

WE CREATE YOUR TOMORROW!

KORLOY CUTTING TOOLS

2013



 **KORLOY**

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2013



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Selection of KORLOY Grades

➤ Turning

Workpiece	P Steel					M	Stainless steel				K	Cast iron			N Nonferrous	S	HRSA				H	Hardened		
ISO	P01	P10	P20	P30	P40	P50	M10	M20	M30	M40	K01	K10	K20	K30	N10	N20	N30	S01	S10	S20	S30	H01	H10	H20
Coated carbide	NC3010						PC8110				NC6205 <i>New</i>				ND1000				PC8110			PC8110		
		NC3220 <i>New</i>									NC6210 <i>New</i>				PD1000						NC5330 <i>New</i>			
		NC3120									NC315K										PC5300			
			NC3030								PC5300													
			NC5330 <i>New</i>								PC9030				NC5330 <i>New</i>									
			NC500H											PC5300										
Cermet	CN1000										CN1000													
		CN2000																						
			CN20																					
cBN / PCD											KB350				DP150								KB320	
											KB360												KB330	
Uncoated carbide	ST05									U10		H02				H01							H01	
		ST10								U20		H01												
			ST15									H05												
			ST20									H10												
				ST30N		ST40						G10												
				ST30			ST46																	
					ST45																			

➤ Milling

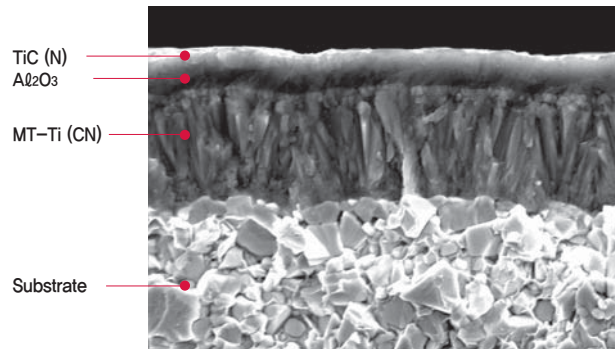
Workpiece	P Steel					M	Stainless steel				K	Cast iron				N	Nonferrous			S	HRSA				H	Hardened		
ISO	P01	P10	P20	P30	P40	P50	M10	M20	M30	M40	K01	K10	K20	K30	N10	N20	N30	S01	S10	S20	S30	H01	H10	H20				
Coated carbide			NC5330 <i>New</i>				NC5330 <i>New</i>								ND2000								PC210F					
			NCM325				NCM325				PC8110				PD2000						PC5300							
			PC3600 <i>New</i>				PC5300				PC6510										PC3545							
				PC5300				PC9530					PC5300															
				NCM335				NCM335						NC5330														
				PC3545					PC3545																			
Cermet			CN2000																									
			CN20																									
			CN30																									
cBN / PCD															DP150				KB360					KB350				
Uncoated carbide			ST20										H01				H01											
				ST30A					U10				H05															
					ST30N				U20				H10															
						ST40				U40				G10														

➤ Drilling & Endmilling

Workpiece	P General steel, Alloy steel				M	Stainless steel			K	Cast iron			N	Al Alloy, Copper Graphite			S	Heat resistant alloy			H	Hardened		
Type	High speed	Medium speed	Low speed roughing	Interrupted heavy machining	High speed	Medium speed	Low speed roughing	High speed	Medium speed	Low speed roughing	High speed	Medium speed	Low speed	High speed	Medium speed	Low speed	High speed	Medium speed	Low speed	High speed	Medium speed	Low speed		
Coated Cemented Carbide		PC205F			PC205F			PC205F			ND3000			PC205F						PC205F				
	PC203F				PC210			PC203F			PD3000						PC210					PC203F		
		PC220			PC220			PC220				PC210C												
Micro grain Cemented Carbide		FG2			FG2			FG2			FG2											FG2		
	FS1												H01											
		FA2		FCC		FS1		FA2					FA2											

Special Features

- 1) The special crystalline structure of the new coating technology achieves superior toughness.
- 2) A multi-layer coating with strong bonding strength provides superior wear resistance.



Cross-sectional view of CVD coating

Guide of Grade Selection

> Turning

Workpiece	Machining types	Recommended grade	Recommended cutting speed(m/min)	ISO	Application range
P Steel	Continuous cutting	NC3010	300 (200~400)	P01	NC3010
		NC3220 <i>New</i>	280 (150~380)	P10	
	Interrupted cutting	NC3120	250 (150~350)	P15	NC3220 NC3120 NC3030 NC5330 <i>New</i> NC500H
		NC3030	200 (150~250)	P20	
		NC5330 <i>New</i>	190 (100~230)	P30	
		NC500H	100 (50~150)	P35	
M Stainless steel	Continuous cutting	NC9025	140 (80~220)	P40	NC9025
	Interrupted cutting			M30	
K Cast iron	Continuous cutting	NC6205 <i>New</i>	450 (250~550)	M40	NC6205 NC6210 <i>New</i> NC315K NC5330 <i>New</i>
		NC6210 <i>New</i>	350 (250~450)	K05	
	Interrupted cutting	NC315K	200 (150~250)	K10	
		NC5330	180 (130~230)	K20	
S HRSA	Continuous cutting	NC5330	40 (20~60)	K30	NC5330 <i>New</i>
	Continuous cutting			S20	

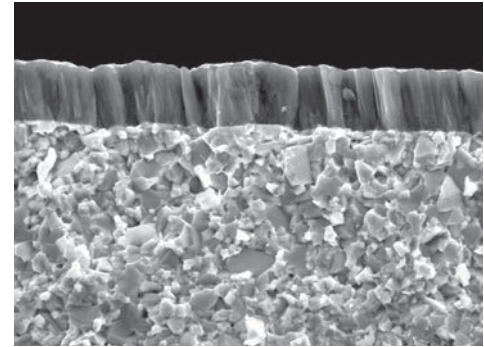
> Milling

Workpiece	Machining types	Recommended grade	Recommended cutting speed(m/min)	ISO	Application range
P Steel	Continuous cutting	NC5330 <i>New</i>	270(220~320)	P15	NC5330 <i>New</i> NCM325
				P20	
	Continuous cutting	NCM325	250(150~300)	P25	NCM335
	Interrupted cutting	NCM335	230(120~280)	P30	
				P35	
M Stainless steel	Continuous cutting	NC5330 <i>New</i>	200(150~250)	P40	NC5330 <i>New</i> NCM325 NCM335
	Continuous cutting	NCM325	180(140~230)	M10	
	Interrupted cutting	NCM335	170(120~210)	M20	
				M30	
K Cast iron	Continuous cutting	NC5330 <i>New</i>	170(130~220)	M40	NCM335
				K20	
				K30	NC5330 <i>New</i>

KORLOY PVD Coated Grades

Special Features

- 1) PVD coating technology has inherent advantages like superior chipping resistance of the coated film while maintaining the toughness of the substrate. Thus it is possible to significantly increase tool life.
- 2) PVD coatings can make sharp cutting edges without blunting of the substrate.
- 3) Ti-base coating films can provide excellent surface finish and high accuracy machining due to the low affinity of Ti film with Workpiece.



Cross-sectional view of PVD coating

Special Features of KORLOY PVD Series

- 1) TiAlN which is optimal for high speed dry cutting case.
- 2) Toughness of TiAlN has been enhanced to reduce brittleness of conventional TiAlN.
- 3) The outer TiN layer reduces friction and improves surface smoothness.
- 4) Easy to recognize of amount of wear on the cutting edge.

Guide of Grade Selection

> Turning

Workpiece	Machining types	Recommended grade	Recommended cutting speed(m/min)	ISO	Application range
P Steel	Continuous cutting	PC5300	150(120~220)	P30	
	Interrupted cutting			P40	
M Stainless steel	Continuous cutting	PC8110	200(150~250)	M10	
		PC5300	170(120~220)	M20	
	Interrupted cutting	PC9030	120(50~180)	M30	
				M40	
S HRSA	Continuous cutting	PC8110	60(40~90)	S10	
	Interrupted cutting	PC5300	50(30~70)	S20	
				S30	

> Milling

Workpiece	Machining types	Recommended grade	Recommended cutting speed(m/min)	ISO	Application range
P Steel	Continuous cutting	PC3600 New	200 (150~250)	P20	
		PC5300		P30	
	Interrupted cutting	PC5300	120 (100~150)	P40	
		PC3545		P50	
M Stainless steel	Continuous cutting	PC5300	120 (100~150)	M20	
		PC9530	130 (50~200)	M30	
	Interrupted cutting	PC3545	120 (100~150)	M40	
				M40	
K Cast iron	Continuous cutting	PC8110	250 (200~400)	K01	
		PC6510	200 (150~250)	K05	
	Interrupted cutting	PC5300	165 (120~210)	K10	
				K20	
S HSRA	Continuous cutting	PC5300	70(40~100)	S20	
	Interrupted cutting	PC3545	50(30~70)	S30	
H High hardness steel	Continuous cutting	PC210F	250(150~300)	H01	
				H10	

Special Features

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

Special Advantages

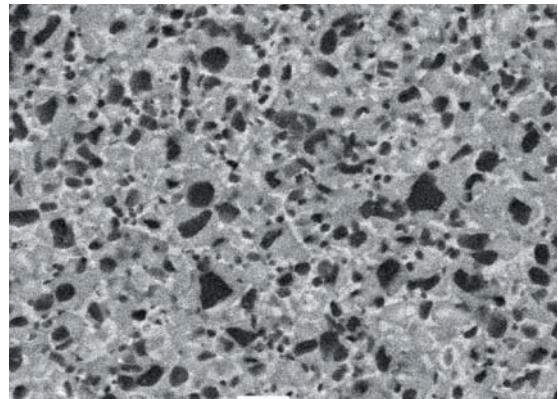
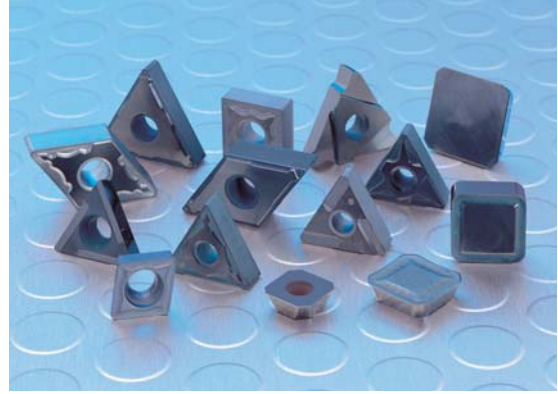
Cermet, using TiCN as the main component, is harder than cemented carbide and has a lower affinity with Ferrous workpiece at high temperatures, thus cermets have special advantages as listed below.

• Compared to Un-Coated Carbide

1. Since cermet has superior wear resistance and cratering resistance, higher speed cutting is available.
2. Since cermet has low affinity with ferrous workpiece, low to high speed cutting is available.
3. Low affinity with workpiece provides excellent surface finish.
4. Exceptional tool life and cutting performance can be acquired at high speed finishing.

• Compared to Coated Carbide

1. Suitable for light cutting/finishing.
2. Better wear resistance and surface finish can be acquired at the same cutting condition.



Microstructure of Cermet

Guide of Grade Selection

> Turning

Workpiece	Machining types	Recommended grade	Recommended cutting speed(m/min)	ISO	Application range
P Steel	Continuous cutting	CN1000	280 (150 ~ 400)	P10	CN1000
	Interrupted cutting	CN20 CN2000	210 (120 ~ 300)	P20	CN20 CN2000
K Cast iron	Finishing	CN1000	280 (150 ~ 400)	K01 K10	CN1000

> Milling

Workpiece	Machining types	Grade	Recommended cutting speed(m/min)	ISO	Application range
P Steel	Continuous cutting	CN2000	250 (200 ~ 300)	P10 ~ P20	CN2000
	Continuous cutting	CN20	180 (130 ~ 230)	P15 ~ P25	CN20 CN30
	Interrupted cutting	CN30	150 (100 ~ 200)	P20 ~ P30	

KORLOY Uncoated Carbide Grades

Special Features

- Due to Korloys advanced sintering technology, our uncoated carbide grades have a fine alloy structure which is necessary to get superior quality from an uncoated cutting tool



Special Advantages

- P, M, K carbide grades and can be used in all kinds of workpiece
- Excellent quality when machining with coolant, due to the superior thermal crack resistance of the carbide
- Due to the special design of the carbide, it has a fine micro structure and low affinity with the workpiece
- It has excellent toughness and produces lower cutting loads

ISO	Composition	Features	Workpiece
P	WC-TiC-TaC-Co	Excellent thermal shock resistance and plastic deformation resistance	Carbon steel, Alloy steel, Stainless steel
M	WC-TiC-TaC-Co	General grades with thermal shock resistance and hardness	Carbon steel, Alloy steel, Stainless steel, Cast steel
K	WC-Co	High hardness and superior wear resistance	Cast iron, Non-ferrous metal, Non metal

ISO	Grade	Hardness (HRA)	TRS (kgf/mm ²)	Young's modulus (10 ³ kgf/mm ²)	Thermal expansion coefficient (10 ⁻⁶ /°C)	Thermal conductivity (cal/cm · sec · °C)
P	ST05	92.7	140	-	-	-
	ST10	92.1	175	48	6.2	25
	ST20	91.9	200	56	5.2	45
	ST30A	91.3	230	53	5.2	-
M	U10	92.4	170	47	-	-
	U20	91.1	210	-	-	88
	ST30A	91.3	230	53	5.2	-
	U40	89.2	270	-	-	-
K	H02	93.2	185	61	4.4	105
	H01	92.9	210	66	4.7	109
	G10	90.9	250	63	-	105

1kPa = 102kg/m², 1w/m·k = 2.39×10⁻³cal/cm·sec·°C

Guide of Grade Selection

> Turning

Workpiece		Recommended grade	Recommended cutting speed(m/min)	ISO	Application range				
P	Steel	ST10	150 (100 ~ 200)	P10	ST10				
		ST15	140 (90 ~ 190)	P20		ST15			
		ST20	130 (70 ~ 180)				ST20		
		ST30A	130 (70 ~ 180)	P30				ST30A	
K	Cast iron	H02	150 (100 ~ 200)	K01	H02				
		H01, H05	140 (100 ~ 200)	K10		H01			
		H10, G10	130 (90 ~ 190)				H05		
	Alloyed aluminum	H01	500 (300 ~ 800)	K20				H10	
	Alloyed copper	H01	200 (150 ~ 300)	K30					G10

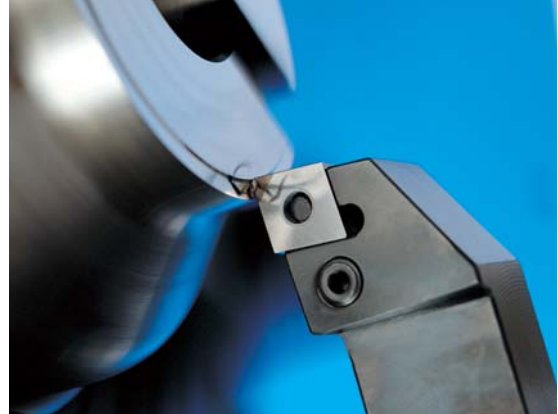
> Milling

Workpiece		Grade	Recommended cutting speed(m/min)	ISO	Application range	
P	Steel	ST30A	130 (70 ~ 180)	P30	ST30A	
K	Cast iron	H01, H05	150 (100 ~ 200)	K01		
		H10, G10	140 (90 ~ 190)	K10	H01	H05
	Aluminum alloy	H01	500 (300 ~ 800)	K20		
	Copper alloys	H01	200 (150 ~ 300)	K30	G10	

Special 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.



