HIGH QUALITY PRODUCTS AND ON TIME DELIVERY FOR WORLD-WIDE CUSTOMERS

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

* For the more information on sales network, Please contact the head office as below:

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YG-1 YUBS170913001

YG-1 CO., LTD.
HEAVY CUTTING APPLICATIONS (-HRC40)

“Y”-Coated Solid Carbide End Mills

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 Ø 1/8” - Ø 1”
- Corner Radius Ø 1/8” - Ø 1”
- Ball Nose Ø 1/8” - Ø 1”

TitaNox Power

HIGH-SPEED MACHINING FOR EXOTIC MATERIALS

“Y”-Coated Solid Carbide End Mills for Titanium & Tough Materials

TitaNox Power for exotic materials, holds a 4-flute double core, 5-flute multiple helix, and rougher. It shows excellent performances on Titanium, Stainless Steels, Inconel, and also on Steels. With a 2-stepped core and multiple helix, along with YG-1’s special coating, its latest technology makes it possible for heavy profiling and high-speed machining.

FEATURES & BENEFITS
- For Titanium, Stainless Steels, Inconel 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 .004” ~ Ø 1”
- Corner Radius Ø .008” ~ Ø 3/4”
- Ball Nose Ø .004” ~ Ø 3/4”

4G MILLS

THE FIRST CHOICE FOR PRE-HARDENED STEELS (-HRC55)

“Y”-Coated Solid Carbide End Mills for High-Speed Machining

FEATURES & BENEFITS
- Large product line with various sizes & shapes
- Edge preparation preventing chipping, achieving excellent finish, and longer tool life in high-speed cutting

RANGE
- Square Ø .004” ~ Ø 1”
- Corner Radius Ø .008” ~ Ø 3/4”
- Ball Nose Ø .004” ~ Ø 3/4”

X5070

FOR HIGH-HARDENED STEELS (HRC50-70)

“BLUE”-Coated Solid Carbide End Mills for High-Harden Dies

FEATURES & BENEFITS
- Made from premium grade carbide material for dry / high-speed machining
- YG-1’s customized coating, along with negative rake angles
- Excellent finished surface

RANGE
- Corner Radius Ø 1/16” ~ Ø 1”
- Ball Nose Ø 1/32” ~ Ø 1/4”

▶ 4 times faster compared to normal Carbide End Mills
▶ Excellent wear resistance at heavy feed rates on high hardened materials
D-POWER CFRP

THE BEST PERFORMANCE FOR CFRP

Diamond - Coated Solid Carbide End Mills for Composite Materials

D-Power for aerospace and automobile industries, holds a high technology corner geometry with a special diamond coating to achieve high velocity cutting with optimum tool life and excellent finish.

**FEATURES & BENEFITS**

- For aerospace and automotive industries
- For composite materials including CFRP and GFRP
- Reduced delamination and burns

**RANGE**

- Dual Helix
  - Ø 1/4” ~ Ø 1/2”
- 4-Flute
  - Ø 1/4” ~ Ø 1/2”

i-SMART

EXCELLENT PRODUCTIVITY BY REDUCING TOOL SET-UP TIME

Modular Type, “Y”-Coated Solid Carbide Heads with Carbide and Steel Holders for Pre-Hardened Steels

**FEATURES & BENEFITS**

- Reduces 1/10 of the time spent to change tools than conventional solid tools
- Outstanding cutting abilities and wear resistance made from advanced coating and geometry
- Multiple helix applied to minimize vibration when cutting

**RANGE**

- Square
  - Ø 3/8” ~ Ø 1-1/4”
- Corner Radius
  - Ø 3/8” ~ Ø 1-1/4”
- Ball Nose
  - Ø 3/8” ~ Ø 1-1/4”

ALU-POWER HPC

HIGH PERFORMANCE END MILLS FOR ALUMINUM

(HIGH FEED, HIGH RPM, HIGH CHIP REMOVAL)

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

**FEATURES & BENEFITS**

- For aerospace industries
- Special geometries applied to control weight balance for quality performance on higher RPM making an excellent surface finish through stable machining
- Large range of Corner Radius and various lengths of neck, designed for high standard performance
- High corner protection made from special shape and rake angle inside the radius
- Excellent performance with high feed, high RPM, high chip removal(heavy cutting)

