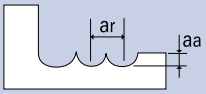
List 8590: 2 Flute, Stub Length, Long Neck, Ball End, Rib Processing

Contouring

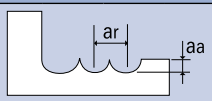
Hardness	Up to 45 HRC				45-55 HRC				55-62 HRC				62-66 HRC				66-70 HRC			
Work Material	Tool Steels Hardened Steels Alloy Steels				Hardened Steels															
Depth of Cut																				
Mill Dia. mm	Neck mm	Speed (RPM)	Feed (IPM)	Aa (in)	Ar (in)	Speed (RPM)	Feed (IPM)	Aa (in)	Ar (in)	Speed (RPM)	Feed (IPM)	Aa (in)	Ar (in)	Speed (RPM)	Feed (IPM)	Aa (in)	Ar (in)	Speed (RPM)	Feed (IPM)	Aa (in)	Ar (in)
0.1	0.3	50,000	2.76	0.00012	0.00012	50,000	2.36	0.00012	0.00012	50,000	2.36	0.00012	0.00012	50,000	1.97	0.00012	0.00012	50,000	1.57	0.00012	0.00012
0.1	0.5	50,000	1.97	0.00012	0.00012	50,000	1.57	0.00012	0.00012	50,000	1.57	0.00012	0.00012	50,000	1.18	0.00012	0.00012	50,000	0.79	0.00012	0.00012
0.2	0.5	50,000	14.96	0.00020	0.00020	50,000	10.24	0.00020	0.00020	50,000	7.87	0.00016	0.00020	50,000	6.69	0.00016	0.00020	50,000	5.12	0.00016	0.00020
0.2	0.75	50,000	13.39	0.00020	0.00020	50,000	9.06	0.00020	0.00020	50,000	7.09	0.00016	0.00020	50,000	5.91	0.00016	0.00020	50,000	4.33	0.00016	0.00020
0.2	1	50,000	13.39	0.00020	0.00020	50,000	9.06	0.00020	0.00020	50,000	7.09	0.00016	0.00020	50,000	5.91	0.00016	0.00020	45,000	4.33	0.00016	0.00020
0.2	1.25	50,000	11.81	0.00020	0.00020	50,000	8.27	0.00020	0.00020	50,000	5.91	0.00016	0.00020	46,500	5.12	0.00016	0.00020	37,200	3.94	0.00016	0.00020
0.2	1.5	50,000	11.02	0.00020	0.00020	50,000	7.48	0.00020	0.00020	49,200	5.12	0.00016	0.00020	44,300	4.33	0.00016	0.00020	35,500	3.15	0.00016	0.00020
0.2	1.75	50,000	9.45	0.00020	0.00020	50,000	6.69	0.00020	0.00020	45,600	4.72	0.00016	0.00020	41,100	3.94	0.00016	0.00020	32,900	3.15	0.00016	0.00020
0.2	2	45,600	8.27	0.00020	0.00020	44,500	5.51	0.00020	0.00020	39,600	3.94	0.00016	0.00020	35,700	3.54	0.00016	0.00020	28,600	2.76	0.00016	0.00020
0.2	2.5	38,400	6.30	0.00016	0.00020	37,200	3.94	0.00016	0.00020	37,200	3.15	0.00016	0.00020	33,500	2.76	0.00016	0.00020	26,800	1.97	0.00016	0.00020
0.2	3	38,400	5.51	0.00016	0.00020	37,200	3.54	0.00016	0.00020	37,200	2.76	0.00016	0.00020	33,500	2.36	0.00016	0.00020	26,800	1.97	0.00016	0.00020
0.3	0.6	50,000	22.44	0.00020	0.00394	50,000	15.35	0.00020	0.00039	50,000	11.81	0.00020	0.00039	50,000	10.24	0.00020	0.00039	50,000	7.87	0.00039	0.00039
0.3	1	50,000	22.44	0.00020	0.00039	50,000	15.35	0.00020	0.00039	50,000	11.81	0.00020	0.00039	50,000	10.24	0.00020	0.00039	50,000	7.87	0.00039	0.00039
0.3	1.25	50,000	22.44	0.00020	0.00039	50,000	14.96	0.00020	0.00039	50,000	11.81	0.00020	0.00039	50,000	10.24	0.00020	0.00039	50,000	7.87	0.00039	0.00039
0.3	1.5	50,000	22.44	0.00020	0.00039	50,000	14.57	0.00020	0.00039	50,000	11.42	0.00020	0.00039	50,000	9.84	0.00020	0.00039	46,500	7.48	0.00039	0.00039
0.3	1.75	50,000	18.90	0.00020	0.00039	50,000	12.20	0.00020	0.00039	50,000	8.66	0.00020	0.00039	46,500	7.48	0.00020	0.00039	37,200	5.51	0.00039	0.00039
0.3	2	50,000	17.72	0.00020	0.00020	50,000	11.42	0.00020	0.00020	49,200	8.27	0.00016	0.00020	44,300	7.09	0.00016	0.00020	35,500	5.51	0.00016	0.00020
0.3	2.25	50,000	14.96	0.00020	0.00020	50,000	9.84	0.00020	0.00020	49,200	7.09	0.00016	0.00020	44,300	5.91	0.00016	0.00020	35,500	4.33	0.00016	0.00020
0.3	2.5	48,000	11.02	0.00020	0.00020	48,000	7.48	0.00020	0.00020	43,200	5.12	0.00016	0.00020	38,900	4.33	0.00016	0.00020	31,200	3.15	0.00016	0.00020
0.3	3	45,600	9.06	0.00020	0.00020	44,400	5.91	0.00020	0.00020	39,600	3.94	0.00016	0.00020	35,700	3.54	0.00016	0.00020	28,600	2.76	0.00016	0.00020
0.3	3.5	40,800	7.48	0.00016	0.00020	39,600	4.72	0.00016	0.00020	39,600	3.74	0.00016	0.00020	35,700	3.15	0.00016	0.00020	28,600	2.36	0.00016	0.00020
0.3	4	38,400	5.51	0.00016	0.00020	37,200	3.54	0.00016	0.00020	37,200	2.76	0.00016	0.00020	33,500	2.36	0.00016	0.00020	26,800	1.97	0.00016	0.00020
0.3	4.5	38,400	4.72	0.00016	0.00020	37,200	3.15	0.00016	0.00020	37,200	2.36	0.00016	0.00020	33,500	1.97	0.00016	0.00020	26,800	1.57	0.00016	0.00020
0.3	5	34,800	3.74	0.00016	0.00020	33,600	2.36	0.00016	0.00020	33,600	1.97	0.00016	0.00020	30,300	1.57	0.00016	0.00020	24,200	1.18	0.00016	0.00020
