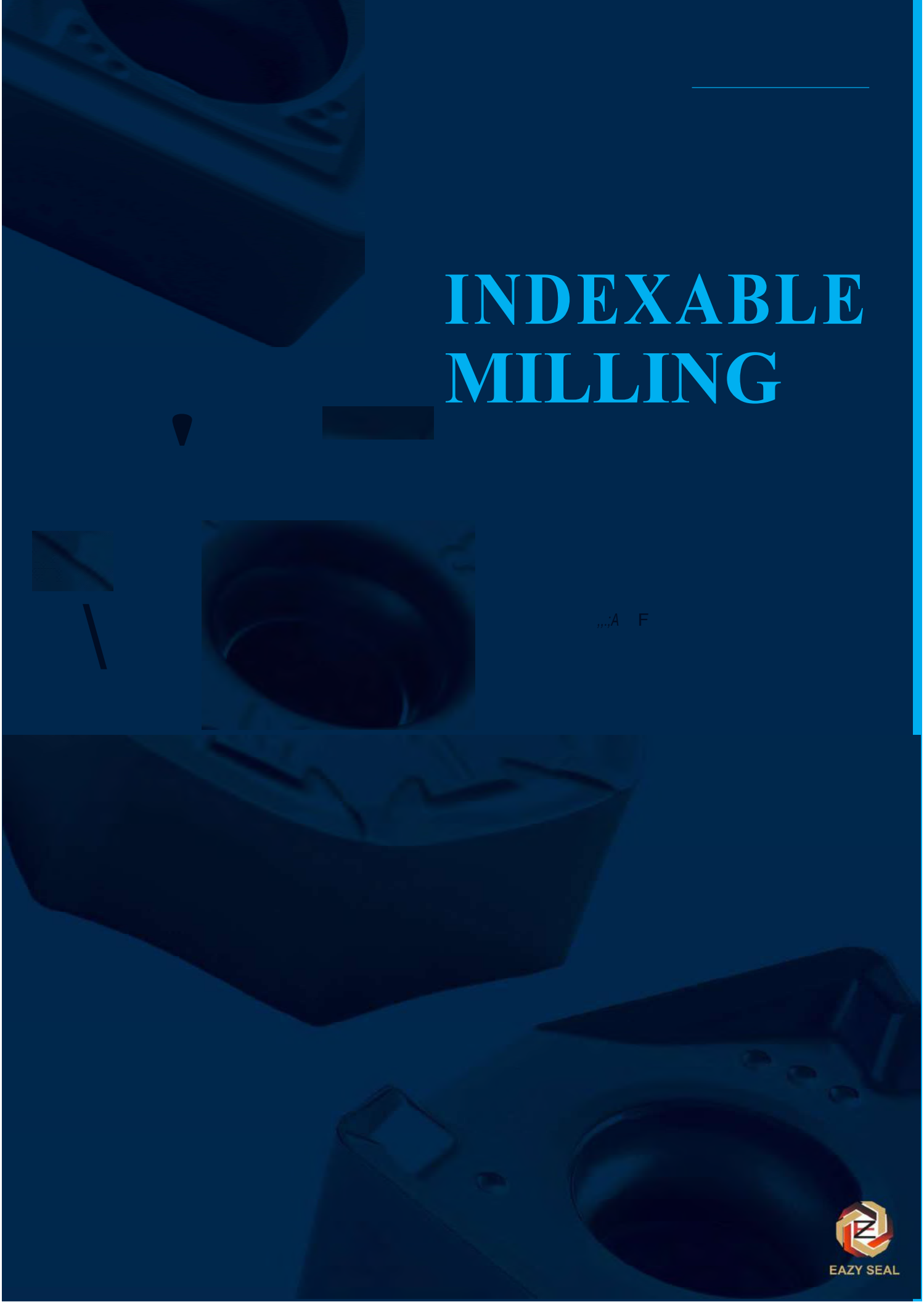
INDEXABLE MILLING

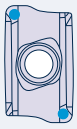
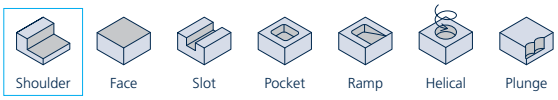
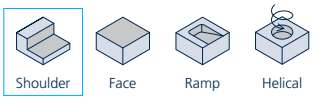


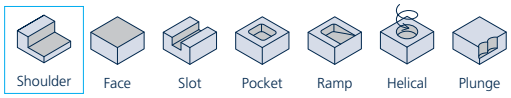
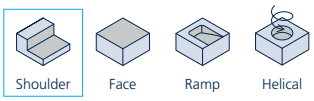
EAZY SEAL

MILLING

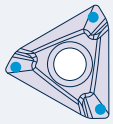
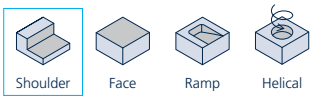
INDEXABLE MILLING

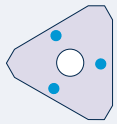
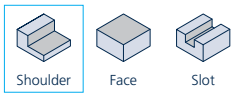
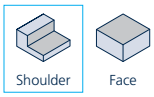
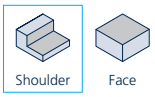
90° Shoulder Milling

Multi90Mill V2 2 Cutting Edges  P M K N S H	E90AO Cylindrical shank style	E90AO Weldon shank style	F90AO Arbor style
	 Pg. 24	 Pg. 25	 Pg. 26
AOMT11T3  10.5 mm APMX  Pg. 27	Ø 16 - 32mm	Ø 16 - 32mm	Ø 40 - 50mm
AOMT1505  13.8 mm APMX  Pg. 27	Ø 25 - 40mm	Ø 25 - 40mm	Ø 40 - 125mm
Main Application and Other Applications	 Shoulder Face Slot Pocket Ramp Helical Plunge		 Shoulder Face Ramp Helical

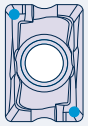
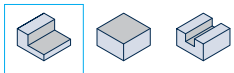
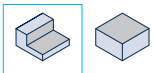
UniMill V2 2 Cutting Edges  P M K N S H	E90APT Cylindrical shank style	E90APT Weldon shank style	F90APT Arbor style
	 Pg. 30	 Pg. 31	 Pg. 32
APKT1003  9.7 mm APMX  Pg. 33	Ø 12 - 32mm	Ø 16 - 32mm	Ø 40 - 80mm
APKT1604  15.1 mm APMX  Pg. 33	Ø 25 - 40mm	Ø 25 - 40mm	Ø 40 - 160mm
Main Application and Other Applications	 Shoulder Face Slot Pocket Ramp Helical Plunge		 Shoulder Face Ramp Helical

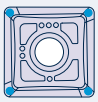
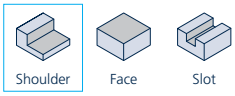
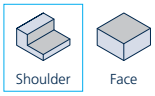
90° Shoulder Milling

Millerator V2	F90TD Arbor style
3 Cutting Edges  P M K N S H	 Pg. 35
TDMT1504  12.2 mm APMX  Pg. 36	Ø 40 - 125mm
TDMT1906  15.0 mm APMX  Pg. 36	Ø 63 - 160mm
Main Application and Other Applications	 Shoulder Face Ramp Helical

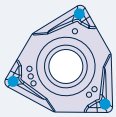
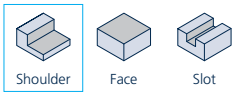
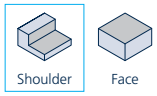
ClassicMill	E90TP Weldon shank style	F90TPE Arbor style	F90TP Arbor style
3 Cutting Edges  P M K N S H	 Pg. 38	 Pg. 39	 Pg. 40
TP*N1603  15.5 mm APMX  Pg. 41 - 42	Ø 25 - 32mm	Ø 40 - 200mm	Ø 52 - 250mm
TP*N2204  19.9 mm APMX  Pg. 41 - 42	-	Ø 63 - 200mm	Ø 80 - 250mm
Main Application and Other Applications	 Shoulder Face Slot	 Shoulder Face	 Shoulder Face

90° Shoulder Milling

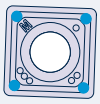
MillaTron V2 4 Cutting Edges  Double sided insert P M K N S H	E90AN Weldon shank style	F90AN Arbor style
	 Pg. 43	 Pg. 44
9.0 mm APMX ANMX1006  Pg. 45	Ø 20 - 40mm	Ø 40 - 63mm
14.0 mm APMX ANMX1508  Pg. 45	Ø 32 - 40mm	Ø 50 - 160mm
Main Application and Other Applications	 Shoulder Face Slot	 Shoulder Face

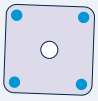
Multi4Mill V2 4 Cutting Edges  P M K N S H	E90SO Cylindrical shank style	F90SO Arbor style
	 Pg. 46	 Pg. 47
4.5 mm APMX SOMT0703  Pg. 48	Ø 16 - 32mm	Ø 40 - 63mm
11.0 mm APMX SOMT12T3  Pg. 48	-	Ø 50 - 160mm
Main Application and Other Applications	 Shoulder Face Slot	 Shoulder Face

90° Shoulder Milling

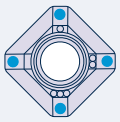
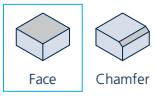
Millix V2 6 Cutting Edges  Double sided insert P M K N S H	E90XN Cylindrical shank style	E90XN Weldon shank style	F90XN Arbor style
	 Pg. 49	 Pg. 50	 Pg. 51
XN*X0403  4.2 mm APMX  Pg. 52	Ø 20 - 32mm	Ø 20 - 32mm	Ø 32 - 63mm
XN*X0806  7.9 mm APMX  Pg. 52	-	-	Ø 40 - 160mm
Main Application and Other Applications	 Shoulder Face Slot		 Shoulder Face

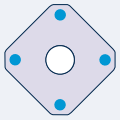
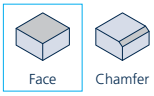
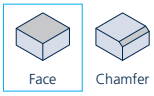
88° Shoulder Milling

TeraMill V2	F88SNX Arbor style	
8 Cutting Edges  Double sided insert P M K N S H	 Pg. 53	
SNMX120508  10.0 mm APMX  Pg. 54	Ø 50 - 160mm	
Main Application and Other Applications	 Shoulder Face	

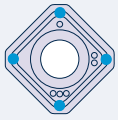
ClassicMill	F88SN Arbor style	
8 Cutting Edges  Double sided insert P M K N S H	 Pg. 55	
SNUN1204  11.5 mm APMX  Pg. 56	Ø 40 - 125mm	
Main Application and Other Applications	 Shoulder Face	

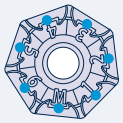
45° Face Milling

TetraMill V2	F45SES Arbor style	
4 Cutting Edges  P M K N S H	 Pg. 58	
SEMT1204  5.8 mm APMX  Pg. 59	Ø 50 - 160mm	
Main Application and Other Applications	 Face Chamfer	

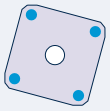
ClassicMill	F45SEE Arbor style	F45SE Arbor style
4 Cutting Edges  P M K N S H	 Pg. 60	 Pg. 61
SEKN1203  6.2 mm APMX  Pg. 62	Ø 50 - 200mm	Ø 80 - 250mm
SEKN1504  8.5 mm APMX  Pg. 62	-	Ø 80 - 250mm
Main Application and Other Applications	 Face Chamfer	 Face Chamfer

45° Face Milling

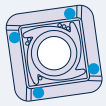
TeraMill V2 **8** **Cutting Edges**  Double sided insert P M K N S H	**F45SNX** Arbor style	**F45SNY** Arbor interchangeable cartridge style
	 **Pg. 63**	 **Pg. 64**
6.4 mm APMX **SNMX1205ANSN**  **Pg. D60**	Ø 50 - 200mm	Ø 125 - 315mm
8.1 mm APMX **SNMX120508**  **Pg. D60**	Ø 50 - 200mm	Ø 125 - 315mm
Main Application and Other Applications	Face Chamfer	Face Chamfer

ShrapMill V2 **14** **Cutting Edges**  Double sided insert P M K N S H	**E45NN** Cylindrical shank style	**F45NN** Arbor style
	 **Pg. 66**	 **Pg. 67**
3.2 mm APMX **NNMU1004**  **Pg. 68**	Ø 25 - 32mm	Ø 40 - 80mm
5.5 mm APMX **NNMU2007**  **Pg. 68**	-	Ø 63 - 160mm
Main Application and Other Applications	Face Chamfer	Face Chamfer

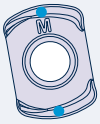
75° Face Milling

ClassicMill	F75SPE Arbor style	F75SP Arbor style
4 Cutting Edges  P M K N S H	 Pg. 69	 Pg. 70
9.7 mm APMX SP*N1203  Pg. 71 - 72	Ø 40 - 200mm	Ø 80 - 500mm
Main Application	 Face	 Face

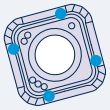
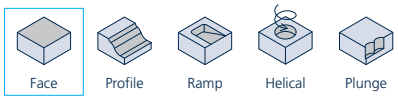
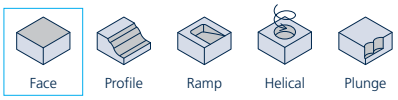
8° / 10° High Feed Milling

NitroMill V2	E08XD Cylindrical shank style	F08XD / F10XD Arbor style
4 Cutting Edges  P M K N S H	 Pg. 74	 Pg. 75
XDMT09T3 1.0 mm APMX  Pg. 76	Ø 25 - 40mm	Ø 50 - 80mm
XDMT1405 2.0 mm APMX  Pg. 76	-	Ø 63 - 125mm
Main Application and Other Applications	Face, Profile, Ramp, Helical, Plunge	Face, Profile, Ramp, Helical, Plunge

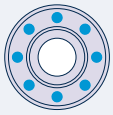
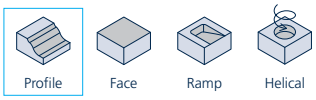
High Feed Milling

HyperMill V2	ER6BN Cylindrical shank style	FR6BN Arbor style
4 Cutting Edges  Double sided insert P M K N S H	 Pg. 78	 Pg. 79
BNMU0603 1.1 mm APMX  Pg. 80	Ø 16 - 32mm	Ø 40 - 50mm
Main Application and Other Applications	Face, Profile, Ramp, Helical, Plunge	Face, Profile, Ramp, Helical, Plunge

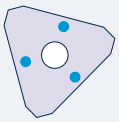
15° High Feed Milling

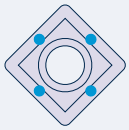
TeraMill V2	E15SNX Cylindrical shank style	F15SNX Arbor style
8 **Cutting Edges**  Double sided insert P M K N S H	 **Pg. 82**	 **Pg. 83** 
SNMX1205DNSN  2.0 mm APMX  **Pg. 84**	Ø 32 - 42mm	Ø 42 - 125mm
Main Application and Other Applications	 Face Profile Ramp Helical Plunge	 Face Profile Ramp Helical Plunge

Profile Milling

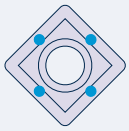
ContiMill V2 **Rnd** Cutting Edges  P M K N S H	**EM0RD** Cylindrical shank style	**EM0RD** Threaded shank style	**FM7RD** Arbor style
	 **Pg. 86**	 **Pg. 87**	 **Pg. 88**
3.5 mm APMX **RDMT0702**  Pg. 89	Ø 16mm	Ø 16 - 25mm	-
5.0 mm APMX **RDMX1003**  Pg. 89	Ø 20 - 25mm	Ø 35mm	-
6.0 mm APMX **RDMX12T3**  Pg. 89	Ø 32mm	Ø 42mm	Ø 52 - 80mm
8.0 mm APMX **RDMX1604**  Pg. 89	-	-	Ø 66 - 125mm
Main Application and Other Applications	 Profile Face Ramp Helical		

45° Chamfer Milling

ClassicMill	E45TP Weldon shank style	
3 Cutting Edges  P M K N S H	 Pg. 92	
10.8 mm APMX TP*N1603  Pg. 93 - 94	Ø 26.5 - 40mm	
Main Application	 Chamfer	

EdgeMill V2	E45SP Cylindrical shank style	
4 Cutting Edges  P M K N S H	 Pg. 95	
3.5 mm APMX SPMT0502  Pg. 96	Ø 10 - 16mm	
4.0 mm APMX SPMT0603  Pg. 96	Ø 20 - 25mm	
5.8 mm APMX SPMT0903  Pg. 96	Ø 32mm	
Main Application	 Chamfer	

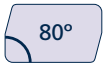
35° to 75° Bevel Milling

BevelMill V2 **4** **Cutting Edges**  P M K N S H	**F**SP15** Arbor style  **Pg. 98**	
6.7 to 13.9 mm APMX **SPMT1505**  **Pg. 99**	Ø 80mm	
Main Application	 Bevel	

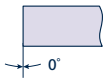
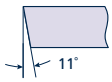
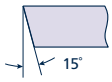
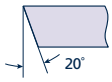
Milling Inserts

Shape	Clearance Angle	Tolerance	Hole & Chipbreaker	Size	Thickness	Corner Radius / Corner Geometry				Chipbreaker	Grade		
						08							
						7							
S	N	M	X	12	05	A	N	S	N	M	8	4	20
1	2	3	4	5	6	8.1	8.2	8.3	8.4	9	10.1	10.2	10.3

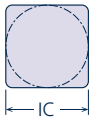
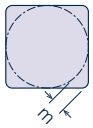
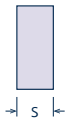
1 Shape

A	B	N	R
			
S	**T**	**W**	**X**
			Special Design

2 Clearance Angle

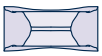
N	P	O
		Special Clearance
D	**E**	
		

3 Tolerance (mm)

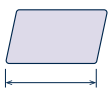
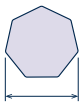
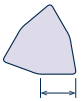
		C	E	G	H	K*	M*	U*
IC		± 0.025	± 0.025	± 0.025	± 0.013	± 0.05-0.15*	± 0.05-0.15*	± 0.08-0.25*
m		± 0.013	± 0.025	± 0.025	± 0.013	± 0.013	± 0.08-0.2*	± 0.13-0.38*
s		± 0.025	± 0.025	± 0.13	± 0.025	± 0.025	± 0.13	± 0.13

* Tolerance is different by Insert IC size. See ISO 1832

4 Hole and Chipbreaker

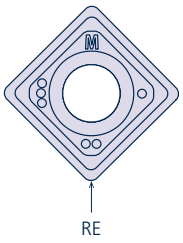
		Hole	Chipbreaker
N		No Hole	No Chipbreaker
T		Screw Hole	Single Sided
U		Screw Hole	Double Sided
X	Special Design		

5 Size (no standard for milling)

A / B	N	R
		
S	**T**	**W**
		

6 Thickness (S) (no standard for milling)

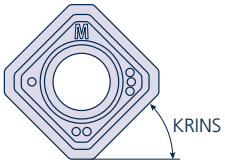
7 Corner Radius (RE) (mm)



04	0.4mm
08	0.8mm
10	1.0mm
12	1.2mm
20	2.0mm
30	3.0mm
M0	Rnd

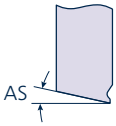
8 Corner Geometry

8.1 Cutting Edge Angle (KRINS)



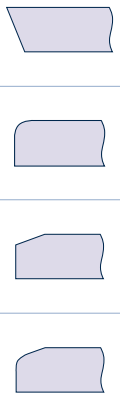
P	A	D	E
90°	45°	60°	75°

8.2 Wiper Edge Clearance (AS)



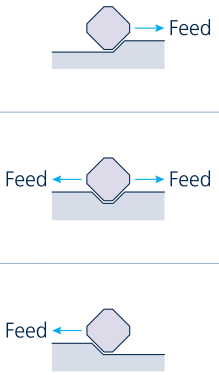
N	P	D	F
0°	11°	15°	25°

8.3 Edge Condition



F	Sharp
E	Round
T	Chamfered
S	Chamfered & Round

8.4 Feed Direction



R	Right
N	Neutral
L	Left

9 Chipbreaker

L	L	Light, more positive geometry for low cutting forces
MM	MM	Medium, but more positive geometry.
M	M	Medium general purpose geometry, suitable for most materials
R	R	Roughing geometry for milling at higher feed rates

10 Grade

10.1 General Application Area

8	Milling and Drilling

10.2 Coating Series

2	3	4	5	6
AlTiN PVD	AlSiTiN PVD	AlCrTiN PVD	TiAlN / TiSiN PVD	TiAlSiN PVD

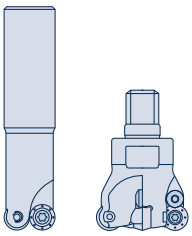
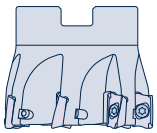
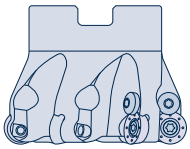
10.3 Hardness / Toughness

		H	K	P	M	S
10	TOUGH ↕ HARD	H05 - H20	K05 - K25	P05 - P20		
20		H10 - H30	K15 - K35	P10 - P30	M10 - M30	S10 - S30
30				P20 - P40	M15 -M30	S15 - S35
40					M20 - M40	S20 - S40

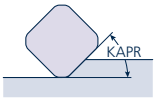
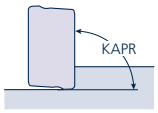
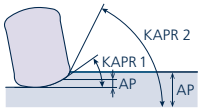
Milling Cutters

Cutter Type	Cutting Edge / Axial Rake Angle	Insert & Cutter Series	Insert Size		Cutter Diameter	Connection Type	Connection Diameter	Functional Length	No. of Teeth	Suitable for inserts with radius up to	Coolant
E	90	APT	10	-	012	A	16	L120	Z2	R20	C
1	2	3	4		5	6	7	8	9	10	11

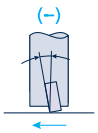
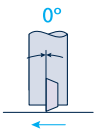
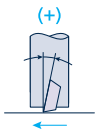
1 Type of Milling Cutter

E	EM
 Endmill	 Endmill (Contimill)
F	**FM**
 Facemill	 Facemill (Contimill)

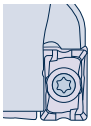
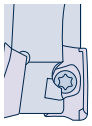
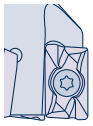
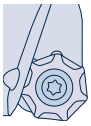
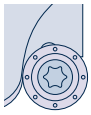
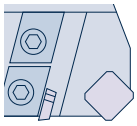
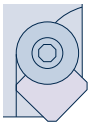
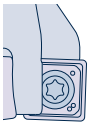
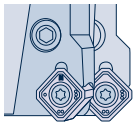
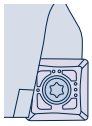
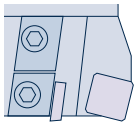
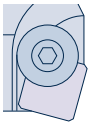
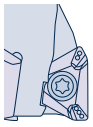
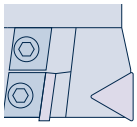
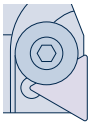
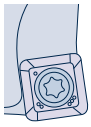
2 Cutting Edge Angle (KAPR) (excl. ContiMill)

 KAPR 45°	 KAPR 90°	 Varying KAPR
For Example		
45	**90**	**R6**
45°	45°	6mm radius (Varying KAPR depending on DOC)

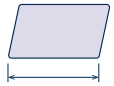
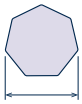
2 For ContiMill: Axial Rake Angle (GAMP)

 Negative Rake Angle	 Neutral Rake Angle	 Positive Rake Angle
-	**0**	**7**
-	0°	7°

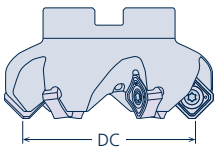
3 Insert and Cutter Series

AN	AO	APT	BN	NN	RD	SE
ANMX	AOMT	APKT	BNMU	NNMU	RDMT / RDMX	SEKN
 Screw Clamp	 Screw Clamp	 Screw Clamp, T Series	 Screw Clamp	 Screw Clamp	 Screw Clamp (Top clamp in selected cutters)	 Cartridge with Top Clamp
SEE	**SES**	**SN**	**SNX**	**SNY**	**SO**	**SP**
SEKN	SEMT	SNUN	SNMX	SNMX	SOMT	SPKN
 Top Clamp	 Screw Clamp	 Top Clamp	 Screw Clamp	 Cartridge with Screw Clamp	 Screw Clamp	 Cartridge with Top Clamp
SPE	**SPT**	**TD**	**TP**	**TPE**	**XD**	**XN**
SPKN	SPMT	TDMT	TPKN	TPKN	XDMT	XNGX / XNMX
 Top Clamp	 Screw Clamp	 Screw Clamp	 Cartridge with Top Clamp	 Top Clamp	 Screw Clamp	 Screw Clamp

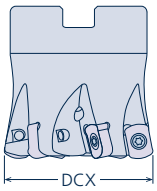
4 Insert Size (no standard for milling)

A / B	N	R	S	T	W
					

5 Cutter Diameter (DC or DCX)



DC for all Cutters



DCX for NitroMill, HyperMill & ContiMill

For Example

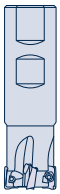
16

16mm

6 Type of Coupling

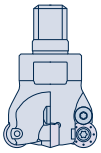
A

Cylindrical



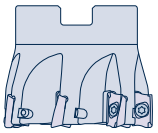
B

Weldon



M

Threaded

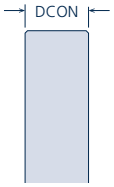


Q

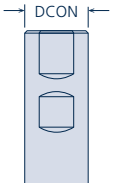
Arbor

7 Connection Dimensions (DCON or TDZ)

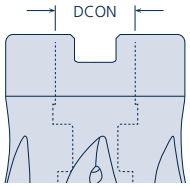
For coupling A, B & Q = Connection Diameter (DCON)



A = Cylindrical

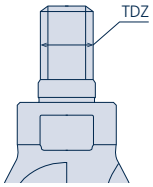


B = Weldon



Q = Arbor

For coupling M = Thread Diameter Size (TDZ)

