EMO HANNOVER
22-26/09/2025

KORLOY'S NEW
&
STEADY SELLING
PRODUCTS

Highlight Product

KORLOY

KORLOY Highlight Product - EMO

Contents

Grades

Turning

Milling

Drills

Endmills

Thread

HWICK

CVD insert series for Steel Turning

NC3205/NC3215 NC3225/NC3235

- 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

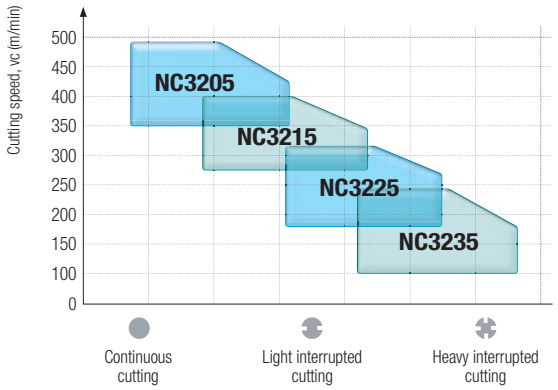
• Highly lubricative coating with fine surface finish application

[NC3205, NC3235]

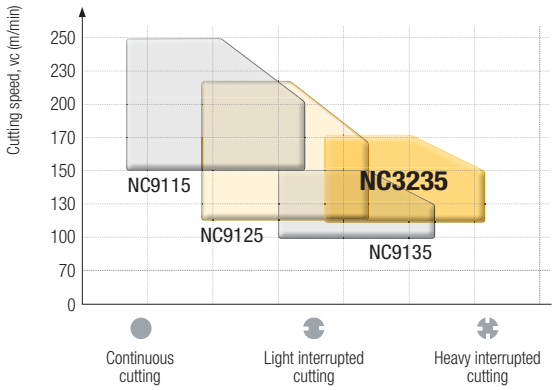
[Existing grade]

Application range

P Steel

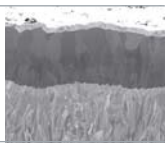


M Stainless Steel

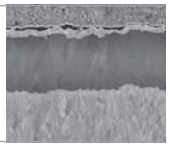


NC3205
- High cutting performance in high speed and continuous cutting
- Good wear resistance

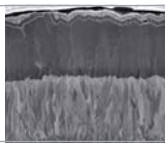
NC3225
- High cutting performance in medium speed and medium interrupted cutting
- 1st recommended grade



NC3215
- High cutting performance in medium to high speed and light interrupted cutting
- Good wear resistance and heat resistance



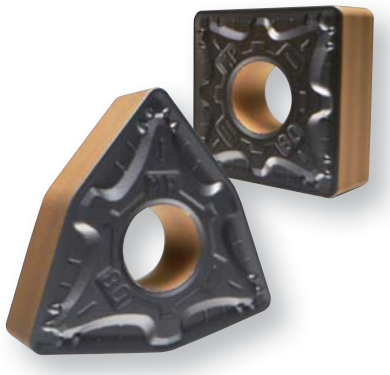
NC3235
- High cutting performance in medium to low speed and heavy interrupted cutting
- Good chipping resistance and fracture resistance



Universal insert for Steel and Cast Iron cutting

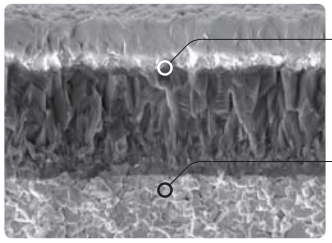
NC5320

- Applying exclusive substrate for Steel and Cast Iron and New CVD coating with great wear resistance
- Applying 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



Applying α-phase alumina coating, optimal structured universal CVD coating

Increased chipping resistance

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

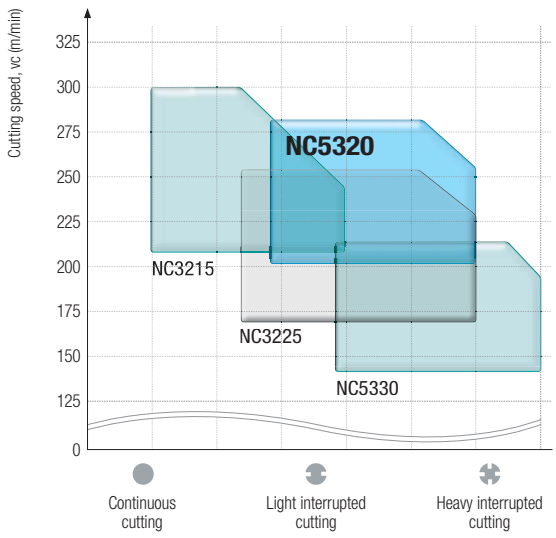
Increased wear resistance

• Increased surface finish due to applying New CVD coating

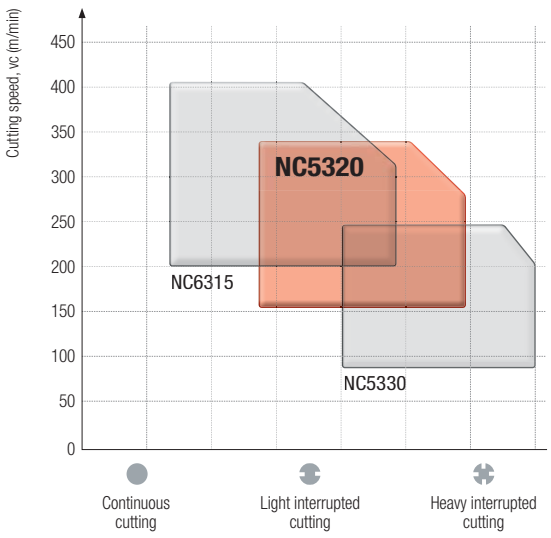
[NC5320] [Existing grade]

Application range

P Steel

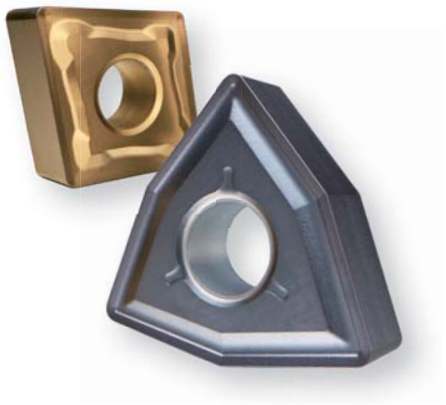


K Cast Iron



Super Coating Series

SNC805/SPC810



- Turning grade for machining of HRSA including Inconel, Hastelloy, Titanium alloy, Precipitation hardened Stainless S teel, and etc.
- Higher speed machining can be applied compared to UNC805/UPC810 while it has the equal toughness

Features

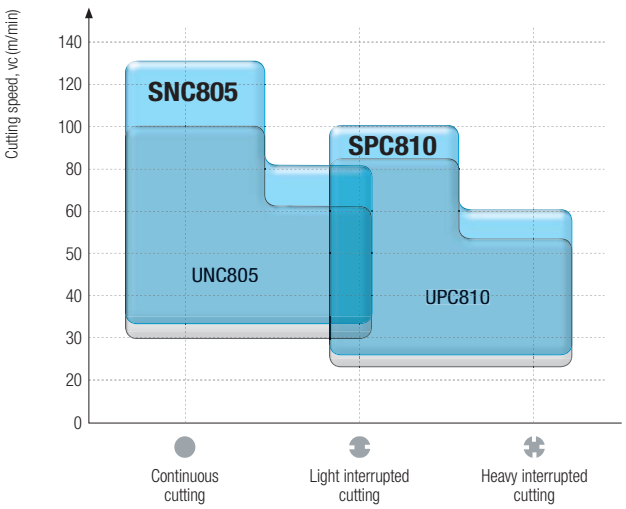
SNC805(CVD)	SPC810(PVD)
	

• 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.



High performance Ultra Coating grade series for machining of HRSA

UPC830/UNC840/ UPC845

UPC830

- Applied for various workpieces such as hard-to-cut Stainless Steel, Inconel and Titanium

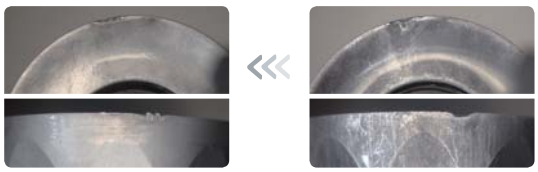
UNC840/UPC845

- Enhanced substrate in order to minimize thermal crack resistance at high temperature and prevent unexpected tool breakage
- Increased chip removal volume thanks to Ultra Coating technology with high hardness and lubrication

Features

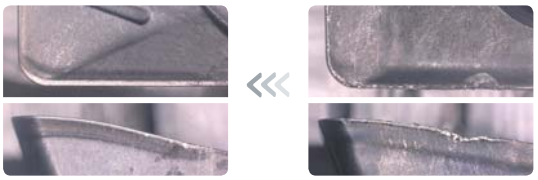
Inconel 718

[UPC830] [Competitor]



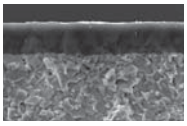
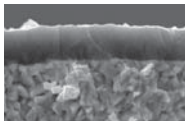
[UNC840] [Competitor]

Ti-6Al-4V



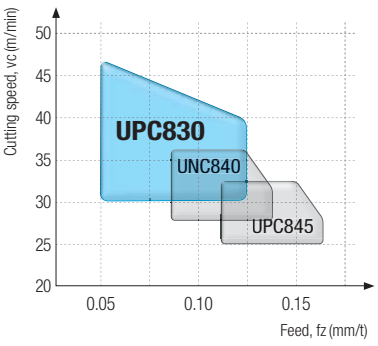
[UPC830] [Competitor]

[UPC845] [Competitor]

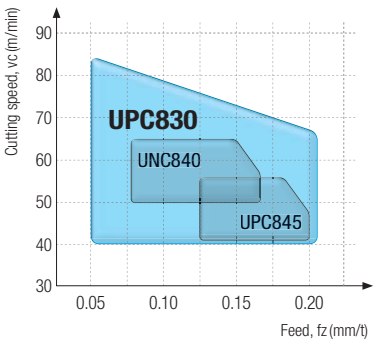
UPC830 (PVD)	UNC840 (CVD)	UPC845 (PVD)
		
- Increased wear resistance at high temperature due to substrate and Ultra Coating with high heat resistance - Secured stable tool life through improving welding resistance and chipping resistance in Inconel and Titanium alloy cutting - Higher welding resistance and splintering by controlling surface finish on the cutting edge with Edge-Tech™	- Good performance in high speed machining - For high speed and low feed machining - For forged workpiece - For high hardness (HRC35 or above) HRSA - For large-sized workpiece (∅200 or above)	- Good performance in low speed and high feed machining - For high interrupted cutting conditions - For cast and round bar machining - For low hardness (under HRC35) HRSA - For workpiece (under ∅200)

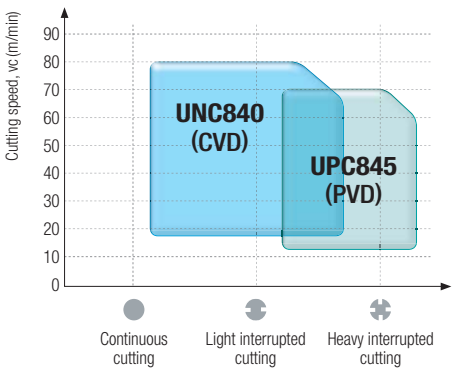
Application range

[Inconel alloy]



[Titanium alloy]