> For general hardened steel machining

• Recommended cutting condition

Grade	Cutting Speed, vc(m/min)	feed fn(mm/rev)		D.O.C ap(mm)
		0	0.1	
KB410	150 — 200	0.03	0.13	0.2
		0.03	0.2	
KB420	120 — 150	0.03	0.3	0.5
		0.03	0.5	
KB425	150 — 200	0.03	0.3	0.5
		0.03	0.5	
KB320	80 — 120	0.03	0.2	0.3
		0.03	0.3	
KB210	150 — 200	0.03	0.2	0.3
		0.03	0.3	
KB335	80 — 110	0.03	0.2	0.3
		0.03	0.3	
DNC250	120 — 220	0.05	0.3	0.3
		0.05	0.3	

> For cast iron machining

• Recommended cutting condition

division	Workpiece		Cutting speed, vc(m/min)			fn (mm/rev)	ap (mm)
	Material	Grade	100	1000	2000		
Turning	Gray cast iron	KB370	500	2000		0.1~0.5	≤ 1.0
		KB350	200	700		0.1~0.5	≤ 1.0
	Alloyed cast iron	KB370	200	800		0.1~0.4	≤ 0.5
	Ductile cast iron	KB370	80	200		0.1~0.4	≤ 0.6
		KB350	100	350		0.1~0.4	≤ 0.5
		KB410	250	500		0.1~0.4	≤ 0.5
Milling	Gray cast iron	KB370	800	2000		0.1~0.5	≤ 0.5

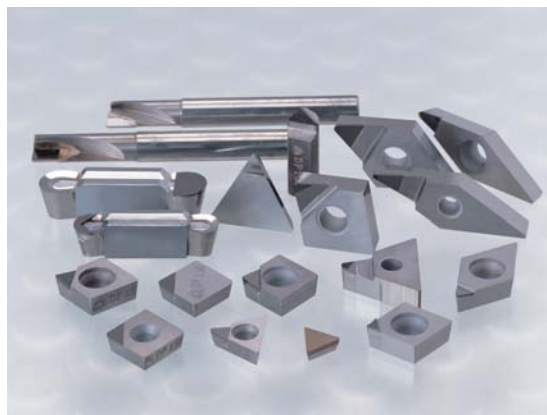
Special Features

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-Si aluminum and rock or stone
- ▶ Excellent tool life for rubber, carbon, graphite and wood



KORLOY PCD grades

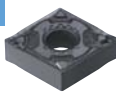
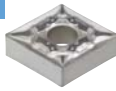
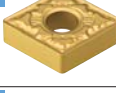
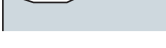
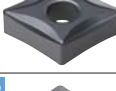
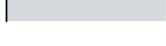
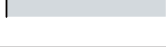
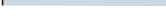
Grade	Features	Application	Grain size(μm)	Hardness(Hv)	TRS(kgf/mm^2)
DP90	Coarse diamond grain has been used to get excellent wear resistance enough to machine cemented-carbide, high Si aluminum alloy	Cemented carbide Ceramic roughing High Si aluminum alloy Rock, Stone	50	10,000~12,000	110
DP150	By use 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 grade	
				1st	2nd
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

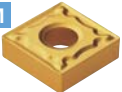
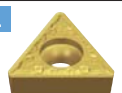
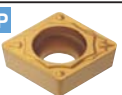
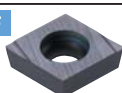
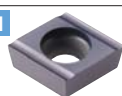
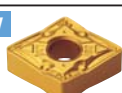
KORLOY Chip Breakers

> KORLOY Chip Breaker For Turning

Geometry	Cutting edge	Application range													Features	
		feed rate (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 (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	VG					0.1~0.35		0.5~2.5								For finishing - Ensures stable chip flow even at very small depth of cut - Suitable for copying
	VQ					0.1~0.4		1.0~3.0								For Medium to Finish Cutting Strong cutting edge makes excellent cutting performance at interrupted cutting
	VL					0.1~0.35		0.2~1.5								For Medium cutting - Stable chip control in high toughness material; low carbon steel, pipe steel & steel plates - Improved chip control for facing, copy machining and better surface finish
	VF					0.05~0.35		0.5~2.0								For Finishing - Good chip control quality on varied depth of cut - Excellent cutting edge strength has been acquired due to the special chip-breaker
	VB					0.15~0.45		0.5~2.0								For Finishing - Improved chip control for smaller depth of cuts - Excellent chip control in copying, corner R machining
	VC					0.12~0.45		0.5~3.5								For medium finishing Stable chip control in copying and internal machining with various depths of cut
	VM					0.1~0.5		1.0~5.0								For Medium cutting - Wide available chip control range from medium-finishing to medium-roughing - Suitable chip breaker for CNC machining
	VK					0.15~0.5		1.0~5.0								For Medium to Roughing of Milling Optimal for high speed machining and interrupted machining
	VH							0.7~1.4				6.0~15.0				For Heavy duty cutting - Designed specifically for heavy machining - Specialized chip breaker for the heavy industries like Ship building, Power plant industry
	VT							0.75~1.6				7.0~17.0				For Heavy duty cutting - Designed specifically for heavy machining - Specialized chip breaker for the heavy industries like Ship building, Power plant industry
	VP1					0.07~0.20		0.10~1.5								For Finishing - High positive cutting edge - Reduced chip contact minimizes temperature to improve tool life
	VP2					0.10~0.40		0.50~4.5								For medium finishing Stable chip control and high machinability in copying with various depths of cut
	VP3					0.12~0.5		0.50~5.0								For medium machining - High positive cutting edge with wide land - Stable cutting performance in interrupted machining with high toughness - Stable machinability and chip control in machining with high depth of cut
H Series	HU					0.03~0.25		0.1~1.5							For Ultra-fine Finishing, Finishing - Suitable for a machining need fine surface finish and a machining generate low cutting force due to sharp cutting edge design. - Specially designed chip breaker ensure stable chip control at ultra fine finishing condition.	
	HR							0.25~0.65				2.5~7.0			For Roughing - Excellent chip control at deep depth of cut and fast feed rate - Strong cutting edge makes excellent cutting performance at intermittent cutting	
	HA					0.03~0.3		0.5~2.5							For Light-alloy, Stainless-steel machining - Sharp cutting edge generates low cutting force - Specially designed tough main cutting edge - Suitable for cutting of low carbon steel, stainless steel, aluminum	

Notice : Application ranges are based on main cutting material

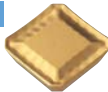
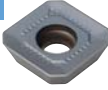
KORLOY Chip Breaker For Turning

Geometry		Cutting edge	Application range													Features		
			feed rate (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 (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		
H Series	HS								0.1~0.4			1.0~4.0					For Medium cutting of Stainless steel • Exclusive design for stainless steel cutting provide longer tool life • Wear resistance have been reinforced through high rake angle of chip breaker land	
G Series	GM								0.1~0.5			0.7~4.0					For Medium to Light cutting • Excellent chip control at general cutting conditions • Strong cutting edge strength provides good performance at intermittent and fast feed cutting	
	GR									0.3~0.8			3.0~8.0				For Medium to Roughing • Suitable for deep depth of cut and high feed cutting of steel and cast iron • Suitable for intermittent cutting	
	GH									0.3~1.3			3.0~11.0				For Heavy duty cutting • Suitable for heavy duty cutting due to strong cutting edge • Wide chip control range with low cutting force	
	GS								0.15~0.5			1.5~5.5					For Medium to Roughing of Stainless-steel • Exclusive chip breaker for stainless steel	
	B25										0.5~1.0			4.0~10.0			For General cutting • Suitable for general cutting condition cutting	
V-posi Series	VF								0.05~0.25			0.1~1.5					For Finishing • Improved surface finish and size accuracy due to stable inner boring	
	VL								0.05~0.20			0.1~1.0					For Finishing • Superior chip control in low carbon steel, pipes, and steel plates	
H-posi Series	HFP								0.05~0.25			0.1~1.5					For Finishing • Excellent chip control at shallow depth of cut and low feed rate • Excellent surface finish of work piece due to reduced cutting force • Suitable for fine boring	
	HMP								0.08~0.4			0.5~3.5					For Medium cutting • Excellent chip control at wide range of cutting conditions • Suitable for stainless steel cutting	
C Series	C25								0.1~0.35			1.0~3.0					For Medium cutting • Suitable for interrupted cutting and cast iron machining • Good surface finish due to low cutting force • Suitable for both boring and outer diameter turning	
AL Series	AK								0.03~0.4			0.1~4.0					For Aluminum cutting • High rake angle and low resistance cutting edge secures long tool life in continuous cutting of aluminum turning • High speed of finishing operation	
	AR								0.05~0.5			0.5~4.0					For Aluminum cutting • High stability of cutting edge secures great performance in high speed and interrupted machining • High speed of medium and interrupted operation	
Auto tool Series	KF								0.01~0.12			0.01~1.0					For Finishing • Shallow depth of cut with sharp edge. • Longer tool life at high speed cutting due to low cutting force • Good surface finish	
	KM								0.04~0.15			0.05~1.5					For Medium to Finish Cutting • Improved chip control makes tool life long and better machining	
Wiper tool Series	LW								0.15~0.6			1.0~5.0					For Medium cutting(Wiper) • Guarantees excellent surface roughness and good chip controls at high feed machining	
	VW								0.15~0.5			0.5~3.5					For Finishing(Wiper) • Improved surface roughness at shallow depth of cut and high feed due to strong cutting edge	

Notice : Application ranges are based on main cutting material

KORLOY Chip Breakers

> KORLOY Chip Breaker For Milling

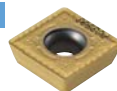
Geometry		Cutting edge	Application range													Features
			feed rate (mm/t)													
			0.04	0.063	0.10	0.16	0.25	0.4	0.63	1.0	1.6	2.5	4.0	6.3		
			depth of cut (mm)													
			0.1	0.16	0.25	0.4	0.63	1.0	1.6	2.5	4.0	6.3	10.0	11.6	13	
MX Series	MX						0.1~0.3			1.0~5.0						For General Milling • Possible to increase productivity through increase feed and depth • Excellent heat resistance due to the special chip breaker design of top face of insert
Futur Mill Series	MF					0.05~0.2			0.5~5.0							For Finishing of Milling • Special design for light cutting of gummy materials like stainless steel and hard to machine material provide fine surface finish and longer tool life
	MM					0.05~0.3			1.0~5.0							For Medium cutting of Milling • Chip breaker design to cover general cutting condition provides wide available application range • Ground type and as sintered type is available
	MR					0.05~0.35			1.5~5.0							For Roughing of Milling • Strongest cutting edge strength provide stable tool life even in case of severe cutting with heavy intermittent and heavy roughing
	MA					0.1~0.35			0.5~5.0							For Aluminum • Suitable design for aluminum machining like sharp cutting edge, mirror face of insert top which prevent built-up-edge, provide excellent cutting performance
RichMill Series-RM8	MA					0.05~0.35			0.3~6.0							For Aluminum • Sharp cutting edge and buffed top face show excellent chip flow and welding resistance in aluminum machining
	MF					0.05~0.35			0.3~6.0							For Finishing of Milling • Low cutting force chip breaker design ensures longer tool life and excellent machining in difficult-to-cut material and light machining
	MM					0.1~0.4			0.5~6.0							For Medium to Roughing of Milling • Suitable geometry design for general milling has wider ranges of machining
RichMill Series-RM4	MA					0.05~0.25			0.3~14.0							For Aluminum Milling • Sharp cutting edge design ensures low cutting resistance and excellent machining in difficult- tocut materials, aluminum and light machining
	MF					0.05~0.3			0.5~14.0							For Finishing of Milling • Low cutting force chip breaker design ensures longer tool life and excellent machining in difficult-to-cut material and light machining
	MM					0.05~0.3			1.0~14.0							For Medium to Roughing of Milling • Suitable geometry design for general milling has wider ranges of machining
RichMill Series-RMT	MF					0.05~0.2			0.5~5.0							For Finishing of Milling • Low cutting force chip breaker design ensures longer tool life and excellent machining in difficult-to-cut material and light machining
	MM					0.05~0.3			0.5~8.0							For Medium to Roughing of Milling • Suitable geometry design for general milling has wider ranges of machining
RichMill Series-RM16	MA					0.05~0.3			0.3~5.5							For Aluminum cutting • Sharp cutting edge design ensures low cutting resistance and excellent machining in difficult- tocut materials, aluminum and light machining
	MF					0.05~0.4			0.3~5.5							For Finishing of Milling • Low cutting force chip breaker design ensures longer tool life and excellent machining in difficult-to-cut material and light machining
	MM					0.1~0.45			0.5~5.5							For Medium to Roughing of Milling • Suitable geometry design for general milling has wider ranges of machining
	W					0.05~0.3			0.3~2.0							For Finishing of Milling (Wiper) • Wiper insert provides improved surface roughness due to special cutting edge

Notice : Application ranges are based on main cutting material

> KORLOY Chip Breaker For Milling

Geometry		Cutting edge	Application range													Features
			feed rate (mm/t)													
		depth of cut (mm)														
		0.04	0.063	0.10	0.16	0.25	0.4	0.63	1.0	1.6	2.5	4.0	6.3			
		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		
Alpha Mill Series	MA															For Aluminum • Sharp cutting edge and buffed top face show excellent chip flow and welding resistance in aluminum machining
	MF															For Finishing of Milling • Low cutting force chip breaker design ensures longer tool life and excellent machining in difficult-to-cut material and light machining
	MM															For Medium to Roughing of Milling • Suitable geometry design for general milling has wider ranges of machining

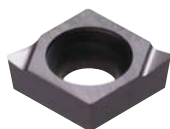
> KORLOY Chip Breaker For Drilling

Geometry		Cutting edge	Application range												Features
			feed rate (mm/rev)												
		depth of cut (mm)													
		0.04	0.063	0.10	0.16	0.25	0.4	0.63	1.0	1.6	2.5	4.0	6.3		
		30	60	90	120	150	180	210	240	270	300	330	900		
KING-DRILL Series	PD		0.04~0.15 25~300												General steel • Chip breaker for King Drill ensures optimal chip control in general drilling and high performance in stainless steel and cast iron machining.
	ND		0.04~0.15 25~300												Non-ferrous metals • 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.

Notice : Application ranges are based on main cutting material

Turning Inserts

CCET



0301005R/L
030101R/L
030102R/L
030104R/L
0401005R/L
040101R/L
040102R/L
040104R/L

CCGT-AK/AR

AK

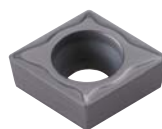


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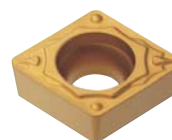
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CCGT-C05



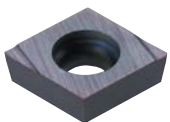
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CCGT-HFP



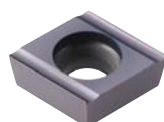
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CCGT-KF



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09T301R/L
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CCGT-KM



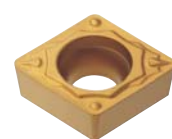
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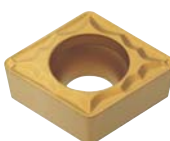
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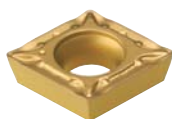
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CCMT-HMP



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CCMT-VF



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CNGG-HU



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CNGG-VP1



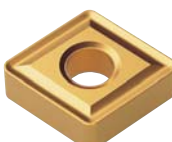
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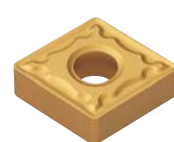
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CNMG-GM



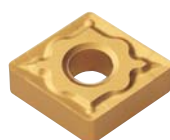
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CNMG-GS



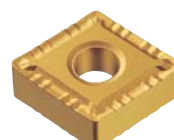
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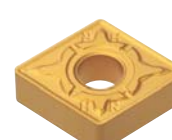
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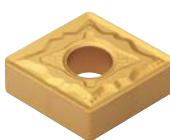
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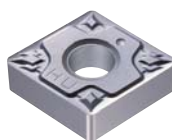
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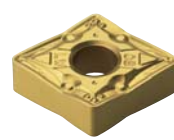
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CNMG-LW



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CNMG-VB



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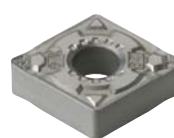
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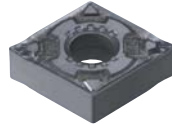
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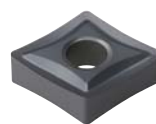
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CNMG-VP2

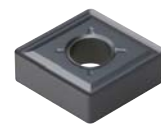
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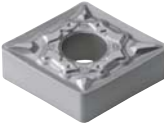
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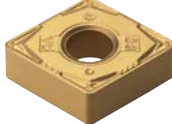
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CNMG-VW



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CNMM-GH



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CNMM-GM



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CNMM-GR



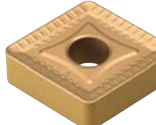
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CNMM-VH



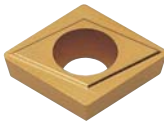
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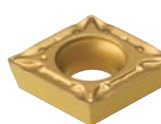
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DCGT-C05



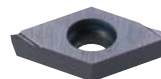
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DCGT-HFP



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DCGT-KF



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DCGT-KM



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070201R/L
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11T3003R/L
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DCMT-C25



070202
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11T302
11T304
11T308

DCMT-HFP



070202
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11T308

DCMT-HMP



070202
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DCMT-VF



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DNGG-HU



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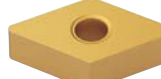
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New



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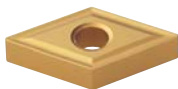
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Turning Inserts

DNMG-B25



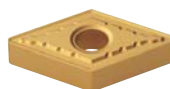
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DNMG-GR



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DNMG-GS



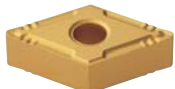
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DNMG-HA



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DNMG-HC



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DNMG-HR



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DNMG-HS



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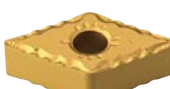
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DNMG-VC



New

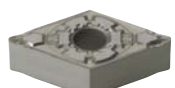
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150612

DNMG-VG



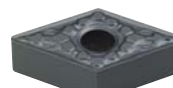
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150608

DNMG-VL



110408
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150604
150608
150612

DNMG-VM



110404
110408
110412
150404
150408
150412
150604
150608
150612

DNMG-VK



150404
150408
150608
150612

DNMG-VP2



New

150404
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150604
150608

DNMG-VP3



New

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150604
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150612

DNMG-VQ



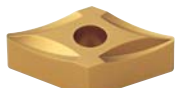
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150608

DNMG-VW



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150604
150608

DNMP



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150608

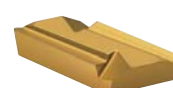
DNMX-SH



New

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

KNUX-11



160405 R/L
160410 R/L

KNUX-12



160405 R/L
160410 R/L

RCGT-AK/AR



AK
AR

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0803M0
1003M0
10T3M0
1204M0

RCMX

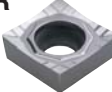
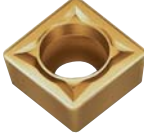
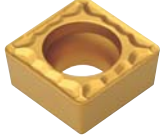
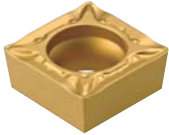
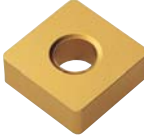
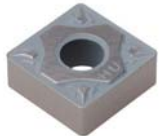
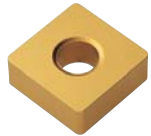
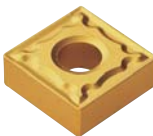
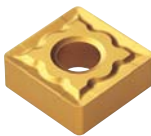
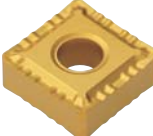
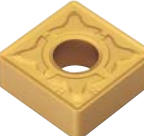
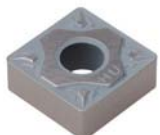
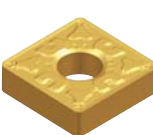
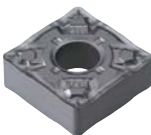
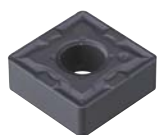


1003M0
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1606M0
2006M0
2507M0
3209M0

RNMG-B25



090300
120400
150600
190600
250600
250900
310900

SCGT AK  AR 	SCGT-HFP 	SCMT-C25 	SCMT-HFP 
SCMT-HMP 	SCMT-VF 	SNGA 	SNGG 
SNGG-HU 	SNG(M)X 	SNGN 	SNMA 
SNMG-B25 	SNMG-GM 	SNMG-GR 	SNMG-GS 
SNMG-HA 	SNMG-HC 	SNMG-HR 	SNMG-HS 
SNMG-HU 	SNMG-VC <i>New</i> 	SNMG-VF 	SNMG-VG 
SNMG-VK 	SNMG-VL 	SNMG-VM 	SNMG-VP2 <i>New</i> 

