2007
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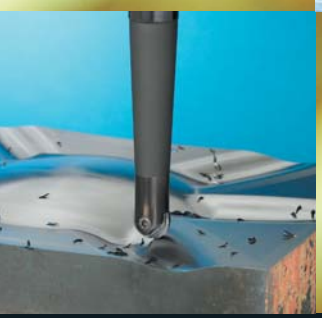
KORLOY®
CUTTING TOOLS





KORLOY Inc.
WE CREATE YOUR TOMORROW!

Profile

40 years' Challenge has made New-Road. Another 40 years will Create New-Beginning.

As a cutting tool manufacturer pursuing Leading-company of world market,
Ceaseless challenge and creative mind will make the future of KORLOY Inc.

Introduction

KORLOY Inc. is a total cutting tool manufacturer who makes carbide, coated carbide and etc. Since 1966, constant innovation has led **KORLOY Inc.** to be the best carbide cutting tool manufacturer in Korea, who tries to be one of the world top class in the field of cutting tool manufacture.

KORLOY Inc. is exporting to over 60 nations through out the world. The products of **KORLOY Inc.** have been getting better and better reputation by virtue of creative, progressive and technical human-resource with up-to-date manufacturing machines as well as Technology Oriented and Market Oriented Management Philosophy.

KORLOY Inc. will do the best to be a World best cutting-tool Manufacturer hoping constant interest and support from our generous customers.

Contents

Selection of KORLOY Grades

KORLOY

Turning

Workpiece	P						M				K				S			H		
Cutting Condition	High Speed		Medium Speed		Low Speed	Intermittent & Heavy Duty	High Speed		Medium Speed	Low Speed	High Speed		Medium Speed	Low Speed	High Speed	Medium Speed	Low Speed	High Speed	Medium Speed	Low Speed
ISO	P01	P10	P20	P30	P40	P50	M10	M20	M30	M40	K01	K10	K20	K30	S01	S10	S20	H01	H10	H20
Coated Carbide	NC3010		NC3120				NC9020				NC305K		NC6110							
			NC3030					NC3030					NC315K			PC8010				
			NC500H						PC9030											
			PC230																	
Cermet	CN100											CN100								
		CT10																		
			CN20																	
			CN2000																	
C.B.N											KB350							KB320		
												KB360							KB330	
Un-Coated Carbide	ST05																			
		ST10						U10				H02								
			ST15						U20				H01							
		ST20												H05						
			MA2											H10						
			ST30N	ST40E						U40				G10						
					ST46															
					ST45															

Milling

Coated Carbide			NCM325				NCM325					PC6510				PC8520				
			NCM335					NCM335												
			PC3525						PC9530				PC215K							
			PC3535							PC3545										
			PC3545																	
Cermet		CN20																		
			CN30																	
C.B.N											KB360							KB350		
Un-Coated Carbide			ST20									H01								
			MA2					U10				H05								
				ST30A					U20			H10								
				ST30N						U40			G10							
				ST40																

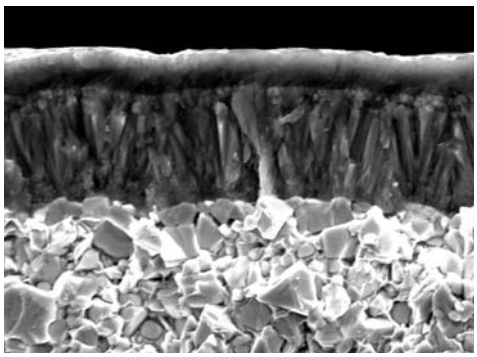
Drilling & Endmilling

Coated Carbide		PC205F						PC205F				PC205F				PC205F			PC205F	
		PC210F						PC210F								PC210F			PC210F	
			PC215F									PC215F								
			PC220F						PC220F										PC220F	
			PC225F						PC225F			PC225F								
Un-Coated Ultra-fine Carbide		FG2										FG2								FG2
		FS1						FS1												
					FCC															
			FA1									FA1								

Special Features

1) Due to the special crystalline structure of coating, superior wear-resistance and toughness have been acquired.
2) Multi-layer coating, having strong bonding strength, has been employed by new coating technology.

Al_2O_3 (Enhance wear Resistance, Prevent Built-up-edge Intermediate layer for better adhesion)
TiC (Enhance wear Resistance)
TiCN (Enhancing wear-resistance and Toughness by adopting New-Coating Tech.)



Cross-sectional view of CVD coating

Guide of Grade Selection

Turning

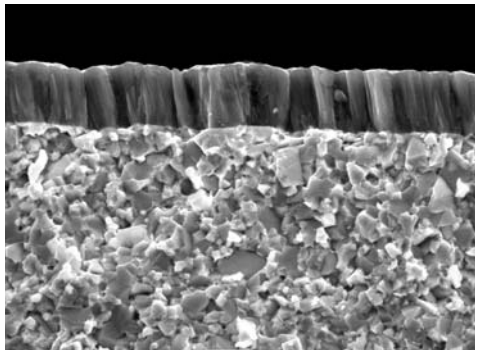
Workpiece	Cutting condition	1st Choice	Cutting speed (m/min)	Cutting speed (sfm)	ISO	Application Range
Steel	Continuous cutting	NC3010	280(200~400)	920(660~1320)	P01	NC3010 (New)
					P10	
		NC3120	230(180~350)	760(590~1150)	P20	NC3120 (New)
	Interrupted cutting		200(180~300)	660(590~990)	P25	
		NC3030	180(120~200)	590(390~660)	P30	NC3030
	Heavy duty	NC500H	100(50~150)	330(160~490)	P40	NC500H
Cast Iron	Continuous cutting	NC305K	370(300~500)	1220(990~1650)	K05	NC305K
		NC6110	350(250~450)	1150(820~1480)	K10	NC6110 (New)
	Interrupted cutting	NC315K	250(150~300)	820(490~990)	K20	NC315K
Stainless steel	Continuous cutting	NC9020	200(180~220)	660(590~720)	M01	
					M10	NC9020
	Interrupted cutting	NC3030	150(100~200)	490(330~660)	M20	NC3030 (New)
					M30	

Milling

Workpiece	1st Choice	Cutting speed (m/min)	Cutting speed (sfm)	ISO	Application Range
Steel	NCM325	250(150 ~ 300)	820(490 ~ 980)	P20 M20	NCM325
				P30 M30	
	NCM335	200(150 ~ 250)	660(490 ~ 820)	P40 M40	NCM335

Special Features

1) PVD coating technology has inherent advantage like superior chipping resistance of coated film itself and maintain the toughness of carbide substrate. Thus it is possible to increase the tool life approximately 2~4times longer than carbide cutting tools.
2) PVD coating can make sharp cutting edge without blunting of sharp substrate.
3) Ti-base coating film 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) Using TiAlN which is optimal for high speed dry cutting case.
2) Toughness of TiAlN has been enhanced than conventional brittle TiAlN.
3) Due to the TiN at outer most layer, friction has been reduced and surface has been improved.
4) Easy to recognize of wear amount on cutting edge.

Guide of Grade Selection

Turning

Workpiece	Coating	1st Choice	Cutting speed (m/min)	Cutting speed (sfm)	ISO	Application Range
Steel	TiAlN/ TiN	PC3525	180(120~230)	590(390~750)	P10	PC3525
					P20	
					P30	
					P40	
Stainless steel	TiAlN	PC9030	130(50 ~ 180)	430(160 ~ 590)	M20	PC9030
					M30	
					M40	
HRSA	TiAlN/TiN	PC8010	50(20 ~ 70)	160(70 ~ 230)	S01	PC8010
					S10	
					S20	

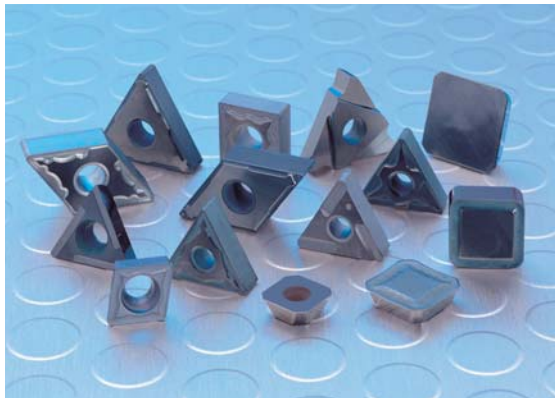
Milling

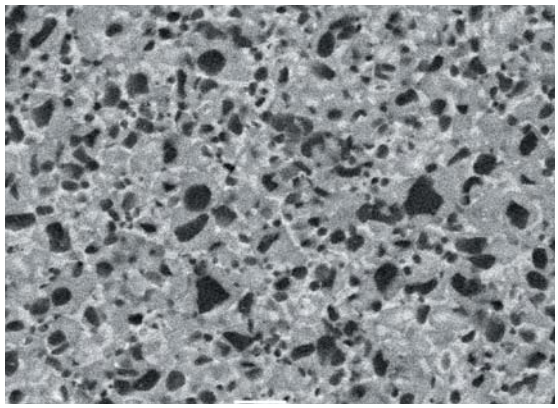
Workpiece	Coating	1st Choice	Cutting speed (m/min)	Cutting speed (sfm)	ISO	Application Range
Steel	TiAlN	PC3525	250(150~350)	820(490~1150)	P10	New PC3525
	TiAlN/ TiN	PC3535	200(150~250)	660(490~820)	P20	PC3535
		PC3545	120(100~150)	390(330~490)	P30	PC3545
					P40	
Cast Iron	TiAlN/ TiN	PC6510	200(150~250)	660(490~820)	K01	PC6510
		PC215K	170(120~210)	560(390~690)	K10	PC215K
					K20	
Stainless steel	TiAlN	PC9530	130(50~200)	430(160~660)	M20	PC9530
					M30	
					M40	
HRSA	TiAlN/TiN	PC8520	50(20~70)	160(70~230)	S10	PC8520
					S20	
					S30	

KORLOY Cermet Grades

Special Features

KORLOY cermet is a kind of carbonitride type cermet which has ultra fine micro structure by adding TiN, TiCN powders as additives. It has superior thermal shock resistance and optimal wear resistance and toughness as per cutting condition, as well.





Microstructure of Cermet

Special Advantages

Cermet, using TiCN as main component, is harder than cemented carbide and has lower affinity with Ferrous workpiece at high temperature, thus cermet have special advantage as below.

Comparing with 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, from 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.

Comparing with Coated Carbide

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

Guide of Grade Selection

Turning

Workpiece	Coating	1st Choice	Cutting Speed (m/min)	Cutting Speed (sfm)	ISO	Application Range
Steel	Finishing	*CC105 *CC115	230(150 ~ 300)	750(490 ~ 980)	P01	CC105
	Light to medium cutting	CN100 CT10	200(150 ~ 280) 200(130 ~ 250)	660(490 ~ 920) 660(430 ~ 820)	P10	CN100, CC115, CT10, CN20
		CN20 CN2000	200(150 ~ 250)	660(500 ~ 830)	P20	CN20, CN2000 (New)

* CC105, CC115 is Coated Cermet Grades.

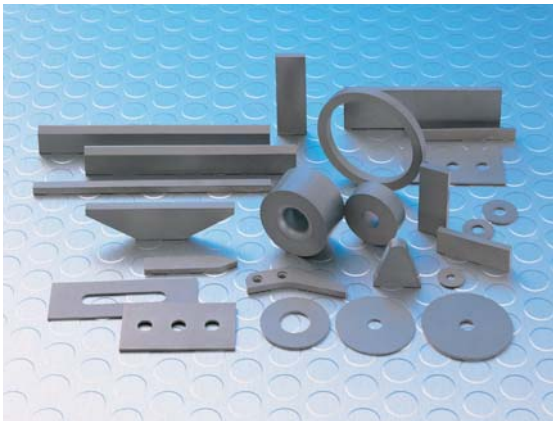
Milling

Workpiece	Coating	1st Choice	Cutting Speed (m/min)	Cutting Speed (sfm)	ISO	Application Range
Steel	Finishing	CN20	230(150 ~ 300)	760(500 ~ 990)	P01	
					P10	CN20
	Light to medium cutting	CN30	200(150 ~ 250)	660(500 ~ 820)	P20	CN30

KORLOY Uncoated Carbide Grades

Special Features

Due to the advanced sintering technology that KORLOY use, KORLOY uncoated carbide grades have even and fine alloy structure which is necessary to get superior quality as a cutting tool.
KORLOY uncoated carbide grades have exceptional wear resistance and toughness at the same time, due to the special design of WC, Co, TaC and TiC, etc.



Advantages

1) Variety of grades as per ISO classification (P,M,K)
2) Excellent quality at machining with coolant, due to the great thermal crack resistance of carbide.
3) Due to the special design of carbides, it has fine micro structure and low affinity with workpiece.
4) It has excellent toughness, in general.

ISO	Composition	Characteristics	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	Comprehensive grades have excellent thermal shock resistance and superior	Carbon steel, Alloy steel, Stainless steel, Cast steel
K	WC-Co	Hard and strong grades	Cast iron, Non-ferrous metal, Plastic, Acryl etc

ISO	Grade	Hardness (H_RA)	TRS (kgf/mm^2)	Young's modulus ($10^3 kgf/mm^2$)	Thermal expansion coefficient ($10^{-6}/℃$)	Thermal conductivity ($cal/cm \cdot Sec \cdot ℃$)
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	-	-
	U2	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

Turning

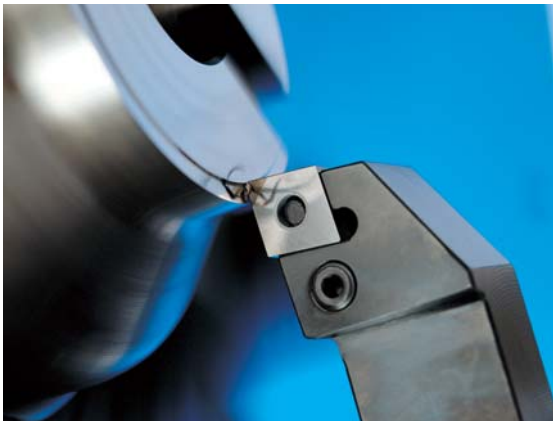
Workpiece	1st Choice	Cutting Speed (m/min)	Cutting Speed (sfm)	ISO	Application Range
Steel	ST10	150(100 ~ 200)	500(330 ~ 660)	P10	ST10
	ST15	140(90 ~ 190)	460(300 ~ 630)	P20	ST15
	ST20	130(70 ~ 180)	430(230 ~ 590)		ST20
	MA2, ST30A	130(70 ~ 180)	430(230 ~ 590)	P30	MA2
Cast iron	H02	150(100 ~ 200)	500(330 ~ 660)	K01	ST30A
	H01, H05	140(100 ~ 200)	460(330 ~ 660)	K10	H02
	H10, G10	130(90 ~ 190)	430(300 ~ 630)		H01
Aluminum alloy	H01	500(300 ~ 800)	1,640(990 ~ 2,630)	K20	H05
Copper, Bronze	H01	200(150 ~ 300)	660(500 ~ 990)	K30	H10
					G10

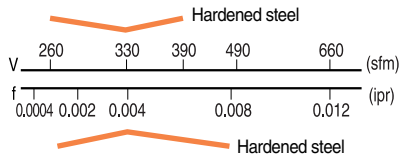
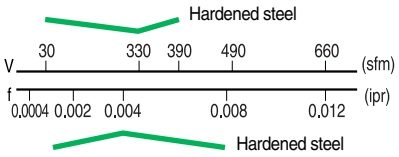
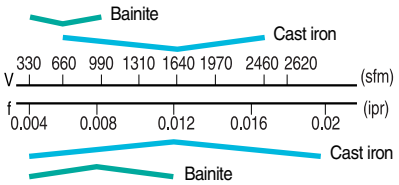
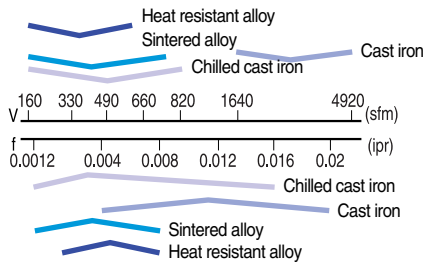
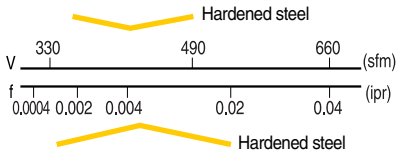
Milling

Workpiece	1st Choice	Cutting Speed (m/min)	Cutting Speed (sfm)	ISO	Application Range
Steel	MA2	140(70 ~ 180)	460(230 ~ 590)	P20	MA2
	ST30A	130(70 ~ 180)	430(230 ~ 590)	P30	ST30A
Cast iron	H01, H05	150(100 ~ 200)	500(330 ~ 660)	K01	
	H10, G10	140(90 ~ 190)	460(300 ~ 630)	K10	H01
Aluminum alloy	H01	500(300 ~ 800)	1,640(900 ~ 2,630)	K20	H05
Copper, Bronze	H01	200(150 ~ 300)	660(500 ~ 990)	K30	G10

Special Features

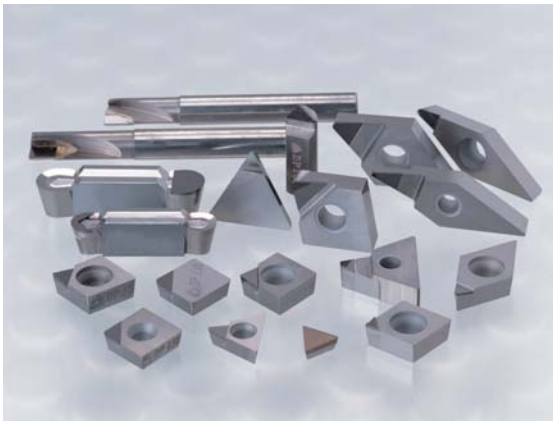
CBN is a cutting tool material made under ultra high pressure and temperature sintering of mixture of cubic boron nitride and special ceramic binder material.
CBN tool is suitable for machining of high speed precise machining In hardened steels and cast irons. Machining with CBN can replace conventional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



Cutting Condition	Special Features	Workpiece
	**KB320** • Suitable for general cutting, intermittent and continuous cutting. • Superior toughness. • Comprehensive grade having optimal wear resistance and toughness.	Hardened steel HRC : 40~65
	**KB330** • Suitable for intermittent cutting.	Hardened steel HRC : 40~65
	**KB350** • Suitable for high speed finishing of cast iron. • Comprehensive grade for machining of cast iron.	Cast iron HB : 180~250
	**KB360** • Suitable for high speed cutting of cast iron and milling of high hardness roll, sintered alloy as well.	Cast iron, Sintered alloy Heat resistant alloy, Carbide roll
	**KB420** • Unsurpassed tool life at high speed cut. • High productivity.	**Hardened steel** HRC : 40~65

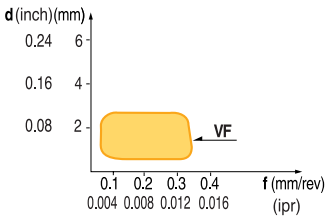
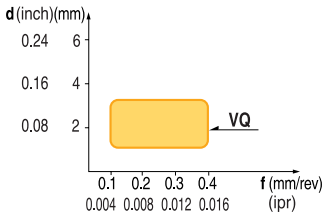
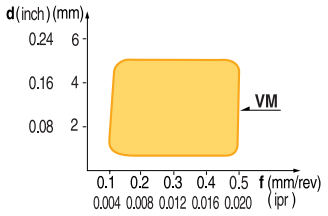
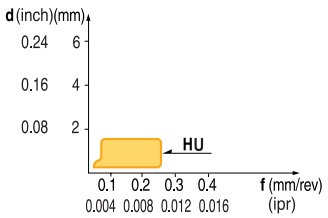
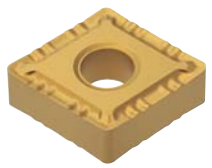
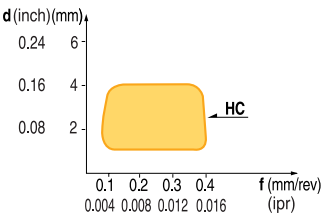
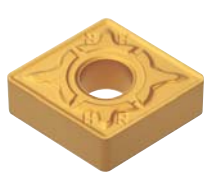
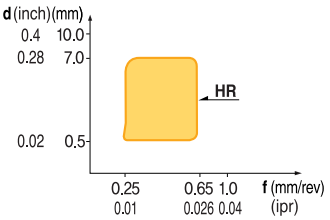
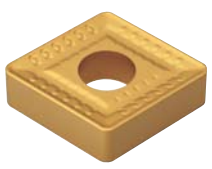
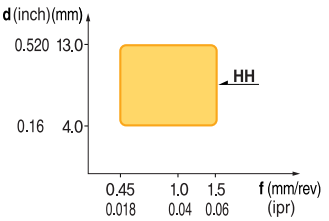
Special Features

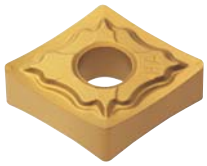
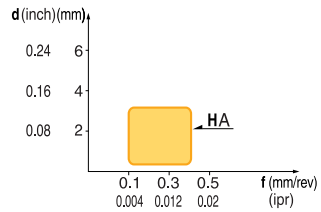
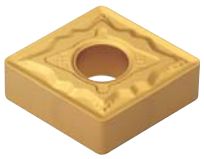
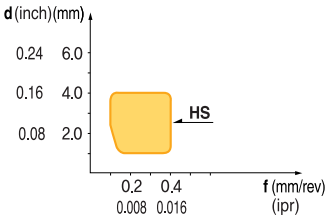
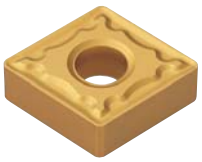
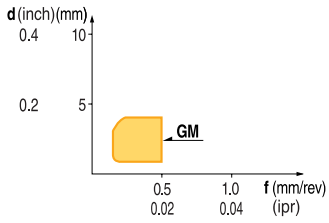
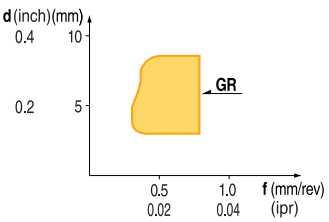
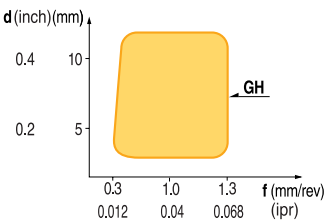
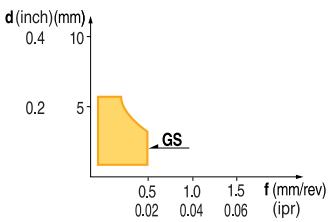
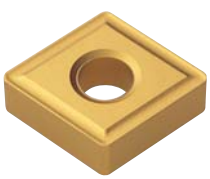
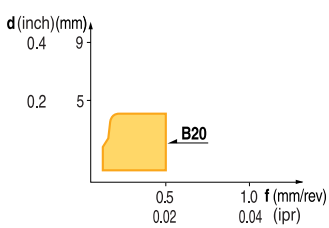
KORLOY PCD products are manufactured by using high quality PCD tip which is made under ultra high temperature and pressure. The PCD tip has been welded on the qualified carbide insert of KORLOY.
Since KORLOY supplies high quality PCD products for turning, milling and endmill, it is possible to meet the needs of variety of application.