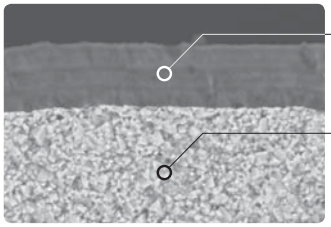
Milling grade specialized for Steel

PC3700

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

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

Excellent wear resistance and stable tool life

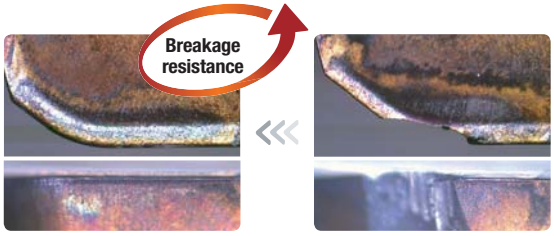
Ensures machinability due to wear and breakage resistant materials optimized for milling applications of Steel

• Special coating surface treatment

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

[PC3700] [Existing products]

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

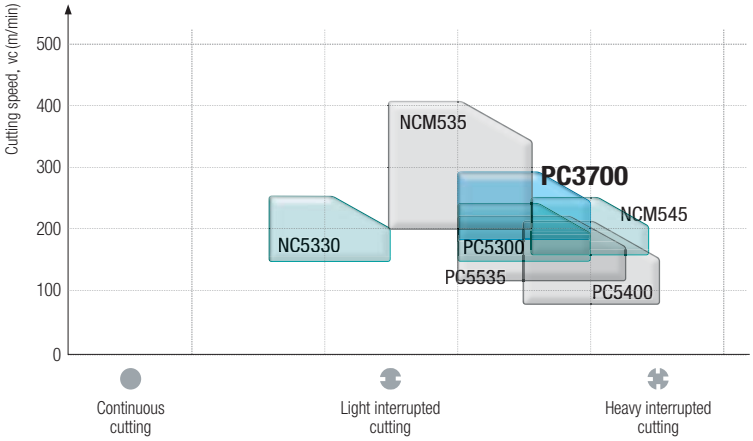


[PC3700] [Competitor]

Ensuring general machinability due to wear and breakage resistant materials optimized for milling applications of Steel

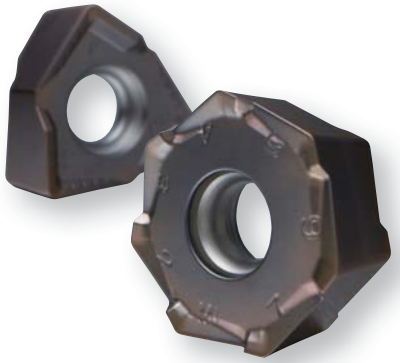
Application range

P Steel



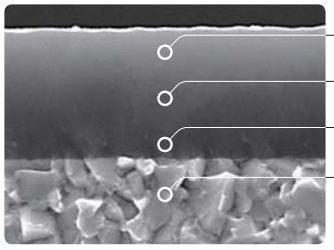
PVD insert for cast Iron Milling

PC6100



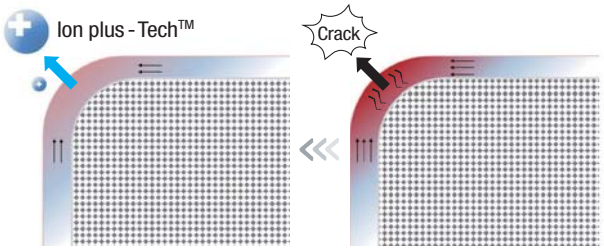
- Optimally designed PVD coating grade in cast Iron milling
- Applied Ion plus - Tech™ increased hardness and adherence of layer ensures wear resistance and thermal crack resistance
- Coating surface treatment technology prevents chipping and unexpected fracture
- The optimal substrate for cast Iron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

Features



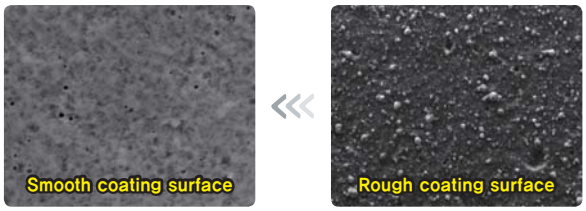
- Applied coating technology to reinforce high hardness of cutting edge
- Applied coating layer with high heat resistance
- Reinforced adhesion on the cutting edge
- Applied optimal materials with wear resistance and impact resistance for cast Iron cutting

• Applied Ion plus - Tech™



[Ion plus - Tech™] [Existing technology]

• Applied smooth coating surface treatment technology

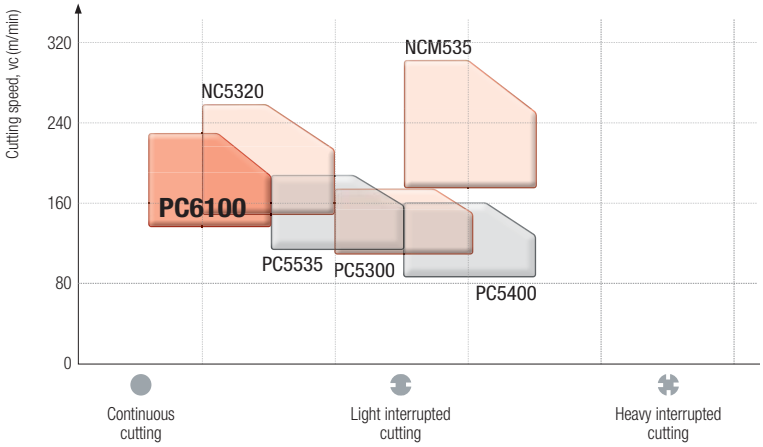


[PC6100] [Existing grade]

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

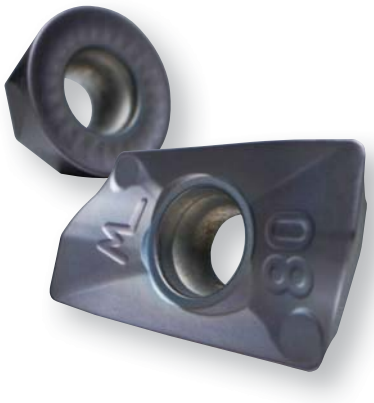
Application range

K Cast Iron



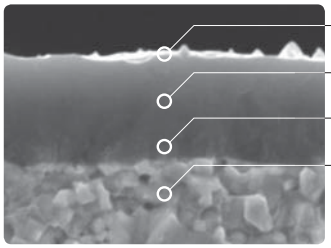
PVD insert for Stainless Steel and Titanium Milling

PC9540

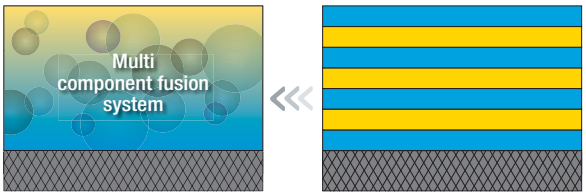


- Optimal PVD grade for medium to rough cutting and highly interrupted milling in Stainless Steel and Titanium
- Applying Omega-Tech™ enhances the wear resistance, oxidation resistance, and welding resistance of PVD coating film
- Improved plastic deformation resistance and fracture resistance of the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

Features



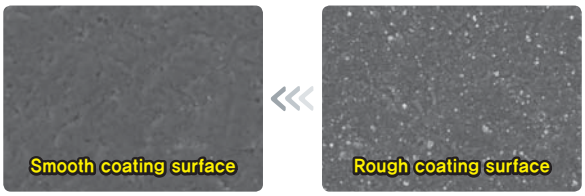
• Applying Omega-Tech™



[Omega-Tech™] [Existing technology]

- One strong coating layer unifying various components
- Enhanced general use and cutting performance due to increased mechanical and chemical stability

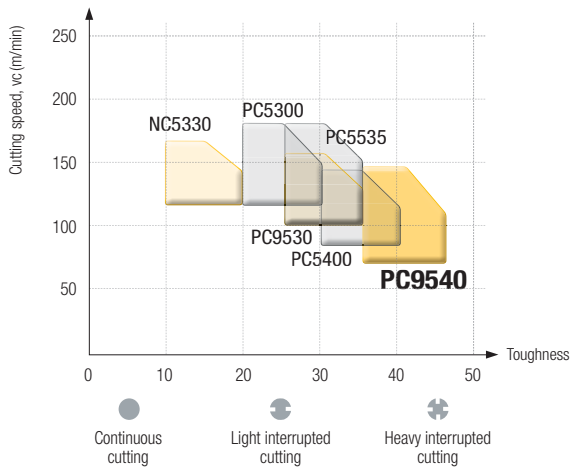
• Special coating surface treatment technology



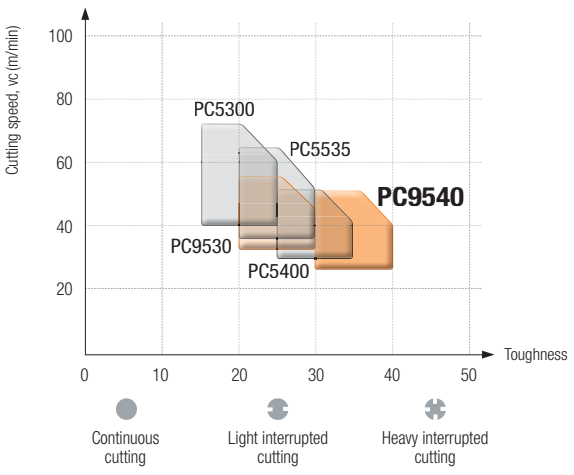
[PC9540] [Existing grade]

Application range

M Stainless Steel

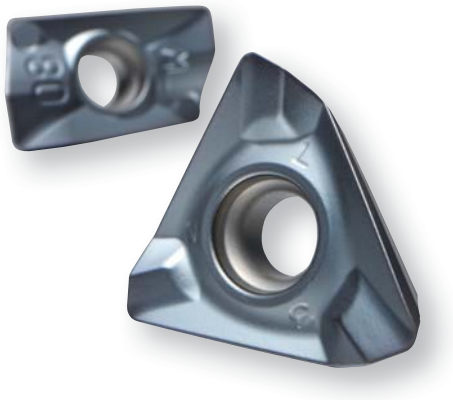


S HRSA



PVD insert for general Milling

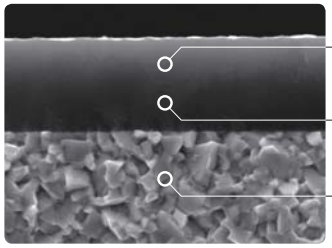
PC5535



- 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

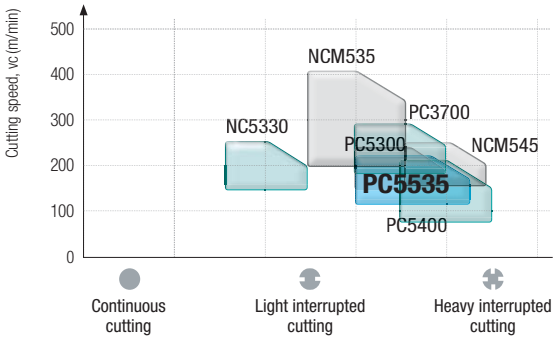
[PC5535] [Competitor]

Edge - Tech™

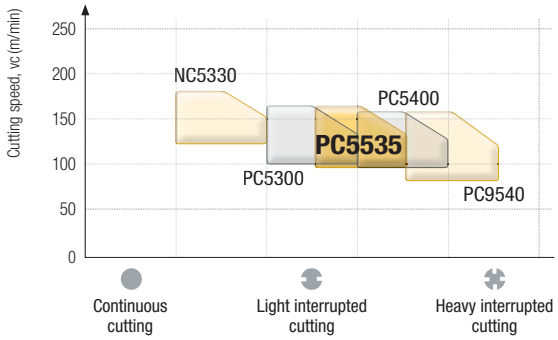
- Prevents welding, chipping and unexpected fracture
- Longer tool life and stable cutting

