



QUICK-SEARCH
YG-1 PRODUCTS!!
www.yg1.kr



BEST OF SELECTION

HIGH PERFORMANCE PRODUCTS

2022-2023



 YG-1 CO., LTD.



Scan this QR code to see our **V7 Plus Chip Splitters** at work.

HEAVY CUTTING APPLICATIONS (-HRc40)

Y-Coated Solid Carbide End Mills for Heavy Cutting

FEATURES & BENEFITS

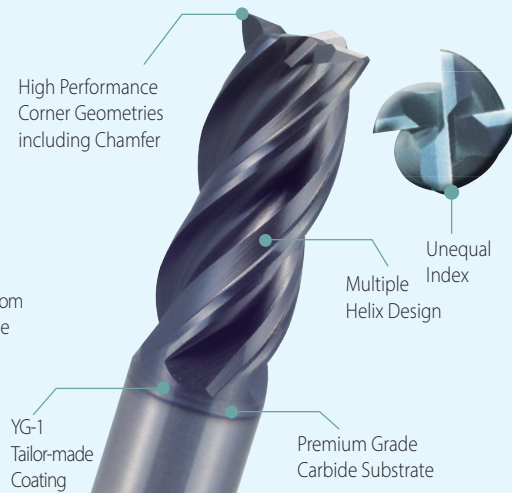
- High volume cutting with excellent surface finish (heavy cutting)
- Excellent on Stainless Steels, Mild Steels and Cast Iron
- Unique flute and corner design for chip formation and longer tool life
- Optimized coating for wear reduction and heat resistance
- Great performance with trochoidal machining

RANGE

- Square \varnothing 3mm - \varnothing 25mm (1/8 - 1")
- Corner Radius \varnothing 3mm - \varnothing 25mm (1/8 - 1")
- Ball Nose \varnothing 3mm - \varnothing 25mm (1/8 - 1")



Chip Splitters
Special Chip Splitter Design
Shorter Chip Length at high axial machining, improving chip removal from both the component and the machine



YG-1 Tailor-made Coating



Scan this QR code to see our **TitaNox Power** at work.

HIGH-SPEED MACHINING FOR EXOTIC MATERIALS

Y-Coated Solid Carbide End Mills for Titanium and other Exotic Materials

Address all your slotting, shoulder milling and ramping applications with the necked 4 flute corner radii series. The extensive 5 fluter offering with corner chamfer and radii is optimized for side milling and trimming

FEATURES & BENEFITS

- For Titanium, Stainless Steels and also excellent for Steels
- For high-speed machining and heavy cutting
- Dual stepped-core on 4 flute, 5 flute with multiple helix

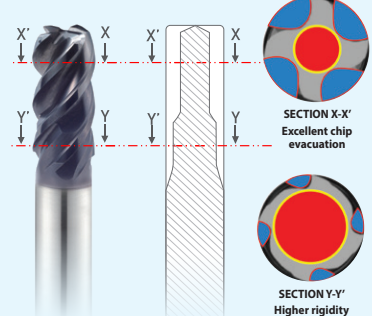
RANGE

- Square \varnothing 6mm - \varnothing 25mm (1/8 - 1-1/4")
- Corner Radius \varnothing 6mm - \varnothing 25mm (1/8 - 1-1/4")
- Roughing \varnothing 6mm - \varnothing 25mm (1/4 - 1")



4 Flute Double Core End Mills With Corner Radius

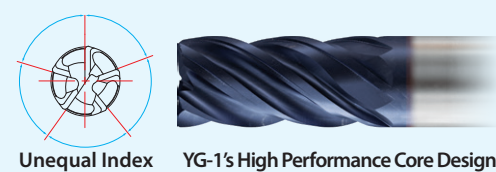
2 STEP CORE



Large Chip Pocket
• Excellent Chip Evacuation.
• Minimizes Chips from Clogging
• Good Performance for Slotting Applications

Thick Core
• Higher Rigidity
• Better Stability Preventing Tool bending
• Good Performance for Shouldering Applications

TitaNox-Power HPC
NEW 5 FLUTE DESIGN for **HEAVY CUTTING**



Scan this QR code to see our **4G Mills** at work.

THE FIRST CHOICE FOR PRE-HARDENED STEELS (-HRc55)

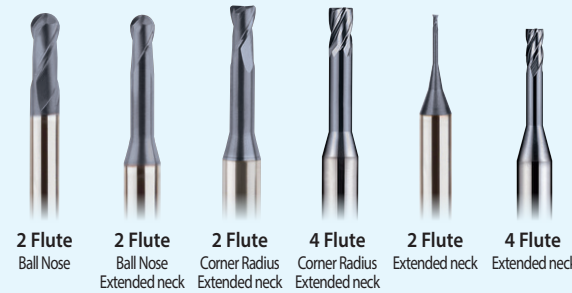
Y-Coated Solid Carbide End Mills for Die & Mold Industries

FEATURES & BENEFITS

- Large product line with various sizes & shapes
- Edge preparation preventing chipping, achieving excellent finish, and longer tool life in high-speed cutting
- Unequal index & multiple helix exclusively designed to reduce vibration and also to achieve excellent chip evacuation

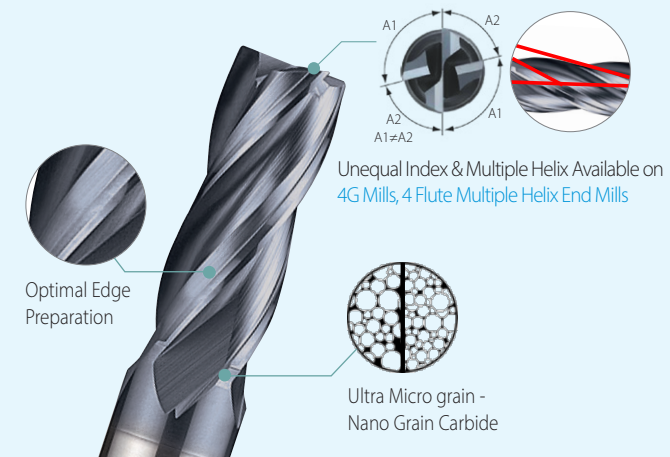
What's New!!