**RANGE**

- Square
  - Ø 1/8” ~ Ø 1”
- Corner Radius
  - Ø 1/8” ~ Ø 1”

i-Xmill

HIGH PRECISION CUTTING WITH COST EFFICIENCY

Coated Solid Carbide Inserts with Carbide & Steel Holders for Various Materials

**FEATURES & BENEFITS**

- Re-grinding & re-storing (holder) service
- For General Purpose, Pre-Hardened Steels, High-Hardened Steels, Stainless Steels and Graphite
- Ball Nose, Corner Radius, Full Radius and also high feed types available
- For several work materials such as General Purpose, Pre-Hardened Steel, High-Hardened Steel, Graphite, Stainless Steels, etc.
- Holders available in both Carbide & Steel
- Long tool life with high wear resistance

**RANGE**

- Ball
  - Ø 5/16” ~ Ø 1-1/4”
- Corner Radius
  - Ø 5/16” ~ Ø 1-1/4”

Increased precision by tightening the tolerance and grinding the internal Screw hole of holders and Inserts
INDEXABLE TOOLS

YG UNIVERSAL MILLING

Ultra-Dense Insert Grade with Optimal Thermal Resistance and Added Strength for Multi-Purpose

**INSERT GRADE**

YG602 Grade

- Multi-Purpose Grade with optimal thermal resistance & added strength
- Sub-micron substrate designed for demanding application

**PRODUCT LINE**

APKT Series Shoulder Mill
SEKT Series Face Mill
ODMT Series Face Mill
RDKT Series Round Insert

YG TURN

YG UNIVERSAL TURNING

The Most Cost Effective Cutting Tools for Various Machining Applications

**INSERT GRADE**

YG801 Grade

- Unique PVD Grade designed to balance edge strength & wear resistance
- Excellent cutting performance under harsh machining condition

YG1001 Grade

- Thick coating optimized for Cast Iron applications and harsh machining condition
- Advanced CVD coating with optimal thermal & wear resistance

TOOL HOLDERS

YG TOOL HOLDERS

HYDRAULIC CHUCK

- Superb T.I.R., Accuracy & Repeatability ± 0.003mm (Direct Clamping)
- Basic G2.5 25,000 RPM Balanced
- Excellent Vibration Damping
  - To increase tool life
  - For better roughness
  - For better accuracy
- Vacuum Filling System for injection of 100% pure hydraulic oil guaranteeing stable torque power
- Various Size of Reduction Sleeve Ø 3mm - Ø 25mm

Rigid e-HYDRO (Heavy Duty Hydraulic Chuck)

- High Clamping Power
  - min. 520 Nm (I.D 20mm)

APPLICATION

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**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 from 1.5 to 2 times faster than 2-flute drills
- Multi-layered coating delivers outstanding productivity and reliability

**PRODUCTIVITY (Carbon Steel)**
- Ø 6.0 5xD
  - 1.4 times UP
  - 1.592 mm/min.
  - 3xD: 1.114 mm/min.
- Ø 10.0 5xD
  - 1.6 times UP
  - 1.003 mm/min.
  - 5xD: 8.600 mm/min.

**RANGE**
- Ø 5mm - Ø 20mm (0.1969-0.7874”)
- Drill Depth: 3xD, 5xD

**FEATURES & BENEFITS**
- Cylindrical shank with a parallel flat according to ISO965
- Plain shank and Whistle notch shank are available on request
- 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
- Multi-layered “H”-coated Micron Grain Carbide Insert
- Ground bright finished shank for more precise clamping

**RANGE**
- Ø 10mm - Ø 33.73mm (0.3937-1.3346”)
- Holder Length: 3xD, 5xD, 8xD

**i-ONE DRILL**

COST EFFICIENT HIGH PERFORMANCE EXCHANGEABLE DRILLING TOOLS

“H”-Coated Carbide Inserts and Premium Tool 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

**PRODUCTIVITY (Carbon Steel)**
- Ø 6.0 5xD
  - 1.4 times UP
  - 1.592 mm/min.
- Ø 10.0 5xD
  - 1.6 times UP
  - 1.003 mm/min.

