IMTEX 2025

KORLOY'S NEW & STEADY SELLING PRODUCTS

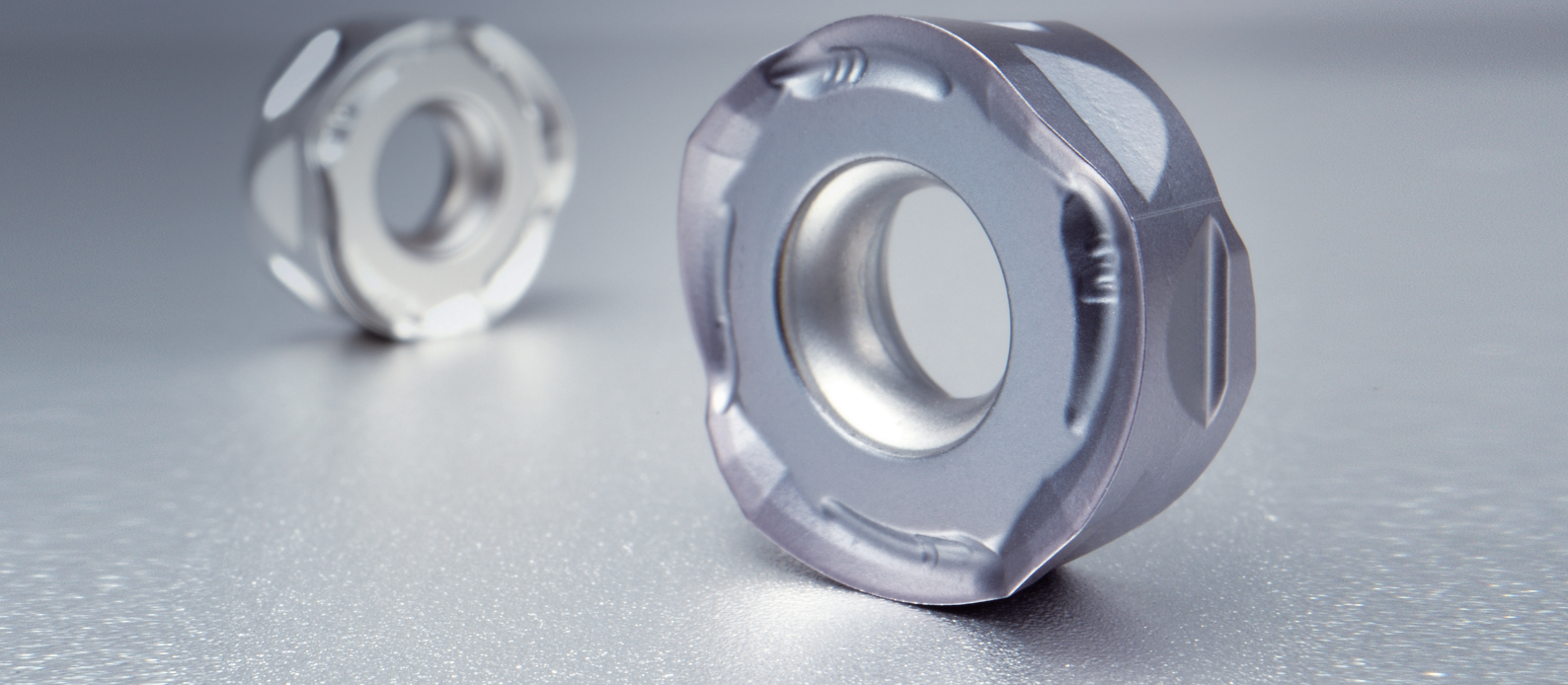
Highlight Product

KORLOY

Contents

Grades

Turning

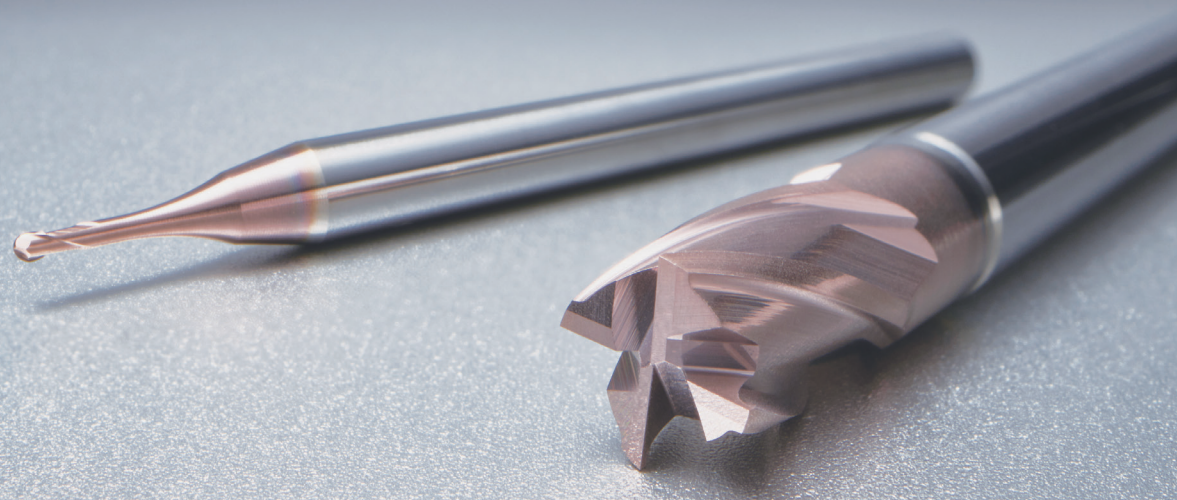


Milling

Drills

Endmills

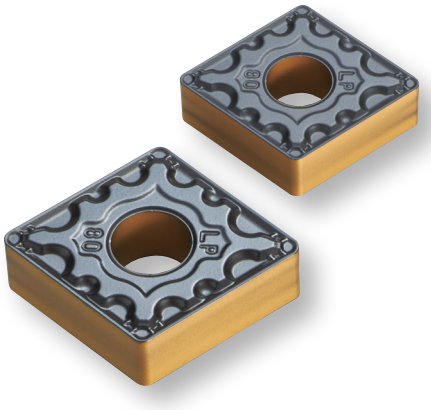
Thread



NC3205/NC3215 NC3225/NC3235

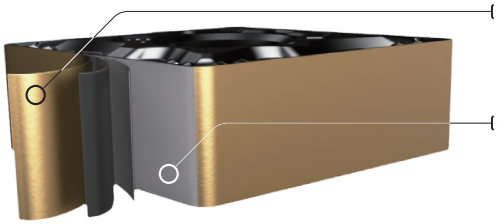
CVD insert series for Steel Turning

- Applied 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 increased wear resistance, chipping resistance and heat resistance

High toughness and heat resistance substrate

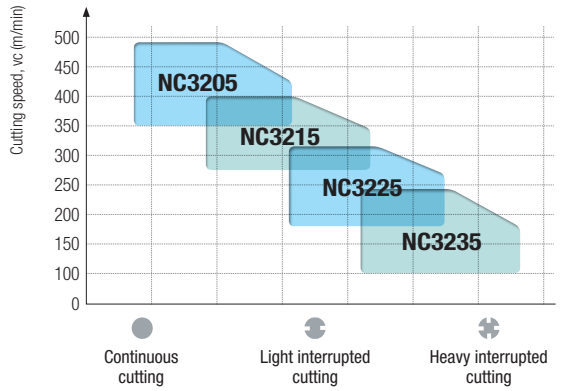
- Applied optimal materials for each grade to increase in tool life

• Highly lubricative coating with fine surface finish application

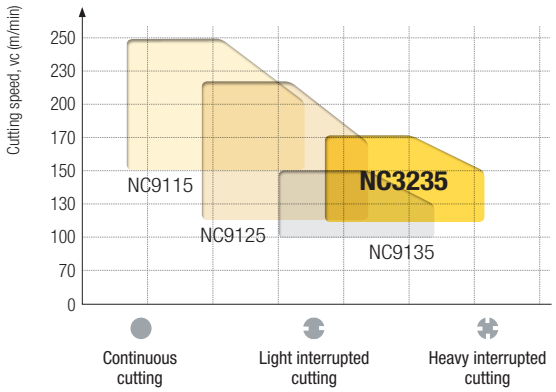
[NC3205, NC3235] [Existing grade]

Application range

P Steel

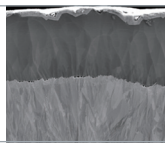


M Stainless steel



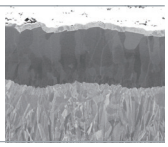
NC3205

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



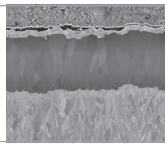
NC3225

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



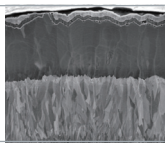
NC3215

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



NC3235

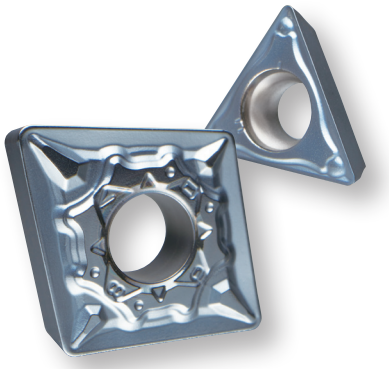
- High cutting performance in medium to low speed and heavy interrupted cutting
- Good chipping resistance and fracture resistance



CC1015/CC1025

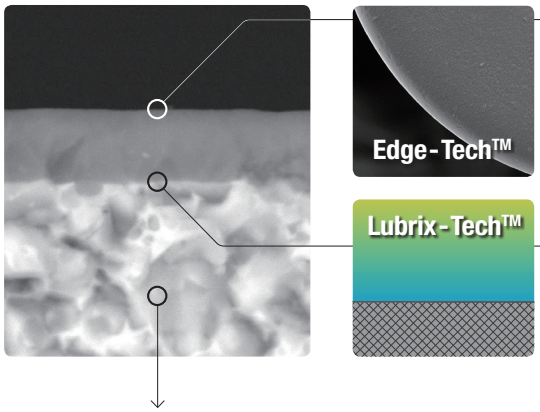
PVD Cermet for Steel Turning

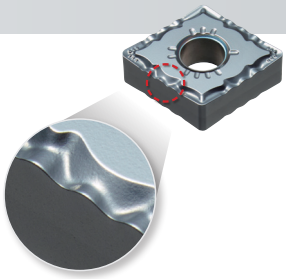
- Ensured stable tool life from applying Lubrix-Tech™ (high hardness and lubrication PVD coating technology) for increasing flank wear resistance on nose radius
- Smooth cutting surface from applying Edge-Tech™ (high lubrication cutting edge treatment technology) to prevent welding and chipping



Features

- **Applying exclusive PVD Lubrix-Tech™ and Edge-Tech™ technology**

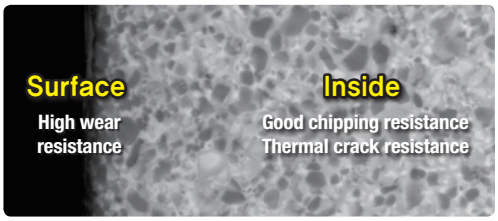




Edge-Tech™
- High lubrication cutting edge treatment technology
- Due to decrease in welding, chipping, and unexpected fracture, increased in stability of tool life

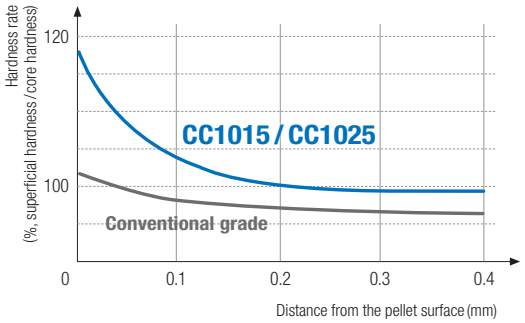
Lubrix-Tech™
- AlCrN series high hardness lubrication PVD coating technology
- Coating layer's growth direction controlling technology

Inclination functional substrate



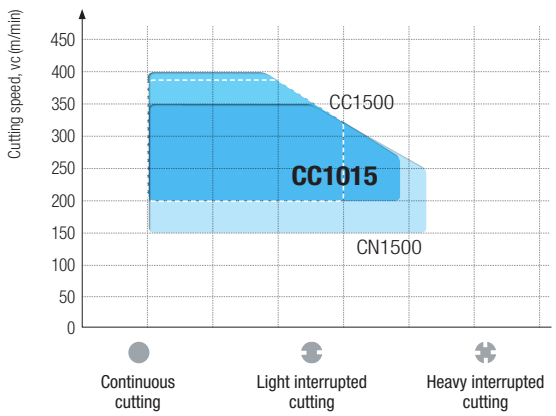
- Inclination functional layer creation with the surface and internal composition's microstructure control
- High chipping resistance and stable tool life