You can find new items with Shank Diameter 6mm and less in these types as below;



RANGE

- Square \varnothing 0.1mm - \varnothing 25mm (.004 - 1")
- Corner Radius \varnothing 0.2mm - \varnothing 20mm (.008 - 3/4")
- Ball Nose \varnothing 0.1mm - \varnothing 25mm (.004 - 3/4")



Scan this QR code to see our **X5070** at work.

FOR HIGH-HARDENED STEELS (HRc50-70)

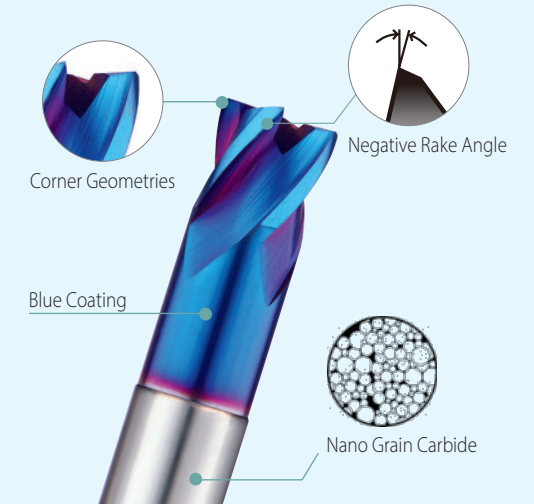
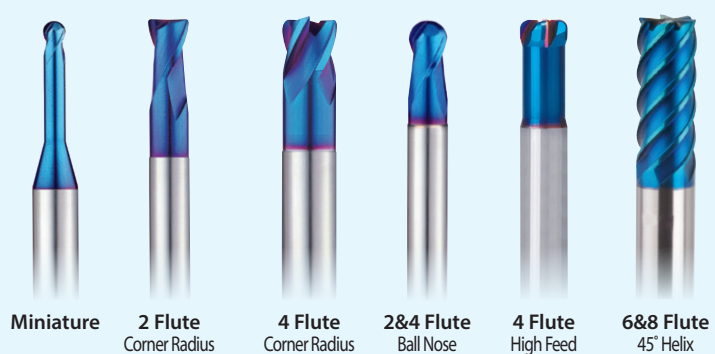
BLUE- Coated Solid Carbide End Mills for High-Hardened Steels

FEATURES & BENEFITS

- Made from premium grade carbide material for oil mist / high-speed machining
- YG-1's customized coating, along with negative rake angles
- Excellent finished surface

RANGE

- Square \varnothing 0.1mm - \varnothing 25mm (.004 - 1")
- Corner Radius \varnothing 0.5mm - \varnothing 20mm (1/16 - 1")
- Ball Nose \varnothing 0.1mm - \varnothing 25mm (1/32 - 1/4")



ALU-POWER HPC

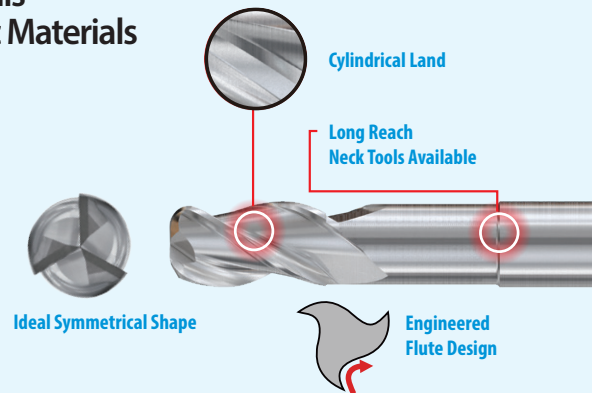
HIGH PERFORMANCE END MILLS FOR ALUMINUM

HIGH FEED, HIGH RPM and HIGH CHIP REMOVAL

DLC-Coated & Non-Coated Solid Carbide End Mills for Aluminum Alloy, Non-Ferrous & Non-Metallic Materials

FEATURES & BENEFITS

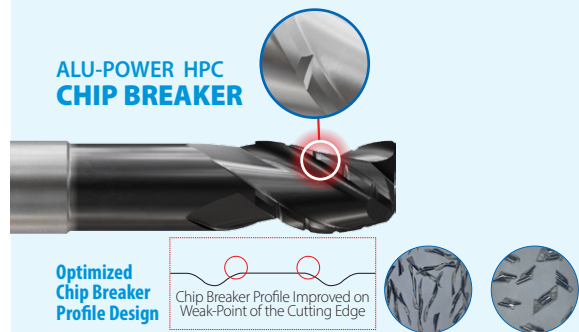
- Designed for Aluminum Alloys used in Aerospace industries
- Special geometries applied to control weight balance for quality performance on higher RPM making an excellent surface finish through stable machining
- High corner protection made from special shape and rake angle inside the radius
- Excellent performance with high feed, high RPM, high chip removal (heavy cutting)