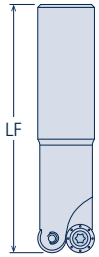


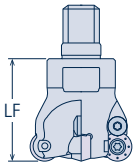
M = Threaded

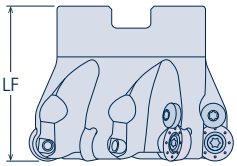
For Example

16	8
16mm	M8

8 Functional Length of Cutter (LF)







For Example

L120

Functional Length of 120mm

9 Face Effective Cutting Edge Count (ZEFF)

For Example

Z2	2 Inserts in cutter for face cutting

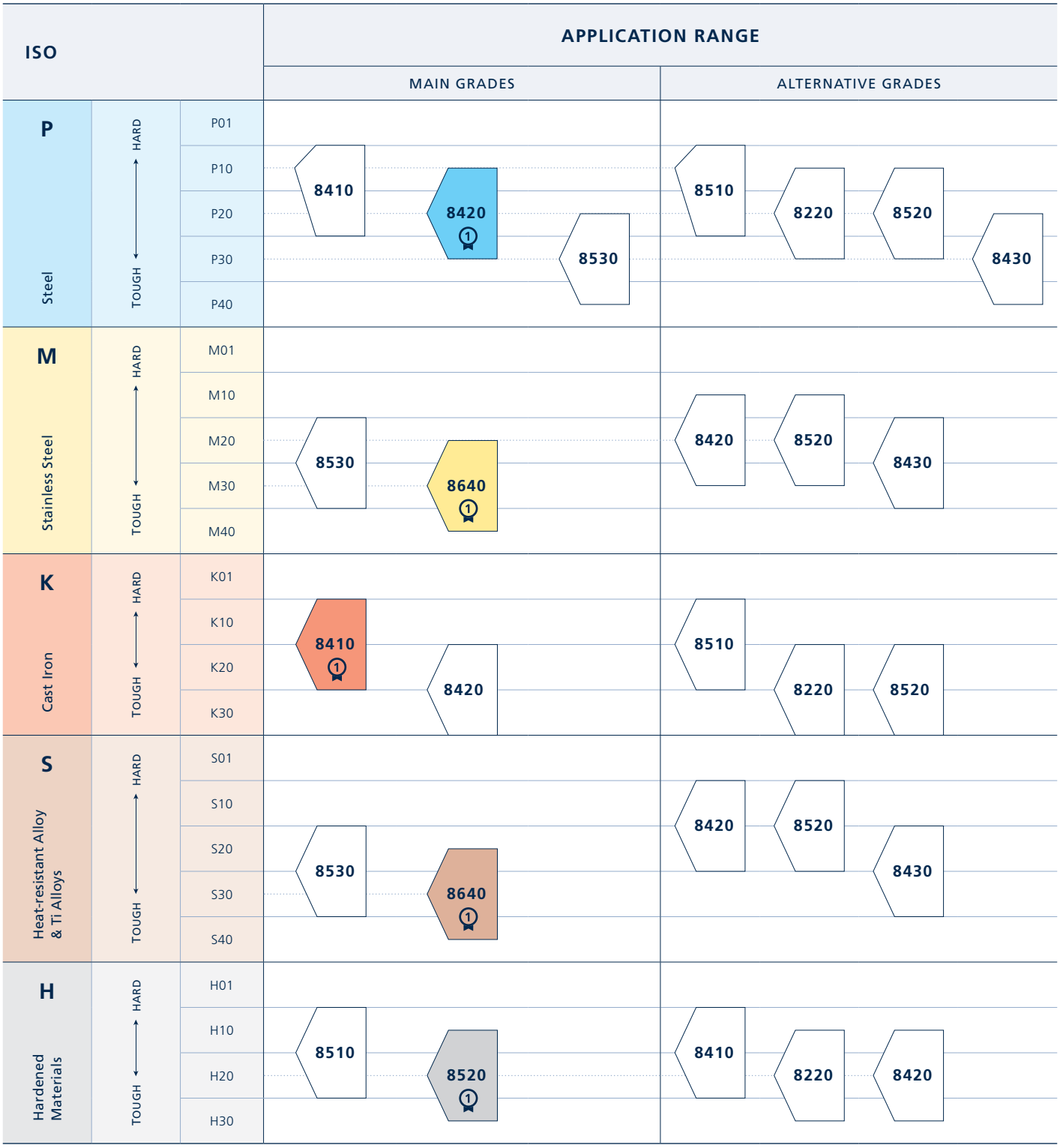
10 Cutter suitable for Inserts with Radius up to (mm)

R20	Suitable for inserts with radius up to 2mm
R31	Suitable for inserts with radius > 2.0mm to 3.1mm

11 Through Coolant

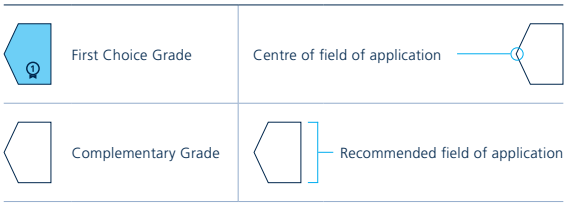
C	with through coolant

Milling Grades - Application Range



The position of the grade symbols indicate the suitable field of application

Key



Milling Grades - Characteristics & Applications

GRADE	ISO	First Choice	CHARACTERISTICS & APPLICATIONS
8410 AlCrTiN  PVD	K05 – K25 P05 – P20 H05 – H20	Cast Iron	• A highly wear-resistant, PVD-coated micrograin carbide • **1st Choice for general milling of cast iron** • High speed milling of high alloyed steels in light applications • Alternative grade for high speed milling of hardened materials in light applications
8510 TiAlN / TiSiN  PVD	H05 – H20 P05 – P20 K05 – K25		• A highly wear-resistant, PVD-coated micrograin carbide • High speed milling of hardened materials in light applications • Alternative grade for high speed milling of high alloy steels in light applications and general milling of cast iron
8220 AlTiN  PVD	P10 – P30 H10 – H30 S10 – S30 M10 – M30 K15 – K35		• PVD-coated micrograin carbide • Economical grade • General milling of steel • Alternative grade for general milling of hardened materials • Can also be used for milling of stainless steel and heat-resistant alloys under stable conditions at medium to high cutting speeds • Interrupted milling of cast iron at low cutting speeds
8420 AlCrTiN  PVD	P10 – P30 H10 – H30 S10 – S30 M10 – M30 K15 – K30	Steel	• PVD-coated micrograin carbide • **1st Choice for general milling of steel** • Alternative grade for general milling of hardened materials • Can also be used for milling of stainless steel and heat-resistant alloys under stable conditions at medium to high cutting speeds • Interrupted milling of cast iron at low cutting speeds
8520 TiAlN / TiSiN  PVD	H10 – H30 P10 – P30 S10 – S30 M10 – M30 K15 – K35	Hardened Materials	• PVD-coated micro-grain carbide • **1st Choice for general milling of hardened materials** • General milling of steel • Can also be used for milling of stainless steel and heat-resistant alloys under stable conditions at medium to high cutting speeds • Alternative grade for interrupted milling of cast iron at low cutting speeds
8430 AlCrTiN  PVD	P20 – P40 M15 – M35 S15 – S35		• PVD-coated fine-grain carbide • General purpose grade for milling of steel, stainless steel and heat-resistant alloys • Can be used in unstable conditions
8530 TiAlN / TiSiN  PVD	P20 – P40 M15 – M35 S15 – S35	General Purpose	• PVD-coated fine-grain carbide • **1st Choice general purpose grade for milling of steel, stainless steel and heat-resistant alloys** • Can be used in unstable conditions
8640 TiAlSiN  PVD	M20 – M40 S20 – S40	Stainless Steel Heat Resistant Alloys	• A tough PVD-coated coarse-grain carbide • **1st Choice for general milling of stainless steel and heat-resistant alloys**

HARD ↑ TOUGH ↓

Key: First Choice Material

SHOULDER MILLING

SOLUTIONS

90°

88°

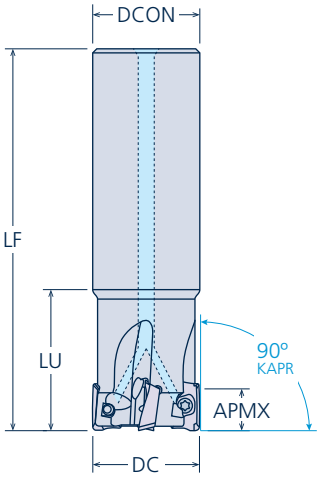
Multi90Mill V2

Shoulder | Face | Slot | Pocket | Ramp | Helical | Plunge

E90AO - Cylindrical shank style

Multi-purpose square shoulder milling solution, utilising AOMT11T3 and AOMT1505 positive inserts with two helical cutting edges. Choose this solution if you are looking to limit the number of tools needed to cover multiple applications.

Cutter diameters: 16mm to 40mm
KAPR: 90°

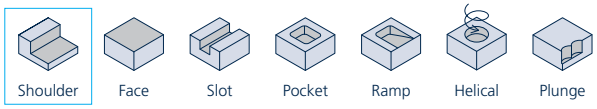


Through coolant

DESCRIPTION	ZEFF	DIMENSIONS (mm)					INSERT SCREW	TORX BIT	TORQUE ADAPTER	T-HANDLE
		DC	LF	LU	DCON	APMX				
Cutters for AOMT11T3 Inserts										
E90AO11-016A16L073Z2R20C	2	16	73	25	16	10.5	TS-M2.5L5.8/ 60° T8	BIT50-TX8 or BIT50-TX8 HD	Adapter - 1.2 Nm	T-Handle
E90AO11-016A16L145Z2R20C	2	16	145	30	16	10.5				
E90AO11-020A20L081Z3R20C	3	20	81	25	20	10.5	TS-M2.5L6.6/ 60° T8			
E90AO11-020A20L170Z2R20C	2	20	170	30	20	10.5				
E90AO11-020A20L170Z3R20C	3	20	170	30	20	10.5				
E90AO11-025A25L088Z4R20C	4	25	88	32	25	10.5				
E90AO11-025A25L210Z2R20C	2	25	210	40	25	10.5				
E90AO11-025A25L210Z4R20C	4	25	210	40	25	10.5				
E90AO11-032A32L100Z5R20C	5	32	100	35	32	10.5				
E90AO11-032A32L235Z3R20C	3	32	235	50	32	10.5				
E90AO11-032A32L235Z5R20C	5	32	235	50	32	10.5				
Cutters for AOMT1505 Inserts										
E90AO15-025A25L120Z2R20C	2	25	120	32	25	13.8	TS-M4L8.2/ 60° T15	BIT50-TX15 or BIT50-TX15 HD	Adapter - 4.3 Nm	T-Handle
E90AO15-025A25L210Z2R20C	2	25	210	45	25	13.8				
E90AO15-032A32L130Z3R20C	3	32	130	40	32	13.8	TS-M4L9.8/ 60° T15			
E90AO15-032A32L235Z2R20C	2	32	235	50	32	13.8				
E90AO15-040A32L170Z4R20C	4	40	170	40	32	13.8				
E90AO15-040A32L250Z2R20C	2	40	250	40	32	13.8				

For inserts see page 27

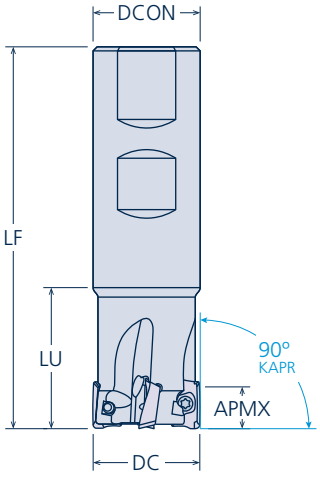
Multi90Mill V2



E90AO - Weldon shank style

Multi-purpose square shoulder milling solution, utilising AOMT11T3 and AOMT1505 positive inserts with two helical cutting edges. Choose this solution if you are looking to limit the number of tools needed to cover multiple applications.

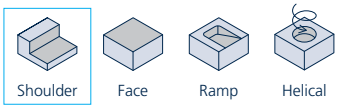
Cutter diameters: 16mm to 40mm
KAPR: 90°



DESCRIPTION	ZEFF	DIMENSIONS (mm)					INSERT SCREW	TORX BIT	TORQUE ADAPTER	T-HANDLE
		DC	LF	LU	DCON	APMX				
Cutters for AOMT11T3 Inserts										
E90AO11-016B16L073Z2R20	2	16	73	25	16	10.5	TS-M2.5L5.8/ 60° T8	BIT50-TX8 or BIT50-TX8 HD	Adapter - 1.2 Nm	T-Handle
E90AO11-020B20L081Z3R20	3	20	81	25	20	10.5	TS-M2.5L6.6/ 60° T8			
E90AO11-025B25L088Z4R20	4	25	88	32	25	10.5				
E90AO11-032B32L100Z5R20	5	32	100	35	32	10.5				
Cutters for AOMT1505 Inserts										
E90AO15-025B25L088Z2R20	2	25	88	32	25	13.8	TS-M4L8.2/ 60° T15	BIT50-TX15 or BIT50-TX15 HD	Adapter - 4.3 Nm	T-Handle
E90AO15-032B32L100Z3R20	3	32	100	40	32	13.8	TS-M4L9.8/ 60° T15			
E90AO15-040B32L110Z4R20	4	40	110	40	32	13.8				

For inserts see page 27

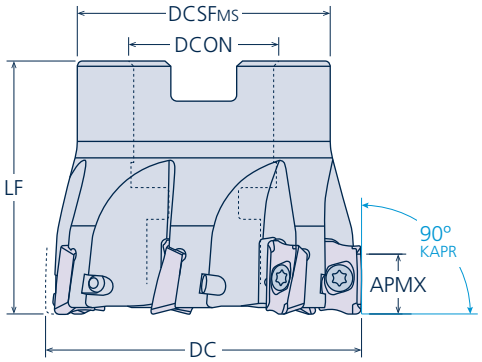
Multi90Mill V2



F90AO - Arbor style

Multi-purpose square shoulder milling solution, utilising AOMT11T3 and AOMT1505 positive inserts with two helical cutting edges. Choose this solution if you are looking to limit the number of tools needed to cover multiple applications.

Cutter diameters: 40mm to 125mm
KAPR: 90°



DESCRIPTION	ZEFF	DIMENSIONS (mm)					INSERT SCREW	TORX BIT	TORQUE ADAPTER	T-HANDLE
		DC	LF	DCSFMS	DCON	AMPX				
Cutters for AOMT11T3 Inserts										
F90AO11-040Q16Z6R20	6	40	40	32	16	10.5	TS-M2.5L6.6/ 60° T8	BIT50-TX8 or BIT50-TX8 HD	Adapter - 1.2 Nm	T-Handle
F90AO11-050Q22Z7R20	7	50	40	40	22	10.5				
Cutters for AOMT1505 Inserts										
F90AO15-040Q16Z4R20	4	40	40	32	16	13.8	TS-M4L9.8/ 60° T15	BIT50-TX15 or BIT50-TX15 HD	Adapter - 4.3 Nm	T-Handle
F90AO15-050Q22Z5R20	5	50	40	40	22	13.8				
F90AO15-063Q22Z6R20	6	63	40	48	22	13.8				
F90AO15-080Q27Z7R20	7	80	50	58	27	13.8				
F90AO15-100Q32Z8R20	8	100	50	78	32	13.8				
F90AO15-125Q40Z9R20	9	125	63	90	40	13.8		BIT73-TX15 HD		

For inserts see page 27

Multi90Mill V2

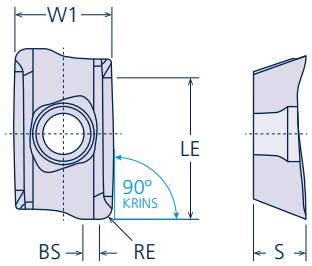
AOMT - Milling insert

AOMT11T3 and AOMT1505 positive inserts with two helical cutting edges.

KRINS: 90°

Medium, but more positive geometry.
Suitable for medium machining on most materials.

Medium, but more negative geometry for medium to heavy machining at higher feed rates. First choice for steel and cast iron. Also first choice for interrupted cutting.

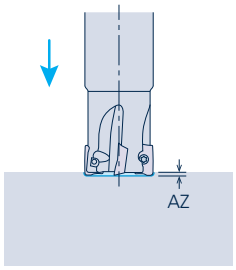


INSERT	DESCRIPTION	DIMENSIONS (mm)						P						M		K		S		H	
								P10	P10	P20	P20	P30	P30	M25	M30	K15	K25	S25	S30	H15	H20
		LE	W1	S	RE	BS	APMX	8410	8510	8420	8520	8430	8530	8530	8640	8410	8420	8530	8640	8510	8520
AOMT11T3 M - MEDIUM *(General Purpose)*	AOMT11T308M*	10.8	6.9	3.6	0.8	1.1	10.5			●			●	●			●	●			
	AOMT11T320M*	10.8	6.9	3.6	2	0.25	10.5			●			●	●			●	●			
AOMT1505 L - LIGHT	AOMT150512L*	14.2	10.2	5.25	1.2	1	13.8			●			●	●			●	●			
																					
AOMT1505 M - MEDIUM *(General Purpose)*	AOMT150512M*	14.2	10.2	5.25	1.2	1	13.8			●			●	●				●			
																					

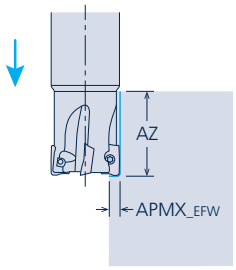
For milling cutters see pages 24 - 26

Multi90Mill V2

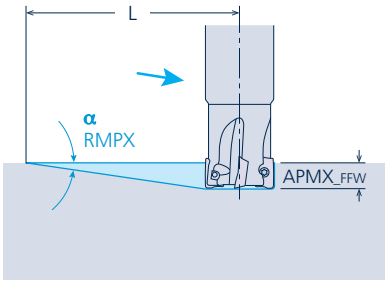
Plunge, Linear Ramping and Helical Ramping



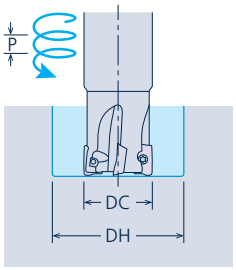
Plunge
Full Engagement



Plunge
Off-set



Linear Ramping



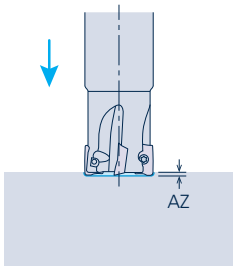
Helical Ramping

DESCRIPTION	Ø	PLUNGE Full Engagement	PLUNGE Off-set		LINEAR RAMPING		HELICAL RAMPING			
	DC (mm)	Max. Plunge Depth AZ (mm)	Max. Plunge Depth AZ (mm)	Max. Depth of Cut APMX_EFW (mm)	Max. Ramp Angle RMPX (°)	Min. Distance L (mm)	Max. Hole Ø DH max (mm)	Max. Pitch P max (mm)	Min. Hole Ø DH min (mm)	Max. Pitch P max (mm)
AOMT11T308										
Cylindrical Shank Style										
E90AO11-016A16L073Z2R20C	16	0.8	73	6.3	6.1	98.3	30.4	4.8	19.2	1.1
E90AO11-016A16L145Z2R20C	16	0.8	145	6.3	6.1	98.3	30.4	4.8	19.2	1.1
E90AO11-020A20L081Z3R20C	20	0.8	81	6.3	3.8	158.1	38.4	3.8	27.2	1.5
E90AO11-020A20L170Z2R20C	20	0.8	170	6.3	3.8	158.1	38.4	3.8	27.2	1.5
E90AO11-020A20L170Z3R20C	20	0.8	170	6.3	3.8	158.1	38.4	3.8	27.2	1.5
E90AO11-025A25L088Z4R20C	25	0.8	88	6.3	2.6	231.2	48.4	3.3	37.3	1.8
E90AO11-025A25L210Z2R20C	25	0.8	210	6.3	2.6	231.2	48.4	3.3	37.3	1.8
E90AO11-025A25L210Z4R20C	25	0.8	210	6.3	2.6	231.2	48.4	3.3	37.3	1.8
E90AO11-032A32L100Z5R20C	32	0.8	100	6.3	1.8	334.1	62.4	3.0	51.3	1.9
E90AO11-032A32L235Z3R20C	32	0.8	235	6.3	1.8	334.1	62.4	3.0	51.3	1.9
E90AO11-032A32L235Z5R20C	32	0.8	235	6.3	1.8	334.1	62.4	3.0	51.3	1.9
Weldon Shank Style										
E90AO11-016B16L073Z2R20	16	0.8	73	6.3	6.1	98.3	30.4	4.8	19.2	1.1
E90AO11-020B20L081Z3R20	20	0.8	81	6.3	3.8	158.1	38.4	3.8	27.2	1.5
E90AO11-025B25L088Z4R20	25	0.8	88	6.3	2.6	231.2	48.4	3.3	37.3	1.8
E90AO11-032B32L100Z5R20	32	0.8	100	6.3	1.8	334.1	62.4	3.0	51.3	1.9
Arbor Style										
F90AO11-040Q16Z6R20	40	0.8	40+ (1)	6.3	1.4	429.6	78.4	2.9	67.3	2.1
F90AO11-050Q22Z7R20	50	0.8	40+ (1)	6.3	1.0	601.5	98.4	2.7	87.3	2.0
AOMT11T320										
Cylindrical Shank Style										
E90AO11-016A16L073Z2R20C	16	0.8	73	6.3	6.1	98.3	28.0	4.0	19.2	1.1
E90AO11-016A16L145Z2R20C	16	0.8	145	6.3	6.1	98.3	28.0	4.0	19.2	1.1
E90AO11-020A20L081Z3R20C	20	0.8	81	6.3	3.8	158.1	36.0	3.3	27.2	1.5
E90AO11-020A20L170Z2R20C	20	0.8	170	6.3	3.8	158.1	36.0	3.3	27.2	1.5
E90AO11-020A20L170Z3R20C	20	0.8	170	6.3	3.8	158.1	36.0	3.3	27.2	1.5
E90AO11-025A25L088Z4R20C	25	0.8	88	6.3	2.6	231.2	46.0	3.0	37.3	1.8
E90AO11-025A25L210Z2R20C	25	0.8	210	6.3	2.6	231.2	46.0	3.0	37.3	1.8
E90AO11-025A25L210Z4R20C	25	0.8	210	6.3	2.6	231.2	46.0	3.0	37.3	1.8
E90AO11-032A32L100Z5R20C	32	0.8	100	6.3	1.8	334.1	60.0	2.8	51.3	1.9
E90AO11-032A32L235Z3R20C	32	0.8	235	6.3	1.8	334.1	60.0	2.8	51.3	1.9
E90AO11-032A32L235Z5R20C	32	0.8	235	6.3	1.8	334.1	60.0	2.8	51.3	1.9
Weldon Shank Style										
E90AO11-016B16L073Z2R20	16	0.8	73	6.3	6.1	98.3	28.0	4.0	19.2	1.1
E90AO11-020B20L081Z3R20	20	0.8	81	6.3	3.8	158.1	36.0	3.3	27.2	1.5
E90AO11-025B25L088Z4R20	25	0.8	88	6.3	2.6	231.2	46.0	3.0	37.3	1.8
E90AO11-032B32L100Z5R20	32	0.8	100	6.3	1.8	334.1	60.0	2.8	51.3	1.9

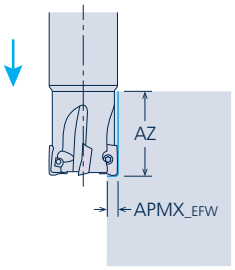
*Formulae: Linear Ramp; Min. Distance: L = (APMX/tan RMPX°). Helical Ramp; Max. Pitch: P max = (DH-DC)*π*tan RMPX°, Max. Hole Ø: DH max = (DC - RE) (2), Min. Hole Ø: DH min = (cutter radius + min. cutting radius) (2)*
(1) DC > DCSFms, off-set plunge is only limited by arbor clearance

Multi90Mill V2

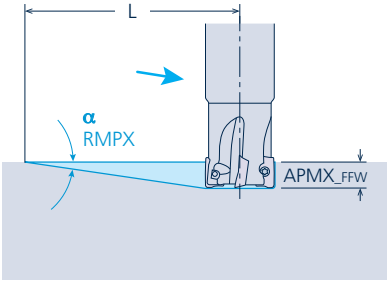
Plunge, Linear Ramping and Helical Ramping - Continued



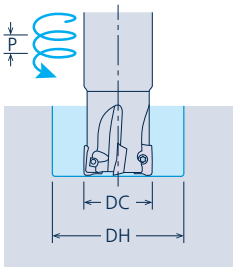
Plunge
Full Engagement



Plunge
Off-set



Linear Ramping

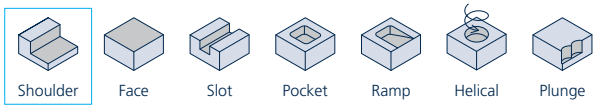


Helical Ramping

DESCRIPTION	Ø	PLUNGE Full Engagement	PLUNGE Off-set		LINEAR RAMPING		HELICAL RAMPING			
	DC (mm)	Max. Plunge Depth AZ (mm)	Max. Plunge Depth AZ (mm)	Max. Depth of Cut APMX_EFW (mm)	Max. Ramp Angle RMPX (°)	Min. Distance L (mm)	Max. Hole Ø DH max (mm)	Max. Pitch P max (mm)	Min. Hole Ø DH min (mm)	Max. Pitch P max (mm)
AOMT11T320 - Continued										
Arbor Style										
F90AO11-040Q16Z6R20	40	0.8	40+ (1)	6.3	1.4	429.6	76.0	2.8	67.3	2.1
F90AO11-050Q22Z7R20	50	0.8	40+ (1)	6.3	1.0	601.5	96.0	2.5	87.3	2.0
AOMT150512										
Cylindrical Shank Style										
E90AO15-025A25L120Z2R20C	25	2.2	32	9.5	10.4	75.2	47.6	13.0	31.0	3.5
E90AO15-025A25L210Z2R20C	25	2.2	45	9.5	10.4	75.2	47.6	13.0	31.0	3.5
E90AO15-032A32L130Z3R20C	32	2.2	40	9.5	6.6	119.3	61.6	10.8	45.0	4.7
E90AO15-032A32L235Z2R20C	32	2.2	50	9.5	6.6	119.3	61.6	10.8	45.0	4.7
E90AO15-040A32L170Z4R20C	40	2.2	40	9.5	4.8	164.3	77.6	9.9	61.0	5.5
E90AO15-040A32L250Z2R20C	40	2.2	40	9.5	4.8	164.3	77.6	9.9	61.0	5.5
Weldon Shank Style										
E90AO15-025B25L088Z2R20	25	2.2	32	9.5	10.4	75.2	47.6	13.0	31.0	3.5
E90AO15-032B32L100Z3R20	32	2.2	40	9.5	6.6	119.3	61.6	10.8	45.0	4.7
E90AO15-040B32L110Z4R20	40	2.2	40	9.5	4.8	164.3	77.6	9.9	61.0	5.5
Arbor Style										
F90AO15-040Q16Z4R20	40	2.2	40+ (1)	9.5	4.8	164.3	77.6	9.9	61.0	5.5
F90AO15-050Q22Z5R20	50	2.2	40+ (1)	9.5	3.5	225.6	97.6	9.1	81.0	6.0
F90AO15-063Q22Z6R20	63	2.2	40+ (1)	9.5	2.6	303.9	123.6	8.6	107.0	6.3
F90AO15-080Q27Z7R20	80	2.2	50+ (1)	9.5	1.9	416.0	157.6	8.1	141.1	6.4
F90AO15-100Q32Z8R20	100	2.2	50+ (1)	9.5	1.5	527.0	197.6	8.0	181.1	6.7
F90AO15-125Q40Z9R20	125	2.2	63+ (1)	9.5	1.1	718.7	247.6	7.4	231.1	6.4

*Formulae: Linear Ramp; Min. Distance: L = (APMX/tan RMPX°). Helical Ramp; Max. Pitch: P max = (DH-DC)*π*tan RMPX°, Max. Hole Ø: DH max = (DC - RE) (2), Min. Hole Ø: DH min = (cutter radius + min. cutting radius) (2)*
(1) DC > DCSFms, off-set plunge is only limited by arbor clearance

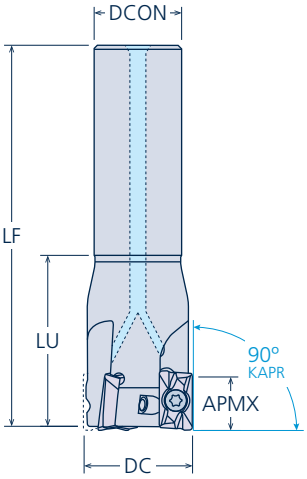
UniMill V2



E90APT - Cylindrical shank style

A multi-purpose square shoulder milling solution, utilising APKT1003 and APKT1604 positive inserts with two helical cutting edges. Choose this solution for a multi-purpose solution.