Turning Inserts

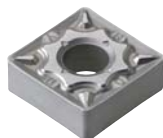
SNMG-VP3

New



120404
120408
120412

SNMG-VQ



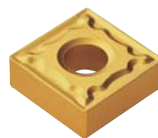
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090308
120404
120408

SNMM-GH



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250932

SNMM-GM



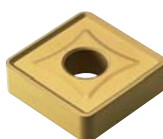
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SNMM-GR



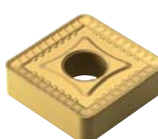
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SNMM-VH



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190624
250724
250920
250924

SNMM-VT



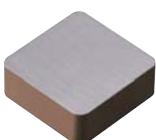
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250924

SNMN



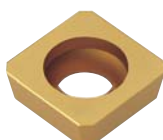
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190416

SNUN



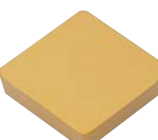
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120412TN
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SPGA



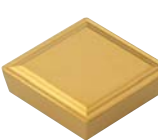
060204
090308T
090308T-Z

SPGN



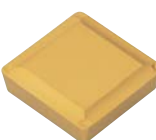
070202 120408
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090302 150408
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090308 150416
120302 150420
120304 190404
120308 190408
120312 190412
120316 190416
120402 190424
120404

SPGR-F



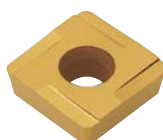
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120304

SPGR-M



090308
120308

SPGT



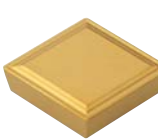
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090308R/L

SPGT-C05



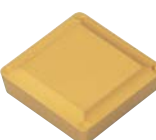
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SPMR-F



090304
120304

SPMR-M



090308
120308
120312

SPMT-VF



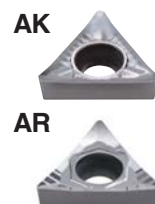
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090308

TBGT



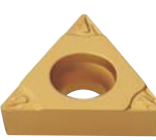
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060104L

TCGT



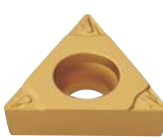
AK 090202 16T304
090204 16T308
110202 16T312
110204 16T316
110208 16T325
16T302

TCGT-C05



090204
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110208

TCGT-HFP



090204
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110204
16T304

TCGT-KF



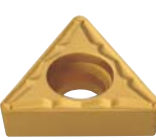
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080201 R/L
080202 R/L

TCMT-C25



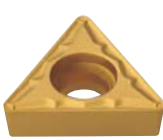
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110204
110208
16T304
16T308

TCMT-HFP



090204
110202
110204
16T302
16T304

TCMT-HMP



090204
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110204
110208
16T304
16T308

TCMT-VF



110202
110204
110208
16T304

TCMT-VL



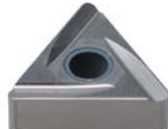
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TNGA



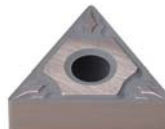
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TNGG



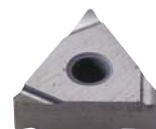
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160408R/L
220404R/L
220408R/L
220412R/L

TNGG-HU



160404
160408

TNGG-SC



160402 R/L
160404 R/L

TNGN



110302 160412
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110308 220408
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TNMA



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TNMG-B25



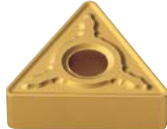
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TNMG-GM



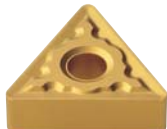
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TNMG-GR



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330924

TNMG-GS



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TNMG-HA



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TNMG-HC



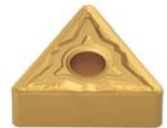
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TNMG-HR



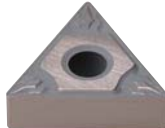
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TNMG-HS



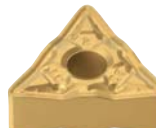
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TNMG-HU



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TNMG-LW



160408
160412

TNMG-VB



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TNMG-VC



New

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TNMG-VF



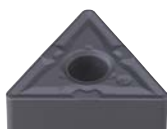
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TNMG-VG



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TNMG-VK



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TNMG-VL



160404
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TNMG-VM



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220412

TNMG-VP2



New

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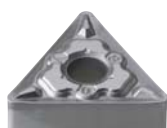
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New

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TNMG-VQ



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TNMG-VW



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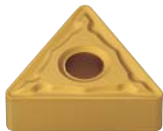
TNMG-GH



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Turning Inserts

TNMM-GM



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TNMM-GR



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TNMN



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TNMX



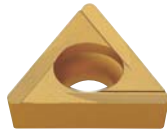
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220408R
160404L
160408L

TNMX-SH



160404 R/L
160408 R/L

TOEH



060102L
090204L
140304L

TPGH



080202L
080204L
110202L
110204L

TPGN



090204 160316
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TPGR-F



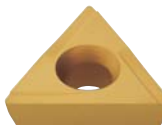
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TPGR-M



110308
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TPGT



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

TPGT-C05



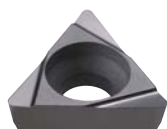
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TPGT-HFP



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TPGX



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090208L
110304L

TPMR-F



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110304
110308
160304
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TPMR-M



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TPMT-VF



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TPUN



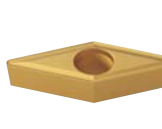
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VBGT-AK/AR



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VBGT



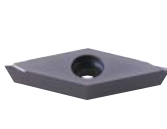
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VBGT-HFP



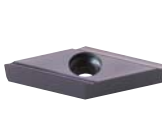
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VBGT-KF



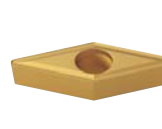
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110301R/L
110302R/L

VBGT-KM



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

VBMT



160404
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VBMT-HMP



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160412

VBMT-VF



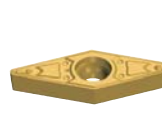
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VBMT-VL

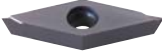
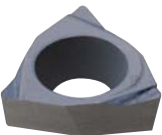
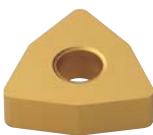
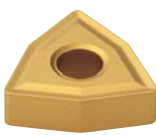


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VBMT-VM

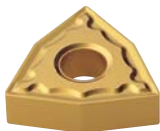


160404
160408

VC GT-AK/AR AK  AR 	110301 160402 110302 160404 110304 160408 110308 160412 130302 220516 130304 220525 130308 220530	VC GT-HFP 	110302 110304 110308 160404 160408	VC GT-KF 	1103003R/L 110301R/L 110302R/L	VC GT-KM 	1103003R/L 110301R/L 110302R/L
VC MT-HFP 	110302 110304 110308 160404 160408	VC MT-HMP 	160404 160408	VC MT-VF 	080202 080204 110304 160404	VC MT-VL 	160404 160408
VC MT-VM 	160404 160408	VN GG-HA 	160408	VN MG-GM 	160404 160408	VN MG-HA 	160404 160408
VN MG-HR 	160408	VN MG-HS 	160404 160408	VN MG-VB 	160404 160408	VN MG-VC 	<i>New</i> 160404 160408
VN MG-VF 	160402 160404 160408	VN MG-VG 	160404 160408	VN MG-VL 	160404 160408	VN MG-VM 	160404 160408 160412 220404 220408
VN MG-VK 	160412	VN MG-VP3 	<i>New</i> 160404 160408	VN MG-VQ 	160404 160408	VN MP 	160404 160408
WB GT 	020102R S30204R 020102L S30202L S30204L	WC GT-C05 	080408	WN MA 	060404 060408 060412 080404 080408 080412	WN MG-B25 	080404 080408 080412

Turning Inserts

WNMG-GM



060404
060408
080404
080408
080412

WNMG-GR



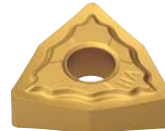
080404
080408
080412
080416

WNMG-GS



060404
060408
060412
080404
080408
080412

WNMG-HA



060404
060408
080404
080408
080412

WNMG-HC



060404
080404
080408

WNMG-HR



060408
060412
080408
080412
080416

WNMG-HS



060404
060408
060412
080404
080408
080412

WNMG-HU



080404
080408
080412

WNMG-LW



060408
060412
080408
080412

WNMG-VB



080404
080408

WNMG-VC



New

080404
080408

WNMG-VF



060404
060408
080404
080408

WNMG-VG



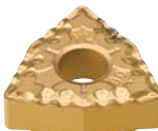
060404
060408
080404
080408

WNMG-VK



080404
080408
080412
080416

WNMG-VL



060408
080404
080408

WNMG-VM



060402
060404
060408
060412
080404
080408
080412

WNMG-VP2



New

080404
080408
080412

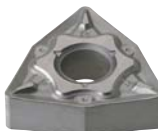
WNMG-VP3



New

080404
080408
080412

WNMG-VQ



060404
060408
080404
080408

WNMG-VW



080404
080408

WNMM-B25



100608
130612

WNMX-SH

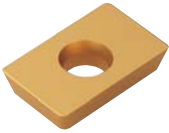


New

080404R/L
080408R/L

ADKA

150308R
150308TR
150308SR



ADLT

150308R
150308SR
150308TR



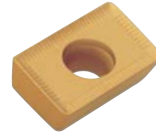
APFT-X22

1604PDSR
1604PDTR



APFT-X28

1604PDR
1604PDSR
1604PDTR



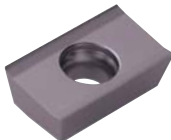
APKT

1604PDSR



APKT-MA

1604PDFR



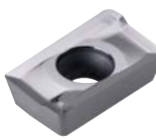
APKT-MA2

1604PDFR
160416FR
160432FR



APKT-MA3

1604PDFR
160420FR



APKT-MF

1604PDSR



APKT-MM

1604PDSR



APKT-MM1

160432R



APKT-X22

1604PDSR
1604PDTR



APKT-X23

1604PDR
1604PDTR



APKT-X24

1604PDR
1604PDFR



APLT

070304R



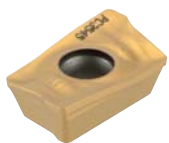
APMT-MF

11T3PDSR
1604PDSR
1806PDSR
180612PDSR



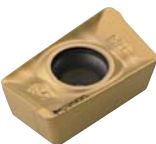
APMT-ML

0903PDER
11T3PDER
1604PDER
1806PDER



APMT-MM

060202PDSR 090320R 160410PDSR 180620PDSR-MM
0602PDSR 090331R 160416PDSR 180624PDSR-MM
060208PDSR 090332R 160424R 180630R-MM
060212R 11T3PDSR 160430R 180632R-MM
060216R 11T308PDSR 160432R 180640R-MM
0903PDSR 11T312PDSR 160450R 180648R-MM
090306PDSR 11T316R 160464R 180650R-MM
090308PDSR 11T318R 1806PDSR 180660R-MM
090312R 11T324R 180612PDSR-MM 180664R-MM
090316R 1604PDSR 180616PDSR-MM



APMT-MA

0602PDFR
0903PDFR
11T3PDFR
1604PDFR
1806PDFR



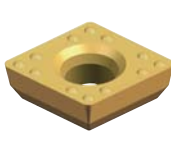
APXT-MR

11T3PDSR
11T308PDR



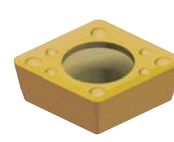
CPMH-MM

120408



CPMT-MM

060204
080308
09T308



HECN

090408FN
090408SN
090408TN
110412FN
110412TN



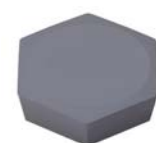
HPEN

090408FN
090408SN
090408EN
110412FN



HPEN-WC

090408
110412



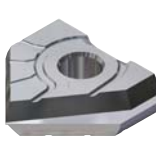
LBH/LBS

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



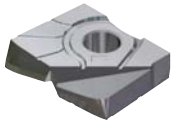
LCF

160-D90
200-D90
250-D90



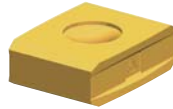
Milling Inserts

LFH



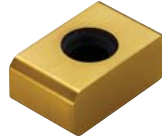
100
120
160
200
250
300
320

LNCS



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

LNE



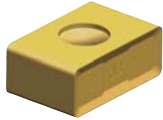
324-C1.0
324-R0.8

LNEX-MA



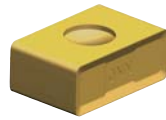
100605PNR
151004PNR
151008PNR

LNEX



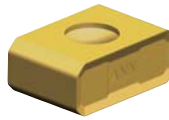
150608-MF
150608-ML

LNEX-QNN



1506QNN-MF
1506QNN-ML

LNEX-ANN



1506ANN-MF
1506ANN-ML

LNМ(E)X-MF



100605PNR
100608PNR

LNМ(E)X-MF



151004PNR
151008PNR
151016PNR

LNМ(E)X-MM



100605PNR
100605PNL
100608PNR

LNМ(E)X-MM

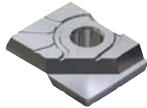


151004PNR
151008PNR
151008PNL
151016PNR

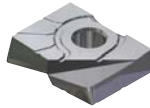
LR / LRH

LR

LRH



(Special Type)



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

MPMT



090308
120408

OFCN



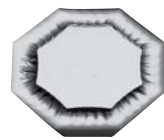
0704SN
0704FN
070408FN
070408SN
070408TN

OFCW



05T3SN
05T3FN
05T308FN

OFKR-MA



0704FN
0704EN

OFKR-MF



0704SN
070408SN

OFKR-MM



0704SN
070408SN

OFKT-MA



05T3FN
05T3EN
0704EN
0704FN

OFKT-MF



05T3SN
05T308SN

OFKT-MM



05T3SN
05T308SN
0704SN

ONHX-MA



060608
080608

ONH(M)X-MF



060608
080608
0606ANN
0806ANN

ONH(M)X-MM



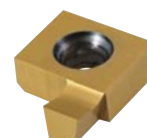
060608
080608
0606ANN
0806ANN

ONHX-W



060608
080608

ORG



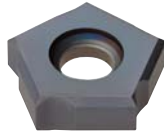
265
325
405
470

PNEJ



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

PNEJ-C



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

RC



16
20
25
30
32

RDCT-MA



10T3M0
1204M0

RDHW



0501M0-F(E,S)
06T1M0-F(E,S)
0702M0-F(E,S)
0803M0-F(E,S)

RDHW



1605M0-F(E,S)
2006M0-F(E,S)

RDKT-MF



10T3M0
1204M0
1605M0

RDKT-ML



1605M0

REKR-MM



170400-MM

RDKT-MM



10T3M0
1204M0
1605M0
2006M0

RDKW



0501M0E
06T1M0E
0702M0E
0803M0E

SDCN



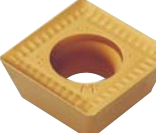
42R 53L 42AESN
42L 53M 42AESN-RH
42M 53M-G 53AEEN
42M-G 53MT 53AEEN-RH
42MT 53MT-RH 53AESN
42MT-RH 53MT-S20 53AESN-RH
42MT-S20 42AEEN
53R 42AEEN-RH

SDET-MA



09M402R
09M404R
09M405R
130504R

SDET-MF



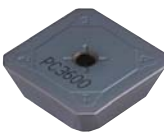
09M405R
130508R

SDET-MM



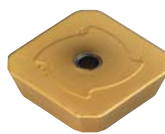
09M405R
130508R

SDKN-MU



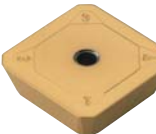
1203AESN
1504AESN

SDKN-SM



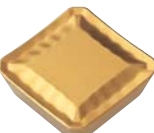
1203AESN
1203AEEN
1504AESN
1504AEEN

SDKN-SU



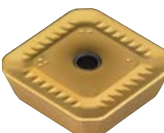
1203AESN
1504AESN

SDKR-MX



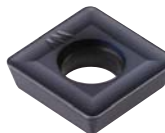
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1203AETN
1203AEN
1504AESN
1504AETN
1504AEN

SDKR-SM



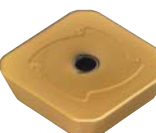
1203AESN
1504AESN

SDMT-MM



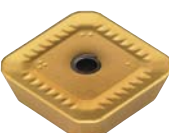
090308

SDXN-FM



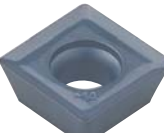
1203AESN
1203AEEN
1504AESN
1504AEEN

SDXR-FM



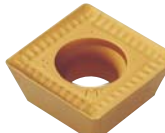
1203AESN
1504AESN

SDXT-MA



09M405R
130508R

SDXT-MF



09M403R/L
09M404R/L
09M405R/L
130508R

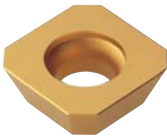
SDXT-MM



09M405R/L
130508R/L
130538

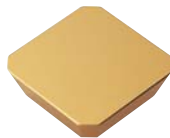
Milling Inserts

SECA



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

SECN



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

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

SEET-MA



0903AGFN
14M4AGFN

SEET-MF



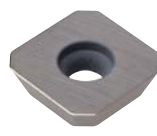
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14M4AGSN

SEET-MM



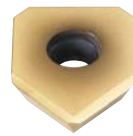
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14M4AGSN

SEEW



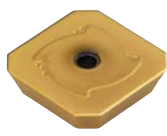
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14M4AGTN

SEEW-W



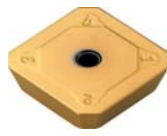
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14M4AGSN
14M4AGTN

SEKN-SM



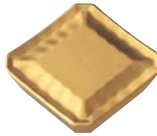
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1504AFEN
1504AFSN

SEKN-SU



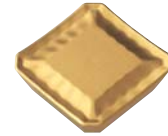
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SEKR-MF1



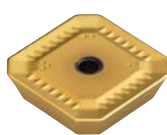
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SEKR-MX



1203AFSN
1204AFSN
1504AFSN

SEKR-SM



1204AFSN
1504AFSN

SEKR-X35



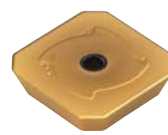
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1203AFSN
1204AFFN

SEMN



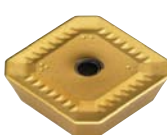
1204AZ

SEKN-FM



1203AFEN
1203AFSN
1504AFEN
1504AFSN

SEXR-FM



1203AFSN
1504AFSN

SEXT-MF



0903AGSN
14M4AGSN

SEXT-MM



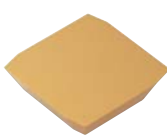
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14M4AGSN