Application range

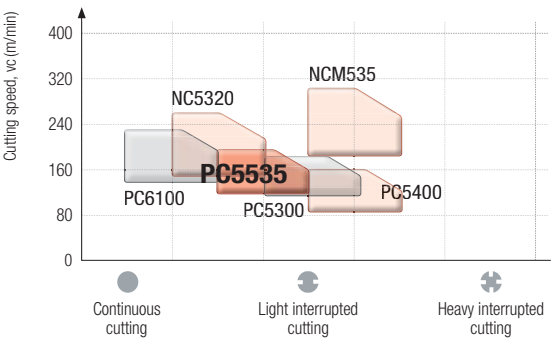
P Steel



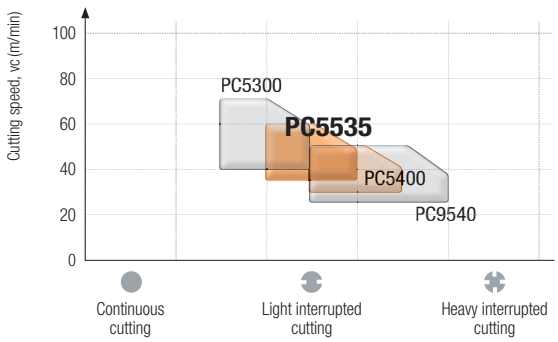
M Stainless Steel



K Cast Iron

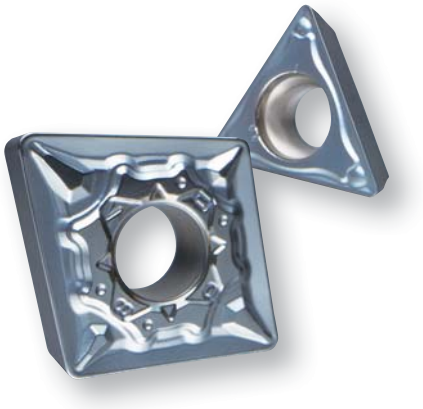


S HRSA



PVD Cermet for Steel Turning

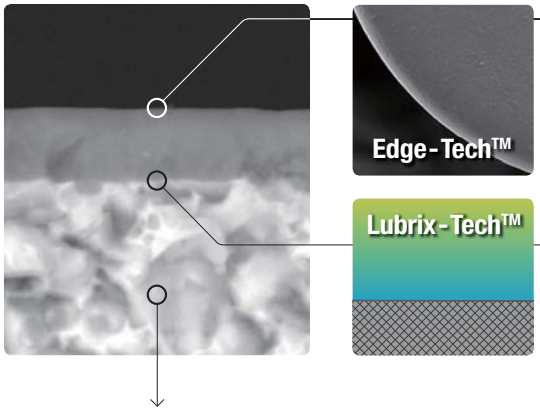
CC1015/CC1025

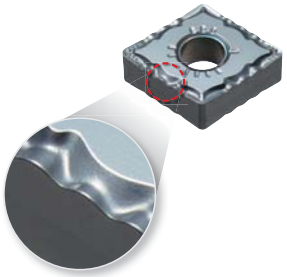


- PVD coated Cermet turning grade optimally designed for various small and medium parts.
- Stable tool life by applying Lubrix-Tech™ (high hardness and lubrication PVD coating technology) to increase flank wear resistance on nose radius
- Smooth cutting surface by applying Edge-Tech™ (high lubrication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

Features

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





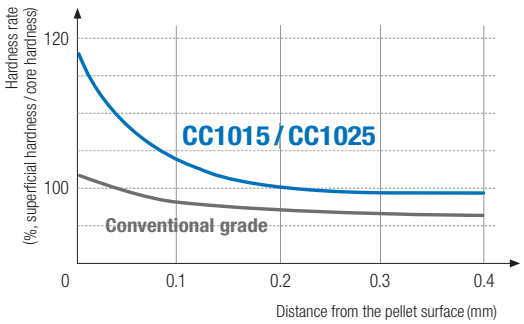
Edge-Tech™
- High lubrication cutting edge treatment technology
- Reducing welding, chipping and unexpected fracture and increasing tool life and stability

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

Inclination functional substrate

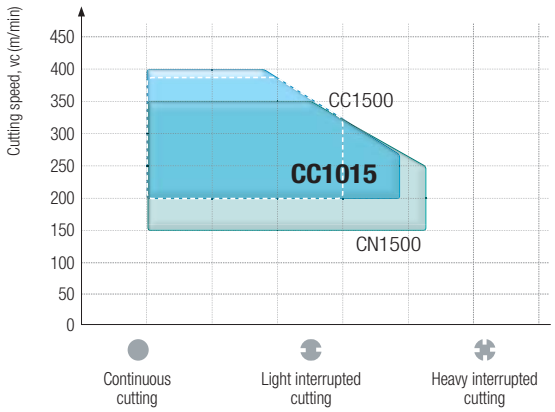
- Inclination functional layer creation with the surface and internal composition's microstructure control
- High chipping resistance and stable tool life

Hardness rate comparison chart

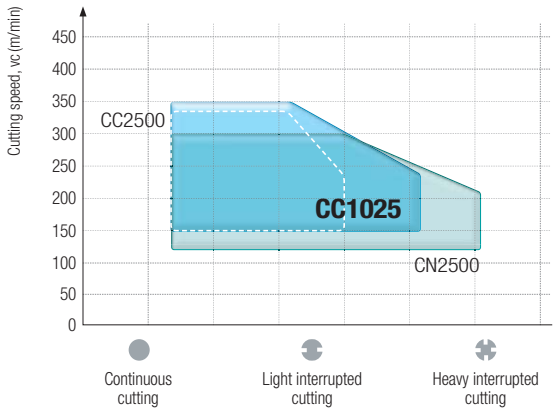


Application range

P Steel



P Steel



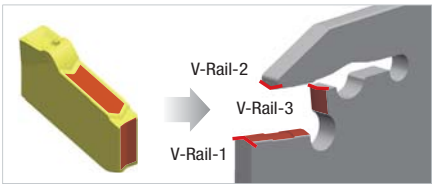
A solution for Parting and deep Grooving

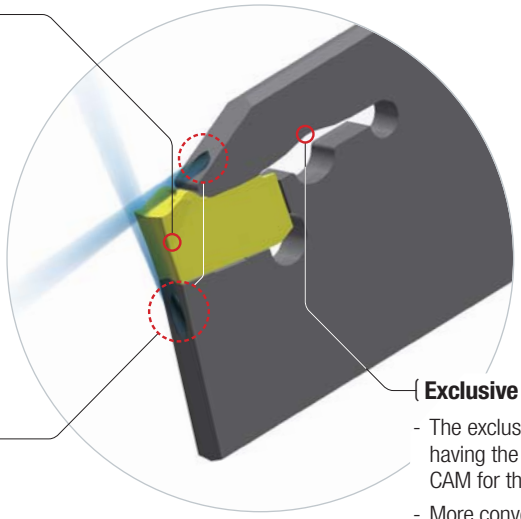
Saw Man-X

- 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

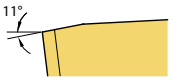
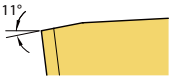




Internal spraying of 2 channel high pressure coolant
- Direct spraying of cutting edge coolant for effective coolant
- Longer tool life in HRSA cutting
  (*need for exclusive blade and block for high pressure coolant)

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

Chip breaker features

Type	Shape	Cutting edge	Features
N Chip breaker			• 1st recommended in Steel and Cast Iron cutting • Negative land cutting edge • For interrupted and high feed cutting
S Chip breaker			• 1st recommended in Stainless Steel and HRSA cutting • Sharp cutting edge • For high speed and continuous cutting
N Chip breaker (Lead angle type)			• 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
High pressure coolant blade
Blade height : 26 mm

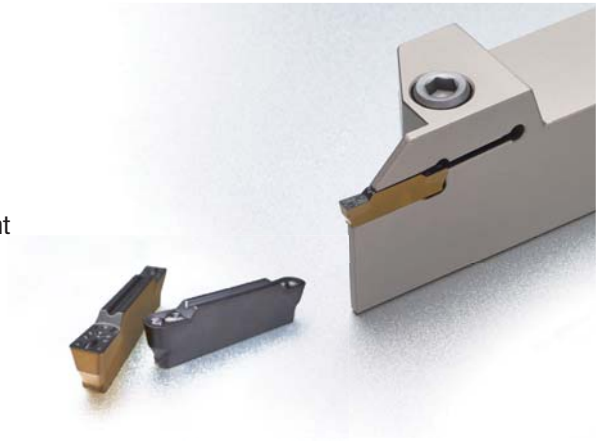
Self grip shank
Shank height : 16, 20, 25 mm
Screw clamping shank
Shank height : 20, 25 mm

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

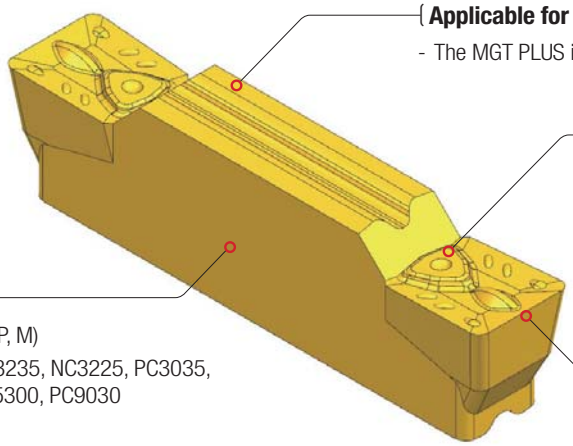
Universal tools for Grooving / Parting Off / Turning

MGT Plus

- Various chip breakers with good chip control
- Improved tool life and workpiece surface roughness via Consistent edge treatment application



Features



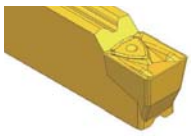
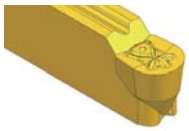
Applicable for various MGT holders
- The MGT PLUS insert can be clamped on the MGT holder

New C/B Design
- KORLOY Symbol design
- Design protected by patent
- Various C/B for good chip control

New Grades
- New CVD : NC3235 (P, M)
- Grades Line Up : NC3235, NC3225, PC3035, PC5300, PC9030

Uniform quality of edges
- Improved tool life & Good surface roughness

Chip breaker features

Type	Shape	Features
MM : Multi Medium		• For grooving, parting and turning • Bumps on the rake surface • Straight cutting edge • Various workpieces
GM : Groove Medium		• For grooving and parting • Straight cutting edge • Bumps on the rake surface • Various workpieces • High depth of cut machining • For Hard-to-cut material cutting
RM : Relief Medium		• For copying and relief cutting • Round cutting edge • Bumps on the rake surface • Excellent surface finish

Type

Insert
Cutting width : 1.5 ~ 8mm

Insert (Round)
Cutting width : 2 ~ 8mm

External Holder
Shank height: 10, 12, 16, 20, 25, 32

Facing Holder
Shank height: 25

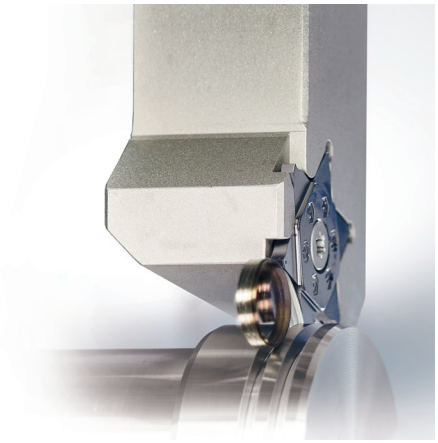
Internal Holder
DCON-MS: 16, 20, 25, 32, 40

