

HIGH PERFORMANCE PRODUCT



Best of Selection

We help you improve your productivity

YG YG-1 CO., LTD.

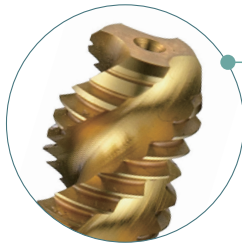
SYNCHRO TAPS (HSS-PM)

High Speed, High Precision for CNC Machining



Synchro Tap has an optimized short thread length and high thread reliefs.

We guarantee you shorter cycle time, higher productivity, and longer tool life. YG-1's own special geometry prevents oversized thread and enables to manufacture superior quality of threading with consistence.



Prevents chip packing by applying short thread length



APPLICATION

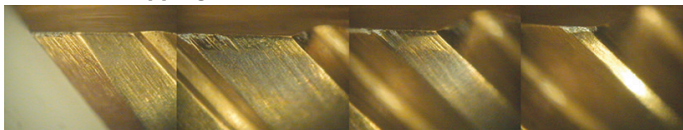
- Best Solution for CNC Threading
- Best Performance for General Purpose

BENEFITS

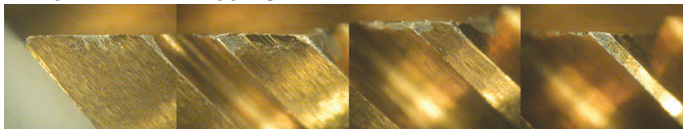
- Longer tool life and shorter Cycle Time
- **High Productivity by High Speed Machining**
- Consistency in Threading Quality

Reduces chattering by tight shank tolerance compare to normal taps.

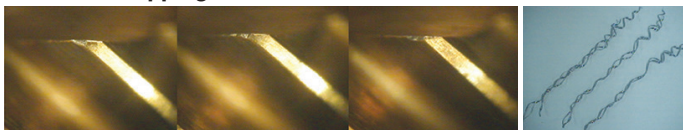
YG-1 (Total Tapping 490 Holes)



Competitor (Total Tapping 490 Holes)



YG-1 (Total Tapping 490 Holes)



Competitor (Total Tapping 490 Holes)



CUTTING CONDITION

Tools: HSS-PM Synchro Spiral Flute Tap

Size: M10 x 1.5

Work Material • DIN: C45

• WR: 1.0503

• JIS: S45C (HRc35)

Cutting Speed: 30 m/min.

R.P.M.: 1,592 rev./min.

Feed: 1.0 mm/rev.

Tapping Depth: 15 mm

Tapping Method: Blind Hole Tapping

Coolant: Wet Cut

Machine: Machining Center

Chamfer

Thread

4C MILLS SOLID CARBIDE END MILLS



High Speed Cutting for Pre-Hardened Steel

4G Mills is designed to have edge preparation to prevent chipping, achieve outstanding finish, and keep longer tool life even at **High Speed Cutting**.

YG-1 Tailored carbide material and coating technology enable remarkable wear resistance and cutting ability for working material.

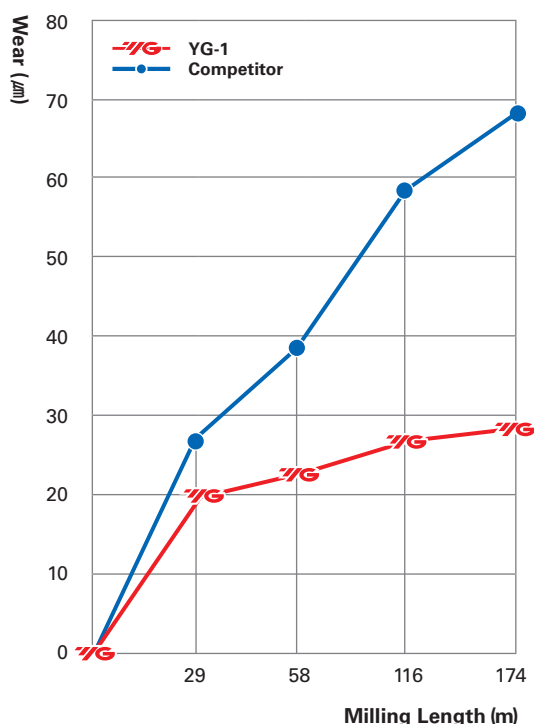


APPLICATION

- Excellent for **Mold & Die Industry**
- High performance for both **Wet cut** and **Dry cut**
- Pre-hardened Steels and Hardened Steels (~ HRC55)
- Carbon steels
- Alloy steels

BENEFITS

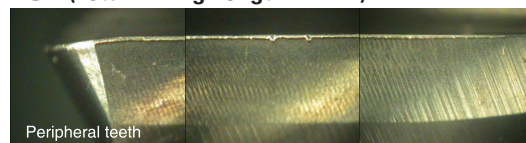
- New geometry, tailored carbide material, and coating enable outstanding cutting performance and wear resistance.
- Edge preparation to prevent chipping, achieve good finish, and long tool life in high speed cutting.
- Multiple helix designed in case of 4 flute end mills can work heavy cut and better finish.