0.4	0.8	50,000	33.46	0.00039	0.00079	50,000	23.23	0.00039	0.00079	50,000	18.50	0.00031	0.00059	50,000	15.75	0.00031	0.00059	50,000	11.81	0.00031	0.00059
0.4	1	50,000	33.46	0.00039	0.00079	50,000	21.65	0.00039	0.00079	50,000	17.32	0.00031	0.00059	50,000	14.57	0.00031	0.00059	50,000	11.02	0.00031	0.00059
0.4	1.5	50,000	29.92	0.00039	0.00079	50,000	20.47	0.00039	0.00079	50,000	16.14	0.00031	0.00059	50,000	13.78	0.00031	0.00059	46,500	10.24	0.00031	0.00059
0.4	2	50,000	25.98	0.00039	0.00079	50,000	18.11	0.00039	0.00079	50,000	12.99	0.00031	0.00059	48,600	11.02	0.00031	0.00059	38,900	8.27	0.00031	0.00059
0.4	2.5	50,000	20.47	0.00031	0.00059	50,000	14.17	0.00031	0.00059	49,200	10.24	0.00031	0.00059	44,300	8.66	0.00031	0.00059	35,500	6.69	0.00031	0.00059
0.4	3	50,000	18.50	0.00020	0.00039	50,000	12.60	0.00020	0.00039	45,600	8.66	0.00020	0.00039	41,100	7.48	0.00020	0.00039	32,900	5.51	0.00020	0.00039
0.4	3.5	48,000	15.75	0.00020	0.00039	48,000	11.02	0.00020	0.00039	43,200	7.87	0.00020	0.00039	38,900	6.69	0.00020	0.00039	31,200	5.12	0.00020	0.00039
0.4	4	43,200	13.78	0.00020	0.00020	42,000	9.06	0.00020	0.00020	37,200	6.30	0.00020	0.00020	33,500	5.51	0.00020	0.00020	26,800	4.33	0.00020	0.00020
0.4	4.5	38,400	10.63	0.00016	0.00020	37,200	7.09	0.00016	0.00020	33,600	5.12	0.00016	0.00020	30,300	4.33	0.00016	0.00020	24,200	3.15	0.00016	0.00020
0.4	5	38,400	10.24	0.00016	0.00020	37,200	6.69	0.00016	0.00020	33,600	4.72	0.00016	0.00020	30,300	3.94	0.00016	0.00020	24,200	3.15	0.00016	0.00020
0.4	5.5	36,000	8.27	0.00016	0.00020	34,800	5.51	0.00016	0.00020	31,200	3.94	0.00016	0.00020	28,100	3.54	0.00016	0.00020	22,500	2.76	0.00016	0.00020
0.4	6	36,000	7.48	0.00016	0.00020	34,800	4.72	0.00016	0.00020	31,200	3.94	0.00016	0.00020	28,100	3.54	0.00016	0.00020	22,500	2.76	0.00016	0.00020
0.5	1	50,000	41.34	0.00059	0.00118	50,000	28.74	0.00059	0.00118	50,000	22.83	0.00039	0.00079	50,000	19.29	0.00039	0.00079	50,000	14.57	0.00039	0.00079
0.5	1.5	50,000	41.34	0.00059	0.00118	50,000	27.56	0.00059	0.00118	50,000	22.05	0.00039	0.00079	50,000	18.90	0.00039	0.00079	48,000	14.17	0.00039	0.00079
0.5	2	50,000	37.40	0.00059	0.00118	50,000	25.59	0.00059	0.00118	50,000	20.47	0.00039	0.00079	48,600	17.32	0.00039	0.00079	38,900	12.99	0.00039	0.00079
0.5	2.5	50,000	37.40	0.00059	0.00118	50,000	23.62	0.00059	0.00118	50,000	16.93	0.00039	0.00079	46,500	14.57	0.00039	0.00079	37,200	11.02	0.00039	0.00079
0.5	3	50,000	33.46	0.00039	0.00079	50,000	21.65	0.00039	0.00079	48,000	15.35	0.00039	0.00079	43,200	12.99	0.00039	0.00079	34,600	9.84	0.00039	0.00079
0.5	3.5	50,000	25.59	0.00039	0.00079	50,000	17.72	0.00039	0.00079	45,600	12.60	0.00039	0.00079	41,100	10.63	0.00039	0.00079	32,900	7.87	0.00039	0.00079
0.5	4	50,000	22.44	0.00039	0.00039	50,000	15.35	0.00039	0.00039	40,800	10.63	0.00039	0.00039	36,800	9.06	0.00039	0.00039	29,400	6.69	0.00039	0.00039
0.5	4.5	45,600	18.50	0.00039	0.00039	45,600	12.60	0.00039	0.00039	31,200	8.66	0.00039	0.00039	28,100	7.48	0.00039	0.00039	22,500	5.51	0.00039	0.00039
0.5	5	36,000	14.96	0.00020	0.00039	34,800	9.84	0.00020	0.00039	28,800	6.69	0.00020	0.00039	26,000	5.51	0.00020	0.00039	20,800	4.33	0.00020	0.00039
0.5	5.5	33,600	11.02	0.00016	0.00020	32,400	7.09	0.00016	0.00020	26,400	4.72	0.00016	0.00020	23,800	3.94	0.00016	0.00020	19,100	3.15	0.00016	0.00020
0.5	6	31,200	9.06	0.00016	0.00020	30,000	5.91	0.00016	0.00020	24,000	3.94	0.00016	0.00020	21,600	3.54	0.00016	0.00020	17,300	2.76	0.00016	0.00020
0.5	7	28,800	7.48	0.00016	0.00020	27,600	5.12	0.00016	0.00020	24,000	3.94	0.00016	0.00020	21,600	3.54	0.00016	0.00020	17,300	2.76	0.00016	0.00020
0.5	8	26,400	5.91	0.00016	0.00020	25,200	4.33	0.00016	0.00020	24,000	3.94	0.00016	0.00020	21,600	3.54	0.00016	0.00020	17,300	2.76	0.00016	0.00020
0.5	9	24,000	4.33	0.00016	0.00020	25,200	3.94	0.00016	0.00020	24,000	3.54	0.00016	0.00020	21,600	3.15	0.00016	0.00020	17,300	2.36	0.00016	0.00020
0.5	10	24,000	3.74	0.00016	0.00020	25,200	3.94	0.00016	0.00020	24,000	3.54	0.00016	0.00020	21,600	3.15	0.00016	0.00020	17,300	2.36	0.00016	0.00020

