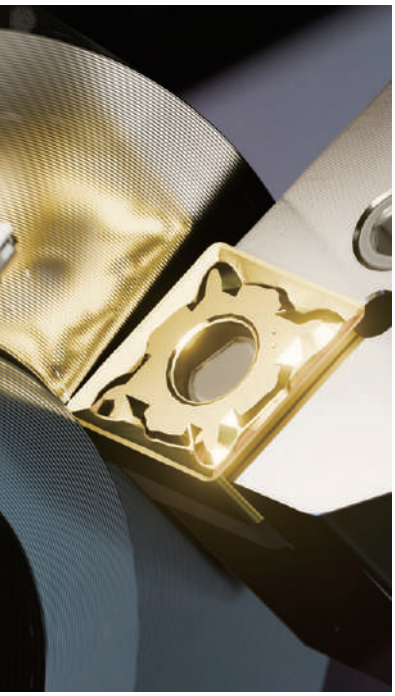
QUICK-SEARCH
YG-1 PRODUCTS!!
www.yg1.solutions

BEST OF SELECTION

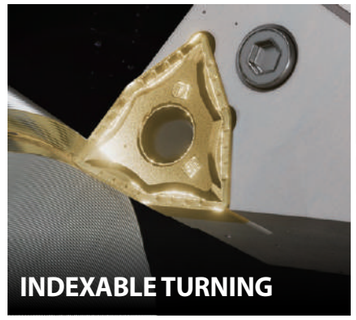
HIGH PERFORMANCE PRODUCTS 2025-2026



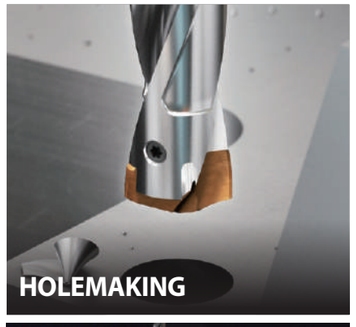





YG-1 CO., LTD.



HIGH PERFORMANCE PRODUCTS



CONTENTS

Scan QR Code
to See More Tools for Indexable inserts Turnig catalog

YGTURN GRADES

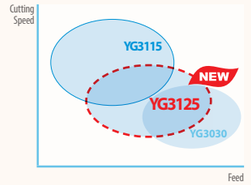
P Steel

Hard ↕ Tough

YG3115 First Choice Garde for High Cutting Speed in Steels

NEW **YG3125** Recommended First Grade for Steel

YG3030 Interrupted Cutting of Steel

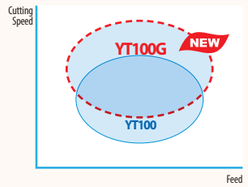


P Steel

Hard ↕ Tough

YT100 Cermet Grade for Turning

NEW **YT100G** PVD-coated Cermet Grade for Turning



M Stainless Steel

Hard ↓ Tough

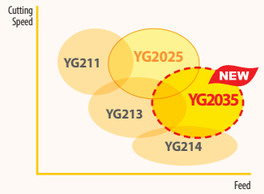
YG211 High Wear Resistance Grade for Stainless steel

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

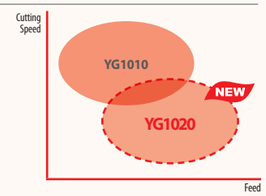


K Cast Iron

Hard ↕ Tough

YG1010 First Choice for Cast Iron

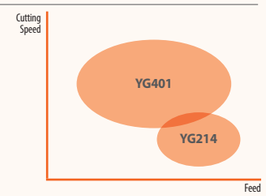
NEW **YG1020** First choice for ductile cast iron



S Super Alloy

ISO S10-S20

YG401 PVD Turning Grade for Heat-Resistant Super Alloy



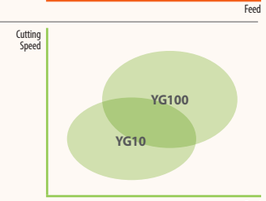
N Non-ferrous Metals

DLC

YG100 First Choice Grade for Aluminum with DLC Coating

Uncoated

YG10 Uncoated Grade for General Aluminum



YGTURN CHIP BREAKERS

Chip breakers for Steel

Finishing ↕ Roughing

-UF For Finishing

NEW **-PWF** Wiper-Finishing

-UL Semi-Finishing and Sticky Materials

-UM Medium (for Unstable Condition)