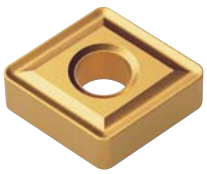
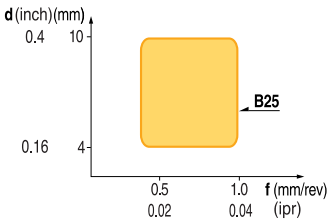
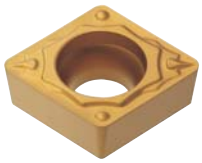
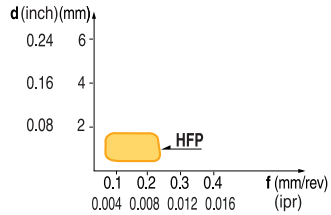
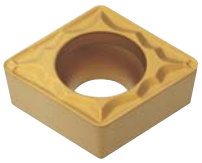
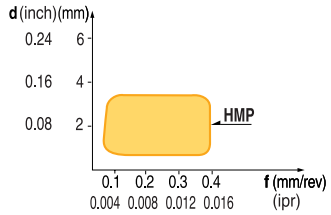
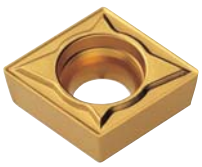
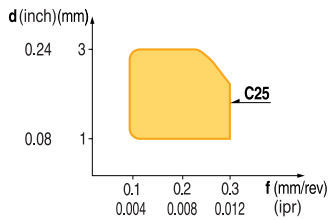
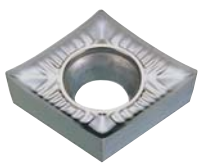
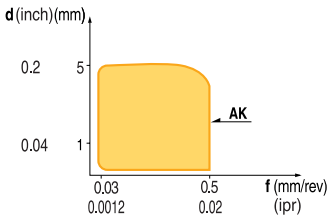
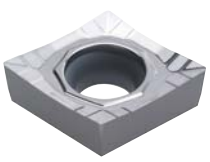
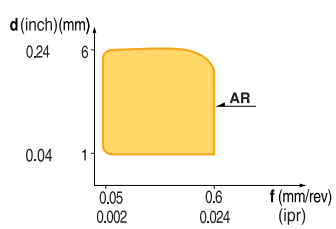
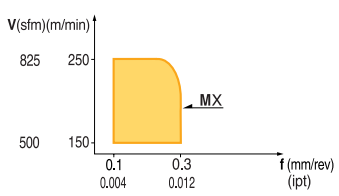


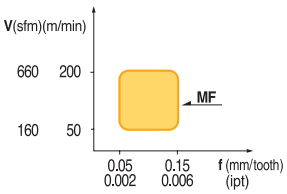
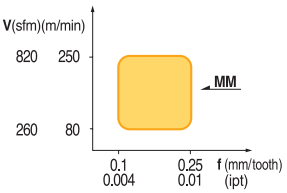
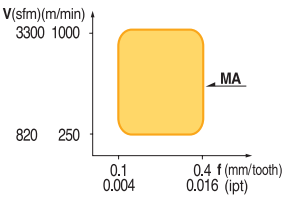
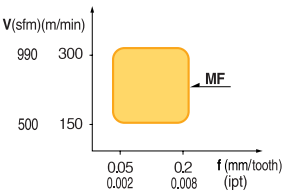
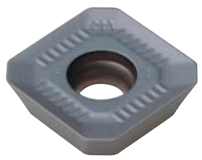
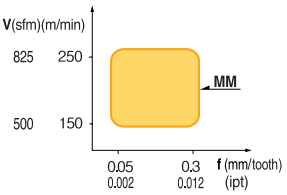
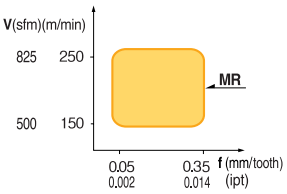
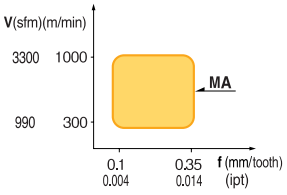
KORLOY PCD grades

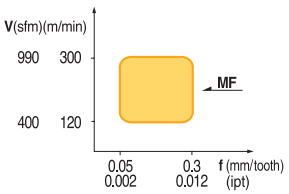
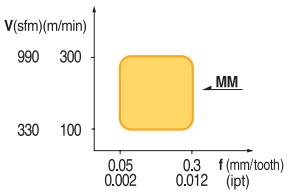
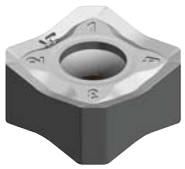
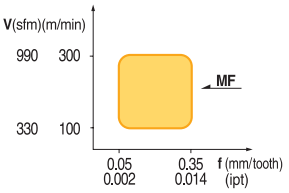
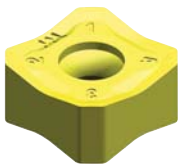
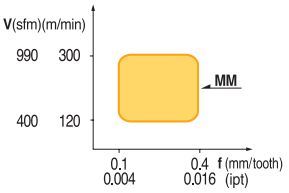
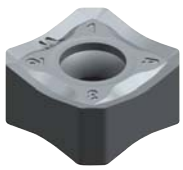
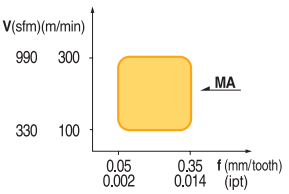
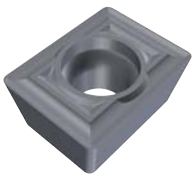
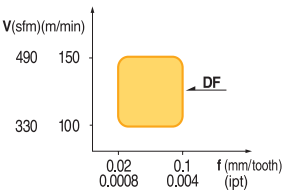
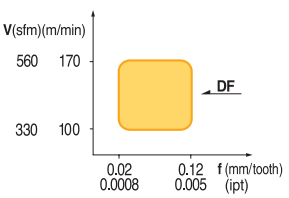
Grade	Special Features	Application range	Grain size (μm)	Hardness (Hv)	TRS (kg/mm²)
DP90	• Coarse diamond grain has been used to get excellent wear resistance enough to machine cemented-carbide, high Si aluminum alloy.	Cemented carbide Ceramic roughing High Si aluminum Rock, Stone	50	10,000 ~ 12,000	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 Copper, Bronze 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 cutting of aluminum	0.5	8,000 ~ 10,000	220

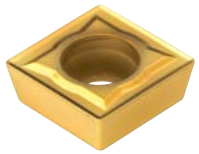
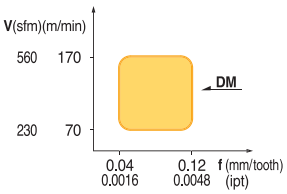
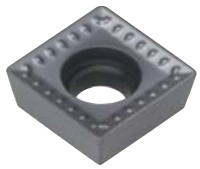
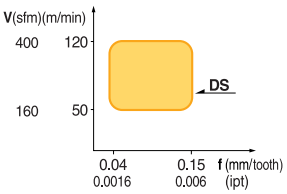
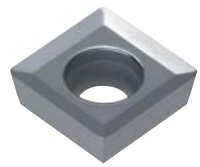
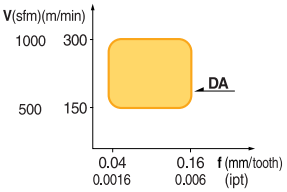
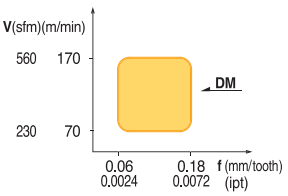
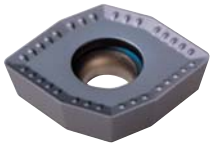
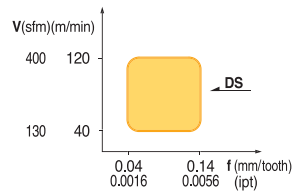
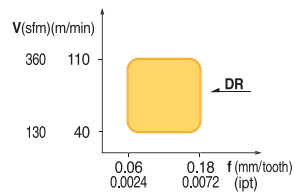
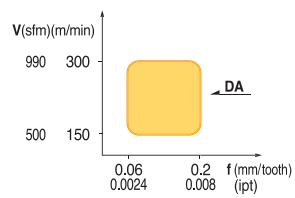
	Shape	Application Range	Special Features
"V"Series	**VF** 		■ For Finishing • Good chip control quality on varied depth of cut.. • Excellent cutting edge strength has been acquired due to the special chip-breaker. ■ Recommended Cutting Conditions d = 0.3 ~ 2.5mm f = 0.05 ~ 0.35mm/rev 0.012 ~ 0.10inch 0.002 ~ 0.014ipr
	VQ 		■ For Medium to Finish Cutting • Exclusive chip breaker for KORLOY's CN2000 grade. • Side cutting edge of curving type ■ Recommended Cutting Conditions d = 1.0 ~ 3.0mm f = 0.1 ~ 0.4mm/rev 0.04 ~ 0.12inch 0.004 ~ 0.016ipr
	VM 		■ For Medium Cutting • Wide available chip control range from medium-finishing to medium-roughing. • Suitable chip breaker for CNC machining ■ Recommended Cutting Conditions d = 1.0 ~ 5.0mm f = 0.1 ~ 0.5mm/rev 0.04 ~ 0.20inch 0.004 ~ 0.02ipr
"H"Series	**HU** 		■ 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. ■ Recommended Cutting Conditions d = 0.1 ~ 1.5mm f = 0.03 ~ 0.25mm/rev 0.004 ~ 0.006inch 0.0012 ~ 0.01ipr
	HC 		■ For Medium to Finish Cutting • Excellent for copying of special shape. • Smooth chip control at shallow cut as well as deep depth of cut. ■ Recommended Cutting Conditions d = 0.8 ~ 4.0mm f = 0.08 ~ 0.4mm/rev 0.03 ~ 0.16inch 0.003 ~ 0.016ipr
	HR 		■ For Roughing • Excellent chip control at deep depth of cut and fast feed rate. • Strong cutting edge makes excellent cutting performance at intermittent cutting. ■ Recommended Cutting Conditions d = 2.5 ~ 7.0mm f = 0.25 ~ 0.65mm/rev 0.1 ~ 0.28inch 0.01 ~ 0.028ipr
	HH 		■ For Heavy Duty Cutting • Specially designed toughest cutting edge provides superior cutting performance at deep depth of cut and fast feed rate. • Unique design of dot on cutting edge makes smooth chip flow and reduce cutting force. ■ Recommended Cutting Conditions d = 4.0 ~ 13.0mm f = 0.45 ~ 1.5mm/rev 0.16 ~ 0.5 inch 0.018 ~ 0.04ipr

	Shape	Application Range	Special Features
"H"Series	**HA** 		■ For Light-alloy, Stainless steel machining • Sharp cutting edge generate low cutting force. • Specially designed tough main cutting edge. • Suitable for cutting of low carbon steel, stainless steel, aluminum. ■ Recommended Cutting Conditions d = 0.8 ~ 3.5mm f = 0.1 ~ 0.4mm/rev 0.03 ~ 0.16inch 0.004 ~ 0.016ipr
	HS 		■ 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. ■ Recommended Cutting Conditions d = 1.0 ~ 4.0mm f = 0.1 ~ 0.4mm/rev 0.04 ~ 0.16 inch 0.004 ~ 0.016ipr
"G"Series	**GM** 		■ For Medium to Light Cutting • Excellent chip control at general cutting conditions. • Strong cutting edge strength provide good performance at intermittent and fast feed cutting. ■ Recommended Cutting Conditions d = 0.7 ~ 4.0mm f = 0.1 ~ 0.5mm/rev 0.03 ~ 0.16inch 0.004 ~ 0.02ipr
	GR 		■ For Medium to Roughing • Suitable for deep depth of cut and fast feed cutting of steel and cast iron. • Suitable for intermittent cutting. ■ Recommended Cutting Conditions d = 3.0 ~ 8.0mm f = 0.3 ~ 0.8mm/rev 0.12 ~ 0.32inch 0.012 ~ 0.032ipr
	GH 		■ For Heavy Duty Cutting • Suitable for heavy duty cutting due to strong cutting edge. • Wide chip control range with low cutting force ■ Recommended Cutting Conditions d = 3.0 ~ 11.0mm f = 0.3 ~ 1.3mm/rev 0.12 ~ 0.44inch 0.012 ~ 0.047ipr
	GS 		■ For Medium to Roughing of Stainless steel • Exclusive chip breaker for stainless steel. ■ Recommended Cutting Conditions d = 1.5 ~ 5.5mm f = 0.15 ~ 0.5mm/rev 0.06 ~ 0.22inch 0.006 ~ 0.020ipr
"B"Series	**B20** 		■ For Light to Medium Cutting • Exclusive chip breaker for cutting of cast iron. ■ Recommended Cutting Conditions d = 1.5 ~ 4.0mm f = 0.15 ~ 0.5mm/rev 0.06 ~ 0.16inch 0.006 ~ 0.020ipr

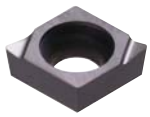
	Shape	Application Range	Special Features
"B"Series	**B25** 		■ For General Cutting • Suitable for general cutting condition cutting. ■ Recommended Cutting Conditions d = 4.0 ~ 10.0mm f = 0.5 ~ 1.0mm/rev 0.16 ~ 0.40inch 0.02 ~ 0.04ipr
"H-Posi"Series	**HFP** 		■ For Finishing • Excellent chip control at shallow depth of cut and low feed rate. • Excellent surface finish of work piece due to reduced cutting force. • Suitable for fine boring. ■ Recommended Cutting Conditions d = 0.1 ~ 1.5mm f = 0.05 ~ 0.25mm/rev 0.004 ~ 0.06inch 0.002 ~ 0.01ipr
	HMP 		■ For Medium Cutting • Excellent chip control at wide range of cutting conditions. • Suitable for stainless steel cutting. ■ Recommended Cutting Conditions d = 0.5 ~ 3.5mm f = 0.05 ~ 0.4mm/rev 0.02 ~ 0.14inch 0.002 ~ 0.016ipr
"C"Series	**C25** 		■ For Medium Cutting • Suitable for intermittent cutting and cast iron machining. • Good surface finish due to low cutting force. • Suitable for both boring and outer diameter turning. ■ Recommended Cutting Conditions d = 1.0 ~ 3.0mm f = 0.1 ~ 0.3mm/rev 0.04 ~ 0.12inch 0.004 ~ 0.012ipr
"Al"Series	**AK** 		■ 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. ■ Recommended Cutting Conditions d = 0.1 ~ 4.0mm f = 0.03 ~ 0.5mm/rev 0.004 ~ 0.16inch 0.0012 ~ 0.02ipr
	AR 		■ For Aluminum Cutting • High stability of cutting edge secures great performance in high speed and intermittent machining. • High speed of medium and interrupted operation. ■ Recommended Cutting Conditions d = 1.0 ~ 6.0mm f = 0.05 ~ 0.6mm/rev 0.04 ~ 0.24inch 0.002 ~ 0.024ipr
"MX"Series	**MX** 		■ 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. ■ Recommended Cutting Conditions V = 150 ~ 250m/min f = 0.1 ~ 0.3mm/tooth 500 ~ 825sfm 0.004 ~ 0.012ipt

	Shape	Application Range	Special Features
"Alpha Mill"Series	**MF** 		■ For Finishing of Milling • Specially designed cutting edge to reduce cutting load enables to multi applications for various workpiece. ■ Recommended Cutting Conditions V = 50 ~ 300m/min 160 ~ 660sfm f = 0.05 ~ 0.15mm/tooth 0.002 ~ 0.006ipt
	MM 		■ For Medium Cutting of Milling • The best match of strong cutting edge and curved line ensures various milling operations. ■ Recommended Cutting Conditions V = 80 ~ 250m/min 260 ~ 820sfm f = 0.1 ~ 0.25mm/tooth 0.004 ~ 0.01ipt
	MA 		■ For Aluminum Milling • Optimal design and polished mirror top face for aluminum machining makes smooth chip control and prevents built-up -edge. ■ Recommended Cutting Conditions V = 250 ~ 1000m/min 820 ~ 3300sfm f = 0.1 ~ 0.4mm/tooth 0.004 ~ 0.016ipt
"Future Mill"Series	**MF** 		■ 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. ■ Recommended Cutting Conditions V = 150 ~ 300m/min 500 ~ 990sfm f = 0.05 ~ 0.2mm/tooth 0.002 ~ 0.008ipt
	MM 		■ For Medium Cutting of Milling • Chip breaker design to cover general cutting condition provide wide available application range. • Ground type and as sintered type is available. ■ Recommended Cutting Conditions V = 150 ~ 250m/min 500 ~ 825sfm f = 0.05 ~ 0.3mm/tooth 0.002 ~ 0.012ipt
	MR 		■ For Roughing of Milling • Strongest cutting edge strength provide stable tool life even in case of severe cutting with heavy intermittent and heavy roughing. ■ Recommended Cutting Conditions V = 150 ~ 250m/min 500~ 825sfm f = 0.05 ~ 0.35mm/tooth 0.002 ~ 0.014ipt
	MA 		■ For Aluminum Milling • Suitable design for aluminum machining like sharp cutting edge, mirror face of insert top which prevent built-up-edge, provide excellent cutting performance. ■ Recommended Cutting Conditions V = 300 ~ 1000m/min 990 ~ 3300sfm f = 0.1 ~ 0.35mm/tooth 0.004 ~ 0.014ipt