1. Use a rigid and precise machine and holder.
2. We suggest using air blow or MQL (mist).
3. Use air blow or a suitable cutting fluid with high smoke retardant properties.
4. The above parameters are for contouring operations with stable conditions and setup. Adjustment may be required in less optimal situations.
5. Please adjust parameters based on machine accuracy, part shape, and tool path.
6. When using a tool with diameter 0.5mm or below or when L/D ratio is above 10 unstable or aggressive milling may result in tool breakage. Please adjust parameters based on the machine setup.
7. If unable to achieve the recommended RPM above please reduce the speed and feed by the same proportion. Axial and radial depth may remain as specified in the table.

CONTINUED

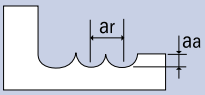
List 8590: 2 Flute, Stub Length, Long Neck, Ball End, Rib Processing (Continued)

Contouring

Hardness	Up to 45 HRC				45-55 HRC				55-62 HRC				62-66 HRC				66-70 HRC			
Work Material	Tool Steels Hardened Steels Alloy Steels				Hardened Steels															
Depth of Cut																				
Mill Dia. mm	Neck mm	Speed (RPM)	Feed (IPM)	Aa (in)	Ar (in)	Speed (RPM)	Feed (IPM)	Aa (in)	Ar (in)	Speed (RPM)	Feed (IPM)	Aa (in)	Ar (in)	Speed (RPM)	Feed (IPM)	Aa (in)	Ar (in)	Speed (RPM)	Feed (IPM)	Aa (in)	Ar (in)
0.6	1	50,000	47.24	0.00118	0.00197	50,000	33.07	0.00118	0.00197	50,000	26.38	0.00039	0.00079	50,000	22.44	0.00039	0.00079	50,000	16.93	0.00039	0.00079
0.6	1.2	50,000	47.24	0.00118	0.00197	50,000	33.07	0.00118	0.00197	50,000	26.38	0.00039	0.00079	50,000	22.44	0.00039	0.00079	50,000	16.93	0.00039	0.00079
0.6	2	50,000	47.24	0.00118	0.00197	50,000	32.28	0.00118	0.00197	50,000	25.59	0.00039	0.00079	50,000	21.65	0.00039	0.00079	50,000	16.14	0.00039	0.00079
0.6	2.5	50,000	43.31	0.00118	0.00197	50,000	30.31	0.00118	0.00197	50,000	24.02	0.00039	0.00079	50,000	20.47	0.00039	0.00079	48,000	15.35	0.00039	0.00079
0.6	3	50,000	43.31	0.00079	0.00118	50,000	29.53	0.00079	0.00118	50,000	21.26	0.00039	0.00079	48,600	18.11	0.00039	0.00079	38,900	13.78	0.00039	0.00079
0.6	3.5	50,000	37.40	0.00079	0.00118	50,000	25.98	0.00079	0.00118	49,200	18.90	0.00039	0.00079	44,300	16.14	0.00039	0.00079	35,500	12.20	0.00039	0.00079
0.6	4	48,000	33.46	0.00039	0.00079	48,000	23.23	0.00039	0.00079	43,200	16.54	0.00039	0.00079	38,900	14.17	0.00039	0.00079	31,200	10.63	0.00039	0.00079
0.6	4.5	40,800	29.13	0.00039	0.00079	40,800	20.08	0.00039	0.00079	37,200	14.57	0.00039	0.00079	33,500	12.20	0.00039	0.00079	26,800	9.06	0.00039	0.00079
0.6	5	36,000	25.20	0.00039	0.00079	36,000	17.32	0.00039	0.00079	32,400	12.20	0.00039	0.00079	29,200	10.24	0.00039	0.00079	23,400	7.87	0.00039	0.00079
0.6	5.5	33,600	24.02	0.00039	0.00079	33,600	16.54	0.00039	0.00079	30,000	11.81	0.00039	0.00079	27,000	10.24	0.00039	0.00079	21,600	7.87	0.00039	0.00079
0.6	6	31,200	22.44	0.00039	0.00079	30,000	14.96	0.00039	0.00079	26,400	10.24	0.00039	0.00079	23,800	8.66	0.00039	0.00079	19,100	6.69	0.00039	0.00079
