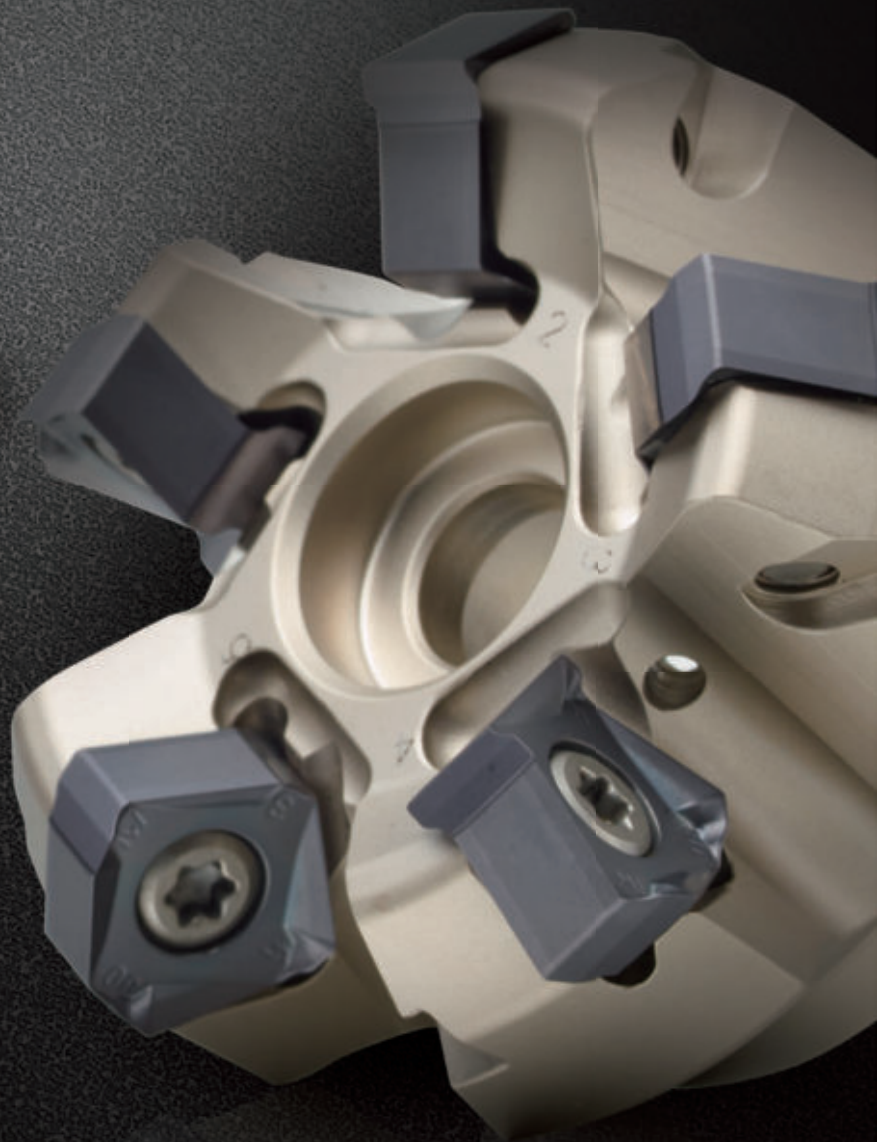
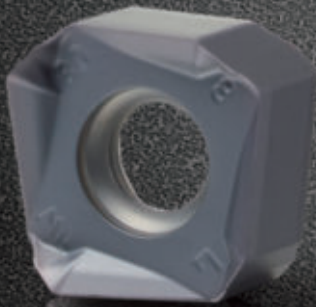
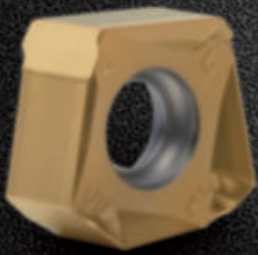


MILLING

Milling tools that provide the best quality and improve productivity for every customer needs.



E

Insert

E02	Milling Insert Code System (ISO)
E04	Milling Inserts
E34	KORLOY Cutters
E42	KORLOY Shanks
E45	KORLOY Modular Adaptors

Face Milling Cutters

E47	Mill-max/Mill-max Plus (E48, E54)
E57	Technical Information for Mill-max Heavy
E58	Mill-max Heavy
E59	Turbo Mill
E62	Double Mill
E64	Technical Information for Power Buster
E68	Power Buster
E71	Technical Information for Rich Mill
E99	Rich Mill
E147	Technical Information for Aero Mill/Aero Mill-Plus/Aero Mill-Mini
E151	Aero Mill
E152	Aero Mill-Plus
E154	Aero Mill-Mini
E156	PCD face cutter

Cutters for Molds

E157	Technical Information for Alpha Mill
E158	Technical Information for Alpha Mill Nick
E164	Alpha Mill
E193	Technical Information for Alpha Mill-X
E197	Alpha Mill-X
E201	Technical Information for Future Mill
E211	Technical Information for Future Mill P-Positive
E216	Future Mill
E242	Future Mill P-Positive
E254	Technical Information for Triple Mill
E258	Triple Mill

Cutters for Molds

E262	Technical Information for HFMD
E267	HFMD
E277	Technical Information for HFM
E281	HFM
E284	Technical Information for HRMDouble
E289	HRMDouble
E300	HRM
E307	Tank Mill
E308	Technical Information for TP2P
E311	TP2P
E317	Technical Information for Laser Mill/GBE/BRE
E326	Laser Mill
E331	BFE
E332	GBE
E335	BRE
E337	Technical Information for HAVE
E339	HAVE (Multi-edge, Single-edge)
E341	Technical Information for BT/HSK Tooling System
E342	BT Tooling System (Alpha Mill)
E347	BT Tooling System (Mono-Tool)
E353	HSK Tooling System (Alpha Mill)
E358	HSK Tooling System (Mono-Tool)
E363	HSK Tooling System (Pro-V Mill)
E364	O-ring Cutter
E366	Chamfer Tool (Multi-functional, Solid)
E374	T-Cutter (TFE)

Milling Cutter for Aluminum

E375	Technical Information for Pro-A Mill/Pro-X Mill/Pro-L Mill/Pro-XL Mill/Pro-V Mill
E385	Pro-A Mill
E388	Pro-X Mill
E394	Pro-L Mill
E398	Pro-XL Mill
E399	Pro-V Mill
E401	Modular Adaptor (MAT/BT/HSK)

Side Milling Cutters

E405	Technical Information for Side Milling Cutters
E407	Side Milling Cutters
E411	Side Cutter
E414	Wind Mill

Milling Cutter for Cast iron at high feed

E418	Technical information for High feed Cutter
E420	Technical information for Cube Mill
E421	Technical information for Couple Mill
E423	Technical information for Shave Mill
E425	Technical information for Shave Mill Ultra

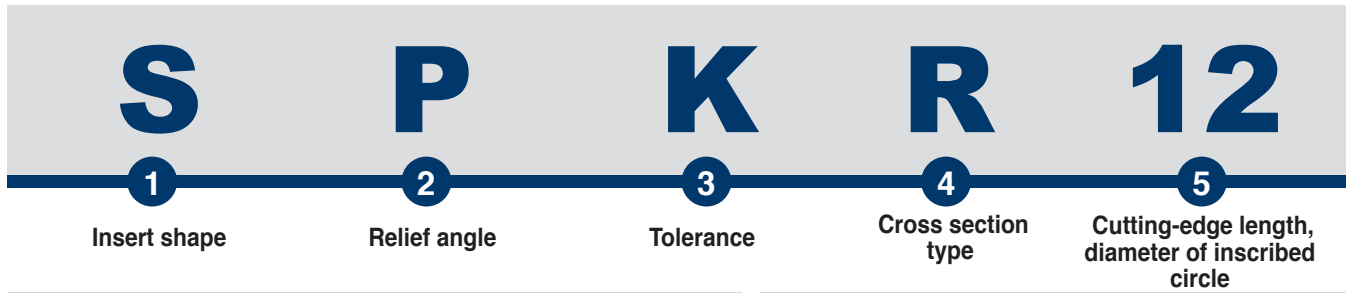
Detail Information of Milling Cutter and Arbor

E426	Actual Designation of Milling Cutter and Arbor
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Gear Tools

E429	Technical information for Gear Cutter Tools
E430	Gear Cutter Table
E431	Gear Cutter
E439	Gear Cutter Order Form
E440	Indexable HOB
E441	Indexable HOB Cutter Order Form

E Milling Insert Code System (ISO)



1 Insert shape

S **P** **K** **R** 12 03 ^{ED}₀₈ **S** **R** - **MX**

A C D H L O
R S T V W

2 Relief angle

S **P** **K** **R** 12 03 ^{ED}₀₈ **S** **R** - **MX**

A B C D E
F G N P

3 Tolerance

S **P** **K** **R** 12 03 ^{ED}₀₈ **S** **R** - **MX**

d: Inscribed circle
t: Thickness
m: Refer to figure

■ Tolerance on C, E, H, M, O, P, R, S, T, W Insert Shape (exceptional case)

Class	d	m	t	Tolerance on d		Tolerance on m	
				J, K, L, M, N	U	M, N	U
A	±0.025	±0.005	±0.025	6.35	±0.05 ±0.08	±0.08	±0.13
C	±0.025	±0.013	±0.025	9.525	±0.05 ±0.08	±0.08	±0.13
H	±0.013	±0.013	±0.025	12.7	±0.08 ±0.13	±0.13	±0.20
E	±0.025	±0.025	±0.025	15.875	±0.10 ±0.18	±0.15	±0.27
G	±0.025	±0.025	±0.13	19.05	±0.10 ±0.18	±0.15	±0.27
J	±0.05~±0.15	±0.005	±0.025	25.4	±0.13 ±0.25	±0.18	±0.38
K	±0.05~±0.15	±0.013	±0.025	Tolerance on D Insert Shape (exceptional case)			
L	±0.05~±0.15	±0.025	±0.025	d	Tolerance on d	Tolerance on m	
M	±0.05~±0.15	±0.08~±0.20	±0.13	6.35	±0.05	±0.11	
U	±0.08~±0.25	±0.13~±0.38	±0.13	9.525	±0.05	±0.11	
				12.7	±0.08	±0.15	
				15.875	±0.10	±0.18	
				19.05	±0.10	±0.18	

4 Cross section type

S **P** **K** **R** 12 03 ^{ED}₀₈ **S** **R** - **MX**

A B C F
G H J M
N Q R T
U W X

C'Sink 70°~90° C'Sink 70°~90°
C'Sink 70°~90° C'Sink 70°~90°
C'Sink 40°~60° C'Sink 40°~60°
C'Sink 40°~60° C'Sink 40°~60°
Special type

5 Cutting-edge length, diameter of inscribed circle

S **P** **K** **R** 12 03 ^{ED}₀₈ **S** **R** - **MX**

■ Metric system * Decimal integer constant

■ Inch system

· Use 1/32" unit for a insert having smaller I.C under 1/4"
· Use 1/8" unit for a insert having larger I.C over 1/4"

■ In case of rectangular and rhombic insert indicate cutting-edge length instead of inscribed circle.

■ Cross over chart for "Metric" and "Inch" system

	06	09	11	16	22	27	33	44
Inscribed circle	5/32"	7/32"	1/4"	3/8"	1/2"	5/8"	3/4"	1"
Inch system	5	7	2 (8)	3	4	5	6	8



03
**ED
08**
S
R - MX
6

Height of cutting-edge

7

Nose radius
(Nose R)

8

Edge preparation

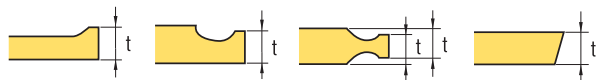
9

Hand

10

Chip breaker for milling

6 Height of cutting-edge

S P K R 12 03 ED 08 S R - MX


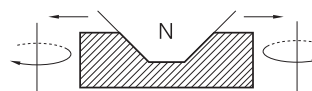
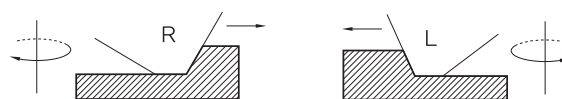
Symbol		Height of cutting-edge (t)	
Metric	Inch	Metric	Inch
01	1 (2)	1.59	1/16
T0	1.125	1.79	9/128
T1	1.2	1.98	5/64
02	1.5 (3)	2.38	3/32
T2	1.75	2.78	7/64
03	2	3.18	1/8
T3	2.5	3.97	5/32
04	3	4.76	3/16
05	3.5	5.56	7/32
06	4	6.35	1/4
07	5	7.94	5/16
09	6	9.52	3/8
11	7	11.11	7/16
12	8 (16)	12.70	1/2

() Symbol for small size insert

8 Edge preparation

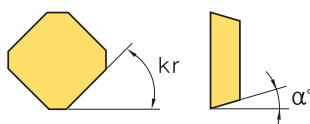
S P K R 12 03 ED 08 S R - MX

9 Hand

S P K R 12 03 ED 08 S R - MX

7 Nose radius (Nose R)

S P K R 12 03 ED 08 S R - MX


Symbol		r		Symbol		r	
Metric	Inch	Metric	Inch	Metric	Inch	Metric	Inch
00	0	0.0		12	3	1.2	3/64
02		0.2		15		1.5	
04	1	0.4	1/64	16	4	1.6	4/64
05		0.5		24	6	2.4	6/64
08	2	0.8	2/64	32	8	3.2	8/64
10		1.0		40		4.0	

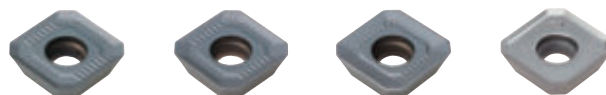


Parallel Land		Relief Angle	
kr		α°	
A - 45°		A - 3°	F - 25°
D - 60°		B - 5°	G - 30°
E - 75°		C - 7°	N - 0°
F - 85°		D - 15°	P - 11°
P - 90°		E - 20°	
Z - Special			

10 Chip breaker for milling

S P K R 12 03 ED 08 S R - MX


MA MF MM MX

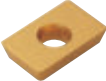
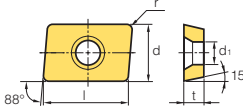
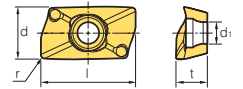
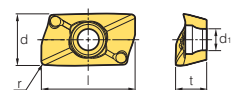
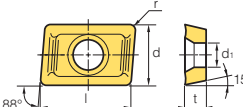
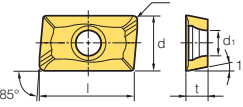
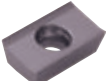
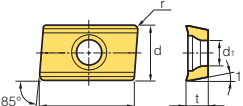
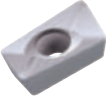
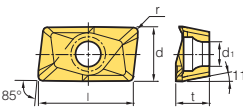


MF MM MR MA



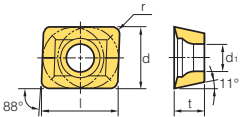
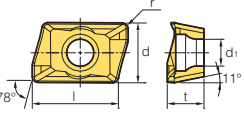
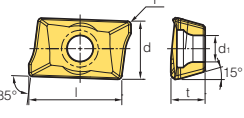
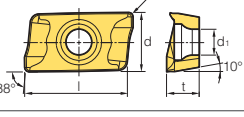
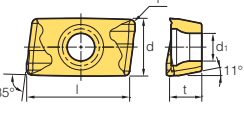
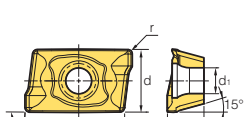
MA MF MM ML

[illegible]

Inserts	Designation	Cermet	Coated								Uncoated	Dimensions (mm)					Geometries	Available tools			
		CN2500 CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	H01 H05	l			d	t	r
	150308R														11.7	6.424	3.819	0.4	2.8		-
	150308SR														14.5	7.813	4.824	0.8	3.4		
	150308TR		●													19.665	10.843	6.529	0.8		
 <i>new</i>	10T304PEER-ML				●			●	●		●	●	●		11.7	6.424	3.819	0.4	2.8		E197~ E200
	120408PESR-ML				●			●	●		●	●	●		14.5	7.813	4.824	0.8	3.4		
	170608PESR-ML					●			●	●		●	●	●		19.665	10.843	6.529	0.8		
 <i>new</i>	10T304PESR-MM				●			●	●		●	●	●		11.7	6.424	3.819	0.4	2.8		E197~ E200
	10T308PESR-MM											●	●		11.7	6.424	3.819	0.8	2.8		
	10T312PESR-MM												●		11.7	6.424	3.819	1.2	2.8		
	120408PESR-MM				●			●	●		●	●	●		14.5	7.813	4.824	0.8	3.4		
	120412PESR-MM							●	●		●	●	●		14.5	7.813	4.824	1.2	3.4		
	120416PESR-MM							●	●		●	●	●		14.5	7.813	4.824	1.6	3.4		
	170604PESR-MM							●			●				19.665	10.843	6.529	0.4	4.5		
	170608PESR-MM					●			●	●		●	●		19.665	10.843	6.529	0.8	4.5		
	170616PESR-MM											●	●		19.665	10.843	6.529	1.6	4.5		
170620PESR-MM												●	●	19.665	10.843	6.529	2.0	4.5			
	150308R														15.0	9.525	3.18	0.8	4.5		E307
	150308SR														15.0	9.525	3.18	0.8	4.5		
	150308TR														15.0	9.525	3.18	0.8	4.5		
	1604PDSR			●				●	●						16.4	9.525	4.76	0.8	4.4		E168 E180
	1604PDFR-MA												●	●	16.4	9.525	4.76	0.2	4.4		E168 E180
	160416FR-MA												●		16.4	9.525	4.76	1.6	4.4		
	1604PDFR-MA2												●		16.5	9.56	5.67	0.8	4.5		E158 E170
	160416FR-MA2														16.5	9.56	5.67	1.6	4.5		

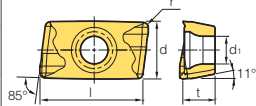
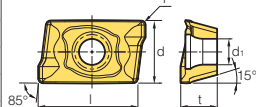
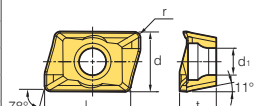
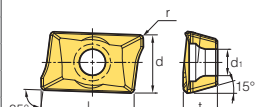
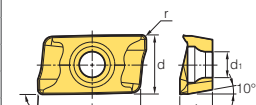
● : Stock item

[illegible]

Inserts	Designation	Cermet	Coated								Uncoated		Dimensions (mm)					Geometries	Available tools			
		CN2500 CN30	NC5330	NCM535	NCM545	PC2505	PC2510	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	G10	H01	l	d			t	r	d _i
APLT 	070304R															7.5	6.35	3.18	0.4	2.8		E305
APMT-MA 	0602PDRF-MA												●		6	4.24	2.6	0.4	2.0		E164	
	060208PDRF-MA														6	4.24	2.6	0.8	2.0		E175	
																					E185	
																					E188	
																					E190	
	0903PDRF-MA													●	9.4	6.21	3.6	0.4	2.8		E165	
	090308PDRF-MA														9.4	6.21	3.6	0.8	2.8		E176	
																					E177	
																					E185	
																					E191	
	11T3PDRF-MA													●	11.2	6.467	3.6	0.5	2.9		E166	
	11T308PDRF-MA														11.2	6.467	3.6	0.8	2.9		E172	
																					E178	
																					E186	
																					E189	
																					E192	
		160404PDRF-MA														16.4	9.41	5.76	0.4	4.5		E167
		1604PDRF-MA												●	16.4	9.41	5.76	0.8	4.5	E173		
																				E179		
	180604PDRF-MA												●	17.4	10.98	6.35	0.4	4.5		E169		
	1806PDRF-MA												●	17.4	10.98	6.35	0.8	4.5		E174		
	180612PDRF-MA												●	17.4	10.98	6.35	1.2	4.5	E181			
	180616PDRF-MA												●	17.4	10.98	6.35	1.6	4.5	E182			
	180620PDRF-MA												●	17.4	10.98	6.35	2.0	4.5	E187			
	180624PDRF-MA												●	17.4	10.98	6.35	2.4	4.5				
	180630R-MA												●	17.4	10.98	6.35	3.0	4.5				
APMT-MF 	11T3PDSR-MF		●					● ●				● ●			11.2	6.467						

● : Stock item

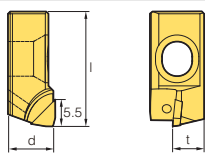
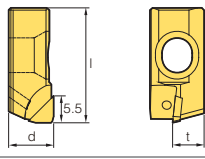
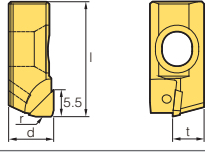
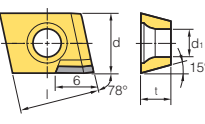
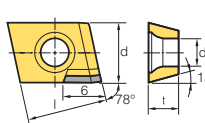
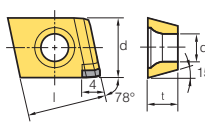
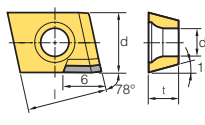
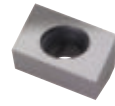
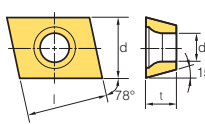
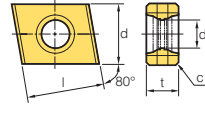
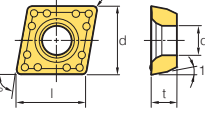
[illegible]

Inserts	Designation	Cermet		Coated										PCD		Dimensions (mm)					Geometries	Available tools		
		CN2500	CN30	NC5330	NCM325	NCM535	PC2505	PC2510	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	DP150	DP200	l	d	t			r	d ₁
APMT-ML 	160404PDER-ML												●	●			16.4	9.41	5.76	0.4	4.5		E167	
	1604PDER-ML												●	●			16.4	9.41	5.76	0.8	4.5		E173	
													●	●									E179	
	180604PDER-ML													●	●			17.4	10.98	6.35	0.4	4.5		E169
	1806PDER-ML													●	●			17.4	10.98	6.35	0.8	4.5		E174
	180612PDER-ML													●	●			17.4	10.98	6.35	1.2	4.5		E181
	180616PDER-ML													●				17.4	10.98	6.35	1.6	4.5		E182
	180620PDER-ML													●	●			17.4	10.98	6.35	2.0	4.5		E187
180624PDER-ML													●	●			17.4	10.98	6.35	2.4	4.5			
180630R-ML													●	●			17.4	10.98	6.35	3.0	4.5			
APMT-MM 	060202PDSR-MM			●					●				●	●			6	4.24	2.6	0.2	2.0		E164, 170	
	0602PDSR-MM			●			●	●		●	●	●	●	●			6	4.24	2.6	0.4	2.0		E175, 183	
	060208PDSR-MM			●					●				●	●			6	4.24	2.6	0.8	2.0		E185, 188	
	060212R-MM			●									●	●			6	4.24	2.6	1.2	2.0		E190	
	060216R-MM *													●	●			6	4.24	2.6	1.6	2.0		
	0903PDSR-MM			●			●	●		●	●			●	●			9.4	6.21	3.6	0.4	2.8		E165
	090308PDSR-MM			●					●					●	●			9.4	6.21	3.6	0.8	2.8		E176
	090312R-MM								●					●	●			9.4	6.21	3.6	1.2	2.8		E177
	090316R-MM			●					●					●	●			9.4	6.21	3.6	1.6	2.8		E185
	090320R-MM								●					●	●			9.2	6.21	3.6	2.0	2.8	E191	
	090332R-MM *													●	●			9.2	6.21	3.6	3.2	2.8		
	11T3PDSR-MM			●	●	●	●	●		●	●	●	●	●	●			11.2	6.467	3.6	0.5	2.85		E166, 170
	11T308PDSR-MM			●					●		●	●	●	●	●			11.2	6.467	3.6	0.8	2.85		E172, 178
	11T312PDSR-MM			●					●		●			●	●			11.2	6.467	3.6	1.2	2.85		E183, 186
	11T316R-MM			●					●					●	●			11.0	6.467	3.6	1.6	2.85		E189, 192

● : Stock item

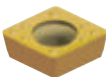
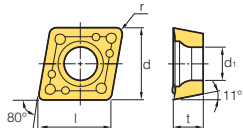
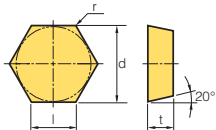
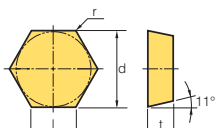
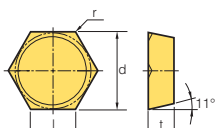
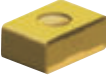
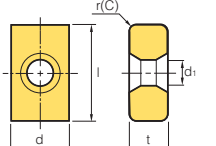
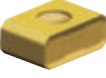
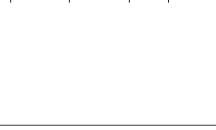
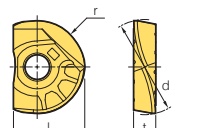
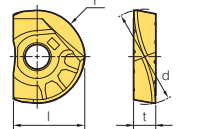


Workpiece		P M K N S H	Machining types															
Steel		P																
Stainless steel		M																
Cast iron		K																
Non-ferrous metal		N																
Heat resistant alloy, Titanium alloy		S																
Hardened steel		H																

Inserts	Designation	Cermet		Coated								Uncoated	PCD	Dimensions (mm)					Geometries	Available tools			
		CN2500 CN30	NC5330	NCM535 NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300			PC5400	l	d	t	r			d ₁		
 BAMPR-XAF	BAMPR-XAF																25.5	10.5	7	-	-		E152 E153
 BAMPR-XAW	BAMPR-XAW																25.5	10	7	-	-		E152 E153
 BAMPR-XAWR	BAMPR-XAWR																25.5	10	7	-	-		E152 E153
 CDEW-NAF strengthened Edge	1204R-NAF																12.7	9.525	4.76	-	4.4		E151
	1204L-NAF																12.7	9.525	4.76	-	4.4		
 CDEW-NAW Strengthened Edge Wiper Insert	1204R-NAW																12.7	9.525	4.76	-	4.4		E151
	1204L-NAW																12.7	9.525	4.76	-	4.4		
 CDEW-XAW Sharp Edge Wiper Insert	1204R-XAW																12.7	9.525	4.76	-	4.4		E151
	1204L-XAW																12.7	9.525	4.76	-	4.4		
 CDEW-XAF Sharp Edge	1204R-XAF																12.7	9.525	4.76	-	4.4		E151
	1204L-XAF																12.7	9.525	4.76	-	4.4		
 CDEW-XCF Sharp Edge	1204R-XCF																12.7	9.525	4.76	-	4.4		E136
	1204L-XCF																12.7	9.525	4.76	-	4.4		
 CNHQ	1005-C0.5																10	10	5.4	-	4.7		E305 E306
	1305-C0.5																12.7	10	5.4	-	4.7		
	1606-C0.5																	16	12	6.4	-		
 CPMH	120408-MM																12.9	12.7	4.76	0.8	5.5		E372

● : Stock item

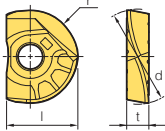
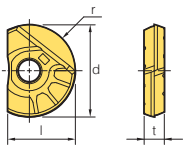
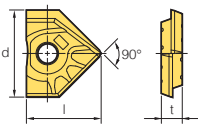
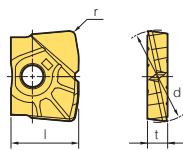
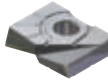
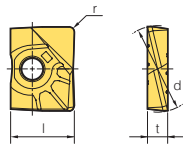
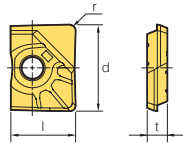
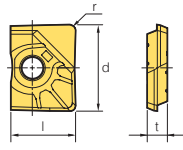
[illegible]

Inserts	Designation	Cermet		Coated										Uncoated		Dimensions (mm)					Geometries	Available tools
		CN2500 CN30	NCM535	NCM545	PC2505	PC2005	PC2010	PC2015	PC210F	PC3700	PC6510	PC9530	PC9540	ST30A H01	l	d	t	r	d _i			
 CPMT	060204-MM								●						6.4	6.35	2.38	0.4	2.75		E372	
	080308-MM								●					8.1	7.938	3.18	0.8	3.40				
	09T308-MM									●				9.7	9.525	3.97	0.8	4.4				
 HECN	090408FN													9.0	15.875	4.76	0.8	-		E417		
	090408SN													9.0	15.875	4.76	0.8	-				
	090408TN													9.0	15.875	4.76	0.8	-				
	110412FN													11.0	19.05	4.76	1.2	-				
	110412TN													11.0	19.05	4.76	1.2	-				
 HPEN	090408FN													9.0	15.875	4.76	0.8	-		E417		
	090408SN													9.0	15.875	4.76	0.8	-				
	090408EN													9.0	15.875	4.76	0.8	-				
	110412FN													11.0	19.05	4.76	1.2	-				
 HPEN-WC	090408-WC													9.0	15.875	4.76	0.8	-		E417		
	110412-WC													11.0	19.05	4.76	1.2	-				
 KEL-MF	150608-MF													15.88	15.23	6.35	0.8	-		E429		
	150608-ML													15.88	15.23	6.35	0.8	-				
 KEL-QNN	1506QNN-MF													15.88	15.23	6.35	0.8	-		-		
	1506QNN-ML													15.88	15.23	6.35	0.8	-				
 KEL-ANN	1506ANN-MF													15.88	15.23	6.35	0.8	-		-		
	1506ANN-ML													15.88	15.23	6.35	0.8	-				
 LBH	080								●					7.0	8	2.4	4.0	-		E325~ E328		
	100								●					8.5	10	2.6	5.0	-				
	120								●					10.0	12	3.0	6.0	-				
	160								●					12.0	16	4.0	8.0	-				
	200								●					15.0	20	5.0	10.0	-				
	250								●					18.5	25	6.0	12.5	-				
	300								●					22.5	30	7.0	15.0	-				
	320								●					23.5	32	7.0	16.0	-				
	330													24.0	33	7.0	16.5	-				
 LBH-KF	080-KF								●					7.0	8	2.4	4.0	-		E324 E325		
	100-KF								●					8.5	10	2.6	5.0	-				
	120-KF								●					10.0	12	3.0	6.0	-				
	130-KF								●					20.5	13	3.0	6.5	-				
	160-KF								●					12.0	16	4.0	8.0	-				
	170-KF								●					12.5	17	4.0	8.5	-				
	200-KF								●					15.0	20	5.0	10.0	-				
	210-KF								●					15.5	21	5.0	10.5	-				
	250-KF								●					18.5	25	6.0	12.5	-				
	300-KF								●					22.5	30	7.0	15.0	-				
	320-KF													23.5	32	7.0	16.0	-				
	330-KF													24.0	33	7.0	16.5	-				

● : Stock item



[illegible]

Inserts	Designation	Cermet		Coated								Uncoated	Dimensions (mm)					Geometries	Available tools			
		CN2500 CN30	NC5330	NCM535 NCM545	PC2505	PC2010	PC210F	PC3700	PC6510	PC9530	PC9540	PC5300 PC5400	ST30A H01	l	d	t	r			d ₁		
 LBH-KH	080-KH					●								7.0	8	2.4	4.0	-		E324 E325		
	100-KH				●	●								8.5	10	2.6	5.0	-				
	120-KH				●	●								10.0	12	3.0	6.0	-				
	130-KH				●	●								20.5	13	3.0	6.5	-				
	160-KH				●	●								12.0	16	4.0	8.0	-				
	170-KH				●	●								12.5	17	4.0	8.5	-				
	200-KH				●	●								15.0	20	5.0	10.0	-				
	210-KH				●	●								15.5	21	5.0	10.5	-				
	250-KH				●	●								18.5	25	6.0	12.5	-				
	260-KH				●	●								19.0	26	6.0	13.0	-				
	300-KH				●	●								22.5	30	7.0	15.0	-				
	320-KH					●								23.5	32	7.0	16.0	-				
	330-KH													24.0	33	7.0	16.5	-				
 LBS	080													7.0	8	2.4	4.0	-		E325~ E328		
	090													7.5	9	2.4	4.5	-				
	100													8.5	10	2.6	5.0	-				
	110													9.0	11	2.6	5.5	-				
	120													10.0	12	3.0	6.0	-				
	130													10.5	13	3.0	6.5	-				
	160													12.0	16	4.0	8.0	-				
	170													12.5	17	4.0	8.5	-				
	200													15.0	20	5.0	10.0	-				
	210													15.5	21	5.0	10.5	-				
	250													18.5	25	6.0	12.5	-				
	260													19.0	26	6.0	13.0	-				
	300													22.5	30	7.0	15.0	-				
 LCF	160-D90						●							13.7	16	4.0	-	-		E325~ E328		
	200-D90						●							17.0	20	5.0	-	-				
	250-D90													21.5	25	6.0	-	-				
 LFH	100													8.5	10	2.6	1.0	-		E325~ E328		
	120					●								10.0	12	3.0	1.0	-				
	160					●								12.0	16	4.0	1.5	-				
	200													15.0	20	5.0	1.5	-				
	250													18.5	25	6.0	2.0	-				
	300													22.5	30	7.0	2.0	-				
	320													23.5	32	7.0	2.0	-				
 LRH	100-R05					●								8.5	10	2.6	0.5	-		E325~ E328		
	100-R10					●								8.5	10	2.6	1.0	-				
	100-R20													8.5	10	2.6	2.0	-				
	110-R05													9.0	11	2.6	0.5	-				
	120-R05					●								10.0	12	3.0	0.5	-				
	120-R10					●								10.0	12	3.0	1.0	-				
	120-R20													10.0	12	3.0	2.0	-				
	130-R05					●								10.5	13	3.0	0.5	-				
	130-R10					●								10.5	13	3.0	1.0	-				
	160-R05					●								12.0	16	4.0	0.5	-				
	160-R10					●								12.0	16	4.0	1.0	-				
	160-R20													12.0	16	4.0	2.0	-				
	 LR (Special type)	160-R30					●								12.0	16	4.0	3.0			-	
170-R05						●								12.5	17	4.0	0.5	-				
170-R10						●								12.5	17	4.0	1.0	-				
200-R05						●								15.0	20	5.0	0.5	-				
200-R10						●								15.0	20	5.0	1.0	-				
200-R20						●								15.0	20	5.0	2.0	-				
200-R30						●								15.0	20	5.0	3.0	-				
210-R05						●								15.5	21	5.0	0.5	-				
																			LR type			

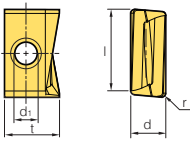
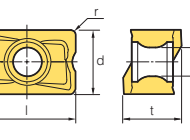
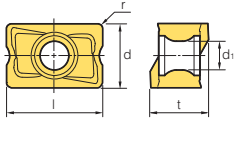
● : Stock item

Workpiece	Steel	P	●	⊕	●	●	●	●	⊕	●					⊕	●	⊕
	Stainless steel	M							●					⊕	⊕	⊕	
	Cast iron	K			⊕	●	●	⊕	⊕							⊕	●
	Non-ferrous metal	N							●								●
	Heat resistant alloy, Titanium alloy	S														⊕	⊕
	Hardened steel	H					●	⊕	⊕							⊕	⊕
	Machining types																
● Continuous cutting																	
⊕ General cutting																	
⊕ Interrupted cutting																	

[illegible]

● : Stock item

Workpiece			Machining types															
Steel	P																	
Stainless steel	M																	
Cast iron	K																	
Non-ferrous metal	N																	
Heat resistant alloy, Titanium alloy	S																	
Hardened steel	H																	

Inserts	Designation	Cermet		Coated								Uncoated	Dimensions (mm)					Geometries	Available tools		
		CN2500 CN30	CN5330	NCM535	NCM545	PC2505	PC2010	PC210F	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A H01	l	d			t	r
LNKT-ML 	080404PNR-ML														8.0	4.2	6.6	0.4	2.8		E309~ E314
	080408PNR-ML														8.0	4.2	6.6	0.8	2.8		
	080412PNR-ML														8.0	4.2	6.6	1.2	2.8		
	080416PNR-ML														8.0	4.2	6.6	1.6	2.8		
	140604PNR-ML														12.7	6.65	10.0	0.4	4.0		
	140608PNR-ML														12.7	6.65	10.0	0.8	4.0		
	140612PNR-ML														12.7	6.65	10.0	1.2	4.0		
	140616PNR-ML														12.7	6.65	10.0	1.6	4.0		
	170704PNR-ML														16.5	7.0	11.0	0.4	4.5		
	170708PNR-ML								●			●	●		16.5	7.0	11.0	0.8	4.5		
	170712PNR-ML														16.5	7.0	11.0	1.2	4.5		
	170716PNR-ML														16.5	7.0	11.0	1.6	4.5		
	170720PNR-ML														16.5	7.0	11.0	2.0	4.5		
LNKT-MM 	080404PNR-MM														8.0	4.2	6.6	0.4	2.8		
	080408PNR-MM														8.0	4.2	6.6	0.8	2.8		
	080412PNR-MM														8.0	4.2	6.6	1.2	2.8		
	080416PNR-MM														8.0	4.2	6.6	1.6	2.8		
	140604PNR-MM														12.7	6.65	10.0	0.8	4.0		
	140608PNR-MM														12.7	6.65	10.0	0.8	4.0		
	140612PNR-MM														12.7	6.65	10.0	1.2	4.0		
	140616PNR-MM														12.7	6.65	10.0	1.6	4.0		
	170704PNR-MM														16.5	7.0	11.0	0.4	4.5		
	170708PNR-MM											●	●		16.5	7.0	11.0	0.8	4.5		
	170712PNR-MM														16.5	7.0	11.0	1.2	4.5		
	170716PNR-MM														16.5	7.0	11.0	1.6	4.5		
	170720PNR-MM														16.5	7.0	11.0	2.0	4.5		
LNX-MA 	100605PNR-MA													●	10.0	6.5	6.5	0.5	3.5		E105 E106 E109 E110 E113~ E117
	151004PNR-MA													●	15.0	10.0	10.0	0.4	4.5		
	151008PNR-MA													●	15.0	10.0	10.0	0.8	4.5		
LNM(E)X-MF 																					

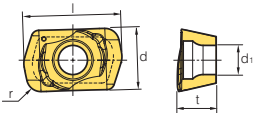
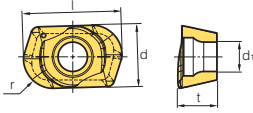
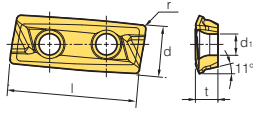
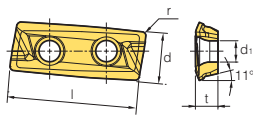
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● : Stock item

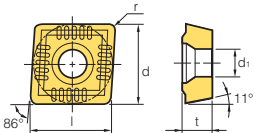
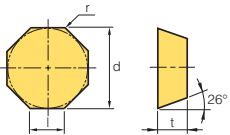
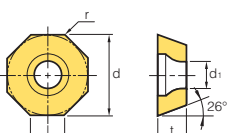
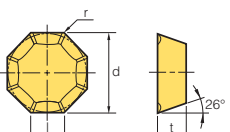
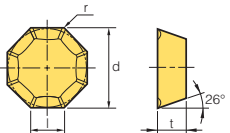
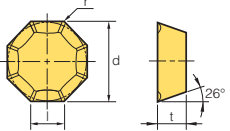
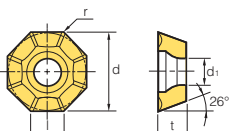
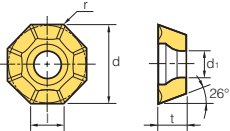


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Inserts	Designation	Cermet	Coated										Uncoated	Dimensions (mm)					Geometries	Available tools	
		CN2500 CN30	NC5330	NCM535	NCM545	PC2505	PC2510	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A H01	l	d	t			r
LPMW 	040210R					●	●					●			6.4	4.2	2.6	1.0	2.0		E281~ E283
	040220R					●	●					●			6.4	4.2	2.6	2.0	2.0		
LXET-MA 	250404PEFR-32-MA														25	10.775	4.76	0.4	4.5		E394~ E397
	2504PEFR-32-MA												●		25	10.775	4.76	0.8	4.5		
	250412PEFR-32-MA														25	10.775	4.76	1.2	4.5		
	250416PEFR-32-MA														25	10.775	4.76	1.6	4.5		
	250404PEFR-40-MA														25	10.618	4.76	0.4	4.5		
	2504PEFR-40-MA														25	10.618	4.76	0.8	4.5		
	250412PEFR-40-MA														25	10.618	4.76	1.2	4.5		
	250416PEFR-40-MA														25	10.618	4.76	1.6	4.5		
	340504PEFR-50-MA													●	34	13.765	5.56	0.4	5.56		
	3405PEFR-50-MA													●	34	13.765	5.56	0.8	5.56		
	340512PEFR-50-MA														34	13.765	5.56	1.2	5.56		
	340516PEFR-50-MA														34	13.765	5.56	1.6	5.56		
	340504PEFR-63-MA														34	13.803	5.56	0.4	5.56		
	3405PEFR-63-MA													●	34	13.803	5.56	0.8	5.56		
	340512PEFR-63-MA														34	13.803	5.56	1.2	5.56		
	340516PEFR-63-MA														34	13.803	5.56	1.6	5.56		
LXET-ML 	250404PEER-32-ML														25	10.775	4.76	0.4	4.5		E394~ E397
	2504PEER-32-ML														25	10.775	4.76	0.8	4.5		
	250412PEER-32-ML														25	10.775	4.76	1.2	4.5		
	250416PEER-32-ML														25	10.775	4.76	1.6	4.5		
	250404PEER-40-ML														25	10.618	4.76	0.4	4.5		
	2504PEER-40-ML														25	10.618	4.76	0.8	4.5		
	250412PEER-40-ML														25	10.618	4.76	1.2	4.5		
	250416PEER-40-ML														25	10.618	4.76	1.6	4.5		
	340504PEER-50-ML														34	13.765	5.56	0.4	5.56		
	3405PEER-50-ML												●		34	13.765	5.56	0.8	5.56		
	340512PEER-50-ML														34	13.765	5.56	1.2	5.56		
	340516PEER-50-ML														34	13.765	5.56	1.6	5.56		
	340504PEER-63-ML														34	13.803	5.56	0.4	5.56		
	3405PEER-63-ML														34	13.803	5.56	0.8	5.56		
	340512PEER-63-ML														34	13.803	5.56	1.2	5.56		
	340516PEER-63-ML														34	13.803	5.56	1.6	5.56		

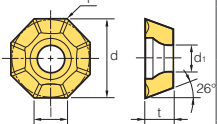
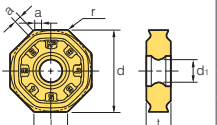
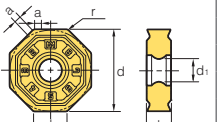
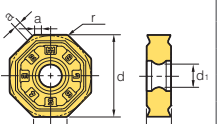
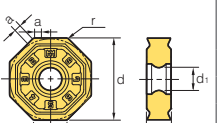
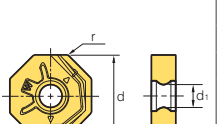
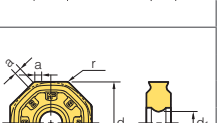
● : Stock item

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Inserts	Designation	Cermet		Coated										Uncoated	Dimensions (mm)					Geometries	Available tools			
		CN2500	CN30	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A	H01	l	d			t	r	d ₁
 MPMT	090308																	9.5	9.525	3.18	0.8	4.5		-
	120408								●								12.7	12.7	4.76	0.8	5.5			
 OFCN	0704SN									●								7.4	18	4.86	0.5	-		E63
	0704FN																	7.4	18	4.86	0.5	-		
	070408SN																	7.4	18	4.86	0.8	-		
	070408FN																	7.4	18	4.86	0.8	-		
	070408TN																	7.4	18	4.86	0.8	-		
 OFCW	05T3SN																	5.2	12.7	3.85	0.5	4.4		E62
	05T3FN																	5.2	12.7	3.85	0.5	4.4		
	05T308FN																	5.2	12.7	3.85	0.8	4.4		
 OFKR-MA	0704FN-MA															●		7.4	18	4.76	0.5	-		E63
	0704EN-MA																	7.4	18	4.76	0.5	-		
 OFKR-MF	0704SN-MF			●	●													7.4	18	4.76	0.5	-		E63
	070408SN-MF																	7.4	18	4.76	0.8	-		
 OFKR-MM	0704SN-MM			●	●					●	●	●			●			7.4	18	4.76	0.5	-		E63
	070408SN-MM			●														7.4	18	4.76	0.8	-		
 OFKT-MA	05T3FN-MA															●		5.2	12.7	3.97	0.5	4.4		E62 E63
	05T3EN-MA																	5.2	12.7	3.97	0.5	4.4		
	0704FN-MA															●		7.4	18	4.76	0.5	5.8		
	0704EN-MA																	7.4	18	4.76	0.5	5.8		
 OFKT-MF	05T3SN-MF									●								5.2	12.7	3.97	0.5	4.4		E62
	05T308SN-MF																	5.2	12.7	3.97	0.8	5.8		

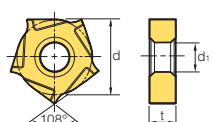
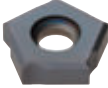
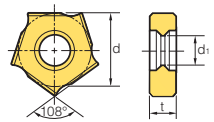
● : Stock item

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Inserts	Designation	Cermet		Coated								Uncoated		Dimensions (mm)								Geometries	Available tools				
		CN2500	CN30	NC5330	NCM325	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A	H01	l	d	t	r			d ₁	a	W	g
OFKT-MM 	05T3SN-MM				●				●	●							5.2	12.7	3.97	0.5	4.4	-	-	-		E62 E63	
	05T308SN-MM								●								5.2	12.7	3.97	0.8	4.4	-	-	-			
	0704SN-MM																	7.4	18	4.76	0.5	5.5	-	-		-	
ONHX-MF 	060608-MF								●		●	●					6.6	16.0	6.0	0.8	5.6	-	-	-		E143 E144	
	080608-MF								●		●	●					8.4	20.2	6.0	0.8	5.6	-	-	-			
	0606ANN-MF									●		●	●					6.6	16.0	6.0	0.8	5.6	1.03	-		-	
	0806ANN-MF									●		●	●					8.4	20.2	6.0	0.8	5.6	1.53	-		-	
ONHX-ML 	060608-ML											●	●				6.6	16.0	6.0	0.8	5.6	-	-	-		E143 E144	
	080608-ML												●	●			8.4	20.2	6.0	0.8	5.6	-	-	-			
ONHX-MM 	060608-MM								●		●	●					6.6	16.0	6.0	0.8	5.6	-	-	-		E143 E144	
	080608-MM								●		●	●					8.4	20.2	6.0	0.8	5.6	-	-	-			
	0606ANN-MM									●		●	●					6.6	16.0	6.0	0.8	5.6	1.03	-		-	
	0806ANN-MM									●		●	●					8.4	20.2	6.0	0.8	5.6	1.53	-		-	
ONHX-MA 	060608-MA													●			6.6	16.0	6.0	0.8	5.6	-	-	-		E143 E144	
	080608-MA													●			8.4	20.2	6.0	0.8	5.6	-	-	-			
ONHX-W 	060608-W								●	●	●						6.5	16.0	6.0	0.8	5.6	-	-	-		E143 E144	
	080608-W								●		●						8.2	20.2	6.0	0.8	5.6	-	-	-			
ONMX-MF 	060608-MF				●				●		●	●					6.6	16.0	6.0	0.8	5.6	-	-	-		E143 E144	
	080608-MF																										

● : Stock item

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Inserts	Designation	Cermet		Coated							Uncoated		Dimensions (mm)						Geometries	Available tools					
		CN2500	CN30	NC5330	NCM535	NCM545	PC2505	PC2010	PC210F	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A	H01	l	d	t	r	d ₁	Cutter width		
 PNEJ	1223N								●									-	12.7	2.3	-	5.0	4.0		E411
	1225N									●								-	12.7	2.5	-	5.0	4.5		E412
	1230N																	-	12.7	3.0	-	5.0	5.0		
	1235N									●				●				-	12.7	3.5	-	5.0	6.0		
	1240N								●				●					-	12.7	4.0	-	5.0	7.0		
	1245N								●				●					-	12.7	4.5	-	5.0	8.0		
	1250N																	-	12.7	5.0	-	5.0	9.0		
	1255N								●									-	12.7	5.5	-	5.0	10.0		
	1260N																	-	12.7	6.0	-	5.0	11.0		
	1265N												●					-	12.7	6.5	-	5.0	12.0		
	1270N																	-	12.7	7.0	-	5.0	13.0		
	1275N												●					-	12.7	7.5	-	5.0	14.0		
	1285N																	-	12.7	8.5	-	5.0	16.0		
 PNEJ-C	1223N-C03																	-	12.7	2.3	-	5.0	4.0	 * C03: Chamfer 0.3 mm C05: Chamfer 0.5 mm	E411
	1230N-C03																	-	12.7	3.0	-	5.0	5.0		E412
	1235N-C03																	-	12.7	3.5	-	5.0	6.0		
	1240N-C05																	-	12.7	4.0	-	5.0	7.0		
	1245N-C05																	-	12.7	4.5	-	5.0	8.0		
	1250N-C05																	-	12.7	5.0	-	5.0	9.0		
	1255N-C05																	-	12.7	5.5	-	5.0	10.0		
	1260N-C05																	-	12.7	6.0	-	5.0	11.0		
	1265N-C05																	-	12.7	6.5	-	5.0	12.0		
	1270N-C05																	-	12.7	7.0	-	5.0	13.0		
	1275N-C05																								

● : Stock item



Workpiece	Steel	P																																								
	Stainless steel	M																																								
	Cast iron	K																																								
	Non-ferrous metal	N																																								
	Heat resistant alloy, Titanium alloy	S																																								
	Hardened steel	H																																								

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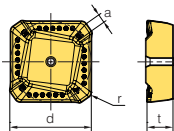
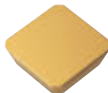
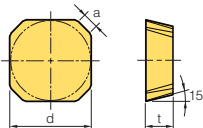
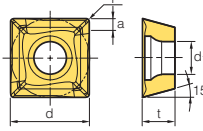
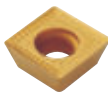
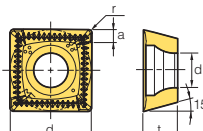
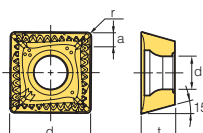
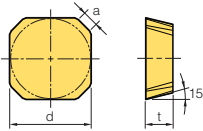
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Workpiece	Steel	P												
	Stainless steel	M												
	Cast iron	K												
	Non-ferrous metal	N												
	Heat resistant alloy, Titanium alloy	S												
	Hardened steel	H												

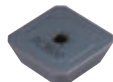
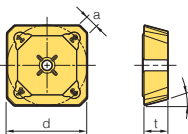
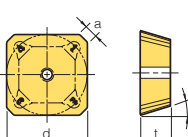
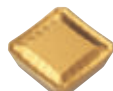
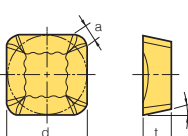
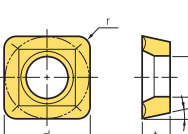
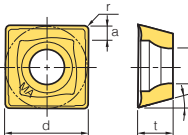
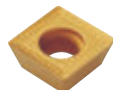
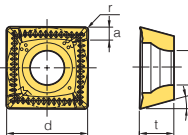
Machining types

- Continuous cutting
- General cutting
- Interrupted cutting

Inserts	Designation	Cermet	Coated							Uncoated			Dimensions (mm)						Geometries	Available tools
		CN2500 CN30	NCM325 NCM335	NCM535 NCM545	PC3700	PC6510 PC9530	PC9540 PC5300	PD1010 PD2000	ST30A G10	H01	H05	l	d	t	r	d _i	a			
SCKN 	220715DDSR-MM			●	●		●				-	22.0	7.0	1.5	-	2.5		E58		
	280920DDSR-MM										-	28.0	9.0	2.0	-	3.0				
SDCN 	42M							●			-	12.7	3.18	-	-	1.5	 ►Cutting-edge geometry - G: Light Side, Sharpe Edge - S20: STS - RH: Strengthened edge ►Sub-cutting-edge geometry - M: AEFN - MT: AETN	E47 E48 E59 E60		
	42M-G							●			-	12.7	3.18	-	-	1.5				
	42MT	● ●	●					●			-	12.7	3.18	-	-	1.5				
	42MT-RH										-	12.7	3.18	-	-	1.5				
	42MT-S20					●					-	12.7	3.18	-	-	1.5				
	53M							●			-	15.875	4.76	-	-	1.5				
	53M-G							●			-	15.875	4.76	-	-	1.5				
	53MT	● ●						●			-	15.875	4.76	-	-	1.5				
	53MT-RH										-	15.875	4.76	-	-	1.5				
	53MT-S20					●					-	15.875	4.76	-	-	1.5				
	1203AEEN										-	12.7	3.18	-	-	1.5				
	1203AEEN-RH										-	12.7	3.18	-	-	1.43				
	1203AESN										-	12.7	3.18	-	-	1.5				
	1203AESN-RH										-	12.7	3.18	-	-	1.43				
	1504AEEN										-	15.875	4.76	-	-	1.5				
	1504AEEN-RH					●	●				-	15.875	4.76	-	-	1.43				
	1504AESN										-	15.875	4.76	-	-	1.5				
1504AESN-RH					●					-	15.875	4.76	-	-	1.43					
SDET-MA 	09M402R-MA							●	● ●		-	9.525	3.923	0.2	4.0	1.2		E222~ E227		
	09M404R-MA										-	9.525	3.923	0.4	4.0	1.2				
	09M405R-MA										-	9.525	3.923	0.5	4.0	1.2				
	130504R-MA						●		● ●		-	13.5	5.56	0.4	5.56	2.2				
SDET-MF 	09M405R-MF										-	9.525	4	0.5	4	1.2		E222~ E227		
	130508R-MF										-	13.5	5.56	0.8	5.56	2.2				
SDET-MM 	09M405R-MM										-	9.525	4	0.5	4	1.2		E222~ E227		
	130508R-MM										-	13.5	5.56	0.8	5.56	2.2				
SDKN-CM 	42MT-CM	●									-	12.7	3.18	-	-	1.5		-		

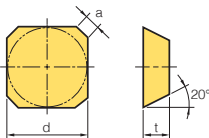
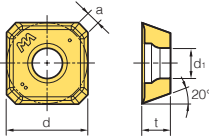
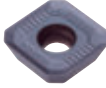
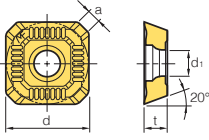
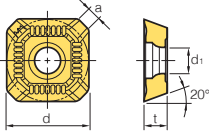
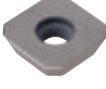
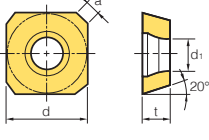
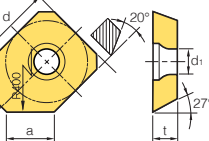
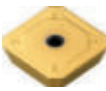
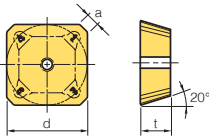
● : Stock item

[illegible]

Inserts	Designation	Cermet		Coated								Uncoated			Dimensions (mm)						Geometries	Available tools			
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A	H01	H05	l	d	t			r	d ₁	a
SDKN-MU 	1203AESN-MU							●									-	12.7	3.18	-	-	-	2.08		E47
	1504AESN-MU							●									-	15.875	4.76	-	-	-	2.10		E48
SDKN-SU 	1203AESN-SU							●				●	●				-	12.7	3.18	-	-	-	2.08		E47
	1504AESN-SU							●				●	●				-	15.875	4.76	-	-	-	2.10		E48
SDKR-MX 	1203AESN-MX																-	12.7	3.18	-	-	-	1.46		E47
	1203AETN-MX																-	12.7	3.18	-	-	-	1.46		E48
	1203AEN-MX				●												-	12.7	3.18	-	-	-	1.46		E53
	1504AESN-MX					●											-	15.875	4.76	-	-	-	1.45		E54
	1504AETN-MX																-	15.875	4.76	-	-	-	1.45		
	1504AEN-MX				●												-	15.875	4.76	-	-	-	1.45		
SDMT-MM 	090308-MM							●				●					-	9.525	3.18	0.8	4.4	-			E307
																									E336
SDXT-MA 	09M405R-MA													●	●		-	9.525	4.0	0.5	4.0	1.2			E222~
	130508R-MA													●	●		-	13.5	5.56	0.8	5.56	2.2			E227
SDXT-MF 	09M403R-MF																-	9.525	4.0	0.3	4.0	1.2			E222~
	09M403L-MF																-	9.525	4.0	0.3	4.0	1.2			E227
	09M404R-MF																-	9.525	4.0	0.4	4.0	1.2			
	09M404L-MF																-	9.525	4.0	0.4	4.0	1.2			
	09M405R-MF				●				●	●	●		●	●			-	9.525	4.0	0.5	4.0	1.2			
	09M405L-MF																-	9.525	4.0	0.5	4.0	1.2			
	130508R-MF				●					●	●		●	●			-	13.5							

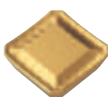
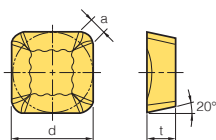
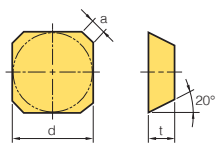
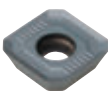
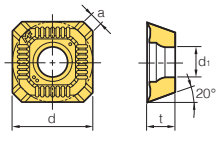
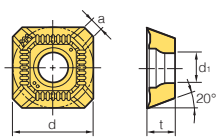
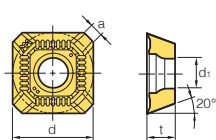
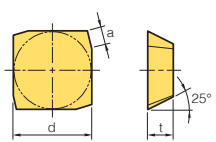
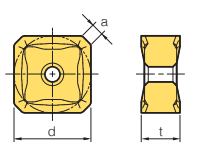
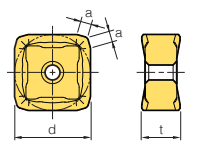
● : Stock item

Workpiece		Machining types															
		● Continuous cutting ⬮ General cutting ✱ Interrupted cutting															
Steel	P		●	●	●	●	✱				●	✱			●		
Stainless steel	M			●	✱			●	✱	✱	✱						
Cast iron	K														●	●	●
Non-ferrous metal	N							●			✱	✱		●		●	●
Heat resistant alloy, Titanium alloy	S																
Hardened steel	H										●	✱					

Inserts	Designation	Cermet		Coated								Uncoated				Dimensions (mm)						Geometries	Available tools		
		CN2500	CN30	NCM325	NCM335	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	PD1010	PD2000	ST30A	G10	H01	H05	l	d	t	r			d _i	a
 SECN	1203AFFN													●	●		-	12.7	3.18	-	-	-	2.36	 ► Shape of Edge - S20: STS - RH: Strengthened edge, STS	E49 E50
	1203AFTN	●	●											●			-	12.7	3.18	-	-	-	2.36		
	1203AFEN																-	12.7	3.18	-	-	-	2.36		
	1203AFSN			●	●												-	12.7	3.18	-	-	-	2.36		
	1203AFEN-RH						●			●							-	12.7	3.18	-	-	-	2.36		
	1203AFSN-RH																-	12.7	3.18	-	-	-	2.36		
	1203AFTN-S20						●										-	12.7	3.18	-	-	-	2.36		
	1504AFFN													●			-	15.875	4.76	-	-	-	2.4		
	1504AFTN		●														-	15.875	4.76	-	-	-	2.4		
	1504AFEN																-	15.875	4.76	-	-	-	2.4		
	1504AFSN																-	15.875	4.76	-	-	-	2.4		
	1504AFEN-RH																-	15.875	4.76	-	-	-	2.4		
	1504AFSN-RH						●										-	15.875	4.76	-	-	-	2.4		
	1504AFTN-S20																-	15.875	4.76	-	-	-	2.4		
 SEET-MA	0903AGFN-MA													●	●		-	9.525	3.18	-	3.4	2.11	 E216~ E221	E216~ E221	
	14M4AGFN-MA										●	●		●	●		-	14.0	4.0	-	4.4	2.64			
 SEET-MF	0903AGSN-MF					●	●		●	●							-	9.525	3.18	-	3.4	2.11	 E216~ E221	E216~ E221	
	14M4AGSN-MF					●	●		●	●							-	14.0	4.0	-	4.4	2.64			
 SEET-MM	0903AGSN-MM			●			●		●	●							-	9.525	3.18	-	3.4	2.11	 E216~ E221	E216~ E221	
	14M4AGSN-MM			●	●	●	●		●	●							-	14.0	4.0	-	4.4	2.64			
 SEEW	0903AGTN																-	9.525	3.18	-	3.4	2.11	 E216~ E221	E216~ E221	
	14M4AGTN		●														-	14.0	4.0	-	4.4	2.64			
 SEEW-W	14M4AGFN-W									●							-	14.0	4.0	-	4.4	8.5	 E217 E219 E221	E217 E219 E221	
	14M4AGSN-W									●							-	14.0	4.0	-	4.4	8.5			
	14M4AGTN-W					●											-	14.0	4.0	-	4.4	8.5			
 SEKN-SU	1203AFSN-SU				●												-	12.7	3.18	-	-	-	1.98	 E49 E50	E49 E50
	1504AFSN-SU				●				●								-	15.875	4.76	-	-	-	2.04		

● : Stock item

[illegible]

Inserts	Designation	Cermet		Coated										Uncoated		Dimensions (mm)					Geometries	Available tools		
		CN2500	CN30	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A	H01	l	d	t			d ₁	a
SEKR-MX 	1203AFSN-MX			●	●							●					-	12.7	3.18	-	2.3		E49 E50	
	1504AFSN-MX			●								●					-	15.875	4.76	-	2.4			
SEMN 	1204AZ																-	12.7	4.76	-	2.0		-	
SEXT-MF 	0903AGSN-MF										●		●	●			-	9.525	3.18	3.4	2.11		E216~ E221	
	14M4AGSN-MF									●		●	●				-	14.0	4.0	4.4	2.64			
SEXT-MM 	0903AGSN-MM									●	●		●	●			-	9.525	3.18	3.4	2.11		E216~ E221	
	14M4AGSN-MM			●						●	●	●	●	●			-	14.0	4.0	4.4	2.64			
SEXT-MR 	0903AGSN-MR																-	9.525	3.18	3.4	2.11		E216~ E221	
	14M4AGSN-MR										●		●				-	14.0	4.0	4.4	2.64			
SFCN 	1203EFR															●	-	12.7	3.18	-	2.5		E51	
SNC(M)F-MF 	SNMF 1206ANN-MF																-	12.7	6.6	-	2.0		E136 E137	
	1507ANN-MF																-	15.875	7.35	-	2.1			
	SNCF 1206ANN-MF																-	12.7	6.6	-	2.0			
	1507ANN-MF										●						-	15.875	7.35	-	2.1			
SNC(M)F-MF 	SNMF 1206ENN-MF									●							-	12.7	6.6	-	1.8		E138 E139	
	1507ENN-MF																-	15.875	7.35	-	1.8			
	SNCF 1206ENN-MF										●						-	12.7	6.6	-	1.8			
	1507ENN-MF										●						-	15.875	7.35	-	1.8			

● : Stock item

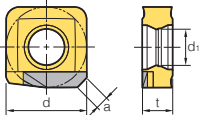
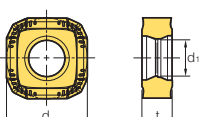
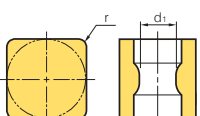
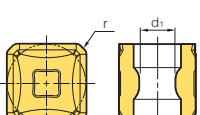
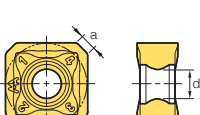
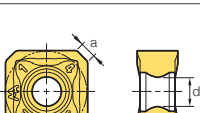
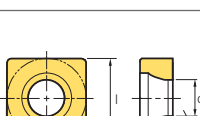


Machining types

- Continuous cutting
- ⊕ General cutting
- ⊞ Interrupted cutting

Technical drawing of a hexagonal nut. The front view (left) shows a hexagonal shape with a central circular hole. The outer diameter is labeled d . The thickness of the nut is labeled t . The side view (right) shows the hexagonal profile with a central hole. The distance from the center of the hole to the outer edge is labeled a .

[illegible]

Inserts	Designation	Cermet		Coated								Uncoated	PCD	Dimensions (mm)						Geometries	Available tools			
		CN2500 CN30	NC5330	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	H01	DP150	DP200	l	d	t			r	d ₁	a
 SNEU-TBW	1204-TBW																-	12.7	4.76	-	5.7	(2.1)		E423
 SNEU-WMF	1204R-WMF																-	12.7	4.76	-	5.7	-		E423
 SNEX	101010 1010ZNN							●									-	10	10	1.0	4.6	-		-
 SNEX-CU1	101010-CU1 1010ZNN-CU1 121212-CU1 1212ZNN-CU1							●									-	10	10	1.0	4.6	-		-
 SNEX-MA	1206ANN-MA 1206ENN-MA 1206QNN-MA 120612-MA							●					●	●	●		-	12.7	6.35	-	4.5	2.36		E126 E127 E130 E134 E135
 SNEX-ML	1206ANN-ML 1206ENN-ML 1206QNN-ML 120612-ML 1507ANN-ML 1507ENN-ML												●	●	●	●	-	12.7	6.35	-	4.5	2.36		E126~ E135
 SNEW	09T3ADFR												●				9.525	9.525	3.97	-	4.4	-		E154 E155
 SNEW-NAF	09T3ADTR-NAF 09T3ADTR-NAW NAW: Wiper insert												●	●			9.525	9.525	3.97	-	4.4	-		E154 E155
 SNEW-XAF	09T3ADTR-XAF 09T3ADTR-XAW XAW: Wiper insert												●	●			9.525	9.525	3.97	-	4.4	-		E154 E155

● : Stock item



[illegible]

Inserts	Designation	Cermet		Coated							PCD	Dimensions (mm)							Geometries	Available tools
		CN2500 CN30	CN330	NCM535	NCM545	PC2010	PC3700	PC6510	PC9530	PC9540		PC5300	PC5400	DP150	DP200	l	d	t		
SNHT-WX 	1102308R-WX									●			-	11	2.30	-	4	-	-	-
	110308R-WX									●			-	11	3.00	-	4	-	-	-
	1203508R-WX									●			-	12.7	3.50	-	5	-	-	-
	120408R-WX									●			-	12.7	4.00	-	5	-	-	-
	1204508R-WX									●			-	12.7	4.54	-	5	-	-	-
	120508R-WX									●			-	12.7	5.00	-	5	-	-	-
	1205408R-WX									●			-	12.7	5.47	-	5	-	-	-
	120608R-WX									●			-	12.7	6.00	-	5	-	-	-
	1206508R-WX									●			-	12.7	6.50	-	5	-	-	-
	120708R-WX									●			-	12.7	7.00	-	5	-	-	-
	1207508R-WX									●			-	12.7	7.5	-	5	-	-	-
	1102308L-WX									●			-	11	2.30	-	4	-	-	-
	110308L-WX									●			-	11	3.00	-	4	-	-	-
	120308L-WX									●			-	12.7	3.25	-	5	-	-	-
	1203508L-WX									●			-	12.7	3.50	-	5	-	-	-
	120408L-WX									●			-	12.7	4.00	-	5	-	-	-
	1204508L-WX									●			-	12.7	4.54	-	5	-	-	-
	120508L-WX									●			-	12.7	5.00	-	5	-	-	-
	1205408L-WX									●			-	12.7	5.47	-	5	-	-	-
	120608L-WX									●			-	12.7	6.00	-	5	-	-	-
1206508L-WX									●			-	12.7	6.50	-	5	-	-	-	
120708L-WX									●			-	12.7	7.00	-	5	-	-	-	
1207508L-WX									●			-	12.7	7.5	-	5	-	-	-	
SNKN 	1204ENN						●						-	12.7	4.76	-	-	1.4	1.0	
	1504ENN												-	15.875	4.76	-	-	1.4	1.0	
SNM(E)X-MF 	SNMX 1206ANN-MF			●			●	●	●	●	●		-	12.7	6.35	-	4.5	2.36	-	
	1507ANN-MF			●			●	●	●	●	●		-	15.875	7.94	-	5.6	3.15	-	
	SNEX 1206ANN-MF						●			●	●		-	12.7	6.35	-	4.5	2.36	-	
	1507ANN-MF							●		●										

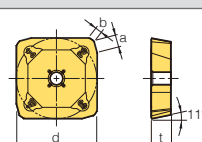
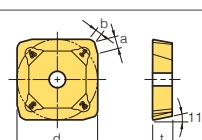
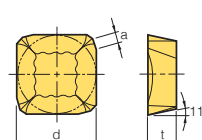
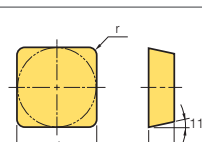
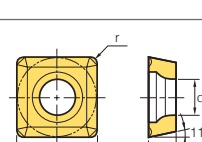
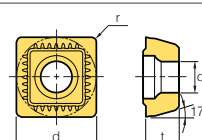
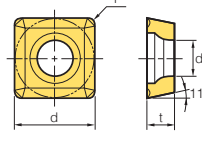
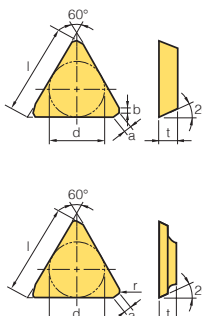
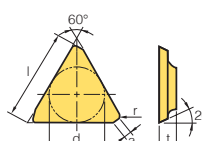
● : Stock item

E

● : Stock item



Workpiece		Machining types															
Steel	P																
Stainless steel	M																
Cast iron	K																
Non-ferrous metal	N																
Heat resistant alloy, Titanium alloy	S																
Hardened steel	H																

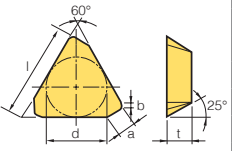
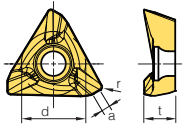
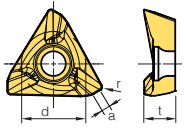
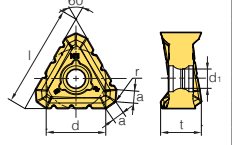
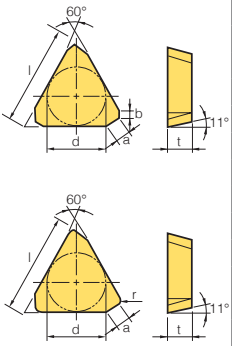
Inserts	Designation	Cermet		Coated										Uncoated		Dimensions (mm)							Geometries	Available tools	
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A	G10	H01	l	d	t	r	d _i			a
 SPKN-MU	1203EDSR-MU							●									-	12.7	3.18	-	-	0.86	1.87		E53 E54
	1504EDSR-MU							●								-	15.875	4.76	-	-	0.84	1.92			
 SPKN-SU	1203EDSR-SU							●				●	●			-	12.7	3.18	-	-	1.66	0.92		E53 E54	
	1203EDSL-SU							●				●	●		-	12.7	3.18	-	-	1.66	0.92				
	1504EDSR-SU							●				●	●		-	15.875	4.76	-	-	1.62	0.93				
	1504EDSL-SU							●				●	●		-	15.875	4.76	-	-	1.62	0.93				
 SPKR-MX	1203EDSR-MX				●	●										-	12.7	3.18	-	-	1.4	-		E53 E54	
	1203EDSL-MX														-	12.7	3.18	-	-	1.4	-				
	1504EDR-MX				●										-	15.875	4.76	-	-	1.45	-				
	1504EDSR-MX														-	15.875	4.76	-	-	1.45	-				
 SPMN	120308													●		-	12.7	3.18	0.8	-	-	-		E369	
 SPMT	060304				●											-	6.35	3.18	0.4	2.8	-	-		E307 E334 E335	
 SPMT-KC	110408-KC							●						●	●	-	11.5	4.8	0.8	4.5	-	-		E369	
 SPMT-MM	120408-MM							●				●				-	12.7	4.76	0.8	5.6	-	-		E307 E334 E336 E352	
	120508-MMN															-	12.7	5.56	0.8	5.6	-	-			
 TEC(E)N	TECN 22R															11.0	6.35	3.18	-	-	1.0	0.5		E61	
	22TR		●											●		11.0	6.35	3.18	0.8	-	0.5	-			
	32R														●	16.5	9.525	3.18	-	-	1.0	0.5			
	32R-G															16.5	9.525	3.18	-	-	1.0	0.5			
	32TR		●		●									●		16.5	9.525	3.18	0.8	-	0.5	-			
	32TR-S20								●							16.5	9.525	3.18	0.8	-	0.5	-			
	43R-G														22.0	12.7	4.76	-	-	2.0	0.5				
	43TR-Z														22.0	12.7	4.76	0.8	-	1.5	-				
	43TR														22.0	12.7	4.76	0.8	-	1.5	-				
	TEEN 32TR															16.5	9.525	3.18	0.8	-	0.5	-			
 TEEN	43R-Z														22.0	12.7	4.76	-	-	2.0	0.5		► Shape of Edge - G: Light side, Sharp edge - S20: STS - ZH: Hole added		
	43TR-Z												●		22.0	12.7	4.76	0.8	-	1.5	-				
	43TR-ZH									●				22.0	12.7	4.76	0.8	-	1.5	-					
	43R												●		22.0	12.7	4.76	-	-	2.0	0.5				
	43R-G												●		22.0	12.7	4.76	-	-	2.0	0.5				
	43TR		●	●		●		●					●		22.0	12.7	4.76	0.8	-	1.5	-				
	43TR-S20								●						22.0	12.7	4.76	0.8	-	1.5	-				

● : Stock item

E Milling Inserts

Workpiece	Steel	P	●	●	●	●	●	●	●	●	●	●	●	●	●	●	Machining types									
	Stainless steel	M	●	●	●	●	●	●	●	●	●	●	●	●	●	●										
	Cast iron	K	●	●	●	●	●	●	●	●	●	●	●	●	●	●										
	Non-ferrous metal	N	●	●	●	●	●	●	●	●	●	●	●	●	●	●										
	Heat resistant alloy, Titanium alloy	S	●	●	●	●	●	●	●	●	●	●	●	●	●	●										
	Hardened steel	H	●	●	●	●	●	●	●	●	●	●	●	●	●	●										

● Continuous cutting
 ● General cutting
 ✱ Interrupted cutting

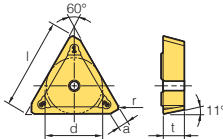
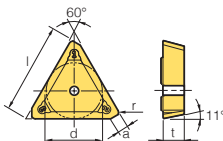
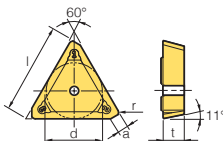
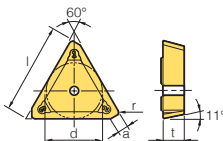
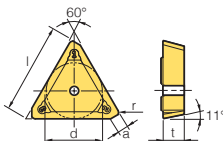
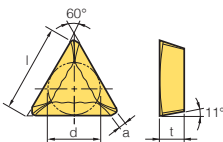
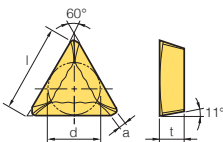
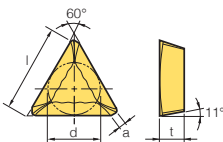
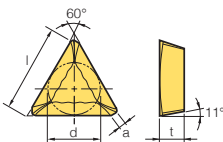
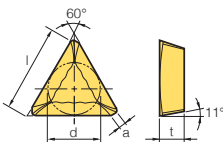
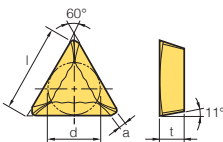
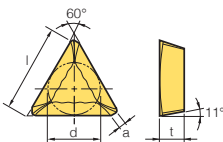
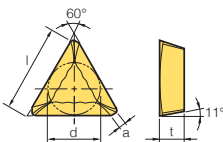
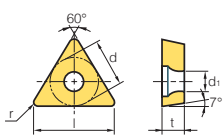
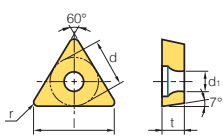
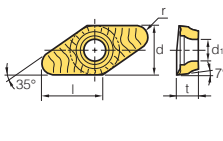
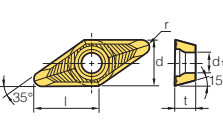
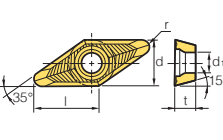
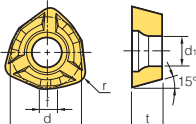
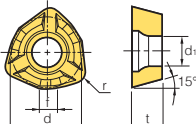
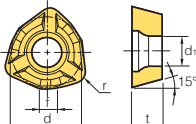
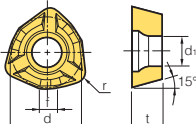
Inserts	Designation	Cermet		Coated								Uncoated			Dimensions (mm)								Geometries	Available tools	
		CN2500 CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A	G10	H01	l	d	t	r	d ₁	a			b
TFCN 	2203PFR													●			22.0	12.7	3.18	-	-	2.42	0.71		E55
	2203PFL																22.0	12.7	3.18	-	-	2.42	0.71		
TNKT-ML 	110508PEER-ML							●			●	●					-	8.0	4.500	0.8	-	1.3	-		E258~ E261
	160608PEER-ML							●			●	●					-	11.7	5.500	0.8	-	1.5	-		
	200708PEER-ML								●			●	●					-	14.5	7.000	0.8	-	2.0		
TNKT-MM 	110508PESR-MM							●	●			●					-	8.0	4.531	0.8	-	1.3	-		E258~ E261
	160608PESR-MM							●	●			●					-	11.7	5.531	0.8	-	1.5	-		
	200708PESR-MM								●	●			●					-	14.5	7.031	0.8	-	2.0		
TNMX-NM 	2710AZNR-NM		●		●		●	●	●	●							27	15.875	10	0.8	5.6	2.63	-		E68~ E70
	2710AZNL-NM																27	15.875	10	0.8	5.6	2.63	-		
	3012PNR-NM																	30	17.462	11.970	0.8	5.6	3.5		
TPCN 	1103PPN	●												●	●		11.0	6.35	3.18	-	-	0.7	0.7		E56
	1103PPTN																11.0	6.35	3.18	-	-	0.7	0.7		
	1603PDR			●													16.5	9.525	3.18	-	-	1.2	0.7		
	1603PPN	●	●					●						●	●		16.5	9.525	3.18	-	-	1.2	1.2		
	1603PPR	●	●											●	●		16.5	9.525	3.18	-	-	1.2	1.0		
	1603PPR-RH																16.5	9.525	3.18	-	-	1.2	1.0		
	1603PPR-G													●			16.5	9.525	3.18	-	-	1.2	1.0		
	1603PPSR																16.5	9.525	3.18	-	-	1.2	1.0		
	1603PPTN																16.5	9.525	3.18	-	-	1.2	1.2		
	1603PPTR																16.5	9.525	3.18	-	-	1.2	1.0		
	1603PPTR-RH																16.5	9.525	3.18	-	-	1.2	1.0		
	1603PDER-RH								●		●						16.5	9.525	3.18	0.8	-	1.5	-		
	1603PDSR-RH								●								16.5	9.525	3.18	0.8	-	1.5	-		
	1603PDR-S20									●							16.5	9.525	3.18	-	-	1.2	0.7		
	1603PDR-RN																16.5	9.525	3.18	-	-	1.5	1.1		
	2204PDR	●	●											●	●		22.0	12.7	4.76	-	-	1.4	0.7		
	2204PDR-RH																22.0	12.7	4.76	-	-	1.4	0.7		
	2204PDR-RN																22.0	12.7	4.76	-	-	1.42	0.52		
	2204PDR-G													●			22.0	12.7	4.76	-	-	1.4	0.7		
	2204PDL													●			22.0	12.7	4.76	-	-	1.4	0.7		
	2204PDSR				●												22.0	12.7	4.76	-	-	1.4	0.7		
	2204PDTR																22.0	12.7	4.76	-	-	1.4	0.7		
	2204PPN																22.0	12.7	4.76	-	-	1.2	1.2		
	2204PPTN																22.0	12.7	4.76	-	-	1.2	1.2		
	2204PDR-RH																22.0	12.7	4.76	0.8	-	1.8	-		
	2204PDER-RH								●		●						22.0	12.7	4.76	0.8	-	1.8	-		
	2204PDSR-RH								●								22.0	12.7	4.76	0.8	-	1.8	-		
	2204PDR-S20									●							22.0	12.7	4.76	-	-	1.4	0.7		

※ In this page, TPC(K)N □□□□P-N is for FC·HC and □□□□P~R is for Cutter (face).

