



MATERIAL GROUP	HRC		Size (mm)						
			6.0	8.0	10.0	12.0	16.0	20.0	
<b>P</b>	11 12	< 30	$v_c$ (m/min)	300	300	3000	295	300	300
			$n$	8000	6800	6000	5200	4800	4700
			$f_z$	0.075	0.088	0.1	0.112	0.113	0.112
			$f$ (mm/min)	2400	2400	2400	2320	2160	2140
	13 14	30-38	$v_c$ (m/min)	225	230	240	250	225	225
			$n$	6000	5200	4800	4400	3600	3500
			$f_z$	0.033	0.04	0.04	0.041	0.039	0.038
			$f$ (mm/min)	800	840	760	720	560	540
<b>H</b>	15 16	38-45	$v_c$ (m/min)	160	160	165	155	150	150
			$n$	4200	3600	3300	2700	2400	2300
			$f_z$	0.034	0.04	0.039	0.039	0.038	0.037
			$f$ (mm/min)	570	570	510	420	360	350
	15 16	45-55	$v_c$ (m/min)	65	60	60	60	65	60
			$n$	1680	1400	1200	1100	1000	950
			$f_z$	0.039	0.036	0.033	0.034	0.038	0.036
			$f$ (mm/min)	260	200	180	150	150	140
	15 16	55-65	$v_c$ (m/min)	45	40	40	40	40	40
			$n$	1200	900	800	700	660	630
			$f_z$	0.04	0.036	0.034	0.036	0.038	0.038
			$f$ (mm/min)	190	130	110	100	100	100
<b>K</b>	31 32 33 34	$v_c$ (m/min)	300	300	3000	295	300	300	
		$n$	8000	6800	6000	5200	4800	4700	
		$f_z$	0.075	0.088	0.1	0.112	0.113	0.112	
		$f$ (mm/min)	2400	2400	2400	2320	2160	2140	
< HRC45			> HRC45						

$v_c$  - 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  
 $a_w$  - 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.