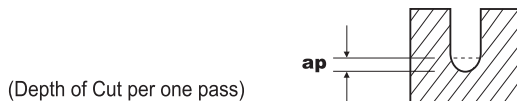


MATERIAL	NON-ALLOYED STEELS ALLOY STEELS CAST IRON					ALLOY STEELS HEAT RESISTANT STEELS				
	~ HRC30					HRC30 ~ HRC45				
HARDNESS	~ 1000N/mm <sup>2</sup>					1000 ~ 1500N/mm <sup>2</sup>				
STRENGTH										
DIAMETER	RPM	FEED	ap (mm)	Vc	fz	RPM	FEED	ap (mm)	Vc	fz
0.4	31000~40000	175~490	0.018~0.036	39~50	0.003~0.006	22500~28500	88~270	0.018~0.036	28~36	0.002~0.005
0.5	31000~40000	175~490	0.023~0.045	49~63	0.003~0.006	22500~28500	88~270	0.023~0.045	35~45	0.002~0.005
0.6	31000~40000	225~630	0.027~0.054	58~75	0.004~0.008	22500~28500	110~350	0.027~0.054	42~54	0.002~0.006
0.8	31000~40000	225~630	0.036~0.072	78~101	0.004~0.008	22500~28500	110~350	0.036~0.072	57~72	0.002~0.006
1.0	29000~36500	250~700	0.045~0.090	91~115	0.004~0.010	20500~26000	125~390	0.045~0.090	64~82	0.003~0.008
1.2	24000~30500	250~780	0.055~0.100	90~115	0.005~0.013	17000~21500	125~390	0.055~0.100	64~81	0.004~0.009
1.4	21000~26000	250~780	0.062~0.125	92~114	0.006~0.015	15000~18000	125~390	0.062~0.125	66~79	0.004~0.011
1.5	19000~24000	250~780	0.070~0.135	90~113	0.007~0.016	13500~17500	125~390	0.070~0.135	64~82	0.005~0.011
1.6	18000~23500	250~780	0.075~0.145	90~118	0.007~0.017	13200~16500	125~390	0.075~0.145	66~83	0.005~0.012
1.8	17000~21500	250~780	0.080~0.160	96~122	0.007~0.018	12000~15000	125~390	0.080~0.160	68~85	0.005~0.013
2.0	15500~19000	250~780	0.090~0.180	97~119	0.008~0.021	11000~13500	125~390	0.090~0.180	69~85	0.006~0.014
3.0	10500~13000	250~780	0.135~0.270	99~123	0.012~0.030	7000~9000	125~390	0.135~0.270	66~85	0.009~0.022
4.0	8500~11000	250~780	0.180~0.360	107~138	0.015~0.035	5800~7800	125~390	0.180~0.360	73~98	0.011~0.025
5.0	6800~8800	250~780	0.225~0.450	107~138	0.018~0.044	4600~6200	125~390	0.225~0.450	72~97	0.014~0.031
6.0	5700~7300	250~780	0.270~0.540	107~138	0.022~0.053	3900~5200	125~390	0.270~0.540	74~98	0.016~0.038

MATERIAL	HARDENED STEELS				
	HRC45 ~ HRC55				
STRENGTH	1500 ~ 2000N/mm <sup>2</sup>				
DIAMETER	RPM	FEED	ap (mm)	Vc	fz
0.4	14300~18000	88~175	0.004~0.007	18~23	0.003~0.005
0.5	14300~18000	88~175	0.005~0.009	22~28	0.003~0.005
0.6	14300~18000	110~225	0.005~0.011	27~34	0.004~0.006
0.8	14300~18000	110~225	0.007~0.014	36~45	0.004~0.006
1.0	13000~16300	125~250	0.009~0.018	41~51	0.005~0.008
1.2	10800~13700	125~250	0.010~0.022	41~52	0.006~0.009
1.4	9400~11700	125~250	0.012~0.025	41~51	0.007~0.011
1.5	8700~10700	125~250	0.014~0.028	41~50	0.007~0.012
1.6	8300~10400	125~250	0.015~0.030	42~52	0.008~0.012
1.8	7400~9400	125~250	0.016~0.032	42~53	0.008~0.013
2.0	6900~8600	125~250	0.018~0.035	43~54	0.009~0.015
3.0	4600~5700	125~250	0.028~0.055	43~54	0.014~0.022
4.0	3900~4900	125~250	0.035~0.070	49~62	0.016~0.026
5.0	3100~3900	125~250	0.044~0.088	49~61	0.020~0.032
6.0	2600~3300	125~250	0.053~0.105	49~62	0.024~0.038



RPM = rev./min.  
FEED = mm/min.  
Vc = m/min.  
fz = mm/t