



QUICK-SEARCH  
**YG-1 PRODUCTS!!**  
[www.yg1.kr](http://www.yg1.kr)



**BEST OF SELECTION**  
HIGH PERFORMANCE PRODUCTS



**YG-1 CO., LTD.**

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**Note** The new address above has currently been updated to the new Korean postal standard valid since 2014.  
Notice that the physical Head Office location did NOT change.



Search 'YG-1' on social media outlets

YG1YEB5190822003

**YG-1 CO., LTD.**

Tool specifications are subject to change without prior notice.

HEAVY CUTTING APPLICATIONS (-HRC40)

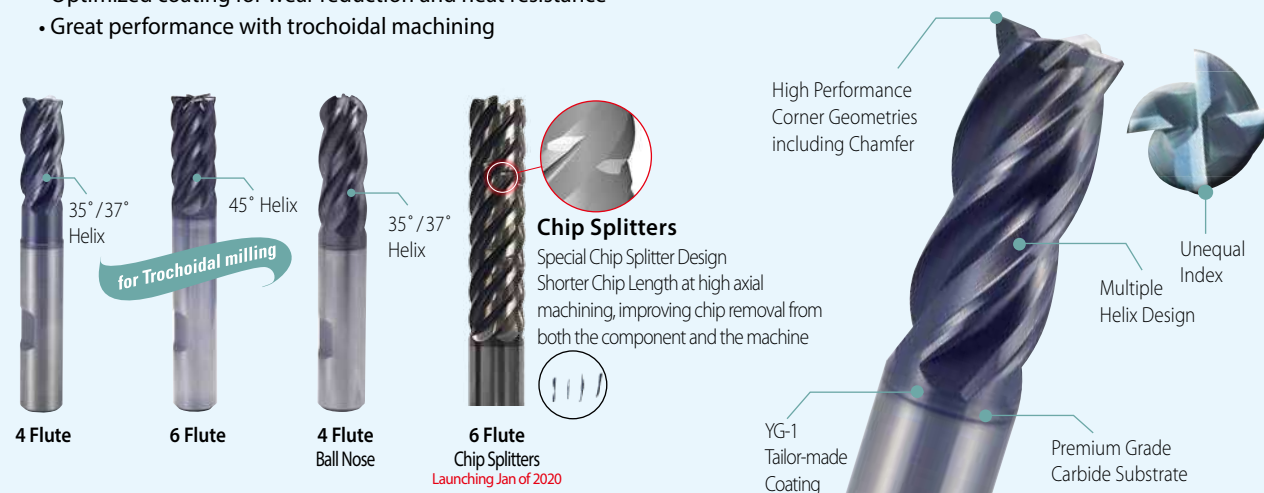
Y-Coated Solid Carbide End Mills for Heavy Cutting

FEATURES & BENEFITS

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

RANGE

- Square  $\varnothing 3\text{mm} - \varnothing 25\text{mm}$  (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")



HIGH-SPEED MACHINING FOR EXOTIC MATERIALS

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

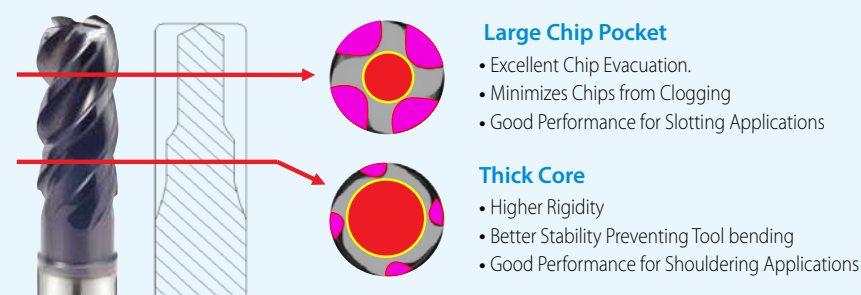
- For Titanium, Stainless Steels and also excellent for Steels
- For high-speed machining and heavy cutting
- Dual stepped-core on 4 flute, 5 flute with multiple helix

