KORLOY *Strong*

PROMO 2020

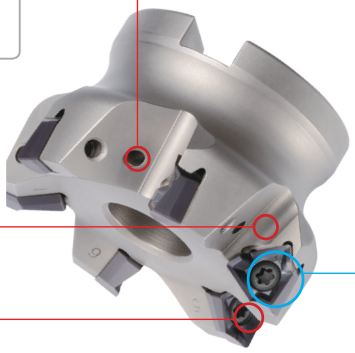
RM3

GET 1 FREE CUTTER

- Buy 10 Inserts per Pocket, Get 1 Free Cutter
- 1.00", 2.00", 3.00" and 4.00" ONLY

● Features of Cutter

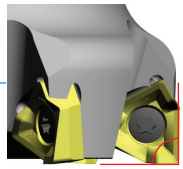
Through coolant system
• Longer tool life due to direct cooling injection into the cutting-edge of insert



Excellent chip evacuation

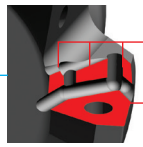
Wide chip pocket

Simple Screw-on system



Perfect perpendicularity

90°



3-face clamping seat

Full flat bottom seat

Strong clamping

*** (End-user) Drop-shipment ONLY**
*** Limited to Six (6) Free Cutters per End User**
*** Limited to US or Korea Stock Standard Holders and Inserts**

Multi Functional Shoulder Milling Tool for Higher Productivity

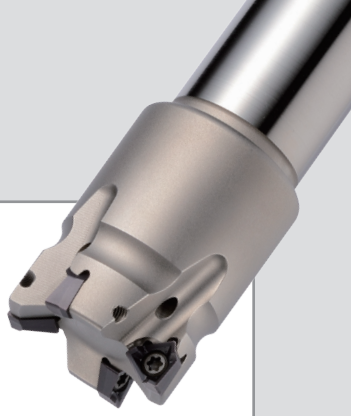
- **High Quality** - True 90° shouldering operation
- **High Productivity** - Strong thick insert and 3-face clamping ensure stable operation even tough condition
- **High Economics** - Long tool life due to optimized manufacturing process

KORLOY AMERICA

620 Maple Avenue, Torrance, CA 90503, USA
Tel : 310-782-3800 Toll free : 888-711-0001 Fax : 310-782-3885
www.korloyamerica.com E-mail : sales@korloy.us

Promotion Validity :
From February ~ August 2020

KORLOY PROMO 2020 - GET 1 FREE CUTTER

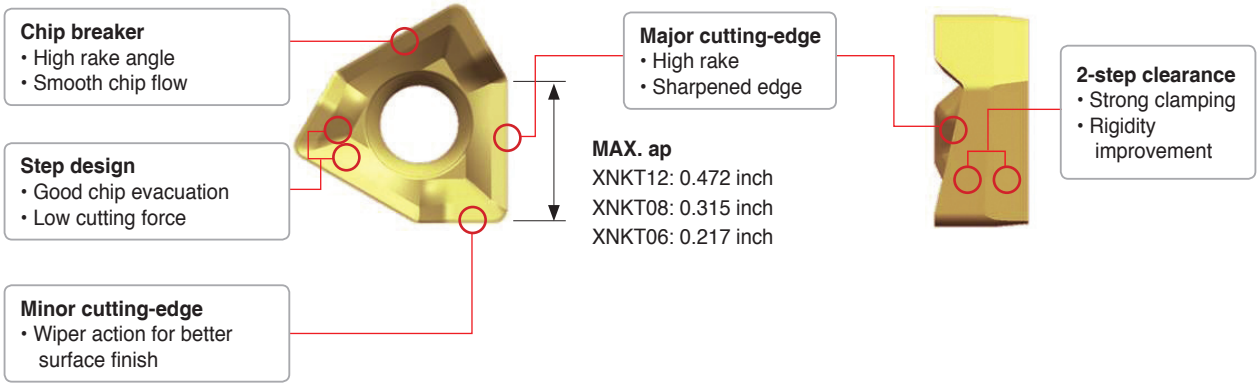


Rich Mill series is one of innovations that provides more available cutting-edges by double-sided insert and longer tool life for our customers

