





TuffCut® AL / X-AL

134 / 134N / 134S / 135 / 135N Recommended Cutting Data - Profile Milling Inch

Workpiece Material Group	ISO	Coolant • Preferred	Profile Milling (ae)				End Mill Diameter							
							3/16*	1/4*	5/16	3/8	1/2	5/8	3/4	1
			10%	20%	30%	50%	ae > .3D use < 1D ap ae < .2D use < 2D ap *Profile Milling at > 25% ap is not recommended for diameters 1/4" and below.							
			3.8	3.1	2	1	← Multiply fz by this Factor based on ae. When finishing, use the standard fz per chart below. Only add chip thinning when roughing or semi-finishing.							
		Max.	vc - SFM				fz - in/tooth							
Non-Ferrous - Aluminum / Aluminum Alloys < 10% Si	N	•	2000	1800	1200	900	.0018	.0025	.0032	.0037	.0050	.0065	.0075	.0100
Non-Ferrous - Aluminum / Aluminum Alloys > 10% Si	N	•	1500	1200	1000	800	.0018	.0025	.0032	.0037	.0050	.0065	.0075	.0100
Non-Ferrous - Brass	N	•	900	800	600	500	.0025	.0032	.0037	.0050	.0065	.0075	.0100	.0120
Non-Ferrous - Cu/Cu Alloys / Magnesium	N	•	1000	800	600	500	.0025	.0032	.0037	.0050	.0065	.0075	.0100	.0120
Non-Ferrous - Plastics	N	•	900	800	600	500	.0025	.0032	.0037	.0050	.0065	.0075	.0100	.0120

Above 20,000 RPM, Tool Balancing Required

134 / 134N / 134S / 135 / 135N Recommended Cutting Data - Profile Milling Metric

Workpiece Material Group	ISO	Coolant • Preferred	Profile Milling (ae)				End Mill Diameter (mm)								
							3*	5*	6*	8	10	14	16	18	25
			10%	20%	30%	50%	ae > .3D use < 1D ap ae < .2D use < 2D ap *Profile Milling at > 25% ap is not recommended for diameters 6mm and below.								
			3.8	3.1	2	1	← Multiply fz by this Factor based on ae. When finishing, use the standard fz per chart below. Only add chip thinning when roughing or semi-finishing.								
		Max.	vc - m/min				fz - mm/tooth								
Non-Ferrous - Aluminum / Aluminum Alloys < 10% Si	N	•	600	550	365	275	.030	.045	.063	.081	.093	.127	.165	.190	.254
Non-Ferrous - Aluminum / Aluminum Alloys > 10% Si	N	•	450	365	305	250	.030	.045	.063	.081	.093	.127	.165	.190	.254
Non-Ferrous - Brass	N	•	275	250	180	150	.045	.063	.081	.093	.127	.165	.190	.254	.304
Non-Ferrous - Cu/Cu Alloys / Magnesium	N	•	300	250	180	150	.045	.063	.081	.093	.127	.165	.190	.254	.304
Non-Ferrous - Plastics	N	•	275	250	180	150	.045	.063	.081	.093	.127	.165	.190	.254	.304

Above 20,000 RPM, Tool Balancing Required

Spindle Maximum - Should the calculated spindle speed be more than your actual spindle maximum, use this formula:
 (Calculated Feed x Spindle Maximum)/Calculated Speed

Technical data provided should be considered advisory only as variations may be necessary depending on the particular application.

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