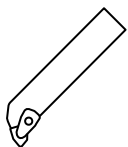


# CUTTING TOOLS

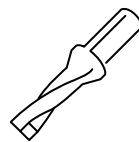
Exploring Limitless Machining KORLOY



Turning



Milling



Holemaking



Endmilling



A variety of high performance tools  
**KORLOY CUTTING TOOLS**

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# Grades / Chip Breakers

Korloys new grades are designed with optimal substrates for each application and are PVD coated for high temperature, high hardness and oxidation resistance, or CVD coated for high temperature and wear resistance. Additionally, the improved post-coating treatment provides superior surface finishes to ensure the highest levels of quality and productivity.

Inserts

Turning Tools

Milling Tools

Endmills / Drills

The Comparison of Chip Breakers, Grades

- Selection of KORLOY Grades
- CVD Coated Grades
- PVD Coated Grades
- Cermet Grades
- Uncoated Carbide Grades
- cBN Grades
- PCD Grades
- Chip Breakers

# < Selection of KORLOY Grades >

## Turning

Workpiece	P					M				K				S				N				H							
	ISO	P01	P10	P20	P30	P40	P50	M10	M20	M30	M40	K01	K10	K20	K30	S01	S10	S20	S30	N01	N10	N20	N30	H01	H10	H20	H30		
Coated carbide				NC3215				PC8105						NC6310 <i>new</i>		PC8105				ND3000 <i>new</i>							PC8105		
				NC3225				PC8110						NC6315 <i>new</i>		PC8110				PD1005 <i>new</i>							PC8110		
				NC3120				NC9115 <i>new</i>								PC8115					PD1010 <i>new</i>							PC8115	
				NC3030				NC9125 <i>new</i>							NC5330		NC9125 <i>new</i>												PC8115
				NC5330				NC9135 <i>new</i>							PC5300		NC9135 <i>new</i>												
				PC5300				PC5300							PC5400		PC5300												
				PC5400				PC5400									PC5400												
Cermets			CC1500 <i>new</i>											CC1500 <i>new</i>															
			CC2500 <i>new</i>											CC2500 <i>new</i>															
			CN1500											CN1500															
			CN2000																										
			CN2500																										
cBN / PCD													DBN700		DBN700					DP90							DNC100		
													DBN800							DP150							DNC250		
													DBN500							DP200							DNC400		
Uncoated carbide			ST10					U20						H01		H01				H01							H01		
				ST20										H05		H05				H05									
					ST30A																								
														G10															

## Milling

Workpiece	P					M				K				S				N				H								
	ISO	P10	P20	P30	P40	P50	M10	M20	M30	M40	K01	K10	K20	K30	K40	S10	S20	S30	S40	N01	N10	N20	N30	H01	H10	H20	H30			
Coated carbide				NC5330					NC5330						PC6510						ND3000 <i>new</i>							PC2005		
				PC3600					PC5300						NC5330		PC5300				PD1005 <i>new</i>								PC2505 <i>new</i>	
				PC3700 <i>new</i>					PC9530						PC5300		PC5400				PD1010 <i>new</i>								PC2010	
				NCM535 <i>new</i>					PC5400						NCM535 <i>new</i>		PC9540 <i>new</i>												PC2510 <i>new</i>	
				PC5300					PC9540 <i>new</i>						PC5400															PC2015
				NCM545 <i>new</i>											NCM545 <i>new</i>															PC210F
				PC5400																										
Cermets			CN2000																											
			CN30																											
cBN / PCD																					DP90							DBN500		
																					DP150									
																					DP200									
Uncoated carbide			ST20					U20							H01						H01									
				ST30A											H05						H05									
															G10															

# Selection of KORLOY Grades

## Endmilling

Workpiece		Grades	ISO	Application range
P	Steel	PC303S	P01	
		PC310U	P10	PC303S PC203F
		PC315F	P20	PC310U
		PC320	P40	PC315E PC320 PC215F
M	Stainless steel	PC303S	M01	
		PC310U	M10	PC303S PC203F PC310U
		PC320S	M20	PC320S
		PC315E	M30	PC315E PC320 PC215F
K	Cast iron	PC303S	K01	
		PC310U	K10	PC303S PC203F PC310U
		PC315E	K20	
		PC320	K40	PC315E PC320 PC215F
N	Nonferrous	ND3000 <sup>new</sup>	N01	ND3000 <sup>new</sup>
		ND2100 <sup>new</sup>	N05	ND2100 <sup>new</sup> PD1005 <sup>new</sup>
		PD3000	N10	PD1010 <sup>new</sup> H01 H05S
		H01	N20	PC210C
S	HRSA	PC210	S10	
		PC320S	S20	PC210 PC320S PC315E PC320 PC215F
		PC315E	S30	
H	High hardness steel	PC303S	H01	
		PC203F	H10	PC303S PC203F PC310U
		PC310U	H20	

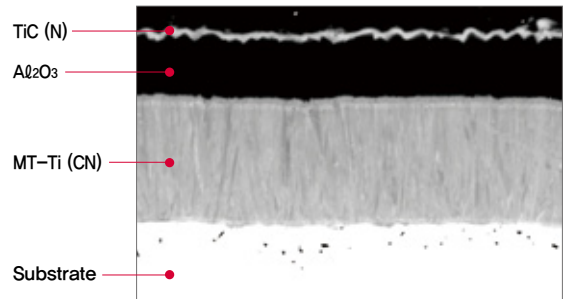
## Drilling

Workpiece		Grades	ISO	Application range
P	Steel	PC215G	P01	
		PC315G	P10	
		PC325U	P20	PC215G PC315G PC325U PC230F
		PC230F	P30	
M	Stainless steel	PC215G	M01	
		PC315G	M10	PC215G PC315G
		PC325U	M30	PC205F
K	Cast iron	PC215G	K01	
		PC315G	K10	
		PC205F	K20	PC215G PC315G PC205F
		PC325U	K30	
N	Nonferrous	ND2100 <sup>new</sup>	N05	ND2100 <sup>new</sup> FG2 FA1
		FG2	N10	
		FG2	N20	
S	HRSA	PC325T <sup>new</sup>	S20	PC325T <sup>new</sup>
			S30	

# CVD Coated Grades

## Features

- KORLOY cermet is a carbonitride type cermet which has an ultra fine microstructure accomplished by adding TiN, TiCN powders as additives. It also has superior toughness, thermal shock and wear resistance.



Cross-sectional view of CVD coating

## Grades Selection Guide

### Turning

Workpiece	Machining types	Recommended grades	Recommended cutting speed (m/min)	ISO	Application range
P Steel	Continuous cutting	NC3215	295 (170 ~ 420)	P10	
		NC3225	260 (150 ~ 370)	P15	NC3215
	Interrupted cutting	NC3120	260 (120 ~ 370)	P20	NC3225
		NC3030	205 (120 ~ 290)	P25	NC3120
		NC5330	205 (120 ~ 290)	P30	NC3030
M Stainless steel	Continuous cutting	NC9115 <sup>new</sup>	240 (220 ~ 260)	M10	NC9115 <sup>new</sup>
		NC9125 <sup>new</sup>	210 (190 ~ 230)	M20	NC9125 <sup>new</sup>
	Interrupted cutting	NC9135 <sup>new</sup>	180 (160 ~ 200)	M30	NC9135 <sup>new</sup>
		NC5330	180 (160 ~ 200)	M40	NC5330
K Cast iron	Continuous cutting	NC6310 <sup>new</sup>	380 (300 ~ 500)	K10	NC6310 <sup>new</sup>
		NC6315 <sup>new</sup>	280 (200 ~ 400)	K20	NC6315 <sup>new</sup>
	Interrupted cutting	NC5330	190 (110 ~ 270)	K30	NC5330
S HRSA	Continuous cutting	NC9125 <sup>new</sup>	40 (20 ~ 60)	S10	NC9125 <sup>new</sup>
	Interrupted cutting	NC9135 <sup>new</sup>		S20	NC9135 <sup>new</sup>

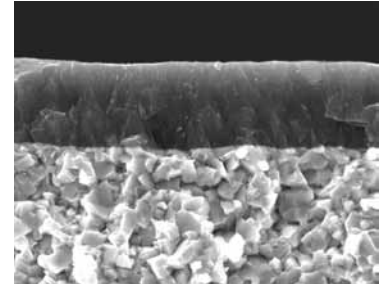
### Milling

Workpiece	Machining types	Recommended grades	Recommended cutting speed (m/min)	ISO	Application range	
P Steel	Continuous cutting	NC5330	200 (150 ~ 250)	P20		
		NC5330		P25	NC5330	
	Interrupted cutting	NCM535 <sup>new</sup>	300 (200 ~ 400)	P30	NCM535 <sup>new</sup>	
M Stainless steel	Continuous cutting	NC5330	150 (120 ~ 180)	P35	NCM535 <sup>new</sup>	
		NCM535 <sup>new</sup>		130 (100 ~ 150)	M20	NC5330
	Interrupted cutting	NCM545 <sup>new</sup>	110 (90 ~ 130)	M30	NCM545 <sup>new</sup>	
K Cast iron	Continuous cutting	NC5330	200 (150 ~ 250)	P40	NCM545 <sup>new</sup>	
		NCM535 <sup>new</sup>		250 (200 ~ 300)	P45	
		NC5330		200 (150 ~ 250)	K10	NC5330
		NCM535 <sup>new</sup>	250 (200 ~ 300)	K20	NCM535 <sup>new</sup>	
		NCM545 <sup>new</sup>	250 (200 ~ 300)	K30	NCM545 <sup>new</sup>	

# PVD Coated Grades

## Features

- PVD coating technology has inherent advantages such as a superior chipping resistance of the coated film while maintaining the toughness of the substrate. Thus it is possible to increase the tool life significantly
- PVD coatings ensure sharp cutting edges without blunting the substrate
- Ti-based coating films can provide excellent surface finish and high accuracy machining due to the low affinity of Ti-film with the workpiece



Cross-sectional view of PVD coating

## Advantages of PVD Coatings

- TiAlN coating optimal for high speed machining
- Toughness of TiAlN has been enhanced to reduce brittleness of conventional TiAlN
- The outer TiN layer reduces friction and improves surface smoothness
- Easy to recognize the amount of wear on the cutting edge

## Grades Selection Guide

### Turning

Workpiece	Machining types	Recommended grades	Recommended cutting speed (m/min)	ISO	Application range
P Steel	Continuous cutting	PC5300	175 (100 ~ 250)	P30	PC5300
	Interrupted cutting		145 (80 ~ 120)	P40	
M Stainless steel	Continuous cutting	PC5400	125 (80 ~ 160)	P50	
		PC8105	175 (120 ~ 230)	M01	
		PC8110	160 (110 ~ 210)	M10	PC8105
	Interrupted cutting	PC8115	150 (100 ~ 200)	M20	PC8110
		PC5300	135 (80 ~ 190)	M30	PC8115
		PC9030	130 (80 ~ 180)	M40	PC5300
S Heat resistant alloy	Continuous cutting	PC5400	110 (80 ~ 140)	M50	PC9030
		PC8105	55 (40 ~ 70)	S01	PC5400
		PC8110	50 (35 ~ 65)	S10	
	Interrupted cutting	PC8115	45 (30 ~ 60)	S20	PC8115
		PC5300	40 (20 ~ 60)	S30	PC5300
		PC5400	35 (20 ~ 50)	S40	PC5400
H Hardened	Interrupted cutting	PC8105	110 (80 ~ 140)	H01	PC8105
		PC8110	100 (70 ~ 130)	H05	PC8110
		PC8115	90 (65 ~ 115)	H10	PC8115

### Milling

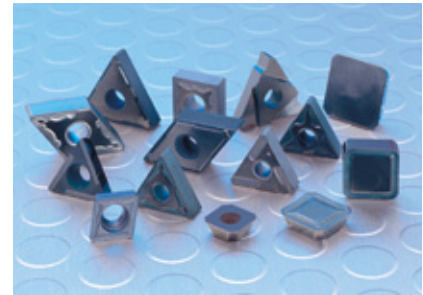
Workpiece	Machining types	Recommended grades	Recommended cutting speed (m/min)	ISO	Application range
P Steel	Continuous cutting	PC3600	235 (180 ~ 290)	P20	PC3600
		PC3700	235 (180 ~ 290)	P30	PC3700 <sup>new</sup>
	Interrupted cutting	PC5300	195 (150 ~ 240)	P40	PC5300
		PC5400	145 (80 ~ 210)		PC5400
M Stainless steel	Continuous cutting	PC5300	130 (100 ~ 160)	M20	PC5300
		PC9530	130 (100 ~ 160)	M30	PC9530
	Interrupted cutting	PC5400	120 (95 ~ 155)	M40	PC5400
		PC9540	110 (80 ~ 140)	M50	PC9540 <sup>new</sup>
K Cast iron	Continuous cutting	PC6510	180 (140 ~ 230)	K05	PC6510
	Interrupted cutting	PC5300	145 (110 ~ 180)	K20	PC5300
		PC5400	125 (85 ~ 160)	K30	PC5400
S HRSA	Continuous cutting	PC5300	55 (40 ~ 70)	S10	PC5300
	Interrupted cutting	PC5400	40 (30 ~ 50)	S30	PC5400
		PC9540	40 (30 ~ 50)	S40	PC9540 <sup>new</sup>
H High hardness steel	Continuous cutting	PC2005	60 (40 ~ 80)	H01	PC2005
		PC2010	55 (40 ~ 70)	H10	PC2010
		PC2015	50 (35 ~ 65)	H20	PC2015
		PC210F	50 (35 ~ 65)	H30	PC210F



# Cermets Grades

## Features

- KORLOY cermet is a carbonitride type cermet which has an ultra fine microstructure accomplished by adding TiN, TiCN powders as additives. It also has superior toughness, thermal shock and wear resistance.



## Advantages

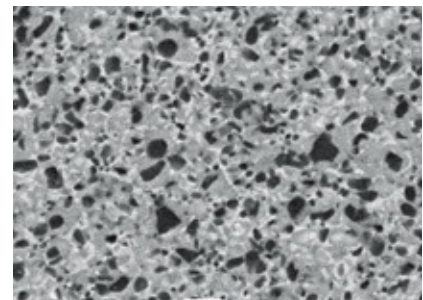
- Cermet, using TiCN as the main component, is harder than cemented carbide and has a lower affinity with ferrous workpieces at high temperatures, thus cermets have special advantages as listed below :

### Compared to Uncoated Carbide

- Since cermet has superior wear and crater wear resistance, higher cutting speeds can be applied
- The low affinity with ferrous workpieces enables cutting operations from low to high speed and provides an excellent surface finish
- Exceptional tool life and cutting performances in high speed finishing applications

### Compared to Coated Carbide

- Suitable for light cutting and finishing
- Better wear resistance and surface finish can be acquired while using the same cutting conditions



Microstructure of Cermet

## Grades Selection Guide

### Turning

Workpiece	Machining types	Recommended grades	Recommended cutting speed (m/min)	ISO	Application range
P Steel	Continuous cutting	CN1500	250 (150~350)	P10	CN1500
	Interrupted cutting	CN2500	220 (130~300)	P20	
				P30	CN2500

### Turning (Coated Cermet Grades)

Workpiece	Machining types	Recommended grades	Recommended cutting speed (m/min)	ISO	Application range
P Steel	Continuous cutting	CC1500 <sup>new</sup>	325 (200~450)	P10	CC1500 <sup>new</sup>
	Interrupted cutting	CC2500 <sup>new</sup>	265 (180~350)	P20	
				P30	CC2500 <sup>new</sup>

### Milling

Workpiece	Machining types	Recommended grades	Recommended cutting speed (m/min)	ISO	Application range
P Steel	Continuous cutting	CN2000	250 (200~300)	P20	CN2000
	Interrupted cutting	CN30	150 (100~200)	P30	

# Uncoated Carbide Grades

## Features

- Due to its the advanced sintering technology, KORLOY's uncoated carbide grades have a fine alloy structure which is necessary to get superior quality cutting tools



## Advantages

- P, M, K carbide grades can be used for the machining of all kinds of workpieces
- Excellent quality in wet machining due to the carbide's superior thermal crack resistance
- Due to the special design of the carbide, it has a fine microstructure and low affinity with the workpiece
- It has excellent toughness and provides low cutting loads

## ⌚ Main composition and application range

Workpiece	Composition	Features	Workpiece
<b>P</b>	WC-TiC-TaC-Co	Heat resistance, excellent plastic deformation resistance	Carbon steel, Alloy steel, Stainless steel
<b>M</b>	WC-TiC-TaC-Co	General tools stable heat resistance with strength	Carbon steel, Alloy steel, Stainless steel, Cast steel
<b>K</b>	WC-Co	High strength and superior wear resistance	Cast iron, Non-ferrous metal, Plastic, etc
<b>S</b>	WC-Co	Excellent wear resistance and chipping resistance	Titanium alloy

## ⌚ The physical properties of uncoated carbide grades

Workpiece	Grades	Hardness (HRA)	TRS (kgf/mm <sup>2</sup> )	Young's modulus (10 <sup>3</sup> kgf/mm <sup>2</sup> )	Thermal expansion coefficient (10 <sup>-6</sup> /°C)	Thermal conductivity (cal/cm · sec·°C)
<b>P</b>	ST10	92.1	175	48	6.2	25
	ST20	91.9	200	56	5.2	45
	ST30A	91.3	230	53	5.2	-
<b>M</b>	U20	91.1	210	-	-	88
	ST30A	91.3	230	53	5.2	-
<b>K</b>	H01	92.9	210	66	4.7	109
	G10	90.9	250	63	-	105
<b>S</b>	H01	92.9	210	66	4.7	109
	H05	91.8	250	-	-	-

1KPa = 102kgf/m<sup>2</sup>, 1w/mk = 2.39×10<sup>-3</sup>cal/cm·sec·°C

## Grades Selection Guide

### Turning

Workpiece	Recommended grades	Recommended cutting speed (m/min)	ISO	Application range
P Steel	ST10	110 (70 ~ 140)	P10	ST10
	ST20	80 (50 ~ 110)	P20	ST20
	ST30A	70 (40 ~ 90)	P30	U20 ST30A
M Stainless steel	U20	70 (40 ~ 90)	M25	
K Cast iron	H01	105 (60 ~ 140)	K01	H01
	H05	105 (60 ~ 140)	K10	H05
	G10	90 (50 ~ 120)	K20	G10
N Aluminum alloy Copper alloys	H01	600 (450 ~ 750)	N10	H01
	H05	425 (320 ~ 530)	N20	H05
S Titanium alloy	H01	55 (40 ~ 70)	S01	H01
	H05	50 (35 ~ 65)	S10	H05
H High hardness steel	H01	80 (55 ~ 105)	H10	H01

### Milling






Workpiece	Recommended grades	Recommended cutting speed (m/min)	ISO	Application range
P Steel	ST30A	80 (60~100)	P30	ST30A
M Stainless steel	U20	90 (70~110)	M20	U20
			M30	
K Cast iron	H01, H05	150 (110~190)	K10	H01 H05
	G10	120 (90~150)	K20	G10
N Aluminum alloy Copper alloys	H01	600 (450~750)	N10	H01
	H05	425 (320~530)	N20	H05

### Features

- cBN is a cutting tool material made under ultra high pressure and temperature sintering of a mixture of cubic boron nitride and a special ceramic binder material.
- cBN tools are suitable for high speed precise machining in hardened steels and cast irons. Machining with cBN can effectively replace the conventional grinding process.

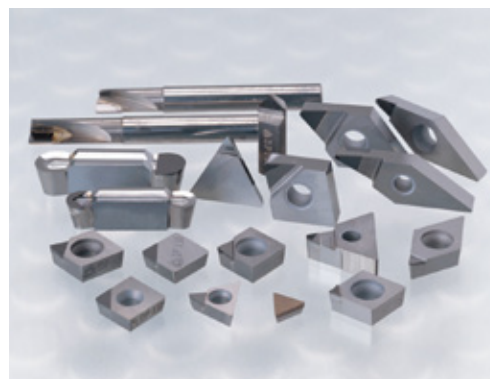


### ② Cutting condition of cBN grades

ISO	Grades	Insert color	Application	Cutting speed, vc (m/min)						feed, fn (mm/rev)	Depth of cut, ap (mm)		
				50	100	150	200	250	300				
H Heat-treated steel	Coated	DNC100 <sup>new</sup> 	Continuous cutting at high speed				180			300	0.03~0.3	0.03~0.3	
		DNC250 	Continuous and low interrupted cutting at high speed				120			220	0.05~0.3	0.05~0.3	
		DNC350 	Medium and high interrupted cutting			90				150	0.05~0.3	0.05~0.3	
		DNC400 <sup>new</sup> 	Continuous and medium interrupted cutting			90					220	0.05~0.3	0.05~0.5
	Non-coated		DBNX10	Continuous cutting at high speed				150			200	0.03~0.13	0.03~0.2
			DB1000	Continuous cutting at high speed				130			250	0.03~0.15	0.03~0.2
			DBNX20	Highly efficient cutting			120				150	0.03~0.3	0.03~0.5
			DBNX25	Interrupted cutting at high speed				150			200	0.03~0.3	0.03~0.5
			DBN250	Medium and low interrupted cutting			80				120	0.03~0.2	0.03~0.3
			DB2000	Medium and low interrupted cutting			80				200	0.03~0.2	0.03~0.3
			DBN350	High interrupted cutting			80				110	0.03~0.2	0.03~0.3
			DBN400	High speed and high depth of cut				120				220	0.10~0.3

## Features

- KORLOY PCD products are manufactured by using high quality PCD tips under ultra high temperatures and pressure.  
The PCD tip is welded on the qualified KORLOY carbide insert  
KORLOY high quality PCD products meet a wide range of application needs in turning, milling, and endmills.
- Excellent tool life for aluminum alloy and copper alloy
- Excellent tool life for Ceramic, high-silicon aluminum and rocks or stones
- Excellent tool life for rubber, carbon, graphite and wood



## PCD grades


















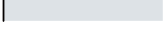

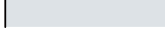
Grades	Features	Application	Grain size (μm)	Hardness (Hv)	TRS (kgf/mm <sup>2</sup> )
DP90	Coarse diamond grain has been used to get excellent wear resistance enough to machine cemented-carbide, high Si aluminum alloy	Cemented carbide Ceramic roughing High Si aluminum alloy Rock, Stone	50	10,000~12,000	110
DP150	By use of fine diamond grain having good bonding property, it is suitable for machining of Non-ferrous metal, graphite	High Si aluminum alloy Copper, Bronze alloy Rubber, Wood, Carbon	5	10,000~12,000	200
DP200	By use of ultra fine diamond grain, it is possible to make sharp cutting edge. Thus it is appropriate grade to machine Non-ferrous material	Plastic Wood Precise finishing of aluminum	0.5	8,000~10,000	220

## Recommended cutting condition

Workpiece	Cutting speed (m/min)	Feed (mm/rev)	Depth of cut (mm)	Recommended grades	
				1 <sup>st</sup>	2 <sup>nd</sup>
Aluminum alloy (4%~8% Si)	1000~3000	0.1~0.6	~ 3	DP150	DP200
Aluminum alloy (9%~14% Si)	600~2500	0.1~0.5	~ 3	DP150	DP200
Aluminum alloy (15%~18% Si)	300~700	0.1~0.4	~ 3	DP150	DP200
Copper, Bronze alloy	~ 1000	0.05~0.2	~ 3	DP150	DP200
Reinforced plastic	~ 1000	0.1~0.3	~ 2	DP150	DP200
Wood	~ 4000	0.1~0.4	-	DP150	DP200
Cemented carbide	10~30	~ 0.2	~ 0.5	DP90	DP150

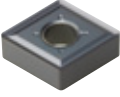

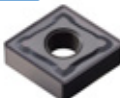

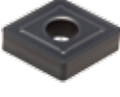

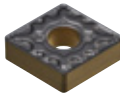

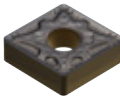











# Chip Breakers

## Chip Breakers for Turning

Geometry	Cutting edge	Application range											Features													
		feed rate $f_n$ (mm/rev)																								
		0.04	0.063	0.10	0.16	0.25	0.4	0.63	1.0	1.6	2.5	4.0		6.3												
depth of cut $a_p$ (mm)																										
											0.1	0.16	0.25	0.4	0.63	1.0	1.6	2.5	4.0	6.3	10.0	11.6	13			
<b>VL</b> 							0.10~0.35	0.2~1.5																		<b>For Finishing</b> <ul style="list-style-type: none"><li>Stable chip control in high toughness material; low carbon steel, pipe steel &amp; steel plates</li><li>Improved chip control for facing, copy machining and better surface finish</li></ul>
<b>VB</b> 							0.15~0.45	0.5~2.0																		<b>For Finishing</b> <ul style="list-style-type: none"><li>Improved chip control for smaller depth of cuts</li><li>Excellent chip control in copying, corner R machining</li></ul>
<b>VF</b> 					0.05~0.35			0.5~1.5																		<b>For Finishing</b> <ul style="list-style-type: none"><li>Good chip control quality on varied depth of cut</li><li>Excellent cutting edge strength has been acquired due to the special chip-breaker</li></ul>
<b>VC</b> 							0.12~0.45	0.5~3.5																		<b>For Medium to finish cutting</b> <ul style="list-style-type: none"><li>Stable chip control in copying and internal machining with various depths of cut</li></ul>
<b>VQ</b> 							0.10~0.40	1.0~3.0																		<b>For Medium to finish cutting</b> <ul style="list-style-type: none"><li>Medium to finishing cutting edges offer improved edge hardness</li><li>For cermet</li></ul>
<b>VM</b> 							0.10~0.50	1.0~5.0																		<b>For Medium cutting</b> <ul style="list-style-type: none"><li>Wide available chip control range from medium-finishing to medium-roughing</li><li>Suitable chip breaker for CNC machining</li></ul>
<b>VH</b> 														0.70~1.40			6.0~15.0									<b>For Heavy duty cutting</b> <ul style="list-style-type: none"><li>Designed specifically for heavy machining</li><li>Specialized chip breaker for the heavy industries like Ship building, Power plant industry</li></ul>
<b>VT</b> 														0.75~1.60			7.0~17.0									<b>For Heavy duty cutting</b> <ul style="list-style-type: none"><li>Designed specifically for heavy machining</li><li>Specialized chip breaker for the heavy industries like Ship building, Power plant industry</li></ul>
<b>VP1</b> 						0.05~0.20		0.1~1.5																		<b>For Finishing</b> <ul style="list-style-type: none"><li>High positive cutting edge</li><li>Reduced contract chip minimizes temperature to improve tool life</li></ul>
<b>VP2</b> 						0.05~0.40		0.5~4.0																		<b>For Medium to finish cutting</b> <ul style="list-style-type: none"><li>Stable chip control and high machinability in copying with various depths of cut</li></ul>

Notice: Application ranges are based on main cutting material

## Chip Breakers for Turning

Geometry	Cutting edge	Application range											Features									
		feed rate $f_n$ (mm/rev)																				
		0.04	0.063	0.10	0.16	0.25	0.4	0.63	1.0	1.6	2.5	4.0		6.3								
depth of cut $a_p$ (mm)																						
0.1											0.16	0.25	0.4	0.63	1.0	1.6	2.5	4.0	6.3	10.0	11.6	13
V series	VP3			<div style="display: flex; justify-content: space-around;"> <div style="background-color: #ADD8E6; padding: 2px;">0.05~0.45</div> <div style="background-color: #90EE90; padding: 2px;">0.5~4.5</div> </div>											<p><b>For Medium cutting</b></p> <ul style="list-style-type: none"> <li>High positive cutting edge with wide land</li> <li>Stable cutting performance in interrupted machining with high toughness</li> <li>Stable machinability and chip control in machining with high depth of cut</li> </ul>							
	VP4			<div style="display: flex; justify-content: space-around;"> <div style="background-color: #ADD8E6; padding: 2px;">0.15~0.45</div> <div style="background-color: #90EE90; padding: 2px;">1.0~4.5</div> </div>											<p><b>For Roughing</b></p> <ul style="list-style-type: none"> <li>The first recommended chip breaker for inconel cutting</li> <li>High hard and resistant rake angle to prevent notch wear in roughing of rugged surfaces</li> </ul>							
	VR			<div style="display: flex; justify-content: space-around;"> <div style="background-color: #ADD8E6; padding: 2px;">0.25~0.55</div> <div style="background-color: #90EE90; padding: 2px;">1.2~7.0</div> </div>											<p><b>For Roughing</b></p> <ul style="list-style-type: none"> <li>High feed machining with the combination of wide land and pockets</li> <li>Shallow chip breaker design prevents chip blocking at high feed</li> <li>Decreased wear on major cutting edge due to special treatment on blade</li> </ul>							
-P series	LP			<div style="display: flex; justify-content: space-around;"> <div style="background-color: #ADD8E6; padding: 2px;">0.10~0.40</div> <div style="background-color: #90EE90; padding: 2px;">0.5~2.5</div> </div>											<p><b>For Medium to finish cutting</b></p> <ul style="list-style-type: none"> <li>Angle land decreases cutting resistance for better surface roughness</li> <li>Special dot design prevents chip blocking by clear chip breaking</li> </ul>							
	MP			<div style="display: flex; justify-content: space-around;"> <div style="background-color: #ADD8E6; padding: 2px;">0.15~0.45</div> <div style="background-color: #90EE90; padding: 2px;">0.5~4.5</div> </div>											<p><b>For Medium cutting</b></p> <ul style="list-style-type: none"> <li>Increased productivity due to excellent chip control in various conditions</li> <li>Stable tool life by reducing cutting load at high speed and high feed</li> </ul>							
-M series	MM			<div style="display: flex; justify-content: space-around;"> <div style="background-color: #ADD8E6; padding: 2px;">0.12~0.45</div> <div style="background-color: #90EE90; padding: 2px;">0.5~5.5</div> </div>											<p><b>For Medium cutting</b></p> <ul style="list-style-type: none"> <li>The first recommended chip breaker for continuous stainless applications cutting</li> <li>Improved tool life and surface finish due to dual lands combining both machinability and toughness</li> <li>Wide chip pockets for stable chip evacuation at high depth of cuts and high feeds</li> </ul>							
	RM			<div style="display: flex; justify-content: space-around;"> <div style="background-color: #ADD8E6; padding: 2px;">0.15~0.55</div> <div style="background-color: #90EE90; padding: 2px;">2.0~6.0</div> </div>											<p><b>For Roughing</b></p> <ul style="list-style-type: none"> <li>The first recommended chip breaker for interrupted cutting or roughing of stainless steel</li> <li>Inhibited notch wear and burr creation at high depth of cuts and feeds</li> <li>Reduced cutting loads and longer tool life at high feeds</li> </ul>							
-K series	MK			<div style="display: flex; justify-content: space-around;"> <div style="background-color: #ADD8E6; padding: 2px;">0.10~0.50</div> <div style="background-color: #90EE90; padding: 2px;">1.0~5.0</div> </div>											<p><b>For Medium cutting</b></p> <ul style="list-style-type: none"> <li>Suitable for continuous cutting of ductile and gray cast iron</li> <li>Excellent tool life and surface finish thanks to angle lands improving cutting performance</li> </ul>							
	RK			<div style="display: flex; justify-content: space-around;"> <div style="background-color: #ADD8E6; padding: 2px;">0.20~0.60</div> <div style="background-color: #90EE90; padding: 2px;">1.5~6.0</div> </div>											<p><b>For Roughing</b></p> <ul style="list-style-type: none"> <li>Suitable for machining ductile and gray cast iron at high speeds and high feeds</li> <li>Improved toughness and chipping resistance due to flat lands</li> </ul>							
H series	HA			<div style="display: flex; justify-content: space-around;"> <div style="background-color: #ADD8E6; padding: 2px;">0.03~0.30</div> <div style="background-color: #90EE90; padding: 2px;">0.5~2.5</div> </div>											<p><b>For Medium to finish cutting</b></p> <ul style="list-style-type: none"> <li>Sharp cutting edge generates low cutting force</li> <li>Specially designed tough main cutting edge</li> <li>Suitable for cutting of low carbon steel, stainless steel, aluminum</li> </ul>							

Notice: Application ranges are based on main cutting material

# Chip Breakers



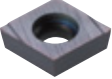

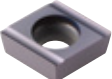









## Chip Breakers for Turning

Geometry	Cutting edge	Application range											Features	
		feed rate $f_n$ (mm/rev)												
		0.04	0.063	0.10	0.16	0.25	0.4	0.63	1.0	1.6	2.5	4.0		6.3
depth of cut ap (mm)														
0.1	0.16	0.25	0.4	0.63	1.0	1.6	2.5	4.0	6.3	10.0		11.6	13	
G series	GR							0.30~0.80				3.0~8.0		
	GH							0.30~1.30			3.0~11.0			<b>For Heavy duty cutting</b> <ul style="list-style-type: none"> <li>Suitable for heavy duty cutting due to strong cutting edge</li> <li>Wide chip control range with low cutting force</li> </ul>
B series	B25							0.50~1.00			4.0~10.0			<b>For General cutting</b> <ul style="list-style-type: none"> <li>Suitable for general cutting condition cutting</li> </ul>
V-Posi series	VF		0.05~0.25											<b>For Finishing</b> <ul style="list-style-type: none"> <li>Improved surface finish and size accuracy due to stable inner boring</li> </ul>
	VL		0.05~0.20											<b>For Finishing</b> <ul style="list-style-type: none"> <li>Superior chip control in low carbon steel, pipes, and steel plates</li> </ul>
	VP1		0.01~0.25											<b>For Finishing</b> <ul style="list-style-type: none"> <li>Excellent chip control in application with micro depth of cut and low feed</li> <li>Low cutting load and superb surface finish</li> <li>Optimal for both internal and external machining</li> </ul>
H-Posi series	HMP					0.08~0.40				0.5~3.5				<b>For Medium cutting</b> <ul style="list-style-type: none"> <li>Excellent chip control at wide range of cutting conditions</li> <li>Machining versatility over a wide range of materials</li> </ul>
C-Posi series	C25					0.10~0.35				1.0~3.0				<b>For Roughing</b> <ul style="list-style-type: none"> <li>Suitable for interrupted cutting and cast iron machining</li> <li>Good surface finish due to low cutting force</li> <li>Suitable for both boring and outer diameter turning</li> </ul>
P-Posi series	MP					0.05~0.30				0.3~3.0				<b>For Medium cutting</b> <ul style="list-style-type: none"> <li>Sharp cutting edge and wide chip pocket for low cutting load</li> <li>Stable chip control at varying depth of cuts</li> <li>Excellent cutting performance when machining automobile components</li> </ul>
AL series	AK					0.03~0.40				0.1~4.0				<b>For Medium to finish cutting</b> <ul style="list-style-type: none"> <li>High rake angle and low resistance cutting edge secures long tool life in continuous cutting of aluminum turning</li> <li>High speed of finishing operation</li> </ul>