NEW **-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

NEW **-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

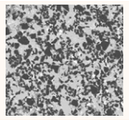
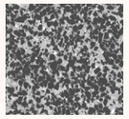
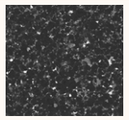
-SM Medium

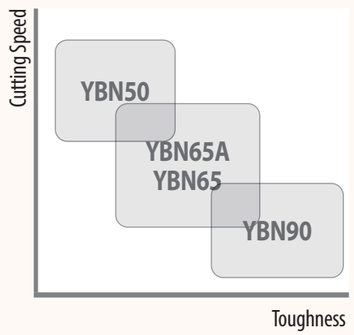
-SR Roughing

Chip breakers for Non-ferrous Metals

-AL from Roughing to Finishing

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 Applicatiion

YG603 — M30 - M50

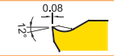
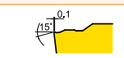
PVD Parting & Grooving for Stainless Steel
- First Choice for Stainless stee
- For interrupted Cut

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

※ width : 2, 3, 4 mm

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

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
PVD	YG712	712					
PVD	YG713	713					
PVD	YG612	612	612			612	
PVD	YG613	613	613				
PVD	YG501			501			
PVD	YG904					904	
CVD	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)

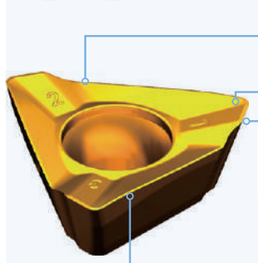
YG613 P30 - P50 | M30 - M40
Milling Grade for Stainless Steel Application

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



① **High helix cutting edge**
- Smooth cutting and low cutting force

② **High positive rake angle chip breaker**
- Optimized chip curl and minimized burr

③ **Wide wiper edge**
- Excellent surface finish

④ **Curved cutting edge**
- Minimized mismatch

APPLICATION

RANGE

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

INSERT SIZE

Increases the range of choices for customer

NEW

TPCT16 -AL

3-corner 90° shoulder milling solution for aluminum machining

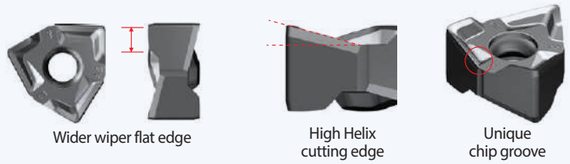
YG50 N05 – N20

Scan this QR code to see our **YG SM3 Mill** at work.

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



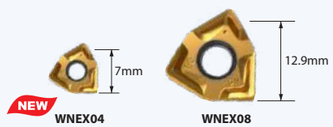
Scan QR Code to See More Tools for Indexable inserts Milling catalog

RANGE

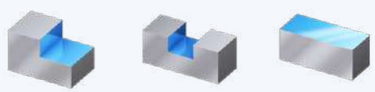
WNEX04	Ø20mm~Ø63mm
WNEX08	Ø32mm~Ø125mm

INSERT SIZE

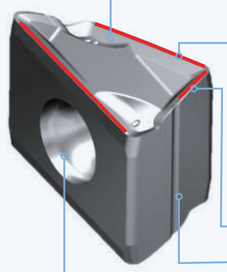
Increases the range of choices for customer



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

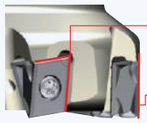
④ **Thicker insert**
- Ultra rigidity

⑤ **Tangential clamping system**
- Rigid clamping and stable machining

RANGE

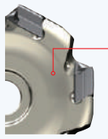
LNKU13	Ø40mm~Ø160mm

KEY TECHNOLOGY



Higher clamping stability with wedge shaped pocket

True 90° shoulder milling



Larger Core Diameter
- Increased rigidity

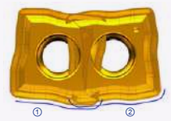
Scan this QR code to see our **YG TM4 Mill** at work.

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



SYMX Series

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

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		
SYMX110408	Ø34~Ø38	1mm	2xD, 3xD, 4xD, 5xD
SYMX130410	Ø39~Ø44		
SYMX150512	Ø45~Ø50		

Scan this QR code to see our **X-Drill** at work.

