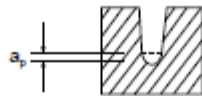




MATERIAL GROUP	HARDNESS HRC		Size (mm)				
			1.0	1.2	1.5	2.0	
<b>P</b>	11 12	< 30	$a_p$ (mm)	0.03	0.037	0.045	0.06
			$v_c$ (m/min)	65	60	60	65
			$n$	20000	18000	13000	10000
			$f_z$	0.009	0.011	0.013	0.018
			$f$ (mm/min)	700	700	700	700
	13 14	30-45	$a_p$ (mm)	0.025	0.032	0.04	0.05
			$v_c$ (m/min)	45	50	45	50
			$n$	15000	13000	10000	8000
			$f_z$	0.008	0.01	0.013	0.016
			$f$ (mm/min)	500	500	500	500
<b>H</b>	15 16	45-55	$a_p$ (mm)	0.015	0.018	0.022	0.03
			$v_c$ (m/min)	30	30	30	30
			$n$	10000	8000	6500	5000
			$f_z$	0.008	0.009	0.012	0.015
			$f$ (mm/min)	300	300	300	300
<b>K</b>	31 32 33 34		$a_p$ (mm)	0.03	0.037	0.045	0.06
			$v_c$ (m/min)	65	60	60	65
			$n$	20000	18000	13000	10000
			$f_z$	0.009	0.011	0.013	0.018
			$f$ (mm/min)	700	700	700	700



► 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.