Notice: Application ranges are based on main cutting material











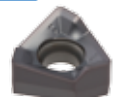
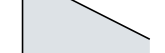










## Chip Breakers for Turning

Geometry	Cutting edge	Application range													Features
		feed rate $f_n$ (mm/rev)													
		0.04	0.063	0.10	0.16	0.25	0.4	0.63	1.0	1.6	2.5	4.0	6.3		
depth of cut ap (mm)															
0.1 0.16 0.25 0.4 0.63 1.0 1.6 2.5 4.0 6.3 10.0 11.6 13															
AL series 		0.05~0.50													<b>For Medium cutting</b> • High stability of cutting edge secures great performance in high speed and interrupted machining • High speed of medium and interrupted operation
		0.5~4.0													
Auto tool 		0.01~0.12													<b>For Finishing</b> • Shallow depth of cut with sharp edge • Longer tool life at high speed cutting due to low cutting force • Good surface finish
		0.01~1.0													
Auto tool 		0.04~0.15													<b>For Medium to finish cutting</b> • Improved chip control makes tool life long and better machining
		0.05~1.5													
For Wiper 		0.15~0.60													<b>For Medium cutting</b> • Guarantees excellent surface roughness and good chip controls at high feed machining
		1.0~5.0													
For Wiper 		0.15~0.50													<b>For Medium to finish cutting</b> • Improved surface roughness at shallow depth of cut and high feed due to strong cutting edge
		0.5~3.5													
For Shaft 		0.12~0.45													<b>For Finishing</b> • Shallow depth of cut with sharp edge • Longer tool life at high speed cutting due to low cutting force • Good surface finish
		1.0~4.5													
For Shaft 		0.15~0.50													<b>For Medium cutting</b> • Good chip flow increases tool life and machinability.
		1.5~5.0													

Notice: Application ranges are based on main cutting material








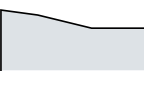








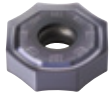

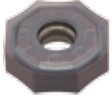

# Chip Breakers

## Chip Breakers for Milling

Geometry	Cutting edge	Application range											Features
		feed rate fz (mm/t)											
		0.04	0.063	0.10	0.16	0.25	0.4	0.63	1.0	1.6	2.5	4.0	
depth of cut ap (mm)													
0.1	0.16	0.25	0.4	0.63	1.0	1.6	2.5	4.0	6.3	10.0		11.6	14
MX series 		0.10~0.30					1.0~5.0						For Roughing
		<ul style="list-style-type: none"> <li>Possible to increase productivity through increase feed and depth</li> <li>Excellent heat resistance due to the special chip breaker design of top face of insert</li> </ul>											
Mill-max Heavy 		0.20~0.40					2.0~14.0						For Roughing
		<ul style="list-style-type: none"> <li>Specialized tool for high depth of cut roughing with high rigidity cutting edge ensures stable machining.</li> </ul>											
Rich Mill - RM3 		0.05~0.40					1.0~8.0						For Aluminum machining
		<ul style="list-style-type: none"> <li>Sharp cutting edge for low cutting load, which is ideal for machining steel, hard-to-cut materials and aluminum</li> </ul>											
		ML 		0.05~0.30					1.0~8.0				
<ul style="list-style-type: none"> <li>Low cutting resistance for light cutting and machining hard-to-cut materials with excellent tool life and surface roughness</li> </ul>													
MM 		0.05~0.35					1.0~8.0						For General cutting
		<ul style="list-style-type: none"> <li>Available for most of applications with universal design for general milling</li> </ul>											
Rich Mill - RM4 		0.05~0.25					0.3~14.0						For Aluminum machining
		<ul style="list-style-type: none"> <li>Sharp cutting edge design ensures low cutting resistance and excellent machining in difficult-to-cut materials, aluminum and light machining</li> </ul>											
		MF 		0.05~0.30					0.5~14.0				
<ul style="list-style-type: none"> <li>Low cutting force chip breaker design ensures longer tool life and excellent machining in difficult-to-cut material and light machining</li> </ul>													
MM 		0.05~0.30					1.0~14.0						For General cutting
		<ul style="list-style-type: none"> <li>Suitable geometry design for general milling has wider ranges of machining</li> </ul>											
Rich Mill - RM6 		0.05~0.2					1.0~8.2						For Aluminum machining
		<ul style="list-style-type: none"> <li>Specialized sharp cutting edge for aluminum machining ensures machinability.</li> <li>Buffing treatment on the surface realizes good chip flow and welding resistance.</li> </ul>											
ML 		0.05~0.25					1.0~8.2						For Machining hard-to-cut materials
		<ul style="list-style-type: none"> <li>Low cutting load chip breaker for light cutting</li> <li>Long tool life and high quality of machining in hard-to-cut material cutting</li> </ul>											

Notice: Application ranges are based on main cutting material











## Chip Breakers for Milling

Geometry	Cutting edge	Application range												Features				
		feed rate fz (mm/t)																
		0.04	0.063	0.10	0.16	0.25	0.4	0.63	1.0	1.6	2.5	4.0	6.3					
		depth of cut ap (mm)																
		0.1	0.16	0.25	0.4	0.63	1.0	1.6	2.5	4.0	6.3	10.0	11.6	14				
Rich Mill - FM6	MM						0.05~0.25											<p><b>For General cutting</b></p> <ul style="list-style-type: none"> <li>Optimally designed shape for general shoulder milling in various cutting ranges</li> </ul>
Rich Mill - FM8	MA						0.05~0.35											<p><b>For Aluminum machining</b></p> <ul style="list-style-type: none"> <li>Sharp cutting edge and lubricated top face show excellent chip flow and welding resistance in aluminum machining</li> </ul>
	MF						0.05~0.35											<p><b>For Light cutting</b></p> <ul style="list-style-type: none"> <li>Low cutting force chip breaker design ensures longer tool life and excellent machining in difficult-to-cut material and light machining</li> </ul>
	ML						0.05~0.30											<p><b>For Machining hard-to-cut materials</b></p> <ul style="list-style-type: none"> <li>Chip breaker with low cutting load resistance ensures long tool life and high quality in light and hard-to-cut material cutting.</li> </ul>
	MM							0.10~0.40										<p><b>For General cutting</b></p> <ul style="list-style-type: none"> <li>Suitable geometry design for general milling has wider ranges of machining</li> </ul>
	MF							0.05~0.20										<p><b>For Light cutting</b></p> <ul style="list-style-type: none"> <li>Low cutting force chip breaker design ensures longer tool life and excellent machining in difficult-to-cut material and light machining</li> </ul>
Rich Mill - FMT	MM							0.05~0.30										<p><b>For General cutting</b></p> <ul style="list-style-type: none"> <li>Suitable geometry design for general milling has wider ranges of machining</li> </ul>
	MA							0.05~0.30										<p><b>For Aluminum machining</b></p> <ul style="list-style-type: none"> <li>Sharp cutting edge design ensures low cutting resistance and excellent machining in difficult-to-cut materials, aluminum and light machining</li> </ul>
Rich Mill - RM16	MF							0.05~0.40										<p><b>For Light cutting</b></p> <ul style="list-style-type: none"> <li>Low cutting force chip breaker design ensures longer tool life and excellent machining in difficult-to-cut material and light machining</li> </ul>
	ML							0.05~0.35										<p><b>For Machining hard-to-cut materials</b></p> <ul style="list-style-type: none"> <li>Low cutting resistance for excellent tool life and surface roughness in machining hard-to-cut materials</li> </ul>

Notice: Application ranges are based on main cutting material












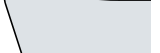

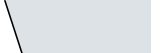

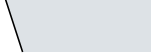

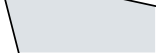

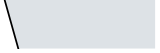
# Chip Breakers

## Chip Breakers for Milling

Geometry	Cutting edge	Application range													Features						
		feed rate fz (mm/t)																			
		0.04	0.063	0.10	0.16	0.25	0.4	0.63	1.0	1.6	2.5	4.0	6.3								
depth of cut ap (mm)																					
0.1	0.16	0.25	0.4	0.63	1.0	1.6	2.5	4.0	6.3	10.0	11.6	17									
Rich Mill - RM16	MM								0.10~0.45												For General cutting
	W								0.05~0.30											For Finishing of milling (Wiper)	<ul style="list-style-type: none"> <li>Wiper insert provides improved surface roughness due to special cutting edge</li> </ul>
Alpha Mill	MA								0.10~0.40											For Aluminum machining	<ul style="list-style-type: none"> <li>Sharp cutting edge and lubricated top face show excellent chip flow and welding resistance in aluminum machining</li> </ul>
	MF								0.05~0.15											For Light cutting	<ul style="list-style-type: none"> <li>Low cutting force chip breaker design ensures longer tool life and excellent machining in difficult-to-cut material and light machining</li> </ul>
	MM								0.10~0.25											For General cutting	<ul style="list-style-type: none"> <li>Suitable geometry design for general milling has wider ranges of machining</li> </ul>
	ML								0.05~0.15											For Hard-to-cut material machining	<ul style="list-style-type: none"> <li>The chip breaker with low cutting resistance ensures superior machinability in hard-to-cut materials</li> </ul>
	MN								0.10~0.25											For Roughing (nick)	<ul style="list-style-type: none"> <li>Design for easy chip cutting ensures high machinability in toughing.</li> </ul>
	MM									0.05~0.35										For General cutting	<ul style="list-style-type: none"> <li>Shape for general milling with most cutting range</li> </ul>
Alpha Mill-X	ML								0.05~0.30										For Hard-to-cut material machining	<ul style="list-style-type: none"> <li>Chip breaker for cutting with low cutting load guarantees long tool life and qualified machining in light cutting and HRSA machining.</li> </ul>	
	MF								0.05~0.20										For Light cutting	<ul style="list-style-type: none"> <li>Special design for light cutting of gummy materials like stainless steel and hard to machine material provide fine surface finish and longer tool life</li> </ul>	






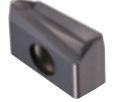


Notice: Application ranges are based on main cutting material

## Chip Breakers for Milling

Geometry	Cutting edge	Application range													Features										
		feed rate fz (mm/t)																							
		0.04	0.063	0.10	0.16	0.25	0.4	0.63	1.0	1.6	2.5	4.0	6.3												
depth of cut ap (mm)																									
													0.1	0.16	0.25	0.4	0.63	1.0	1.6	2.5	4.0	6.3	10.0	11.6	14
Future Mill	MM			0.05~0.30					1.0~5.0								<p><b>For General cutting</b></p> <ul style="list-style-type: none"> <li>Chip breaker design to cover general cutting condition provides wide available application range</li> <li>Ground type and as sintered type is available</li> </ul>								
	MR			0.05~0.35					1.5~5.0								<p><b>For Roughing</b></p> <ul style="list-style-type: none"> <li>Strongest cutting edge strength provide stable tool life even in case of severe cutting with heavy intermittent and heavy roughing</li> </ul>								
	MA			0.10~0.35			0.5~5.0								<p><b>For Aluminum machining</b></p> <ul style="list-style-type: none"> <li>Sharp cutting edge and lubricated top face show excellent chip flow and welding resistance in aluminum machining</li> </ul>										
Future Mill P - Positive	MA						0.30~0.60			0.3~6.0								<p><b>For Aluminum machining</b></p> <ul style="list-style-type: none"> <li>Excellent surface roughness due to buffed surface in machining aluminum</li> </ul>							
	ML						0.30~0.50			0.3~3.0								<p><b>For Hard-to-cut material machining</b></p> <ul style="list-style-type: none"> <li>Low cutting resistance and high hardness cutting edges for excellent surface roughness in machining titanium and Inconel</li> </ul>							
	MF			0.12~0.50			0.3~6.0								<p><b>For Light cutting</b></p> <ul style="list-style-type: none"> <li>Low cutting resistance for light cutting</li> </ul>										
	MM						0.20~0.70			0.3~6.0								<p><b>For General cutting</b></p> <ul style="list-style-type: none"> <li>Universal purpose for most of milling applications</li> </ul>							
	None C/B						0.3~0.5			0.30~0.50						<p><b>For Machining high hardness steel</b></p> <ul style="list-style-type: none"> <li>Ideal for machining high hardness mold steel and heat resistant alloy</li> </ul>									
HFM	MF			0.1~0.4			0.30~1.0								<p><b>For Light cutting</b></p> <ul style="list-style-type: none"> <li>Chip breaker for cutting with low cutting load is optimal for light cutting.</li> </ul>										
	None C/B			0.1~0.4			0.30~0.80								<p><b>For Machining high hardness steel</b></p> <ul style="list-style-type: none"> <li>Shape with hard cutting edge is optimal for high hardness alloy steel machining.</li> </ul>										

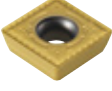







Notice: Application ranges are based on main cutting material

## Chip Breakers for Milling

Geometry	Cutting edge	Application range											Features			
		feed rate fz (mm/t)														
		0.04	0.063	0.10	0.16	0.25	0.4	0.63	1.0	1.6	2.5	4.0		6.3		
		depth of cut ap (mm)														
		0.1	0.16	0.25	0.4	0.63	1.0	1.6	2.5	4.0	6.3	10.0	11.6	57		
HFMD	ML							0.30~0.80								For Hard-to-cut material machining
	MF						0.2~1.0		0.30~1.0							For Light cutting
	MM						0.2~1.0		0.30~1.20							For General cutting
TP2P	MA				0.05~0.25					1.0~16.5						For Aluminum machining
	ML				0.05~0.25					1.0~16.5						For Hard-to-cut material machining
	MM				0.05~0.25					1.0~16.5						For General cutting
Pro-XL Mill	MA				0.05~0.20							10~57			For Aluminum machining	
Pro-V Mill	MA				0.10~0.30					1.0~17					For Aluminum machining	

Notice: Application ranges are based on main cutting material

## Chip breaker for drilling

Geometry	Cutting edge	Application range												Features	
		feed rate fz (mm/t)													
		0.04	0.063	0.10	0.16	0.25	0.4	0.63	1.0	1.6	2.5	4.0	6.3		
depth of cut ap (mm)															
30	60	90	120	150	180	210	240	270	300	330	900				
King Drill	<b>PD</b>  	0.04~0.20												60~300	<b>For General cutting</b> <ul style="list-style-type: none"> <li>Chip breaker with strong cutting edge for universal applications with steel, stainless steel, and cast iron</li> </ul>
	<b>LD</b>  	0.04~0.15												40~250	<b>For Light cutting</b> <ul style="list-style-type: none"> <li>Superior chip control in machining of mild steel, forged steel and stainless steel</li> </ul>
	<b>RD</b>  	0.04~0.20												60~300	<b>Reinforced chipping resistance</b> <ul style="list-style-type: none"> <li>Improved central chipping resistance due to reinforced corners of the King Drill central inserts</li> <li>Excellent cutting performance even in machining where there is frequent corner breakage of central inserts</li> <li>e.g. Machining heat-treated steel or stainless steel, and high feed machining, etc.</li> </ul>
	<b>ND</b>  	0.04~0.10												100~400	<b>Non-ferrous metals</b> <ul style="list-style-type: none"> <li>Chip breaker with sharp and polished cutting edge for aluminum and Non-ferrous metals. Machining with King Drill ensures good chip flow and resistance to chip welding.</li> </ul>

Notice: Application ranges are based on main cutting material

# Inserts

KORLOY constantly tries to expand the range of chip breakers and corner geometries to facilitate customized production that covers many different workpiece materials (P, M, K, S, N) and machining methods (turning, milling and drilling).

We always ensure to enhance customer satisfaction to provide prompt troubleshooting, or higher productivity and machining quality.

- Turning Inserts
- Milling Inserts
- Drilling Inserts
- Inserts for Aluminium Machining
- Multi Functional Tools (Inserts)
- Bearing Inserts
- cBN Inserts
- PCD Inserts

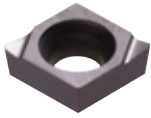


# Turning Inserts

## » For Turning

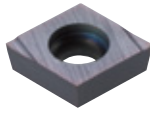
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030101R/L  
030102R/L  
030104R/L  
0401005R/L  
040101R/L  
040102R/L  
040104R/L



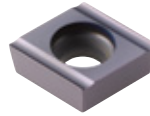
### CCET-KF

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060201MFR/L  
060202MFR/L  
09T3005MFR/L  
09T301MFR/L  
09T302MFR/L



### CCET-KM

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060201MFR/L  
060202MFR/L  
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09T301MFR/L  
09T302MFR/L



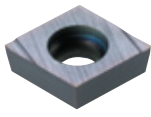
### CCGT-AK/AR

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09T304  
09T308



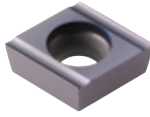
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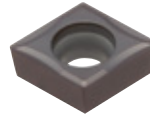
### CCGT-KM

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060202R/L  
09T3003R/L  
09T301R/L  
09T302R/L



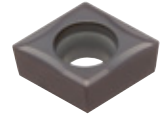
### CCGT-VP1

060201  
060202  
060204  
09T301  
09T302  
09T304



### CCGT-VP1 (Precision class)

060201MFN  
060202MFN  
060204MFN  
09T301MFN  
09T302MFN  
09T304MFN



### CCMT-C25

060202 120404  
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060208 120412  
080308  
09T302  
09T304  
09T308



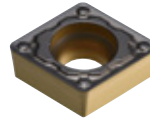
### CCMT-HMP

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060208 120412  
09T302  
09T304  
09T308



### CCMT-MP

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09T304  
09T308



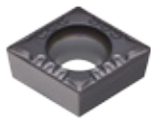
### CCMT-VF

060202  
060204  
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09T304  
09T308  
120404



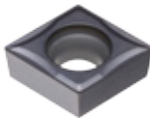
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060208 120412  
09T304  
09T308



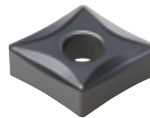
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09T308  
120404  
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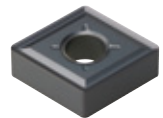
### CNGG-VP1

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120404  
120408



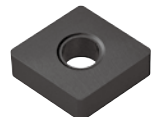
### CNGG-VP3

120404  
120408  
120412



### CNMA

090308 160608  
120404 160612  
120408 160616  
120412 190608  
120416 190612  
190616



### CNMG-B25

120404 190604  
120408 190608  
120412 190612  
160608 190616  
160612  
160616



### CNMG-GR

120408 190608  
120412 190612  
120416 190616  
160608 190624  
160612 250724  
160616 250924



### CNMG-HA

120404  
120408  
120412



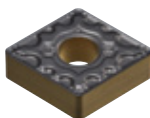
### CNMG-HM

090304  
120404  
120408  
120412  
190612



### CNMG-LP

090304  
090308  
120404  
120408  
120412



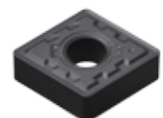
### CNMG-LW

120408  
120412



### CNMG-MK

120404 190608  
120408 190612  
120412 190616  
120416  
160608  
160612  
160616



## » For Turning

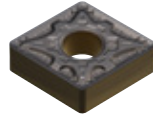
### CNMG-MM

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090404 190608  
090408 190612  
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120408  
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120416



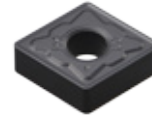
### CNMG-MP

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120416



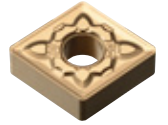
### CNMG-RK

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120412  
120416  
160608  
160612  
160616



### CNMG-RM

120404 190608  
120408 190612  
120412 190616  
120416 250924  
160608  
160612  
160616



### CNMG-VB

120404  
120408  
120412



### CNMG-VC

120404  
120408  
120412



### CNMG-VF

090304  
090308  
120404  
120408  
120412



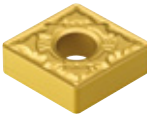
### CNMG-VL

120404  
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120412



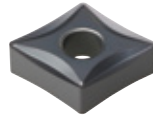
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120416



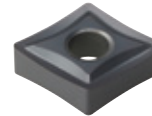
### CNMG-VP1

120404  
120408



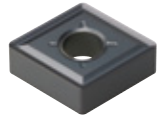
### CNMG-VP2

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120408  
160618  
190608  
190612  
190616



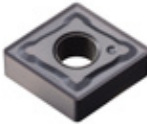
### CNMG-VP3

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120412 190616  
120416  
160608  
160612  
160616



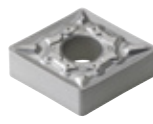
### CNMG-VP4

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160612  
190608  
190612



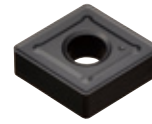
### CNMG-VQ

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090408  
090412  
120404  
120408  
120412



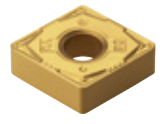
### CNMG-VR

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120408 160616  
120412 190612  
120416 190616  
120508  
120512



### CNMG-VW

120404  
120408  
120412



### CNMM-GH

120408 190608  
120412 190612  
160412 190616  
160424 190624  
160612 250716  
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### CNMM-GR

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120412  
190612  
190616



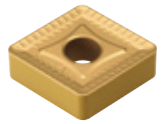
### CNMM-HA

120408



### CNMM-VH

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190624  
250724  
250924



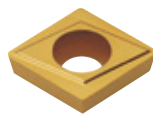
### CNMM-VT

190612  
190616  
190624  
250724  
250924



### CPGT

080202  
080204  
080208  
090302  
090304  
090308



### CPGT-HMP

090308-HMP



### CPMT-C25

060204



## » For Turning

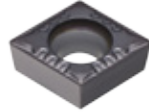
### CPMT-VF

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090308



### CPMT-VL

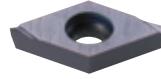
080204  
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090304  
090308



### DCET-KF

Precision class

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070202MFR/L  
11T3005MFR/L  
11T301MFR/L  
11T302MFR/L



### DCET-KM

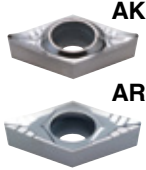
Precision class

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11T3005MFR/L  
11T301MFR/L  
11T302MFR/L



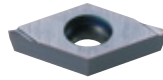
### DCGT-AK/AR

070202  
070204  
070208  
11T302  
11T304  
11T308  
11T312



### DCGT-KF

0702003R/L  
070201R/L  
070202R/L  
11T3003R/L  
11T301R/L  
11T302R/L



### DCGT-KM

0702003R/L  
070201R/L  
070202R/L  
11T3003R/L  
11T301R/L  
11T302R/L



### DCGT-VP1

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11T302  
11T304



### DCGT-VP1

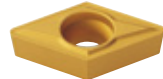
Precision class

070201MFN  
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### DCMT-C25

070202  
070204  
070208  
11T302  
11T304  
11T308



### DCMT-HMP

070202  
070204  
070208  
11T302  
11T304  
11T308



### DCMT-MP

070202  
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11T302  
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11T312



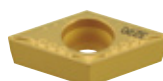
### DCMT-VF

070202  
070204  
11T302  
11T304  
11T308



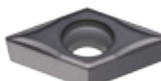
### DCMT-VL

070202  
070204  
070208  
11T302  
11T304  
11T308  
11T312



### DCMT-VP1

070204  
11T304  
11T308



### DNGG-VP1

150404  
150408  
150604  
150608



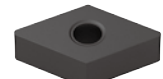
### DNGG-VP3

150404  
150408  
150412  
150604  
150608  
150612



### DNMA

110408  
150404  
150408  
150412  
150604  
150608  
150612  
190608



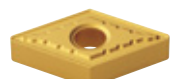
### DNMG-B25

150402 150602  
150404 150604  
150408 150608  
150412 150612  
150425 150625



### DNMG-GR

150408  
150412  
150416  
150608  
150612  
150616



### DNMG-HA

150404  
150408  
150604  
150608



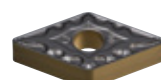
### DNMG-HM

110404  
110408  
150404  
150408  
150604  
150608  
150612



### DNMG-LP

110402 150404  
110404 150408  
110408 150412  
110504 150604  
110508 150608  
150612



### DNMG-LW

150408  
150412  
150608  
150612



# Turning Inserts

## » For Turning

### DNMG-MK

150404  
150408  
150412  
150604  
150608  
150612



### DNMG-MM

110404 150404  
110408 150408  
110412 150412  
110504 150416  
110508 150604  
110512 150608  
150612  
150616



### DNMG-MP

110404 150404  
110408 150408  
110412 150412  
110504 150416  
110508 150604  
110512 150608  
150612  
150616



### DNMG-RK

150408  
150412  
150608  
150612



### DNMG-RM

150404  
150408  
150412  
150416  
150604  
150608  
150612  
150616



### DNMG-VB

110404  
150404  
150408  
150412  
150604  
150608  
150612



### DNMG-VC

150404  
150408  
150412  
150604  
150608  
150612



### DNMG-VF

110402  
110404  
110408  
150404  
150408  
150412  
150604  
150608  
150612



### DNMG-VL

110408  
150404  
150408  
150412  
150604  
150608  
150612



### DNMG-VM

110404 150604  
110408 150608  
110412 150612  
150404  
150408  
150412



### DNMG-VP1

150404  
150408  
150604  
150608



### DNMG-VP2

150404  
150408  
150604  
150608



### DNMG-VP3

150404  
150408  
150412  
150604  
150608  
150612



### DNMG-VP4

150408  
150412  
150608  
150612



### DNMG-VQ

110404 150604  
110408 150608  
110412 150612  
150404  
150408  
150412



### DNMG-VR

150408  
150412  
150608  
150612



### DNMG-VW

150404  
150408  
150604  
150608



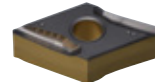
### DNMX-SH

150404R/L  
150408R/L  
150604R/L  
150608R/L



### DNMX-SR

150404R/L  
150408R/L  
150604R/L  
150608R/L



### KNUX-11

160405R/L  
160410R/L



### KNUX-12

160405R/L  
160410R/L



### RCGT-AK/AR

0602M0  
0803M0  
1003M0  
10T3M0  
1204M0



### RCMT-VM

0803M0  
10T3M0  
1204M0  
1606M0



### RCMX

1003M0  
1204M0  
1606M0  
2006M0  
2507M0  
3209M0



## » For Turning

### RNMG-B25

090300  
120400  
150600  
190600  
250600  
250900  
310900



### SCGT-AK/AR

09T302  
09T304  
09T308  
120404  
120408  
120416



AK

AR

### SCMT-C25

060204  
09T304  
09T308  
120404  
120408



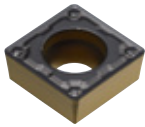
### SCMT-HMP

09T304  
09T308  
120404  
120408



### SCMT-MP

09T304  
09T308  
120404  
120408  
120412



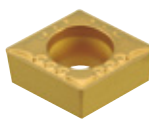
### SCMT-VF

09T304



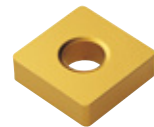
### SCMT-VL

09T304  
09T308



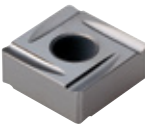
### SNGA

090304 150608  
090308 150616  
120404 190608  
120408 190612  
120412



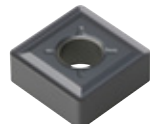
### SNGG

090304R/L  
090308R/L  
120404R/L  
120408R/L  
120412R/L



### SNGG-VP3

120404  
120408  
120412



### SNGN

090302 120424  
090304 150402  
090308 150408  
120304 150412  
120308 150416  
120312 190402  
120402 190412  
120404 190416  
120408 250604  
120412 250616



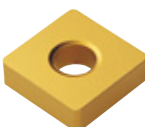
### SNGX

120408R



### SNMA

090304 150612  
090308 150616  
090312 190608  
120402 190612  
120404 190616  
120408 190624  
120412 250724  
120416 250924  
120430



### SNMG-B25

090308 190608  
120404 190612  
120408 190616  
120412 250716  
120416 250724  
120420 250924  
150608  
150612  
150616



### SNMG-GR

120404 190608  
120408 190612  
120412 190616  
150608 190624  
150612 250724  
250924



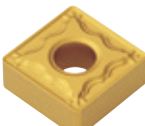
### SNMG-HA

120404  
120408  
120412



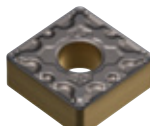
### SNMG-HM

120404  
120408  
120412



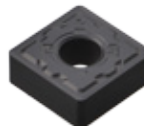
### SNMG-LP

090308  
090408  
120404  
120408  
120412



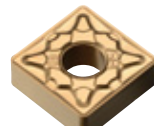
### SNMG-MK

090308 190608  
120404 190612  
120408 190616  
120412  
120416  
150608  
150612  
150616



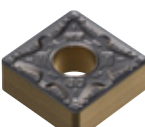
### SNMG-MM

090304 150608  
090308 150612  
090312 150616  
090404 190608  
090408 190612  
120404 190616  
120408 250924  
120412  
120416



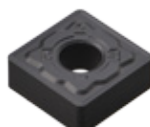
### SNMG-MP

090304 120404  
090308 120408  
090312 120412  
090404 120416  
090408 150608  
090412 150612  
190608  
190612



### SNMG-RK

120404  
120408  
120412  
120416  
150612  
150616  
190612  
190616



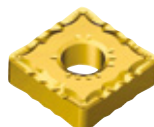
### SNMG-RM

120404 190608  
120408 190612  
120412 190616  
120416 190624  
150608 250924  
150612  
150616



### SNMG-VB

120404  
120408



# Turning Inserts

## For Turning

### SNMG-VC

120408



### SNMG-VF

090304  
090308  
120404  
120408  
120412



### SNMG-VL

120408



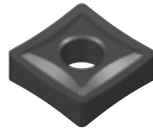
### SNMG-VM

090304  
090308  
120404  
120408  
120412  
190612  
190616



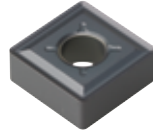
### SNMG-VP2

120404  
120408  
120412



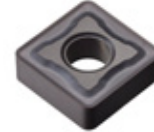
### SNMG-VP3

120404 190608  
120408 190612  
120412 190616  
120416  
160608  
160612  
160616



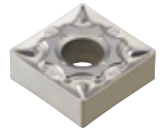
### SNMG-VP4

120408  
120412  
150612  
190608  
190612  
190616



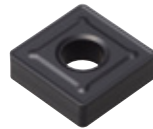
### SNMG-VQ

090304  
090408  
090412  
120404  
120408



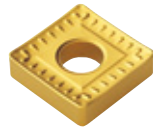
### SNMG-VR

120408  
120412  
120416  
190612  
190616



### SNMM-GH

120408 250724  
120412 250924  
150612 250932  
190612  
190616  
190624



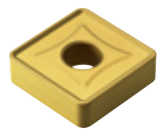
### SNMM-GR

120408  
120412  
190612  
190616



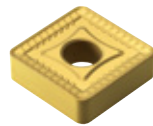
### SNMM-VH

190612  
190616  
190624  
250716  
250724  
250920  
250924



### SNMM-VT

190612  
190616  
190624  
250716  
250724  
250920  
250924



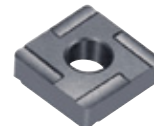
### SNMN

120304 150404  
120308 150408  
120312 150412  
120404 190416  
120408  
120412



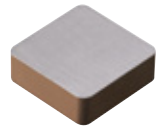
### SNMX

120408R



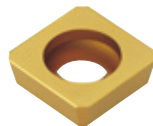
### SNUN

120408  
120412  
190412  
120412TN  
250724TN



### SPGA

060204  
090308T  
090308T-Z



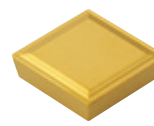
### SPGN

070202 120316 150408  
070208 120402 150412  
090302 120404 150416  
090304 120408 150420  
090308 120412 190404  
120302 120416 190408  
120304 120430 190412  
120308 120440 190416  
120312 150404 190424



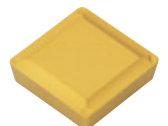
### SPGR-F

090304  
120304



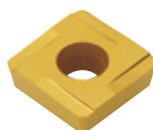
### SPGR-M

090308  
120308



### SPGT

090304R/L  
090308R/L



### SPMR-F

090304  
120304



### SPMR-M

090308  
120308  
120312



### SPMT-VF

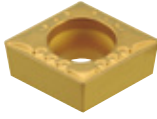
090304  
090308



## » For Turning

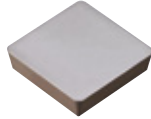
### SPMT-VL

09T304  
09T308



### SPUN

120304  
120308  
120308SN  
150412  
190412  
190416  
250620



### TBGT

060102L  
060104L



### TBMT-VL

060102



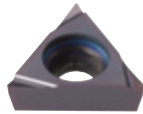
### TCGT-AK/AR

090202 16T302  
090204 16T304  
110202 16T308  
110204 16T312  
110208 16T316  
16T325



### TCGT-KF

0802003R/L  
080201R/L  
080202R/L



### TCGT-VP1

090204  
16T304  
16T308



### TCMT-C25

090204  
090208  
110202  
110204  
110208  
16T304  
16T308



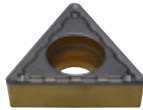
### TCMT-HMP

090204 16T304  
090208 16T308  
110202  
110204  
110208



### TCMT-MP

090204 16T302  
090208 16T304  
110202 16T308  
110204 16T312  
110208 220408



### TCMT-VF

110202  
110204  
110208  
16T302  
16T304



### TCMT-VL

090208  
110204  
110208  
16T304  
16T308



### TCMT-VP1

16T304  
16T308



### TNGA

110302 220304  
110304 220402  
160304 220404  
160402 220408  
160404 220412  
160408 270612  
270624



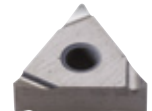
### TNGG

110304R/L  
160402R/L  
160404R/L  
160408R/L  
220404R/L  
220408R/L  
220412R/L



### TNGG-SC

160402R/L  
160404R/L



### TNGG-VP3

160404  
160408



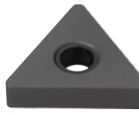
### TNGN

110302 220404  
110304 220408  
110308 220412  
160302 220416  
160304 220424  
160308 270630  
160404  
160408  
160412



### TNMA

110308 220420  
160404 220432  
160408 270608  
160412 270612  
160416 270616  
220404 330924  
220408  
220412  
220416



