



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



1st-cut Tooling Solutions e.K.
Advanced Tooling & Machining

Anwendungstechnik
Prozessoptimierung
Zerspanungslösungen
Werkzeugvertrieb

**Fragen zu Werkzeugen,
Standzeiten oder
Prozessoptimierung?**

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BEST OF SELECTION

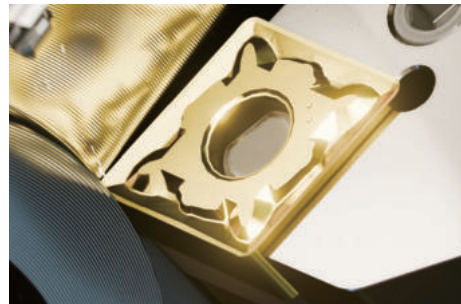
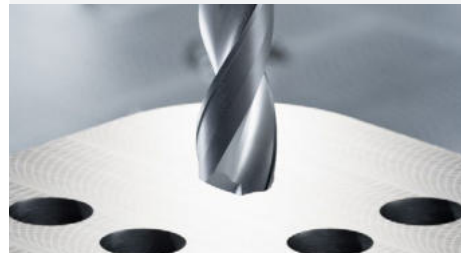
HIGH PERFORMANCE PRODUCTS 2025-2026



YG YG-1 CO., LTD.



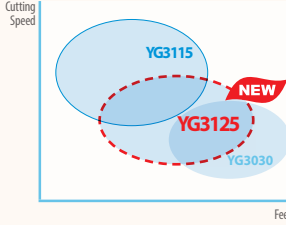
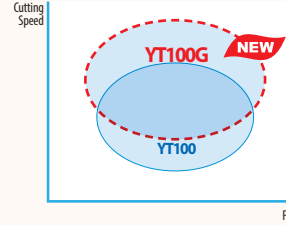
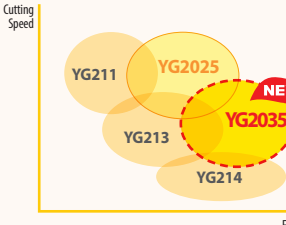
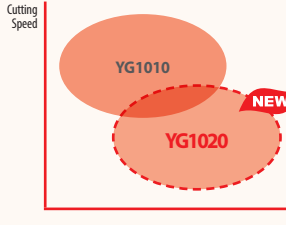
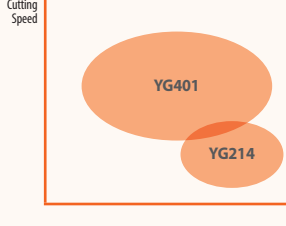
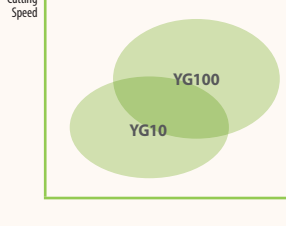
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Scan QR Code
to See More Tools for
Indexable Inserts
Turning catalog

NEW GRADE YG TURN GRADES

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 510-520	 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

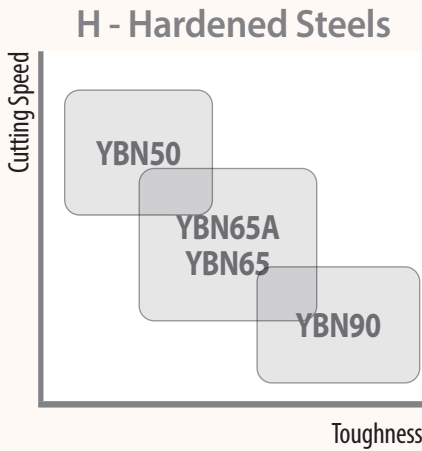
Chip breakers for Steel		Chip breakers for Cast iron	
Finishing Roughing	 -UF For Finishing	Stable Unstable	 -UC Medium Roughing
	 -PWF Wiper-Finishing		 -UR Roughing and Heavy Interrupted Cut
	 -UL Semi-Finishing and Sticky Materials		 -MA Cast Iron Heavy Roughing (Flat type)
	 -UM Medium (for Unstable Condition)		 -KR Cast Iron heavy Roughing (Big K-land)
	 -GM Medium Machining for Steel & Stainless steel		
	 -UG Medium (for Stable Condition)	Chip breakers for Stainless steel	
	 -PWM Wiper-Medium	Finishing Roughing	 -MF Finishing
	 -UC Medium Roughing		 -MM Medium
 -UR Roughing and Heavy Interrupted Cut	 -MG General		
Chip breakers for heavy Turning		 -MR Roughing	
Medium Roughing	 -UH Medium Heavy	Chip breakers for Superalloys	
	 -UT Heavy Roughing	Finishing Roughing	 -SF Finishing
Chip breakers for Cermet			 -SM Medium
 -PSF Cermet Finishing	 -SR Roughing		
Finishing Medium	 -S Cermet Finishing	Chip breakers for Non-ferrous Metals	
	 -C Cermet Medium	 -AL from Roughing to Finishing	
 -PF Cermet Finishing			
 -PM Cermet Medium			



Scan QR Code
to See More Tools for
Indexable Inserts
PCBN catalog



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



GRADES			
YG602 P20 - P35 M20 - M40 K20 - K40 S15 - S25 Universal grade for Parting & Groove Turning • TiAlN PVD Coating for General Application		YG603 M30 - M50 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		 Scan this QR code to see our TDY-RG - YG602G at work.	

