



HIGHEST
QUALITY
TOTAL
SOLUTION

Highlight Product

KORLOY's New And
Best-Selling Products

KORLOY Highlight Product

Contents

GRADE

- 05 ___ NC3205/NC3215/NC3225/NC3235
- 06 ___ NC5320
- 07 ___ PC8105/PC8115
- 08 ___ CC1015/CC1025
- 09 ___ PC3700
- 10 ___ PC6100
- 11 ___ PC9540
- 12 ___ PC5535
- 13 ___ SNC805/SPC810
- 14 ___ SNC840/SPC845

TURNING

- 16 ___ Hexa Blade
- 18 ___ Auto Tools
- 20 ___ Saw Man-X
- 21 ___ FP Chip Breaker
- 22 ___ FM Chip Breaker
- 23 ___ Auto Tools KGT-H
- 24 ___ Auto Tools Nega Type



MILLING

- 26 ___ TP4P
- 28 ___ TP8P
- 29 ___ Alpha Mill-X
- 30 ___ Rich Mill Series
- 32 ___ HQM
- 33 ___ HFMD
- 34 ___ RMR

INDEXABLE DRILL

- 35 ___ KING Drill
- 36 ___ TPDB Plus Drill
- 38 ___ TPDC Plus Drill
- 39 ___ WPDCH

SOLID ENDMILL

- 41 ___ Super Endmill for TI/HRSA
- 42 ___ Super Endmill for HD
- 43 ___ SQM Endmill
- 44 ___ H-Star Endmill
- 45 ___ U-Star Endmill
- 46 ___ S-Star Endmill
- 47 ___ A-Star Endmill

SOLID DRILL

- 48 ___ MSD Plus-S
- 49 ___ W-Star Drill

TAP

- 50 ___ Tap-Star

KORLOY GUIDE

- 52 ___ Korloy Guide

Grade

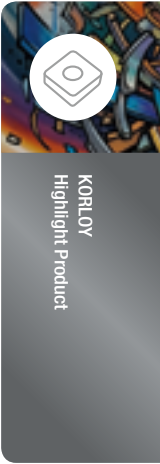
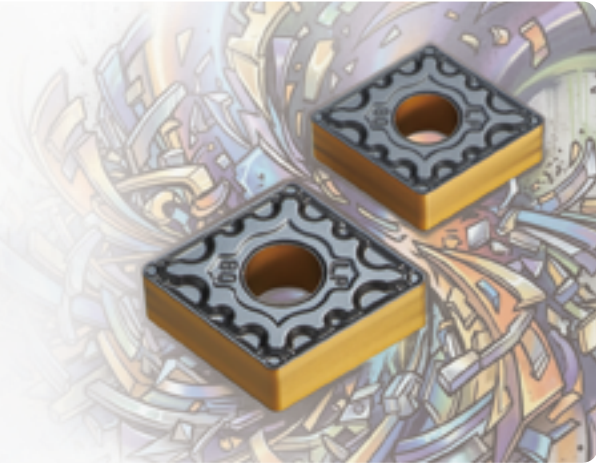
- NC3205/NC3215/NC3225/NC3235
- NC5320
- PC8105/PC8115
- CC1015/CC1025
- PC3700
- PC6100
- PC9540
- PC5535
- SNC805/SPC810
- SNC840/SPC845



NC3205/NC3215 NC3225/NC3235

CVD insert series for Steel Turning

- Applied the new CVD coating to increase in productivity and stable tool life
- Applied optimal substrate in cutting range (P05, P15, P25, P35)



Features

» New CVD coating and substrate increasing stability



CVD coating with increased wear resistance and chipping resistance

- Ensured stable tool life due to increase wear resistance, chipping resistance and heat resistance

High toughness and heat resistance substrate

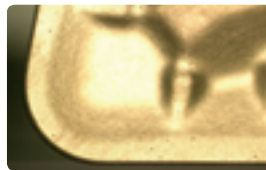
- Exclusive substrate per each grade increasing tool life

» Highly lubricative coating with fine surface finish application



[NC3205, NC3235]

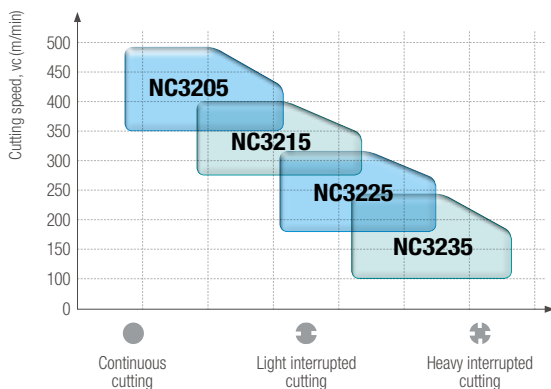
Increased
BUE resistance and
chipping resistance



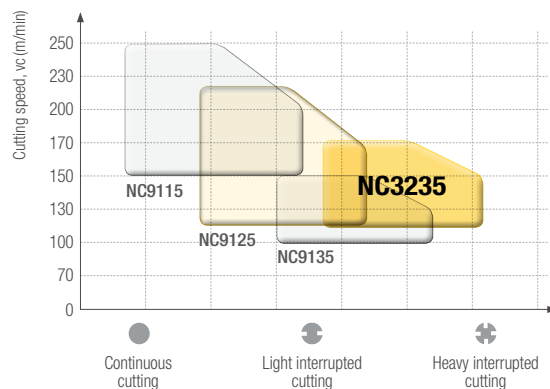
[Existing grade]

Application range

P Steel



M Stainless Steel



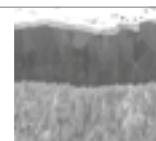
NC3205

- High cutting performance in high speed and continuous cutting
- Good wear resistance



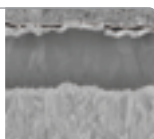
NC3225

- High cutting performance in medium speed and medium interrupted cutting
- 1st recommended grade



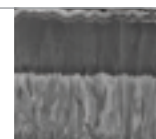
NC3215

- High cutting performance in medium to high speed and light interrupted cutting
- Good wear resistance and heat resistance



NC3235

- High cutting performance in medium to low speed and heavy interrupted cutting
- Good chipping resistance and fracture resistance

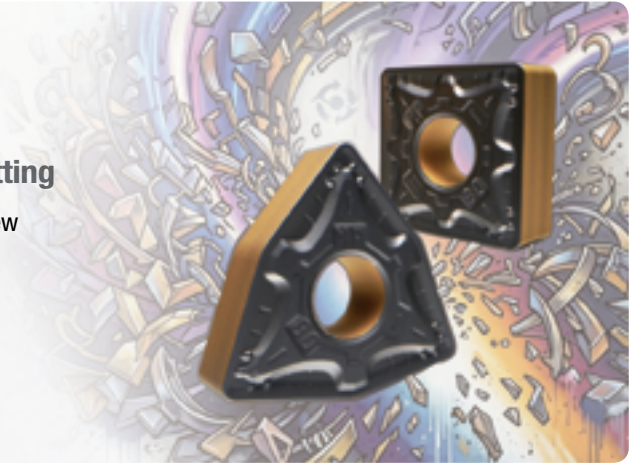




NC5320

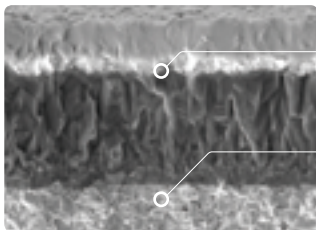
Universal insert for Steel and Cast Iron cutting

- Applied exclusive substrate for Steel and Cast Iron and New CVD coating with great wear resistance
- Applied New CVD coating technology with better BUE resistance and chipping resistance than existing grades



Features

» New CVD coating with increased wear resistance and chipping resistance



{ Applied α -phase alumina coating, optimal structured universal CVD coating

{ Optimal substrate for Steel and Cast Iron cutting with good wear resistance

Increased chipping resistance

Increased wear resistance

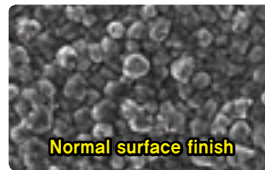
» Increased surface finish due to applying New CVD coating



Good surface finish

[NC5320]

Increased BUE resistance and chipping resistance

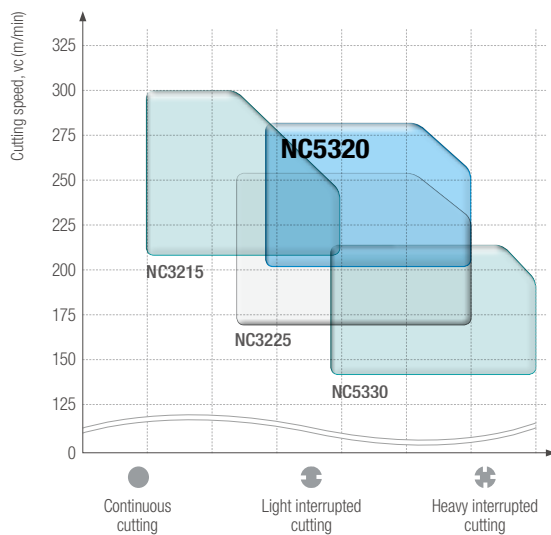


Normal surface finish

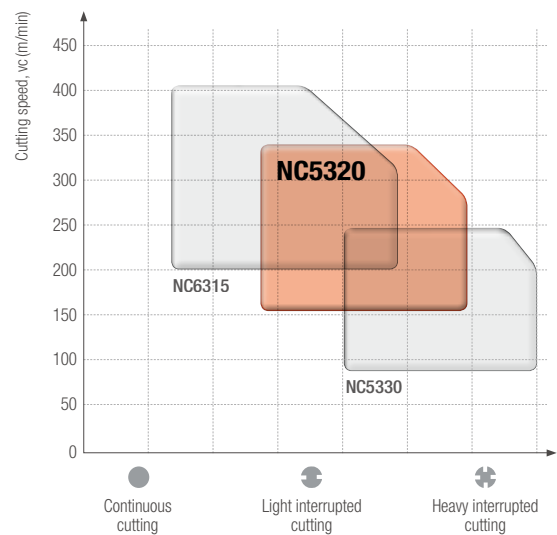
[Existing grade]

Application range

P Steel



K Cast Iron



PC8105/PC8115

Turning inserts for HRSA and Titanium alloys

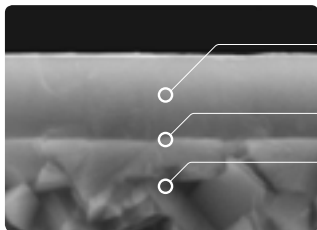
- High-hardness PVD grade optimally designed for machining HRSA
- Applied a substrate optimized for the machining area (S05, S15)
- Applied high-toughness PVD coating technology, TEX-Tech™, which prevents chipping and sudden fracture
- Applied EnduraCore-Process™ enhances the plastic deformation resistance and fracture resistance of the high-hardness substrate



KORLOY
Highlight Product

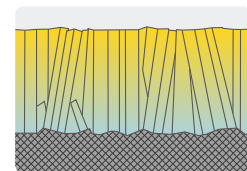
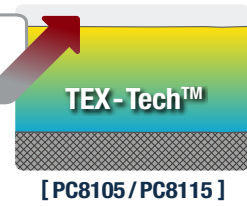
Features

» TEX-Tech™ - High toughness PVD coating layer technology



- { Good chipping resistance due to high toughness and high elasticity coating layer
- { Enhanced adherence by high adherence coating layer
- { Excellent high-temperature wear resistance achieved by applying a highhardness and high-toughness substrate

Improved chipping resistance, adhesion



» EnduraCore-Process™ - Application of substrate toughening process technology

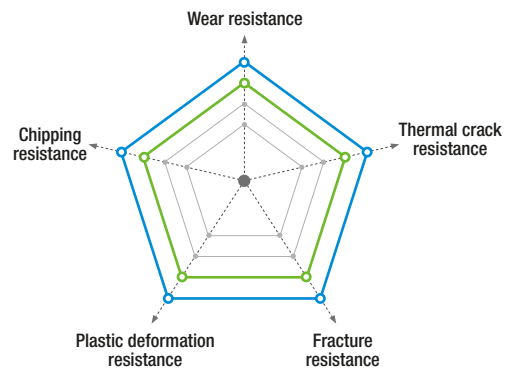
EnduraCore-Process™



- Enhanced plastic deformation resistance of the substrate through optimized alloying elements and content.
- Improved strength of the substrate by realizing an alloy structure with uniform grain size.

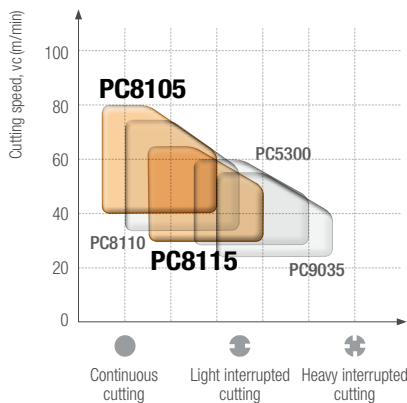
Comparison of Substrate technologies

EnduraCore-Process™ Common use Substrate technology

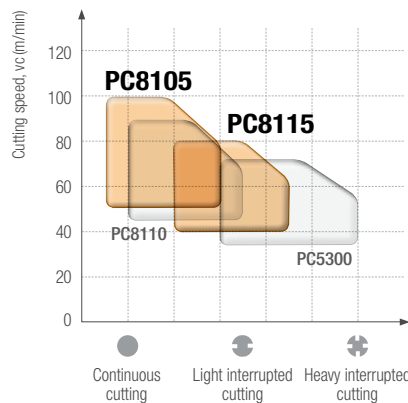


Application range

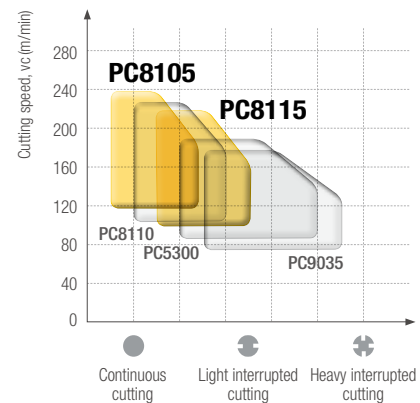
S HRSA



S Titanium alloy



M Stainless steel



GRADE | PC8105 / PC8115





KORLOY
Highlight Product

CC1015/CC1025

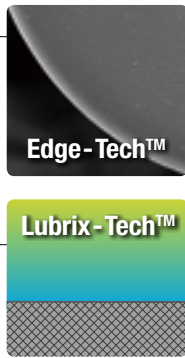
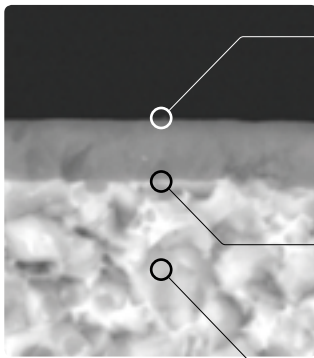
PVD Cermet for Steel Turning

- PVD coated Cermet turning grade optimally designed for various small and medium parts.
- Stable tool life by applying Lubrix-Tech™ (high hardness and lubrication PVD coating technology) to increase flank wear resistance on nose radius
- Smooth cutting surface by applying Edge-Tech™ (high lubrication cutting edge treatment technology) to prevent welding and chipping



Features

» Exclusive PVD Lubrix-Tech™ and Edge-Tech™ technology

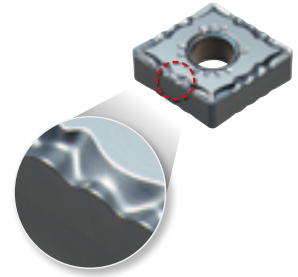


Edge-Tech™

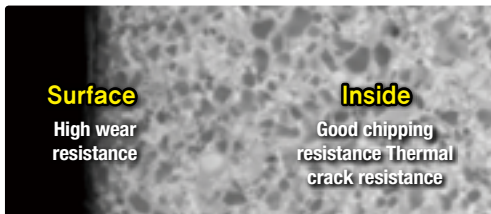
- High lubrication cutting edge treatment technology
- Reducing welding, chipping and unexpected fracture and increasing tool life and stability

Lubrix-Tech™

- AlCrN series high hardness lubrication coating technology
- Coating layer's growth direction controlling technology



Inclination functional substrate

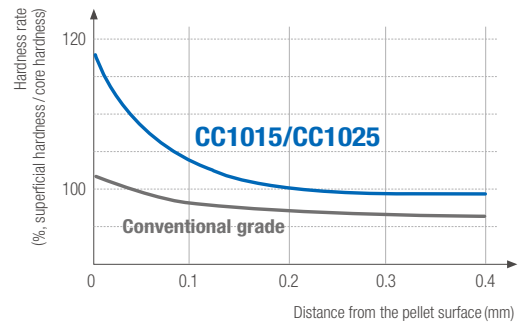


Surface
High wear resistance

Inside
Good chipping resistance
Thermal crack resistance

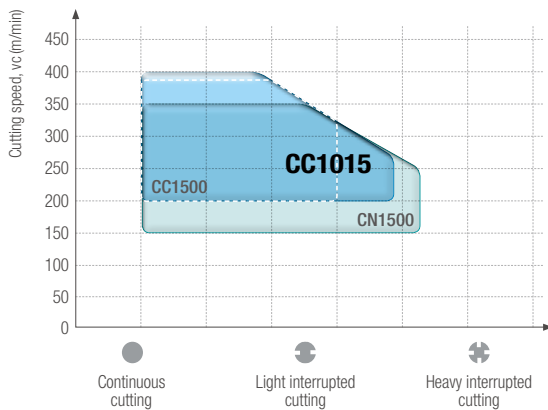
- Inclination functional layer creation with the surface and internal composition's microstructure control
- High chipping resistance and stable tool life

Hardness rate comparison chart

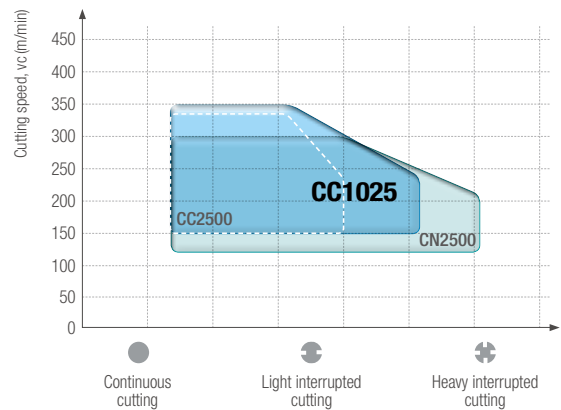


Application range

P Steel



P Steel



GRADE | CC1015 / CC1025

INFO

PC3700

Milling grade specialized for Steel

- Excellent chip removal rate due to a tough substrate specialized for Steel, and lubricative PVD coating of high-hardness
- A high chipping-resistant grade to minimize deviation and extend tool life under various cutting conditions