Cartridge
Shank Height: 20, 25, 32
CDX(External): 16, 20
CDX(Facing): 16

Grooving and Parting tool with precision 6-corners

Hexa Blade

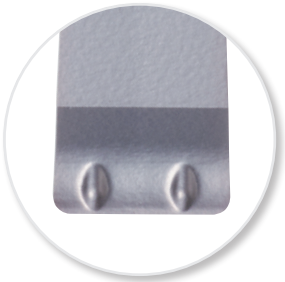
- Grooving and Parting tool with high economical 6-corners
- Increased reliability and stability in cutting due to high qualified cutting edge

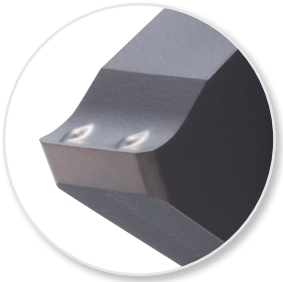


Features

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



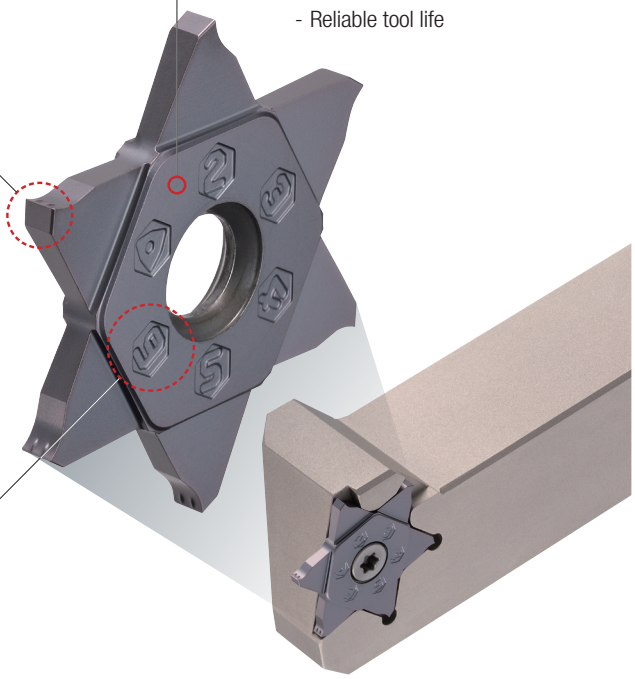


Wide clamping area
- More stable clamping system
- Strengthen anti-vibration during machining
- Reliable tool life

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

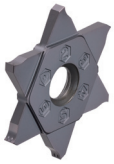
Strong cutting edge
- Increased high feed cutting performance

Neutral hand
- Convenient use with neutral hand



6 cornered insert
- High cost efficiency from multi-corners

Type



Insert (IC Ø19)
Cutting width : 0.5~3.18 mm

Insert (IC Ø27)
Cutting width : 1.79~4 mm

Shank (IC Ø19)
Size : 10, 12, 16 mm

Shank (IC Ø27)
Size : 16, 20, 25 mm

ISO inserts for automatic lathes

Auto Tools

FS, MS Chip breaker

- Precise R shape with the use of minus tolerance of nose R
- Tolerance class precise enough in no need for adjusting tools with the use of accurate cutting edge height
- Sharp blade for excellent chip control and surface roughness with low cutting force
- High precision tools for electrical, electronic instrument and medical instruments

Features

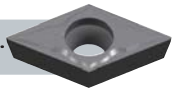
VP1/MS/FS chip breaker

- Exclusive chip breaker for hard-to-cut materials such as Titanium alloy, Inconel, Stainless Steel, etc.
- Minimized cutting heat by reducing contact area between chips and rake surface with the use of high positive blade

VP1

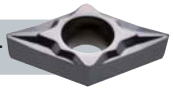
- Hard cutting edge for medium cutting
- Optimal width of chip breaker by each depth of cuts realizes wide workpiece machining

MS



- Good surface finish for medium cutting
- Preventing welding in Titanium machining
- Increasing chip evacuation in high feed machining
- Protecting cutting edge due to structure for good chip evacuation

FS

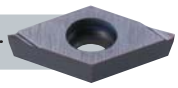


- For finishing (for surface roughness)
- 1st recommended chip breaker for chip control
- Better surface roughness, surface finish and chip control

KF/KM chip breaker, ground type for grooving

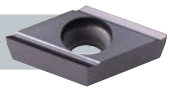
- Ground chip breaker with sharp cutting edge
- High precision insert of E-class tolerance with accurate nose radius

KF



- For finishing
- Low cutting loads with sharp cutting edges
- Longer tool life due to lower chip evacuation resistance at high speed
- Excellent surface roughness

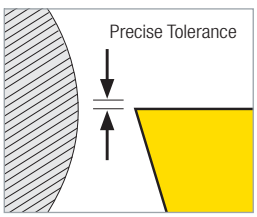
KM

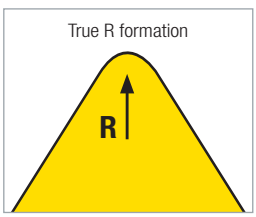


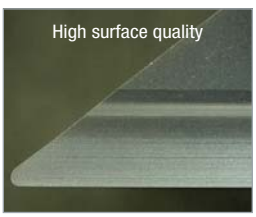
- For medium cutting to finishing
- Better chip flow due to wide chip pockets
- Longer tool life and better cutting action due to improved chip evacuation
- Excellent surface roughness

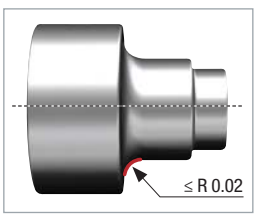
Insert tolerance

- Managing the tolerance of cutting edge, size of 'm' part, and the nose R under 0.02 mm at ultra precision level
- The tolerance of nose R is managed by minus level to prevent expansion of the workpiece's nose R size from 0.02 mm









Tangential Double-Sided 4-Corner Square Shoulder Milling Tool

TP4P

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

Insert 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

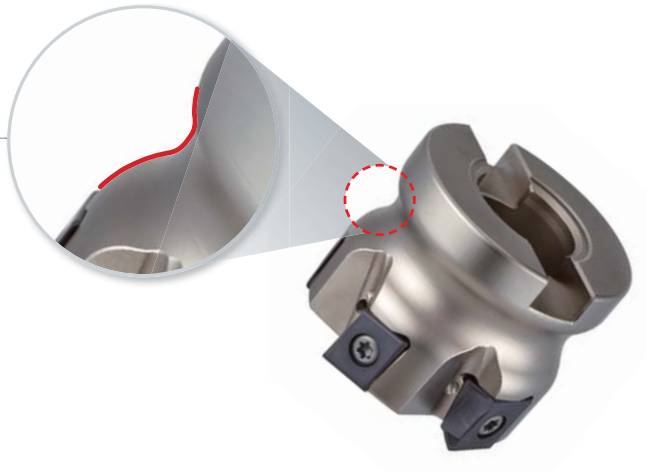
KORLOY Identity Symbol Mark

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 12mm
- Perpendicularity within 30㎛

Cutter features

Streamlined insert structure
- Smooth chip evacuation



Type

Cutter
Ø50 ~ Ø80

Cutter
Ø40 ~ Ø125

Shank
Ø25 ~ Ø40

Right angle Milling tool with Tangential double-sided 8-corners

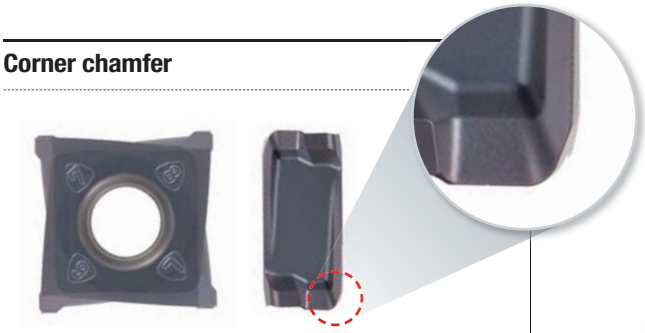
TP8P

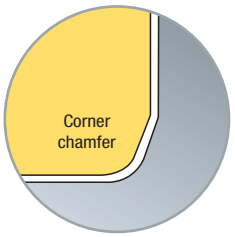
- Double-sided insert with 8-corners enables cost efficiency thanks to right angle Milling with high depth of cut
- Excellent for productivity improvement because Tangential type insert ensures rigid clamping and allows more flutes (extra close pitch) in accordance with a cutter diameter

Insert features

- Economic perpendicular cutting tool with 8-corners insters
- Stable machining due to excellent clamping of tangential clamping
- Various insert line-up (one step or multi-steps)

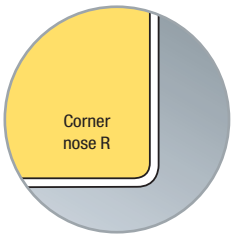
Corner chamfer





- Chamfer corner
- For multi-steps cutting

Corner nose R



- Less coarse
- For one step cutting

Type

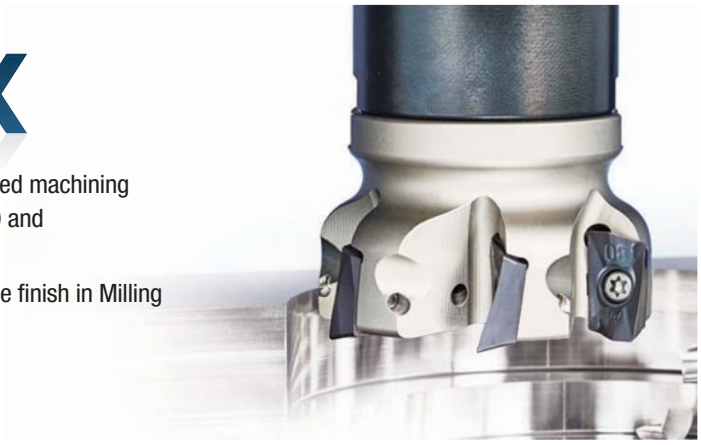
Cutter
Ø40 ~ Ø125

Shank
Ø32 ~ Ø40

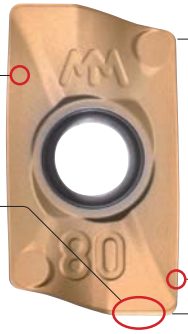
Shoulder Milling tool for high helix

Alpha Mill-X

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



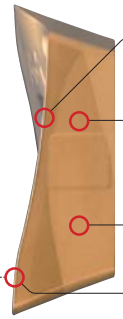
Insert features



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

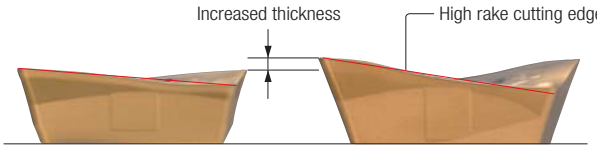
APMX
ADKT17 : 16.5mm
ADKT12 : 11.5mm
ADKT10 : 9.5mm



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

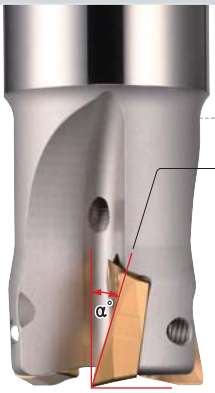


Competitor
(APMT1604PDSR-MM)

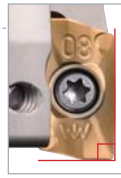
Alpha Mill-X
(ADKT170608PESR-MM)