Hardness rate comparison chart

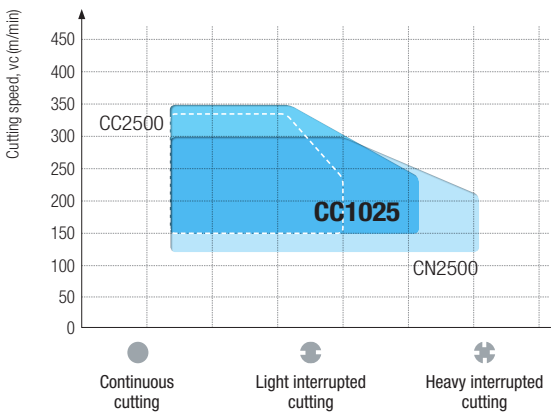


Application range

P Steel



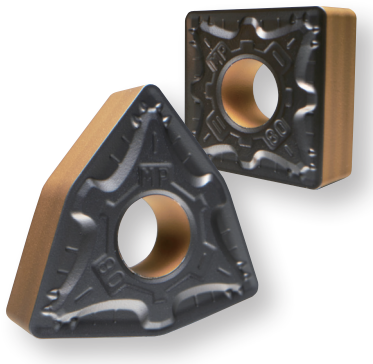
P Steel



NC5320

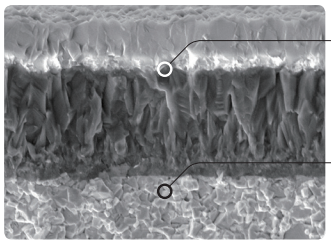
Universal insert for Steel and Cast iron cutting

- Applying exclusive substrate for Steel and Cast iron and New CVD coating with great wear resistance
- Applying New CVD coating technology with better built-up edge 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 chip resistance

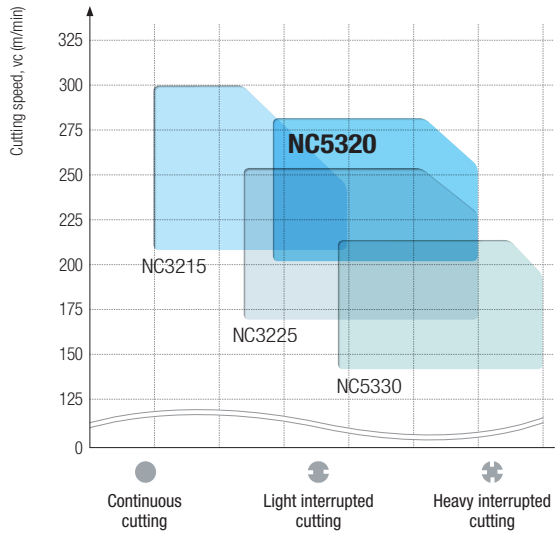
Optimal substrate for Steel and Cast iron cutting with good wear resistance → Increased wear resistance

• Increased surface finish due to applying New CVD coating

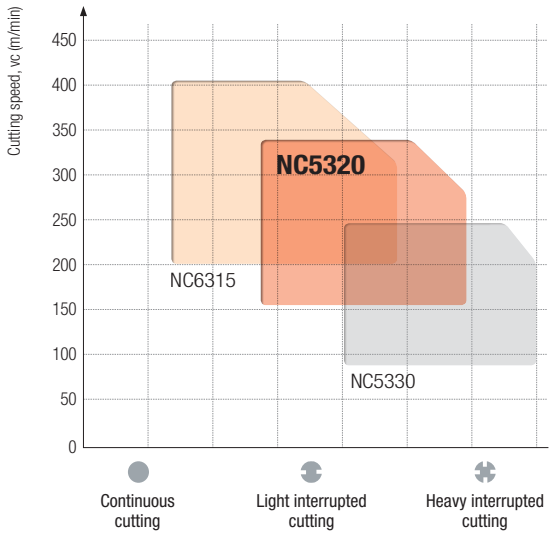
[NC5320] [Existing grade]

Application range

P Steel



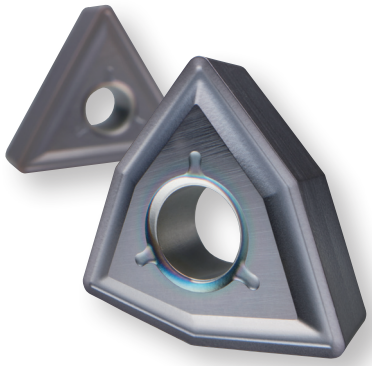
K Cast iron



PC9035

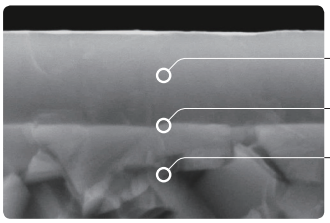
Stainless steel Turning insert

- Optimally designed PVD grade for medium to finish cutting and interrupted cutting of Stainless steel turning
- High stability of cutting due to applying high toughness PVD coating layer technology with chipping resistance and fracture resistance
- Good chipping resistance and welding resistance in the beginning of cutting through the Edge-Tech™ technology



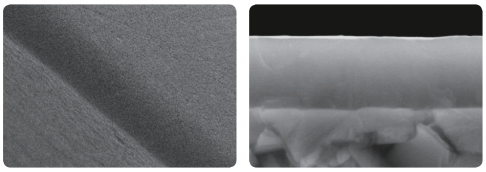
Features

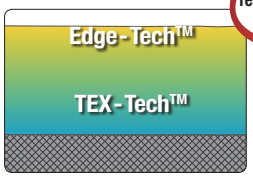
• Applying TEX-Tech™, high toughness PVD coating layer technology



- Good chipping resistance due to high toughness and high elasticity coating layer
- Enhanced adherence by high adherence coating layer
- Excellent fracture resistance from applying high toughness substrate

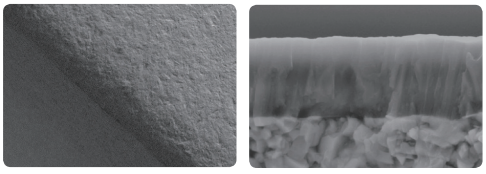
• Applying Edge-Tech™, high lubrication edge technology

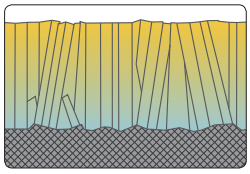




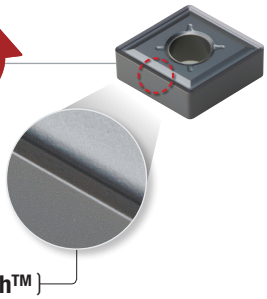
Increased welding resistance and chipping resistance

[PC9035]





[Existing grade]

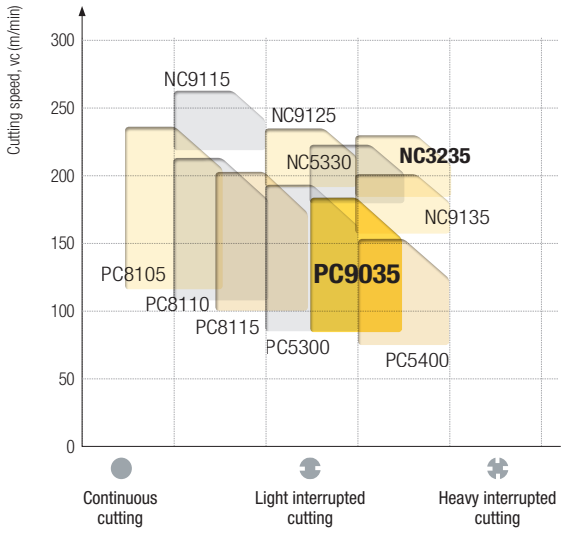


Edge-Tech™

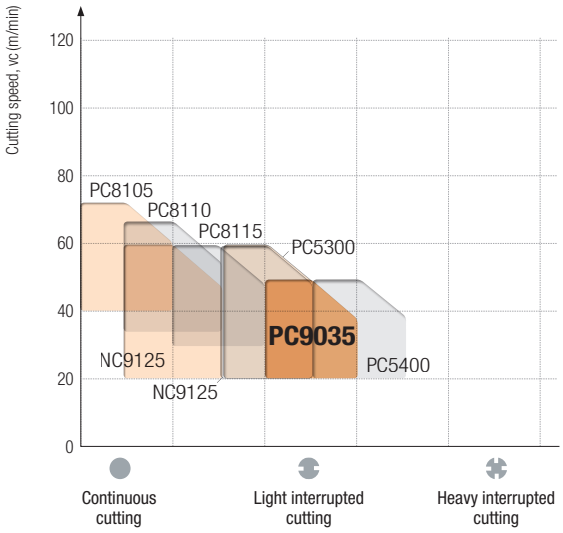
- Special high lubricated cutting edge technology increasing cutting stability through reducing welding, chipping and unexpected fracture

Application range

M Stainless steel



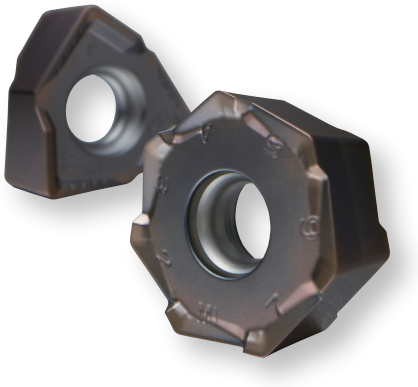
S HRSA



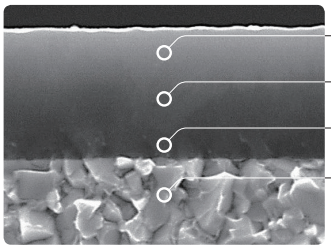
PC6100

Optimally designed PVD grade for cast iron milling

- Applying coating technology for reinforcing high hardness of cutting edge
- Applying coating layer with high heat resistance
- Reinforcing adhesion on the cutting edge
- Applying optimal materials with wear resistance and impact resistance for cast iron cutting

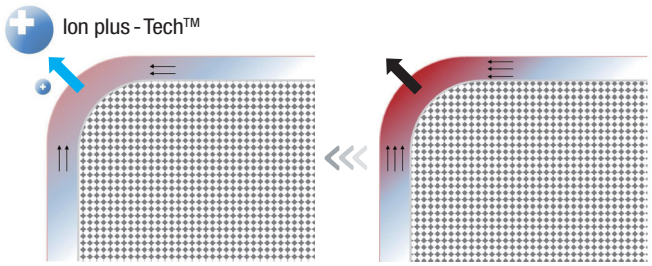


Features



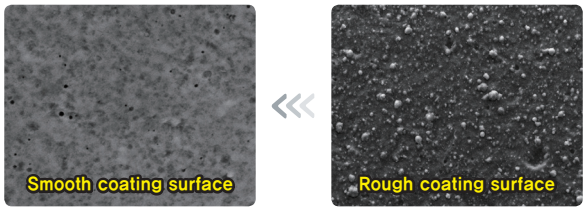
- Applying coating technology for reinforcing high hardness of cutting edge
- Applying coating layer with high heat resistance
- Reinforcing adhesion on the cutting edge
- Applying optimal materials with wear resistance and impact resistance for cast iron cutting

Applying Ion plus-Tech™



[Ion plus-Tech™] [Existing technology]

Applying smooth coating surface treatment technology

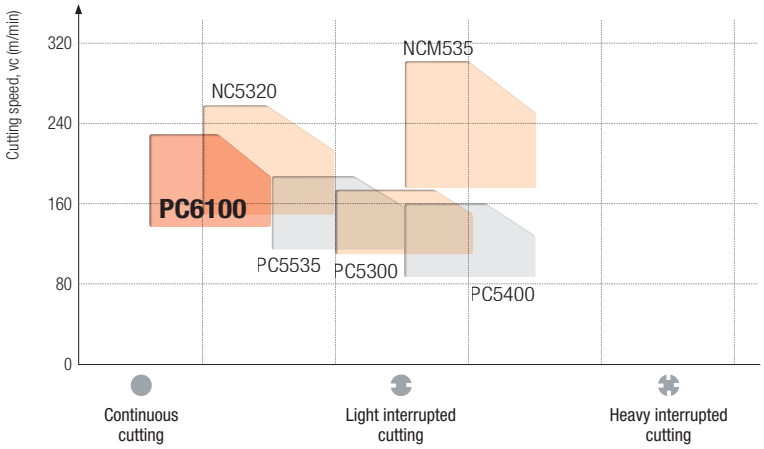


[PC6100] [Existing grade]

* Ion plus-Tech™ : Increasing hardness and adhesion of coating layer due to the exclusive PVD plasma technology reinforcing coating

Application range

K Cast Iron



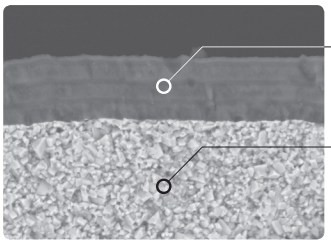
PC3700

Milling grade specialized for Steel

- Specialized material for high-toughness steel and a lubricative, high-hardness thin PVD film have been applied to achieve high-speed, high-feed, and high-cutting performance during machining
- A highly 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



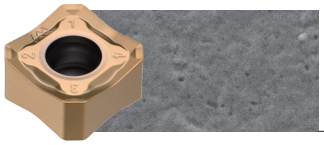
Stronger resistance to welding and chipping due to the multi-layer coating technology with high hardness and lubricating treatment

Excellent wear resistance and stable tool life

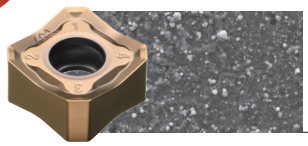
Ensuring general machinability due to wear and breakage resistant materials optimized for milling applications of Steel

• Special coating surface treatment

Increased chipping resistance and welding resistance



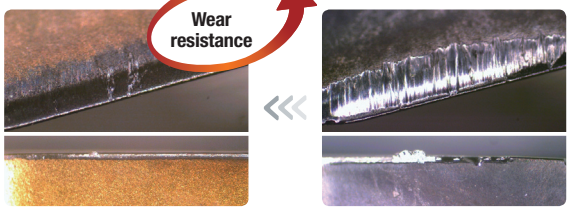
[PC3700]
No macro-particle on the coated surface