**RANGE**
- Ø 3mm - Ø 20mm (0.1181-0.7874”)
- Drill Depth: 2xD, 5xD

**OVER 3 TIMES FASTER DRILLING OPERATION**

“X”-Coated(2xD), “TiAlN”-Coated(5xD) Micro Grain Flat Bottom Solid Carbide Drills (180˚ point angle) for Variety Drilling and Sloped Surfaces

**FEATURES & BENEFITS**
- 180 degree point angle enables drilling of horizontal surface and slopped surface
- Excellent chip evacuation by optimized flute shape
- High strength cutting edge to improve tool life and versatility drilling
- Variety of drilling can be used in a variety of drilling applications

**RANGE**
- Ø 3mm - Ø 20mm (0.1181-0.7874”)
- Drill Depth: 2xD, 5xD

**WHY YG UNIVERSAL DRILL?**

Easy to Choose
1 universal grade for multi-material

Easy to Use
Same insert for inside/outside

**PRODUCT LINE**

SPMX Series
- Economic 4 corner drill insert
  - SPMX 05/06/07/11/14

WCMX Series
- Popular 3 corner drill insert
  - WCMX 04/05/06/08
HSS-PM (POWDER METALLURGY) PREMIUM TAPS FOR VARIOUS MATERIALS

Special Flute Geometry

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

FEATURES & BENEFITS
- The next level of performance with outstanding quality and reliability
- Reduction in torque, wear, and the risk of chipping or breakage compared to conventional taps
- Increased tool life as a result of an optimum combination of material and geometry, which gives excellent performance
- Thread with very good surface finish quality
- High process reliability through high stability
- Fewer tool changes, optimum machine output and increased productivity through long tool life
- Trust in a high level of process reliability even under unfavorable conditions
- Premium tapping performs the various materials (high-tensile Steels, Stainless and acid-resistant Steels, Aluminum and Aluminum Alloys, General Steels, Cast materials, as high as 45 HRc) provide the suitable solution

RANGE
- Special Flute M2 - M30 (44-1")
- Special Point M2 - M30 (44-1")

Premium Cutting Edge Strength

Prime Taps have a more controlled structure which provides more uniform wear and therefore delivers more consistent performance and process stability.

FEATURES & BENEFITS
- High bend strength allows better cutting resistance to edge chipping
- Makes tool life more predictable (High wear resistance)
- Improves performance (Shock resistance and Prevents chipping)

RANGE
- Special Flute M2 - M30 (44-1")
- Special Point M2 - M30 (44-1")

3 TIMES FASTER THAN NORMAL TAPS

Synchro Tap

TiN/TiCN-Coated HSS-PM Taps for High-Speed Tapping Operations

FEATURES & BENEFITS
- High productivity by high-speed machining
- Shorten thread length and higher thread reliefs
- Constant threading quality preventing oversized threading
- Increased tool life as a result of an optimum combination of material and geometry, which gives excellent performance
- Thread with very good surface finish quality
- High process reliability through high stability
- Fewer tool changes, optimum machine output and increased productivity through long tool life
- Trust in a high level of process reliability even under unfavorable conditions
- Premium tapping performs the various materials (high-tensile Steels, Stainless and acid-resistant Steels, Aluminum and Aluminum Alloys, General Steels, Cast materials, as high as 45 HRc) provide the suitable solution

RANGE
- Special Flute M3 - M20 (44-3/4")
- Special Point M3 - M20 (44-3/4")
- Straight Flute M3 - M20 (44-3/4")
- Cold Forming M3 - M12 (44-1/2")

PRODUCTIVITY
Up to 3 times Faster in tapping compare to conventional taps (General Steel)

General Tap 10-20 m/min
Synchro Tap 30-45 m/min

Prevents Chip Packing by Applying Short Thread Length and High Spiral Angle

Reduces Chattering by Tight Shank Tolerance Compared to Normal Taps

General Use for Various Materials

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

FEATURES & BENEFITS
- For Steels, Stainless Steels, Cast Iron and Non-Ferrous Materials
- Prevents over & under feeding by its optimized flank geometry
- Constant threading quality preventing oversized threading

RANGE
- Spiral Flute M2 - M30 (44-1")
- Spiral Point M2 - M30 (44-1")