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

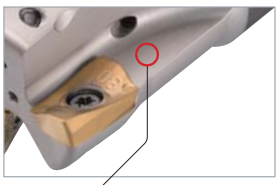
Cutter features



High rake angle cutting edge
- Improved surface finish
- Decreased cutting load



Perfect perpendicularity



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

Type

Cutter
Ø40 ~ Ø125

Shank
Ø16 ~ Ø40

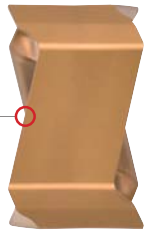
High helix face Milling tool with 8-cornered double-sided inserts

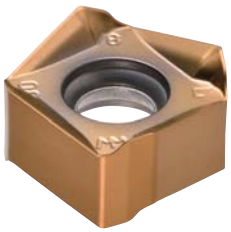
RM8-X

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

Insert features

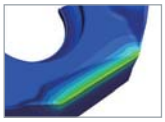
High Helix
- Improved surface finish
- Reduced cutting load

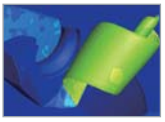




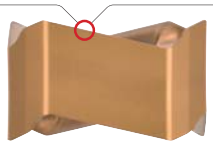
Variable minor cutting edge chip breaker
- Protects its corner on the opposite side
- Enhanced chip control

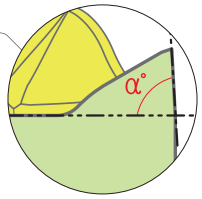
High rake angled major cutting edge / Variable chip breaker
- Maintain its machinability in high depth of cut
- Enhanced chip control



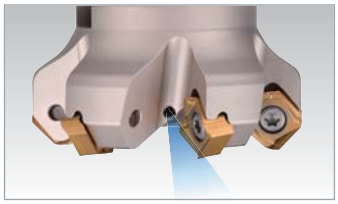


Reversal positive relief angle at the Major cutting edge
- Protects its corner on the opposite side
- Increased chipping resistance and prevents unexpected breakage

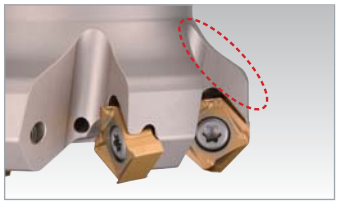




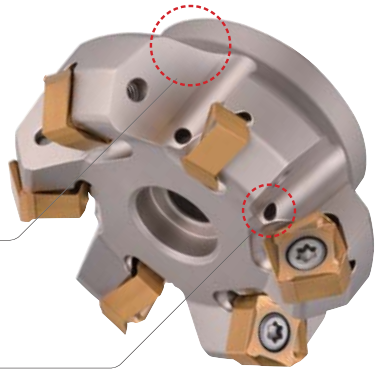
Cutter features



Internal coolant system
- Improved chip evacuation
- Tool life increase with the inserts' cooling



Streamlined cutter design
- Improved chip evacuation



Type

Cutter

Ø50 ~ Ø125

Heptagonal face Mill with 14 double-sided corners

RM14

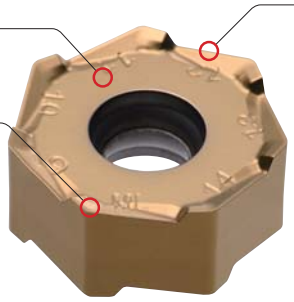
- Economical face mill with 14 double-sided corners
- Minimized chattering of workpiece due to minimum lead angle and sharp cutting edge
- Reduced cutting resistance and improved chip emissions by high helix angle application

Insert features

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

Wider clamping area
- More stable machining

High rake angle chip breaker
- Less cutting load
- Better chip evacuation

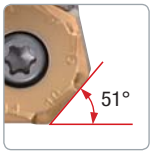


High helix cutting edge
- Better machinability
- Less cutting load

Thicker insert
- High cutting edge strength

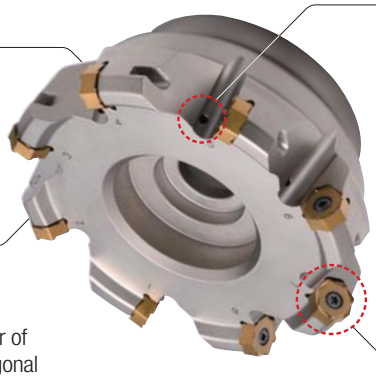
Cutter features

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

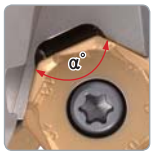


The biggest heptagonal lead angle
- Reduced workpiece chattering by reducing axial force

Preventing interruption of side wall
- Prevented interruption of side wall by using the most number of corners in deep facing (heptagonal 14 double-sided corners)



Internal coolant system
- Improved chip evacuation
- Increased tool life due to cooling insert



Wedge clamping system
- Stable clamping system with an acute angle structure

Type

Cutter
Ø50 ~ Ø160

High feed sQuare Milling

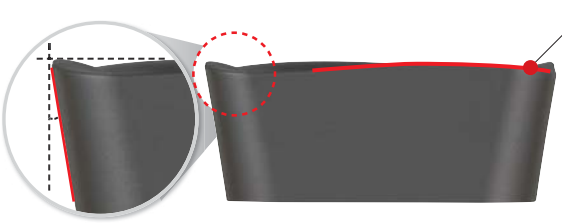
HQM

- 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

Insert 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



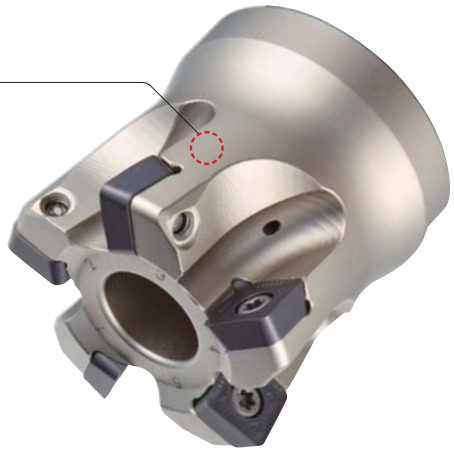
Shape for relief of corner
- Suitable for multi-functional cutting by securing enough relief

Insert shape for higher rigidity
- Applied streamlined helix
- Increase chipping resistance / preventing unexpected fracture

Cutter features

Positive axial direction rake angle
- Good chip curling

Streamlined structure of insert
- Good chip control



Type

Cutter
Ø50 ~ Ø100

Shank
Ø32 ~ Ø40

Double-sided round Milling tool with 8-corners

RMR

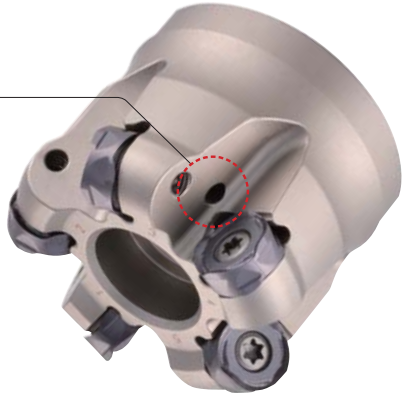
- Improved machining stability with the combination of the reversal positive structure preventing rotation and wide upper and lower clamping sides
- Helix cutting edge and sharp chip breaker realize smooth cutting
- Wide minor cutting edge and optimized holder angle enhance high surface finish

Insert features

- **High cost efficiency** - Maximum 8-corners are usable by applying 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

Cutter features

Internal coolant system
- Longer tool life due to insert cooling



Type

Cutter
Ø50 ~ Ø125

Shank
Ø32 ~ Ø63

The Premium High-Speed Milling Tool for Aluminum

Pro-V Mill

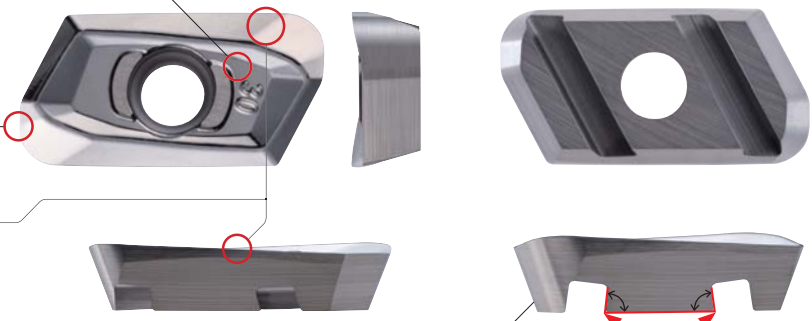
- Increased productivity due to high speed capability
- Excellent surface finish and perpendicularity with high-precision products
- Satisfactory clamping force of inserts by the use of the key shape

Insert features

Mirror-like finish of the rake surface of insert
- Avoids build-up edges through smooth chip flow

Wide minor cutting edges
- Improved surface finish

High-rake chip breaker and helix cutting edges
- High rake and lower cutting load

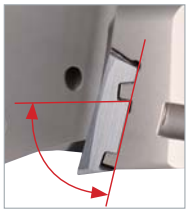


Application of the key slot design
- The bottom key of insert and the key slot in an acute angle
- High clamping stability of the holder contact area → Improved clamping force

Cutter features

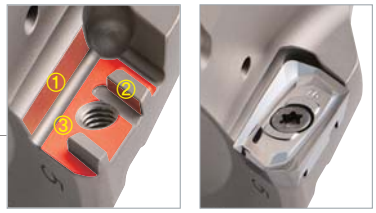
- **Stable Machining / Prevention of insert breakage**
  - The combined clamping system of the key to key slot structure and simple screw-on type ensures strong clamping force
- **Reduced vibrations and excellent surface finish**
  - Avoids uplifting problems of insert due to axial acute-angle clamping of cutters

Screw-on clamping
- New screw shape



Axial acute-angle clamping
- Inhibition of the axial force

Insert clamping area
- Stable clamping force due to the key to key slot structure



Type

Cutter
Ø25 ~ Ø40

Shank
Ø40 ~ Ø125

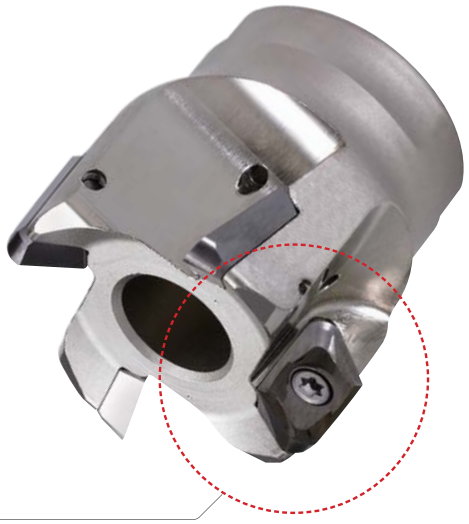
Milling Tool for High Quality Aluminum Machining

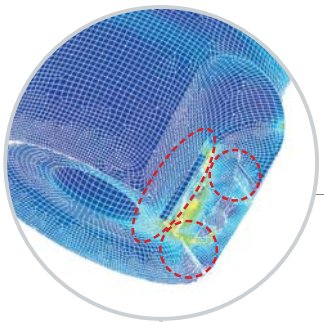
Pro-X Mill

- Inserts feature a buffed top surface ensuring a smoother chip evacuation and reducing built-up edge
- High rake angle of insert provides good surface finish and low cutting load
- Specially designed for high speed machining of Aluminum
- Suitable for square shouldering and curved surface machining

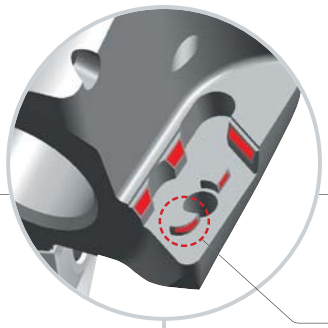
Insert features

- **Mirrored top face of insert**
  - Prevents built-up edges
- **Optimized chip breaker design and high rake angle insert**
  - Reduce cutting resistance and extend tool life
- **Strong clamping**
  - A stopper at the bottom prevents inserts from slipping during machining