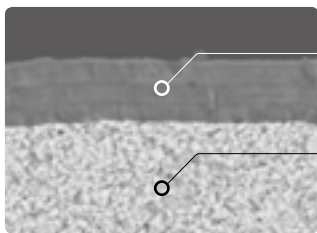


GRADE | PC3700



Features

» Substrate for general milling applications of Steel and PVD coating treatment



Stronger resistance to welding and chipping due to the multi-layer coating technology with high hardness and lubricating treatment

Ensures machinability due to wear and breakage resistant materials optimized for milling applications of steel

Excellent wear resistance and stable tool life

» Special coating surface treatment



[PC3700]
No macro-particle on the coated surface

Excellent wear resistance and stable tool life



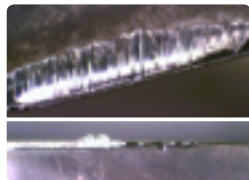
[Existing grade]
Lots of macro-particles on the coated surface

» Smooth surface due to special surface treatment » Smooth chip evacuation, improved chipping resistance and surface finish of the workpiece



[PC3700]

Wear resistance

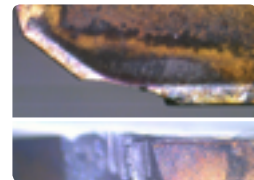


[Existing products]



[PC3700]

Breakage resistance

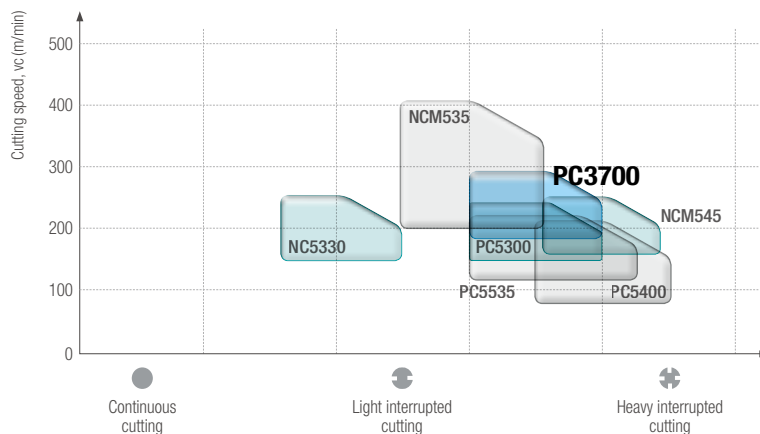


[Competitor]

Application range



Steel





KORLOY
Highlight Product

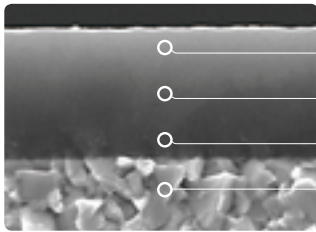
PC6100

PVD insert for cast Iron Milling

- Optimally designed PVD coating grade in cast Iron milling
- Applied Ion plus - Tech™ increased hardness and adherence of layer ensures wear resistance and thermal crack resistance
- Coating surface treatment technology prevents chipping and unexpected fracture
- The optimal substrate for cast Iron cutting enhances wear resistance and fracture resistance

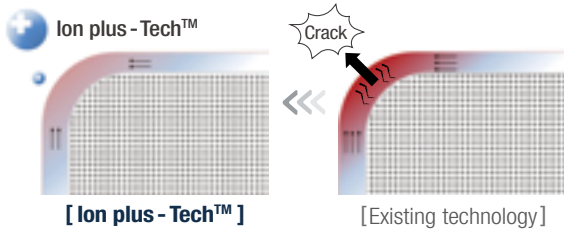


Features

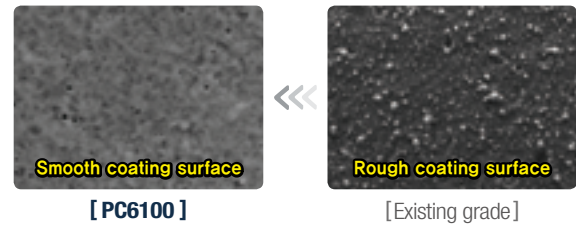


- { Applied coating technology to reinforce high hardness of cutting edge
- { Applied coating layer with high heat resistance
- { Reinforced adhesion on the cutting edge
- { Applied optimal materials with wear resistance and impact resistance for cast Iron cutting

» Applied Ion plus - Tech™

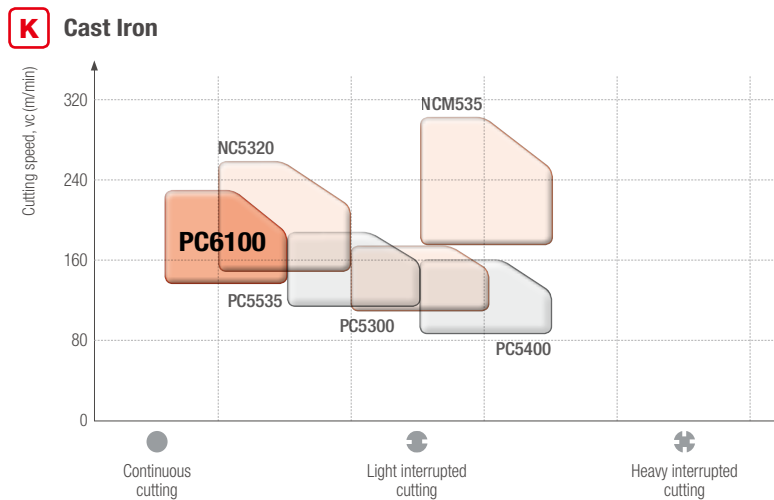


» Applied smooth coating surface treatment technology



* Ion plus - Tech™ : Exclusive PVD plasma coating reinforced technology increases adherence of layer and hardness

Application range



GRADE | PC6100

INFO

PC9540

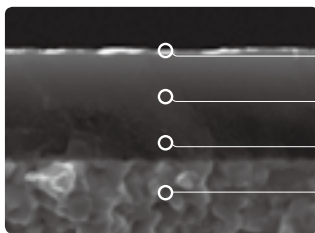
PVD insert for Stainless Steel and Titanium Milling

- Optimal PVD grade for medium to rough cutting and highly interrupted milling in Stainless Steel and Titanium
- Applied Omega-Tech™ which enhances the wear resistance, oxidation resistance, and welding resistance of PVD coating film
- Improved plastic deformation resistance and fracture resistance of the substrate by applying high-toughness substrate process technology
- Stable machinability by preventing welding and chipping due to applying special coating surface treatment



KORLOY
Highlight Product

Features



- (Improved surface finish
- (Applied exclusive PVD fusion coating technology
- (Increased adherence between substrate and coating layer
- (Applied high-toughness substrate process technology

» Application of PVD fusion coating technology

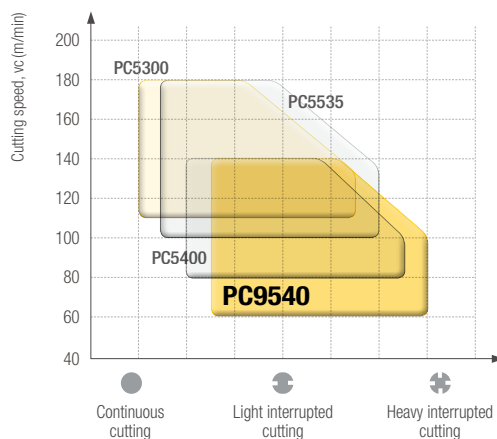
Omega-Tech™	Existing and common use coating technology
<p>[Omega-Tech™]</p> <ul style="list-style-type: none"> • One strong coating layer unifying various components • Enhanced general use and cutting performance due to increased mechanical and chemical stability 	<p>[Existing technology]</p> <ul style="list-style-type: none"> • Combination and laminating of coating layers, Tin, TiAlN, AlCrN and etc. • Limit of general use and adherence

» Application of substrate toughening process technology

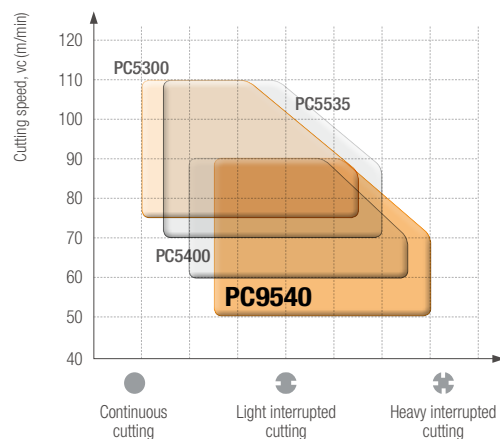
EnduraCore-Process™
<p>EnduraCore-Process™</p> <ul style="list-style-type: none"> • Enhanced plastic deformation resistance of the substance through optimized alloying elements and content. • Improved strength of the substance by realizing an alloy structure with uniform grain size.

Application range

M Stainless Steel



S HRSA



GRADE | PC9540

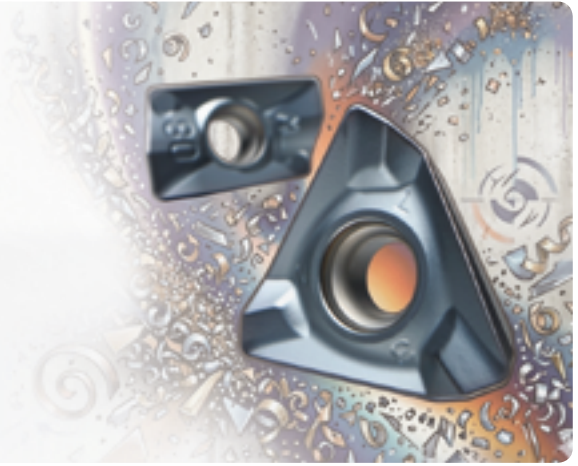




PC5535

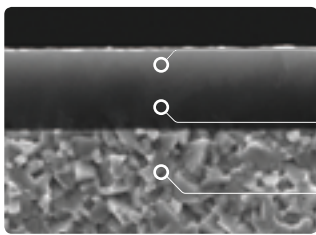
PVD insert for general Milling

- General use due to high toughness substrate with balance of wear resistance and toughness
- Maximized tool life by applying the Omega-Tech™ overcoming primary troubles in Milling
- Achieved stable cutting by implementing Edge-Tech™ and preventing welding, chipping and unexpected fracture



Features

» Omega-Tech™ - applying PVD fusion coating technology



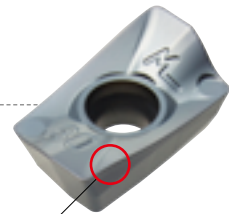
- (Maximized coating performance by applying exclusive PVD fusion coating technology
- (Increased adherence between substrate and coating layer with the application of newly designed layer
- (Fine substrate with balance of wear resistance and toughness

» Edge-tech™ - applying high lubricated edge technology



[PC5535]

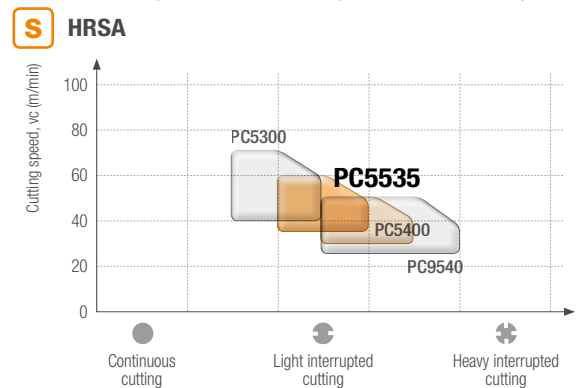
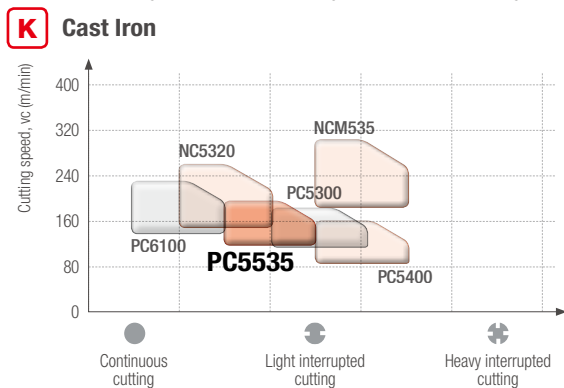
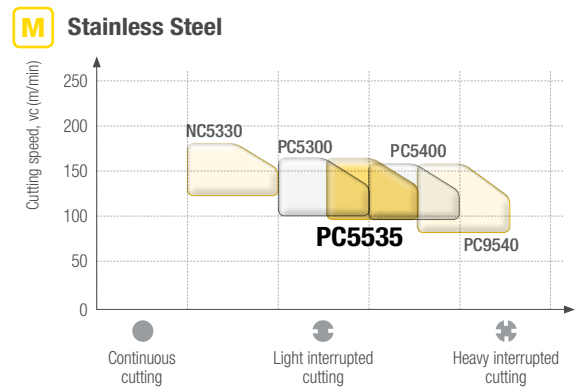
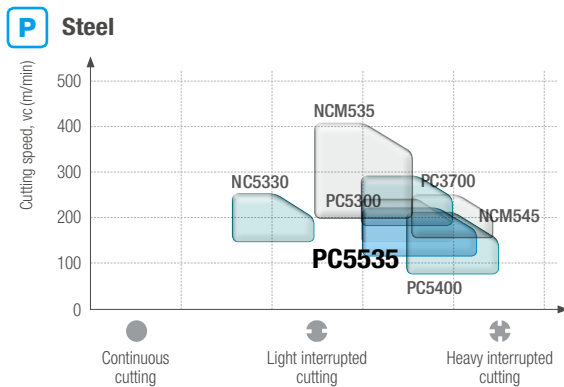
[Competitor]



Edge - Tech™

- Prevents welding, chipping and unexpected fracture
- Longer tool life and stable cutting

Application range



SNC805/SPC810


Super Coating Series

- **SNC805** : Ultra-fine substrate and CVD coatings are applied to enhance the performance at the high speed machining and wear resistance
- **SPC810** : Ultra-fine substrate and PVD coatings are applied to enhance the performance at the high speed machining and chipping resistance



KORLOY
Highlight Product

Features

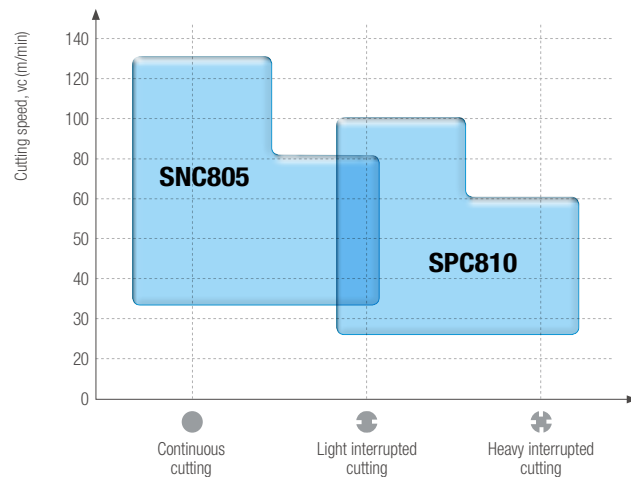
SNC805(CVD)	SPC810(PVD)
	

» Chip breaker line-up

Range	Negative type		Positive type	R Positive type
	HRSA	Aerospace (Engine parts)	HRSA	Aerospace (Engine parts)
Roughing	VP4	-	-	RSA
Medium to Roughing	MM	GSA	-	GSA
Medium	VP3	MSA	MU	-
Medium to Finishing	VP2	LSA	-	-
Finishing	-	-	LU	FSA

Application range

- Improve productivity via high speed processing of Inconel, Hastelloy, Titanium alloy, Precipitation hardening Stainless Steel, and etc.



GRADE | SNC805 / SPC810



KORLOY
Highlight Product

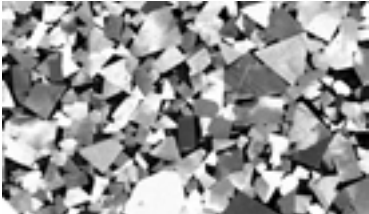
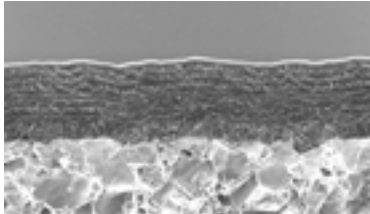
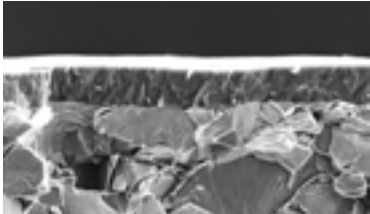
SNC840/SPC845

Super Coating Series

- Achieves high-speed machining of difficult-to-cut materials by maximizing the bond strength and heat resistance of the substrate
- Provides stable tool life in various machining environments through the application of Super Coating

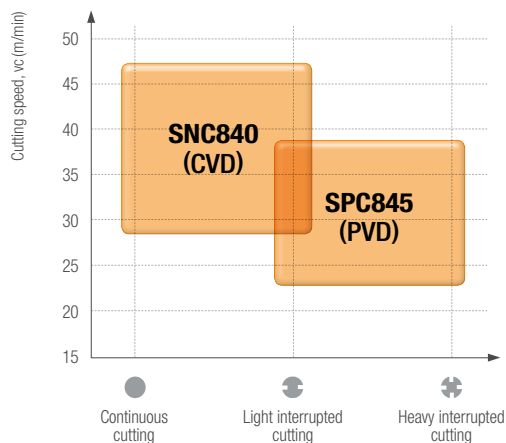


Features

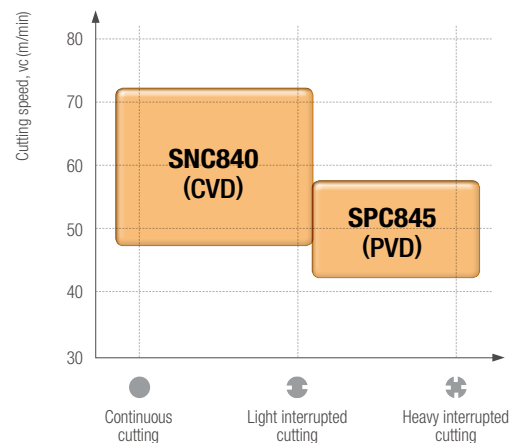
Substrate	SNC Coating (CVD)	SPC Coating (PVD)
Enhanced bond strength/ heat resistance	Applied CVD multi layer	Applied high toughness PVD coating
	 [CVD : Enhanced wear resistance]	 [PVD : Enhanced fracture and impact resistance]

Application range

S Inconel alloy



S Titanium alloy



GRADE | SNC840 / SPC845

Turning

- Hexa Blade
- Auto Tools
- Saw Man-X
- FP Chip Breaker
- FM Chip Breaker
- Auto Tools KGT-H
- Auto Tools Nega Type





