

CUTTING DATA

101350, 101450 (2 Flute Extended Neck)																	
VDI MATERIAL GROUP	MATERIAL	HRc	SLOTTING	Size (mm)													
				0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.5	2.0		
P	10-11	High alloy Steel, Tool Steel	35-45	v_c (m/min)	15	30	40	55	70	85	90	100	110	120	140	165	
				n	47770	47770	42460	43790	44580	45115	40945	39805	38920	38215	29720	26270	
				f_z	0.001	0.001	0.002	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.011	0.013	
				f (mm/min)	95	95	170	175	265	360	405	475	540	610	650	680	
H	38	Hardened Steel	40-50	v_c (m/min)	12	25	40	50	65	75	75	75	80	80	95	110	
				n	47770	47770	42460	43790	44580	45115	40945	39805	38920	38215	29720	26270	
				f_z	0.001	0.001	0.002	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.011	0.013	
				f (mm/min)	95	95	170	175	265	360	405	475	540	610	650	680	
		Hardened Steel	50-55	v_c (m/min)	12	25	40	50	65	75	75	75	80	80	95	110	
				n	38215	39805	42460	39805	41400	39805	34120	29855	28305	25475	20170	17515	
				f_z	0.001	0.001	0.001	0.002	0.003	0.004	0.005	0.005	0.006	0.007	0.009	0.012	
				f (mm/min)	75	80	85	155	245	315	340	295	340	355	360	420	
		39	Hardened Steel	55-65	v_c (m/min)	10	20	25	30	40	45	45	50	50	50	60	70
					n	31845	31845	26530	23885	25475	23885	20470	19900	17690	15920	12735	11145
					f_z	0.001	0.001	0.001	0.001	0.002	0.002	0.003	0.003	0.004	0.004	0.005	0.007
					f (mm/min)	60	60	50	45	100	95	120	115	140	125	125	155
	Hardened Steel		65-70	v_c (m/min)	10	15	20	25	30	40	40	40	40	40	50	60	
				n	31845	23885	21230	19900	19105	21230	18195	15920	14150	12735	10615	9550	
				f_z	0.0006	0.0006	0.0006	0.0006	0.0008	0.001	0.002	0.002	0.003	0.003	0.003	0.003	
				f (mm/min)	35	25	25	20	30	40	70	60	85	75	60	55	
	40		Chilled Cast Iron	v_c (m/min)	15	30	45	65	80	95	100	125	140	150	180	210	
				n	47770	47770	47770	51750	50955	50425	45495	49760	49540	47770	38215	33435	
				f_z	0.001	0.001	0.002	0.002	0.004	0.005	0.006	0.006	0.007	0.008	0.011	0.013	
				f (mm/min)	95	95	190	205	405	500	545	595	690	760	840	865	
	41	Hardened Cast Iron	v_c (m/min)	15	30	40	55	70	85	90	100	110	120	140	165		
			n	47770	47770	42460	43790	44580	45115	40945	39805	38920	38215	29720	26270		
			f_z	0.001	0.001	0.002	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.011	0.013		
			f (mm/min)	95	95	170	175	265	360	405	475	540	610	650	680		
MATERIAL GROUP P, H38, H40-41				MATERIAL GROUP H39													

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

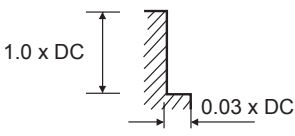
101350, 101450 (2 Flute Extended Neck)																
VDI MATERIAL GROUP	MATERIAL	HRc	SLOTTING	Size (mm)												
				2.5	3.0	3.5	4.0	5.0	6.0	8.0	10.0	12.0	16.0	20.0		
P	10-11	High alloy Steel, Tool Steel	35-45	v_c (m/min)	165	165	165	165	195	195	195	195	190	195	195	
				n	21015	17515	15010	13135	12420	10350	7760	6210	5040	3880	3105	
				f_z	0.016	0.02	0.023	0.027	0.032	0.037	0.046	0.055	0.065	0.074	0.085	
				f (mm/min)	670	700	690	705	795	765	710	680	655	570	525	
H	38	Hardened Steel	40-50	v_c (m/min)	165	165	165	165	195	195	195	195	190	195	195	
				n	21015	17515	15010	13135	12420	10350	7760	6210	5040	3880	3105	
				f_z	0.016	0.02	0.023	0.027	0.032	0.037	0.046	0.055	0.065	0.074	0.085	
				f (mm/min)	670	700	690	705	795	765	710	680	655	570	525	
		Hardened Steel	50-55	v_c (m/min)	110	110	110	110	130	130	130	130	130	130	130	
				n	14010	11675	10005	8755	8280	6900	5175	4140	3450	2585	2070	
				f_z	0.015	0.018	0.021	0.025	0.03	0.035	0.043	0.051	0.059	0.07	0.082	
				f (mm/min)	420	420	420	435	495	480	445	420	405	360	335	
		39	Hardened Steel	55-65	v_c (m/min)	70	70	75	80	80	80	80	80	80	80	80
					n	8915	7430	6820	6365	5095	4245	3185	2545	2120	1590	1270
					f_z	0.009	0.011	0.013	0.015	0.018	0.021	0.026	0.03	0.037	0.042	0.048
					f (mm/min)	160	160	175	190	180	175	165	150	155	130	120
	40	Hardened Steel	65-70	v_c (m/min)	60	60	60	60	70	70	70	70	70	70	70	
				n	7640	6365	5460	4775	4455	3715	2785	2225	1855	1390	1115	
				f_z	0.005	0.008	0.01	0.012	0.014	0.017	0.02	0.025	0.03	0.034	0.038	
				f (mm/min)	75	100	105	115	125	125	110	110	110	95	85	
	41	Chilled Cast Iron		v_c (m/min)	205	205	210	210	245	245	245	245	245	245	245	
				n	26115	21760	19105	16720	15605	13000	9750	7800	6500	4875	3900	
				f_z	0.016	0.019	0.022	0.026	0.032	0.036	0.047	0.054	0.064	0.074	0.085	
				f (mm/min)	835	820	840	865	995	935	915	840	830	720	660	
41	Hardened Cast Iron		v_c (m/min)	165	165	165	165	195	195	195	195	190	195	195		
			n	21015	17515	15010	13135	12420	10350	7760	6210	5040	3880	3105		
			f_z	0.016	0.02	0.023	0.027	0.032	0.037	0.046	0.055	0.065	0.074	0.085		
			f (mm/min)	670	700	690	705	795	765	710	680	655	570	525		
MATERIAL GROUP P, H38, H40-41				MATERIAL GROUP H39												