Cutter diameters: 12mm to 40mm
KAPR: 90°



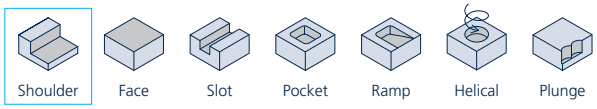
Through coolant

DESCRIPTION	ZEFF	DIMENSIONS (mm)					INSERT SCREW	TORX BIT	TORQUE ADAPTER	T-HANDLE
		DC	LF	LU	DCON	APMX				
Cutters for APKT1003 Inserts										
E90APT10-012A16L120Z1C	1	12	120	35	16	9.7	TS-M2.5L5.5/ 50°8IP	BIT50-8IP	Adapter - 1.2 Nm	T-Handle
E90APT10-016A16L130Z2C	2	16	130	35	16	9.7				
E90APT10-020A20L150Z2C	2	20	150	50	20	9.7				
E90APT10-020A20L150Z3C	3	20	150	50	20	9.7				
E90APT10-025A20L170Z3C	3	25	170	50	20	9.7				
E90APT10-025A20L170Z4C	4	25	170	50	20	9.7				
E90APT10-032A25L195Z4C	4	32	195	50	25	9.7				
E90APT10-032A25L195Z5C	5	32	195	50	25	9.7				
Cutters for APKT1604 Inserts										
E90APT16-025A20L200Z2C	2	25	200	60	20	15.1	TS-M4L9.5/ 60°15IP	BIT50-15IP	Adapter - 3.8 Nm	T-Handle
E90APT16-032A25L200Z3C	3	32	200	60	25	15.1				
E90APT16-040A32L250Z4C	4	40	250	60	32	15.1				

For inserts see page 33

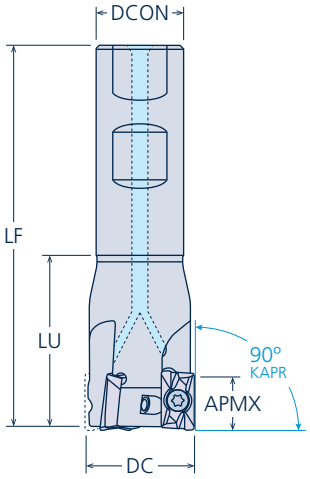
UniMill V2

E90APT - Weldon shank style



A multi-purpose square shoulder milling solution, utilising APKT1003 and APKT1604 positive inserts with two helical cutting edges. Choose this solution for a multi-purpose solution.

Cutter diameters: 16mm to 40mm
KAPR: 90°

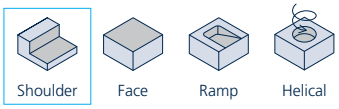


Through coolant

DESCRIPTION	ZEFF	DIMENSIONS (mm)					INSERT SCREW	TORX BIT	TORQUE ADAPTER	T-HANDLE
		DC	LF	LU	DCON	APMX				
Cutters for APKT1003 Inserts										
E90APT10-016B16L85Z2C	2	16	85	37	16	9.7	TS-M2.5L5.5/ 50°8IP	BIT50-8IP	Adapter - 1.2 Nm	T-Handle
E90APT10-020B20L90Z3C	3	20	90	40	20	9.7				
E90APT10-025B25L105Z4C	4	25	105	49	25	9.7				
E90APT10-032B25L110Z5C	5	32	110	54	25	9.7				
Cutters for APKT1604 Inserts										
E90APT16-025B20L100Z2C	2	25	100	40	20	15.1	TS-M4L9.5/ 60°15IP	BIT50-15IP	Adapter - 3.8 Nm	T-Handle
E90APT16-032B25L110Z3C	3	32	110	50	25	15.1				
E90APT16-040B32L115Z4C	4	40	115	55	32	15.1				

For inserts see page 33

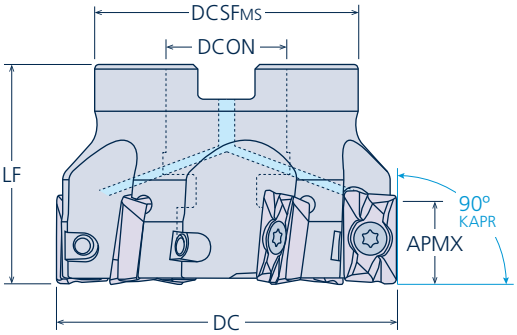
UniMill V2



F90APT - Arbor style

A multi-purpose square shoulder milling solution, utilising APKT1003 and APKT1604 positive inserts with two helical cutting edges. Choose this solution for a multi-purpose solution.

Cutter diameters: 40mm to 160mm
KAPR: 90°



Through coolant

DESCRIPTION	ZEFF	DIMENSIONS (mm)					INSERT SCREW	TORX BIT	TORQUE ADAPTER	T-HANDLE
		DC	LF	DCSFMS	DCON	AMPX				
Cutters for APKT1003 Inserts										
F90APT10-040Q16Z6C	6	40	40	32	16	9.7	TS-M2.5L5.5/ 50°8IP	BIT50-8IP	Adapter - 1.2 Nm	T-Handle
F90APT10-050Q22Z7C	7	50	40	40	22	9.7				
F90APT10-063Q22Z8C	8	63	40	46	22	9.7				
F90APT10-080Q27Z10C	10	80	50	54	27	9.7				
Cutters for APKT1604 Inserts										
F90APT16-040Q22Z4C	4	40	40	32	16	15.1	TS-M4L9.5/ 60°15IP	BIT50-15IP	Adapter - 3.8 Nm	T-Handle
F90APT16-050Q22Z5C	5	50	40	42	22	15.1				
F90APT16-063Q22Z6C	6	63	40	48	22	15.1				
F90APT16-080Q22Z7C	7	80	50	58	27	15.1				
F90APT16-100Q32Z8C	8	100	50	76	32	15.1				
F90APT16-125Q40Z9C	9	125	63	90	40	15.1		BIT75-15IP		
F90APT16-160Q40Z10 (1)	10	160	63	114	40	15.1				

For inserts see page 33

(1) Cutters above Ø125mm are non-through coolant style

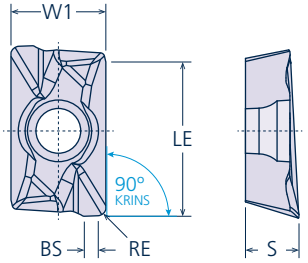
UniMill V2

APKT - Milling insert

APKT1003 and APKT1604 positive inserts with two helical cutting edges.

KRINS: 90°

Medium general purpose geometry.
Suitable for most materials.

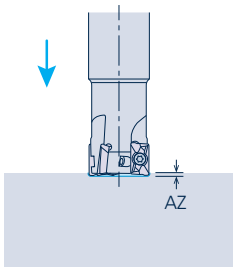


INSERT	DESCRIPTION	DIMENSIONS (mm)						P						M		K		S		H	
								P10	P10	P20	P20	P30	P30	M25	M30	K15	K25	S25	S30	H15	H20
		LE	W1	S	RE	BS	APMX	8410	8510	8420	8520	8430	8530	8530	8640	8410	8420	8530	8640	8510	8520
APKT1003 M - MEDIUM *(General Purpose)*	APKT100308M*	9.8	6.7	3.5	0.8	0.8	9.7			●			●	●			●	●			
APKT1604 M - MEDIUM *(General Purpose)*	APKT160408M*	15.3	9.5	5.3	0.8	1.2	15.1			●			●	●			●	●			

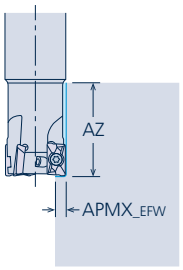
For milling cutters see pages 30 - 32

UniMill V2

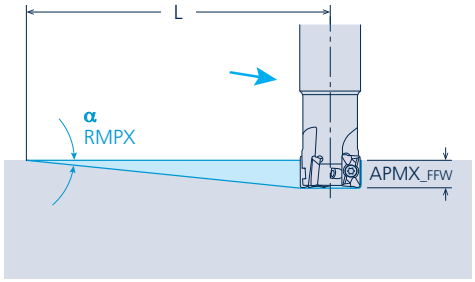
Plunge, Linear Ramping and Helical Ramping



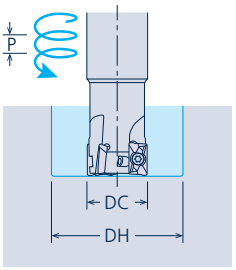
Plunge
Full Engagement



Plunge
Off-set



Linear Ramping



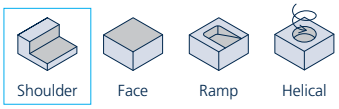
Helical Ramping

DESCRIPTION	Ø	PLUNGE Full Engagement	PLUNGE Off-set		LINEAR RAMPING		HELICAL RAMPING			
	DC (mm)	Max. Plunge Depth AZ (mm)	Max. Plunge Depth AZ (mm)	Max. Depth of Cut APMX_EFW (mm)	Max. Ramp Angle RMPX (°)	Min. Distance L (mm)	Max. Hole Ø DH max (mm)	Max. Pitch P max (mm)	Min. Hole Ø DH min (mm)	Max. Pitch P max (mm)
APKT100308										
Cylindrical Shank Style										
E90APT10-012A16L120Z1C	12	0.5	35	4.0	3.8	146.0	22.4	2.2	15.2	0.7
E90APT10-016A16L130Z2C	16	0.5	35	5.8	3.2	173.5	30.4	2.5	20.0	0.7
E90APT10-020A20L150Z2C	20	0.6	50	6.2	2.4	231.4	38.4	2.4	27.6	1.0
E90APT10-020A20L150Z3C	20	0.6	50	6.2	2.4	231.4	38.4	2.4	27.6	1.0
E90APT10-025A20L170Z3C	25	0.7	50+ (1)	6.2	2.1	264.5	48.4	2.7	37.4	1.4
E90APT10-025A20L170Z4C	25	0.7	50+ (1)	6.2	2.1	264.5	48.4	2.7	37.4	1.4
E90APT10-032A25L195Z4C	32	0.8	50+ (1)	6.2	1.8	308.7	62.4	3.0	51.3	1.9
E90APT10-032A25L195Z5C	32	0.8	50+ (1)	6.2	1.8	308.7	62.4	3.0	51.3	1.9
Weldon Shank Style										
E90APT10-016B16L85Z2C	16	0.5	37	5.8	3.2	173.5	30.4	2.5	20.0	0.7
E90APT10-020B20L90Z3C	20	0.6	40	6.2	2.4	231.4	38.4	2.4	27.6	1.0
E90APT10-025B25L105Z4C	25	0.7	49	6.2	2.1	264.5	48.4	2.7	37.4	1.4
E90APT10-032B25L110Z5C	32	0.8	54+ (1)	6.2	1.8	308.7	62.4	3.0	51.3	1.9
Arbor Style										
F90APT10-040Q16Z6C	40	0.8	40+ (2)	6.2	1.3	427.4	78.4	2.7	67.3	1.9
F90APT10-050Q22Z7C	50	0.8	40+ (2)	6.2	1.0	555.7	98.4	2.7	87.3	2.0
F90APT10-063Q22Z8C	63	0.8	40+ (2)	6.2	0.7	793.9	124.4	2.4	112.5	1.9
F90TP10-080Q27Z10C	80	0.8	50+ (2)	6.2	0.5	1,111.5	158.4	2.2	147.3	1.8
APKT160408										
Cylindrical Shank Style										
E90APT16-025A20L200Z2C	25	1.4	60+ (1)	8.5	2.9	298.1	48.4	3.7	33.2	1.3
E90APT16-032A25L200Z3C	32	1.4	60+ (1)	8.5	1.9	455.2	62.4	3.2	46.3	1.5
E90APT16-040A32L250Z4C	40	1.4	60+ (1)	9.0	1.5	576.6	78.4	3.2	62.1	1.8
Weldon Shank Style										
E90APT16-025B20L100Z2C	25	1.4	40+ (1)	8.5	2.9	298.1	48.4	3.7	33.2	1.3
E90APT16-032B25L110Z3C	32	1.4	50+ (1)	8.5	1.9	455.2	62.4	3.2	46.3	1.5
E90APT16-040B32L115Z4C	40	1.4	55+ (1)	9.0	1.5	576.6	78.4	3.2	62.1	1.8
Arbor Style										
F90APT16-040Q22Z4C	40	1.4	40+ (2)	9.0	1.5	576.6	78.4	3.2	62.1	1.8
F90APT16-050Q22Z5C	50	1.4	40+ (2)	9.0	1.4	617.9	98.4	3.7	82.0	2.5
F90APT16-063Q22Z6C	63	1.4	40+ (2)	9.0	1.3	665.4	124.4	4.4	107.9	3.2
F90APT16-080Q22Z7C	80	1.4	50+ (2)	9.0	1.0	865.1	158.4	4.3	141.9	3.4
F90AP16-100Q32Z8C	100	1.4	50+ (2)	9.0	0.7	1,235.9	198.4	3.8	181.9	3.1
F90AP16-125Q40Z9C	125	1.4	63+ (2)	9.0	0.6	1,441.9	248.4	4.1	231.8	3.5
F90AP16-160Q40Z10	160	1.4	63+ (2)	9.0	0.4	2,162.9	318.4	3.5	301.8	3.1

*Formulae: Linear Ramp; Min. Distance: L = (APMX/tan RMPX°). Helical Ramp; Max. Pitch: P max = (DH-DC)*π*tan RMPX°, Max. Hole Ø: DH max = (DC - RE) (2), Min. Hole Ø: DH min = (cutter radius + min. cutting radius) (2)*
(1) DC > DCON, able to off-set plunge up to clamping in side lock holder / collet chuck
(2) DC > DCSFms, off-set plunge is only limited by arbor clearance

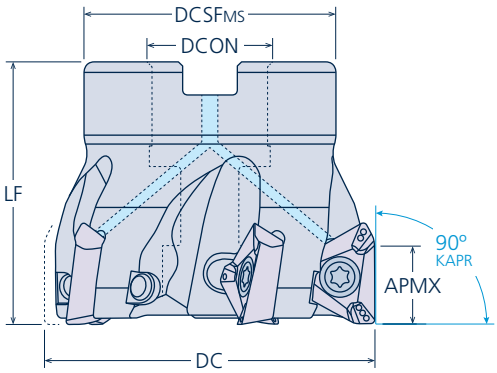
Millerator V2

F90TD - Arbor style



Square shoulder milling solution, utilising triangular positive inserts with three helical cutting edges, for true 90° milling. The TDMT1504 and TDMT1906 inserts are thick and strong providing up to 15mm depth of cut. High relief for ramp down capabilities. Choose this solution if you are looking for a versatile milling solution, that provides increased economy due to inserts with three cutting edges.

Cutter diameters: 40mm to 160mm
KAPR: 90°



Through coolant

DESCRIPTION	ZEFF	DIMENSIONS (mm)					INSERT SCREW	TORX BIT	TORQUE ADAPTER	T-HANDLE
		DC	LF	DCSFMS	DCON	AMPX				
Cutters for TDMT1504 Inserts										
F90TD15-040Q16Z4C	4	40	40	32	16	12.2	TS-M4L9.8/ 60° T15	BIT50-TX15 or BIT50-TX15 HD	Adapter - 4.3 Nm	T-Handle
F90TD15-050Q22Z5C	5	50	40	40	22	12.2				
F90TD15-063Q22Z6C	6	63	40	48	22	12.2				
F90TD15-080Q27Z7C	7	80	50	58	27	12.2				
F90TD15-100Q32Z8C	8	100	50	78	32	12.2				
F90TD15-125Q40Z9C	9	125	63	90	40	12.2		BIT73-TX15 HD		
Cutters for TDMT1906 Inserts										
F90TD19-063Q22Z5C	5	63	50	48	22	15	TS-M5L11.6/ 60° T20	BIT50-TX20 or BIT50-TX20 HD	Adapter - 5.0 Nm	T-Handle
F90TD19-080Q27Z6C	6	80	50	58	27	15				
F90TD19-100Q32Z7C	7	100	50	78	32	15				
F90TD19-125Q40Z8C	8	125	63	90	40	15		BIT73-TX20 HD		
F90TD19-160Q40Z10C	10	160	63	114	40	15				

For inserts see page 36

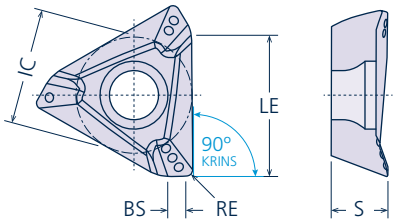
Millerator V2

TDMT - Milling insert

Triangular TDMT1504 and TDMT1906 positive inserts with three helical cutting edges.

KRINS: 90°

Medium general purpose geometry.
Suitable for most materials.

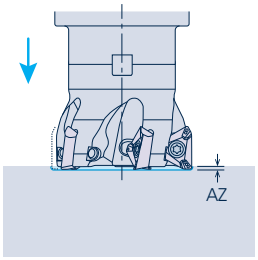


INSERT	DESCRIPTION	DIMENSIONS (mm)						P						M		K		S		H	
								P10	P10	P20	P20	P30	P30	M25	M30	K15	K25	S25	S30	H15	H20
		LE	IC	S	RE	BS	APMX	8410	8510	8420	8520	8430	8530	8530	8640	8410	8420	8530	8640	8510	8520
TDMT1504 M - MEDIUM *(General Purpose)*	TDMT150408M*	12.5	10.47	4.76	0.8	1	12.2			●			●	●			●	●			
TDMT1906 M - MEDIUM *(General Purpose)*	TDMT190608M*	15.3	13.5	6.35	0.8	2	15			●			●	●			●	●			

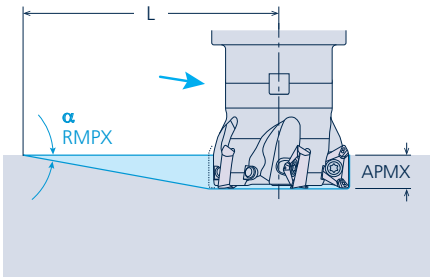
For milling cutters see pages 35

Millerator V2

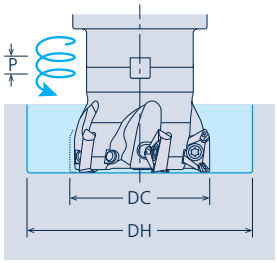
Plunge, Linear Ramping and Helical Ramping



Plunge
Full Engagement



Linear Ramping



Helical Ramping

DESCRIPTION	Ø	PLUNGE Full Engagement	LINEAR RAMPING		HELICAL RAMPING			
	DC (mm)	Max. Plunge Depth AZ (mm)	Max. Ramp Angle RMPX (°)	Min. Distance L (mm)	Max. Hole Ø DH max (mm)	Max. Pitch P max (mm)	Min. Hole Ø DH min (mm)	Max. Pitch P max (mm)
TDMT150408								
Arbor Style								
F90TD15-040Q16Z4C	40	1.0	1.7	411.1	78.4	3.6	70.5	2.8
F90TD15-050Q22Z5C	50	1.0	1.3	537.6	98.4	3.5	90.6	2.9
F90TD15-063Q22Z6C	63	1.0	0.9	776.6	124.4	3.0	116.5	2.6
F90TD15-080Q27Z7C	80	1.0	0.7	998.5	158.4	3.0	150.5	2.7
F90TD15-100Q32Z8C	100	1.0	0.5	1,398.0	198.4	2.7	190.5	2.5
F90TD15-125Q40Z9C	125	1.0	0.4	1,747.5	248.4	2.7	240.5	2.5
TDMT190608								
Arbor Style								
F90TD19-063Q22Z5C	63	1.6	1.7	505.4	124.4	5.7	112.1	4.6
F90TD19-080Q27Z6C	80	1.6	1.2	716.1	158.4	5.2	146.1	4.4
F90TD19-100Q32Z7C	100	1.6	0.9	954.9	198.4	4.9	186.0	4.2
F90TD19-125Q40Z8C	125	1.6	0.7	1,227.7	248.4	4.7	236.1	4.3
F90TD19-160Q40Z10C	160	1.6	0.5	1,718.8	318.4	4.3	306.1	4.0

*Formulae: Linear Ramp; Min. Distance: L = (APMX/tan RMPX°). Helical Ramp; Max. Pitch: P max = (DH-DC)*π*tan RMPX°, Max. Hole Ø: DH max = (DC - RE) (2), Min. Hole Ø: DH min = (cutter radius + min. cutting radius) (2)*

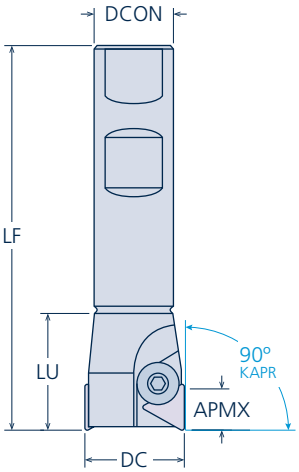
ClassicMill

Shoulder | Face | Slot

E90TP - Weldon shank style

Square shoulder milling solution, utilising triangular ISO standard positive inserts with three cutting edges. Choose this option for ISO standard inserts and where you do not require a good wall finish. Recommended for conventional milling machines.

Cutter diameters: 25mm to 32mm
KAPR: 90°



DESCRIPTION	ZEFF	DIMENSIONS (mm)					CLAMP CREW	CLAMP	HEX KEY	Nm
		DC	LF	LU	DCON	APMX				
Cutters for TP*N1603 Inserts										
E90TP16025W	2	25	110	35	25	15.5 (1)	1016	2064	5004	3.5
E90TP16032W	2	32	125	35	32	15.5 (1)				

For inserts see pages 41 - 42

(1) APMX differs depending on insert used in the cutter. Refer to insert page for specific APMXs

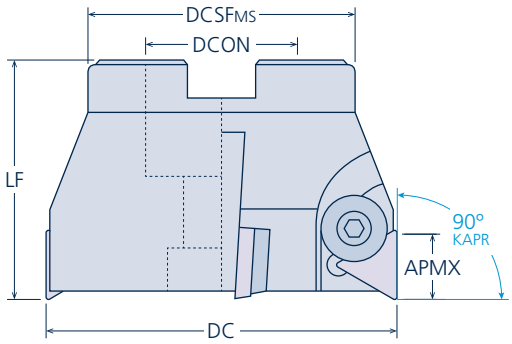
ClassicMill

Shoulder Face

F90TPE - Arbor style

Square shoulder milling solution, utilising triangular ISO standard positive inserts with three cutting edges. Choose this option for ISO standard inserts and where you do not require a good wall finish. Recommended for conventional milling machines.

Cutter diameters: 40mm to 200mm
KAPR: 90°



DESCRIPTION	ZEFF	DIMENSIONS (mm)					INSERT SHIM	CLAMP SCREW	CLAMP	SHIM PIN	ARBOR SCREW	HEX KEY	DIN 2079	Nm
		DC	LF	DCSFMS	DCON	AMPX								
Cutters for TP*N1603 Inserts														
F90TPE16040	3	40	40	38.5	16	15.5 (1)	-	1006R	2064	-	1058	5004	-	3.5
F90TPE16050	4	50	40	49	22	15.5 (1)		1016			912.10			
F90TPE16063	4	63	50	60	27	15.5 (1)	3016	1006R		4016	912.12			
F90TPE16080	5	80	50	78	32	15.5 (1)					912.16			
F90TPE16100	6	100	50	76	40	15.5 (1)					912.20			
F90TPE16125	6	125	63	100	40	15.5 (1)					Standard			
F90TPE16160	7	160	63	100	40	15.5 (1)					912.52		40	
F90TPE16200	8	200	63	140	60	15.5 (1)					912.56		50	
Cutters for TP*N2204 Inserts														
F90TPE22063	3	63	50	60	27	19.9 (1)	3022	1008R	2088	4022	912.12	5005	-	4
F90TPE22080	4	80	50	78	32	19.9 (1)					912.16			
F90TPE22100	5	100	50	76	40	19.9 (1)					912.20			
F90TPE22125	6	125	63	100	40	19.9 (1)					Standard			
F90TPE22160	7	160	63	100	40	19.9 (1)					912.52		40	
F90TPE22200	8	200	63	140	60	19.9 (1)					912.56		50	

For inserts see pages 41 - 42

(1) APMX differs depending on insert used in the cutter. Refer to insert page for specific APMXs

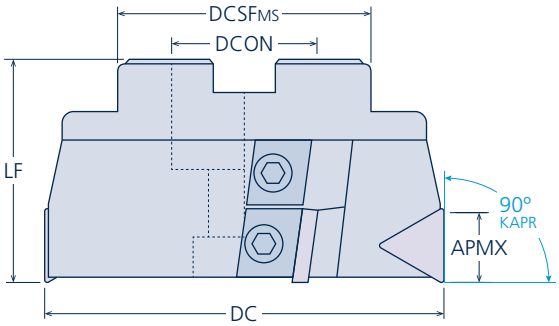
ClassicMill

Shoulder Face

F90TP - Arbor style

Cartridge style square shoulder milling solution, utilising triangular ISO standard positive inserts with three cutting edges. Choose this option for a replaceable cartridge based system that provides cutter body protection and which uses ISO standard inserts.

Cutter diameters: 52mm to 250mm
KAPR: 90°



DESCRIPTION	ZEFF	DIMENSIONS (mm)					WEDGE SCREW	INSERT WEDGE	CARTRIDGE WEDGE	CARTRIDGE	ADJUST. SCREW	ARBOR SCREW	TORX DRIVER	TORX KEY	DIN 2079	Nm
		DC	LF	DCSFMS	DCON	AMPX										
Cutters for TP*N1603 Inserts																
F90TP16052	5	52	50	34	16	15.5*1	1166*2	6031	6032	6526	1460	1058	-	5515		3
F90TP16063	6	63	50	60	22	15.5*1						912.10				
F90TP16080	5	80	50	64	27	15.5*1	1077*2	6433	6435	6927		912.12		5520	-	4
F90TP16100	7	100	50	70	32	15.5*1						912.16	5620	-		
F90TP16125	7	125	63	100	40	15.5*1						Standard				
F90TP16160	9	160	63	115	40	15.5*1						912.52			40	
F90TP16200	11	200	63	140	60	15.5*1						912.56			50	
F90TP16250	15	250	63	140	60	15.5*1									60	
Cutters for TP*N2204 Inserts																
F90TP22080	5	80	50	50	27	19.9*1	1077*2	6434	6436	6942	1460	912.12	-	5520		4
F90TP22100	7	100	50	78	32	19.9*1						912.16	5620	-	-	
F90TP22125	7	125	63	100	40	19.9*1						Standard				
F90TP22160	9	160	63	100	40	19.9*1						912.52			40	
F90TP22200	11	200	63	140	60	19.9*1						912.56			50	
F90TP22250	15	250	63	140	60	19.9*1									60	

For inserts see pages 41 - 42

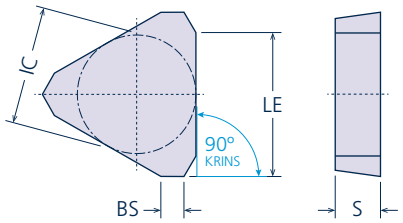
*1 APMX differs depending on insert used in the cutter. Refer to insert page for specific APMXs
*2 Wedge screw is used for both the insert wedge and cartridge wedge

ClassicMill

TPKN - Milling insert

ISO standard triangular TPKN1603 and TPKN2204 positive inserts with three cutting edges.
The periphery ground inserts provide higher accuracy and better floor finish.