RANGE

※ Available in Non-coated & DLC coated items

TYPE(SERIES)	SIZE RANGE	
	METRIC	INCH
3 Flute Square	Ø 3~25mm	Ø 1/8~1
3 Flute Square with Neck	Ø 6~20mm	Ø 1/4~1
3 Flute Corner Radius	Ø 6~20mm (R0.3~4mm)	Ø 1/8~1 (R.010~.250)
3 Flute Corner Radius with Neck	Ø 6~20mm (R0.3~4mm)	Ø 1/4~1 (R.010~.250)



i-Xmill

HIGH PRECISION CUTTING WITH COST EFFICIENCY

Coated Exchangeable Carbide Inserts with both Carbide & Steel Holders for Various Materials

FEATURES & BENEFITS

- Re-generation(holder) service
- For General Purpose, Pre-Hardened Steels, High-Hardened Steels, Stainless Steels and Graphite
- Ball Nose, Corner Radius, Full Radius and also high feed types available
- Holders available in both Carbide & Steel
- Long tool life with high wear resistance
- Increased precision by tightening the tolerance and grinding the internal Screw hole of holders and Inserts

RANGE

- Ball Ø 8mm - Ø 33mm (5/16 - 1-1/4")
- Corner Radius Ø 8mm - Ø 33mm (5/16 - 1-1/4")



For General Purpose (XMB110A, XMR110A) For Pre-Hardened Steels (XMB120C, XMR120C) For High-Hardened Steels (XMB260T, XMR260T) For Graphite / Diamond Coated (XMB110D, XMR110D) Full Radius (XMM110V) High Feed Insert (XMF110V) For Stainless Steel (XMB130A, XMR110A)



i-SMART

EXCELLENT FLEXIBILITY BY USING COPY MILLING COUPLING

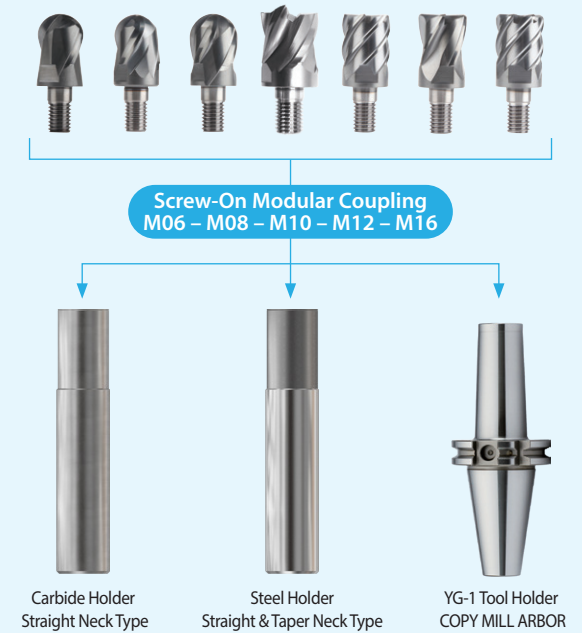
Modular Type, Y-Coated Exchangeable Carbide Milling Heads for machining Pre-Hardened Steels

FEATURES & BENEFITS

- Avoids expensive investments by using existing Copy Milling adaptor technology
- Proven performance transferred to cost effective modular system
- Optimal solution for large size or long reach Die&Mold applications

RANGE

- Square Ø 10mm - Ø 32mm (3/8 - 1-1/4")
- Corner Radius Ø 10mm - Ø 32mm (3/8 - 1-1/4")
- Ball Nose Ø 10mm - Ø 32mm (3/8 - 1-1/4")



COMPOSITE MATERIALS

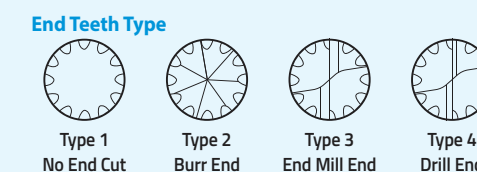
TOOL SOLUTIONS FOR INDUSTRIES

Diamond Coated Chip Breaker Routers

- The unique flute structure provides good surface finish, longer tool life and requires less cutting force
- Reduce delamination and uncut fibers
- Roughing and finishing processes
- Multiple flute
- Diamond coating with excellent abrasion resistance
- Fine nick type

Diamond Coated Compression Routers

- The unique flute structure provides good surface finish, longer tool life and requires less cutting force
- Reduce delamination and fibers pullout
- Roughing and finishing processes
- Diamond coating with excellent abrasion resistance



Solid Carbide Drills

A combination of perfect carbide choice with innovative design and adapted CVD coating make YG-1 CFRP drills a good choice for Composite drilling

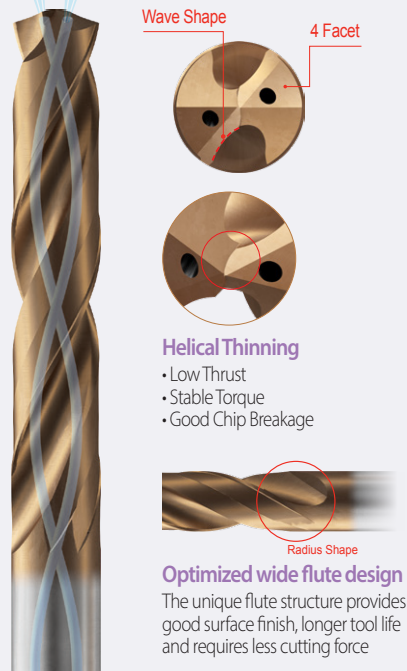


Scan QR Code to See More Tools for COMPOSITE MATERIALS

DREAM DRILLS -PRO

FASTER CUTTING SPEED (HRC30 to HRC50)