SEXT-MR



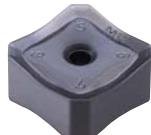
0903AGSN
14M4AGSN

SFCN



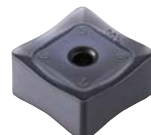
1203EFR

SNCF-MF



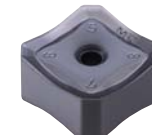
1206ANN
1206ENN
1206QNN
1507ANN
1507ENN

SNMF-MF



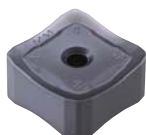
1206ANN
1206ENN
1206QNN
1507ANN
1507ENN

SNCF-MM



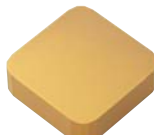
1206ANN
1206ENN
1206QNN
1507ANN
1507ENN

SNMF-MM



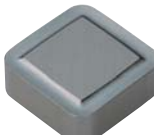
1206ANN
1206ENN
1206QNN
1507ANN
1507ENN

SNCN



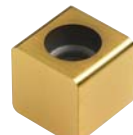
1204ENN
1504ENN

SNEF



435
535

SNEX



101010
1010ZNN

SNEX-CU1



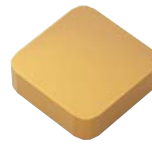
101010
1010ZNN
121212
1212ZNN

SNEX-MA



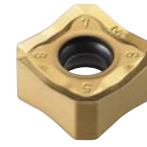
1206ANN
1206ENN
1206QNN
120612

SNKN



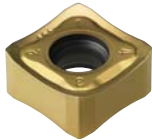
1204ENN
1504ENN

SNE(M)X-MF



1206ANN
1507ANN

SNE(M)X-MF



1206ENN
1507ENN

SNE(M)X-MF



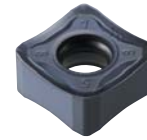
1206QNN
120612

SNE(M)X-MM



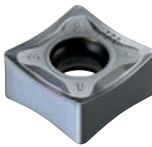
1206ANN
1507ANN

SNE(M)X-MM



1206ENN
1507ENN

SNE(M)X-MM



1206QNN
120612

SNEX-W



1206ANN-W

SPCN



1203EDR/L 1203EDR-S20 1504EDR-G
1203EDR-RH 1204EDR 1504EDR-RH
1203EDR-G 150412T 1504EDSR-RH
1203EDR-RH 1504EDR/L 1504EDTR-RH
1203EDSR-RH 1504EDR-RH 1504EDR-S20
1203EDTR-RH 1504EDSR

SPEN-WC



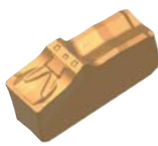
120416
150412
150416
150420
190424

SPEX



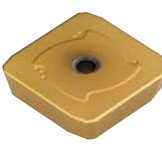
1203EDR-1
1203EDL-1
1504EDR-1
1504EDL-1

SPFN



200-N
300-N
400-N

SPKN-SM



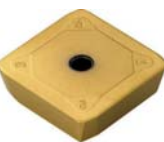
1203EDSR
1203EDER
1504EDSR
1504EDER

SPKN-MU



1203EDSR
1504EDSR

SPKN-SU



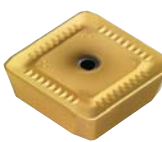
1203EDSR
1203EDSL
1504EDSR
1504EDSL

SPKR-MX



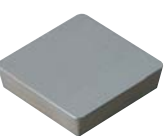
1203EDSR
1203EDSL
1504EDR
1504EDSR

SPKR-SM



1203EDSR
1504EDSR

SPMN



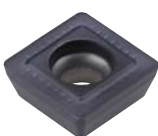
120308

SPMT



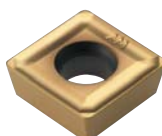
060304

SPMT-KC



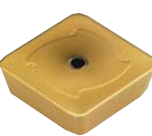
110408

SPMT-MM



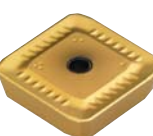
120408
120508

SPXN-FM



1203EDSR
1203EDER
1504EDSR
1504EDER

SPXR-FM



1203EDSR
1504EDSR

TECN



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

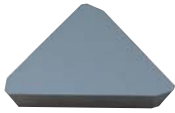
TEEN



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

Milling Inserts

TFCN



2203PFR
2203PFL

TNMX-NM



2710AZNR
2710AZNL

TPCN



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

TPKN-MU



2204PDSR

TPKN-SM



1603PDSR
1603PDER
2204PDSR
2204PDER

TPKN-SU



1603PDSR
1603PDSL
2204PDSR
2204PDSL

TPKR-MX



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

TPKR-SM



1603PDSR
2204PDSR

TPXN-FM



1603PDER
1603PDSR
2204PDER
2204PDSR

TPXR-FM



1603PDSR
2204PDSR

TWX-KC



16R-KC
22R-KC

VCKT-MA



220530N

VDKT-MA



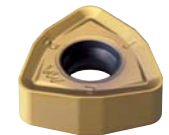
11T210N
11T220N

WDKT-MH



080316ZDSR
10T320ZDSR
130520ZDSR
150625ZDSR

WNMX-MM



060312ZNN
09T316ZNN
130520ZNN
160720ZNN

XCET-KC



310404ER

XEKT-MA



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

ZDMT-R-MM



080310R
110312.5R
130416R

ZPET-MM



Internal

080M
100M
125M
150M
160M
200M
250M

ZPET-MM



External

080S
100S
125S
150S
160S
200S
250S

ZPMT-MM/MMN



1504PPSR-MM
1505PPSR-MMN

ZPMT-R-MM



160520R
160525R
160531R

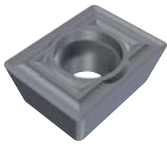
ZPMT-R-MR



160525R

LPMT-DF

040203



NPET-DA

222408
252808
293208
334008
415008
516012



NPET-DR

222408
252808
293208
334008
415008
516012



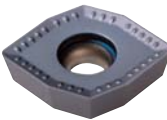
NPMT-DM

222408
252808
293208
334008
415008
516012



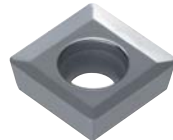
NPMT-DS

222408
252808
293208
334008
415008
516012



SPET-DA

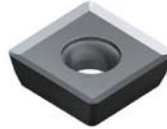
050203
060204
070204



SPET-ND

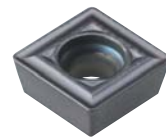
New

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



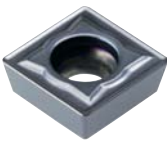
SPMT-DF

050203
060204
070204



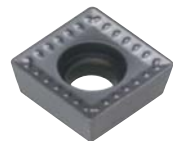
SPMT-DM

050203
060204
070204



SPMT-DS

050203
060204
070204



SPMT-PD

New

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



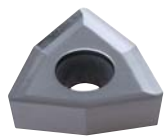
WCKT-C21

030204
040204
050308
06T308
080408



WCKT-DA

030208
040208
050308
06T308
080408



WCMT-C20

030208
040208
050308
06T308
080408
080412



WCMT-C21

030204
040204
040208
050308
06T308
080408



WCMT-DS(P)

030204-DSP
040204-DSP
050308-DS
06T308-DS
080408-DS
080412-DS



XOET-ND

New

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



XOMT-PD

New

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



Inserts for Aluminum

for Turning

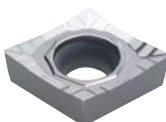
CCGT

AK

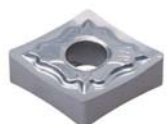


060202
060204
060208
09T302
09T304
09T308
120402
120404
120408

AR



CNMG-HA



120404
120408
120412

DCGT

AK



070202
070204
070208
11T302
11T304
11T308
11T312

AR



RCGT

AK



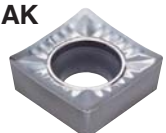
0602MO
0803MO
1003MO
10T3MO
1204MO

AR



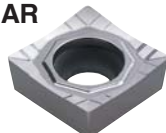
SCGT

AK



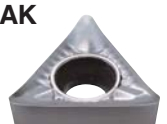
09T302
09T304
09T308
120404
120408
120416

AR



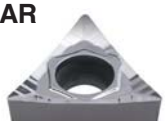
TCGT

AK



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

AR



VBGT

AK



110302
110304
110308
160402
160404
160408
160412

AR



VCGT

AK



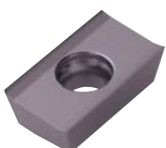
110301
110302
110304
110308
130302
130304
130308
160402
160404
160408
160412
220516
220525
220530

AR



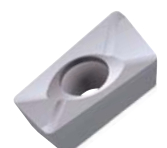
for Milling

APKT-MA



1604PDFR

APKT-MA2



1604PDFR
160416FR
160432FR

APKT-MA3



1604PDFR
160420FR

APXT-MA



11T3PDSR
11T318R

CDEW-XCF



1204R/L

OFKR-MA



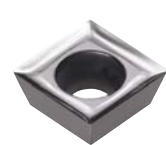
0704FN
0704EN

OFKT-MA



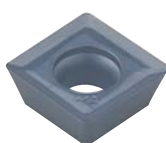
05T3FN
05T3EN
0704EN
0704FN

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

■ XEKT19M5□□-MA's nose-R size

ISO	0.4	0.8	1.2	1.6	1.8	2	3	3.2	4	5
ASA	1	2	3	4	4.5	5	7.5	8	10	12.5

for Grooving

MGGN-A



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

MRGN-A



400
500
600
800

MRGN-A5



6N
8N

MRGN-AM



6N
8N

MRGN-AP



6N
8N

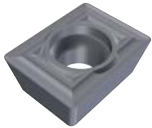
MVGN



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

for Drilling

LPMT-DF



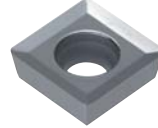
040203

NPET-DA



222408
252808
293208
334008
415008
516012

SPET-DA



050203
060204
070204

SPET-ND

New



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

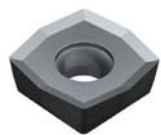
WCKT-DA



030208
040208
050308
06T308
080408

XOET-ND

New



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

Multi Functional Tools (Inserts)

K.G.T Tools

KGMN-L



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

• Width : 2~8mm

KGMN-R



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

• Width : 2~8mm

KGMN-T



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

• Width : 2~8mm

KGMI-T



Holder
KGIVR/L

• Width : 2~4mm

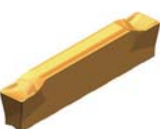
KGGN-B



Holder
KGEHR/L
KGEVR/L

• Width : 3.2mm

KGMR-LP



Holder
KGEHR/L

• Width : 3mm

KGMR-RP



Holder
KGEHR/L

• Width : 3mm

KRMN-C



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

• Width : 3~4mm

M.G.T Tools

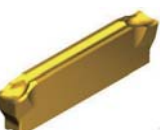
MFMN



Holder
MGFVR/L
MGFHR/L

• Width : 3mm

MGMN-L,R,T



Holder
MGEHR/L
MGEVR/L
MGIVR
MCER/L
MCFR/L

• Width : 2~5mm

MGGN-A



Holder
MGEHR/L
MGEVR/L
MGIVR
MCER/L
MCFR/L

• Width : 3~5mm

MGGN-M



Holder
MGEHR/L
MGEVR/L
MGIVR
MCER/L

• Width : 3~6mm

MGMN-M,G



Holder
MGEHR/L
MGEVR/L
MGIVR
MCER/L
MCFR/L

• Width : 1.5~8mm

MGMR-L-PS



Holder
MGEHR/L
MCER/L

• Width : 3~5mm

MGMR-L-PT



Holder
MGEHR/L
MCER/L

• Width : 2~5mm

MRMN-M



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

• Radius : 2~8(mm)

for Parting

SP



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

Holder : SPB-S or SPH-S, SPB or SPH

ESB



Holder
EH

• Width : 9.525mm

POB



Holder
PH

• Width : 3.0~5.0mm

for Forming

BF



Holder
GFT, GFIP

• Width : 3.1~8.1mm

Multi Functional Tools (Inserts)

for Micro Boring Tools

NFTF, NFTG, NFTT



Holder : FTTIH

* for Internal Grooving, Threading and Copy machining

for Grooving

DB



Holder
DBH

• Width : 3.0~8.0mm

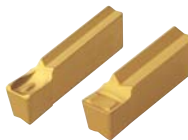
DC



Holder
DBH

• Width : 3.0~5.0mm

FGD/FGM/FMM



Holder
FGHH
FGVH

• Width : 3.0~5.0mm

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 : 3000 type 1.25~4.3mm
4000 type 1.25~4.5mm

TB-M

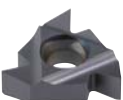


Holder
TBH

• Width : 4000 type : 1.5~4.5mm

for Threading

ER



ISO Metric
0.5~6.0(pitch-mm)
Partial profile 55°
Partial profile 60°

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

ERM



ISO Metric
0.5~5.0(pitch-mm)
Partial profile 55°
Partial profile 60°

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

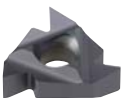
ERM-U



ISO Metric
0.5~3.0(pitch-mm)
Partial profile 55°
Partial profile 60°

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

IR



ISO Metric
0.5~6.0(pitch-mm)
Partial profile 55°
Partial profile 60°

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

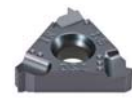
IRM



ISO Metric
0.5~5.0(pitch-mm)
Partial profile 55°
Partial profile 60°

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

IRM-U



ISO Metric
0.5~3.0(pitch-mm)
Partial profile 55°
Partial profile 60°

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

VETR



ISO Metric
0.8~3.0(pitch-mm)
Partial profile 60°

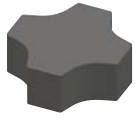
080	200
100	250
125	300
150	150F
175	300F

Holder : VTH

Bearing Inserts

R-Chamfering

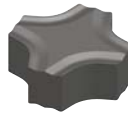
MC



0906 1220
0910 1225
1206 1525
1210 1530
1212 1540
1215

Holder : CMSN...F
CMSN...B

MC-BR



1206
1210
1212
1215
1220
1230
1235

Holder : CMSN...F
CMSN...B

Internal turning

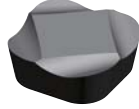
RPGT



0802MO
1203MO
1604MO
2004MO

Holder : SRGP...E
SRGP...F
SRGP...B

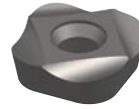
SPGR



120440R/L

Holder : CSKP...B

SPGH



090330R/L

Holder : SSKP...B

Machining for Race-way

KORIC



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

Holder : CKFN...RW
CKGN...RW

SNGN-W

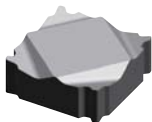


0903WR/L
1504WR/L
1905WR/L

Holder : CSGN...RW

Machining for Bearing Shield

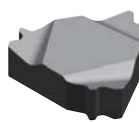
SNGN-S



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

Holder : CSBN...BS
CSKN...BS

TNGN



2204SR/L

Holder : STGN...BS

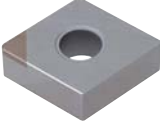
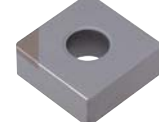
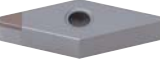
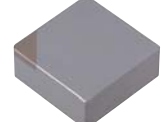
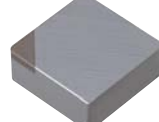
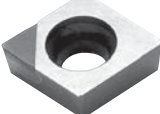
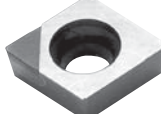
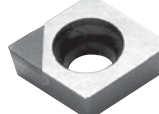
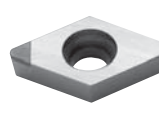
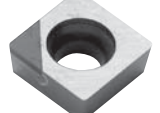
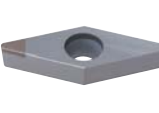
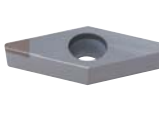
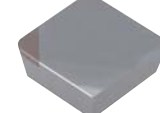
SP



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

Holder : SPB-S

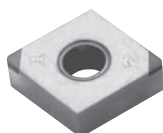
Regrinding Type (Negative / Positive)

CNMA  120404 120404W 120408 120408W 120412 120412W	DNMA  150404 150408 150412	SNMA  120404 120408 120412	TNMA  160404 160408 160412 220404 220408 220412
VNMA  160404 160408 160412	CNGN  090304 090308 090312 090404 090408 090412	SNGN  090304 090308 090312 090404 090408 090412	TNGN  160404 160408 160412
CCMW  09T304 09T308	GPGB  080204 080208 090304 090308 090312	CPGW  080204 080208	DCMW  070204 070208 070212 11T304 11T308 11T312
SCMW  09T304 09T308 09T312	TCGW  110204 110208 16T304 16T308 16T312	VBMW  110204 110208 110304 110308 160404 160408 160412	VCMW  160404 160408 160412
SPGN  090304 090308 090312 120304 120308 120312	TBGN  060102-B 060104-B 060108-B	TPGN  110304 110308 110312 160304 160308 160312	RNGN  120400-B
RBG  08-B 10-B 12-B 16-B 20-B 26-B	RCGA  0906MO	RTGN  0508MO 0608MO 0711MO 0811MO 0914MO 1014MO 1214MO	SNEN  1504ADTR 1504ADTL 1504DTR-W 1504DTL-W
BNGNT  0200R/L 0250R/L 0300R/L 0400R/L 0500R/L 0600R/L	BNTT  1020R/L 1530R/L		

cBN Inserts

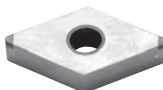
Multi-Corner Type (Negative / Positive)

2 / 4NU-CNGA



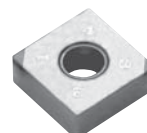
120404
120404W
120408
120408W
120412
120412W

2 / 4NU-DNGA



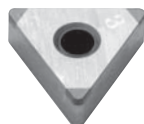
150404
150408
150412

2 / 4 / 8NU-SNGA



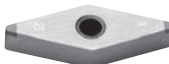
120404
120408
120412

3 / 6NU-TNGA



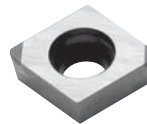
160404
160408
160412

2 / 4NU-VNGA



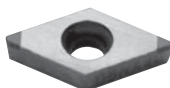
160404
160408
160412

2NU-CCGW / 2NU-CCMW



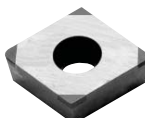
2NU-CCGW	2NU-CCMW
060204W	060204
060208W	060208
09T304	
09T304W	
09T308	
09T308W	
09T312	
09T312W	