RM3

- Optimal shape for shouldering - True perpendicularity after shouldering
- Negative rake surface and wide bottom clamping area - Stable machining even at advantages high speed & high feed
- High rake chip breaker & cutting edge - Low cutting resistance for high speed and feed milling

●Features of Insert



●Features of Insert

Insert		Cutting-edge	Features
Aluminum **MA**			• Superior cutting quality for aluminum due to sharp cutting-edge and buffed surface
Light **ML**			• Superior cutting quality for light and light cutting, difficult-to-cut material machining through the low cutting load of chip breaker
General **MM**			• Suitable for various cutting due to special shape design for general cutting

●Applicatio n gudeline for grade

Workpiece		P		M	K	N
		Carbon steel	Alloy steel	Stainless steel	Cast iron	Aluminum
Chip breaker	First choice	MM	MM	ML	ML	MA
	Second choice	ML	ML	-	MM	-
Grades	High speed machining	PC3600	PC3600	PC5300	PC6510	H01
	General machining	PC5400	PC5300	PC5400	PC5300	
	Interrupted machining	PC5400	PC5400	PC5400	PC5400	

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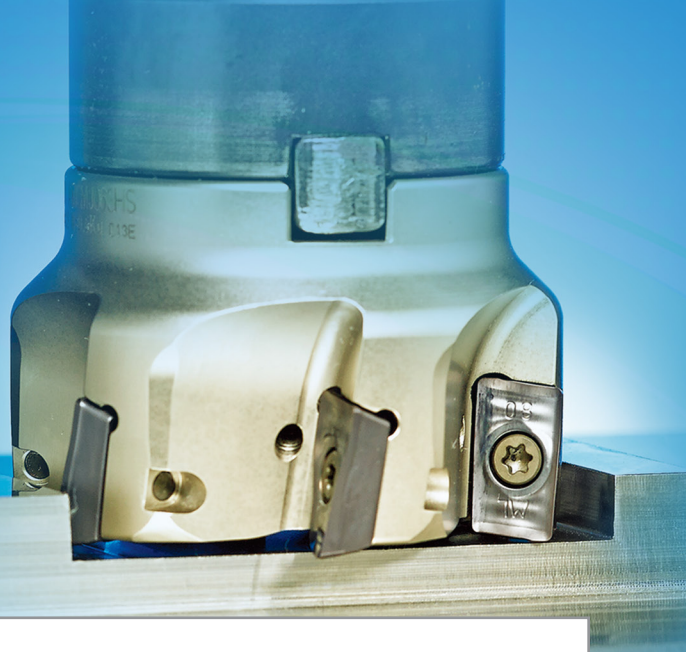
PROMO 2020

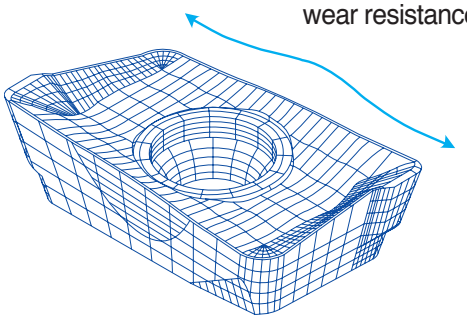
APMT INSERTS
BUY 30 GET 10 FREE



- Buy 30 PCS APMT Inserts,
  Get 10 PCS FREE APMT Inserts

Features of Inserts

- Long tool life at high speed, high feed and deeper cutting by low cutting resistance and strong cutting-edge
- Distinguished features of Alpha-Curve reduce cutting resistance and improve cutting-edge strength and wear resistance



- Low cutting resistance is realized by KORLOY unique design-the alpha curve cutting-edge and optimal convex and concave design
- Highly efficient machining is available by the ideal application of the grade to material

*** (End-user) Drop-shipment ONLY**
*** Limited to 100 Free Inserts per End User**
*** Offer Limited to US or Korea Stock Inserts Only**

High Performance Shoulder Milling and Low Cutting Forces

- **High Quality** - True perpendicular shouldering
- **Versatility**- Multi-operational cutter for most applications (deep shoulder milling, plunge milling, linear ramping, etc.)
- **High Productivity**- Robust body and optimized cutting edge design for reduced cutting resistance at high depths of cut

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KORLOY PROMO 2020 - APMT Inserts (Buy 30, Get 10 Free)