KRINS: 90°



INSERT	DESCRIPTION	DIMENSIONS (mm)					P		M	K	S	H
							P20	P30	M25	K25	S25	H20
		LE	IC	S	RE	APMX	8220	8430	8430	8220	8430	8220
TPKN1603 	TPKN1603PPSN*	13.4	9.53	3.18	1.2	13.3	●	●	●	●	●	●
TPKN2204 	TPKN2204PDSR*	18.7	12.7	4.76	1.4	18.6	●	●	●	●	●	●

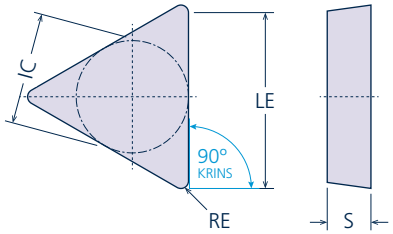
For milling cutters see pages 38 - 40

ClassicMill

TPUN - Milling insert

ISO standard triangular TPUN1603 and TPUN2204 positive inserts with three cutting edges.

KRINS: 90°



INSERT	DESCRIPTION	DIMENSIONS (mm)					P		M	K	S	H
							P20	P30	M25	K25	S25	H20
		LE	IC	S	RE	APMX	8220	8430	8430	8220	8430	8220
TPUN1603												
	TPUN160304*	15.5	9.53	3.18	0.4	15.5	●	●	●	●	●	●
	TPUN160308*	14.5	9.53	3.18	0.8	14.5	●	●	●	●	●	●
	TPUN160312*	13.5	9.53	3.18	1.2	13.5	●	●	●	●	●	●
TPUN2204												
	TPUN220408*	19.9	12.7	4.76	0.8	19.9	●	●	●	●	●	●
	TPUN220412*	19	12.7	4.76	1.2	19.0	●	●	●	●	●	●

For milling cutters see pages 38 - 40

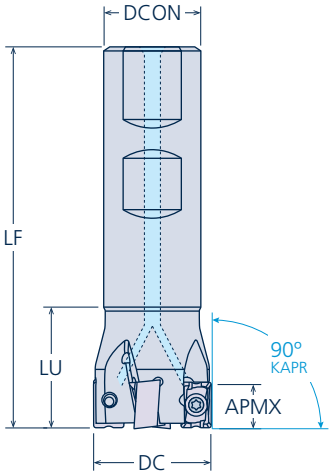
MillaTron V2

Shoulder Face Slot

E90AN - Weldon shank style

Economical double-sided rectangular ANMX1006 and ANMX1508 inserts with four helical cutting edges. The strong negative inserts feature a positive chipbreaker, resulting in an easy cutting action with reduced cutting forces. The narrow, rectangular insert shape enables cutters starting from 20mm diameter and inserts with a longer cutting edge length. Select this option for economic square shoulder milling, featuring strong inserts and where ramping capabilities are not required.

Cutter diameters: 20mm to 40mm
KAPR: 90°



Through coolant

DESCRIPTION	ZEFF	DIMENSIONS (mm)					INSERT SCREW	TORX BIT	TORQUE ADAPTER	T-HANDLE
		DC	LF	LU	DCON	APMX				
Cutters for ANMX1006 Inserts										
E90AN10-020B20L100Z2C	2	20	100	30	20	9	TS-M3L8.6/ 60° T9	BIT50-TX9 or BIT50-TX9 HD	Adapter - 2.2 Nm	T-Handle
E90AN10-020B20L150Z2C	2	20	150	30	20	9				
E90AN10-020B20L100Z3C	3	20	100	30	20	9				
E90AN10-025B25L115Z2C	2	25	115	35	25	9				
E90AN10-025B25L150Z2C	2	25	150	35	25	9				
E90AN10-025B25L115Z3C	3	25	115	35	25	9				
E90AN10-032B32L125Z3C	3	32	125	42	32	9				
E90AN10-032B32L180Z3C	3	32	180	42	32	9				
E90AN10-032B32L125Z4C	4	32	125	42	32	9				
E90AN10-040B32L130Z4C	4	40	130	42	32	9				
E90AN10-040B32L130Z5C	5	40	130	42	32	9				
Cutters for ANMX1508 Inserts										
E90AN15-032B32L125Z3C	3	32	125	40	32	14	TS-M4L10.6/ 60° T15 or TS-M4L11.8/ 60° T15IP	BIT50-TX15 or BIT50-TX15 HD or BIT50-15IP	Adapter - 3.8 Nm	T-Handle
E90AN15-040B32L130Z4C	4	40	130	40	32	14				

For inserts see page 45

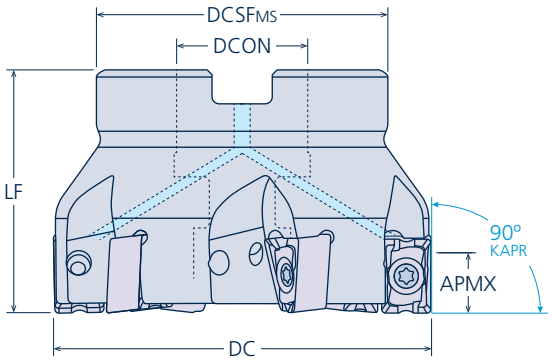
MillaTron V2

F90AN - Arbor style

Shoulder Face

Economical double-sided rectangular ANMX1006 and ANMX1508 inserts with four helical cutting edges. The strong negative inserts feature a positive chipbreaker, resulting in an easy cutting action with reduced cutting forces. The narrow, rectangular insert shape allows for cutters starting from 20mm diameter and inserts with a longer cutting edge length. Select this option for economic square shoulder milling, featuring strong inserts and where ramping capabilities are not required.

Cutter diameters: 40mm to 160mm
KAPR: 90°



Through coolant

DESCRIPTION	ZEFF	DIMENSIONS (mm)					INSERT SCREW	TORX BIT	TORQUE ADAPTER	T-HANDLE
		DC	LF	DCSFMS	DCON	AMPX				
Cutters for ANMX1006 Inserts										
F90AN10-040Q16Z4C	4	40	40	35	16	9	TS-M3L8.6/ 60° T9	BIT50-TX9 or BIT50-TX9 HD	Adapter - 2.2 Nm	T-Handle
F90AN10-040Q16Z5C	5	40	40	35	16	9				
F90AN10-050Q22Z5C	5	50	40	42	22	9				
F90AN10-050Q22Z7C	7	50	40	42	22	9				
F90AN10-063Q22Z6C	6	63	40	49	22	9				
F90AN10-063Q22Z8C	8	63	40	49	22	9				
Cutters for ANMX1508 Inserts										
F90AN15-050Q22Z4C	4	50	40	42	22	14	TS-M4L10.6/ 60° T15 or TS-M4L11.8/ 60° T15IP	BIT50-TX15 or BIT50-TX15 HD or BIT50-15IP	Adapter - 3.8 Nm	T-Handle
F90AN15-063Q22Z6C	6	63	40	49	22	14				
F90AN15-080Q27Z7C	7	80	50	60	27	14				
F90AN15-100Q32Z8C	8	100	50	80	32	14				
F90AN15-125Q40Z10C	10	125	63	90	40	14		BIT73-TX15 HD or BIT75-15IP		
F90AN15-160Q40Z11C	11	160	63	115	40	14				

For inserts see page 45

MillaTron V2

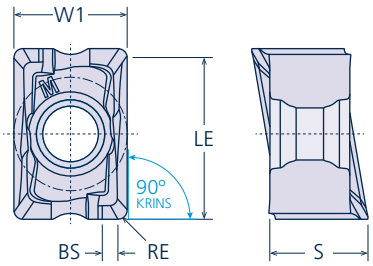
ANMX - Milling insert

ANMX1006 and ANMX1508 negative inserts with four helical cutting edges.

KRINS: 90°

M

Medium general purpose geometry.
Suitable for most materials.



INSERT	DESCRIPTION	DIMENSIONS (mm)						P						M		K		S		H	
								P10	P10	P20	P20	P30	P30	M25	M30	K15	K25	S25	S30	H15	H20
		LE	W1	S	RE	BS	APMX	8410	8510	8420	8520	8430	8530	8530	8640	8410	8420	8530	8640	8510	8520
ANMX1006 M - MEDIUM *(General Purpose)*	ANMX100608M*	10	6.5	6.3	0.8	0.75	9			●			●	●			●	●			
ANMX1508 M - MEDIUM *(General Purpose)*	ANMX150808M*	14.25	10	8.67	0.8	1.4	14			●			●	●			●	●			

For milling cutters see pages 43 - 44

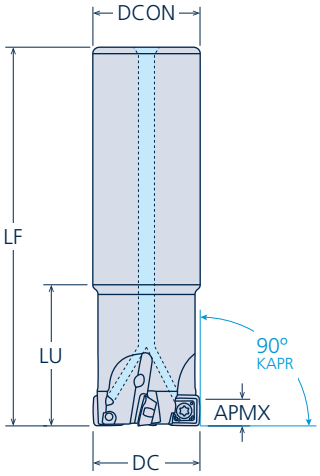
Multi4Mill V2

Shoulder Face Slot

E90SO - Cylindrical shank style

A positive cutting, square shoulder milling solution, utilising small square SOMT0703 positive inserts with four helical cutting edges for true 90° milling. Choose this solution for light cutting square shoulder milling and where ramping capabilities are not required.

Cutter diameters: 16mm to 32mm
KAPR: 90°

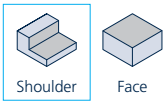


Through coolant

DESCRIPTION	ZEFF	DIMENSIONS (mm)					INSERT SCREW	TORX BIT	TORQUE ADAPTER	T-HANDLE
		DC	LF	LU	DCON	APMX				
Cutters for SOMT0703 Inserts										
E90SO07-016A16L073Z2C	2	16	73	25	16	4.5	TS-M2.5L5.8/ 60° T8	BIT50-TX8 or BIT50-TX8 HD	Adapter - 1.2 Nm	T-Handle
E90SO07-016A16L100Z2C	2	16	100	30	16	4.5				
E90SO07-016A16L145Z2C	2	16	145	25	16	4.5				
E90SO07-020A20L081Z3C	3	20	81	25	20	4.5				
E90SO07-020A20L110Z3C	3	20	110	25	20	4.5				
E90SO07-020A20L170Z2C	2	20	170	30	20	4.5				
E90SO07-025A25L088Z4C	4	25	88	32	25	4.5				
E90SO07-025A25L120Z4C	4	25	120	32	25	4.5				
E90SO07-025A25L210Z2C	2	25	210	40	25	4.5				
E90SO07-032A32L100Z5C	5	32	100	40	32	4.5				
E90SO07-032A32L130Z5C	5	32	130	40	32	4.5				
E90SO07-032A32L235Z3C	3	32	235	50	32	4.5				

For inserts see page 48

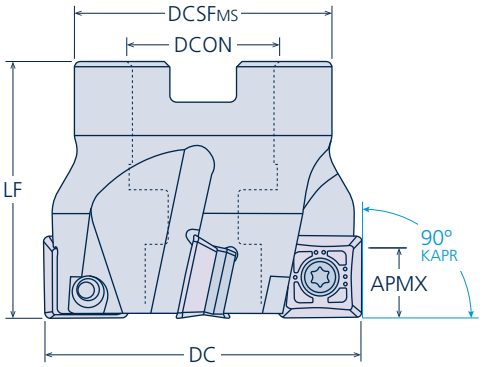
Multi4Mill V2



F90SO - Arbor style

A positive cutting, square shoulder milling solution, utilising square SOMT0703 and SOMT12T3 positive inserts with four helical cutting edges for true 90° milling. Cutter bodies carrying SOMT12 inserts have carbide shims for added protection. Choose this solution for square shoulder milling and where ramping capabilities are not required.

Cutter diameters: 40mm to 160mm
KAPR: 90°



DESCRIPTION	ZEFF	DIMENSIONS (mm)					CARBIDE SHIM	INSERT SCREW	SHIM SCREW	TORX BIT	TORQUE ADAPTER	T-HANDLE
		DC	LF	DCSFMS	DCON	AMPX						
Cutters for SOMT0703 Inserts												
F90SO07-040Q16Z6	6	40	40	32	16	4.5	-	TS-M2.5L5.8/ 60° T8	-	BIT50-TX8 or BIT50-TX8 HD	Adapter - 1.2 Nm	T-Handle
F90SO07-050Q22Z7	7	50	40	40	22	4.5						
F90SO07-063Q22Z8	8	63	40	48	22	4.5						
Cutters for SOMT12T3 Inserts												
F90SO12-050Q22Z4	4	50	40	40	22	11.1*1	3511	TS-M3.5L10.1/ 60° T15	LE-M5x0.5L7	BIT50-TX15 or BIT50-TX15 HD	Adapter - 3.8 Nm	T-Handle
F90SO12-063Q22Z5	5	63	40	48	22	11.1*1						
F90SO12-080Q27Z6	6	80	50	58	27	11.1*1						
F90SO12-100Q32Z7	7	100	50	78	32	11.1*1						
F90SO12-125Q40Z8	8	125	63	90	40	11.1*1				BIT73-TX15 HD		
F90SO12-160Q40Z10	10	160	63	114	40	11.1*1						

For inserts see page 48

*1 APMX differs depending on insert used in the cutter. Refer to insert page for specific APMXs.

Multi4Mill V2

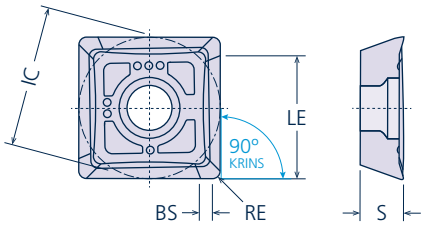
SOMT - Milling insert

Square SOMT0703 and SOMT12T3 positive inserts with four helical cutting edges.

KRINS: 90°

M — Medium general purpose geometry. Suitable for most materials.

R — Roughing geometry for milling at higher feed rates. Suitable for steel and cast iron. Also recommended for interrupted cutting.



INSERT	DESCRIPTION	DIMENSIONS (mm)						P						M		K		S		H	
								P10	P10	P20	P20	P30	P30	M25	M30	K15	K25	S25	S30	H15	H20
		LE	IC	S	RE	BS	APMX	8410	8510	8420	8520	8430	8530	8530	8640	8410	8420	8530	8640	8510	8520
SOMT0703 M - MEDIUM *(General Purpose)*	SOMT070308M*	4.6	7.3	3.18	0.8	0.7	4.5			●			●	●			●	●			
SOMT12T3 M - MEDIUM *(General Purpose)*	SOMT12T308M*	11.2	13.16	3.97	0.8	0.98	11			●			●	●			●	●			
SOMT12T3 R - ROUGHING	SOMT12T320R*	10	13.16	3.97	2	0.8	9.8			●			●	●			●	●			

For milling cutters see pages 46 - 47

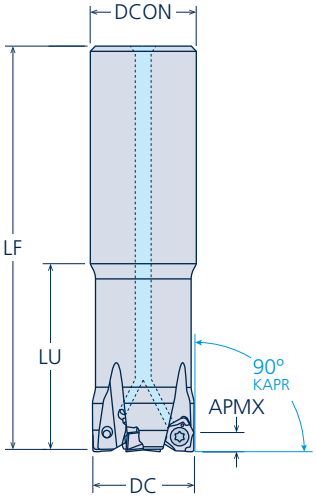
Millix V2

Shoulder Face Slot

E90XN - Cylindrical shank style

Inserts with six cutting edges makes Millix a highly economical square shoulder milling solution. Inserts are available in two styles: *as sintered* and *periphery ground*. The economical *as sintered* XNMX inserts do not have a wiper and are intended for roughing applications. The higher accuracy *periphery ground* XNGX inserts incorporate a wiper and are intended for applications requiring good floor finish. Choose this solution for economic square shoulder milling, due to inserts with six cutting edges.

Cutter diameters: 20mm to 32mm
KAPR: 90°



Through coolant

DESCRIPTION	ZEFF	DIMENSIONS (mm)					INSERT SCREW	TORX BIT	TORQUE ADAPTER	T-HANDLE
		DC	LF	LU	DCON	APMX				
Cutters for XN*X0403 Inserts										
E90XN04-020A20L150Z3C	3	20	150	40	20	4.2	TS-M2.5L6.6/ 60° T8	BIT50-TX8 or BIT50-TX8 HD	Adapter - 1.2 Nm	T-Handle
E90XN04-025A25L170Z4C	4	25	170	50	25	4.2				
E90XN04-032A32L195Z5C	5	32	195	70	32	4.2				

For inserts see page 52

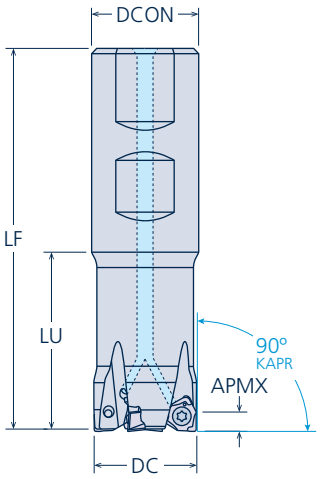
Millix V2

Shoulder Face Slot

E90XN - Weldon shank style

Inserts with six cutting edges makes Millix a highly economical square shoulder milling solution. Inserts are available in two styles: *as sintered* and *periphery ground*. The economical *as sintered* XNMX inserts do not have a wiper and are intended for roughing applications. The higher accuracy *periphery ground* XNGX inserts incorporate a wiper and are intended for applications requiring good floor finish. Choose this solution for economic square shoulder milling, due to inserts with six cutting edges.

Cutter diameters: 20mm to 32mm
KAPR: 90°



Through coolant

DESCRIPTION	ZEFF	DIMENSIONS (mm)					INSERT SCREW	TORX BIT	TORQUE ADAPTER	T-HANDLE
		DC	LF	LU	DCON	APMX				
Cutters for XN*X0403 Inserts										
E90XN04-020B20L090Z3C	3	20	90	40	20	4.2	TS-M2.5L6.6/ 60° T8	BIT50-TX8 or BIT50-TX8 HD	Adapter - 1.2 Nm	T-Handle
E90XN04-025B25L090Z3C	4	25	100	44	25	4.2				
E90XN04-032B32L090Z3C	5	32	110	50	32	4.2				

For inserts see page 52

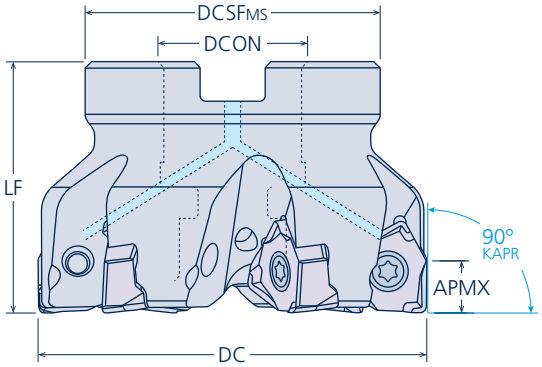
Millix V2

Shoulder Face

F90XN - Arbor style

Inserts with six cutting edges makes Millix a highly economical square shoulder milling solution. Inserts are available in two styles: *as sintered* and *periphery ground*. The economical *as sintered* XNMX inserts do not have a wiper and are intended for roughing applications. The higher accuracy *periphery ground* XNGX inserts incorporate a wiper and are intended for applications requiring good floor finish. Choose this solution for economic square shoulder milling, due to inserts with six cutting edges.

Cutter diameters: 32mm to 160mm
KAPR: 90°



Through coolant

DESCRIPTION	ZEFF	DIMENSIONS (mm)					INSERT SCREW	SPECIAL ARBOR SCREW	TORX BIT	TORQUE ADAPTER	T-HANDLE
		DC	LF	DCSFMS	DCON	AMPX					
Cutters for XN*X0403 Inserts											
F90XN04-032Q16Z6C	6	32	40	30	16	4.2	TS-M2.5L6.6/ 60° T8	Standard	BIT50-TX8 or BIT50-TX8 HD	Adapter - 1.2 Nm	T-Handle
F90XN04-040Q16Z6C	6	40	40	36	16	4.2					
F90XN04-050Q22Z8C	8	50	40	46	22	4.2					
F90XN04-063Q22Z9C	9	63	40	48	22	4.2					
Cutters for XN*X0806 Inserts											
F90XN08-040Q16Z3C	3	40	40	36	16	7.9*1	TS-M4L10.6/ 60° T15	MS3-16*2	BIT50-TX15 or BIT50-TX15 HD	Adapter - 4.3 Nm	T-Handle
F90XN08-050Q22Z4C	4	50	40	46	22	7.9*1		MS2-22S			
F90XN08-050Q22Z5C	5	50	40	46	22	7.9*1					
F90XN08-063Q22Z6C	6	63	40	47	22	7.9*1					
F90XN08-063Q22Z7C	7	63	40	47	22	7.9*1					
F90XN08-080Q27Z7C	7	80	50	62	27	7.9*1		Standard			
F90XN08-080Q27Z9C	9	80	50	62	27	7.9*1					
F90XN08-100Q32Z8C	8	100	50	78	32	7.9*1					
F90XN08-100Q32Z10C	10	100	50	78	32	7.9*1					
F90XN08-125Q40Z11C	11	125	63	90	40	7.9*1			BIT73-TX15 HD		
F90XN08-160Q40Z12C	12	160	63	90	40	7.9*1					

For inserts see page 52

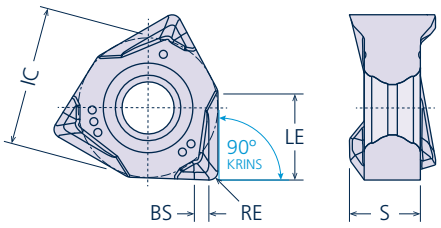
*1 APMX differs depending on insert used in the cutter. Refer to insert page for specific APMXs
*2 Double sided screw M8 (M8x1.25 and M8x0.75)

Millix V2

XN*X - Milling insert

Trigonal XN*X0403 and XN*X0806 negative inserts with six helical cutting edges. Inserts are available in two styles: *as sintered* and *periphery ground*. The economical *as sintered* XNMX inserts do not have a wiper and are intended for roughing applications. The higher accuracy *periphery ground* XNGX inserts incorporate a wiper and are intended for applications requiring good floor finish. Choose this solution for economic square shoulder milling due to inserts with six cutting edges.

KRINS: 90°

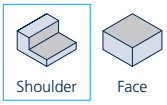


Medium general purpose geometry.
Suitable for most materials.

INSERT	DESCRIPTION	DIMENSIONS (mm)						P						M		K		S		H	
								P10	P10	P20	P20	P30	P30	M25	M30	K15	K25	S25	S30	H15	H20
		LE	IC	S	RE	BS	APMX	8410	8510	8420	8520	8430	8530	8530	8640	8410	8420	8530	8640	8510	8520
As Sintered																					
XNMX0403 M - MEDIUM *(General Purpose)*	XNMX040304M*	4.2	6.7	3.3	0.4	n/a	4.2			●			●	●			●	●			
XNMX0806 M - MEDIUM *(General Purpose)*	XNMX080608M*	7.8	12.5	6.47	0.8	n/a	7.8	●		●			●	●		●	●	●			
Periphery Ground																					
XNGX0806 M - MEDIUM *(General Purpose)*	XNGX080608M*	7.9	12.5	6.5	0.8	1.5	7.9			●			●	●			●	●			

For milling cutters see pages 49 - 51

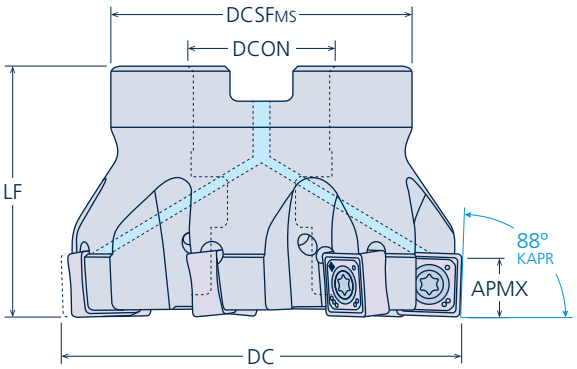
TeraMill V2



F88SNX - Arbor style

88° Approach milling solution, aimed at applications having space restrictions, e.g. milling close to shoulders and fixtures. Can also be used for rough shoulder milling, where a true 90° shoulder is not required. The double sided SNMX120508 inserts with eight cutting edges, feature a positive chipbreaker enabling a smooth, lower-force cutting action. Choose this solution for applications with space restrictions.

Cutter diameters: 50mm to 100mm
KAPR: 88°



Through coolant

DESCRIPTION	ZEFF	DIMENSIONS (mm)					INSERT SCREW	TORX BIT	TORQUE ADAPTER	T-HANDLE
		DC	LF	DCSFMS	DCON	APMX				
Cutters for SNMX120508 Inserts										
F88SNX12-050Q22Z4C	4	50	40	42	22	10	TS-M4L10.0/ Rv15IP	BIT50-15IP	Adapter - 4.3 Nm	T-Handle
F88SNX12-063Q22Z5C	5	63	40	50	22	10				
F88SNX12-080Q27Z7C	7	80	50	60	27	10				
F88SNX12-100Q32Z8C	8	100	50	80	32	10				

For inserts see page 54

TeraMill V2

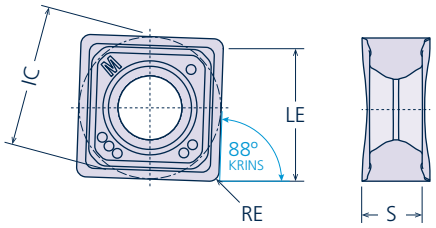
SNMX - Milling insert

Square SNMX120508 negative inserts with eight cutting edges.

KRINS: 88°

M

Medium general purpose geometry.
Suitable for most materials.



INSERT	DESCRIPTION	DIMENSIONS (mm)					P						M		K		S		H	
							P10	P10	P20	P20	P30	P30	M25	M30	K15	K25	S25	S30	H15	H20
		LE	IC	S	RE	APMX	8410	8510	8420	8520	8430	8530	8530	8640	8410	8420	8530	8640	8510	8520
SNMX120508 M - MEDIUM *(General Purpose)*	SNMX120508M*	11.8	12.7	5.48	0.8	10			●			●	●			●	●			

For milling cutters see page 53

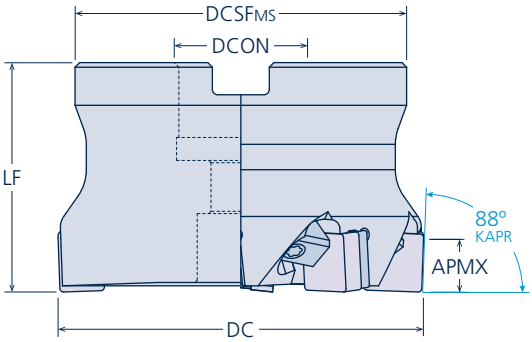
ClassicMill

Shoulder Face

F88SN - Arbor style

88° Approach milling solution for rough shoulder milling and applications having space restrictions e.g. milling close to shoulders and fixture constraints. The solution utilises double sided ISO standard square inserts, with eight cutting edges and is suitable for cast iron machining. Consider this option for cast iron machining, with applications where there are space restrictions.