2NU-DCGW



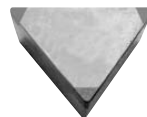
11T302
11T304
11T308

4NU-SCGW



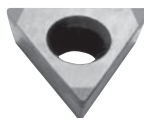
09T304
09T308
09T312

3NU-TPGN



110304
110308
160404
160408

3NU-TPGB / 3NU-TPGW



3NU-TPGB	3NU-TPGW
110304	160404
110308	160408

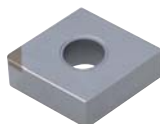
2NU-VBGW



110304
110308
160404
160408

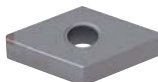
One-Use Type (Negative / Positive)

NU-CNMA



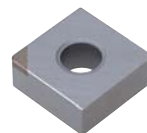
120404
120408
120412

NU-DNMA



150404
150408
150412

NU-SNMA



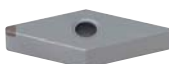
120404
120408
120412

NU-TNMA



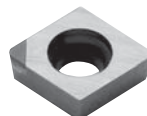
160404
160408
160412

NU-VNMA



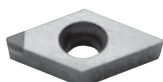
160404
160408
160412

NU-CCMW / NU-CPMB



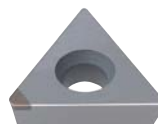
NU-CCMW	NU-CPMB
060202	080204
060204	080208
060208	090304
09T302	090308
09T304	
09T308	

NU-DCMW



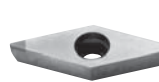
070202
070204
070208
11T302
11T304
11T308

NU-TCGW / NU-TPGW



NU-TCGW	NU-TPGW
090204	080202 110302
090208	080204 110304
110202	080208 110308
110204	090204 160404
110208	090208 160408
16T304	
16T308	

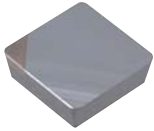
NU-VBMW / NU-VCMW



NU-VBMW	NU-VCMW
110202	110304
110204	110308
110302	160404
110304	160408
110308	160412
160402	
160404	
160408	

One-Use Type (Negative / Positive)

NU-SPGN



090304
090308
120304
120308
120404
120408

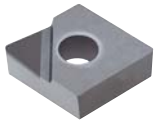
NU-TPGN



110304
110308
160304
160308

for PCD Inserts

CNMM / CNMX



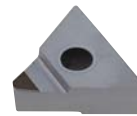
120404
120408
120412

DNMM / DNMX



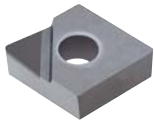
150404
150408
150412

TNMX



160404
160408
160412

VNMX



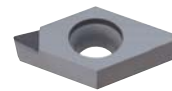
160404
160408
160412

CCMT / CPMT



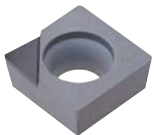
CCMT	CPMT
060202	080204
060204	080208
060208	080212
09T304	090304
09T308	090408
09T312	090312

DCMT



070202
070204
070208
11T302
11T304
11T308

SCMT / SPGW



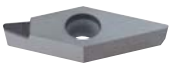
SCMT	SPGW
09T304	090302
09T308	090304
09T312	090308

TBGW / TCMT / TPGW / TPGT



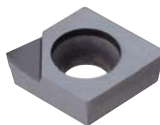
TBGW	TCMT	TPGB	TPGW	TPGT
060102	090201	080204	080202	110302
060104	090202	080208	080204	110304
	090204	090204	110302	
	110201	090208	110304	
	110202	110304	110308	
	110204	110308	160404	
			160408	

VBMT / VCMT



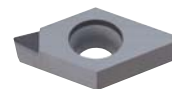
VBMT	VCMT
110302	110302
110304	110304
110308	110308
160402	160404
160404	160408
160408	160412
160412	

TPGN



09T304
09T308
09T312

SPGN



090304
090308
120304
120308

Tool Holders

● Turning Tool 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 3225-P15
2525-M11 3232-P15
3225-P11 2020-K15-3
3232-P11 2525-M15-3
2020-K15 3232-P15-3
2525-M15

DSBNR/L



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

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

DWLNR/L



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

● Turning Tool holders

Lever lock system

PCBNR/L



NEW type		
2020-K12N	3225-P12N	3232-P16N
2525-M12N	2525-M16N	
2020-K12	2525-M16	4040-S19
2525-M12	3232-P16	4040-S25
3225-P12	3232-P19	4040-S25-5

PCKNR/L



NEW type		
2020-K12N	3225-P12N	4040-S16N
2525-M12N	3232-P16N	
2020-K12	3225-P12	4040-S16
2525-M12	3232-P16	

PCLNR/L



NEW type		
1616-M09N	2020-K12N	2525-M16N
2020-K09N	2525-M12N	3232-P16N
2525-M09N	3225-P12N	
1616-H12N	3232-P12N	
1616-M09	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	

PDJNR/L



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

PDNNR/L



NEW type		
2020-K15N	3232-P15N	3232-P15-3N
2525-M15N	2525-M15-3N	
2020-K15	3232-P15	2525-M15-3
2525-M15	4025-M15	4025-M15-3

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



NEW type		
1616-H09N	2525-M12N	2525-M15N
2020-K09N	3225-P12N	3232-P15N
2020-K12N	3232-P12N	
1616-H09	3232-P12	4040-S25
2020-K09	2525-M15	4040-S25-6
2020-K12	3232-P15	5050-T25
2525-M12	3232-P19	
3225-P12	4040-S19	

PSDNN



NEW type		
1616-H09N	3225-P12N	3232-P15N
2020-K12N	3232-P12N	
2525-M12N	2525-M15N	
1616-H09	3232-P15	4040-T25
2020-K12	3225-P19	4040-S25-6
2525-M12	3232-P19	5050-T25-6
3232-P12	4040-S19	
2525-M15	4040-S25	

PSKNR/L



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

PSSNR/L



NEW type		
1616-H09N	3225-P12N	3232-P15N
2020-K12N	3232-P12N	
2525-M12N	2525-M15N	
1616-H09	2525-M15	4040-S19
2020-K12	3232-P15	4040-S25
2525-M12	3232-P19	4040-S25-6
3232-P12	4040-R19	

PTFNR/L



NEW type		
1616-H16N	2525-M22N	4040-S27N
2020-K16N	3232-P22N	
2525-M16N	3232-P27N	
1616-H16	2525-M22	4040-S27
2020-K16	3232-P22	
2525-M16	3232-P27	

Tool Holders

● Turning Tool holders

Lever lock system

PTGNR/L



NEW type		
1616-H16N	3232-P16N	3232-P27N
2020-K16N	2525-M22N	4040-S27N
2525-M16N	3232-P22N	
1212-F11	1616-H16	2525-M22
1616-H11	2020-K16	3232-P22
2020-K11	2525-M16	3232-P27
2525-M11	3232-P16	4040-S27

PTTNR/L



NEW type	
1616-H16N	2525-M16N
2020-K16N	2525-M22N
1616-H16	2525-M16
2020-K16	2525-M22

PWLNLR/L



NEW type		
1616-H06N	2525-M06N	2525-M08N
2020-K06N	2020-K08N	
1616-H06	2525-M06	2525-M08
2020-K06	2020-K08	

Wedge clamp system

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



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

CKJNL



2020-K16
2525-M16
3232-P16
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

• Turning Tool holders

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

MSBNR/L



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

MSDNN



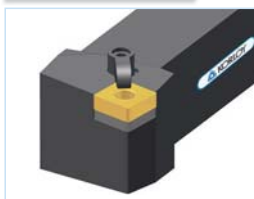
1616-H09
2020-K09
2020-K12
2525-M12
3225-P12
2525-M15
3225-P15
3232-P15
4040-S15
3232-P19
4040-S19

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

Tool Holders

• Turning Tool holders

Multi lock system

MTENN



2020-K16
2525-M16
2525-M22
3225-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



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-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

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

● Turning Tool holders

Screw on system

SSKCR/L



1616-H09

SSSCR/L



1616-H09
2020-K12

STACR/L



1010-E09
1212-F11

STFCR/L



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

STGCR/L



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

STTCR/L



1616-H11
1616-H16
2020-K16

SVABR/L



1616-M16
2020-K16

SVHBR/L



2525-M16
3225-P16

SVJVR/L



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

SWACR/L



1010-E04
1212-F04
1616-H06
2020-K08

Auto Tools

External turning and Facing

SCACR/L



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

SCLCR/L



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

STACR/L



0808-X08A
1010-X08A

External turning and Copy machining

SDJCR/L



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

SDNCN



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

SVJBR/L



1010-X11A
1212-X11A
1616-X11A

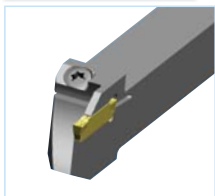
SVJCR/L



1010-X11A
1212-X11A
1616-X11A

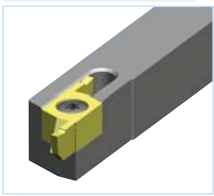
Parting and Grooving

MGEHR/L



insert : MGMN
1010-X15A
1212-X15A
1010-X20A
1212-X20A
1616-X20A
1010-X25A
1212-X25A
1616-X25A

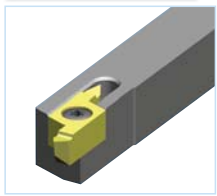
SXGNR/L



insert : SG, SC
1010-X06A
1212-X06A
1616-X06A
2020-X06A
1212-X08A
1616-X08A
2020-X08A

Threading

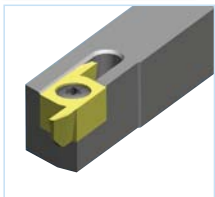
SXGNR/L



insert : ST
1010-X06A
1212-X06A
1616-X06A
2020-X06A
1212-X08A
1616-X08A
2020-X08A

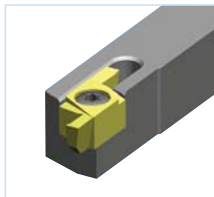
Back turning

SXGNR/L



insert : SB
1010-X06A
1212-X06A
1616-X06A
2020-X06A
1212-X08A
1616-X08A
2020-X08A

SXGNR/L



insert : SGB
1010-X06A
1212-X06A
1616-X06A
2020-X06A
1212-X08A
1616-X08A
2020-X08A

Boring

SCLCR/L



S10H-SCLCR/L-0305
S10H-SCLCR/L-0306
S10J-SCLCR/L-0407
S10J-SCLCR/L-0408

STUBR/L



A08F-STUBR/L-06
S08K-STUBR/L-06

STUPR/L



A08F-STUPR/L-08
S08K-STUPR/L-08

SWUBR/L



S05H-SWUBR/L-02
S08K-SWUBR/L-02
S08K-SWUBR/L-S3
A08F-SWUBR/L-02
A08F-SWUBR/L-S3

• Boring Bars

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



NEW type
S16R-PCLNR/L-09N
S20S-PCLNR/L-09N
S25R-PCLNR/L-09N
S25R-PCLNR/L-12N
S32S-PCLNR/L-12N
S40T-PCLNR/L-12N
S50U-PCLNR/L-12N
S50U-PCLNR/L-19N

A16R-PCLNR/L-09N
A20S-PCLNR/L-09N
A25R-PCLNR/L-09N
A25R-PCLNR/L-12N
A32S-PCLNR/L-12N
A40T-PCLNR/L-12N
A50U-PCLNR/L-12N
A50U-PCLNR/L-19N

S16R-PCLNR/L-09
S20S-PCLNR/L-09
S25R-PCLNR/L-09
S25R-PCLNR/L-12
S32S-PCLNR/L-12
S40T-PCLNR/L-12

S50U-PCLNR/L-12
S50U-PCLNR/L-19
A25R-PCLNR/L-12
A32S-PCLNR/L-12
A40T-PCLNR/L-12

PDSNR/L



NEW type
S32S-PDSNR/L-15N
S40T-PDSNR/L-15N
S32S-PDSNR/L-15-3N
S40T-PDSNR/L-15-3N

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

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

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

PDUNR/L



NEW type
S20S-PDUNR/L-11N
S25R-PDUNR/L-11N
S32S-PDUNR/L-11N
S32S-PDUNR/L-15N
S40T-PDUNR/L-15N
S50U-PDUNR/L-15N
S32S-PDUNR/L-15-3N
S40T-PDUNR/L-15-3N

A20S-PDUNR/L-11N
A25R-PDUNR/L-11N
A32S-PDUNR/L-11N
A32S-PDUNR/L-15N
A40T-PDUNR/L-15N
A50U-PDUNR/L-15N
A32S-PDUNR/L-15-3N
A40T-PDUNR/L-15-3N

S20S-PDUNR/L-11
S25R-PDUNR/L-11
S32S-PDUNR/L-11
S32S-PDUNR/L-15
S40T-PDUNR/L-15
S50U-PDUNR/L-15

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

PSKNR/L



NEW type
S25R-PSKNR/L-12N
S32S-PSKNR/L-12N
S40T-PSKNR/L-12N

A25R-PSKNR/L-12N
A32S-PSKNR/L-12N
A40T-PSKNR/L-12N

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

A25R-PSKNR/L-12
A32S-PSKNR/L-12

PTFNR/L



NEW type
S25R-PTFNR/L-16N
S32S-PTFNR/L-16N
S40T-PTFNR/L-16N

A25R-PTFNR/L-16N
A32S-PTFNR/L-16N
A40T-PTFNR/L-16N

S16R-PTFNR/L-11
S20S-PTFNR/L-11
S25R-PTFNR/L-11
S25R-PTFNR/L-16

S32S-PTFNR/L-16
S40T-PTFNR/L-16
A25R-PTFNR/L-16
A32S-PTFNR/L-16

PWLR/L



NEW type
S20S-PWLR/L-06N
S25R-PWLR/L-06N
S32S-PWLR/L-06N

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

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

S25R-PWLR/L-08
S32S-PWLR/L-08

Boring Bars

Boring Bars

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
S25R-CSKPR/L-12
S20S-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

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 S40T-SCLCR/L-12
S10K-SCLCR/L-06 A08F-SCLCR/L-06
S10M-SCLCR/L-06 A10H-SCLCR/L-06
S12M-SCLCR/L-06 A12K-SCLCR/L-06
S16R-SCLCR/L-06 A12K-SCLCR/L-09
S12M-SCLCR/L-09 A16M-SCLCR/L-09
S16R-SCLCR/L-09 A20Q-SCLCR/L-09
S20S-SCLCR/L-09 A25R-SCLCR/L-09
S25R-SCLCR/L-09 A25R-SCLCR/L-12
S25R-SCLCR/L-12 A32S-SCLCR/L-12
S32S-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
S10H-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

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

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

Boring Bars

Screw on system

STWPR/L



S10M-STWPR/L-11
S12M-STWPR/L-11
S16R-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



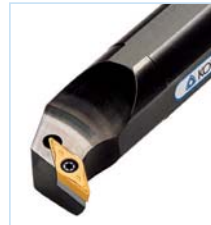
S16R-SVQCR/L-11
S20S-SVQCR/L-11
S25R-SVQCR/L-11
S20S-SVQCR/L-13
S25R-SVQCR/L-13
S25R-SVQCR/L-16
S32S-SVQCR/L-16
S40T-SVQCR/L-16

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

Sleeve

SL



SL1603
SL1604
SL1605
SL1606
SL1607
SL2008
SL2010

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 C25T-SCLCR/L-12
C05H-SCLCR/L-03 E06H-SCLCR/L-04
C08H-SCLCR/L-04 E07K-SCLCR/L-04
C07K-SCLCR/L-04 E08K-SCLCR/L-06
C08K-SCLCR/L-06 E10K-SCLCR/L-06
C10K-SCLCR/L-06 E10M-SCLCR/L-06
C10M-SCLCR/L-06 E12M-SCLCR/L-06
C12M-SCLCR/L-06 E12Q-SCLCR/L-06
C12Q-SCLCR/L-06 E12M-SCLCR/L-09
C12M-SCLCR/L-09 E12Q-SCLCR/L-09
C12Q-SCLCR/L-09 E16R-SCLCR/L-09
C16R-SCLCR/L-09 E16S-SCLCR/L-09
C16S-SCLCR/L-09 E20R-SCLCR/L-09
C20R-SCLCR/L-09 E20S-SCLCR/L-09
C20S-SCLCR/L-09 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
C16S-SDQCR/L-11 E16S-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
C10K-STUBR/L-06
E08K-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
C06H-SWUBR/L-02
C08K-SWUBR/L-02
C08K-SWUBR/L-03
E06H-SWUBR/L-02
E08K-SWUBR/L-02
E08K-SWUBR/L-03

Multi Functional Tools (Holders)

K.G.T Tools

KGEHR/L



• Insert
KGMN
KGGN
KGMR
KRMN

KGEVR/L



• Insert
KGGN
KGMN
KRMN

KGEUR/L



• Insert
KRMN

KGfVR/L



• Insert
KGMN
KRMN

KGfHR/L



• Insert
KGMN
KRMN

KGIUR/L



• Insert
KRMN

KGIVR/L



• Insert
KGMN

M.G.T Tools

MGEHR/L



• Insert
MGMN
MRMR
MGGN
MRMN
MRGN

MGIVR/L



• Insert
MGMN
MRMR
MGGN
MRMN
MRGN

MGEUR/L



• Insert
MRMN
MRGN

MGEVR/L



• Insert
MGMN
MGGN
MRMN
MRGN

MGIUR/L



• Insert
MRMN
MRGN

M.G.T-Cartridge

MCER/L



MGMN
MRMR/L
MGGN
MRMN

MCFR/L



MFMN
MGMN

MCHR/L



MCER/L
MCFR/L

MCVR/L



MCER/L
MCFR/L

Internal Cutting

GFIK



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

Insert : GR

GFIP



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

Insert : BF, GW

IGH



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

Insert : IG

NFTIH



Insert : NFTG, NFTT, NFTF

Saw-man

SPB



• Blade
226
326
426
526
626
232
332
432
532
632

Insert : SP

SPB-S (Stoper type)



• Blade
226-S
326-S
426-S
526-S
626-S
232-S
332-S
432-S
532-S
632-S

Insert : SP

SPH



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

Insert : SP

SPH-S (Holder)