CHIP BREAKERS			
Parting & Grooving	-P		• For External Parting Off & Grooving • For Low Feed Rate
	-N		• For External Parting Off & Grooving • For High Feed Rate
Turning & Grooving	-Y		• For External Turning & Grooving • For Medium Feed Rate
	GL		• For External, Internal Turning and Grooving • Face Grooving and Face turning • For low feed rate
	GM		• For External, Internal Turning and Grooving • Face grooving and Face turning • For Medium Feed Rate
	RG		• For External, Internal Turning and Grooving • Face Grooving and Face Turning • Full Radius Insert for Profiling



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



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																
CVD	YG501										501															
	YG904																					904				
	YG5020										5020															
Uncoated	YG50														50											

YG012 P10 - P30 H10 - H30
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

YG612 P20 - P40 M20 - M40 S20 - S40
Specialized Multi-Nano Coated Grade with high wear resistance and chipping resistance

NEW
YG904 S30 - S45
Excellent performance for machining HRSA(Heat resistant super alloys)

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

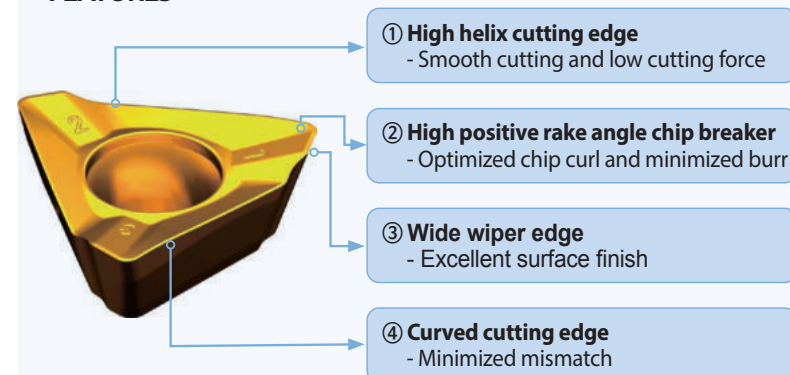
YG50 N05 - N20
Uncoated Milling Grade for Aluminium

CHIP BREAKERS

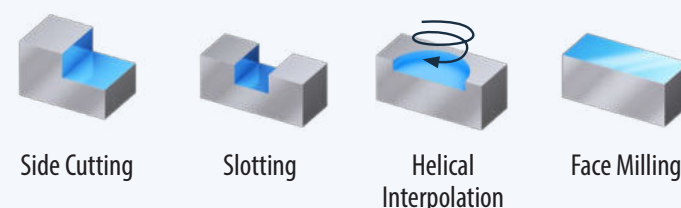
-AL		• For Aluminum • Very Sharp Geometry
-ST		• For Stainless Steel, Super Alloy • Sharp Geometry
General Inserts (GN)		• First Choice for General Application
-TR		• For Hardened Steels • Reinforced Geometry
...W / ...N		• For Hardened Material and Cast Irons



FEATURES



APPLICATION

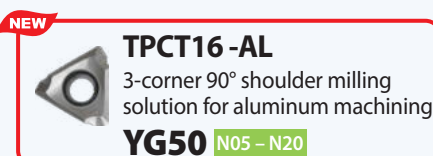


RANGE

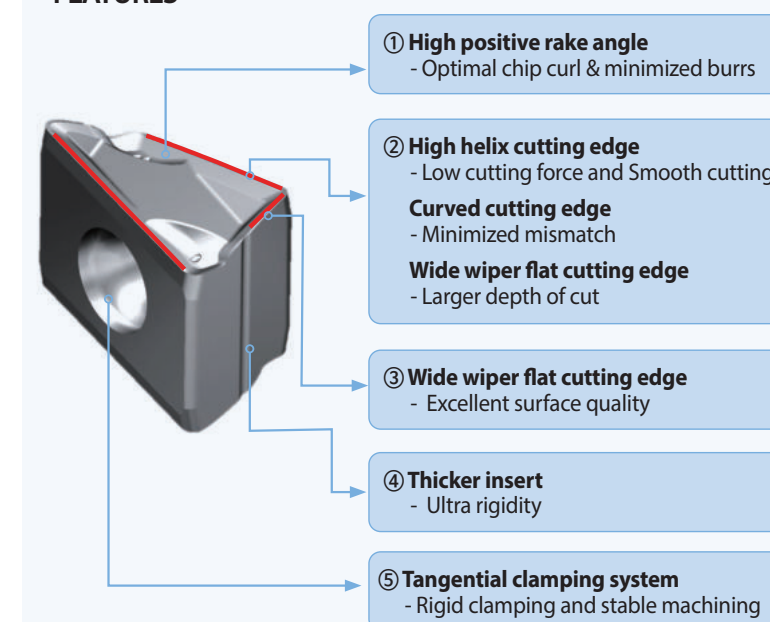
TPKT07	Ø12mm~Ø52mm
TPKT11	Ø20mm~Ø63mm
TPK(C)T16	Ø32mm~Ø200mm

INSERT SIZE

Increases the range of choices for customer



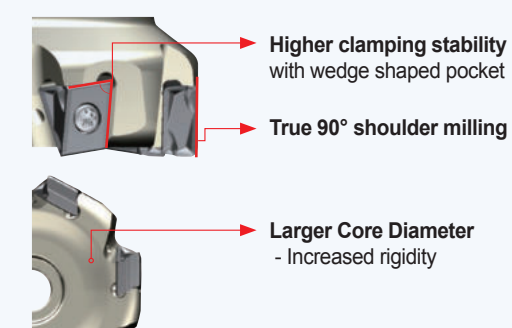
FEATURES



RANGE

LNKU13	Ø40mm~Ø160mm
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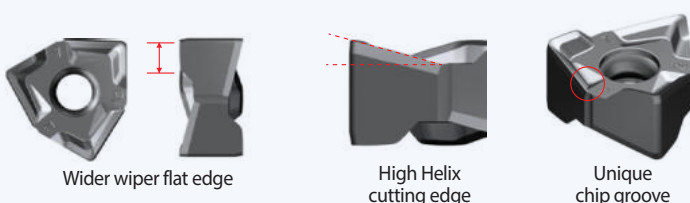
KEY TECHNOLOGY



