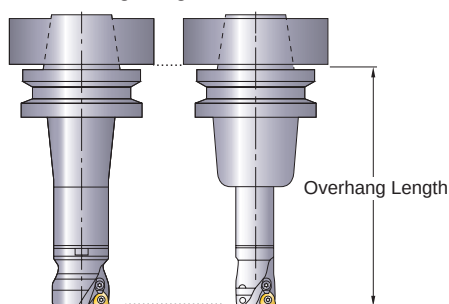


ROTATING TOOLS

RECOMMENDED CUTTING CONDITIONS

Work Material	Hardness	Grade	Cutting Speed (m/min)	φ16 - 17			φ20 - 22			φ25 - 28			
				Overhang (mm)	Axial Depth of Cut (mm)	Feed per Tooth (mm/tooth)	Overhang (mm)	Axial Depth of Cut (mm)	Feed per Tooth (mm/tooth)	Overhang (mm)	Axial Depth of Cut (mm)	Feed per Tooth (mm/tooth)	
M	Stainless Steel	MP7130	140 (100—180)	140	0.8	0.7	160	1.0	0.8	170	1.0	1.0	
				180	0.6	0.5	210	0.8	0.6	230	0.8	0.8	
				210	0.4	0.3	240	0.6	0.4	290	0.6	0.6	
		MP7140	120 (80—160)	140	0.8	0.7	160	1.0	0.8	170	1.0	1.0	
				180	0.6	0.5	210	0.8	0.6	230	0.8	0.8	
				210	0.4	0.3	240	0.6	0.4	290	0.6	0.6	
K	Gray Cast Iron	FH7020	150 (100—200)	140	0.8	1.0	160	1.0	1.2	170	1.0	1.4	
				180	0.6	0.8	210	0.8	1.0	230	0.8	1.2	
				210	0.4	0.6	240	0.6	0.8	290	0.6	1.0	
	Ductile Cast Iron	VP15TF	120 (80—160)	140	0.7	0.8	160	0.8	1.0	170	0.8	1.2	
				180	0.5	0.6	210	0.6	0.8	230	0.6	1.0	
				210	0.3	0.4	240	0.4	0.6	290	0.4	0.8	
H	Hardened Steel	VP15TF	70 (50—90)	140	0.5	0.5	160	0.5	0.6	170	0.5	0.8	
				180	0.4	0.3	210	0.4	0.4	230	0.4	0.6	
				210	0.3	0.2	240	0.3	0.2	290	0.3	0.4	

① Overhang Length



② Main Spindle Revolution

$$n(\text{min}^{-1}) = (\text{Recommended Cutting Speed} \times 1000) \div (\text{Outer Tool Diameter} \times 3.14)$$

③ Table Feed Rate

$$vf(\text{mm/min}) = n \times \text{Feed per Tooth} \times \text{Number of Teeth}$$

④ Recommended width of cut (ae) is more than 60% of the cutting edge diameter.

⑤ The above cutting conditions are guides to cutting on a #50 BT machine. In case of #40 BT and #63 HSK machines, a cutting edge diameter of under 35mm is recommended. In this case, reduce the depth of cut and table feed rate.

⑥ Use of **ST** chipbreaker with tougher cutting edges is recommended for machining parts that require interrupted cutting. First recommended insert grade for non-standard 06/08/09 **ST** chipbreakers is **VP30RT** irrespective of the workpiece material.

⑦ Cutter body with coarse pitch is recommended for the unstable cutting caused by the long tool overhang.

⑧ Use the "sharp" **JM** chipbreaker to lower cutting forces or when long tool overhangs are used.

⑨ Heavy chips are generated when machining with the **AJX**. To avoid chip jamming-related problems, use air blow while machining to discharging chips effectively.