RANGE

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

4 Flute Double Core End Mills With Corner Radius

▶ 2 STEP CORE



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

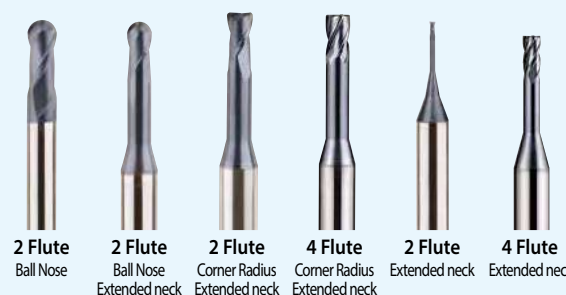
Y-Coated Solid Carbide End Mills for Die & Mold Industries

FEATURES & BENEFITS

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

▶ What's New!!

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



RANGE

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



FOR HIGH-HARDENED STEELS (HRC50-70)

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

FEATURES & BENEFITS

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

RANGE

- Square  $\varnothing 0.1\text{mm} - \varnothing 25\text{mm}$  (.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")





## ALU-POWER HPC

### HIGH PERFORMANCE END MILLS FOR ALUMINUM

#### HIGH FEED, HIGH RPM and HIGH CHIP REMOVAL

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

##### FEATURES & BENEFITS

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

##### RANGE

※ Available in Non-coated & DLC coated items

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

##### Ideal Symmetrical Shape

- 3 Flute design "To the center" - all 3 flutes come to center
- Designed with high spindle speeds in mind
- Highly effective in plunging and helical ramping

##### Engineered Flute Design

Effective chip evacuation at high feed rates with lower cutting forces than competitive products

##### Long Reach Neck Tools Available

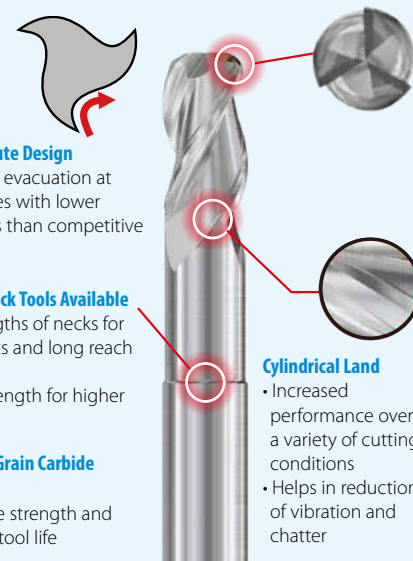
- Variable lengths of necks for deep pockets and long reach processing
- Short flute length for higher rigidity

##### Tough Micro - Grain Carbide Material

Provides edge strength and unsurpassed tool life

##### Cylindrical Land

- Increased performance over a variety of cutting conditions
- Helps in reduction of vibration and chatter



## i-Xmill

### HIGH PRECISION CUTTING WITH COST EFFICIENCY

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

##### FEATURES & BENEFITS

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

##### RANGE

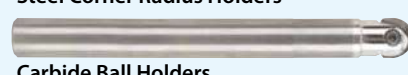
- Ball Ø 8mm - Ø 33mm (5/16 - 1-1/4")
- Corner Radius Ø 8mm - Ø 33mm (5/16 - 1-1/4")



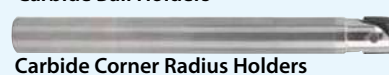
Steel Ball Holders



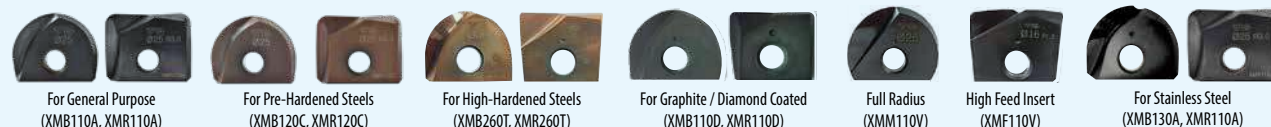
Steel Corner Radius Holders



Carbide Ball Holders



Carbide Corner Radius Holders



For General Purpose (XMB110A, XMR110A)