Features of Chip Breakers

Type	Chip breaker	Cutting-edge	Features
Al	**MA**		• Optimal cutting-edge and buffed surface for aluminum workpieces ensure high performance in machining
Hard-to-cut material	**ML**		• Chip breaker with low cutting load is optimal for machining hard-to-cut materials
Light cutting	**MF**		• Chip breaker with low cutting load and harder cutting-edge than ML's are optimal for light cutting
General cutting	**MM**		• Optimal for milling in general ranges

Product Constitution

Item description	Type	Nose R	MA	ML
APMT	**1000 type**	0.016	APMT0602PDFR-MA	-
		0.031	APMT060208PDFR-MA	-
	1500 type	0.016	APMT0903PDFR-MA	APMT0903PDER-ML
		0.031	APMT090308PDFR-MA	APMT090308PDER-ML
	2000 type	0.020	APMT11T3PDFR-MA	APMT11T3PDER-ML
		0.031	APMT11T308PDFR-MA	APMT11T308PDER-ML
	3000 type	0.016	APMT160404PDFR-MA	APMT160404PDER-ML
		0.031	APMT1604PDFR-MA	APMT1604PDER-ML
	4000 type	0.016	APMT180604PDFR-MA	APMT180604PDER-ML
		0.031	APMT1806PDFR-MA	APMT1806PDER-ML
		0.047	APMT180612PDFR-MA	APMT180612PDER-ML
		0.063	APMT180616PDFR-MA	APMT180616PDER-ML
		0.079	APMT180620PDFR-MA	APMT180620PDER-ML
		0.094	APMT180624PDFR-MA	APMT180624PDER-ML
		0.118	APMT180630R-MA	APMT180630R-ML

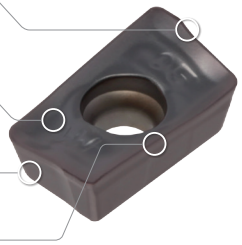
- The inserts can switch to the APMT type holders.

Concave shape
- Minimum interference for better chip control

Chip breaker
- High angle of inclination, increased hardness, and enlarged chip pocket with convex and concave shapes

The side
- All positive shaped sides to minimize interference

Main cutting edge
- High rake angle
- Decreasing cutting resistance
- Sharp cutting edge



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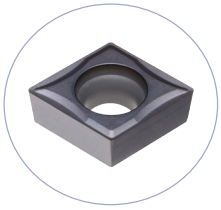
PROMO 2020

PC8100, NC9100, NC3200
BUY 20 GET 10 FREE

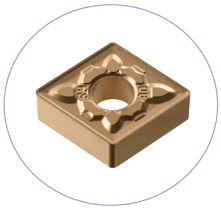
- PC8100 Series for Heat Resistant Alloys
- NC9100 Series for Stainless Steels
- NC3200 Series for Forged and Bearing Steels

●PC8105 / PC8110 / PC8115 - A Solution for Machining Hard-to-cut Materials



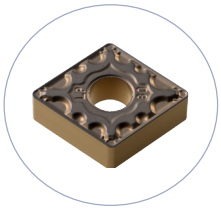
- **Stable tool life :** Higher productivity
- **Longer tool life and high removal rate :** Possible and shortened cutting time
- **Perfect harmony between grades and chip breakers :** Increased tool life & Various operation range such as finishing and roughing
- **Proper to machine heat resistant alloy and stainless steel**

●NC9115 / NC9125 / NC9135 - CVD Coated Turning Insert for Stainless Steel



- **Solving the four main issues in stainless steel machining :** Prevents built-up edge, notch wear, plastic deformation, and burrs
- **Stable tool life at high speeds, feeds, and depths of cut**
- **Ideal combination of grade and chip breaker**
- **Versatile applications for different workpiece materials**

●NC3215 / NC3225 - Grade for All Applications of Steel



- **Stable tool life :** More stable production
- **Longer tool life & higher removal rate :** Makes cutting condition higher, faster and shortens cutting time
- **Good balance of grade and chip breaker :** Longer tool life & Wide range of application
- **Applicable to various automobile components with forged steel, bearing steel, etc.**

