



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



BEST OF SELECTION

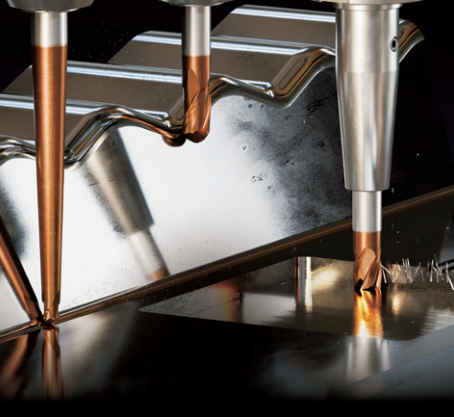
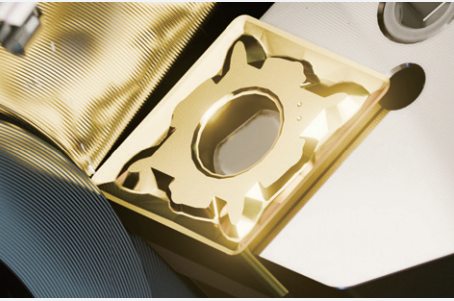
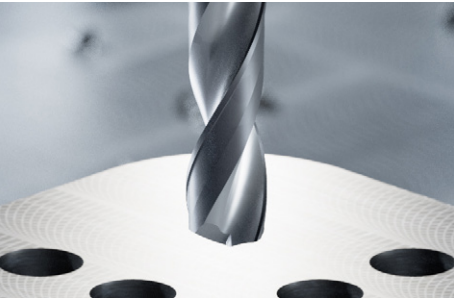
HIGH PERFORMANCE PRODUCTS 2026-2027



YG YG-1 CO., LTD.



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Scan QR Code
to See More Tools for
X1-EH catalog

**NEW &
Additional Sizes**

**PREMIUM
X1-EH**

Exceptionally Accurate Nano Grain Solid Carbide End Mills for Hardened Steel

- Reducing Try-out and Re-Work time after machining due to industry leading small Tolerances with Ball Nose and Corner Radius Tools for more accurate workpieces
- Able to serve all application needs along the manufacturing sequence from roughing, semi-finishing to fine-finishing with over 1,900 different tool variants.
- Providing exceptional edge stability using nano grain carbide and proprietary C-Coating technology for extraordinary high tool life and respective unseen surface qualities

Ball Nose Gash Transition

- Optimized transition from end mill center to flute for improved chip flow.

Reinforced Back Relief

- Strengthened cutting edge design for greater stability while not interfering with chip flow.

Raw Material

- Newly developed fine-grain nanostructure substrate for improved thermal shock stability and higher hardness.

Corner Geometries

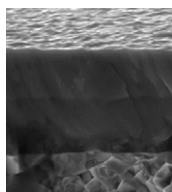
- YG-1's High performance corner geometries, including corner radius, for longer tool life in high-hardness machining.

Edge Preparation

- Optimal edge preparation applied to prevent chipping and achieve excellent surface finishes with longer tool life in high speed machining.

Special High Technology Coating

- Excellent wear and heat resistance with improved thermal shock stability. The nanolayer structure prevents the propagation of microcracks and coating elasticity promotes increased tool life.

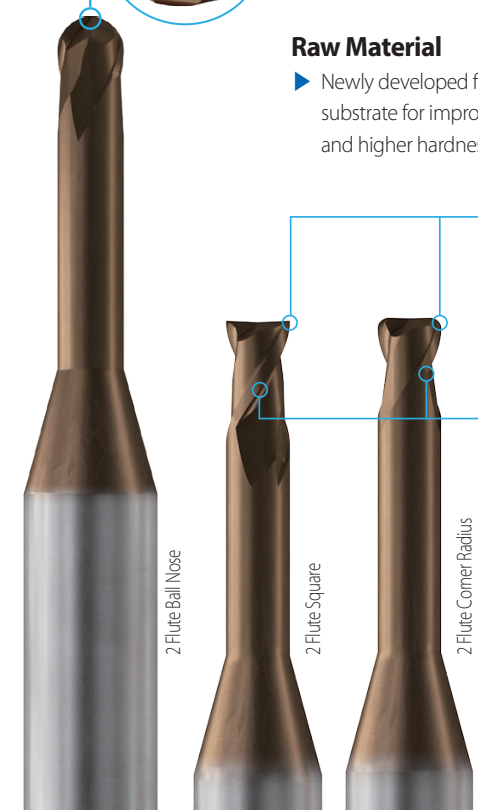
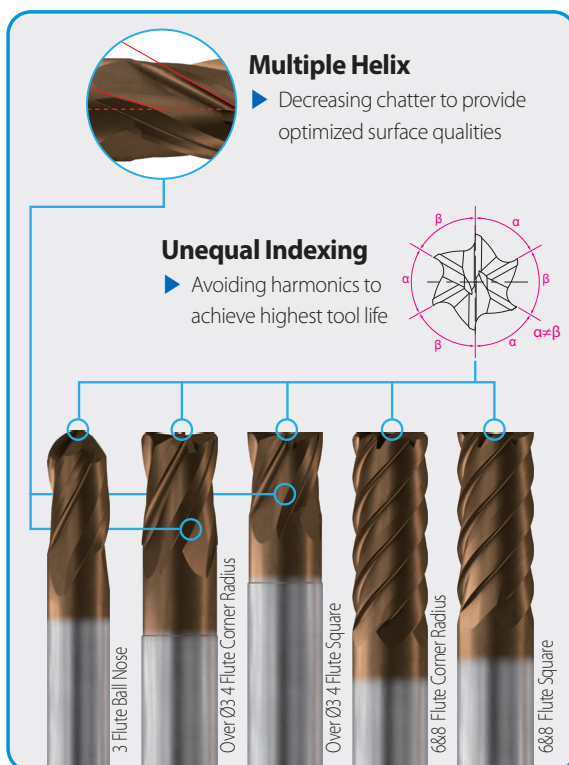
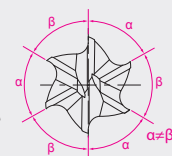


Multiple Helix

- Decreasing chatter to provide optimized surface qualities

Unequal Indexing

- Avoiding harmonics to achieve highest tool life



**Over 1,900 SKUs
Available**

Flutes	Series	Type	OD Range		HRC Range		Accuracy	Helix	Applications
			min.	max.	40-60	50-70			
2	NEW SIZE HPI90	Ball Nose	R0.05	R10.0	○	●			
	NEW HPK44	Ball Nose			●	○			
	NEW SIZE HPI91	Ball Nose for Rib Processing	R0.05	R6.0	○	●	≤Ø6mm ±1µm-5µm	30°	3D (Profiling)
	NEW HPK45	Ball Nose for Rib Processing			●	○	>Ø6mm ±3µm-7µm		
	HPI92	Ball Nose for Rib Processing with Taper Neck	R0.05	R6.0	○	●			
	NEW HPK47	Ball Nose for Rib Processing with Taper Neck			●	○			
	NEW HPK10	Ball Nose with Neck	R0.5	R12.5	○	●	≤Ø1/4" ±0.005" -0.002"		
	NEW HPK46	Ball Nose with Neck			●	○	>Ø1/4" ±0.010" -0.003"		
	NEW HPK24	Ball Nose with Neck	R1/64	R1/4	○	●			
	NEW HPK48	Ball Nose with Neck			●	○			
3	NEW SIZE HPI89	Corner Radius for Rib Processing	D0.2	D12.0	○	●	≤Ø6mm ±5µm		Side cutting
	NEW HPK15	Corner Radius with Extended Neck-Stub Length	D0.3	D20.0	○	●	>Ø6mm ±8µm		Slotting
	NEW HPK14	Miniature Corner Radius	D0.3	D2.0	○	●	±5µm	35°	Face milling
	HPI88	Square for Rib Processing	D0.1	D6.0	○	●	-		
	NEW HPK19	Square with Extended Neck	D0.1	D20.0	○	●	-		
4	NEW HPK11	Ball Nose - Center Match	R1.5	R10.0	○	●	≤Ø6mm ±5µm	30°	3D (Profiling)
	NEW HPK12	Ball Nose - Center Match	R1.5	R10.0	○	●	>Ø6mm ±8µm		
	NEW HPK13	Ball Nose with Neck - Center Match	R0.5	R6.0	○	●			
	NEW SIZE HPK16	Corner Radius for Rib Processing with Neck	D0.1	D6.0	○	●	±5µm		Side cutting
	NEW HPK17	Corner Radius with Neck	D1.0	D20.0	○	●	≤Ø1/4" (6mm) ±5µm ±0.002"	30° up to Ø3(1/8")	Slotting
	NEW HPK26	Corner Radius with Neck	D1/16	D3/4	○	●	≤Ø1/4" (6mm) ±8µm ±0.003"		Face milling
6	NEW HPK20	Square for Rib Processing with Neck	D1.0	D6.0	○	●	-	27°/30° Over Ø3(1/8")	
	NEW HPK21	Square with Extended Neck	D1.0	D20.0	○	●	-		
	NEW HPK18	Corner Radius	D6.0	D20.0	○	●	±8µm ±0.003"	45°	Side cutting
6&8	NEW HPK27	Corner Radius	D1/4	D1"	○	●	±0.003"		Face milling
4&6 & 8	NEW HPK23	Multi Flute Square	D1.0	D25.0	○	●	-		
4	NEW HPK22	Corner Radius - High Feed	D2.0	D16.0	○	●	±5µm ±0.002"	0°	3D (Profiling)
	NEW HPK25	Corner Radius - High Feed	D1/8	D1/2	○	●			Face milling

