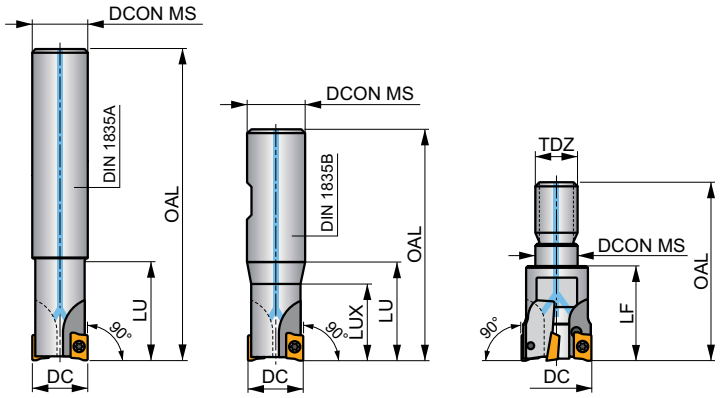
90° end and shell mills utilizing positive AD.. 16 style insert with APMX of .512 inches. Suitable for face, shoulder, slot, helical, trochoidal, ramping and plunge milling. Available in cylindrical, Weldon, modular and arbor (with differential tooth pitch) style. Body treated for longer tool life.

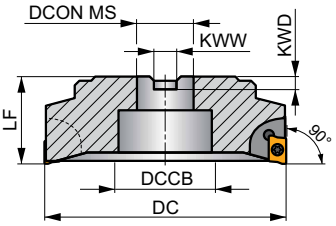
FORCE AD

KAPR	90°
APMX	.512 in

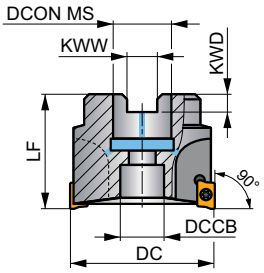








DC 6 in



DC 1.5 – 5 in

h_m	.003 - .009 in
h_m	.002 - .007 in

	Product	DC (inch)	OAL (inch)	DCON MS (inch)	DCCB (inch)	LU (inch)	LUX (inch)	LF (inch)	TDZ	KWW (inch)	KWD (inch)	GAMF (°)	GAMP (°)			max.		lbs			MID
DIN 1835A	100A2R130C100-ISAD16E-C	1.000	6.496	1.000	–	1.300	–	–	–	–	–	-13	5	2	–	18700	✓	1.10	GI165	SQ030	6798445
	125A3R130C125-ISAD16E-C	1.250	7.677	1.250	–	1.300	–	–	–	–	–	-12	7	3	–	18700	✓	1.98	GI165	SQ030	6798446
	100A2R128W100-ISAD16E-C	1.000	3.780	1.000	–	–	1.28	–	–	–	–	-13	5	2	–	18700	✓	.66	GI165	SQ030	6798444
DIN 1835B	125A3R150W125-ISAD16E-C	1.250	4.000	1.250	–	–	1.5	–	–	–	–	-12	7	3	–	16500	✓	1.10	GI165	SQ030	6798447
	150A3R160W125-ISAD16E-C	1.500	4.350	1.250	–	–	1.6	–	–	–	–	-8.2	10.5	3	–	14800	✓	1.32	GI165	SQ030	6798480
	150A4R160W125-ISAD16E-C	1.500	4.350	1.250	–	–	1.6	–	–	–	–	-8.2	10.5	4	–	14800	✓	1.32	GI165	SQ030	6798481
MODULAR	125A3R169M16-ISAD16E-C	1.250	2.596	.669	–	–	–	1.690	M16	–	–	-12	7	3	–	–	✓	.46	GI165	SQ030	6798448
	150A4R169M16-ISAD16E-C	1.500	2.596	.669	–	–	–	1.690	M16	–	–	-8.2	10.5	4	–	–	✓	.52	GI165	SQ030	6798482
	150A04R-IS90AD16E-C	1.500	–	.500	.433	–	–	1.575	–	.258	.165	-8.2	10.5	4	–	14700	✓	.62	GI165	SQ032	6798449
	200A03R-IS90AD16E-C	2.000	–	.750	.630	–	–	1.575	–	.321	.193	-7	11	3	–	13200	✓	.66	GI165	SQ033	6798483
	200A05R-IS90AD16E-C	2.000	–	.750	.630	–	–	1.575	–	.321	.193	-7	11	5	✓	13200	✓	.66	GI165	SQ033	6798484
	250A04R-IS90AD16E-C	2.500	–	.750	.630	–	–	1.575	–	.321	.193	-6	12	4	✓	11800	✓	1.10	GI165	SQ033	6798485
ISO 6462 DIN 8030	250A06R-IS90AD16E-C	2.500	–	.750	.630	–	–	1.575	–	.321	.193	-6	12	6	✓	11800	✓	1.10	GI165	SQ033	6798486
	300A05R-IS90AD16E-C	3.000	–	1.000	.827	–	–	1.969	–	.382	.224	-5	12	5	✓	10400	✓	2.21	GI165	SQ054	6798487
	300A07R-IS90AD16E-C	3.000	–	1.000	.827	–	–	1.969	–	.382	.224	-5	13	7	✓	10400	✓	2.21	GI165	SQ054	6798488
	400A06R-IS90AD16E-C	4.000	–	1.500	1.260	–	–	1.969	–	.634	.382	-4	12	6	✓	9300	✓	4.89	GI165	SQ055	6798489
	400A08R-IS90AD16E-C	4.000	–	1.500	1.260	–	–	1.969	–	.634	.382	-4	12	8	✓	9300	✓	3.75	GI165	SQ055	6798490
	500A09R-IS90AD16E-C	5.000	–	1.500	1.260	–	–	2.480	–	.634	.382	-3.8	12	9	✓	8400	✓	7.72	GI165	SQ055	6798491
	600B10R-IS90AD16E	6.000	–	2.000	3.465	–	–	2.480	–	.756	.445	-3.8	10	10	✓	7300	✓	1.81	GI165	SQ031	6798492

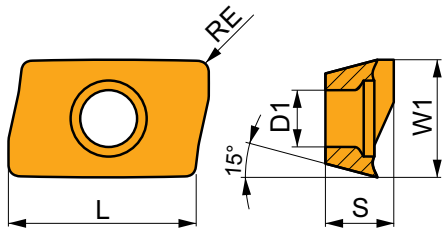
GI165	ADMX 1606..	ADEX 1606..

		Nm						
SQ030	US 4008-T15P	3.5	M 4	.315	–	–	Flag T15P	–
SQ031	US 4011-T15P	3.5	M 4	.417	D-T08P/T15P	FG-15	–	–
SQ032	US 4008-T15P	3.5	M 4	.315	D-T08P/T15P	FG-15	–	HS 0830C
SQ033	US 4011-T15P	3.5	M 4	.417	D-T08P/T15P	FG-15	–	HS 1030C
SQ054	US 4011-T15P	3.5	M 4	.417	D-T08P/T15P	FG-15	–	HS 050125
SQ055	US 4011-T15P	3.5	M 4	.417	D-T08P/T15P	FG-15	–	HS 075125

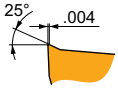
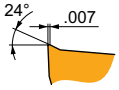
ADMX 16

PRAMET

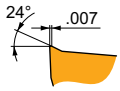
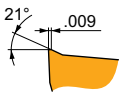
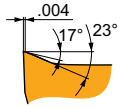
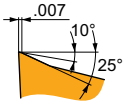
	W1	D1	L	S
	(inch)	(inch)	(inch)	(inch)
1606	.392	.177	.630	.246



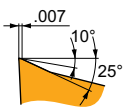
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
																					
			F geometry with highly positive design for light to medium machining.																		
ADMX 160608SR-F	**8215**	.031	951	.0039	.079	558	.0035	.079	902	.0039	.079	2854	.0047	.079	230	.0028	.063	–	–	–	6753390
	M8310	.031	1050	.0039	.079	525	.0035	.079	984	.0039	.079	–	–	–	–	–	–	–	–	–	6922522
	M8330	.031	935	.0039	.079	558	.0035	.079	886	.0039	.079	2805	.0047	.079	230	.0028	.063	–	–	–	7447817
	M8340	.031	853	.0039	.079	509	.0035	.079	804	.0039	.079	–	–	–	213	.0028	.063	–	–	–	6800810
	M9340	.031	1115	.0039	.079	656	.0035	.079	–	–	–	–	–	–	279	.0028	.063	–	–	–	6754592
																					
			M geometry with positive design for light to medium machining.																		
ADMX 160604SR-M	**8215**	.016	623	.0071	.197	361	.0063	.197	591	.0071	.197	–	–	–	148	.0051	.157	–	–	–	6838387
	M8330	.016	623	.0071	.197	361	.0063	.197	591	.0071	.197	–	–	–	148	.0051	.157	–	–	–	7447815
	M8340	.016	558	.0071	.197	328	.0063	.197	525	.0071	.197	–	–	–	131	.0051	.157	–	–	–	6838389
ADMX 160608SR-M	**8215**	.031	738	.0071	.197	443	.0063	.197	689	.0071	.197	–	–	–	180	.0051	.157	–	–	–	6753391
	M5315	.031	1001	.0071	.197	–	–	–	935	.0071	.197	–	–	–	–	–	–	–	–	–	6754624
	M8310	.031	820	.0071	.197	410	.0063	.197	771	.0071	.197	–	–	–	–	–	–	–	–	–	6922523
	M8330	.031	738	.0071	.197	443	.0063	.197	689	.0071	.197	–	–	–	180	.0051	.157	–	–	–	7447818
	M8340	.031	673	.0071	.197	394	.0063	.197	623	.0071	.197	–	–	–	164	.0051	.157	–	–	–	6800811
	M9315	.031	1001	.0071	.197	–	–	–	935	.0071	.197	–	–	–	–	–	–	–	–	–	6754547
	M9325	.031	919	.0071	.197	–	–	–	869	.0071	.197	–	–	–	–	–	–	–	–	–	6754544
	M9340	.031	837	.0071	.197	492	.0063	.197	–	–	–	–	–	–	197	.0051	.157	–	–	–	6754593

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

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
																					
M geometry with positive design for light to medium machining.																					
ADMX 160616SR-M	**8215**	.063	■ 820	.0071	.197	◪ 492	.0063	.197	■ 771	.0071	.197	–	–	–	◪ 197	.0051	.157	–	–	–	6753392
	M8310	.063	■ 902	.0071	.197	◪ 459	.0063	.197	■ 853	.0071	.197	–	–	–	–	–	–	–	–	–	6922524
	M8330	.063	■ 820	.0071	.197	■ 492	.0063	.197	■ 771	.0071	.197	–	–	–	◪ 197	.0051	.157	–	–	–	7447820
	M8340	.063	■ 738	.0071	.197	■ 443	.0063	.197	◪ 689	.0071	.197	–	–	–	◪ 180	.0051	.157	–	–	–	6800812
	M9325	.063	■ 1017	.0071	.197	–	–	–	■ 951	.0071	.197	–	–	–	–	–	–	–	–	–	6754545
ADMX 160620SR-M	**M8330**	.079	■ 869	.0071	.197	■ 509	.0063	.197	■ 820	.0071	.197	–	–	–	◪ 213	.0051	.157	–	–	–	7447821
	M8340	.079	■ 787	.0071	.197	■ 459	.0063	.197	◪ 738	.0071	.197	–	–	–	◪ 197	.0051	.157	–	–	–	6838401
ADMX 160630SR-M	**M8330**	.118	■ 869	.0071	.197	■ 509	.0063	.197	■ 820	.0071	.197	–	–	–	◪ 213	.0051	.157	–	–	–	7447822
	M8340	.118	■ 787	.0071	.197	■ 459	.0063	.197	◪ 738	.0071	.197	–	–	–	◪ 197	.0051	.157	–	–	–	6838403
ADMX 160632SR-M	**M6330**	.126	■ 738	.0071	.197	■ 509	.0063	.197	–	–	–	–	–	–	◪ 213	.0051	.157	–	–	–	7601333
	M8330	.126	■ 869	.0071	.197	■ 509	.0063	.197	■ 820	.0071	.197	–	–	–	◪ 213	.0051	.157	–	–	–	7447823
	M8340	.126	■ 787	.0071	.197	■ 459	.0063	.197	◪ 738	.0071	.197	–	–	–	◪ 197	.0051	.157	–	–	–	6800813
	M9325	.126	■ 1066	.0071	.197	–	–	–	■ 1001	.0071	.197	–	–	–	–	–	–	–	–	–	6754546
ADMX 160640SR-M	**M8330**	.157	■ 869	.0071	.197	■ 509	.0063	.197	■ 820	.0071	.197	–	–	–	◪ 213	.0051	.157	–	–	–	7447824
	M8340	.157	■ 787	.0071	.197	■ 459	.0063	.197	◪ 738	.0071	.197	–	–	–	◪ 197	.0051	.157	–	–	–	6838405
ADMX 160650SR-M	**M8330**	.197	■ 869	.0071	.197	■ 509	.0063	.197	■ 820	.0071	.197	–	–	–	◪ 213	.0051	.157	–	–	–	7447825
	M8340	.197	■ 787	.0071	.197	■ 459	.0063	.197	◪ 738	.0071	.197	–	–	–	◪ 197	.0051	.157	–	–	–	6838407
																					
R geometry with positive design for medium to less stable machining conditions.																					
ADMX 160608PR-R	**8215**	.031	■ 673	.0098	.236	◪ 394	.0091	.236	■ 623	.0098	.236	–	–	–	◪ 164	.0079	.189	◪ 131	.0063	.043	6753389
	M5315	.031	◪ 853	.0098	.236	–	–	–	■ 804	.0098	.236	–	–	–	–	–	–	◪ 164	.0063	.043	6754623
	M8310	.031	■ 722	.0098	.236	◪ 361	.0091	.236	■ 673	.0098	.236	–	–	–	–	–	–	◪ 131	.0063	.043	6922521
	M8330	.031	■ 673	.0098	.236	◪ 394	.0091	.236	■ 623	.0098	.236	–	–	–	◪ 164	.0079	.189	◪ 131	.0063	.043	7447816
	M8340	.031	■ 623	.0098	.236	◪ 361	.0091	.236	◪ 591	.0098	.236	–	–	–	◪ 148	.0079	.189	–	–	–	6800799
	M9315	.031	■ 869	.0098	.236	–	–	–	■ 820	.0098	.236	–	–	–	–	–	–	◪ 164	.0063	.043	6754548
	M9325	.031	■ 820	.0098	.236	–	–	–	■ 771	.0098	.236	–	–	–	–	–	–	◪ 164	.0063	.043	6754543
ADMX 160616PR-R	**M8330**	.063	■ 738	.0098	.236	◪ 443	.0091	.236	■ 689	.0098	.236	–	–	–	◪ 180	.0079	.189	◪ 148	.0063	.043	7447819
	M8340	.063	■ 689	.0098	.236	◪ 410	.0091	.236	◪ 640	.0098	.236	–	–	–	◪ 164	.0079	.189	–	–	–	6838413
	M9315	.063	■ 968	.0098	.236	–	–	–	■ 919	.0098	.236	–	–	–	–	–	–	◪ 180	.0063	.043	6838409
																					
MF geometry with highly positive design for finish machining.																					
ADMX 160608SR-MF	**M6330**	.031	■ 705	.0031	.157	■ 492	.0028	.157	–	–	–	–	–	–	■ 197	.0024	.126	–	–	–	6925520
	M8340	.031	■ 738	.0031	.157	■ 443	.0028	.157	–	–	–	–	–	–	■ 180	.0024	.126	–	–	–	6925543
	M9340	.031	■ 1001	.0031	.157	■ 591	.0028	.157	–	–	–	–	–	–	■ 246	.0024	.126	–	–	–	7051434
																					
MM geometry with highly positive design for light to medium machining.																					
ADMX 160604SR-MM	**M6330**	.016	■ 476	.0071	.157	■ 344	.0063	.157	–	–	–	–	–	–	■ 131	.0055	.126	–	–	–	6925521
	M8340	.016	■ 525	.0071	.157	■ 312	.0063	.157	–	–	–	–	–	–	■ 131	.0055	.126	–	–	–	6925544
ADMX 160608SR-MM	**M6330**	.031	■ 574	.0071	.157	■ 410	.0063	.157	–	–	–	–	–	–	■ 164	.0055	.126	–	–	–	6925522
	M8340	.031	■ 623	.0071	.157	■ 361	.0063	.157	–	–	–	–	–	–	■ 148	.0055	.126	–	–	–	6925545
	M8345	.031	■ 492	.0071	.157	■ 295	.0063	.157	–	–	–	–	–	–	■ 115	.0055	.126	–	–	–	7051439
	M9340	.031	■ 771	.0071	.157	■ 459	.0063	.157	–	–	–	–	–	–	■ 180	.0055	.126	–	–	–	7051468

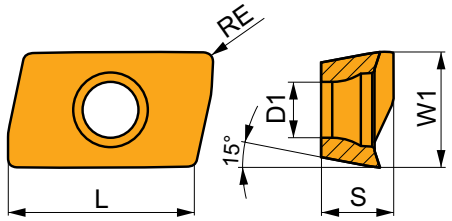
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
																					
MM geometry with highly positive design for light to medium machining.																					
ADMX 160616SR-MM	**M6330**	.063	■ 640	.0071	.157	■ 459	.0063	.157	–	–	–	–	–	–	■ 180	.0055	.126	–	–	–	6925523
	M8340	.063	■ 689	.0071	.157	■ 410	.0063	.157	–	–	–	–	–	–	■ 164	.0055	.126	–	–	–	6925546
	M8345	.063	■ 541	.0071	.157	■ 312	.0063	.157	–	–	–	–	–	–	■ 131	.0055	.126	–	–	–	7051460
	M9340	.063	■ 853	.0071	.157	■ 509	.0063	.157	–	–	–	–	–	–	■ 213	.0055	.126	–	–	–	7051469

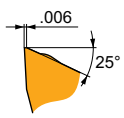
ADEX 16

PRAMET

	W1	D1	L	S
	(inch)	(inch)	(inch)	(inch)
1606	.392	.177	.630	.246

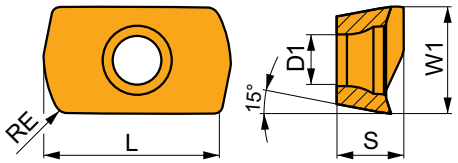


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

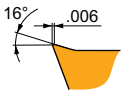
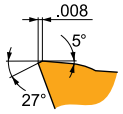
Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
																					
FM geometry with highly positive design for medium machining.																					
ADEX 160608SR-FM	**8215**	.031	■ 853	.0063	.079	◪ 509	.0055	.079	■ 804	.0063	.079	–	–	–	◪ 213	.0043	.063	–	–	–	6753382
	M8330	.031	■ 837	.0063	.079	◪ 492	.0055	.079	■ 787	.0063	.079	–	–	–	◪ 197	.0043	.063	–	–	–	7447739
	M8340	.031	■ 771	.0063	.079	◪ 459	.0055	.079	◪ 722	.0063	.079	–	–	–	◪ 180	.0043	.063	–	–	–	6800797

ADEX 16-HF

	W1	D1	L	S
	(inch)	(inch)	(inch)	(inch)
1606	.392	.177	.630	.231

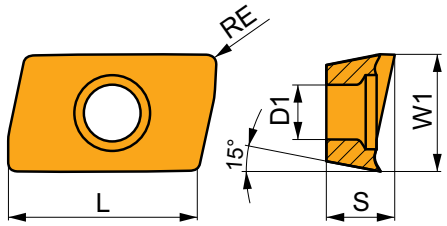


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

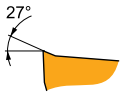
Product		RE	P				M				K				N				S				H				MID
			vc (ft/min)	f (in/tooth)	ap (inch)		vc (ft/min)	f (in/tooth)	ap (inch)		vc (ft/min)	f (in/tooth)	ap (inch)		vc (ft/min)	f (in/tooth)	ap (inch)		vc (ft/min)	f (in/tooth)	ap (inch)		vc (ft/min)	f (in/tooth)	ap (inch)		
		(inch)																									
			HF geometry with highly positive design for high feed machining.																								
ADEX 160612SR-HF	**8215**	.047	■ 640	.0394	.024	◪ 377	.0354	.024		–	–	–		–	–	–		–	–	–		–	–	–		6838414
	M8310	.047	■ 673	.0394	.024	◪ 328	.0303	.024		–	–	–		–	–	–		–	–	–		–	–	–		6922513
	M8330	.047	■ 656	.0394	.024	◪ 394	.0354	.024		–	–	–		–	–	–		–	–	–		–	–	–		7447790
	M8340	.047	■ 607	.0394	.024	◪ 361	.0354	.024		–	–	–		–	–	–		–	–	–		–	–	–		6838416
	M9340	.047	■ 640	.0394	.024	◪ 377	.0354	.024		–	–	–		–	–	–		–	–	–		–	–	–		7048986
			HF2 geometry with positive design for high feed machining.																								
ADEX 160612SR-HF2	**M8310**	.047	■ 673	.0354	.024	◪ 328	.0319	.024		◪ 623	.0354	.024		–	–	–		–	–	–		◪ 131	.0248	.020		7056746
	M8330	.047	■ 673	.0354	.024	◪ 394	.0319	.024		◪ 623	.0354	.024		–	–	–		◪ 164	.0319	.020		◪ 131	.0248	.020		7447791
	M8340	.047	■ 623	.0354	.024	◪ 361	.0319	.024		◪ 591	.0354	.024		–	–	–		◪ 148	.0319	.020		–	–	–		7056750
	M9325	.047	■ 755	.0354	.024	–	–	–		◪ 705	.0354	.024		–	–	–		–	–	–		◪ 148	.0248	.020		7056748

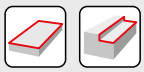
ADEX 16-FA

	W1	D1	L	S
	(inch)	(inch)	(inch)	(inch)
1606	.392	.177	.630	.243



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

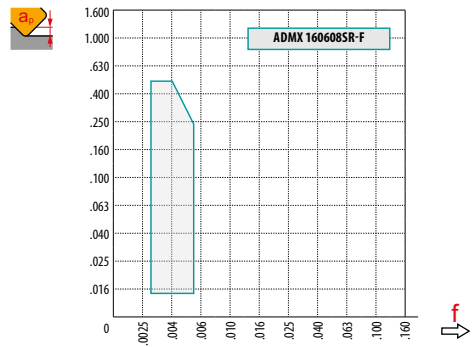
Product		RE	P			M			K			N			S			H			MID
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	
		(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	
																					
FA geometry with highly positive design for fine-finish to medium machining.																					
ADEX 160604FR-FA	**HF7**	.016	–	–	–	–	–	–	–	–	–	640	.011	.236	–	–	–	–	–	–	6838381
	M0315	.016	–	–	–	–	–	–	–	–	–	1575	.011	.236	–	–	–	–	–	–	6838384
ADEX 160608FR-FA	**HF7**	.031	–	–	–	–	–	–	–	–	–	787	.011	.236	–	–	–	–	–	–	6752632
	M0315	.031	–	–	–	–	–	–	–	–	–	1870	.011	.236	–	–	–	–	–	–	6838385
ADEX 160616FR-FA	**HF7**	.063	–	–	–	–	–	–	–	–	–	837	.011	.236	–	–	–	–	–	–	6838382
	M0315	.063	–	–	–	–	–	–	–	–	–	2067	.011	.236	–	–	–	–	–	–	6838386
ADEX 160630FR-FA	**HF7**	.118	–	–	–	–	–	–	–	–	–	886	.011	.236	–	–	–	–	–	–	6838383



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	.95	.85	.75	.85	.95	1.00	1.00	1.00	1.00
⇨ x.f	.64	.64	.64	.64	.64	.65	.65	.67	.68	.71	.72	.74	.79	1.00

	ADMX 16-F	ADEX 16-FM	ADMX 16-M								ADMX 16-R	
RE (mm)	.8	.8	.4	.8	1.6	2.0	3.0	3.2	4.0	5.0	.8	1.6
BS (inch)	.118	.086	.133	.118	.064	.048	.011	.004	.106	.060	.118	.064

	ADMX 16-MF	ADMX 16-MM			ADEX 16-HF	ADEX 16-HF2	ADEX 16-FA			
RE (mm)	.8	.4	.8	1.6	1.2	1.2	.4	.8	1.6	3.0
BS (inch)	.118	.133	.118	.064	.020	.020	.112	.096	.065	.027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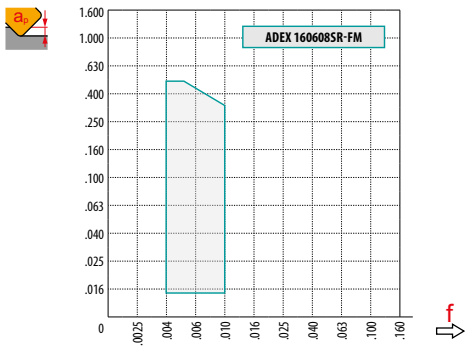
.016
.025
.040
.063
.100
.160
f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.010
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.025
.040
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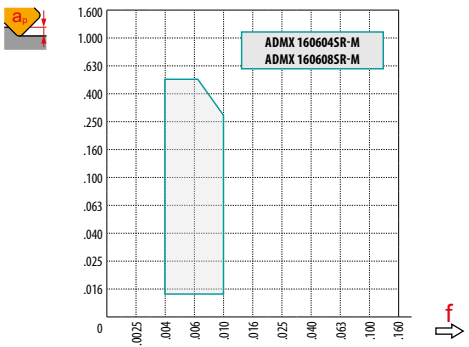
.100
.160
f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ADMX 160608SR-M
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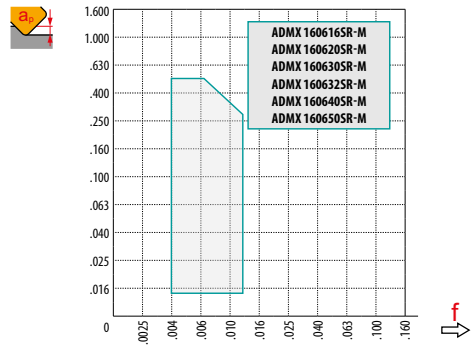
.025
.040
.063
.100
.160
f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ADMX 160620SR-M
ADMX 160630SR-M
ADMX 160632SR-M
ADMX 160640SR-M
ADMX 160650SR-M
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.025
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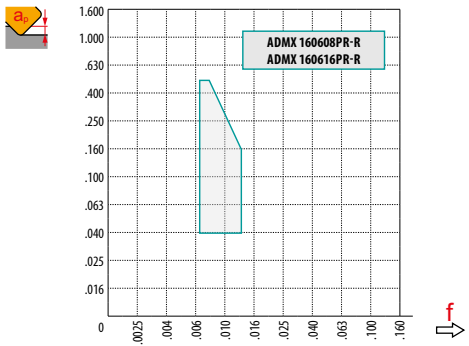
.100
.160
f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ADMX 160616PR-R
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.016
.025
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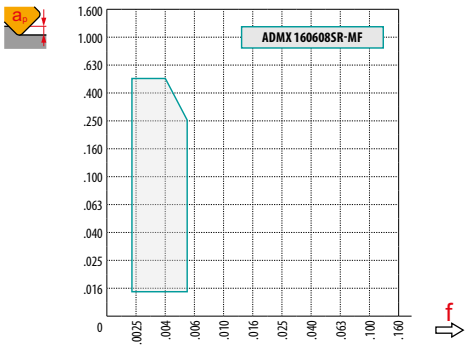
.160
f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.025
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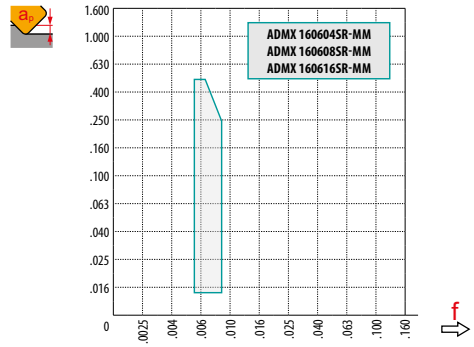
f


ADMX 160604SR-MM
ADMX 160608SR-MM
ADMX 160616SR-MM
1.600
1.000
.630
.400
.250
.160
.100
.063
.040
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.025
.040
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.100
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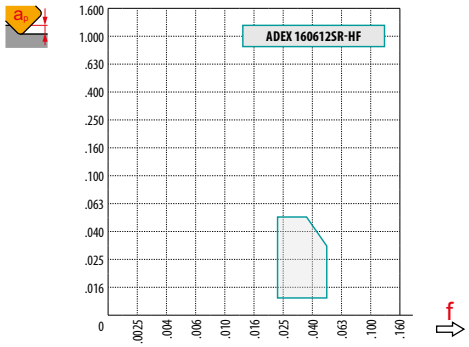
f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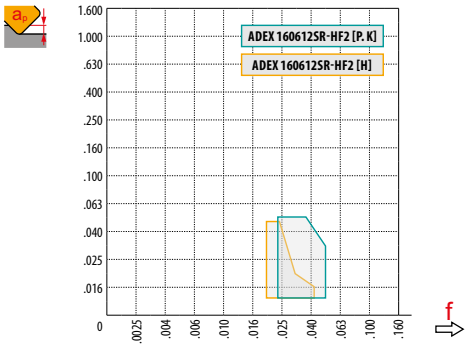
.160
f


ADEX 160612SR-HF2 [P, K]
ADEX 160612SR-HF2 [H]
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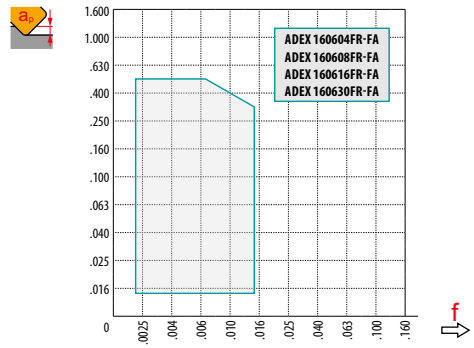
.160
f


ADEX 160604FR-FA
ADEX 160608FR-FA
ADEX 160616FR-FA
ADEX 160630FR-FA
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.016
.025
.040
.063
.100
.160
f

(inch)

max

.295

(inch)

a_p	.039	.236	.512
1 f	.011	.007	.004

(inch)

DC	RPMX	APMX/I
1.000	12.5°	.512/2.362
1.250	7.5°	.512/3.937
1.500	5.0°	.339/3.937
2.000	3.5°	.236/3.937
2.500	2.5°	.165/3.937
3.000	2.0°	.130/3.937

HFC

DC	RPMX *	RPMX **	APMX/I
1.000	4.0°	8.0°	.051/0.748
1.250	2.0°	7.5°	.051/1.496
1.500	1.2°	4.5°	.051/2.559
2.000	0.8°	3.0°	.051/3.937
2.500	0.5°	2.0°	.031/3.937
3.000	.4°	1.5°	.024/3.937

* HFC milling
** Conventional milling

(inch)

DC	DMIN	DMAX	SMAX DMIN	SMAX DMAX
1.000	1.654	1.969	.394	.492
1.250	2.165	2.520	.256	.354
1.500	2.835	3.150	.197	.315
2.000	3.622	3.937	.177	.236
2.500	4.646	4.961	.157	.197
3.000	5.354	6.299	.059	.079

HFC

DC	DMIN	DMAX	SMAX DMIN	SMAX DMAX
1.000	1.654	1.969	.051	.051
1.250	2.165	2.520	.051	.051
1.500	2.835	3.150	.051	.051
2.000	3.622	3.937	.051	.051
2.500	4.646	4.961	.051	.051
3.000	5.354	6.299	.051	.051

(inch)

a_p

.098

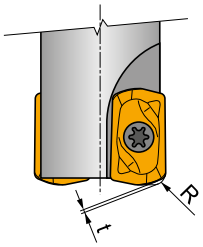
(inch)

DC	µm	3	5	10	15	20	30	40	50	60	80	100
1.000	FE	.022	.028	.039	.048	.056	.068	.079	.088	.096	.111	.124
1.250		.024	.031	.045	.055	.063	.077	.089	.100	.109	.126	.141
1.500		.027	.035	.050	.061	.070	.086	.100	.111	.122	.141	.157
2.000		.031	.039	.056	.068	.079	.096	.111	.124	.136	.157	.176
2.500		.034	.044	.062	.077	.088	.108	.125	.140	.153	.177	.198
3.000		.039	.050	.070	.086	.100	.122	.141	.157	.173	.199	.223

RE	µm	3	5	10	15	20	30	40	50	60	80	100
.063	FE	.008	.010	.014	.017	.020	.024	.028	.031	.034	.040	.045
.079		.009	.011	.016	.019	.022	.027	.031	.035	.039	.045	.050
.118		.011	.014	.019	.024	.027	.033	.039	.043	.047	.055	.061
.126		.011	.014	.020	.024	.028	.034	.040	.045	.049	.056	.063
.157		.012	.016	.022	.027	.031	.039	.045	.050	.055	.063	.070
.197		.014	.018	.025	.031	.035	.043	.050	.056	.061	.070	.079

(inch)

ADMX/ADEX 16	R
ADMX 160630SR-M	.098
ADMX 160632SR-M	.098
ADMX 160640SR-M	.157
ADMX 160650SR-M	.177
ADEX 160612SR-HF	.118
ADEX 160612SR-HF2	.118



ADEX 16	R	t
ADEX 160612SR-HF	.102	.022
ADEX 160612SR-HF2	.098	.022

STN10

P M K N S

PRAMET

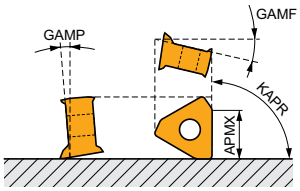
S

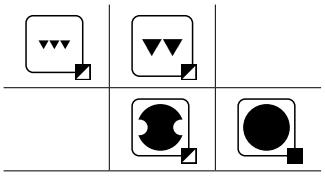
ECON TN10 Square Shoulder Mill with Internal Coolant

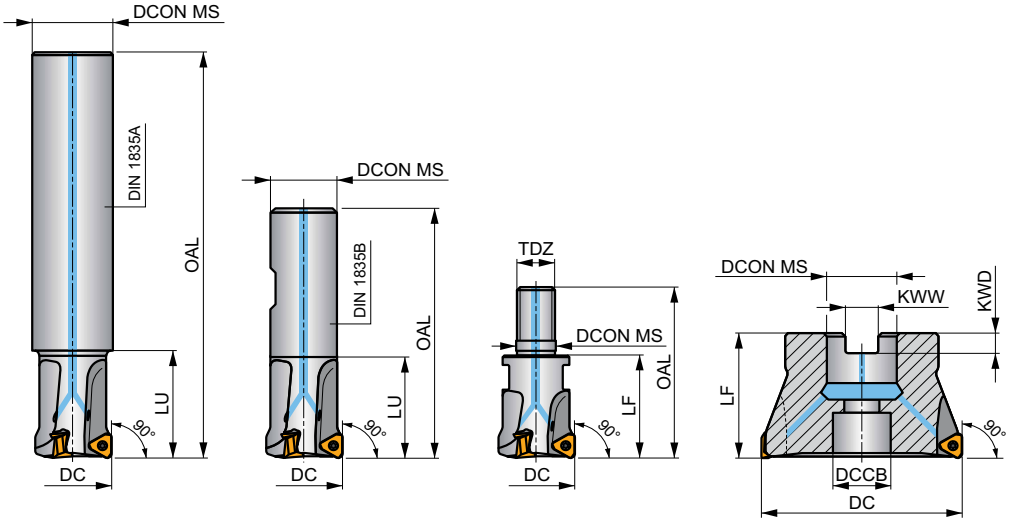
90° end and shell mills utilizing double sided TNGX 10 insert with 6 cutting edges and APMX of 5 mm. Suitable for a wide range of applications. Available in cylindrical, Weldon, modular and arbor style, with or without differential tooth pitch. Body treated for longer tool life.

ECON TN

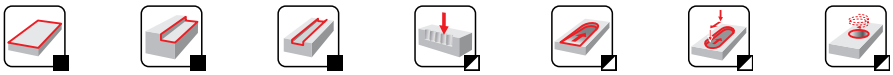
KAPR	90°
APMX	5.0 mm







h_m	0.03 - 0.08 mm
h_m	0.03 - 0.06 mm



	Product	DC (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	LU (mm)	LF (mm)	TDZ	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		lbs				MID
	18A2R050A20-STN10-C	18	180	20	–	50	–	–	–	–	-17.1	-11	2	–	29100	✓	.86	GI292	SQ300	–	7178465
	20A2R029A20-STN10-C	20	150	20	–	29	–	–	–	–	-16.5	-11	2	–	27600	✓	.76	GI292	SQ300	–	7178466
	20A3R029A20-STN10-C	20	150	20	–	29	–	–	–	–	-16.5	-11	3	–	27600	✓	.75	GI292	SQ300	–	7174636
	22A3R050A25-STN10-C	22	180	25	–	50	–	–	–	–	-16.5	-11	3	–	26300	✓	1.27	GI292	SQ300	–	7178467
DIN 1835A	**25A3R034A25-STN10-C**	25	170	25	–	34	–	–	–	–	-16	-11	3	–	24700	✓	1.29	GI292	SQ300	–	7178468
	25A4R034A25-STN10-C	25	170	25	–	34	–	–	–	–	-16	-11	4	✓	24700	✓	1.28	GI292	SQ300	–	7178469
	30A4R050A32-STN10-C	30	200	32	–	50	–	–	–	–	-16	-11	4	✓	22500	✓	2.34	GI292	SQ300	–	7178490
	32A4R037A32-STN10-C	32	195	32	–	37	–	–	–	–	-16	-11	4	✓	21800	✓	2.39	GI292	SQ300	–	7178491
	32A5R037A32-STN10-C	32	195	32	–	37	–	–	–	–	-16	-11	5	✓	21800	✓	2.38	GI292	SQ300	–	7178492
	35A5R080A32-STN10-C	35	200	32	–	80	–	–	–	–	-16	-11	5	✓	20800	✓	2.37	GI292	SQ300	–	7178493
	20A2R032B20-STN10-C	20	90	20	–	32	–	–	–	–	-16.5	-11	2	–	27600	✓	.45	GI292	SQ300	–	7178494
	20A3R032B20-STN10-C	20	90	20	–	32	–	–	–	–	-16.5	-11	3	–	27600	✓	.43	GI292	SQ300	–	7178495
DIN 1835B	**25A3R042B25-STN10-C**	25	100	25	–	42	–	–	–	–	-16	-11	3	–	24700	✓	.68	GI292	SQ300	–	7178496
	25A4R042B25-STN10-C	25	100	25	–	42	–	–	–	–	-16	-11	4	✓	24700	✓	.68	GI292	SQ300	–	7178497
	32A4R042B32-STN10-C	32	110	32	–	42	–	–	–	–	-16	-11	4	✓	21800	✓	1.25	GI292	SQ300	–	7178498
	32A5R042B32-STN10-C	32	110	32	–	42	–	–	–	–	-16	-11	5	✓	21800	✓	1.25	GI292	SQ300	–	7178499
	20A2R026M10-STN10-C	20	45	10.5	–	–	26	M10	–	–	-16.5	-11	2	–	–	✓	.14	GI292	SQ300	–	7178500
	20A3R026M10-STN10-C	20	45	10.5	–	–	26	M10	–	–	-16.5	-11	3	–	–	✓	.14	GI292	SQ300	–	7178501
MODULAR	**25A3R033M12-STN10-C**	25	55	12.5	–	–	33	M12	–	–	-16	-11	3	–	–	✓	.21	GI292	SQ300	–	7178502
	25A4R033M12-STN10-C	25	55	12.5	–	–	33	M12	–	–	-16	-11	4	✓	–	✓	.22	GI292	SQ300	–	7178503
	32A4R043M16-STN10-C	32	66	17	–	–	43	M16	–	–	-16	-11	4	✓	–	✓	.47	GI292	SQ300	–	7178504
	32A5R043M16-STN10-C	32	66	17	–	–	43	M16	–	–	-16	-11	5	✓	–	✓	.47	GI292	SQ300	–	7178505
ISO 6462 DIN 8030	**40A04R-S90TN10-C**	40	–	16	14	–	40	–	8.4	5.6	-15	-11	4	✓	19500	✓	.75	GI292	SQ302	–	7178521

	Product	DC (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	LU (mm)	LF (mm)	TDZ	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		lbs				MID
ISO 6462 DIN 8030	**40A06R-S90TN10-C**	40	–	16	14	–	40	–	8.4	5.6	-15	-11	6	✓	19500	✓	.75	GI292	SQ302	–	7178522
	50A05R-S90TN10-C	50	–	22	18	–	40	–	10.4	6.3	-15	-11	5	✓	17400	✓	1.07	GI292	SQ303	–	7178523
	50A07R-S90TN10-C	50	–	22	18	–	40	–	10.4	6.3	-15	-11	7	✓	17400	✓	1.08	GI292	SQ303	–	7174637
	63A06R-S90TN10-C	63	–	22	18	–	40	–	10.4	6.3	-15	-11	6	✓	15500	✓	1.38	GI292	SQ303	–	7178524
	63A09R-S90TN10-C	63	–	22	18	–	40	–	10.4	6.3	-15	-11	9	✓	15500	✓	1.38	GI292	SQ303	–	7178525
	80A10R-S90TN10-C	80	–	27	38	–	50	–	12.4	7	-15	-11	10	✓	13800	✓	2.43	GI292	SQ301	AC001	7178526

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

ISTN10

P M K N S

PRAMET

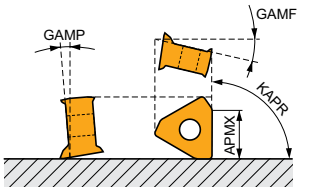
S

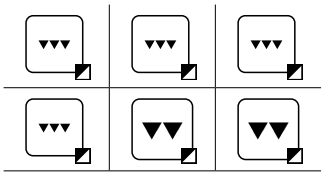
ECON TN10 Square Shoulder Mill with Internal Coolant

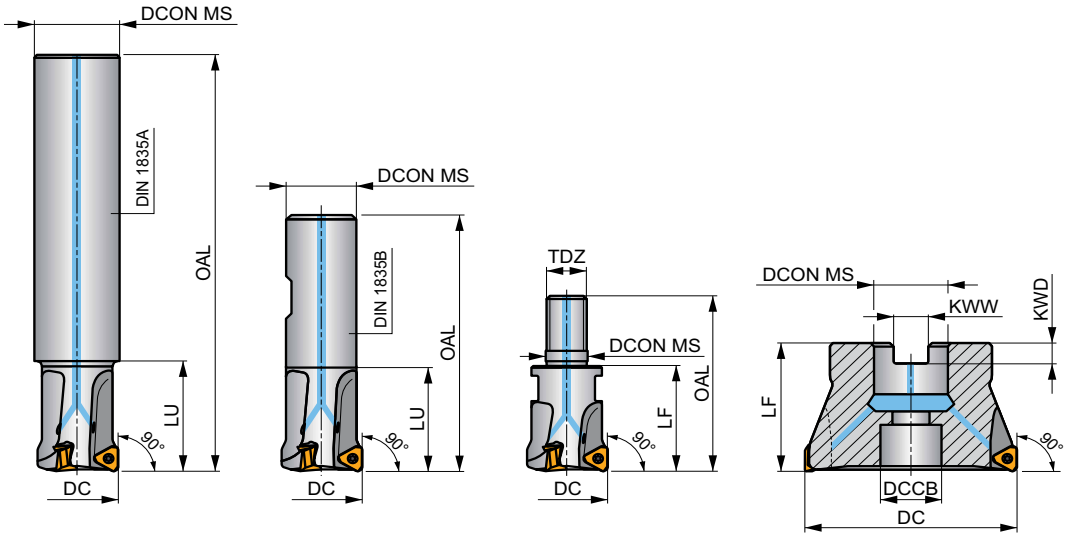
90˚ end and shell mills utilizing double sided TNGX 10 insert with 6 cutting edges and APMX of .197 inches. Suitable for a wide range of applications. Available in cylindrical, Weldon, modular and arbor style, , with or without differential tooth pitch. Body treated for longer tool life.

ECON TN

KAPR	90°
APMX	.197 in







h_m	.001 - .003 in
h_m	.001 - .002 in

	Product	DC (inch)	OAL (inch)	DCON MS (inch)	DCCB (inch)	LU (inch)	LF (inch)	TDZ	KWW (inch)	KWD (inch)	GAMF (°)	GAMP (°)			max.		lbs			MID
	075A2R114C075-ISTN10-C	.750	5.906	.750	–	1.142	–	–	–	–	-11	-16.5	2	–	27600	✓	.64	GI292	SQ300	7276931
	075A3R114C075-ISTN10-C	.750	5.906	.750	–	1.142	–	–	–	–	-11	-16.5	3	–	27600	✓	.62	GI292	SQ300	7276932
DIN 1835A	**100A3R140C100-ISTN10-C**	1.000	6.693	1.000	–	1.339	–	–	–	–	-11	-16	3	–	24700	✓	1.28	GI292	SQ300	7276933
	100A4R140C100-ISTN10-C	1.000	6.693	1.000	–	1.339	–	–	–	–	-11	-16	4	✓	24700	✓	1.34	GI292	SQ300	7276934
	125A4R146C125-ISTN10-C	1.250	7.677	1.250	–	1.457	–	–	–	–	-11	-16	4	✓	21800	✓	2.32	GI292	SQ300	7276935
	125A5R146C125-ISTN10-C	1.250	7.677	1.250	–	1.457	–	–	–	–	-11	-16	5	✓	21800	✓	2.32	GI292	SQ300	7276936
	075A2R125W075-ISTN10-C	.750	3.500	.750	–	1.250	–	–	–	–	-11	-16.5	2	–	27600	✓	.41	GI292	SQ300	7276925
	075A3R125W075-ISTN10-C	.750	3.500	.750	–	1.250	–	–	–	–	-11	-16.5	3	–	27600	✓	.41	GI292	SQ300	7276926
DIN 1835B	**100A3R150W100-ISTN10-C**	1.000	4.000	1.000	–	1.500	–	–	–	–	-11	-16	3	–	24700	✓	.68	GI292	SQ300	7276927
	100A4R150W100-ISTN10-C	1.000	4.000	1.000	–	1.500	–	–	–	–	-11	-16	4	✓	24700	✓	.68	GI292	SQ300	7276928
	125A4R150W125-ISTN10-C	1.250	4.331	1.250	–	1.500	–	–	–	–	-11	-16	4	✓	21800	✓	1.26	GI292	SQ300	7276929
	125A5R150W125-ISTN10-C	1.250	4.331	1.250	–	1.500	–	–	–	–	-11	-16	5	✓	21800	✓	1.19	GI292	SQ300	7276930
	075A2R102M10-ISTN10-C	.750	1.772	.413	–	–	1.024	M10	–	–	-11	-16.5	2	–	–	✓	.09	GI292	SQ300	7276937
	075A3R102M10-ISTN10-C	.750	1.772	.413	–	–	1.024	M10	–	–	-11	-16.5	3	–	–	✓	.09	GI292	SQ300	7276938
MODULAR	**100A3R130M12-ISTN10-C**	1.000	2.165	.492	–	–	1.300	M12	–	–	-11	-16	3	–	–	✓	.18	GI292	SQ300	7276939
	100A4R130M12-ISTN10-C	1.000	2.165	.492	–	–	1.300	M12	–	–	-11	-16	4	✓	–	✓	.18	GI292	SQ300	7276940
	125A4R169M16-ISTN10-C	1.250	2.598	.669	–	–	1.693	M16	–	–	-11	-16	4	✓	–	✓	.44	GI292	SQ300	7276941
	125A5R169M16-ISTN10-C	1.250	2.598	.669	–	–	1.693	M16	–	–	-11	-16	5	✓	–	✓	.44	GI292	SQ300	7276942
	150A04R-IS90TN10-C	1.500	–	.500	.433	–	1.575	–	.258	.165	-11	-15	4	✓	19500	✓	.49	GI292	SQ322	7276848
	150A06R-IS90TN10-C	1.500	–	.500	.433	–	1.575	–	.258	.165	-11	-15	6	✓	19500	✓	.46	GI292	SQ322	7276849
ISO 6462 DIN 8030	**200A05R-IS90TN10-C**	2.000	–	.750	.630	–	1.575	–	.321	.193	-11	-15	5	✓	17400	✓	1.12	GI292	SQ323	7276920
	200A07R-IS90TN10-C	2.000	–	.750	.630	–	1.575	–	.321	.193	-11	-15	7	✓	17400	✓	.91	GI292	SQ323	7276921
	250A06R-IS90TN10-C	2.500	–	.750	.630	–	1.575	–	.321	.193	-11	-15	6	✓	15500	✓	1.15	GI292	SQ323	7276922

	Product	DC (inch)	OAL (inch)	DCON MS (inch)	DCCB (inch)	LU (inch)	LF (inch)	TDZ	KWW (inch)	KWD (inch)	GAMF (°)	GAMP (°)			max.		lbs			MID
ISO 6462 DIN 8030	**250A09R-IS90TN10-C**	2.500	–	.750	.630	–	1.575	–	.321	.193	-11	-15	9	✓	15500	✓	1.38	GI292	SQ323	7276923
	300A10R-IS90TN10-C	3.000	–	1.000	.827	–	1.969	–	.382	.224	-11	-15	10	✓	13800	✓	2.34	GI292	SQ324	7276924

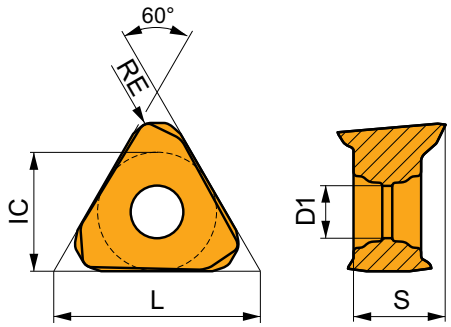
GI292	TNGX 1004..

		Nm						
SQ300	US 52506-T07P	0.8	M 2.5	.236	–	–	Flag T07P	–
SQ322	US 52506-T07P	0.8	M 2.5	.236	D-T07P/T09P	FG-15	–	HS 025100
SQ323	US 52506-T07P	0.8	M 2.5	.236	D-T07P/T09P	FG-15	–	HS 037100
SQ324	US 52506-T07P	0.8	M 2.5	.236	D-T07P/T09P	FG-15	–	HS 050125

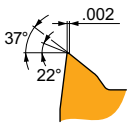
TNGX 10

PRAMET

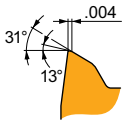
	IC (inch)	D1 (inch)	L (inch)	S (inch)
1004	.236	.110	.409	.185



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

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
																					
			F geometry with highly positive design for light machining.																		
TNGX 100402SR-F	**M8330**	.008	673	.0035	.079	394	.0031	.079	623	.0035	.079	–	–	–	–	–	–	–	–	–	7451058
	M8340	.008	623	.0035	.079	361	.0031	.079	591	.0035	.079	–	–	–	–	–	–	–	–	–	7178538
TNGX 100404SR-F	**8215**	.016	738	.0035	.079	443	.0031	.079	689	.0035	.079	–	–	–	–	–	–	–	–	–	7178552
	M6330	.016	623	.0035	.079	443	.0031	.079	–	–	–	–	–	–	–	–	–	–	–	–	7342921
	M8330	.016	722	.0035	.079	427	.0031	.079	673	.0035	.079	–	–	–	–	–	–	–	–	–	7451059
	M8340	.016	656	.0035	.079	394	.0031	.079	623	.0035	.079	–	–	–	–	–	–	–	–	–	7178551
	M9340	.016	886	.0035	.079	525	.0031	.079	–	–	–	–	–	–	–	–	–	–	–	–	7178550
TNGX 100408SR-F	**8215**	.031	886	.0035	.079	525	.0031	.079	837	.0035	.079	–	–	–	–	–	–	–	–	–	7178557
	M6330	.031	738	.0035	.079	525	.0031	.079	–	–	–	–	–	–	–	–	–	–	–	–	7342922
	M8330	.031	853	.0035	.079	509	.0031	.079	804	.0035	.079	–	–	–	–	–	–	–	–	–	7451101
	M8340	.031	787	.0035	.079	459	.0031	.079	738	.0035	.079	–	–	–	–	–	–	–	–	–	7178554
	M9340	.031	1050	.0035	.079	623	.0031	.079	–	–	–	–	–	–	–	–	–	–	–	–	7178556

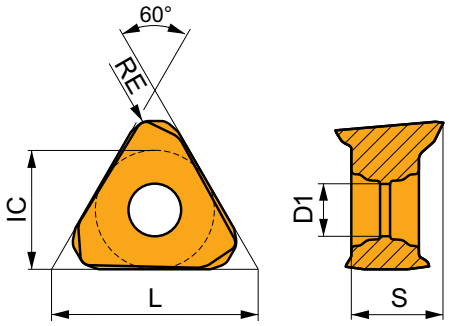
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
																					
M geometry with positive design for light to medium machining.																					
TNGX 100404SR-M	**8215**	.016	673	.0051	.079	394	.0047	.079	623	.0051	.079	–	–	–	164	.0035	.063	–	–	–	7178558
	M6330	.016	574	.0051	.079	410	.0047	.079	–	–	–	–	–	–	164	.0035	.063	–	–	–	7601345
	M8330	.016	673	.0051	.079	394	.0047	.079	623	.0051	.079	–	–	–	164	.0035	.063	–	–	–	7451100
	M8340	.016	607	.0051	.079	361	.0047	.079	574	.0051	.079	–	–	–	148	.0035	.063	–	–	–	7178560
	M9340	.016	787	.0051	.079	459	.0047	.079	–	–	–	–	–	–	197	.0035	.063	–	–	–	7178561
TNGX 100408SR-M	**8215**	.031	804	.0051	.079	476	.0047	.079	755	.0051	.079	–	–	–	197	.0035	.063	–	–	–	7178562
	M6330	.031	689	.0051	.079	492	.0047	.079	–	–	–	–	–	–	197	.0035	.063	–	–	–	7342923
	M8310	.031	886	.0051	.079	443	.0047	.079	837	.0051	.079	–	–	–	–	–	–	–	–	–	7178565
	M8330	.031	804	.0051	.079	476	.0047	.079	755	.0051	.079	–	–	–	197	.0035	.063	–	–	–	7451102
	M8340	.031	722	.0051	.079	427	.0047	.079	673	.0051	.079	–	–	–	180	.0035	.063	–	–	–	7178564
	M8345	.031	591	.0051	.079	344	.0047	.079	–	–	–	–	–	–	148	.0035	.063	–	–	–	7216249
	M9340	.031	935	.0051	.079	558	.0047	.079	–	–	–	–	–	–	230	.0035	.063	–	–	–	7178566
TNGX 100412SR-M	**M8330**	.047	837	.0051	.079	492	.0047	.079	787	.0051	.079	–	–	–	197	.0035	.063	–	–	–	7799438
	M8340	.047	755	.0051	.079	443	.0047	.079	705	.0051	.079	–	–	–	180	.0035	.063	–	–	–	7799439
TNGX 100416SR-M	**M8310**	.063	984	.0051	.079	492	.0047	.079	935	.0051	.079	–	–	–	–	–	–	–	–	–	7799480
	M8330	.063	886	.0051	.079	525	.0047	.079	837	.0051	.079	–	–	–	213	.0035	.063	–	–	–	7799481
	M8340	.063	804	.0051	.079	476	.0047	.079	755	.0051	.079	–	–	–	197	.0035	.063	–	–	–	7799482

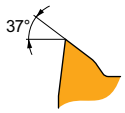
TNGX 10-FA

PRAMET

	IC (inch)	D1 (inch)	L (inch)	S (inch)
1004	.236	.110	.409	.185

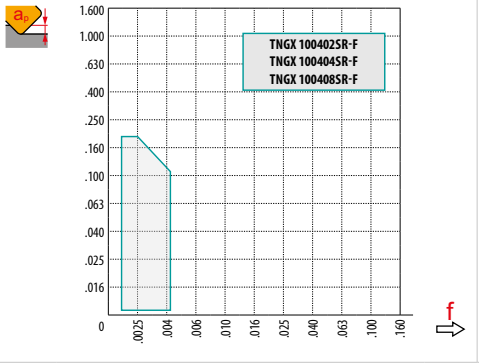


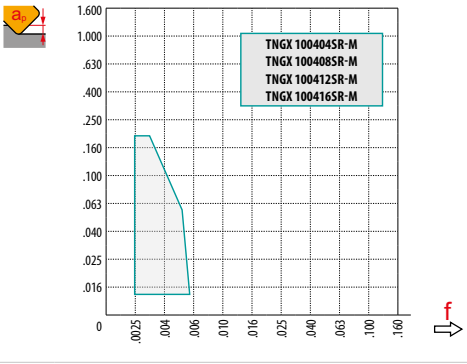
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

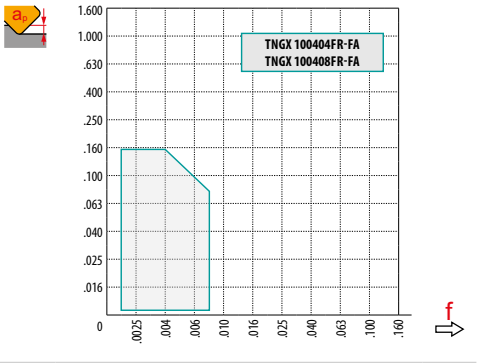
Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
																					
FA geometry with highly positive design for fine-finish to medium machining.																					
TNGX 100404FR-FA	**HF7**	.016	–	–	–	–	–	–	–	–	–	1132	.0039	.059	–	–	–	–	–	–	7178567
	M0315	.016	–	–	–	–	–	–	–	–	–	2559	.0039	.059	–	–	–	–	–	–	7178569
TNGX 100408FR-FA	**HF7**	.031	–	–	–	–	–	–	–	–	–	1132	.0039	.059	–	–	–	–	–	–	7178568
	M0315	.031	–	–	–	–	–	–	–	–	–	2559	.0039	.059	–	–	–	–	–	–	7178570

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	.95	.85	.75	.85	.95	1.00	1.00	1.00	1.00
⇨X.f	.64	.64	.64	.64	.64	.65	.65	.67	.68	.71	.72	.74	.79	1.00

	TNGX 10-F			TNGX 10-M		TNGX 10-FA	
RE (mm)	.2	.4	.8	.4	.8	.4	.8
BS (inch)	.060	.053	.036	.053	.036	.052	.037







(inch)

max
.059

(inch)

a_p	.039	.118	.197
1 f	.004	.003	.002

(inch)

a_p
.008

(inch)

DC	RPMX	APMX/l
.750	1.60°	.106/3.937
1.000	1.00°	.067/3.937
1.250	0.80°	.051/3.937
1.500	0.60°	.035/3.937
2.000	0.50°	.028/3.937
2.500	0.40°	.020/3.937
3.000	0.25°	.012/3.937

(inch)

DC	DMIN	DMAX	SMAX DMIN	SMAX DMAX
.750	1.457	1.575	.047	.047
1.000	1.850	1.969	.039	.039
1.250	2.402	2.520	.039	.039
1.500	3.031	3.150	.035	.035
2.000	3.819	3.937	.035	.035
2.500	4.843	4.961	.035	.035
3.000	6.181	6.299	.035	.035

STN16

P M K N S

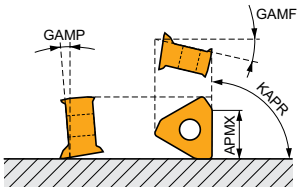
PRAMET

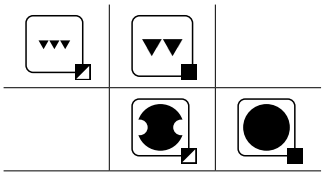
S

ECON TN16 Square Shoulder Mill with Internal Coolant

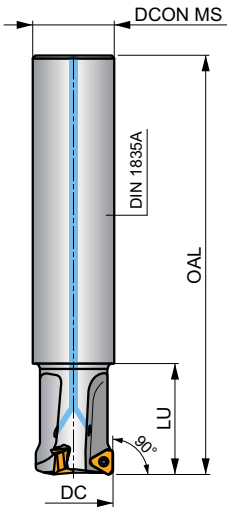
90° end and shell mills utilizing double sided TNGX 16 inserts with 6 cutting edges and APMX of 10 mm. Suitable for a wide range of applications. Available in cylindrical, Weldon, modular and arbor (with differential tooth pitch) style. Body treated for longer tool life.

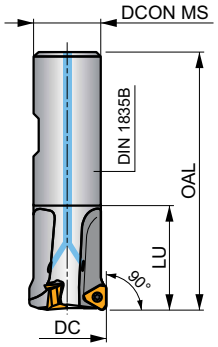
KAPR	90°
APMX	10.0 mm

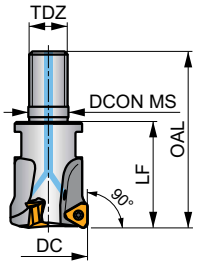


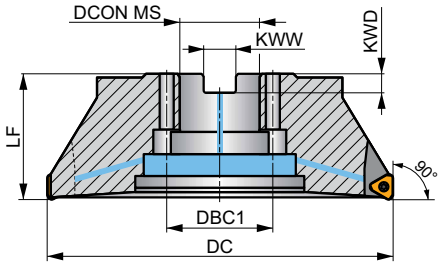


ECON TN

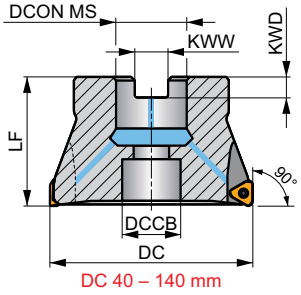








DC 160 – 175 mm



DC 40 – 140 mm

h_m	0.03 - 0.15 mm
h_m	0.03 - 0.13 mm

	Product	DC	OAL	DCON MS	DCCB	DBC1	LU	LF	TDZ	KWW	KWD	GAMF	GAMP			max.		lbs			MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)	(°)	(°)								
	25A2R034A25-STN16-C	25	170	25	–	–	34	–	–	–	–	-18.5	-9.5	2	–	20000	✓	1.19	GI340	C0382	8052259
	32A2R034A32-STN16-C	32	195	32	–	–	34	–	–	–	–	-16	-9.5	2	–	17500	✓	2.32	GI340	C0382	8020915
DIN 1835A	**25A2R080A25-STN16-C**	25	170	25	–	–	80	–	–	–	–	-18.5	-9.5	2	–	20000	✓	1.06	GI340	C0382	8052330
DIN 1835A	**32A2R080A32-STN16-C**	32	195	32	–	–	80	–	–	–	–	-16	-9.5	2	–	17500	✓	2.11	GI340	C0382	8020916
	32A3R034A32-STN16-C	32	195	32	–	–	34	–	–	–	–	-16	-9.5	3	–	17500	✓	2.29	GI340	C0382	8020917
	35A3R034A32-STN16-C	35	195	32	–	–	34	–	–	–	–	-16	-9.5	3	–	17000	✓	2.37	GI340	C0382	8020918
	25A2R042B25-STN16-C	25	110	25	–	–	42	–	–	–	–	-18.5	-9.5	2	–	20000	✓	.65	GI340	C0382	8052331
DIN 1835B	**32A3R042B32-STN16-C**	32	110	32	–	–	42	–	–	–	–	-16	-9.5	3	–	17500	✓	1.14	GI340	C0382	8021055
DIN 1835B	**40A4R050B32-STN16-C**	40	120	32	–	–	50	–	–	–	–	-16	-9.5	4	–	16000	✓	1.49	GI340	C0382	8021056
	25A2R033M12-STN16-C	25	55	12.5	–	–	–	33	M12	–	–	-18.5	-9.5	2	–	20000	✓	.22	GI340	C0382	8052332
	32A2R043M16-STN16-C	32	66	17	–	–	–	43	M16	–	–	-16	-9.5	2	–	17500	✓	.39	GI340	C0382	8021058
MODULAR	**32A3R043M16-STN16-C**	32	66	17	–	–	–	43	M16	–	–	-16	-9.5	3	–	17500	✓	.38	GI340	C0382	8021059
MODULAR	**40A3R043M16-STN16-C**	40	66	17	–	–	–	43	M16	–	–	-16	-9.5	3	–	16000	✓	.45	GI340	C0382	8021160
MODULAR	**40A4R043M16-STN16-C**	40	66	17	–	–	–	43	M16	–	–	-16	-9.5	4	–	16000	✓	.46	GI340	C0382	8021161
	40A03R-S90TN16-C	40	40	16	12.4	–	–	40	–	8.4	5.6	-16	-9.5	3	–	16000	✓	.71	GI340	C0384	8020829
	40A04R-S90TN16-C	40	40	16	12.4	–	–	40	–	8.4	5.6	-16	-9.5	4	–	16000	✓	.68	GI340	C0384	8020900
	50A04R-S90TN16-C	50	40	22	18.1	–	–	40	–	10.4	6.3	-16	-9.5	4	✓	14000	✓	.75	GI340	C0386	8020901
	50A05R-S90TN16-C	50	40	22	18.1	–	–	40	–	10.4	6.3	-16	-9.5	5	✓	14000	✓	.71	GI340	C0386	8020902
ISO 6462 DIN 8030	**63A04R-S90TN16-C**	63	40	22	18.1	–	–	40	–	10.4	6.3	-16	-9.5	4	✓	12500	✓	1.03	GI340	C0386	8020903
ISO 6462 DIN 8030	**63A06R-S90TN16-C**	63	40	22	18.1	–	–	40	–	10.4	6.3	-16	-9.5	6	✓	12500	✓	1.06	GI340	C0386	8020904
ISO 6462 DIN 8030	**80A05R-S90TN16-C**	80	50	27	22.1	–	–	50	–	12.4	7	-16	-9.5	5	✓	11000	✓	2.54	GI340	C0388	8020905
ISO 6462 DIN 8030	**80A07R-S90TN16-C**	80	50	27	22.1	–	–	50	–	12.4	7	-16	-9.5	7	✓	11000	✓	2.58	GI340	C0388	8020906
	100A06R-S90TN16-C	100	50	32	45.1	–	–	50	–	14.4	8	-16	-9.5	6	✓	10000	✓	3.95	GI340	C0390	8020907

	Product	DC (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	DBC1 (mm)	LU (mm)	LF (mm)	TDZ	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		lbs			MID
ISO 6462 DIN 8030	**100A08R-S90TN16-C**	100	50	32	45.1	–	–	50	–	14.4	8	-16	-9.5	8	✓	10000	✓	3.67	GI340	C0390	8020908
	115A06R-S90TN16-C	115	50	32	45.1	–	–	50	–	14.4	8	-16	-9.5	6	✓	9500	✓	4.88	GI340	C0390	8020909
	125A07R-S90TN16-C	125	63	40	56.1	–	–	63	–	16.4	9	-16	-9.5	7	✓	9000	✓	6.73	GI340	C0390	8020910
	125A09R-S90TN16-C	125	63	40	56.1	–	–	63	–	16.4	9	-16	-9.5	9	✓	9000	✓	6.92	GI340	C0390	8020911
	140A08R-S90TN16-C	140	63	40	56.1	–	–	63	–	16.4	9	-16	-9.5	8	✓	8500	✓	8.14	GI340	C0390	8020912
	160C10R-S90TN16-C	160	63	40	–	66.7	–	63	–	16.4	9.2	-16	-9.5	10	✓	8000	✓	11.37	GI340	C0394	8020913
	175C10R-S90TN16-C	175	63	40	–	66.7	–	63	–	16.4	9.2	-16	-9.5	10	✓	7500	✓	15.18	GI340	C0394	8020914

GI340	TNGX 1606..

		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

ISTN16

P M K N S

PRAMET

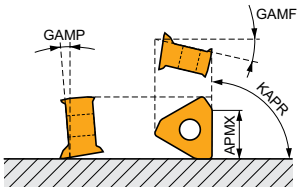
S

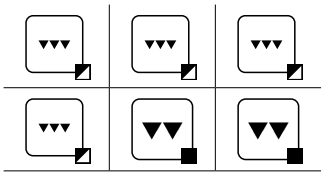
ECON TN16 Square Shoulder Mill with Internal Coolant

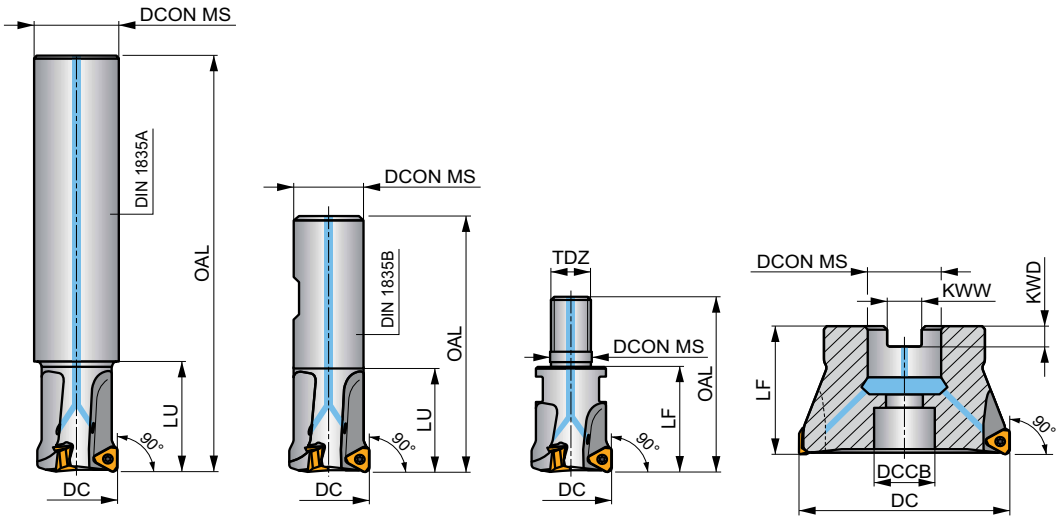
90° end and shell mills utilizing double sided TNGX 16 inserts with 6 cutting edges and APMX of .394 inches. Suitable for a wide range of applications. Available in cylindrical, Weldon, modular and arbor (with differential tooth pitch) style. Body treated for longer tool life.

ECON TN

KAPR	90°
APMX	.394 in







h_m	.001 - .006 in
h_m	.001 - .005 in

	Product	DC (inch)	OAL (inch)	DCON MS (inch)	DCCB (inch)	LU (inch)	LF (inch)	TDZ	KWW (inch)	KWD (inch)	GAMF (°)	GAMP (°)				lbs			MID
DIN 1835A	100A2R130C100-ISTN16-C	1.000	6.693	1.000	–	1.339	–	–	–	–	-18.5	-9.5	2	–	✓	1.19	GI340	C0382	8052333
	125A2R130C125-ISTN16-C	1.250	7.677	1.250	–	1.339	–	–	–	–	-16	-9.5	2	–	✓	2.27	GI340	C0382	8021685
	125A2R315C125-ISTN16-C	1.250	7.677	1.250	–	3.150	–	–	–	–	-16	-9.5	2	–	✓	2.07	GI340	C0382	8021686
	125A3R130C125-ISTN16-C	1.250	7.677	1.250	–	1.339	–	–	–	–	-16	-9.5	3	–	✓	2.25	GI340	C0382	8021687
DIN 1835B	100A2R165W100-ISTN16-C	1.000	3.937	1.000	–	1.654	–	–	–	–	-18.5	-9.5	2	–	✓	.65	GI340	C0382	8052334
	125A3R165W125-ISTN16-C	1.250	4.331	1.250	–	1.654	–	–	–	–	-16	-9.5	3	–	✓	1.12	GI340	C0382	8021689
	150A4R200W125-ISTN16-C	1.500	4.724	1.250	–	1.969	–	–	–	–	-16	-9.5	4	–	✓	1.38	GI340	C0382	8021720
MODULAR	100A2R130M12-ISTN16-C	1.000	2.165	.492	–	–	1.299	M12	–	–	-16	-9.5	2	–	✓	.17	GI340	C0382	8052338
	125A2R169M16-ISTN16-C	1.250	2.598	.669	–	–	1.693	M16	–	–	-16	-9.5	2	–	✓	.38	GI340	C0382	8021721
	125A3R169M16-ISTN16-C	1.250	2.598	.669	–	–	1.693	M16	–	–	-16	-9.5	3	–	✓	.37	GI340	C0382	8021722
	150A3R169M16-ISTN16-C	1.500	2.598	.669	–	–	1.693	M16	–	–	-16	-9.5	3	–	✓	.41	GI340	C0382	8021723
	150A4R169M16-ISTN16-C	1.500	2.598	.669	–	–	1.693	M16	–	–	-16	-9.5	4	–	✓	.43	GI340	C0382	8021724
ISO 6462 DIN 8030	150A04R-IS90TN16-C	1.500	–	.500	.409	–	1.575	–	.258	.165	-16	-9.5	4	–	✓	.41	GI340	IC0336	8021162
	200A04R-IS90TN16-C	2.000	–	.750	.630	–	1.575	–	.321	.193	-16	-9.5	4	✓	✓	.82	GI340	IC0338	8021163
	200A05R-IS90TN16-C	2.000	–	.750	.630	–	1.575	–	.321	.193	-16	-9.5	5	✓	✓	1.05	GI340	IC0338	8021164
	250A04R-IS90TN16-C	2.500	–	.750	.630	–	1.575	–	.321	.193	-16	-9.5	4	✓	✓	1.08	GI340	IC0338	8021165
	250A06R-IS90TN16-C	2.500	–	.750	.630	–	1.575	–	.321	.193	-16	-9.5	6	✓	✓	1.36	GI340	IC0338	8021166
	300A05R-IS90TN16-C	3.000	–	1.000	.827	–	1.969	–	.382	.224	-16	-9.5	5	✓	✓	2.20	GI340	IC0340	8021167
	300A07R-IS90TN16-C	3.000	–	1.000	.827	–	1.969	–	.382	.224	-16	-9.5	7	✓	✓	2.26	GI340	IC0340	8021168
	400A06R-IS90TN16-C	4.000	–	1.500	1.417	–	1.969	–	.634	.382	-16	-9.5	6	✓	✓	4.25	GI340	IC0342	8021169
	400A08R-IS90TN16-C	4.000	–	1.500	1.417	–	1.969	–	.634	.382	-16	-9.5	8	✓	✓	4.38	GI340	IC0342	8021180
	500A09R-IS90TN16-C	5.000	–	1.500	1.417	–	2.480	–	.634	.382	-16	-9.5	9	✓	✓	8.37	GI340	IC0342	8021181

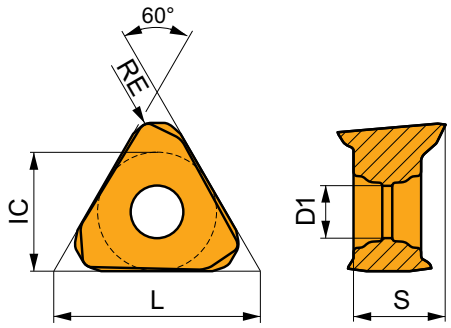
GI340	TNGX 1606..

		Nm						
C0382	US 44010-T15P	3.5	M 4	.394	–	–	Flag T15P	–
IC0336	US 44010-T15P	3.5	M 4	.394	D-T08P/T15P	FG-15	–	HCS 025150C
IC0338	US 44010-T15P	3.5	M 4	.394	D-T08P/T15P	FG-15	–	HS 037100
IC0340	US 44010-T15P	3.5	M 4	.394	D-T08P/T15P	FG-15	–	HS 050125
IC0342	US 44010-T15P	3.5	M 4	.394	D-T08P/T15P	FG-15	–	HCS 075175

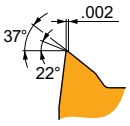
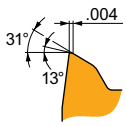
TNGX 16

PRAMET

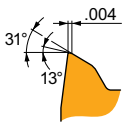
	IC	D1	L	S
	(inch)	(inch)	(inch)	(inch)
1606	.375	.173	.650	.259



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

Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
																					
F geometry with highly positive design for light machining.																					
TNGX 160604SR-F	**M8330**	.016	673	.0039	.118	394	.0035	.118	623	.0039	.118	–	–	–	–	–	–	–	–	–	8020443
	M8340	.016	623	.0039	.118	361	.0035	.118	591	.0039	.118	–	–	–	–	–	–	–	–	–	8020444
TNGX 160608SR-F	**8215**	.031	820	.0039	.118	492	.0035	.118	771	.0039	.118	–	–	–	–	–	–	–	–	–	8020446
	M6330	.031	705	.0039	.118	492	.0035	.118	–	–	–	–	–	–	–	–	–	–	–	–	8020449
	M8310	.031	919	.0039	.118	459	.0035	.118	869	.0039	.118	–	–	–	–	–	–	–	–	–	8020445
	M8330	.031	804	.0039	.118	476	.0035	.118	755	.0039	.118	–	–	–	–	–	–	–	–	–	8020447
	M8340	.031	738	.0039	.118	443	.0035	.118	689	.0039	.118	–	–	–	–	–	–	–	–	–	8020448
																					
M geometry with positive design for light to medium machining.																					
TNGX 160604SR-M	**8215**	.016	591	.0071	.118	344	.0063	.118	558	.0071	.118	–	–	–	148	.0051	.094	–	–	–	8019943
	M6330	.016	509	.0071	.118	361	.0063	.118	–	–	–	–	–	–	148	.0051	.094	–	–	–	8019947
	M8310	.016	673	.0059	.118	328	.0055	.118	623	.0059	.118	–	–	–	–	–	–	–	–	–	8019944
	M8330	.016	591	.0071	.118	344	.0063	.118	558	.0071	.118	–	–	–	148	.0051	.094	–	–	–	8019945
	M8340	.016	541	.0071	.118	312	.0063	.118	509	.0071	.118	–	–	–	131	.0051	.094	–	–	–	8019946

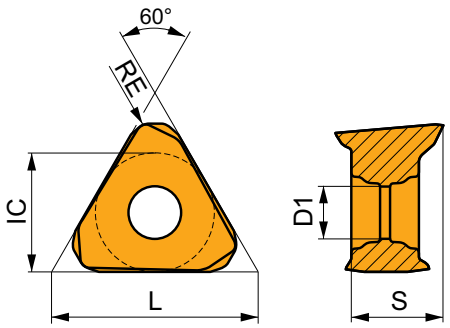
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
																					
			M geometry with positive design for light to medium machining.																		
TNGX 160608SR-M	**8215**	.031	■ 705	.0071	.118	◪ 410	.0063	.118	◪ 656	.0071	.118	–	–	–	◪ 164	.0051	.094	–	–	–	8019794
	M6330	.031	■ 607	.0071	.118	◪ 427	.0063	.118	–	–	–	–	–	–	◪ 180	.0051	.094	–	–	–	8019797
	M8310	.031	■ 804	.0059	.118	◪ 394	.0055	.118	◪ 755	.0059	.118	–	–	–	–	–	–	–	–	–	8019793
	M8330	.031	■ 705	.0071	.118	◪ 410	.0063	.118	◪ 656	.0071	.118	–	–	–	◪ 164	.0051	.094	–	–	–	8019795
	M8340	.031	■ 640	.0071	.118	◪ 377	.0063	.118	◪ 607	.0071	.118	–	–	–	◪ 148	.0051	.094	–	–	–	8019796
	M8345	.031	■ 509	.0071	.118	◪ 295	.0063	.118	–	–	–	–	–	–	◪ 115	.0051	.094	–	–	–	8019798
	M9325	.031	■ 935	.0059	.118	–	–	–	◪ 886	.0059	.118	–	–	–	–	–	–	–	–	–	8019799
	M9340	.031	■ 804	.0071	.118	◪ 476	.0063	.118	–	–	–	–	–	–	◪ 197	.0051	.094	–	–	–	8019820
TNGX 160612SR-M	**M8330**	.047	■ 755	.0071	.118	◪ 443	.0063	.118	◪ 705	.0071	.118	–	–	–	◪ 180	.0051	.094	–	–	–	8020755
	M8340	.047	■ 673	.0071	.118	◪ 394	.0063	.118	◪ 623	.0071	.118	–	–	–	◪ 164	.0051	.094	–	–	–	8020756
TNGX 160616SR-M	**M8310**	.063	■ 902	.0059	.118	◪ 459	.0055	.118	◪ 853	.0059	.118	–	–	–	–	–	–	–	–	–	8020757
	M8330	.063	■ 787	.0071	.118	◪ 459	.0063	.118	◪ 738	.0071	.118	–	–	–	◪ 197	.0051	.094	–	–	–	8020758
	M8340	.063	■ 722	.0071	.118	◪ 427	.0063	.118	◪ 673	.0071	.118	–	–	–	◪ 180	.0051	.094	–	–	–	8020759

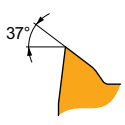
TNGX 16-FA

PRAMET

	IC (inch)	D1 (inch)	L (inch)	S (inch)
1606	.375	.173	.650	.259

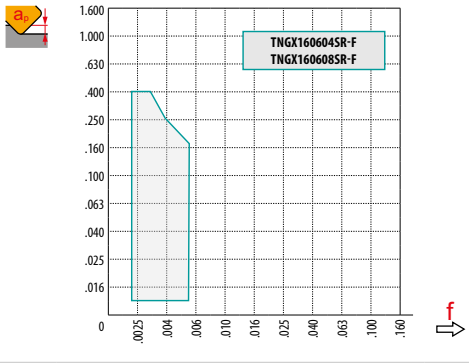


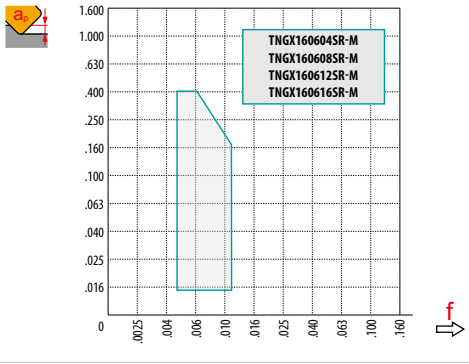
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

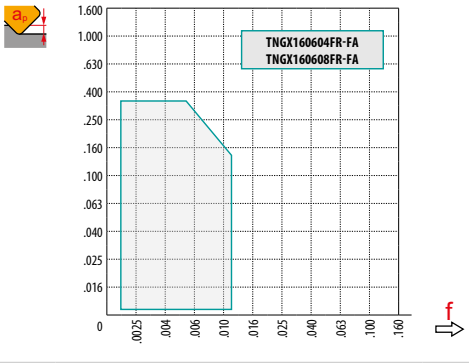
Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
																					
			FA geometry with highly positive design for fine-finish to medium machining.																		
TNGX 160604FR-FA	**HF7**	.016	–	–	–	–	–	–	–	–	–	■ 837	.0055	.079	–	–	–	–	–	–	8020826
	M0315	.016	–	–	–	–	–	–	–	–	–	■ 1919	.0055	.079	–	–	–	–	–	–	8020825
TNGX 160608FR-FA	**HF7**	.031	–	–	–	–	–	–	–	–	–	■ 984	.0055	.079	–	–	–	–	–	–	8020828
	M0315	.031	–	–	–	–	–	–	–	–	–	■ 2264	.0055	.079	–	–	–	–	–	–	8020827

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	.95	.85	.75	.85	.95	1.00	1.00	1.00	1.00
⇨X.f	.64	.64	.64	.64	.64	.65	.65	.67	.68	.71	.72	.74	.79	1.00

	TNGX 16-F		TNGX 16-M				TNGX 16-FA	
RE (mm)	.4	.8	.4	.8	1.2	1.6	.4	.8
BS (inch)	.083	.075	.083	.075	.068	.045	.083	.075







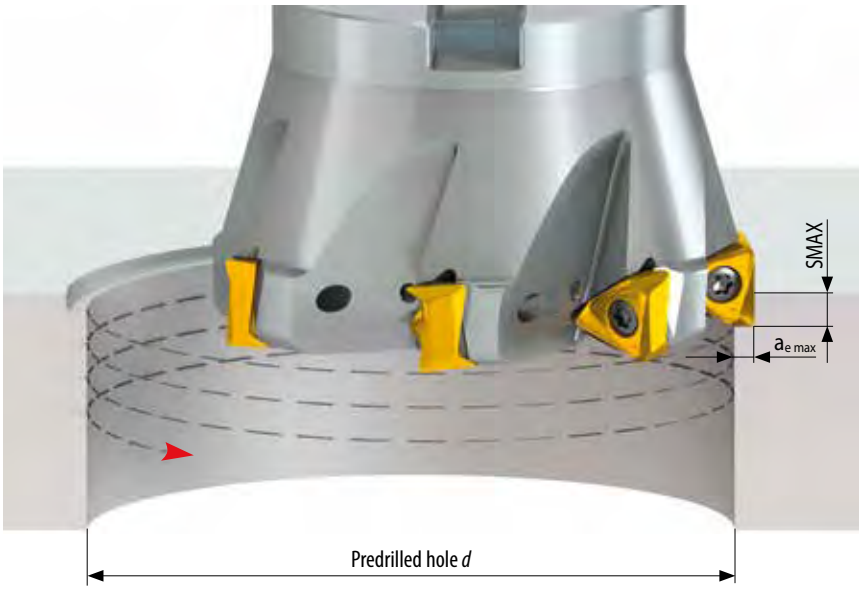
(inch)

a_p	.118	.177	.236
f	.007	.006	.004

(inch)

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	$a_{e\,max}$
.984	.984	.006	.051	1.220	.009	.087	1.496	.013	.118	1.732	.024	.157	1.969	.028	.197
1.260	1.260	.006	.059	1.575	.013	.110	1.890	.017	.157	2.205	.028	.197	2.520	.035	.256
1.575	1.575	.009	.079	1.969	.015	.138	2.362	.022	.197	2.756	.035	.256	3.150	.045	.315
1.969	1.969	.011	.098	2.480	.020	.177	2.953	.028	.256	3.465	.039	.315	3.937	.055	.394
2.480	2.480	.013	.126	3.150	.024	.217	3.740	.035	.315	4.331	.057	.394	4.921	.071	.492
3.150	3.150	.022	.157	3.937	.039	.276	4.724	.057	.394	5.512	.085	.512	6.299	.102	.630
3.937	3.937	.028	.197	4.921	.047	.354	5.906	.071	.492	6.890	.106	.650	7.874	.130	.787
4.528	4.528	.033	.236	5.709	.059	.394	6.890	.075	.571	7.874	.110	.748	9.055	.150	.906
4.921	4.921	.035	.256	6.102	.063	.433	7.480	.091	.610	8.661	.122	.787	9.843	.161	.984
5.512	5.512	.039	.276	6.890	.071	.492	8.268	.102	.689	9.646	.146	.906	11.024	.181	1.102
6.299	6.299	.047	.315	7.874	.079	.551	9.449	.114	.787	11.024	.169	1.024	12.598	.209	1.260
6.890	6.890	.051	.346	8.661	.087	.610	10.433	.126	.866	12.008	.185	1.142	13.780	.228	1.378

* Check feed rate reduction when hole diameter is between d_{min} – 1.5 *DC*.

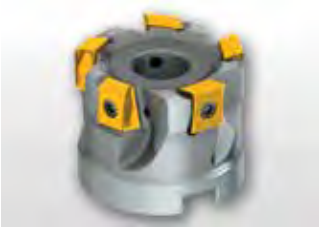


SLN12X

P K H

PRAMET

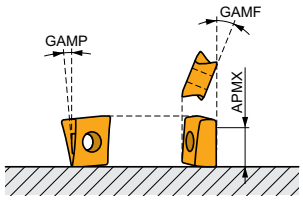
S

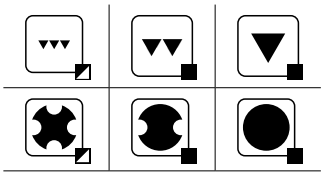


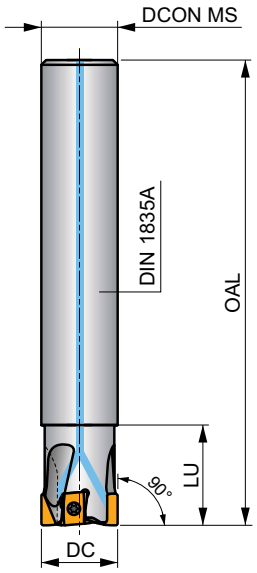
PROD LN12 90° Tangential Square Shoulder Mill with Internal Coolant

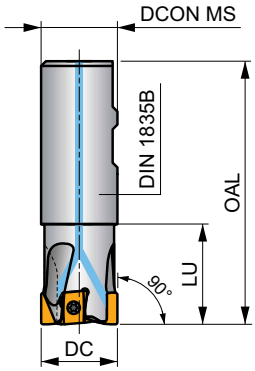
90°end and shell mills utilising tangential LNEX 12 insert with four cutting edges and APMX of 10 mm. Suited for a wide range of applications. Available in cylindrical, weldon and arbor style. Robust cutter body supports long tool life and excellent breakage resistance.

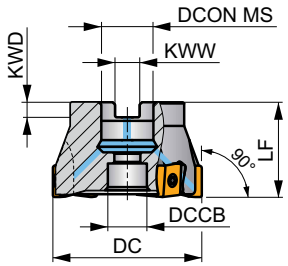
KAPR	90°
APMX	10.0 mm











h_m	0.06 - 0.20 mm
h_m	0.06 - 0.18 mm

	Product	DC (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	LU (mm)	LF (mm)	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		lbs			MID
DIN 1835A	25A2R042A25-SLN12X-C	25	170	25	–	42	–	–	–	-30	-5	2	–	17300	✓	1.21	GI206	C0382	8185950
	25A2R080A25-SLN12X-C	25	170	25	–	80	–	–	–	-30	-5	2	–	17300	✓	1.10	GI206	C0382	8185951
	32A3R042A32-SLN12X-C	32	195	32	–	42	–	–	–	-22.5	-5	3	–	15300	✓	2.40	GI206	SQ340	8185952
	32A3R090A32-SLN12X-C	32	195	32	–	90	–	–	–	-22.5	-5	3	–	15300	✓	2.25	GI206	SQ340	8185953
	40A4R050A32-SLN12X-C	40	195	32	–	50	–	–	–	-22.5	-5	4	–	13700	✓	2.58	GI206	SQ340	8185954
DIN 1835B	25A2R042B25-SLN12X-C	25	100	25	–	42	–	–	–	-30	-5	2	–	17300	✓	.64	GI206	C0382	8185956
	32A3R042B32-SLN12X-C	32	110	32	–	42	–	–	–	-22.5	-5	3	–	15300	✓	1.27	GI206	SQ340	8185957
	40A4R050B32-SLN12X-C	40	120	32	–	50	–	–	–	-22.5	-5	4	–	13700	✓	1.61	GI206	SQ340	8185958
ISO 6462 DIN 8030	40A03R-S90LN12X-C	40	–	16	12.4	–	40	8.4	5.6	-22.5	-5	3	–	13700	✓	.33	GI206	SQ345	8184466
	40A04R-S90LN12X-C	40	–	16	12.4	–	40	8.4	5.6	-22.5	-5	4	✓	13700	✓	.51	GI206	SQ345	8184465
	50A05R-S90LN12X-C	50	–	22	16.5	–	40	10.4	6.3	-19.5	-5	5	–	12300	✓	.75	GI206	SQ343	8184467
	50A06R-S90LN12X-C	50	–	22	16.5	–	40	10.4	6.3	-19.5	-5	6	–	12300	✓	.75	GI206	SQ343	8184468
	52A05R-S90LN12X-C	52	–	22	16.5	–	40	10.4	6.3	-19.5	-5	5	–	12300	✓	.82	GI206	SQ343	8184474
	63A06R-S90LN12X-C	63	–	22	16.5	–	40	10.4	6.3	-19.5	-5	6	✓	10900	✓	1.35	GI206	SQ343	8184475
	63A08R-S90LN12X-C	63	–	22	16.5	–	40	10.4	6.3	-19.5	-5	8	–	10900	✓	1.10	GI206	SQ343	8184476
	66A06R-S90LN12X-C	66	–	22	16.5	–	40	10.4	6.3	-19.5	-5	6	✓	10900	✓	1.19	GI206	SQ343	8184477
	80A07R-S90LN12X-C	80	–	27	38.1	–	50	12.4	7	-19.5	-5	7	✓	9700	✓	2.20	GI206	SQ341	8185934
	80A10R-S90LN12X-C	80	–	27	38.1	–	50	12.4	7	-19.5	-5	10	–	9700	✓	2.16	GI206	SQ341	8185935
	100A08R-S90LN12X-C	100	–	32	45.1	–	50	14.4	8	-17.5	-5	8	✓	8700	✓	4.18	GI206	SQ341	8185936
	100A11R-S90LN12X-C	100	–	32	45.1	–	50	14.4	8	-17.5	-5	11	–	8700	✓	4.15	GI206	SQ341	8185937
	125A12R-S90LN12X-C	125	–	40	56.1	–	63	16.4	9	-17.5	-5	12	✓	7800	✓	7.48	GI206	SQ341	8185938

GI206	LNEX 1210..