*** (End-user) Drop-shipment ONLY**
*** Limited to 100 Free Inserts per End User on 4 and 5 Series Insert**
*** 6 Series limited to 50 Free Inserts per End User**
*** Offer limited to US or Korea Stock Inserts Only 4/5/6 Series Only**
*** Must Purchase 20 of Single Grade and Receive 10 Free of Same Grade**

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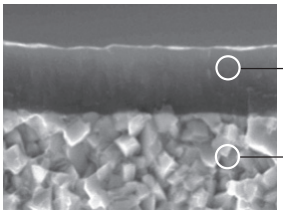
Promotion Validity :
From February ~ August 2020

KORLOY PROMO 2020 - PC8100, NC9100 & NC3200 Series

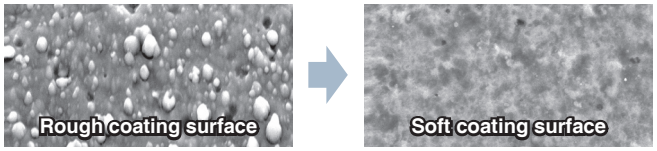
● Features of PC8100 Series



It prevents wear at a high temperature to apply excellent surface roughness and coating with oxidation resistance and high hardness

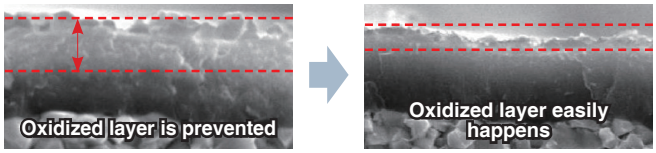
It improves wear resistance to equalize submicron matrix, secure stability between corners and improve chipping and wear resistance

Coating surface treatment technology



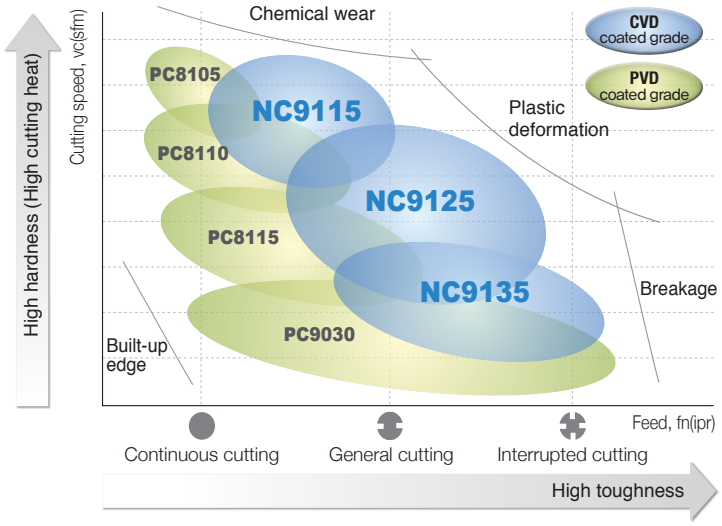
Conventional coating — Improved lubrication — **PC8100 Series**

Oxidation resistant coating technology (Heat-treated at 900°C)



Competitor — Improved oxidation resistance — **PC8100 Series**

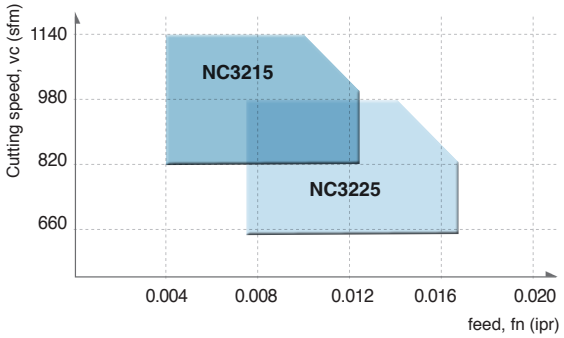
● NC9100 Series Grade Lineup & Chip Removal Volume per Cutting Speed