Size	Shank Dia. Tolerance
up to Ø6 (1/4")	h4
over Ø6 (1/4")	h5

NEW! EV MILLS

Economical High-Performance Solid Carbide End Mills

- Extremely stable due to short design addressing also the growing market of mill-turn machines
- Environmentally friendly design minimizes raw material and grinding costs
- Soft cut to support mill-turn machines as well driven units in lathe tooling
- Radius transition created between floor and wall (according DIN) with undersize end mills increases durability of machined shafts
- Instead of regrinding use a new EV MILL with 100% performance

PRODUCT FEATURES & LINE UP & RANGE

	Ball Nose	Inch : Ø1/16 - Ø1/2 Metric : Ø0.1mm - Ø20mm	Ensures smooth chip evacuation and easy programming
	Square		
	Corner Radius		
	Ball Nose	Inch : Ø1/8 - Ø1/2 Metric : Ø0.3mm - Ø 12mm	Low cutting forces and corner radius diameters for key-way cutting
	Square		
	Corner Radius		
	Ball Nose	Inch : Ø1/8 - Ø3/4 Metric : Ø1mm - Ø25mm	Highest Metal Removal Rates and Tool life
	Square		
	Corner Radius		



i-Xmill

High Precision Cutting with Cost Efficiency

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

HOLDER FEATURES

- Carbide Holders**
- Repairable in case of collision due to blunt brazing
 - Lower deflection than steel holder
 - Preferred shank for use with shrink fit holders
 - Ball nose shanks also accept both corner radius and high feed inserts
- Steel Holders**
- Economic solution for short reach applications
 - Taper neck shape for less deflection on 5 axis machines
 - Ball nose shanks also accept both corner radius and high feed inserts
- Modular Type of i-Xmill Tooling**
- Highest flexibility using market common coupling
 - Internal coolant or air blow supply

RANGE

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



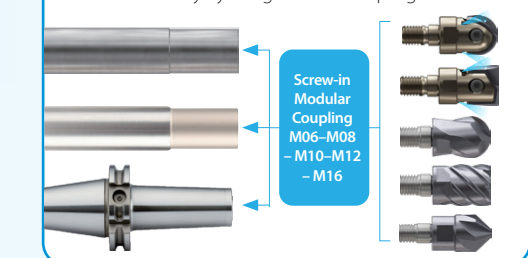
INSERT FEATURES

- Optimal for machining deep cavities or around obstacles e.g. fixtures
- Favorable solution for larger diameters beyond Solid Carbide
- High accuracy for Semi and Fine Finishing operations
- Various geometries and coating variants available covering almost all materials



i-Xmill, i-SMART Modular Type End mills

Excellent flexibility by using screw-in coupling



4G MILLS

The First Choice for Pre-Hardened Steels (-HRC55)

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

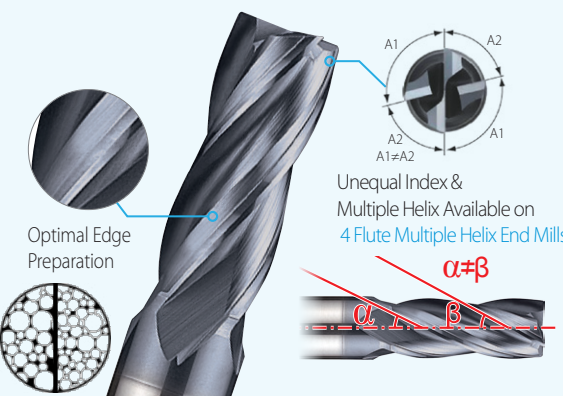
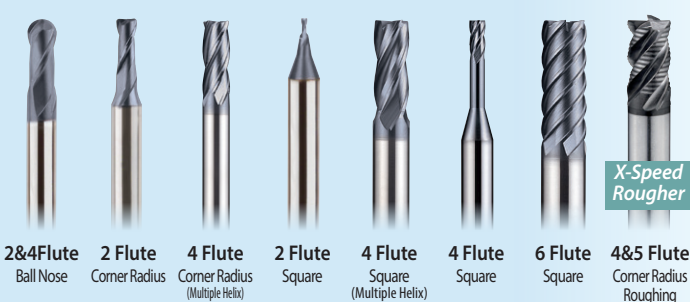
FEATURES & BENEFITS

- 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

RANGE

- Square Ø 0.1mm - Ø 25mm (.004 - 1")
- Corner Radius Ø 0.2mm - Ø 20mm (.008 - 3/4")
- Ball Nose Ø 0.1mm - Ø 25mm (.004 - 3/4")
- X-Speed Rougher Ø 6mm - Ø 20mm (1/4 - 1")

4G Mills Line up



NEW! YG MINIATURE End Mills

for PRECISE DETAIL MACHINING

Miniature End Mills for Precise Detail Machining

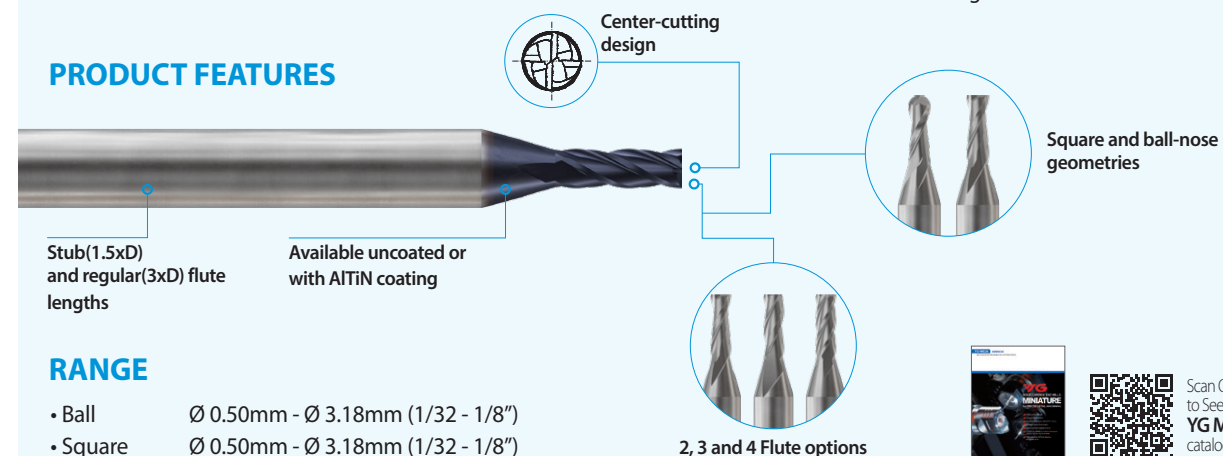
INDUSTRIES & APPLICATIONS

- Medical Devices: Small implants, precision components, and surgical tooling
- Electronics: Micro-features for electronic devices and telecom components
- Jewelry: Intricate shapes and designs in precious metals with fine detail
- Watchmaking: Ultra-precise timepiece components
- Aerospace: Small parts for aircraft, spacecraft, and communication systems

FEATURES

- Center-Cutting Design
- 2, 3, and 4 Flute Options
- Available Uncoated Or With AlTiN Coating
- Stub and Regular Flute Lengths
- Square and Ball-Nose Geometries
- Tight Tolerances for Both Diameter and Length of Cut

PRODUCT FEATURES



RANGE

- Ball Ø 0.50mm - Ø 3.18mm (1/32 - 1/8")
- Square Ø 0.50mm - Ø 3.18mm (1/32 - 1/8")