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 - Ø200mm
- Ap (max) : 7mm

KEY TECHNOLOGY

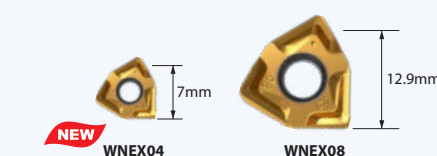


RANGE

WNEX04	Ø20mm~Ø63mm
WNEX08	Ø32mm~Ø125mm

INSERT SIZE

Increases the range of choices for customer



APPLICATION



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 improved chip evacuation in deeper machining

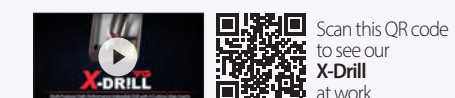
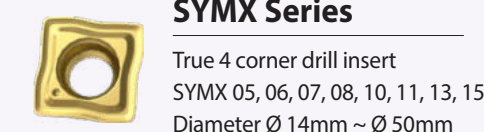
KEY TECHNOLOGY

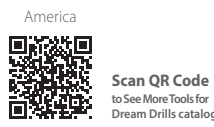
- Only 1 Chip formation per flute
- Real 4 Cutting edges



RANGE

Drill insert	Drill Body		
SYMX050204	Ø14~Ø16.5	0.5mm	2xD, 3xD, 4xD, 5xD
SYMX060204	Ø17~Ø20.5		
SYMX07T206	Ø21~Ø23.5		
SYMX080306	Ø24~Ø28.5		
NEW SYMX10T308	Ø29~Ø33.5	1mm	2xD, 3xD, 4xD, 5xD
SYMX110408	Ø34~Ø38		
SYMX130410	Ø39~Ø44		
SYMX150512	Ø45~Ø50		





DREAM DRILL^X

Multi-Purpose Solid Carbide Drilling up to HRC50
Proprietary Coating upgrade boosting Performance
in Steel and Cast-Iron applications

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

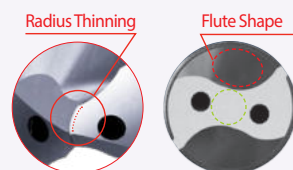


High Heat Endurance



Chipping Protection

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



Negative Land (Honing)

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

NEW SERIES

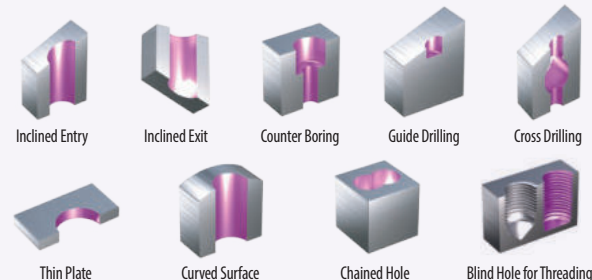
DREAM DRILLS -FLAT BOTTOM

Fast and Stable Drilling for a Wide Variety of Applications
X-Coated(2XD), TiAlN Coated(3XD, 5XD), Flat Bottom Solid Carbide Drills
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

APPLICATION

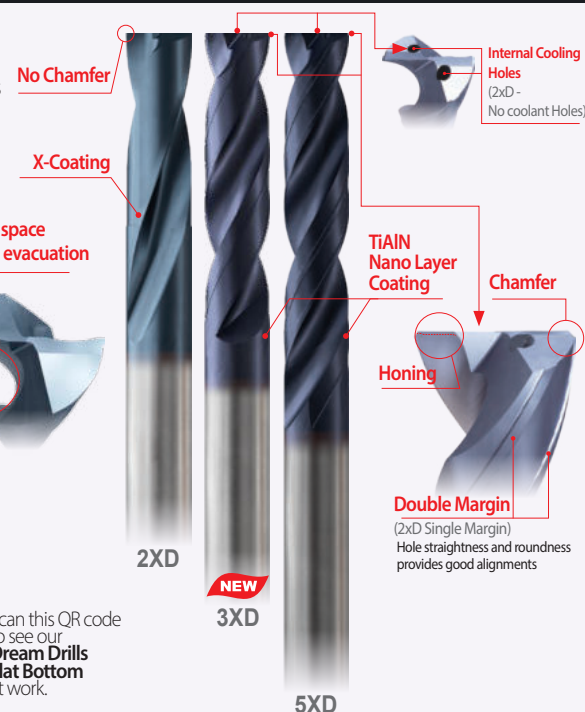


RANGE

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



Scan this QR code to see our Dream Drills Flat Bottom at work.



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

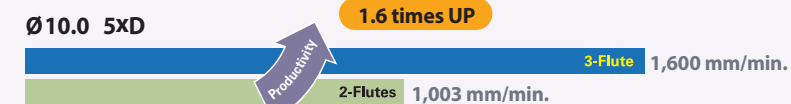
FEATURES & BENEFITS

- 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

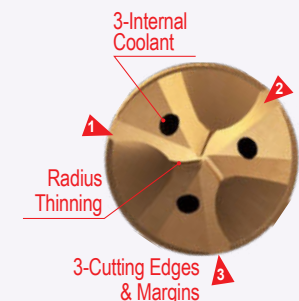
RANGE

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

Productivity (Carbon Steel)



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



i-ONE DRILL

Cost Efficient High Performance Exchangeable Drilling Tools
H- Coated 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

Ground bright finished shank
for more precise clamping

Body Clearance
for elimination undesirable contact with work piece

Nickel-plated Steel holder
for corrosion resistance and wear resistance

Optimized flute shape
for better chip evacuation

Torx Plus Screw
for clamping insert

Internal cooling channel
for higher drilling performance

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

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



Scan this QR code to see our i-One Drills at work.