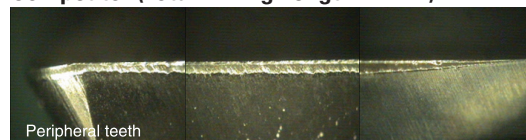
CUTTING CONDITION

Tools: 4Flute, Corner Radius
Size: Ø10(R0.5) x 10 x 25 x 100
Work Material: KP4M (HRC35 / DIN 1.2738 Improved)
Cutting Speed: 51.522 m/min.
RPM: 1,640 rev./min. **Feed:** 180 mm/min.
Feed per tooth: 0.027 mm/tooth
Milling Method: Down & Side Cutting
Milling Depth: Axial: 25 mm, Radial: 0.5 mm
Coolant: Oil Mist
Overhang: 41mm

YG-1 (Total Milling Length : 174m)



Competitor (Total Milling Length : 174m)

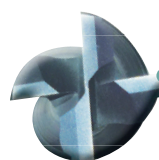
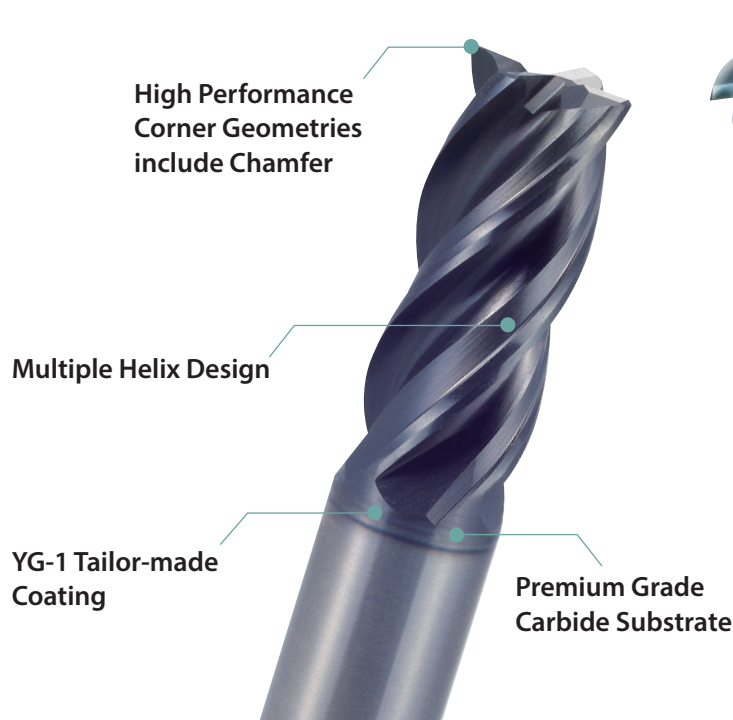


V7 Plus SOLID CARBIDE END MILLS

High Performance End Mills for Steels & Stainless Steels



The V7 Plus for Mild Steels to difficult-to-cutting material under HRc40. It has a unique design that maximizes chip removal and improves productivity in slotting and heavy profiling operations. The V7 Plus advanced geometry reduces chatter for increased tool life and productivity.



Unequal Indexing

APPLICATION

- **Heavy Cut for General Machining**
- **Trochoidal Machining**
- Stainless Steels, Mild Steels and Cast Iron
- Low to Medium hardness materials under HRc40

BENEFITS

- Reduced chatter and harmonics NVH, improved stability and better finishing.
- Best flute design for optimal chip formation and evacuation.
- Enhanced corner geometry for longer tool life
- Optimized coating for wear reduction and superior heat resistance.

CUTTING CONDITION

Tools: 4Flute, Square

Size: Ø10 x 10 x 22 x 72

Work Material • DIN: C45

• WR: 1.0503

• JIS: S45C (HRc30)

Cutting Speed: 230.09 m/min.

RPM: 7,324 rev./min. **Feed:** 1,464 mm/min.