[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

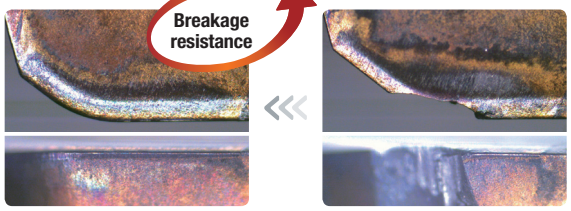
Wear resistance



[PC3700] [Existing products]

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

Breakage resistance

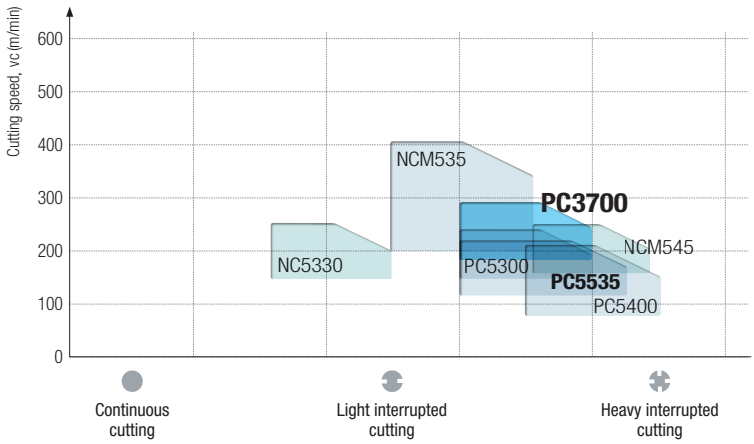


[PC3700] [Competitor]

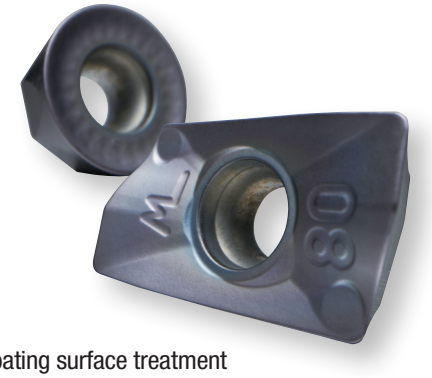
Ensuring general machinability due to wear and breakage resistant materials optimized for milling applications of Steel

Application range

P Steel



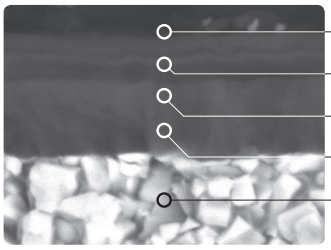
PC9540



Optimal PVD Coating for Stainless Steel & HRSA for Milling Inserts

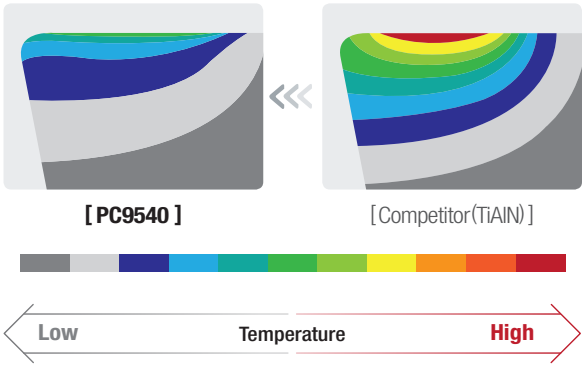
- Longer tool life due to higher breakage resistance applying high toughness substrate controlling crack growth
- Excellent and new PVD oxide film with oxidation and heat resistance overcoming the limit of hard-to-cut materials machining
- Stable machinability by preventing welding and chipping due to applying special coating surface treatment

Features



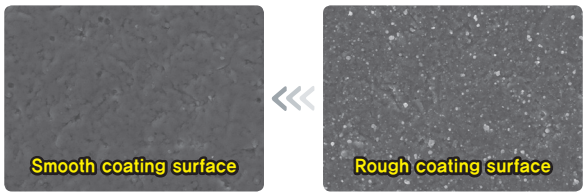
- Improved surface finish → Good welding resistance
- PVD multilayer → Controlling crack growth
- PVD oxide film → Good oxidation and heat resistance
- PVD nitride film → Good wear resistance
- High toughness substrate → Good breakage resistance

• New PVD oxide film (comparison of thermal conductivity)



[PC9540] [Competitor(TiAlN)]

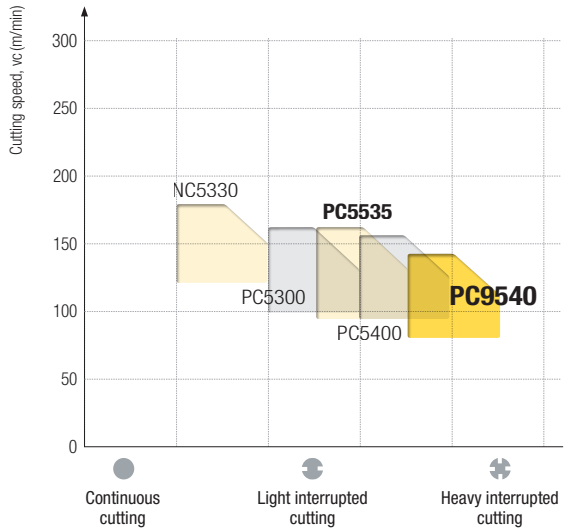
• Special coating surface treatment technology



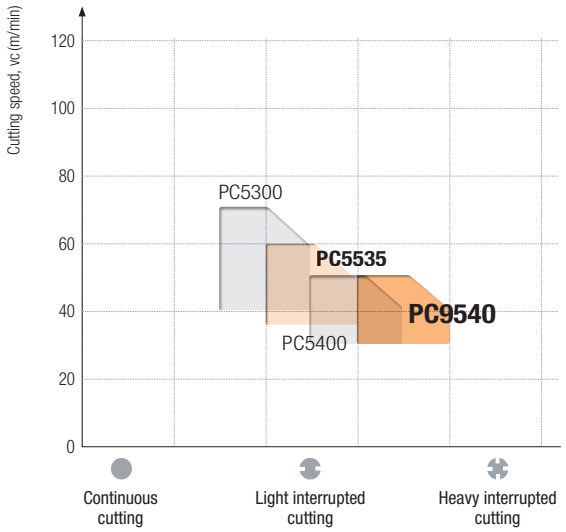
[PC9540] [Existing grade]

Application range

M Stainless steel



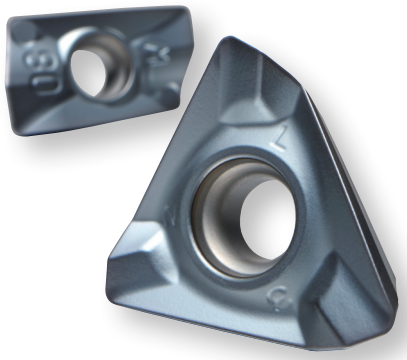
S HRSA



PC5535

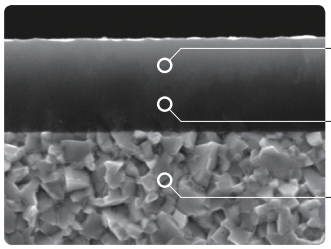
PVD insert for general Milling

- 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



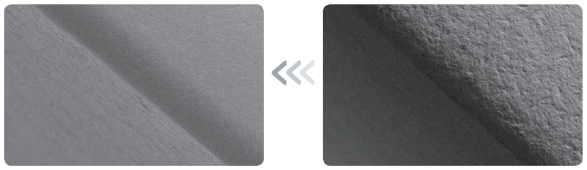
Features

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

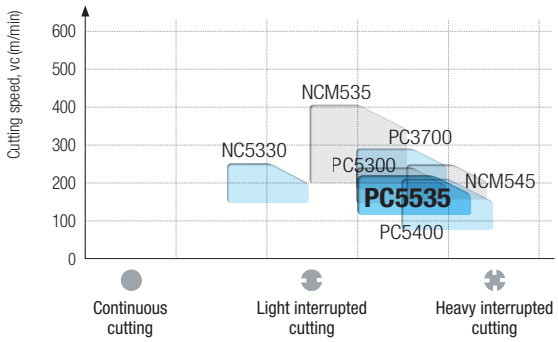


[PC5535] [Competitor]

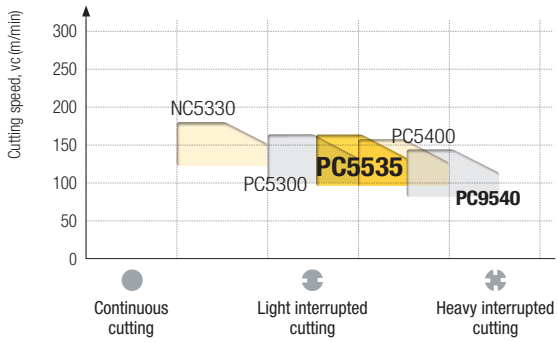
Edge-Tech™
- Preventing welding, chipping and unexpected fracture
- Longer tool life and stable cutting

Application range

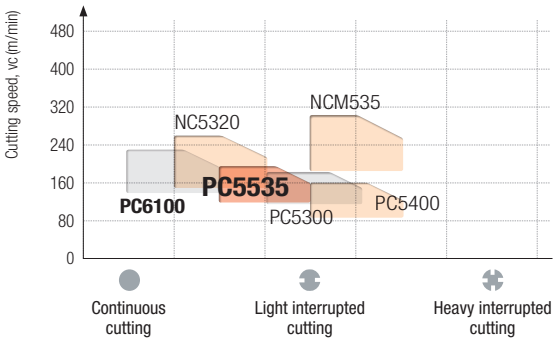
P Steel



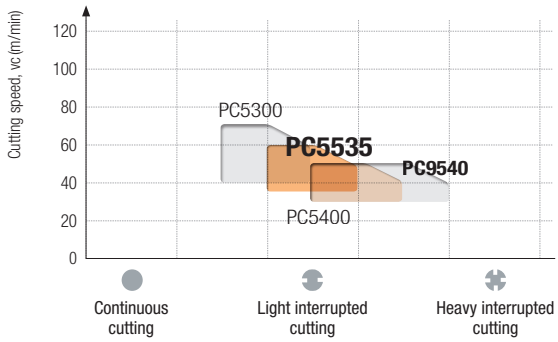
M Stainless steel



K Cast iron



S HRSA



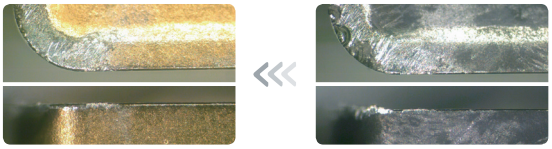
UNC805/UNC840 UPC810/UPC845

High performance Ultra Coating grade series for machining of HRSA

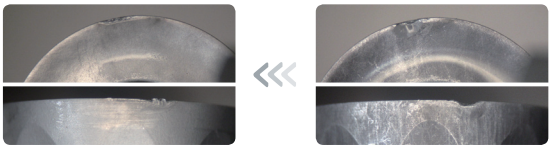
- Enhanced substrate in order to minimize thermal crack resistance at high temperature and prevent unexpected tool breakage
- Increased chip removal volume thanks to Ultra Coating technology with high hardness and lubrication
- Minimized built-up edge due to the optimized cutting edge of the insert

Features

Inconel 718

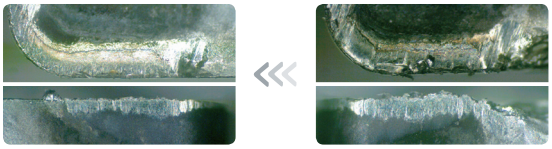


[UNC805] [Competitor]

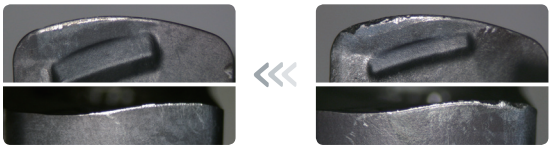


[UNC840] [Competitor]

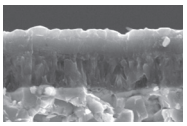
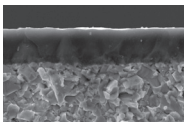
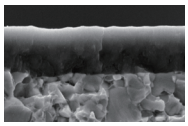
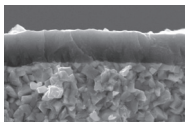
Ti-6Al-4V



[UPC810] [Competitor]

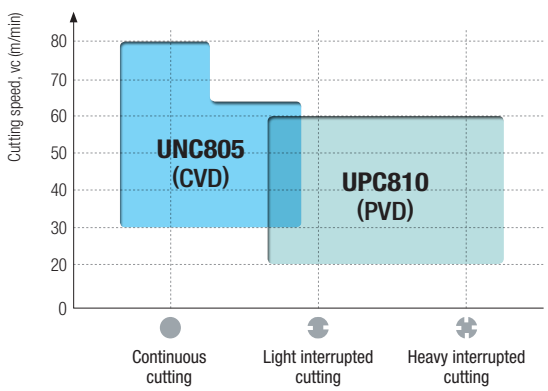


[UPC845] [Competitor]