0.6	6.5	28,800	20.47	0.00039	0.00039	27,600	13.39	0.00039	0.00039	24,000	9.06	0.00039	0.00039	21,600	7.87	0.00039	0.00039	17,300	5.91	0.00039	0.00039
0.6	7	27,600	16.54	0.00039	0.00039	26,400	11.02	0.00039	0.00039	22,800	7.48	0.00039	0.00039	20,600	6.30	0.00039	0.00039	16,500	4.72	0.00039	0.00039
0.6	7.5	27,600	14.96	0.00039	0.00039	26,400	9.84	0.00039	0.00039	22,800	6.69	0.00039	0.00039	20,600	5.51	0.00039	0.00039	16,500	4.33	0.00039	0.00039
0.6	8	24,000	11.81	0.00020	0.00039	22,800	7.87	0.00020	0.00039	20,400	5.51	0.00020	0.00039	18,400	4.72	0.00020	0.00039	14,700	3.54	0.00020	0.00039
0.6	8.5	24,000	11.02	0.00020	0.00039	22,800	7.09	0.00020	0.00039	20,400	5.12	0.00020	0.00039	18,400	4.33	0.00020	0.00039	14,700	3.15	0.00020	0.00039
0.6	9	24,000	10.24	0.00020	0.00039	22,800	6.69	0.00020	0.00039	20,400	4.72	0.00020	0.00039	18,400	3.94	0.00020	0.00039	14,700	3.15	0.00020	0.00039
0.6	9.5	24,000	8.66	0.00020	0.00031	22,800	5.51	0.00020	0.00031	20,400	4.33	0.00020	0.00031	18,400	3.54	0.00020	0.00031	14,700	2.76	0.00020	0.00031
0.6	10	24,000	7.48	0.00020	0.00031	22,800	4.72	0.00020	0.00031	20,400	3.94	0.00020	0.00031	18,400	3.54	0.00020	0.00031	14,700	2.76	0.00020	0.00031
0.6	11	21,600	5.51	0.00020	0.00031	20,400	3.54	0.00020	0.00031	20,400	3.15	0.00020	0.00031	18,400	2.76	0.00020	0.00031	14,700	1.97	0.00020	0.00031
0.6	12	21,600	4.33	0.00020	0.00020	20,400	3.15	0.00020	0.00020	20,400	2.76	0.00016	0.00020	18,400	2.36	0.00016	0.00020	14,700	1.97	0.00016	0.00020
0.8	1	50,000	86.61	0.00157	0.00315	50,000	70.87	0.00157	0.00315	50,000	55.12	0.00157	0.00315	50,000	46.85	0.00157	0.00315	50,000	35.04	0.00157	0.00315
0.8	2	50,000	74.80	0.00157	0.00315	50,000	62.99	0.00157	0.00315	50,000	47.24	0.00059	0.00118	50,000	40.16	0.00059	0.00118	50,000	30.31	0.00059	0.00118
0.8	3	50,000	59.06	0.00157	0.00315	50,000	43.31	0.00157	0.00315	50,000	32.28	0.00059	0.00118	48,600	27.56	0.00059	0.00118	38,900	20.87	0.00059	0.00118
0.8	4	48,000	43.31	0.00157	0.00315	48,000	39.37	0.00157	0.00315	45,600	29.92	0.00059	0.00118	41,100	25.59	0.00059	0.00118	32,900	19.29	0.00059	0.00118
0.8	5	40,800	35.43	0.00118	0.00197	40,800	31.50	0.00118	0.00197	37,200	22.83	0.00059	0.00118	33,500	19.29	0.00059	0.00118	26,800	14.57	0.00059	0.00118
0.8	6	36,000	29.92	0.00118	0.00197	36,000	25.59	0.00118	0.00197	32,400	18.11	0.00059	0.00118	29,200	15.35	0.00059	0.00118	23,400	11.42	0.00059	0.00118
0.8	7	30,000	22.44	0.00039	0.00079	30,000	17.72	0.00039	0.00079	26,400	12.20	0.00039	0.00079	23,800	10.24	0.00039	0.00079	19,100	7.87	0.00039	0.00079
0.8	8	27,600	16.54	0.00020	0.00039	27,600	11.81	0.00020	0.00039	24,000	7.87	0.00020	0.00039	21,600	6.69	0.00020	0.00039	17,300	5.12	0.00020	0.00039
0.8	10	21,600	11.81	0.00020	0.00031	20,400	7.87	0.00020	0.00031	20,400	6.69	0.00020	0.00031	18,400	5.51	0.00020	0.00031	14,700	4.33	0.00020	0.00031
0.8	12	20,400	9.06	0.00020	0.00020	19,200	6.30	0.00020	0.00020	19,200	4.33	0.00020	0.00020	17,300	3.54	0.00020	0.00020	13,900	2.76	0.00020	0.00020