Feed per tooth: 0.05 mm/tooth

Milling Method: Down & Side Cutting

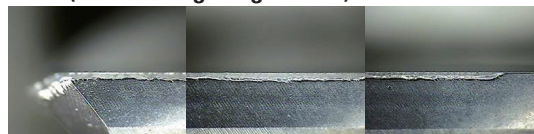
Milling Depth: Axial: 10mm, Radial: 3mm

Coolant: Wet Cut

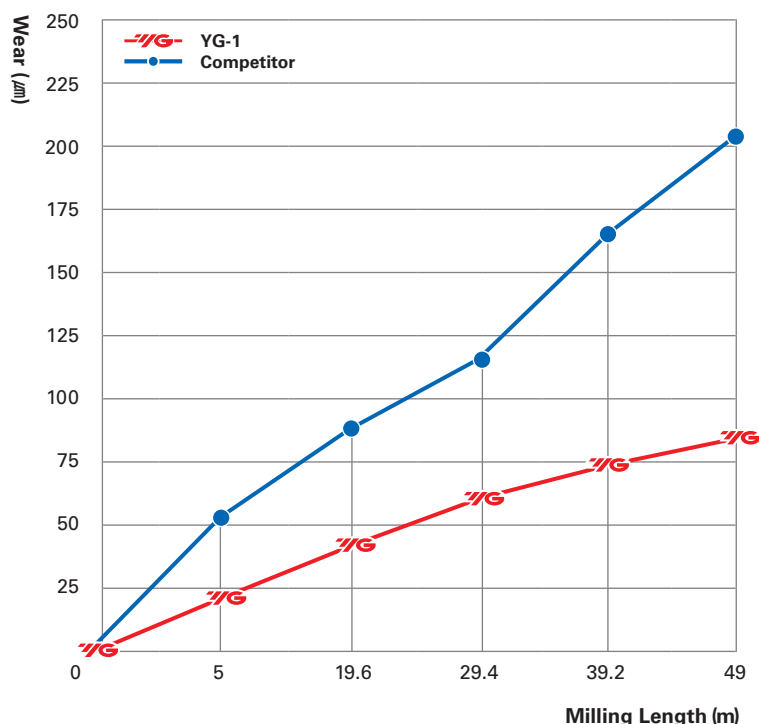
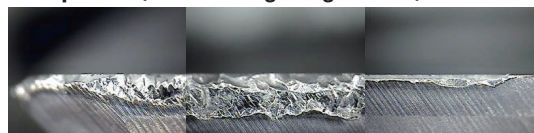
Overhang: 34 mm

Machine: Machining Center

YG-1 (Total Milling Length: 49m)



Competitor (Total Milling Length: 49m)



X5070 SOLID CARBIDE END MILLS



for High Speed Cutting & Dry Cutting

X5070 made with special carbide material and YG-1 tailored coating for high hardened steels between HRc45 and HRc70 offers excellent surface finish in dry and high speed machining. Also, the unique geometry, negative rake angle, guarantees high abrasion resistance.



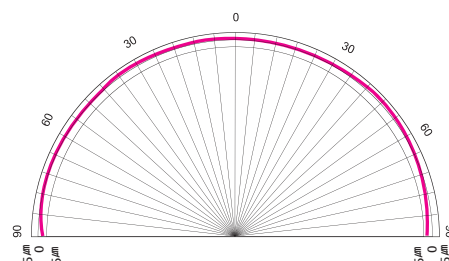
APPLICATION

- **High Hardened Steels (HRc45 ~ 70)**

BENEFITS

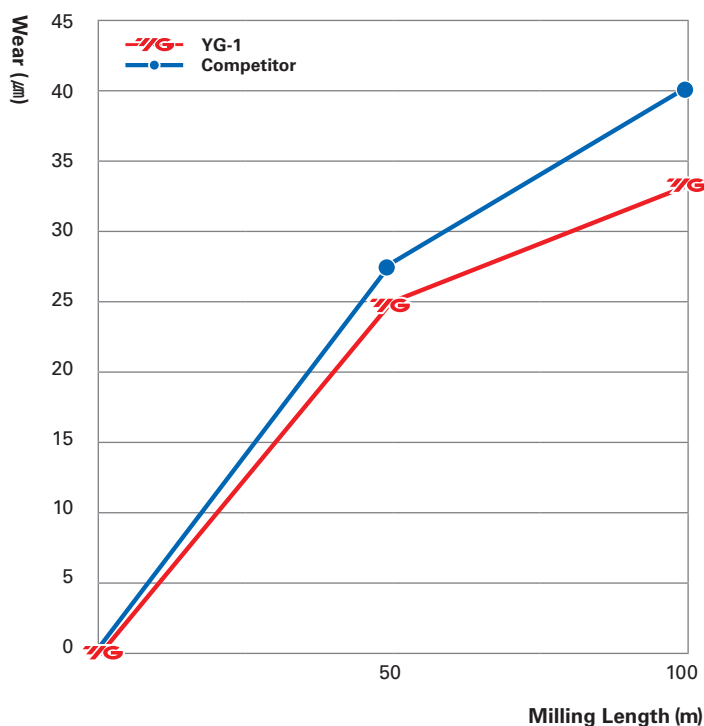
- Made with special carbide material
- **Dry cutting for High Speed Machining**
- YG-1 tailored coating
- Designed for high abrasion resistance thanks to negative rake angle
- Excellent surface finish