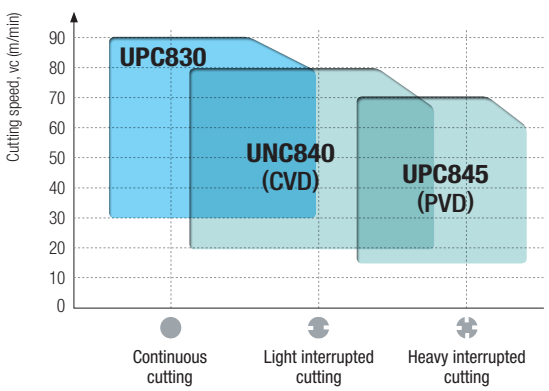
UNC805 (CVD Turning)	UNC840 (CVD Milling)	UPC810 (PVD Turning)	UPC845 (PVD Milling)
			
- Good performance in high speed machining - For high speed and low feed machining - For forged workpiece - For high hardness (HRC35 or above) HRSA - For large-sized workpiece (∅ 200 or above)		- Good performance 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

Turning



Milling



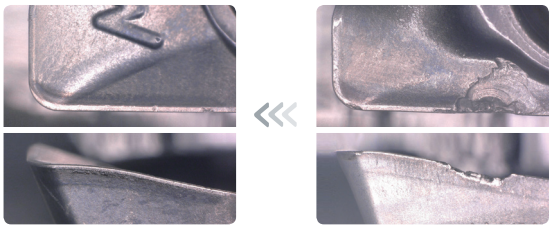
UPC830

New Milling grade with high performance Ultra Coating for HRSA cutting

- First recommended grade for HRSA perpendicularity with increased wear resistance
- Applied for various workpieces such as hard-to-cut Stainless steel, Inconel and Titanium
- Enhanced productivity due to HRSA high speed cutting

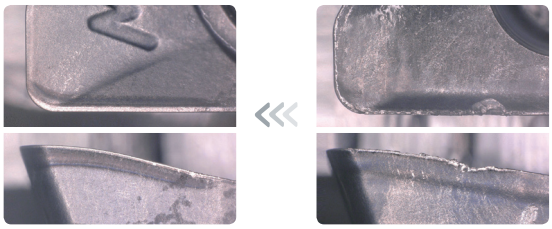
Features

Inconel 718

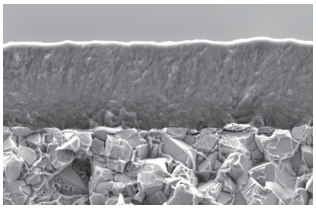
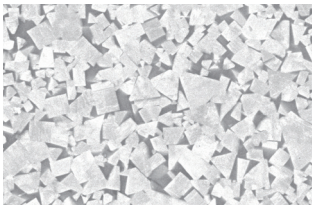


[UPC830] [Competitor]

Ti-6Al-4V



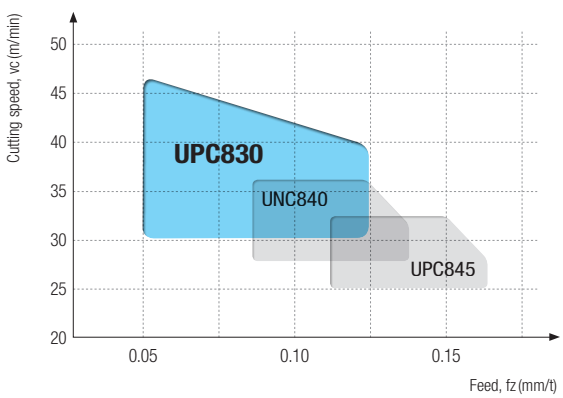
[UPC830] [Competitor]

High hardness-high lubrication Ultra Coating	Substrate with high heat resistance
	

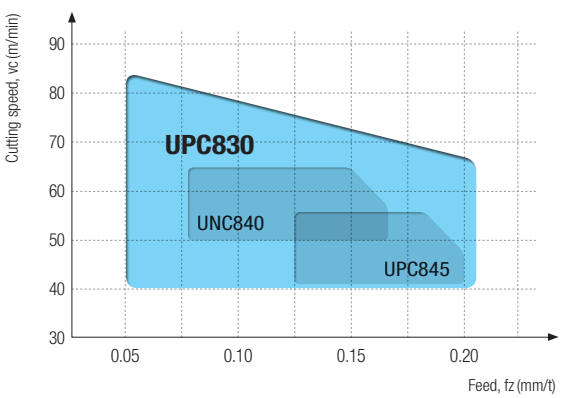
- Increased wear resistance at high temperature due to substrate and Ultra Coating with high heat resistance
- Secured stable tool life through improving welding resistance and chipping resistance in Inconel and Titanium alloy cutting
- Higher welding resistance and splintering by controlling surface finish on the cutting edge with Edge-Tech™

Application range

[Inconel alloy]



[Titanium alloy]



Saw Man-X

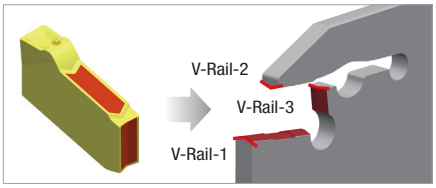
A solution for Parting and deep Grooving

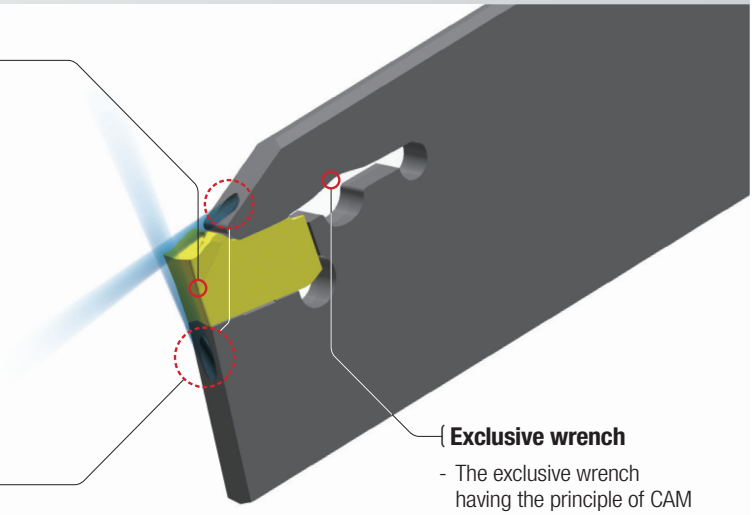
- Stable machining in deep grooving applying clamping system with strong three-way V-Rail
- Improving clamping precision and convenient replacing of inserts with using the exclusive wrench

Features

Three-way V-Rail

- Tightly clamped inset 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





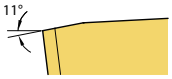
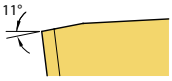
Internal spraying of 2 channel high pressure coolant

- 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

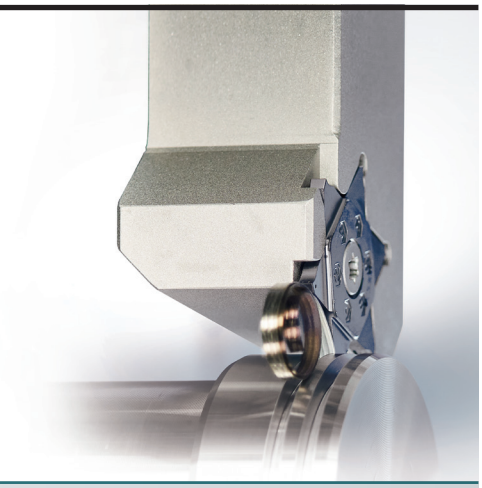
Self grip shank
Shank height : 16, 20, 25 mm
Screw clamping shank
Shank height : 20, 25 mm

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

Hexa Blade

Grooving and Parting tool with precision 6 corners

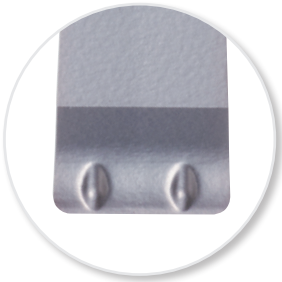
- Grooving and Parting tool with high economical 6 corners
- Increased reliability and stability in cutting due to high qualified cutting edge

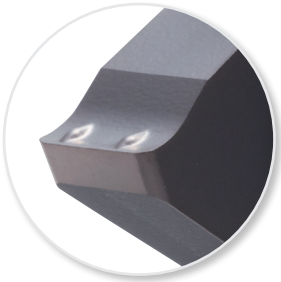


Features

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



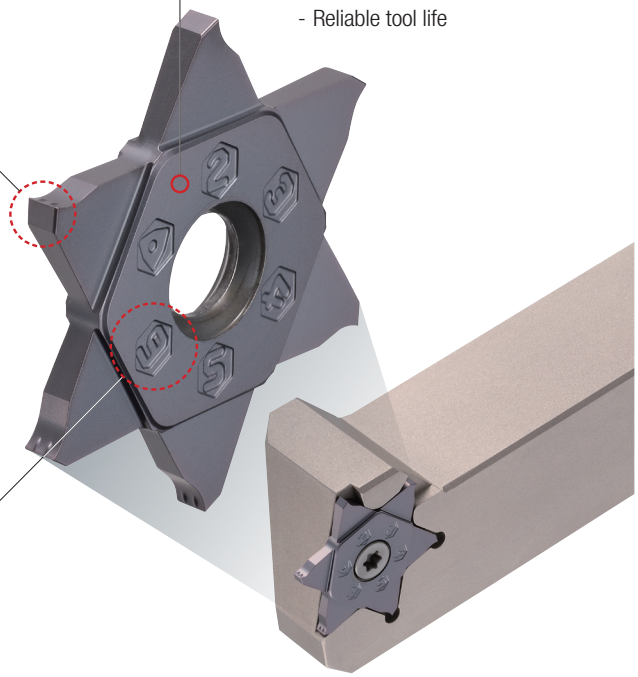


Precision insert
- Superior quality in dimensions
- Excellent corner dimension deviation management
- Equally stable performance

Neutral hand
- Convenient use with neutral hand

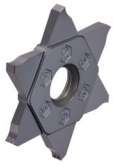
Strong cutting edge
- Increased high feed cutting performance

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



6 cornered insert
- High cost efficiency from multi-corners

Type



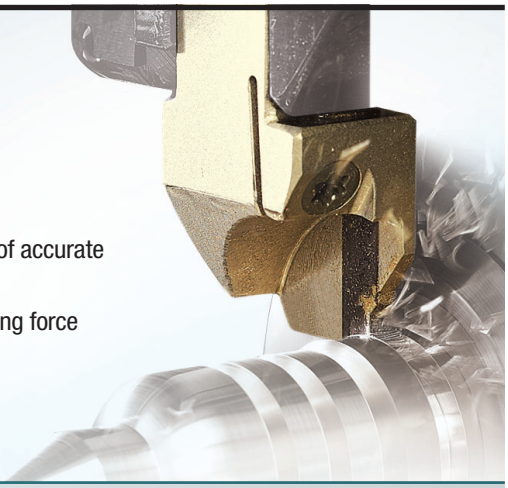
Insert
Cutting width : 1.78 ~ 4 mm

Shank
Diameter : 20, 25 mm

Auto Tools

ISO inserts for automatic lathes

- 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, and medical instruments

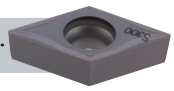


Features

VP1/MS/FS chip breaker

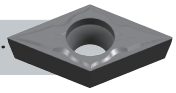
- Exclusive chip breaker for hard-to-cut materials such as Titanium alloy, Inconel, Stainless steel, etc.
- Minimized cutting heat by reducing contact area between chips and rake surface with the use of high positive blade

VP1



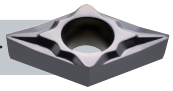
- Hard cutting edge for medium cutting
- Optimal width of chip breaker by each depth of cuts realizes wide workpiece machining

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

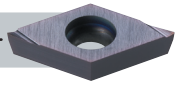


- For finishing (for surface roughness)
- 1st recommended chip breaker for chip control
- Better surface roughness, surface finish and chip control

KF/KM chip breaker, ground type for grooving

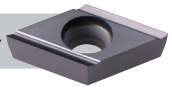
- Ground chip breaker with sharp cutting edge
- High precision insert of E-class tolerance with accurate nose radius

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

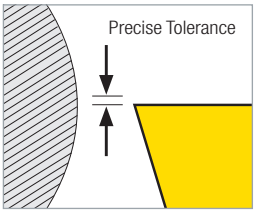
KM

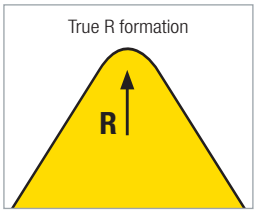


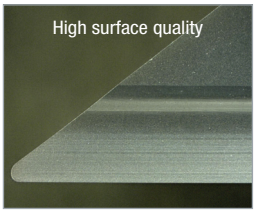
- For medium cutting to finishing
- Better chip flow due to wide chip pockets
- Longer tool life and better cutting action due to improved chip evacuation
- Excellent surface roughness

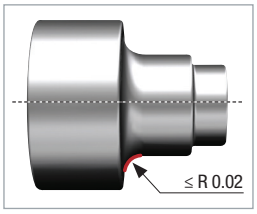
Insert tolerance

- 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







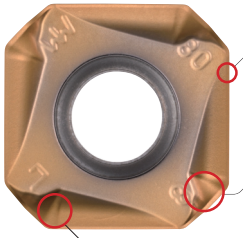


RM8-X

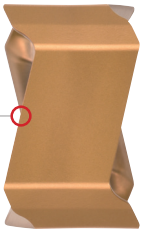
High helix face Milling tool with 8 cornered double-side inserts