Hexa Blade

Grooving and parting tool with precision 6 corners

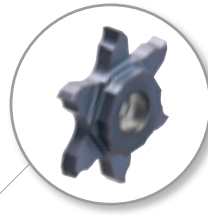
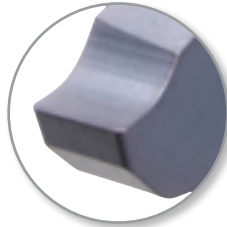
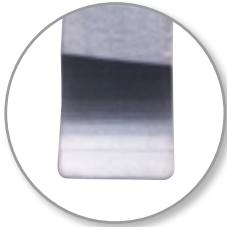
- Grooving and parting tool with high economical 6 corners
- Increased reliability and stability in cutting due to high qualified cutting edge



Features

Hexa Blade 19(P chip breaker)

- Universal chip breaker usable for various work materials
- Excellent cutting performance and superior surface finish achieved through sharp cutting edges



[Wide lateral clamping surface

- Increased clamping stability
- Enhanced stability during automatic lathe machining
- Reliable tool life

Precision grade (sharp edge) insert

- Excellent dimensional quality
- Superior cutting performance
- Reduced dimensional variation between corners
- Consistent cutting performance

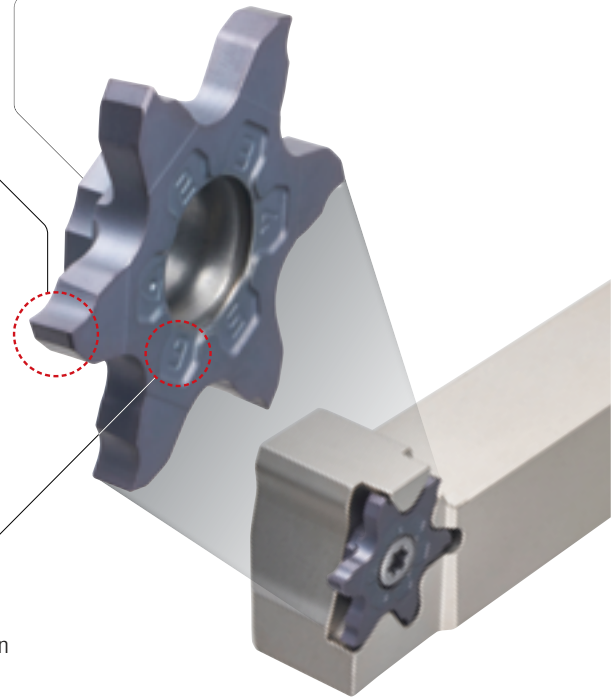
Provides "zero offset" when clamped in the holder

- Left and right-hand inserts
- Grooving and parting operations for automatic lathes



6-cornered Insert

- Offers high economic efficiency through multi-corner utilization



Type



HB19
Cutting width : 0.75 ~ 3.18 mm

HB27
Cutting width : 1.78 ~ 4 mm



HBEHR/L19 (High pressure coolant / VDI type)
Shank height : 12, 16 mm

HBEHR/L27 (High pressure coolant / VDI type)
Shank height : 16, 20, 25 mm

Hexa Blade 27 (M chip breaker)

- Dot-typed chip breaker general cutting for various workpieces
- Good chip control preventing long chip and chip curling
- Stable cutting even in high feed cutting due to strengthened cutting edge structure



Precision insert

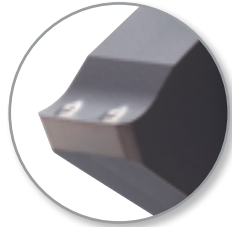
- Superior quality in dimensions
- Excellent corner dimension deviation management
- Equally stable performance

Neutral hand

- Convenient use with neutral hand

6 cornered insert

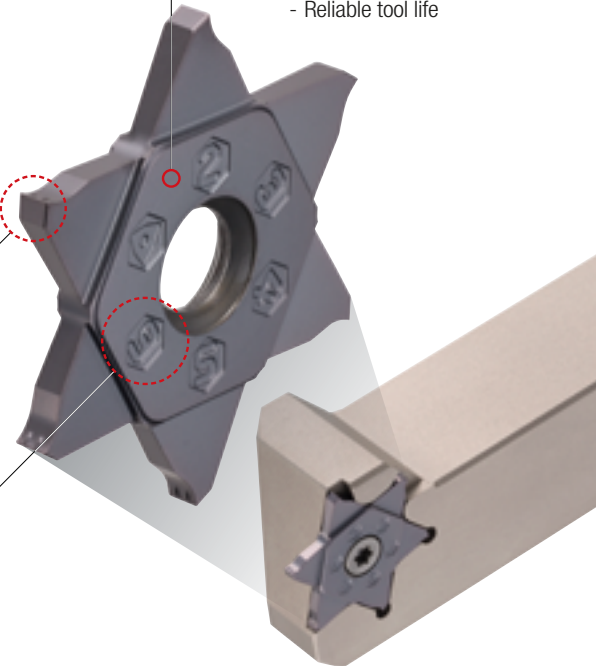
- High cost efficiency from multi-corners



Strong cutting edge

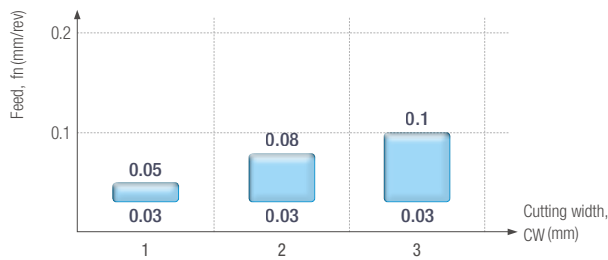
- Increased high feed cutting performance

- Wide clamping area**
- More stable clamping system
 - Strengthen anti-vibration during machining
 - Reliable tool life

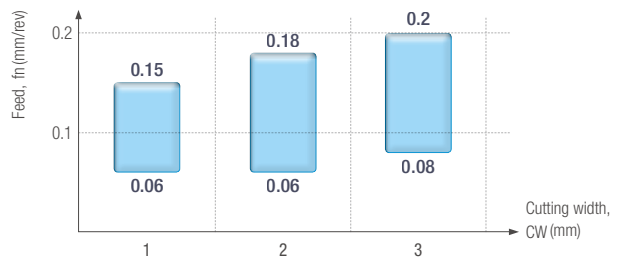


Application range

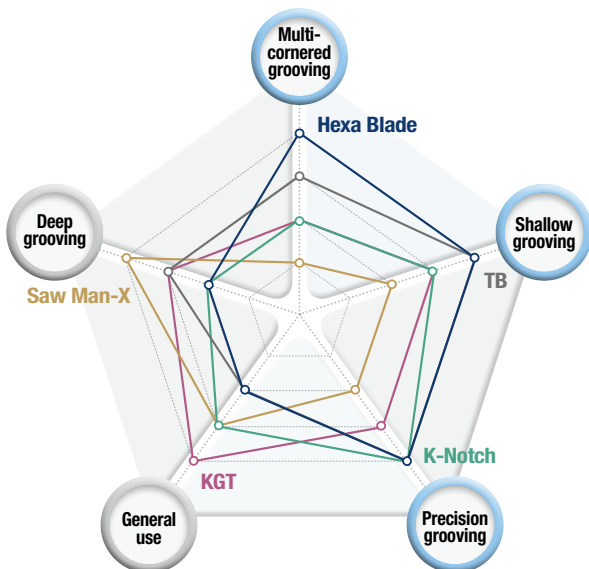
Hexa Blade 19



Hexa Blade 27



Tool selection guide



Tools	Multi-cornered grooving	Shallow grooving	Precision grooving	General use	Deep grooving
Hexa Blade	★★★★	★★★★	★★★★	★★	★★
TB	★★★	★★★★	★★★★	★★	★★★
K-Notch	★★	★★★	★★★★	★★★★	★★
KGT	★★	★★★	★★★★	★★★★	★★★
Saw Man-X	★	★★	★★	★★★★	★★★★



Auto Tools

Auto Tools

- High quality products through stable machining
- Exclusive insert for automatic lathes



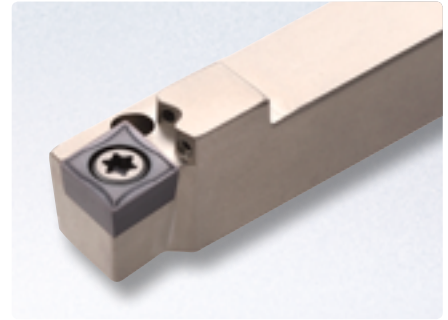
ISO type

- Precision R shape using negative tolerance for the nose radius
- Tolerance grade that does not require tool adjustment due to accurate cutting edge height
- Sharp cutting edge for excellent chip control and surface finish with low cutting forces



KHP Coolant

- 240% increased in productivity on Inconel machining vs. low pressure coolant system
- Cooling, tool life, and chip control are improved by the high pressure coolant multi-directional injection system



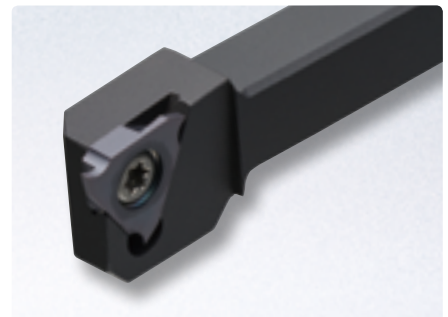
KGT/MGT+

- Grooving insert for automatic lathes
- Dedicated holders for automatic lathes
- Cost-effective due to use of double-edged inserts



TBGF

- Economical 3-cornered insert for precision grooving with small diameter
- High precision machining by applying precision ground class insert
- Optimal for automatic machining from stable chip control in TBGF grooving





Multi-functional type

- For outer diameter machining of small precision parts
- Five insert types: SB(back-turning), SG(grooving), ST(threading), SC(cutting-off), SGB(grooving & back)
- All inserts are applicable on a single holder for convenience



Small Blade

- Blade insert for automatic lathes
- For external machining of precise small parts
- Four types of inserts: SBB (back-turning), SBG (grooving), SBT (threading), SBC (cutting-off)



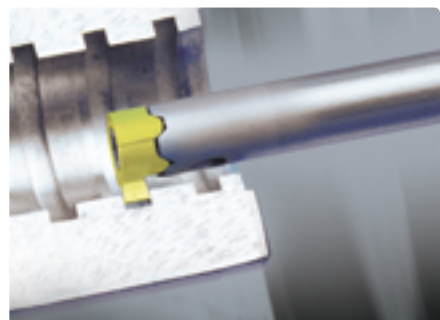
MSB/MSB+

- High hardness grade guarantees longer tool life
- Various kinds of machining (Fitting, Valve, Medical parts, Automobile component, and Semiconductor equipment) are available
- Various types of MSB tools (Boring, Grooving, Threading)



Fine Tools

- Insert shape suitable for small-diameter machining with high-rigidity clamping structure
- Six types of inserts compatible to a single Type-1 holder, enabling versatile machining
- Optimal tool life ensured by various combinations of carbide grades and thin-film coatings



W-Star Drill

- Economical carbide coated solid drill
- Better cutting performance with an improved thinning shape which reduces cutting load
- High rigidity and good chip evacuation from the optimal designed flute





Saw Man-X

A solution for Parting and deep Grooving

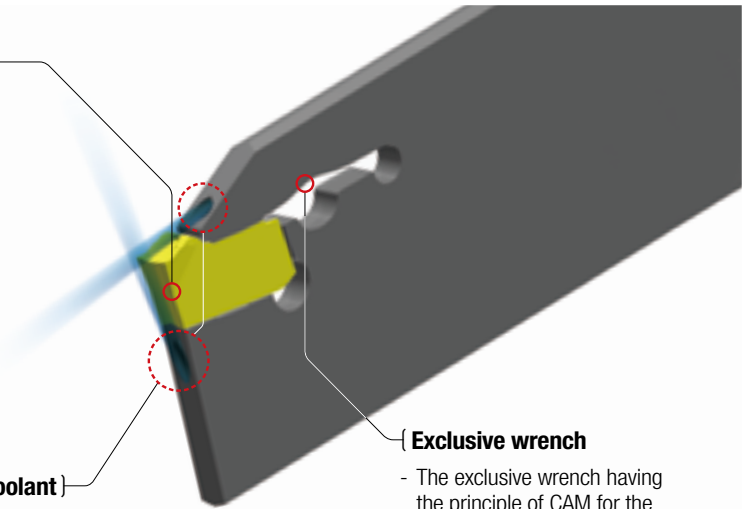
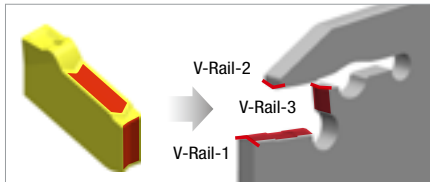
- Stable machining in deep grooving applying clamping system with strong three-way V-Rail
- Clamping precision improved, and inserts can be replaced conveniently using the exclusive wrench.



Features

Three-way V-Rail

- Tightly clamped insert in the tip seat
- Increased stability by minimized vibration during the machining
- Available for stable high speed, high feed and high depth of cut machining



Exclusive wrench

- The exclusive wrench having the principle of CAM for the Saw Man-X
- More convenient clamping system

Internal spraying of 2 channel high pressure coolant

- Direct spraying of cutting edge coolant for effective coolant
- Longer tool life in HRSA cutting
(*need for exclusive blade and block for high pressure coolant)

» Chip breaker features

Type	Shape	Cutting edge	Features
N Chip breaker			<ul style="list-style-type: none"> • 1st recommended in Steel and Cast Iron cutting • Negative land cutting edge • For interrupted and high feed cutting
S Chip breaker			<ul style="list-style-type: none"> • 1st recommended in Stainless Steel and HRSA cutting • Sharp cutting edge • For high speed and continuous cutting
N Chip breaker (Lead angle type)			<ul style="list-style-type: none"> • Optimal for pipe and round bar cutting • Negative land cutting edge applying lead angle • Minimized burr and size of PIP

Type



Insert
Cutting width : 2, 3, 4, 5, 6 mm



Blade
Blade height : 26, 32 mm



Blade [High pressure coolant blade]
Blade height : 26 mm



Shank
Shank height : 16, 20, 25 mm

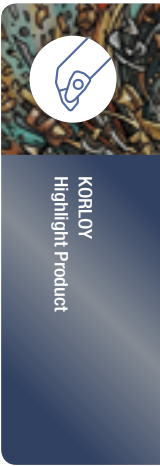


Block
Block height : 26, 32 mm
high pressure coolant block
Block height : 26 mm

FP Chip Breaker

Negative Turning Insert for Steel (Ultra finishing Type with Enhanced Chip Control)

- Two-step concave chip breaker shape enables effective chip control from low to high depths of cut within the finishing range
- Stable chip control is possible in small depths of cut (smaller than nose R), tapering and copying
- Sharp edge and side rake angle result in excellent surface finish and reduced cutting forces



KORLOY
Highlight Product

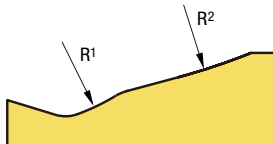
TURNING | FP Chip Breaker



Features

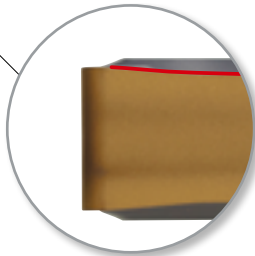
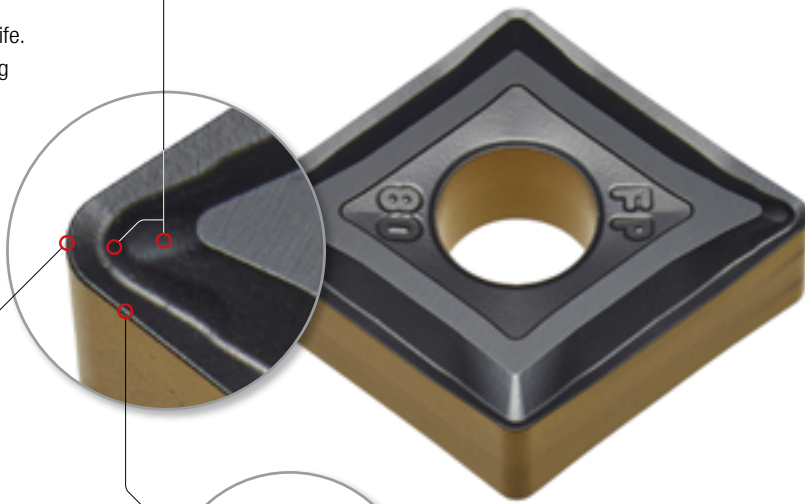
Two-step chip breaker

- Effective chip control from ultra finishing to finishing applications.
- Optimized design for improving flank wear life.
- Optimized first-step chip breaker for copying and taper machining.



Sharp cutting edge

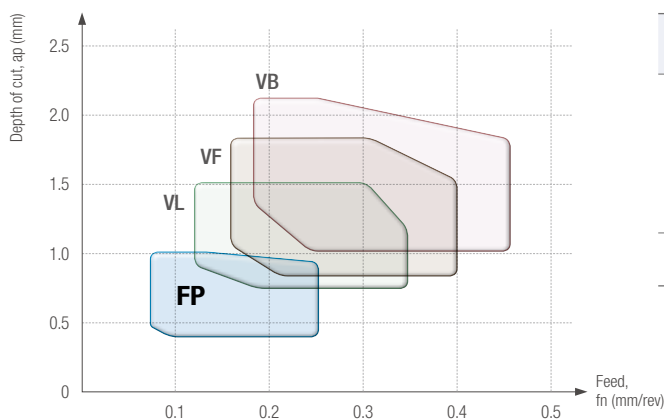
- Reduced cutting load
- High surface finish



Side rake angle

- Shearing function for long chips when they are generated.
- Improved surface finish and chip control.