### TNMG-B25

110308 220424  
160404 220432  
160408 270608  
160412 270612  
160416 270616  
220404 330716  
220408 330924  
220412  
220416



### TNMG-GR

160408 270608  
160412 270612  
220408 270616  
220412 330924  
220416



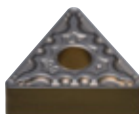
### TNMG-HM

110308  
160404  
160408  
160412  
220404  
220408



### TNMG-LP

110304  
110308  
160404  
160408  
160412



### TNMG-LW

160408  
160412



# Turning Inserts

## For Turning

### TNMG-MK

160404 220404  
160408 220408  
160412 220412  
160416 220416  
270612



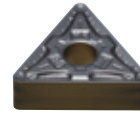
### TNMG-MM

160404 220404  
160408 220408  
160412 220412  
160416 220416



### TNMG-MP

110308 220404  
160404 220408  
160408 220412  
160412 220416  
160416



### TNMG-RK

160408  
160412  
160416  
220408  
220412  
220416



### TNMG-RM

160404  
160408  
160412  
220408  
220412  
220416



### TNMG-VB

160404  
160408  
160412  
220408  
220412



### TNMG-VC

160404  
160408  
160412  
220408  
220412



### TNMG-VF

110304 220404  
160404 220408  
160408  
160412



### TNMG-VL

160404  
160408  
160412  
220408  
220412



### TNMG-VM

110308 220404  
160404 220408  
160408 220412  
160412



### TNMG-VP2

160404  
160408  
160412  
220404  
220408



### TNMG-VP3

160404  
160408  
160412  
220404  
220408  
220412  
220416



### TNMG-VP4

160408  
160412



### TNMG-VQ

110304  
160404  
160408  
160412  
220404



### TNMG-VR

160404  
160408  
160412  
160416  
220408  
220412  
220416



### TNMG-VW

160404  
160408



### TNMM-GH

160408  
220408  
220412  
220416  
270616  
270624  
330924



### TNMM-GR

220408  
220412  
220416



### TNMM

160408  
220408  
220412



### TNMX

160402R  
160404R/L  
160408R/L  
220404R  
220408R



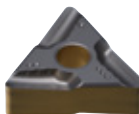
### TNMX-SH

160404R/L  
160408R/L



### TNMX-SR

160404R/L  
160408R/L



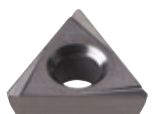
### TOEH

060102L  
090204L  
140304L



### TPGH

080202L  
080204L  
110202L  
110204L





## » For Turning

### TPGN

090204 160316  
110302 160404  
110304 220404  
110308 220408  
160302 220412  
160304 220430  
160308 220440  
160310 270408  
160312 270608



### TPGR-F

110302  
110304  
160304



### TPGR-M

110308  
160308



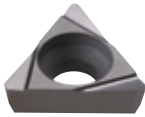
### TPGT

080202R/L  
110302R/L  
110304R/L  
110308R/L  
160404R/L  
160408R/L



### TPGX

090202L  
090204L  
090208L  
110304L



### TPMR-F

090202  
090204  
110302  
110304  
110308  
160304  
160308



### TPMR-M

110304  
110308  
160304  
160308  
160312  
220408



### TPMT-MP

090202 160402  
090204 160404  
110302 160408  
110304  
110308



### TPMT-VF

110304  
110308  
160404  
160408



### TPMT-VL

090204  
090208  
110304  
110308  
160404  
160408



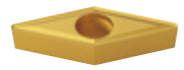
### TPUN

090308 220404  
110208 220408  
110304 220412  
110308 330620  
160304 160308TN  
160308 160312TN  
160312 220412TN



### VBGT

160404  
160408



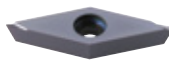
### VBGT-AK/AR

110302  
110304  
110308  
160402  
160404  
160408  
160412



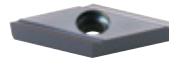
### VBGT-KF

1103003R/L  
110301R/L  
110302R/L



### VBGT-KM

1103003R/L  
110301R/L  
110302R/L  
160404R/L



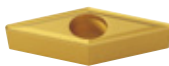
### VBGT-VP1

110302  
160402  
160404



### VBMT

160404  
160408



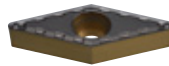
### VBMT-HMP

110304  
110308  
160404  
160408  
160412



### VBMT-MP

110302  
110304  
110308  
160402  
160404  
160408  
160412



### VBMT-VB

110302  
110304  
110308  
160402  
160404  
160408  
160412



### VBMT-VF

160404  
160408



### VBMT-VL

110302  
110304  
110308  
160402  
160404  
160408  
160412



### VBMT-VP1

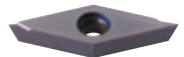
160402  
160404  
160408



### VCET-KF

Precision class

1103005MFR/L  
110301MFR/L  
110302MFR/L

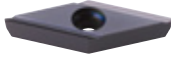


# Turning Inserts

## » For Turning

### VCET-KM Precision class

1103005MFR/L  
110301MFR/L  
110302MFR/L



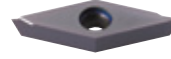
### VCGT-AK / AR

110301 160402  
110302 160404  
110304 160408  
110308 160412  
130302 220516  
130304 220525  
130308 220530



### VCGT-KF

1103003R/L  
110301R/L  
110302R/L



### VCGT-KM

1103003R/L  
110301R/L  
110302R/L



### VCGT-VP1

110301  
110302  
110304  
160404  
160408



### VCGT-VP1 Precision class

110301MFN  
110302MFN  
110304MFN  
1203008FN  
120301FN  
120302FN  
120304FN



### VCGX-VP1 Precision class

120300MFR  
120301MFR  
120302MFR  
120304MFR  
120308MFR



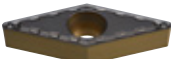
### VCMT-HMP

160404  
160408



### VCMT-MP

080202  
080204  
110302  
110304  
160404  
160408  
160412



### VCMT-VF

080202  
080204  
110304  
160404



### VCMT-VL

080202  
080204  
160404  
160408  
160412



### VCMT-VP1

160404  
160408



### VNGG-HA

160408



### VNGG-VP3

160404  
160408



### VNMG-HM

160404  
160408  
160412



### VNMG-MM

160404  
160408  
160412



### VNMG-LP

160404  
160408  
160412



### VNMG-MK

160404  
160408  
160412



### VNMG-MP

160404  
160408  
160412  
160416



### VNMG-RM

160404  
160408  
160412



### VNMG-VB

160404  
160408  
160412



### VNMG-VC

160404  
160408  
160412



### VNMG-VF

160402  
160404  
160408  
160412



### VNMG-VL

160404  
160408  
160412



## » For Turning

### VNMG-VM

160404  
160408  
160412  
220404  
220408



### VNMG-VP3

160404  
160408  
160412



### VNMG-VQ

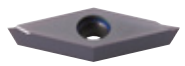
160404  
160408  
160412



### VPET-KF

Precision class

0802005MFR/L  
080201MFR/L  
080202MFR/L



### VPET-KM

Precision class

0802005MFR/L  
080201MFR/L  
080202MFR/L



### VPGT-VP1

110301  
110302  
110304



### VPGT-VP1

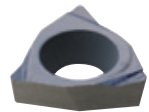
Precision class

110301MFN  
110302MFN  
110304MFN



### WBGT

020102R/L  
S30202L  
S30204R/L



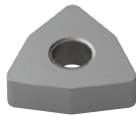
### WNGG-VP3

080404



### WNMA

060404  
060408  
060412  
080404  
080408  
080412  
080416



### WNMG-B25

080404  
080408  
080412



### WNMG-GR

080404  
080408  
080412  
080416



### WNMG-HA

060404  
060408  
080404  
080408  
080412



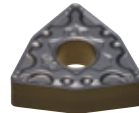
### WNMG-HM

060404  
060408  
080404  
080408  
080412



### WNMG-LP

06T308  
060404  
060408  
060404  
080404  
080408  
080412



### WNMG-LW

060408  
060412  
080408  
080412



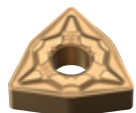
### WNMG-MK

060408  
080404  
080408  
080412  
080416



### WNMG-MM

06T304 080404  
06T308 080408  
06T312 080412  
060404  
060408  
060412



### WNMG-MP

06T304 080404  
06T308 080408  
060404 080412  
060408 080416  
060412



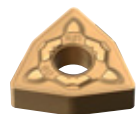
### WNMG-RK

060408  
060412  
080404  
080408  
080412  
080416



### WNMG-RM

060404  
060408  
060412  
080404  
080408  
080412



### WNMG-VB

080404  
080408



### WNMG-VC

080404  
080408  
080412



### WNMG-VF

060404  
060408  
080404  
080408  
080412



# < Turning Inserts >

## » For Turning

### WNMG-VL

060404  
080404  
080408



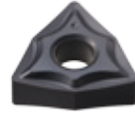
### WNMG-VM

060404  
060408  
060412  
080404  
080408  
080412  
080416



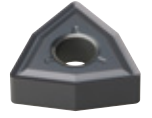
### WNMG-VP2

080404  
080408  
080412



### WNMG-VP3

060408  
060412  
080404  
080408  
080412  
130612



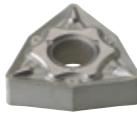
### WNMG-VP4

080408  
080412



### WNMG-VQ

060404  
060408  
060412  
080404  
080408  
080412



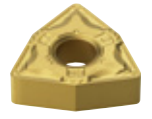
### WNMG-VR

060408  
080404  
080408  
080412  
080416



### WNMG-VW

060404  
060408  
080404  
080408  
080412



### WNMM-B25

100608  
130612



### WNMX-SH

080404R/L  
080408R/L



### WNMX-SR

080404R/L  
080408R/L



# Milling Inserts

## » For Milling

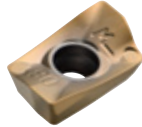
### ADKA

150308R  
150308SR  
150308TR



### ADKT-ML

170608PESR



### ADKT-MM

170604PESR  
170608PESR  
170616PESR  
170620PESR



### ADLT

150308R  
150308SR  
150308TR



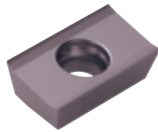
### APKT

1604PDSR



### APKT-MA

1604PDFR  
160416FR



### APKT-MA2

1604PDFR  
160416FR  
160432FR



### APKT-MA3

1604PDFR  
160420FR



### APKT-MF

1604PDSR



### APKT-MM

1604PDSR



### APKT-MM1

160432R



### APLT

070304R



### APMT-MA

0602PDFR 11T308PDFR 180612PDFR  
060208PDFR 160404PDFR 180616PDFR  
0903PDFR 1604PDFR 180620PDFR  
090308PDFR 180604PDFR 180624PDFR  
11T3PDFR 1806PDFR 180630R



### APMT-MF

11T3PDSR  
1604PDSR  
1806PDSR  
180612PDSR



### APMT-ML

0903PDER 1604PDER 180620PDER  
090308PDER 180604PDER 180624PDER  
11T3PDER 1806PDER 180630R  
11T308PDER 180612PDER  
160404PDER 180616PDER



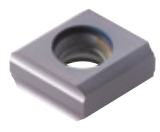
### APMT-MM

060202PDSR 090331R 160416PDSR 180624PDSR  
0602PDSR 090332R 160424R 180630R  
060208PDSR 11T3PDSR 160430R 180632R  
060212R 11T308PDSR 160432R 180640R  
060216R 11T312PDSR 160450R 180648R  
0903PDSR 11T316R 160464R 180650R  
090308PDSR 11T318R 1806PDSR 180660R  
090312R 11T324R 180612PDSR 180664R  
090316R 1604PDSR 180616PDSR  
090320R 160410PDSR 180620PDSR



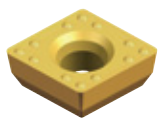
### CNHQ

1005-C0.5  
1305-C0.5  
1606-C0.5



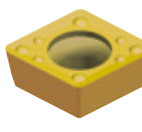
### CPMH-MM

120408



### CPMT-MM

060204  
080308  
09T308



### HECN

090408FN  
090408SN  
090408TN  
110412FN  
110412TN



# Milling Inserts

## » For Milling

### HPEN

090408FN  
090408SN  
090408EN  
110412FN



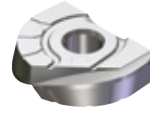
### HPEN-WC

090408  
110412



### LBH

080 300  
100 320  
120 330  
160  
200  
250



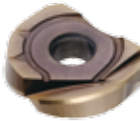
### LBH-KF

080 200  
100 210  
120 250  
130 300  
160 320  
170 330



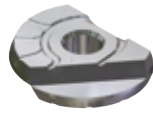
### LBH-KH

080 200  
100 210  
120 250  
130 260  
160 300  
170 320  
330



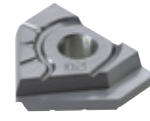
### LBS

080 200  
090 210  
100 250  
110 260  
120 300  
130 310  
160 320  
170



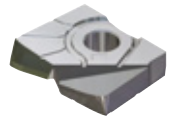
### LCF

160-D90  
200-D90  
250-D90



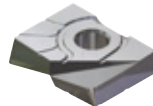
### LFH

100  
120  
160  
200  
250  
300  
320



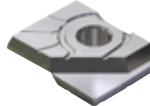
### LRH / LR

100-R05	130-R10	200-R10	260-R05	320-R30
100-R10	160-R05	200-R20	260-R10	330-R05
100-R20	160-R10	200-R30	300-R10	330-R10
110-R05	160-R20	210-R05	300-R20	330-R20
120-R05	160-R30	250-R05	300-R30	330-R30
120-R10	170-R05	250-R10	310-R05	
120-R20	170-R10	250-R20	320-R10	
130-R05	200-R05	250-R30	320-R20	



LRH

Special type



LR

### LDET

650540PPFR-MA  
650550PPFR-MA



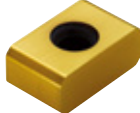
### LNCS

1907-C1.5-WC  
1907-R3.0-WC



### LNE

324-R0.8  
324-C1.0



### LNEX-MA

100605PNR  
151004PNR  
151008PNR



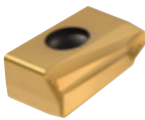
### LNKT-MA

080404PNR-MA  
080408PNR-MA  
140608PNR-MA  
170704PNR-MA  
170708PNR-MA  
170712PNR-MA  
170716PNR-MA  
170720PNR-MA



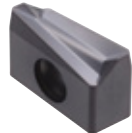
### LNKT-ML

080404PNR-ML  
080408PNR-ML  
140608PNR-ML  
170704PNR-ML  
170708PNR-ML  
170712PNR-ML  
170716PNR-ML  
170720PNR-ML



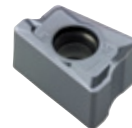
### LNKT-MM

080404PNR-MM  
080408PNR-MM  
140608PNR-MM  
170704PNR-MM  
170708PNR-MM  
170712PNR-MM  
170716PNR-MM  
170720PNR-MM



### LN(E)X-MM

100605PNR  
100608PNR  
151004PNR  
151008PNR  
151016PNR



### LN(E)X-MM

100605PNR  
100608PNR  
100605PNL  
151004PNR  
151008PNR  
151016PNR  
151008PNL



### LNMX-MF

060310



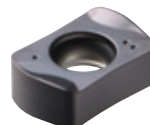
### LNMX-ML

060310



### LNMX-MM

060310



### LPEW

040210R  
040220R



## » For Milling

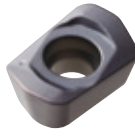
### LPMT-MF

040210R  
040220R



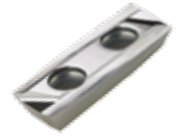
### LPMW

040210R  
040220R



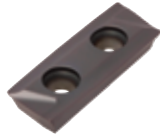
### LXET-MA

250404PEFR-32	250412PEFR-40	340504PEFR-63
2504PEFR-32	250416PEFR-40	3405PEFR-63
250412PEFR-32	340504PEFR-50	340512PEFR-63
250416PEFR-32	3405PEFR-50	340516PEFR-63
250404PEFR-40	340512PEFR-50	
2504PEFR-40	340516PEFR-50	



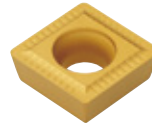
### LXET-ML

250404PEER-32	250412PEER-40	340504PEER-63
2504PEER-32	250416PEER-40	3405PEER-63
250412PEER-32	340504PEER-50	340512PEER-63
250416PEER-32	3405PEER-50	340516PEER-63
250404PEER-40	340512PEER-50	
2504PEER-40	340516PEER-50	



### MPMT

090308  
120408



### OFCN

0704SN  
0704FN  
070408SN  
070408FN  
070408TN



### OFCW

05T3SN  
05T3FN  
05T308FN



### OFKR-MA

0704FN  
0704EN



### OFKR-MF

0704SN  
070408SN



### OFKR-MM

0704SN  
070408SN



### OFKT-MA

05T3FN  
05T3EN  
0704FN  
0704EN



### OFKT-MF

05T3SN  
05T308SN



### OFKT-MM

05T3SN  
05T308SN  
0704SN



### ONHX-MF

060608  
080608  
0606ANN  
0806ANN



### ONHX-ML

060608  
080608



### ONHX-MM

060608  
080608  
0606ANN  
0806ANN



### ONHX-MA

060608  
080608



### ONHX-W

060608  
080608



### ONMX-MF

060608  
080608  
0606ANN  
0806ANN



### ONMX-MM

060608  
080608  
0606ANN  
0806ANN



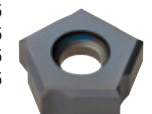
### PNEJ

1223N 1260N  
1225N 1265N  
1230N 1270N  
1235N 1275N  
1240N 1285N  
1245N  
1250N  
1255N



### PNEJ-C

1223N-C03 1260N-C05  
1230N-C03 1265N-C05  
1235N-C03 1270N-C05  
1240N-C05 1275N-C05  
1245N-C05  
1250N-C05  
1255N-C05



## » For Milling

### RC

16  
20  
25  
30  
32



### RDCT-MA

10T3M0  
1204M0



### RDHW

0501M0F 0803M0F  
0501M0E 0803M0E  
0501M0S 0803M0S  
06T1M0F 1605M0F  
06T1M0E 1605M0E  
06T1M0S 1605M0S  
0702M0F 2006M0F  
0702M0E 2006M0E  
0702M0S 2006M0S



### RDKT-MF

10T3M0  
1204M0  
1605M0



### RDKT-ML

1605M0



### RDKT-MM

10T3M0  
1204M0  
1605M0  
2006M0



### RDKW

0501M0E  
06T1M0E  
0702M0E  
0803M0E



### REKR-MM

170400



### RPCT-MA

10T3M0  
1204M0  
1606M0  
2007M0



### RPET-ML

0803M0E  
103TM0E  
1204M0E  
1606M0E  
2007M0E



### RPMT-MF

0803M0E  
10T3M0E  
1204M0E  
1606M0E  
2007M0E



### RPMT-MM

0803M0S  
10T3M0S  
1204M0S  
1606M0S  
2007M0S



### RPMW

0803M0E1  
10T3M0E1  
1204M0S1  
1204M0S2  
1606M0S1  
2007M0S1



### SCKN

220715DDSR-MM  
280920DDSR-MM



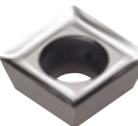
### SDCN

42M	53M-G	1203AESN
42M-G	53MT	1203AESN-RH
42MT	53MT-RH	1504AEEN
42MT-RH	53MT-S20	1504AEEN-RH
42MT-S20	1203AEEN	1504AEEN
53M	1203AEEN-RH	1504AEEN-RH



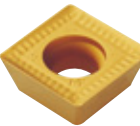
### SDET-MA

09M402R  
09M404R  
09M405R  
130504R



### SDET-MF

09M405R  
130508R



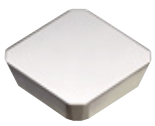
### SDET-MM

09M405R  
130508R



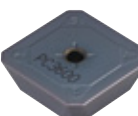
### SDKN-CM

42MT



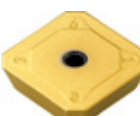
### SDKN-MU

1203AESN  
1504AESN



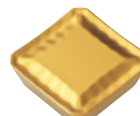
### SDKN-SU

1203AESN  
1504AESN



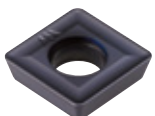
### SDKR-MX

1203AESN  
1203AETN  
1203AEN  
1504AESN  
1504AETN  
1504AEN



### SDMT-MM

090308





## » For Milling

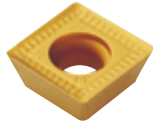
### SDXT-MA

09M405R  
130508R



### SDXT-MF

09M403R  
09M403L  
09M404R  
09M404L  
09M405R  
09M405L  
130508R



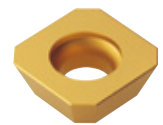
### SDXT-MM

09M405R  
09M405L  
130508R  
130508L  
130538



### SECA

1204AFSN  
1204AFTN  
1204AFFN  
1204AFEN  
1504AFSN  
1504AFTN  
1504AFFN



### SECN

1203AFFN  
1203AFTN  
1203AFEN  
1203AFSN  
1203AFEN-RH  
1203AFSN-RH  
1203AFEN-RH  
1203AFSN-RH  
1504AFSN  
1504AFEN-RH  
1504AFSN-RH  
1504AFTN-S20



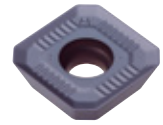
### SEET-MA

0903AGFN  
14M4AGFN



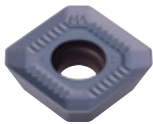
### SEET-MF

0903AGSN  
14M4AGSN



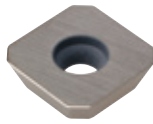
### SEET-MM

0903AGSN  
14M4AGSN



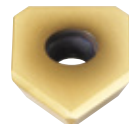
### SEEW

0903AGTN  
14M4AGTN



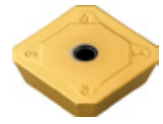
### SEEW-W

14M4AGFN  
14M4AGSN  
14M4AGTN



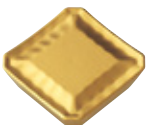
### SEKN-SU

1203AFSN  
1504AFSN



### SEKR-MX

1203AFSN  
1504AFSN



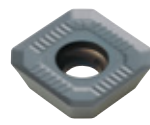
### SEMN

1204AZ



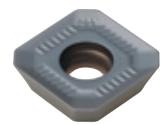
### SEXT-MF

0903AGSN  
14M4AGSN



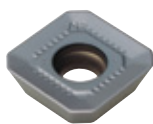
### SEXT-MM

0903AGSN  
14M4AGSN



### SEXT-MR

0903AGSN  
14M4AGSN



### SFCN

1203EFR



### SNC(M)F-MF

1206ANN  
1507ANN



### SNC(M)F-MF

1206ENN  
1507ENN



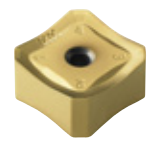
### SNC(M)F-MF

1206QNN



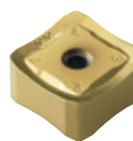
### SNC(M)F-MM

1206ANN  
1507ANN



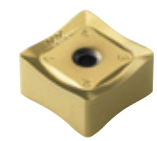
### SNC(M)F-MM

1206ENN  
1507ENN



### SNC(M)F-MM

1206QNN



# Milling Inserts

## » For Milling

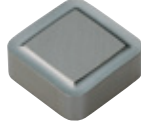
### SNCN

1204ENN  
1504ENN



### SNEF

435  
535



### SNEU-MF

120420



### SNEU-MF

1204ANN



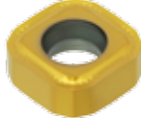
### SNEU-TBW

1204



### SNEU-WMF

1204R



### SNEX

101010  
1010ZNN



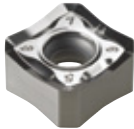
### SNEX-CU1

101010  
1010ZNN  
121212  
1212ZNN



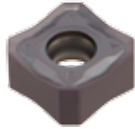
### SNEX-MA

1206ANN  
1206ENN  
1206QNN  
120612



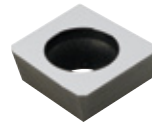
### SNEX-ML

1206ANN  
1206ENN  
1206QNN  
120612  
1507ANN  
1507ENN



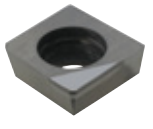
### SNEW

09T3ADFR



### SNEW-NAF

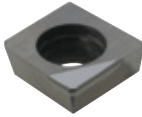
09T3ADTR-NAF  
09T3ADTR-NAW



• NAW: Wiper insert

### SNEW-XAF

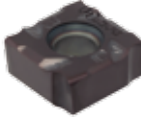
09T3ADTR-XAF  
09T3ADTR-XAW



• NAW: Wiper insert

### SNHT-WX

1102308R/L  
110308R/L  
120308R/L  
1203508R/L  
120408R/L  
1204508R/L  
120508R/L  
1205408R/L  
120608R/L  
1206508R/L  
120708R/L  
1207508R/L



### SNKN

1204ENN  
1504ENN



### SNM(E)X-MF

1206ANN  
1507ANN



### SNM(E)X-MF

1206ENN  
1507ENN



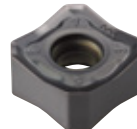
### SNM(E)X-MF

1206QNN  
120612



### SNM(E)X-MM

1206ANN  
1507ANN



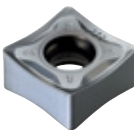
### SNM(E)X-MM

1206ENN  
1507ENN



### SNM(E)X-MM

1206QNN  
120612



### SNEX-W

1206ANN



### SPCN

1203EDR	1203EDTR-RH	1504EDR-G
1203EDR-RH	1203EDR-S20	1504EDR-RN
1203EDL	150412T	1504EDER-RH
1203EDR-G	1504EDR	1504EDSR-RH
1203EDR-RN	1504EDR-RH	1504EDTR-RH
1203EDER-RH	1504EDSR	1504EDR-S20
1203EDSR-RH	1504EDL	



## » For Milling

### SPEN-WC

120416  
150412  
150416  
150420  
190424



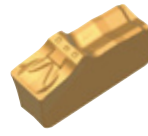
### SPEX

1203EDR-1  
1203EDL-1  
1504EDR-1  
1504EDL-1



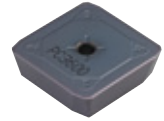
### SPFN

200-N  
300-N  
400-N



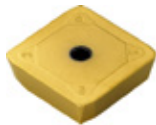
### SPKN-MU

1203EDSR  
1504EDSR



### SPKN-SU

1203EDSR  
1203EDSL  
1504EDSR  
1504EDSL



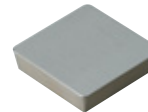
### SPKR-MX

1203EDSR  
1203EDSL  
1504EDR  
1504EDSR



### SPMN

120308



### SPMT

060304



### SPMT-KC

110408



### SPMT-MM

120408-MM  
120508-MMN



### TEC(E)N

#### TECN

22R 43R-G  
22TR 43TR-Z  
32R 43TR  
32R-G  
32TR  
32TR-S20



#### TEEN

32TR

### TEEN

43R-Z  
43TR-Z  
43TR-ZH  
43R  
43R-G  
43TR  
43TR-S20



### TFCN

2203PFR  
2203PFL



### TNMX-NM

2710AZNR  
2710AZNL  
3012PNR



### TPCN

1103PPN 1603PPSR 1603PDR-RN 2204PDTR  
1103PPTN 1603PPTN 2204PDR 2204PPN  
1603PDR 1603PPTR 2204PDR-RH 2204PPTN  
1603PPN 1603PPR-RH 2204PDR-RN 2204PDR-RH  
1603PPR 1603PDER-RH 2204PDR-G 2204PDER-RH  
1603PPR-RH 1603PDSR-RH 2204PDL 2204PDSR-RH  
1603PPR-G 1603PDR-S20 2204PDSR 2204PDR-S20



### TPKN-MU

220530N



### TPKN-SU

1603PDSR  
1603PDSL  
2204PDSR  
2204PDSL



### TPKR-MX

1603PDSN  
1603PDSR  
1603PPR  
1603PPSN  
1603PPSR  
2204PDR  
2204PDSR  
2204PPR



### TWX-KC

16R  
22R



### VCKT-MA

220530N



### VDKT-MA

11T210N  
11T220N



### WDKT-MH

080316ZDSR  
10T320ZDSR  
130520ZDSR  
150625ZDSR



### WNGX-MA

040304PNFR  
040308PNFR  
040312PNFR  
040316PNFR  
080604PNFR  
080608PNFR  
080612PNFR  
080616PNFR  
080620PNFR



# Milling Inserts

## For Milling

### WNGX-ML

040304PNER  
040308PNER  
040312PNER  
040316PNER  
080604PNER  
080608PNER  
080612PNER  
080616PNER  
080620PNER



### WNGX-MM

040304PNSR  
040308PNSR  
040312PNSR  
040316PNSR  
080604PNSR  
080608PNSR  
080612PNSR  
080616PNSR  
080620PNSR



### WNMX-MF

060312ZNN  
09T316ZNN  
130520ZNN  
160720ZNN



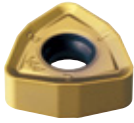
### WNMX-ML

060312ZNN  
09T316ZNN  
130520ZNN  
160720ZNN



### WNMX-MM

060312ZNN  
09T316ZNN  
130520ZNN  
160720ZNN



### XCET-KC

310404ER



### XDET-MA

190504PEFR  
190508PEFR  
190512PEFR  
190516PEFR  
190520PEFR  
190524PEFR  
190530PEFR  
190532PEFR  
190540PEFR  
190550PEFR



### XEKT-MA

19M504FR 250604FR  
19M508FR 250608FR  
19M512FR 250612FR  
19M516FR 250616FR  
19M518FR 250620FR  
19M520FR 250630FR  
19M530FR 250632FR  
19M532FR 250640FR  
19M540FR 250650FR  
19M550FR



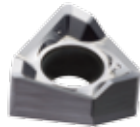
### XEKT-ML

19M504FR 250604FR  
19M508FR 250608FR  
19M512FR 250612FR  
19M516FR 250616FR  
19M518FR 250620FR  
19M520FR 250630FR  
19M530FR 250632FR  
19M532FR 250640FR  
19M540FR 250650FR  
19M550FR



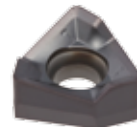
### XNCT-MA

080504PNFR  
080508PNFR  
080512PNFR  
080520PNFR  
120608PNFR



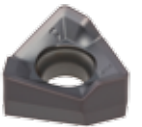
### XNKT-ML

060405PNER  
060408PNER  
080504PNER  
080508PNER  
080512PNER  
080516PNER  
080520PNER  
120608PNER  
120612PNER  
120616PNER  
120620PNER



### XNKT-MM

060405PNSR  
060408PNSR  
080504PNSR  
080508PNSR  
080512PNSR  
080516PNSR  
080520PNSR  
120604PNSR  
120608PNSR  
120612PNSR  
120616PNSR  
120620PNSR



### XPMT-MM

0802ER  
1003ER  
13T3ER  
1604ER  
1805ER  
2006ER  
2507ER



### ZDMT-R-MM

080310R  
110312.5R  
130416R



### ZPET-MM

Internal

080M 140M  
090M 150M  
100M 160M  
110M 200M  
125M 250M  
130M



### ZPET-MM

External

080S 140S  
090S 150S  
100S 160S  
110S 200S  
125S 250S  
130S



### ZPMT-MM

1504PPSR-MM  
1505PPSR-MMN



### ZPMT-R-MM

160520R  
160525R  
160531.5R



### ZPMT-R-MR

160525R

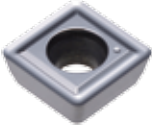


# < Drilling Inserts >

## » For Drilling

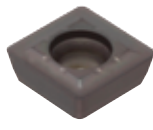
### SPET-ND

040204 11T308  
050204 130410  
060205 15M510  
07T208 180510  
090308



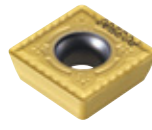
### SPMT-LD

060205  
07T208  
090308  
11T308  
130410  
15M510  
180510



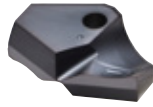
### SPMT-PD

040204 11T308  
050204 130410  
060205 15M510  
07T208 180510  
090308



### TPDB Plus

TPD100B ~ 109B	TPD180B ~ 189B	TPD260B ~ 269B
TPD110B ~ 119B	TPD190B ~ 199B	TPD270B ~ 279B
TPD120B ~ 129B	TPD200B ~ 209B	TPD280B ~ 289B
TPD130B ~ 139B	TPD210B ~ 219B	TPD290B ~ 299B
TPD140B ~ 149B	TPD220B ~ 229B	TPD300B ~ 309B
TPD150B ~ 159B	TPD230B ~ 239B	TPD310B ~ 319B
TPD160B ~ 169B	TPD240B ~ 249B	TPD320B ~ 329B
TPD170B ~ 179B	TPD250B ~ 259B	



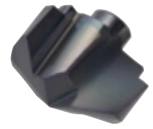
### TPDB-H

TPD140B-H ~ 149B-H	TPD230B-H ~ 239B-H
TPD150B-H ~ 159B-H	TPD240B-H ~ 249B-H
TPD160B-H ~ 169B-H	TPD250B-H ~ 259B-H
TPD170B-H ~ 179B-H	TPD260B-H ~ 269B-H
TPD180B-H ~ 189B-H	TPD270B-H ~ 279B-H
TPD190B-H ~ 199B-H	TPD280B-H ~ 289B-H
TPD200B-H ~ 209B-H	TPD290B-H ~ 299B-H
TPD210B-H ~ 219B-H	TPD300B-H ~ 309B-H
TPD220B-H ~ 229B-H	



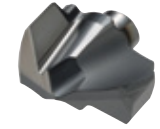
### TPD-CP

TPDC12□□	TPDC19□□	TPDC26□□
TPDC13□□	TPDC20□□	TPDC27□□
TPDC14□□	TPDC21□□	TPDC28□□
TPDC15□□	TPDC22□□	TPDC29□□
TPDC16□□	TPDC23□□	TPDC30□□
TPDC17□□	TPDC24□□	
TPDC18□□	TPDC25□□	



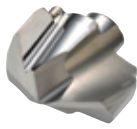
### TPD-CM

TPDC12□□	TPDC19□□	TPDC26□□
TPDC13□□	TPDC20□□	TPDC27□□
TPDC14□□	TPDC21□□	TPDC28□□
TPDC15□□	TPDC22□□	TPDC29□□
TPDC16□□	TPDC23□□	TPDC30□□
TPDC17□□	TPDC24□□	
TPDC18□□	TPDC25□□	