FEATURES & BENEFITS

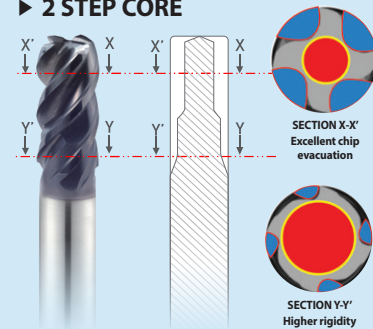
- For Titanium, Stainless Steels and also excellent for Steels
- For high-speed machining and heavy cutting
- Dual stepped-core on 4 flute, 5 flute with multiple helix

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

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

LINE UP

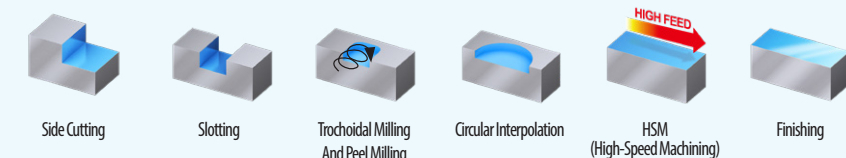
4 FLUTE DOUBLE CORE END MILLS



5 FLUTE MULTIPLE HELIX END MILLS



APPLICATIONS



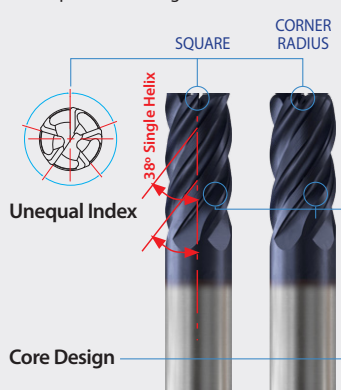
WORK MATERIALS **M S**

- Recommended for high performance milling of Stainless Steel, Titanium, and Heat-Resistant Super Alloys



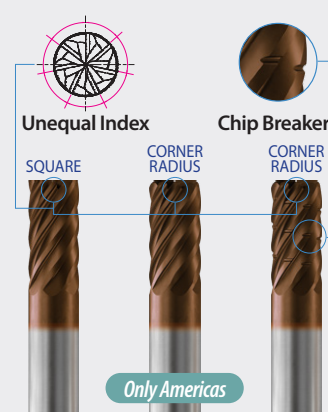
NEW SIZE 5 FLUTE END MILLS

- New design enhances chip space in heavy cuts, while still maintaining rigidity in peel milling
- Full eccentric relief for edge strength
- YG-1 advanced coating for better wear resistance
- Unequal index design for Chatter-free cutting



NEW 7 FLUTE END MILLS

- Purpose-designed 7 flute geometry for high-efficiency milling enables stable deep-axial engagement and increased feed rates



NEW 4&6 FLUTE HIGH FEED END MILLS

- High-feed optimized double-radius bottom edge with helical gash geometry reduces cutting resistance in heat-resistant alloys



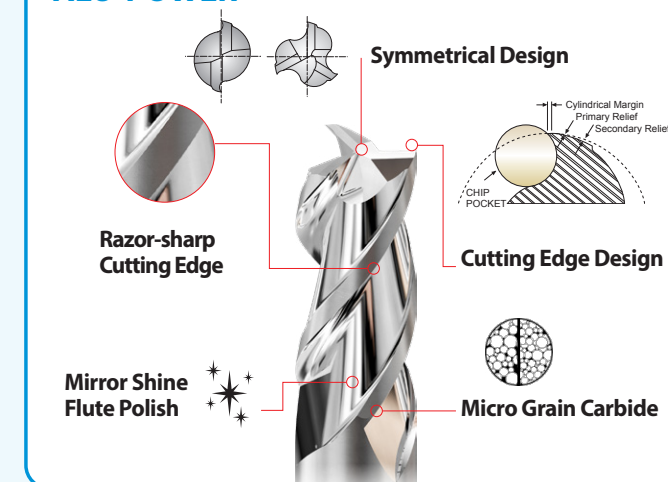
Only Americas



FEATURES & BENEFITS

- Excellent Cutting Performance in Nonferrous Materials like Aluminum due to mirror shine polished chip flutes and razor-sharp cutting edges
- Increased Tool Life and Higher Cutting Accuracy in the types of Aluminum prone to build-up edges
- The ultra fine grain carbide provides the edge integrity necessary for Excellent Surface Finishes
- Sophisticated flute design provides superior Chip Evacuation

ALU-POWER



EXPANSION Maximize machining efficiency with a variety of length of cut

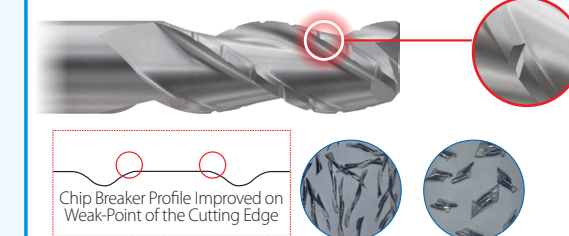


FEATURES & BENEFITS

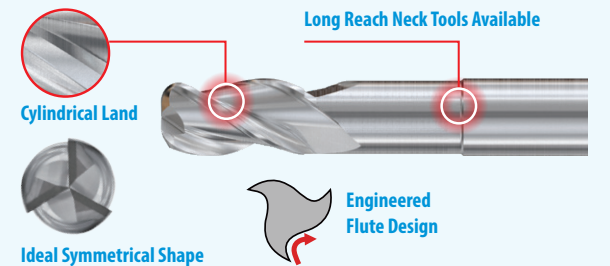
- Designed for Aluminum Alloys used in Aerospace industries
- Special geometries applied to control weight balance for quality performance on higher RPM making an excellent surface finish through stable machining
- High corner protection made from special shape and rake angle inside the radius

Excellent performance with High feed, High RPM, High chip removal(heavy cutting)

ALU-POWER HPC CHIP BREAKER



Optimized Chip Breaker Profile Design
Optimized Chip Breaker Profile design boosts the best performance in Aluminum high-speed processing.



RANGE

* Available in Non-coated & DLC coated items

TYPE(SERIES)	SIZE RANGE	
	METRIC	INCH
• 3 Flute Square	$\varnothing$ 3.0~25.0mm	1/8 - 1"
• 3 Flute Corner Radius	$\varnothing$ 6.0~20.0mm	1/8 - 1"
• 3 Flute Corner Radius with Chip Breakers	$\varnothing$ 6.0~20.0mm	1/8 - 1"
• 3 Flute Ball Nose	-	1/8 - 1"
• 3 Flute Ball Nose With Extended Taper Neck	-	3/16 - 1/2"
• 3 Flute Square with Chip Breakers	-	1/2 - 3/4"



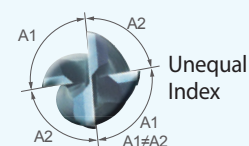


FEATURES & BENEFITS

- 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 $\varnothing 1.0\text{mm} - \varnothing 25.0\text{mm}$ (1/8 - 1")
- Corner Radius $\varnothing 1.0\text{mm} - \varnothing 25.0\text{mm}$ (1/8 - 1")
- Ball Nose $\varnothing 3.0\text{mm} - \varnothing 25.0\text{mm}$ (1/8 - 1")