● : Stock item



[illegible]

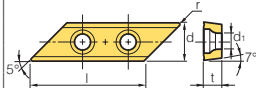
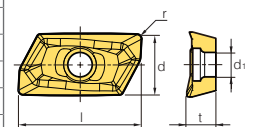
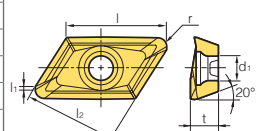
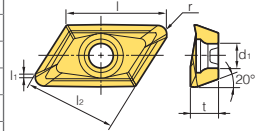
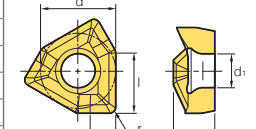
Inserts	Designation	Cermet	Coated											Uncoated	Dimensions (mm)								Geometries	Available tools	
		CN2500 CN30	NCM325	NCM335	NCM535	NCM545	PC2505	PC2510	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	H01	l	d	t	r	d ₁	a	b			f
 TPKN-MU	2204PDSR-MU							●								22.0	12.7	4.76	0.8	-	1.96	-	-		E56
 TPKN-SU	1603PDSL-SU							●								16.5	9.525	3.18	1.0	-	1.70	-	-		E56
	1603PDSR-SU							●								16.5	9.525	3.18	1.0	-	1.70	-	-		
	2204PDSL-SU							●								22.0	12.7	4.76	1.0	-	1.91	-	-		
	2204PDSR-SU							●				●	●			22.0	12.7	4.76	1.0	-	1.91	-	-		
 TPKR-MX	1603PDSN-MX															16.5	9.525	3.18	-	-	1.2	1.2	-		E56
	1603PDSR-MX								●							16.5	9.525	3.18	-	-	1.2	0.7	-		
	1603PPR-MX		●													16.5	9.525	3.18	-	-	1.2	1.0	-		
	1603PPSN-MX															16.5	9.525	3.18	-	-	1.2	1.2	-		
	1603PPSR-MX			●												16.5	9.525	3.18	-	-	1.2	1.0	-		
	2204PDR-MX		●													22.0	12.7	4.76	1.0	-	1.4	-	-		
	2204PDSR-MX		●	●												22.0	12.7	4.76	1.0	-	1.4	-	-		
	2204PPR-MX															22.0	12.7	4.76	1.0	-	1.4	-	-		
 TWX-KC	16R-KC							●					●			16.5	9.52	3.97	0.8	4.45	-	-	-		E371
	22R-KC							●								22.0	12.7	4.76	0.8	4.45	-	-	-		
 VCKT-MA	220530N-MA													●		15.6	12.7	5.56	3.0	5.6	-	-	-		E385 E386
 VDKT-MA	11T210N-MA													●		8.8	6.35	2.87	1.0	2.8	-	-	-		E386
	11T220N-MA															6.7	6.35	2.87	2.0	2.8	-	-	-		E387
 WDKT-MH	080316ZDSR-MH						●	●	●	●	●	●	●	●		-	8.0	3.18	1.6	3.3	-	-	1.8		E300~ E306
	10T320ZDSR-MH							●	●	●	●	●	●	●		-	10.0	3.97	2.0	4.3	-	-	2.3		
	130520ZDSR-MH						●	●	●	●	●	●	●	●		-	13.5	5.56	2.0	5.56	-	-	3.1		
	150625ZDSR-MH							●	●	●	●	●	●	●		-	15.0	6.35	2.5	5.56	-	-	3.4		

[illegible]

Inserts	Designation	Cermet		Coated								Uncoated	Dimensions (mm)						Geometries	Available tools			
		CN2500	CN30	NCM535	NCM545	PC2010	PC2505	PC2510	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A	H01	l	d			t	r	d ₁
 WNGX-MA new	040304PNFR-MA														●	4.3	7.0	3.46	0.4	-	-		
	040308PNFR-MA															●	4.3	7.0	3.46	0.8	-	-	
	040312PNFR-MA															●	4.3	7.0	3.46	1.2	-	-	
	040316PNFR-MA															●	4.3	7.0	3.46	1.6	-	-	
	080604PNFR-MA															●	8.2	13.0	6.4	0.4	-	-	
	080608PNFR-MA															●	8.2	13.0	6.4	0.8	-	-	
	080612PNFR-MA															●	8.2	13.0	6.4	1.2	-	-	
	080616PNFR-MA															●	8.2	13.0	6.4	1.6	-	-	
	080620PNFR-MA															●	8.2	13.0	6.4	2.0	-	-	
 WNGX-ML new	040304PNER-ML									●		●	●	●		4.3	7.0	3.46	0.4	-	-		
	040308PNER-ML														●	4.3	7.0	3.46	0.8	-	-		
	040312PNER-ML														●	4.3	7.0	3.46	1.2	-	-		
	040316PNER-ML														●	4.3	7.0	3.46	1.6	-	-		
	080604PNER-ML									●			●	●	●	8.2	13.0	6.4	0.4	-	-		
	080608PNER-ML		●						●	●		●	●	●	8.2	13.0	6.4	0.8	-	-	-		
	080612PNER-ML												●		8.2	13.0	6.4	1.2	-	-	-		
	080616PNER-ML												●		8.2	13.0	6.4	1.6	-	-	-		
	080620PNER-ML												●		8.2	13.0	6.4	2.0	-	-	-		
 WNGX-MM new	040304PNSR-MM									●		●	●			4.3	7.0	3.46	0.4	-	-		
	040308PNSR-MM													●		4.3	7.0	3.46	0.8	-	-		
	040312PNSR-MM													●		4.3	7.0	3.46	1.2	-	-		
	040316PNSR-MM													●		4.3	7.0	3.46	1.6	-	-		
	080604PNSR-MM									●			●	●	8.2	13.0	6.4	0.4	-	-	-		
	080608PNSR-MM		●						●	●		●	●	●	8.2	13.0	6.4	0.8	-	-	-		
	080612PNSR-MM												●		8.2	13.0	6.4	1.2	-	-	-		
	080616PNSR-MM												●		8.2	13.0	6.4	1.6	-	-	-		
	080620PNSR-MM												●		8.2	13.0	6.4	2.0	-	-	-		
 WNMX-MF new	060312ZNN-MF												●	●		-	6.35	3.18	1.2	2.86	1.2		
	09T316ZNN-MF								●				●	●		-	9.525	3.97	1.6	3.6	1.7		
	130520ZNN-MF												●	●		-	12.7	5.56	2.0	4.7	2.5		
	160720ZNN-MF												●	●		-	16.0	7.0	2.0	5.8	3.0		
 WNMX-ML new	060312ZNN-ML												●	●		-	6.35	3.18	1.2	2.86	1.2		
	09T316ZNN-ML												●	●		-	9.525	3.97	1.6	3.6	1.7		
	130520ZNN-ML												●	●		-	12.7	5.56	2.0	4.7	2.5		
	160720ZNN-ML												●			-	16.0	7.0	2.0	5.8	3.0		
 WNMX-MM	060312ZNN-MM						●	●	●				●	●		-	6.35	3.18	1.2	2.86	1.2		
	09T316ZNN-MM						●	●	●		●	●	●	●		-	9.525	3.97	1.6	3.6	1.7		
	130520ZNN-MM						●	●	●		●	●	●	●		-	12.7	5.56	2.0	4.7	2.5		
	160720ZNN-MM							●					●	●		-	16.0	7.0	2.0	5.8	3.0		

● : Stock item

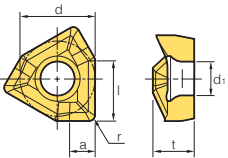
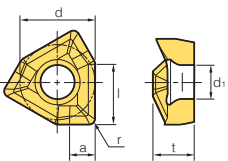
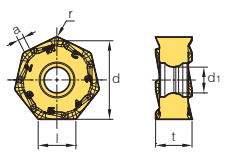
Workpiece	Steel	P																																																																																																																																																																																																																																																																																																																																																																																																																												
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Inserts	Designation	Cermet CN2500 CN30	Coated							Uncoated ST30A G10 H01 H05	Dimensions (mm)								Geometries	Available tools
			NC5330 NCM535	NCM545	PC3700	PC6510	PC9530	PC9540	PC5300		PC5400	PD1010	PD2000	l	l ₂	l ₁	d	t		
	310404ER-KC				●					● ●	30.9	-	-	9.525	4.5	0.4	4.4	-		E370
 new	190504PEFR-MA									● ●	22	-	-	11.3	5.04	0.4	4.5	-		E399
	190508PEFR-MA									● ●	22	-	-	11.3	5.00	0.8	4.5	-		E400
	190512PEFR-MA									● ●	22	-	-	11.3	5.00	1.2	4.5	-		
	190516PEFR-MA									● ●	22	-	-	11.3	4.99	1.6	4.5	-		
	190520PEFR-MA									● ●	22	-	-	11.3	4.97	2.0	4.5	-		
	190524PEFR-MA									● ●	22	-	-	11.3	4.95	2.4	4.5	-		
	190530PEFR-MA									● ●	22	-	-	11.3	4.93	3.0	4.5	-		
	190532PEFR-MA									● ●	22	-	-	11.3	4.92	3.2	4.5	-		
	190540PEFR-MA									● ●	21	-	-	11.3	4.85	4.0	4.5	-		
190550PEFR-MA									● ●	21	-	-	11.3	4.81	5.0	4.5	-			
	19M504FR-MA								● ●	● ●	18	16.4	1.4	-	5	0.4	4.4	-		E388~
	19M508FR-MA								● ●	● ●	18	16.4	1.0	-	5	0.8	4.4	-		E393
	19M512FR-MA								● ●	● ●	18	16.4	0.6	-	5	1.2	4.4	-		
	19M516FR-MA								●	● ●	17.5	16.4	0.5	-	5	1.6	4.4	-		
	19M518FR-MA									● ●	17.5	16.4	0.5	-	5	1.8	4.4	-		
	19M520FR-MA								● ●	● ●	17.5	16.4	0.5	-	5	2.0	4.4	-		
	19M530FR-MA								●	● ●	17	16.4	0.7	-	5	3.0	4.4	-		
	19M532FR-MA								● ●	● ●	17	16.4	0.5	-	5	3.2	4.4	-		
	19M540FR-MA								● ●	● ●	16.5	16.4	0.5	-	5	4.0	4.4	-		
	19M550FR-MA								● ●	● ●	16	16.4	0.4	-	5	5.0	4.4	-		
	250604FR-MA									● ●	24.5	21.9	1.5	-	6.35	0.4	6.0	-		
	250608FR-MA									● ●	24.5	21.9	1.2	-	6.35	0.8	6.0	-		
	250612FR-MA									● ●	24.5	21.9	0.8	-	6.35	1.2	6.0	-		
	250616FR-MA									● ●	24.5	21.9	0.4	-	6.35	1.6	6.0	-		
	250620FR-MA									● ●	24	21.9	0.5	-	6.35	2.0	6.0	-		
	250630FR-MA									● ●	23.7	21.9	0.6	-	6.35	3.0	6.0	-		
	250632FR-MA									● ●	23.7	21.9	0.4	-	6.35	3.2	6.0	-		
250640FR-MA									● ●	22.8	21.9	1.2	-	6.35	4.0	6.0	-			
250650FR-MA									● ●	22.7	21.9	0.4	-	6.35	5.0	6.0	-			
 new	19M504ER-ML										18	16.4	1.4	-	5	0.4	4.4	-		E388~
	19M508ER-ML										18	16.4	1.0	-	5	0.8	4.4	-		E393
	19M512ER-ML										18	16.4	0.6	-	5	1.2	4.4	-		
	19M516ER-ML										17.5	16.4	0.5	-	5	1.6	4.4	-		
	19M518ER-ML										17.5	16.4	0.5	-	5	1.8	4.4	-		
	19M520ER-ML										17.5	16.4	0.5	-	5	2.0	4.4	-		
	19M530ER-ML										17	16.4	0.7	-	5	3.0	4.4	-		
	19M532ER-ML										17	16.4	0.5	-	5	3.2	4.4	-		
	19M540ER-ML										16.5	16.4	0.5	-	5	4.0	4.4	-		
	19M550ER-ML										16	16.4	0.4	-	5	5.0	4.4	-		
	250604ER-ML										24.5	21.9	1.5	-	6.35	0.4	6.0	-		
	250608ER-ML										24.5	21.9	1.2	-	6.35	0.8	6.0	-		
	250612ER-ML										24.5	21.9	0.8	-	6.35	1.2	6.0	-		
	250616ER-ML										24.5	21.9	0.4	-	6.35	1.6	6.0	-		
	250620ER-ML										24	21.9	0.5	-	6.35	2.0	6.0	-		
	250630ER-ML										23.7	21.9	0.6	-	6.35	3.0	6.0	-		
	250632ER-ML										23.7	21.9	0.4	-	6.35	3.2	6.0	-		
250640ER-ML										22.8	21.9	1.2	-	6.35	4.0	6.0	-			
250650ER-ML										22.7	21.9	0.4	-	6.35	5.0	6.0	-			
 new	080504PNFR-MA									●	8.2	-	-	10.0	5.5	0.4	4.5	2.9		E100
	080508PNFR-MA									●	8.2	-	-	10.0	5.5	0.8	4.5	2.9	E101	
	080512PNFR-MA									●	8.2	-	-	10.0	5.5	1.2	4.5	2.9	E103	
	080520PNFR-MA									●	8.2	-	-	10.0	5.5	2.0	4.5	2.9	E104	
	120608PNFR-MA									●	12.0	-	-	13.0	6.5	0.8	5.5	3.5		

● : Stock item

E

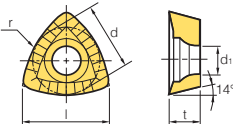
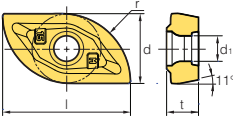
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Inserts	Designation	Cermet		Coated								Uncoated	Dimensions (mm)						Geometries	Available tools				
		CN2500	CN30	NC5330	NCM535	NCM545	PC2505	PC2510	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A H01	l	d	t			r	d ₁	a	
 XNKT-ML new	060405PNER-ML							●	●	●		●	●	●		5.7	6.5	4.0	0.5	3.4	1.8		E99~ E104	
	060408PNER-ML									●		●	●	●		5.7	6.5	4.0	0.8	3.4	1.8			
	080504PNER-ML												●	●	●		8.2	10.0	5.5	0.4	4.5			2.9
	080508PNER-ML				●			●	●	●		●	●	●	●		8.2	10.0	5.5	0.8	4.5			2.9
	080512PNER-ML												●	●	●		8.2	10.0	5.5	1.2	4.5			2.9
	080516PNER-ML													●	●	●	8.2	10.0	5.5	1.6	4.5			2.9
	080520PNER-ML													●	●	●	8.2	10.0	5.5	2.0	4.5			2.9
	120608PNER-ML								●	●		●	●	●	●		12.0	13.0	6.5	0.8	5.5			3.5
	120612PNER-ML													●	●	●	12.0	13.0	6.5	1.2	5.5			3.5
	120616PNER-ML													●	●	●	12.0	13.0	6.5	1.6	5.5			3.5
	120620PNER-ML													●	●	●	12.0	13.0	6.5	2.0	5.5			3.5
 XNKT-MM new	060405PNSR-MM							●	●	●		●	●	●		5.7	6.5	4.0	0.5	3.4	1.8		E99~ E104	
	060408PNSR-MM							●	●	●		●	●	●		5.7	6.5	4.0	0.8	3.4	1.8			
	080504PNSR-MM									●		●	●	●		8.2	10.0	5.5	0.4	4.5	2.9			
	080508PNSR-MM				●			●	●	●		●	●	●	●		8.2	10.0	5.5	0.8	4.5			2.9
	080512PNSR-MM							●	●	●		●	●	●	●		8.2	10.0	5.5	1.2	4.5			2.9
	080516PNSR-MM							●	●	●		●	●	●	●		8.2	10.0	5.5	1.6	4.5			2.9
	080520PNSR-MM							●	●			●	●	●	●		8.2	10.0	5.5	2.0	4.5			2.9
	120604PNSR-MM												●	●	●		12.0	13.0	6.5	0.4	5.5			3.5
	120608PNSR-MM							●	●	●	●		●	●	●		12.0	13.0	6.5	0.8	5.5			3.5
	120612PNSR-MM							●	●			●	●	●	●		12.0	13.0	6.5	1.2	5.5			3.5
	120616PNSR-MM							●	●			●	●	●	●		12.0	13.0	6.5	1.6	5.5			3.5
120620PNSR-MM							●	●			●	●	●	●		12.0	13.0	6.5	2.0	5.5	3.5			
 XNMX-ML new	0606XNR-ML				●					●		●	●	●		6.7	14.0	6.5	0.8	4.6	1.0		E142	
 XNMX-ML new	060608-ML				●					●														

● : Stock item



Workpiece	Material	Machining types											
		Continuous cutting	General cutting	Interrupted cutting	Continuous cutting	General cutting	Interrupted cutting	Continuous cutting	General cutting	Interrupted cutting	Continuous cutting	General cutting	Interrupted cutting
	Steel	P	●	●	●	●	●	●	●	●	●	●	●
	Stainless steel	M								●	●	●	●
	Cast iron	K		●	●	●	●	●	●			●	●
	Non-ferrous metal	N											●
	Heat resistant alloy, Titanium alloy	S									●	●	
	Hardened steel	H			●	●					●	●	

Inserts	Designation	Cermet		Coated								Uncoated		Dimensions (mm)					Geometries	Available tools		
		CN2500	CN30	NC5330	NCM535	NCM545	PC2505	PC2510	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A	H01	l	d			t	r
	080310R-MM							●				●				8.4	6.73	3.2	10	2.8		E339
	110312.5R-MM											●				10.6	8.5	3.65	12.5	2.8		E340
	130416R-MM							●				●				13.2	10.5	4.76	16	4.4		
 Internal	080M-MM															16	8.0	3.5	8	2.9		E332~
	090M-MM															17.7	7.2	4.3	9	3.4		E334
	100M-MM							●	●				●			19	10.4	4.5	10	3.4		
	110M-MM															22.2	11.4	4.8	11	4.5		
	125M-MM							●	●				●			24	12.9	5.3	12.5	4.5		
	130M-MM															25.7	13.4	5.3	13	4.5		
	140M-MM															27.2	14.3	6.3	14	5.6		
	150M-MM								●				●			28	15.4	7	15	5.6		
	160M-MM							●	●				●			28.5	16.4	7	16	5.6		
	200M-MM								●							38	20.7	8	20	6.6		
	250M-MM															48	25.9	9.5	25	8.6		
	 External	080S-MM															15	6.6	3.1	8		2.9
090S-MM																15.5	7.4	3.7	9	3.4		
100S-MM								●	●				●			15.5	8.4	3.8	10	3.4		
110S-MM																18.1	9	4.4	11	4.5		
125S-MM								●	●				●			20.5	10.7	4.5	12.5	4.5		
130S-MM																22.2	11	4.4	13	4.5		
140S-MM																24.1	11.2	5.7	14	5.6		
150S-MM									●				●			25	12.4	6.5	15	5.6		
160S-MM								●	●				●			26	13.4	6.5	16	5.6		
200S-MM									●							32	16.7	7	20	6.6		
250S-MM																40	20.7	8.5	25	8.6		
		1504PPSR-MM							●				●				15.9	12.7	4.76	-	5.6	E307
	1505PPSR-MMN															15.9	12.7	5.76	-	5.6	E352	
	160520R-MM							●				●				16.1	12.7	5.56	20	5.6	E336	
	160525R-MM							●				●				16.9	12.7	5.56	25	5.6		
	160531.5R-MM											●				17.6	12.7	5.56	31.5	5.6		
	160525R-MR															17.6	12.7	5.56	25	5.6	E335	
																					E336	

● : Stock item

Type	Cutter	Designation	Shape	A.A	Diameter range	Features	Application					Page
							Facing	Shouldering	Slotting	Copying	Ramping, Helical	
Cutters for face milling	Mill-max	ADN(M) 4000/5000+		45°	Ø80~Ø315	Excellent cutting-edge strength and chip flow	●					E47 E48
		AE(M) 4000/5000		45°	Ø80~Ø315	Low cutting load and good machinability	●					E49 E50
		EF(M) 4000		75°	Ø80~Ø315	High rake angle to prevents welding	●					E51
		EN(M) 4000		75°	Ø80~Ø315	Economical because double sided inserts applied	●					E52
		EPN(M) 4000/5000+		75°	Ø80~Ø315	Double posi rake angle and low cutting force	●					E53 E54
		PF(M) 4000		90°	Ø80~Ø315	High rake angle and good machinability	●	●	●			E55
		PPN(M) 4000		90°	Ø80~Ø315	Double posi rake angle and low cutting force	●	●	●			E56
	Mill-max Heavy	HDDCM 7000/9000 new		55°	Ø125~Ø315	Deep roughing availability thanks to highly rigid inserts	●					E58
	Turbo Mill	ADS 4000/5000		45°	Ø50~Ø63	Anti-vibration	●					E59 E60
		PES 2000/3000/ 4000		90°	Ø20~Ø63	High rake angle, Cutting efficiency	●	●	●			E61
	Double Mill	AFO(M)4000		45°	Ø80~Ø125	High rake angle low cutting force	●					E62
		AFO(M)5000			Ø80~Ø315	Economical (8 corners available)						E63



Type	Cutter	Designation	Shape	A.A	Diameter range	Features	Application					Page
							Facing	Shouldering	Slotting	Copying	Ramping, Helical	
Cutters for face milling	Power Buster	PBAC(M)5000		45°	Ø80~Ø315	Double-sided Insert High depth High feed roughing	●					E68
		PBZC(M)5000		90°	Ø80~Ø315		●					E69
		PBPCM6000 new			Ø80~Ø315		●	●				E70
	Aero Mill	APD(M) A type		90°	Ø80~Ø315	Aluminum cutter body suitable for high speed machining, Both cemented carbides and PCD inserts are available, G2.5 balance possible	●					E151
	Aero Mill - Plus	APD(M)-PB		90°	Ø80~Ø315	Prevent overload to the spindle bearings through weight reduction of the Al alloy body and enable high-speed processing	●					E152 E153
	Aero Mill-Mini	MAPDS		90°	Ø40~Ø63	Available with small Machining center-Carbide, PCD insert	●					E154
		MAPD		90°	Ø32~Ø40	Application-Balancing class G2.5	●					E155
	Rich Mill	RM8AC(M)4000 RMH8AC(M)4000		45°	Ø50~Ø400	8 corners available Double-sided insert for steel, cast iron, stainless steel, aluminum	●					E126 E127
		RM8AC(M)5000 RMH8AC(M)5000			Ø80~Ø400		●					E128 E129
		RM8EC(M)4000 RMH8EC(M)4000		75°	Ø50~Ø400	8 corners available Double-sided insert for steel, cast iron	●					E130 E131
		RM8EC(M)5000 RM8HEC(M)5000			Ø80~Ø400		●					E132 E133

 Cutter for aluminum

Type	Cutter	Designation	Shape	A.A	Diameter range	Features	Application					Page
							Facing	Shouldering	Slotting	Copying	Ramping, Helical	
Cutters for face milling	Rich Mill	RM8QC(M)4000 RMH8QC(M)4000		88°	Ø63~Ø200	8 corners available Reduced cutting interruption at cast Iron	●					E134 E135
		RMT8A(M) 4000/5000		45°	Ø80~Ø315		●					E136 E137
		RMT8E(M) 4000/5000		75°	Ø80~Ø315	Easy insert change and good machinability due to latch clamping system 8 corners available Excellent surface finish	●					E138 E139
		RMT8Q(M) 4000		88°	Ø80~Ø315		●					E140
		RMX8AC(M)-SA14 new		45°	Ø50~Ø125	Double sided insert with 8 corners Stable cutting performance due to double reversal positive relief surface Good machinability in stainless cutting with High helix cutting edge	●					E141
		RM14XCM-XN06 new		51°	Ø50~Ø160	Double sided insert with 14 corners Suitable for automobile components machining	●					E142
		RM16AC(M) 6000/8000		45°	Ø63~Ø400	16 corners available Wiper inserts can be applied for good surface finish Strong insert and powerful clamping	●					E143 E144
		RMRC(M)-RN12 new		-	Ø50~Ø125	High cost efficiency due to double sided round typed cutting edge Excellent rotating prevention by strong clamping system Suitable for Inconel cutting	●					E145
Cutters for molds	Rich Mill	RM3PC(M)3000 new		90°	Ø40~Ø80	Perfect perpendicularity Strong clamping	●	●	●		●	E99
		RM3PC(M)4000 new			Ø40~Ø125							E100
		RM3PC(M)5000 new			Ø80~Ø125							E101
		RM4PC(M)3000		90°	Ø40~Ø100	4 corners available High rake angle insert reduces cutting force. Excellent insert rigidity	●	●	●		●	E105 E106
		RM4PC(M)4000			Ø50~Ø160							



Type	Cutter	Designation	Shape	A.A	Diameter range	Features	Application					Page
							Facing	Shouldering	Slotting	Copying	Ramping, Helical	
Cutters for molds	Rich Mill	RM4ZCM3000		90°	Ø40~Ø52	4 corners available In vertical machining, the maximum cutting depth for RM4Z3000: 9.00 mm, RM4Z4000: 14.0 mm	●	●	●		●	E118
		RM4ZC(M)4000			Ø63~Ø100							
		RM6PCM-WN04 new		90°	Ø40~Ø63	Improved productivity and high-quality shouldering through high speed and high feed machining	●	●	●		●	E120
		RM6PC(M)-WN08 new			Ø50~Ø125							E121
	Alpha Mill-X	AMXCM-AD10/12/17 new		90°	Ø40~Ø125	High rake angle cutting edge and chip breaker reduce cutting load and improve chip evacuation. High rigidity due to special design	●	●	●	●	●	E197 E198
	Alpha Mill	AMC(M) 1000S/1500S/2000S		90°	Ø32~Ø100	3-dimensional shape and high rake angle lowers cutting load and ensures better chip evacuation Inner coolant system for better chip control increases tool life	●	●	●	●	●	E164~ E166
		AMC(M) 3000S/3000S-K /4000S		90°	Ø40~Ø200		●	●	●	●	●	E167~ E169
		AMC(M) 1000SE 2000SE 3000SE		75°	Ø40~Ø100	Wide size range of inserts enlarges application range. Various types of Alpha Mills available for high depth of cut and high feed machining	●					E170 E171
		AMC(M) 2000M 3000M 4000M		90°	Ø50~Ø125		●	●	●	●	●	E172~ E174
	Future Mill	FMAC(M)3000		45°	Ø50~Ø125	Accurate inserts and cutter, Excellent chip flow	●					E226
		FMAC(M)4000			Ø50~Ø200							E227
		FMAC(M)3000-A		45°	Ø63~Ø125	Excellent in high speed cutting and tapping center, low power machine due to light aluminum body	●					E228
		FMAC(M)4000-A			Ø63~Ø315							E229

Type	Cutter	Designation	Shape	A.A	Diameter range	Features	Application					Page
							Facing	Shouldering	Slotting	Copying	Ramping, Helical	
Cutters for molds	Future Mill	FMPC(M)3000		90°	Ø50~Ø100	4 corners available various inserts can be applied to machine for different types of workpiece	●	●	●			E222
		FMPC(M)4000			Ø63~Ø125							E223
		FMPC(M)3000A		90°	Ø63~Ø100	Excellent in high speed cutting and tapping center, low power machine due to light aluminum body	●	●	●			E224
		FMPC(M)4000A			Ø63~Ø315							E225
		FMRC(M)3000		-	Ø40~Ø100	4~8 corners available Double contact faces between insert & seat part of cutter for stable clamping	●	●	●	●	●	E228
		FMRC(M)4000			Ø50~Ø125							E229
		FMRC(M)5000		-	Ø50~Ø125	Excellent rotating-free machining	●	●	●	●	●	E230
		FMRC(M)6000			Ø63~Ø160							E231
	Future Mill P-positive	FMRC(M)^{new} 3000 4000 5000 6000		-	Ø40~Ø250	Stable clamping system enables stable machining and productivity Varied product line-up ensures wide application range Optimal shape and grade with high hardness for hard-to-cut material machining.	●	●	●	●	●	E242~E245
	Triple Mill	TPMCM-TN16		90°	Ø50~Ø125	3-cornered insert for shouldering	●	●	●			E258
		TPMCM-TN20			Ø63~Ø125	-Reduced cutting resistance due to high rake angled cutting edge and chip breaker						E259
	HFMD	HFMDCM-LN06		-	Ø32~Ø66	Double sided with 4 corners insert for small diameter machining	●	●	●		●	E272
		HFMD(M)-LN10		-	Ø40~Ø100	For high feed and multi-functional machining Strong clamping realizes stable machining.						E273
	HRM	HRMC(M)13		15°	Ø50~Ø80	Powerful clamping by double clamping system	●	●	●		●	E300
		HRMC(M)15			Ø63~Ø160	3 corners available high feed cutting with low cutting load						E301
	HRMD	HRMDC(M)09		14°	Ø40~Ø100	Double side insert with 6 corner High feed cutting with strong simple screw-on clamp	●	●	●		●	E289
		HRMDC(M)13			Ø50~Ø125							E290
		HRMDC(M)16^{new}			Ø80~Ø315							E291
	Tangen-Pro	TP2PC(M)-LN08^{new}		90°	Ø40~Ø63	High-quality results available even under harsh cutting conditions, thanks to the stable clamping force	●	●	●			E311
		TP2PC(M)-LN14^{new}			Ø40~Ø125							E312
		TP2PC(M)-LN17^{new}			Ø40~Ø125							E313



Type	Cutter	Designation	Shape	A.A	Diameter range	Features	Application					Page	
							Facing	Shouldering	Slotting	Copying	Ramping, Helical		
Cutters for molds	BT/HSK Tooling System	BT30/40/50		90°	Ø10~Ø50	BT/HSK one solid type has been accepted to increase the precision Inner coolant system can also make it possible to evacuate the chip effectively High feed and high depth	●	●	●		●	E342~E346	
		HSK63									E353~E357		
		BT30/40/50		90°	Ø16~Ø100		●	●	●			E347~E351	
		HSK63/100									E358~E362		
		BT30/40/50-MAT		90°	Ø12~Ø40	Alpha Mill, Rich Mill, FMR, Laser Mill, HRM(D), Pro-A, Pro-X Modular head M06~M16 applicable	●	●	●	●	●	E403	
		HSK63/100-MAT										E404	
		BT50 HAT4000		90°	Ø50~Ø80	Head only replacement possible and higher efficiency by self assembly head	●	●	●			E352	
Cutters for aluminum	Pro-A Mill	PAC(M) 2000/4000		90°	Ø40~Ø100	Buffered insert controls chip flow without built-up edge	●	●	●	●	●	E385	
	Pro-X Mill	PAXC(M)5000		90°	Ø40~Ø125	Powerful clamping Excellent body rigidity for rectangular and curve machining	●	●	●	●	●	E388	
		PAXC(M)6000			Ø50~Ø125						E389		
	Pro-L Mill	PALC(M)		90°	Ø63	High helix and high depth of cut High perpendicularity Low cutting load	●	●	●	●	●	E394	
	Pro-V Mill	PAVCM-XD19		90°	Ø40~Ø125	Exclusive milling tool for high speed aluminum machining with key to key way structure ensures stable clamping.	●	●	●	●	●	E399	
Indexable side cutter	Tangential type	Full-side cutter	TAFCP		-	Ø100~Ø315	Various cutting depth can be possible because of adjustable length control. Medium to Roughing based on strengthened edge		●	●			E407
			TAFCB		-	Ø100~Ø315		●	●	●			E407
		Half-side cutter	TAHCP		-	Ø100~Ø315				●	●		E408
			TAHCB		-	Ø100~Ø315		●	●	●			E408

 Cutter for aluminum

Type	Cutter	Designation	Shape	A.A	Diameter range	Features	Application					Page
							Facing	Shouldering	Slotting	Copying	Ramping, Helical	
Indexable side cutter	Radial type	Full-side cutter	RAFCP		-	Ø100~Ø315	Wide range of machining width with only one side cutter due to adjustable cutting-edge height Suitable for medium and finishing in narrow width side cutting due to good chip evacuation by 3-dimensional chip breaker	●	●			E409
			RAFCB		-	Ø100~Ø315		●	●	●		E409
		Half-side cutter	RAHCP		-	Ø100~Ø315			●	●		E410
			RAHCB		-	Ø100~Ø315		●	●	●		E410
Side cutters	Full-side cutter	SPP(M)		-	Ø80~Ø200	Economical by using pentagonal insert Suitable for narrow & deep grooving			●			E411
		SPB(M)		-	Ø80~Ø200	Economical by using pentagonal insert Suitable for narrow & deep grooving			●			E412
		SPS		-	Ø50~Ø200	For narrow and deep width grooving			●			E413
	Full-side cutter	RM4PFCB		-	Ø80~Ø160	4 corner usage with double-sided insert can be economical			●			E107 E108
		RM4PFCP		-	Ø80~Ø160				●			E111 E112
	Half-side cutter	RM4PHCB		-	Ø80~Ø160	4 corner usage with double-sided insert can be economical			●			E109 E110
		RM4PHCP		-	Ø80~Ø160				●			E113 E114
	Wind Mill	WFSB(M)		-	Ø100~Ø250	The nose R shape of insert ensures long tool life.	●	●	●			E416
		WFSP(M)		-	Ø100~Ø250	Wide applications with various widths and corner R sizes.		●	●			E417



Type	Cutter	Designation	Shape	A.A	Diameter range	Features	Application					Page
							Facing	Shouldering	Slotting	Copying	Ramping, Helical	
Cutters for face milling	Turbo Mill	ADS 4000/5000		45°	Ø50~Ø63	Uneven insert spacing prevents chattering	●					E59 E60
		PES 2000/3000/4000		90°	Ø20~Ø63	Good machinability due to the high rake angle	●	●	●			E61
Cutters for molds	Rich Mill	RM3PS3000		90°	Ø20~Ø40	Perfect perpendicularity Strong clamping	●	●	●		●	E102
		RM3PS4000 new			Ø32~Ø63							E103
		RM4PS3000		90°	Ø14~Ø50	4 corners available High rake angle insert reduces cutting force	●	●	●		●	E115
		RM4PS4000 new			Ø32~Ø63	Excellent insert rigidity	●	●	●		●	E116
		RM4ZS3000		90°	Ø25~Ø40	In vertical machining, the maximum cutting width: 9.0 mm	●	●	●		●	E119
		RM6PS-WN04 new		90°	Ø20~Ø32	Improved productivity and high-quality shouldering through high speed and high feed machining	●	●	●		●	E122
		RM6PS-WN08 new			Ø32~Ø50							E123
		RMRS-RN12 new		-	Ø32~Ø63	High cost efficiency due to double sided round typed cutting edge Excellent rotating prevention by strong clamping system Suitable for Inconel cutting	●					E146
	Alpha Mill-X	AMXS-AD10/12/17 new		90°	Ø20~Ø40	High rake angle cutting edge and chip breaker reduce cutting resistance and improve chip evacuation. High rigidity due to special design	●	●	●	●	●	E199 E200
		AMS 1000S/1500S 2000S/3000S 3000S-K/4000S		90°	Ø10~Ø63	The combination of a 3-dimensional curve design & high rake angle helps chip-evacuation effectively with a low cutting force Inner coolant system The various range of inserts can provide the widened choice High depth and high feed can be available during operation	●	●	●	●	●	E175~ E182
	Alpha Mill	AMS 1000SE/2000SE 3000SE		75°	Ø25~Ø63		●					E183 E184
		AMS 1000M/1500M 2000M/4000M		90°	Ø16~Ø50		●	●	●	●	●	E185~ E187
		AMS 1000MH/1500MH 2000MH/3000MH(-K)		90°	Ø14~Ø40		●	●	●	●	●	E188 E189

Type	Cutter	Designation	Shape	A.A	Diameter range	Features	Application					Page
							Facing	Shouldering	Slotting	Copying	Ramping, Helical	
Cutters for molds	Future Mill	FMAS3000		45°	Ø25~Ø63	For precision machining	●					E220
		FMAS4000			Ø50~Ø63	Excellent chip evacuation						E221
		FMPS3000		90°	Ø25~Ø63	4 corners available	●					E226
		FMPS4000			Ø40~Ø63	Strong cutting-edge with low cutting load						E227
		FMRS 1000/1500/2000 2500/3000/4000 5000/6000		-	Ø8~Ø63	2 touch clamping system, convenient insert change	●	●	●	●	●	E232~E237
	Future Mill P-positive	FMRS ^{new} 2500/3000 4000/5000 6000		-	Ø17~Ø50	P-positive relief angle ensures high rigidity and high machinability in die steel and high-resistant alloy machining Flat clearance face of insert prevents interference and revolution while machining	●	●	●	●	●	E246~E249
	Triple Mill	TPMS-TN11 ^{new}		90°	Ø25~Ø40	3-cornered insert for shouldering Reduced cutting resistance due to high rake angled cutting edge and chip breaker	●	●	●			E260
		TPMS-TN16 ^{new}			Ø32~Ø40							E261
	HFMD	HFMDS-LN04 ^{new}		-	Ø8~Ø21	Double sided insert with 4 corners for small diameter machining	●	●	●	●	●	E267 E268
		HFMDS-LN06 ^{new}			Ø16~Ø40	For high feed and multi-functional machining						E269 E270
		HFMDS-LN10			Ø25~Ø42	Strong clamping system for stable machining						E271
	HFM	HFMS ^{new} 1000		13°	Ø8~Ø21	Apply helix cutting-edge on insert, low cutting load and reinforce toughness on corner Increased rigidity with double relief angle (11, 13), prevent interference with high feed To apply the negative axial rake angle when set up the holder, increased chipping resistance	●	●	●	●	●	E281 E282
	HRM	HRMS 08/10/13/15		15°	Ø20~Ø63	Powerful clamping by double clamping system 3 corners available High feed cutting with low cutting load	●	●	●	●	●	E302~E304
	HRMD	HRMDS 06/09/13		14°	Ø16~Ø63	6 corners available, High feed, multi-function, only one screw application	●	●	●	●	●	E292~E296
	Tangen-Pro	TP2PS-LN08 ^{new}		90°	Ø16~Ø25	High-quality results available even under harsh cutting conditions, thanks to the stable clamping force	●	●	●			E311
		TP2PS-LN14 ^{new}			Ø25~Ø50							E312
		TP2PS-LN17 ^{new}			Ø32~Ø50							E313
	Tank Mill	THE		90°	Ø25~Ø50	Right-hand helix angle employed for good chip evacuation. Special surface treatment prevents body breaking and improves rigidity. Strong cutting-edge	●	●				E307



Type	Cutter	Designation	Shape	A.A	Diameter range	Features	Application					Page
							Facing	Shouldering	Slotting	Copying	Ramping, Helical	
Cutters for molds	Laser Mill	LBE □□ LRE □□		-	Ø8~Ø32	Indexable ball endmill for precise mold. Rigid holder with simple design finishing MQL is available	●	●	●	●		E326~ E330
		LBE □□-C LRE □□-C		-	Ø8~Ø32	Indexable ball endmill for precise mold. Rigid holder with simple design finishing MQL is available Carbide shank	●	●	●			E326~ E330
	Mach Mill	BFE		-	Ø16~Ø32	Upgraded cutting performance with S type curve design V clamping application	●	●	●	●		E331
		GBE		-	Ø16~Ø50	Helical design of edge can reduce the force during operation. Safe application to prevent rotation guarantee the increased tool life	●	●	●	●		E332 E333
		BRE		-	Ø20~Ø63	Flute type chip-pocket can make chip-evacuation Customized edge design can prevent the breakage of holder's body	●	●	●	●		E335
	HAVE	Multi-edge		90°	Ø16~Ø50	Tools for Z-axis feed plunge machining to cut faster and more effectively in vertical machining Machining with whole diameter	●	●	●		●	E339
		Single-edge										E340
	O-ring Cutter	ORC		90°	Ø11~Ø46	For grooving the seat of an O-Ring in a plastic mold Superior surface roughness and cutting performance compared to HSS and brazed tool	-	-	-	-	-	E365
	Chamfer Tool	CE		75°	Ø25~Ø30	For Back & Front high quality chamfering and various Chamfering angle machining	●					E369
				60°	Ø25~Ø35							
				45°	Ø7~Ø39							
				30°	Ø25~Ø42							
				30°	Ø5~Ø35	Various chamfer degrees available Effective long chamfer cutting available	●	●	●			E370
				45°	Ø5~Ø48							
				60°	Ø5~Ø57							
				45°	~Ø28	Centering, Grooving, Chamfering	●	●	●		●	E371

Type	Cutter	Designation	Shape	A.A	Diameter range	Features	Application					Page
							Facing	Shouldering	Slotting	Copying	Ramping, Helical	
Cutters for molds	Chamfer Tool	CCT		30°	Ø3~Ø16	Centering, Countersinking, Chamfering						E373
				45°								
				60°								
		CET		30°	Ø4~Ø16	Countersinking, Chamfering, Shouldering	●	●	●		●	E372
				45°								
				60°								
	T-Cutter	TFE		90°	Ø21~Ø50	For slotting	●	●	●	●	●	E374
Cutters for aluminum	Pro-A Mill	PAS 2000/4000		90°	Ø12~Ø42 Ø32~Ø40	Polished face increases chip flow and reduces built-up edge	●	●	●	●	●	E386
	Pro-X Mill	PAXS 5000/6000		90°	Ø20~Ø40 Ø25~Ø40	Square shoulder and corner machining	●	●	●	●	●	E390 E391
	Pro-L Mill	PALS-HR (Single-edge)		90°	Ø32~Ø63	High helix and high depth of cut High perpendicularity Low cutting load	●	●	●	●	●	E395 E396
		PALS-HM (Multi-edge)			Ø63		●	●	●	●	●	E397
	Pro-XL Mill	PXLS 		90°	Ø40~Ø80	Improved surface finish and perpendicularity achieved by a single pass with the deep cutting-edges	●	●				E398
	Pro-V Mill	PAVS-XD19 		90°	Ø25~Ø40	Exclusive milling tool for high speed aluminum machining with key to key way structure ensures stable machining.	●	●	●	●	●	E400
		HSK-XD19 			Ø32~Ø50		●	●	●	●	●	E363
Thread milling	-	TM		-	Ø32~Ø50	For internal and external threading	●					D49



FMRM type

➔ E238~241
E250~253



LBE-MHD type

➔ E330



PAM type

➔ E387



PAXM type

➔ E392



AMM type

➔ E190~192



RM3PM type

➔ E104



RM4PM type

➔ E117



Steel Shank type

➔ E401



Carbide Shank type

➔ E402



BT Arbors type

➔ E403



HSK Arbors type

➔ E404

E KORLOY Modular Adaptors

RM4ZM type

➔ E119



RM6PM type

➔ E124, 125



HFMDM type

➔ E274~276



HFMM type

➔ E283



HRMM type

➔ E305, 306



HRMDM type

➔ E297~299



GBEM type

➔ E334



Steel Shank type

➔ E401



Carbide Shank type

➔ E402



BT Arbors type

➔ E403



HSK Arbors type

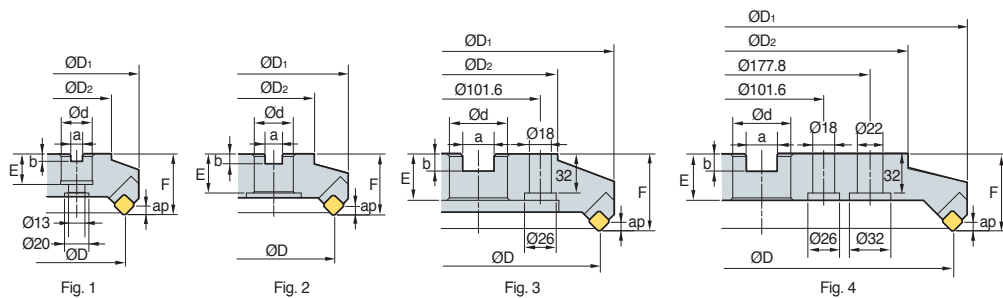
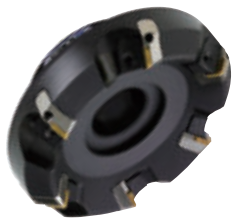
➔ E404



E

Milling

ADN(M)4000



AA
45°

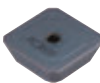
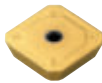
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• RR: -4°

(mm)

Designation			ØD	ØD1	ØD2	Ød	a	b	E	F	ap		Fig.
ADN (ADNM)	4080R/L	4	80	57	57	25.4 (27)	9.5 (12.4)	6 (7)	25 (22)	50	6	1.9	1
	4100R/L	5	100	67	67	31.75 (32)	12.7 (14.4)	8 (8)	32 (28)	50	6	2.5	2
	4125R/L	6	125	87	87	38.1 (40)	15.9 (16.4)	10 (9)	38 (30)	63	6	4.3	2
	4160R/L	8	160	107	107	50.8 (40)	19.0 (16.4)	11 (9)	38 (30)	63	6	6.4	2
	4200R/L	10	200	130	130	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	6	8.7	3
	4250R/L	12	250	180	180	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	6	14.0	3
	4315R/L	14	315	240	240	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	6	21.0	4

() Metric size

Available inserts

SDCN		SDKN-MU		SDKN-SU		SDKR-MX				
										
Designation		Cermet	Coated						Uncoated	page
		CN2500 CN30	NC5330	NCM325 NCM335 NCM535 NCM545	PC3700 PC6510 PC9530 PC9540	PC5300 PC5400	ST30A G10 H01			
SDCN	42M								●	E19
	42M-G								●	
	42MT	●●		●				●		
	42MT-RH									
	42MT-S20						●			
	1203AEEN									
	1203AEEN-RH									
	1203AESN									
1203AESN-RH									E20	
SDKN	1203AESN-MU				●					
	1203AESN-SU				●		●●			
SDKR	1203AESN-MX									E20
	1203AETN-MX									
	1203AEN-MX			●						

Available arbors

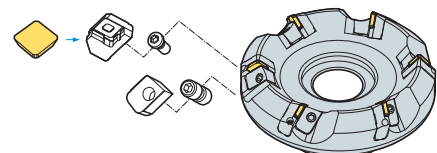
Designation	General arbor	NC arbors	
		ADN	ADNM
ADN (ADNM)	4080R/L	NT*□□ (MU)-FMA25.4-25	BT**□□ -FMA25.4-□□ FMC27
	4100R/L	NT*□□ (MU)-FMA31.75-□□	BT**□□ -FMA31.75-□□ FMC32
	4125R/L	NT*□□ (MU)-FMA38.1-□□	BT**□□ -FMA38.1-□□ FMB40
	4160R/L	NT*□□ (MU)-FMA50.8-□□	BT**□□ -FMA50.8-□□ FMB40
	4200R/L	NT*□□ (MU)-FMA47.625-25, KCP-8***	BT**□□ -FMA47.625-□□ FMB60
	4250R/L	NT*□□ (MU)-FMA47.625-25, KCP-8***	BT**□□ -FMA47.625-□□ FMB60
	4315R/L	KCP-8*** (Center ring plug)	

*□□-NT number **□□-BT number ***Over milling 5

Recommended cutting condition

Workpiece	Cutting condition		Grades
	vc (m/min)	fz (mm/t)	
P	190~320	0.05~0.20	NCM325 PC3700 ST30A
	161~270	0.05~0.20	
	80~140	0.05~0.20	
M	90~150	0.05~0.20	PC9530
K	140~230	0.05~0.30	PC6510 G10
	50~90	0.05~0.30	

Assembling



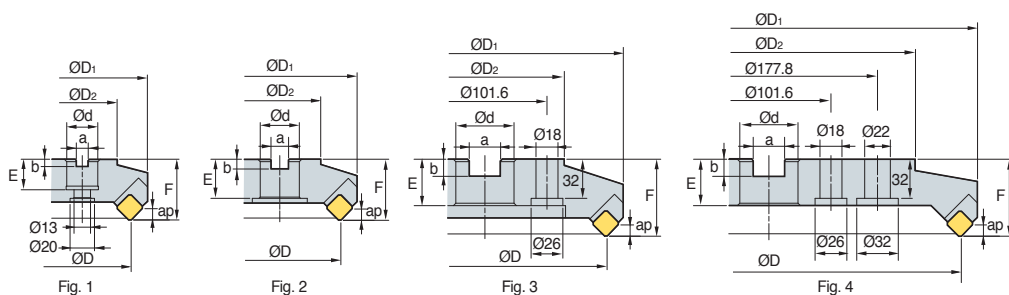
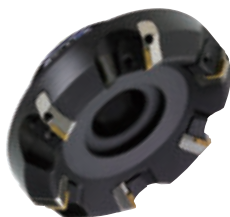
Parts

Specification					
Ø80-Ø315	LADN4R/L	WEPN4R/L	DHA0821F	LTX0514	HW40

Available inserts **E19, E20**

Available arbors and bolt **E426~E428**

ADN(M)5000+



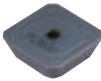
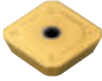
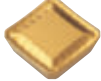
AA
45°
• AR: 15°
• RR: -4°

(mm)

Designation			ØD	ØD1	ØD2	Ød	a	b	E	F	ap	 kg	Fig.
ADN (ADNM)	5080R/L ⁺	4	80	107	65	25.4(27)	9.5 (12.4)	6 (7)	25 (22)	63	8	2.4	1
	5100R/L ⁺	5	100	126	75	31.75(32)	12.7 (14.4)	8 (8)	32 (28)	63	8	3.0	2
	5125R/L ⁺	6	125	150	100	38.1(40)	15.9 (16.4)	10 (9)	38 (30)	63	8	4.7	2
	5160R/L ⁺	8	160	185	120	50.8(40)	19.0 (16.4)	11 (9)	38 (30)	63	8	6.5	2
	5200R/L ⁺	10	200	225	140	47.625(60)	25.4 (25.7)	14 (14)	38 (38)	63	8	8.7	3
	5250R/L ⁺	12	250	275	220	47.625(60)	25.4 (25.7)	14 (14)	38 (38)	63	8	15.5	3
	5315R/L ⁺	14	315	340	280	47.625(60)	25.4 (25.7)	14 (14)	38 (38)	63	8	23.7	4

() Metric size

Available inserts

SDCN		SDKN-MU		SDKN-SU		SDKR-MX										
																
Designation		Cermet	Coated								Uncoated		page			
		CN2500 CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC3700	PC6510	PC9530	PC9540	PC5300		PC5400	ST30A G10 H01	
SDCN	53M														●	E19
	53M-G														●	
	53MT	●		●										●		
	53MT-RH															
	53MT-S20								●							
	1504AEEN															
	1504AEEN-RH							●		●						
	1504AESN															
SDKN	1504AESN-MU							●								E20
	1504AESN-SU							●			●	●				
SDKR	1504AESN-MX			●												E20
	1504AETN-MX															
	1504AEN-MX			●												

Available arbors

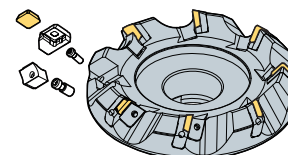
Designation	General arbor	NC arbors	
		ADN	ADNM
ADN 5080R/L+	NT*□□ (MU)-FMA25.4-25	BT**□□ -FMA25.4-□□	FMC27
ADNM 5100R/L+	NT*□□ (MU)-FMA31.75-□□	BT**□□ -FMA31.75-□□	FMC32
5125R/L+	NT*□□ (MU)-FMA38.1-□□	BT**□□ -FMA38.1-□□	FMB40
5160R/L+	NT*□□ (MU)-FMA50.8-□□	BT**□□ -FMA50.8-□□	FMB40
5200R/L+	NT*□□ (MU)-FMA47.625-25, KCP-8**	BT**□□ -FMA47.625-□□	FMB60
5250R/L+	NT*□□ (MU)-FMA47.625-25, KCP-8**	BT**□□ -FMA47.625-□□	FMB60
5315R/L+	KCP-8*** (Center ring plug)		

*□□-NT number **□□-BT number ***Over milling 5

Recommended cutting condition

Workpiece	Cutting condition		Grades
	vc (m/min)	fz (mm/t)	
P	190~320	0.05~0.20	NCM325 PC3700 ST30A
	161~270	0.05~0.20	
	80~140	0.05~0.20	
M	90~150	0.05~0.20	PC9530
K	140~230	0.05~0.30	PC6510 G10
	50~90	0.05~0.30	

Assembling



Parts

Specification					
Ø80~Ø315	LADN5R/L	WHPS5R/L	WHX0817 WHX0813*	LTX0514	HW40

*: Ø80

Available inserts E19, E20 Available arbors and bolt E426~E428



AE(M)4000

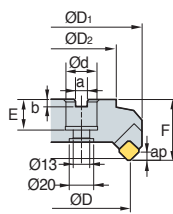


Fig. 1

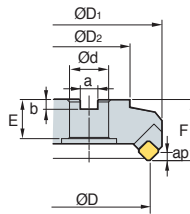


Fig. 2

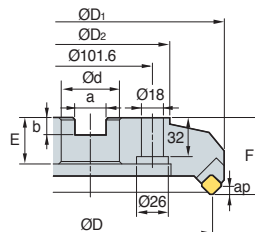


Fig. 3

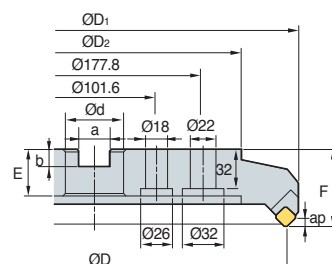


Fig. 4



AA
45°

• AR: 20°
• RR: -3°

(mm)

Designation			ØD	ØD1	ØD2	Ød	a	b	E	F	ap	 kg	Fig.
AE (AEM)	4080R/L	4	80	103	60	25.4 (27)	9.5 (12.4)	6 (7)	25 (22)	50	5.5	1.7	1
	4100R/L	5	100	122	80	31.75 (32)	12.7 (14.4)	8 (8)	32 (28)	50	5.5	2.9	2
	4125R/L	6	125	146	100	38.1 (40)	15.9 (16.4)	10 (9)	38 (30)	63	5.5	4.4	2
	4160R/L	8	160	181	120	50.8 (40)	19.0 (16.4)	11 (9)	38 (30)	63	5.5	6.1	2
	4200R/L	10	200	220	130	47.625 (60)	25.4 (25.7)	13.5 (14)	38 (38)	63	5.5	8.9	3
	4250R/L	12	250	270	180	47.625 (60)	25.4 (25.7)	13.5 (14)	38 (38)	63	5.5	15.7	3
	4315R/L	15	315	335	240	47.625 (60)	25.4 (25.7)	13.5 (14)	38 (38)	63	5.5	25.1	4

() Metric size

Available inserts

SECN		SEKN-SU		SEKR-MX					
									
Designation	Cermet	Coated						Uncoated	page
	CN2500 CN30	NC5330 NCM325 NCM335 NCM335 NCM535 NCM545	PC3700 PC6510 PC9530 PC9540 PC5300 PC5400	ST30A G10 H01					
SECN	1203AFFN							● ●	E21
	1203AFTN	● ●						●	
	1203AFEN								
	1203AFSN		● ●						
	1203AFEN-RH				●		●		
	1203AFSN-RH								
	1203AFTN-S20					●			
SEKN	1203AFSN-SU				●				E21
SEKR	1203AFSN-MX		● ●			●			E22

Available arbors

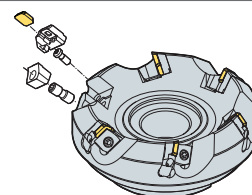
Designation	General arbor	NC arbors	
		ADN	ADNM
AE (AEM) 4080R/L	NT*□□ (M/U)-FMA25.4-25	BT**□□-FMA25.4-□□	FMC27
4100R/L	NT*□□ (M/U)-FMA31.75-□□	BT**□□-FMA31.75-□□	FMC32
4125R/L	NT*□□ (M/U)-FMA38.1-□□	BT**□□-FMA38.1-□□	FMB40
4160R/L	NT*□□ (M/U)-FMA50.8-□□	BT**□□-FMA50.8-□□	FMB40
4200R/L	NT*□□ (M/U)-FMA47.625-25, KCP-8***	BT**□□-FMA47.625-□□	FMB60
4250R/L	NT*□□ (M/U)-FMA47.625-25, KCP-8***	BT**□□-FMA47.625-□□	FMB60
4315R/L	KCP-8*** (Center ring plug)		

*□□-NT number **□□-BT number ***Over milling 5

Recommended cutting condition

Workpiece	Cutting condition		Grades
	vc (m/min)	fz (mm/t)	
P	190~320 161~270 80~140	0.05~0.20 0.05~0.20 0.05~0.20	NCM325 PC3700 ST30A
M	90~150	0.05~0.20	PC9530
K	140~230 50~90	0.05~0.30 0.05~0.30	PC6510 G10

Assembling



Parts

Specification					
Ø80-Ø315	LAE4R/L	WAE4R/L	DHA0821F	LTX0512	HW40

Available inserts E21, E22 Available arbors and bolt E426~E428

AE(M)5000

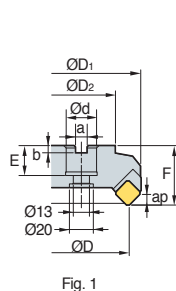


Fig. 1

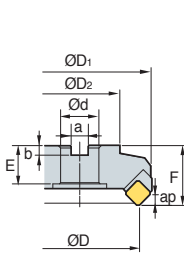


Fig. 2

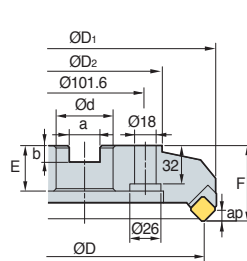


Fig. 3

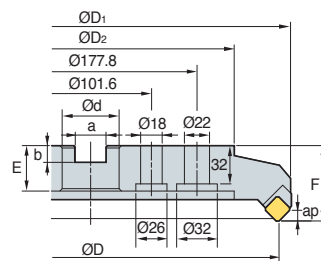


Fig. 4



AA
45°

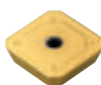
• AR: 20°
• RR: -3°

(mm)

Designation			ØD	ØD ₁	ØD ₂	Ød	a	b	E	F	ap		Fig.
AE (AEM)	5080R/L	4	80	103	60	25.4 (27)	9.5 (12.4)	6 (7)	25 (22)	50	7.5	1.7	1
	5100R/L	5	100	122	80	31.75 (32)	12.7 (14.4)	8 (8)	32 (28)	50	7.5	2.9	2
	5125R/L	6	125	146	100	38.1 (40)	15.9 (16.4)	10 (9)	38 (30)	63	7.5	4.4	2
	5160R/L	8	160	181	120	50.8 (40)	19.0 (16.4)	11 (9)	38 (30)	63	7.5	6.1	2
	5200R/L	10	200	220	130	47.625 (60)	25.4 (25.7)	13.5 (14)	38 (38)	63	7.5	8.9	3
	5250R/L	12	250	270	180	47.625 (60)	25.4 (25.7)	13.5 (14)	38 (38)	63	7.5	15.7	3
	5315R/L	15	315	335	240	47.625 (60)	25.4 (25.7)	13.5 (14)	38 (38)	63	7.5	25.1	4

() Metric size

Available inserts

SECN		SEKN-SU		SEKR-MX														
																		
Designation		Cermet		Coated										Uncoated		page		
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A		G10	H01
SECN	1504AFFN																●	E21
	1504AFTN		●															
	1504AFEN																	
	1504AFSN																	
	1504AFEN-RH																	
	1504AFSN-RH									●								
	1504AFTN-S20																	
SEKN	1504AFSN-SU								●					●				E21
	1504AFSN-MX				●						●							
SEKR	1504AFSN-MX				●						●							E22

Available arbors

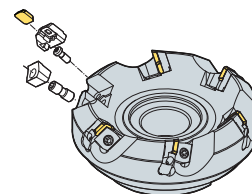
Designation	General arbor	NC arbors	
		AE	AEM
AE (AEM)	5080R/L	NT*□□ (M/U)-FMA25.4-25	BT**□□ -FMA25.4-□□ FMC27
	5100R/L	NT*□□ (M/U)-FMA31.75-□□	BT**□□ -FMA31.75-□□ FMC32
	5125R/L	NT*□□ (M/U)-FMA38.1-□□	BT**□□ -FMA38.1-□□ FMB40
	5160R/L	NT*□□ (M/U)-FMA50.8-□□	BT**□□ -FMA50.8-□□ FMB40
	5200R/L	NT*□□ (M/U)-FMA47.625-25, KCP-8***	BT**□□ -FMA47.625-□□ FMB60
	5250R/L	NT*□□ (M/U)-FMA47.625-25, KCP-8***	BT**□□ -FMA47.625-□□ FMB60
	5315R/L	KCP-8*** (Center ring plug)	

*□□-NT number **□□-BT number ***Over milling 5

Recommended cutting condition

Workpiece	Cutting condition		Grades
	vc (m/min)	fz (mm/t)	
P	190~320	0.05~0.20	NCM325 PC3700 ST30A
	161~270	0.05~0.20	
	80~140	0.05~0.20	
M	90~150	0.05~0.20	PC9530
K	140~230	0.05~0.30	PC6510 G10
	50~90	0.05~0.30	

Assembling



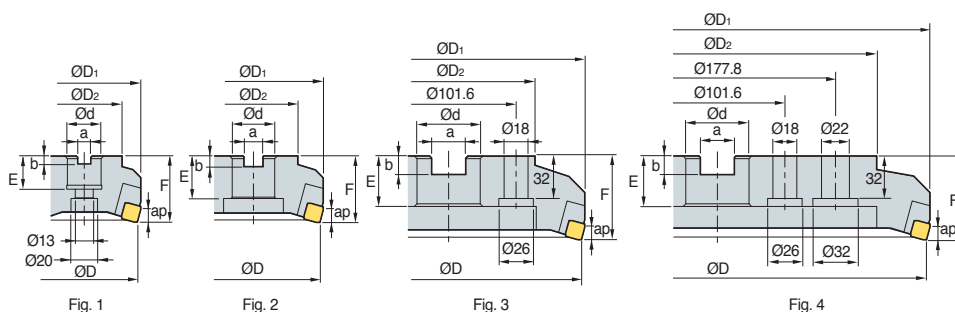
Parts

Specification					
Ø80~Ø315	LAE5R/L	WAE5R/L	DHA0821F	LTX0512	HW40

Available inserts E21, E22 Available arbors and bolt E426~E428



EF(M)4000



AA
75°

• AR: 18°
• RR: 11°

(mm)

Designation			ØD	ØD1	ØD2	Ød	a	b	E	F	ap	 kg	Fig.
EF (EFM)	4080R/L	4	80	89	57	25.4 (27)	9.5 (12.4)	6 (7)	25 (22)	50	8.0	1.5	1
	4100R/L	5	100	108	70	31.75 (32)	12.7 (14.4)	8 (8)	32 (28)	50	8.0	2.1	2
	4125R/L	6	125	133	87	38.1 (40)	15.9 (16.4)	10 (9)	38 (30)	63	8.0	3.8	2
	4160R/L	8	160	168	107	50.8 (40)	19.0 (16.4)	11 (9)	38 (30)	63	8.0	5.5	2
	4200R/L	10	200	208	130	47.625 (60)	25.4 (25.7)	13.5 (14)	38 (38)	63	8.0	8.2	3
	4250R/L	12	250	257	180	47.625 (60)	25.4 (25.7)	13.5 (14)	38 (38)	63	8.0	13.4	3
	4315R/L	16	315	322	240	47.625 (60)	25.4 (25.7)	13.5 (14)	38 (38)	63	8.0	21.2	4

() Metric size

Available inserts

SFCN



Designation	Cermet	Coated								Uncoated	page
	CN2500 CN30	NCM330 NCM325	NCM535 NCM545	PC2010 PC3700	PC9530 PC8510	PC9540 PC5300	PC5400	ST30A G10	H01		
SFCN 1203EFR										●	E22

Available arbors

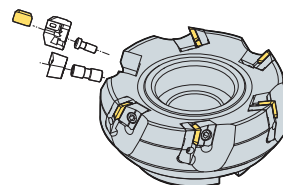
Designation	General arbor	NC arbors	
		EF	EFM
EF (EFM) 4080R/L	NT*□□ (MU)-FMA25.4-25-□□	BT**□□-FMA25.4-□□	FMC27
4100R/L	NT*□□ (MU)-FMA31.75-□□	BT**□□-FMA31.75-□□	FMC32
4125R/L	NT*□□ (MU)-FMA38.1-□□	BT**□□-FMA38.1-□□	FMB40
4160R/L	NT*□□ (MU)-FMA50.8-□□	BT**□□-FMA50.8-□□	FMB40
4200R/L	NT*□□ (MU)-FMA47.625-25. KCP-8***	BT**□□-FMA47.625-□□	FMB60
4250R/L	NT*□□ (MU)-FMA47.625-25. KCP-8***	BT**□□-FMA47.625-□□	FMB60
4315R/L	KCP-8*** (Center ring plug)		

*□□-NT number **□□-BT number ***Over milling 5

Recommended cutting condition

Workpiece	Cutting condition		Grades
	vc (m/min)	fz (mm/t)	
K	75~125	0.05~0.30	H01

Assembling



Parts

Specification	Locator	Wedge	Wedge screw	Locator screw	Wrench
Ø80-Ø315	LEF4R/L LEF4R1*/L1*	WEFR/L	DHA0821F	LTX0512	HW40

Available inserts **E22**

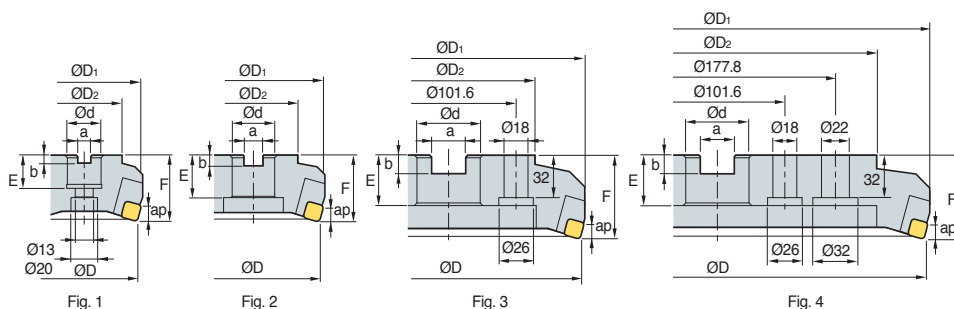
Available arbors and bolt **E426-E428**

* : Ø80~Ø125

Milling



EN(M)4000



AA
75°

• AR: -6°
• RR: -5°

(mm)

Designation			ØD	ØD1	ØD2	Ød	a	b	E	F	ap		Fig
EN (ENM)	4080R/L	5	80	87	57	25.4 (27)	9.5 (12.4)	6 (7)	25 (22)	50	8.5	1.4	1
	4100R/L	6	100	107	67	31.75 (32)	12.7 (14.4)	8 (8)	32 (28)	50	8.5	2.1	2
	4125R/L	8	125	132	87	38.1 (40)	15.9 (16.4)	10 (9)	38 (30)	63	8.5	3.8	2
	4160R/L	10	160	167	107	50.8 (40)	19.0 (16.4)	11 (9)	38 (30)	63	8.5	5.7	2
	4200R/L	12	200	207	130	47.625 (60)	25.4 (25.7)	13.5 (14)	38 (38)	63	8.5	8.4	3
	4250R/L	16	250	257	180	47.625 (60)	25.4 (25.7)	13.5 (14)	38 (38)	63	8.5	13.8	3
	4315R/L	20	315	322	240	47.625 (60)	25.4 (25.7)	13.5 (14)	38 (38)	63	8.5	21.6	4

() Metric size

Available inserts

		SNCN		SNKN							
											
Designation		Cermel	Coated						Uncoated	page	
		CN2500 CN30	CN5330	NCM325 NCM535	NCM545 PC2010	PC3700	PC6510	PC9530 PC9540	PC5300 PC5400		ST30A G10 H01
SNCN	1204ENN			●						●	E23
SNKN	1204ENN						●				E25

Available arbors

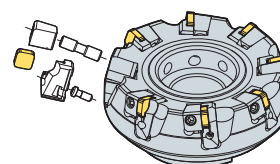
Designation		General arbor	NC arbors	
			EN	ENM
EF (EFM)	4080R/L	NT*□□ (M/U)-FMA25.4-25-□□	BT**□□ -FMA25.4-□□	FMC27
	4100R/L	NT*□□ (M/U)-FMA31.75-□□	BT**□□ -FMA31.75-□□	FMC32
	4125R/L	NT*□□ (M/U)-FMA38.1-□□	BT**□□ -FMA38.1-□□	FMB40
	4160R/L	NT*□□ (M/U)-FMA50.8-□□	BT**□□ -FMA50.8-□□	FMB40
	4200R/L	NT*□□ (M/U)-FMA47.625-25, KCP-8***	BT**□□ -FMA47.625-□□	FMB60
	4250R/L	NT*□□ (M/U)-FMA47.625-25, KCP-8***	BT**□□ -FMA47.625-□□	FMB60
	4315R/L	KCP-8*** (Center ring plug)		

*□□-NT number **□□-BT number ***Over milling 5

Recommended cutting condition

Workpiece	Cutting condition		Grades
	vc (m/min)	fz (mm/t)	
P	190~320	0.05~0.20	NCM325 PC3700 ST30A
	161~270	0.05~0.20	
	80~140	0.05~0.20	
M	90~150	0.05~0.20	PC9530
K	140~230	0.05~0.30	PC6510 G10
	50~90	0.05~0.30	

Assembling



Parts

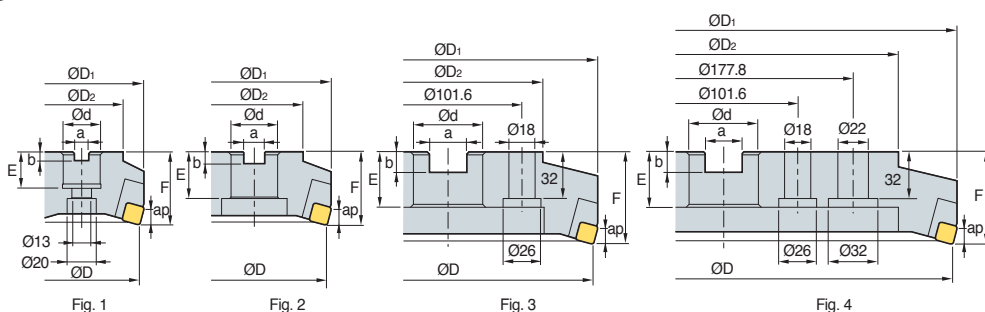
Specification					
Ø80~Ø315	LEN4R/L	WENR/L WENR1*/L1*	DHA0830 DHA0825*	LTX0512	HW40

* : Ø80~Ø100

Available inserts **E23, E25** Available arbors and bolt **E426~E428**



EPN(M)4000



AA
75°

• AR: 7°
• RR: 0°

(mm)

Designation			ØD	ØD1	ØD2	Ød	a	b	E	F	ap	 kg	Fig.
EPN (EPNM)	4080R/L	5	80	86	57	25.4 (27)	9.5 (12.4)	6 (7)	25 (22)	50	9	1.4	1
	4100R/L	6	100	107	67	31.75 (32)	12.7 (14.4)	8 (8)	32 (28)	50	9	2.1	2
	4125R/L	8	125	132	87	38.1 (40)	15.9 (16.4)	10 (9)	38 (30)	63	9	3.8	2
	4160R/L	10	160	166	107	50.8 (40)	19.0 (16.4)	11 (9)	38 (30)	63	9	5.7	2
	4200R/L	12	200	206	130	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	9	8.2	3
	4250R/L	16	250	256	180	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	9	13.5	3
	4315R/L	20	315	321	240	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	9	21.1	4

()Metric size

Available inserts



Designation		Cermet	Coated											Uncoated			page
		CN2500 CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A	G10	H01	
SPCN	1203EDR	●	●	●									●	●	●	E26	
	1203EDL												●				
	1203EDR-G														●		
	1203EDER-RH							●		●							
	1203EDSR-RH							●									
	1203EDTR-RH																
	1203EDR-S20								●								
SPKN	1203EDSR-MU						●									E27	
	1203EDSR-SU						●			●	●						
	1203EDSL-SU						●										
SPKR	1203EDSR-MX		●	●												E27	
	1203EDSL-MX																
SPEX	1203EDR/L-1															E26	

Available arbors

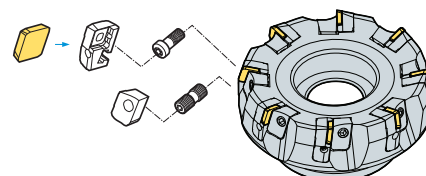
Designation		General arbor	NC arbors	
			EPN	EPNM
EPN (EPNM)	4080R/L	NT*□□ (M/U)-FMA25.4-25	BT**□□ -FMA25.4-□□	FMC27
	4100R/L	NT*□□ (M/U)-FMA31.75-□□	BT**□□ -FMA31.75-□□	FMC32
	4125R/L	NT*□□ (M/U)-FMA38.1-□□	BT**□□ -FMA38.1-□□	FMB40
	4160R/L	NT*□□ (M/U)-FMA50.8-□□	BT**□□ -FMA50.8-□□	FMB40
	4200R/L	NT*□□ (M/U)-FMA47.625-25, KCP-8***	BT**□□ -FMA47.625-□□	FMB60
	4250R/L	NT*□□ (M/U)-FMA47.625-25, KCP-8***	BT**□□ -FMA47.625-□□	FMB60
	4315R/L	KCP-8*** (Center ring plug)		

*□□-NT number **□□-BT number ***Over milling 5

Recommended cutting condition

Workpiece	Cutting condition		Grades
	vc (m/min)	fz (mm/t)	
P	190~320	0.05~0.20	NCM325 PC3700 ST30A
	161~270	0.05~0.20	
	80~140	0.05~0.20	
M	90~150	0.05~0.20	PC9530
K	140~230	0.05~0.30	PC6510 G10
	50~90	0.05~0.30	

Assembling



Parts

Specification	Locator	Wedge	Wedge screw	Locator screw	Wrench
Ø80~Ø315	LEPN4R/L LEPN4R1*/L1*	WEPN4R/L	DHA0821F DHA0817F*	LTX0514	HW40

Available inserts **E26, E27**

Available arbors and bolt **E426~E428**

* : Ø80~Ø100

EPN(M)5000+

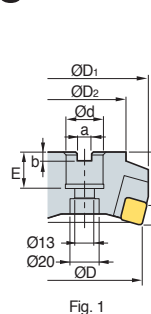


Fig. 1

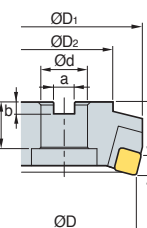


Fig. 2

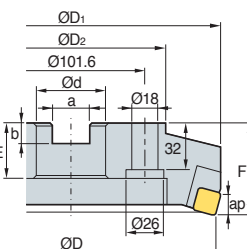


Fig. 3

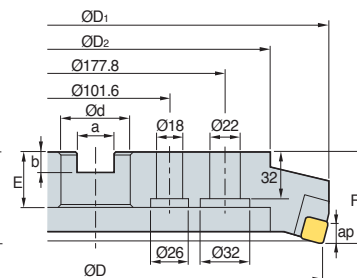


Fig. 4



AA
75°

• AR: 7°
• RR: 0°

(mm)

Designation		ØD	ØD1	ØD2	Ød	a	b	E	F	ap	kg	Fig.
EPN	5080R/L+	5	80	91	60	25.4 (27)	9.5 (12.4)	6 (7)	25 (22)	63	1.7	1
(EPNM)	5100R/L+	6	100	110	70	31.75 (32)	12.7 (14.4)	8 (8)	32 (28)	63	2.5	1
	5125R/L+	8	125	134	90	38.1 (40)	15.9 (16.4)	10 (9)	38 (30)	63	3.8	2
	5160R/L+	10	160	169	110	50.8 (40)	19.0 (16.4)	11 (9)	38 (30)	63	5.5	2
	5200R/L+	12	200	209	150	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	8.0	3
	5250R/L+	16	250	259	230	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	14.8	3
	5315R/L+	20	315	324	270	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	22.4	4

() Metric size

Available inserts



Designation		Cermet								page
		CN2500	CN30	NC330	NCM325	NCM535	NCM545	PC2010	PC3700	
SPCN	150412T									
	1504EDR	●	●							
	1504EDSR									
	1504EDL							●		
	1504EDR-G									● E26
	1504EDER-RH								●	
	1504EDSR-RH							●		
	1504EDTR-RH									
SPKN	1504EDR-S20							●		
	1504EDSR-MU							●		
	1504EDSR-SU							●	● ●	E27
SPKR	1504EDSL-SU							●		
	1504EDR-MX		●							E27
SPEX	1504EDSR-MX									
	1504EDR/L-1									E26

Available arbors

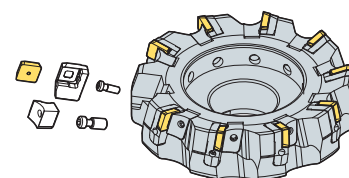
Designation	General arbor	NC arbors	
		EPN	EPNM
EPN	5080R/L+	NT*□□(MU)-FMA25.4-25	BT**□□-FMA25.4-□□ FMC27
(EPNM)	5100R/L+	NT*□□(MU)-FMA31.75-□□	BT**□□-FMA31.75-□□ FMC32
	5125R/L+	NT*□□(MU)-FMA38.1-□□	BT**□□-FMA38.1-□□ FMB40
	5160R/L+	NT*□□(MU)-FMA50.8-□□	BT**□□-FMA50.8-□□ FMB40
	5200R/L+	NT*□□(MU)-FMA47.625-25, KCP-8***	BT**□□-FMA47.625-□□ FMB60
	5250R/L+	NT*□□(MU)-FMA47.625-25, KCP-8***	BT**□□-FMA47.625-□□ FMB60
	5315R/L+	KCP-8*** (Center ring plug)	

*□□-NT number **□□-BT number ***Over milling 5

Recommended cutting condition

Workpiece	Cutting condition		Grades
	vc (m/min)	fz (mm/t)	
P	190~320	0.05~0.20	NCM325 PC3700 ST30A
	161~270	0.05~0.20	
	80~140	0.05~0.20	
M	90~150	0.05~0.20	PC9530
K	140~230	0.05~0.30	PC6510 G10
	50~90	0.05~0.30	

Assembling



Parts

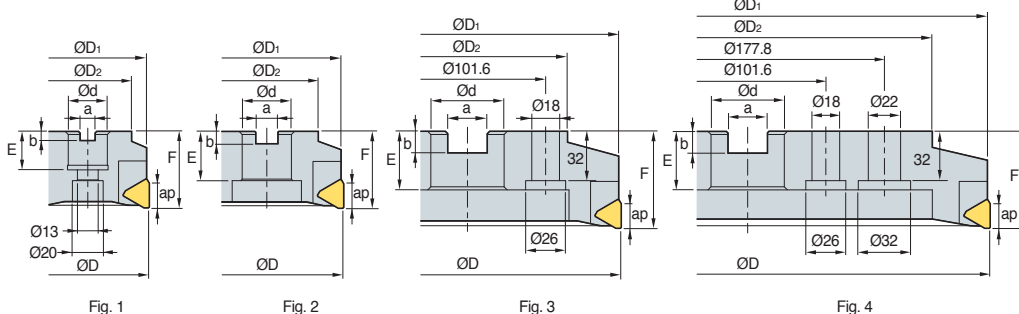
Specification	Locator	Wedge	Wedge screw	Locator screw	Wrench
Ø80~Ø315	LEPN5R/L LEPN5R1*/L1*	WHP55R/L	WHX0817 WHX0813*	LTX0514	HW40

* : Ø80

Available inserts E26, E27 Available arbors and bolt E426~E428



PF(M)4000



AA
90°

• AR: 15°
• RR: 14°

(mm)

Designation		ØD	ØD1	ØD2	Ød	a	b	E	F	ap		Fig.
PF (PFM)	4080R/L	4	80	79	57	25.4 (27)	9.5 (12.4)	6 (7)	25 (22)	50	1.2	1
	4100R/L	4	100	97	67	31.75 (32)	12.7 (14.4)	8 (8)	32 (28)	50	1.8	2
	4125R/L	7	125	122	87	38.1 (40)	15.9 (16.4)	10 (9)	38 (30)	63	3.1	2
	4160R/L	9	160	158	107	50.8 (40)	19.0 (16.4)	11 (9)	38 (30)	63	5.6	2
	4200R/L	11	200	197	130	47.625 (60)	25.4 (25.7)	13.5 (14)	38 (38)	63	8.8	3
	4250R/L	15	250	247	180	47.625 (60)	25.4 (25.7)	13.5 (14)	38 (38)	63	16	3
	4315R/L	19	315	311	240	47.625 (60)	25.4 (25.7)	13.5 (14)	38 (38)	63	22	4

() Metric size

Available inserts

TFCN



Designation	Cermet		Coated						Uncoated	page
	CN2500	CN30	NC5330	NCM925	NCM635	NCM645	PC2010	PC3700	PC6510	
TFCN 2203PFR										E28
2203PFL										

Available arbors

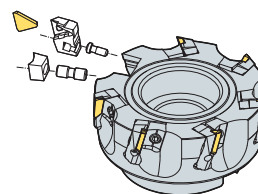
Designation	General arbor	NC arbors	
		PF	PFM
PF (PFM)	4080R/L	NT*□□ (M/U)-FMA25.4-25	BT**□□-FMA25.4-□□ FMC27
	4100R/L	NT*□□ (M/U)-FMA31.75-□□	BT**□□-FMA31.75-□□ FMC32
	4125R/L	NT*□□ (M/U)-FMA38.1-□□	BT**□□-FMA38.1-□□ FMB40
	4160R/L	NT*□□ (M/U)-FMA50.8-□□	BT**□□-FMA50.8-□□ FMB40
	4200R/L	NT*□□ (M/U)-FMA47.625-25, KCP-8***	BT**□□-FMA47.625-□□ FMB60
	4250R/L	NT*□□ (M/U)-FMA47.625-25, KCP-8***	BT**□□-FMA47.625-□□ FMB60
	4315R/L	KCP-8*** (Center ring plug)	

*□□-NT number **□□-BT number ***Over milling 5

Recommended cutting condition

Workpiece	Cutting condition		Grades
	vc (m/min)	fz (mm/t)	
P	190~320	0.05~0.20	NCM325 PC3700 ST30A
	161~270	0.05~0.20	
	80~140	0.05~0.20	
M	90~150	0.05~0.20	PC9530
K	140~230	0.05~0.30	PC6510 G10
	50~90	0.05~0.30	

Assembling



Parts

Specification					
Ø80~Ø315	LPF4R/L LPF4R1**/L1**	WPFR/L	DHA0821F DHA0817F*	LTX0512	HW40

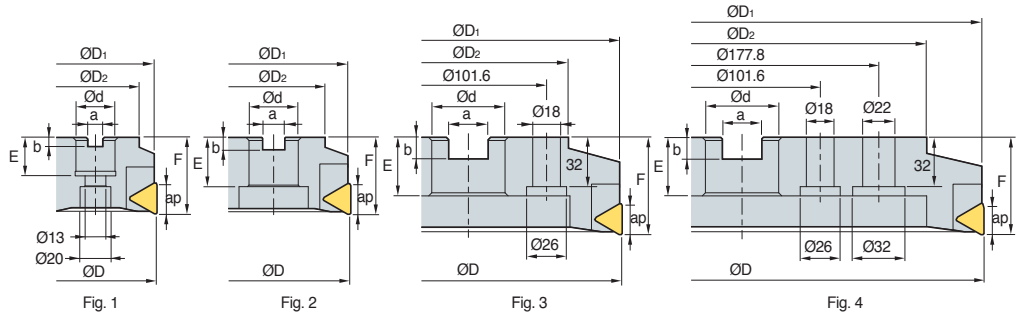
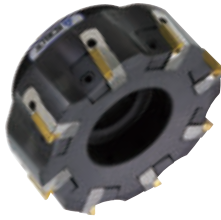
Available inserts **E28** Available arbors and bolt **E426~E428**

* : Ø80~Ø100 / ** : Ø80~Ø125



Milling

PPN(M)4000



AA
90°

•AR : 7°
•RR : 0°

(mm)

Designation			ØD	ØD ₁	ØD ₂	Ød	a	b	E	F	ap	 kg	Fig.
PPN (PPNM)	4080R/L	5	80	79	57	25.4 (27)	9.5 (12.4)	6 (7)	25 (22)	50	18	1.3	1
	4100R/L	6	100	99	67	31.75 (32)	12.7 (14.4)	8 (8)	32 (28)	50	18	1.9	2
	4125R/L	8	125	124	87	38.1 (40)	15.9 (16.4)	10 (9)	38 (30)	63	18	3.5	2
	4160R/L	10	160	158	107	50.8 (40)	19.0 (16.4)	11 (9)	38 (30)	63	18	5.6	2
	4200R/L	12	200	198	130	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	18	8.1	3
	4250R/L	16	250	248	180	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	18	13.3	3
	4315R/L	20	315	313	240	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	18	21.4	4

() Metric size

Available inserts

TPCN		TPKN-SU		TPKN-MU		TPKR-MX					
											
Designation		Cermet	Coated						Uncoated	page	
		CN2500 CN30	NC5330 NCM325	NCM335 NCM535	NCM545 PC3700	PC6510 PC9530	PC9540 PC5300	PC5400	ST30A G10 H01		
TPCN	2204PDR	●	●						●	●	E28
	2204PDR-G									●	
	2204PDL								●		
	2204PDSR			●							
	2204PDTR										
	2204PDR-RH										
	2204PDER-RH					●		●			
	2204PDSR-RH					●					
2204PDR-S20						●					
TPKN	2204PDSR-MU					●					E29
	2204PDSR-SU					●		●	●		
	2204PDSL-SU					●					
TPKR	2204PDR-MX		●								E29
	2204PDSR-MX		●	●							
	2204PPR-MX										

Available arbors

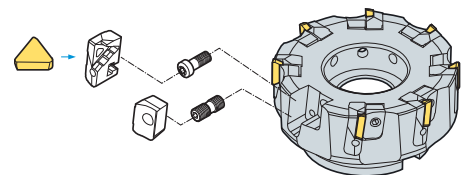
Designation	General arbor	NC arbors	
		PPN	PPNM
PPN 4080R/L	NT*□□ (MU)-FMA25.4-25	BT**□□-FMA25.4-□□	FMC27
(PPNM) 4100R/L	NT*□□ (MU)-FMA31.75-□□	BT**□□-FMA31.75-□□	FMC32
4125R/L	NT*□□ (MU)-FMA38.1-□□	BT**□□-FMA38.1-□□	FMB40
4160R/L	NT*□□ (MU)-FMA50.8-□□	BT**□□-FMA50.8-□□	FMB40
4200R/L	NT*□□ (MU)-FMA47.625-25, KCP-8***	BT**□□-FMA47.625-□□	FMB60
4250R/L	NT*□□ (MU)-FMA47.625-25, KCP-8***	BT**□□-FMA47.625-□□	FMB60
4315R/L	KCP-8*** (Center ring plug)		

*□□-NT number **□□-BT number ***Over milling 5

Recommended cutting condition

Workpiece	Cutting condition		Grades
	vc (m/min)	fz (mm/t)	
P	190~320	0.05~0.20	NCM325 PC3700 ST30A
	161~270	0.05~0.20	
	80~140	0.05~0.20	
M	90~150	0.05~0.20	PC9530
K	140~230	0.05~0.30	PC6510 G10
	50~90	0.05~0.30	

Assembling



Parts

Specification	Locator	Wedge	Wedge screw	Locator screw	Wrench
Ø80~Ø315	LPPN4R/L LPPN4R1*/L1*	WPPN4R/L	DHA0821F DHA0817F*	LTX0514	HW40

* : Ø80~Ø100

Available inserts E28, E29 Available arbors and bolt E426~E428

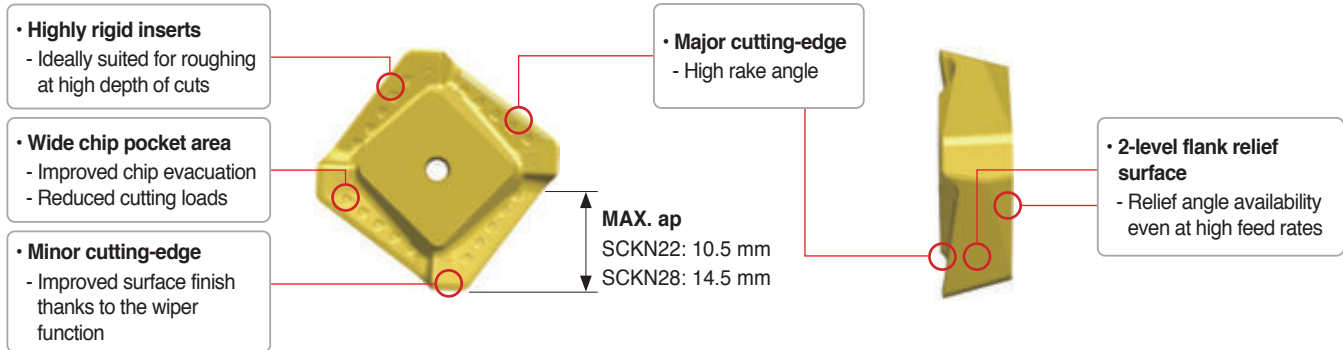


Highly rigid inserts for roughing

Mill-max Heavy **new**

- Productivity - Cutting time is reduced by the cutting-edge design specialized for rough facing at high depth of cuts
- High rigidity - The highly rigid inserts and cutter seams prevent tool breakage in rough facing
- Clamping stability- The wedge-type clamping system, which is easy-to-use and strong, reduces time for replacing inserts, and improves clamping stability

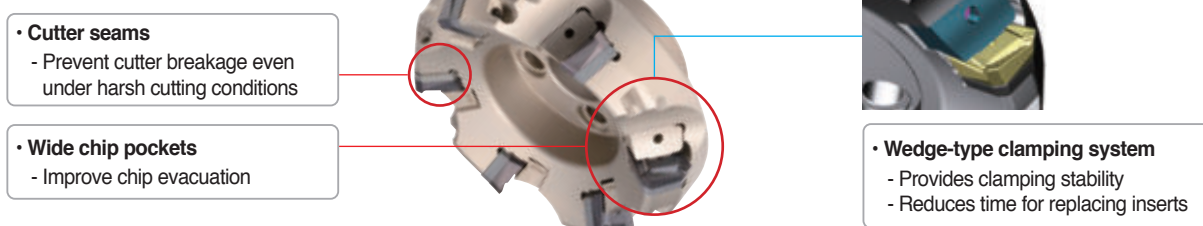
Features of insert



Features of chip breakers

Insert	Cutting-edge	Uses	Features
MM		For roughing	Highly rigid chip breaker ideally suited for roughing at high depth of cuts

