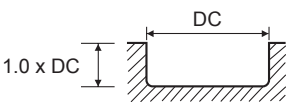


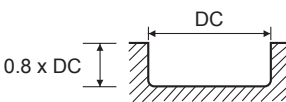
CUTTING DATA

167123, 167323, 168123, 168323, 169123, 169323 (4&5 Flute Roughing)									
VDI MATERIAL GROUP		HRc	SLOTTING	Size (mm)					
				6.0	8.0	10.0	12.0	16.0	20.0
P	1-5	Non-alloy Steel	<25	v_c (m/min)	225	225	225	225	225
				n	12000	9000	7200	6000	4500
				f_z	0.032	0.046	0.057	0.064	0.067
				f (mm/min)	1550	1650	1650	1540	1500
	6-9	Low alloy Steel	25-35	v_c (m/min)	200	205	200	205	205
				n	10600	8100	6400	5400	4100
				f_z	0.026	0.036	0.046	0.053	0.051
				f (mm/min)	1100	1180	1180	1140	1050
	10-11	High alloy Steel, Tool Steel	35-45	v_c (m/min)	200	205	200	205	205
				n	10600	8100	6400	5400	4100
				f_z	0.026	0.036	0.046	0.053	0.051
				f (mm/min)	1100	1180	1180	1140	1050
K	15-16	Grey Cast Iron		v_c (m/min)	225	225	225	225	225
				n	12000	9000	7200	6000	4500
				f_z	0.032	0.046	0.057	0.064	0.067
				f (mm/min)	1550	1650	1650	1540	1500
	17-20	Nodular/Malleable Cast Iron		v_c (m/min)	200	205	200	205	205
				n	10600	8100	6400	5400	4100
				f_z	0.026	0.036	0.046	0.053	0.051
				f (mm/min)	1100	1180	1180	1140	1050

MATERIAL GROUP P1-5



MATERIAL GROUP P6-11, K



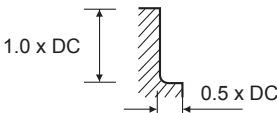
Recommended cutting depths are **maximum** depths, and **speeds and feeds are a starting point** based on these depths.
 All recommendations are based on ideal machining conditions. Adjustments may need to be made according to your set-up.
For long series and long necked tools it may be necessary to reduce feed rate by up to 50%.

v_c - cutting speed (m/min)
 n - RPM (rev/min)
 f_z - feed per tooth (mm)
 f - feed rate (mm/min)
 a_p - axial depth of cut
 a_e - radial depth of cut

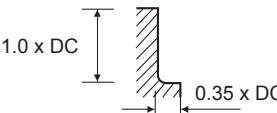
CUTTING DATA

167123, 167323, 168123, 168323, 169123, 169323 (4&5 Flute Roughing)									
VDI MATERIAL GROUP		HRc	SIDE CUTTING	Size (mm)					
				6.0	8.0	10.0	12.0	16.0	20.0
P	1-5	Non-alloy Steel	<25	v_c (m/min)	300	300	300	300	300
				n	15800	11900	9500	8000	4800
				f_z	0.041	0.057	0.071	0.08	0.089
				f (mm/min)	2570	2700	2700	2570	2140
	6-9	Low alloy Steel	25-35	v_c (m/min)	270	270	270	270	270
				n	14300	10700	8500	7100	4300
				f_z	0.032	0.046	0.057	0.065	0.07
				f (mm/min)	1850	1950	1950	1850	1500
	10-11	High alloy Steel, Tool Steel	35-45	v_c (m/min)	270	270	265	270	270
				n	14300	10700	8400	77100	5300
				f_z	0.032	0.046	0.057	0.065	0.07
				f (mm/min)	1850	1950	1950	1850	1500
K	15-16	Grey Cast Iron		v_c (m/min)	300	300	300	300	300
				n	15800	11900	9500	8000	4800
				f_z	0.041	0.057	0.071	0.08	0.089
				f (mm/min)	2570	2700	2700	2570	2140
	17-20	Nodular/ Malleable Cast Iron		v_c (m/min)	270	270	270	270	270
				n	14300	10700	8500	7100	4300
				f_z	0.032	0.046	0.057	0.065	0.07
				f (mm/min)	1850	1950	1950	1850	1500

MATERIAL GROUP P1-5



MATERIAL GROUP P6-11, K



Recommended cutting depths are **maximum** depths, and **speeds and feeds are a starting point** based on these depths.
 All recommendations are based on ideal machining conditions. Adjustments may need to be made according to your set-up.
For long series and long necked tools it may be necessary to reduce feed rate by up to 50%.

v_c - cutting speed (m/min)
 n - RPM (rev/min)
 f_z - feed per tooth (mm)
 f - feed rate (mm/min)
 a_p - axial depth of cut
 a_e - radial depth of cut