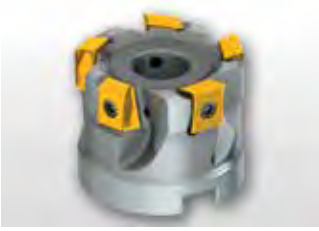
		Nm						
C0382	US 44010-T15P	3.5	M 4	10	–	–	Flag T15P	–
SQ340	US 44012-T15P	3.5	M 4	12	–	–	Flag T15P	–
SQ341	US 44012-T15P	3.5	M 4	12	D-T08P/T15P	FG-15	–	–
SQ343	US 44012-T15P	3.5	M 4	12	D-T08P/T15P	FG-15	–	HS 1030C
SQ345	US 44012-T15P	3.5	M 4	12	D-T08P/T15P	FG-15	–	HS 90835

ISLN12X

P K H

PRAMET

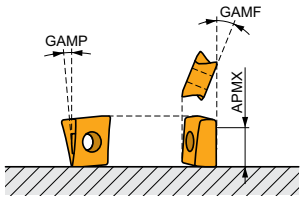
S

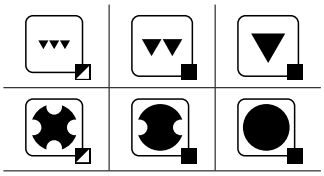


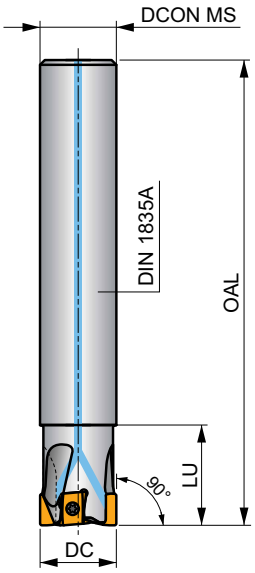
PROD LN12 90° Tangential Square Shoulder Mill with Internal Coolant

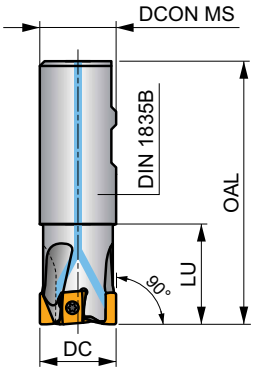
Highly productive 90° shoulder mills utilising tangential LNEX 12 insert with 4 cutting edges and APMX of .394 inches. Suited for a wide range of applications. Available in cylindrical, Weldon and arbor style. Robust cutter body supports long tool life and excellent breakage resistance.

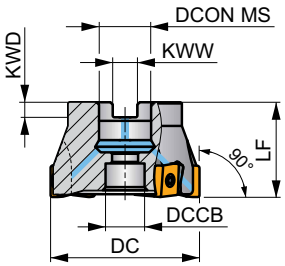
KAPR	90°
APMX	.394 in











h_m	.0024-.0079 in
h_m	.0024-.0071 in

	Product	DC (inch)	OAL (inch)	DCON MS (inch)	DCCB (inch)	LU (inch)	LF (inch)	KWW (inch)	KWD (inch)	GAMF (°)	GAMP (°)			max.		lbs			MID
DIN 1835A	100A2R315C100-ISLN12X-C	1.000	6.693	1.000	–	3.150	–	–	–	-30	-5	2	–	17300	✓	1.17	GI206	IC0360	8185989
	125A3R355C125-ISLN12X-C	1.250	7.677	1.250	–	3.550	–	–	–	-22.5	-5	3	–	15300	✓	2.16	GI206	IC0361	8186010
	150A4R200C125-ISLN12X-C	1.500	7.677	1.250	–	2.000	–	–	–	-22.5	-5	4	–	13700	✓	2.47	GI206	IC0361	8186011
DIN 1835B	100A2R165W100-ISLN12X-C	1.000	3.937	1.000	–	1.654	–	–	–	-30	-5	2	–	17300	✓	.66	GI206	IC0360	8186012
	125A3R165W125-ISLN12X-C	1.250	4.331	1.250	–	1.654	–	–	–	-22.5	-5	3	–	15300	✓	1.19	GI206	IC0361	8186013
	150A4R200W125-ISLN12X-C	1.500	4.724	1.250	–	2.000	–	–	–	-22.5	-5	4	–	13700	✓	1.50	GI206	IC0361	8186014
ISO 6462 DIN 8030	150A04R-IS90LN12X-C	1.500	–	.500	.433	–	1.575	.260	.165	-22.5	-5	4	✓	13700	✓	.44	GI206	IC0362	8185959
	200A05R-IS90LN12X-C	2.000	–	.750	.630	–	1.575	.323	.193	-19.5	-5	5	–	12300	✓	.82	GI206	IC0363	8185980
	200A06R-IS90LN12X-C	2.000	–	.750	.630	–	1.575	.323	.193	-19.5	-5	6	–	12300	✓	.82	GI206	IC0363	8185981
	250A06R-IS90LN12X-C	2.500	–	.750	.630	–	1.575	.323	.193	-19.5	-5	6	✓	10900	✓	1.19	GI206	IC0363	8185982
	250A08R-IS90LN12X-C	2.500	–	.750	.630	–	1.575	.323	.193	-19.5	-5	8	–	10900	✓	1.15	GI206	IC0363	8185983
	300A07R-IS90LN12X-C	3.000	–	1.000	.827	–	1.969	.382	.224	-19.5	-5	7	✓	9700	✓	2.36	GI206	IC0364	8185984
	300A10R-IS90LN12X-C	3.000	–	1.000	.827	–	1.969	.382	.224	-19.5	-5	10	–	9700	✓	2.34	GI206	IC0364	8185985
	400A08R-IS90LN12X-C	4.000	–	1.500	1.417	–	1.969	.634	.382	-17.5	-5	8	✓	8700	✓	4.48	GI206	IC0365	8185986
	500A12R-IS90LN12X-C	5.000	–	1.500	1.417	–	2.480	.634	.382	-17.5	-5	12	✓	7800	✓	8.02	GI206	IC0365	8185987

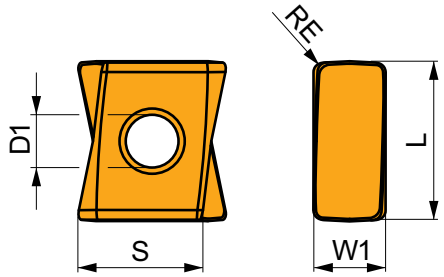
GI206	LNEX 1210..

		Nm						
IC0360	US 44010-T15P	3.5	M 4	.394	–	–	FLAG T15P	–
IC0361	US 44012-T15P	3.5	M 4	.472	–	–	FLAG T15P	–
IC0362	US 44012-T15P	3.5	M 4	.472	D-T08P/T15P	FG-15	–	HS 025100
IC0363	US 44012-T15P	3.5	M 4	.472	D-T08P/T15P	FG-15	–	HS 037100
IC0364	US 44012-T15P	3.5	M 4	.472	D-T08P/T15P	FG-15	–	HS 050125
IC0365	US 44012-T15P	3.5	M 4	.472	D-T08P/T15P	FG-15	–	HCS 075175

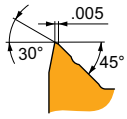
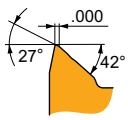
LNEX 12

PRAMET

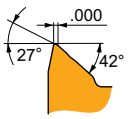
	W1	D1	L	S
	(inch)	(inch)	(inch)	(inch)
1210	.236	.173	.524	.404



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

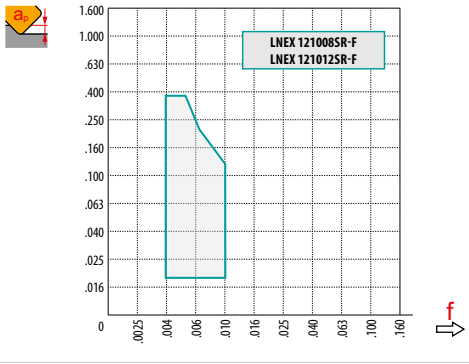
Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
																					
			F geometry is sharp and used for light and medium machining, suitable for large overhang applications. Designed with highly positive rake, narrow T-land and rounding of cutting edge for light to medium machining.																		
LNEX 121008SR-F	**M6330**	.031	722	.0067	.118	509	.0059	.118	–	–	–	–	–	–	–	–	–	–	–	–	8184460
	M8310	.031	919	.0067	.118	459	.0059	.118	869	.0067	.118	–	–	–	–	–	–	180	.0043	.039	8184459
	M8330	.031	853	.0067	.118	509	.0059	.118	804	.0067	.118	–	–	–	–	–	–	164	.0043	.039	8184458
	M8340	.031	771	.0067	.118	459	.0059	.118	722	.0067	.118	–	–	–	–	–	–	–	–	–	8184457
LNEX 121012SR-F	**M6330**	.047	755	.0067	.118	541	.0059	.118	–	–	–	–	–	–	–	–	–	–	–	–	8184463
	M8310	.047	968	.0067	.118	492	.0059	.118	919	.0067	.118	–	–	–	–	–	–	180	.0043	.039	8184462
	M8330	.047	886	.0067	.118	525	.0059	.118	837	.0067	.118	–	–	–	–	–	–	164	.0043	.039	8184461
																					
			M geometry is versatile and the first choice for a wide range of working conditions. Designed with positive rake, medium T-land and rounding of cutting edge for medium up to semi-roughing machining.																		
LNEX 121008SR-M	**M6330**	.031	689	.0079	.138	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	8184332
	M8310	.031	869	.0079	.138	–	–	–	820	.0079	.138	–	–	–	–	–	–	164	.0063	.039	8184228
	M8330	.031	804	.0079	.138	–	–	–	755	.0079	.138	–	–	–	–	–	–	148	.0063	.039	8184226
	M8340	.031	722	.0079	.138	–	–	–	673	.0079	.138	–	–	–	–	–	–	–	–	–	8184227
	M9315	.031	1050	.0079	.138	–	–	–	984	.0079	.138	–	–	–	–	–	–	197	.0063	.039	8184331
	M9325	.031	984	.0079	.138	–	–	–	935	.0079	.138	–	–	–	–	–	–	197	.0063	.039	8184330
	M9340	.031	886	.0079	.138	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	8184229
LNEX 121012SR-M	**M8310**	.047	919	.0079	.138	–	–	–	869	.0079	.138	–	–	–	–	–	–	180	.0063	.039	8184339
	M8330	.047	837	.0079	.138	–	–	–	787	.0079	.138	–	–	–	–	–	–	164	.0063	.039	8184338
	M8340	.047	771	.0079	.138	–	–	–	722	.0079	.138	–	–	–	–	–	–	–	–	–	8184337
LNEX 121016SR-M	**M8310**	.063	968	.0079	.138	–	–	–	919	.0079	.138	–	–	–	–	–	–	180	.0063	.039	8184452
	M8330	.063	886	.0079	.138	–	–	–	837	.0079	.138	–	–	–	–	–	–	164	.0063	.039	8184451
	M8340	.063	804	.0079	.138	–	–	–	755	.0079	.138	–	–	–	–	–	–	–	–	–	8184450

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

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
																					
M geometry is versatile and the first choice for a wide range of working conditions. Designed with positive rake, medium T-land and rounding of cutting edge for medium up to semi-roughing machining.																					
LNEX 121020SR-M	**M8330**	.079	■	935	.0079 .138	–	–	–	■	886	.0079 .138	–	–	–	–	–	–	◪	180	.0063 .039	8184454
	M8340	.079	■	837	.0079 .138	–	–	–	◪	787	.0079 .138	–	–	–	–	–	–	–	–	–	8184453
LNEX 121024SR-M	**M8330**	.094	■	935	.0079 .138	–	–	–	■	886	.0079 .138	–	–	–	–	–	–	◪	180	.0063 .039	8184456
	M8340	.094	■	837	.0079 .138	–	–	–	◪	787	.0079 .138	–	–	–	–	–	–	–	–	–	8184455

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	.95	.85	.75	.85	.95	1.00	1.00	1.00	1.00
x.f	.64	.64	.64	.64	.64	.65	.65	.67	.68	.71	.72	.74	.79	1.00

	LNEX 12-F		LNEX 12-M				
RE (mm)	.8	1.2	.8	1.2	1.6	2.0	2.4
BS (inch)	.089	.068	.089	.068	.052	.045	.031



(inch)

max.

.098

(inch)

a_p	.079	.118	.157	.197
1 f	.012	.008	.008	.006

(inch)

DC	LNEX 12	
	RPMX	APMX/I
1.000	.80°	.055/3.937
1.250	.60°	.039/3.937
1.500	.35°	.024/3.937
2.000	.30°	.020/3.937
2.500	.20°	.014/3.937

(inch)

DC	LNEX 12			
	DMIN	DMAX	SMAX DMIN	SMAX DMAX
1.000	1.732	1.890	.024	.028
1.250	2.283	2.441	.031	.039
1.500	2.913	3.071	.028	.031
2.000	3.701	3.858	.028	.031
2.500	4.724	4.882	.012	.016

(inch)

DC	µm	3	5	10	15	20	30	40	50	60	80	100
1.000		.022	.028	.039	.048	.056	.068	.079	.088	.096	.111	.124
1.250		.024	.031	.045	.055	.063	.077	.089	.100	.109	.126	.141
1.500		.027	.035	.050	.061	.070	.086	.100	.111	.122	.141	.157
2.000		.031	.039	.056	.068	.079	.096	.111	.124	.136	.157	.176
2.500		.039	.050	.070	.086	.100	.122	.141	.157	.173	.199	.223

RE (mm)	µm	3	5	10	15	20	30	40	50	60	80	100
.8		.006	.008	.011	.014	.016	.019	.022	.025	.027	.031	.035
1.2		.007	.009	.012	.015	.017	.021	.024	.027	.030	.034	.039
1.6		.008	.010	.014	.017	.020	.024	.028	.031	.034	.040	.045
2.0		.009	.011	.016	.019	.022	.027	.031	.035	.039	.045	.050
2.4		.010	.012	.018	.022	.025	.031	.035	.039	.043	.050	.056

SLN12

P M K N

PRAMET

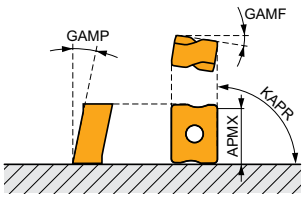
S

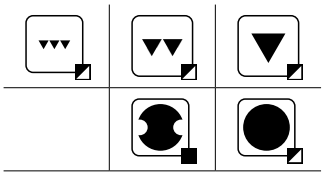
ECON LN12 Square Shoulder Mill with Internal Coolant

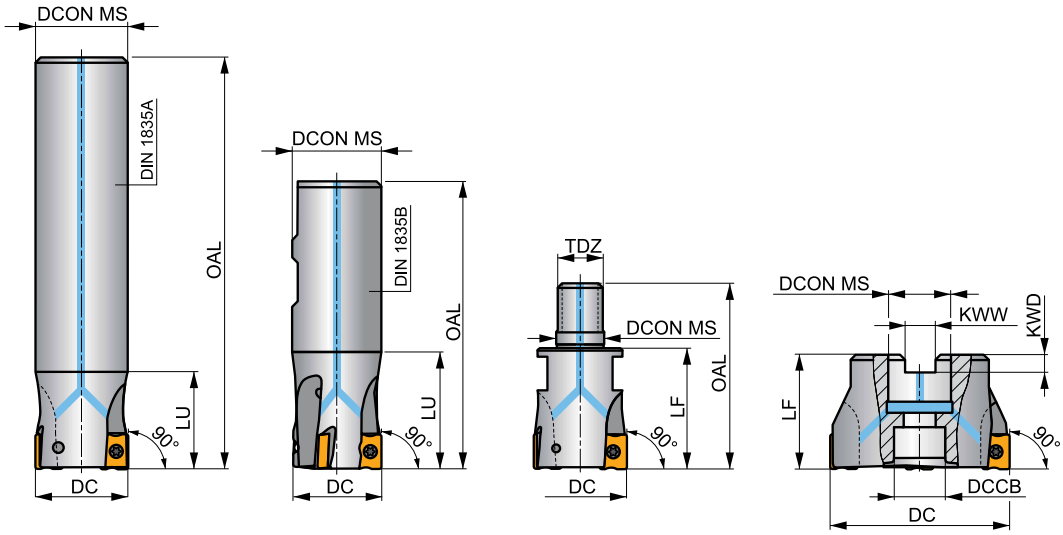
90° end and shell mills utilising double sided LN.. 12 inserts with APMX of 9 mm. Suitable for a wide range of applications. Available in cylindrical, Weldon, modular and arbor (with differential tooth pitch) style. Body treated for longer tool life.

ECON LN

KAPR	90°
APMX	9.0 mm







h_m 0.06 - 0.15 mm

h_m 0.06 - 0.13 mm

	Product	DC (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	LU (mm)	LF (mm)	TDZ	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		lbs				MID
DIN 1835A	**25A2R034A25-SLN12-C**	25	170	25	–	34	–	–	–	–	-23	-8	2	–	19500	✓	1.28	GI205	SQ340	–	6760296
DIN 1835A	**25A2R080A25-SLN12-C**	25	170	25	–	80	–	–	–	–	-23	-8	2	–	19500	✓	1.20	GI205	SQ340	–	6760297
DIN 1835A	**32A2R034A32-SLN12-C**	32	195	32	–	34	–	–	–	–	-15	-6	2	–	17300	✓	2.31	GI205	SQ340	–	6760298
DIN 1835A	**32A2R090A32-SLN12-C**	32	195	32	–	90	–	–	–	–	-15	-6	2	–	17300	✓	2.16	GI205	SQ340	–	6760299
DIN 1835B	**25A2R042B25-SLN12-C**	25	99	25	–	42	–	–	–	–	-23	-8	2	–	19500	✓	.66	GI205	SQ340	–	6760300
DIN 1835B	**32A3R042B32-SLN12-C**	32	103	32	–	42	–	–	–	–	-15	-6	3	–	17300	✓	1.10	GI205	SQ340	–	6760301
DIN 1835B	**40A4R050B32-SLN12-C**	40	111	32	–	50	–	–	–	–	-15	-6	4	✓	15500	✓	1.37	GI205	SQ340	–	6760302
MODULAR	**25A2R033M12-SLN12-C**	25	55	12.5	–	–	33	–	–	–	-22	-6	2	–	–	✓	.24	GI205	SQ340	–	6798614
MODULAR	**32A2R043M16-SLN12-C**	32	66	17	–	–	43	–	–	–	-15	-6	2	–	–	✓	.49	GI205	SQ340	–	6760303
MODULAR	**32A3R043M16-SLN12-C**	32	66	17	–	–	43	–	–	–	-15	-6	3	–	–	✓	.48	GI205	SQ340	–	6803503
MODULAR	**40A3R043M16-SLN12-C**	40	66	17	–	–	43	–	–	–	-15	-6	3	–	–	✓	.62	GI205	SQ340	–	6760287
	40A04R-S90LN12-C	40	–	16	14	–	40	–	8.4	5.6	-15	-6	4	✓	15500	✓	.72	GI205	SQ342	–	6760288
	50A04R-S90LN12-C	50	–	22	18	–	40	–	10.4	6.3	-14.5	-6	4	✓	13800	✓	1.05	GI205	SQ343	–	6760289
	50A05R-S90LN12-C	50	–	22	18	–	40	–	10.4	6.3	-14.5	-6	5	✓	13800	✓	.88	GI205	SQ343	–	6760290
	63A04R-S90LN12-C	63	–	22	18	–	40	–	10.4	6.3	-14	-6	4	✓	12300	✓	1.21	GI205	SQ343	–	6760304
	63A06R-S90LN12-C	63	–	22	18	–	40	–	10.4	6.3	-14	-6	6	✓	12300	✓	1.10	GI205	SQ343	–	6760305
ISO 6462 DIN 8030	**80A05R-S90LN12-C**	80	–	27	38	–	50	–	12.4	7	-14	-6	5	✓	10900	✓	2.56	GI205	SQ341	AC001	6760291
ISO 6462 DIN 8030	**80A07R-S90LN12-C**	80	–	27	38	–	50	–	12.4	7	-14	-6	7	✓	10900	✓	2.46	GI205	SQ341	AC001	6760292
ISO 6462 DIN 8030	**100A06R-S90LN12-C**	100	–	32	45	–	50	–	14.4	8	-14	-6	6	✓	9800	✓	3.92	GI205	SQ341	AC002	6760293
ISO 6462 DIN 8030	**100A08R-S90LN12-C**	100	–	32	45	–	50	–	14.4	8	-14	-6	8	✓	9800	✓	4.30	GI205	SQ341	AC002	6760294
ISO 6462 DIN 8030	**110A06R-S90LN12-C**	110	–	32	45	–	50	–	14.4	8	-14	-6	6	✓	9300	✓	4.61	GI205	SQ341	AC002	6760295
ISO 6462 DIN 8030	**125A07R-S90LN12-C**	125	–	40	56	–	63	–	16.4	9	-14	-6	7	✓	8700	✓	7.50	GI205	SQ341	AC003	6798612
ISO 6462 DIN 8030	**125A09R-S90LN12-C**	125	–	40	56	–	63	–	16.4	9	-14	-6	9	✓	8700	✓	7.39	GI205	SQ341	AC003	6798613

GI205	LNGX 1205..	LNGU 1205..

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

ISLN12

P M K N

PRAMET

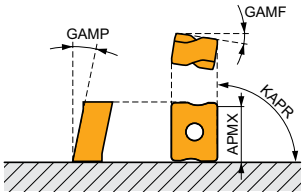
S

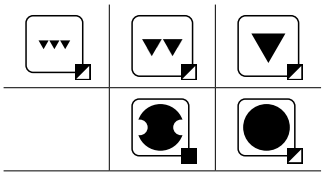
ECON LN12 Square Shoulder Mill with Internal Coolant

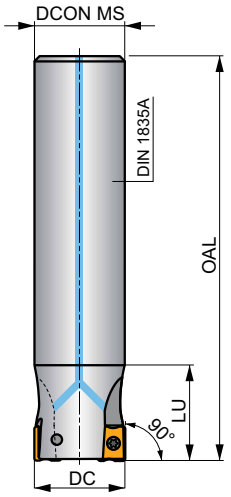
90° end and shell mills utilizing double sided LN.. 12 inserts with APMX of .354 inches. Suitable for a wide range of applications. Available in cylindrical, Weldon, modular and arbor (with differential tooth pitch) style. Body treated for longer tool life.

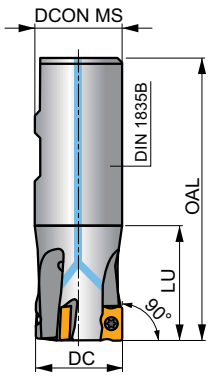
ECON LN

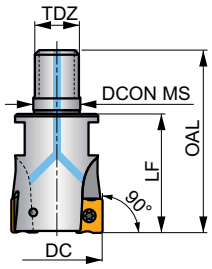
KAPR	90°
APMX	.354 in

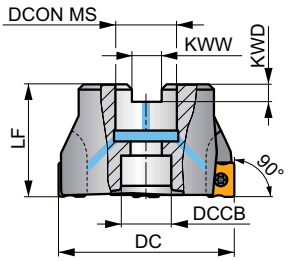












h_m	0023-.0059 in
h_m	.0023-.0051 in

	Product	DC (inch)	OAL (inch)	DCON MS (inch)	DCCB (inch)	LU (inch)	LF (inch)	TDZ	KWW (inch)	KWD (inch)	GAMF (°)	GAMP (°)			max.		lbs			MID
DIN 1835A	100A2R315C100-ISLN12-C	1.000	6.693	1.000	–	3.150	–	–	–	–	-23	-8	2	–	19500	✓	1.10	GI205	SQ340	6792998
	100A2R134C100-ISLN12-C	1.000	6.693	1.000	–	1.340	–	–	–	–	-23	-8	2	–	19500	✓	1.10	GI205	SQ340	6792996
	125A2R134C125-ISLN12-C	1.250	7.677	1.250	–	1.340	–	–	–	–	-15	-6	2	–	17300	✓	1.98	GI205	SQ340	6792999
	125A2R354C125-ISLN12-C	1.250	7.677	1.250	–	3.543	–	–	–	–	-15	-6	2	–	17300	✓	1.98	GI205	SQ340	6793011
DIN 1835B	100A2R128W100-ISLN12-C	1.000	3.819	1.000	–	1.280	–	–	–	–	-23	-8	2	–	19500	✓	.22	GI205	SQ340	6792995
	125A3R150W125-ISLN12-C	1.250	4.039	1.250	–	1.500	–	–	–	–	-15	-6	3	–	17300	✓	1.10	GI205	SQ340	6793012
	150A4R160W125-ISLN12-C	1.500	4.389	1.250	–	1.600	–	–	–	–	-15	-6	4	✓	15500	✓	1.32	GI205	SQ340	6793016
MODULAR	100A2R138M12-ISLN12-C	1.000	2.244	.492	–	–	1.378	–	–	–	-22	-6	2	✓	–	✓	.22	GI205	SQ340	6792997
	125A2R169M16-ISLN12-C	1.250	2.598	.669	–	–	1.693	–	–	–	-15	-6	2	✓	–	✓	.44	GI205	SQ340	6793010
	125A3R169M16-ISLN12-C	1.250	2.598	.669	–	–	1.693	–	–	–	-15	-6	3	✓	–	✓	.44	GI205	SQ340	6793013
	150A3R169M16-ISLN12-C	1.500	2.598	.669	–	–	1.693	–	–	–	-15	-6	3	✓	–	✓	.44	GI205	SQ340	6793015
ISO 6462 DIN 8030	150A04R-IS90LN12-C	1.500	–	.500	.433	–	1.575	–	.258	.165	-15	-6	4	✓	15500	✓	.44	GI205	SQ362	6793014
	200A04R-IS90LN12-C	2.000	–	.750	.630	–	1.575	–	.321	.193	-14.5	-6	4	✓	13800	✓	.66	GI205	SQ363	6793017
	200A05R-IS90LN12-C	2.000	–	.750	.630	–	1.575	–	.321	.193	-14.5	-6	5	✓	13800	✓	.66	GI205	SQ363	6793018
	250A04R-IS90LN12-C	2.500	–	.750	.630	–	1.575	–	.321	.193	-14	-6	4	✓	12300	✓	1.10	GI205	SQ363	6793019
	250A06R-IS90LN12-C	2.500	–	.750	.630	–	1.575	–	.321	.193	-14	-6	6	✓	12300	✓	1.10	GI205	SQ363	6793020
	300A05R-IS90LN12-C	3.000	–	1.000	.827	–	1.969	–	.382	.224	-14	-6	5	✓	10900	✓	2.21	GI205	SQ364	6793021
	300A07R-IS90LN12-C	3.000	–	1.000	.827	–	1.969	–	.382	.224	-14	-6	7	✓	10900	✓	2.21	GI205	SQ364	6793022
	400A06R-IS90LN12-C	4.000	–	1.500	1.260	–	1.969	–	.630	.382	-14	-6	6	✓	9800	✓	3.75	GI205	SQ365	6793023
	400A08R-IS90LN12-C	4.000	–	1.500	1.260	–	1.969	–	.630	.382	-14	-6	8	✓	9800	✓	3.75	GI205	SQ365	6793024
	500A07R-IS90LN12-C	5.000	–	1.500	1.260	–	2.480	–	.630	.382	-14	-6	7	✓	8700	✓	7.06	GI205	SQ369	6793025
	500A09R-IS90LN12-C	5.000	–	1.500	1.260	–	2.480	–	.630	.382	-14	-6	9	✓	8700	✓	7.06	GI205	SQ369	6793026

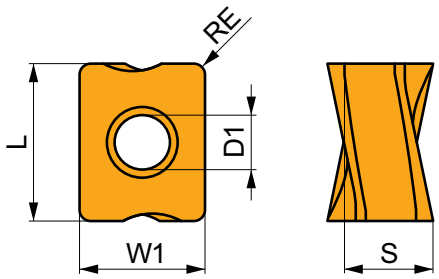
GI205	LNGX 1205..	LNGU 1205..

		Nm						
SQ340	US 44012-T15P	3.5	M 4	.472	–	–	Flag T15P	–
SQ362	US 44012-T15P	3.5	M 4	.472	D-T08P/T15P	FG-15	–	HS 025100
SQ363	US 44012-T15P	3.5	M 4	.472	D-T08P/T15P	FG-15	–	HS 037100
SQ364	US 44012-T15P	3.5	M 4	.472	D-T08P/T15P	FG-15	–	HS 050125
SQ365	US 44012-T15P	3.5	M 4	.472	D-T08P/T15P	FG-15	–	HCS 075200
SQ369	US 44012-T15P	3.5	M 4	.472	D-T08P/T15P	FG-15	–	HS 075125

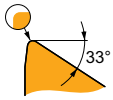
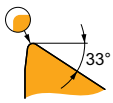
LNGX 12

PRAMET

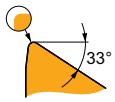
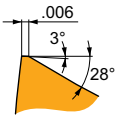
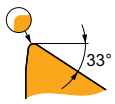
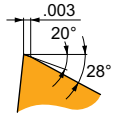
	W1	D1	L	S
	(inch)	(inch)	(inch)	(inch)
1205	.374	.177	.472	.235



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

Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
			 E																		
			F geometry with highly positive design for light machining.																		
LNGX 120504ER-F	**8215**	.016	656	.0059	.059	–	–	–	623	.0059	.059	–	–	–	–	–	–	–	–	–	6798582
	M8330	.016	656	.0059	.059	–	–	–	623	.0059	.059	–	–	–	–	–	–	–	–	–	7447898
	M8340	.016	591	.0059	.059	–	–	–	558	.0059	.059	–	–	–	–	–	–	–	–	–	6798584
LNGX 120508ER-F	**8215**	.031	787	.0059	.059	–	–	–	738	.0059	.059	–	–	–	–	–	–	–	–	–	6798585
	M8310	.031	853	.0059	.059	–	–	–	804	.0059	.059	–	–	–	–	–	–	–	–	–	6922540
	M8330	.031	771	.0059	.059	–	–	–	722	.0059	.059	–	–	–	–	–	–	–	–	–	7447900
	M8340	.031	705	.0059	.059	–	–	–	656	.0059	.059	–	–	–	–	–	–	–	–	–	6798587
			 E																		
			M geometry with positive design for light to medium machining.																		
LNGX 120504ER-M	**M8330**	.016	607	.0059	.118	–	–	–	574	.0059	.118	–	–	–	–	–	–	–	–	–	7447899
	M8340	.016	558	.0059	.118	–	–	–	525	.0059	.118	–	–	–	–	–	–	–	–	–	6798590
LNGX 120508ER-M	**8215**	.031	722	.0059	.118	–	–	–	673	.0059	.118	–	–	–	–	–	–	–	–	–	6753697
	M8310	.031	787	.0059	.118	–	–	–	738	.0059	.118	–	–	–	–	–	–	–	–	–	6922541
	M8330	.031	722	.0059	.118	–	–	–	673	.0059	.118	–	–	–	–	–	–	–	–	–	7447901
	M8340	.031	656	.0059	.118	–	–	–	623	.0059	.118	–	–	–	–	–	–	–	–	–	6798588
	M9315	.031	984	.0059	.118	–	–	–	935	.0059	.118	–	–	–	–	–	–	–	–	–	6753695
	M9325	.031	919	.0059	.118	–	–	–	869	.0059	.118	–	–	–	–	–	–	–	–	–	6753696
	M9340	.031	820	.0059	.118	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6755626

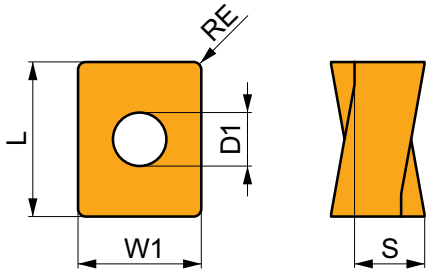
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
																					
M geometry with positive design for light to medium machining.																					
LNGX 120510ER-M	**M8330**	.039	755	.0059	.118	–	–	–	705	.0059	.118	–	–	–	–	–	–	–	–	–	7447903
LNGX 120512ER-M	**M8330**	.047	755	.0059	.118	–	–	–	705	.0059	.118	–	–	–	–	–	–	–	–	–	7447904
	M8340	.047	689	.0059	.118	–	–	–	640	.0059	.118	–	–	–	–	–	–	–	–	–	6798592
LNGX 120516ER-M	**M8330**	.063	787	.0059	.118	–	–	–	738	.0059	.118	–	–	–	–	–	–	–	–	–	7447905
	M8340	.063	722	.0059	.118	–	–	–	673	.0059	.118	–	–	–	–	–	–	–	–	–	6798594
LNGX 120520ER-M	**M8310**	.079	919	.0059	.118	–	–	–	869	.0059	.118	–	–	–	–	–	–	–	–	–	7048988
	M8330	.079	837	.0059	.118	–	–	–	787	.0059	.118	–	–	–	–	–	–	–	–	–	7447907
	M8340	.079	755	.0059	.118	–	–	–	705	.0059	.118	–	–	–	–	–	–	–	–	–	6798596
																					
R geometry with positive design for unstable cutting conditions.																					
LNGX 120508SR-R	**8215**	.031	673	.0079	.138	–	–	–	623	.0079	.138	–	–	–	–	–	–	–	–	–	6798601
	M5315	.031	869	.0079	.138	–	–	–	820	.0079	.138	–	–	–	–	–	–	–	–	–	6798604
	M8310	.031	722	.0079	.138	–	–	–	673	.0079	.138	–	–	–	–	–	–	–	–	–	6922542
	M8330	.031	673	.0079	.138	–	–	–	623	.0079	.138	–	–	–	–	–	–	–	–	–	7447902
	M8340	.031	607	.0079	.138	–	–	–	574	.0079	.138	–	–	–	–	–	–	–	–	–	6798603
	M9315	.031	869	.0079	.138	–	–	–	820	.0079	.138	–	–	–	–	–	–	–	–	–	6798605
	M9325	.031	820	.0079	.138	–	–	–	771	.0079	.138	–	–	–	–	–	–	–	–	–	6798606
	M9340	.031	738	.0079	.138	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6798607
LNGX 120516SR-R	**8215**	.063	738	.0079	.138	–	–	–	689	.0079	.138	–	–	–	–	–	–	–	–	–	6798608
	M8330	.063	738	.0079	.138	–	–	–	689	.0079	.138	–	–	–	–	–	–	–	–	–	7447906
	M8340	.063	673	.0079	.138	–	–	–	623	.0079	.138	–	–	–	–	–	–	–	–	–	6798610
	M9325	.063	902	.0079	.138	–	–	–	853	.0079	.138	–	–	–	–	–	–	–	–	–	6798611
																					
MF geometry with highly positive design for light machining.																					
LNGX 120504ER-MF	**M6330**	.016	574	.0059	.039	410	.0055	.039	–	–	–	–	–	–	–	–	–	–	–	–	6925524
	M9340	.016	787	.0059	.039	459	.0055	.039	–	–	–	–	–	–	–	–	–	–	–	–	7051435
LNGX 120508ER-MF	**M6330**	.031	689	.0059	.039	492	.0055	.039	–	–	–	–	–	–	–	–	–	–	–	–	6925525
	M8340	.031	738	.0059	.039	443	.0055	.039	–	–	–	–	–	–	–	–	–	–	–	–	6925548
	M9340	.031	935	.0059	.039	558	.0055	.039	–	–	–	–	–	–	–	–	–	–	–	–	7051436
																					
MM geometry with positive design for light to medium machining.																					
LNGX 120508SR-MM	**M6330**	.031	623	.0059	.11	443	.0055	.11	–	–	–	–	–	–	–	–	–	–	–	–	6925526
	M8340	.031	656	.0059	.11	394	.0055	.11	–	–	–	–	–	–	–	–	–	–	–	–	6925549
	M8345	.031	525	.0059	.11	312	.0055	.11	–	–	–	–	–	–	–	–	–	–	–	–	7051461
	M9340	.031	837	.0059	.11	492	.0055	.11	–	–	–	–	–	–	–	–	–	–	–	–	7051470

LNGU 12

PRAMET

	W1	D1	L	S
	(inch)	(inch)	(inch)	(inch)
1205	.374	.177	.472	.235



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

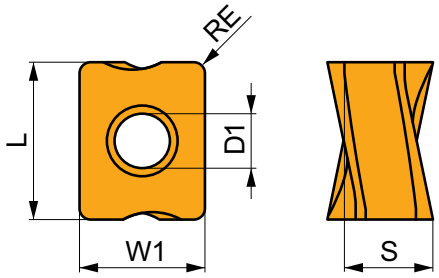
Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
		(inch)																			
																					
LNGU 120525ER-M	**M8330**	.098	■ 837	.0059	.118	–	–	–	■ 787	.0059	.118	–	–	–	–	–	–	–	–	–	7447896
	M8340	.098	■ 755	.0059	.118	–	–	–	◪ 705	.0059	.118	–	–	–	–	–	–	–	–	–	6798598
LNGU 120530ER-M	**M8330**	.118	■ 837	.0059	.118	–	–	–	■ 787	.0059	.118	–	–	–	–	–	–	–	–	–	7447897
	M8340	.118	■ 755	.0059	.118	–	–	–	◪ 705	.0059	.118	–	–	–	–	–	–	–	–	–	6798600

M geometry with positive design for medium machining.

LNGX 12-FA

PRAMET

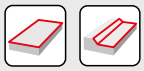
	W1	D1	L	S
	(inch)	(inch)	(inch)	(inch)
1205	.374	.177	.472	.235



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

Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
		(inch)																			
																					
LNGX 120504FR-FA	**HF7**	.016	–	–	–	–	–	–	–	–	–	■ 886	.0118	.079	–	–	–	–	–	–	6798579
LNGX 120508FR-FA	**HF7**	.031	–	–	–	–	–	–	–	–	–	■ 1033	.0118	.079	–	–	–	–	–	–	6798580
	M0315	.031	–	–	–	–	–	–	–	–	–	■ 2362	.0118	.079	–	–	–	–	–	–	6798581

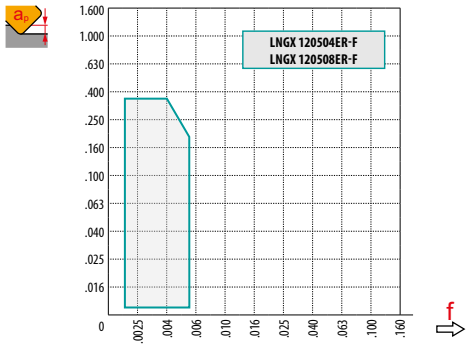
FA geometry with highly positive design for fine-finish to medium machining.

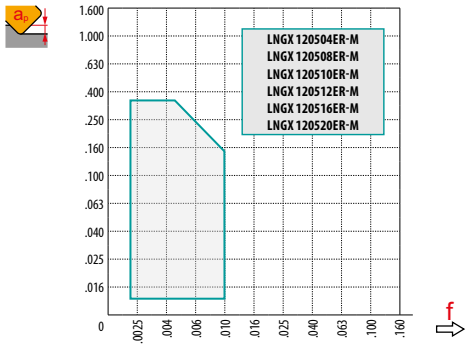


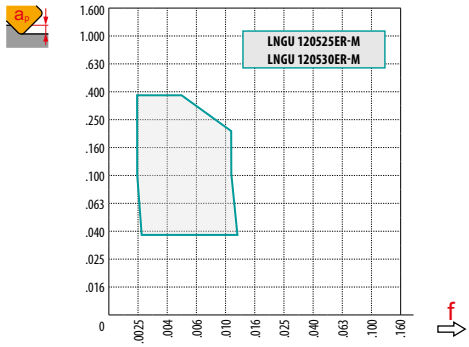
a_e/DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ x.f	2.20	1.60	1.35	1.20	1.10	.95	.85	.75	.85	.95	1.00	1.00	1.00	1.00
⇨ x.f	.64	.64	.64	.64	.64	.65	.65	.67	.68	.71	.72	.74	.79	1.00

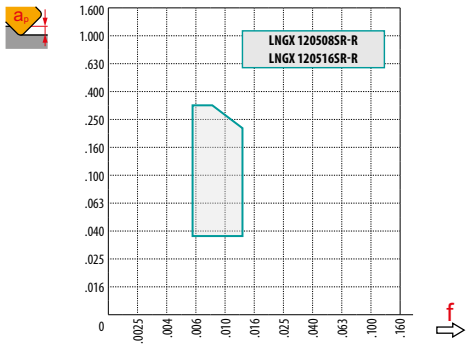
	LNGX 12-F		LNGX 12-M						LNGU 12-M	
RE (mm)	.4	.8	.4	.8	1.0	1.2	1.6	2.0	2.5	3.0
BS (inch)	.090	.074	.090	.074	.067	.059	.043	.027	.034	.014

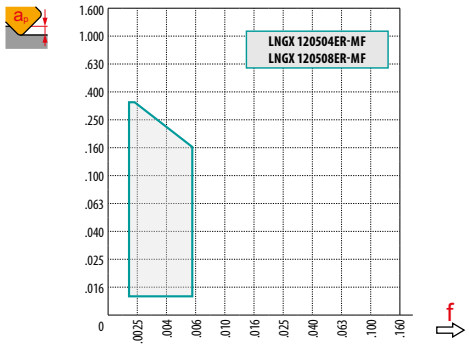
	LNGX 12-R		LNGX 12-MF		LNGX 12-MM	LNGX 12-FA	
RE (mm)	.8	1.6	.4	.8	.8	.4	.8
BS (inch)	.074	.043	.090	.074	.074	.091	.074

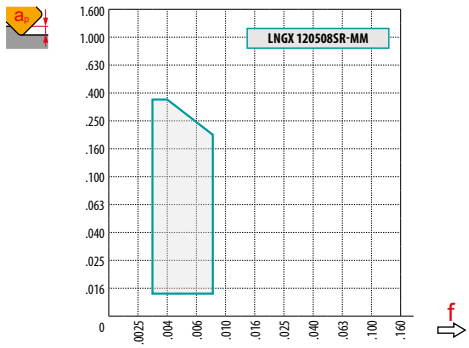


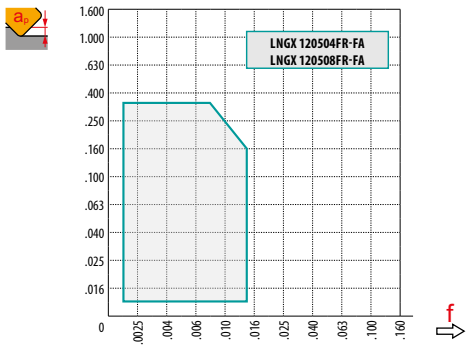












(inch)

(inch)

(inch)

max

.138

	.039	.197	.354
f	.007	.005	.003

DC	LNGX 12	
	RPMX	APMX/I
0.984	1.3°	0.083/3.937
1.260	0.7°	0.043/3.937
1.575	0.5°	0.028/3.937
1.969	0.4°	0.020/3.937
2.480	0.2°	0.012/3.937
3.150	0.2°	0.008/3.937

(inch)

DC	LNGX 12			
	DMIN	DMAX	SMAX DMIN	SMAX DMAX
1.000	1.378	1.969	.028	.067
1.250	1.929	2.520	.024	.047
1.500	2.559	3.150	.024	.039
2.000	3.346	3.937	.028	.039
2.500	4.370	4.961	.024	.031
3.000	5.709	6.299	.028	.031

(inch)

a_p
.008

(inch)

DC	µm	3	5	10	15	20	30	40	50	60	80	100
1.000	FE	.022	.028	.039	.048	.056	.068	.079	.088	.096	.111	.124
1.250		.024	.031	.045	.055	.063	.077	.089	.100	.109	.126	.141
1.500		.027	.035	.050	.061	.070	.086	.100	.111	.122	.141	.157
2.000		.031	.039	.056	.068	.079	.096	.111	.124	.136	.157	.176
2.500		.034	.044	.062	.077	.088	.108	.125	.140	.153	.177	.198
3.000		.039	.050	.070	.086	.100	.122	.141	.157	.173	.199	.223

RE (mm)	µm	3	5	10	15	20	30	40	50	60	80	100
1.6	FE	.008	.010	.014	.017	.020	.024	.028	.031	.034	.040	.045
2.0		.009	.011	.016	.019	.022	.027	.031	.035	.039	.045	.050
2.5		.010	.012	.018	.022	.025	.031	.035	.039	.043	.050	.056
3.0		.011	.014	.019	.024	.027	.033	.039	.043	.047	.055	.061

SSO09

P M K S

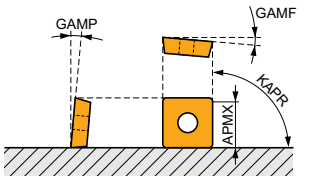
PRAMET

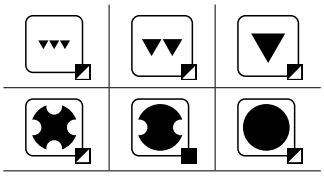
S

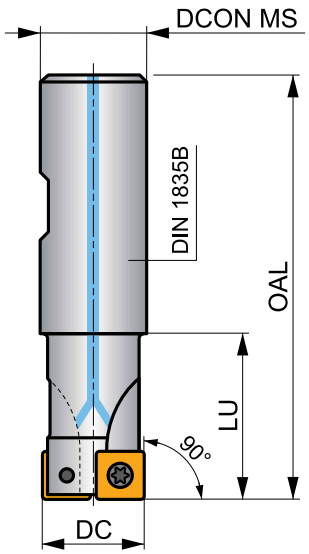
90° Square Shoulder Mill for SOMT 09 Insert with Internal Coolant

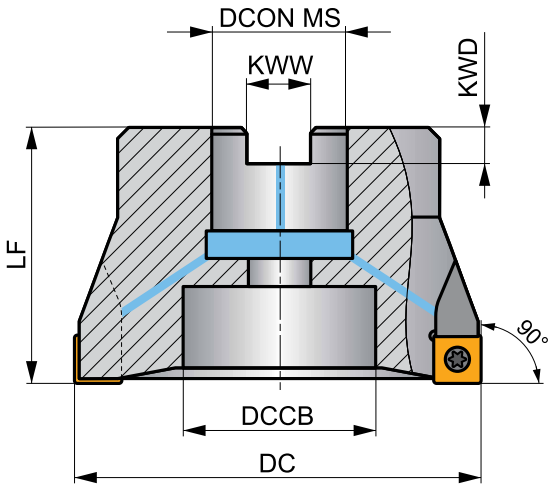
90° end and shell mills utilising positive SOMT 09 inserts with APMX of 8 mm. Suitable for face, shoulder, slot and plunge milling. Available in weldon and arbor style. Differential tooth pitch available. Body treated for longer tool life.

KAPR	90°
APMX	8.0 mm









h_m	0.07 - 0.22 mm
h_m	0.07 - 0.18 mm

	Product	DC (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	LU (mm)	LF (mm)	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		lbs				MID
DIN 1835B	**20A2R032B20-SSO09-C**	20	82	20	–	32	–	–	–	-12	6	2	–	23800	✓	.46	GI146	SQ400	–	6758358
DIN 1835B	**25A3R042B25-SSO09-C**	25	98	25	–	42	–	–	–	-12	6	3	–	21300	✓	.68	GI146	SQ400	–	6758359
DIN 1835B	**32A4R042B32-SSO09-C**	32	102	32	–	42	–	–	–	-10	10	4	✓	18800	✓	1.21	GI146	SQ400	–	6758360
ISO 6462 DIN 8030	**40A05R-S90SO09-C**	40	–	16	14	–	40	8.4	5.6	-9.1	10	5	–	16800	✓	.63	GI146	SQ402	–	6758308
ISO 6462 DIN 8030	**50A06R-S90SO09-C**	50	–	22	18	–	40	10.4	6.4	-8.8	10	6	–	15100	✓	.73	GI146	SQ403	–	6758309
ISO 6462 DIN 8030	**63A07R-S90SO09-C**	63	–	22	18	–	40	10.4	6.4	-8.6	10	7	–	13400	✓	1.36	GI146	SQ403	–	6758310
ISO 6462 DIN 8030	**80A09R-S90SO09-C**	80	–	27	38	–	50	12.4	7	-8.1	10	9	–	11900	✓	2.27	GI146	SQ401	AC001	6758311

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

ISSO09

P M K S

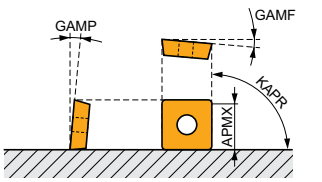
PRAMET

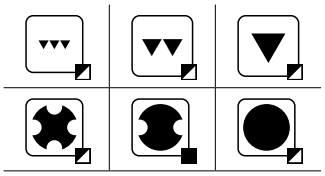
S

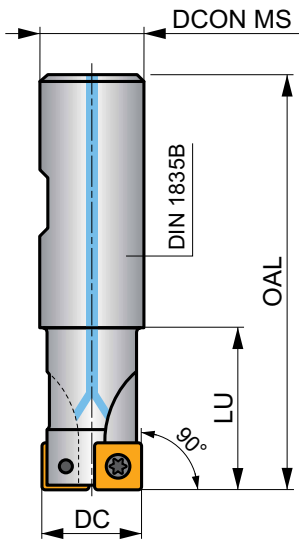
90° Square Shoulder Mill for SOMT 09 Insert with Internal Coolant

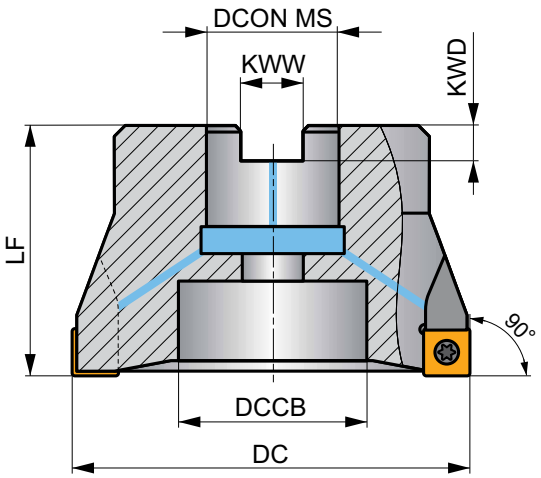
90° end and shell mills utilizing positive SOMT 09 inserts with APMX of .315 inches. Suitable for face, shoulder, slot and plunge milling. Available in Weldon and arbor style. Differential tooth pitch available. Body treated for longer tool life.

KAPR	90°
APMX	.315 in









h_m	.0027-.0086 in
h_m	.0027-.0070 in

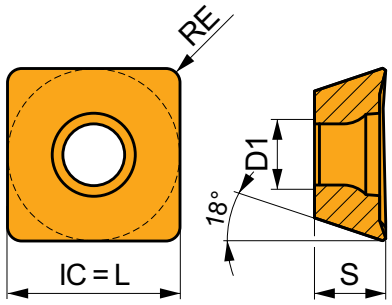
	Product	DC (inch)	OAL (inch)	DCON MS (inch)	DCCB (inch)	LU (inch)	LF (inch)	KWW (inch)	KWD (inch)	GAMF (°)	GAMP (°)			max.		lbs			MID
DIN 1835B	**100A3R128W100-ISSO09-C**	1.000	3.780	–	–	1.280	–	–	–	-12	6	3	–	21300	✓	.66	GI146	SQ400	6789775
	125A4R150W125-ISSO09-C	1.250	4.000	–	–	1.500	–	–	–	-10	10	4	✓	18800	✓	1.54	GI146	SQ400	6789776
ISO 6462 DIN 8030	**200A06R-IS90SO09-C**	2.000	–	.630	.630	–	1.575	.321	.193	-8.8	10	6	–	15100	✓	.66	GI146	SQ423	6789778
	250A07R-IS90SO09-C	2.500	–	.630	.630	–	1.575	.321	.193	-8.6	10	7	–	13400	✓	1.36	GI146	SQ423	6789779
	300A09R-IS90SO09-C	3.000	–	.827	.827	–	1.969	.382	.224	-8.1	10	9	–	11900	✓	2.14	GI146	SQ494	6789780

GI146	SOMT 09T3..

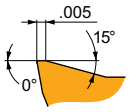
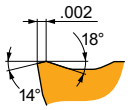
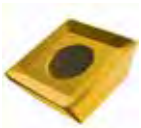
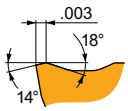
		Nm						
SQ400	US 3006-T09P	2.0	M 3	.236	–	–	Flag T09P	–
SQ423	US 3006-T09P	2.0	M 3	.236	D-T07P/T09P	FG-15	–	HS 037100
SQ494	US 3006-T09P	2.0	M 3	.236	D-T07P/T09P	FG-15	–	HS 050125

SOMT 09

	IC	D1	L	S
	(inch)	(inch)	(inch)	(inch)
09T3	.376	.138	.376	.156

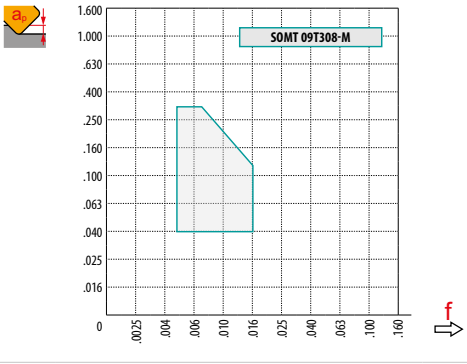


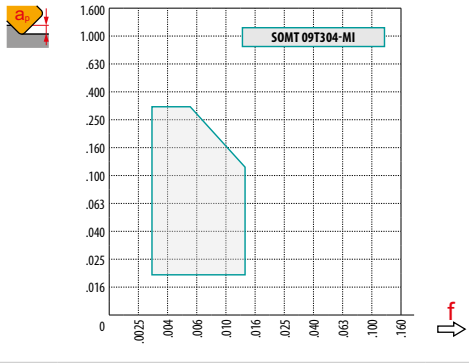
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Conditions are valid for setting angle 90°. Refer to our cutting conditions app for further options.

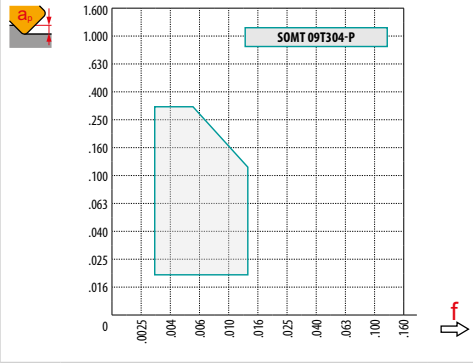
Product		RE	P			M			K			N			S			H			MID
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	
		(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	
																					
M geometry with positive design for medium machining.																					
SOMT 09T308-M	**8215**	.031	■ 902	.0055	.098	◪ 541	.0051	.098	◪ 853	.0055	.098	–	–	–	◪ 213	.0051	.079	–	–	–	6753419
	M5315	.031	◪ 1280	.0055	.098	–	–	–	◪ 1214	.0055	.098	–	–	–	–	–	–	–	–	–	6754629
	M8330	.031	■ 886	.0055	.098	■ 525	.0051	.098	◪ 837	.0055	.098	–	–	–	◪ 213	.0051	.079	–	–	–	7451031
	M8340	.031	■ 820	.0055	.098	■ 492	.0051	.098	◪ 771	.0055	.098	–	–	–	◪ 197	.0051	.079	–	–	–	6800889
	M9315	.031	■ 1247	.0055	.098	–	–	–	◪ 1181	.0055	.098	–	–	–	–	–	–	–	–	–	6754617
																					
MI geometry with stable positive design for medium machining.																					
SOMT 09T304-MI	**8215**	.016	■ 755	.0055	.098	◪ 443	.0051	.098	◪ 705	.0055	.098	–	–	–	◪ 180	.0039	.079	–	–	–	6753418
	M8310	.016	■ 837	.0055	.098	◪ 427	.0051	.098	◪ 787	.0055	.098	–	–	–	–	–	–	–	–	–	6756266
	M8330	.016	■ 755	.0055	.098	■ 443	.0051	.098	◪ 705	.0055	.098	–	–	–	◪ 180	.0039	.079	–	–	–	7451029
	M8340	.016	■ 689	.0055	.098	■ 410	.0051	.098	◪ 640	.0055	.098	–	–	–	◪ 164	.0039	.079	–	–	–	6800887
	M9315	.016	■ 1050	.0055	.098	–	–	–	◪ 984	.0055	.098	–	–	–	–	–	–	–	–	–	6754616
	M9340	.016	■ 869	.0055	.098	■ 509	.0051	.098	–	–	–	–	–	–	◪ 213	.0039	.079	–	–	–	6754603
																					
P geometry with highly positive design for medium machining.																					
SOMT 09T304-P	**M8330**	.016	■ 820	.0055	.098	◪ 492	.0051	.098	◪ 771	.0055	.098	–	–	–	◪ 197	.0039	.079	–	–	–	7451030
	M8340	.016	■ 755	.0055	.098	◪ 443	.0051	.098	◪ 705	.0055	.098	–	–	–	◪ 180	.0039	.079	–	–	–	6800888
	M9325	.016	■ 1050	.0055	.098	–	–	–	◪ 984	.0055	.098	–	–	–	–	–	–	–	–	–	6754577

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	.95	.85	.75	.85	.95	1.00	1.00	1.00	1.00
x.f	.64	.64	.64	.64	.64	.65	.65	.67	.68	.71	.72	.74	.79	1.00

	SOMT 09-M	SOMT 09-MI	SOMT 09-P
RE (mm)	.8	.4	.4
BS (inch)	.035	.051	.051







(inch)

max.
.236

(inch)

a_p	.039	.157	.315
1 f	.011	.007	.004

SSD12

P M K N S

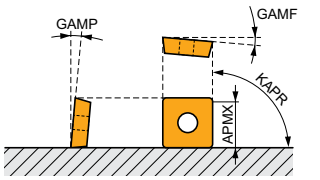
PRAMET

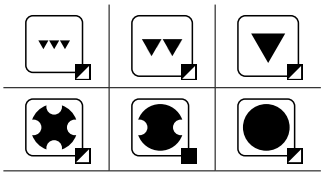
S

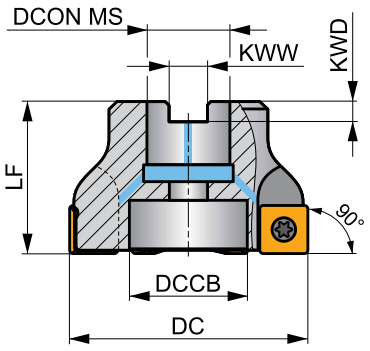
90° Square Shoulder Mill for SDMT 12 Insert with Internal Coolant

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. Body treated for longer tool life.

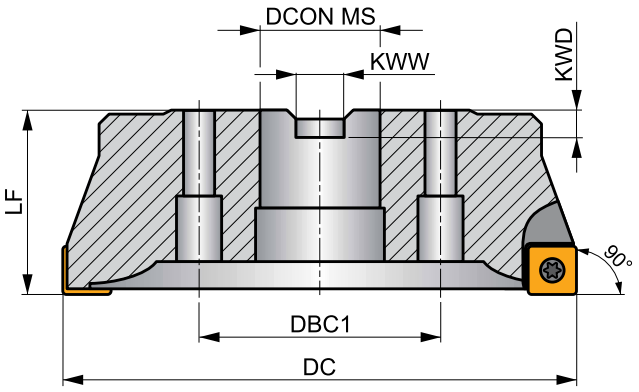
KAPR	90°
APMX	10.0 mm







DC 50 - 125 mm



DC 160 mm

h_m 0.09 - 0.25 mm

	Product	DC (mm)	LF (mm)	DCON MS (mm)	DCCB (mm)	DBC1 (mm)	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		lbs				MID
ISO 6462 DIN 8030	**50A05R-S90SD12-C**	50	40	22	18	–	10.4	6.3	-5	8	5	–	13000	✓	.75	GI057	SQ413	–	6756789
	63A06R-S90SD12-C	63	40	22	18	–	10.4	6.3	-5	8	6	–	11600	✓	1.16	GI057	SQ413	–	6756790
	80A06R-S90SD12-C	80	50	27	38	–	12.4	7	-5	8	6	–	10300	✓	2.56	GI057	SQ411	AC001	6760182
	100A08R-S90SD12-C	100	50	32	45	–	14.4	8	-5	8	8	–	9200	✓	3.73	GI057	SQ411	AC002	6760183
	125A09R-S90SD12-C	125	63	40	56	–	16.4	9	-5	8	9	–	8300	✓	7.03	GI057	SQ411	AC003	6760184
	160C12R-S90SD12	160	63	40	–	66.7	16.4	9	-5	8	12	–	7300	–	12.57	GI057	SQ411	–	6760185

GI057	SDMT 1205..

					Nm					
SQ411	SSN 100312	MS 3510	HXK 3.5	US 3511-T15	3.0	M 3.5	11	D-T07/T15	FG-15	–
SQ413	–	–	–	US 3511-T15	3.0	M 3.5	11	D-T07/T15	FG-15	HS 1030C

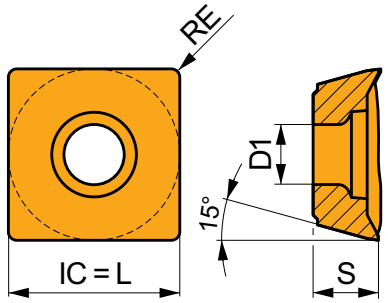
AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32

AC003	KS 2040	K.FMH40

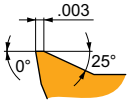
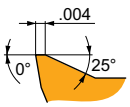
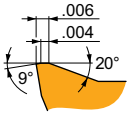
SDMT 12

PRAMET

	IC (inch)	D1 (inch)	L (inch)	S (inch)
1205	.500	.173	.500	.197

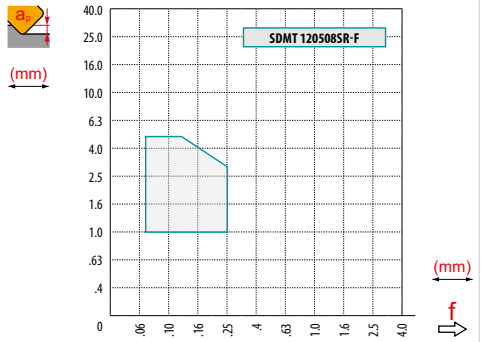


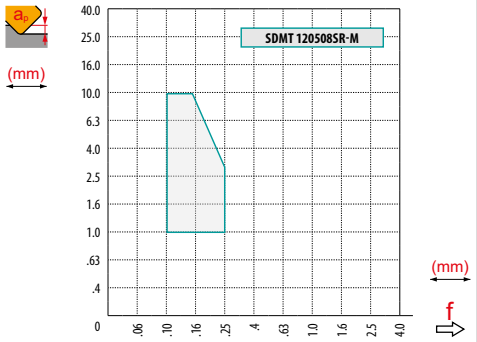
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

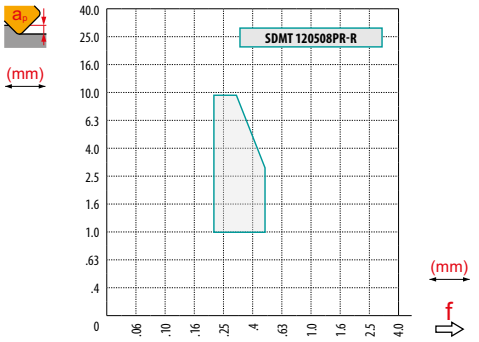
Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
																					
			F geometry with positive design for light to medium machining.																		
SDMT 120508SR-F	**M8330**	.031	902	.0039	.118	541	.0035	.118	853	.0039	.118	2707	.0047	.118	213	.0031	.094	–	–	–	7447978
	M8340	.031	820	.0039	.118	492	.0035	.118	771	.0039	.118	–	–	–	197	.0031	.094	–	–	–	6800851
																					
			M geometry with positive design for light to medium machining.																		
SDMT 120508SR-M	**8215**	.031	804	.0063	.138	476	.0055	.138	755	.0063	.138	–	–	–	197	.0043	.110	–	–	–	6753405
	M8330	.031	787	.0063	.138	459	.0055	.138	738	.0063	.138	–	–	–	197	.0043	.110	–	–	–	7447979
	M8340	.031	722	.0063	.138	427	.0055	.138	673	.0063	.138	–	–	–	180	.0043	.110	–	–	–	6800852
	M9325	.031	1001	.0063	.138	–	–	–	935	.0063	.138	–	–	–	–	–	–	–	–	–	6754562
																					
			R geometry with stable positive design for medium machining.																		
SDMT 120508PR-R	**M8330**	.031	722	.0098	.138	427	.0091	.138	673	.0098	.138	–	–	–	180	.0091	.110	–	–	–	7447977
	M8340	.031	640	.0098	.138	377	.0091	.138	607	.0098	.138	–	–	–	148	.0091	.110	–	–	–	6800850
	M9315	.031	919	.0098	.138	–	–	–	869	.0098	.138	–	–	–	–	–	–	–	–	–	6754610
	M9325	.031	869	.0098	.138	–	–	–	820	.0098	.138	–	–	–	–	–	–	–	–	–	6754561

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	.95	.85	.75	.85	.95	1.00	1.00	1.00	1.00
⇨ X.f	.64	.64	.64	.64	.64	.65	.65	.67	.68	.71	.72	.74	.79	1.00

	SDMT 12-F	SDMT 12-M	SDMT 12-R
RE	.8	.8	.8
BS	–	–	–







(mm)

max.
8.0

(mm)

a_p	1.0	5.0	10.0
1 ⇨ f	.39	.25	.14

J(T)-SAD11E

P M K N S

PRAMET

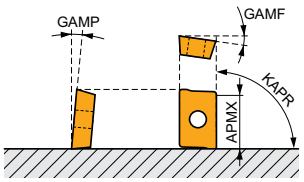
S

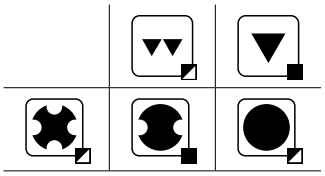
HELICAL AD11 Long Edge Mill with Internal Coolant

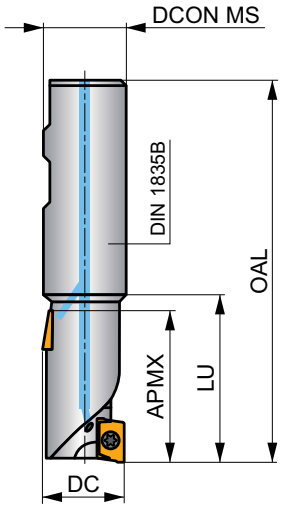
90° long edge end mill utilising positive ADMX 11 inserts with APMX of 36 up to 56 mm with internal coolant. Suitable for shoulder, slot, face or plunge milling. Available in weldon, morse taper and arbor style. Body treated for longer tool life.

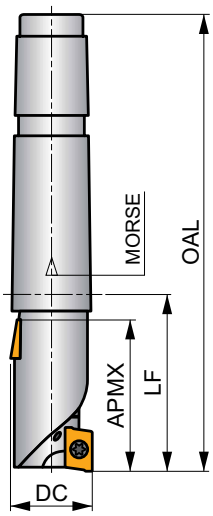
FORCE AD

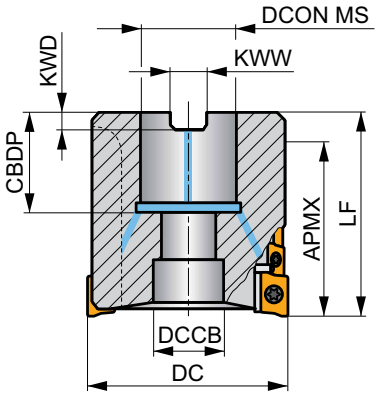
KAPR	90°
APMX	37.0 - 56.0 mm











h_m	0.05 - 0.08 mm
h_m	0.05 - 0.08 mm

	Product	DC (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	LU (mm)	LF (mm)	APMX (mm)	CBDP (mm)	CZC MS	GAMF (°)	GAMP (°)	NOF			max.		lbs			MID
DIN 1835B	**25J2R50B25-SAD11E38-C**	25	106	25	–	50	–	38.00	–	–	-10.5	5	2	8	–	24100	✓	.71	GI184	SQ210	6759643
	32J2R60B32-SAD11E47-C	32	120	32	–	60	–	47.00	–	–	-9	8	2	10	–	21300	✓	1.33	GI184	SQ210	6759644
	40J2R60B40-SAD11E47-C	40	130	40	–	60	–	47.00	–	–	-8.1	11	2	10	–	19100	✓	2.37	GI184	SQ210	6759645
	40J3R70B32-SAD11E56-C	40	130	32	–	70	–	56.00	–	–	-8.1	11	3	18	–	19100	✓	1.67	GI184	SQ210	6800796
	40J3R70B40-SAD11E56-C	40	140	40	–	70	–	56.00	–	–	-8.1	11	3	18	–	19100	✓	2.37	GI184	SQ210	6759646
DIN 228A	**25J2R55E03-SAD11E38-C**	25	136	–	–	–	55	38.00	–	3	-10.5	5	2	8	–	24100	✓	.71	GI184	SQ210	6759647
	32J2R65E04-SAD11E47-C	32	167.5	–	–	–	65	47.00	–	4	-9	8	2	10	–	21300	✓	1.57	GI184	SQ210	6759648
	40J3R75E04-SAD11E56-C	40	177.5	–	–	–	75	56.00	–	4	-8.1	11	3	18	–	19100	✓	1.87	GI184	SQ210	6759649
ISO 6462 DIN 8030	**50T03R-S90AD11E37-C**	50	–	22	18	–	58	37.00	21	–	-7.2	12	3	12	–	17000	✓	1.44	GI184	SQ903	6759650

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

J(T)-ISAD11E

P M K N S

PRAMET

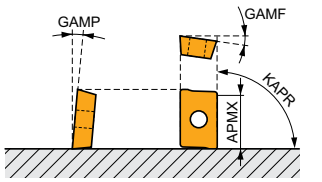
S

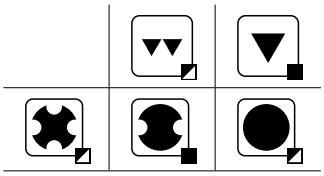
HELICAL AD11 Long Edge Mill with Internal Coolant

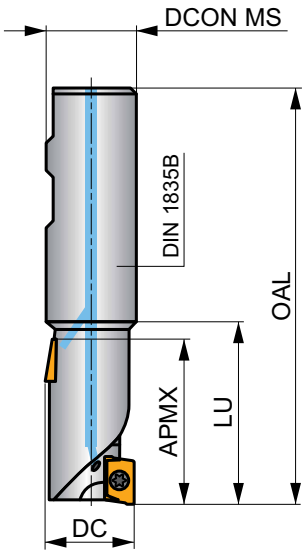
90° long edge end mill utilizing positive ADMX 11 inserts with APMX of 1.417 up to 2.205 inches with internal coolant. Suitable for shoulder, slot, face or plunge milling. Available in Weldon and arbor style. Body treated for longer tool life.

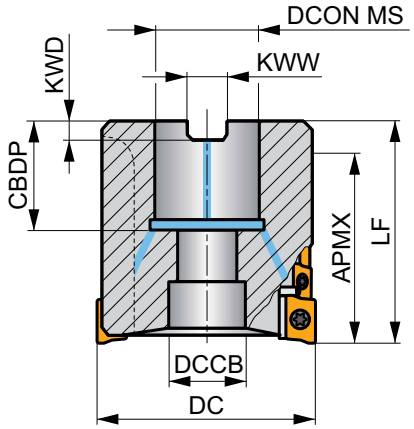
FORCE AD

KAPR	90°
APMX	1.496-2.205 in









h_m	.0019-.0031 in
h_m	.0019-.0031 in

	Product	DC (inch)	OAL (inch)	DCON MS (inch)	DCCB (inch)	LU (inch)	LF (inch)	APMX (inch)	CBDP (inch)	GAMF (°)	GAMP (°)	NOF			max.		lbs			MID
DIN 1835B	**100J2R197W100-ISAD11E150**	1.000	4.508	1.000	–	1.969	–	1.496	–	-10.5	5	2	8	–	24100	✓	.66	GI184	SQ210	6790020
DIN 1835B	**125J2R236W125-ISAD11E185**	1.250	4.902	1.250	–	2.362	–	1.850	–	-9	8	2	10	–	21300	✓	1.32	GI184	SQ210	6790021
DIN 1835B	**150J3R276W125-ISAD11E220**	1.500	5.295	1.250	–	2.756	–	2.205	–	-8.1	11	3	18	–	19100	✓	2.21	GI184	SQ210	6790022
ISO 6462 DIN 8030	**200T03R-IS90AD11E146-C**	2.000	–	.750	.630	–	2.362	1.457	.827	-7.2	12	3	12	–	1700	✓	1.10	GI184	SQ221	6790023

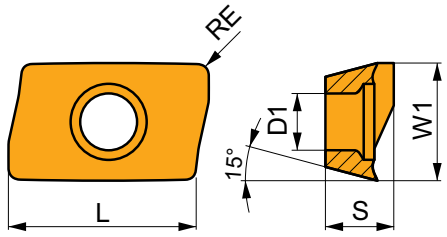
GI184	ADMX 11T3..	ADEX 11T3..-FA

		Nm						
SQ210	US 2506-T07P	1.2	M 2.5	.248	–	–	Flag T07P	–
SQ221	US 2506-T07P	1.2	M 2.5	.248	D-T07P/T09P	FG-15	–	HS 037100

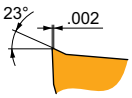
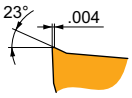
ADMX 11

PRAMET

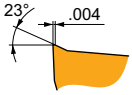
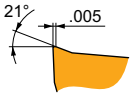
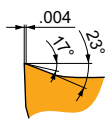
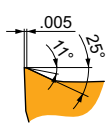
	W1	D1	L	S
	(inch)	(inch)	(inch)	(inch)
11T3	.257	.114	.433	.156



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

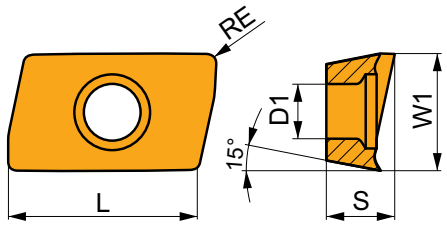
Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
																					
			F geometry with very sharp positive design for light machining.																		
ADMX 11T304SR-F	**8215**	.016	804	.0039	.079	476	.0035	.079	755	.0039	.079	2411	.0047	.079	197	.0031	.063	–	–	–	6753383
	M8330	.016	787	.0039	.079	459	.0035	.079	738	.0039	.079	2362	.0047	.079	197	.0031	.063	–	–	–	7447803
	M8340	.016	722	.0039	.079	427	.0035	.079	673	.0039	.079	–	–	–	180	.0031	.063	–	–	–	6800784
	M9340	.016	935	.0039	.079	558	.0035	.079	–	–	–	–	–	–	230	.0031	.063	–	–	–	6754588
ADMX 11T308SR-F	**8215**	.031	951	.0039	.079	558	.0035	.079	902	.0039	.079	2854	.0047	.079	230	.0031	.063	–	–	–	6753386
	M8330	.031	935	.0039	.079	558	.0035	.079	886	.0039	.079	2805	.0047	.079	230	.0031	.063	–	–	–	7447806
	M8340	.031	853	.0039	.079	509	.0035	.079	804	.0039	.079	–	–	–	213	.0031	.063	–	–	–	6800787
	M9340	.031	1115	.0039	.079	656	.0035	.079	–	–	–	–	–	–	279	.0031	.063	–	–	–	6754590
																					
			M geometry with positive design for light to medium machining.																		
ADMX 11T302SR-M	**M8330**	.008	623	.0059	.157	361	.0055	.157	591	.0059	.157	–	–	–	148	.0047	.126	–	–	–	7447802
	M8340	.008	558	.0059	.157	328	.0055	.157	525	.0059	.157	–	–	–	131	.0047	.126	–	–	–	6800753
ADMX 11T304SR-M	**8215**	.016	673	.0059	.157	394	.0055	.157	623	.0059	.157	–	–	–	164	.0047	.126	–	–	–	6753384
	M8310	.016	722	.0059	.157	361	.0055	.157	673	.0059	.157	–	–	–	–	–	–	–	–	–	6922517
	M8330	.016	673	.0059	.157	394	.0055	.157	623	.0059	.157	–	–	–	164	.0047	.126	–	–	–	7447804
	M8340	.016	607	.0059	.157	361	.0055	.157	574	.0059	.157	–	–	–	148	.0047	.126	–	–	–	6800785
	M9325	.016	837	.0059	.157	–	–	–	787	.0059	.157	–	–	–	–	–	–	–	–	–	6754538
	M9340	.016	771	.0059	.157	459	.0055	.157	–	–	–	–	–	–	180	.0047	.126	–	–	–	6754589
ADMX 11T308SR-M	**8215**	.031	804	.0059	.157	476	.0055	.157	755	.0059	.157	–	–	–	197	.0047	.126	–	–	–	6753387
	M5315	.031	1099	.0059	.157	–	–	–	1033	.0059	.157	–	–	–	–	–	–	–	–	–	6754622
	M8310	.031	869	.0059	.157	443	.0055	.157	820	.0059	.157	–	–	–	–	–	–	–	–	–	6922519
	M8330	.031	804	.0059	.157	476	.0055	.157	755	.0059	.157	–	–	–	197	.0047	.126	–	–	–	7447807
	M8340	.031	722	.0059	.157	427	.0055	.157	673	.0059	.157	–	–	–	180	.0047	.126	–	–	–	6800788
	M9315	.031	1083	.0059	.157	–	–	–	1017	.0059	.157	–	–	–	–	–	–	–	–	–	6754550
	M9325	.031	1001	.0059	.157	–	–	–	935	.0059	.157	–	–	–	–	–	–	–	–	–	6754540
	M9340	.031	902	.0059	.157	541	.0055	.157	–	–	–	–	–	–	213	.0047	.126	–	–	–	6754591
ADMX 11T310SR-M	**M8330**	.039	837	.0059	.157	492	.0055	.157	787	.0059	.157	–	–	–	197	.0047	.126	–	–	–	7447808
	M8340	.039	755	.0059	.157	443	.0055	.157	705	.0059	.157	–	–	–	180	.0047	.126	–	–	–	6800755
ADMX 11T312SR-M	**8215**	.047	837	.0059	.157	492	.0055	.157	787	.0059	.157	–	–	–	197	.0047	.126	–	–	–	6800757
	M8330	.047	837	.0059	.157	492	.0055	.157	787	.0059	.157	–	–	–	197	.0047	.126	–	–	–	7447809
	M8340	.047	755	.0059	.157	443	.0055	.157	705	.0059	.157	–	–	–	180	.0047	.126	–	–	–	6800758

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

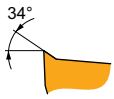
Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
																					
			M geometry with positive design for light to medium machining.																		
ADMX 11T316SR-M	**8215**	.063	■ 886	.0059	.157	◪ 525	.0055	.157	■ 837	.0059	.157	–	–	–	◪ 213	.0047	.126	–	–	–	6753388
	M6330	.063	■ 755	.0059	.157	■ 541	.0055	.157	–	–	–	–	–	–	◪ 213	.0047	.126	–	–	–	7601278
	M8310	.063	■ 968	.0059	.157	◪ 492	.0055	.157	■ 919	.0059	.157	–	–	–	–	–	–	–	–	–	6922520
	M8330	.063	■ 886	.0059	.157	■ 525	.0055	.157	■ 837	.0059	.157	–	–	–	◪ 213	.0047	.126	–	–	–	7447811
	M8340	.063	■ 787	.0059	.157	■ 459	.0055	.157	◪ 738	.0059	.157	–	–	–	◪ 197	.0047	.126	–	–	–	6800789
ADMX 11T320SR-M	**M6330**	.079	■ 787	.0059	.157	■ 558	.0055	.157	–	–	–	–	–	–	◪ 230	.0047	.126	–	–	–	7601279
	M8330	.079	■ 919	.0059	.157	■ 541	.0055	.157	■ 869	.0059	.157	–	–	–	◪ 230	.0047	.126	–	–	–	7447812
	M8340	.079	■ 837	.0059	.157	■ 492	.0055	.157	◪ 787	.0059	.157	–	–	–	◪ 197	.0047	.126	–	–	–	6800770
ADMX 11T325SR-M	**M6330**	.098	■ 787	.0059	.157	■ 558	.0055	.157	–	–	–	–	–	–	◪ 230	.0047	.126	–	–	–	7601330
	M8340	.098	■ 837	.0059	.157	■ 492	.0055	.157	◪ 787	.0059	.157	–	–	–	◪ 197	.0047	.126	–	–	–	6800772
ADMX 11T330SR-M	**M6330**	.118	■ 787	.0059	.157	■ 558	.0055	.157	–	–	–	–	–	–	◪ 230	.0047	.126	–	–	–	7601331
	M8330	.118	■ 919	.0059	.157	■ 541	.0055	.157	■ 869	.0059	.157	–	–	–	◪ 230	.0047	.126	–	–	–	7447814
	M8340	.118	■ 837	.0059	.157	■ 492	.0055	.157	◪ 787	.0059	.157	–	–	–	◪ 197	.0047	.126	–	–	–	6800774
																					
			R geometry with positive design for machining conditions in less stable conditions.																		
ADMX 11T308PR-R	**8215**	.031	■ 755	.0071	.157	◪ 443	.0063	.157	■ 705	.0071	.157	–	–	–	◪ 180	.0063	.126	◪ 148	.0047	.028	6753385
	M5315	.031	◪ 1017	.0071	.157	–	–	–	■ 951	.0071	.157	–	–	–	–	–	–	◪ 197	.0051	.028	6754621
	M8310	.031	■ 820	.0071	.157	◪ 410	.0063	.157	■ 771	.0071	.157	–	–	–	–	–	–	◪ 164	.0047	.028	6922518
	M8330	.031	■ 755	.0071	.157	◪ 443	.0063	.157	■ 705	.0071	.157	–	–	–	◪ 180	.0063	.126	◪ 148	.0047	.028	7447805
	M8340	.031	■ 689	.0071	.157	◪ 410	.0063	.157	◪ 640	.0071	.157	–	–	–	◪ 164	.0063	.126	–	–	–	6800786
	M9315	.031	■ 1017	.0071	.157	–	–	–	■ 951	.0071	.157	–	–	–	–	–	–	◪ 197	.0051	.028	6754549
	M9325	.031	■ 951	.0071	.157	–	–	–	■ 902	.0071	.157	–	–	–	–	–	–	◪ 180	.0051	.028	6754539
ADMX 11T316PR-R	**8215**	.063	■ 837	.0071	.157	◪ 492	.0063	.157	■ 787	.0071	.157	–	–	–	◪ 197	.0063	.126	◪ 164	.0047	.028	6800775
	M8330	.063	■ 837	.0071	.157	◪ 492	.0063	.157	■ 787	.0071	.157	–	–	–	◪ 197	.0063	.126	◪ 164	.0047	.028	7447810
	M9325	.063	■ 1050	.0071	.157	–	–	–	■ 984	.0071	.157	–	–	–	–	–	–	◪ 197	.0047	.028	6800778
																					
			MF geometry with highly positive design for light to finish machining.																		
ADMX 11T304SR-MF	**M6330**	.016	■ 705	.0031	.098	■ 492	.0028	.098	–	–	–	–	–	–	■ 197	.0024	.079	–	–	–	6925505
	M8340	.016	■ 722	.0031	.098	■ 427	.0028	.098	–	–	–	–	–	–	■ 180	.0024	.079	–	–	–	6925538
ADMX 11T308SR-MF	**M6330**	.031	■ 837	.0031	.098	■ 591	.0028	.098	–	–	–	–	–	–	■ 246	.0024	.079	–	–	–	6925506
	M8340	.031	■ 869	.0031	.098	■ 509	.0028	.098	–	–	–	–	–	–	■ 213	.0024	.079	–	–	–	6925539
																					
			MM geometry with highly positive design for light to medium machining.																		
ADMX 11T304SR-MM	**M6330**	.016	■ 607	.0055	.098	■ 427	.0051	.098	–	–	–	–	–	–	■ 180	.0043	.079	–	–	–	6925507
	M8340	.016	■ 640	.0055	.098	■ 377	.0051	.098	–	–	–	–	–	–	■ 148	.0043	.079	–	–	–	6925540
ADMX 11T308SR-MM	**M6330**	.031	■ 738	.0055	.098	■ 509	.0051	.098	–	–	–	–	–	–	■ 213	.0043	.079	–	–	–	6925508
	M8340	.031	■ 771	.0055	.098	■ 459	.0051	.098	–	–	–	–	–	–	■ 180	.0043	.079	–	–	–	6925541
	M8345	.031	■ 623	.0055	.098	■ 361	.0051	.098	–	–	–	–	–	–	■ 148	.0043	.079	–	–	–	7051437
	M9340	.031	■ 984	.0055	.098	■ 591	.0051	.098	–	–	–	–	–	–	■ 246	.0043	.079	–	–	–	7051465
ADMX 11T312SR-MM	**M6330**	.047	■ 771	.0055	.098	■ 541	.0051	.098	–	–	–	–	–	–	■ 230	.0043	.079	–	–	–	6925509
	M8340	.047	■ 804	.0055	.098	■ 476	.0051	.098	–	–	–	–	–	–	■ 197	.0043	.079	–	–	–	6925542

ADEX 11-FA

	W1	D1	L	S
	(inch)	(inch)	(inch)	(inch)
11T3	.254	.114	.382	.154



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

Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
		(inch)																			
																					
			FA geometry with highly positive design for fine-finish to medium machining.																		
ADEX 11T304FR-FA	**HF7**	.016	–	–	–	–	–	–	–	–	–	■ 689	.0118	.197	–	–	–	–	–	–	6753137
	M0315	.016	–	–	–	–	–	–	–	–	–	■ 1575	.0118	.197	–	–	–	–	–	–	6800782
ADEX 11T308FR-FA	**HF7**	.031	–	–	–	–	–	–	–	–	–	■ 787	.0118	.197	–	–	–	–	–	–	6753138
	M0315	.031	–	–	–	–	–	–	–	–	–	■ 1870	.0118	.197	–	–	–	–	–	–	6800783
ADEX 11T312FR-FA	**HF7**	.047	–	–	–	–	–	–	–	–	–	■ 837	.0118	.197	–	–	–	–	–	–	7155957
ADEX 11T316FR-FA	**HF7**	.063	–	–	–	–	–	–	–	–	–	■ 886	.0071	.197	–	–	–	–	–	–	6754620

a_e/DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	.89	.81	.76	.73	.71	.70	.67	.65	.63	.62	.60	.60	.60	.45

(mm)

$a_{e\,max}$	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	.25	.40	.16	.26	.12	.19	.10	.15	.09	.14	.07	.12	.07	.11
32	.28	.45	.18	.29	.13	.21	.11	.17	.09	.15	.08	.13	.07	.12
40	.32	.51	.20	.32	.14	.23	.12	.19	.10	.17	.09	.14	.08	.13
50	.35	.57	.23	.36	.16	.26	.13	.21	.12	.19	.10	.15	.09	.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	.08	.13	–	–	–	–	–	–
32	.07	.11	.08	.13	–	–	–	–
40	.07	.12	.07	.11	.08	.13	–	–
50	.08	.13	.07	.12	.07	.11	.08	.13

	ADMX 11-F		ADMX 11-M									ADMX 11-R		ADMX 11-MF		ADMX 11-MM			ADEX 11-FA			
RE (mm)	.4	.8	.2	.4	.8	1.0	1.2	1.6	2.0	2.5	3.0	.8	1.6	.4	.8	.4	.8	1.2	.4	.8	1.2	1.6
BS (mm)	1.89	1.48	2.09	1.89	1.48	1.27	1.08	.68	1.61	1.13	.66	1.48	.68	1.89	1.48	1.89	1.48	1.08	1.77	1.39	1.0	.62

(mm)

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

(mm)

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

(mm)

max

4.5

J(T)-SAD16E

P M K N S

PRAMET

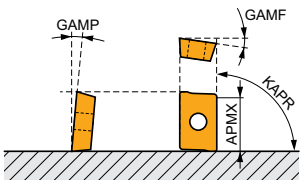
S

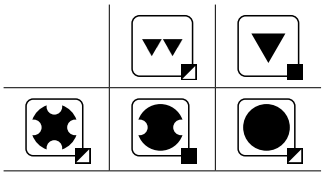
HELICAL AD16 Long Edge Mill with Internal Coolant

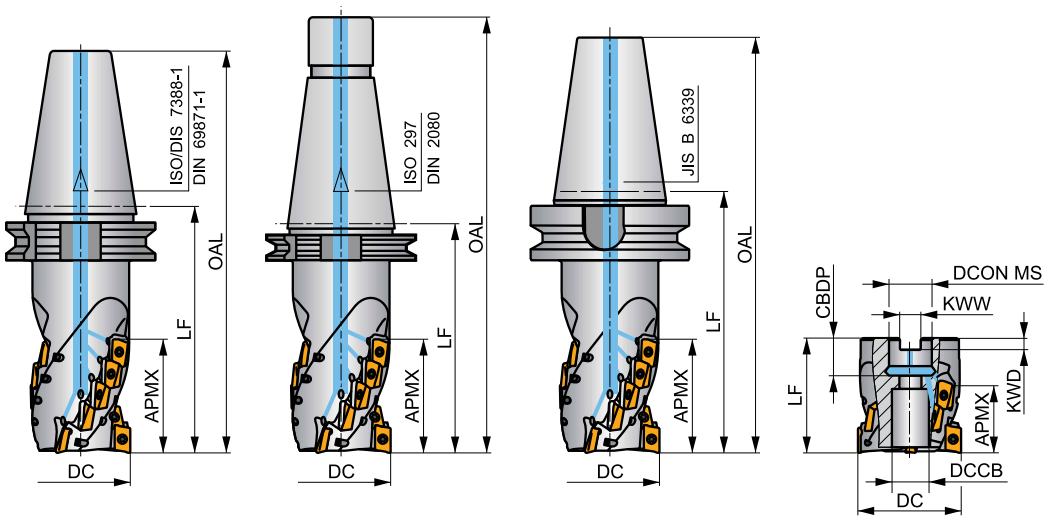
90° long edge end mill utilising positive AD.. 16 inserts with APMX of 40 up to 108 mm with internal coolant. Suitable for shoulder, slot, face or plunge milling. Available in arbor, DIN 69871, BT and DIN 2080 taper style, with or without differential tooth pitch. Body treated for longer tool life.