Features of cutter



Recommended cutting condition

	Workpiece	Grades	Cutting condition		
			vc (m/min)	fz (mm/t)	ap (mm)
P	Low carbon steel/Mild steel	PC5300, NC5340, NCM535	140~270	0.2~0.4	2.0~10.0 [SCKN22], 3.0~14.0 [SCKN28]
	High carbon steel	PC5300, NC5340, NCM535	100~220	0.2~0.4	2.0~10.0 [SCKN22], 3.0~14.0 [SCKN28]
	Alloy steel	PC5300, NC5340, NCM535	100~180	0.2~0.4	2.0~10.0 [SCKN22], 3.0~14.0 [SCKN28]
M	Stainless steel	PC5300, NC5340, NCM535	90~180	0.2~0.4	2.0~10.0 [SCKN22], 3.0~14.0 [SCKN28]
K	Cast iron	PC5300, NC5340, NCM535	100~180	0.2~0.4	2.0~10.0 [SCKN22], 3.0~14.0 [SCKN28]

HDDCM 7000/9000 new

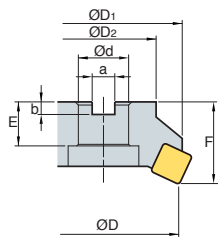


Fig. 1

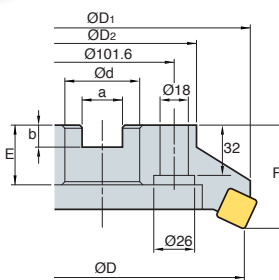


Fig. 2

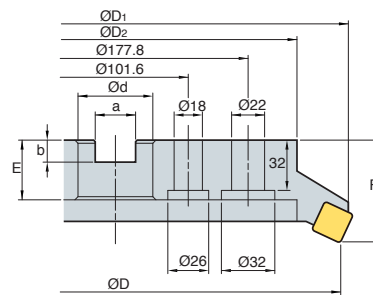


Fig. 3



AA
55°

• AR: 15°
• RR: 5°

(mm)

Designation			ØD	ØD1	ØD2	Ød	a	b	E	F	ap	 kg	Fig.
HDDCM	7125R/L-5	5	125	135.6	90	40	16.4	9	32	63	10.5	3.43	1
	7160R/L-6	6	160	169.8	110	40	16.4	9	32	63	10.5	4.89	2
	7160R/L-8	8	160	169.8	110	40	16.4	9	32	63	10.5	4.62	2
	7200R/L-8	8	200	209.2	130	60	25.7	14	38	80	10.5	8.49	2
	7200R/L-10	10	200	209.2	130	60	25.7	14	38	80	10.5	8.74	2
	7250R/L-10	12	250	258.6	180	60	25.7	14	38	80	10.5	13.44	2
	7250R/L-12	10	250	258.6	180	60	25.7	14	38	80	10.5	13.41	2
	7315R/L-12	12	315	323.2	240	60	25.7	14	38	80	10.5	21.69	3
7315R/L-14	14	315	323.2	240	60	25.7	14	38	80	10.5	21.41	3	
HDDCM	9125R/L-5	5	125	140.4	90	40	16.4	9	32	63	14.5	3.4	1
	9160R/L-6	6	160	177.6	110	40	16.4	9	32	80	14.5	6.39	2
	9200R/L-8	8	200	213.6	130	60	25.7	14	38	80	14.5	8.76	2
	9250R/L-10	10	250	265	180	60	25.7	14	38	80	14.5	13.84	2
	9250R/L-12	12	250	265	180	60	25.7	14	38	80	14.5	13.41	2
	9315R/L-12	12	315	327.4	240	60	25.7	14	38	80	14.5	21.02	3

Available inserts

SCKN-MM



Designation			Cermet		Coated								Uncoated			page		
			CN2500	CN30	NC5330	NCM325	NCM535	NCM545	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400		ST30A	G10
7000 type	SCKN	220715DDSR-MM				●			●				●					E19
9000 type	SCKN	280920DDSR-MM																

Recommended cutting condition

Workpiece	Cutting condition		Grades
	vc (m/min)	fz (mm/t)	
P	140~270 100~220 100~180	0.2~0.4	NC5340 NCM535
M	90~180		
K	100~180		

Parts

Specification					
Ø125~Ø315 (7000 type)	WHD7R/L	WHX0817	SS64DPR	FTGA0614	HW40
Ø125~Ø315 (9000 type)	WHD9R/L	WHX0817	SS84DPR	FTGA0818	HW40

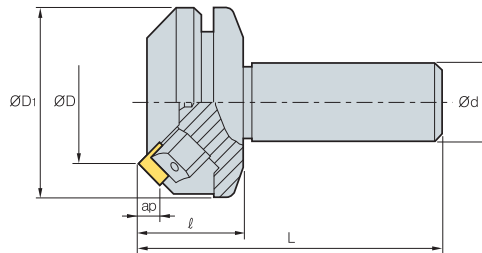
Available arbors

Designation	General arbor
HDDCM 7125R/L-5	NT*□□(M/U)-FMC40
7160R/L-6	
7160R/L-8	
7200R/L-8	NT*□□(M/U)-FMC60
7200R/L-10	
7250R/L-10	
7250R/L-12	
7315R/L-12	
7315R/L-14	
9125R/L-5	NT*□□(M/U)-FMC40
9160R/L-6	
9200R/L-8	
9250R/L-10	NT*□□(M/U)-FMC60
9250R/L-12	
9315R/L-12	

*□□-NT number **□□-BT number ***Over milling 5



ADS4000

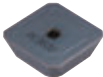
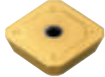
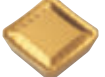

AA
45°

• AR: 15°
• RR: -3°

(mm)

Designation		ØD	ØD1	Ød	ℓ	L	ap	
ADS	4050R/L	3	50	75	32	40	120	6.5
	4050R/L-S42	3	50	75	42	40	120	6.5
	4063R/L	4	63	87	32	40	120	6.5
	4063R/L-S42	4	63	87	42	40	120	6.5

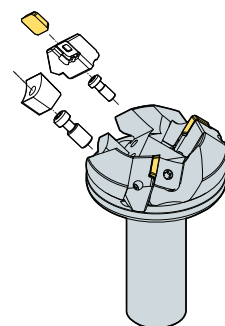
Available inserts

SDCN		SDKN-MU		SDKN-SU		SDKR-MX					
											
Designation		Cermet	Coated						Uncoated	page	
		CN2500 CN30	NC5330	NCM325 NCM335	NCM535 NCM545	PC3700 PC6510	PC9530 PC9540	PC5300 PC5400	ST30A G10 H01		
SDCN	42M									●	E19
	42M-G									●	
	42MT	●	●		●					●	
	42MT-RH										
	42MT-S20						●				
	1203AEEN										
	1203AEEN-RH										
	1203AESN										
1203AESN-RH											
SDKN	1203AESN-MU					●					E20
	1203AESN-SU					●		●	●		
SDKR	1203AESN-MX										E20
	1203AETN-MX										
	1203AEN-MX			●							

Recommended cutting condition

Workpiece	Cutting condition		Grades
	vc (m/min)	fz (mm/t)	
P	190~320	0.05~0.20	NCM325 PC3700 ST30A
	161~270	0.05~0.20	
	80~140	0.05~0.20	
M	90~150	0.05~0.20	PC9530
K	140~230	0.05~0.30	PC6510 G10
	50~90	0.05~0.30	

Assembling

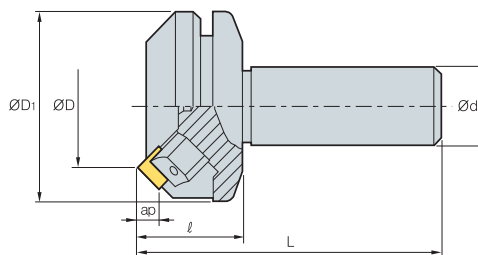


Parts

Specification	Locator	Wedge	Wedge screw	Locator screw	Wrench
Ø50~Ø63	LASS4R/L	WASR/L	WTX0817	LTX0512	TW25

Available inserts E19, E20

ADS5000



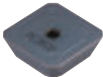
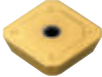
AA
45°

• AR: 15°
• RR: -3°

(mm)

Designation			ØD	ØD ₁	Ød	ℓ	L	ap	 kg
ADS	5050R/L	3	50	75	32	40	120	8.5	1.9
	5050R/L-S42	3	50	75	42	40	120	8.5	2.3
	5063R/L	4	63	87	32	40	120	8.5	2.4
	5063R/L-S42	4	63	87	42	40	120	8.5	2.8

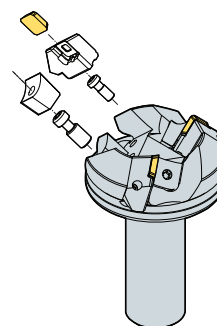
Available inserts

SDCN		SDKN-MU		SDKN-SU		SDKR-MX										
																
Designation		Cermet	Coated										Uncoated		page	
		CN2500 CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A G10 H01		
SDCN	53M														●	E19
	53M-G														●	
	53MT	●		●										●		
	53MT-RH															
	53MT-S20								●							
	1504AEEN															
	1504AEEN-RH								●		●					
	1504AESN															
1504AESN-RH								●							E20	
SDKN	1504AESN-MU							●								E20
	1504AESN-SU							●		●	●					
SDKR	1504AESN-MX			●												
	1504AETN-MX															
	1504AEN-MX			●												

Recommended cutting condition

Workpiece	Cutting condition		Grades
	vc (m/min)	fz (mm/t)	
P	190~320	0.05~0.20	NCM325 PC3700 ST30A
	161~270	0.05~0.20	
	80~140	0.05~0.20	
M	90~150	0.05~0.20	PC9530
K	140~230	0.05~0.30	PC6510 G10
	50~90	0.05~0.30	

Assembling



Parts

Specification					
Ø50~Ø63	LASS5R/L	WASR/L	WTX0817	LTX0512	TW25

Available inserts E19, E20

PES2000/3000/4000

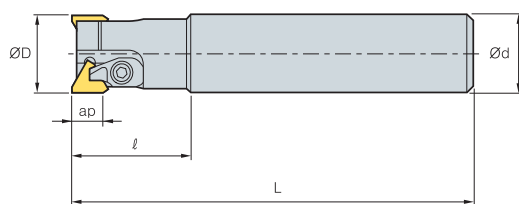


Fig. 1

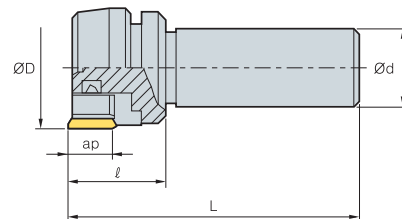


Fig. 2


AA
90°

- AR: 10°~15°
- RR: 2°~3°

(mm)

Designation			ØD	Ød	ℓ	L	ap		Fig.
PES	2020R/L	2	20	20	30	110	8	0.3	1
	2025R/L	2	25	25	35	120	8	0.5	1
	3030R/L	2	30	32	45	160	13	0.9	1
	3032R/L	2	32	32	45	160	13	1.0	1
	3033R/L	2	33	32	45	160	13	1.1	1
	3035R/L	2	35	32	45	160	13	1.2	1
	3036R/L	2	36	32	45	160	13	1.3	1
	3040R/L	2	40	32	45	160	13	1.4	1
	4050R/L	3	50	32	40	120	16.5	1.2	2
	4050R/L-S42	3	50	42	40	120	16.5	1.5	2
	4063R/L	4	63	32	40	120	16.5	1.5	2
	4063R/L-S42	4	63	42	40	120	16.5	1.8	2

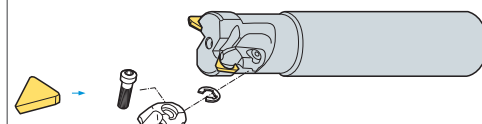
Available inserts

			TECN		TEEN												
																	
Designation			Cermet	Coated										Uncoated	page		
			CN2500 CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400		ST30A G10 H01	
2000 type	TECN	22R														E27	
		22TR	●											●			
3000 type	TECN	32R													●	E27	
		32TR	●		●									●			
		32TR-S20									●						
4000 type	TEEN	43R													●	E27	
		43R-G															●
		43TR	●●		●●				●					●			
		43TR-S20								●							
		43TR-Z												●			
		43TR-ZH								●							

Recommended cutting condition

Workpiece	Cutting condition		Grades
	vc (m/min)	fz (mm/t)	
P	190~320	0.05~0.20	NCM325 PC3700 ST30A
	161~270	0.05~0.20	
	80~140	0.05~0.20	
M	90~150	0.05~0.20	PC9530
K	140~230	0.05~0.30	PC6510 G10
	50~90	0.05~0.30	

Assembling

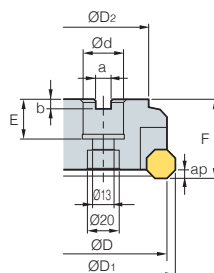


Parts

Specification	Locator	Wedge	Wedge screw	Locator screw	Wrench	Wrench	Clamp	Ring
Ø20~Ø25 (2000 type)	-	-	-	CHX0407	HW25L	-	CH4R1	ER03
Ø30~Ø40 (3000 type)	-	-	-	CHX0510	HW30L	-	CH5R1	ER04
Ø50~Ø63 (4000 type)	LPTS4R/L	WPTSR	DHA0815	LTX0512	-	HW40	-	-

Available inserts E27

AFO(M)4000



AA
45°

• AR: 15°
• RR: 5°

(mm)

Designation			ØD	ØD ₁	ØD ₂	Ød	a	b	E	F	ap	
AFO (AFOM)	4080R/L	5	80	88	60	25.4 (27)	9.5 (12.4)	6 (7)	25 (22)	50	3.3	1.4
	4100R/L	6	100	108	80	31.75 (32)	12.7 (14.4)	8 (8)	32 (28)	50	3.3	2.0
	4125R/L	8	125	133	100	38.1 (40)	15.9 (16.4)	10 (9)	38 (30)	63	3.3	3.1

()Metric size

Available inserts

	OFCW	OFKT-MF	OFKT-MM	OFKT-MA					
									
Designation	Cermet	Coated						Uncoated	page
	CN2500 CN30	NC5330 NCM325 NCM535 NCM545	PC2010 PC3700 PC6510 PC9530 PC9540 PC5300 PC5400	ST30A G10 H01					
OFCW	05T3SN								E14
	05T3FN								
	05T308FN								
OFKT	05T3SN-MF					●			E14
	05T308SN-MF								
	05T3SN-MM		●		●	●			
	05T308SN-MM								E15
	05T3FN-MA							●	
	05T3EN-MA								

Available arbors

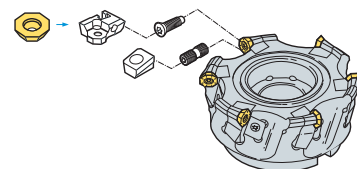
Designation	General arbor	NC arbors	
		AFO	AFOM
AFO (AFOM)	4080R/L	NT*□□(M/U)-FMA25.4-25	BT**□□-FMA25.4-□□ FMC27
	4100R/L	NT*□□(M/U)-FMA31.75-□□	BT**□□-FMA31.75-□□ FMC32
	4125R/L	NT*□□(M/U)-FMA38.1-□□	BT**□□-FMA38.1-□□ FMB40

*□□-NT number **□□-BT number ***Over milling 5

Recommended cutting condition

Workpiece	Cutting condition		Grades
	vc (m/min)	fz (mm/t)	
P	190~320	0.05~0.20	NCM325 PC3700 ST30A
	161~270	0.05~0.20	
	80~140	0.05~0.20	
M	90~150	0.05~0.20	PC9530
K	140~230	0.05~0.30	PC6510 G10
	50~90	0.05~0.30	

Assembling



Parts

Specification					
Ø80~Ø125	LAF04R/L	WAFO4R/L	DHA0815	FTKA0408	TW15S

Available inserts **E14, E15** Available arbors and bolt **E426~E428**



AFO(M)5000

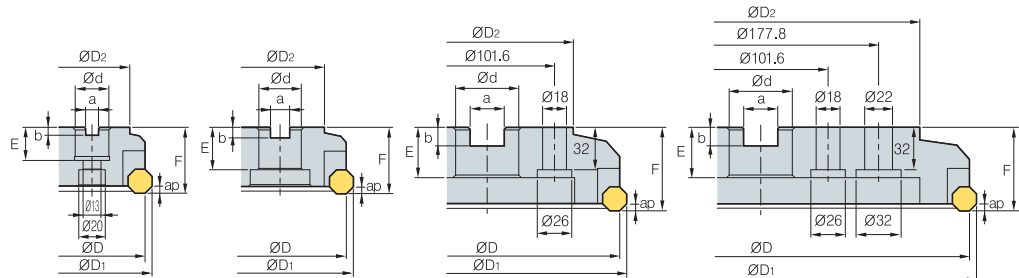


Fig. 1

Fig. 2

Fig. 3

Fig. 4


AA
45°

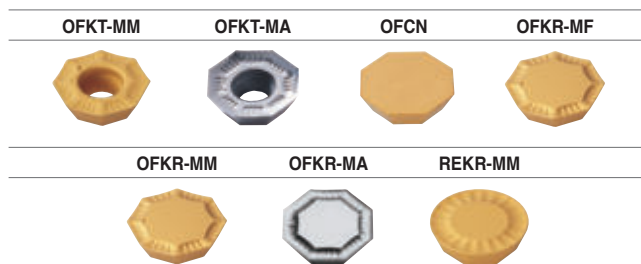
• AR: 15°
• RR: 5°

(mm)

Designation			ØD	ØD1	ØD2	Ød	a	b	E	F	ap	 kg	Fig.
AFO (AFOM)	5080R/L	5	80	91	60	25.4 (27)	9.5 (12.4)	6 (7)	25 (22)	50	4.8	1.4	1
	5100R/L	6	100	111	80	31.75	12.7 (14.4)	8 (8)	32 (28)	50	4.8	2.0	2
	5125R/L	8	125	136	100	38.1 (40)	15.9 (16.4)	10 (9)	38 (30)	63	4.8	3.1	2
	5160R/L	10	160	171	120	50.8 (40)	19.0 (16.4)	11 (9)	38 (30)	63	4.8	5.2	2
	5200R/L	12	200	211	130	47.625 (60)	25.4 (25.7)	13.5 (14)	38 (38)	63	4.8	7.5	3
	5250R/L	16	250	261	180	47.625 (60)	25.4 (25.7)	13.5 (14)	38 (38)	63	4.8	16.1	3
	5315R/L	20	315	326	240	47.625 (60)	25.4 (25.7)	13.5 (14)	38 (38)	63	4.8	22.8	4

()Metric size

Available inserts



Designation		Coated										page
		CN2500	CN30	NCM325	NCM335	NCM535	NCM545	PC3700	PC6510	PC9530	PC9540	
OFCN	0704SN											E14
	0704FN											
	070408SN											
	070408FN											
OFKR	0704SN-MM											E14
	070408SN-MM											
	0704FN-MA											
	0704EN-MA											
	0704SN-MM											
	070408SN-MM											
OFKT	0704SN-MM											E14
	0704FN-MA											
	0704EN-MA											
REKR	170400-MM											E17

Available arbors

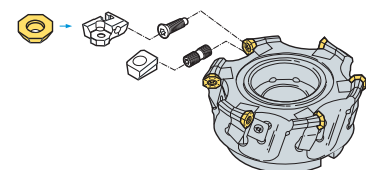
Designation	General arbor	NC arbors	
		AFO	AFOM
AFO 5080R/L	NT*□□ (M/U)-FMA25.4-25	BT**□□ -FMA25.4-□□	FMC27
AFO 5100R/L	NT*□□ (M/U)-FMA31.75-□□	BT**□□ -FMA31.75-□□	FMC32
5125R/L	NT*□□ (M/U)-FMA38.1-□□	BT**□□ -FMA38.1-□□	FMB40
5160R/L	NT*□□ (M/U)-FMA50.8-□□	BT**□□ -FMA50.8-□□	FMB40
5200R/L	NT*□□ (M/U)-FMA47.625-25, KCP-8***	BT**□□ -FMA47.625-□□	FMB60
5250R/L	NT*□□ (M/U)-FMA47.625-25, KCP-8***	BT**□□ -FMA47.625-□□	FMB60
5315R/L	KCP-8*** (Center ring plug)		

*□□-NT number **□□-BT number ***Over milling 5

Recommended cutting condition

Workpiece	Cutting condition		Grades
	vc (m/min)	fz (mm/t)	
P	190~320 161~270 80~140	0.05~0.20 0.05~0.20 0.05~0.20	NCM325 PC3700 ST30A
M	90~150	0.05~0.20	PC9530
K	140~230 50~90	0.05~0.30 0.05~0.30	PC6510 G10

Assembling



Parts

Specification	Locator	Wedge	Wedge screw	Locator screw	Wrench
Ø80~Ø315	LAF05R/L LAF05R*/L-1*	WEFR/L	DHA0821F	LTX0512	HW40

Available inserts E14~E17

Available arbors and bolt E426~E428

*: Ø80~Ø100



Milling

E

63

New serrated edge design increases productivity by reducing insert cutting load

Power Buster

- New tooling utilizing a specially designed serrated edge to increase productivity by reducing the cutting load.
- Double-sided 6 corner insert geometry ensures high rigidity, long tool life and cost efficiency
- The serrated edge divides the chips into smaller pieces. This feature provides excellent chip control, reduces interference of the cutter and ensures good durability of the cutter body.
- Two types of inserts are available-TNMX27 for PBA (Approach angle: 45°) and PBZ (AA: 80°), and TNMX30 for PBP (AA: 90°)
- Application: High depth of cut and feed rate (Steel, Cast iron)

Code system

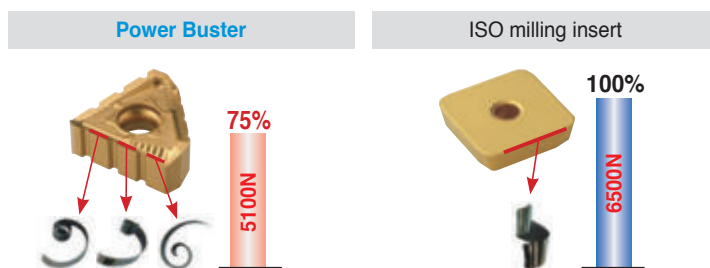
PB	A	C	M	5	250	R/L	M
Power Buster	AA	Cutter type	Arbor type	Inscribed circle of insert	Tool Dia.	Hand	No of tooth
Power buster	A: 45° Z: 80° P: 90°	C: Cutter	M: Metric No code: Inch	5: 15.875 6: 17.462	ØD: 250	R: Right L: Left	No code: Coarse pitch M: Close pitch 8: 8 teeth

Features of insert

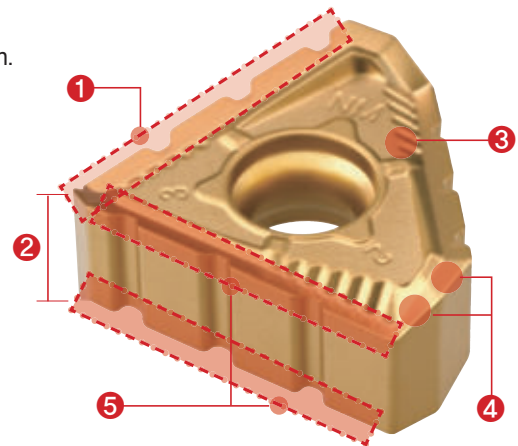
1 Major cutting-edge (Serrated edge)

- Low cutting force
- Ideal for chip control, divides chips into small pieces for proper chip evacuation.
- Ideal edge design for Steel and Cast iron rough milling

Comparison of chip control and cutting force

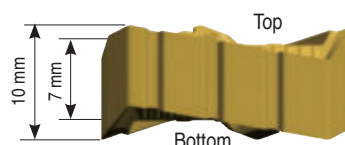


- **Workpiece** SCM440
- **Cutting condition** vc = 200 m/min, ap = 8 mm, ae = 90 mm, fz = 0.3 mm/t



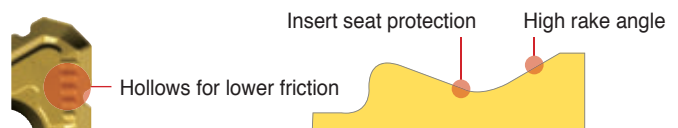
2 Thicker insert

- Thick insert guarantees high rigidity
- Balanced insert design for stable mounting



3 NM Chip breaker

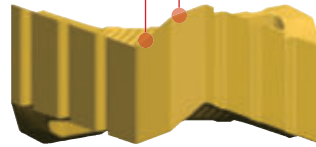
- High rake angle for low cutting force
- Good chip flow at various feed and depth of cut
- Inserts are protected with seats for a precise mounting
- Low friction and good heat evacuation at high depth cut



4 Insert shape applied to PBA/Z cutters (AA: 45°/80°)

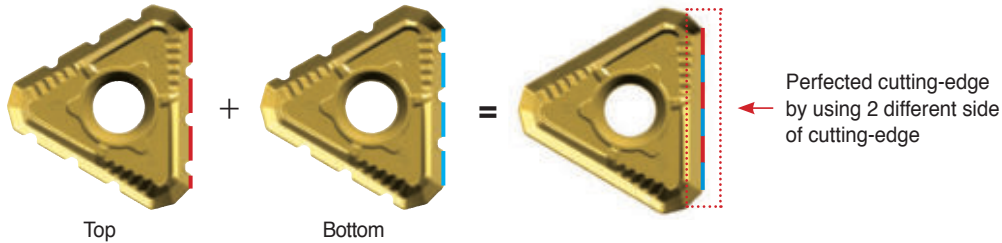
- High rake angle to avoid interference with chip
- Calculated minor cutting-edge angel for both AA 45° & 80° cutter

2nd minor cutting-edge for AA 80° 1st minor cutting-edge for AA 45°



5 Mirror system

- Cutting-edge on the both side of insert covers all overlapped cutting area



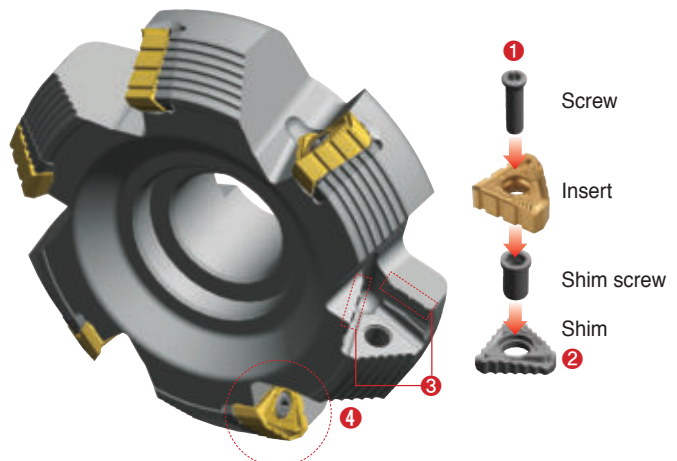
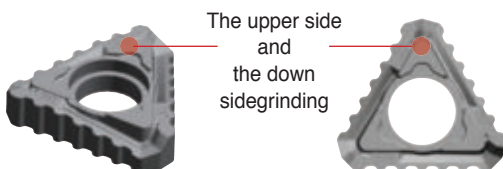
Features of cutter

1 Screw-on clamping system

- Simple and strong screw on clamping system

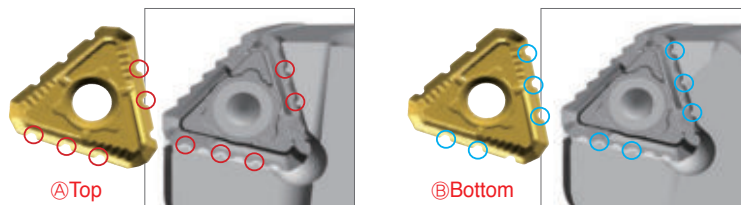
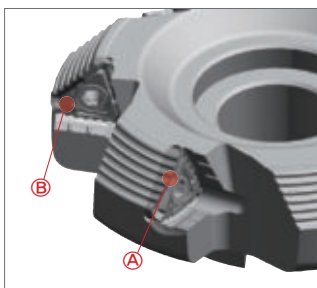
2 Better rigidity & Stable Assembly system

- The shim protects the cutter from insert damage
- High accuracy shim ensures tighter clamping



3 Foolproof System

- Insert serrations match pocket design to prevent improper seating and alignment

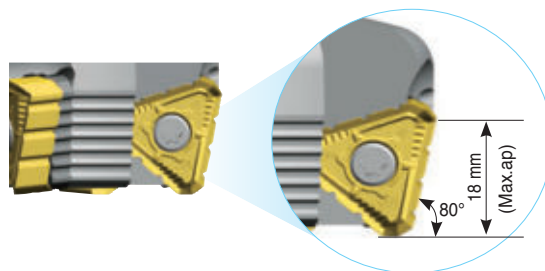
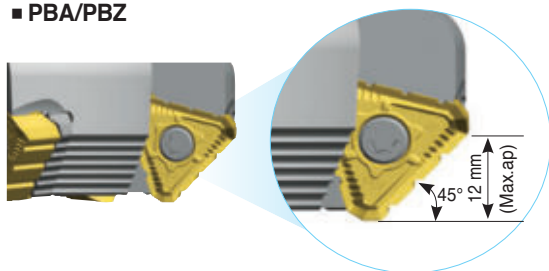


E Technical Information for Power Buster

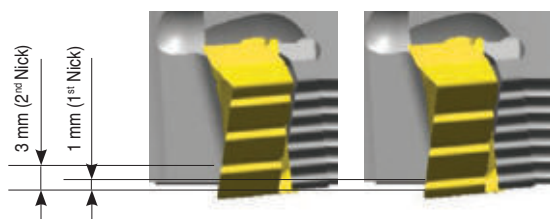
4 Multi-application system

- Same insert for multi-use (45° and 80°)

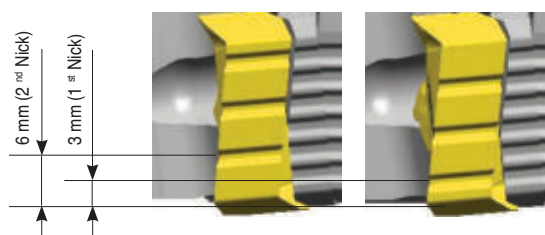
■ PBA/PBZ



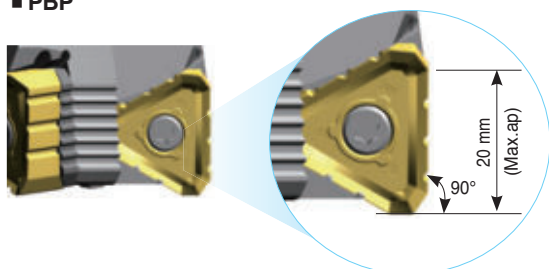
The serrations are effective with a depth of cut larger than 1 mm



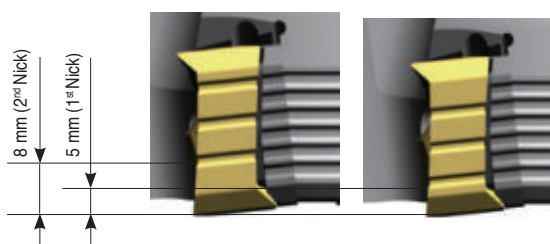
The serrations are effective with a depth of cut larger than 3 mm



■ PBP

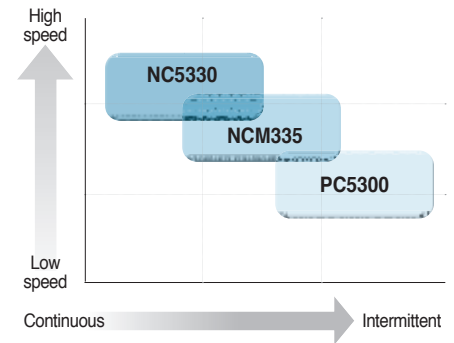


For the AA 90° cutter, nicks function properly at depth of cuts over 5 mm



Recommended cutting condition

ISO	Workpiece		Material	NC5330	NCM335	PC5300
				fz (mm/t)		
				0.1-0.2-0.3	0.1-0.2-0.3	0.1-0.2-0.3
				vc (m/min)		
P	Carbon steel	-	SUM22, C = 0.1~25	400	335	280
		-	C = 0.30~55	365	305	255
		-	C = 0.55~80	340	285	240
	Low alloy steel (Alloy constituent < 5%)	-	SCM415(H), SCM420, SCM440	280	235	195
		Hardened		165	140	115
	High alloy steel (Alloy constituent > 5%)	Annealed	SKD61	210	180	150
		Hardened	SKH51, SKH55	175	145	120
K	Gray cast iron	Low tensile	FC200, FC250	125	-	145
		Hight tensile	FC300, FC350	105	-	120
		Ferric	FCD400, FCD500	80	-	95
		Pearlitic	FCD600, FCD700	75	-	85

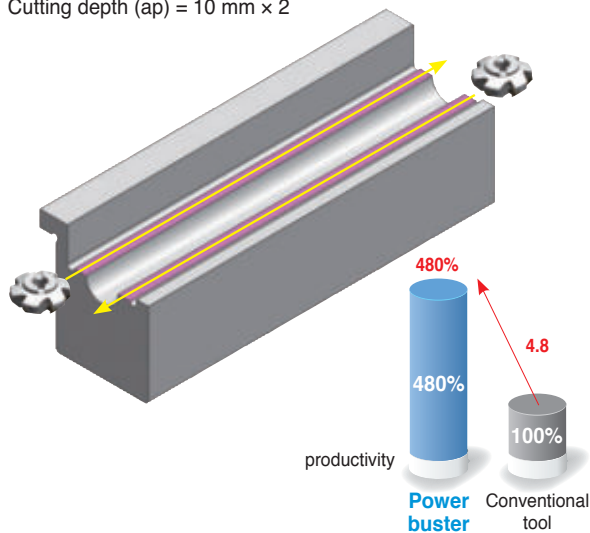


Power Buster test

■ Cylinder block for ship engine (Cast iron)

Cutting width (ae) = 160 mm x 2

Cutting depth (ap) = 10 mm x 2

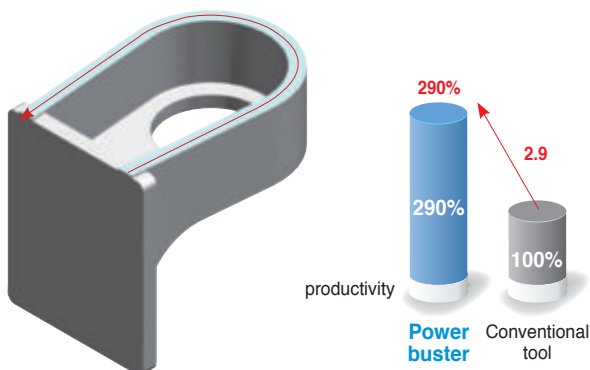


Item	Power buster	Conventional tool
Diameter (ØD)	200 mm	200 mm
	12 tooth	12 tooth
Grades	NC5330	PVD coating for Cast iron
vc	170 m/min	130 m/min
fz	0.24 mm/t	0.16 mm/t
ap	10 mm x 2 passes	4 mm x 5 passes
min	28.2 min/ea	137.5 min/ea
4.8 times productivity increased		• One-sided 4 corner insert (Without nick) • AA 45° cutter

■ Heavy machinery part (Alloy steel)

Cutting width (ae) = 35 mm

Cutting depth (ap) = 10 mm



Item	Power Buster	Conventional tool
Diameter (ØD)	125 mm	100 mm
	8 tooth	8 tooth
Grades	NCM335	PVD coating for Cast iron
vc	180 m/min	150 m/min
fz	0.15 mm/t	0.10 mm/t
ap	5 mm x 2 passes	2.5 mm x 4 passes
min	5 min/ea	14.7 min/ea
2.9 times productivity increased		• Double-sided 8 corner insert (Without nick) • AA 45° cutter

PBAC(M)5000

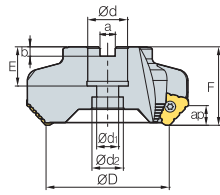


Fig. 1

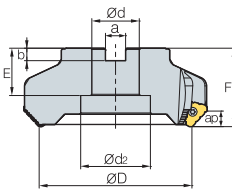


Fig. 2

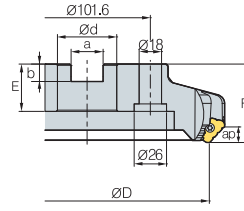


Fig. 3

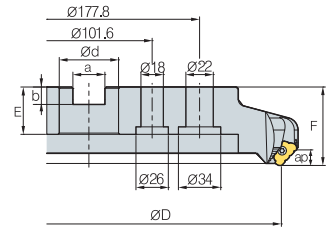


Fig. 4



AA
45°

• AR: -5°
• RR: -11°

(mm)

Designation				ØD	Ød	Ød1	Ød2	a	b	E	F	ap	Fig.
Coarse pitch	PBAC (PBACM)	5080R/L	4	80	25.4 (27)	14	20	9.5 (12.4)	6 (7)	25 (22)	50	12	1
		5100R/L	4	100	31.75 (32)	-	45	12.7 (14.4)	8 (8)	32 (28)	50	12	2
		5125R/L	6	125	38.1 (40)	-	56	15.9 (16.4)	10 (9)	38 (32)	63	12	2
		5160R/L	8	160	50.8 (40)	-	100	19 (16.4)	11 (9)	38 (32)	63	12	2
		5200R/L	10	200	47.625 (60)	-	-	25.4 (25.7)	14 (14)	38 (38)	63	12	3
		5250R/L	12	250	47.625 (60)	-	-	25.4 (25.7)	14 (14)	38 (38)	63	12	3
		5315R/L	14	315	47.625 (60)	-	-	25.4 (25.7)	14 (14)	38 (38)	63	12	4
Close pitch	PBAC (PBACM)	5080R/L-M	6	80	25.4 (27)	14	20	9.5 (12.4)	6 (7)	25 (22)	50	12	1
		5100R/L-M	6	100	31.75 (32)	-	45	12.7 (14.4)	8 (8)	32 (28)	50	12	2
		5125R/L-M	8	125	38.1 (40)	-	56	15.9 (16.4)	10 (9)	38 (32)	63	12	2
		5160R/L-M	10	160	50.8 (40)	-	100	19 (16.4)	11 (9)	38 (32)	63	12	2
		5200R/L-M	12	200	47.625 (60)	-	-	25.4 (25.7)	14 (14)	38 (38)	63	12	3
		5250R/L-M	14	250	47.625 (60)	-	-	25.4 (25.7)	14 (14)	38 (38)	63	12	3
		5315R/L-M	16	315	47.625 (60)	-	-	25.4 (25.7)	14 (14)	38 (38)	63	12	4

() Metric size

Available inserts

TNMX-NM



Designation		Cermet		Coated										Uncoated			page
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	
TNMX	2710AZNR-NM			●			●				●		●		●		E28
	2710AZNL-NM																

Available arbors

Designation		Available arbors	
		PBAC	PBACM
PBAC (PBACM)	5080R/L-□	BT□□-FMA25.4-□□	BT□□-FMC27-□□
	5100R/L-□	BT□□-FMA31.75-□□	BT□□-FMC32-□□
	5125R/L-□	BT□□-FMA38.1-□□	BT□□-FMB40-□□
	5160R/L-□	BT□□-FMA50.8-□□	BT□□-FMC40-□□
	5200R/L-□		
	5250R/L-□	BT□□-FMA47.625-□□	BT□□-FMB60-□□
	5315R/L-□		

Parts

Specification				
Ø80~Ø315	FTGA0518	ST53AZR	SHXN0712F	TW20-100

Available inserts E28 Available arbors and bolt E426~E428



PBZC(M)5000

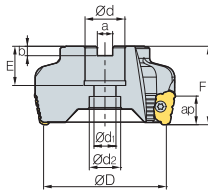


Fig. 1

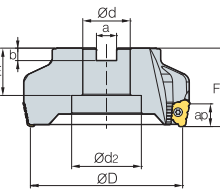


Fig. 2

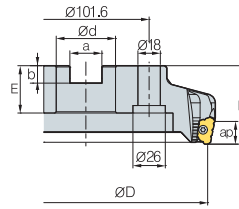


Fig. 3

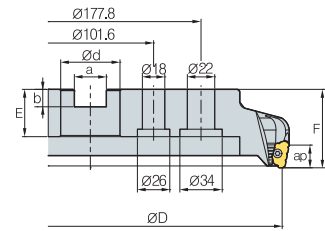


Fig. 4

AA
80°• AR: -5°
• RR: -12°

(mm)

Designation				ØD	Ød	Ød ₁	Ød ₂	a	b	E	F	ap	Fig.
Coarse pitch	PBZC (PBZCM)	5080R/L	4	80	25.4 (27)	14	20	9.5 (12.4)	6 (7)	25 (22)	50	18	1
		5100R/L	4	100	31.75 (32)	-	45	12.7 (14.4)	8 (8)	32 (28)	50	18	2
		5125R/L	6	125	38.1 (40)	-	56	15.9 (16.4)	10 (9)	38 (32)	63	18	2
		5160R/L	8	160	50.8 (40)	-	100	19 (16.4)	11 (9)	38 (32)	63	18	2
		5200R/L	10	200	47.625 (60)	-	-	25.4 (25.7)	14 (14)	38 (38)	63	18	3
		5250R/L	12	250	47.625 (60)	-	-	25.4 (25.7)	14 (14)	38 (38)	63	18	3
Close pitch	PBZC (PBZCM)	5315R/L	14	315	47.625 (60)	-	-	25.4 (25.7)	14 (14)	38 (38)	63	18	4
		5080R/L-M	6	80	25.4 (27)	14	20	9.5 (12.4)	6 (7)	25 (22)	50	18	1
		5100R/L-M	6	100	31.75 (32)	-	45	12.7 (14.4)	8 (8)	32 (28)	50	18	2
		5125R/L-M	8	125	38.1 (40)	-	56	15.9 (16.4)	10 (9)	38 (32)	63	18	2
		5160R/L-M	10	160	50.8 (40)	-	100	19 (16.4)	11 (9)	38 (32)	63	18	2
		5200R/L-M	12	200	47.625 (60)	-	-	25.4 (25.7)	14 (14)	38 (38)	63	18	3

() Metric size

Available inserts

TNMX-NM



Designation		Cermet		Coated											Uncoated			page	
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A		G10
TNMX	2710AZNR-NM			●			●				●		●		●				
	2710AZNL-NM																		E28

Available arbors

Designation		Available arbors									
		PBZC					PBZCM				
PBZC (PBZCM)	5080R/L-□	BT□□ -FMA25.4-□□					BT□□ -FMC27-□□				
	5100R/L-□	BT□□ -FMA31.75-□□					BT□□ -FMC32-□□				
	5125R/L-□	BT□□ -FMA38.1-□□					BT□□ -FMB40-□□				
	5160R/L-□	BT□□ -FMA50.8-□□					BT□□ -FMC40-□□				
	5200R/L-□	BT□□ -FMA47.625-□□					BT□□ -FMB60-□□				
	5250R/L-□										
	5315R/L-□										

Parts

Specification				
Ø80-Ø315	FTGA0518	ST53AZR	SHXN0712F	TW20-100

Available inserts **E28** Available arbors and bolt **E426~E428**

PBPCM6000 new

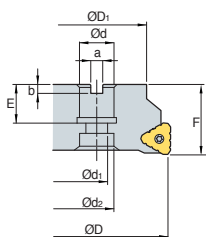
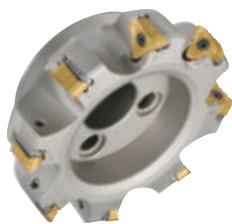


Fig. 1

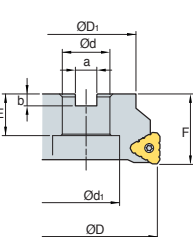


Fig. 2

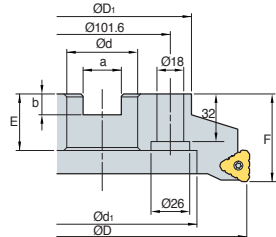


Fig. 3

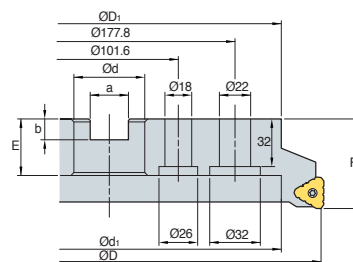


Fig. 4



AA
90°

- AR: -5°
- RR: -12°

(mm)

Designation	ØD	ØD1	Ød	Ød1	Ød2	a	b	E	F	ap	kg	Fig.
PBPCM 6080R-4	80	60	27	14	20	12.4	7	24	50	20	0.85	1
6100R-6	100	70	32	-	54	14.4	8	30	50	20	1.16	2
6125R-6	125	90	40	-	56	16.4	9	32	63	20	2.84	2
6160R-8	160	107	40	-	90	16.4	9	32	63	20	3.58	3
6200R-10	200	130	60	-	132	25.7	14	38	63	20	5.13	3
6250R-12	250	180	60	-	180	25.7	14	38	63	20	9.6	3
6315R-14	315	240	60	-	238	25.7	14	38	63	20	16.85	4

Available inserts

TNMX-NM



Designation		Cermet		Coated											Uncoated			page	
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A		G10
TNMX	3012PNR-NM																		E28

Available arbors

Designation	General arbor
PBPCM 6080R-4	BT□□-FMC27-□□
6100R-6	BT□□-FMC32-□□
6125R-6	BT□□-FMC40-□□
6160R-8	
6200R-10	
6250R-12	BT□□-FMC60-□□
6315R-14	

Parts

Specification	Screw	Shim	Shim Screw	Wrench
Ø80~Ø315	FTGA0518	ST53PNR	SHXN0712F	TW20-100

Available inserts E28 Available arbors and bolt E426~E428



Rich Mill series is one of innovations that provides more available cutting-edges by double-sided insert and longer tool life for our customers

Rich Mill Series

- Rich Mill series is one of the innovations that provides more available cutting-edges with double-sided inserts and longer tool life for our customers
- The unique geometry and special cutting-edge guarantees low cutting loads and long tool life
- Rich Mill series has a wide application range from steel and stainless steel to cast iron and aluminum
- Applying negative inserts makes it even stronger and provides longer tool life
- Rich Mill series has both screw-on clamping system and latch clamping system

Code system

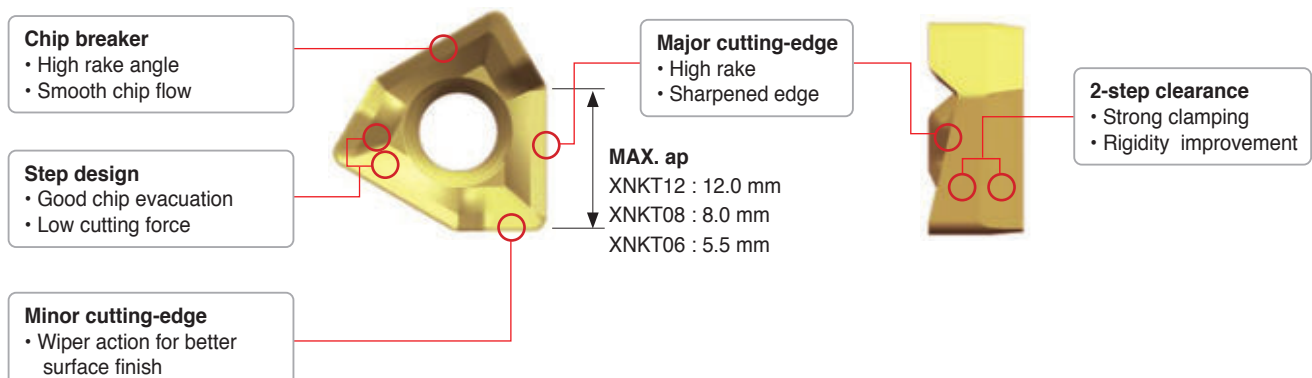
RM16	A	C	M	4	100	H	R – M	
Number of edges	Approach angle	Tool type	Arbors type	Inscribed circle of insert	Tool Dia.	Coolant type	Hand	Pitch type
RM3 : Number of edges-3	A : 45°	C : Cutter	M : Metric	3 : 9.525	Ø100	H : Thru-Hole	R : Right	M : Close
RM4 : Number of edges-4	D : 30°	S : Shank	A : Inch	4 : 12.7		No code : None	L : Left	H : Extra Close
RM6 : Number of edges-6	E : 15°			5 : 15.875				
RM8-X : Number of edges-8 (High helix)	F : 5°							
	P : 0°							
RM14 : Number of edges-14	Q : 2°							
RM16 : Number of edges-16	Z : Plunging							
RMT8 : Number of edges-8 (Latch Clamp)								
RMH8 : Number of edges-8 (Shim)								
RMR : Number of edges-8 (Round Type)								

Rich Mill RM3

Features

- High Quality - True 90° shouldering operation
- High Productivity - Strong thick insert and 3-face clamping ensure stable operation even tough condition.
- High Economics - Long tool life due to optimized manufacturing process

Features of insert



Rich Mill RM3

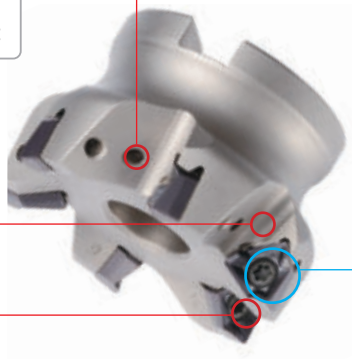
Features of cutter

Through coolant system
 • Longer tool life due to direct cooling injection into the cutting-edge of insert

Excellent chip evacuation

Wide chip pocket

Simple Screw-on system



Perfect perpendicularity

90°



3-face clamping seat

Full flat bottom seat

Strong clamping

Through coolant system

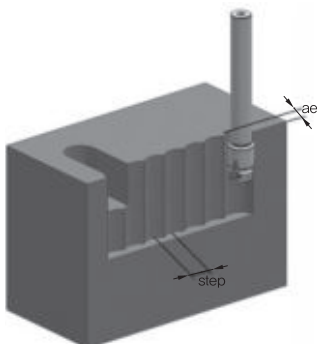
- Exclusive through coolant bolt required
- Effective coolant distribution directly to cutting-edge
- Coolant supporting arbor required



Features of chip breakers

Insert	Cutting-edge	Uses	Features
MA		Aluminum	Superior cutting quality for aluminum due to sharp cutting-edge and buffed surface
ML		Light	Superior cutting quality for light and light cutting, difficult-to-cut material machining through the low cutting load of chip breaker
MM		General	Suitable for various cutting due to special shape design for general cutting

Max step in plunging



Type	max. ae
3000 type	2.5
4000 type	3.0
5000 type	3.5

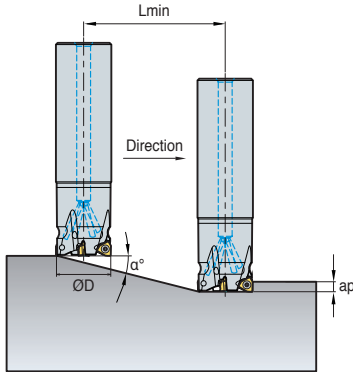
ae	Cutter Diameter (Ø)											
	Ø20	Ø21	Ø25	Ø26	Ø32	Ø33	Ø40	Ø50	Ø63	Ø80	Ø100	Ø125
	max step (mm)											
1	8.5	8.9	9.7	10	11.1	11.3	12.4	14	15.7	17.7	19.9	22.2
2	12	12.3	13.5	13.8	15.4	15.7	17.4	19.5	22	24.9	28	31.3
3	-	-	-	-	-	-	21	23.7	26.8	30.3	34.1	38.2



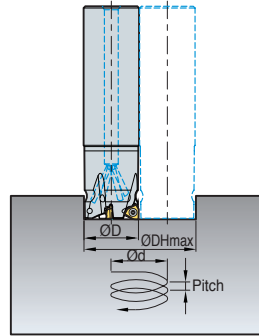
Rich Mill RM3

Ramping and helical cutting

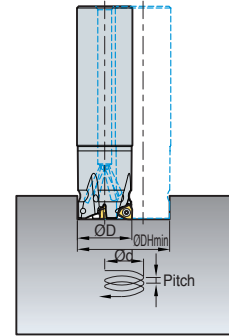
1. Ramping



2. Helical cutting for blind hole



3. Helical cutting for through hole



(mm)

Type	Tool Dia. ØD	ap	1. Ramping		2. Helical cutting for blind hole				3. Helical cutting for through hole	
			Max. rake angle α°	Lmin	Min. machining Dia. ØDHmin	Max. pitch	Max. machining Dia. ØDHmax	Max. pitch	Min. machining Dia. ØDHmin	Max. pitch
3000 type	20	5.5	15.5	19.8	36.5	5.5	38.5	5.5	33.0	5.5
	21	5.5	14.0	22.1	38.5	5.5	40.5	5.5	35.0	5.5
	25	5.5	10.0	31.2	46.5	5.5	48.5	5.5	43.0	5.5
	26	5.5	9.5	32.9	48.34	5.5	51.0	5.5	45.0	5.5
	32	5.5	6.5	48.3	60.5	5.5	62.5	5.5	59.0	5.5
	33	5.5	6.0	52.3	62.5	5.5	64.5	5.5	59.0	5.5
	40	5.5	4.5	69.9	46.5	5.5	78.5	5.5	73.0	5.5
	50	5.5	3.5	89.9	96.5	5.5	98.5	5.5	93.0	5.5
	63	5.5	2.5	126.0	122.5	5.5	124.5	5.5	119.0	5.5
	80	8	2.0	157.5	156.5	5.5	158.5	5.5	153.0	5.5
	100	8	1.5	210.0	194.5	5.5	198.5	5.5	193.0	5.5
	125	8	1.0	315.1	246.5	5.5	248.5	5.5	243.0	5.5
4000 type	25	8	24.0	18.0	44.5	8.0	48.0	8.0	38.5	8.0
	32	8	13.0	34.7	58.5	8.0	62.0	8.0	52.5	8.0
	33	8	12.0	37.6	60.02	8.0	64.4	8.0	54.5	8.0
	40	8	8.5	53.5	74.5	8.0	78.0	8.0	68.5	8.0
	50	8	6.0	76.1	94.5	8.0	98.0	8.0	88.5	8.0
	63	8	4.0	114.4	120.5	8.0	124.0	8.0	114.5	8.0
	80	8	3.0	152.6	154.5	8.0	158.0	8.0	148.5	8.0
	100	8	2.0	229.1	194.5	8.0	198.0	8.0	188.5	8.0
	125	8	1.5	305.5	244.5	7.7	248.0	7.8	238.5	7.7
5000 type	80	12	5.5	124.6	153.5	12.0	158.0	12.0	146.5	12.0
	100	12	4.5	152.5	193.5	12.0	198.0	12.0	159.5	12.0
	125	12	3.5	196.2	242.5	12.0	248.0	12.0	236.5	12.0

* Please be sure to use cutting oil or air for ramping and helical machining
 $L_{min} = ap / \tan(\alpha^\circ)$

Rich Mill RM3

Application guideline for grade

Workpiece		P		M	K	N
		Carbon steel	Alloy steel	Stainless steel	Cast iron	Aluminum
Chip breaker	First choice	MM	MM	ML	ML	MA
	Second choice	ML	ML	-	MM	-
Grades	High speed machining	PC3700	PC3700	PC5300	PC6510	H01
	General machining	PC5400	PC5300	PC5400	PC5300	
	Interrupted machining	PC5400	PC5400	PC5400	PC5400	

Recommended cutting condition

• RM3 3000 type

Workpiece		Grades	Cutting conditions				Cutting conditions			
			vc (m/min)	fz (mm/t)	max ap (mm)	Available inserts	vc (m/min)	fz (mm/t)	max ap (mm)	Available inserts
P	steel	PC3700	160~270	0.25~0.05	5.5	XNKT0604□□ PNSR-MM	160~270	0.2~0.05	5.5	XNKT0604□□ PNER-ML
		PC5300	150~240	0.25~0.05			150~240	0.25~0.05		
		PC5400	130~210	0.25~0.05			130~210	0.25~0.05		
M	Stainless steel	PC5300	90~150	0.2~0.05			90~150	0.1~0.05		
		PC5400	70~120	0.2~0.05			70~120	0.1~0.05		
K	Cast iron	PC6510	140~230	0.3~0.08			140~230	0.25~0.08		
		PC5300	120~200	0.3~0.08			120~200	0.25~0.08		

※ Maximum cutting condition: vc = 350 m/min, fz = 0.5 mm/t according to cutting environment

• RM3 4000 type

Workpiece		Grades	Cutting conditions				Cutting conditions			
			vc (m/min)	fz (mm/t)	max ap (mm)	Available inserts	vc (m/min)	fz (mm/t)	max ap (mm)	Available inserts
P	steel	PC3700	160~270	0.3~0.05	8.0	XNKT0805□□ PNSR-MM	160~270	0.25~0.05	8.0	XNKT0805□□ PNER-ML
		PC5300	150~240	0.3~0.05			150~240	0.25~0.05		
		PC5400	130~210	0.3~0.05			130~210	0.25~0.05		
M	Stainless steel	PC5300	90~150	0.25~0.05			90~150	0.2~0.05		
		PC5400	70~120	0.25~0.05			70~120	0.2~0.05		
K	Cast iron	PC6510	140~230	0.35~0.08			140~230	0.3~0.08		
		PC5300	120~200	0.35~0.08			120~200	0.3~0.08		
N	Aluminum	H01	400~1200	0.4~0.1		XNCT0805□□PNFR-MA	-	-	-	-

※ Maximum cutting condition: vc = 350 m/min, fz = 0.5 mm/t according to cutting environment

• RM3 5000 type

Workpiece		Grades	Cutting conditions				Cutting conditions			
			vc (m/min)	fz (mm/t)	max ap (mm)	Available inserts	vc (m/min)	fz (mm/t)	max ap (mm)	Available inserts
P	steel	PC3700	160~270	0.3~0.05	12.0	XNKT1206□□ PNSR-MM	160~270	0.25~0.05	12.0	XNKT1206□□ PNER-ML
		PC5300	150~240	0.3~0.05			150~240	0.25~0.05		
		PC5400	130~210	0.3~0.05			130~210	0.25~0.05		
M	Stainless steel	PC5300	90~150	0.25~0.05			90~150	0.2~0.05		
		PC5400	70~120	0.25~0.05			70~120	0.2~0.05		
K	Cast iron	PC6510	140~230	0.35~0.08			140~230	0.3~0.08		
		PC5300	120~200	0.35~0.08			120~200	0.3~0.08		
N	Aluminum	H01	400~1200	0.4~0.1		XNCT1206□□PNFR-MA	-	-	-	-

※ Maximum cutting condition: vc = 350 m/min, fz = 0.5 mm/t according to cutting environment



Rich Mill RM4

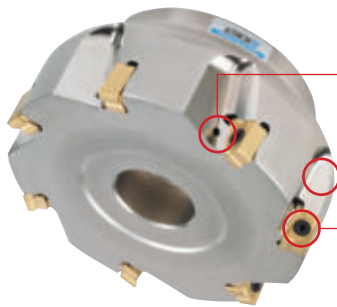
Features

- Economical 4 cutting-edges by using double-sided insert
- RM4, as a multi-functional milling tool, offers economical 4 cutting-edges by using an innovative double-sided insert
- Special designed chip breaker consists of high rake angle and strong cutting-edge to decrease the cutting load
- RM4 is multi-functional tool that can cover facing, side cutting, shouldering, slotting, ramping & helical cutting
- Optimal matching of the special cutting-edge geometry with variety of new grades provides consistence & long tool life of insert



Features of cutter

- 4 cutting - edges can be used by using double-sided insert
- High rake angle chip breaker and cutting-edge can make smooth cutting with low cutting load
- Strong negative insert
- High efficiency, economical, multi-functional tool



Through coolant system

- Longer tool life due to direct cooling injection into the cutting-edge of insert

Wide chip pocket for better chip evacuation

Improving chip control

Simple screw on system

Features of insert

- Double-sided insert using 4 cutting-edges
- High rake angle chip breaker, cutting-edge
- Flexibility of product
- High efficiency, economical, multi-functional tool
- Negative insert has strong cutting-edge

Chip breaker

- High rake angle chip breaker
- Improving chip control

Step design

- Improving chip control
- Reducing cutting load

Minor cutting-edge

- Special design of cutting-edge to improve surface roughness

Major cutting-edge

- High rake angle chip breaker
- Better surface roughness

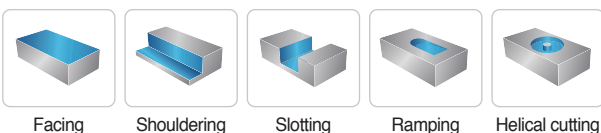
Concave design

- 4 cutting-edges
- Minimize interference

Clearance face

- Strong negative face
- Strong cutting-edge

Uses

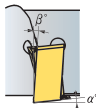
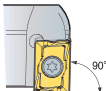


Rich Mill RM4

Features of chip breakers

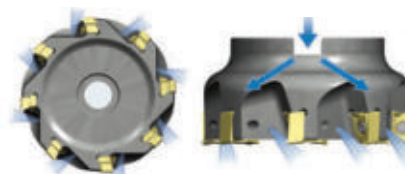
Insert	Cutting-edge	Uses	Features
MA		Aluminum, Light machining	With sharp edge application the better productivity has been accomplished, especially for Aluminum or low force cut
MF		Light cutting	Due to low cutting load, it is good for light cutting and difficult-to-cut material
MM		General cutting	It is suitable design for general milling

Setting configuration

Shape	Setting angle of insert	Features
		High rake chip breaker & positive setting angle for low cutting load → Improving machinability
		Multi applications for facing, shouldering, slotting, ramping, helical cutting, etc

Through coolant system

- By using on exclusive coolant bolt (hexagonal socket bolt) powerful cooling & better chip evacuation can be acquired
- To get optimal chip control, the direction of coolant injection has been designed to reach to each cutting-edge directly (through coolant arbor is required)

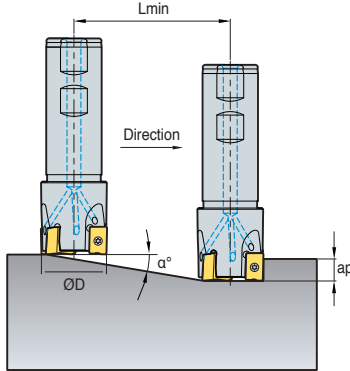


Through coolant system for decreasing cutting heat and good chip evacuation

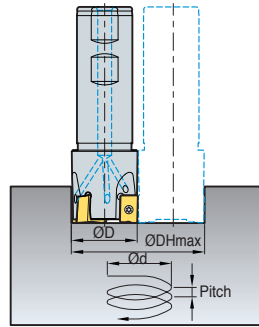
Rich Mill RM4

Ramping and helical cutting

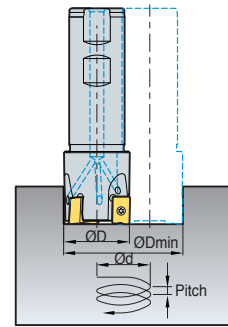
1. Ramping



2. Helical cutting for blind hole



3. Helical cutting for through hole



(mm)

Designation	Tool Dia. ØD	ap	1. Ramping		2. Helical cutting for blind hole				3. Helical cutting for through hole	
			Max. rake angle α°	Lmin	Min. machining Dia. ØDHmin	Max. pitch	Max. machining Dia. ØDHmax	Max. pitch	Min. machining Dia. ØDHmin	Max. pitch
RM4PS3014HR	14	9	4.5	125	25	2.7	27	3.1	19	1.3
RM4PS3016HR	16	9	3.5	160	29	2.5	31	2.7	23	1.4
RM4PS3018HR	18	9	3.0	185	33	2.4	35	2.7	27	1.5
RM4PS3020HR	20	9	2.7	204	37	2.5	39	2.7	31	1.6
RM4PS3025HR	25	9	1.8	301	47	2.1	49	2.3	41	1.6
RM4PS3032HR	32	9	1.2	451	61	1.9	63	2.0	55	1.5
RM4PS3040HR	40	9	0.9	616	77	1.8	79	1.8	71	1.5
RM4PS3050HR	50	9	0.6	843	97	1.5	99	1.5	91	1.3
RM4PC(M)3040HR	40	9	0.9	616	77	1.8	79	1.8	71	1.5
RM4PC(M)3050HR	50	9	0.6	843	97	1.5	99	1.5	91	1.3
RM4PC(M)3063HR	63	9	0.5	1123	123	1.6	125	1.6	117	1.4
RM4PC(M)3080HR	80	9	0.3	1508	157	1.2	159	1.2	151	1.1
RM4PC(M)3100HR	100	9	0.2	1910	197	1.0	199	1.0	191	0.9
RM4PS4032HR	32	14	2.5	229	59.5	3.0	62	4	49	2.0
RM4PS4040HR	40	14	2.0	286	75.5	3.0	78	4	65	2.0
RM4PS4050HR	50	14	2.0	286	95.5	4.0	98	5	85	3.5
RM4PS4063HR	63	14	2.0	286	121.5	5.0	124	5	111	5.0
RM4PC(M)4050HR	50	14	2.0	286	95.5	4.0	98	5	85	3.5
RM4PC(M)4063HR	63	14	2.0	286	121.5	5.0	124	5	111	5.0
RM4PC(M)4080HR	80	14	1.5	382	155.5	5.0	158	5	145	5.0
RM4PC(M)4100HR	100	14	1.0	573	195.5	4.5	198	5	185	4.0
RM4PC(M)4125HR	125	14	1.0	573	245.5	5.0	248	5	235	5.0
RM4PC(M)4160R	160	14	0.5	1146	315.5	3.5	318	4	305	3.5

* Please be sure to use cutting oil or air for ramping and helical machining
 $Lmin = ap / \tan(\alpha^\circ)$

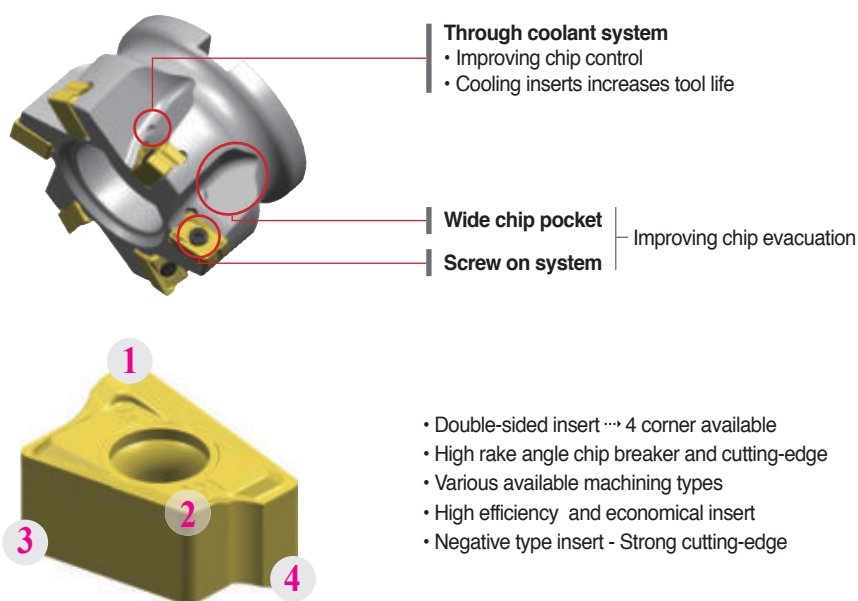
Recommended cutting condition

ISO	Grades	LNM(E)X100605PNR-MF		LNM(E)X100605PNR-MM		LNEX100605PNR-MA		Max-ap (mm)	LNM(E)X151008PNR-MF		LNM(E)X151008PNR-MM		LNEX151008PNR-MA		Max-ap (mm)
		vc (m/min)	fz (mm/t)	vc (m/min)	fz (mm/t)	vc (m/min)	fz (mm/t)		vc (m/min)	fz (mm/t)	vc (m/min)	fz (mm/t)	vc (m/min)	fz (mm/t)	
P	NCM535	-	-	-	-	-	-	9.0	150~300	0.05~0.30	120~300	0.05~0.35	150~300	0.03~0.20	14.0
	PC3700	150~300	0.05~0.25	120~300	0.05~0.30	150~300	0.03~0.20		150~300	0.05~0.30	120~300	0.05~0.35	150~300	0.03~0.20	
M	PC5300	120~180	0.05~0.25	100~180	0.05~0.30	120~200	0.03~0.20		120~180	0.05~0.30	100~180	0.05~0.3	120~200	0.03~0.20	
K	PC6510	150~300	0.08~0.30	120~300	0.08~0.35	-	-		150~300	0.08~0.35	120~300	0.08~0.35	-	-	

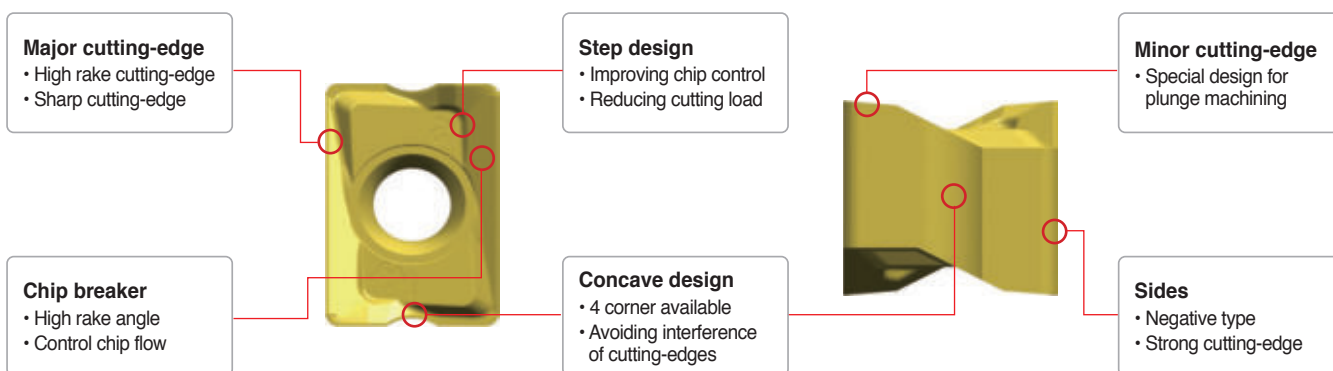
Rich Mill RM4Z

Features

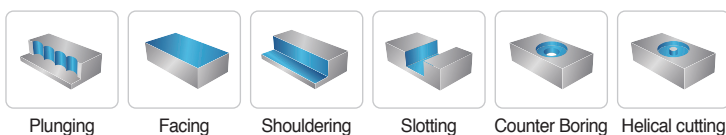
- Rich mill series RM4Z is a plunge mill for high efficiency vertical machining such as slotting and pocketing in roughing applications
- Rich mill series RM4Z is a highly efficient milling tool for plunging, shouldering and facing. It makes operations more economical with the use of its double-sided 4-corner insert
- Plunge machining reduces lead time for high productivity and precision machining.
- In plunging the max depth of RM4Z 3000 type is 9.0 mm and that of RM4Z 4000 type is 14.0 mm



Features of insert



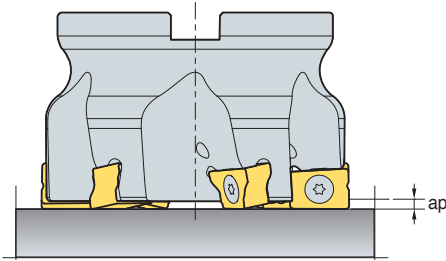
Uses



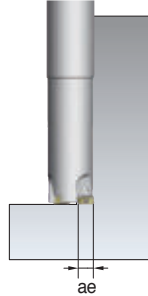
Rich Mill RM4Z

➤ The depth of cut by machining type

• In horizontal machining, Depth of cut = a_p (mm)

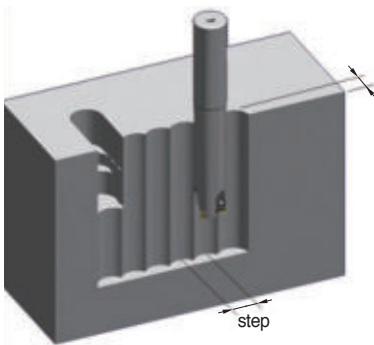


• In plunging, Depth of cut = a_e (mm)



RM4Z	Horizontality	Verticality	
	max a_p (mm)	max a_e (mm)	step
RM4Z3000	1.5	9	< 0.7D
RM4Z4000	2.5	14	< 0.7D

➤ Max step in plunging

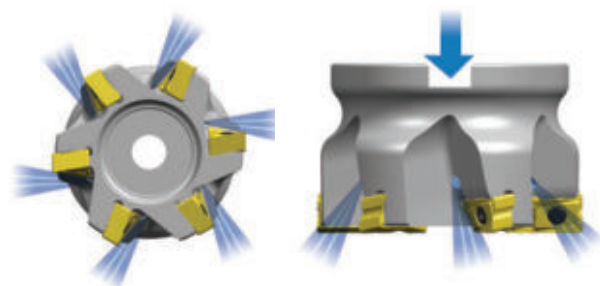


ae	Cutter Diameter (mm)								
	25	32	40	50	52	63	66	80	100
	Max step (mm)								
1	9.7	11.1	12.4	14	14.2	15.7	16.1	17.7	19.9
2	13.5	15.4	17.4	19.5	20	22	22.6	24.9	28
3	16.2	18.6	21	23.7	24.2	26.8	27.4	30.3	34.1
4	18.3	21.1	24	27.1	27.7	30.7	31.4	34.8	39.1
5	20	23.2	26.4	30	30.6	34	34.9	38.7	43.5
6	21.3	24.9	28.5	32.4	33.2	36.9	37.9	42.1	47.4
7	22.4	26.4	30.3	34.6	35.4	39.5	40.6	45.2	51
8	23.3	27.7	32	36.6	37.5	41.9	43	48	54.2
9	24	28.7	33.4	38.4	39.3	44	45.2	50.5	57.2
10	-	-	-	-	-	46	47.3	52.9	60
11	-	-	-	-	-	47.8	49.1	55.1	62.5
12	-	-	-	-	-	49.4	50.9	57.1	64.9
13	-	-	-	-	-	50.9	52.4	59	67.2
14	-	-	-	-	-	52.3	53.9	60.7	69.3

➤ Through coolant system

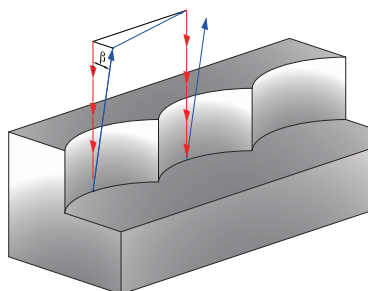
- Exclusive hexagonal coolant socket bolt provides excellent cooling and chip evacuation
- Direct coolant injection to cutting-edge improves cooling effectiveness
- Coolant type arbor should be used

*Coolant bolt is not included, it is for sale



Rich Mill RM4Z

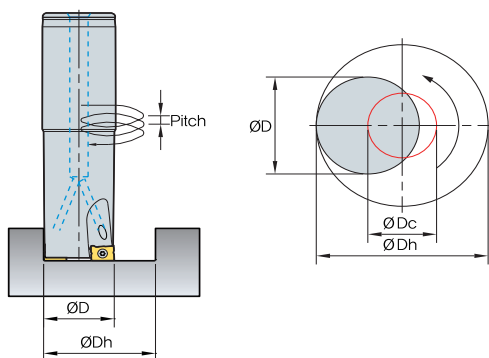
Programming tip



- Plunging feed direction
- Tool escape
- β Escape angle ($\beta \geq 1^\circ$)

• When your tool steps back after plunging, please get over 1° more escape angle

Helical machining



$$\text{ØDc} = \text{ØDh} - \text{ØD}$$

ØDc = Tool center path
 ØDh = Desired hole diameter
 ØD = Tool Dia.

(mm)

Designation	Diameter ØD (mm)	Helical data			
		Min. machining Dia. ØDHmin	Max. pitch	Max. machining Dia. ØDHmax	Max. pitch
RM4ZS 3025HR-L25	25	30	0.4	48	1.8
	3032HR-L32	32	0.3	62	0.9
	3040HR-L32	40	0.3	78	0.6
RM4ZCM 3040HR	40	59	0.3	78	0.6
	3050HR	50	0.3	98	0.5
	3052HR	52	0.3	102	0.5
RM4ZM 3025HR-M12	25	30	0.4	48	1.8
	3032HR-M16	32	0.3	62	0.9
	3040HR-M16	40	0.3	78	0.6
RM4ZCM 4063HR	63	95	0.5	124	1.0
	4066HR	66	0.5	130	1.0
	4080HR	80	0.5	158	0.8
	4100HR	100	0.3	198	0.5

Recommended cutting condition

ISO	Grades	LNM(E)X100605PNL-MM				LNM(E)X151008PNL-MM			
		vc (m/min)	fz (mm/t)	* max ae (mm)	** max ap (mm)	vc (m/min)	fz (mm/t)	* max ae (mm)	** max ap (mm)
P	PC3700	100~250	0.05~0.25	9	1.5	120~250	0.05~0.25	14	2.5
M	PC5300	100~250	0.08~0.30			120~250	0.08~0.30		
K	PC6510	80~180	0.05~0.20			100~180	0.05~0.20		

* max ae (mm): (Plunging) max. radial depth of cut

** max ap (mm): (Shouldering/Facing) max depth of cut



Rich Mill RM6

Features

- Stable clamping - 3 clamping surfaces on the side and strong clamping screws
→ Improves cutting stability
- High quality results - High precision, excellent perpendicularity, outstanding surface finish on the flank, accurate tolerance
- High productivity - High rake angle and sharp cutting-edges for lower cutting resistance
→ Ideal for high speed and high feed machining

Features of insert

Higher clamping stability

- Wide clamping areas and strong clamping screws for rigid clamping

High rake angle chip breaker

- Maintains stable clamping
- Induces smooth chip flow
→ Increases insert life

Wide minor cutting-edges

- Improved surface finish
- Enable multi-purpose machining incl. plunging

High rake cutting-edges

- Improved machinability and reduces cutting resistance

MAX. ap
WNGX08: 8.2 mm
WNGX04: 4.3 mm

3-level flank relief surface

- Enhances rigidity and enables stable clamping
→ Improves cutting stability

Features of cutter

Streamlined holder design

- Improved chip evacuation in deep shouldering and slotting

Strong clamping screws

- Strong clamping screws enable rigid clamping

Through coolant system

- Improved chip flow and tool life thanks to insert cooling

3-side supporting system

- Stable tool life

Rich Mill RM6

Features of chip breakers

Insert	Cutting-edge	Uses	Features
MA			For aluminum
ML			For light cutting
MM			For general cutting

Application guideline for grade

Workpiece		P		M	K	N
		Carbon steel	Alloy steel	Stainless steel	Cast iron	Non-ferrous metal
Shape	1st recommended	MM	MM	ML	ML	MA
	2nd recommended	ML	ML	-	MM	MA
Grades	High speed milling	PC3700	PC3700	PC5300	PC6510	H01
	General milling	PC5400	PC5300	PC5400	PC5300	H01
	Interrupted milling	PC5400	PC5400	PC5400	PC5400	H01

Recommended cutting condition

• WNGX04

Workpiece		Grades	WNGX040304PNSR-MM			WNGX040304PNER-ML			WNGX040304PNFR-MA		
			vc (m/min)	fz (mm/t)	max. ap(mm)	vc (m/min)	fz (mm/t)	max. ap(mm)	vc (m/min)	fz (mm/t)	max. ap(mm)
P	Steel	PC3700	160~270	0.25~0.05	4.3	160~270	0.20~0.05	4.3	-	-	4.3
		PC5300	150~240	0.25~0.05		150~240	0.25~0.05		-	-	
		PC5400	130~210	0.25~0.05		130~210	0.25~0.05		-	-	
M	Stainless steel	PC5300	90~150	0.20~0.05		90~150	0.10~0.05		-	-	
		PC5400	70~120	0.20~0.05		70~120	0.10~0.05		-	-	
K	Cast iron	PC6510	140~230	0.30~0.08		140~230	0.25~0.08		-	-	
		PC5300	120~200	0.30~0.08		120~200	0.25~0.08		-	-	
N	Non-ferrous metal	H01	-	-	-	-	-	-	500~1000	0.2~0.05	4.3

※ The above data refer to general cutting conditions and can be adjustable up to 300 m/min and 0.4 mm/t depending on user environment.

• WNGX08

Workpiece		Grades	WNGX080608PNSR-MM			WNGX080608PNER-ML			WNGX080608PNFR-MA		
			vc (m/min)	fz (mm/t)	max. ap(mm)	vc (m/min)	fz (mm/t)	max. ap(mm)	vc (m/min)	fz (mm/t)	max. ap(mm)
P	Steel	PC3700	160~270	0.25~0.05	8.2	160~270	0.20~0.05	8.2	-	-	8.2
		PC5300	150~240	0.25~0.05		150~240	0.25~0.05		-	-	
		PC5400	130~210	0.25~0.05		130~210	0.25~0.05		-	-	
M	Stainless steel	PC5300	90~150	0.20~0.05		90~150	0.10~0.05		-	-	
		PC5400	70~120	0.20~0.05		70~120	0.10~0.05		-	-	
K	Cast iron	PC6510	140~230	0.30~0.08		140~230	0.25~0.08		-	-	
		PC5300	120~200	0.30~0.08		120~200	0.25~0.08		-	-	
N	Non-ferrous metal	H01	-	-	-	-	-	-	500~1000	0.2~0.05	8.2

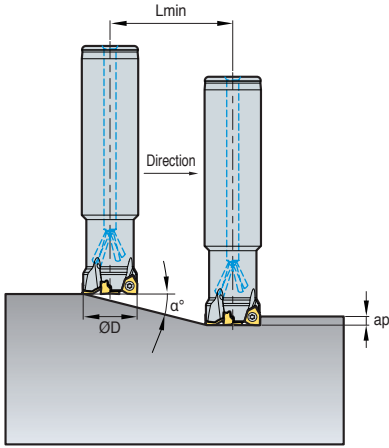
※ The above data refer to general cutting conditions and can be adjustable up to 300 m/min and 0.4 mm/t depending on user environment.



