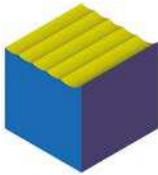




# Speed & Feed Recommendations

56MB Metric	HARDNESS		CUT	SPEED		FEED (mm/flute)						
	BRINELL	Type		m/min		1	1.5	3	5	6	10	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	$\leq 370$	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
	$> 370$ $\leq 475$	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
	$> 475$ $\leq 655$	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*
$a_p = 0.1 \times D_1$	$a_p = 0.03 \times D_1$	$a_p = 0.05 \times D_1$	$a_p = 0.02 \times D_1$	$a_p = 0.04 \times D_1$	$a_p = 0.01 \times D_1$
$a_e = 0.4 \times D_1$	$a_e = 0.4 \times D_1$	$a_e = 0.4 \times D_1$	$a_e = 0.4 \times D_1$	$a_e = 0.4 \times D_1$	$a_e = 0.4 \times D_1$



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

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

- 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  $D_1$  maximum
- refer to the SGS Tool Wizard for more complete technical information (available at )
- Max. ramp angle =  $6^\circ$  / Max. ramp depth =  $1xD$  (reduce feed accordingly)