FORCE AD

KAPR	90°
APMX	40.0 - 108.0 mm







h_m	0.08 - 0.10 mm
h_m	0.08 - 0.10 mm

	Product	DC (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	LF (mm)	APMX (mm)	CBDP (mm)	CZC MS	GAMF (°)	GAMP (°)	NOF			max.		lbs			MID
ISO/DIS 7388-1	50J3R100H50-SAD16E54-C	50	202	–	–	100	54.00	–	50	-6	12	3	12	–	13200	✓	8.98	GI282	SQ031	6922377
	50J3R140H50-SAD16E80-C	50	242	–	–	140	80.00	–	50	-6	12	3	18	–	13200	✓	9.65	GI282	SQ031	6922379
	63J3R140H50-SAD16E68-C	63	242	–	–	140	68.00	–	50	-6	12	3	15	–	11700	✓	11.78	GI282	SQ031	6922412
	63J3R155H50-SAD16E95-C	63	257	–	–	155	95.00	–	50	-6	12	3	21	–	11700	✓	11.97	GI282	SQ031	6922414
	80J4R165H50-SAD16E108-C	80	257	–	–	165	108.00	–	50	-6	12	4	32	✓	10400	✓	16.25	GI282	SQ031	6922419
ISO 297	50J3R140G50-SAD16E80-C	50	267	–	–	140	80.00	–	50	-6	12	3	18	–	13200	✓	9.87	GI282	SQ031	6922378
	63J3R155G50-SAD16E95-C	63	282	–	–	155	95.00	–	50	-6	12	3	21	–	11700	✓	12.18	GI282	SQ031	6922413
	80J4R165G50-SAD16E108-C	80	292	–	–	165	108.00	–	50	-6	12	4	32	✓	10400	✓	16.57	GI282	SQ031	6922418
JIS B 6339	50J3R140X50-SAD16E68-C	50	242	–	–	140	68.00	–	50	-6	12	3	15	–	13200	✓	11.64	GI282	SQ031	6922410
	63J3R155X50-SAD16E80-C	63	257	–	–	155	80.00	–	50	-6	12	3	18	–	11700	✓	13.65	GI282	SQ031	6922415
	80J4R165X50-SAD16E95-C	80	267	–	–	165	95.00	–	50	-6	12	4	28	✓	10400	✓	17.29	GI282	SQ031	6922420
ISO 6462 DIN 8030	50T03R-S90AD16E40-C	50	–	22	18	70	40.00	21	–	-6	12	3	9	–	13200	✓	1.40	GI282	SQ913	6922411
	63T04R-S90AD16E40-C	63	–	27	22	70	40.00	22	–	-6	12	4	12	✓	11700	✓	2.51	GI282	SQ914	6922416
	63T04R-S90AD16E68-C	63	–	27	22	100	68.00	22	–	-6	12	4	20	✓	11700	✓	4.10	GI282	SQ914	6922417
	80T04R-S90AD16E55-C	80	–	32	30	85	55.00	25	–	-6	12	4	16	✓	10400	✓	5.65	GI282	SQ915	6922421
	80T04R-S90AD16E80-C	80	–	32	30	115	80.00	25	–	-6	12	4	24	✓	10400	✓	7.00	GI282	SQ915	6922422
	100T05R-S90AD16E80-C	100	–	40	36	120	80.00	30	–	-6	12	5	30	✓	9300	✓	11.71	GI282	SQ916	6922376

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

							
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

J(T)-ISAD16E

P M K N S

PRAMET

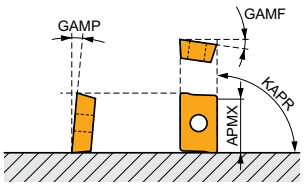
S

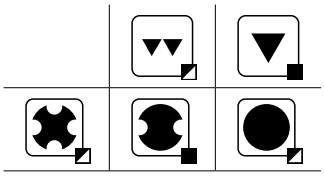
HELICAL AD16 Long Edge Mill with Internal Coolant

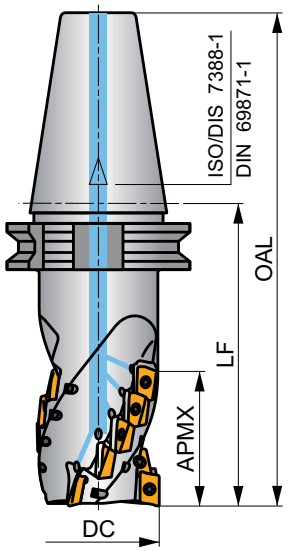
90° long edge end mill utilizing positive AD.. 16 inserts with APMX of 1.575 up to 4.252 inches with internal coolant. Suitable for shoulder, slot, face or plunge milling. Available in cylindrical and arbor, with or without differential tooth pitch. Body treated for longer tool life.

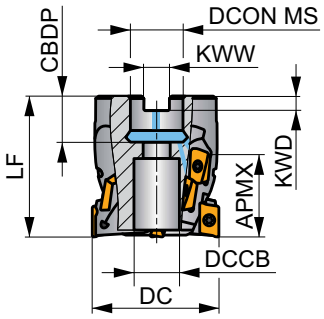
FORCE AD

KAPR	90°
APMX	1.575 - 4.252 in









h_m	.003 - .004 in
h_m	.003 - .004 in

	Product	DC (inch)	OAL (inch)	DCON MS (inch)	DCCB (inch)	LF (inch)	APMX (inch)	CBDP (inch)	CZC MS	GAMF (°)	GAMP (°)	NOF			max.		lbs			MID
ANSI B5.50	**200J3R394CA50-ISAD16E213**	2.000	7.940	–	–	3.940	2.160	–	50	-7	11	3	12	–	13200	✓	7.25	GI282	SQ031	7276988
	200J3R551CA50-ISAD16E315	2.000	9.520	–	–	5.510	3.220	–	50	-7	11	3	18	–	13200	✓	9.79	GI282	SQ031	7276989
	250J3R551CA50-ISAD16E268	2.500	9.520	–	–	5.510	2.690	–	50	-6	12	3	15	–	11700	✓	9.90	GI282	SQ031	7277020
	250J3R610CA50-ISAD16E374	2.500	9.520	–	–	5.510	3.740	–	50	-6	12	3	15	–	11700	✓	10.14	GI282	SQ031	7277021
	300J4R650CA50-ISAD16E425	3.000	10.500	–	–	6.500	4.270	–	50	-5	12	4	32	✓	10400	✓	13.47	GI282	SQ031	7277022
ISO 6462 DIN 8030	**200T03R-IS90AD16E163-C**	2.000	2.760	.750	.630	–	1.630	.79	–	-7	11	3	9	–	13200	✓	2.59	GI282	SQ056	7276982
	250T04R-IS90AD16E163-C	2.500	2.760	1.000	.830	–	1.630	.91	–	-6	12	4	12	✓	11700	✓	3.92	GI282	SQ054	7276983
	250T04R-IS90AD16E268-C	2.500	3.940	1.000	.830	–	2.690	.91	–	-6	12	4	20	✓	11700	✓	4.51	GI282	SQ054	7276984
	300T04R-IS90AD16E217-C	3.000	3.350	1.250	1.060	–	2.160	1.02	–	-5	12	4	16	✓	10400	✓	5.42	GI282	SQ057	7276985
	300T04R-IS90AD16E315-C	3.000	4.520	1.250	1.060	–	3.220	1.02	–	-5	12	4	24	✓	10400	✓	6.67	GI282	SQ057	7276986
	400T05R-IS90AD16E315-C	4.000	4.720	1.500	1.260	–	3.220	1	–	-4	12	5	30	✓	9300	✓	10.71	GI282	SQ055	7276987

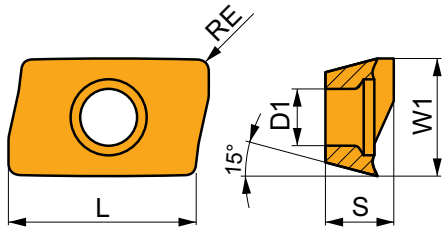
GI282	ADMX 1606..	ADEX 1606..-FA	ADEX 1606..-FM

		Nm					
SQ031	US 4011-T15P	3.5	M 4	.417	D-T08P/T15P	FG-15	–
SQ054	US 4011-T15P	3.5	M 4	.417	D-T08P/T15P	FG-15	HS 050125
SQ055	US 4011-T15P	3.5	M 4	.417	D-T08P/T15P	FG-15	HS 075125
SQ056	US 4011-T15P	3.5	M 4	.417	D-T08P/T15P	FG-15	HS 037100
SQ057	US 4011-T15P	3.5	M 4	.417	D-T08P/T15P	FG-15	HS 062125

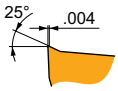
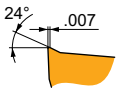
ADMX 16

PRAMET

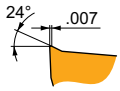
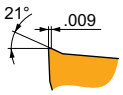
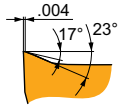
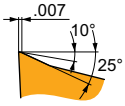
	W1	D1	L	S
	(inch)	(inch)	(inch)	(inch)
1606	.392	.177	.630	.246



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

Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
																					
			F geometry with highly positive design for light to medium machining.																		
ADMX 160608SR-F	**8215**	.031	951	.0039	.079	558	.0035	.079	902	.0039	.079	2854	.0047	.079	230	.0028	.063	–	–	–	6753390
	M8310	.031	1050	.0039	.079	525	.0035	.079	984	.0039	.079	–	–	–	–	–	–	–	–	–	6922522
	M8330	.031	935	.0039	.079	558	.0035	.079	886	.0039	.079	2805	.0047	.079	230	.0028	.063	–	–	–	7447817
	M8340	.031	853	.0039	.079	509	.0035	.079	804	.0039	.079	–	–	–	213	.0028	.063	–	–	–	6800810
	M9340	.031	1115	.0039	.079	656	.0035	.079	–	–	–	–	–	–	279	.0028	.063	–	–	–	6754592
																					
			M geometry with positive design for light to medium machining.																		
ADMX 160604SR-M	**8215**	.016	623	.0071	.197	361	.0063	.197	591	.0071	.197	–	–	–	148	.0051	.157	–	–	–	6838387
	M8330	.016	623	.0071	.197	361	.0063	.197	591	.0071	.197	–	–	–	148	.0051	.157	–	–	–	7447815
	M8340	.016	558	.0071	.197	328	.0063	.197	525	.0071	.197	–	–	–	131	.0051	.157	–	–	–	6838389
ADMX 160608SR-M	**8215**	.031	738	.0071	.197	443	.0063	.197	689	.0071	.197	–	–	–	180	.0051	.157	–	–	–	6753391
	M5315	.031	1001	.0071	.197	–	–	–	935	.0071	.197	–	–	–	–	–	–	–	–	–	6754624
	M8310	.031	820	.0071	.197	410	.0063	.197	771	.0071	.197	–	–	–	–	–	–	–	–	–	6922523
	M8330	.031	738	.0071	.197	443	.0063	.197	689	.0071	.197	–	–	–	180	.0051	.157	–	–	–	7447818
	M8340	.031	673	.0071	.197	394	.0063	.197	623	.0071	.197	–	–	–	164	.0051	.157	–	–	–	6800811
	M9315	.031	1001	.0071	.197	–	–	–	935	.0071	.197	–	–	–	–	–	–	–	–	–	6754547
	M9325	.031	919	.0071	.197	–	–	–	869	.0071	.197	–	–	–	–	–	–	–	–	–	6754544
	M9340	.031	837	.0071	.197	492	.0063	.197	–	–	–	–	–	–	197	.0051	.157	–	–	–	6754593
ADMX 160616SR-M	**8215**	.063	820	.0071	.197	492	.0063	.197	771	.0071	.197	–	–	–	197	.0051	.157	–	–	–	6753392
	M8310	.063	902	.0071	.197	459	.0063	.197	853	.0071	.197	–	–	–	–	–	–	–	–	–	6922524
	M8330	.063	820	.0071	.197	492	.0063	.197	771	.0071	.197	–	–	–	197	.0051	.157	–	–	–	7447820
	M8340	.063	738	.0071	.197	443	.0063	.197	689	.0071	.197	–	–	–	180	.0051	.157	–	–	–	6800812
	M9325	.063	1017	.0071	.197	–	–	–	951	.0071	.197	–	–	–	–	–	–	–	–	–	6754545

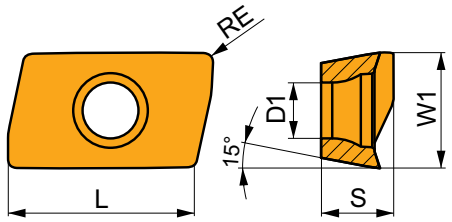
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
																					
M geometry with positive design for light to medium machining.																					
ADMX 160620SR-M	**M8330**	.079	■ 869	.0071	.197	■ 509	.0063	.197	■ 820	.0071	.197	–	–	–	◪ 213	.0051	.157	–	–	–	7447821
	M8340	.079	■ 787	.0071	.197	■ 459	.0063	.197	◪ 738	.0071	.197	–	–	–	◪ 197	.0051	.157	–	–	–	6838401
ADMX 160630SR-M	**M8330**	.118	■ 869	.0071	.197	■ 509	.0063	.197	■ 820	.0071	.197	–	–	–	◪ 213	.0051	.157	–	–	–	7447822
	M8340	.118	■ 787	.0071	.197	■ 459	.0063	.197	◪ 738	.0071	.197	–	–	–	◪ 197	.0051	.157	–	–	–	6838403
ADMX 160632SR-M	**M6330**	.126	■ 738	.0071	.197	■ 509	.0063	.197	–	–	–	–	–	–	◪ 213	.0051	.157	–	–	–	7601333
	M8330	.126	■ 869	.0071	.197	■ 509	.0063	.197	■ 820	.0071	.197	–	–	–	◪ 213	.0051	.157	–	–	–	7447823
	M8340	.126	■ 787	.0071	.197	■ 459	.0063	.197	◪ 738	.0071	.197	–	–	–	◪ 197	.0051	.157	–	–	–	6800813
	M9325	.126	■ 1066	.0071	.197	–	–	–	■ 1001	.0071	.197	–	–	–	–	–	–	–	–	–	6754546
ADMX 160640SR-M	**M8330**	.157	■ 869	.0071	.197	■ 509	.0063	.197	■ 820	.0071	.197	–	–	–	◪ 213	.0051	.157	–	–	–	7447824
	M8340	.157	■ 787	.0071	.197	■ 459	.0063	.197	◪ 738	.0071	.197	–	–	–	◪ 197	.0051	.157	–	–	–	6838405
ADMX 160650SR-M	**M8330**	.197	■ 869	.0071	.197	■ 509	.0063	.197	■ 820	.0071	.197	–	–	–	◪ 213	.0051	.157	–	–	–	7447825
	M8340	.197	■ 787	.0071	.197	■ 459	.0063	.197	◪ 738	.0071	.197	–	–	–	◪ 197	.0051	.157	–	–	–	6838407
																					
R geometry with positive design for medium to less stable machining conditions.																					
ADMX 160608PR-R	**8215**	.031	■ 673	.0098	.236	◪ 394	.0091	.236	■ 623	.0098	.236	–	–	–	◪ 164	.0079	.189	◪ 131	.0063	.043	6753389
	M5315	.031	◪ 853	.0098	.236	–	–	–	■ 804	.0098	.236	–	–	–	–	–	–	◪ 164	.0063	.043	6754623
	M8310	.031	■ 722	.0098	.236	◪ 361	.0091	.236	■ 673	.0098	.236	–	–	–	–	–	–	◪ 131	.0063	.043	6922521
	M8330	.031	■ 673	.0098	.236	◪ 394	.0091	.236	■ 623	.0098	.236	–	–	–	◪ 164	.0079	.189	◪ 131	.0063	.043	7447816
	M8340	.031	■ 623	.0098	.236	◪ 361	.0091	.236	◪ 591	.0098	.236	–	–	–	◪ 148	.0079	.189	–	–	–	6800799
	M9315	.031	■ 869	.0098	.236	–	–	–	■ 820	.0098	.236	–	–	–	–	–	–	◪ 164	.0063	.043	6754548
	M9325	.031	■ 820	.0098	.236	–	–	–	■ 771	.0098	.236	–	–	–	–	–	–	◪ 164	.0063	.043	6754543
ADMX 160616PR-R	**M8330**	.063	■ 738	.0098	.236	◪ 443	.0091	.236	■ 689	.0098	.236	–	–	–	◪ 180	.0079	.189	◪ 148	.0063	.043	7447819
	M8340	.063	■ 689	.0098	.236	◪ 410	.0091	.236	◪ 640	.0098	.236	–	–	–	◪ 164	.0079	.189	–	–	–	6838413
	M9315	.063	■ 968	.0098	.236	–	–	–	■ 919	.0098	.236	–	–	–	–	–	–	◪ 180	.0063	.043	6838409
																					
MF geometry with highly positive design for finish machining.																					
ADMX 160608SR-MF	**M6330**	.031	■ 705	.0031	.157	■ 492	.0028	.157	–	–	–	–	–	–	■ 197	.0024	.126	–	–	–	6925520
	M8340	.031	■ 738	.0031	.157	■ 443	.0028	.157	–	–	–	–	–	–	■ 180	.0024	.126	–	–	–	6925543
	M9340	.031	■ 1001	.0031	.157	■ 591	.0028	.157	–	–	–	–	–	–	■ 246	.0024	.126	–	–	–	7051434
																					
MM geometry with highly positive design for light to medium machining.																					
ADMX 160604SR-MM	**M6330**	.016	■ 476	.0071	.157	■ 344	.0063	.157	–	–	–	–	–	–	■ 131	.0055	.126	–	–	–	6925521
	M8340	.016	■ 525	.0071	.157	■ 312	.0063	.157	–	–	–	–	–	–	■ 131	.0055	.126	–	–	–	6925544
ADMX 160608SR-MM	**M6330**	.031	■ 574	.0071	.157	■ 410	.0063	.157	–	–	–	–	–	–	■ 164	.0055	.126	–	–	–	6925522
	M8340	.031	■ 623	.0071	.157	■ 361	.0063	.157	–	–	–	–	–	–	■ 148	.0055	.126	–	–	–	6925545
	M8345	.031	■ 492	.0071	.157	■ 295	.0063	.157	–	–	–	–	–	–	■ 115	.0055	.126	–	–	–	7051439
	M9340	.031	■ 771	.0071	.157	■ 459	.0063	.157	–	–	–	–	–	–	■ 180	.0055	.126	–	–	–	7051468
ADMX 160616SR-MM	**M6330**	.063	■ 640	.0071	.157	■ 459	.0063	.157	–	–	–	–	–	–	■ 180	.0055	.126	–	–	–	6925523
	M8340	.063	■ 689	.0071	.157	■ 410	.0063	.157	–	–	–	–	–	–	■ 164	.0055	.126	–	–	–	6925546
	M8345	.063	■ 541	.0071	.157	■ 312	.0063	.157	–	–	–	–	–	–	■ 131	.0055	.126	–	–	–	7051460
	M9340	.063	■ 853	.0071	.157	■ 509	.0063	.157	–	–	–	–	–	–	■ 213	.0055	.126	–	–	–	7051469

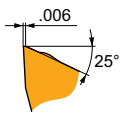
ADEX 16

PRAMET

	W1	D1	L	S
	(inch)	(inch)	(inch)	(inch)
1606	.392	.177	.630	.246



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

Product		RE	P			M			K			N			S			H			MID
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	
		(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	
																					

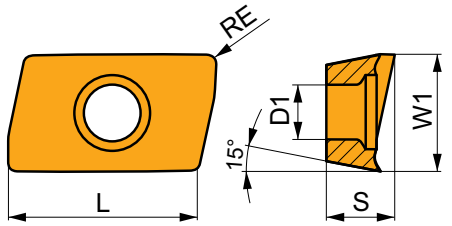
FM geometry with highly positive design for medium machining.

ADEX 160608SR-FM	**8215**	.031	■	853	.0063	.079	◪	509	.0055	.079	■	804	.0063	.079	–	–	–	◪	213	.0043	.063	–	–	–	6753382
	M8330	.031	■	837	.0063	.079	◪	492	.0055	.079	■	787	.0063	.079	–	–	–	◪	197	.0043	.063	–	–	–	7447739
	M8340	.031	■	771	.0063	.079	◪	459	.0055	.079	◪	722	.0063	.079	–	–	–	◪	180	.0043	.063	–	–	–	6800797

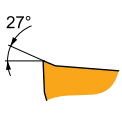
ADEX 16-FA

PRAMET

	W1	D1	L	S
	(inch)	(inch)	(inch)	(inch)
1606	.392	.177	.630	.243



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

Product		RE	P			M			K			N			S			H			MID
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	
		(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	
																					

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

ADEX 160604FR-FA	**HF7**	.016	–	–	–	–	–	–	–	–	–	■	640	.011	.236	–	–	–	–	–	–	6838381
	M0315	.016	–	–	–	–	–	–	–	–	–	■	1575	.011	.236	–	–	–	–	–	–	6838384
ADEX 160608FR-FA	**HF7**	.031	–	–	–	–	–	–	–	–	–	■	787	.011	.236	–	–	–	–	–	–	6752632
	M0315	.031	–	–	–	–	–	–	–	–	–	■	1870	.011	.236	–	–	–	–	–	–	6838385
ADEX 160616FR-FA	**HF7**	.063	–	–	–	–	–	–	–	–	–	■	837	.011	.236	–	–	–	–	–	–	6838382
	M0315	.063	–	–	–	–	–	–	–	–	–	■	2067	.011	.236	–	–	–	–	–	–	6838386
ADEX 160630FR-FA	**HF7**	.118	–	–	–	–	–	–	–	–	–	■	886	.011	.236	–	–	–	–	–	–	6838383

a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	.89	.81	.76	.73	.71	.70	.66	.65	.63	.62	.60	.60	.60	.45

$a_{e\,max}$	0.039		0.098		0.197		0.295		0.394		0.591		0.787	
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} ⇨
1.969	.022	.028	.014	.018	.010	.013	.008	.011	.007	.009	.006	.007	.006	.007
2.480	.025	.031	.016	.020	.011	.014	.009	.012	.008	.010	.007	.008	.006	.007
3.150	.028	.035	.018	.022	.013	.016	.011	.013	.009	.011	.007	.009	.007	.008
3.937	.031	.039	.020	.025	.014	.018	.012	.015	.010	.013	.008	.011	.007	.009

$a_{e\,max}$	0.984		1.260		1.575		1.969		2.480		3.150		3.937	
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} ⇨
1.969	.005	.006	.005	.006	.004	.006	.005	.006	–	–	–	–	–	–
2.480	.006	.007	.005	.006	.005	.006	.004	.006	.005	.006	–	–	–	–
3.150	.006	.007	.006	.007	.005	.006	.005	.006	.004	.006	.005	.006	–	–
3.937	.007	.008	.006	.007	.006	.007	.005	.006	.005	.006	.004	.006	.005	.006

	ADMX 16-F	ADEX 16-FM	ADMX 16-M								ADMX 16-R	
RE (mm)	.8	.8	.4	.8	1.6	2.0	3.0	3.2	4.0	5.0	.8	1.6
BS (inch)	.118	.086	.133	.118	.064	.048	.011	.004	.106	.060	.118	.064

	ADMX 16-MF	ADMX 16-MM			ADEX 16-FA			
RE (mm)	.8	.4	.8	1.6	.4	.8	1.6	3.0
BS (inch)	.118	.133	.118	.064	.112	.096	.065	.027

(inch)

(inch)

ISO	DC		APMX	a_p	max
50J3R100H50-SAD16E54-C	1.969	.118	2.126	1.988	.295
50J3R140H50-SAD16E80-C	1.969	.118	3.150	3.012	
63J3R140H50-SAD16E68-C	2.480	.118	2.677	2.539	
63J3R155H50-SAD16E95-C	2.480	.118	3.740	3.602	
80J4R165H50-SAD16E108-C	3.150	.157	4.252	4.114	
50J3R140G50-SAD16E80-C	1.969	.118	3.150	3.012	
63J3R155G50-SAD16E95-C	2.480	.118	3.740	3.602	
80J4R165G50-SAD16E108-C	3.150	.157	4.252	4.114	
50J3R140X50-SAD16E68-C	1.969	.118	2.677	2.539	
63J3R155X50-SAD16E80-C	2.480	.118	3.150	3.012	
80J4R165X50-SAD16E95-C	3.150	.157	3.740	3.602	
50T03R-S90AD16E40-C	1.969	.118	1.575	1.437	
63T04R-S90AD16E40-C	2.480	.157	1.575	1.437	
63T04R-S90AD16E68-C	2.480	.157	2.677	2.539	
80T04R-S90AD16E55-C	3.150	.157	2.165	2.028	
80T04R-S90AD16E80-C	3.150	.157	3.150	3.012	
100T05R-S90AD16E80-C	3.937	.197	3.150	3.012	

(inch)

ADMX/ADEX 16	R
ADMX 160630SR-M	.098
ADMX 160632SR-M	.098
ADMX 160640SR-M	.157
ADMX 160650SR-M	.177

SRC10

P M K S H

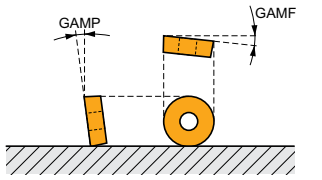
PRAMET

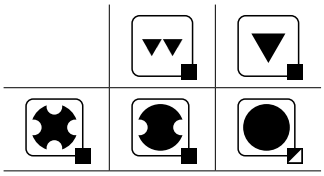
S

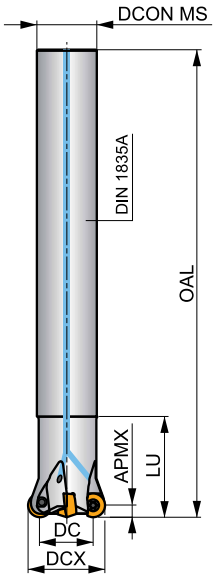
Copy Milling Cutter for Round Inserts RCMT 10 with Internal Coolant

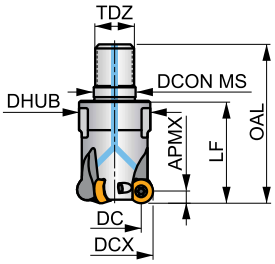
Milling cutter for copy milling utilizing positive RCMT 10 inserts with APMX of 5 mm. Internal coolant. Suitable for face, helical interpolation, ramping, progressive plunge and high-feed milling. Available in cylindrical, modular and arbor style. Body treated for longer tool life.

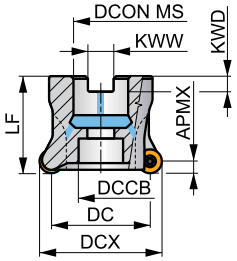
APMX	5.0 mm











h_m	0.08 - 0.15 mm
h_m	0.05 - 0.12 m

	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.	lbs	MID
DIN 1835A	**25E2R034A20-SRC10-C**	25	15	170	20	–	–	34	–	–	–	–	-3	-7	20900	.88	GI328 C0010 7444097
DIN 1835A	**25E3R034A20-SRC10-C**	25	15	170	20	–	–	34	–	–	–	–	-3	-7	20900	.79	GI328 C0010 7444098
DIN 1835A	**32E3R042A25-SRC10-C**	32	22	200	25	–	–	42	–	–	–	–	-2.6	-7	18500	1.48	GI328 C0010 7444200
DIN 1835A	**32E4R042A25-SRC10-C**	32	22	200	25	–	–	42	–	–	–	–	-2.6	-7	18500	1.53	GI328 C0010 7444099
MODULAR	**25E2R032M12-SRC10-C**	25	15	54	12.5	21	–	–	32	M12	–	–	-3	-7	20900	.24	GI328 C0010 7444201
MODULAR	**25E3R032M12-SRC10-C**	25	15	54	12.5	21	–	–	32	M12	–	–	-3	-7	20900	.18	GI328 C0010 7444202
MODULAR	**32E4R042M16-SRC10-C**	32	22	65	17	29	–	–	42	M16	–	–	-2.6	-7	18500	.44	GI328 C0010 7444204
MODULAR	**35E4R042M16-SRC10-C**	35	25	65	17	29	–	–	42	M16	–	–	-2.4	-7	17700	.43	GI328 C0010 7444205
ISO 6462 DIN 8030	**40A05R-SMORC10-C**	40	30	–	16	–	14	–	40	–	8.4	5.6	-2.2	-7	16500	.47	GI328 C0012 7444330
ISO 6462 DIN 8030	**50A05R-SMORC10-C**	50	40	–	22	–	18	–	40	–	10.4	6.3	-2	-7	14800	.75	GI328 C0013 7444331
ISO 6462 DIN 8030	**50A06R-SMORC10-C**	50	40	–	22	–	18	–	40	–	10.4	6.3	-2	-7	14800	.73	GI328 C0013 7444332
ISO 6462 DIN 8030	**52A05R-SMORC10-C**	52	42	–	22	–	18	–	40	–	10.4	6.3	-2	-7	14500	.77	GI328 C0013 7444333
ISO 6462 DIN 8030	**52A06R-SMORC10-C**	52	42	–	22	–	18	–	40	–	10.4	6.3	-2	-7	14500	.63	GI328 C0013 7444334
ISO 6462 DIN 8030	**63A06R-SMORC10-C**	63	53	–	22	–	18	–	40	–	10.4	6.3	-1.8	-7	13200	1.16	GI328 C0013 7444335
ISO 6462 DIN 8030	**63A07R-SMORC10-C**	63	53	–	22	–	18	–	40	–	10.4	6.3	-1.8	-7	13200	1.15	GI328 C0013 7444336
ISO 6462 DIN 8030	**66A06R-SMORC10-C**	66	56	–	27	–	22	–	50	–	12.4	7	-1.4	-7	12800	1.27	GI328 C0014 7444337
ISO 6462 DIN 8030	**66A07R-SMORC10-C**	66	56	–	27	–	22	–	50	–	12.4	7	-1.4	-7	12800	1.31	GI328 C0014 7444338

GI328	RCMT 10T3M0..

		Nm				
C0010	US 63509-T10P	3.0	M 3.5	9	Flag T10P	–
C0012	US 63509-T10P	3.0	M 3.5	9	Flag T10P	HS 0830C
C0013	US 63509-T10P	3.0	M 3.5	9	Flag T10P	HS 1030C
C0014	US 63509-T10P	3.0	M 3.5	9	Flag T10P	HS 1230C

ISRC10

P M K S H

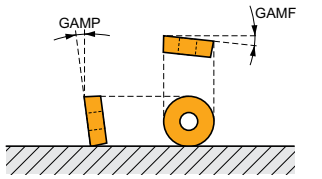
PRAMET

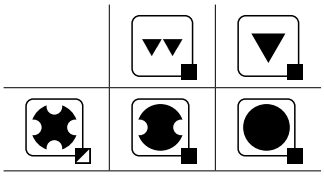
S

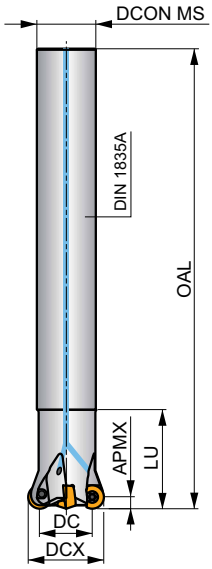
Copy Milling Cutter for Round Inserts RCMT 10 with Internal Coolant

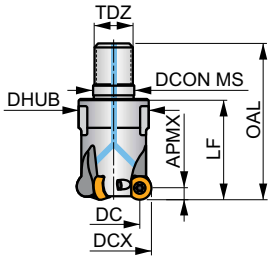
Milling cutter for copy milling utilizing positive RCMT 10 inserts with APMX of .197 inches. Internal coolant. Suitable for face, helical interpolation, ramping, progressive plunge and high-feed milling. Available in cylindrical, modular and arbor style. Body treated for longer tool life.

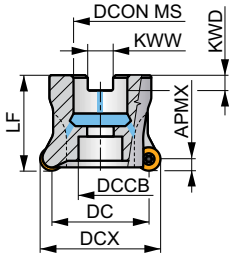
APMX	.197 in











h_m	.003 - .006 in
h_m	.002 - .005 in

	Product	DCX (inch)	DC (inch)	OAL (inch)	DCON MS (inch)	DHUB (inch)	DCCB (inch)	LU (inch)	LF (inch)	TDZ	KWW (inch)	KWD (inch)	GAMF (°)	GAMP (°)	max.	✓	lbs	MID
DIN 1835A	**100E2R134C075-ISRC10-C**	1.000	.606	6.700	.750	–	–	1.339	–	–	–	–	-3	-7	20900	✓	1.61	GI328 C0010 7455328
	100E3R134C075-ISRC10-C	1.000	.606	6.700	.750	–	–	1.339	–	–	–	–	-3	-7	20900	✓	1.61	GI328 C0010 7455329
	125E3R165C100-ISRC10-C	1.250	.856	7.900	1.000	–	–	1.654	–	–	–	–	-2.6	-7	18500	✓	3.35	GI328 C0010 7455360
	125E4R165C100-ISRC10-C	1.250	.856	7.900	1.000	–	–	1.654	–	–	–	–	-2.6	-7	18500	✓	1.58	GI328 C0010 7455361
MODULAR	**100E2R126M12-ISRC10-C**	1.000	.606	2.126	.492	.827	–	–	1.260	M12	–	–	-3	-7	20900	✓	.40	GI328 C0010 7455362
	100E3R126M12-ISRC10-C	1.000	.606	2.126	.492	.827	–	–	1.260	M12	–	–	-3	-7	20900	✓	.40	GI328 C0010 7455363
	125E3R165M16-ISRC10-C	1.250	.856	2.559	.669	1.142	–	–	1.654	M16	–	–	-2.6	-7	18500	✓	.88	GI328 C0010 7455364
	125E4R165M16-ISRC10-C	1.250	.856	2.559	.669	1.142	–	–	1.654	M16	–	–	-2.6	-7	18500	✓	.88	GI328 C0010 7455365
	150E4R165M16-ISRC10-C	1.500	1.106	2.559	.669	1.142	–	–	1.654	M16	–	–	-2.1	-7	16500	✓	.97	GI328 C0010 7455366
	150E5R165M16-ISRC10-C	1.500	1.106	2.559	.669	1.142	–	–	1.654	M16	–	–	-2.1	-7	16500	✓	.97	GI328 C0010 7455367
ISO 6462 DIN 8030	**150A05R-ISM0RC10-C**	1.500	1.106	–	.500	–	.433	–	1.575	–	.258	.165	-2.2	-7	16500	✓	.73	GI328 C0052 7455508
	200A05R-ISM0RC10-C	2.000	1.606	–	.750	–	.630	–	1.575	–	.321	.193	-2	-7	14800	✓	1.37	GI328 C0053 7455509
	200A06R-ISM0RC10-C	2.000	1.606	–	.750	–	.630	–	1.575	–	.321	.193	-2	-7	14800	✓	1.32	GI328 C0053 7455530
	250A06R-ISM0RC10-C	2.500	2.106	–	.750	–	.630	–	1.575	–	.321	.193	-1.8	-7	13200	✓	2.18	GI328 C0053 7455531
	250A07R-ISM0RC10-C	2.500	2.106	–	.750	–	.630	–	1.575	–	.321	.193	-1.8	-7	13200	✓	2.14	GI328 C0053 7455532

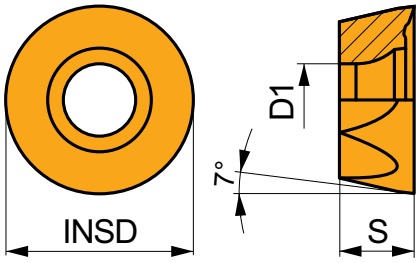
GI328	RCMT 10T3M0..

C0010	US 63509-T10P	3.0	M 3.5	.354	Flag T10P	–
C0052	US 63509-T10P	3.0	M 3.5	.354	FLAG T10P	HS 025100
C0053	US 63509-T10P	3.0	M 3.5	.354	FLAG T10P	HS 037100

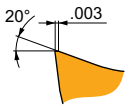
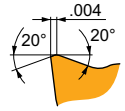
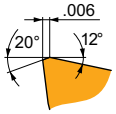
RCMT 10

PRAMET

	INSD	D1	S
	(inch)	(inch)	(inch)
10T3	.394	.154	.156

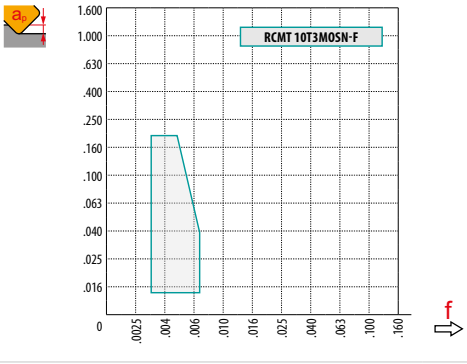


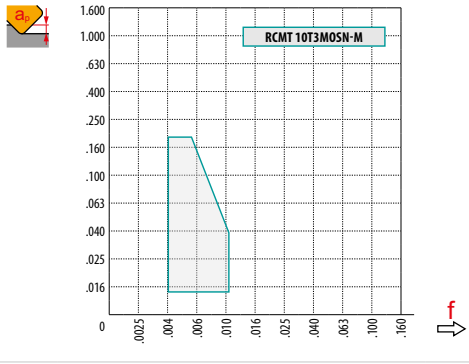
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

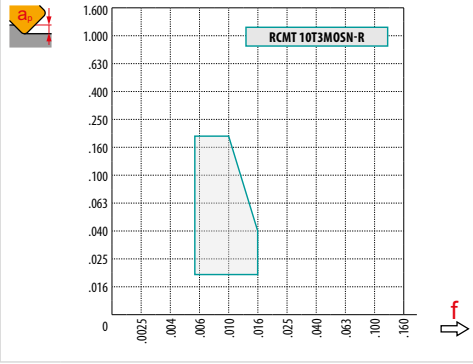
Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
																					
			HFC S																		
			F geometry with highly positive design for light machining.																		
RCMT 10T3MOSN-F	**M6330**	–	■ 1115	.0039	.039	■ 787	.0035	.039	–	–	–	–	–	–	■ 328	.0031	.031	–	–	–	7445881
	M8330	–	■ 1296	.0039	.039	■ 771	.0035	.039	–	–	–	–	–	–	◪ 312	.0031	.031	–	–	–	7445759
																					
			1 U HFC S																		
			M geometry with highly positive design for medium machining.																		
RCMT 10T3MOSN-M	**M6330**	–	■ 1017	.0047	.039	◪ 722	.0043	.039	–	–	–	–	–	–	■ 295	.0043	.031	–	–	–	7445886
	M8310	–	■ 1312	.0047	.039	◪ 656	.0043	.039	■ 1247	.0047	.039	–	–	–	–	–	–	–	–	–	7445882
	M8330	–	■ 1181	.0047	.039	◪ 705	.0043	.039	■ 1115	.0047	.039	–	–	–	◪ 295	.0043	.031	–	–	–	7445883
	M8340	–	■ 1083	.0047	.039	◪ 640	.0043	.039	◪ 1017	.0047	.039	–	–	–	■ 262	.0043	.031	–	–	–	7445884
																					
			HFC S																		
			R geometry with positive design for rough copy machining.																		
RCMT 10T3MOSN-R	**M8310**	–	■ 1132	.0067	.039	–	–	–	■ 1066	.0067	.039	–	–	–	–	–	–	■ 213	.0047	.028	7445889
	M8330	–	■ 1017	.0067	.039	–	–	–	■ 951	.0067	.039	–	–	–	◪ 246	.0067	.031	◪ 197	.0047	.028	7445890

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	.95	.85	.75	.85	.95	1.00	1.00	1.00	1.00
x.f	.64	.64	.64	.64	.64	.65	.65	.67	.68	.71	.72	.74	.79	1.00

	RCMT 10-F	RCMT 10-M	RCMT 10-R
RE (mm)	5.0	5.0	5.0
BS (inch)	–	–	–







(inch)

DCX	a_p	.000	.006	.012	.020	.030	.039	.049	.059	.079	.098	.118	.157	.197
1.000	DEF	.606	.702	.741	.778	.814	.843	.867	.887	.921	.947	.967	.992	1.000
1.250		.856	.952	.991	1.028	1.064	1.093	1.117	1.137	1.171	1.197	1.217	1.242	1.250
1.500		1.106	1.202	1.241	1.278	1.314	1.343	1.367	1.387	1.421	1.447	1.467	1.492	1.500
2.000		1.606	1.702	1.741	1.778	1.814	1.843	1.867	1.887	1.921	1.947	1.967	1.992	2.000
2.500		2.106	2.202	2.241	2.278	2.314	2.343	2.367	2.387	2.421	2.447	2.467	2.492	2.500
	a_p	–	.006	.012	.020	.030	.039	.049	.059	.079	.098	.118	.157	.197
	1 f	–	.035	.025	.020	.016	.014	.013	.011	.010	.009	.008	.007	.007

(inch)

DCX	RPMX	APMX/I
1.000	13.2°	.197/.906
1.250	12.7°	.197/.945
1.500	9.1°	.197/1.300
2.000	6.3°	.197/1.851
2.500	4.6°	.197/2.520

(inch)

DCX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
1.000	1 299	2 000	.118	.118
1.250	1 732	2 500	.118	.118
1.500	2 244	3 000	.118	.118
2.000	3 228	4 000	.118	.118
2.500	4 252	5 000	.118	.118

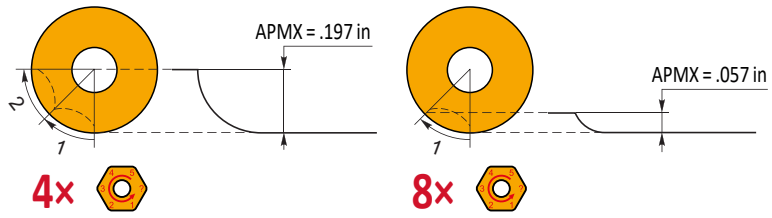
(inch)

a_p
.088

(inch)

DCX	µm	0.118	0.197	0.394	0.591	0.787	1.181	1.575	1.969	2.362	3.150	3.937
1.000	FE	.022	.028	.040	.049	.056	.069	.079	.089	.097	.112	.125
1.250		.024	.031	.044	.054	.063	.077	.089	.099	.109	.125	.140
1.500		.027	.034	.049	.060	.069	.084	.097	.109	.119	.137	.154
2.000		.031	.040	.056	.069	.079	.097	.112	.125	.137	.159	.177
2.500		.034	.044	.063	.077	.089	.109	.125	.140	.154	.177	.198
RE (mm)	µm	**0.118**	**0.197**	**0.394**	**0.591**	**0.787**	**1.181**	**1.575**	**1.969**	**2.362**	**3.150**	**3.937**
5.0	FE	.014	.018	.025	.031	.035	.043	.050	.056	.061	.070	.079

(inch)



SRD10

P M K N S H

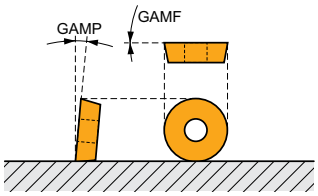
PRAMET

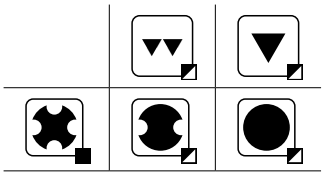
S

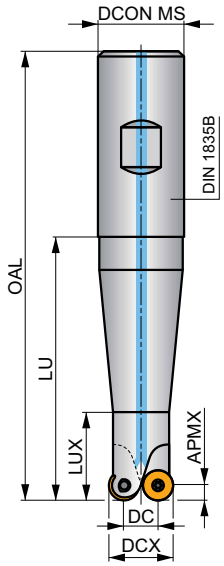
Copy Milling Cutter for Round Inserts RD.. 10 with Internal Coolant

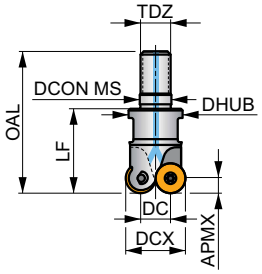
Milling cutter for copy milling utilizing positive RD.. 10 inserts with APMX of 2.5 mm. Internal coolant. Suitable for face, helical interpolation, ramping, progressive plunge and copy milling. Available in Weldon, modular and arbor style. Body treated for longer tool life.

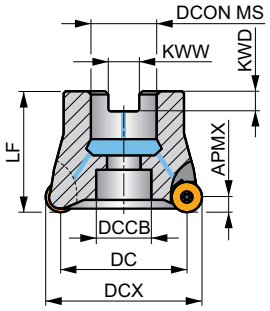
APMX	2.5 mm











h_m 0.065 - 0.19 mm

	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.		lbs			MID
DIN 1835B	20E2R040B20-SRD10-CF	20	10	90	20	–	–	40	20	–	–	–	–	-2	0	2	–	30800	✓	.43	GI119	C0356	7999217
	20E2R060B20-SRD10-CF	20	10	110	20	–	–	60	22	–	–	–	–	-2	0	2	–	30800	✓	.44	GI119	C0356	7999218
	20E2R080B25-SRD10-CF	20	10	136	25	–	–	80	25	–	–	–	–	-2	0	2	–	30800	✓	.88	GI119	C0356	7999219
	20E2R100B25-SRD10-CF	20	10	156	25	–	–	100	25	–	–	–	–	-2	0	2	–	30800	✓	.98	GI119	C0356	7999250
	20E2R120B25-SRD10-CF	20	10	176	25	–	–	120	25	–	–	–	–	-2	0	2	–	30800	✓	1.01	GI119	C0356	7999251
	20E2R028M10-SRD10-CF	20	10	47	10.5	18	–	–	–	28	M10	–	–	-2	0	2	–	30800	✓	.15	GI119	C0356	7999252
	25E2R032M12-SRD10-CF	25	15	54	12.5	21	–	–	–	32	M12	–	–	0.5	0.5	2	–	27500	✓	.18	GI119	C0356	7999253
	25E3R032M12-SRD10-CF	25	15	54	12.5	21	–	–	–	32	M12	–	–	0.5	0.5	3	–	27500	✓	.23	GI119	C0356	7999254
MODULAR	30E4R042M16-SRD10-CF	30	20	65	17	29	–	–	–	42	M16	–	–	0	0	4	–	25100	✓	.40	GI119	C0356	7999255
	32E4R042M16-SRD10-CF	32	22	65	17	29	–	–	–	42	M16	–	–	0	0	4	–	24300	✓	.42	GI119	C0356	8025177
	35E5R042M16-SRD10-CF	35	25	65	17	29	–	–	–	42	M16	–	–	0	0	5	–	23200	✓	.49	GI119	C0356	7999256
	42E4R042M16-SRD10-CF	42	32	65	17	29	–	–	–	42	M16	–	–	0	0	4	–	21200	✓	.53	GI119	C0356	8025178
	42E5R042M16-SRD10-CF	42	32	65	17	29	–	–	–	42	M16	–	–	0	0	5	–	21200	✓	.53	GI119	C0356	8025179
ISO 6462 DIN 8030	42A05R-SMORD10-CF	42	32	–	16	–	14	–	–	40	–	8.4	8.4	0	0	5	–	21200	✓	.44	GI119	C0358	8025251
	52A07R-SMORD10-CF	52	42	–	22	–	18	–	–	40	–	10.4	10.4	0	0	7	–	19100	✓	.90	GI119	C0360	8025252

GI119	RD.. 1003MOT	RDHT 1003MO-FA

							
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

ISRD10

P M K N S H

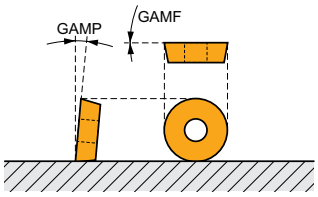
PRAMET

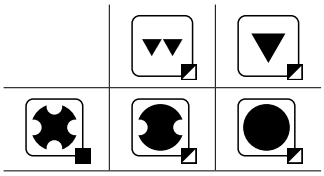
S

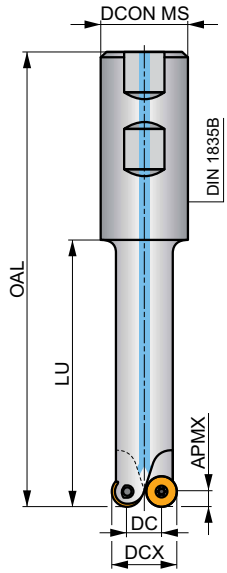
Copy Milling Cutter for Round Inserts RD.. 10 with Internal Coolant

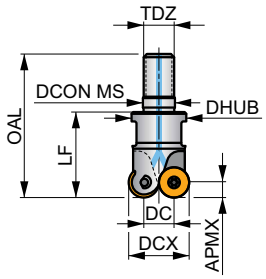
Milling cutter for copy milling utilizing positive RD.. 10 inserts with APMX of .098 inches. Internal coolant. Suitable for face, helical interpolation, ramping, progressive plunge and copy milling. Available in Weldon and modular style. Body treated for longer tool life.

APMX	.098 in









h_m .0026-.0075 in

	Product	DCX (inch)	DC (inch)	OAL (inch)	DCON MS (inch)	DHUB (inch)	LU (inch)	LF (inch)	TDZ	GAMF (°)	GAMP (°)			max.		lbs			MID
DIN 1835B	075E2R175W075-ISRD10-CF	.750	.357	3.780	.750	–	1.750	–	–	1	0	2	–	30800	✓	.35	GI119	C0356	7999182
	075E2R250W075-ISRD10-CF	.750	.357	4.528	.750	–	2.500	–	–	1	0	2	–	30800	✓	.42	GI119	C0356	7999183
	075E2R325W100-ISRD10-CF	.750	.357	5.315	1.000	–	3.250	–	–	1	0	2	–	30800	✓	.79	GI119	C0356	7999184
	075E2R400W100-ISRD10-CF	.750	.357	6.024	1.000	–	4.000	–	–	1	0	2	–	30800	✓	.88	GI119	C0356	7999185
	075E2R475W100-ISRD10-CF	.750	.357	6.772	1.000	–	4.750	–	–	1	0	2	–	30800	✓	.99	GI119	C0356	7999186
MODULAR	075E2R110M10-ISRD10-CF	.750	.357	1.850	.413	.709	–	1.102	M10	1	0	2	–	30800	✓	.16	GI119	C0356	7999187
	100E2R130M12-ISRD10-CF	1.000	.607	2.165	.492	.827	–	1.300	M12	0.5	0.5	2	–	27500	✓	.24	GI119	C0356	7999188
	100E3R130M12-ISRD10-CF	1.000	.607	2.165	.492	.827	–	1.300	M12	0.5	0.5	3	–	27500	✓	.18	GI119	C0356	7999189
	125E4R157M16-ISRD10-CF	1.250	.857	2.480	.669	1.142	–	1.575	M16	0	0	4	–	25100	✓	.40	GI119	C0356	7999210
	150E5R169M16-ISRD10-CF	1.500	1.107	2.598	.669	1.142	–	1.693	M16	0	0	5	–	23200	✓	.53	GI119	C0356	7999211

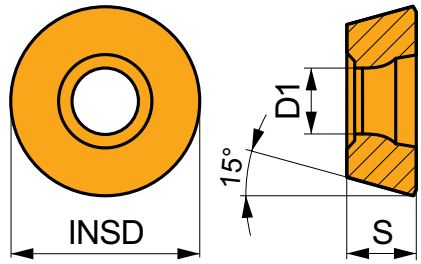
GI119	RD.. 1003MOT	RDHT 1003MO-FA

C0356	US 63507-T15P	3.0 Nm	M 3.5	.276	Flag T15P

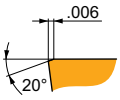
RDHX 10

PRAMET

	INSD (inch)	D1 (inch)	S (inch)
1003	.394	.154	.125



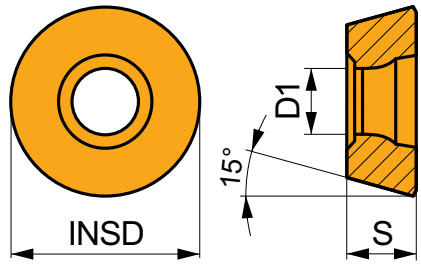
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
																					
			Zero rake angle design for finish machining.																		
RDHX 1003MOT	**M4303**	–	◪ 1115	.0059	.039	–	–	–	■ 1050	.0059	.039	–	–	–	–	–	–	■ 213	.0047	.028	7637289
	M8310	–	◪ 1099	.0059	.039	–	–	–	■ 1033	.0059	.039	–	–	–	–	–	–	■ 213	.0047	.028	6755669
	M8325	–	◪ 820	.0059	.039	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6756005
	M8345	–	◪ 738	.0059	.039	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6755965

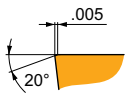
RDMX 10

PRAMET

	INSD (inch)	D1 (inch)	S (inch)
1003	.394	.154	.125



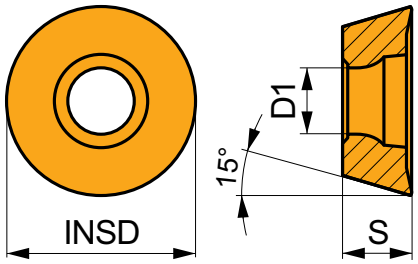
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
																					
			Zero rake angle design for finish machining.																		
RDMX 1003MOT	**M8310**	–	◪ 1099	.0059	.039	–	–	–	■ 1033	.0059	.039	–	–	–	–	–	–	■ 213	.0043	.028	6801016
	M8325	–	◪ 820	.0059	.039	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6801018
	M8345	–	◪ 738	.0059	.039	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6801019

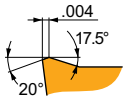
RDGT 10

PRAMET

	INSD (inch)	D1 (inch)	S (inch)
1003	.394	.154	.125



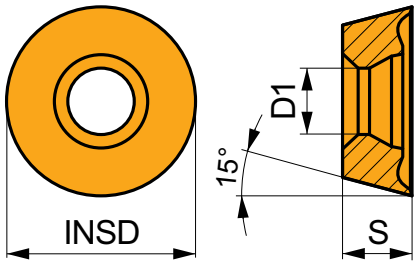
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
			U HFC T																		
			Positive design for finish machining.																		
RDGT 1003M0T	**M6330**	–	■ 951	.0059	.039	■ 673	.0055	.039	–	–	–	–	–	–	◪ 279	.0047	.031	–	–	–	7601340
	M8310	–	■ 1230	.0059	.039	◪ 623	.0055	.039	■ 1165	.0059	.039	–	–	–	–	–	–	–	–	–	6756258
	M8325	–	■ 919	.0059	.039	◪ 427	.0055	.039	–	–	–	–	–	–	–	–	–	–	–	–	6756000
	M8345	–	■ 820	.0059	.039	■ 492	.0055	.039	–	–	–	–	–	–	◪ 197	.0047	.031	–	–	–	6755962
	M9340	–	■ 1296	.0059	.039	■ 771	.0055	.039	–	–	–	–	–	–	◪ 312	.0047	.031	–	–	–	6755646

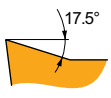
RDHT 10-FA

PRAMET

	INSD (inch)	D1 (inch)	S (inch)
1003	.394	.154	.125

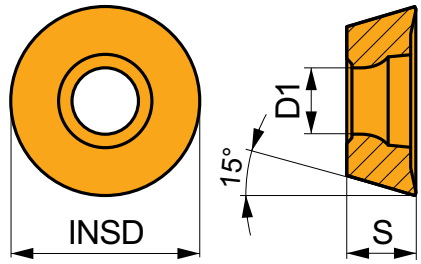


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

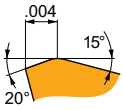
Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
			HFC F																		
			FA geometry with highly positive design for fine-finish to medium machining.																		
RDHT 1003M0-FA	**HF7**	–	–	–	–	–	–	–	–	–	–	■ 1280	.0071	.039	–	–	–	–	–	–	6751851

RDMT 10

	INSD	D1	S
	(inch)	(inch)	(inch)
1003	.394	.154	.125

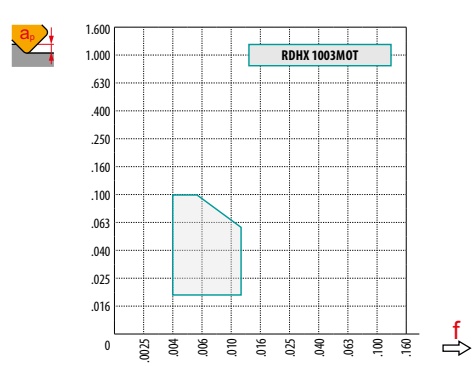


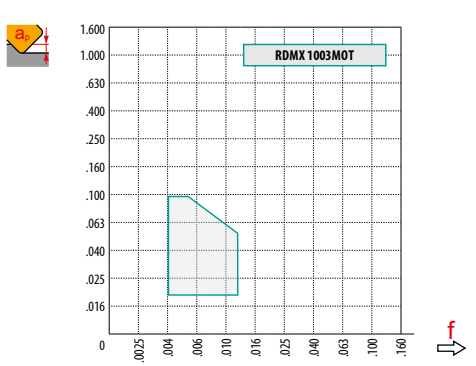
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

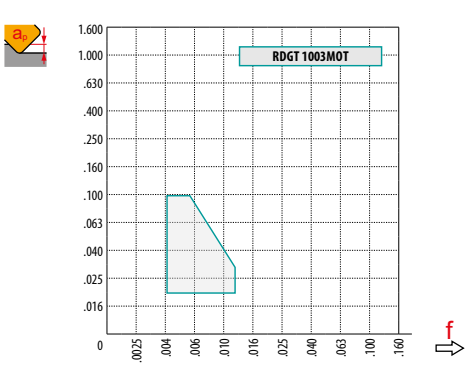
Product		RE	P			M			K			N			S			H			MID
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	
		(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	
			HFC S																		
			Positive design for finish machining.																		
RDMT 1003MOT	**M8325**	–	■ 919	.0059	.039	◪ 427	.0055	.039	–	–	–	–	–	–	–	–	–	–	–	–	7343097
	M8345	–	■ 820	.0059	.039	◪ 492	.0055	.039	–	–	–	–	–	–	–	–	–	–	–	–	7343098

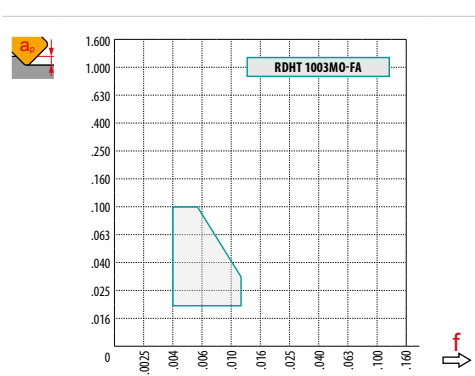
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	.95	.85	.75	.85	.95	1.00	1.00	1.00	1.00
x.f	.64	.64	.64	.64	.64	.65	.65	.67	.68	.71	.72	.74	.79	1.00

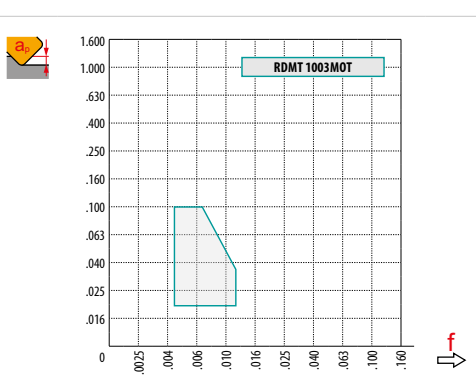
	RDHX 10	RDMX 10	RDGT 10	RDHT 10-FA
RE (mm)	5.0	5.0	5.0	5.0
BS (inch)	–	–	–	–











(inch)

DCX	a_p	.000	.020	.030	.039	.049	.059	.079	.098	.118	.138	.157	.197
.787		.394	.567	.602	.630	.654	.673	.709	.736	.756	.768	.780	.787
.984		.591	.764	.799	.827	.850	.870	.906	.933	.953	.965	.976	.984
1.181		.787	.961	.996	1.024	1.047	1.067	1.102	1.130	1.150	1.161	1.173	1.181
1.260	DEF	.866	1.039	1.075	1.102	1.126	1.146	1.181	1.209	1.228	1.240	1.252	1.260
1.378		.984	1.157	1.193	1.220	1.244	1.264	1.299	1.327	1.346	1.358	1.370	1.378
1.654		1.260	1.433	1.469	1.496	1.520	1.539	1.575	1.602	1.622	1.634	1.646	1.654
2.047		1.654	1.827	1.862	1.890	1.913	1.933	1.969	1.996	2.016	2.028	2.039	2.047
	a_p	**.000**	**.020**	**.030**	**.039**	**.049**	**.059**	**.079**	**.098**	**.118**	**.138**	**.157**	**.197**
	1 f	–	.021	.017	.015	.014	.013	.011	.010	.009	.009	.008	.007

(inch)

DCX	RPMX	APMX/l
.787	20°	.098/.591
.984	12°	.098/.984
1.181	8°	.098/1.457
1.260	7.5°	.098/.787
1.378	7°	.098/1.654
1.654	4°	.098/1.457
2.047	3°	.098/1.929

(inch)

DCX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
.787	.866	1.575	.098	.098
.984	1.260	1.969	.098	.098
1.181	1.654	2.362	.098	.098
1.260	1.811	2.520	.098	.098
1.378	2.047	2.756	.098	.098
1.654	2.598	3.307	.098	.098
2.047	3.386	4.094	.098	.098

(inch)

a_p
.098

(inch)

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
.787		.019	.025	.035	.043	.050	.061	.070	.079	.086	.100	.111
.984		.022	.028	.039	.048	.056	.068	.079	.088	.096	.111	.124
1.181		.024	.031	.043	.053	.061	.075	.086	.096	.106	.122	.136
1.260	FE	.024	.031	.045	.055	.063	.077	.089	.100	.109	.126	.141
1.378		.026	.033	.047	.057	.066	.081	.093	.104	.114	.132	.147
1.654		.028	.036	.051	.062	.072	.088	.102	.114	.125	.144	.161
2.047		.031	.040	.057	.070	.080	.098	.114	.127	.139	.161	.180
RE (mm)	µm	**3**	**5**	**10**	**15**	**20**	**30**	**40**	**50**	**60**	**80**	**100**
5.0	FE	.014	.018	.025	.031	.035	.043	.050	.056	.061	.070	.079

SRD12

P M K N S H

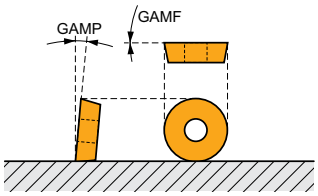
PRAMET

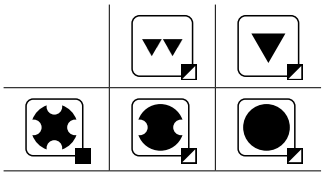
S(C)

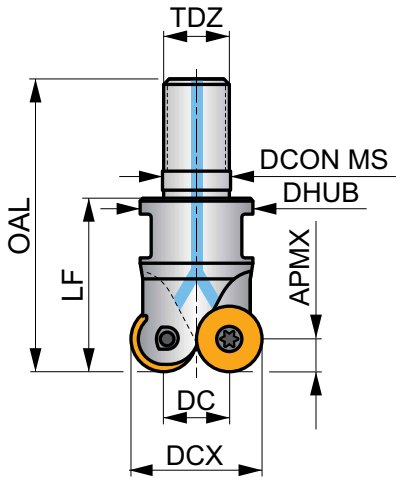
Copy Milling Cutter for Round Inserts RD.. 12 with Internal Coolant

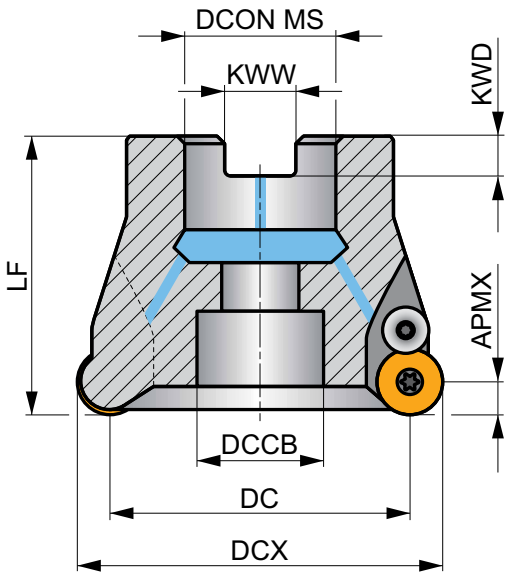
Milling cutter for copy milling utilizing positive RD.. 12 inserts with APMX of 3 mm. Internal coolant. Suitable for face, helical interpolation, ramping, progressive plunge and copy milling. Available in modular and arbor style. Body treated for longer tool life.

APMX	3.0 mm









h_m	0.065 - 0.25 mm
h_m	0.065 - 0.22 mm

	Product	DCX (mm)	DC (mm)	OAL (mm)	DCON MS (mm)	DHUB (mm)	DCCB (mm)	LF (mm)	TDZ	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		lbs			MID
MODULAR	**24E2R032M12-SRD12-CF**	24	12	54	12.5	21	–	32	M12	–	–	-3	0	2	–	21900	✓	.21	GI120	C0362	7999320
	35E3R042M16-SCRD12-CF	35	23	65	17	29	–	42	M16	–	–	0	0	3	–	18100	✓	.48	GI120	C0364	7999321
	35E4R042M16-SRD12-CF	35	23	65	17	29	–	42	M16	–	–	0	0	4	–	18100	✓	.44	GI120	C0362	7999322
	42E4R042M16-SCRD12-CF	42	30	65	17	29	–	42	M16	–	–	0	0	4	–	16600	✓	.46	GI120	C0364	7999323
	42E5R042M16-SRD12-CF	42	30	65	17	29	–	42	M16	–	–	0	0	5	–	16600	✓	.49	GI120	C0366	7999324
ISO 6462 DIN 8030	**50A05R-SCMORD12-CF**	50	38	–	22	–	18	50	–	10.4	10.4	2	7	5	–	15200	✓	.64	GI120	C0366	7999325
	52A05R-SCMORD12-CF	52	40	–	22	–	18	50	–	10.4	10.4	2	7	5	–	14900	✓	.97	GI120	C0366	7999326
	66A06R-SCMORD12-CF	66	54	–	27	–	22	50	–	12.4	12.4	2	7	6	–	13200	✓	1.19	GI120	C0370	7999327
	80A07R-SCMORD12-CF	80	68	–	27	–	38	52	–	12.4	12.4	2	7	7	–	12000	✓	1.96	GI120	C0372	7999328

GI120	RD.. 12T3M0T	RDHT 12T3M0-FA

		Nm							
C0362	US 3508-T15P	3.5	M 3.5	8	–	–	Flag T15P	–	–
C0364	US 3006-T09P	2.0	M 3	6	D-T07P/T09P	FG-15	–	CS12P	–
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	–

ISRD12

P M K N S H

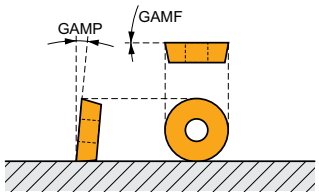
PRAMET

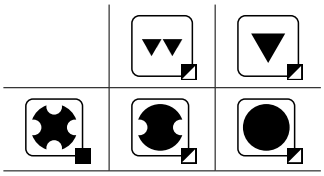
S(C)

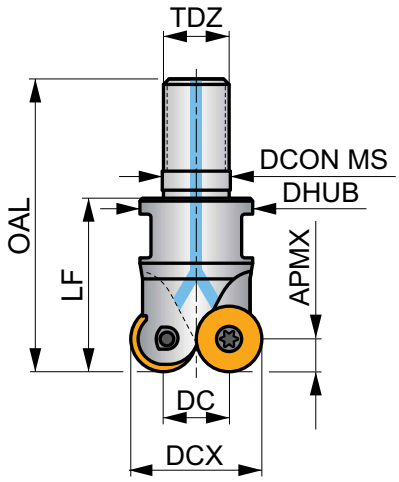
Copy Milling Cutter for Round Inserts RD.. 12 with Internal Coolant

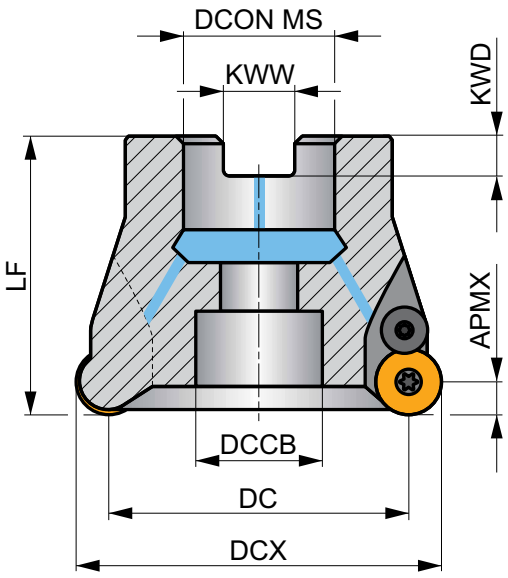
Milling cutter for copy milling utilizing positive RD.. 12 inserts with APMX of .118 inches. Internal coolant. Suitable for face, helical interpolation, ramping, progressive plunge and copy milling. Available in modular and arbor style. Body treated for longer tool life.

APMX	.1181 in









h_m	.0026-.0098 in
h_m	.0026-.0087 in

	Product	DCX (inch)	DC (inch)	OAL (inch)	DCON MS (inch)	DHUB (inch)	DCCB (inch)	LF (inch)	TDZ	KWW (inch)	KWD (inch)	GAMF (°)	GAMP (°)			max.		lbs			MID
MODULAR	**100E2R130M12-ISRD12-CF**	1.000	.528	2.165	.492	.827	–	1.300	M12	–	–	-3	0	2	–	21900	✓	.17	GI120	C0362	8057896
MODULAR	**150E3R169M16-ISCRD12-CF**	1.500	1.028	2.598	.669	1.142	–	1.693	M16	–	–	0	0	3	–	18100	✓	.46	GI120	C0346	7979737
ISO 6462 DIN 8030	**200A05R-ISCMORD12-CF**	2.000	1.528	–	.750	–	.630	1.968	–	.321	.193	2	7	5	–	15200	✓	.73	GI120	C0347	7979738
ISO 6462 DIN 8030	**250A06R-ISCMORD12-CF**	2.500	2.028	–	1.000	–	.827	1.968	–	.382	.224	2	7	6	–	13200	✓	1.48	GI120	C0348	7979739
ISO 6462 DIN 8030	**300A07R-ISCMORD12-CF**	3.000	2.528	–	1.000	–	.827	2.047	–	.382	.224	2	7	7	–	12000	✓	2.16	GI120	C0348	7979760

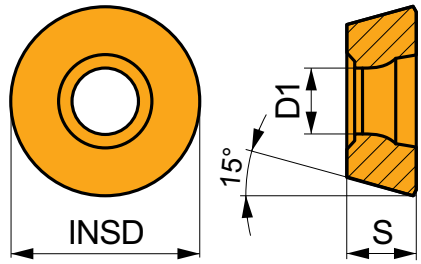
GI120	RD.. 12T3MOT	RDHT 12T3M0-FA

		Nm							
C0346	US 3508-T15P	3.5	M 3.5	.315	FLAG T15P	–	–	–	CS12P
C0347	US 3508-T15P	3.5	M 3.5	.315	–	D-T08P/T15P	FG-15	HS 037100	CS12P
C0348	US 3508-T15P	3.5	M 3.5	.315	–	D-T08P/T15P	FG-15	HS 050125	CS12P
C0362	US 3508-T15P	3.5	M 3.5	.315	–	–	–	Flag T15P	–

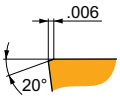
RDHX 12

PRAMET

	INSD (inch)	D1 (inch)	S (inch)
12T3	.472	.154	.156



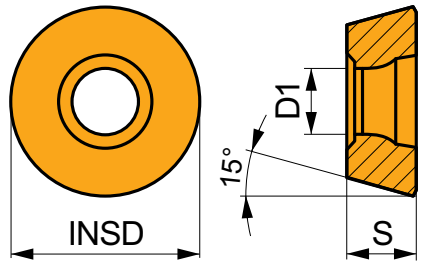
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
			HFC T																		
			Zero rake angle design for finish machining.																		
RDHX 12T3M0T	**M4303**	–	984	.0079	.059	–	–	–	935	.0079	.059	–	–	–	–	–	–	197	.0055	.031	7637287
	M8310	–	984	.0079	.059	–	–	–	935	.0079	.059	–	–	–	–	–	–	197	.0055	.031	6756221
	M8325	–	738	.0079	.059	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6756006
	M8345	–	656	.0079	.059	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6755966

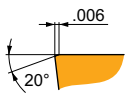
RDMX 12

PRAMET

	INSD (inch)	D1 (inch)	S (inch)
12T3	.472	.154	.156



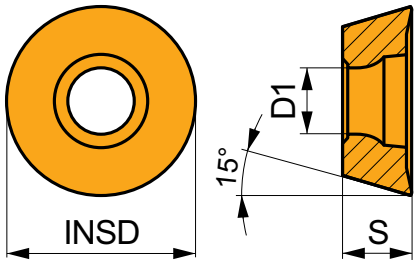
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
			HFC T																		
			Zero rake angle design for finish machining.																		
RDMX 12T3M0T	**M8310**	–	984	.0079	.059	–	–	–	935	.0079	.059	–	–	–	–	–	–	197	.0039	.031	6801017
	M8325	–	738	.0079	.059	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6801040
	M8345	–	656	.0079	.059	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6801041

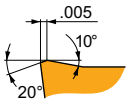
RDGT 12

PRAMET

	INSD (inch)	D1 (inch)	S (inch)
12T3	.472	.154	.156



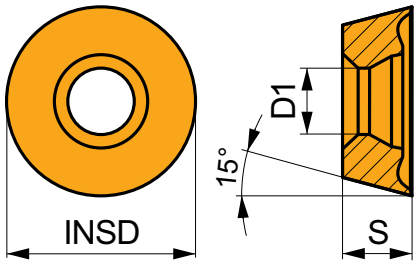
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
			 Positive design for finish machining.																		
RDGT 12T3M0T	**M6330**	–	■ 853	.0079	.059	■ 607	.0071	.059	–	–	–	–	–	–	◪ 246	.0055	.047	–	–	–	7601341
	M8310	–	■ 1083	.0079	.059	◪ 541	.0071	.059	■ 1017	.0079	.059	–	–	–	–	–	–	–	–	–	6756279
	M8325	–	■ 820	.0079	.059	◪ 394	.0071	.059	–	–	–	–	–	–	–	–	–	–	–	–	6756001
	M8345	–	■ 738	.0079	.059	■ 443	.0071	.059	–	–	–	–	–	–	◪ 180	.0055	.047	–	–	–	6755963
	M9340	–	■ 1115	.0079	.059	■ 656	.0071	.059	–	–	–	–	–	–	◪ 279	.0055	.047	–	–	–	6755647

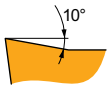
RDHT 12-FA

PRAMET

	INSD (inch)	D1 (inch)	S (inch)
12T3	.472	.154	.156

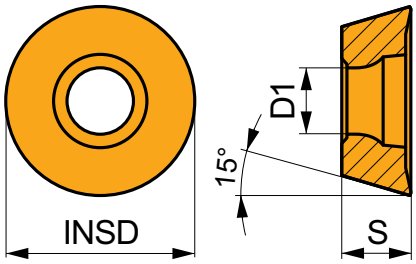


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

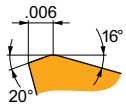
Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
			 FA geometry with highly positive design for fine-finish to medium machining.																		
RDHT 12T3M0-FA	**HF7**	–	–	–	–	–	–	–	–	–	–	■ 1181	.0094	.059	–	–	–	–	–	–	6751852

RDMT 12

	INSD	D1	S
	(inch)	(inch)	(inch)
12T3	.472	.154	.156

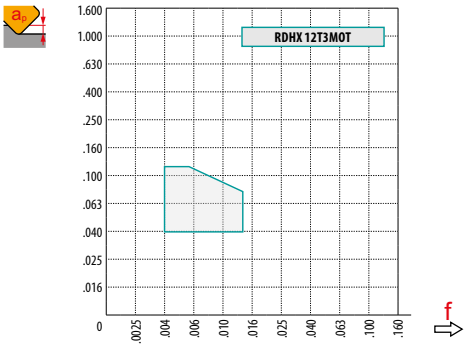


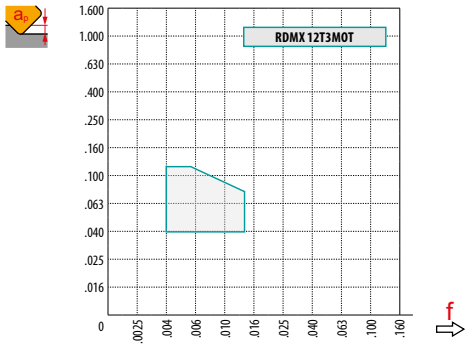
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

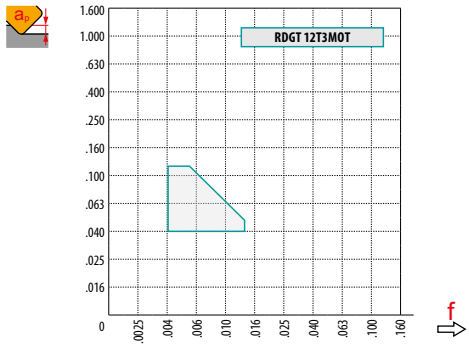
Product		RE	P			M			K			N			S			H			MID
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	
		(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	
			HFC S																		
			Positive design for finish machining.																		
RDMT 12T3MOT	**M8345**	–	■ 738	.0079	.059	◩ 443	.0071	.059	–	–	–	–	–	–	–	–	–	–	–	–	7343110

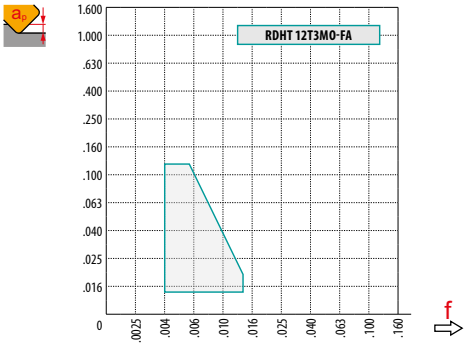
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ x.f	2.20	1.60	1.35	1.20	1.10	.95	.85	.75	.85	.95	1.00	1.00	1.00	1.00
⇨ x.f	.64	.64	.64	.64	.64	.65	.65	.67	.68	.71	.72	.74	.79	1.00

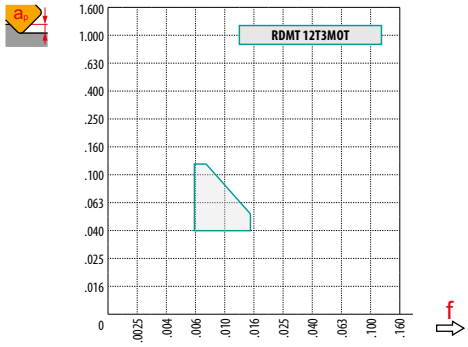
	RDHX 12	RDMX 12	RDGT 12	RDHT 12-FA
RE (mm)	6.0	6.0	6.0	6.0
BS (inch)	–	–	–	–











(inch)

DCX	a_p	.000	.020	.030	.039	.049	.059	.079	.098	.118	.138	.157	.197	.236
.945	DEF	.472	.661	.701	.732	.760	.783	.823	.854	.882	.902	.917	.937	.945
1.378		.906	1.094	1.134	1.165	1.193	1.217	1.256	1.287	1.315	1.335	1.350	1.370	1.378
1.654		1.181	1.370	1.409	1.441	1.469	1.492	1.531	1.563	1.591	1.610	1.626	1.646	1.654
1.969		1.496	1.685	1.724	1.756	1.783	1.807	1.846	1.878	1.906	1.925	1.941	1.961	1.969
2.047		1.575	1.764	1.803	1.835	1.862	1.886	1.925	1.957	1.984	2.004	2.020	2.039	2.047
2.598		2.126	2.315	2.354	2.386	2.413	2.437	2.476	2.508	2.535	2.555	2.571	2.591	2.598
3.150		2.677	2.866	2.906	2.937	2.965	2.988	3.028	3.059	3.087	3.106	3.122	3.142	3.150
	a_p	**.000**	**.020**	**.030**	**.039**	**.049**	**.059**	**.079**	**.098**	**.118**	**.138**	**.157**	**.197**	**.236**
	f	–	.019	.016	.014	.013	.011	.010	.009	.008	.008	.007	.007	.006

(inch)

DCX	RPMX	APMX/l
.945	25.0°	.118/.551
1.378	9.0°	.118/1.535
1.654	8.0°	.118/1.732
1.969	4.0°	.118/3.425
2.047	4.0°	.118/3.425
2.598	3.0°	.118/3.937
3.150	2.2°	.118/3.937

(inch)

DCX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
.945	1.024	1.890	.118	.118
1.378	1.811	2.756	.118	.118
1.654	2.441	3.307	.118	.118
1.969	3.071	3.937	.110	.110
2.047	3.228	4.094	.110	.110
2.598	4.331	5.197	.110	.110
3.150	5.354	6.299	.110	.110

(inch)

a_p
.110

(inch)

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
.945	FE	.021	.027	.039	.047	.055	.067	.077	.086	.094	.109	.122
1.378		.026	.033	.047	.057	.066	.081	.093	.104	.114	.132	.147
1.654		.028	.036	.051	.062	.072	.088	.102	.114	.125	.144	.161
1.969		.031	.039	.056	.068	.079	.096	.111	.124	.136	.157	.176
2.047		.031	.040	.057	.070	.080	.098	.114	.127	.139	.161	.180
2.598		.035	.045	.064	.078	.090	.111	.128	.143	.157	.181	.202
3.150		.039	.050	.070	.086	.100	.122	.141	.157	.173	.199	.223
RE (mm)	µm	**3**	**5**	**10**	**15**	**20**	**30**	**40**	**50**	**60**	**80**	**100**
6.0	FE	.015	.019	.027	.033	.039	.047	.055	.061	.067	.077	.086

SRD16

P M K N S H

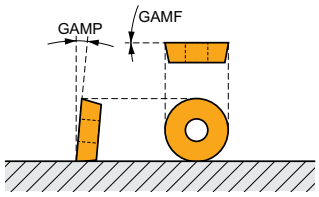
PRAMET

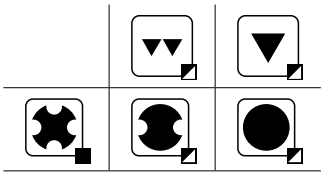
S(C)

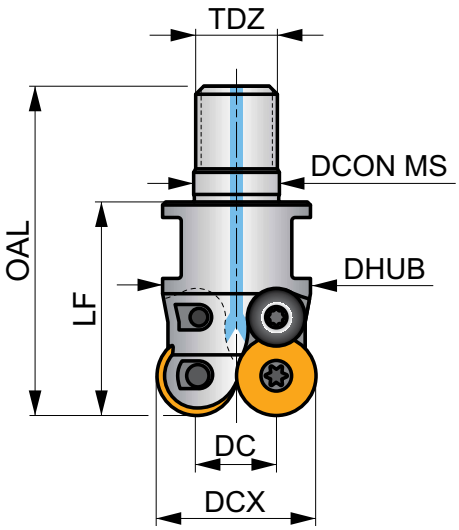
Copy Milling Cutter for Round Inserts RD.. 16 with Internal Coolant

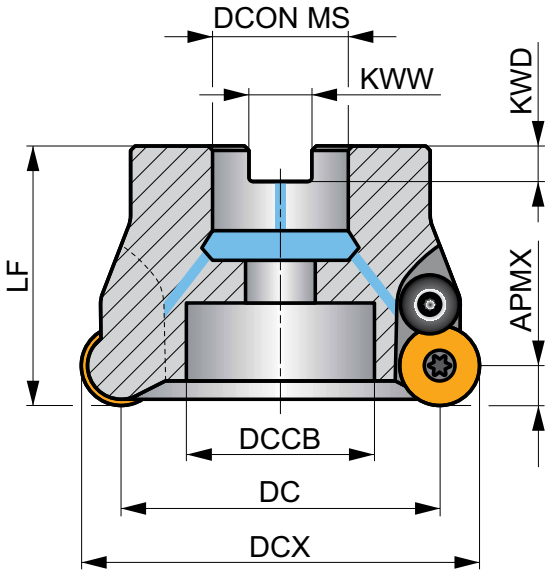
Milling cutter for copy milling utilizing positive RD.. 16 inserts with APMX of 4 mm. Internal coolant. Suitable for face, helical interpolation, ramping, progressive plunge and copy milling. Available in modular and arbor style. Body treated for longer tool life.

APMX	4.0 mm









h_m	0.11 - 0.25 mm
h_m	0.1 - 0.2 mm

	Product	DCX (mm)	DC (mm)	OAL (mm)	DCON MS (mm)	DHUB (mm)	DCCB (mm)	LF (mm)	TDZ	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		lbs			MID
MODULAR	**32E2R042M16-SCRD16-CF**	32	16	65	17	29	–	42	M16	–	–	-2	0	2	–	12600	✓	.40	GI121	C0374	7999353
	52A04R-SCM0RD16-CF	52	36	–	22	–	16.5	50	–	10.4	10.4	0	7	4	–	9900	✓	.91	GI121	C0376	7999354
ISO 6462 DIN 8030	**66A05R-SCM0RD16-CF**	66	50	–	27	–	22	50	–	12.4	12.4	0	7	5	–	8800	✓	1.33	GI121	C0378	7999355
	80A06R-SCM0RD16-CF	80	64	–	27	–	38	52	–	12.4	12.4	0	7	6	–	8000	✓	1.91	GI121	C0380	7999356
	100A07R-SCM0RD16-CF	100	84	–	32	–	45	52	–	14.4	14.4	0	7	7	–	7100	✓	3.11	GI121	C0380	7999357

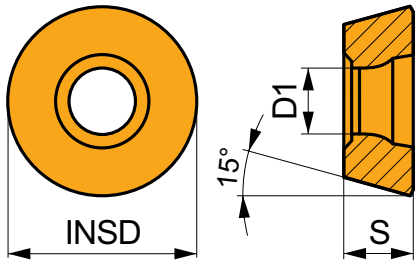
GI121	RD.. 1604M0T	RDHT 1604M0-FA

		Nm						
C0374	US 64510-T20P	4.5	M 4.5	10	–	Flag T20P	CS16P	–
C0376	US 64510-T20P	4.5	M 4.5	10	SDR T20P-T	–	CS16P	HS 1030C
C0378	US 64510-T20P	4.5	M 4.5	10	SDR T20P-T	–	CS16P	HS 1230C
C0380	US 64510-T20P	4.5	M 4.5	10	SDR T20P-T	–	CS16P	–

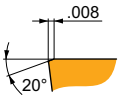
RDHX 16

PRAMET

	INSD (inch)	D1 (inch)	S (inch)
1604	.630	.205	.187



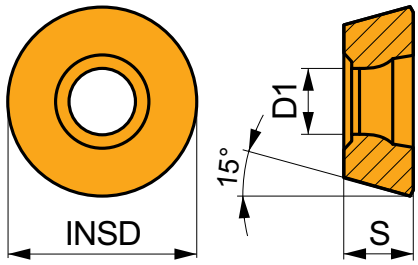
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
			 Zero rake angle design for finish machining.																		
RDHX 1604MOT	**M8310**	–	◪	837	.0118	.079	–	–	–	■	787	.0118	.079	–	–	–	–	–	–	■	164	.0059	.043	6756283
	M8325	–	◪	640	.0118	.079	–	–	–		–	–	–	–	–	–	–	–	–		–	–	–	6756008
	M8345	–	◪	591	.0118	.079	–	–	–		–	–	–	–	–	–	–	–	–		–	–	–	6755967
	M9325	–	◪	951	.0118	.079	–	–	–	■	902	.0118	.079	–	–	–	–	–	–	◪	180	.0059	.043	7455502

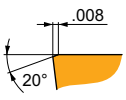
RDMX 16

PRAMET

	INSD (inch)	D1 (inch)	S (inch)
1604	.630	.205	.187



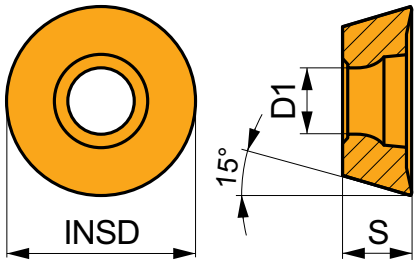
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
			 Zero rake angle design for finish machining.																		
RDMX 1604MOT	**M8310**	–	◪	837	.0118	.079	–	–	–	■	787	.0118	.079	–	–	–	–	–	–	■	164	.0059	.043	6801044

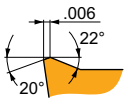
RDGT 16

PRAMET

	INSD	D1	S
	(inch)	(inch)	(inch)
1604	.630	.205	.187



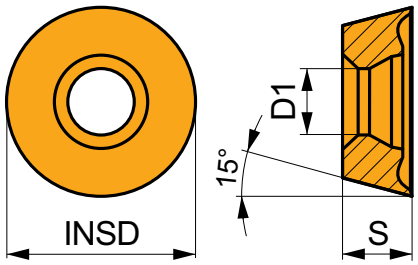
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE	P			M			K			N			S			H			MID
		(inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
			U HFC T																		
			Positive design for finish machining.																		
RDGT 1604M0T	**M8310**	–	■ 935	.0118	.079	◪ 476	.0106	.079	■ 886	.0118	.079	–	–	–	–	–	–	–	–	–	6756280
	M8325	–	■ 722	.0118	.079	◪ 344	.0106	.079	–	–	–	–	–	–	–	–	–	–	–	–	6756002
	M8345	–	■ 656	.0118	.079	■ 394	.0106	.079	–	–	–	–	–	–	◪ 164	.0083	.063	–	–	–	6755964

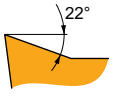
RDHT 16-FA

PRAMET

	INSD	D1	S
	(inch)	(inch)	(inch)
1604	.630	.205	.187

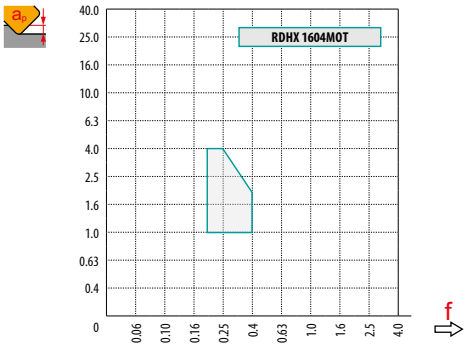


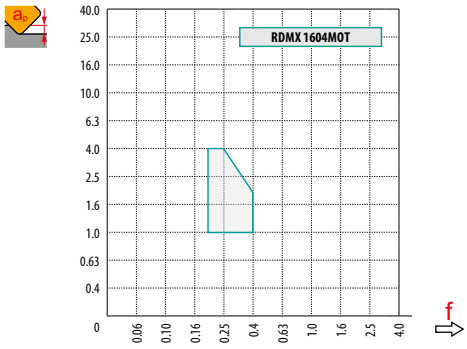
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

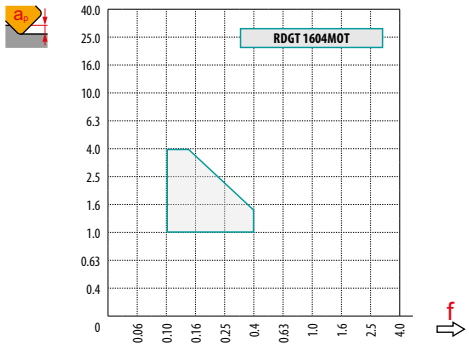
Product		RE	P			M			K			N			S			H			MID
		(inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
			HFC F																		
			FA geometry with highly positive design for fine-finish to medium machining.																		
RDHT 1604M0-FA	**HF7**	–	–	–	–	–	–	–	–	–	–	■ 1033	.0142	.079	–	–	–	–	–	–	6751853

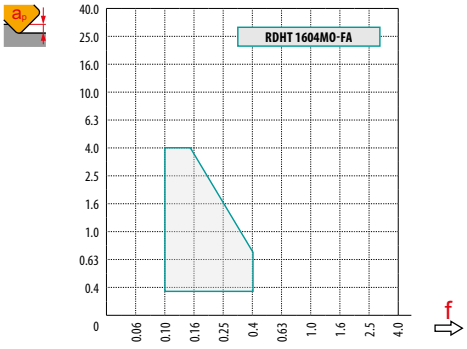
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	.95	.85	.75	.85	.95	1.00	1.00	1.00	1.00
x.f	.64	.64	.64	.64	.64	.65	.65	.67	.68	.71	.72	.74	.79	1.00

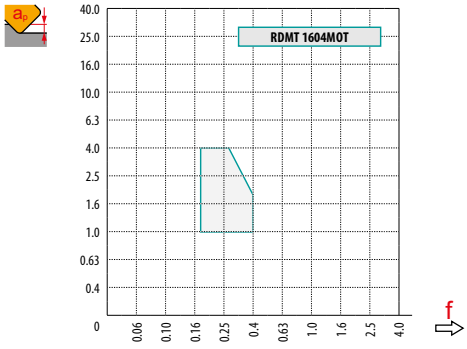
	RDHX 16	RDMX 16	RDGT 16	RDHT 16-FA
RE (mm)	8.0	8.0	8.0	8.0
BS (mm)	–	–	–	–











(mm)

DCX	a_p	.00	.50	.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	**.00**	**.50**	**.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**
	f	–	.91	.74	.65	.58	.53	.46	.42	.38	.36	.34	.30	.28	.26	.25

(mm)

DCX	RPMX	APMX/I
32	25°	4.0/19
52	8°	4.0/58
66	6°	4.0/78
80	4°	4.0/100
100	3°	4.0/100

(mm)

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

(mm)

a_p
4.0

(mm)

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
32	FE	.620	.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578
52		.790	1.020	1.442	1.766	2.040	2.498	2.884	3.225	3.533	4.079	4.561
66		.890	1.149	1.625	1.990	2.298	2.814	3.250	3.633	3.980	4.596	5.138
80		.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	.438	.566	.800	.980	1.131	1.386	1.600	1.789	1.960	2.263	2.530

K2-SRC

P M K H

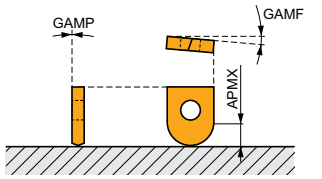
PRAMET

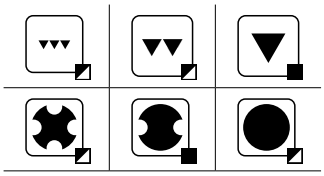
S

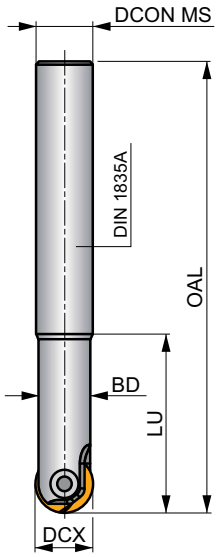
Copy and Profile End Mills

Flexible end mill for a wide range of Die & Mold applications. One tool solution for ball-nosed and toroidal inserts. Available in cylindrical and modular style. Body treated for longer tool life.