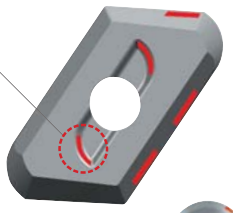




- Clamping design as per FEM analysis
- Strong clamping of insert

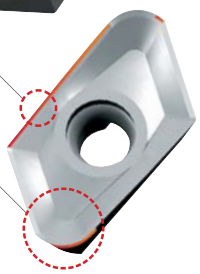


- Special design for strong clamping at high speed machining to prevent flying out of insert



Chip breaker 3 dimensional design for low cutting load

Various inserts corner radius is available (R0.4~R5.0)



Type

Cutter
Ø40 ~ Ø125

Shank
Ø20 ~ Ø40

Modular
Ø25 ~ Ø40

Modular Adaptor
Steel / Carbide Shank
M06 ~ M16

Modular Adaptor
Arbor
M06 ~ M16

Optimized insert design for maximum drilling efficiency

KING Drill

- 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
- Different inserts, optimized for the central and peripheral insert locations in order to maximize cutting tool life

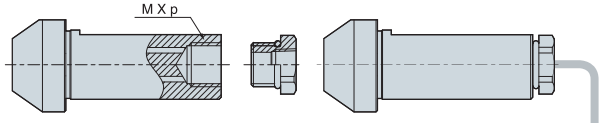
Features

- **Optimized flute system - 2 coolant holes applied**
  The optimized shape of the flute increases the rigidity of the Drill body and improves chip evacuation

KING Drill
for through coolant system with a lathe

Drill with through coolant system for general lathe and CNC lathe without through coolant system

- Through coolant system with Drill holder, plug, oil-hole hose and oil-hole pump
- PT Tap in the plug is combined to PT Tap connected to oil hose
- Available to use the Drill without a plug in Milling machine



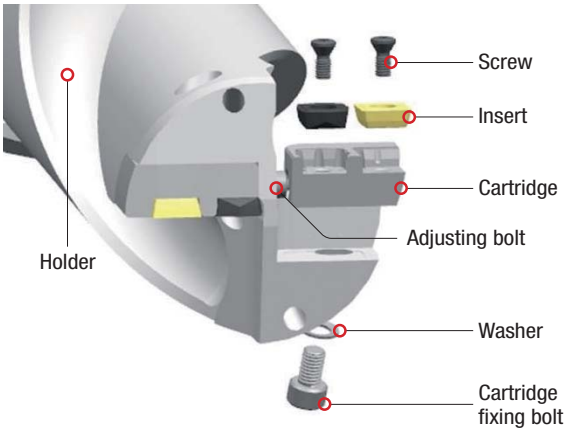
- Clamping oil hose to the bottom of plug and connect the oil pump to the holder

Oil pump

KING Drill
for large diameter drilling

High rigidity drill produces cost efficiency due to cartridge replacement

- Cartridge type for Ø61~Ø100 Drilling
- Peripheral cartridge can adjust the Drilling diameter within 5 mm
- Easy to adjust Drilling diameter with adjusting bolt



Type

KING Drill
[2D/3D/4D/5D]
Ø12 ~ Ø60.5

KING Drill
(For through coolant system with a lathe)
[2D/3D/4D]
Ø13 ~ Ø29.5

KING Drill
(For large diameter Drilling)
[2D, 3D, 4D]
Ø61 ~ Ø100

Highly precise and efficient top solid indexable Drill

TPDB Plus Drill

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

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

Features

- **Highly precise clamping system** - Superior clamping precision with auto-centering system and highly precise grinding clamping parts
- **Screw on clamping system** - Easy to replace inserts
- **Sharp cutting edge** - Low cutting load and good chip control
- **Holder with excellent durability** - Holder with high rigidity and excellent wear resistance due to special surface treatment
- **Holder with excellent chip control** - Low cutting resistance and outstanding chip evaluation applying high helix angle

Special surface treatment
- Improved durability of a holder

High helix angle
- **High productivity**
  - Stable chip evacuation realizes stable machinability
  - Decreased cycle time by applying improved cutting conditions
- **Improvement in machining quality**
  - Good surface finish and regular size of the hole

Screw on clamping system

Advanced chip control due to a chip breaker

Auto-centering system

Cutting edge with low cutting resistance
- Low cutting load and excellent chip control

Type

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

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

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

TPDB-F [1.5D]
Ø14.0 ~ Ø30.9
- Flat -

High quality and high feed top solid indexable Drill

TPDC Plus Drill

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

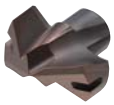
- The optimal tool shape for Drilling realizing high precision and high feed machining as of carbide solid Drill performance level
- Usable for various machining through enlarged line-up by workpieces, depth of cuts and workpiece shapes

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

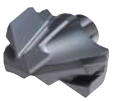
- **Clamping area** → Clamping insert and holder
- **Anti-rotating area** → Performing as a stopper
- Clamping and anti-rotating area make an acute angle to prevent insert rotation while machining

Insert



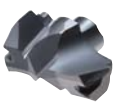
XP

P



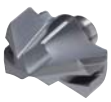
CP

P K



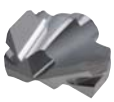
CP-FC

P



CM

M



CN

N

Type

TPDX [3D/5D/8D]
Ø8 ~ Ø11.5

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

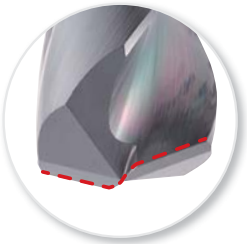
Economical carbide coated solid drill

W-Star Drill

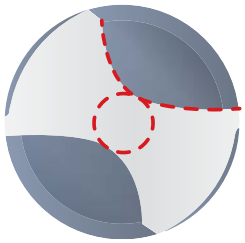
- Better cutting performance with an improved thinning shape which lessens cutting load
- High rigidity and good chip evacuation from the optimal designed flute

Features

- **Stable tool life** - For automotive line, enhanced productivity
- **Various standard line-up** - Provided customized service
- **Increased cutting performance, stable chip evacuation** - Reduced cutting load on the cutting edge and better surface finish
- **Applied to various workpieces** - P, M, K

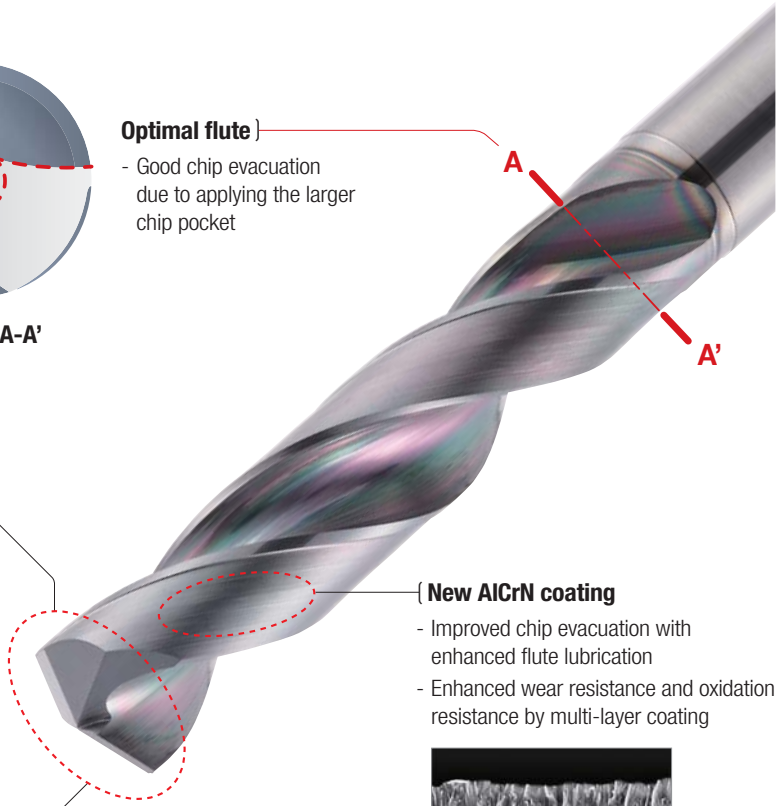


XR Thinning shape
- Reduced cutting load on the cutting edge with a streamlined thinning
- Improved chip breaking

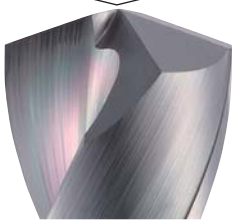


SECTION A-A'

Optimal flute
- Good chip evacuation due to applying the larger chip pocket

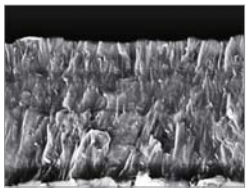


Multi point angle



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

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



Type

WSDP [3D/5D/7D]
Ø1 ~ Ø20

Mach solid Drill Plus-S for Inconel and Titanium cutting

MSD Plus-S

- 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

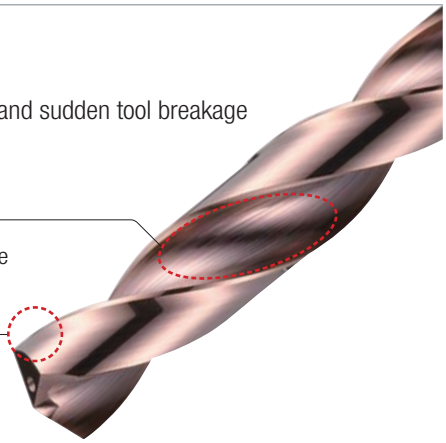
Features

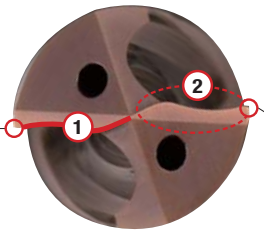
3D, 5D

- 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





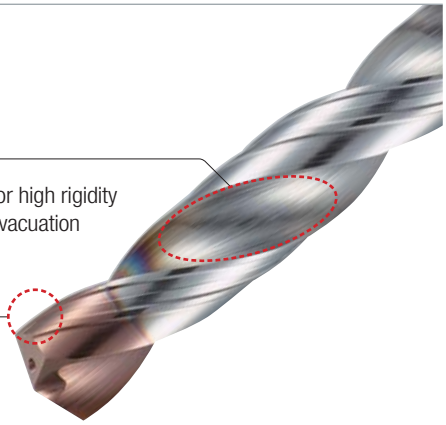
Cutting-edge design
- Notch-controlled blade design and specially treated cutting edges prevent chipping and breakage
  ① Cutting edges designed for low cutting resistance
  ② Tip relief angle and shape optimized for heat evacuation