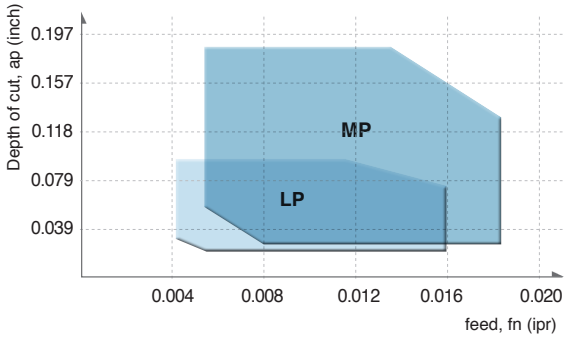


Grade	ISO	Cutting speed (sfm)	Chip removal volume(in3)
NC9135	M35	**492**	12.9
PVD coated grade	M30		15.6
Competitor	M35		7.7
NC9135	M35	**656**	7.7
PVD coated grade	M30		3.4
Competitor	M35		4.0

- Higher productivity than PVD grades at high speeds over 150m/min

● NC3215 / NC3225 Application Range





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PROMO 2020

TPDB

3D, 5D & 8D Drills

FREE DRILL BODY

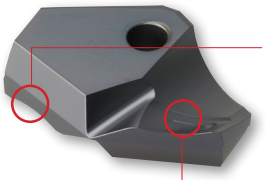
- With the Purchase of 3 tips (3D & 5D only)
- With the Purchase of 5 tips (8D only)

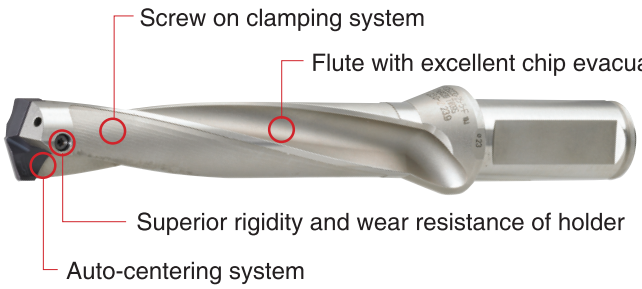
OR

BUY2 GET1 FREE

- Buy 2 Drill Bodies, Get the Third Body Free

Features





*** (End-user) Drop-shipment ONLY**
*** Limited to US or Korea Stock Drills and Inserts**
*** Limited to 6 Free Drill Bodies**

Indexable Drill for High Precision and High Efficiency

- Excellent Surface Finish
- Screw-on Clamping System
- High Precision Clamping System
- For Combined Precision and Productivity

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KORLOY PROMO 2020 - Free Drill Body or Buy 2 Get 1 Free

High Precision and High Productivity Indexable Drill

TPDB Top Solid Piercing Drill Brade

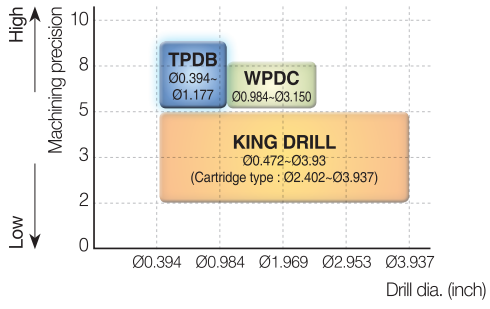
- **High precision clamping system** - High precision grinding and superior clamping precision with auto-centering system
- **Holder with excellent durability** - Holder with high rigidity and superb wear resistance due to special surface treatment
- **Sharp cutting edge** - Improved chip evacuation, low cutting load, longer tool life with ultra-fine substrate and exclusive coating layer
- **Screw on clamping system** - Easy clamping system of TPDB insert

