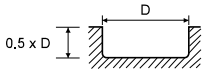
ALU-XP CUTTING CONDITIONS

155303 (2 Flute Corner Radius) SLOTTING

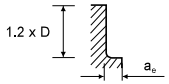
MATERIAL GROUP			Size (mm)						
			4.0	6.0	8.0	10.0	12.0	16.0	20.0
N	61	v_c (m/min)	40	60	60	75	90	95	75
	62	n	3120	3120	2400	2400	2400	1920	1200
	63	f_z	0.038	0.049	0.075	0.092	0.114	0.132	0.167
	64	f (mm/min)	240	305	360	440	545	505	400
	71	v_c (m/min)	130	195	200	250	300	320	250
	72	n	10400	10400	8000	8000	8000	6400	4000
	73	f_z	0.046	0.058	0.09	0.110	0.135	0.156	0.2
	74	f (mm/min)	960	1200	1440	1760	2160	2000	1600



155303 (2 Flute Corner Radius) PROFILING

MATERIAL GROUP			Size (mm)						
			4.0	6.0	8.0	10.0	12.0	16.0	20.0
N	61	v_c (m/min)	40	60	60	75	90	95	75
	62	n	3120	3120	2400	2400	2400	1920	1200
	63	f_z	0.045	0.064	0.097	0.114	0.142	0.163	0.21
	64	f (mm/min)	280	400	465	545	680	625	505
	71	v_c (m/min)	130	195	200	250	300	320	250
	72	n	10400	10400	8000	8000	8000	6400	4000
	73	f_z	0.054	0.077	0.115	0.135	0.17	0.194	0.25
	74	f (mm/min)	1120	1600	1840	2160	2720	2480	2000

a_e : ø4.0mm - ø10.0mm = 0.25 x D
a_e : ø12.0mm - ø20.0mm = 0.5x 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: $n = \frac{v_c * 1000}{\pi * ø}$

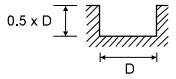
To calculate cutting speed from RPM: $v_c = \frac{n * \pi * ø}{1000}$

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

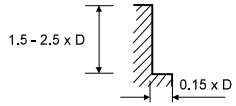
143303, 144303, 153303 (3 Flute 45º Helix, Long & Long Series) SLOTTING

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)	65	90	110	130	140	175	210	210	175
	72	n	7000	7000	7000	7000	5600	5600	5600	4200	2800
	73	f_z	0.035	0.045	0.05	0.06	0.088	0.106	0.131	0.158	0.2
	74	f (mm/min)	730	940	1050	1250	1470	1780	2200	1990	1680



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

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)	65	90	110	130	140	175	210	210	175
	72	n	7000	7000	7000	7000	5600	5600	5600	4200	2800
	73	f_z	0.045	0.055	0.065	0.075	0.113	0.131	0.163	0.2	0.238
	74	f (mm/min)	940	1150	1360	1580	1900	2200	2740	2520	2000



▶ The feed rate for long and long reach tools should be reduced by up to 50%

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