Metric America

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to See More Tools for
Dream Drills catalog

DREAM DRILL X

Multi-Purpose Solid Carbide Drilling up to HRc50

Proprietary Coating upgrade boosting Performance
in Steel and Cast-Iron applications

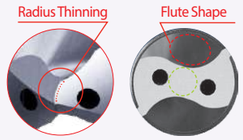
New Coating Technology *"RCH-Coating"*

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



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

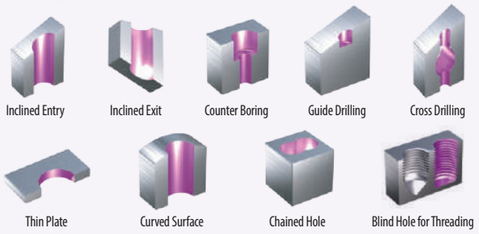
Fast and Stable Drilling for a Wide Variety of Applications

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

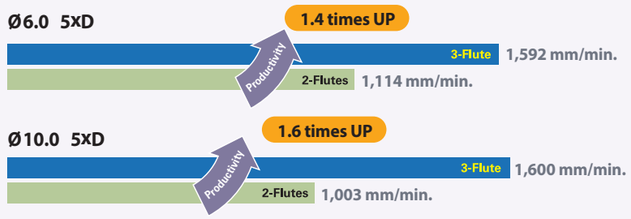
FEATURES & BENEFITS

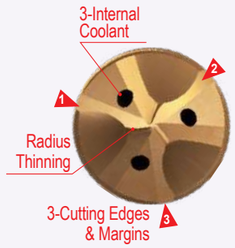
- For Carbon Steels, Alloy Steels (-HRc35), Cast Iron
- Increases productivity due to 1.5 to 2 times faster feeding speed than 2 flute drills
- Multi-layered coating delivers outstanding productivity and reliability

RANGE

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

Productivity (Carbon Steel)



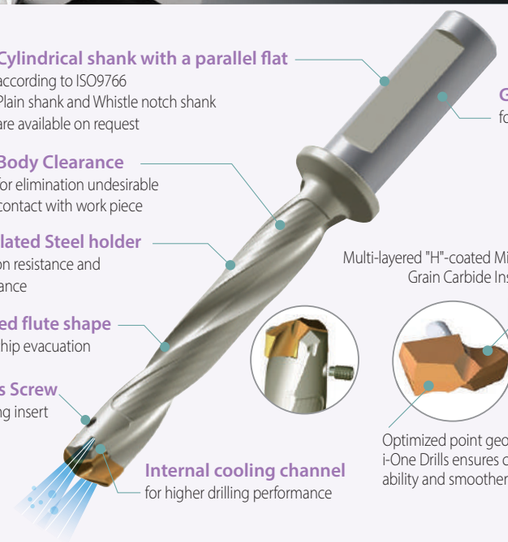


Scan this QR code
to see our
Dream Drills
High Feed
at work.

i-ONE DRILL

Cost Efficient High Performance Exchangeable Drilling Tools

H- Coated Carbide Inserts and Premium Steel Holders



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.

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

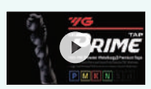
Powdered metal technology for higher spindle speeds, longer tool life, and excellent thread finish.

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

without Internal Coolant

with Internal Coolant

Tight shank tolerance for consistent thread gauging

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

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

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

Sychro Tapping Chuck

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

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.

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"

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

YG TAP FORMING

Tapping by Forming Soft Materials

Nitride, Steam Tempered, TiCN, TiN Coated HSS-E & HSS-PM Foming Tap

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

NEW!

EV MILLS

Economical Solid Carbide End Mill

FEATURES, BENEFITS & LINE UP

ASIA	2 Flute	Ball Nose Square	Ø0.1mm - Ø16mm	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 – Ø12mm	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" - Ø3/4" Metric Ø 2mm - Ø 20mm	Reduces vibration during machining, ensuring superior surface finish and tool life.