Extremely high hardness and heat resistance due to YG-1 special Z-Coating technology

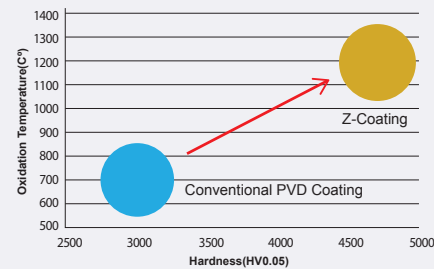


FEATURES & BENEFITS

- Drilling for Carbon Steels, Alloy Steels (HB225-325), Pre-hardened Steels (HRC30~50), Cast Iron
- Wave shape cutting edge to improve chip formation for low cutting force
- Helical thinning for low thrust, stable torque and good chip breakage
- Extremely high hardness and heat resistance due to YG-1 special Z-Coating technology

RANGE

- Ø 1mm - Ø 20mm (.0393"-.7874")
- Drill Depth: 3XD, 5XD



Higher & Improved cutting conditions due to YG-1 Special Z-Coating Technology (YG-1's Unique Silicon Based Coating: Nano-Layer Coating)

- Extremely High Hardness and Heat Resistance



DREAM DRILLS -FLAT BOTTOM

FAST AND STABLE DRILLING FOR A WIDE VARIETY OF APPLICATIONS

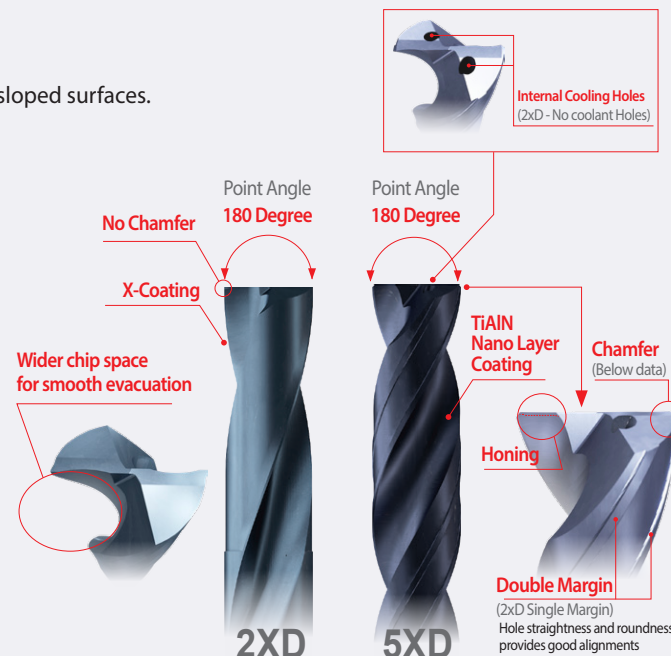
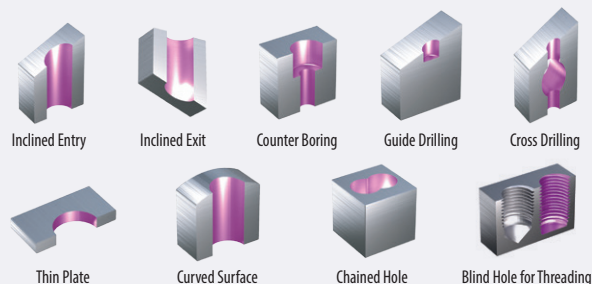
X-Coated(2XD), TiAlN Coated(5XD), Micro Grain Flat Bottom Solid Carbide Drills (180° point angle) for Drilling a Variety of Contoured and Sloped Surfaces

FEATURES & BENEFITS

- 180 degree point angle enables drilling of horizontal and sloped surfaces.
- Excellent chip evacuation by optimized flute shape.
- High strength cutting edge to improve tool life.
- Can be used in a variety of drilling applications.

RANGE

- Ø 3mm - Ø 20mm (.1181"-.7874")
- Drill Depth: 2XD, 5XD



DREAM DRILLS -HIGH FEED

INCREASE YOUR PRODUCTIVITY UP TO 2 TIMES HIGHER

H-Coated 3 Flute Solid Carbide Drills with Coolant Holes for Faster Drilling on Steels and Cast Iron

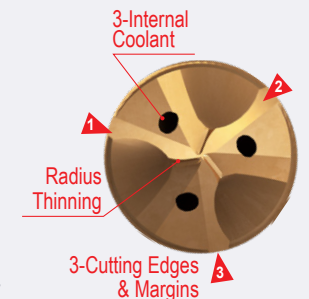
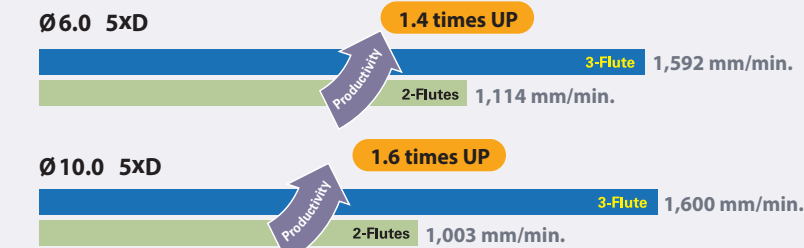
FEATURES & BENEFITS