For Pre-Hardened Steels (XMB120C, XMR120C)

For High-Hardened Steels (XMB260T, XMR260T)

For Graphite / Diamond Coated (XMB110D, XMR110D)

Full Radius (XMM110V)

High Feed Insert (XMF110V)

For Stainless Steel (XMB130A, XMR110A)

## i-SMART

### EXCELLENT PRODUCTIVITY BY REDUCING TOOL SET-UP TIME

#### Modular Type, Y-Coated Exchangeable Carbide Heads for Pre-Hardened Steels with both Carbide & Steel Holders

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



Changing modular heads

About 1 minute

Changing conventional Solid End Mills

About 10 minutes

Tool set-up time per piece

## COMPOSITE MATERIALS

### TOOL SOLUTIONS FOR INDUSTRIES

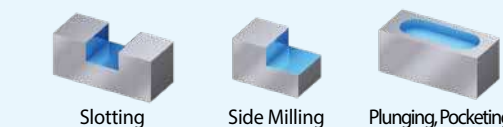
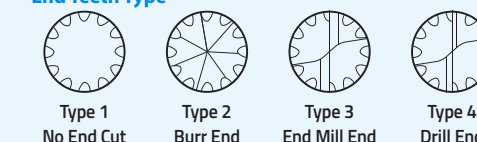
#### Diamond Coated Chip Breaker Routers

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

#### Diamond Coated Compression Routers

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

##### End Teeth Type



#### Solid Carbide Drills

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



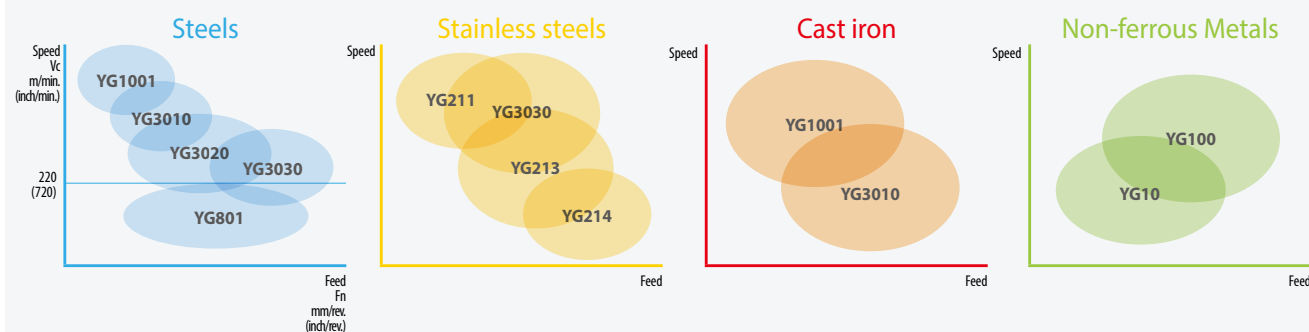
Scan QR Code to See More Tools for COMPOSITE MATERIALS

# YGTURN

## ISO Turning – Grades

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

|                                |                 |  |                |   |
|--------------------------------|-----------------|--|----------------|---|
| <b>P</b><br>Steel              |                 |  | <b>YG1001</b>  | High hardness grade for Best Productivity           |
|                                |                 |  | <b>YG3010</b>  | First choice for Finishing Steels                   |
|                                |                 |  | <b>YG3020</b>  | Balanced grade between Hardness and Toughness       |
|                                |                 |  | <b>YG3030</b>  | High toughness grade for Heavy Interrupted cut      |
| <b>M</b><br>Stainless Steel    |                 |  | <b>YG211</b>   | High wear resistance grade for Stainless Steel      |
|                                |                 |  | <b>YG3030</b>  | CVD Grade for high speed cutting on STS             |
|                                |                 |  | <b>YG213</b>   | First choice of general stainless steel application |
|                                |                 |  | <b>YG214</b>   | High toughness grade for Unstable Machining         |
| <b>K</b><br>Cast Iron          |                 |  | <b>ISO K10</b> |   |
|                                |                 |  | <b>ISO K15</b> |   |
|                                |                 |  | <b>YG1001</b>  | First choice for Grey Cast Iron                     |
|                                |                 |  | <b>YG3010</b>  | First choice for Ductile Cast Iron                  |
| <b>N</b><br>Non-ferrous Metals | DLC<br>Uncoated |  | <b>YG100</b>   | DLC Coated grade for High alloyed Aluminum          |
|                                |                 |  | <b>YG10</b>    | Uncoated grade for General Aluminum application     |



