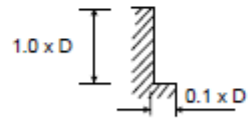
Cutting Conditions 173329, 174329, 175329, 176329 (6 Flute VX6) CONVENTIONAL

MATERIAL GROUP			Type of cut		Diameter (mm)						
					6.0	8.0	10.0	12.0	16.0	20.0	25.0
P	11 12	Magnetic soft steels, structural steels, case carburizing steels		v_c (m/min)	151 (121-181)						
				n	7998	5998	4799	3999	2999	2399	1919
				f_z	0.022	0.035	0.043	0.053	0.061	0.069	0.075
				f (mm/min)	1056	1224	1238	1272	1098	993	864
	13 14	Plain carbon steels, alloy steels		v_c (m/min)	126 (101-152)						
				n	6705	5029	4023	3353	2514	2012	1609
				f_z	0.017	0.028	0.035	0.041	0.049	0.053	0.058
				f (mm/min)	684	845	845	825	739	640	560
H	15	Alloy steels Hardened & Tempered steels		v_c (m/min)	70 (56-84)						
				n	3716	2787	2230	1858	1394	1115	892
				f_z	0.012	0.019	0.024	0.029	0.033	0.037	0.040
				f (mm/min)	268	318	321	323	276	247	214
M	21	Free machining stainless steels		v_c (m/min)	131 (105-157)						
				n	6947	5211	4168	3474	2605	2084	1667
				f_z	0.017	0.028	0.035	0.041	0.049	0.053	0.058
				f (mm/min)	709	875	875	855	766	663	580
	22	Austenitic stainless steels		v_c (m/min)	93 (74-112)						
				n	4928	3696	2957	2464	1848	1478	1183
				f_z	0.012	0.021	0.027	0.031	0.038	0.043	0.048
				f (mm/min)	326	466	479	458	421	381	341
	23	Ferritic, Ferritic & Austenitic, Martensitic stainless steels		v_c (m/min)	85 (68-102)						
				n	4524	3393	2714	2262	1696	1354	1086
				f_z	0.012	0.021	0.027	0.031	0.038	0.043	0.048
				f (mm/min)	326	428	440	421	387	350	313
S	41 42 43	Titanium, Titanium alloys		v_c (m/min)	93 (74-112)						
				n	4928	3696	2957	2464	1848	1478	1183
				f_z	0.014	0.023	0.029	0.036	0.044	0.048	0.053
				f (mm/min)	426	510	514	532	488	426	376
	51 52 53	Nickel, Nickel alloys		v_c (m/min)	26 (21-31)						
				n	1373	1030	824	687	515	412	330
				f_z	0.012	0.021	0.027	0.031	0.038	0.043	0.048
				f (mm/min)	99	130	104	128	117	106	95

SIDE CUTTING



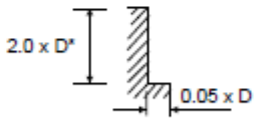
For long length tools reduce feed by up to 50%.
Recommended cutting depths are **maximum** depths, and speeds and feeds are a starting point based on these depths.
All recommendations are based on ideal machining conditions. Adjustments may need to be made according to your set-up.

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 Conditions 173329, 174329, 175329, 176329 (6 Flute VX6) TROCHOIDAL

MATERIAL GROUP			Type of cut		Diameter (mm)						
					6.0	8.0	10.0	12.0	16.0	20.0	25.0
P	11 12	Magnetic soft steels, structural steels, case carburizing steels		v_c (m/min)	300 (240-360)						
				n	15915	11937	9549	7958	5968	4775	3820
				f_z	0.068	0.116	0.144	0.173	0.202	0.225	0.232
				f (mm/min)	6494	8308	8251	8260	7234	6446	5317
	13 14	Plain carbon steels, alloy steels		v_c (m/min)	203 (162-244)						
				n	10769	8077	6462	5385	4039	3231	2585
				f_z	0.050	0.085	0.106	0.128	0.149	0.167	0.174
				f (mm/min)	3231	4119	4110	4135	3610	3237	2698
H	15	Alloy steels Hardened & Tempered steels		v_c (m/min)	100 (80-120)						
				n	5305	3979	3183	2653	1989	1592	1273
				f_z	0.041	0.071	0.088	0.105	0.123	0.137	0.144
				f (mm/min)	1305	1695	1681	1681	1468	1308	1100
M	21	Free machining stainless steels		v_c (m/min)	213 (170-256)						
				n	11300	8475	6780	5650	4238	3390	2712
				f_z	0.049	0.084	0.104	0.125	0.148	0.162	0.168
				f (mm/min)	3322	4271	4231	4238	3712	3294	2734
	22	Austenitic stainless steels		v_c (m/min)	147 (118-176)						
				n	7799	5849	4679	3899	2924	2340	1872
				f_z	0.041	0.071	0.088	0.105	0.123	0.137	0.143
				f (mm/min)	1918	2492	2471	2457	2158	1923	1606
	23	Ferritic, Ferritic & Austenitic, Martensitic stainless steels		v_c (m/min)	134 (107-161)						
				n	7109	5332	4265	3554	2666	2133	1706
				f_z	0.041	0.071	0.088	0.105	0.123	0.137	0.142
				f (mm/min)	1749	2271	2252	2239	1967	1753	1454
S	41 42 43	Titanium, Titanium alloys		v_c (m/min)	213 (170-256)						
				n	11300	8475	6780	5650	4238	3390	2712
				f_z	0.033	0.055	0.070	0.083	0.097	0.113	0.117
				f (mm/min)	2239	2798	2849	2815	2467	2300	1905
	51 52 53	Nickel, Nickel alloys		v_c (m/min)	134 (107-161)						
				n	7109	5332	4265	3554	2666	2133	1706
				f_z	0.033	0.055	0.070	0.082	0.097	0.112	0.115
				f (mm/min)	1408	1760	1792	1750	1552	1434	1178

TROCHOIDAL MILLING



*If tool's length of cut is below 2xD use 90% of the length.
*Long length tools can be used up to 4xD if rigidity is 100%
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.

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