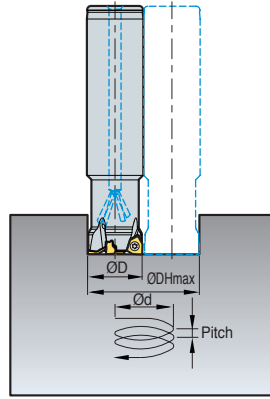
Rich Mill RM6

Ramping

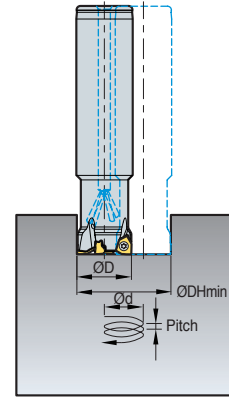
1. Ramping



2. Helical cutting for blind holes



3. Helical cutting for through holes



(mm)

Designation		Tool Dia. ØD	ap	1. Ramping		2. Helical cutting for blind holes				3. Helical cutting for through holes	
				Max. rake angle α°	Lmin	Min. machining Dia. ØDHmin	Max. pitch	Max. machining Dia. ØDHmax	Max. pitch	Min. machining Dia. ØDHmin	Max. pitch
RM6PS	032R-2W32-120-WN08	32	8	0.8	572.9	54	0.96	62	1.3	38.5	0.5
	040R-3W32-120-WN08	40	8	0.5	916.7	70	0.82	78	1.0	54.5	0.4
	050R-4W32-120-WN08	50	8	0.3	1527.9	90	0.66	98	0.8	74.5	0.3
RM6PCM	063R-22-6-WN08	63	8	0.2	2291.3	116	0.58	124	0.6	100.5	0.3
	080R-27-7-WN08	80	8	0.1	4583.7	150	0.38	158	0.4	134.5	0.2
	100R-32-8-WN08	100	8	0.1	4583.7	190	0.49	198	0.5	174.5	0.3
	125R-40-11-WN08	125	8	0.1	4583.7	240	0.63	248	0.6	224.5	0.3

$$Lmin = ap / \tan(\alpha^\circ)$$

Lmin: Cutting length at min. rake angle
ap: Axial depth of cut
α°: Available rake angle for ramping

Rich Mill RM8

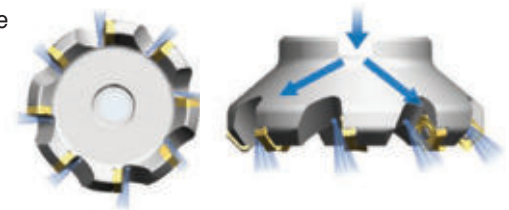
Features

- Double-sided insert to use 8 cutting-edges
- Innovative double-sided insert makes it possible to use 8 cutting-edges
It is more economical than conventional single sided insert
- The unique geometry and high rake angle of cutting-edge guarantees excellent surface finish
Applicable for various workpieces like steel, stainless steel, cast iron, aluminum
- Combined with the innovative geometry and various grades provided the tool offers durability and excellent tool life
- Various pitches and chip breakers can be applicable for diverse machining
- Light Rich Mill cutter can be useful for high speed machining and low power machine



Through coolant system

- Exclusive coolant bolt is adapted to get better chip evacuation and more powerful cooling. To get optimal chip evacuation, the direction of coolant injection has been designed to reach to each cutting-edge directly. Through coolant arbor is required

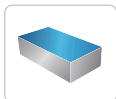


Through coolant system for decreasing cutting heat and good chip evacuation

Features of chip breakers

Insert	Cutting-edge	Uses	Features
MA		For aluminum	Due to sharp cutting-edge and buffed surface, it has good chip flow and welding resistance
ML		For hard-to-cut material	Chip breaker with low cutting load is optimal for machining hard-to-cut materials
MF		For light cutting	Due to low cutting load, it is good for light cutting and difficult-to-cut material
MM		For general cutting	It is suitable design for general milling
W		For wiper	Specialized edge design can be suitable for excellent surface roughness operation

Uses



Facing

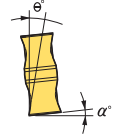
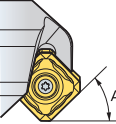
Features of insert

Insert	Cutting-edge	Features
	View-A 	High rake chip breaker & positive setting angle for low cutting load
	View-B 	Designed wiper technology in minor cutting-edge for improved surface roughness
	Chip breaker 	Low cutting load due to the positive setting and high rake angle chip breaker



Rich Mill RM8

Features of cutter

Shape	Setting angle of insert	Features
		High rake angle makes positive setting angle for low cutting load
		Suitable for facing and chamfering • RM8A A = 45° • RM8E A = 75° • RM8Q A = 88°

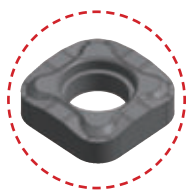
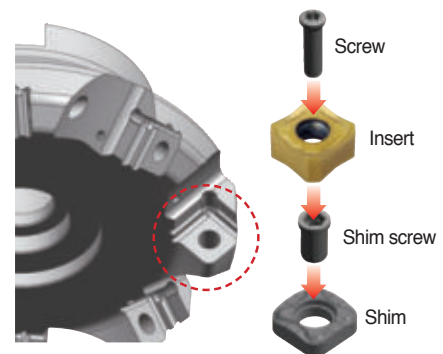
Recommended cutting condition

ISO	Grades	SNM(E)X1206A(E)NN-MF		SNM(E)X1206A(E)NN-MM		SNEX1206A(E)NN-MA		Max-ap (mm)	SNM(E)X1507A(E)NN-MF		SNM(E)X1507A(E)NN-MM		Max-ap (mm)
		vc (m/min)	fz (mm/t)	vc (m/min)	fz (mm/t)	vc (m/min)	fz (mm/t)		vc (m/min)	fz (mm/t)	vc (m/min)	fz (mm/t)	
P	NC5330	-	-	150~300	0.10~0.35	150~300	0.10~0.35	RM8A 6.0	-	-	150~300	0.10~0.35	RM8A 7.5
	NCM535	200~300	0.05~0.30	150~300	0.10~0.35	150~300	0.10~0.35		200~300	0.05~0.30	150~300	0.10~0.35	
	PC3700	200~300	0.05~0.30	150~300	0.10~0.35	150~300	0.10~0.35		200~300	0.05~0.30	150~300	0.10~0.35	
M	PC9530	90~150	0.05~0.25	90~150	0.10~0.35	-	-	RM8E 9.0	90~150	0.10~0.30	90~150	0.10~0.35	RM8E 11
	PC5300	90~150	0.05~0.25	90~150	0.10~0.35	-	-		90~150	0.10~0.30	90~150	0.10~0.35	
K	PC6510	150~300	0.08~0.35	150~300	0.10~0.40	150~300	0.10~0.40	RM8Q 11.5	150~300	0.08~0.35	150~300	0.10~0.40	
	PC5300	150~300	0.08~0.35	150~300	0.10~0.40	150~300	0.10~0.40		150~300	0.08~0.35	150~300	0.10~0.40	

Rich Mill RMH8

Features

- Screw on clamping system - Adaptable and Stable clamping system
- Reinforced rigidity and enhanced clamping power
 - Applying shim system, prevent cutter damage when insert breaks
- Adapting/exchangeable shim
 - Using various kinds of cutter (Approach angle 45°, 75°, 88°)
 - Stable clamping power with insert



RMH8A
(AA 45°)



RMH8E
(AA 75°)



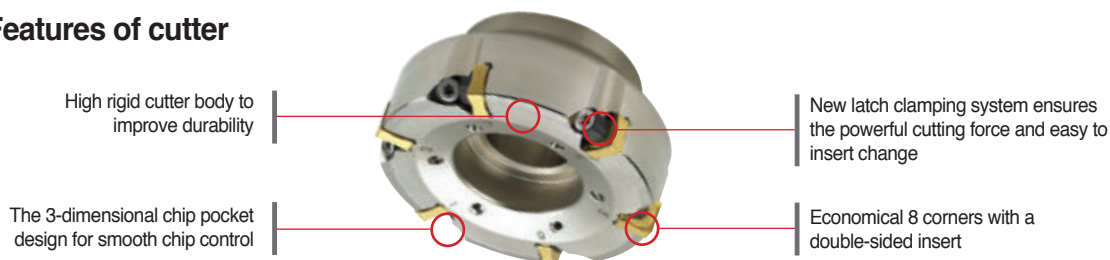
RMH8Q
(AA 88°)

Rich Mill RMT8

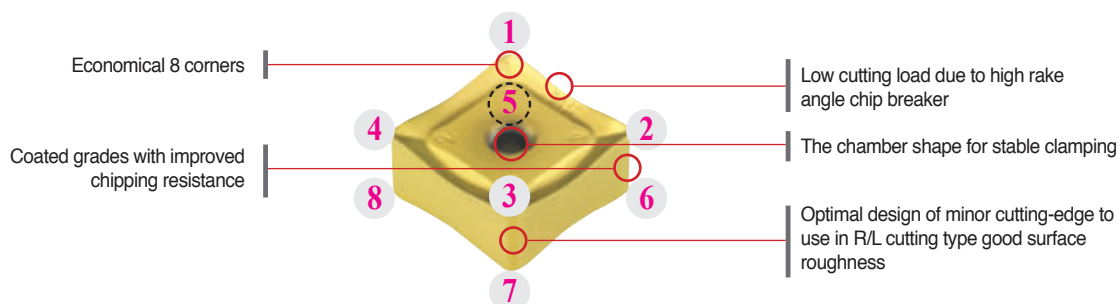
Features

- New latch clamping system provides a powerful cutting force and an easy insert change
- New grades with chipping resistance provides good surface roughness and better tool life
- Due to the specially designed chip breaker, all operations are possible
- RMT with various pitches can replace conventional ISO milling tool

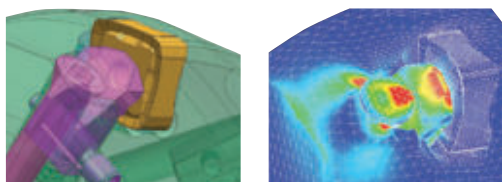
Features of cutter



Features of insert (Using R/L)



Clamping force analysis



Features of chip breakers

	Insert	Cutting-edge	Uses	Features
MF			For fine finishing	Our specialized insert design creates low cutting forces suitable for light cutting, HRSA
MM			For strengthen	Suitable geometry design for general milling has wider ranges of machining

Recommended grades and chip breakers

ISO	Grades	MM	MF
P	NCM535	◎	○
	PC5300	◎	○
M	PC9530	○	◎
K	PC6510	○	◎

◎: Optimum ○: Proper

Recommended cutting condition

ISO	Grades	MM		MF	
		vc (m/min)	fz (mm/t)	vc (m/min)	fz (mm/t)
P	NC5330	190~310	0.10~0.35	190~310	0.05~0.30
	NCM535	160~270	0.10~0.35	160~270	0.05~0.30
	PC3700	130~210	0.10~0.35	130~210	0.05~0.30
M	PC9530	90~150	0.05~0.30	90~150	0.05~0.30
K	PC6510	140~230	0.10~0.40	140~230	0.08~0.35

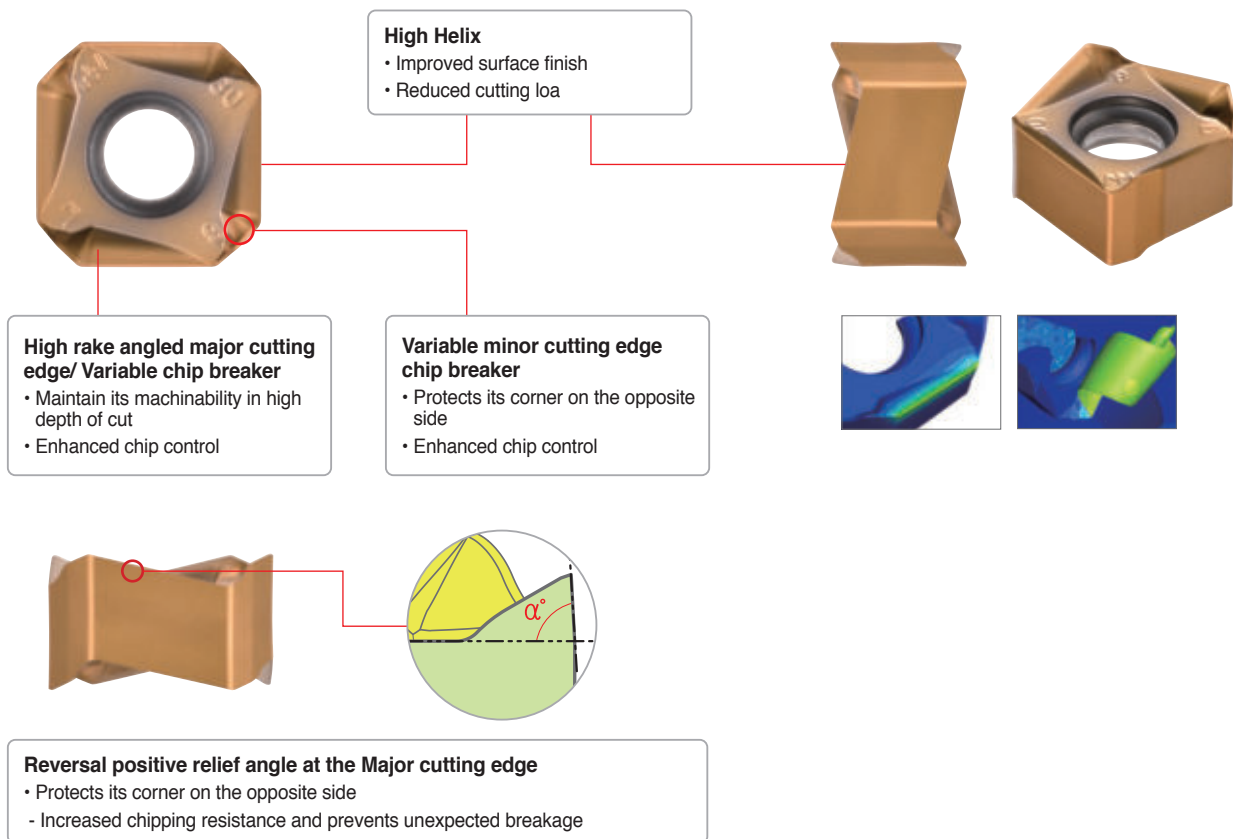


Rich Mill RM8-X

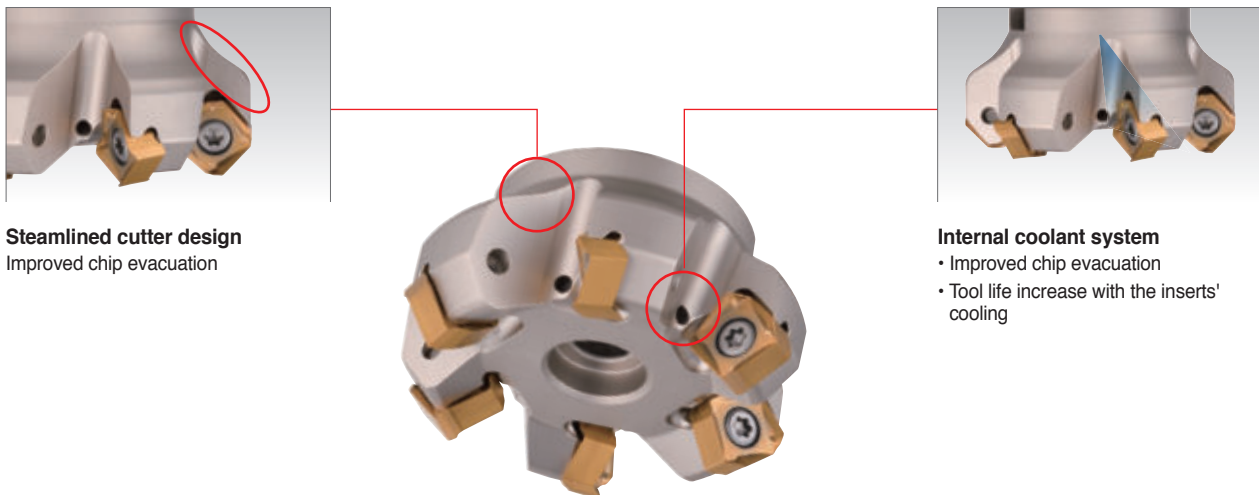
Features

- High helix face milling tool with 8-cornered double-side inserts
- High performance in stainless steel machining due to sharp cutting edge and double reverse positive relief surface structure
- Economic tool by double-sided 8 corners and high helix right-handed shape realizing high depth of cut machining

Insert features

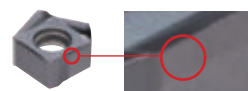
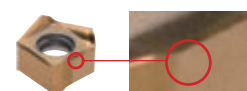


Cutter features



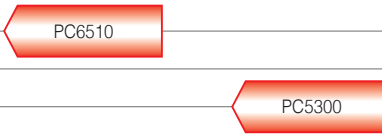
Rich Mill RM8-X

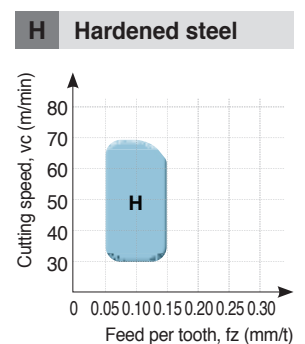
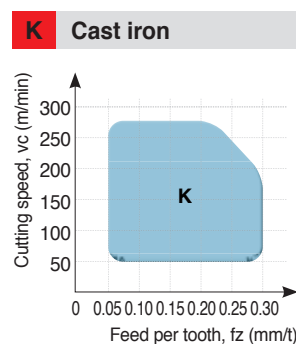
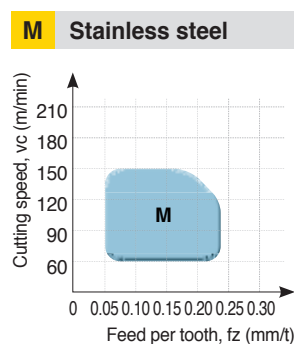
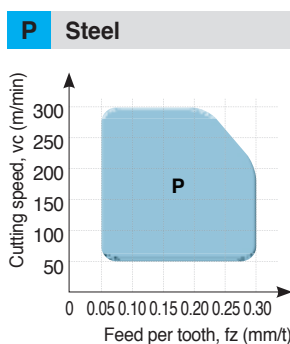
Recommended grade and cutting edge

Type	SAGX			SNMX	
Features	Strong relief surface			Relief surface for surface finish	
Workpiece	M	S	H	P	K
Geometry	 SAGX-ML SAGX-MM			 SNMX-MM	
	 [Double reverse positive relief surface]			 [Negative relief surface]	

Type	Recommended insert and grade for different workpieces (●: 1 st recommendation)									
	P		M		K		S		H	
	C/B	Grades	C/B	Grades	C/B	Grades	C/B	Grades	C/B	Grades
SAGX140808ANER	○ ML ○ MM	○ PC5300 ○ PC3700	● ML ○ MM	● PC9540 ○ PC5300	○ ML ○ MM	○ PC6510 ○ PC5300	● ML ○ MM	● PC5300	● MM	● PC2510 ○ PC2505
SNMX140808ANER	● MM	● PC3700	-	-	● MM	● PC6510	-	-	-	-

Recommended cutting condition

Grades	Machining types	Recommended grade	Recommended cutting speed (m/min)	ISO	Application range
P Steel	Continuous cutting	PC3700 new	235 (180~290)	P30	
	Interrupted cutting	PC5300	195 (150~240)	P40	
M Stainless steel	Continuous cutting	PC5300	130 (100~160)	M20	
	Interrupted cutting	PC9540	110 (80~140)	M40	
K Cast iron	Continuous cutting	PC6510	180 (140~230)	K05	
	Interrupted cutting	PC5300	145 (110~180)	K10	
				K20	
H Hardened steel	Continuous cutting	PC2510 new	55 (40~70)	H10	



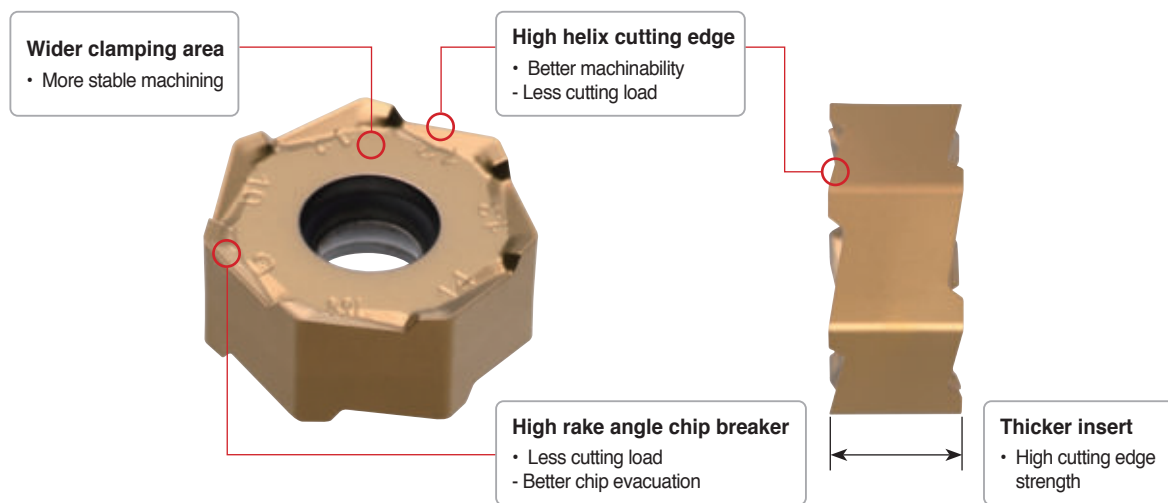
Rich Mill RM14

Features

- Economical face mill with 14 double-sided corners
- Minimized chattering of workpiece due to minimum lead angle and sharp cutting edge
- Reduced cutting resistance and improved chip emissions by high helix angle application

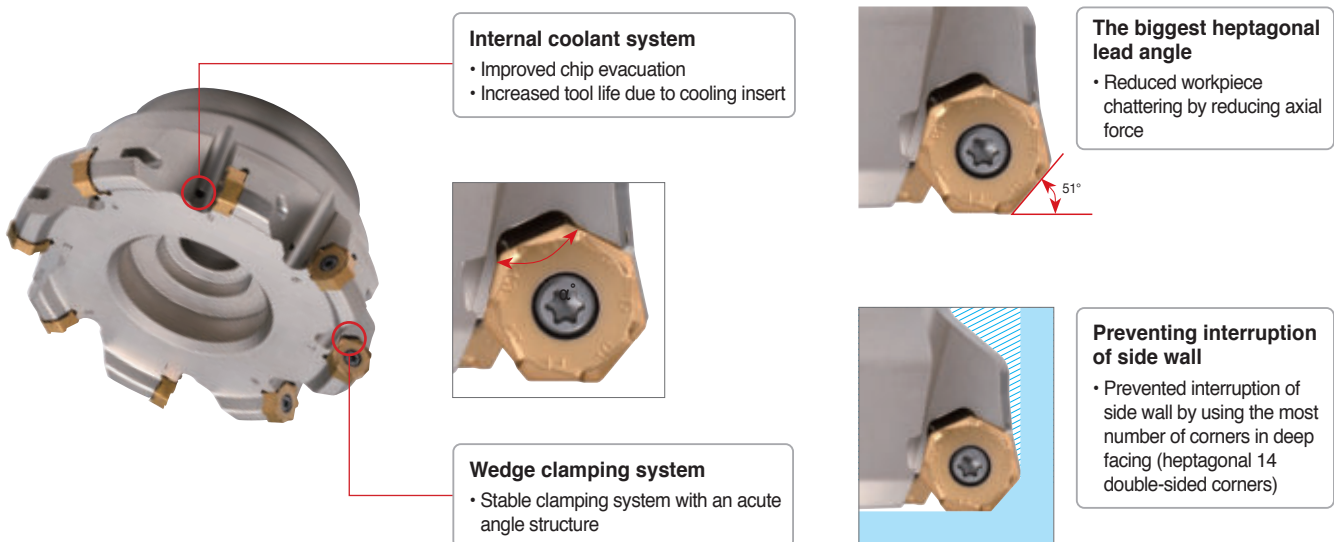
Insert features

- Wide supporting area of insert ensures stable clamping system.
- High rake angle cutting edge reduces cutting load and increases chip evacuation.
- Thicker insert realizes stability in machining.



Cutter features

- The biggest heptagonal lead angle reduces chatter in machining.
- Wedge type clamping system ensures stable clamping.
- Stepped machining is available without interruption of side wall of insert.



Rich Mill RM14

Features of chip breakers

Insert	Cutting-edge	Uses	Features
Flat 		Neutral type Flat cutting edge	1 st recommended for heat resistant stainless steel machining Generally applied in various machining Applicable for both right handed and left handed
Helix 		Right handed type High helix cutting edge	1 st recommended for cast iron machining Applicable for stainless steel machining with less than 3 mm depth of cut For high speed and high feed machining

Recommended grade and cutting edge

(● : 1st recommendation)

Type		Recommended grade and cutting edge by workpiece							
		M				K			
		Austenitic stainless steel		Heat resistance stainless steel		Gray cast iron		Ductile cast iron	
		Type	Grade	Type	Grade	Type	Grade	Type	Grade
Flat		-	● PC9540 ○ PC5300 ○ PC5400	●	● PC9540 ○ PC5300 ○ PC5400	-	○ PC6510 ○ PC5300 ● NCM535	-	● PC6510 ○ PC5300 ○ NCM535
Helix		●	● PC9540 ○ PC5300 ○ PC5400	-	● PC9540 ○ PC5300 ○ PC5400	●	○ PC6510 ○ PC5300 ● NCM535	●	● PC6510 ○ PC5300 ○ NCM535

Recommended cutting condition

ISO	Workpiece	ISO (DIN)*	AISI	KS	HB	Grades	Cutting conditions					
							Helix			Flat		
							vc (m/min)	fz (mm/t)	ap (mm)	vc (m/min)	fz (mm/t)	ap (mm)
M	Austenite	STS304 STS316	X5CrNi18-9 X5CrNiMo17-12-2	304 316	160-180	PC9540 (PC5300)	80-160	0.3-0.05	1-3	90-150	0.25-0.05	1-3
	Heat resistance stainless steel	-	(1.48□□)	-	160-200	PC9540 (PC5300)	60-100	0.2-0.05	1-2	60-100	0.25-0.05	1-3
K	Gray cast iron	GC250	250 (GG 25)	No 35 B	180-240	NCM535 (PC6510)	200-300	0.3-0.1	2-3	200-300	0.25-0.1	2-3
	Ductile cast iron	GCD500	500-7 (GGG 50)	80-55-06	150-230	PC6510 (PC5300)	110-230	0.3-0.1	2-3	150-200	0.3-0.1	2-3
		GCD600	600-3 (GGG 60)	-	170-270	PC6510 (PC5300)	85-200	0.25-0.15	2-3	150-200	0.25-0.15	2-3



Rich Mill RM16

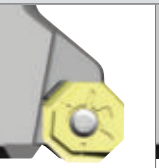
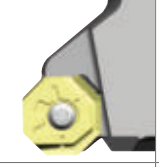
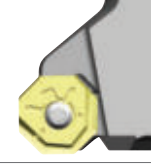
Features

- Economical 16 cutting-edges
- Reduces cost in medium cutting
- Wiper insert can be used for good surface roughness
- Optimal matching of the special cutting-edge geometry with variety of new grades provides consistence & long tool
- When it is used 16 corners, maximum cutting depth is 5.5 mm, but it is used 8 corners, maximum cutting depth is 13 mm
- Wiper insert is placed 0.05 mm lower than facing insert in cutter
- When feed is bigger than wiper cutting-edge length (7 mm), 2 wiper inserts are placed in symmetrical position

Features of chip breakers

Insert	Cutting-edge	Uses	Features
MA		For aluminum cutting light	With sharp edge application, the better productivity has been accomplished, especially for aluminum cutting
ML		For hard-to-cut material	Chip breaker with low cutting load is optimal for machining hard-to-cut materials
MF		For light cutting	Due to low cutting load, it is good for light cutting and difficult-to-cut material
MM		For general cutting	It is suitable design for general milling
W		For wiper	It has better surface roughness than MM and MF chip breakers

Instruction for wiper insert

Hand	Correct setting	Incorrect setting			
Right hand					
Decision	○	×	×	×	×
Left hand					
Decision	○	×	×	×	×

Through coolant system

- Well designed chip pocket for better chip flow
- Through coolant system reduces cutting heat and improves chip evacuation



Recommended cutting condition

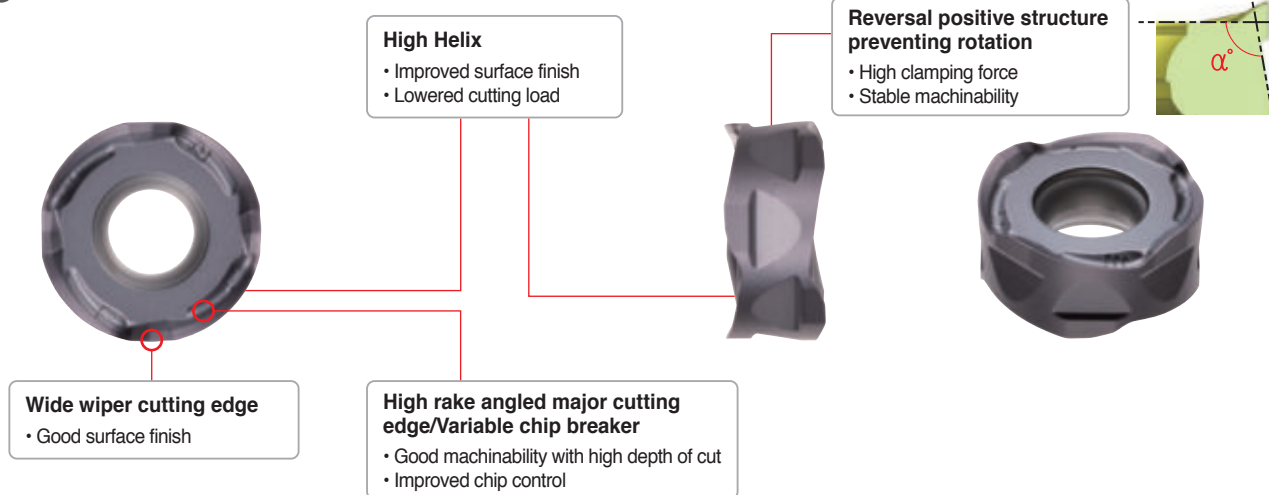
ISO	Grades	(mm)											
		ONM(H)X060608-MM		ONM(H)X060608-MF		ONHX060608-W		ONM(H)X080608-MM		ONM(H)X080608-MF		ONHX080608-W	
		vc (m/min)	fz (mm/t)	vc (m/min)	fz (mm/t)	vc (m/min)	fz (mm/t)	vc (m/min)	fz (mm/t)	vc (m/min)	fz (mm/t)	vc (m/min)	fz (mm/t)
P	NCM535	150~300	0.10~0.35	200~300	0.05~0.30	200~300	0.05~0.20	150~300	0.10~0.40	200~300	0.05~0.35	200~300	0.05~0.25
	PC3700	150~300	0.10~0.35	200~300	0.05~0.30	200~300	0.05~0.20	150~300	0.10~0.40	200~300	0.05~0.35	200~300	0.05~0.25
M	PC9530	120~180	0.10~0.35	100~180	0.05~0.30	100~180	0.05~0.20	120~180	0.10~0.40	100~180	0.05~0.35	100~180	0.05~0.25
K	PC6510	150~300	0.10~0.40	150~300	0.08~0.35	150~300	0.05~0.25	150~300	0.10~0.45	150~300	0.08~0.40	150~300	0.05~0.30

Rich Mill RMR

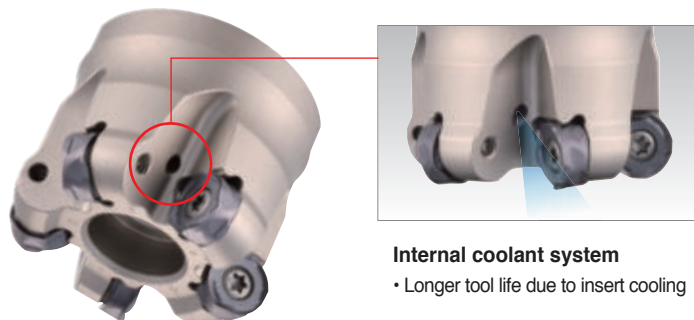
Features

- Improved machining stability with the combination of the reversal positive structure preventing rotation and wide upper and lower clamping sides.
- Helix cutting edge and sharp chip breaker realize smooth cutting.
- Wide minor cutting edge and optimized holder angle enhance high surface finish.

Insert features



Cutter features

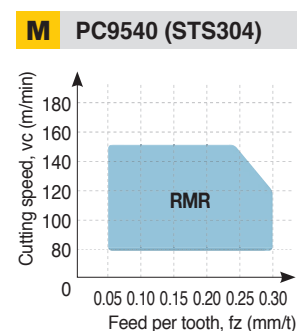
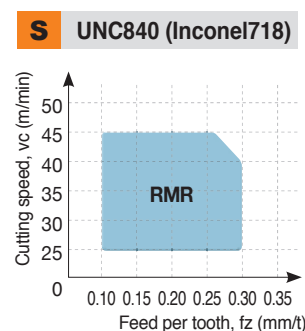


Recommended grade and cutting edge

Chip breaker	Cutting-edge	Recommended grade and cutting edge by workpiece (●: 1 st recommendation)	
		S	M
		Grade	Grade
ML		● UNC840 ○ UPC845	● PC9540 ○ UPC845

Recommended cutting condition

Workpiece	Grades	ISO	AISI	KS	Cutting conditions		
					vc (m/min)	fz (mm/t)	ap (mm)
S High temperature alloys	UNC840	15156-3	7718	Inconel718	30-50	0.4-0.1	1.0-3.0
	UPC845	15156-3	7718	Inconel718	20-40	0.6-0.2	1.5-4.0
M Stainless steel	PC9540	X5CrNi18-9	304	STS304	80-160	0.3-0.05	1.0-3.0
		X5CrNiMo17-12-2	316	STS316			



 Cutters

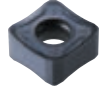
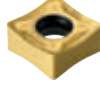
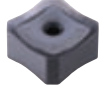
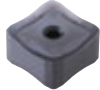
Type	A.A	Designation	Shape	Cutter Diameter	Application		Features	Page
RM3	90°	RM3PC(M)3000		Ø40~Ø80	XNKT060405PNER-ML	XNKT060405PNSR-MM	- Economical 3 corners - Perfect perpendicularity - Longer tool life due to direct injection into the cutting-edge of insert	E99
		RM3PC(M)4000		Ø40~Ø125	XNCT080508PNFR-MA XNKT080508PNER-ML XNKT080508PNSR-MM	XNKT080512PNSR-MM XNKT080516PNSR-MM XNKT080520PNSR-MM		E100
		RM3PC(M)5000 		Ø80~Ø125	XNCT120608PNER-MA XNKT120608PNER-ML XNKT120612PNER-ML XNKT120616PNER-ML XNKT120620PNER-ML	XNKT120608PNSR-MM XNKT120612PNSR-MM XNKT120616PNSR-MM XNKT120620PNSR-MM		E101
RM4	90°	RM4PC(M)3000		Ø40~Ø100	LNEX100605PNR-MF LNMX100605aPNR-MF LNEX100605PNR-MM LNMX100605PNR-MM LNEX100608PNR-MF LNMX100608PNR-MF	LNEX100608PNR-MM LNMX100608PNR-MM LNEX100605PNR-MA LNEX100605PNL-MM LNMX100605PNL-MM	- Economical 4 corners - Screw on type for slotting, facing	E105
		RM4PC(M)4000		Ø50~Ø160	LNEX151004PNR-MF LNMX151004PNR-MF LNEX151004PNR-MM LNMX151004PNR-MM LNEX151008PNR-MF LNMX151008PNR-MF LNEX151008PNR-MM LNMX151008PNR-MM	LNEX151016PNR-MF LNMX151016PNR-MF LNEX151016PNR-MM LNMX151016PNR-MM LNEX151004PNR-MA LNEX151008PNR-MA LNEX151008PNL-MM LNMX151008PNL-MM		E106
		RM4ZCM3000		Ø40~Ø52	LNEX100605PNL-MM	LNMX100605PNL-MM	- Economical 4 corners - Optimal insert application for vertical machining	E118
		RM4ZC(M)4000		Ø63~Ø100	LNEX151008PNL-MM	LNMX151008PNL-MM		

Cutters

Type	A.A	Designation	Shape	Cutter Diameter	Application		Features	Page
RM6	90°	RM6PCM-WN04 new		Ø40~Ø63	WNGX040304PNFR-MA WNGX040308PNFR-MA WNGX040312PNFR-MA WNGX040316PNFR-MA WNGX040304PNER-ML WNGX040308PNER-ML	WNGX040312PNER-ML WNGX040316PNER-ML WNGX040304PNSR-MM WNGX040308PNSR-MM WNGX040312PNSR-MM WNGX040316PNSR-MM	 Improved productivity and high-quality shouldering through high speed and high feed machining	E120
		RM6PC(M)-WN08 new		Ø50~Ø125	WNGX080604PNFR-MA WNGX080608PNFR-MA WNGX080612PNFR-MA WNGX080616PNFR-MA WNGX080620PNFR-MA WNGX080604PNER-ML WNGX080608PNER-ML WNGX080612PNER-ML	WNGX080616PNER-ML WNGX080620PNER-ML WNGX080604PNSR-MM WNGX080608PNSR-MM WNGX080612PNSR-MM WNGX080616PNSR-MM WNGX080620PNSR-MM		E121
RM8	45°	RM8AC(M)4000		Ø50~Ø400	SNEX1206ANN-MA SNEX1206ANN-MF SNMX1206ANN-MF SNEX1206ANN-ML	SNEX1206ANN-MM SNMX1206ANN-MM SNEX1206ANN-W		E126
		RM8AC(M)5000		Ø80~Ø400	SNEX1507ANN-MF SNMX1507ANN-MF SNEX1507ANN-ML	SNEX1507ANN-MM SNMX1507ANN-MM		E128
	75°	RM8EC(M)4000		Ø50~Ø400	SNEX1206ENN-MA SNEX1206ENN-MF SNMX1206ENN-MF	SNEX1206ENN-ML SNEX1206ENN-MM SNMX1206ENN-MM		E130
		RM8EC(M)5000		Ø80~Ø400	SNEX1507ENN-MF SNMX1507ENN-MF SNEX1507ENN-ML	SNEX1507ENN-MM SNMX1507ENN-MM		E132
	88°	RM8QC(M)4000		Ø63~Ø200	SNEX1206QNN-MA SNEX1206QNN-MF SNMX1206QNN-MF SNEX1206QNN-ML SNEX1206QNN-MM SNMX1206QNN-MM	SNEX120612-MA SNEX120612-MF SNMX120612-MF SNEX120612-ML SNEX120612-MM SNMX120612-MM		E134



 Cutters

Type	A.A	Designation	Shape	Cutter Diameter	Application		Features	Page
RM8	45°	RMH8AC(M)4000		Ø50~Ø400	SNEX1206ANN-MA SNEX1206ANN-MF SNMX1206ANN-MF	SNEX1206ANN-ML SNEX1206ANN-MM SNMX1206ANN-MM SNEX1206ANN-W	  	E127
		RMH8AC(M)5000		Ø80~Ø400	SNEX1507ANN-MF SNMX1507ANN-MF SNEX1507ANN-ML	SNEX1507ANN-MM SNMX1507ANN-MM		E129
	75°	RMH8EC(M)4000		Ø50~Ø400	SNEX1206ENN-MA SNEX1206ENN-MF SNMX1206ENN-MF	SNEX1206ENN-ML SNEX1206ENN-MM SNMX1206ENN-MM		E131
		RMH8EC(M)5000		Ø80~Ø400	SNEX1507ENN-MF SNMX1507ENN-MF SNEX1507ENN-ML	SNEX1507ENN-MM SNMX1507ENN-MM		E133
	88°	RMH8QC(M)4000		Ø63~Ø200	SNEX1206QNN-MA SNEX1206QNN-MF SNMX1206QNN-MF SNEX1206QNN-ML SNEX1206QNN-MM SNMX1206QNN-MM	SNEX120612-MA SNEX120612-MF SNMX120612-MF SNEX120612-ML SNEX120612-MM SNMX120612-MM		E135
RMT8	45°	RMT8A(M) 4000/5000		Ø80~Ø315	SNCF1206ANN-MF SNCF1507ANN-MF SNMF1206ANN-MF SNMF1507ANN-MF	SNCF1206ANN-MM SNCF1507ANN-MM SNMF1206ANN-MM SNMF1507ANN-MM	  	E136 E137
	75°	RMT8E(M) 4000/5000		Ø80~Ø315	SNCF1206ENN-MF SNCF1507ENN-MF SNMF1206ENN-MF SNMF1507ENN-MF	SNCF1206ENN-MM SNCF1507ENN-MM SNMF1206ENN-MM SNMF1507ENN-MM		E138 E139
	88°	RMT8Q(M)4000		Ø80~Ø315	SNCF1206QNN-MF	SNMF1206QNN-MF		E140

Cutters

Type	A.A	Designation	Shape	Cutter Diameter	Application		Features	Page
RM8-X	45°	RMX8AC(M)-SA14 new		Ø50~Ø125	SAGX140808ANER-ML	SAGX140808ANER-MM SNMX140808ANER-MM	 • Double sided insert with 8 corners • Stable cutting performance due to double reversal positive relief surface • Good machinability in stainless cutting with High helix cutting edge	E141
RM14	51°	RM14XCM-XN06 new		Ø50~Ø160	XNMX0606XNR-ML	XNMX060608-ML	  • Reduced vibration with the application of maximum approach angle on heptagonal shape • Stable clamping from wedge type clamping structure • Available for multiple-staged cutting without interference of the cutter's side wall	E 142
RM16	45°	RM16AC(M) 6000/8000		Ø63~Ø400	ONHX060608-MF ONMX060608-MF ONHX0606ANN-MF ONMX0606ANN-MF ONHX080608-MF ONMX080608-MF ONHX0806ANN-MF ONMX0806ANN-MF ONHX060608-ML ONMX060608-ML ONHX080608-ML ONMX080608-ML ONHX060608-MM ONMX060608-MM ONHX0606ANN-MM ONMX0606ANN-MM ONHX080608-MM ONMX080608-MM ONHX0806ANN-MM ONMX0806ANN-MM ONHX060608-MA ONMX060608-W ONHX080608-MA ONMX080608-W	 • Economical 16 corners • Wiper insert for surface roughness	E143 E144	
RMR	-	RMRC(M)-RN12 new		Ø50~Ø125	RNMX1204M0E-ML		 • High cost efficiency due to double sided round typed cutting edge • Excellent rotating prevention by strong clamping system • Suitable for Inconel cutting	E145



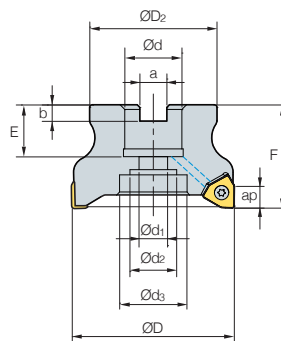
Shanks/Modulars

Type	A.A	Designation	Shape	Cutter Diameter	Application		Features	Page
RM3	90°	RM3PS3000 new		Ø20~Ø40	XNKT060405PNER-ML	XNKT060405PNSR-MM	- Economical 3 corners - Perfect perpendicular shouldering operation multi milling tool	E102
		RM3PS4000 new		Ø32~Ø63	XNKT080508PNER-ML XNKT080508PNSR-MM XNKT080512PNSR-MM	XNKT080516PNSR-MM XNKT080520PNSR-MM		E103
		RM3PM new 3000/4000		Ø20~Ø50	XNKT060405PNER-ML XNKT060405PNSR-MM XNKT060408PNER-ML XNKT060408PNSR-MM XNCT080504PNFR-MA XNCT080508PNFR-MA XNCT080512PNFR-MA XNCT080520PNFR-MA	XNKT080508PNER-ML XNKT080508PNSR-MM XNKT080512PNER-ML XNKT080512PNSR-MM XNKT080516PNER-ML XNKT080516PNSR-MM XNKT080520PNER-ML XNKT080520PNSR-MM		E104
RM4	90°	RM4PS3000		Ø14~Ø50	LNEX100605PNR-MF LNMX100605PNR-MF LNEX100605PNR-MM LNMX100605PNR-MM LNEX100608PNR-MF LNMX100608PNR-MF	LNEX100608PNR-MM LNMX100608PNR-MM LNEX100605PNR-MA LNEX100605PNL-MM LNMX100605PNL-MM	- Economical 4 corners - Screw on type for slotting, facing	E115
		RM4PS4000		Ø32~Ø63	LNEX151004PNR-MF LNMX151004PNR-MF LNEX151004PNR-MM LNMX151004PNR-MM LNEX151008PNR-MF LNMX151008PNR-MF LNEX151008PNR-MM LNMX151008PNR-MM	LNEX151016PNR-MF LNMX151016PNR-MF LNEX151016PNR-MM LNMX151016PNR-MM LNEX151004PNR-MA LNEX151008PNR-MA LNEX151008PNL-MM LNMX151008PNL-MM		E116
	90°	RM4ZS3000		Ø25~Ø40	LNEX100605PNL-MM	LNMX100605PNL-MM	  - Economical 4 corners - Optimal insert application for vertical machining	E119
		RM4PM3000		Ø14~Ø50	LNEX100605PNR-MF LNMX100605PNR-MF LNEX100605PNR-MM LNMX100605PNR-MM LNEX100608PNR-MF LNMX100608PNR-MF	LNEX100608PNR-MM LNMX100608PNR-MM LNEX100605PNR-MA LNEX100605PNL-MM LNMX100605PNL-MM		E117
		RM4ZM3000		Ø25~Ø40	LNEX100605PNL-MM	LNMX100605PNL-MM		E119

Shanks/Modulars

Type	A.A	Designation	Shape	Cutter Diameter	Application		Features	Page
RM6	90°	RM6PS-WN04 ^{new}		Ø20~Ø32	WNGX040304PNFR-MA WNGX040308PNFR-MA WNGX040312PNFR-MA WNGX040316PNFR-MA WNGX040304PNER-ML WNGX040308PNER-ML	WNGX040312PNER-ML WNGX040316PNER-ML WNGX040304PNSR-MM WNGX040308PNSR-MM WNGX040312PNSR-MM WNGX040316PNSR-MM	 • Improved productivity and high-quality shouldering through high speed and high feed machining	E122
		RM6PS-WN08 ^{new}		Ø32~Ø50	WNGX080604PNFR-MA WNGX080608PNFR-MA WNGX080612PNFR-MA WNGX080616PNFR-MA WNGX080620PNFR-MA WNGX080604PNER-ML WNGX080608PNER-ML WNGX080612PNER-ML	WNGX080616PNER-ML WNGX080620PNER-ML WNGX080604PNSR-MM WNGX080608PNSR-MM WNGX080612PNSR-MM WNGX080616PNSR-MM WNGX080620PNSR-MM		E123
		RM6PM-WN04 ^{new}		Ø20~Ø32	WNGX040304PNFR-MA WNGX040308PNFR-MA WNGX040312PNFR-MA WNGX040316PNFR-MA WNGX040304PNER-ML WNGX040308PNER-ML	WNGX040312PNER-ML WNGX040316PNER-ML WNGX040304PNSR-MM WNGX040308PNSR-MM WNGX040312PNSR-MM WNGX040316PNSR-MM		E124
		RM6PM-WN08 ^{new}		Ø32~Ø40	WNGX080604PNFR-MA WNGX080608PNFR-MA WNGX080612PNFR-MA WNGX080616PNFR-MA WNGX080620PNFR-MA WNGX080604PNER-ML WNGX080608PNER-ML WNGX080612PNER-ML	WNGX080616PNER-ML WNGX080620PNER-ML WNGX080604PNSR-MM WNGX080608PNSR-MM WNGX080612PNSR-MM WNGX080616PNSR-MM WNGX080620PNSR-MM		E125
RMR	-	RMRS-RN12 ^{new}		Ø32~Ø63	RNMX1204M0E-ML		 • High cost efficiency due to double sided round typed cutting edge • Excellent rotating prevention by strong clamping system • Suitable for Inconel cutting	E146

RM3PC(M)3000 **new**


AA
90°

• AR: -5°
• RR: -9°~6°

Designation		⊗	ØD	ØD2	Ød	Ød1	Ød2	Ød3	a	b	E	F	ap	kg
RM3PCM	3040HR	5	40	35	16	9	14	-	8.4	5.6	16	40	5.5	0.2
	3040HR-M	6	40	35	16	9	14	-	8.4	5.6	16	40	5.5	0.2
	3050HR	6	50	41	22	11	18	-	10.4	6.3	20	40	5.5	0.3
	3050HR-M	7	50	41	22	11	18	-	10.4	6.3	20	40	5.5	0.3
	3063HR	7	63	49	22	11	18	-	10.4	6.3	20	40	5.5	0.49
	3063HR-M	8	63	49	22	11	18	-	10.4	6.3	20	40	5.5	0.49
RM3PC (RM3PCM)	3080HR	8	80	57	25.4 (27)	14	25	35	9.5 (12.4)	6 (7)	25 (23)	50	5.5	0.87
	3080HR-M	10	80	57	25.4 (27)	14	25	35	9.5 (12.4)	6 (7)	25 (23)	50	5.5	0.88

() Metric size

Available inserts

XNKT-ML

XNKT-MM



Designation		Cermet		Coated										Uncoated			page
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2510	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	
XNKT	060405PNER-ML									●	●	●		●	●	●	E32
	060405PNSR-MM								●	●	●	●		●	●	●	
	060408PNER-ML											●			●	●	
	060408PNSR-MM								●	●	●	●			●	●	

Available arbors

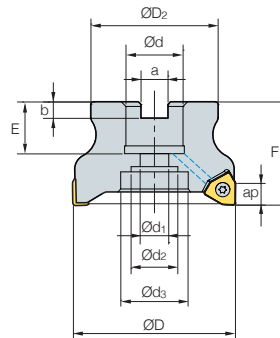
Designation		Available arbors	
		RM3PC	RM3PCM
RM3PC(M)	3040HR	-	BT□□-FMC16-□□
	3040HR-M		
	3050HR		
	3050HR-M		
	3063HR	-	BT□□-FMC22-□□
	3063HR-M		
	3080HR		
	3080HR-M		

Parts

Specification		
Ø40~Ø80	FTNA0306	TW09S

Available inserts E32 Available arbors and bolt E426~E428

RM3PC(M)4000 new



AA
90°

• AR: -5°
• RR: -8°~6°

(mm)

Designation			ØD	ØD2	Ød	Ød1	Ød2	Ød3	a	b	E	F	ap	
RM3PCM	4040HR	3	40	35	16	9	14	-	8.4	5.6	19	40	8.0	0.19
	4040HR-M	4	40	35	16	9	14	-	8.4	5.6	19	40	8.0	0.19
	4050HR	4	50	42	22	11	18	-	10.4	6.3	20	40	8.0	0.28
	4050HR-M	5	50	42	22	11	18	-	10.4	6.3	20	40	8.0	0.29
	4063HR	5	63	49	22	11	18	-	10.4	6.3	20	40	8.0	0.54
	4063HR-M	6	63	49	22	11	18	-	10.4	6.3	20	40	8.0	0.53
RM3PC (RM3PCM)	4080HR	5	80	57	25.4 (27)	14	20	35	9.5 (12.4)	6 (7)	25 (23)	50	8.0	1.08
	4080HR-M	7	80	57	25.4 (27)	14	20	35	9.5 (12.4)	6 (7)	25 (23)	50	8.0	1.06
	4100HR	7	100	67	31.75 (32)	18	26	42	12.7 (14.4)	8 (8)	33 (25)	63 (50)	8.0	1.68
	4100HR-M	8	100	67	31.75 (32)	18	26	42	12.7 (14.4)	8 (8)	33 (25)	63 (50)	8.0	1.67
	4125HR	8	125	90	38.1 (40)	22	32	52	15.9 (16.4)	9 (10)	38 (29)	63	8.0	3.45
	4125HR-M	10	125	90	38.1 (40)	22	32	52	15.9 (16.4)	9 (10)	38 (29)	63	8.0	3.45

Available inserts

() Metric size

XNCT-MA

XNKT-ML

XNKT-MM



Designation	Cermet		Coated										Uncoated			page
	CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2510	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	
XNCT	080504PNFR-MA															●
	080508PNFR-MA															●
	080512PNFR-MA															●
	080520PNFR-MA															●
XNKT	080504PNER-ML													●	●	
	080504PNSR-MM									●				●	●	
	080508PNER-ML					●			●	●	●		●	●	●	
	080508PNSR-MM					●		●	●	●	●		●	●	●	
	080512PNER-ML								●	●	●		●	●	●	
	080512PNSR-MM							●	●	●			●	●	●	
	080516PNER-ML								●	●	●		●	●	●	
	080516PNSR-MM							●	●	●			●	●	●	
	080520PNER-ML								●	●			●	●	●	
	080520PNSR-MM							●	●				●	●	●	

Available arbors

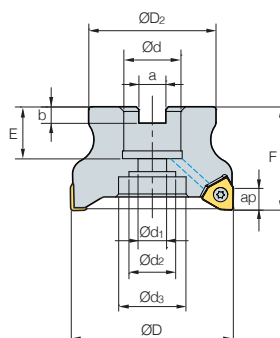
Designation	Available arbors	
	RM3PC	RM3PCM
RM3PC(M) 4040HR	-	BT□□-FMC16-□□
4050HR	-	BT□□-FMC22-□□
4063HR		
4080HR	BT□□-FMA25.4-□□	BT□□-FMC27-□□
4100HR	BT□□-FMA31.75-□□	BT□□-FMC32-□□
4125HR	BT□□-FMA38.1-□□	BT□□-FMC40-□□

Parts

Specification		
Ø40~Ø125	FTNA0408	TW15S

Available inserts E31, E32 Available arbors and bolt E426~E428





- AR: -5°
- RR: -7°

(mm)

☐ Metric size

 Available inserts

XNKT-MM



E31

E32

 Available arbors

Designation		Available arbors	
		RM3PC	RM3PCM
RM3PC(M)	5080HR	BT□□ -FMA25.4-□□	BT□□ -FMC27-□□
	5100HR	BT□□ -FMA31.75-□□	BT□□ -FMC32-□□
	5125HR	BT□□ -FMA38 1-□□	BT□□ -FMC40-□□

Parts

Specification	 Screw	 Wrench
Ø80~Ø125	FTNA0511	TW20-100

➡ Available inserts **E31, E32** ➡ Available arbors and bolt **E426~E428**

RM3PS3000 new

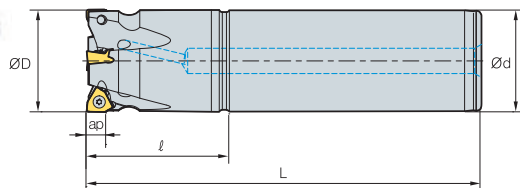


Fig. 1

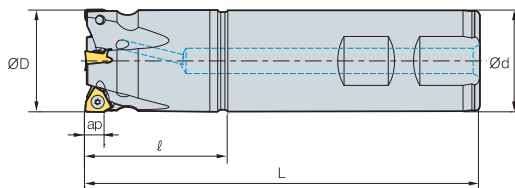


Fig. 2



AA
90°

• AR: -5°
• RR: -16°~9°

(mm)

Designation			ØD	Ød	ℓ	L	ap		Fig.
RM3PS	3020HR-2S20	2	20	20	35	100	5.5	0.21	2
	3020HR-2L20	2	20	20	35	200	5.5	0.43	1
	3021HR-2S20	2	21	20	30	100	5.5	0.21	2
	3021HR-2L20	2	21	20	30	200	5.5	0.43	1
	3025HR-3S20	3	25	20	35	115	5.5	0.27	2
	3025HR-3L20	3	25	20	35	200	5.5	0.46	1
	3025HR-3S25	3	25	25	40	115	5.5	0.36	2
	3025HR-3L25	3	25	25	40	200	5.5	0.66	1
	3026HR-2S20	2	26	20	35	115	5.5	0.29	2
	3026HR-2L20	2	26	20	35	200	5.5	0.47	1
	3026HR-3S20	3	26	20	35	115	5.5	0.28	2
	3026HR-3L20	3	26	20	35	200	5.5	0.47	1
	3026HR-2S25	2	26	25	35	115	5.5	0.37	2
	3026HR-2L25	2	26	25	35	200	5.5	0.68	1
	3026HR-3S25	3	26	25	35	115	5.5	0.37	2
	3026HR-3L25	3	26	25	35	200	5.5	0.68	1
	3032HR-3S25	3	32	25	42	125	5.5	0.48	2
	3032HR-3L25	3	32	25	42	200	5.5	0.74	1
	3032HR-4S25	4	32	25	42	125	5.5	0.48	2
	3032HR-4L25	4	32	25	42	200	5.5	0.74	1
	3032HR-4S32	4	32	32	42	125	5.5	0.68	2
	3032HR-4L32	4	32	32	42	200	5.5	1.13	1
	3033HR-3S25	3	33	25	42	125	5.5	0.49	2
	3033HR-3L25	3	33	25	42	200	5.5	0.75	1
	3033HR-4S25	4	33	25	42	125	5.5	0.49	2
	3033HR-4L25	4	33	25	42	200	5.5	0.75	1
	3033HR-4S32	4	33	32	42	125	5.5	0.70	2
	3033HR-4L32	4	33	32	42	200	5.5	1.14	1
	3040HR-4S32	4	40	32	45	130	5.5	0.83	2
	3040HR-4L32	4	40	32	45	200	5.5	1.24	1
	3040HR-5S32	5	40	32	45	130	5.5	0.83	2
	3040HR-5L32	5	40	32	45	200	5.5	1.24	1

Available inserts

XNKT-ML

XNKT-MM



Designation	Cermet		Coated										Uncoated			page
	CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2510	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	
XNKT	060405PNER-ML															E32
	060405PNSR-MM															
	060408PNER-ML															
	060408PNSR-MM															

Parts

Specification		
Ø20~Ø40	FTNA0306	TW09S

Available inserts E32



E Milling

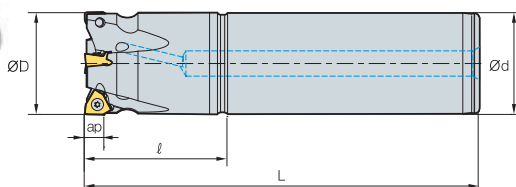
RM3PS4000 **new**

Fig. 1

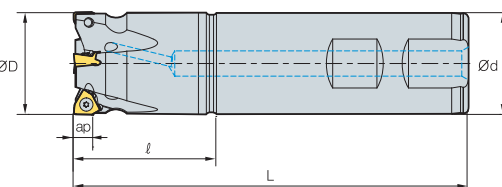


Fig. 2

AA
90°• AR: -5°
• RR: -11°~7°

(mm)

Designation			ØD	Ød	ℓ	L	ap		Fig.
RM3PS	4032HR-3S32	3	32	32	42	125	8	0.67	2
	4032HR-3L32	3	32	32	42	200	8	1.11	1
	4033HR-3S32	3	33	32	42	125	8	0.68	2
	4033HR-3L32	3	33	32	42	200	8	1.13	1
	4040HR-3S32	3	40	32	42	130	8	0.8	2
	4040HR-3L32	3	40	32	42	200	8	1.21	1
	4040HR-4S32	4	40	32	42	130	8	0.81	2
	4040HR-4L32	4	40	32	42	200	8	1.22	1
	4050HR-4S32	4	50	32	42	135	8	0.99	2
	4050HR-4L32	4	50	32	42	200	8	1.38	1
	4050HR-4S40	4	50	40	42	135	8	1.32	2
	4050HR-4L40	4	50	40	42	200	8	1.94	1
	4050HR-5S32	5	50	32	42	135	8	1.02	2
	4050HR-5L32	5	50	32	42	200	8	1.4	1
	4050HR-5S40	5	50	40	42	135	8	1.35	2
	4050HR-5L40	5	50	40	42	200	8	1.96	1
	4063HR-5S32	5	63	32	42	135	8	1.31	2
	4063HR-5L32	5	63	32	42	200	8	1.7	1
	4063HR-5S40	5	63	40	42	135	8	1.64	2
	4063HR-5L40	5	63	40	42	200	8	2.25	1
	4063HR-6S32	6	63	32	42	135	8	1.31	2
	4063HR-6L32	6	63	32	42	200	8	1.7	1
	4063HR-6S40	6	63	40	42	135	8	1.64	2
	4063HR-6L40	6	63	40	42	200	8	2.26	1

Available inserts

XNCT-MA

XNKT-ML

XNKT-MM



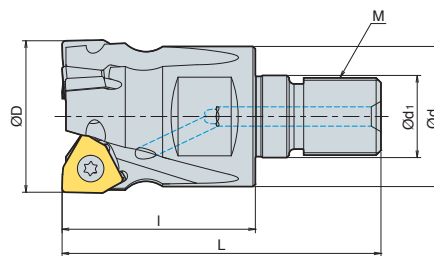
Designation		Cermet		Coated												Uncoated			page
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2510	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A	G10	
XNCT	080504PNFR-MA																		●
	080508PNFR-MA																		●
	080512PNFR-MA																		●
	080520PNFR-MA																		●
XNKT	080504PNER-ML													●	●				
	080504PNSR-MM									●				●	●				
	080508PNER-ML					●			●	●	●		●	●	●				
	080508PNSR-MM					●		●	●	●	●		●	●	●				
	080512PNER-ML													●	●				
	080512PNSR-MM							●	●					●	●				
	080516PNER-ML													●	●				
	080516PNSR-MM								●	●				●	●				
	080520PNER-ML													●	●				
	080520PNSR-MM								●	●				●	●				

Parts

Specification		
Ø32~Ø63	FTNA0408	TW15S

Available inserts E31, E32

RM3PM3000/4000 new



AA
90°

• AR: -5°
• RR: -16°~7°

(mm)

Designation			ØD	Ød	Ød1	I	L	M	ap	
RM3PM	3020HR-2-M10	2	20	18	10.5	30	50	M10	5.5	0.06
	3025HR-3-M12	3	25	21	12.5	35	58	M12	5.5	0.1
	3032HR-4-M16	4	32	29	17	40	66	M16	5.5	0.21
	3040HR-5-M16	5	40	29	17	40	66	M16	5.5	0.26
RM3PM	4032HR-3-M16	3	32	29	17	40	66	M16	8	0.21
	4040HR-4-M16	4	40	29	17	50	76	M16	8	0.33
	4050HR-5-M16	5	50	29	17	55	81	M16	8	0.49

Available inserts



Designation			Cermet		Coated										Uncoated			page				
			CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2510	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400		ST30A	G10	H01	
3000 type	XNKT	060405PNER-ML									●	●	●		●	●	●				E32	
		060405PNSR-MM								●	●	●	●		●	●	●					
		060408PNER-ML											●			●	●					
		060408PNSR-MM								●	●	●	●			●	●					
4000 type	XNCT	080504PNFR-MA																		●	E31 E32	
		080508PNFR-MA																		●		
		080512PNFR-MA																		●		
		080520PNFR-MA																		●		
	XNKT	080504PNER-ML															●	●				
		080504PNSR-MM															●	●				
		080508PNER-ML										●	●	●		●	●	●				
		080508PNSR-MM								●	●	●	●		●	●	●	●				
		080512PNER-ML															●	●				
		080512PNSR-MM									●	●					●	●				
		080516PNER-ML															●	●				
		080516PNSR-MM									●	●					●	●				
		080520PNER-ML															●	●				
		080520PNSR-MM									●	●					●	●				

Available adaptor

Designation		Available adaptor
RM3PM	3020HR-2-M10	MAT-M10
	3025HR-3-M12	MAT-M12
	3032HR-4-M16	MAT-M16
	3040HR-5-M16	MAT-M16
RM3PM	4032HR-3-M16	MAT-M16
	4040HR-4-M16	MAT-M16
	4050HR-5-M16	MAT-M16

Designation : RM3PM4032HR-M16
Modular head threading measure size (M16)

II

Adaptor spec.: MAT-M16-035-S32S
Adaptor threading measure (M16)

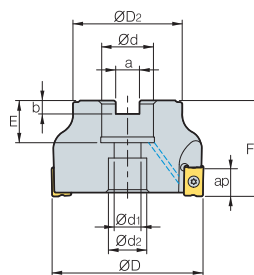
Parts

Specification	Screw	Wrench
Ø20~Ø40 (3000 type)	FTNA0306	TW09S
Ø32~Ø50 (4000 type)	FTNA0408	TW15S

Available inserts E31, E32 Available adaptor E401~E402



RM4PC(M)3000



AA
90°
• AR: -6°
• RR: -19°~13°

(mm)

Designation			ØD	ØD²	Ød	Ød₁	Ød²	a	b	E	F	ap	 kg	Bolt
RM4PCM	3040HR	4	40	35	16	9	14	8.4	5.6	19	40	9.0	0.24	SB0825
	3040HR-M	5	40	35	16	9	14	8.4	5.6	19	40	9.0	0.23	SB0825
	3050HR	5	50	42	22	11	18	10.4	6.3	20	40	9.0	0.36	SB1025
	3050HR-M	7	50	42	22	11	18	10.4	6.3	20	40	9.0	0.35	SB1025
	3063HR	7	63	49	22	11	18	10.4	6.3	20	40	9.0	0.61	SB1025
	3063HR-M	9	63	49	22	11	18	10.4	6.3	20	40	9.0	0.6	SB1025
RM4PC (RM4PCM)	3080HR	8	80	57	25.4 (27)	14	20	9.5 (12.4)	6.0 (7.0)	25 (23)	50	9.0	1.25 (1.24)	SB1230
	3080HR-M	10	80	57	25.4 (27)	14	20	9.5 (12.4)	6.0 (7.0)	25 (23)	50	9.0	1.24 (1.23)	SB1230
	3100HR	9	100	67	31.75 (32)	18	26	12.7 (14.4)	8.0 (8.0)	33 (25)	63 (50)	9.0	2.46 (1.94)	SB1630
	3100HR-M	12	100	67	31.75 (32)	18	26	12.7 (14.4)	8.0 (8.0)	33 (25)	63 (50)	9.0	2.44 (1.93)	SB1630

() Metric size

Available inserts

LNEX-MA

LNM(E)X-MF

LNM(E)X-MM



Designation	Cermet		Coated										Uncoated			page
	CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	
LNEX	100605PNR-MF										●			●	●	E11
	100605PNR-MM									●	●			●	●	
	100605PNR-MA															
	100608PNR-MF									●	●			●	●	
	100608PNR-MM										●			●	●	
LNMX	100605PNR-MF									●	●			●	●	
	100605PNR-MM									●	●	●		●	●	
	100608PNR-MF										●			●	●	
	100608PNR-MM									●				●	●	
	100608PNR-MM									●				●	●	

Available arbors

Designation	Available arbors	
	RM4PC	RM4PCM
RM4PC(M)	3040HR	BT□□-FMC16-□□
	3040HR-M	
	3050HR	
	3050HR-M	BT□□-FMC22-□□
	3063HR	
	3063HR-M	

Designation	Available arbors	
	RM4PC	RM4PCM
RM4PC(M)	3080HR	BT□□-FMA25.4-□□
	3080HR-M	
	3100HR	BT□□-FMA31.75-□□
	3100HR-M	

Parts

Specification		
Ø40-Ø100	FTKA0307	TW09S

Available inserts E11 Available arbors and bolt E426~E428

RM4PC(M)4000

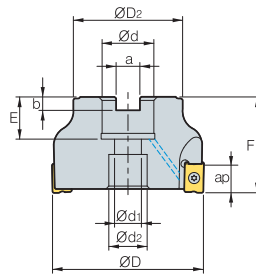


Fig. 1

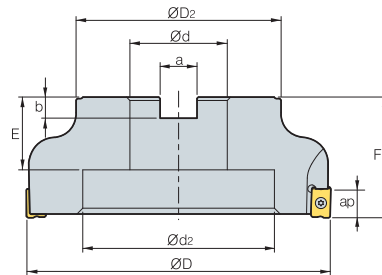


Fig. 2



AA
90°
• AR: -6°
• RR: -19°~13°

(mm)

Designation		ØD	ØD2	Ød	Ød1	Ød2	a	b	E	F	ap		Bolt	Fig.
RM4PCM	4040HR	3	40	36	16	11	18	8.4	5.6	19	40	14	0.23	SB0825 1
	4050HR	3	50	46	22	11	18	10.4	6.3	20	40	14	0.36	SB1025 1
	4050HR-M	4	50	46	22	11	18	10.4	6.3	20	40	14	0.35	SB1025 1
	4050HR-H	5	50	46	22	11	18	10.4	6.3	20	40	14	0.36	SB1025 1
	4063HR	4	63	49	22	11	18	10.4	6.3	20	40	14	0.56	SB1025 1
	4063HR-M	6	63	49	22	11	18	10.4	6.3	20	40	14	0.57	SB1025 1
RM4PC (RM4PCM)	4080HR	5	80	57	25.4 (27)	14	20	9.5 (12.4)	6.0 (7.0)	25 (23)	50	14	1.18 (1.16)	SB1230 1
	4080HR-M	7	80	57	25.4 (27)	14	20	9.5 (12.4)	6.0 (7.0)	25 (23)	50	14	1.17 (1.14)	SB1230 1
	4080HR-H	8	80	57	25.4 (27)	14	20	9.5 (12.4)	6.0 (7.0)	25 (23)	50	14	1.17 (1.14)	SB1230 1
	4100HR	5	100	67	31.75 (32)	18	26	12.7 (14.4)	8.0 (8.0)	33 (25)	63 (50)	14	2.35 (1.84)	SB1630 1
	4100HR-M	8	100	67	31.75 (32)	18	26	12.7 (14.4)	8.0 (8.0)	33 (25)	63 (50)	14	2.31 (1.82)	SB1630 1
	4100HR-H	9	100	67	31.75 (32)	18	26	12.7 (14.4)	8.0 (8.0)	33 (25)	63 (50)	14	2.31 (1.82)	SB1630 1
	4125HR	7	125	87	38.1 (40)	22	32	15.9 (16.4)	10 (9.0)	35 (30)	63	14	3.87 (3.79)	SB2040 1
	4125HR-M	10	125	87	38.1 (40)	22	32	15.9 (16.4)	10 (9.0)	35 (30)	63	14	3.82 (3.70)	SB2040 1
	4160R	8	160	107	50.8 (40)	-	100	19 (16.4)	11 (9.0)	38 (32)	63	14	5.0 (4.75)	MBA 2
	4160R-M	12	160	107	50.8 (40)	-	100	19 (16.4)	11 (9.0)	38 (32)	63	14	4.97 (4.71)	MBA 2

() Metric size

Available inserts

LNEX-MA	LNM(E)X-MF	LNM(E)X-MM

Designation		Cermet	Coated										Uncoated	page		
		CN2500 CN30	NC5330	NCM325 NCM335	NCM535 NCM545	PC2505 PC2010	PC3700	PC6510 PC9530	PC9540	PC5300 PC5400	ST30A H01					
LNEX	151004PNR-MF															
	151004PNR-MM															
	151004PNR-MA															
	151008PNR-MF															
	151008PNR-MM															
	151008PNR-MA															
	151016PNR-MF															
	151016PNR-MM															

Designation		Cermet	Coated										Uncoated	page		
		CN2500 CN30	NC5330	NCM325 NCM335	NCM535 NCM545	PC2505 PC2010	PC3700	PC6510 PC9530	PC9540	PC5300 PC5400	ST30A H01					
LNMX	151004PNR-MF															
	151004PNR-MM															
	151008PNR-MF															
	151008PNR-MM															
	151016PNR-MF															
	151016PNR-MM															

Available arbors

Designation	Available arbors	
	RM4PC	RM4PCM
RM4PC(M) 4050HR		
4050HR-M		
4063HR		
4063HR-M		
4080HR	BT□□-FMA25.4-□□	BT□□-FMC27-□□
4080HR-M		

Designation	Available arbors	
	RM4PC	RM4PCM
RM4PC(M) 4100HR	BT□□-FMA31.75-□□	BT□□-FMC32-□□
4100HR-M		
4125HR	BT□□-FMA38.1-□□	BT□□-FMB40-□□
4125HR-M		
4160R	BT□□-FMA50.8-□□	BT□□-FMC40-□□
4160R-M		

Parts

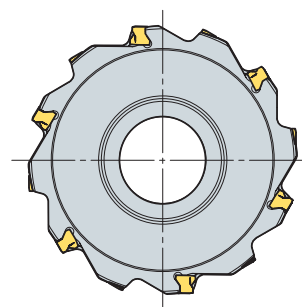
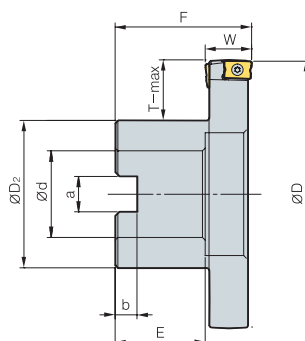
Specification		
Ø50~Ø160	FTKA0412B	TW15S

Available inserts E11 Available arbors and bolt E426~E428



E Milling

RM4PFCB3000



(mm)

Designation		ØD	ØD ₂	Ød	a	b	E	F	W	T-max	
RM4PFCB	308015R	10	80	40	25.4	9.5	6	25	50	15	19
	308017R	10	80	40	25.4	9.5	6	25	50	17	19
	310015R	12	100	54	31.75	12.7	8	32	50	15	22
	310017R	12	100	54	31.75	12.7	8	32	50	17	22
	312515R	14	125	70	38.1	15.9	10	38	60	15	26
	312517R	14	125	70	38.1	15.9	10	38	60	17	26
	316015R	16	160	70	38.1	15.9	10	38	60	15	44
	316017R	16	160	70	38.1	15.9	10	38	60	17	44

Available inserts

LNM(E)X-MM



Designation		Cermet		Coated												Uncoated			page	
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A	G10		H01
LNEX	100605PNR-MM										●	●			●	●				E11
	100605PNL-MM											●			●	●				
LNMX	100605PNR-MM										●	●	●		●	●				
	100605PNL-MM										●	●			●	●				

Available arbors

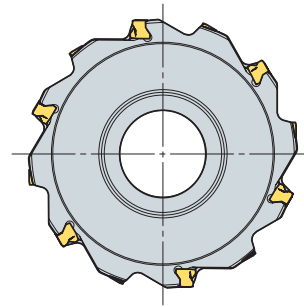
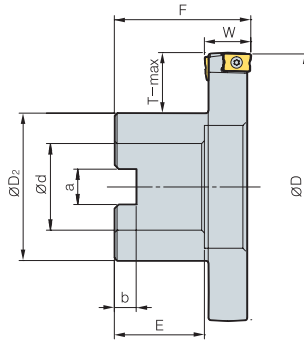
Designation	Available arbors
RM4PFCB	308015R
	308017R
	310015R
	310017R
	312515R
	312517R
	316015R
	316017R
BT□□ -FMA25.4-□□	
BT□□ -FMA31.75-□□	
BT□□ -FMA38.1-□□	

Parts

Specification	Screw	Wrench
Ø80~Ø160	FTKA0307	TW09S

Available inserts E11 Available arbors and bolt E426~E428

RM4PFCB4000



(mm)

Designation		ØD	ØD ₂	Ød	a	b	E	F	W	T-max
RM4PFCB	408022R	6	80	40	25.4	9.5	6	25	50	19
	408024R	6	80	40	25.4	9.5	6	25	50	19
	408026R	6	80	40	25.4	9.5	6	25	50	19
	408028R	6	80	40	25.4	9.5	6	25	50	19
	410022R	8	100	54	31.75	12.7	8	32	50	22
	410024R	8	100	54	31.75	12.7	8	32	50	22
	410026R	8	100	54	31.75	12.7	8	32	50	22
	410028R	8	100	54	31.75	12.7	8	32	50	22
	412522R	10	125	70	38.1	15.9	10	38	60	26
	412524R	10	125	70	38.1	15.9	10	38	60	26
	412526R	10	125	70	38.1	15.9	10	38	60	26
	412528R	10	125	70	38.1	15.9	10	38	60	26
	416022R	12	160	70	38.1	15.9	10	38	60	44
	416024R	12	160	70	38.1	15.9	10	38	60	44
	416026R	12	160	70	38.1	15.9	10	38	60	44
	416028R	12	160	70	38.1	15.9	10	38	60	44

Available inserts

LNM(E)X-MM



Designation		Cermet		Coated												Uncoated			page
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A	G10	
LNEX	151008PNR-MM									●	●			●	●				E11
	151008PNL-MM										●			●	●				
LNMX	151008PNR-MM					●				●	●	●		●	●				
	151008PNL-MM													●	●				

Available arbors

Designation	Available arbors	Designation	Available arbors
RM4PFCB	408022R	RM4PFCB	412522R
	408024R		412524R
	408026R		412526R
	408028R		412528R
	410022R		416022R
	410024R		416024R
	410026R		416026R
	410028R		416028R
	BT□□-FMA25.4-□□		BT□□-FMA38.1-□□
	BT□□-FMA31.75-□□		

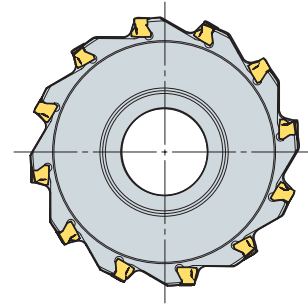
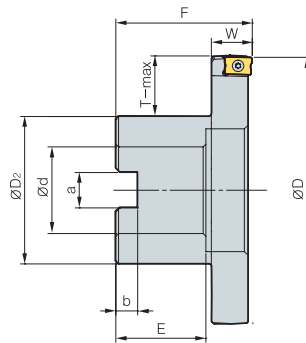
Parts

Specification	Screw	Wrench
Ø80~Ø160	FTKA0412B	TW15S

Available inserts E11 Available arbors and bolt E426~E428



RM4PHCB3000



(mm)

Designation		ØD	ØD2	Ød	a	b	E	F	W	T-max
RM4PHCB 308015R	10	80	40	25.4	9.5	6	25	50	15	19
310015R	12	100	54	31.75	12.7	8	32	50	15	22
312515R	14	125	70	38.1	15.9	10	38	60	15	26
316015R	16	160	70	38.1	15.9	10	38	60	15	44

Available inserts

LNEX-MA

LNM(E)X-MF

LNM(E)X-MM



Designation		Cermet		Coated												Uncoated			page	
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A	G10		H01
LNEX	100605PNR-MF											●			●	●				E11
	100605PNR-MM									●	●				●	●				
	100605PNR-MA																	●		
	100608PNR-MF									●	●				●	●				
	100608PNR-MM										●				●	●				
LNMX	100605PNR-MF										●				●	●				
	100605PNR-MM									●	●	●			●	●				
	100608PNR-MF										●				●	●				
	100608PNR-MM									●					●	●				

Available arbors

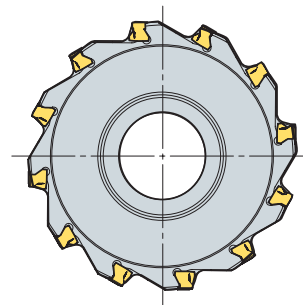
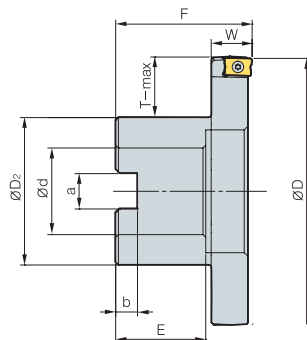
Designation	Available arbors
RM4PHCB 308015R	BT□□-FMA25.4-□□
310015R	BT□□-FMA31.75-□□
312515R	BT□□-FMA38.1-□□
316015R	

Parts

Specification	Screw	Wrench
Ø80~Ø160	FTKA0307	TW09S

Available inserts E11 Available arbors and bolt E426~E428

RM4PHCB4000



(mm)

Designation		ØD	ØD2	Ød	a	b	E	F	W	T-max
RM4PHCB 408020R	6	80	40	25.4	9.5	6	25	50	20	19
410020R	8	100	54	31.75	12.7	8	32	50	20	22
412520R	10	125	70	38.1	15.9	10	38	60	20	26
416020R	12	160	70	38.1	15.9	10	38	60	20	44

Available inserts

LNEX-MA LNM(E)X-MF LNM(E)X-MM



Designation		Cermet		Coated												Uncoated			page	
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A	G10		H01
LNEX	151004PNR-MF											●			●	●				E11
	151004PNR-MM											●			●	●				
	151004PNR-MA																	●		
	151008PNR-MF										●				●	●				
	151008PNR-MM									●	●				●	●				
	151008PNR-MA																	●		
	151016PNR-MF										●				●	●				
	151016PNR-MM										●				●	●				
LNMX	151004PNR-MF									●	●				●	●				
	151004PNR-MM										●					●				
	151008PNR-MF					●				●	●				●	●				
	151008PNR-MM					●				●	●	●			●	●				
	151016PNR-MF										●				●	●				
	151016PNR-MM										●					●				

Available arbors

Designation	Available arbors
RM4PHCB 408020R	BT□□ -FMA25.4-□□
410020R	BT□□ -FMA31.75-□□
412520R	BT□□ -FMA38.1-□□
416020R	

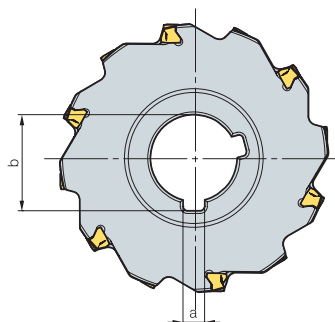
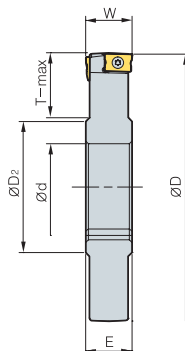
Parts

Specification	Screw	Wrench
Ø80~Ø160	FTKA0412B	TW15S

Available inserts E11 Available arbors and bolt E426~E428



RM4PFCP3000



(mm)

Designation		ØD	ØD ₂	Ød	a	b	E	W	T-max
RM4PFCP	308015R	10	80	41.5	25.4	6.35	28	15	17
	308017R	10	80	41.5	25.4	6.35	28	17	17
	310015R	12	100	48	31.75	7.94	35.2	15	24
	310017R	12	100	48	31.75	7.94	35.2	17	24
	312515R	14	125	58	38.1	9.53	42.3	15	32
	312517R	14	125	58	38.1	9.53	42.3	17	32
	316015R	16	160	58	38.1	9.53	42.3	15	49
	316017R	16	160	58	38.1	9.53	42.3	17	49

Available inserts

LNM(E)X-MM



Designation		Cermet		Coated												Uncoated			page	
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A	G10		H01
LNEX	100605PNR-MM										●	●			●	●				E11
	100605PNL-MM											●			●	●				
LNMX	100605PNR-MM										●	●	●		●	●				
	100605PNL-MM										●	●			●	●				

Available arbors

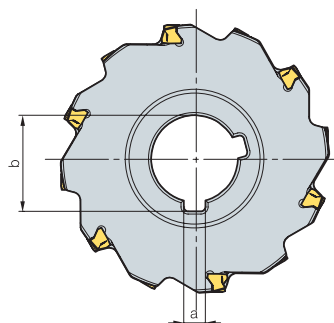
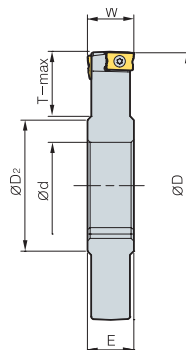
Designation	Available arbors
RM4PFCP 308015R	BT□□-SCA25.4-□□
308017R	
310015R	BT□□-SCA31.75-□□
310017R	
312515R	BT□□-SCA38.1-□□
312517R	
316015R	
316017R	

Parts

Specification	Screw	Wrench
Ø80~Ø160	FTKA0307	TW09S

Available inserts E11 Available arbors and bolt E426~E428

RM4PFCP4000



(mm)

Designation		ØD	ØD2	Ød	a	b	E	W	T-max
RM4PFCP	408022R	6	80	41.5	25.4	6.35	28	22	17
	408024R	6	80	41.5	25.4	6.35	28	24	17
	408026R	6	80	41.5	25.4	6.35	28	26	17
	408028R	6	80	41.5	25.4	6.35	28	28	17
	410022R	8	100	48	31.75	7.94	35.2	22	24
	410024R	8	100	48	31.75	7.94	35.2	24	24
	410026R	8	100	48	31.75	7.94	35.2	26	24
	410028R	8	100	48	31.75	7.94	35.2	28	24
	412522R	10	125	58	38.1	9.53	42.3	22	32
	412524R	10	125	58	38.1	9.53	42.3	24	32
	412526R	10	125	58	38.1	9.53	42.3	26	32
	412528R	10	125	58	38.1	9.53	42.3	28	32
	416022R	12	160	58	38.1	9.53	42.3	22	49
	416024R	12	160	58	38.1	9.53	42.3	24	49
	416026R	12	160	58	38.1	9.53	42.3	26	49
	416028R	12	160	58	38.1	9.53	42.3	28	49

Available inserts

LNM(E)X-MM



Designation	Cermet		Coated										Uncoated			page
	CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	
LNEX	151008PNR-MM									●	●			●	●	E11
	151008PNL-MM										●			●	●	
LNMX	151008PNR-MM					●				●	●	●		●	●	
	151008PNL-MM													●	●	

Available arbors

Designation	Available arbors	Designation	Available arbors
RM4PFCP	BT□□-SCA25.4-□□	412522R	BT□□-SCA38.1-□□
		412524R	
		412526R	
		412528R	
	BT□□-SCA31.75-□□	416022R	
		416024R	
		416026R	
		416028R	

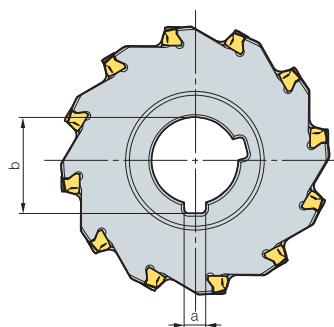
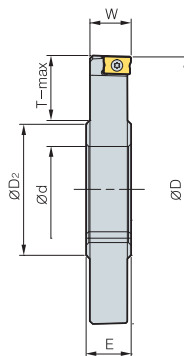
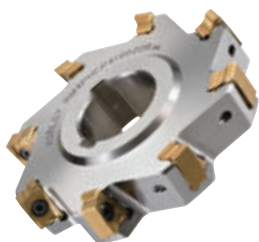
Parts

Specification	Screw	Wrench
Ø80~Ø160	FTKA0412B	TW15S

Available inserts E11 Available arbors and bolt E426~E428



RM4PHCP3000



(mm)

Designation			ØD	ØD2	Ød	a	b	E	W	T-max
RM4PHCP	308015R	10	80	41.5	25.4	6.35	28	16.5	15.1	17
	310015R	12	100	48	31.75	7.94	35.2	16.5	15.1	24
	312515R	14	125	58	38.1	9.52	42.3	16.5	15.1	32
	316015R	16	160	58	38.1	9.52	42.3	16.5	15.1	49

Available inserts

LNEX-MA

LNM(E)X-MF

LNM(E)X-MM



Designation		Cermet		Coated												Uncoated			page
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A	G10	
LNEX	100605PNR-MF										●			●	●				E11
	100605PNR-MM									●	●			●	●				
	100605PNR-MA																●		
	100608PNR-MF									●	●			●	●				
	100608PNR-MM										●			●	●				
LNMX	100605PNR-MF										●			●	●				
	100605PNR-MM									●	●	●		●	●				
	100608PNR-MF										●			●	●				
	100608PNR-MM									●				●	●				