4G MILLS

The First Choice for Pre-Hardened Steels (-HRc55)

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

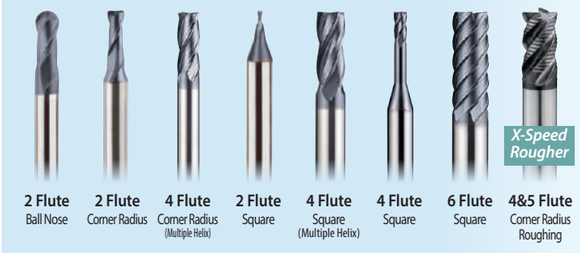
FEATURES & BENEFITS

- 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

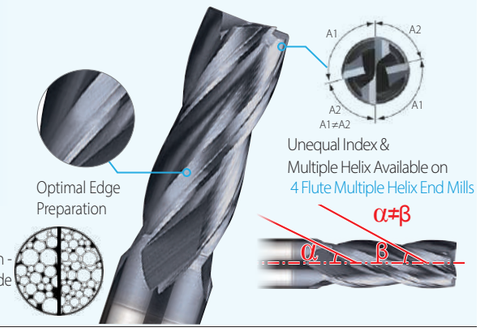
RANGE

- 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



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

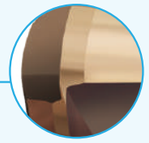


Metric America

Scan QR Code
to See More Tools for Dream Drills catalog

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

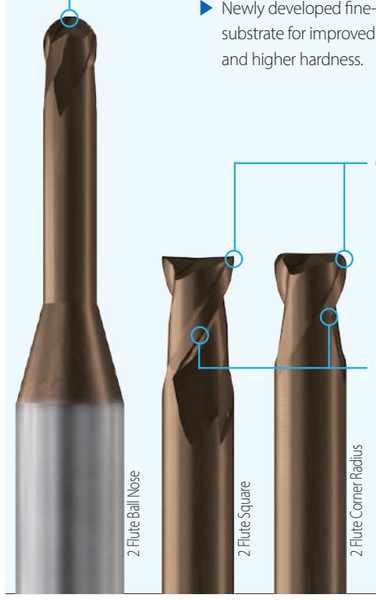
▶ Optimized transition from end mill center to flute for improved chip flow.

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

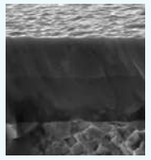
▶ YG-1's High performance corner geometries, including corner radius, for longer tool life in high-hardness machining.

Edge Preparation

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

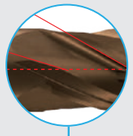
Special High Technology Coating

▶ 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

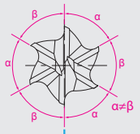


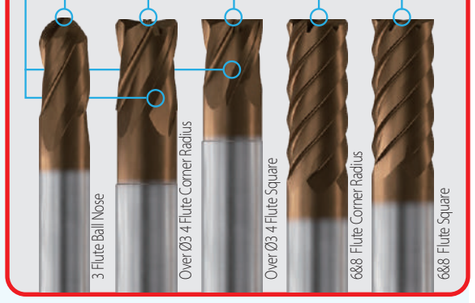
Multiple Helix

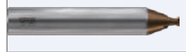
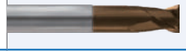
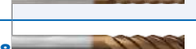
▶ Decreasing chatter to provide optimized surface qualities