- 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

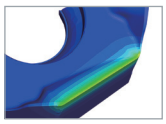


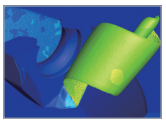
High Helix
- Improved surface finish
- Reduced cutting loa



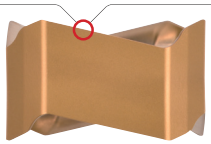
Variable minor cutting edge chip breaker
- Protects its corner on the opposite side
- Enhanced chip control

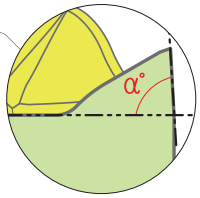
High rake angled major cutting edge / Variable chip breaker
- Maintain its machinability in high depth of cut
- Enhanced chip control



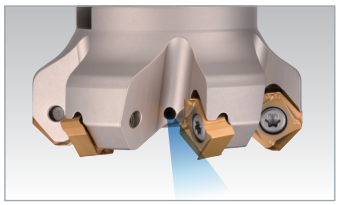


Reversal positive relief angle at the Major cutting edge
- Protects its corner on the opposite side
- Increased chipping resistance and prevents unexpected breakage

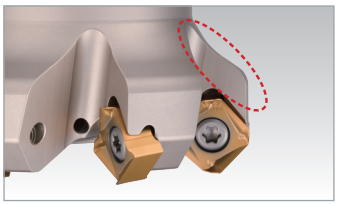




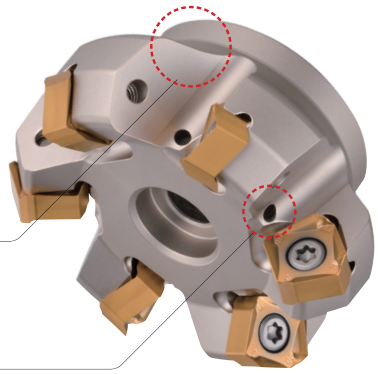
Cutter features



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



Streamlined cutter design
- Improved chip evacuation



Type

Cutter
Ø50 ~ Ø125

RM14

Heptagonal face Mill with 14 double-sided corners

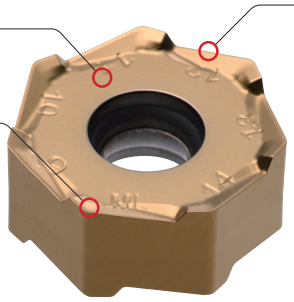
- Minimized chattering of workpiece due to maximum lead angle and sharp cutting edge
- Reduced cutting resistance and improved chip emissions by high helix angle application

Insert features

- Wide supporting area of insert ensures stable clamping system.
- High rake angle cutting edge reduces cutting load and increases chip evacuation.
- Increased the insert thickness to stabilize machinability

Wider clamping area
- More stable machining

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



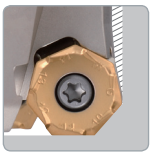
High helix cutting edge
- Better machinability
- Less cutting load

Thicker insert
- High cutting edge strength

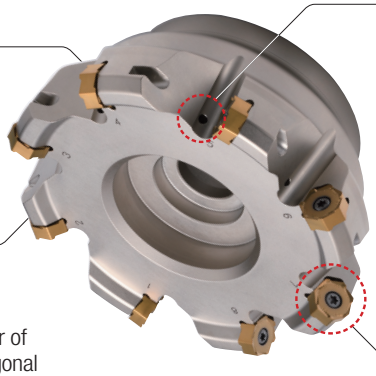
Cutter features

- 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.

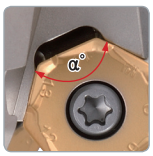
The biggest heptagonal lead angle
- Reduced workpiece chattering by reducing axial force



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

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 are usable due to applying doublesided structure
- **Good surface finish** - The optimal minor cutting edge ensures good surface finish
- **Stable tool life** - Applied an exclusive anti-rotational structure to maximize the stability of machining

High Helix
- Improved surface finish
- Lowered cutting load

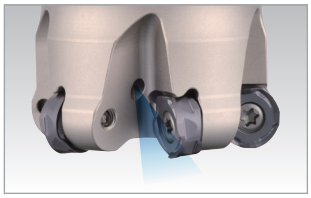
Reversal positive structure preventing rotation
- High clamping force
- Stable machinability

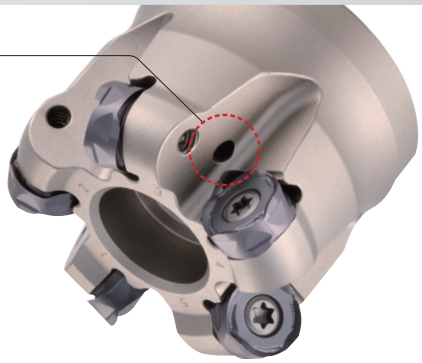
Wide wiper cutting edge
- Good surface finish

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 flow
- Longer tool life due to insert cooling





Type

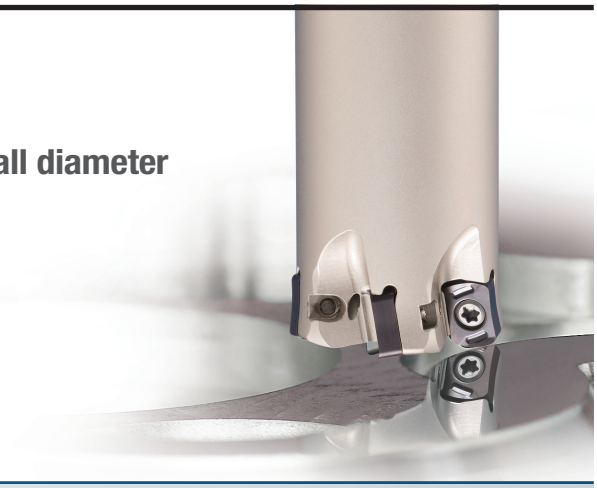
Cutter
Ø50 ~ Ø125

Shank
Ø32 ~ Ø63

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



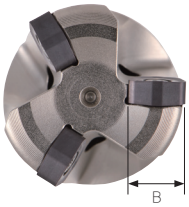
Features

- Available for high feed machining with the increase in the number of teeth 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)

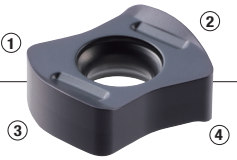
HFMD



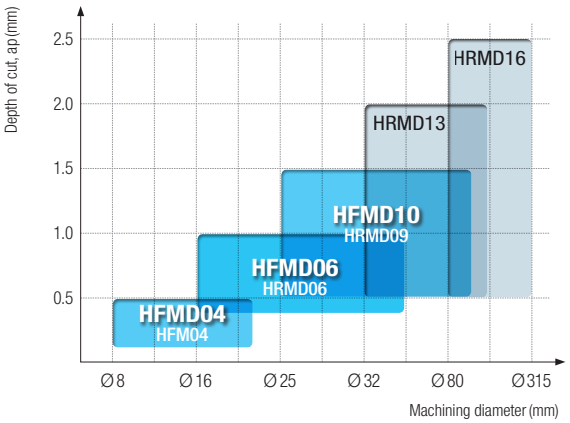
HRMD

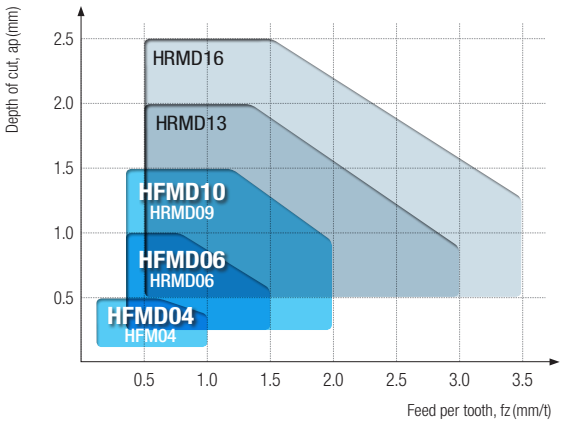
Economical 4 corner insert

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



Application range





Type

Cutter
Ø8 ~ Ø42

Shank
Ø8 ~ Ø42

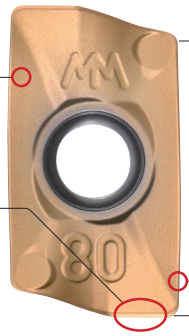
Modular
Ø10 ~ Ø42

Alpha Mill-X

Shoulder Milling tool for high helix

- High helix cutting edge enables 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.

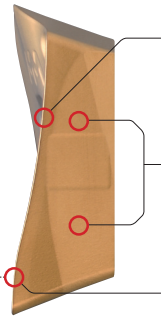
Insert features



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

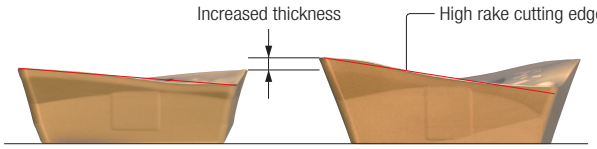
Max. ap
ADKT17 : 16.5 mm
ADKT12 : 11.5 mm
ADKT10 : 9.5 mm



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

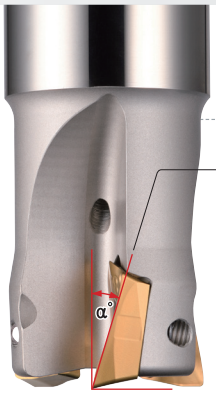


Competitor
(APMT1604PDSR-MM)

Alpha Mill-X
(ADKT170608PESR-MM)

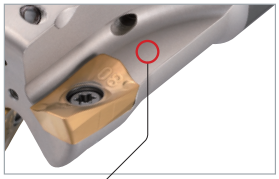
Optimal for high speed and high feed machining
- Applying cutting edge with high rake angle : Decreased in cutting resistance
- Thicker insert: high rigidity of insert

Cutter features



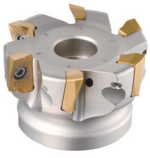
High rake angle cutting edge
- Improved surface finish
- Decreased cutting load

Perfect perpendicularity



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

Type



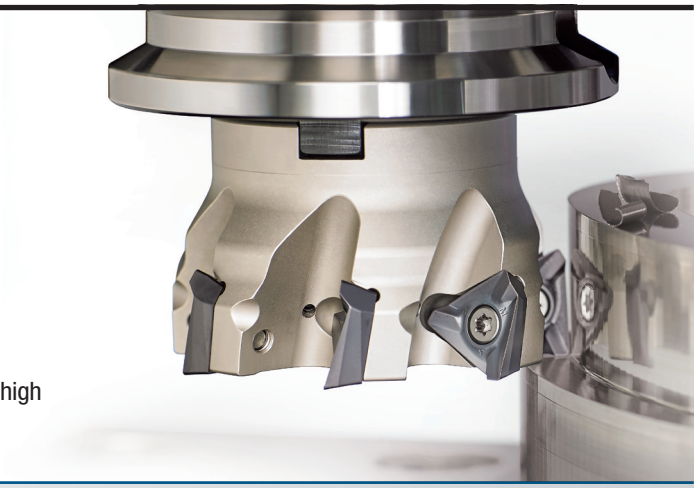
Cutter
Ø40 ~ Ø125

Shank
Ø16 ~ Ø40

Triple Mill

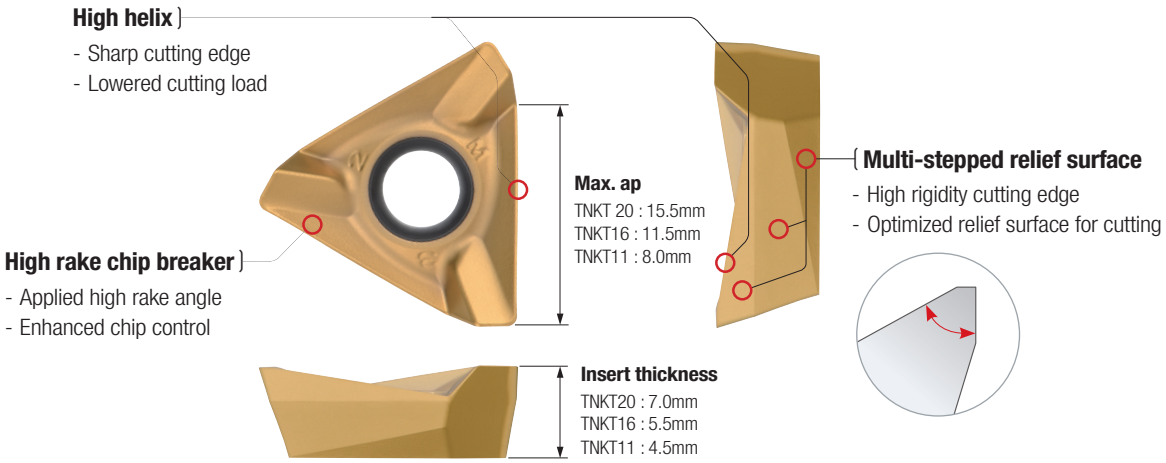
High depth of cut Milling tool with 3 corners for perpendicularity

- Economical Milling tool with 3 corners with positive cutting edge for high depth of cut machining
- Stable machinability in high feed machining due to enhanced chip evacuation and thicker insert
- High precision machining from less cutting load due to high helix and sharp cutting edge