# YGTURN

## ISO Turning – Chipbreakers

Optimized ISO Turning Chipbreakers to Boost Up  
Your Productivity from Roughing to Finishing

### Chipbreakers for Steel

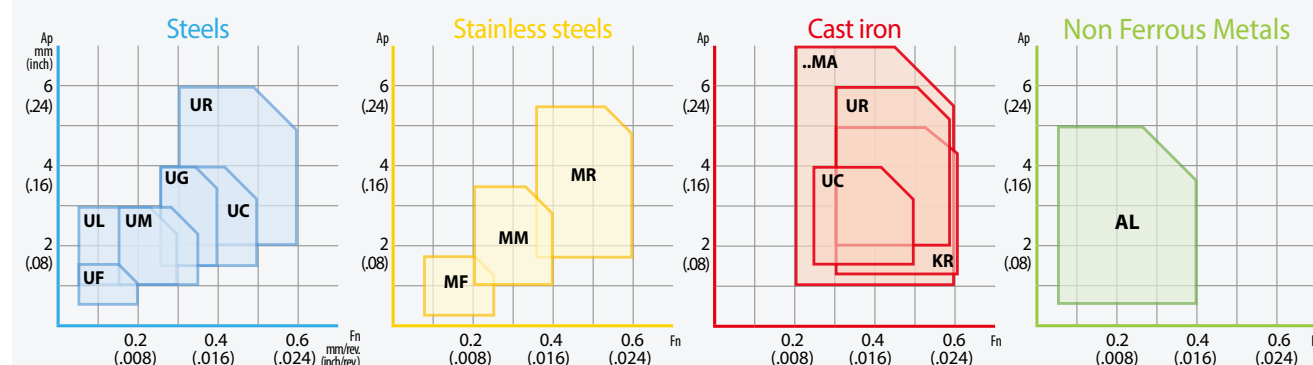
|  |  |            |                                     |
|--|--|------------|-------------------------------------|
|  |  | <b>-UF</b> | For Finishing                       |
|  |  | <b>-UL</b> | Semi-Finishing and Sticky Materials |
|  |  | <b>-UM</b> | Medium (for Unstable Condition)     |
|  |  | <b>-UG</b> | Medium (for Stable Condition)       |
|  |  | <b>-UC</b> | Medium Roughing                     |
|  |  | <b>-UR</b> | Roughing and Heavy Interrupted Cut  |

### Chipbreakers for Non-ferrous Metals

|  |            |                            |
|--|------------|----------------------------|
|  | <b>-AL</b> | From Roughing to Finishing |
|--|------------|----------------------------|

### Chipbreakers for Stainless steel

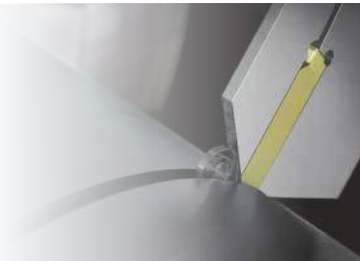
|  |  |            |                                       |
|--|--|------------|---------------------------------------|
|  |  | <b>-MF</b> | Finishing                             |
|  |  | <b>-MM</b> | Medium                                |
|  |  | <b>-MR</b> | Roughing                              |
|  |  |            |                                       |
|  |  | <b>-UC</b> | Medium Roughing                       |
|  |  | <b>-UR</b> | Roughing and Heavy Interrupted Cut    |
|  |  | <b>-MA</b> | Cast Iron Heavy Roughing (Flat type)  |
|  |  | <b>-KR</b> | Cast Iron heavy Roughing (Big K-land) |