NEW
Internal Coolant

TAP PRIME

HSS-PM, Premium Spiral Flute, Spiral Point
and Forming Taps
New Prime X-Coated Tap for CNC Machining on Various Ductile Materials

without Internal Coolant

with Internal Coolant

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
	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"
Forming	M	M2 - M24
	MF	M2 - M24
	UNC	#0 - 1"
	UNF	#0 - 1"

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

Scan this QR code to see our Prime Tap at work.

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

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

without Internal Coolant

with Internal Coolant

Tight shank tolerance for consistent thread gauging

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

Scan this QR code to see our Synchro Tap at work.

YG TAP CHIP BREAKER

"The Trouble-Shooter"

TiN Coated HSS-E, HSS-PM

Chip Breaker

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

YG-1 Special Thread Structure

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

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.

15° Helix Angle

Promotes efficient chip evacuation

RANGE

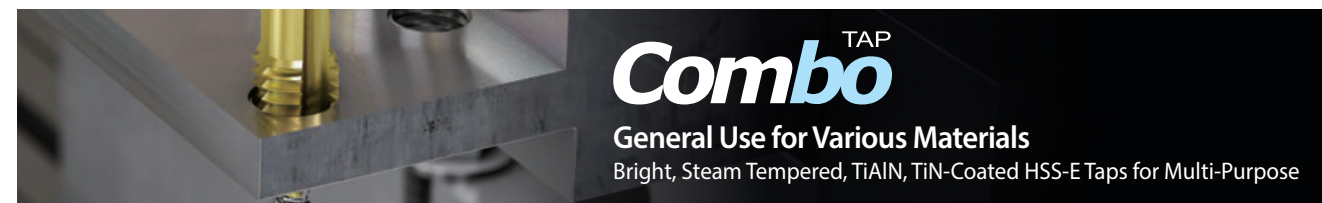
With Internal Coolant	M	M4 - M20
	MF	M8 - M20
	UNC/UNF	#8 - 1"
Without Internal Coolant	M	M6 - M20
	MF	M8 - M20
	UNC/UNF	1/4 - 1"

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

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Y_G YG-1 CO., LTD. • www.yg1.solutions

13



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"

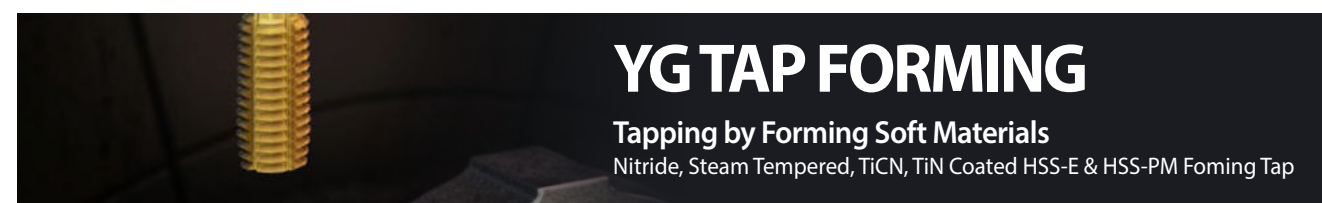
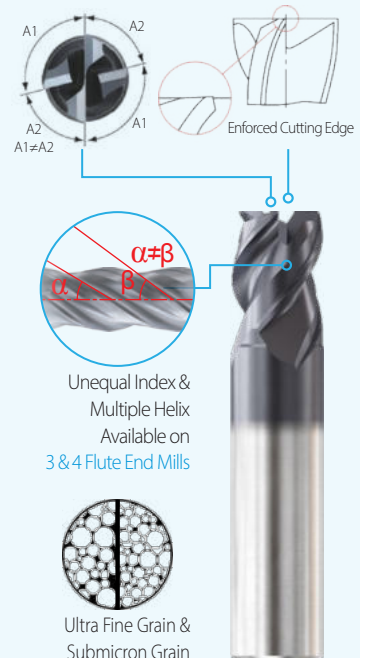


Scan this QR code to see our Combo Tap at work.



FEATURES, BENEFITS & LINE UP

ASIA	2 Flute	Ball Nose Square	Ø 0.1mm - Ø 16mm	Ensures smooth chip evacuation and enhanced cutting performance
	4 Flute	Square	Ø 1mm - Ø 20mm	Reduces vibration during machining, ensuring superior surface finish and tool life.
EUROPE (Plain shank and adapted Flat shanks for best stability)	2 Flute	Ball Nose Square	Ø 2mm - Ø 12mm	Ensures smooth chip evacuation and easy programming
	3 Flute	Ball Nose Square Corner Radius	Ø 1.8mm - Ø 12mm	Low cutting forces and undersize corner radius diameters for key-way cutting
	4 Flute	Ball Nose Square	Ø 2mm - Ø 12mm	Highest Metal Removal Rates and Tool life
AMERICA	2 Flute	Ball Nose Square	Inch Ø 1/16" - Ø 1/2" Metric Ø 1mm - Ø 16mm	Ensures smooth chip evacuation and enhanced cutting performance
	4 Flute	Ball Nose Square	Inch Ø 1/4" - Ø 3/4" Metric Ø 2mm - Ø 20mm	Reduces vibration during machining, ensuring superior surface finish and tool life.