Unequal Indexing

▶ Avoiding harmonics to achieve highest tool life





Flutes	Series		Type	OD Range min.	OD Range max.	HRc Range 40-60	HRc Range 50-70	Accuracy	Helix	Applications
2		HPI90	Ball Nose	R0.05	R10.0	○	●	≤Ø6mm ±1μm~5μm; >Ø6mm ±3μm~7μm; ≤Ø1/4" +.00005"~-.00020"; >Ø1/4" +.00010"~-.00030"	30°	3D (Profiling)
		HPK44				●	○			
		HPI91	Ball Nose for Rib Processing	R0.05	R6.0	○	●			
		HPK45				●	○			
		HPI92	Ball Nose for Rib Processing with Taper Neck	R0.05	R6.0	○	●			
		HPK47				●	○			
		HPK10	Ball Nose with Neck	R0.5	R12.5	○	●			
		HPK46				●	○			
		HPK24	Ball Nose with Neck	R1/64	R1/4	○	●			
		HPK48				●	○			
		HPI89	Corner Radius for Rib Processing	D0.2	D12.0	○	●	≤Ø6mm ±5μm; >Ø6mm ±8μm		Side cutting
		HPK15	Corner Radius with Extended Neck-Stub Length	D0.3	D20.0	○	●			Sloting
		HPK14	Miniature Corner Radius	D0.3	D2.0	○	●	±5μm	35°	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 ±5μm; >Ø6mm ±8μm	30°	3D (Profiling)
		HPK12	Ball Nose - Center Match	R1.5	R10.0	○	●			
		HPK13	Ball Nose with Neck - Center Match	R0.5	R6.0	○	●			
4		HPK16	Corner Radius for Rib Processing with Neck	D0.5	D6.0	○	●	±5μm	30° up to Ø3(1/8") 27°/30° Over Ø3(1/8")	Side cutting
		HPK17	Corner Radius with Neck	D1.0	D20.0	○	●	≤Ø1/4" (6mm) ±5μm ±.0002"; ≤Ø1/4" (6mm) ±8μm ±.0003"		Sloting
		HPK26	Corner Radius with Neck	D1/16	D3/4	○	●			Face milling
		HPK20	Square for Rib Processing with Neck	D1.0	D6.0	○	●	-		
		HPK21	Square with Extended Neck	D1.0	D20.0	○	●	-		
6		HPK18	Corner Radius	D6.0	D20.0	○	●	±8μm ±.0003"	45°	Side cutting
6&8		HPK27	Corner Radius	D1/4	D1"	○	●			Face milling
4&6&8		HPK23	Multi Flute Square	D1.0	D25.0	○	●	-		
4		HPK22	Corner Radius - High Feed	D2.0	D16.0	○	●	±5μm ±.0002"	0°	3D (Profiling) Face milling
		HPK25	Corner Radius - High Feed	D1/8	D1/2	○	●			

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

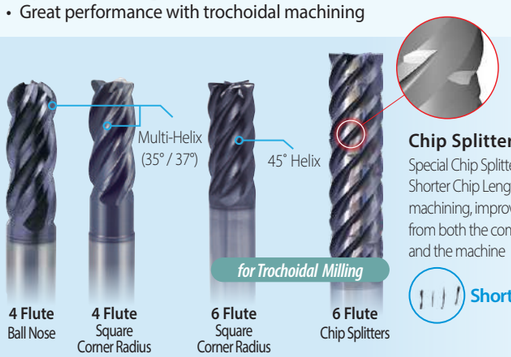
V7 Plus

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



Chip Splitters

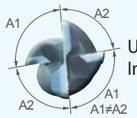
Special Chip Splitter Design
Shorter Chip Length at high axial machining, improving chip removal from both the component and the machine

Shorter Chips

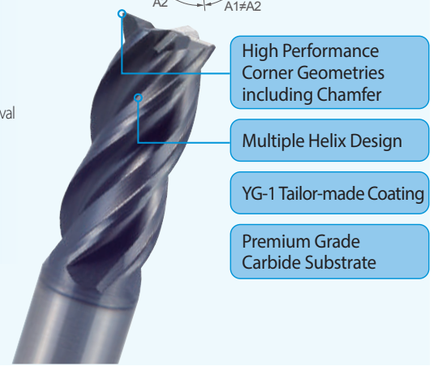
Scan this QR code to see our **V7Plus Chip Splitters** at work.

RANGE

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



Unequal Index



TitaNox Power

High-Speed Machining for Exotic Materials

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

FEATURES & BENEFITS

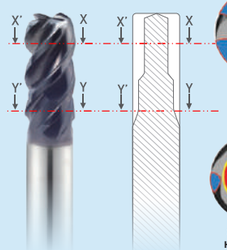
- For Titanium, Stainless Steels and also excellent for Steels
- For high-speed machining and heavy cutting
- Dual stepped-core on 4 flute, 5 flute with multiple helix

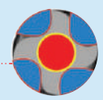
RANGE

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

4 Flute Double Core End Mills With Corner Radius

▶ **2 STEP CORE**





SECTION X-X'
Excellent chip evacuation

Large Chip Pocket

- Excellent Chip Evacuation.
- Minimizes Chips from Clogging
- Good Performance for Slotting Applications

SECTION Y-Y'
Higher rigidity

Thick Core

- Higher Rigidity
- Better Stability Preventing Tool bending
- Good Performance for Shouldering Applications

