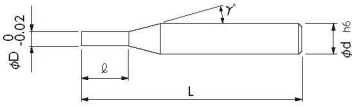


# MHD445

无限涂层 高硬度材料用 4刃平底铣刀  
MUGEN-COATING 4-Flute End Mill for Hardened Steels



- 最适合高硬度领域 (48~65HRC) 的精加工。
- 可实现歪斜少的精密精加工。
- Machineable to high hardened steels (48~65HRC).
- Realized high precision finishing without the deflection.



加工材料 Work Material

| 碳素钢<br>Carbon Steels    | 合金钢·工具钢<br>Alloy Steels·<br>Tool Steels | 预硬钢·调质钢<br>Prehardened<br>Steels | 淬火钢<br>Hardened Steels |               |
|-------------------------|---|----------------------------------|------------------------|---------------|
|                         |   |                                  | ~55HRC                 | 55HRC~        |
| ○                       | ○                                       | ○                                | ◎                      | ◎             |
| 不锈钢<br>Stainless Steels | 钛合金<br>Titanium Alloy                   | 铝合金<br>Aluminum                  | 铜合金<br>Copper          | 树脂<br>Plastic |
| ○                       | ○                                       |                                  |                        |               |

单位 [规格: mm / 价格: 日元]  
Unit [size: mm / Retail Price: JPY]

| 产品代码<br>Code No. | (D)刃径<br>Dia. | (ℓ)刃长<br>Length of Cut | (γ)首角<br>Nck Taper Angle | (d)颈角<br>Shank Dia. | (L)全长<br>Overall Length | 定价(日元)<br>Retail Price |
|------------------|---------------|------------------------|--------------------------|---------------------|-------------------------|------------------------|
| 08-00400-00100   | 1             | 1.5                    | 12°                      | 6                   | 60                      | 6,300                  |
| 08-00400-00150   | 1.5           | 2.5                    | 12°                      | 6                   | 60                      | 6,300                  |
| 08-00400-00200   | 2             | 4                      | 12°                      | 6                   | 60                      | 6,300                  |
| 08-00400-00300   | 3             | 6                      | 12°                      | 6                   | 60                      | 8,200                  |
| 08-00400-00400   | 4             | 8                      | 12°                      | 6                   | 60                      | 8,500                  |

### 订购方法

请指定MHD445 刃径(D).  
When you order, indicate MHD445 (D).

※ (γ)为参考值。

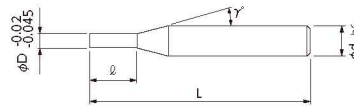
※ (γ) is reference value.

● 切削参数表记载于第D-060页

● Recommended Milling Conditions are shown on page D-060.

# MHD645

无限涂层 高硬度材料用 6刃平底铣刀  
MUGEN-COATING 6-Flute End Mill for Hardened Steels



- 最适合高硬度领域 (48~65HRC) 的精加工。
- 可实现歪斜少的精密精加工。
- Machineable to high hardened steels (48~65HRC).
- Realized high precision finishing without the deflection.



加工材料 Work Material

| 碳素钢<br>Carbon Steels    | 合金钢·工具钢<br>Alloy Steels·<br>Tool Steels | 预硬钢·调质钢<br>Prehardened<br>Steels | 淬火钢<br>Hardened Steels |               |
|-------------------------|---|----------------------------------|------------------------|---------------|
|                         |   |                                  | ~55HRC                 | 55HRC~        |
| ○                       | ○                                       | ○                                | ◎                      | ◎             |
| 不锈钢<br>Stainless Steels | 钛合金<br>Titanium Alloy                   | 铝合金<br>Aluminum                  | 铜合金<br>Copper          | 树脂<br>Plastic |
| ○                       | ○                                       |                                  |                        |               |

单位 [规格: mm / 价格: 日元]  
Unit [size: mm / Retail Price: JPY]

| 产品代码<br>Code No. | (D)刃径<br>Dia. | (ℓ)刃长<br>Length of Cut | (γ)首角<br>Nck Taper Angle | (d)颈角<br>Shank Dia. | (L)全长<br>Overall Length | 定价(日元)<br>Retail Price |
|------------------|---------------|------------------------|--------------------------|---------------------|-------------------------|------------------------|
| 08-00410-00500   | 5             | 10                     | 12°                      | 6                   | 60                      | 9,300                  |
| 08-00410-00600   | 6             | 15                     | -                        | 6                   | 60                      | 9,500                  |
| 08-00410-00800   | 8             | 20                     | -                        | 8                   | 65                      | 13,000                 |
| 08-00410-01000   | 10            | 25                     | -                        | 10                  | 75                      | 15,300                 |
| 08-00410-01200   | 12            | 30                     | -                        | 12                  | 80                      | 24,700                 |

### 订购方法

请指定MHD645 刃径(D).  
When you order, indicate MHD645 (D).

※ (γ)为参考值。

※ (γ) is reference value.

● 切削参数表记载于第D-060页

● Recommended Milling Conditions are shown on page D-060.

|                              |                              |                    |                                |                              |                                |                          |                        |
|------------------------------|------------------------------|--------------------|--------------------------------|------------------------------|--------------------------------|--------------------------|------------------------|
| CBN铣刀<br>Cubic Boron Nitride | P.C.D.·单晶<br>PCD-Monocrystal | 涂层<br>Coating      | 平底铣刀<br>Square<br>铣刀           | 球头铣刀<br>Ball<br>铣刀           | 圆鼻铣刀<br>Radius<br>铣刀           | 锥形铣刀<br>Taper Ball<br>铣刀 | 钻头<br>Drilling         |
| Diamond                      | 涂层<br>Coating                | 无涂层<br>Non-Coating | 长颈平底<br>Long Neck Square<br>铣刀 | 长颈球头<br>Long Neck Ball<br>铣刀 | 长颈圆鼻<br>Long Neck Radius<br>铣刀 | 锥形球头<br>Taper Ball<br>铣刀 | 螺纹铣刀<br>Thread milling |
| 涂层<br>Coating                | 无涂层<br>Non-Coating           | 涂层<br>Coating      | 长颈球头<br>Long Neck Ball<br>铣刀   | 圆鼻铣刀<br>Radius<br>铣刀         | 锥形圆鼻<br>Taper Radius<br>铣刀     | 倒角刀<br>Chamfering        |                        |