- For Carbon Steels, Alloy Steels (-HRC35), Cast Iron
- Increases productivity due to 1.5 to 2 times faster feeding speed than 2 flute drills
- Multi-layered coating delivers outstanding productivity and reliability

RANGE

- Ø 5mm - Ø 20mm (.1969"-.7874")
- Drill Depth: 3XD, 5XD

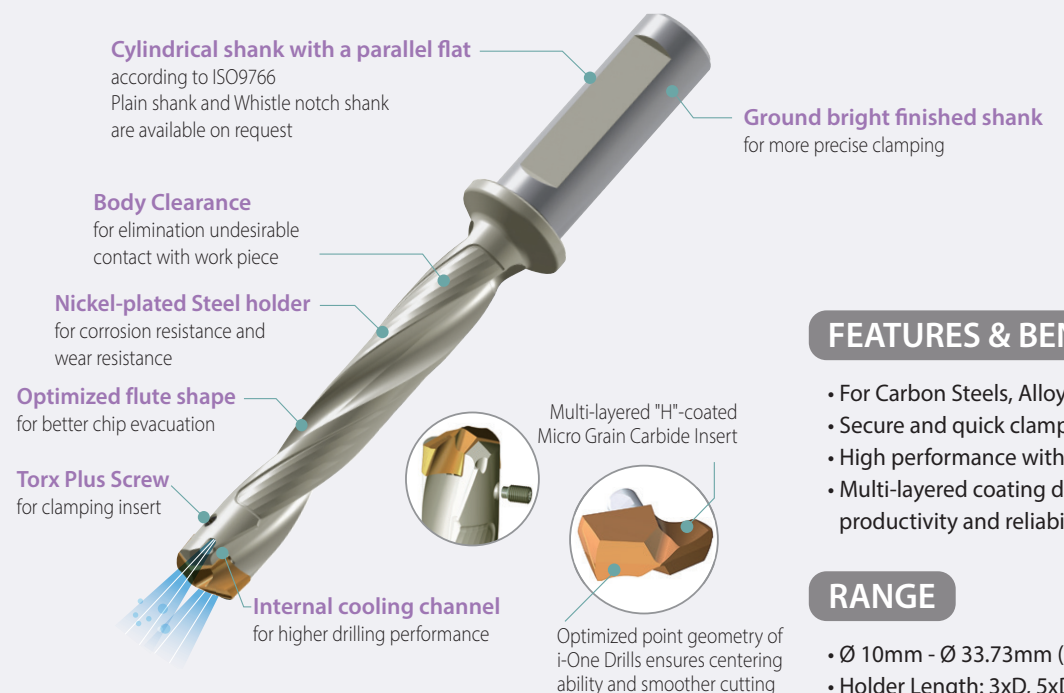
Productivity (Carbon Steel)



i-ONE DRILL

COST EFFICIENT HIGH PERFORMANCE EXCHANGEABLE DRILLING TOOLS

H-Coated Carbide Inserts and Premium Steel Holders



FEATURES & BENEFITS

- For Carbon Steels, Alloy Steels and Cast Iron
- Secure and quick clamping system
- High performance with cost efficiency
- Multi-layered coating delivers outstanding productivity and reliability

RANGE

- Ø 10mm - Ø 33.73mm (.3937"-1.3281")
- Holder Length: 3xD, 5xD, 8xD

TAP
PRIME



HSS-PM, PREMIUM SPIRAL FLUTE & SPIRAL POINT TAPS

New Prime X-Coated Tap for CNC Machining on Various Ductile Materials

Special grinding process provides an unique geometry on spiral flute and spiral point taps to help control chip evacuation, preventing nest formation and enhance flute space.

FEATURES & BENEFITS

YG-1 Special Thread Structure

- Reduction in torque, wear, and the risk of over feeding as compared to conventional taps

Optimized Edge Preparation

- Consistent performance and process stability to Prevent chipping

Extra Short Threaded Body and Recess

- Minimize bird nesting, reduced chipping, improved thread finish

Optimized Flutes Geometry for Excellent Chip Flow

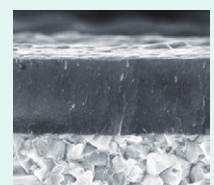
- Increased tool life as a result of an optimum combination of material, geometry, and coating which gives Unrestricted chip flow

Spiral Flute

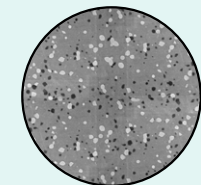
Spiral Point

RANGE

Spiral Flute	M	M2 - M30
	MF	M4 - M30
	UNC	#4 - 1-1/2"
	UNF	#4 - 1-1/2"
Spiral Point	M	M2 - M24
	MF	M4 - M24
	UNC	#2 - 1"
	UNF	#2 - 1"



YG-1's X-Coating
YG-1's High Performance Coating for high heat and wear resistance



HSS-PM(Powder Metallurgy) Premium Taps
Powdered Metal Technology for tough-chipping resistance cutting for long tool life and reliable thread finish



Premium Cutting Edge Strength

- More controlled structure with high wear resistance
- Consistent performance and process stability with chipping resistance
- High bend strength for the tool life

Synchro TAP



3 TIMES FASTER THAN NORMAL TAPS

TiAlN, TiN-Coated HSS-PM Taps for High-Speed Tapping on Rigid CNC Machines

FEATURES & BENEFITS

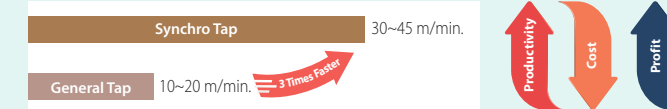
- High productivity by high-speed machining
- Shorten thread length and higher thread reliefs
- Close tolerance concentricity eliminating oversized threads