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

Insert : SP

SMBB



• Blade
0712
1010
1012
1212

Insert : SP

Multi Functional Tools (Holders)

External Cutting

DBH



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

Insert : DB

EH



620R
625R

Insert : ESB

GFT



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

Insert : GW, BF

GH



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

Insert : GS, GO

TBH



320-23R/L 420-23R/L
320-33R/L 420-33R/L
320-43R/L 420-45R/L
325-23R/L 425-23R/L
325-33R/L 425-33R/L
325-43R/L 425-45R/L

Insert : TB

PH



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

Insert : FOB

Face Grooving Tools

FGHH (FGVH)



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

Insert : FGD/FGM/FMM

MGFHR



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

Insert : MFMN/MGMN

MGFVR



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

Insert : MFMN/MGMN

Threading

ER(L)H



• Screw on system
ER(L)H□□-□□

Insert : ER/ERM/ERM-U

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

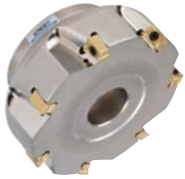


2020R
2525R
3225R

Insert : VETR

Rich Mill Series

RM4PC 3000/4000



■ 3000 Type

: Ø40 - Ø100mm

• Insert

LNEX100605PNR-MF/MM
LNMX100605PNR-MF/MM
LNEX100608PNR-MF/MM
LNMX100608PNR-MF/MM
LNEX100605PNR-MA
LNEX100605PNL-MM
LNMX100605PNL-MM

■ 4000 Type

: Ø50 - Ø160mm

• Insert

LNEX151004PNR-MF/MM
LNMX151004PNR-MF/MM
LNEX151008PNR-MF/MM
LNMX151008PNR-MF/MM
LNEX151016PNR-MF/MM
LNMX151016PNR-MF/MM
LNEX151004PNR-MA
LNEX151008PNR-MA
LNEX151008PNL-MM
LNMX151008PNL-MM

RM4PS 3000/4000



■ 3000 Type

: Ø14 - Ø50mm

• Insert

LNEX100605PNR-MF/MM
LNMX100605PNR-MF/MM
LNEX100608PNR-MF/MM
LNMX100608PNR-MF/MM
LNEX100605PNR-MA
LNEX100605PNL-MM
LNMX100605PNL-MM

■ 4000 Type

: Ø32 - Ø63mm

• Insert

LNEX151004PNR-MF/MM
LNMX151004PNR-MF/MM
LNEX151008PNR-MF/MM
LNMX151008PNR-MF/MM
LNEX151016PNR-MF/MM
LNMX151016PNR-MF/MM
LNEX151004PNR-MA
LNEX151008PNR-MA
LNEX151008PNL-MM
LNMX151008PNL-MM

RM4PM



: Ø14 - Ø50mm

• Insert

LNEX100605PNR-MF/MM
LNMX100605PNR-MF/MM
LNEX100608PNR-MF/MM
LNMX100608PNR-MF/MM
LNEX100605PNR-MA
LNEX100605PNL-MM
LNMX100605PNL-MM

RM4ZC 3000/4000



■ 3000/4000 Type

: Ø40 - Ø100mm

• Insert

LNEX100605PNL-MM
LNMX100605PNL-MM
LNEX151008PNL-MM
LNMX151008PNL-MM

RM4ZS 3000



■ 3000 Type

: Ø25 - Ø40mm

• Insert

LNEX100605PNL-MM
LNMX100605PNL-MM

RM4ZM 3000



■ 3000 Type

: Ø25 - Ø40mm

• Insert

LNEX100605PNL-MM
LNMX100605PNL-MM

RM8AC 4000/5000



■ 4000 Type

: Ø50 - Ø400mm

• Insert

SNEX1206ANN-MF/MM
SNMX1206ANN-MF/MM
SNEX1206ANN-MA
SNEX1206ANN-W

■ 5000 Type

: Ø80 - Ø400mm

• Insert

SNEX1507ANN-MF/MM
SNMX1507ANN-MF/MM

RMH8AC 4000/5000



■ 4000 Type

: Ø80 - Ø400mm

• Insert

SNEX1206ANN-MF/MM
SNMX1206ANN-MF/MM
SNEX1206ANN-MA
SNEX1206ANN-W

■ 5000 Type

: Ø80 - Ø400mm

• Insert

SNEX1507ANN-MF/MM
SNMX1507ANN-MF/MM

RM8EC 4000/5000



■ 4000 Type

: Ø50 - Ø400mm

• Insert

SNEX1206ENN-MF/MM
SNMX1206ENN-MF/MM
SNEX1206ENN-MA

■ 5000 Type

: Ø80 - Ø400mm

• Insert

SNEX1507ENN-MF/MM
SNMX1507ENN-MF/MM

RMH8EC 4000/5000



■ 4000 Type

: Ø80 - Ø400mm

• Insert

SNEX1206ENN-MF/MM
SNMX1206ENN-MF/MM
SNEX1206ENN-MA

■ 5000 Type

: Ø80 - Ø400mm

• Insert

SNEX1507ENN-MF/MM
SNMX1507ENN-MF/MM

RM8QC 4000



■ 4000 Type

: Ø63 - Ø200mm

• Insert

SNEX1206QNN-MF/MM
SNMX1206QNN-MF/MM
SNEX1206QNN-MA
SNEX120612-MF/MM
SNMX120612-MF/MM
SNEX120612-MA

RMH8QC 4000



■ 4000 Type

: Ø80 - Ø200mm

• Insert

SNEX1206QNN-MF/MM
SNMX1206QNN-MF/MM
SNEX1206QNN-MA
SNEX120612-MF/MM
SNMX120612-MF/MM
SNEX120612-MA

Face Mill

Rich Mill Series

RM4PFCB 3000/4000



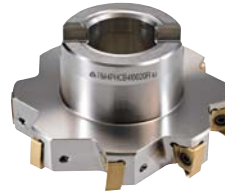
■ 3000 Type
: Ø80 - Ø160mm

• Insert
LNEX100605PNR-MM
LNMX100605PNR-MM
LNEX100605PNL-MM
LNMX100605PNL-MM

■ 4000 Type
: Ø80 - Ø160mm

• Insert
LNEX151008PNR-MM
LNMX151008PNR-MM
LNEX151008PNL-MM
LNMX151008PNL-MM

RM4PHCB 3000/4000



■ 3000 Type
: Ø80 - Ø160mm

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

■ 4000 Type
: Ø80 - Ø160mm

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

RM4PFCP 3000/4000



■ 3000 Type
: Ø80 - Ø160mm

• Insert
LNEX100605PNR-MM
LNMX100605PNR-MM
LNEX100605PNL-MM
LNMX100605PNL-MM

■ 4000 Type
: Ø80 - Ø160mm

• Insert
LNEX151008PNR-MM
LNMX151008PNR-MM
LNEX151008PNL-MM
LNMX151008PNL-MM

RM4PHCP 3000/4000



■ 3000 Type
: Ø80 - Ø160mm

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

■ 4000 Type
: Ø80 - Ø160mm

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

RM16AC 6000/8000



■ 6000 Type
: Ø63 - Ø400mm

• Insert
ONMX060608-MM/MF
ONHX060608-MM/MF
ONHX060608-W
ONMX0606ANN-MM/MM
ONHX0606ANN-MM/MM
ONHX0606ANN-MM/MA

■ 8000 Type
: Ø63 - Ø400mm

• Insert
ONMX080608-MM/MF
ONHX080608-MM/MF
ONHX080608-W
ONMX0806ANN-MM/MM
ONHX0806ANN-MM/MM
ONHX0806ANN-MM/MA

RMT8A 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 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 4000



■ 4000 Type
: Ø80 - Ø315mm

• Insert
SNMF1206QNN-MF/MM

Future Mill Series

FMAC 3000/4000



■ 3000 Type
: Ø50 - Ø125mm

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

■ 4000 Type
: Ø50 - Ø200mm

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

FMAS 3000/4000



■ 3000 Type
: Ø25 - Ø63mm

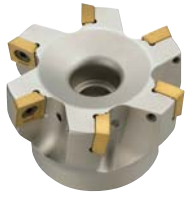
• Insert
SEET0903AGFN-MA
SEET0903AGSN-MF/MM
SEXT0903AGSN-MF/MM/MR
SEEW0903AGTN

■ 4000 Type
: Ø50 - Ø63mm

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

Future Mill Series

FMPC 3000/4000



- 3000 Type
: Ø50 - Ø100mm
- Insert
SDET09M402R-MA
SDET09M405R-MF/MM
SDXT09M405R/L-MF
SDXT09M405R/L-MM
SDXT09M405R-MA

- 4000 Type
: Ø63 - Ø125mm
- Insert
SDET09M402R-MA
SDET09M405R-MF/MM
SDXT09M405R/L-MF
SDXT09M405R/L-MM
SDXT09M405R-MA

FMPS 3000/4000



- 3000 Type
: Ø25 - Ø63mm
- Insert
SDET09M402R-MA
SDET09M405R-MF/MM
SDXT09M405R/L-MF
SDXT09M405R/L-MM
SDXT09M405R-MA

- 4000 Type
: Ø40 - Ø63mm
- Insert
SDET09M402R-MA
SDET09M405R-MF/MM
SDXT09M405R/L-MF
SDXT09M405R/L-MM
SDXT09M405R-MA

FMRC 3000/4000



- 3000 Type
: Ø40 - Ø100mm
- Insert
RDCT10T3M0-MA
RDKT10T3M0-MF/MM

- 4000 Type
: Ø50 - Ø125mm
- Insert
RDCT1204M0-MA
RDKT1204M0-MF/MM

FMRC 5000/6000



- 5000 Type
: Ø50 - Ø125mm
- Insert
RDHW1605M0E, F, S
RDKT1605M0-MM/ML

- 6000 Type
: Ø63 - Ø160mm
- Insert
RDHW2006M0E, F, S
RDKT2006M0-MM

FMRS 1000/1500



- 1000 Type
: Ø8 - Ø20mm
- Insert
RDHW0501M0E, F, S
RDKW0501M0E
RDHW06T1M0E, F, S
RDKW06T1M0E

- 1500 Type
: Ø8 - Ø20mm
- Insert
RDHW0501M0E, F, S
RDKW0501M0E
RDHW06T1M0E, F, S
RDKW06T1M0E

FMRS 2000/2500



- 3000 Type
: Ø15 - Ø25mm
- Insert
RDHW0702M0E, F, S
RDKW0702M0E
RDHW0803M0E, F, S
RDKW0803M0E

- 4000 Type
: Ø15 - Ø25mm
- Insert
RDHW0702M0E, F, S
RDKW0702M0E
RDHW0803M0E, F, S
RDKW0803M0E

FMRS 3000/4000



- 3000 Type
: Ø21 - Ø40mm
- Insert
RDCT10T3M0-MA
RDKT10T3M0-MF/MM

- 4000 Type
: Ø32 - Ø50mm
- Insert
RDCT1204M0-MA
RDKT1204M0-MF/MM

FMRS 5000/6000



- 5000 Type
: Ø40 - Ø63mm
- Insert
RDHW1605M0E, F, S
RDKT1605M0-MM/ML

- 6000 Type
: Ø50 - Ø63mm
- Insert
RDHW2006M0E, F, S
RDKT2006M0-MM

FMRM 1000/1500/2000/2500



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

FMRM 3000/4000/5000



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

FMAC 3000-A/4000-A



Aluminum Body

- 3000-A Type
: Ø63 - Ø125mm
- Insert
SEET0903AGFN-MA
SEET0903AGSN-MF/MM
SEXT0903AGSN-MF/MM/MR
SEEW0903AGTN

- 4000-A Type
: Ø63 - Ø315mm
- Insert
SEET14M4AGFN-MA
SEET14M4AGSN-MF/MM
SEXT14M4AGSN-MF/MM/MR
SEEW14M4AGTN
SEEW14M4AGFN-W
SEEW14M4AGSN-W
SEEW14M4AGTN-W

FMPC 3000-A/4000-A



Aluminum Body

- 3000-A Type
: Ø63 - Ø100mm
- Insert
SDET09M402R-MA
SDET09M405R-MF/MM
SDXT09M405R/L-MF
SDXT09M405R/L-MM
SDXT09M405R-MA

- 4000-A Type
: Ø63 - Ø315mm
- Insert
SDET130504R-MA
SDET130508R-MF/MM
SDXT130508R-MF/MM
SDXT130538-MM
SDXT130508R-MA

Face Mill

HRM / HRMDouble Tools

HRMDC 09/13



- 09 Type
: Ø40 - Ø100mm
- 13 Type
: Ø50 - Ø125mm
- Insert
WNMX09T316ZNN-MM
- Insert
WNMX130520ZNN-MM

HRMDC 16



- 16 Type
: Ø80 - Ø315mm
- Insert
WNMX160720ZNN-MM

HRMDS 06



- 06 Type
: Ø16 - Ø33mm
- Insert
WNMX060312ZNN-MM

HRMDS 09/13



- 09 Type
: Ø25 - Ø50mm
- 13 Type
: Ø32 - Ø63mm
- Insert
WNMX09T316ZNN-MM
- Insert
WNMX130520ZNN-MM

HRMDM 06



- 06 Type
: Ø16 - Ø33mm
- Insert
WNMX060312ZNN-MM

HRMDM 09/13



- 09 / 13 Type
: Ø25 - Ø40mm
- Insert
WNMX09T316ZNN-MM
- Insert
WNMX130520ZNN-MM

HRMC 13/15



- 13 / 15 Type
: Ø50 - Ø160mm
- Insert
WDKT130520ZDSR-MH
- Insert
WDKT150625ZDSR-MH

HRMS 08/10



- 08 / 10 Type
: Ø32 - Ø40mm
- Insert
WDKT080316ZDSR-MH
- Insert
WDKT10T320ZDSR-MH

HRMS 13/15



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

HRMM 08/10/13



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

Mill-Max series

ADN 4000/5000



■ 4000 Type
: Ø80 - Ø315mm

• Insert

SDCN42
SDCN1203
SDKN1203
SDKR1203
SDXN1203
SDXR1203

■ 5000 Type
: Ø80 - Ø315mm

• Insert

SDCN53
SDCN1504
SDKN1504
SDKR1504
SDXN1504
SDXR1504

AE 4000/5000



■ 4000 Type
: Ø80 - Ø315mm

• Insert

SECN1203
SEKN1203
SEKR1203
SEXN1203
SEXR1203

■ 5000 Type
: Ø80 - Ø315mm

• Insert

SECN1504
SEKN1504
SEKR1504
SEXN1504
SEXR1504

EF 4000



■ 4000 Type
: Ø80 - Ø315mm

• Insert

SFCN1203EFR

EN 4000



■ 4000 Type
: Ø80 - Ø315mm

• Insert

SNCN1204ENN
SNKN1204ENN

EPN 4000/5000



■ 4000 Type
: Ø80 - Ø315mm

• Insert

SPCN1203
SPKN1203
SPKR1203
SPXN1203
SPXR1203

■ 5000 Type
: Ø80 - Ø315mm

• Insert

SPCN1504
SPKN1504
SPKR1504
SPXN1504
SPXR1504

PF 4000



■ 4000 Type
: Ø80 - Ø315mm

• Insert

TFCN2203PFR
TFCN2203PFL

PPN 4000



■ 4000 Type
: Ø80 - Ø315mm

• Insert

TPCN2204
TPKN2204
TPKR2204
TPXN2204
TPXR2204

Double-Mill series

AFO 4000



■ 4000 Type
: Ø80 - Ø125mm

• Insert

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

AFO 5000



■ 5000 Type
: Ø80 - Ø315mm

• Insert

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

Power Buster series

PBAC 5000



■ 5000 Type
: Ø80 - Ø315mm

• Insert

TNMX2710AZNR-NM
TNMX2710AZNL-NM

PBZC 5000



■ 5000 Type
: Ø80 - Ø315mm

• Insert

TNMX2710AZNR-NM
TNMX2710AZNL-NM

Multi Functional Tools

Alpha-Mill Series

AMC-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-SE

1000SE, 2000SE, 3000SE



- 1000 Type
: Ø40 - Ø50mm
- 2000 Type
: Ø80 - Ø100mm
- 3000 Type
: Ø80 - Ø100mm

AMC-M

2000M, 3000M, 4000M



- 2000 Type
: Ø50 - Ø100mm
- 3000 Type
: Ø63 - Ø100mm
- 4000 Type
: Ø63 - Ø125mm

AMS-S

1000S, 1500S, 2000S, 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
: Ø12 - Ø32mm
- 2000 Type
: Ø16 - Ø40mm

BT Tooling system(Single)



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

HSK Tooling system(Single)



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

BT Tooling system(Multi)



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

HSK Tooling system(Multi)



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

Insert

1000 Series

APMT060202PDSR-MM
APMT0602PDFR-MA
APMT0602PDSR-MM
APMT060208PDSR-MM
APMT060212R-MM
APMT060216R-MM

1500 Series

APMT0903PDER-ML
APMT0903PDFR-MA
APMT0903PDSR-MM
APMT090308PDSR-MM
APMT090312R-MM
APMT090316R-MM
APMT090320R-MM
APMT090331R-MM
APMT090332R-MM

2000 Series

APMT11T3PDER-ML
APMT11T3PDFR-MA
APMT11T3PDSR-MM
APMT11T3PDSR-MF
APMT11T308PDSR-MM
APMT11T312PDSR-MM
APMT11T316R-MM
APMT11T318R-MM
APMT11T324R-MM

3000 Series

APMT1604PDER-ML
APMT1604PDFR-MA
APMT1604PDSR-MM
APMT1604PDSR-MF
APMT160410PDSR-MM
APMT160416PDSR-MM
APMT160424R-MM
APMT160430R-MM
APMT160432R-MM

3000-K Series

APFT1604PDSR-X22
APFT1604PDR-X22
APFT1604PDR-X28
APFT1604PDSR-X28
APFT1604PDR-X28
APKT1604PDSR
APKT1604PDSR-MF
APKT1604PDSR-MM
APKT160432R-MM1
APKT1604PDFR-MA
APKT1604PDR-X24
APKT1604PDTR-X24

4000 Series

APMT1806PDER-ML
APMT1806PDFR-MA
APMT1806PDSR-MM
APMT1806PDSR-MF
APMT180612PDSR-MM
APMT180616PDSR-MM
APMT180620PDSR-MM
APMT180624PDSR-MM
APMT180630R-MM
APMT180632R-MM