1	2	50,000	145.67	0.00197	0.00394	50,000	145.67	0.00197	0.00394	50,000	118.11	0.00079	0.00197	50,000	100.39	0.00079	0.00197	50,000	75.20	0.00079	0.00197
1	3	50,000	118.11	0.00197	0.00394	50,000	94.49	0.00197	0.00394	50,000	74.80	0.00079	0.00197	48,600	63.78	0.00079	0.00197	38,900	48.03	0.00079	0.00197
1	4	48,000	112.20	0.00197	0.00394	48,000	86.61	0.00197	0.00394	48,000	66.93	0.00079	0.00197	43,200	57.09	0.00079	0.00197	34,600	42.91	0.00079	0.00197
1	5	43,200	82.68	0.00197	0.00394	43,200	62.99	0.00197	0.00394	43,200	47.24	0.00079	0.00197	38,900	40.16	0.00079	0.00197	31,200	30.31	0.00079	0.00197
1	6	36,000	74.80	0.00197	0.00394	36,000	59.06	0.00197	0.00394	36,000	47.24	0.00079	0.00197	32,400	40.16	0.00079	0.00197	26,000	30.31	0.00079	0.00197
1	7	32,400	62.99	0.00197	0.00394	32,400	51.18	0.00197	0.00394	32,400	39.37	0.00079	0.00197	29,200	33.46	0.00079	0.00197	23,400	25.20	0.00079	0.00197
1	8	31,200	59.06	0.00197	0.00394	31,200	47.24	0.00197	0.00394	31,200	37.80	0.00079	0.00197	28,100	32.28	0.00079	0.00197	22,500	24.41	0.00079	0.00197
1	9	28,800	43.31	0.00118	0.00197	28,800	34.65	0.00118	0.00197	28,800	27.56	0.00079	0.00197	26,000	23.62	0.00079	0.00197	20,800	17.72	0.00079	0.00197
1	10	26,400	39.37	0.00039	0.00079	25,200	29.92	0.00039	0.00079	21,600	20.47	0.00039	0.00079	19,500	17.32	0.00039	0.00079	15,600	12.99	0.00039	0.00079
1	12	24,000	29.92	0.00039	0.00039	22,800	22.44	0.00039	0.00039	20,400	15.75	0.00039	0.00039	18,400	13.39	0.00039	0.00039	14,700	10.24	0.00039	0.00039
1	14	21,600	22.44	0.00020	0.00039	20,400	16.93	0.00020	0.00039	18,000	11.81	0.00020	0.00039	16,200	10.24	0.00020	0.00039	13,000	7.87	0.00020	0.00039
1	16	19,200	15.75	0.00020	0.00039	18,000	11.81	0.00020	0.00039	15,600	7.87	0.00020	0.00039	14,100	6.69	0.00020	0.00039	11,300	5.12	0.00020	0.00039
1	18	16,800	11.81	0.00020	0.00020	15,600	8.66	0.00020	0.00020	14,400	6.30	0.00016	0.00020	13,000	5.51	0.00016	0.00020	10,400	4.33	0.00016	0.00020
1	20	15,600	11.22	0.00020	0.00020	14,400	7.09	0.00020	0.00020	14,400	5.51	0.00016	0.00020	13,000	4.72	0.00016	0.00020	10,400	3.54	0.00016	0.00020
1	22	14,400	7.48	0.00020	0.00020	14,400	4.33	0.00020	0.00020	14,400	3.94	0.00016	0.00020	13,000	3.54	0.00016	0.00020	10,400	2.76	0.00016	0.00020
1.2	2	50,000	149.61	0.00236	0.00472	50,000	149.61	0.00236	0.00472	50,000	125.98	0.00079	0.00197	50,000	107.09	0.00079	0.00197	50,000	80.31	0.00079	0.00197
1.2	2.4	50,000	141.73	0.00236	0.00472	50,000	141.73	0.00236	0.00472	50,000	118.11	0.00079	0.00197	50,000	100.39	0.00079	0.00197	50,000	75.20	0.00079	0.00197
1.2	4	48,000	112.20	0.00236	0.00472	48,000	90.55	0.00236	0.00472	45,600	68.90	0.00079	0.00197	41,100	58.66	0.00079	0.00197	32,900	44.09	0.00079	0.00197
1.2	6	38,400	78.74	0.00236	0.00472	38,400	62.99	0.00236	0.00472	36,000	47.24	0.00079	0.00197	32,400	40.16	0.00079	0.00197	26,000	30.31	0.00079	0.00197
1.2	8	30,000	62.99	0.00236	0.00472	30,000	47.24	0.00236	0.00472	30,000	37.80	0.00079	0.00197	27,000	32.28	0.00079	0.00197	21,600	24.41	0.00079	0.00197

