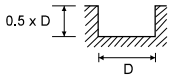
ALU-XP CUTTING CONDITIONS

331303, 151303, 152303 (2 Flute 45º Helix, Short & Long)  SLOTTING

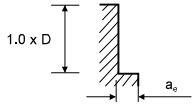
MATERIAL GROUP			Size (mm)										
			3.0	4.0	5.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0
N	71	v_c (m/min)	95	125	155	190	200	250	300	265	300	225	250
	72	n	10000	10000	10000	10000	8000	8000	8000	6000	6000	4000	4000
	73	f_z	0.035	0.045	0.05	0.06	0.088	0.106	0.131	0.15	0.158	0.175	0.2
	74	f (mm/min)	700	900	1000	1200	1400	1700	2100	1800	1900	1400	1600



331303, 151303, 152303 (2 Flute 45º Helix, Short & Long)  PROFILING

MATERIAL GROUP			Size (mm)										
			3.0	4.0	5.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0
N	71	v_c (m/min)	95	125	155	190	200	250	300	265	300	225	250
	72	n	10000	10000	10000	10000	8000	8000	8000	6000	6000	4000	4000
	73	f_z	0.045	0.055	0.065	0.075	0.113	0.131	0.163	0.183	0.2	0.225	0.238
	74	f (mm/min)	900	1100	1300	1500	1800	2100	1600	2200	2400	1800	1900

a_e : ø3.0mm - ø10.0mm = 0.25 x D
a_e : ø12.0mm - ø20.0mm = 0.15x D



v_c - cutting speed (m/min)
n - RPM (rev/min)
f_Z - feed rate (mm/tooth)
f - feed rate (mm/rev)
z - No. of teeth
a_p - axial depth of cut
a_e - radial depth of cut

To calculate RPM from cutting speed: $n = \frac{v_c * 1000}{\pi * ø}$

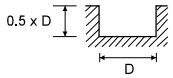
To calculate cutting speed from RPM: $v_c = \frac{n * \pi * ø}{1000}$

All recommendations are based on ideal machining conditions. Adjustments may need to be made according to your set-up. The recommendations for speeds, feeds and other parameters presented in this chart are nominal recommendations and should be considered only as good starting points.

ALU-XP CUTTING CONDITIONS

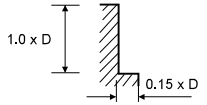
157303 (2 Flute 55º Helix)  SLOTTING

MATERIAL GROUP			Size (mm)								
			3.0	4.0	5.0	6.0	8.0	10.0	12.0	16.0	20.0
N	71	v_c (m/min)	339	407	424	458	452	452	441	452	452
	72	n	36000	32400	27000	24300	18000	14400	11700	9000	7200
	73	f_z	0.019	0.025	0.047	0.052	0.07	0.1	0.123	0.16	0.188
	74	f (mm/min)	1350	1620	2520	2520	2520	2880	2880	2880	2700



157303 (2 Flute 55º Helix)  PROFILIING

MATERIAL GROUP			Size (mm)								
			3.0	4.0	5.0	6.0	8.0	10.0	12.0	16.0	20.0
N	71	v_c (m/min)	339	407	424	458	452	452	441	452	452
	72	n	36000	32400	27000	24300	18000	14400	11700	9000	7200
	73	f_z	0.03	0.036	0.067	0.074	0.1	0.141	0.173	0.225	0.269
	74	f (mm/min)	2160	2340	3600	3600	3600	4050	4050	4050	3870



v_c - cutting speed (m/min)
n - RPM (rev/min)
f_Z - feed rate (mm/tooth)
f - feed rate (mm/rev)
z - No. of teeth
a_p - axial depth of cut
a_e - radial depth of cut

To calculate RPM from cutting speed: $n = \frac{v_c * 1000}{\pi * ø}$

To calculate cutting speed from RPM: $v_c = \frac{n * \pi * ø}{1000}$

All recommendations are based on ideal machining conditions. Adjustments may need to be made according to your set-up. The recommendations for speeds, feeds and other parameters presented in this chart are nominal recommendations and should be considered only as good starting points.

ALU-XP SUPER MIRROR POLISHED FLUTE