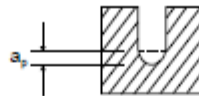




MATERIAL GROUP	HARDNESS HRC		Size (mm)											
			0.6	0.8	1.0	1.2	1.4	1.5	1.6	1.8	2.0	3.0	4.0	
P	11 12	< 30	a_p (mm)	0.04	0.054	0.067	0.077	0.083	0.102	0.11	0.12	0.135	0.19	0.27
			v_c (m/min)	66	99	103	102	103	102	104	109	108	111	122
			n	35000	39500	33000	27000	23500	21500	20500	19500	17000	12000	10000
			f_z	0.008	0.008	0.007	0.009	0.009	0.011	0.012	0.012	0.014	0.021	0.025
			f (mm/min)	420	450	450	480	420	475	500	450	480	500	500
	13 14	30-45	a_p (mm)	0.04	0.054	0.067	0.077	0.083	0.102	0.11	0.12	0.135	0.19	0.27
			v_c (m/min)	48	64	73	73	72	73	74	76	77	78	85
			n	25000	25000	23000	19000	16500	15500	15000	13500	12500	8500	7000
			f_z	0.004	0.004	0.005	0.006	0.007	0.008	0.009	0.009	0.01	0.014	0.018
			f (mm/min)	200	200	230	230	230	250	265	250	245	230	250
H	15 16	45-55	a_p (mm)	0.008	0.01	0.013	0.015	0.018	0.021	0.022	0.024	0.028	0.041	0.052
			v_c (m/min)	30	40	46	47	46	45	47	48	49	49	55
			n	16000	16000	14500	12500	10500	9500	9000	8500	7500	5500	4500
			f_z	0.005	0.005	0.006	0.007	0.009	0.009	0.01	0.011	0.012	0.018	0.021
			f (mm/min)	160	160	175	175	190	170	185	185	185	185	185
K	31 32 33 34		a_p (mm)	0.04	0.054	0.067	0.077	0.083	0.102	0.11	0.12	0.135	0.19	0.27
			v_c (m/min)	66	99	103	102	103	102	104	109	108	111	122
			n	35000	39500	33000	27000	23500	21500	20500	19500	17000	12000	10000
			f_z	0.008	0.008	0.007	0.009	0.009	0.011	0.012	0.012	0.014	0.021	0.025
			f (mm/min)	420	450	450	480	420	475	500	450	480	500	500



► The data shown is based on medial length tools. Please adjust machining conditions according to length.

v_c - cutting speed (m/min)
 n - RPM (rev/min)
 f_z - feed rate (mm/tooth)
 f - feed rate (mm/rev)
 z - No. of teeth
 a_p - axial depth of cut
 a_r - radial depth of cut

$$\text{To calculate RPM from cutting speed: } n = \frac{v_c \times 1000}{\pi \times \phi}$$

$$\text{To calculate cutting speed from RPM: } v_c = \frac{n \times \pi \times \phi}{1000}$$

All recommendations are based on ideal machining conditions. Adjustments may need to be made according to your set-up. The recommendations for speeds, feeds and other parameters presented in this chart are nominal recommendations and should be considered only as good starting points.