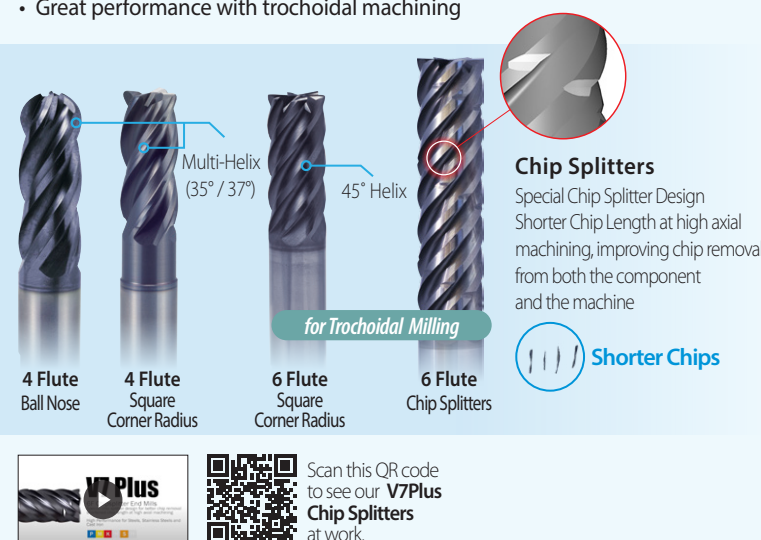


High Performance Corner Geometries including Chamfer

Multiple Helix Design

YG-1 Tailor-made Coating

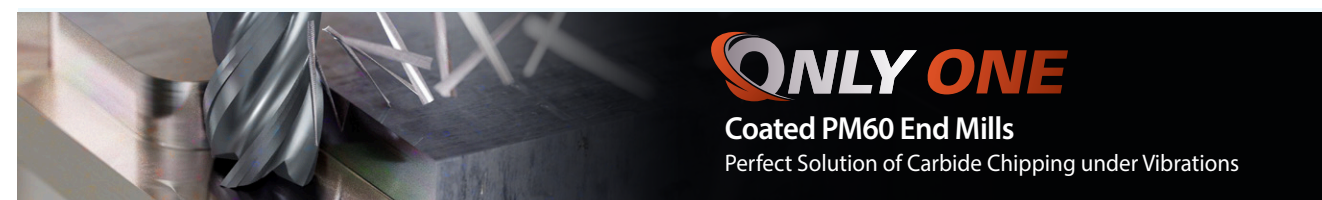
Premium Grade Carbide Substrate



Chip Splitters

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

Shorter Chips



FEATURES

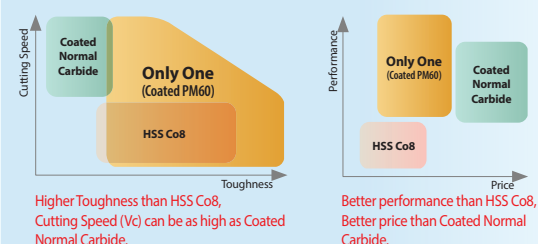
ONLY ONE Coated PM60 End Mills

High Toughness

ONLY ONE is based on **Powder Metallurgy** that ensures High Toughness which is one of the advantages of Cobalt HSS

The ONLY ONE holds a very Strong Toughness which can bring out **Higher performances also on Machines with unstable conditions** such as Vibration and irregular composition of materials

To protect chipping problems under the unstable machining conditions with vibration



RANGE

- Ball $\varnothing 1.0\text{mm} - \varnothing 25.0\text{mm}$ (1/8 - 1")
- Square $\varnothing 1.0\text{mm} - \varnothing 25.0\text{mm}$ (1/8 - 1")
- Roughing $\varnothing 6.0\text{mm} - \varnothing 25.0\text{mm}$ (1/4 - 1-1/4")



Scan this QR code to see our ONLY ONE at work.



P Steel	Hard Tough	YG3115	First Choice Grade for High Cutting Speed in Steels	
		NEW YG3125	Recommended First Grade for Steel	
		YG3030	Interrupted Cutting of Steel	
P Steel	Hard Tough	YT100	Cermet Grade for Turning	
		NEW YT100G	PVD-coated Cermet Grade for Turning	
M Stainless Steel	Hard Tough	YG211	High Wear Resistance Grade for Stainless Steel	
		YG2025	CVD Grade for Interrupted Cutting of Stainless Steel	
		YG213	First Choice Grade on Low Cutting Speed of Stainless Steel	
		NEW YG2035	CVD Coated Grade for Stainless Steel at Low Cutting Speed	
		YG214	Heavy Interrupted Cut for Stainless Steel	
K Cast Iron	Hard Tough	YG1010	First Choice for Cast Iron	
		NEW YG1020	First Choice for Ductile Cast Iron	
S Super Alloy		ISO S05-S15	NEW YG411 For Nickel based Super Alloys at High Cutting Speed	
		ISO S10-S20	YG401 PVD Turning Grade for Heat-Resistant Super Alloy	
N Non-ferrous Metals	DLC	YG100	First Choice Grade for Aluminum with DLC Coating	
	Uncoated	YG10	Uncoated Grade for General Aluminum	

NEW CHIP BREAKER

YG TURN CHIP BREAKERS

Chip Breakers for Steel

Finishing ↓ Roughing		-UF	For Finishing
		-PWF	Wiper-Finishing
		-UL	Semi-Finishing and Sticky Materials
		-UM	Medium (for Unstable Condition)
		-GM	Medium Machining for Steel & Stainless Steel
		-UG	Medium (for Stable Condition)
		-PWM	Wiper-Medium
		-UC	Medium Roughing
		-UR	Roughing and Heavy Interrupted Cut

Chip Breakers for Heavy Turning

Medium ↓ Roughing		-UH	Medium Heavy
		-UT	Heavy Roughing

Chip Breakers for Cermet

Finishing ↓ Medium		-PSF	Cermet Finishing
		-S	Cermet Finishing
		-C	Cermet Medium
Finishing ↓ Medium		-PF	Cermet Finishing
		-PM	Cermet Medium

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 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 Non-Ferrous Metals

	-AL	for Aluminum
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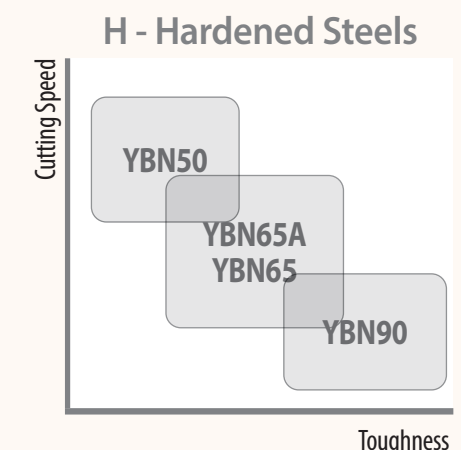


NEW!

YG TURN PCBN GRADE

PCBN Turning Grades for Hardened Steel

YBN50 H5 - H15		Uncoated PCBN grade for Continuous to light interrupted turning of hardened steels
YBN65A H10 - H25		Coated PCBN grade for Continuous to Medium interrupted turning with higher cutting Speed of hardened steels
YBN65 H10 - H25		Uncoated PCBN grade for Continuous to Medium interrupted turning of hardened steels
YBN90 H20 - H35 K05 - K20		Uncoated PCBN grade of Severe interrupted turning of hardened steels, and the Stable machining of Gray Cast iron, Sintered alloy steel



YG GROOVE

Parting & Grooving

GRADES

YG602	P20 - P35 M20 - M40 K20 - K40 S15 - S25	YG603	M30 - M50
	Universal grade for Parting & Groove Turning • TiAlN PVD Coating for general application		PVD Parting & Grooving for Stainless Steel • First choice for stainless steel • For interrupted Cut
YG602G	P20 - P35 M20 - M40 K20 - K40 S15 - S25		
	Universal grade for Parting & Groove Turn ing • TiAlN / TiN PVD Coating with good wear resistance		

CHIP BREAKERS

Parting & Grooving	-P		
	-N		
Turning & Grooving	GL		
	GM		
	RG		

※ width : 2, 3, 4 mm

SELF-GRIP

SGP	SGN
Sharp Cutting Edge. For Stainless Steel, Mild Steel, and Super Alloys at Low Feed Rate	Stable Cutting Edge. For General Machining at Medium Feed Rate

Scan this QR code to see our TDY-RG - YG602G at work.



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

NEW GRADE YG MILL Grades & Chip Breakers

GRADES

Milling Grades	P Steel					M Stainless Steel				K Cast Iron				N Non-ferrous				S Super Alloys				H Hardened Steel			
	P05	P15	P25	P35	P45	M05	M15	M25	M35	K05	K15	K25	K35	N05	N15	N25	N35	S05	S15	S25	S35	H05	H15	H25	H35
PVD	YG012	012																					012		
	YG712	712																							
	YG713	713																							
	YG612		612					612												612					
	YG613			613					613																
	YG614								614												614				
CVD	YG501										501														
	YG5020										5020														
Uncoated	YG50													50											



YG012 PVD
For Machining on Pre-Hardened & Hardened Steel



YG712 PVD
For High Cutting Speed on Steels



YG612 PVD
First Choice Grade / For General Machining
For High Cutting Speed on Stainless Steel