Cutter diameters: 40mm to 125mm
KAPR: 88°



DESCRIPTION	ZEFF	DIMENSIONS (mm)					INSERT SHIM	INSERT SCREW	INSERT CLAMP	CLAMP SCREW	ARBOR SCREW	TORX DRIVER	TORX KEY	Nm
		DC	LF	DCSFMS	DCON	AMPX								
Cutters for SNUN1204 Inserts														
F88SN12-040Q16Z3	3	40	40	38.5	16	11.5*1	3212	1630	6226	1266	Standard	-	5515	3
F88SN12-050Q22Z4	4	50	40	49	22	11.5*1								
F88SN12-063Q27Z6	6	63	50	60	27	11.5*1					912.10			
F88SN12-080Q27Z8	8	80	50	64	27	11.5*1					912.12			
F88SN12-100Q32Z10	10	100	50	64	32	11.5*1					912.16	5615	-	
F88SN12-125Q40Z12	12	125	63	100	40	11.5*1					Standard			

For inserts see page 56

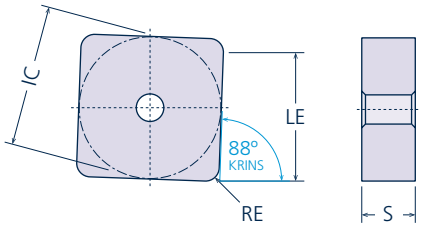
*1 APMX differs depending on insert used in the cutter. Refer to insert page for specific APMXs

ClassicMill

SNUN - Milling insert

Square ISO standard SNUN1204 negative inserts with eight cutting edges.

KRINS: 88°



INSERT	DESCRIPTION	DIMENSIONS (mm)					P		M	K	S	H
							P20	P30	M25	K25	S25	H20
		LE	IC	S	RE	APMX	8220	8430	8430	8220	8430	8220
SNUN1204	SNUN120412*	11.4	12.7	4.76	1.2	11.5	●	●	●	●	●	●
	SNUN120430*	9.6	12.7	4.76	3	9.5	●	●	●	●	●	●

For milling cutters see page 55

FACE MILLING

SOLUTIONS

45°

75°

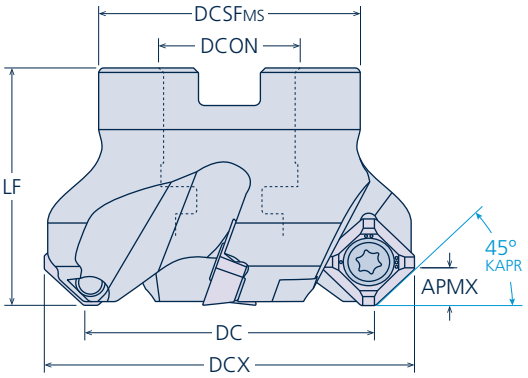
TetraMill V2

Face Chamfer

F45SES - Arbor style

Positive cutting, 45° approach face milling solution, utilising square SEMT1204 positive inserts with four cutting edges. Inserts incorporate a 2.1mm wiper for excellent surface finish. Choose this solution for face milling when using machines with lower power.

Cutter diameters: 50mm to 160mm
KAPR: 45°



DESCRIPTION	ZEFF	DIMENSIONS (mm)						INSERT SCREW	TORX BIT	TORQUE ADAPTER	T-HANDLE
		DC	DCX	LF	DCSFMS	DCON	AMPX				
Cutters for SEMT1204 Inserts											
F45SES12-050Q22Z4	4	50	62.5	40	44	22	5.8	TS-M5L10.8/ 60° T20	BIT50-TX20 or BIT50-TX20 HD	Adapter - 5.0 Nm	T-Handle
F45SES12-063Q22Z5	5	63	75.5	40	48	22	5.8				
F45SES12-080Q27Z6	6	80	92.5	50	56	27	5.8				
F45SES12-100Q32Z7	7	100	112.6	50	78	32	5.8				
F45SES12-125Q40Z8	8	125	132.7	63	90	40	5.8		BIT73-TX20 HD		
F45SES12-160Q40Z10	10	160	172.7	63	114	40	5.8				

For inserts see page 59

TetraMill V2

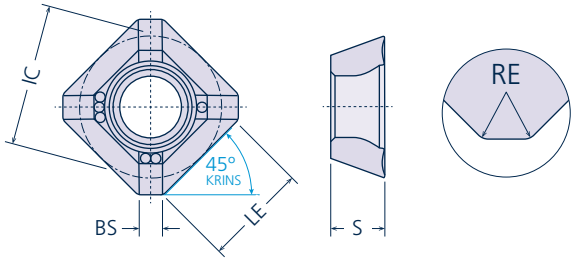
SEMT - Milling insert

Square SEMT1204 positive inserts with four cutting edges.
Insert incorporates a 2.1mm wiper for excellent surface finish.

KRINS: 45°

L — Light, more positive geometry for low cutting forces.
First choice for stainless steel and heat resistant alloys.

M — Medium general purpose geometry, suitable for most materials.
First choice for steel machining.



INSERT	DESCRIPTION	DIMENSIONS (mm)						P						M		K		S		H	
								P10	P10	P20	P20	P30	P30	M25	M30	K15	K25	S25	S30	H15	H20
		LE	IC	S	RE	BS	APMX	8410	8510	8420	8520	8430	8530	8530	8640	8410	8420	8530	8640	8510	8520
SEMT1204 L - LIGHT	SEMT1204AFEN-L*	6.2	12.7	4.76	1.5	2.1	5.8			●			●	●			●	●			
SEMT1204 M - MEDIUM *(General Purpose)*	SEMT1204AFEN-M*	6.2	12.7	4.76	1.5	2.1	5.8			●			●	●			●	●			

For milling cutters see page 58

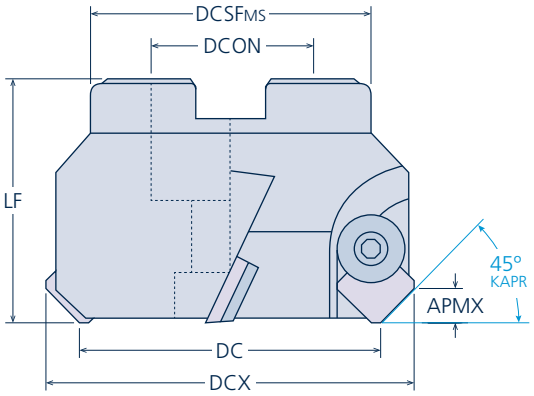
ClassicMill

Face Chamfer

F45SEE - Arbor style

45° approach face milling solution, utilising ISO standard square SEKN1203 positive inserts with four cutting edges. Choose this option for a face milling solution that utilises ISO standard inserts.

Cutter diameters: 50mm to 200mm
KAPR: 45°



DESCRIPTION	ZEFF	DIMENSIONS (mm)						INSERT SHIM	CLAMP CREW	CLAMP	SHIM PIN	ARBOR SCREW	HEX KEY	DIN 2079	Nm
		DC	DCX	LF	DCSFMS	DCON	APMX								
Cutters for SEKN1203 Inserts															
F45SEE12050	4	50	63	40	49	22	6.2	3010	1006L	2063	4016	912.10	5004	-	3.5
F45SEE12063	5	63	76	50	60	22	6.2								
F45SEE12080	6	80	93	50	64	27	6.2				4012	912.12			
F45SEE12100	6	100	113	50	78	32	6.2					912.17			
F45SEE12125	7	125	138	63	100	40	6.2					Standard			
F45SEE12160	8	160	173	63	100	40	6.2					912.52		40	
F45SEE12200	10	200	213	63	140	60	6.2					912.56		50	

For inserts see page 62

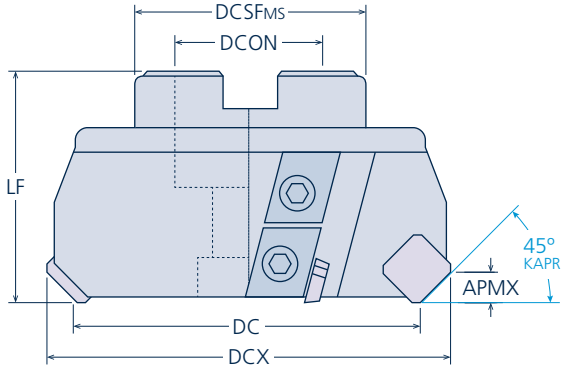
ClassicMill

F45SE - Arbor cartridge style

Face Chamfer

45° approach face milling solution, utilising ISO standard square SEKN1203 and SEKN1504 positive inserts with four cutting edges. Milling cutters feature a cartridge system for added cutter security. Choose this option for a replaceable cartridge based solution that provides cutter body protection and which uses ISO standard inserts.

Cutter diameters: 80mm to 250mm
KAPR: 45°



DESCRIPTION	ZEFF	DIMENSIONS (mm)						WEDGE SCREW	INSERT WEDGE	CARTRIDGE WEDGE	CARTRIDGE	ADJUST. SCREW	ARBOR SCREW	TORX DRIVER	TORX KEY	DIN 2079	Nm
		DC	DCX	LF	DCSFMS	DCON	APMX										
Cutters for SEKN1203 Inserts																	
F45SE12080	6	80	92	50	50	27	6.2	1077*1	6488	6489	6918	1460	912.12	-	5220	-	4
F45SE12100	8	100	112	50	64	32	6.2						912.17	5620	-		
F45SE12125	8	125	137	63	100	40	6.2						Standard				
F45SE12160	10	160	172	63	100	40	6.2						912.52			40	
F45SE12200	12	200	212	63	140	60	6.2						912.56			50	
F45SE12250	16	250	262	63	170	60	6.2										
Cutters for SEKN1504 Inserts																	
F45SE15080	6	80	98	50	50	27	8.5	1077*1	6490	6491	6920	1460	912.12	-	5220	-	4
F45SE15100	8	100	118	50	64	32	8.5						912.17	5620	-		
F45SE15125	8	125	143	63	100	40	8.5						Standard				
F45SE15160	10	160	178	63	100	40	8.5						912.52			40	
F45SE15200	12	200	218	63	140	60	8.5						912.56			50	
F45SE15250	16	250	268	63	170	60	8.5										

For inserts see page 62

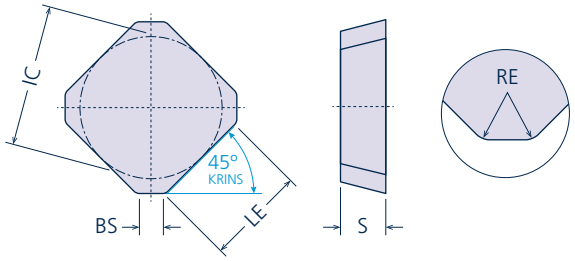
*1 Wedge screw is used for both the insert wedge and cartridge wedge

ClassicMill

SEKN - Milling insert

Square ISO standard SEKN1203 and SEKN1504 positive inserts with four cutting edges.
The inserts are periphery ground for higher accuracy.

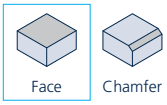
KRINS: 45°



INSERT	DESCRIPTION	DIMENSIONS (mm)						P		M	K	S	H
								P20	P30	M25	K25	S25	H20
		LE	IC	S	RE	BS	APMX	8220	8430	8430	8220	8430	8220
SEKN1203 	SEKN1203AFSN*	6.3	12.7	3.18	1.1	1.4	6.2	●	●	●	●	●	●
SEKN1504 	SEKN1504AFSN*	8.6	15.88	4.76	1.1	1.4	8.5	●	●	●	●	●	●

For milling cutters see pages 60 - 61

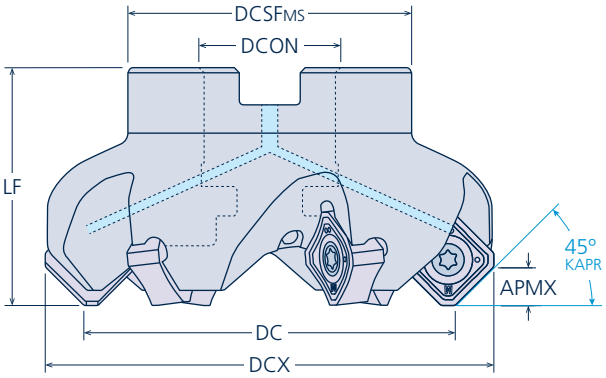
TeraMill V2



F45SNX - Arbor style

45° approach face milling solution, utilising double sided SNMX1205 inserts with eight cutting edges. The strong negative inserts feature a positive chipbreaker, allowing for an easy cutting action, with reduced cutting forces. Inserts are available in two styles:
- SNMX1205ANSN: inserts feature a 1.7mm wiper for good surface finish.
- SNMX120508: inserts feature a 0.8mm radius, but no wiper. These inserts provide versatility as they can also be used in the TeraMill 88° approach cutter.
Choose this solution for an economical face milling solution.

Cutter diameters: 50mm to 250mm
KAPR: 45°



Through coolant

DESCRIPTION	ZEFF	DIMENSIONS (mm)						INSERT SCREW	TORX BIT	TORQUE ADAPTER	T-HANDLE
		DC	DCX	LF	DCSFMS	DCON	APMX				
Cutters for SNMX1205ANSN / SNMX120508 Inserts											
F45SNX12-050Q22Z4C	4	50	63	40	44	22	8.1*1	TS-M4L10.0/ Rv15IP	BIT50-15IP	Adapter - 4.3 Nm	T-Handle
F45SNX12-063Q22Z6C	6	63	76	40	48	22	8.1*1				
F45SNX12-080Q27Z7C	7	80	93	50	60	27	8.1*1				
F45SNX12-100Q32Z8C	8	100	113	50	78	32	8.1*1				
F45SNX12-125Q40Z10C	10	125	138	63	90	40	8.1*1		BIT75-15IP		
F45SNX12-160Q40Z12C	12	160	173	63	110	40	8.1*1				
F45SNX12-200Q60Z14C	14	200	213	63	145	60	8.1*1				

For inserts see page D60

*1 APMX differs depending on insert used in the cutter. Refer to insert page for specific APMXs

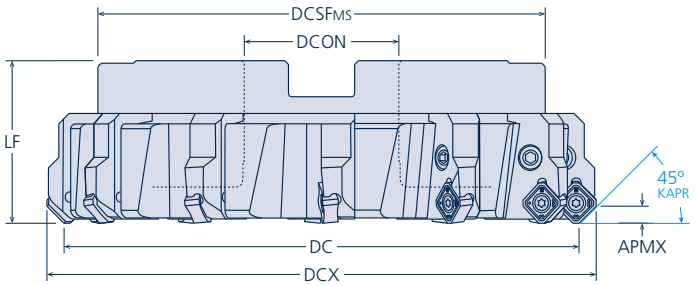
TeraMill V2

Face Chamfer

F45SNY - Arbor interchangeable cartridge style

45° approach milling solution utilizing SNMX1205ANSN and SNMX120508 inserts in an interchangeable cartridge system. The Facemill Interchangeable Cartridge ("FIC") Series of universal milling cutters are fitted with interchangeable cartridges that take a range of inserts covering, 45° face milling, 88° close to shoulder milling and 90° square shoulder milling. Chose this solution for milling medium and large components with larger diameter cutters, which provide cutter body security and versatility due to the interchangeable cartridge system.

Cutter diameters: 125mm to 315mm
KAPR: 45°



SOLUTION	ZEFF	DIMENSIONS (mm)						CUTTER BODY	CARTRIDGE	CARTRIDGE SCREW	CARTRIDGE HEX-KEY	INSERT SCREW	TORX BIT	TORQUE ADAPTER	T-HANDLE
		DC	DCX	LF	DCSFMS	DCON	APMX								
Cutters for SNMX1205ANSN / SNMX120508 Inserts															
F45SNY12 Facemill Interchangeable Cartridge System	6	125	138			40	8.1*1	FIC-125Q40Z6	CRT-SNY12-45	FS247	5004	TS-M4L10.0 /Rv15IP	BIT75-15IP	Adapter - 4.3 Nm	T-Handle
	7	160	173			40	8.1*1	FIC-160Q40Z7							
	8	160	173			40	8.1*1	FIC-160Q40Z8							
	10	200	213			60	8.1*1	FIC-200Q60Z10							
	12	200	213			60	8.1*1	FIC-200Q60Z12							
	11	250	263			60	8.1*1	FIC-250Q60Z11							
	13	315	328			60	8.1*1	FIC-315Q60Z13							

For inserts see page D61

*1 APMX differs depending on insert used in the cutter. Refer to insert page for specific APMXs
Ordering instructions: Cutter body, cartridge, cartridge screw and insert screw need to be ordered separately and assembled

Range of Cartridges available for FIC Series Universal Cutters

CARTRIDGE	INSERT	KAPR	PAGE
CRT-SNY12-45	SNMX1205ANSN SNMX120508	45°	D60
CRT-SNZ12-88	SNMX120508	88°	54
CRT-ANY08-90	ANMX151008	90°	45
CRT-XNY08-90	XN*X080608	90°	52

TeraMill V2

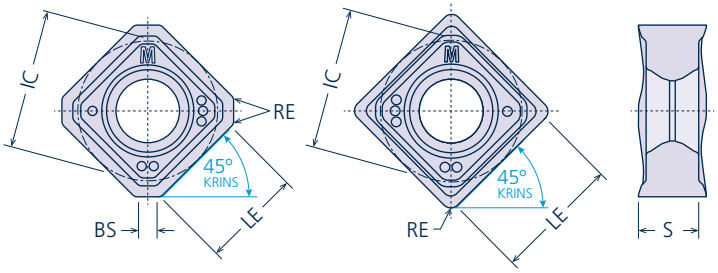
SNMX - Milling insert

Square SNMX1205 negative inserts with eight cutting edges. The strong negative inserts feature a positive chipbreaker, allowing for an easy cutting action, with reduced cutting forces.

The SNMX1205ANSN inserts feature a 1.7mm wiper for good surface finish. The SNMX120508 inserts feature a 0.8mm radius, but no wiper. They provide versatility and can also be used in the TeraMill 88° approach cutter.

KRINS: 45°

M — Medium general purpose geometry. Suitable for most materials.



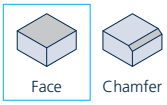
SNMX1205ANSN
MEDIUM

SNMX120508
MEDIUM

INSERT	DESCRIPTION	DIMENSIONS (mm)						P						M		K		S		H	
								P10	P10	P20	P20	P30	P30	M25	M30	K15	K25	S25	S30	H15	H20
		LE	IC	S	RE	BS	APMX	8410	8510	8420	8520	8430	8530	8530	8640	8410	8420	8530	8640	8510	8520
SNMX1205 M - MEDIUM	SNMX1205ANSN-M*	9.3	12.7	5.48	0.8	1.7	6.4			●			●	●			●	●			
SNMX120508 M - MEDIUM *(General Purpose)*	SNMX120508-M*	11.6	12.7	5.48	0.8	n/a	8.1			●			●	●			●	●			

For milling cutters see page 63

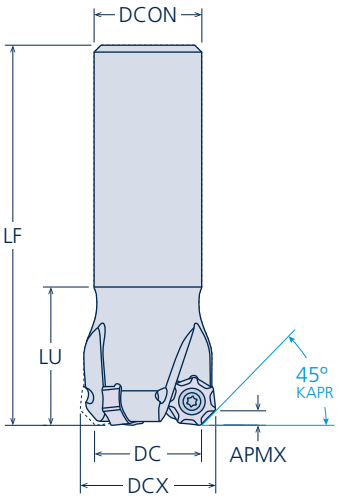
ShrapMill V2



E45NN - Cylindrical shank style

ShrapMill features inserts with fourteen cutting edges, making it a highly economical 45° approach face milling solution. The double sided heptagonal inserts feature a positive chipbreaker, enabling a smooth, lower-force cutting action. Choose this solution as your overall first choice face milling solution.

Cutter diameters: 25mm to 32mm
KAPR: 45°



DESCRIPTION	ZEFF	DIMENSIONS (mm)						INSERT SCREW	TORX BIT	TORQUE ADAPTER	T-HANDLE
		DC	DCX	LF	LU	DCON	APMX				
Cutters for NNMU1004 Inserts											
E45NN10-025A25L088Z3	3	25	31.9	88	32	25	3.2	TS-M3L8.6/ 60° T9	BIT50-TX9 or BIT50-TX9 HD	Adapter - 2.2 Nm	T-Handle
E45NN10-032A32L100Z4	4	32	38.9	100	40	32	3.2				

For inserts see page 68

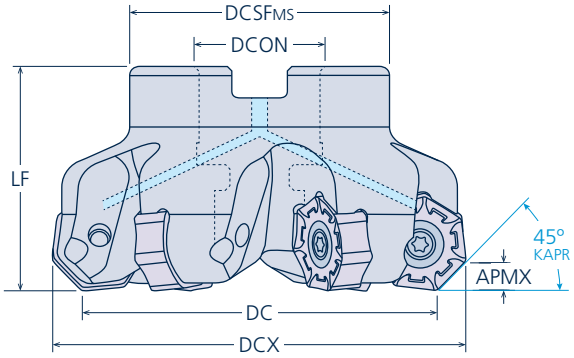
ShrapMill V2

F45NN - Arbor style

Face Chamfer

ShrapMill features inserts with fourteen cutting edges, making it a highly economical 45° approach face milling solution. The double sided heptagonal inserts feature a positive chipbreaker, enabling a smooth, lower force cutting action. Choose this solution as your overall first choice face milling solution.

Cutter diameters: 40mm to 160mm
KAPR: 45°



Through coolant

DESCRIPTION	ZEFF	DIMENSIONS (mm)						INSERT SCREW	TORX BIT	TORQUE ADAPTER	T-HANDLE
		DC	DCX	LF	DCSFMS	DCON	APMX				
Cutters for NNMU1004 Inserts											
F45NN10-040Q16Z5C	5	40	46.9	40	34	16	3.2	TS-M3L8.6/ 60° T9	BIT50-TX9 or BIT50-TX9 HD	Adapter - 2.2 Nm	T-Handle
F45NN10-050Q22Z6C	6	50	56.9	40	43	22	3.2				
F45NN10-063Q22Z7C	7	63	69.9	40	48	22	3.2				
F45NN10-080Q27Z9C	9	80	86.9	50	58	27	3.2				
Cutters for NNMU2007 Inserts											
F45NN20-063Q22Z5C	5	63	74	50	48	22	5.5	TS-M5L13.2/ 60° T20	BIT50-TX20 or BIT50-TX20 HD	Adapter - 5.0 Nm	T-Handle
F45NN20-080Q27Z6C	6	80	91	50	58	27	5.5				
F45NN20-100Q32Z7C	7	100	111	50	78	32	5.5				
F45NN20-125Q40Z8C	8	125	136	63	90	40	5.5		BIT73-TX20 HD		
F45NN20-160Q40Z10C	10	160	171	63	114	40	5.5				

For inserts see page 68

ShrapMill V2

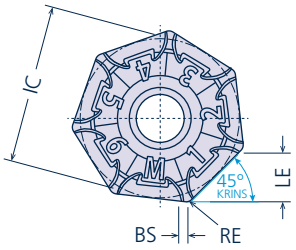
NNMU - Milling insert

Heptagonal NNMU1004 and NNMU2007 negative inserts with 14 cutting edges. The inserts feature positive chipbreakers for a smooth low-force cutting action.

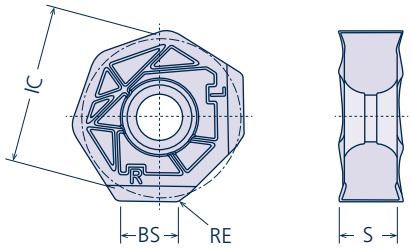
KRINS: 45°

MM — Medium, but more positive geometry.
First choice for stainless steel and heat resistant alloys.

M — Medium general purpose geometry, suitable for most materials.
First choice for steel machining.



NNMU MM / M
MEDIUM



NNMU W
WIPER

INSERT	DESCRIPTION	DIMENSIONS (mm)						P						M		K		S		H	
								P10	P10	P20	P20	P30	P30	M25	M30	K15	K25	S25	S30	H15	H20
		LE	IC	S	RE	BS	APMX	8410	8510	8420	8520	8430	8530	8530	8640	8410	8420	8530	8640	8510	8520
NNMU1004 M - MEDIUM *(General Purpose)*	NNMU100404M*	4.2	10.4	4.45	0.4	0.2	3.2			●			●	●			●	●			
										●			●	●			●	●			
NNMU2007 MM - MEDIUM *(Stainless Steel)*	NNMU200708MM*	7.6	20	7.25	0.8	1	5.5			●			●	●			●	●			
NNMU2007 M - MEDIUM *(General Purpose)*	NNMU200708M*	7.6	20	7.25	0.8	1	5.5			●			●	●			●	●			
NNMU2007 W - WIPER	NNMU200708W*	n/a	20	6.86	0.8	6.9	0.5			●			●	●			●	●			

For milling cutters see pages 66 - 67

Instructions for use of Wiper Inserts

1: The specifications for these wipers are right hand body two corners and left hand body two corners *(refer to Fig.1)*.

2: A satisfactory finish surface can be achieved with one wiper insert. However, if the feed rate per revolution will be equal to or greater than the width of the wiper edge, it is recommended to install the second and further wiper inserts spaced evenly within the cutting body.

Fig 1

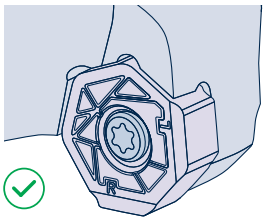
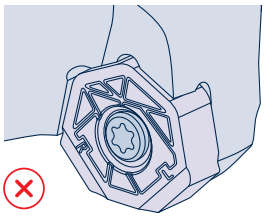


Fig 2



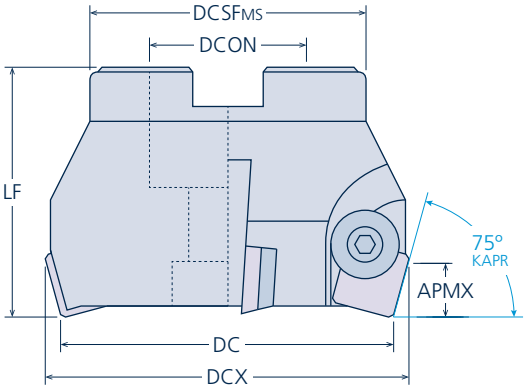
ClassicMill

Face

F75SPE - Arbor style

75° approach face milling solution, utilising ISO standard square SP*N1203 positive inserts with four cutting edges. Choose this option for ISO standard inserts.

Cutter diameters: 40mm to 200mm
KAPR: 75°



DESCRIPTION	ZEFF	DIMENSIONS (mm)						INSERT SHIM	CLAMP CREW	CLAMP	SHIM PIN	ARBOR SCREW	HEX KEY	Nm
		DC	DCX	LF	DCSFMS	DCON	APMX							
Cutters for SP*N1203 Inserts														
F75SPE12040	3	40	46	40	38.5	16	9.7	-	1006	2066	-	1058	5004	3.5
F75SPE12050	3	50	56	40	49	22	9.7	3012			4012	912.10		
F75SPE12063	4	63	69	50	60	27	9.7					912.12		
F75SPE12080	5	80	86	50	64	32	9.7					912.17		
F75SPE12100	6	100	106	50	76	40	9.7					912.20		
F75SPE12125	6	125	131	63	100	40	9.7					Standard		
F75SPE12160	7	160	166	63	100	40	9.7					912.52		
F75SPE12200	8	200	206	63	145	60	9.7					912.56		

For inserts see pages 71 - 72

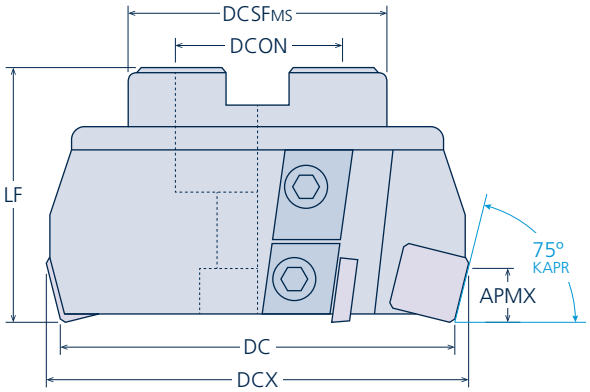
ClassicMill

Face

F75SP - Arbor cartridge style

75° approach face milling solution, utilising ISO standard square SP*N1203 and SPKN1504 positive inserts with four cutting edges. Milling cutters feature a cartridge system for added cutter security. Choose this option for a replaceable cartridge based solution that provides cutter body protection and which uses ISO standard inserts.