FEATURES & BENEFITS

- The strongest threads with greater pull strength, increased productivity, reduced breakage, longer tool life
- Superior thread finish with roll form taps.
- Roll formed threads are created using a deformation process during the tapping cycle moving metal grains into position versus cutting.

RANGE

with Oil Groove	M	M2 - M20
	MF	M4 - M20
	UNC	#5 - 3/4"
without Oil Groove	M	M2 - M20



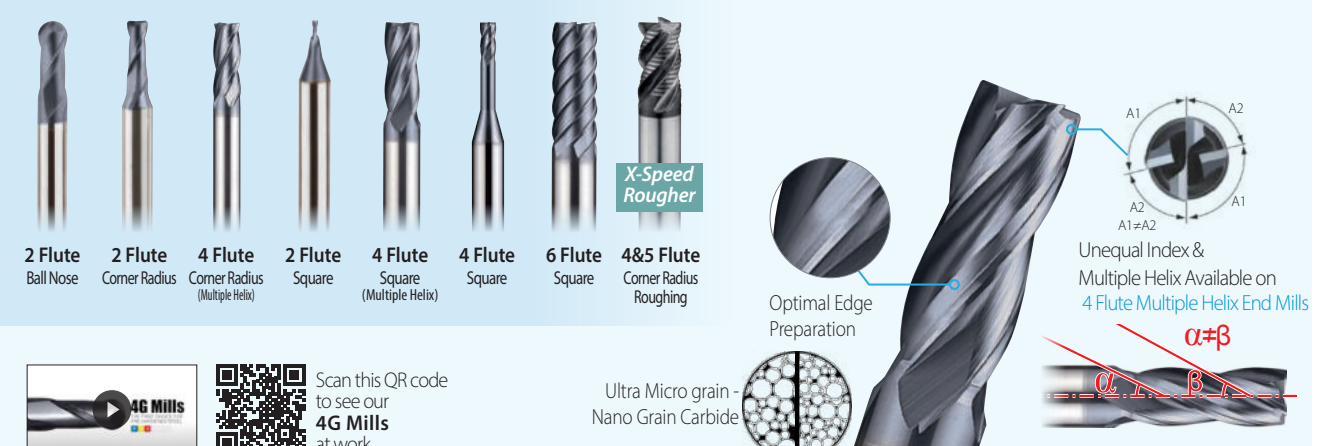
FEATURES & BENEFITS

- 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 &
Additional Sizes

**PREMIUM
X-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 >1.800 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

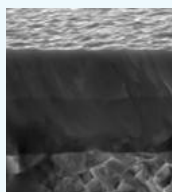
- ▶ YG-1's High performance corner geometries, including corner radius, for longer tool life in high-hardness machining.

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.



3&4&6&8 FLUTE END MILLS

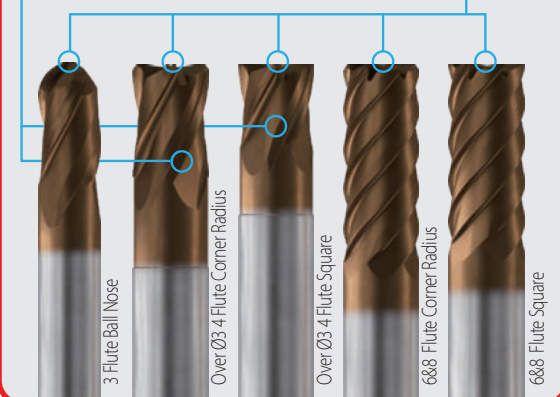
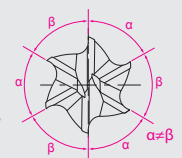
NEW