YG613 PVD
For Machining on Stainless Steel
in Dry Machining



YG614 PVD
For Machining on Stainless Steel in Wet
Machining



YG5020 CVD
For Machining on Grey Cast Iron



YG50 Uncoated
For Machining on Aluminum



YG501 PVD
For Machining on Ductile Cast Iron

CHIP BREAKERS

-AL



- For Aluminum
- Very Sharp Geometry

-ST



- For Stainless Steel, Super Alloy
- Sharp Geometry

General Inserts



- First Choice for General Application

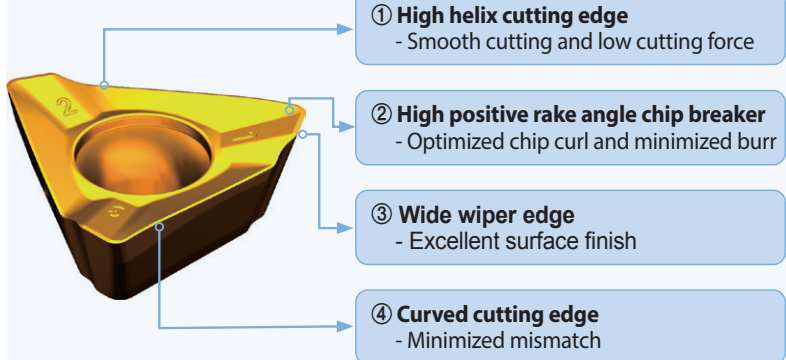
-TR



- For Hardened Steels
- Reinforced Geometry

Additional Sizes YG SM3 MILL TPKT True 90° Shoulder Milling

FEATURES



RANGE

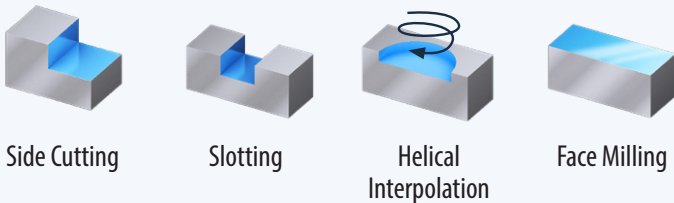
TPKT07	Ø12mm~Ø52mm (.5"-2.0")
TPKT11	Ø20mm~Ø63mm (1.25"-5.0")
TPK(C)T16	Ø32mm~Ø200mm (1.25"-6.0")

INSERT SIZE

Increases the range of choices for customer



APPLICATION



NEW TPCT16-AL
3-corner 90° shoulder milling
solution for aluminum machining
YG50 N05 - N20

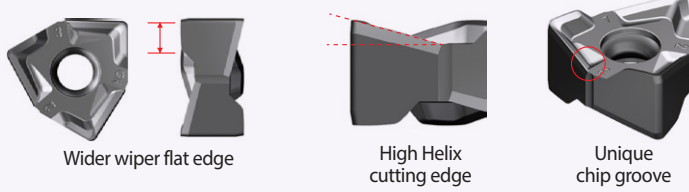


Additional Sizes YG SM6 MILL WNEX 6 Cutting Edges for Shouldering

FEATURES

- 6 Cutting edges for shouldering - high cost-efficiency
- High positive helical cutting edge
- High chipping resistance with reinforced cutting edge
- Ground insert - high precision tolerance and excellent surface finish
- Diameter range : Ø20mm ~ Ø125mm
- Ap (max) : 7mm

KEY TECHNOLOGY

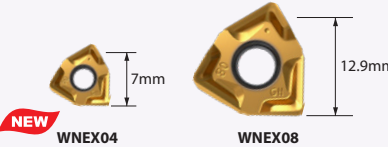


RANGE

WNEX04	Ø20mm~Ø63mm (.75"-3.0")
WNEX08	Ø32mm~Ø125mm (1.25"-5.0")

INSERT SIZE

Increases the range of choices for customers



APPLICATION





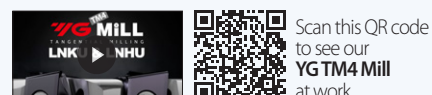
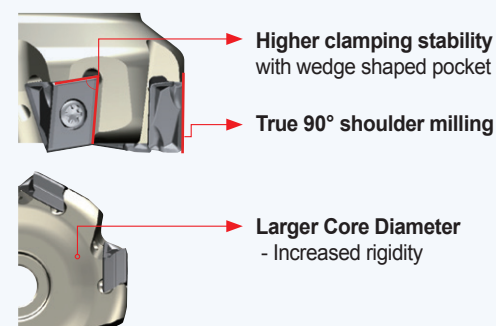
FEATURES

- ① High positive rake angle**
- Optimal chip curl & minimized burrs
- ② High helix cutting edge**
- Low cutting force and Smooth cutting
Curved cutting edge
- Minimized mismatch
Wide wiper flat cutting edge
- Larger depth of cut
- ③ Wide wiper flat cutting edge**
- Excellent surface quality
- ④ Thicker insert**
- Ultra rigidity
- ⑤ Tangential clamping system**
- Rigid clamping and stable machining

RANGE

LNKU13	Ø40mm~Ø160mm (2.0"-10.0")
--------	---------------------------

KEY TECHNOLOGY

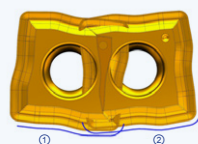


FEATURES

- Economic square type 4 cutting edge insert
- One kind of insert in outer and inner pocket
- Twisted coolant channel and enlarged chip gullet for better chip evacuation
- Highly durable drill body due to high hardness and optimized material
- Polished flute enables to improve chip evacuation in deeper machining

KEY TECHNOLOGY

- Only 1 Chip formation per flute
- Real 4 Cutting edges



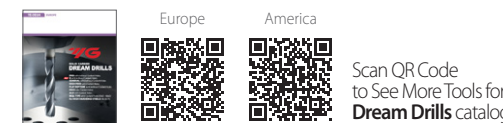
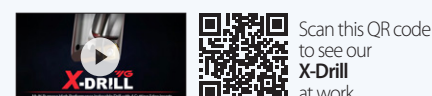
RANGE

Drill insert	Drill Body	
SYMX050204	Ø14~Ø16.5mm (.563"-.656")	
SYMX060204	Ø17~Ø20.5mm (.689"-.813")	
SYMX07T206	Ø21~Ø23.5mm (.843"-.906")	2xD, 3xD, 4xD, 5xD
SYMX080306	Ø24~Ø28.5mm (.937"-1.125")	
NEW SYMX10T308	Ø29~Ø33.5mm (1.156"-1.312")	
SYMX110408	Ø34~Ø38mm (1.343"-1.513")	
SYMX130410	Ø39~Ø44mm (1.531"-1.750")	2xD, 3xD, 4xD, 5xD
SYMX150512	Ø45~Ø50mm (1.781"-2.000")	



SYMX Series

True 4 corner drill insert
SYMX 05, 06, 07, 08, 10, 11, 13, 15
Diameter range : Ø 14mm ~ Ø 50mm



New Coating Technology "RCH-Coating"

Combining the major benefits of TiAlN and AlCrN into a new Multi-Layer coating generation provides unique advantages such as:



Extreme Wear Resistance

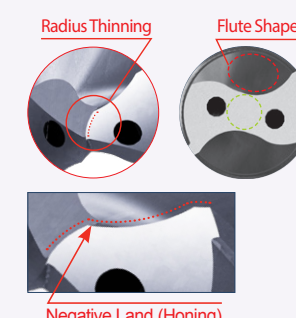


High Heat Endurance



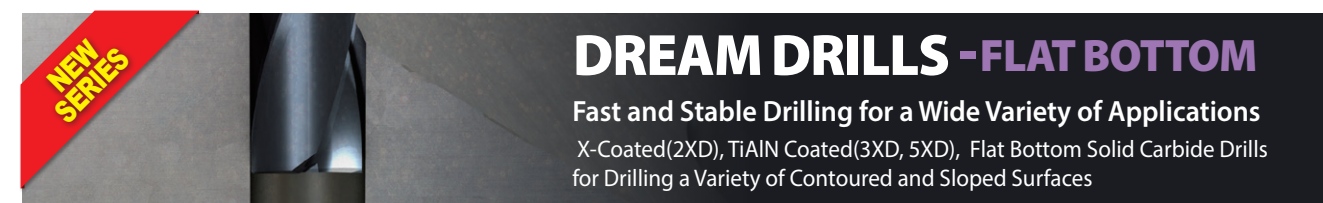
Chipping Protection

Tool Life
20 to 50%
compared to Normal TiAlN coated drills



FEATURES & BENEFITS

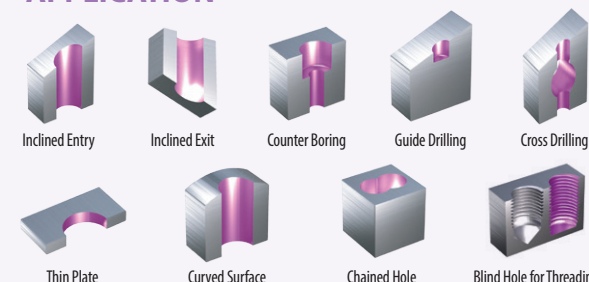
- Universal Point Grinding**
Soft cutting action and reduced axial forces; Easy to Recondition
- Radius Thinning**
Provides very good self centering even at low feed rates and unstable situations
- Tailored Flute Design**
Excellent Chip Breaking and Evacuation
- Edge Preparation**
Maximizing Tool life in various materials



