HIGH PERFORMANCE PRODUCT

Best of Selection
We help you improve your productivity

YG-1 CO., LTD.
SYNCHRO TAPS (HSS-PM)

High Speed, High Precision for CNC Machining

SynchroTap 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.

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.

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 |
4G 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)**
High Performance Product

**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.

**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**

<table>
<thead>
<tr>
<th>Tools: 4Flute, Square</th>
<th>Size: Ø10 x 10 x 22 x 72</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work Material:</td>
<td>DIN: C45</td>
</tr>
<tr>
<td></td>
<td>WR: 1.0503</td>
</tr>
<tr>
<td></td>
<td>JIS: S45C (HRc30)</td>
</tr>
<tr>
<td>Cutting Speed:</td>
<td>230.09 m/min.</td>
</tr>
<tr>
<td>RPM: 7,324 rev./min.</td>
<td>Feed: 1,464 mm/min.</td>
</tr>
<tr>
<td>Feed per tooth:</td>
<td>0.05 mm/tooth</td>
</tr>
<tr>
<td>Milling Method:</td>
<td>Down &amp; Side Cutting</td>
</tr>
<tr>
<td>Milling Depth:</td>
<td>Axial: 10mm, Radial: 3mm</td>
</tr>
<tr>
<td>Coolant:</td>
<td>Wet Cut</td>
</tr>
<tr>
<td>Overhang:</td>
<td>34 mm</td>
</tr>
<tr>
<td>Machine:</td>
<td>Machining Center</td>
</tr>
</tbody>
</table>

**YG-1 (Total Milling Length: 49m)**

**Competitor (Total Milling Length: 49m)**

**UNEQUAL INDEXING**

**HIGH PERFORMANCE CORNER GEOMETRIES**
- include Chamfer

**MULTIPLE HELIX DESIGN**

**YG-1 Tailor-made Coating**

**PREMIUM GRADE CARBIDE SUBSTRATE**

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**PHONE:** +33-172-84-4070, **FAX:** +33-172-84-4086, **http://www.yg1france.com**, **E-mail:** yg1@yg1.eu
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 ±0.005mm (Up to 6mm)

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

CUTTING CONDITION

Tools: 6Flute, 45º Helix
Size: Ø16 x 16 x 40 x 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**.

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

Flute design for the best chip evacuation

Point shape to Maximize Self-Centering

YG-1 (Total Drilling 200 Holes)

Competitor (Total Drilling 200 Holes)
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.

**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)**

<table>
<thead>
<tr>
<th>Diameter</th>
<th>R.P.M.</th>
<th>Feed</th>
<th>Depth</th>
<th>Tool Type</th>
<th>Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø 6.0</td>
<td>3,200</td>
<td>0.5</td>
<td>50</td>
<td>2-Flutes</td>
<td>1,114 mm/min.</td>
</tr>
<tr>
<td>Ø 10.0</td>
<td>3,200</td>
<td>0.5</td>
<td>50</td>
<td>3-Flutes</td>
<td>1,592 mm/min.</td>
</tr>
</tbody>
</table>

**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
YG-1 CO., LTD.

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Tool specifications are subject to change without prior notice.

QUICK-SEARCH
YG-1 PRODUCTS!!