RANGE

Spiral Flute	M/MF	M3 - M20
	UNC/UNF	#4 - 3/4"
Spiral Point	M/MF	M3 - M20
	UNC/UNF	#4 - 3/4"
Straight Flute	M/MF	M3 - M20
	UNC/UNF	#4 - 3/4"
Cold Forming	M/MF	M3 - M20
	UNC/UNF	#4 - 3/4"

PRODUCTIVITY

Up to 3 times faster in tapping compared to conventional taps (General Steel)



Prevents chip packing by applying short thread length and high spiral angle



Combo TAP



GENERAL USE FOR VARIOUS MATERIALS

Bright, Steam Tempered, TiAlN, TiN-Coated HSS-E Taps for Multi-Purpose

Combo Tap's geometry provides enough flute space resulting in smooth chip evacuation and therefore a continuous production process. Guarantee a high level of process reliability even under unfavorable conditions.

FEATURES & BENEFITS

- For Steels, Stainless steels, Cast iron and Non-ferrous materials
- Prevent over & under feeding by its optimized flank geometry
- Constant threading quality preventing oversized threading

RANGE

Spiral Flute	M	M2 - M52
	MF	M4 - M52
	UNC	#4 - 1-1/2"
	UNF	#4 - 1-1/2"
Spiral Point	M	M2 - M52
	MF	M4 - M52
	UNC	#4 - 1-1/2"
	UNF	#4 - 1-1/2"

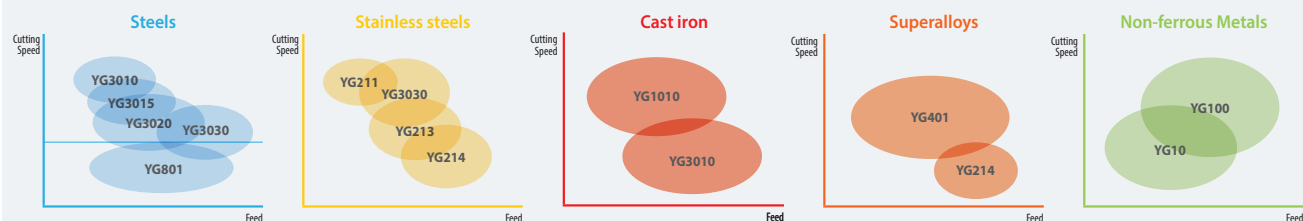


YGTURN



Optimized ISO Turning Grades to Boost Up Your Productivity from Interrupted Cut to Continuous Cut








P Steel	↑ Hard ↓ Tough	 YG3010	First choice for Finishing Steel
		 YG3015	Balanced Productivity for Continuous cut
		 YG3020	First Choice Grade for General Steel Application
		 YG3030	Interrupted Cutting of Steel
M Stainless Steel	↑ Hard ↓ Tough	 YG211	High wear resistance Grade for Stainless steel
		 YG3030	CVD Grade for Interrupted Cutting of Stainless steel
		 YG213	First Choice Grade on Low Cutting Speed of Stainless steel
		 YG214	Heavy Interrupted cut for Stainless steel
S Super Alloy		 YG401	PVD Turning Grade for Heat-resistant Super alloy
K Cast Iron		 YG1010	First Choice for Cast Iron
		 YG3010	First choice for Ductile Cast Iron
N Non-ferrous Metals	DLC	 YG100	First Choice Grade for Aluminum with DLC Coating
	Uncoated	 YG10	Uncoated Grade for General Aluminum







YGTURN

Optimized ISO Turning Chip breakers to Boost Up Your Productivity from Roughing to Finishing

Chip breakers for Steel

↑ Finishing ↓ Roughing	 -UF	For Finishing
	 -UL	Semi-Finishing and Sticky Materials
	 -UM	Medium (for Unstable Condition)
	 -UG	Medium (for Stable Condition)
	 -PWM	Wiper-Medium NEW
	 -UC	Medium Roughing
	 -UR	Roughing and Heavy Interrupted Cut





Chip breakers for Stainless steel

↑ Finishing ↓ Roughing	 -MF	Finishing
	 -MM	Medium
	 -MG	General
	 -MR	Roughing

Chip breakers for Superalloys

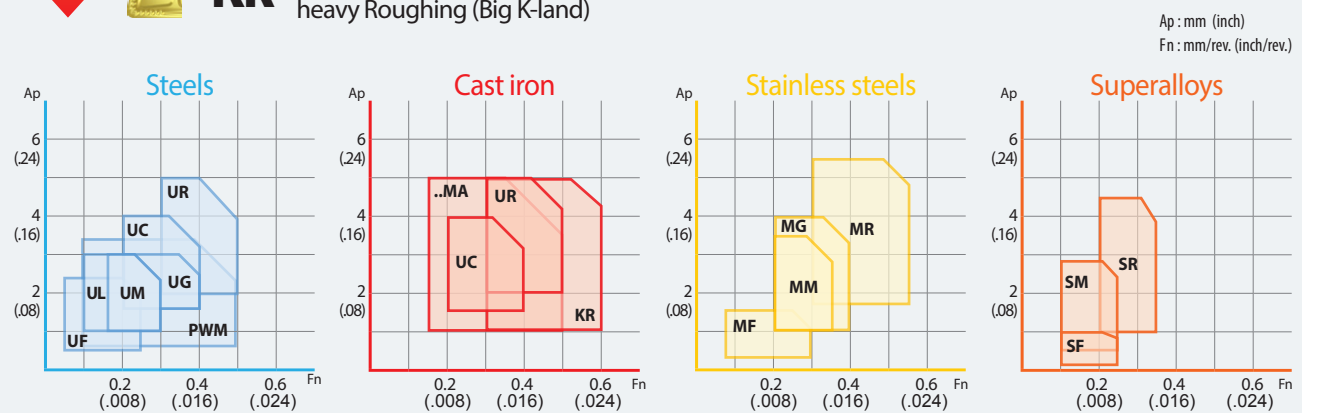
↑ Finishing ↓ Roughing	 -SF	Finishing
	 -SM	Medium
	 -SR	Roughing