FEATURES & BENEFITS

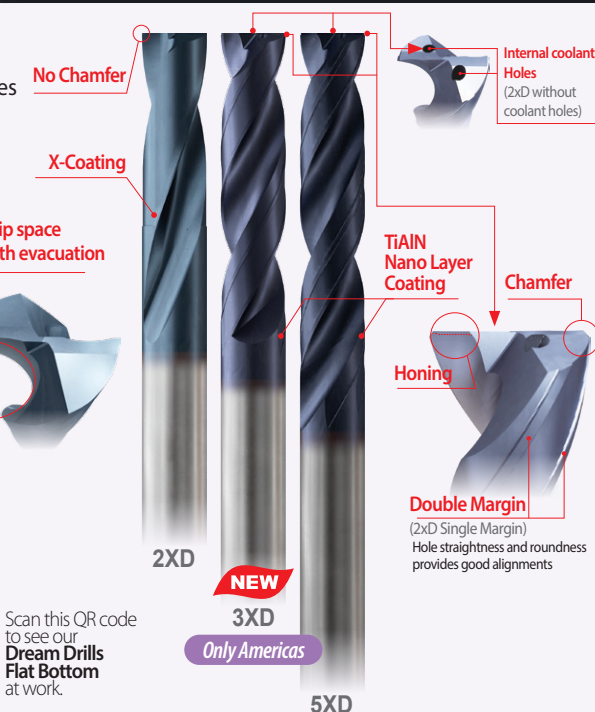
- 180 degree point angle enables drilling of horizontal and sloped surfaces
- Excellent chip evacuation by optimized flute shape
- High strength cutting edge to improve tool life
- Can be used in a variety of drilling applications

APPLICATION



RANGE

- Metric : Ø 3.0mm - Ø 20.0mm
- Inch : .1181" - .7874"
- Drill Depth: 2xD, 3xD, 5xD



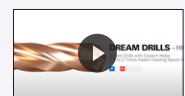
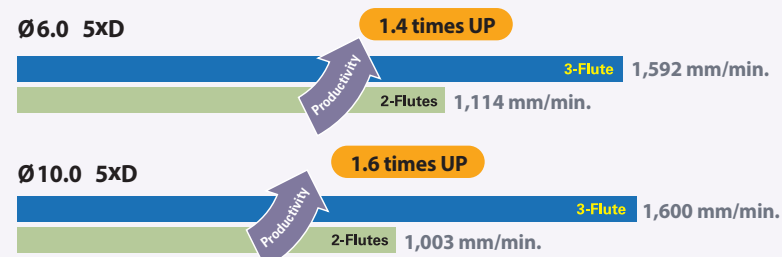
DREAM DRILLS -HIGH FEED

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

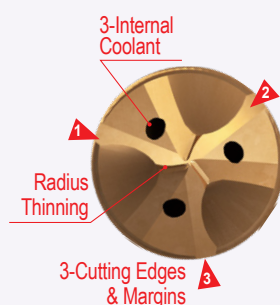
Productivity (Carbon Steel)



Scan this QR code to see our Dream Drills High Feed at work.

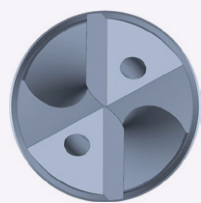
RANGE

- Metric : Ø 5.0mm - Ø 20.0mm
- Inch : .1575" - .7874"
- Drill Depth : 3xD, 5xD

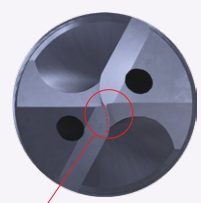
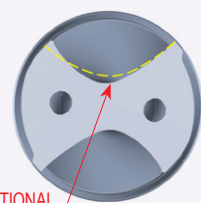


DREAM DRILLS -INOX

For Tough Materials like Stainless Steels



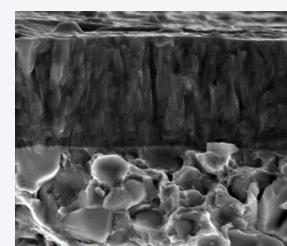
CONVENTIONAL



R-Thinning (Radius Thinning)

- Special flute geometry and chip pocket to help chip evacuation and proper chip curl.
- Strong rigidity from Cutting Edge
- High performance on stainless steel and pre hardened steel

- Positive Axial Rake Angle and cutting force, with R-Thinning enhance centering and Chip Breaking.



Nano Layer
Carbide

TiAlN Coating

(Upgraded Titanium Aluminum Nitride : nano-layer coating)

- Higher wear resistance and Lower friction
- Higher Cutting Speed and Feed
- Improved Drill Hole Quality

Special surface treatment after coating to reduce friction and better chip flow.

RANGE

- Metric : Ø1.0mm - Ø20.0mm
- Inch : .0787" - .7874"
- Drill Depth : 3xD, 5xD, 8xD



Scan QR Code to See More Tools for catalog

MULTI-1 DRILLS

Premium HSS-PM Drills for Wide Range of Applications

GOLD-P DRILLS

HSS & HSS-E, HSS Co8 & HSS Co5 Gold-P Drills Same Performance as Full TiN-Coated Drills

WIDE RANGE OF WORK MATERIALS; P M K N S

- Carbon Steels, Alloy Steels, Structural Steels, Hardened Steels (up to HRC45), Cast Irons, Stainless Steels, Aluminum and Titanium

RANGE

- Metric : Ø1.0mm - Ø13.0mm / Inch : Ø#45(.0820) - Ø1/2
- Drill Depth : Stub Jobber



Premium Powder Material with Excellent Toughness

Improve cutting edge strength with higher stability and rigidity



Point Shape to Maximize Self-centering

- ▶ Excellent positioning - bush is not necessary



Flute Design for the Best Chip Evacuation

- ▶ Prevent chip clogging and reduce axial thrust



TiAlN Coating

GOLD-P DRILL SETS



EUROPE (HSS & HSS-E)

SET1	SET2	SET3	SET4
19pcs	25pcs	24pcs	91pcs
1.0mm ~ 10.0mm ×0.5mm step	1.0mm ~ 13.0mm ×0.5mm step	1.0mm ~ 10.5mm ×0.5mm step +3.3+4.2 +6.8+10.2	1.0mm ~ 10.0mm ×0.1mm step

AMERICAS (HSS Co8 & HSS Co5)

SET1	SET2	SET3	SET4
26 pcs	28 pcs	29 pcs	56 pcs
A~Z(Letter)	Ø5/64~Ø1/2 (Fractional)	Ø1/16~Ø1/2 (Fractional)	#1~#56 (Wire gauge)

RANGE

- Metric : Ø1.0mm - Ø13.0mm / Inch : Ø#60(.0400) - Ø3/4
- Drill Depth : Jobber

i-ONE DRILL

Cost Efficient High Performance Exchangeable Drilling Tools
Carbide Inserts and Premium Steel Holders

Cylindrical shank with a parallel flat

according to ISO9766
Plain shank and Whistle notch shank are available on request

Body Clearance

for elimination undesirable contact with workpiece

Nickel-plated Steel holder

for corrosion resistance and wear resistance

Optimized flute shape

for better chip evacuation

Torx Plus Screw

for clamping insert

Internal coolant channel

for higher drilling performance

Ground bright finished shank

for more precise clamping

Multi-layered "H"-coated Micro Grain Carbide Insert



Optimized point geometry of i-One Drills ensures centering ability and smoother cutting

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

- Metric : Ø 10.0mm - Ø 33.9mm
- Inch : .3937" - 1.3189"
- Holder Length : 3xD, 5xD, 8xD

NEW Inserts for Stainless Steel

Z-Coating
Provides outstanding heat resistance for high-temperature machining

Optimized Edge Honing (for Stainless Steel)
Provides outstanding heat resistance for high-temperature machining



NEW
Internal Coolant

TAP

PRIME

HSS-PM, Premium Spiral Flute, Spiral Point and Forming Taps

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

FEATURES & BENEFITS

- High-Performance
- Prime Tap is the tap for customers who demand versatility with improved tool life and consistent performance. Especially effective for end users with modern CNC equipment looking for productivity gains with consistent gauging and excellent thread finish.
- Multi-Purpose
- Prime Tap is YG-1's answer high performance tapping across a range of materials including carbon and alloy steels, ductile irons, aluminum, and stainless steel
- Fix Problem
- Prime Tap utilizes YG-1's latest tap geometries to reduce or eliminate bird nest problems associated with blind hole tapping with spiral flute taps.
- Premium HSS-PM
- Powdered metal technology for higher spindle speeds, longer tool life, and excellent thread finish.