	Shape	Application Range	Special Features
"Rich Mill RM4"Series	**MF** 		■ For Finishing of Milling • Specially designed chip breaker with low cutting load for light cutting and difficult-to-material provides fine surface roughness and longer tool life ■ Recommended Cutting Conditions V=120~300m/min f=0.05~0.3mm/tooth 400~990sfm 0.002~0.012ipr
	MM 		■ For Medium to Roughing of Milling • Proper design of cutting edge for general milling operation provides wide available application range. ■ Recommended Cutting Conditions V = 100 ~ 300m/min f = 0.05~0.3mm/tooth 330 ~ 900sfm 0.002~0.012ipt
"Rich Mill RM8"Series	**MF** 		■ For Finishing of Milling • Specially designed chip breaker with low cutting load for light cutting and difficult-to-cut material provides fine surface roughness and longer tool life ■ Recommended Cutting Conditions V = 100 ~ 300m/min f = 0.05 ~ 0.35mm/tooth 330 ~ 990sfm 0.002 ~ 0.014ipt
	MM 		■ For Medium to Roughing of Milling • Proper design of cutting edge for general milling operation provides wide available application range. ■ Recommended Cutting Conditions V = 120 ~ 300m/min f = 0.1 ~ 0.4mm/tooth 400~ 990sfm 0.004~0.016 ipt
	MA 		■ For Aluminum Milling • Sharp cutting edge with buffered on top face of insert which prevents built-up-edge provides smooth chip condition. ■ Recommended Cutting Conditions V = 100 ~ 300m/min f = 0.05~0.35mm/tooth 330 ~ 990sfm 0.002~0.014ipt
"LPDrill"Series	**DF** 		■ For Medium Cutting of Small Hole Drilling • General application of steel and stainless steel. • Sharp cutting edge for excellent chip breaking in small hole drilling. ■ Recommended Cutting Conditions V = 100 ~ 150m/min f = 0.02 ~ 0.1mm/tooth 330 ~ 490sfm 0.0008 ~ 0.004ipt
"SPDrill"Series	**DF** 		■ For Medium Cutting of Drilling • General application of steel and stainless steel. • Excellent performance with suitable cutting edge for deep hole drilling. ■ Recommended Cutting Conditions V = 100 ~ 170m/min f = 0.02 ~ 0.12mm/tooth 330 ~ 560sfm 0.0008 ~ 0.005ipt

	Shape	Application Range	Special Features
"SPDrill" Series	**DM** 		■ For Medium Cutting of Drilling • General application of steel, stainless and cast iron • Strong cutting edge suitable for interrupted hole drilling. ■ Recommended Cutting Conditions V=70~170m/min f=0.04~0.12mm/rev 230~560sfm 0.0016~0.0048ipr
	DS 		■ For Stainless steel Drilling • As an insert for stainless steel drilling, combination of high rake angle and convex dot put on top face make good chip control and long last tool life at the same time. ■ Recommended Cutting Conditions V=50~120m/min f=0.04~0.15mm/rev 160~400sfm 0.0016~0.006ipr
	DA 		■ For Aluminum Drilling • As an insert for aluminum drilling, it has sharp cutting edge and polished mirror top face. It prevents built-up-edge, thus gets great chip flow. ■ Recommended Cutting Conditions V=150~300m/min f=0.04~0.16mm/rev 500~1000sfm 0.0016~0.006ipr
"NPDrill" Series	**DM** 		■ For Medium Cutting of Drilling • Major application of steel and cast iron • Strong cutting edge suitable for interrupted hole drilling. ■ Recommended Cutting Conditions V=70~170m/min f=0.06~0.18mm/rev 230~560sfm 0.0024~0.0072ipr
	DS 		■ For Stainless steel Drilling • Suitable design for stainless drilling having sharp edge and chip breaker ■ Recommended Cutting Conditions V=40~120m/min f=0.04~0.14mm/rev 130~400sfm 0.0016~0.0056ipr
	DR 		■ For Roughing of Mild steel • Roughing of soft steel • Strong cutting edge suitable for interrupted hole drilling provides excellent cutting performance. ■ Recommended Cutting Conditions V=40~110m/min f=0.06~0.18mm/rev 130~360sfm 0.0024~0.0072ipr
	DA 		■ For Aluminum Drilling • Suitable design for aluminum machining. • Sharp cutting edge and buffed surface prevent built-up-edge. • It provides excellent cutting performance in high speed aluminum drilling. ■ Recommended Cutting Conditions V=150~300m/min f=0.06~0.2mm/rev 500~990sfm 0.0024~0.008ipr

CCET



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030102L (520.5)
030104L (521)
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040101L (620)
040102L (620.5)
040104L (621)

CCGT

AK

AR

060202 (21.50.5)
060204 (21.51)
060208 (21.52)
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09T308 (32.52)
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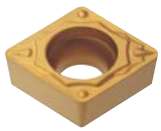
CCGT-HFP



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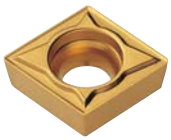
CCMT-C25



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CCMT-HMP

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CNG(M)G-HU

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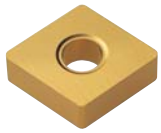
CNMA



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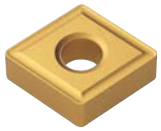

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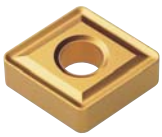

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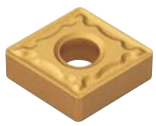

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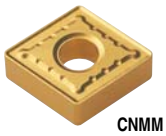

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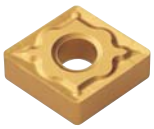

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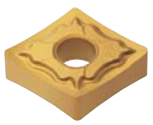

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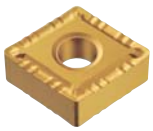

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CNMG-VQ

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CNMG-VM

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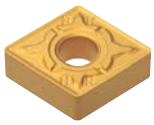

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CNMG-HS

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CNMM-GH

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CNMM-HH

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CPGT-C05

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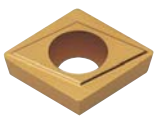
CPGT



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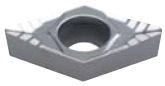
DCGT

AK

AR



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DCGT-HFP

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DCMT-C25

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DCMT-HMP

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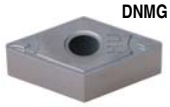
DNG(M)G-HU



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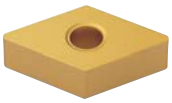
DNMA



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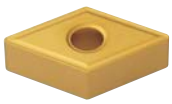

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DNMG-B25

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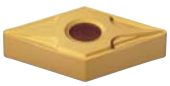
DNMG-GF



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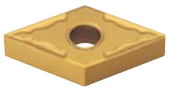
DNMG-GM



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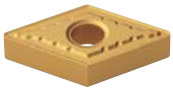
DNMG-GR



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DNMG-GS

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DNMG-HA

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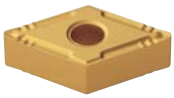

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DNMG-VF

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150408 (432)
150412 (433)
150604 (441)
150608 (442)
150612 (443)

DNMG-VQ

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150408 (432)
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DNMG-VM

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110408 (332)
110412 (333)
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150608 (442)
150612 (443)

DNMG-HR

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150616 (444)

DNMG-HS

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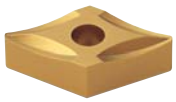
DNMP



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KNUX

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160410 R11
160405 R12
160410 R12
160405 L11
160410 L11
160405 L12
160410 L12

RCGT

AK

AR

0602M0
0803M0
1003M0
10T3M0
1204M0

RCMX

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

RNMG-B25

090300 (32)
120400 (43)
150400 (53)
150600 (54)
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250900 (86)
310900 (106)

RPMT

0802M0
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1604M0
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SCGT

AK

AR

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09T308 (32.52)
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SCGT-HFP

09T304 (32.51)

SCMT-C25

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SCMT-HMP

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SNG(M)G-HU

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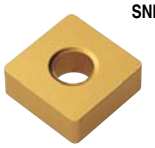
SNG(M)X

120408 (432)

SNGA SNPA*



SNGA 090304 (321)
SNPA* 090308 (322)
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120408 (432)
120412 (433)
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150616 (544)
190608 (642)
190612 (643)

* Old code system

SNGG SNPR/L*

SNGG 090304R (321)
SNPR* 090308R (322)
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120412R (433)
SNGG 090304L (321)
SNPL* 090308L (322)
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120408L (432)
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SNGN

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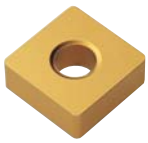
SNMA



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250724 (856)
250924 (866)

SNMG-B20

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SNMG-B25

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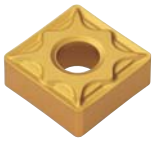
SNMG-GF



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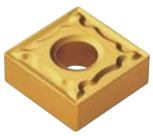
SNMG(M)-GM



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120412 (433)
SNMM 120412 (433)

SNMG(M)-GR

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120412 (433)
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150612 (543)
190608 (642)
190612 (643)
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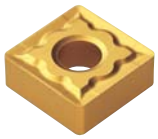
250924 (866)
SNMM 120408 (432)
120412 (433)
190612 (643)
190616 (644)

SNMG-GS



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SNMG(M)-HA

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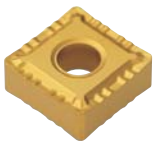
SNMM 120408 (432)

SNMG-HC



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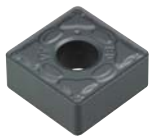
120408 (432)

SNMG-VF



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090308 (322)

SNMG-VQ

120404 (431)
120408 (432)

SNMG-VM

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090308 (322)
120404 (431)
120408 (432)
120412 (433)
190612 (643)

SNMG-HR

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120412 (433)
120416 (434)
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150616 (544)
150624 (546)
190608 (642)
190612 (643)
190616 (644)
190624 (646)
250724 (856)
250924 (866)

SNMG-HS

090304 (321)
090308 (322)
120404 (431)
120408 (432)
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190612 (643)
190616 (644)

SNMM-GH

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190616 (644)
190624 (646)
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250924 (866)
250932 (868)

SNMM-HH

190612 (643)
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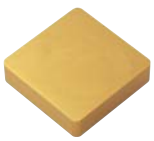
SNMN



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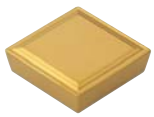
150412 (533)
150416 (534)

SPG(M)R-F



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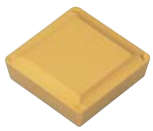
120304 (421)

SPG(M)R-M



SPGR 090308 (322)
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SPMR 090308 (322)
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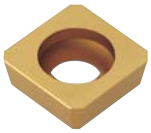
SPGA(-Z)



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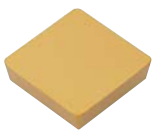
SPGN



070202 (2.51.50.5)
070208 (2.51.53)
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090308 (322)
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150416 (534)
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190416 (634)

SPGT-C05

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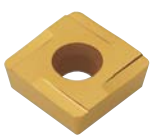
090308 (322)

SPGT



090304R (321)
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090304L (321)
090308L (322)

TBGT

060102L (520.5)

TCGT

AK

AR

090202 (1.81.50.5)
090204 (1.81.51)
110202 (21.50.5)
110204 (21.51)
110208 (21.52)
16T302 (32.50.5)
16T304 (32.51)
16T308 (32.52)
16T312 (32.53)
16T316 (32.54)

TCGT-HFP

090204 (731)
110202 (21.50.5)
110204 (21.51)
110208 (21.52)
16T304 (32.51)
16T308 (32.52)

* Old code system

TCMT-C25

090204 (731)
090208 (732)
110202 (21.50.5)
110204 (21.51)
110208 (21.52)
16T304 (32.51)
16T308 (32.52)

TCMT-HMP

110202 (21.50.5)
110204 (21.51)
110208 (21.52)
16T304 (32.51)
16T308 (32.52)

TNG(M)G-HU

TNGG 160404 (331)
160408 (332)
TNMG 160404 (331)
160408 (332)

TNGA TNPA*

TNGA 090204 (1.81.51)
TNPA* 110302 (220.5)
110304 (221)
160304 (321)
160402 (330.5)
160404 (331)
160408 (332)
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220404 (431)
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270612 (543)
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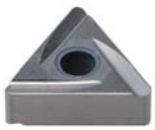
TNGG TNPR/L*



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TNPR/L* 160402R (330.5)
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110304L (221)
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160408L (332)
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TNGN

110304 (221)
110308 (222)
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160308 (322)
160404 (331)
160408 (332)
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TNMA

110308 (222)
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TNMG-B20

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TNMG-B25

110308 (222) 220408 (432)
160304 (321) 220412 (433)
160308 (322) 220416 (434)
160312 (323) 220424 (436)
160316 (324) 270608 (542)
160404 (331) 270612 (543)
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160416 (334) 330924 (666)
220404 (431)

TNMG-GF

160404 (331)
160408 (332)
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220408 (432)

TNMG(M)-GM

160304 (321)
160404 (331)
160408 (332)
160412 (333)
220404 (431)
220408 (432)
220412 (433)
TNMM 160412 (333)
220412 (433)
220416 (434)

TNMG(M)-GR

160408 (332)
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220408 (432)
220412 (433)
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270608 (542)
270612 (543)
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TNMM 220408 (432)
220412 (433)
220416 (434)

TNMG-GS

160404 (331)
160408 (332)
220408 (432)

TNMG-HA

160404 (331)
160408 (332)
220408 (432)

TNMG-HC

160404 (331)
160408 (332)
160412 (333)
220408 (432)

TNMG-VF

110304 (221)
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160408 (332)
160412 (333)
220404 (431)
220408 (432)

TNMG-VQ

160404 (331)
160408 (332)

TNMG(M)-VM

110308 (222)
160404 (331)
160408 (332)
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220404 (431)
220408 (432)
220412 (433)
TNMM 160408 (332)
220408 (432)

TNMG-HR

160408 (332)
160412 (333)
220408 (432)
220412 (433)
220416 (434)
270608 (542)
270612 (543)
270632 (548)
330716 (654)
330924 (666)

TNMG-HS

160404 (331)
160408 (332)
160412 (333)
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220412 (433)

TNMM-HH

220412 (433)
270616 (544)
270624 (546)
330924 (666)

TNMN

160408 (332)
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220412 (433)

TNMX

160402 (330.5)
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220408 (432)
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160408 (332)

TOEH

060102L (1.210.5)
090204L (1.81.51)
140304L

TPG(M)R-F

TPGR 110302 (220.5)
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160304 (321)
TPMR 090202 (1.81.50.5)
090204 (1.81.51)
110302 (22.0.5)
110304 (221)
110308 (222)
160304 (321)
160308 (322)

TPG(M)R-M

TPGR 110308 (222)
160308 (322)
TPMR 110304 (221)
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TPGN

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220408 (432)
220412 (433)
220430 (437.6)

TPGT-C05

110304 (221)
160404 (331)

* Old code system

TPGT-HFP

110304 (221)
160308 (332)

TPGT

080202R (1.51.50.5)
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110308R (222)
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160408R (332)
080202L (1.51.50.5)
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110304L (221)
110308L (222)
160404L (331)
160408L (332)

VBG(M)T

VBGT 160404 (331)
160408 (332)
VBMT 160404 (331)
160408 (332)

VBGT

AK

AR

110302 (220.5)
110304 (221)
110308 (222)
160402 (330.5)
160404 (331)
160408 (332)
160412 (333)

VBMT-HMP

110204 (21.51)
110304 (221)
110308 (222)
160404 (331)
160408 (332)

VCGT

AK

AR

110301 (220)
110302 (220.5)
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110308 (222)
130302 (2.520.5)
130304 (2.521)
130308 (2.522)
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160404 (331)
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160412 (333)
220516 (43.54)
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220530 (43.57.6)

VCGT-HFP

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110304 (221)
110308 (222)
160404 (331)
160408 (332)

VCMT-HMP

160404 (331)
160408 (332)

VNGG-HA

160408 (332)

VNMG-B20

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VNMG-GF

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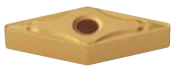
160408 (332)

VNMG-GM



160404 (331)
160408 (332)

VNMG-VF

160402 (330.5)
160404 (331)
160408 (332)

VNMG-VQ

NEW

160404 (331)
160408 (332)

VNMG-VM

NEW

160404 (331)
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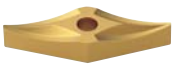
160412 (333)
220404 (431)
220408 (432)

VNMG-HS

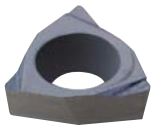
160404 (331)
160408 (332)

VNMP



160404 (331)
160408 (332)

WBGT



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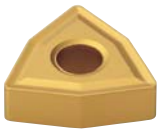
S30202L (1.51.50.5)
S30204L (1.51.51)

WNMA

060404 (331)
060408 (332)
080408 (432)
080412 (433)

WNM(M)G-B25



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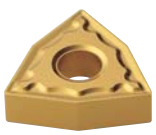
080412 (433)
WNMM 100608 (542)
130612 (643)

WNMG-GM



060404 (331)
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080412 (433)

WNMG-GR

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080416 (434)

WNMG-GS

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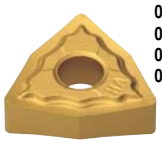
060408 (332)
080404 (431)
080408 (432)
080412 (433)

WNMG-HA



060404 (331)
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080404 (431)
080408 (432)
080412 (433)

WNMG-HC

080404 (431)
080408 (432)

WNMG-VF

060404 (331)
060408 (332)
080404 (431)
080408 (432)

WNMG-VQ

NEW

080404 (431)
080408 (432)

WNMG-VM

NEW

060404 (331)
060408 (332)
060412 (333)
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080408 (432)
080412 (433)

WNMG-HR

060408 (332)
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080408 (432)
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080416 (434)

WNMG-HS

060404 (331)
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060412 (333)
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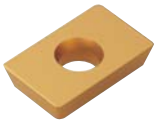
080412 (433)

ADKA



150308R
150308TR
150308SR

ADLT

150308R
150308TR
150308SR

APFT-X28

1604PDR
1604PDSR
1604PDTR

APKT

1604PDSR

APKT-MA

1604PDFR

APKT-X22, APFT-X22

1604PDS(T)R
1604PDS(T)R

APKT-X23, X24

1604PD(T)R-X23
1604PD(F)R-X24

APXT, APKT

APXT 11T3PDSR-MF
11T3PDSR-MM
11T3PDSR-MR

11T312R-MM
11T316R-MM
11T324R-MM
11T3PDR-MA
11T318R-MA
11T318R-MM
1604PDSR-MF
1604PDSR-MM
160416R-MM
160432R-MM
APKT 1604PDFR-MA2
160416FR-MA2
160432FR-MA2

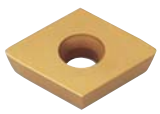
CSN(CSNH)

43M
43MT
43M
43MT

CSP(H)

53R
53L
53R
53L

EDCW



1604ZDFR
1604ZDTR

HECN

090408FN (532)
090408SN (532)
090408TN (532)
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HPEN

090408FN (532)
090408SN (532)
090408EN (532)
110412FN (633)

HPEN-WC

090408-WC (532)
110412-WC (633)

LBH

LBH080
LBH100
LBH120
LBH160
LBH200
LBH250
LBH300
LBH320

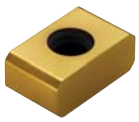
LCF

LCF160-D90
LCF200-D90
LCF250-D90

LFH

LFH100
LFH120
LFH160
LFH200
LFH250
LFH300
LFH320

LNE



324-C1.0
324-R0.8

LNM(E)X

LNMX151008PNR-MM
LNEX151008PNR-MM
LNMX151008PNR-MF
LNEX151008PNR-MF

LPMT

LPMT040203-DF

LRH

LRH100-R05
LRH100-R10
LRH100-R20
LRH120-R05
LRH120-R10
LRH120-R20
LRH160-R05
LRH160-R10
LRH160-R20
LRH160-R30
LRH200-R05
LRH200-R10
LRH200-R20
LRH200-R30
LRH250-R10
LRH250-R20
LRH250-R30
LRH300-R10
LRH300-R20
LRH300-R30
LRH320-R10
LRH320-R20
LRH320-R30

MCMT

080308EN
09T308EN

MPMT

090308 (322)
120408 (432)

NPET-DR

222408
252808
293208
334008
415008
516012

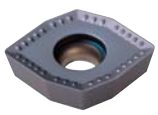
NPMT-DM

222408
252808
293208
334008
415008
516012

NPET-DA

222408
252808
293208
334008
415008
516012

NPMT-DS



222408
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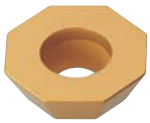
293208
334008
415008
516012

OFCN

0704SN
0704FN
070408SN
070408FN

OFCW



05T3SN
05T3FN
05T308FN

OFKR-MF, MM, MA

0704SN-MF
070408SN-MF
0704SN-MM
070408SN-MM
0704FN-MA
0704EN-MA

OFKT-MF, MM, MA

05T3SN-MF
05T308SN-MF
05T3SN-MM
05T308SN-MM
05T3FN-MA
05T3EN-MA
0704SN-MM
0704EN-MA
0704FN-MA

ONM(H)X-MF

080608-MF

ONM(H)X-MM

080608-MM

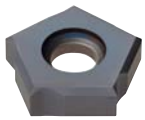
ONHX-W

080608-W

PNEJ

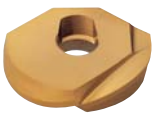
1223N
1225N
1230N
1235N
1240N
1245N
1250N
1255N
1260N
1265N
1270N
1275N
1285N