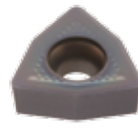
### TPD-CN

TPDC12□□	TPDC19□□	TPDC26□□
TPDC13□□	TPDC20□□	TPDC27□□
TPDC14□□	TPDC21□□	TPDC28□□
TPDC15□□	TPDC22□□	TPDC29□□
TPDC16□□	TPDC23□□	TPDC30□□
TPDC17□□	TPDC24□□	
TPDC18□□	TPDC25□□	



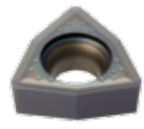
### WCMT-C20N

030208  
040208  
050308  
06T308  
080408  
080412



### WCMT-C21N

030204  
040204  
040208  
050308  
06T308  
080408



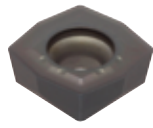
### XOET-ND

040204  
050204  
060204  
07T205  
090305  
11T306  
130406  
15M508  
180508



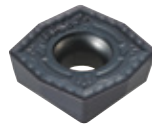
### XOMT-LD

060204  
07T205  
090305  
11T306  
130406  
15M508  
180508



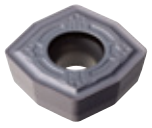
### XOMT-PD

040204  
050204  
060204  
07T205  
090305  
11T306  
130406  
15M508  
180508



### XOMT-RD

07T207  
090308  
11T309  
130410  
15M511  
180512



# Inserts for Aluminium Machining

## » For Turning

### CCGT-AK

060202 120402  
060204 120404  
060208 120408  
09T302  
09T304  
09T308



### CCGT-AR

060202 120402  
060204 120404  
060208 120408  
09T302 120412  
09T304  
09T308



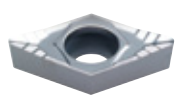
### DCGT-AK

070202  
070204  
070208  
11T302  
11T304  
11T308  
11T312



### DCGT-AR

070202  
070204  
070208  
11T302  
11T304  
11T308  
11T312



### RCGT-AK

0602M0  
0803M0  
1003M0  
10T3M  
1204M0



### RCGT-AR

0602M0  
0803M0  
1003M0  
10T3M  
1204M0



### SCGT-AK

09T302  
09T304  
09T308  
120404  
120408  
120416



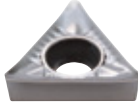
### SCGT-AR

09T302  
09T304  
09T308  
120404  
120408  
120416



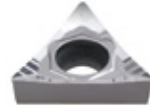
### TCGT-AK

090202 16T302  
090204 16T304  
110202 16T308  
110204 16T312  
110208 16T316  
16T325



### TCGT-AR

090202 16T302  
090204 16T304  
110202 16T308  
110204 16T312  
110208 16T316  
16T325



### VBGT-AK

110302  
110304  
110308  
160402  
160404  
160408  
160412



### VBGT-AR

110302  
110304  
110308  
160402  
160404  
160408  
160412



### VCGT-AK

110301 160402  
110302 160404  
110304 160408  
110308 160412  
130302 220516  
130304 220525  
130308 220530



### VCGT-AR

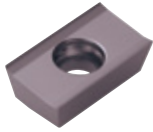
110301 160402  
110302 160404  
110304 160408  
110308 160412  
130302 220516  
130304 220525  
130308 220530



» For Milling

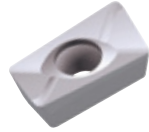
**APKT-MA**

1604PDFR  
160416FR



**APKT-MA2**

1604PDFR  
160416FR  
160432FR



**APKT-MA3**

1604PDFR  
160420FR



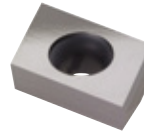
**APMT-MA**

0602PDFR	11T308PDFR	180612PDFR
060208PDFR	160404PDFR	180616PDFR
0903PDFR	1604PDFR	180620PDFR
090308PDFR	180604PDFR	180624PDFR
11T3PDFR	1806PDFR	180630R



**CDEW-XCF**

1204R  
1204L



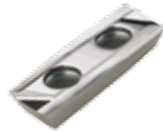
**LNEX-MA**

100605PNR  
151004PNR  
151008PNR



**LXET-MA**

250404PEFR-32	250412PEFR-40	340504PEFR-63
2504PEFR-32	250416PEFR-40	3405PEFR-63
250412PEFR-32	340504PEFR-50	340512PEFR-63
250416PEFR-32	3405PEFR-50	340516PEFR-63
250404PEFR-40	340512PEFR-50	
2504PEFR-40	340516PEFR-50	



**OFKR-MA**

0704FN  
0704EN



**OFKT-MA**

05T3FN  
05T3EN  
0704FN  
0704EN



**ONHX-MA**

060608  
080608



**RDCT-MA**

10T3M0  
1204M0



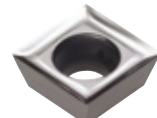
**RPCT-MA**

10T3M0  
1204M0  
1606M0  
2007M0



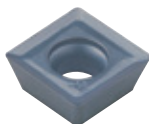
**SDET-MA**

09M402R  
09M404R  
09M405R  
130504R



**SDXT-MA**

09M405R  
130508R



**SEET-MA**

0903AGFN  
14M4AGFN



**SNEX-MA**

1206ANN  
1206ENN  
1206QNN  
120612



**VCKT-MA**

220530N



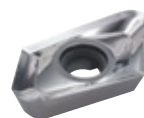
**VDKT-MA**

11T210N  
11T220N



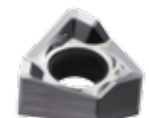
**XEKT-MA**

19M504FR	19M520FR	250604FR	250630FR
19M508FR	19M530FR	250608FR	250632FR
19M512FR	19M532FR	250612FR	250640FR
19M516FR	19M540FR	250616FR	250650FR
19M518FR	19M550FR	250620FR	



**XNCT-MA**

080508PNFR



# Inserts for Aluminium Machining

## » For Grooving

### KGGN-A

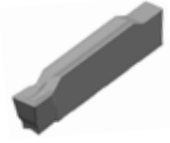
200-02  
300-02  
400-04  
500-04  
600-04



### KGGN-A

Type singular

200S-02  
300S-02  
400S-04  
500S-04  
600S-04



### KRGN-A

300  
400  
500  
600  
800



### MGGN-A

300-02 500-02  
300-04 500-04  
300-08 500-08  
400-02  
400-04  
400-08



### MRGN-A

300  
400  
500  
600  
800



### MRGN-A

6N  
8N



### MRGN-A5

6N  
8N



### MRGN-AM

6N  
8N



### MRGN-AP

6N  
8N



### MVGN

8N-A-R1.2  
8N-A-R1.6



## » For Drilling

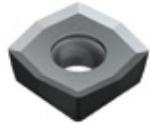
### SPET-ND

040204 11T308  
050204 130410  
060205 15M510  
07T208 180510  
090308



### XOET-ND

040204 11T306  
050204 130406  
060204 15M508  
07T205 180508  
090305





# Multi Functional Tools (Inserts)

## KG T

### KGGN-A

Holder  
KGEHR/L  
KGEVR/L  
KGFHR/L  
KGFVR/L

Width  
: 2.0 ~ 6.0mm



### KGGN-A

Type singular

Holder  
KGTB

Width  
: 2.0 ~ 6.0mm



### KGGN-B

Holder  
KGEHR/L  
KGEVR/L  
KGFHR/L  
KGFVR/L

Width  
: 2.65 ~ 8.0mm



### KGGN-R

Holder  
KGEHR/L  
KGEVR/L  
KGFHR/L  
KGFVR/L

Width  
: 2.0 ~ 8.0mm



### KGGN-R

Type singular

Holder  
KGTB

Width  
: 2.0 ~ 8.0mm



### KGMI-T

Holder  
KGIVR/L

Width  
: 2.0 ~ 4.0mm



### KGML-LP

Holder  
KGEHR/L

Width  
: 2.0 ~ 4.0mm



### KGML-RP

Holder  
KGEHR/L

Width  
: 2.0 ~ 4.0mm



### KGMN-L

Holder  
KGEHR/L  
KGEVR/L  
KGFHR/L  
KGFVR/L  
KGIVR/L

Width  
: 2.0 ~ 6.0mm



### KGMN-R

Holder  
KGEHR/L  
KGEVR/L  
KGFHR/L  
KGFVR/L  
KGIVR/L

Width  
: 1.5 ~ 8.0mm



### KGMN-T

Holder  
KGEHR/L  
KGEVR/L  
KGFHR/L  
KGFVR/L  
KGIVR/L

Width  
: 1.5 ~ 8.0mm



### KGMR-LP

Holder  
KGEHR/L

Width  
: 2.0 ~ 5.0mm



### KGMR-RP

Holder  
KGEHR/L

Width  
: 2.0 ~ 5.0mm



### KRGN-A

Holder  
KGEHR/L  
KGEVR/L  
KGEUR/L  
KGFHR/L  
KGFVR/L  
KGIUR/L

Width  
: 3.0 ~ 8.0mm



### KRMI-C

Holder  
KGIVR/L

Width  
: 2.0 ~ 4.0mm



### KRMN-C

Holder  
KGEHR/L  
KGEVR/L  
KGEUR/L  
KGFHR/L  
KGFVR/L  
KGIVR/L  
KGIUR/L

Width  
: 2.0 ~ 8.0mm



## MGT

### MFMM

Holder  
MGFHR/L  
MGFVR/L

Width  
: 3.0mm



### MGGN-A

Holder  
MGEHR/L  
MGEVR/L  
MGIVR/L

Width  
: 3.0 ~ 5.0mm



### MGGN-M

Holder  
MGEHR/L  
MGEVR/L  
MGIVR/L

Width  
: 3.0 ~ 6.0mm



### MGMN-G

Holder  
MGEHR/L  
MGEVR/L  
MGIVR/L  
MGFHR/L  
MGFVR/L

Width  
: 1.5 ~ 6.0mm



### MGMN-L

Holder  
MGEHR/L  
MGEVR/L  
MGIVR/L  
MGFHR/L  
MGFVR/L

Width  
: 2.0 ~ 5.0mm



### MGMN-M

Holder  
MGEHR/L  
MGEVR/L  
MGIVR/L  
MGFHR/L  
MGFVR/L

Width  
: 2.0 ~ 8.0mm



### MGMN-R

Holder  
MGEHR/L  
MGEVR/L  
MGIVR/L  
MGFHR/L  
MGFVR/L

Width  
: 1.5 ~ 6.0mm



### MGMN-T

Holder  
MGEHR/L  
MGEVR/L  
MGIVR/L  
MGFHR/L  
MGFVR/L

Width  
: 1.5 ~ 6.0mm



# Multi Functional Tools (Inserts)

## » MGT

### MGMR/L-PS

Holder  
MGEHR/L

Width  
: 3.0 ~ 5.0mm



### MGMR/L-PT

Holder  
MGEHR/L

Width  
: 2.0 ~ 5.0mm



### MRGN-A

Holder  
MGEHR/L  
MGEUR/L  
MGEVR/L  
MGIUR/L  
MGIVR/L

Width  
: 4.0 ~ 5.0mm



### MRMN-M

Holder  
MGEHR/L  
MGEUR/L  
MGEVR/L  
MGIUR/L  
MGIVR/L

Width  
: 2.0 ~ 8.0mm



## MVGN

Holder  
MGEXR/L  
MGIUR/L-MV

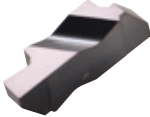


## » K Notch

### KNG

Holder  
KNSR

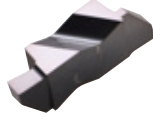
Width  
: 0.79 ~ 6.35mm



### KNGP

Holder  
KNSR

Width  
: 0.79 ~ 6.35mm



### KNR

Holder  
KNSR

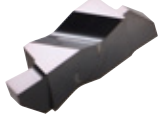
Width  
: 1.57 ~ 6.35mm



### KNRP

Holder  
KNSR

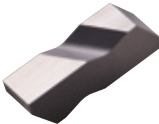
Width  
: 1.57 ~ 6.35mm



### KNB

Holder  
KNSR

Width  
: 3.81 ~ 6.48mm



### KNT

Holder  
KNSR

Width  
: 3.81 ~ 6.48mm



## » For Parting

### KSP

200-020-N  
300-020-N  
400-025-N  
500-025-N  
600-035-N

Holder  
KSPB



### SP

160 300L 600  
180 400 600R  
200 400R 600L  
200R 400L 800  
200L 500 900  
300 500R  
300R 500L

Holder  
SPB/SPB-S, SPH/SPH-S



### POB

Holder  
PH

Width  
: 3.0 ~ 5.0mm



## » For Forming

### BF

Holder  
GFT, GFIP



## » For Grooving

### ESB

Holder  
EH

Width  
: 9.525mm



### DB

Holder  
DBH

Width  
: 3.0 ~ 8.0mm



### DC

Holder  
DBH

Width  
: 3.0 ~ 5.0mm



### FGD/FGM/FMM

Holder  
FGHH  
FGVH

Width  
: 3.0 ~ 5.0mm



## » For Grooving

### GO

Holder  
GH  
Width  
: 2.5 ~ 4.1mm



### GS

Holder  
GH  
Width  
: 1.23 ~ 4.28mm



### GW

Holder  
GFT  
GFIP  
Width  
: 1.1~8.0mm



### IG

Holder  
IGH  
Width  
: 1.25 ~ 2.8mm



### GR

Holder  
GFT  
GFIK  
Width  
: 2.0 ~ 8.0mm



### TB

Holder  
TBH  
Width  
TB3: 1.25 ~ 4.3mm  
TB4: 1.25 ~ 4.5mm



### TB-M

Holder  
TBH  
Width  
TB4-M: 1.5 ~ 4.5mm  
TB5-M: 0.5 ~ 3.18mm



## » For Micro Boring Tools

### NFTF, NFTG, NFTT

Holder : NFTIH  
※ for Internal Grooving, Threading and Copy machining



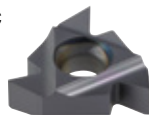
## » For Threading

### < Standard >

- Partial profile 60°
- Partial Profile 55°
- ISO Metric (Full Profile)
- American UN (Full Profile)  
UN, UNC, UNF, UNEF
- Whitworth (Full Profile)  
BSW, BSF, BSP
- British Standard Pipe thread  
(Full Profile) BSPT
- National Pipe Thread  
(Full Profile) NPT
- National Pipe Threads-Dryseal  
(Full Profile) NPTF
- Round DIN 405
- Trapez DIN 103
- American ACME
- Stub ACME
- UNJ
- American Buttress
- British Buttress
- Metric Buttress-Sagengewinde
- API
- API Buttress Casing
- API Round Casing & Tubing
- EL-Extreme Line

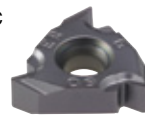
### ER

Holder  
ER(L)H / ER(L)H-C



### ERM

Holder  
ER(L)H / ER(L)H-C



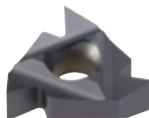
### ERM-U

Holder  
ER(L)H / ER(L)H-C



### IR

Holder  
IR(L)H / IR(L)H-C



### IRM

Holder  
IR(L)H / IR(L)H-C



### IRM-U

Holder  
IR(L)H / IR(L)H-C



# < Bearing Inserts >

## » For R-Chamfering

### MC

0906 1212 1525  
0910 1215 1530  
1206 1220 1540  
1210 1225

**Holder**  
CMSN...F  
CMSN...B



### MC

1206 1220  
1210 1230  
1212 1235  
1215

**Holder**  
CMSN...F  
CMSN...B



## » Internal Turning

### RPGT

0802M0 1604M0  
1203M0 2004M0

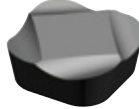
**Holder**  
SRGP...E  
SRGP...F  
SRGP...B



### SPGH

120440L

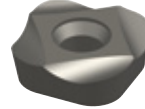
**Holder**  
CSKP...B



### SPGH

090330L

**Holder**  
SSKP...B

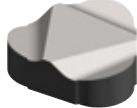


## » Machining for Race-way

### KORIC

2204R/L 3806R/L  
2704R/L 4408R/L  
3306R/L

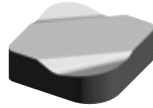
**Holder**  
CKFN...RW  
CKGN...RW



### SNGN-W

0903WR/L  
1504WR/L  
1905WR/L

**Holder**  
CSGN...RW

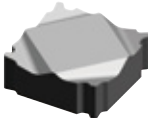


## » Machining for Bearing Shield

### SNGN-S

0903SR/L  
1204SR/L  
1504SR/L

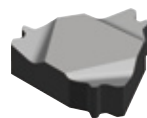
**Holder**  
CSBN...BS  
CSKN...BS



### TNGN

2204SR/L

**Holder**  
STGN...BS



### SP

160 300R 500R  
180 300L 500L  
200 400 600  
200R 400R 600R  
200L 400L 600L  
300 500

**Holder**  
SPB-S

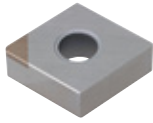


# < cBN/PCD Inserts >

## » Regrinding Type (Negative/Positive)

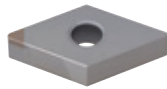
### CNMA

120404  
120408



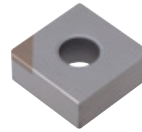
### DNMA

150404  
150408



### SNMA

Holder  
KNSR



### TNMA

160404  
160408



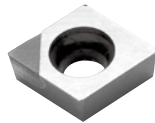
### VNMA

160404  
160408



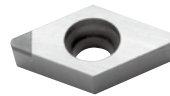
### CCMW

09T304



### DCGW

11T308



### TPGB

110304  
110308



### VBMW

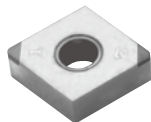
160404  
160408



## » Multi-Corner Type (Negative/Positive)

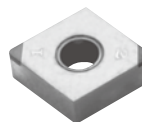
### 2NU-CNGA

120404    120408    120408WT    120412WF  
120404F    120408F    120412    120412WT  
120404T    120408T    120412F  
120404W    120408W    120412T  
120404WF    120408WF    120412W



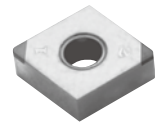
### 2NU-CNMA

120404  
120408



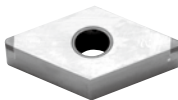
### 2NS-CNGA

120408



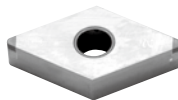
### 2NU-DNGA

150404  
150404F  
150404T  
150408  
150408F  
150408T  
150412  
150412F  
150412T  
150608



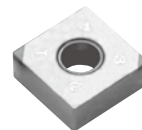
### 2NS-DNGA

150408



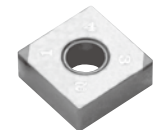
### 4NU-SNGA

120404  
120404F  
120404T  
120408  
120408F  
120408T  
120412



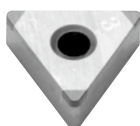
### 2NS-SNGA

120408



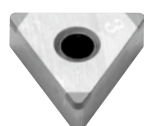
### 3NU-TNGA

160404  
160404F  
160404T  
160408  
160408F  
160408T  
160412



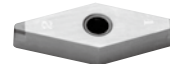
### 2NS-TNGA

160408



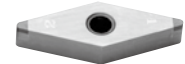
### 2NU-VNGA

160404  
160404F  
160404T  
160408  
160408F  
160408T



### 2NS-VNGA

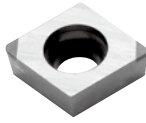
160408



» Multi-Corner Type (Negative/Positive)

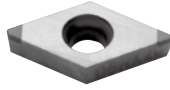
**2NU-CCGW**

060202 09T304  
060202F 09T304F  
060202T 09T304T  
060204 09T308  
060204F 09T308F  
060204T 09T308T  
060208 09T308W  
060208F 09T308WF  
060208T



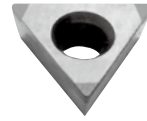
**2NU-DCGW**

070204 11T304F  
070204F 11T304T  
070204T 11T308  
070208 11T308F  
070208F 11T308T  
070208T  
11T304



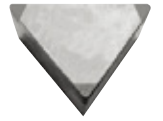
**3NU-TCGW**

090204  
090204F  
090204T



**3NU-TPGB**

110304  
110304F  
110304T  
110308  
110308F  
110308T



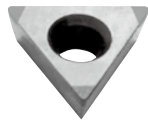
**3NU-TPGN**

110304 160304  
110304F 160308  
110304T  
110308  
110308F  
110308T



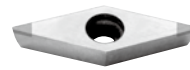
**3NU-TPGW**

110304  
110304F  
110304T  
110308  
110308F  
110308T



**2NU-VBGW**

160404  
160404F  
160404T  
160408  
160408F  
160408T



**2NU-VCGW**

160404  
160404F  
160404T  
160408  
160408F  
160408T



» PCD Inserts (Negative/Positive)

**BAMPR-XAF**

BAMPR



**BAMPR-XAW**

BAMPR



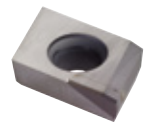
**BAMPR-XAWR**

BAMPR



**CDEW-NAF**

1204R  
1204L



(Strengthened Edge)

**CDEW-NAW**

1204R  
1204L



(Strengthened Edge Wiper Insert)

**CDEW-XAW**

1204R  
1204L



(Sharp Edge Wiper Insert)

**CDEW-XAF**

1204R  
1204L



(Sharp Edge)

**CDEW-XCF**

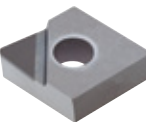
1204R  
1204L



(Sharp Edge)

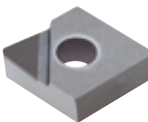
**CNMM**

120404  
120408  
120412



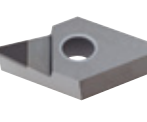
**CNMX**

120404  
120408  
120412



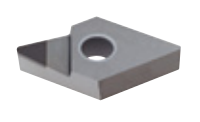
**DNMM**

150404  
150408  
150412



**DNMX**

150404  
150408  
150412



**TNMX**

160404  
160408  
160412



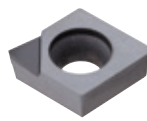
**VNMX**

160404  
160408  
160412



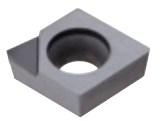
**CCMT**

060202  
060204  
060208  
09T304  
09T308  
09T312



**CPMT**

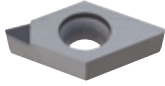
080204  
080208  
080212  
090304  
090308  
090312



» PCD Inserts (Negative/Positive)

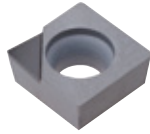
**DCMT**

070202  
070204  
070208  
11T302  
11T304  
11T308



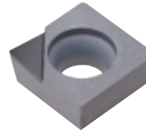
**SCMT**

09T304  
09T308  
09T312



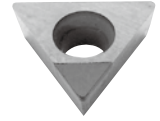
**SPGW**

090302  
090304  
090308



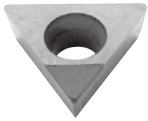
**TBGW**

080204  
080208  
080212  
090304  
090308  
090312



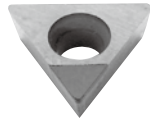
**TCMT**

090201  
090202  
090204  
110201  
110202  
110204



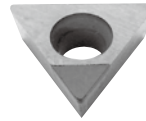
**TPGB**

080204  
080208  
090204  
090208  
110304  
110308



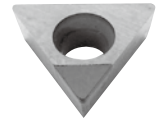
**TPGW**

080202  
080204  
090204  
090208  
110302  
110304  
110308  
160404  
160408



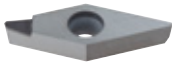
**TPGT**

110302  
110304



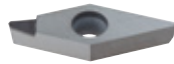
**VBMT**

110302  
110304  
110308  
160402  
160404  
160408  
160412



**VCMT**

110302  
110304  
110308  
160404  
160408  
160412



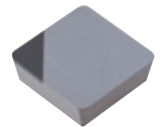
**TPGN**

090204  
090208  
110302  
110304  
110308  
160302  
160304  
160308



**SPGN**

090304  
090308  
120304  
120308



# Turning Tools

KORLOY holders contribute to improving machining quality and tool life by employing excellent durability and strong clamping.

KORLOY responds to customer demands for a variety of holder shapes that are proper for each machining route.

- Tool Holders (ISO Type)
- Boring Bars (ISO Type)
- Save Turn
- Auto Tools
- Multi Functional Tools (Holders)



## » Double Clamp System

### DCBNR/L

2020-K12  
2525-M12  
3225-P12  
2525-M16  
3232-P16  
3232-P19  
4040-S19



### DCKNR/L

2020-K12  
2525-M12  
3225-P12  
3232-P16  
4040-S16



### DCLNR/L

2020-K09 3225-P16  
2525-M09 3232-P16  
2020-K12 2525-M19  
2525-M12 3225-P19  
3225-P12 3232-P19  
3232-P12 4040-S19  
2525-M16



### DDJNR/L

2020-K11  
2525-M11  
3225-P11  
3232-P11  
2020-K15  
2525-M15  
3225-P15  
3232-P15  
2020-K15-3  
2525-M15-3  
3232-P15-3



### DSBNR/L

2020-K09  
2525-M09  
2020-K12  
2525-M12  
3225-P12  
3232-P12  
2525-M15  
3225-P15  
3232-P15  
3232-P19  
4040-S19



### DSDNN

2020-K09  
2020-K12  
2525-M12  
3225-P12  
3232-P12  
2525-M15  
3232-P15  
3232-P19  
4040-S19



### DSKNR/L

2020-K09  
2020-K12  
2525-M12  
3232-P12  
3232-P15  
3232-P19  
4040-S19



### DSSNR/L

2020-K09  
2020-K12  
2525-M12  
3225-P12  
3232-P12  
2525-M15  
3232-P15  
3232-P19  
4040-S19



### DTFNR/L

2020-K16  
2525-M16  
3232-P16  
2525-M22  
3225-P22  
3232-P22



### DTGNR/L

2020-K16  
2525-M16  
3232-P16  
2525-M22  
3225-P22  
3232-P22



### DVJNR/L

2020-K16  
2525-M16  
3232-P16



### DVVNN

2020-K16  
2525-M16  
3232-P16



### DWLNRL

2020-K06  
2525-M06  
2020-K08  
2525-M08



» Lever Lock System

**PCBNR/L**

2020-K12	3232-P16	4040-S25-5
2525-M12	3232-P19	5050-T25
3225-P12	4040-S19	
2525-M16	4040-S25	

**New Type**

2020-K12N	2525-M16N	4040-S19N
2525-M12N	3232-P16N	
3225-P12N	3232-P19N	

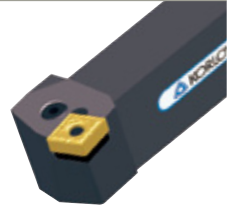


**PCKNR/L**

2020-K12	3225-P12	4040-S16
2525-M12	3232-P16	

**New Type**

2020-K12N	3225-P12N	
2525-M12N	3232-P16N	



**PCLNR/L**

1616-H09	3232-P12	4040-S19
2020-K09	2525-M16	4040-S25
2525-M09	3232-P16	5050-T25
1616-H12	2525-M19	4040-S25-5
2020-K12	3225-P19	5050-S25-5
2525-M12	3232-P19	
3225-P12	4040-P19	

**New Type**

1616-H09N	2020-K12N	2525-M16N
2020-K09N	2525-M12N	3232-P16N
2525-M09N	3225-P12N	2525-M19N
1616-H12N	3232-P12N	4040-S19N



**PDJNR/L**

1616-H11	2525-M15	2525-M15-3
2020-K11	3225-P15	3232-P15-3
2525-M11	3232-P15	
2020-K15	2020-K15-3	

**New Type**

1616-H11N	2525-M15N	2525-M15-3N
2020-K11N	3225-P15N	3232-P15-3N
2525-M11N	3232-P15N	
2020-K15N	2020-K15-3N	



**PDNNR/L**

2020-K15	3232-P15	2525-M15-3
2525-M15	4025-M15	4025-M15-3

**New Type**

2020-K15N	3232-P15N	3232-P15-3N
2525-M15N	2525-M15-3N	



**PRDCN**

2020-M10	3225-Q12	3232-Q20
2525-M10	2525-Q16	4040-S25
2525-M12	3225-Q16	4040-T25
2020-K12	3232-Q16	5050-U32



**PRGCR/L**

2020-K10	2525-M12	3225-P16
2525-M10	3225-P12	3232-P20
2020-K12	2525-M16	4040-S25



**PSBNR/L**

1616-H09	3232-P12	4040-S25
2020-K09	2525-M15	4040-S25-6
2020-K12	3232-P15	5050-T25
2525-M12	3232-P19	5050-T25-6
3225-P12	4040-S19	

**New Type**

1616-H09N	2525-M12N	2525-M15N
2020-K09N	3225-P12N	
2020-K12N	3232-P12N	



**PSDNN**

1616-H09	2525-M15	4040-S25
2020-K12	3232-P15	5050-T25
2525-M12	3225-P19	4040-S25-6
3225-P12	3232-P19	5050-T25-6
3232-P12	4040-S19	

**New Type**

1616-H09N	3225-P12N	3232-P15N
2020-K12N	3232-P12N	
2525-M12N	2525-M15N	



**PSKNR/L**

1616-H09	3232-P12	4040-S19
2020-K09	2525-M15	4040-S25
2020-K12	3232-P15	4040-S25-6
2525-M12	3232-P19	5050-T25-6

**New Type**

1616-H09N	2525-M12N	3232-P15N
2020-K09N	3232-P12N	
2020-K12N	2525-M15N	



## » Lever Lock System

### PSSNR/L

1616-H09	3232-P12	4040-R19
2020-K12	2525-M15	4040-S19
2525-M12	3232-P15	4040-S25
3225-P12	3232-P19	4040-S25-6

#### New Type

1616-H09N	3225-P12N	3232-P15N
2020-K12N	3232-P12N	
2525-M12N	2525-M15N	



### PTFNR/L

1616-H16	2525-M22	4040-S27
2020-K16	3232-P22	
2525-M16	3232-P27	

#### New Type

2525-M22N	3232-P27N	
3232-P22N	4040-S27N	



### PTGNR/L

1212-F11	1616-H16	2525-M22
1616-H11	2020-K16	3232-P22
2020-K11	2525-M16	3232-P27
2525-M11	3232-P16	4040-S27

#### New Type

2525-M22N	3232-P27N	
3232-P22N	4040-S27N	



### PTTNR/L

1616-H16	2525-M16
2020-K16	2525-M22

#### New Type

2525-M22N
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### PWLNLR/L

1616-H06	2525-M06	2525-M08
2020-K06	2020-K08	

#### New Type

1616-H06N	2525-M06N	2525-M08N
2020-K06N	2020-K08N	



## » Wedge Clamp System

### WTENN

2020-K16
2525-M16
2525-M22
3232-P22



### WTJNR/L

2020-K16
2525-M16
3232-P16
2525-M22
3232-P22



### WTXNR/L

2020-K16
2525-M16
3232-P16



### WWLNR/L

2020-K08
2525-M08
3232-P08



» Clamp on System

**CKJNR/L**

CKJNR  
2020-K16 3225-P16  
2525-M16 3232-P16  
3225-M16 4040-R16



**CKNNR/L**

2525-M16  
3232-P16



**CSDPN**

1616-H09  
2525-M12



**CSKPR/L**

2525-M12



**CTFPR/L**

2020-K16  
2525-M16



**CTGPR/L**

1212-F11  
1616-H11  
2020-K11  
2020-K16  
2525-M16  
2525-M22  
3232-P22



» Multi Lock System

**MCKNR/L**

2020-K12  
2525-M12  
3232-P12



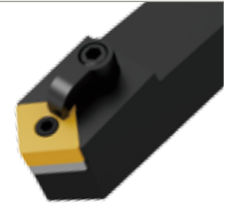
**MCLNR/L**

1616-H09 2525-M16  
2020-K09 3232-P16  
2525-M09 4040-S16  
2020-K12 2525-M19  
2525-M12 3232-P19  
3225-P12 4040-S19  
3232-P12 4040-S25



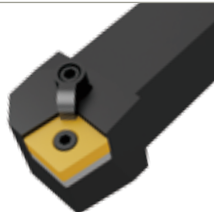
**MCMNN**

2020-K12  
2525-M12  
3232-P12  
2525-M16  
3232-P16  
3232-P19  
4040-S19



**MCRNR/L**

2020-K12  
2525-M12  
2525-M16  
3232-P16  
3232-P19  
4040-S19



**MDJNR/L**

2020-K11  
2525-M11  
2020-K15-3  
2525-M15-3  
3232-P15-3  
2020-K15  
2525-M15  
3232-P15



**MDNNN**

2525-M15-3  
2525-M15



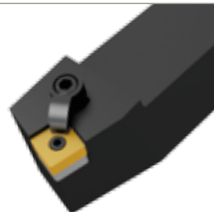
**MDQNR/L**

2525-M15-3  
3232-P15-3  
2525-M15  
3232-M15



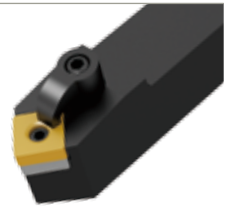
**MSBNR/L**

2020-K12  
2525-M12  
2525-M15  
3232-P15  
3232-P19  
4040-S19



**MSDNN**

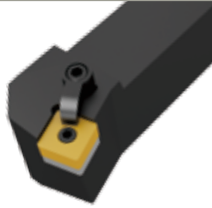
1616-H09  
2020-K09  
2020-K12  
2525-M12  
3225-P12  
2525-M15  
3225-P15  
3232-P15  
4040-S15  
3232-P19  
4040-S19



» **Multi Lock System**

**MSKNR/L**

1616-H09  
2020-K09  
2020-K12  
2525-M12  
3225-P12  
2525-M15  
3232-P15  
3232-P19  
4040-S19  
4040-S25



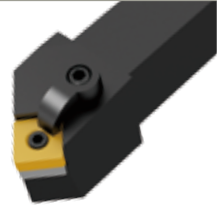
**MSRNR/L**

1616-H09  
2020-K09  
2020-K12  
2525-M12  
2525-M15  
3232-P15  
3225-P19  
3232-P19  
4040-S19  
4040-S25



**MSSNR/L**

1616-H09  
2020-K09  
2020-K12  
2525-M12  
2525-M15  
3232-P15  
3232-P19  
4040-S19



**MTENN**

2020-K16  
2525-M16  
2525-M22  
3232-P27  
4040-S33



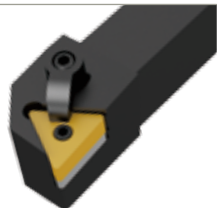
**MTFNR/L**

1616-H16  
2020-K16  
2525-M16  
2525-M22  
3232-P22  
4040-S22  
3232-P27  
4040-S27  
4040-S33



**MTGNR/L**

1616-H16  
2020-K16  
2525-M16  
2525-M22  
3232-P22  
3232-P27  
4040-S27  
4040-S33



**MTJNR/L**

2020-K16  
2525-M16  
2525-M22  
3232-P22  
3232-P27  
4040-S27  
4040-S33



**MVJNR/L**

2020-K16  
2525-M16  
3232-P16  
2525-M22  
3232-P22  
4040-S22



**MVQNR/L**

2020-K16  
2525-M16  
3232-P16



**MVVNN**

2020-K16  
2525-M16



**MWLNLR/L**

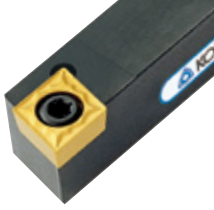
2020-K06  
2525-M06  
3232-P06  
2020-K08  
2525-M08  
3232-P08