Available arbors

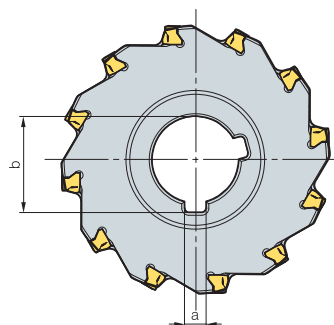
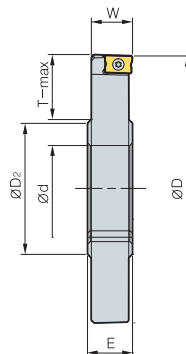
Designation	Available arbors
RM4PHCP 308015R	BT□□-SCA25.4-□□
310015R	BT□□-SCA31.75-□□
312515R	
316015R	BT□□-SCA38.1-□□

Parts

Specification	Screw	Wrench
Ø80~Ø160	FTKA0307	TW09S

Available inserts E11 Available arbors and bolt E426~E428

RM4PHCP4000



(mm)

Designation		ØD	ØD2	Ød	a	b	E	W	T-max	
RM4PHCP	408020R	6	80	41.5	25.4	6.35	28	22	19.8	17
	410020R	8	100	48	31.75	7.94	35.2	22	19.8	24
	412520R	10	125	58	38.1	9.53	42.3	22	19.8	32
	416020R	12	160	58	38.1	9.53	42.3	22	19.8	49

Available inserts

LNEX-MA

LNM(E)X-MF

LNM(E)X-MM



Designation		Cermet		Coated												Uncoated			page
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A	G10	
LNEX	151004PNR-MF										●			●	●				E11
	151004PNR-MM										●			●	●				
	151004PNR-MA																		
	151008PNR-MF										●			●	●				
	151008PNR-MM									●	●			●	●				
	151008PNR-MA																		
	151016PNR-MF										●			●	●				
	151016PNR-MM										●			●	●				
LNMX	151004PNR-MF									●	●			●	●				
	151004PNR-MM										●				●				
	151008PNR-MF					●				●	●			●	●				
	151008PNR-MM					●				●	●			●	●				
	151016PNR-MF										●			●	●				
	151016PNR-MM										●				●				

Available arbors

Designation	Available arbors
RM4PHCP 408020R	BT□□ -SCA25.4-□□
410020R	BT□□ -SCA31.75-□□
412520R	BT□□ -SCA38.1-□□
416020R	

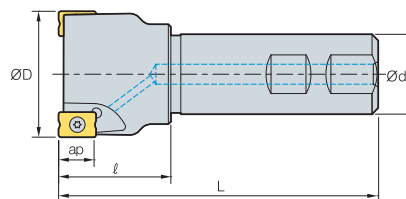
Parts

Specification	Screw	Wrench
Ø80~Ø160	FTKA0412B	TW15S

Available inserts E11 Available arbors and bolt E426~E428



RM4PS3000



• AR: -6°
• RR: -39°~16°

(mm)

Designation		ØD	Ød	l	L	ap	kg
RM4PS	3014HR-S16	1	14	16	23	90	0.11
	3016HR-S16	1	16	16	25	90	0.11
	3018HR-S16	2	18	16	23	90	0.12
	3020HR-S20	2	20	20	30	100	0.21
	3020HR-S20M	3	20	20	30	100	0.21
	3025HR-S25	2	25	25	35	115	0.38
	3025HR-S25M	3	25	25	35	115	0.38
	3032HR-S32	3	32	32	40	125	0.69
	3032HR-S32M	4	32	32	40	125	0.7
	3040HR-S32	4	40	32	42	130	0.86
	3040HR-S32M	5	40	32	42	130	0.85
	3040HR-S40	4	40	40	42	130	1.17
	3040HR-S40M	5	40	40	42	130	1.17
	3040HR-S42	4	40	42	42	130	1.26
	3040HR-S42M	5	40	42	42	130	1.25
	3050HR-S32	5	50	32	45	135	1.06
	3050HR-S32M	7	50	32	45	135	1.05
	3050HR-S40	5	50	40	45	135	1.38
	3050HR-S40M	7	50	40	45	135	1.37
	3050HR-S42	5	50	42	45	135	1.48
	3050HR-S42M	7	50	42	45	135	1.48

Available inserts

LNEX-MA

LMN(E)X-MF

LMN(E)X-MM



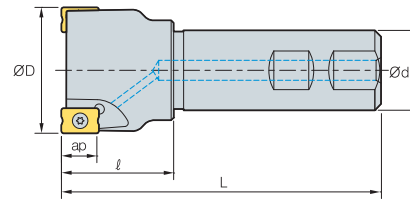
Designation		Cermet		Coated												Uncoated			page
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A	G10	
LNEX	100605PNR-MF										●			●	●				
	100605PNR-MM									●	●			●	●				
	100605PNR-MA																	●	
	100605PNL-MM									●	●			●	●				
	100608PNR-MF										●			●	●				
	100608PNR-MM										●			●	●				
LNMX	100605PNR-MF									●	●	●		●	●				
	100605PNR-MM										●			●	●				
	100608PNR-MF									●				●	●				
	100608PNR-MM										●	●							

Parts

Specification		
Ø14~Ø50	FTKA0307	TW09S

Available inserts E11

RM4PS4000



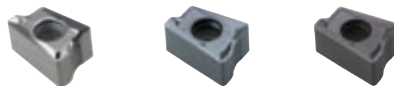
• AR: -6°
• RR: -24°~14°

(mm)

Designation		ØD	Ød	ℓ	L	ap	
RM4PS	4032HR-S32	2	32	32	40	125	0.68
	4032HR-S32M	3	32	32	40	125	0.69
	4040HR-S32	3	40	32	42	125	0.83
	4040HR-S32M	4	40	32	42	125	0.83
	4040HR-S40	3	40	40	42	125	1.14
	4040HR-S42	3	40	42	42	125	1.23
	4050HR-S32	3	50	32	45	125	1.02
	4050HR-S32M	4	50	32	45	125	1.02
	4050HR-S40	3	50	40	45	125	1.35
	4050HR-S40M	4	50	40	45	125	1.34
	4050HR-S42	3	50	42	45	125	1.45
	4050HR-S42M	4	50	42	45	125	1.45
	4063HR-S32	4	63	32	45	125	1.25
	4063HR-S32M	6	63	32	45	125	1.24
	4063HR-S40	4	63	40	45	125	1.62
	4063HR-S40M	6	63	40	45	125	1.61
	4063HR-S42	4	63	42	45	125	1.71
	4063HR-S42M	6	63	42	45	125	1.7

Available inserts

LNEX-MA LNM(E)X-MF LNM(E)X-MM



Designation	Cermet		Coated										Uncoated			page
	CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	
LNEX	151004PNR-MF										●			●	●	E11
	151004PNR-MM										●			●	●	
	151004PNR-MA															
	151008PNR-MF										●			●	●	
	151008PNR-MM									●	●			●	●	
	151008PNR-MA															
	151016PNR-MF										●			●	●	
	151016PNR-MM										●			●	●	
LNMX	151004PNR-MF									●	●			●	●	
	151004PNR-MM										●			●	●	
	151008PNR-MF					●				●	●			●	●	
	151008PNR-MM					●				●	●	●		●	●	
	151016PNR-MF									●	●			●	●	
	151016PNR-MM									●	●			●	●	

Parts

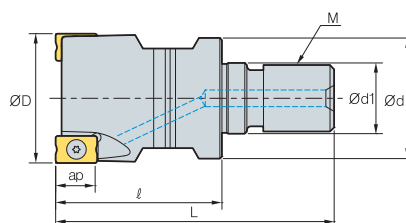
Specification		
Ø32~Ø63	FTKA0412B	TW15S

Available inserts E11



E Milling

RM4PM3000



AA
90°
• AR: -6°
• RR: -39°~16°

(mm)

Designation		ØD	Ød	Ød1	l	L	M	ap	kg
RM4PM	3014HR-M06	1	14	12	6.5	25	M06	9.0	0.02
	3016HR-M08	1	16	14.5	8.5	25	M08	9.0	0.02
	3018HR-M08	2	18	14.5	8.5	25	M08	9.0	0.03
	3020HR-M10	2	20	18	10.5	30	M10	9.0	0.06
	3025HR-M12	2	25	23	12.5	35	M12	9.0	0.11
	3032HR-M16	3	32	29	17	40	M16	9.0	0.21
	3040HR-M16	4	40	29	17	40	M16	9.0	0.26
	3050HR-M16	5	50	30	17	45	M16	9.0	0.41

Available inserts

LNEX-MA LNM(E)X-MF LNM(E)X-MM



Designation	Cermet		Coated										Uncoated			page
	CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	
LNEX	100605PNR-MF										●			●	●	E11
	100605PNR-MM									●	●			●	●	
	100605PNR-MA															
	100608PNR-MF									●	●			●	●	
	100608PNR-MM										●			●	●	
LNMX	100605PNR-MF										●			●	●	
	100605PNR-MM									●	●	●		●	●	
	100608PNR-MF										●			●	●	
	100608PNR-MM									●				●	●	

Available adaptor

Designation		Available adaptor
RM4PM	3014HR-M06	MAT-M06
	3016HR-M08	MAT-M08
	3018HR-M08	
	3020HR-M10	MAT-M10
	3025HR-M12	MAT-M12
	3032HR-M16	MAT-M16
	3040HR-M16	
	3050HR-M16	

Designation : RM4PM3032HR-M16
Modular head threading measure size (M16)

II

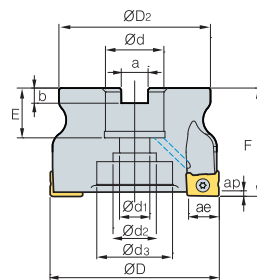
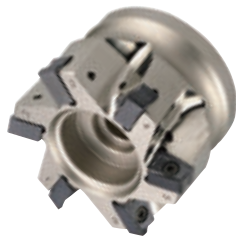
Adaptor spec.: MAT-M16-035-S32S
Adaptor threading measure (M16)

Parts

Specification	Screw	Wrench
Ø14~Ø50	FTKA0307	TW09S

Available inserts E11 Available adaptor E401~E402

RM4ZC(M)3000/4000



AA
90°
• AR: -11°
• RR: -12°~10°

(mm)

Designation			ØD	ØD2	Ød	Ød1	Ød2	Ød3	a	b	E	F	ap	ae	
RM4ZCM	3040HR	4	40	37	16	9	14	-	8.4	5.6	19	40	1.5	9.0	0.21
	3050HR	5	50	47	22	11	18	-	10.4	6.3	20	40	1.5	9.0	0.33
	3052HR	5	52	48	22	11	18	-	10.4	6.3	20	40	1.5	9.0	0.37
	4063HR	5	63	58	22	11	18	-	10.4	6.3	20	40	2.5	14.0	0.56
RM4ZC (RM4ZCM)	4066HR	5	66	61	25.4 (27)	14	20	-	9.5 (12.4)	6 (7)	25	50	2.5	14.0	0.74
	4080HR	6	80	70	25.4 (27)	14	20	35	9.5 (12.4)	6 (7)	25 (23)	50	2.5	14.0	1.09
	4100HR	7	100	80	31.75 (32)	18	26	42	12.7 (14.4)	8 (8)	25 (33)	63 (50)	2.5	14.0	1.71

() Metric size

Available inserts

LNM(E)X-MM



Designation	Cermet		Coated										Uncoated			page
	CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	
3000 type LNEX 100605PNL-MM											●			●	●	E11
LNMX 100605PNL-MM										●	●			●	●	
4000 type LNEX 151008PNL-MM											●			●	●	
LNMX 151008PNL-MM														●	●	

Available arbors

Designation	Available arbors	
	RM4ZC	RM4ZCM
RM4ZCM 3040HR	BT□□ -FMC16-□□ BT□□ -SCA16-□□	
3050HR		
3052HR	BT□□ -FMC22-□□	
RM4ZCM 4063HR	BT□□ -FMC22-□□	
RM4ZC(M) 4066HR		
4080HR	BT□□ -FMA25.4-□□ BT□□ -FMA31.75-□□ BT□□ -SCA31.75-□□	BT□□ -FMC27-□□
4100HR		BT□□ -FMC32-□□

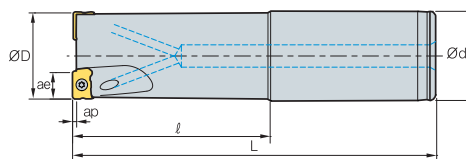
Parts

Specification	Screw	Wrench
Ø40~Ø52 (3000 type)	FTKA0307	TW09S
Ø63~Ø100 (4000 type)	FTKA0412B	TW15S

Available inserts E11 Available arbors and bolt E426~E428



RM4ZS3000



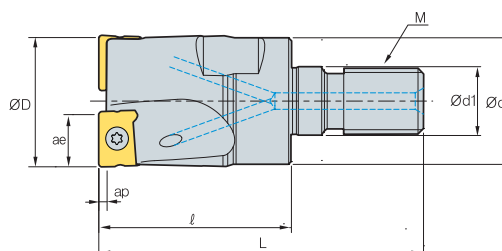
AA
90°

- AR: -11°
- RR: -17°~-14°

(mm)

Designation			ØD	Ød	ℓ	L	ap	ae	
RM4ZS	3025HR-L25	2	25	25	120	200	1.5	9.0	0.62
	3032HR-L32	3	32	32	120	210	1.5	9.0	1.13
	3040HR-L32	4	40	32	120	250	1.5	9.0	1.53

RM4ZM3000



AA
90°

- AR: -11°
- RR: -17°~-14°

(mm)

Designation			ØD	Ød	Ød ₁	ℓ	L	M	ap	ae	
RM4ZM	3025HR-M12	2	25	23	12.5	35	59	M12	1.5	9.0	0.11
	3032HR-M16	3	32	29	17	40	67	M16	1.5	9.0	0.21
	3040HR-M16	4	40	29	17	40	67	M16	1.5	9.0	0.28

Available inserts

LNM(E)X-MM



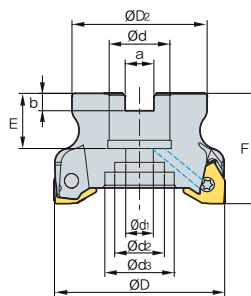
Designation		Cermet		Coated												Uncoated			page
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A	G10	
LNEX	100605PNL-MM																		
LNMX	100605PNL-MM																		E11

Parts

Specification		
Ø25~Ø40	FTKA0307	TW09S

Available inserts E11

RM6PCM-WN04 new



AA
90°
• AR: -6°
• RR: -14°~11°

(mm)

Designation			ØD	ØD2	Ød	Ød1	Ød2	Ød3	a	b	E	F	ap		Available screw
RM6PCM	040R-16-6-WN04	6	40	35	16	9	14	-	8.4	5.6	19	40	4.3	0.19	ETNA02506
	040R-16-7-WN04	7	40	35	16	9	14	-	8.4	5.6	19	40	4.3	0.19	ETNA02506
	050R-22-8-WN04	8	50	42	22	11	18	-	10.4	6.3	20	40	4.3	0.28	ETNA02506
	050R-22-9-WN04	9	50	42	22	11	18	-	10.4	6.3	20	40	4.3	0.28	ETNA02506
	063R-22-10-WN04	10	63	49	22	11	18	-	10.4	6.3	20	40	4.3	0.47	ETNA02506
	063R-22-11-WN04	11	63	49	22	11	18	-	10.4	6.3	20	40	4.3	0.47	ETNA02506

Available inserts

WNGX-MA

WNGX-ML

WNGX-MM



Designation		Cermet		Coated												Uncoated			page		
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A	G10		H01	
WNGX	040304PNFR-MA																		●	E30	
	040308PNFR-MA																		●		
	040312PNFR-MA																		●		
	040316PNFR-MA																		●		
	040304PNER-ML										●		●	●	●						
	040308PNER-ML													●	●						
	040312PNER-ML													●							
	040316PNER-ML													●							
	040304PNSR-MM											●			●	●					
	040308PNSR-MM														●	●					
	040312PNSR-MM														●						
	040316PNSR-MM														●						

Available arbors

Designation	NC arbors
RM6PCM 040R-16-6-WN04	BT□□-FMC16-□□
040R-16-7-WN04	
050R-22-8-WN04	
050R-22-9-WN04	BT□□-FMC22-□□
063R-22-10-WN04	
063R-22-11-WN04	

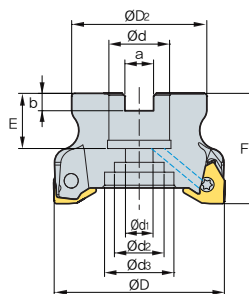
Parts

Specification	Screw	Wrench
Ø40~Ø63	ETNA02506	TW07S

Available inserts E30 Available arbors and bolt E426~E428



RM6PC(M)-WN08 **new**



AA
90°

• AR: -6°
• RR: -14°~ -11°

(mm)

Designation			ØD	ØD2	Ød	Ød1	Ød2	Ød3	a	b	E	F	ap		Available screw
RM6PCM	050R-22-4-WN08	4	50	42	22	11	18	-	10.4	6.3	20	40	8.2	0.28	FTNA0513
	050R-22-5-WN08	5	50	42	22	11	18	-	10.4	6.3	20	40	8.2	0.27	FTNA0511
	063R-22-5-WN08	5	63	49	22	11	18	-	10.4	6.3	20	40	8.2	0.45	FTNA0513
	063R-22-6-WN08	6	63	49	22	11	18	-	10.4	6.3	20	40	8.2	0.45	FTNA0513
	080R-27-7-WN08	7	80	57	27	14	20	35	12.4	7	23	50	8.2	0.90	FTNA0513
	080R-27-9-WN08	9	80	57	27	14	20	35	12.4	7	23	50	8.2	0.89	FTNA0511
	100R-32-8-WN08	8	100	67	32	18	26	42	14.4	8	25	50	8.2	1.47	FTNA0513
	100R-32-11-WN08	11	100	67	32	18	26	42	14.4	8	25	50	8.2	1.45	FTNA0511
	125R-40-11-WN08	11	125	90	40	22	32	52	16.4	9	29	63	8.2	2.94	FTNA0513
	125R-40-14-WN08	14	125	90	40	22	32	52	16.4	9	29	63	8.2	2.91	FTNA0511
RM6PC	080R-25.4-7-WN08	7	80	57	25.4	14	20	35	9.5	6	25	50	8.2	0.91	FTNA0513
	080R-25.4-9-WN08	9	80	57	25.4	14	20	35	9.5	6	25	50	8.2	0.91	FTNA0511
	100R-31.75-8-WN08	8	100	67	31.75	18	26	42	12.7	8	32	63	8.2	1.69	FTNA0513
	100R-31.75-11-WN08	11	100	67	31.75	18	26	42	12.7	8	32	63	8.2	1.73	FTNA0511
	125R-38.1-11-WN08	11	125	90	38.1	22	32	52	15.9	10	35	63	8.2	1.98	FTNA0513
	125R-38.1-14-WN08	14	125	90	38.1	22	32	52	15.9	10	35	63	8.2	2.90	FTNA0511

Available inserts

WNGX-MA

WNGX-ML

WNGX-MM



Designation	Cermet	Coated								Uncoated	page		Designation	Cermet	Coated								Uncoated	page								
	NCN2500	NCN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC3700	PC6510				PC9530	PC9540	PC5300	PC5400	ST30A	H01	NCN2500	NCN30	NC5330	NCM325			NCM335	NCM535	NCM545	PC2505	PC3700	PC6510	PC9530
WNGX 080604PNFR-MA																●	E30	WNGX 080616PNER-ML													●	E30
080608PNFR-MA																●		080620PNER-ML													●	
080612PNFR-MA																		080604PNSR-MM								●				●		
080616PNFR-MA																●		080608PNSR-MM				●				●	●		●	●		
080620PNFR-MA																●		080612PNSR-MM											●			
080604PNER-ML									●			●	●	●				080616PNSR-MM											●			
080608PNER-ML						●			●	●		●	●	●				080620PNSR-MM											●			
080612PNER-ML													●																			

Available arbors

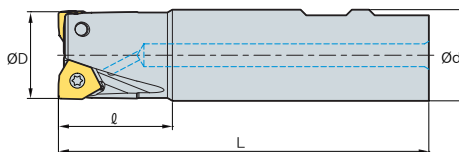
Designation	NC arbors	Designation	NC arbors
RM6PC 080R-25.4-7-WN08	BT□□-FMA25.4-□□	RM6PCM 063R-22-5-WN08	BT□□-FMC22-□□
080R-25.4-9-WN08		063R-22-6-WN08	
100R-31.75-8-WN08	BT□□-FMA31.75-□□	080R-27-7-WN08	BT□□-FMC27-□□
100R-31.75-11-WN08		080R-27-9-WN08	
125R-38.1-11-WN08	BT□□-FMA38.1-□□	100R-32-8-WN08	BT□□-FMC32-□□
125R-38.1-14-WN08		100R-32-11-WN08	
RM6PCM 050R-22-4-WN08	BT□□-FMC22-□□	125R-40-11-WN08	BT□□-FMC40-□□
050R-22-5-WN08		125R-40-14-WN08	

Parts

Specification	Screw	Wrench
Ø50~Ø125	FTNA0511/FTNA0513	TW20-100

Available inserts E30 Available arbors and bolt E426~E428

RM6PS-WN04 new



AA
90°

• AR: -6°
• RR: -20°~14°

(mm)

Designation			ØD	Ød	ℓ	L	ap		Available screw
RM6PS	020R-2W20-110-WN04	2	20	20	35	110	4.3	0.22	ETNA02506
	020R-3W20-110-WN04	3	20	20	35	110	4.3	0.22	ETNA02506
	025R-3W25-110-WN04	3	25	25	35	110	4.3	0.36	ETNA02506
	025R-4W25-110-WN04	4	25	25	35	110	4.3	0.35	ETNA02506
	032R-5W32-110-WN04	5	32	32	35	110	4.3	0.60	ETNA02506
	032R-6W32-110-WN04	6	32	32	35	110	4.3	0.60	ETNA02506

Available inserts

WNGX-MA

WNGX-ML

WNGX-MM



Designation		Cermet		Coated										Uncoated			page	
		CN2500	CN30	NC5330	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A	G10		H01
WNGX	040304PNFR-MA																●	E30
	040308PNFR-MA																●	
	040312PNFR-MA																●	
	040316PNFR-MA																●	
	040304PNER-ML								●		●	●	●					
	040308PNER-ML											●	●					
	040312PNER-ML											●						
	040316PNER-ML											●						
	040304PNSR-MM								●			●	●					
	040308PNSR-MM											●	●					
	040312PNSR-MM											●						
	040316PNSR-MM											●						

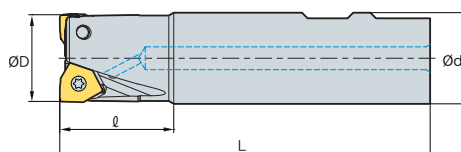
Parts

Specification		
Ø20~Ø32	ETNA02506	TW07S

Available inserts E30



Milling

RM6PS-WN08 new

AA
90°
• AR: -6°
• RR: -20°~-14°

(mm)

Designation		ØD	Ød	l	L	ap		Available screw
RM6PS 032R-2W32-120-WN08	2	32	32	40	120	8.2	0.65	FTNA0513
040R-3W32-120-WN08	3	40	32	40	120	8.2	0.69	FTNA0513
040R-4W32-120-WN08	4	40	32	40	120	8.2	0.69	FTNA0513
050R-4W32-120-WN08	4	50	32	40	120	8.2	0.76	FTNA0513
050R-5W32-120-WN08	5	50	32	40	120	8.2	0.76	FTNA0513

Available inserts

WNGX-MA

WNGX-ML

WNGX-MM



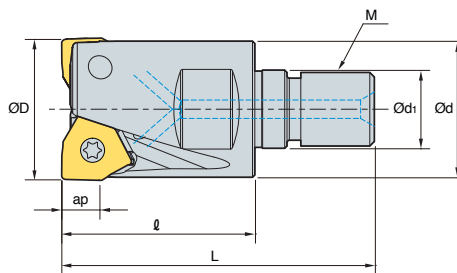
Designation		Cermet		Coated												Uncoated			page	
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A	G10		H01
WNGX	080604PNFR-MA																		●	E30
	080608PNFR-MA																		●	
	080612PNFR-MA																			
	080616PNFR-MA																		●	
	080620PNFR-MA																		●	
	080604PNER-ML										●			●	●	●				
	080608PNER-ML						●				●	●		●	●	●				
	080612PNER-ML														●					
	080616PNER-ML														●					
	080620PNER-ML														●					
	080604PNSR-MM										●				●	●				
	080608PNSR-MM						●				●	●		●	●	●				
	080612PNSR-MM														●					
	080616PNSR-MM														●					
	080620PNSR-MM														●					

Parts

Specification		
Ø32~Ø50	FTNA0513	TW20-100

Available inserts E30

RM6PM-WN04 new



AA
90°

• AR: -6°
• RR: -9°~6°

(mm)

Designation			ØD	Ød	Ød ₁	ℓ	L	M	ap	
RM6PM	020R-2-M10-WN04	2	20	18	10.5	30	50	10	4.3	0.06
	020R-3-M10-WN04	3	20	18	10.5	30	50	10	4.3	0.06
	025R-4-M12-WN04	4	25	23	12.5	30	53	12	4.3	0.1
	025R-5-M12-WN04	5	25	23	12.5	30	53	12	4.3	0.09
	032R-5-M16-WN04	5	32	29	17	40	66	16	4.3	0.25
	032R-6-M16-WN04	6	32	29	17	40	66	16	4.3	0.24

Available inserts

WNGX-MA WNGX-ML WNGX-MM



Designation	Cermet		Coated										Uncoated	page			
	CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC3700	PC6510	PC9530	PC9540	PC5300		PC5400	ST30A	H01
WNGX 040304PNFR-MA																●	E30
040308PNFR-MA																●	
040312PNFR-MA																●	
040316PNFR-MA																●	
040304PNER-ML									●		●	●	●				
040308PNER-ML											●	●	●				
040312PNER-ML												●					
040316PNER-ML												●					
040304PNSR-MM									●			●	●				
040308PNSR-MM												●	●				
040312PNSR-MM												●					
040316PNSR-MM												●					
Designation	CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A	H01	page
WNGX 080604PNFR-MA																●	E30
080608PNFR-MA																●	
080612PNFR-MA																●	
080616PNFR-MA																●	
080620PNFR-MA																●	
080604PNER-ML										●					●	●	
080608PNER-ML					●					●	●			●	●	●	
080612PNER-ML														●			
080616PNER-ML														●			
080620PNER-ML														●			
080604PNSR-MM										●				●	●	●	
080608PNSR-MM						●				●	●		●	●	●	●	
080612PNSR-MM														●			
080616PNSR-MM														●			
080620PNSR-MM														●			

Available adaptor

Designation	Available adaptor
RM6PM 020R-2-M10-WN04	MAT-M10
020R-3-M10-WN04	MAT-M10
025R-4-M12-WN04	MAT-M12
025R-5-M12-WN04	MAT-M12
032R-5-M16-WN04	MAT-M16
032R-6-M16-WN04	MAT-M16

Designation : RM6PM032R-5-M16-WN04
Modular head threading measure size (M16)

II

Adaptor spec.: MAT-M16-035-S32S
Adaptor threading measure (M16)

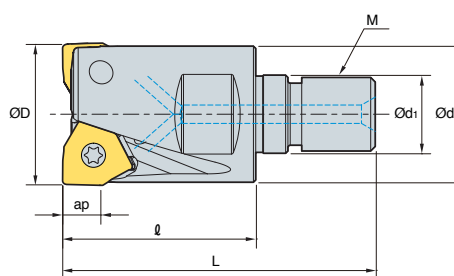
Parts

Specification	Screw	Wrench
Ø20~Ø32	ETNA02506	TW07S



E

Milling

RM6PM-WN08 new

AA
90°
• AR: -6°
• RR: -9°~6°

(mm)

Designation		ØD	Ød	Ød1	l	L	M	ap	
RM6PM 032R-2-M16-WN08	2	32	29	17	43	69	16	8.2	0.22
040R-3-M16-WN08	3	40	29	17	43	69	16	8.2	0.31
040R-4-M16-WN08	4	40	29	17	43	69	16	8.2	0.30

Available inserts

WNGX-MA

WNGX-ML

WNGX-MM



Designation		Cermet		Coated										Uncoated		page		
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC5300	PC5400		ST30A	H01
WNGX	040304PNFR-MA																●	E30
	040308PNFR-MA																●	
	040312PNFR-MA																●	
	040316PNFR-MA																●	
	040304PNER-ML									●		●	●	●			●	
	040308PNER-ML												●	●			●	
	040312PNER-ML													●			●	
	040316PNER-ML														●		●	
	040304PNSR-MM									●			●	●			●	
	040308PNSR-MM												●	●			●	
040312PNSR-MM													●			●		
040316PNSR-MM														●		●		
Designation		Cermet		Coated										Uncoated		page		
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC5300	PC5400		ST30A	H01
WNGX	080604PNFR-MA																●	E30
	080608PNFR-MA																●	
	080612PNFR-MA																●	
	080616PNFR-MA																●	
	080620PNFR-MA																●	
	080604PNER-ML										●			●	●		●	
	080608PNER-ML										●	●		●	●		●	
	080612PNER-ML										●	●			●		●	
	080616PNER-ML														●		●	
	080620PNER-ML														●		●	
080604PNSR-MM											●			●	●		●	
080608PNSR-MM											●	●		●	●		●	
080612PNSR-MM															●		●	
080616PNSR-MM															●		●	
080620PNSR-MM															●		●	

Available adaptor

Designation	Available adaptor
RM6PM 032R-2-M16-WN08	MAT-M16
040R-3-M16-WN08	MAT-M16
040R-4-M16-WN08	MAT-M16

Designation : RM6PM032R-5-M16-WN04
Modular head threading measure size (M16)

II

Adaptor spec.: MAT-M16-035-S32S
Adaptor threading measure (M16)

Parts

Specification		
Ø32~Ø40	FTNA0513	TW20-100

Available inserts E30 Available adaptor E401~E402

RM8AC(M)4000

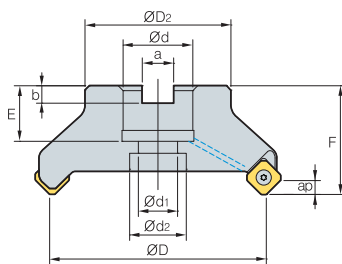


Fig. 1

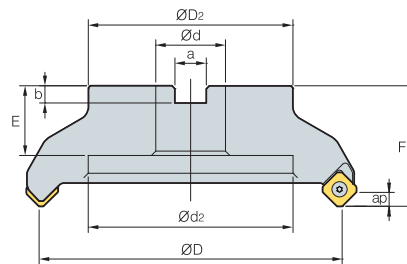


Fig. 2



AA
45°

- AR: -6°
- RR: -9°~6°

(mm)

Designation			ØD	ØD2	Ød	Ød1	Ød2	a	b	E	F	ap		Fig.
RM8ACM	4050HR-M	4	50	49	22	11	18	10.4	6.3	20	40	6.0	0.5	1
	4050HR-H	6	50	49	22	11	18	10.4	6.3	20	40	6.0	0.5	1
	4063HR-M	6	63	49	22	11	18	10.4	6.3	20	40	6.0	0.7	1
	4063HR-H	8	63	49	22	11	18	10.4	6.3	20	40	6.0	0.7	1
RM8AC (RM8ACM)	4080HR	5	80	57	25.4 (27)	14	20	9.5 (12.4)	6(7)	25 (23)	50	6.0	1.2	1
	4080HR-M	7	80	57	25.4 (27)	14	20	9.5 (12.4)	6(7)	25 (23)	50	6.0	1.2	1
	4080HR-H	10	80	57	25.4 (27)	14	20	9.5 (12.4)	6(7)	25 (23)	50	6.0	1.3	1
	4100HR	6	100	67	31.75 (32)	18	26	12.7 (14.4)	8	33 (25.5)	63 (50)	6.0	1.7	1
	4100HR-M	8	100	67	31.75 (32)	18	26	12.7 (14.4)	8	33 (25.5)	63 (50)	6.0	1.7	1
	4100HR-H	12	100	67	31.75 (32)	18	26	12.7 (14.4)	8	33 (25.5)	63 (50)	6.0	1.7	1
	4125HR	8	125	87	38.1 (40)	22	32	15.9 (16.4)	10(9)	36 (30)	63	6.0	3.6	1
	4125HR-M	10	125	87	38.1 (40)	22	32	15.9 (16.4)	10(9)	36 (30)	63	6.0	3.6	1
	4125HR-H	16	125	87	38.1 (40)	22	32	15.9 (16.4)	10(9)	36 (30)	63	6.0	3.7	1
	4160R	10	160	107	50.8 (40)	-	107	19 (16.4)	11(9)	38 (32)	63	6.0	4.8	2
	4160R-M	12	160	107	50.8 (40)	-	107	19 (16.4)	11(9)	38 (32)	63	6.0	5.3	2
	4160R-H	20	160	107	50.8 (40)	-	107	19 (16.4)	11(9)	38 (32)	63	6.0	5.4	2
	4200R-M	14	200	130	47.625 (60)	-	135	25.4 (25.7)	14	38 (32)	63	6.0	7.1	2
	4200R-H	24	200	130	47.625 (60)	-	135	25.4 (25.7)	14	38 (32)	63	6.0	7.1	2
	4250R-M	16	250	180	47.625 (60)	-	180	25.4 (25.7)	14	38 (32)	63	6.0	11.9	2
	4250R-H	30	250	180	47.625 (60)	-	180	25.4 (25.7)	14	38 (32)	63	6.0	12.0	2
	4315R	18	315	240	47.625 (60)	-	238	25.4 (25.7)	14	38	63	6.0	18.8 (18.6)	2
	4315R-M	20	315	240	47.625 (60)	-	238	25.4 (25.7)	14	38	63	6.0	18.8 (18.6)	2
	4400R-M	28	400	260	47.625 (60)	-	238	25.4 (25.7)	14	38	80	6.0	37.7 (37.4)	2

() Metric size

Available inserts

SNM(E)X-MF		SNEX-ML		SNM(E)X-MM		SNEX-MA		SNEX-W				
												
Designation		Cermet		Coated						Uncoated		page
		CN2500 CN30	NC5330	NCM325 NCM335	NCM635 NCM645	PC2505 PC2010	PC3700 PC6510	PC9530 PC9540	PC5300 PC5400	ST30A H01		
SNEX	1206ANN-MF						●		●	●	E24 E25 E26	
	1206ANN-ML								●	●		
	1206ANN-MM						●	●	●	●		
	1206ANN-MA						●	●		●		
	1206ANN-W						●	●	●			
SNMX	1206ANN-MF				●		●	●	●	●		
	1206ANN-MM		●		●		●	●	●	●		

Parts

Specification		
Ø50~Ø400	FTKA410	TW15S

Available arbors

Designation	Available arbors	
	RM8AC	RM8ACM
RM8ACM 4050HR-□	-	BT□□-FMC22-□□
4063HR-□	-	BT□□-FMC27-□□
RM8AC 4080HR-□	BT□□-FMA25.4-□□	BT□□-FMC32-□□
4100HR-□	BT□□-FMA31.75-□□	BT□□-FMB40-□□
4125HR-□	BT□□-FMA38.1-□□	BT□□-FMC40-□□
4160R-□	BT□□-FMA50.8-□□	BT□□-FMB60-□□
4200R-□		
4250R-□	BT□□-FMA47.625-□□	
4315R-□		
4400R-□		



RMH8AC(M)4000

Shim type

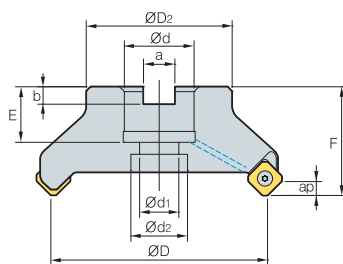


Fig. 1

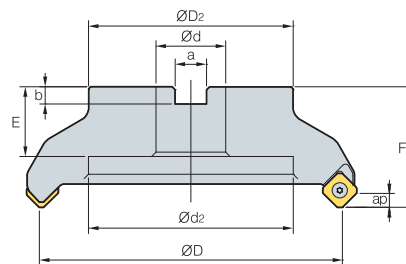


Fig. 2

AA
45°

- AR: -6°
- RR: -9°~6°

(mm)

Designation			ØD	ØD2	Ød	Ød1	Ød2	a	b	E	F	ap		Fig.
RMH8AC (RMH8ACM)	4080HR-M	7	80	57	25.4 (27)	14	20	9.5 (12.4)	6 (7)	25 (23)	50	6.0	1.2	1
	4100HR-M	8	100	67	31.75 (32)	18	26	12.7 (14.4)	8	33 (25.5)	63 (50)	6.0	1.7	1
	4125HR-M	10	125	87	38.1 (40)	22	32	15.9 (16.4)	10 (9)	36 (30)	63	6.0	3.6	1
	4160R-M	12	160	107	50.8 (40)	-	107	19 (16.4)	11 (9)	38 (32)	63	6.0	5.3	2
	4200R-M	14	200	130	47.625 (60)	-	135	25.4 (25.7)	14	38 (32)	63	6.0	7.1	2
	4250R-M	16	250	180	47.625 (60)	-	180	25.4 (25.7)	14	38 (32)	63	6.0	11.9	2
	4315R-M	20	315	240	47.625 (60)	-	238	25.4 (25.7)	14	38	63	6.0	18.8 (18.6)	2
	4400R-M	26	400	260	47.625 (60)	-	238	25.4 (25.7)	14	38	80	6.0	37.7 (37.4)	2

() Metric size

Available inserts

SNM(E)X-MF

SNEX-ML

SNM(E)X-MM

SNEX-MA

SNEX-W



Designation		Cermet		Coated												Uncoated			page	
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A	G10		H01
SNEX	1206ANN-MF										●	●			●	●				E24 E25 E26
	1206ANN-ML														●	●				
	1206ANN-MM									●	●	●		●	●					
	1206ANN-MA																	●		
	1206ANN-W									●	●				●	●				
SNMX	1206ANN-MF					●					●	●		●	●	●				
	1206ANN-MM			●			●					●	●		●	●				

Available arbors

Designation	Available arbors	
	RMH8AC	RMH8ACM
RMH8AC (RMH8ACM)	BT□□-FMA25.4-□□	BT□□-FMC27-□□
4100HR-□	BT□□-FMA31.75-□□	BT□□-FMC32-□□
4125HR-□	BT□□-FMA38.1-□□	BT□□-FMB40-□□
4160R-□	BT□□-FMA50.8-□□	BT□□-FMC40-□□
4200R-□	BT□□-FMA47.625-□□	BT□□-FMB60-□□
4250R-□		
4315R-□		
4400R-□		

Parts

Specification				
Ø80~Ø400	FTKA0412B	SS42RM8	SHXN0609F	TW15S

Available inserts E24~E26

Available arbors and bolt E426~E428

RM8AC(M)5000

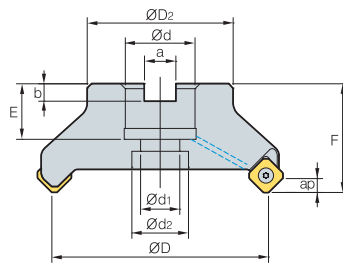


Fig. 1

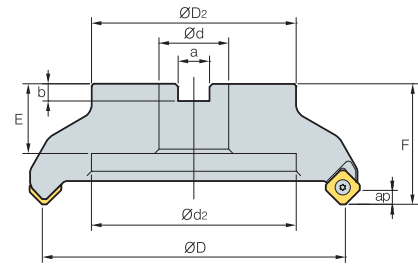


Fig. 2



AA
45°

- AR: -6°
- RR: -9°~6°

(mm)

Designation			ØD	ØD2	Ød	Ød1	Ød2	a	b	E	F	ap		Fig.
RM8AC (RM8ACM)	5080HR-M	6	80	57	25.4 (27)	14	20	9.5 (12.4)	6 (7)	25 (23)	50	7.5	1.2	1
	5100HR-M	7	100	67	31.75 (32)	18	26	12.7 (14.4)	8.0	33 (25)	63 (50)	7.5	2.5 (1.8)	1
	5125HR-M	8	125	87	38.1 (40)	22	32	15.9 (16.4)	10 (9)	35 (30)	63	7.5	3.6	1
	5160R-M	10	160	107	50.8 (40)	-	107	19 (16.4)	11 (9)	38 (32)	63	7.5	5 (4.56)	2
	5200R-M	12	200	130	47.625 (60)	-	135	25.4 (25.7)	14.0	38	63	7.5	7.1 (6.8)	2
	5250R-M	15	250	180	47.625 (60)	-	180	25.4 (25.7)	14.0	38	63	7.5	11.9 (10.6)	2
	5315R-M	20	315	240	47.625 (60)	-	238	25.4 (25.7)	14.0	38	63	7.5	19.1 (18.9)	2
	5400R-M	28	400	260	47.625 (60)	-	238	25.4 (25.7)	14.0	38	80	7.5	37.7 (37.5)	2

() Metric size

Available inserts

SNM(E)X-MF

SNEX-ML

SNM(E)X-MM



Designation		Cermet		Coated										Uncoated			page
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	
SNEX	1507ANN-MF											●			●	●	E24
	1507ANN-ML														●	●	
	1507ANN-MM											●			●	●	
SNMX	1507ANN-MF						●				●	●			●	●	E26
	1507ANN-MM						●				●	●			●	●	

Available arbors

Designation		Available arbors	
		RM8AC	RM8ACM
RM8AC (RM8ACM)	5080HR-□	BT□□-FMA25.4-□□	BT□□-FMC27-□□
	5100HR-□	BT□□-FMA31.75-□□	BT□□-FMC32-□□
	5125HR-□	BT□□-FMA38.1-□□	BT□□-FMB40-□□
	5160R-□	BT□□-FMA50.8-□□	BT□□-FMC40-□□
	5200R-□	BT□□-FMA47.625-□□	BT□□-FMB60-□□
	5250R-□		
	5315R-□		
	5400R-□		

Parts

Specification		
Ø80~Ø400	FTGA0513	TW20-100

Available inserts E24~E26 Available arbors and bolt E426~E428



RMH8AC(M)5000

Shim type

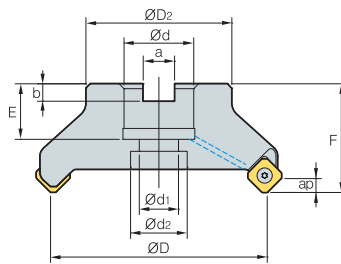


Fig. 1

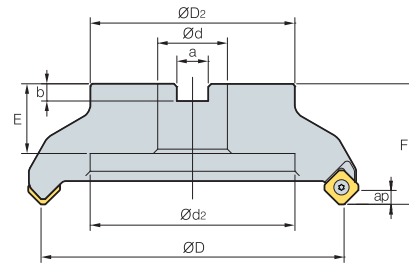


Fig. 2


AA
45°

- AR: -6°
- RR: -9°~6°

(mm)

Designation			ØD	ØD2	Ød	Ød1	Ød2	a	b	E	F	ap		Fig.
RMH8AC (RMH8ACM)	5080HR-M	6	80	57	25.4 (27)	14	20	9.5 (12.4)	6 (7)	25 (23)	50	7.5	1.2	1
	5100HR-M	7	100	67	31.75 (32)	18	26	12.7 (14.4)	8.0	33 (25)	63 (50)	7.5	2.5 (1.8)	1
	5125HR-M	8	125	87	38.1 (40)	22	32	15.9 (16.4)	10 (9)	36 (30)	63	7.5	3.6	1
	5160R-M	10	160	107	50.8 (40)	-	107	19 (16.4)	11 (9)	38 (32)	63	7.5	5 (4.56)	2
	5200R-M	12	200	130	47.625 (60)	-	135	25.4 (25.7)	14.0	38 (32)	63	7.5	7.1 (6.8)	2
	5250R-M	15	250	180	47.625 (60)	-	180	25.4 (25.7)	14.0	38 (32)	63	7.5	11.9 (10.6)	2
	5315R-M	20	315	240	47.625 (60)	-	238	25.4 (25.7)	14.0	38	63	7.5	19.1 (18.9)	2
	5400R-M	22	400	260	47.625 (60)	-	238	25.4 (25.7)	14.0	38	80	7.5	37.7 (37.5)	2

() Metric size

Available inserts

SNM(E)X-MF

SNEX-ML

SNM(E)X-MM



Designation	Cermet		Coated										Uncoated			page
	CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	
SNEX	1507ANN-MF										●			●	●	E24
	1507ANN-ML										●			●	●	
	1507ANN-MM										●			●	●	
SNMX	1507ANN-MF					●				●	●			●	●	E26
	1507ANN-MM					●				●	●			●	●	

Available arbors

Designation	Available arbors	
	RMH8AC	RMH8ACM
RMH8AC (RMH8ACM)	5080HR-□	BT□□-FMA25.4-□□
	5100HR-□	BT□□-FMA31.75-□□
	5125HR-□	BT□□-FMA38.1-□□
	5160R-□	BT□□-FMA50.8-□□
	5200R-□	BT□□-FMA47.625-□□
	5250R-□	
	5315R-□	
	5400R-□	
		BT□□-FMC27-□□
		BT□□-FMC32-□□
		BT□□-FMB40-□□
		BT□□-FMC40-□□
		BT□□-FMB60-□□

Parts

Specification				
Ø80~Ø400	FTGA0513	SS53RM8	SHXN0712F	TW20-100

Available inserts E24~E26

Available arbors and bolt E426~E428



Milling

E

RM8EC(M)4000

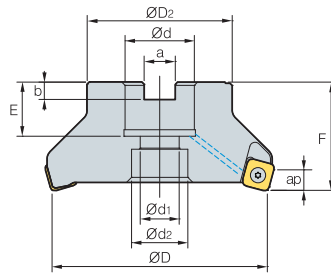


Fig. 1

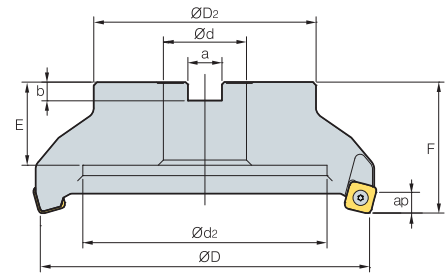


Fig. 2



AA
75°

- AR: -6°
- RR: -8°~6°

(mm)

Designation			ØD	ØD ₂	Ød	Ød ₁	Ød ₂	a	b	E	F	ap	 kg	Fig.
RM8ECM	4050HR-M	4	50	49	22	11	18	10.4	6.3	20	40	9.0	0.4	1
	4063HR-M	6	63	49	22	11	18	10.4	6.3	20	40	9.0	0.6	1
RM8EC (RM8ECM)	4080HR	5	80	57	25.4 (27)	14	20	9.5 (12.4)	6 (7)	25 (23)	50	9.0	1.2	1
	4080HR-M	7	80	57	25.4 (27)	14	20	9.5 (12.4)	6 (7)	25 (23)	50	9.0	1.1	1
	4100HR	6	100	67	31.75 (32)	18	26	12.7 (14.4)	8	33 (25)	63 (50)	9.0	1.6	1
	4100HR-M	8	100	67	31.75 (32)	18	26	12.7 (14.4)	8	33 (25)	63 (50)	9.0	2.5	1
	4125HR	8	125	87	38.1 (40)	22	32	15.9 (16.4)	10 (9)	35 (29)	63	9.0	2.9 (3.3)	1
	4125HR-M	10	125	87	38.1 (40)	22	32	15.9 (16.4)	10 (9)	35 (29)	63	9.0	3.0	1
	4160R	10	160	107	50.8 (40)	-	107	19 (16.4)	11 (9)	38 (32)	63	9.0	4.4	2
	4160R-M	12	160	107	50.8 (40)	-	107	19 (16.4)	11 (9)	38 (32)	63	9.0	4.0	2
	4200R-M	16	200	130	47.625 (60)	-	135	25.4 (25.7)	14	38 (32)	63	9.0	5.9	2
	4250R-M	16	250	180	47.625 (60)	-	180	25.4 (25.7)	14	38	63	9.0	10.9 (10.6)	2
	4315R-M	20	315	240	47.625 (60)	-	238	25.4 (25.7)	14	38	63	9.0	18.1 (17.9)	2
	4400R-M	28	400	260	47.625 (60)	-	238	25.4 (25.7)	14	38	80	9.0	31.8 (31.5)	2

() Metric size

Available inserts

SNM(E)X-MF

SNEX-ML

SNM(E)X-MM

SNEX-MA



Designation	Cermet		Coated										Uncoated			page
	CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	
SNEX	1206ENN-MF										●			●	●	E24 E25 E26
	1206ENN-ML										●			●	●	
	1206ENN-MM										●			●	●	
	1206ENN-MA										●			●	●	
SNMX	1206ENN-MF					●				●	●		●	●	●	E24 E25 E26
	1206ENN-MM					●				●	●		●	●	●	

Available arbors

Designation	NC arbors	
	RM8EC	RM8ECM
RM8ECM 4050HR-□	-	BT□□-FMC22-□□
4063HR-□		
RM8EC 4080HR-□	BT□□-FMA25.4-□□	BT□□-FMC27-□□
(RM8ECM) 4100HR-□	BT□□-FMA31.75-□□	BT□□-FMC32-□□
4125HR-□	BT□□-FMA38.1-□□	BT□□-FMB40-□□
4160R-□	BT□□-FMA50.8-□□	BT□□-FMC40-□□
4200R-□	BT□□-FMA47.625-□□	BT□□-FMB60-□□
4250R-□		
4315R-□		
4400R-□		

Parts

Specification	Screw	Wrench
Ø50~Ø400	PTKA0411-R3	TW15S

Available inserts E24~E26 Available arbors and bolt E426~E428



RMH8EC(M)4000

Shim type

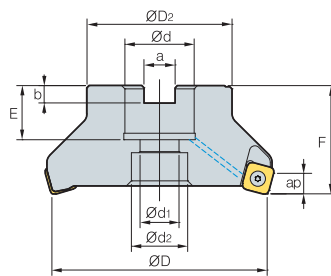


Fig. 1

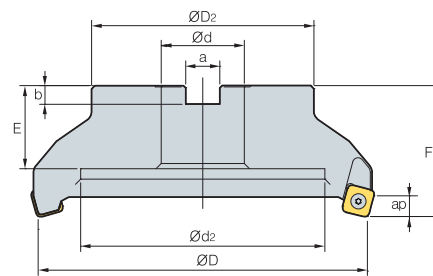


Fig. 2

AA
75°

- AR: -6°
- RR: -8°~6°

(mm)

Designation			ØD	ØD2	Ød	Ød1	Ød2	a	b	E	F	ap		Fig.
RMH8EC (RMH8ECM)	4080HR-M	7	80	57	25.4 (27)	14	20	9.5 (12.4)	6 (7)	25 (23)	50	9.0	1.1	1
	4100HR-M	8	100	67	31.75 (32)	18	26	12.7 (14.4)	8	33 (25.5)	63 (50)	9.0	2.5	1
	4125HR-M	10	125	87	38.1 (40)	22	32	15.9 (16.4)	10 (9)	36 (30)	63	9.0	3.0	1
	4160R-M	12	160	107	50.8 (40)	-	107	19 (16.4)	11 (9)	38 (32)	63	9.0	4.0	2
	4200R-M	16	200	130	47.625 (60)	-	135	25.4 (25.7)	14	38 (32)	63	9.0	5.9	2
	4250R-M	16	250	180	47.625 (60)	-	180	25.4 (25.7)	14	38 (32)	63	9.0	10.9 (10.6)	2
	4315R-M	20	315	240	47.625 (60)	-	238	25.4 (25.7)	14	38	63	9.0	18.1 (17.9)	2
	4400R-M	24	400	260	47.625 (60)	-	238	25.4 (25.7)	14	38	80	9.0	31.8 (31.5)	2

() Metric size

Available inserts

SNM(E)X-MF

SNEX-ML

SNM(E)X-MM

SNEX-MA



Designation		Cermet		Coated										Uncoated			page
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	
SNEX	1206ENN-MF											●			●	●	E24 E25 E26
	1206ENN-ML											●			●	●	
	1206ENN-MM											●			●	●	
	1206ENN-MA											●			●	●	
SNMX	1206ENN-MF						●				●	●		●	●	●	
	1206ENN-MM						●				●	●		●	●	●	

Available arbors

Designation		Available arbors	
		RMH8EC	RMH8ECM
RMH8EC (RMH8ECM)	4080HR-□	BT□□-FMA25.4-□□	BT□□-FMC27-□□
	4100HR-□	BT□□-FMA31.75-□□	BT□□-FMC32-□□
	4125HR-□	BT□□-FMA38.1-□□	BT□□-FMB40-□□
	4160R-□	BT□□-FMA50.8-□□	BT□□-FMC40-□□
	4200R-□		
	4250R-□	BT□□-FMA47.625-□□	BT□□-FMB60-□□
	4315R-□		
	4400R-□		

Parts

Specification				
Ø80~Ø400	PTKA0411-R3	SS42RM8	SHXN0609F	TW15S

Available inserts E24~E26

Available arbors and bolt E426~E428

RM8EC(M)5000

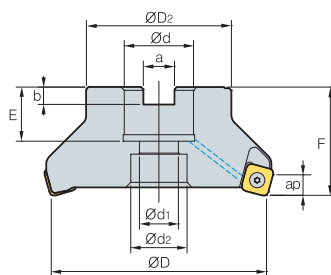


Fig. 1

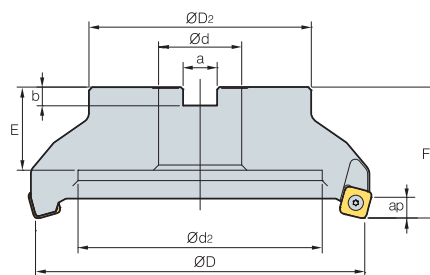


Fig. 2



AA
75°

- AR: -6°
- RR: -8°~6°

(mm)

Designation			ØD	ØD2	Ød	Ød1	Ød2	a	b	E	F	ap		Fig.
RM8EC (RM8ECM)	5080HR-M	6	80	57	25.4 (27)	14	20	9.5 (12.4)	6 (7)	25 (23)	50	11.0	1.1	1
	5100HR-M	7	100	67	31.75 (32)	18	26	12.7 (14.4)	8.0	33 (25)	63 (50)	11.0	2.1 (1.7)	1
	5125HR-M	8	125	87	38.1 (40)	22	32	15.9 (16.4)	10 (9)	35 (30)	63	11.0	3.4 (3.3)	1
	5160R-M	10	160	107	50.8 (40)	-	107	19 (16.4)	11 (9)	38 (32)	63	11.0	4.4 (4.1)	2
	5200R-M	12	200	130	47.625 (60)	-	135	25.4 (25.7)	14.0	38	63	11.0	6.4 (6.1)	2
	5250R-M	15	250	180	47.625 (60)	-	180	25.4 (25.7)	14.0	38	63	11.0	11.0 (10.7)	2
	5315R-M	20	315	240	47.625 (60)	-	238	25.4 (25.7)	14.0	38	63	11.0	18.0 (17.7)	2
	5400R-M	28	400	260	47.625 (60)	-	238	25.4 (25.7)	14.0	38	80	11.0	35.7 (35.4)	2

()Metric size

Available inserts

SNM(E)X-MF

SNEX-ML

SNM(E)X-MM



Designation		Cermet		Coated												Uncoated			page
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A	G10	
SNEX	1507ENN-MF											●			●	●			
	1507ENN-ML														●	●			E24
	1507ENN-MM											●			●	●			E25
SNMX	1507ENN-MF						●			●	●				●	●			E26
	1507ENN-MM						●			●	●				●	●			

Available arbors

Designation		Available arbors	
		RM8EC	RM8ECM
RM8EC (RM8ECM)	5080HR-□	BT□□-FMA25.4-□□	BT□□-FMC27-□□
	5100HR-□	BT□□-FMA31.75-□□	BT□□-FMC32-□□
	5125HR-□	BT□□-FMA38.1-□□	BT□□-FMB40-□□
	5160R-□	BT□□-FMA50.8-□□	BT□□-FMC40-□□
	5200R-□	BT□□-FMA47.625-□□	BT□□-FMB60-□□
	5250R-□		
	5315R-□		
	5400R-□		

Parts

Specification	Screw	Wrench
Ø80~Ø400	FTGA0513	TW20-100

Available inserts E24~E26 Available arbors and bolt E426~E428



RMH8EC(M)5000

Shim type

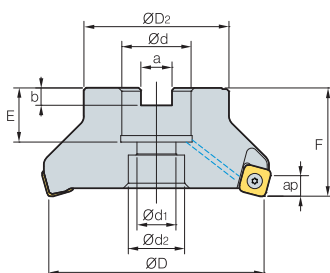


Fig. 1

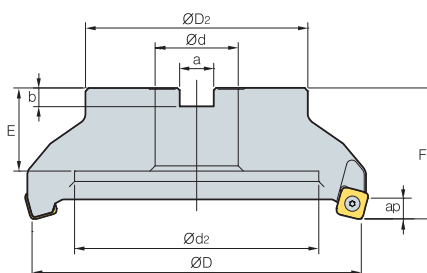


Fig. 2

AA
75°

- AR: -6°
- RR: -8°~6°

(mm)

Designation			ØD	ØD2	Ød	Ød1	Ød2	a	b	E	F	ap		Fig.
RMH8EC (RMH8ECM)	5080HR-M	6	80	57	25.4 (27)	14	20	9.5 (12.4)	6 (7)	25 (23)	50	11.0	1.1	1
	5100HR-M	7	100	67	31.75 (32)	18	26	12.7 (14.4)	8.0	33 (25.5)	63 (50)	11.0	2.1 (1.7)	1
	5125HR-M	8	125	87	38.1 (40)	22	32	15.9 (16.4)	10 (9)	36 (30)	63	11.0	3.4 (3.3)	1
	5160HR-M	10	160	107	50.8 (60)	-	107	19 (16.4)	11 (9)	38 (32)	63	11.0	4.4 (4.1)	2
	5200R-M	12	200	130	47.625 (60)	-	135	25.4 (25.7)	14.0	38 (32)	63	11.0	6.4 (6.1)	2
	5250R-M	15	250	180	47.625 (60)	-	180	25.4 (25.7)	14.0	38 (32)	63	11.0	110 (10.7)	2
	5315R-M	20	315	240	47.625 (60)	-	238	25.4 (25.7)	14.0	38	63	11.0	18.0 (17.7)	2
	5400R-H	22	400	260	47.625 (60)	-	238	25.4 (25.7)	14.0	38	80	11.0	35.7 (35.4)	2

() Metric size

Available inserts

SNM(E)X-MF

SNEX-ML

SNM(E)X-MM



Designation	Cermet		Coated										Uncoated			page
	CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC5510	PC9530	PC9540	PC5300	PC5400	
SNEX	1507ENN-MF										●			●	●	E24 E25 E26
	1507ENN-ML										●			●	●	
	1507ENN-MM										●			●	●	
SNMX	1507ENN-MF					●				●	●			●	●	E26
	1507ENN-MM					●				●	●			●	●	

Available arbors

Designation	Available arbors	
	RMH8EC	RMH8ECM
RMH8EC (RMH8ECM) 5080HR-□	BT□□-FMA25.4-□□	BT□□-FMC27-□□
5100HR-□	BT□□-FMA31.75-□□	BT□□-FMC32-□□
5125HR-□	BT□□-FMA38.1-□□	BT□□-FMB40-□□
5160R-□	BT□□-FMA50.8-□□	BT□□-FMC40-□□
5200R-□	BT□□-FMA47.625-□□	BT□□-FMB60-□□
5250R-□		
5315R-□		
5400R-□		

Parts

Specification	 Screw	 Shim	 Shim Screw	 Wrench
Ø80~Ø400	FTGA0513	SS53RM8	SHXN0712F	TW20-100

Available inserts E24~E26

Available arbors and bolt E426~E428

E



E



E



- AR: -6°
- RR: $-8^{\circ} \sim -6^{\circ}$

E

E

E

E

E

E

E

E

E

E

E

E

RMH8QC(M)4000

Shim type

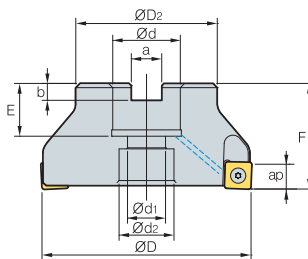


Fig. 1

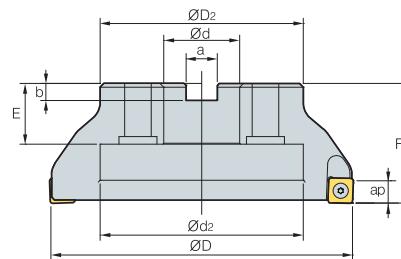


Fig. 2


AA
88°

- AR: -6°
- RR: -8°~6°

(mm)

Designation			ØD	ØD2	Ød	Ød1	Ød2	a	b	E	F	ap		Fig.
RMH8QC (RMH8QCM)	4080HR-M	7	80	57	25.4 (27)	14	20	9.5 (12.4)	6 (7)	25 (23)	50	11.5	1.1	1
	4100HR-M	8	100	67	31.75 (32)	18	26	12.7 (14.4)	8	33 (25.5)	63 (50)	11.5	2.5	1
	4125HR-M	10	125	87	38.1 (40)	22	32	15.9 (16.4)	10 (9)	36 (30)	63	11.5	3.0	1
	4160R-M	12	160	107	50.8 (40)	-	107	19 (16.4)	11 (9)	38 (32)	63	11.5	4.0	2
	4200R-M	16	200	130	47.625 (60)	-	135	25.4 (25.7)	14	38 (32)	63	11.5	5.9	2

() Metric size

Available inserts

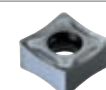
SNM(E)X-MF



SNEX-ML



SNM(E)X-MM



SNEX-MA



Designation	Cermet		Coated										Uncoated			page
	CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	
SNEX	1206QNN-MF									●	●			●	●	E24 E25 E26
	1206QNN-ML													●	●	
	1206QNN-MM										●			●	●	
	1206QNN-MA															
	120612-MF										●			●	●	
	120612-ML													●	●	
	120612-MM										●					
SNMX	120612-MA															●
	1206QNN-MF					●			●	●				●	●	
	1206QNN-MM					●			●	●		●		●	●	
	120612-MF									●	●			●	●	
	120612-MM									●	●			●	●	

Available arbors

Designation	Available arbors	
	RMH8QC	RMH8QCM
RMH8QC (RMH8QCM)	4080HR-□	BT□□-FMA25.4-□□
	4100HR-□	BT□□-FMA31.75-□□
	4125HR-□	BT□□-FMA38.1-□□
	4160R-□	BT□□-FMA50.8-□□
	4200R-□	BT□□-FMA47.625-□□

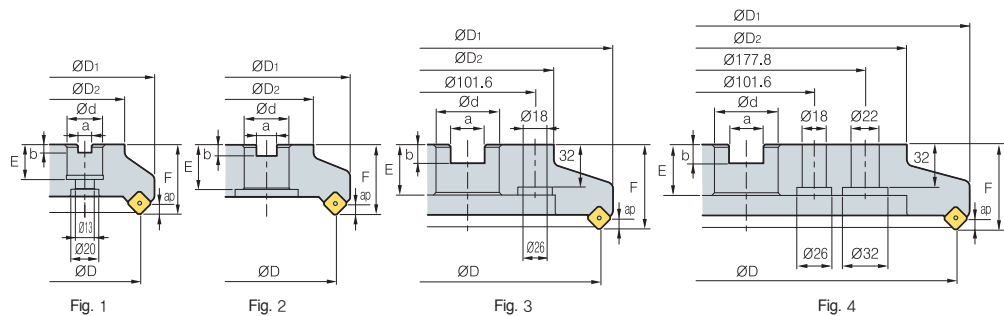
Parts

Specification				
Ø80~Ø200	PTKA0411-R3	SS42RM8	SHXN0609F	TW15S

Available inserts E24~E26

Available arbors and bolt E426~E428

RMT8A(M)4000



AA
45°

• AR: -6°
• RR: -6°

(mm)

Designation			ØD	ØD1	ØD2	Ød	a	b	E	F	ap	 kg	Fig.
RMT8A (RMT8AM)	4080R	5	80	100	57	25.4 (27)	9.5 (12.4)	6 (7)	25 (22)	50	4	1.6	1
	4080R-M	6	80	100	57	25.4 (27)	9.5 (12.4)	6 (7)	25 (22)	50	4	1.6	1
	4100R	6	100	120	70	31.75 (32)	12.7 (14.4)	8 (8)	32 (28)	50	4	2.3	2
	4100R-M	8	100	120	70	31.75 (32)	12.7 (14.4)	8 (8)	32 (28)	50	4	2.3	2
	4125R	8	125	144	87	38.1 (40)	15.9 (16.4)	10 (9)	38 (30)	63	4	4.3	2
	4125R-M	10	125	144	87	38.1 (40)	15.9 (16.4)	10 (9)	38 (30)	63	4	4.3	2
	4160R	10	160	179	110	50.8 (40)	19.0 (16.4)	11 (9)	38 (30)	63	4	6.5	2
	4160R-M	14	160	179	110	50.8 (40)	19.0 (16.4)	11 (9)	38 (30)	63	4	6.5	2
	4200R	12	200	219	130	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	4	8.8	3
	4200R-M	18	200	219	130	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	4	8.8	3
	4250R	16	250	269	180	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	4	14.1	3
	4250R-M	22	250	269	180	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	4	14.1	3
	4315R	20	315	334	240	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	4	22.3	4
	4315R-M	28	315	334	240	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	4	22.3	4

Available inserts

() Metric size

SNC(M)F-MF

SNC(M)F-MM



Designation		Cermet		Coated												Uncoated			page
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A	G10	
SNCF	1206ANN-MF																		E22
	1206ANN-MM																		
SNMF	1206ANN-MF																		E23
	1206ANN-MM																		

Available arbors

Designation		General arbors	NC arbors	
			RMT8A	RMT8AM
RMT8A (RMT8AM)	□080R	NT*□□(M/U)-FMA25.4-25	BT**□□-FMA25.4-□□	FMC27
	□100R	NT*□□(M/U)-FMA31.75-□□	BT**□□-FMA31.75-□□	FMC32
	□125R	NT*□□(M/U)-FMA38.1-□□	BT**□□-FMA38.1-□□	FMB40
	□160R	NT*□□(M/U)-FMA50.8-□□	BT**□□-FMA50.8-□□	
	□200R	NT*□□(M/U)-FMA47.625-25, KCP-8***	BT**□□-FMA47.625-□□	FMB60
	□250R			
	□315R	KCP-8*** (Center ring plug)	-	-

*□□-NT number **□□-BT number ***Over milling 5

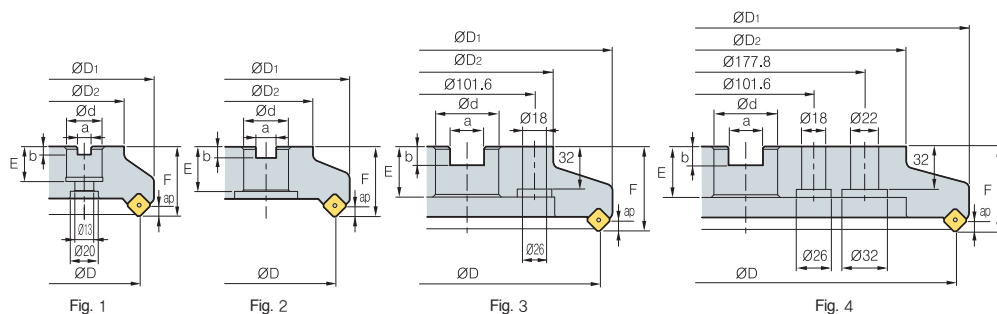
Parts

Specification					
Ø80~Ø315	ETKA0523	KHB0417	SPR0315	LTC05SR-RM4	TW20-100

Available inserts E22, E23 Available arbors and bolt E426~E428



RMT8A(M)5000



AA
45°

- AR: -6°
- RR: -6°

(mm)

Designation			ØD	ØD ₁	ØD ₂	Ød	a	b	E	F	ap		Fig.
RMT8A (RMT8AM)	5080R	5	80	104	57	25.4 (27)	9.5 (12.4)	6 (7)	25 (22)	50	6	1.8	1
	5080R-M	6	80	104	57	25.4 (27)	9.5 (12.4)	6 (7)	25 (22)	50	6	1.8	1
	5100R	6	100	124	70	31.75 (32)	12.7 (14.4)	8 (8)	32 (28)	50	6	2.6	2
	5100R-M	8	100	124	70	31.75 (32)	12.7 (14.4)	8 (8)	32 (28)	50	6	2.6	2
	5125R	8	125	149	87	38.1 (40)	15.9 (16.4)	10 (9)	38 (30)	63	6	4.3	2
	5125R-M	10	125	149	87	38.1 (40)	15.9 (16.4)	10 (9)	38 (30)	63	6	4.3	2
	5160R	10	160	184	110	50.8 (40)	19.0 (16.4)	11 (9)	38 (30)	63	6	6.5	2
	5160R-M	14	160	184	110	50.8 (40)	19.0 (16.4)	11 (9)	38 (30)	63	6	6.5	2
	5200R	12	200	224	130	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	6	9.0	3
	5200R-M	18	200	224	130	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	6	9.0	3
	5250R	16	250	274	180	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	6	14.4	3
	5250R-M	22	250	274	180	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	6	14.4	3
	5315R	20	315	339	240	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	6	22.2	4
	5315R-M	28	315	339	240	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	6	22.2	4

Available inserts

() Metric size

SNC(M)F-MF SNC(M)F-MM



Designation		Cermet		Coated												Uncoated			page
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A	G10	
SNCF	1507ANN-MF																		E22 E23
	1507ANN-MM										●								
SNMF	1507ANN-MF																		E22 E23
	1507ANN-MM																		

Available arbors

Designation		General arbors	NC arbors	
			RMT8A	RMT8AM
RMT8A (RMT8AM)	☐ 080R	NT* ☐ ☐ (M/U)-FMA25.4-25	BT** ☐ ☐ (M/U)-FMA25.4- ☐ ☐	FMC27
	☐ 100R	NT* ☐ ☐ (M/U)-FMA31.75- ☐ ☐	BT** ☐ ☐ (M/U)-FMA31.75	FMC32
	☐ 125R	NT* ☐ ☐ (M/U)-FMA38.1- ☐ ☐	BT** ☐ ☐ (M/U)-FMA38.1	FMB40
	☐ 160R	NT* ☐ ☐ (M/U)-FMA50.8- ☐ ☐	BT** ☐ ☐ (M/U)-FMA50.8	
	☐ 200R	NT* ☐ ☐ (M/U)-FMA47.625-25, KCP-8***	BT** ☐ ☐ (M/U)-FMA47.625- ☐ ☐	FMB60
	☐ 250R			
	☐ 315R	KCP-8*** (Center ring plug)	-	-

*☐☐-NT number **☐☐-BT number ***Over milling 5

Parts

Specification					
Ø80-Ø315	ETKA0625	KHB0417	SPR0415	LTC06SR-RM5	TW20-100

Available inserts E22, E23

Available arbors and bolt E426~E428

RMT8E(M)4000

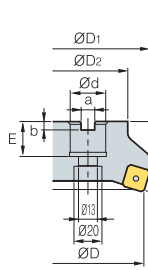


Fig. 1

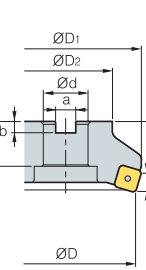


Fig. 2

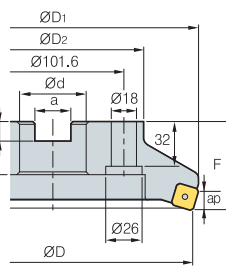


Fig. 3

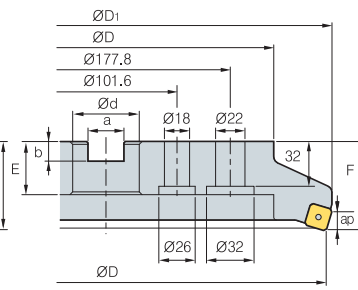


Fig. 4



AA
75°

- AR: -6°
- RR: -8°~6°

(mm)

Designation			ØD	ØD1	ØD2	Ød	a	b	E	F	ap		Fig.
RMT8E (RMT8EM)	4080R	5	80	100	57	25.4 (27)	9.5 (12.4)	6 (7)	25 (22)	50	5	1.5	1
	4080R-M	6	80	100	57	25.4 (27)	9.5 (12.4)	6 (7)	25 (22)	50	5	1.5	1
	4100R	6	100	120	67	31.75 (32)	12.7 (14.4)	8 (8)	32 (28)	50	5	2	2
	4100R-M	8	100	120	67	31.75 (32)	12.7 (14.4)	8 (8)	32 (28)	50	5	2	2
	4125R	8	125	144	87	38.1 (40)	15.9 (16.4)	10 (9)	38 (30)	63	5	3.8	2
	4125R-M	10	125	144	87	38.1 (40)	15.9 (16.4)	10 (9)	38 (30)	63	5	3.8	2
	4160R	10	160	179	107	50.8 (40)	19.0 (16.4)	11 (9)	38 (30)	63	5	5.8	2
	4160R-M	14	160	179	107	50.8 (40)	19.0 (16.4)	11 (9)	38 (30)	63	5	5.8	2
	4200R	12	200	219	130	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	5	7.9	3
	4200R-M	18	200	219	130	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	5	7.9	3
	4250R	16	250	269	180	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	5	13.0	3
	4250R-M	22	250	269	180	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	5	13.0	3
	4315R	20	315	334	240	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	5	20.5	4
	4315R-M	28	315	334	240	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	5	20.5	4

Available inserts

() Metric size

SNC(M)F-MF

SNC(M)F-MM



Designation	Cermet		Coated										Uncoated			page
	CN2500	CN30	NC5330	NCM325	NCM335	NCM355	NCM365	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	
SNCF	1206ENN-MF										●					E22
	1206ENN-MM															
SNMF	1206ENN-MF									●						E23
	1206ENN-MM									●						

Available arbors

Designation		General arbors	NC arbors	
			RMT8E	RMT8EM
RMT8E (RMT8EM)	□080R	NT*□□(M/U)-FMA25.4-25	BT**□□-FMA25.4-□□	FMC27
	□100R	NT*□□(M/U)-FMA31.75-□□	BT**□□-FMA31.75-□□	FMC32
	□125R	NT*□□(M/U)-FMA38.1-□□	BT**□□-FMA38.1-□□	FMB40
	□160R	NT*□□(M/U)-FMA50.8-□□	BT**□□-FMA50.8-□□	
	□200R	NT*□□(M/U)-FMA47.625-25, KCP-8***	BT**□□-FMA47.625-□□	FMB60
	□250R			
	□315R	KCP-8*** (Center ring plug)	-	-

*□□-NT number **□□-BT number ***Over milling 5

Parts

Specification					
Ø80~Ø315	ETKA0523	KHB0417	SPR0315	LTC05SR-RM4	TW20-100

Available inserts E22, E23 Available arbors and bolt E426~E428



E Milling

RMT8E(M)5000

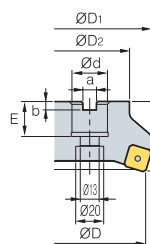


Fig. 1

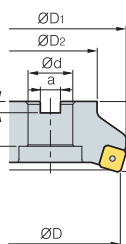


Fig. 2

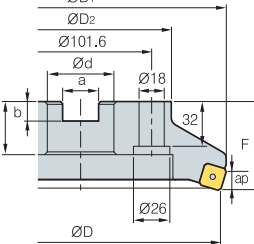


Fig. 3

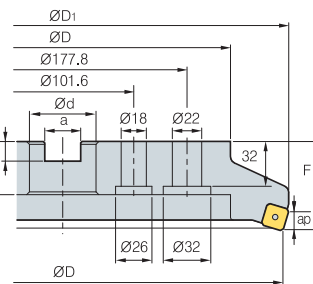


Fig. 4

AA
75°

- AR: -6°
- RR: -8°~6°

(mm)

Designation			ØD	ØD1	ØD2	Ød	a	b	E	F	ap		Fig.
RMT8E (RMT8EM)	5080R	5	80	88	57	25.4 (27)	9.5 (12.4)	6 (7)	25 (22)	50	8	1.4	1
	5080R-M	6	80	88	57	25.4 (27)	9.5 (12.4)	6 (7)	25 (22)	50	8	1.4	1
	5100R	6	100	108	67	31.75 (32)	12.7 (14.4)	8 (8)	32 (28)	50	8	1.9	2
	5100R-M	8	100	108	67	31.75 (32)	12.7 (14.4)	8 (8)	32 (28)	50	8	1.9	2
	5125R	8	125	133	87	38.1 (40)	15.9 (16.4)	10 (9)	38 (30)	63	8	3.7	2
	5125R-M	10	125	133	87	38.1 (40)	15.9 (16.4)	10 (9)	38 (30)	63	8	3.7	2
	5160R	10	160	168	107	50.8 (40)	19.0 (16.4)	11 (9)	38 (30)	63	8	5.7	2
	5160R-M	14	160	168	107	50.8 (40)	19.0 (16.4)	11 (9)	38 (30)	63	8	5.7	2
	5200R	12	200	208	130	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	8	7.5	3
	5200R-M	18	200	208	130	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	8	7.5	3
	5250R	16	250	258	180	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	8	12.4	3
	5250R-M	22	250	258	180	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	8	12.4	3
	5315R	20	315	323	240	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	8	19.9	4
	5315R-M	28	315	323	240	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	8	19.9	4

() Metric size

Available inserts

SNC(M)F-MF SNC(M)F-MM



Designation		Cermet		Coated												Uncoated			page
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A	G10	
SNCF	1507ENN-MF											●							E22 E23
	1507ENN-MM																		
SNMF	1507ENN-MF																		E22 E23
	1507ENN-MM									●									

Available arbors

Designation		General arbors	NC arbors	
			RMT8E	RMT8EM
RMT8E (RMT8EM)	□080R	NT*□□(M/U)-FMA25.4-25	BT**□□-FMA25.4-□□	FMC27
	□100R	NT*□□(M/U)-FMA31.75-□□	BT**□□-FMA31.75-□□	FMC32
	□125R	NT*□□(M/U)-FMA38.1-□□	BT**□□-FMA38.1-□□	FMB40
	□160R	NT*□□(M/U)-FMA50.8-□□	BT**□□-FMA50.8-□□	
	□200R	NT*□□(M/U)-FMA47.625-25, KCP-8***	BT**□□-FMA47.625-□□	FMB60
	□250R			
	□315R	KCP-8*** (Center ring plug)	-	-

*□□-NT number **□□-BT number ***Over milling 5

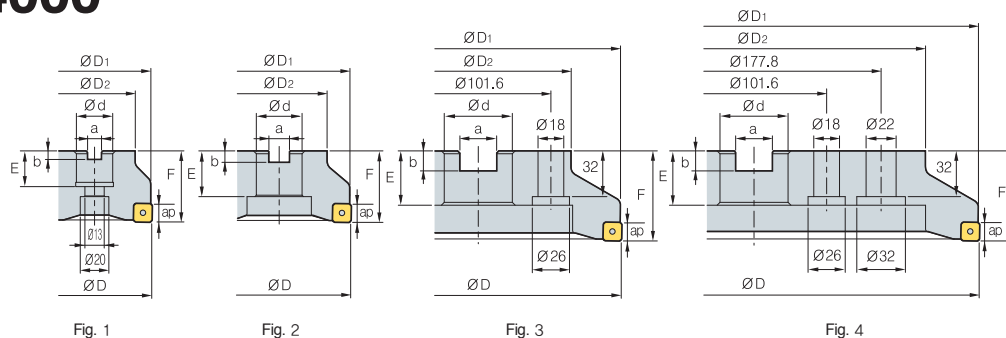
Parts

Specification					
Ø80~Ø315	ETKA0625	KHB0417	SPR0415	LTC06SR-RM5	TW20-100

Available inserts E22, E23

Available arbors and bolt E426~E428

RMT8Q(M)4000



AA
88°

- AR: -6°
- RR: -11°~6°

(mm)

Designation			ØD	ØD1	ØD2	Ød	a	b	E	F	ap		Fig.
RMT8Q (RMT8QM)	4080R	5	80	79	57	25.4 (27)	9.5 (12.4)	6 (7)	25 (22)	50	5	1.4	1
	4080R-M	6	80	79	57	25.4 (27)	9.5 (12.4)	6 (7)	25 (22)	50	5	1.4	1
	4100R	6	100	99	67	31.75 (32)	12.7 (14.4)	8 (8)	32 (28)	50	5	1.8	2
	4100R-M	8	100	99	67	31.75 (32)	12.7 (14.4)	8 (8)	32 (28)	50	5	1.8	2
	4125R	8	125	124	87	38.1 (40)	15.9 (16.4)	10 (9)	38 (30)	63	5	3.6	2
	4125R-M	10	125	124	87	38.1 (40)	15.9 (16.4)	10 (9)	38 (30)	63	5	3.6	2
	4160R	10	160	159	107	50.8 (40)	19.0 (16.4)	11 (9)	38 (30)	63	5	5.7	2
	4160R-M	14	160	159	107	50.8 (40)	19.0 (16.4)	11 (9)	38 (30)	63	5	5.7	2
	4200R	12	200	199	130	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	5	7.5	3
	4200R-M	18	200	199	130	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	5	7.5	3
	4250R	16	250	249	180	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	5	12.5	3
	4250R-M	22	250	249	180	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	5	12.5	3
	4315R	20	315	314	240	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	5	19.9	4
	4315R-M	28	315	314	240	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	5	19.9	4

Available inserts

() Metric size

SNC(M)F-MF SNC(M)F-MM



Designation		Cermet		Coated												Uncoated			page
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A	G10	
SNCF	1206QNN-MF										●								E22
	1206QNN-MM										●								
SNMF	1206QNN-MF									●									E23
	1206QNN-MM									●									

Available arbors

Designation		General arbors	NC arbors	
			RMT8Q	RMT8QM
RMT8Q (RMT8QM)	□080R	NT*□□(M/U)-FMA25.4-25	BT**□□-FMA25.4-□□	FMC27
	□100R	NT*□□(M/U)-FMA31.75-□□	BT**□□-FMA31.75-□□	FMC32
	□125R	NT*□□(M/U)-FMA38.1-□□	BT**□□-FMA38.1-□□	FMB40
	□160R	NT*□□(M/U)-FMA50.8-□□	BT**□□-FMA50.8-□□	
	□200R	NT*□□(M/U)-FMA47.625-25, KCP-8***	BT**□□-FMA47.625-□□	FMB60
	□250R			
	□315R	KCP-8*** (Center ring plug)	-	-

*□□-NT number **□□-BT number ***Over milling 5

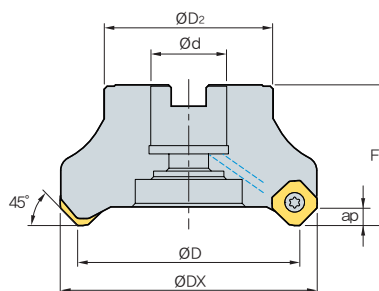
Parts

Specification					
Ø80~Ø315	ETKA0523	KHB0417	SPR0315	LTC05SR-RM4	TW20-100

Available inserts E22, E23 Available arbors and bolt E426~E428



RMX8AC(M)-SA14



AA
45°

- AR: -8°
- RR: -11°~9°

(mm)

Designation			ØDX	ØD	ØD ₂	Ød	F	ap	
RMX8ACM	050R-22-4-SA14	4	62.5	50	42	22	40	5.5	0.34
	050R-22-5-SA14	5	62.5	50	42	22	40	5.5	0.38
	063R-22-5-SA14	5	75.5	63	42	22	40	5.5	0.56
	063R-22-6-SA14	6	75.5	63	42	22	40	5.5	0.54
	080R-27-6-SA14	6	92.5	80	60	27	50	5.5	1.00
	080R-27-8-SA14	8	92.5	80	60	27	50	5.5	1.04
	100R-32-8-SA14	8	112.5	100	70	32	50	5.5	2.05
	100R-32-10-SA14	10	112.5	100	70	32	50	5.5	2.06
	125R-40-8-SA14	8	137.5	125	90	40	63	5.5	3.34
	125R-40-12-SA14	12	137.5	125	90	40	63	5.5	3.34
RMX8AC	080R-25.4-6-SA14	6	92.5	80	60	25.4	50	5.5	1.02
	080R-25.4-8-SA14	8	92.5	80	60	25.4	50	5.5	1.06
	100R-31.75-8-SA14	8	112.5	100	70	31.75	63	5.5	2.08
	100R-31.75-10-SA14	10	112.5	100	70	31.75	63	5.5	2.09
	125R-38.1-8-SA14	8	137.5	125	90	38.1	63	5.5	3.43
	125R-38.1-12-SA14	12	137.5	125	90	38.1	63	5.5	3.35

Available inserts

SAGX-ML

SAGX-MM

SNMX-MM



Designation		Cermet		Coated												Uncoated			page	
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2510	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	ST30A	G10		H01
SAGX	140808ANER-ML														●	●				E18
	140808ANER-MM															●				
SNMX	140808ANER-MM										●	●				●				

Available arbors

Designation	Ød	Available arborss
RMX8ACM 050R-22-□-SA14	22	BT□□-FMC22-□□
063R-22-□-SA14		
080R-27-□-SA14	27	BT□□-FMC27-□□
100R-32-□-SA14	32	BT□□-FMC32-□□
125R-40-□-SA14	40	BT□□-FMC40-□□