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



RC16
RC20
RC25
RC30
RC32

RDHW

0501M0-F,E,S
06T1M0-F,E,S
0702M0-F,E,S
0803M0-F,E,S
1605M0-F,E,S
2006M0-F,E,S

RDKT

10T3M0-MM,MF,MA
1204M0-MM,MF,MA
1605M0-MM
2006M0-MM

REKR-MM

170400-MM

RPMM

120400

SDAN, SDCN, SDKN

SDAN 1203AEEN
1203AEFN
1203AESN
SDCN 1203AESN
SDKN 1504AEFN
1504AETN
1504AESN

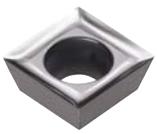
SDC(H)

42R
42L
42TR
42TL
53R
53L
53TR
53TL

SDCN

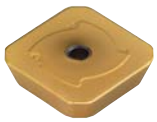
42R
42L
42M
42MT
42MT-RH
42MT-S20
53R
53L
53M
53MT
53MT-RH
53MT-S20

SDET-MA



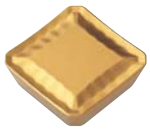
SDET09M402R-MA
SDET130504R-MA

SDKN-SM



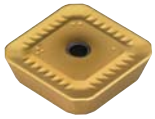
1203AESN-SM
1504AESN-SM

SDKR-MX



1203AESN-MX
1203AETN-MX
1504AESN-MX
1504AETN-MX

SDKR-SM

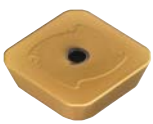


1203AESN-SM
1504AESN-SM

SDMT

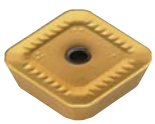
090308 (322)

SDXN-FM



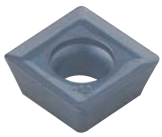
1203AESN-FM
1504AESN-FM

SDXR-FM



1203AESN-FM
1504AESN-FM

SDXT-MA



09M405R-MA
130508R-MA

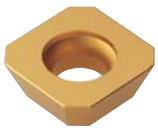
SDXT-MF

09M405R-MF
09M405L-MF
130508R-MF

SDXT-MM

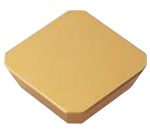
09M405R-MM
09M405L-MM
130508R-MM
130538-MM

SECA



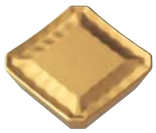
1204AFSN (43)
1204AFTN (43)
1204AFFN (43)
1204AFEN (43)
1504AFSN (53)
1504AFTN (53)
1504AFFN (53)

SEAN, SECN, SEKN



1203AFFN (42)
1203AFTN (42)
1203AFEN (42)
1203AFN (42)
1203AFSN (42)
1203AFTN-S20 (42)
1504AFFN (53)
1504AFTN (53)
1504AFEN (53)
1504AFSN (53)

SECR-MX, SEKR-MX(MF1)

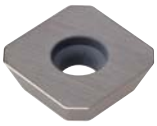


1203AFSN- MX (42)
1203AFSN- MX (42)
1203AFSN- MF1 (42)
1204AFSN- MX (43)
1504AFSN- MX (53)

SEET-MA

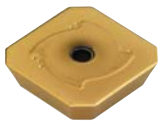
0903AGFN-MA
14M4AGFN-MA

SEEW



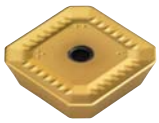
0903AGTN
14M4AGTN

SEKN-SM



1203AFSN-SM
1504AFSN-SM

SEKR-SM

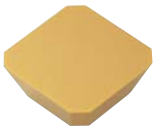


1203AFSN-SM
1504AFSN-SM

SEKR-X35

1203AFSN-X35 (42)
1203AFFN-X35 (42)
1204AFFN-X35 (43)

SEMN

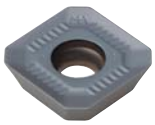


1204AZ (43)

SEX(E)T-MF

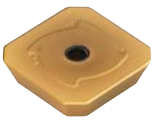
0903AGSN-MF
0903AGSN-MF
14M4AGSN-MF
14M4AGSN-MF

SEX(E)T-MM



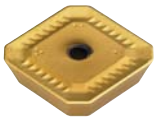
0903AGSN-MM
0903AGSN-MM
14M4AGSN-MM
14M4AGSN-MM

SEXN-FM



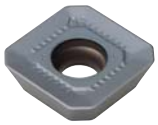
1203AFSN-FM
1504AFSN-FM

SEXR-FM



1203AFSN-FM
1504AFSN-FM

SEXT-MR

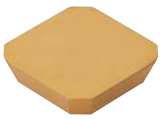


0903AGSN-MR
14M4AGSN-MR

SFAN, SFCN

1203EFR (42)
1203EFR (42)
1203ZFR (42)

SFKN

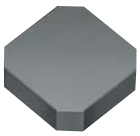


12T3AZTN (42.5)
12T3AZSN (42.5)
12T3AZFN (42.5)
12T3AZEN (42.5)

SNAN, SNCN, SNKN

1204ENN (43)
1504ENN (53)
1204ENN (43)
1504ENN (53)

SNC-MW

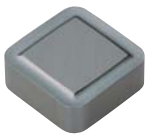


43MW

SNC(M)F

SNC(M)F 1206Q(E)(A)NN-MF
1206Q(E)(A)NN-MM
SNC(M)F 1507QE(A)NN-MF
1507QE(A)NN-MM

SNEF



435
535

SNEX

1010ZNN
1010ZNN-CU1
1212ZNN-CU1
101010
101010-CU1
121212-CU1

SNM(E)X

1206ANN-MF
1206ANN-MM
1206ANN-MA

SPAN, SPCN, SPKN

SPAN 1203ED(T)R (42)
1504ED(T)R (53)
SPCN 1203ED(T)R (42)

1203ED(T)L (42)
1204ED(T)R (43)
1504ED(T)R (53)
150412T (53)
1504EDL (53)
1203ED(T)R-RH (42)
1504ED(T)R-RH (53)
1203EDR-S20 (42)
1504EDR-S20 (53)
SPKN 1203ED(T)R (42)
1204ED(T)R (43)
1504ED(T)R (53)
1904ED(T) (63)

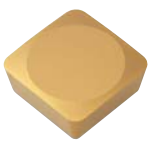
SPC(H)

42R
42TR
53R
53TR

SPCR-MX, SPKR-MX

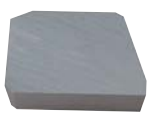
SPCR 1203EDSR (42)
SPKR 1203EDSL (42)
1504EDSR (53)

SPEN-WC



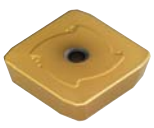
120416-WC (434)
150412-WC (533)
150416-WC (534)
150420-WC (535)
190424-WC (636)

SPEX



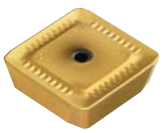
1203EDR-1 (42)
1203EDL-1 (42)
1504EDR-1 (53)
1504EDL-1 (53)
1904EDR-1 (63)
1904EDL-1 (63)

SPKN-SM



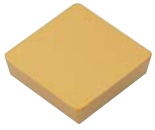
1203EDSR-SM
1504EDSR-SM

SPKR-SM



1203EDSR-SM
1504EDSR-SM

SPMN

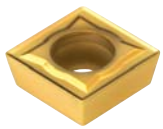


120304 (421)
120308 (422)
120312 (423)
120408 (432)
120412 (433)
150408 (532)
150412 (533)
190408 (632)
190412 (633)

SPMT

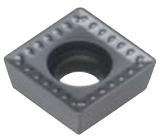
060304 (221)
120408 (432)

SPMT-DM



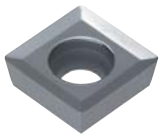
050203
060204
070204

SPMT-DS



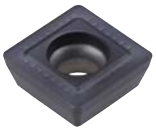
050203
060204
070204

SPET-DA



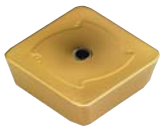
050203
060204
070204

SPMT-KC



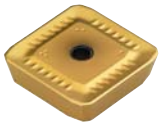
110408-KC

SPXN-FM



1203EDSR-FM
1504EDSR-FM

SPXR-FM



1203EDSR-FM
1504EDSR-FM

TECN, TEKN, TEEN

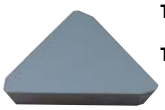
TEEN 43R
43TR
43TR-S20
43R
43TR
TEKN 43R
(TECN) 43TR

TECN, TEKN, TEEN(-Z)

TECN 22R
22TR

32R
32TR
TEEN 22R
22TR
32R
32TR
43R-Z
43TR-Z
TEKN 43L-Z
(TECN)43TL-Z

TFAN, TFCN



TFAN 2203PFR (42)
2203PFL (42)
TFCN 1603PFR (32)
1603PFL (32)
TFCN 2203PFR (42)
2203PFL (42)

TPAN, TPCN

TPAN 1103PPN (22)
TPCN 1103PPTN (22)
1603PPN (32)
1603PPTN (32)

1603PPR (32)
1603PPTR (32)
1603PDR (32)
1603PPSR (32)
1603PPR-RH (32)
1603PDR-S20 (32)
2204PPN (43)
2204PPTN (43)
2204PDR (43)
2204PDTR (43)
2204PDL (43)
2204PDSR (43)
2204PDR-RH (43)
2204PDR-S20 (43)

TPKN

1103PPN (22)
1103PPTN (22)
1603PPN (32)
1603PPTN (32)
1603PPR (32)
1603PPTR (32)
1603PDR (32)
1603PDSR (32)
2204PPN (43)
2204PPTN (43)
2204PDR (43)
2204PDTR (43)
2204PDSR (43)

TPKN-SM

1603PDSR-SM
2204PDSR-SM

TPKR-MX

1603PPR -MX (32)
1603PDSN -MX (32)
1603PDSR -MX (32)
2204PDSR -MX (43)
2204PPR -MX (43)

TPKR-SM

1603PDSR-SM
2204PDSR-SM

TPXN-FM

1603PDSR-FM
2204PDSR-FM

TPXR-FM

1603PDSR-FM
2204PDSR-FM

VCKT-MA

220530N-MA

WCMT-C20

030208-C20 (1.81.52)
040208-C20 (21.52)
050308-C20 (2.522)
06T308-C20 (32.52)
080408-C20 (432)
080412-C20 (433)

WCMT-C21

030204-C21 (1.81.51)
040204-C21 (21.51)
040208-C21 (432)
080408-C21

WCKT-DA

030208-DA
040208-DA
050308-DA
06T308-DA
080408-DA

WCMT-DS(P)

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

WDKT

080316ZDSR-MH
10T320ZDSR-MH
130520ZDSR-MH
150625ZDSR-MH

XCET-KC

310404ER-KC

ZCMT-ER

080308-ER
09T308-ER

ZDMT-R

08T2-R10
1103-R12.5
13T3-R16

ZPMT

1504PPSR

ZPMT-R

1604-R20
1604-R25
1604-R31.5

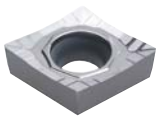
for Turning

CCGT

AK

060202 (21.50.5)
060204 (21.51)
060208 (21.52)
09T302 (32.50.5)
09T304 (32.51)
09T308 (32.52)
120402 (430.5)
120404 (431)
120408 (432)
120412 (433)

AR

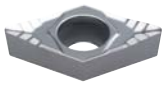


DCGT

AK

070202 (21.50.5)
070204 (21.51)
070208 (21.52)
11T302 (32.50.5)
11T304 (32.51)
11T308 (32.52)
11T312 (32.53)

AR



RCGT

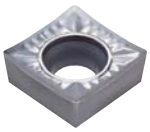
AK

0602M0
0803M0
1003M0
10T3M0
1204M0

AR

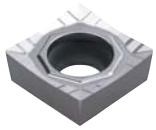
SCGT

AK



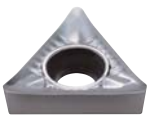
09T302 (32.50.5)
09T304 (32.51)
09T308 (32.52)
120404 (431)
120408 (432)
120412 (433)
120416 (434)

AR



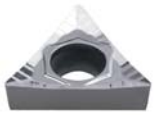
TCGT

AK



090202 (1.81.50.5)
090204 (1.81.51)
110202 (21.50.5)
110204 (21.52)
110208 (21.52)
16T302 (32.50.5)
16T304 (32.51)
16T308 (32.52)
16T312 (32.53)
16T316 (32.54)

AR



VBGT

AK

110302 (220.5)
110304 (221)
110308 (222)
130302 (2.52.0.5)
160402 (330.5)
160404 (331)
160412 (333)

AR

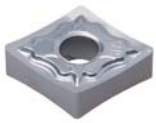
VCGT

AK

110302 (220.5)
110304 (221)
110308 (222)
130302 (2.520.5)
130304 (2.521)
130308 (2.522)
160402 (330.5)
160404 (331)
160408 (332)
160412 (333)
220525 (43.56.3)
220530 (43.57.6)

AR

CNMG-HA



120404 (431)
120408 (432)
120412 (433)

for Milling

APKT

1604PDFR-MA
160416R-MA
160432R-MA

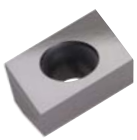
APKT

1604PDFR-MA3

APXT

11T3PDR-MA
11T318R-MA

CDEW



CDEW1204R/L-XCF

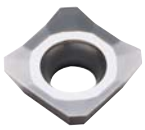
OFKT

05T3FN-MA
0704FN-MA

OFKR

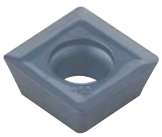
0704FN-MA

SDHT



1204AEFN-MA (43)

SDXT - MA



09M405R
130508R

SEHT

1204AFFN-M (43)

SEET- MA

0903AGFN
14M4AGFN

VCKT-MA

220530
(43.57.5)

VDKT-MA

11T210
(21.52.5)

XEKT-MA

19M5□□-MA

■ **XEKT19M5□□-MA's** nose-R size

ISO	04	08	12	16	18	20	30	32	40	50
ASA	1	2	3	4	4.5	5	7.5	8	10	12.5

for Grooving

MRGN-A

MRGN6N-A
MRGN8N-A

MRGN-A5

MRGN6N-A5
MRGN8N-A5

MRGN-AM

MRGN6N-AM
MRGN8N-AM

MRGN-AP

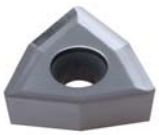
MRGN6N-AP
MRGN8N-AP

MVGN

MRGN8N-A-R1.2
MRGN8N-A-R1.6

for Drilling

WCKT



06T308-DA (32.52)
080408-DA (432)

NPET-DA

222408-DA
252808-DA
293208-DA
334008-DA
415008-DA
516012-DA

SPET-DA

050203-DA
060204-DA
070204-DA

for Forming, Grooving, Threading and Parting

for M.G.T Tools

MGMN - G

· **Width**
1.5mm
2.0mm 0.078 inch
2.5mm
3.0mm 0.118 inch
4.0mm 0.157 inch
5.0 mm 0.197 inch

MGMN - M

· **Width**
2.0mm
2.5mm
3.0mm 0.118 inch
4.0mm 0.157 inch
5.0 mm 0.197 inch
6.0mm 0.236 inch

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

MRMN - M

Radius : 1.5R
2R
2.5R
3R
4R

MFMN

· **Width** : 3mm

Holder : MGFVR/L3(25)
MGFHR/L3(25)

for Micro Boring Tools

FTG, FTT, FTF

Holder : FTIH

※ for Internal Grooving, Threading and Copy machining

for Parting

SP

Saw-man®

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

SP

200	400	600
200L	400L	600L
200R	400R	600R
300	500	
300L	500L	
300R	500R	

SP- A Series for Aluminum

200 - A	200 R/L - A
300 - A	300 R/L - A
400 - A	400 R/L - A
500 - A	500 R/L- A

inch : 0.087, 0.122, 0.161, 0.201, 0.252

for Forming

BF

· **Width**
3.1mm 0.122 inch
5.1mm 0.201 inch
8.1mm 0.319 inch

Holder : GFT, GFIP

for Grooving

DB

· **Width**
3.0 - 8.0mm

Holder : DBH

DC

· **Width**
3.0mm 0.118 inch
4.0mm 0.157 inch
5.0mm 0.197 inch

Holder : DBH

ESB

34

Holder : EH

GO

· **Width**
2.5mm 0.098 inch
3.2mm 0.126 inch
4.1mm 0.161 inch

Holder : GH

GS

· **Width**
1.23 - 4.28mm
0.048~0.169 inch

Holder : GH

GW

· **Width**
1.1 - 8.0mm
0.043~0.315 inch

Holder : GFT, GFIP

IG

· **Width**
1.25 - 2.8mm
0.049~0.110 inch

Holder : IGH

GR

· **Width**
2.0 - 8.0mm
0.079~0.315 inch

Holder : GFT, GFIK

POB

· **Width**
3.0mm 0.118 inch
4.0mm 0.157 inch
5.0mm 0.197 inch

Holder : PH

TB

· **Width**
3000 type
1.25 -4.3mm
0.049~0.110 inch

4000 type
1.25 -4.5mm
0.049~0.177 inch

Holder : TBH

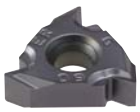
FGD / FGM

· **Width**
3.0 mm 0.118 inch
4.0 mm 0.157 inch

Holder : FGHH, FGVH

for Threading

ERM



ISO Metric
1.5 - 3.0(pitch-mm)
Partial profile 60˚
Partial profile 55˚

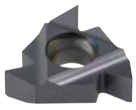
Holder : ERH

IRM

ISO Metric
1.5 - 3.0(pitch-mm)
Partial profile 60˚
Partial profile 55˚

Holder : IRH

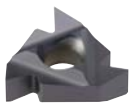
ER



ISO Metric
1.0 - 5.0(pitch-mm)
Whitworth 55
5 - 28(No.of pitch/Inch)
UN 60
5 - 28(No.of pitch/Inch)

Holder : ERH

IR



ISO Metric
0.5 - 5.0(pitch-mm)
Whitworth 55
5 - 48(No.of pitch/Inch)
UN 60
5 - 48(No.of pitch/Inch)

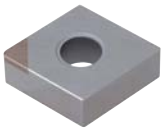
Holder : IRH

VETR

ISO Metric
0.8 - 3.0(pitch-mm)

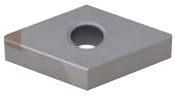
Holder : TH

CNMA



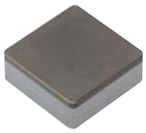
120404 (431)
120408 (432)
120412 (433)

DNMA



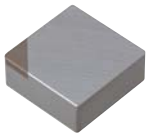
150404 (431)
150408 (432)
150412 (433)

SNGN-B



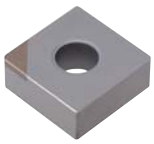
120408-B (432)
120412-B (433)
120416-B (434)

SNGN



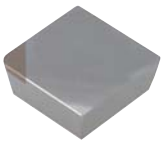
120408 (432)
120412 (433)

SNMA



120404 (431)
120408 (432)
120412 (433)

SPGN

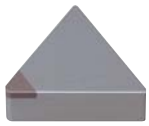


090304 (321)
090308 (322)
090312 (323)
120308 (422)
120312 (423)

TBGN-B

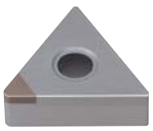
060102-B (1.210.5)
060104-B (1.211)
060108-B (1.212)

TNGN



160404 (331)
160408 (332)
160412 (333)

TNMA

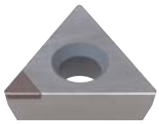


160402 (330.5)
160404 (331)
160408 (332)
160412 (333)
220408 (432)
220412 (433)

TPGN

090204 (1.81.51)
090208 (1.81.52)
110304 (221)
110308 (222)
160304 (321)
160308 (322)
160312 (323)
220408 (432)

TPGW



110304 (221)
110308 (222)
160404 (331)
160408 (332)
160412 (333)

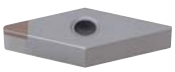
VBMW

160404 (331)
160408 (332)

VCMW

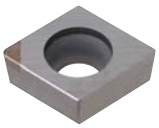
160404 (331)
160408 (332)

VNMA



160404 (331)
160408 (332)
220408 (432)

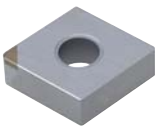
NU-CC(P)GW



NU-CCGW 060202 (21.50.5)
060204 (21.51)
060208 (21.52)
09T302 (32.50.5)
09T304 (32.51)
09T308 (32.52)

