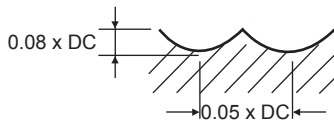


CUTTING DATA

100365 (2 Flute Ball Nose)														
VDI MATERIAL GROUP	MATERIAL	HRc		Size (mm)										
				0.1	0.2	0.3	0.4	0.5	0.6	0.8	1.0	1.5	2.0	
P	1-5 Non-alloy Steel	<25	v_c (m/min)	13	19	28	38	47	57	75	94	141	187	
			n	40000	30000	30000	30000	30000	30000	30000	30000	30000	30000	29820
			f_z	0.007	0.012	0.015	0.019	0.024	0.029	0.039	0.048	0.054	0.057	0.057
			f (mm/min)	550	720	900	1140	1440	1740	2340	2880	3240	3420	3420
	6-9 Low alloy Steel	25-35	v_c (m/min)	13	19	28	38	47	57	75	94	141	187	
			n	40000	30000	30000	30000	30000	30000	30000	30000	30000	30000	29820
			f_z	0.007	0.012	0.015	0.019	0.024	0.029	0.039	0.048	0.054	0.057	0.057
			f (mm/min)	550	720	900	1140	1440	1740	2340	2880	3240	3420	3420
	10-11 High alloy Steel, Tool Steel	35-45	v_c (m/min)	13	19	28	38	47	57	75	94	141	187	
			n	40000	30000	30000	30000	30000	30000	30000	30000	30000	30000	29820
			f_z	0.007	0.012	0.015	0.019	0.024	0.029	0.039	0.048	0.054	0.057	0.057
			f (mm/min)	550	720	900	1140	1440	1740	2340	2880	3240	3420	3420
K	15-20 Cast Iron	v_c (m/min)	13	19	28	38	47	57	75	94	141	187		
		n	40000	30000	30000	30000	30000	30000	30000	30000	30000	30000	29820	
		f_z	0.007	0.012	0.015	0.019	0.024	0.029	0.039	0.048	0.054	0.057	0.057	
		f (mm/min)	550	720	900	1140	1440	1740	2340	2880	3240	3420	3420	
H	38 Hardened Steel	45-55	v_c (m/min)	10	17	25	34	42	51	68	85	122	151	
			n	31800	27000	26500	27000	26700	27000	27000	27000	25800	24000	
			f_z	0.006	0.011	0.013	0.017	0.021	0.024	0.033	0.042	0.047	0.05	
			f (mm/min)	380	590	690	920	1120	1300	1780	2270	2400	2400	
	40 Chilled Cast Iron		v_c (m/min)	13	19	28	38	47	57	75	94	136	180	
			n	41000	30000	29700	30200	29900	30200	29800	30000	28800	28600	
			f_z	0.006	0.011	0.014	0.017	0.021	0.025	0.033	0.042	0.047	0.05	
			f (mm/min)	500	660	830	1000	1250	1510	1970	2500	2700	2800	
	41 Hardened Cast Iron		v_c (m/min)	10	17	25	34	42	51	68	85	122	151	
			n	31800	27000	26500	27000	26700	27000	27000	27000	25800	24000	
			f_z	0.006	0.011	0.013	0.017	0.021	0.024	0.033	0.042	0.047	0.05	
			f (mm/min)	380	590	690	920	1120	1300	1780	2270	2400	2400	

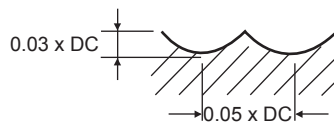


Recommended cutting depths are **maximum** depths, and **speeds and feeds are a starting point** based on these depths.
 All recommendations are based on ideal machining conditions. Adjustments may need to be made according to your set-up.
For long series and long necked tools it may be necessary to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

100365 (2 Flute Ball Nose)														
VDI MATERIAL GROUP	MATERIAL	HRc		Size (mm)										
				2.5	3.0	4.0	5.0	6.0	8.0	10.0	12.0	16.0	20.0	
P	1-5	Non-alloy Steel	<25	v_c (m/min)	187	187	187	175	157	167	175	157	168	168
				n	23800	19860	14900	11160	8340	6660	5580	4170	3340	2670
				f_z	0.074	0.091	0.121	0.156	0.174	0.189	0.199	0.212	0.238	0.264
				f (mm/min)	3510	3600	3600	3480	2910	2520	2220	1770	1590	1410
	6-9	Low alloy Steel	25-35	v_c (m/min)	187	187	187	175	157	167	175	157	168	168
				n	23800	19860	14900	11160	8340	6660	5580	4170	3340	2670
				f_z	0.074	0.091	0.121	0.156	0.174	0.189	0.199	0.212	0.238	0.264
				f (mm/min)	3510	3600	3600	3480	2910	2520	2220	1770	1590	1410
	10-11	High alloy Steel, Tool Steel	35-45	v_c (m/min)	187	187	187	175	157	167	175	157	168	168
				n	23800	19860	14900	11160	8340	6660	5580	4170	3340	2670
				f_z	0.074	0.091	0.121	0.156	0.174	0.189	0.199	0.212	0.238	0.264
				f (mm/min)	3510	3600	3600	3480	2910	2520	2220	1770	1590	1410
K	15-20	Cast Iron	v_c (m/min)	187	187	187	175	157	167	175	157	168	168	
			n	23800	19860	14900	11160	8340	6660	5580	4170	3340	2670	
			f_z	0.074	0.091	0.121	0.156	0.174	0.189	0.199	0.212	0.238	0.264	
			f (mm/min)	3510	3600	3600	3480	2910	2520	2220	1770	1590	1410	
H	38	Hardened Steel	45-55	v_c (m/min)	151	151	151	141	124	136	141	127	136	136
				n	19200	16000	12000	8900	6500	5400	4500	3370	2700	2160
				f_z	0.063	0.075	0.1	0.125	0.141	0.15	0.16	0.17	0.189	0.208
				f (mm/min)	2400	2400	2400	2200	1850	1620	1430	1760	1000	900
	40	Chilled Cast Iron	v_c (m/min)	180	180	180	168	152	161	168	151	161	162	
			n	22900	19000	14300	10700	8000	6400	5300	4000	3200	2600	
			f_z	0.066	0.083	0.111	0.138	0.153	0.164	0.174	0.188	0.206	0.227	
			f (mm/min)	3000	3100	3200	2950	2400	2100	1860	1500	1320	1170	
	41	Hardened Cast Iron	v_c (m/min)	151	151	151	141	124	136	141	127	136	136	
			n	19200	16000	12000	8900	6500	5400	4500	3370	2700	2160	
			f_z	0.063	0.075	0.1	0.125	0.141	0.15	0.16	0.17	0.189	0.208	
			f (mm/min)	2400	2400	2400	2200	1850	1620	1430	1760	1000	900	



Recommended cutting depths are **maximum** depths, and **speeds and feeds are a starting point** based on these depths.
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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