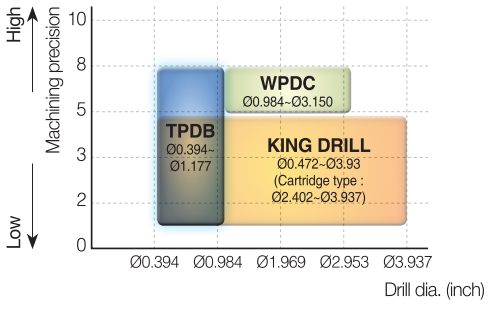
● Recommended Cutting Condition

Workpiece				Grade	vc	Depth of cut = 3D~5D Feed rate (ipr) per drill dia. (inch)		
ISO		Workpiece	HB		sfm	Ø0.3937~Ø0.6260	Ø0.6300~Ø0.9803	Ø0.9843~Ø1.1772
P	Carbon steel	Low carbon steel	80~120	PC5300, PC5335	365 (265~464)	0.0059~0.0118	0.0079~0.0138	0.0098~0.0157
		High carbon steel	180~280	PC5300, PC5335	332 (232~431)	0.0059~0.0118	0.0079~0.0138	0.0098~0.0157
	Alloy steel	Low alloy steel	140~260	PC5300	365 (265~464)	0.0071~0.0138	0.0091~0.015	0.0110~0.0169
		Low pre-hardened steel	200~400	PC5300	249 (166~332)	0.0071~0.0138.	0.0091~0.015	0.0110~0.0169
		High alloy steel	260~320	PC5300	232 (166~298)	0.0071~0.0118	0.0079~0.0138	0.0098~0.0157
		High pre-hardened steel	300~450	PC5300	199 (133~265)	0.0071~0.0118	0.0079~0.0138	0.0098~0.0157
M	Stainless steel	Austenite series	135~275	PC5300	166 (99~232)	0.0051~0.0098	0.0059~0.0118	0.0067~0.0130
		Ferrite series Martensite series	13~275	PC5300	182 (133~232)	0.0051~0.0098	0.0059~0.0118	0.0067~0.0130
K	Cast iron	Gray cast iron	150~230	PC5300	365 (265~464)	0.0071~0.0138	0.0079~0.0157	0.0098~0.0177
		Ductile cast iron	160~260	PC5300	332 (232~431)	0.0071~00.0138	0.0079~0.0157	0.0098~0.0177
S	Heat resisting steel	Ni-heat resisting alloy	130~400	PC5300	133 (66~199)	0.0039~0.0079	0.0047~0.0087	0.0051~0.0098
		Ti-heat resisting alloy	130~400	PC5300	133 (66~199)	0.0039~0.0079	0.0047~0.0087	0.0051~0.0098
		High-hardened steel	Over 400	PC5300	116 (66~166)	0.0039~0.0079	0.0047~0.0087	0.0051~0.0098

- In case of 8D, reduce the cutting conditions to 40~50% or machine the beginning of hole first.(1.5D)
- In case of interrupted machining, reduce the feed to 30~50% machining around the interrupted part

● Application Range





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PROMO 2020

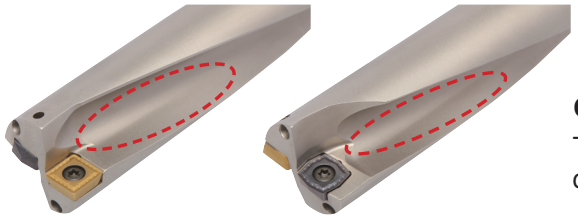
KING DRILL

FREE DRILL BODY

- With Purchase of 40 Inserts up to 1.00 Inch
- With Purchase of 60 Inserts up to 2.00 Inch

● Features

- 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



Optimized flute system - 2 coolant holes applied

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

*** (End-user) Drop-shipment ONLY**
*** Limited to US or Korea Stock Drills and Inserts**
*** Limited to 6 Free Drill Bodies**
*** 5D Over 1" Drills Require 80 Inserts**

High Speed and High Efficiency Indexable Drill

- **Excellent Chip Control** - Highly effective chipbreaker design for hole making applications. Excellent chip control and surface finish due to optimized insert geometries
- **Stable Tool Life** - Optimized balance between cutting edges and grades improves stability of tool life.

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KORLOY PROMO 2020 - FREE DRILL BODY

Optimized insert design for maximum drilling efficiency

KING DRILL

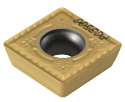
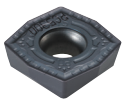
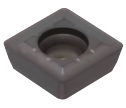
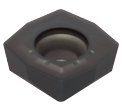
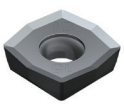
- High performance and improved chip Evacuation