Designation	Ød	Available arbors
RMX8AC 080R-25.4-□-SA14	25.4	BT□□-FMC25.4-□□
100R-31.75-□-SA14	31.75	BT□□-FMC31.75-□□
125R-38.1-□-SA14	38.1	BT□□-FMC38.1-□□

Parts

Specification		
Ø50~Ø125	FTNA0513	TW20-100

Available inserts **E18** Available arbors and bolt **E426~E428**



RM14XCM-XN06 new

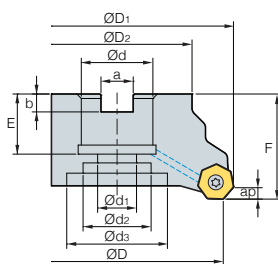


Fig. 1

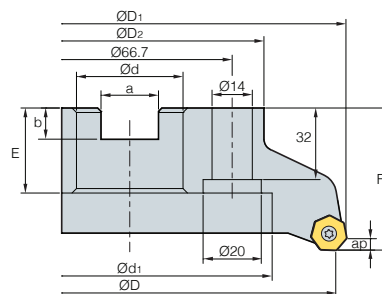


Fig. 2



AA
51°

• AR: -6°
• RR: -9°

(mm)

Designation		ØD	ØD ₁	ØD ₂	Ød	Ød ₁	Ød ₂	Ød ₃	a	b	E	F	ap	kg	Fig.
RM14XCM 050R-22-5-XN06	5	50	58.6	42	22	11	18	-	10.4	6.3	21	40	3.5	0.34	1
050R-22-6-XN06	6	50	58.6	42	22	11	18	-	10.4	6.3	21	40	3.5	0.34	1
063R-22-6-XN06	6	63	71.6	42	22	11	18	-	10.4	6.3	21	40	3.5	0.51	1
063R-22-8-XN06	8	63	71.6	42	22	11	18	-	10.4	6.3	21	40	3.5	0.58	1
080R-27-6-XN06	6	80	88.6	57	27	14	20	35	12.4	7.0	23	50	3.5	0.98	1
080R-27-8-XN06	8	80	88.6	57	27	14	20	35	12.4	7.0	23	50	3.5	1.08	1
080R-27-10-XN06	10	80	88.6	57	27	14	20	35	12.4	7.0	23	50	3.5	1.07	1
100R-32-10-XN06	10	100	108.6	67	32	18	26	42	14.4	8.0	25	63	3.5	1.60	1
100R-32-12-XN06	12	100	108.6	67	32	18	26	42	14.4	8.0	25	63	3.5	1.58	1
125R-40-12-XN06	12	125	133.6	90	40	22	32	54	16.4	9.0	29	63	3.5	3.43	1
125R-40-14-XN06	14	125	133.6	90	40	22	32	54	16.4	9.0	29	63	3.5	3.40	1
160NR-40-16-XN06	16	160	168.6	110	40	90	-	-	16.4	9.0	32	63	3.5	4.86	2
160NR-40-18-XN06	18	160	168.6	110	40	90	-	-	16.4	9.0	32	63	3.5	4.84	2

※ In applying XNMX060608-□□, Max. ap = 4.8 mm

Available inserts

XNMX-ML

XNMX-ML



Designation		Cermet		Coated												Uncoated			page	
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A	G10		H01
XNMX	0606XNR-ML						●							●	●	●				E32
	060608-ML						●							●	●	●				

Available arbors

Designation	Ød	Available arbors
RM14XCM 050R	22	BT□□-FMC22-□□
063R		
080R	27	BT□□-FMC27-□□
100R	32	BT□□-FMC32-□□
125R	40	
160R		BT□□-FMC40-□□

Parts

Specification	Screw	Wrench
Ø50~Ø160	FTKA0412B	TW15S

Available inserts **E32** Available arbors and bolt **E426~E428**



RM16AC(M)6000

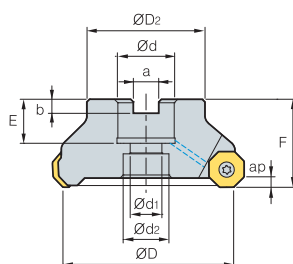


Fig. 1

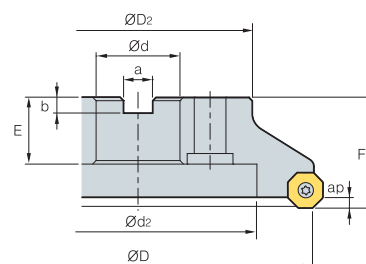


Fig. 2

AA
45°• AR: -6°
• RR: -6°

(mm)

Designation			ØD	ØD2	Ød	Ød1	Ød2	a	b	E	F	ap		Fig.
RM16ACM	6063HR-M	5	63	49	22	11	18	10.4	6.3	20	40	4.0	0.7	1
RM16AC (RM16ACM)	6080HR-M	6	80	57	25.4 (27)	14	20	9.5 (12.4)	6 (7)	25 (23)	50	4.0	1.2	1
	6100HR-M	7	100	67	31.75 (32)	18	26	12.7 (14.4)	8	33 (25)	63 (50)	4.0	1.9	1
	6125HR-M	8	125	87	38.1 (40)	22	32	15.9 (16.4)	10 (9)	35 (29)	63	4.0	3.5	1
	6160R-M	10	160	107	50.8 (40)	-	107	19 (16.4)	11 (9)	38 (32)	63	4.0	4.1	2
	6200R-M	12	200	130	47.625 (60)	-	135	25.4 (25.7)	14	38 (32)	63	4.0	6.1	2
	6250R-M	15	250	180	47.625 (60)	-	180	25.4 (25.7)	14	38	63	4.0	11.5	2
	6315R-M	20	315	240	47.625 (60)	-	238	25.4 (25.7)	14	38	63	4.0	18.9	2
	6400R-M	26	400	260	47.625 (60)	-	238	25.4 (25.7)	14	38	80	4.0	32.7	2

() Metric size

Available inserts

ONHX-MF	ONHX-ML	ONHX-MM	ONHX-W	ONHX-MA	ONMX-MF	ONMX-MM

Designation		Cermet		Coated												Uncoated			page
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A	G10	
ONHX	060608-MM											●			●	●			
	060608-MF											●			●	●			
	060608-ML														●	●			
	060608-MA																		●
	060608-W											●	●		●	●			
	0606ANN-MM											●			●	●			
	0606ANN-MF											●			●	●			
ONMX	060608-MM						●				●	●		●	●	●			
	060608-MF						●				●			●	●	●			
	0606ANN-MM						●				●		●	●	●	●			
	0606ANN-MF						●				●	●		●	●	●			

Available arbors

Designation	Available arbors	
	RM16AC	RM16ACM
RM16AC 6063HR-M		BT□□-FMC22-□□
(RM16ACM) 6080HR-M	BT□□-FMA25.4-□□	BT□□-FMC27-□□
6100HR-M	BT□□-FMA31.75-□□	BT□□-FMC32-□□
6125HR-M	BT□□-FMA38.1-□□	BT□□-FMB40-□□
6160R-M	BT□□-FMA50.8-□□	BT□□-FMC40-□□
6200R-M		
6250R-M		
6315R-M	BT□□-FMA47.625-□□	BT□□-FMB60-□□
6400R-M		

Parts

Specification	Screw	Wrench
Ø63~Ø400	FTGA0513	TW20-100

Available inserts E15 Available arbors and bolt E426~E428

RM16AC(M)8000

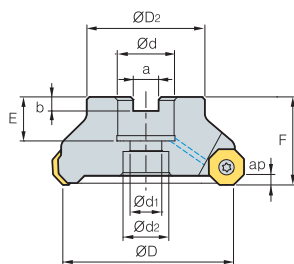


Fig. 1

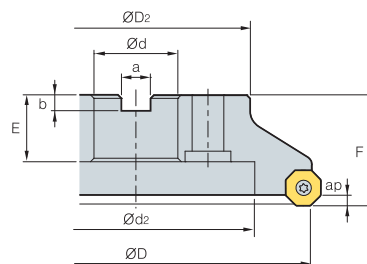


Fig. 2



AA
45°

• AR: -6°
• RR: -6°

(mm)

Designation			ØD	ØD2	Ød	Ød1	Ød2	a	b	E	F	ap		Fig.
RM16ACM	8063HR-M	5	63	49	22	11	18	10.4	6.3	20	40	5.5	0.7	1
RM16AC (RM16ACM)	8080HR-M	6	80	57	25.4 (27)	14	20	9.5 (12.4)	6 (7)	25 (23)	50	5.5	1.2	1
	8100HR-M	7	100	67	31.75 (32)	18	26	12.7 (14.4)	8	33 (25)	63 (50)	5.5	1.8	1
	8125HR-M	8	125	87	38.1 (40)	22	32	15.9 (16.4)	10 (9)	35 (29)	63	5.5	3.5	1
	8160R-M	10	160	107	50.8 (40)	-	107	19 (16.4)	11 (9)	38 (32)	63	5.5	4.5	2
	8200R-M	12	200	130	47.625 (60)	-	135	25.4 (25.7)	14 (14)	38 (32)	63	5.5	5.8	2
	8250R-M	14	250	180	47.625 (60)	-	180	25.4 (25.7)	14	38	63	5.5	11.4	2
	8315R-M	18	315	240	47.625 (60)	-	238	25.4 (25.7)	14	38	63	5.5	18.8	2
	8400R-M	24	400	260	47.625 (60)	-	238	25.4 (25.7)	14	38	80	5.5	32.7	2

()Metric size

Available inserts

		ONHX-MF	ONHX-ML	ONHX-MM	ONHX-W	ONHX-MA	ONMX-MF	ONMX-MM											
																			
Designation		Cermet		Coated												Uncoated			page
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A	G10	
ONHX	080608-MM										●			●	●				E15
	080608-MF										●			●	●				
	080608-ML													●	●				
	080608-MA																●		
	080608-W										●			●					
	0806ANN-MM											●		●	●				
	0806ANN-MF										●			●	●				
ONMX	080608-MM					●				●	●	●		●	●				
	080608-MF					●					●			●	●				
	0806ANN-MM					●					●	●		●	●				
	0806ANN-MF					●				●	●			●	●				

Available arbors

Designation		Available arbors	
		RM16AC	RM16ACM
RM16AC (RM16ACM)	8063HR-M	-	BT□□-FMC22-□□
	8080HR-M	BT□□-FMA25.4-□□	BT□□-FMC27-□□
	8100HR-M	BT□□-FMA31.75-□□	BT□□-FMC32-□□
	8125HR-M	BT□□-FMA38.1-□□	BT□□-FMB40-□□
	8160R-M	BT□□-FMA50.8-□□	BT□□-FMC40-□□
	8200R-M		
	8250R-M		
	8315R-M		
	8400R-M	BT□□-FMA47.625-□□	BT□□-FMB60-□□

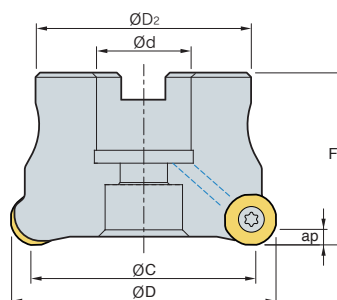
Parts

Specification		
Ø63~Ø400	FTGA0513	TW20-100

Available inserts E15 Available arbors and bolt E426~E428



RMRC(M)-RN12 new



- AR: -7°
- RR: -13°

(mm)

Designation			ØD	ØC	ØD ₂	Ød	F	ap	
RMRCM	050R-22-5-RN12	5	50	40.4	42	22	40	3.5	0.28
	050R-22-6-RN12	6	50	40.4	42	22	40	3.5	0.29
	063R-22-6-RN12	6	63	53.4	42	22	40	3.5	0.45
	063R-22-7-RN12	7	63	53.4	42	22	40	3.5	0.46
	080R-27-6-RN12	6	80	70.4	60	27	50	3.5	0.83
	080R-27-8-RN12	8	80	70.4	60	27	50	3.5	0.82
	100R-32-7-RN12	7	100	90.4	70	32	63	3.5	1.67
	100R-32-9-RN12	9	100	90.4	70	32	63	3.5	1.67
	125R-40-10-RN12	10	125	115.4	90	40	63	3.5	2.82
	125R-40-12-RN12	12	125	115.4	90	40	63	3.5	2.83
RMRC	080R-25.4-6-RN12	6	80	70.4	60	25.4	50	3.5	0.85
	080R-25.4-8-RN12	8	80	70.4	60	25.4	50	3.5	0.85
	100R-31.75-7-RN12	7	100	90.4	70	31.75	63	3.5	1.71
	100R-31.75-9-RN12	9	100	90.4	70	31.75	63	3.5	1.71
	125R-38.1-10-RN12	10	125	115.4	90	38.1	63	3.5	2.88
	125R-38.1-12-RN12	12	125	115.4	90	38.1	63	3.5	2.88

Available inserts

RNMX-ML



Designation		Cermet		Coated												Uncoated			page	
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	UNC840	UPC845	ST30A	G10		H01
RNMX	1204M0E-ML														●	●				E17

Available arbors

Designation	Ød	Available arbors
RMRCM 050R-22-□-RN12	22	BT□□-FMC22-□□
063R-22-□-RN12		
080R-27-□-RN12	27	BT□□-FMC27-□□
100R-32-□-RN12	32	BT□□-FMC32-□□
125R-40-□-RN12	40	BT□□-FMC40-□□

Designation	Ød	Available arbors
RMRC 080R-25.4-□-RN12	25.4	BT□□-FMC25.4-□□
100R-31.75-□-RN12	31.75	BT□□-FMC31.75-□□
125R-38.1-□-RN12	38.1	BT□□-FMC38.1-□□

Parts

Specification	Screw	Wrench
Ø50-Ø125	FTNA0411-A	TW15S

Available inserts E17 Available arbors and bolt E426-E428

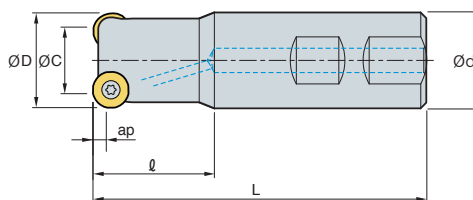


Milling

E

145

RMRS-RN12 new



• AR: -7°
• RR: -15°~13°

(mm)

	Designation		ØD	ØC	Ød	l	L	Shank	ap	
RMRS	032R-2W32-110-RN12	2	32	22.4	32	40	110	W	3.5	0.56
	032R-3W32-110-RN12	3	32	22.4	32	40	110	W	3.5	0.55
	032R-2C32-200-RN12	2	32	22.4	32	40	200	C	3.5	1.09
	032R-3C32-200-RN12	3	32	22.4	32	40	200	C	3.5	1.09
	040R-3W32-110-RN12	3	40	30.4	32	40	110	W	3.5	0.62
	040R-4W32-110-RN12	4	40	30.4	32	40	110	W	3.5	0.62
	040R-3C32-200-RN12	3	40	30.4	32	40	200	C	3.5	1.15
	040R-4C32-200-RN12	4	40	30.4	32	40	200	C	3.5	1.15
	050R-5W40-120-RN12	5	50	40.4	40	40	120	W	3.5	1.08
	050R-6W40-120-RN12	6	50	40.4	40	40	120	W	3.5	1.08
	050R-5C42-300-RN12	5	50	40.4	42	40	300	C	3.5	3.05
	050R-6C42-300-RN12	6	50	40.4	42	40	300	C	3.5	3.05
	063R-6W40-130-RN12	6	63	53.4	40	50	130	W	3.5	1.43
	063R-7W40-130-RN12	7	63	53.4	40	50	130	W	3.5	1.43
	063R-6C42-300-RN12	6	63	53.4	42	50	300	C	3.5	3.30
	063R-7C42-300-RN12	7	63	53.4	42	50	300	C	3.5	3.26

Available inserts

RNMX-ML



Designation		Cermet		Coated												Uncoated			page
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	UNC840	UPC845	ST30A	G10	
RNMX	1204M0E-ML													●	●				E17

Parts

Specification		
Ø32~Ø63	FTNA0411-A	TW15S

Available inserts **E17** Available arbors and bolt **E426~E428**



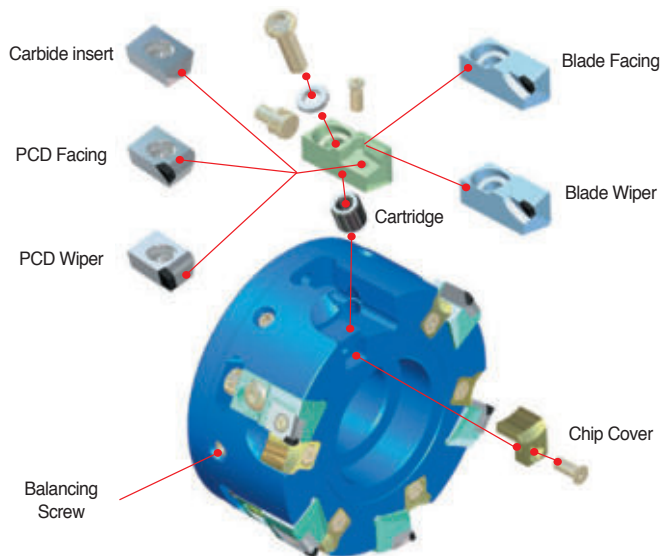
E Milling

Lighter tool ensures excellent performance in high speed machining

Aero Mill

- Excellent machining performance can be acquired especially at the high speeds due to the light aluminum cutter body that is 50% of the weight of a conventional steel cutter body
- High speed milling cutter for precise machining
- Special aluminum material and high rake angle of insert provide rigid & stable machining
- High tolerance surface finishes can be acquired due to the low cutting load provided from the high rake angle
- Balanceable up to G2.5 level

Assembly structure of cutter



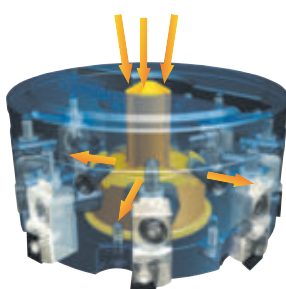
Features of cutter

- Increased stability based on cartridge type application
- Both insert and blade can be available in the same cutter
- Finishing to roughing can be possible because of wide chip pocket space
- Roughing and finishing available with carbide, PCD insert application
- Cutter breakage can be solved by making use of the chip cover

Coolant through system

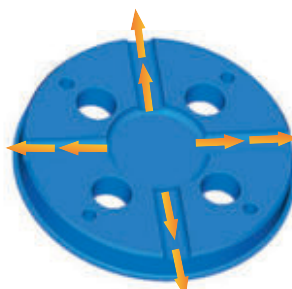
- Specially designed coolant through system provides coolant from the center of the cutter to the insert enhances the cooling rate and chip evacuation.
- Direction of coolant has designed to focus directly to the insert cutting-edge to maximize chip evacuation and improve tool life
- Coolant bolt is applicable up to $\varnothing 160$, coolant cover is applicable from $\varnothing 200$ and over.
Coolant devices are sold separately for through coolant system, through coolant arbor has to be used

Coolant Bolt



For $\varnothing 80 \sim \varnothing 160$

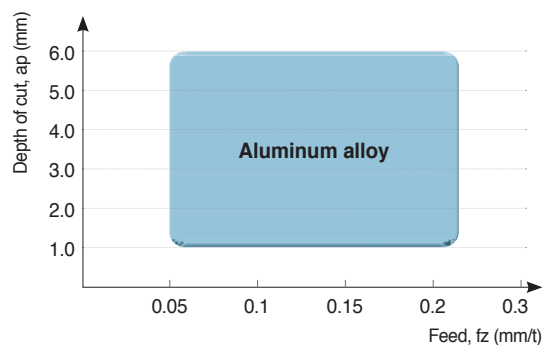
Coolant Cover



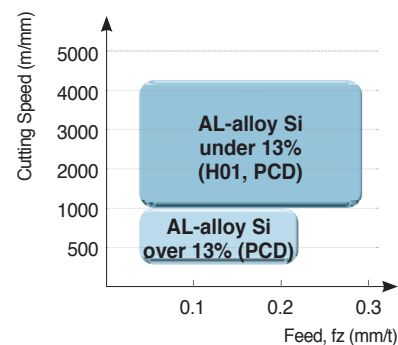
For $\varnothing 200$ and over

Aero Mill

Application range

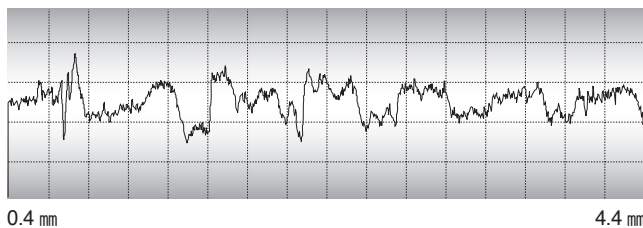


Recommended cutting condition



Surface finish

- **Workpiece** A6061
- **Cutting condition**
 - $v_c = 1570$ m/min $v_f = 3000$ mm/min
 - $S = 5000$ rpm $f_z = 0.1$ mm/t
 - $a_p = 0.5$ mm Machine = PCV620
- **Designation**
 - Cutter** APD100R-A6Z (6 Flutes)
 - Insert** CDEW1204R-XCF (H01)



- R_{max} : $2.1 \mu\text{m}$
- R_z : $1.6 \mu\text{m}$
- R_a : $0.3 \mu\text{m}$

Max. revolution

Diameter (mm)	Max. revolution (rpm)
Ø80	16,000
Ø100	15,000
Ø125	12,500
Ø160	10,000
Ø200	8,000
Ø250	6,500
Ø315	5,000

Coolant parts

Diameter (mm)	Type	Designation		Shape	Note
Ø80	Coolant Bolt	CBP080-IN/MM			Extra charge
Ø100	Coolant Bolt	CBP100-IN	CBP100-MM-1		
Ø125	Coolant Bolt	CBP125-IN	CBP125-MM-1		
Ø160	Coolant Bolt	CBP160-IN	CBP160-MM		
Ø200	Coolant Cover	CCP200			
Ø250	Coolant Cover	CCP250			
Ø315	Coolant Cover	CCP315			

• Choice: CBP100-IN:APD type, General for unmarked item

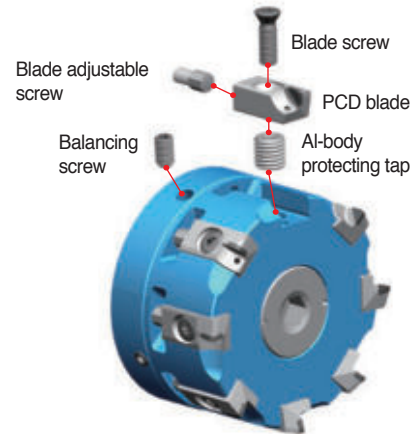


High speed milling tool with PCD blade

Aero Mill-Plus

- Improve tool life up to 20% with a coolant system that enables direct spray cooling to cutting blades
- Enable high feed milling by increasing the number of cutting blades by 20% through a simply structured coupling method for clamps
- Reduces set up time up to 40% by applying a spanner adjustment method
- Introduce an aluminum cutter body to provide a superior cutting performance during high speed milling

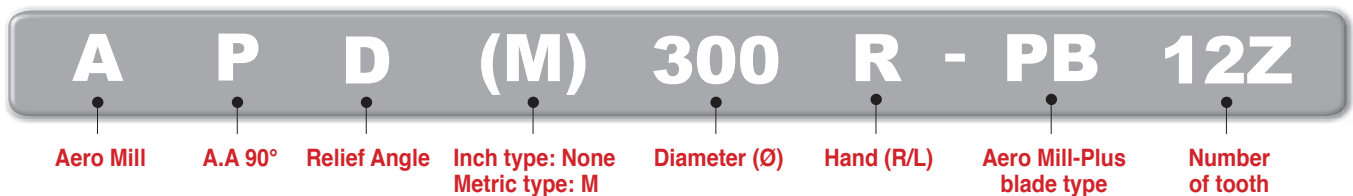
Assembly structure of cutter



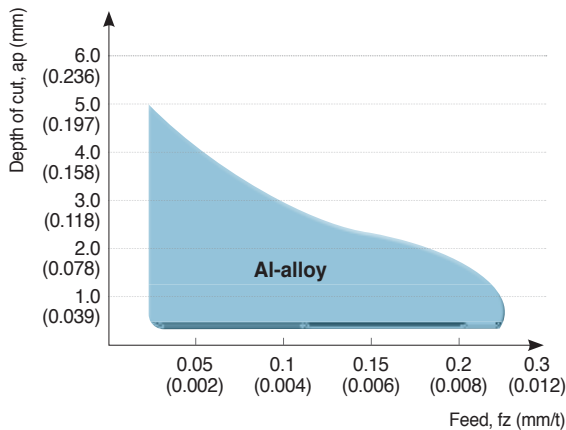
Features of cutter

- Prevent overload to the spindle bearings through weight reduction of the Al alloy body and enable high-speed processing
- Provide PCD Blade-dedicated cutter design to offer stable tool life and increase of applied blades
- Improve the blade life by applying a coolant system that enables direct spray cooling to cutting blades
- Adopt a clamping method with simple structure without set screw
- Reduce weight and apply a coolant bolt that is exclusively used for Aero-Mill Plus that applies coolant to remove internal chip

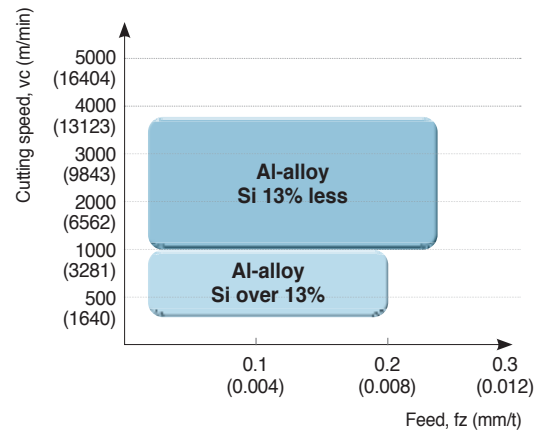
Code system



Application range



Recommended cutting speed



Max. RPM

Diameter (mm)	Max. revolution (rpm)
Ø80	20,000
Ø100	18,000
Ø125	16,000
Ø160	13,000
Ø200	10,000
Ø250	8,000
Ø315	7,000

Coolant parts

Diameter (mm)	Type	inch/mm	Designation	Shape	Material	Note
Ø80	Coolant bolt	inch, mm	CB12-AMaP80		Steel	Included
Ø100		inch	CB16-AMP100			
		mm	CB16-AMP100M			
Ø125		inch	CB20-AMP125			
		mm	CB20-AMP125M			
Ø160		inch	CB24-AMP160			
		mm	CB20-AMP125M			
Ø200	Coolant cover	inch, mm	CCV-AMP200		Aluminum	Extra charge
Ø250			CCV-AMP250			
Ø315			CCV-AMP315			

E Technical information for Aero Mill-Mini

Good performance in small-medium size of operations

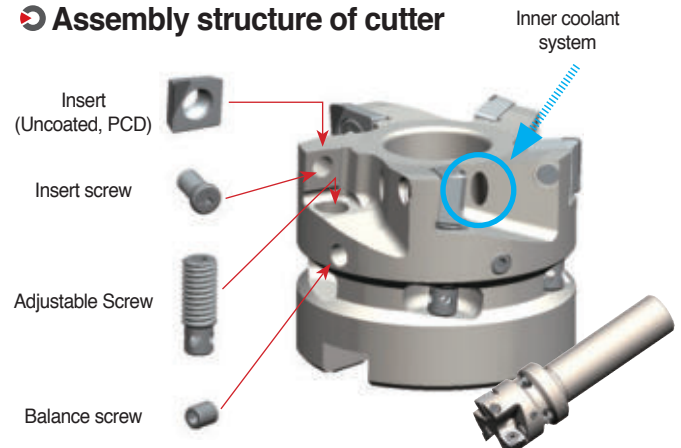
Aero Mill-Mini

- Good performance in small-medium size of operations
- Good duration of the steel body
- Choice of Uncoated carbide/PCD grades can be applied to various kind of work material
- Balance level: G2.5

Features of cutter

- Simple and strong design of Screw-on clamping.
- Adjustable range: ± 0.1 mm Max
- Adjustable step: Min. 2 micro meter
- Wide chip pocket area for Roughing and Aluminum machining.
- Inner coolant system

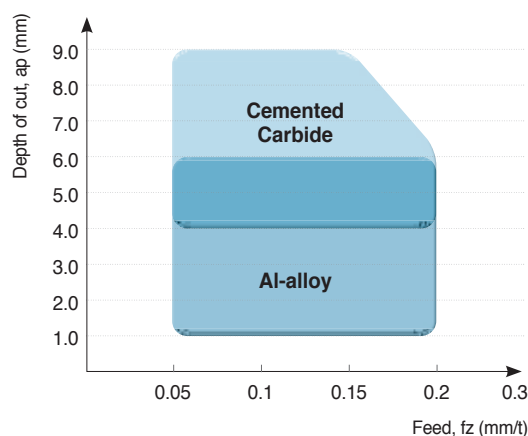
Assembly structure of cutter



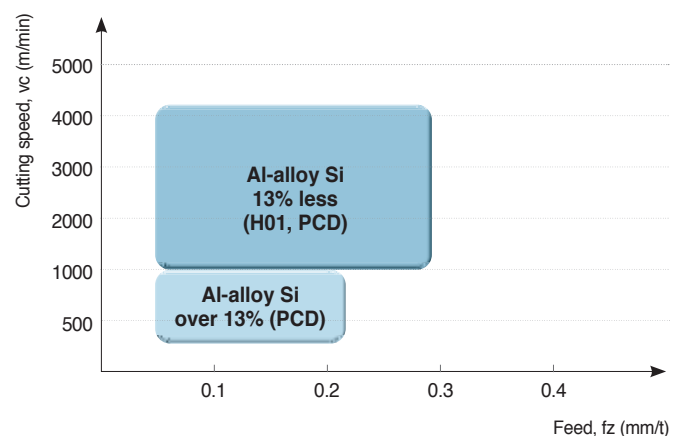
Code system



Application range



Recommended cutting condition



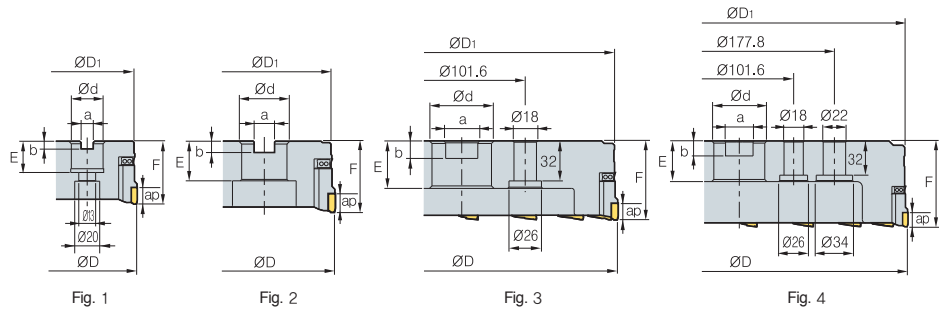
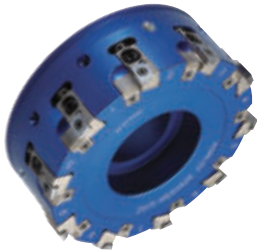
Max. RPM

Diameter	Max. RPM (min ⁻¹)
Ø32	26,000
Ø40	24,500
Ø50	22,000
Ø63	20,000



APD(M)-A

Cartridge + insert


AA
90°

• AR: 6°
• RR: 5°~9°

(mm)

Designation			ØD	ØD ₁	Ød	a	b	E	F	ap	Max rpm		Fig.
APD (APDM)	080R/L-A6Z	6	80	76	25.4 (27)	9.5 (12.4)	6 (7)	25 (22)	50	10	16000	0.75	1
	100R/L-A6Z	6	100	95	31.75 (32)	12.7 (14.4)	8 (8)	32 (28)	50	10	15000	0.95	2
	125R/L-A8Z	8	125	120	38.1 (40)	15.9 (16.4)	10 (9)	38 (30)	63	10	12500	1.8	2
	160R/L-A10Z	10	160	155	50.8 (40)	19.0 (16.4)	11 (9)	38 (30)	63	10	10000	2.9	2
	200R/L-A12Z	12	200	195	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	10	8000	4.0	3
	250R/L-A16Z	16	250	245	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	63	10	6500	6.3	3
	315R/L-A18Z	18	315	310	47.625 (60)	25.4 (25.7)	14 (14)	38 (38)	80	10	5000	11.3	4

() Metric size

Available inserts

CDEW-XCF CDEW-XAF,NAF CDEW-XAW,NAW



Designation	Uncoated			PCD	page
	H01	G10	ST30A	DP200	
CDEW	1204R-XCF	●			E07
	1204L-XCF				
	1204R-XAF			●	
	1204L-XAF				
	1204R-NAF			●	
	1204L-NAF				
	1204R-XAW			●	
	1204L-XAW				
	1204R-NAW			●	
	1204L-NAW				

Available arbors

Designation	General arbors	NC arbors
APD	080R/L NT*□□(M/U)-FMA25.4-25	BT**□□-FMA25.4
(APDM)	100R/L NT*□□(M/U)-FMA31.75-□□	BT**□□-FMA31.75
	125R/L NT*□□(M/U)-FMA38.1-□□	BT**□□-FMA38.1
	160R/L NT*□□(M/U)-FMA50.8-□□	BT**□□-FMA50.8
	200R/L NT*□□(M/U)-FMA47.625-25,	BT**□□-FMA47.625-□□
	250R/L KCP-8***	
	315R/L KCP-8*** (Center ring plug)	-

*□□-NT number **□□-BT number ***Over milling 5

Recommended cutting condition

Workpiece	Cutting condition		Grades
	vc (m/min)	fz (mm/t)	
Aluminum	1,000~4,000 500~2,500	0.05~0.30 0.05~0.20	DP200 H01

Parts

Specification	Cartridge	Chip cover	Chip cover Screw	Insert screw	Adjust screw	Cartridge Screw	Wrench for insert	Wrench for cartridge
Ø80-Ø315	LAPDR/L-AJ	CAPDR/L-AJ	PTMA0411	FTNA0411	AZ0514	BHA0619-NYLOK	TW15S	HW50

Available inserts E07 Available arbors and bolt E426-E428

APD(M)-PB

Blade

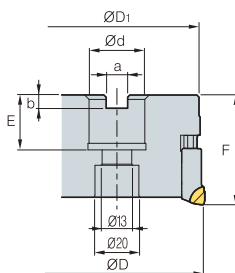
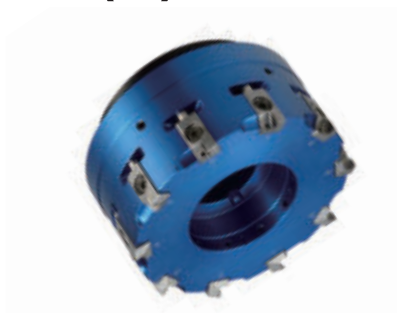


Fig. 1

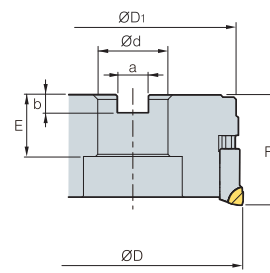


Fig. 2



AA
90°

• AR: 6°
• RR: -4°~1°

(mm)

Designation			Max 	ØD	ØD ₁	Ød	a	b	E	F	ap		Fig.
APD (APDM)	080R/L-PB6Z	6	10	80	77	25.4 (27)	9.5 (12.4)	6 (7)	23.5	50	5	0.55	1
	080R/L-PB8Z	8	10	80	77	25.4 (27)	9.5 (12.4)	6 (7)	23.5	50	5	0.55	1
	100R/L-PB6Z	6	12	100	97	31.75 (32)	12.7 (14.4)	8	34 (32)	50	5	0.92	2
	100R/L-PB8Z	8	12	100	97	31.75 (32)	12.7 (14.4)	8	34 (32)	50	5	0.92	2
	125R/L-PB8Z	8	14	125	122	38.1 (40)	15.9 (16.4)	10 (9)	40 (35)	63	5	1.9	2
	125R/L-PB10Z	10	14	125	122	38.1 (40)	15.9 (16.4)	10 (9)	40 (35)	63	5	1.9	2
	160R/L-PB10Z	10	20	160	157	50.8 (40)	19.0 (16.4)	11 (9)	41 (35)	63	5	3.3	2
	160R/L-PB12Z	12	20	160	157	50.8 (40)	19.0 (16.4)	11 (9)	41 (35)	63	5	3.3	2

() Metric size

Available blades

BAMPR-XAF

BAMPR-XAW

BAMPR-XAWR



Designation	PCD DP150	page
BAMPR-XAF		E07
BAMPR-XAW	●	
BAMPR-XAWR	●	

Available arbors

Designation	NC arbors
APD-PB	080R/L-PB□□Z
(APDM-PB)	100R/L-PB□□Z
	125R/L-PB□□Z
	160R/L-PB□□Z

BT□□-FMA25.4(FMC27)-□□

BT□□-FMA31.75(FMC32)-□□

BT□□-FMA38.1(FMB40)-□□

BT□□-FMA50.8(FMB/FMC40)-□□

Parts

Specification						
	Blade screw	Blade adjustable screw	Al-body protecting tap	Balancing screw	Wrench for insert	Wrench for cartridge
Ø80~Ø160	ETKA0620	AZ0514-SPN6	UZD1010	KHE0610	SPN-6	TW25-100

Available inserts E07 Available arbors and bolt E426~E428



E

Milling

APD(M)-PB

Blade

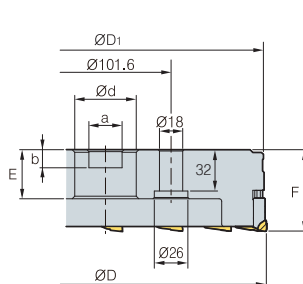
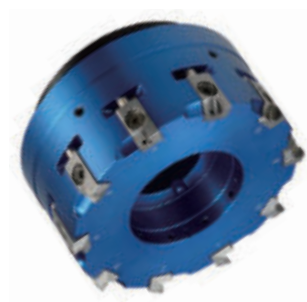


Fig. 1

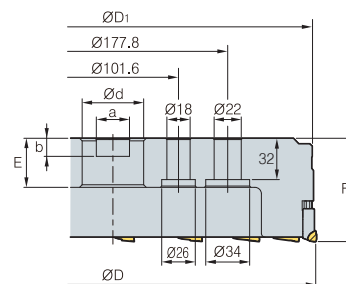


Fig. 2


AA
90°

• AR: -6°
• RR: -39°~-16°

(mm)

Designation			 Max	ØD	ØD ₁	Ød	a	b	E	F	ap	 kg	Fig.
APD (APDM)	200R/L-PB12Z	12	26	200	197	47.625 (60)	25.4 (25.7)	14	40	63	5	4.0	1
	250R/L-PB16Z	16	32	250	247	47.625 (60)	25.4 (25.7)	14	40	63	5	6.5	1
	315R/L-PB18Z	18	42	315	312	47.625 (60)	25.4 (25.7)	14	40	63	5	11.3	2

() Metric size

Available blades

BAMPR-XAF BAMPR-XAW BAMPR-XAWR



Designation	PCD DP150	page
BAMPR-XAF		
BAMPR-XAW	•	E07
BAMPR-XAWR	•	

Available arbors

Designation	NC arbors
APD-PB	
(APDM-PB)	
200R/L-PB□□Z	
250R/L-PB□□Z	BT□□-FMA47.625(FMB60)-□□
315R/L-PB□□Z	

Parts

Specification	Blade screw	Blade adjustable screw	Al-body protecting tap	Balancing screw	Wrench for insert	Wrench for cartridge
Ø200~Ø315	ETKA0620	AZ0514-SPN6	UZD1010	KHE0610	SPN-6	TW25-100

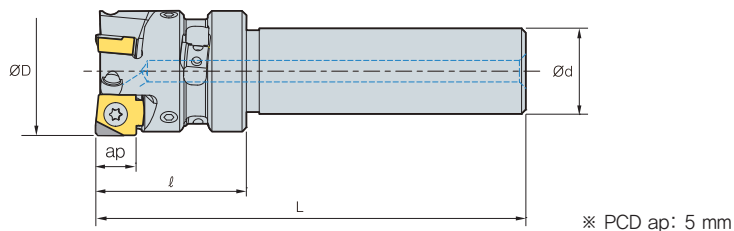
Available inserts E07 Available arbors and bolt E426~E428

Milling


E

153

MAPDS000HR/L-Z0



AA
90°

• AR: 6°
• RR: -4°~1°

(mm)

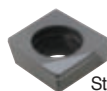
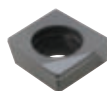
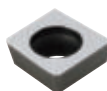
Designation		ØD	Ød	l	L	ap	Max rpm	kg
MAPDS 032HR/L-Z3	3	32	20	35	100	9.5	26,000	0.35
040HR/L-Z4	4	40	20	35	100	9.5	24,500	0.42

Available inserts

SNEW

SNEW-XAF

SNEW-NAF



Strengthened edge

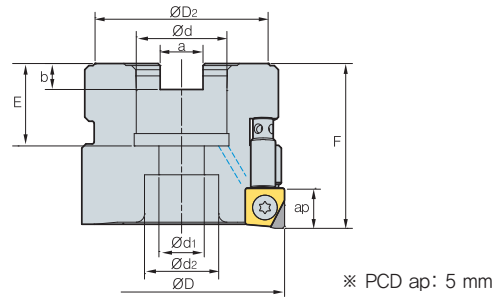
Designation	Uncoated			PCD	page
	H01	G10	ST30A	DP200	
SNEW 09T3ADFR	●				E24
09T3ADTR-XAF				●	
09T3ADTR-XAW				●	
09T3ADTR-NAF				●	
09T3ADTR-NAW				●	

Parts

Specification	Insert screw	Adjust screw	Balance screw	Wrench for insert	Adjust wrench
Ø32~Ø63	FTKA0408	AHX0617F-NYLOK	KHD0405	TW15S	HW20L

Available inserts E24



MAPD000HR/L-Z0AA
90°

- AR: 6°
- RR: -1°~12°

Designation			ØD	ØD2	Ød	a	b	E	F	Ød1	Ød2	ap	Max rpm	
MAPD	040HR/L-Z4	4	40	34	16	8.4	5.6	18	40	9	14	9.5	24,000	0.24
	050HR/L-Z5	5	50	42	22	10.4	6.3	20	40	11	18	9.5	22,000	0.35
	063HR/L-Z6	6	63	42	22	10.4	6.3	20	40	11	18	9.5	20,000	0.65

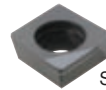
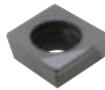
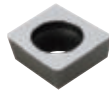
(mm)

Available inserts

SNEW

SNEW-XAF

SNEW-NAF



Strengthened edge

Designation		Uncoated				PCD	page
		H01	G10	ST30A	ST20	DP200	
SNEW	09T3ADFR	●					E24
	09T3ADTR-XAF					●	
	09T3ADTR-XAW					●	
	09T3ADTR-NAF					●	
	09T3ADTR-NAW					●	

Available arbors

Designation		NC arbors
MAPD	040HR/L-Z4	BT**□□-FMC16-□□
	050HR/L-Z5	BT**□□-FMC22-□□
	063HR/L-Z6	BT**□□-FMC22-□□

Recommended cutting condition

Workpiece	Cutting condition		Grades
	vc (m/min)	fz (mm/t)	
Aluminum	1,000~4,000	0.05~0.30	DP200 H01
	500~2,500	0.05~0.20	

Coolant bolt (Not included)

Designation	Applicable cutter	Available cutters
CB0525	MAPD040HR/L-Z4	Ø40
CB1025	MAPD050HR/L-Z5	Ø50
	MAPD063HR/L-Z6	Ø63

Parts

Specification					
Ø32~Ø63	FTKA0408	AHX0617F-NYLOK	KHD0405	TW15S	HW20L

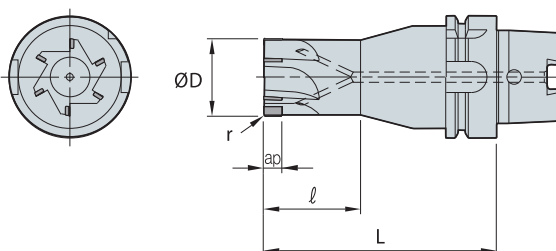
Available inserts E24 Available arbors and bolt E426~E428

E PCD Face Cutter

Code system

PDF	6	032	- HSK63A
PCD Face cutter	Tooth	Diameter	Shank

PCD Face cutter



AA
90°

- AR: 6°
- RR: 5°~9°

(mm)

Designation			ØD	r	ap	ℓ	L
PDF	4032-HSK50A	4	32	0.5	8	50	120
	4040-HSK50A	4	40	0.5	8	50	120
	4032-HSK63A	4	32	0.5	8	50	120
	4040-HSK63A	4	40	0.5	8	50	120
	4050-HSK63A	4	50	0.5	8	50	120
	6063-HSK63A	6	63	0.5	12	-	100
	6063-HSK100A	6	63	0.5	12	-	100

Recommended cutting condition

Workpiece	vc (m/min)	fz (mm/t)	ap (mm)
Al, Brass, Alloy	200~2,000	0.02~0.1	0.05~4.0

Special PCD order sheet

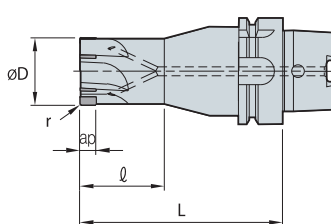
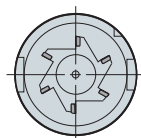


Fig. 1

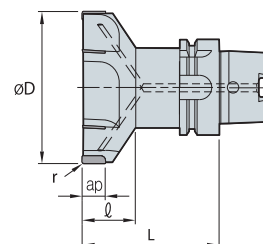


Fig. 2

Designation	Fig.	tooth	Dimensions (mm)					Shank spec.
			ØD	r	ap	l	L	
PDF								



E

Milling

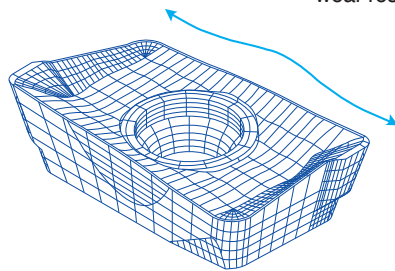
Various applications are available with multi-functional cutters

Alpha Mill

- Innovative curve cutting-edge and chip-breaker design ensures ideal 90-degree cutting, lower cutting resistance, and improved insert life.
- Various applications are available with multi-functional cutters. (Facing, Slotting, Square shoulder milling, etc.)
- Excellent performance ensured at large depth of cut operations due to strong cutting-edge and low cutting resistance.

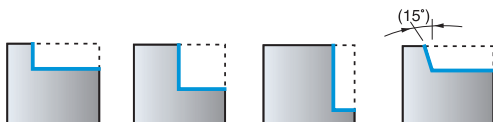
Features of insert

- Long tool life at high speed, high feed and deeper cutting by low cutting resistance and strong cutting-edge
- Distinguished features of Alpha-Curve reduce cutting resistance and improve cutting-edge strength and wear resistance
- Low cutting resistance is realized by KORLOY unique design-the alpha curve cutting-edge and optimal convex and concave design
- Highly efficient machining is available by the ideal application of the grade to material



Application example

Shouldering



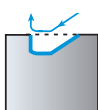
Slotting



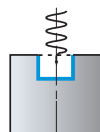
Drilling



Ramping



Helical cutting

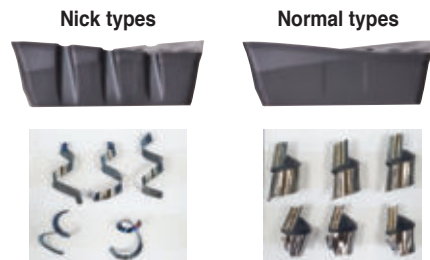


Alpha Mill Nick new

- New nick cutting edge reduces cutting load
- High productivity
- APMT standard holders are compatible with Alpha Mill nick that is reducing stock management cost.

Features

- Lower cutting load due to the overlapping system



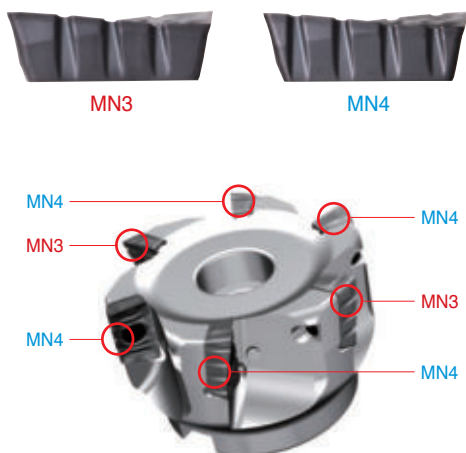
※ Nick types require both chip breaker types for application.

※ Can be used with the existing Alpha Mill holders. Use multi-edges for maximum results. (cutters with even-numbered teeth)

Type	Nick type		General type
Required No. of teeth	20		20
For AMCM3080M (4 Flute x 5 teeth)	 x 10 APMT16- MN3	 x 10 APMT16- MN4	 x 20 APMT16-MM, MF, ML, MA

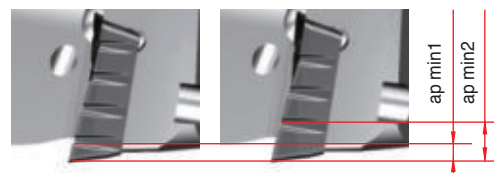
How to clamp

- Alternate the two types of chip breakers when clamping an insert.



Min. depth of cut

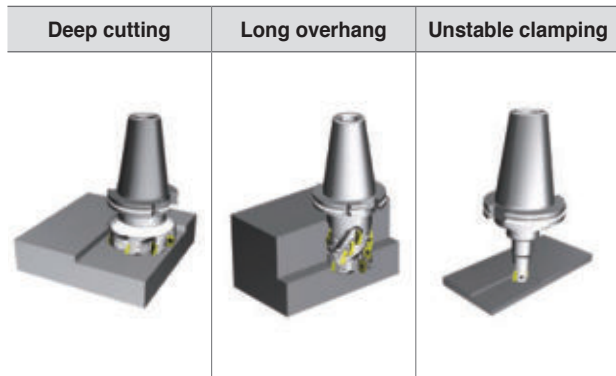
- The depth of cut must be greater than ap_{min1} for chip breaking.



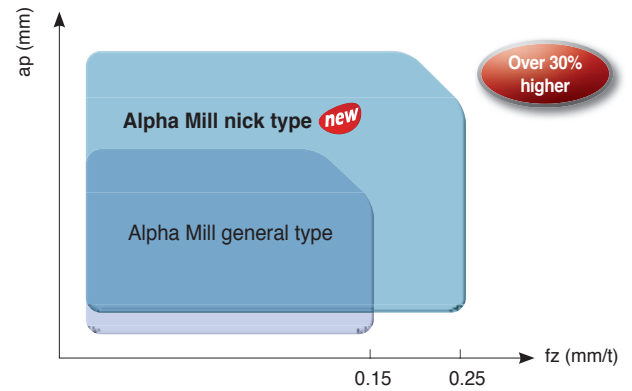
Type	ap_{min1}	ap_{min2}
APMT11 (2000 type)	1.6 mm	4.1 mm
APMT16 (3000 type)	2.2 mm	5 mm
APMT18 (4000 type)	2.3 mm	5.5 mm



Application examples



Application area



• 30% or higher cutting conditions available compared to normal types

Recommended cutting condition

ISO	Grades	APMT 2000 type			APMT 3000 type			APMT 4000 type		
		vc (m/min)	fz (mm/t)	ap (mm)	vc (m/min)	fz (mm/t)	ap (mm)	vc (m/min)	fz (mm/t)	ap (mm)
P	PC3700	180~280	0.05~0.15	11	160~270	0.05~0.18	16	160~270	0.05~0.18	17
	PC5300	150~250	0.05~0.15		150~240	0.05~0.18		150~240	0.05~0.18	
M	PC5300	90~170	0.05~0.15		90~150	0.05~0.18		90~150	0.05~0.18	
K	PC5300	120~240	0.1~0.2		120~200	0.1~0.23		120~200	0.1~0.23	

※ Above cutting conditions can be applied up to cutting speed of 300 m/min and feed per tooth of 0.4 mm/t.

Features of chip breakers

Insert	Cutting-edge	Uses	Features
MA		Al	Optimal cutting-edge and buffed surface for aluminum workpieces ensure high performance in machining
ML		Hard-to-cut material	Chip breaker with low cutting load is optimal for machining hard-to-cut materials
MF		Light cutting	Chip breaker with low cutting load and harder cutting-edge than ML's are optimal for light cutting
MM		General cutting	Optimal for milling in general ranges
MN		Roughing (Nick)	Design for easy chip cutting ensures high machinability in toughing

Product constitution

Item description	Type	Nose R	MA	ML
APMT	1000 type	0.4	APMT0602PDRF-MA	-
		0.8	APMT060208PDRF-MA	-
	1500 type	0.4	APMT0903PDRF-MA	APMT0903PDER-ML
		0.8	APMT090308PDRF-MA	APMT090308PDER-ML
	2000 type	0.5	APMT11T3PDRF-MA	APMT11T3PDER-ML
		0.8	APMT11T308PDRF-MA	APMT11T308PDER-ML
	3000 type	0.4	APMT160404PDRF-MA	APMT160404PDER-ML
		0.8	APMT1604PDRF-MA	APMT1604PDER-ML
	4000 type	0.4	APMT180604PDRF-MA	APMT180604PDER-ML
		0.8	APMT1806PDRF-MA	APMT1806PDER-ML
		1.2	APMT180612PDRF-MA	APMT180612PDER-ML
		1.6	APMT180616PDRF-MA	APMT180616PDER-ML
		2.0	APMT180620PDRF-MA	APMT180620PDER-ML
		2.4	APMT180624PDRF-MA	APMT180624PDER-ML
		3.0	APMT180630R-MA	APMT180630R-ML

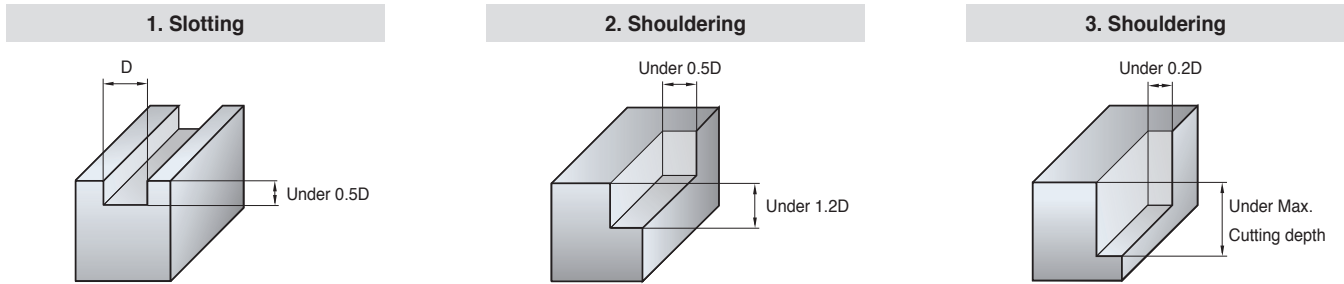
- The inserts can switch to the APMT type holders.

Recommended grades and chip breakers by workpiece

Chip breaker	Cutter edge	Recommended C/B and grade as per workpiece (●: 1 st)											
		P				M		K		N		S	
		Low carbon steel/Mild steel		High carbon steel/Mild steel		Stainless steel		Cast iron		Aluminum alloy		Ti/Inconel	
		C/B	Grades	C/B	Grades	C/B	Grades	C/B	Grades	C/B	Grades	C/B	Grades
MA		-	-	-	-	-	-	-	-	●	● H01	-	-
ML		-	-	-	-	●	● PC5300 ○ PC5400 ○ PC9530	-	-	-	-	●	● PC5300 ○ PC5400
MF		●	● PC3700 ○ PC5300 ○ PC5400 ○ NCM325 ○ NCM335	-	○ PC3700 ○ NCM325 ○ NCM335	-	● PC5300 ○ PC5400 ○ PC9530	-	● PC6510 ○ PC5300 ○ PC5400	-	-	-	● PC5300 ○ PC5400
MM		-	● PC3700 ○ PC5300 ○ PC5400 ○ NCM325 ○ NCM335	●	● PC3700 ○ PC5300 ○ PC5400 ○ NCM325 ○ NCM335	-	● PC5300 ○ PC5400 ○ PC9530	●	● PC6510 ○ PC5300 ○ PC5400	-	-	-	● PC5300 ○ PC5400
MN		-	● PC3700 ○ PC5300 ○ PC5400	-	-	-	● PC5300 ○ PC5400 ○ PC9530	-	● PC6510 ○ PC5300 ○ PC5400	-	-	-	● PC5300 ○ PC5400



Recommended depth of cut



Recommended cutting condition (for Multi-edge type)

Workpiece	Grades	Fig.	Tool dia.									
			Ø10, 16		Ø20, 25		Ø32, 40		Ø50, 63		Ø80, 100	
			vc (m/min)	fz (mm/t)	vc (m/min)	fz (mm/t)	vc (m/min)	fz (mm/t)	vc (m/min)	fz (mm/t)	vc (m/min)	fz (mm/t)
Mild steel, Low carbon steel)	NCM535 NCM325 PC5400 PC5300 PC3700	①	50~80	0.05~0.08	80~100	0.05~0.08	100~120	0.05~0.08	100~120	0.05~0.08	100~120	0.05~0.08
		②	65~90	0.08~0.1	100~120	0.08~0.1	120~140	0.08~0.1	120~140	0.08~0.1	120~140	0.08~0.1
		③	65~95	0.1~0.15	100~120	0.1~0.15	120~140	0.1~0.15	120~140	0.1~0.15	130~150	0.1~0.15
High carbon steel, Alloy steel	NCM535 NCM325 PC5300 PC3700	①	45~60	0.05	60~80	0.05	80~100	0.05	80~100	0.05	80~100	0.05
		②	50~80	0.05~0.08	80~100	0.05~0.08	100~120	0.08~0.1	100~120	0.08~0.1	100~120	0.08~0.1
		③	50~80	0.1~0.15	80~100	0.1~0.15	110~130	0.1~0.15	100~120	0.1~0.15	110~130	0.1~0.15
Alloy tool steel	PC5300 PC3700 PC2510 PC2505	①	40~55	0.05	50~70	0.05	70~90	0.05	70~90	0.05	70~90	0.05
		②	45~60	0.05~0.08	60~80	0.05~0.08	90~120	0.05~0.08	100~120	0.05~0.08	100~120	0.05~0.08
		③	50~75	0.12~0.18	90~110	0.12~0.18	100~130	0.1~0.15	100~120	0.1~0.15	110~130	0.1~0.15
Stainless steel	PC5300 PC9530	①	35~50	0.054	50~70	0.054	70~90	0.05	70~90	0.05	70~90	0.05
		②	45~60	0.05~0.08	60~80	0.05~0.08	90~120	0.05~0.08	100~120	0.05~0.08	100~120	0.05~0.08
		③	50~75	0.1~0.15	90~110	0.1~0.15	100~130	0.1~0.15	110~130	0.1~0.15	110~130	0.1~0.15
Cast iron	PC6510 PC5300	①	50~70	0.1~0.12	70~90	0.1~0.12	70~90	0.1~0.12	90~120	0.1~0.12	90~120	0.1~0.12
		②	50~80	0.12	80~100	0.12	90~120	0.12	100~140	0.12	100~140	0.12
		③	50~80	0.15~0.2	80~100	0.15~0.2	100~130	0.15~0.2	120~150	0.15~0.2	120~150	0.15~0.2
Aluminum alloy	H01	①	160~600	0.1~0.2	200~800	0.1~0.2	300~900	0.1~0.2	400~1,000	0.1~0.2	400~1,000	0.1~0.2
		②	200~650	0.15~0.3	250~900	0.15~0.3	300~950	0.15~0.3	400~1,000	0.1~0.4	400~1,000	0.1~0.4
		③	200~650	0.15~0.3	250~900	0.15~0.3	300~950	0.15~0.3	400~1,000	0.1~0.4	400~1,000	0.1~0.4
Hardened steel	PC5300 PC2510 PC2505	①	35~50	0.03	50~70	0.03	60~90	0.03	60~90	0.03	60~90	0.03
		②	45~60	0.05~0.08	60~80	0.05~0.08	80~100	0.05~0.08	80~100	0.05~0.08	80~100	0.05~0.08
		③	50~80	0.05~0.08	80~100	0.05~0.08	80~100	0.05~0.08	80~100	0.05~0.08	80~100	0.05~0.08

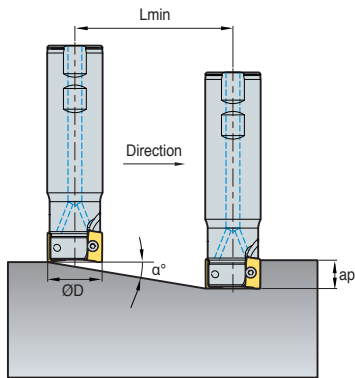
Recommended cutting condition (for Single-edge type)

Workpiece	Grades	Fig.	Tool dia.									
			Ø10, 16		Ø20, 25		Ø32, 40		Ø50, 63		Ø80, 100	
			vc (m/min)	fz (mm/t)	vc (m/min)	fz (mm/t)	vc (m/min)	fz (mm/t)	vc (m/min)	fz (mm/t)	vc (m/min)	fz (mm/t)
Mild steel, low carbon steel	NCM535 NCM325 PC5400 PC5300 PC3700	①	45~60	0.05~0.08	60~80	0.05~0.08	80~120	0.05~0.08	120~200	0.05~0.08	150~200	0.05~0.08
		②	60~90	0.08~0.1	80~120	0.08~0.1	120~180	0.08~0.1	180~250	0.08~0.1	200~250	0.08~0.1
		③	60~90	0.1~0.15	80~120	0.1~0.15	120~180	0.1~0.15	180~250	0.1~0.15	200~250	0.1~0.15
High carbon steel, alloy steel	NCM535 NCM325 PC5300 PC3700	①	40~60	0.05	50~80	0.05	80~110	0.05	100~150	0.05	100~150	0.05
		②	50~80	0.05~0.08	80~100	0.05~0.08	110~150	0.05~0.1	150~200	0.05~0.1	150~200	0.05~0.1
		③	50~80	0.1~0.15	80~100	0.1~0.15	120~150	0.1~0.15	180~200	0.1~0.15	180~200	0.1~0.15
Alloy tool steel	PC5300 PC3700 PC2510 PC2505	①	35~50	0.05	50~70	0.05	80~100	0.05	100~130	0.05	100~130	0.05
		②	45~70	0.05~0.08	70~100	0.05~0.08	100~130	0.05~0.1	130~180	0.05~0.1	130~180	0.05~0.1
		③	45~70	0.1~0.15	70~100	0.1~0.15	100~150	0.1~0.15	130~180	0.1~0.15	130~180	0.1~0.15
Stainless steel	PC5300 PC9530	①	35~50	0.05	50~70	0.05	80~100	0.05	100~130	0.05	100~130	0.05
		②	45~70	0.05~0.08	70~100	0.05~0.08	100~130	0.05~0.1	130~180	0.05~0.1	130~180	0.05~0.1
		③	45~70	0.1~0.15	70~100	0.1~0.15	100~150	0.1~0.15	130~180	0.1~0.15	130~180	0.1~0.15
Cast iron	PC6510 PC5300	①	50~80	0.08~0.12	80~100	0.08~0.12	80~100	0.15	120~150	0.15	120~150	0.15
		②	65~90	0.12~0.15	100~120	0.12~0.15	100~130	0.15~0.18	150~200	0.15~0.18	150~200	0.15~0.18
		③	65~90	0.15~0.2	100~120	0.15~0.2	100~130	0.15~0.2	150~200	0.15~0.2	150~200	0.15~0.2
Aluminum alloy	H01	①	200~600	0.15~0.2	250~800	0.15~0.2	300~900	0.15~0.2	400~1,000	0.1~0.2	400~1,000	0.1~0.2
		②	200~650	0.2~0.25	250~900	0.2~0.25	350~950	0.2~0.25	400~1,000	0.2~0.3	400~1,000	0.2~0.3
		③	200~650	0.25~0.3	250~900	0.25~0.3	350~950	0.25~0.3	400~1,000	0.3~0.4	400~1,000	0.3~0.4
Hardened steel	PC5300 PC2510 PC2505	①	35~50	0.03	50~70	0.03	60~90	0.03	60~90	0.03	60~90	0.03
		②	45~65	0.05~0.08	60~80	0.05~0.08	80~100	0.05~0.08	80~100	0.05~0.08	80~100	0.05~0.08
		③	50~80	0.05~0.08	80~100	0.05~0.08	80~100	0.05~0.08	80~100	0.05~0.08	80~100	0.05~0.08

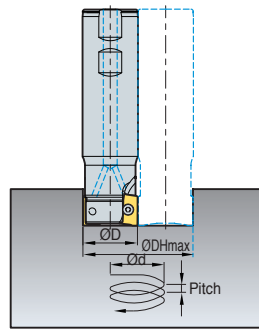


➤ Cutting condition for ramping and helical operation

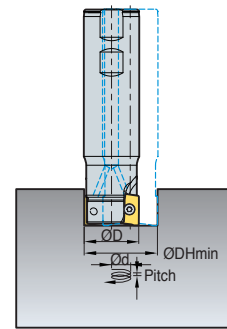
1. Ramping



2. Helical cutting for blind hole



3. Helical cutting for through hole



(mm)

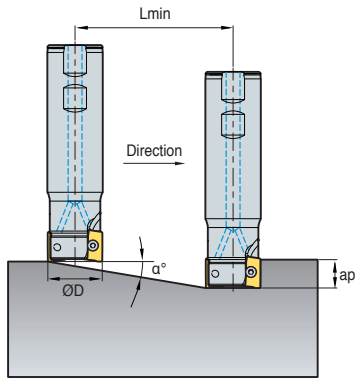
Designation	Tool dia. ØD (min)	ap	1. Ramping		2. Helical cutting for blind hole				3. Helical cutting for through hole	
			Maximum angle α(°)	Lmin	Min. desirable hole dia. ØDHmin	Max. pitch dmax	Max. desirable hole dia. ØDHmax	Max. pitch dmax	Min. desirable hole dia. ØDHmin	Max. pitch dmax
AMS1010HS	10	5	6.5	44	17.6	2.0	18.8	2.1	13	1.5
AMS1011HS	11		5.6	51	19.6	1.9	20.8	2.0	15	1.5
AMS1012HS	12		4.9	58	21.6	1.9	22.8	2.0	17	1.5
AMS1014HS	14		3.9	73	25.6	1.8	26.8	1.8	21	1.4
AMS1015HS	15		3.6	80	27.6	1.7	28.8	1.8	23	1.4
AMS1016HS	16		3.3	87	29.6	1.7	30.8	1.8	25	1.4
AMS1017HS	17		3.0	94	31.6	1.7	32.8	1.7	27	1.4
AMS1018HS	18		2.8	101	33.6	1.7	34.8	1.7	29	1.4
AMS1020HS	20		2.5	115	37.6	1.6	38.8	1.7	33	1.4
AMS1021HS	21		2.3	123	39.6	1.6	40.8	1.7	35	1.4
AMS1022HS	22		2.2	130	41.6	1.6	42.8	1.6	37	1.4
AMS1025HS	25		1.9	151	47.6	1.6	48.8	1.6	43	1.4
AMS1026HS	26		1.8	158	49.6	1.6	50.8	1.6	45	1.4
AMS1032HS	32		1.4	201	61.6	1.5	62.8	1.6	57	1.4
AMS1033HS	33		1.4	208	63.6	1.5	64.8	1.6	59	1.4
AMCM1032HS	32	9	1.4	201	61.6	1.5	62.8	1.6	57	1.4
AMCM1040HS	40		1.1	258	77.6	1.5	78.8	1.5	73	1.4
AMCM1050HS	50		0.9	330	97.6	1.5	98.8	1.5	93	1.4
AMCM1063HS	63		0.7	423	123.6	1.5	124.8	1.5	119	1.4
AMS1510HS	10		7.5	68	17.4	2.3	18.8	2.5	11	1.5
AMS1512HS	12		6.5	79	21.4	2.4	22.8	2.6	15	1.7
AMS1513HS	13		5.7	90	23.4	2.3	24.8	2.5	17	1.7
AMS1514HS	14		6.3	82	25.4	2.8	26.8	2.9	19	2.1
AMS1516HS	16		5.0	102	29.4	2.6	30.8	2.7	23	2.0
AMS1517HS	17		4.6	112	31.4	2.5	32.8	2.6	25	2.0
AMS1518HS	18		4.2	122	33.4	2.5	34.8	2.6	27	2.0
AMS1519HS	19		3.9	132	35.4	2.4	36.8	2.5	29	2.0
AMS1520HS	20		3.6	142	37.4	2.4	38.8	2.5	31	2.0
AMS1521HS	21		3.4	152	39.4	2.3	40.8	2.4	33	2.0
AMS1522HS	22		3.2	162	41.4	2.3	42.8	2.4	35	1.9
AMS1524HS	24		2.8	182	45.4	2.2	46.8	2.3	39	1.9
AMS1525HS	25		2.7	192	47.4	2.2	48.8	2.3	41	1.9
AMS1528HS	28		2.3	222	53.4	2.2	54.8	2.2	47	1.9
AMS1530HS	30		2.1	242	57.4	2.1	58.8	2.2	51	1.9
AMS1532HS	32		2.0	262	61.4	2.1	62.8	2.2	55	1.9
AMS1535HS	35		1.8	292	67.4	2.1	68.8	2.1	61	1.9
AMS1540HS	40		1.5	342	77.4	2.0	78.8	2.1	71	1.9
AMCM15040HS	40		1.5	342	77.4	2.0	78.8	2.1	71	1.9
AMCM15050HS	50		1.2	442	97.4	2.0	98.8	2.0	91	1.9
AMCM15063HS	63		0.9	572	123.4	1.9	124.8	2.0	117	1.8
AMCM15080HS	80		0.7	742	157.4	1.9	158.8	1.9	151	1.8
AMCM15100HS	100		0.5	942	197.4	1.9	198.8	1.9	191	1.8

$$Lmin = \frac{ap}{\tan \alpha} \quad (\text{mm})$$

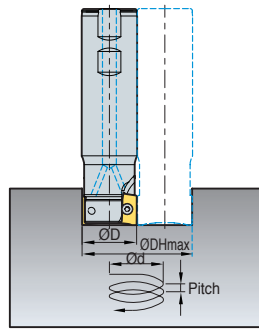


Cutting condition for ramping and helical operation

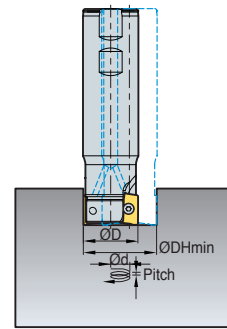
1. Ramping



2. Helical cutting for blind hole



3. Helical cutting for through hole

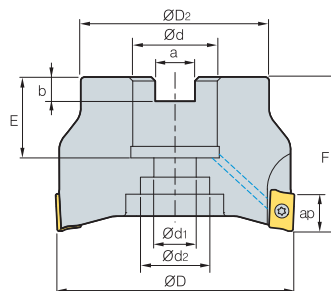


(mm)

Designation	Tool dia. ØD (min)	ap	1. Ramping		2. Helical cutting for blind hole				3. Helical cutting for through hole	
			Maximum angle α(°)	Lmin	Min. desirable hole dia. ØDHmin	Max. pitch dmax	Max. desirable hole dia. ØDHmax	Max. pitch dmax	Min. desirable hole dia. ØDHmin	Max. pitch dmax
AMS2010HS	10	10	16.82	33	16.4	5.0	18	5.4	11	3.3
AMS2012HS	12		11.69	48	20.4	4.2	22	4.6	15	3.1
AMS2014HS	14		7.55	75	24.4	3.2	26	3.4	19	2.5
AMS2016HS	16		10.30	55	28	5.1	30	5.5	23	4.2
AMS2018HS	18		8.23	69	32	4.6	34	4.9	27	3.9
AMS2020HS	20		5.60	102	36	3.5	38	3.7	31	3.0
AMS2022HS	22		5.15	111	40	3.6	42	3.8	35	3.2
AMS2025HS	25		3.92	146	46	3.2	48	3.3	41	2.8
AMS2032HS	32		2.70	212	60	2.8	62	2.9	55	2.6
AMS2040HS	40		1.98	289	76	2.6	78	2.7	71	2.5
AMS2050HS	50		1.48	386	96	2.5	98	2.5	91	2.4
AMS2063HS	63		1.11	514	122	2.4	124	2.4	117	2.3
AMCM2040HS	40		1.29	445	76	2.5	78	2.6	71	2.1
AMCM2050HS	50		0.36	1576	96	0.6	98	0.6	91	0.6
AMCM2063HS	63	10	0.27	2104	122	0.6	124	0.6	117	0.6
AMCM2080HS	80		0.21	2784	156	0.6	158	0.6	151	0.5
AMCM2100HS	100		0.16	3584	196	0.5	198	0.6	191	0.5
AMS3025HS	25		4.72	121	46	3.8	48	4.0	36	3.0
AMS3032HS	32		3.00	191	60	3.1	62	3.2	50	2.6
AMS3040HS	40		2.29	250	76	3.0	78	3.1	66	2.6
AMS3050HS	50		1.64	350	96	2.7	98	2.8	86	2.5
AMS3063HS	63		1.22	470	122	2.6	124	2.6	112	2.4
AMCM3040HS	40		1.99	288	76	2.6	78	2.7	66	2.3
AMCM3050HS	50		1.67	343	96	2.8	98	2.9	86	2.5
AMCM3063HS	63	10	1.22	470	122	2.6	124	2.6	112	2.4
AMCM3080HS	80		0.90	636	156	2.5	158	2.5	146	2.3
AMCM3100HS	100		0.69	830	196	2.4	198	2.4	186	2.2
AMS2025MH	25		1.50	764	46	1.2	48	1.3	-	-
AMS2032MH	32		1.50	1146	60	1.6	62	1.6	-	-
AMS3040MH	40		1.50	1528	76	2.0	78	2.0	-	-
AMS4020HS	20	16	9.5	98	37.4	6.2	38.8	6.5	31	5.2
AMS4021HS	21		5.2	179	39.4	3.6	40.8	3.7	33	3.0
AMS4025HS	25		7.6	122	47.4	6.3	48.8	6.5	41	5.5
AMS4026HS	26		7.1	130	49.4	6.2	50.8	6.4	43	5.4
AMS4032HS	32		3.4	276	61.4	3.6	62.8	3.7	55	3.3
AMS4033HS	33		3.2	288	63.4	3.6	64.8	3.7	57	3.2
AMS4040HS	40		2.5	376	77.4	3.4	78.8	3.4	71	3.1
AMS4050HS	50		1.9	502	97.4	3.2	98.8	3.2	91	3.0
AMS4063HS	63		1.4	665	123.4	3.0	124.8	3.1	117	2.9
AMCM4050HS	50		1.9	502	97.4	3.2	98.8	3.2	91	3.0
AMCM4063HS	63		1.4	665	123.4	3.0	124.8	3.1	117	2.9
AMCM4080HS	80		1.1	878	157.4	2.9	158.8	2.9	151	2.8
AMCM4100HS	100		0.8	1128	197.4	2.9	198.8	2.9	191	2.8
AMCM4125HS	125		0.6	1442	247.4	2.8	248.8	2.8	241	2.7

$$Lmin = \frac{ap}{\tan \alpha^\circ} \text{ (mm)}$$

AMC(M)1000S



AA
90°

- AR: 9°~13°
- RR: -14°~5°

(mm)

Designation			ØD	ØD2	Ød	Ød1	Ød2	a	b	E	F	ap	
AMCM	1032HS	8	32	30	16	9	14	8.4	5.6	19	40	5.6	0.15
	1040HS-16	10	40	34	16	9	14	8.4	5.6	19	40	5.6	0.24
	1040HS-22	10	40	34	22	11	18	10.4	6.3	21	40	5.6	0.24
	1050HS	12	50	42	22	11	18	10.4	6.3	21	40	5.6	0.36
	1063HS	14	63	49	22	11	18	10.4	6.3	21	40	5.6	0.61

Available inserts

APMT-MA

APMT-MM



Designation		Cermet		Coated												Uncoated		page	
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2510	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	G10		H01
APMT	0602PDFR-MA																	●	E05
	060208PDFR-MA																		
	060202PDSR-MM			●						●					●	●			
	0602PDSR-MM			●					●	●	●	●	●		●	●			
	060208PDSR-MM			●							●				●	●			
	060212R-MM			●											●	●			
	060216R-MM														●	●			

Available arbors

Designation	Ød	NC arbors
AMCM		
1032HS	16	BT□□-FMC16-□□
1040HS-16		
1040HS-22		
1050HS	22	BT□□-FMC22-□□
1063HS		

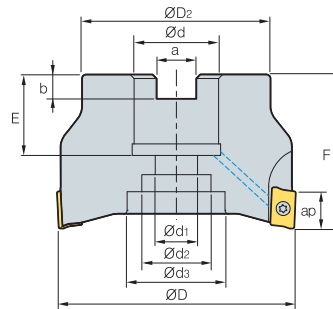
Parts

Specification		
Ø32~Ø63	FTKA01842	TW06S-A

Available inserts E05 Available arbors and bolt E426~E428



AMC(M)1500S



AA
90°
• AR: 9°~13°
• RR: -14°~5°

(mm)

Designation			ØD	ØD2	Ød	Ød1	Ød2	Ød3	a	b	E	F	ap	
AMCM	15040HS	5	40	34	16	9	14	-	8.4	5.6	19	40	9	0.22
	15050HS	6	50	42	22	11	18	-	10.4	6.3	21	40	9	0.34
	15063HS	8	63	49	22	11	18	-	10.4	6.3	21	40	9	0.57
AMC (AMCM)	15080HS	10	80	57	25.4 (27)	14	25	35	9.5 (12.4)	6 (7)	24 (23)	50	9	1.10
	15100HS	12	100	67	31.75 (32)	18	26	42	12.7 (14.4)	8 (8)	32 (26)	63	9	2.10

() Metric size

Available inserts

APMT-MA APMT-ML APMT-MM



Designation		Cermet		Coated												Uncoated		page	
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2510	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	G10		H01
APMT	0903PDFR-MA																	●	E05
	090308PDFR-MA																		
	0903PDER-ML													●	●				
	090308PDER-ML													●	●				
	0903PDSR-MM			●				●	●	●	●			●	●				
	090308PDSR-MM			●						●				●	●				
	090312R-MM									●				●	●				
	090316R-MM			●						●				●	●				
	090320R-MM									●				●	●				

Available arbors

Designation		Ød	NC arbors
AMCM	15040HS	16	BT□□-FMC16-□□
	15050HS	22	BT□□-FMC22-□□
	15063HS		
AMC (AMCM)	15080HS	25.4	BT□□-FMA25.4-□□
		27	BT□□-FMC27-□□
	15100HS	31.75	BT□□-FMA31.75-□□
		32	BT□□-FMC32-□□

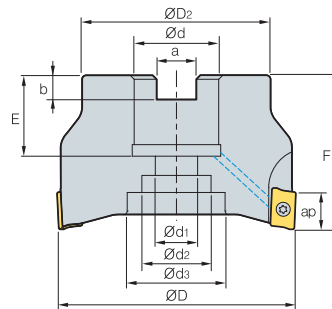
Parts

Specification	Screw	Wrench
Ø40~Ø100	FTKA02565S	TW08S

Available inserts E05 Available arbors and bolt E426~E428



AMC(M)2000S



AA
90°
• AR: 9°~13°
• RR: -14°~5°

(mm)

Designation			ØD	ØD2	Ød	Ød1	Ød2	Ød3	a	b	E	F	ap	
AMCM	2040HS	5	40	34	16	9	14	-	8.4	5.6	18	40	11	0.22
	2050HS	6	50	42	22	11	18	-	10.4	6.3	20	40	11	0.34
	2063HS	8	63	49	22	11	18	-	10.4	6.3	20	40	11	0.57
AMC (AMCM)	2080HS	8	80	57	25.4 (27)	14	25	35	9.5 (12.4)	6 (7)	25 (22)	50	11	1.10
	2100HS	10	100	67	31.75 (32)	18	26	42	12.7 (14.4)	8 (8)	32 (28)	63	11	2.10

() Metric size

Available inserts

APMT-MA

APMT-ML

APMT-MM

APMT-MF

APMT-MN



Designation		Cermet		Coated												Uncoated		page
		CN2500	CN30	NC330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2510	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	G10	
APMT	11T3PDFR-MA																	●
	11T308PDFR-MA																	
	11T3PDER-ML														●	●		
	11T308PDER-ML														●	●		
	11T3PDSR-MM			●	●		●		●	●	●	●			●	●		
	11T3PDSR-MF			●						●	●				●	●		
	11T308PDSR-MM			●						●		●	●		●	●		
	11T312PDSR-MM			●						●		●			●	●		
	11T316R-MM			●						●					●	●		
	11T318R-MM																	
	11T324R-MM			●						●					●	●		
	11T3PDSR-MN2														●			
	11T3PDSR-MN3														●			

※ Please purchase 2 types of APMT-MN (nick type) inserts with different chip breakers. ※ Please use the cutters with even teeth.

Available arbors

Designation		Ød	NC arbors
AMCM	2040HS	16	BT□□-FMC16-□□
	2050HS		
	2063HS	22	BT□□-FMC22-□□
AMC (AMCM)	2080HS	25.4	BT□□-FMA25.4-□□
		27	BT□□-FMC27-□□
	2100HS	31.75	BT□□-FMA31.75-□□
		32	BT□□-FMC32-□□

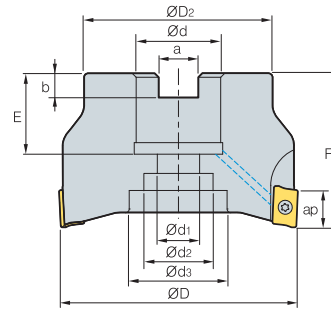
Parts

Specification	Screw	Wrench
Ø40~Ø100	FTKA02565S	TW08S

Available inserts E06 Available arbors and bolt E426~E428



AMC(M)3000S



• AR: 14°
• RR: -12°~8°

(mm)

Designation			ØD	ØD2	Ød	Ød1	Ød2	Ød3	a	b	E	F	ap	 kg
AMCM	3040HS	4	40	34	16	9	14	-	8.4	5.6	18	40	16	0.18
	3050HS	5	50	42	22	11	18	-	10.4	6.3	20	40	16	0.28
	3063HS	6	63	49	22	11	18	-	10.4	6.3	20	40	16	0.50
AMC (AMCM)	3080HS	7	80	57	25.4 (27)	14	25	35	9.5 (12.4)	6 (7)	25 (22)	50	16	1.02
	3100HS	8	100	67	31.75 (32)	18	26	42	12.7 (14.4)	8 (8)	32 (28)	63	16	2.05

() Metric size

Available inserts



Designation		Cermet		Coated												Uncoated		page	
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2510	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	G10		H01
APMT	1604PDFR-MA																	●	E06
	160404PDFR-MA																		
	1604PDER-ML														●	●			
	160404PDER-ML														●	●			
	1604PDSR-MM			●	●		●		●	●	●	●	●	●	●	●			
	1604PDSR-MF			●							●	●			●	●			
	160410PDSR-MM										●				●	●			
	160416PDSR-MM			●							●				●	●			
	160424R-MM			●							●				●	●			
	160430R-MM										●				●	●			
	160432R-MM			●							●				●	●			
	1604PDSR-MN3														●				
	1604PDSR-MN4														●				

※ Please purchase 2 types of APMT-MN (nick type) inserts with different chip breakers. ※ Please use the cutters with even teeth.