## » Screw on System

### SCACR/L

1010-E06  
1212-F09



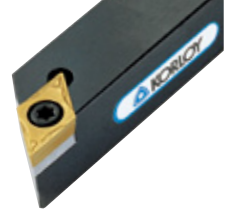
### SCLCR/L

0808-D06  
1010-E06  
1212-F09  
1616-H09  
2020-K09  
2020-K12  
2525-M09  
2525-M12



### SDACR/L

1010-E07  
1212-F11  
1616-H11



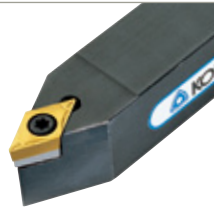
### SDJCR/L

1010-E07  
1212-F07  
1616-H07  
2020-K07  
1212-F11  
1616-H11  
2020-K11  
2525-M11



### SDNCN

1010-E07  
1212-F07  
1212-H11  
1616-H11  
2020-K11  
2020-M11



### SRDCN

1010-E06  
1212-F06  
1616-H06  
2525-M06  
1616-H08  
2020-K08  
2525-M08  
1616-H10  
2020-K10  
2525-M10  
2020-K12  
2525-M12



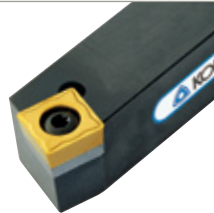
### SRGCR/L

1010-E06  
1212-F06  
1616-H06  
1616-H08  
2020-K08  
2525-M08  
1616-H10  
2020-K10  
2525-M10  
2020-K12  
2525-M12



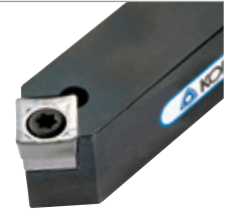
### SSBCR/L

1212-F09  
1616-H09  
2020-K12



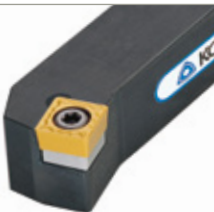
### SSDCN

1212-F09  
1616-H09



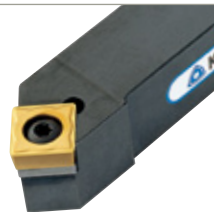
### SSKCR/L

1616-H09



### SSSCR/L

1616-H09  
2020-K12  
2525-M12



### STACR/L

1010-E09  
1212-F11



### STFCR/L

1010-E09  
1212-F11  
1616-H11  
1616-H16  
2020-K16  
2525-M16



### STGCR/L

0808-D09  
1010-E09  
1212-F11  
1616-H11  
1616-H16  
2020-K16  
2525-M16



### STTCR/L

1616-H11  
1616-H16  
2020-K16



» Screw on System

**SVABR/L**

1616-H16  
2020-K16



**SVHBR/L**

2525-M16  
3225-P16



**SVJBR/L**

1212-F11  
1616-H11  
2020-K11  
1616-H16  
2020-K16  
2525-M16  
3225-P16  
3232-P16



**SVJCR/L**

1212-F11  
1616-H11  
2020-K11  
1212-F13  
1616-H13  
2020-K13  
1616-H16  
2020-K16  
2525-M16



**SVVBN**

1212-F11  
1616-H11  
2020-K11  
1616-H16  
2020-K16  
2525-M16  
3225-P16



**SVVCN**

1212-F11  
1616-H11  
2020-K11  
1212-F13  
1616-H13  
2020-K13  
1616-H16  
2020-K16  
2525-M16



# Boring Bars (ISO Type)

## Double Clamp System

### DCLNR/L

A25R-DCLNR/L-09  
A25R-DCLNR/L-12  
A32S-DCLNR/L-12  
A40T-DCLNR/L-12  
A50U-DCLNR/L-16



### DDUNR/L

A40T-DDUNR/L-15  
A50U-DDUNR/L-15  
A40T-DDUNR/L-15-3  
A50U-DDUNR/L-15-3



### DSKNR/L

A25R-DSKNR/L-09  
A25R-DSKNR/L-12  
A32S-DSKNR/L-12  
A40T-DSKNR/L-12



### DTFNR/L

A25R-DTFNR/L-16  
A32S-DTFNR/L-16  
A40T-DTFNR/L-22  
A50U-DTFNR/L-22



### DWLR/L

A25R-DWLR/L-06  
A32S-DWLR/L-06  
A40T-DWLR/L-06  
A25R-DWLR/L-08  
A32S-DWLR/L-08  
A40T-DWLR/L-08  
A50U-DWLR/L-08



## Lever Lock System

### PCLNR/L

S16R-PCLNR/L-09 S32S-PCLNR/L-12 A25R-PCLNR/L-12  
S20S-PCLNR/L-09 S32U-PCLNR/L-12 A32S-PCLNR/L-12  
S25R-PCLNR/L-09 S40T-PCLNR/L-12 A40T-PCLNR/L-12  
S25R-PCLNR/L-12 S50U-PCLNR/L-12  
S25T-PCLNR/L-12 S50U-PCLNR/L-19

#### New Type

S16R-PCLNR/L-09N S32U-PCLNR/L-12N A25R-PCLNR/L-09N  
S20S-PCLNR/L-09N S40T-PCLNR/L-12N A25R-PCLNR/L-12N  
S25R-PCLNR/L-09N S50U-PCLNR/L-12N A32R-PCLNR/L-12N  
S25R-PCLNR/L-12N S50U-PCLNR/L-19N A40T-PCLNR/L-12N  
S25T-PCLNR/L-12N A16R-PCLNR/L-09N A50U-PCLNR/L-12N  
S32S-PCLNR/L-12N A20S-PCLNR/L-09N A50U-PCLNR/L-19N



### PDSNR/L

S32S-PDSNR/L-15 S40T-PDSNR/L-15-3  
S40T-PDSNR/L-15 A32S-PDSNR/L-15  
S32S-PDSNR/L-15-3 A32S-PDSNR/L-15-3

#### New Type

S32S-PDSNR/L-15N A32S-PDSNR/L-15N  
S40T-PDSNR/L-15N A40T-PDSNR/L-15N  
S32S-PDSNR/L-15-3N A32S-PDSNR/L-15-3N  
S40T-PDSNR/L-15-3N A40T-PDSNR/L-15-3N



### PDUNR/L

S32S-PDUNR/L-11 S50U-PDUNR/L-15 A32S-PDUNR/L-15  
S32S-PDUNR/L-15 S32S-PDUNR/L-15-3 A32S-PDUNR/L-15-3  
S40T-PDUNR/L-15 S40T-PDUNR/L-15-3

#### New Type

S20S-PDUNR/L-11N S50U-PDUNR/L-15N A32S-PDUNR/L-15N  
S25R-PDUNR/L-11N S32S-PDUNR/L-15-3N A40T-PDUNR/L-15N  
S32S-PDUNR/L-11N S40T-PDUNR/L-15-3N A50U-PDUNR/L-15N  
S32S-PDUNR/L-15N A20S-PDUNR/L-11N A32S-PDUNR/L-15-3N  
S32U-PDUNR/L-15N A25R-PDUNR/L-11N A40T-PDUNR/L-15-3N  
S40T-PDUNR/L-15N A32S-PDUNR/L-11N



### PSKNR/L

S25R-PSKNR/L-12 A25R-PSKNR/L-12  
S32S-PSKNR/L-12 A32S-PSKNR/L-12  
S40T-PSKNR/L-12

#### New Type

S25R-PSKNR/L-12N A25R-PSKNR/L-12N  
S32S-PSKNR/L-12N A32S-PSKNR/L-12N  
S40T-PSKNR/L-12N A40T-PSKNR/L-12N



### PTFNR/L

S16R-PTFNR/L-11 S32S-PTFNR/L-16  
S20S-PTFNR/L-11 S40T-PTFNR/L-16  
S25R-PTFNR/L-11 A25R-PTFNR/L-16  
S25R-PTFNR/L-16 A32S-PTFNR/L-16



### PWLR/L

S16R-PWLR/L-06 S32S-PWLR/L-06  
S20S-PWLR/L-06 S25R-PWLR/L-08  
S25R-PWLR/L-06 S32S-PWLR/L-08

#### New Type

S32S-PWLR/L-06N S32S-PWLR/L-08N  
S25R-PWLR/L-08N





## » Clamp on System

### CKUNR/L

S32S-CKUNR/L-16  
S40T-CKUNR/L-16  
S50U-CKUNR/L-16



### CSKPR/L

S16R-CSKPR/L-09  
S20S-CSKPR/L-09  
S20S-CSKPR/L-12  
S25R-CSKPR/L-12



### CTFPR/L

S12M-CTFPR/L-11  
S16R-CTFPR/L-11  
S20S-CTFPR/L-11  
S16R-CTFPR/L-16  
S20S-CTFPR/L-16  
S25R-CTFPR/L-16  
S32S-CTFPR/L-16  
S40T-CTFPR/L-16  
S40T-CTFPR/L-22



## » Multi Lock System

### MCLNR/L

S20S-MCLNR/L-09  
S25R-MCLNR/L-09  
S25R-MCLNR/L-12  
S32S-MCLNR/L-12  
S40T-MCLNR/L-12  
A25R-MCLNR/L-12  
A32S-MCLNR/L-12



### MDUNR/L

S32S-MDUNR/L-15-3  
S40T-MDUNR/L-15-3  
A32S-MDUNR/L-15-3



### MSKNR/L

S25R-MSKNR/L-12  
S32S-MSKNR/L-12  
S40T-MSKNR/L-12  
A25R-MSKNR/L-12  
A32S-MSKNR/L-12  
A40T-MSKNR/L-12



### MTFNR/L

S25R-MTFNR/L-16  
S32S-MTFNR/L-16  
S40T-MTFNR/L-16  
A25R-MTFNR/L-16  
A32S-MTFNR/L-16



### MVUNR/L

S32S-MVUNR/L-16  
S40T-MVUNR/L-16  
A32S-MVUNR/L-16  
A40T-MVUNR/L-16



### MWLNRL/L

S25R-MWLNRL/L-06  
S32S-MWLNRL/L-06  
S40T-MWLNRL/L-06  
S25R-MWLNRL/L-08  
S32S-MWLNRL/L-08  
S40T-MWLNRL/L-08  
A25R-MWLNRL/L-06  
A32S-MWLNRL/L-06  
A25R-MWLNRL/L-08  
A32S-MWLNRL/L-08



## » Screw on System

### SCLCR/L

S08K-SCLCR/L-06  
S10K-SCLCR/L-06  
S10M-SCLCR/L-06  
S12M-SCLCR/L-06  
S16R-SCLCR/L-06  
S12M-SCLCR/L-09  
S16R-SCLCR/L-09  
S20S-SCLCR/L-09  
S25R-SCLCR/L-09  
S25R-SCLCR/L-12  
S32S-SCLCR/L-12  
S40T-SCLCR/L-12  
A08F-SCLCR/L-06  
A10H-SCLCR/L-06  
A12K-SCLCR/L-06  
A12K-SCLCR/L-09  
A16M-SCLCR/L-09  
A20Q-SCLCR/L-09  
A25R-SCLCR/L-09  
A25R-SCLCR/L-12  
A32S-SCLCR/L-12



### SCLPR/L

S10M-SCLPR/L-08  
S12M-SCLPR/L-08  
S16N-SCLPR/L-09  
S16R-SCLPR/L-09  
S20N-SCLPR/L-09  
S20S-SCLPR/L-09  
A10H-SCLPR/L-08  
A12K-SCLPR/L-08  
A16M-SCLPR/L-09  
A20Q-SCLPR/L-09



### SDQCR/L

S10M-SDQCR/L-07  
S12M-SDQCR/L-07  
S16R-SDQCR/L-07  
S16R-SDQCR/L-11  
S20S-SDQCR/L-11  
S25R-SDQCR/L-11  
A10H-SDQCR/L-07  
A12K-SDQCR/L-07  
A16M-SDQCR/L-11  
A20Q-SDQCR/L-11  
A25R-SDQCR/L-11



### SDUCR/L

S10M-SDUCR/L-07  
S12M-SDUCR/L-07  
S16R-SDUCR/L-07  
S16R-SDUCR/L-11  
S20S-SDUCR/L-11  
S25R-SDUCR/L-11  
S32S-SDUCR/L-11  
A10H-SDUCR/L-07  
A12K-SDUCR/L-07  
A16M-SDUCR/L-07  
A20Q-SDUCR/L-11  
A25R-SDUCR/L-11



## » Screw on System

### SDZCR/L

S16R-SDZCR/L-07  
S20S-SDZCR/L-07  
S25R-SDZCR/L-11  
S32S-SDZCR/L-11  
S40T-SDZCR/L-11  
A25R-SDZCR/L-11  
A32S-SDZCR/L-11



### SSKCR/L

S12M-SSKCR/L-09  
S16R-SSKCR/L-09  
S20S-SSKCR/L-09  
S25R-SSKCR/L-12  
S32S-SSKCR/L-12  
A12K-SSKCR/L-09  
A16M-SSKCR/L-09  
A20Q-SSKCR/L-09  
A25R-SSKCR/L-12  
A32S-SSKCR/L-12



### SSKPR/L

S12M-SSKPR/L-09  
S16N-SSKPR/L-09  
S16R-SSKPR/L-09  
S20N-SSKPR/L-09  
S20S-SSKPR/L-09  
A12K-SSKPR/L-09  
A16M-SSKPR/L-09  
A20Q-SSKPR/L-09



### STFCR/L

S10M-STFCR/L-09	S25R-STFCR/L-16	A16M-STFCR/L-11
S12M-STFCR/L-09	S32S-STFCR/L-16	A20Q-STFCR/L-11
S12M-STFCR/L-11	S40T-STFCR/L-16	A25R-STFCR/L-16
S16R-STFCR/L-11	A10H-STFCR/L-09	A32S-STFCR/L-16
S20S-STFCR/L-11	A12K-STFCR/L-09	
S20S-STFCR/L-16	A12K-STFCR/L-11	



### STFPR/L

S10M-STFPR/L-11  
S12M-STFPR/L-11  
S16N-STFPR/L-11  
S16R-STFPR/L-11  
S20N-STFPR/L-16  
S20S-STFPR/L-16  
A10H-STFPR/L-11  
A12H-STFPR/L-11  
A16M-STFPR/L-11  
A20Q-STFPR/L-16



### STWPR/L

S10M-STWPR/L-11  
S12M-STWPR/L-11  
S16Q-STWPR/L-11  
S20R-STWPR/L-11



### SVJCR/L

S12M-SVJCR/L-08  
S16Q-SVJCR/L-08



### SVQBR/L

S32S-SVQBR/L-16  
S40T-SVQBR/L-16  
A32S-SVQBR/L-16



### SVQCR/L

S16R-SVQCR/L-11  
S20S-SVQCR/L-11  
S25R-SVQCR/L-11  
S20S-SVQCR/L-13  
S25R-SVQCR/L-13  
S25R-SVQCR/L-16  
S32S-SVQCR/L-16  
S40T-SVQCR/L-16



### SVUBR/L

S32S-SVUBR/L-16  
S40T-SVUBR/L-16  
A32S-SVUBR/L-16



### SVUCR/L

S16R-SVUCR/L-11  
S20S-SVUCR/L-11  
S25T-SVUCR/L-11  
S20S-SVUCR/L-13  
S25R-SVUCR/L-13  
S25R-SVUCR/L-16  
S32S-SVUCR/L-16  
S40T-SVUCR/L-16



### SWLCR/L

S25R-SWLCR/L-08  
S32S-SWLCR/L-08  
A25R-SWLCR/L-08  
A32S-SWLCR/L-08



## » Carbide Shank Boring Bar

### SCLCR/L

C04G-SCLCR/L-03	C12Q-SCLCR/L-09	E10M-SCLCR/L-06
C05H-SCLCR/L-03	C16R-SCLCR/L-09	E12M-SCLCR/L-06
C06H-SCLCR/L-04	C16S-SCLCR/L-09	E12Q-SCLCR/L-06
C07K-SCLCR/L-04	C20R-SCLCR/L-09	E12M-SCLCR/L-09
C08K-SCLCR/L-06	C20S-SCLCR/L-09	E12Q-SCLCR/L-09
C10K-SCLCR/L-06	C25T-SCLCR/L-12	E16R-SCLCR/L-09
C10M-SCLCR/L-06	E06H-SCLCR/L-04	E16S-SCLCR/L-09
C12M-SCLCR/L-06	E07K-SCLCR/L-04	E20R-SCLCR/L-09
C12Q-SCLCR/L-06	E08K-SCLCR/L-06	E20S-SCLCR/L-09
C12M-SCLCR/L-09	E10K-SCLCR/L-06	E25T-SCLCR/L-12



### SCLPR/L

C10K-SCLPR/L-08	E10K-SCLPR/L-08
C10M-SCLPR/L-08	E10M-SCLPR/L-08
C12M-SCLPR/L-08	E12M-SCLPR/L-08
C12Q-SCLPR/L-08	E12Q-SCLPR/L-08
C12M-SCLPR/L-09	E12M-SCLPR/L-09
C12Q-SCLPR/L-09	E12Q-SCLPR/L-09
C16R-SCLPR/L-09	E16R-SCLPR/L-09
C16S-SCLPR/L-09	E16S-SCLPR/L-09
C20R-SCLPR/L-09	E20R-SCLPR/L-09
C20S-SCLPR/L-09	E20S-SCLPR/L-09



### SDQCR/L

C08K-SDQCR/L-07	E08K-SDQCR/L-07
C10K-SDQCR/L-07	E10K-SDQCR/L-07
C12M-SDQCR/L-07	E12M-SDQCR/L-07
C16R-SDQCR/L-07	E16R-SDQCR/L-07
C16R-SDQCR/L-11	E16R-SDQCR/L-11
C20R-SDQCR/L-11	E20R-SDQCR/L-11
C20S-SDQCR/L-11	E20S-SDQCR/L-11



### SDUCR/L

C10K-SDUCR/L-07	E10K-SDUCR/L-07
C10M-SDUCR/L-07	E10M-SDUCR/L-07
C12M-SDUCR/L-07	E12M-SDUCR/L-07
C12Q-SDUCR/L-07	E12Q-SDUCR/L-07
C16R-SDUCR/L-07	E16R-SDUCR/L-07
C16S-SDUCR/L-07	E16S-SDUCR/L-07
C16R-SDUCR/L-11	E16R-SDUCR/L-11
C16S-SDUCR/L-11	E16S-SDUCR/L-11
C20R-SDUCR/L-11	E20R-SDUCR/L-11
C20S-SDUCR/L-11	E20S-SDUCR/L-11
C25T-SDUCR/L-11	E25T-SDUCR/L-11



### STFCR/L

C08K-STFCR/L-09	E08K-STFCR/L-09
C10K-STFCR/L-09	E10K-STFCR/L-09
C10K-STFCR/L-11	E10K-STFCR/L-11
C12M-STFCR/L-11	E12M-STFCR/L-11
C16R-STFCR/L-11	E16R-STFCR/L-11
C20R-STFCR/L-11	E20R-STFCR/L-11
C20S-STFCR/L-11	E20S-STFCR/L-11
C20R-STFCR/L-16	E20R-STFCR/L-16
C20S-STFCR/L-16	E20S-STFCR/L-16



### STFPR/L

C08K-STFPR/L-08	E08K-STFPR/L-08
C10K-STFPR/L-11	E10K-STFPR/L-11
C10M-STFPR/L-11	E10M-STFPR/L-11
C12M-STFPR/L-11	E12M-STFPR/L-11
C12Q-STFPR/L-11	E12Q-STFPR/L-11
C16R-STFPR/L-11	E16R-STFPR/L-11
C16S-STFPR/L-11	E16S-STFPR/L-11
C20R-STFPR/L-11	E20R-STFPR/L-11
C20S-STFPR/L-11	E20S-STFPR/L-11
C20R-STFPR/L-16	E20R-STFPR/L-16
C20S-STFPR/L-16	E20S-STFPR/L-16
C25T-STFPR/L-16	E25T-STFPR/L-16



### STUBR/L

C08K-STUBR/L-06	E08K-STUBR/L-06
C10K-STUBR/L-06	E10K-STUBR/L-06



### STUPR/L

C08K-STUPR/L-08	E08K-STUPR/L-08
C10K-STUPR/L-11	E10K-STUPR/L-11
C10M-STUPR/L-11	E10M-STUPR/L-11
C12M-STUPR/L-11	E12M-STUPR/L-11
C12Q-STUPR/L-11	E12Q-STUPR/L-11
C16R-STUPR/L-11	E16R-STUPR/L-11
C16S-STUPR/L-11	E16S-STUPR/L-11
C20R-STUPR/L-11	E20R-STUPR/L-11
C20S-STUPR/L-11	E20S-STUPR/L-11
C20R-STUPR/L-16	E20R-STUPR/L-16
C20S-STUPR/L-16	E20S-STUPR/L-16
C25T-STUPR/L-16	E25T-STUPR/L-16



### SWUBR/L

C05H-SWUBR/L-02	E06H-SWUBR/L-02
C06H-SWUBR/L-02	E08K-SWUBR/L-02
C08K-SWUBR/L-02	E08K-SWUBR/L-S3
C08K-SWUBR/L-S3	



» External Turning

**PCLNR/L**

1616-H09-4N  
2020-K09-4N  
2525-M09-4N



**PCBNR/L**

2020-K09-4N  
2525-M09-4N



**PDJNR/L**

2020-K11-5N  
2525-M11-5N



**PDNNR/L**

2020-K11-5N  
2525-M11-5N



**PDQNR/L**

2020-K11-5N  
2525-M11-5N



**PSBNR/L**

2020-K09-4N  
2525-M09-4N



**PSDNN**

2020-K09-4N  
2525-M09-4N



**PSKNR/L**

2020-K09-4N  
2525-M09-4N



**PSSNR/L**

2020-K09-4N  
2525-M09-4N



**PWLNR/L**

1616-H06  
2020-K06  
2525-M06



## » Internal Turning

### PCLNR/L

S20Q-PCLNR/L-09-4N  
S25R-PCLNR/L-09-4N  
S32S-PCLNR/L-09-4N



### PDUNR/L

S32S-PDUNR/L-11-5N  
S40T-PDUNR/L-11-5N



### PDZNR/L

S32S-PDZNR/L-11-5N  
S40T-PDZNR/L-11-5N



### PSKNR/L

S25R-PSKNR/L-09-4N  
S32S-PSKNR/L-09-4N



### PWLNRL/L

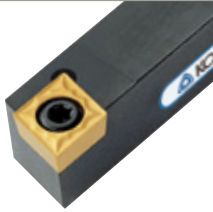
S20S-PWLNRL/L-06  
S25S-PWLNRL/L-06  
S32S-PWLNRL/L-06



## ISO Type

### SCACR/L

0808-X06A  
1010-X06A  
1010-X09A  
1212-X09A  
1616-X09A



### SCLCR/L

0808-X06A  
1010-X06A  
1010-X09A  
1212-X09A  
1616-X09A



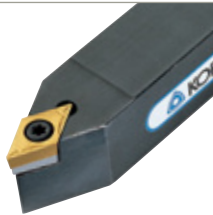
### SDJCR/L

0808-X07A  
1010-X07A  
1010-X11A  
1212-X11A  
1616-X11A



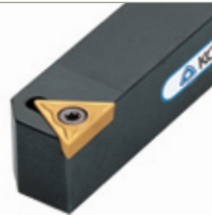
### SDNCN

0808-X07A  
1010-X07A  
1010-X11A  
1212-X11A  
1616-X11A



### STACR/L

0808-X08A  
1010-X08A



### SVACR/L

0810-X12A  
1010-X12A  
1212-X12A  
1616-X12A  
0810-X12C  
1010-X12C  
1212-X12C  
1616-X12C



### SVAPR/L

0808-X11A  
1010-X11A  
1212-X11A  
1616-X11A



### SVJBR/L

1010-X11A  
1212-X11A  
1616-X11A



### SVJCR/L

1010-X11A  
1212-X11A  
1616-X11A  
0810-X12A  
1010-X12A  
1212-X12A  
1616-X12A  
0810-X12C  
1010-X12C  
1212-X12C  
1616-X12C



### SVJPR/L

0810-X11A  
1010-X11A  
1212-X11A  
1616-X11A



### SVVPN

0810-X11A  
1010-X11A  
1212-X11A  
1616-X11A



## KHP

### SCLCR/L

122-X09A-KHP



### SDJCR/L

122-X07A-KHP  
122-X11A-KHP



### SVJCR/L

122-X11A-KHP  
122-X12A-KHP



## » Blade Type

### SBHR/L

1010-K25  
1212-K25  
1616-K25

Insert : SBT



### SBHR/L-X

1010-K25-X  
1212-K25-X

Insert : SBG, SBC

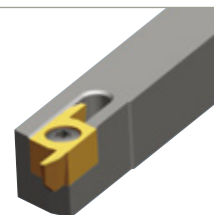


## » Multi Functional Type

### SXGNR/L

1010-X06A  
1212-X06A  
1616-X06A  
2020-X06A  
1212-X08A  
1616-X08A  
2020-X08A

Insert : SB



## » KGT/MGT Type

### KGEHR/L-D00A

1010-2-D20A  
1212-2-D25A  
1414-2-D25A  
1616-2-D32A  
1212-3-D25A  
1616-3-D32A

Insert : KGMM



### KGEHR/L-D00B

1010-2-D30B  
1212-2-D25B  
1212-2-D30B  
1616-2-D32B  
1212-3-D25B  
1212-3-D32B  
1616-3-D32B



### MGEHR/L

1010-X15A  
1212-X15A  
1010-X20A  
1212-X20A  
1616-X20A  
1010-X25A  
1212-X25A  
1616-X25A



# Multi Functional Tools (Holders)



## KGEHR/L

1212-□-T□□  
1616-□-T□□  
2020-□-T□□  
2525-□-T□□  
3232-□-T□□

**Insert**  
KGGN KRGN  
KGMN KRMN  
KGMR/L



## KGEHR/L-D00A

Auto Tool

1010-□-□□□A  
1212-□-□□□A  
1414-□-□□□A  
1616-□-□□□A

**Insert**  
KGGN KRMN  
KGMN KRGN  
KGMR/L



## KGEHR/L-D00B

Auto Tool

1010-□-□□□B  
1212-□-□□□B  
1414-□-□□□B  
1616-□-□□□B

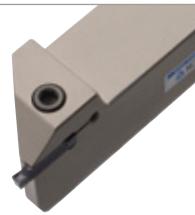
**Insert**  
KGGN KGMR/L  
KGMN KRMN



## KGEHR/L-T00

1616-□-T00  
2020-□-T00  
2525-□-T00

**Insert**  
KGGN KRGN  
KGMN KRMN



## KGEVR/L-T00

2020-□-T00  
2525-□-T00  
3232-□-T00

**Insert**  
KGGN KRGN  
KGMN KRMN



## KGEUR/L

1616-□  
2020-□  
2525-□  
3232-□

**Insert**  
KRGN KRMN



## KGFVR/L

325-□/□-T□□  
425-□/□-T□□  
525-□/□-T□□  
625-□/□-T□□

**Insert**  
KGGN KRGN  
KGMN KRMN



## KGFHR/L

320-□/□-T□□  
325-□/□-T□□  
420-□/□-T□□  
425-□/□-T□□  
525-□/□-T□□  
625-□/□-T□□

**Insert**  
KGGN KRGN  
KGMN KRMN



## KGIUR/L

3520-□  
4025-□  
5032-□

**Insert**  
KRGN KRMN



## KGIVR/L

2016-□ 3225-□  
2516-□ 4032-□  
2520-□ 4540-□

**Insert**  
KGGN KRMI  
KGMN KRMN



## KGTB (Blades)

1526S 4026S  
1532 4032  
2026S 5032  
2032 6032  
3026S 8032S  
3032

**Insert**  
KG□□



## K.G.T Cartridge

### KCER/L (Cartridge)

3-T16 5-T20  
4-T16 6-T20

**Insert**  
KGGN KGMR/L  
KGMN KRMN



### KCFR/L (Cartridge)

3-34/50-T16  
3-44/70-T16  
3-64/99-T16  
4-44/60-T16  
4-60/120-T16  
4-112/200-T16

**Insert**  
KGMN





## » MGT

### MGEHR/L

1212-□ 2525-□  
1616-□ 2525-□-T□  
2020-□ 3232-□  
2020-□-T□ 3232-□-T□

#### Insert

MGGN MRGN  
MGMN MRMN  
MGMR



### MGEUR/L

2020-□ 2525-□A  
2525-□ 3232-□A  
3232-□

#### Insert

KGGN KRMN  
KGMN KRGN  
KGMR/L



### MGEVR/L

2020-□  
2525-□  
3232-□

#### Insert

KGGN KGMR/L  
KGMN KRMN



### MGIUR/L

3520-□ 4025-□A  
4025-□ 5032-□A  
5032-□

#### Insert

MRGN MRMN



### MGIVR/L

2016-□ 2520-□-T□  
2520-□ 3125-□-T□  
2925-□ 3732-□-T□  
3125-□  
3732-□  
4540-□

#### Insert

MGGN MRGN  
MGMN MRMN



## » MGT Cartridge

### MCER/L (Cartridge)

3-T16  
4-T16  
5-T20  
6-T20

#### Insert

MGMN MGGN  
MGMR MRMN



### MCFR/L (Cartridge)

3-24/35-T16 3-64/99-T16  
3-29/40-T16 4-44/60-T16  
3-34/50-T16 4-60/120-T16  
3-44/70-T16 4-112/200-T16

#### Insert

MFNM MGMN



### MCHR/L (Holder)

2020  
2525  
3232

#### Insert

MCER/L MCFR/L



### MCVR/L (Holder)

2020  
2525  
3232

#### Insert

MCER/L MCFR/L



## » K Notch

### KNSR

1.01E+05 2525M3  
1212F2 322593  
1616H2 323293  
2020K2 2525M4  
2525M2 3225P4  
2020K3 3232P4

#### Insert

KNB KNR  
KNG KNRP  
KNGP KNT



## » Saw-Man X

### KSPB (Blades)

2026 4032  
2032 5026  
3026 5032  
3032 6026  
4026 6032

#### Insert

KSP



# Multi Functional Tools (Holders)

## » Saw-Man

### SMBB (Block)

1626 2526  
2026 2532  
2032 3232

Insert : SP



### SPB (Blades)

226 232  
326 332  
426 432  
526 532  
626 632

Insert : SP



### SPB-S (Blades)

226-S 432-S  
326-S 532-S  
426-S 632-S  
526-S 832-S  
626-S 932-S  
232-S 8526-S  
332-S 9526-S

Insert : SP



### SPH (Holder)

316R/L 325R/L  
320R/L 425R/L  
420R/L 525R/L  
520R/L

Insert : SP



### SPH-S (Holder)

316R/L-S 325R/L-S  
320R/L-S 425R/L-S  
420R/L-S 525R/L-S  
520R/L-S

Insert : SP



## » Internal Cutting

### GFIK

316R/L 525R/L  
325R/L 540R/L  
340R/L 840R/L

Insert : GR



### GFIP

316R/L 525R/L  
320R/L 540R/L  
325R/L 840R/L  
340R/L

Insert : BF, GW



### IGH

214R/L 220R/L  
216R/L

Insert : IG



### NFTIH

08206C 11208C 14012C 14312C 16316C  
08212C 11212C 14016C 14316C 16416C  
08312C 11312C 14112C 16312C 16516C  
08312S 11312S 14116C 16312S  
08412C 11412C 14212C 16412C  
08512C 11512C 14216C 16512C

Insert : NFTF, NFTG, NFFT



## » External Cutting

### DBH

320R/L 525R/L  
325R/L 720R/L  
520R/L 725R/L

Insert : DB, DC



### EH

620R 625R

Insert : ESB



### GFT

320R/L 525R/L  
325R/L 825R/L

Insert : GW, BF



## External Cutting

### GH

2020R/L-3 2020R/L-4  
2025R/L-3 2525R/L-4

Insert : GO, GS



### TBH

320R/L-23 425R/L-23  
320R/L-33 425R/L-33  
320R/L-43 425R/L-45  
325R/L-23 510R/L  
325R/L-33 512R/L  
325R/L-43 516R/L  
420R/L-23 520R/L  
420R/L-33 525R/L  
420R/L-45

Insert : TB, TB-M



### PH

320R/L 425R/L  
325R/L 520R/L  
420R/L 525R/L

Insert : POB



## Face Grooving Tools

### MGFHR/L

325-24/35-T10 325-64/99-T10  
325-29/40-T10 425-62/120-T15  
325-34/50-T10 425-112/200-T15  
325-44/70-T10

Insert : MFMN, MGMN



### MGFVR/L

325-24/35-T10 325-64/99-T10  
325-29/40-T10 425-44/60-T10  
325-34/50-T10 425-60/120-T10  
325-44/70-T10 425-112/200-T10

Insert : MFMN, MGMN



### MGFVR/L

320R 425R  
325R 520R  
420R 525R

Insert : FGD, FGM, FMM



## Threading

### ER(L)H

Screw on system

ER(L)H□□-□□

Insert : ER, ERM



### ER(L)H-C

Clamp on system

ER(L)H□□-□□C

Insert : ER, ERM, ERM-U



### IR(L)H

Clamp on system

IR(L)H□□-□□

Insert : IR, IRM, IRM-U



### IR(L)H-C

Clamp on system

IR(L)H□□-□□C

Insert : IR, IRM, IRM-U



### VTH

2020R  
2525R  
3225R

Insert : VETR



# Milling Tools

KORLOY provides high quality milling cutters thanks to its advanced technology and accumulated know-how of tooling systems, carrying out values for higher productivity and quality results.