Cutter diameters: 80mm to 500mm
KAPR: 75°



DESCRIPTION	ZEFF	DIMENSIONS (mm)						WEDGE SCREW	INSERT WEDGE	CARTRIDGE WEDGE	CARTRIDGE	ADJUST. SCREW	ARBOR SCREW	TORX DRIVER	TORX KEY	DIN 2079	Nm
		DC	DCX	LF	DCSFMS	DCON	APMX										
Cutters for SP*N1203 Inserts																	
F75SP12080	5	80	86	50	64	27	9.7	1077*1	6437	6438	6914	1460	912.12	-	5220	-	4
F75SP12100	7	100	106	50	72	32	9.7						912.20	5620	-		
F75SP12125	8	125	131	63	100	40	9.7						Standard				
F75SP12160	10	160	166	63	100	40	9.7						912.52			40	
F75SP12200	12	200	206	63	140	60	9.7									50	
F75SP12250	16	250	256	63	140	60	9.7										
F75SP12315	20	315	321	63	250	60	9.7						912.56			50/60	
F75SP12400	26	400	406	63	250	60	9.7										
F75SP12500	34	500	506	63	250	60	9.7										

For inserts see pages 71 - 72

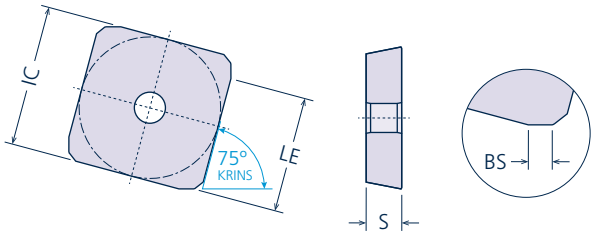
*1 Wedge screw is used for both the insert wedge and cartridge wedge

ClassicMill

SPKN - Milling insert

Square ISO standard SPKN1203 positive inserts with four cutting edges.
The SPKN inserts are periphery ground for higher accuracy.

KRINS: 75°



INSERT	DESCRIPTION	DIMENSIONS (mm)					P		M	K	S	H
							P20	P30	M25	K25	S25	H20
		LE	IC	S	BS	APMX	8220	8430	8430	8220	8430	8220
SPKN1203	SPKN1203EDSR*	9.8	12.7	3.18	1.3	9.7	●	●	●	●	●	●

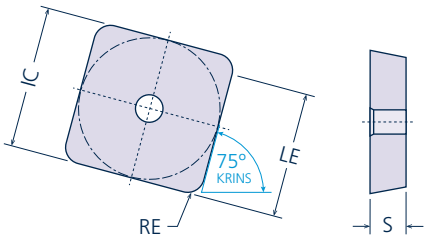
For milling cutters see pages 69 - 70

ClassicMill

SPUN - Milling insert

Square ISO standard SPUN1203 positive inserts with four cutting edges.

KRINS: 75°



INSERT	DESCRIPTION	DIMENSIONS (mm)					P		M	K	S	H
							P20	P30	M25	K25	S25	H20
		LE	IC	S	RE	APMX	8220	8430	8430	8220	8430	8220
SPUN1203	SPUN120308*	11.9	12.7	3.18	0.8	11.3	●	●	●	●	●	●
	SPUN120312*	11.5	12.7	3.18	1.2	10.8	●	●	●	●	●	●

For milling cutters see pages 69 - 70

HIGH FEED MILLING

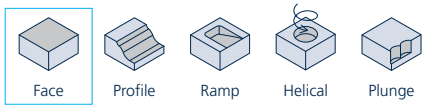
SOLUTIONS

8° / 10°

Rnd

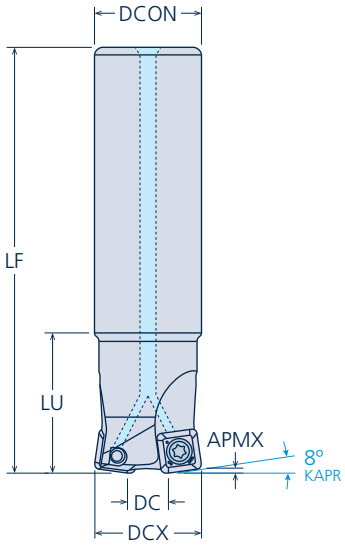
NitroMill V2

E08XD - Cylindrical shank style



High feed, 8° approach milling solution, utilising square XDMT09T3 positive inserts with four cutting edges. Max depth of cut of 1mm. Choose this solution for high feed milling.

Cutter diameters: 25mm to 40mm
KAPR: 8°

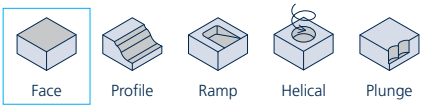


Through coolant

DESCRIPTION	ZEFF	DIMENSIONS (mm)						INSERT SCREW	TORX BIT	TORQUE ADAPTER	T-HANDLE
		DCX	DC	LF	DCON	LU	APMX				
Cutters for XDMT09T3 Inserts											
E08XD09-025A25L120Z2C	2	25	8.6	120	25	32	1	TS-M3.5L7.7/ 60° T15	BIT50-TX15 or BIT50-TX15 HD	Adapter - 3.8 Nm	T-Handle
E08XD09-025A25L210Z2C	2	25	8.6	210	25	45	1				
E08XD09-032A32L130Z3C	3	32	15.5	130	32	40	1				
E08XD09-032A32L235Z3C	3	32	15.5	235	32	55	1				
E08XD09-032A32L235Z2C	2	32	15.5	235	32	50	1				
E08XD09-040A32L170Z4C	4	40	23.45	170	32	40	1				
E08XD09-040A32L250Z3C	3	40	23.45	250	32	40	1				
E08XD09-040A32L250Z4C	4	40	23.45	250	32	40	1				

For inserts see page 76

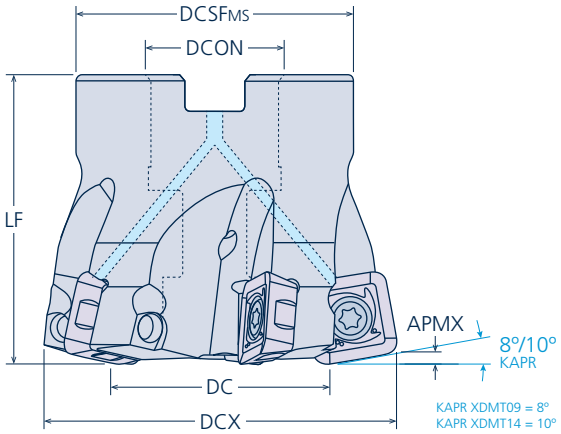
NitroMill V2



F08XD / F10XD - Arbor style

High feed 8° and 10° approach milling solution, utilising square XDMT09T3 and XDMT1405 positive inserts with four cutting edges, with a max depth of cut of 1 and 2mm.
Choose this solution for high feed milling.

Cutter diameters: 50mm to 125mm
KAPR: 8° and 10°



Through coolant

DESCRIPTION	ZEFF	DIMENSIONS (mm)						INSERT SCREW	TORX BIT	TORQUE ADAPTER	T-HANDLE
		DCX	DC	LF	DCSFMS	DCON	APMX				
Cutters for XDMT09T3 Inserts											
F08XD09-050Q22Z5C	5	50	33.3	40	40	22	1	TS-M3.5L7.7/ 60° T15	BIT50-TX15 or BIT50-TX15 HD	Adapter - 3.8 Nm	T-Handle
F08XD09-063Q22Z6C	6	63	46.3	40	48	22	1				
F08XD09-080Q27Z7C	7	80	63.3	50	58	27	1				
Cutters for XDMT1405 Inserts											
F10XD14-063Q22Z5C	5	63	38.8	50	48	22	2	TS-M5L11.6/ 60° T20	BIT50-TX20 or BIT50-TX20 HD	Adapter - 5.0 Nm	T-Handle
F10XD14-080Q27Z6C	6	80	55.3	50	58	27	2				
F10XD14-100Q32Z7C	7	100	75.3	50	78	32	2				
F10XD14-125Q40Z8C	8	125	100.3	63	90	40	2		BIT73-TX20 HD		

For inserts see page 76

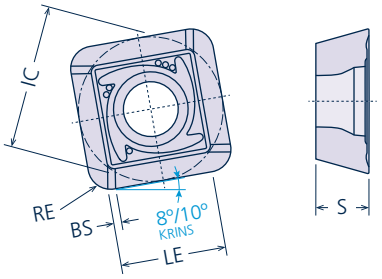
NitroMill V2

XDMT - Milling insert

Square XDMT09T3 and XDMT1405 positive inserts with four cutting edges.

KRINS: 8° and 10°

M — Medium general purpose geometry, suitable for most materials.
Recommended for steel, tool steel and hardened materials



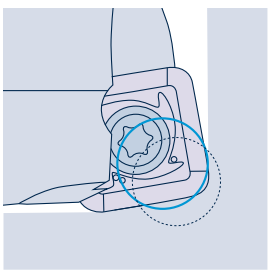
INSERT	DESCRIPTION	DIMENSIONS (mm)						P						M		K		S		H	
								P10	P10	P20	P20	P30	P30	M25	M30	K15	K25	S25	S30	H15	H20
		LE	IC	S	RE	BS	APMX	8410	8510	8420	8520	8430	8530	8530	8640	8410	8420	8530	8640	8510	8520
XDMT09T3 M - MEDIUM	XDMT09T310M*	8.4	9.53	3.97	1	0.68	1				●										●
XDMT1405 M - MEDIUM	XDMT140520M*	12.5	14.6	5.62	2	0.8	2				●										●

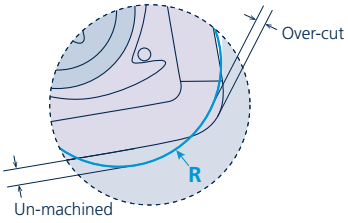
For milling cutters see pages 74 - 75

Programming **R** Data

INSERT	PROGRAM R	OVER-CUT	UN-MACHINED
XDMT09T3	**2.0**	0	0.80
	2.5	0.10	0.73
	3.0	0.26	0.67
XDMT1405	**3.7**	0	1.40
	4.0	0.03	1.35
	4.5	0.13	1.27
	5.0	0.28	1.20

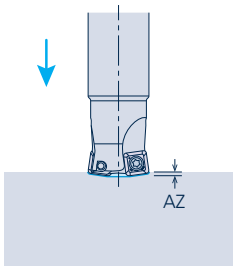
Recommended program "**R**" in bold



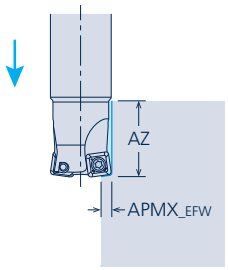


NitroMill V2

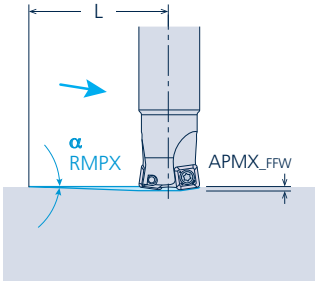
Plunge, Linear Ramping and Helical Ramping



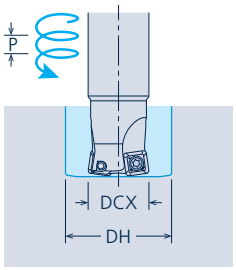
Plunge
Full Engagement



Plunge
Off-set



Linear Ramping



Helical Ramping

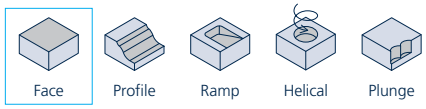
DESCRIPTION	Ø	PLUNGE Full Engagement	PLUNGE Off-set		LINEAR RAMPING		HELICAL RAMPING			
	DCX (mm)	Max. Plunge Depth AZ (mm)	Max. Plunge Depth AZ (mm)	Max. Depth of Cut APMX_EFW (mm)	Max. Ramp Angle RMPX (°)	Min. Distance L (mm)	Max. Hole Ø DH max (mm)	Max. Pitch P max (mm)	Min. Hole Ø DH min (mm)	Max. Pitch P max (mm)
XDMT09T3										
Cylindrical Shank Style										
E08XD09-025A25L120Z2C	25	0.4	32	8.2	2.8	20.4	48.2	1.0	33.6	1.0
E08XD09-025A25L210Z2C	25	1.0	45	8.2	2.8	20.4	48.2	1.0	33.6	1.0
E08XD09-032A32L130Z3C	32	1.0	40	8.2	3.7	15.5	62.2	1.0	47.5	1.0
E08XD09-032A32L235Z3C	32	1.0	55	8.2	3.7	15.5	62.2	1.0	47.5	1.0
E08XD09-032A32L235Z2C	32	1.0	50	8.2	3.7	15.5	62.2	1.0	47.5	1.0
E08XD09-040A32L170Z4C	40	1.0	40	8.2	2.4	23.9	78.2	1.0	63.5	1.0
E08XD09-040A32L250Z3C	40	1.0	40	8.2	2.4	23.9	78.2	1.0	63.5	1.0
E08XD09-040A32L250Z4C	40	1.0	40	8.2	2.4	23.9	78.2	1.0	63.5	1.0
Arbor Style										
F08XD09-050Q22Z5C	50	1.0	40+*1	8.2	1.7	33.7	98.2	1.0	83.4	1.0
F08XD09-063Q22Z6C	63	1.0	40+*1	8.2	1.2	47.7	124.2	1.0	109.3	1.0
F08XD09-080Q27Z7C	80	1.0	50+*1	8.2	0.8	71.6	158.2	1.0	143.3	1.0
XDMT140520										
Arbor Style										
F10XD14-063Q22Z5C	63	1.3	40+*1	12.3	1.9	60.3	122.6	2.0	101.3	2.0
F10XD14-080Q27Z6C	80	1.3	40+*1	12.3	1.3	88.1	156.6	2.0	135.3	2.0
F10XD14-100Q32Z7C	100	1.3	40+*1	12.3	0.9	127.3	196.6	2.0	175.3	2.0
F10XD14-125Q40Z8C	125	1.3	50+*1	12.3	0.7	163.7	246.6	2.0	225.3	2.0

*Formulae: Linear Ramp; Min. Distance: L = (APMX/tan RMPX°). Helical Ramp; Max. Pitch: P max = (DH-DC)*π*tan RMPX°, Max. Hole Ø: DH max = (DC - RE)*2, Min. Hole Ø: DH min = (cutter radius + min. cutting radius)*2*

*1 DC > DCSFms, off-set plunge is only limited by arbor clearance

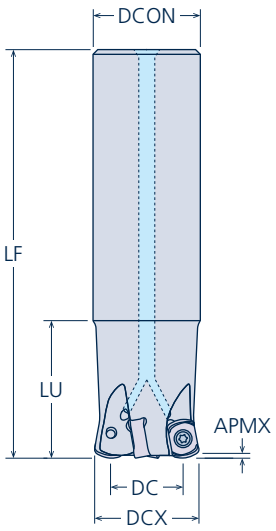
HyperMill V2

ER6BN - Cylindrical shank style



High feed milling solution, utilising double sided, negative BNMU0603 inserts with 6mm radius and four cutting edges. Maximum depth of cut of 1.1mm. Choose this solution for a high feed milling range starting from diameter 16mm in cylindrical shank.

Cutter diameters: 16mm to 32mm
KAPR: Radius 6mm



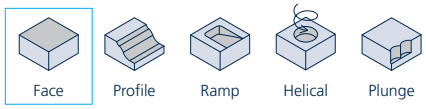
Through coolant

DESCRIPTION	ZEFF	DIMENSIONS (mm)						INSERT SCREW	TORX BIT	TORQUE ADAPTER	T-HANDLE
		DCX	DC	LF	LU	DCON	APMX				
Cutters for BNMU0603 Inserts											
ER6BN06-016A16L130Z2C	2	16	9	130	30	16	0.85	TS-M2.5L5.8/ 60° T8	BIT50-TX8 or BIT50-TX8 HD	Adapter - 1.2 Nm	T-Handle
ER6BN06-020A20L140Z3C	3	20	12.5	140	32	20	1.10				
ER6BN06-025A25L150Z4C	4	25	17.4	150	32	25	1.10				
ER6BN06-032A32L180Z5C	5	32	24.5	180	42	32	1.10				

For inserts see page 80

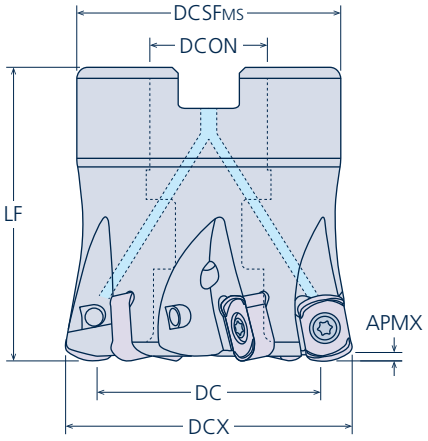
HyperMill V2

FR6BN - Arbor style



High feed milling solution, utilising double sided, negative BNMU0603 inserts with 6mm radius and four cutting edges. Maximum depth of cut of 1.1mm. Choose this solution for a high feed milling range starting from diameter 16mm in cylindrical shank.

Cutter diameters: 40mm to 50mm
KAPR: Radius 6mm



Through coolant

DESCRIPTION	ZEFF	DIMENSIONS (mm)						INSERT SCREW	TORX BIT	TORQUE ADAPTER	T-HANDLE
		DCX	DC	LF	DCSFMS	DCON	APMX				
Cutters for BNMU0603 Inserts											
FR6BN06-040Q16Z6C	6	40	32.7	40	35	16	1.1	TS-M2.5L5.8/ 60° T8	BIT50-TX8 or BIT50-TX8 HD	Adapter - 1.2 Nm	T-Handle
FR6BN06-050Q22Z7C	7	50	42.6	50	47	22	1.1				

For inserts see page 80

HyperMill V2

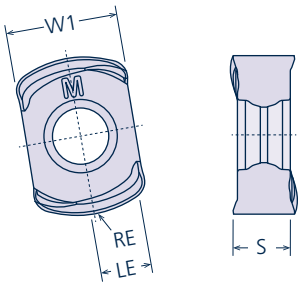
BNMU - Milling insert

Rectangular BNMU0603 negative inserts with four cutting edges.

L — Light, sharp positive geometry for low cutting force. First choice for heat resistant alloys. Also suitable for long overhangs to reduce vibration.

MM — Medium, but more positive geometry. Smooth milling in low power machines. First choice for stainless steels. Also suitable for heat resistant alloys when a stronger cutting edge is required.

M — Medium general purpose geometry, for medium to heavy milling with higher feed rates. First choice for steel, tool steel and hardened materials. Also first choice for interrupted cutting.



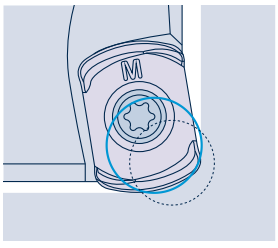
INSERT	DESCRIPTION	DIMENSIONS (mm)					P						M		K		S		H	
							P10	P10	P20	P20	P30	P30	M25	M30	K15	K25	S25	S30	H15	H20
		LE	W1	S	RE	APMX	8410	8510	8420	8520	8430	8530	8530	8640	8410	8420	8530	8640	8510	8520
BNMU0603 L - LIGHT	BNMU0603L*	3.8	6.2	3.2	6	1.1				●		●	●				●			●
BNMU0603 MM - MEDIUM *(Stainless Steel)*	BNMU0603MM*	3.8	6.2	3.2	6	1.1				●		●	●				●			●
BNMU0603 M - MEDIUM *(General Purpose)*	BNMU0603M*	3.8	6.2	3.2	6	1.1		●		●		●	●				●			●

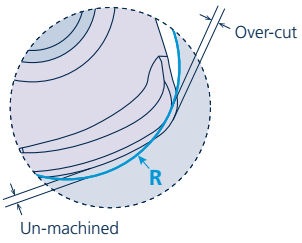
For milling cutters see pages 78 - 79

Programming **R** Data

INSERT	CUTTER Ø	PROGRAM R	OVER-CUT	UN-MACHINED
BNMU0603	Ø16	**1.5**	0	0.36
		2.0	0.06	0.25
		2.5	0.22	0.12
	≥ Ø20	**2.0**	0	0.40
		2.5	0.12	0.24
		3.0	0.29	0.10

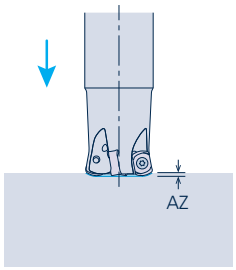
Recommended program "**R**" in bold



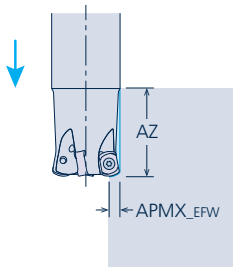


HyperMill V2

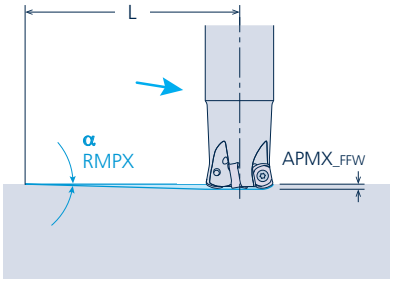
Plunge, Linear Ramping and Helical Ramping



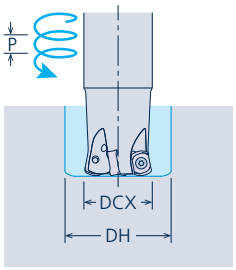
Plunge
Full Engagement



Plunge
Off-set



Linear Ramping



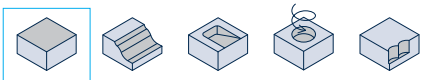
Helical Ramping

DESCRIPTION	Ø	PLUNGE Full Engagement	PLUNGE Off-set		LINEAR RAMPING		HELICAL RAMPING			
	DCX (mm)	Max. Plunge Depth AZ (mm)	Max. Plunge Depth AZ (mm)	Max. Depth of Cut APMX_EFW (mm)	Max. Ramp Angle RMPX (°)	Min. Distance L (mm)	Max. Hole Ø DH max (mm)	Max. Pitch P max (mm)	Min. Hole Ø DH min (mm)	Max. Pitch P max (mm)
BNMU0603										
Cylindrical Shank Style										
ER6BN06-016A16L130Z2C	16	0.22	30	4.3	1.4	34.8	31.1	0.85	25.6	0.74
ER6BN06-020A20L140Z3C	20	0.35	32	5.2	1.7	37.1	39.1	1.10	32.5	1.10
ER6BN06-025A25L150Z4C	25	0.40	32	5.6	1.3	48.5	49.1	1.10	42.3	1.10
ER6BN06-032A32L180Z5C	32	0.40	42	5.6	0.9	70.0	63.1	1.10	56.4	1.10
Arbor Style										
FR6BN06-040Q16Z6C	40	0.40	40+*1	5.6	0.8	71.6	79.1	1.00	72.2	1.00
FR6BN06-050Q22Z7C	50	0.40	50+*1	5.6	0.6	95.5	99.2	1.00	92.0	1.00

*Formulae: Linear Ramp; Min. Distance: L = (APMX/tan RMPX°). Helical Ramp; Max. Pitch: P max = (DH-DC)*π*tan RMPX°, Max. Hole Ø: DH max = (DC - RE)*2, Min. Hole Ø: DH min = (cutter radius + min. cutting radius)*2*

*1DC > DCSFms, off-set plunge is only limited by arbor clearance

TeraMill V2



E15SNX - Cylindrical shank style

High feed, 15º approach milling solution, utilising double sided square inserts with eight cutting edges. Maxium depth of cut of 2mm. Choose this solution for an economical high feed solution due to inserts with eight cutting edges.

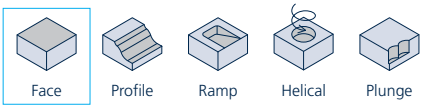
Cutter diameters: 32mm to 42mm
KAPR: 15º

Through coolant

DESCRIPTION	ZEFF	DIMENSIONS (mm)						INSERT SCREW	TORX BIT	TORQUE ADAPTER	T-HANDLE
		DCX	DC	LF	DCON	LU	APMX				
 Cutters for SNMX1205DNSN Inserts											
E15SNX12-032A32L150Z2C	2	32	13	150	32	70	2	TS-M4L10.0/ Rv15IP	BIT50-15IP	Adapter - 4.3 Nm	T-Handle
E15SNX12-042A32L170Z3C	3	42	23	170	32	40	2				

For inserts see page 84

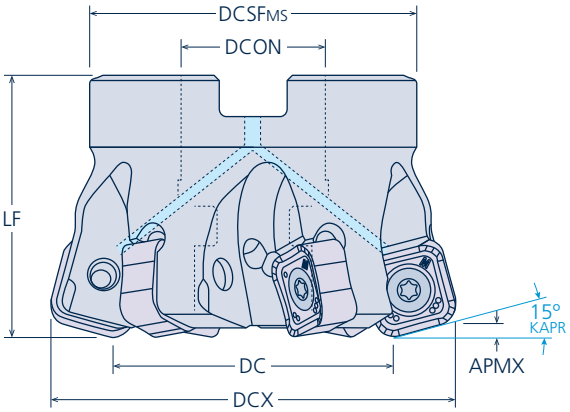
TeraMill V2



F15SNX - Arbor style

High feed 15° approach milling solution, utilising double sided square inserts with eight cutting edges. Maxium depth of cut of 2mm. Choose this solution for an economical high feed solution due to inserts with eight cutting edges.

Cutter diameters: 42mm to 125mm
KAPR: 15°



Through coolant

DESCRIPTION	ZEFF	DIMENSIONS (mm)						INSERT SCREW	TORX BIT	TORQUE ADAPTER	T-HANDLE
		DCX	DC	LF	DCSFMS	DCON	APMX				
Cutters for SNMX1205DNSN Inserts											
F15SNX12-042Q16Z3C	3	42	23	40	36	16	2	TS-M4L10.0/ Rv15IP	BIT50-15IP	Adapter - 4.3 Nm	T-Handle
F15SNX12-052Q22Z5C	5	52	33	40	42	22	2				
F15SNX12-063Q22Z6C	6	63	44	40	50	22	2				
F15SNX12-080Q27Z7C	7	80	61	50	58	27	2				
F15SNX12-100Q32Z8C	8	100	81	50	78	32	2				
F15SNX12-125Q40Z10C	10	125	106	63	90	40	2		BIT75-15IP		

For inserts see page 84

TeraMill V2

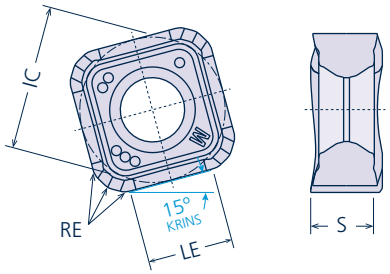
SNMX - Milling insert

Square SNMX1205DNSN negative inserts with eight cutting edges. The strong negative inserts feature a positive chipbreaker, allowing for an easy cutting action, with reduced cutting forces.

