



MATERIAL GROUP	HRC		Size (mm)									
			6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0	25.0	
P	11 12 13 14	< 30	v_c (m/min)	135	135	135	135	135	135	135	135	135
			n	7270	5450	4360	3630	3110	2720	2390	2180	1720
			f_z	0.034	0.038	0.05	0.063	0.069	0.076	0.082	0.089	0.09
			f (mm/min)	1240	1040	1100	1150	1080	1040	980	970	770
M	21 22		v_c (m/min)	115	115	115	115	115	115	115	115	115
			n	6080	4540	3630	3030	2600	2270	2030	1810	1460
			f_z	0.03	0.032	0.038	0.063	0.065	0.069	0.072	0.076	0.077
			f (mm/min)	920	720	690	960	850	780	730	690	560
	23		v_c (m/min)	105	105	105	105	105	105	105	105	105
			n	5680	4240	3390	3630	2420	2120	1850	1690	1340
			f_z	0.03	0.032	0.038	0.043	0.064	0.068	0.072	0.076	0.077
			f (mm/min)	860	670	640	820	770	720	670	640	510
K	31 32 33 34		v_c (m/min)	135	135	135	135	135	135	135	135	135
			n	7270	5450	4360	3630	3110	2720	2390	2180	1720
			f_z	0.034	0.038	0.05	0.063	0.069	0.076	0.082	0.089	0.09
			f (mm/min)	1240	1040	1100	1150	1080	1040	980	970	770
S	41 42 43		v_c (m/min)	85	85	85	85	85	85	85	85	85
			n	4440	3330	2660	220	1900	1660	1500	1330	1080
			f_z	0.03	0.031	0.038	0.05	0.057	0.063	0.069	0.075	0.078
			f (mm/min)	670	520	500	560	540	520	510	500	420
	51 52 53		v_c (m/min)	25	25	25	25	25	25	25	25	25
			n	1450	1090	870	720	620	540	440	430	320
			f_z	0.017	0.02	0.025	0.036	0.045	0.048	0.054	0.06	0.062
			f (mm/min)	120	110	110	130	140	130	120	130	100
STEEL, STAINLESS STEEL, CAST IRON												
TITANIUM												
			INCONEL									

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: $v_c = \frac{n \times \pi \times \phi}{1000}$