



# Speed & Feed Recommendations

56MB Metric	HARDNESS	CUT	SPEED	FEED (mm/flute)							
	BRINELL	Type	m/min	1	1.5	3	5	6	10	12	20
 STEEL, TOOL STEEL, MOLD & DIE STEEL 300M, 4340, 52100, HP 9-4-20, M-50, A2, D2, H13, L2, M2, P20, S7, T15, W2	≤ 370	Heavy	191	0.015	0.038	0.076	0.102	0.127	0.203	0.254	0.305
		Light	290	0.018	0.043	0.084	0.112	0.112	0.224	0.279	0.330
	> 370 ≤ 475	Heavy	229	0.013	0.028	0.058	0.076	0.097	0.152	0.191	0.216
		Light	351	0.015	0.030	0.064	0.084	0.107	0.168	0.208	0.254
	> 475 ≤ 655	Heavy	152	0.010	0.020	0.043	0.058	0.074	0.114	0.145	0.160
		Light	305	0.013	0.023	0.048	0.064	0.081	0.127	0.160	0.180

CUT TYPE					
< 370 BRINELL		> 370 ≤ BRINELL		> 475 ≤ BRINELL	
HEAVY	LIGHT*	HEAVY	LIGHT*	HEAVY	LIGHT*
$a_p = 0.1 \times D_1$ $a_e = 0.4 \times D_1$	$a_p = 0.03 \times D_1$ $a_e = 0.4 \times D_1$	$a_p = 0.05 \times D_1$ $a_e = 0.4 \times D_1$	$a_p = 0.02 \times D_1$ $a_e = 0.4 \times D_1$	$a_p = 0.04 \times D_1$ $a_e = 0.4 \times D_1$	$a_p = 0.01 \times D_1$ $a_e = 0.4 \times D_1$



$\text{rpm} = (1000 \times \text{m/min}) / (3.14 \times D_1)$

$\text{mm/min} = (\text{mm/flute}) \times \text{rpm}$

- maximum recommended depths shown
- reduce speed and feed for materials harder than listed
- \* finish cuts typically require reduced feed and cutting depths of .02 x D<sub>1</sub> maximum
- refer to the SGS Tool Wizard for more complete technical information (available at )
- Max. ramp angle = 6° / Max. ramp depth = 1xD (reduce feed accordingly)

