

IMPACT MIRACLE END MILL FOR DIFFICULT TO CUT MATERIALS, IRREGULAR HELIX

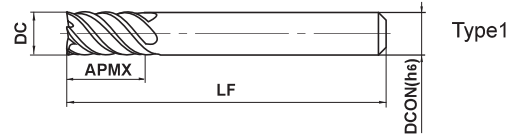
VF6MHV

End mill, Medium cut length, 6 flute, Irregular helix flutes



CARBIDE

| | | | | | | | |
|---|---|-------------------------|-------------------------|----------------------------|--------------------------------------|--------------|-----------------|
| Carbon Steel, Alloy Steel, Cast Iron (<30HRC) | Tool Steel, Pre-Hardened Steel, Hardened Steel (≤45HRC) | Hardened Steel (≤55HRC) | Hardened Steel (>55HRC) | Austenitic Stainless Steel | Titanium Alloy, Heat Resistant Alloy | Copper Alloy | Aluminium Alloy |
| ○ | ○ | ○ | ○ | ◎ | ◎ | | |



| | | | | |
|----|----------------|----------------|----------------|----------------|
| h6 | DC ≤ 12 | DC > 12 | | |
| | 0 - 0.020 | 0 - 0.030 | | |
| h6 | DCON=6 | 8 ≤ DCON ≤ 10 | 12 ≤ DCON ≤ 16 | DCON=20 |
| | 0 - 0.008 | 0 - 0.009 | 0 - 0.011 | 0 - 0.013 |

● Newly developed irregular helix 6 flute geometry reduces vibrations and achieves high efficiency machining. Suitable for machining of difficult-to-cut materials such as stainless steel, titanium alloy and inconel.

Unit : mm

| Order Number | DC | APMX | LF | DCON | No. of Flutes | Stock | Type |
|--------------|----|------|-----|------|---------------|-------|------|
| VF6MHVD0600 | 6 | 13 | 50 | 6 | 6 | ● | 1 |
| VF6MHVD0800 | 8 | 19 | 60 | 8 | 6 | ● | 1 |
| VF6MHVD1000 | 10 | 22 | 70 | 10 | 6 | ● | 1 |
| VF6MHVD1200 | 12 | 26 | 75 | 12 | 6 | ● | 1 |
| VF6MHVD1600 | 16 | 32 | 90 | 16 | 6 | ● | 1 |
| VF6MHVD2000 | 20 | 38 | 100 | 20 | 6 | ● | 1 |

RECOMMENDED CUTTING CONDITIONS

Side milling

| Work material | Alloy steel, Tool steel, Pre-hardened steel | | Austenitic stainless steel, Titanium alloy | | Heat resistant alloys | |
|---------------|---|--------------------|--|--------------------|---------------------------------|--------------------|
| | AISI H13, AISI W1-10, AISI P21 | | AISI 304, AISI 306, Ti-6Al-4V | | Inconel718 | |
| Dia. DC (mm) | Revolution (min ⁻¹) | Feed rate (mm/min) | Revolution (min ⁻¹) | Feed rate (mm/min) | Revolution (min ⁻¹) | Feed rate (mm/min) |
| 6 | 10600 | 2900 | 8000 | 2000 | 2100 | 320 |
| 8 | 8000 | 2900 | 6000 | 2000 | 1600 | 300 |
| 10 | 6400 | 2700 | 4800 | 2000 | 1300 | 260 |
| 12 | 5300 | 2700 | 4000 | 2000 | 1100 | 230 |
| 16 | 4000 | 2200 | 3000 | 1600 | 800 | 180 |
| 20 | 3200 | 1900 | 2400 | 1400 | 640 | 150 |

| Depth of cut | Alloy steel, Tool steel, Pre-hardened steel | | Austenitic stainless steel, Titanium alloy | | Heat resistant alloys | |
|--------------|---|--|--|--|-----------------------|--|
| | | | | | | |

DC: Dia.

- 1) When cutting austenitic stainless steels, the use of water-soluble cutting fluid is effective.
- 2) If the depth of cut is shallow, the revolution and feed rate can be increased.
- 3) The irregular helix flute end mill has a larger effect on controlling vibration when compared to standard end mills. However, if the rigidity of the machine or the workpiece installation is poor, vibration or abnormal sound can occur. In this case, please reduce the revolution and feed rate proportionately, or set a lower depth of cut.

SQUARE

BALL

RADIUS

TAPER

SOLID END MILLS