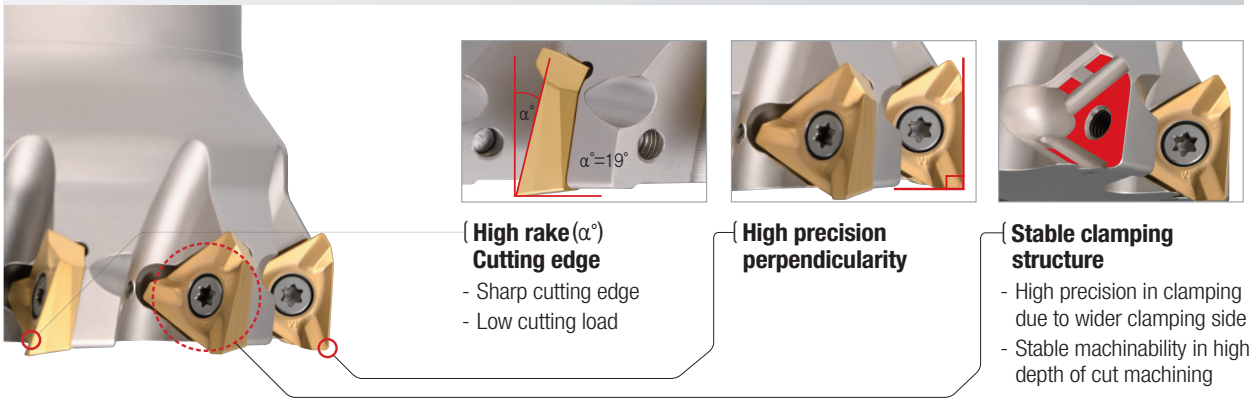


Insert features

- Economical insert with 3 corners due to high depth of cut cutting edge
- Lowered cutting load and enhanced chip evacuation by sharp chip breaker and high helix cutting edge
- Stable machinability even in high cutting conditions from high rigidity design



Cutter features



Type

Cutter
Ø50 ~ Ø125

Shank
Ø25 ~ Ø40

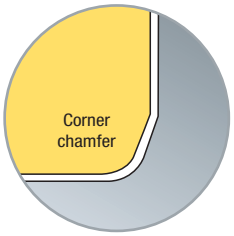
TP8P

Right angle Milling tool with Tangential double-sided 8 corners

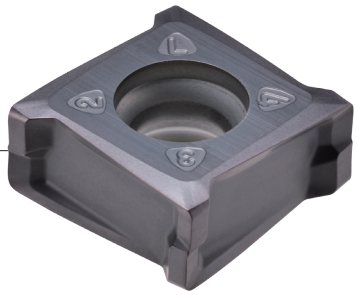
- Double-sided insert with 8 corners enables cost efficiency thanks to right angle Milling with high depth of cut.
- Excellent for productivity improvement because Tangential type insert ensures rigid clamping and allows more flutes (extra close pitch) in accordance with a cutter diameter.

Features

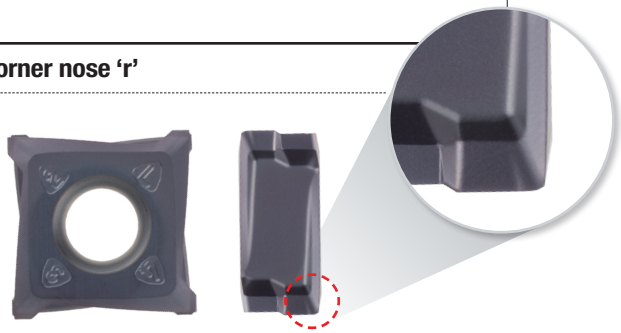
Corner chamfer

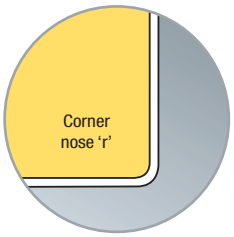


- Chamfer corner
- For multi-steps cutting



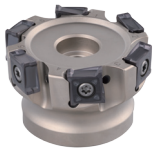
Corner nose ‘r’





- Corner nose ‘r’
- For one step cutting

Type



Cutter
Ø40 ~ Ø125

Shank
Ø32 ~ Ø40

TPDB Plus Drill

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

High-quality and high efficiency top solid indexable Drill

- 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 by applying high helix angle

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 -

TPDC Plus Drill

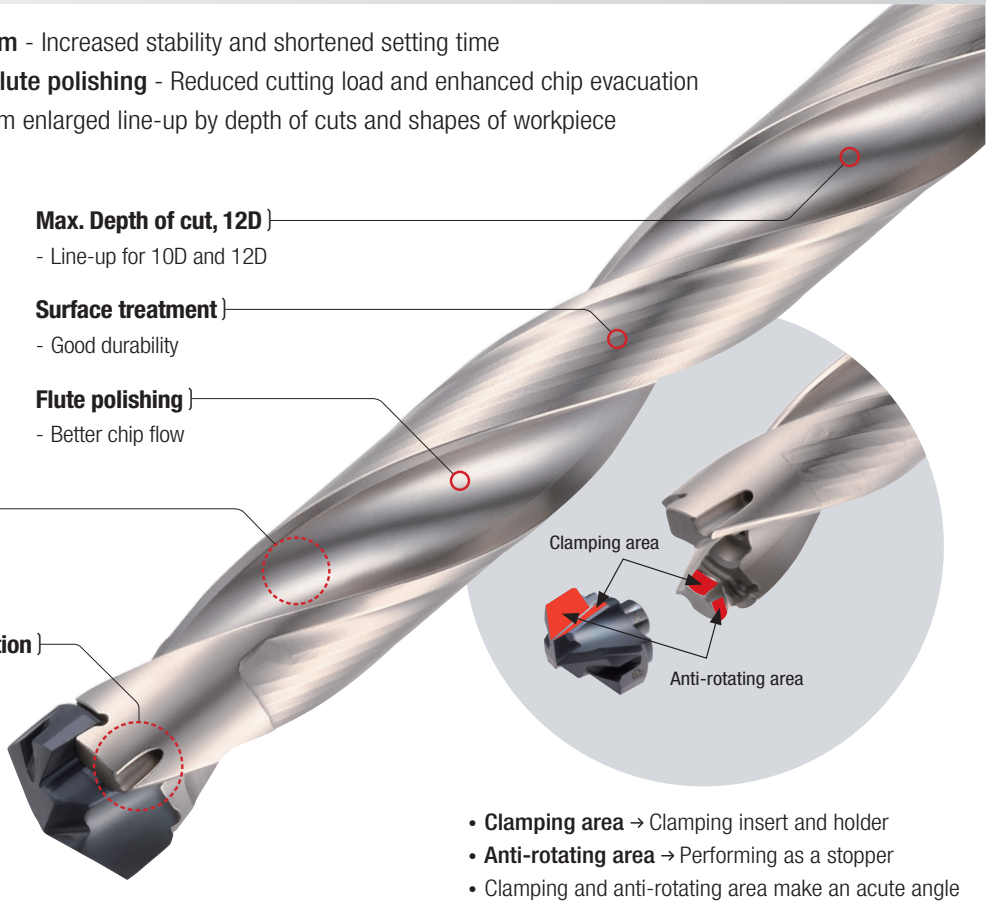
(TPDC-XP, CP, CM, CN, CP-FC)

High quality and high feed top solid indexable Drill

- The optimal tool shape for Drilling enables 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

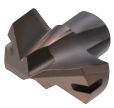
Features

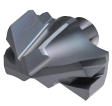
- **One step clamp system** - Increased stability and shortened setting time
- **High helix angle and flute polishing** - Reduced cutting load and enhanced chip evacuation
- Various applications from enlarged line-up by depth of cuts and shapes of workpiece

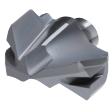


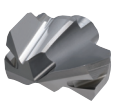
- **Clamping area** → Clamping insert and holder
- **Anti-rotating area** → Performing as a stopper
- Clamping and anti-rotating area make an acute angle to prevent insert rotation while machining.

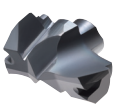
Insert


XP
P


CP
P K


CM
M


CN
N


CP-FC
P

Type

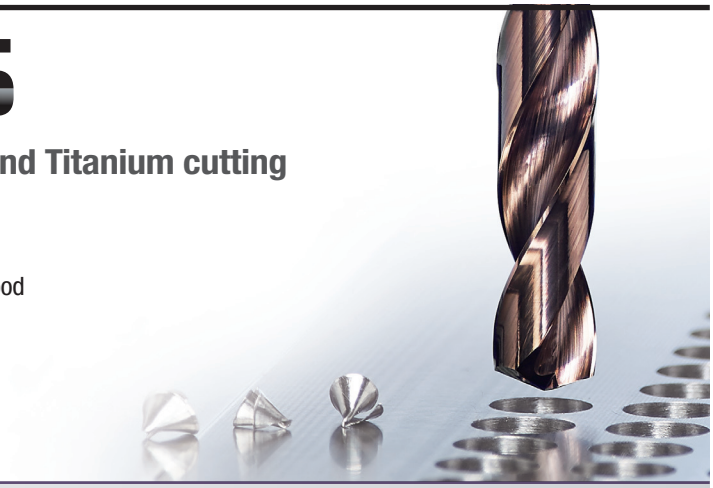

TPDX [3D/5D/8D]
Ø8.0 ~ Ø11.9


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

MSD Plus-S

Mach solid Drill Plus-S for Inconel and Titanium cutting

- Optimal cutting shape and chip pocket to enhance machining stability
- Increased tool life from applying coating layer with good chipping resistance at high temperature



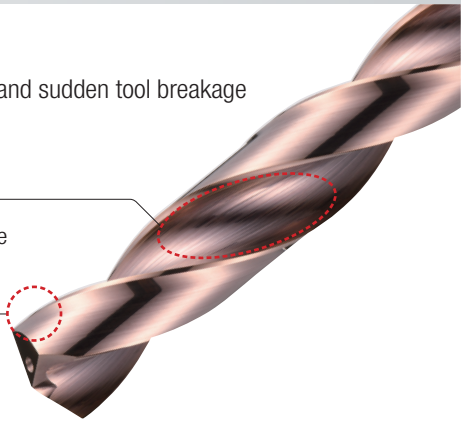
Features

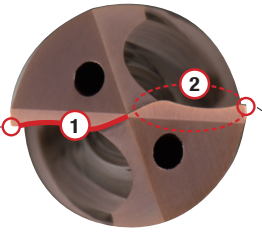
3D, 5D

- 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





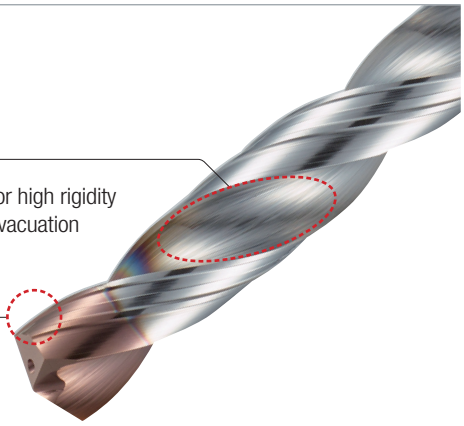
Cutting-edge design
- Notch-controlled blade design and specially treated cutting edges prevent chipping and breakage
  ① Cutting edges designed for low cutting resistance
  ② Tip relief angle and shape optimized for heat evacuation

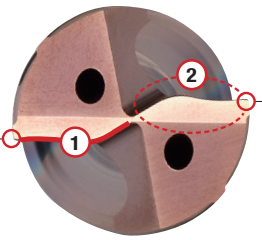
8D, 10D

- Enhancing chip evacuation and preventing fracture of tool from proper design of flute for deep hole drilling

Optimal margin and back-tapered design
- Reduced friction resistance and cutting temperature
- Implemented double margin to increase the machining stability

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

Super Endmill for Ti for HRSA

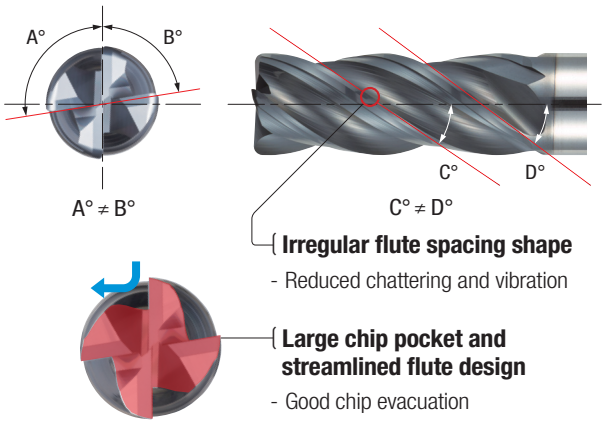
Endmills series for hard-to-cut materials (Ti and HRSA)

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

Features

Super Endmill for Ti

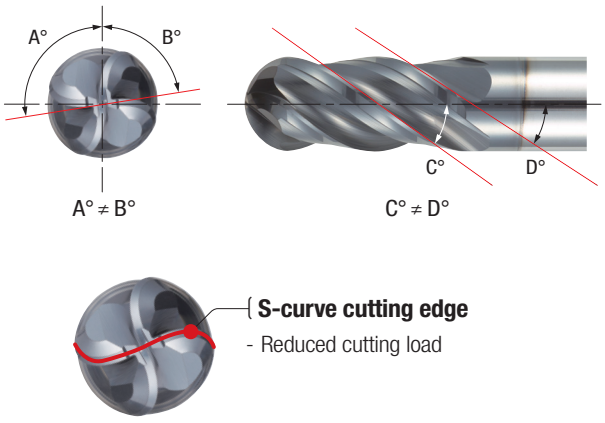
• SFET (Flat) / SRET (Radius)