Application range



Cutting range	Chip breaker	a_p (mm)	f_n (mm/rev)
Finishing	VB	1 ~ 2	0.18 ~ 0.45
	VF	0.8 ~ 1.8	0.15 ~ 0.4
	VL	0.7 ~ 1.5	0.12 ~ 0.35
Ultra finishing	FP	0.3 ~ 1	0.08 ~ 0.25



FM Chip Breaker

Negative Turning Insert for Stainless steel

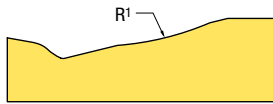
- Tool life improved due to optimized cutting edge that delays adhesion and a geometry that suppresses adhesion spreading.
- Stable chip management in the finishing area with a side V-shaped cutting edge and concave projection structure
- Increased chipping and breakage resistance at the engagement boundary by increasing rigidity at this section
- Maximized heat dissipation through an optimized cutting edge geometry for coolant inflow (coolant guide)



Features

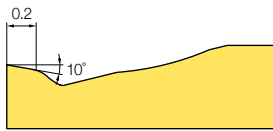
Concave projection

- Prevents chip entanglement between the workpiece and the tool through smooth chip evacuation



Optimized cutting edge & geometry for suppressing adhesion propagation

- Delays in adhesion occurrence
- Suppression of adhesion spreading

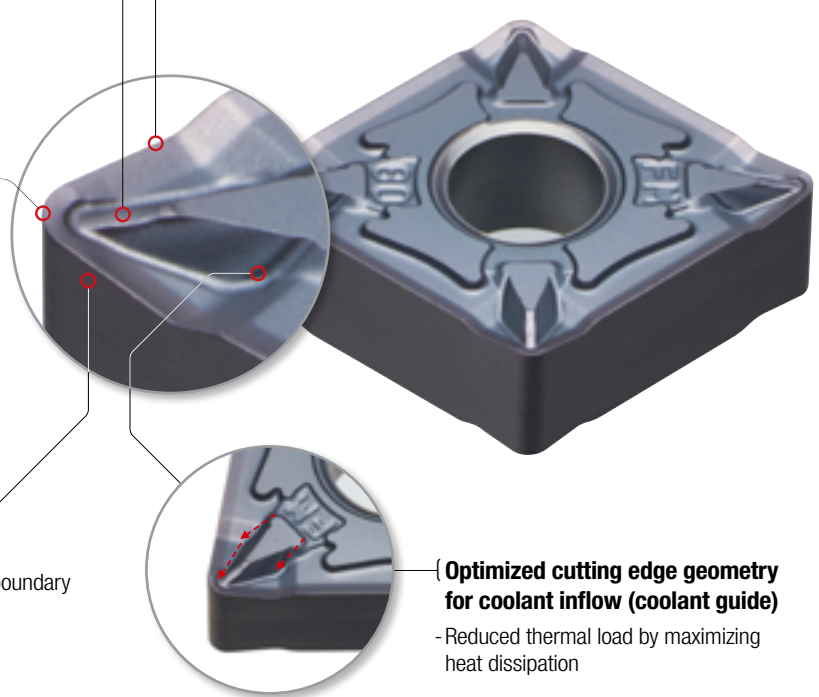


Variable land, increased rigidity at the engagement boundary

- Prevents from chipping / breakage at the boundary
- Excellent surface finish due to enhanced cutting edge durability

Side V-shaped cutting edge

- Ensures stable chip control even in the challenging low-feed / low-depth-of cut range

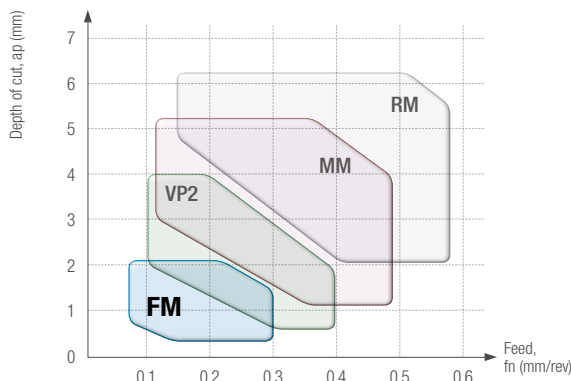


Optimized cutting edge geometry for coolant inflow (coolant guide)

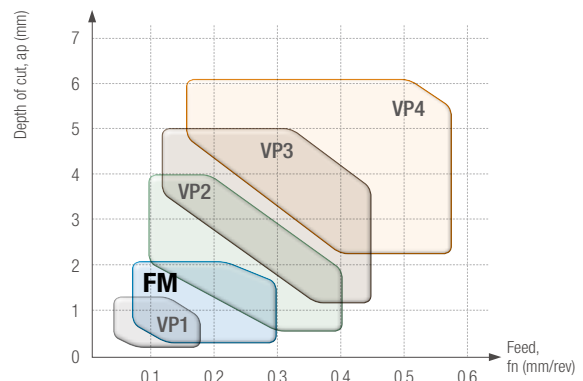
- Reduced thermal load by maximizing heat dissipation

Application range

M Stainless steel



S HRSA



Auto Tools KGT-H

2-Edge Grooving and Parting Tool with High Machining Stability

- High-rigidity geometry and a strong clamping system ensure excellent machining stability and dimensional accuracy under demanding cutting conditions.
- A wide range of chipbreakers is available, allowing to select optimum chip breaker for maximum performance according to machining conditions.

Coming soon



KORLOY
Highlight Product

TURNING | Auto Tools KGT-H

Features

Increased insert thickness

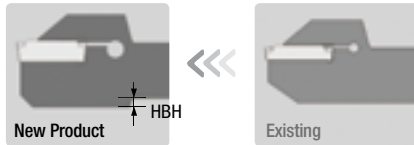
- Improved rigidity through a 38% increase in insert thickness compared to the conventional type
- Prevents insert fracture even under high cutting conditions

Increased front relief angle (7° → 8°)

- Improved cutting performance
- Reduced flank wear

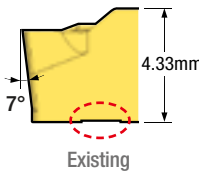
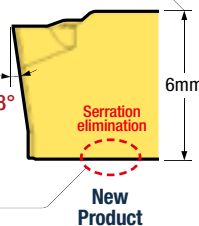
Elimination of insert serration

- Prevents holder indentation by eliminating the bottom serration
- Improved holder durability



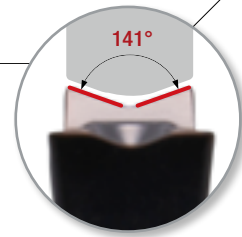
Increased lower thickness of holder head (HBH)

- Improved holder rigidity by reinforcing the lower section of the holder head



V-Groove angle correction (142° → 141°)

- Improved clamping stability through increased contact area by optimizing the insert angle



Improved KGT V-Groove design

- Prevents insert drop-out during mounting by applying an R-shaped geometry
- Enhanced clamping stability through increased contact area by minimizing angular clearance between the insert and holder

Features of Chip breaker



L Light grooving

- For Grooving and Parting
- Concave cutting edge
- Concave rake surface
- Low hardness workpiece
- Small diameter part cutting



R Rough grooving

- For Grooving and Parting
- Straight cutting edge
- Hard cutting edge
- High hardness workpiece
- For high feed cutting



T Turning and grooving

- For Grooving, Cutting and Parting
- Straight cutting edge
- Concave bump
- For various workpiece cutting
- Good chip control



TL Turning and grooving in Low feed

- For Grooving, Cutting and Parting
- Concave cutting edge
- Concave bump
- For HRSA cutting
- Good chip control

Type



Insert

Cutting width : 1.5, 2.0, 2.5, 3.0mm



Shank

Shank Height : 10, 12, 16mm

Auto Tools Nega Type

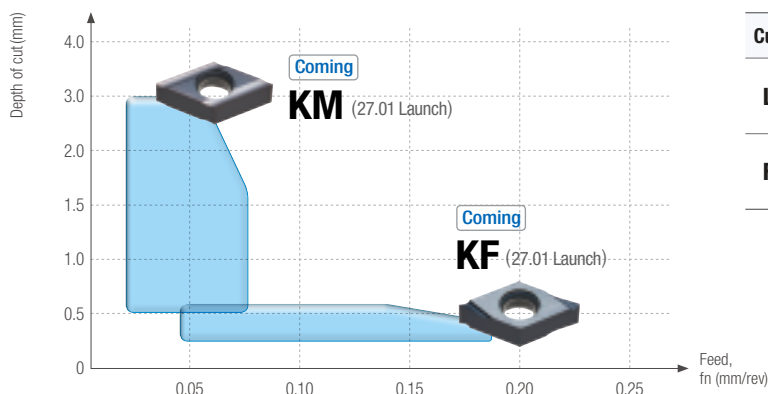
Automatic lathe insert (KM/KF)

- Small negative-type double-sided insert provides high cost efficiency and stable 4-corner usability.
- Delivers the same sharp cutting edge performance as conventional positive-type inserts.
- High-rigidity geometry and strong clamping force ensure stable machining under high cutting conditions.

Coming soon

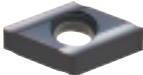
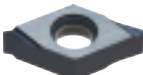


Cutting range



Cutting range	Chip breaker	ap(mm)	fn(mm/rev)
Low feed	KM	0.5~3.0	0.02~0.08
Finishing	KF	0.1~0.5	0.05~0.15

Features

No.	Chip breaker	Shape	Feature
1	KM		<ul style="list-style-type: none"> • Primary recommended chipbreaker for high depth-of-cut machining • Excellent chip control under low-feed conditions • Low cutting resistance type
2	KF		<ul style="list-style-type: none"> • Primary recommended chipbreaker for finishing • Sharp cutting edge and excellent surface finish

Code system

C	N	G	U	07	03	02	M	F	R	-	KM
Insert shape	Relief angle	Tolerance	Cross-sectional shape	IC	Cutting edge height	Nose R Size	Nose R Tolerance M : Negative tolerance	Cutting Edge F : Sharp edge E : Honed edge T : Negative land S : Negative land + honed edge	Hand of Insert R : Right-hand L : Left-hand N : Neutral	-	Chip breaker

How to Use Inserts with Negative Tolerance Corner Radius (Re)

When an undercut corner radius is specified on the machining drawing as shown in Fig. 1, using an insert with a corner radius (Re) of 0.2 mm may result in a larger corner radius than required. In such cases, an insert with a negative tolerance corner radius (Re) should be used.

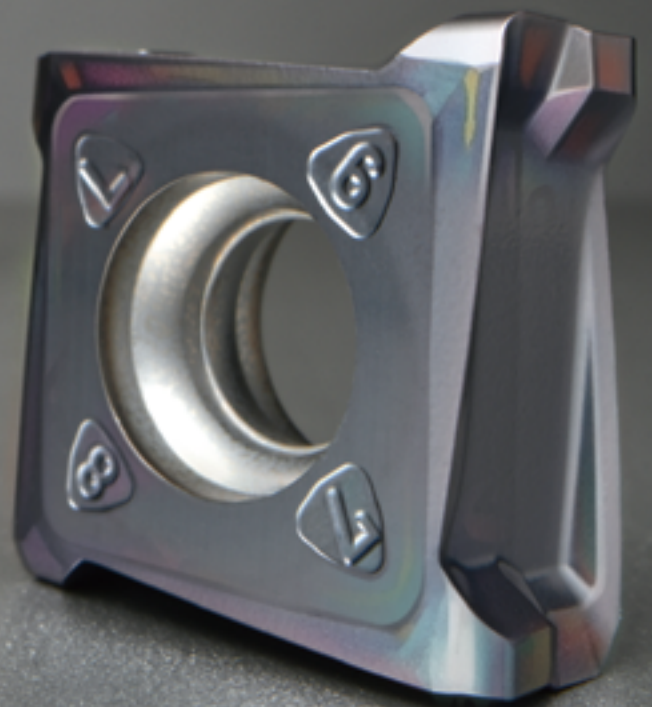
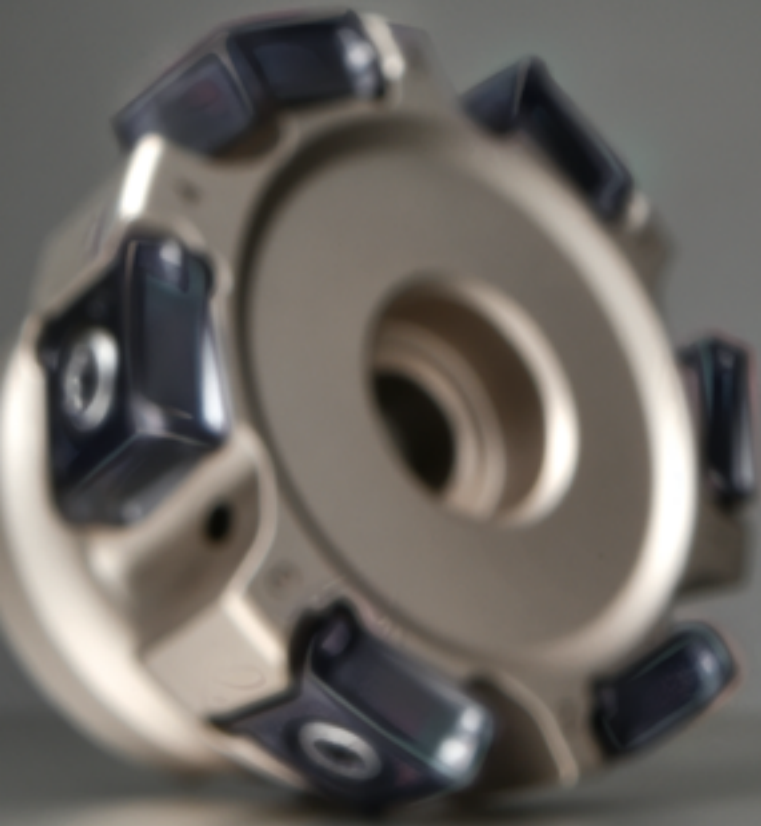
Rotating

MILLING

- TP4P
- TP8P
- Alpha Mill-X
- Rich Mill Series
- HQM
- HFMD
- RMR

INDEXABLE DRILL

- KING Drill
- TPDB Plus Drill
- TPDC Plus Drill
- WPDCH





TP4P

Tangential Double - Sided 4 - Corner Shoulder Milling Tool

- High depth-of-cut (up to 12mm) shoulder milling by high helix chip-breaking double-sided inserts
- Enhanced productivity through strong clamping force of the tangential type and multi-insert application



Features

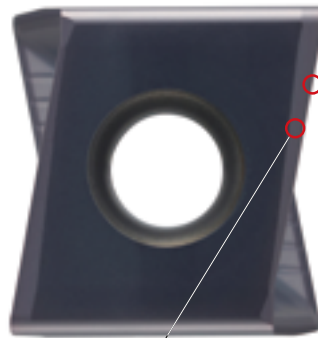
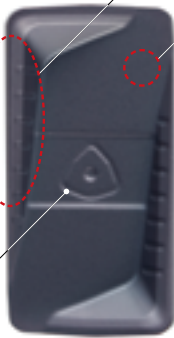
Heat dispersion chip breaker Structure

- Installation of multiple dimples
- Prevents from thermal cracks and increases tool life

Excellent clamping stability

- Ensures a large clamping surface area

KORLOY Identity
Symbol Mark



Reinforced cutting edge geometry

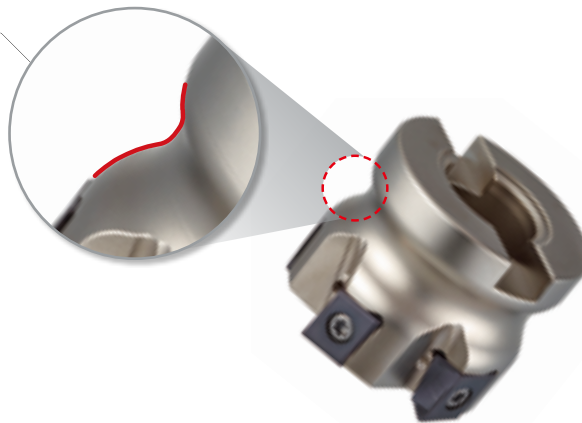
- Double negative-positive edge structure
- Improved chipping resistance and prevention of sudden breakage

High depth-of-cut structure and optimized perpendicularity

- APMX 12 mm
- Perpendicularity within 30 μ m

Streamlined holder structure

- Smooth chip evacuation



Type



TP4PCM-LN13 (Single-edge)
Ø50 ~ Ø80






TP4PC(M)-LN13 (Multi-edge)
Ø40 ~ Ø125



TP4PS-LN13
Ø25 ~ Ø40



» Application and features of chip breakers

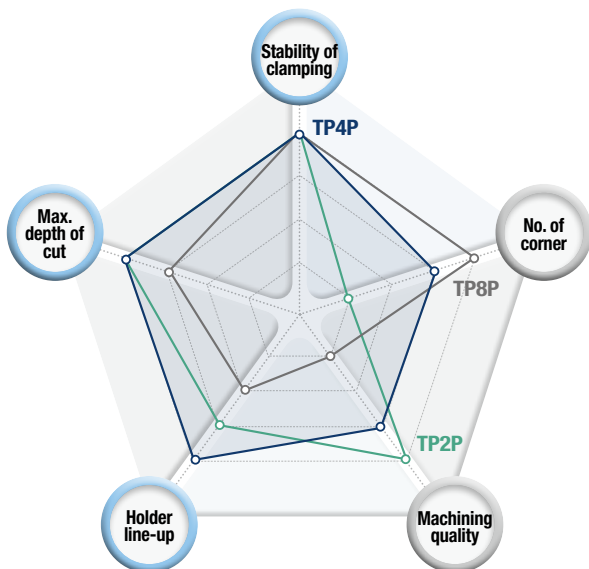
Chip breaker	Cutting edge	Application	Feature
MA		For Aluminum	<ul style="list-style-type: none"> Sharp cutting edges for excellent cutting performance in aluminum machining Buffed surface for excellent chip flow and welding resistance
ML		For HRSA and Titanium	<ul style="list-style-type: none"> Guarantees high quality of performance from applying suitable for low cutting resistance chip breaker for HRSA cutting and high hardness cutting edge
MM		For general cutting	<ul style="list-style-type: none"> Suitable for general cutting range from design structure for general high feed cutting

» Recommended grade and cutting edge

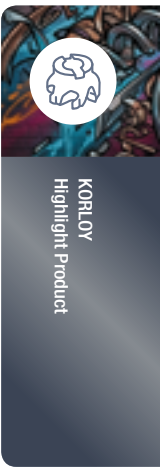
Recommended grade and cutting edge (●: 1st recommendation)

P		M		K		S		N	
C/B	Grade	C/B	Grade	C/B	Grade	C/B	Grade	C/B	Grade
● MM ○ ML	● PC3700 ○ PC5300	● ML	● PC9540 ○ PC5300	● ML ○ MM	● PC6100 ○ PC5300	● ML	● UNC840 ○ UPC845 ○ PC5300	● MA	● H05

Tool selection guide



Tools	Stability of clamping	No. of corner	Machining quality	Holder line-up	Max. depth of cut
TP4P	★★★★	★★★	★★★	★★★★	★★★★
TP8P	★★★★	★★★★	★	★★	★★★
TP2P	★★★★	★	★★★★	★★★	★★★★

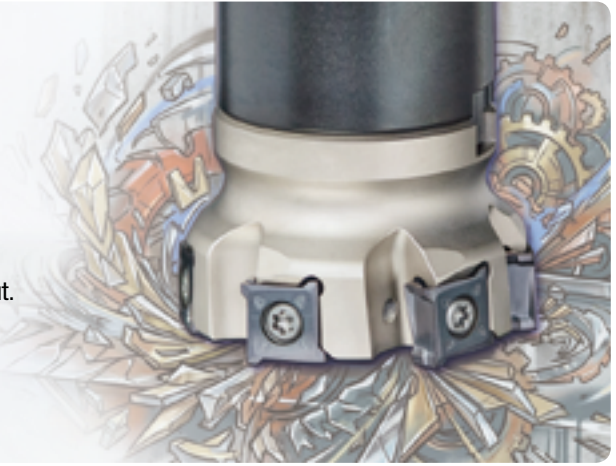




TP8P

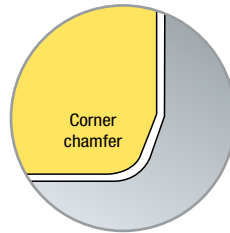
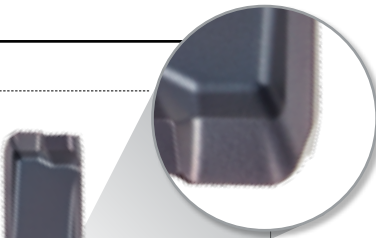
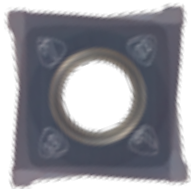
Right angle milling tool with tangential double-sided 8 corners

- Double-sided insert with 8 corners realizes high cost efficiency thanks to right angle milling with high depth of cut.
- Excellent for productivity improvement because tangential type insert ensures rigid clamping and allows more flutes (extra close pitch) in accordance with a cutter diameter.