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CUTTING DATA

101350, 101450 (2 Flute Extended Neck)											
VDI MATERIAL GROUP	MATERIAL	HRc	SIDE CUTTING	Size (mm)							
				1.0	1.5	2.0	2.5	3.0	3.5	4.0	
P	10-11	High alloy Steel, Tool Steel	35-45	v_c (m/min)	120	140	165	165	165	165	165
				n	38215	29720	26270	21015	17515	15010	13135
				f_z	0.011	0.015	0.019	0.023	0.028	0.033	0.038
				f (mm/min)	840	890	995	965	980	990	995
H	38	Hardened Steel	40-50	v_c (m/min)	120	140	165	165	165	165	165
				n	38215	29720	26270	21015	17515	15010	13135
				f_z	0.011	0.015	0.019	0.023	0.028	0.033	0.038
				f (mm/min)	840	890	995	965	980	990	995
		Hardened Steel	50-55	v_c (m/min)	80	95	110	110	110	110	110
				n	25475	20170	17515	14010	11675	10005	8755
				f_z	0.01	0.013	0.017	0.021	0.026	0.031	0.036
				f (mm/min)	510	520	595	585	605	620	630
	39	Hardened Steel	55-65	v_c (m/min)	50	60	70	70	70	75	80
				n	15920	12735	11145	8915	7430	6820	6365
				f_z	0.006	0.008	0.01	0.012	0.015	0.018	0.021
				f (mm/min)	190	200	220	210	220	245	265
		Hardened Steel	65-70	v_c (m/min)	40	50	60	60	60	60	60
				n	12735	10615	9550	7640	6365	5460	4775
				f_z	0.005	0.006	0.008	0.01	0.012	0.014	0.017
				f (mm/min)	125	125	150	150	150	150	160
	40	Chilled Cast Iron	v_c (m/min)	150	180	210	205	205	210	210	
			n	47770	38215	33435	26115	21760	19105	16720	
			f_z	0.011	0.014	0.018	0.023	0.028	0.032	0.037	
			f (mm/min)	1050	1070	1200	1200	1215	1220	1235	
41	Hardened Cast Iron	v_c (m/min)	120	140	165	165	165	165	165		
		n	38215	29720	26270	21015	17515	15010	13135		
		f_z	0.011	0.015	0.019	0.023	0.028	0.033	0.038		
		f (mm/min)	840	890	995	965	980	990	995		

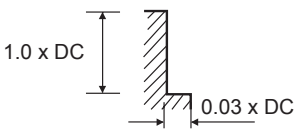


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VDI MATERIAL GROUP	MATERIAL	HRc	SIDE CUTTING	Size (mm)							
				5.0	6.0	8.0	10.0	12.0	16.0	20.0	
P	10-11	High alloy Steel, Tool Steel	35-45	v_c (m/min)	195	195	195	195	190	195	195
				n	12420	10350	7760	6210	5040	3880	3105
				f_z	0.046	0.053	0.066	0.079	0.092	0.108	0.121
				f (mm/min)	1140	1095	1025	980	925	835	750
H	38	Hardened Steel	40-50	v_c (m/min)	195	195	195	195	190	195	195
				n	12420	10350	7760	6210	5040	3880	3105
				f_z	0.046	0.053	0.066	0.079	0.092	0.108	0.121
				f (mm/min)	1140	1095	1025	980	925	835	750
		Hardened Steel	50-55	v_c (m/min)	130	130	130	130	130	130	130
				n	8280	6900	5175	4140	3450	2585	2070
				f_z	0.043	0.05	0.061	0.072	0.084	0.1	0.116
				f (mm/min)	710	690	630	595	580	515	480
	39	Hardened Steel	55-65	v_c (m/min)	80	80	80	80	80	80	80
				n	5095	4245	3185	2545	2120	1590	1270
				f_z	0.025	0.03	0.037	0.043	0.052	0.059	0.067
				f (mm/min)	255	255	235	215	220	185	170
		Hardened Steel	65-70	v_c (m/min)	70	70	70	70	70	70	70
				n	4455	3715	2785	2225	1855	1390	1115
				f_z	0.021	0.025	0.03	0.033	0.043	0.05	0.056
				f (mm/min)	185	185	165	145	160	135	125
	40	Chilled Cast Iron	v_c (m/min)	245	245	245	245	245	245	245	
			n	15605	13000	9750	7800	6500	4875	3900	
			f_z	0.046	0.052	0.067	0.077	0.09	0.107	0.122	
			f (mm/min)	1430	1350	1305	1200	1170	1040	950	
41	Hardened Cast Iron	v_c (m/min)	195	195	195	195	190	195	195		
		n	12420	10350	7760	6210	5040	3880	3105		
		f_z	0.046	0.053	0.066	0.079	0.092	0.108	0.121		
		f (mm/min)	1140	1095	1025	980	925	835	750		



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