



MATERIAL GROUP	HRC		Size (mm)									
			4.0	5.0	6.0	8.0	10.0	12.0	16.0	20.0		
P	11 12	< 30	v_c (m/min)	65	70	75	75	80	80	85	80	
			n	5360	4580	3950	3000	2520	2080	1740	1280	
			f_z	0.018	0.023	0.032	0.045	0.054	0.051	0.055	0.056	
			f (mm/min)	170	210	250	270	270	210	190	140	
	13 14	30-45	v_c (m/min)	45	45	50	50	50	50	55	50	
			n	3410	2900	2520	1900	1640	1390	1070	820	
			f_z	0.012	0.017	0.025	0.033	0.038	0.041	0.042	0.037	
			f (mm/min)	85	100	125	125	125	115	90	60	
	H	15 16	45-55	v_c (m/min)	25	30	30	30	30	30	35	30
				n	2150	1900	1640	1280	1010	840	670	500
				f_z	0.009	0.013	0.018	0.024	0.03	0.03	0.03	0.03
				f (mm/min)	40	50	60	60	60	50	40	30
15 16		55-65	v_c (m/min)	20	20	20	20	20	20	20	20	
			n	1470	1280	1160	840	670	550	440	340	
			f_z	0.007	0.01	0.015	0.021	0.026	0.023	0.023	0.022	
			f (mm/min)	20	25	35	35	35	25	20	15	
K	31 32 33 34		v_c (m/min)	65	70	75	75	80	80	85	80	
			n	5360	4580	3950	3000	2520	2080	1740	1280	
			f_z	0.018	0.023	0.032	0.045	0.054	0.051	0.055	0.056	
			f (mm/min)	170	210	250	270	270	210	190	140	
< HRc55 												
> HRc55 												

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_e - radial depth of cut

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

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.