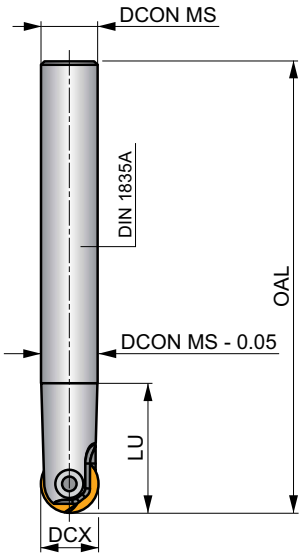
APMX	0.6 - 3.2 mm



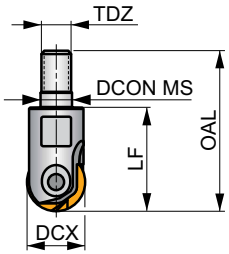




DCX 8 – 20 mm



DCX 8 – 20 mm



h_m	0.07 - 0.14 mm

	Product	DCX (mm)	OAL (mm)	DCON MS (mm)	BD (mm)	LU (mm)	LF (mm)	TDZ			max.		lbs			MID
	08K2R025A10-SRC08-A	8	110	10	7.5	25	–	–	2	–	56000	–	.18	GI030	C0530	6756690
	08K2R050A12-SRC08-A	8	140	12	–	13.5	–	–	2	–	56000	–	.30	GI030	C0530	6756718
	10K2R030A12-SRC10-A	10	130	12	9	30	–	–	2	–	42000	–	.39	GI031	C0531	6756691
	10K2R060A16-SRC10-A	10	150	16	–	19.5	–	–	2	–	42000	–	.40	GI031	C0531	6756719
	12K2R030A12-SRC12-A	12	130	12	10.5	30	–	–	2	–	35000	–	.24	GI032	C0532	6756692
DIN 1835A	**16K2R035A16-SRC16-A**	16	140	16	14	35	–	–	2	–	22000	–	.51	GI033	C0533	6756693
	20K2R045A20-SRC20-A	20	160	20	18	45	–	–	2	–	16000	–	.88	GI034	C0534	6756694
	25K2R045A25-SRC25-A	25	160	25	22.4	45	–	–	2	–	10000	–	1.31	GI035	C0535	6756695
	32K2R060A32-SRC32-A	32	180	32	28.6	60	–	–	2	–	6000	–	2.43	GI036	C0536	6756696
	12K2R060A16-SRC12-A	12	160	16	–	24.5	–	–	2	–	35000	–	.31	GI032	C0532	6756720
	16K2R065A20-SRC16-A	16	175	20	–	31.5	–	–	2	–	22000	–	.66	GI033	C0533	6756721
	20K2R080A25-SRC20-A	20	190	25	–	33.5	–	–	2	–	16000	–	1.46	GI034	C0534	6756722
	08K2R30M06-SRC08-A	8	45	6.5	–	–	30	M6	2	–	–	–	.04	GI123	C0530	6757579
	10K2R30M06-SRC10-A	10	45	6.5	–	–	30	M6	2	–	–	–	.06	GI124	C0531	6757580
MODULAR	**12K2R30M06-SRC12-A**	12	45	6.5	–	–	30	M6	2	–	–	–	.33	GI125	C0530	7051473
	12K2R30M08-SRC12-A	12	48	8.5	–	–	30	M8	2	–	–	–	.09	GI125	C0532	6757581
	16K2R35M08-SRC16-A	16	53	8.5	–	–	35	M8	2	–	–	–	.35	GI033	C0533	6757582
	20K2R35M10-SRC20-A	20	54	10.5	–	–	35	M10	2	–	–	–	.17	GI034	C0534	6757583

GI030	RC 08	–	LC 08-KP	LC 08-KPF
GI031	RC 10	RC 10-F	LC 10-KP	LC 10-KPF

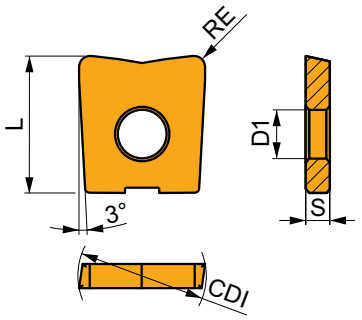
GI032	RC 12	RC 12-F	–	–
GI033	RC 16	RC 16-F	–	–
GI034	RC 20	–	–	–
GI035	RC 25	–	–	–
GI036	RC 32	–	–	–
GI123	RC 08	–	–	–
GI124	RC 10	RC 10-F	–	–
GI125	RC 12	RC 12-F	–	–

CO530	CS 3007-T08P	1.2	–	–	–	Flag T08P
CO531	CS 4008-T15P	3.0	–	D-T08P/T15P	FG-15	–
CO532	CS 5009-T20P	5.0	SDR T20P	–	–	–
CO533	CS 5013-T20P	5.0	SDR T20P	–	–	–
CO534	CS 5015-T20P	5.0	SDR T20P	–	–	–
CO535	CS 6020-T20P	7.5	SDR T20P	–	–	–
CO536	CS 8025-T30P	15.0	SDR T30P	–	–	–

LC

PRAMET

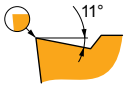
	CDI (inch)	D1 (inch)	L (inch)	S (inch)
08	.315	.118	.374	.079
10	.394	.157	.453	.098
12	.472	.197	.551	.098
16	.630	.197	.630	.118
20	.787	.197	.709	.118



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

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
			U E																		
			KP geometry with zero rake angle design for light to medium machining.																		
LC 0806-KP	**M4310**	.024	◪ 919	.0063	.012	–	–	–	■ 869	.0063	.012	–	–	–	–	–	–	■ 180	.0043	.024	7637582
	M8310	.024	■ 1066	.0063	.012	–	–	–	■ 1001	.0063	.012	–	–	–	–	–	–	■ 213	.0043	.024	6922531
LC 0810-KP	**M4310**	.039	◪ 919	.0063	.02	–	–	–	■ 869	.0063	.02	–	–	–	–	–	–	■ 180	.0043	.039	7637585
LC 1008-KP	**M4310**	.031	◪ 886	.0063	.016	–	–	–	■ 837	.0063	.016	–	–	–	–	–	–	■ 164	.0031	.031	7637586
	M8310	.031	■ 1033	.0063	.016	–	–	–	■ 968	.0063	.016	–	–	–	–	–	–	■ 197	.0031	.031	6922533
LC 1010-KP	**M4310**	.039	◪ 919	.0063	.02	–	–	–	■ 869	.0063	.02	–	–	–	–	–	–	■ 180	.0031	.039	7637589
	M8310	.039	■ 1066	.0063	.02	–	–	–	■ 1001	.0063	.02	–	–	–	–	–	–	■ 213	.0031	.039	6922534
LC 1210-KP	**M4310**	.039	◪ 919	.0063	.02	–	–	–	■ 869	.0063	.02	–	–	–	–	–	–	■ 180	.0031	.039	7637601
	M8310	.039	■ 1066	.0063	.02	–	–	–	■ 1001	.0063	.02	–	–	–	–	–	–	■ 213	.0031	.039	6922535
	M8330	.039	■ 968	.0063	.02	–	–	–	■ 919	.0063	.02	–	–	–	–	–	–	◪ 180	.0031	.039	7637602
LC 1610-KP	**M4310**	.039	◪ 919	.0063	.02	–	–	–	■ 869	.0063	.02	–	–	–	–	–	–	■ 180	.0031	.039	7637606
	M8310	.039	■ 1066	.0063	.02	–	–	–	■ 1001	.0063	.02	–	–	–	–	–	–	■ 213	.0031	.039	6922536
	M8330	.039	■ 968	.0063	.02	–	–	–	■ 919	.0063	.02	–	–	–	–	–	–	◪ 180	.0031	.039	7637607

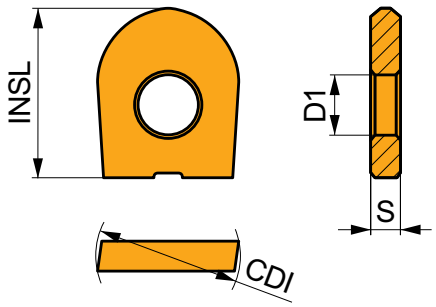
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
			U E																		
KP geometry with zero rake angle design for light to medium machining.																					
LC 1613-KP	**M4310**	.051	◪ 886	.0063	.028	–	–	–	■ 837	.0063	.028	–	–	–	–	–	–	■ 164	.0031	.051	7637608
	M8310	.051	■ 1033	.0063	.028	–	–	–	■ 968	.0063	.028	–	–	–	–	–	–	■ 197	.0031	.051	6922537
LC 2010-KP	**M4310**	.039	◪ 919	.0063	.02	–	–	–	■ 869	.0063	.02	–	–	–	–	–	–	■ 180	.0031	.039	7637611
	M8310	.039	■ 1066	.0063	.02	–	–	–	■ 1001	.0063	.02	–	–	–	–	–	–	■ 213	.0031	.039	6922538
LC 2016-KP	**M4310**	.063	◪ 919	.0063	.031	–	–	–	■ 869	.0063	.031	–	–	–	–	–	–	■ 180	.0031	.043	7637613
	M8310	.063	■ 1066	.0063	.031	–	–	–	■ 1001	.0063	.031	–	–	–	–	–	–	■ 213	.0031	.043	6922539
LC 2040-KP	**M8330**	.157	■ 935	.0063	.079	–	–	–	■ 886	.0063	.079	–	–	–	–	–	–	◪ 180	.0031	.106	7637615
			F																		
KPF geometry with positive design for light to medium machining.																					
LC 0806-KPF	**M4310**	.024	◪ 919	.0063	.012	◪ 459	.0055	.012	■ 869	.0063	.012	–	–	–	–	–	–	■ 180	.0031	.024	7637584
LC 1008-KPF	**M4310**	.031	◪ 886	.0063	.016	◪ 443	.0055	.016	■ 837	.0063	.016	–	–	–	–	–	–	■ 164	.0031	.031	7637588
LC 1210-KPF	**M4310**	.039	◪ 919	.0063	.02	◪ 459	.0055	.02	■ 869	.0063	.02	–	–	–	–	–	–	■ 180	.0031	.039	7637603
	M8330	.039	■ 968	.0063	.02	◪ 574	.0055	.02	■ 919	.0063	.02	–	–	–	–	–	–	◪ 180	.0031	.039	7637604

RC

PRAMET

	CDI (inch)	D1 (inch)	INSL (inch)	S (inch)
08	.315	.118	.374	.079
10	.394	.157	.453	.098
12	.472	.197	.472	.098
16	.630	.197	.551	.118
20	.787	.197	.630	.118
25	.984	.236	.846	.157
32	1.26	.315	1.016	.197



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

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
			U E																		
Neutral face with a positive cutting edge design.																					
RC 08	**M4310**	–	◪ 837	.0142	.016	–	–	–	■ 787	.0142	.016	–	–	–	–	–	–	■ 164	.0071	.031	7637781
	M8310	–	◪ 968	.0142	.016	–	–	–	■ 919	.0142	.016	–	–	–	–	–	–	■ 180	.0071	.031	6922545
RC 10	**M4310**	–	◪ 820	.0142	.02	–	–	–	■ 771	.0142	.02	–	–	–	–	–	–	■ 164	.0071	.039	7637784
	M8310	–	◪ 951	.0142	.02	–	–	–	■ 902	.0142	.02	–	–	–	–	–	–	■ 180	.0071	.039	6922546
	M8330	–	◪ 886	.0142	.02	–	–	–	■ 837	.0142	.02	–	–	–	–	–	–	◪ 164	.0071	.039	7637785
RC 12	**M4310**	–	◪ 804	.0142	.024	–	–	–	■ 755	.0142	.024	–	–	–	–	–	–	■ 148	.0071	.047	7637787
	M8310	–	■ 935	.0142	.024	–	–	–	■ 886	.0142	.024	–	–	–	–	–	–	■ 180	.0071	.047	6922547
	M8330	–	■ 869	.0142	.024	–	–	–	■ 820	.0142	.024	–	–	–	–	–	–	◪ 164	.0071	.047	7637788

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

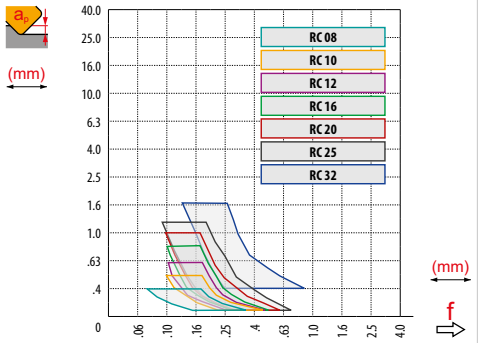
Product		RE	P				M				K				N				S				H				MID
		(inch)	vc (ft/min)	f (in/tooth)	ap (inch)		vc (ft/min)	f (in/tooth)	ap (inch)		vc (ft/min)	f (in/tooth)	ap (inch)		vc (ft/min)	f (in/tooth)	ap (inch)		vc (ft/min)	f (in/tooth)	ap (inch)		vc (ft/min)	f (in/tooth)	ap (inch)		
			U E																								
			Neutral face with a positive cutting edge design.																								
RC 16	**M4310**	–	◪ 771	.0142	.031		–	–	–		■ 722	.0142	.031		–	–	–		–	–	–		■ 148	.0071	.043		7637790
	M8310	–	■ 902	.0142	.031		–	–	–		■ 853	.0142	.031		–	–	–		–	–	–		■ 180	.0071	.043		6922548
	M8330	–	■ 837	.0142	.031		–	–	–		■ 787	.0142	.031		–	–	–		–	–	–		◪ 164	.0071	.043		7637791
RC 20	**M4310**	–	◪ 771	.0142	.039		–	–	–		■ 722	.0142	.039		–	–	–		–	–	–		■ 148	.0071	.051		7637794
	M8310	–	■ 886	.0142	.039		–	–	–		■ 837	.0142	.039		–	–	–		–	–	–		■ 164	.0071	.051		6922549
	M8330	–	■ 820	.0142	.039		–	–	–		■ 771	.0142	.039		–	–	–		–	–	–		◪ 164	.0071	.051		7637795
RC 25	**M8310**	–	■ 853	.0142	.051		–	–	–		■ 804	.0142	.051		–	–	–		–	–	–		■ 164	.0071	.067		6922550
	M8330	–	■ 804	.0142	.051		–	–	–		■ 755	.0142	.051		–	–	–		–	–	–		◪ 148	.0071	.067		7637799
RC 32	**M4310**	–	◪ 722	.0142	.063		–	–	–		■ 673	.0142	.063		–	–	–		–	–	–		■ 131	.0071	.083		7637800
	M8330	–	■ 787	.0142	.063		–	–	–		■ 738	.0142	.063		–	–	–		–	–	–		◪ 148	.0071	.083		7637801
			F																								
			F geometry is sharp and suitable for finish machining.																								
RC 10-F	**M4310**	–	◪ 820	.0142	.02		◪ 410	.0126	.02		■ 771	.0142	.02		–	–	–		–	–	–		■ 164	.0071	.039		7637786
RC 12-F	**M4310**	–	◪ 804	.0142	.024		◪ 394	.0126	.024		■ 755	.0142	.024		–	–	–		–	–	–		■ 148	.0071	.047		7637789
RC 16-F	**M4310**	–	◪ 771	.0142	.031		◪ 377	.0126	.031		■ 722	.0142	.031		–	–	–		–	–	–		■ 148	.0071	.043		7637792
	M8330	–	■ 837	.0142	.031		◪ 492	.0126	.031		■ 787	.0142	.031		–	–	–		–	–	–		◪ 164	.0071	.043		7637793

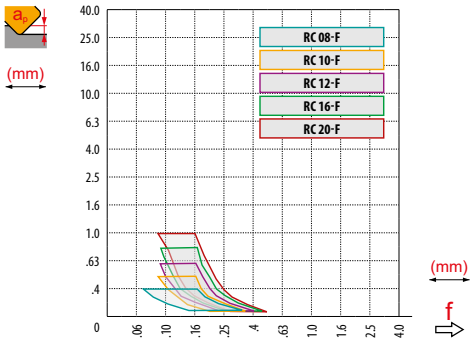
	RC 08	RC 10	RC 12	RC 16	RC 20	RC 25	RC 32
RE (mm)	4.0	5.0	6.0	8.0	10.0	12.5	16.0
BS (mm)	–	–	–	–	–	–	–

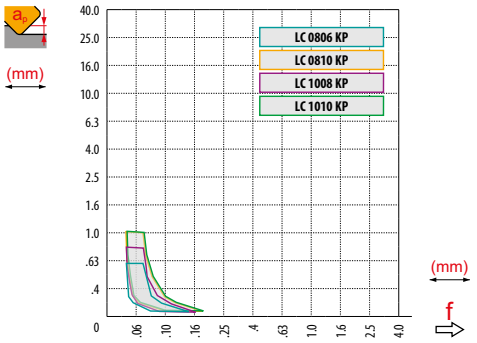
	RC 08-F	RC 10-F	RC 12-F	RC 16-F	RC 20-F
RE (mm)	4.0	5.0	6.0	8.0	10.0
BS (mm)	–	–	–	–	–

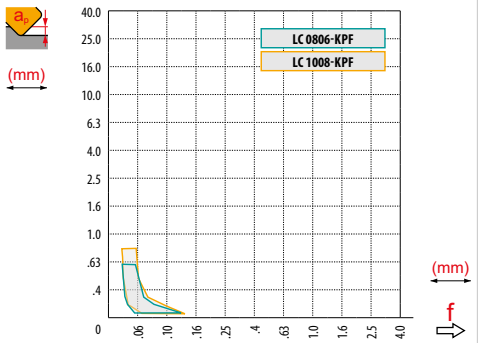
	LC 08-KP	LC 08-KP	LC 10-KP	LC 10-KP	LC 08-KPF	LC 10-KPF
RE (mm)	.6	1.0	.8	1.0	.6	.8
BS (mm)	–	–	–	–	–	–

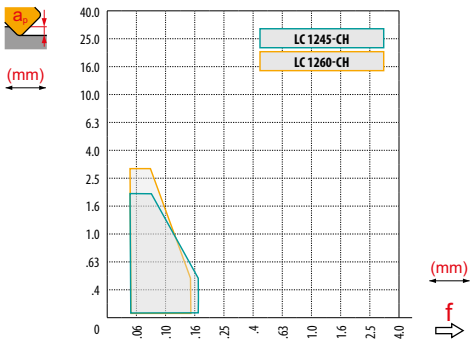
	LC 1245-CH	LC 1260-CH	LC 1210-RE	LC 1220-RE	LC 1230-RE
RE (mm)	3×45	5×60	1.0	2.0	3.0
BS (mm)	–	–	–	–	–

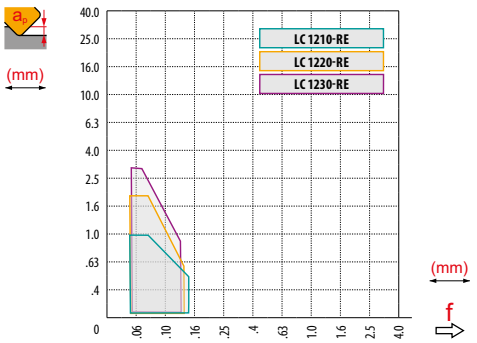










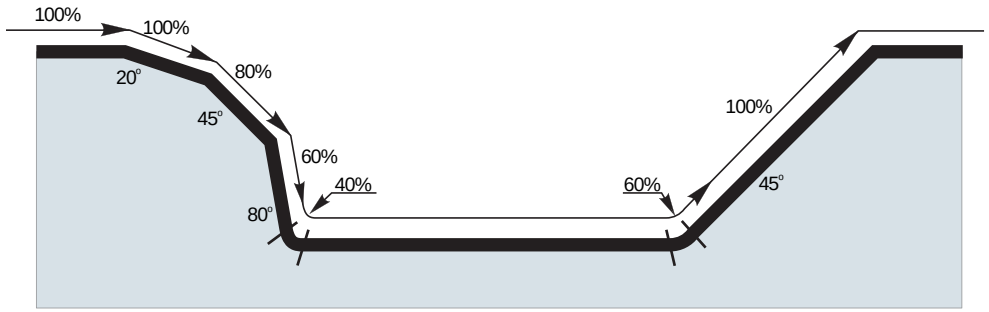


	(mm) DCX	(mm) a_p .3	.4	.5	.7	1.0	1.25	1.5	2.0	2.5	3.0	4.0	5.0	6.0	8.0	10.0	12.0	15.0	16.0
RC 08 / RC 08-F	8	3.0	3.5	3.9	4.5	5.3	5.8	6.2	6.9	7.4	7.7	8.0	–	–	–	–	–	–	–
RC 10 / RC 10-F	10	3.4	3.9	4.4	5.1	6.0	6.6	7.1	8.0	8.7	9.2	9.8	10.0	–	–	–	–	–	–
RC 12 / RC 12-F	12	3.7	4.3	4.8	5.6	6.6	7.3	7.9	8.9	9.7	10.4	11.3	11.8	12.0	–	–	–	–	–
RC 16 / RC 16-F	16	4.3	5.0	5.6	6.5	7.7	8.6	9.3	10.6	11.6	12.5	13.9	14.8	15.5	16.0	–	–	–	–
RC 20 / RC 20-F	20	4.9	5.6	6.2	7.4	8.7	9.7	10.5	12.0	13.2	14.3	16.0	17.3	18.3	19.6	20.0	–	–	–
RC 25 / RC 25-F	25	5.4	6.3	7.0	8.2	9.8	10.9	11.9	13.6	15.0	16.2	18.3	20.0	21.4	23.3	24.5	25.0	–	–
RC 32 / RC 32-F	32	6.17	7.11	7.94	9.36	11.14	12.40	13.53	15.49	17.18	18.65	21.17	23.24	24.98	27.71	29.66	30.98	31.94	32.00

(mm)

	DCX	µm 3	5	10	15	20	30	40	50	60	80	100
RC 08 / RC 08-F	8	.310	.400	.566	.693	.800	.980	1.131	1.265	1.386	1.600	1.789
RC 10 / RC 10-F	10	.346	.447	.632	.775	.894	1.095	1.265	1.414	1.549	1.789	2.000
RC 12 / RC 12-F	12	.379	.490	.693	.849	.980	1.200	1.386	1.549	1.697	1.960	2.191
RC 16 / RC 16-F	16	.438	.566	.800	.980	1.131	1.386	1.600	1.789	1.960	2.263	2.530
RC 20 / RC 20-F	20	.490	.632	.894	1.095	1.265	1.549	1.789	2.000	2.191	2.530	2.828
RC 25 / RC 25-F	25	.548	.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	.620	.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	.89	–	–	–	–	–	–	–	–	–	–	–	–	–
31.2 %	2.5 %	3.58	2.28	1.64	1.36	1.20	1.01	.92	.88	.91	–	–	–	–	–	–	–	–	–	–
43.6 %	5.0 %	4.22	2.68	1.92	1.58	1.39	1.16	1.03	.95	.90	.88	.89	–	–	–	–	–	–	–	–
52.7 %	7.5 %	4.63	2.95	2.10	1.73	1.51	1.26	1.11	1.02	.96	.91	.89	.88	.90	–	–	–	–	–	–
60.0 %	10.0 %	4.94	3.14	2.24	1.84	1.61	1.33	1.18	1.07	1.00	.95	.91	.89	.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	.96	.93	.90	.88	.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	.96	.93	.89	.88	.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	.99	.95	.90	.88	.88	.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	.97	.92	.89	.88	.88	.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	.98	.93	.89	.88	.88	.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	.99	.93	.90	.89	.88	.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	.94	.90	.89	.88	.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	.94	.90	.89	.88	.88	1.00



(mm)

	DCX	RE	a_p .00	.30	.40	.50	.60	.70	.80	.90	1.00	1.25	1.50	2.00	2.50	3.00	4.00
LC 0806-KP		.6	6.8	7.8	7.9	8.0	8.0	–	–	–	–	–	–	–	–	–	–
LC 0806-KPF	**8**	.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		.8	8.4	9.6	9.8	9.9	9.9	10.0	10.0	–	–	–	–	–	–	–	–
LC 1008-KPF	**10**	.8	8.4	9.6	9.8	9.9	9.9	10.0	10.0	–	–	–	–	–	–	–	–
LC 1010-KP		1.0	8.0	9.4	9.6	9.7	9.8	9.9	10.0	10.0	10.0	–	–	–	–	–	–
LC 1245-CH		3 × 45°	8.0	8.6	8.8	9.0	9.2	9.4	9.6	9.8	10.0	10.5	11.0	12.0	–	–	–
LC 1260-CH		5 × 60°	9.7	10.0	10.2	10.3	10.4	10.5	10.6	10.7	10.8	11.1	11.4	12.0	–	–	–
LC 1210-RE	**12**	1.0	10.0	10.1	10.2	10.3	10.4	10.6	10.8	11.1	12.0	–	–	–	–	–	–
LC 1220-RE		2.0	8.0	8.0	8.1	8.1	8.2	8.3	8.3	8.4	8.5	8.9	9.4	12.0	–	–	–
LC 1230-RE		3.0	6.0	6.0	6.1	6.1	6.1	6.2	6.2	6.3	6.3	6.5	6.8	7.5	8.7	12.0	–

(mm)

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
8	FE	.310	.400	.566	.693	.800	.980	1.131	1.265	1.386	1.600	1.789
10		.346	.447	.632	.775	.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**
.6	FE	.120	.155	.219	.268	.310	.379	.438	.490	.537	.620	.693
.8		.139	.179	.253	.310	.358	.438	.506	.566	.620	.716	.800
1.0		.155	.200	.283	.346	.400	.490	.566	.632	.693	.800	.89

(mm)

	DCX	RE	max.
LC 0806-KP		.6	3.0
LC 0806-KPF	**8**	.6	2.8
LC 0810-KP		1.0	3.0
LC 1008-KP		.8	3.8
LC 1008-KPF	**10**	.8	3.6
LC 1010-KP		1.0	3.8
LC 1245-CH		3×45	–
LC 1260-CH		5×60	–
LC 1210-RE	**12**	1.0	–
LC 1220-RE		2.0	–
LC 1230-RE		3.0	–

(mm)

	DCX	RE	RPMX	APMX/l
LC 0806-KP		.6	2.5	1.5/35
LC 0806-KPF	**8**	.6	2.2	1.5/39
LC 0810-KP		1.0	2.4	1.5/36
LC 1008-KP		.8	2.6	1.5/33
LC 1008-KPF	**10**	.8	2.3	1.5/38
LC 1010-KP		1.0	2.6	1.5/33
LC 1245-CH		3×45	–	–
LC 1260-CH		5×60	–	–
LC 1210-RE	**12**	1.0	–	–
LC 1220-RE		2.0	–	–
LC 1230-RE		3.0	–	–

	DCX	RE	DMIN	DMAX	SMAX DMIN	SMAX DMAX
LC 0806-KP	**8**	.6	9.8	15.9	.8	1.0
LC 0806-KPF		.6	10.2	15.9	.1	.1
LC 0810-KP		1.0	9.9	15.9	.1	.1
LC 1008-KP	**10**	.8	12.2	19.9	.9	1.1
LC 1008-KPF		.8	12.6	19.9	.2	.2
LC 1010-KP		1.0	12.2	19.9	.2	.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**	.6	.15
LC 0806-KPF		.6	.13
LC 0810-KP		1.0	.13
LC 1008-KP	**10**	.8	.2
LC 1008-KPF		.8	.18
LC 1010-KP		1.0	.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	.21
LC 1260-CH		5 × 60°	1.26	.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	.9	.8	.7	.5

K2-SLC

P M K H

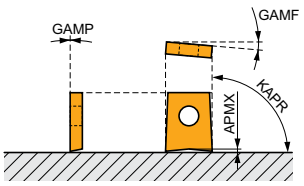
PRAMET

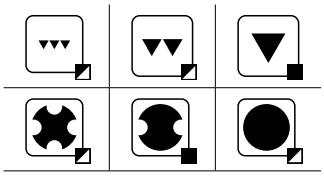
S

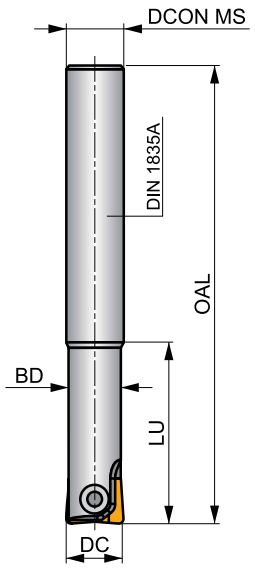
Copy and Profile End Mills for finishing

End mill for finishing operations in a wide range of applications utilising LC inserts. High precision ground inserts provide excellent accuracy. For profiling, chamfering, helical, progressive plunge milling and ramping. Available in cylindrical style only. Body treated for longer tool life.

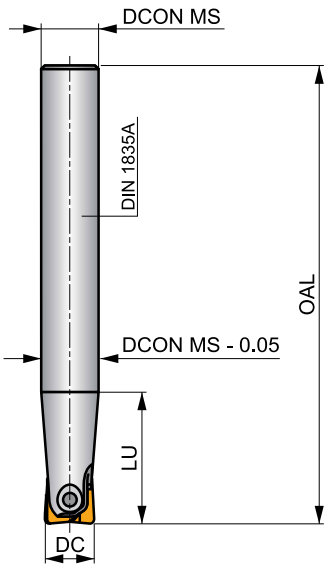
APMX	1.0 - 3.0 mm







DC 12 - 16 mm



DC 20 mm

h_m 0.03 - 0.10 mm

	Product	DC (mm)	OAL (mm)	DCON MS (mm)	LU (mm)	BD (mm)			max.		lbs			MID
DIN 1835A	**12K2R030A12-SLC12-A**	12	130	12	30	10.5	2	–	35000	–	.24	GI037	C0532	6756697
	16K2R035A16-SLC16-A	16	140	16	35	14	2	–	22000	–	.44	GI038	C0533	6756698
	20K2R045A20-SLC20-A	20	160	20	45	18	2	–	16000	–	.84	GI039	C0534	6756699

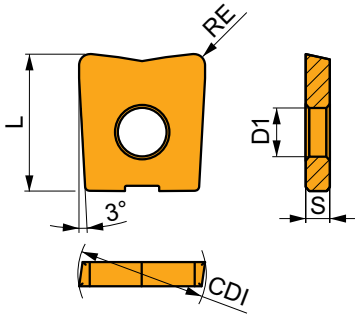
GI037	LC 12-KP	LC 12-KPF
GI038	LC 16-KP	LC 16-KPF
GI039	LC 20-KP	LC 20-KPF

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

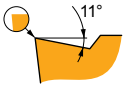
LC

PRAMET

	CDI	D1	L	S
	(inch)	(inch)	(inch)	(inch)
08	.315	.118	.374	.079
10	.394	.157	.453	.098
12	.472	.197	.551	.098
16	.630	.197	.630	.118
20	.787	.197	.709	.118

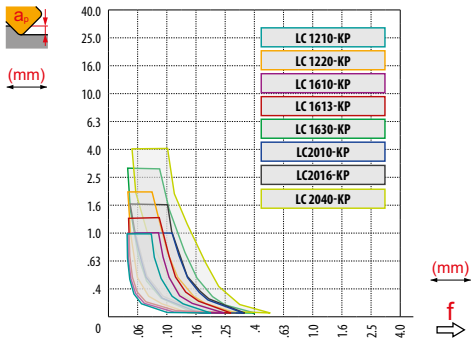


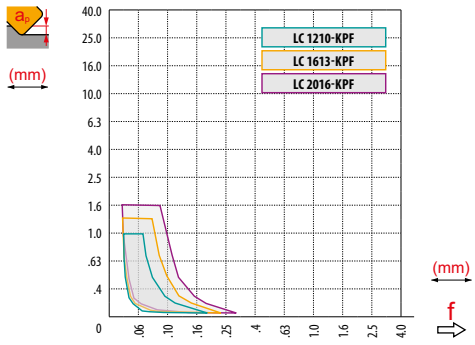
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

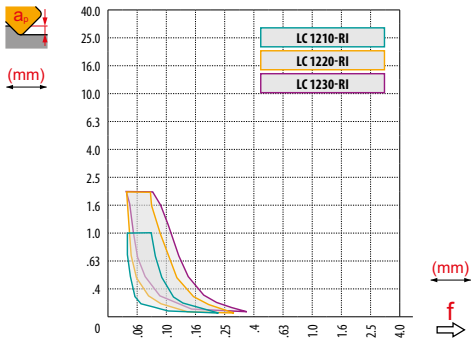
Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
		(inch)																			
			U E																		
KP geometry with zero rake angle design for light to medium machining.																					
LC 0806-KP	**M4310**	.024	◪ 919	.0063	.012	–	–	–	■ 869	.0063	.012	–	–	–	–	–	–	■ 180	.0043	.024	7637582
	M8310	.024	■ 1066	.0063	.012	–	–	–	■ 1001	.0063	.012	–	–	–	–	–	–	■ 213	.0043	.024	6922531
LC 0810-KP	**M4310**	.039	◪ 919	.0063	.020	–	–	–	■ 869	.0063	.020	–	–	–	–	–	–	■ 180	.0043	.039	7637585
LC 1008-KP	**M4310**	.031	◪ 886	.0063	.016	–	–	–	■ 837	.0063	.016	–	–	–	–	–	–	■ 164	.0031	.031	7637586
	M8310	.031	■ 1033	.0063	.016	–	–	–	■ 968	.0063	.016	–	–	–	–	–	–	■ 197	.0031	.031	6922533
LC 1010-KP	**M4310**	.039	◪ 919	.0063	.020	–	–	–	■ 869	.0063	.020	–	–	–	–	–	–	■ 180	.0031	.039	7637589
	M8310	.039	■ 1066	.0063	.020	–	–	–	■ 1001	.0063	.020	–	–	–	–	–	–	■ 213	.0031	.039	6922534
LC 1210-KP	**M4310**	.039	◪ 919	.0063	.020	–	–	–	■ 869	.0063	.020	–	–	–	–	–	–	■ 180	.0031	.039	7637601
	M8310	.039	■ 1066	.0063	.020	–	–	–	■ 1001	.0063	.020	–	–	–	–	–	–	■ 213	.0031	.039	6922535
	M8330	.039	■ 968	.0063	.020	–	–	–	■ 919	.0063	.020	–	–	–	–	–	–	◪ 180	.0031	.039	7637602
LC 1610-KP	**M4310**	.039	◪ 919	.0063	.020	–	–	–	■ 869	.0063	.020	–	–	–	–	–	–	■ 180	.0031	.039	7637606
	M8310	.039	■ 1066	.0063	.020	–	–	–	■ 1001	.0063	.020	–	–	–	–	–	–	■ 213	.0031	.039	6922536
	M8330	.039	■ 968	.0063	.020	–	–	–	■ 919	.0063	.020	–	–	–	–	–	–	◪ 180	.0031	.039	7637607
LC 1613-KP	**M4310**	.051	◪ 886	.0063	.028	–	–	–	■ 837	.0063	.028	–	–	–	–	–	–	■ 164	.0031	.051	7637608
	M8310	.051	■ 1033	.0063	.028	–	–	–	■ 968	.0063	.028	–	–	–	–	–	–	■ 197	.0031	.051	6922537
LC 2010-KP	**M4310**	.039	◪ 919	.0063	.020	–	–	–	■ 869	.0063	.020	–	–	–	–	–	–	■ 180	.0031	.039	7637611
	M8310	.039	■ 1066	.0063	.020	–	–	–	■ 1001	.0063	.020	–	–	–	–	–	–	■ 213	.0031	.039	6922538
LC 2016-KP	**M4310**	.063	◪ 919	.0063	.031	–	–	–	■ 869	.0063	.031	–	–	–	–	–	–	■ 180	.0031	.043	7637613
	M8310	.063	■ 1066	.0063	.031	–	–	–	■ 1001	.0063	.031	–	–	–	–	–	–	■ 213	.0031	.043	6922539
LC 2040-KP	**M8330**	.157	■ 935	.0063	.079	–	–	–	■ 886	.0063	.079	–	–	–	–	–	–	◪ 180	.0031	.106	7637615
			F																		
KPF geometry with positive design for light to medium machining.																					
LC 0806-KPF	**M4310**	.024	◪ 919	.0063	.012	◪ 459	.0055	.012	■ 869	.0063	.012	–	–	–	–	–	–	■ 180	.0031	.024	7637584
LC 1008-KPF	**M4310**	.031	◪ 886	.0063	.016	◪ 443	.0055	.016	■ 837	.0063	.016	–	–	–	–	–	–	■ 164	.0031	.031	7637588
LC 1210-KPF	**M4310**	.039	◪ 919	.0063	.020	◪ 459	.0055	.020	■ 869	.0063	.020	–	–	–	–	–	–	■ 180	.0031	.039	7637603
	M8330	.039	■ 968	.0063	.020	◪ 574	.0055	.020	■ 919	.0063	.020	–	–	–	–	–	–	◪ 180	.0031	.039	7637604

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	.95	.85	.75	.85	.95	1.00	1.00	1.00	1.00
⇨ x.f	.64	.64	.64	.64	.64	.65	.65	.67	.68	.71	.72	.74	.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	LC 12-KPF	LC 16-KPF	LC 20-KP	LC 1215-RI	LC 1220-RI	LC 1230-RI
RE (mm)	1.0	2.0	1.0	1.3	3.0	1.0	1.6	4.0	1.0	1.3	1.6	1.5	2.0	3.0
BS (mm)	–	–	–	–	–	–	–	–	–	–	–	–	–	–







	DC	RE	a_p .0	.3	.4	.5	.6	.7	.8	.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	–	–

(mm)

DC	µm	3	5	10	15	20	30	40	50	60	80	100
12	FE	.379	.490	.693	.849	.980	1.200	1.386	1.549	1.697	1.960	2.191
16		.438	.566	.800	.980	1.131	1.386	1.600	1.789	1.960	2.263	2.530
20		.490	.632	.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	.177	.228	.322	.395	.456	.559	.645	.721	.790	.912	1.020
1.6		.196	.253	.358	.438	.506	.620	.716	.800	.876	1.012	1.131
2.0		.219	.283	.400	.490	.566	.693	.800	.894	.980	1.131	1.265
3.0		.268	.346	.490	.600	.693	.849	.980	1.095	1.200	1.386	1.549
4.0		.310	.400	.566	.693	.800	.980	1.131	1.265	1.386	1.600	1.789

(mm)

	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

(mm)

	DC	RE	RPMX	APMX/I
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

(mm)

	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	.4	.4
LC 1220-KP		2.0	14.1	23.9	.3	.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	.6	.6
LC 1613-KPF		1.3	19.9	31.9	.5	.5
LC 1630-KP		3.0	18.6	31.9	.4	.4
LC 2010-KP	20	1.0	22.8	39.9	1.3	1.5
LC 2016-KP		1.6	22.8	39.9	.8	.8
LC 2016-KPF		1.6	24.8	39.9	.7	.7
LC 2040-KP		4.0	22.8	39.9	.5	.5

(mm)

	DC	RE	a_p
LC 1210-KP	12	1.0	.44
LC 1210-KPF		1.0	.9
LC 1220-KP		2.0	.4
LC 1210-RI		1.0	–
LC 1220-RI		2.0	–
LC 1230-RI		3.0	–
LC 1610-KP	16	1.0	.65
LC 1613-KP		1.3	.62
LC 1613-KPF		1.3	.53
LC 1630-KP		3.0	.44
LC 2010-KP	20	1.0	.85
LC 2016-KP		1.6	.79
LC 2016-KPF		1.6	.67
LC 2040-KP		4.0	.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	.9	.8	.7	.5

K2-PPH

P M K S H

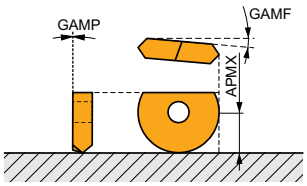
PRAMET

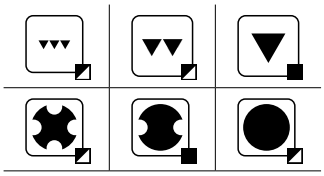
S

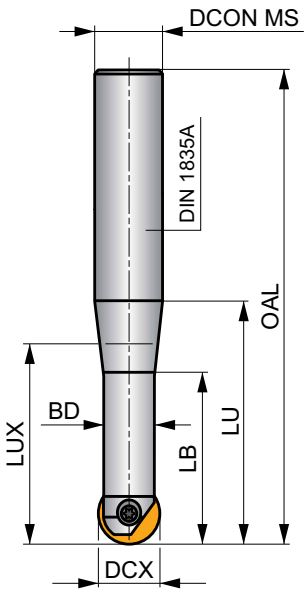
Copy and Profile End Mills

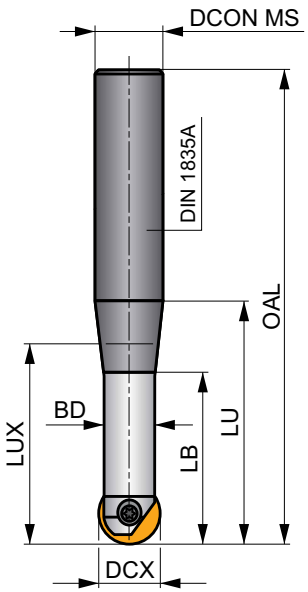
Flexible end mill for a wide range of Die & Mold applications. One tool solution for ball-nosed, toroidal and high-feed inserts. High precision ground inserts provide high accuracy. Available in cylindrical and modular style. Body treated for longer tool life.

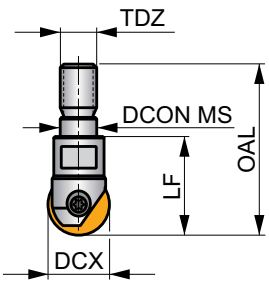
APMX	0.3 - 4.0 mm











h_m 0.07 - 0.14 mm

	Product	DCX (mm)	OAL (mm)	DCON MS (mm)	BD (mm)	LB (mm)	LU (mm)	LUX (mm)	LF (mm)	TDZ	Carbide	max.		lbs			MID
	PPH-08/02-QC12-092	8	92	12	6.5	19	35	23.1	–	–	–	40000	–	.32	GI284	C0540	7024709
	PPH-08/02-QC12-110	8	110	12	6.5	33.5	53	41.5	–	–	–	33600	–	.32	GI284	C0540	7024730
	PPH-08/02-QC12-132	8	132	12	6.5	19	75	41.8	–	–	–	16800	–	.34	GI284	C0540	7024732
	PPH-10/02-QC12-092	10	92	12	8	22.4	38	30	–	–	–	40000	–	.27	GI285	C0541	7024735
	PPH-10/02-QC12-110	10	110	12	8	38.7	53	51.9	–	–	–	40000	–	.33	GI285	C0541	7024737
	PPH-10/02-QC12-132	10	132	12	8	21.8	75	73.6	–	–	–	20300	–	.35	GI285	C0541	7024739
	PPH-12/02-QC16-145	12	145	16	10	22.5	85	63.3	–	–	–	19800	–	.53	GI286	C0542	7024746
	PPH-16/02-QC20-166	16	166	20	14	29.5	100	75.5	–	–	–	20000	–	.81	GI287	C0543	7024754
	PPH-20/02-QC25-191	20	191	25	17	35	115	82.2	–	–	–	18400	–	1.42	GI288	C0544	7024762
	PPH-25/02-QC32-215	25	215	32	21	42.5	135	97	–	–	–	16500	–	2.37	GI289	C0545	7024766
	PPH-12/02-QC12-083	12	83	12	10	–	26	–	–	–	–	40000	–	.33	GI286	C0542	7024741
DIN 1835A	**PPH-12/02-QC12-110**	12	110	12	10	–	53	–	–	–	–	40000	–	.36	GI286	C0542	7024743
	PPH-12/02-QC12-145	12	145	12	10	–	45	–	–	–	–	40000	–	.44	GI286	C0542	7024745
	PPH-16/02-QC16-092	16	92	16	14	–	92	–	–	–	–	36000	–	.44	GI287	C0543	7024749
	PPH-16/02-QC16-123	16	123	16	14	–	63	–	–	–	–	36000	–	.52	GI287	C0543	7024751
	PPH-16/02-QC16-166	16	166	16	14	–	55	–	–	–	–	36000	–	.68	GI287	C0543	7024753
	PPH-20/02-QC20-104	20	104	20	17	–	38	–	–	–	–	40000	–	.75	GI288	C0544	7024757
	PPH-20/02-QC20-141	20	141	20	17	–	75	–	–	–	–	40000	–	.90	GI288	C0544	7024759
	PPH-20/02-QC20-191	20	191	20	17	–	65	–	–	–	–	40000	–	1.19	GI288	C0544	7024761
	PPH-25/02-QC25-121	25	121	25	21	–	45	–	–	–	–	40000	–	1.18	GI289	C0545	7024764
	PPH-25/02-QC25-166	25	166	25	21	–	90	–	–	–	–	37100	–	1.25	GI289	C0545	7024765
	PPH-32/02-QC32-186	32	186	32	26	–	107	–	–	–	–	32500	–	2.40	GI290	C0546	7024767
	PPH-32/02-QC32-240	32	240	32	26	–	160	–	–	–	–	14500	–	3.02	GI290	C0546	7024768

	Product	DCX (mm)	OAL (mm)	DCON MS (mm)	BD (mm)	LB (mm)	LU (mm)	LUX (mm)	LF (mm)	TDZ	Carbide	max.		lbs			MID
	PPH-08/02-QC12-110HSCW	8	110	12	6.5	19	53	30.1	–	–	✓	40000	–	.45	GI284	C0540	7024731
	PPH-08/02-QC12-132HSCW	8	132	12	6.5	19	75	37.1	–	–	✓	23400	–	.49	GI284	C0540	7024733
	PPH-10/02-QC12-092HSCW	10	92	12	8	21.9	38.1	90.9	–	–	✓	40000	–	.44	GI285	C0541	7024736
	PPH-10/02-QC12-110HSCW	10	110	12	8	21.8	53.1	41.4	–	–	✓	40000	–	.45	GI285	C0541	7024738
	PPH-10/02-QC12-132HSCW	10	132	12	8	21.8	75.1	51.1	–	–	✓	23400	–	.52	GI285	C0541	7024740
	PPH-12/02-QC16-145HSCW	12	145	16	10	21.5	85	65.6	–	–	✓	21000	–	.62	GI286	C0542	7024747
	PPH-16/02-QC20-166HSCW	16	166	20	14	28.5	100	87.2	–	–	✓	25500	–	1.46	GI287	C0543	7024755
DIN 1835A	**PPH-20/02-QC25-191HSCW**	20	191	25	17	35	115	75.6	–	–	✓	18500	–	2.37	GI288	C0544	7024763
	PPH-08/02-QC08-130HSCW	8	130	8	6.5	–	20	–	–	–	✓	40000	–	.37	GI284	C0540	7024708
	PPH-10/02-QC10-140HSCW	10	140	10	8	–	25	–	–	–	✓	40000	–	.48	GI285	C0541	7024734
	PPH-12/02-QC12-083HSCW	12	83	12	10	–	26	–	–	–	✓	40000	–	.42	GI286	C0542	7024742
	PPH-12/02-QC12-110HSCW	12	110	12	10	–	53	–	–	–	✓	40000	–	.49	GI286	C0542	7024744
	PPH-16/02-QC16-092HSCW	16	92	16	14	–	32	–	–	–	✓	43000	–	.64	GI287	C0543	7024750
	PPH-16/02-QC16-123HSCW	16	123	16	14	–	63	–	–	–	✓	43000	–	.80	GI287	C0543	7024752
	PPH-20/02-QC20-104HSCW	20	104	20	17	–	38	–	–	–	✓	40000	–	1.10	GI288	C0544	7024758
	PPH-20/02-QC20-141HSCW	20	141	20	17	–	75	–	–	–	✓	40000	–	1.37	GI288	C0544	7024760
MODULAR	**PPH-16/02-025-P08**	16	–	8.5	–	–	–	–	25	M8	–	–	–	.22	GI287	C0543	7024748
	PPH-20/02-030-P10	20	–	10.5	–	–	–	–	30	M10	–	–	–	.40	GI288	C0544	7024756

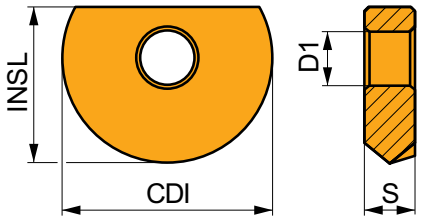
GI284	PPH 08..	–	PPHT 08..	PPHF 08..
GI285	PPH 10..	PPHE 10..	PPHT 10..	PPHF 10..
GI286	PPH 12..	PPHE 12..	PPHT 12..	PPHF 12..
GI287	PPH 16..	PPHE 16..	PPHT 16..	PPHF 16..
GI288	PPH 20..	PPHE 20..	PPHT 20..	PPHF 20..
GI289	PPH 25..	–	PPHT 25..	–
GI290	PPH 32..	–	–	–

		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

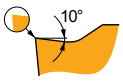
PPH

PRAMET

	CDI	D1	INSL	S
	(inch)	(inch)	(inch)	(inch)
0800	.315	.098	.276	.094
1000	.394	.118	.335	.102
1200	.472	.138	.394	.118
1600	.630	.157	.472	.157
2000	.787	.197	.591	.197
2500	.984	.236	.728	.236
3000	1.181	.315	.886	.276
3200	1.260	.315	.925	.276



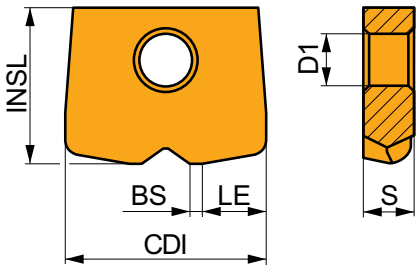
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
		(inch)																			
			F																		
			CL1 geometry with sharp design.																		
PPH 0800-CL1	**2003**	–	935	.0142	.016	476	.0126	.016	886	.0142	.016	–	–	–	–	–	–	180	.0071	.031	7156080
PPH 1000-CL1	**2003**	–	919	.0142	.020	459	.0126	.02	869	.0142	.020	–	–	–	–	–	–	180	.0071	.039	7156081
PPH 1200-CL1	**2003**	–	902	.0142	.024	459	.0126	.024	853	.0142	.024	–	–	–	–	–	–	180	.0071	.047	7156082
PPH 1600-CL1	**2003**	–	869	.0142	.031	443	.0126	.031	820	.0142	.031	–	–	–	–	–	–	164	.0071	.043	7156083
PPH 2000-CL1	**2003**	–	853	.0142	.039	427	.0126	.039	804	.0142	.039	–	–	–	–	–	–	164	.0071	.051	7156084
PPH 2500-CL1	**2003**	–	820	.0142	.051	410	.0126	.051	771	.0142	.051	–	–	–	–	–	–	164	.0071	.067	7156085
PPH 3000-CL1	**2003**	–	804	.0142	.059	394	.0126	.059	755	.0142	.059	–	–	–	–	–	–	148	.0071	.079	7156086
PPH 3200-CL1	**2003**	–	804	.0142	.063	394	.0126	.063	755	.0142	.063	–	–	–	–	–	–	148	.0071	.083	7156087
			1 F																		
			CL4 geometry with sharp design for interrupted cuts.																		
PPH 0800-CL4	**8215**	–	886	.0142	.016	–	–	–	837	.0142	.016	–	–	–	–	–	–	164	.0071	.031	7156088
PPH 1000-CL4	**8215**	–	869	.0142	.020	–	–	–	820	.0142	.020	–	–	–	–	–	–	164	.0071	.039	7156089
PPH 1200-CL4	**8215**	–	837	.0142	.024	–	–	–	787	.0142	.024	–	–	–	–	–	–	164	.0071	.047	7156090
PPH 1600-CL4	**8215**	–	820	.0142	.031	–	–	–	771	.0142	.031	–	–	–	–	–	–	164	.0071	.043	7156091
PPH 2000-CL4	**8215**	–	804	.0142	.039	–	–	–	755	.0142	.039	–	–	–	–	–	–	148	.0071	.051	7156092
			U F																		
			SM1 geometry with sharp design.																		
PPHE 1000-SM1	**8215**	–	902	.0122	.020	541	.011	.020	853	.0122	.020	–	–	–	–	–	–	180	.0063	.039	7156096
PPHE 1200-SM1	**8215**	–	837	.0142	.024	492	.0126	.024	787	.0142	.024	–	–	–	–	–	–	164	.0071	.047	7156097
PPHE 1600-SM1	**8215**	–	853	.0122	.031	509	.011	.031	804	.0122	.031	–	–	–	–	–	–	164	.0063	.043	7156098
PPHE 2000-SM1	**8215**	–	820	.0122	.039	492	.011	.039	771	.0122	.039	–	–	–	–	–	–	164	.0063	.051	7156099

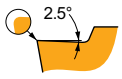
PPHF

PRAMET

	BS	LE	CDI	D1	INSL	S
	(inch)	(inch)	(inch)	(inch)	(inch)	(inch)
0800	.016	.102	.315	.098	.276	.094
1000	.020	.126	.394	.118	.335	.102
1200	.024	.154	.472	.138	.394	.118
1600	.031	.205	.630	.157	.472	.157
2000	.039	.252	.787	.197	.591	.197



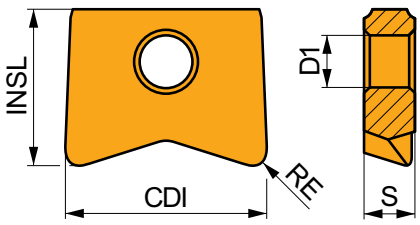
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE	P			M			K			N			S			H			MID
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	
		(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	
			HFC E																		
CE1 geometry with strong design for high feed machining.																					
PPHF 080004-CE1	**M8330**	–	■ 656	.0118	.012	◪ 394	.0106	.012	■ 623	.0118	.012	–	–	–	◪ 164	.0106	.008	◪ 131	.0083	.008	7447933
PPHF 100005-CE1	**M8330**	–	■ 623	.0138	.012	◪ 361	.0126	.012	■ 591	.0138	.012	–	–	–	◪ 148	.0126	.008	◪ 115	.0098	.008	7447934
PPHF 120006-CE1	**M8330**	–	■ 673	.0177	.016	◪ 394	.0161	.016	■ 623	.0177	.016	–	–	–	◪ 164	.0161	.012	◪ 131	.0126	.012	7447935
PPHF 160008-CE1	**M8330**	–	■ 623	.0236	.020	◪ 361	.0213	.020	■ 591	.0236	.020	–	–	–	◪ 148	.0213	.016	◪ 115	.0165	.016	7447936
PPHF 200010-CE1	**M8330**	–	■ 607	.0295	.024	◪ 361	.0268	.024	■ 574	.0295	.024	–	–	–	◪ 148	.0268	.02	◪ 115	.0209	.016	7447937

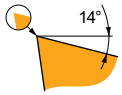
PPHT

PRAMET

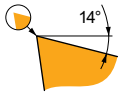
	CDI	D1	INSL	S
	(inch)	(inch)	(inch)	(inch)
0800	.315	.098	.276	.094
1000	.394	.118	.335	.102
1200	.472	.138	.394	.118
1600	.630	.157	.472	.157
2000	.787	.197	.591	.197
2500	.984	.236	.728	.236

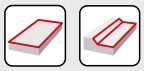


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE	P			M			K			N			S			H			MID
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	
		(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	
			U F																		
A2 geometry with positive design for light to medium machining.																					
PPHT 080003-A2	**2003**	.012	◪ 902	.0039	.012	◪ 459	.0035	.012	■ 853	.0039	.012	–	–	–	–	–	–	◪ 180	.0028	.012	7156106
PPHT 080005-A2	**2003**	.020	◪ 886	.0051	.012	◪ 443	.0047	.012	■ 837	.0051	.012	–	–	–	–	–	–	◪ 164	.0035	.020	7156107
PPHT 080010-A2	**2003**	.039	◪ 1033	.0055	.020	◪ 525	.0051	.020	■ 968	.0055	.020	–	–	–	–	–	–	◪ 197	.0039	.039	7156109
PPHT 100005-A2	**2003**	.020	◪ 886	.0051	.012	◪ 443	.0047	.012	■ 837	.0051	.012	–	–	–	–	–	–	◪ 164	.0035	.020	7156110
PPHT 100008-A2	**2003**	.031	◪ 1001	.0055	.016	◪ 509	.0051	.016	■ 935	.0055	.016	–	–	–	–	–	–	◪ 197	.0039	.031	7156111
PPHT 100010-A2	**2003**	.039	◪ 1033	.0055	.020	◪ 525	.0051	.020	■ 968	.0055	.020	–	–	–	–	–	–	◪ 197	.0039	.039	7156112

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

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
			U F																		
A2 geometry with positive design for light to medium machining.																					
PPHT 120005-A2	**2003**	.020	◪ 886	.0051	.012	◪ 443	.0047	.012	■ 837	.0051	.012	–	–	–	–	–	–	◪ 164	.0035	.020	7156113
PPHT 120010-A2	**2003**	.039	◪ 1033	.0055	.020	◪ 525	.0051	.020	■ 968	.0055	.020	–	–	–	–	–	–	◪ 197	.0039	.039	7156114
PPHT 120020-A2	**2003**	.079	◪ 1050	.0055	.039	◪ 525	.0051	.039	■ 984	.0055	.039	–	–	–	–	–	–	◪ 197	.0039	.051	7156115
PPHT 160010-A2	**2003**	.039	◪ 1033	.0055	.020	◪ 525	.0051	.020	■ 968	.0055	.020	–	–	–	–	–	–	◪ 197	.0039	.039	7156116
PPHT 160013-A2	**2003**	.051	◪ 984	.0059	.024	◪ 492	.0051	.024	■ 935	.0059	.024	–	–	–	–	–	–	◪ 197	.0039	.051	7156117
PPHT 160020-A2	**2003**	.079	◪ 1050	.0055	.039	◪ 525	.0051	.039	■ 984	.0055	.039	–	–	–	–	–	–	◪ 197	.0039	.051	7156118
PPHT 200010-A2	**2003**	.039	◪ 1033	.0055	.020	◪ 525	.0051	.020	■ 968	.0055	.020	–	–	–	–	–	–	◪ 197	.0039	.039	7156120
PPHT 200016-A2	**2003**	.063	◪ 1017	.0055	.031	◪ 509	.0051	.031	■ 951	.0055	.031	–	–	–	–	–	–	◪ 197	.0039	.043	7156121
PPHT 200030-A2	**2003**	.118	◪ 1001	.0055	.059	◪ 509	.0051	.059	■ 935	.0055	.059	–	–	–	–	–	–	◪ 197	.0039	.079	7156122
PPHT 200040-A2	**2003**	.157	◪ 968	.0055	.079	◪ 492	.0051	.079	■ 919	.0055	.079	–	–	–	–	–	–	◪ 180	.0039	.106	7156123
PPHT 250020-A2	**2003**	.079	◪ 1050	.0055	.039	◪ 525	.0051	.039	■ 984	.0055	.039	–	–	–	–	–	–	◪ 197	.0039	.051	7156124



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	.95	.85	.75	.85	.95	1.00	1.00	1.00	1.00
⇨X.f	.64	.64	.64	.64	.64	.65	.65	.67	.68	.71	.72	.74	.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 (mm)	4.0	5.0	6.0	8.0	10.0	12.5	15.0	16.0
BS (mm)	–	–	–	–	–	–	–	–

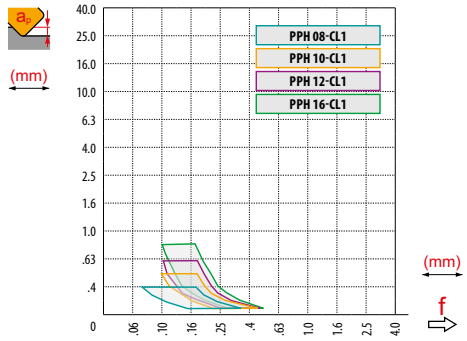
	PPH 08-CL4	PPH 10-CL4	PPH 12-CL4	PPH 16-CL4	PPH 20-CL4	PPH 25-CL4	PPH 30-CL4	PPH 32-CL4
RE (mm)	4.0	5.0	6.0	8.0	10.0	12.5	15.0	16.0
BS (mm)	–	–	–	–	–	–	–	–

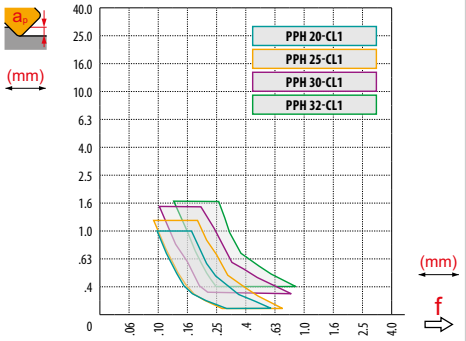
	PPHE 10-SM1	PPHE 12-SM1	PPHE 16-SM1	PPHE 20-SM1
RE (mm)	5.0	6.0	8.0	10.0
BS (mm)	–	–	–	–

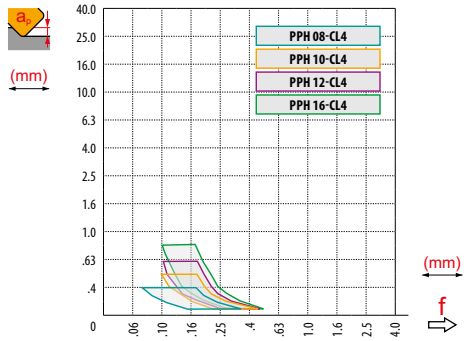
	PPHF 08-CE1	PPHF 10-CE1	PPHF 12-CE1	PPHF 16-CE1	PPHF 20-CE1	PPHF 25-CE1
RE (mm)	.6	.8	1.0	1.3	1.6	1.9
BS (mm)	.40	.50	.60	.80	1.00	1.20

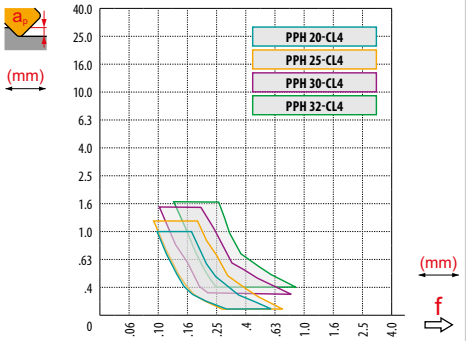
	PPHT 08-A2	PPHT 08-A2	PPHT 08-A2	PPHT 08-A2	PPHT 10-A2	PPHT 10-A2	PPHT 10-A2	PPHT 12-A2	PPHT 12-A2	PPHT 12-A2	PPHT 16-A2
RE (mm)	.3	.5	.8	1.0	.5	.8	1.0	.5	1.0	2.0	1.0
BS (mm)	–	–	–	–	–	–	–	–	–	–	–

	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 (mm)	1.3	2.0	3.0	1.0	1.6	3.0	4.0	2.0
BS (mm)	–	–	–	–	–	–	–	–


a_p
(mm)
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
.63
.4
0
.06
.10
.16
.25
.4
.63
1.0
1.6
2.5
4.0
(mm)
f


a_p
(mm)
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
.63
.4
0
.06
.10
.16
.25
.4
.63
1.0
1.6
2.5
4.0
(mm)
f


a_p
(mm)
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
.63
.4
0
.06
.10
.16
.25
.4
.63
1.0
1.6
2.5
4.0
(mm)
f


a_p
(mm)
PPH 20-CL4
PPH 25-CL4
PPH 30-CL4
PPH 32-CL4
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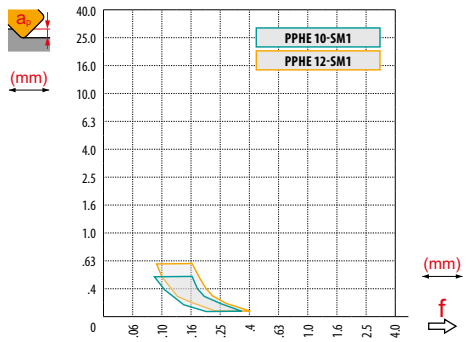
25.0
16.0
10.0
6.3
4.0
2.5
1.6
1.0
.63
.4
0
.06
.10
.16
.25
.4
.63
1.0
1.6
2.5
4.0
(mm)
f


a_p
(mm)
PPHE 10-SM1
PPHE 12-SM1
40.0
25.0
16.0
10.0
6.3
4.0
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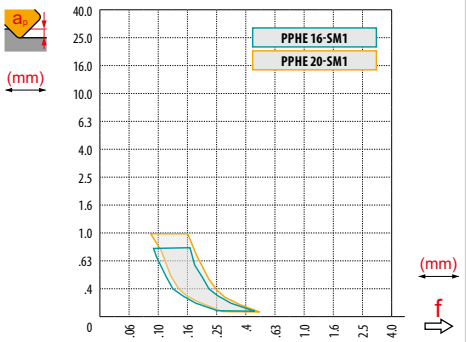
1.6
1.0
.63
.4
0
.06
.10
.16
.25
.4
.63
1.0
1.6
2.5
4.0
(mm)
f


a_p
(mm)
PPHE 16-SM1
PPHE 20-SM1
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25.0
16.0
10.0
6.3
4.0
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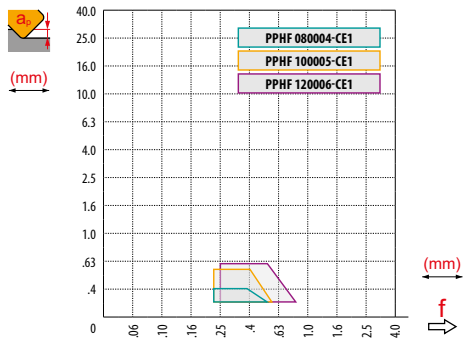
1.6
1.0
.63
.4
0
.06
.10
.16
.25
.4
.63
1.0
1.6
2.5
4.0
(mm)
f


a_p
(mm)
PPHF 080004-CE1
PPHF 100005-CE1
PPHF 120006-CE1
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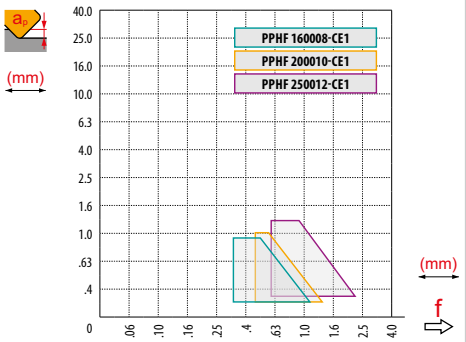
6.3
4.0
2.5
1.6
1.0
.63
.4
0
.06
.10
.16
.25
.4
.63
1.0
1.6
2.5
4.0
(mm)
f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(mm)
PPHF 160008-CE1
PPHF 200010-CE1
PPHF 250012-CE1
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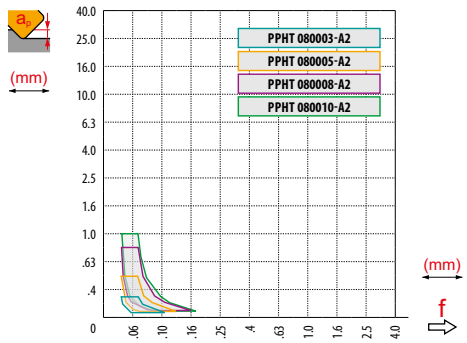
16.0
10.0
6.3
4.0
2.5
1.6
1.0
.63
.4
0
.06
.10
.16
.25
.4
.63
1.0
1.6
2.5
4.0
(mm)
f


a_p
(mm)
PPHT 080003-A2
PPHT 080005-A2
PPHT 080008-A2
PPHT 080010-A2
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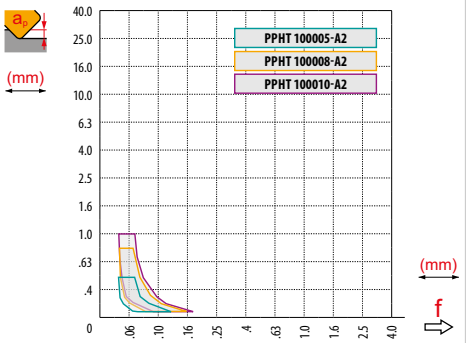
16.0
10.0
6.3
4.0
2.5
1.6
1.0
.63
.4
0
.06
.10
.16
.25
.4
.63
1.0
1.6
2.5
4.0
(mm)
f


a_p
(mm)
PPHT 100005-A2
PPHT 100008-A2
PPHT 100010-A2
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25.0
16.0
10.0
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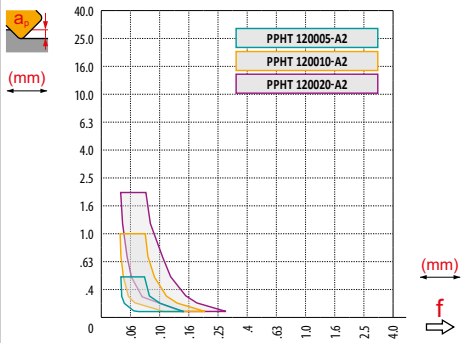
2.5
1.6
1.0
.63
.4
0
.06
.10
.16
.25
.4
.63
1.0
1.6
2.5
4.0
(mm)
f


a_p
(mm)
PPHT 120005-A2
PPHT 120010-A2
PPHT 120020-A2
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25.0
16.0
10.0
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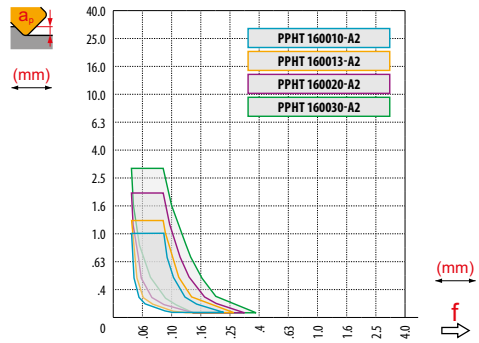
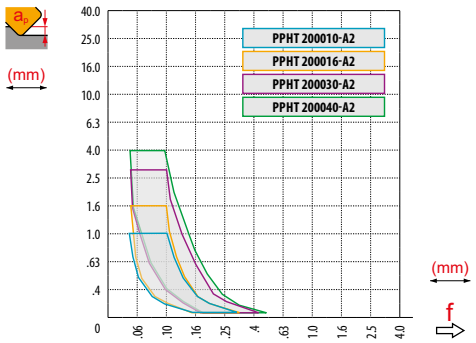
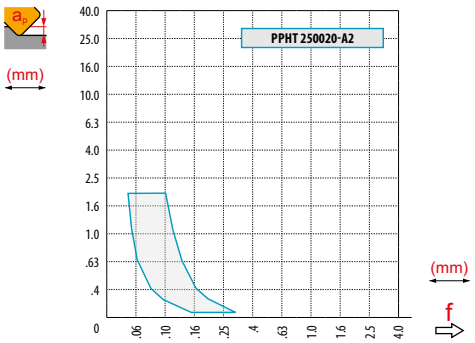
2.5
1.6
1.0
.63
.4
0
.06
.10
.16
.25
.4
.63
1.0
1.6
2.5
4.0
(mm)
f







(mm)

	DCX	a_p	.3	.4	.5	.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

(mm)

	DCX	µm	3	5	10	15	20	30	40	50	60	80	100
PPH 08	**8**		.310	.400	.566	.693	.800	.980	1.131	1.265	1.386	1.600	1.789
PPH 10	**10**	FE	.346	.447	.632	.775	.894	1.095	1.265	1.414	1.549	1.789	2.000
PPH 12	**12**		.379	.490	.693	.849	.980	1.200	1.386	1.549	1.697	1.960	2.191
PPH 16	**16**		.438	.566	.800	.980	1.131	1.386	1.600	1.789	1.960	2.263	2.530
PPH 20	**20**	FE	.490	.632	.894	1.095	1.265	1.549	1.789	2.000	2.191	2.530	2.828
PPH 25	**25**		.548	.707	1.000	1.225	1.414	1.732	2.000	2.236	2.449	2.828	3.162
PPH 30	**30**		.600	.775	1.095	1.342	1.549	1.897	2.191	2.449	2.683	3.098	3.464
PPH 32	**32**		.620	.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578

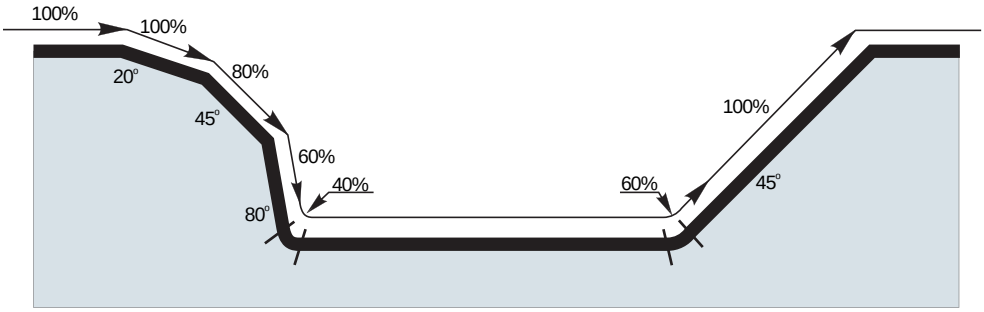
(mm)

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	.89	–	–	–	–	–	–	–	–	–	–	–	–	–
31.2 %	2.5 %	3.58	2.28	1.64	1.36	1.20	1.01	.92	.88	.91	–	–	–	–	–	–	–	–	–	–
43.6 %	5.0 %	4.22	2.68	1.92	1.58	1.39	1.16	1.03	.95	.90	.88	.89	–	–	–	–	–	–	–	–
52.7 %	7.5 %	4.63	2.95	2.10	1.73	1.51	1.26	1.11	1.02	.96	.91	.89	.88	.90	–	–	–	–	–	–
60.0 %	10.0 %	4.94	3.14	2.24	1.84	1.61	1.33	1.18	1.07	1.00	.95	.91	.89	.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	.96	.93	.90	.88	.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	.96	.93	.89	.88	.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	.99	.95	.90	.88	.88	.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	.97	.92	.89	.88	.88	.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	.98	.93	.89	.88	.88	.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	.99	.93	.90	.89	.88	.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	.94	.90	.89	.88	.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	.94	.90	.89	.88	.88	1.00

(mm)

	DCX	a_p															
		RE	.0	.3	.4	.5	.6	.7	.8	.9	1.0	1.25	1.5	2.0	2.5	3.0	4.0
PPHT 08-A2	**8**	.3	7.4	8.0	–	–	–	–	–	–	–	–	–	–	–	–	–
PPHT 08-A2		.5	7.0	7.9	8.0	8.0	–	–	–	–	–	–	–	–	–	–	–
PPHT 08-A2		.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**	.5	9.0	9.9	10.0	10.0	–	–	–	–	–	–	–	–	–	–	–
PPHT 10-A2		.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**	.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**	.6	2.8	6.0	7.1	–	–	–	–	–	–	–	–	–	–	–	–
PPHF 10-CE1	**10**	.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		.310	.400	.566	.693	.800	.980	1.131	1.265	1.386	1.600	1.789
10		.346	.447	.632	.775	.894	1.095	1.265	1.414	1.549	1.789	2.000
12	FE	.379	.490	.693	.849	.980	1.200	1.386	1.549	1.697	1.960	2.191
16		.438	.566	.800	.980	1.131	1.386	1.600	1.789	1.960	2.263	2.530
20		.490	.632	.894	1.095	1.265	1.549	1.789	2.000	2.191	2.530	2.828
25		.548	.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		.177	.228	.322	.395	.456	.559	.645	.721	.790	.912	1.020
1.6		.196	.253	.358	.438	.506	.620	.716	.800	.876	1.012	1.131
1.9	FE	.214	.276	.390	.477	.551	.675	.780	.872	.955	1.103	1.233
2.0		.219	.283	.400	.490	.566	.693	.800	.894	.980	1.131	1.265
3.0		.268	.346	.490	.600	.693	.849	.980	1.095	1.200	1.386	1.549
4.0		.310	.400	.566	.693	.800	.980	1.131	1.265	1.386	1.600	1.789

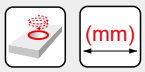


	DCX	RE	max
PPHT 08-A2	8	.3	2.4
PPHT 08-A2		.5	2.4
PPHT 08-A2		.8	2.5
PPHT 08-A2		1.0	2.7
PPHT 10-A2	10	.5	3.2
PPHT 10-A2		.8	3.3
PPHT 10-A2		1.0	3.4
PPHT 12-A2	12	.5	4.0
PPHT 12-A2		1.0	4.2
PPHT 12-A2		2.0	4.6
PPHT 16-A2	16	1.0	5.7
PPHT 16-A2		1.3	5.8
PPHT 16-A2		2.0	6.0
PPHT 16-A2		3.0	6.4
PPHT 20-A2	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	.6	2.0
PPHF 10-CE1	10	.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	.3	6.3	1.2/11
PPHT 08-A2		.5	6.1	1.2/12
PPHT 08-A2		.8	5.7	1.2/12
PPHT 08-A2		1.0	6.8	1.2/11
PPHT 10-A2	10	.5	6.9	1.5/13
PPHT 10-A2		.8	6.6	1.5/13
PPHT 10-A2		1.0	7.5	1.5/12
PPHT 12-A2	12	.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	.6	8.0	.4/3
PPHF 10-CE1	10	.8	8.0	.5/4
PPHF 12-CE1	12	1.0	8.0	.6/5
PPHF 16-CE1	16	1.3	8.0	.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	.3	11.0	15.9	.5	.5
PPHT 08-A2		.5	10.9	15.9	.5	.5
PPHT 08-A2		.8	10.7	15.9	.4	.4
PPHT 08-A2		1.0	10.3	15.9	.4	.4
PPHT 10-A2	10	.5	13.4	19.9	.7	.7
PPHT 10-A2		.8	13.2	19.9	.6	.6
PPHT 10-A2		1.0	12.9	19.9	.6	.6
PPHT 12-A2	12	.5	15.8	23.9	1.0	1.0
PPHT 12-A2		1.0	15.4	23.9	.8	.8
PPHT 12-A2		2.0	14.6	23.9	.7	.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

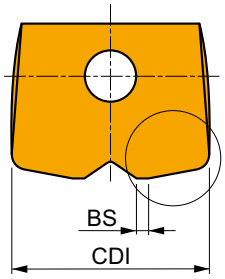
	DCX	RE	DMIN	DMAX	SMAX DMIN	SMAX DMAX
PPHF 08-CE1	8	.6	10.0	14.7	.40	.40
PPHF 10-CE1	10	.8	13.0	18.4	.50	.50
PPHF 12-CE1	12	1.0	15.7	22.0	.60	.60
PPHF 16-CE1	16	1.3	20.9	29.4	.80	.80
PPHF 20-CE1	20	1.6	26.2	36.7	1.00	1.00
PPHF 25-CE1	25	1.9	33.0	46.1	1.20	1.20

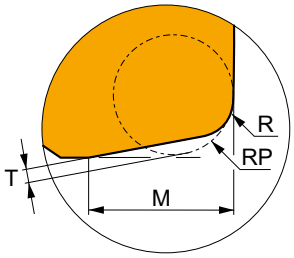
(mm)

	DCX	RE	a_p
PPHT 08-A2	**8**	.3	.52
PPHT 08-A2		.5	.47
PPHT 08-A2		.8	.39
PPHT 08-A2		1.0	.40
PPHT 10-A2	**10**	.5	.69
PPHT 10-A2		.8	.61
PPHT 10-A2		1.0	.62
PPHT 12-A2	**12**	.5	.97
PPHT 12-A2		1.0	.79
PPHT 12-A2		2.0	.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**	.6	.40
PPHF 10-CE1	**10**	.8	.50
PPHF 12-CE1	**12**	1.0	.60
PPHF 16-CE1	**16**	1.3	.80
PPHF 20-CE1	**20**	1.6	1.00
PPHF 25-CE1	**25**	1.9	1.20

(mm)





DCX	R	RP	M	T
08	.6	1.0	2.6	.3
10	.8	1.2	3.2	.4
12	1.0	1.5	3.9	.4
16	1.3	2.0	5.2	.6
20	1.6	2.5	6.4	.7
25	1.9	3.0	7.9	.9

(mm)

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	.9	.8	.7	.5

SVC22C

N

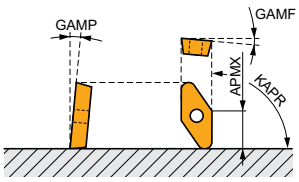
PRAMET

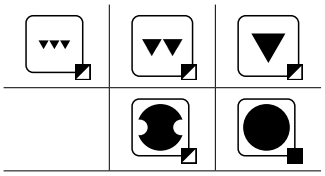
S

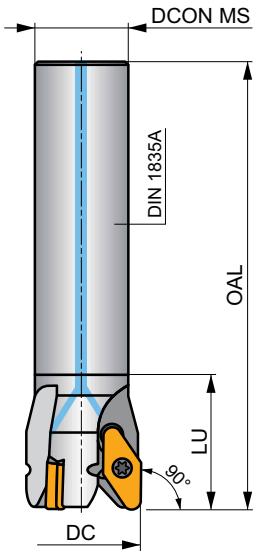
Milling Cutters for Machining Non ferrous materials with Internal Coolant

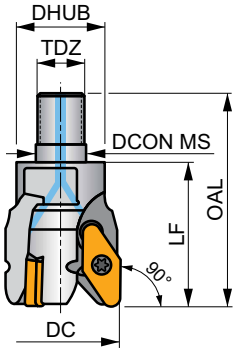
Highly productive cutter for aluminium and non ferrous material utilising VCGT 22 inserts with APMX of 16 mm. Internal coolant. Suitable for face, progressive plunge, shoulder, ramping and slot milling. Available in cylindrical, modular and arbor style. Body treated for longer tool life.

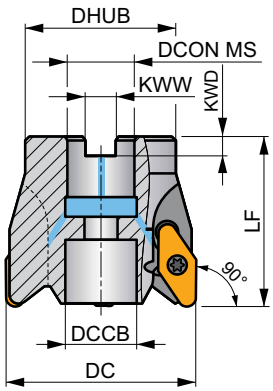
KAPR	90°
APMX	3.0 (16.0) mm











h_m	0.03 - 0.55 mm
h_m	0.03 - 0.5 mm

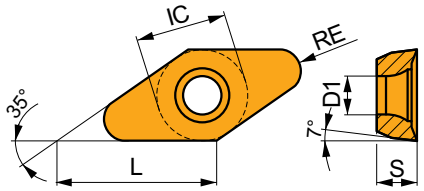
	Product	DC (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	LU (mm)	LF (mm)	DHUB (mm)	TDZ	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		lbs			MID
DIN 1835A	**32A2R045A25-SVC22C**	32	120	25	–	45	–	–	–	–	–	4	3	2	–	10400	✓	1.01	GI141	C0560	6757989
	40A3R045A32-SVC22C	40	150	32	–	45	–	–	–	–	–	8	3	3	–	9300	✓	2.01	GI141	C0560	6757990
MODULAR	**32A2R048M16-SVC22C**	32	71	17	–	–	48	29	M16	–	–	11	3	2	–	–	✓	.37	GI141	C0560	6757984
	40A3R048M16-SVC22C	40	71	17	–	–	48	29	M16	–	–	13	3	3	–	–	✓	.53	GI141	C0560	6757985
ISO 6462 DIN 8030	**50A03R-S90VC22C**	50	–	22	18	–	56	40	–	10	6.3	4	3	3	–	8400	✓	.92	GI141	C0563	6757986
	63A04R-S90VC22C	63	–	22	18	–	56	50	–	10	6.3	6	3	4	–	7400	✓	1.50	GI141	C0563	6757987
	80A05R-S90VC22C	80	–	27	20	–	56	63	–	12	7	8	3	5	–	6600	✓	2.54	GI141	C0562	6757988

GI141	VCGT 220530F-FA

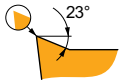
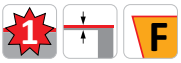
		Nm					
C0560	US 4511-T20	5.0	M 4.5	11	–	–	Flag T20
C0562	US 4511-T20	5.0	M 4.5	11	SDR T20-T	–	–
C0563	US 4511-T20	5.0	M 4.5	11	SDR T20-T	HS 1030C	–

VCGT 22-FA

	IC	D1	L	S
	(inch)	(inch)	(inch)	(inch)
2205	.500	.205	.866	.217



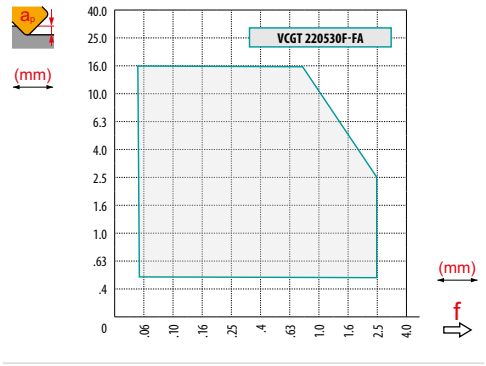
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE	P			M			K			N			S			H			MID
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	
		(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	
																					
VCGT 220515F-FA	**HF7**	.059	–	–	–	–	–	–	–	–	–	■	837	.0094	.016	–	–	–	–	–	–	6751854
VCGT 220520F-FA	**HF7**	.079	–	–	–	–	–	–	–	–	–	■	837	.0118	.020	–	–	–	–	–	–	6751855
VCGT 220530F-FA	**HF7**	.118	–	–	–	–	–	–	–	–	–	■	689	.0189	.039	–	–	–	–	–	–	6751856

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	.95	.85	.75	.85	.95	1.00	1.00	1.00	1.00
x.f	.64	.64	.64	.64	.64	.65	.65	.67	.68	.71	.72	.74	.79	1.00

	VCGT 22-FA
RE (mm)	3.0
BS (mm)	–



a_p	.5	3.0	12.0
f	.86	.31	.05

DC	RPMX	APMX/I
32	8.0	12.0/87
40	8.0	12.0/87
50	6.0	10.4/100
63	4.2	7.2/100
80	3.1	5.3/100

DC	DMIN	DMAX	SMAX DMIN	SMAX DMAX
32	42.0	64.0	4.2	12.0
40	58.0	80.0	7.7	12.0
50	78.0	100.0	9.0	12.0
63	104.0	126.0	9.3	12.0
80	138.0	160.0	9.7	12.0

a_p
9

DC	µm	3	5	10	15	20	30	40	50	60	80	100
32	FE	.620	.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578
40		.693	.894	1.265	1.549	1.789	2.191	2.530	2.828	3.098	3.578	4.000
50		.775	1.000	1.414	1.732	2.000	2.449	2.828	3.162	3.464	4.000	4.472
63		.869	1.122	1.587	1.944	2.245	2.750	3.175	3.550	3.888	4.490	5.020
80		.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	.268	.346	.490	.600	.693	.849	.980	1.095	1.200	1.386	1.549

SWN04C

P K H

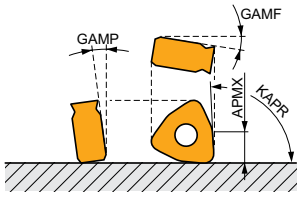
PRAMET

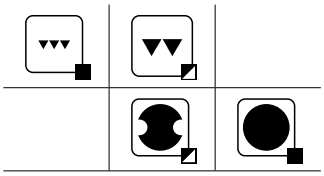
S

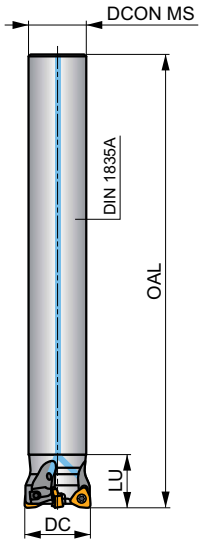
End Mills for Die & Mold Applications with Internal Coolant

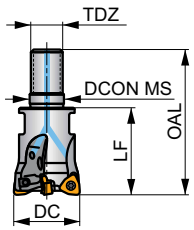
End mill for a wide range of applications in the finishing area for Die & Mold with APMX of 0.5 mm. High precision ground WNHX 04 inserts with 6 cutting edges, provide high accuracy and economy. Available in cylindrical and modular style. Body treated for longer tool life.