Chip breakers for Cast iron

↑ Stable ↓ Unstable	 -UC	Medium Roughing
	 -UR	Roughing and Heavy Interrupted Cut
	 -MA	Cast Iron Heavy Roughing (Flat type)
	 -KR	Cast Iron heavy Roughing (Big K-land)

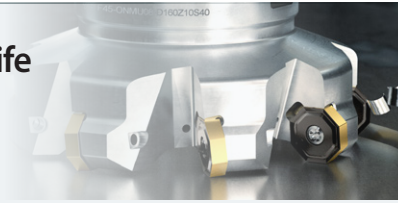
Chip breakers for Non-ferrous Metals

 **-AL** from Roughing to Finishing



YGMILL

Optimized chipbreaker with grade will give you better tool life and higher productivity



Milling Grades	P Steel					M Stainless steel				K Cast iron				N Non-ferrous				S Superalloys				H Hardened steel		
	P05	P15	P25	P35	P45	M05	M15	M25	M35	K05	K15	K25	K35	N05	N15	N25	N35	S05	S15	S25	S35	H15	H25	H35
PVD YG602			602					602					602						602					
YG012			012																					012
YG712			712																					
YG613				613				613																
YG501													501											
CVD YG5020													5020											
Uncoated YG50													50											

YG602 P20 - P35 M20 - M40
K20 - K40 S15 - S25
Universal grade for General Milling Application

YG613 P30 - P50 M30 - M40
Milling Grade for Stainless Steel Application

YG012 P20 - P40 H20 - H40 **NEW**
Optimized Milling Grade for Pre-Hardened & Hardened steel

YG501 K05 - K25
Hard Milling grade for Cast Iron

YG712 P10 - P30
Milling Grade for Medium of Steel Application

YG5020 K01-K30
CVD grade for Cast Iron

YG50 N05 - N20
Uncoated Milling Grade for Aluminium

-AL • For Aluminum
• Very Sharp Geometry

-ST • For Stainless Steel, Super Alloy
• Sharp Geometry

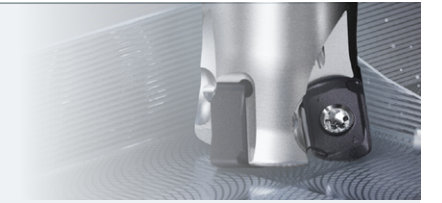
General Inserts (GN) • First Choice for General Application

-TR • For Hardened Steels
• Reinforced Geometry

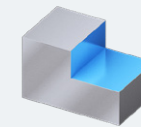
...W / ...N • For Hardened Material and Cast Irons

YGMILL

Various shape of inserts will give you better tool life and higher productivity

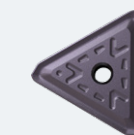


SHOULDERING



2 Corner

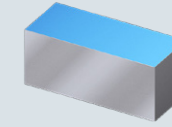
Positive APKT, APMT, ADKT, AOMT



3 Corner

ISO TPKN

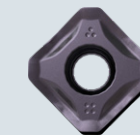
FACING



Octagonal

Negative ONMU, ODMT

Positive OFER, OFMT

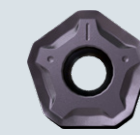


Square

Negative SNMX

Positive SEKT, SEMT

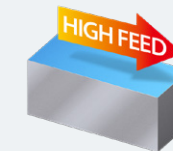
ISO SDKN, SEKN/R, SPKN/R



Pentagonal

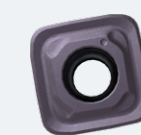
Negative **NEW** PNMU

HIGH FEED



4 Corner

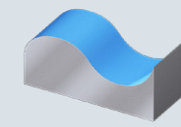
Negative **NEW** ENMX



4 Corner

Positive SDMT

PROFILING



Round

Positive RDKT, RDMT, RPMT

ETC



ISO

Square SPUN

Triangle TPUN

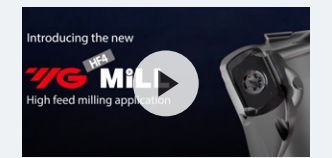


4 Corner

Positive SPMT



Scan this QR code to see our YG FM10 Mill at work.



Scan this QR code to see our YG HF4 Mill at work.