1. Use a rigid and precise machine and holder.
2. We suggest using air blow or MQL (mist).
3. Use air blow or a suitable cutting fluid with high smoke retardant properties.
4. The above parameters are for contouring operations with stable conditions and setup. Adjustment may be required in less optimal situations.
5. Please adjust parameters based on machine accuracy, part shape, and tool path.
6. When using a tool with diameter 0.5mm or below or when L/D ratio is above 10 unstable or aggressive milling may result in tool breakage. Please adjust parameters based on the machine setup.
7. If unable to achieve the recommended RPM above please reduce the speed and feed by the same proportion. Axial and radial depth may remain as specified in the table.

Contouring

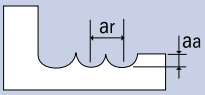
Hardness	Up to 45 HRC				45-55 HRC				55-62 HRC				62-66 HRC				66-70 HRC			
Work Material	Tool Steels Hardened Steels Alloy Steels				Hardened Steels															
Depth of Cut																				
Mill Dia. mm	Neck mm	Speed (RPM)	Feed (IPM)	Aa (in)	Ar (in)	Speed (RPM)	Feed (IPM)	Aa (in)	Ar (in)	Speed (RPM)	Feed (IPM)	Aa (in)	Ar (in)	Speed (RPM)	Feed (IPM)	Aa (in)	Ar (in)	Speed (RPM)	Feed (IPM)	Aa (in)	Ar (in)
1.2	10	24,000	43.31	0.00197	0.00394	21,600	31.50	0.00197	0.00394	19,200	22.05	0.00079	0.00197	17,300	18.90	0.00079	0.00197	13,900	14.17	0.00079	0.00197
1.2	12	20,400	33.46	0.00118	0.00197	19,200	25.20	0.00118	0.00197	16,800	17.32	0.00079	0.00197	15,200	14.57	0.00079	0.00197	12,100	11.02	0.00079	0.00197
1.2	14	19,200	24.02	0.00118	0.00197	18,000	17.72	0.00118	0.00197	15,600	12.20	0.00079	0.00197	14,100	10.24	0.00079	0.00197	11,300	7.87	0.00079	0.00197
1.2	16	18,000	16.54	0.00079	0.00197	16,800	11.81	0.00079	0.00197	14,400	7.87	0.00079	0.00197	13,000	6.69	0.00079	0.00197	10,400	5.12	0.00079	0.00197
1.2	18	18,000	12.99	0.00020	0.00020	16,800	7.87	0.00020	0.00020	14,400	5.12	0.00016	0.00020	13,000	4.33	0.00016	0.00020	10,400	3.15	0.00016	0.00020
1.2	20	15,600	11.81	0.00020	0.00020	14,400	7.09	0.00020	0.00020	12,000	4.72	0.00016	0.00020	10,800	3.94	0.00016	0.00020	8,700	3.15	0.00016	0.00020
1.5	2	50,000	204.72	0.00295	0.00591	50,000	204.72	0.00295	0.00591	50,000	165.35	0.00118	0.00236	50,000	140.55	0.00118	0.00236	50,000	105.51	0.00118	0.00236
1.5	3	50,000	188.98	0.00295	0.00591	50,000	188.98	0.00295	0.00591	50,000	153.54	0.00118	0.00236	50,000	130.71	0.00118	0.00236	48,000	98.03	0.00118	0.00236
1.5	4	48,000	145.67	0.00295	0.00591	48,000	114.17	0.00295	0.00591	45,600	86.61	0.00118	0.00236	41,100	73.62	0.00118	0.00236	32,900	55.12	0.00118	0.00236
1.5	6	36,000	106.30	0.00295	0.00591	36,000	86.61	0.00295	0.00591	32,400	59.06	0.00118	0.00236	29,200	50.39	0.00118	0.00236	23,400	37.80	0.00118	0.00236
1.5	8	28,800	82.68	0.00295	0.00591	28,800	66.93	0.00295	0.00591	25,200	43.31	0.00118	0.00236	22,700	37.01	0.00118	0.00236	18,200	27.95	0.00118	0.00236
1.5	10	28,800	74.80	0.00295	0.00591	28,800	59.06	0.00295	0.00591	25,200	39.37	0.00118	0.00236	22,700	33.46	0.00118	0.00236	18,200	25.20	0.00118	0.00236
1.5	12	25,200	51.18	0.00295	0.00394	25,200	39.37	0.00295	0.00394	21,600	26.77	0.00118	0.00236	19,500	22.83	0.00118	0.00236	15,600	17.32	0.00118	0.00236
1.5	14	20,400	43.31	0.00197	0.00394	20,400	35.43	0.00197	0.00394	18,000	24.80	0.00118	0.00236	16,200	21.26	0.00118	0.00236	13,000	16.14	0.00118	0.00236
1.5	16	16,800	29.92	0.00197	0.00394	15,600	22.05	0.00197	0.00394	12,000	13.39	0.00118	0.00197	10,800	11.42	0.00118	0.00197	8,700	8.66	0.00118	0.00197
1.5	18	15,600	18.50	0.00118	0.00197	14,400	13.78	0.00118	0.00197	12,000	9.06	0.00118	0.00197	10,800	7.87	0.00118	0.00197	8,700	5.91	0.00118	0.00197
1.5	20	14,400	13.39	0.00079	0.00197	13,200	9.45	0.00079	0.00197	10,800	5.91	0.00079	0.00197	9,800	5.12	0.00079	0.00197	7,800	3.94	0.00079	0.00197
1.5	22	14,400	11.81	0.00079	0.00197	13,200	8.66	0.00079	0.00197	10,800	5.51	0.00079	0.00197	9,800	4.72	0.00079	0.00197	7,800	3.54	0.00079	0.00197
1.5	30	13,200	7.48	0.00020	0.00039	12,000	4.72	0.00020	0.00039	10,800	3.54	0.00020	0.00039	9,800	3.15	0.00020	0.00039	7,800	2.36	0.00039	0.00039
1.6	8	28,800	110.24	0.00315	0.00630	27,600	82.68	0.00315	0.00630	24,000	55.12	0.00118	0.00315	21,600	46.85	0.00118	0.00315	17,300	35.04	0.00118	0.00315
1.6	12	25,200	66.93	0.00197	0.00394	24,000	54.33	0.00197	0.00394	21,600	38.98	0.00118	0.00315	19,500	33.07	0.00118	0.00315	15,600	24.80	0.00118	0.00315