- Face Milling Cutters
- Multi Functional Cutters
- For Aluminum Milling
- High Feed Milling Cutters
- Side Cutters

# Face Milling Cutters



## RM3PC(M)3000/4000/5000

### ▶ 3000 Type

: Ø40 ~ Ø80mm

#### Insert

XNKT060405PNER-ML  
XNKT060405PNSR-MM  
XNKT060408PNER-ML  
XNKT060408PNSR-MM

### ▶ 4000 Type

: Ø40 ~ Ø125mm

#### Insert

XNCT080504PNFR-MA XNKT080508PNSR-MM  
XNCT080508PNFR-MA XNKT080512PNER-ML  
XNCT080512PNFR-MA XNKT080512PNSR-MM  
XNCT080520PNFR-MA XNKT080516PNER-ML  
XNKT080504PNER-ML XNKT080516PNSR-MM  
XNKT080504PNSR-MM XNKT080520PNER-ML  
XNKT080508PNER-ML XNKT080520PNSR-MM

### ▶ 5000 Type

: Ø80 ~ Ø125mm

#### Insert

XNCT120608PNFR-MA XNKT120612PNSR-MM  
XNKT120604PNSR-MM XNKT120616PNER-ML  
XNKT120608PNER-ML XNKT120616PNSR-MM  
XNKT120608PNSR-MM XNKT120620PNER-ML  
XNKT120612PNER-ML XNKT120620PNSR-MM



## RM3PS3000/4000

### ▶ 3000 Type

: Ø20 ~ Ø40mm

#### Insert

XNKT060405PNER-ML  
XNKT060405PNSR-MM  
XNKT060408PNER-ML  
XNKT060408PNSR-MM

### ▶ 4000 Type

: Ø32 ~ Ø63mm

#### Insert

XNCT080504PNFR-MA XNKT080504PNSR-MM XNKT080516PNER-ML  
XNCT080508PNFR-MA XNKT080508PNER-ML XNKT080516PNSR-MM  
XNCT080512PNFR-MA XNKT080508PNSR-MM XNKT080520PNER-ML  
XNCT080520PNFR-MA XNKT080512PNER-ML XNKT080520PNSR-MM  
XNKT080504PNER-ML XNKT080512PNSR-MM



## RM3PM3000/4000

### ▶ 3000 Type

: Ø20 ~ Ø40mm

#### Insert

XNKT060405PNER-ML  
XNKT060405PNSR-MM  
XNKT060408PNER-ML  
XNKT060408PNSR-MM

### ▶ 4000 Type

: Ø32 ~ Ø63mm

#### Insert

XNCT080504PNFR-MA XNKT080504PNSR-MM XNKT080516PNER-ML  
XNCT080508PNFR-MA XNKT080508PNER-ML XNKT080516PNSR-MM  
XNCT080512PNFR-MA XNKT080508PNSR-MM XNKT080520PNER-ML  
XNCT080520PNFR-MA XNKT080512PNER-ML XNKT080520PNSR-MM  
XNKT080504PNER-ML XNKT080512PNSR-MM



\* Please refer to page 104 for available adaptors

## RM4PC(M)3000/4000

### ▶ 3000 Type

: Ø40 ~ Ø100mm

#### Insert

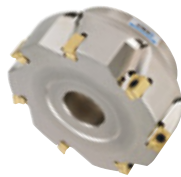
LNEX100605PNR-MA  
LNEX100605PNR-MF/MM  
LNEX100608PNR-MF/MM  
LNMX100605PNR-MF/MM  
LNMX100608PNR-MF/MM

### ▶ 4000 Type

: Ø50 ~ Ø160mm

#### Insert

LNEX151004PNR-MA  
LNEX151004PNR-MF/MM  
LNEX151008PNR-MA  
LNEX151008PNR-MF/MM  
LNEX151016PNR-MF/MM  
LNMX151004PNR-MF/MM  
LNMX151008PNR-MF/MM  
LNMX151016PNR-MF/MM



## RM4PS3000/4000

### ▶ 3000 Type

: Ø14 ~ Ø50mm

#### Insert

LNEX100605PNR-MA  
LNEX100605PNR-MF/MM  
LNEX100605PNL-MM  
LNMX100605PNR-MF/MM  
LNMX100608PNR-MF/MM

### ▶ 4000 Type

: Ø32 ~ Ø63mm

#### Insert

LNEX151004PNR-MA  
LNEX151004PNR-MF/MM  
LNEX151008PNR-MA  
LNEX151008PNR-MF/MM  
LNEX151016PNR-MF/MM  
LNMX151004PNR-MF/MM  
LNMX151008PNR-MF/MM  
LNMX151016PNR-MF/MM



## RM4PM3000

### ▶ 3000 Type

: Ø14 ~ Ø50mm

#### Insert

LNEX100605PNR-MA  
LNEX100605PNR-MF/MM  
LNEX100608PNR-MF/MM  
LNMX100605PNR-MF/MM  
LNMX100608PNR-MF/MM  
LNMX100608PNR-MF/MM



## RM4ZC(M)3000/4000

### ▶ 3000 Type

: Ø40 ~ Ø63mm

#### Insert

LNEX100605PNL-MM  
LNMX100605PNL-MM

### ▶ 4000 Type

: Ø66 ~ Ø100mm

#### Insert

LNEX151008PNL-MM  
LNMX151008PNL-MM



\* Please refer to page 104 for available adaptors

## Rich Mill

### RM4ZS3000

- ▶ **3000 Type**  
: Ø25 ~ Ø40mm

**Insert**

LNEX100605PNL-MM  
LNMX100605PNL-MM



### RM4ZM3000

- ▶ **3000 / 4000 Type**  
: Ø25 ~ Ø40mm

**Insert**

LNEX100605PNL-MM  
LNMX100605PNL-MM



• Please refer to page 104 for available adaptors

### RM6PC(M)-WN04/08

- ▶ **WN04**

: Ø40 ~ Ø63mm

**Insert**

WNGX040304PNFR-MA WNGX040304PNSR-MM  
WNGX040308PNFR-MA WNGX040308PNSR-MM  
WNGX040312PNFR-MA WNGX040312PNSR-MM  
WNGX040316PNFR-MA WNGX040316PNSR-MM  
WNGX040304PNER-ML  
WNGX040308PNER-ML  
WNGX040312PNER-ML  
WNGX040316PNER-ML

- ▶ **WN08**

: Ø50 ~ Ø125mm

**Insert**

WNGX080604PNFR-MA WNGX080616PNER-ML  
WNGX080608PNFR-MA WNGX080620PNER-ML  
WNGX080612PNFR-MA WNGX080604PNSR-MM  
WNGX080616PNFR-MA WNGX080608PNSR-MM  
WNGX080620PNFR-MA WNGX080612PNSR-MM  
WNGX080604PNER-ML WNGX080616PNSR-MM  
WNGX080608PNER-ML WNGX080620PNSR-MM  
WNGX080612PNER-ML



### RM6PS-WN04/08

- ▶ **WN04**

: Ø20 ~ Ø32mm

**Insert**

WNGX040304PNFR-MA WNGX040304PNSR-MM  
WNGX040308PNFR-MA WNGX040308PNSR-MM  
WNGX040312PNFR-MA WNGX040312PNSR-MM  
WNGX040316PNFR-MA WNGX040316PNSR-MM  
WNGX040304PNER-ML  
WNGX040308PNER-ML  
WNGX040312PNER-ML  
WNGX040316PNER-ML

- ▶ **WN08**

: Ø32 ~ Ø50mm

**Insert**

WNGX080604PNFR-MA WNGX080616PNER-ML  
WNGX080608PNFR-MA WNGX080620PNER-ML  
WNGX080612PNFR-MA WNGX080604PNSR-MM  
WNGX080616PNFR-MA WNGX080608PNSR-MM  
WNGX080620PNFR-MA WNGX080612PNSR-MM  
WNGX080604PNER-ML WNGX080616PNSR-MM  
WNGX080608PNER-ML WNGX080620PNSR-MM  
WNGX080612PNER-ML



### RM6PM-WN04/08

- ▶ **WN04**

: Ø20 ~ Ø32mm

**Insert**

WNGX040304PNFR-MA WNGX040312PNER-ML  
WNGX040308PNFR-MA WNGX040316PNER-ML  
WNGX040312PNFR-MA WNGX040304PNSR-MM  
WNGX040316PNFR-MA WNGX040308PNSR-MM  
WNGX040304PNER-ML WNGX040312PNSR-MM  
WNGX040308PNER-ML WNGX040316PNSR-MM

- ▶ **WN08**

: Ø32 ~ Ø40mm

**Insert**

WNGX080604PNFR-MA WNGX080616PNER-ML  
WNGX080608PNFR-MA WNGX080620PNER-ML  
WNGX080612PNFR-MA WNGX080604PNSR-MM  
WNGX080616PNFR-MA WNGX080608PNSR-MM  
WNGX080620PNFR-MA WNGX080612PNSR-MM  
WNGX080604PNER-ML WNGX080616PNSR-MM  
WNGX080608PNER-ML WNGX080620PNSR-MM  
WNGX080612PNER-ML



• Please refer to page 104 for available adaptors

### RM8AC(M)4000/5000

- ▶ **4000 Type**

: Ø50 ~ Ø400mm

**Insert**

SNEX1206ANN-MA  
SNEX1206ANN-MF  
SNEX1206ANN-ML  
SNEX1206ANN-MM  
SNEX1206ANN-W  
SNMX1206ANN-MF  
SNMX1206ANN-MM

- ▶ **5000 Type**

: Ø80 ~ Ø400mm

**Insert**

SNEX1507ANN-MF  
SNEX1507ANN-ML  
SNEX1507ANN-MM  
SNMX1507ANN-MF  
SNMX1507ANN-MM



### RMH8AC(M)4000/5000

Shim Type

- ▶ **4000 Type**

: Ø80 ~ Ø400mm

**Insert**

SNEX1206ANN-MA  
SNEX1206ANN-MF  
SNEX1206ANN-ML  
SNEX1206ANN-MM  
SNEX1206ANN-W  
SNMX1206ANN-MF  
SNMX1206ANN-MM

- ▶ **5000 Type**

: Ø80 ~ Ø400mm

**Insert**

SNEX1507ANN-MF  
SNEX1507ANN-ML  
SNEX1507ANN-MM  
SNMX1507ANN-MF  
SNMX1507ANN-MM



## Rich Mill

### RM8EC(M)4000/5000

#### ▶ 4000 Type

: Ø50 ~ Ø400mm

#### Insert

SNEX1206ENN-MA  
SNEX1206ENN-MF  
SNEX1206ENN-ML  
SNEX1206ENN-MM  
SNMX1206ENN-MF  
SNMX1206ENN-MM

#### ▶ 5000 Type

: Ø80 ~ Ø400mm

#### Insert

SNEX1507ENN-MF  
SNEX1507ENN-ML  
SNEX1507ENN-MM  
SNMX1507ENN-MF  
SNMX1507ENN-MM



### RMH8EC(M)4000/5000

Shim Type

#### ▶ 4000 Type

: Ø80 ~ Ø400mm

#### Insert

SNEX1206ENN-MA  
SNEX1206ENN-MF  
SNEX1206ENN-ML  
SNEX1206ENN-MM  
SNMX1206ENN-MF  
SNMX1206ENN-MM

#### ▶ 5000 Type

: Ø80 ~ Ø400mm

#### Insert

SNEX1507ENN-MF  
SNEX1507ENN-ML  
SNEX1507ENN-MM  
SNMX1507ENN-MF  
SNMX1507ENN-MM



### RM8QC(M)4000

#### ▶ 4000 Type

: Ø63 ~ Ø200mm

#### Insert

SNEX1206QNN-MA  
SNEX1206QNN-MF  
SNEX1206QNN-ML  
SNEX1206QNN-MM  
SNEX120612-MA  
SNEX120612-MF

SNEX120612-ML  
SNEX120612-MM  
SNMX1206QNN-MF  
SNMX1206QNN-MM  
SNMX120612-MF  
SNMX120612-MM



### RMH8QC(M)4000

Shim Type

#### ▶ 4000 Type

: Ø80 ~ Ø200mm

#### Insert

SNEX1206QNN-MA  
SNEX1206QNN-MF  
SNEX1206QNN-ML  
SNEX1206QNN-MM  
SNEX120612-MA  
SNEX120612-MF

SNEX120612-ML  
SNEX120612-MM  
SNMX1206QNN-MF  
SNMX1206QNN-MM  
SNMX120612-MF  
SNMX120612-MM



### RMT8A(M)4000/5000

#### ▶ 4000 Type

: Ø80 ~ Ø315mm

#### Insert

SNCF1206ANN-MF/MM  
SNMF1206ANN-MF/MM

#### ▶ 5000 Type

: Ø80 ~ Ø315mm

#### Insert

SNCF1507ANN-MF/MM  
SNMF1507ANN-MF/MM



### RMT8E(M)4000/5000

#### ▶ 4000 Type

: Ø80 ~ Ø315mm

#### Insert

SNCF1206ANN-MF/MM  
SNMF1206ANN-MF/MM

#### ▶ 5000 Type

: Ø80 ~ Ø315mm

#### Insert

SNCF1507ANN-MF/MM  
SNMF1507ANN-MF/MM



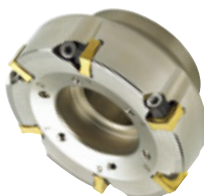
### RMT8Q(M)4000

#### ▶ 4000 Type

: Ø80 ~ Ø315mm

#### Insert

SNMF1206QNN-MF/MM  
SNMF1206QNN-MF/MM



### RM16AC(M)6000/8000

#### ▶ 6000 Type

: Ø63 ~ Ø400mm

#### Insert

ONHX060608-MA  
ONHX060608-MF  
ONHX060608-ML  
ONHX060608-MM  
ONHX060608-W  
ONHX0606ANN-MF  
ONHX0606ANN-MM  
ONMX060608-MF  
ONMX060608-MM  
ONMX0606ANN-MF  
ONMX0606ANN-MM

#### ▶ 8000 Type

: Ø63 ~ Ø400mm

#### Insert

ONHX080608-MA  
ONHX080608-MF  
ONHX080608-ML  
ONHX080608-MM  
ONHX080608-W  
ONHX0806ANN-MF  
ONHX0806ANN-MM  
ONMX080608-MF  
ONMX080608-MM  
ONMX0806ANN-MF  
ONMX0806ANN-MM



## Rich Mill (Side Milling Cutter)

### RM4PFCB3000/4000

▶ **3000 Type**

: Ø80 ~ Ø160mm

**Insert**

LNEX100605PNR-MM  
LNEX100605PNL-MM  
LNMX100605PNR-MM  
LNMX100605PNL-MM

▶ **4000 Type**

: Ø80 ~ Ø160mm

**Insert**

LNEX151008PNR-MM  
LNEX151008PNL-MM  
LNMX151008PNR-MM  
LNMX151008PNL-MM



### RM4PHCB3000/4000

▶ **3000 Type**

: Ø80 ~ Ø315mm

**Insert**

LNEX100605PNR-MA  
LNEX100605PNR-MF/MM  
LNEX100608PNR-MF/MM  
LNMX100605PNR-MF/MM  
LNMX100608PNR-MF/MM

▶ **4000 Type**

: Ø80 ~ Ø160mm

**Insert**

LNEX151004PNR-MA  
LNEX151008PNR-MA  
LNEX151004PNR-MF/MM  
LNEX151008PNR-MF/MM  
LNEX151016PNR-MF/MM  
LNMX151004PNR-MF/MM  
LNMX151008PNR-MF/MM  
LNMX151016PNR-MF/MM



### RM4PFCP3000/4000

▶ **3000 Type**

: Ø80 ~ Ø160mm

**Insert**

LNEX100605PNR-MM  
LNEX100605PNL-MM  
LNMX100605PNR-MM  
LNMX100605PNL-MM

▶ **4000 Type**

: Ø80 ~ Ø160mm

**Insert**

LNEX151008PNR-MM  
LNEX151008PNL-MM  
LNMX151008PNR-MM  
LNMX151008PNL-MM



### RM4PHCP3000/4000

▶ **3000 Type**

: Ø80 ~ Ø315mm

**Insert**

LNEX100605PNR-MA  
LNEX100605PNR-MF/MM  
LNEX100608PNR-MF/MM  
LNMX100605PNR-MF/MM  
LNMX100608PNR-MF/MM

▶ **4000 Type**

: Ø80 ~ Ø160mm

**Insert**

LNEX151004PNR-MA  
LNEX151008PNR-MA  
LNEX151004PNR-MF/MM  
LNEX151008PNR-MF/MM  
LNEX151016PNR-MF/MM  
LNMX151004PNR-MF/MM  
LNMX151008PNR-MF/MM  
LNMX151016PNR-MF/MM



## Tangen-Pro TP2P

### TP2PCM-LN08

Ø40 ~ Ø63mm

**Insert**

LNKT080404PNR-MA  
LNKT080408PNR-MA  
LNKT080404PNR-ML  
LNKT080408PNR-ML  
LNKT080404PNR-MM  
LNKT080408PNR-MM



### TP2PC(M)-LN14

Ø40 ~ Ø125mm

**Insert**

LNKT140608PNR-MA  
LNKT140608PNR-ML  
LNKT140608PNR-MM



### TP2PC(M)-LN17

Ø40 ~ Ø125mm

**Insert**

LNKT170704PNR-MA LNKT170716PNR-ML  
LNKT170708PNR-MA LNKT170720PNR-ML  
LNKT170712PNR-MA LNKT170704PNR-MM  
LNKT170716PNR-MA LNKT170708PNR-MM  
LNKT170720PNR-MA LNKT170712PNR-MM  
LNKT170704PNR-ML LNKT170716PNR-MM  
LNKT170708PNR-ML LNKT170720PNR-MM  
LNKT170712PNR-ML



### TP2PS-LN08

Ø20 ~ Ø25mm

**Insert**

LNKT080404PNR-MA  
LNKT080408PNR-MA  
LNKT080404PNR-ML  
LNKT080408PNR-ML  
LNKT080404PNR-MM  
LNKT080408PNR-MM



### TP2PS-LN14

Ø25 ~ Ø50mm

**Insert**

LNKT140608PNR-MA  
LNKT140608PNR-ML  
LNKT140608PNR-MM



### TP2PS-LN17

Ø40 ~ Ø125mm

**Insert**

LNKT170704PNR-MA LNKT170716PNR-ML  
LNKT170708PNR-MA LNKT170720PNR-ML  
LNKT170712PNR-MA LNKT170704PNR-MM  
LNKT170716PNR-MA LNKT170708PNR-MM  
LNKT170720PNR-MA LNKT170712PNR-MM  
LNKT170704PNR-ML LNKT170716PNR-MM  
LNKT170708PNR-ML LNKT170720PNR-MM  
LNKT170712PNR-ML





## Future Mill

### FMAC(M)3000/4000

#### ▶ 3000 Type

: Ø50 ~ Ø125mm

#### Insert

SEET0903AGFN-MA  
SEET0903AGSN-MF/MM  
SEXT0903AGSN-MF/MM/MR  
SEEW0903AGTN

#### ▶ 4000 Type

: Ø80 ~ Ø160mm

#### Insert

SEET14M4AGFN-MA  
SEET14M4AGSN-MF/MM  
SEXT14M4AGSN-MF/MF/MR  
SEEW14M4AGTN  
SEEW14M4AGFN-W  
SEEW14M4AGSN-W  
SEEW14M4AGTN-W



### FMAC(M)3000-A/4000-A

Aluminum Body

#### ▶ 3000 Type

: Ø63 ~ Ø215mm

#### Insert

SEET0903AGFN-MA  
SEET0903AGSN-MF/MM  
SEXT0903AGSN-MF/MM/MR  
SEEW0903AGTN

#### ▶ 4000 Type

: Ø63 ~ Ø315mm

#### Insert

SEET14M4AGFN-MA  
SEET14M4AGSN-MF/MM  
SEXT14M4AGSN-MF/MM/MR  
SEEW14M4AGTN  
SEEW14M4AGFN-W  
SEEW14M4AGSN-W  
SEEW14M4AGTN-W



### FMAS3000/4000

#### ▶ 3000 Type

: Ø25 ~ Ø63mm

#### Insert

SEET0903AGFN-MA  
SEET0903AGSN-MF/MM  
SEXT0903AGSN-MF/MM/MR  
SEEW0903AGTN

#### ▶ 4000 Type

: Ø50 ~ Ø63mm

#### Insert

SEET14M4AGFN-MA  
SEET14M4AGSN-MF/MM  
SEXT14M4AGSN-MF/MM/MR  
SEEW14M4AGTN  
SEEW14M4AGFN-W  
SEEW14M4AGSN-W  
SEEW14M4AGTN-W



### FMPC(M)3000/4000

#### ▶ 3000 Type

: Ø50 ~ Ø100mm

#### Insert

SDET09M402R-MA  
SDET09M405R-MF/MM  
SDXT09M405R-MA  
SDXT09M405R/L-MF  
SDXT09M405R/L-MM

#### ▶ 4000 Type

: Ø63 ~ Ø125mm

#### Insert

SDET130504R-MA  
SDET130508R-MF/MM  
SDXT130508R-MA  
SDXT130508R-MF/MM



### FMPC(M)3000-A/4000-A

Aluminum Body

#### ▶ 3000 Type

: Ø63 ~ Ø100mm

#### Insert

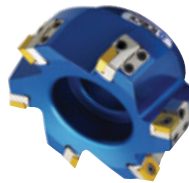
SDET09M402R-MA  
SDET09M405R-MF/MM  
SDXT09M405R-MA  
SDXT09M405R/L-MF  
SDXT09M405R/L-MM

#### ▶ 4000 Type

: Ø63 ~ Ø315mm

#### Insert

SDET130504R-MA  
SDET130508R-MF/MM  
SDXT130508R-MA  
SDXT130508R-MF/MM



### FMPS3000/4000

#### ▶ 3000 Type

: Ø25 ~ Ø63mm

#### Insert

SDET09M402R-MA  
SDET09M405R-MF/MM  
SDXT09M405R-MA  
SDXT09M405R/L-MF  
SDXT09M405R/L-MM

#### ▶ 4000 Type

: Ø40 ~ Ø63mm

#### Insert

SDET130504R-MA  
SDET130508R-MF/MM  
SDXT130508R-MA  
SDXT130508R-MF/MM



## Future Mill

### FMRC(M)3000/4000

#### ▶ 3000 Type

: Ø40 ~ Ø100mm

#### Insert

RDCT10T3M0-MA  
RDKT10T3M0-MF/MM

#### ▶ 4000 Type

: Ø50 ~ Ø125mm

#### Insert

RDCT1204M0-MA  
RDKT1204M0-MF/MM



### FMRC(M)5000/6000

#### ▶ 5000 Type

: Ø50 ~ Ø125mm

#### Insert

RDCT10T3M0-MA  
RDKT10T3M0-MF/MM

#### ▶ 6000 Type

: Ø63 ~ Ø160mm

#### Insert

RDCT1204M0-MA  
RDKT1204M0-MF/MM



### FMRS1000/1500

#### ▶ 1000 Type

: Ø8 ~ Ø15mm

#### Insert

RDHW0501M0E, F, S  
RDKW0501M0E

#### ▶ 1500 Type

: Ø10 ~ Ø20mm

#### Insert

RDHW06T1M0E, F, S  
RDKW06T1M0E



### FMRS2000/2500

#### ▶ 2000 Type

: Ø15 ~ Ø20mm

#### Insert

RDHW0702M0E, F, S  
RDKW0702M0E

#### ▶ 2500 Type

: Ø16 ~ Ø25mm

#### Insert

RDHW0803M0E, F, S  
RDKW0803M0E



# < Face Milling Cutters >

## Future Mill

### FMRS3000/4000

- |  |  |
|--|--|
| <p>▶ <b>3000 Type</b><br/>: Ø21 ~ Ø40mm<br/><b>Insert</b><br/>RDCT10T3M0-MA<br/>RDKT10T3M0-MF/MM</p> | <p>▶ <b>4000 Type</b><br/>: Ø32 ~ Ø50mm<br/><b>Insert</b><br/>RDCT1204M0-MA<br/>RDKT1204M0-MF/MM</p> |
|--|--|



### FMRS5000/6000

- |   |   |
|---|---|
| <p>▶ <b>5000 Type</b><br/>: Ø40 ~ Ø63mm<br/><b>Insert</b><br/>RDHW1605M0E, F, S<br/>RDKT1605M0-MF/ML/MM</p> | <p>▶ <b>6000 Type</b><br/>: Ø50 ~ Ø63mm<br/><b>Insert</b><br/>RDHW2006M0E, F, S<br/>RDKT2006M0-MM</p> |
|---|---|



### FMRM1000/1500/2000/2500

- ▶ **1000/1500/2000/2500 Type**  
: Ø8 ~ Ø25mm  
**Insert**  
RDHW0501M0E,F,S    RDHW0702M0E.F,S  
RDKW0501M0E        RDKW0702M0E  
RDHW06T1M0E,F,S    RDHW0803M0E,F,S  
RDKW06T1M0E        RDKW0803M0E



### FMRM3000/4000/5000

- ▶ **3000/4000/5000 Type**  
: Ø21 ~ Ø40mm  
**Insert**  
RDCT10T3M0-MA        RDKT1204M0-MF/MM  
RDKT10T3M0-MF/MM    RDHW1605M0E, F, S  
RDCT1204M0-MA        RDKT1605M0-MM/ML



• Please refer to page 104 for available adaptors

• Please refer to page 104 for available adaptors

## FMR P-positive

### FMRC(M)3000/4000

- |   |   |
|---|---|
| <p>▶ <b>3000 Type</b><br/>: Ø40 ~ Ø66mm<br/><b>Insert</b><br/>RPCT10T3M0-MA<br/>RPET10T3M0E-ML<br/>RPMT10T3M0E-MF<br/>RPMT10T3M0S-MM<br/>RPMW10T3M0E1</p> | <p>▶ <b>4000 Type</b><br/>: Ø50 ~ Ø100mm<br/><b>Insert</b><br/>RPCT1204M0-MA<br/>RPET1204M0E-ML<br/>RPMT1204M0E-MF<br/>RPMT1204M0S-MM<br/>RPMW1204M0S1<br/>RPMW1204M0S2</p> |
|---|---|



### FMRC(M)5000/6000

- |  |  |
|--|--|
| <p>▶ <b>5000 Type</b><br/>: Ø63 ~ Ø160mm<br/><b>Insert</b><br/>RPCT1606M0-MA<br/>RPET1606M0E-ML<br/>RPMT1606M0E-MF<br/>RPMT1606M0S-MM<br/>RPMW1606M0S1</p> | <p>▶ <b>6000 Type</b><br/>: Ø63 ~ Ø250mm<br/><b>Insert</b><br/>RPCT2007M0-MA<br/>RPET2007M0E-ML<br/>RPMT2007M0E-MF<br/>RPMT2007M0S-MM<br/>RPMW2007M0S1</p> |
|--|--|



### FMRS2500

- ▶ **2500 Type**  
: Ø17 ~ Ø26mm  
**Insert**  
RPET0803M0E-ML  
RPMT0803M0E-MF  
RPMT0803M0S-MM  
RPMW0803M0E1



### FMRS3000/4000

- |   |  |
|---|--|
| <p>▶ <b>3000 Type</b><br/>: Ø25 ~ Ø33mm<br/><b>Insert</b><br/>RPCT10T3M0-MA<br/>RPET10T3M0E-ML<br/>RPMT10T3M0E-MF<br/>RPMT10T3M0S-MM<br/>RPMW10T3M0E1</p> | <p>▶ <b>4000 Type</b><br/>: Ø25 ~ Ø50mm<br/><b>Insert</b><br/>RPCT1204M0-MA<br/>RPET1204M0E-ML<br/>RPMT1204M0E-MF<br/>RPMT1204M0S-MM<br/>RPMW1204M0S1<br/>RPMW1204M0S2</p> |
|---|--|



### FMRS5000

- ▶ **5000 Type**  
: Ø40 ~ Ø50mm  
**Insert**  
RPCT1606M0-MA  
RPET1606M0E-ML  
RPMT1606M0E-MF  
RPMT1606M0S-MM  
RPMW1606M0S1



### FMRS6000

- ▶ **6000 Type**  
: Ø50mm  
**Insert**  
RPCT2007M0-MA  
RPCT2007M0E-ML  
RPMT2007M0E-MF  
RPMT2007M0S-MM  
RPMW2007M0S1



## » FMR P-positive

### FMRM2500/3000/4000/5000

#### ► 2500/3000/4000/5000 Type

: Ø17 ~ Ø42mm

##### Insert

RPET0803M0E-ML	RPET10T3M0E-ML	RPET1204M0E-ML	RPCT1606M0-MA
RPMT0803M0E-MF	RPMT10T3M0E-MF	RPMT1204M0E-MF	RPET1606M0E-ML
RPMT0803M0S-MM	RPMT10T3M0S-MM	RPMT1204M0S-MM	RPMT1606M0E-MF
RPMW0803M0E1	RPMW10T3M0E1	RPMW1204M0S1	RPMT1606M0S-MM
RPCT10T3M0-MA	RPCT1204M0-MA	RPMW1204M0S2	RPMW1606M0S1

\* Please refer to page 104 for available adaptors



## » Double-Mill

### AFO(M)4000

#### ► 4000 Type

: Ø80 ~ Ø125mm

##### Insert

OFCW05T3FN	OFKT05T3EN-MA
OFCW05T3SN	OFKT05T3FN-MA
OFCW05T308FN	OFKT05T3SN-MF/MM
	OFKT05T308SN-MF/MM



### AFO(M)5000

#### ► 5000 Type

: Ø80 ~ Ø315mm

##### Insert

OFCN0704FN	OFKR0704SN-MF/MM
OFCN0704SN	OFKR0704E(F)N-MA
OFCN070408FN	OFKR070408SN-MF/MM
OFCN070408SN	OFKT0704E(F)N-MA
	OFKT0704SN-MM
	REKR170400-MM



## » Power Buster

### PBAC(M)5000

#### ► 5000 Type

: Ø80 ~ Ø315mm

##### Insert

TNMX2710AZNR-NM
TNMX2710AZNL-NM



### PBZC(M)5000

#### ► 5000 Type

: Ø80 ~ Ø315mm

##### Insert

TNMX2710AZNR-NM
TNMX2710AZNL-NM



## » Mill-Max

### ADN(M)4000/5000+

#### ► 4000 Type

: Ø80 ~ Ø315mm

##### Insert

SDCN42
SDCN1203
SDKN1203
SDKR1203

#### ► 5000+ Type

: Ø80 ~ Ø315mm

##### Insert

SDCN53
SDCN1504
SDKN1504
SDKR1504



### AE(M)4000/5000

#### ► 4000 Type

: Ø80 ~ Ø315mm

##### Insert

SECN1203
SEKN1203
SEKR1203

#### ► 5000 Type

: Ø80 ~ Ø315mm

##### Insert

SECN1504
SEKN1504
SEKR1504



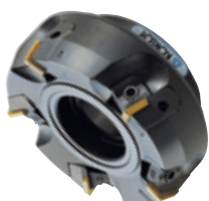
### EF(M)4000

#### ► 4000 Type

: Ø80 ~ Ø315mm

##### Insert

SFCN1203EFR
-------------



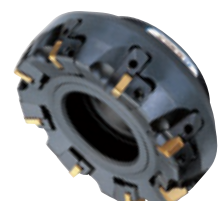
### EN(M)4000

#### ► 4000 Type

: Ø80 ~ Ø315mm

##### Insert

SNCN1204ENN
SNKN1204ENN



# < Face Milling Cutters >

## » Mill-Max

### EPN(M)4000/5000+

▶ **4000 Type**

: Ø80 ~ Ø315mm

**Insert**

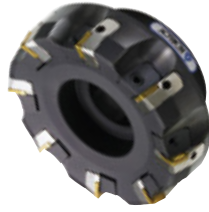
SPCN1203  
SPKN1203  
SPKR1203  
SPEX1203

▶ **5000+ Type**

: Ø80 ~ Ø315mm

**Insert**

SPCN1504  
SPKN1504  
SPKR1504  
SPEX1504



### PF(M)4000

▶ **4000 Type**

: Ø80 ~ Ø315mm

**Insert**

TFCN2203PFR  
TFCN2203PFL



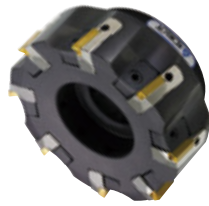
### PPN(M)4000

▶ **4000 Type**

: Ø80 ~ Ø315mm

**Insert**

TPCN2204  
TPKN2204  
TPKR2204



## » Mill-Max Heavy

### HDDCM7000/9000

▶ **7000 Type**

: Ø125 ~ Ø315mm

**Insert**

SCKN220715DDSR-MM

▶ **9000 Type**

: Ø125 ~ Ø315mm

**Insert**

SCKN280920DDSR-MM



## » Shave Mill

### SVM(M)4000

▶ **4000 Type**

: Ø80 ~ Ø315mm

**Insert**

SNEU120420-MF  
SNEU1204ANN-MF  
SNEU1204R-WMF  
SNEU1204-TBW



## » Shave Mill Ultra

### SVUM6000

▶ **6000 Type**

: Ø80 ~ Ø315mm

**Insert**

LNCS1907-R3.0-WC  
LNCS1907-C1.5-WC



### SVUM6000-B

▶ **6000 Type**

: Ø80 ~ Ø315mm

**Insert**

LNCS1907-R3.0-WC  
LNCS1907-C1.5-WC



## » High Feed Cutter

### ANH4000/5000

▶ **4000 Type**

: Ø100 ~ Ø450mm

**Insert**

SNKN1204ENN  
SNKN1204ENN

▶ **5000 Type**

: Ø100 ~ Ø450mm

**Insert**

SNCN 1504ENN  
SNKN 1504ENN



### CDH4000/5000

▶ **4000 Type**

: Ø100 ~ Ø450mm

**Insert**

SDCN42R  
SDCN42L

▶ **5000 Type**

: Ø100 ~ Ø450mm

**Insert**

SDCN53R  
SDCN53L



## High Feed Cutter

### DEH5000

Ø100 ~ Ø450mm

**Insert**

HECN090408FN  
HECN090408SN  
HECN090408TN



### DPH5000

Ø100 ~ Ø450mm

**Insert**

HPEN090408FN  
HPEN090408SN  
HPEN090408EN  
HPEN090408-WC



### PNH4000/5000

Ø125 ~ Ø450mm

**Insert**

SNEF435

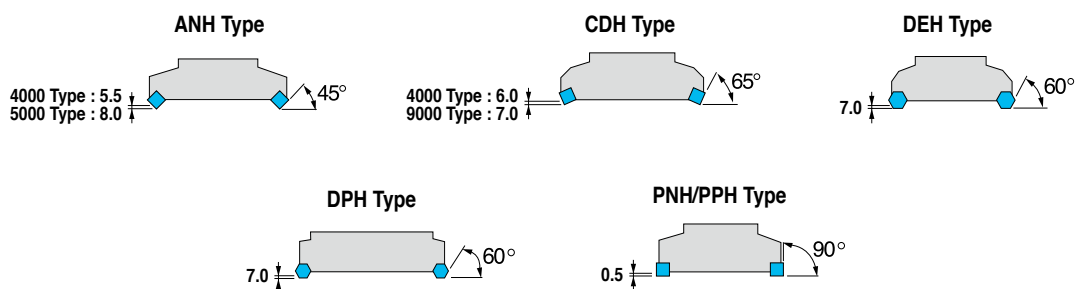


### PPH4000

Ø125 ~ Ø450mm

**Insert**

SPEN120416-WC



# Multi Functional Cutters

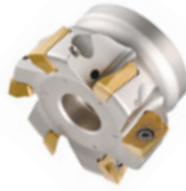
## Alpha Mill-X

### AMXCM

Ø40 ~ Ø80mm

#### Insert

ADKT170604PESR-MM  
ADKT170608PESR-MM  
ADKT170608PESR-ML  
ADKT170616PESR-ML  
ADKT170620PESR-ML



### AMXS

Ø20 ~ Ø40mm

#### Insert

ADKT170604PESR-MM  
ADKT170608PESR-MM  
ADKT170608PESR-ML  
ADKT170616PESR-ML  
ADKT170620PESR-ML



## Alpha Mill

### AMC(M)-S

1000S, 1500S, 2000S, 3000S(-K), 4000S

- ▶ **1000 Type**  
: Ø32 ~ Ø63mm
- ▶ **1500 Type**  
: Ø40 ~ Ø100mm
- ▶ **2000 Type**  
: Ø40 ~ Ø100mm
- ▶ **3000 Type**  
: Ø40 ~ Ø100mm
- ▶ **4000 Type**  
: Ø50 ~ Ø200mm