●Recommended Cutting Condition

Workpiece				Insert			vc (sfm)	Depth of cut = 2D, 3D, 4D Fn (ipr) depending on drill Dia. (inch)				
ISO		Workpiece	Hardness (HB)	Chip breaker	Grade			Ø0.47~Ø0.63	Ø0.64~Ø0.91	Ø0.92~Ø1.14	Ø1.15~Ø1.65	Ø1.66~Ø2.36
					Central	Peripheral						
P	Carbon steel	Low carbon steel	80~180	LD	PC5335	PC5335	394 (197~558)	0.0016~0.0031	0.0016~0.0031	0.0016~0.0031	0.0016~0.0031	0.0016~0.0031
				PD/RD	PC5300	PC3500	492 (394~591)					
						NC5330	591 (459~722)					
		High carbon steel	180~280	PD	PC5300	PC3500	394 (295~492)	0.0016~0.0039	0.0016~0.0047	0.002~0.0063	0.0024~0.0063	0.0024~0.0071
						NC5330	492 (361~623)	0.0016~0.0024	0.0016~0.0028	0.0016~0.0031	0.0016~0.0031	0.0016~0.0031
	Alloy steel	Low alloy steel	140~260	LD	PC5335	PC5335	394 (197~525)	0.0024~0.0039	0.0024~0.0039	0.0024~0.0047	0.0024~0.0055	0.0024~0.0055
				PD	PC5300	PC3500	492 (394~558)	0.0024~0.0047	0.0024~0.0047	0.0024~0.0055	0.0024~0.0063	0.0024~0.0063
						NC5330	591 (459~689)	0.0024~0.0031	0.0024~0.0031	0.0024~0.0039	0.0024~0.0047	0.0024~0.0047
		Hardened low alloy steel	200~400	PD	PC5300	PC5300	328 (164~492)	0.0016~0.0039	0.0024~0.0039	0.0024~0.0047	0.0024~0.0055	0.0024~0.0055
		High alloy steel	260~320	PD	PC5300	PC3500	328 (164~525)	0.002~0.0043	0.002~0.0043	0.002~0.0051	0.002~0.0059	0.002~0.0059
		Hardened high alloy steel	300~450	PD	PC5300	PC5300	230 (98~394)	0.0016~0.0031	0.0024~0.0031	0.0024~0.0039	0.0024~0.0047	0.0024~0.0047
M	Stainless steel	Stainless steel	135-275	LD	PD5335	PC5335	394 (262~459)	0.0016~0.0028	0.0016~0.0028	0.0016~0.0028	0.0016~0.0031	0.0016~0.0031
				PD	PC5300	PC5300	427 (328~525)	0.0016~0.0028	0.0016~0.0028	0.0016~0.0028	0.0016~0.0031	0.0016~0.0031
K	Cast iron	Gray cast iron	150~230	PD	PC5300	PC6510	623 (492~820)	0.0016~0.0047	0.002~0.0055	0.0024~0.0071	0.0039~0.0087	0.0039~0.0102
		Ductile cast iron	150~230	PD	PC5300	PC6510	427 (328~525)	0.0016~0.0028	0.0016~0.0031	0.0016~0.0039	0.002~0.0047	0.002~0.0047
S	Heat resisting alloy	Ni-heat resisting alloy	130~400	PD	PC5300	PC5300	164 (98~328)	0.0016~0.0039	0.0016~0.0039	0.0016~0.0039	0.0016~0.0039	0.0016~0.0039
		Ti-heat resisting alloy	130~400	LD	PC5335	PC5335	197 (131~262)	0.0016~0.0031	0.0016~0.0039	0.0024~0.0047	0.0024~0.0055	0.0024~0.0063
				PD	PC5300	PC5300	197 (131~262)	0.0016~0.0031	0.0016~0.0039	0.0024~0.0047	0.0024~0.0055	0.0024~0.0063
		High hardened steel	over 400	PD	PC5300	PC5300	131 (66~262)	0.0016~0.002	0.0016~0.0024	0.0016~0.0031	0.0016~0.0031	0.0016~0.0031
N	Aluminium	Aluminium	30~150	ND	H01	H01	984 (820~1312)	0.0020~0.0055	0.0024~0.0063	0.0039~0.0087	0.0063~0.0039	0.0047~0.0098
		Alloyed copper	150-160	ND	H01	H01	820 (656~984)	0.0020~0.0055	0.0024~0.0063	0.0039~0.0087	0.0063~0.0039	0.0047~0.0098

- The Max. feed of 5D holders is 70%~80% of the max. conditions of 2D/3D/4D holders
- In interrupted machining part, reduce 30~50% of feed from the above machining around interrupted part

●Insert Shape

Chip breaker	PD		LD		ND		RD
Insert	Peripheral insert	Central insert	Peripheral insert	Central insert	Peripheral insert	Central insert	Central insert
Shape							

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