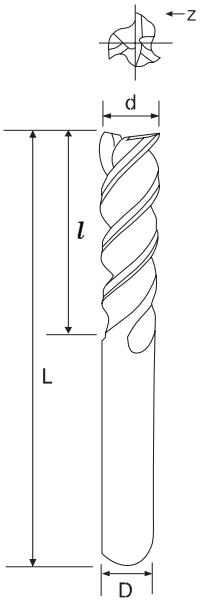
AUE 切削條件表 P408 Cutting Condition

AUEL 切削條件表 P409 Cutting Condition

# High Feed U-Type For Aluminum - 3 flutes
# ■ 3刃超高速鋁用立銑刀

600 Nano | 50°

- Micro Grain Carbide
- WC=90 Co=10 HV30=1571 Rupture=3750N/mm$^2$ Grain Size=0.6μm




| MODE | Diameter | Flute Length | Full Length | Shank Diameter | Flutes |
|---|---|---|---|---|---|
| 型號 | d 刃徑 | l 刃長 | L 全長 | D 柄徑 | Z 刃數 |
| AUE0253 | 2.5 | 8 | 50 | 6 | 3 |
| AUE0303 | 3 | 9 | 50 | 6 | 3 |
| AUE0403 | 4 | 12 | 50 | 6 | 3 |
| AUE0503 | 5 | 15 | 50 | 6 | 3 |
| AUE0603 | 6 | 18 | 50 | 6 | 3 |
| AUE0803 | 8 | 20 | 60 | 8 | 3 |
| AUE1003 | 10 | 30 | 75 | 10 | 3 |
| AUE1203 | 12 | 32 | 75 | 12 | 3 |
| AUE1603 | 16 | 45 | 100 | 16 | 3 |
| AUE2003 | 20 | 45 | 100 | 20 | 3 |

## Long Flute - 長刃

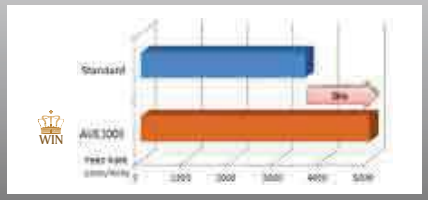
| MODE | Diameter | Flute Length | Full Length | Shank Diameter | Flutes |
|---|---|---|---|---|---|
| 型號 | d 刃徑 | l 刃長 | L 全長 | D 柄徑 | Z 刃數 |
| AUEL0603 | 6 | 30 | 75 | 6 | 3 |
| AUEL0803 | 8 | 40 | 100 | 8 | 3 |
| AUEL1003 | 10 | 42 | 100 | 10 | 3 |
| AUEL1203 | 12 | 52 | 100 | 12 | 3 |

※Special U-Type design:
Material removal rate (MRR) and surface finishes are greatly improved due to effective chip removal at high rate

※Strong tooth with double relief angles:
Excellent production rates become 100% possible due to the Improvement of tooth hardness.

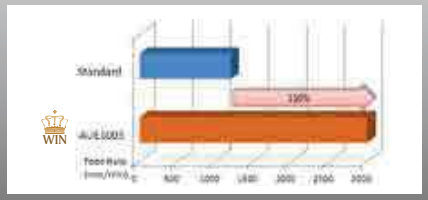
※Sharp aluminum alloy tooth design Applicable for roughing and finishing

Feed Rate Comparsion (Side Milling)




Work piece material: Aluminum alloy expanding material 6061
Speed: 15000 min-1, Depth of Cut: AP=2.0D, AE=0.5D

Feed Rate Comparsion (Slotting)



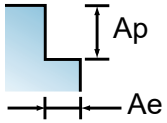
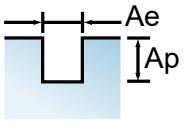

Work piece material: Aluminum alloy expanding material 6061
Speed: 10000 min-1, Depth of Cut: AP=2.0D, AE=1.0D

Application 適用材質：

★ Perfect 最推薦 ◎ Excellent 適合 O Good 佳

| carbon steel, Alloy steel 炭素鋼 ,合金鋼 | Pre-harden steel 預硬鋼 | High-hardened 高硬度鋼 | | | | Stainless steel 不鏽鋼 | Copper alloy 銅合金,銅 | Aluminum alloy 鋁合金 |
|---|---|---|---|---|---|---|---|---|
| | ~45HRC | ~50HRC | ~55HRC | ~60HRC | ~65HRC | | | |
| | | | | | | | ◎ | ★ |

Unit/單位: mm

| Work Material | | Aluminum alloy expanding material A7075<br>Aluminum alloy casting<Sil 13% | | Copper | |
|---|---|---|---|---|---|
| **Slotting** | | | | | |
| Max Cutting Speed(V) | | 240m/min | | 87m/min | |
| TYPE NO. | Diameter (mm) | Speed ($min^{-1}$) | Feed Rate (mm/min) | Speed ($min^{-1}$) | Feed Rate (mm/min) |
| AUE0603 | 6 | 12,500 | 4,150 | 4,650 | 2,000 |
| AUE0803 | 8 | 9,400 | 3,150 | 3,500 | 1,520 |
| AUE1003 | 10 | 7,500 | 2,500 | 2,800 | 1,200 |
| AUE1203 | 12 | 6,250 | 2,100 | 2,300 | 1,000 |
| Depth of cut (D=Dia) | Ap=2.0D<br>Ae=0.5D   | V | 235.5 | V | 87.92 |
| | | Z | 3 | Z | 3 |
| | | Fz | 0.11 | Fz | 0.10 |
| **Side Milling** | | | | | |
| Max Cutting Speed(V) | | 250m/min | | 90m/min | |
| TYPE NO. | Diameter (mm) | Speed ($min^{-1}$) | Feed Rate (mm/min) | Speed ($min^{-1}$) | Feed Rate (mm/min) |
| AUE0603 | 6 | 12,000 | 4,000 | 4,960 | 1,350 |
| AUE0803 | 8 | 10,000 | 3,040 | 3,680 | 1,050 |
| AUE1003 | 10 | 8,000 | 2,400 | 2,960 | 850 |
| AUE1203 | 12 | 6,660 | 2,000 | 2,480 | 700 |
| Depth of cut (D=Dia) | Ap=1.5D<br>Ae=1.0D   | V | 251.2 | V | 92.944 |
| | | Z | 3 | Z | 3 |
| | | Fz | 0.10 | Fz | 0.14 |