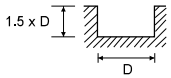
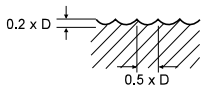
135303 (1 Flute Router)

MATERIAL GROUP			Type of cut		Size (mm)							
					2.0	3.0	4.0	5.0	6.0	8.0	10.0	12.0
N	71 72 73 74	Aluminium and Aluminium alloys		v_c (m/min)	145	170	190	190	190	195	190	190
				n	23000	18000	15000	12000	10000	8000	6000	5000
				f_z	0.065	0.094	0.12	0.15	0.18	0.244	0.333	0.44
				f (mm/min)	1500	1700	1800	1800	1800	1900	2000	2200
O	81 82	Thermoplastics, Thermosetting plastics, Acrylics		v_c (m/min)	200	235	250	235	255	250	250	255
				n	32000	25000	20000	15000	13500	10000	8000	6700
				f_z	0.069	0.096	0.12	0.147	0.17	0.24	0.3	0.343
				f (mm/min)	2200	2400	2400	2200	2300	2400	2400	2300



112303 (2 Flute 50º Helix, Ball Nose)

MATERIAL GROUP			Type of cut		Size (mm)					
					6.0	8.0	10.0	12.0	16.0	20.0
N	61 62 63 64	Copper and Copper alloys		v_c (m/min)	85	85	105	125	135	105
				n	4400	3360	3360	3360	2640	1680
				f_z	0.04	0.06	0.069	0.089	0.101	0.131
				f (mm/min)	350	400	465	600	535	440
	71 72 73 74	Aluminium and Aluminium alloys		v_c (m/min)	270	280	350	420	440	350
				n	14400	11200	11200	11200	8800	5600
				f_z	0.049	0.071	0..084	0.07	0.123	0.157
				f (mm/min)	1400	1600	1880	2400	2160	1760



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%.

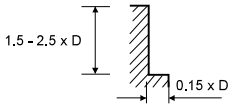
v_c - cutting speed (m/min)
n - RPM (rev/min)
f_z - feed per tooth (mm)
f - feed rate (mm/min)
a_p - axial depth of cut
a_e - radial depth of cut

ALU-XP
CUTTING CONDITIONS

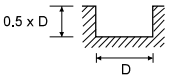
143303, 144303, 153303 (3 Flute 45º Helix, Long, Necked & Long Series)

MATERIAL GROUP			Type of cut		Size (mm)								
					3.0	4.0	5.0	6.0	8.0	10.0	12.0	16.0	20.0
N	71 72	Aluminium and Aluminium alloys		v_c (m/min)	65	90	110	130	140	175	210	210	175
				n	7000	7000	7000	7000	5600	5600	5600	4200	2800
				f_z	0.045	0.055	0.065	0.075	0.113	0.131	0.163	0.2	0.238
				f (mm/min)	940	1150	1360	1580	1900	2200	2740	2520	2000
	73 74			v_c (m/min)	65	90	110	130	140	175	210	210	175
				n	7000	7000	7000	7000	5600	5600	5600	4200	2800
				f_z	0.035	0.045	0.05	0.06	0.088	0.106	0.131	0.158	0.2
				f (mm/min)	730	940	1050	1250	1470	1780	2200	1990	1680

SIDE CUTTING



SLOTTING

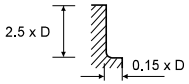


‣ The feed rate for long series and long necked tools should be reduced by up to 50%

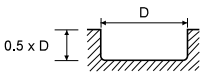
142303, 156303 (3 Flute 45º Helix, Corner Radius & Necked Corner Radius)

MATERIAL GROUP			Type of cut		Size (mm)								
					3.0	4.0	5.0	6.0	8.0	10.0	12.0	16.0	20.0
N	71 72	Aluminium and Aluminium alloys		v_c (m/min)	95	125	155	190	200	250	300	300	250
				n	10000	10000	10000	10000	8000	8000	8000	6000	4000
				f_z	0.05	0.061	0.072	0.083	0.125	0.145	0.179	0.22	0.262
				f (mm/min)	1490	1820	2150	2480	3000	3470	4290	3960	3140
	73 74			v_c (m/min)	95	125	155	190	200	250	300	300	250
				n	10000	10000	10000	10000	8000	8000	8000	6000	4000
				f_z	0.039	0.05	0.055	0.066	0.096	0.117	0.145	0.174	0.22
				f (mm/min)	1160	1490	1650	1980	2310	2810	3470	3140	2640

SIDE CUTTING



SLOTTING



‣ The feed rate for long series and long necked tools should be reduced by up to 50%