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

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

TitaNox-Power HPC

5 FLUTE DESIGN for **HEAVY CUTTING**

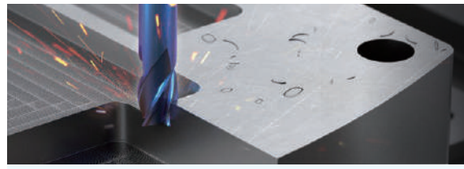
- New design enhances chip space in heavy cuts, while still maintaining rigidity in peel milling
- Full eccentric relief for edge strength
- Unequal index design for Chatter-Free cutting

RANGE

- Square Ø 6mm - Ø 25mm (1/4 - 1")
- Corner Radius Ø 6mm - Ø 25mm (1/4 - 1")

Unequal Index

YG-1's High Performance Core Design



X5070

For High-Hardened Steels (HRc50-70)

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

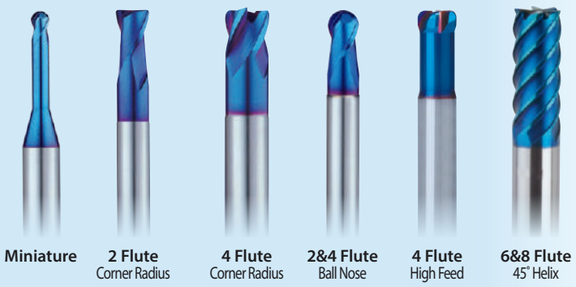
FEATURES & BENEFITS

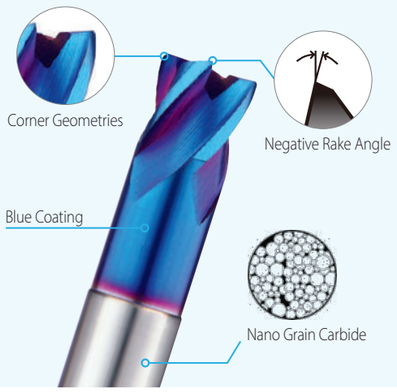
- Made from premium grade carbide material for oil mist / high-speed machining
- YG-1's customized coating, along with negative rake angles
- Excellent finished surface

RANGE

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

X 5070 Line up





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

ALU-POWER HPC

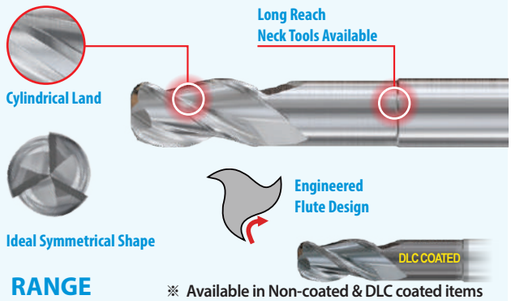
High Performance End Mills for Aluminum

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

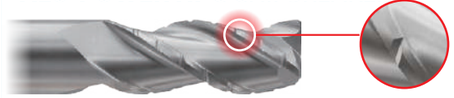
FEATURES & BENEFITS

- 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.

RANGE

※ Available in Non-coated & DLC coated items

TYPE(SERIES)	SIZE RANGE	
	METRIC	INCH
3 Flute Square	Ø3~25mm	Ø1/8~1
3 Flute Square with Neck	Ø6~20mm	Ø1/4~1
3 Flute Corner Radius	Ø6~20mm (R0.3~4mm)	Ø1/8~1(R.010~.250)
3 Flute Corner Radius with Neck	Ø6~20mm (R0.3~4mm)	Ø1/4~1(R.010~.250)
3 Flute Square with Chip Breakers	Ø6~20mm (R0.25~4mm)	Ø1/2~3/4 (R0.10~.60)
3 Flute Corner Radius with Chip Breakers	Ø6~20mm (R0.25~4mm)	Ø1/8~1 (R0.10~.60)

Scan this QR code to see our **Alu-Power HPC** at work.

i-Xmill

High Precision Cutting with Cost Efficiency

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

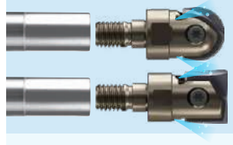
HOLDER FEATURES

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

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

Scan this QR code to see our **i-Xmill** at work.