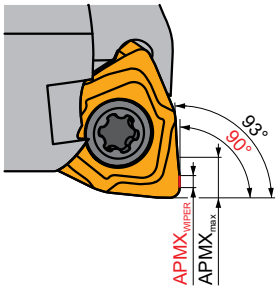
KAPR	90° (93°)
APMX	0.5 (2.0 mm)











h_m 0.02 - 0.07 mm

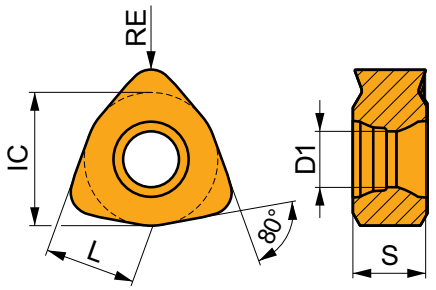
	Product	DC (mm)	OAL (mm)	DCON MS (mm)	LU (mm)	LF (mm)	TDZ	GAMF (°)	GAMP (°)			max.		lbs			MID
DIN 1835A	**16A2R020A14-SWN04C-C**	16	140	14	20	–	–	-13.5	-8	2	–	33200	✓	.31	GI331	C0602	8238749
	20A3R020A18-SWN04C-C	20	160	18	20	–	–	-12	-8	3	–	19700	✓	.60	GI331	C0602	7636661
	25A4R020A22-SWN04C-C	25	180	22	20	–	–	-11.5	-8	4	✓	26600	✓	.99	GI331	C0602	7636662
	32A6R020A25-SWN04C-C	32	200	25	20	–	–	-11.2	-8	6	✓	23500	✓	1.52	GI331	C0602	7636663
MODULAR	**16A2R025M08-SWN04C-C**	16	43	8.5	–	25	M08	-13.5	-8	2	–	33200	✓	.11	GI331	C0602	8238780
	20A3R030M10-SWN04C-C	20	49	10.5	–	30	M10	-12	-8	3	–	–	✓	.16	GI331	C0602	7636664
	25A4R033M12-SWN04C-C	25	55	12.5	–	33	M12	-11.5	-8	4	✓	–	✓	.23	GI331	C0602	7636665
	32A6R040M16-SWN04C-C	32	63	17	–	40	M16	-11.2	-8	6	✓	–	✓	.46	GI331	C0602	7636666
	35A6R043M16-SWN04C-C	35	66	17	–	43	M16	-11.1	-8	6	✓	–	✓	.49	GI331	C0602	7636667

GI331	WNHX0403..

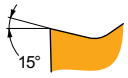
C0602	US 42507-T07P	1.2	M 2.5	7	Flag T07P

WNHX 04

	IC	D1	S
	(inch)	(inch)	(inch)
0403	.244	.102	.133



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

Product		RE	P			M			K			N			S			H			MID
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	
		(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	
																					
			WM geometry with wiper design for semi-finish to finish machining.																		
WNHX 040305ER-WM	**M4310**	.020	◪ 951	.0059	.039	–	–	–	■ 902	.0059	.039	–	–	–	–	–	–	■ 180	.0039	.028	7639270
	M8330	.020	■ 853	.0059	.039	–	–	–	■ 804	.0059	.039	–	–	–	–	–	–	◪ 164	.0039	.028	7639271
WNHX 040310ER-WM	**M4310**	.039	◪ 1214	.0059	.039	–	–	–	■ 1148	.0059	.039	–	–	–	–	–	–	■ 230	.0039	.028	7639272
	M8330	.039	■ 1083	.0059	.039	–	–	–	■ 1017	.0059	.039	–	–	–	–	–	–	◪ 213	.0039	.028	7639273
WNHX 040315ER-WM	**M4310**	.059	◪ 1280	.0059	.039	–	–	–	■ 1214	.0059	.039	–	–	–	–	–	–	■ 246	.0039	.028	7639274
	M8330	.059	■ 1132	.0059	.039	–	–	–	■ 1066	.0059	.039	–	–	–	–	–	–	◪ 213	.0039	.028	7639275

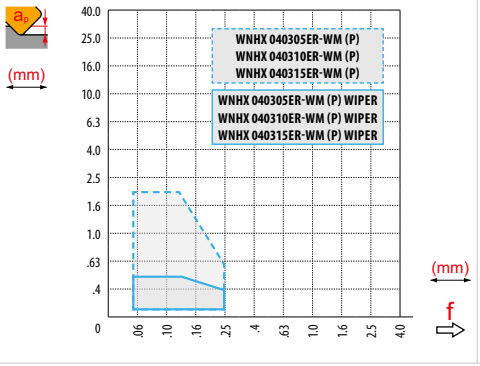
(mm)

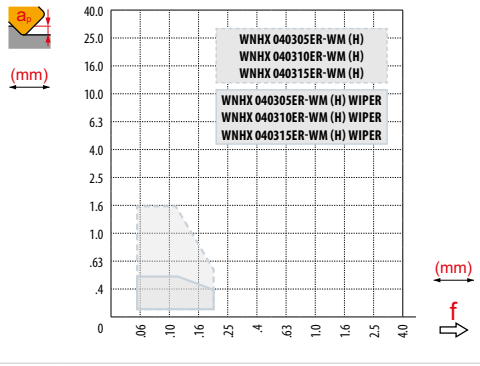
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00

(mm)

a_e / DC	.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 (mm)	.5	1.0	1.5
BS (mm)	.50	.50	.50





(mm)

DC	max
20	.4
25	.5
32	.5
35	.5

(mm)

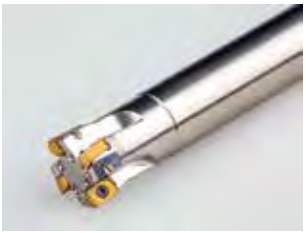
DC	RPMX	APMX/I
20	.7	1.1/100
25	.5	.75/100
32	.3	.4/100
35	.3	.4/100

SBN10

P M K S H

PRAMET

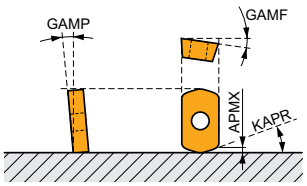
S

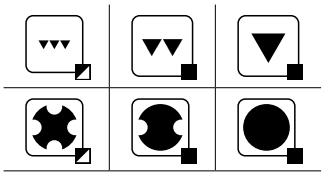


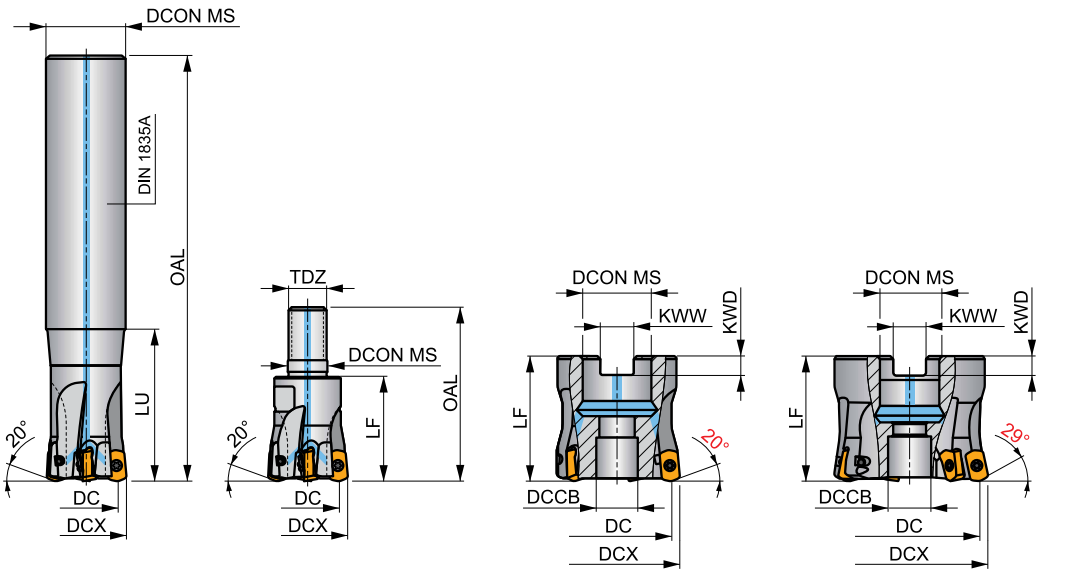
High Feed Milling Cutter for BN.. 10 inserts with Internal Coolant

High-feed milling cutter for smaller diameters utilizing 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. Body treated for longer tool life.

KAPR	20° (29°)
APMX	1.0 mm







h_m	0.17 - 0.41 mm
h_m	0.17 - 0.41 mm

	Product	DCX (mm)	DC (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	LU (mm)	LF (mm)	TDZ	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)	KAPR (°)			max.		lbs		MID
	16E2R030A16-SBN10-C	16	9.4	100	16	–	30	–	–	–	–	-12	-10	20	2	✓	31100	✓	.28	GI329 C0310	7259577
	16E2R050A16-SBN10-C	16	9.4	150	16	–	50	–	–	–	–	-12	-10	20	2	–	31100	✓	.40	GI329 C0310	7452543
	16E2R030A14-SBN10-C	16	9.4	150	14	–	30	–	–	–	–	-12	-10	20	2	–	31100	✓	.40	GI329 C0310	7452542
	18E2R030A16-SBN10-C	18	11.4	150	16	–	30	–	–	–	–	-11	-10	20	2	–	29200	✓	.51	GI329 C0310	7452544
	20E3R040A20-SBN10-C	20	13.4	130	20	–	40	–	–	–	–	-10	-10	20	3	–	27700	✓	.56	GI329 C0310	7259578
	20E3R080A20-SBN10-C	20	13.4	160	20	–	80	–	–	–	–	-10	-10	20	3	–	27700	✓	.64	GI329 C0310	7452545
	20E3R040A18-SBN10-C	20	13.4	180	18	–	40	–	–	–	–	-10	-10	20	3	–	27700	✓	.65	GI329 C0310	7259579
	20E4R040A20-SBN10-C	20	13.4	130	20	–	40	–	–	–	–	-10	-10	20	4	–	27700	✓	.62	GI329 C0310	7455018
DIN 1835A	**25E4R050A25-SBN10-C**	25	18.4	140	25	–	50	–	–	–	–	-9	-10	20	4	✓	24800	✓	.92	GI329 C0310	7452546
	25E4R100A25-SBN10-C	25	18.4	180	25	–	100	–	–	–	–	-9	-10	20	4	✓	24800	✓	1.12	GI329 C0310	7452547
	25E4R050A22-SBN10-C	25	18.4	220	22	–	50	–	–	–	–	-9	-10	20	4	✓	24800	✓	1.29	GI329 C0310	7259720
	25E5R050A25-SBN10-C	25	18.4	140	25	–	50	–	–	–	–	-9	-10	20	5	–	24800	✓	.93	GI329 C0310	7253577
	32E5R070A32-SBN10-C	32	25.4	150	32	–	70	–	–	–	–	-8	-10	20	5	✓	21900	✓	1.61	GI329 C0310	7452548
	32E6R070A32-SBN10-C	32	25.4	150	32	–	70	–	–	–	–	-8	-10	20	6	✓	21900	✓	1.68	GI329 C0310	7452549
	32E5R120A32-SBN10-C	32	25.4	200	32	–	120	–	–	–	–	-8	-10	20	5	✓	21900	✓	2.17	GI329 C0310	7259721
	35E5R050A32-SBN10-C	35	28.4	200	32	–	50	–	–	–	–	-7.5	-10	20	5	✓	21000	✓	2.38	GI329 C0310	7452550
	35E6R050A32-SBN10-C	35	28.4	200	32	–	50	–	–	–	–	-7.5	-10	20	6	✓	21000	✓	2.38	GI329 C0310	7452551
	16E2R025M08-SBN10-C	16	9.4	43	8.5	–	–	25	M8	–	–	-12	-10	20	2	–	31100	✓	.10	GI329 C0310	7452552
	18E2R025M08-SBN10-C	18	11.4	43	8.5	–	–	25	M8	–	–	-11	-10	20	2	–	29200	✓	.12	GI329 C0310	7452553
MODULAR	**20E3R030M10-SBN10-C**	20	13.4	49	10.5	–	–	30	M10	–	–	-10	-10	20	3	–	27700	✓	.15	GI329 C0310	7259722
	20E4R030M10-SBN10-C	20	13.4	49	10.5	–	–	30	M10	–	–	-10	-10	20	4	–	27700	✓	.14	GI329 C0310	7459341
	25E4R033M12-SBN10-C	25	18.4	55	12.5	–	–	33	M12	–	–	-9	-10	20	4	✓	24800	✓	.18	GI329 C0310	7452554
	25E5R033M12-SBN10-C	25	18.4	55	12.5	–	–	33	M12	–	–	-9	-10	20	5	–	24800	✓	.22	GI329 C0310	7253578

		DCX (mm)	DC (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	LU (mm)	LF (mm)	TDZ	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)	KAPR (°)			max.		lbs			MID
MODULAR	**28E5R035M12-SBN10-C**	28	21.4	57	12.5	–	–	35	M12	–	–	-8.5	-10	20	5	✓	23400	✓	.26	GI329	C0310	7452555
MODULAR	**32E5R040M16-SBN10-C**	32	25.4	63	17	–	–	40	M16	–	–	-8	-10	20	5	✓	21900	✓	.46	GI329	C0310	7452556
MODULAR	**32E6R040M16-SBN10-C**	32	25.4	63	17	–	–	40	M16	–	–	-8	-10	20	6	✓	21900	✓	.46	GI329	C0310	7253579
MODULAR	**35E6R043M16-SBN10-C**	35	28.4	66	17	–	–	43	M16	–	–	-7.5	-10	20	6	✓	21000	✓	.52	GI329	C0310	7452557
MODULAR	**40E6R043M16-SBN10-C**	40	33.4	66	17	–	–	43	M16	–	–	-7	-10	20	6	✓	19600	✓	.60	GI329	C0310	7464854
MODULAR	**40E7R043M16-SBN10-C**	40	33.4	66	17	–	–	43	M16	–	–	-7	-10	20	7	✓	19600	✓	.57	GI329	C0310	7464855
ISO 6462 DIN 8030	**40A05R-SMOBN10-C**	40	33.4	–	16	14.1	–	40	–	8.4	5.6	-7	-10	20	5	✓	19600	✓	.51	GI329	C0312	7464824
ISO 6462 DIN 8030	**40A07R-SMOBN10-C**	40	33.4	–	16	14.1	–	40	–	8.4	5.6	-7	-10	20	7	✓	19600	✓	.59	GI329	C0312	7464825
ISO 6462 DIN 8030	**42A05R-SMOBN10-C**	42	35.4	–	16	14.1	–	40	–	8.4	5.6	-7	-10	20	5	✓	19100	✓	.51	GI329	C0312	7464826
ISO 6462 DIN 8030	**42A07R-SMOBN10-C**	42	35.4	–	16	14.1	–	40	–	8.4	5.6	-7	-10	20	7	✓	19100	✓	.78	GI329	C0312	7464827
ISO 6462 DIN 8030	**50A07R-SMOBN10-C**	50	45	–	22	18.1	–	40	–	10.4	6.3	-6	-7	29	7	✓	17500	✓	1.02	GI343	C0311	8258997
ISO 6462 DIN 8030	**50A08R-SMOBN10-C**	50	45	–	22	18.1	–	40	–	10.4	6.3	-6	-7	29	8	✓	17500	✓	.75	GI343	C0311	8258998
ISO 6462 DIN 8030	**52A07R-SMOBN10-C**	52	47	–	22	18.1	–	40	–	10.4	6.3	-6	-7	29	7	✓	17200	✓	1.09	GI343	C0311	8258999
ISO 6462 DIN 8030	**52A08R-SMOBN10-C**	52	47	–	22	18.1	–	40	–	10.4	6.3	-6	-7	29	8	✓	17200	✓	.82	GI343	C0311	7259724
ISO 6462 DIN 8030	**66A08R-SMOBN10-C**	66	61	–	27	22.1	–	50	–	12.4	7	-6	-7	29	8	✓	15200	✓	1.95	GI343	C0313	8259010

GI329	BNGX 10T3…	ANHX 10T3..
GI343	BNGX 10T3…	–

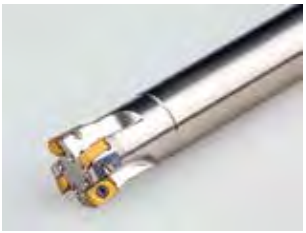
		Nm						
C0310	US 42507-T07P	1.2	M 2.5	7	Flag T07P	–	–	–
C0313	US 42507-T07P	1.2	M 2.5	7	–	D-T07P/T09P	FG-15	HS 1230C
C0312	US 42507-T07P	1.2	M 2.5	7	–	D-T07P/T09P	FG-15	HS 0830C
C0311	US 42507-T07P	1.2	M 2.5	7	–	D-T07P/T09P	FG-15	HS 1030C

ISBN10

P M K S H

PRAMET

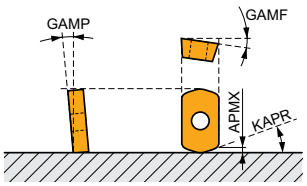
S

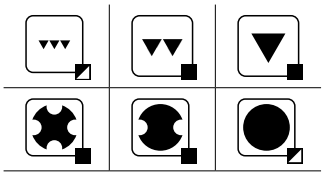


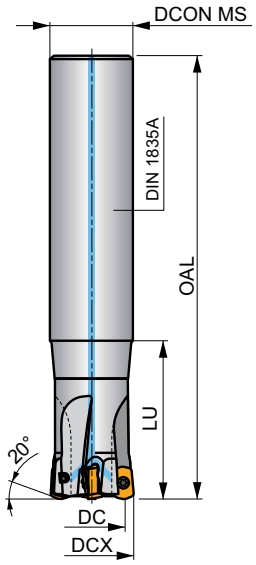
High Feed Milling Cutter for BN.. 10 inserts with Internal Coolant

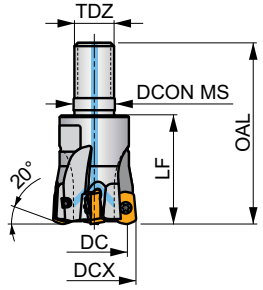
High-feed milling cutter for smaller diameters utilizing double-sided BNGX 10 inserts with four cutting edges and APMX of .039 inches. Internal coolant. Suitable for a wide range of applications. Available in cylindrical, modular and arbor style. Body treated for longer tool life.

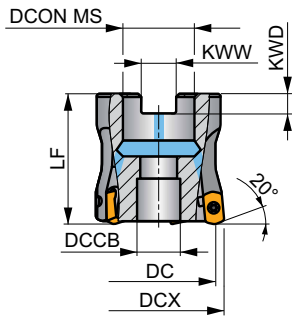
KAPR	20° (29°)
APMX	.039 in











h_m	.007 - .016 in
h_m	.007 - .016 in

	Product	DCX (inch)	DC (inch)	OAL (inch)	DCON MS (inch)	DCCB (inch)	LU (inch)	LF (inch)	TDZ	KWW (inch)	KWD (inch)	KAPR (°)	GAMF (°)	GAMP (°)			max.		lbs			MID
DIN 1835A	062E2R118C062-ISBN10-C	.625	.365	3.937	.625	–	1.181	–	–	–	–	20	-10	-12	2	–	31100	✓	.26	GI329	C0330	7455279
	062E2R197C062-ISBN10-C	.625	.365	5.906	.625	–	1.969	–	–	–	–	20	-10	-12	2	–	31100	✓	.40	GI329	C0330	7455290
	075E3R157C075-ISBN10-C	.750	.490	5.118	.750	–	1.575	–	–	–	–	20	-10	-10.5	3	–	28400	✓	.49	GI329	C0330	7455291
	075E3R315C075-ISBN10-C	.750	.490	6.299	.750	–	3.150	–	–	–	–	20	-10	-10.5	3	–	28400	✓	.66	GI329	C0330	7455292
	100E4R197C100-ISBN10-C	1.000	.740	5.512	1.000	–	1.969	–	–	–	–	20	-10	-9	4	✓	24600	✓	1.03	GI329	C0330	7455293
	100E4R394C100-ISBN10-C	1.000	.740	7.087	1.000	–	3.937	–	–	–	–	20	-10	-9	4	✓	24600	✓	1.17	GI329	C0330	7455294
	100E4R472C100-ISBN10-C	1.000	.740	8.661	1.000	–	4.724	–	–	–	–	20	-10	-9	4	✓	24600	✓	1.45	GI329	C0330	7455295
	100E5R197C100-ISBN10-C	1.000	.740	5.512	1.000	–	1.969	–	–	–	–	20	-10	-9	5	–	24600	✓	.96	GI329	C0330	7455296
	125E5R276C125-ISBN10-C	1.250	.990	5.906	1.250	–	2.756	–	–	–	–	20	-10	-8	5	✓	22000	✓	1.65	GI329	C0330	7455297
	125E5R472C125-ISBN10-C	1.250	.990	7.874	1.250	–	4.724	–	–	–	–	20	-10	-8	5	✓	22000	✓	2.03	GI329	C0330	7455299
	125E6R276C125-ISBN10-C	1.250	.990	5.906	1.250	–	2.756	–	–	–	–	20	-10	-8	6	✓	22000	✓	1.59	GI329	C0330	7455298
MODULAR	062E2R098M08-ISBN10-C	.625	.365	1.693	.335	–	–	.984	M8	–	–	20	-10	-12	2	–	31100	✓	.07	GI329	C0330	7477730
	075E2R118M10-ISBN10-C	.750	.490	1.929	.413	–	–	1.181	M10	–	–	20	-10	-10.5	2	–	28400	✓	.11	GI329	C0330	7477731
	075E3R118M10-ISBN10-C	.750	.490	1.929	.413	–	–	1.181	M10	–	–	20	-10	-10.5	3	–	28400	✓	.11	GI329	C0330	7477732
	100E4R130M12-ISBN10-C	1.000	.740	2.165	.492	–	–	1.299	M12	–	–	20	-10	-9	4	✓	24600	✓	.18	GI329	C0330	7455321
	100E5R130M12-ISBN10-C	1.000	.740	2.165	.492	–	–	1.299	M12	–	–	20	-10	-9	5	–	24600	✓	.22	GI329	C0330	7455322
	125E5R157M16-ISBN10-C	1.250	.990	2.480	.669	–	–	1.575	M16	–	–	20	-10	-8	5	✓	22000	✓	.42	GI329	C0330	7455323
	125E6R157M16-ISBN10-C	1.250	.990	2.480	.669	–	–	1.575	M16	–	–	20	-10	-8	6	✓	22000	✓	.42	GI329	C0330	7455324
ISO 6462 DIN 8030	150A05R-ISMOBN10-C	1.500	1.240	–	.500	.433	–	1.575	–	.258	.165	20	-10	-7	5	✓	20100	✓	.46	GI329	C0332	7464859
	150A07R-ISMOBN10-C	1.500	1.240	–	.500	.433	–	1.575	–	.258	.165	20	-10	-7	7	–	20100	✓	.46	GI329	C0332	7464890
	200A07R-ISMOBN10-C	2.000	1.803	–	.750	.630	–	1.575	–	.321	.193	29	-6	-7	7	✓	17400	✓	1.07	GI343	C0395	8259014
	200A08R-ISMOBN10-C	2.000	1.803	–	.750	.630	–	1.575	–	.321	.193	29	-6	-7	8	✓	17400	✓	.94	GI343	C0395	8259015

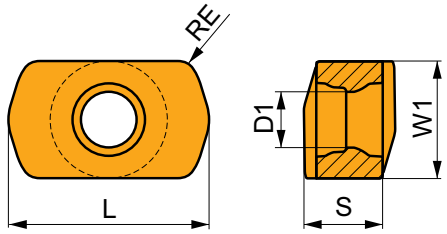
GI329	BNGX 10T3…	ANHX 10T3..
GI343	BNGX 10T3…	–

C0330	US 42507-T07P	1.2	M 2.5	.276	FLAG T07P	–	–	–
C0332	US 42507-T07P	1.2	M 2.5	.276	–	D-T07P/T09P	FG-15	HS 025100
C0395	US 42507-T07P	1.2	M 2.5	.276	–	D-T07P/T09P	FG-15	HS 037100

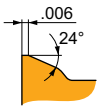
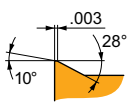
BNGX 10

PRAMET

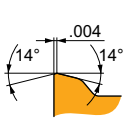
	W1	D1	L	S
	(inch)	(inch)	(inch)	(inch)
10T3	.228	.109	.391	.154



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

Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
																					
BNGX 10T308SR-M	**8215**	.031	■ 787	.0256	.028	–	–	–	■ 738	.0256	.028	–	–	–	–	–	–	◪ 148	.0142	.020	7451991
	M6330	.031	■ 689	.0256	.028	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	7601335
	M8310	.031	■ 820	.0256	.028	–	–	–	■ 771	.0256	.028	–	–	–	–	–	–	◪ 164	.0142	.020	7451990
	M8330	.031	■ 787	.0256	.028	–	–	–	■ 738	.0256	.028	–	–	–	–	–	–	◪ 148	.0142	.020	7451992
	M8340	.031	■ 738	.0256	.028	–	–	–	◪ 689	.0256	.028	–	–	–	–	–	–	–	–	–	7451993
	M8345	.031	■ 591	.0256	.028	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	7451994
	M9325	.031	■ 902	.0256	.028	–	–	–	■ 853	.0256	.028	–	–	–	–	–	–	◪ 180	.0142	.020	7451995
																					
BNGX 10T308SR-MM	**M6330**	.031	◪ 705	.0256	.024	■ 492	.0232	.024	–	–	–	–	–	–	■ 197	.0181	.020	–	–	–	7253609
	M8310	.031	◪ 837	.0256	.024	◪ 427	.0232	.024	–	–	–	–	–	–	–	–	–	–	–	–	7474618
	M8330	.031	◪ 804	.0256	.024	■ 476	.0232	.024	–	–	–	–	–	–	◪ 197	.0181	.020	–	–	–	7474619
	M8340	.031	◪ 755	.0256	.024	■ 443	.0232	.024	–	–	–	–	–	–	■ 180	.0181	.020	–	–	–	7253607
	M8345	.031	◪ 591	.0256	.024	■ 344	.0232	.024	–	–	–	–	–	–	■ 148	.0181	.020	–	–	–	7253608
	M9325	.031	◪ 919	.0256	.024	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	7253620
	M9340	.031	◪ 820	.0256	.024	■ 492	.0232	.024	–	–	–	–	–	–	■ 197	.0181	.020	–	–	–	7253621

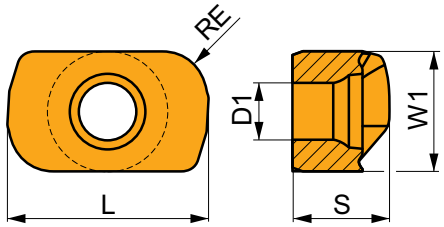
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
																					
HM geometry with strong design for high feed machining.																					
BNGX 10T308SR-HM	**8215**	.031	–	–	–	–	–	–	◪	787	.0256	.016	–	–	–	–	–	–	■	164	.0256	.016	7451997
	M8310	.031	–	–	–	–	–	–	◪	820	.0256	.016	–	–	–	–	–	–	■	164	.0256	.016	7451996
	M8330	.031	–	–	–	–	–	–	◪	787	.0256	.016	–	–	–	–	–	–	◪	164	.0256	.016	7451998

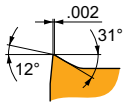
ANHX 10

PRAMET

	W1 (inch)	D1 (inch)	L (inch)	S (inch)
10T3	.228	.109	.383	.185



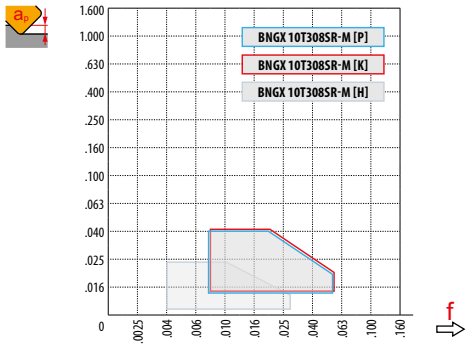
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

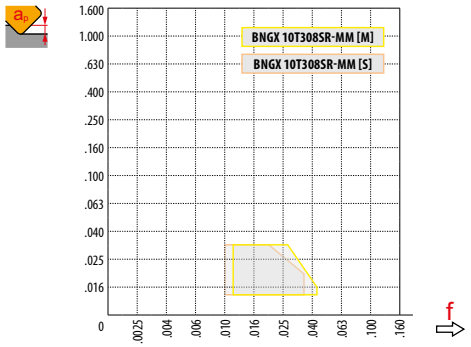
Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
																					
F geometry with positive design for finish and semi-finish machining.																					
ANHX 10T320SR-F	**M8310**	.079	■	1247	.0039	.098	◪	623	.0035	.098	–	–	–	–	–	–	–	–	–	–	7451999
	M8330	.079	■	1115	.0039	.098	◪	656	.0035	.098	–	–	–	–	–	–	–	–	–	–	7452020

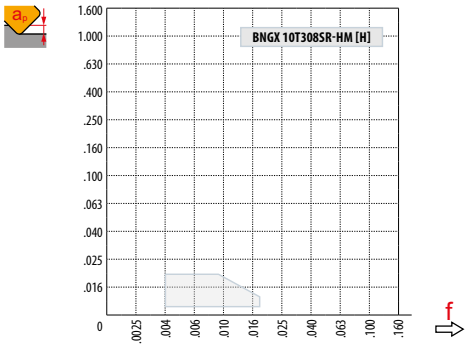
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ X.f	2.20	1.60	1.35	1.20	1.10	.95	.85	.75	.85	.95	1.00	1.00	1.00	1.00
⇨ X.f	.64	.64	.64	.64	.64	.65	.65	.67	.68	.71	.72	.74	.79	1.00

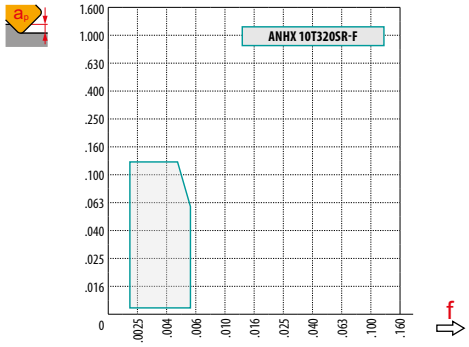
	BNGX 10-M	BNGX 10-MM	BNGX 10-HM
RE (mm)	.8	.8	.8
BS (inch)	–	–	–

	ANHX 10 - F
RE (mm)	2.0
BS (inch)	.036









(inch)

DCX	a_p	BNGX 10 (HFC)								
		.000	.012	.016	.020	.024	.028	.031	.035	.039
.625	DEF	.365	.501	.521	.539	.554	.568	.581	.593	.604
.750		.490	.626	.646	.664	.679	.693	.706	.718	.729
1.000		.740	.876	.896	.914	.929	.943	.956	.968	.979
1.250		.990	1.126	1.146	1.164	1.179	1.193	1.206	1.218	1.229
1.500		1.240	1.376	1.396	1.414	1.429	1.443	1.456	1.468	1.479
2.000		1,763	1,846	1,860	1,875	1,889	1,903	1,917	1,931	1,943
	a_p	.000	.012	.016	.020	.024	.028	.031	.035	.039
	1 f	–	.051	.043	.035	.031	.028	.027	.026	.020

(inch)

BNGX 10		
DCX	$a_{e\,max}$	f_{max}
.625	.138	.005
.750	.157	.005
1.000	.157	.006
1.250	.157	.006
1.500	.157	.007
2.000	.177	.019

(inch)

BNGX 10 (HFC)			
a_p	.012	.024	.039
1 f	.043	.024	.012

(inch)

DCX	BNGX 10 (HFC)		ANHX 10	
	RPMX	APMX/l	RPMX	APMX/l
.625	4.0°	.0393/.629	1.6°	.104/3.937
.750	4.0°	.0393/.629	1.2°	.077/3.937
1.000	2.6°	.0393/.945	.8°	.049/3.937
1.250	1.9°	.0393/1.260	.5°	.030/3.937
1.500	1.5°	.0393/1.575	.4°	.016/3.937
2.000	.4°	.0217/3.937	–	–

(inch)

BNGX 10 (HFC)		
DCX	a_p	f_{max}
.625	.016	.006
.750	.028	.006
1.000	.028	.008
1.250	.028	.008
1.500	.028	.008
2.000	.012	.008

(inch)

BNGX 10 (HFC)				
DCX	DMIN	DMAX	SMAX / DMIN	SMAX / DMAX
.625	.870	1.240	.020	.020
.750	1.087	1.492	.020	.020
1.000	1.583	1.992	.020	.020
1.250	2.083	2.492	.020	.020
1.500	2.583	2.992	.020	.020
2.000	3.590	3.984	.020	.020

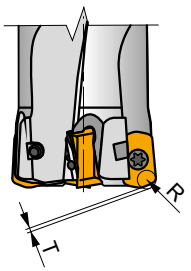
(inch)

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
.625	FE	.017	.022	.031	.038	.044	.054	.063	.070	.077	.089	.099
.750		.019	.024	.034	.042	.049	.060	.069	.077	.084	.097	.109
1.000		.022	.028	.040	.049	.056	.069	.079	.089	.097	.112	.125
1.250		.024	.031	.044	.054	.063	.077	.089	.099	.109	.125	.140
1.500		.027	.034	.049	.060	.069	.084	.097	.109	.119	.137	.154

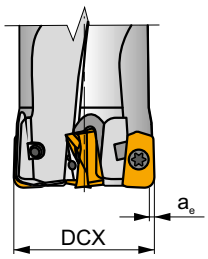
ANHX 10

RE (mm)	µm	3	5	10	15	20	30	40	50	60	80	100
2.0	FE	.009	.011	.016	.019	.022	.027	.031	.035	.039	.045	.050

(inch)



	R	T
BNGX 10T308	.063	.017



	max a_e/DCX
ANHX 10T320	.05

SSN11

P M K S H

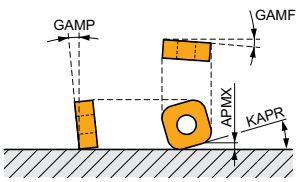
PRAMET

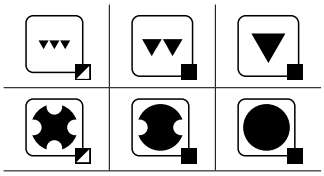
S

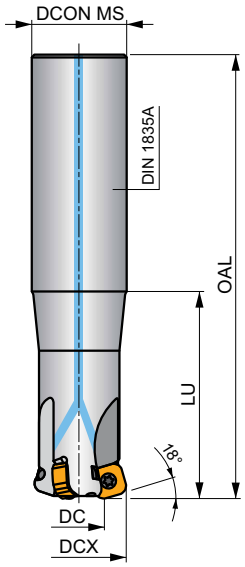
High Feed Milling Cutter for SN.. 11 inserts with Internal Coolant

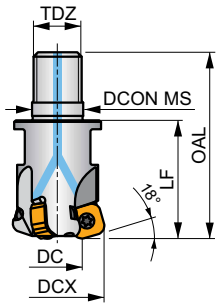
High-feed milling cutter for bigger diameters utilizing double-sided SNXG 11 inserts with eight cutting edges and APMX of 1.7 mm. Internal coolant. Suitable for a wide range of applications. Available in cylindrical, modular and arbor style. Body treated for longer tool life.

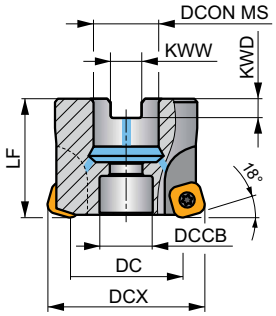
KAPR	18°
APMX	1.7 mm











	Product	DCX (mm)	DC (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	LU (mm)	LF (mm)	TDZ	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		lbs				MID
DIN 1835A	**32E3R070A32-SSN11-C**	32	18.3	150	32	–	70	–	–	–	–	-11.5	-10	3	–	17500	✓	1.52	GI339	C0314	–	7799390
	32E3R120A32-SSN11-C	32	18.3	200	32	–	120	–	–	–	–	-11.5	-10	3	–	17500	✓	1.96	GI339	C0314	–	7799391
	35E3R050A32-SSN11-C	35	21.2	200	32	–	50	–	–	–	–	-11	-10	3	–	16800	✓	2.39	GI339	C0314	–	7799393
MODULAR	**32E3R040M16-SSN11-C**	32	18.3	63	17	–	–	40	M16	–	–	-11.5	-10	3	–	17500	✓	.42	GI339	C0314	–	7799394
	35E3R040M16-SSN11-C	35	21.2	63	17	–	–	40	M16	–	–	-11	-10	3	–	16800	✓	.42	GI339	C0314	–	7799395
	40E4R043M16-SSN11-C	40	26.2	66	17	–	–	43	M16	–	–	-10.5	-10	4	✓	15700	✓	.57	GI339	C0314	–	7799396
	40A04R-SMOSN11-C	40	26.2	–	16	12.4	–	40	–	8.4	5.6	-10.5	-10	4	✓	15700	✓	.42	GI339	C0316	–	7799318
	42A04R-SMOSN11-C	42	28.2	–	16	14.1	–	40	–	8.4	5.6	-10.5	-10	4	✓	15300	✓	.46	GI339	C0318	–	7799319
	50A05R-SMOSN11-C	50	36.1	–	22	18.1	–	40	–	10.4	6.3	-10	-10	5	✓	14000	✓	.68	GI339	C0320	–	7799340
	50A06R-SMOSN11-C	50	36.1	–	22	18.1	–	40	–	10.4	6.3	-10	-10	6	✓	14000	✓	.95	GI339	C0320	–	7799341
	52A05R-SMOSN11-C	52	38.1	–	22	18.1	–	40	–	10.4	6.3	-10	-10	5	✓	13800	✓	1.03	GI339	C0320	–	7799342
	52A06R-SMOSN11-C	52	38.1	–	22	18.1	–	40	–	10.4	6.3	-10	-10	6	✓	13800	✓	1.02	GI339	C0320	–	7799343
	63A06R-SMOSN11-C	63	49.1	–	22	18.1	–	40	–	10.4	6.3	-10	-10	6	✓	12500	✓	1.01	GI339	C0320	–	7799344
ISO 6462 DIN 8030	**63A08R-SMOSN11-C**	63	49.1	–	22	18.1	–	40	–	10.4	6.3	-10	-10	8	✓	12500	✓	1.32	GI339	C0320	–	7799345
	66A06R-SMOSN11-C	66	52.1	–	27	18.1	–	50	–	12.4	7	-10	-10	6	✓	12200	✓	1.93	GI339	C0322	–	7799346
	66A08R-SMOSN11-C	66	52.1	–	27	18.1	–	50	–	12.4	7	-10	-10	8	✓	12200	✓	1.95	GI339	C0322	–	7799347
	80A07R-SMOSN11-C	80	66.1	–	27	38.1	–	50	–	12.4	7	-10	-10	7	✓	11100	✓	2.09	GI339	C0324	AC001	7799348
	80A09R-SMOSN11-C	80	66.1	–	27	38.1	–	50	–	12.4	7	-10	-10	9	✓	11100	✓	2.27	GI339	C0324	AC001	7799349
	100A08R-SMOSN11-C	100	86.1	–	32	45.1	–	50	–	14.4	8	-10	-10	8	✓	9900	✓	4.03	GI339	C0324	AC002	7799350
	115A08R-SMOSN11-C	115	101.1	–	32	45.1	–	50	–	14.4	8	-10	-10	8	✓	9200	✓	5.07	GI339	C0324	AC002	7799351
	125A08R-SMOSN11-C	125	111.1	–	40	56.1	–	63	–	16.4	9	-10	-10	8	✓	8900	✓	7.36	GI339	C0324	AC003	7799352

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

ISSN11

P M K S H

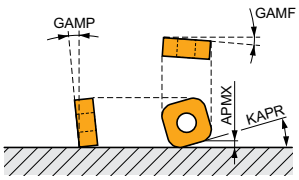
PRAMET

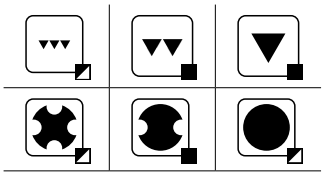
S

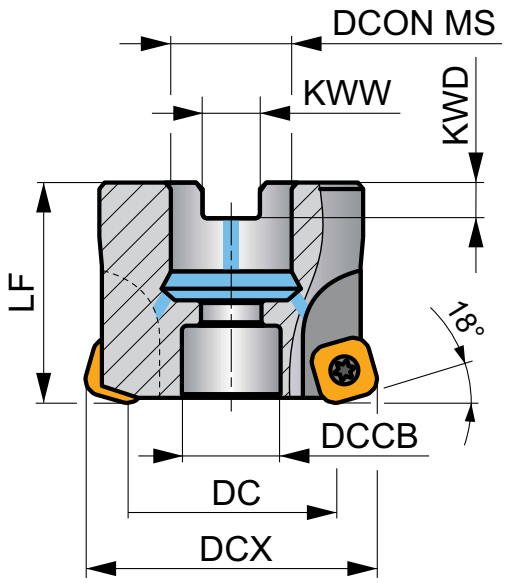
High Feed Milling Cutter for SN.. 11 inserts with Internal Coolant

High-feed milling cutter for bigger diameters utilizing double-sided SNXG 11 inserts with eight cutting edges and APMX of .067 inches. Internal coolant. Suitable for a wide range of applications. Available only arbor style. Body treated for longer tool life.

KAPR	18°
APMX	0.067 in







h_m	.008 - .018 in
h_m	.008 - .018 in

	Product	DCX (inch)	DC (inch)	DCON MS (inch)	LF (inch)	KWW (inch)	KWD (inch)	GAMF (°)	GAMP (°)			max.		lbs			MID
	150A04R-ISMOSN11-C	1.500	.957	.500	1.575	.258	.165	-10.5	-10	4	✓	16100	✓	.40	GI339	C0336	7800651
	200A05R-ISMOSN11-C	2.000	1.453	.750	1.575	.321	.193	-10	-10	5	✓	13900	✓	1.03	GI339	C0338	7800652
	200A06R-ISMOSN11-C	2.000	1.453	.750	1.575	.321	.193	-10	-10	6	✓	13900	✓	1.02	GI339	C0338	7800653
ISO 6462 DIN 8030	**250A06R-ISMOSN11-C**	2.500	1.953	.750	1.575	.321	.193	-10	-10	6	✓	12400	✓	1.08	GI339	C0338	7800654
	250A08R-ISMOSN11-C	2.500	1.953	.750	1.575	.321	.193	-10	-10	8	✓	12400	✓	1.08	GI339	C0338	7800655
	300A07R-ISMOSN11-C	3.000	2.453	1.000	1.969	.382	.224	-10	-10	7	✓	11400	✓	2.25	GI339	C0390	7800656
	300A09R-ISMOSN11-C	3.000	2.453	1.000	1.969	.382	.224	-10	-10	9	✓	11400	✓	2.23	GI339	C0390	7800657
	400A08R-ISMOSN11-C	4.000	3.453	1.500	1.969	.634	.382	-10	-10	8	✓	9800	✓	5.10	GI339	C0392	7800658

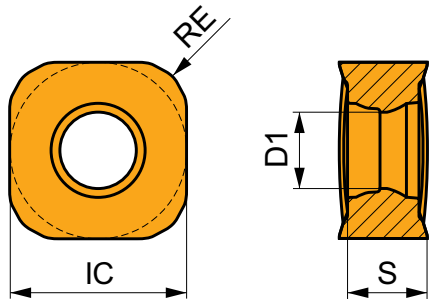
GI339	SNGX 1104..

		Nm					
C0336	US 44012-T15P	3.5	M 4	.472	D-T08P/T15P	FG-15	HCS 025150C
C0338	US 44012-T15P	3.5	M 4	.472	D-T08P/T15P	FG-15	HS 037100
C0390	US 44012-T15P	3.5	M 4	.472	D-T08P/T15P	FG-15	HS 050125
C0392	US 44012-T15P	3.5	M 4	.472	D-T08P/T15P	FG-15	HCS 075175

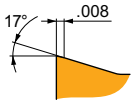
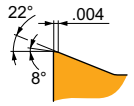
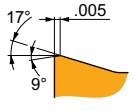
SNGX 11

PRAMET

	IC	D1	S
	(inch)	(inch)	(inch)
1104	.417	.180	.187

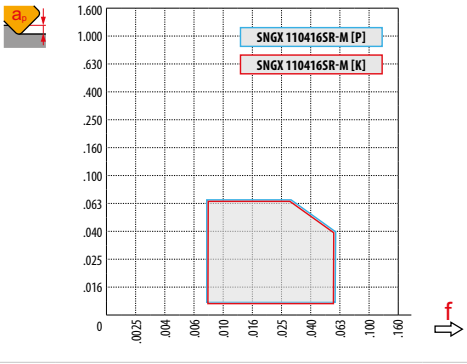


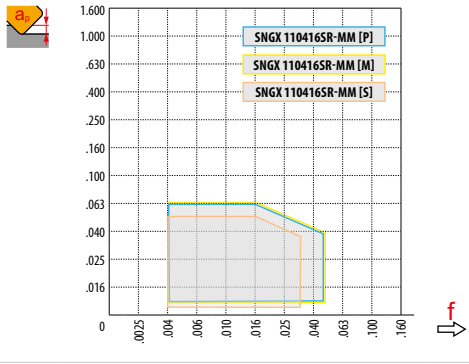
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
																					
			M geometry with positive design for high feed machining.																		
SNGX 110416SR-M	**8215**	.063	■ 853	.0236	.039	–	–	–	■ 804	.0236	.039	–	–	–	–	–	–	–	–	–	7799778
	M8310	.063	■ 902	.0236	.039	–	–	–	■ 853	.0236	.039	–	–	–	–	–	–	–	–	–	7799777
	M8330	.063	■ 853	.0236	.039	–	–	–	■ 804	.0236	.039	–	–	–	–	–	–	–	–	–	7799779
	M8340	.063	■ 804	.0236	.039	–	–	–	◪ 755	.0236	.039	–	–	–	–	–	–	–	–	–	7799790
	M9325	.063	■ 1001	.0236	.039	–	–	–	■ 935	.0236	.039	–	–	–	–	–	–	–	–	–	7799791
	M9340	.063	■ 886	.0236	.039	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	7799792
																					
			MM geometry with highly positive design for high feed machining.																		
SNGX 110416SR-MM	**M6330**	.063	■ 574	.0236	.039	■ 410	.0213	.039	–	–	–	–	–	–	■ 164	.0165	.031	–	–	–	7799794
	M8340	.063	■ 623	.0236	.039	■ 361	.0213	.039	–	–	–	–	–	–	■ 148	.0165	.031	–	–	–	7799795
	M8345	.063	■ 492	.0236	.039	■ 295	.0213	.039	–	–	–	–	–	–	■ 115	.0165	.031	–	–	–	7799796
	M9340	.063	■ 689	.0236	.039	■ 410	.0213	.039	–	–	–	–	–	–	■ 164	.0165	.031	–	–	–	7799797
																					
			HM geometry with strong design for high feed machining.																		
SNGX 110416SR-HM	**8215**	.063	■ 755	.0394	.039	–	–	–	■ 705	.0394	.039	–	–	–	–	–	–	■ 148	.0276	.028	8174569
	M8310	.063	■ 787	.0394	.039	–	–	–	■ 738	.0394	.039	–	–	–	–	–	–	■ 148	.0276	.028	8174564
	M8330	.063	■ 771	.0394	.039	–	–	–	■ 722	.0394	.039	–	–	–	–	–	–	◪ 148	.0276	.028	8174565
	M9325	.063	■ 853	.0394	.039	–	–	–	■ 804	.0394	.039	–	–	–	–	–	–	◪ 164	.0276	.028	8174620

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	.95	.85	.75	.85	.95	1.00	1.00	1.00	1.00
x.f	.64	.64	.64	.64	.64	.65	.65	.67	.68	.71	.72	.74	.79	1.00

	SNGX 11 - M	SNGX 11 - MM	SNGX 11 - HM
RE (mm)	1.6	1.6	1.6
BS (inch)	–	–	–





(inch) — HFC

DCX	a_p	.000	.008	.016	.024	.031	.039	.043	.047	.051	.055	.059	.063	.067
1.250	DEF	.957	1.005	1.054	1.102	1.151	1.199	1.223	1.247	1.272	1.296	1.320	1.344	1.369
2.000		1.453	1.501	1.550	1.598	1.647	1.695	1.719	1.744	1.768	1.792	1.816	1.840	1.865
2.500		1.953	2.001	2.050	2.098	2.147	2.195	2.219	2.244	2.268	2.292	2.316	2.340	2.365
3.000		2.453	2.501	2.550	2.598	2.647	2.695	2.719	2.744	2.768	2.792	2.816	2.840	2.865
4.000		3.453	3.501	3.550	3.598	3.647	3.695	3.719	3.744	3.768	3.792	3.816	3.840	3.865
	a_p	–	.008	.016	.024	.031	.039	.043	.047	.051	.055	.059	.063	.067
	f	–	.054	.039	.032	.028	.025	.024	.023	.023	.022	.021	.021	.020

(inch)

SNGX		
DCX	a_{emax}	f_{max}
1.250	.204	.012
2.000	.208	.012
2.500	.212	.012
3.000	.216	.014
4.000	.216	.014

(inch)

SNGX (HFC)		
DCX	RPMX	APMX/I
1.250	.8°	.047/3.937
2.000	.8°	.035/3.937
2.500	.7°	.028/3.937
3.000	.7°	.020/3.937
4.000	.5°	.012/3.937

SNGX (HFC)		
DCX	a_p	f_{max}
1.250	.008	.012
2.000	.012	.016
2.500	.012	.016
3.000	.012	.016
4.000	.012	.016

(inch)

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
1.250	FE	.027	.034	.049	.060	.069	.084	.097	.109	.119	.137	.154
2.000		.031	.040	.056	.069	.079	.097	.112	.125	.137	.159	.177
2.500		.034	.044	.063	.077	.089	.109	.125	.140	.154	.177	.198
3.000		.038	.049	.069	.084	.097	.119	.137	.154	.168	.194	.217
4.000		.043	.056	.079	.097	.112	.137	.159	.177	.194	.224	.251

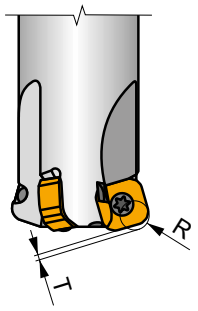
(inch)

SNGX				
a_p	**.008**	**.020**	**.039**	**.067**
f	.047	.039	.020	.010

(inch)

SNGX (HFC)				
DCX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
1.250	2.362	2.984	.033	.057
2.000	3.346	3.992	.037	.055
2.500	4.331	4.992	.040	.055
3.000	5.354	5.984	.039	.049
4.000	7.323	7.992	.036	.044

(inch)



SNGX	R	T
SNGX 110416	.181	.036

SPD09

P M K S H

PRAMET

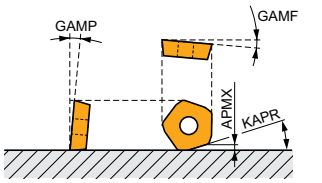
S

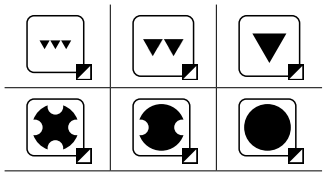
PENTA HF High-Feed Milling Cutter with Internal Coolant

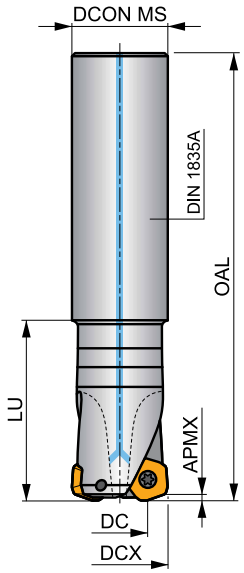
Productive high-feed milling cutter utilizing single-sided positive PD.. 09 insert with 5 cutting edges and APMX of 2 mm. Internal coolant. Suitable for a wide range of applications. Available in cylindrical and arbor style. Body treated for longer tool life.

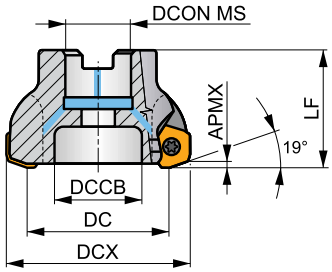
PENTA HF

KAPR	19°
APMX	2.0 mm









h_m 0.065 - 0.975 mm

h_m 0.065 - 0.975 mm

	Product	DCX (mm)	DC (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	LU (mm)	LF (mm)	GAMF (°)	GAMP (°)			max.		lbs				MID
DIN 1835A	32E2R060A32-SPD09-C	32	18.4	250	32	–	60	–	-24	10	2	–	13100	✓	2.96	GI245	C0340	–	6920665
DIN 1835A	40E3R060A32-SPD09-C	40	25.5	250	32	–	60	–	-11	10	3	–	11700	✓	3.15	GI245	C0340	–	6920666
	42A03R-S19PD09-C	42	27.5	–	16	12	–	40	-8	10	3	–	11500	✓	.40	GI245	C0342	–	6761256
	50A04R-S19PD09-C	50	35.3	–	22	18	–	40	-3	10	4	–	10500	✓	.51	GI245	C0343	–	6761257
	50A05R-S19PD09-C	50	35.3	–	22	18	–	40	-3	10	5	–	10500	✓	.72	GI245	C0343	–	6920667
	52A04R-S19PD09-C	52	37.3	–	22	18	–	40	-3	10	4	–	10300	✓	.55	GI245	C0343	–	6761258
	63A05R-S19PD09-C	63	48.2	–	22	18	–	40	-1	10	5	–	9400	✓	.97	GI245	C0343	–	6761259
	63A06R-S19PD09-C	63	48.2	–	22	18	–	40	-1	10	6	–	9300	✓	1.00	GI245	C0343	–	6920668
	66A06R-S19PD09-C	66	51.2	–	22	18	–	40	-1	10	6	–	9200	✓	.77	GI245	C0343	–	6761260
ISO 6462 DIN 8030	66A06R-S19PD09-CF	66	51.2	–	27	22	–	50	-1	10	6	–	9100	✓	1.47	GI245	C0344	–	6920710
	80A05R-S19PD09-C	80	65.3	–	27	37	–	50	-1	10	5	–	8300	✓	1.85	GI245	C0341	AC001	6761261
	80A06R-S19PD09-C	80	65.3	–	27	37	–	50	-1	10	6	–	8300	✓	1.89	GI245	C0341	AC001	6920669
	100A06R-S19PD09-C	100	58.3	–	32	45	–	50	-1	10	6	–	7400	✓	3.22	GI245	C0341	AC002	6761262
	100A08R-S19PD09-C	100	85.3	–	32	45	–	50	-1	10	8	–	7400	✓	3.09	GI245	C0341	AC002	6761263
	125A08R-S19PD09-C	125	110.3	–	40	36	–	63	-1	10	8	–	6600	✓	6.83	GI245	C0349	–	7039765
	125A10R-S19PD09-C	125	110.3	–	40	36	–	63	-1	10	10	–	6600	✓	6.85	GI245	C0349	–	6920711
	140A08R-S19PD09-C	140	125.3	–	40	36	–	63	-1	10	8	–	6200	✓	7.86	GI245	C0349	–	7049117

GI245	PD.X 0905ZE..	PDKT 0905..	PDMW 0905..

CO340	US 45011-T20P	5.0	M 5	11	–	–	Flag T20P
CO341	US 45011-T20P	5.0	M 5	11	SDR T20P-T	–	–
CO342	US 45011-T20P	5.0	M 5	11	SDR T20P-T	HS 90835	–
CO343	US 45011-T20P	5.0	M 5	11	SDR T20P-T	HS 1030C	–
CO344	US 45011-T20P	5.0	M 5	11	SDR T20P-T	HS 1230C	–
CO349	US 45011-T20P	5.0	M 5	11	SDR T20P-T	HSD 2040	–

AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32

ISPD09

P M K S H

PRAMET

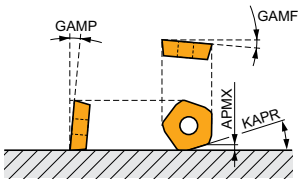
S

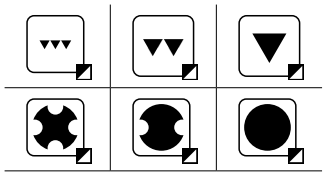
PENTA HF High-Feed Milling Cutter with Internal Coolant

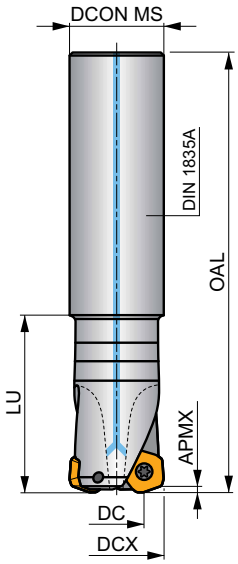
Productive high-feed milling cutter utilizing single-sided positive PD.. 09 insert with 5 cutting edges and APMX of .079 inches. Internal coolant. Suitable for a wide range of applications. Available in cylindrical and arbor style. Body treated for longer tool life.

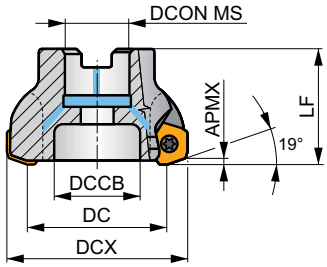
PENTA HF

KAPR	19°
APMX	.079 in









h_m	.0025-.0383 in
h_m	.0025-.0383 in

	Product	DCX (inch)	DC (inch)	OAL (inch)	DCON MS (inch)	DCCB (inch)	LU (inch)	LF (inch)	GAMF (°)	GAMP (°)			max.		lbs			MID
DIN 1835A	**125E2R236C125-ISPD09-C**	1.250	.724	9.843	1.250	–	2.362	–	-24	10	2	–	13100	✓	3.13	GI245	C0363	6792981
DIN 1835A	**150E3R236C125-ISPD09-C**	1.500	1.004	9.843	1.250	–	2.362	–	-11	10	3	–	11700	✓	3.31	GI245	C0340	6792949
	200A04R-IS19PD09-C	2.000	1.433	–	.750	.630	–	1.575	-3	10	4	–	10500	✓	.50	GI245	C0363	6792982
ISO 6462 DIN 8030	**250A05R-IS19PD09-C**	2.500	1.931	–	.750	.630	–	1.575	-1	10	5	–	9400	✓	.68	GI245	C0340	6792980
ISO 6462 DIN 8030	**300A05R-IS19PD09-C**	3.000	2.432	–	1.000	.827	–	1.969	-1	10	5	–	8300	✓	1.83	GI245	C0384	6792983
ISO 6462 DIN 8030	**400A06R-IS19PD09-C**	4.000	3.431	–	1.500	1.417	–	1.969	-1	10	6	–	7400	✓	3.09	GI245	C0365	6792984
ISO 6462 DIN 8030	**400A08R-IS19PD09-C**	4.000	3.431	–	1.500	1.417	–	1.969	-1	10	8	–	7400	✓	3.04	GI245	C0365	6792985

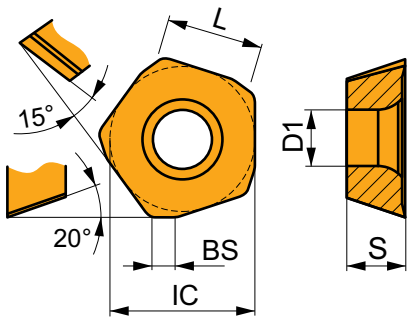
GI245	PD.X 0905ZE..	PDKT 0905..	PDMW 0905..

		Nm					
C0340	US 45011-T20P	5.0	M 5	.433	–	Flag T20P	–
C0363	US 45011-T20P	5.0	M 5	.433	SDR T20P-T	–	HS 037100
C0365	US 45011-T20P	5.0	M 5	.433	SDR T20P-T	–	HCS 075175
C0384	US 45011-T20P	5.0	M 5	.433	SDR T20P-T	–	HS 050125

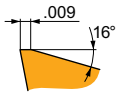
PDKX 09

PRAMET

	BS	IC	D1	L	S
	(inch)	(inch)	(inch)	(inch)	(inch)
0905	.079	.531	.217	.354	.215



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

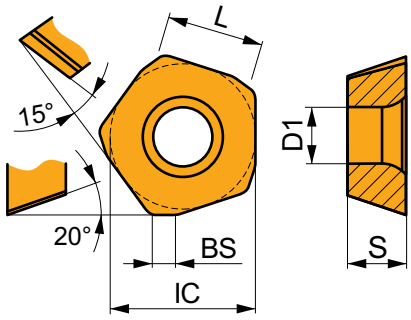
Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
		(inch)																			
																					
PDKX 0905ZEER-FM	**M6330**	–	■ 640	.0394	.047	■ 443	.0354	.047	–	–	–	–	–	–	■ 180	.0276	.039	–	–	–	7056845
	M8345	–	■ 541	.0394	.047	■ 312	.0354	.047	–	–	–	–	–	–	■ 131	.0276	.039	–	–	–	6756072
	M9340	–	■ 705	.0394	.047	■ 410	.0354	.047	–	–	–	–	–	–	■ 164	.0276	.039	–	–	–	6756073

FM geometry with highly positive design for medium high feed machining.

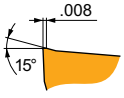
PDMX 09

PRAMET

	BS	IC	D1	L	S
	(inch)	(inch)	(inch)	(inch)	(inch)
0905	.079	.531	.217	.354	.215

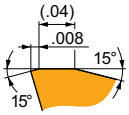


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
		(inch)																			
																					
PDMX 0905ZEER-M	**8215**	–	■ 705	.0394	.047	◪ 410	.0354	.047	◪ 656	.0394	.047	–	–	–	–	–	–	–	–	–	6756188
	M8330	–	■ 722	.0394	.047	■ 427	.0354	.047	◪ 673	.0394	.047	–	–	–	–	–	–	–	–	–	7447926
	M8345	–	■ 541	.0394	.047	■ 312	.0354	.047	–	–	–	–	–	–	–	–	–	–	–	–	6756190
	M9340	–	■ 705	.0394	.047	■ 410	.0354	.047	–	–	–	–	–	–	–	–	–	–	–	–	6756191

M geometry with positive design for medium high feed machining.

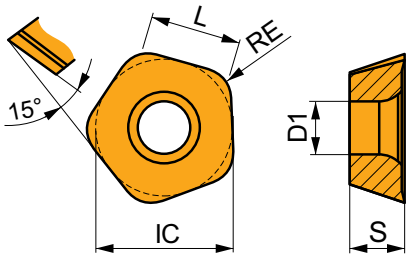
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
			HFC P																		
R geometry with strong design for high feed machining.																					
PDMX 0905ZESR-R	**8215**	–	◪ 705	.0394	.051	–	–	–	■ 656	.0394	.051	–	–	–	–	–	–	■ 131	.0276	.035	6755681
	M8330	–	◪ 705	.0394	.051	–	–	–	■ 656	.0394	.051	–	–	–	–	–	–	◪ 131	.0276	.035	7447927
	M8345	–	◪ 541	.0394	.051	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6756076
	M9325	–	◪ 804	.0394	.051	–	–	–	■ 755	.0394	.051	–	–	–	–	–	–	◪ 148	.0276	.035	7049050

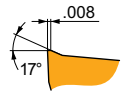
PDKT 09

PRAMET

	IC (inch)	D1 (inch)	L (inch)	S (inch)
0905	.531	.217	.354	.215

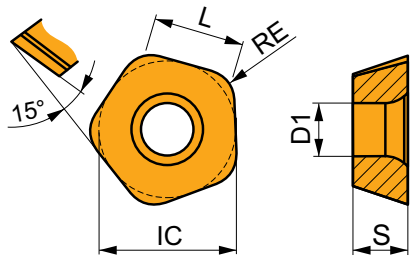


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

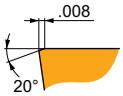
Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
			U HFC S																		
FM geometry with highly positive design for light to medium high feed machining.																					
PDKT 090530ER-FM	**8215**	.118	■ 787	.0394	.047	◪ 459	.0354	.047	◪ 738	.0394	.047	–	–	–	◪ 197	.0276	.039	–	–	–	6755683
	M6330	.118	■ 689	.0394	.047	■ 492	.0354	.047	–	–	–	–	–	–	■ 197	.0276	.039	–	–	–	6925531
	M8310	.118	■ 820	.0394	.047	◪ 410	.0354	.047	◪ 771	.0394	.047	–	–	–	–	–	–	–	–	–	6922543
	M8330	.118	■ 804	.0394	.047	■ 476	.0354	.047	◪ 755	.0394	.047	–	–	–	◪ 197	.0276	.039	–	–	–	7447925
	M8345	.118	■ 591	.0394	.047	■ 344	.0354	.047	–	–	–	–	–	–	■ 148	.0276	.039	–	–	–	6756071
	M9325	.118	■ 902	.0394	.047	–	–	–	◪ 853	.0394	.047	–	–	–	–	–	–	–	–	–	7048989

PDMW 09

	IC	D1	L	S
	(inch)	(inch)	(inch)	(inch)
0905	.531	.217	.354	.215

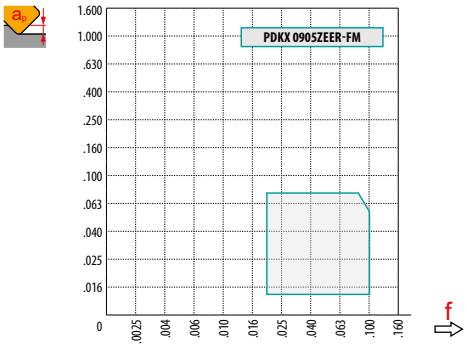


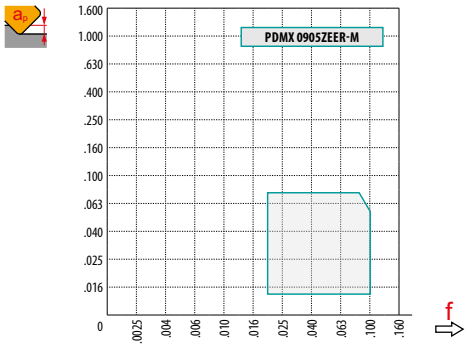
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

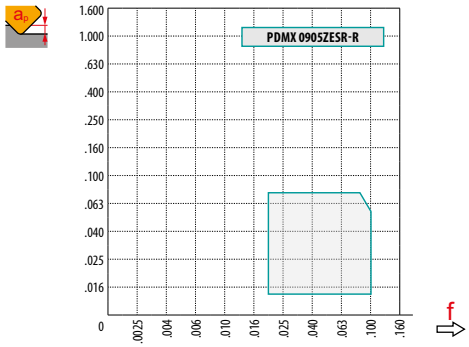
Product		RE	P			M			K			N			S			H			MID
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	
		(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	
			HFC S																		
			Zero rake angle design for high feed machining.																		
PDMW 090530SR	**M8310**	.118	◪ 804	.0394	.055	–	–	–	■ 755	.0394	.055	–	–	–	–	–	–	■ 148	.0276	.039	6922544
	M8345	.118	◪ 591	.0394	.055	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6756074
	M9325	.118	◪ 886	.0394	.055	–	–	–	■ 837	.0394	.055	–	–	–	–	–	–	◪ 164	.0276	.039	6756075

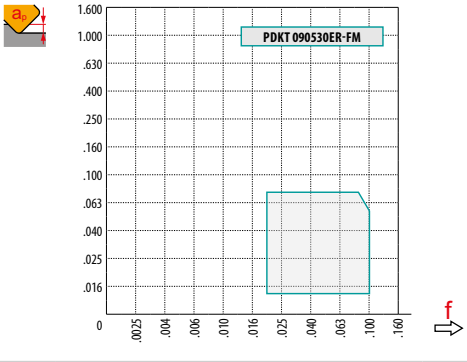
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	.95	.85	.75	.85	.95	1.00	1.00	1.00	1.00
x.f	.64	.64	.64	.64	.64	.65	.65	.67	.68	.71	.72	.74	.79	1.00

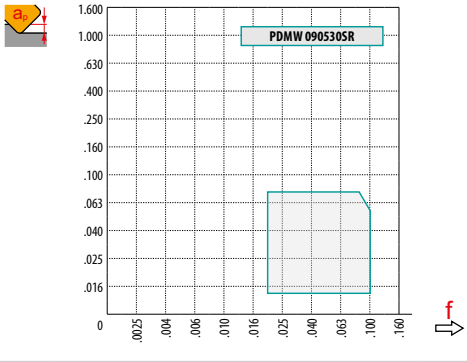
	PDKX 09-FM	PDMX 09-M	PDMX 09-R	PDKT 09-FM	PDMW 09
RE (mm)	–	–	–	3.0	3.0
BS (inch)	.079	.079	.079	–	–











(inch)

DCX	a_p	.000	.012	.016	.020	.024	.028	.031	.035	.039	.049	.059	.079
1.250		.724	.791	.815	.839	.862	.886	.906	.929	.953	1.012	1.067	1.181
1.500		1.004	1.071	1.094	1.118	1.142	1.165	1.185	1.209	1.232	1.291	1.346	1.461
2.000	DEF	1.390	1.457	1.480	1.504	1.528	1.551	1.571	1.594	1.618	1.677	1.732	1.846
2.500		1.898	1.965	1.988	2.012	2.035	2.059	2.079	2.102	2.126	2.185	2.240	2.354
3.000		2.571	2.638	2.661	2.685	2.709	2.732	2.752	2.776	2.799	2.858	2.913	3.028
4.000		3.358	3.425	3.449	3.472	3.496	3.520	3.539	3.563	3.587	3.646	3.701	3.815
	a_p	**.000**	**.012**	**.016**	**.020**	**.024**	**.028**	**.031**	**.035**	**.039**	**.049**	**.059**	**.079**
	1 f	–	.118	.118	.114	.110	.106	.102	.098	.094	.089	.059	.059

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.

(inch)

DCX	max	f_{max}
1.250	.197	.008
1.500	.197	.008
2.000	.236	.008
2.500	.276	.010
3.000	.315	.012
4.000	.315	.012

(inch)

DCX	RPMX	APMX/I
1.500	8.0°	.071/.630
2.000	8.0°	.079/.630
2.500	7.0°	.079/.710
3.000	5.0°	.079/.710
4.000	3.0°	.079/.575

(inch)

HFC			
a_p	**.020**	**.039**	**.079**
1 f	.118	.091	.059

(inch)

DCX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
1.500	2.508	3.150	.079	.079
2.000	3.280	3.937	.079	.079
2.500	4.299	4.961	.079	.079
3.000	5.642	6.299	.079	.079
4.000	7.217	7.874	.079	.079

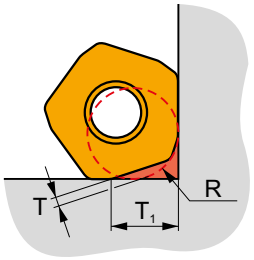
(inch)

DCX	a_p	f_{max}
1.250	.071	.008
1.500	.071	.008
2.000	.079	.008
2.500	.079	.008
3.000	.079	.008
4.000	.079	.010

(inch)

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
1.260	FE	.024	.031	.045	.055	.063	.077	.089	.100	.109	.126	.141
1.575		.027	.035	.050	.061	.070	.086	.100	.111	.122	.141	.157
1.654		.028	.036	.051	.062	.072	.088	.102	.114	.125	.144	.161
1.969		.031	.039	.056	.068	.079	.096	.111	.124	.136	.157	.176
2.047		.031	.040	.057	.070	.080	.098	.114	.127	.139	.161	.180
2.480		.034	.044	.062	.077	.088	.108	.125	.140	.153	.177	.198
2.598		.035	.045	.064	.078	.090	.111	.128	.143	.157	.181	.202
3.150		.039	.050	.070	.086	.100	.122	.141	.157	.173	.199	.223

(inch)



DCX	R	T	T_1
1.250	.177	.043	.268
1.500 – 6.000	.177	.043	.287

S90SN

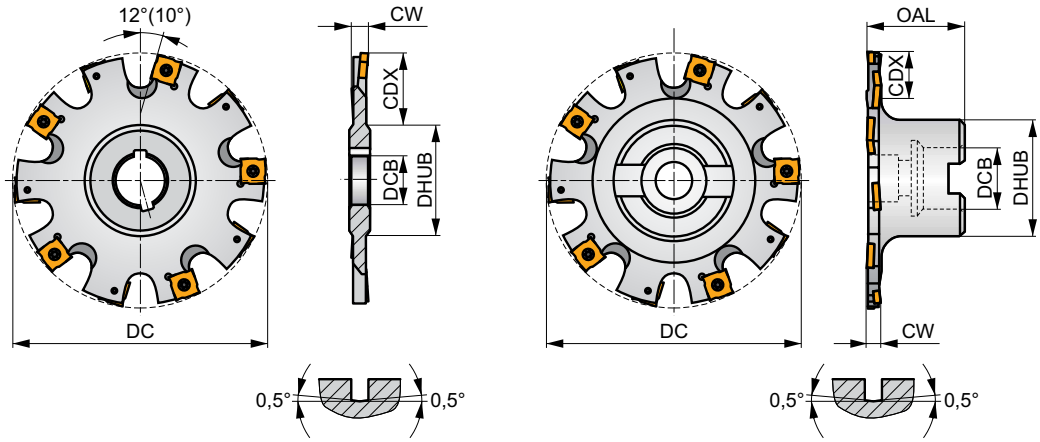
P M K

PRAMET

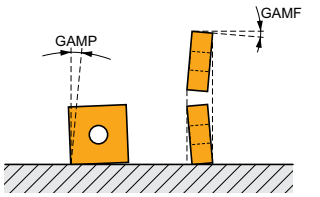
S

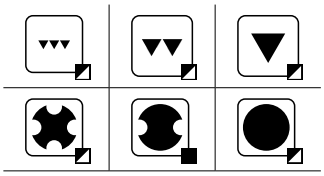
Side and Face Disk Milling Cutter

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. Body treated for longer tool life.



KAPR	90°
CW	4.0 - 14.0 mm





h_m	0.07 - 0.09 mm
h_m	0.07 - 0.09 mm

	Product	DC (mm)	OAL (mm)	DCB (mm)	DHUB (mm)	CDX (mm)	CW (mm)	x 1	GAMF (°)	GAMP (°)			max.		lbs				MID
	80F8N-S90SN11N4	80	–	27	42	16	4.00	–	2.5	-0.5	8	–	12300	–	.46	GI151	DI011	–	6758320
	80F8N-S90SN11N5	80	–	27	42	16	5.00	–	2.5	-0.5	8	–	12300	–	.49	GI152	DI019	–	6758321
	80F8N-S90SN12N6	80	–	27	42	16	6.00	–	2.5	-0.5	8	–	8400	–	.55	GI153	DI012	–	6758372
	80F8N-S90SN12N8	80	–	27	42	16	8.00	–	2.5	-0.5	8	–	8400	–	.55	GI157	DI013	–	6758450
	100G10N-S90SN12N6	100	–	32	48	24	6.00	–	2.5	-0.5	10	–	7500	–	.96	GI153	DI012	–	6758373
	100G10N-S90SN12N8	100	–	32	48	24	8.00	–	2.5	-0.5	10	–	7500	–	.93	GI157	DI013	–	6758374
	100G10N-S90SN12N10	100	–	32	48	24	10.00	–	2.5	-0.5	10	–	7500	–	1.01	GI154	DI014	–	6758375
	100G10N-S90SN12N12	100	–	32	48	24	12.00	–	2.5	-0.5	10	–	7500	–	1.46	GI158	DI015	–	6758451
	125H12N-S90SN12N6	125	–	40	58	31	6.00	–	2.5	-0.5	12	–	6700	–	1.37	GI153	DI012	–	6758376
	125H12N-S90SN12N8	125	–	40	58	31	8.00	–	2.5	-0.5	12	–	6700	–	1.60	GI157	DI013	–	6758377
ISO 6462 DIN 8030	**125H12N-S90SN12N10**	125	–	40	58	31	10.00	–	2.5	-0.5	12	–	6700	–	1.46	GI154	DI014	–	6758378
	125H12N-S90SN12N12	125	–	40	58	31	12.00	–	2.5	-0.5	12	–	6700	–	1.68	GI158	DI015	–	6758452
	160H16N-S90SN12N6	160	–	40	58	43	6.00	–	2.5	-0.5	16	–	5900	–	1.90	GI153	DI012	–	6758379
	160H16N-S90SN12N8	160	–	40	58	43	8.00	–	2.5	-0.5	16	–	5900	–	2.43	GI157	DI013	–	6758380
	160H16N-S90SN12N10	160	–	40	58	43	10.00	–	2.5	-0.5	16	–	5900	–	2.51	GI154	DI014	–	6758381
	160H16N-S90SN12N12	160	–	40	58	43	12.00	–	2.5	-0.5	16	–	5900	–	2.87	GI158	DI015	–	6758382
	160H15N-S90SN12N14	160	–	40	58	43	14.00	–	2.5	-0.5	15	–	5900	–	3.09	GI158	DI015	–	6758383
	200J18N-S90SN12N6	200	–	50	72	62	6.00	–	2.5	-0.5	18	–	5300	–	3.09	GI153	DI012	–	6758453
	200J18N-S90SN12N8	200	–	50	72	62	8.00	–	2.5	-0.5	18	–	5300	–	3.92	GI157	DI013	–	6758454
	200J18N-S90SN12N10	200	–	50	72	62	10.00	–	2.5	-0.5	18	–	5300	–	4.17	GI154	DI014	–	6758455
	200J18N-S90SN12N12	200	–	50	72	62	12.00	–	2.5	-0.5	18	–	5300	–	4.92	GI158	DI015	–	6758456
	200J18N-S90SN12N14	200	–	50	72	62	14.00	–	2.5	-0.5	18	–	5300	–	5.89	GI158	DI015	–	6758457
ISO 6462 DIN 8030	**63A03R-S90SN11N4**	63	40	16	34	10.5	4.00	3	2.5	-0.5	6	–	13900	–	.81	GI151	DI021	–	6758322

	Product	DC (mm)	OAL (mm)	DCB (mm)	DHUB (mm)	CDX (mm)	CW (mm)		GAMF (°)	GAMP (°)			max.		lbs				MID
ISO 6462 DIN 8030	**63A03R-S90SN11N5**	63	40	16	34	10.5	5.00	3	2.5	-0.5	6	–	13900	–	.79	GI152	DI021	–	6758323
	63A03R-S90SN12N6	63	40	16	34	10.5	6.00	3	2.5	-0.5	6	–	9500	–	.82	GI153	DI022	–	6758324
	80A04R-S90SN11N5	80	40	22	40	17.5	5.00	4	2.5	-0.5	8	–	12300	–	1.06	GI152	DI023	–	6758325
	80A04R-S90SN12N6	80	40	22	40	17.5	6.00	4	2.5	-0.5	8	–	8400	–	1.10	GI153	DI024	–	6758326
	100A05R-S90SN12N6	100	50	27	48	23.5	6.00	5	2.5	-0.5	10	–	7500	–	1.90	GI153	DI025	–	6758327
	125B06R-S90SN12N6	125	50	40	56	24	6.00	6	2.5	-0.5	12	–	6700	–	2.65	GI153	DI012	AC003	6758328
	160B08R-S90SN12N10	160	50	40	70	41	10.00	8	2.5	-0.5	16	–	5900	–	4.03	GI154	DI014	–	6758329

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

IS90SN

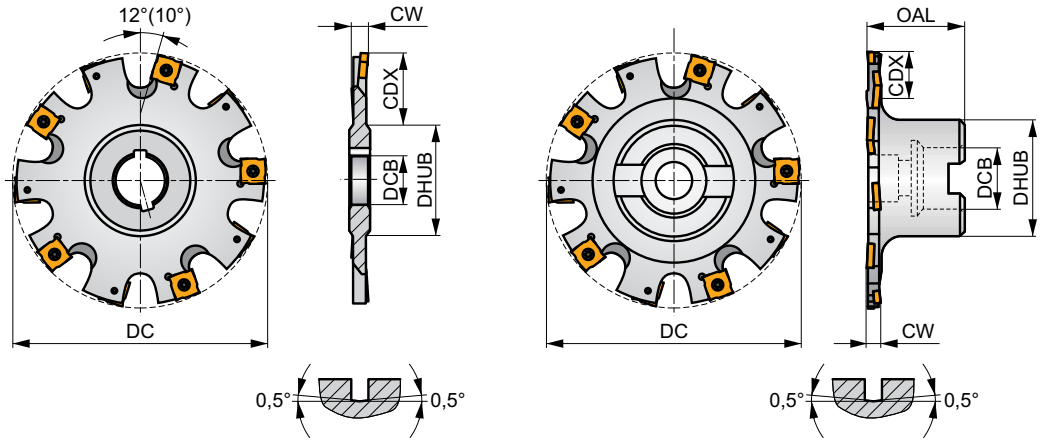
P M K

PRAMET

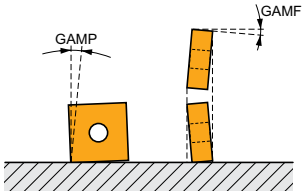
S

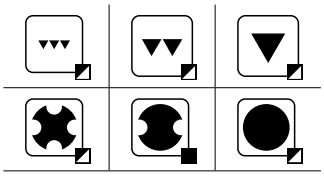
Side and Face Disk Milling Cutter

90° side and face cutter utilizing SNHQ 11, 12 inserts with CDX (slotting depth) of .413 up to 2.441 inches. Suitable for shoulder, slot, rear side and face milling. Available in arbor or stub arbor style. Body treated for longer tool life.



KAPR	90°
CW	.156-.375 in





h_m	.0027-.0035 in
h_m	.0027-.0035 in

	Product	DC (inch)	OAL (inch)	DCB (inch)	DHUB (inch)	CDX (inch)	CW (inch)	ix1	GAMF (°)	GAMP (°)			max.		lbs			MID
ISO 6462 DIN 8030	**300F04N-IS90SN12N4**	3.000	–	1.000	1.480	.630	.250	–	2.5	-0.5	8	–	8400	–	.44	GI153	DI012	6789673
	300F04N-IS90SN12N5	3.000	–	1.000	1.480	.630	.313	–	2.5	-0.5	8	–	8400	–	.66	GI157	DI013	6789674
	400G05N-IS90SN12N4	4.000	–	1.250	1.750	.945	.250	–	2.5	-0.5	10	–	7500	–	.66	GI153	DI012	6789676
	500H06N-IS90SN12N5	5.000	–	1.250	2.000	1.220	.313	–	2.5	0.5	12	–	6700	–	1.32	GI157	DI013	6789680
	600H08N-IS90SN12N4	6.000	–	1.250	2.000	1.693	.250	–	2.5	0.5	16	–	5900	–	2.21	GI153	DI012	6789682
ISO 6462 DIN 8030	**250A03R-IS90SN12N4**	2.500	1.575	.750	1.319	.413	.250	3	2.5	0.5	6	–	9500	–	1.10	GI153	DI042	6789669
	300A04R-IS90SN11N3	3.000	1.575	.750	1.575	.610	.187	4	2.5	0.5	8	–	12300	–	1.08	GI152	DI043	6789670
	300A04R-IS90SN12N4	3.000	1.575	.750	1.575	.610	.250	4	2.5	0.5	8	–	8400	–	1.32	GI153	DI044	6789671
	400A05R-IS90SN12N4	4.000	1.969	1.000	1.890	.945	.250	5	2.5	0.5	10	–	7500	–	1.54	GI153	DI045	6789675
	600B08R-IS90SN12N6	6.000	1.969	1.500	2.756	1.457	.375	8	2.5	0.5	16	–	5900	–	4.63	GI154	DI014	6789681

GI152	SNHQ 1103..
GI153	SNHQ 1203..
GI154	SNHQ 1205..
GI157	SNHQ 1204..

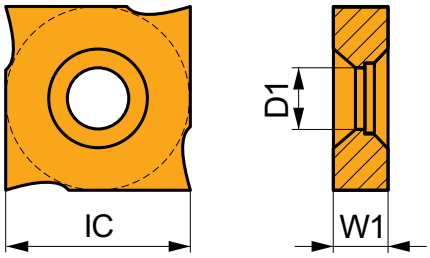
		Nm					
DI012	US 70	5.0	M 4	.197	D-T07/T15	FG-15	–

		Nm					
DI013	US 71	5.0	M 4	.276	D-T07/T15	FG-15	–
DI014	US 72	5.0	M 4	.354	D-T07/T15	FG-15	–
DI042	US 70	5.0	M 4	.197	D-T07/T15	FG-15	HS 037100
DI043	US 3505-T09P	3.0	M 3.5	.197	D-T07P/T09P	FG-15	HS 037100
DI044	US 70	5.0	M 4	.197	D-T07/T15	FG-15	HS 037100
DI045	US 70	5.0	M 4	.197	D-T07/T15	FG-15	HS 050125

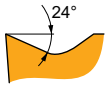
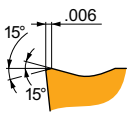
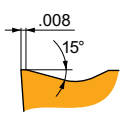
SNHQ AZ

PRAMET

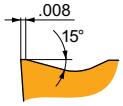
	IC	D1	W1
	(inch)	(inch)	(inch)
1102	.433	.169	.091
1103	.433	.169	.106
1203	.500	.197	.126
1204	.500	.197	.177
1205	.500	.197	.213
1207	.500	.197	.276
12T3	.500	.197	.134



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

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
																					
			U E																		
			EN geometry with special design for slot milling.																		
SNHQ 1203AZEN	**8215**	–	1362	.0039	–	804	.0039	–	1280	.0039	–	–	–	–	–	–	–	–	–	–	6753412
	M8340	–	1214	.0039	–	722	.0039	–	1148	.0039	–	–	–	–	–	–	–	–	–	–	6800876
SNHQ 1204AZEN	**8215**	–	1329	.0039	–	787	.0039	–	1247	.0039	–	–	–	–	–	–	–	–	–	–	6753413
	M8340	–	1165	.0039	–	689	.0039	–	1099	.0039	–	–	–	–	–	–	–	–	–	–	6800881
SNHQ 1205AZEN	**8215**	–	1280	.0039	–	755	.0039	–	1214	.0039	–	–	–	–	–	–	–	–	–	–	6753414
	M8340	–	1132	.0039	–	673	.0039	–	1066	.0039	–	–	–	–	–	–	–	–	–	–	6803509
SNHQ 1207AZEN	**8215**	–	1247	.0039	–	738	.0039	–	1181	.0039	–	–	–	–	–	–	–	–	–	–	6753415
	M8340	–	1099	.0039	–	656	.0039	–	1033	.0039	–	–	–	–	–	–	–	–	–	–	6803594
																					
			U T																		
			TN geometry with special design for slot milling.																		
SNHQ 1102AZTN	**M8330**	–	1198	.0079	–	705	.0071	–	1132	.0079	–	–	–	–	–	–	–	–	–	–	7451017
	M8340	–	1099	.0079	–	656	.0071	–	1033	.0079	–	–	–	–	–	–	–	–	–	–	6800871
SNHQ 1103AZTN	**M8330**	–	1132	.0079	–	673	.0071	–	1066	.0079	–	–	–	–	–	–	–	–	–	–	7451018
	M8340	–	1033	.0079	–	607	.0071	–	968	.0079	–	–	–	–	–	–	–	–	–	–	6800872
																					
			U T																		
			TN geometry with special design for slot milling.																		
SNHQ 1203AZTN	**M8330**	–	1132	.0079	–	673	.0071	–	1066	.0079	–	–	–	–	–	–	–	–	–	–	7451019
	M8340	–	1033	.0079	–	607	.0071	–	968	.0079	–	–	–	–	–	–	–	–	–	–	6800877
SNHQ 1204AZTN	**M8330**	–	1099	.0079	–	656	.0079	–	1033	.0079	–	–	–	–	–	–	–	–	–	–	7451020
	M8340	–	984	.0079	–	591	.0079	–	935	.0079	–	–	–	–	–	–	–	–	–	–	6800882

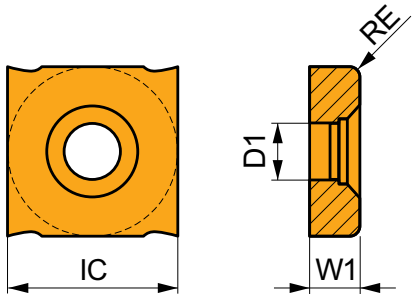
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
			U T																		
TN geometry with special design for slot milling.																					
SNHQ 1205AZTN	**M8330**	–	■ 1083	.0079	–	◪ 640	.0079	–	■ 1017	.0079	–	–	–	–	–	–	–	–	–	–	7451021
	M8340	–	■ 968	.0079	–	◪ 574	.0079	–	◪ 919	.0079	–	–	–	–	–	–	–	–	–	–	6803590
SNHQ 1207AZTN	**M8330**	–	■ 1050	.0079	–	◪ 623	.0079	–	■ 984	.0079	–	–	–	–	–	–	–	–	–	–	7451022
	M8340	–	■ 951	.0079	–	◪ 558	.0079	–	◪ 902	.0079	–	–	–	–	–	–	–	–	–	–	6803595
SNHQ 12T3AZTN	**M8340**	–	■ 984	.0079	–	◪ 591	.0071	–	◪ 935	.0079	–	–	–	–	–	–	–	–	–	–	6835853

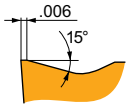
SNHQ TRL

PRAMET

	IC (inch)	D1 (inch)	L (inch)	W1 (inch)
1203	.500	.197	.500	.126
1204	.500	.197	.500	.177
1205	.500	.197	.500	.213
1207	.500	.197	.500	.276

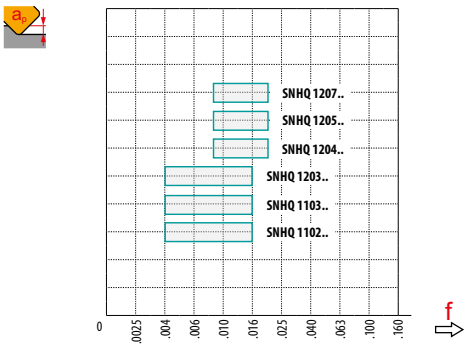


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

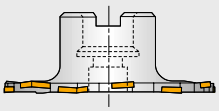
Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
			U T																		
TRL geometry with special design for slot milling.																					
SNHQ 120305TRL	**M8340**	.020	■ 755	.0079	–	◪ 443	.0071	–	◪ 705	.0079	–	–	–	–	–	–	–	–	–	–	6800873
SNHQ 120310TRL	**M8340**	.039	■ 935	.0079	–	◪ 558	.0071	–	◪ 886	.0079	–	–	–	–	–	–	–	–	–	–	6800874
SNHQ 120315TRL	**M8340**	.059	■ 984	.0079	–	◪ 591	.0071	–	◪ 935	.0079	–	–	–	–	–	–	–	–	–	–	6800875
SNHQ 120405TRL	**M8340**	.020	■ 722	.0079	–	◪ 427	.0079	–	◪ 673	.0079	–	–	–	–	–	–	–	–	–	–	6800878
SNHQ 120415TRL	**M8340**	.059	■ 951	.0079	–	◪ 558	.0079	–	◪ 902	.0079	–	–	–	–	–	–	–	–	–	–	6800880
SNHQ 120505TRL	**M8340**	.020	■ 705	.0079	–	◪ 410	.0079	–	◪ 656	.0079	–	–	–	–	–	–	–	–	–	–	6800883
SNHQ 120515TRL	**M8340**	.059	■ 919	.0079	–	◪ 541	.0079	–	◪ 869	.0079	–	–	–	–	–	–	–	–	–	–	6803508
SNHQ 120705TRL	**M8340**	.020	■ 689	.0079	–	◪ 410	.0079	–	◪ 640	.0079	–	–	–	–	–	–	–	–	–	–	6803591
SNHQ 120710TRL	**M8340**	.039	■ 869	.0079	–	◪ 509	.0079	–	◪ 820	.0079	–	–	–	–	–	–	–	–	–	–	6803592

a_e / DC	.05	.10	.15	.20	.25	.30	.40	.50	.60	.70	.75	.80	.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

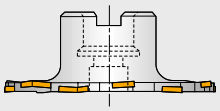
	SNHQ AZEN	SNHQ AZTN	SNHQ 12TRL
RE (mm)	–	–	.020 – .059
BS (inch)	–	–	–

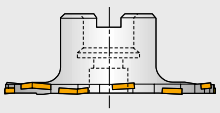


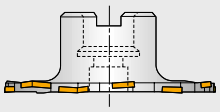
(inch)

	DC		CDX	a_{emax}
	**3.000**	4	.630	.630
	4.000	5	.945	.945
	5.000	6	1.220	1.220
	6.000	5	1.693	1.693
	8.000	9	2.441	2.441
	**2.500**	3	.413	2.480
	3.000	4	.689	3.150
	4.000	5	.925	3.937
	5.000	6	.945	4.921
	6.000	8	1.614	6.299

(inch)

	a_e	.197		.394		.591		.787		.984	
	DC	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹
	**3.000**	.011	.014	.008	.010	.007	.008	–	–	–	–
	4.000	.013	.016	.009	.011	.007	.009	.006	.008	–	–
	5.000	.014	.018	.010	.013	.008	.011	.007	.009	.006	.008
	6.000	.016	.020	.011	.014	.009	.012	.008	.010	.007	.009
	8.000	.017	.022	.013	.016	.010	.013	.009	.011	.008	.010
	**2.500**	.010	.013	.007	.009	.006	.007	.005	.007	.005	.006
	3.000	.011	.014	.008	.010	.007	.008	.006	.007	.005	.007
	4.000	.013	.016	.009	.011	.007	.009	.006	.008	.006	.007
	5.000	.014	.018	.010	.013	.008	.011	.007	.009	.006	.008
	6.000	.016	.020	.011	.014	.009	.012	.008	.010	.007	.009

	a_e	1.260		1.575		1.969		2.480		3.150	
	DC	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹
	**3.000**	–	–	–	–	–	–	–	–	–	–
	4.000	–	–	–	–	–	–	–	–	–	–
	5.000	–	–	–	–	–	–	–	–	–	–
	6.000	.006	.008	.006	.007	–	–	–	–	–	–
	8.000	.007	.009	.006	.008	.006	.007	–	–	–	–
	**2.500**	.004	.006	.004	.005	.004	.005	.004	.004	–	–
	3.000	.005	.006	.004	.006	.004	.005	.004	.005	.004	.004
	4.000	.005	.007	.005	.006	.004	.006	.004	.005	.004	.005
	5.000	.006	.007	.005	.007	.005	.006	.004	.006	.004	.005
	6.000	.006	.008	.006	.007	.005	.007	.005	.006	.004	.006

	a_e	3.937		4.921		6.299	
	DC	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹
	**3.000**	–	–	–	–	–	–
	4.000	–	–	–	–	–	–
	5.000	–	–	–	–	–	–
	6.000	–	–	–	–	–	–
	8.000	–	–	–	–	–	–
	**2.500**	–	–	–	–	–	–
	3.000	–	–	–	–	–	–
	4.000	.004	.004	–	–	–	–
	5.000	.004	.005	.004	.004	–	–
	6.000	.004	.005	.004	.005	.004	.004

SSD09

P M K S H

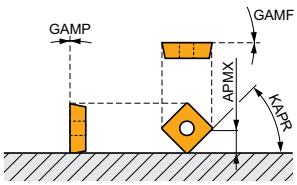
PRAMET

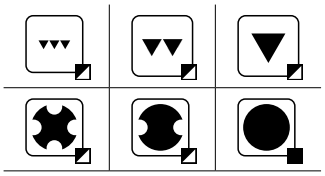
S

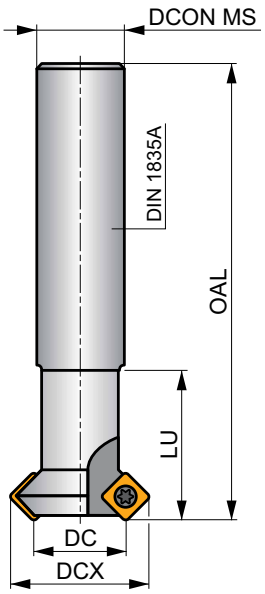
45° Chamfer Milling Cutter for Square Insert SD.. 09

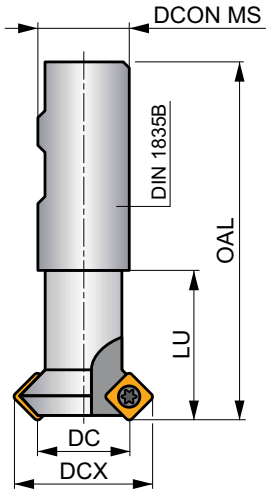
A 45° chamfer milling cutter utilising single-sided SD.. 09 inserts with APMX of 4.5 mm. Suitable for top and bottom side chamfering. Available in cylindrical, Weldon and morse taper style and outside. Body treated for longer tool life.