Multiple Helix

- ▶ Decreasing chatter to provide optimized surface qualities

Unequal Indexing

- ▶ Avoiding harmonics to achieve highest tool life



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

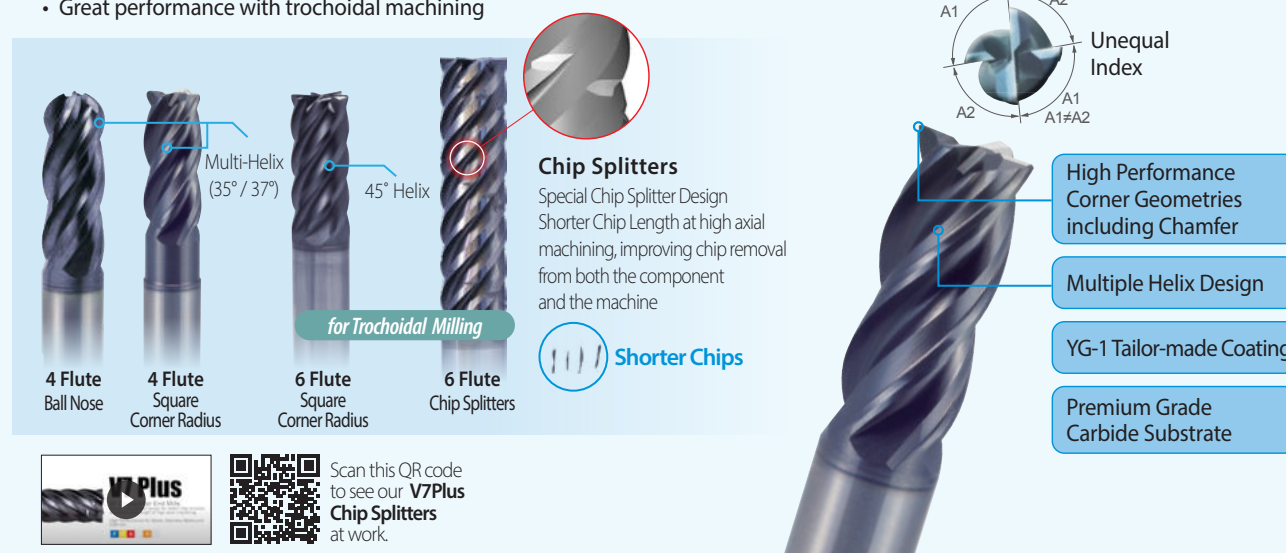


FEATURES & BENEFITS

- 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 $\varnothing 3\text{mm} - \varnothing 25\text{mm}$ (1/8 - 1")
- Corner Radius $\varnothing 3\text{mm} - \varnothing 25\text{mm}$ (1/8 - 1")
- Ball Nose $\varnothing 3\text{mm} - \varnothing 25\text{mm}$ (1/8 - 1")



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

X 5070 Line up



FEATURES & BENEFITS

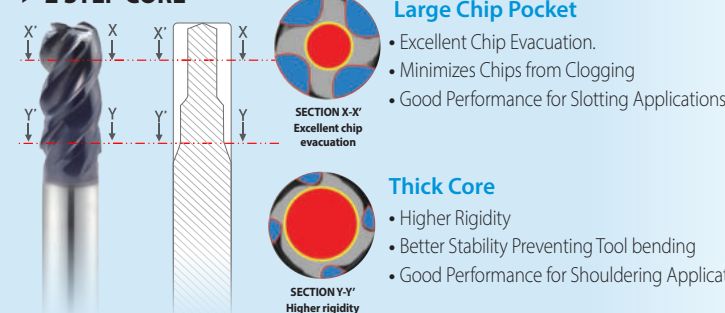
- For Titanium, Stainless Steels and also excellent for Steels
- For high-speed machining and heavy cutting
- Dual stepped-core on 4 flute, 5 flute with multiple helix

RANGE

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

4 Flute Double Core End Mills With Corner Radius

2 STEP CORE



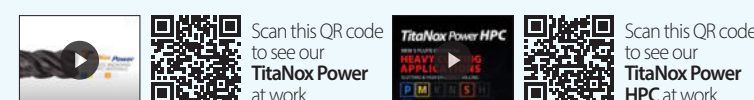
TitaNox-Power HPC

5 FLUTE DESIGN for HEAVY CUTTING

- New design enhances chip space in heavy cuts, while still maintaining rigidity in peel milling
- Full eccentric relief for edge strength
- Unequal index design for Chatter-Free cutting

RANGE

- Square $\varnothing 6\text{mm} - \varnothing 25\text{mm}$ (1/4 - 1")
- Corner Radius $\varnothing 6\text{mm} - \varnothing 25\text{mm}$ (1/4 - 1")

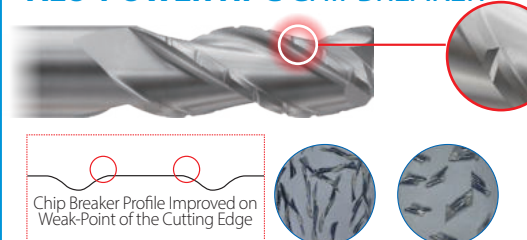


FEATURES & BENEFITS

- 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 CHIPBREAKER



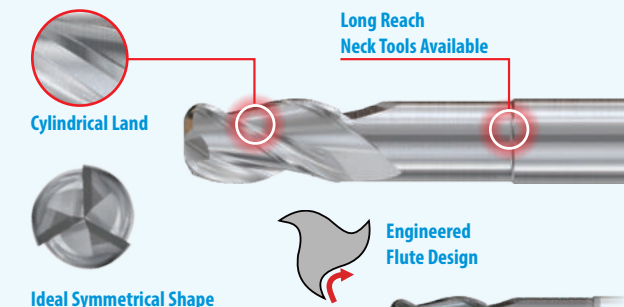
Optimized Chip Breaker Profile Design

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

ALU-POWER HPC

High Performance End Mills for Aluminum

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

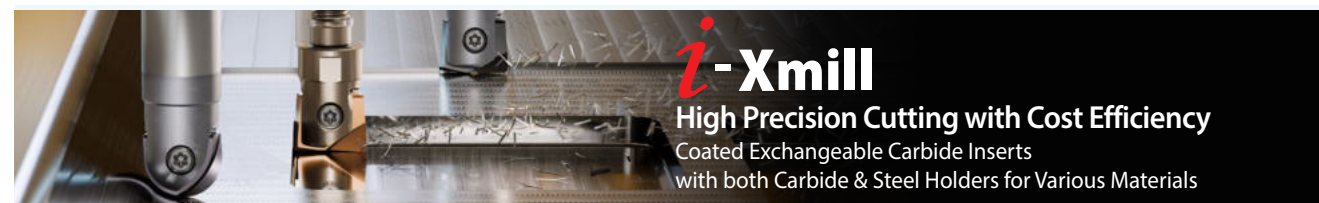


RANGE

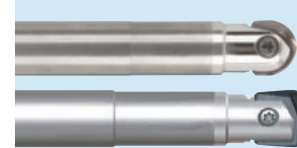
※ Available in Non-coated & DLC coated items