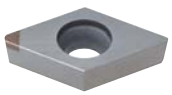
NU-CPGW 080202 (2.51.50.5)
080204 (2.51.51)
080208 (2.51.52)
090302 (320.5)
090304 (321)
090308 (322)

NU-CNMA



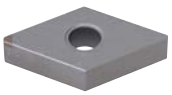
120404 (431)
120408 (432)
120412 (433)

NU-DCGW



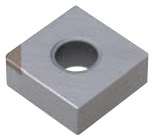
070202 (21.50.5)
070204 (21.51)
070208 (21.52)
11T302 (32.50.5)
11T304 (32.51)
11T308 (32.52)

NU-DNMA



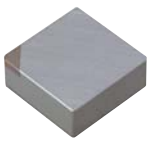
150404 (431)
150408 (432)
150412 (433)

NU-SNMA



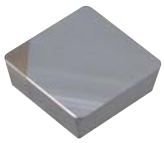
120404
120408
120412

NU-SNMN



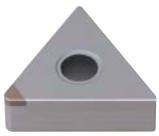
120408 (432)
120412 (433)

NU-SPGN



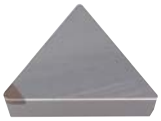
090304 (321)
090308 (322)

NU-TNMA



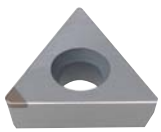
160404 (331)
160408 (332)
160412 (333)

NU-TPGN



110304 (221)
110308 (222)
160304 (321)
160308 (322)

NU-TPGW



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080204 (1.51.51)
080208 (1.51.52)
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110204 (21.51)
110208 (21.52)
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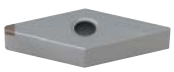
110308 (222)
160404 (331)
160408 (332)

NU-VNMA

160404 (331)
160408 (332)



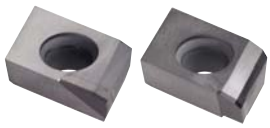
BAPD

R/L-XAF R/L-XAW
R-NAF R-NAW

CCMT

060201 (21.50)
060202 (21.50.5)
060204 (21.51)
09T301 (32.50)
09T302 (32.50.5)
09T304 (32.51)

CDEW



1204R/L-XAF 1204R/L-XAW
1204R/L-NAF 1204R/L-NAW

CNMX

120404 (431)
120408 (432)
120412 (433)

CPMT

080202 (2.51.50.5)
080204 (2.51.51)
080208 (2.51.52)
090302 (320.5)
090304 (321)
090308 (322)

DCMT

070201 (21.50)
070202 (21.50.5)
070204 (21.51)
11T301 (32.50)
11T302 (32.50.5)
11T304 (32.51)

DNMX

150404 (431)
150408 (432)
150412 (433)

MRGN

MRGN 600-A
800-A

RPG(T)W(-WF)

RPGW 0803MO
RPGT 0803MO-WF

SCMT

070201 (2.51.50)
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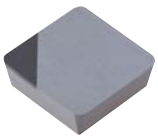
070204 (2.51.51)
09T301 (32.50)
09T302 (32.50.5)
09T304 (32.51)

SEGN



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090304 (321)
090308 (322)
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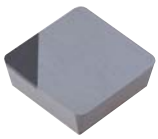
120304 (421)
120308 (422)

SPGN



090302 (320.5)
090304 (321)
090308 (322)
120304 (421)
120308 (422)
120312 (423)

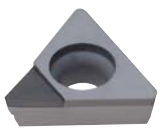
SPGW

090302 (320.5)
090304 (321)
090308 (322)

TBGN-B

060102-B (1.210.5)
060104-B (1.211)
060108-B (1.212)

TBGW



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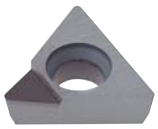
060104 (1.211)

TCMT



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090204 (1.81.51)
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110202 (21.50.5)
110204 (21.51)

TEGN

110202 (21.50.5)
110204 (21.51)
110208 (21.52)
110302 (220.5)
110304 (221)
110308 (222)
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160304 (321)
160308 (322)
220404 (431)
220408 (432)

TNMX

160404 (331)
160408 (332)
160412 (333)

TPGN

090202 (1.81.50.5)
090204 (1.81.51)
090208 (1.81.52)
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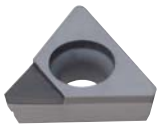
160302 (320.5)
160304 (321)
160308 (322)
160312 (323)

TPGW



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080204 (1.51.51)
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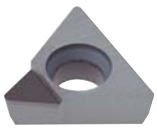
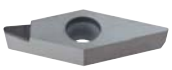
110204 (21.51)
110208 (21.52)
110300 (210)
110302 (210.5)
110304 (211)
110308 (212)
160402 (330.5)
160404 (331)
160408 (332)
160412 (333)

TPMT



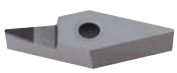
110302 (220.5)
110304 (221)
110308 (222)

VCMT



110301 (220)
110302 (220.5)
110304 (221)
110308 (222)
160408 (332)
160412 (333)
220520 (43.55)
220530 (43.57)

VNMX



160402 (330.5)
160404 (331)
160408 (332)
160412 (333)

DFE

2040S
2050S
2080S
2090S
2100S
4090S
4100S
4130GS

DPE

1040 **2090**
1045 **2095**
1050 **2100**
1055 **2105**
2060 **2110**
2065 **2115**
2070 **2120**
2075
2080
2085

Turning Toolholders

Lever lock system

PCBNR/L

2020-K12 (12-4B)
2525-M12 (16-4D)
2525-M16 (16-5D)
3225-P12 (85-4D)
3232-P16 (20-5D)
3232-P19 (20-6D)
4040-S19 (24-6E)
4040-S25 (24-8E)

PCLNR/L

1616-M09 (10-3D)
2020-K12 (12-4B)
2525-M12 (16-4D)
2525-M16 (16-5D)
3232-P12 (20-4D)
3232-P16 (20-5D)
3232-P19 (20-6D)
4040-S19 (24-6E)
4040-P19 (24-6D)
4040-S25 (24-8E)
5050-T25 (32-8H)

PDJNR/L

1616-H11 (10-3A)
2020-K11 (12-3B)
2525-M11 (16-3D)
2020-K15 (12-4B)
2525-M15 (16-4D)
3225-P15 (85-5D)
3232-P15 (20-4D)
2020-K15-3 (12-4B-3)
2525-M15-3 (16-4D-3)
3232-P15-3 (20-4D-3)

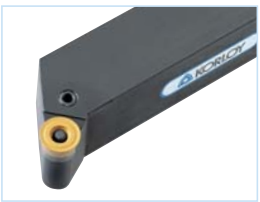
PDNNR/L

2020-K15 (12-4B)
2525-M15 (16-4D)
4025-M15 (86-4D)
2525-M15-3 (16-4D-3)
4025-M15-3 (86-4D-3)
3232-P15 (20-4D)

PRDCN

2020-M10 (12-10B)
2525-M10 (16-10D)
2525-M12 (16-12D)
2020-K12 (12-12B)
3225-Q12 (85-12E)
2525-Q16 (16-16E)
3225-Q16 (85-16E)
3232-Q16 (20-16E)
3232-Q20 (20-20E)
4040-S25 (24-25E)
4040-T25 (24-25H)
5050-U32 (32-32H)

PRGCR/L



2020-K10 (12-10B)
2525-M10 (16-10D)
2020-K12 (12-12B)
2525-M12 (16-12D)
3225-P12 (85-12D)
2525-M16 (16-16D)
3225-P16 (85-16D)
3232-P20 (20-20D)
4040-S25 (24-25E)

PSDNN

1616-H09 (10-3A)
2020-K12 (12-4B)
2525-M12 (16-4D)
3232-P12 (20-4D)
2525-M15 (16-5D)
3232-P15 (20-5D)
3232-P19 (20-6D)
4040-S19 (24-6E)
4040-S25 (24-8E)
4040-T25 (24-8H)

PSBNR/L

1616-H09 (10-3A)
2020-K12 (12-4B)
2525-M12 (16-4D)
3232-P12 (85-4D)
3225-P12 (20-4D)
2525-M15 (16-5D)
3232-P15 (20-5D)
3232-P19 (20-6D)
4040-S19 (24-6E)
5050-T25 (32-8H)

PSKNR/L

1616-H09 (10-3A)
2020-K09 (12-3B)
2020-K12 (12-4B)
2525-M12 (16-4D)
3232-P12 (20-4D)
2525-M15 (16-5D)
3232-P15 (20-5D)
3232-P19 (20-6D)
3232-S19 (20-6D)
4040-S19 (24-6E)
4040-S25 (24-8E)

PSSNR/L

1616-H09 (10-3A)
2020-K12 (12-4B)
2525-M12 (16-4D)
3232-P12 (20-4D)
2525-M15 (16-5D)
3232-P15 (20-5D)
3232-P19 (20-6D)
4040-S19 (24-6E)
4040-R19 (24-6E)
4040-S25 (24-8E)

PTFNR/L

1616-H16 (10-3A)
2020-K16 (12-3B)
2525-M16 (16-3D)
2525-M22 (16-4D)
3232-P22 (20-4D)
3232-P27 (20-5D)
4040-S27 (24-5E)

PTGNR/L

1212-F11 (08-2K)
1616-H11 (10-2A)
1616-H16 (10-3A)
2020-K11 (12-2B)
2020-K16 (12-3B)
2525-M16 (16-3D)
3232-P16 (20-3D)
2525-M22 (16-4D)
3232-P22 (20-4D)
3232-P27 (20-5D)
4040-S27 (24-5E)

PTTNR/L

1616-H16 (10-3A)
2020-K16 (12-3B)
2525-M16 (16-3D)
2525-M22 (16-4D)

PWLNR/L

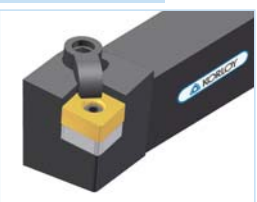
1616-H06 (10-3A)
2020-K06 (12-3B)
2525-M06 (16-3D)
2020-K08 (12-4B)
2525-M08 (16-4D)

Multi lock system

MCKNR/L

2020-K12 (12-4B)
2525-M12 (16-4D)
3232-P12 (20-4D)

MCLNR/L



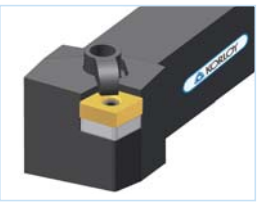
2020-K12 (12-4B)
2525-M12 (16-4D)
3225-P12 (85-4D)
3232-P12 (20-4D)
2525-M16 (16-5D)
3232-P16 (20-5D)
4040-S16 (24-5E)
2525-M19 (16-6D)
3232-P19 (20-6D)
4040-S19 (24-6E)
4040-S25 (24-8E)

MCMNN

2020-K12 (12-4B)
2525-M12 (16-4D)
2525-M16 (20-4D)
3232-P12 (16-5D)
3232-P16 (20-5D)
3232-P19 (20-6D)
4040-S19 (24-6E)

Turning Toolholders

MCRNR/L



2020-K12 (12-4B)
2525-M12 (16-4D)
2525-M16 (16-5D)
3232-P16 (20-5D)
3232-P19 (20-6D)
4040-S19 (24-6E)

MDJNR/L

2020-K11 (12-3B)
2525-M11 (16-3D)
2020-K15-3 (12-4B-3)
2525-M15-3 (16-4D-3)
3232-P15-3 (20-4D-3)
2020-K15 (12-4B)
2525-M15 (16-4D)
3232-P15 (20-4D)

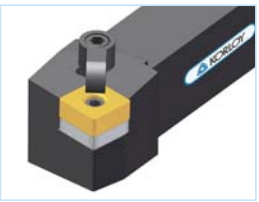
MDNNN

2525-M15-3 (16-4D-3)
2525-M15 (16-4D)

MDQNR/L

2525-M15 (16-4D)
3232-P15 (20-4D)
2525-M15-3 (16-4D-3)
3232-P15-3 (20-4D-3)

MSBNR/L



2020-K12 (12-4B)
2525-M12 (16-4D)
2525-M15 (16-5D)
3232-P15 (20-5D)
3232-P19 (20-6D)
4040-S19 (24-6E)

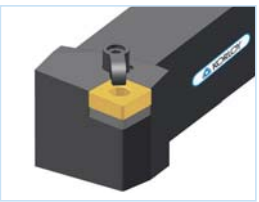
MSDNN

1616-H09 (10-3A)
2020-K09 (12-3B)
2020-K12 (12-4B)
2525-M12 (16-4D)
3225-P12 (85-4D)
2525-M15 (16-5D)
3225-P15 (85-5D)
3232-P15 (20-5D)
4040-S15 (24-5E)
3232-P19 (20-6D)
4040-S19 (24-6E)

MSKNR/L

1616-H09 (10-3A)
2020-K09 (12-3B)
2020-K12 (12-3D)
2525-M12 (16-3D)
3225-P12 (85-3D)
2525-M15 (16-5D)
3232-P15 (20-5D)
3232-P19 (20-6D)
4040-S19 (24-6E)
4040-S25 (24-8E)

MSRNR/L



1616-H09 (10-3A)
2020-K09 (12-3B)
2020-K12 (12-4B)
2525-M12 (16-4D)
2525-M15 (16-5D)
3232-P15 (20-5D)
3225-P19 (85-6D)
3232-P19 (20-6D)
4040-S19 (24-6E)
4040-S25 (24-8E)

MSSNR/L

1616-H09 (10-3A)
2020-K09 (12-3B)
2020-K12 (12-4B)
2525-M12 (16-4D)
2525-M15 (16-5D)
3232-P15 (20-5D)
3232-P19 (20-6D)
4040-S19 (24-6E)

MTENNS

2020-K16 (12-3B)
2525-M16 (16-3D)
2525-M22 (16-4D)
3225-P27 (20-5D)
4040-S33 (24-6E)

MTFNR/L

1616-H16 (10-3A)
2020-K16 (12-3B)
2525-M16 (16-3D)
2525-M22 (16-4D)
3232-P22 (20-4D)
4040-S22 (24-4E)
3232-P27 (20-5D)
4040-S27 (24-5E)
4040-S33 (24-6E)

MTGNR/L

1616-H16 (10-3A)
2020-K16 (12-3B)
2525-M16 (16-3D)
2525-M22 (16-4D)
3232-P22 (20-4D)
3232-P27 (20-5D)
4040-S27 (24-5E)
4040-S33 (24-6E)

MTJNR/L

2020-K16 (12-3B)
2525-M16 (16-3D)
2525-M22 (16-4D)
3232-P22 (20-4D)
3232-P27 (20-5D)
4040-S27 (24-5E)
4040-S33 (24-6E)

MVJNR/L

2020-K16 (12-3B)
2525-M16 (16-3D)
3232-P16 (20-3D)
2525-M22 (16-4D)
3232-P22 (20-4D)
4040-S22 (24-4E)

MVPNR/L

2020-K16 (12-3B)

MVTNR

2525-M16 (16-3D)

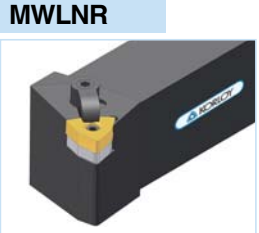
MVQNR

2020-K16 (20-3D)
2525-M16 (16-3D)
3232-P16 (20-3D)

MVVNN

2020-K16 (12-3B)
2525-M16 (16-3D)

MWLNR



2020-K06 (12-3B)
2525-M06 (16-3D)
3232-P06 (20-3D)
2020-K08 (12-4B)
2525-M08 (16-4D)
3232-P08 (20-4D)

Turning Toolholders

Wedge clamp on system

WTJNR

2020-K16 (12-3B)
2525-M16 (16-3D)
3225-P16 (85-3D)
3232-P16 (20-3D)
2525-M22 (16-4D)
3232-P22 (20-4D)

WTXNR/L

2020-K16 (12-3B)
2525-M16 (16-3D)
3232-P16 (20-3D)

WWLNR/L

2020-K08 (12-4B)
2525-M08 (16-4D)
3232-P08 (20-4D)

Clamp on system

CKJNR/L

2020-K16 (12-3B)
2525-M16 (16-3D)
3225-P16 (20-3D)
3225-M16 (85-3D)
3232-P16 (20-3D)
4040-R16 (24-3E)

CSDNN

2020-K12C (12-4B)
2525-M12C (16-4D)
3225-P12C (85-4D)

CCLNR/L

2020-K12C (12-4B)
2525-M12C (16-4D)
3225-P12C (85-4D)

CRDNN

2020-K12C (12-4B)
2525-M12C (16-4D)
3225-P12C (85-4D)

CRGNR/L

2020-K12C (12-4B)
2525-M12C (16-4D)
3225-P12C (85-4D)

CSKNR/L

2020-K12C (12-4B)
2525-M12C (16-4D)
3225-P12C (85-4D)

CTFNR/L

2020-K16C (12-4B)
2525-M16C (16-4D)
3225-P16C (85-4D)

CKNNR/L

2525-M16 (16-3D)
3232-P16 (20-3D)

CTGNR/L

2020-K16C (12-4B)
2525-M16C (16-4D)
3225-P16C (85-4D)

Screw on system

SDJCR/L

1010-E07 (06-2J)
1212-E07 (08-2K)
1212-F11 (08-3K)
1616-H07 (10-2A)
1616-H11 (10-3A)
2020-K07 (12-2B)
2020-K11 (12-3B)
2525-M11 (16-3D)

STGCR/L

0808-D09 (05-1.8I)
1010-E09 (06-1.8J)
1212-F11 (08-2K)
1616-H11 (10-2A)
1616-H16 (10-3A)
2020-K16 (12-3B)
2525-M16 (16-3D)

SVVBN

1212-F11 (08-2K)
1212-F11-2 (08-2K-2)
1616-H11 (10-2A)
1616-H11-2 (10-2A-2)
1616-H16 (10-3A)
2020-K11 (12-2B)
2020-K11-2 (12-2B-2)
2020-K16 (12-3B)
2525-M16 (16-3D)
3225-P16 (85-3D)

SCLCR/L

0808-D06 (05-2I)
1010-E06 (06-2J)
1212-F09 (08-3K)
1616-H09 (10-3A)
2020-K09 (12-3B)
2525-M09 (16-3D)
2020-K12 (12-4B)
2525-M12 (16-4D)

SCACR/L

1010-E06 (06-2J)
1212-F09 (08-3K)

SSKCR/L

1616-H09 (10-3A)

Turning Toolholders

Screw on system

SDNCN

1010-E07 (06-2J)
1212-F07 (08-2K)
1212-H11 (08-3A)
1616-H11 (10-3A)
2020-K11 (12-3B)

SDACR/L

1010-E07 (06-2J)
1212-E07 (08-3K)
1616-H11 (10-3A)

SSDCN

1212-F09 (08-3K)
1616-H09 (10-3A)

SSBCR/L

1212-F09 (08-3K)
1616-H09 (10-3A)
2020-K12 (12-4B)

STACR/L

1010-E09 (06-1.8J)
1212-F11 (08-2K)

STTCR/L

1616-H11 (10-2A)
1616-H16 (10-3A)
2020-K16 (12-3B)

STFCR/L

1010-E09 (06-1.8J)
1212-F11 (08-2K)
1616-H11 (10-2A)
1616-H16 (10-3A)
2020-K16 (12-3B)
2525-M16 (16-3D)

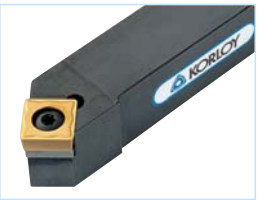
SVABR/L

1616-M16 (10-3A)
2020-K16 (12-3B)

SWACR/L

1010-E04 (06-2J)
1212-F04 (08-2A)
1616-H06 (10-3A)
2020-K08 (12-4B)

SSSCR/L



1616-H09 (10-3A)
2020-K12 (12-4B)
2525-M12 (16-4D)

Boring Bars

Screw on system

SCLCR/L

S08K-SCLCR/L-06 (S05K-SCLCR/L2)
S10K-SCLCR/L-06 (S06K-SCLCR/L2)
S10M-SCLCR/L-06 (S06M-SCLCR/L2)
S12M-SCLCR/L-06 (S08M-SCLCR/L2)
S12M-SCLCR/L-09 (S08M-SCLCR/L3)
S16R-SCLCR/L-09 (S10R-SCLCR/L3)
S20S-SCLCR/L-09 (S12S-SCLCR/L3)
S25T-SCLCR/L-09 (S16T-SCLCR/L3)
S25T-SCLCR/L-12 (S16T-SCLCR/L4)
S32U-SCLCR/L-12 (S20U-SCLCR/L4)
S40V-SCLCR/L12 (S24V-SCLCR/L4)
C12M-SCLCR/L-09 (C08M-SCLCR/L3)
C16R-SCLCR/L-09 (C10S-SCLCR/L3)
C08K-SCLCR/L-06 (C05K-SCLCR/L2)
C10K-SCLCR/L-06 (C06K-SCLCR/L2)