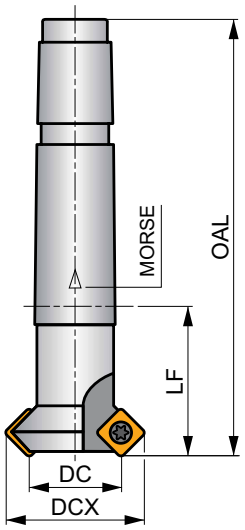
KAPR	45°
APMX	4.5 mm











h_m 0.095 - 0.15 mm

	Product	DC (mm)	DCX (mm)	OAL (mm)	DCON MS (mm)	LU (mm)	LF (mm)	CZC MS	GAMF (°)	GAMP (°)			max.		lbs			MID
DIN 1835A	**16N2R027A16-SSD09**	16	28	200	16	27	–	–	0	0	2	–	32200	–	.75	GI129	C0070	6757771
	25N3R042A25-SSD09	25	37	200	25	42	–	–	0	0	3	–	25800	–	1.71	GI129	CH011	6757772
DIN 1835B	**10N1R027B16-SSD09-A**	10	22	75	16	27	–	–	0	0	1	–	40700	–	.29	GI129	C0070	6757762
	16N2R027B16-SSD09-A	16	28	75	16	27	–	–	0	0	2	–	32200	–	.30	GI129	C0070	6757763
	25N3R042B25-SSD09-A	25	37	98	25	42	–	–	0	0	3	–	25800	–	.81	GI129	CH011	6757764
DIN 228A	**16N2R030E02-SSD09-A**	16	28	94	–	–	30	2	0	0	2	–	32200	–	.33	GI129	C0070	6757798
	25N3R043E03-SSD09-A	25	37	124	–	–	43	3	0	0	3	–	25800	–	.84	GI129	CH011	6757829

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

ISSD09

P M K S H

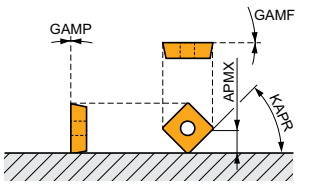
PRAMET

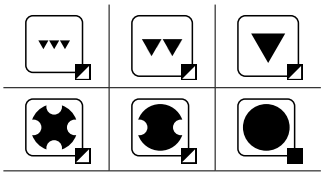
S

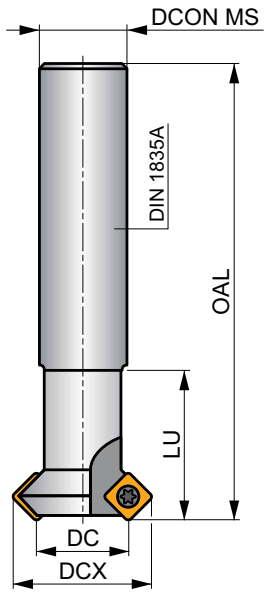
45° Chamfer Milling Cutter for Square Insert SD.. 09

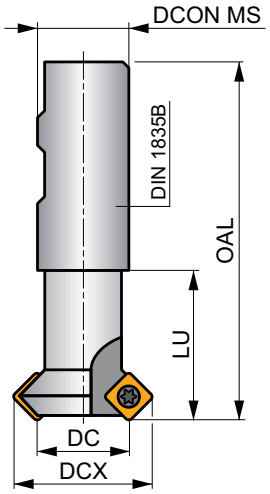
A 45° chamfer milling cutter utilizing single-sided SD.. 09 inserts with APMX of .177 inches. Suitable for top and bottom side chamfering. Available in cylindrical and Weldon style and. Body treated for longer tool life.

KAPR	45°
APMX	.177 in









h_m .0037-.0059 in

	Product	DC (inch)	DCX (inch)	OAL (inch)	DCON MS (inch)	LU (inch)	GAMF (°)	GAMP (°)			max.		lbs			MID
DIN 1835A	**062N2R106C062-ISSD09**	.625	1.097	7.874	.625	1.063	0	0	2	–	32200	–	.88	GI129	C0070	6789707
	100N3R128C100-ISSD09	1.000	1.472	7.874	1.000	1.280	0	0	3	–	25800	–	1.54	GI129	CH011	6789709
DIN 1835B	**037N1R106W062-ISSD09**	.375	.847	2.969	.625	1.063	0	0	1	–	40700	–	.26	GI129	C0070	6789706
	062N2R106W062-ISSD09	.625	1.097	2.969	.625	1.063	0	0	2	–	32200	–	.44	GI129	C0070	6789708
	100N3R128W100-ISSD09	1.000	1.472	3.780	1.000	1.280	0	0	3	–	25800	–	.88	GI129	CH011	6789710

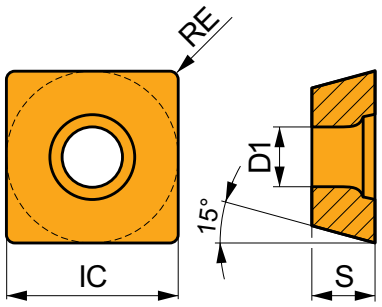
GI129	SDEW 0903..	SDEX 0903..

		Nm			
C0070	US 3507-T15	3.0	M 3.5	.276	Flag T15
CH011	US 3509-T15	3.0	M 3.5	.354	Flag T15

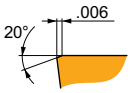
SDEW 09

PRAMET

	IC (inch)	D1 (inch)	S (inch)
0903	.375	.173	.125



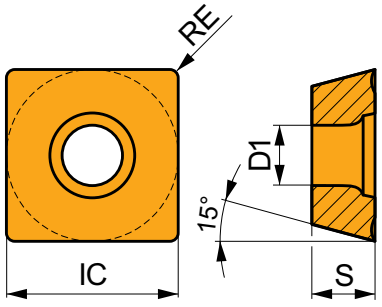
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
			U E																		
			EN geometry with zero rake angle design for 45° chamfer milling.																		
SDEW 090308EN	**M8330**	.031	771	.0039	.177	–	–	–	722	.0039	.177	–	–	–	–	–	–	148	.0035	.028	7447971
	M8340	.031	689	.0039	.177	–	–	–	640	.0039	.177	–	–	–	–	–	–	–	–	–	6800848
			S																		
			SN geometry with zero rake angle design for 45° chamfer milling.																		
SDEW 090308SN	**M8330**	.031	705	.0059	.177	–	–	–	656	.0059	.177	–	–	–	–	–	–	131	.0043	.028	7447972
	M8340	.031	640	.0059	.177	–	–	–	607	.0059	.177	–	–	–	–	–	–	–	–	–	6800849

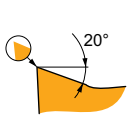
SDEX 09

PRAMET

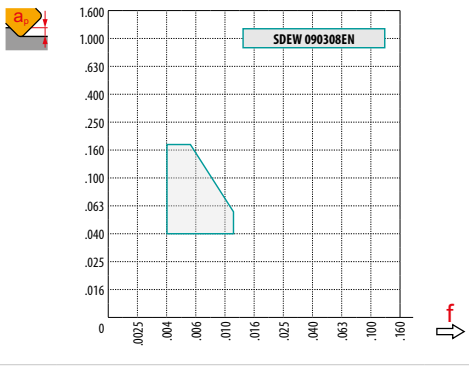
	IC (inch)	D1 (inch)	S (inch)
0903	.375	.173	.125

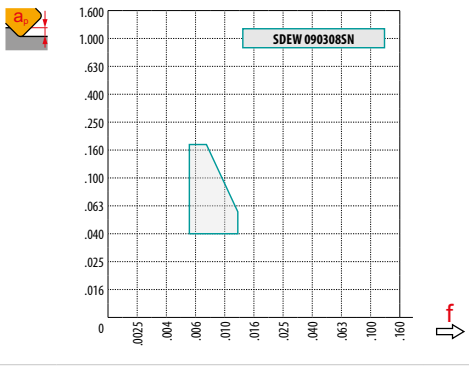


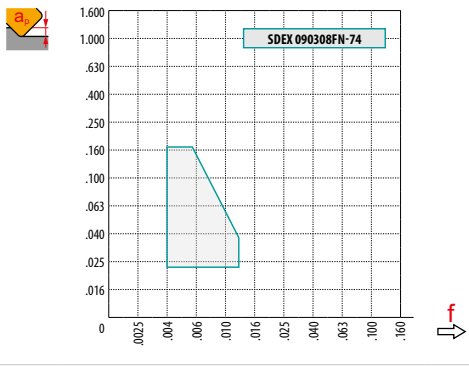
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
			F																		
			Geometry 74 with positive design for 45° chamfer milling.																		
SDEX 090308FN-74	**M8330**	.031	1001	.0047	.177	591	.0043	.177	935	.0047	.177	–	–	–	246	.0043	.142	–	–	–	7447973

	SDEW 09 EN	SDEW 09 SN	SDEX 09-74
RE (mm)	.8	.8	.8
BS (inch)	–	–	–







(inch)

DC	DCX	X.V	f_{min}	f_{max}
.394	.866	.043	.008	.012
.630	1.102	.046	.010	.013
.984	1.457	.049	.013	.015

(inch)

a_e / DC	.10			.15			.20			.25			.30			.35			.40			.020 – .039		
	f																							
45°	.017	.021	.026	.014	.017	.022	.012	.015	.019	.011	.013	.017	.010	.012	.015	.009	.011	.014	.008	.011	.013	.007	.009	.012
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

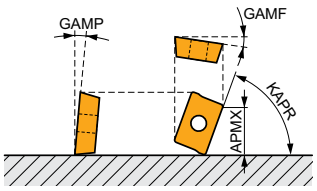
PRAMET

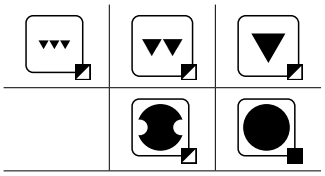
S

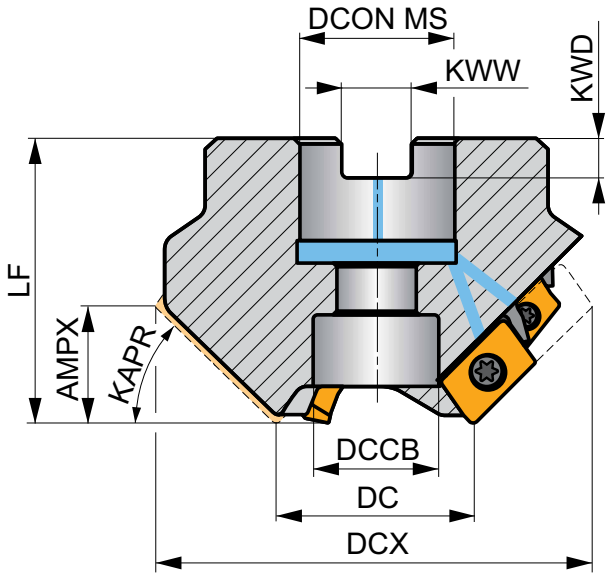
Long Edge Chamfer Milling Cutter for XPHT 16 insert with Internal Coolant

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 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 mm

	Product	DC (mm)	DCX (mm)	LF (mm)	DCON MS (mm)	DCCB (mm)	KAPR (°)	KWW (mm)	KWD (mm)	APMX (mm)	GAMF (°)	GAMP (°)	NOF			max.		lbs			MID
	35T03R-S15XP1607-C	35	90.6	50	27	22	15	12.4	7	7.00	-6	-1	3	6	–	15200	✓	2.90	GI208	CH050	6760360
	35T03R-S25XP1612-C	35	87.3	50	27	22	25	12.4	7	12.00	-6	0	3	6	–	15200	✓	2.54	GI208	CH050	6760347
	35T03R-S30XP1614-C	35	85.1	50	27	22	30	12.4	7	14.00	-6	0	3	6	–	15200	✓	2.45	GI208	CH050	6760355
	35T03R-S35XP1616-C	35	82.4	50	27	22	35	12.4	7	16.00	-6	0	3	6	–	15200	✓	2.30	GI208	CH050	6760354
	35T03R-S40XP1618-C	35	79.4	50	27	22	40	12.4	7	18.00	-6	1	3	6	–	15200	✓	2.11	GI208	CH050	6760362
	35T03R-S45XP1620-C	35	76.1	50	27	22	45	12.4	7	20.00	-6	2	3	6	–	15200	✓	1.97	GI208	CH050	6760353
	35T03R-S50XP1622-C	35	72.4	50	27	22	50	12.4	7	22.00	-6	2	3	6	–	15200	✓	1.82	GI208	CH050	6760361
	35T03R-S55XP1623-C	35	68.4	50	27	22	55	12.4	7	23.00	-6	2	3	6	–	15200	✓	1.59	GI208	CH050	6760363
ISO 6462 DIN 8030	**35T03R-S60XP1625-C**	35	64.2	50	27	22	60	12.4	7	25.00	-5	4	3	6	–	15200	✓	1.38	GI208	CH050	6760364
	45T03R-S75XP1628-C	45	60.1	50	27	22	75	12.4	7	28.00	-5	5	3	6	–	13400	✓	1.43	GI208	CH050	6760359
	45T04R-S25XP1612-C	45	97.3	50	27	22	25	12.4	7	12.00	-6	0	4	8	✓	13400	✓	2.73	GI208	CH050	6760352
	45T04R-S30XP1614-C	45	95.1	50	27	22	30	12.4	7	14.00	-6	0	4	8	✓	13400	✓	2.67	GI208	CH050	6760351
	45T04R-S35XP1616-C	45	92.4	50	27	22	35	12.4	7	16.00	-6	2	4	8	✓	13400	✓	2.87	GI208	CH050	6760350
	45T04R-S40XP1618-C	45	89.5	50	27	22	40	12.4	7	18.00	-6	2	4	8	✓	13400	✓	2.38	GI208	CH050	6760349
	45T04R-S45XP1620-C	45	86.1	50	27	22	45	12.4	7	20.00	-6	2	4	8	✓	13400	✓	2.28	GI208	CH050	6760348
	45T04R-S50XP1622-C	45	82.4	50	27	22	50	12.4	7	22.00	-6	2	4	8	✓	13400	✓	2.12	GI208	CH050	6760357
	45T04R-S55XP1623-C	45	78.4	50	27	22	55	12.4	7	23.00	-6	2	4	8	✓	13400	✓	1.95	GI208	CH050	6760356
	45T04R-S60XP1625-C	45	74.2	50	27	22	60	12.4	7	25.00	-5	4	4	8	✓	13400	✓	1.72	GI208	CH050	6760358

GI208	XPHT 1604..

							
CH050	US 3509-T15	3.0	M 3.5	9	D-T07/T15	FG-15	HS 1230C

J(T)-ISXP16

P M K N

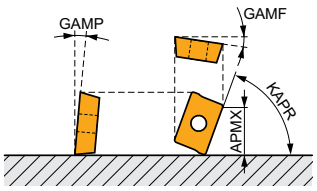
PRAMET

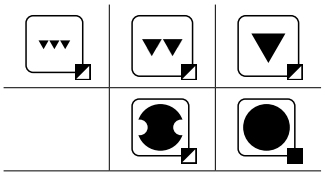
S

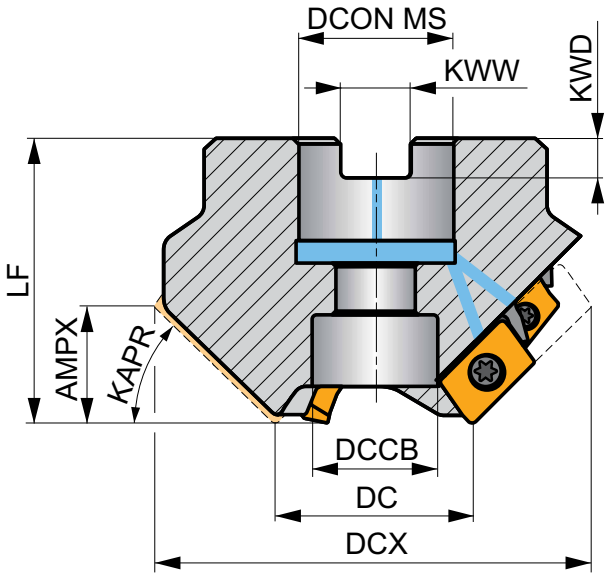
Long Edge Chamfer Milling Cutter for XPHT 16 insert with Internal Coolant

Chamfer milling cutter utilizing single-sided XPHT 16 inserts with APMX from .551 up to .984 inches. Internal coolant. Suitable for top chamfering. Available in arbor style in range of 30°, 45° and 60° chamfer angle. Body treated for longer tool life.

KAPR	30° - 60°
APMX	.276-1.102 in







h_m .0019-.0043 in

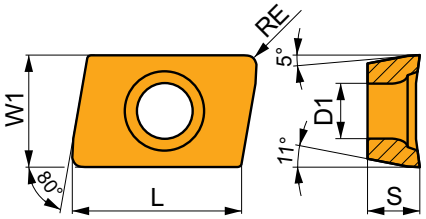
	Product	DC (inch)	DCX (inch)	LF (inch)	DCON MS (inch)	DCCB (inch)	KAPR (°)	KWW (inch)	KWD (inch)	APMX (inch)	GAMF (°)	GAMP (°)	NOF			max.		lbs			MID
	150T03R-IS60XP16-C	1.500	2.642	1.969	1.000	.827	60	.382	.224	.984	-5	4	3	–	–	15200	✓	1.17	GI208	ICH050	6790027
	150T03R-IS45XP16-C	1.500	3.035	1.969	1.000	.827	45	.382	.224	.787	-6	2	3	–	–	15200	✓	1.70	GI208	ICH050	6790026
ISO 6462 DIN 8030	**150T03R-IS30XP16-C**	1.500	3.350	1.969	1.000	.827	30	.382	.224	.551	-6	0	3	–	–	15200	✓	2.14	GI208	ICH050	6790025
	200T04R-IS60XP16-C	2.000	3.102	1.969	1.000	.827	60	.382	.224	.984	-5	4	4	–	✓	13400	✓	1.50	GI208	ICH050	6790070
	200T04R-IS45XP16-C	2.000	3.575	1.969	1.000	.827	45	.382	.224	.787	-6	2	4	–	✓	13400	✓	1.98	GI208	ICH050	6790029
	200T04R-IS30XP16-C	2.000	3.850	1.969	1.000	.827	30	.382	.224	.551	-6	0	4	–	✓	13400	✓	2.38	GI208	ICH050	6790028

GI208	XPHT 1604..

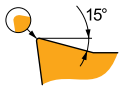
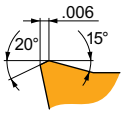
ICH050	US 3509-T15	3.0 Nm	M 3.5	.354	D-T07/T15	FG-15	HS 050125

XPHT 16

	W1	D1	L	S
	(inch)	(inch)	(inch)	(inch)
1604	.375	.173	.625	.187

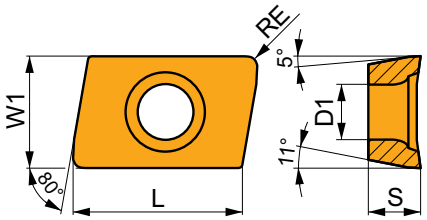


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

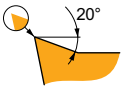
Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
			U E																		
E geometry with highly positive design for chamfer milling.																					
XPHT 160412E	**8215**	.047	738	.0039	.591	443	.0035	.591	689	.0039	.591	–	–	–	–	–	–	–	–	–	6753426
	M6330	.047	623	.0039	.591	443	.0035	.591	–	–	–	–	–	–	–	–	–	–	–	–	7451137
	M8330	.047	722	.0039	.591	427	.0035	.591	673	.0039	.591	–	–	–	–	–	–	–	–	–	7451127
	M8340	.047	640	.0039	.591	377	.0035	.591	607	.0039	.591	–	–	–	–	–	–	–	–	–	6835887
			1 U S																		
S geometry with highly positive design for chamfer milling.																					
XPHT 160412S	**8215**	.047	689	.0047	.591	410	.0043	.591	640	.0047	.591	–	–	–	–	–	–	–	–	–	6753427
	M8330	.047	689	.0047	.591	410	.0043	.591	640	.0047	.591	–	–	–	–	–	–	–	–	–	7451128
	M8340	.047	623	.0047	.591	361	.0043	.591	591	.0047	.591	–	–	–	–	–	–	–	–	–	6803614
	M9325	.047	886	.0047	.591	–	–	–	837	.0047	.591	–	–	–	–	–	–	–	–	–	6754583
	M9340	.047	804	.0047	.591	476	.0043	.591	–	–	–	–	–	–	–	–	–	–	–	–	6754608

XPHT 16-FA

	W1	D1	L	S
	(inch)	(inch)	(inch)	(inch)
1604	.375	.173	.625	.187



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

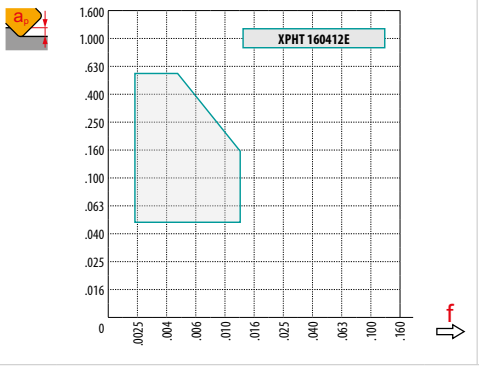
Product		RE	P			M			K			N			S			H			MID
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	
		(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	
																					

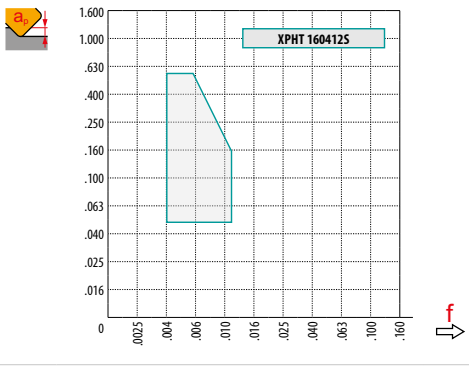
F

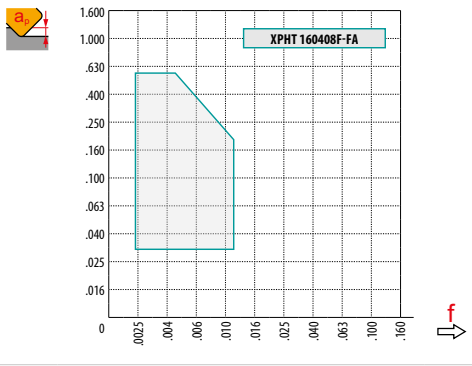
FA geometry with highly positive design for chamfer milling.

XPHT 160408F-FA	**HF7**	.031	–	–	–	–	–	–	–	–	–	837	.0047	.591	–	–	–	–	–	–	6752075

	XPHT 16 E	XPHT 16 S	XPHT 16-FA
RE	1.2	1.2	.8
BS	–	–	–







(inch)

a_e / DC	.10			.15			.20			.25			.30			.35			.40			.50 – 1.00		
	f																							
15°	.024	.039	.053	.020	.031	.043	.017	.027	.037	.015	.024	.033	.014	.022	.031	.013	.020	.028	.012	.019	.026	.011	.017	.024
25°	.015	.024	.032	.012	.019	.026	.010	.017	.023	.009	.015	.020	.009	.014	.019	.008	.013	.017	.007	.012	.016	.007	.011	.015
30°	.013	.020	.028	.010	.016	.022	.009	.014	.019	.008	.013	.017	.007	.011	.016	.007	.011	.015	.006	.010	.014	.006	.009	.012
35°	.011	.017	.024	.009	.014	.020	.007	.012	.017	.007	.011	.015	.006	.010	.014	.006	.009	.013	.006	.009	.012	.005	.008	.011
40°	.010	.015	.021	.008	.013	.017	.007	.011	.015	.006	.010	.013	.006	.009	.012	.005	.008	.011	.005	.008	.011	.004	.007	.009
45°	.009	.014	.019	.007	.011	.016	.006	.010	.014	.006	.009	.012	.005	.008	.011	.005	.007	.010	.004	.007	.010	.004	.006	.009
50°	.008	.013	.018	.007	.011	.015	.006	.009	.013	.005	.008	.011	.005	.007	.010	.004	.007	.009	.004	.007	.009	.004	.006	.008
55°	.007	.012	.017	.006	.010	.014	.006	.009	.012	.005	.008	.011	.004	.007	.010	.004	.007	.009	.004	.006	.008	.004	.006	.007
60°	.007	.011	.016	.006	.009	.013	.005	.008	.011	.005	.007	.010	.004	.007	.009	.004	.006	.008	.004	.006	.008	.003	.005	.007
75°	.006	.010	.014	.005	.008	.011	.005	.007	.010	.004	.007	.009	.004	.006	.008	.004	.006	.007	.003	.005	.007	.003	.005	.006
X.V	1.35			1.27			1.22			1.19			1.16			1.13			1.11			1.00		

(inch)

	a_p	DC	DCX	X.V	f_{min}	f_{max}
15°	.276	1.378	3.567	.046	.017	.028
25°	.472	1.378	3.437	.046	.008	.013
30°	.551	1.378	3.350	.046	.006	.010
35°	.630	1.378	3.244	.046	.005	.008
40°	.709	1.378	3.126	.046	.004	.006
45°	.787	1.378	2.992	.046	.004	.006
50°	.866	1.378	2.850	.046	.003	.005
55°	.906	1.378	2.693	.047	.003	.004
60°	.984	1.378	2.524	.047	.003	.004

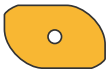
	a_p	DC	DCX	X.V	f_{min}	f_{max}
25°	.472	1.772	3.831	.046	.009	.013
30°	.551	1.772	3.740	.046	.007	.010
35°	.630	1.772	3.638	.047	.006	.008
40°	.709	1.772	3.524	.047	.005	.007
45°	.787	1.772	3.386	.047	.004	.006
50°	.866	1.772	3.244	.048	.004	.005
55°	.906	1.772	3.087	.048	.004	.004
60°	.984	1.772	2.917	.048	.003	.004
75°	1.102	1.772	2.366	.052	.003	.003

Cutters with setting angle 15°can be used as HFC. Use feeds from chamfers table.

OTHER MILLING INSERTS

ADKT 15

634

ADKX 15

634

APMT 16

635

CNM

636

ODMT 05

636

OFKR 07

637

RDET

637

RDHX 20

638

RPET 12

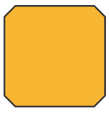
638

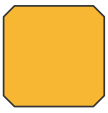
RPEW 12

639

RPEX

639

SEEN

640

SEER

641

SEET 12

642

SEET 12-FA

642

SEET 12-PM

643

SEEW 12

643

SNHF

644

SNHN

645

SNUN

645

SPGN

646

SPGN 25 DZ

646

SPKN

647

SPKR

648

SPUN

648

TPCN 16

649

TPKN

650

TPKR

651

TPUN

651

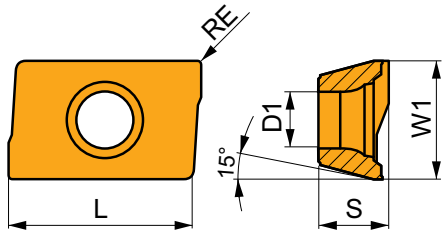
XDHW

652

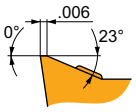
ADKT 15

PRAMET

	W1	D1	L	S
	(inch)	(inch)	(inch)	(inch)
1505	.375	.173	.612	.220



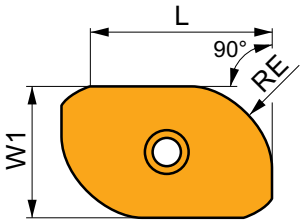
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE	P			M			K			N			S			H			MID
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	
		(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	
																					
			M geometry with highly positive design for medium machining.																		
ADKT 1505PDER-M	**M8330**	.031	■ 771	.0079	.197	■ 459	.0071	.197	■ 722	.0079	.197	–	–	–	◩ 180	.0063	.157	–	–	–	7447792
	M8340	.031	■ 689	.0079	.197	■ 410	.0071	.197	◩ 640	.0079	.197	–	–	–	◩ 164	.0063	.157	–	–	–	6800798
	M9325	.031	■ 951	.0079	.197	–	–	–	■ 902	.0079	.197	–	–	–	–	–	–	–	–	–	6754542

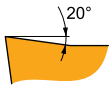
ADKX 15

PRAMET

	W1	L	S
	(inch)	(inch)	(inch)
15T3	.375	.480	.156

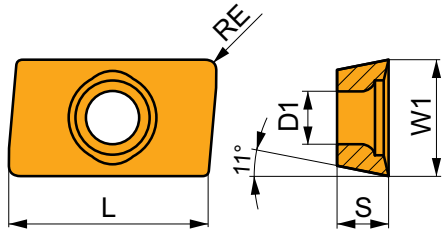


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

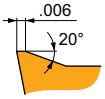
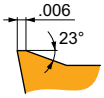
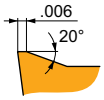
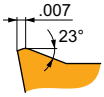
Product		RE	P			M			K			N			S			H			MID
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	
		(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	
																					
			F geometry with very sharp positive design for light to medium machining.																		
ADKX 15T308ER-F	**M8345**	.031	◩ 558	.0039	.394	■ 328	.0035	.394	–	–	–	–	–	–	◩ 131	.0028	.315	–	–	–	6756225

APMT 16

	W1	D1	L	S
	(inch)	(inch)	(inch)	(inch)
1604	.378	.177	.669	.187



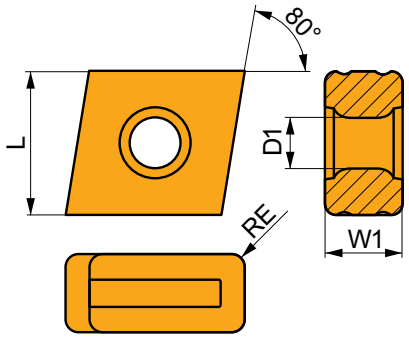
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
																					
			F geometry with positive design for light machining.																		
APMT 1604PDER-F	**M8330**	–	■ 1050	.0039	.079	■ 623	.0035	.079	◪ 984	.0039	.079	–	–	–	◪ 262	.0028	.063	–	–	–	7447833
																					
			FM geometry with positive design for light to medium machining.																		
APMT 1604PDER-FM	**M8330**	–	■ 935	.0063	.079	■ 558	.0055	.079	◪ 886	.0063	.079	–	–	–	◪ 230	.0051	.063	–	–	–	7447834
	M8345	–	■ 673	.0063	.079	■ 394	.0055	.079	–	–	–	–	–	–	◪ 164	.0051	.063	–	–	–	7156043
																					
			ER-R geometry with positive design for rough machining.																		
APMT 1604PDER-R	**M8330**	–	■ 837	.0063	.197	–	–	–	■ 787	.0063	.197	–	–	–	–	–	–	–	–	–	7447835
																					
			SR-R geometry with positive design for rough machining.																		
APMT 1604PDSR-R	**M8330**	–	■ 837	.0071	.197	–	–	–	■ 787	.0071	.197	–	–	–	–	–	–	–	–	–	7447836

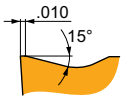
CNM

PRAMET

	D1	L	S
	(inch)	(inch)	(inch)
63	.217	.591	.315



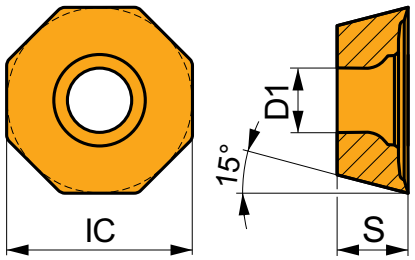
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
		(inch)																			
																					
			Universal geometry.																		
CNM 563	**M8330**	.047	■ 607	.0118	.394	–	–	–	■ 574	.0118	.394	–	–	–	–	–	–	–	–	–	7447876
	M8340	.047	■ 722	.0118	.394	–	–	–	◪ 673	.0118	.394	–	–	–	–	–	–	–	–	–	6800828

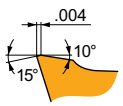
ODMT 05

PRAMET

	IC	D1	S
	(inch)	(inch)	(inch)
0504	.500	.173	.187



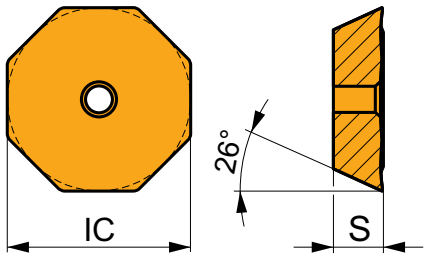
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
		(inch)																			
																					
			Slightly positive design for medium machining.																		
ODMT 0504ZZN	**M8340**	–	■ 640	.0098	.059	–	–	–	◪ 607	.0098	.059	–	–	–	–	–	–	–	–	–	6800836

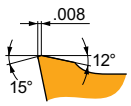
OFKR 07

PRAMET

	IC	D1	S
	(inch)	(inch)	(inch)
0704	.703	.104	.180



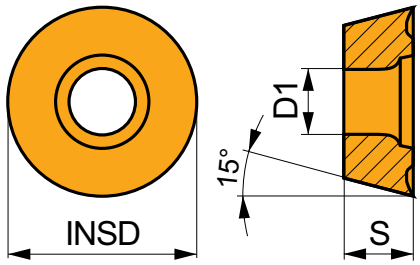
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE	P			M			K			N			S			H			MID
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	
		(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	
																					
			M geometry with positive design for light to medium machining.																		
OFKR 0704SN-M	**M8330**	–	■ 771	.0098	.059	■ 459	.0091	.059	◪ 722	.0098	.059	–	–	–	–	–	–	–	–	–	7447924
	M8340	–	■ 705	.0098	.059	■ 410	.0091	.059	◪ 656	.0098	.059	–	–	–	–	–	–	–	–	–	6800838

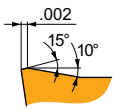
RDET

PRAMET

	INSD	D1	S
	(inch)	(inch)	(inch)
0802	.315	.134	.094
1003	.394	.173	.125
12T3	.472	.173	.156



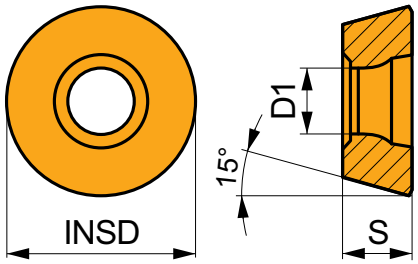
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE	P			M			K			N			S			H			MID
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	
		(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	
																					
			Positive design for finish machining.																		
RDET 0802MOSN	**M8340**	–	■ 1099	.0059	.020	◪ 656	.0055	.020	◪ 1033	.0059	.020	–	–	–	◪ 262	.0047	.016	–	–	–	6800839
RDET 1003MOSN	**M8340**	–	■ 1017	.0059	.039	◪ 607	.0055	.039	◪ 951	.0059	.039	–	–	–	◪ 246	.0047	.031	–	–	–	6800840
RDET 12T3MOSN	**M8340**	–	■ 919	.0079	.059	◪ 541	.0071	.059	◪ 869	.0079	.059	–	–	–	◪ 230	.0055	.047	–	–	–	6800842

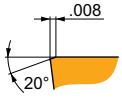
RDHX 20

PRAMET

	INSD (inch)	D1 (inch)	S (inch)
2006	.787	.205	.250



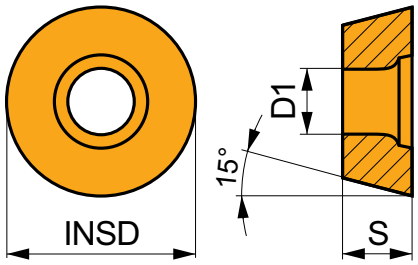
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
			  Zero rake angle design for finish machining.																	
RDHX 2006M0T	**M8310**	–	◪ 787	.0138	.118	–	–	–	■ 738	.0138	.118	–	–	–	–	–	–	■ 148	.0071	.051	6756284
	M8325	–	◪ 591	.0138	.118	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6756009

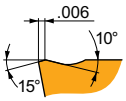
RPET 12

PRAMET

	INSD (inch)	D1 (inch)	S (inch)
1204	.472	.173	.187



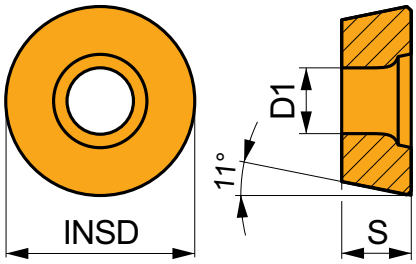
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
			  Positive design for finish machining.																	
RPET 1204M0SN	**8215**	–	■ 1066	.0079	.059	◪ 640	.0071	.059	◪ 1001	.0079	.059	–	–	–	◪ 262	.0055	.047	–	–	–	6753403
	M8330	–	■ 1050	.0079	.059	◪ 623	.0071	.059	◪ 984	.0079	.059	–	–	–	◪ 262	.0055	.047	–	–	–	7447964
	M8340	–	■ 968	.0079	.059	◪ 574	.0071	.059	◪ 919	.0079	.059	–	–	–	◪ 230	.0055	.047	–	–	–	6800845

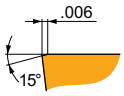
RPEW 12

PRAMET

	INSD (inch)	D1 (inch)	S (inch)
1204	.472	.173	.187



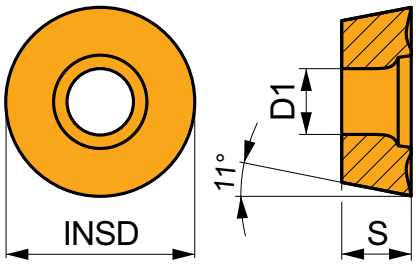
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
			HFC S																		
			Zero rake angle design for finish machining.																		
RPEW 1204M0SN	**M8330**	–	935	.0079	.059	–	–	–	886	.0079	.059	–	–	–	–	–	–	180	.0039	.031	7447966
	M8340	–	869	.0079	.059	–	–	–	820	.0079	.059	–	–	–	–	–	–	–	–	–	6835886

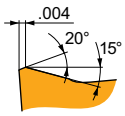
RPEX

PRAMET

	INSD (inch)	D1 (inch)	S (inch)
1204	.472	.173	.187



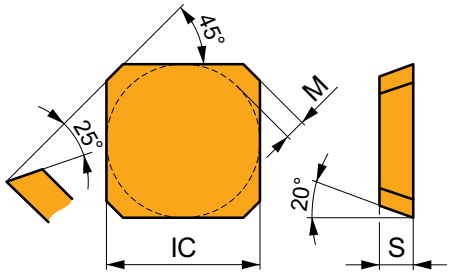
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
			HFC S																		
			Positive design for finish machining.																		
RPEX 1204M0SN-12	**M8340**	–	705	.0118	.059	410	.0106	.059	656	.0118	.059	–	–	–	164	.0083	.047	–	–	–	6800847

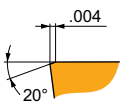
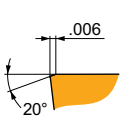
SEEN

PRAMET

	IC (inch)	M (inch)	S (inch)
1203	.500	.063	.125
1504	.625	.079	.187



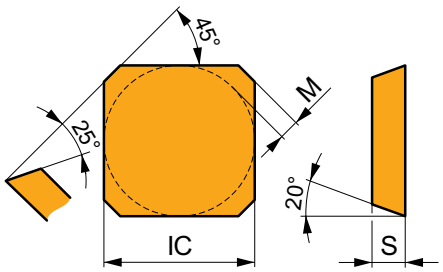
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
			U F																		
AFFN edge preperation, zero rake angle geometry for light to medium machining.																					
SEEN 1203AFFN	**M8330**	–	■ 886	.0059	.079	◪ 525	.0055	.079	◪ 837	.0059	.079	–	–	–	–	–	–	–	–	–	7450962
	M8340	–	■ 804	.0059	.079	◪ 476	.0055	.079	◪ 755	.0059	.079	–	–	–	–	–	–	–	–	–	6800853
			U S																		
AFSN edge preperation, zero rake angle geometry for medium to heavy machining.																					
SEEN 1203AFSN	**8215**	–	■ 837	.0079	.079	–	–	–	■ 787	.0079	.079	–	–	–	–	–	–	◪ 164	.0051	.039	6753406
	M8330	–	■ 837	.0079	.079	–	–	–	■ 787	.0079	.079	–	–	–	–	–	–	◪ 164	.0051	.039	7450963
	M8340	–	■ 755	.0079	.079	–	–	–	◪ 705	.0079	.079	–	–	–	–	–	–	–	–	–	6800854
	M9315	–	■ 1115	.0079	.079	–	–	–	■ 1050	.0079	.079	–	–	–	–	–	–	◪ 213	.0051	.039	6754611
	M9325	–	■ 1033	.0079	.079	–	–	–	■ 968	.0079	.079	–	–	–	–	–	–	◪ 197	.0051	.039	6754563
			U S																		
AFSN edge preperation, zero rake angle geometry for medium to heavy machining.																					
SEEN 1504AFSN	**M8330**	–	■ 787	.0079	.118	–	–	–	■ 738	.0079	.118	–	–	–	–	–	–	◪ 148	.0051	.051	7450966
	M8340	–	■ 738	.0079	.118	–	–	–	◪ 689	.0079	.118	–	–	–	–	–	–	–	–	–	6800857

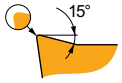
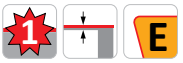
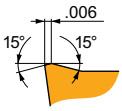
SEER

PRAMET

	IC	M	S
	(inch)	(inch)	(inch)
1203	.500	.063	.125
1204	.500	.063	.187
1504	.625	.079	.187



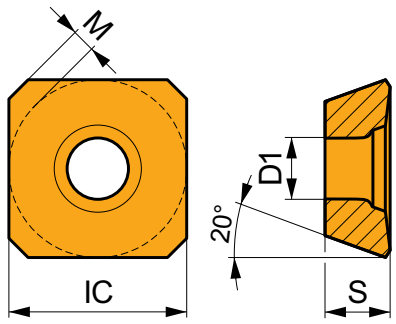
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
																					
			AFEN edge preperation, chipbreaker geometry for medium to heavy machining.																		
SEER 1203AFEN	**M8330**	–	■ 869	.0094	.098	■ 509	.0087	.098	◪ 820	.0094	.098	–	–	–	◪ 213	.0087	.079	–	–	–	7450967
	M8340	–	■ 804	.0094	.098	■ 476	.0087	.098	◪ 755	.0094	.098	–	–	–	◪ 197	.0087	.079	–	–	–	6941439
																					
			AFSN edge preperation, chipbreaker geometry for medium to heavy machining.																		
SEER 1203AFSN	**M8330**	–	■ 869	.0098	.098	◪ 509	.0091	.098	■ 820	.0098	.098	–	–	–	◪ 213	.0079	.079	–	–	–	7450968
	M8340	–	■ 787	.0098	.098	◪ 459	.0091	.098	◪ 738	.0098	.098	–	–	–	◪ 197	.0079	.079	–	–	–	6800858
SEER 1204AFSN	**M8330**	–	■ 869	.0098	.098	◪ 509	.0091	.098	■ 820	.0098	.098	–	–	–	◪ 213	.0079	.079	–	–	–	7451000
SEER 1504AFSN	**M8330**	–	■ 837	.0098	.138	◪ 492	.0091	.138	■ 787	.0098	.138	–	–	–	◪ 197	.0079	.110	–	–	–	7451002
	M8340	–	■ 755	.0098	.138	◪ 443	.0091	.138	◪ 705	.0098	.138	–	–	–	◪ 180	.0079	.110	–	–	–	6800860

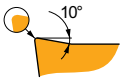
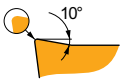
SEET 12

PRAMET

	IC	D1	M	S
	(inch)	(inch)	(inch)	(inch)
1204	.500	.217	.063	.187



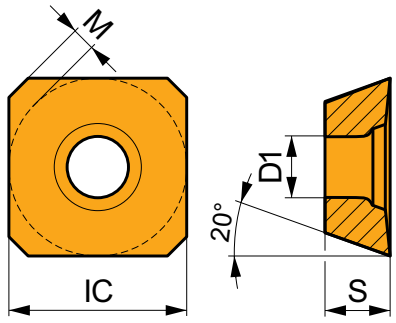
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
			E																		
AFEN edge preperation, positive all purpose geometry.																					
SEET 1204AFEN	**M8330**	–	■ 869	.0094	.098	■ 509	.0087	.098	◪ 820	.0094	.098	–	–	–	◪ 213	.0087	.079	–	–	–	7451004
			1	S																	
AFSN edge preperation, positive all purpose geometry.																					
SEET 1204AFSN	**8215**	–	■ 869	.0091	.098	◪ 509	.0083	.098	■ 820	.0091	.098	–	–	–	◪ 213	.0083	.079	–	–	–	6753407
	M8330	–	■ 869	.0094	.098	◪ 509	.0087	.098	■ 820	.0094	.098	–	–	–	◪ 213	.0087	.079	–	–	–	7451005
	M8340	–	■ 787	.0098	.098	◪ 459	.0091	.098	◪ 738	.0098	.098	–	–	–	◪ 197	.0091	.079	–	–	–	6800862
	M9325	–	■ 1115	.0079	.098	–	–	–	■ 1050	.0079	.098	–	–	–	–	–	–	–	–	–	6754567

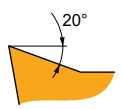
SEET 12-FA

PRAMET

	IC	D1	M	S
	(inch)	(inch)	(inch)	(inch)
1204	.500	.217	.063	.187



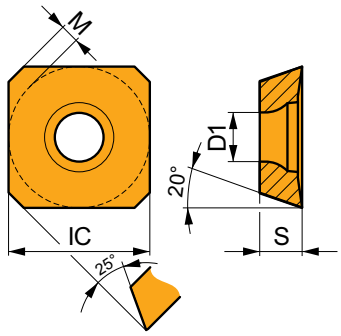
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
			F																		
FA geometry with highly positive design for fine-finish to medium machining.																					
SEET 1204AFFN-FA	**HF7**	–	–	–	–	–	–	–	–	–	–	■ 1083	.0071	.118	–	–	–	–	–	–	6751838

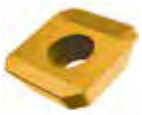
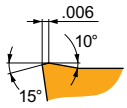
SEET 12-PM

PRAMET

	IC	D1	M	S
	(inch)	(inch)	(inch)	(inch)
12T3	.528	.165	.059	.156



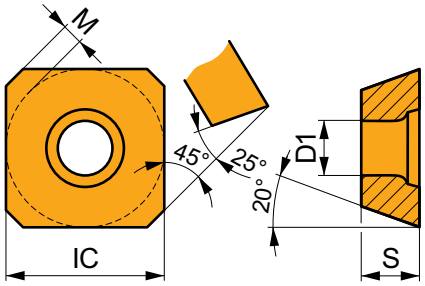
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
		(inch)																			
																					
			PM geometry with positive all purpose design.																		
SEET 12T3M-PM	**M8330**	–	■ 869	.0098	.079	◪ 509	.0091	.079	■ 820	.0098	.079	–	–	–	◪ 213	.0079	.063	–	–	–	7451006
	M8340	–	■ 804	.0098	.079	◪ 476	.0091	.079	◪ 755	.0098	.079	–	–	–	◪ 197	.0079	.063	–	–	–	6800863
	M9325	–	■ 1066	.0098	.079	–	–	–	■ 1001	.0098	.079	–	–	–	–	–	–	–	–	–	6754568
	M9340	–	■ 951	.0098	.079	◪ 558	.0091	.079	–	–	–	–	–	–	◪ 230	.0079	.063	–	–	–	6754599

SEEW 12

PRAMET

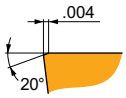
	IC	D1	M	S
	(inch)	(inch)	(inch)	(inch)
1204	.500	.217	.063	.187



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

Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
		(inch)																			
																					
			AFEN edge preperation with zero rake angle geometry for light to medium machining.																		
SEEW 1204AFEN	**M8330**	–	◪ 869	.0059	.098	–	–	–	◪ 820	.0059	.098	–	–	–	–	–	–	–	–	–	7451007
	M8340	–	◪ 787	.0059	.098	–	–	–	◪ 738	.0059	.098	–	–	–	–	–	–	–	–	–	6800864

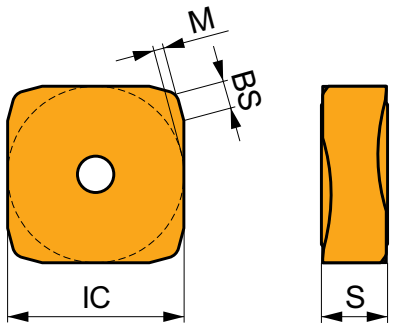
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
																					
AFSN edge preperation with zero rake angle geometry for light to medium machining.																					
SEEW 1204AFSN	**8215**	–	◪ 820	.0079	.098	–	–	–	■ 771	.0079	.098	–	–	–	–	–	–	◪ 164	.0051	.039	6753408
	M8330	–	◪ 804	.0079	.098	–	–	–	■ 755	.0079	.098	–	–	–	–	–	–	◪ 148	.0051	.039	7451008
	M8340	–	◪ 738	.0079	.098	–	–	–	◪ 689	.0079	.098	–	–	–	–	–	–	–	–	–	6800865
	M9325	–	◪ 1001	.0079	.098	–	–	–	■ 935	.0079	.098	–	–	–	–	–	–	◪ 197	.0051	.039	6754569

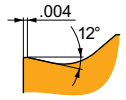
SNHF

PRAMET

	BS (inch)	IC (inch)	M (inch)	S (inch)
1204	.079	.500	.020	.187
1504	.055	.625	.043	.187



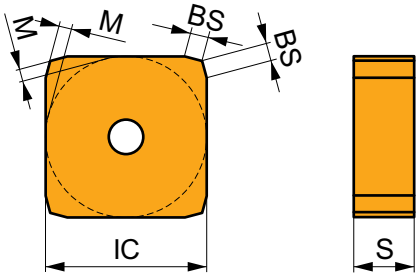
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
																					
M geometry with positive design for light to medium machining.																					
SNHF 1204ENSR-M	**M8330**	–	■ 771	.0059	.157	–	–	–	◪ 722	.0059	.157	–	–	–	–	–	–	–	–	–	7451013
SNHF 1504ENSR-M	**M8340**	–	■ 722	.0059	.236	–	–	–	◪ 673	.0059	.236	–	–	–	–	–	–	–	–	–	6800868

SNHN

PRAMET

	BS	IC	M	S
	(inch)	(inch)	(inch)	(inch)
1204	.055	.500	.037	.187
1504	.055	.625	.051	.187



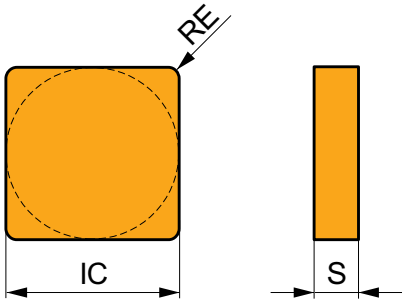
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
		(inch)																			
			U E																		
			Standard negative milling geometry for 75° face milling.																		
SNHN 1204ENEN	**8215**	–	902	.0059	.236	–	–	–	853	.0059	.236	–	–	–	–	–	–	180	.0043	.039	6753410
	M8330	–	886	.0059	.236	–	–	–	837	.0059	.236	–	–	–	–	–	–	164	.0043	.039	7451015
	M8340	–	804	.0059	.236	–	–	–	755	.0059	.236	–	–	–	–	–	–	–	–	–	6800869
	S26	–	361	.0059	.236	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6751637
SNHN 1504ENEN	**8215**	–	853	.0059	.354	–	–	–	804	.0059	.354	–	–	–	–	–	–	164	.0043	.051	6753411
	M8330	–	853	.0059	.354	–	–	–	804	.0059	.354	–	–	–	–	–	–	164	.0043	.051	7451016
	M8340	–	771	.0059	.354	–	–	–	722	.0059	.354	–	–	–	–	–	–	–	–	–	6800870
	S26	–	344	.0059	.354	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6751639

SNUN

PRAMET

	IC	S
	(inch)	(inch)
1204	.500	.187
1504	.625	.187



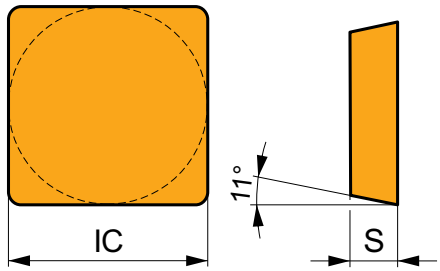
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
		(inch)																			
			E																		
			Negative geometry milling insert, can also be used for turning.																		
SNUN 120408	**M8330**	.031	853	.0051	.177	–	–	–	804	.0051	.177	–	–	–	–	–	–	164	.0039	.039	7451026
SNUN 120412	**M8330**	.047	902	.0051	.177	–	–	–	853	.0051	.177	–	–	–	–	–	–	180	.0039	.039	7451027
SNUN 150412	**M8330**	.047	837	.0059	.236	–	–	–	787	.0059	.236	–	–	–	–	–	–	164	.0047	.051	7451028

SPGN

PRAMET

	IC	S
	(inch)	(inch)
0903	.375	.125
1203	.500	.125
1504	.625	.187



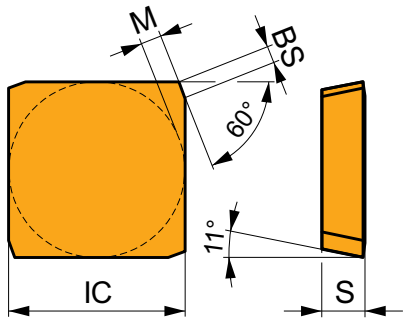
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
		(inch)																			
			E																		
			Zero rake angle design milling insert, can also be used for turning.																		
SPGN 090308	**M8340**	.031	■ 738	.0059	.079	–	–	–	◪ 689	.0059	.079	–	–	–	–	–	–	–	–	–	6800895
SPGN 120308	**M8330**	.031	■ 755	.0059	.157	–	–	–	■ 705	.0059	.157	–	–	–	–	–	–	–	–	–	7451040
SPGN 150412	**M8330**	.047	■ 738	.0079	.197	–	–	–	◪ 689	.0079	.197	–	–	–	–	–	–	–	–	–	7451042

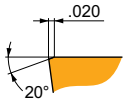
SPGN 25 DZ

PRAMET

	IC	M	S	BS
	(inch)	(inch)	(inch)	(inch)
2506	.984	.137	.250	.945

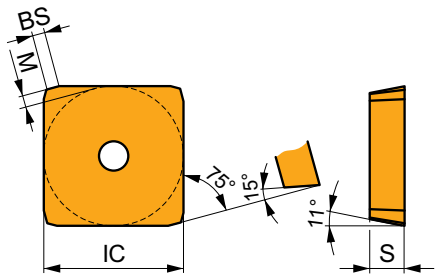


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

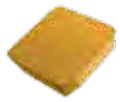
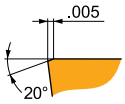
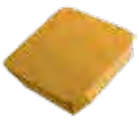
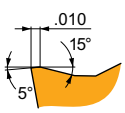
Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
		(inch)																			
																					
			DZ geometry with zero rake angle design for heavy machining.																		
SPGN 2506DZSR	**M8326**	–	◪ 361	.0197	.472	–	–	–	◪ 328	.0197	.472	–	–	–	–	–	–	–	–	–	6801312
	M8346	–	■ 295	.0197	.472	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6801313

SPKN

	IC	M	S	BS
	(inch)	(inch)	(inch)	(inch)
1203	.500	.035	.125	.63
1504	.625	.05	.187	.669



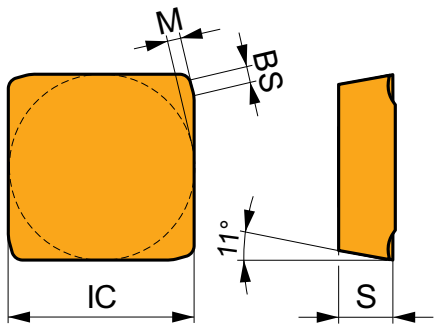
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
			E																		
			EDER edge preperation with zero rake angle geometry for light to medium machining.																		
SPKN 1203EDER	**M8330**	–	837	.0059	.157	–	–	–	787	.0059	.157	–	–	–	–	–	–	–	–	–	7451043
	M8340	–	755	.0059	.157	–	–	–	705	.0059	.157	–	–	–	–	–	–	–	–	–	6803598
SPKN 1504EDER	**M8330**	–	771	.0079	.197	–	–	–	722	.0079	.197	–	–	–	–	–	–	–	–	–	7451047
	M8340	–	689	.0079	.197	–	–	–	640	.0079	.197	–	–	–	–	–	–	–	–	–	6803600
			U	S																	
			EDSR edge preperation with zero rake angle geometry for medium machining.																		
SPKN 1203EDSL	**M8330**	–	787	.0079	.157	–	–	–	738	.0079	.157	–	–	–	–	–	–	148	.0051	.039	7451044
SPKN 1203EDSR	**M8330**	–	787	.0079	.157	–	–	–	738	.0079	.157	–	–	–	–	–	–	148	.0051	.039	7451045
	M8340	–	705	.0079	.157	–	–	–	656	.0079	.157	–	–	–	–	–	–	–	–	–	6803599
	M9325	–	951	.0079	.157	–	–	–	902	.0079	.157	–	–	–	–	–	–	180	.0051	.039	6754578
	S26	–	312	.0079	.157	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6751716
			U	S																	
			EDSR (right-hand cut) / EDSL (left-hand cut) edge preperation with zero rake angle geometry for medium machining.																		
SPKN 1504EDSR	**8215**	–	722	.0098	.197	–	–	–	673	.0098	.197	–	–	–	–	–	–	131	.0051	.051	6753421
	M8330	–	722	.0098	.197	–	–	–	673	.0098	.197	–	–	–	–	–	–	131	.0051	.051	7451048
	M8340	–	673	.0098	.197	–	–	–	623	.0098	.197	–	–	–	–	–	–	–	–	–	6803602
	M9315	–	935	.0098	.197	–	–	–	886	.0098	.197	–	–	–	–	–	–	180	.0051	.051	6754619
	M9325	–	886	.0098	.197	–	–	–	837	.0098	.197	–	–	–	–	–	–	164	.0051	.051	6754579
	S26	–	295	.0098	.197	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6751719

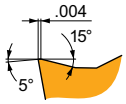
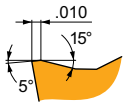
SPKR

PRAMET

	IC	L	M	S
	(inch)	(inch)	(inch)	(inch)
1203	.500	.500	.035	.125
1504	.625	.625	.048	.187



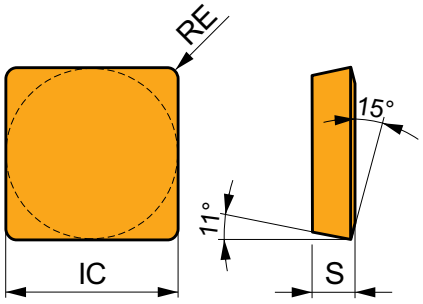
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
																					
			.004 15° 5°																		
			EDSR edge preperation, chipbreaker geometry for medium to heavy machining.																		
SPKR 1203EDSR	**M8330**	–	■ 869	.0079	.157	◪ 509	.0071	.157	■ 820	.0079	.157	–	–	–	–	–	–	–	–	–	7451049
	M8340	–	■ 787	.0079	.157	◪ 459	.0071	.157	◪ 738	.0079	.157	–	–	–	–	–	–	–	–	–	6803603
																					
			.010 15° 5°																		
			EDSR edge preperation, chipbreaker geometry for medium to heavy machining.																		
SPKR 1504EDSR	**M8330**	–	■ 804	.0098	.197	◪ 476	.0098	.197	■ 755	.0098	.197	–	–	–	–	–	–	–	–	–	7451050
	M8340	–	■ 738	.0098	.197	◪ 443	.0098	.197	◪ 689	.0098	.197	–	–	–	–	–	–	–	–	–	6803604

SPUN

PRAMET

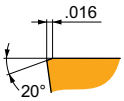
	IC	S
	(inch)	(inch)
1203	.500	.125
1504	.625	.187
1904	.750	.187
2506	1.000	.250



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

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
																					
			E																		
			Zero rake geometry milling insert, can also be used for turning.																		
SPUN 120304	**M8330**	.016	■ 640	.0059	.157	–	–	–	◪ 607	.0059	.157	–	–	–	–	–	–	–	–	–	7451051

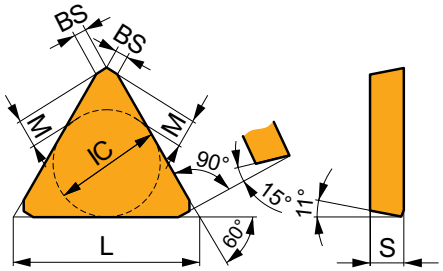
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
			E																		
			Zero rake geometry milling insert, can also be used for turning.																		
SPUN 120308	**M8330**	.031	755	.0059	.157	–	–	–	705	.0059	.157	–	–	–	–	–	–	–	–	–	7451052
	S26	.031	312	.0059	.157	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6751791
SPUN 120312	**M8330**	.047	804	.0059	.157	–	–	–	755	.0059	.157	–	–	–	–	–	–	–	–	–	7451053
			E																		
			Zero rake geometry milling insert, can also be used for turning.																		
SPUN 150412	**M8330**	.047	738	.0079	.197	–	–	–	689	.0079	.197	–	–	–	–	–	–	–	–	–	7451054
SPUN 190408	**M8330**	.031	689	.0079	.236	–	–	–	640	.0079	.236	–	–	–	–	–	–	–	–	–	7451055
SPUN 190412	**M8330**	.047	722	.0079	.236	–	–	–	673	.0079	.236	–	–	–	–	–	–	–	–	–	7451056
			1		S																
			Zero rake geometry milling insert, can also be used for turning.																		
SPUN 250616S	**M8326**	.063	377	.0157	.472	–	–	–	344	.0157	.472	–	–	–	–	–	–	–	–	–	6801314
SPUN 250620S	**M5326**	.079	476	.0157	.472	–	–	–	443	.0157	.472	–	–	–	–	–	–	–	–	–	6801301
	M8326	.079	394	.0157	.472	–	–	–	361	.0157	.472	–	–	–	–	–	–	–	–	–	6801316
	M8346	.079	328	.0157	.472	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6801317
	S26	.079	148	.0157	.472	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6751794

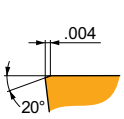
TPCN 16

PRAMET

	BS (inch)	IC (inch)	L (inch)	M (inch)	S (inch)
1603	.047	.375	.634	.096	.125

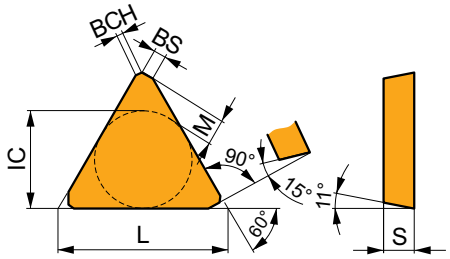


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

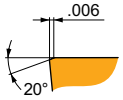
Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
			U		S																
			Special design for disc milling.																		
TPCN 1603PDSN	**M8330**	–	640	.0079	–	–	–	–	607	.0079	–	–	–	–	–	–	–	–	–	–	7451104

TPKN

	IC	L	M	S	BCH	BS
	(inch)	(inch)	(inch)	(inch)		(inch)
1603	.375	.650	.096	.125	.047	.051
2204	.500	.866	.140	.187	.047	.059



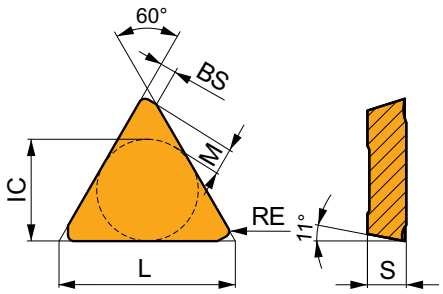
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE	P			M			K			N			S			H			MID
			vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	vc (ft/min)	f (in/tooth)	ap (inch)	
			E																		
PDER edge preperation, zero rake angle geometry for light to medium machining.																					
TPKN 1603PDER	**M8330**	–	640	.0059	.157	–	–	–	607	.0059	.157	–	–	–	–	–	–	–	–	–	7451105
	M8340	–	574	.0059	.157	–	–	–	541	.0059	.157	–	–	–	–	–	–	–	–	–	6803606
TPKN 2204PDER	**8215**	–	623	.0059	.217	–	–	–	591	.0059	.217	–	–	–	–	–	–	–	–	–	6753422
	M8330	–	623	.0059	.217	–	–	–	591	.0059	.217	–	–	–	–	–	–	–	–	–	7451107
	M8340	–	558	.0059	.217	–	–	–	525	.0059	.217	–	–	–	–	–	–	–	–	–	6803608
			U	S																	
PDSR edge preperation, zero rake angle geometry for medium machining.																					
TPKN 1603PDSR	**M8330**	–	607	.0079	.157	–	–	–	574	.0079	.157	–	–	–	–	–	–	115	.0051	.031	7451106
	M8340	–	541	.0079	.157	–	–	–	509	.0079	.157	–	–	–	–	–	–	–	–	–	6803607
	S26	–	246	.0079	.157	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6751622
TPKN 2204PDSR	**M8310**	–	640	.0079	.217	–	–	–	607	.0079	.217	–	–	–	–	–	–	115	.0051	.039	7178578
	M8330	–	574	.0079	.217	–	–	–	541	.0079	.217	–	–	–	–	–	–	115	.0051	.039	7451108
	M8340	–	525	.0079	.217	–	–	–	492	.0079	.217	–	–	–	–	–	–	–	–	–	6803609
	M9325	–	722	.0079	.217	–	–	–	673	.0079	.217	–	–	–	–	–	–	131	.0051	.039	6754581
	S26	–	246	.0079	.217	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6751623

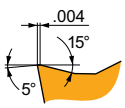
TPKR

PRAMET

	IC	L	M	S	BS
	(inch)	(inch)	(inch)	(inch)	(inch)
1603	.375	.650	.096	.125	.055
2204	.500	.866	.140	.187	.055



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

Product		RE	P			M			K			N			S			H			MID
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	
		(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	
			1 S																		

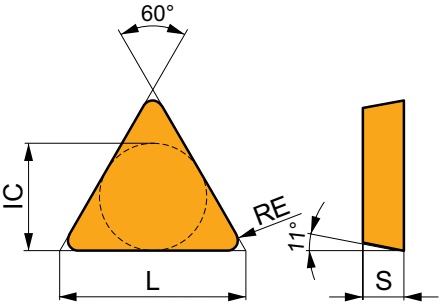
PDSR edge preperation, chipbreaker geometry for medium to heavy machining.

TPKR 1603PDSR	**M8330**	–	■	607	.0079	.157	◪	361	.0071	.157	■	574	.0079	.157	–	–	–	–	–	–	–	–	–	7451109
	M8340	–	■	541	.0079	.157	◪	312	.0071	.157	◪	509	.0079	.157	–	–	–	–	–	–	–	–	–	6803610
TPKR 2204PDSR	**M8330**	–	■	574	.0079	.217	◪	344	.0071	.217	■	541	.0079	.217	–	–	–	–	–	–	–	–	–	7451110
	M8340	–	■	525	.0079	.217	◪	312	.0071	.217	◪	492	.0079	.217	–	–	–	–	–	–	–	–	–	6803611
	M9325	–	■	722	.0079	.217		–	–	–	■	673	.0079	.217	–	–	–	–	–	–	–	–	–	6754582

TPUN

PRAMET

	IC	L	S
	(inch)	(inch)	(inch)
1103	.250	.433	.125
1603	.375	.650	.125
2204	.500	.866	.187



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

Product		RE	P			M			K			N			S			H			MID
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	
		(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	(ft/min)	(in/tooth)	(inch)	
			E																		

Zero rake geometry milling insert, can also be used for turning.

TPUN 110304	**M8330**	.016		–	–	–		–	–	–	■	492	.0039	.047	–	–	–	–	◪	98	.0039	.016	7451111
TPUN 160304	**8215**	.016	◪	509	.0059	.157		–	–	–	◪	476	.0059	.157	–	–	–	–		–	–	–	6753423
	H10	.016		–	–	–		–	–	–	◪	213	.0059	.157	–	–	–	–		–	–	–	6751783
	M8330	.016	◪	509	.0059	.157		–	–	–	◪	476	.0059	.157	–	–	–	–		–	–	–	7451113
	S26	.016	◪	213	.0059	.157		–	–	–		–	–	–	–	–	–	–		–	–	–	6751784

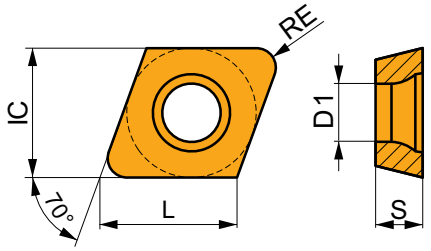
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
			E																		
			Zero rake geometry milling insert, can also be used for turning.																		
TPUN 160308	**8215**	.031	◪ 607	.0059	.157	–	–	–	◪ 574	.0059	.157	–	–	–	–	–	–	–	–	–	6753424
	M8330	.031	–	–	–	–	–	–	■ 509	.0071	.059	–	–	–	–	–	–	◪ 98	.0043	.024	7451114
TPUN 160312	**M8330**	.047	–	–	–	–	–	–	■ 509	.0079	.059	–	–	–	–	–	–	◪ 98	.0043	.031	7451115
TPUN 220408	**M8330**	.031	◪ 558	.0079	.197	–	–	–	◪ 525	.0079	.197	–	–	–	–	–	–	–	–	–	7451116
TPUN 220412	**M8330**	.047	–	–	–	–	–	–	■ 509	.0079	.079	–	–	–	–	–	–	◪ 98	.0043	.039	7451117

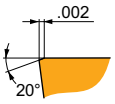
XDHW

PRAMET

	IC (inch)	D1 (inch)	L (inch)	S (inch)
0702	.256	.116	.272	.094
10T3	.394	.156	.417	.156

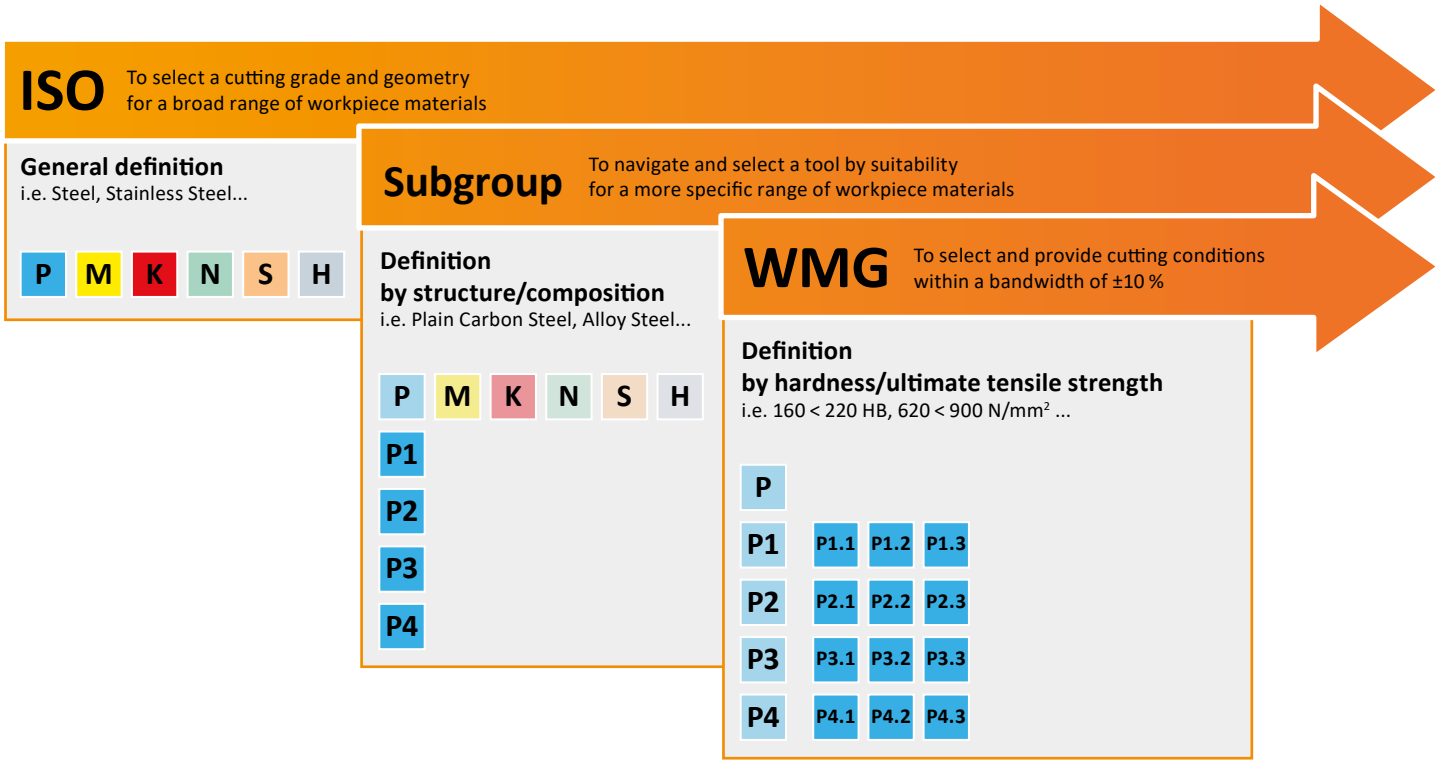


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our cutting conditions app for further options.

Product		RE (inch)	P vc (ft/min)	P f (in/tooth)	P ap (inch)	M vc (ft/min)	M f (in/tooth)	M ap (inch)	K vc (ft/min)	K f (in/tooth)	K ap (inch)	N vc (ft/min)	N f (in/tooth)	N ap (inch)	S vc (ft/min)	S f (in/tooth)	S ap (inch)	H vc (ft/min)	H f (in/tooth)	H ap (inch)	MID
			E																		
			EN geometry with zero rake angle design for slot milling.																		
XDHW 070210EN	**M8310**	.039	◪ 1017	.0039	.039	–	–	–	■ 951	.0039	.039	–	–	–	–	–	–	■ 197	.002	.039	6756267
			S																		
			SN geometry with zero rake angle design for slot milling.																		
XDHW 070210SN	**M8310**	.039	◪ 1017	.0039	.039	–	–	–	■ 951	.0039	.039	–	–	–	–	–	–	■ 197	.002	.039	6756268
	M8325	.039	◪ 755	.0039	.039	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6756012
XDHW 10T310SN	**M8310**	.039	◪ 902	.0059	.039	–	–	–	■ 853	.0059	.039	–	–	–	–	–	–	■ 180	.0031	.039	6756269
	M8325	.039	◪ 689	.0059	.039	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6756013

INDEXABLE MILLS – TECHNICAL INFORMATION

WORKPIECE MATERIAL GROUPS (WMG)



ABOUT DORMER PRAMET'S WORKPIECE MATERIAL CLASSIFICATION

Workpiece **M**aterial **G**roups (**WMG**) are used to support easy and reliable selection of the right cutting tool and starting values for machining conditions in particular applications.
Dormer Pramet classifies workpiece materials into six different colored 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, ...)
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 < 240 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 < 180 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, ...)
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, ...)
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, ...)
N	**Non-ferrous metals** (metals including alloys without an appreciable amount of iron)	**N1**	Wrought aluminum	**N1.1**	Pure aluminum and wrought aluminum 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 aluminum 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 aluminum 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 aluminum	**N2.1**	Cast aluminum 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 aluminum 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 aluminum 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, TecAlaryhmäh 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, ...)
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, ...)
H	**Hardened materials** (any engineering metal with a hardness > 45 HRC)	**H1**	Chilled cast iron	**H1.1**	Chilled cast iron with a hardness of < 440 HB	**1.52**	UNS **F45001,** EN-**GJS-1050-6,** DIN **5.3406,** SS **0512,** BS **Grade 2A**
		H2	Hardened cast iron	**H2.1**	Hardened cast iron with a hardness < 55 HRC	**0.90**	UNS **F45003,** EN-**GJS-1400-1,** DIN **5.3405,** SS **0457,** BS **Grade 3D**
				H2.2	Hardened cast iron with a hardness > 55 HRC	**0.77**	UNS **F45003,** EN **G-X260NiCr4-2,** DIN **0.9620,** SS **0466,** BS **Grade S**
		H3	Hardened steel < 55 HRC	**H3.1**	Hardened steel with a hardness of < 51 HRC	**1.00**	AISI **4135,** EN **34CrMo4,** DIN **1.7220,** SS **2234,** STN **415131,** BS **198,** UNE **F.1250,** GB **35CrMo,** AFNOR **35CD4,** GOST **АС38ХГМ,** UNI **35CrMo4KB**
				H3.2	Hardened steel with a hardness of 51 – 55 HRC	**0.82**	AISI **4135,** EN **34CrMo4,** DIN **1.7220,** SS **2234,** STN **415131,** BS **198,** UNE **F.1250,** GB **35CrMo,** AFNOR **35CD4,** GOST **АС38ХГМ,** UNI **35CrMo4KB**
		H4	Hardened steel > 55 HRC	**H4.1**	Hardened steel with a hardness of 55 – 59 HRC	**0.64**	UNS **T31501,** EN **100MnCrW4,** DIN **1.2510,** SS **2140,** STN **419413,** BS **B01,** UNE **F.5220,** GB **9CrWMn,** AFNOR **90MWCrV5,** GOST **9ХВГ,** UNI **95MNWCr5KU**
				H4.2	Hardened steel with a hardness of > 59 HRC	**0.54**	UNS **T31501,** EN **100MnCrW4,** DIN **1.2510,** SS **2140,** STN **419413,** BS **B01,** UNE **F.5220,** GB **9CrWMn,** AFNOR **90MWCrV5,** GOST **9ХВГ,** UNI **95MNWCr5KU**

Correction factors for specific type of 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

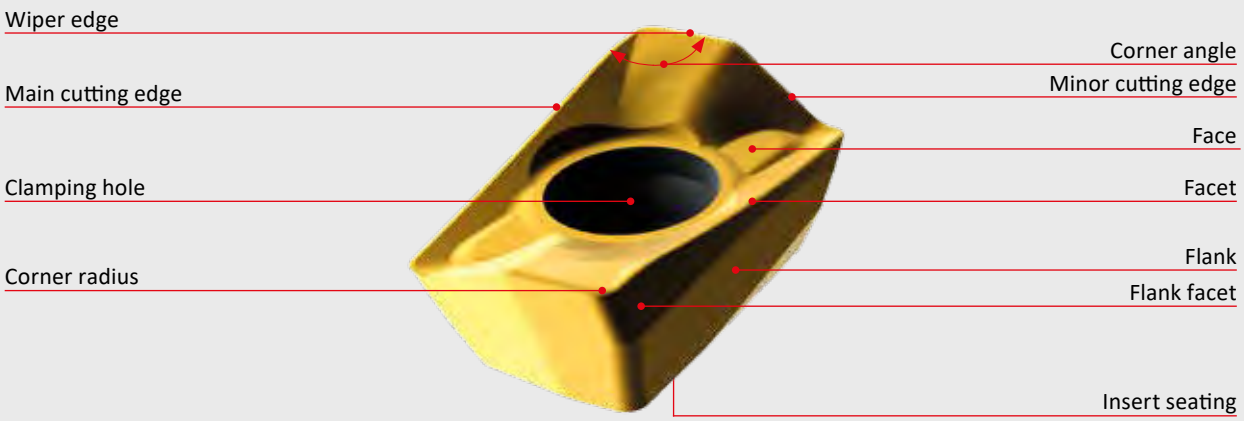
Resulting corrected cutting speed *vcc*

$vcc = v_c \times kvG \times C_{VcO} \times CvcT \times C_{VcA} \times C_{VcRCT} \times Cf_{zRCT}$

k_{vG} – coefficient of used material

v_c – starting speed from catalogue page

Parts of an Indexable Insert



Geometry of milling tool

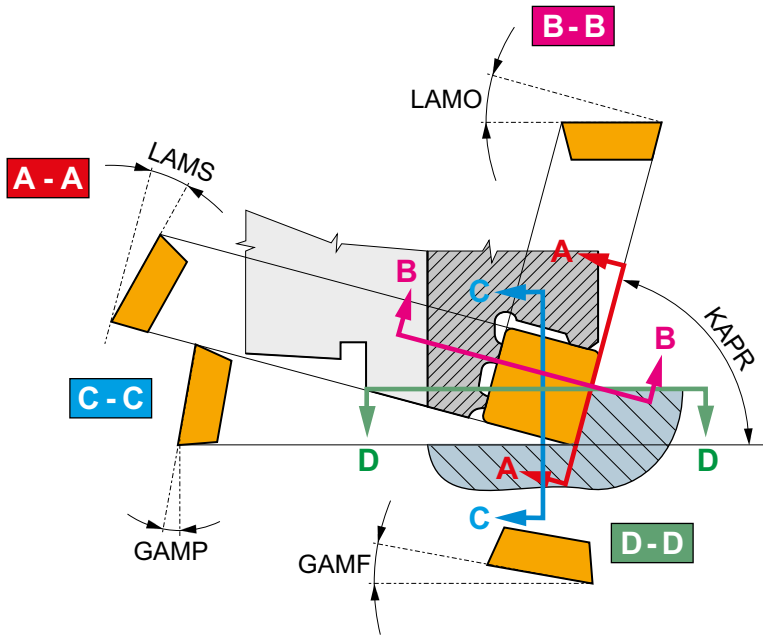
Constructional angles determine the basic orientation of the seat position that the cutting insert is clamped in and are therefore important for the design of the milling cutter body. There are two angles: axial face angle *GAMP* – γ_p (tool back rake) and radial face angle *GAMF* – γ_f (tool side rake) – see picture below.

Working angles are the setting angle *KAPR* – κ_r, the orthogonal face angle *GAMO* γ_o and the rake angle of the cutting edge *LAMS* – λ_s.

- **Orthogonal face angle** *GAMO* – γ_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* – γ_o, the lower the cutting force and power demand of the spindle motor (and vice versa).
- **Setting angle** *KAPR* – κ_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* – κ_r at a constant feed f_z causes a decrease in the chip thickness h.
- **Rake angle of cutting edge** *LAMS* – λ_s together with setting angle *KAPR* – κ_r and face angle *GAMO* – γ_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.

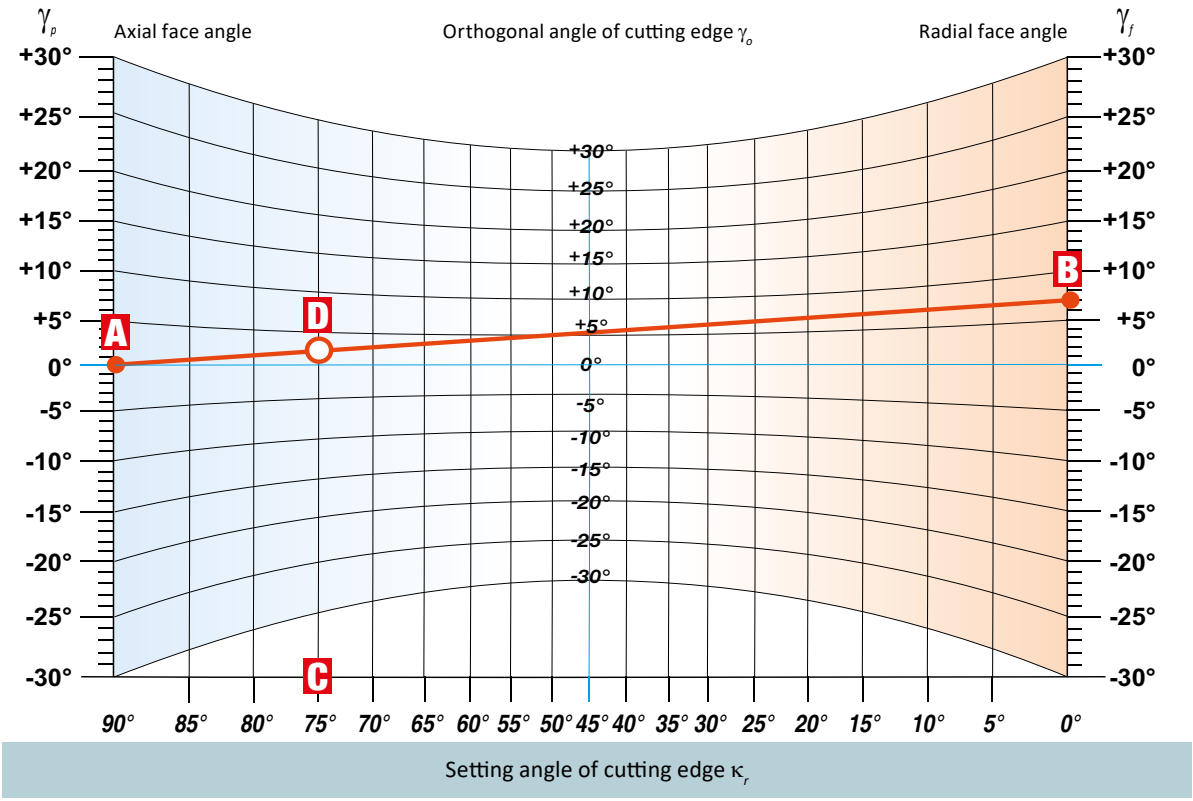
Working angles of the tool you can determine the bed using the formulas or diagrams below.

