

FINISHMEISTER SHREDMEISTER

STANDARD CUTTING CONDITIONS

Slotting / Roughing ($ae = 0.4 \times D$ or over)

| ISO | Material | Vc (m/min) | fz (mm/t) | | | ap (Slotting) |
|----------|-----------------|------------|---------------|--------------|---------------|---------------|
| | | | ø6 - ø8 | ø10 - ø12 | ø16 - ø20 | |
| P | Carbon steel | 140 - 180 | 0.035 - 0.055 | 0.045 - 0.07 | 0.06 - 0.0825 | 2xD |
| | Alloy steel | 70 - 150 | 0.03 - 0.045 | 0.045 - 0.07 | 0.06 - 0.0825 | 2xD |
| M | Stainless steel | 60 - 100 | 0.03 - 0.055 | 0.045 - 0.06 | 0.05 - 0.0675 | 1xD |
| K | Cast iron | 80 - 180 | 0.03 - 0.06 | 0.045 - 0.08 | 0.06 - 0.09 | 2xD |
| N | Aluminium alloy | 300 - 750 | 0.03 - 0.06 | 0.045 - 0.08 | 0.04 - 0.105 | 2xD |
| S | Titanium alloy | 20 - 50 | 0.03 - 0.045 | 0.04 - 0.06 | 0.04 - 0.105 | 1xD |
| H | Hardened steel | 20 - 30 | 0.015 - 0.025 | 0.025 - 0.07 | 0.06 - 0.075 | 0.5xD |

Semi-finishing / Shouldering ($ae = 0.1 \sim 0.4 \times D$)

| ISO | Material | Vc (m/min) | fz (mm/t) | | | ap |
|----------|-----------------|------------|---------------|--------------|---------------|-----|
| | | | ø6 - ø8 | ø10 - ø12 | ø16 - ø20 | |
| P | Carbon steel | 150 - 220 | 0.045 - 0.09 | 0.09 - 0.11 | 0.1 - 0.12 | 2xD |
| | Alloy steel | 70 - 160 | 0.03 - 0.075 | 0.06 - 0.1 | 0.065 - 0.105 | 2xD |
| M | Stainless steel | 80 - 130 | 0.035 - 0.06 | 0.055 - 0.07 | 0.06 - 0.075 | 2xD |
| K | Cast iron | 130 - 220 | 0.045 - 0.075 | 0.06 - 0.09 | 0.09 - 0.105 | 2xD |
| N | Aluminium alloy | 350 - 850 | 0.06 - 0.09 | 0.09 - 0.12 | 0.12 - 0.15 | 2xD |
| S | Titanium alloy | 40 - 60 | 0.045 - 0.06 | 0.055 - 0.07 | 0.075 - 0.12 | 2xD |
| H | Hardened steel | 30 - 70 | 0.02 - 0.055 | 0.045 - 0.07 | 0.06 - 0.09 | 2xD |

Finishing (feed rate depending on required accuracy) / High feed machining at small width of cut ($ae = 0.05 \sim 0.1 \times D$)

| ISO | Material | Vc (m/min) | fz (mm/t) | | | ap |
|----------|-----------------|------------|---------------|--------------|---------------|-------|
| | | | ø6 - ø8 | ø10 - ø12 | ø16 - ø20 | |
| P | Carbon steel | 170 - 280 | 0.075 - 0.11 | 0.11 - 0.12 | 0.12 - 0.15 | apmax |
| | Alloy steel | 110 - 220 | 0.075 - 0.11 | 0.11 - 0.12 | 0.12 - 0.15 | apmax |
| M | Stainless steel | 100 - 160 | 0.045 - 0.07 | 0.06 - 0.075 | 0.065 - 0.09 | apmax |
| K | Cast iron | 180 - 280 | 0.05 - 0.09 | 0.09 - 0.1 | 0.09 - 0.12 | apmax |
| N | Aluminium alloy | 350 - 900 | 0.065 - 0.11 | 0.11 - 0.15 | 0.15 - 0.22 | apmax |
| S | Titanium alloy | 50 - 70 | 0.055 - 0.075 | 0.06 - 0.09 | 0.09 - 0.12 | apmax |
| H | Hardened steel | 40 - 80 | 0.03 - 0.06 | 0.05 - 0.09 | 0.075 - 0.105 | apmax |

- When the depth of cut (ae) is closer to the upper limit, please start with a lower limit value of cutting speed (Vc).
- While air blow is recommended, water-soluble coolant will be good for stainless steel, titanium alloy, and heat-resistant alloy.
- When chattering occurs with low rigid machines or settings, reduce cutting speed and feed at an equal rate.
- When chattering occurs with long tool overhang, reduce cutting speed and feed by 20 to 40%.

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