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)

ONLY ONE

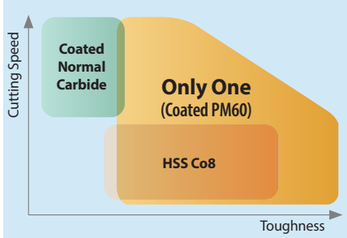
HSS PM60 Coated End mills

Perfect Solution of Carbide Chipping under Vibrations

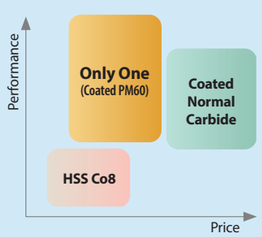
FEATURES & BENEFITS

- 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.

2 Flute
Ball Nose

2~4 Flute
Square

Multi Flute
Roughing

RANGE

• Ball	Ø 0.5mm - Ø 25.0mm
• Square	Ø 1.0mm - Ø 25.0
• Roughing	Ø 6.0mm - Ø 2.5mm

Scan this QR code to see our **Only One** at work.

COMPOSITE MATERIALS

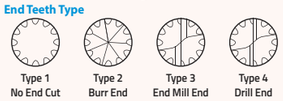
High Performance machining Tool for Composite Material

Specially designed & optimized for high efficiency milling & drilling.

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



Scan this QR code to see our **Diamond Coated Chip Breaker Routers** at work.

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

Scan this QR code to see our **Compression Routers** at work.

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.

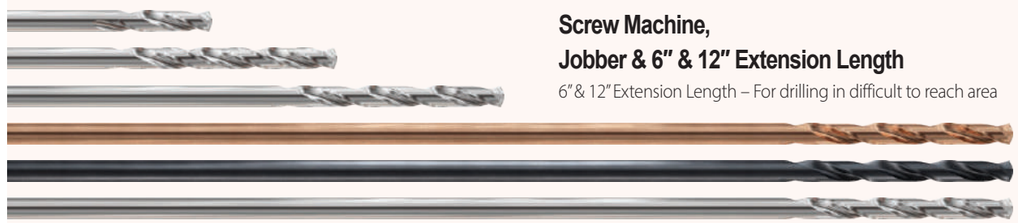
PCD TOOLS

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 METERIALS

AIRCRAFT DRILLS

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



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

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 within maintaining concentricity and accuracy.
Available for Straight Shank, Threaded Shank, Quick-Change Shank

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TOOLING SYSTEM

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

HYDRAULIC CHUCK - Power E Hydro

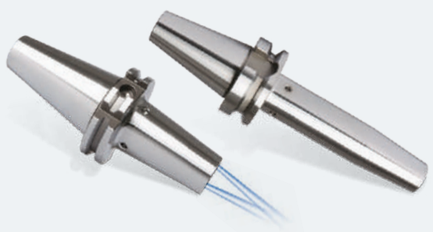
- **Superb T.I.R. Accuracy & Repeatability**
  ≤ 0.003mm (Direct Clamping)
- **Clamping Force**
  - ID 12mm : 110 Nm
  - ID 20mm : 520 Nm
  - ID 32mm : 900 Nm
- **Basic G2.5 25,000 RPM Balanced**
- **Various Size of Reduction Sleeve**
  Ø 3mm - Ø 25mm
- **Advantage**
  - Covering up to milling(roughing & 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**

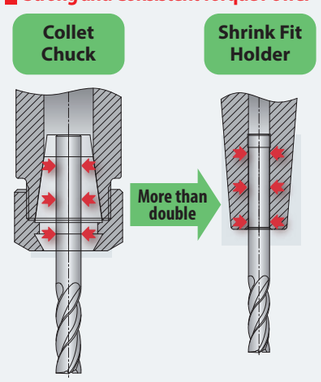
• Tool holder I.D tolerance : H6

SHRINK FIT HOLDER



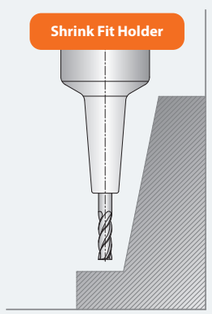
- **Superb T.I.R Accuracy**
  ≤ 0.003mm
- **Strong Torque Power**
  Min. 18Nm ~ 550Nm
- **Basic Balancing Grade**
  Min. G2.5/25,000rpm
- **Standard and Slim Design**
  - Standard 4.5°
  - Extra Slim 3.0°

Strong and Consistent Torque Power



• Achieving strong torque power by integration of chuck and tool

Deep Cavity Machining



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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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