Working and constructional angles of milling tool

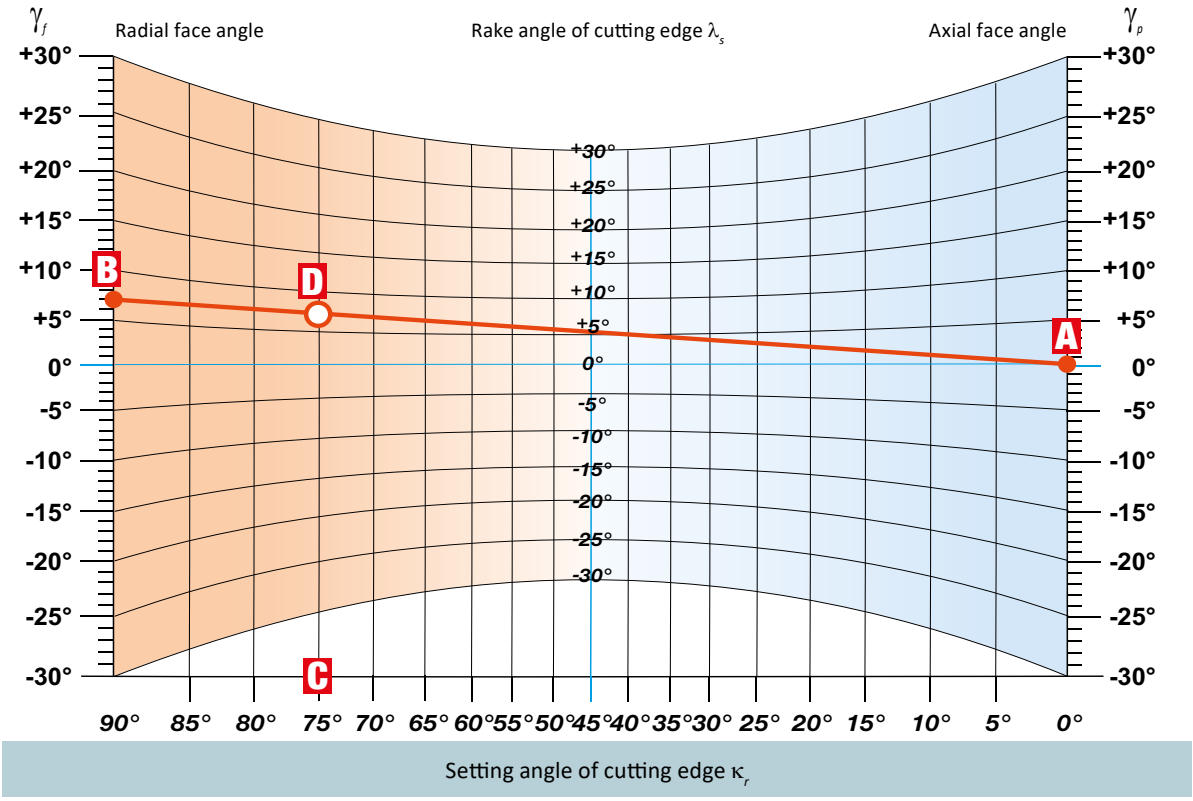


Nomogram for calculating the working geometry of mills

$$\tan \gamma_o = \tan \gamma_p \times \sin \kappa_o + \tan \gamma_f \times \cos \kappa_r$$



$$\tan \lambda_s = \tan \gamma_f \times \sin \kappa_r - \tan \gamma_p \times \cos \kappa_r$$



The exiting of the cutting edge from the cut is also accompanied by thermal stress, caused by a rapid reduction in temperature of the surface layer of the cutting edge and mechanical stress caused by elastic deformation relief of the surface layer of workpiece at a rapid drop in cutting force.

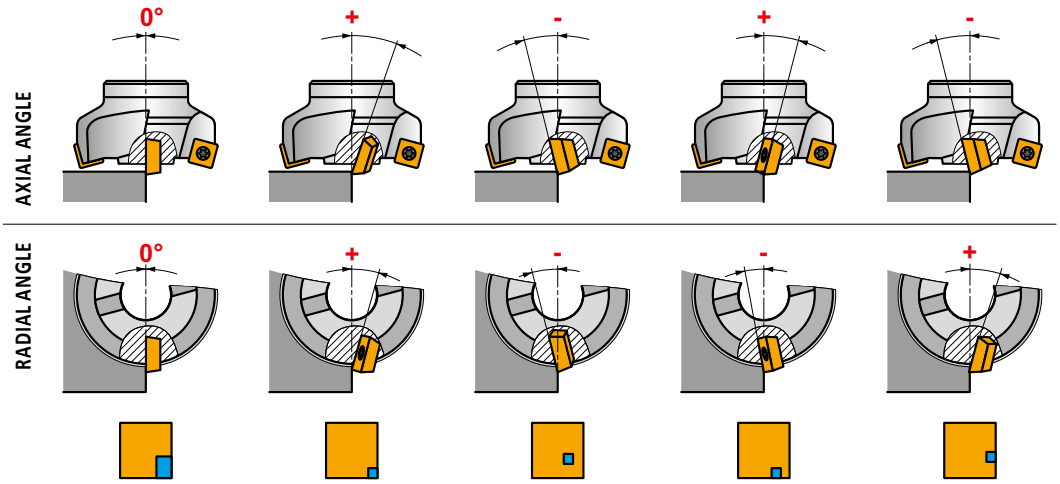
That is why we use the average value of chip thickness h_m for any calculations.

The chip thickness h fluctuates during one revolution depending on angle φ in accordance with the formula $h\varphi = f_z \times sin\varphi$.

The maximum chip thickness equal to f_z is reached at the axis of the milling cutter. The average chip thickness h_m cut by one tooth during one revolution is equal to the height of the rectangle of the same area as the area under the sine curve relates to the radial depth of cut a_e.

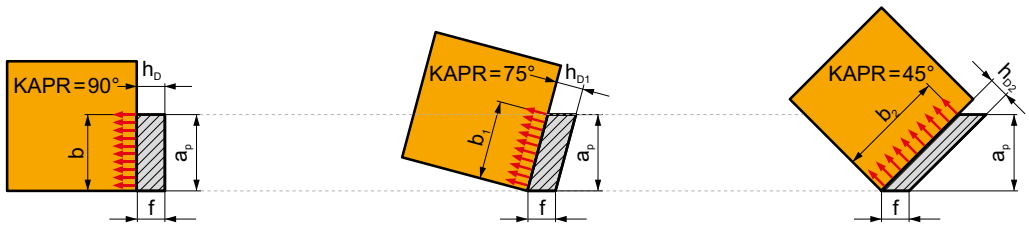
The average chip thickness h_m depends on the type of milling cutter and the cutting conditions, especially on the relation a_e / DC, feed per tooth f_z and the setting angle $KAPR - \kappa_r$. See picture on the next page for an illustrative example.

Milling Cutter Geometry



When choosing a tool, it is necessary to take many criteria into account. One of the primary requirements is that the place of first contact between the cutting wedge and the workpiece lie further away from the tip and the cutting edge. That, however, is dependent on the basic geometry of the cutting wedge i.e. angles *GAMO* – γ_o, *LAMS* – λ_s, *KAPR* – κ_r, as well as the mutual position of the milling cutter and the entry edge of the workpiece. The following figure shows individual milling cutter geometries (or rather, the combinations of radial and axial angles) at some of the most adverse engagement conditions (i.e. when the axis of the milling cutter is in line with the edge of the workpiece). At the bottom of the figure is a depiction of the indexable insert with an indication of the area where the insert makes first contact with the workpiece. The figure shows that in such adverse engagement conditions, tools with negative – negative geometry perform the best, while tools with positive – positive geometry will be the most problematic. Another criterion is chip removal. Negative – negative tools push the chip into the work surface (towards the workpiece) while positive – positive tools do the opposite, leading the chip away from the work surface, i.e. away from the workpiece. It is thus an optimal compromise to combine negative and positive angles.

Entering Angle



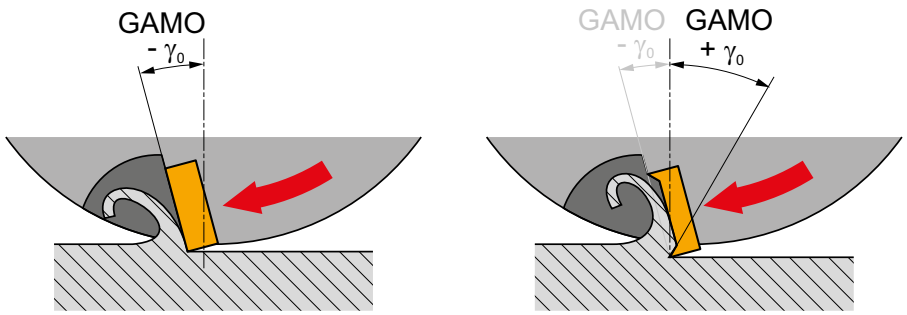
$h_D = f$ $k_c = 1{,}00\ k_{c1}$ $k_c/b = 1{,}00$	$h_{D1} = 0{,}97f$ $k_c = 1{,}01\ k_{c1}$ $k_c/b_1 = 0{,}98$	$h_{D2} = 0{,}71f$ $k_c = 1{,}09\ k_{c1}$ $k_c/b_2 = 0{,}77$

When choosing the entering angle for face milling, you should, among other things, account for the power and rigidity of the machine (size and type of tool holder), its dynamic capabilities and maximum depth of removal. For instance, if you have a high-performance (50 – 100 kW) machine at your disposal with an ISO 50 tool holder and you cut at high depth, your first choice should be a milling cutter with an entering angle between 90° – 58°. On the other hand, if you have a low-power machine (up to 10 kW) with an ISO 40 (HSK 63) tool holder and you expect to cut at 0.078" – 0.118" depth, you should choose a tool with an entering angle of 45° – 10° (i.e. HFC) or with round inserts. It would thus be an ideal compromise to choose a tool with an entering angle of 45°, which can also handle higher depths of cut and, when compared to a tool with an entering angle of 90°, can cut at the same depth at up to 30 % higher feed and at approximately the same load. Finally, it is important to emphasise that the lower the entering angle, the thinner the chip and the longer the engaged section of the cutting wedge, which is important with regard to heat dissipation and the distribution of force across the edge of the insert. Also worth mentioning is the change in the direction of the resultant cutting forces, which, in simplified terms, can be visualised as perpendicular to the edge. (Decreasing the entering angle increases the passive component of the cutting force leading into the spindle and decreases the active radial component of the cutting force).

The following figure shows the assortment of Pramet milling cutters with regard to the entering angle and the basic geometry of the cutter body (i.e. the axial and radial angle of the face). However, it must be pointed out that insert geometry may change the resulting geometry of the tool as indicated in the following figure.

	Negative – Negative	← Negative – Positive →	Positive – Positive
93°	 SWN04C		
90°	 STN10  STN16  SLN12	 SAD07D  SAD11E  SAD16E  SSD12  SS009  J(T)-SAD11E  J(T)-SAD16E  S90SN	 SVC22C
60°		 FSB22X	
57°	 SPN13		
45°	 SHN06C  SHN09C  SSD09	 SOD05  SOD06D  SSE09	
43°			 SOE06Z
20°	 SBN10		
19°		 SPD09	
18°	 SSN11		
I	 SRC10  SRD10  SRD12  K2-PPH  K2-SLC  K2-SRC	 SRD10  SRD12  SRD16  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 catalog section.

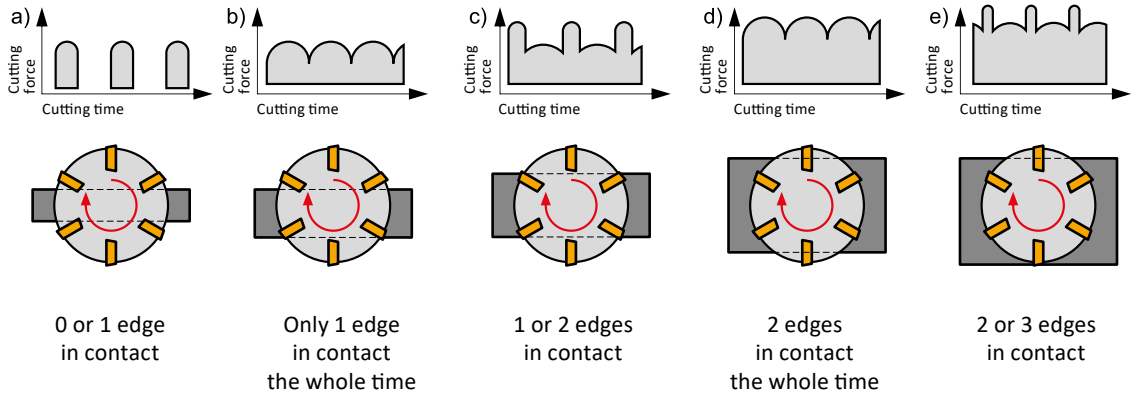
Conditions		Selection of cutter geometry according to application		
		Negative – Negative	Negative – Positive	Positive – Positive
Structural parameter of the body	*GAMP* (A.R.)	-	+	+
	GAMF (R.R.)	-	-	+
	GAMO	-	+	+
Machined material	Carbon steels, alloy steels (< 300 HB)	◪	■	■
	Stainless steels (< 300 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

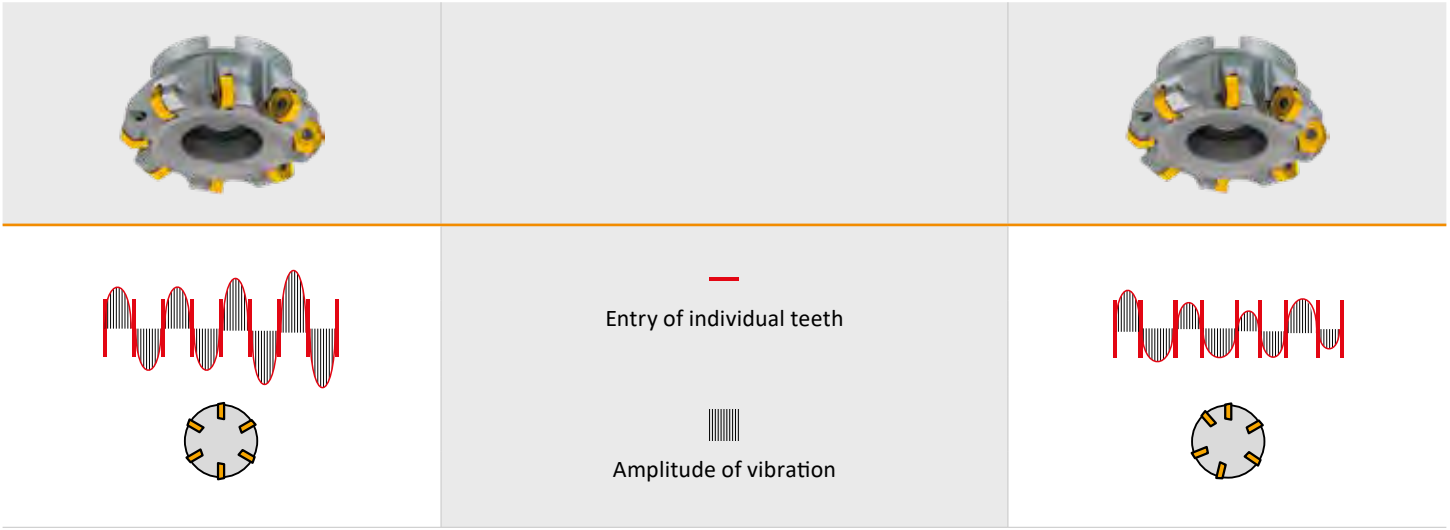
The number of teeth on the milling cutter is also important in relation to the width of the milled surface, where it determines the force (and acoustic) characteristics of the cut, as indicated in the following figure.

			
Feed per minute	+	++	+++
Tough materials	+++	++	+
Power requirement	+	++	+++
Resulting roughness	+++	++	+
			

Tooth Pitch

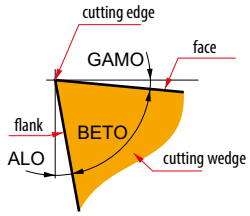
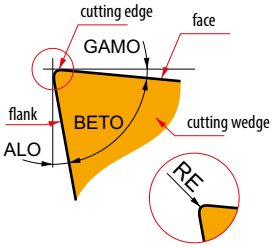
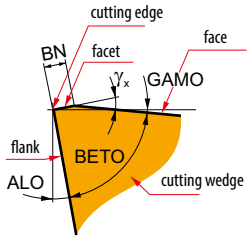
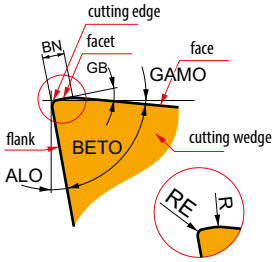
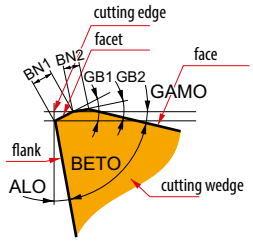
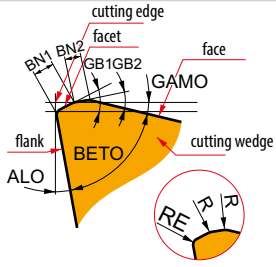


In addition, some tool families offer the option to choose between even and uneven tooth pitch. Using a tool with an uneven tooth pitch interferes with harmonic oscillation and, as a result, helps improve stability and reduce the risk of vibration. That means you should choose uneven tooth pitch if you 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.



When choosing an indexable insert, please also pay attention to its microgeometry, which is indicated by icons directly in the catalog 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.

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).

INSERT GEOMETRIES	🕮
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ADEX 11-HF	469
ADEX 11-HF2	469
ADEX 16-FA	481
ADEX 16-FM	479
ADEX 16-HF	480
ADEX 16-HF2	480
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ADKX 15-F	634
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ADMX 07-M	458
ADMX 11-F	467
ADMX 11-M	467
ADMX 11-MF	468
ADMX 11-MM	468
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ADMX 16-F	477
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BNGX 10-HM	596
BNGX 10-M	595
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HNGX 06-M	442
HNGX 06-R	442
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HNGX 09-FF	448
HNGX 09-M	448
HNGX 09-R	449
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LNEX 12-M	502
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LNGX 12-F	509
LNGX 12-FA	511
LNGX 12-M	509
LNGX 12-MF	510
LNGX 12-MM	510
LNGX 12-R	510
O	
ODEW 06	414
ODKT 05-F (IM)	404
ODKT 05-FM (IM)	404
ODMT 05	636
ODMT 05-FM (IM)	405
ODMT 05-R (IM)	405
ODMT 06	414
OEHT 06-FA	422
OEHT 06-M	421
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ONMX 06-M	435
ONMX 06-R	435
ONMX 06-W	436
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PDKT 09-FM	610
PDKX 09-FM	609
PDMW 09	611
PDMX 09-M	609
PDMX 09-R	610
PNMQ 13	429
PNMU 13	429
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PPH -CL4	576
PPHE -SM1	576
PPHF -CE1	577
PPHT-A2	577
R	
RC	564
RC -F	565
RCMT 10-F	539
RCMT 10-M	539
RCMT 10-R	539
RDET	637
RDGT 10	546
RDGT 12	553
RDGT 12-F (IM)	405
RDGT 12-FM (IM)	406
RDGT 16	559
RDHT 10 -FA	546
RDHT 12 -FA	553
RDHT 16-FA	559
RDHX 10	545
RDHX 12	552
RDHX 16	558
RDHX 20	638
RDMT 10	547
RDMT 12	554
RDMT 12-F (IM)	405
RDMT 12-FM (IM)	406
RDMT 12-R (IM)	406
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RDMX 16	558
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REHT 16-MM	423
RPET 12	638
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SBMR 22	453
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SDET 13-FA	397
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SDEW 09SN	624
SDEX 09-74	624
SDKT 12-F (IM)	407
SDKT 12-FM (IM)	407
SDMT 12-F	520
SDMT 12-F (IM)	408
SDMT 12-FM (IM)	408
SDMT 12-M	520
SDMT 12-R	520
SDMT 12-R (IM)	408
SDMT 13-M	398
SDMT 13-R	398
SEEN 12FN	640
SEEN SN	640
SEER EN	641
SEER SN	641
SEET 09	391
SEET 12EN	642
SEET 12SN	642
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SEET 12-PM	643
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SNHF -M	644
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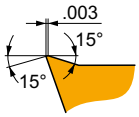
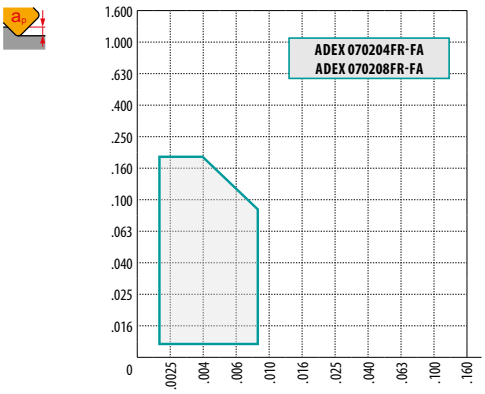
SOMT 09-M	517
SOMT 09-MI	517
SOMT 09-P	517
SPGN	646
SPGN 25 DZ	646
SPKN EDSR(L)	647
SPKN EDER	647
SPKR	648
SPUN	648
SPUN 25	649
T	
TNGX 10-F	489
TNGX 10-FA	490
TNGX 10-M	490
TNGX 16-F	495
TNGX 16-FA	496
TNGX 16-M	495
TPCN 16	649
TPKN ER	650
TPKN SR	650
TPKR	651
TPUN	651
V	
VCGT 22-FA	587
W	
WNHX 04-WM	590
X	
XDET 13	399
XDHW	652
XEHT 06	422
XNGX 06	443
XNGX 09	449
XNGX 13	430
XPHT 16	629
XPHT 16-FA	630

ADEX 07-FA





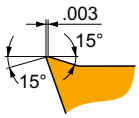
P	M	K	N	S	H
			■		

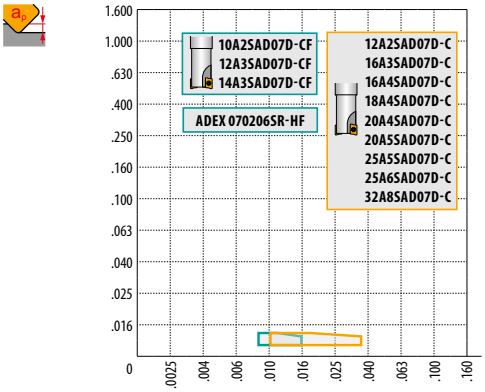
f 0.001 – 0.008

a_p 0.004 – 0.197

ADEX 0702..FR-FA

ADEX 07-HF





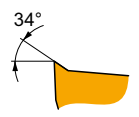
P	M	K	N	S	H
■	◪				

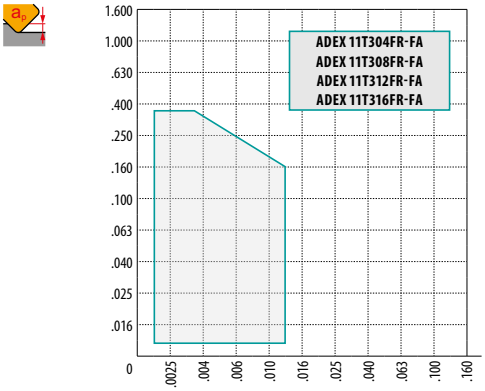
f 0.008 – 0.035

a_p 0.004 – 0.012

ADEX 070206SR-HF

ADEX 11-FA





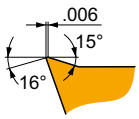
P	M	K	N	S	H
			■		

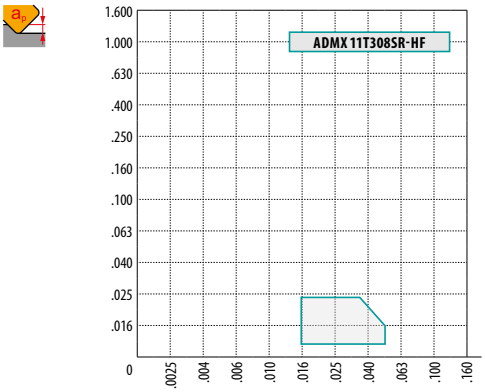
f 0.001 – 0.012

a_p 0.008 – 0.354

ADEX 11T304FR-FA, ADEX 11T308FR-FA
ADEX 11T312FR-FA, ADEX 11T316FR-FA

ADEX 11-HF





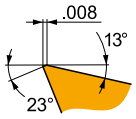
P	M	K	N	S	H
■	◪				

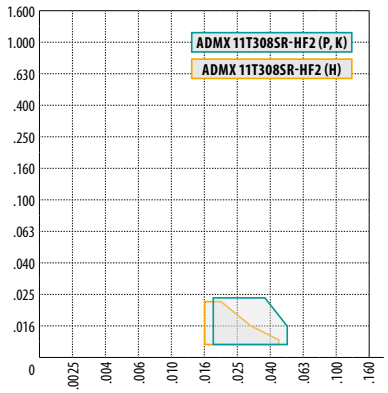
f 0.016 – 0.051

a_p 0.004 – 0.024

ADEX 11T308SR-HF

ADEX 11-HF2





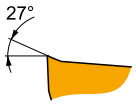
P	M	K	N	S	H
■	◪	◪		◪	◪

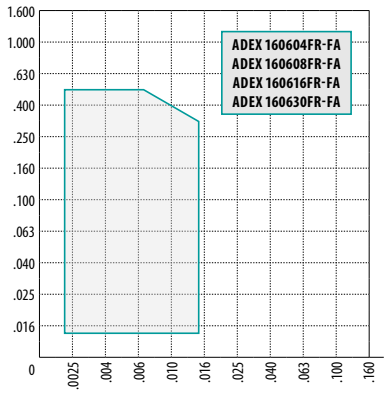
f 0.016 – 0.051

a_p 0.008 – 0.024

ADEX 11T308SR-HF2

ADEX 16-FA





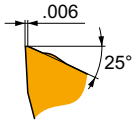
P	M	K	N	S	H
			■		

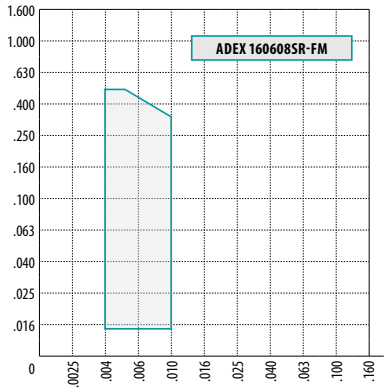
f 0.002 – 0.014

a_p 0.012 – 0.512

ADEX 160604FR-FA, ADEX 160608FR-FA
ADEX 160616FR-FA, ADEX 160630FR-FA

ADEX 16-FM





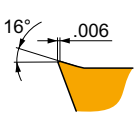
P	M	K	N	S	H
■	◪	■		◪	

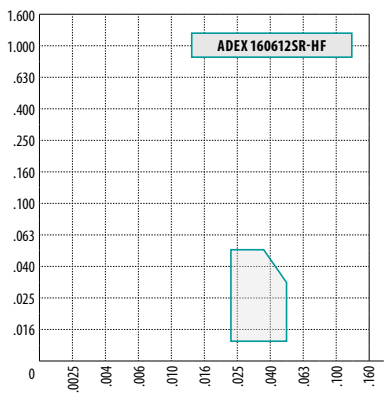
f 0.004 – 0.010

a_p 0.012 – 0.512

ADEX 160608SR-FM

ADEX 16-HF





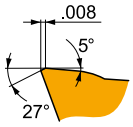
P	M	K	N	S	H
■	◪				

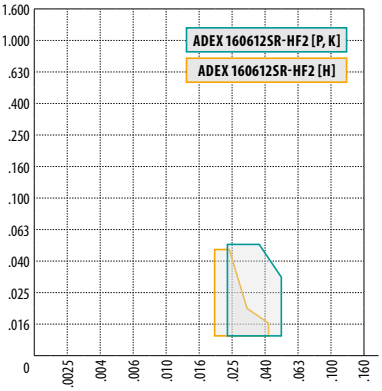
f 0.024 – 0.051

a_p 0.012 – 0.051

ADEX 160612SR-HF

ADEX 16-HF2





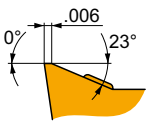
P	M	K	N	S	H
■	◪	◪		◪	◪

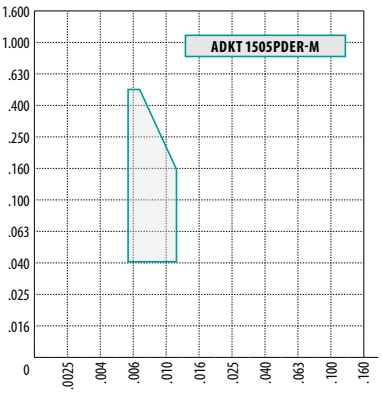
f 0.024 – 0.051

a_p 0.012 – 0.051

ADEX 160612SR-HF2

ADKT 15-M





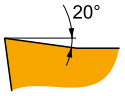
P	M	K	N	S	H
■	■	■		◪	

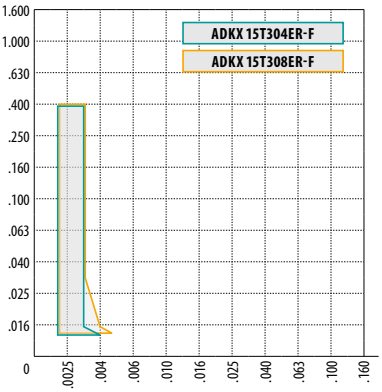
f 0.006 – 0.012

a_p 0.039 – 0.512

ADKT 1505PDER-M

ADKX 15-F





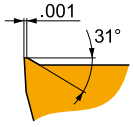
P	M	K	N	S	H
◪	■			◪	

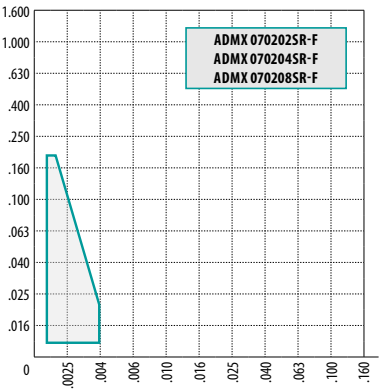
f 0.002 – 0.005

a_p 0.012 – 0.394

ADKX 15T304ER-F
ADKX 15T308ER-F

ADMX 07-F





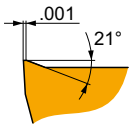
P	M	K	N	S	H
■	■		◪	◪	

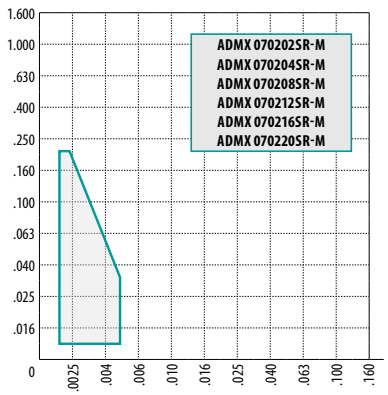
f 0.001 – 0.004

a_p 0.004 – 0.197

ADMX 070202SR-F
ADMX 070204SR-F
ADMX 070208SR-F

ADMX 07-M





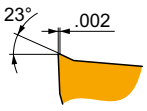
P	M	K	N	S	H
■	◪	◪	◪	◪	

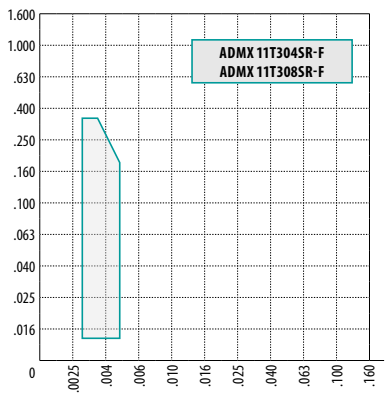
f ⇨ 0.001 – 0.005

a_p 0.004 – 0.197

ADMX 070202SR-M, ADMX 070204SR-M
ADMX 070208SR-M, ADMX 070212SR-M
ADMX 070216SR-M, ADMX 070220SR-M

ADMX 11-F





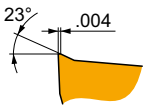
P	M	K	N	S	H
■	◪	◪	◪	◪	

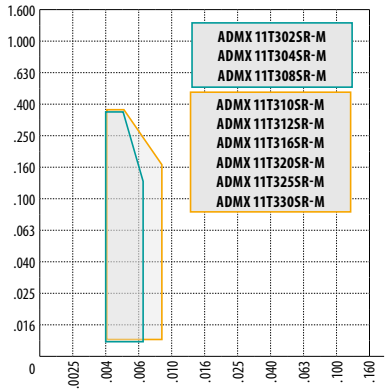
f ⇨ 0.003 – 0.005

a_p 0.008 – 0.354

ADMX 11T304SR-F
ADMX 11T308SR-F

ADMX 11-M





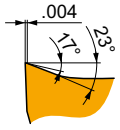
P	M	K	N	S	H
■	■	■		◪	

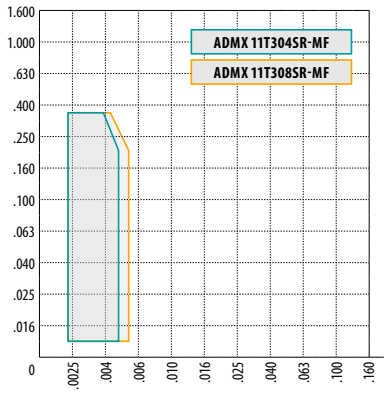
f ⇨ 0.004 – 0.009

a_p 0.008 – 0.354

ADMX 11T3..SR-M

ADMX 11-MF





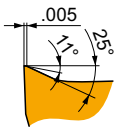
P	M	K	N	S	H
■	■		◪	■	

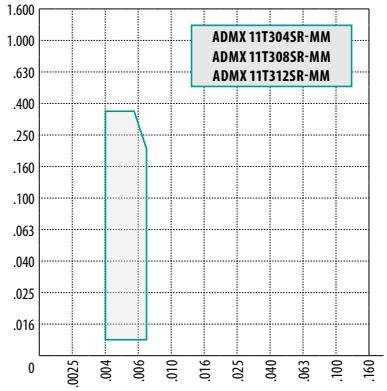
f ⇨ 0.002 – 0.006

a_p 0.008 – 0.354

ADMX 11T304SR-MF
ADMX 11T308SR-MF

ADMX 11-MM





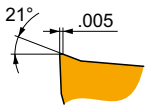
P	M	K	N	S	H
■	■		◪	■	

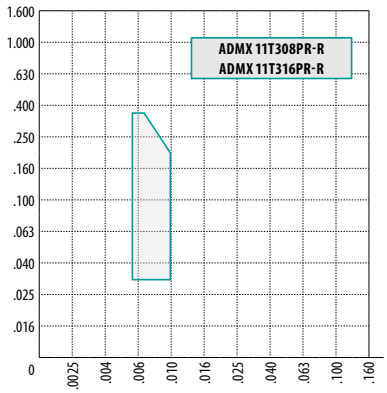
f ⇨ 0.004 – 0.007

a_p 0.008 – 0.354

ADMX 11T304SR-MM
ADMX 11T308SR-MM
ADMX 11T312SR-MM

ADMX 11-R





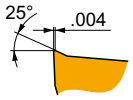
P	M	K	N	S	H
■	◪	■		◪	◪

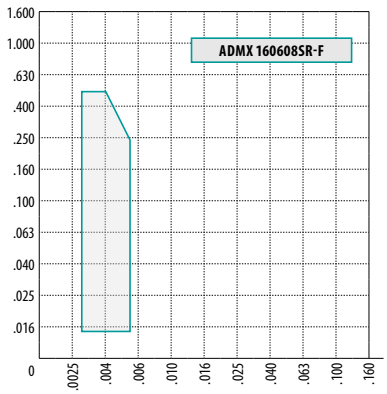
f ⇨ 0.006 – 0.010

a_p 0.031 – 0.354

ADMX 11T3..PR-R

ADMX 16-F





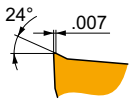
P	M	K	N	S	H
■	◪	◪	◪	◪	

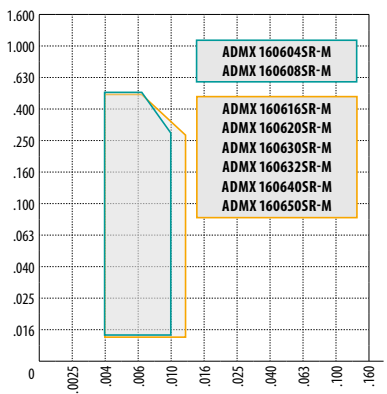
f ⇨ 0.003 – 0.006

a_p 0.012 – 0.512

ADMX 160608SR-F

ADMX 16-M





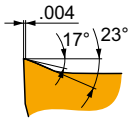
P	M	K	N	S	H
■	■	■		◪	

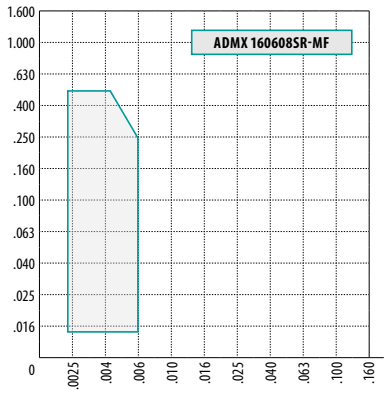
f ⇨ 0.004 – 0.010

a_p 0.012 – 0.512

ADMX 1606..SR-M

ADMX 16-MF





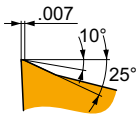
P	M	K	N	S	H
■	■		◪	■	

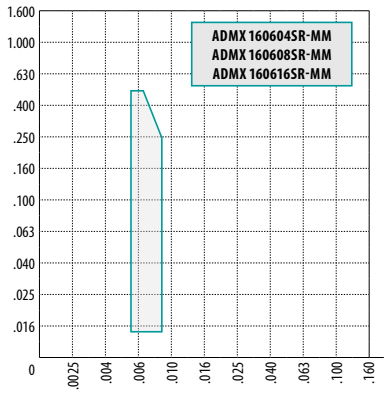
f 0.002 – 0.006

a_p 0.012 – 0.512

ADMX 160608SR-MF

ADMX 16-MM





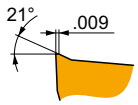
P	M	K	N	S	H
■	■		◪	■	

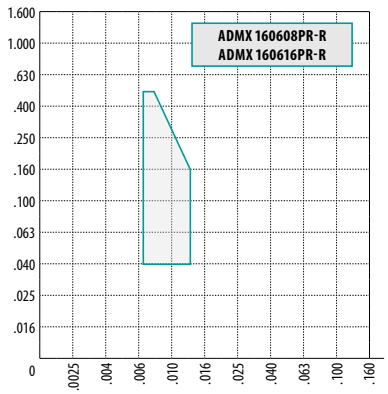
f 0.006 – 0.009

a_p 0.012 – 0.512

ADMX 160604SR-MM
ADMX 160608SR-MM
ADMX 160616SR-MM

ADMX 16-R





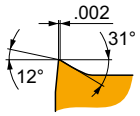
P	M	K	N	S	H
■	◪	■		◪	◪

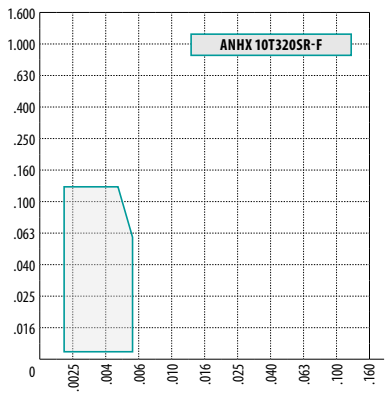
f 0.007 – 0.014

a_p 0.039 – 0.512

ADMX 160608PR-R
ADMX 160616PR-R

ANHX 10-F





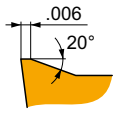
P	M	K	N	S	H
■	◪				

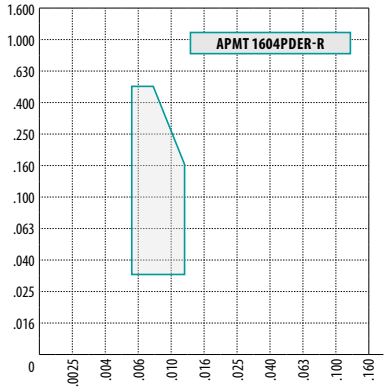
f 0.002 – 0.006

a_p 0.004 – 0.118

ANHX 10T320SR-F

APMT 16 ER-R





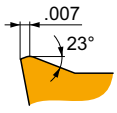
P	M	K	N	S	H
■		■			

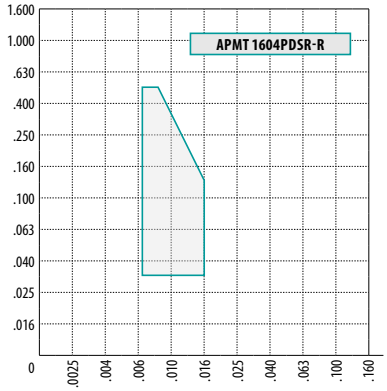
f 0.006 – 0.012

a_p 0.031 – 0.512

APMT 1604PDER-R

APMT 16 SR-R





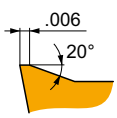
P	M	K	N	S	H
■		■			

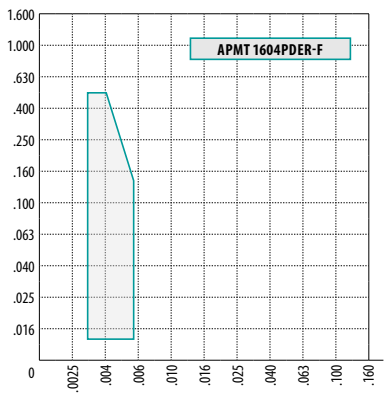
f 0.007 – 0.016

a_p 0.031 – 0.512

APMT 1604PDSR-R

APMT 16-F





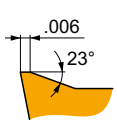
P	M	K	N	S	H
■	■	◪		◪	

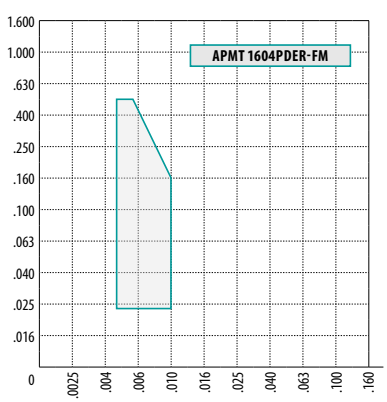
f 0.003 – 0.006

a_p 0.012 – 0.512

APMT 1604PDER-F

APMT 16-FM





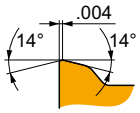
P	M	K	N	S	H
■	■	◪		◪	

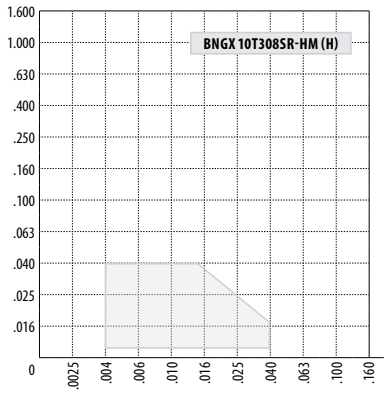
f 0.005 – 0.010

a_p 0.024 – 0.512

APMT 1604PDER-FM

BNGX 10-HM





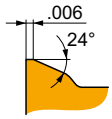
P	M	K	N	S	H
		◪			■

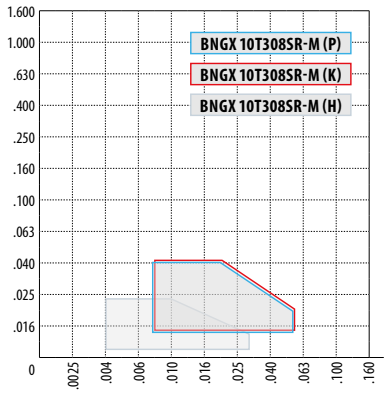
f ⇨ 0.004 – 0.039

a_p 0.004 – 0.039

BNGX 10T308SR-HM

BNGX 10-M





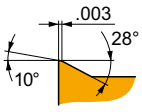
P	M	K	N	S	H
■		■			◪

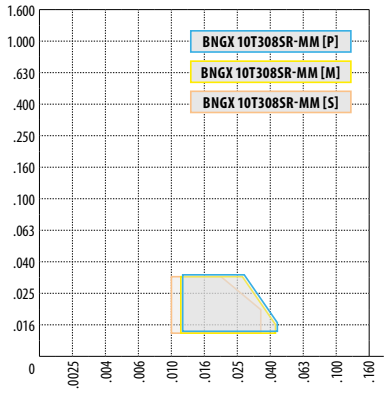
f ⇨ 0.008 – 0.055

a_p 0.012 – 0.039

BNGX 10T308SR-M

BNGX 10-MM





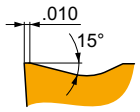
P	M	K	N	S	H
◪	■			■	

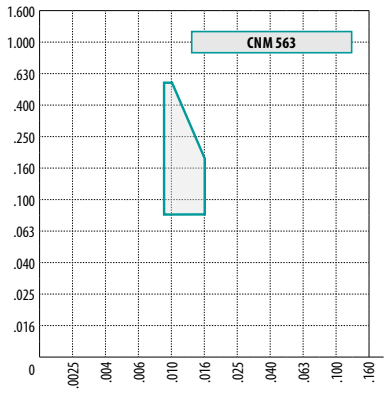
f ⇨ 0.008 – 0.043

a_p 0.012 – 0.039

BNGX 10T308SR-MM

CNM 563





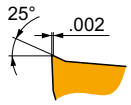
P	M	K	N	S	H
■		■			

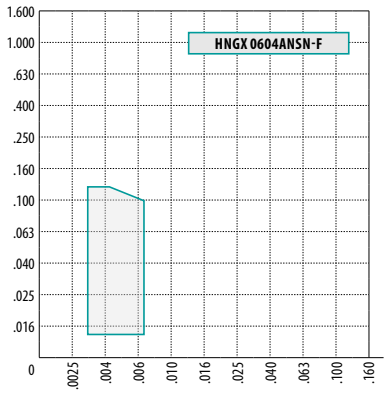
f ⇨ 0.008 – 0.016

a_p 0.079 – 0.551

CNM 563

HNGX 06-F





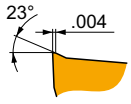
P	M	K	N	S	H
■	◪				

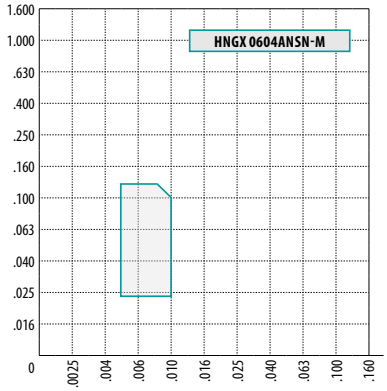
f 0.003 – 0.007

a_p 0.012 – 0.118

HNGX 0604ANSN-F

HNGX 06-M





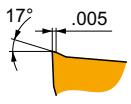
P	M	K	N	S	H
■	◪	■			

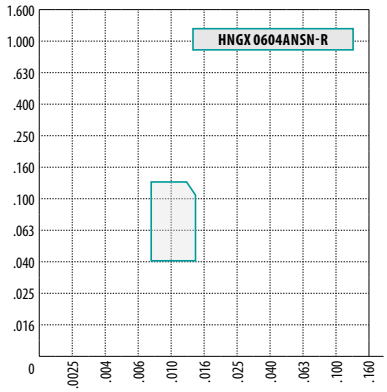
f 0.005 – 0.010

a_p 0.024 – 0.118

HNGX 0604ANSN-M

HNGX 06-R





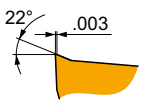
P	M	K	N	S	H
■	◪	■			◪

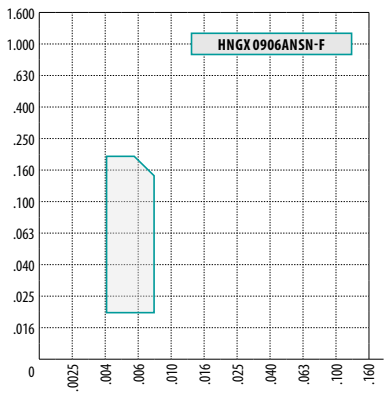
f 0.007 – 0.012

a_p 0.039 – 0.118

HNGX 0604ANSN-R

HNGX 09-F





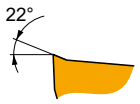
P	M	K	N	S	H
■	■				

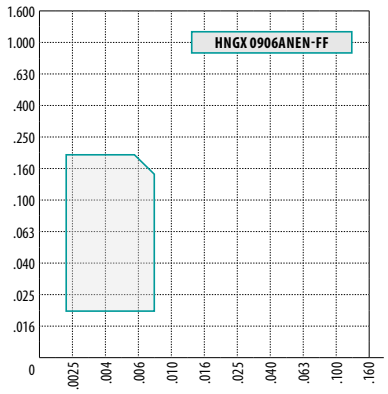
f 0.004 – 0.008

a_p 0.020 – 0.197

HNGX 0906ANSN-F

HNGX 09-FF





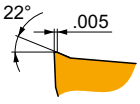
P	M	K	N	S	H
■	■				

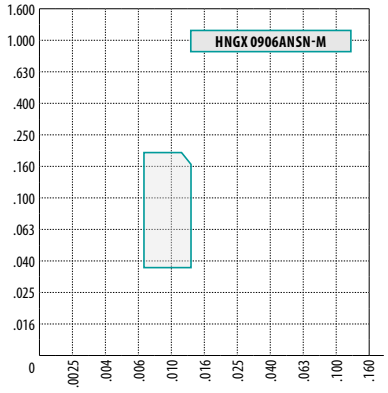
f 0.002 – 0.008

a_p 0.020 – 0.197

HNGX 0906ANEN-FF

HNGX 09-M





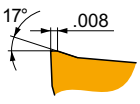
P	M	K	N	S	H
■	◪	■			

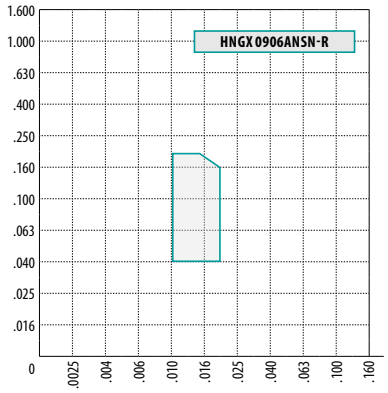
f 0.007 – 0.014

a_p 0.031 – 0.197

HNGX 0906ANSN-M

HNGX 09-R





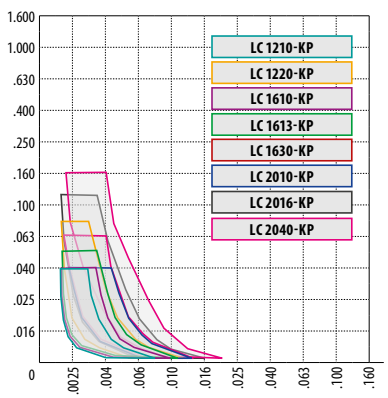
P	M	K	N	S	H
■	◪	■			◪

f 0.010 – 0.020

a_p 0.039 – 0.197

HNGX 0906ANSN-R

LC -KP



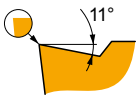
P	M	K	N	S	H
■		■			■

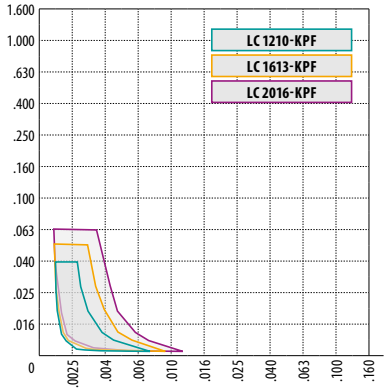
f 0.003 – 0.014 (according to insert size)

a_p 0.004 – 0.157 (according to insert size)

LC ....-KP

LC -KPF





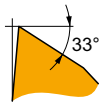
P	M	K	N	S	H
■	◪	■			■

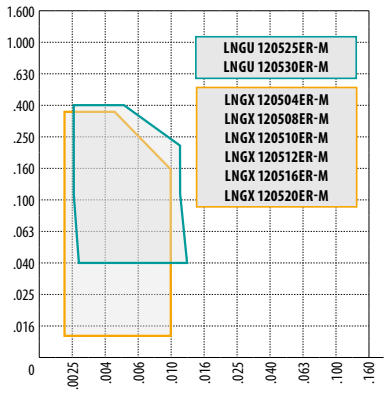
f: 0.002 – 0.012 (according to insert size and radii)

a_p: 0.004 – 0.063 (according to insert size and radii)

LC 1210-KPF
LC 1613-KPF
LC 2016-KPF

LNG(U)X 12-M





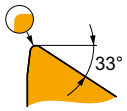
P	M	K	N	S	H
■		■			

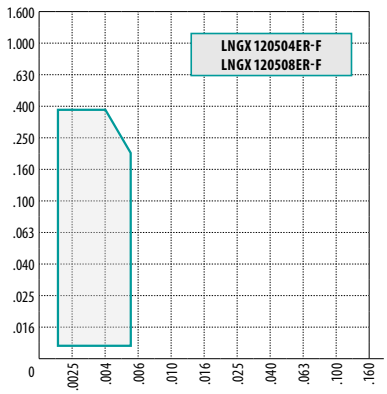
f: 0.002 – 0.010

a_p: 0.008 – 0.354 (according to insert radii)

LNGU 1205..ER-M
LNGX 1205..ER-M

LNGX 12-F





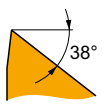
P	M	K	N	S	H
■		◪			

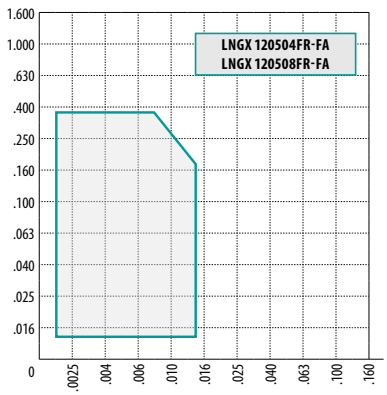
f: 0.002 – 0.006

a_p: 0.008 – 0.354

LNGX 120504ER-F
LNGX 120508ER-F

LNGX 12-FA





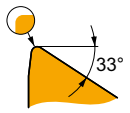
P	M	K	N	S	H
			■		

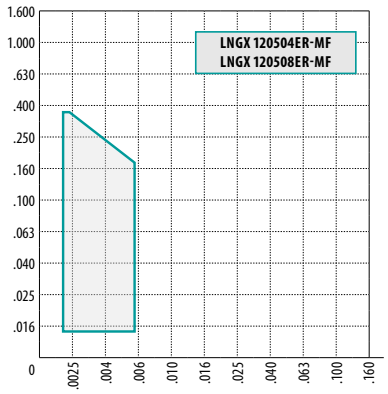
f: 0.001 – 0.014

a_p: 0.008 – 0.354

LNGX 120504FR-FA
LNGX 120508FR-FA

LNGX 12-MF





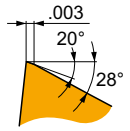
P	M	K	N	S	H
◪	■				

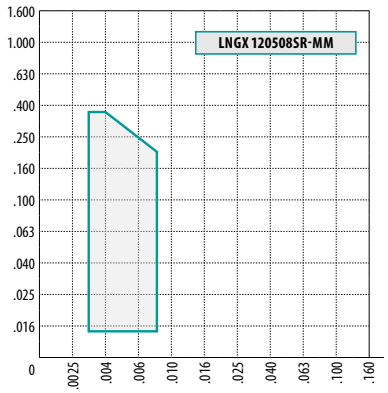
f ⇨ 0.002 – 0.006

a_p 0.012 – 0.354

LNGX 120504ER-MF
LNGX 120508ER-MF

LNGX 12-MM





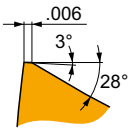
P	M	K	N	S	H
■	■				

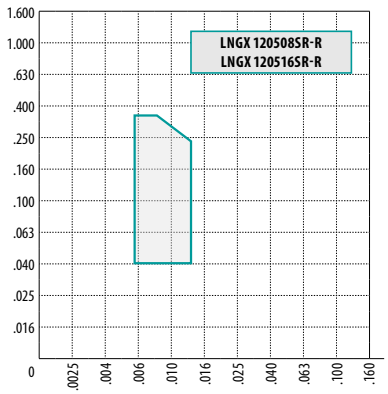
f ⇨ 0.003 – 0.008

a_p 0.012 – 0.354

LNGX 120508SR-MM

LNGX 12-R





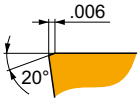
P	M	K	N	S	H
■		■			

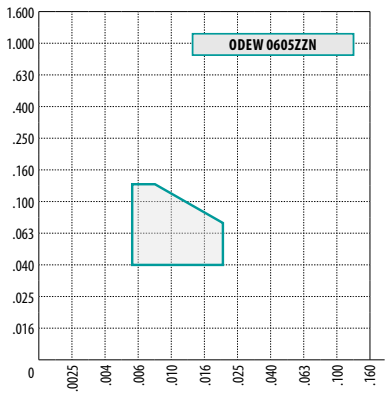
f ⇨ 0.006 – 0.014

a_p 0.039 – 0.354

LNGX 120508SR-R
LNGX 120516SR-R

ODEW 06





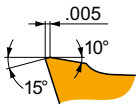
P	M	K	N	S	H
◪		■			◪

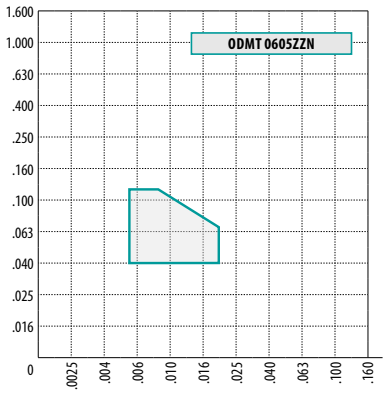
f ⇨ 0.006 – 0.018

a_p 0.039 – 0.122

ODEW 0605ZZN

ODMT 06





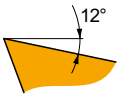
P	M	K	N	S	H
■		■			

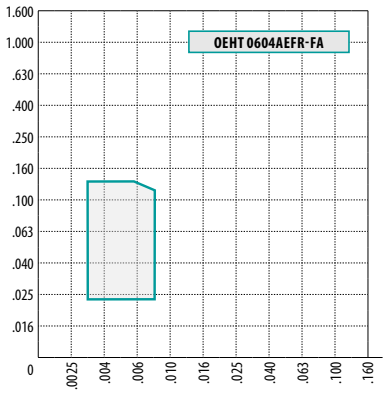
f 0.006 – 0.018

a_p 0.039 – 0.122

ODMT 0605ZZN

OEHT 06-FA





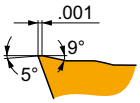
P	M	K	N	S	H
			■		

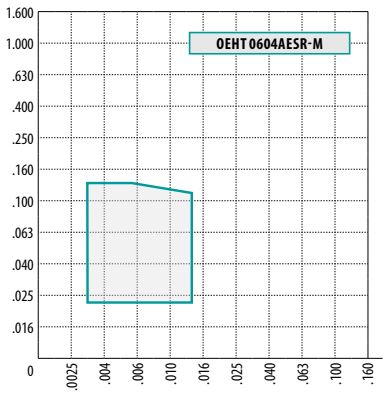
f 0.003 – 0.008

a_p 0.020 – 0.130

OEHT 0604AEFR-FA

OEHT 06-M





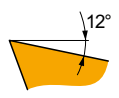
P	M	K	N	S	H
■	■			◪	

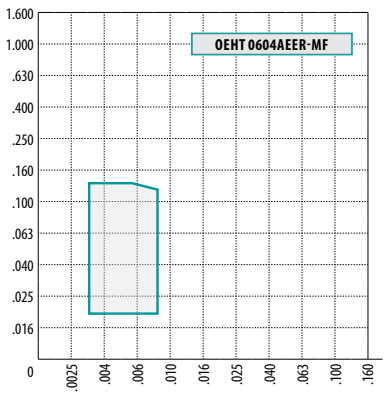
f 0.003 – 0.014

a_p 0.020 – 0.130

OEHT 0604AESR-M

OEHT 06-MF





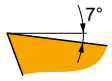
P	M	K	N	S	H
◪	■		◪	■	

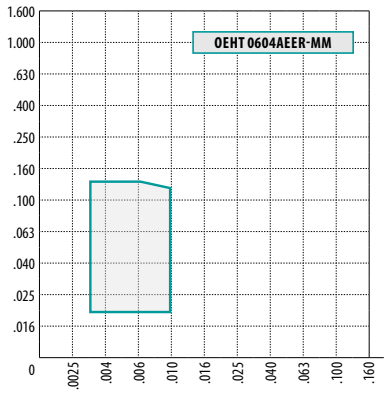
f 0.003 – 0.008

a_p 0.020 – 0.130

OEHT 0604AEER-MF

OEHT 06-MM





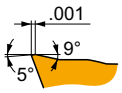
P	M	K	N	S	H
◪	■		◪	■	

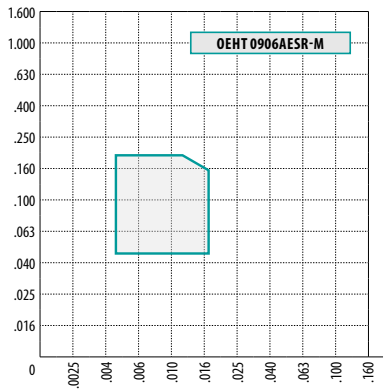
f ⇨ 0.003 – 0.010

a_p 0.020 – 0.130

OEHT 0604AEER-MM

OEHT 09-M





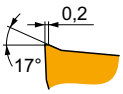
P	M	K	N	S	H
■	■			◪	

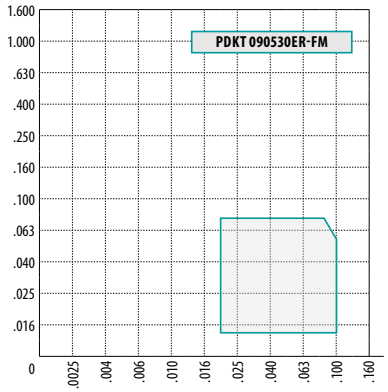
f ⇨ 0.005 – 0.018

a_p 0.047 – 0.197

OEHT 0906AESR-M

PDKT 09-FM





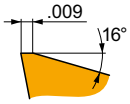
P	M	K	N	S	H
■	■	◪		■	

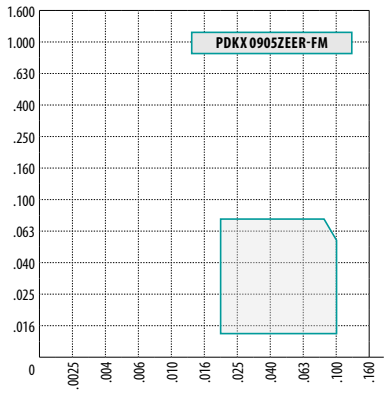
f ⇨ 0.020 – 0.098

a_p 0.012 – 0.079

PDKT 090530ER-FM

PDKX 09-FM





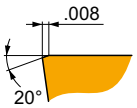
P	M	K	N	S	H
■	■	◪		■	

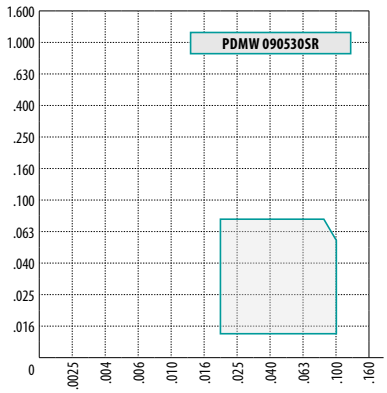
f ⇨ 0.020 – 0.098

a_p 0.012 – 0.079

PDKX 0905ZEER-FM

PDMW 09

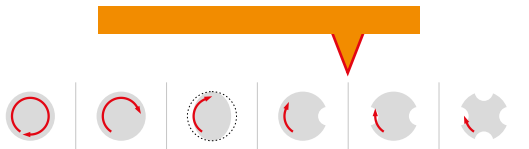




P	M	K	N	S	H
◪		■			■

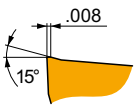
f 0.020 – 0.098

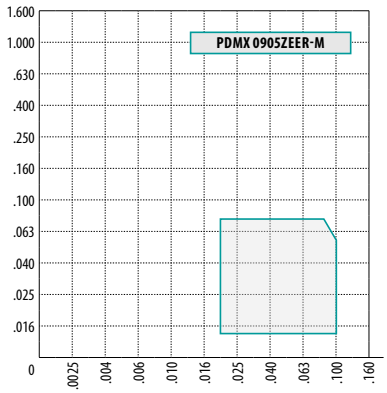
a_p 0.012 – 0.079



PDMW 090530SR

PDMX 09-M

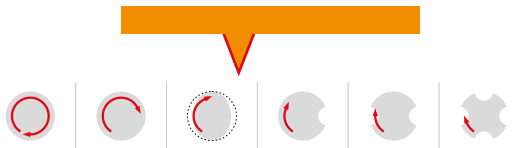




P	M	K	N	S	H
■	■	◪			

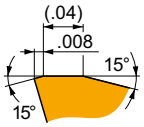
f 0.020 – 0.098

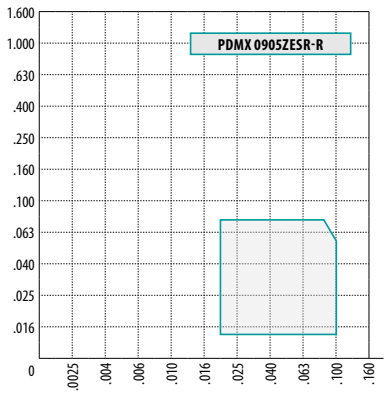
a_p 0.012 – 0.079



PDMX 0905ZEER-M

PDMX 09-R

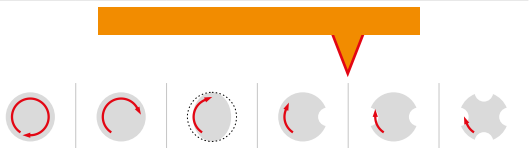




P	M	K	N	S	H
◪		■			■

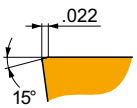
f 0.020 – 0.098

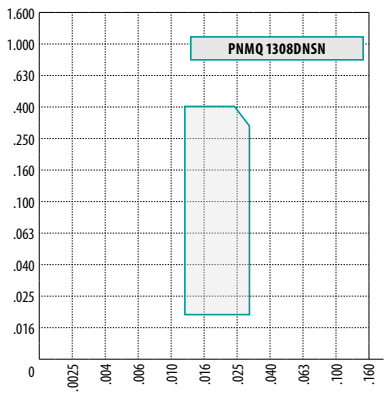
a_p 0.012 – 0.079



PDMX 0905ZESR-R

PNMQ 13

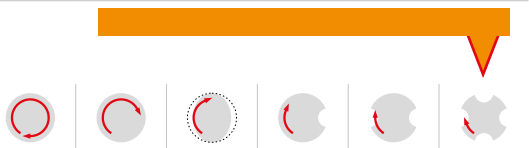




P	M	K	N	S	H
◪		■			■

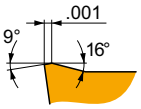
f 0.012 – 0.028

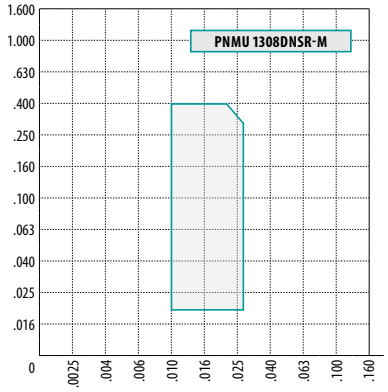
a_p 0.020 – 0.394



PNMQ 1308DNSN

PNMU 13-M





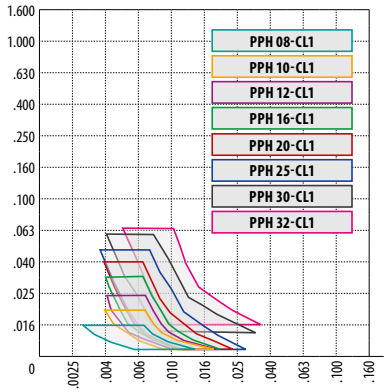
P	M	K	N	S	H
■	◪	■		◪	◪

f ⇨ 0.010 – 0.028

a_p 0.020 – 0.394

PNMU 1308DNSR-M

PPH -CL1



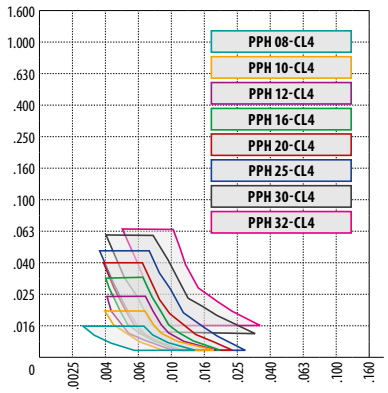
P	M	K	N	S	H
■	◪	■			◪

f ⇨ 0.002 – 0.024 (according to insert size)

a_p 0.004 – 0.126 (according to insert size)

PPH ..00-CL1

PPH -CL4



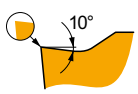
P	M	K	N	S	H
■		■			■

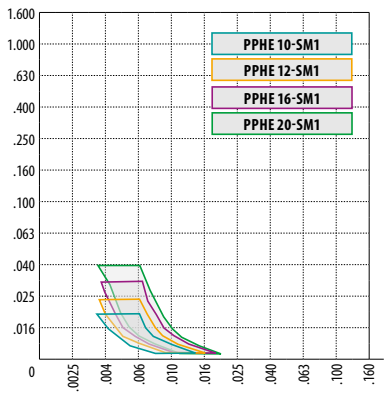
f ⇨ 0.002 – 0.024 (according to insert size)

a_p 0.004 – 0.126 (according to insert size)

PPH ..00-CL4

PPHE -SM1





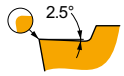
P	M	K	N	S	H
■	◪	■			■

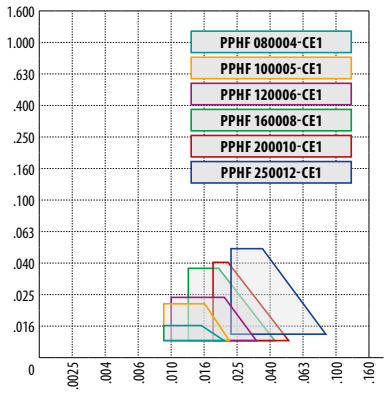
f ⇨ 0.002 – 0.020 (according to insert size)

a_p 0.004 – 0.079 (according to insert size)

PPHE ..00-SM1

PPHF -CE1





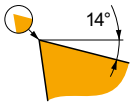
P	M	K	N	S	H
■	◪	■		◪	■

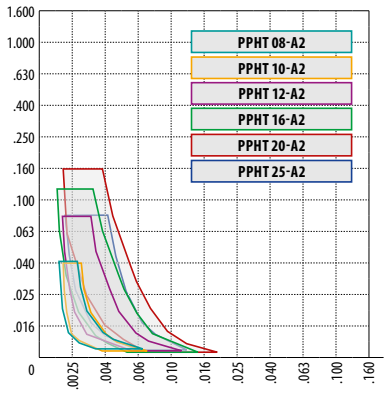
f ⇨ 0.008 – 0.059 (according to insert size)

a_p 0.004 – 0.047 (according to insert size)

PPHF 080004-CE1, PPHF 100005-CE1
PPHF 120006-CE1, PPHF 160008-CE1
PPHF 200010-CE1, PPHF 250012-CE1

PPHT-A2





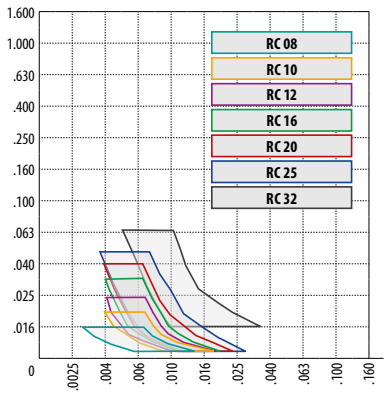
P	M	K	N	S	H
■	◪	■			■

f ⇨ 0.002 – 0.020 (according to insert size and radii)

a_p 0.004 – 0.157 (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



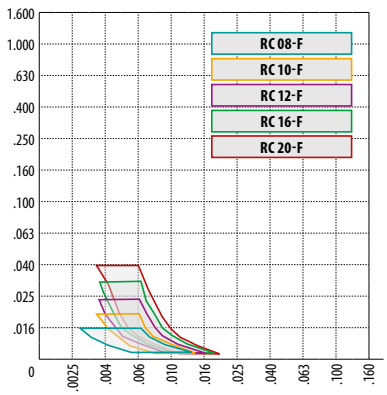
P	M	K	N	S	H
■		■			■

f ⇨ 0.004 – 0.024 (according to insert size)

a_p 0.012 – 0.126 (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
■	◪	■			■

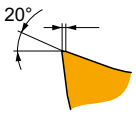
f ⇨ 0.002 – 0.024 (according to insert size)

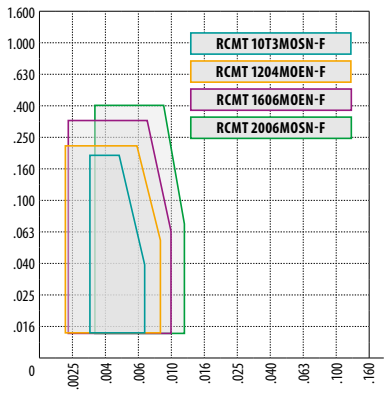
a_p 0.012 – 0.126 (according to insert size)

RC 08-F, RC 10-F, RC 12-F
RC 16-F, RC 20-F

RCMT-F

RCMT 10	.003
RCMT 12	–
RCMT 16	–
RCMT 20	.010





P	M	K	N	S	H
■	■			■	

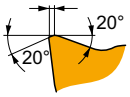
f ⇨ 0.002 – 0.012 (according to insert size)

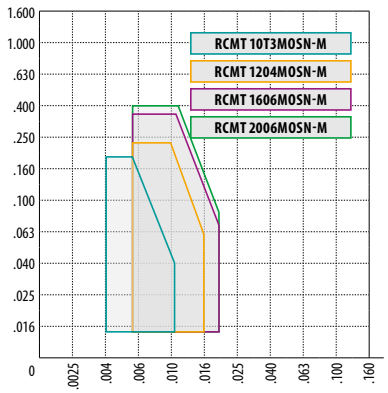
a_p 0.012 – 0.394 (according to insert size)

RCMT 10T3MOSN-F, RCMT 1204MOEN-F
RCMT 1606MOEN-F, RCMT 2006MOSN-F

RCMT-M

RCMT 10	.004
RCMT 12	.006
RCMT 16	.005
RCMT 20	.009





P	M	K	N	S	H
■	◪	■		■	

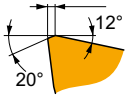
f ⇨ 0.004 – 0.018 (according to insert size)

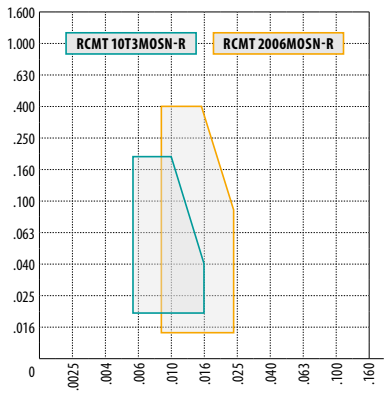
a_p 0.012 – 0.394 (according to insert size)

RCMT 10T3MOSN-M, RCMT 1204MOSN-M
RCMT 1606MOSN-M, RCMT 2006MOSN-M

RCMT-R

RCMT 10	.006
RCMT 20	.007





P	M	K	N	S	H
■		■		◪	■

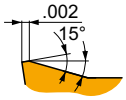
f ⇨ 0.006 – 0.024 (according to insert size)

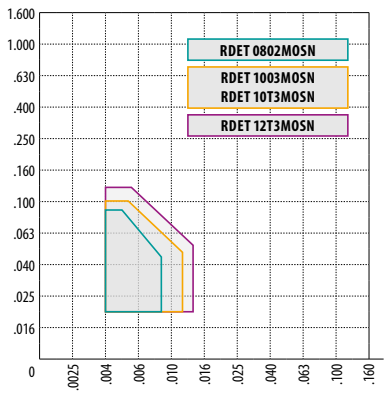
a_p 0.012 – 0.394 (according to insert size)

RCMT 10T3MOSN-R
RCMT 2006MOSN-R

RDET

RDET 08	10°
RDET 10	15°
RDET 12	15°





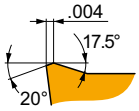
P	M	K	N	S	H
■	◪	■		◪	

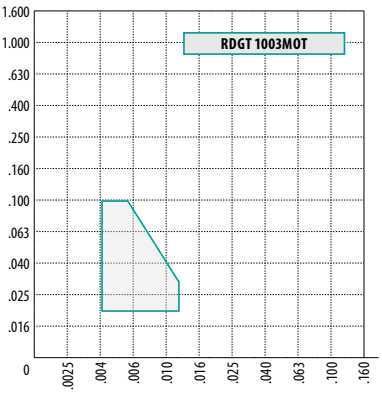
f ⇨ 0.004 – 0.014 (according to insert size)

a_p 0.020 – 0.118 (according to insert size)

RDET 0802MOSN, RDET 1003MOSN
RDET 10T3MOSN, RDET 12T3MOSN

RDGT 10





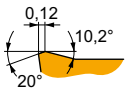
P	M	K	N	S	H
■	◪	■		◪	

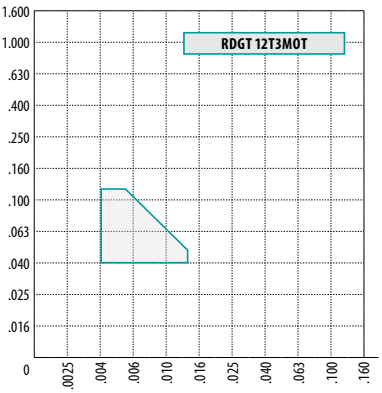
f 0.004 – 0.012

a_p 0.020 – 0.098

RDGT 1003M0T

RDGT 12





P	M	K	N	S	H
■	◪	■		◪	

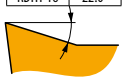
f 0.004 – 0.014

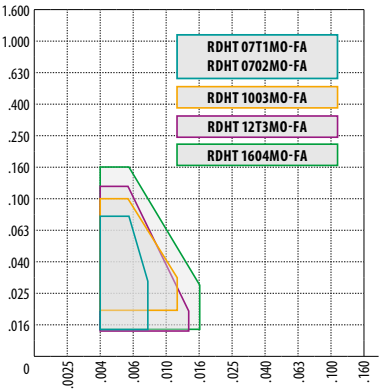
a_p 0.039 – 0.118

RDGT 12T3M0T

RDHT -FA

RDHT 07	15.9°
RDHT 10	17.5°
RDHT 12	10.2°
RDHT 16	22.0°





P	M	K	N	S	H
			■		

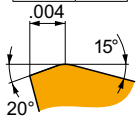
f 0.004 – 0.016 (according to insert size)

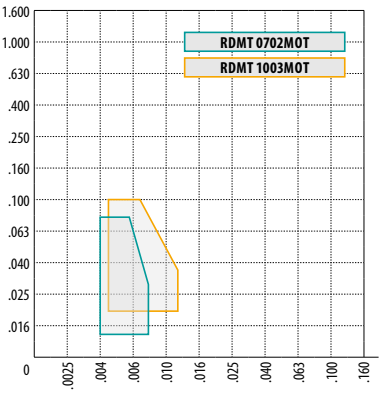
a_p 0.012 – 0.157 (according to insert size)

RDHT 07T1M0-FA, RDHT 0702M0-FA
RDHT 1003M0-FA, RDHT 12T3M0-FA
RDHT 1604M0-FA

RDMT

RDMT 07	14°
RDMT 10	15°





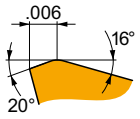
P	M	K	N	S	H
■	◪	■			

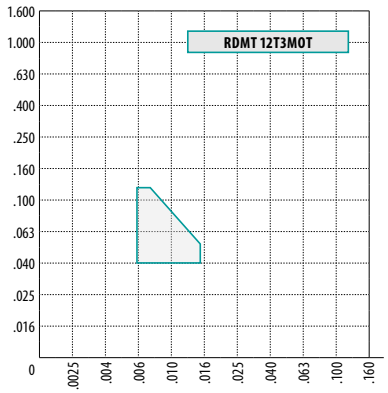
f 0.004 – 0.012 (according to insert size)

a_p 0.012 – 0.098 (according to insert size)

RDMT 0702M0T
RDMT 1003M0T

RDMT 12





P	M	K	N	S	H
■	◪	■			

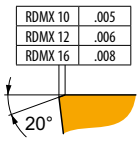
f ⇨ 0.006 – 0.014

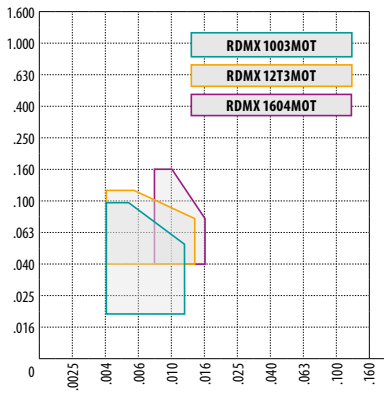
a_p 0.039 – 0.118

RDMT 12T3M0T

RDMX

RDMX 10	.005
RDMX 12	.006
RDMX 16	.008





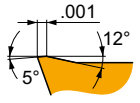
P	M	K	N	S	H
◪		■			■

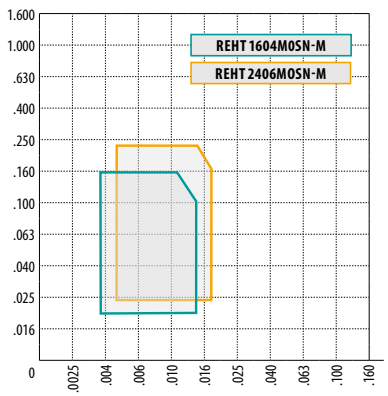
f ⇨ 0.004 – 0.016 (according to insert size)

a_p 0.020 – 0.157 (according to insert size)

RDMX 1003M0T
RDMX 12T3M0T
RDMX 1604M0T

REHT -M





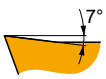
P	M	K	N	S	H
■	■			◪	

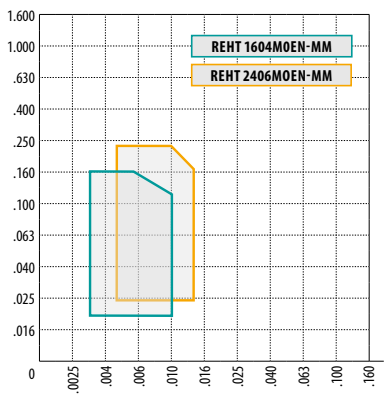
f ⇨ 0.003 – 0.018 (according to insert size)

a_p 0.020 – 0.236 (according to insert size)

REHT 1604M0SN-M
REHT 2406M0SN-M

REHT -MM





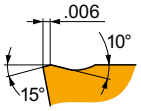
P	M	K	N	S	H
◪	■		◪	■	

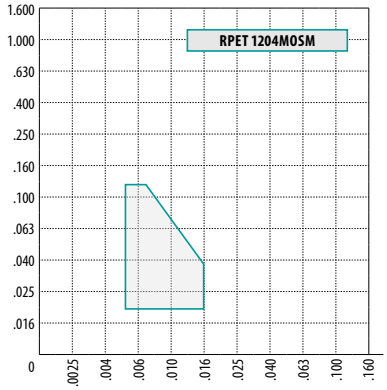
f ⇨ 0.003 – 0.014 (according to insert size)

a_p 0.020 – 0.236 (according to insert size)

REHT 1604M0EN-MM
REHT 2406M0EN-MM

RPET 12





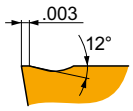
P	M	K	N	S	H
■	◪	◪		◪	

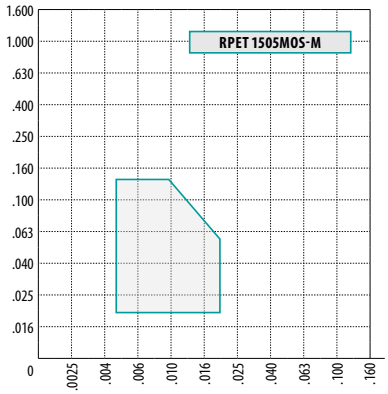
f 0.005 – 0.016

a_p 0.020 – 0.118

RPET 1204M0SM

RPET 15-M





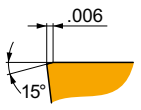
P	M	K	N	S	H
■	◪	◪		◪	

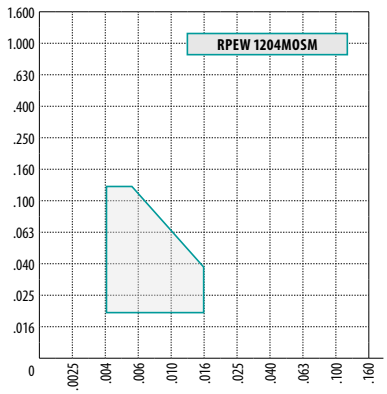
f 0.005 – 0.020

a_p 0.020 – 0.138

RPET 1505M0S-M

RPEW 12





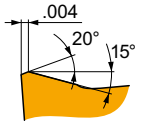
P	M	K	N	S	H
◪		■			■

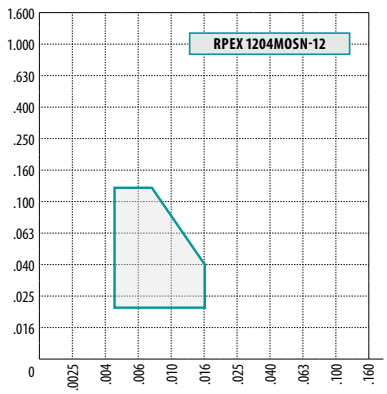
f 0.004 – 0.016

a_p 0.020 – 0.118

RPEW 1204M0SM

RPEX -12





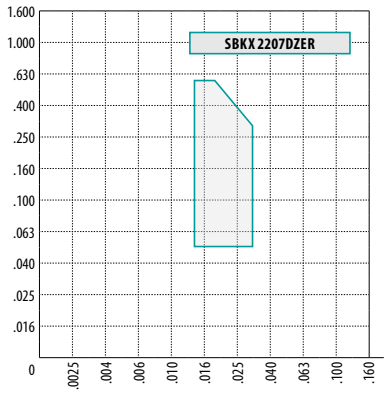
P	M	K	N	S	H
■	◪	■		◪	

f 0.005 – 0.016

a_p 0.020 – 0.118

RPEX 1204M0SN-12

SBKX 22



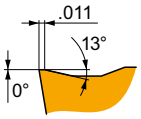
P	M	K	N	S	H
■		■			

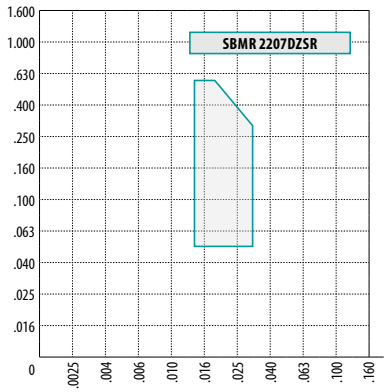
f 0.014 – 0.031

a_p 0.059 – 0.591

SBKX 2207DZER

SBMR 22





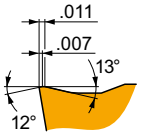
P	M	K	N	S	H
■	◪	■			

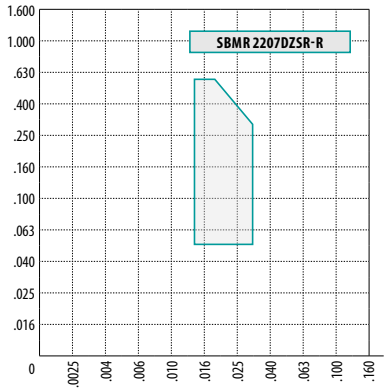
f 0.014 – 0.031

a_p 0.059 – 0.591

SBMR 2207DZSR

SBMR 22-R





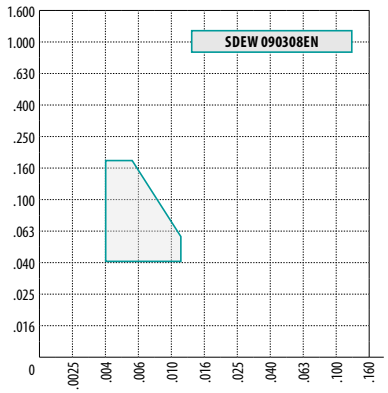
P	M	K	N	S	H
■	◪	■			

f 0.014 – 0.031

a_p 0.059 – 0.591

SBMR 2207DZSR-R

SDEW 09EN



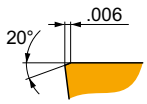
P	M	K	N	S	H
◪		■			◪

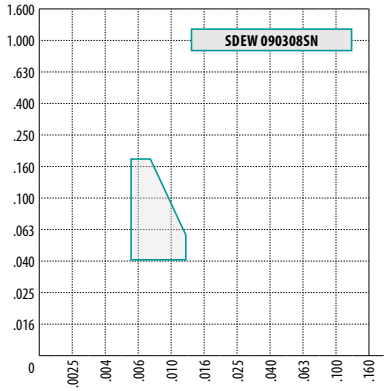
f 0.004 – 0.012

a_p 0.039 – 0.177

SDEW 090308EN

SDEW 09SN

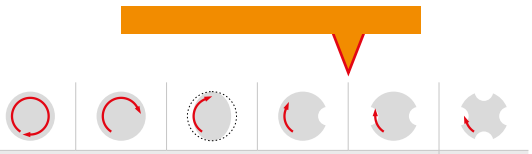




P	M	K	N	S	H
◪		■			◪

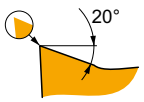
f ⇨ 0.006 – 0.012

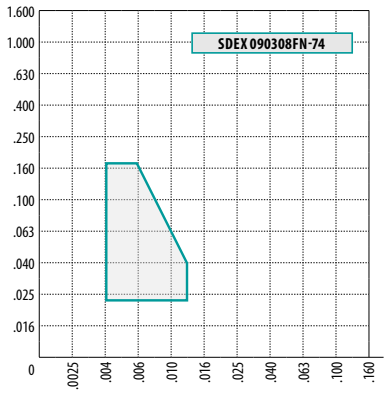
a_p 0.039 – 0.177



SDEW 090308SN

SDEX 09-74

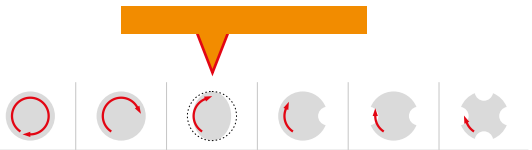




P	M	K	N	S	H
■	◪	◪		◪	

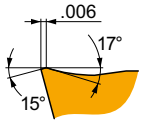
f ⇨ 0.004 – 0.012

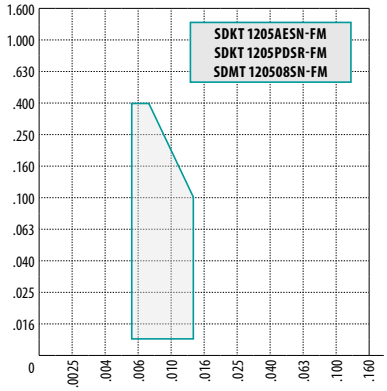
a_p 0.020 – 0.177



SDEX 090308FN-74

SDK(M)T 12-FM (IM)

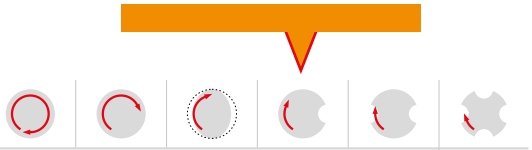




P	M	K	N	S	H
■	◪	◪			

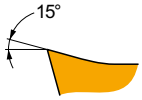
f ⇨ 0.006 – 0.014

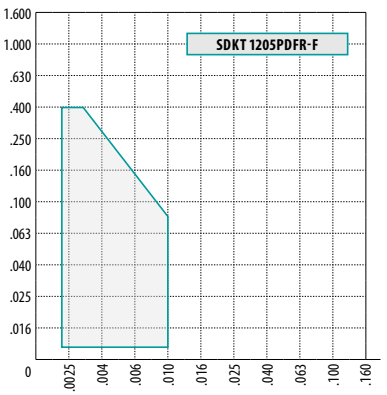
a_p 0.008 – 0.394



SDKT 1205AESN-FM
SDKT 1205PDSR-FM
SDMT 120508SN-FM

SDKT 12-F (IM)

