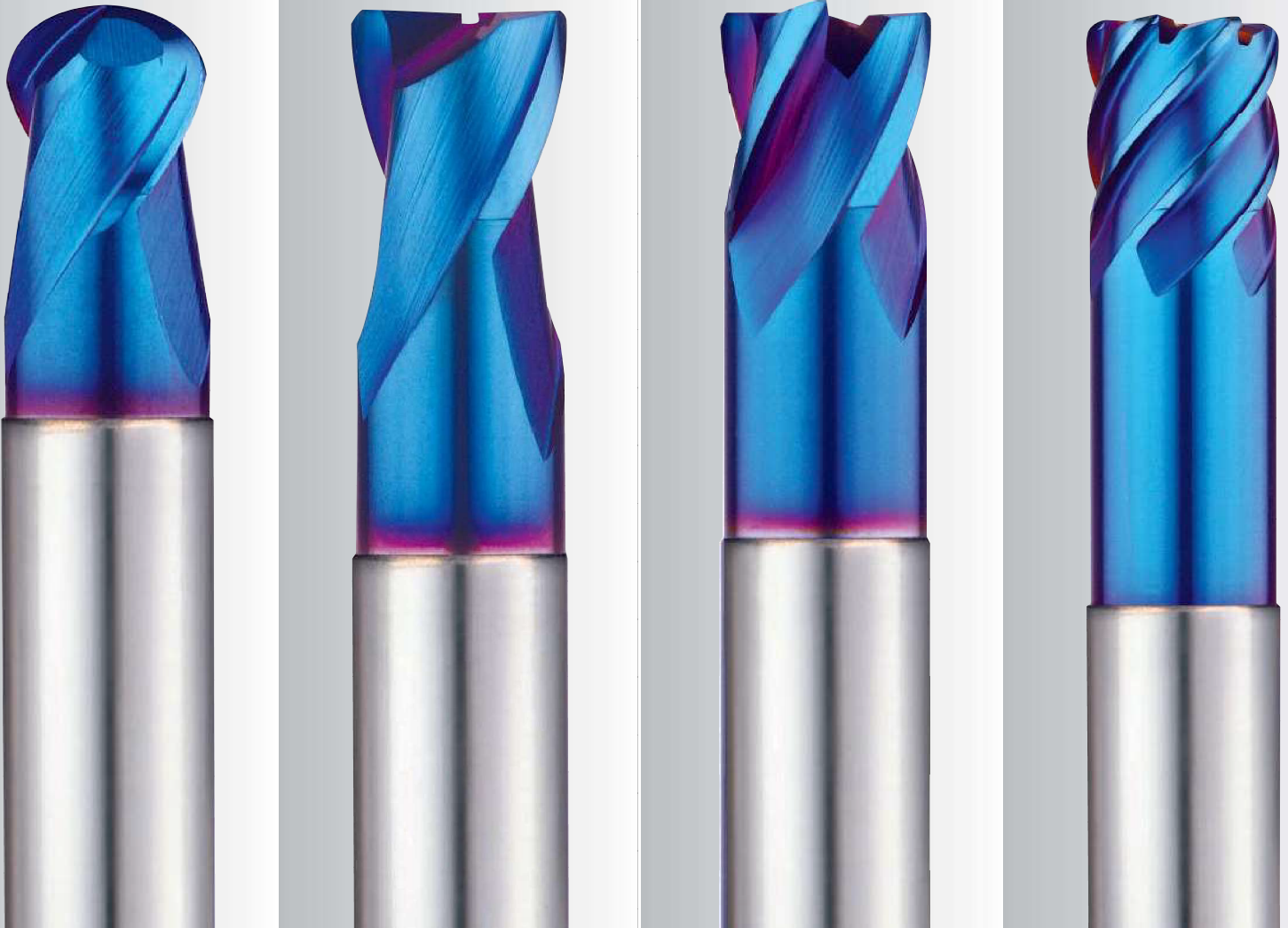




# CARBIDE

Being the best through innovation

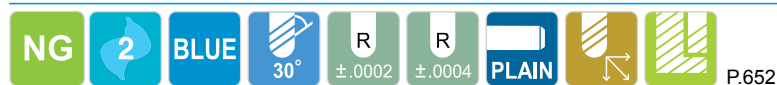
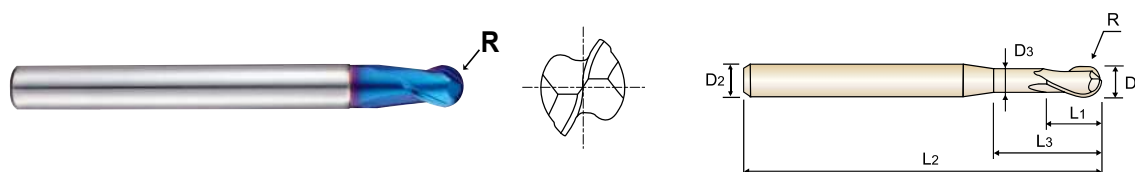


# X5070 END MILLS

- High Hardened Steels HRc45 to HRc70, High Speed Machining, Dry Cutting

# CARBIDE, 2 FLUTE STUB CUT LENGTH BALL NOSE with EXTENDED NECK

- ▶ Designed to machine high hardened materials.
- ▶ Suitable for dry cutting, high speed cutting due to newly developed raw-material and new coating.
- ▶ Excellent workpiece finish.
- ▶ Designed for high precision milling operation.
- ▶ Higher wear-resistance.



◆ U.S.A Stock

R1/64~R1/8 R5/32~R1/4

Unit : Inch

| EDP No.         | Radius of Ball Nose | Mill Diameter | Shank Diameter | Length of Cut | Length Below Shank | Overall Length | Neck Diameter |
|-----------------|---------------------|---------------|----------------|---------------|--------------------|----------------|---------------|
|                 | R                   | D1            | D2             | L1            | L3                 | L2             | D3            |
| <b>G8A43002</b> | R1/64               | <b>1/32</b>   | 1/4            | 1/32          | 1/16               | 2              | .029          |
| <b>G8A43004</b> | R1/32               | <b>1/16</b>   | 1/4            | 1/16          | 1/8                | 2              | .059          |