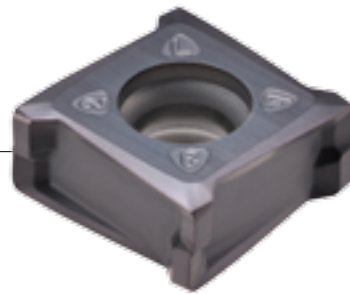


Features

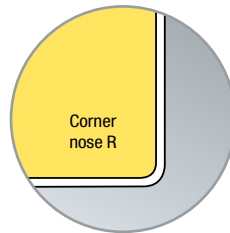
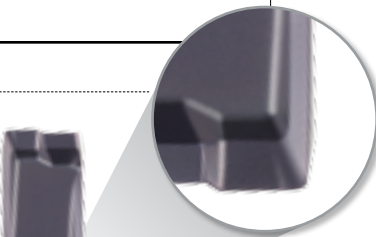
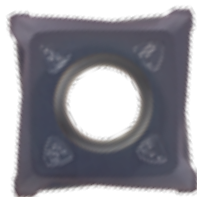
Corner chamfer



- Chamfer corner
- For multi-steps cutting



Corner nose R



- Less coarse
- For one step cutting

Type



Cutter
Ø40 ~ Ø125



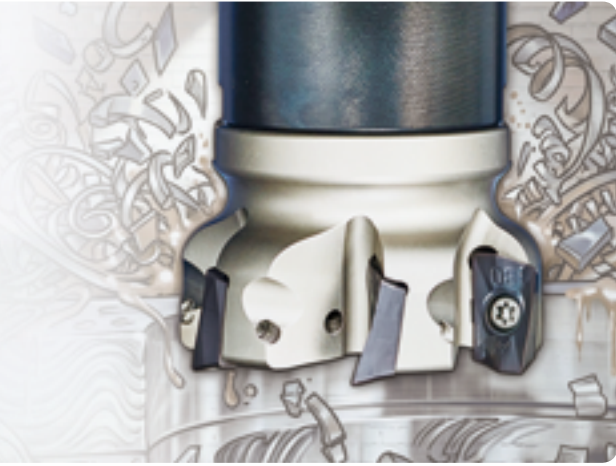
Shank
Ø32 ~ Ø40



Alpha Mill-X

Shoulder Milling tool for high helix

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



KORLOY
Highlight Product

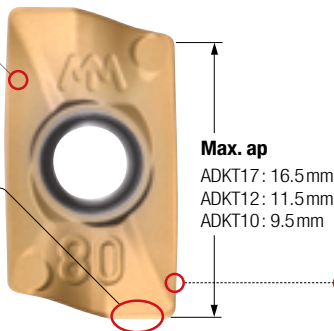
Insert features

High rake angle chip breaker

- Applied high rake angle
- Improved chip control

Applied minor cutting edge with a wiper function

- Minor cutting edge design optimized for excellent surface finish



Proprietary relief surface shape

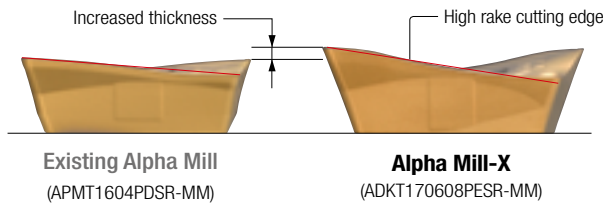
- High rigidity of insert

Flat clamping area

- Stable clamping in high speed and high feed machining

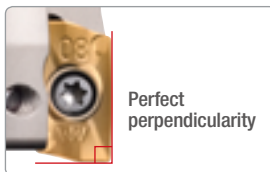
High rake cutting edge

- Better surface toughness
- Lower cutting load

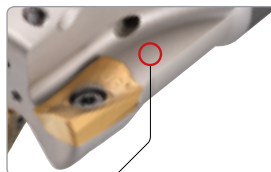


- Applied cutting edge with high rake angle : Decreased in cutting resistance
- Thicker insert: high rigidity of insert
- Optimal for high speed and high feed machining

Cutter features

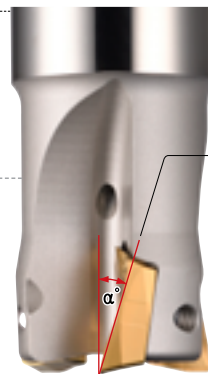


Perfect perpendicularity



Wider chip pocket

- Maximized chip control
- Outstanding chip control in high speed and high feed machining



High rake angle cutting edge

- Improved surface finish
- Decreased cutting load

Type



Cutter
Ø40 ~ Ø125



Shank
Ø16 ~ Ø40

MILLING | Alpha Mill-X



Rich Mill Series

innovative double sided insert design provides more cutting edges and longer tool life

- Rich Mill series is one of the innovated design that provides various number of cutting edges with double sided inserts and longer tool life for our customers
- The unique geometry and special cutting edge guarantees low cutting loads and long tool life
- Rich Mill series has a wide application range from steel and stainless steel to cast iron and aluminum



RM3



- True perpendicular shouldering operation
- Strong thick insert and 3-face clamping for stable milling even in the toughest conditions
- Reduced tool cost due optimized manufacturing process and excellent tool life



RM4



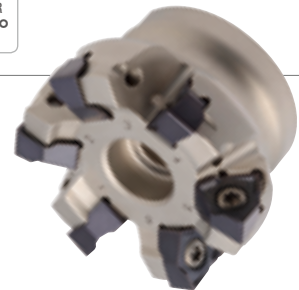
- Double sided inserts with 4 cutting edges
- High rake angle chip breaker and cutting-edge can make smooth cutting with low cutting load
- Negative insert has strong cutting-edge



RM6



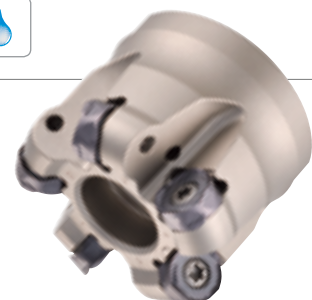
- 3 clamping surfaces on the side and strong clamping screws
- High precision, excellent perpendicularity, outstanding surface finish on the flank, accurate tolerance
- High rake angle and sharp cutting edges for lower cutting resistance



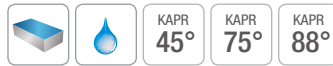
RMR



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



RM8



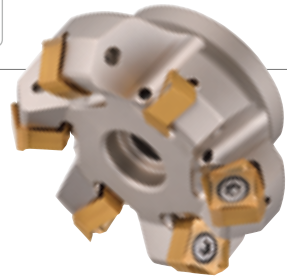
- Double-sided insert with 8 cutting-edges
- The unique geometry and high rake angle of cutting-edge guarantees excellent surface finish
Applicable for various workpieces like Steel, Stainless steel, Cast iron, Aluminum
- Combined with the innovative geometry and various grades offer durability and excellent tool life



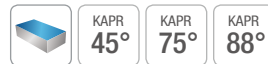
RM8-X



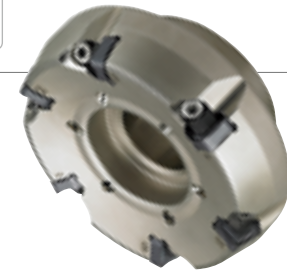
- High performance in stainless steel machining due to sharp cutting edge and double reverse positive relief surface structure
- Economical tool with double-sided 8 corners and high helix right-handed geometry for high depth of cut machining



RMT8



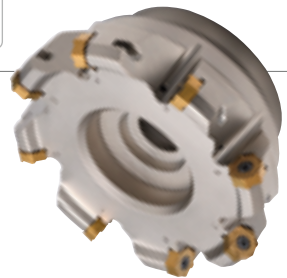
- New latch clamping system provides a powerful cutting force and an easy insert change
- New grades with chipping resistance provides good surface roughness and better tool life
- Special chip breaker design opens possibility to do all operation



RM14



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



RM16



- Economical 16 cutting-edges
- Reduces cost in medium cutting
- Wiper insert can be used for good surface roughness





HQM

High feed sQuare Milling

- Stable and high efficient cutting due to the design with high rigidity of 4 planar corners
- High speed and high feed cutting from the optimal rake angle and high helix cutting edge



Features

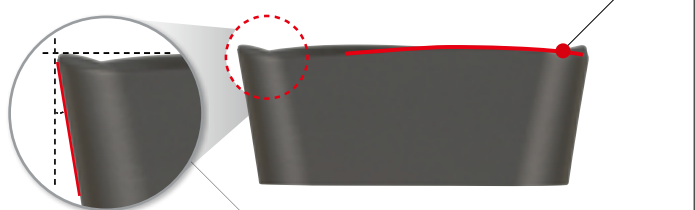
(High rigidity insert

- Inscribed circle 12.0/14.0 mm
- Increased rigidity



(Structure of C/B for dispersing heat

- Several dimples
- Preventing heat crack/ increasing tool life



Shape for relief of corner

- Suitable for multi-functional cutting by securing enough relief

Insert shape for higher rigidity

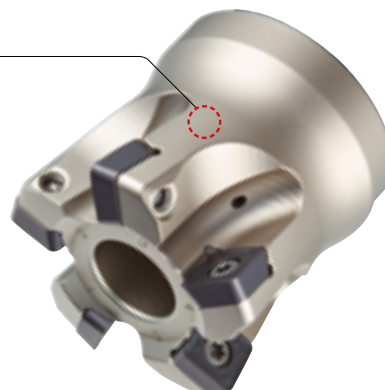
- Applied streamlined helix
- Increase chipping resistance/ preventing unexpected fracture

Positive axial direction rake angle

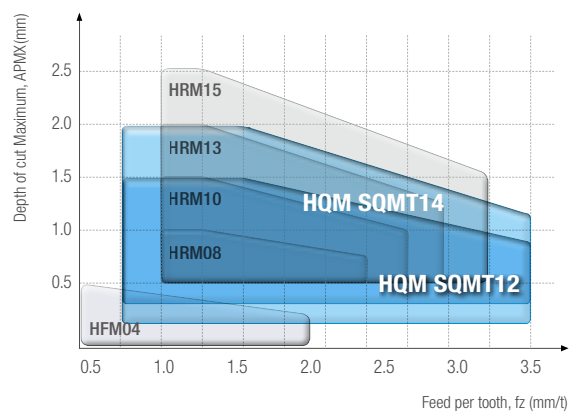
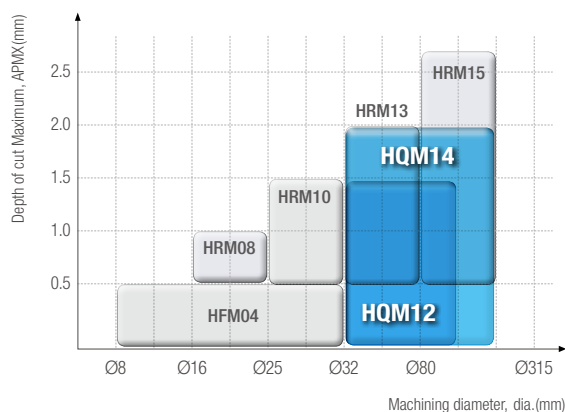
- Good chip curling

Streamlined structure of holder

- Good chip control



Application range



HFMD

High Feed Milling Tool with 4 Corners for Small Diameter

- Available for economical and highly efficient machining with implementation of double sided 4 corner inserts and increase in the number of teeth per cutter diameter
- Available for high speed/high feed machining with high helix edge design and excellent clamping stability



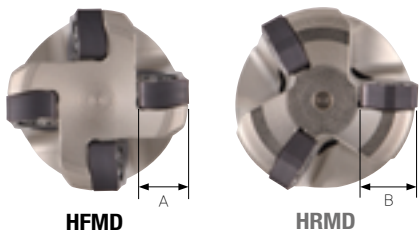
MILLING | HFMD
INFO

Features

- Available for high feed machining with the increase in the number of tooth per cutter diameter
- Excellent chip evacuation in slotting or deep shouldering with minimized interference with side walls

Highly efficient insert due to fine pitch

- Able to use fine pitch at the same machining diameter with typical types of milling cutters due to smaller inscribed circle ($A < B$)



HFMD

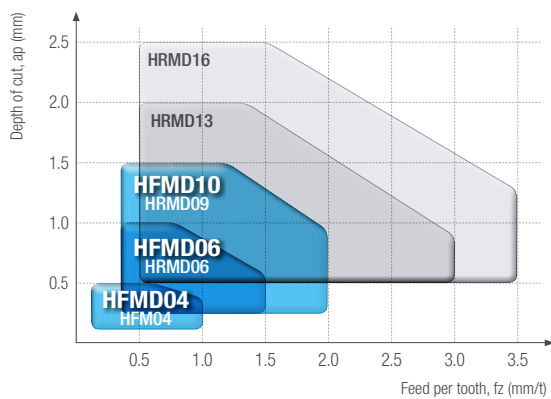
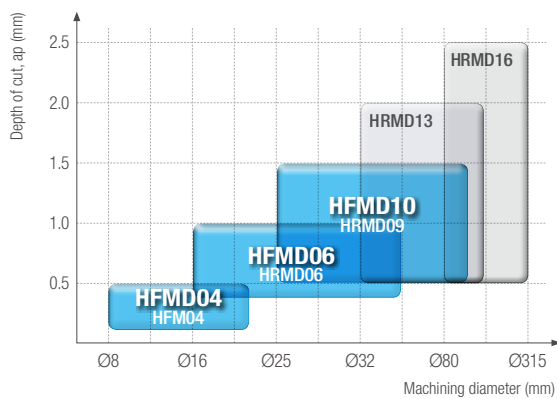
HRMD

Economical 4-corner insert

- Can use 4 corners with 1 insert by utilizing front/back face; High feed due to finer pitch



Application range



Type



Cutter
Ø32 ~ Ø100



Shank
Ø8 ~ Ø42



Modular
Ø10 ~ Ø42



RMR

Double-sided round Milling tool with 8-corners

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



Insert features

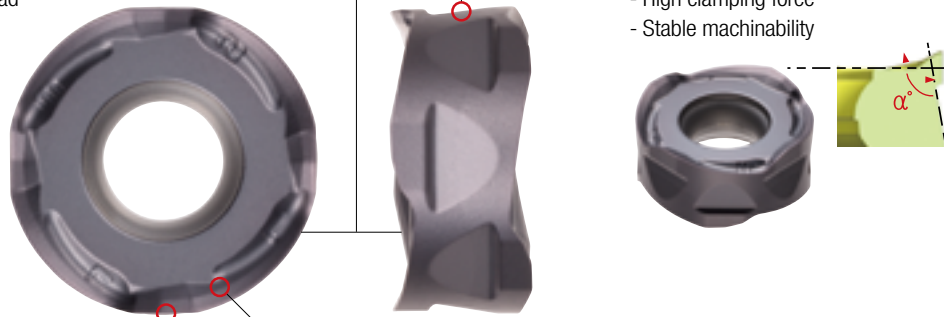
- **High cost efficiency** - Maximum 8-corners can be used due to double-sided structure
- **Good surface finish** - The optimal minor cutting edge ensures good surface finish
- **Stable tool life** - The exclusive structure preventing rotation ensures stable machining

High Helix

- Improved surface finish
- Lowered cutting load

Reversal positive structure preventing rotation

- High clamping force
- Stable machinability



Wide wiper cutting edge

- Good surface finish

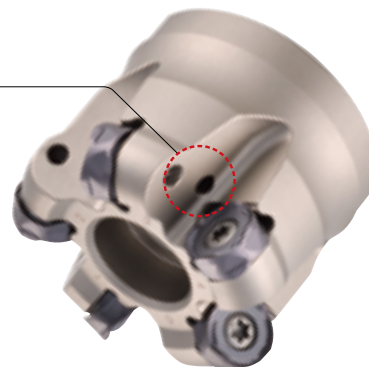
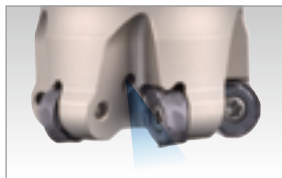
High rake angled major cutting edge/Variable chip breaker

- Good machinability with high depth of cut
- Improved chip control

Cutter features

Internal coolant system

- Better chip evacuation
- Longer tool life due to insert cooling



Type



Cutter
Ø50 ~ Ø125



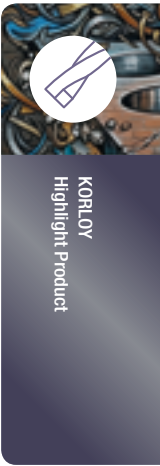
Shank
Ø32 ~ Ø63



KING Drill

Optimized insert design for maximum drilling efficiency

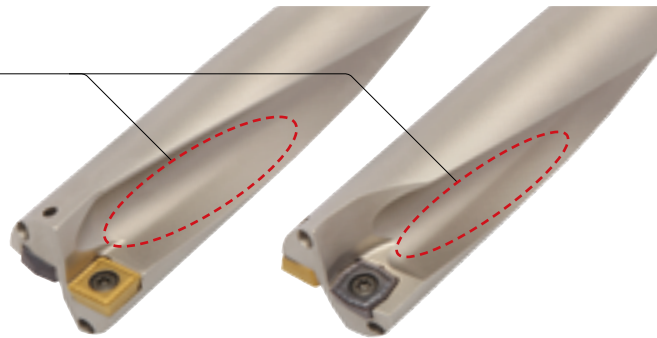
- Optimized design of inserts for maximum drilling efficiency
- Excellent cutting performance and chip control due to the optimized geometry and chip breaker of both inserts, central & peripheral



Features

Optimized flute system - 2 coolant holes applied

- The optimized shape of the flute increases the rigidity of the drill body and improves chip evacuation



» Features of chip breaker

Chip breaker	PD		LD		ND		RD
Features	- Universal - At medium speed and medium feed		- Superior chip control for machining mild steel and stainless steel - Light cutting (at low~medium speed and low feed)		- Sharp cutting edge for aluminum machining - Insert surface buffed for high quality result - E Class tolerance		- Improved chipping resistance - Excellent performance in case of frequent fracture and chipping on the cutting edge
Insert	Peripheral insert	Central insert	Peripheral insert	Central insert	Peripheral insert	Central insert	Central insert
Shape							
Grades for workpiece	NC5330 : P, M, K PC3700 : P PC5300 : P, M, K, S PC6100 : K PC9540 : P, M, S		PC5335 : P, M		H01 : N		PC5300 : P, M, K, S

Type



[2D/3D/4D/5D]
Ø12 ~ Ø60.5



Coolant through system with a lathe [2D/3D/4D]
Ø13 ~ Ø29.5



For large diameter drilling [2D, 3D, 4D]
Ø61 ~ Ø100



KORLOY
Highlight Product

TPDB Plus Drill

(TPDB/TPDB-DS/TPDB-H/TPDB-F)

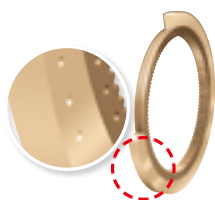
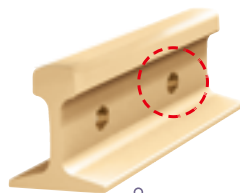
High-quality and high efficiency top solid indexable Drill Series

- Improved productivity and excellent machining quality through stable machining
- Versatility in machining various surfaces, structural Steel, and medium / large diameter machining



Applicable industries

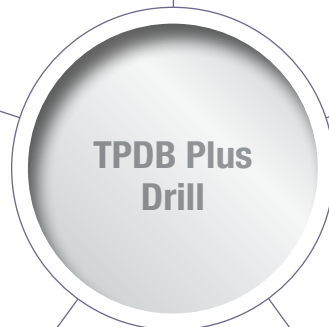
Railway and construction



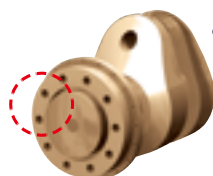
Wind and nuclear power generator



Aircraft



TPDB Plus Drill



Shipbuilding



Automobile

Holder & Insert line-up



TPDB [3D/5D/8D/10D/12D]
Ø10.0 ~ Ø32.9
Standard

P **K**

M



TPD□B



TPD□BM



TPDB-DS [3D/5D/8D]
Ø33.0 ~ Ø39.9
Medium/Large dia.