## YGTURN Parting & Groove

### Parting & Groove Turn







Universal Easy-to-Choose Parting & Groove Turn Insert Grade for Various Application



#### PRODUCT LINE

|   |            |                   |         |
|---|------------|-------------------|---------|
|  | TD. Series | TDN<br>TDP<br>TDY | 2, 3, 4 |
|---|------------|-------------------|---------|

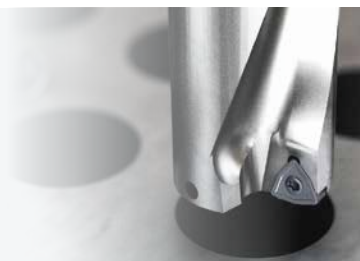
#### Chipbreakers

|                   |  |  |                                 |
|-------------------|--|--|---------------------------------|
| <b>-P<br/>TDP</b> |   |   | • Parting & Grooving (Positive) |
| <b>-N<br/>TDN</b> |   |   | • Parting & Grooving (General)  |
| <b>-Y<br/>TDY</b> |  |  | • Groove Turn                   |

## YGDRILL

### YG-1 Drilling

Universal Easy-to-Choose Drilling Insert Grade for Various Kinds of Material

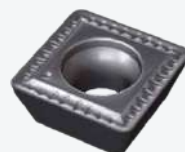


#### PRODUCT LINE



#### WCMX Series

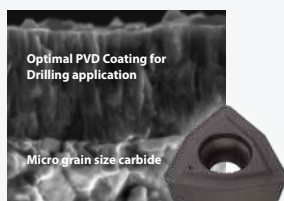
Popular 3 corner drill insert  
WCMX 04/05/06/08  
Diameter Ø 20mm ~ Ø 60mm



#### SPMX Series

Economic 4 corner drill insert  
SPMX 05/06/07/09/11/14  
Diameter Ø 13mm ~ Ø 50mm

#### Grade



### YG602 P20 - P35 M20 - M40 K20 - K40 S15 - S25

#### Universal grade for General Drilling Application

- Ultra Dense PVD Coating with optimal thermal resistance & strength
- Sub-Micron substrate designed for demanding application

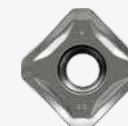
## YGMILL

### YG-1 Milling

Various Insert Milling Series to Meet Your Tooling Needs from Shoulder Milling to High Feed Milling



#### PRODUCT LINE



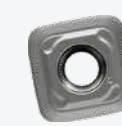
#### SNMX

8 Corner Negative  
Ø 50mm ~ Ø 100mm



#### ONMU

16 Corner Negative  
Ø 63mm ~ Ø 315mm



#### SDMT

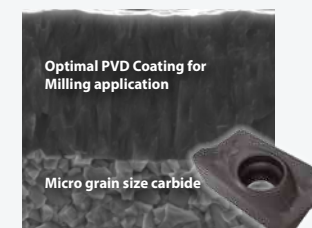
4 Corner  
Square High Feed  
Ø 32mm ~ Ø 100mm



#### APKT-TR, ST, AL

2 Corner Positive  
APKT 10 : Ø16mm ~ Ø 100mm  
APKT 16 : Ø25mm ~ Ø 200mm

#### GRADES



### YG602

#### for Milling

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








### YG622

#### for Milling

- High adhesive strength and toughness between the substrate and coating layer
- Sub-micron substrate designed for demanding application