Tank-Mill Series

THE

Ø25 - Ø50mm



• Insert
THESPMT060304
SDMT090308-MM
SPMT120408-MM
APLT070304R
ADLT150308R
ZPMT1504PPSR-MM

Chamfer Tool Series

CE(Back&Front)



• Chamfer angles
15°, 30°, 45°, 60°
• Insert
SPMT110408-KC
15-1125R-S20
30-1125R-S20
45-1107R-S20
45-1119R-S20
45-1125R-S20
60-1125R-S32

CE(Front)



• Chamfer angles
45°
• Insert
SPMN120308
45-1207R-S32
45-1220R-S32
45-1225R-S32
45-1235R-S32

CE(Long Champer)



• Chamfer angles
45°
• 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

T-Cutter Series

TFE

Ø21 - Ø50mm



• Insert
CPMT21.51-MM
CPMT2.522-MM
CPMT32.52-MM
CPMH432-MM

Turbo-Mill Series

ADS 4000/5000



■ 4000 Type
: Ø50 - Ø63mm
• Insert
SDCN42
SDCN1203
SDKN1203
SDKR1203
SDXN1203
SDXR1203

■ 5000 Type
: Ø50 - Ø63mm
• Insert
SDCN53
SDCN1504
SDKN1504
SDKR1504
SDXN1504
SDXR1504

PES 2000/3000/4000



■ 2000/3000/4000 Type
: Ø20 - Ø63mm
• Insert
TECN22R/TR
TECN32R/TR
TECN32TR-S20
TEEN43R/TR
TEEN43R-G
TEEN43TR-S20
TEEN43TR-Z
TEEN43TR-ZH

For Aluminum Milling

Pro-X Mill

PAXC 5000/6000



- 5000 Type
: Ø40 - Ø125mm
- 6000 Type
: Ø50 - Ø125mm
- Insert
XEKT19M5□□FR-MA
- Insert
XEKT2506□□FR-MA

PAXS 5000/6000



- 5000 Type
: Ø20 - Ø42mm
- 6000 Type
: Ø25 - Ø40mm
- Insert
XEKT19M5□□FR-MA
- Insert
XEKT2506□□FR-MA

PAXM 5000



- 5000 Type
: Ø25 - Ø40mm

HSK Tooling system(Single)



- 5000 Type
: Ø32, Ø80, Ø100mm

Pro-A Mill

PAC 4000



- 4000 Type
: Ø40 - Ø100mm
- Insert
VCKT220530N-MA

PAS 2000/4000



- 2000/4000 Type
: Ø12 - Ø40mm
- Insert
VDKT11T210N-MA
VCKT220530N-MA

PAM 2000



- 2000 Type
: Ø12 - Ø42mm
- Insert
VDKT11T210N-MA

Aero Mill

APD-A



- Ø80 - Ø315mm
- Insert
CDEW1204R-XCF
CDEW1204R/L-XAF
CDEW1204R-NAF(Insert Type)
CDEW1204R/L-XAW
CDEW1204R-NAW

APD-B



- Ø80 - Ø315mm
- Blade
BAPDR/L-XAF
BAPDR/L-XAW
BAPDL-NAW

Aero Mill - Mini

MAPD000HR/L-Z0



- Ø40 - Ø63mm
- Insert
SNEW09T3ADFR
SNEW09T3ADTR-XAF
SNEW09T3ADTR-NAF

MAPDS000HR/L-Z0



- Ø32 - Ø40mm
- Blade
SNEW09T3ADFR
SNEW09T3ADTR-XAF
SNEW09T3ADTR-NAF

High Feed Milling Cutter

High feed cutter

ANH 4000/5000



- 4000 Type
: Ø100 - Ø450mm
- 5000 Type
: Ø100 - Ø450mm
- Insert
SNCN1204ENN
SNKN1204ENN
- Insert
SNCN 1504ENN
SNKN 1504ENN

CDH 4000/5000



- 4000 Type
: Ø100 - Ø450mm
- 5000 Type
: Ø100 - Ø450mm
- Insert
SDCN42R
SDCN42L
- Insert
SDCN53R
SDCN53L

DEH 5000



- 5000 Type
: Ø100 - Ø450mm
- Insert
HECN090408FN
HECN090408SN
HECN090408TN

DPH 5000



- 5000 Type
: Ø100 - Ø450mm
- Insert
HPEN090408FN
HPEN090408SN
HPEN090408EN
HPEN090408-WC

PNH 4000/5000

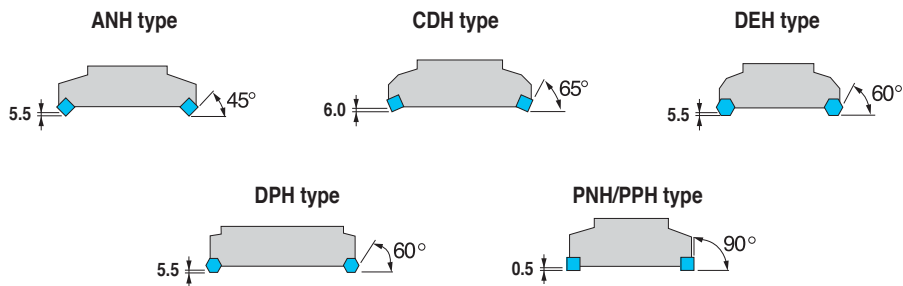


- 4000/5000 Type
: Ø125 - Ø450mm
- Insert
SNEF435
SNEF535

PPH 4000



- 4000 Type
: Ø125 - Ø450mm
- Insert
SPEN120416-WC



Shave Mill Ultra

SVUM 6000



- 6000 Type
Ø80 - Ø315mm
- Insert
LNCS1907-R3.0-WC
LNCS1907-C1.5-WC

SVUM 6000-B



- 6000-B Type
Ø80 - Ø315mm
- Insert
LNCS1907-R3.0-WC
LNCS1907-C1.5-WC

Side Cutter

• Adjustable Side Cutter

Tangential type(Full side cutter)

TAFCP

New

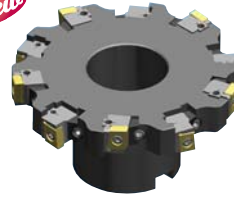


Ø100 - Ø315mm

• Insert
CNHQ1005-□□□
CNHQ1305-□□□
CNHQ1606-□□□

TAFCB

New



Ø100 - Ø315mm

• Insert
CNHQ1005-□□□
CNHQ1305-□□□
CNHQ1606-□□□

Tangential type(Half side cutter)

TAHCP

New



Ø100 - Ø315mm

• Insert
CNHQ1005-□□□
CNHQ1305-□□□
CNHQ1606-□□□

TAHCB

New



Ø100 - Ø315mm

• Insert
CNHQ1005-□□□
CNHQ1305-□□□
CNHQ1606-□□□

Radial type(Full side cutter)

RAFCP

New



Ø80 - Ø315mm

• Insert
SDXT09M40□□R/L
SDXT13050□□R/L

RAFCB

New



Ø100 - Ø315mm

• Insert
SDXT09M40□□R/L
SDXT13050□□R/L

Radial type(Half side cutter)

RAHCP

New



Ø100 - Ø315mm

• Insert
SDXT09M40□□R/L
SDXT13050□□R/L

RAHCB

New



Ø100 - Ø315mm

• Insert
SDXT09M40□□R/L
SDXT13050□□R/L

• Side Cutter

Side cutter

FC(Full side cutter)

Ø80 - Ø315mm



• Insert
TPCN22PPN
TPCN32PPN

HC(Half side cutter)

Ø100 - Ø315mm



• Insert
TPCN32PPN

SPP(M)

Ø80 - Ø200mm



• Insert
PNEJ12□□N

SPB(M)

Ø80 - Ø200mm



• Insert
PNEJ12□□N

SPS

Ø50 - Ø200mm



• Insert
SPFN200
SPFN300
SPFN400

- Ultra fine grain grade (FS03, FA1, FS1)
- Accurate cutting surface and good finishing operations with excellent toughness

H-Max Endmills

HPBE2000/2000L/2000T



No. of flute : 2
Cutting diameter : $\varnothing 0.6 \sim \varnothing 16$

HPRE2000/2000T



No. of flute : 2
Cutting diameter : $\varnothing 2$

HPRE4000/4000T



No. of flute : 4
Cutting diameter : $\varnothing 2 \sim \varnothing 16$

V-Endmill

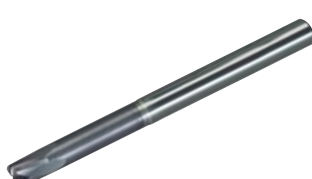
VFE4000(Standard)



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

F-Endmill

FME4000(Standard)



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

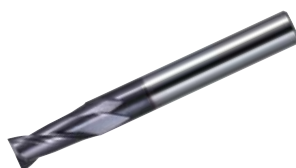
FMLE4000(Long)



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

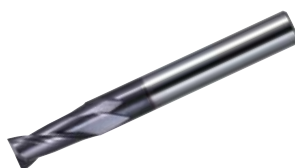
Coated Carbide I-Max Endmills

IFE2000 (Flat)Standard



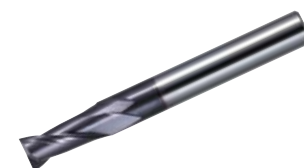
No. of flute : 2
Cutting diameter : $\varnothing 1 \sim \varnothing 20$

IFE3000 (Flat)Standard



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

IFE4000 (Flat)Standard



No. of flute : 4
Cutting diameter : $\varnothing 2.5 \sim \varnothing 20$

IFE2000 (Long Flat)



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

IFE4000 (Long Flat)



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

IFE2000-T (Taper Flat)



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

IBE2000 (Ball)



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

IBE4000 (Ball)



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

IBE2000 (Long Ball)



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

Solid Endmills

Coated Carbide I-Max Endmills

IBE2000-T (Taper Ball)



No. of flute : 2
Cutting diameter : Ø3 ~ Ø16

IRE2000 (Radius)



No. of flute : 2
Cutting diameter : Ø3 ~ Ø20

IRE4000 (Radius)



No. of flute : 4
Cutting diameter : Ø3 ~ Ø20

Carbide I-max Endmills

FE2000 (Flat)



No. of flute : 2
Cutting diameter : Ø1 ~ Ø20

FE3000 (Flat)



No. of flute : 3
Cutting diameter : Ø2 ~ Ø16

FE4000 (Flat)



No. of flute : 4
Cutting diameter : Ø2.5 ~ Ø20

FE2000 (Long Flat)



No. of flute : 2
Cutting diameter : Ø3 ~ Ø20

FE4000 (Long Flat)



No. of flute : 4
Cutting diameter : Ø3 ~ Ø16

FE2000-T (Taper Flat)



No. of flute : 2
Cutting diameter : Ø3 ~ Ø16

BE2000 (Ball)



No. of flute : 2
Cutting diameter : Ø1 ~ Ø20

BE4000 (Ball)



No. of flute : 2
Cutting diameter : Ø3 ~ Ø20

BE2000 (Long Ball)



No. of flute : 2
Cutting diameter : Ø3 ~ Ø20

BE2000-T (Taper Ball)



No. of flute : 2
Cutting diameter : Ø3 ~ Ø16

Endmills for Hard-to-cut-Material

IFSE3000 (Flat)



No. of flute : 3
Cutting diameter : Ø3 ~ Ø20

Endmills for specific Aluminium

SSE2000 (Flat)

Al



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

SSE3000

Al



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

SSBE2000 (Ball)

Al



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

C-Max Endmills

CFE2000 (Flat)



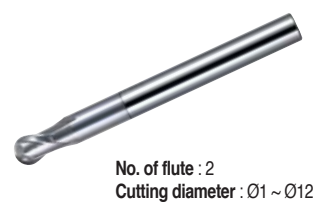
No. of flute : 2
Cutting diameter : $\varnothing 1 \sim \varnothing 12$

CFNE2000 (Long Neck Flat)



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

CBE2000 (Ball)



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

CBNE2000 (Long Neck Ball)



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

CRE2000 (Radius)



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

CRNE2000 (Long Neck Flat)



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

D-Max Endmills

DBE2000 (Ball)



No. of flute : 2
Cutting diameter : $\varnothing 4 \sim \varnothing 8$

DFE2000 (Flat)



No. of flute : 2
Cutting diameter : $\varnothing 3 \sim \varnothing 8$

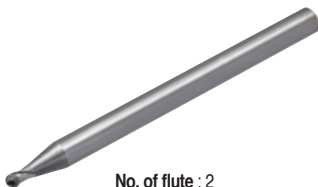
DRE2000 (Radius)



No. of flute : 2
Cutting diameter : $\varnothing 4 \sim \varnothing 8$

cBN Endmills

CSBE (Ball)



No. of flute : 2
Cutting diameter : $\varnothing 0.2 \sim \varnothing 4$

CSRE (Radius)



No. of flute : 2
Cutting diameter : $\varnothing 0.2 \sim \varnothing 4$

Solid Endmills

PCD Endmills

PDE1000 (Flat)



No. of flute : 1
Cutting diameter : $\varnothing 4.0 \sim \varnothing 6$

PDE2000 (Flat)



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

Micro Endmills

MSE2000 (Flat)



No. of flute : 2
Cutting diameter : $\varnothing 0.2 \sim \varnothing 1$

MSBE2000 (Ball)



No. of flute : 2
Cutting diameter : $\varnothing 0.2 \sim \varnothing 1$

Rib Endmills

DMA(V)H-RB (Ball)



No. of flute : 2
Cutting diameter : $\varnothing 0.2 \sim \varnothing 6$

DMA(V)H-RF (Flat)



No. of flute : 2
Cutting diameter : $\varnothing 0.2 \sim \varnothing 6$

DMA(V)H-RNR (Radius)



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

DMA(V)H-TNB (Neck Ball)



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

Brazed Endmills

ZSE200 (Flat)



No. of flute : 2
Cutting diameter : $\varnothing 14 \sim 50$

ZSE300 (Flat)



No. of flute : 3
Cutting diameter : $\varnothing 14 \sim 50$

ZSE400 (Flat)



No. of flute : 4
Cutting diameter : $\varnothing 14 \sim 50$

Solid Endmills / Solid Drills

Brazed Endmills

ZSE600 (Flat)



No. of flute : 6
Cutting diameter : $\varnothing 34 \sim 50$

ZSEA200 (Flat)



No. of flute : 2
Cutting diameter : $\varnothing 15 \sim \varnothing 50$

ZSEL200 (Long Flat)



No. of flute : 2
Cutting diameter : $\varnothing 14 \sim \varnothing 50$

ZSEL400 (Long Flat)



No. of flute : 4
Cutting diameter : $\varnothing 16 \sim \varnothing 40$

ZSEXL200 (Long Flat)



No. of flute : 2
Cutting diameter : $\varnothing 20 \sim \varnothing 25$

ZSBE200 (Ball)



No. of flute : 2
Cutting diameter : $\varnothing 13 \sim \varnothing 50$

Mach Drills

MSD

MSDA□□□-□P/M/K/N



Aspect Ratio(L / D) : 3, 5, 7
Cutting diameter : $\varnothing 2.5 \sim \varnothing 20$

MSDH

MSDHA□□□-□P/M/K/N



Aspect Ratio(L / D) : 3, 5, 7
Cutting diameter : $\varnothing 2.5 \sim \varnothing 20$

Mach Long Drills

MLDP

MLDPA□□□-□P/M/K/N



Aspect Ratio(L / D) : 3, 5, 7
Cutting diameter : $\varnothing 3 \sim \varnothing 10$

MLD

MLDA□□□-□P/M/K/N



Aspect Ratio(L / D) : 3, 5, 7
Cutting diameter : $\varnothing 3 \sim \varnothing 10$

Vulcan Drills

VZD-M, MB

Brazed type
Cutting diameter : $\varnothing 12.6 \sim \varnothing 40.5$



Special size items can be ordered.

VZD-L, LB

Brazed type
Cutting diameter : $\varnothing 12.6 \sim \varnothing 40.5$



Special size items can be ordered.