P **K**

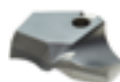


TPD□B-DS



TPDB-H [3D/4D/5D/8D]
Ø14.0 ~ Ø32.9
H-Beam

P



TPD□B-H



TPDB-F [1.5D]
Ø14.0 ~ Ø30.9
Flat

P **K**



TPD□B-F

INDEXABLE DRILL | TPDB Plus Drill

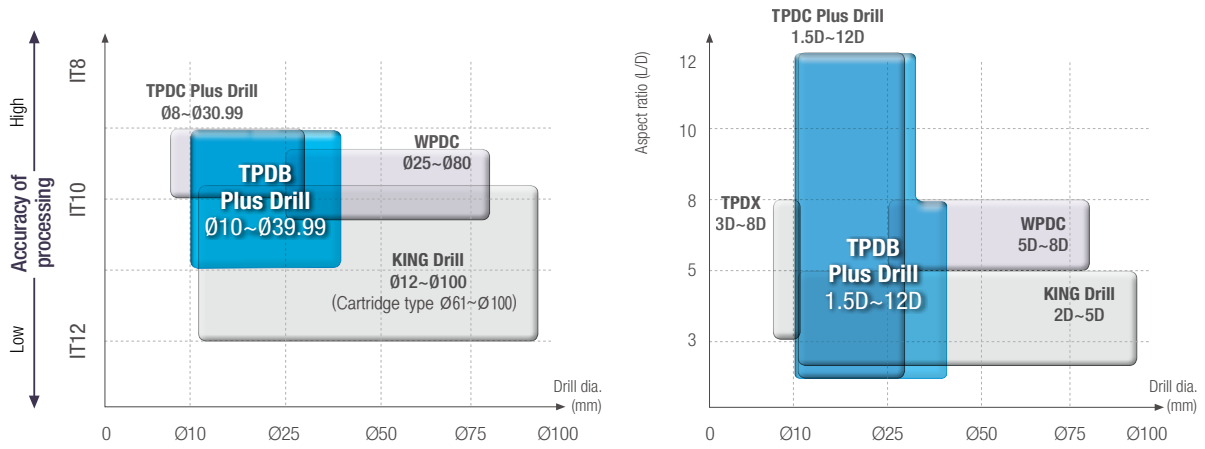


TPDB Plus Drill Series



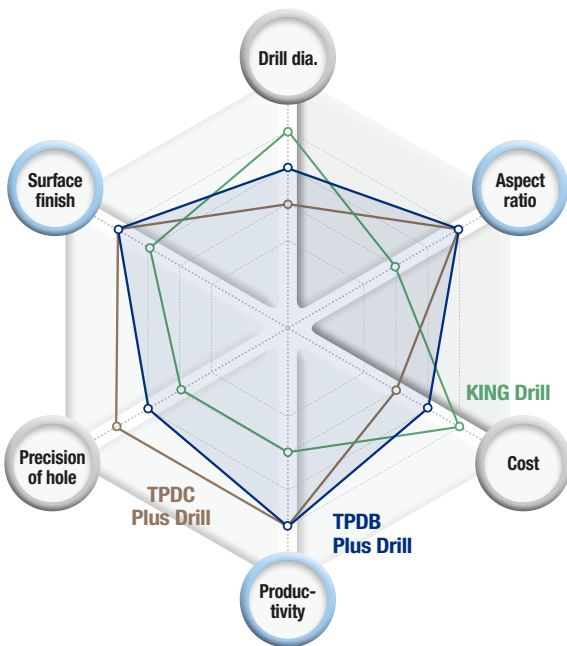
INDEXABLE DRILL | TPDB Plus Drill

Application range



Tool		Application range			
		Drill dia. (Ø)	Aspect ratio (L/D)	Tolerance of Drill dia.	Workpiece material
TPDB Plus Drill	TPDB(M)	10.0 ~ 32.99mm	3, 5, 8, 10, 12	h7	P, M, K
	TPDB-DS	33.0 ~ 39.99mm	3, 5, 8		P, K
	TPDB-H	14.0 ~ 32.99mm	3, 4, 5, 8		P
	TPDB-F	14.0 ~ 30.99mm	1.5		P

Tool selection guide



Tools	Drill dia.	Aspect ratio	Cost	Productivity	Precision of hole	Surface finish
TPDB Plus Drill	★★★★	★★★★★	★★★	★★★★★	★★★	★★★★★
TPDC Plus Drill	★★	★★★★★	★★	★★★★★	★★★★★	★★★★★
KING Drill	★★★★★	★★	★★★★★	★★	★★	★★★



KORLOY
Highlight Product

TPDC Plus Drill

(TPDC-XP, CP, CM, CN, CP-FC)

High quality and high feed top solid indexable Drill

- The optimal tool shape for Drilling realizing high precision and high feed machining as of carbide solid Drill performance level
- Usable for various machining through enlarged line-up by workpieces, depth of cuts and workpiece shapes



Features

- **One step clamp system** - Increased stability and shortened setting time
- **High helix angle and flute polishing** - Reduced cutting load and enhanced chip evacuation
- Various applications from enlarged line-up by depth of cuts and shapes of workpiece

Max. Depth of cut, 12D

- Line-up for 10D and 12D

Surface treatment

- Good durability

Flute polishing

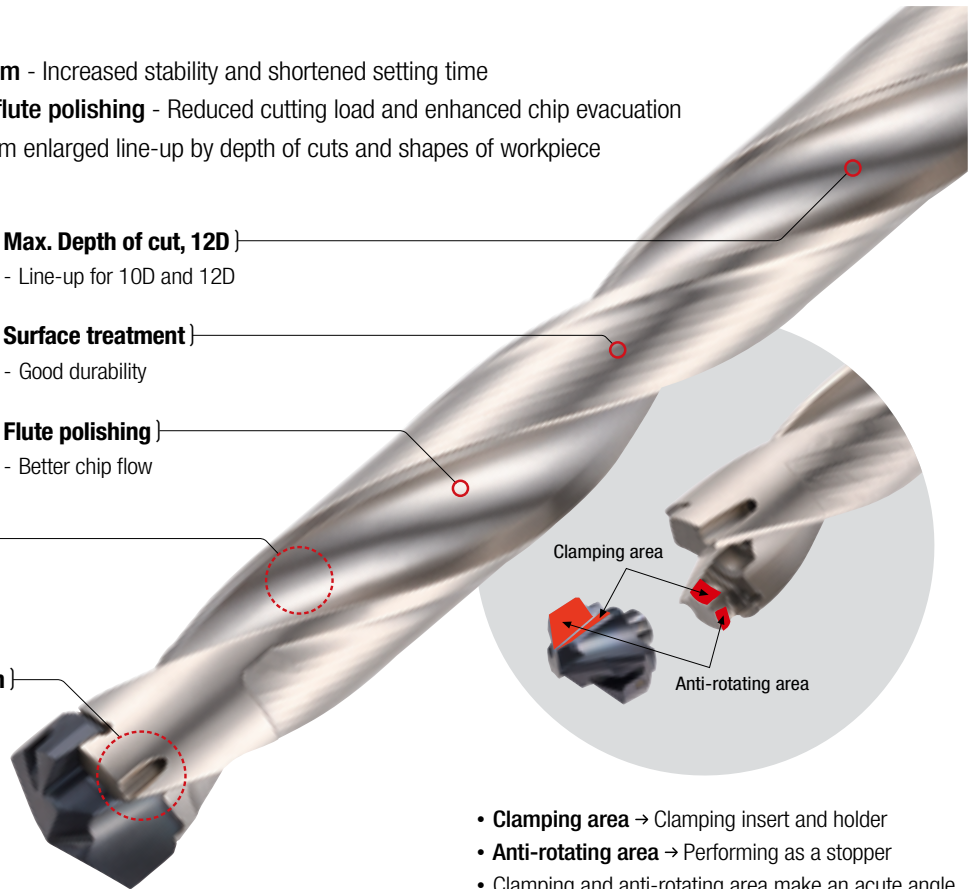
- Better chip flow

High helix angle

- Improved chip control
- Applied high rake angle

Spiral oil hole application

- Stable chip evacuation



- **Clamping area** → Clamping insert and holder
- **Anti-rotating area** → Performing as a stopper
- Clamping and anti-rotating area make an acute angle to prevent insert rotation while machining

Insert



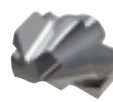
XP



CP



CM



CN



CP-FC



Type



TPDX [3D/5D/8D]
Ø8.0 ~ Ø11.9



TPDC [1.5D/3D/5D/8D/10D/12D]
Ø12.0 ~ Ø30.9

INDEXABLE DRILL | TPDC Plus Drill

INFO



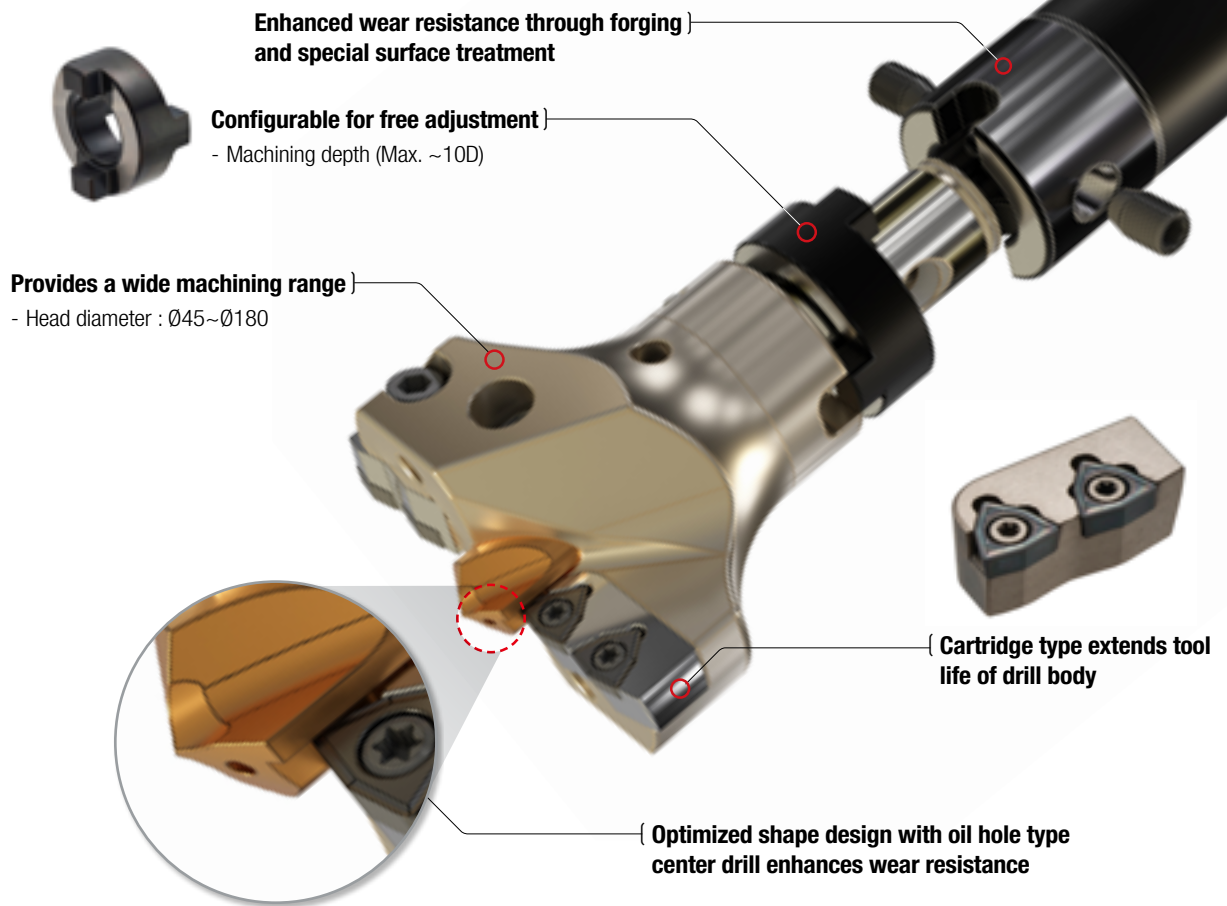
WPDCH

Large diameter($\varnothing 45 \sim \varnothing 180$) Indexable Drill

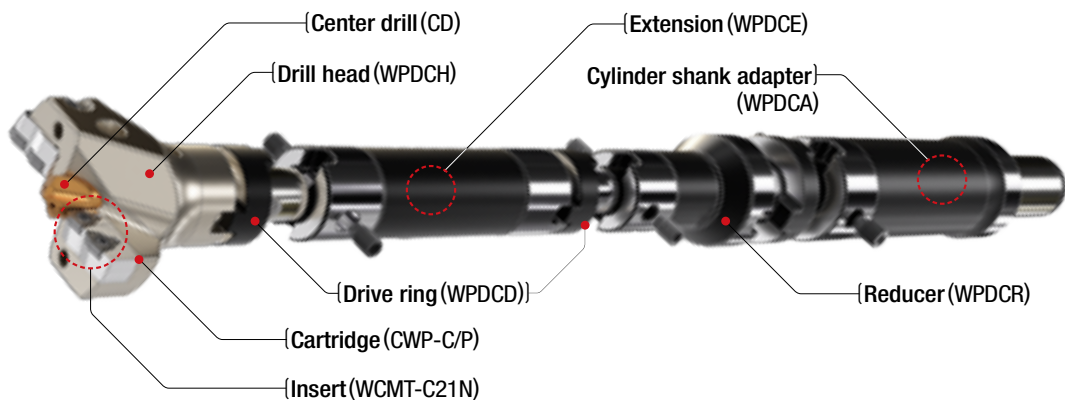
- Cartridge type with adjustable drill diameter allows to freely adjust the machining depth.
- Enhanced wear resistance and durability with a forged and specially surface-treated drill body.