#### CHIPBREAKERS

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



## DREAM DRILLS -HIGH FEED

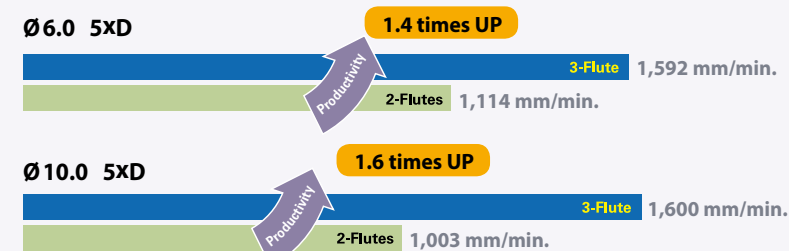
INCREASE YOUR PRODUCTIVITY UP TO 2 TIMES HIGHER

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

### FEATURES & BENEFITS

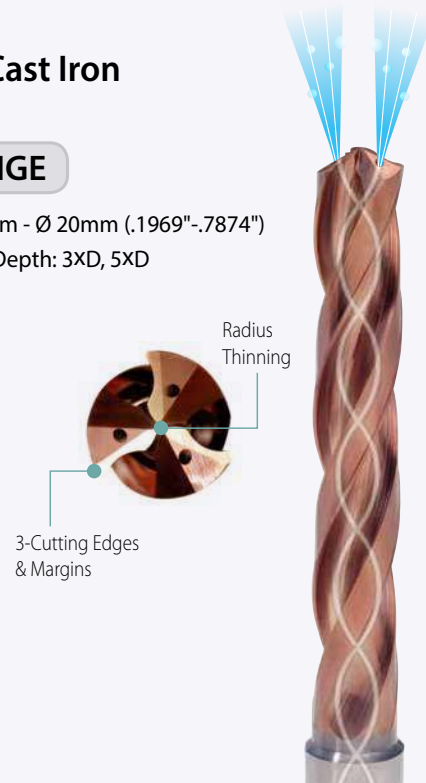
- For Carbon Steels, Alloy Steels (-HRC35), Cast Iron
- Increases productivity due to 1.5 to 2 times faster feeding speed than 2 flute drills
- Multi-layered coating delivers outstanding productivity and reliability

### PRODUCTIVITY (Carbon Steel)



### RANGE

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



## DREAM DRILLS -FLAT BOTTOM

FAST AND STABLE DRILLING FOR A WIDE VARIETY OF APPLICATIONS

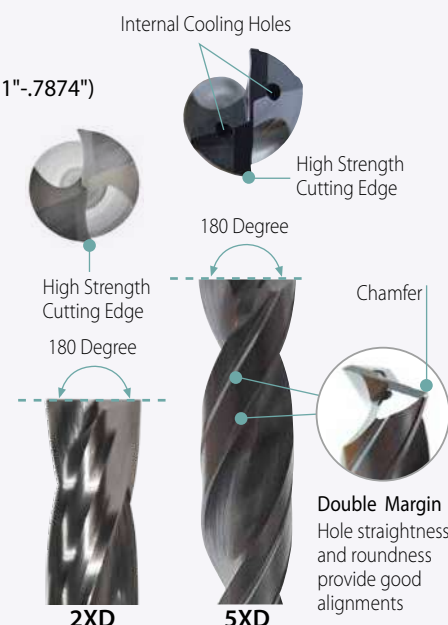
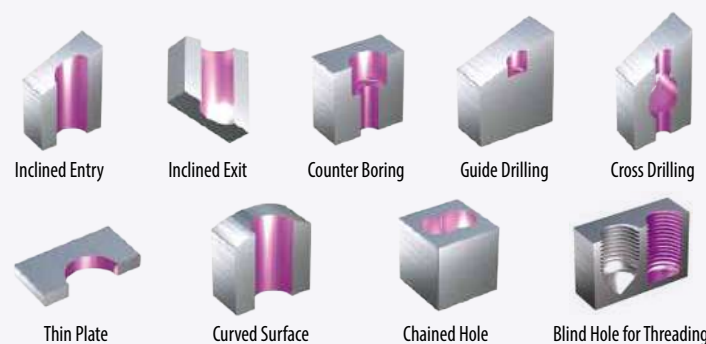
**X-Coated(2XD), TiAlN Coated(5XD), Micro Grain Flat Bottom Solid Carbide Drills (180° point angle) for Drilling a Variety of Contoured and Sloped Surfaces**