TYPE(SERIES)	SIZE RANGE	
	METRIC	INCH
3 Flute Square	$\varnothing 3 \sim 25\text{mm}$	$\varnothing 1/8 \sim 1$
3 Flute Square with Neck	$\varnothing 6 \sim 20\text{mm}$	$\varnothing 1/4 \sim 1$
3 Flute Corner Radius	$\varnothing 6 \sim 20\text{mm}$ (R0.3~4mm)	$\varnothing 1/8 \sim 1$ (R0.10~.250)
3 Flute Corner Radius with Neck	$\varnothing 6 \sim 20\text{mm}$ (R0.3~4mm)	$\varnothing 1/4 \sim 1$ (R0.10~.250)
3 Flute Square with Chip Breakers	$\varnothing 6 \sim 20\text{mm}$ (R0.25~4mm)	$\varnothing 1/2 \sim 3/4$ (R0.10~.60)
3 Flute Corner Radius with Chip Breakers	$\varnothing 6 \sim 20\text{mm}$ (R0.25~4mm)	$\varnothing 1/8 \sim 1$ (R0.10~.60)





HOLDER FEATURES



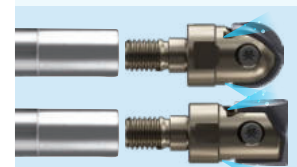
Carbide Holders

- ▶ 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

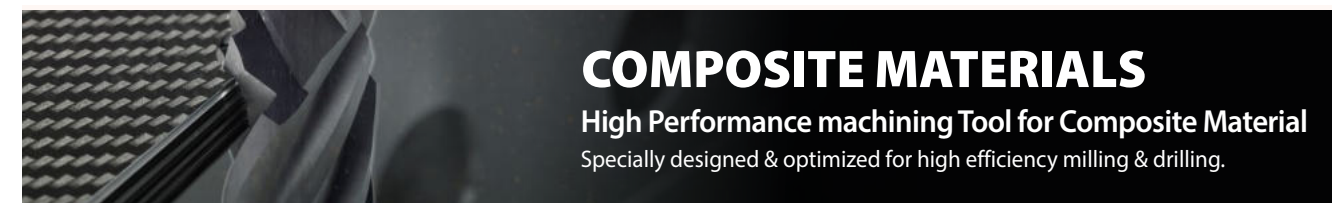
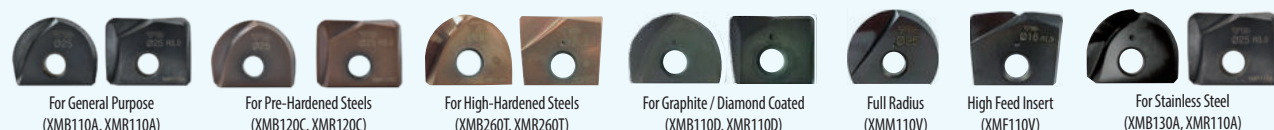
- ▶ Highest flexibility using market common coupling
- ▶ Internal coolant or air blow supply

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

RANGE

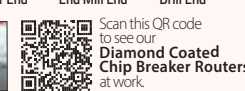
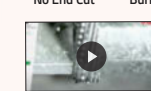
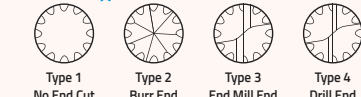
- Ball $\varnothing 8\text{mm} - \varnothing 33\text{mm}$ (5/16 - 1-1/4")
- Corner Radius $\varnothing 8\text{mm} - \varnothing 33\text{mm}$ (5/16 - 1-1/4")



Diamond Coated Chip Breaker Routers

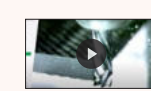
- The unique flute structure provides good surface finish, longer tool life and requires less cutting force
- Reduce delamination and uncut fibers
- Roughing and finishing processes
- Diamond coating with excellent abrasion resistance

End Teeth Type



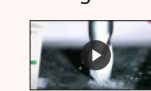
Diamond Coated Compression Routers

- 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



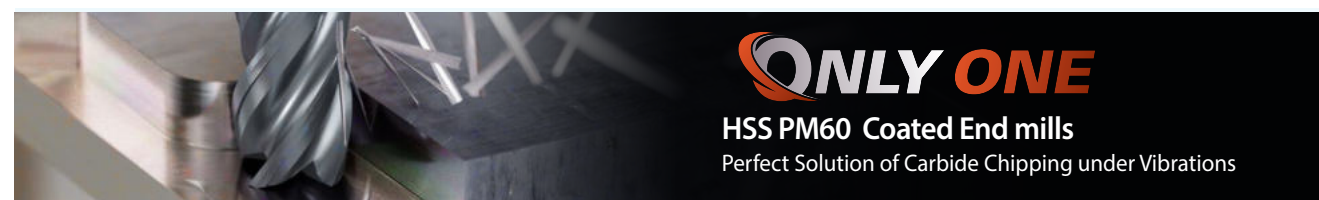
Diamond Coated Drills

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



PCD TOOLS

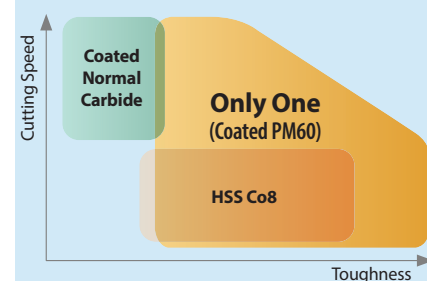
YG-1 PCD Series for CFRP and stacks offer cutters designed for drilling, countersinking and milling operations. It covers the complete range of cutting tools commonly used within Aerospace, Automotive, Energy and Sporting Goods industries.