Features



Holder design



Solid / Tap

SOLID ENDMILL

- Super Endmill for TI/HRSA
- Super Endmill for HD
- SQM Endmill
- H-Star Endmill
- U-Star Endmill
- S-Star Endmill
- A-Star Endmill

SOLID DRILL

- MSD Plus-S
- W-Star Drill

TAP

- Tap-Star



Super Endmill for Ti for HRSA

Endmills series for difficult-to-cut materials (Ti and HRSA)

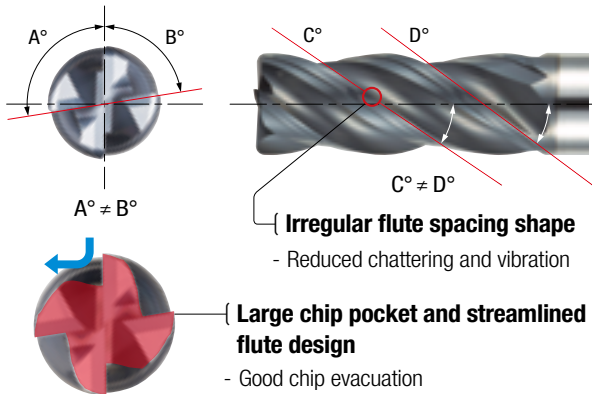
- Machining HRSA and Ti components like engine, turbine and etc. used in aerospace and power generation industries
- Optimal for difficult-to-cut materials machining due to reduced cutting heat and enhanced chip evacuation



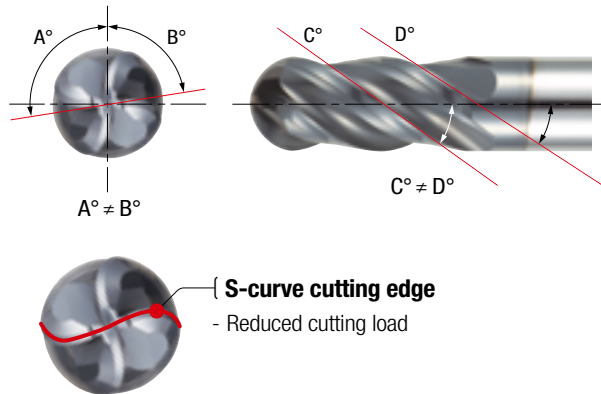
Features

Super Endmill for Ti

» SFET(Flat)/SRET(Radius)

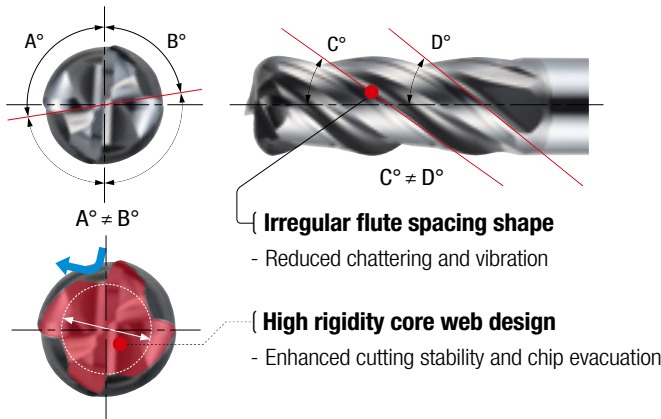


» SBET(Ball)

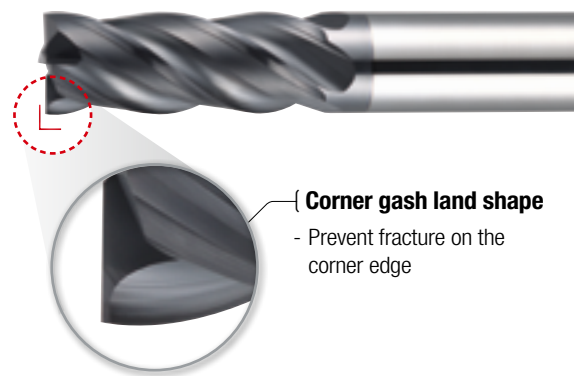


Super Endmill for HRSA

» SRES(Radius)



» SFES(Flat)



Type

(For Ti)

(For HRSA)



Flat
Ø3.0 ~ Ø20.0



Radius
Ø3.0 ~ Ø20.0



Ball
Ø1.0 ~ Ø12.0



Flat
Ø3.0 ~ Ø20.0



Radius
Ø3.0 ~ Ø20.0



TI



HRSA



KORLOY
Highlight Product

Super Endmill for HD

High-Efficiency Medium-Duty Endmill for Materials up to HRC52

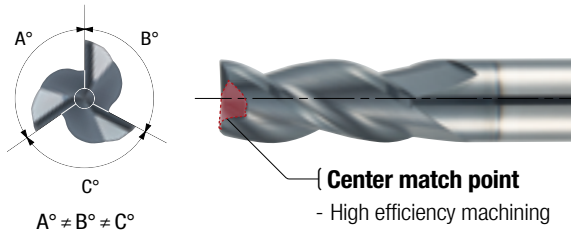
- Excellent Tool Life Across Various Materials
- For Machining Carbon steel, Alloy Steel, Pre-hardened steel, and Stainless steel

Coming soon

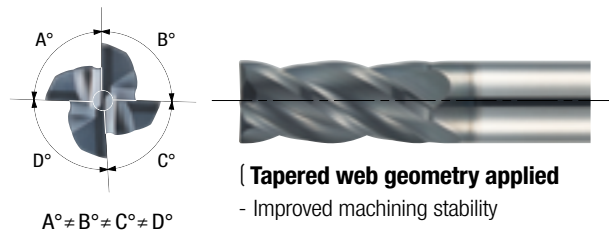
SOLID ENDMILL | Super Endmill for HD

Features

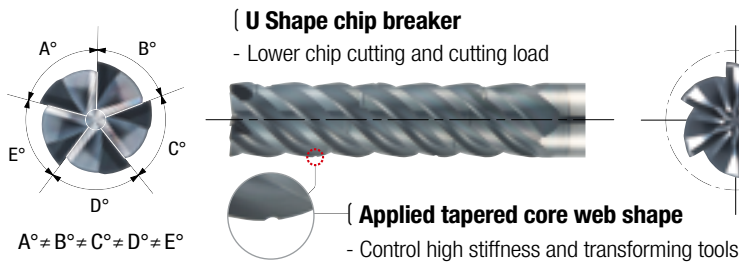
» SFEU3000(Flat)



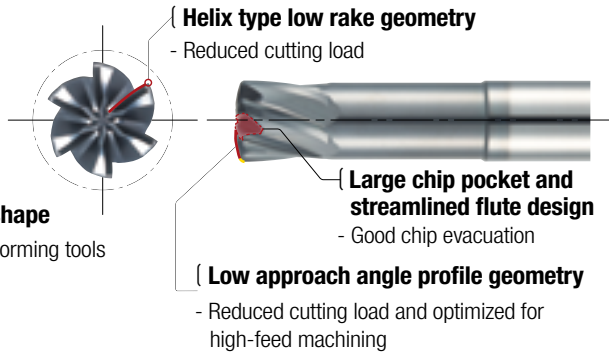
» SFEU4000(Flat)/SREU4000(Radius)



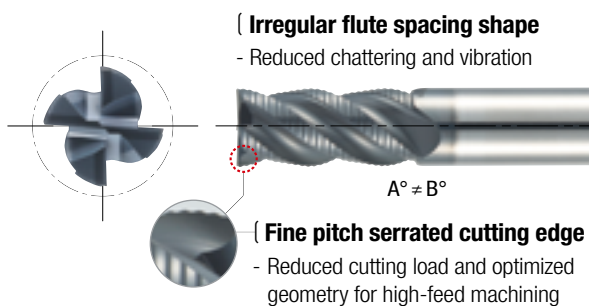
» SLFEU5000-SPLT(Splitter)



» SDREU6000(High feed)

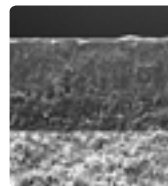


» SFREU4000(Fine pitch roughing)



Grade Features

UE coating(Ultra Endurable resistant coating)



- Maximized tool life with excellent wear resistance of high-hardness thin coating
- Enhanced machining stability through outstanding coating surface finish
- Improved chip evacuation and prevention of built-up edge with excellent surface lubricity

Type



SQM Endmill

Super Quickfix Modular Endmill

- High-precision and strong fastening due to a proprietary screw fastening design
- Excellent performance achieved by applying modular-dedicated shape and material

Coming soon



KORLOY
Highlight Product

Features

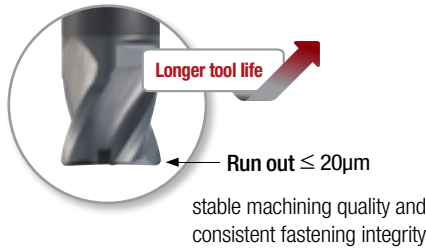
Features of proprietary screw fastening structure

- High-precision and strong fastening, maintains fastening repeatability and accuracy
- Dual guide surfaces ensures precise centering and prevents from machining deflection
- Dual contact surfaces maximize fastening stability and repeatability

Dual guide surfaces

- Ensures precise centering and prevents from bending during machining

Ensures stable machining quality and consistent fastening integrity



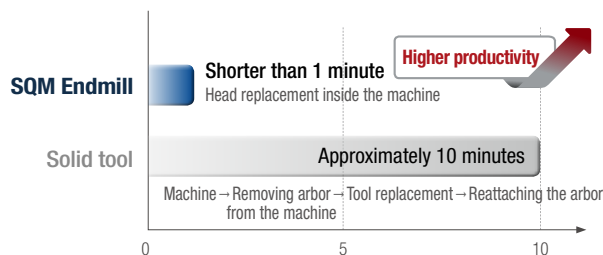
Exclusive screw clamping structure

- High-precision and strong fastening

Dual contact surfaces

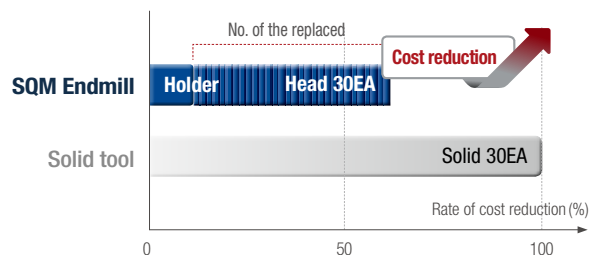
- Dual contact surfaces contact in both the Z-axis and radial directions, ensuring fastening stability and maintaining repeatability through high-precision, strong fastening

Reduces setup time due to fast and easy head replacement



- Minimized machine downtime

Cost savings on tools (Based on replacing 30 heads and solids)



- Superior price competitiveness by allowing replacement of only worn heads

Type



Flat
Ø10.0 ~ Ø25.0



Radius
Ø10.0 ~ Ø25.0



Holder
Ø10.0 ~ Ø32.0

SOLID ENDMILL | SQM Endmill



KORLOY
Highlight Product

H-Star Endmill

Endmill for High hardness Steel cutting

- Stable cutting from High hardness substrate and exclusive new coating layer with good wear resistance application
- Improved initial chipping resistance with optimized edge treatment for High hardness Steel cutting



Features

- **High hardness coating layer** - Ensuring stable cutting from high Si content, increased wear resistance and frictional heat resistance due to applying a new AlTiSiN series coating layer
- **High hardness substrate** - Containing ultra-fine WC + Co 9% and expanded general application range by maximizing cutting edge feature
- **Edge treatment** - Increased chipping resistance in the beginning of high hardness steel cutting and enhanced wear resistance lead to stable cutting



High hardness substrate

- Ultra-fine WC + Co 9%
- Expanded general application range by maximizing cutting edge feature



High hardness coating layer

- High Si content
- Enhanced wear resistance
- Stable cutting through frictional heat resistance increase

Edge treatment

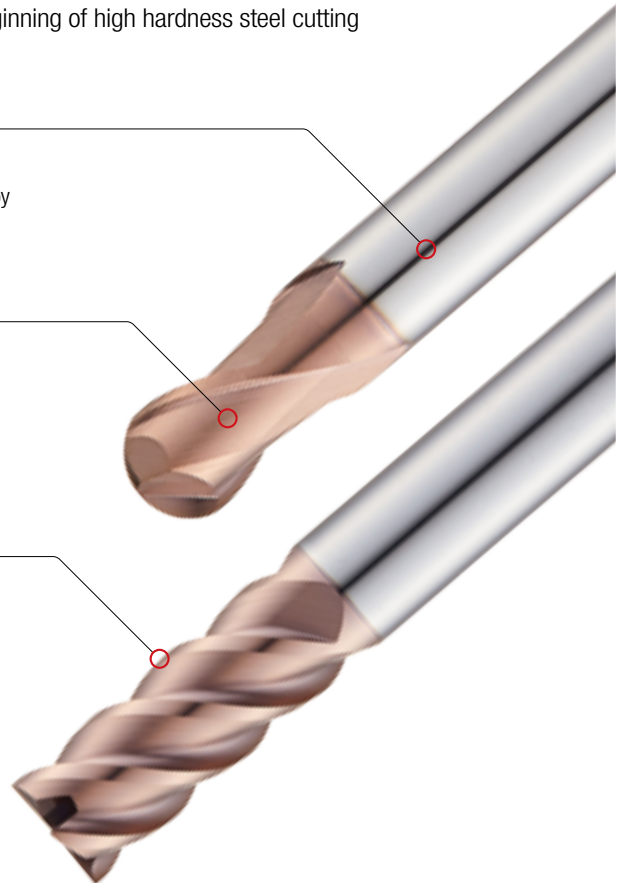
- Enhancing chipping resistance in the beginning of high hardness steel cutting
- Increased wear resistance and stable cutting performance



After



Before



Type



Ball
Ø0.1 ~ Ø12.0



Flat
Ø0.1 ~ Ø20.0



Radius
Ø0.2 ~ Ø20



High feed
Ø3.0 ~ Ø12.0

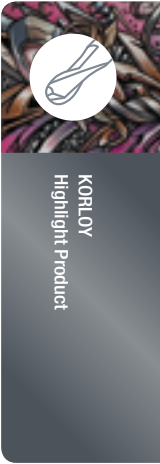
SOLID ENDMILL | H-Star Endmill



U-Star Endmill

General use Endmill for Medium hardness and Alloy Steel cutting

- Wide line-ups for cutting various complicated shaped workpieces
- Longer tool life due to new coating and optimal substrate for cutting



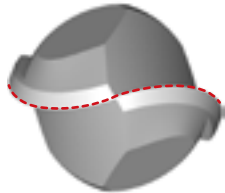
Features

- Carbide Endmill for HRC30~50 medium Hardness Steel and Die Steel cutting
- Enhanced wear resistance, anti-oxidation and lubrication by applying AlCrN series coating layer
- Enhanced cutting edge strength of ball Endmill applying ultra-fine substrate (PC303W)
- Higher chipping resistance of flat Endmill applying high toughness substrate (PC315W)
- Various shaped line-ups for complicated mold machining
- Suitable for precision cutting with high precision Range of h5 shank, flute and radius



Applying substrate for medium hardness steel cutting

- Separating the substrate (PC303W and PC315W) maximizes the features of tool and ensures general use

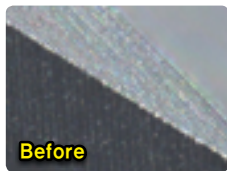


Applying S-curved gash shape

- Increased cutting performance and wear resistance due to dispersing cutting force

Edge treatment

- Enhanced chipping resistance in the beginning of cutting
- Guiding stable cutting for managing the properties of mold machining



After

Before

AlCrN base new coating

- Increased wear and oxidation resistance due to multi layer
- Enhanced lubrication with Cr containing
- Stable cutting under frictional heat



Type



Flat

Ø0.1 ~ Ø25.0



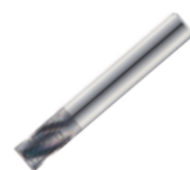
Radius

Ø0.2 ~ Ø20.0



Ball

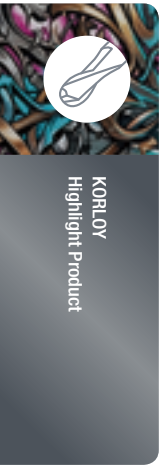
Ø0.1 ~ Ø25.0



Roughing

Ø3.0 ~ Ø25.0





S-Star Endmill

Endmill for Stainless Steel machining

- Stable machinability minimizing unexpected chipping from optimal cutting edge design for Stainless Steel cutting
- High performance in Stainless Steel series, Titanium and Nickel cutting from applying new coating with high oxidation resistance and Hardness



SOLID ENDMILL | S-Star Endmill

Features



Applying high toughness substrate (Grade PC325)

- Stable cutting is ensured with better chipping resistance by applying high toughness substrate

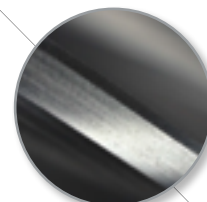


Applied differential AlCrN coating layer depth per tool size

- Applied multi coating layers
- Increased lubrication due to containing Cr
- Enhanced stability against frictional heat
- Improved wear resistance from thicker coating layers

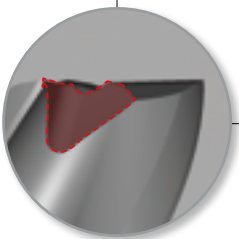
Cutting edge treatment

- Improved chipping resistance in the beginning of cutting
- Better wear resistance and stable cutting
- High quality of product from cutting edge treatment stabilization



Additional finishing edge

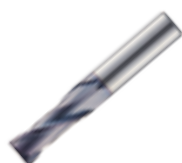
- Enhanced surface finish due to increased 1st O.D grinding roughness
- High quality cutting edge and good welding resistance



Uneven flute spacing / R gash

- High chip evacuation through R gash shape
- Stability in shouldering machining

Type



Flat
Ø1.0 ~ Ø20.0



Radius
Ø1.0 ~ Ø20.0



Ball
Ø1.0 ~ Ø20.0



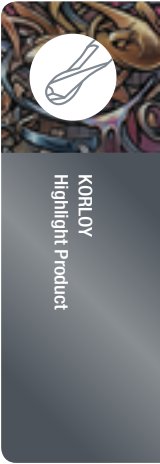
Roughing
Ø3.0 ~ Ø20.0



A-Star Endmill

Endmill for Aluminum machining

- Optimized solutions for each application type - A wide selection of tools provided for various machining processes
- Higher machining efficiency - Advanced flute design and cutting edge technology applied



Features

APFE

- Streamlined blade design optimized for rough, medium to finish cutting
- Extended tool life due to efficient chip evacuation



U-shaped flutes with mirror-like finishing

- Efficient chip evacuation through wide chip pockets
- Inhibited build-up edges due to mirror-like finishing

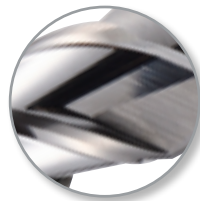
Sharp cutting edges and double relief angles

- Reduced cutting force
- Prevention of tool breakage due to reinforced cutting edges



AFE

- More economical compared to other products
- Reduced tool breakage and increased machinability



Mirror-like flute surface

- Lower cutting force
- Reduced cutting load over equipment

Sharp cutting edges

- Long tool life and improved cost efficiency
- Reduced cutting force



RPAE

- Specially designed cutting edges for roughing
- Improved surface finish due to sharp edges

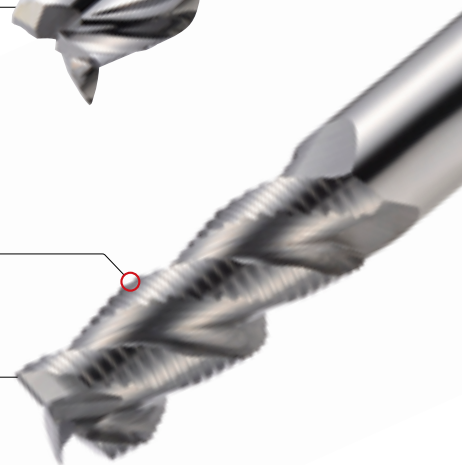


Blade design of wave form

- Lower cutting force
- Efficient chip evacuation through chip breaking

Sharp cutting edges

- Lower cutting force
- Reduced loads over equipment



Type



Flat
Ø1.0 ~ Ø20.0



Ball
Ø1.0 ~ Ø12.0



Roughing
Ø4.0 ~ Ø25.0



MSD Plus-S (3D, 5D, 8D, 10D)

Mach solid Drill Plus-S for Inconel and Titanium cutting

- Improved Productivity and Excellent Machinability - Ensuring machinability with optimized blade design and chip pockets
- Stronger Resistance to Wear - Extended tool life due to excellent high temp resistance to chipping



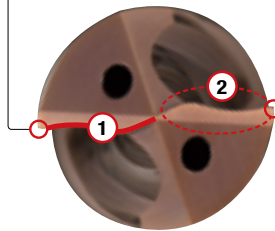
Features

3D, 5D

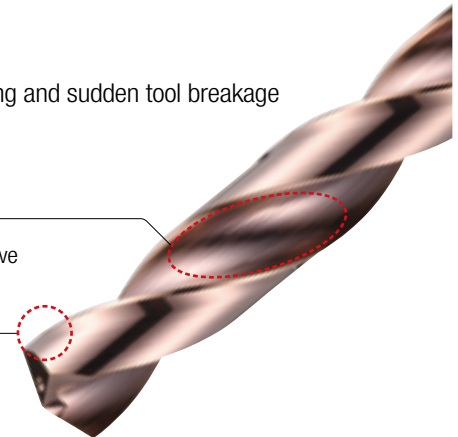
- Specially prepared cutting edges and optimized blade design prevent chipping and sudden tool breakage
- Optimized tip flank design improves heat evacuation