TIGHTER RADIUS TOLERANCE



- IMPROVED $\pm 0.005\text{mm}$ (Up to 6mm)

* Tighter Radius Tolerance 0.005mm higher provides accuracy and longer tool life.



CUTTING CONDITION

Tools: 6Flute, 45° Helix

Size: $\varnothing 16 \times 16 \times 40 \times 110$

Work Material

- JIS: SKD61 (HRc50)
- DIN: X40CrMoV5-1 (1.2344)
- AISI: H13

Cutting Speed: 96.5 m/min.

R.P.M: 1,920 rev./min. **Feed:** 912 mm/min.

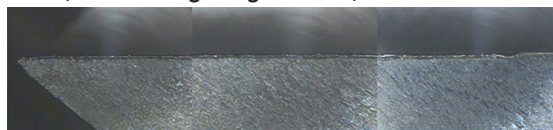
Milling Method: Down & Side Cutting

Milling Depth: Axial : 24 mm, Radial: 0.96 mm

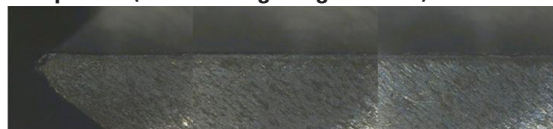
Coolant: Dry Cut

Overhang: 52 mm

YG-1 (Total Milling Length: 100m)



Competitor (Total Milling Length: 100m)



ONLY ONE (PM60)

HSS-PM END MILLS



PM(power metallurgy) material based Only One End Mill ensures **High Toughness** performance which is one of advantage of Cobalt HSS. Also, it has **Exceptional Wear Resistance** which is one of advantage of micro-grain carbide tools.

Excellent performance for **Machining Condition with Vibration.**



APPLICATION

- Stainless Steels
- Pre-hardened Steels
- Carbon steels
- Alloy steels
- Cast Iron

BENEFITS

- Equivalent performance with carbide, but cheaper price, and long tool life in bad tooling condition.
- Excellent performance compare to Cobalt HSS tools with economical price level.

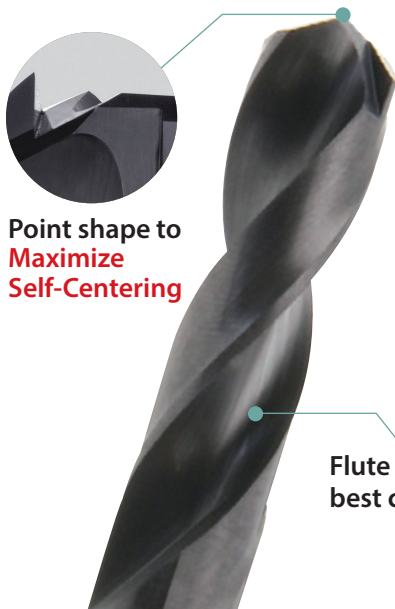
MULTI-1 DRILLS

HSS-PM DRILLS



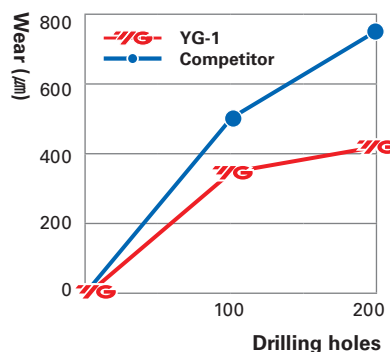
High Toughness and **Exceptional Wear Resistance.**

Excellent performance for **Machining Condition with Vibration.**



Point shape to
**Maximize
Self-Centering**

Flute design for the
best chip evacuation



APPLICATION

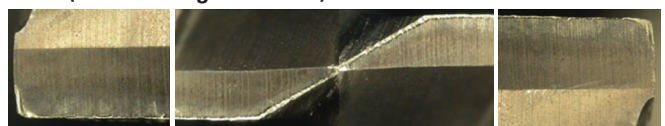
- Structural steels, Carbon steels, Alloy steels, Pre-hardened steels, Mold steels, Stainless steels, Hardened steels (HRc30 ~ 45), Cast irons, Aluminum alloys, Nonferrous alloys