SCLPR/L

S10M-SCLPR/L-08 (S06M-SCLPR/L2.5)
S12M-SCLPR/L-08 (S08M-SCLPR/L2.5)
S16N-SCLPR/L-09 (S10N-SCLPR/L3)
S16R-SCLPR/L-09 (S10R-SCLPR/L3)
S20N-SCLPR/L-09 (S12N-SCLPR/L3)
S20S-SCLPR/L-09 (S12S-SCLPR/L3)
C10M-SCLPR/L-08 (C06M-SCLPR/L2.5)
C12M-SCLPR/L-08 (C08M-SCLPR/L2.5)
C16R-SCLPR/L-09 (C10R-SCLPR/L3)
C20S-SCLPR/L-09 (C12S-SCLPR/L3)

SDQCR/L, SDUCR/L

S10M-SDQCR/L-07 (S06M-SDQCR/L2)
S12M-SDQCR/L-07 (S08M-SDQCR/L2)
S16R-SDQCR/L-07 (S10R-SDQCR/L2)
S16R-SDQCR/L-11 (S10R-SDQCR/L3)
S20S-SDQCR/L-11 (S12S-SDQCR/L3)
S25T-SDQCR/L-11 (S16T-SDQCR/L3)
S32U-SDQCR/L-11 (S20U-SDQCR/L3)
S10M-SDUCR/L-07 (S06M-SDUCR/L2)
S12M-SDUCR/L-07 (S08M-SDUCR/L2)
S16R-SDUCR/L-07 (S10R-SDUCR/L2)
S16R-SDUCR/L-11 (S10R-SDUCR/L3)
S20S-SDUCR/L-11 (S12S-SDUCR/L3)
S25T-SDUCR/L-11 (S16T-SDUCR/L3)

SDZCR/L

S16R-SDZCR/L-07 (S10R-SDZCR/L2)
S20S-SDZCR/L-07 (S12S-SDZCR/L2)
S25T-SDZCR/L-11 (S16T-SDZCR/L3)
S32U-SDZCR/L-11 (S20U-SDZCR/L3)
S40V-SDZCR/L-11 (S24V-SDZCR/L3)

SSKCR/L

S12M-SSKCR/L09 (S08M-SSKCR/L3)
S16R-SSKCR/L09 (S10R-SSKCR/L3)
S20S-SSKCR/L09 (S12S-SSKCR/L3)
S25T-SSKCR/L12 (S16T-SSKCR/L4)
S32U-SSKCR/L12 (S20U-SSKCR/L4)

SSKPR/L

S12M-SSKPR/L-09 (S08M-SSKPR/L3)
S16N-SSKPR/L-09 (S10N-SSKPR/L3)
S16R-SSKPR/L-09 (S10R-SSKPR/L3)
S20N-SSKPR/L-09 (S12N-SSKPR/L3)
S20S-SSKPR/L-09 (S12S-SSKPR/L3)
X12M-SSKPR/L-09 (X08M-SSKPR/L3)
X16N-SSKPR/L-09 (X10N-SSKPR/L3)
X16R-SSKPR/L-09 (X10R-SSKPR/L3)
X20N-SSKPR/L-09 (X12N-SSKPR/L3)
X20S-SSKPR/L-09 (X12S-SSKPR/L3)

STFCR/L

S10M-STFCR/L-09 (S06M-STFCR/L1.8)
S12M-STFCR/L-09 (S08M-STFCR/L1.8)
S12M-STFCR/L-11 (S08M-STFCR/L2)
S16R-STFCR/L-11 (S10R-STFCR/L2)
S20S-STFCR/L-11 (S12S-STFCR/L2)
S20S-STFCR/L-16 (S12S-STFCR/L3)
S25T-STFCR/L-16 (S16T-STFCR/L3)
S32U-STFCR/L-16 (S20U-STFCR/L3)
S40V-STFCR/L-16 (S24V-STFCR/L3)

STFPR/L

S10M-STFPR/L-11 (S06M-STFPR/L2)
S12M-STFPR/L-11 (S08M-STFPR/L2)
S16N-STFPR/L-11 (S10N-STFPR/L2)
S16R-STFPR/L-11 (S10R-STFPR/L2)
S20N-STFPR/L-16 (S12N-STFPR/L3)
S20S-STFPR/L-16 (S12S-STFPR/L3)
C10M-STFPR/L-11 (C06M-STFPR/L2)
C12M-STFPR/L-11 (C08M-STFPR/L2)
C16R-STFPR/L-11 (C10R-STFPR/L2)
C20S-STFPR/L-16 (C12S-STFPR/L3)

SVQBR/L

S32U-SVQBR/L-16 (S20U-SVQBR/L3)
S40V-SVQBR/L-16 (S24V-SVQBR/L3)

SVUBR/L

S32U-SVUBR/L-16 (S20U-SVUBR/L3)
S40V-SVUBR/L-16 (S24V-SVUBR/L3)

SWLCR/L

S25T-SWLCR/L-08 (S16T-SWLCR/L4)
S32U-SWLCR/L-08 (S20U-SWLCR/L4)

Boring Bars

Lever lock system

PCLNR/L

S16R-PCLNR/L-09 (S10R-PCLNR/L3)
S20S-PCLNR/L-09 (S12S-PCLNR/L3)
S25T-PCLNR/L-09 (S16T-PCLNR/L3)
S25T-PCLNR/L-12 (S16T-PCLNR/L4)
S32U-PCLNR/L-12 (S20U-PCLNR/L4)
S40V-PCLNR/L-12 (S24V-PCLNR/L4)
S50W-PCLNR/L-12 (S32W-PCLNR/L4)
S50W-PCLNR/L-19 (S32W-PCLNR/L6)
A25R-PCLNR/L-12 (A16R-PCLNR/L4)
A32S-PCLNR/L-12 (A20S-PCLNR/L4)
A40T-PCLNR/L-12 (A24T-PCLNR/L4)

PSKNR/L

S25T-PSKNR/L-12 (S16T-PSKNR/L4)
S32U-PSKNR/L-12 (S20U-PSKNR/L4)
S40V-PSKNR/L-12 (S24V-PSKNR/L4)
A25R-PSKNR/L-12 (A16R-PSKNR/L4)
A32S-PSKNR/L-12 (A20S-PSKNR/L4)

PTFNR/L

S16R-PTFNR/L-16 (S10R-PTFNR/L3)
S20S-PTFNR/L-16 (S12S-PTFNR/L3)
S25T-PTFNR/L-16 (S16T-PTFNR/L3)
S32U-PTFNR/L-16 (S20U-PTFNR/L3)
S40V-PTFNR/L-16 (S24V-PTFNR/L3)
A25R-PTFNR/L-16 (A16R-PTFNR/L3)
A32S-PTFNR/L-16 (A20S-PTFNR/L3)

PDSNR/L

S32U-PDSNR/L-15 (S20U-PDSNR/L4)
S40V-PDSNR/L-15 (S24V-PDSNR/L4)
S32U-PDSNR/L-15-3 (S20U-PDSNR/L4-3)
S40V-PDSNR/L-15-3 (S24V-PDSNR/L4-3)
A32S-PDSNR/L-15 (A20S-PDSNR/L4)
A32S-PDSNR/L-15-3 (A20S-PDSNR/L4-3)

PDUNR/L

S20S-PDUNR/L-11 (S12S-PDUNR/L3)
S25T-PDUNR/L-11 (S16T-PDUNR/L3)
S32U-PDUNR/L-11 (S20U-PDUNR/L3)
S32U-PDUNR/L-15 (S20U-PDUNR/L4)
S40V-PDUNR/L-15 (S24V-PDUNR/L4)
S32U-PDUNR/L-15-3 (S20U-PDUNR/L4-3)
S40V-PDUNR/L-15-3 (S24V-PDUNR/L4-3)
A32S-PDUNR/L-15 (A20S-PDUNR/L4)
A32S-PDUNR/L-15-3 (A20S-PDUNR/L4-3)

Multi lock system

MCLNR/L

S25T-MCLNR/L-12 (S16T-MCLNR/L-4)
S32U-MCLNR/L-12 (S20U-MCLNR/L-4)
S40V-MCLNR/L-12 (S24V-MCLNR/L-4)
A25R-MCLNR/L-12 (A16R-MCLNR/L-4)
A32S-MCLNR/L-12 (A20S-MCLNR/L-4)

MDUNR/L

S32U-MDUNR/L-15 (S20U-MDUNR/L-4)
S40V-MDUNR/L-15 (S24V-MDUNR/L-4)
A32S-MDUNR/L-15 (A20S-MDUNR/L-4)
A40T-MDUNR/L-15 (A24T-MDUNR/L-4)

MSKNR/L

S25T-MSKNR/L-12 (S16T-MSKNR/L-4)
S32U-MSKNR/L-12 (S20U-MSKNR/L-4)
S40V-MSKNR/L-12 (S24V-MSKNR/L-4)
A25R-MSKNR/L-12 (A16R-MSKNR/L-4)
A32S-MSKNR/L-12 (A20S-MSKNR/L-4)
A40T-MSKNR/L-12 (A24T-MSKNR/L-4)

MTFNR/L

S25T-MTFNR/L-16 (S16T-MTFNR/L-3)
S32U-MTFNR/L-16 (S20U-MTFNR/L-3)
S40U-MTFNR/L-16 (S24U-MTFNR/L-3)
A25R-MTFNR/L-16 (A16R-MTFNR/L-3)
A32S-MTFNR/L-16 (A20S-MTFNR/L-3)

MVUNR/L

S32U-MVUNR/L-16 (S20U-MVUNR/L-3)
S40V-MVUNR/L-16 (S24V-MVUNR/L-3)
A32U-MVUNR/L-16 (A20U-MVUNR/L-3)
A40T-MVUNR/L-16 (A24T-MVUNR/L-3)

MWLNR/L

S25T-MWLNR/L-06 (S16T-MWLNR/L-3)
S32U-MWLNR/L-06 (S20U-MWLNR/L-3)
S40V-MWLNR/L-06 (S24V-MWLNR/L-3)
S25T-MWLNR/L-08 (S16T-MWLNR/L-4)
S32U-MWLNR/L-08 (S20U-MWLNR/L-4)
S40V-MWLNR/L-08 (S24V-MWLNR/L-4)
A25R-MWLNR/L-06 (A16R-MWLNR/L-3)
A32S-MWLNR/L-06 (A20S-MWLNR/L-3)
A25R-MWLNR/L-08 (A16R-MWLNR/L-4)
A32S-MWLNR/L-08 (A20S-MWLNR/L-4)

Coolant hole boring bars

SDUCR/L

A10H-SDUCR/L-07 (A06H-SDUCR/L2)
A12K-SDUCR/L-07 (A08K-SDUCR/L2)
A16M-SDUCR/L-07 (A10M-SDUCR/L2)
A20Q-SDUCR/L-11 (A12Q-SDUCR/L3)
A25R-SDUCR/L-11 (A16R-SDUCR/L3)

STFCR/L

A10H-STFCR/L-09 (A06H-STFCR/L1.8)
A12K-STFCR/L-09 (A08K-STFCR/L1.8)
A12K-STFCR/L-11 (A08K-STFCR/L2)
A16M-STFCR/L-11 (A10M-STFCR/L2)
A20Q-STFCR/L-11 (A12Q-STFCR/L2)
A25R-STFCR/L-16 (A16R-STFCR/L3)
A32S-STFCR/L-16 (A20S-STFCR/L3)

SDQCR/L

A10H-SDQCR/L-07 (A06H-SDUCR/L2)
A12K-SDQCR/L-07 (A08K-SDUCR/L2)
A16M-SDQCR/L-11 (A10M-SDUCR/L2)
A20Q-SDQCR/L-11 (A12Q-SDUCR/L3)
A25R-SDQCR/L-11 (A16R-SDUCR/L3)

SCLCR/L

A08F-SCLCR/L-06 (A05F-SCLCR/L2)
A10H-SCLCR/L-06 (A06H-SCLCR/L2)
A12K-SCLCR/L-06 (A08K-SCLCR/L2)
A12K-SCLCR/L-09 (A08K-SCLCR/L3)
A16M-SCLCR/L-09 (A10M-SCLCR/L3)
A20Q-SCLCR/L-09 (A12Q-SCLCR/L3)
A25R-SCLCR/L-09 (A16R-SCLCR/L3)
A25R-SCLCR/L-12 (A16R-SCLCR/L4)
A32S-SCLCR/L-12 (A20S-SCLCR/L4)

SCLPR/L

A10H-SCLPR/L-08 (A06H-SCLPR/L2.5)
A12K-SCLPR/L-08 (A08K-SCLPR/L2.5)
A16M-SCLPR/L-09 (A10M-SCLPR/L3)
A20Q-SCLPR/L-09 (A12Q-SCLPR/L3)
E10M-SCLPR/L-08 (E06M-SCLPR/L2.5)
E12M-SCLPR/L-08 (E08M-SCLPR/L2.5)
E16R-SCLPR/L-09 (E10R-SCLPR/L3)
E20S-SCLPR/L-09 (E12S-SCLPR/L3)

SDZCR/L

A25R-SDZCR/L-11 (A16R-SDZCR/L3)
A32S-SDZCR/L-11 (A20S-SDZCR/L3)

SSKCR/L

A12K-SSKCR/L09 (A08K-SSKCR/L3)
A16M-SSKCR/L09 (A10M-SSKCR/L3)
A20Q-SSKCR/L09 (A12Q-SSKCR/L3)
A25R-SSKCR/L12 (A16R-SSKCR/L4)
A32S-SSKCR/L12 (A20S-SSKCR/L4)

SSKPR/L

A12K-SSKPR/L-09 (A08K-SSKPR/L3)
A16M-SSKPR/L-09 (A10M-SSKPR/L3)
A20Q-SSKPR/L-09 (A12Q-SSKPR/L3)

STFPR/L

A10H-STFPR/L-11 (A06H-STFPR/L2)
A12K-STFPR/L-11 (A08K-STFPR/L2)
A16M-STFPR/L-11 (A10M-STFPR/L2)
A20Q-STFPR/L-16 (A12Q-STFPR/L3)
E10M-STFPR/L-11 (E06M-STFPR/L2)
E12M-STFPR/L-11 (E08M-STFPR/L2)
E16R-STFPR/L-11 (E10M-STFPR/L2)
E20S-STFPR/L-16 (E12S-STFPR/L3)

SVQBR/L

A32S-SVQBR/L-16 (A20S-SVQBR/L3)

SVUBR/L

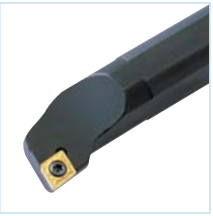
A32S-SVUBR/L-16 (A20S-SVUBR/L3)

SWLCR/L

A25R-SWLCR/L-08 (A16R-SWLCR/L4)
A32S-SWLCR/L-08 (A20S-SWLCR/L4)

Compact mini bars

SCLCR/R



S10H-SCLCR/L-0305
S10H-SCLCR/L-0306
S10J-SCLCR/L-0407
S10J-SCLCR/L-0408
C04G-SCLCR/L-0305
C05H-SCLCR/L-0306
C06J-SCLCR/L-0407
C07K-SCLCR/L-0408

STUBR/L

A08F-STUBR/L-06
C08K-STUBR/L-06
S08K-STUBR/L-06

STUPR/L

A08F-STUPR/L-08
C08K-STUPR/L-08
S08K-STUPR/L-08

SWUBR/L

A08F-SWUBR/L-02
A08F-SWUBR/L-S3
C05H-SWUBR/L-02
C08K-SWUBR/L-02
C08K-SWUBR/L-S3
E05H-SWUBR/L-02
E08K-SWUBR/L-02
S05H-SWUBR/L-02
S08K-SWUBR/L-02
S08K-SWUBR/L-S3

Forming, Grooving, Threading, Parting

SAW-MAN

SPB-S(SPBA-S)

(Stopper type)

Insert : SP

· Blade

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

SPH-S(SPHA-S)

Insert : SP

· Blade

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

SPB(SPBA) / SMBB(SMBBA)

Insert : SP

· Blade

226 432
232 526
326 532
332 626
426 632

· Block

1626
2026
2032
2526
2532
3232

M. G. T

MGEHR/L

Insert : MGMN-M
MRMN-M
MRGN-A

MGIVR/L

Insert : MGMN-M
MRMN-M
MRGN-A

MGEUR/L

Insert : MGMN-M
MRMN-M
MRGN-A

MGEVR/L

Insert : MGMN-M
MRMN-M

MGIUR/L

Insert : MGMN-M
MRMN-M
MRGN-A

Internal Cutting

FTIH

Insert : FTG, FTT, FTF

IGH

Insert : IG

214 (0910-2)
216 (1110-2)
220 (1310-2)

GFIK

Insert : GR

316R/L (1410-3)
325R/L (2116-3)
340R/L (3224-3)
525R/L (2116-5)
540R/L (3224-5)
840R/L (3224-8)

GFIP

Insert : BF, GW

316R/L (1310-3)
320R/L (1712-3)
325R/L (2116-3)
340R/L (3224-3)
525R/L (2116-5)
540R/L (3224-5)

External Cutting

DBH

Insert : DB

320 (12-3)
325 (16-3)
520 (12-5)
525 (16-5)
720 (12-7)
725 (16-7)

GH

Insert : GS, GO

2020R/L-3 (12-3)
2525R/L-3 (16-3)
2020R/L-4 (12-4)
2525R/L-4 (16-4)

GFT

Insert : GW, BF

320R/L (12-3)
325R/L (16-3)
525R/L (16-5)
825R/L (16-8)

TBH

Insert : TB

320-23 (12-3-23)
320-33 (12-3-33)
320-43 (12-3-43)
325-23 (16-3-23)
325-33 (16-3-33)
325-43 (16-3-43)
420-23 (12-4-23)
420-33 (12-4-33)
420-45 (12-4-45)
425-23 (16-4-23)
425-33 (16-4-33)
425-45 (16-4-45)

Face Grooving Tools

EH

Insert : ESB

620 (12-6)
625 (16-6)

PH

Insert : POB

320R/L (12-3)
325R/L (16-3)
420R/L (12-4)
425R/L (16-4)
520R/L (12-5)
525R/L (16-5)

FGHH (FGVH)

Insert : FGD
FGM
FMM

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

MGFHR

Insert : MFMN
MGMN

325-24/35-T10
325-29/40-T10
325-34/50-T10
25-44/70-T10
325-64/99-T10
425-62/120-T15
425-112/200-T15

MGFVR

Insert : MFMN
MGMN

325-24/35-T10
325-29/40-T10
325-34/50-T10
425-44/60-T15

Threading

ERH

Insert : ER/ERM

• Screw on system
: ERH□-□
• Clamp on system
: ERH□-□

IRH

Insert : IR/IRM

• Screw on system
: IRH□-□
• Clamp on system
: IRH□-□

VTH

Insert : VETR

2020R/L (12)
2525R/L (16)
3225R/L (85)

Rich Mill Series

RM4PC(M) 4000

(ø50 - ø160mm)
(ø2 - ø6.4inch)

· Insert
LNMX151008PNR-MF
LNMX151008PNR-MM
LNEX151008PNR-MF
LNEX151008PNR-MM

RM4PS 4000

(ø32 - ø63mm)
(ø1.28 - ø2.52inch)

· Insert
LNMX151008PNR-MF
LNMX151008PNR-MM
LNEX151008PNR-MF
LNEX151008PNR-MM

RM8AC(M) 4000

(ø50 - ø250mm)
(ø2 - ø10inch)

· Insert
SNMX1206ANN-MF
SNMX1206ANN-MM
SNEX1206ANN-MF
SNEX1206ANN-MM

RM8EC(M) 4000

(ø50 - ø200mm)
(ø2 - ø8inch)

· Insert
SNMX1206ENN-MF
SNMX1206ENN-MM
SNEX1206ENN-MF
SNEX1206ENN-MM

RM16AC(M) 8000

(ø63 - ø200mm)
(ø2.52 - ø8inch)

· Insert
ONMX080608-MF
ONMX080608-MM
ONHX080608-MF
ONHX080608-MM
ONHX080608-W

RMT8Q/E/A(M) 4000,5000

(ø80 - ø315mm)
(ø3.2 - ø12.6inch)