| <b>G8A43006</b> | R3/64               | <b>3/32</b>   | 1/4            | 3/32          | 3/16               | 2              | .090          |
| <b>G8A43008</b> | R1/16               | <b>1/8</b>    | 1/4            | 1/8           | 1/4                | 2-1/2          | .121          |
| <b>G8A43012</b> | R3/32               | <b>3/16</b>   | 1/4            | 3/16          | 3/8                | 3              | .184          |
| <b>G8A43016</b> | R1/8                | <b>1/4</b>    | 1/4            | 1/4           | 1/2                | 3-1/2          | .246          |
| <b>G8A43020</b> | R5/32               | <b>5/16</b>   | 5/16           | 5/16          | 5/8                | 4              | .309          |
| <b>G8A43024</b> | R3/16               | <b>3/8</b>    | 3/8            | 3/8           | 3/4                | 4              | .371          |
| <b>G8A43032</b> | R1/4                | <b>1/2</b>    | 1/2            | 1/2           | 1                  | 4-1/2          | .496          |

The original bright blue color may discolor during use, however, the performance will not be negatively affected

| Size       | Radius Tolerance (Inch) | Mill Dia. Tolerance (Inch) | Shank Dia. Tolerance |
|------------|-------------------------|----------------------------|----------------------|
| up to Ø1/4 | ±.0002                  | 0~-.0005                   | h6                   |
| over Ø1/4  | ±.0004                  | 0~-.0006                   |                      |