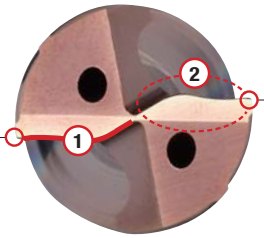
8D, 10D

- 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

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

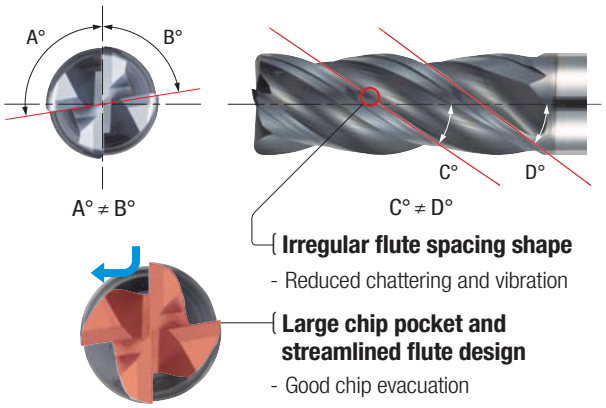
Super Endmill for Ti for HRSA

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

Features

Super Endmill for Ti

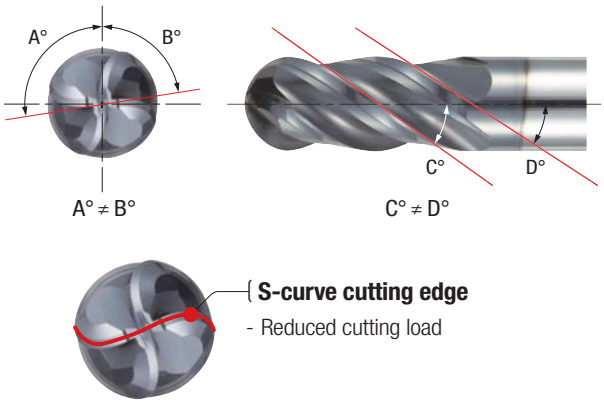
• SFET (Flat) / SRET (Radius)



Irregular flute spacing shape
- Reduced chattering and vibration

Large chip pocket and streamlined flute design
- Good chip evacuation

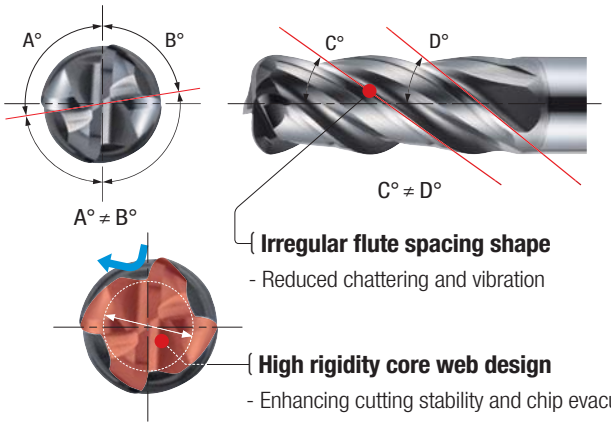
• SBET (Ball)



S-curve cutting edge
- Reduced cutting load

Super Endmill for HRSA

• SRES (Radius)



Irregular flute spacing shape
- Reduced chattering and vibration

High rigidity core web design
- Enhancing cutting stability and chip evacuation

• SFES (Flat)

Corner gash land shape
- Prevent fracture on the corner edge

Type

(For Ti)

Flat
Ø3.0 ~ Ø20.0

Radius
Ø3.0 ~ Ø20.0

Ball
Ø1.0 ~ Ø12.0

(For HRSA)

Flat
Ø3.0 ~ Ø20.0

Radius
Ø3.0 ~ Ø20.0

High precision mold manufacture solution

The Mirror Endmill

- For medium cutting of high precision workpiece and mold machining above HRC60
- Enhanced wear resistance from applying the optimal grade for PCD, cBN

Features

PCD ball Endmill

For polishing of high precision workpiece and high hardness mold

- Optimal surface finish by PCD ball Endmill with no edge
- Nano-level surface finish due to its ultra-fine Endmill
- Enhanced wear resistance from applying the optimal grade for PCD

cBN ball Endmill

For ultra-fine and mirror-like workpiece and mold with over HRC60 machining

- Higher productivity and surface finish in high speed cutting
- Enhanced wear resistance due to the optimal cBN grade
- Longer tool life by shape with strong cutting edge
- Stable tool life and surface from high precision Endmill

cBN radius Endmill

For medium cutting of high precision workpiece and mold machining above HRC60

- Higher productivity in high speed machining
- Better wear resistance of tool due to applying the optimal grade for cBN
- Good surface finish through connecting smooth cutting edge and body
- Long tool life from strong cutting edge

H-Star Endmill

Proper for the various cutting processes with long neck, rib and taper neck etc.

- Stronger cutting edge strength of the tool applied ultra-fine substrate
- Enhanced high temperature heat resistance by applying new coating layer on the edge in high speed cutting
- Stable cutting performance due to the optimal cutting edge for high speed machining

Type

Ball [PCD]
Ø0.3 ~ Ø2.0

Ball [cBN]
Ø0.4 ~ Ø2.0

Radius [cBN]
Ø0.4 ~ Ø2.0

Long neck ball [H-Star]
Ø0.1 ~ Ø5.0

Endmill for High hardness Steel cutting

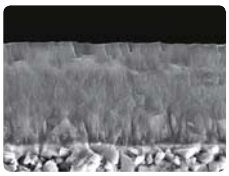
H-Star Endmill

- 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

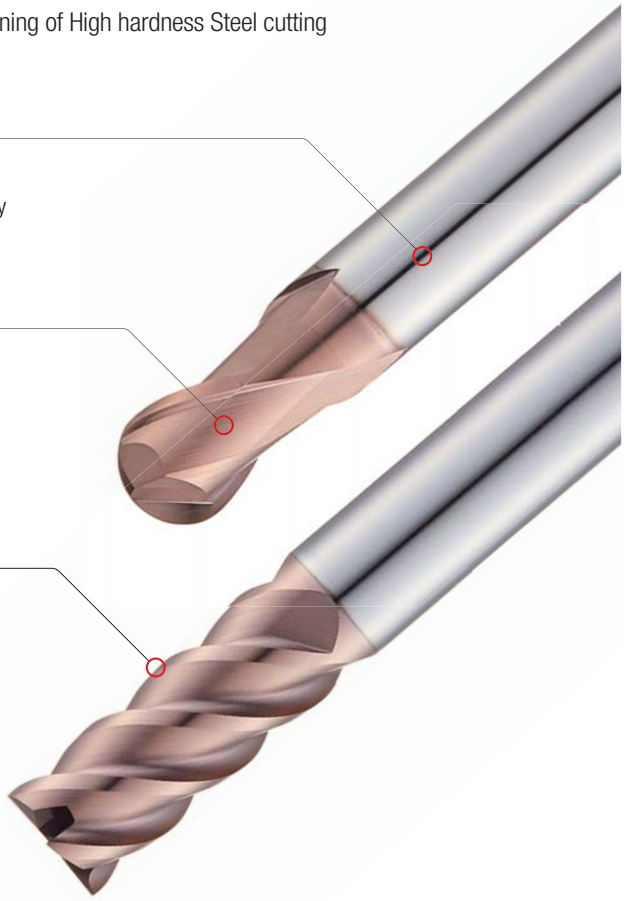
Features

- **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

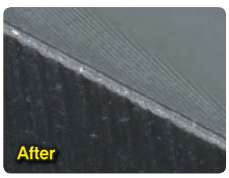
High hardness substrate
- Ultra-fine WC+Co 9%
- Expanded general application range by maximizing cutting edge feature

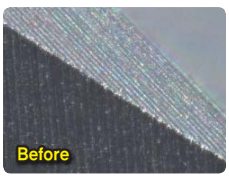


High hardness coating layer
- High Si content
- Enhanced wear resistance
- Stable cutting through frictional heat resistance increase



Edge treatment
- Enhancing chipping resistance in the beginning of High hardness Steel cutting
- Increased wear resistance and stable cutting performance





Type

Ball
Ø0.1 ~ Ø12.0

Flat
Ø0.1 ~ Ø20.0

Radius
Ø0.2 ~ Ø20

High feed
Ø3.0 ~ Ø12.0

General use Endmill for Medium hardness and Alloy Steel cutting

U-Star Endmill

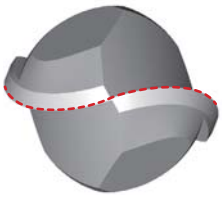
- Enhanced cutting edge strength of ball Endmill applying ultra-fine substrate (PC303W)
- Higher chipping resistance of flat Endmill applying high toughness substrate (PC315W)
- Various shaped line-ups for complicated mold machining
- Suitable for precision cutting with high precision Range of h5 shank, flute and radius

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 tolerance of h5 shank, flute and radius

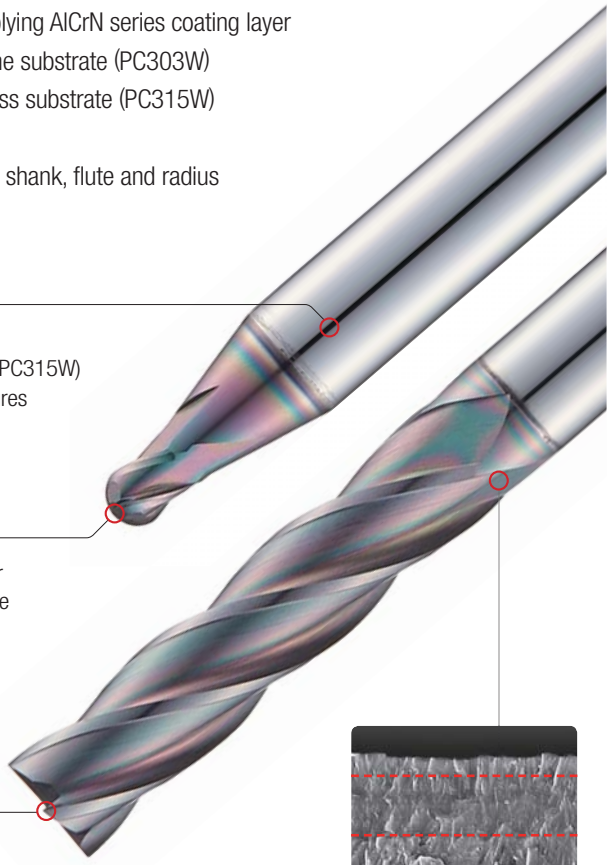
Applying substrate for medium Hardness Steel cutting

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



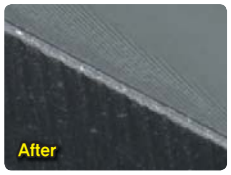
Applying S-curved gash shape

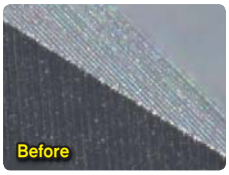
- Increased cutting performance and wear resistance due to dispersing cutting force



Edge treatment

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





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

Endmill for Stainless Steel machining

S-Star Endmill

- 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

Features

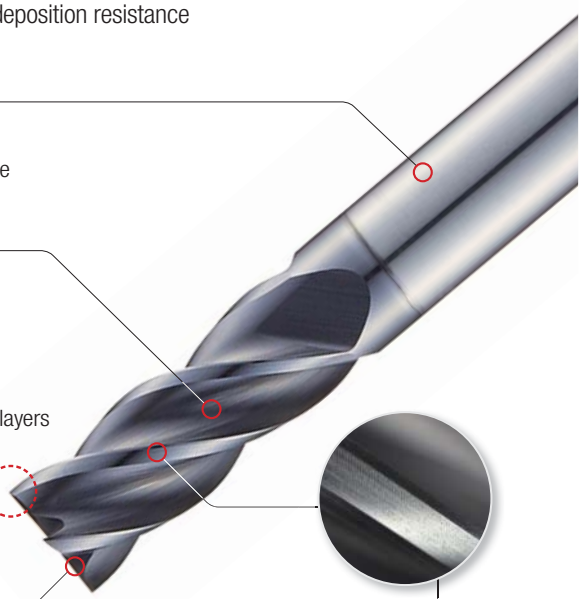
- Stable high speed processing with minimum vibration, unequal index and optimal rake angle
- High machinability and low vibration by applying unequal index in cutting edge
- Minimum vibration through optimized helix angle and R gash, enhanced chip emission and strengthness improvement
- Reduced friction resistance and improved chip emission by applying new coatings with high surface hardness oxidation resistance
- Newly strengthened flute with enhanced chipping resistance, and deposition resistance