{ Optimized margin and back-tapered design }
- Reduced friction resistance and cutting temperature

{ Flute Design }
- Wider chip pockets improve chip evacuation



{ Cutting-edge design }
- Notch-controlled blade design and specially treated cutting edges prevent chipping and breakage
① Cutting edges designed for low cutting resistance
② Tip relief angle and shape optimized for heat evacuation

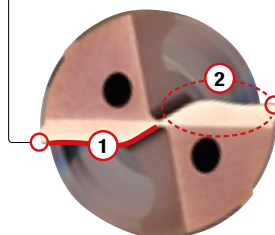


8D, 10D

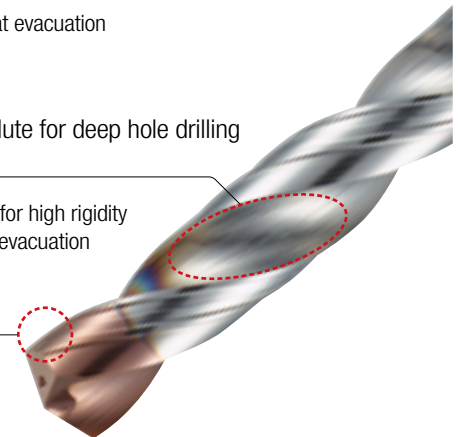
- Enhanced chip evacuation fracture resistance of tool from proper design of flute for deep hole drilling

{ Optimal margin and back-tapered design }
- Reduced friction resistance and cutting temperature
- Realized cutting stability by applying double margin

{ Flute shape }
- Design of flute for high rigidity and good chip evacuation



{ Cutting edge design }
- Designing cutting edge for chip shape control and applying optimal cutting edge treatment
① Proper chip shape and cutting edge for low cutting resistance
② Tip relief angle and shape optimized for heat evacuation



Type



MSDPH-S [3D/5D]
Ø3.0 ~ Ø16.0



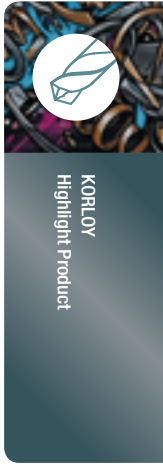
MSDPH-S [8D/10D]
Ø3.0 ~ Ø16.0



W-Star Drill

Economical carbide coated solid drill

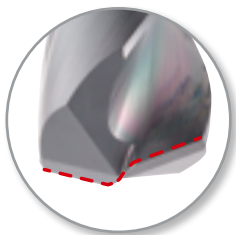
- Better cutting performance with an improved thinning shape which lessens cutting load
- High rigidity and good chip evacuation from the optimal designed flute



SOLID DRILL | W-Star Drill

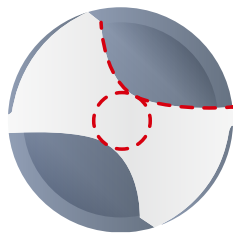


Features



XR Thinning shape

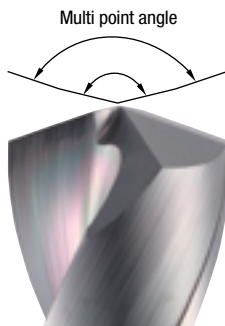
- Reduced cutting load on the cutting edge with a streamlined thinning
- Improved chip breaking



SECTION A-A'

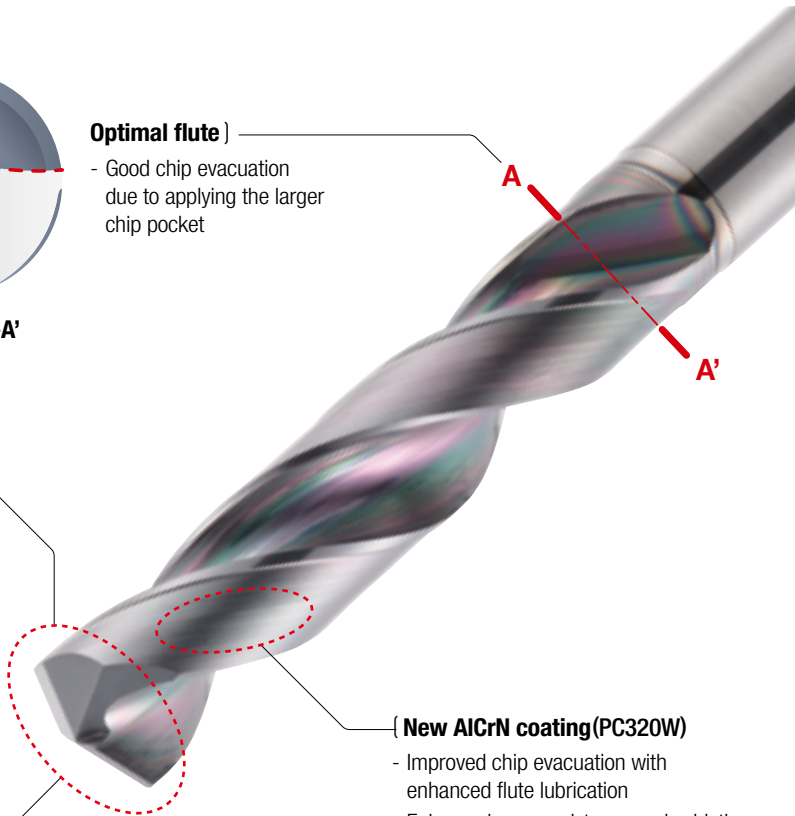
Optimal flute

- Good chip evacuation due to applying the larger chip pocket



Multi point angle

- Separated cutting load by optimal point angle
- Streamlined 1st point angle



New AlCrN coating(PC320W)

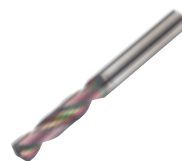
- Improved chip evacuation with enhanced flute lubrication
- Enhanced wear resistance and oxidation resistance by multi-layer coating



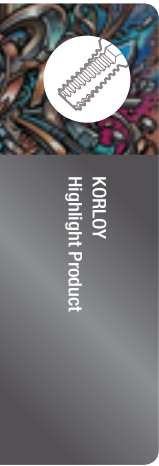
Type



WSDP [3D/5D/7D]
Ø1.0 ~ Ø20.0



WSDPH [3D/5D/8D]
Ø3.0 ~ Ø20.0



KORLOY
Highlight Product

TAP | Tap-Star



Tap-Star

High performance threading Tap

- High toughness HSS substrate for improved chipping resistance
- Optimally designed shape for various workpiece cutting



Features

» Higher chipping resistance

- Chipping reduced by applying high toughness substrate
- Special chamfer edge treatment

» Optimal shape

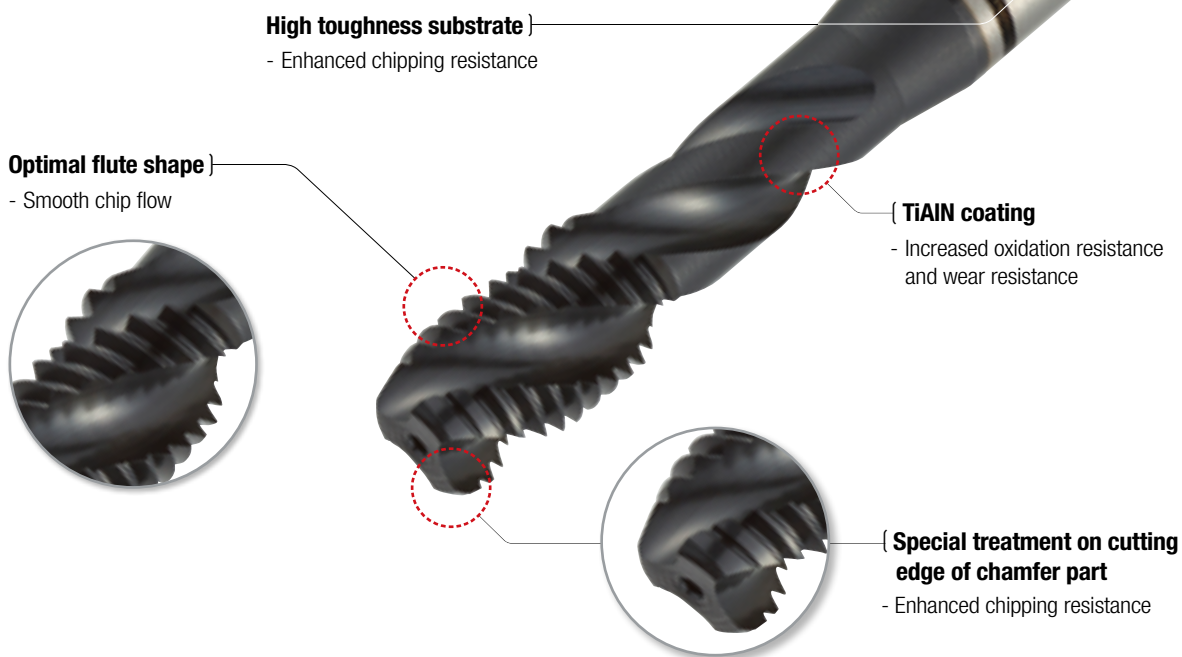
- Flute shape for smooth chip evacuation
- Designed with an optimal relief angle for high chipping resistance

» Higher wear resistance

- TiAIN coating with high temperature oxidation resistance

» Cost efficiency of tool

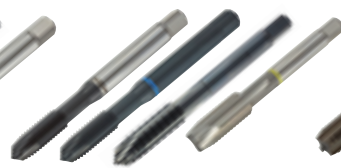
- Providing the best performance and quality



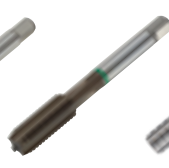
Type



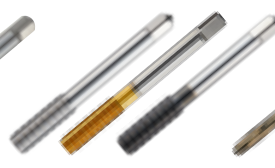
Spiral flute Tap
DIN : M2 ~ M24
JIS : M2 ~ M24



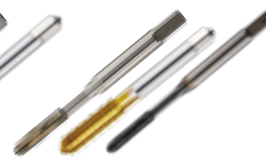
Spiral point Tap
DIN : M2 ~ M24
JIS : M2 ~ M24



Straight flute Tap
DIN : M3 ~ M24
JIS : M3 ~ M24



Roll Tap
DIN : M3 ~ M12
JIS : M3 ~ M12



Spiral roll Tap
JIS : M3 ~ M6

KORLOY GUIDE





INTRODUCTION OF HOMEPAGE

- Get on the homepage through the internet.
» <http://www.korloy.com> (KORLOY Homepage)
- Choose a category and click that.

Main screen guide

Searching whole categories
Searchable wanted items

Selection by each language
Moving on to the site in each language

Detailed screen
Selecting detailed screen by each category

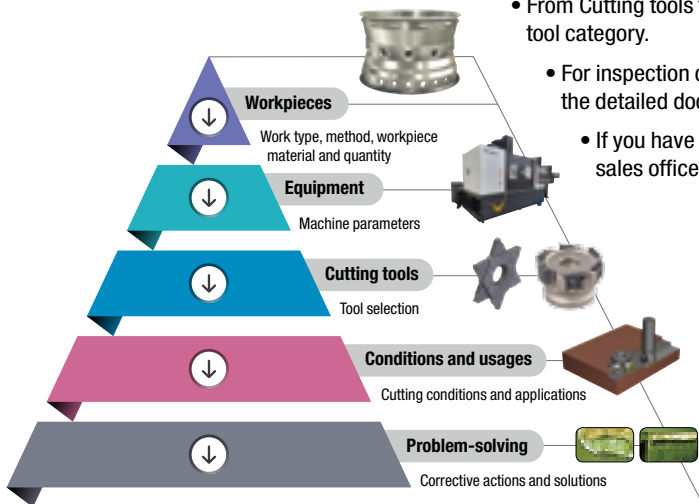
Quick menu
Checkable product information and KORLOY news quickly by scrolling the mouse

INFO

TOOLS SELECTION GUIDE

Main screen guide

- To analyze machining operation, follow the steps above.
- From Cutting tools to Problem-solving, refer to the respective chapters for each tool category.
- For inspection criteria regarding workpieces and equipment, please refer to the detailed documentation on the following page.
- If you have any inquiries or questions, please contact the designated sales office listed on the last page for a detail explanation.



INTRODUCTION OF DIGITAL CATALOG

Get on the homepage through the internet.
 >> <https://catalog.korloy.com>

PC

Grade guide

Explanation of standard grades on the catalogue

My assembly

Vivid assembly

Log in / registration

E-mail/password

Language

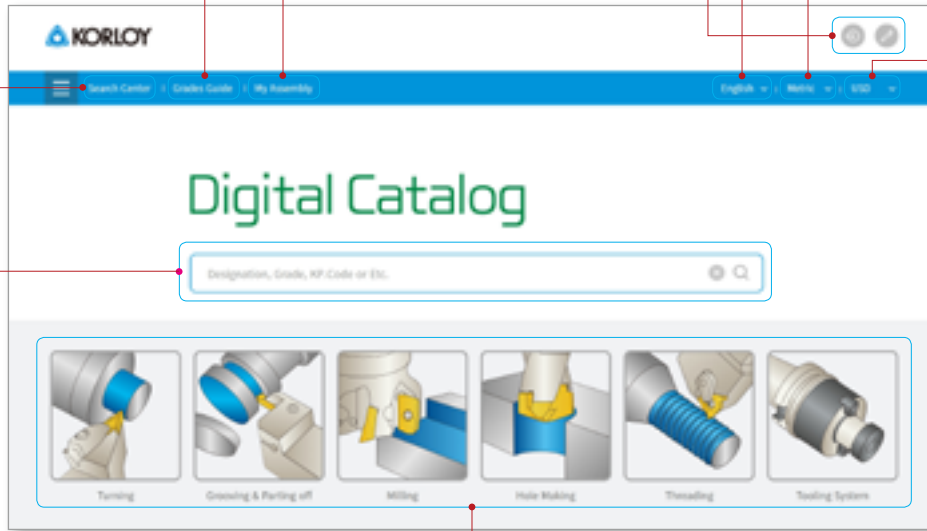
Switch to the selected language

Measurement unit

Metric/inch

Current(Unused)

KRW/USD/EUR



Search items

Search necessary item with its grade or designation

Main application

Select the main application of necessary items.

Mobile



INTRODUCTION OF ONLINE EXHIBITION

Get on the online exhibition hall on the PC or mobile.
 >> https://www.korloy.com/ko/prcenter/media_list.do#online

Main screen guide

- 1 Mini map - Move the wanted hall
- 2 Information desk - Introduction in Korean/English
- 3 Side menu - Searchable wanted sections
- 4 Product names / Explanation - In Korean/English
- 5 Video - Item promotion video
- 6 Tech news - Checking tech news
- 7 Detailed information of product - Checking the information of product and promotion video
- 8 3D modeling - Checking 3D modeling view

* Connectable on mobile

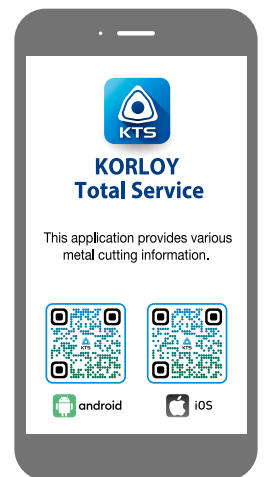


⚠ For the safe metalcutting

- Use safety supplies such as protective gloves to prevent possible injury while touching the edge of tools.
- Use safety glasses or safety cover to hedge possible dangers. Inappropriate usage or excessive cutting condition may lead tool's breakage or even the fragment's scattering.
- Clamp the workpiece tightly enough to prevent its movement while its machining.
- Properly manage the tool change phase because the inordinately used tool can be easily broken under the excessive cutting load or severe wear, and it may threat the operator's safety.
- Use safety cover because chips evacuated during cutting are hot and sharp and may cause burns and cuts. To remove chips safely, stop machining, put on protective gloves, and use a hook or other tools.
- Prepare for fire prevention measures as the use of the non-water soluble cutting oil may cause fire.
- Use safety cover and other safety supplies because the spare parts or the tools can be pulled out due to centrifugal force while high speed machining.



Head Office: Holystar B/D, 326, Seocho-daero, Seocho-gu, Seoul, 06633, Republic of Korea
Tel: +82-2-522-3181 Fax: +82-2-522-3184, +82-2-3474-4744 Web: www.korloy.com E-mail: sales.khq@korloy.com



KORLOY AMERICA

620 Maple Avenue, Torrance, CA 90503, USA
Tel : +1-310-782-3800 / +1-888-711-0001 Fax : +1-310-782-3885
E-mail : sales.kai@korloy.com

KORLOY INDIA

Plot No. 415, Sector 8, IMT Manesar, Gurgaon 122051, Haryana, India
Tel : +91-124-4391790 Fax : +91-124-4050032
E-mail : sales.kip@korloy.com

KORLOY TURKIYE

Ziya Gokalp, Mah. Seyit Onbasi Cad. No:36, 3 Kat,
iC Kapi No : 5 Basaksehir/Istanbul, Turkiye
Tel : +90-212-813-8874 E-mail : sales.ktl@korloy.com

KORLOY RUSSIA

115280, Moscow, vn.ter.g. municipal district Danilovsky,
street Masterkova, house 4, premises 1/2
Tel : +7-495-280-1458 Fax : +7-495-280-1459 E-mail : sales.krc@korloy.com

KORLOY UK

Unit B2, Loades Ecoparc, Blackhorse Road, Exhall CV7 9FW
Tel : +44 7931 085478 E-mail : sales.kul@korloy.com

KORLOY EUROPE

Gablonzer Str. 25-27, 61440 Oberursel, Germany
Tel : +49-6171-27783-0 Fax : +49-6171-27783-59
E-mail : sales.keg@korloy.com

KORLOY BRASIL

Av. Aruana 280, conj.12, WLC, Alphaville, Barueri, CEP06460-010, SP, Brasil
Tel : +55-11-4193-3810 Fax : +55-11-4193-5837
E-mail : sales.kbl@korloy.com

KORLOY CHILE

Av. Providencia 1650, Office 1009, 7500027
Providencia-Santiago, Chile
Tel : +56-229-295-490 E-mail : sales.kcs@korloy.com

KORLOY MEXICO

Avenida de las Ciencias, No. 3015, Interior 406, Juriquilla Santa Fe,
C.P.76230 Querétaro, Mexico
Tel : +52-442-193-3600 E-mail : sales.kml@korloy.com

KORLOY FACTORY INDIA

Plot NO. 415, Sector 8, IMT Manesar, Gurgaon 122051, Haryana, India
Tel : +91-124-4391790 Fax : +91-124-4050032
E-mail : pro.kim@korloy.com