Irregular flute spacing shape
- Reduced chattering and vibration

Large chip pocket and streamlined flute design
- Good chip evacuation

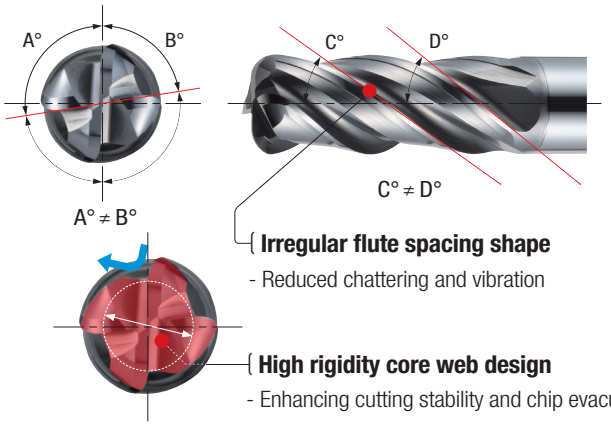
• SBET (Ball)



S-curve cutting edge
- Reduced cutting load

Super Endmill for HRSA

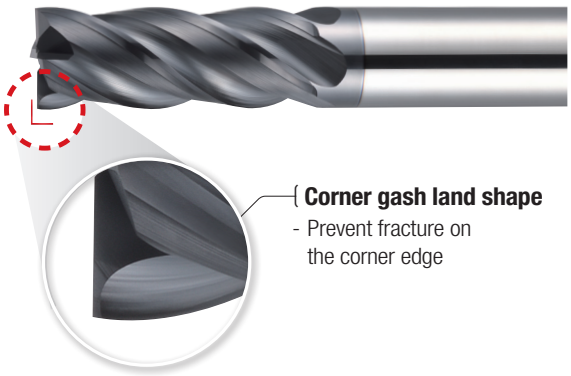
• SRES4000 (Radius)



Irregular flute spacing shape
- Reduced chattering and vibration

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

• SFES4000 (Flat)



Corner gash land shape
- Prevent fracture on the corner edge

Type

(For Ti)

Flat
Ø3.0 ~ Ø20.0

Radius
Ø3.0 ~ Ø20.0

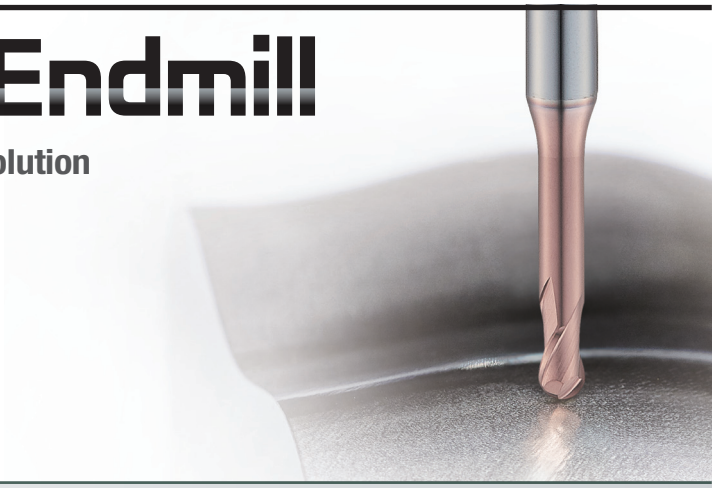
Ball
Ø1.0 ~ Ø12.0

(For HRSA)

Flat
Ø3.0 ~ Ø20.0

Radius
Ø3.0 ~ Ø20.0

The Mirror Endmill



High precision mold manufacture solution

- 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

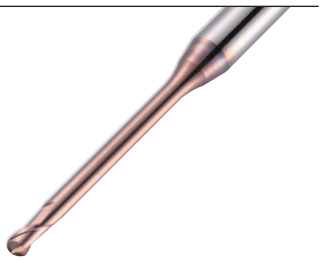
- Higher productivity and surface finish in high speed cutting
- Enhanced wear resistance due to the optimal cBN grade
- Longer tool life by shape with strong cutting edge
- Stable tool life and surface from high precision Endmill

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

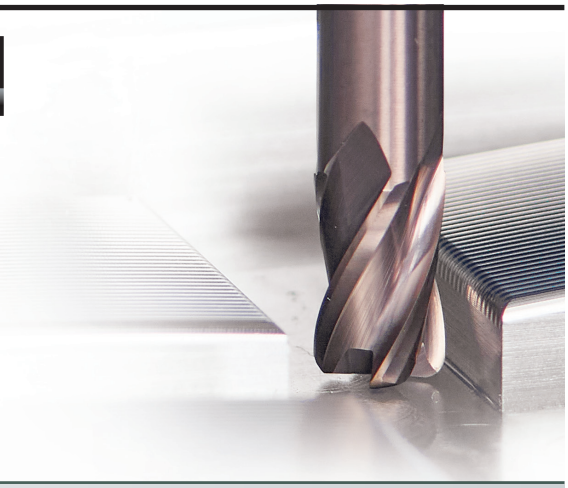
Radius [cBN]
Ø0.4 ~ Ø2.0

Long neck ball [H-Star]
Ø0.1 ~ Ø5.0

H-Star Endmill

Endmill for High hardness Steel cutting

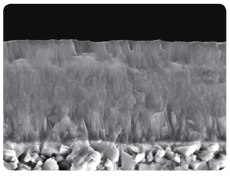
- Stable cutting from High hardness substrate and exclusive new coating layer with good wear resistance application
- Improved initial chipping resistance with optimized edge treatment for high hardness Steel cutting



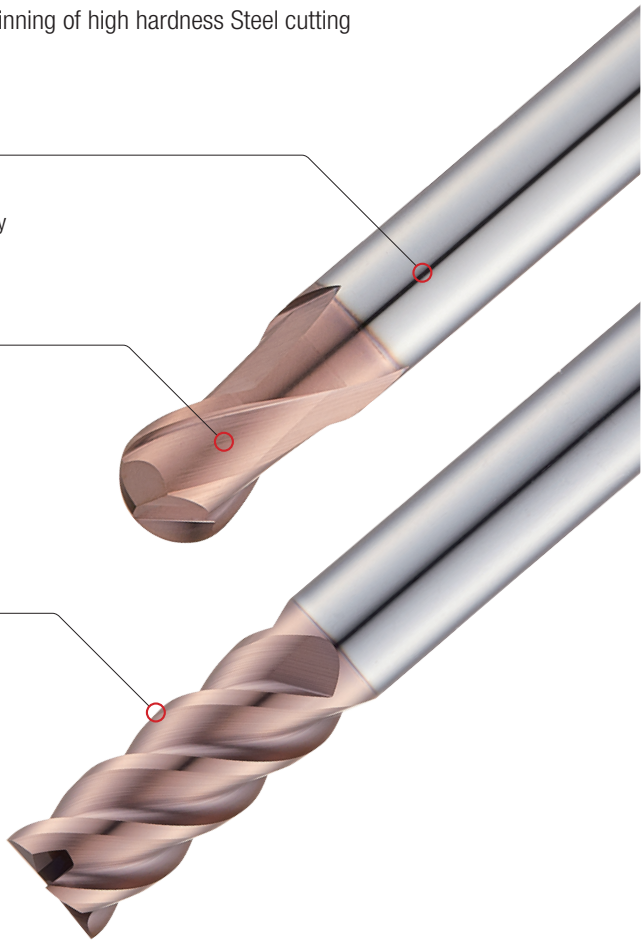
Features

- **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

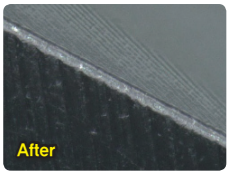
High hardness substrate
- Ultra-fine WC+Co 9%
- Expanded general application range by maximizing cutting edge feature

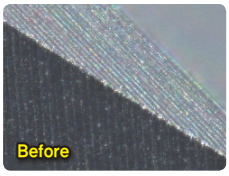


High hardness coating layer
- High Si content
- Enhanced wear resistance
- Stable cutting through frictional heat resistance increase



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

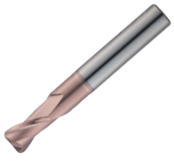




Type

Ball
Ø0.1 ~ Ø12.0

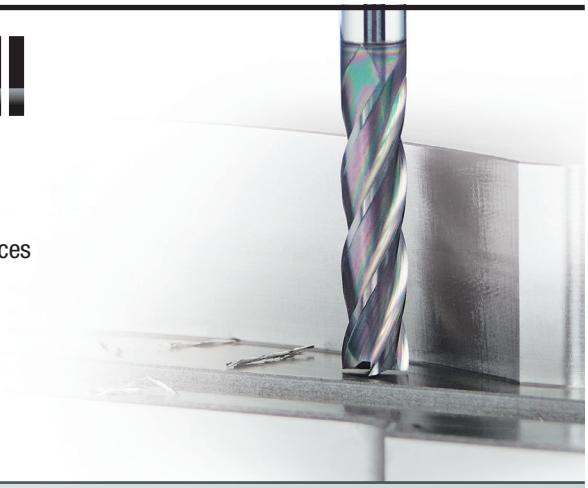
Flat
Ø0.1 ~ Ø20.0



Radius
Ø1.0 ~ Ø20.0

High feed
Ø3.0 ~ Ø12.0

U-Star Endmill



General use Endmill for Medium hardness and Alloy steel cutting

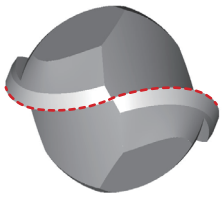
- Wide line-ups for cutting various and complicated shaped workpieces
- Long tool life due to new coating and optimal substrate for cutting

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 tolerance of h5 shank, flute and radius

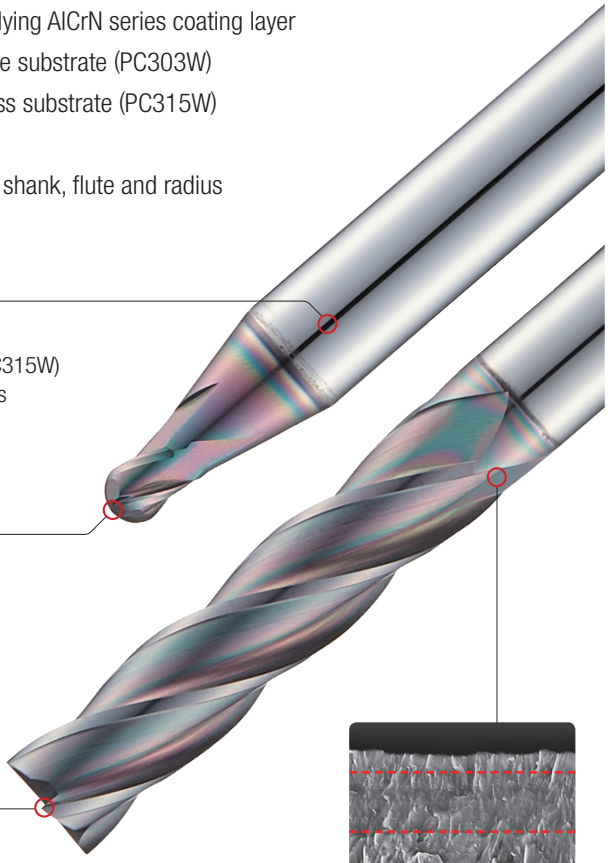
Applying substrate for medium hardness Steel cutting

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



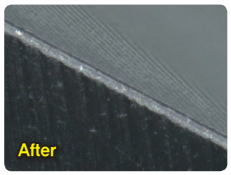
Applying S-curved gash shape

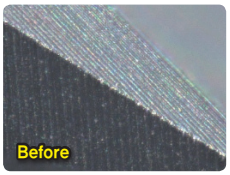
- Increased cutting performance and wear resistance due to dispersing cutting force

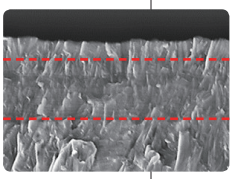


Edge treatment

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



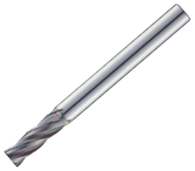




AlCrN base new coating

- Through Multi-layer coating, increased in wear resistance and oxidation resistance
- Enhanced lubrication with Cr containing
- Stability against the frictional resistance when cutting