### FEATURES & BENEFITS

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

### RANGE

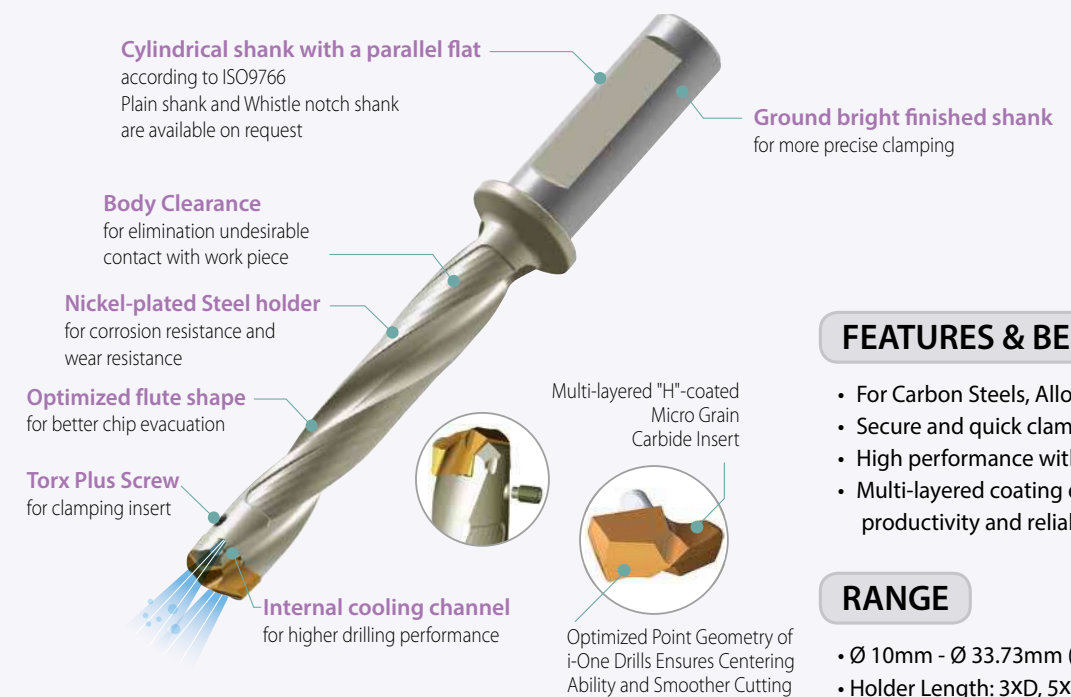
- Ø 3mm - Ø 20mm (.1181"-.7874")
- Drill Depth: 2XD, 5XD



## 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

## DREAM DRILLS -MQL

FOR DEEP HOLE DRILLING WITHOUT PECKING OPERATION

**Higher Productivity than Conventional HSS Deep Hole Drills**

### FEATURES & BENEFITS

- Optimized Special Flutes are ideal for Outstanding Chip Removability and productive Drilling
- Upgraded TiAlN Nano Layer Full Coating
- Compatible with the MQL(Minimum Quantity Lubrication) System
- For Carbon Steels, Alloy Steels, Pre-Hardened Steels and Cast Iron

### RANGE

|      |          |
|------|----------|
| 10XD | [Ø3~Ø14] |
| 15XD | [Ø3~Ø12] |
| 20XD | [Ø3~Ø12] |
| 10XD | [Ø3~Ø14] |
| 15XD | [Ø3~Ø12] |
| 20XD | [Ø3~Ø12] |
| 25XD | [Ø3~Ø10] |
| 30XD | [Ø3~Ø8]  |

\* Drilling Depth 35xD(Ø3~Ø6), 40xD(Ø3~Ø6) are Special Series



## Combo<sup>TAP</sup>

### 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
- Prevents over & under feeding by its optimized flank geometry
- Constant threading quality preventing oversized threading

##### RANGE

- Spiral Flute M2 - M30 (#4-1")
- Spiral Point M2 - M30 (#4-1")