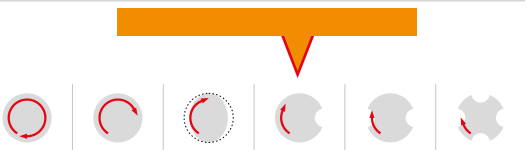




P	M	K	N	S	H
■	◪		◪		

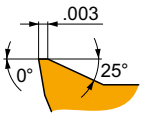
f ⇨ 0.002 – 0.010

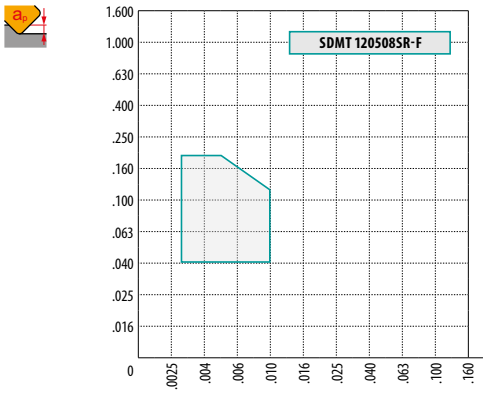
a_p 0.008 – 0.394



SDKT 1205PDFR-F

SDMT 12-F





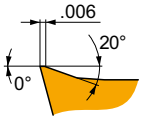
P	M	K	N	S	H
■	◪	◪	◪	◪	

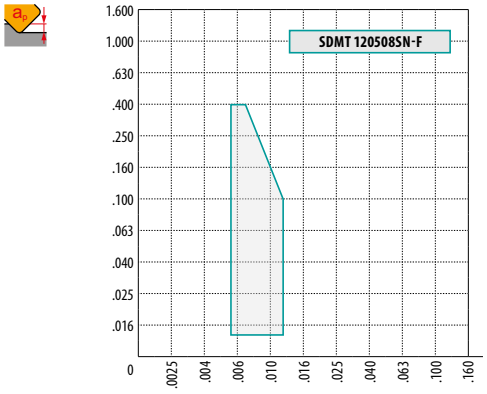
f 0.003 – 0.010

a_p 0.039 – 0.197

SDMT 120508SR-F

SDMT 12-F (IM)





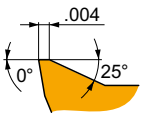
P	M	K	N	S	H
■	◪		◪		

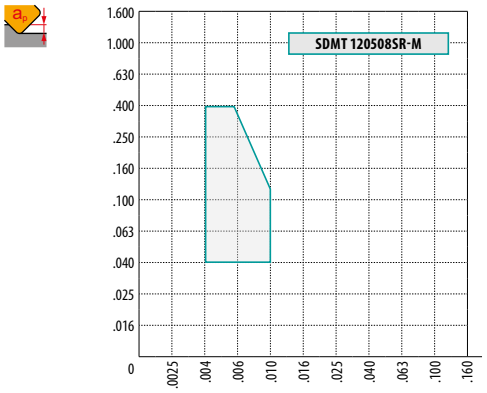
f 0.006 – 0.012

a_p 0.012 – 0.394

SDMT 120508SN-F

SDMT 12-M





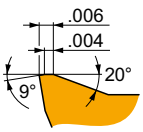
P	M	K	N	S	H
■	■	◪		◪	

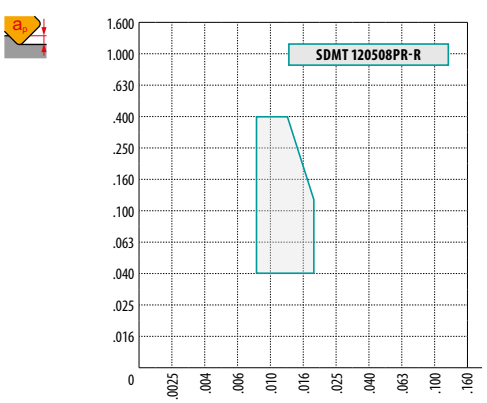
f 0.004 – 0.010

a_p 0.039 – 0.394

SDMT 120508SR-M

SDMT 12-R





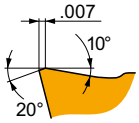
P	M	K	N	S	H
■	◪	■		◪	

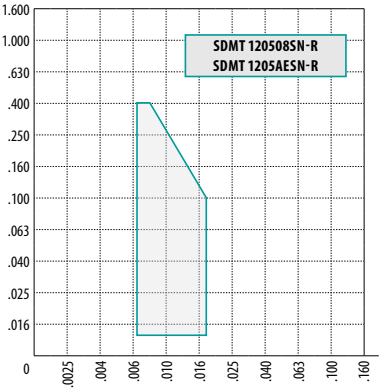
f 0.008 – 0.018

a_p 0.039 – 0.394

SDMT 120508PR-R

SDMT 12-R (IM)

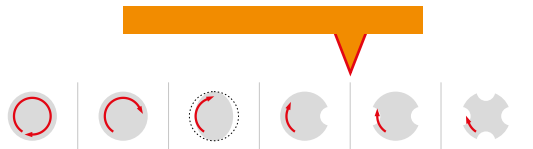




P	M	K	N	S	H
■		■			

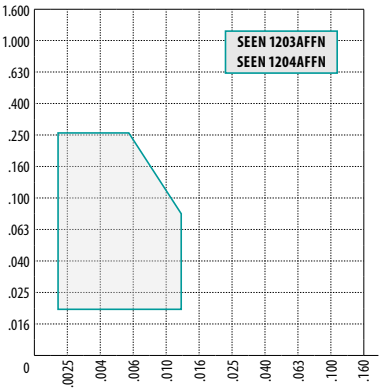
f 0.007 – 0.018

a_p 0.012 – 0.394



SDMT 120508SN-R
SDMT 1205AESN-R

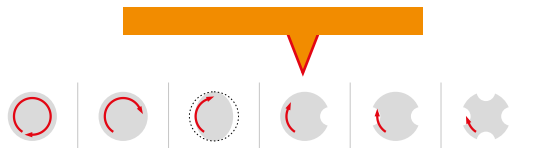
SEEN 12FN



P	M	K	N	S	H
■	◪	◪			

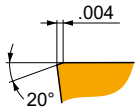
f 0.002 – 0.016 (according to insert size)

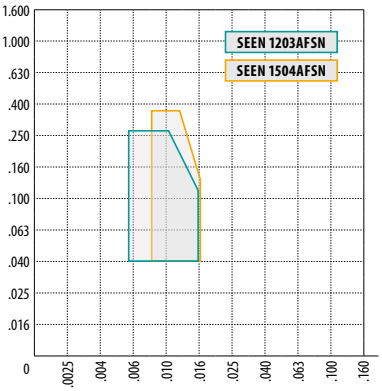
a_p 0.020 – 0.256



SEEN 1203AFFN
SEEN 1204AFFN

SEEN SN

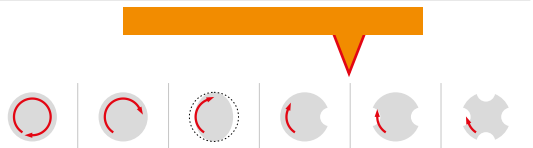




P	M	K	N	S	H
■		■			◪

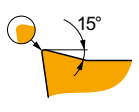
f 0.006 – 0.016 (according to insert size)

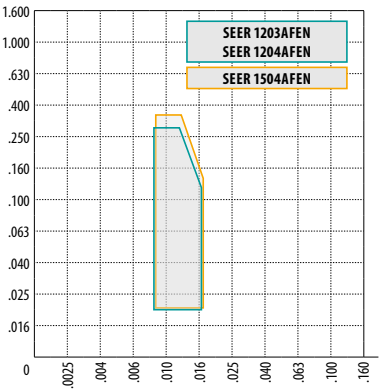
a_p 0.020 – 0.354 (according to insert size)



SEEN 1203AFSN
SEEN 1504AFSN

SEER EN

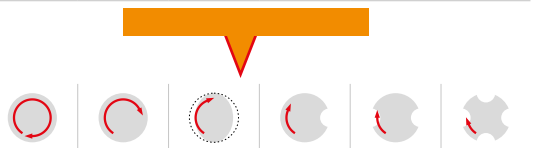




P	M	K	N	S	H
■	◪	■		◪	

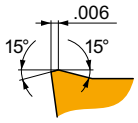
f 0.008 – 0.016 (according to insert size)

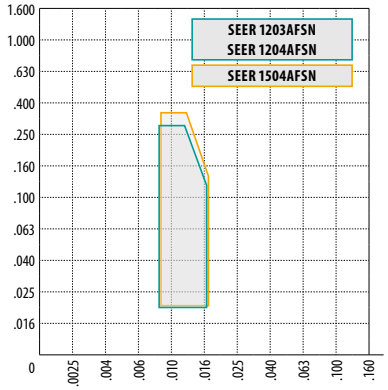
a_p 0.020 – 0.354 (according to insert size)



SEER 1203AFEN
SEER 1204AFEN
SEER 1504AFEN

SEER SN





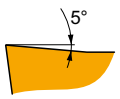
P	M	K	N	S	H
■	◪	■		◪	

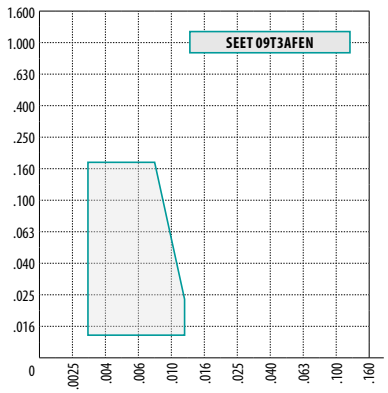
f ⇨ 0.008 – 0.016 (according to insert size)

a_p 0.039 – 0.354 (according to insert size)

SEER 1203AFSN
SEER 1204AFSN
SEER 1504AFSN

SEET 09





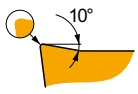
P	M	K	N	S	H
■	◪			◪	

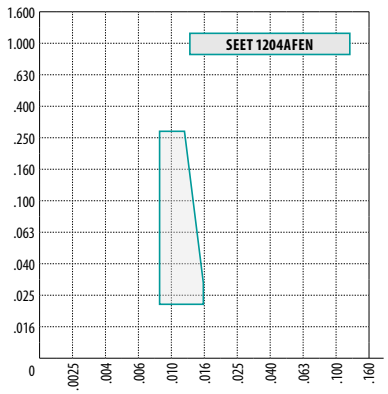
f ⇨ 0.003 – 0.012

a_p 0.012 – 0.177

SEET 09T3AFEN

SEET 12EN





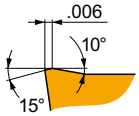
P	M	K	N	S	H
■	■	◪		◪	

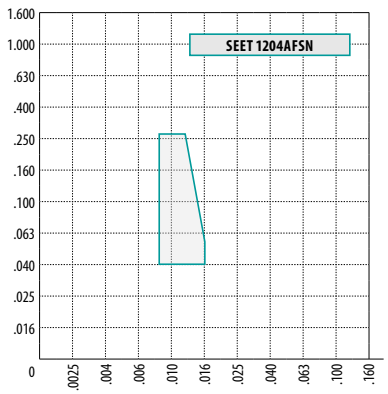
f ⇨ 0.008 – 0.016

a_p 0.020 – 0.256

SEET 1204AFEN

SEET 12SN





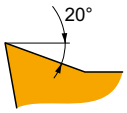
P	M	K	N	S	H
■	■	◪		◪	

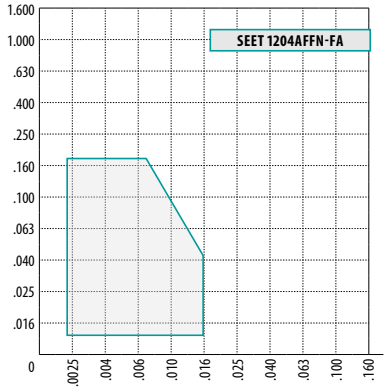
f ⇨ 0.008 – 0.016

a_p 0.039 – 0.256

SEET 1204AFSN

SEET 12-FA





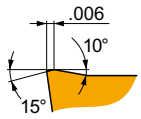
P	M	K	N	S	H
			■		

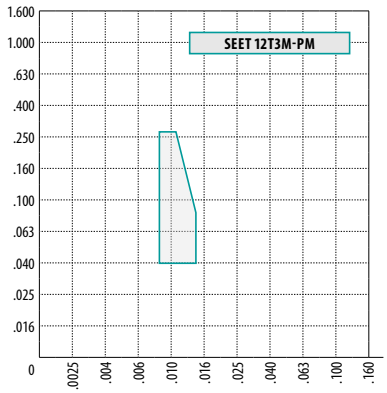
f 0.002 – 0.016

a_p 0.008 – 0.177

SEET 1204AFFN-FA

SEET 12-PM





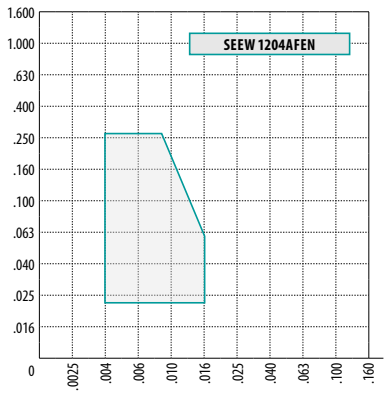
P	M	K	N	S	H
■	◪	■		◪	

f 0.008 – 0.014

a_p 0.039 – 0.256

SEET 12T3M-PM

SEEW 12 EN



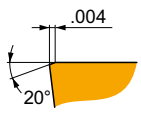
P	M	K	N	S	H
◪		◪			

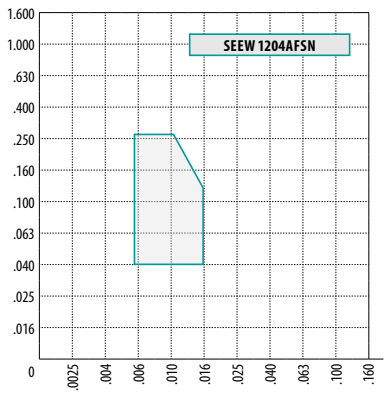
f 0.004 – 0.016

a_p 0.020 – 0.256

SEEW 1204AFEN

SEEW 12 SN





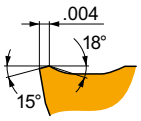
P	M	K	N	S	H
◪		■			◪

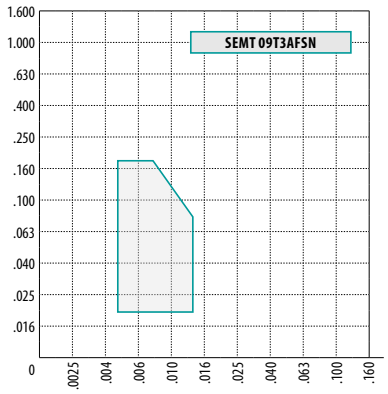
f 0.006 – 0.016

a_p 0.039 – 0.256

SEEW 1204AFSN

SEMT 09





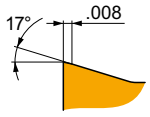
P	M	K	N	S	H
■	◪	■			

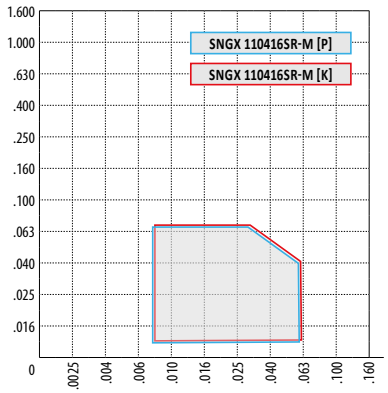
f ⇨ 0.005 – 0.014

a_p 0.020 – 0.177

SEMT 09T3AFSN

SNGX 11-M





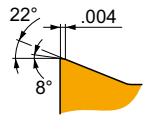
P	M	K	N	S	H
■		■			

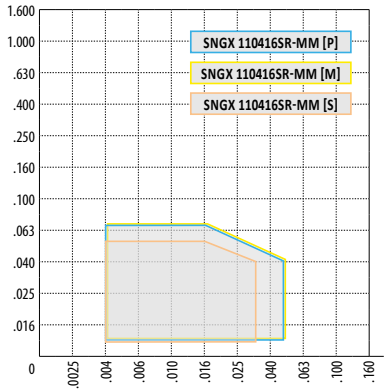
f ⇨ 0.008 – 0.059

a_p 0.008 – 0.067

SNGX 110416SR-M

SNGX 11-MM





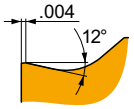
P	M	K	N	S	H
■	■			■	

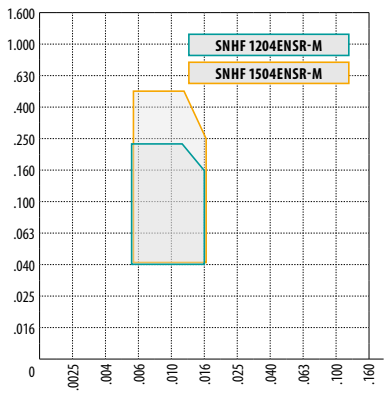
f ⇨ 0.004 – 0.047

a_p 0.008 – 0.067

SNGX 110416SR-MM

SNHF -M





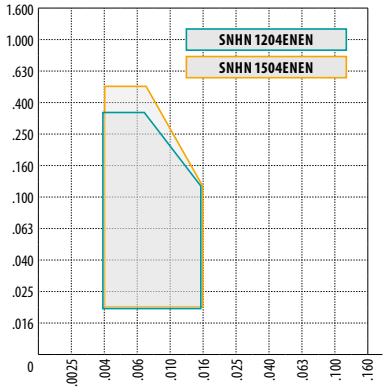
P	M	K	N	S	H
■		◪			

f ⇨ 0.006 – 0.016

a_p 0.039 – 0.531 (according to insert size)

SNHF 1204ENSR-M
SNHF 1504ENSR-M

SNHN



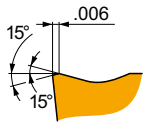
P	M	K	N	S	H
◪		■			◪

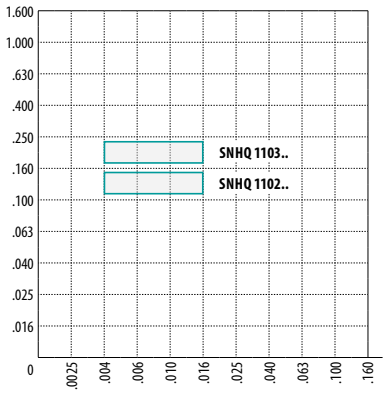
f: 0.004 – 0.016

a_p: 0.020 – 0.531 (according to insert size)

SNHN 1204ENEN
SNHN 1504ENEN

SNHQ 11





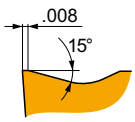
P	M	K	N	S	H
■	◪	■			

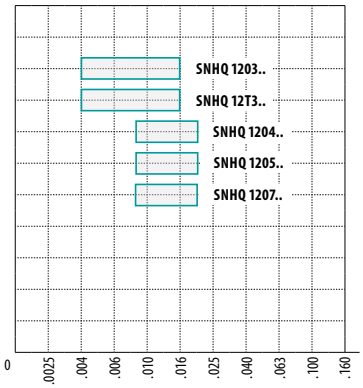
f: 0.004 – 0.016

a_p: –

SNHQ 110.AZTN

SNHQ 12TN





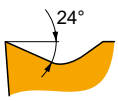
P	M	K	N	S	H
■	◪	■			

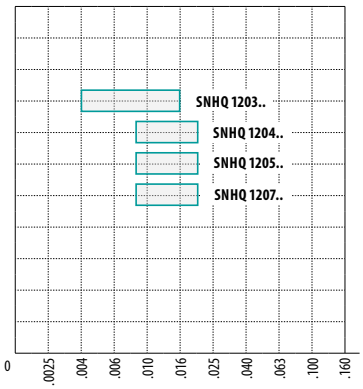
f: 0.004 – 0.020 (according to insert type)

a_p: –

SNHQ 1203AZTN, SNHQ 12T3AZTN
SNHQ 1204AZTN, SNHQ 1205AZTN
SNHQ 1207AZTN

SNHQ 12EN





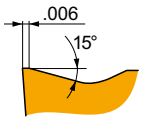
P	M	K	N	S	H
■	◪	■			

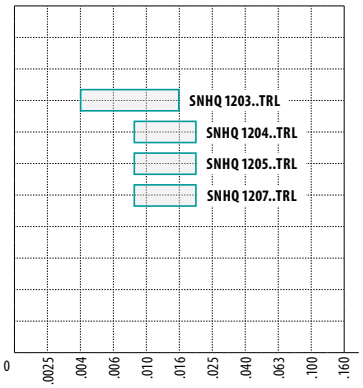
f: 0.004 – 0.020 (according to insert type)

a_p: –

SNHQ 1203AZEN, SNHQ 1204AZEN
SNHQ 1205AZEN, SNHQ 1207AZEN

SNHQ 12TRL





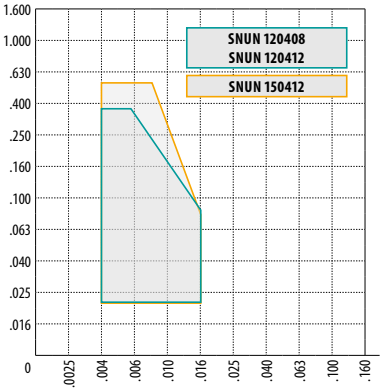
P	M	K	N	S	H
■	◪	◪			

f: 0.004 – 0.020 (according to insert type)

a_p: –

SNHQ 1203..TRL, SNHQ 1204..TRL
SNHQ 1205..TRL, SNHQ 1207..TRL

SNUN



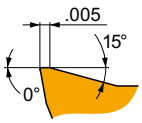
P	M	K	N	S	H
◪		■			◪

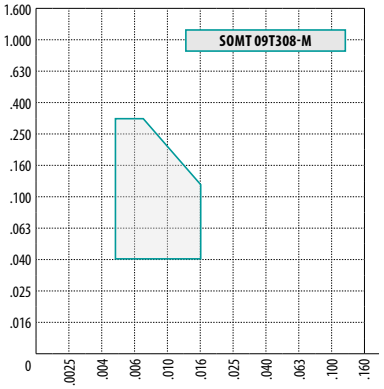
f: 0.004 – 0.016

a_p: 0.020 – 0.531 (according to insert size)

SNUN 120408
SNUN 120412
SNUN 150412

SOMT 09-M





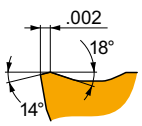
P	M	K	N	S	H
■	■	◪		◪	

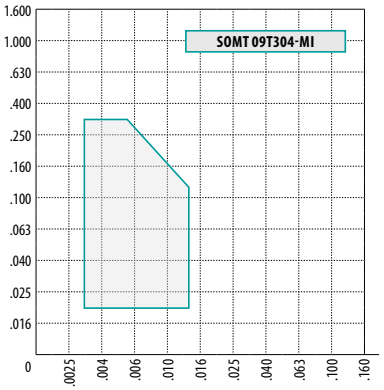
f: 0.005 – 0.016

a_p: 0.039 – 0.315

SOMT 09T308-M

SOMT 09-MI





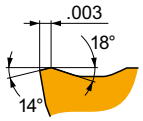
P	M	K	N	S	H
■	■	◪		◪	

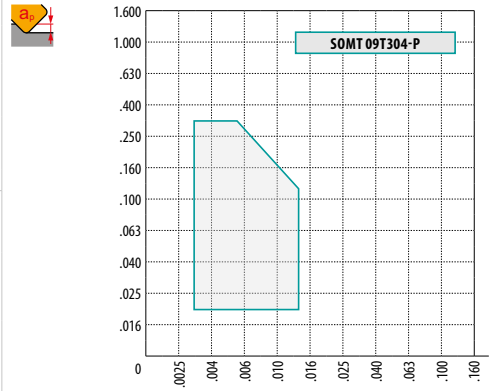
f: 0.003 – 0.014

a_p: 0.020 – 0.315

SOMT 09T304-MI

SOMT 09-P





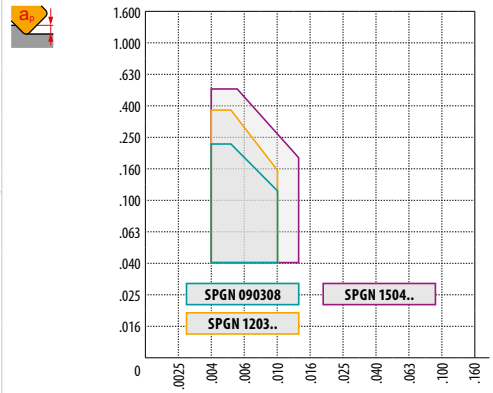
P	M	K	N	S	H
■	◪	◪		◪	

f 0.003 – 0.014

a_p 0.020 – 0.315

SOMT 09T304-P

SPGN



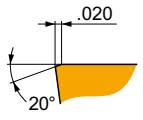
P	M	K	N	S	H
■		■			

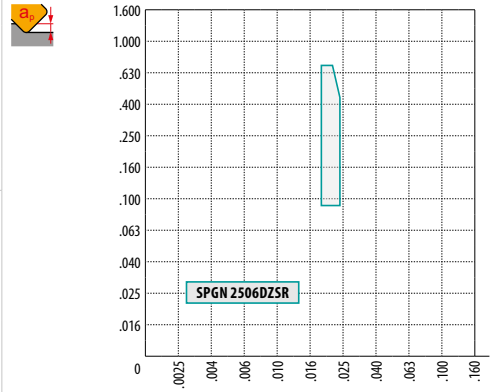
f 0.004 – 0.014 (according to insert size)

a_p 0.020 – 0.531 (according to insert size)

SPGN 090308
SPGN 1203..
SPGN 1504..

SPGN DZ





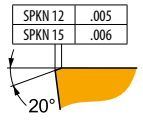
P	M	K	N	S	H
■		■			

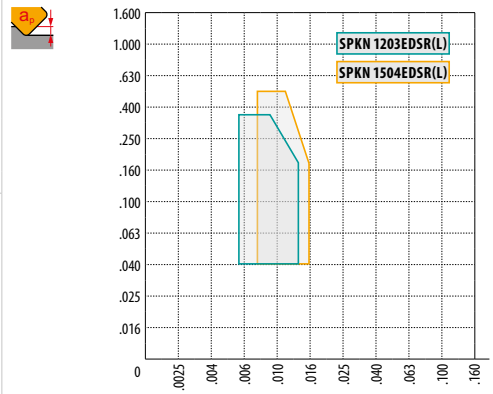
f 0.018 – 0.024

a_p 0.079 – 0.709

SPGN 2506DZSR

SPKN EDSR(L)





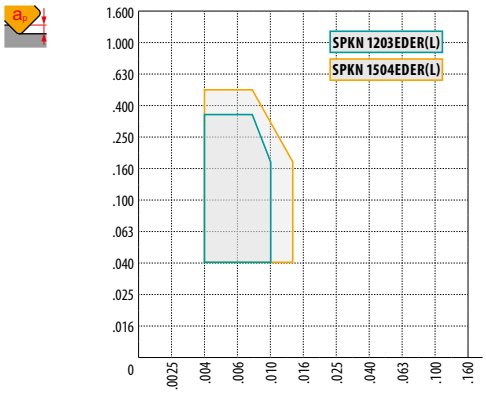
P	M	K	N	S	H
◪		■			◪

f 0.006 – 0.016 (according to insert size)

a_p 0.039 – 0.512 (according to insert size)

SPKN 1203EDSR(L)
SPKN 1504EDSR(L)

SPKN EDER(L)



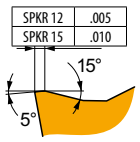
P	M	K	N	S	H
◪		■			◪

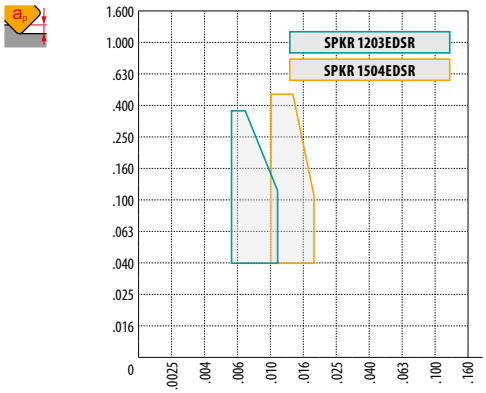
f ⇨ 0.004 – 0.014 (according to insert size)

a_p 0.039 – 0.512 (according to insert size)

SPKN 1203EDER(L)
SPKN 1504EDER(L)

SPKR





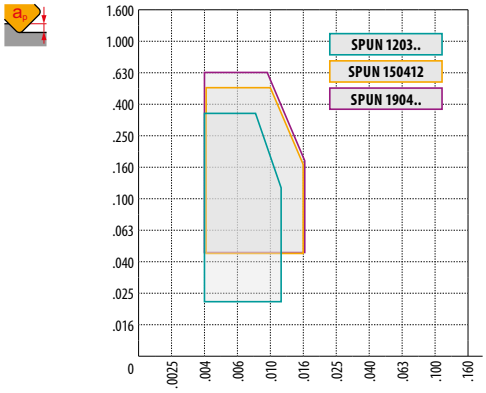
P	M	K	N	S	H
■	◪	■			

f ⇨ 0.006 – 0.018 (according to insert size)

a_p 0.039 – 0.472 (according to insert size)

SPKR 1203EDSR
SPKR 1504EDSR

SPUN



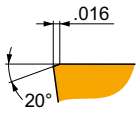
P	M	K	N	S	H
■		◪			

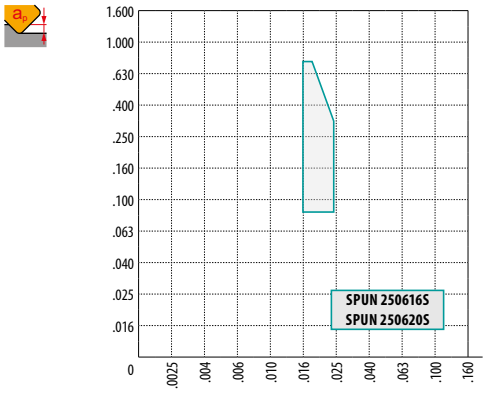
f ⇨ 0.004 – 0.016 (according to insert size)

a_p 0.020 – 0.630 (according to insert size)

SPUN 1203..
SPUN 150412
SPUN 1904..

SPUN 25





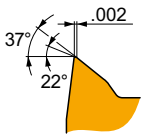
P	M	K	N	S	H
■		◪			

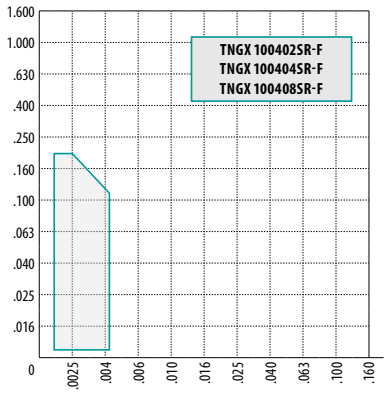
f ⇨ 0.016 – 0.024

a_p 0.079 – 0.709

SPUN 250616S
SPUN 250620S

TNGX 10-F

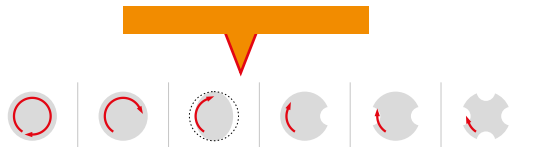




P	M	K	N	S	H
■	◪	◪			

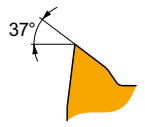
f 0.012 – 0.004

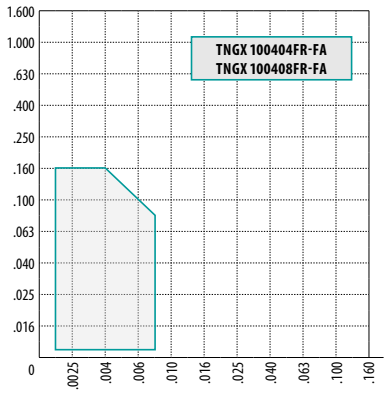
a_p 0.004 – 0.197



TNGX 100402SR-F
TNGX 100404SR-F
TNGX 100408SR-F

TNGX 10-FA

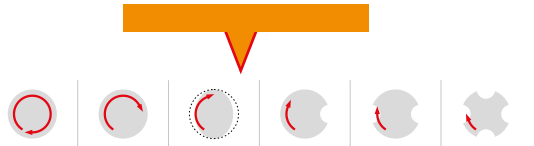




P	M	K	N	S	H
			■		

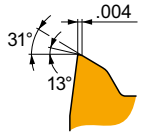
f 0.001 – 0.008

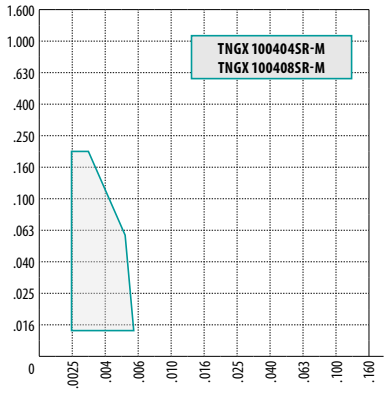
a_p 0.004 – 0.157



TNGX 100404FR-FA
TNGX 100408FR-FA

TNGX 10-M

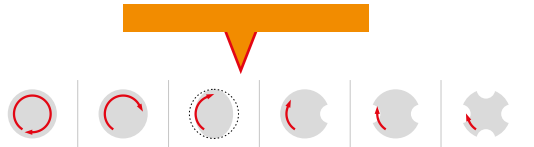




P	M	K	N	S	H
■	◪	◪		◪	

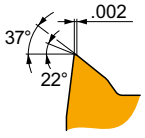
f 0.002 – 0.006

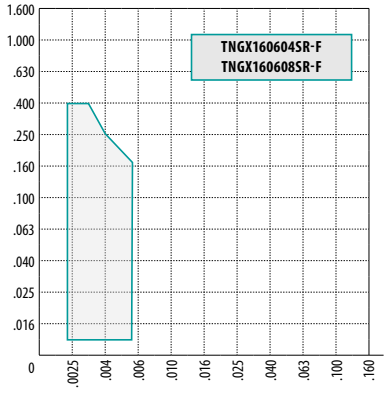
a_p 0.012 – 0.197



TNGX 100404SR-M
TNGX 100408SR-M

TNGX 16-F

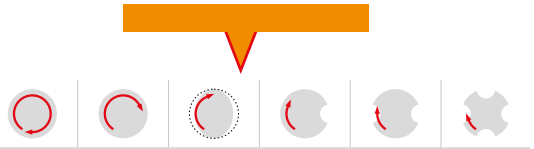




P	M	K	N	S	H
■	◪	◪			

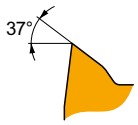
f 0.002 – 0.006

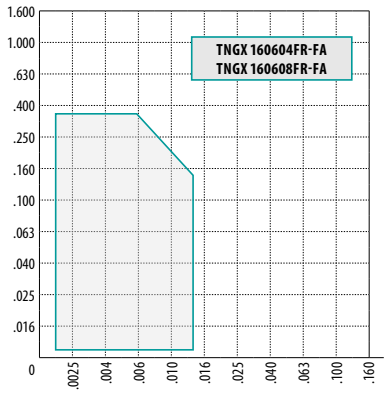
a_p 0.008 – 0.394



TNGX160604SR-F
TNGX160608SR-F

TNGX 16-FA





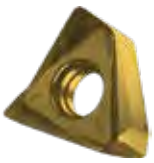
P	M	K	N	S	H
			■		

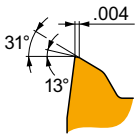
f ⇨ 0.001 – 0.014

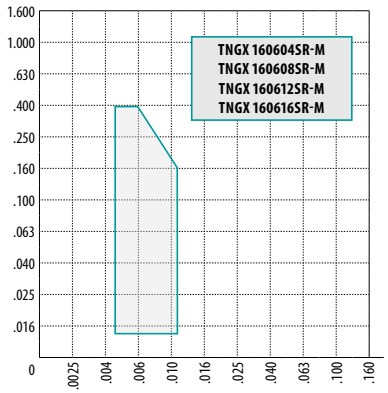
a_p 0.008 – 0.354

TNGX 160604FR-FA
TNGX 160608FR-FA

TNGX 16-M







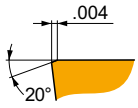
P	M	K	N	S	H
■	◪	◪		◪	

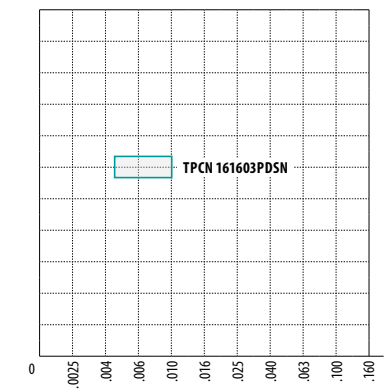
f ⇨ 0.005 – 0.011

a_p 0.012 – 0.394

TNGX 160604SR-M, TNGX 160608SR-M
TNGX 160612SR-M, TNGX 160616SR-M

TPCN 16





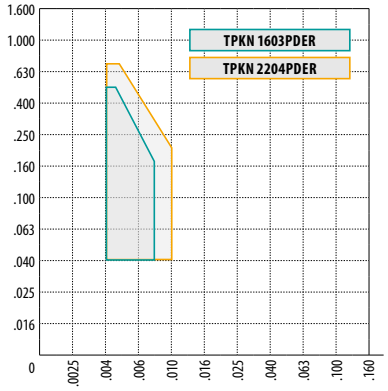
P	M	K	N	S	H
■		■			

f ⇨ 0.005 – 0.010

a_p –

TPCN 161603PDSN

TPKN ER



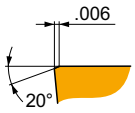
P	M	K	N	S	H
◪		◪			

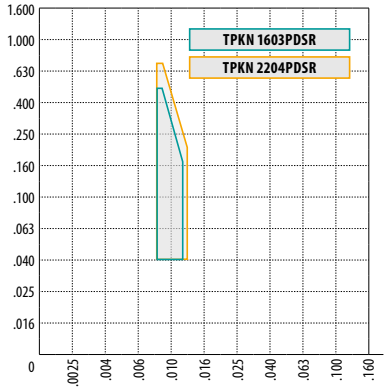
f ⇨ 0.004 – 0.010 (according to insert size)

a_p 0.039 – 0.669 (according to insert size)

TPKN 1603PDER
TPKN 2204PDER

TPKN SR





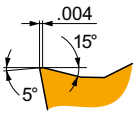
P	M	K	N	S	H
◪		◪			◪

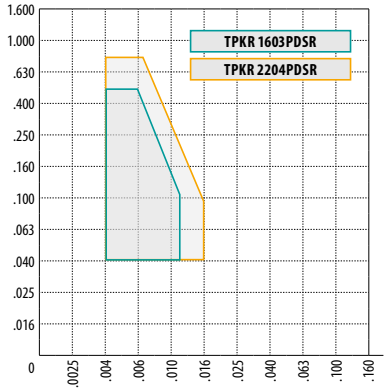
f: 0.008 – 0.014 (according to insert size)

a_p: 0.039 – 0.669 (according to insert size)

TPKN 1603PDSR
TPKN 2204PDSR

TPKR





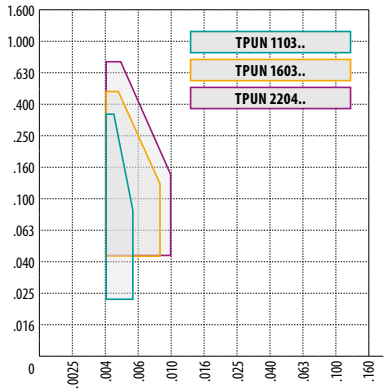
P	M	K	N	S	H
■	◪	■			

f: 0.004 – 0.016 (according to insert size)

a_p: 0.039 – 0.669 (according to insert size)

TPKR 1603PDSR
TPKR 2204PDSR

TPUN



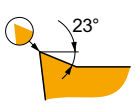
P	M	K	N	S	H
◪		◪			

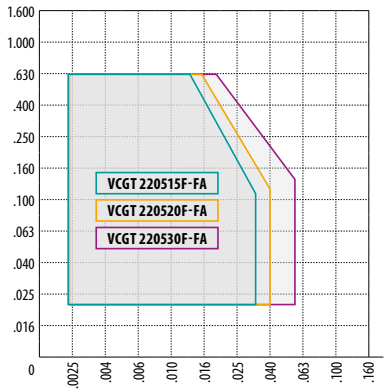
f: 0.004 – 0.010 (according to insert size)

a_p: 0.020 – 0.669 (according to insert size)

TPUN 1103..
TPUN 1603..
TPUN 2204..

VCGT 22-FA

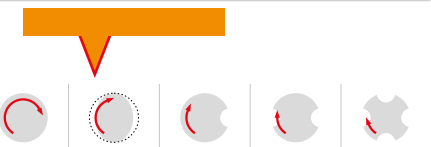




P	M	K	N	S	H
			■		

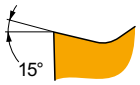
f: 0.002 – 0.059 (according to insert size)

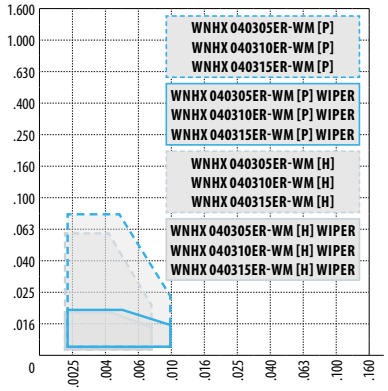
a_p: 0.020 – 0.630



VCGT 220515F-FA
VCGT 220520F-FA
VCGT 220530F-FA

WNHX 04-WM





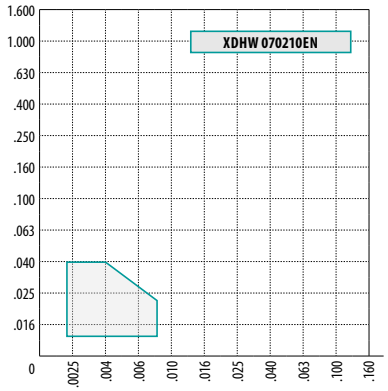
P	M	K	N	S	H
■		■			■

f: 0.002 – 0.010

a_p: 0.004 – 0.079

WNHX 0403..ER-WM

XDHW EN



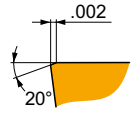
P	M	K	N	S	H
◪		■			■

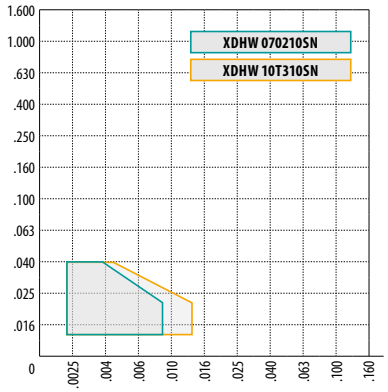
f: 0.002 – 0.008

a_p: 0.008 – 0.039

XDHW 070210EN

XDHW SN





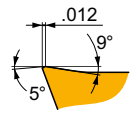
P	M	K	N	S	H
◪		■			■

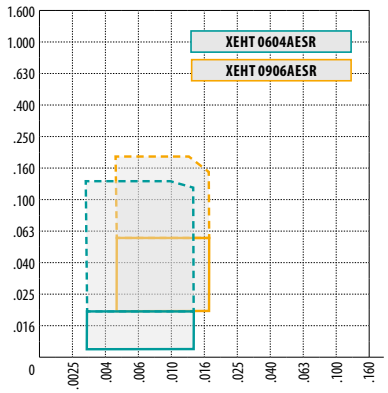
f: 0.002 – 0.014 (according to insert size)

a_p: 0.008 – 0.039

XDHW 070210SN
XDHW 10T310SN

XEHT





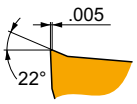
P	M	K	N	S	H
■	◪				

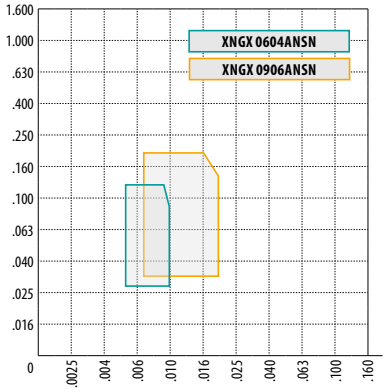
f: 0.003 – 0.018 (according to insert size)

a_p: 0.004 – 0.197 (according to insert size)

XEHT 0604AESR
XEHT 0906AESR

XNGX ANSN





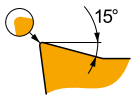
P	M	K	N	S	H
■	◪	■			

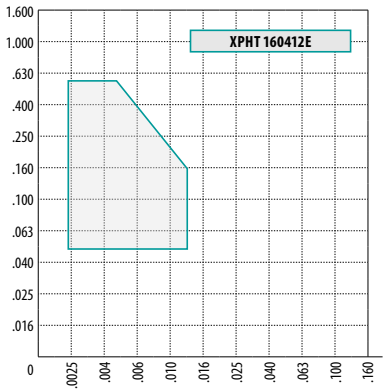
f ⇨ 0.005 – 0.020 (according to insert size)

a_p 0.028 – 0.197 (according to insert size)

XNGX 0604ANSN
XNGX 0906ANSN

XPHT 16E





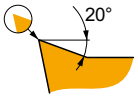
P	M	K	N	S	H
■	■	◪			

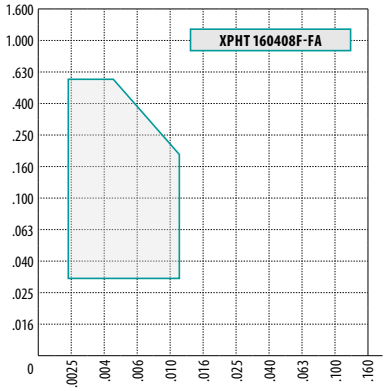
f ⇨ 0.002 – 0.012

a_p 0.047 – 0.591

XPHT 160412E

XPHT 16-FA





P	M	K	N	S	H
			■		

f ⇨ 0.002 – 0.012

a_p 0.031 – 0.591

XPHT 160408F-FA

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	Color	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	+ / -	One of the toughest grade dedicated for machining with lower cutting speed and unfavorable conditions. This grade is ideal for all operations where the main requirement is for a tough cutting edge.

Grade Identification	Area of Application	Application	Feed	Cutting speed	Resistance to adverse Working Conditions	Coating	Color	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 unfavorable 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 unfavorable 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 unfavorable 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 unfavorable 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

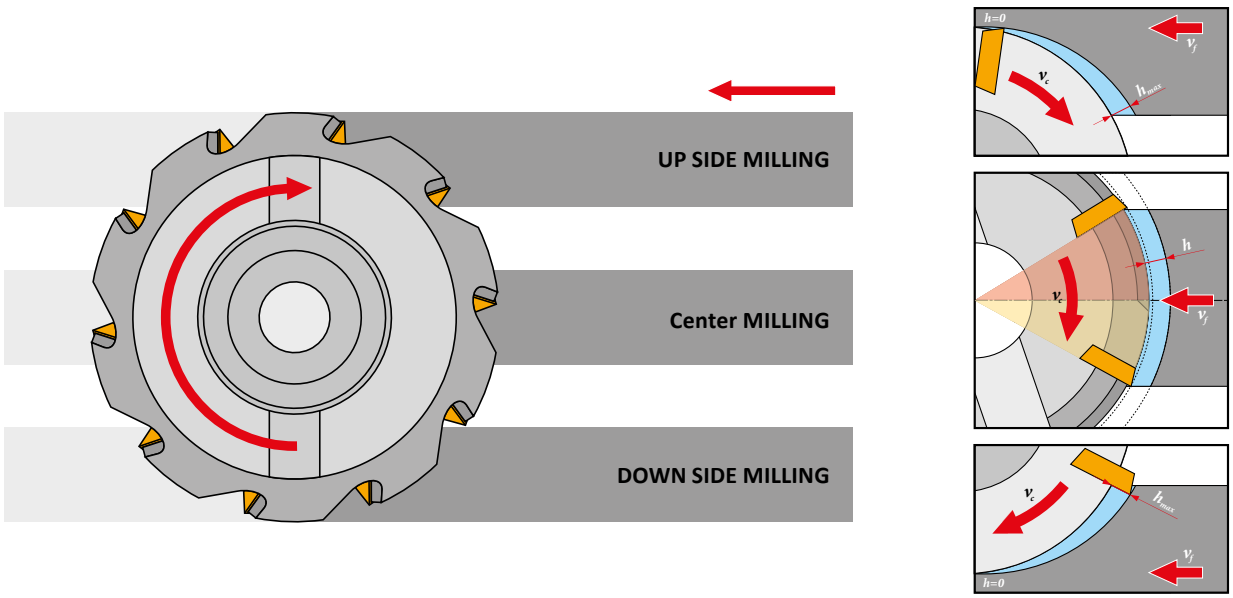
Level of influence	
	Level 1 – 5

When performing a milling operation, the edge of the milling cutter almost always makes interrupted (intermittent) cuts. Each edge enters and exits the workpiece at least once within a single revolution of the tool.

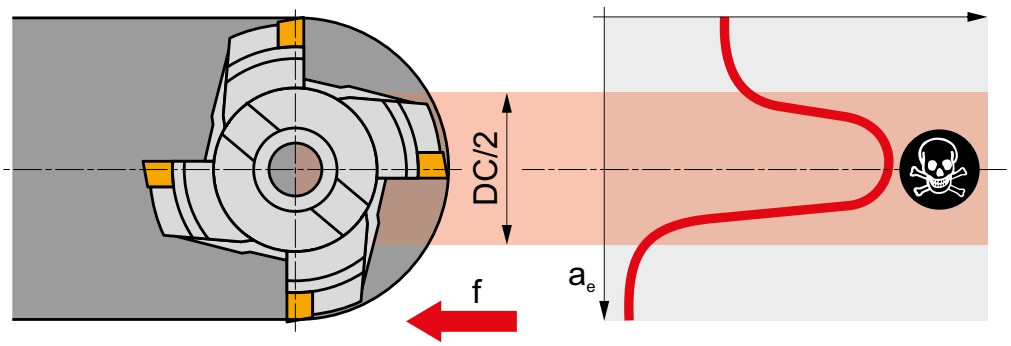
In addition, a periodic change in chip thickness takes place during each revolution of the milling cutter. This results in fluctuations in the size and direction of the tangential component of the cutting force. The edge of the milling cutter is thus subjected to cyclic stress which results in specific wear. The durability of the milling cutter edge is therefore dependent on the conditions in which the edge enters and exits the workpiece. Proper choice of these conditions significantly affects the milling process and its results in terms of cutting power and quality of the machined surface.

At the moment the edge enters or exits the workpiece, the edge is subjected to more or less intense mechanical shock which causes mechanical stress in the immediate vicinity of the cutting edge. If engagement conditions are chosen incorrectly, this shock can cause brittle damage to the edge, in the form of either fracturing or crumbling of the edge.

Position of the milling cutter relative to the workpiece is thus a very important factor. There are essentially three possible milling cutter positions: side up milling, center 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...).

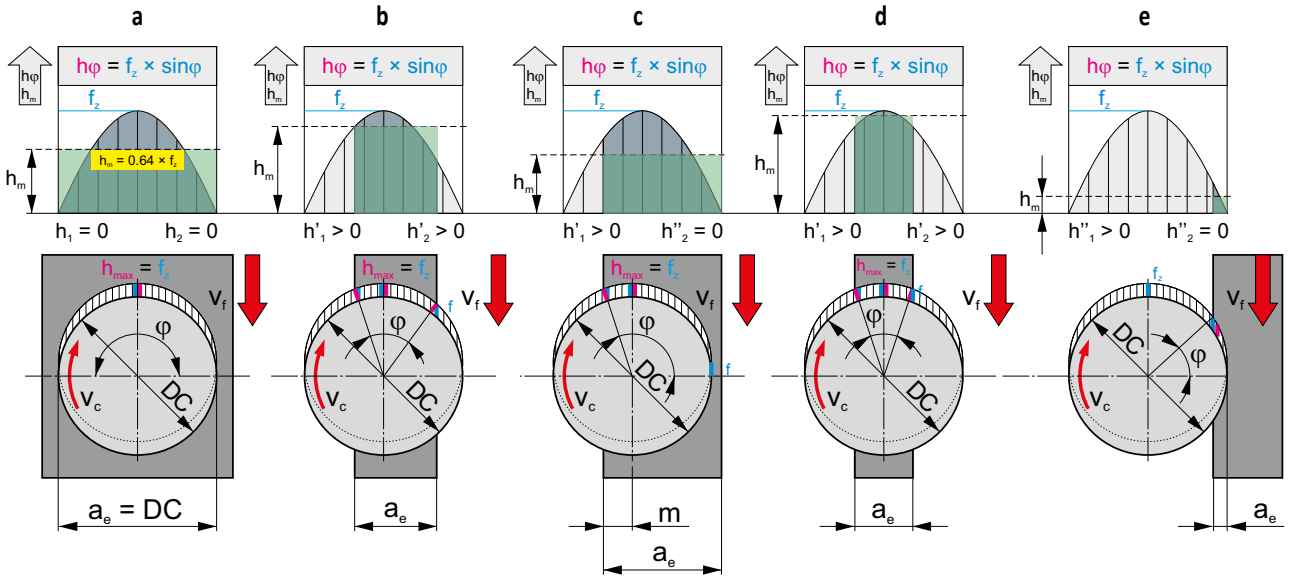


During face milling, where the width of the milled surface a_e is equal to the diameter of the milling cutter, follow the values recommended specifically for the inserts. If the engagement width is less than the diameter of the milling cutter, then the key factor is whether we machine with the center 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 697). Either way, we should try to ensure that the tool does not enter or exit the cut in an area close to the center 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 center) in accordance with figure a, b, d is calculated based on the formula:

$$h_m = f_z \times sin\,\kappa_r \times \left(57.3 \frac{a_e}{DC \times arcsin \times \left(\frac{a_e}{DC} \right)} \right)$$

Average chip thickness h_m for machining with the side of the milling cutter (figure c, e) is calculated based on the formula:

$$h_m = f_z \times sin\,\kappa_r \times 114.6 \times \left(\frac{a_e}{DC \times arccos \times \left(1 - \frac{2a_e}{DC} \right)} \right)$$

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:

$$h_m = f_z \times sin\,\kappa_r \times \sqrt{\frac{a_e}{DC}}$$

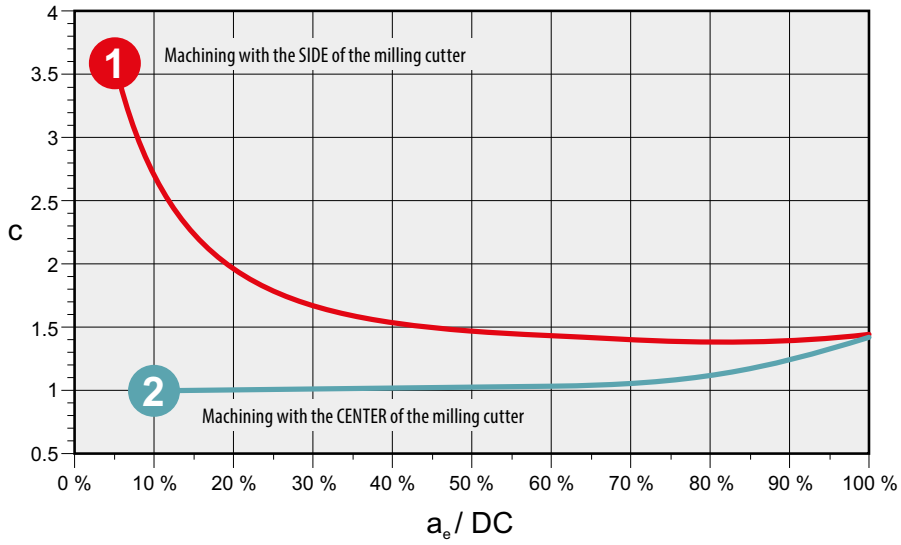
Where:

h_m	Is average chip thickness (mm)
f_z	Feed per tooth (mm/tooth)
a_e	Radial depth of cut (mm)
DC	Diameter of the milling cutter (mm)
κ_r	Entering angle of the main cutting edge *KAPR* (°)

For optimal application of any milling tool, we recommend checking chip thickness, or rather, using the recommended h_m range to choose (calculate) the proper feed rate.

It is, of course, also necessary to take into account the geometry of the indexable insert itself. To calculate f_z, you can use the formula provided above or use the following formula. The values of coefficient c can be derived from the following chart:

$$f_z = \frac{h_m}{sin \times \kappa_r} \times c$$



Each tool type listed in this catalog has its own optimum range of average chip thickness. Using values lower than listed in this range may prevent the tool from cutting or, rather, may subject the insert to excessive wear and, in extreme cases, may even destroy it in the process. Similarly, exceeding the recommended values may destroy the insert by overloading the tool. The ranges of recommended average chip thickness are listed directly by each tool family.

The full range of chip thickness can only be used for groups P and K. The lower limit of chip thickness must be adjusted (taken as higher than listed) for groups M and S and for tougher materials from group N. The upper limit must be lowered for groups H, S and slightly also for tougher materials from group M. On the contrary, it is possible to increase the upper limit of recommended average chip thickness by approx. 10 – 15 % when machining soft materials from group N.

SHN06C

P M K H

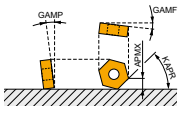
PRAMET

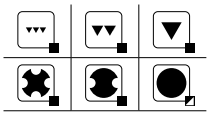
S

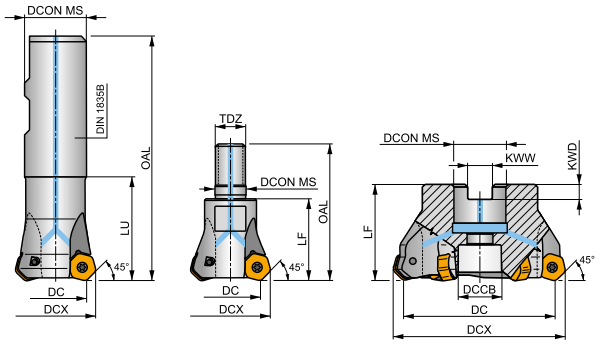
ECON HN06 45° Face Mill with Double Negative Design and Internal Coolant

Highly productive 45° face mill utilising double sided HN.. 06 style inserts with APMX of 3 mm. Roughing, finishing and chamfering. Economical insert with 12 cutting edges. Differential tooth pitch. Weldon, modular and arbor style available in range from Ø25 up to Ø125 mm. Body treated for longer tool life.

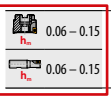
KAPR	45°
APMX	3.0 mm







Optimum range of average chip thickness

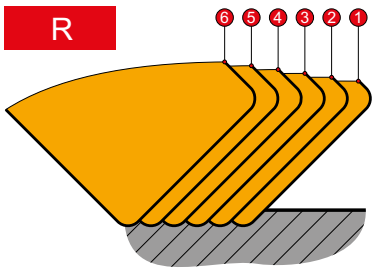


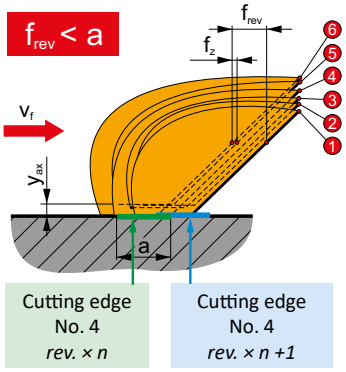
Product	DC	DCX	OAL	DCON MS	DCCB	LU	LF	TDZ	KWW	KWD	GAMF	GAMP	max.	kg

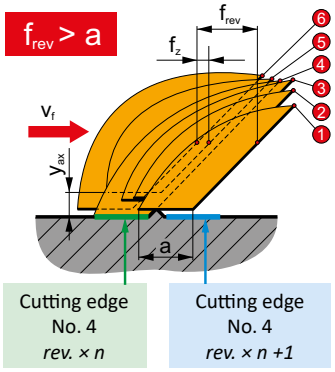
One of the key criteria in finishing operations is the resulting roughness of the machined surface. The following article will therefore provide several tips on how to approach this issue.

Face Milling

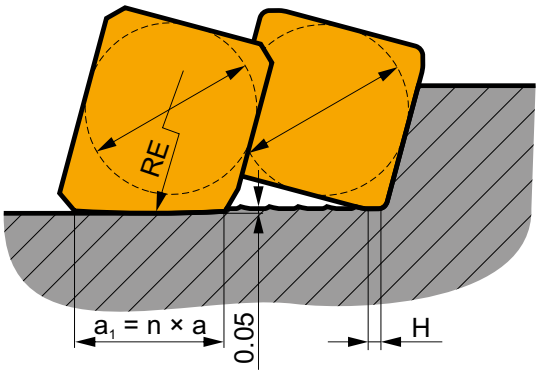
When performing any milling operation, the machined surface is shaped by multiple edges. The microgeometry of the surface is thus dependent on the axial runout of the individual edges of the milling cutter. The most axially protruding edges are the ones that shape the machined surface. The resulting 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. 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 $f_z = 0.8 \times a / z$ 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.



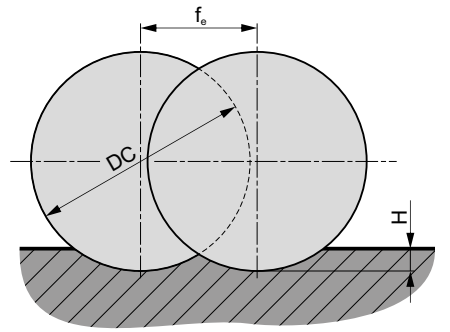




In that case, the best solution is to use a milling cutter with fewer pockets or to reduce the number of pockets on the milling cutter (only fitting an insert onto every other pocket of milling cutters with an even number of pockets). There is, however, a risk of reduced productivity. Another alternative 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 center 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 catalog section.



As regards the majority of other types of milling operations, the approximate maximum surface roughness can again be calculated. To do so, we can use the following formula, here accompanied by a graphical explanation.

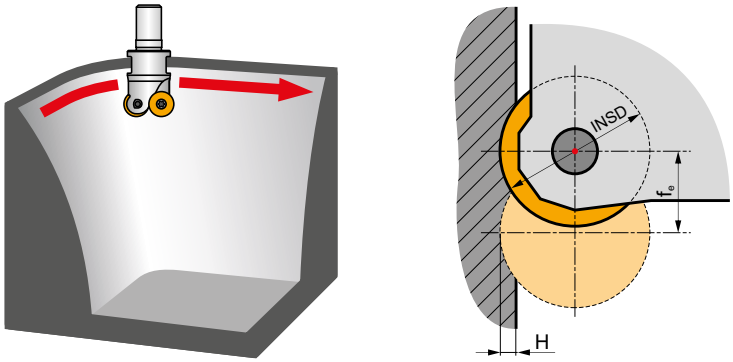


$$H = \frac{f_e^2}{4 \times DC} \rightarrow f_e = \sqrt{4 \times DC \times H}$$

Where and when to apply this formula:

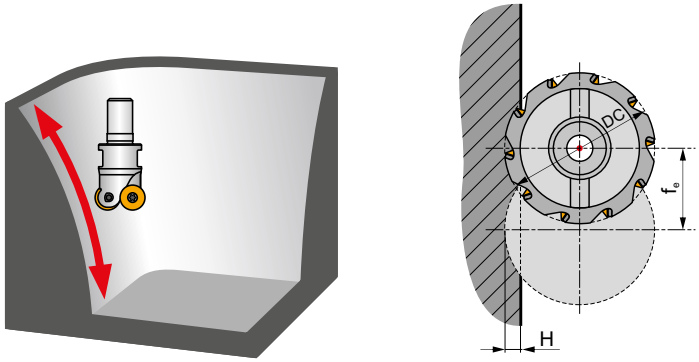
1) When determining line spacing during peripheral linear machining with toric* or ball-nose milling cutters.

* Substitute insert diameter for *INSD.*



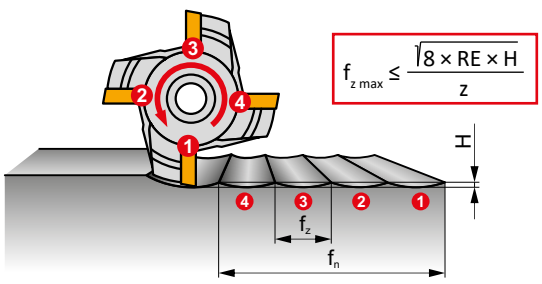
2) When determining line spacing during transverse linear machining with (not only) toric milling cutters and during plunge milling **.

** Substitute milling cutter diameter for *DC.*

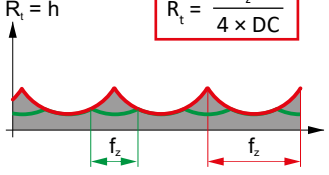


3) When determining feed per tooth during contour milling (side milling).***

*** Substitute milling cutter diameter for *DC* and divide by the number of teeth.



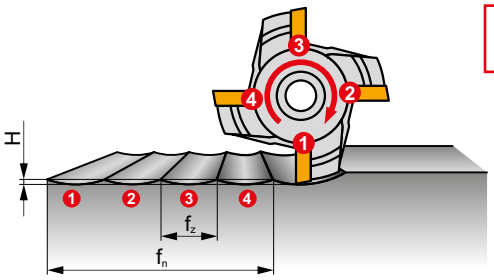
$$f_{z\,max} \leq \frac{\sqrt{8 \times RE \times H}}{z}$$



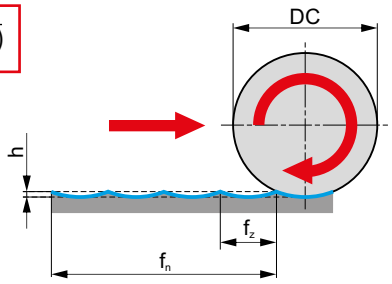
$$R_t = \frac{f_z^2}{4 \times DC}$$

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*.



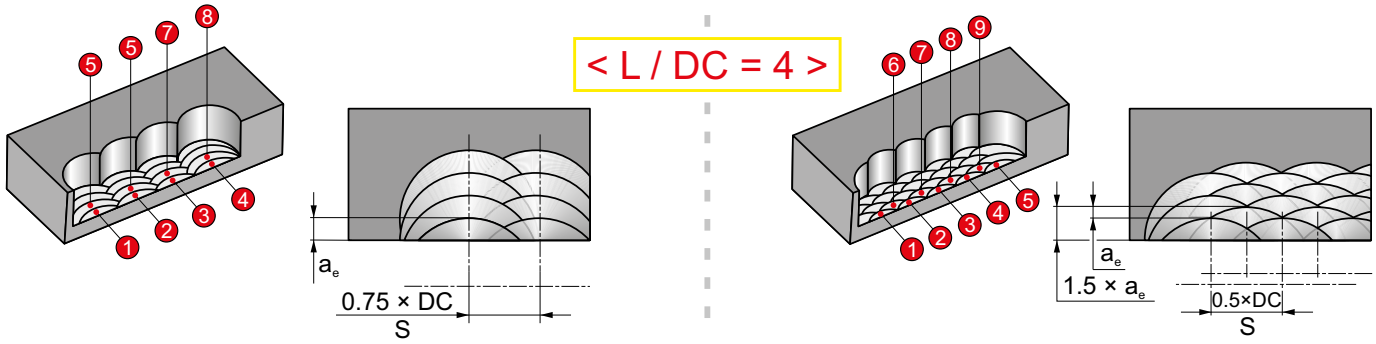
$$h = \frac{1}{2}\left(DC - \sqrt{DC^2 - f_z^2}\right)$$



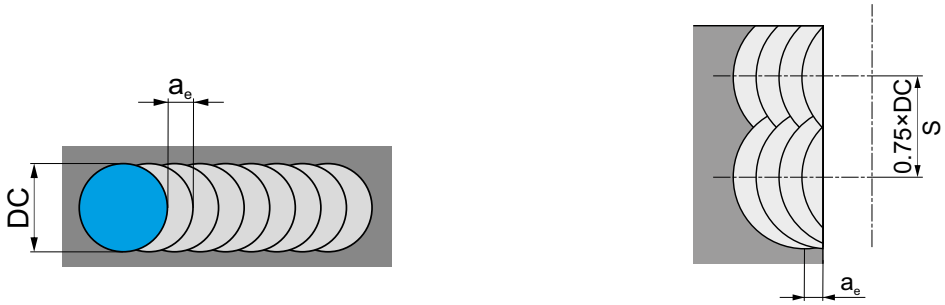
Plunge Milling (Slotting)

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:

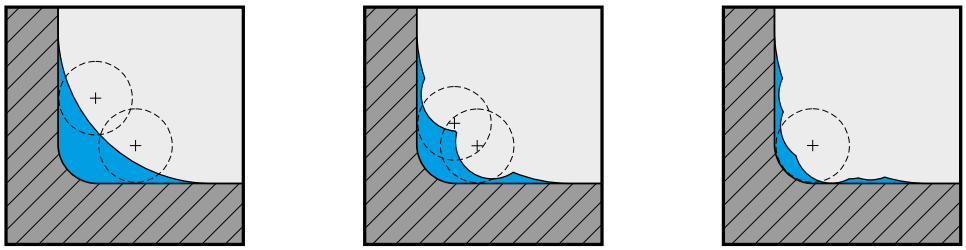
Contour milling



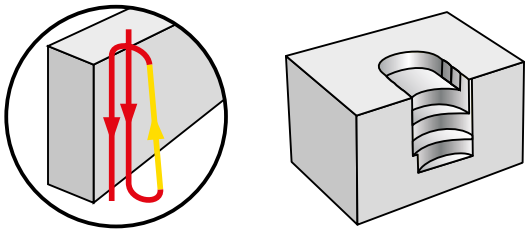
Slot milling



Shoulder milling



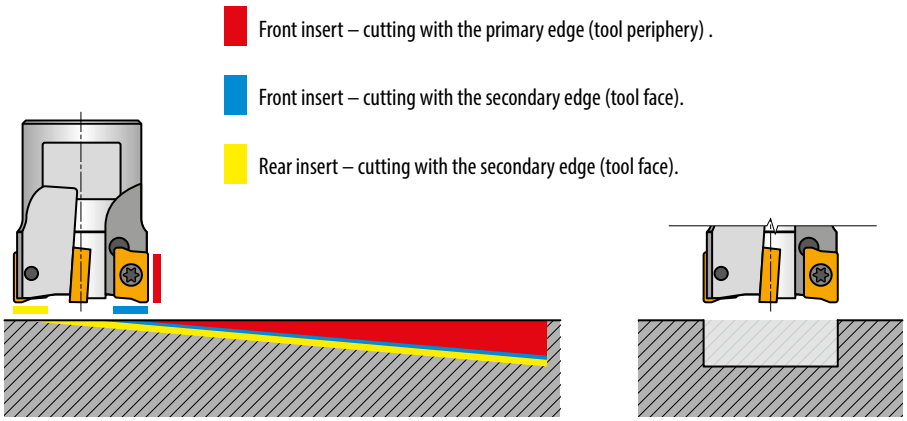
In shoulder milling, the mutual offset of paths should also not exceed ¾ of the milling cutter diameter (and should be gradually decreased towards the corner).



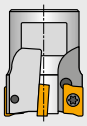
When creating programs for this technology, you should avoid passes over already machined surfaces (bottom). In other words, we do not recommend using a so-called drilling cycle. When selecting engagement conditions, make sure that more than one tooth is engaged at all times. We also recommend gradually 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 *DC* and then down at max. angle, repeat straight...
	Down at max. angle, then up by length *X* and down again at max. angle. $X = tg\ \alpha\ (DC - W1)$

When choosing the feed speed, we advise following the recommendation given for slot milling. If the slot is deeper (i.e. first pass at an angle, second to level off), you must select one of four basic program variants for the consecutive steps.

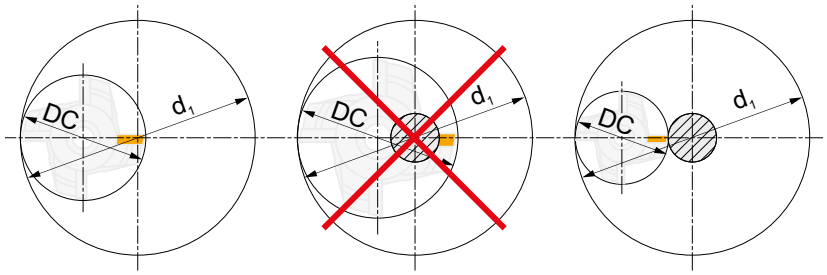
Where:

X	Offset
α	Ramp angle (°)
DC	Diameter of the milling cutter
W1	Insert width

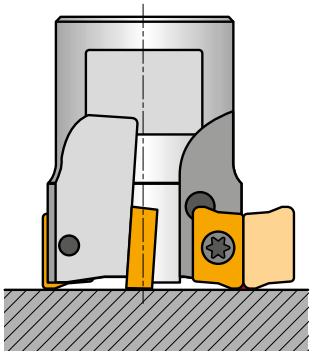
Milling using Circular or Helical Interpolation

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 × d_1 | DC > 0.5 × d_1 | DC < 0.5 × d_1



D_{max} – Hole diameter

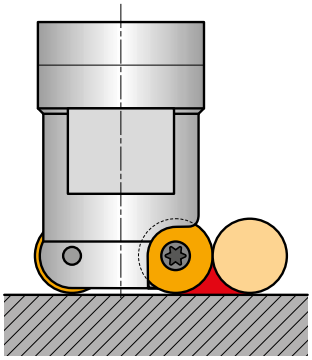
DC – Milling cutter diameter

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 center.

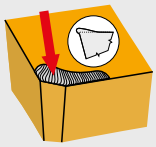
For through hole: $D_{max} = 2 \times DC$		For through hole: $D_{max} = 2 \times DC$

Minimum hole diameter

For through hole: $D_{min} = (DC - b) \times 2$		For through hole: $D_{min} = (DC - 0.8\ INSD) \times 2$
For flat bottom: $D_{min} = (DC - (RE + BS)) \times 2$		For flat bottom: $D_{min} = (DC - 0.5\ INSD) \times 2$

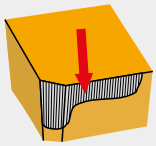
Recommendations include tables listing the minimum hole diameter, maximum hole diameter and in-axis descent angle values for these diameters (in some cases there will be two tables: one for standard insert geometry and another for HFC).

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

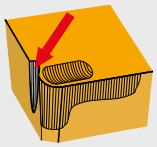


	↑	Use a more wear resistant substrate (H).
(MT)CVD / PVD	++	Any coating (decisive factor is hardness – TiC, TiCN).
f	↑	Increase feed (especially if it is under 0.1 mm).
V	↓	Decrease cutting speed.
a_p		It has no influence.
	↑	Increase the clearance angle.
	+	It can help, but only with ideal working conditions.

CRATERING

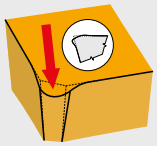
	↑	Use a more wear resistant substrate (S).
(MT)CVD / PVD	++	CVD coating (decisive factor is oxidation resistance – α Al_2O_3).
f	↑	Feed has infuence on shape and position of crater.
V	↓	Decrease cutting speed.
a_p	↓	Minimal effect.
	↑	Use more positive cutting geometry.
	++	It can help, but only with ideal working conditions.

OXIDATION GROOVE ON THE MINOR EDGE



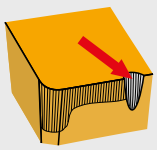
	↑	Use a more wear resistant substrate (S).
(MT)CVD / PVD	+ +	CVD coating (decisive factor is oxidation resistance – α Al_2O_3).
f	↓	Feed has infuence on shape and position of groove.
v	↓	Decrease cutting speed.
a_p	↓	Minimal effect.
	↑	Use another (more positive) cutting geometry.
	+ +	It can help, but only with ideal working conditions.

PLASTIC DEFORMATION



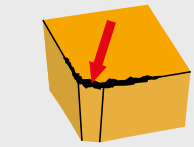
	↑	Using a more wear resistant substrate (decisive factor is content of Co).
(MT)CVD / PVD	+	Any coating (decisive factor is friction).
f	↓	Decrease feed rate.
v	↓	Decrease cutting speed.
a_p	↓	Minimal effect.
	↑	Use another (more positive) cutting geometry.
	+ +	It can help, but only with ideal working conditions.

NOTCH WEAR



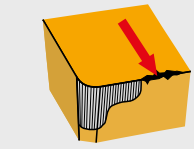
	↑↓	It depends on the character of the damage (abrasive – use more wear resistant substrate; breaking – use tougher substrate).
(MT)CVD / PVD	+ +	CVD coating (decisive factor is oxidation resistance – α Al_2O_3).
f	↓	Feed has infuence on intensity, but less than the cutting speed.
v	↓	Decrease cutting 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



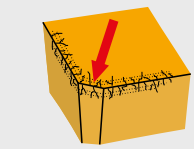
	↓	(H) grain has a great influence.
(MT)CVD PVD	+	PVD coating recommended.
f	↓	Feed has infuence on intensity, but less than the cutting speed.
v	↑↓	It is about vibrations.
a_p		It has no influence.
	↑	Increase the rake angle to reduce cutting forces.
	-	No coolant (it is possible to use air to remove chips from cutting area).
		Use better working condition (a_e / DC).

FAILURE OF CUTTING EDGE



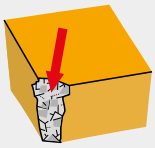
	↓	(H) grain has a great influence.
(MT)CVD PVD	+	PVD coating recommended.
f	↑↓	Good chip control is very important.
v	↑↓	It is about chip control and vibration.
a_p	↑↓	Reduces the force load (important for machining with long overhangs).
	↓	Use less positive cutting geometry.
		It has no influence.
		Use better working conditions, reduce feed rate until insert is in cut.

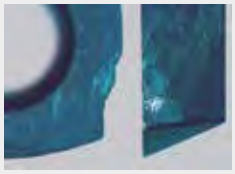
CREATION OF RACK CRACKS



	↓	(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.
	+	PVD coating recommended.
	↓	Very important to reduce cutting force.
	↑↓	It is about chip control and vibration.
	↓	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

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 catalog). 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 catalog 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)	$n = \frac{v_c \times 1000}{DC \times \pi}$
Cutting speed	(ft/min)	$v_c = \frac{\pi \times DC \times n}{1000}$
Feed per revolution	(in/rev)	$f_{rev} = \frac{f_{min}}{n} = f_z \times z$
Feed per minute (speed of feed)	(fpm)	$f_{min} = v_f = f_{rev} \times n = f_z \times z \times n$
Feed per tooth	(in/tooth)	$f_z = \frac{f_{rev}}{z} = \frac{f_{min}}{n \times z}$
Chip cross section	(in^2)	$A = f_z \times a_p$
Chip thickness (for inserts with a straight edge)	(in)	$h = f_z \times sin\ KAPR$
Chip thickness (for round cutting inserts)	(in)	$h = f_z \times \sqrt{\frac{a_p}{INSD}}$
Metal removal rate	(in^3/min)	$Q = \frac{a_p \times a_e \times f_{min}}{1000}$
Power demand	(kW)	$P_c = \frac{a_p \times a_e \times f_{min}}{60 \times 10^6 \times \eta} \times k_c \times k_\gamma$
Approximate power demand	(kW)	$P_c = \frac{a_p \times a_e \times f_{min}}{x}$

Note:

	Quantity	Unit
n	Number of revolutions	(rev/min)
DC	Diameter (of tool or work piece)	(in)
v_c	Cutting speed	(sfm)
f_{rev}	Feed per revolution	(in/rev)
A	Chip cross section	(in^2)
a_p	Axial depth of cut (depth of cut)	(in)
a_e	Radial depth of cut (width of cut)	(in)
KAPR	Setting angle	(°)
f_{min}	Feed per minute (sometimes called speed of feed)	(fpm)
f_z	Feed per tooth	(in/tooth)
z	Number of teeth	(-)
INSD	Diameter of insert	(in)

	Quantity	Unit
h	Chip thickness	(in)
Q	Material removal rate per minute	(in^3/min)
P_c	Power demand	(kW)
k_c	Cutting force per mm^2	(MPa)
k_γ	Coefficient of influence of angle γ_0	(°)
η	Machine efficiency usually $\eta = 0.75$	(-)
x	Coefficient of influence of work piece material	(-)

Material	Steel	Cast iron	Al
Coefficient *x*	24 000	30 000	120 000

RECOMMENDED TORQUE OF CLAMPING SCREWS

Clamping screw	Torque	Thread	Length
	(Nm)	–	(in)
US 20	.9	M 2	.118
US 2205-T07P	.9	M 2.2	.197
US 25	1.2	M 2.5	.197
US 2505-T08P	1.2	M 2.5	.197
US 2506-T07P	1.2	M 2.5	.236
US 3006-T09P	2	M 3	.236
US 3007-T09P	2	M 3	.276
US 3504-T09P	3	M 3.5	.157
US 3507-T15	3	M 3.5	.276
US 3509-T15	3	M 3.5	.354
US 3511-T15	3	M 3.5	.433
US 3512-T15P	3	M 3.5	.472
US 4008-T15P	3.5	M 4	.315
US 4011-T15P	3.5	M 4	.433
US 4511-T20	5	M 4.5	.433
US 5012-T15P	5	M 5	.472
US 70	5	M 4	.197
US 71	5	M 4	.276
US 72	5	M 4	.354
US 73	5	M 4	.433
CS 3007-T08P	1.2	M 3	.276
CS 4008-T15P	3	M 4	.315
CS 42506-T07P	1	M 2.5	.236
CS 43008-T08P	1.2	M 3	.315
CS 43509-T10P	2	M 3.5	.354
CS 44013-T15P	3	M 4	.512
CS 45016-T20P	5	M 5	.630
CS 46020-T25P	7.5	M 6	.787
CS 48025-T40P	15	M 8	.984
CS 5009-T20P	5	M 5	.354
CS 5013-T20P	5	M 5	.512
CS 5015-T20P	5	M 5	.591
CS 6020-T20P	7.5	M 6	.787
CS 8025-T30P	15	M 8	.984
US 2505-T07P	1.2	M 2.5	.197
US 2506-T07P	1.2	M 2.5	.236
US 3007-T09P	2	M 3	.276
US 3505-T09P	3	M 3.5	.197
US 4011A-T15P	3.5	M 4	.433
US 4011-T15P	3.5	M 4	.433
US 44010-T15P	3.5	M 4	.394
US 44012-T15P	3.5	M 4	.472
US 45011-T20P	5	M 5	.433
US 45012-T20P	5	M 5	.472
US 5011-T20P	5	M 5	.433
US 5018-T20P	5	M 5	.709
US 52506-T07P	.8	M 2.5	.236
US 54511-T15P	5	M 4.5	.433
US 62003A-T06P	.6	M 2	.118
US 62004A-T06P	.6	M 2	.157
US 62004-T06P	.6	M 2	.157
US 62505-T07P	1.2	M 2.5	.197
US 62506-T07P	1.2	M 2.5	.236
US 62506-T08P	1.2	M 2.5	.236
US 62508-T08P	1.2	M 2.5	.276

Clamping screw	Torque	Thread	Length
	(Nm)	–	(in)
US 63009-T09P	1.2	M 3	.354
US 63509-T15P	3	M 3.5	.394
US 63510-T10P	2	M 3.5	.354
US 63511D-T15P	3	M 3.5	.433
US 63513-T15P	3	M 3.5	.472
US 64014-T15P	3.5	M 4	.551
US 65013-T20	5	M 5	.512
US 65014-T20P	5	M 5	.551
US 65017-T20P	5	M 5	.669
US 66015-T25P	7.5	M 6	.591
US 68020-T30P	15	M 8	.787
US 68026-T30P	15	M 8	1.024
US 74016-T15P	3.5	M 4	.630

Torque screwdrivers

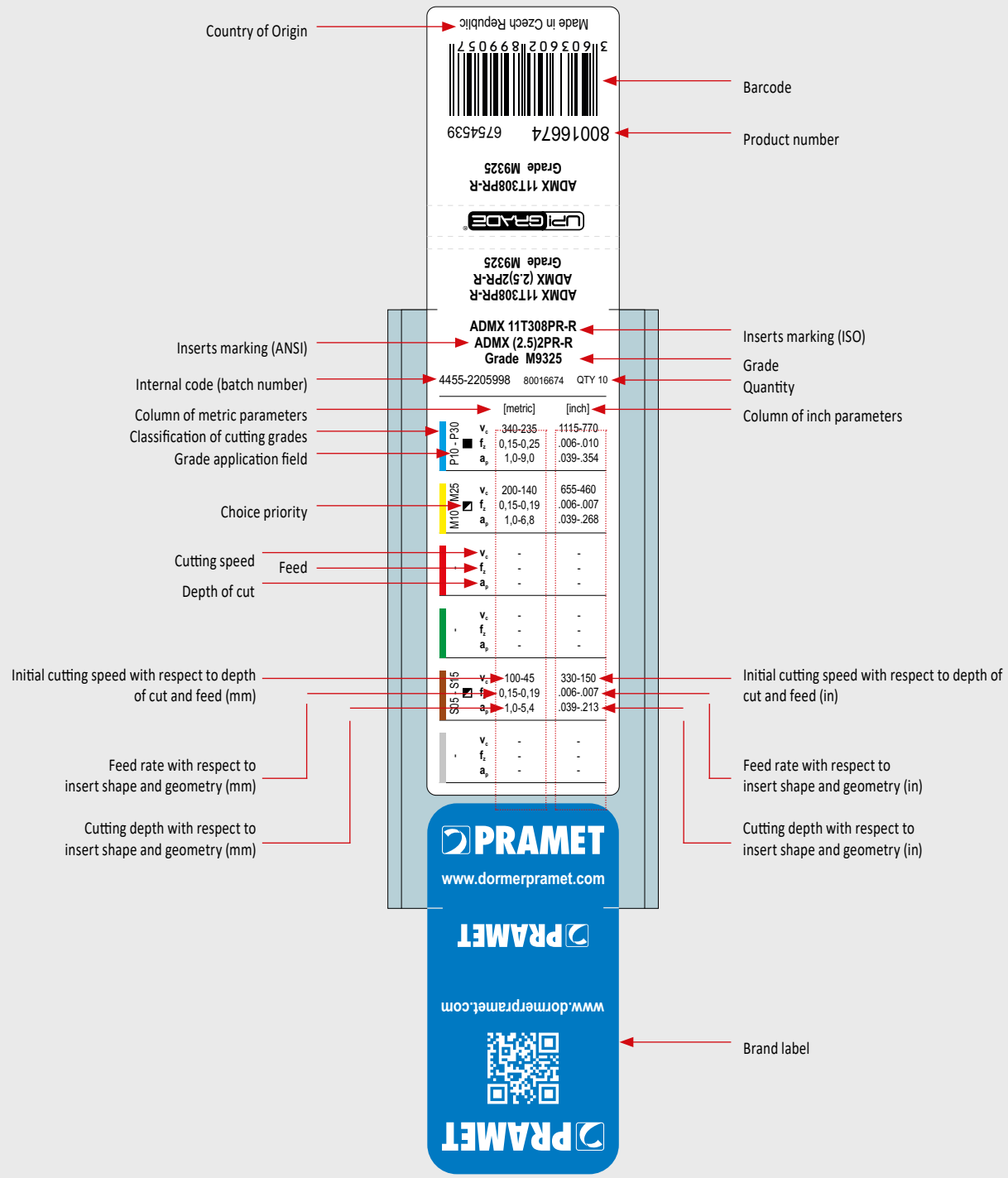
Torque handle 	Torque (Nm)	Clamping screw thread
MR-0.8-2.0 Vario	.5 – 2.0	M 2 – M 3
MR-1.0-5.0 Vario	.8 – 5.0	M 2.5 – M 5
MR-0.9 fix	.9	M 2
MR-2.0 fix	2.0	M 3
MR-3.0 fix	3.0	M 3.5
MR-3.5 fix	3.5	M 4
MR-5.0 fix	5.0	M 5

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. This paste can be ordered in the same way as any other spare part from Dormer Pramet.


Country of Origin
Made in Czech Republic
Barcode
Product number
8001667 4 6754539
ADMX 11T308PR-R
Grade M9325
UPGRADE
Inserts marking (ANSI)
Internal code (batch number)
Column of metric 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)
Feed rate with respect to insert shape and geometry (mm)
Cutting depth with respect to insert shape and geometry (mm)
ADMX 11T308PR-R
ADMX (2.5)2PR-R
Grade M9325
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
Inserts marking (ISO)
Grade
Quantity
Column of inch parameters
Initial cutting speed with respect to depth of cut and feed (in)
Feed rate with respect to insert shape and geometry (in)
Cutting depth with respect to insert shape and geometry (in)
PRAMET
www.dormerpramet.com
Brand label

HARDNESS CONVERSION TABLE

Strength (MPa)	Hardness			
	BRINELL	VICKERS	ROCKWELL	ROCKWELL
R_m	HB	HV	HRB	HRC
285	86	90	1190	–
320	95	100	56.2	–
350	105	110	62.3	–
385	114	120	66.7	–
415	124	130	71.2	–
450	133	140	75.0	–
480	143	150	78.7	–
510	152	160	81.7	–
545	162	170	85.8	–
575	171	180	87.1	–
610	181	190	89.5	–
640	190	200	91.5	–
675	199	210	93.5	–
705	209	220	95	–
740	219	230	96.7	–
770	228	240	98.1	–
800	238	250	99.5	–
820	242	255	–	23.1
850	252	265	–	24.8
880	261	275	–	26.4
900	266	280	–	27.1
930	276	290	–	28.5
950	280	295	–	29.2
995	295	310	–	31.0
1030	304	320	–	32.2
1060	314	330	–	33.3
1095	323	340	–	34.4
1125	333	350	–	35.5
1155	342	360	–	36.6

Strength (MPa)	Hardness			
	BRINELL	VICKERS	ROCKWELL	ROCKWELL
R_m	HB	HV	HRB	HRC
1190	352	370	–	37.7
1220	361	380	–	38.8
1255	371	390	–	39.8
1290	380	400	–	40.8
1320	390	410	–	41.8
1350	399	420	–	42.7
1385	409	430	–	43.6
1420	418	440	–	44.5
1455	428	450	–	45.3
1485	437	460	–	46.1
1520	447	470	–	46.9
1555	456	480	–	47.7
1595	466	490	–	48.4
1630	475	500	–	49.1
1665	485	510	–	49.8
1700	494	520	–	50.5
1740	504	530	–	51.1
1775	513	540	–	51.7
1810	523	550	–	52.3
1845	532	560	–	53.0
1880	542	570	–	53.6
1920	551	580	–	54.1
1955	561	590	–	54.7
1995	570	600	–	55.2
2030	580	610	–	55.7
2070	589	620	–	56.3
2105	599	630	–	56.8
2145	608	640	–	57.3
2180	618	650	–	57.8

NOTES

NOTES

SIMPLY RELIABLE

As a professional you can judge the quality of work by just looking at the chip. Our chip is a clean and uncomplicated shape that in itself tells a story. It is a clear and consistent signal and that's why we use it as a symbol for being **Simply Reliable**.

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