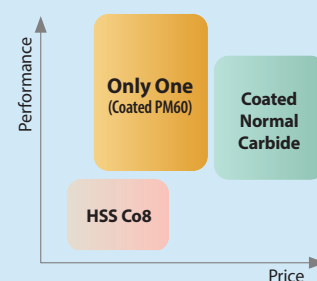
FEATURES & BENEFITS

- Y-coated PM60 High Speed Steel
- First Choice alternative to carbide in less stable conditions
- Higher cutting speeds than regular HSS Co
- HSS-PM60 allows for machining harder materials

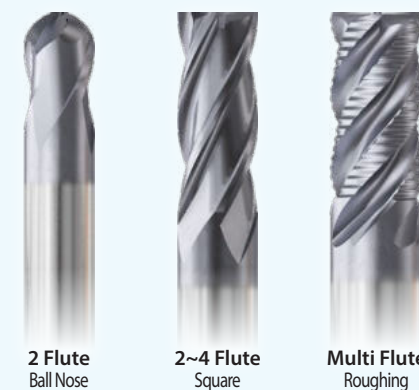
To protect chipping problems under the unstable machining conditions with vibration



Higher Toughness than HSS Co8, Cutting Speed (Vc) can be as high as Coated Normal Carbide.

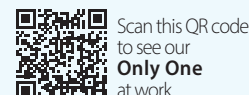


Better performance than HSS Co8, Better price than Coated Normal Carbide.



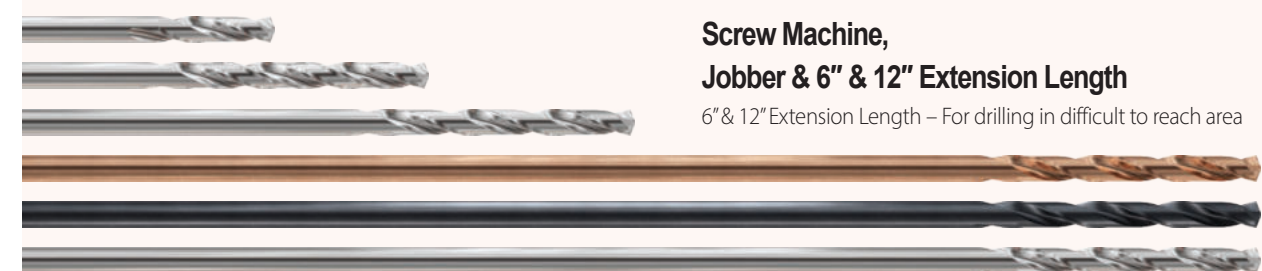
RANGE

- Ball $\varnothing 0.5\text{mm} - \varnothing 25.0\text{mm}$
- Square $\varnothing 1.0\text{mm} - \varnothing 25.0$
- Roughing $\varnothing 6.0\text{mm} - \varnothing 2.5\text{mm}$



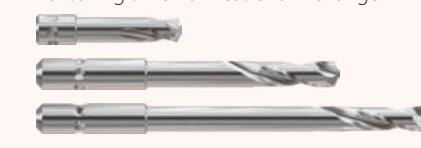
AIRCRAFT DRILLS

- HSS & Cobalt Drills
- Manufactured to NAS(National Aerospace Specification) STD.
- To use with Hand-Held Equipment for drilling of Aircraft Materials



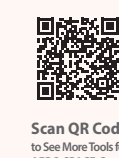
Quick Change Adapter Drills

For saving time from easier drill change



Double Margin Step Drills

Available in suitable for machining close tolerance holes within maintaining concentricity and accuracy. Available for Straight Shank, Threaded Shank, Quick-Change Shank





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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

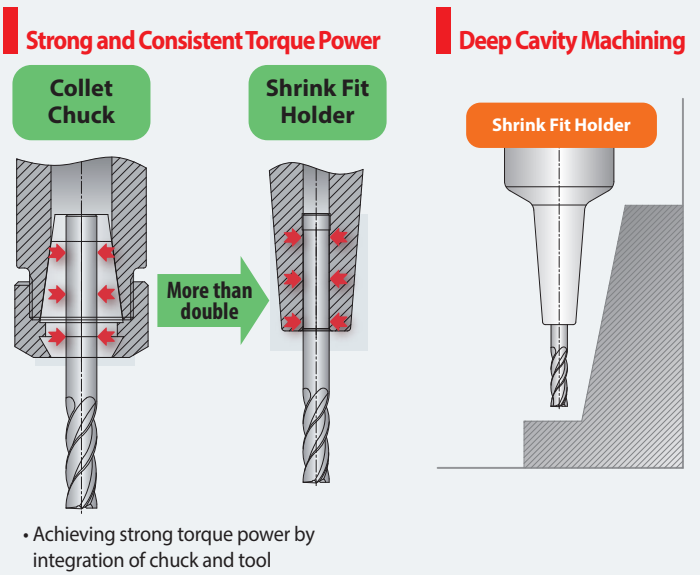
Hydraulic Chuck I.D(mm)	Tool Shank O.D(mm)	Applicable RPM	Minimum Clamping Depth (mm)		Min. Torque Power (Nm)	
			Slim	Power E Hydro	Slim	Power E Hydro
6	6	40,000	27		16	
8	8	40,000	27		23	
10	10	40,000	32		45	
12	12	40,000	37	41	90	110
14	14	40,000	37		110	
16	16	40,000	42	48	185	350
18	18	40,000	42		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°



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Since 1982, YG-1 has been committed to quality, innovation and the unique customer experience. Our performance and experience have granted YG-1 the global impression of one of the leading manufacturers of high quality cutting tool solutions. This global footprint expands over 75 countries, with international logistic centers, pledging to our customers to give the best service available today - and tomorrow.

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