· Insert

SNCF 1206QNN-MM	SNMF 1507ENN-MM
1206QNN-MF	1507ENN-MF
SNMF 1206QNN-MM	SNCF 1206ANN-MM
1206QNN-MF	1206ANN-MF
SNCF 1206ENN-MM	SNMF 1206ANN-MM
1206ENN-MF	1206ANN-MF
SNMF 1206ENN-MM	SNCF 1507ANN-MM
1206ENN-MF	1507ANN-MF
SNCF 1507ENN-MM	SNMF 1507ANN-MM
1507ENN-MF	1507ANN-MF

Future Mill Series

FMRC 3000, 4000, 5000, 6000

(ø40 - ø160mm)
(ø1.6 - ø6.4inch)

· Insert
RDKT10T3M0-MM,MF,MA
RDKT1204M0-MM,MF,MA
RDKT1605M0-MM
RDKT2006M0-MM
RDHW1605M0-F,E,S
RDHW2006M0-F,E,S

FMRS 1000, 1500, 2000, 2500, 3000, 4000, 5000, 6000

(ø8 - ø63mm)
(ø0.32 - ø2.52inch)

· Insert
RDHW0501M0-F,E,S
RDHW06T1M0-F,E,S
RDHW0702M0-F,E,S
RDHW0803M0-F,E,S
RDKT10T3M0-MM,MF,MA
RDKT1204M0-MM,MF,MA
RDKT1605M0-MM
RDKT2006M0-MM
RDHW1605M0-F,E,S
RDHW2006M0-F,E,S

FMRM 1000, 1500, 2000, 2500, 3000, 4000, 5000

(ø8 - ø42mm)
(ø0.32 - ø1.72inch)

· Insert
RDHW0501M0-F,E,S
RDHW06T1M0-F,E,S
RDHW0702M0-F,E,S
RDHW0803M0-F,E,S
RDKT10T3M0-MM,MF,MA
RDKT1204M0-MM,MF,MA
RDKT1605M0-MM
RDHW1605M0-F,E,S

FMPC

(ø50 - ø125mm)
(ø2 - ø5inch)

· Insert
SDXT09M405R-MF
SDXT09M405R-MM
SDXT09M405R-MA
SDET09M402R-MA
SDXT130508R-MF
SDXT130508R-MM
SDXT130508R-MA
SDET130504R-MA

FMPS

(ø25 - ø63mm)
(ø1 - ø2.52inch)

· Insert
SDXT09M405R-MF
SDXT09M405R-MM
SDXT09M405R-MA
SDET09M402R-MA
SDXT130508R-MF
SDXT130508R-MM
SDXT130508R-MA
SDET130504R-MA

FMAC

(ø50 - ø200mm)
(ø2- ø8inch)

· Insert
SEET0903AGSN-MF
SEXT0903AGSN-MF
SEET0903AGSN-MM
SEXT0903AGSN-MM
SEET0903AGFN-MA
SEXT0903AGSN-MR
SEET14M4AGSN-MF
SEXT14M4AGSN-MF
SEET14M4AGSN-MM
SEXT14M4AGSN-MM
SEET14M4AGSN-MA
SEXT14M4AGSN-MR
SEEW14M4AGTN-W

Future Mill Aluminum Body

FMAS

(ø25 - ø63mm)
(ø1 - ø2.52inch)

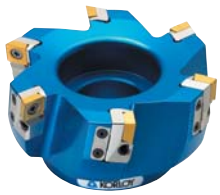
· Insert
SEET0903AGSN-MF
SEXT0903AGSN-MF
SEET0903AGSN-MM
SEXT0903AGSN-MM
SEET0903AGFN-MA
SEXT0903AGSN-MR
SEET14M4AGSN-MF
SEXT14M4AGSN-MF
SEET14M4AGSN-MM
SEXT14M4AGSN-MM
SEET14M4AGSN-MA
SEXT14M4AGSN-MR
SEEW14M4AGTN-W

FMAC-A

(ø63 - ø315mm)
(ø2.52 - ø12.6inch)

· Insert
SEET0903AGSN-MF
SEXT0903AGSN-MF
SEET0903AGSN-MM
SEXT0903AGSN-MM
SEET0903AGFN-MA
SEXT0903AGSN-MR
SEET14M4AGSN-MF
SEXT14M4AGSN-MF
SEET14M4AGSN-MM
SEXT14M4AGSN-MM
SEET14M4AGSN-MA
SEXT14M4AGSN-MR
SEEW14M4AGTN-W

FMPC-A



(ø63 - ø315mm)
(ø2.52 - ø12.6inch)

· Insert
SDXT09M405R-MF
SDXT09M405R-MM
SDXT09M405R-MA
SDET09M402R-MA
SDXT130508R-MF
SDXT130508R-MM
SDXT130508R-MA
SDET130504R-MA

HRM Tool

HRMC(M) 1300, 1500

(ø50 - ø160mm)
(ø2 - ø6.4inch)

· Insert
WDKT130520ZDSR-MH
WDKT150625ZDSR-MH

HRMS 0800,1000,1300,1500

(ø20 - ø63mm)
(ø0.8 - ø2.52inch)

· Insert
WDKT080316ZDSR-MH
WDKT10T320ZDSR-MH
WDKT130520ZDSR-MH
WDKT150625ZDSR-MH

Mill-Max series

ADN4000 / ADN5000

(ø80 - ø315mm)
(ø3.2 - ø12.6inch)

· Insert
SDAN1203, 1504
SDKN1203, 1504

AE4000(AEM,AEA)

(ø80 - ø315mm)
(ø3.2 - ø12.6inch)

· Insert
SECN1203(42)
SEKN1203(42)
SEKR1203(42)
· For milling of steel, tool steel and stainless steel

EF4000(EFM,EFA)

(ø80 - ø315mm)
(ø3.2 - ø12.6inch)

· Insert
SFAN1203(42)
SFCN1203
· For milling of aluminum and light alloy exclusively

※ADM, AEM, EFM :They have the Metric Size System.

EN4000(ENM,ENA)

(ø80 - ø315mm)
(ø3.2 - ø12.6inch)

· Insert
SNCN1204(42)
· For milling of cast - iron exclusively

EPN4000 / EPN5000

(ø80 - ø315mm)
(ø3.2 - ø12.6inch)

· Insert
SPAN1203,1504
SPCN1203, 1504
SPKN1203,1504
SPKR1203, 1504

PPN4000

(ø80 - ø315mm)
(ø3.2 - ø12.6inch)

· Insert
TPAN2204
TPKN2204
TPKR2204
TPCN2204

Double-Mill series

AFO4000(AFOM,AFOA)

(ø80 - ø125mm)
(ø3.2 - ø5inch)

· Insert
OFCW05T3N
OFKT05T3SN-MF
OFKT05T3SN-MM
REKT12T300-MM
OFKT05T3FN-MA

AFO5000(AFOM,AFOA)

(ø80 - ø200mm)
(ø3.2 - ø8inch)

· Insert
OFCN0704N
OFKR0704SN-MF
OFKR0704SN-MM
REKR170400-MM
OFKR0704FN-MA

※AFOM :They have the Metric Size System.

Alpha-Mill Series

AMC2000,3000S

(ø50 - ø100mm)
(ø2 - ø4inch)

· Insert
APXT11T3PDSR-MM
11T3PDSR-MF
11T312R-MM
11T3PDR-MA
APKT1604PDFR-MA
APXT1604PDSR-MM
1604PDSR-MF
160416R-MM
160432R-MM

AMC 2000,3000SE

(ø80 - ø100mm)
(ø3.2 - ø4inch)

· Insert
APXT11T3PDSR-MM
11T3PDSR-MF
11T312R-MM
1604PDSR-MM
1604PDSR-MF
160416R-MM
160432R-MM

AMS 2000S, 3000S

(ø10 - ø63mm)
(ø0.4 - ø2.52inch)

· Insert
APXT 11T3PDSR-MM
11T3PDSR-MF
11T312R-MM
1604PDSR-MM
1604PDSR-MF
160416R-MM
APKT 160432R-MM
1604PDFR-MA

AMS 2000, 3000SE

(ø25 - ø63mm)
(ø1 - ø2.52inch)

· Insert
APXT 11T3PDSR-MM
11T3PDSR-MF
11T312R-MM
1604PDSR-MM
1604PDSR-MF
160416R-MM
160432R-MM

AMS 2000M

(ø20 - ø40mm)
(ø0.8 - ø1.6inch)

· Insert
APXT 11T3PDSR-MM
11T3PDSR-MF
11T312R-MM
11T3PDR-MA

AMC 2000M

(ø50 - ø100mm)
(ø2 - ø4inch)

· Insert
APXT11T3PDSR-MM
11T3PDSR-MF
11T312R-MM
11T3PDR-MA

Tank-Mill Series

THE

(ø25 - ø50mm)
(ø1 - ø2inch)

· Insert
APLT070304R
ADLT150308R
ZPMT1504PPSR
SPMT060304
SPMT120308
SDMT090308

HE

(ø25 - ø63mm)
(ø1 - ø2.52inch)

· Insert
MCMT080308EN
09T308EN
ZCMT 080308ER
09T308ER

Chamfer Tool Series

CE

CE15-1125R-S20
CE30-1125R-S20
CE45-1107R-S20
CE45-1119R-S20
CE45-1125R-S20
CE60-1125R-S32

· Insert
SPMT110408-KC

CE

CE45-1207R-S32
CE45-1220R-S32
CE45-1225R-S32
CE45-1235R-S32

· Insert
SPMN120308

CE

CE30-3105R-S32
CE45-3105R-S32
CE60-3105R-S32

· Insert
XCET310404ER-KC

Cen-Mill Series

PM

(ø40 - ø50mm)
(ø1.6 - ø2inch)

· Insert
EDCW1604ZDF(T)R

SE

(ø25 - ø40mm)
(ø1 - ø1.6inch)

· Insert
MPMT090308
120408

TM

(ø32 - ø50mm)
(ø1.28 - ø2inch)

· Insert
MIT 100, 150, 200, 300, 400
MET 100, 150, 200, 300, 400

Turbo-Mill Series

ADS 4000, 5000

(ø50 - ø63mm)
(ø2 - ø2.52inch)

· Insert
SDCN42M/MT
SDCN42M/MT

PES2000, 3000, 4000

(ø20 - ø63mm)
(ø0.8- ø2.52inch)

· Insert
TECN22R/TR
TECN32R/TR
TECN42R/TR
TECN43R/TR

Pro-X Mill

PAXC

(ø40 - ø125mm)
(ø1.6 - ø5inch)

· **Insert**
XEKT19M5 □□-MA

PAXS

(ø20 - ø40mm)
(ø0.8 - ø1.6inch)

· **Insert**
XEKT19M5□□-MA

■ **XEKT19M5□□-MA's** nose-R size

Nose-R (ISO code)	04	08	12	16	18	20	30	32	40	50
Nose-R (ASA code)	1	2	3	4	4.5	5	7.5	8	10	12.5

Pro-A Mill

PAC 4000

(ø40 - ø100mm)
(ø1.6 - ø4inch)

· **Insert**
VCKT220530 - MA

PAS 2000, 4000

2000 (ø12 - ø42mm)
(ø0.48 - ø1.68inch)
4000 (ø32 - ø40mm)
(ø1.28 - ø1.6inch)

· **Insert**
VDKT11T210-MA
VCKT220530-MA

PAM 2000

(ø12 - ø42mm)
(ø0.48 - ø1.68inch)

· **Insert**
VDKT11T210-MA

Aero Mill

APD(M)□□□-A(Insert Type)

(ø80 - ø315mm)
(ø3.2 - ø12.6inch)

· **Insert**
CDEW1204R-XCF
CDEW1204R-XAF
CDEW1204R-XAW
CDEW1204R-NAF
CDEW1204R-NAW

APD(M)□□□-B(Blade Type)

(ø80 - ø315mm)
(ø3.2 - ø12.6inch)

· **Blade**
BAPDR-XAF
BAPDR-XAW
BAPDR-NAF
BAPDR-NAW

High Feed Cutter for Cast iron

CBMQ(AA=2°)

(ø80 - ø315mm)
(ø3.2 - ø12.6inch)

· Insert
SNEX1010ZNN-CU1
SNEX101010-CU1
SNEX1212ZNN-CU1
SNEX121212-CU1

CBMF(AA=5°)

(ø80 - ø315mm)
(ø3.2 - ø12.6inch)

· Insert
SNEX1010ZNN-CU1
SNEX101010-CU1
SNEX1212ZNN-CU1
SNEX121212-CU1

CBME(AA=15°)

(ø80 - ø315mm)
(ø3.2 - ø12.6inch)

· Insert
SNEX101010-CU1
SNEX121212-CU1

CBMC(AA=25°)

(ø80 - ø315mm)
(ø3.2 - ø12.6inch)

· Insert
SNEX101010-CU1
SNEX121212-CU1

CBMA(AA=45°)

(ø80 - ø315mm)
(ø3.2 - ø12.6inch)

· Insert
SNEX1010ZNN-CU1
SNEX101010-CU1
SNEX1212ZNN-CU1
SNEX121212-CU1

DRMQ(AA=2°)

(ø80 - ø315mm)
(ø3.2 - ø12.6inch)

· Insert
SNCQ1205ZNR
SNCQ1205ZNL

SQN(AA=2°)

(ø80 - ø315mm)
(ø3.2 - ø12.6inch)

· Insert
LNE 324-C1.0
LNE 324-R0.8

SFN(AA=5°)

(ø80 - ø315mm)
(ø3.2 - ø12.6inch)

· Insert
LNE 324-C1.0
LNE 324-R0.8

SEN(AA=15°)

(ø80 - ø315mm)
(ø3.2 - ø12.6inch)

· Insert
LNE 324-R0.8

SAN(AA=45°)

(ø80 - ø315mm)
(ø3.2 - ø12.6inch)

· Insert
LNE 324-C1.0
LNE 324-R0.8

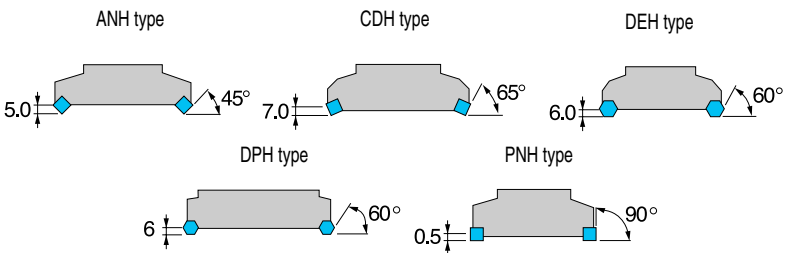
COUPLE MILL

(ø335 - ø450mm)
(ø13.4 - ø18inch)

CUBE-COUPLE
DURA-COUPLE
STORM-COUPLE

High feed cutter

ANH4000, 5000
CDH4000, 5000
CDH4000, 5000
DEH5000
DPH5000
PNH4000, 5000



Side cutter

FC0810R/L-31524R/L(FCA)
HC10024R/L-31524R/L(HCA)

FC0810R/L-31524R/L(FCA)
(ø80 - ø315mm)
(ø3.2- ø12.6inch)

HC10024R/L-31524R/L(HCA)
(ø100 - ø315mm)
(ø4 - ø12.6inch)
· Insert
TPCN1103PPN
1603PPN

SPB (Boss type)

(ø80 - ø200mm)
(ø3.2 - ø8inch)

· Insert
PNEJ 1223N
PNEJ 1275N

SPP (Plane type)

(ø80 - ø200mm)
(ø3.2 - ø8inch)

· Insert
PNEJ 1223N
PNEJ 1275N

Solid Endmills

KORLOY

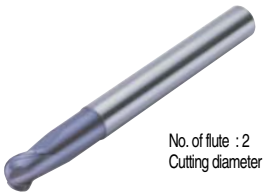
- Ultra fine grain grade (FCC, FA1, FS1)
- Accurate cutting surface and good finishing operations with excellent toughness

H-Max Endmills

HPRE

No. of flute : 4
Cutting diameter : ø3 - ø16㎜

HPBE



No. of flute : 2
Cutting diameter : ø1.0 - ø16.0㎜

Z-Max Endmills

HSE

No. of flute : 4, 6, 8
Cutting diameter : ø3 - ø20㎜
For high feed

HSRE

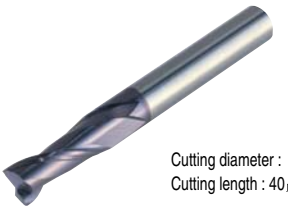
No. of flute : 4
Cutting diameter : ø3 - ø16㎜

HSBE

No. of flute : 2
Cutting diameter : ø1.0 - ø16.0㎜

Coated Carbide Endmills Q-MAX Endmills

SSE2000 - Q(TiAlN)

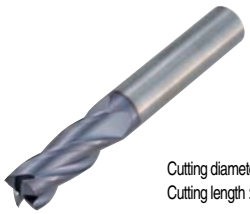


Cutting diameter : ø1 - ø16
Cutting length : 40㎜ - 90㎜

SSE3000 - Q(TiAlN)

Cutting diameter : ø3 - ø16
Cutting length : 45㎜ - 90㎜

SSE4000 - Q (TiAlN)

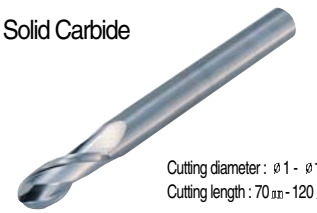


Cutting diameter : ø13 - ø16
Cutting length : 45㎜ - 90㎜

Ball Endmills

SSBE (2000/4000)

Solid Carbide



Cutting diameter : ø1 - ø16
Cutting length : 70㎜ - 120㎜

SSBE2000 - Q / 4000 - Q

Q-Max Ball Endmills

Cutting diameter : ø1 - ø16
Cutting length : 70㎜ - 120㎜

LSSBE - Q (Long Ball Endmills)

Q-Max Ball Endmills

Cutting diameter : ø3 - ø16
Cutting length : 100㎜ - 170㎜

ZSBE(Brazed Spiral)

Cutting diameter : ø14 - ø50
Cutting length : 100㎜ - 170㎜

Endmills for specific workpiece

SSEA2000/3000

AL

No.of flute : 2, 3
Cutting diameter : ø10 - ø20
Cutting length : 40mm ~ 110mm

SSES3000-Q

SUS(STS)

Cutting diameter : ø3 - ø20
Cutting length : 45mm ~ 110mm

Solid Spiral Endmills

SSE2000

Cutting diameter : ø3 - ø16
Cutting length : 40㎜ - 80㎜

SSE4000

Cutting diameter : ø3 - ø16
Cutting length : 40㎜ - 80㎜

Mach Drills

MSD

MSD□□□-□P

Aspect Ratio : 3D, 5D, 7D
Cutting diameter : ø2.5 - ø20mm
ø0.1 - ø0.8inch

MSDH(Mach Drill with Coolant Hole)

MSDH□□□-□P

Aspect Ratio : 3D, 5D, 7D
Cutting diameter : ø2.5 - ø20mm
ø0.1 - ø0.8inch

Mach Long Drills

MLD (Mach Drill with Coolant Hole)

Aspect ratio : Over 15D
Cutting diameter : ø2.5 - ø16mm
Max. overall length : 300mm

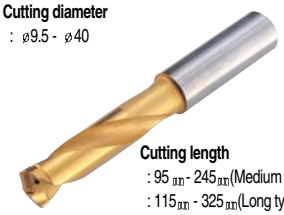
MLDP (Mach Drill with Coolant Hole)

Cutting diameter : ø2.5 - ø16mm
Pilot Drill

Vulcan Drills

VZD- MA, MBA, LA, LBA

(Brazed type)
Cutting diameter
: ø9.5 - ø40



Cutting length
: 95㎜ - 245㎜(Medium type)
: 115㎜ - 325㎜(Long type)

Drills

SSD

Cutting diameter : ø1 - ø13
Cutting length : 32㎜ - 125㎜
For General purpose

Indexable Drills Series

LPD

(ø12 - ø13.5mm)
(ø0.48 - ø0.54inch)

· Insert
LPMT040203-DF

SPD

(ø13 - ø22mm)
(ø0.52 - ø0.88inch)

· Insert
SPMT050203-DM, DS, DA, DF
(SPET)060204
070204

NPD

(ø23 - ø60mm)
(ø0.92 - ø2.4inch)

· Insert
NPMT 222408-DM,DS,DR,DA
(NPET) 252808
293208
334008
415008
516012

NPD Cartridge

(ø61 - ø100mm)
(ø2.44 - ø4inch)

· Insert
NPMT 222408-DM,DS,DR,DA
(NPET) 252808
293208
334008
415008
516012

Mach Mill & Laser Mill Series

BFE

(ø16 - ø32mm)
(ø0.64 - ø1.28inch)

· Insert
RC16
RC20
RC25
RC30
RC32

BRE

(ø20 - ø63mm)
(ø0.8 - ø2.52inch)