Applying high toughness substrate

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

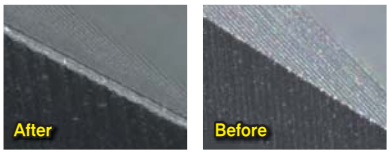
Applied differential AlCrN coating layer depth per tool size

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



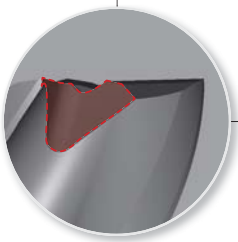
Cutting edge treatment

- 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

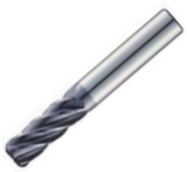


Uneven flute spacing / R gash

- 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

Endmill for Aluminum machining

A-Star Endmill

- 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

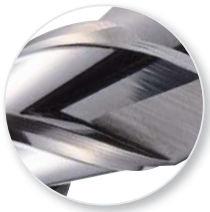
- Streamlined blade design optimized for rough, medium to finish cutting
- Extended tool life due to efficient chip evacuation

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

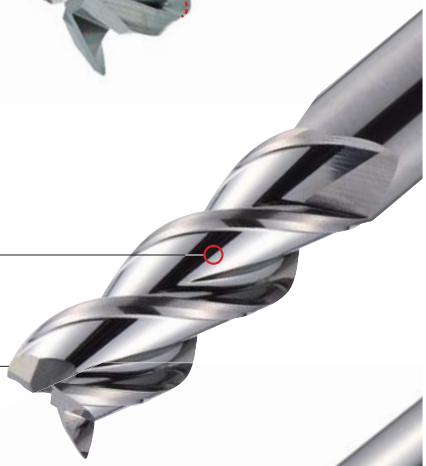
AFE

- 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

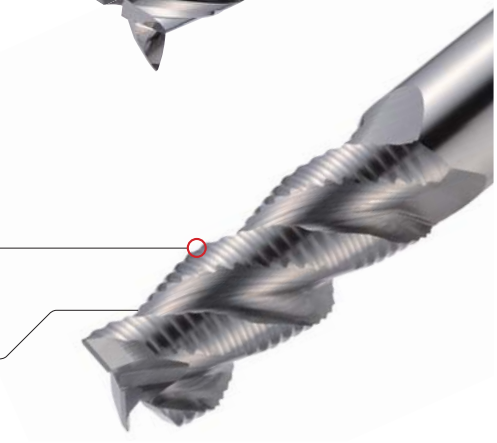


RPAE

- 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

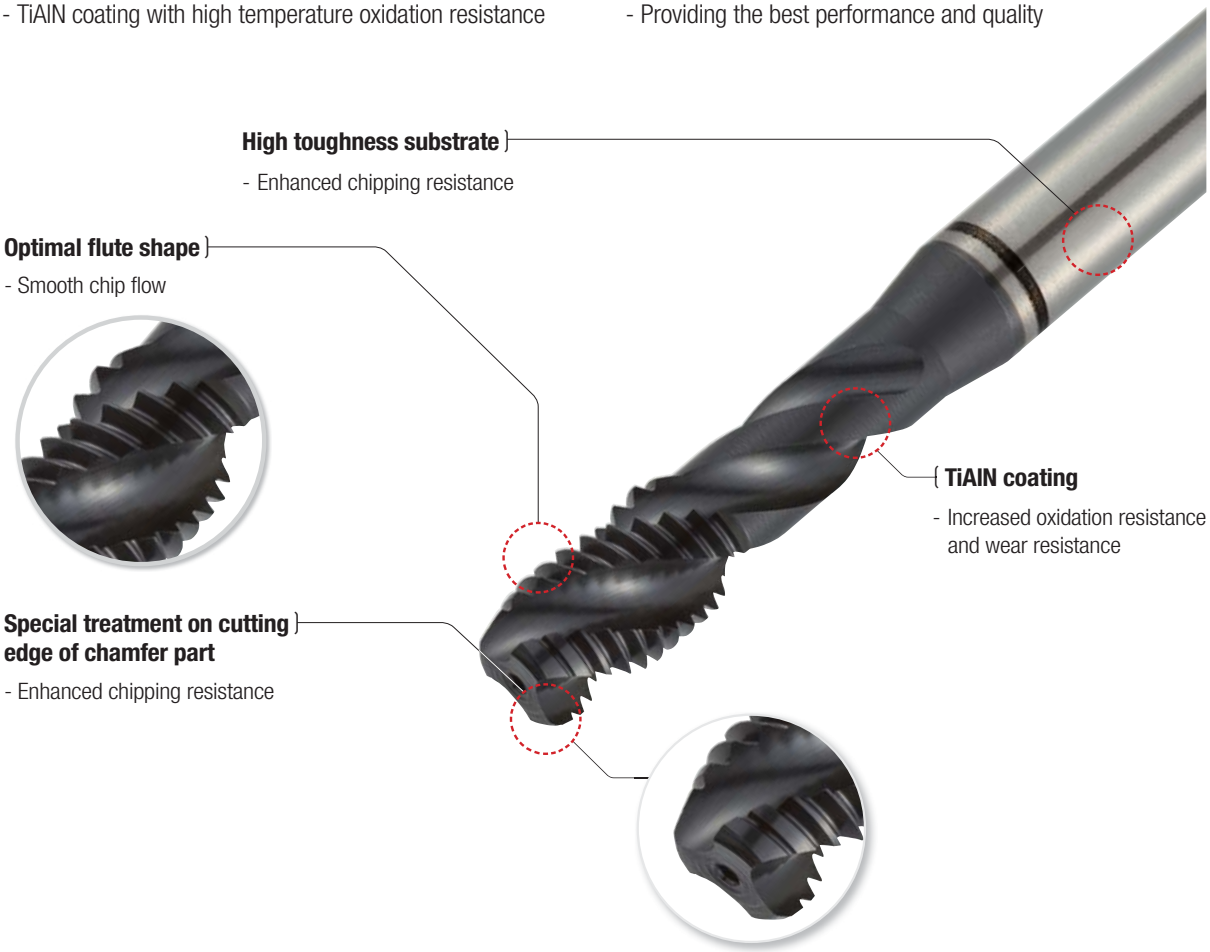
High preformance threading Tap

Tap-Star

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

Features

- **Higher chipping resistance**
  - Chipping reduced by applying high toughness substrate
  - Special chamfer edge treatment
- **Higher wear resistance**
  - TiAlN coating with high temperature oxidation resistance
- **Optimal shape**
  - Flute shape for smooth chip evacuation
  - Designed with an optimal relief angle for high chipping 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's high feed tooling

HWICK Series

HRMD, HFMD, HQM, HFM, LFH, U-star(USPM)

High Feed Rates : **Hwick** products are exclusively designed to perform at higher feed rates, allowing for a larger volume of material removal in a shorter time

Cost Efficiency : **Hwick** products can reduce overall operating costs by maximizing productivity with its excellent performances at higher cutting condition

Versatile for every industry which needs high feed tools : **Hwick** products dedicate to all the industries where 'higher feed condition is required' It includes Die and Mold, Large components, Automotive, Aerospace, Railroad, Shipbuilding, Power Generation, and etc.

Features

HRMD

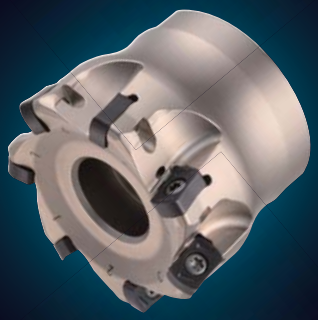
High Feed Milling Tool with Negative-type, 6-Corners

- High-rake angle cutting edges and chip breakers reduce cutting loads
- Negative geometry has been designed for rigidity of cutting-edge and double-sided function
- Unique insert design for high feed and multifunctional machining

HFMD

High Feed Milling Tool with Negative-type, 4-Corner Inserts for Small Diameter Applications

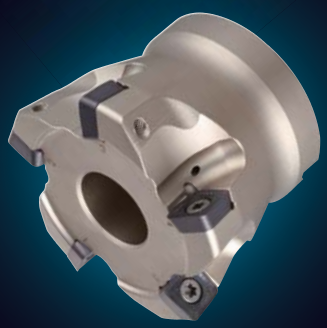
- Increased productivity due to thinner and elongated shape of the insert which makes fine pitch available
- Insert designed for low cutting resistance with high rake and helix angle which reduces cutting load
- Increased chipping and breakage resistance concave and stronger screw



HQM

High Feed Milling Tool with Positive-type 4-Corners (sQuare) Inserts

- Stable and highly efficient cutting enabled by the rigid design of four planar corners
- High speed and feed cutting from the optimal rake angle and high helix cutting edge



Features

HFM

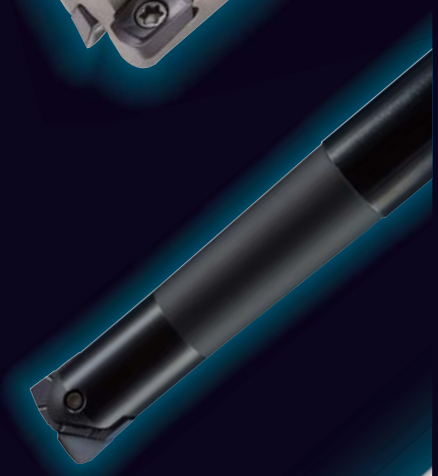
High Feed Milling Tool with Positive-type 2-Corner Inserts for Small Diameter Applications

- Stable and highly efficient milling tool for small diameter machining
- Excellent productivity through improved insert geometry: helix applied to cutting edge reduces cutting load and reinforces corner toughness
- Increased rigidity with double relief angles helps prevent interference during high-feed machining

LFH

High-accuracy indexable endmills for precision mold finishing

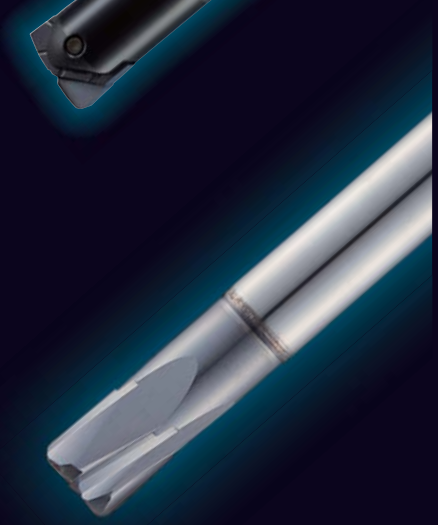
- Achieved longer tool life due to excellent cutting performance of the insert grade
- Optimal mold machining is achieved with a system compatible with MQL (Minimum Quantity Lubrication)



U-Star Endmill

High-Speed Machining 4-Flute Radius EndMill for Mold & Die Applications

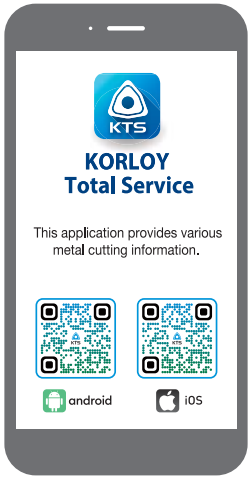
- Applied a well-balanced grade(PC315W) with high chipping resistance coating layer and high toughness substrate (PC315W)
- Suitable for precision cutting with high precision range of h5 shank, and precise radius with edge treatment
- Excellent performance on medium Hardness Steel (HRC30~50) made of Alloy Steel, Carbon Steel, Die Steel, and etc.



HWICK Series

⚠ 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.



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