1.6	16	16,800	29.92	0.00197	0.00394	15,600	23.62	0.00197	0.00394	13,200	15.75	0.00118	0.00315	11,900	13.39	0.00118	0.00315	9,600	10.24	0.00118	0.00315
1.6	20	14,400	14.17	0.00118	0.00197	13,200	11.02	0.00118	0.00197	12,000	7.87	0.00118	0.00197	10,800	6.69	0.00118	0.00197	8,700	5.12	0.00118	0.00197
2	4	50,000	220.47	0.00394	0.00787	50,000	208.66	0.00394	0.00787	48,000	141.73	0.00197	0.00394	43,200	120.47	0.00197	0.00394	34,600	90.55	0.00197	0.00394
2	6	43,200	110.24	0.00394	0.00787	42,000	106.30	0.00394	0.00787	36,000	70.87	0.00197	0.00394	32,400	60.24	0.00197	0.00394	26,000	45.28	0.00197	0.00394
2	8	30,000	94.49	0.00394	0.00787	28,800	90.55	0.00394	0.00787	24,000	59.06	0.00197	0.00394	21,600	50.39	0.00197	0.00394	17,300	37.80	0.00197	0.00394
2	10	24,000	86.61	0.00394	0.00787	22,800	78.74	0.00394	0.00787	20,400	55.12	0.00197	0.00394	18,400	46.85	0.00197	0.00394	14,700	35.04	0.00197	0.00394
2	12	19,200	74.80	0.00394	0.00787	18,000	66.93	0.00394	0.00787	15,600	43.31	0.00197	0.00394	14,100	37.01	0.00197	0.00394	11,300	27.95	0.00197	0.00394
2	14	18,000	66.93	0.00394	0.00787	16,800	59.06	0.00394	0.00787	14,400	39.37	0.00197	0.00394	13,000	33.46	0.00197	0.00394	10,400	25.20	0.00197	0.00394
2	16	16,800	62.99	0.00394	0.00394	15,600	55.12	0.00394	0.00394	13,200	37.40	0.00197	0.00394	11,900	31.89	0.00197	0.00394	9,600	24.02	0.00197	0.00394
2	18	15,600	59.06	0.00394	0.00394	14,400	47.24	0.00394	0.00394	12,000	31.50	0.00197	0.00394	10,800	26.77	0.00197	0.00394	8,700	20.08	0.00197	0.00394
2	20	13,200	43.31	0.00197	0.00394	12,000	35.04	0.00197	0.00394	10,800	25.20	0.00197	0.00394	9,800	21.26	0.00197	0.00394	7,800	16.14	0.00197	0.00394
2	22	10,800	37.40	0.00197	0.00394	10,800	33.86	0.00197	0.00394	9,000	22.44	0.00197	0.00394	8,100	18.90	0.00197	0.00394	6,500	14.17	0.00197	0.00394
2	25	10,800	29.92	0.00118	0.00197	10,800	26.77	0.00118	0.00197	9,000	17.72	0.00118	0.00197	8,100	14.96	0.00118	0.00197	6,500	11.42	0.00118	0.00197
2	30	10,800	18.50	0.00079	0.00197	10,800	14.17	0.00079	0.00197	9,000	9.45	0.00079	0.00197	8,100	7.87	0.00079	0.00197	6,500	5.91	0.00079	0.00197
2	35	9,000	9.06	0.00079	0.00118	8,400	5.12	0.00079	0.00118	7,200	3.94	0.00079	0.00118	6,500	3.54	0.00079	0.00118	5,200	2.76	0.00079	0.00118
2	40	7,200	5.51	0.00079	0.00118	7,200	3.94	0.00079	0.00118	7,200	3.54	0.00079	0.00118	6,500	3.15	0.00079	0.00118	5,200	2.36	0.00079	0.00118
2.5	10	24,000	122.05	0.00394	0.00787	22,800	114.17	0.00394	0.00787	19,200	74.80	0.00197	0.00394	17,300	63.78	0.00197	0.00394	13,900	48.03	0.00197	0.00394
2.5	15	20,400	102.36	0.00394	0.00787	19,200	94.49	0.00394	0.00787	16,800	62.99	0.00197	0.00394	15,200	53.54	0.00197	0.00394	12,100	40.16	0.00197	0.00394
2.5	20	18,000	66.93	0.00394	0.00787	16,800	62.99	0.00394	0.00787	14,400	39.37	0.00197	0.00394	13,000	33.46	0.00197	0.00394	10,400	25.20	0.00197	0.00394
2.5	25	13,200	37.40	0.00118	0.00197	12,000	32.68	0.00118	0.00197	10,800	23.23	0.00118	0.00197	9,800	19.69	0.00118	0.00197	7,800	14.96	0.00118	0.00197
2.5	30	10,800	29.92	0.00118	0.00197	9,600	25.59	0.00118	0.00197	8,400	17.72	0.00118	0.00197	7,600	14.96	0.00118	0.00197	6,100	11.42	0.00118	0.00197
2.5	35	9,000	18.50	0.00079	0.00118	8,400	16.93	0.00079	0.00118	7,200	11.42	0.00079	0.00118	6,500	9.84	0.00079	0.00118	5,200	7.48	0.00079	0.00118
3	6	49,800	244.09	0.00591	0.01181	38,400	188.98	0.00591	0.01181	31,800	129.92	0.00236	0.00591	28,700	110.63	0.00236	0.00591	22,900	83.07	0.00236	0.00591
3	8	36,000	165.35	0.00591	0.01181	30,000	137.80	0.00591	0.01181	26,400	94.49	0.00236	0.00591	23,800	80.31	0.00236	0.00591	19,100	60.24	0.00236	0.00591
3	10	30,000	141.73	0.00591	0.01181	24,000	110.24	0.00591	0.01181	21,600	78.74	0.00236	0.00591	19,500	66.93	0.00236	0.00591	15,600	50.39	0.00236	0.00591
3	12	24,000	110.24	0.00591	0.01181	21,600	98.43	0.00591	0.01181	19,200	66.93	0.00236	0.00591	17,300	57.09	0.00236	0.00591	13,900	42.91	0.00236	0.00591
3	14	21,600	98.43	0.00591	0.01181	18,000	78.74	0.00591	0.01181	15,600	51.18	0.00236	0.00591	14,100	43.70	0.00236	0.00591	11,300	32.68	0.00236	0.00591
3	15	19,200	86.61	0.00394	0.01181	15,600	70.87	0.00394	0.01181	13,200	47.24	0.00236	0.00591	11,900	40.16	0.00236	0.00591	9,600	30.31	0.00236	0.00591
3	16	19,200	74.80	0.00394	0.00787	15,600	59.06	0.00394	0.00787	13,200	43.31	0.00236	0.00591	11,900	37.01	0.00236	0.00591	9,600	27.95	0.00236	0.00591