KRINS: 15°

M

Medium general purpose geometry.
Suitable for most materials.



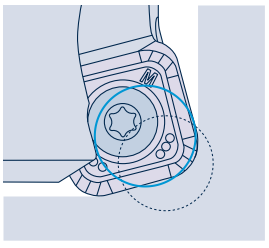
INSERT	DESCRIPTION	DIMENSIONS (mm)					P						M		K		S		H	
							P10	P10	P20	P20	P30	P30	M25	M30	K15	K25	S25	S30	H15	H20
		LE	IC	S	RE	APMX	8410	8510	8420	8520	8430	8530	8530	8640	8410	8420	8530	8640	8510	8520
SNMX1205 M - MEDIUM	SNMX1205DNSN-M*	7.5	12.7	5.48	1.6	2.0				●		●	●				●			●

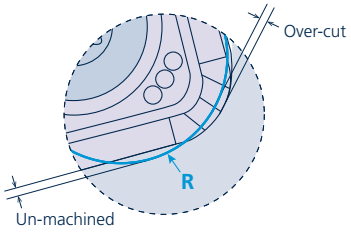
For milling cutters see page 82 - 83

Programming **R** Data

INSERT	PROGRAM R	OVER-CUT	UN-MACHINED
SNMX1205	**4.76**	0	1.37
	5.00	D31	1.31
	6.00	0.23	1.08
	8.00	0.95	0.63

Recommended program "**R**" in bold





PROFILE MILLING

SOLUTIONS

Rnd

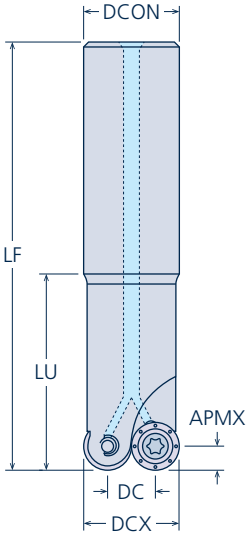
ContiMill V2

Profile | Face | Ramp | Helical

EM0RD - Cylindrical shank style

Profile milling solution utilising round positive inserts. Capable of high feed rates at low depth of cut. Also a good face milling solution. Choose this solution for indexable profile milling and as an alternative high feed and face milling solution.

Cutter diameters: 16mm to 32mm



Through coolant

DESCRIPTION	ZEFF	DIMENSIONS (mm)						INSERT SCREW	INSERT CLAMP SCREW	TORX BIT	TORQUE ADAPTER	T-HANDLE
		DCX	DC	LF	DCON	LU	APMX					
Cutters for RDMT0702 Inserts												
EM0RD07-016A16L100Z2C	2	16	9	100	16	45	3.5	TS-M2.5L5.2/ 60° T8	-	BIT50-TX8 or BIT50-TX8 HD	Adapter - 1.2 Nm	T-Handle
EM0RD07-016A16L145Z2C	2	16	9	145	16	50	3.5					
Cutters for RDMX1003 Inserts												
EM0RD10-020A20L110Z2C	2	20	10	110	20	50	5	TS-M3.5L7.1/ 60° T15	-	BIT50-TX15 or BIT50-TX15 HD	Adapter - 3.8 Nm	T-Handle
EM0RD10-020A20L170Z2C	2	20	10	170	20	60	5					
EM0RD10-025A25L120Z3C	3	25	15	120	25	55	5					
EM0RD10-025A25L210Z3C	3	25	15	210	25	70	5					
Cutters for RDMX12T3 Inserts												
EM0RD12-032A32L130Z3C	3	32	20	130	32	60	6	TS-M3.5L7.7/ 60° T15	TS-M3.5L4/ bh T15	BIT50-TX15 or BIT50-TX15 HD	Adapter - 3.8 Nm	T-Handle
EM0RD12-032A32L235Z3C	3	32	20	235	32	80	6					

For inserts see page 89

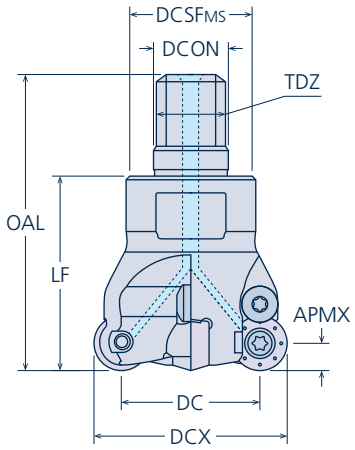
ContiMill V2

Profile | Face | Ramp | Helical

EM0RD - Threaded shank style

Profile milling solution utilising round positive inserts. Capable of high feed rates at low depth of cut. Also a good face milling solution. Choose this solution for indexable profile milling and as an alternative high feed and face milling solution.

Cutter diameters: 16mm to 42mm

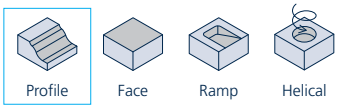


Through coolant

DESCRIPTION	ZEFF	DIMENSIONS (mm)								INSERT SCREW	INSERT CLAMP SCREW	TORX BIT	TORQUE ADAPTER	T-HANDLE
		DCX	DC	LF	DCON	OAL	DCSFMS	TDZ	APMX					
Cutters for RDMT0702 Inserts														
EM0RD07-016M8Z3C	3	16	9	23	8.5	39	12.7	M8	3.5	TS-M2.5L5.2/ 60° T8	-	BIT50-TX8 or BIT50-TX8 HD	Adapter - 1.2 Nm	T-Handle
EM0RD07-020M10Z4C	4	20	13	30	10.5	48	17.7	M10	3.5					
EM0RD07-025M12Z5C	5	25	18	35	12.5	55	20.7	M12	3.5					
Cutters for RDMX1003 Inserts														
EM0RD10-035M16Z5C	5	35	25	42	17	64	28.7	M16	5	TS-M3.5L7.1/ 60° T15	-	BIT50-TX15 or BIT50-TX15 HD	Adapter - 3.8 Nm	T-Handle
Cutters for RDMX12T3 Inserts														
EM0RD12-042A16Z4C	4	42	30	42	17	64	28.7	M16	6	TS-M3.5L7.7/ 60° T15	TS-M3.5L4/ bh T15	BIT50-TX15 or BIT50-TX15 HD	Adapter - 3.8 Nm	T-Handle

For inserts see page 89

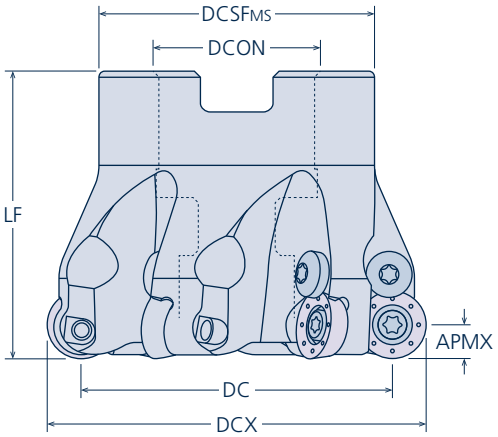
ContiMill V2



FM7RD - Arbor style

Profile milling solution utilising round positive inserts. Capable of high feed rates at a low depth of cut. Also a good face milling solution. Choose this solution for indexable profile milling and as an alternative high feed and face milling solution.

Cutter diameters: 52mm to 125mm



DESCRIPTION	ZEFF	DIMENSIONS (mm)						INSERT SCREW	INSERT CLAMP SCREW	WASHER	TORX BIT	TORQUE ADAPTER	T-HANDLE
		DCX	DC	LF	DCSFMS	DCON	AMPX						
Cutters for RDMX12T3 Inserts													
FM7RD12-052Q22Z5	5	52	40	40	40	22	6	TS-M3.5L7.7/ 60° T15	TS-M3.5L4/ bh T15	-	BIT50-TX15 or BIT50-TX15 HD	Adapter - 3.8 Nm	T-Handle
FM7RD12-066Q27Z6	6	66	54	50	48	27	6						
FM7RD12-080Q27Z7	7	80	68	50	58	27	6						
Cutters for RDMX1604 Inserts													
FM7RD16-066Q27Z5	5	66	50	50	48	27	8	TS-M4.5L9.5/ 60° T15	TS-M4.5L9.5/ 60° T15	WSH1-5-11*1	BIT50-TX15 or BIT50-TX15 HD	Adapter - 5.7 Nm	T-Handle
FM7RD16-080Q27Z6	7	80	64	50	58	27	8						
FM7RD16-100Q32Z7	7	100	84	50	70	32	8						
FM7RD16-125Q40Z8	8	125	109	63	90	40	8				BIT73-TX15 HD		

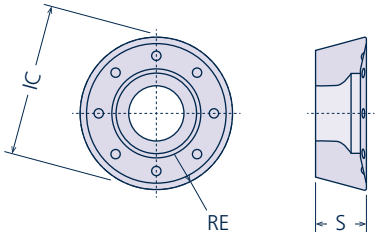
For inserts see page 89

*1 Washer uses same screw as insert

ContiMill V2

RDMT/X - Milling insert

Round RDMT0702, RDMX1003, RDMX12T3 and RDMX1604 positive inserts.

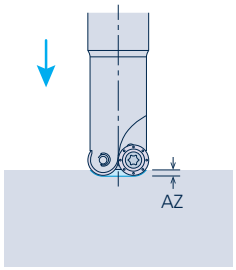


INSERT	DESCRIPTION	DIMENSIONS (mm)				P						M		K		S		H	
						P10	P10	P20	P20	P30	P30	M25	M30	K15	K25	S25	S30	H15	H20
		IC	S	RE	APMX	8410	8510	8420	8520	8430	8530	8530	8640	8410	8420	8530	8640	8510	8520
RDMT0702 L - LIGHT	RDMT0702M0-L*	7	2.38	3.5	3.5				●										●
RDMX1003 R - ROUGHING	RDMX1003M0-R*	10	3.18	5	5				●										●
RDMX12T3 R - ROUGHING	RDMX12T3M0-R*	12	3.97	6	6				●	●									●
RDMX1604 R - ROUGHING	RDMX1604M0-R*	16	4.76	8	8				●	●									●

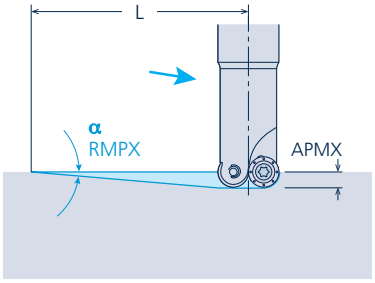
For milling cutters see pages 86 - 88

ContiMill V2

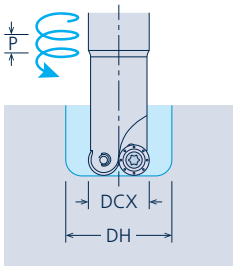
Plunge, Linear Ramping and Helical Ramping



Plunge
Full Engagement



Linear Ramping



Helical Ramping

DESCRIPTION	Ø	PLUNGE Full Engagement	LINEAR RAMPING		HELICAL RAMPING			
	DCX (mm)	Max. Plunge Depth AZ (mm)	Max. Ramp Angle RMPX (°)	Max. Distance L (mm)	Max. Hole Ø DH max (mm)	Max. Pitch P max (mm)	Min. Hole Ø DH min (mm)	Max. Pitch P max (mm)
RDMT0702M0-L								
Cylindrical Shank Style								
EM0RD07-016A16L100Z2C	16	1.3	10.3	19.3	30.7	1.5	19.5	1.5
EM0RD07-016A16L145Z2C	16	1.3	10.3	19.3	30.7	1.5	19.5	1.5
Threaded Shank Style								
EM0RD07-016M8Z3C	16	0.6	4.0	50.1	30.7	1.5	21.6	1.2
EM0RD07-020M10Z4C	20	1.3	6.6	30.2	38.7	1.5	27.9	1.5
EM0RD07-025M12Z5C	25	1.3	4.4	45.5	48.7	1.5	37.6	1.5
RDMT1003M0-R								
Cylindrical Shank Style								
EM0RD10-020A20L110Z2C	20	2.5	22.4	12.1	38.6	2.5	21.3	1.7
EM0RD10-020A20L170Z2C	20	2.5	22.4	12.1	38.6	2.5	21.3	1.7
EM0RD10-025A25L120Z3C	25	2.4	12.1	23.3	48.6	2.5	31.4	2.5
EM0RD10-025A25L210Z3C	25	2.4	12.1	23.3	48.6	2.5	31.4	2.5
Threaded Shank Style								
EM0RD10-035M16Z5C	35	1.8	4.4	65.0	68.6	2.5	52.3	2.5
RDMX12T3M0-R								
Cylindrical Shank Style								
EM0RD12-032A32L130Z3C	32	2.7	9.2	37.0	63.2	4.0	42.0	4.0
EM0RD12-032A32L235Z3C	32	2.7	9.2	37.0	63.2	4.0	42.0	4.0
Threaded Shank Style								
EM0RD12-042A16Z4C	42	2.7	5.7	60.1	83.2	4.0	62.0	4.0
Arbor Style								
FM7RD12-052Q22Z5	52	2.5	3.7	92.8	103.3	4.0	82.3	4.0
FM7RD12-066Q27Z6	66	2.5	2.6	132.1	131.3	4.0	110.3	4.0
FM7RD12-080Q27Z7	80	2.5	2.1	163.6	159.3	4.0	138.3	4.0
RDMX1604M0-R								
Arbor Style								
FM7RD16-066Q27Z5	66	3.5	4.1	111.6	130.8	5.0	102.8	5.0
FM7RD16-080Q27Z6	80	3.5	3.2	143.1	158.8	5.0	130.8	5.0
FM7RD16-100Q32Z7	100	3.5	2.4	190.9	198.8	5.0	170.8	5.0
FM7RD16-125Q40Z8	125	3.5	1.8	254.6	248.8	5.0	220.8	5.0

*Formulae: Linear Ramp; Min. Distance: L = (APMX/tan RMPX°). Helical Ramp; Max. Pitch: P max = (DH-DC)*π*tan RMPX°, Max. Hole Ø: DH max = (DC - RE)*2, Min. Hole Ø: DH min = (cutter radius + min. cutting radius)*2*

CHAMFER MILLING

SOLUTIONS

45°

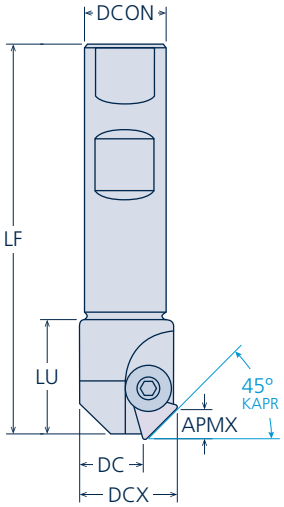
ClassicMill

Chamfer

E45TP - Weldon shank style

45° approach chamfer milling solution, utilising ISO standard triangular TP*N1603 inserts with three cutting edges. Choose this option as a basic chamfering solution utilising ISO standard inserts.

Cutter diameters: 26.5mm to 40mm
KAPR: 45°



DESCRIPTION	ZEFF	DIMENSIONS (mm)						CLAMP CREW	CLAMP	HEX KEY	Nm
		DC	DCX	LF	LU	DCON	APMX				
Cutters for TP*N1603 Inserts											
E45TP16006W	1	6.5	26.5	110	35	25	10.8*1	1006	2064	5004	3.5
E45TP16020W	3	20	40	110	35	25	10.8*1				

For inserts see pages 93 - 94

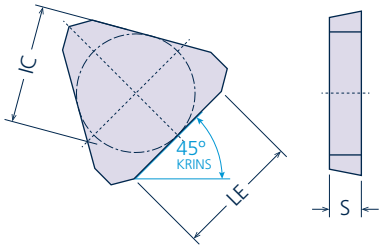
*1 APMX differs depending on insert used in the cutter. Refer to insert page for specific APMXs

ClassicMill

TPKN - Milling insert

ISO standard triangular TPKN1603 positive inserts with three cutting edges.
Inserts are periphery ground.

KRINS: 45°



INSERT	DESCRIPTION	DIMENSIONS (mm)				P		M	K	S	H
						P20	P30	M25	K25	S25	H20
		LE	IC	S	APMX	8220	8430	8430	8220	8430	8220
TPKN1603 	TPKN1603PPSN*	12.3	9.53	3.18	9	●	●	●	●	●	●

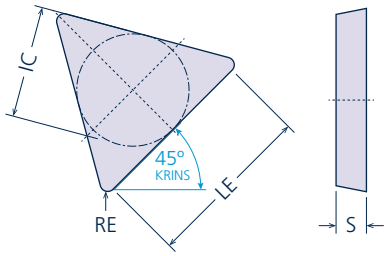
For milling cutters see pages 92

ClassicMill

TPUN - Milling insert

ISO standard triangular TPUN1603 positive inserts with three cutting edges.

KRINS: 45°



INSERT	DESCRIPTION	DIMENSIONS (mm)					P		M	K	S	H
							P20	P30	M25	K25	S25	H20
		LE	IC	S	RE	APMX	8220	8430	8430	8220	8430	8220
TPUN1603	TPUN160304*	15.1	9.53	3.18	0.4	10.8	●	●	●	●	●	●
	TPUN160308*	13.7	9.53	3.18	0.8	9.9	●	●	●	●	●	●
	TPUN160312*	12.3	9.53	3.18	1.2	9.1	●	●	●	●	●	●

For milling cutters see pages 92

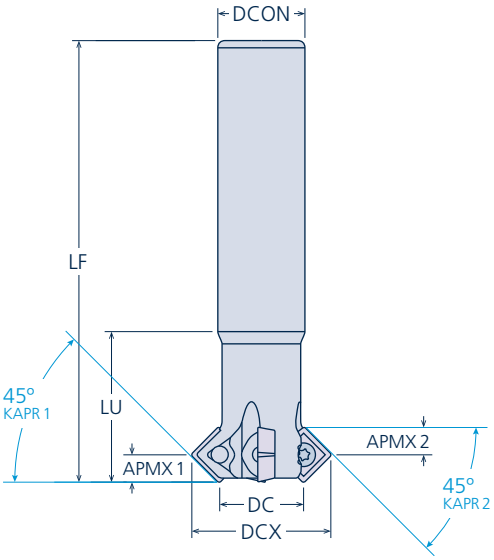
EdgeMill V2

Chamfer

E45SP - Cylindrical shank style

Versatile 45° chamfer cutters for both chamfers and back chamfers, utilising square SPMT0502, SPMT0603 and SPMT0903 positive inserts with four cutting edges. Fine pitch cutters allow for high table feed. Long cutters in coarse pitch to reduce vibration. Choose this as your first choice chamfering solution.

Cutter diameters: 10mm to 32mm
KAPR 1: 45°
KAPR 2: 45°



DESCRIPTION	ZEFF	DIMENSIONS (mm)						INSERT SCREW	TORX BIT	TORQUE ADAPTER	T-HANDLE
		DC	DCX	LF	DCON	LU	APMX 1&2				
Cutters for SPMT0502 Inserts											
E45SP05-010A10L090Z3	3	10	16.9	90	10	23	3.5	TS-M2.2L4.7/ 60° T7	BIT50-TX7 or BIT50-TX7 HD	Adapter - 0.9 Nm	T-Handle
E45SP05-012A12L095Z4	4	12	18.9	95	12	23	3.5				
E45SP05-016A16L145Z3	3	16	22.9	145	16	25	3.5				
E45SP05-016A16L100Z5	5	16	22.9	100	16	25	3.5				
Cutters for SPMT0603 Inserts											
E45SP06-020A20L110Z5	5	20	28	110	20	31	4	TS-M2.5L6.6/ 60° T8	BIT50-TX8 or BIT50-TX8 HD	Adapter - 1.2 Nm	T-Handle
E45SP06-025A25L210Z4	4	25	33	210	25	32	4				
E45SP06-025A25L120Z6	6	25	33	120	25	32	4				
Cutters for SPMT0903 Inserts											
E45SP09-032A32L130Z6	6	32	43.6	130	32	40	5.8	TS-M3L7.1/ 60° T9	BIT50-TX9 or BIT50-TX9 HD	Adapter - 2.2 Nm	T-Handle

For inserts see pages 96

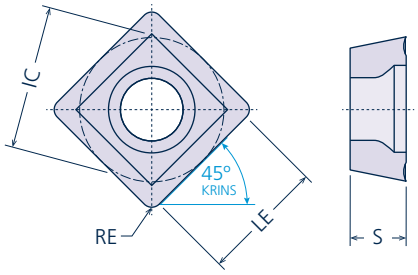
EdgeMill V2

SPMT - Milling insert

Square SPMT0502, SPMT0603 and SPMT0903 positive inserts with four cutting edges.

KRINS: 45°

Std. Features cutting geometry along full cutting edge length (LE).
Suitable for most materials.



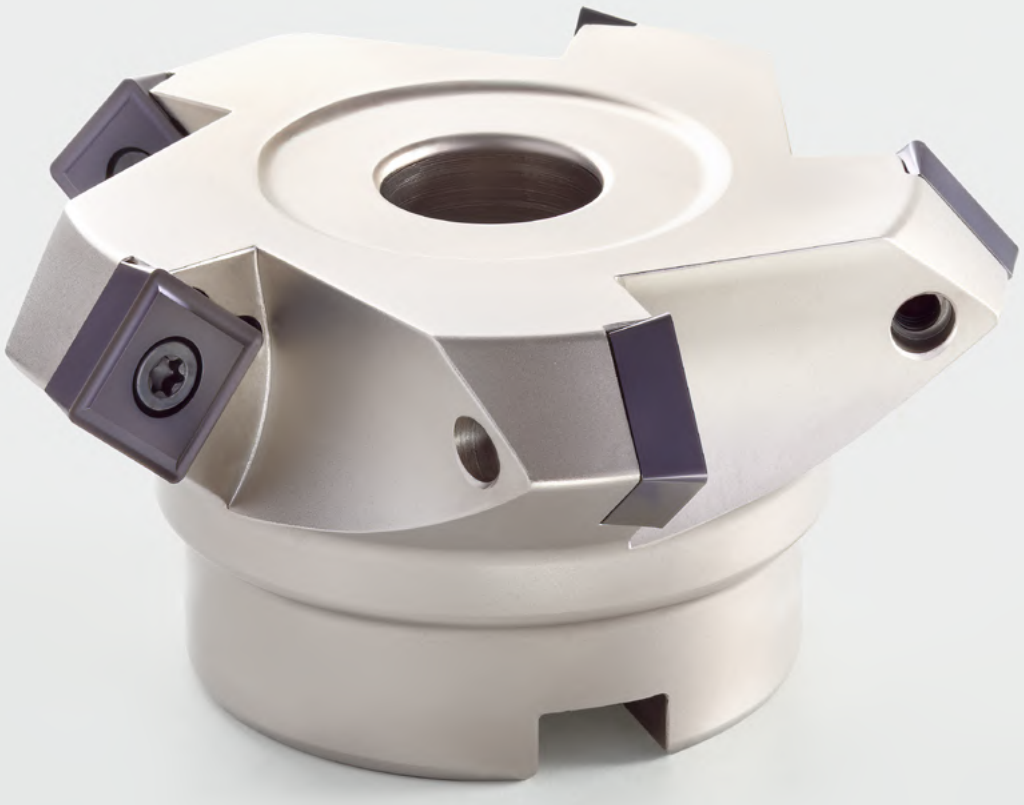
INSERT	DESCRIPTION	DIMENSIONS (mm)					P						M		K		S		H	
							P10	P10	P20	P20	P30	P30	M25	M30	K15	K25	S25	S30	H15	H20
		LE	IC	S	RE	APMX	8410	8510	8420	8520	8430	8530	8530	8640	8410	8420	8530	8640	8510	8520
SPMT0502 	SPMT050204*	4.7	5.56	2.38	0.4	3.5			●		●	●	●			●	●			
SPMT0603 	SPMT060304*	5.5	6.35	3.18	0.4	4			●		●	●	●			●	●			
SPMT0903 	SPMT090308*	7.9	9.52	3.17	0.8	5.8			●		●	●	●			●	●			

For milling cutters see page 95

BEVEL MILLING

SOLUTIONS

35° to 75°



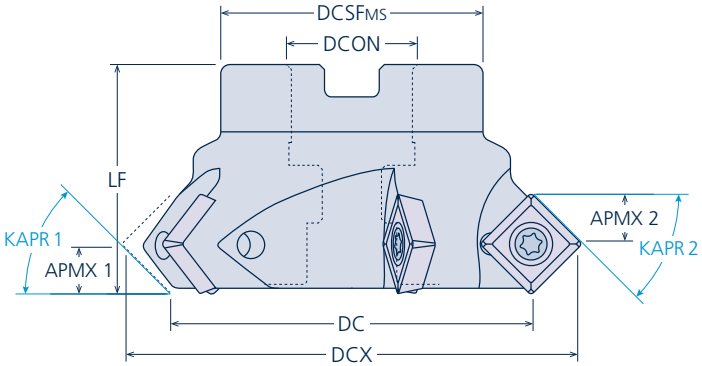
BevelMill V2

Bevel

F**SP15 - Arbor style

Bevel milling cutters in approach angles: 35° up to 75°, utilising SPMT1505 positive inserts with four cutting edges.

Cutter diameters: 80mm
KAPR 1: 35° - 75°
KAPR 2: 30° - 55°



DESCRIPTION	KAPR		CHAMFER		ZEFF	DIMENSIONS (mm)						INSERT SCREW	TORX BIT	TORQUE ADAPTER	T-HANDLE
	1	2	FRONT	BACK		DC	DCX	LF	DCSFMS	DCON	APMX 1&2				
Cutters for SPMT1505 Inserts															
F35SP15-080Q27Z5	35°	55°	55°	35°	5	80	103.25	50	58	27	7.9	11.0	TS-M5L11.6/ 60° T20	BIT50-TX20 or BIT50-TX20 HD	Adapter - 5.0 Nm	T-Handle
F40SP15-080Q27Z5	40°	50°	50°	40°	5	80	101.90	50	58	27	8.9	10.3				
F45SP15-080Q27Z5	45°	45°	45°	45°	5	80	99.73	50	58	27	9.8	9.5				
F50SP15-080Q27Z5	50°	40°	40°	50°	5	80	97.70	50	58	27	10.7	8.6				
F55SP15-080Q27Z5	55°	35°	35°	55°	5	80	95.60	50	58	27	11.5	7.7				
F60SP15-080Q27Z5	60°	30°	30°	60°	5	80	93.30	50	58	27	12.2	6.7				
F65SP15-080Q27Z5	65°	-	25°	-	5	80	92.00	50	58	27	12.9	-				
F70SP15-080Q27Z5	70°	-	20°	-	5	80	89.80	50	58	27	13.4	-				
F75SP15-080Q27Z5	75°	-	15°	-	5	80	87.40	50	58	27	13.9	-				

For inserts see pages 99

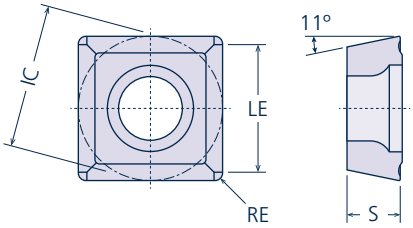
BevelMill V2

SPMT - Milling insert

Square SPMT1505 positive inserts with 4 cutting edges.

Std.

Features cutting geometry along full cutting edge length (LE).
Suitable for most materials.