### AMC(M)-SE

1000SE, 2000SE, 3000SE

- ▶ **1000 Type**  
: Ø40 ~ Ø50mm
- ▶ **2000 Type**  
: Ø80 ~ Ø100mm
- ▶ **3000 Type**  
: Ø80 ~ Ø100mm



### AMC(M)-M

2000M, 3000M, 4000M

- ▶ **2000 Type**  
: Ø50 ~ Ø100mm
- ▶ **3000 Type**  
: Ø63 ~ Ø100mm
- ▶ **4000 Type**  
: Ø63 ~ Ø125mm



### AMS-S

1000S, 1500S, 2000S, 3000S, 3000S(-K), 4000S

- ▶ **1000 Type**  
: Ø10 ~ Ø33mm
- ▶ **1500 Type**  
: Ø10 ~ Ø40mm
- ▶ **2000 Type**  
: Ø10 ~ Ø63mm
- ▶ **3000 Type**  
: Ø25 ~ Ø63mm
- ▶ **4000 Type**  
: Ø20 ~ Ø63mm



### AMS-SE

1000SE, 2000SE, 3000SE

- ▶ **1000 Type**  
: Ø25mm
- ▶ **2000 Type**  
: Ø25 ~ Ø63mm
- ▶ **3000 Type**  
: Ø50 ~ Ø63mm



### AMS-M

1000M, 1500M, 2000M, 4000M

- ▶ **1000 Type**  
: Ø16 ~ Ø25mm
- ▶ **1500 Type**  
: Ø20 ~ Ø32mm
- ▶ **2000 Type**  
: Ø20 ~ Ø40mm
- ▶ **4000 Type**  
: Ø32 ~ Ø50mm



### AMS-MH

1000MH, 1500MH, 2000MH, 3000MH-K

- ▶ **1000 Type**  
: Ø14 ~ Ø18mm
- ▶ **1500 Type**  
: Ø20mm
- ▶ **2000 Type**  
: Ø25 ~ Ø32mm
- ▶ **3000 Type**  
: Ø40mm



### AMM

1000M, 1500M, 2000M

- ▶ **1000 Type**  
: Ø12 ~ Ø32mm
- ▶ **1500 Type**  
: Ø10 ~ Ø32mm
- ▶ **2000 Type**  
: Ø16 ~ Ø40mm



• Please refer to page 88 for available adaptors

### BT Tooling system (Single)

AM1000HS, AM1500HS, AM2000HS, AM3000HS, AM4000HS

- ▶ **1000 Type**  
: Ø10 ~ Ø20mm
- ▶ **1500 Type**  
: Ø16 ~ Ø40mm
- ▶ **2000 Type**  
: Ø16 ~ Ø50mm
- ▶ **3000 Type**  
: Ø25 ~ Ø50mm
- ▶ **4000 Type**  
: Ø20 ~ Ø50mm



### BT Tooling system (Multi)

AM1000, AM1500, AM2000, AM3000, AM4000

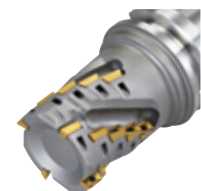
- ▶ **1000 Type**  
: Ø16 ~ Ø25mm
- ▶ **1500 Type**  
: Ø20 ~ Ø32mm
- ▶ **2000 Type**  
: Ø20 ~ Ø100mm
- ▶ **3000 Type**  
: Ø50 ~ Ø100mm
- ▶ **4000 Type**  
: Ø40 ~ Ø100mm



### HSK Tooling system (Single)

AM1000HS, AM1500HS, AM2000HS, AM3000HS, AM4000HS

- ▶ **1000 Type**  
: Ø10 ~ Ø20mm
- ▶ **1500 Type**  
: Ø16 ~ Ø40mm
- ▶ **2000 Type**  
: Ø16 ~ Ø50mm
- ▶ **3000 Type**  
: Ø25 ~ Ø50mm
- ▶ **4000 Type**  
: Ø20 ~ Ø50mm



### HSK Tooling system (Multi)

AM1000, AM1500, AM2000, AM3000, AM4000

- ▶ **1000 Type**  
: Ø16 ~ Ø25mm
- ▶ **1500 Type**  
: Ø20 ~ Ø32mm
- ▶ **2000 Type**  
: Ø20 ~ Ø100mm
- ▶ **3000 Type**  
: Ø50 ~ Ø100mm
- ▶ **4000 Type**  
: Ø40 ~ Ø100mm



## » Have Mill

### HAVE (Multi Edge)

Ø16 ~ Ø50mm

#### Insert

XPMT0802ER-MM	XPMT2006ER-MM
XPMT1003ER-MM	XPMT2507ER-MM
XPMT13T3ER-MM	
XPMT1604ER-MM	
XPMT1805ER-MM	



### HAVE (Single Edge)

Ø16 ~ Ø50mm

#### Insert

XPMT0802ER-MM	XPMT2006ER-MM
XPMT1003ER-MM	XPMT2507ER-MM
XPMT13T3ER-MM	
XPMT1604ER-MM	
XPMT1805ER-MM	



## » Turbo Mill

### ADS4000/5000

#### ► 4000 Type

: Ø50 ~ Ø63mm

**Insert**  
SDCN42  
SDCN1203  
SDKN1203  
SDKR1203

#### ► 5000 Type

: Ø50 ~ Ø63mm

**Insert**  
SDCN53  
SDCN1504  
SDKN1504  
SDKR1504



### PES2000/3000/4000

#### ► 2000/3000/4000 Type

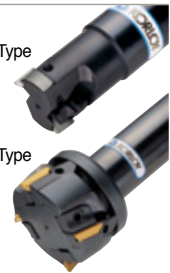
: Ø20 ~ Ø63mm

#### Insert

TECN22R/TR	TEEN43R-G
TECN32R/TR	TEEN43TR-S20
TECN32TR-S20	TEEN43TR-Z
TEEN43R/TR	TEEN43TR-ZH

2000/3000 Type

4000 Type



## » Tank Mill

### THE

Ø25 ~ Ø50mm

#### Insert

SPMT060304	APLT070304R
SDMT090308-MM	ADLT150308R
SPMT120408-MM	ZPMT1504PPSR-MM



## » T-Cutter

### TFE

Ø21 ~ Ø50mm

#### Insert

CPMT060204-MM  
CPMT080308-MM  
CPMT09T308-MM  
CPMH120408-MM



## » Chamfer Tool

### CE (Back & Front)

#### ► Chamfer angles

15°, 30°, 45°, 60°

#### Insert

SPMT110408-KC  
SPMN120308

15-1125R-S20	60-1125R-S32
30-1125R-S20	45-1207R-S32
45-1107R-S20	45-1220R-S32
45-1119R-S20	45-1225R-S32
45-1125R-S20	45-1235R-S32



### CE (Long Chamfer)

#### ► Chamfer angles

30°, 45°, 60°

#### Insert

XCET310404ER-KC

30-3105R-S32  
45-3105R-S32  
60-3105R-S32



### CE (Multi-functional)

#### ► Chamfer angles

45°

#### Insert

TWX16R-KC  
TWX22R-KC

45-1600R-S12  
45-1600R-S20  
45-1600R-L20  
45-2200R-S12  
45-2200R-S25  
45-2200R-L25



### CET

CET060-□□□  
CET090-□□□  
CET120-□□□



### CCT

CCT060-□□□  
CCT060T-□□□  
CCT060T-□□□L  
CCT090-□□□  
CCT090T-□□□  
CCT090T-□□□L  
CCT120-□□□  
CCT120T-□□□  
CCT120T-□□□L



# For Aluminum Milling

## Pro-A Mill

### PAC(M)2000/4000

- ▶ **2000/4000 Type** :  $\varnothing 40 \sim \varnothing 100\text{mm}$   
Insert  
VCKT220530N-MA



### PAS2000/4000

- ▶ **2000 Type** :  $\varnothing 12 \sim \varnothing 42\text{mm}$   
Insert  
VDKT11T210N-MA  
VDKT11T220N-MA
- ▶ **4000 Type** :  $\varnothing 32 \sim \varnothing 40\text{mm}$   
Insert  
VCKT220530N-MA



### PAM2000

- ▶ **2000 Type** :  $\varnothing 12 \sim \varnothing 42\text{mm}$   
Insert  
VDKT11T210N-MA



• Please refer to page 104 for available adaptors

## Pro-X Mill

### PAXC(M)5000/6000

- ▶ **5000 Type** :  $\varnothing 40 \sim \varnothing 125\text{mm}$   
Insert  
XEKT19M5□□FR-MA  
XEKT19M5□□ER-ML
- ▶ **6000 Type** :  $\varnothing 50 \sim \varnothing 125\text{mm}$   
Insert  
XEKT2506□□FR-MA  
XEKT2506□□ER-ML



### PAXS5000/6000

- ▶ **5000 Type** :  $\varnothing 20 \sim \varnothing 40\text{mm}$   
Insert  
XEKT19M5□□FR-MA  
XEKT19M5□□ER-ML
- ▶ **6000 Type** :  $\varnothing 25 \sim \varnothing 40\text{mm}$   
Insert  
XEKT2506□□FR-MA  
XEKT2506□□ER-ML



### PAXM5000

- ▶ **5000 Type** :  $\varnothing 25 \sim \varnothing 40\text{mm}$   
Insert  
XEKT19M5□□FR-MA  
XEKT19M5□□ER-ML



• Please refer to page 104 for available adaptors

## Pro-L Mill

### PALCM

- $\varnothing 63\text{mm}$   
Insert  
LXET3405PEFR-63-MA/ML  
LXET3405□□PEFR-63-MA/ML



### PALS (Single Edge)

- $\varnothing 32, \varnothing 40\text{mm}$   
Insert  
LXET2504PEER-□□-MA/ML  
LXET2504□□PEER-□□-MA/ML  
LXET2504PEFR-□□-MA/ML  
LXET2504□□PEFR-□□-MA/ML
- $\varnothing 50, \varnothing 63\text{mm}$   
Insert  
LXET3405PEER-□□-MA/ML  
LXET3405□□PEER-□□-MA/ML  
LXET3405PEFR-□□-MA/ML  
LXET3405□□PEFR-□□-MA/ML



### PALS (Multi Edge)

- $\varnothing 63\text{mm}$   
Insert  
LXET3405PEER-□□-MA/ML  
LXET3405□□PEER-□□-MA/ML  
LXET3405PEFR-□□-MA/ML  
LXET3405□□PEFR-□□-MA/ML



## Pro-XL Mill

### PXL(S)

- $\varnothing 40 \sim \varnothing 80\text{mm}$   
Insert  
LDET650540PPFR-MA  
LDET650550PPFR-MA



## Pro-V Mill

### PAVCM-XD19

- $\varnothing 40 \sim \varnothing 125\text{mm}$   
Insert  
XDET1905□□PEFR-MA



### PAVS-XD19

- $\varnothing 25 \sim \varnothing 40\text{mm}$   
Insert  
XDET1905□□PEFR-MA



### HSK-XD19

- $\varnothing 32 \sim \varnothing 50\text{mm}$   
Insert  
XDET1905□□PEFR-MA





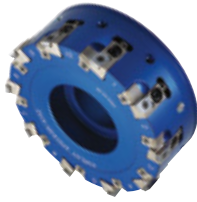
## » Aero Mill

### APD(M)-A

Ø80 ~ Ø315mm

#### Insert

CDEW1204R/L-XCF  
CDEW1204R/L-XAF  
CDEW1204R-NAF  
CDEW1204R/L-XAW  
CDEW1204R-NAW



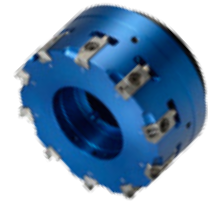
## » Aero Mill-Plus

### APD(M)-PB

Ø80 ~ Ø315mm

#### Insert

BAMPR-XAF  
BAMPR-XAW  
BAMPR-XAWR



## » Aero Mill-Mini

### MAPD000HR/L-Z0

Ø40 ~ Ø63mm

#### Insert

SNEW09T3ADFR  
SNEW09T3ADTR-XAF  
SNEW09T3ADTR-XAW  
SNEW09T3ADTR-NAF  
SNEW09T3ADTR-NAW



### MAPDS000HR/L-Z0

Ø32 ~ Ø40mm

#### Insert

SNEW09T3ADFR  
SNEW09T3ADTR-XAF  
SNEW09T3ADTR-XAW  
SNEW09T3ADTR-NAF  
SNEW09T3ADTR-NAW



# High Feed Milling Cutters

## HRM/HRM Double Tools

### HRMDC(M)09/13

- ▶ **09 Type**  
: Ø40 ~ Ø100mm  
**Insert**  
WNMX09T316ZNN-MF/ML/MM
- ▶ **13 Type**  
: Ø50 ~ Ø125mm  
**Insert**  
WNMX130520ZNN-MF/ML/MM



### HRMDC(M)16

- ▶ **16 Type**  
: Ø80 ~ Ø315mm  
**Insert**  
WNMX160720ZNN-MF/ML/MM



### HRMDS06

- ▶ **06 Type**  
: Ø16 ~ Ø33mm  
**Insert**  
WNMX060312ZNN-MF/ML/MM



### HRMDS09/13

- ▶ **09 Type**  
: Ø25 ~ Ø50mm  
**Insert**  
WNMX09T316ZNN-MF/ML/MM
- ▶ **13 Type**  
: Ø32 ~ Ø63mm  
**Insert**  
WNMX130520ZNN-MF/ML/MM



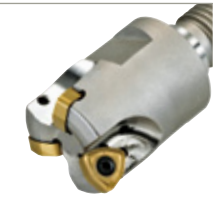
### HRMDM06

- ▶ **06 Type**  
: Ø16 ~ Ø33mm  
**Insert**  
WNMX060312ZNN-MF/ML/MM



### HRMDM09/13

- ▶ **09 Type**  
: Ø25 ~ Ø40mm  
**Insert**  
WNMX09T316ZNN-MF/ML/MM
- ▶ **13 Type**  
: Ø32 ~ Ø40mm  
**Insert**  
WNMX130520ZNN-MF/ML/MM



• Please refer to page 104 for available adaptors

• Please refer to page 104 for available adaptors

### HRMC(M)13/15

- ▶ **13 Type**  
: Ø50 ~ Ø80mm  
**Insert**  
WDKT130520ZDSR-MH
- ▶ **15 Type**  
: Ø63 ~ Ø160mm  
**Insert**  
WDKT150625ZDSR-MH



### HRMS08/10

- ▶ **08 Type**  
: Ø20 ~ Ø21mm  
**Insert**  
WDKT080316ZDSR-MH
- ▶ **10 Type**  
: Ø25 ~ Ø30mm  
**Insert**  
WDKT10T320ZDSR-MH



### HRMS13/15

- ▶ **13 Type**  
: Ø32 ~ Ø40mm  
**Insert**  
WDKT130520ZDSR-MH
- ▶ **15 Type**  
: Ø50 ~ Ø63mm  
**Insert**  
WDKT150625ZDSR-MH



### HRMM08/10/13

- ▶ **08/10/13 Type**  
: Ø20 ~ Ø40mm  
**Insert**  
WDKT080316ZDSR-MH  
WDKT10T320ZDSR-MH  
WDKT130520ZDSR-MH



• Please refer to page 104 for available adaptors

## » HFM (High Feed Mill)

### HFMS1000

▶ **1000 Type**  
:  $\varnothing 15 \sim \varnothing 21\text{mm}$   
**Insert**  
LPMT040210R-MF  
LPMT040220R-MF  
LPMW040210R  
LPMW040220R  
LPEW040210R  
LPEW040220R



### HFMM1000

▶ **1000 Type**  
:  $\varnothing 8 \sim \varnothing 33\text{mm}$   
**Insert**  
LPMT040210R-MF  
LPMT040220R-MF  
LPMW040210R  
LPMW040220R  
LPEW040210R  
LPEW040220R



• Please refer to page 104 for available adaptors

## » HFMD (High Feed Mill Double)

### HFMDCM-LN06

$\varnothing 32 \sim \varnothing 66\text{mm}$   
**Insert**  
LNMX060310R-MF  
LNMX060310R-ML  
LNMX060310R-MM



### HFMDS-LN06

$\varnothing 16 \sim \varnothing 40\text{mm}$   
**Insert**  
LNMX060310R-MF  
LNMX060310R-ML  
LNMX060310R-MM



### HFMDM-LN06

$\varnothing 16 \sim \varnothing 42\text{mm}$   
**Insert**  
LNMX060310R-MF  
LNMX060310R-ML  
LNMX060310R-MM



# Side Cutters

## » Tangential Type (Full Side Cutter)

### TAFCP(M)

Ø100 ~ Ø315mm

#### Insert

CNHQ1005-□□□  
CNHQ1305-□□□  
CNHQ1606-□□□



### TAFCB(M)

Ø100 ~ Ø315mm

#### Insert

CNHQ1005-□□□  
CNHQ1305-□□□  
CNHQ1606-□□□



## » Tangential Type (Half Side Cutter)

### TAHCP(M)

Ø100 ~ Ø315mm

#### Insert

CNHQ1005-□□□  
CNHQ1305-□□□  
CNHQ1606-□□□



### TAHCB(M)

Ø100 ~ Ø315mm

#### Insert

CNHQ1005-□□□  
CNHQ1305-□□□  
CNHQ1606-□□□



## » Radial Type (Full Side Cutter)

### RAFCP(M)

Ø100 ~ Ø315mm

#### Insert

SDXT09M40□R/L  
SDXT13050□R/L

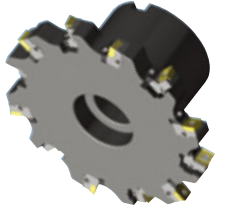


### RAFCB(M)

Ø100 ~ Ø315mm

#### Insert

SDXT09M40□R/L  
SDXT13050□R/L



## » Radial Type (Half Side Cutter)

### RAHCP(M)

Ø100 ~ Ø315mm

#### Insert

SDXT09M40□R/L  
SDXT13050□R/L



### RAHCB(M)

Ø100 ~ Ø315mm

#### Insert

SDXT09M40□R/L  
SDXT13050□R/L



## Side Cutters

### SPP(M)

Ø80 ~ Ø200mm

#### Insert

PNEJ12□□N



### SPB(M)

Ø80 ~ Ø200mm

#### Insert

PNEJ12□□N



### SPS

Ø50 ~ Ø200mm

#### Insert

SPFN200

SPFN300

SPFN400



## Wind Mill

### RAHCP(M)

Boss Type

Ø80 ~ Ø250mm

#### Insert

SNHT11023□□R/L-WX

SNHT1103□□R/L-WX

SNHT1203□□R/L-WX

SNHT12035□□R/L-WX

SNHT1204□□R/L-WX

SNHT12045□□R/L-WX

SNHT1205□R/L-WX

SNHT12054□R/L-WX

SNHT1206□□R/L-WX

SNHT12065□□R/L-WX

SNHT1207□□R/L-WX

SNHT12075□□R/L-WX



### RAHCB(M)

Plane Type

Ø80 ~ Ø250mm

#### Insert

SNHT11023□□R/L-WX

SNHT1103□□R/L-WX

SNHT1203□□R/L-WX

SNHT12035□□R/L-WX

SNHT1204□□R/L-WX

SNHT12045□□R/L-WX

SNHT1205□R/L-WX

SNHT12054□R/L-WX

SNHT1206□□R/L-WX

SNHT12065□□R/L-WX

SNHT1207□□R/L-WX

SNHT12075□□R/L-WX



# Endmills / Drills

KORLOY provides high quality endmills and drills thanks to its advanced technology and accumulated know-how of tooling systems, carrying out values for higher productivity and quality results.

- Solid Endmills
- Solid Drills
- Indexable Drills / Indexable Endmills

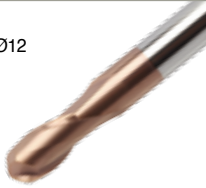


# < Solid Endmills >

## » H Endmill

### PBE2000 (Ball)

No. of flutes : 2  
Cutting diameter :  $\varnothing 0.5 \sim \varnothing 12$



### PRE4000 (Radius)

No. of flutes : 4  
Cutting diameter :  $\varnothing 3 \sim \varnothing 12$



## » V Endmill

### VFE4000 (Flat)

No. of flutes : 4  
Cutting diameter :  $\varnothing 2.5 \sim \varnothing 16$



## » Z Endmill

### ZFE2000 (Flat)

No. of flutes : 2  
Cutting diameter :  $\varnothing 1 \sim \varnothing 16$



### ZFE4000 (Flat)

No. of flutes : 4  
Cutting diameter :  $\varnothing 1 \sim \varnothing 16$



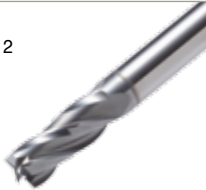
### ZSFE2000 (Short Flat)

No. of flutes : 2  
Cutting diameter :  $\varnothing 1 \sim \varnothing 12$



### ZSFE4000 (Short Flat)

No. of flutes : 4  
Cutting diameter :  $\varnothing 1 \sim \varnothing 12$



### ZBE2000 (Ball)

No. of flutes : 2  
Cutting diameter :  $\varnothing 1 \sim \varnothing 12$



## » F Endmill

### FME4000 (High feed)

No. of flutes : 4  
Cutting diameter :  $\varnothing 6 \sim \varnothing 12$



### FMLE4000 (High feed long)

No. of flutes : 4  
Cutting diameter :  $\varnothing 6 \sim \varnothing 12$



## » T Endmill

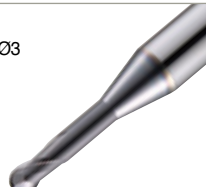
### TZBE (Ball)

No. of flutes : 2  
Cutting diameter :  $\varnothing 0.6 \sim \varnothing 3$



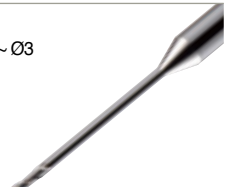
### TTBE (Ball)

No. of flutes : 2  
Cutting diameter :  $\varnothing 0.6 \sim \varnothing 3$



### TWBE (Ball)

No. of flutes : 2  
Cutting diameter :  $\varnothing 0.6 \sim \varnothing 3$



## » D Endmill

### DFE2000 (Flat)

No. of flutes : 2  
Cutting diameter :  $\varnothing 1 \sim \varnothing 12$



### DFE4000 (Flat)

No. of flutes : 4  
Cutting diameter :  $\varnothing 2 \sim \varnothing 12$



### DBE2000 (Ball)

No. of flutes : 2  
Cutting diameter :  $\varnothing 0.6 \sim \varnothing 12$



### DBE4000 (Ball)

No. of flutes : 4  
Cutting diameter :  $\varnothing 2 \sim \varnothing 12$



## » Endmills for Specific Aluminum

### SSEA2000 (Flat)

No. of flutes : 2  
Cutting diameter :  $\varnothing 1 \sim \varnothing 20$



### SSEA3000 (Flat)

No. of flutes : 3  
Cutting diameter :  $\varnothing 2 \sim \varnothing 16$



### SSBEA2000 (Ball)

No. of flutes : 2  
Cutting diameter :  $\varnothing 1 \sim \varnothing 20$



## » C-Max

### CFE2000 (Flat)

No. of flutes : 2  
Cutting diameter :  $\varnothing 1 \sim \varnothing 12$



### CFNE2000 (Long Neck Flat)

No. of flutes : 2  
Cutting diameter :  $\varnothing 0.5 \sim \varnothing 4$



### CBE2000 (Ball)

No. of flutes : 2  
Cutting diameter :  $\varnothing 1 \sim \varnothing 12$



### CBNE2000 (Long Neck Ball)

No. of flutes : 2  
Cutting diameter :  $\varnothing 0.5 \sim \varnothing 4$



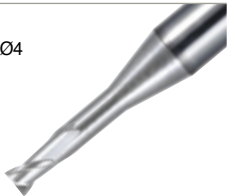
### CRE2000 (Radius)

No. of flutes : 2  
Cutting diameter :  $\varnothing 2 \sim \varnothing 12$



### CRNE2000 (Long Neck Radius)

No. of flutes : 2  
Cutting diameter :  $\varnothing 1 \sim \varnothing 4$





## » Super Endmill

### SRES4000

No. of flutes : 4  
Cutting diameter :  $\varnothing 3 \sim \varnothing 20$



## » Composite Router Endmill

### CCDR4000

No. of flutes : 4  
Cutting diameter :  $\varnothing 6 \sim \varnothing 8$



### CCDR6000

No. of flutes : 6  
Cutting diameter :  $\varnothing 10 \sim \varnothing 12$



### CCHR4000

No. of flutes : 4  
Cutting diameter :  $\varnothing 6 \sim \varnothing 8$



### CCHR6000

No. of flutes : 6  
Cutting diameter :  $\varnothing 10 \sim \varnothing 12$



### CCR2000

No. of flutes : 2  
Cutting diameter :  $\varnothing 4 \sim \varnothing 12$



### CCLR4000

No. of flutes : 4  
Cutting diameter :  $\varnothing 4 \sim \varnothing 12$



### CCRR6000

No. of flutes : 6  
Cutting diameter :  $\varnothing 6 \sim \varnothing 8$



### CCRR8000

No. of flutes : 8  
Cutting diameter :  $\varnothing 10 \sim \varnothing 12$



## » I+ Endmill

### IPFE2000 (Flat)

No. of flutes : 2  
Cutting diameter :  $\varnothing 1 \sim \varnothing 20$



### IPFE4000 (Flat)

No. of flutes : 4  
Cutting diameter :  $\varnothing 1 \sim \varnothing 20$



### IPLFE2000 (Long Flat)

No. of flutes : 2  
Cutting diameter :  $\varnothing 6 \sim \varnothing 12$



# < Solid Endmills >

Grades / Chip Breakers

Inserts

Turning Tools

Milling Tools

Endmills / Drills

The Comparison of Chip Breakers, Grades

## » I+ Endmill

### IPLFE4000 (Long Flat)

No. of flutes : 4  
Cutting diameter :  $\varnothing 6 \sim \varnothing 12$



### IPBE2000 (Ball)

No. of flutes : 2  
Cutting diameter :  $\varnothing 0.5 \sim \varnothing 10$



### IPBE4000 (Ball)

No. of flutes : 4  
Cutting diameter :  $\varnothing 0.5 \sim \varnothing 10$



### IPLBE2000 (Long Ball)

No. of flutes : 2  
Cutting diameter :  $\varnothing 0.5 \sim \varnothing 8$



### IPRE2000 (Radius)

No. of flutes : 2  
Cutting diameter :  $\varnothing 1 \sim \varnothing 12$



### IPRE4000 (Radius)

No. of flutes : 4  
Cutting diameter :  $\varnothing 2 \sim \varnothing 12$



### IPLRE2000 (Long Radius)

No. of flutes : 2  
Cutting diameter :  $\varnothing 3 \sim \varnothing 12$



### IPRE4000 (Long Radius)

No. of flutes : 4  
Cutting diameter :  $\varnothing 3 \sim \varnothing 12$



## » Z+ Endmill

### ZPFE2000 (Flat)

No. of flutes : 2  
Cutting diameter :  $\varnothing 1 \sim \varnothing 20$



### ZPSFE2000 (Short Flat)

No. of flutes : 2  
Cutting diameter :  $\varnothing 1 \sim \varnothing 16$



### ZPLFE2000 (Long Flat)

No. of flutes : 2  
Cutting diameter :  $\varnothing 2 \sim \varnothing 20$



### ZPLFE2000 (Long Flute)

No. of flutes : 2  
Cutting diameter :  $\varnothing 2 \sim \varnothing 20$



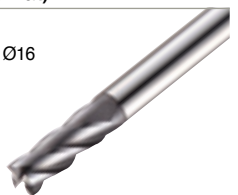
### ZPFE4000 (Flat)

No. of flutes : 4  
Cutting diameter :  $\varnothing 1 \sim \varnothing 20$



### ZPSFE4000 (Short Flat)

No. of flutes : 4  
Cutting diameter :  $\varnothing 1 \sim \varnothing 16$



## » Z<sup>+</sup> Endmill

### ZPLFE4000 (Long Flat)

No. of flutes : 4  
Cutting diameter :  $\varnothing 2 \sim \varnothing 20$



### ZPLFE4000 (Long Flute)

No. of flutes : 4  
Cutting diameter :  $\varnothing 1 \sim \varnothing 20$



### ZPFE3000 (Flat)

No. of flutes : 3  
Cutting diameter :  $\varnothing 2 \sim \varnothing 25$



### ZPFE6000 (Flat)

No. of flutes : 6  
Cutting diameter :  $\varnothing 6 \sim \varnothing 20$



### ZPBE2000 (Ball)

No. of flutes : 2  
Cutting diameter :  $\varnothing 0.8 \sim \varnothing 20$



### ZPLBE2000 (Long Ball)

No. of flutes : 2  
Cutting diameter :  $\varnothing 2 \sim \varnothing 12$



### ZPBE4000 (Ball)

No. of flutes : 4  
Cutting diameter :  $\varnothing 2 \sim \varnothing 20$



### ZPRE2000 (Radius)

No. of flutes : 2  
Cutting diameter :  $\varnothing 1 \sim \varnothing 16$



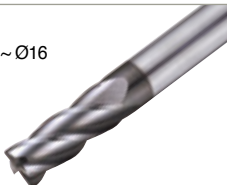
### ZPLRE2000 (Long Radius)

No. of flutes : 2  
Cutting diameter :  $\varnothing 6 \sim \varnothing 16$



### ZPRE4000 (Radius)

No. of flutes : 2  
Cutting diameter :  $\varnothing 1.5 \sim \varnothing 16$



### ZPLRE4000 (Long Radius)

No. of flutes : 4  
Cutting diameter :  $\varnothing 6 \sim \varnothing 16$



## » S<sup>+</sup> Endmill

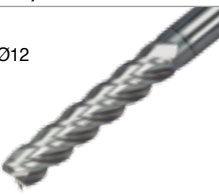
### SPFE4000 (Flat)

No. of flutes : 4  
Cutting diameter :  $\varnothing 1 \sim \varnothing 12$



### SPLFE4000 (Long Flat)

No. of flutes : 4  
Cutting diameter :  $\varnothing 1 \sim \varnothing 12$



» **S+ Endmill**

**SPFE4000 (Flat)**

No. of flutes : 4  
Cutting diameter :  $\varnothing 1 \sim \varnothing 12$



**SPLFE4000 (Long Flat)**

No. of flutes : 4  
Cutting diameter :  $\varnothing 1 \sim \varnothing 12$

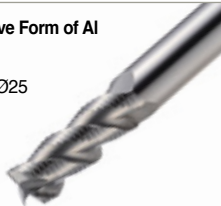


» **R+ Endmill**

**RPAE**

Roughing Endmill for Wave Form of Al

No. of flutes : 3  
Cutting diameter :  $\varnothing 6 \sim \varnothing 25$



**RPE-FP-H**

Standard Roughing Endmill for Fine Pitches

No. of flutes : 4  
Cutting diameter :  $\varnothing 5 \sim \varnothing 20$



**RPLE-FP-H**

Long Type Roughing Endmill for Fine Pitches

No. of flutes : 4  
Cutting diameter :  $\varnothing 5 \sim \varnothing 20$



**RPE-XG**

Roughing Endmill with Finishing Capability

No. of flutes : 4  
Cutting diameter :  $\varnothing 6 \sim \varnothing 20$



**RPE-FP-L**

Roughing Endmill for Fine Pitches

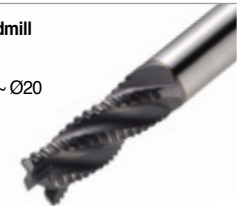
No. of flutes : 4  
Cutting diameter :  $\varnothing 5 \sim \varnothing 20$



