







156 Recommended Cutting Data - Contouring

Inch If axial depth (ap) is less than the ball diameter, the speed is figured using the effective cutting diameter.

Workpiece Material Group	I S O	Hardness	Coolant ● Preferred ○ Possible x Not Possible			End Mill Diameter											
						1/32		1/16		3/32		1/8		5/32		1/4	
			Max.	Air	MMS	RPM (n)	IPM (vf)	RPM (n)	IPM (vf)	RPM (n)	IPM (vf)	RPM (n)	IPM (vf)	RPM (n)	IPM (vf)	RPM (n)	IPM (vf)
Tool Steels & Die Steels O7, M1, M2, M3, M4, M7, T1, T2, T4, T5, T8, T15, A2, A3, A6, A7, H10, H11, H12, H13, H19, H21, L3, L6, L7, P2, P20, S1, S5, S7, 52100, A128, D2, D3, D4, D5, D7	P	28 to 44 Rc	●	●	●	30000	26.9	30000	62	25000	84	17500	95	14000	120	8750	140
Hardened Steels	H	40-45 Rc	●	○	○	30000	24	23500	57	22000	96	14500	90	11500	90	72500	70
Hardened Steels		46-55 Rc	●	○	○	30000	18	23500	37	20000	35	12000	35	9600	37	6000	38
Hardened Steels		55-60 Rc	●	○	○	30000	15	15000	15	10000	15	7000	15	5600	20	3500	18
Stainless Steel - Ferritic / Martensitic / PH	M	over 28 Rc	●	x	○	30000	26	30000	62	25000	85	17500	95	14000	120	8750	140

Workpiece Material Group	I S O	Hardness	Coolant ● Preferred ○ Possible x Not Possible			End Mill Diameter					
						5/16		3/8		1/2	
			Max.	Air	MMS	RPM (n)	IPM (vf)	RPM (n)	IPM (vf)	RPM (n)	IPM (vf)
Tool Steels & Die Steels O7, M1, M2, M3, M4, M7, T1, T2, T4, T5, T8, T15, A2, A3, A6, A7, H10, H11, H12, H13, H19, H21, L3, L6, L7, P2, P20, S1, S5, S7, 52100, A128, D2, D3, D4, D5, D7	P	28 to 44 Rc	●	●	●	7000	168	5800	125	4300	140
Hardened Steels	H	40-45 Rc	●	○	○	5800	68	4800	50	3625	45
Hardened Steels		46-55 Rc	●	○	○	4800	35	4000	30	3000	25
Hardened Steels		55-60 Rc	●	○	○	2800	15	2300	15	1750	10
Stainless Steel - Ferritic / Martensitic / PH	M	over 28 Rc	●	x	○	7000	170	5800	125	4300	140

Axial & Radial Depth - Roughing / Semi Finishing

30 - 40 Rc 10% of Diameter ap
 40 - 50 Rc 5% of Diameter ap
 50 - 60 Rc 4% of Diameter ap
 Radial Step Over 25%-40% of Diameter

Axial & Radial Depth - Finishing

< 40 Rc 3% of Diameter ap
 40 - 50 Rc 2% of Diameter ap
 50 - 60 Rc 1% of Diameter ap
 ae (step over) depends on finish requirement of the part.