Carbide Drills

SSD

Solid Carbide
Cutting diameter : $\varnothing 1 \sim \varnothing 15$
For General purpose



Solid Drills / Indexable Drills / Indexable Ball Endmills

Indexable Drills Series

KING DRILL (2D/3D/4D/5D)

Ø12 - Ø60.5mm



• Insert

SPMT040204-PD
SPMT050204-PD
SPMT060205-PD
SPMT07T208-PD
SPMT090308-PD
XOMT040204-PD
XOMT050204-PD
XOMT060204-PD
XOMT07T205-PD
XOMT090305-PD
XOMT11T308-PD
XOMT130406-PD
XOMT15M508-PD
XOMT180508-PD

KING DRILL (K2D/K3D/K4D)

KING DRILL-Cartridge Type
Ø61 - Ø100mm



• Insert

SPMT(E)11T308-□□ XOMT(E)11T306-□□
SPMT(E)130410-□□ XOMT(E)130406-□□
SPMT(E)130410-□□ XOMT(E)130406-□□
SPMT(E)130410-□□ XOMT(E)130406-□□
SPMT(E)15M510-□□ XOMT(E)15M508-□□
SPMT(E)15M510-□□ XOMT(E)15M508-□□
SPMT(E)15M510-□□ XOMT(E)15M508-□□
SPMT(E)180510-□□ XOMT(E)180508-□□

• Cartridge

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

TPDB (3D/5D/8D)

Ø10 - Ø29.9mm

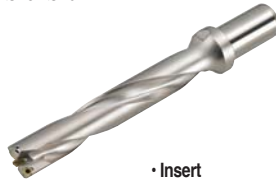


• Insert

TPD100BA ~ TPD299BA

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

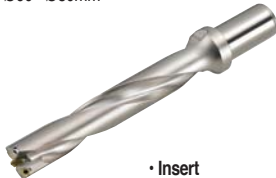


• Insert

WC□T06T308-C21
WC□T080408-C21

WPDC (5D/6.5D/8D)

Dual insert cartridge type
Ø60 - Ø80mm



• Insert

WC□T050308-C21
WC□T06T308-C21

Indexable Ball Endmills

BFE

Ø16 - Ø32mm



• Insert

RC16
RC20
RC25
RC30
RC32

BRE

Ø20 - Ø50mm



• Steel Shank

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

GBE

Single Edge
Ø16 - Ø50mm



Internal : M
External : S

ZPET080M(S)-MM
ZPET100M(S)-MM
ZPET125M(S)-MM
ZPET150M(S)-MM
ZPET160M(S)-MM
ZPET200M(S)-MM
ZPET250M(S)-MM

GBE-M

Multi Edge
Ø0.787 ~ Ø1.969inch



Internal : M
External : S

ZPET100M(S)-MM
ZPET125M(S)-MM
ZPET150M(S)-MM
ZPET160M(S)-MM
ZPET200M(S)-MM
ZPET250M(S)-MM
Ext. main :
SPMT060304
SDMT090308-MM
SPMT120408-MM

GBEM

Ø16 - Ø32mm



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

Indexable Ball Endmills / Adapter

Laser Mill Series

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

Carbide Shank-Ball, Corner R type
(Straight type)



LBE08080S-S08C
LBE080100S-S08C
LBE08020S-S08C-130
LBE08020S-S08C-150
LBE10080S-S10C
LBE100120S-S10C
LBE10023S-S10C-130
LBE10023S-S10C-170
LBE120100S-S12C
LBE120150S-S12C
LBE12025S-S12C-150
LBE12025S-S12C-200
LBE160100S-S16C
LBE160150S-S16C
LBE16030S-S16C-160
LBE16030S-S16C-210
LBE200120S-S20C
LBE200170S-S20C
LBE20035S-S20C-190
LBE20035S-S20C-240
LBE250140S-S25C
LBE250170S-S25C
LBE250040S-S25C-220
LBE250040S-S25C-250
LBE300140S-S32C
LBE300170S-S32C
LBE300050S-S32C-230
LBE300050S-S32C-260
LBE320140S-S32C
LBE320170S-S32C
LBE320050S-S32C-230
LBE320050S-S32C-260

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

Still Shank-Ball, Corner R type
(Taper type)



LBE08035T-S12
LBE08055T-S12
LBE08075T-S12
LBE10035T-S12
LBE10055T-S12
LBE10075T-S12
LBE12055T-S12
LBE12085T-S16
LBE16065T-S16
LBE160100T-S20
LBE20075T-S20
LBE200115T-S25
LBE250090T-S25
LBE250135T-S32
LBE300105T-S32
LBE300160T-S32
LBE320105T-S32
LBE320160T-S32

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

Still Shank-Ball, Corner R type
(Straight type)



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

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

Carbide Shank-Corner R type
(Straight type)



LRE10080S-S10C
LRE100120S-S10C
LRE10023S-S10C-130
LRE10023S-S10C-170
LRE120100S-S12C
LRE120150S-S12C
LRE12025S-S12C-150
LRE12025S-S12C-200
LRE160100S-S16C
LRE160150S-S16C
LRE16030S-S16C-160
LRE16030S-S16C-210
LRE200120S-S20C
LRE200170S-S20C
LRE20035S-S20C-190
LRE20035S-S20C-240
LRE250140S-S25C
LRE250170S-S25C
LRE250040S-S25C-220
LRE250040S-S25C-250
LRE300140S-S32C
LRE300170S-S32C
LRE300050S-S32C-230
LRE300050S-S32C-260
LRE320140S-S32C
LRE320170S-S32C
LRE320050S-S32C-230
LRE320050S-S32C-260

LRE (10/12)

Still Shank-Ball, Corner R type
(Taper type)



LRE10025T-S12
LRE10050T-S12
LRE12060T-S16

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

Steel Shank-Corner R 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

Shank adaptor for modular head

MAT(Still Shank)

* Available to use (FMRM, LBE, PAM, AMM, RM4PM, HRMM, PAXM)



(Straight neck type)
MAT-M06-020-S10S
MAT-M06-020-S12S
MAT-M06-040-S12S
MAT-M08-020-S16S
MAT-M10-030-S20S
MAT-M12-030-S25S
MAT-M16-035-S32S

(Taper neck type)
MAT-M06-040-S12T
MAT-M06-065-S16T
MAT-M06-065-S16T
MAT-M08-080-S16T
MAT-M08-040-S16T
MAT-M08-065-S16T
MAT-M08-080-S20T
MAT-M08-110-S25T
MAT-M10-050-S20T
MAT-M10-070-S20T
MAT-M10-090-S25T
MAT-M12-050-S25T
MAT-M12-070-S25T
MAT-M12-090-S25T
MAT-M12-110-S32T
MAT-M12-175-S40T
MAT-M16-055-S32T
MAT-M16-080-S32T
MAT-M16-120-S32T
MAT-M16-175-S40T

MAT-M10-110-S25T
MAT-M10-130-S32T
MAT-M12-050-S25T
MAT-M12-070-S25T
MAT-M12-090-S25T
MAT-M12-110-S32T
MAT-M12-175-S40T
MAT-M16-055-S32T
MAT-M16-080-S32T
MAT-M16-120-S32T
MAT-M16-175-S40T

MAT-C(Carbide Shank)

* Available to use (FMRM, LBE, PAM, AMM, RM4PM, HRMM, PAXM)



(Straight neck type)
MAT-M08-010-S16S-C-150
MAT-M08-010-S16S-C-180
MAT-M08-010-S16S-C-250
MAT-M10-010-S20S-C-170
MAT-M10-010-S20S-C-200
MAT-M10-010-S20S-C-300
MAT-M12-015-S25S-C-170
MAT-M12-015-S25S-C-200
MAT-M12-015-S25S-C-300
MAT-M16-020-S32S-C-180
MAT-M16-020-S32S-C-210
MAT-M16-020-S32S-C-300

(Taper neck type)
MAT-M08-080-S16S-C
MAT-M08-110-S16S-C
MAT-M08-150-S16S-C
MAT-M10-090-S20S-C
MAT-M10-110-S20S-C
MAT-M10-175-S20S-C
MAT-M12-090-S25S-C
MAT-M12-110-S25S-C
MAT-M12-175-S25S-C
MAT-M16-080-S32S-C
MAT-M16-120-S32S-C
MAT-M16-175-S32S-C

The comparison of chip breakers

Application			KORLOY		SMITOMO	SANDVIK	KENNA-METAL	KYOCERA	MITSUBISHI	ISCAR	TOSHIBA	SECO	WALTER	DIJET	TAEGU TEC
			Main	Sub											
NEGA Type	For steel	For ultra-finishing	HU	D02	FA FL	QF	FF	GP DP CF	FS FH FY	SF	TF			F1 FA	FA EA
		For ultra-finishing	VF	GF	SU LU	PF	FN FP K	CQ HQ	SA SH SY	NF	TSF TS,SS CF,ZF	MF2	NF NF5	FT UA	FG SF
		For medium to finishing	HC	VM	SX UU	SM	P	CQ HQ	SH	NF RF LF	ZM NM	MF1	NS4 NS8	GP UR PF	ML
		Medium machining	VM	GM	GU UX UG	PM QM	MN MP	GS HS CS PS	MV MA MH	TF PP	CM TM SM	M3 MR3 MF5	NM,NM4 NM5 NM7	UB GG	MP MC MT
		Roughing	HR	GR	MU MX	PR	RN	GT HT ★	GH	NR	TH CH	MR4 M5	NR5 NR7	UD	RT ★
		Heavy duty machining	GH	B40	HG MP HP	HR	RH	HX	HZ HV HH HX	TNM	TU 57 65	RR9		UC	RH HT
		For better surface finish WIPER I/S	VW LW		GUW LUW	WF,WM WR,WL	MW FW RW	WQ WP	MW SW	WG WF	AFW ASW	M3,M5	NF,NM		WS WT
	For general		B25	GR	UZ	23	MG	★	MT, MV	GN				GN	★
	Stainless steel, soft steel		HA HS GS	HC VM GR X38	SU EX (GU) MU FL	MF MM,QM MR,QM LC	FF,FW FP,MP MW,RN	GU,HU XP,XQ XS MU,MS	FS, FJ SH, MJ MS, GJ GH,FY	PP TF	TF SS SA TU MS	MF1 MF3 M5	NS4 NM4 NR7	SF	FG,ML MP,MT RH,ET EA
	For cast iron		GR	B20 B25 HR	UZ UX ★	KF KM,QM KR,QR	FF,FW MP,MW RN,UN	GC ★ ZS	★ MA GH	GN	★ 33 ★ CM	MF3 M5	NS4,NS8 ★ NM4		MT,RT ★
	For aluminum		HA				F GP MS	AH		PP					
POSI Type	For steel - cast iron	For finishing	HFP		LU FP	PF KF	MT-UF MT-LF GT-LF	GP DP HQ	FV SQ	★ SM	01 PF	F1	PF5	FT	FA
		For medium to finishing (medium machining)	HMP		SJ,SU SK	(PM) (KM)	MT-LF	XQ HQ GK	SV R/L R/L-F	14,SM 17,19	PS 23 PM	F1 F2	PS4 PS5		FG
		Medium machining (Roughing)	C25	HMP	SF MU	(PR) (KR)	MT-MF	★ G	MV MQ ★	19	24 ★	F2	PM2 PM5 (PR5)		MT
	For aluminum		AR AK MA		AG	AL	HP	A3		AS	PP			ALU ACB	FL
	For stainless steel		HMP	AK	SU	MF, MM MR	LF	(XQ)	FV ★	14,SM 17,19	SS		PS4 PM5		FA FG MT
	WIPER I/S				LUW	WF WM			SW MW	WF WG					WT
	Indexable drills		DM DS,DA DF	C20 C21	S04 R06	51,53 56,58		★ SU,SP		SW,GF GG,DT		C1,P1 85,86			

★ : Simple Type ★ : Non - Name

The comparison of grade for turning

> WC

ISO	KORLOY	SUMITOMO	KYOCERA	ISCAR	SANDVIK	SECO	KENAMETAL	TOSHIBA	MITSUBISHI	HITACHI	VALENITE	WALTER	TAEGUTEC	NTK	DIJET
Turning	P	ST50E ST10 ST15 ST20 MA2 ST30 ST30A ST30N ST40	ST10P ST20E A30 ST40E		S1P SM30 S30T S6	TTX TTM TTR	K45 KM K420	TX10S TX20 TX30 TX40	ST110T ST120T UT120T	SRN5 WS20B EX35 EX40 EX45	S1F VC6 VC5 VC56		P10 P20 P30 P40		
	M	U10 U20 U40	U10E U2 A30 A40		H13A H10F	AT10 AT15 TTR	K2885 K2S	TU10 TU20 TU40	UT120T	WAM10B EX35	VC27 VC28		M10 M20 M40		
	K	H02 H01 H05 H10 G10	H1 G10E	KW10H	IC4 IC20 IC28	H1P H10F	THM THR	K68 K8735	TH03 TH10 KS20	HT110T HT120T	WH05 W10 WH20	VC3 VC2 VC1	K10 K20 K20M K30		

> CVD COATED

ISO	KORLOY	SUMITOMO	KYOCERA	ISCAR	SANDVIK	SECO	KENAMETAL	TOSHIBA	MITSUBISHI	HITACHI	VALENITE	WALTER	TAEGUTEC	NTK	DIJET
Turning	P	NC3010 NC3220★	AC810P AC820P	CA5505 CA5515 CA5525	IC8150 IC8250	GC4205 GC4215 GC4225	TP0500 TP1500 TP2500	KCP05 KCP10 KCP25	T9105 T9115 T9125	UE6105 UE6110 UE6020	HG8010 HG8025	VP5515 VP5525	WPP01 WPP05 WPP10 WPP20	TT8115 TT8125	CP5 JC110V JC215V
	M	NC3120 NC3030 NC5330★ NC500H	AC830P	CA5535	IC8350	GC4235	TP3500	KU30 KCP40	T9135	UE6035	GM8035	VP5535	WPP30	TT8135 TT7100	JC325V JC450
	K	NC9020 NC9025	AC610M AC630M	CA6515 CA6525	IC8250 IC8350	GC2015 GC2025	TM2000 TM4000	KCM15 KCM25 KCM35	T6020 T6030	US7020 US735	GM25 GX30	VP8515 VP8525	WAM10 WAM20	TT9215 TT9225 TT9235	TT9215 TT9225 TT9235

> PVD COATED

ISO	KORLOY	SUMITOMO	KYOCERA	ISCAR	SANDVIK	SECO	KENAMETAL	TOSHIBA	MITSUBISHI	HITACHI	VALENITE	WALTER	TAEGUTEC	NTK	DIJET
Turning	P	PC230 PC3535 PC5300★ PC3545		PR1005 PR915 PR1115 PR930 PR1025 PR630 PR660	IC507 IC808★ IC830★ IC908 IC3028 IC330★	GC1025 GC4125	CP200 CP250 CP500	AH710 GH730 AH330 AH740 AH120 GH330	VP15TF VP20MF	IP2000 IP3000	VC907 VC927 VC905	WTA43 WTA41	TT5030		JC5003 JC5015
	M	PC8110★ PC5300★ PC9030	AC510U EH510Z AC520U EH520Z★ AC530U★	PR915 PR930 PR1125 PR630 PR660	IC808★ IC907 IC3028 IC830★ IC330★	GC1005 GC1020 GC1025 GC4125	CP200 CP250 CP500	AH330 GH330 AH120 GH730 AH140	VP05RT VP10RT VP15TF VP20MF	IP505★ IP100S★	VC929 VC927 VC902 VC901 VC905		TT5030	ZM3 QM3 VM1 TAS	JC5003 JC5015
	K	PC5300★	EH510Z EH520Z		IC5100★ IC810★ IC220 IC908 IC228★ IC808★		CP200 CP250 CP500	AH110 GH110 AH120		CY110H	VC929 VC903 VC927 VC902 VC901 VC907		TT5030		

> CERMET

ISO	KORLOY	SUMITOMO	KYOCERA	ISCAR	SANDVIK	SECO	KENAMETAL	TOSHIBA	MITSUBISHI	HITACHI	VALENITE	WALTER	TAEGUTEC	NTK	DIJET
Turning	P	CN1000 CC115★ CN2000 CN20	T110A T2000Z★ T1500A★ T3000Z★	PV30★ TN30 PV60★ TN60 TN6020 TN90	IC20N IC520N IC30N IC530N	CT5015 CT525 GC1525★	CM C15M TP1020 TP1030★	HT2 KT125 HT5 KT175 KT195M	NS520 GT530★ NC530 NC540 NC730	NX2525 NX3035 UP35N★ AP25N★ NX335	CH350 CZ25★ CH530 CH550 CH570	VC83 WTA43★ WTA41★	PV3010★ CT3000	T3N T15 N20 C30 N40	LN10 CX50 CX75 CX90 CX99
	M		T1500A★						NX2525						LN10 CX75 CX99
	K	CN1000	T110A T1500A★						NX2525				CT3000	T15	LN10 CX75

★ : PVD Coating cermet ★ : New Grade

The comparison of grade for milling

> CVD COATED

ISO	KORLOY	SUMITOMO	KYOCERA	ISCAR	SANDVIK	SECO	KENAMETAL	TOSHIBA	MITSUBISHI	HITACHI	VALENITE	WALTER	TAEGUTEC	NTK	DIJET
Milling	P	NC5330★	ACP100		IC5400	GC4220	MP1500					WQM15	TT7400		
		NCM325				GC4230	MP2500					WKP25			
		NCM335				GC4240	T25M T350M	T3130	FH7020 F7030		SM245	WQM25 WKP35 WQM35	TT7800		
	M	NC5330★													
		MCM325 NCM335				GC2040	MP2500 GC2040	T3130	F7030			WQM25 WTP35			
	K	NC5330★	ACK200		IC5100	GC3220	MK1500 MK3000	T1115 T1015	MC5020		V01 VN8	WAK15 WKP25 WKP35	TT6800		

> PVD COATED

ISO	KORLOY	SUMITOMO	KYOCERA	ISCAR	SANDVIK	SECO	KENAMETAL	TOSHIBA	MITSUBISHI	HITACHI	VALENITE	WALTER	TAEGUTEC	NTK	DIJET
Milling	P	PC210F								ATH80D PCA08M ACS05E PCA12M PC20M JX1005 TB6005 JX1020 CY9020					
		PC3500 PC3525 PC3535	ACZ310 ACP200 ACZ330	PR730 PR830 PR630	IC903 IC908 IC950 GC1025 GC1030	MP3000★ F25M F30M	KC522M KUC20M KC525M KUC30M	GH330 AH120	AP20M GP20M VP15TF UP20M		VC935		TT7070 TT7080 TT7030	QM3 ZM3	JC5003 JC5015 JC5030 JC5040
		PC5300★	ACP300 ACZ350		IC1008					TB6045 CY250 PTH30E					
		PC3545		PR660	IC928	GC1030	KC935M KC7140 KC720		VP30RT	PTH40H			TT8020		
	M		PR730	IC903			KC5510 KC7020			JX1020 CY9020 JX1015 TB6020 CY250					JC5003
		PC5300★	ACP200	PR1025 PR630 PR660	IC900 IC250 IC928	GC1125 GC1025 GC2030 GC1030	KC522M KC725M KC735M KC7030	AH120 AH140		JX1045 TB6045 JX1060 TB6060	VC928 VC902 VC901	WQM35	TT9030 TT9080 TT8020	QM3 ZM3	JC5015 JC5030 JC5040
		PC9530 PC3545	ACP300 ACZ350		IC328		F30M F40M								
	K	PC8110★ PC6510		PR510 PR905	DT7150 IC900 IC910 IC950 IC350		KC510M KC915M KC520M	AH120	VP10MF VP15TF VP20RT		VC903 VC928 VC902 VC901		TT6290 TT6030 TT6060		JC5003 JC5015
		PC5300★													
	S	PC5300★	AC520U	PC660	IC328	GC1025	TS2500	KC510M	VP15TF	ACS05E			TT9030		

> CERMET

ISO	KORLOY	SUMITOMO	KYOCERA	ISCAR	SANDVIK	SECO	KENAMETAL	TOSHIBA	MITSUBISHI	HITACHI	VALENITE	WALTER	TAEGUTEC	NTK	DIJET
Milling	P	CN2000 CN20 CN30	T250A	TN100M TC60M	IC30N			NS540 NS740	NX2525 NX4545	CH550 CH570			CT3000 CT7000	C50	
	M		T250A			CT530									
	K								NX2525						

★ : PVD Coating cermet ★ : New Grade



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