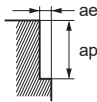


RECOMMENDED CUTTING CONDITIONS

Shoulder milling (L/D=3)

(mm)

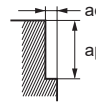
| Workpiece Material | | Aluminium alloy A6061, A7075 | | | | |
|--------------------|-----------------------|---------------------------------|-----------------------|--------------------|-----------------|-----------------|
| Dia. DC | Cutting Speed (m/min) | Revolution (min ⁻¹) | Feed per Tooth (mm/t) | Feed rate (mm/min) | Depth of cut ap | Width of Cut ae |
| 10 | 500 | 16000 | 0.117 | 5600 | 8 | 3 |
| 12 | 500 | 13000 | 0.118 | 4600 | 9.6 | 3.6 |
| 16 | 500 | 9900 | 0.153 | 4500 | 12.8 | 4.8 |
| 20 | 500 | 8000 | 0.175 | 4200 | 16 | 6 |
| 25 | 500 | 6400 | 0.211 | 4100 | 20 | 7.5 |

Depth of Cut 

Shoulder milling (L/D=5)

(mm)

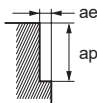
| Workpiece Material | | Aluminium alloy A6061, A7075 | | | | |
|--------------------|-----------------------|---------------------------------|-----------------------|--------------------|-----------------|-----------------|
| Dia. DC | Cutting Speed (m/min) | Revolution (min ⁻¹) | Feed per Tooth (mm/t) | Feed rate (mm/min) | Depth of cut ap | Width of Cut ae |
| 10 | 300 | 9500 | 0.09 | 2600 | 8 | 1.2 |
| 12 | 300 | 8000 | 0.09 | 2200 | 9.6 | 1.44 |
| 16 | 300 | 6000 | 0.12 | 2200 | 12.8 | 1.92 |
| 20 | 300 | 4800 | 0.14 | 2000 | 16 | 2.4 |
| 25 | 300 | 3800 | 0.17 | 1900 | 20 | 3 |

Depth of Cut 

Shoulder milling (L/D=7)

(mm)

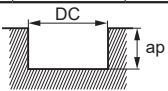
| Workpiece Material | | Aluminium alloy A6061, A7075 | | | | |
|--------------------|-----------------------|---------------------------------|-----------------------|--------------------|-----------------|-----------------|
| Dia. DC | Cutting Speed (m/min) | Revolution (min ⁻¹) | Feed per Tooth (mm/t) | Feed rate (mm/min) | Depth of cut ap | Width of Cut ae |
| 10 | 200 | 6400 | 0.08 | 1500 | 8 | 0.6 |
| 12 | 200 | 5300 | 0.08 | 1300 | 9.6 | 0.72 |
| 16 | 200 | 4000 | 0.11 | 1300 | 12.8 | 0.96 |
| 20 | 200 | 3200 | 0.12 | 1200 | 16 | 1.2 |
| 25 | 200 | 2500 | 0.15 | 1100 | 20 | 1.5 |

Depth of Cut 

Slot milling (L/D=3)

(mm)

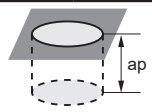
| Workpiece Material | | Aluminium alloy A6061, A7075 | | | |
|--------------------|-----------------------|---------------------------------|-----------------------|--------------------|-----------------|
| DC | Cutting Speed (m/min) | Revolution (min ⁻¹) | Feed per Tooth (mm/t) | Feed rate (mm/min) | Depth of cut ap |
| 10 | 500 | 16000 | 0.068 | 3300 | 5 |
| 12 | 500 | 13000 | 0.072 | 2800 | 6 |
| 16 | 500 | 9900 | 0.093 | 2800 | 8 |
| 20 | 500 | 8000 | 0.108 | 2600 | 10 |
| 25 | 500 | 6400 | 0.127 | 2400 | 12.5 |

Depth of Cut 
DC: Dia. (Cutting diameter)

Plunging (L/D=3)

(mm)

| Workpiece Material | | Aluminium alloy A6061, A7075 | | | | |
|--------------------|-----------------------|---------------------------------|------------------------|--------------------|------------------|----------|
| DC | Cutting Speed (m/min) | Revolution (min ⁻¹) | Feed per Rev. (mm/rev) | Feed rate (mm/min) | Drilled Depth ap | Step ap2 |
| 10 | 300 | 9500 | 0.1 | 950 | 5 | 2.5 |
| 12 | 300 | 8000 | 0.1 | 800 | 6 | 2.5 |
| 16 | 300 | 6000 | 0.1 | 600 | 8 | 2.5 |
| 20 | 300 | 4800 | 0.1 | 480 | 10 | 2.5 |
| 25 | 300 | 3800 | 0.1 | 380 | 12.5 | 2.5 |

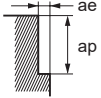
Depth of Cut 

Note 1) The use of water-soluble coolant is effective.

Note 2) If the machine or workpiece material is not rigid, or if chatter or abnormal noises occur, adjust the revolution, feed rate and depth of cut.

Side milling

(mm)

| Workpiece Material | | Aluminium alloy A6061, A7075 | | | | | |
|--------------------|-----------|---|---------------------------------|-----------------------|--------------------|-----------------|-----------------|
| L/D | Dia. DC | Cutting Speed (m/min) | Revolution (min ⁻¹) | Feed per Tooth (mm/t) | Feed rate (mm/min) | Depth of cut ap | Width of Cut ae |
| 3 | 12 | 500 | 13000 | 0.117 | 4600 | 9.6 | 2.4 |
| | 14 | 500 | 11000 | 0.118 | 3900 | 11.2 | 2.8 |
| | 18 | 500 | 8800 | 0.153 | 4000 | 14.4 | 3.6 |
| | 22 | 500 | 7200 | 0.175 | 3800 | 17.6 | 4.4 |
| | 28 | 500 | 5700 | 0.211 | 3600 | 22.4 | 5.6 |
| 5 | 12 | 300 | 8000 | 0.09 | 2200 | 9.6 | 1.0 |
| | 14 | 300 | 6800 | 0.09 | 1800 | 11.2 | 1.1 |
| | 18 | 300 | 5300 | 0.12 | 1900 | 14.4 | 1.4 |
| | 22 | 300 | 4300 | 0.14 | 1800 | 17.6 | 1.8 |
| | 28 | 300 | 3400 | 0.17 | 1700 | 22.4 | 2.2 |
| Depth of cut | |  | | | | | |

Note 1) The use of water-soluble coolant is effective.

Note 2) If the machine or workpiece material is not rigid, or if chatter or abnormal noises occur, adjust the revolution, feed rate and depth of cut.