· Insert
ZDMT08T2-R10.0
ZDMT1103-R12.5
ZDMT13T3-R16.0
ZPMT1604-R20.0
ZPMT1604-R25.0
ZPMT1604-R31.5

LBE Holder(Shank)

· Steel Shank
LBE080035T-S12
LBE080055T-S12
LBE080075T-S12

LBE100035T-S12
LBE100055T-S12
LBE100075T-S12
LBE120035S-S12
LBE120055T-S12
LBE120085T-S16
LBE160035S-S16
LBE160065T-S16
LBE160100T-S20
LBE200040S-S20
LBE200075T-S20
LBE200115T-S25
LBE250045S-S25

LBE250090T-S25
LBE250135T-S32
LBE300055S-S32
LBE300105T-S32
LBE300160T-S32
LBE320055S-S32
LBE320105T-S32
LBE320160T-S32

· Carbide Shank
LBE080080S-S08C
LBE080100S-S08C
LBE100080S-S10C

LBE100120S-S10C
LBE100100S-S12C
LBE120150S-S12C
LBE160100S-S16C
LBE160150S-S16C
LBE200120S-S20C
LBE200170S-S20C
LBE250140S-S25C
LBE250170S-S25C
LBE300140S-S32C
LBE300170S-S32C
LBE320140S-S32C
LBE320170S-S32C

Carbide Shank

LBE080020S-S08C-130
LBE080020S-S08C-150
LBE100023S-S10C-130
LBE100023S-S10C-170

LBE120025S-S12C-150
LBE120025S-S12C-200
LBE160030S-S16C-160
LBE160030S-S16C-210
LBE200035S-S20C-190
LBE200035S-S20C-240
LBE250040S-S25C-220
LBE250040S-S25C-250
LBE300050S-S32C-230
LBE300050S-S32C-260
LBE320050S-S32C-230
LBE320050S-S32C-260

LBE Modular Head

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

FMR, PAM, LBE modular type shank

(Taper neck type)

(Straight neck type)
MAT-M06-020-S10S
MAT-M6B-020-S12S
MAT-M6B-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-M6B-065-S16T
MAT-M6B-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-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

Carbide modular adaptor * Standard type : Available to use RM, LM, HRM, FMR

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

MATM08-080-S16S-C
MATM08-110-S16S-C
MATM08-150-S16S-C
MATM10-090-S20S-C
MATM10-110-S20S-C
MATM10-175-S20S-C
MATM12-090-S25S-C
MATM12-110-S25S-C
MATM12-175-S25S-C
MATM16-080-S32S-C
MATM16-120-S32S-C
MATM16-175-S32S-C

THE COMPARISON OF CHIP BREAKERS

APPLICATION			KORLOY Main	KORLOY Sub	SUMITO-MO	SANDVIK	KENNA-METAL	KYOCERA	MITSU-BISHI	ISCAR	TOSHIBA	SECO	WALTER	DIJET
NEGA.TYPE	STEEL	EXTREME FINISHING	HU	D02	FA	QF	FF	GP DP CF	FH	SF	TF	FF1 F1, F2		F1 FA
		FINISHING	VF	GF	SU, SK SP LU	PF	FN FP FW	CQ HQ	SH	NF	TS, AS 11 17	MF2	NF NF3 NF5	FT UA
		MEDIUM FINISHING	HC	VM	SX UU	SM		CQ HQ	SH	NF RF LF	MJ	MF1	NS4 NS8	GP UR PF
		MEDIUM ROUGHING	VM	GM	GU UX UG	PM QM	MN MP MW	GS HS CS	MA MH	TF PP	TM	M3 MR3	NM, NM4 NM5, NM6 NM7	UB GG
		ROUGHING	HR	GR	MU MX	PR	RN CT	GT HT ★	GH	NR	TH	MR4 M5 MR7	NR5 NR7	UD
		HEAVY	GH HH	B40	HG MP HP	HR	RH SP HP	HX	HZ, HV HH HX	TNM	TU 57 65	RR9 R4		UC
		WIPER	VW LW		LUW GUW	WF WM WR	MW FW	WQ	MW SW	WF WG	ASW	M3 M5	NF, PF NM, PM	
	GENERAL		B25	GR	UZ	23	MG	★	MT, MV	GN				GN
	STAINLESS STEEL MILD STEEL		HA HS GS	HC HM GR X38	SU, EX MU, FL (GU)	MF MM, QM MR	FF, FW FP, MP MW, RN	GU, HU XP, XQ XS	FS, FJ SH, MJ MS, GJ GH	PP TF	TF SS SA TU, MS	MF1 MF3 M5	NS4 NM4 NR7	SF
	CAST IRON		GR	B20 B25 HR	UZ UX ★	KF KM, QM KR, QR	FF, FW MP, MW RN	GC ★ ZS	★ ★	GN	★ 33, CM ★	MF3 M5	NS4, NS8 ★ NM4	
	ALUMINUM		HA				F GP MS	AH		PP				
POSI.TYPE	STEEL CAST IRON	FINISHING	HFP	C05	FP FK	PF KF	MT-UF MT-LF GT-LF	GP DP HQ	FV SQ	★ SM	01 PF	F1	PF4 PF5	FT
		MEDIUM FINISHING	HMP		SJ, SU SK	(PM) (KM)	MF	XQ HQ	R/L R/L-F	14, SM 17, 19	PS 23 PM	F1 F2	PS4 PS5	
		MEDIUM ROUGHING	C25	HMP	SF MU	(PR) (KR)	MT-MF GM	★ G	MV MQ ★	19	24 ★	F2	PM2, PM5 (PR5)	
	ALUMINUM		AK AR		AG	AL	HP	A3		AS	PP	Al		ALU ACB
	STAINLESS STEEL MILD STEEL		HMP	AK	MU	MF, MM MR	LF	(XQ)	FV ★	14, SM 17, 19	SS		PS4 PM5	
	INDEXABLE DRILLS		DS, DA DF, DM	C20 C21	S04 R06	51, 53 56, 58		★ SU, SP		SW, GF GG, DT		C1, P1 85, 86		
GROOVING			M,G			CM, CS					K3, J10	MC, LF		

★No Name ★Simple Type

The Comparison of Grades - Turning

ISO	KORLOY			SUMITOMO			KYOCERA			ISCAR			SANDVIK			SECO			KENNAMETAL			TOSHIBA		
	WC	COATED	CERMET	WC	COATED	CERMET	WC	COATED	CERMET	WC	COATED	CERMET	WC	COATED	CERMET	WC	COATED	CERMET	WC	COATED	CERMET	WC	COATED	CERMET
P	ST05E ST10P ST15 ST20E MA2 ST30E A30 ST30N ST40E	NC3010 NC3120 NC3030 NC500H	CN100 CT10 CC115 ★ CN20 CN2000	ST10P ST20E A30 ST40E	AC700G AC900G AC2000 AC3000	T110A T2000Z ★ T1200A T3000Z ★	PW30	CA5505 PR1005 ★ CR7015 CA5515 PR1115 ★ CR7025 CA5525 CA5025 PR1025 ★ CA5535	TN30 PV30 ★ TN60 TN6020 PV60 ★ TN90	IC50M IC54	IC8048 IC9150 IC9015 IC9250 IC9025 IC656 IC9350 IC9054 IC635	IC20N IC520N IC30N IC530N	S1P SM30 S30T S6	GC4005 GC4015 GC4225 GC4025 GC4235 GC4035 GC4125 ★	CT5015 CT525 GC1525 ★	TTX TTM TTR	TP1000 TP2500 TP2000 TP3000 CP200 ★ CP250 ★ CP500 ★	CM C15M	K45 KM K420	KC9105 KC9110 KU10T ★ KC9115 KU25T ★ KC9125 KC9240 KC9245	HT2 KT125 HT5 KT175 KT195M	TX10S TX20 TX30 TX40	AH330 ★ AH710 ★ GH330 ★ GH730 ★ T9005 TD905 T9015 TD915 T9025 T9035 TD930	NS520 GT530 ★ NS530 NS540 NS730
M	U10E U2 A40	PC8010 ★ NC9020 NC3030 PC9030 ★		U10E U2 A30 A40	AC610M EH510Z ★ AC304 AC630M AC3000 EH520Z ★	T1200A		CA6515 CA6015 CA6525 PR915 ★ PR1125 ★ PR930 ★			IC9025 IC328 ★		H13A H10F	GC1005 ★ GC2015 GC1020 ★ GC2025 GC2035 ★ GC2145 ★		AT10 AT15 TTR	TP400 CP200 ★ CP250 ★ CP500 ★		K2885 K2S	KC9215 KC9225 KC5010 ★ KC9245 KC5025 ★		TU10 TU20 TU40	AH120 ★ AH140 ★ AH330 ★ T5105 T5010 T5115 T5020 T5125	
K	H2 H01 H05 H10 G10E	NC305K NC6110 NC315K	CN100	H01 G10E	AC410K AC300G EH510Z ★ AC500G EH520Z ★ AC700G	T110A T1200A	KW10H	CA4010 CA4110 CA4125 CR7015 PR610 ★ PR905 ★		IC4 IC20 IC28	IC9015 IC4028		H1P H10F	GC3205 GC3210 GC3215		THM THR	TK1000 CP200 ★ TK2000 CP250 ★ CP500 ★		K68 K8735	KC9315 KC9320 KC9325 KC7310 ★		TH03 TH10 KS20	AH110 ★ AH120 ★ GH110 ★ T5105 T5010 T5115 T5020 T5125	

ISO	KORLOY			MITSUBISHI			HITACHI			VALENITE			WALTER			TAEGUTEC			NTK			DIJET		
	WC	COATED	CERMET	WC	COATED	CERMET	WC	COATED	CERMET	WC	COATED	CERMET	WC	COATED	CERMET	WC	COATED	CERMET	WC	COATED	CERMET	WC	COATED	CERMET
P	ST05E ST10P ST15 ST20E MA2 ST30E A30 ST30N ST40E	NC3010 NC3120 NC3030 NC500H	CN100 CT10 CC115 ★ CN20 CN2000	STi10T ST20T UTi20T	UE6005 UE6110 UE6010 UC6010 UE6020 UC6025 UE6035	NX2525 NX3035 UP35N ★ AP25N ★ NX335	SRN5 WS20B EX35 EX40 EX45	HG8010 GM8015 GM8020 HG8025 GM8035	CH350 CZ25 ★ CH530 CH550 CH570	S1F VC6 VC5 VC56	SV305 SV405 VP5515 SV310 SV410 SV315 SV415 VP5525 SV325 SV330 VP5535 SV235	VC83		WPP01 WAP01 WPP05 WPP10 WAP20 WPP20 WAM10 WATA43 ★ WAP30 WATA41 ★ WPP30	WTA43 ★ WTA41 ★	P10 P20 P30 P40	TT1500 TT8115 TT3500 TT5100	PV3010 ★ CT320 CT3000 CT420 CT520		ZM3 ★ KM3 ★ CP5	T3N T15 N20 C30 N40		JC110V JC215V JC325V JC450	LN10 CX50 CX75 CX90 CX99
M	U10E U2 A40	PC8010 ★ NC9020 NC3030 PC9030 ★		UTi20T	US7020 US735 VP15TF ★ VP20MF ★ VP20M ★	NX2525	WAM10B EX35	GM25 GX30		VC27 VC28				WAM20 WAM30		M10 M20 M40	TT2500 TT3500 TT5100 TT5030 ★			KM3 ★			JC5003 JC110V JC5015	LN10 CX75 CX99
K	H2 H01 H05 H10 G10E	NC305K NC6110 NC315K	CN100	HTi10T HTi20T	UC5105 GP10H ★ UC5115 UP10H ★ UC6010	NX2525	WH05 W10 WH20	CY100H ★ HG3315 GM3005 GM8015 GM8020		VC3 VC2 VC1	VP1505 SV405 VP1510 SV415 VP5515 SV515			WAK10 WAK20		K10 K20 K20M K30	TT1300 TT7310 TT1500	CT320 CT420 CT520		CP2 CP5	T15		JC105V JC110V JC215V	LN10 CX75

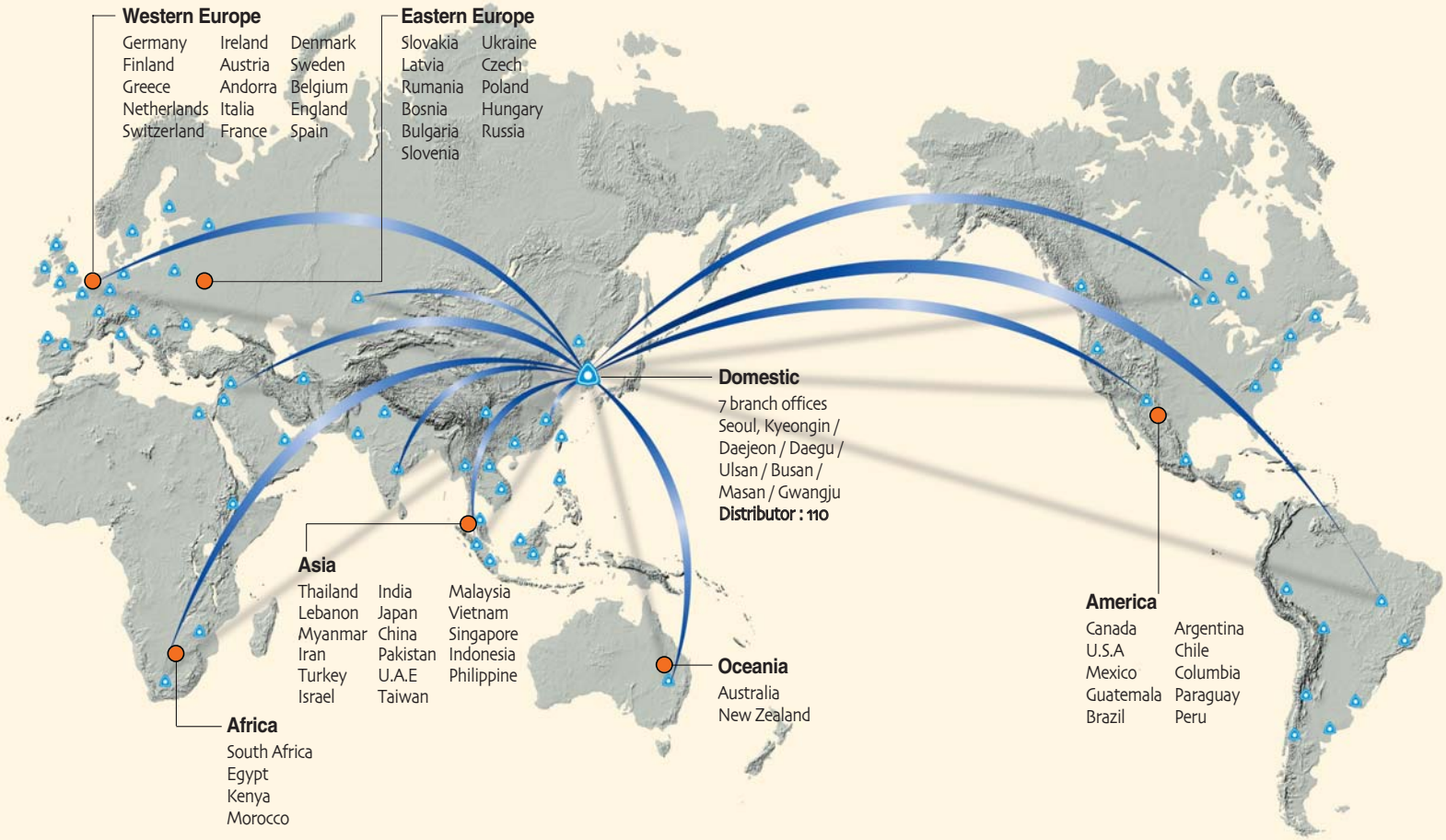
※ Coated ★ : PVD
Cermet ★ : cermet+PVD

The Comparison of Grades - Milling

ISO	KORLOY		SUMITOMO		KYOCERA		ISCAR		SANDVIK		SECO		KENNAMETAL		TOSHIBA	
	COATED	CERMET	COATED	CERMET	COATED	CERMET	COATED	CERMET	COATED	CERMET	COATED	CERMET	COATED	CERMET	COATED	CERMET
P	NCM325 PC3525 ★ PC230 ★ NCM335 PC3545 ★	CN20 CN30	AC230 ACP100 ACP200 ★ ACP300 ★ ACZ330 ★	T250A	PR730 ★ PR630 ★ PR830 ★ PR660 ★	TN100M TC60M	IC520M IC635 IC903 ★ IC950 ★ IC908 ★ IC1008 ★ IC928 ★	IC30N	GC1015 ★ GC1025 ★ GC4020 GC4230 GC4030 GC1120 ★ GC4240 GC4040 CTC1030 ★		T20M T60M ★ T250M T25M F25M ★ T350M F30M ★ F40M ★ T60M ★		KC725M ★ KC792M ★ KC522M ★ KUC20M ★ KC525M ★ KUC30M ★ KC935M ★ KC7140 ★ KC720 ★ AH120 ★ AH330 ★	KT195M	T325 AH120 ★ AH330 ★ T3030 AH740 ★	 NS540 NS740
M	PC8520 ★ NCM335 PC9530 ★	CN30	EH510Z ★ EH520Z ★ ACP300 ★ ACZ350 ★	T250A	PR730 ★ PR1025 ★ PR630 ★ PR660 ★		IC903 ★ IC900 ★ IC250 ★ IC928 ★ IC328 ★		GC1005 ★ GC1025 ★ GC2030 ★ GC1030 ★ GC2040	CT530	CP200 ★ CP500 ★ F30M ★ F40M ★		KC9240 KC5510 ★ KC7020 ★ KC5025 ★ KC7025 ★ KC7030 ★ KC722 ★			
K	PC6510 ★ PC215K ★		ACK100 AC211 ACK200 ACK300 ★ ACZ310 ★		PR510 ★ PR905 ★		IC4050 DT7150 ★ IC900 ★ IC910 ★ IC950 ★ IC350 ★		GC3220 GC3020 GC3040		T150M T20M		KC992M KC709M ★ KC510M ★ KC520M ★ KC915M ★		T1015 AH110 ★	

ISO	KORLOY		MITSUBISHI		HITACHI		VALENITE		WALTER		TAEGUTEC		NTK		DIJET	
	COATED	CERMET	COATED	CERMET	COATED	CERMET	COATED	CERMET	COATED	CERMET	COATED	CERMET	COATED	CERMET	COATED	CERMET
P	NCM325 PC3525 ★ PC230 ★ NCM335 PC3545 ★	CN20 CN30	VP15TF ★ F7030 GP20M ★ AP20M ★ UP20M ★ VP30RT ★	NX2525 NX4545	CY150 ★ CY250 ★	CH550 CH570	SV935 ★ SM245		WQM15 WTL41 WKP25 WQM25 WTL71 WKP35 WQM35		KT7300 ★ TT7030 ★ TT7070 ★ TT7080 ★	CT420 CT3000 CT520	QM3	C50	JC5003 JC730V JC5030 JC5015 JC5040	
M	PC8520 ★ NCM335 PC9530 ★	CN30	VP15TF ★		HC844 ★				WQM25 WSP45 ★ WSH35 ★ WTP35 WSM45 ★ WXP45	WQM35 ★ WSP45 ★	TT8020 ★					
K	PC6510 ★ PC215K ★		F5010 VP10MF ★ VP15TF ★ AP10H ★ VP20RT ★	NX2525	CY100H ★		V01 VN8		WTA11 WAK15 WXN15 ★ WTA21 WKP25 WKP35		TT6060 ★ TT6030 ★ TT6290 ★				JC5003 JC600 JC610 JC5015	

※ Coated ★ : PVD
Cermet ★ : cermet+PVD



■Coating line of Jin-cheon Factory

■Cheong-ju Factory

■Jin-cheon Factory

■High Technology Analysis facility

■R&D Institute

■Superb Designing facility

CARBIDE CUTTING TOOL REPRESENTATIVE OF KOREA

KORLOY Inc. is a carbide cutting tool manufacturer launched at 1966, now supply its products over 60 countries all over the world and has national wide sales network in KOREA.

We, KORLOY Inc. will always do our best to be the top class manufacturer with ceaseless R&D, high quality product and good service.
KORLOY Inc. will grow as a global leading company.

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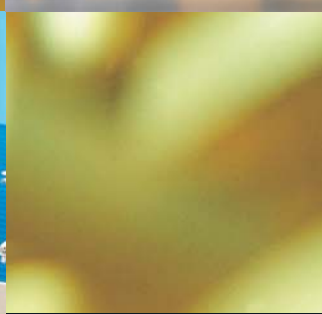

• Dec. 2007