CUTTING CONDITION

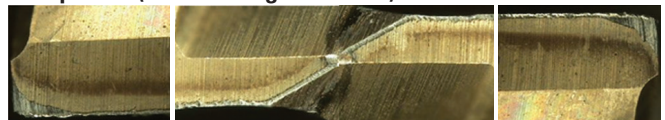
Work Material • DIN: X155CrVMo12-1
• WR: 1.2379
• JIS: SKD11

RPM: 600 rev./min. **Feed:** 110 mm/min.
Drilling Depth: 24 mm

YG-1 (Total Drilling 200 Holes)



Competitor (Total Drilling 200 Holes)

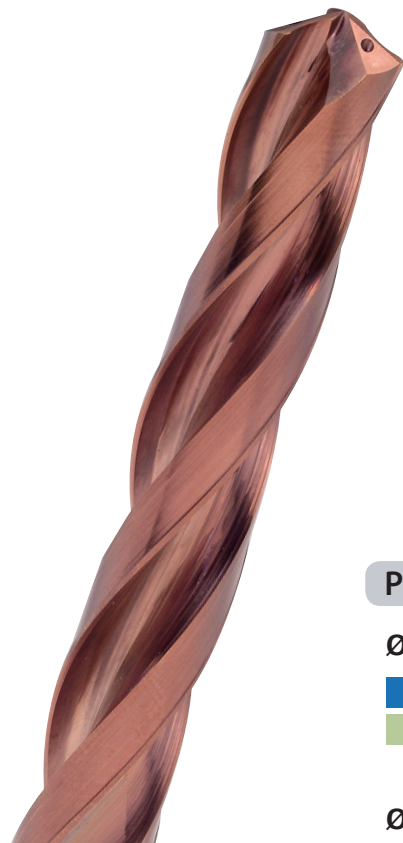


DREAM DRILL HIGH FEED

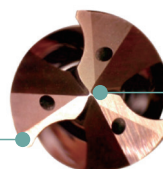
Higher Cutting Speeds and Feeds



Dream Drill High Feed offers 1.5 to 2 times **higher feeding speed** compared to conventional 2-flute drill. The unique flute design and exceptional surface finish promise extraordinary chip evacuation.



3-Cutting Edges & Margins



Radius Thinning

APPLICATION

- Carbon Steels, Alloy Steels (~ HRC35), Cast Iron

BENEFITS

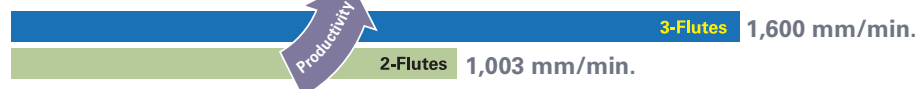
- **Increases productivity due to 1.5 to 2 times faster feeding speed than 2-flute drill**
- Multi-Layer coating delivers much better productivity and reliability.
- Self-Centering

Productivity (Carbon Steel)

Ø 6.0 5xD



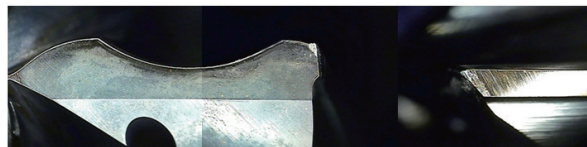
Ø 10.0 5xD



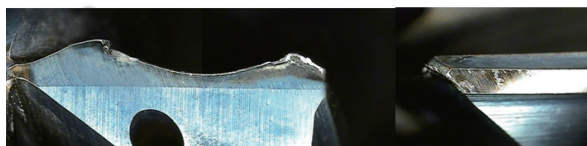
YG-1 (Total Drilling 330 Holes)



Competitor A (Total Drilling 330 Holes)



Competitor B (Total Drilling 330 Holes)



CUTTING CONDITION

Tools: Dream Drill High Feed

Size: Ø10 x 10 x 61 x 103

Work Material

- DIN: C45
- WR: 1.0503
- JIS: S45C (HRc20)

R.P.M.: 3,200 m/min.

Feed: 0.5 mm/rev.

Drilling Depth: 50 mm (5xD)

Drilling Method: Blind Hole

Coolant: Internal Cooling

Machine: Machining Center



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Tool specifications are subject to change without prior notice.



QUICK-SEARCH

YG-1 PRODUCTS!!