Type



Flat
Ø0.1 ~ Ø25.0

Radius
Ø0.2 ~ Ø20.0

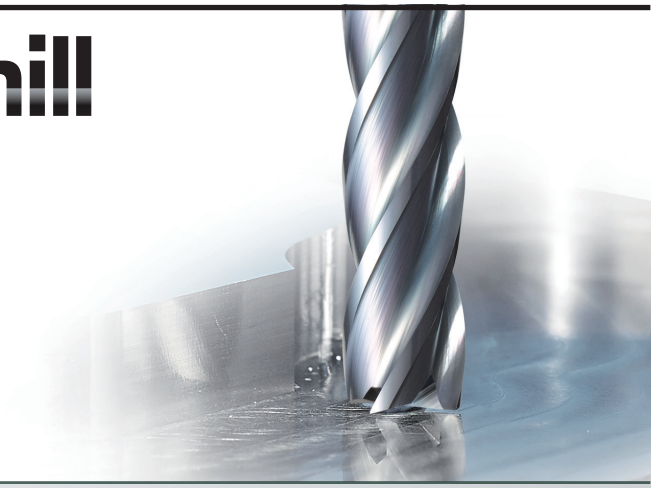
Ball
Ø0.1 ~ Ø25.0

Roughing
Ø3.0 ~ Ø25.0

G-Star Endmill

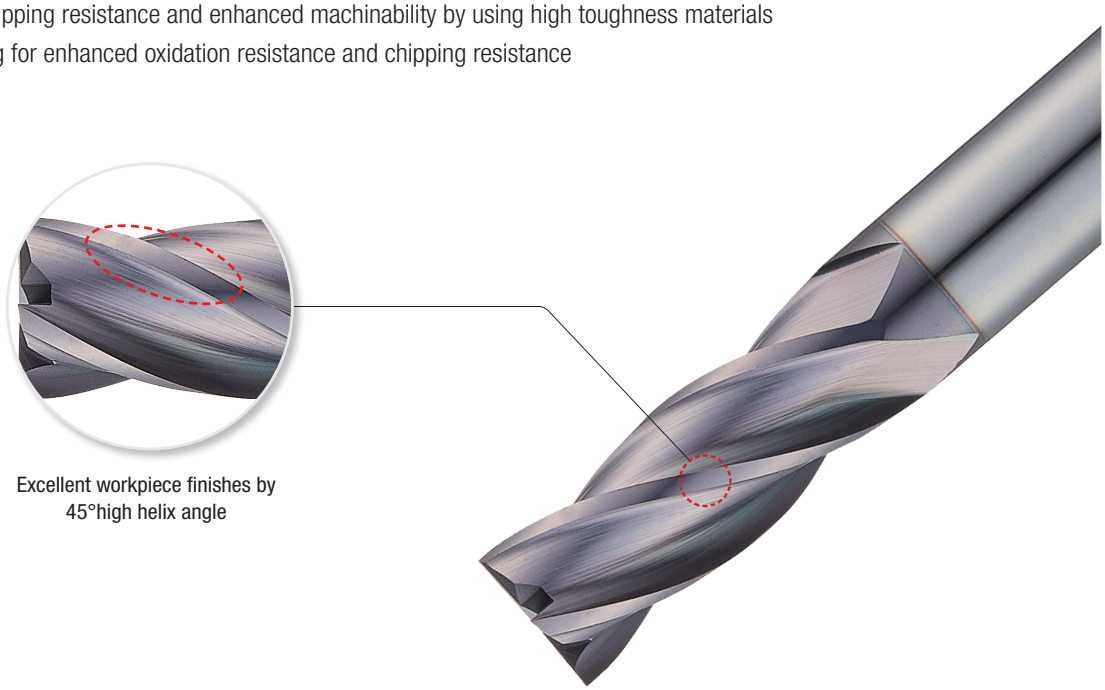
Endmill for Low hardness

- Suitable for low hardness Steel (HRC10~30) : Alloy steel, Carbon steel, Pre-harden steel etc.
- General purpose suitable for rough machining, finishing and curved and sloped surfaces



Features

- Excellent rake angle and cutting edge considered the characteristics of workpiece
- Improved chipping resistance and enhanced machinability by using high toughness materials
- TiAlN coating for enhanced oxidation resistance and chipping resistance

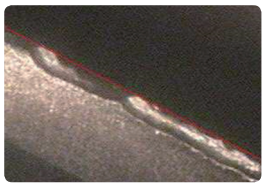


Excellent workpiece finishes by 45°high helix angle

Performance evaluation

Workpiece	Carbon steel (STC3)
Cutting condition	vc (m/min) = 140, fz (mm/t) = 0.02, ap (mm) = 10.0
	ae (mm) = 0.4, dry
Tool	ZE304100P (Diameter = Ø10 mm)

[G-Star Endmill]



[Competitor]

Type

Flat
Ø1.0 ~ Ø20.0

Radius
Ø3.0 ~ Ø12.0

Ball
Ø1.0 ~ Ø20.0

A-Star Endmill

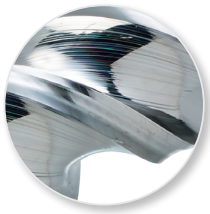
Endmill for Aluminum machining

- 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

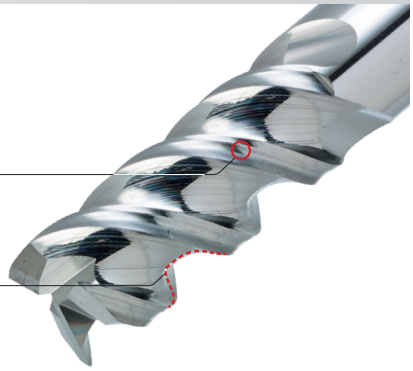
APFE

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



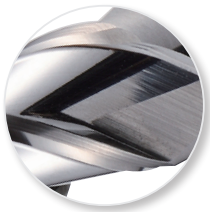
U-shaped flutes with mirror-like finishing
- Efficient chip evacuation through wide chip pockets
- Inhibited build-up edges due to mirror-like finishing

Sharp cutting edges and double relief angles
- Reduced cutting force
- Inhibited tool breakage due to reinforced cutting edges



AFE

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



Mirror-like flute surface
- Inhibited chip welding
- Reduced cutting force due to less build-up edges

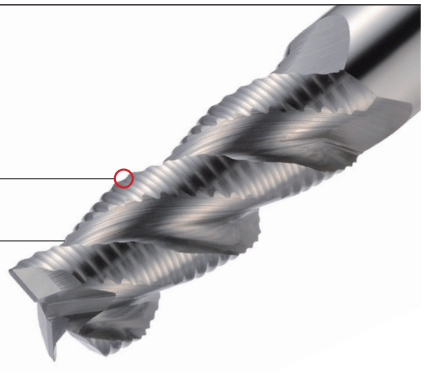
Sharp cutting edges
- Long tool life and improved cost efficiency
- Reduced cutting force

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

S-Star Endmill

Endmill for Stainless steel machining

- Suitable for difficult to cut material such as STS, Ti, Ni and Inconel
- New coatings with high oxidation resistance and surface hardness
- Advanced surface roughness with improved chip emission and deposition resistance

Features

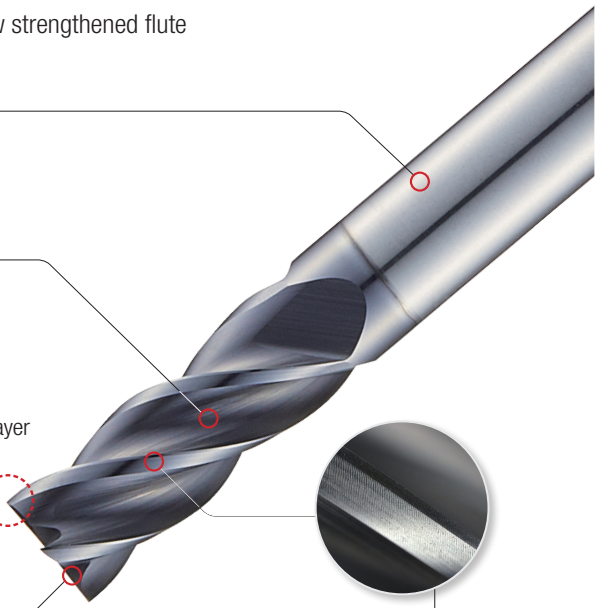
- Stable high speed processing with minimum vibration, unequal index and optimal rake angle
- High processability and low vibration by applying unequal index in cutting edge
- Minimum vibration through optimized helix angle and R gash, enhanced chip emission with stiffness supplementation
- Reduced friction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

Applying high toughness substrate

- Chipping resistance and stable cutting from applying high toughness substrate

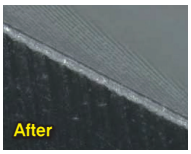
Applying different width and size of AlCrN based layer

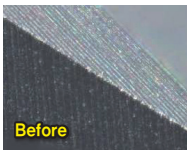
- Applying multi layers
- Increased lubrication due to containing Cr
- Ensured stability against frictional heat
- Secured wear resistance from thicker coating layer



Cutting edge treatment

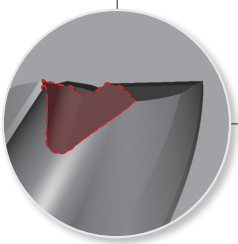
- Improved chipping resistance in the beginning of cutting
- Better wear resistance and stable cutting
- High quality of product from cutting edge treatment stabilization





Additional finishing edge

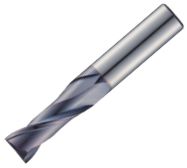
- Enhanced surface finish due to increased 1st O.D grinding roughness
- High quality cutting edge and good welding resistance



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

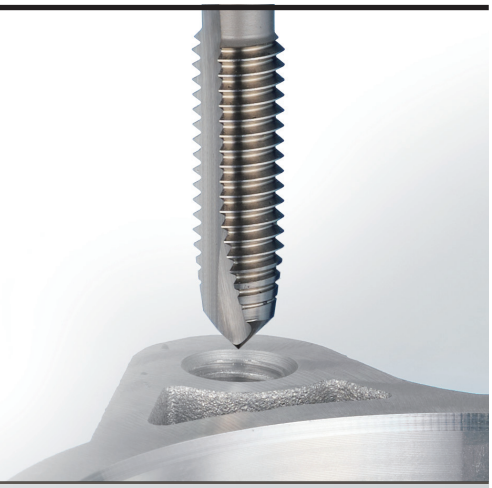
Ball
Ø1.0 ~ Ø20.0

Roughing
Ø3.0 ~ Ø20.0

Tap-Star

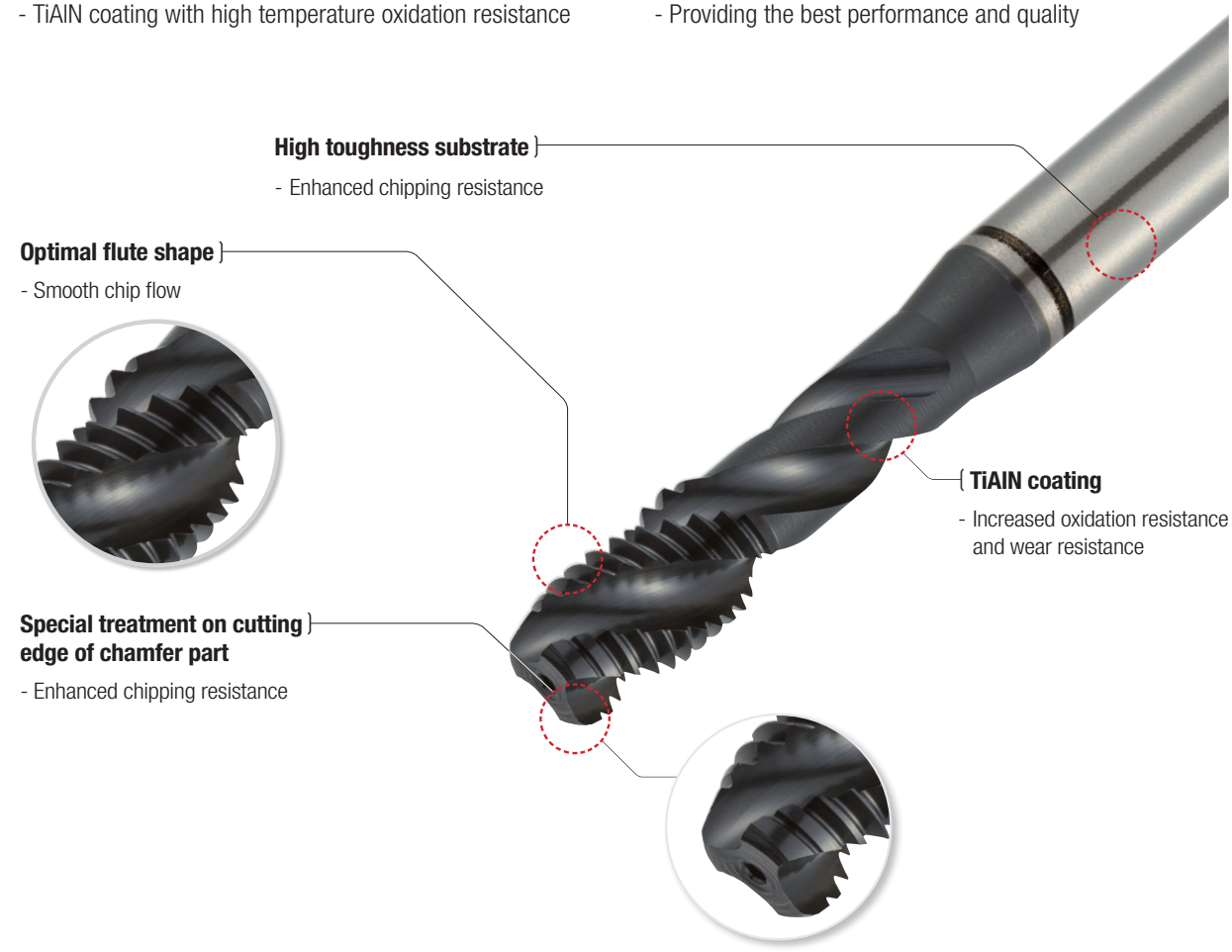
High preformance threading Tap

- 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	Spiral point Tap	Straight flute Tap	Roll Tap	Spiral roll Tap
DIN : M2 ~ M24 JIS : M2 ~ M24	DIN : M2 ~ M24 JIS : M2 ~ M24	DIN : M3 ~ M24 JIS : M3 ~ M24	DIN : M3 ~ M12 JIS : M3 ~ M12	JIS : M3 ~ M6

KORLOY Highlight Product _ **IMTEX**

⚠ 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 inserts can be pulled out due to centrifugal force while high speed machining.

KORLOY

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