Spiral Flute Taps

Spiral Point Taps

PATENTED

## Synchro TAP

### 3 TIMES FASTER THAN NORMAL TAPS

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

##### FEATURES & BENEFITS

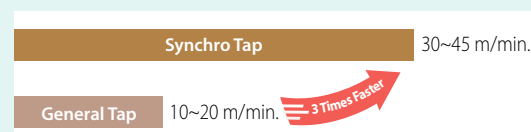
- High productivity by high-speed machining
- Shorten thread length and higher thread reliefs
- Close tolerance concentricity eliminating oversized threads

##### RANGE

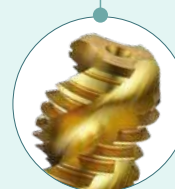
- Spiral Flute M3 - M20 (#4-3/4")
- Spiral Point M3 - M20 (#4-3/4")
- Straight Flute M3 - M20 (#4-3/4")
- Cold Forming M3 - M12 (#4-1/2")

##### PRODUCTIVITY

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



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



Spiral Flute

Spiral Point

Straight Flute

Cold Forming

Reduces Chattering by Tight Shank Tolerance Compared to Normal Taps

## YG TOOLING SYSTEM

### HYDRAULIC CHUCK



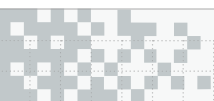
- ✓ **Superb T.I.R. Accuracy & Repeatability**  
≤ 0.003mm (Direct Clamping)
- ✓ **Basic G2.5 25,000 RPM Balanced**
- ✓ **Excellent Vibration Damping**
  - To increase tool life
  - For better roughness
  - For better accuracy
- ✓ **Vacuum Filling System** for injection of 100% pure hydraulic oil guaranteeing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

### SHRINK FIT HOLDER



- ✓ **Superb T.I.R. Accuracy**  
≤ 0.003mm
- ✓ **Basic Balancing Grade**  
Min. G2.5/25,000rpm
- ✓ **Strong Torque Power**  
Min. 18Nm ~ 550Nm
- ✓ **Standard and Slim Design**
  - Standard 4.5°
  - Slim 4.0°
  - Extra Slim 3.0°

| APPLICATION |                          |               |
|-------------|--------------------------|---------------|
| Milling     | High-Speed Cutting       | Fine Drilling |
|             |                          |               |
| Reaming     | Tapping & Thread Milling | Chamfering    |
|             |                          |               |



## 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 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.

### EUROPE

|                |         |           |          |             |                 |
|----------------|---------|-----------|----------|-------------|-----------------|
| BELGIUM        | FINLAND | ITALY     | PORTUGAL | SLOVENIA    | THE NETHERLANDS |
| CROATIA        | FRANCE  | LITHUANIA | ROMANIA  | SPAIN       | TURKEY          |
| CZECH REPUBLIC | GERMANY | NORWAY    | RUSSIA   | SWEDEN      | UNITED KINGDOM  |
| DENMARK        | HUNGARY | POLAND    | SERBIA   | SWITZERLAND |                 |

### ASIA PACIFIC

|           |                         |             |             |                      |
|-----------|-------------------------|-------------|-------------|----------------------|
| AUSTRALIA | INDONESIA               | MALAYSIA    | SINGAPORE   | UNITED ARAB EMIRATES |
| CHINA     | ISRAEL                  | PAKISTAN    | SOUTH KOREA | VIETNAM              |
| HONG KONG | JAPAN                   | PHILIPPINES | TAIWAN      |                      |
| INDIA     | KINGDOM OF SAUDI ARABIA | THAILAND    |             |                      |

### AMERICAS

|        |        |          |        |               |
|--------|--------|----------|--------|---------------|
| BRAZIL | CANADA | COLOMBIA | MEXICO | UNITED STATES |
|--------|--------|----------|--------|---------------|

### AFRICA

|       |              |
|-------|--------------|
| EGYPT | SOUTH AFRICA |
|-------|--------------|

**YG-1 CO., LTD.**

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