Available arbors

Designation	Ød	NC arbors
AMCM 3040HS	16	BT□□-FMC16-□□
3050HS	22	BT□□-FMC22-□□
3063HS		
AMC (AMCM) 3080HS	25.4	BT□□-FMA25.4-□□
	27	BT□□-FMC27-□□
	31.75	BT□□-FMA31.75-□□
3100HS	32	BT□□-FMC32-□□

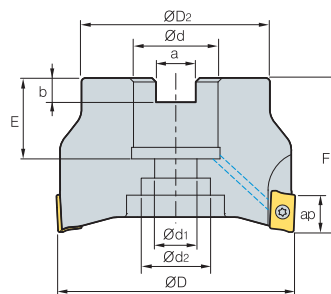
Parts

Specification	Screw	Wrench
Ø40~Ø100	FTKA0410	TW15S

Available inserts **E06** Available arbors and bolt **E426~E428**



AMC(M)3000S-K



AA
90°
• AR: 14°
• RR: -12°~8°

(mm)

Designation			ØD	ØD2	Ød	Ød1	Ød2	a	b	E	F	ap	
AMCM	3040HS-K	4	40	34	16	9	14	8.4	5.6	18	40	16	0.15
	3050HS-K	5	50	42	22	11	18	10.4	6.3	20	40	16	0.24
	3063HS-K	6	63	49	22	11	18	10.4	6.3	20	40	16	0.24
AMC (AMCM)	3080HS-K	7	80	57	25.4 (27)	14	20	9.5 (12.4)	6 (7)	25 (22)	50	16	0.36
	3100HS-K	8	100	67	31.75 (32)	18	26	12.7 (14.4)	8 (8)	32 (28)	63	16	0.61

() Metric size

Available inserts

APKT

APKT-MF

APKT-MM

APKT-MA

APKT-MA2

APKT-MA3



Designation		Cermet		Coated												Uncoated			page
		CN2500	CN30	NCM325	NCM335	NCM635	NCM545	PC2505	PC2510	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	PD2000	G10	H01	
APKT	1604PDSR			●						●	●								
	1604PDSR-MF			●									●						
	1604PDSR-MM			●	●					●	●	●		●					
	1604PDFR-MA															●		●	●
	1604PDFR-MA2																	●	
	160416FR-MA2																	●	
	160432FR-MA2																		
	1604PDFR-MA3																●	●	●
	160420FR-MA3																		

Available arbors

Designation	Ød	NC arbors
AMCM	16	BT□□-FMC16-□□
	22	BT□□-FMC22-□□
	25.4	BT□□-FMA25.4-□□
AMC (AMCM)	27	BT□□-FMC27-□□
	31.75	BT□□-FMA31.75-□□
	32	BT□□-FMC32-□□

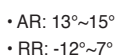
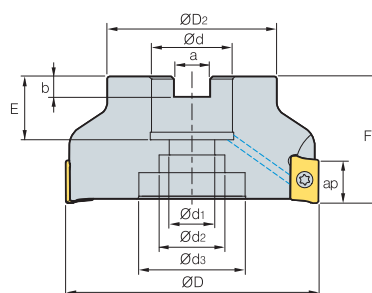
Parts

Specification		
Ø40~Ø100	FTKA0410	TW15S

Available inserts E04 Available arbors and bolt E426~E428



AMC(M)4000S



(mm)

Designation			ØD	ØD ₂	Ød	Ød ₁	Ød ₂	Ød ₃	a	b	E	F	ap	
AMCM	4050HS	5	50	42	22	11	18	-	10.4	6.3	21	40	17	0.28
	4063HS	6	63	49	22	11	18	-	10.4	6.3	21	40	17	0.50
AMC (AMCM)	4080HS	7	80	57	25.4 (27)	14	25	35	9.5 (12.4)	6 (7)	24 (23)	50	17	1.00
	4100HS	8	100	67	31.75 (32)	18	26	42	12.7 (14.4)	8 (8)	32 (25)	63 (50)	17	2.10
	4125HS	9	125	87	38.1 (40)	22	32	52	15.9 (16.4)	10 (9)	35 (29)	63	17	3.30
	4160S	10	160	107	50.8 (40)	-	-	100	19 (16.4)	11 (9)	38 (32)	63	17	3.6
	4200S	10	200	108	47.625 (60)	-	-	132	25.4 (25.7)	14 (14)	40 (38)	63	17	6

()Metric size

 Available inserts

[illegible]

※ Please purchase 2 types of APMT-MN (nick type) inserts with different chip breakers. ※ Please use the cutters with even teeth.

 Available arbors

Designation		Ød	NC arbors
AMCM	4050HS	22	BT□□-FMC22-□□
	4063HS		
AMC (AMCM)	4080HS	25.4	BT□□-FMA25.4-□□
		27	BT□□-FMC27-□□
	4100HS	31.75 32	BT□□-FMA31.75-□□ BT□□-FMC32-□□

Designation		Ød	NC arbors
AMC (AMCM)	4125HS	38.1	BT□□-FMA38.1-□□
		40	BT□□-FMC40-□□
	4160S	50.8	BT□□-FMA50.8-□□
		40	BT□□-FMC40-□□
	4200S	47.625	BT□□-FMA47.625-□□
		60	BT□□-FMR60-□□

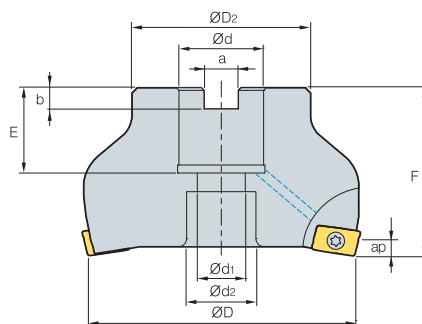
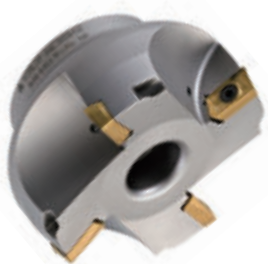
Parts

Specification	 Screw	 Wrench
Ø50~Ø200	FTKA0410	TW15S

Available inserts E06 Available arbors and bolt E426~E428



AMC(M)1000SE/2000SE



AA
75°

• AR: 45°
• RR: 0°

(mm)

Designation		ØD	ØD2	Ød	Ød1	Ød2	a	b	E	F	ap	kg
AMCM 1040HSE	4	40	34	16	9	14	8.4	5.6	19	40	2.5	0.26
1050HSE	5	50	42	22	11	18	10.4	6.3	21	40	2.5	0.39
AMC (AMCM) 2080HSE	5	80	57	25.4 (27)	14	20	9.5 (12.4)	6.0 (7.0)	25 (22)	50	4	1.2
2100HSE	6	100	67	31.75 (32)	18	26	12.7 (14.4)	8.0 (8.0)	32 (28)	63	4	2.33

()Metric size

Available inserts

APMT-MM

APMT-MF



Type	Designation		Cermet		Coated												Uncoated		page	
			CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2510	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	G10		H01
1000 type	APMT	060202PDSR-MM			●								●			●	●			
		0602PDSR-MM			●					●	●	●	●	●		●	●			
		060208PDSR-MM			●							●				●	●			
		060212R-MM			●											●	●			
2000 type	APMT	11T3PDSR-MM			●	●		●		●	●	●	●	●		●	●			
		11T3PDSR-MF			●							●	●			●	●			
		11T308PDSR-MM			●							●		●	●	●	●			
		11T312PDSR-MM			●							●		●		●	●			
		11T316R-MM			●							●				●	●			
		11T318R-MM			●											●	●			
		11T324R-MM			●							●				●	●			

Available arbors

Type	Designation	Ød	NC arbors
1000 type	AMC (AMCM) 1040HSE	16	BT□□-FMC16-□□
	1050HSE	22	BT□□-FMC22-□□
2000 type	AMC (AMCM) 2080HSE	25.4	BT□□-FMA25.4-□□
		27	BT□□-FMC27-□□
	2100HSE	31.75	BT□□-FMA31.75-□□
		32	BT□□-FMC32-□□

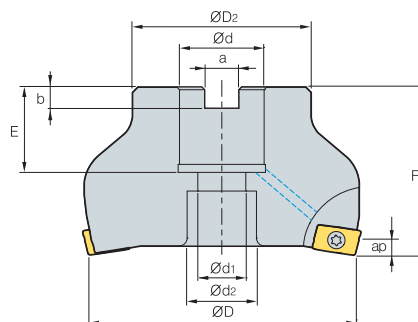
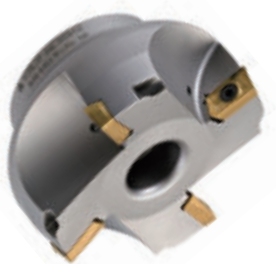
Parts

Specification	Screw	Wrench	Wrench
Ø40~Ø50 (1000 type)	FTKA01842	-	TW06S-A
Ø80~Ø100 (2000 type)	FTKA02565S	TW08S	-

Available inserts E06 Available arbors and bolt E426~E428



AMC(M)3000SE



AA
75°

• AR: 45°
• RR: 0°

(mm)

Designation			ØD	ØD2	Ød	Ød1	Ød2	a	b	E	F	ap	
AMC (AMCM)	3080HSE	4	80	57	25.4 (27)	14	20	9.5 (12.4)	6.0 (7.0)	25 (22)	50	6	1.3
	3100HSE	5	100	67	31.75 (32)	18	26	12.7 (14.4)	8.0 (8.0)	32 (28)	63	6	2.3

() Metric size

Available inserts

APMT-MM

APMT-MF



Designation		Cermet		Coated												Uncoated		page	
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2510	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	G10		H01
APMT	1604PDSR-MM			●	●		●		●	●	●	●	●	●	●	●			E06
	1604PDSR-MF			●							●	●			●	●			
	160410PDSR-MM										●				●	●			
	160416PDSR-MM			●							●				●	●			
	160424R-MM			●							●				●	●			
	160430R-MM										●				●	●			
	160432R-MM			●							●				●	●			

Available arbors

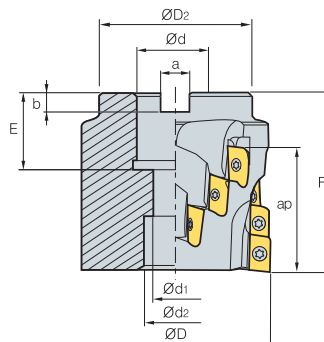
Designation	Ød	NC arbors
AMC (AMCM) 3080HSE	25.4	BT□□-FMA25.4-□□
	27	BT□□-FMC27-□□
3100HSE	31.75	BT□□-FMA31.75-□□
	32	BT□□-FMC32-□□

Parts

Specification	Screw	Wrench
Ø80~Ø100	FTKA0410	TW08S

Available inserts **E06** Available arbors and bolt **E426~E428**

AMC(M)2000M



AA
90°

• AR: 9°
• RR: -9°~5°

(mm)

Designation			ØD	ØD2	Ød	Ød1	Ød2	a	b	E	F	No. of flute	ap	 kg
AMCM	2050M	16	50	40	22	11	18	10.4	6.3	21	58	4	39	0.7
AMC (AMCM)	2063M	16	63	50	25.4 (27)	13.5	20	9.5 (12.4)	6 (7)	25 (25)	58	4	39	0.8
	2080M	20	80	60	31.75 (32)	-	45	12.7 (14.4)	8 (8)	35 (28)	63	5	39	0.96
	2100M	24	100	80	38.1 (40)	-	56	15.9 (16.4)	10 (9)	38 (30)	63	6	39	1.2

() Metric size

Available inserts

APMT-MA

APMT-ML

APMT-MM

APMT-MF

APMT-MN



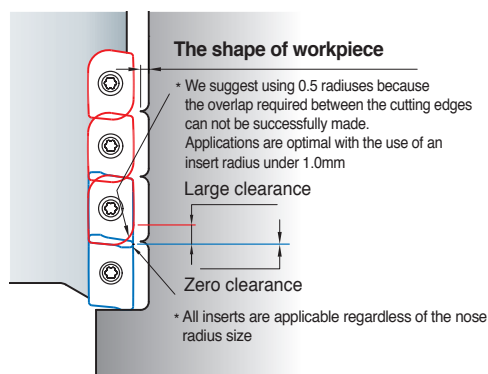
Designation	Cermet		Coated												Uncoated		page	
	CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2510	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	G10		H01
APMT	11T3PDFR-MA																●	E06
	11T308PDFR-MA																	
	11T3PDER-ML													●	●			
	11T308PDER-ML													●	●			
	11T3PDSR-MM			●	●		●	●	●	●	●			●	●			
	11T3PDSR-MF			●						●	●			●	●			
	11T308PDSR-MM			●						●		●	●	●	●			
	11T312PDSR-MM			●						●		●		●	●			
	11T316R-MM			●						●				●	●			
	11T318R-MM																	
	11T324R-MM			●						●				●	●			
	11T3PDSR-MN2													●				
	11T3PDSR-MN3													●				

※ Please purchase 2 types of APMT-MN (nick type) inserts with different chip breakers. ※ Please use the cutters with even teeth.

Available arbors

Designation	Ød	NC arbors	
AMC	2050M	22	BT□□-FMC22-□□ BT□□-SMC22-□□
(AMCM)	2063M	25.4	BT□□-FMA25.4-□□ BT□□-SMA25.4-□□
		27	BT□□-FMC27-□□ BT□□-SMC27-□□
	2080M	31.75	BT□□-FMA31.75-□□ BT□□-SMA31.75-□□
		32	BT□□-FMC32-□□ BT□□-SMC32-□□
	2100M	38.1	BT□□-FMA38.1-□□ BT□□-SMA38.1-□□
		40	BT□□-FMC40-□□ BT□□-SMC40-□□

Caution when clamping the inserts



Parts

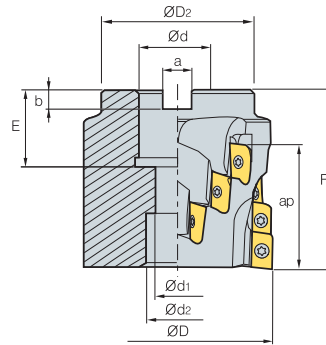
Specification		
Ø50~Ø100	FTKA02565S	TW08S



E

Milling

AMC(M)3000M



AA
90°

- AR: 9°
- RR: -9°~5°

(mm)

Designation			ØD	ØD2	Ød	Ød1	Ød2	a	b	E	F	No. of flute	ap	
AMC (AMCM)	3063M	16	63	57	25.4 (27)	14	20	9.5 (12.4)	6 (7)	38 (38)	85	4	57	1.1
	3080M	20	80	67	31.75 (32)	14	26	12.7 (14.4)	8 (8)	40 (40)	100	4	71	2.23
	3100M	30	100	87	38.1 (40)	22	32	15.9 (16.4)	10 (9)	40 (40)	100	6	71	3.59

() Metric size

Available inserts

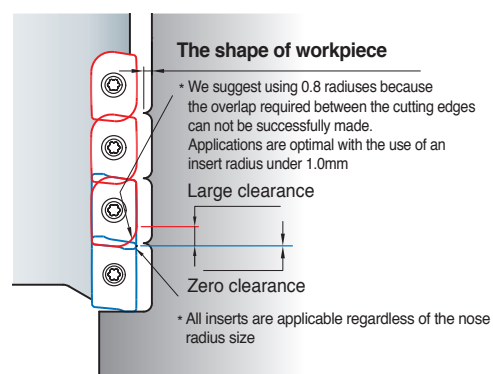
		APMT-MA		APMT-ML		APMT-MM		APMT-MF		APMT-MN									
																			
Designation		Cermet		Coated										Uncoated		page			
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2510	PC3700	PC6510	PC9530	PC9540	PC5300		PC5400	G10	H01
APMT	1604PDR-MA																	●	E06
	160404PDR-MA																		
	1604PDER-ML														●	●			
	160404PDER-ML														●	●			
	1604PDSR-MM			●	●		●		●	●	●	●	●	●	●	●			
	1604PDSR-MF			●						●	●				●	●			
	160410PDSR-MM									●					●	●			
	160416PDSR-MM			●						●					●	●			
	160424R-MM			●						●					●	●			
	160430R-MM									●	●				●	●			
	160432R-MM			●						●					●	●			
	1604PDSR-MN3														●				
	1604PDSR-MN4														●				

※ Please purchase 2 types of APMT-MN (nick type) inserts with different chip breakers. ※ Please use the cutters with even teeth.

Available arbors

Designation	Ød	NC arbors	
AMC (AMCM) 3063M	25.4	BT□□-FMA25.4-□□	BT□□-SMA25.4-□□
	27	BT□□-FMC27-□□	BT□□-SMC27-□□
3080M	31.75	BT□□-FMA31.75-□□	BT□□-SMA31.75-□□
	32	BT□□-FMC32-□□	BT□□-SMC32-□□
3100M	38.1	BT□□-FMA38.1-□□	BT□□-SMA38.1-□□
	40	BT□□-FMC40-□□	BT□□-SMC40-□□

Caution when clamping the inserts

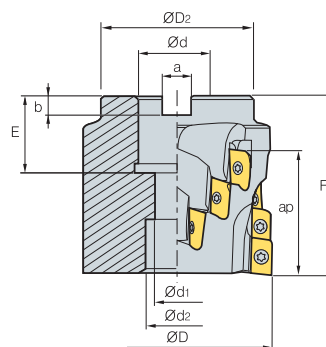


Parts

Specification		
Ø63~Ø100	FTKA0410	TW15S

Available inserts **E06** Available arbors and bolt **E426~E428**

AMC(M)4000M



AA
90°

• AR: 9°
• RR: -9°~5°

(mm)

Designation			ØD	ØD ₂	Ød	Ød ₁	Ød ₂	a	b	E	F	No. of flute	ap	 kg
AMC (AMCM)	4063M	16	63	57	25.4 (27)	14	20	9.5 (12.4)	6 (7)	38 (38)	85	4	61.1	1.1
	4080M	20	80	67	31.75 (32)	14	26	12.7 (14.4)	8 (8)	40 (40)	100	4	76.1	2.23
	4100M	30	100	87	38.1 (40)	22	32	15.9 (16.4)	10 (9)	40 (40)	100	6	76.1	3.59
	4125M	18	125	87	38.1 (40)	22	32	15.9 (16.4)	10 (9)	36 (29)	68	6	46.1	4.0

() Metric size

Available inserts

APMT-MA

APMT-ML

APMT-MM

APMT-MF

APMT-MN



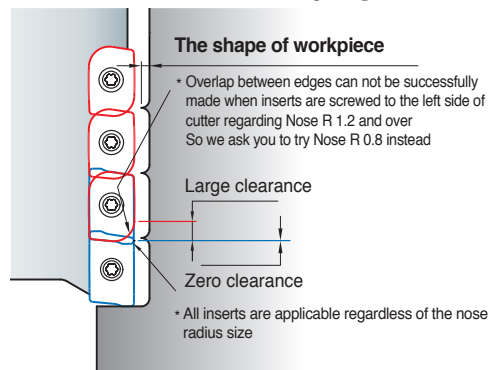
Designation	Cermet		Coated								Uncoated		page					
	CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530		PC9540	PC5300	PC5400	G10	H01
APMT 1806PDR-MA																	●	E06
180604PDR-MA																	●	
180612PDR-MA																	●	
180616PDR-MA																	●	
180620PDR-MA																	●	
180624PDR-MA																	●	
180630R-MA																	●	
1806PDR-ML																● ●		
180604PDR-ML																● ●		
180612PDR-ML																● ●		
180616PDR-ML																● ●		
180620PDR-ML																● ●		
APMT 180624PDR-ML																	● ●	E06
180630R-ML																	● ●	
1806PDSR-MM				●				● ● ● ● ● ● ● ●								● ●		
1806PDSR-MF			●							●						● ●		
180612PDSR-MM			●								●					● ●		
180616PDSR-MM			●													● ●		
180620PDSR-MM																		
180624PDSR-MM			●													● ●		
180630R-MM																● ●		
180632R-MM			●													● ●		
1806PDSR-MN3																●		
1806PDSR-MN4																●		

※ Please purchase 2 types of APMT-MN (nick type) inserts with different chip breakers. ※ Please use the cutters with even teeth.

Available arbors

Designation	Ød	NC arbors	
AMC (AMCM)	25.4	BT□□-FMA25.4-□□	BT□□-SMA25.4-□□
	27	BT□□-FMC27-□□	BT□□-SMC27-□□
4080M	31.75	BT□□-FMA31.75-□□	BT□□-SMA31.75-□□
	32	BT□□-FMC32-□□	BT□□-SMC32-□□
4100M	38.1	BT□□-FMA38.1-□□	BT□□-SMA38.1-□□
	40	BT□□-FMC40-□□	BT□□-SMC40-□□
4125M	38.1	BT□□-FMA38.1-□□	BT□□-SMA38.1-□□
	40	BT□□-FMC40-□□	BT□□-SMC40-□□

Caution when clamping the inserts



Parts

Specification	Screw	Wrench
Ø63~Ø125	FTKA0410	TW15S

Available inserts E06 Available arbors and bolt E426~E428



AMS1000S

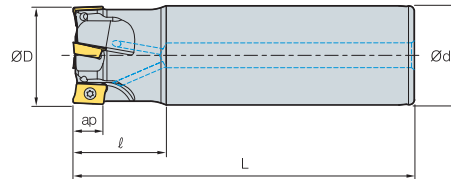


Fig. 1

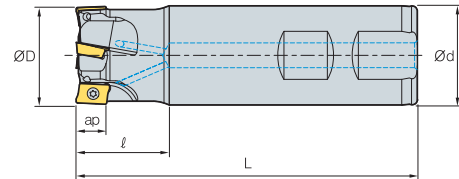


Fig. 2

AA
90°

• AR: 7.5°~13°
• RR: -17°~6°

(mm)

Designation			ØD	Ød	ℓ	L	ap		Fig.
AMS	1010HS	2	10	10	20	80	5.6	0.04	2
	1011HS	2	11	10	20	80	5.6	0.04	2
	1012HS-2	2	12	12	25	80	5.6	0.06	2
	1012HS-2L12	2	12	12	25	120	5.6	0.09	1
	1012HS-3	3	12	12	25	80	5.6	0.06	2
	1014HS-2	2	14	16	25	90	5.6	0.11	2
	1014HS-2L16	2	14	16	25	140	5.6	0.18	1
	1014HS-3	3	14	16	25	90	5.6	0.11	2
	1015HS	3	15	16	25	90	5.6	0.11	2
	1015HS-3L16	3	15	16	25	140	5.6	0.18	1
	1016HS-3	3	16	16	25	90	5.6	0.12	2
	1016HS-3L16	3	16	16	25	160	5.6	0.22	1
	1016HS-4	4	16	16	25	90	5.6	0.12	2
	1017HS	4	17	16	25	90	5.6	0.12	2
	1017HS-3L16	3	17	16	25	160	5.6	0.22	1
	1018HS	4	18	16	25	90	5.6	0.12	2
	1018HS-4L16	4	18	16	25	180	5.6	0.25	1
	1020HS-4	4	20	20	30	110	5.6	0.23	2
	1020HS-4L20	4	20	20	30	200	5.6	0.43	1
	1020HS-5	5	20	20	30	110	5.6	0.23	2
	1021HS	5	21	20	30	110	5.6	0.24	2
	1021HS-4L20	4	21	20	30	200	5.6	0.43	1
	1022HS	5	22	20	30	110	5.6	0.27	2
	1025HS	7	25	25	30	120	5.6	0.39	2
	1026HS	7	26	25	30	120	5.6	0.39	2
	1032HS	8	32	32	35	120	5.6	0.65	2
	1033HS	8	33	32	35	120	5.6	0.65	2

Available inserts

APMT-MA

APMT-MM



Designation		Cermet		Coated												Uncoated		page	
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2510	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	G10		H01
APMT	0602PDFR-MA																	●	E06
	060208PDFR-MA																		
	060202PDSR-MM			●						●				●	●				
	0602PDSR-MM			●				●	●	●	●	●		●	●				
	060208PDSR-MM			●						●				●	●				
	060212R-MM			●										●	●				
	060216R-MM													●	●				

Parts

Specification		
	Screw	Wrench
Ø10~Ø33	FTKA01842	TW06S-A

Available inserts **E06**

Milling

E

175

AMS1500S

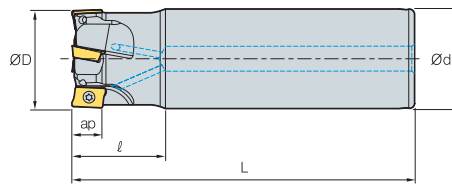


Fig. 1

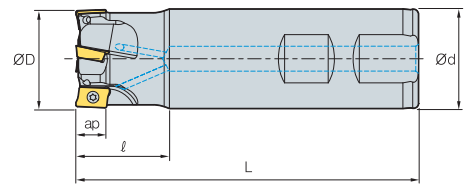


Fig. 2



AA
90°

• AR: 7.5°~12.5°
• RR: -28°~14°

(mm)

Designation		ØD	Ød	ℓ	L	ap	kg	Fig.
AMS 15010HS	1	10	10	25	80	9	0.04	2
15010HS-1L16	1	10	16	30	160	9	0.21	1
15012HS	1	12	16	25	80	9	0.10	2
15012HS-1L16	1	12	16	30	160	9	0.21	1
15013HS	1	13	16	25	80	9	0.10	2
15014HS	1	14	16	25	80	9	0.10	2
15014HS-1L16	1	14	16	30	160	9	0.21	1
15016HS	2	16	16	30	90	9	0.11	2
15016HS-2L16	2	16	16	30	160	9	0.21	1
15017HS	2	17	16	30	90	9	0.12	2
15017HS-2L16	2	17	16	30	160	9	0.21	1
15018HS	2	18	16	30	90	9	0.14	2
15018HS-2L16	2	18	16	30	160	9	0.21	1
15019HS	2	19	16	30	90	9	0.16	2
15020HS	2	20	20	30	90	9	0.18	2
15020HS-2L20	2	20	20	30	160	9	0.34	1
15020HS-3	3	20	20	30	90	9	0.18	2
15021HS	2	21	20	30	90	9	0.20	2
15021HS-2L20	2	21	20	30	160	9	0.34	1
15021HS-3	3	21	20	30	90	9	0.20	2
15022HS	3	22	20	30	110	9	0.23	2
15022HS-3L20	3	22	20	30	180	9	0.38	1
15024HS	3	24	20	30	110	9	0.30	2
15024HS-4	4	24	20	30	110	9	0.30	2
15025HS-3S20	3	25	20	30	110	9	0.35	2
15025HS	3	25	25	30	110	9	0.35	2
15025HS-3L25	3	25	25	30	180	9	0.59	1

Available inserts

APMT-MA APMТ-ML APMТ-MM



Designation		Cermet		Coated												Uncoated		page	
		CN2500	CN30	NC5330	NCM325	NCM325	NCM535	NCM545	PC2505	PC2510	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	G10		H01
APMT	0903PDR-MA																	●	E06
	090308PDR-MA																		
	0903PDER-ML														●	●			
	090308PDER-ML														●	●			
	0903PDSR-MM			●					●	●	●	●			●	●			
	090308PDSR-MM			●							●				●	●			
	090312R-MM										●				●	●			
	090316R-MM			●							●				●	●			
	090320R-MM										●				●	●			

Parts

Specification		
	Screw	Wrench
Ø10~Ø14 Ø16~Ø25	FTKA02555S FTKA02565S	TW08S

Available inserts E06



AMS1500S

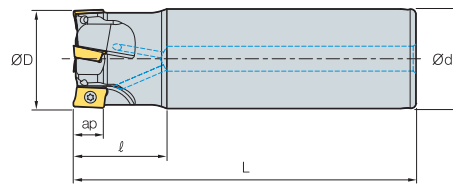


Fig. 1

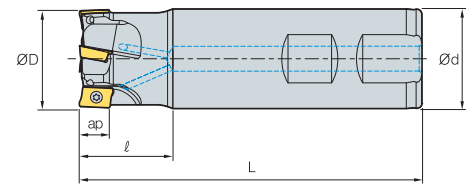


Fig. 2



AA
90°

• AR: 7.5°~12.5°
• RR: -28°~-14°

(mm)

Designation		ØD	Ød	l	L	ap	kg	Fig.
AMS 15025HS-4S20	4	25	20	30	110	9	0.25	2
15025HS-4S25	4	25	25	30	110	9	0.25	2
15028HS	4	28	25	30	110	9	0.36	2
15028HS-4L25	4	28	25	30	180	9	0.61	1
15028HS-5	5	28	25	30	110	9	0.36	2
15030HS	4	30	25	30	110	9	0.38	2
15030HS-4L25	4	30	25	30	180	9	0.62	1
15030HS-5	5	30	25	30	110	9	0.38	2
15032HS	4	32	32	30	110	9	0.60	2
15032HS-4L32	4	32	32	30	180	9	1.00	1
15032HS-5	5	32	32	30	110	9	0.60	2
15035HS	5	35	32	30	110	9	0.70	2
15035HS-6	6	35	32	30	110	9	0.70	2
15040HS-S32	5	40	32	35	130	9	0.80	2
15040HS-5L32	5	40	32	35	200	9	1.20	1
15040HS-6S32	6	40	32	35	130	9	0.80	2
15040HS-S40	5	40	40	35	130	9	1.13	2
15040HS-6S40	6	40	40	35	130	9	1.13	2
15040HS-S42	5	40	42	35	130	9	1.23	2
15040HS-6S42	6	40	42	35	130	9	1.23	2

Available inserts

APMT-MA APMT-ML APMT-MM



Designation		Cermet		Coated												Uncoated		page	
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2510	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	G10		H01
APMT	0903PDFR-MA																	●	E06
	090308PDFR-MA																		
	0903PDER-ML														●	●			
	090308PDER-ML														●	●			
	0903PDSR-MM			●					●	●	●	●			●	●			
	090308PDSR-MM			●							●				●	●			
	090312R-MM										●				●	●			
	090316R-MM			●							●				●	●			
	090320R-MM										●				●	●			

Parts

Specification	 Screw	 Wrench
Ø25~Ø40	FTKA02565S	TW08S

Available inserts E06



Milling

E

AMS2000S

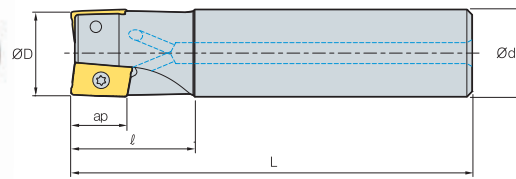


Fig. 1

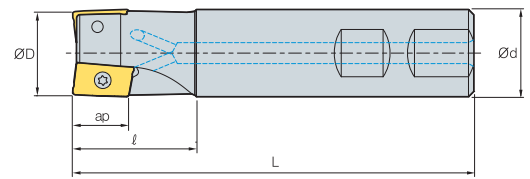


Fig. 2



AA
90°

- AR: 3°~14°
- RR: -25°~18°

(mm)

Designation			ØD	Ød	ℓ	L	ap		Fig.
AMS	2010HS	1	10	10	20	85	11	0.04	2
	2010HS-1L16	1	10	16	30	160	11	0.21	1
	2012HS	1	12	16	25	85	11	0.10	2
	2012HS-1L16	1	12	16	30	160	11	0.21	1
	2014HS	1	14	16	25	90	11	0.12	2
	2014HS-1L16	1	14	16	30	160	11	0.21	1
	2016HS	2	16	16	25	90	11	0.12	2
	2016HS-2L16	2	16	16	30	180	11	0.21	1
	2018HS	2	18	16	25	90	11	0.12	2
	2018HS-2L16	2	18	16	30	180	11	0.21	1
	2020HS	2	20	20	30	100	11	0.21	2
	2020HS-2L20	2	20	20	30	210	11	0.49	1
	2022HS	3	22	20	35	115	11	0.25	2
	2022HS-3L20	3	22	20	35	180	11	0.38	1
	2025HS	3	25	25	35	115	11	0.40	2
	2025HS-3L25	3	25	25	40	180	11	0.59	1
	2032HS	4	32	32	40	125	11	0.70	2
	2032HS-4L32	4	32	32	50	180	11	1.00	1
	2040HS	5	40	32	42	130	11	0.84	2
	2040HS-5L32	5	40	32	50	200	11	1.20	1
	2040HS-S40	5	40	40	42	130	11	1.15	2
	2040HS-S42	5	40	42	42	130	11	2.00	2
	2050HS	6	50	32	45	135	11	1.06	2
	2050HS-S40	6	50	40	45	135	11	1.38	2
	2050HS-S42	6	50	42	45	135	11	1.50	2
	2063HS	8	63	32	45	135	11	1.31	2
	2063HS-S40	8	63	40	45	135	11	1.62	2
	2063HS-S42	8	63	42	45	135	11	1.70	2

Available inserts



Designation		Cermet		Coated												Uncoated		page	
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2510	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	G10		H01
APMT	11T3PDFR-MA																	●	E06
	11T308PDFR-MA																		
	11T3PDER-ML														●	●			
	11T308PDER-ML														●	●			
	11T3PDSR-MM			●	●		●		●	●	●	●			●	●			
	11T3PDSR-MF			●						●	●				●	●			
	11T308PDSR-MM			●						●		●	●		●	●			
	11T312PDSR-MM			●						●		●			●	●			
	11T316R-MM			●						●					●	●			
	11T318R-MM																		
	11T324R-MM			●							●				●	●			
	11T3PDSR-MN2														●				
	11T3PDSR-MN3														●				

Parts

※ Please purchase 2 types of APMT-MN (nick type) inserts with different chip breakers. ※ Please use the cutters with even teeth.

Specification		
Ø10~Ø14	FTKA02555S	TW08S
Ø16~Ø63	FTKA02565S	

Available inserts E06



E Milling

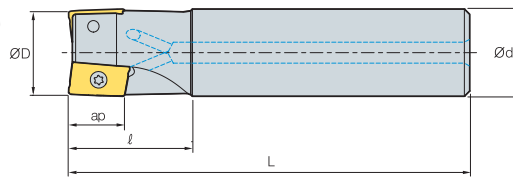
AMS3000S

Fig. 1

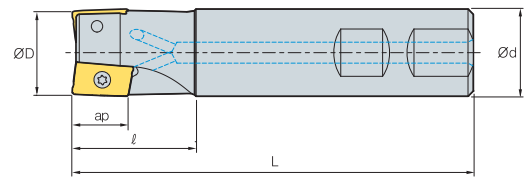


Fig. 2



• AR: 3°~14°
• RR: -18°~10°

(mm)

Designation		ØD	Ød	l	L	ap	kg	Fig.
AMS	3025HS	2	25	25	35	115	0.40	2
	3025HS-2M25	2	25	25	35	180	0.65	1
	3025HS-2L25	2	25	25	60	220	0.75	1
	3032HS	3	32	32	40	125	0.69	2
	3032HS-2M32	2	32	32	40	200	1.13	1
	3032HS-2L32	2	32	32	65	260	1.52	1
	3032HS-3M32	3	32	32	40	200	1.12	1
	3032HS-3L32	3	32	32	65	260	1.48	1
	3040HS	4	40	32	42	130	0.80	2
	3040HS-3M32	3	40	32	42	200	1.24	1
	3040HS-3L32	3	40	32	42	260	1.61	1
	3040HS-4M32	4	40	32	42	200	1.21	1
	3040HS-4L32	4	40	32	42	260	1.58	1
	3040HS-S40	4	40	40	42	130	1.10	2
	3040HS-S42	4	40	42	42	130	1.20	2
	3050HS	5	50	32	45	135	1.00	2
	3050HS-S40	5	50	40	45	135	1.30	2
	3050HS-S42	5	50	42	45	135	1.40	2
	3063HS	6	63	32	45	135	1.25	2
	3063HS-S40	6	63	40	45	135	1.50	2
	3063HS-S42	6	63	42	45	135	1.54	2

Available inserts

Designation		Cermet		Coated											Uncoated		page		
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2510	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400		G10	H01
APMT	1604PDFR-MA																	●	E06
	160404PDFR-MA																		
	1604PDER-ML													●	●				
	160404PDER-ML													●	●				
	1604PDSR-MM			●	●		●		●	●	●	●	●	●	●				
	1604PDSR-MF			●							●	●		●	●				
	160410PDSR-MM										●			●	●				
	160416PDSR-MM			●							●			●	●				
	160424R-MM			●							●			●	●				
	160430R-MM										●			●	●				
	160432R-MM			●							●			●	●				
	1604PDSR-MN3													●					
	1604PDSR-MN4													●					

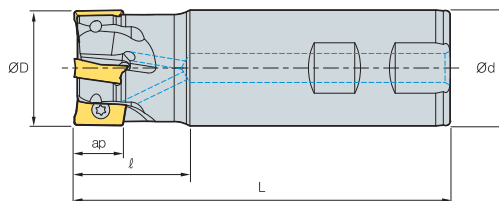
※ Please purchase 2 types of APMT-MN (nick type) inserts with different chip breakers. ※ Please use the cutters with even teeth.

Parts

Specification	Screw Wrench	
Ø25 Ø32~Ø63	FTKA0408 FTKA0410	TW15S

Available inserts **E06**

AMS3000S-K



AA
90°

• AR: 14°
• RR: -18°~10°

(mm)

Designation			ØD	Ød	ℓ	L	ap	 kg
AMS	3025HS-K	2	25	25	35	115	16	0.4
	3032HS-K	3	32	32	40	125	16	0.69
	3040HS-K	4	40	32	42	130	16	0.8
	3040HS-K-S40	4	40	40	42	130	16	1.1
	3040HS-K-S42	4	40	42	42	130	16	1.2
	3050HS-K	5	50	32	45	135	16	1.0
	3050HS-K-S40	5	50	40	45	135	16	1.3
	3050HS-K-S42	5	50	42	45	135	16	1.4
	3063HS-K	6	63	32	45	135	16	1.25
	3063HS-K-S40	6	63	40	45	135	16	1.5
	3063HS-K-S42	6	63	42	45	135	16	1.54

Available inserts

		APKT		APKT-MF		APKT-MM		APKT-MA		APKT-MA2		APKT-MA3							
																			
Designation		Cermet		Coated												Uncoated			page
		CN2500	CN30	NCM325	NCM335	NCM535	NCM545	PC2505	PC2510	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	PD2000	G10	H01	
APKT	1604PDSR			●					●	●									
	1604PDSR-MF			●									●						
	1604PDSR-MM			●	●				●	●	●		●						
	1604PDFR-MA														●		●	●	
	1604PDFR-MA2																●		
	160416FR-MA2																●		
	160432FR-MA2																		
	1604PDFR-MA3																●	●	●

Parts

Specification		
Ø25 Ø32~Ø63	FTKA0408 FTKA0410	TW15S

Available inserts E04



AMS4000S

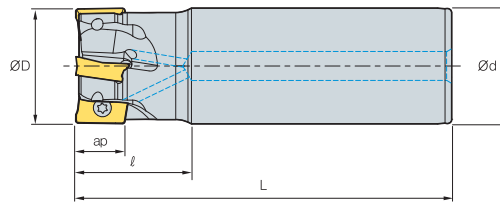


Fig. 1

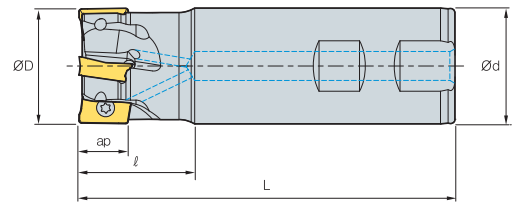


Fig. 2



AA
90°
• AR: 7°~13°
• RR: -20°~-6°

(mm)

Designation			ØD	Ød	ℓ	L	ap	 kg	Fig.
AMS	4020HS	1	20	20	30	90	17	0.18	2
	4020HS-M	1	20	20	30	160	17	0.17	1
	4021HS	1	21	20	30	90	17	0.19	2
	4021HS-M	1	21	20	30	160	17	0.34	1
	4025HS	2	25	25	40	110	17	0.35	2
	4025HS-2M25	2	25	25	40	180	17	0.58	1
	4025HS-2L25	2	25	25	40	230	17	0.80	1
	4026HS	2	26	25	40	110	17	0.37	2
	4026HS-2M25	2	26	25	40	180	17	0.60	1
	4026HS-2L25	2	26	25	40	230	17	0.82	1
	4032HS	3	32	32	40	125	17	0.65	2
	4032HS-2M32	2	32	32	50	200	17	1.17	1
	4032HS-2L32	2	32	32	50	260	17	1.50	1
	4032HS-3M32	3	32	32	50	200	17	1.10	1
	4032HS-3L32	3	32	32	50	260	17	1.48	1
	4033HS	3	33	32	40	125	17	0.68	2
	4033HS-2M32	2	33	32	50	200	17	1.12	1
	4033HS-2L32	2	33	32	50	260	17	1.55	1
	4033HS-3M32	3	33	32	50	200	17	1.12	1
	4033HS-3L32	3	33	32	50	260	17	1.55	1

Available inserts

APMT-MA

APMT-ML

APMT-MM

APMT-MF

APMT-MN



Designation		Cermet	Coated										Uncoated	page				
		CN2500 CN30	NC5330	NCM325	NCM335	NCM635	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540		PC5300	PC5400	G10	H01
APMT	1806PDR-MA																●	E06
	180604PDR-MA																●	
	180612PDR-MA																●	
	180616PDR-MA																●	
	180620PDR-MA																●	
	180624PDR-MA																●	
	180630R-MA																●	
	1806PDR-ML												●	●				
	180604PDR-ML												●	●				
	180612PDR-ML												●	●				
180616PDR-ML												●	●					
180620PDR-ML												●	●					
APMT	180624PDR-ML																●	E06
	180630R-ML																●	
	1806PDSR-MM												●		●	●	●	
	1806PDSR-MF												●		●	●		
	180612PDSR-MM													●		●	●	
	180616PDSR-MM														●	●		
	180620PDSR-MM															●	●	
	180624PDSR-MM															●	●	
	180630R-MM															●	●	
	180632R-MM															●	●	
1806PDSR-MN3															●	●		
1806PDSR-MN4															●	●		

※ Please purchase 2 types of APMT-MN (nick type) inserts with different chip breakers. ※ Please use the cutters with even teeth.

Parts

Specification	Screw	Wrench
Ø20~Ø21 Ø25~Ø33	FTKA0408 FTKA0410	TW15S

Available inserts **E06**



Milling

E

181

AMS4000S

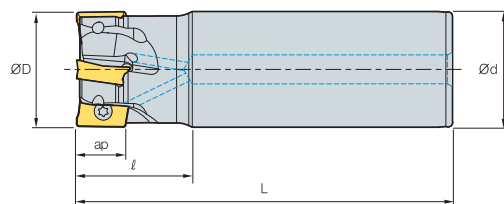


Fig. 1

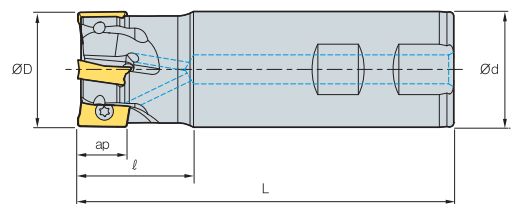


Fig. 2



AA
90°
• AR: 7°~13°
• RR: -20°~6°

(mm)

Designation			ØD	Ød	ℓ	L	ap		Fig.
AMS	4040HS-3M32	3	40	32	50	200	17	1.20	1
	4040HS-3L32	3	40	32	50	260	17	1.60	1
	4040HS-4M32	4	40	32	50	200	17	1.20	1
	4040HS-4L32	4	40	32	50	260	17	1.60	1
	4040HS-S32	4	40	32	40	130	17	0.76	2
	4040HS-S40	4	40	40	40	130	17	1.10	2
	4040HS-S42	4	40	42	40	130	17	1.20	2
	4050HS-S32	5	50	32	40	135	17	0.95	2
	4050HS-S40	5	50	40	40	135	17	1.30	2
	4050HS-S42	5	50	42	40	135	17	1.40	2
	4063HS-S32	6	63	32	40	135	17	1.25	2
	4063HS-S40	6	63	40	40	135	17	1.60	2
4063HS-S42	6	63	42	40	135	17	1.70	2	

Available inserts



Designation	Cermet	Coated	Uncoated	page	Designation	Cermet	Coated	Uncoated	page
APMT 1806PDR-MA	✓			●	APMT 180624PDR-ML	✓		●	
180604PDR-MA	✓			●	180630R-ML	✓		●	
180612PDR-MA	✓			●	1806PDSR-MM	✓	●	●	
180616PDR-MA	✓			●	1806PDSR-MF	✓	●	●	
180620PDR-MA	✓			●	180612PDSR-MM	✓	●	●	
180624PDR-MA	✓			●	180616PDSR-MM	✓	●	●	
180630R-MA	✓			●	180620PDSR-MM	✓	●	●	
1806PDER-ML	✓		●		180624PDSR-MM	✓	●	●	
180604PDER-ML	✓		●		180630R-MM	✓	●	●	
180612PDER-ML	✓		●		180632R-MM	✓	●	●	
180616PDER-ML	✓		●		1806PDSR-MN3	✓		●	
180620PDER-ML	✓		●		1806PDSR-MN4	✓		●	

※ Please purchase 2 types of APMT-MN (nick type) inserts with different chip breakers. ※ Please use the cutters with even teeth.

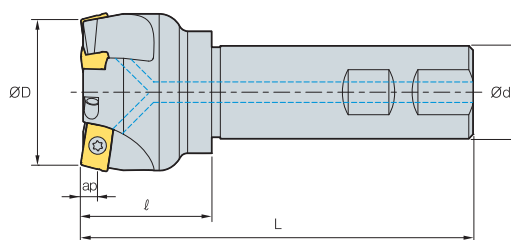
Parts

Specification		
Ø40~Ø63	FTKA0410	TW15S

Available inserts E06



AMS1000SE/2000SE



AA
75°

- AR: -4.5°~1°
- RR: -3°~0°

(mm)

Designation		ØD	Ød	ℓ	L	ap	kg
AMS 1025HSE	3	25	25	30	115	2.5	0.41
AMS 2025HSE	2	25	25	30	115	4	0.4
2032HSE	3	32	32	40	125	4	0.72
2040HSE	3	40	32	40	130	4	0.86
2040HSE-S40	3	40	40	40	130	4	1.2
2040HSE-S42	3	40	42	40	130	4	1.3
2050HSE	4	50	32	40	135	4	0.98
2050HSE-S40	4	50	40	40	135	4	1.3
2050HSE-S42	4	50	42	40	135	4	1.4
2063HSE	5	63	32	40	135	4	1.24
2063HSE-S40	5	63	40	40	135	4	1.57
2063HSE-S42	5	63	42	40	135	4	1.62

Available inserts

APMT-MF

APMT-MM



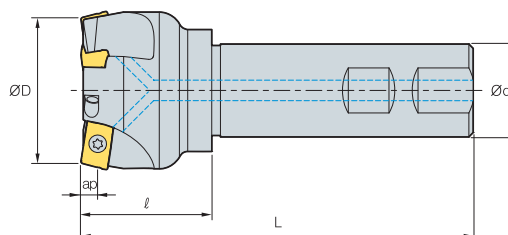
Type	Designation		Cermet		Coated												Uncoated		page	
			CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2510	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	G10		H01
1000 type	APMT	060202PDSR-MM			●							●				●	●			E06
		0602PDSR-MM			●					●	●	●	●	●		●	●			
		060208PDSR-MM			●							●				●	●			
		060212R-MM			●											●	●			
		060216R-MM														●	●			
2000 type	APMT	11T3PDSR-MM			●	●		●		●	●	●	●	●		●	●			
		11T3PDSR-MF			●							●	●			●	●			
		11T308PDSR-MM			●							●		●	●	●	●			
		11T312PDSR-MM			●							●		●		●	●			
		11T316R-MM			●							●				●	●			
		11T318R-MM																		
		11T324R-MM			●							●				●	●			

Parts

Specification	 Screw	 Wrench	 Wrench
Ø25 (1000 type)	FTKA01842	-	TW06S-A
Ø25~Ø63 (2000 type)	FTKA02565S	TW08S	-

Available inserts **E06**

AMS3000SE



AA
75°

- AR: -4.5°~1°
- RR: -3°~0°

(mm)

Designation			ØD	Ød	ℓ	L	ap	
AMS	3050HSE	3	50	32	45	135	6	1.0
	3050HSE-S40	3	50	40	45	135	6	1.3
	3050HSE-S42	3	50	42	45	135	6	1.4
	3063HSE	4	63	32	45	135	6	1.3
	3063HSE-S40	4	63	40	45	135	6	1.6
	3063HSE-S42	4	63	42	45	135	6	1.7

Available inserts

APMT-MF

APMT-MM



Designation		Cermet		Coated												Uncoated		page	
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2510	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	G10		H01
APMT	1604PDSR-MM			●	●		●		●	●	●	●	●	●	●	●			E06
	1604PDSR-MF			●							●	●			●	●			
	160410PDSR-MM										●				●	●			
	160416PDSR-MM			●							●				●	●			
	160424R-MM			●							●				●	●			
	160430R-MM										●				●	●			
	160432R-MM			●							●				●	●			

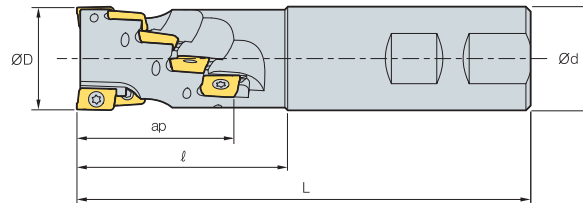
Parts

Specification		
Ø50~Ø63	FTKA0410	TW15S

Available inserts E06



AMS1000M/1500M



AA
90°

- AR: 7°~9°
- RR: -13°~10°

(mm)

Designation			ØD	Ød	ℓ	L	No. of flute	ap	 kg
AMS	1016M	6	16	16	30	80	2	15.5	0.3
	1020M	12	20	20	32	85	3	20.5	0.3
	1025M	20	25	25	39	95	4	25.5	0.3
AMS	15020M	3	20	20	42	105	1	26.5	0.3
	15025M	8	25	25	50	110	2	35	0.3
	15032M	10	32	32	60	120	2	44	0.3

Available inserts

APMT-MA

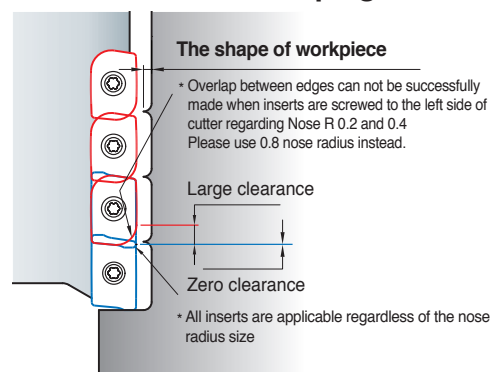
APMT-ML

APMT-MM



Type	Designation		Cermet		Coated											Uncoated		page	
			CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2510	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400		G10
1000 type	APMT	0602PDFR-MA																	
		060208PDFR-MA																	●
		060202PDSR-MM			●							●				●	●		
		0602PDSR-MM			●					●	●	●	●	●		●	●		
		060208PDSR-MM			●							●				●	●		
		060212R-MM			●											●	●		
		060216R-MM														●	●		
1500 type	APMT	0903PDFR-MA																	●
		090308PDFR-MA																	
		0903PDER-ML														●	●		
		090308PDER-ML														●	●		
		0903PDSR-MM			●					●	●	●	●			●	●		
		090308PDSR-MM			●							●				●	●		
		090312R-MM										●				●	●		
		090316R-MM			●							●				●	●		
		090320R-MM										●				●	●		

Caution when clamping the inserts

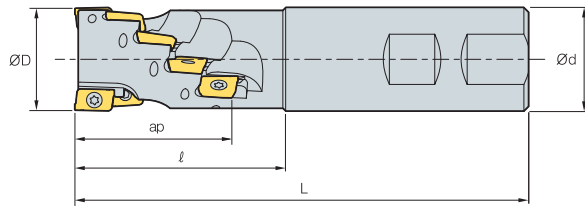


Parts

Specification	Screw	Wrench	Wrench
Ø16~Ø25 (1000 type)	FTKA01842	-	TW06S-A
Ø20~Ø32 (1500 type)	FTKA02565S	TW08S	-

Available inserts **E06**

AMS2000M



AA
90°

- AR: 7°~9°
- RR: -13°~10°

(mm)

Designation			ØD	Ød	ℓ	L	No. of flute	ap	 kg
AMS	2020M	3	20	20	45	120	1	29.4	0.32
	2025M	8	25	25	55	130	2	38.9	0.40
	2032M	10	32	32	65	140	2	48.5	0.65
	2040M	14	40	40	75	150	2	58	0.75

Available inserts

APMT-MA

APMT-ML

APMT-MM

APMT-MF

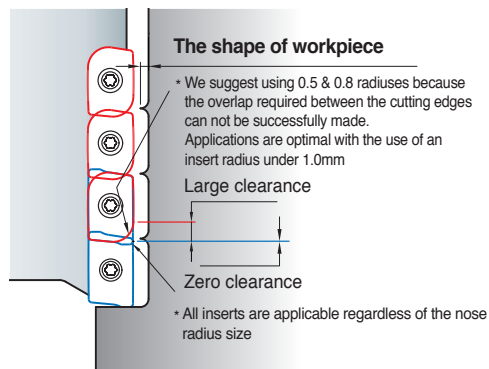
APMT-MN



Designation		Cermet		Coated												Uncoated		page	
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2510	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	G10		H01
APMT	11T3PDFR-MA																	●	E06
	11T308PDFR-MA																		
	11T3PDER-ML														●	●			
	11T308PDER-ML														●	●			
	11T3PDSR-MM			●	●		●		●	●		●			●	●			
	11T3PDSR-MF			●						●	●				●	●			
	11T308PDSR-MM			●						●		●	●		●	●			
	11T312PDSR-MM			●						●		●			●	●			
	11T316R-MM			●						●					●	●			
	11T318R-MM																		
	11T324R-MM			●						●					●	●			
	11T3PDSR-MN2														●				
11T3PDSR-MN3														●					

※ Please purchase 2 types of APMT-MN (nick type) inserts with different chip breakers. ※ Please use the cutters with even teeth.

Caution when clamping the inserts



Parts

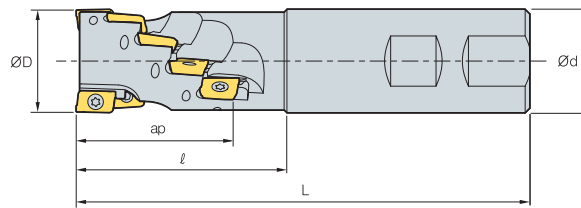
Specification		
Ø20~Ø40	FTKA02565S	TW08S



E

Milling

AMS4000M



AA
90°

- AR: 7°~9°
- RR: -13°~10°

(mm)

Designation			ØD	Ød	ℓ	L	No. of flute	ap	 kg
AMS	4032M	4	32	32	60	130	2	31.6	0.65
	4040M	6	40	40	70	140	2	46	1.11
	4050M-S40	6	50	40	55	125	2	46	1.22
	4050M	8	50	40	70	140	2	61	1.37

Available inserts

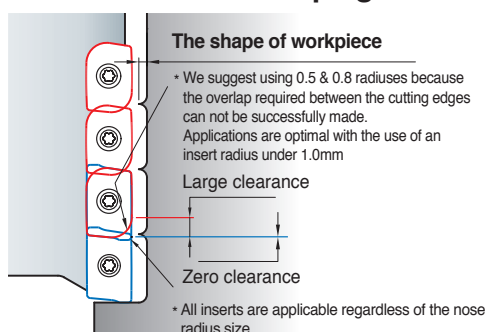


Designation	Cermet		Coated												Uncoated		page	
	CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2510	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	G10		H01
APMT	1806PDFR-MA																●	E06
	180604PDFR-MA																●	
	180612PDFR-MA																●	
	180616PDFR-MA																●	
	180620PDFR-MA																●	
	180624PDFR-MA																●	
	180630R-MA																●	
	1806PDER-ML													●	●			
	180604PDER-ML													●	●			
	180612PDER-ML													●	●			
	180616PDER-ML													●				
	180620PDER-ML													●	●			
	180624PDER-ML													●	●			
	180630R-ML													●	●			
	1806PDSR-MM			●					●	●	●	●	●	●	●			
	1806PDSR-MF			●								●		●	●			
	180612PDSR-MM			●							●			●	●			
	180616PDSR-MM			●										●	●			
	180620PDSR-MM																	
	180624PDSR-MM			●										●	●			
	180630R-MM													●	●			
	180632R-MM			●										●	●			
	1806PDSR-MN3													●				
	1806PDSR-MN4													●				

E06

- ※ Please purchase 2 types of APMT-MN (nick type) inserts with different chip breakers.
- ※ Please use the cutters with even teeth.

Caution when clamping the inserts

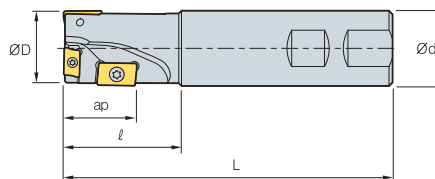


Parts

Specification	Screw	Wrench
Ø32~Ø50	FTKA0410	TW15S

Available inserts E06

AMS1000MH/1500MH



• AR: 9°~12°
• RR: -12°~10°

(mm)

Designation		ØD	Ød	l	L	ap		APMT 0602	APMT 0903	APM(X)T 11T3 -	APMT 1604	APKT 1604 -
AMS	1014MH	3	14	12	30	120	11	0.16	3	-	-	-
	1016MH	3	16	14	30	140	11	0.20	3	-	-	-
	1018MH	3	18	16	30	140	11	0.21	3	-	-	-
AMS	15020MH	3	20	20	35	140	17	0.31	1	2	-	-

Available inserts

APMT-MA APMT-ML APMT-MM



Type	Designation		Cermet		Coated										Uncoated		page			
			CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2510	PC3700	PC6510	PC9530	PC9540	PC5300		PC5400	G10	H01
1000 type	APMT	0602PDFR-MA																	●	E06
		060208PDFR-MA																		
		060202PDSR-MM			●							●				●	●			
		0602PDSR-MM			●				●	●	●	●	●		●	●				
		060208PDSR-MM			●						●				●	●				
1500 type	APMT	0903PDFR-MA																	●	
		090308PDFR-MA																		
		0903PDER-ML														●	●			
		090308PDER-ML														●	●			
		0903PDSR-MM			●					●	●	●	●		●	●				
		090308PDSR-MM			●							●			●	●				

Recommended cutting condition



	Drilling	Shouldering	Slotting
vc(m/min)	80~200	80~200	80~200
fz(mm/t)	0.03~0.06	0.05~0.25	0.05~0.20

• Please keep the drill depth under 0.25D when you're drilling
• Please keep the step depth from 0.2 to 0.3mm

Parts

Specification			
Ø14~Ø18 (1000 type)	FTKA01842	-	TW06S-A
Ø20 (1500 type)	FTKA02565S	TW08S	-

Available inserts E06



AMS2000MH/3000MH(-K)

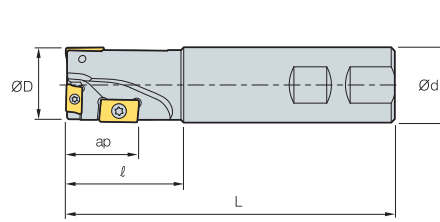


Fig. 1

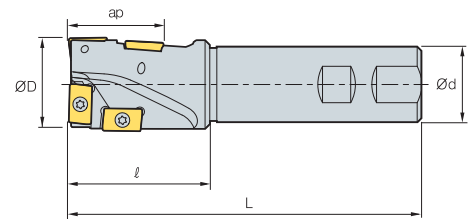


Fig. 2



• AR: 9°~12°
• RR: -12°~-10°

(mm)

Designation		ØD	Ød	l	L	ap	kg	APMT 0602	APMT 0903	APM(X)T 11T3 -	APMT 1604	APKT 1604 -	Fig.
AMS 2025MH		3	25	25	40	130	0.45	-	-	3	-	-	1
2032MH		3	32	32	50	140	0.75	-	-	1	2	-	1
AMS 3040MH		4	40	32	60	150	0.90	-	-	-	4	-	2
3040MH-K		4	40	32	60	150	0.90	-	-	-	-	4	2

Available inserts

		APKT-MF	APKT-MM	APMT-MA	APMT-MF	APMT-ML	APMT-MM												
				 new		 new													
Type	Designation	Cermet		Coated												Uncoated	page		
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2510	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400		H01	
2000 type	APMT	11T3PDFR-MA																●	E06
	11T308PDFR-MA																		
	11T3PDER-ML														●	●			
	11T308PDER-ML														●	●			
	11T3PDSR-MM			●	●		●		●	●	●	●	●		●	●			
	11T3PDSR-MF			●							●	●			●	●			
	11T308PDSR-MM			●							●		●	●	●	●			
	11T312PDSR-MM			●							●		●		●	●			
	11T316R-MM			●							●				●	●			
	11T318R-MM			●															
11T324R-MM			●							●				●	●				
3000 type	APMT	1604PDSR-MM		●	●				●	●	●	●	●		●	●			
	1604PDSR-MF		●								●	●			●	●			
3000-K type	APKT	1604PDSR-MM			●	●					●	●	●		●				
	1604PDSR-MF				●										●				

E06

Parts

Specification	Screw	Wrench	Wrench
Ø25 (2000 type)	FTKA02565S	TW08S	-
Ø32 (2000 type)	FTKA02565S+FTKA0410	TW08S+TW15S	-
Ø40 (3000 type)	FTKA0410	TW15S	-

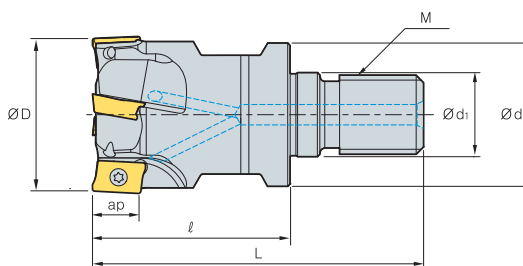
Available inserts **E06**

Recommended cutting condition

	Drilling	Shouldering	Slotting
vc(m/min)	80~200	80~200	80~200
fz(mm/t)	0.03~0.06	0.05~0.25	0.05~0.20

- Please keep the drill depth under 0.25D when you're drilling
- Please keep the step depth from 0.2 to 0.3mm

AMM1000



• AR: 7.5°~12.5°
• RR: -28°~6°

(mm)

Designation		ØD	Ød	Ød1	l	L	M	ap	
AMM	1012HR-M06	3	12	11	6.5	25	M06	5.6	0.02
	1016HR-M08	4	16	14.5	8.5	25	M08	5.6	0.03
	1020HR-M10	5	20	18	10.5	30	M10	5.6	0.07
	1025HR-M12	7	25	23	12.5	35	M12	5.6	0.12
	1032HR-M16	8	32	29	17	40	M16	5.6	0.23

Available inserts

APMT-MA APMT-MM



Designation		Cermet		Coated												Uncoated		page	
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2510	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	G10		H01
APMT	0602PDFR-MA																	●	E06
	060208PDFR-MA																		
	060202PDSR-MM			●							●				●	●			
	0602PDSR-MM			●					●	●	●	●	●		●	●			
	060208PDSR-MM			●							●				●	●			
	060212R-MM			●											●	●			
	060216R-MM														●	●			

Available adaptor

Designation	Available adaptor
AMM	
1012HR-M06	MAT-M06
1016HR-M08	MAT-M08
1020HR-M10	MAT-M10
1025HR-M12	MAT-M12
1032HR-M16	MAT-M16

Designation : AMM1032HR-M16
Modular head threading measure size (M16)

II

Adaptor spec.: MAT-M16-035-S32S
Adaptor threading measure (M16)

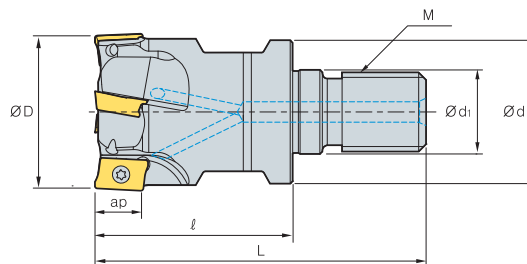
Parts

Specification		
Ø12~Ø32	FTKA01842	TW06S-A

Available inserts E06 Available adaptor E401~E402



AMM1500



AA
90°
• AR: 7.5°~12.5°
• RR: ~28°~6°

(mm)

Designation		ØD	Ød	Ød1	l	L	M	ap	kg
AMM 15010HR-M06	1	10	9.5	6.5	25	40	M06	9	0.01
15012HR-M06	1	12	11	6.5	25	40	M06	9	0.02
15016HR-M08	2	16	14.5	8.5	25	42	M08	9	0.03
15020HR-M10	2	20	18	10.5	30	51	M10	9	0.06
15025HR-M12	3	25	23	12.5	35	59	M12	9	0.12
15032HR-M16	4	32	29	17	40	67	M16	9	0.22

Available inserts

APMT-MA APMT-ML APMT-MM



Designation		Cermet		Coated												Uncoated		page	
		CN2500	CN30	NC5330	NCM325	NCM335	NCM635	NCM645	PC2505	PC2510	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	G10		H01
APMT	0903PDFR-MA																	●	E06
	090308PDFR-MA																		
	0903PDER-ML														●	●			
	090308PDER-ML														●	●			
	0903PDSR-MM			●					●	●	●	●			●	●			
	090308PDSR-MM			●							●				●	●			
	090312R-MM										●				●	●			
	090316R-MM			●							●				●	●			
	090320R-MM										●				●	●			

Available adaptor

Designation	Available adaptor
AMM 15010HR-M06	MAT-M06
15012HR-M06	
15016HR-M08	MAT-M08
15020HR-M10	MAT-M10
15025HR-M12	MAT-M12
15032HR-M16	MAT-M16

Designation : AMM15032HR-M16
Modular head threading measure size (M16)

II

Adaptor spec.: MAT-M16-035-S32S
Adaptor threading measure (M16)

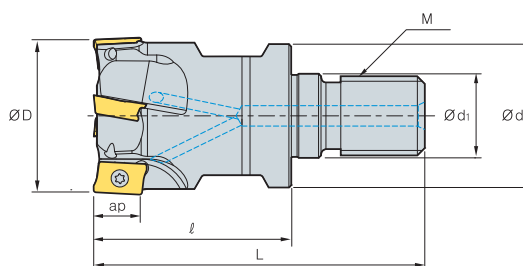
Parts

Specification	Screw	Wrench
Ø10~Ø14 Ø16~Ø100	FTKA02555S FTKA02565S	TW08S

Available inserts E06 Available adaptor E401~E402



AMM2000



• AR: 7.5°~12.5°
• RR: -28°~6°

(mm)

Designation		ØD	Ød	Ød1	l	L	M	ap	
AMM	2016HR-M08	2	16	14.5	8.5	25	M08	11	0.04
	2020HR-M10	2	20	18	10.5	30	M10	11	0.07
	2025HR-M12	3	25	23	12.5	35	M12	11	0.04
	2032HR-M16	4	32	29	17	40	M16	11	0.23
	2040HR-M16	5	40	29	17	40	M16	11	0.25

Available inserts



Designation		Cermet		Coated												Uncoated		page
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2510	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	G10	
APMT	11T3PDFR-MA																	●
	11T308PDFR-MA																	
	11T3PDER-ML														●	●		
	11T308PDER-ML														●	●		
	11T3PDSR-MM			●	●		●		●	●		●			●	●		
	11T3PDSR-MF			●							●	●			●	●		
	11T308PDSR-MM			●							●		●		●	●		
	11T312PDSR-MM			●							●		●		●	●		
	11T316R-MM			●							●				●	●		
	11T318R-MM																	
	11T324R-MM			●							●				●	●		
	11T3PDSR-MN2														●			
	11T3PDSR-MN3														●			

※ Please purchase 2 types of APMT-MN (nick type) inserts with different chip breakers. ※ Please use the cutters with even teeth.

Available adaptor

Designation	Available adaptor
AMM	
2016HR-M08	MAT-M08
2020HR-M10	MAT-M10
2025HR-M12	MAT-M12
2032HR-M16	MAT-M16
2040HR-M16	

Designation : AMM2032HR-M16
Modular head threading measure size (M16)

II

Adaptor spec.: MAT-M16-035-S32S
Adaptor threading measure (M16)

Parts

Specification		
Ø16~Ø40	FTKA02565S	TW08S

Available inserts E06 Available adaptor E401~E402



Shoulder milling tool for high helix

Alpha Mill-X **new**

- High helix cutting edge realizes high speed and high feed machining (15% higher speed than conventional tool's machining) and increases 20% higher productivity.
- Highly precise cutting edge ensures high quality surface finish in milling.

Code system

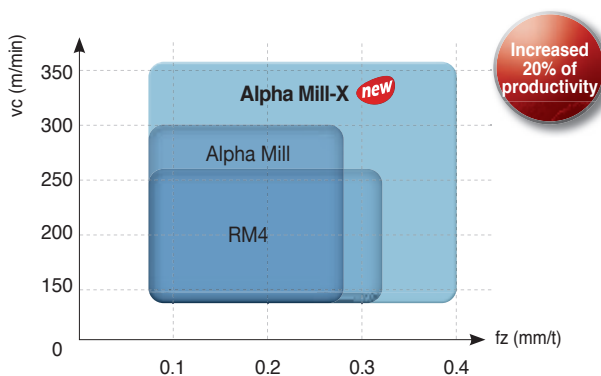
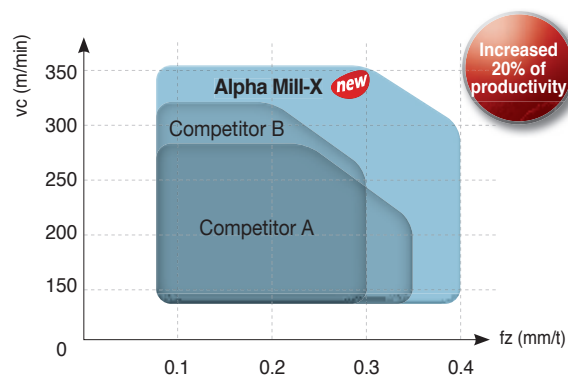
• Cutter

AMX	C	M	050	R	- 22 -	4 -	AD17
Alpha Mill-X	Type C: Cutter	Arbor type M: Metric A: Inch None: Asia	Diameter 050: Ø50 mm	Oil hole & Hand R: With Oil hole, right-handed NR: Without oil hole, right-handed	Internal diameter 22: Ø22 mm	No. of tooth 4: 4	Insert AD17: ADKT17 AD12: ADKT12 AD10: ADKT10

• Shank

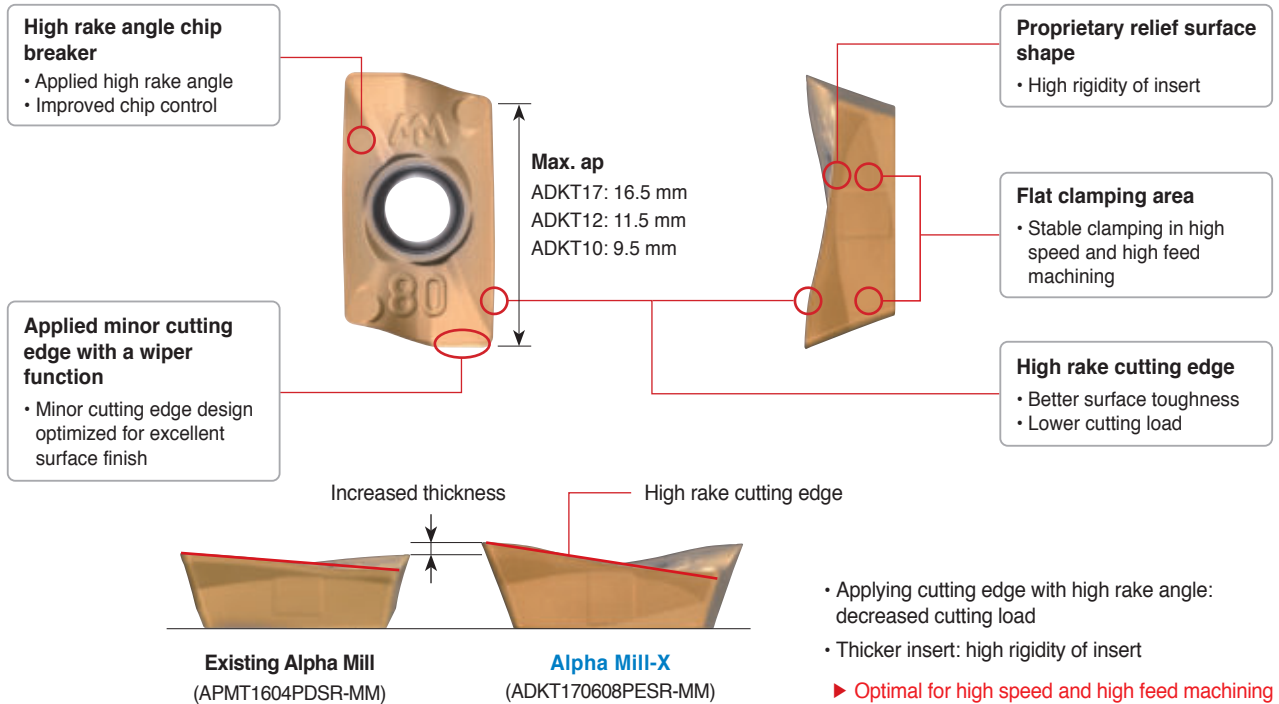
AMX	S	032	R	- 2	C	32 -	150 -	AD17
Alpha Mill-X	Type S: Shank	Diameter 032: Ø32 mm	Oil hole & Hand R: With Oil hole, right-handed NR: Without oil hole, right-handed	No. of tooth 2: 2 teeth	Shank type C: Cylinder W: Weldon	Shank Dia. 32: Ø32 mm	Overall length 150: 150 mm	Insert AD17: ADKT17 AD12: ADKT12 AD10: ADKT10

Application area

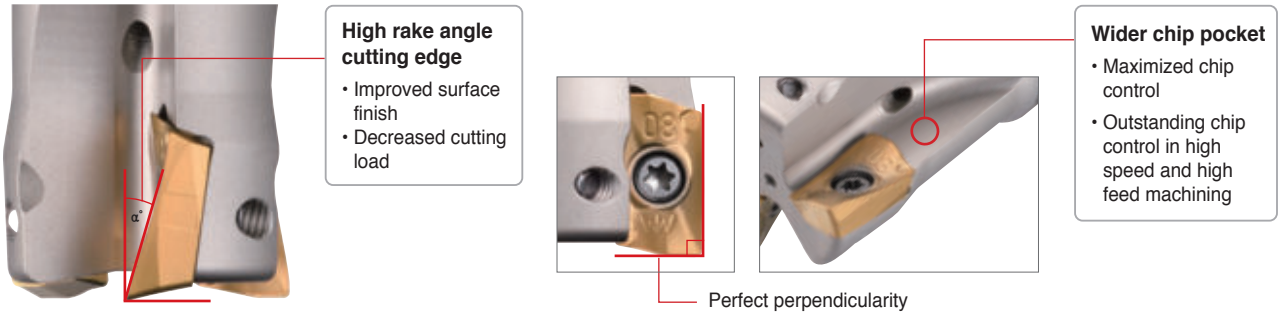


E Technical Information for Alpha Mill-X

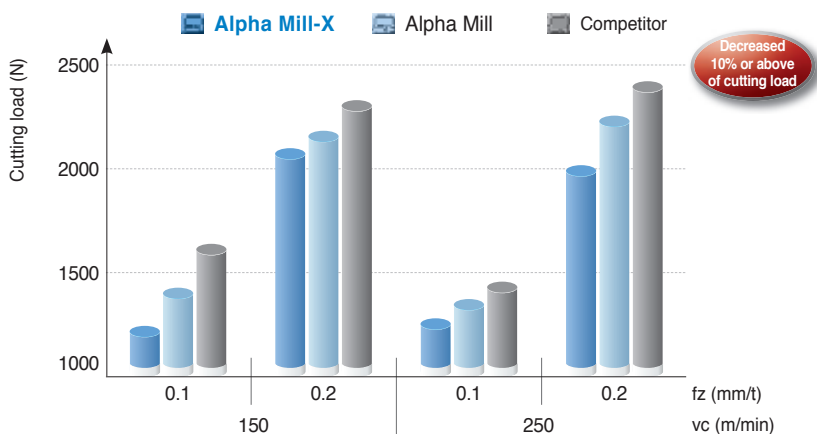
Features of insert



Cutter features



Cutting load



Recommended cutting conditions

• In face machining and shouldering

Workpiece		Grade	Cutting speed vc (m/min)	Feed, fz (mm/t)		
				ADKT17	ADKT12	ADKT10
P	Steel	PC5300	150-240	0.3-0.05	0.25-0.05	0.2-0.05
		PC5400	130-210			
		PC3700	160-270			
		NCM535	250-350			
M	Stainless steel	PC5300	90-150	0.25-0.05	0.2-0.05	0.15-0.05
		PC5400	70-120			
		PC9540	50-120			
K	Cast iron	PC6510	150-200	0.35-0.08	0.3-0.08	0.25-0.08
		PC5300	120-200			
		NCM535	200-300			
S	HRSA	PC5300	40-70	0.2-0.05	0.15-0.05	0.1-0.05
		PC5400	30-50			

* The above data refer to general cutting conditions and can be adjustable up to 350 m/min and 0.4 mm/t depending on user environment

• In grooving, ramping and helical machining

Workpiece		Grade	Cutting speed vc (m/min)	Feed, fz (mm/t)		
				ADKT17	ADKT12	ADKT10
P	Steel	PC5300	150-240	0.15-0.05	0.15-0.05	0.15-0.05
		PC5400	130-210			
		PC3700	160-270			
		NCM535	250-350			
M	Stainless steel	PC5300	90-150	0.15-0.05	0.15-0.05	0.15-0.05
		PC5400	70-120			
		PC9540	50-120			
K	Cast iron	PC6510	150-250	0.2-0.08	0.2-0.08	0.2-0.08
		PC5300	120-200			
		NCM535	200-300			
S	HRSA	PC5300	40-70	0.15-0.05	0.15-0.05	0.1-0.05
		PC5400	30-50			

* In deep grooving, set the ap under 5 mm and use coolant and air.

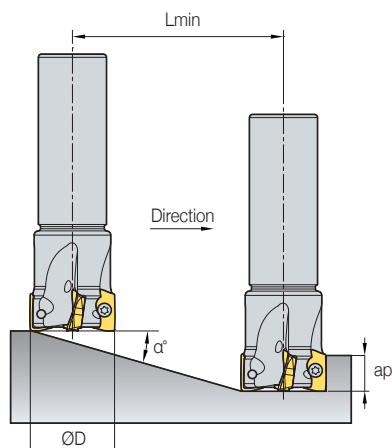
Recommended grades and chip breakers

(● : 1st Recommendation)

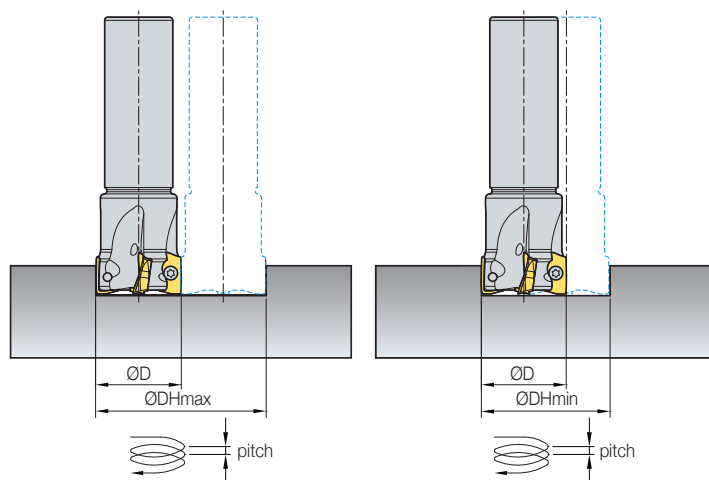
C/B	Cutting edge	P				M		K		N		S	
		Low carbon steel/ Mild steel		High carbon steel/ Alloy steel		Stainless steel		Cast iron		Non-ferrous metal		HRSA	
		C/B	Grade	C/B	Grade	C/B	Grade	C/B	Grade	C/B	Grade	C/B	Grade
ML		-	● PC3700 ○ PC5300 ○ PC5400 ○ NCM535	-	● PC3700 ○ PC5300 ○ PC5400 ○ NCM535	●	● PC5300 ○ PC5400 ○ PC9540	-	● PC6510 ○ PC5300 ○ PC5400 ○ NCM535	-	-	●	● PC5300 ○ PC5400
MM		●	● PC3700 ○ PC5300 ○ PC5400 ○ NCM535	●	● PC3700 ○ PC5300 ○ PC5400 ○ NCM535	-	● PC5300 ○ PC5400 ○ PC9540	●	● PC6510 ○ PC5300 ○ PC5400 ○ NCM535	-	-	-	● PC5300 ○ PC5400

➤ Cutting condition for ramping and helical operation

Ramping



Helical cutting



(mm)

Designation	Tool dia. ØD (min)	ap	Ramping		Blind hole helical cutting				Through hole helical cutting	
			Max. rake angle α°	Lmin	Min. desirable hole dia. ØDHmin	Max. pitch dmax	Max. desirable hole dia. ØDHmax	Max. pitch dmax	Min. desirable hole dia. ØDHmin	Max. pitch dmax
ADKT17	20	16.5	13	71	30	7.0	38	8.9	21	4.8
	25		8.0	117	40	5.7	48	6.8	31	4.3
	32		3.7	255	54	3.5	62	4.0	45	2.9
	33		3.6	262	56	3.5	64	4.1	47	2.9
	40		2.6	363	70	3.2	78	3.6	61	2.8
	50		1.9	497	90	3.0	98	3.3	81	2.7
	63		1.3	727	116	2.6	124	2.8	107	2.4
	80		1.1	859	150	2.9	158	3.0	141	2.7
	100		0.7	1350	190	2.3	198	2.4	181	2.2
	125		0.5	1891	240	2.1	248	2.2	231	2.0
ADKT12	18	11.5	7.0	98	29	3.6	34	4.2	23	2.8
	20		5.5	125	33	3.2	38	3.7	27	2.6
	25		3.5	196	43	2.7	48	3.0	37	2.3
	32		2.5	275	57	2.5	62	2.7	51	2.2
	33		2.4	286	59	2.5	64	2.7	53	2.2
	40		1.5	458	73	1.9	78	2.1	67	1.7
	50		1.2	573	93	2.0	98	2.1	87	1.8
	63		1.0	687	119	2.1	124	2.2	113	2.0
	80		0.7	982	153	1.9	158	1.9	147	1.8
ADKT10	16	9.5	4.5	121	28	2.2	31	2.5	24	1.9
	18		3.5	155	32	2.0	35	2.2	28	1.7
	20		3.0	181	36	1.9	39	2.1	32	1.7
	25		2.2	247	46	1.8	49	1.9	42	1.6
	32		1.5	363	60	1.6	63	1.7	56	1.5
	33		1.4	389	62	1.5	65	1.6	58	1.4
	40		1.2	454	76	1.6	79	1.7	72	1.5
	50		0.8	680	96	1.3	99	1.4	92	1.3
	63		0.6	907	122	1.3	125	1.3	118	1.2
	80		0.5	1089	156	1.4	159	1.4	152	1.3

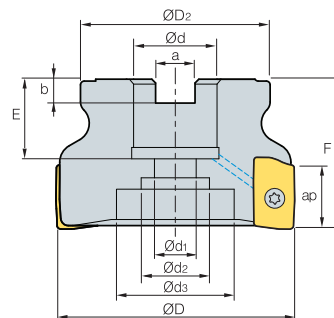
※ In ramping and helical machining, use coolant and air.