RANGE

Spiral Flute	M	M2 - M30	Spiral Point	M	M2 - M24	Forming	M	M2 - M24
	MF	M4 - M30		MF	M4 - M24		MF	M2 - M24
	UNC	#4 - 1-1/2"		UNC	#2 - 1"		UNC	#0 - 1"
	UNF	#4 - 1-1/2"		UNF	#2 - 1"		UNF	#0 - 1"
	G(BSP)	G1/16 - G1"		G(BSP)	G1/16 - G1"		G(BSP)	G1/16 - G1"

without Internal Coolant

with Internal Coolant

NEW

Synchro TAP

3 Times Faster Than Conventional Taps

TiCN, TiN-Coated HSS-PM Taps for High-Speed Synchronous Tapping

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" |
- With Internal Coolant
- For extreme spindle speeds
 - Axial and Radial coolant for reduced heat and longer tool life at higher spindle speeds
 - Better chip flow for improved thread finish

without Internal Coolant

with Internal Coolant

Tight shank tolerance for consistent thread gauging

HSK, SK, BT, CAT MAS, STRAIGHT-K

Synchro Tapping Chuck

- To compensate for synchronization errors to extend tap life and improve thread quality
- To compensate for lead tolerances of taps
- For machines with synchronized tapping cycles

NEW

THREAD MILLS

Threading in High Quality Available with Chamfer

Carbide Thread Mill for Precision Thread

Covering Wide Range of Materials / Produce Full Threads to the Bottom

THREAD MILLS VS. TAPPING

- Versatility
- Able to thread a range of hole sizes with the same thread mill
 - The same thread mill can produce right and left hand threads with a simple program change
 - The same thread mill can produce threads in a wide range of materials
 - Capable of producing full threads to the bottom of the hole
 - The same thread mill can produce any Class of Fit
 - Low cutting forces make thread mills a perfect solution for underpowered machines

RANGE

M	M1 - M24
MF	M8 - M20
UNC	1" - 3/4"
UNF	1/4" - 3/4"
BSP(G)	G1/16 - G1"
Rc(BSPT)	Rc1/8 - Rc1"
NPS	1/8 - 1-2
NPT/NPTF	1/16 - 2-1/2

THREAD MILLS

without Internal Coolant

with Internal Coolant

with Coolant Hole & Chamfer

Miniature THREAD MILLS

Miniature THREAD MILLS for Hard Materials

Miniature THREAD MILLS for Dental

Drill & THREAD MILLS with Chamfer

Europe

America

Scan QR Code to See More Tools for THREAD MILLS catalog

NEW!

COMBO AOS TAP

High-End HiPIMS Coating Technology, HSS-E TAPS for Multi-Purpose

For Steels, Stainless Steels, Cast Iron and Non-Ferrous Materials

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

FSH-Coating (High-End HiPIMS Coating Technology)

Combining the advantages of all current coating technologies, it features high hardness, high toughness, and an extremely smooth surface. These characteristics provide highly reliable performance in threading processes.

Conventional Coating

FSH-Coating

NEW

OTHER COATING PRODUCTS



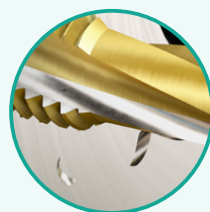
RANGE

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



TiN Coated HSS-E, HSS-PM YG TAP CHIP BREAKER "The Trouble-Shooter"

FEATURES



Chip Breaker

Special flute grinding process provides excellent performance with chip-breaking to aid in chip evacuation

15° Helix Angle

Promotes efficient chip evacuation

YG-1 Special Thread Structure

Reduction in torque, wear, and the risk of overfeeding as compared to conventional taps

TiN Coating

Increased wear resistance by minimizing friction between the tap and the workpiece

HSS-E Material

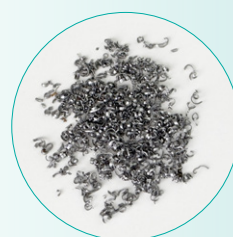
Ideal for applications requiring high wear

RANGE

With Internal Coolant	M	M4 - M20
	MF	M8 - M20
	UNC/UNF	#8 - 1"
Without Internal Coolant	M	M6 - M20
	MF	M8 - M20
	UNC/UNF	1/4 - 1"



Scan this QR code to see our YG Tap Chip Breaker at work.



Short Chip Obtained With YG Tap Chip Breaker!!

► YG Tap Chip Breaker provides a solution to solve the productivity problem caused by long chips, avoiding bird nesting. Particularly suitable for machining non-alloy steel, low alloy steel, high alloy steel, and tool steel.



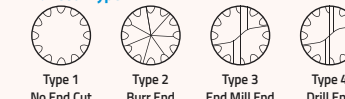
COMPOSITE MATERIALS

High Performance machining Tool for Composite Material
Specially designed & optimized for high efficiency milling & drilling and PCD Tools

Diamond Coated Chip Breaker Routers

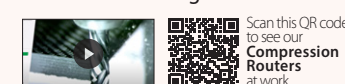
- The unique flute structure provides good surface finish, longer tool life and requires less cutting force
- Reduce delamination and uncut fibers
- Roughing and finishing processes
- Diamond coating with excellent abrasion resistance

End Teeth Type



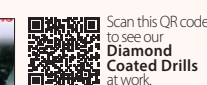
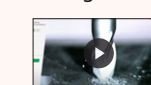
Diamond Coated Compression Routers

- 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



Diamond Coated 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



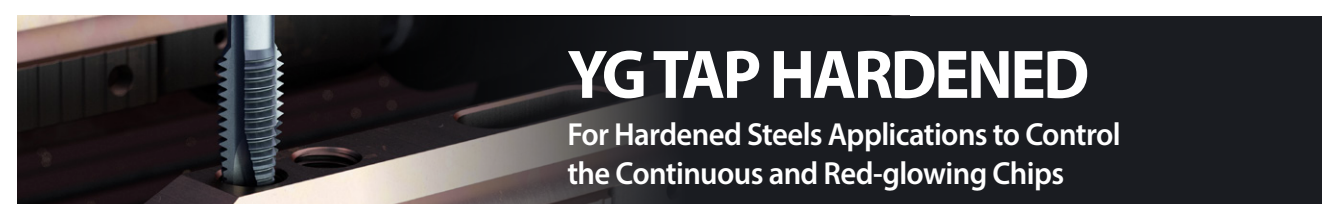
Scan this QR code to see our Diamond Coated Drills at work.

PCD TOOLS

YG-1 PCD Series for CFRP and stacks offer cutters designed for drilling, countersinking and milling operations. It covers the complete range of cutting tools commonly used within Aerospace, Automotive, Energy and Sporting Goods industries.



Scan QR Code to See More Tools for COMPOSITE MATERIALS



YG TAP HARDENED For Hardened Steels Applications to Control the Continuous and Red-glowing Chips

FEATURES & BENEFITS

- Suitable for blind hole tapping thanks to special flute geometry and excellent chip evacuation, optimized for steels up to HRc 25 – 45.
- Suitable for through hole in more cutting speed than other taps due to thick web, optimized for steels up to HRc 25 – 45.