**RPE-RG**

Standard Roughing Endmill

No. of flutes : 4  
Cutting diameter :  $\varnothing 5 \sim \varnothing 20$



**RPE-RG**

4F Roughing Endmill

No. of flutes : 4  
Cutting diameter :  $\varnothing 6 \sim \varnothing 20$



**RPE-FF**

Roughing Endmill for Fine Pitches

No. of flutes : 4  
Cutting diameter :  $\varnothing 6 \sim \varnothing 20$



**RPE-FP**

Roughing Endmill for Fine Pitches

No. of flutes : 4  
Cutting diameter :  $\varnothing 6 \sim \varnothing 20$



**RPE-RG**

Roughing Endmill

No. of flutes : 4  
Cutting diameter :  $\varnothing 6 \sim \varnothing 20$



## » A+ Endmill

### APFE2000 (Flat)

No. of flutes : 2  
Cutting diameter :  $\varnothing 1 \sim \varnothing 20$



### APFE3000 (Flat)

No. of flutes : 3  
Cutting diameter :  $\varnothing 1 \sim \varnothing 20$



### APMFE2000 (Middle Flat)

No. of flutes : 2  
Cutting diameter :  $\varnothing 3 \sim \varnothing 20$



### APMFE3000 (Middle Flat)

No. of flutes : 3  
Cutting diameter :  $\varnothing 3 \sim \varnothing 20$



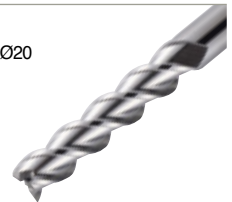
### APLFE2000 (Long Flat)

No. of flutes : 2  
Cutting diameter :  $\varnothing 3 \sim \varnothing 20$



### APLFE3000 (Long Flat)

No. of flutes : 3  
Cutting diameter :  $\varnothing 3 \sim \varnothing 20$



### APBE2000 (Ball)

No. of flutes : 2  
Cutting diameter :  $\varnothing 1 \sim \varnothing 12$



### AFE3000 (Short Flat)

No. of flutes : 3  
Cutting diameter :  $\varnothing 1 \sim \varnothing 20$



### AFE3000 (Flat)

No. of flutes : 3  
Cutting diameter :  $\varnothing 1 \sim \varnothing 20$



### AFE3000 (Long Flat)

No. of flutes : 3  
Cutting diameter :  $\varnothing 1 \sim \varnothing 20$



### APRE3000 (Roughing)

No. of flutes : 3  
Cutting diameter :  $\varnothing 4 \sim \varnothing 25$



### RPAE3000 (Wave Roughing)

No. of flutes : 3  
Cutting diameter :  $\varnothing 6 \sim \varnothing 25$



## » PCD Endmills

### PDE1000 (Flat)

No. of flutes : 1  
Cutting diameter :  $\varnothing 4.6 \sim \varnothing 6$



### PDE2000 (Flat)

No. of flutes : 2  
Cutting diameter :  $\varnothing 6.0 \sim \varnothing 12$



» **Brazed Endmills**

**ZSE200 (Flat)**

No. of flutes : 2  
Cutting diameter : Ø14 ~ Ø50



**ZSE300 (Flat)**

No. of flutes : 3  
Cutting diameter : Ø14 ~ Ø50



**ZSE400 (Flat)**

No. of flutes : 4  
Cutting diameter : Ø14 ~ Ø50



**ZSE600 (Flat)**

No. of flutes : 6  
Cutting diameter : Ø34 ~ Ø50



**ZSEA200 (Flat)**

No. of flutes : 2  
Cutting diameter : Ø15 ~ Ø50



**ZSEL200 (Long Flat)**

No. of flutes : 2  
Cutting diameter : Ø14 ~ Ø50



**ZSEL400 (Long Flat)**

No. of flutes : 4  
Cutting diameter : Ø16 ~ Ø40



**ZSEXL200 (Long Flat)**

No. of flutes : 2  
Cutting diameter : Ø20 ~ Ø25



**ZSBE200 (Ball)**

No. of flutes : 2  
Cutting diameter : Ø13 ~ Ø50



# Solid Drills

## » Mach Solid Drill Plus

### MSDP

Aspect Ratio(L/D) : 3, 5, 7  
Cutting diameter : Ø1 ~ Ø20

MSDP□□□□-□P/M/K/N



### MSDPH

Oil hole type

Aspect Ratio(L/D) : 3, 5, 7  
Cutting diameter : Ø2 ~ Ø20

MSDPH□□□□-□P/M/K/N

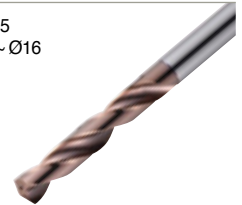


## » Mach Solid Drills Plus-S

### MSDPH-S

Aspect Ratio(L/D) : 3, 5  
Cutting diameter : Ø3 ~ Ø16

MSDPH□□□□-□S



## » Mach Solid Drill Plus CFRP-C

### MSDP-C

Aspect Ratio(L/D) : 5  
Cutting diameter : Ø3 ~ Ø12.7

MSDPH□□□□-□5S

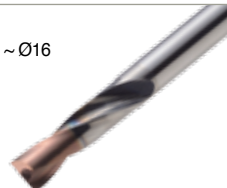


## » MSFD

### MSFD

Aspect Ratio(L/D) : 2  
Cutting diameter : Ø2.5 ~ Ø16

MSDP□□□□-□P/M/K/N

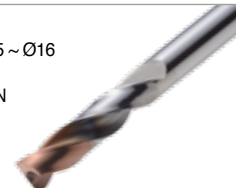


### MSFDH

Oil hole type

Aspect Ratio(L/D) : 3  
Cutting diameter : Ø2.5 ~ Ø16

MSDPH□□□□-□P/M/K/N



## » Mach Long Drills Plus

### MLDP

Aspect Ratio(L/D) : 10, 15, 20, 25  
Cutting diameter : Ø3 ~ Ø10

MLD□□□□N-□□P/K/N



## » Vulcan Drills

### VZD

VZD-MA, MBA  
Cutting diameter : Ø12.6 ~ Ø40.5



### VZD

VZD-LA, LBA  
Cutting diameter : Ø12.6 ~ Ø40.5



## » ESD Plus

### ESDP

Aspect Ratio(L/D) : 3, 5, 7  
Cutting diameter : Ø1 ~ Ø20

ESDP□□□□-□P

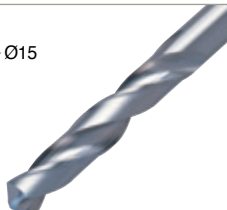


## » SSD Plus

### SSDP

Aspect Ratio(L/D) :  
Cutting diameter : Ø1 ~ Ø15

SSDP□□□□



## King Drill

### King Drill (2D/3D/4D/5D)

Ø12 ~ Ø60.5mm

#### Insert

Inner	Outer
SPMT040204-PD	XOMT040204-PD
SPMT050204-PD	XOMT050204-PD
SPMT060205-PD	XOMT060204-PD
SPMT07T208-PD	XOMT07T205-PD
SPMT090308-PD	XOMT090305-PD
SPMT11T308-PD	XOMT11T306-PD
SPMT130410-PD	XOMT130406-PD
SPMT15M510-PD	XOMT15M508-PD
SPMT180510-PD	XOMT180508-PD



### King Drill-HP (2D/3D/4D)

Ø13 ~ Ø29mm

#### Insert

Inner	Outer
SPMT040204-PD	XOMT040204-PD
SPMT050204-PD	XOMT050204-PD
SPMT060205-PD	XOMT060204-PD
SPMT07T208-PD	XOMT07T205-PD
SPMT090308-PD	XOMT090305-PD



### King Drill

For large diameter drilling

#### KING DRILL- Cartridge Type

Ø61 ~ Ø100mm

#### Cartridge

Inner		Outer	
KDC6165C	KDC8085C	KDC6165P	KDC8085P
KDC6570C	KDC8590C	KDC6570P	KDC8590P
KDC7075C	KDC9095C	KDC7075P	KDC9095P
KDC7580C	KDC95100C	KDC7580P	KDC95100P



### King Drill Insert

	PD	LD	ND	RD
Inner				
	SPMT-PD	SPMT-LD	SPET-ND	XOMT-RD
Outer				
	XOMT-PD	XOMT-LD	XOET-ND	

## TPDB Plus

### TPDB Plus (3D/5D/8D/10D/12D)

Ø10 ~ Ø32.9mm

#### Insert

TPD100B~TPD329B



## TPDB-H

### TPDB-H (3D/4D/8D)

Ø14 ~ Ø30.4mm

#### Insert

TPD140B-H~TPD309B-H



## TPDC

### TPDC (3D/5D/8D/10D/12D)

Ø12 ~ Ø30.9mm

#### Insert

TPDC1200CP, CM, CN  
~ TPDC3050CP, CM, CN



## WPDC

### WPDC (5D/6.5D/8D)

Standard type  
Ø25 ~ Ø40mm

#### Insert

WC□T030204-C21  
WC□T040204-C21  
WC□T050308-C21



### WPDC (5D/6.5D/8D)

Single insert cartridge type  
Ø41 ~ Ø59mm

#### Insert

WC□T06T308-C21  
WC□T080408-C21



### WPDC (5D/6.5D/8D)

Dual insert cartridge type  
Ø60 ~ Ø80mm

#### WSP

WC□T050308-C21  
WC□T06T308-C21





# Indexable Endmills

## Indexable Endmill

### BFE

Ø16 ~ Ø32

RC16  
RC20  
RC25  
RC30  
RC32



### BRE

Ø20 ~ Ø50

SDMT090308-MM      ZDMT130416R-MM  
SPMT060304          ZPMT160520R-MM  
SPMT120408-MM      ZPMT160525R-MM  
SPMT120508-MMN    ZPMT160531.5R-MM  
ZDMT080310R-MM    ZPMT160525R-MR  
ZDMT110312.5R-MM



### GBE

Single Edge : Ø16 ~ Ø50

Internal : M External : S

ZPET080M(S)-MM      ZPET140M(S)-MM  
ZPET090M(S)-MM      ZPET150M(S)-MM  
ZPET100M(S)-MM      ZPET160M(S)-MM  
ZPET110M(S)-MM      ZPET200M(S)-MM  
ZPET125M(S)-MM      ZPET250M(S)-MM  
ZPET130M(S)-MM



### GBE-M

Multi Edge : Ø20 ~ Ø50mm

Internal : M External : S

ZPET100M(S)-MM      ZPET150M(S)-MM  
ZPET110M(S)-MM      ZPET160M(S)-MM  
ZPET125M(S)-MM      ZPET200M(S)-MM  
ZPET130M(S)-MM      ZPET250M(S)-MM  
ZPET140M(S)-MM



Ext.Principal :

SPMT060304          SPMT120408-MM  
SDMT090308-MM

### GBEM

Ø16 ~ Ø32mm

Internal : M External : S

ZPET080M(S)-MM  
ZPET100M(S)-MM  
ZPET125M(S)-MM  
ZPET150M(S)-MM  
ZPET160M(S)-MM



## Laser Mill

### LBE (08/10/12/16/20/25/30/32)

Carbide Shank-Ball type (Straight type)

LBE080080S-S08C	LBE120100S-S12C	LBE200120S-S20C	LBE300140S-S32C
LBE080100S-S08C	LBE120150S-S12C	LBE200170S-S20C	LBE300170S-S32C
LBE080020S-S08C-130	LBE120025S-S12C-150	LBE200035S-S20C-190	LBE300050S-S32C-230
LBE080020S-S08C-150	LBE120025S-S12C-200	LBE200035S-S20C-240	LBE300050S-S32C-260
LBE100080S-S10C	LBE160100S-S16C	LBE250140S-S25C	LBE320140S-S32C
LBE100120S-S10C	LBE160150S-S16C	LBE250170S-S25C	LBE320170S-S32C
LBE100023S-S10C-130	LBE160030S-S16C-160	LBE250040S-S25C-220	LBE320050S-S32C-230
LBE100023S-S10C-170	LBE160030S-S16C-210	LBE250040S-S25C-250	LBE320050S-S32C-260



### LBE (08/10/12/16/20/25/30/32)

Steel Shank-Ball type (Taper type)

LBE080035T-S12	LBE160100T-S20
LBE080055T-S12	LBE200075T-S20
LBE080075T-S12	LBE200115T-S25
LBE100035T-S12	LBE250090T-S25
LBE100055T-S12	LBE250135T-S32
LBE100075T-S12	LBE300105T-S32
LBE120055T-S12	LBE300160T-S32
LBE120085T-S16	LBE320105T-S32
LBE160065T-S16	LBE320160T-S32



### LBE (12/16/20/25/30/32)

Steel Shank-Ball type (Straight type)

LBE120035S-S12	LBE250045S-S25
LBE160035S-S16	LBE300055S-S32
LBE200040S-S20	LBE320055S-S32



## » Laser Mill

### LRE (10/12/16/20/25/30/32)

#### Carbide Shank-Corner R type (Straight type)

LRE100080S-S10C	LRE120025S-S12C-200	LRE200035S-S20C-190	LRE300170S-S32C
LRE100120S-S10C	LRE160100S-S16C	LRE200035S-S20C-240	LRE300050S-S32C-230
LRE100023S-S10C-130	LRE160150S-S16C	LRE250140S-S25C	LRE300050S-S32C-260
LRE100023S-S10C-170	LRE160030S-S16C-160	LRE250170S-S25C	LRE320140S-S32C
LRE120100S-S12C	LRE160030S-S16C-210	LRE250040S-S25C-220	LRE320170S-S32C
LRE120150S-S12C	LRE200120S-S20C	LRE250040S-S25C-250	LRE320050S-S32C-230
LRE120025S-S12C-150	LRE200170S-S20C	LRE300140S-S32C	LRE320050S-S32C-260



### LRE (10/12)

#### Steel Shank-Corner R type (Taper type)

LRE100025T-S12  
LRE100050T-S12  
LRE120060T-S16



### LRE (12/16/25/30/32)

#### Steel Shank-Corner R type (Straight type)

LRE120030S-S12  
LRE160050S-S16  
LRE160060S-S16  
LRE200060S-S20  
LRE200080S-S20  
LRE250070S-S25  
LRE250100S-S25  
LRE300070S-S32  
LRE300100S-S32  
LRE320080S-S32  
LRE320100S-S32



### LBE-MHD

LBE100-MHD-M06  
LBE120-MHD-M06  
LBE160-MHD-M08  
LBE200-MHD-M10  
LBE250-MHD-M12  
LBE300-MHD-M16  
LBE320-MHD-M16



• Please refer to page 88 for available adaptors

## » Shank Adaptor for Modular Head

### MAT (Steel Shank type)

#### Available to use

(FMRM, LBE, PAM, PAXM, AMM, RM3PM, RM4PM, RM4ZM, RM6PM, HFMDM, HFMM, HRMM, HRMDM, GBEM)

MAT-M06-020-S10S	MAT-M10-050-S20T
MAT-M6B-020-S12S	MAT-M10-070-S20T
MAT-M6B-040-S12S	MAT-M10-090-S25T
MAT-M08-020-S16S	MAT-M10-110-S25T
MAT-M10-030-S20S	MAT-M10-130-S32T
MAT-M12-030-S25S	MAT-M12-050-S25T
MAT-M16-035-S32S	MAT-M12-070-S25T
MAT-M06-040-S12T	MAT-M12-090-S25T
MAT-M06-065-S16T	MAT-M12-110-S32T
MAT-M6B-065-S16T	MAT-M12-175-S40T
MAT-M6B-080-S16T	MAT-M16-055-S32T
MAT-M08-040-S16T	MAT-M16-080-S32T
MAT-M08-065-S16T	MAT-M16-120-S32T
MAT-M08-080-S20T	MAT-M16-175-S40T
MAT-M08-110-S25T	



### MAT-C (Carbide Shank type)

#### Available to use

(FMRM, LBE, PAM, PAXM, AMM, RM3PM, RM4PM, RM4ZM, RM6PM, HFMDM, HFMM, HRMM, HRMDM, GBEM)

MAT-M06-030-S10S-C-80	MAT-M10-010-S20S-C-170
MAT-M06-050-S10S-C-100	MAT-M10-010-S20S-C-200
MAT-M06-080-S10S-C-130	MAT-M10-010-S20S-C-300
MAT-M6B-030-S12S-C-80	MAT-M12-090-S25S-C
MAT-M6B-050-S12S-C-100	MAT-M12-110-S25S-C
MAT-M6B-080-S12S-C-130	MAT-M12-175-S25S-C
MAT-M08-080-S16S-C	MAT-M12-015-S25S-C-170
MAT-M08-110-S16S-C	MAT-M12-015-S25S-C-200
MAT-M08-150-S16S-C	MAT-M12-015-S25S-C-300
MAT-M08-010-S16S-C-150	MAT-M16-090-S32S-C
MAT-M08-010-S16S-C-180	MAT-M16-120-S32S-C
MAT-M08-010-S16S-C-250	MAT-M16-175-S32S-C
MAT-M10-090-S20S-C	MAT-M16-020-S32S-C-180
MAT-M10-110-S20S-C	MAT-M16-020-S32S-C-210
MAT-M10-175-S20S-C	MAT-M16-020-S32S-C-300



# The Comparison of Chip Breakers

## Comparison of Chip Breakers

APPLICATION			KORLOY	KYOCERA	TAEGUTEC	SUMITOMO	SANDVIK	KENNAMETAL	ISCAR	WLATER	mitsubishi	SECO	TUNGALLOY	
NEGATIVE	P	Application	Ultra-Finishing	-	DP (G-class)	-	FA	PMC	FF (G-class)	SF	-	PK (G-class), FY	FF1	TF
				VL	GP	FA	FL, FB	QF	UF	PF	NF3	FH, FS, SY	FF2	NS, ZF
		Finishing	VF	PP	FG	LU, FE	PF, XF	FN	NF, SM	NF4	FP			NM, NS, SS
			VB	-	SF	SU	61	K	F3P	FP5	LP, SH, SA	MF2	TS, TSF	
		Medium to finishing	VQ, VC	HQ, CQ	MC	SE	HM	LF, CT	TF	NS6	C (Cermet)			AS
			LP	PQ, CJ	FC	SX	PMC	-	-	MP3	MV	MF5	ZM, AM	
	Medium machining	VM, HM	HK, GS, HS, PS	MP, MT	GU (UG)	QM, SM	MP, MN	PP, TF	NM4, NP5	MA, MH	M3, M5	TQ, TM		
		MP	PG	PC	GE, UX	PM, XM	-	M3P	MP5	MP	-	DM, None C/B		
	Roughing	B25									GM, None C/B	M5	TH	
		GR	PT, GT, HT, PH	RT	MU, ME, MX	PR, WR	RN, None C/B	R3P	RP5, NM9	GH, RP	MR5, MR6, MR7	THS		
Heavy duty machining	GH	PX	HB, RH, RX	HG, MP	PR, XMR	RH	NR, HT	RP7, NR4, NRF	HZ	R4, R5	CH			
	VH	-	HZ, EH	HP	QR	RM	HR	NRR, NR8	HX	R6, R7, R8, PR6	THS, TRS			
		VT	-	HT, HY, HD	HU, HW, HF	HR	MM	T3P	HV	PR9, R56, R57, R68	65, TUS			
Low carbon steel	Soft steel	VL	XF, XP, XP-T	SF	FL	LC	-	-	-	FY	-	-		
		-	XQ, XS	-	-	-	-	-	-	SY	-	-		
High feed	Wiper	VW	WP, WF	WS	LUW, SEW	WF, WL	FW	WF	NF	SW	FF2, MF2	AFW, FW		
		LW	WQ, WE	WT	GUW	WM, WMX	MW	WG	NM	MW	MF5, M3	ASW, SW		
		-	-	-	-	WR	RW	-	-	-	R4, R7	-		
Application	Shaft (long bar)	SH	CJ, ST	FS, VF, FX	HM	K	-	-	-	ES	UX	P, S		
		KNUX-	KNMX-	KNUX-	-	KNUX-71	-	-	-	KNMX-19	-	KNMX		
M	Stainless steel	Finishing	VP2, MP	MQ, GU, SK	EA, SF	SU, EF	MF, XF	FP, FF	SF, VL, F3M	NF4, FM5	SH, LM	FF1, MF1	SS, SF, SA	
			Medium cutting	MM	HU, TK, MS	MP, EM	EX, EG, GU	MM, XM, QM, MMC	MP, UP, MS	PP, TF, M3M	NM4, NR4	MS, GM, MM	MF3, MF4	SM
			Roughing	RM	MU	ET	MU, HM, EM	MR, XMR, MRR	RP, P	MR, R3M	RM5, NRS	MA, ES	MF5, M5	S, SH
K	Cast iron	Finishing	MP	None C/B, C, KQ	MT	UZ	KF, PMC, XF	T-20, FN	TF	NM, MK5	LK, MA	M4	CF	
			Medium cutting	B25, MK	ZS, KG	RT, KT	UX, GZ	KM, XM	UN, RP	GN	NM5, RK5	MK, GK, None C/B	M5	CM, None C/B
			Roughing	-MA, RK	-MA, GC, KH	-MA	-MA	KR, XMR, KRR	MR, S-20, -MA	-MA, NR	-MA, RK7	RK, -MA	MR7	CH
S	HRSA	Ultra-finishing	VP1	MQ, SK	EA	EF	SF, SGF	FS (G-class) LF (G-class)	SF, PF	NF4	FJ (G-class)	M1	SF	
			Finishing	VP2	TK	ML	UP, EG	23.SR, XF, SMC	UP	PP	NFT	LS	MF1	HMM
			Medium cutting	VP3	MS	EM	EX	SM, SMR, XM	MS, GP, P, UN	TF	NMS, NMT	MS	MF4, MR3	HRF
			Roughing	VP4	MU	ET	MU	XMR	RP	MR	NRS, NRT	RS, GJ	MR4	HRM
N	Aluminium alloy	Finishing	HA	AH	ML	AX	23	GP, MS	NF, PP	FN2, PF2, MN2, PM2	MJ	MF1	P	
POSITIVE	P	Application	Finishing	VL	XP, PP	FA, FX	FC	PF, XF	11	PF	FP4	SMG (G-class), FV	FF1	O1
				VF	GP	-	FB, LU (FP, FK)	UF	UF	F3P	FK6	SV, FP	F1	PSF, PF
			Medium cutting	HMP	XQ	FG	LB, NF	PM, XM	LF, FP	14	MP4, FM2, FM4, MK4	LP	MF2	PSS
				MP	HQ, GK	PC, FM	SU, SC	UM, PMC	MP, T-20	SM	FP6, MM4, FM6, RK4	MV	F2, M3	PS
			Roughing	C25	None C/B	MT	MU	PR, UR, XR	MF, GM, -C	19	RP4, RM4, RK6	None C/B, MP	M5	PM
	Wiper	-	WP	-	LUW	WL, WF	FW	WF	PM	SW	-	-		
		-	-	WT	SDW	WM, WMX	MW	WG	-	MW	-	-		
	M	Stainless steel For HRSA	Finishing	VP1	CF, GF, GQ	FG	FC, FM	MF, MM, MMC	11, UF, LF	PF	FM4, NM4	FJ (G-class), FM, LM	F1, MF2	PSF, PSS
				Medium to finish cutting	VL	MQ, MF	SA	LB, SI	MR, XR, SMC	MF	SM, M3M	RM4	MM, None C/B	M3, M5
	K	Cast iron	Medium cutting	MP	HQ	PC	MU	KF, KM	LF	17	FK6	MK	M3	CM
Roughing				C25	GK	MT	None C/B	KR	MF, UF	19	MK4, RK6	None C/B, -MW	M5	None C/B
N	Aluminium alloy	AK, AR	AH	FL	AW, AG, AY	AL	HP, LF	AS, AF	PM2	AZ, FS	AL	AL		
	High precision bar turning (tolerance class G&E)	KF, KM	FSF, USF, J, A3	GF, FF, GW	FY, FX, FZ	K, F, UM	GH	LF, RF, XL	-	F, SR, SS, SM	UX	JS, J10, JRP, JPP		

# The comparison of grades for turning

Grades / Chip Breakers

Inserts

Turning Tools

Milling Tools

Endmills / Drills

The Comparison of Chip Breakers, Grades

## WC

ISO	KORLOY	SUMITOMO	KYOCERA	ISCAR	SANDVIK	SECO	KENNAMETAL	TOSHIBA	MITSUBISHI	HITACHI	VALENITE	WALTER	TAEGUTEC	NTK	DIJET	
Turning	P	ST10														
		ST20	ST10P ST20E			S1P			TX10S TX20	ST10T ST120T	SRN5 WS20B	S1F		P10 P20		
		ST30A	A30	PW30	IC50M IC54	S30T S6	TTX TTM TTR	K45 KM K420	TX30	UT120T	EX35 EX40 EX45	VC6 VC5 VC56		P30 P40		
	M	U20	U10E U2 A30 A40			H13A H10F	AT10 AT15 TTR	K2885 K2S	TU10 TU20 TU40	UT120T	WAM10B EX35	VC27 VC28		M10 M20		
		H01 H05 G10	H1		IC4	H1P	THM	K68	TH03 TH10 KS20	HT10T HT120T	WH05 W10 WH20	VC3 VC2 VC1		K10 K20 K20M K30		
		G10E	G10E	KW10H	IC20 IC28	H10F	THR	K8735								

## CVD coated

ISO	KORLOY	SUMITOMO	KYOCERA	ISCAR	SANDVIK	SECO	KENNAMETAL	TOSHIBA	MITSUBISHI	HITACHI	VALENITE	WALTER	TAEGUTEC	NTK	DIJET	
Turning	P	AC805P	CA5505 CA510		GC4305 GC4205	TP0500 TP0501 TP1500	KCP05 KCP05B	T9105	UE6105				TT8105			
		NC3215★	AC810P AC700G AC900G	CA515 VP5115 CA5515	IC8150	GC4315 GC4215	TP1501 TGP25	KCP10 KCP10B	T9115	UE6110 MY5015	HG8010	VP5515	WPP10S WKP13S	TT8110 LC215P TT8115		
		NC3225★	AC820P AC2000 AC8025P	CA525 VP5125 CA5525	IC8250	GC4325 GC4225	TP2500 TP2501 TGP35 TP3501	KCP25 KCP25B	T9125	MC6025 UE6020	HG8025	VP5525	WPP20S WKP23S	TT8120 LC225P TT8125	CP5	JC110V JC215V
		NC3030	AC830P	CR9025 CA5535 CA530	IC8350	GC4335 GC4235	TP3500 TGP45	KCP30 KCP30B	T9135	MC6035 UE6035	GM8035	VP5535	WPP30S WKP33S	TT5100 TT8135 TT7100		JC325V JC450
		NC5330						KCP40 KCP40B		UH6400						
		NC9115★ NC9125★	AC610M	CA6515	IC6015 IC6025	S05F GC2015 GC2220 GC2025	TM2000	KCM15 KCM15M KCM25 KCM35 KCM35B	T6120	MC7015 MC7025 US7020	GM25	VP8525	WAM10 WMP20S WAM20	TT9215 TT9225		
	NC9135★	AC630M AC6030M	CA6525			TM4000		T6130	US735	GX30		WAM30	TT9235			
	K	NC6310★	AC405K	CA4505	IC5005	GC3205 GC3210	TK1001	KCK05 KCK05B	T5105	MC5005 UC5105	HG3505	VP1505	WKK10S	TT7005 TT7505 TT7310	CP2	JC105V
		NC6315	AC415K	CA4010 CA4515 CA4115	IC5015	GC3215 GC3225	TK2001 TGK1500	KCK15 KCK15B	T5115	MC5015 UC5115	HG3515	VP1510 VP1515	WKK20S	TT7015	CP5	JC110V JC215V
			AC420K	CA4120				KCK20 KCK20B	T5125				WAK30	TT6300		

## PVD coated

ISO	KORLOY	SUMITOMO	KYOCERA	ISCAR	SANDVIK	SECO	KENNAMETAL	TOSHIBA	MITSUBISHI	HITACHI	VALENITE	WALTER	TAEGUTEC	NTK	DIJET	
Turning	P	PC8105★ PC8110		PR1005 PR915	IC507 IC808		CP200	AH710 GH730			VC907 VC927				JC5003	
		PC5300 PC8115★		PR1115 PR930 PR1025 PR630 PR660	IC830 IC908 IC3028	GC1025	CP250	KU10T KU25T	AH330 AH740 AH120 GH330	VP15TF VP20MF	IP2000 IP3000	VC905	WTA43 WTA41	TT5030		JC5015
		PC8105★ PC8110 PC8115★ PC5300★	AC510U EH510Z AC520U EH520Z AC530U	PR915 PR930	IC3028 IC830	GC1005 GC1105 GC1020 GC1025 GC4125	CP200 CP250	CP500	KC5010 KC5510	AH330 GH330 AH120 GH730 AH140 AH630	VP15TF VP20MF	IP50S IP100S	VC929 VC927 VC902 VC901 VC905	WSM10S WSM20S WSM30S WSM40S	TT5030	ZM3 QM3 VM1 TAS
	PC9030	PR1125 PR630 PR660			GC2035				AH645	MP7035						
	PC5400★			IC330									TT8020			
	K	PC5300	EH510Z EH520Z		IC5100 IC810 IC220 IC908 IC228		CP200 CP250 CP500		AH110 GH110 AH120		CY110H	VC929 VC903 VC927 VC902 VC901 VC907		TT5030		
		PC8105★ PC8110 PC8115★ PC5300★ PC5400★	AC510U AC520U	PR915 PR660 PR1325	IC808 IC907 IC3028 IC328	GC1105 GC1025 GC2035	TS2000 CP500 TS2500	KC5010 KC5025	AH110 AH120	VP05RT VP10RT VP15TF MP7035		WSM10 WSM20 WSM30		TT5030		

## CERMET

ISO	KORLOY	SUMITOMO	KYOCERA	ISCAR	SANDVIK	SECO	KENNAMETAL	TOSHIBA	MITSUBISHI	HITACHI	VALENITE	WALTER	TAEGUTEC	NTK	DIJET
Turning	P	CC1500★ CN1500★	T110A T2000Z★	PV30★ TN30	IC20N IC520N	CT5015	CM C15M	HT2 KT125	NS520 GT530★	NX2525 NX3035	CH350 CZ25★		PV3010★ CT3000	T3N T15 N20	LN10 CX50 CX75
		CC2500★ CN2000 CN2500★	T1500A T3000Z★	PV7020★ TN60 TN620 TN6020 TN90 PV90★	IC30N IC530N	CT525 GC1525★	TP1020	HT5 KT175 KT195M	NS530 NS9530 GT9530★	UP35N★ AP25N★ NX335 MP3025★	CH530 CH550 CH570	VC83	WTA43★ WTA41★	C30 N40	CX90 CX99
	K	CN1500★ CN2500★	T110A							NX2525			CT3000	T15	LN10 CX75

★ : PVD Coating cermet    ★ : New Grade

# The comparison of grades for milling

## ☞ CVD coated

ISO	KORLOY	SUMITOMO	KYOCERA	ISCAR	SANDVIK	SECO	KENAMETAL	TOSHIBA	mitsubishi	HITACHI	VALENITE	WALTER	TAEGUTEK	NTK	DIJET
Milling	P	NC5330	ACP100		IC5100 IC5400	GC4210 GC4220 GC4230							TT8515 TT7800		
		NCM325 NCM535★					MP1500 MS2500 MP2500 MS2500 T350M MM4500	KCPM20 KCMP30 KC927M		FH7020 F7030		WKP25S WKP35S WKP35G			
		NCM335 NCM545★							T3130			SM245			
	M	NC5330 NC5340★					MP2500 MM4500		T3130	F7030					
		NC5350★	ACP400			GC2040									
	K	NC5330 NCM535★ NCM545★	ACK200		IC5100		MK1500 MK2000 MS2500 T350M MK3000	KC907M KCK15 KC914M KCPK30 KC917M KC924M	T1115 T1015	MC5020		WAK15 WKK25 WKP25S WKP35S WKP35G	TT7515 TT6800		

## ☞ PVD coated

ISO	KORLOY	SUMITOMO	KYOCERA	ISCAR	SANDVIK	SECO	KENAMETAL	TOSHIBA	mitsubishi	HITACHI	VALENITE	WALTER	TAEGUTEK	NTK	DIJET	
Milling	P	PC2005★ PC2010★ PC2015★				P20A				ATH80D PCA08M ACS05E PCA12M PC20M						
		PC2505★ PC2510★				GC1010			AP20M GP20M	JX1005 TB6005 JX1020 CY9020		TT2510		DH102		
		PC3600 PC3700★	ACZ310	PR730	IC903 IC908 IC950		MP3000 F25M F30M	KC522M KUC20M	GH330	MP6120	TB6045	VC935	WKP25	TT7070 TT7080 TT7030	QC3 ZM3	JC5003 JC5015
		PC210F	ACZ330	PR830 PR630	IC1008	GC1025 GC1030		KC525M KUC30M	AH120	VP15TF UP20M	CY250 PTH30E		WKP35			JC5030 JC5040
		PC5300 PC5400★	ACP300 ACZ350	PR660	IC928	GC1030	F40M T60M	KC935M KC7140 KC720	AH3135	VP30RT	JM4160 PTH40H		WKP45	TT8020		
	M	PC210F PC5300	ACM100 ACP200	PR730	IC903			KC5510 KC7020	AH120		JX1020 CY9020 JX1015 TB6020 CY250		VC928 VC902 VC901	TT9030	QC3 ZM3	JC5003 JC5015
		PC9530	ACM300 ACP300 ACZ350	PR1025 PR630 PR660 PR1535	IC900 IC250 IC928	GC1025 GC2030 GC1030	F25M F30M	KC522M KC725M KC735M KC7030	AH140	MP7130	JX1045 TB6045		WOM35 WSM35S WSP45 WSM45S	TT9080 TT8020		JC5030 JC5040
		PC5400★ PC9540★		PR660	IC328		F40M	KC722	AH3135	MP7140	JX1060 TB6060					
		K	PC6510		PR510 PR905	DT7150 IC900 IC910 IC950 IC350		MK2050	KC510M KC915M KC520M	AH120	VP10MF VP15TF VP20RT		VC903 VC928 VC902 VC901	TT6290 TT6030 TT6060		JC5003 JC5015
	PC5300 PC5400★ PC9540★		AC520U	PR620 PR660 PR1535	IC328 IC408	GC1025 GC1040 S40T	F40M MS2050	KC510M KCU30M		VP15TF VP30RT MP9130	ACS05E		WSM35S WSM45S	TT9030 TT8020 TT8080		

## ☞ CERMET

ISO	KORLOY	SUMITOMO	KYOCERA	ISCAR	SANDVIK	SECO	KENAMETAL	TOSHIBA	mitsubishi	HITACHI	VALENITE	WALTER	TAEGUTEK	NTK	DIJET
Milling	P	CN2000	TN100M										CT3000		
		CN30	T250A TC60M	IC30N			KT195M	NS540 NS740	NX2525 NX4545	CH550 CH570			CT7000	C50	
	M		T250A			CT530									
K									NX2525						

★ : PVD Coating cermet    ★ : New Grade

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