◎ : Excellent ○ : Good

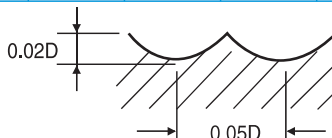
| P             |              |                    |                 |          | H                    | M                | K         | N      |          |          |         |      | S        |                        |
|---------------|--------------|--------------------|-----------------|----------|----------------------|------------------|-----------|--------|----------|----------|---------|------|----------|------------------------|
| Carbon Steels | Alloy Steels | Prehardened Steels | Hardened Steels |          | High Hardened Steels | Stainless Steels | Cast Iron | Copper | Graphite | Aluminum | Acrylic | CFRP | Titanium | High Temperature Alloy |
| ~HRc20        | HRc20~30     | HRc30~40           | HRc40~45        | HRc45~55 | HRc55~70             |                  |           |        |          |          |         |      |          |                        |
|               |              | ○                  | ○               | ◎        | ◎                    |                  |           |        |          |          |         |      |          |                        |

CARBIDE

HSS


**X5070  
END MILLS**
**RECOMMENDED CUTTING CONDITIONS**
CBN  
END MILLi-Xmill  
END MILLX5070  
END MILLS4G MILLS  
END MILLSX-SPEED  
ROUGHER  
END MILLSX-POWER  
END MILLSJET-POWER  
END MILLSV7 Mill STEEL  
END MILLSV7 Mill INOX  
END MILLSALU-POWER  
END MILLSD-POWER  
END MILLSSTANDARD  
CARBIDE  
END MILLSTANK-POWER  
END MILLSSTANDARD  
COBALT  
& HSS  
END MILLSTECHNICAL  
DATA
**CARBIDE, 2 FLUTE BALL NOSE with EXTENDED NECK**
**G8A43 SERIES**

| MATERIAL     | ALLOY STEELS<br>HEAT RESISTANT<br>STEELS |       | HARDENED STEELS |       |                 |       |                 |       |                 |       |                 |      |
|--------------|------------------------------------------|-------|-----------------|-------|-----------------|-------|-----------------|-------|-----------------|-------|-----------------|------|
| HARDNESS     | HRc 30 ~ HRc 40                          |       | HRc 40 ~ HRc 50 |       | HRc 50 ~ HRc 55 |       | HRc 55 ~ HRc 60 |       | HRc 60 ~ HRc 65 |       | HRc 65 ~ HRc 70 |      |
| DIAMETER     | RPM                                      | FEED  | RPM             | FEED  | RPM             | FEED  | RPM             | FEED  | RPM             | FEED  | RPM             | FEED |
| R1/64 × 1/32 | 50000                                    | 189.0 | 50000           | 165.4 | 45000           | 149.6 | 40000           | 118.1 | 35000           | 102.4 | 35000           | 90.6 |
| R1/32 × 1/16 | 49700                                    | 224.4 | 47800           | 189.0 | 40000           | 157.5 | 35000           | 124.0 | 32000           | 110.2 | 28500           | 90.6 |
| R3/64 × 3/32 | 49700                                    | 224.4 | 47800           | 189.0 | 40000           | 157.5 | 35000           | 124.0 | 32000           | 110.2 | 28500           | 90.6 |
| R1/16 × 1/8  | 33100                                    | 236.2 | 31800           | 208.7 | 26500           | 157.5 | 23500           | 124.0 | 21000           | 110.2 | 19000           | 90.6 |
| R3/32 × 3/16 | 18600                                    | 228.4 | 17800           | 192.9 | 15000           | 147.6 | 13500           | 120.1 | 11500           | 100.4 | 10500           | 82.7 |
| R1/8 × 1/14  | 13900                                    | 190.9 | 13400           | 161.4 | 11000           | 122.1 | 10000           | 98.4  | 8800            | 84.7  | 8000            | 68.9 |
| R5/32 × 5/16 | 11100                                    | 165.4 | 10700           | 137.8 | 9000            | 106.3 | 8000            | 84.7  | 7000            | 72.8  | 6500            | 61.0 |
| R3/16 × 3/8  | 9300                                     | 145.7 | 8900            | 122.1 | 7500            | 94.5  | 6600            | 74.8  | 5800            | 65.0  | 5300            | 54.3 |
| R1/4 × 1/2   | 6950                                     | 116.1 | 6680            | 98.4  | 5600            | 74.8  | 5000            | 61.0  | 4400            | 49.2  | 4000            | 41.3 |



※ The Feed, in long &amp; extra long types, should be reduced by around 50%.

 RPM = rev./min.  
FEED = inch/min.