※ Lmin : Cutting length in machining with Min. rake angle
 α° : Rake angle for ramping
 ap : Depth of cut in axial direction

$$Lmin = \frac{ap}{\tan \alpha^\circ} \text{ (mm)}$$



AMXCM-AD10/12 **new**



• AR: 8°
• RR: -10°~3°

(mm)

Designation			ØD	ØD2	Ød	Ød1	Ød2	Ød3	a	b	E	F	ap	
AMXCM	040R-16-5-AD10	5	40	35	16	9	14	-	8.4	5.6	19	40	9.5	0.18
	040R-16-6-AD10	6	40	35	16	9	14	-	8.4	5.6	19	40	9.5	0.18
	050R-22-6-AD10	6	50	42	22	11	18	-	10.4	6.3	20	40	9.5	0.23
	050R-22-7-AD10	7	50	42	22	11	18	-	10.4	6.3	20	40	9.5	0.20
	063R-22-7-AD10	7	63	49	22	11	18	-	10.4	6.3	20	40	9.5	0.44
	063R-22-8-AD10	8	63	49	22	11	18	-	10.4	6.3	20	40	9.5	0.49
	080R-27-8-AD10	8	80	57	27	14	25	38	12.4	7	23	50	9.5	0.88
	080R-27-9-AD10	9	80	57	27	14	25	38	12.4	7	23	50	9.5	0.90
AMXCM	040R-16-4-AD12	4	40	35	16	9	14	-	8.4	5.6	19	40	11.5	0.18
	040R-16-5-AD12	5	40	35	16	9	14	-	8.4	5.6	19	40	11.5	0.16
	050R-22-5-AD12	5	50	42	22	11	18	-	10.4	6.3	20	40	11.5	0.23
	050R-22-7-AD12	7	50	42	22	11	18	-	10.4	6.3	20	40	11.5	0.20
	063R-22-6-AD12	6	63	49	22	11	18	-	10.4	6.3	20	40	11.5	0.44
	063R-22-7-AD12	7	63	49	22	11	18	-	10.4	6.3	20	40	11.5	0.49
	080R-27-7-AD12	7	80	57	27	14	25	38	12.4	7	23	50	11.5	0.88
	080R-27-8-AD12	8	80	57	27	14	25	38	12.4	7	23	50	11.5	0.90

Available inserts

ADKT-ML ADKT-MM



Type	Designation		Cermet		Coated											Uncoated		page	
			CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400		G10
10 type	ADKT	10T304PEER-ML																	
		10T304PESR-MM																	
		10T308PESR-MM																	
		10T312PESR-MM																	
12 type	ADKT	120408PESR-ML																	
		120408PESR-MM																	
		120412PESR-MM																	
		120416PESR-MM																	

Available arbors

Designation	Ød	Available arbors
AMXCM 040R-16-□-AD□□	16	BT□□-FMC16-□□
050R-22-□-AD□□	22	BT□□-FMC22-□□

Designation	Ød	Available arbors
AMXCM 063R-22-□-AD□□	22	BT□□-FMC22-□□
080R-27-□-AD□□	27	BT□□-FMC27-□□

Parts

Specification	Screw	Wrench
Ø40~Ø80 (10 type)	FTKA02555S	TW08S
Ø40~Ø80 (12 type)	FTNA0306	TW09S

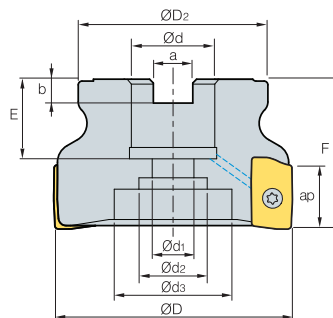
Available inserts E04 Available arbors and bolt E426~E428



Milling

E

AMXCM-AD17 new



AA
90°
• AR: 8°
• RR: -10°~3°

(mm)

Designation			ØD	ØD2	Ød	Ød1	Ød2	Ød3	a	b	E	F	ap	
AMXCM	040R-16-3-AD17	3	40	35	16	9	14	-	8.4	5.6	19	40	16.5	0.18
	040R-16-4-AD17	4	40	35	16	9	14	-	8.4	5.6	19	40	16.5	0.18
	050R-22-4-AD17	4	50	42	22	11	18	-	10.4	6.3	20	40	16.5	0.23
	050R-22-5-AD17	5	50	42	22	11	18	-	10.4	6.3	20	40	16.5	0.20
	063R-22-5-AD17	5	63	49	22	11	18	-	10.4	6.3	20	40	16.5	0.44
	063R-22-6-AD17	6	63	49	22	11	18	-	10.4	6.3	20	40	16.5	0.49
	080R-27-6-AD17	6	80	57	27	14	25	38	12.4	7	23	50	16.5	0.88
	080R-27-7-AD17	7	80	57	27	14	25	38	12.4	7	23	50	16.5	0.90
	100R-32-8-AD17	8	100	70	32	18	28	45	14.4	8	28	63	16.5	1.76
	100R-32-10-AD17	10	100	70	32	18	28	45	14.4	8	28	63	16.5	1.68
	125R-40-8-AD17	8	125	90	40	22	32	54	16.4	9	30	63	16.5	2.89
	125R-40-10-AD17	10	125	90	40	22	32	54	16.4	9	30	63	16.5	4.83

Available inserts

ADKT-ML ADKT-MM



Designation		Cermet		Coated												Uncoated		page	
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	G10		H01
ADKT	170608PESR-ML						●				●	●		●	●	●			E04
	170604PESR-MM										●				●				
	170608PESR-MM						●				●	●		●	●	●			
	170616PESR-MM														●	●			
	170620PESR-MM														●	●			

Available arbors

Designation	Ød	Available arbors	Designation	Ød	Available arbors
AMXCM	16	BT□□-FMC16-□□	AMXCM	27	BT□□-FMC27-□□
	22	BT□□-FMC22-□□		32	BT□□-FMC32-□□
				40	BT□□-FMC40-□□

Parts

Specification	Screw	Wrench
Ø40~Ø125	FTKA0408	TW15S

Available inserts E04 Available arbors and bolt E426~E428



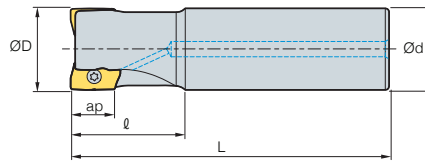
AMXS-AD10/12 **new**

Fig. 1

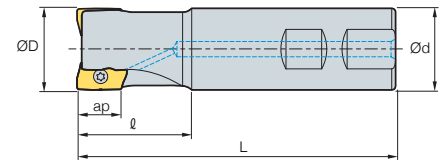


Fig. 2



AA
90°
• AR: 8°
• RR: -10°~3°

(mm)

	Designation		ØD	Ød	ℓ	L	ap		Fig.
AMXS	016R-2W16-90-AD10	2	16	16	25	90	9.5	0.110	2
	016R-2C16-180-AD10	2	16	16	25	180	9.5	0.190	1
	018R-2W16-100-AD10	2	18	16	35	100	9.5	0.120	2
	018R-2C16-200-AD10	2	18	16	35	200	9.5	0.210	1
	020R-3W20-100-AD10	3	20	20	35	100	9.5	0.250	2
	020R-3C20-200-AD10	3	20	20	35	200	9.5	0.490	1
	025R-4W25-115-AD10	4	25	25	40	115	9.5	0.400	2
	025R-4C25-200-AD10	4	25	25	40	200	9.5	0.590	1
	032R-4W32-125-AD10	4	32	32	45	125	9.5	0.700	2
	032R-4C32-200-AD10	4	32	32	45	200	9.5	1.000	1
	040R-5W32-130-AD10	5	40	32	50	130	9.5	1.050	2
	040R-5C32-200-AD10	5	40	32	50	200	9.5	1.200	1
AMXS	018R-2W16-100-AD12	2	18	16	35	100	11.5	0.120	2
	018R-2C16-200-AD12	2	18	16	35	200	11.5	0.210	1
	020R-2W20-100-AD12	2	20	20	35	100	11.5	0.250	2
	020R-2C20-200-AD12	2	20	20	35	200	11.5	0.490	1
	025R-3W25-115-AD12	3	25	25	40	115	11.5	0.400	2
	025R-3C25-200-AD12	3	25	25	40	200	11.5	0.590	1
	032R-4W32-125-AD12	4	32	32	45	125	11.5	0.700	2
	032R-4C32-200-AD12	4	32	32	45	200	11.5	1.000	1
	040R-4W32-130-AD12	4	40	32	50	130	11.5	1.050	2
	040R-4C32-200-AD12	4	40	32	50	200	11.5	1.200	1

Available inserts

ADKT-ML ADKT-MM



Type	Designation		Cermet		Coated											Uncoated		page	
			CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400		G10
10 type	ADKT	10T304PEER-ML					●				●	●		●	●	●			E04
		10T304PESR-MM					●				●	●		●	●	●			
		10T308PESR-MM														●	●		
		10T312PESR-MM															●		
12 type	ADKT	120408PESR-ML					●				●	●		●	●	●			
		120408PESR-MM					●				●	●		●	●	●			
		120412PESR-MM									●	●			●	●	●		
		120416PESR-MM									●	●				●	●		

Parts

Specification		
Ø16~Ø40 (10 type)	FTKA0255S	TW08S
Ø18~Ø40 (12 type)	FTNA0306	TW09S

Available inserts **E04** Available arbors and bolt **E426~E428**



AMXS-AD17 new

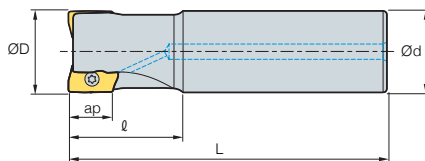


Fig. 1

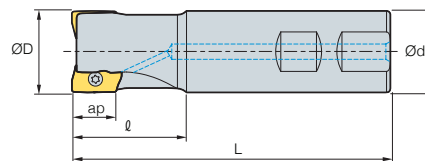


Fig. 2



AA
90°
• AR: 8°
• RR: -10°~3°

(mm)

Designation		ØD	Ød	ℓ	L	ap		Fig.
AMXS 020R-1W20-100-AD17	1	20	20	35	100	16.5	0.170	2
020R-1C20-200-AD17	1	20	20	35	200	16.5	0.360	1
025R-2W25-115-AD17	2	25	25	35	115	16.5	0.610	2
025R-2C25-200-AD17	2	25	25	35	200	16.5	0.450	1
032R-3W32-125-AD17	3	32	32	45	125	16.5	0.620	2
032R-3C32-200-AD17	3	32	32	45	200	16.5	1.050	1
033R-3W32-125-AD17	3	33	32	45	125	16.5	0.620	2
033R-3C32-200-AD17	3	33	32	45	200	16.5	1.050	1
040R-3W32-130-AD17	3	40	32	50	130	16.5	0.750	2
040R-3C32-200-AD17	3	40	32	50	200	16.5	1.170	1
040R-4W32-130-AD17	4	40	32	50	130	16.5	0.740	2
040R-4C32-200-AD17	4	40	32	50	200	16.5	1.200	1

Available inserts

ADKT-ML ADKT-MM



Designation		Cermet		Coated												Uncoated		page	
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	G10		H01
ADKT	170608PESR-ML						●				●	●		●	●	●			E04
	170604PESR-MM										●				●				
	170608PESR-MM						●				●	●		●	●	●			
	170616PESR-MM														●	●			
	170620PESR-MM														●	●			

Parts

Specification		
Ø20~Ø40	FTKA0408	TW15S

Available inserts E04 Available arbors and bolt E426~E428



Rigid body employs high tensile aluminum

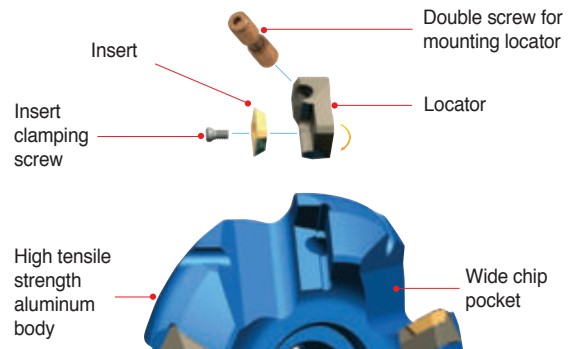
Future Mill

- Light-weight aluminum body (50% of steel body) can be used for high speed cutting, tapping center, and on low power machines
- Easy handling
- It can be used for aluminum alloys, medium cutting of steel, and cast iron
- Rigid body employs high tensile aluminum
- Locators for excellent durability
- A variety of chip breaker are available
- The high rake angle provides low cutting loads and good surface roughness

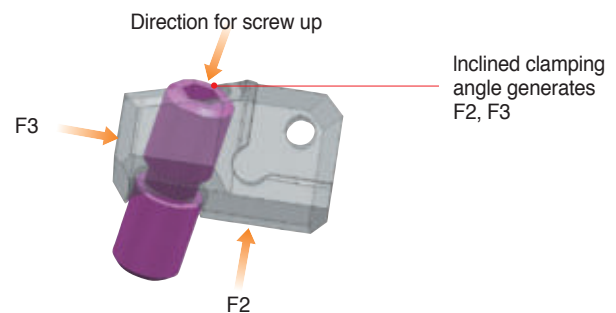
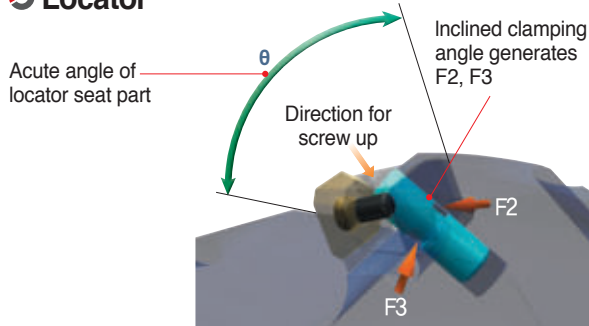
Features of cutter

- Strong clamping between aluminum body and locator with double screw provides high efficiency
- Acute angle of locator seat provides strong clamping
- Wide chip pocket area provides good chip evacuation
- High tensile strength aluminum body

Assembly structure of cutter

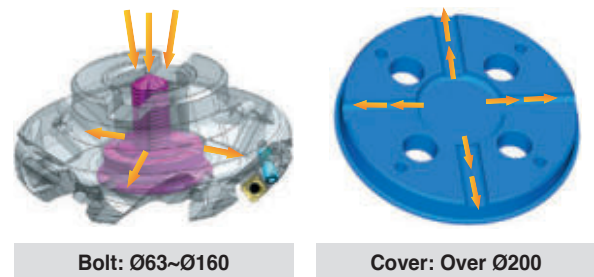


Locator

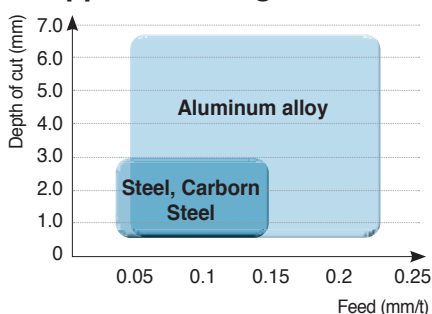


Through coolant system

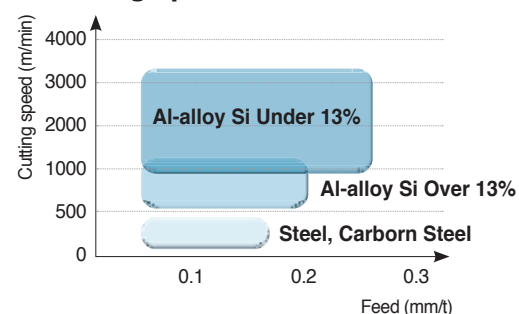
- Exclusively designed coolant bolt and cover provide excellent coolant action and chip evacuation for improved tool life
- Exact coolant direction to cutting area
- Exclusive coolant bolt and cover are sold separately. Through coolant arbor is required



Application range



Cutting speed



E Technical Information for Future Mill

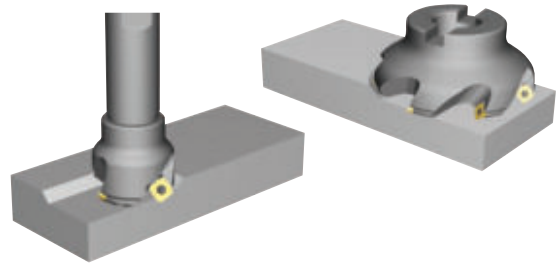
➤ Max. available revolution

Cutter diameter	Max. revolution (rpm)
Ø63	20,000
Ø80	16,000
Ø100	13,000
Ø125	10,000
Ø160	8,000
Ø200	6,500
Ø250	5,000
Ø315	4,000

Future Mill (FMA)

➤ Features

- General milling cutter for high productivity
- Adjustable pitch of cutter and various chip breaker offer wide application range.
- Light cutter body allows high speed cutting and can be used in low horse power machine
- Smooth cutting with low cutting load is accomplished with high-rake angle



➤ Features of chip breaker

Insert	Cutting-edge	Uses	Features
None C/B		Light cutting	Superior surface roughness at finishing due to ground type cermet insert
MF		Light cutting	Superior cutting quality for light and difficult-to-cut material machining through the low cutting load of chip breaker
MM		General cutting	Suitable for various cutting due to special shape design for general cutting
MR		Roughing	Tough cutting-edge provides stable cutting performance in severe interruption
MA		For aluminum	Superior cutting quality for aluminum due to sharp cutting-edge and buffed surface - S□ET-MA: Sharp cutting-edge due to high accurate grinding - S□XT-MA: Suitable cutting-edge for roughing

➤ Recommended cutting condition

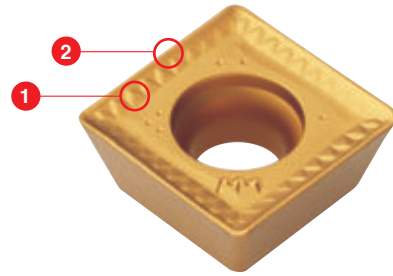
ISO	Grades	vc (m/min)	MF	MM	MR	MA
			fz (mm/t)	fz (mm/t)	fz (mm/t)	fz (mm/t)
P	NC5330	210~350	0.05~0.20	0.10~0.30	0.10~0.30	-
	NCM325	190~310	0.05~0.20	0.10~0.30	0.10~0.30	-
	PC3700	160~270	0.05~0.20	0.10~0.30	0.10~0.30	-
M	PC9530	90~150	0.05~0.15	0.10~0.30	-	-
	NCM335	70~120	0.05~0.15	0.10~0.30	-	-
K	PC5300	110~180	0.05~0.20	0.10~0.30	-	-
N	H01	260~440	-	-	-	0.10~0.35



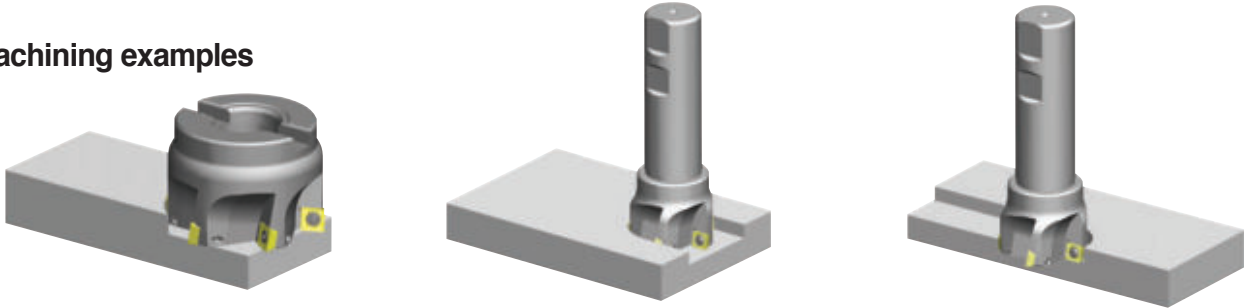
Future Mill (FMP)

Features

- The strong cutting-edge ensures excellent tool life in high feed and high speed, deep depth of cut, with low cutting loads
- Optimal grades for most workpieces make high efficiency cutting possible
- Unique chip breaker makes good chip evacuation and lower cutting loads (1)
- Innovative curve cutting-edge lowers cutting load and provides a stronger cutting-edge (2)



Machining examples



Features of chip breaker

- Innovative special cutting-edge and chip breaker design ensures ideal 90° cutting and low cutting load
- Various applications are available with multi functional cutters (Facing, Slotting, Shouldering)
- Improved tool life due to special coated grades
- Superior cutting quality at deep cutting depth through the low cutting load and strong cutting-edge

Recommended C/B and grade as per workpiece

Insert	Cutting-edge	Uses	Recommended C/B and grade as per workpiece (●: 1 st)									
			Low carbon steel/Mild steel		High carbon steel/Mild steel		Stainless steel		Cast iron		Aluminum alloy	
			C/B	Grades	C/B	Grades	C/B	Grades	C/B	Grades	C/B	Grades
MF			●	○ NCM325 ○ NC5330 ● NCM335		● NCM325 ○ NC5330 ○ NCM335	●	○ NCM325 ○ NC5330 ● NCM335	●	● PC6510 ○ PC215K	-	-
MM				○ NCM325 ○ NC5330 ● NCM335		● NCM325 ○ NC5330 ○ NCM335		○ NCM325 ○ NC5330 ● NCM335		● PC6510 ○ PC215K	-	-
MA			-	-	-	-	-	-	-	-	●	○ H01 ○ G10

Recommended cutting condition

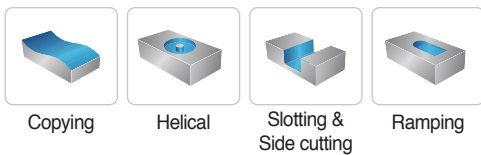
ISO	Cutting Speed vc (m/min)							
	CVD Coated		PVD Coated					Carbide
	NCM325	NCM335	PC3700	PC6510	PC5300	PC9530	PC5400	H01
P	190~310	180~290	160-270	-	150-240	-	130-210	-
M	110~180	100~160	-	-	90-150	90-150	70-120	-
K	-	-	-	140-230	120-200	-	100-160	-
N	-	-	-	-	-	-	-	260-440

Future Mill (FMR)

Features

- Wide coverage for medium to roughing, general steel to high hardness mold materials
- 2 step shape of insert provides strong clamping and can minimize components to replace the shim
- 4-8 cutting-edge available per insert (Inscribed circle 05, 06, 07, 08, 10, 12, 16, 20)
- Uneven flute spacing prevents vibration on high speed applications and provides more stable machining
- Precise design of the insert seat prevents insert from chattering
- Special design of the insert bottom prevents movement and chatter of insert
- Easy to change cutting-edge due to the rotation prevention design of the insert

Uses



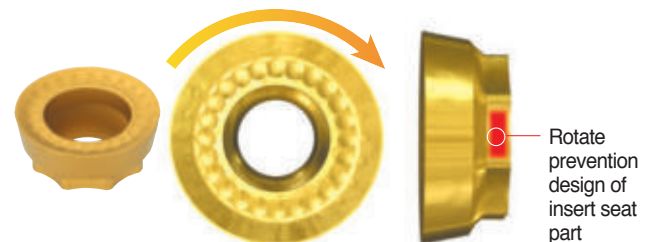
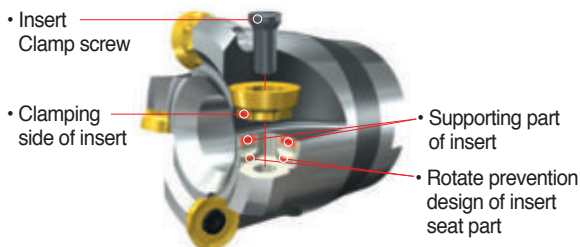
FMR Insert cutting-edge shape

Designation	RDHW□□□□M0F	RDHW□□□□M0E	RDHW□□□□M0S
Cutting edge shape (G calss)			

Features of chip breaker

Insert	Cutting-edge	Uses	Features
MF		Light cutting	Low cutting resistance chip breaker design guarantees long tool life good performance at finishing and difficult-to-cut material machining
MM		General	Suitable for general milling at wide application range
MA		Aluminum	Sharp cutting-edge and buffed top face for aluminum machining prevent welding and control chip flow

Clamping system

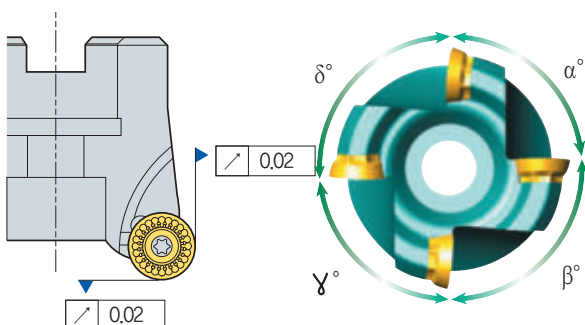


FMR□3000 type
FMR□4000 type

FMR□5000 type
FMR□6000 type

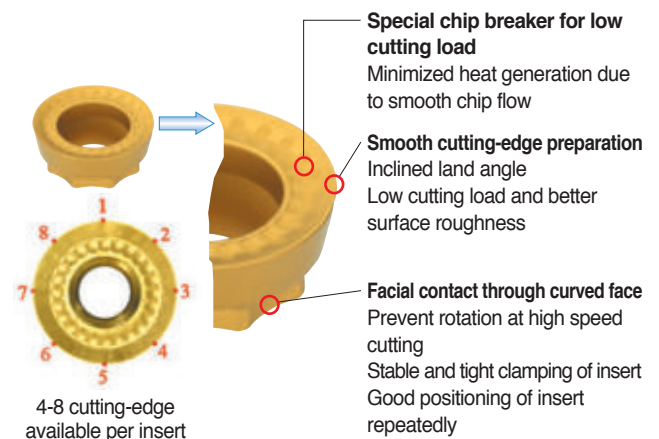
RDKT10T3M0-□□
RDKT1204M0-□□

RDKT1605M0-MM
RDKT2006M0-MM



Good surface finish due to the precise design of insert seat part of cutter

Uneven flute spacing prevents vibration at high speed application and provides stable machining



Future Mill (FMR)

Chip removal rate (cm³/min)

	Workpiece	Grades	Ø8	Ø10	Ø12	Ø15	Ø16	Ø20	Ø21	Ø25	Ø26	Ø32	Ø33	Ø40	Ø50	Ø63	Ø80	Ø100	Ø125	Ø160
P	General structure steel (under 200HB)	PC3700 PC5300	4.97	9.94	9.94	14.92	31.83	31.83	47.74	47.74	47.74	71.61	38.19	95.49	119.36	143.23	167.11	190.98	133.69	509.29
			vc = 250, fz = 0.25, ap = 0.5, ae = 0.5D					vc = 300, fz = 0.4 ap = 1.0, ae = 0.5D		vc = 250, fz = 0.4, ap = 1.5, ae = 0.5D										vc = 200, fz = 0.5 ap = 4.0, ae = 0.5D
	General carbon steel (under 30 HRC)		3.97	7.95	7.95	11.93	25.46	25.46	38.19	38.19	38.19	57.29	38.19	76.39	95.49	114.59	133.69	152.78	133.69	458.36
			vc = 200, fz = 0.25, ap = 0.5, ae = 0.5D					vc = 250, fz = 0.4 ap = 1.0, ae = 0.5D		vc = 200, fz = 0.4, ap = 1.5, ae = 0.5D										vc = 180, fz = 0.5 ap = 4.0, ae = 0.5D
	High carbon steel, Alloy steel (30~40 HRC)		2.86	5.72	5.72	8.59	22.91	22.91	34.37	34.37	34.37	51.56	34.37	68.75	85.94	103.13	120.32	137.5	120.32	407.43
			vc = 180, fz = 0.20, ap = 0.5, ae = 0.5D					vc = 200, fz = 0.4 ap = 1.0, ae = 0.5D		vc = 180, fz = 0.4, ap = 1.5, ae = 0.5D										vc = 160, fz = 0.5 ap = 4.0, ae = 0.5D
	High carbon steel, Alloy steel (40~50 HRC)		1.24	2.48	2.48	3.72	11.45	11.45	14.32	17.18	14.32	21.48	14.32	28.64	35.8	42.97	50.13	57.29	50.13	249.55
			vc = 130, fz = 0.15, ap = 0.4, ae = 0.5D					vc = 170, fz = 0.3 ap = 0.9, ae = 0.5D		vc = 150, fz = 0.3, ap = 1.0, ae = 0.5D										vc = 140, fz = 0.4 ap = 3.5, ae = 0.5D
Alloy steel (over 50 HRC)	0.95	1.9	1.9	2.86	7.63	7.63	9.54	11.45	9.54	14.32	9.54	19.09	23.87	28.64	33.42	38.19	33.42	152.78		
	vc = 100, fz = 0.15, ap = 0.4, ae = 0.5D					vc = 130, fz = 0.3 ap = 0.9, ae = 0.5D		vc = 100, fz = 0.3, ap = 1.0, ae = 0.5D										vc = 100, fz = 0.4 ap = 3.0, ae = 0.5D		
M	Stainless steel	PC5300	2.06	4.13	4.13	6.2	16.55	16.55	12.41	24.82	12.41	18.62	12.41	24.82	31.03	37.24	43.44	49.65	43.44	331.04
			vc = 130, fz = 0.20, ap = 0.5, ae = 0.5D					vc = 200, fz = 0.2 ap = 1.0, ae = 0.5D		vc = 100, fz = 0.3, ap = 1.0, ae = 0.5D										vc = 130, fz = 0.5 ap = 4.0, ae = 0.5D
K	Cast iron	PC5300	2.86	5.72	5.72	8.59	14.32	14.32	21.48	21.48	21.48	32.22	21.48	42.97	53.71	64.45	75.2	85.94	75.2	366.69
			vc = 180, fz = 0.20, ap = 0.5, ae = 0.5D					vc = 180, fz = 0.2 ap = 1.0, ae = 0.5D		vc = 180, fz = 0.2, ap = 1.5, ae = 0.5D										vc = 180, fz = 0.4 ap = 4.0, ae = 0.5D

Required machine power (P_{KW} = 0.75 x P_{HP})

• RDKT10□□

Workpiece	Grades	Ø21	Ø25	Ø26	Ø32	Ø40	Ø50	Ø63	Ø80	Ø100	Cutting condition			
											vc	fz	ap	ae
P	General structure steel (under 200HB)	2.2	2.2	2.2	3.3	4.4	5.5	6.6	7.7	8.8	250	0.4	1.5	0.5D
	General carbon steel (under 30 HRC)	2.1	2.1	2.1	3.1	4.1	5.2	6.2	7.3	8.3	200	0.4	1.5	0.5D
	High carbon steel, Alloy steel (30~40 HRC)	2.2	2.2	2.2	3.3	4.5	5.6	6.7	7.9	9	180	0.4	1.5	0.5D
	High carbon steel, Alloy steel (40~50 HRC)	1.1	1.1	1.1	1.6	2.1	2.6	3.2	3.7	4.2	150	0.3	1.0	0.5D
	Alloy steel (over 50 HRC)	0.7	0.7	0.7	1.1	1.4	1.7	2.1	2.4	2.8	100	0.3	1.0	0.5D
M	Stainless steel	0.6	0.6	0.6	0.8	1.2	1.5	1.7	2	2.3	130	0.2	1.5	0.5D
K	Cast iron	0.6	0.6	0.6	0.9	1.2	1.5	1.8	2.1	2.4	180	0.2	1.5	0.5D

• The figures in the above chart means Php value.

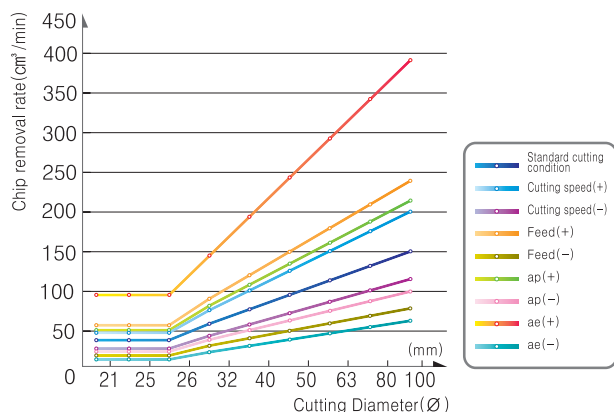
• RDKT12□□

Workpiece	Grades	Ø32	Ø33	Ø40	Ø50	Ø63	Ø80	Ø100	Ø125	Cutting condition			
										vc	fz	ap	ae
P	General structure steel (under 200HB)	1.7	1.7	2.6	3.5	3.5	4.4	5.3	6.1	200	0.4	1.5	0.5D
	General carbon steel (under 30 HRC)	2	2	3.1	4.1	2.6	5.2	6.2	7.2	180	0.4	1.5	0.5D
	High carbon steel, Alloy steel (30~40 HRC)	2.2	2.2	3.3	4.4	2.8	5.6	6.7	7.8	160	0.4	1.5	0.5D
	High carbon steel, Alloy steel (40~50 HRC)	1	1	1.5	1.6	2.1	2.6	3.1	3.6	140	0.3	1.0	0.5D
	Alloy steel (over 50 HRC)	0.7	0.7	1	1.4	0.8	1.7	2.1	2.4	100	0.3	1.0	0.5D
M	Stainless steel	0.5	0.5	0.8	1.1	0.7	1.4	1.7	2	130	0.2	1.5	0.5D
K	Cast iron	0.6	0.6	0.9	1.2	0.7	1.5	1.8	2.1	180	0.2	1.5	0.5D

• The figures in the above chart means Php value.

Chip removal rate by cutting condition

• Used insert: RDKT10□□



Variation of cutting condition

Standard	ISO			
	vc = 200	fz = 0.4	ap = 1.5	ae = 0.5D
Speed (+)	250			
Speed (-)	150			
Feed (+)	0.6			
Feed (-)	0.2			
ap (+)	2			
ap (-)	1			
ae (+)	D			
ae (-)	0.2D			



Recommended cutting condition

• Side milling, slotting, ramping, copying

Workpiece	Hardness	Grades	Cutting speed (m/min)	FMR1000		FMR1500		FMR2000		FMR2500		FMR3000		FMR4000		FMR5000		FMR6000	
				ap (mm)	fz (mm/t)	ap (mm)	fz (mm/t)	ap (mm)	fz (mm/t)	ap (mm)	fz (mm/t)	ap (mm)	fz (mm/t)	ap (mm)	fz (mm/t)	ap (mm)	fz (mm/t)	ap (mm)	fz (mm/t)
P	Carbon steel	PC5300	280	≤ 1.0	≤ 0.4	≤ 1.2	≤ 0.4	≤ 1.5	≤ 0.4	≤ 1.7	≤ 0.4	≤ 2.0	≤ 0.5	≤ 2.4	≤ 0.6	≤ 3.0	≤ 0.7	≤ 4.0	≤ 0.8
		PC5400	245																
		PC5300	250	≤ 0.7	≤ 0.4	≤ 1.2	≤ 0.4	≤ 1.5	≤ 0.4	≤ 1.7	≤ 0.4	≤ 2.0	≤ 0.5	≤ 2.4	≤ 0.6	≤ 3.0	≤ 0.7	≤ 4.0	≤ 0.8
	Alloy steel	PC5400	210																
		PC5300	195	≤ 0.7	≤ 0.2	≤ 0.9	≤ 0.2	≤ 1.2	≤ 0.2	≤ 1.5	≤ 0.2	≤ 1.7	≤ 0.3	≤ 2.0	≤ 0.4	≤ 2.7	≤ 0.5	≤ 3.7	≤ 0.6
M	High alloy steel (alloy constituent > 5%)	PC5400	170																
		PC5300	150	≤ 0.7	≤ 0.2	≤ 0.9	≤ 0.2	≤ 1.2	≤ 0.2	≤ 1.5	≤ 0.2	≤ 1.7	≤ 0.3	≤ 2.0	≤ 0.4	≤ 2.7	≤ 0.5	≤ 3.7	≤ 0.6
		PC5400	130																
	Stainless steel	PC5300	120	≤ 0.7	≤ 0.2	≤ 0.9	≤ 0.2	≤ 1.2	≤ 0.2	≤ 1.5	≤ 0.2	≤ 1.7	≤ 0.3	≤ 2.0	≤ 0.4	≤ 2.7	≤ 0.5	≤ 3.7	≤ 0.6
		PC5400	105																
K	Cast iron, Ductile cast iron	PC5300	130	≤ 0.7	≤ 0.2	≤ 0.9	≤ 0.2	≤ 1.2	≤ 0.2	≤ 1.5	≤ 0.2	≤ 1.7	≤ 0.3	≤ 2.0	≤ 0.4	≤ 2.7	≤ 0.5	≤ 3.7	≤ 0.6
		PC5400	110																
		PC5300	145	≤ 0.7	≤ 0.4	≤ 1.2	≤ 0.4	≤ 1.5	≤ 0.4	≤ 1.7	≤ 0.4	≤ 2.0	≤ 0.5	≤ 2.4	≤ 0.6	≤ 3.0	≤ 0.7	≤ 4.0	≤ 0.8
	Low tensile	PC5400	110																
		PC5300	110																

• Plunging

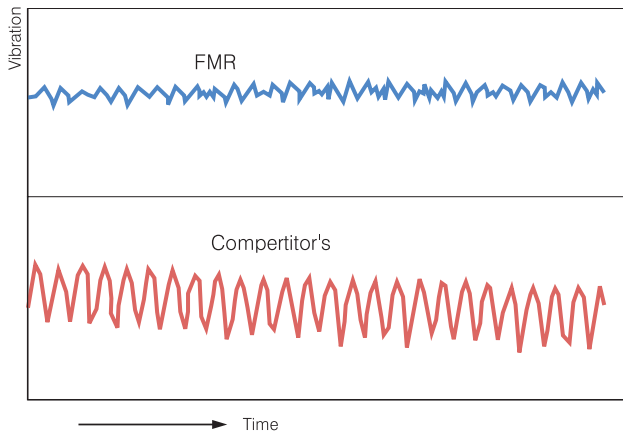
Workpiece	Hardness	Grades	Cutting speed (m/min)	FMR1000		FMR1500		FMR2000		FMR2500		FMR3000		FMR4000		FMR5000		FMR6000	
				ap (mm)	fz (mm/t)	ap (mm)	fz (mm/t)	ap (mm)	fz (mm/t)	ap (mm)	fz (mm/t)	ap (mm)	fz (mm/t)	ap (mm)	fz (mm/t)	ap (mm)	fz (mm/t)	ap (mm)	fz (mm/t)
P	Carbon steel	PC5300	280	≤ 2.5	≤ 0.2	≤ 3.0	≤ 0.2	≤ 3.5	≤ 0.2	≤ 4.0	≤ 0.2	≤ 5.0	≤ 0.3	≤ 6.0	≤ 0.4	≤ 8.0	≤ 0.5	≤ 10.0	≤ 0.6
		PC5400	245																
		PC5300	250	≤ 2.5	≤ 0.2	≤ 3.0	≤ 0.2	≤ 3.5	≤ 0.2	≤ 4.0	≤ 0.2	≤ 5.0	≤ 0.3	≤ 6.0	≤ 0.4	≤ 8.0	≤ 0.5	≤ 10.0	≤ 0.6
	Alloy steel	PC5400	210																
		PC5300	195	≤ 2.5	≤ 0.1	≤ 3.0	≤ 0.1	≤ 3.5	≤ 0.1	≤ 4.0	≤ 0.1	≤ 5.0	≤ 0.2	≤ 6.0	≤ 0.3	≤ 8.0	≤ 0.4	≤ 10.0	≤ 0.5
M	High alloy steel (alloy constituent > 5%)	PC5400	170																
		PC5300	150	≤ 2.5	≤ 0.1	≤ 3.0	≤ 0.1	≤ 3.5	≤ 0.1	≤ 4.0	≤ 0.1	≤ 5.0	≤ 0.2	≤ 6.0	≤ 0.3	≤ 8.0	≤ 0.4	≤ 10.0	≤ 0.5
		PC5400	130																
	Stainless steel	PC5300	120	≤ 2.5	≤ 0.1	≤ 3.0	≤ 0.1	≤ 3.5	≤ 0.1	≤ 4.0	≤ 0.1	≤ 5.0	≤ 0.2	≤ 6.0	≤ 0.3	≤ 8.0	≤ 0.4	≤ 10.0	≤ 0.5
		PC5400	105																
K	Cast iron, Ductile cast iron	PC5300	130	≤ 2.5	≤ 0.1	≤ 3.0	≤ 0.1	≤ 3.5	≤ 0.1	≤ 4.0	≤ 0.1	≤ 5.0	≤ 0.2	≤ 6.0	≤ 0.3	≤ 8.0	≤ 0.4	≤ 10.0	≤ 0.5
		PC5400	110																
		PC5300	145	≤ 2.5	≤ 0.2	≤ 3.0	≤ 0.2	≤ 3.5	≤ 0.2	≤ 4.0	≤ 0.2	≤ 5.0	≤ 0.3	≤ 6.0	≤ 0.4	≤ 8.0	≤ 0.5	≤ 10.0	≤ 0.6
	Low tensile	PC5400	110																
		PC5300	110																

• Helical cutting

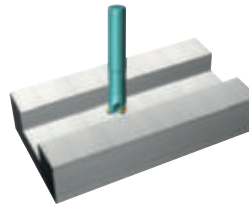
Workpiece	Hardness	Grades	Cutting speed (m/min)	FMR1000		FMR1500		FMR2000		FMR2500		FMR3000		FMR4000		FMR5000		FMR6000	
				ap (mm)	fz (mm/t)	ap (mm)	fz (mm/t)	ap (mm)	fz (mm/t)	ap (mm)	fz (mm/t)	ap (mm)	fz (mm/t)	ap (mm)	fz (mm/t)	ap (mm)	fz (mm/t)	ap (mm)	fz (mm/t)
P	Carbon steel	PC5300	280	≤ 1.0	≤ 0.2	≤ 1.0	≤ 0.2	≤ 1.0	≤ 0.2	≤ 1.0	≤ 0.2	≤ 2.0	≤ 0.3	≤ 2.0	≤ 0.4	≤ 4.0	≤ 0.5	≤ 4.0	≤ 0.6
		PC5400	245																
		PC5300	250	≤ 0.7	≤ 0.2	≤ 0.7	≤ 0.2	≤ 0.7	≤ 0.2	≤ 0.7	≤ 0.2	≤ 2.0	≤ 0.3	≤ 2.0	≤ 0.4	≤ 4.0	≤ 0.5	≤ 4.0	≤ 0.6
	Alloy steel	PC5400	210																
		PC5300	195	≤ 0.7	≤ 0.1	≤ 0.7	≤ 0.1	≤ 0.7	≤ 0.1	≤ 0.7	≤ 0.1	≤ 1.7	≤ 0.2	≤ 1.7	≤ 0.3	≤ 3.7	≤ 0.4	≤ 3.7	≤ 0.5
M	High alloy steel (alloy constituent > 5%)	PC5400	170																
		PC5300	150	≤ 0.7	≤ 0.1	≤ 0.7	≤ 0.1	≤ 0.7	≤ 0.1	≤ 0.7	≤ 0.1	≤ 1.7	≤ 0.2	≤ 1.7	≤ 0.3	≤ 3.7	≤ 0.4	≤ 3.7	≤ 0.5
		PC5400	130																
	Stainless steel	PC5300	120	≤ 0.7	≤ 0.1	≤ 0.7	≤ 0.1	≤ 0.7	≤ 0.1	≤ 0.7	≤ 0.1	≤ 1.7	≤ 0.2	≤ 1.7	≤ 0.3	≤ 3.7	≤ 0.4	≤ 3.7	≤ 0.5
		PC5400	105																
K	Cast iron, Ductile cast iron	PC5300	130	≤ 0.7	≤ 0.1	≤ 0.7	≤ 0.1	≤ 0.7	≤ 0.1	≤ 0.7	≤ 0.1	≤ 1.7	≤ 0.2	≤ 1.7	≤ 0.3	≤ 3.7	≤ 0.4	≤ 3.7	≤ 0.5
		PC5400	110																
		PC5300	145	≤ 1.0	≤ 0.2	≤ 1.0	≤ 0.2	≤ 1.0	≤ 0.2	≤ 1.0	≤ 0.2	≤ 2.0	≤ 0.3	≤ 2.0	≤ 0.4	≤ 4.0	≤ 0.5	≤ 4.0	≤ 0.6
	Low tensile	PC5400	110																
		PC5300	110																

Future Mill (FMR)

FMR Vibration test



Machining example



- **Workpiece** STD11
- **Cutting condition**
 - vc (m/min) = 200
 - fz (mm/t) = 0.40
 - ap (mm) = 2.0
 - ae (mm) = 4.0
- **Tools**
 - Insert** RDKT10T3M0-MM (PC3500)
 - Holder** FMRS3032RD-S

Cutting condition formulas for milling

Cutting speed

$$vc = \frac{\pi \times D \times n}{1000} \text{ (m/min)}$$

RPM

$$n = \frac{vc \times 1000}{\pi \times D} \text{ (min}^{-1}\text{)}$$

Feed (per tooth)

$$fz = \frac{vf}{Z \times n} \text{ (mm/t)}$$

Feed (per minute)

$$vf = fz \times n \times z \text{ (mm/min)}$$

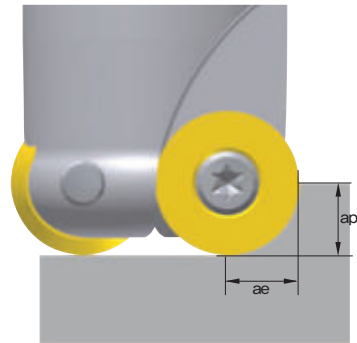
Chip removal rate

$$Q = \frac{ap \times ae \times vf}{1000} \text{ (cm}^3\text{/min)}$$

Required machine power

$$P_{kw} = \frac{Q \times kc}{60 \times 102 \times \eta} \text{ (kW)}$$

$$P_{hp} = \frac{P_c}{0.75} \text{ (hp)}$$



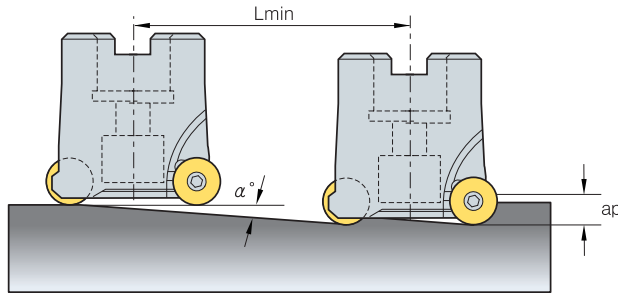
vc = Cutting speed (m/min)	P _{kw} = Required machine power (kW)
n = Revolution per a minute (min ⁻¹)	P _{hp} = Horsepower requirement (hp)
D = Cutting diameter (mm)	Q = Chip removal amount (cm ³ /min)
D _e = Efficient cutting diameter (mm)	ap = Depth of cut (mm)
vf = Feed per a minute (mm/min)	ae = Width of cut (mm)
fz = Feed per tooth (mm/t)	kc = Specific cutting resistance (MPa)
z = Number of tooth	η = Mechanical efficiency (%)
P _c = Power requirement (kW)	

Feed as per cutting depth

Designation	Chip breaker	Depth of cut (mm)								
		0.2~0.5	0.5~1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
RDHW0501M0	-	0.25	0.15	-	-	-	-	-	-	-
RDHW06T1M0	-	0.30	0.20	0.10	-	-	-	-	-	-
RDHW0702M0	-	0.35	0.25	0.10	0.07	-	-	-	-	-
RDHW0803M0	-	0.40	0.30	0.15	0.01	-	-	-	-	-
RDKT10T3M0 -	MF/MM	-	0.40	0.35	0.30	0.20	-	-	-	-
RDKT1204M0 -	MF/MM	-	0.50	0.45	0.30	0.25	0.22	-	-	-
RDHW1605M0	-	-	0.60	0.50	0.45	0.35	0.30	0.20	0.10	-
RDHW2006M0	-	-	-	0.60	0.50	0.40	0.30	0.25	0.15	0.10
RDKT1605M0 -	MM	-	0.60	0.50	0.45	0.35	0.30	0.20	0.10	-
RDKT2006M0 -	MM	-	-	0.60	0.50	0.40	0.30	0.25	0.15	0.10

Future Mill (FMR)

Ramping technical data



$$L_{min} = \frac{ap}{\tan \alpha^\circ} \text{ (mm)}$$

* Lmin: Min. inclination cutting length
α°: Max. ramping angle
ap: Depth of cut

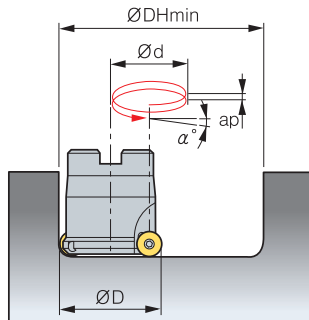
(mm)

Section	Tool dia.	Ramping angle α° (Max)	Cutting length L (mm) by ramping angle									
			ap = 1	ap = 2	ap = 2.5	ap = 3	ap = 3.5	ap = 4	ap = 5	ap = 6	ap = 8	ap = 10
FMR1000	08	18.14	3	6	8	-	-	-	-	-	-	-
	10	11.7	5	10	12	-	-	-	-	-	-	-
	12	8.43	7	13	17	-	-	-	-	-	-	-
	15	5.93	10	19	24	-	-	-	-	-	-	-
FMR1500	10	20.67	21	5	7	8	-	-	-	-	-	-
	12	10.05	10	11	14	17	-	-	-	-	-	-
	16	6.12	6	19	23	28	-	-	-	-	-	-
	20	4.36	4	26	33	39	-	-	-	-	-	-
FMR2000	15	9.42	6	12	15	18	21	-	-	-	-	-
	20	5.85	10	20	24	29	34	-	-	-	-	-
FMR2500	16	13.7	4	8	10	12	14	16	-	-	-	-
	20	9.29	6	12	15	18	21	24	-	-	-	-
	25	6.56	9	17	22	26	30	35	-	-	-	-
FMR3000	25	21.8	3	5	6	8	9	10	13	-	-	-
	32	13.24	4	9	11	13	15	17	21	-	-	-
	40	9.09	6	13	16	19	22	25	31	-	-	-
	50	6.52	9	17	22	26	31	35	44	-	-	-
	63	4.76	12	24	30	36	42	48	60	-	-	-
	80	3.52	16	33	41	49	57	65	81	-	-	-
FMR4000	100	2.69	21	43	53	64	74	85	106	-	-	-
	32	15.95	3	7	9	10	12	14	17	21	-	-
	40	10.3	6	11	14	17	19	22	28	33	-	-
	50	7.13	8	16	20	24	28	32	40	48	-	-
	63	5.08	11	22	28	34	39	45	56	67	-	-
	80	3.69	16	31	39	47	54	62	78	93	-	-
	100	2.79	21	41	51	62	72	82	103	123	-	-
FMR5000	125	2.14	27	54	67	80	94	107	134	161	-	-
	40	7.4	8	15	19	23	27	31	38	46	62	-
	50	5.22	11	22	27	33	38	44	55	66	88	-
	63	3.79	15	30	38	45	53	60	75	91	121	-
	80	2.97	19	39	48	58	67	77	96	116	154	-
	100	2.09	27	55	69	82	96	110	137	164	219	-
FMR6000	125	1.63	35	70	88	105	123	141	176	211	281	-
	40	7.44	8	15	19	23	27	31	38	46	61	77
	50	4.97	11	23	29	34	40	46	57	69	92	46
	63	3.69	16	31	39	47	54	62	78	93	124	62
	80	2.72	21	42	53	63	74	84	105	126	168	84
	100	2.12	27	54	68	81	95	108	135	162	216	108
	125	1.57	36	73	91	109	128	146	182	219	292	146



Future Mill (FMR)

Helical cutting technical data - ØDHmin



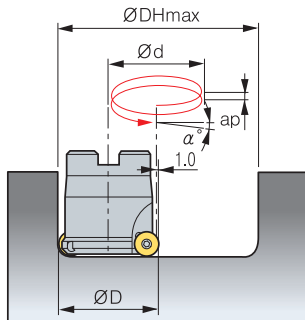
- ØD = Tool dia. (mm), ØDHmin, Max = Min, Max diameter (mm)
- Ød = Tool path (mm)
- ØDHmin (Min diameter) = ØD × 2 - Insert size, ØDHmax (Max diameter) = ØD × 2 - 2
- Ød (Tool path) = ØDHmin, Max - ØD

(mm)

Section	Insert	Tool dia.	ØDHmin	Ød	Ramping angle (α°)									
					ap = 1	ap = 2	ap = 2.5	ap = 3	ap = 3.5	ap = 4	ap = 5	ap = 6	ap = 8	ap = 10
FMR1000	5	08	11	3	6.11	12.35	15.57	-	-	-	-	-	-	-
	5	10	15	5	3.65	7.34	7.34	-	-	-	-	-	-	-
	5	12	19	7	2.61	5.23	5.23	-	-	-	-	-	-	-
	5	15	25	10	1.83	3.65	3.65	-	-	-	-	-	-	-
FMR1500	6	10	14	4	4.57	9.20	9.20	13.95	-	-	-	-	-	-
	6	12	18	6	3.04	6.11	6.11	9.20	-	-	-	-	-	-
	6	16	26	10	1.83	3.65	3.65	5.49	-	-	-	-	-	-
	6	20	34	14	1.30	2.61	2.61	3.92	-	-	-	-	-	-
FMR2000	7	15	23	8	2.28	4.57	4.57	6.88	8.04	-	-	-	-	-
	7	20	33	13	1.40	2.81	2.81	4.22	4.92	-	-	-	-	-
FMR2500	8	16	24	8	2.28	4.57	4.57	6.88	8.04	9.20	-	-	-	-
	8	20	32	12	1.52	3.04	3.04	4.57	5.34	6.11	-	-	-	-
	8	25	42	17	1.07	2.15	2.15	3.22	3.76	4.30	-	-	-	-
FMR3000	10	25	40	15	1.22	2.43	2.43	3.65	4.27	4.88	6.11	-	-	-
	10	32	54	22	0.83	1.66	1.66	2.49	2.91	3.32	4.15	-	-	-
	10	40	70	30	0.61	1.22	1.22	1.83	2.13	2.43	3.04	-	-	-
	10	50	90	40	0.46	0.91	0.91	1.37	1.60	1.83	2.28	-	-	-
	10	63	116	53	0.34	0.69	0.69	1.03	1.21	1.38	1.72	-	-	-
	10	80	150	70	0.26	0.52	0.52	0.78	0.91	1.04	1.30	-	-	-
	10	100	190	90	0.20	0.41	0.41	0.61	0.71	0.81	1.01	-	-	-
FMR4000	12	32	52	20	0.91	1.83	1.83	2.74	3.20	3.65	4.57	5.49	-	-
	12	40	68	28	0.65	1.30	1.30	1.96	2.28	2.61	3.26	3.92	-	-
	12	50	88	38	0.48	0.96	0.96	1.44	1.68	1.92	2.40	2.88	-	-
	12	63	114	51	0.36	0.72	0.72	1.07	1.25	1.43	1.79	2.15	-	-
	12	80	148	68	0.27	0.54	0.54	0.81	0.94	1.07	1.34	1.61	-	-
	12	100	188	88	0.21	0.41	0.41	0.62	0.73	0.83	1.04	1.24	-	-
	12	125	238	113	0.16	0.32	0.32	0.48	0.57	0.65	0.81	0.97	-	-
	12	150	298	143	0.13	0.26	0.26	0.39	0.46	0.53	0.65	0.78	-	-
FMR5000	16	40	64	24	0.76	1.52	1.52	2.28	2.66	3.04	3.81	4.57	6.11	-
	16	50	84	34	0.54	1.07	1.07	1.61	1.88	2.15	2.69	3.22	4.30	-
	16	63	110	47	0.39	0.78	0.78	1.16	1.36	1.55	1.94	2.33	3.11	-
	16	80	144	64	0.29	0.57	0.57	0.86	1.00	1.14	1.43	1.71	2.28	-
	16	100	184	84	0.22	0.43	0.43	0.65	0.76	0.87	1.09	1.30	1.74	-
	16	125	234	109	0.17	0.33	0.33	0.50	0.59	0.67	0.84	1.00	1.34	-
FMR6000	20	50	80	30	0.61	1.22	1.22	1.83	2.13	2.43	3.04	3.65	4.88	6.11
	20	63	106	43	0.42	0.85	0.85	1.27	1.49	1.70	2.12	2.55	3.40	4.25
	20	80	140	60	0.30	0.61	0.61	0.91	1.06	1.22	1.52	1.83	2.43	3.04
	20	100	180	80	0.23	0.46	0.46	0.68	0.80	0.91	1.14	1.37	1.83	2.28
	20	125	230	105	0.17	0.35	0.35	0.52	0.61	0.70	0.87	1.04	1.39	1.74
	20	160	300	140	0.13	0.26	0.26	0.39	0.46	0.52	0.65	0.78	1.04	1.30

Future Mill (FMR)

Helical cutting technical data - ØDHmax



- ØD = Tool dia. (mm), ØDHmin, Max = Min, Max diameter (mm)
- Ød = Tool path (mm)
- ØDHmin (Min diameter) = ØD × 2 - Insert size, ØDHmax (Max diameter) = ØD × 2 - 2
- Ød (Tool path) = ØDHmin, Max - ØD

(mm)

Section	Insert	Tool dia.	ØDHmax	Ød	Ramping angle (α°)									
					ap = 1	ap = 2	ap = 2.5	ap = 3	ap = 3.5	ap = 4	ap = 5	ap = 6	ap = 8	ap = 10
FMR1000	5	08	14	6	3.04	6.11	7.65	-	-	-	-	-	-	-
	5	10	18	8	2.28	4.57	5.72	-	-	-	-	-	-	-
	5	12	22	10	1.83	3.65	4.57	-	-	-	-	-	-	-
	5	15	28	13	1.40	2.81	3.51	-	-	-	-	-	-	-
FMR1500	6	10	18	8	2.28	4.57	5.72	6.88	-	-	-	-	-	-
	6	12	22	10	1.83	3.65	4.57	5.49	-	-	-	-	-	-
	6	16	30	14	1.30	2.61	3.26	3.92	-	-	-	-	-	-
	6	20	38	18	1.01	2.03	2.54	3.04	-	-	-	-	-	-
FMR2000	7	15	28	13	1.40	2.81	3.51	4.22	4.92	-	-	-	-	-
	7	20	38	18	1.01	2.03	2.54	3.04	3.55	-	-	-	-	-
FMR2500	8	16	30	14	1.30	2.61	3.26	3.92	4.57	5.23	-	-	-	-
	8	20	38	18	1.01	2.03	2.54	3.04	3.55	4.06	-	-	-	-
	8	25	48	23	0.79	1.59	1.98	2.38	2.78	3.18	-	-	-	-
FMR3000	10	25	48	23	0.79	1.59	1.98	2.38	2.78	3.18	3.97	-	-	-
	10	32	62	30	0.61	1.22	1.52	1.83	2.13	2.43	3.04	-	-	-
	10	40	78	38	0.48	0.96	1.20	1.44	1.68	1.92	2.40	-	-	-
	10	50	98	48	0.38	0.76	0.95	1.14	1.33	1.52	1.90	-	-	-
	10	63	124	61	0.30	0.60	0.75	0.90	1.05	1.20	1.50	-	-	-
	10	80	158	78	0.23	0.47	0.58	0.70	0.82	0.94	1.17	-	-	-
	10	100	198	98	0.19	0.37	0.47	0.56	0.65	0.74	0.93	-	-	-
FMR4000	12	32	62	30	0.61	1.22	1.52	1.83	2.13	2.43	3.04	3.65	-	-
	12	40	78	38	0.48	0.96	1.20	1.44	1.68	1.92	2.40	2.88	-	-
	12	50	98	48	0.38	0.76	0.95	1.14	1.33	1.52	1.90	2.28	-	-
	12	63	124	61	0.30	0.60	0.75	0.90	1.05	1.20	1.50	1.80	-	-
	12	80	158	78	0.23	0.47	0.58	0.70	0.82	0.94	1.17	1.40	-	-
	12	100	198	98	0.19	0.37	0.47	0.56	0.65	0.74	0.93	1.12	-	-
	12	125	248	123	0.15	0.30	0.37	0.45	0.52	0.59	0.74	0.89	-	-
FMR5000	16	40	78	38	0.48	0.96	1.20	1.44	1.68	1.92	2.40	2.88	3.85	-
	16	50	98	48	0.38	0.76	0.95	1.14	1.33	1.52	1.90	2.28	3.04	-
	16	63	124	61	0.30	0.60	0.75	0.90	1.05	1.20	1.50	1.80	2.39	-
	16	80	158	78	0.23	0.47	0.58	0.70	0.82	0.94	1.17	1.40	1.87	-
	16	100	198	98	0.19	0.37	0.47	0.56	0.65	0.74	0.93	1.12	1.49	-
	16	125	248	123	0.15	0.30	0.37	0.45	0.52	0.59	0.74	0.89	1.19	-
FMR6000	20	50	98	48	0.38	0.76	0.95	1.14	1.33	1.52	1.90	2.28	3.04	3.81
	20	63	124	61	0.30	0.60	0.75	0.90	1.05	1.20	1.50	1.80	2.39	2.99
	20	80	158	78	0.23	0.47	0.58	0.70	0.82	0.94	1.17	1.40	1.87	2.34
	20	100	198	98	0.19	0.37	0.47	0.56	0.65	0.74	0.93	1.12	1.49	1.86
	20	125	248	123	0.15	0.30	0.37	0.45	0.52	0.59	0.74	0.89	1.19	1.48
	20	160	318	158	0.12	0.23	0.29	0.35	0.40	0.46	0.58	0.69	0.92	1.16



Future Mill series for mold making

FMR P-positive

- Stable clamping system enables stable machining and productivity
- Varied product line-up ensures wide application range
- Optimal shape and grade with high hardness for hard-to-cut material machining

Features

- P-positive relief angle (11°) ensures high rigidity and high machinability in die steel and high-resistant alloy machining
- Flat clearance face of insert prevents interference and revolution while machining
- Optimal grades and chip breakers for various workpieces
- Chip breaker
 - Concave shape ensures wide chip pocket and lowers cutting temperature
 - Clearance face for preventing rotation
 - Prevents rotation in machining
 - Divides corners
 - Prevents interference in high-feed machining
 - Ensures stable clamping
 - Through-coolant system
 - Superb chip evacuation
 - Low cutting heat ensures long tool life

Features of chip breaker

Insert	Cutting-edge	Uses	Features
MA		Aluminum machining	Optimal cutting-edge for aluminum machining and buffed surface ensure high machinability
ML		Titanium & Inconel machining	Excellent results in titanium machining thanks to a high hardness cutting-edge and the chip breaker reducing the cutting load
MF		Light machining	Chip breaker for low cutting resistance enables fine finishing.
MM		General machining	Optimal for general machining
None C/B		Super hard material machining	Optimal for high hardness die steel and heat resistant alloy

Recommended cutting condition

* Recommended chip breaker: ● First ○ Second

	Workpiece	Hardness	Grades	Cutting conditions				Chip breaker				
				vc (m/min)	fz (mm/t)	ap (mm)	ae (mm)	MA	ML	MF	MM	None C/B 1 2
P	Low carbon steel	HB80~180	PC5400	100~250	0.12~0.70	0.3~6.0	0.7D~0.1D	-	-	●	○	-
	High carbon steel	HB180~280	PC5400	100~220	0.12~0.70	0.3~6.0	0.7D~0.1D	-	-	●	○	-
	Low alloy steel	Under H _R C27	PC3700	180~290	0.20~0.60	0.3~6.0	0.7D~0.1D	-	-	-	●	○
			PC5400/PC5300	100~200	0.20~0.60	0.3~6.0	0.7D~0.1D	-	-	-	●	○
	Low pre-hardened steel	H _R C20~50	PC3700	130~250	0.30~0.50	~ 0.5	0.7D~0.1D	-	-	-	-	●
			PC2510/PC5300	50~150	0.30~0.50	~ 0.5	0.7D~0.1D	-	-	-	-	●
	High alloy steel	Under H _R C27	PC3700	130~250	0.30~0.50	~ 0.5	0.7D~0.1D	-	-	-	●	○
M	High pre-hardened steel	H _R C20~48	PC5300	100~220	0.30~0.50	~ 0.5	0.7D~0.1D	-	-	-	●	○
			PC2510/PC5300	50~150	0.30~0.50	~ 0.5	0.7D~0.1D	-	-	-	-	●
K	Stainless steel	Under HB270	PC5300/PC5400	100~150	0.20~0.60	0.3~6.0	0.7D~0.1D	-	-	○	●	-
K	Gray cast iron, Ductile cast iron	Under 350MPa	PC5300	120~210	0.20~0.60	0.3~6.0	0.7D~0.1D	-	-	○	●	-
N	Aluminum	-	H01	300~800	0.30~0.60	0.3~6.0	0.7D~0.1D	●	-	-	-	-
S	Heat resistant alloy	Fe	H _R C20~30	PC5300/PC5400	35~60	0.30~0.50	~ 0.5	0.7D~0.1D	-	●	○	-
		Ni or Co	H _R C40~45	PC5300/PC5400	30~50	0.30~0.50	~ 0.5	0.7D~0.1D	-	●	○	-
	Titanium	H _R C35~45	PC5300/PC5400	40~70	0.30~0.50	~ 1.5	0.7D~0.1D	-	●	○	-	-
H	High hardened materials	Over H _R C50	PC2505/PC2510	30~50	0.30~0.50	~ 0.5	0.7D~0.1D	-	-	-	-	●

E Technical Information for FMR P-positive

➤ Feed per tooth according to ap (fz, mm/t)

(mm)

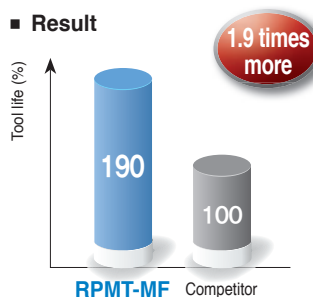
Insert	Insert size (d)	Feed per tooth according to ap							
		ap = 1	ap = 2	ap = 3	ap = 4	ap = 5	ap = 6	ap = 8	ap = 10
RPMT08	8	0.30	0.22	0.18	0.15	-	-	-	-
RPMT10	10	0.40	0.28	0.25	0.20	0.12	-	-	-
RPMT12	12	0.60	0.45	0.35	0.30	0.25	0.20	-	-
RPMT16	16	0.65	0.45	0.40	0.32	0.30	0.28	0.23	-
RPMT20	20	0.70	0.50	0.42	0.35	0.32	0.29	0.25	0.22

➤ Performance evaluation

Alloy steel (SM490A Heat treatment, HRC 38~40)

- **Cutting conditions** vc (m/min) = 250
fz (mm/tooth) = 0.6
ap (mm) = 1
wet

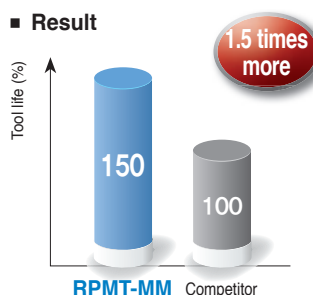
- **Tools** **Insert** RPMT1204M0E-MF (PC5300)
Holder FMRS4032HRP-3L25



Low pre-hardened steel (KP4M Heat treatment, HRC 30~45)

- **Cutting conditions** vc (m/min) = 178
fz (mm/tooth) = 0.72
ap (mm) = 1.5
dry

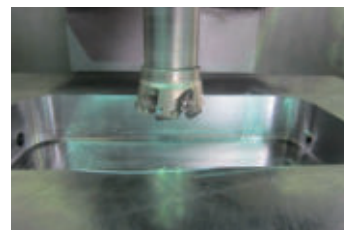
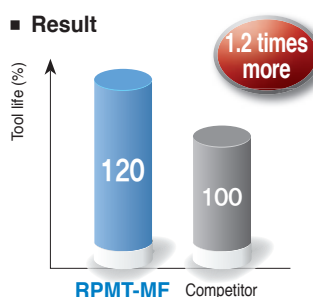
- **Tools** **Insert** RPMT1606M0S-MM (PC5300)
Holder FMRCM5063HRP-4



Low pre-hardened steel (KP1, HRC 28~33)

- **Cutting conditions** vc (m/min) = 178
fz (mm/tooth) = 0.74
ap (mm) = 0.8
dry

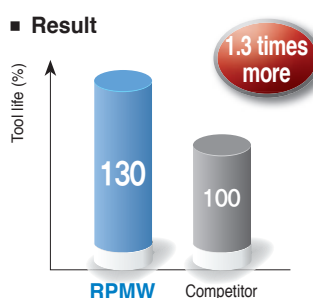
- **Tools** **Insert** RPMT1204M0E-MF (PC5300)
Holder FMRCM4063HRP-6



High pre-hardened steel (STD61, HRC 50~52)

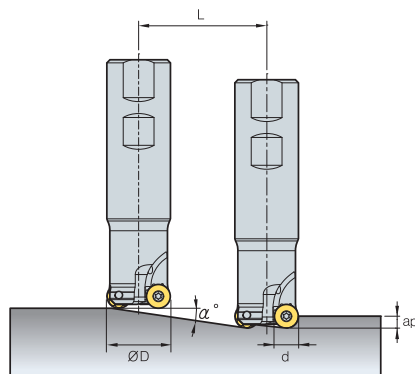
- **Cutting conditions** vc (m/min) = 50
fz (mm/tooth) = 0.15
ap (mm) = 4.0
dry

- **Tools** **Insert** RPMW1204M0S1 (PC5300)
Holder FMRS4032HRP-3L25



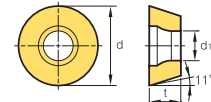
FMR P-positive

Maximum angle table for ramping machining



$$L_{min} = \frac{ap}{\tan \alpha^\circ} \text{ (mm)}$$

* L (mm): Cutting length
α°: Max. ramping angle
ap: Depth of cut



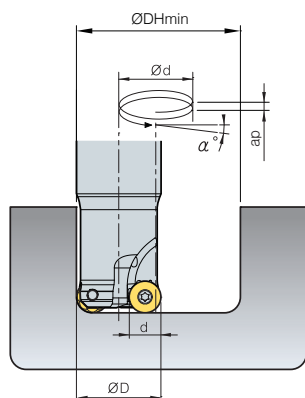
(mm)

Section	Insert size (d)	Tool dia. (ØD)	Ramping angle α° (max)	Cutting length L (mm) by ap									
				ap = 1	ap = 2	ap = 2.5	ap = 3	ap = 3.5	ap = 4	ap = 5	ap = 6	ap = 8	ap = 10
FMR2500	8	17	4.7	12	24	30	36	42	48	-	-	-	-
	8	18	4.1	14	28	34	41	48	55	-	-	-	-
	8	20	15.4	4	7	9	11	13	14	-	-	-	-
	8	21	13.9	4	8	10	12	14	16	-	-	-	-
	8	25	9.8	6	12	14	17	20	23	-	-	-	-
	8	26	9.2	6	12	16	19	22	25	-	-	-	-
FMR3000	10	25	13.8	4	8	10	12	14	16	20	-	-	-
	10	26	12.6	4	9	11	13	16	18	22	-	-	-
	10	32	8.4	7	14	17	20	24	27	34	-	-	-
	10	33	8.0	7	14	18	21	25	29	36	-	-	-
	10	40	5.8	10	20	25	30	34	39	49	-	-	-
	10	50	4.2	14	27	34	41	48	55	68	-	-	-
	10	63	3.1	19	37	47	56	65	75	93	-	-	-
FMR4000	10	66	2.9	20	40	50	60	69	79	99	-	-	-
	12	25	4.5	13	25	32	38	44	51	63	76	-	-
	12	26	4.1	14	28	35	42	49	56	70	84	-	-
	12	32	14.7	4	8	10	11	13	15	19	23	-	-
	12	33	13.8	4	8	10	12	14	16	20	24	-	-
	12	40	9.6	6	12	15	18	21	24	30	36	-	-
	12	50	6.7	9	17	21	26	30	34	43	51	-	-
	12	63	4.8	12	24	30	36	42	48	60	72	-	-
	12	66	4.5	13	26	32	38	45	51	64	77	-	-
FMR5000	12	80	3.5	17	33	41	50	58	66	83	99	-	-
	12	100	2.6	22	44	55	65	76	87	109	131	-	-
	16	40	17.8	3	6	8	9	11	12	16	19	25	-
	16	50	11.3	5	10	13	15	18	20	25	30	40	-
	16	63	7.6	7	15	19	22	26	30	37	45	60	-
	16	66	7.1	8	16	20	24	28	32	40	48	64	-
	16	80	5.3	11	21	27	32	37	43	53	64	85	-
	16	100	4.0	14	29	36	43	51	58	72	87	116	-
	16	125	3.0	19	38	48	58	67	77	96	115	154	-
FMR6000	16	160	2.2	26	52	65	78	90	103	129	155	207	-
	20	50	17.8	3	6	8	9	11	12	16	19	25	31
	20	63	11.1	5	10	13	15	18	20	25	30	41	51
	20	80	7.4	8	15	19	23	27	31	38	46	61	77
	20	100	5.3	11	21	27	32	37	43	53	64	85	107
	20	125	4.0	14	29	36	43	51	58	72	87	116	145
	20	160	2.9	20	40	49	59	69	79	99	119	158	198
	20	200	2.2	26	52	65	78	90	103	129	155	207	258
FMR6000	20	250	1.7	33	67	84	100	117	134	167	200	267	334

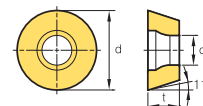
* Insert size (d): Please refer page E16 applicable insert drawing.

FMR P-positive

Minimum hole diameter table for helical machining (ØDHmin)



- ØD = Tool dia. (mm)
- Ød (Tool path, mm) = ØDHmin, Max - ØD
- ØDHmin (Minimum hole diameter) = ØD × 2 - Insert size (d)
- ØDHmax (Maximum hole diameter) = ØD × 2 + 2
- Ramping angle by ap (α°) = $\tan^{-1} \left(\frac{ap}{\pi \times \text{Ød}} \right)$
- Helical angle adjusted by ap cannot exceed maximum angle
- ap = Depth of cut



(mm)

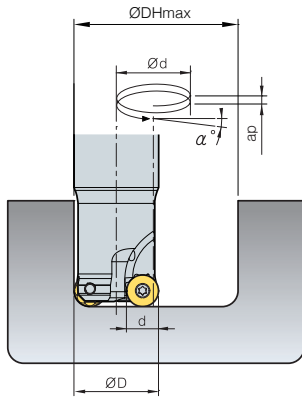
Section	Insert size (d)	Tool dia. (ØD)	Ramping angle α° (max)	ØDHmin	Ød	Ramping angle (α°) by ap									
						ap = 1	ap = 2	ap = 2.5	ap = 3	ap = 3.5	ap = 4	ap = 5	ap = 6	ap = 8	ap = 10
FMR2500	8	17	4.7	26	9	2.03	4.06	-	-	-	-	-	-	-	-
	8	18	4.1	28	10	1.83	3.65	-	-	-	-	-	-	-	-
	8	20	15.4	32	12	1.52	3.04	3.81	4.57	5.34	6.11	-	-	-	-
	8	21	13.9	34	13	1.40	2.81	3.51	4.22	4.92	5.63	-	-	-	-
	8	25	9.8	42	17	1.07	2.15	2.69	3.22	3.76	4.30	-	-	-	-
	8	26	9.2	44	18	1.01	2.03	2.54	3.04	3.55	4.06	-	-	-	-
FMR3000	10	25	13.8	40	15	1.22	2.43	3.04	3.65	4.27	4.88	-	-	-	-
	10	26	12.6	42	16	1.14	2.28	2.85	3.43	4.00	4.57	-	-	-	-
	10	32	8.4	54	22	0.83	1.66	2.07	2.49	2.91	3.32	-	-	-	-
	10	33	8.0	56	23	0.79	1.59	1.98	2.38	2.78	3.18	-	-	-	-
	10	40	5.8	70	30	0.61	1.22	1.52	1.83	2.13	2.43	-	-	-	-
	10	50	4.2	90	40	0.46	0.91	1.14	1.37	1.60	1.83	-	-	-	-
	10	63	3.1	116	53	0.34	0.69	0.86	1.03	1.21	1.38	-	-	-	-
	10	66	2.9	122	56	0.33	0.65	0.81	0.98	1.14	1.30	-	-	-	-
FMR4000	12	25	4.5	38	13	1.40	2.81	3.51	-	-	-	-	-	-	-
	12	26	4.1	40	14	1.30	2.61	3.26	-	-	-	-	-	-	-
	12	32	14.7	52	20	0.91	1.83	2.28	2.74	3.20	3.65	4.57	5.49	-	-
	12	33	13.8	54	21	0.87	1.74	2.17	2.61	3.04	3.48	4.35	5.23	-	-
	12	40	9.6	68	28	0.65	1.30	1.63	1.96	2.28	2.61	3.26	3.92	-	-
	12	50	6.7	88	38	0.48	0.96	1.20	1.44	1.68	1.92	2.40	2.88	-	-
	12	63	4.8	114	51	0.36	0.72	0.89	1.07	1.25	1.43	1.79	2.15	-	-
	12	66	4.5	120	54	0.34	0.68	0.84	1.01	1.18	1.35	1.69	2.03	-	-
	12	80	3.5	148	68	0.27	0.54	0.67	0.81	0.94	1.07	1.34	1.61	-	-
	12	100	2.6	188	88	0.21	0.41	0.52	0.62	0.73	0.83	1.04	1.24	-	-
FMR5000	16	40	17.8	64	24	0.76	1.52	1.90	2.28	2.66	3.04	3.81	4.57	6.11	-
	16	50	11.3	84	34	0.54	1.07	1.34	1.61	1.88	2.15	2.69	3.22	4.30	-
	16	63	7.6	110	47	0.39	0.78	0.97	1.16	1.36	1.55	1.94	2.33	3.11	-
	16	66	7.1	116	50	0.36	0.73	0.91	1.09	1.28	1.46	1.83	2.19	2.92	-
	16	80	5.3	144	64	0.29	0.57	0.71	0.86	1.00	1.14	1.43	1.71	2.28	-
	16	100	4.0	184	84	0.22	0.43	0.54	0.65	0.76	0.87	1.09	1.30	1.74	-
	16	125	3.0	234	109	0.17	0.33	0.42	0.50	0.59	0.67	0.84	1.00	1.34	-
	16	160	2.2	304	144	0.13	0.25	0.32	0.38	0.44	0.51	0.63	0.76	1.01	-
FMR6000	20	50	17.8	80	30	0.61	1.22	1.52	1.83	2.13	2.43	3.04	3.65	4.88	6.11
	20	63	11.1	106	43	0.42	0.85	1.06	1.27	1.49	1.70	2.12	2.55	3.40	4.25
	20	80	7.4	140	60	0.30	0.61	0.76	0.91	1.06	1.22	1.52	1.83	2.43	3.04
	20	100	5.3	180	80	0.23	0.46	0.57	0.68	0.80	0.91	1.14	1.37	1.83	2.28
	20	125	4.0	230	105	0.17	0.35	0.43	0.52	0.61	0.70	0.87	1.04	1.39	1.74
	20	160	2.9	300	140	0.13	0.26	0.33	0.39	0.46	0.52	0.65	0.78	1.04	1.30
	20	200	2.2	380	180	0.10	0.20	0.25	0.30	0.35	0.41	0.51	0.61	0.81	1.01
	20	250	1.7	480	230	0.08	0.16	0.20	0.24	0.28	0.32	0.40	0.48	0.63	0.79

* Insert size (d): Please refer page E16 applicable insert drawing.

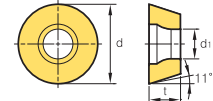


FMR P-positive

Maximum hole diameter table for helical machining (ØDHmax)



- ØD = Tool dia. (mm)
- Ød (Tool path, mm) = ØDHmin, Max - ØD
- ØDHmin (Minimum hole diameter) = ØD × 2 - Insert size (d)
- ØDHmax (Maximum hole diameter) = ØD × 2 - 2
- Ramping angle by ap (α°) = $\tan^{-1} \left(\frac{ap}{\pi \times \text{Ød}} \right)$
- Helical angle adjusted by ap cannot exceed maximum angle
- ap = Depth of cut



(mm)

Section	Insert size (d)	Tool dia. (ØD)	Ramping angle α° (max)	ØDHmax	Ød	Ramping angle (α°) by ap									
						ap = 1	ap = 2	ap = 2.5	ap = 3	ap = 3.5	ap = 4	ap = 5	ap = 6	ap = 8	ap = 10
FMR2500	8	17	4.7	32	15	1.22	2.43	3.04	3.65	-	-	-	-	-	-
	8	18	4.1	34	16	1.14	2.28	2.85	3.43	-	-	-	-	-	-
	8	20	15.4	38	18	1.01	2.03	2.54	3.04	3.55	4.06	-	-	-	-
	8	21	13.9	40	19	0.96	1.92	2.40	2.88	3.37	3.85	-	-	-	-
	8	25	9.8	48	23	0.79	1.59	1.98	2.38	2.78	3.18	-	-	-	-
	8	26	9.2	50	24	0.76	1.52	1.90	2.28	2.66	3.04	-	-	-	-
FMR3000	10	25	13.8	48	23	0.79	1.59	1.98	2.38	2.78	3.18	-	-	-	-
	10	26	12.6	50	24	0.76	1.52	1.90	2.28	2.66	3.04	-	-	-	-
	10	32	8.4	62	30	0.61	1.22	1.52	1.83	2.13	2.43	-	-	-	-
	10	33	8.0	64	31	0.59	1.18	1.47	1.77	2.06	2.36	-	-	-	-
	10	40	5.8	78	38	0.48	0.96	1.20	1.44	1.68	1.92	-	-	-	-
	10	50	4.2	98	48	0.38	0.76	0.95	1.14	1.33	1.52	-	-	-	-
	10	63	3.1	124	61	0.30	0.60	0.75	0.90	1.05	1.20	-	-	-	-
	10	66	2.9	130	64	0.29	0.57	0.71	0.86	1.00	1.14	-	-	-	-
FMR4000	12	25	4.5	48	23	0.79	1.59	1.98	2.38	2.78	3.18	-	-	-	-
	12	26	4.1	50	24	0.76	1.52	1.90	2.28	2.66	3.04	-	-	-	-
	12	32	14.7	62	30	0.61	1.22	1.52	1.83	2.13	2.43	3.04	3.65	-	-
	12	33	13.8	64	31	0.59	1.18	1.47	1.77	2.06	2.36	2.95	3.54	-	-
	12	40	9.6	78	38	0.48	0.96	1.20	1.44	1.68	1.92	2.40	2.88	-	-
	12	50	6.7	98	48	0.38	0.76	0.95	1.14	1.33	1.52	1.90	2.28	-	-
	12	63	4.8	124	61	0.30	0.60	0.75	0.90	1.05	1.20	1.50	1.80	-	-
	12	66	4.5	130	64	0.29	0.57	0.71	0.86	1.00	1.14	1.43	1.71	-	-
	12	80	3.5	158	78	0.23	0.47	0.58	0.70	0.82	0.94	1.17	1.40	-	-
	12	100	2.6	198	98	0.19	0.37	0.47	0.56	0.65	0.74	0.93	1.12	-	-
FMR5000	16	40	17.8	78	38	0.48	0.96	1.20	1.44	1.68	1.92	2.40	2.88	3.85	-
	16	50	11.3	98	48	0.38	0.76	0.95	1.14	1.33	1.52	1.90	2.28	3.04	-
	16	63	7.6	124	61	0.30	0.60	0.75	0.90	1.05	1.20	1.50	1.80	2.39	-
	16	66	7.1	130	64	0.29	0.57	0.71	0.86	1.00	1.14	1.43	1.71	2.28	-
	16	80	5.3	158	78	0.23	0.47	0.58	0.70	0.82	0.94	1.17	1.40	1.87	-
	16	100	4.0	198	98	0.19	0.37	0.47	0.56	0.65	0.74	0.93	1.12	1.49	-
	16	125	3.0	248	123	0.15	0.30	0.37	0.45	0.52	0.59	0.74	0.89	1.19	-
	16	160	2.2	318	158	0.12	0.23	0.29	0.35	0.40	0.46	0.58	0.69	0.92	-
FMR6000	20	50	17.8	98	48	0.38	0.76	0.95	1.14	1.33	1.52	1.90	2.28	3.04	3.81
	20	63	11.1	124	61	0.30	0.60	0.75	0.90	1.05	1.20	1.50	1.80	2.39	2.99
	20	80	7.4	158	78	0.23	0.47	0.58	0.70	0.82	0.94	1.17	1.40	1.87	2.34
	20	100	5.3	198	98	0.19	0.37	0.47	0.56	0.65	0.74	0.93	1.12	1.49	1.86
	20	125	4.0	248	123	0.15	0.30	0.37	0.45	0.52	0.59	0.74	0.89	1.19	1.48
	20	160	2.9	318	158	0.12	0.23	0.29	0.35	0.40	0.46	0.58	0.69	0.92	1.16
	20	200	2.2	398	198	0.09	0.18	0.23	0.28	0.32	0.37	0.46	0.55	0.74	0.92
	20	250	1.7	498	248	0.07	0.15	0.18	0.22	0.26	0.29	0.37	0.44	0.59	0.74

* Insert size (d): Please refer page E16 applicable insert drawing.



FMAC(M)3000

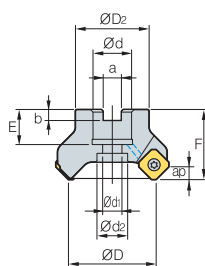


Fig. 1

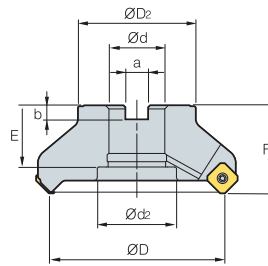


Fig. 2



AA
45°

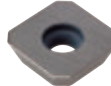
• AR: 21°
• RR: -17°~12°

(mm)

Designation			ØD	ØD ₂	Ød	a	b	E	F	Ød ₁	Ød ₂	ap		Fig.
FMACM	3050HR	4	50	42	22	10.4	6.3	20	40	11	17.5	4.0	0.4	1
	3050HR-H	6	50	42	22	10.4	6.3	20	40	11	17.5	4.0	0.4	1
	3063HR	5	63	49	22	10.4	6.3	20	40	11	17.5	4.0	0.5	1
	3063HR-H	8	63	49	22	10.4	6.3	20	40	11	17.5	4.0	0.6	1
FMAC (FMACM)	3080HR	6	80	57	25.4 (27)	9.5 (12.4)	6 (7)	25 (23)	50	14	20	4.0	1.1	1
	3080HR-H	10	80	57	25.4 (27)	9.5 (12.4)	6 (7)	25 (23)	50	14	20	4.0	1.2	1
	3100HR	7	100	67	31.75 (32)	12.7 (14.4)	8 (8)	35 (25.5)	50	(18)	45(26)	4.0	1.7	2 (1)
	3100HR-H	12	100	67	31.75 (32)	12.7 (14.4)	8 (8)	35 (25.5)	50	(18)	45 (26)	4.0	1.7	2 (1)
	3125HR	8	125	87	38.1 (40)	15.9 (16.4)	10 (9)	42 (29)	63	(22)	55 (32)	4.0	3.3 (3.5)	2 (1)
	3125HR-H	14	125	87	38.1 (40)	15.9 (16.4)	10 (9)	42 (29)	63	(22)	55 (32)	4.0	3.3 (3.5)	2 (1)

() Metric size

Available inserts

		SEET-MF	SEET-MM	SEET-MA	SEXT-MF	SEXT-MM	SEXT-MR	SEEW												
																				
Designation		Cermet		Coated												Uncoated				page
		CN2500	CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6510	PC9530	PC9540	PC5300	PC5400	ST30A	G10	H01	
SEET	0903AGFN-MA																			
	0903AGSN-MF											●	●		●	●			●	●
	0903AGSN-MM				●							●	●		●	●				
SEXT	0903AGSN-MF											●	●		●	●				
	0903AGSN-MM									●		●	●		●	●				
	0903AGSN-MR														●	●				
SEEW	0903AGTN																			

Available arbors

Designation		Ød	NC arbors
FMACM	3050HR-□	22	BT□□-FMC22-□□
	3063HR-□		
FMAC (FMACM)	3080HR-□	25.4	BT□□-FMA25.4-□□
		27	BT□□-FMC27-□□
	3100HR-□	31.75	BT□□-FMA31.75-□□
		32	BT□□-FMC32-□□
	3125HR-□	38.1	BT□□-FMA38.1-□□
		40	BT□□-FMB/FMC40-□□

Parts

Specification		
Ø50~Ø125	FTKA0307	TW09S

Available inserts E21, E22 Available arbors and bolt E426~E428