CARBIDE

Straight Flute



Only Europe

HSS-PM

Spiral Flute Spiral Point



NEW NEW

HSS-E

Spiral Flute Spiral Flute Spiral Point Spiral Point



RANGE

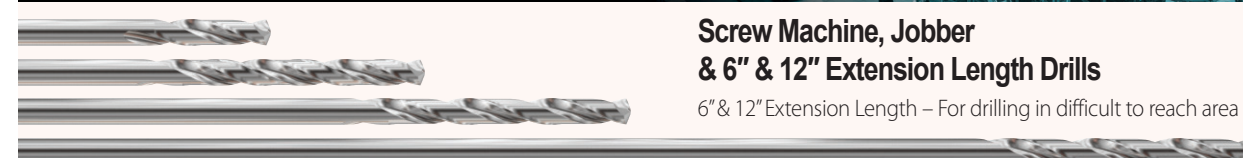
Spiral Flute	M	M2 - M30
	MF	M3 - M24
	UNC	#2 - 3/4"
	UNF	#10 - 3/4"
Spiral Point	M	M2 - M30
	MF	M3 - M24
	UNC	#2 - 3/4"
	UNF	#10 - 3/4"

AIRCRAFT DRILLS & REAMERS

- Available in HSS, Cobalt and Solid Carbide
- Manufactured to NAS(National Aerospace Specification) STD.
- To use with Hand-Held Equipment for drilling or reaming of Aircraft Materials

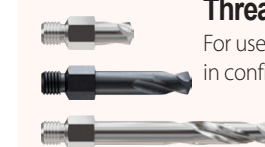
Screw Machine, Jobber & 6" & 12" Extension Length Drills

6" & 12" Extension Length – For drilling in difficult to reach area



Threaded Shank Adapter Drills

For use in right-angle drilling motor in confined spaces



Quick Change Adapter Drills

For saving time from easier drill change



Double Margin Step Drills

Available in suitable for machining close tolerance holes with in maintaining concentricity and accuracy



Reamers for High Precision Holes

Available in HSS, Cobalt and Solid Carbide



Core Drill

Used to enlarge pre-drilled Holes to the desired finished dimension with improvement of out-of-roundness, misalignment in the drilled hole

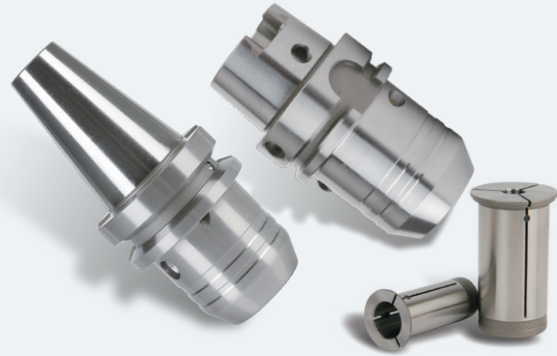


Scan QR Code to See More Tools for AERO SPACE Catalog



Scan this QR code
to see our
Power E-Hydro
at work.

HYDRAULIC CHUCK - Power E-Hydro



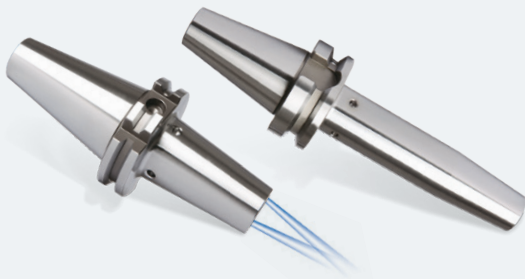
- **Superb T.I.R. Accuracy & Repeatability**
≤ 0.003mm (Direct Clamping)
- **Clamping Force**
 - ID 12mm : 110 Nm
 - ID 16mm : 350Nm
 - ID 20mm : 520 Nm
 - ID 32mm : 900 Nm
- **Basic G2.5 25,000 RPM Balanced**
- **Various Size of Reduction Sleeve**
Ø 3.0mm - Ø 25.0mm
- **Advantage**
 - Covering up to 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	37	41	90	110
14	14	40,000	37		110	
16	16	40,000	42	48	185	350
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

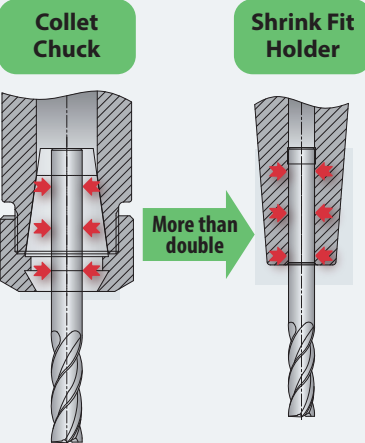
• Tool holder I.D tolerance : H6

SHRINK FIT HOLDER



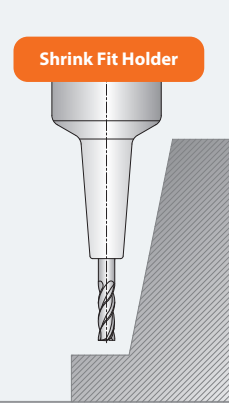
- **Superb T.I.R Accuracy**
≤ 0.003mm
- **Strong Torque Power**
Min. 18Nm ~ 550Nm
- **Basic Balancing Grade**
Min. G2.5/25,000rpm
- **Standard and Slim Design**
 - Standard 4.5°
 - Extra Slim 3.0°

Strong and Consistent Torque Power



• Achieving strong torque power by
integration of chuck and tool

Deep Cavity Machining



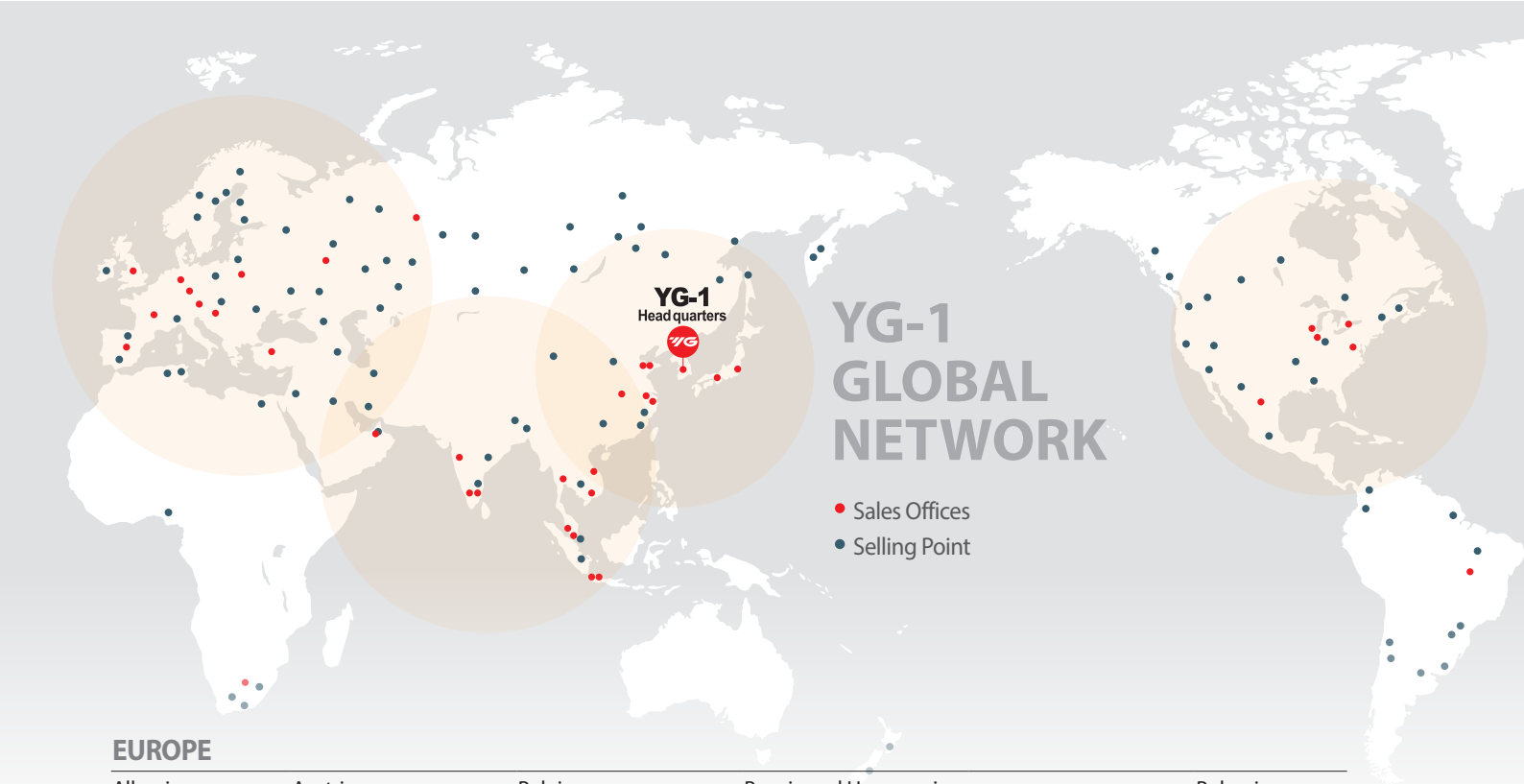
MEMO





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* For the more information on sales network, please contact the head office as below;

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Note

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