INSERT	DESCRIPTION	DIMENSIONS (mm)				P						M		K		S		H	
						P10	P10	P20	P20	P30	P30	M25	M30	K15	K25	S25	S30	H15	H20
		LE	IC	S	RE	8410	8510	8420	8520	8430	8530	8530	8640	8410	8420	8530	8640	8510	8520
SPMT1505 	SPMT150512*	13.4	15.88	5.56	1.2			●			●	●			●	●			●

For milling cutters see page 98

Recommended Cutting Speed (m/min)

Milling

MATERIAL				MACHINE	HARD ← INSERT GRADE → TOUGH																	
ISO	VDI 3323	DESCRIPTION & HARDNESS		DRY / WET	8410			8510			8220 8420					8520					8430			8530			8640	
					K15	P10	H10	H10	P10	K15	P20	H20	S15	M15	K25	H20	P20	S15	M15	K25	P30	M25	S25	P30	M25	S25	M30	S30
P	1	Non-alloyed Steel (C<0.25%)	<125HB	Dry							280 - 355					280 - 355					240 - 305			240 - 305				
	2~3	Non-alloyed Steel (0.25%≤C<0.55%)	190-250HB 13-24HRC	Dry							200 - 280					200 - 280					175 - 250			175 - 250				
	4~5	Non-alloyed Steel (C≥0.55%)	220-300HB 19-32HRC	Dry							155 - 270					155 - 270					135 - 235			135 - 235				
	6~9	Low-alloyed Steel	200-350HB 15-38HRC	Dry							115 - 225					115 - 225					100 - 195			100 - 195				
	10~11	High-alloyed Steel	220-325HB 19-34HRC	Dry	95 - 165			95 - 165			90 - 160					90 - 160					85 - 155			85 - 155				
M	12~13	Stainless Steel (Ferritic/Martensitic)	200-240HB 15-22HRC	Dry 5% Emulsion							185 - 250 140 - 190					185 - 250 140 - 190					175 - 235 135 - 180			175 - 235 135 - 180			130 - 185 95 - 140	
	14	Stainless Steel (Austenitic)	200HB *1 -15HRC	Dry 5% Emulsion							185 - 245 140 - 185					185 - 245 140 - 185					175 - 230 135 - 175			175 - 230 135 - 175			125 - 185 95 - 140	
K	15~16	Grey Cast Iron	180-260HB 11-26HRC	Dry 5% Emulsion (Wet if dust prob.)	200 - 250 150 - 190			200 - 250 150 - 190			175 - 220 130 - 165					175 - 220 130 - 165												
	17~18	Nodular Cast Iron	160-250HB -24HRC	5% Emulsion	130 - 185			130 - 185			115 - 160					115 - 160												
	19~20	Malleable Cast Iron	130-230HB -21HRC	5% Emulsion	115 - 190			115 - 190			100 - 165					100 - 165												
S	31~35	Heat-resistant Super Alloys	200-320HB 15-34HRC	5% Emulsion							30 - 50					30 - 50					25 - 45			25 - 45			25 - 40	
	36~37	Titanium-based Alloys		5% Emulsion							30 - 100					30 - 100					25 - 90			25 - 90			25 - 85	
H	38~39	Hardened Steel	55-60HRC	Dry	75 - 110			75 - 110			60 - 95					60 - 95												
	40~41	Chilled Cast Iron & Hardened Cast Iron	400-530HB 42-55HRC	Dry	125 - 190			125 - 190			105 - 160					105 - 160												

*1 VDI3323 specifies a material hardness up to 180HB. However the recommended cutting speeds noted have been determined bases on material hardnesses up 200HB

Technical Note:

- The recommended cutting speeds in the above table are based on a target cutting time of 60 minutes with hex = 0.15mm
- Reduce cutting speed for higher cutter engagement and increase cutting speed for lower cutter engagement
- If cutter engagement = 0.1DC select high end of cutting speed range. If cutter engagement = DC select low end of cutting speed range
- Generally dry cutting is recommended. However for heat-resistant super alloys and titanium-based alloys, as well as nodular and malleable cast iron, wet cutting is recommended
- For stainless steel, if good surface finish is required, then wet cutting is recommended. However this may result in a reduction in tool life when compared to dry cutting

Recommended Feed per Tooth (mm/tooth)

Multi90Mill V2

INSERT		MAX. CHIP THICKNESS hex (mm)	FEED PER TOOTH fz (mm/tooth)			
DESCRIPTION	KAPR (°)		CUTTER ENGAGEMENT (Radial immersion)			
			Ae/DC = 10%	Ae/DC = 20%	Ae/DC = 30%	Ae/DC ≥ 40%
AOMT11T308M	90°	0.08 - 0.12 - 0.15	0.13 - **0.19** - 0.25	0.10 - **0.15** - 0.19	0.09 - **0.13** - 0.16	0.08 - **0.12** - 0.15
AOMT150512L	90°	0.08 - 0.13 - 0.18	0.13 - **0.22** - 0.30	0.10 - **0.17** - 0.23	0.09 - **0.15** - 0.20	0.08 - **0.13** - 0.18
AOMT150512M	90°	0.08 - 0.14 - 0.20	0.13 - **0.23** - 0.33	0.10 - **0.18** - 0.25	0.09 - **0.16** - 0.22	0.08 - **0.14** - 0.20

Recommended starting feed per tooth (fz) is in bold

UniMill V2

INSERT		MAX. CHIP THICKNESS hex (mm)	FEED PER TOOTH fz (mm/tooth)			
DESCRIPTION	KAPR (°)		CUTTER ENGAGEMENT (Radial immersion)			
			Ae/DC = 10%	Ae/DC = 20%	Ae/DC = 30%	Ae/DC ≥ 40%
APKT100308M	90°	0.08 - 0.12 - 0.15	0.13 - **0.19** - 0.25	0.10 - **0.15** - 0.19	0.09 - **0.13** - 0.16	0.08 - **0.12** - 0.15
APKT160408M	90°	0.08 - 0.13 - 0.18	0.13 - **0.22** - 0.30	0.10 - **0.17** - 0.23	0.09 - **0.15** - 0.20	0.08 - **0.13** - 0.18

Recommended starting feed per tooth (fz) is in bold

Millerator V2

INSERT		MAX. CHIP THICKNESS hex (mm)	FEED PER TOOTH fz (mm/tooth)			
DESCRIPTION	KAPR (°)		CUTTER ENGAGEMENT (Radial immersion)			
			Ae/DC = 10%	Ae/DC = 20%	Ae/DC = 30%	Ae/DC ≥ 40%
TDMT150408M	90°	0.08 - 0.13 - 0.17	0.13 - **0.21** - 0.28	0.10 - **0.16** - 0.21	0.09 - **0.14** - 0.19	0.08 - **0.13** - 0.17
TDMT190608M	90°	0.08 - 0.15 - 0.22	0.13 - **0.25** - 0.37	0.10 - **0.19** - 0.28	0.09 - **0.17** - 0.24	0.08 - **0.15** - 0.22

Recommended starting feed per tooth (fz) is in bold

MillaTron V2

INSERT		MAX. CHIP THICKNESS hex (mm)	FEED PER TOOTH fz (mm/tooth)			
DESCRIPTION	KAPR (°)		CUTTER ENGAGEMENT (Radial immersion)			
			Ae/DC = 10%	Ae/DC = 20%	Ae/DC = 30%	Ae/DC ≥ 40%
ANMX100608M	90°	0.08 - 0.16 - 0.24	0.13 - **0.27** - 0.40	0.10 - **0.20** - 0.30	0.09 - **0.18** - 0.26	0.08 - **0.16** - 0.24
ANMX151008M	90°	0.08 - 0.18 - 0.28	0.13 - **0.30** - 0.47	0.10 - **0.23** - 0.35	0.09 - **0.20** - 0.31	0.08 - **0.19** - 0.29

Recommended starting feed per tooth (fz) is in bold

Recommended Feed per Tooth (mm/tooth)

Multi4Mill V2

INSERT		MAX. CHIP THICKNESS hex (mm)	FEED PER TOOTH fz (mm/tooth)			
DESCRIPTION	KAPR (°)		CUTTER ENGAGEMENT (Radial immersion)			
			Ae/DC = 10%	Ae/DC = 20%	Ae/DC = 30%	Ae/DC ≥ 40%
SOMT070308M	90°	0.06 - 0.10 - 0.14	0.10 - **0.17** - 0.23	0.08 - **0.13** - 0.18	0.07 - **0.11** - 0.15	0.06 - **0.10** - 0.14
SOMT12T308M	90°	0.08 - 0.13 - 0.17	0.13 - **0.21** - 0.28	0.10 - **0.16** - 0.21	0.09 - **0.14** - 0.19	0.08 - **0.13** - 0.17
SOMT12T320R	90°	0.08 - 0.13 - 0.18	0.13 - **0.22** - 0.30	0.10 - **0.17** - 0.23	0.09 - **0.15** - 0.20	0.08 - **0.13** - 0.18

Recommended starting feed per tooth (fz) is in bold

Millx V2

INSERT		MAX. CHIP THICKNESS hex (mm)	FEED PER TOOTH fz (mm/tooth)			
DESCRIPTION	KAPR (°)		CUTTER ENGAGEMENT (Radial immersion)			
			Ae/DC = 10%	Ae/DC = 20%	Ae/DC = 30%	Ae/DC ≥ 40%
XN*X0403M	90°	0.08 - 0.13 - 0.18	0.13 - **0.22** - 0.30	0.10 - **0.17** - 0.23	0.09 - **0.15** - 0.20	0.08 - **0.13** - 0.18
XN*X0806M	90°	0.08 - 0.17 - 0.25	0.13 - **0.28** - 0.42	0.10 - **0.21** - 0.31	0.09 - **0.18** - 0.27	0.08 - **0.17** - 0.26

Recommended starting feed per tooth (fz) is in bold

TeraMill V2

INSERT		MAX. CHIP THICKNESS hex (mm)	FEED PER TOOTH fz (mm/tooth)			
DESCRIPTION	KAPR (°)		CUTTER ENGAGEMENT (Radial immersion)			
			Ae/DC = 10%	Ae/DC = 20%	Ae/DC = 30%	Ae/DC ≥ 40%
SNMX1205DNSN-M	15°	0.08 - 0.19 - 0.30	0.53 - **1.27** - 2.00	0.40 - **0.95** - 1.49	0.35 - **0.82** - 1.29	0.32 - **0.76** - 1.20
SNMX1205*-M	45°	0.08 - 0.17 - 0.25	0.19 - **0.39** - 0.59	0.14 - **0.30** - 0.46	0.12 - **0.26** - 0.39	0.08 - **0.22** - 0.36
SNMX120508-M	88°	0.08 - 0.17 - 0.25	0.13 - **0.28** - 0.42	0.10 - **0.21** - 0.31	0.09 - **0.18** - 0.27	0.08 - **0.17** - 0.26

Recommended starting feed per tooth (fz) is in bold

TetraMill V2

INSERT		MAX. CHIP THICKNESS hex (mm)	FEED PER TOOTH fz (mm/tooth)			
DESCRIPTION	KAPR (°)		CUTTER ENGAGEMENT (Radial immersion)			
			Ae/DC = 10%	Ae/DC = 20%	Ae/DC = 30%	Ae/DC ≥ 40%
SEMT1204AFEN-L	45°	0.07 - 0.14 - 0.20	0.17 - **0.33** - 0.48	0.12 - **0.24** - 0.36	0.11 - **0.21** - 0.31	0.10 - **0.20** - 0.29
SEMT1204AFEN-M	45°	0.08 - 0.15 - 0.22	0.19 - **0.36** - 0.52	0.14 - **0.27** - 0.39	0.12 - **0.23** - 0.34	0.12 - **0.22** - 0.32

Recommended starting feed per tooth (fz) is in bold

Recommended Feed per Tooth (mm/tooth)

ShrapMill V2

INSERT		MAX. CHIP THICKNESS hex (mm)	FEED PER TOOTH fz (mm/tooth)			
DESCRIPTION	KAPR (°)		CUTTER ENGAGEMENT (Radial immersion)			
			Ae/DC = 10%	Ae/DC = 20%	Ae/DC = 30%	Ae/DC ≥ 40%
NNMU100404M	45°	0.07 - 0.14 - 0.20	0.17 - **0.33** - 0.48	0.12 - **0.24** - 0.36	0.11 - **0.21** - 0.31	0.10 - **0.20** - 0.29
NNMU200708MM	45°	0.08 - 0.16 - 0.24	0.19 - **0.38** - 0.57	0.14 - **0.29** - 0.43	0.12 - **0.25** - 0.37	0.08 - **0.22** - 0.35
NNMU200708M	45°	0.08 - 0.18 - 0.27	0.19 - **0.42** - 0.64	0.14 - **0.31** - 0.48	0.12 - **0.27** - 0.42	0.08 - **0.24** - 0.39

Recommended starting feed per tooth (fz) is in bold

NitroMill V2

INSERT		MAX. CHIP THICKNESS hex (mm)	FEED PER TOOTH fz (mm/tooth)			
DESCRIPTION	KAPR (°)		CUTTER ENGAGEMENT (Radial immersion)			
			Ae/DC = 10%	Ae/DC = 20%	Ae/DC = 30%	Ae/DC ≥ 40%
XDMT09T310M	8°	0.07 - 0.14 - 0.20	0.89 - **1.72** - 2.54	0.66 - **1.28** - 1.89	0.57 - **1.10** - 1.63	0.53 - **1.02** - 1.51
XDMT140520M	10°	0.10 - 0.20 - 0.30	1.01 - **2.02** - 3.02	0.75 - **1.50** - 2.25	0.65 - **1.30** - 1.95	0.60 - **1.20** - 1.80

Recommended starting feed per tooth (fz) is in bold

HyperM V2

INSERT			MAX. CHIP THICKNESS hex (mm)	FEED PER TOOTH fz (mm/tooth)			
DESCRIPTION	Ap (mm)	KAPR (°)		CUTTER ENGAGEMENT (Radial immersion)			
				Ae/DC = 10%	Ae/DC = 20%	Ae/DC = 30%	Ae/DC ≥ 40%
BNMU0603L	0.25	17°	0.07 - 0.14 - 0.20	0.41 - **0.80** - 1.18	0.31 - **0.60** - 0.89	0.27 - **0.52** - 0.77	0.25 - **0.49** - 0.72
	0.50	24°	0.07 - 0.14 - 0.20	0.30 - **0.58** - 0.85	0.22 - **0.43** - 0.64	0.19 - **0.37** - 0.55	0.18 - **0.35** - 0.52
	0.75	29°	0.07 - 0.14 - 0.20	0.25 - **0.48** - 0.71	0.18 - **0.36** - 0.53	0.16 - **0.31** - 0.46	0.15 - **0.29** - 0.43
	1.00	34°	0.07 - 0.14 - 0.20	0.22 - **0.42** - 0.62	0.16 - **0.31** - 0.46	0.14 - **0.27** - 0.40	0.13 - **0.25** - 0.37
BNMU0603MM	0.25	17°	0.07 - 0.15 - 0.22	0.41 - **0.86** - 1.30	0.31 - **0.65** - 0.98	0.27 - **0.56** - 0.85	0.25 - **0.52** - 0.79
	0.50	24°	0.07 - 0.15 - 0.22	0.30 - **0.62** - 0.94	0.22 - **0.46** - 0.70	0.19 - **0.40** - 0.61	0.18 - **0.38** - 0.57
	0.75	29°	0.07 - 0.15 - 0.22	0.25 - **0.52** - 0.78	0.18 - **0.38** - 0.58	0.16 - **0.33** - 0.50	0.15 - **0.31** - 0.47
	1.00	34°	0.07 - 0.15 - 0.22	0.22 - **0.45** - 0.68	0.16 - **0.34** - 0.51	0.14 - **0.29** - 0.44	0.13 - **0.27** - 0.41
BNMU0603M	0.25	17°	0.07 - 0.16 - 0.25	0.41 - **0.95** - 1.48	0.31 - **0.71** - 1.11	0.27 - **0.62** - 0.96	0.25 - **0.58** - 0.90
	0.50	24°	0.07 - 0.16 - 0.25	0.30 - **0.68** - 1.06	0.22 - **0.51** - 0.80	0.19 - **0.44** - 0.69	0.18 - **0.41** - 0.64
	0.75	29°	0.07 - 0.16 - 0.25	0.25 - **0.57** - 0.88	0.18 - **0.42** - 0.66	0.16 - **0.37** - 0.57	0.15 - **0.34** - 0.53
	1.00	34°	0.07 - 0.16 - 0.25	0.22 - **0.50** - 0.78	0.16 - **0.37** - 0.58	0.14 - **0.32** - 0.50	0.13 - **0.30** - 0.47

Recommended starting feed per tooth (fz) is in bold. Insert with radius, KAPR varies with depth of cut

Recommended Feed per Tooth (mm/tooth)

ContiMill V2

INSERT			MAX. CHIP THICKNESS hex (mm)	FEED PER TOOTH fz (mm/tooth)			
				CUTTER ENGAGEMENT (Radial immersion)			
DESCRIPTION	Ap (mm)	KAPR (°)		Ae/DC = 10%	Ae/DC = 20%	Ae/DC = 30%	Ae/DC ≥ 40%
RDMT0702M0L	0.18	18°	0.06 - 0.11 - 0.15	0.32 - **0.56** - 0.80	0.24 - **0.42** - 0.60	0.21 - **0.37** - 0.52	0.19 - **0.34** - 0.49
	0.35	26°	0.06 - 0.11 - 0.15	0.23 - **0.41** - 0.58	0.17 - **0.31** - 0.44	0.15 - **0.27** - 0.38	0.14 - **0.25** - 0.35
	0.70	37°	0.06 - 0.11 - 0.15	0.17 - **0.30** - 0.42	0.13 - **0.23** - 0.32	0.11 - **0.20** - 0.28	0.10 - **0.18** - 0.26
	1.05	46°	0.06 - 0.11 - 0.15	0.14 - **0.25** - 0.36	0.11 - **0.19** - 0.27	0.09 - **0.16** - 0.23	0.08 - **0.15** - 0.22
	1.75	61°	0.06 - 0.11 - 0.15	0.12 - **0.21** - 0.30	0.09 - **0.16** - 0.22	0.08 - **0.14** - 0.19	0.07 - **0.13** - 0.18
	3.50	90°	0.06 - 0.11 - 0.15	0.10 - **0.18** - 0.26	0.08 - **0.14** - 0.19	0.07 - **0.12** - 0.17	0.06 - **0.11** - 0.15
RDMX1003M0R	0.25	18°	0.07 - 0.15 - 0.22	0.38 - **0.62** - 0.86	0.20 - **0.42** - 0.64	0.18 - **0.37** - 0.56	0.17 - **0.35** - 0.52
	0.50	26°	0.07 - 0.15 - 0.22	0.27 - **0.57** - 0.86	0.20 - **0.42** - 0.64	0.18 - **0.37** - 0.56	0.17 - **0.35** - 0.52
	1.00	37°	0.07 - 0.15 - 0.22	0.20 - **0.42** - 0.63	0.15 - **0.31** - 0.47	0.13 - **0.27** - 0.41	0.12 - **0.25** - 0.38
	1.50	46°	0.07 - 0.15 - 0.22	0.17 - **0.35** - 0.53	0.13 - **0.27** - 0.40	0.11 - **0.23** - 0.34	0.10 - **0.21** - 0.32
	2.50	61°	0.07 - 0.15 - 0.22	0.14 - **0.29** - 0.44	0.10 - **0.22** - 0.33	0.09 - **0.19** - 0.28	0.08 - **0.17** - 0.26
	5.00	90°	0.07 - 0.15 - 0.22	0.12 - **0.25** - 0.38	0.09 - **0.19** - 0.29	0.08 - **0.17** - 0.25	0.07 - **0.15** - 0.22
RDMX12T3M0R	0.30	18°	0.08 - 0.17 - 0.25	0.43 - **0.90** - 1.36	0.32 - **0.67** - 1.01	0.28 - **0.58** - 0.88	0.26 - **0.54** - 0.82
	0.60	26°	0.08 - 0.17 - 0.25	0.31 - **0.65** - 0.98	0.23 - **0.48** - 0.73	0.20 - **0.42** - 0.64	0.19 - **0.39** - 0.59
	1.20	37°	0.08 - 0.17 - 0.25	0.23 - **0.48** - 0.72	0.17 - **0.35** - 0.5	0.15 - **0.31** - 0.46	0.14 - **0.29** - 0.43
	1.80	46°	0.08 - 0.17 - 0.25	0.19 - **0.40** - 0.61	0.14 - **0.30** - 0.45	0.13 - **0.26** - 0.39	0.12 - **0.24** - 0.36
	3.00	61°	0.08 - 0.17 - 0.25	0.16 - **0.33** - 0.50	0.12 - **0.25** - 0.37	0.10 - **0.21** - 0.32	0.10 - **0.20** - 0.30
	6.00	90°	0.08 - 0.17 - 0.25	0.14 - **0.29** - 0.44	0.10 - **0.22** - 0.33	0.09 - **0.19** - 0.28	0.08 - **0.17** - 0.25
RDMX1604M0R	0.40	18°	0.08 - 0.19 - 0.30	0.44 - **1.04** - 1.64	0.33 - **0.78** - 1.22	0.28 - **0.67** - 1.06	0.26 - **0.63** - 0.99
	0.80	26°	0.08 - 0.19 - 0.30	0.32 - **0.75** - 1.18	0.24 - **0.56** - 0.88	0.20 - **0.49** - 0.77	0.19 - **0.45** - 0.71
	1.60	37°	0.08 - 0.19 - 0.30	0.23 - **0.55** - 0.87	0.17 - **0.41** - 0.65	0.15 - **0.36** - 0.56	0.14 - **0.33** - 0.52
	2.40	46°	0.08 - 0.19 - 0.30	0.20 - **0.47** - 0.73	0.15 - **0.35** - 0.55	0.13 - **0.30** - 0.47	0.12 - **0.28** - 0.44
	4.00	61°	0.08 - 0.19 - 0.30	0.16 - **0.39** - 0.61	0.12 - **0.29** - 0.46	0.11 - **0.25** - 0.39	0.10 - **0.23** - 0.36
	8.00	90°	0.08 - 0.19 - 0.30	0.14 - **0.34** - 0.53	0.11 - **0.26** - 0.40	0.09 - **0.22** - 0.34	0.08 - **0.19** - 0.30

Recommended starting feed per tooth (fz) is in bold. Insert with radius, KAPR varies with depth of cut

EdgeMill V2

INSERT		MAX. CHIP THICKNESS hex (mm)	FEED PER TOOTH fz (mm/tooth)			
			CUTTER ENGAGEMENT (Radial immersion)			
DESCRIPTION	KAPR (°)		Ae/DC = 10%	Ae/DC = 20%	Ae/DC = 30%	Ae/DC ≥ 40%
SPMT050204M	45°	0.06 - 0.10 - 0.14	0.15 - **0.25** - 0.35	0.11 - **0.19** - 0.26	0.10 - **0.17** - 0.23	0.09 - **0.15** - 0.21
SPMT060304M	45°	0.07 - 0.13 - 0.18	0.18 - **0.32** - 0.45	0.13 - **0.24** - 0.34	0.11 - **0.20** - 0.29	0.10 - **0.19** - 0.27
SPMT090308M	45°	0.08 - 0.14 - 0.20	0.20 - **0.35** - 0.50	0.15 - **0.26** - 0.37	0.13 - **0.23** - 0.32	0.12 - **0.21** - 0.30

Recommended starting feed per tooth (fz) is in bold

Recommended Feed per Tooth (mm/tooth)

BevelMill V2

INSERT		MAX. CHIP THICKNESS hex (mm)	FEED PER TOOTH fz (mm/tooth)			
DESCRIPTION	KAPR (°)		CUTTER ENGAGEMENT (Radial immersion)			
			Ae/DC = 10%	Ae/DC = 20%	Ae/DC = 30%	Ae/DC ≥ 40%
SPMT150512	35°	0.08 - 0.14 - 0.20	0.23 - **0.41** - 0.59	0.18 - **0.31** - 0.44	0.15 - **0.27** - 0.38	0.14 - **0.25** - 0.36
	40°	0.08 - 0.14 - 0.20	0.21 - **0.37** - 0.52	0.16 - **0.28** - 0.39	0.14 - **0.24** - 0.34	0.13 - **0.23** - 0.32
	45°	0.08 - 0.14 - 0.20	0.19 - **0.34** - 0.48	0.14 - **0.25** - 0.36	0.12 - **0.22** - 0.31	0.11 - **0.20** - 0.29
	50°	0.08 - 0.14 - 0.20	0.18 - **0.31** - 0.44	0.13 - **0.23** - 0.33	0.11 - **0.20** - 0.29	0.10 - **0.19** - 0.27
	55°	0.08 - 0.14 - 0.20	0.16 - **0.29** - 0.41	0.12 - **0.22** - 0.31	0.11 - **0.19** - 0.27	0.10 - **0.18** - 0.25
	60°	0.08 - 0.14 - 0.20	0.15 - **0.27** - 0.39	0.12 - **0.21** - 0.29	0.10 - **0.18** - 0.25	0.09 - **0.17** - 0.24
	65°	0.08 - 0.14 - 0.20	0.14 - **0.26** - 0.37	0.11 - **0.20** - 0.28	0.10 - **0.17** - 0.24	0.09 - **0.16** - 0.23
	70°	0.08 - 0.14 - 0.20	0.14 - **0.25** - 0.36	0.11 - **0.19** - 0.27	0.09 - **0.16** - 0.23	0.09 - **0.16** - 0.22
	75°	0.08 - 0.14 - 0.20	0.14 - **0.25** - 0.35	0.10 - **0.18** - 0.26	0.09 - **0.16** - 0.23	0.08 - **0.15** - 0.21

Recommended starting feed per tooth (fz) is in bold

ClassicMill

INSERT		MAX. CHIP THICKNESS hex (mm)	FEED PER TOOTH fz (mm/tooth)			
DESCRIPTION	KAPR (°)		CUTTER ENGAGEMENT (Radial immersion)			
			Ae/DC = 10%	Ae/DC = 20%	Ae/DC = 30%	Ae/DC ≥ 40%
TP*N1603	90°	0.08 - 0.12 - 0.15	0.13 - **0.19** - 0.25	0.10 - **0.15** - 0.19	0.09 - **0.13** - 0.16	0.08 - **0.12** - 0.15
TP*N2204	90°	0.08 - 0.14 - 0.19	0.13 - **0.23** - 0.32	0.10 - **0.17** - 0.24	0.09 - **0.15** - 0.21	0.08 - **0.14** - 0.19
SNUN1204*	88°	0.08 - 0.15 - 0.22	0.13 - **0.25** - 0.37	0.10 - **0.19** - 0.28	0.09 - **0.17** - 0.24	0.08 - **0.15** - 0.22
SEKN1203AFSN	45°	0.08 - 0.14 - 0.20	0.19 - **0.34** - 0.48	0.14 - **0.25** - 0.36	0.12 - **0.22** - 0.31	0.12 - **0.21** - 0.29
SEKN1504AFSN	45°	0.08 - 0.15 - 0.22	0.19 - **0.36** - 0.52	0.14 - **0.27** - 0.39	0.12 - **0.23** - 0.34	0.12 - **0.22** - 0.32
SP*N1203*	75°	0.08 - 0.14 - 0.20	0.14 - **0.25** - 0.35	0.10 - **0.18** - 0.26	0.09 - **0.16** - 0.23	0.08 - **0.15** - 0.21

Recommended starting feed per tooth (fz) is in bold

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