YGTURN Parting & Groove

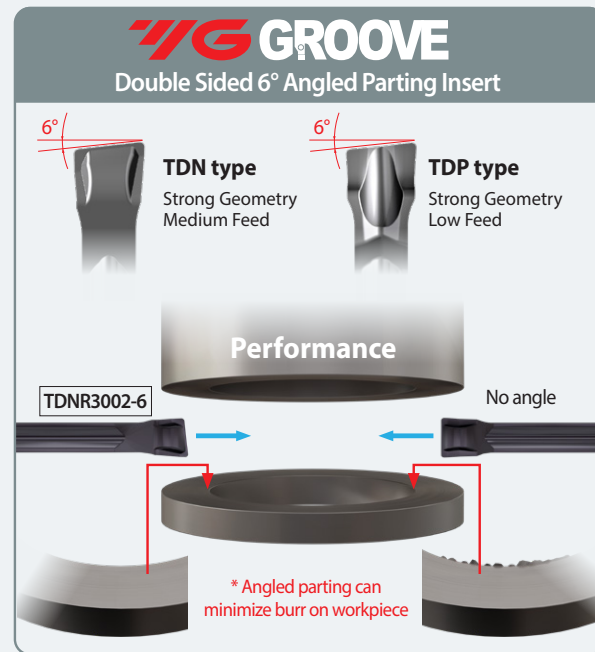
Optimized Parting & Groove Turn Insert Grade for Various Application

- YG602** P20 - P35 M20 - M40 K20 - K40 S15 - S25
Universal grade for Parting & Groove Turn
 • TiAlN PVD Coating for General Application
 - YG602G** P20 - P35 M20 - M40 K20 - K40 S15 - S25
Universal grade for Parting & Groove Turn
 • TiAlN / TiN PVD Coating with Good wear resistance
 - YG603** M30 - M50 NEW
PVD Parting & Grooving Grade for Stainless Steel
 • First Choice for stainless steel
- P TDP** • Parting & Grooving (Positive)

-N TDN • Parting & Grooving (General)

-Y TDY • Turning, Parting & Grooving

※ width : 2, 3, 4 mm



YGDRILL

Optimized Drilling Insert Grade for Various Kinds of Material

- WCMX Series**
Popular 3 corner drill insert
WCMX 03/04/05/06/08
Diameter Ø 16mm ~ Ø 60mm

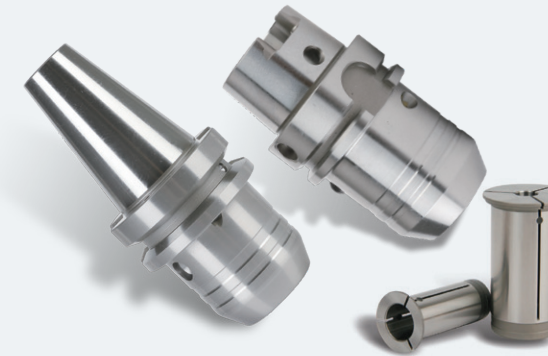
YG602 P20 - P35 M20 - M40
K20 - K40 S15 - S25
Multi-Purpose Grade
- SPMX Series**
Economic 4 corner drill insert
SPMX 05/06/07/09/11/14
Diameter Ø 13mm ~ Ø 50mm

YG713 P15 - P25
Drilling Grade for General Steel Application
- YG613** P30 - P50 M30 - M50
Drilling Grade for Stainless Steel Application

YG TOOLING SYSTEM



HYDRAULIC CHUCK - Power E Hydro

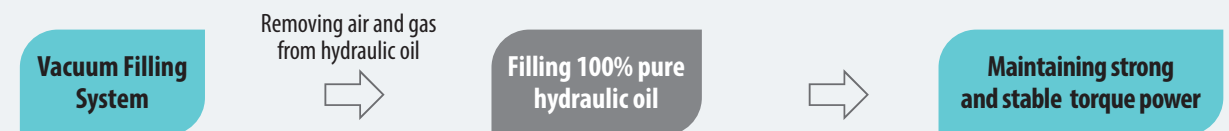


- Superb T.I.R. Accuracy & Repeatability
≤ 0.003mm (Direct Clamping)
- Clamping Force
 - ID 12mm : 110 Nm
 - ID 20mm : 520 Nm
 - ID 32mm : 900 Nm
- Basic G2.5 25,000 RPM Balanced
- Various Size of Reduction Sleeve
Ø 3mm - Ø 25mm
- Advantage
 - Covering up to milling(roughing & finishing)
 - No slippage or pull out of tool
 - Rigid body design to withstand side thrust
 - Avoid tool bending during machining.

Strong Torque Power

Hydraulic Chuck I.D(mm)	Tool Shank O.D(mm)	Applicable RPM	Minimum Clamping Depth (mm)		Min. Torque Power (Nm)	
			Slim	Power E Hydro	Slim	Power E Hydro
6	6	40,000	27		16	
8	8	40,000	27		23	
10	10	40,000	32		45	
12	12	40,000	27	41	90	110
14	14	40,000	37		110	
16	16	40,000	42		185	
18	18	40,000	42		240	
20	20	40,000	42	48	330	520
25	25	25,000	48		400	
32	32	25,000	55	57	650	900

• Tool holder I.D tolerance : H6



SHRINK FIT HOLDER

Strong and Consistent Torque Power

• Superb T.I.R Accuracy ≤ 0.003mm

• Strong Torque Power Min. 18Nm ~ 550Nm

• Basic Balancing Grade Min. G2.5/25,000rpm

• Standard and Slim Design

- Standard 4.5°
- Extra Slim 3.0°

Deep hole Machining

Collet Chuck → Shrink Fit Holder (More than double)

Shrink Fit Holder: 50mm length, 20mm diameter, 1Kg force, 0.022mm clearance.

• Achieving strong torque power by integration of chuck and tool

YG-1 CO., LTD.

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Notice YG-1 Global head office is relocated from December 2020 to a new address as above;

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<https://www.yg1.kr> E-mail: yg1@yg1.kr

Note The information is provided for reference only. Tool specifications are subject to change without prior notice.
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