1. Use a rigid and precise machine and holder.
2. We suggest using air blow or MQL (mist).
3. Use air blow or a suitable cutting fluid with high smoke retardant properties.
4. The above parameters are for contouring operations with stable conditions and setup. Adjustment may be required in less optimal situations.
5. Please adjust parameters based on machine accuracy, part shape, and tool path.
6. When using a tool with diameter 0.5mm or below or when L/D ratio is above 10 unstable or aggressive milling may result in tool breakage. Please adjust parameters based on the machine setup.
7. If unable to achieve the recommended RPM above please reduce the speed and feed by the same proportion. Axial and radial depth may remain as specified in the table.

CONTINUED

List 8590: 2 Flute, Stub Length, Long Neck, Ball End, Rib Processing (Continued)

Contouring

Hardness	Up to 45 HRC				45-55 HRC				55-62 HRC				62-66 HRC				66-70 HRC			
Work Material	Tool Steels Hardened Steels Alloy Steels				Hardened Steels															
Depth of Cut																				
Mill Dia. mm	Neck mm	Speed (RPM)	Feed (IPM)	Aa (in)	Ar (in)	Speed (RPM)	Feed (IPM)	Aa (in)	Ar (in)	Speed (RPM)	Feed (IPM)	Aa (in)	Ar (in)	Speed (RPM)	Feed (IPM)	Aa (in)	Ar (in)	Speed (RPM)	Feed (IPM)	Aa (in)	Ar (in)
3	20	16,800	66.93	0.00394	0.00787	13,200	62.99	0.00394	0.00787	12,000	39.37	0.00236	0.00591	10,800	33.46	0.00236	0.00591	8,700	25.20	0.00236	0.00591
3	25	14,400	43.31	0.00197	0.00394	10,800	32.28	0.00197	0.00394	9,600	22.83	0.00197	0.00394	8,700	19.29	0.00197	0.00394	7,000	14.57	0.00197	0.00394
3	30	10,800	29.92	0.00118	0.00197	8,400	23.23	0.00118	0.00197	7,200	15.75	0.00118	0.00197	6,500	13.39	0.00118	0.00197	5,200	10.24	0.00118	0.00197
3	35	9,000	22.44	0.00079	0.00197	7,200	18.11	0.00079	0.00197	6,000	11.81	0.00079	0.00197	5,400	10.24	0.00079	0.00197	4,400	7.87	0.00079	0.00197
3	40	7,800	18.50	0.00079	0.00118	6,000	14.17	0.00079	0.00118	4,800	9.06	0.00079	0.00118	4,400	7.87	0.00079	0.00118	3,500	5.91	0.00079	0.00118
3.5	15	21,600	110.24	0.00394	0.01181	16,800	78.74	0.00394	0.01181	14,400	51.18	0.00276	0.00591	13,000	43.70	0.00276	0.00591	10,400	32.68	0.00276	0.00591
3.5	20	19,200	98.43	0.00394	0.00787	14,400	70.87	0.00394	0.00787	12,000	47.24	0.00276	0.00591	10,800	40.16	0.00276	0.00591	8,700	30.31	0.00276	0.00591
3.5	25	14,400	74.80	0.00394	0.00394	10,800	51.18	0.00394	0.00394	9,600	36.22	0.00276	0.00591	8,700	30.71	0.00276	0.00591	7,000	23.23	0.00276	0.00591
3.5	30	12,000	59.06	0.00197	0.00394	9,600	43.31	0.00197	0.00394	8,400	30.31	0.00197	0.00394	7,600	25.59	0.00197	0.00394	6,100	19.29	0.00197	0.00394
3.5	35	10,800	37.40	0.00197	0.00197	8,400	27.56	0.00197	0.00197	6,000	15.75	0.00197	0.00197	5,400	13.39	0.00197	0.00197	4,400	10.24	0.00197	0.00197
3.5	40	9,000	29.92	0.00197	0.00197	7,200	22.83	0.00197	0.00197	4,800	11.81	0.00197	0.00197	4,400	10.24	0.00197	0.00197	3,500	7.87	0.00197	0.00197
3.5	45	7,800	22.44	0.00118	0.00118	6,000	16.54	0.00118	0.00118	4,800	10.24	0.00118	0.00118	4,400	8.66	0.00118	0.00118	3,500	6.69	0.00118	0.00118
4	8	37,200	224.41	0.00787	0.01969	28,800	173.23	0.00787	0.01969	24,000	125.98	0.00315	0.00787	21,600	107.09	0.00315	0.00787	17,300	80.31	0.00315	0.00787
4	10	30,000	165.35	0.00787	0.01969	24,000	129.92	0.00787	0.01969	21,600	90.55	0.00315	0.00787	19,500	77.17	0.00315	0.00787	15,600	57.87	0.00315	0.00787
4	12	24,000	133.86	0.00787	0.01969	20,400	114.17	0.00787	0.01969	16,800	74.80	0.00315	0.00787	15,200	63.78	0.00315	0.00787	12,100	48.03	0.00315	0.00787
4	15	24,000	133.86	0.00787	0.01969	19,200	106.30	0.00787	0.01969	14,400	62.99	0.00315	0.00787	13,000	53.54	0.00315	0.00787	10,400	40.16	0.00315	0.00787
4	16	21,600	118.11	0.00787	0.01969	18,000	98.43	0.00787	0.01969	12,000	51.18	0.00315	0.00787	10,800	43.70	0.00315	0.00787	8,700	32.68	0.00315	0.00787
4	20	19,200	102.36	0.00787	0.01575	16,800	90.55	0.00787	0.01575	9,600	39.37	0.00315	0.00787	8,700	33.46	0.00315	0.00787	7,000	25.20	0.00315	0.00787
4	25	19,200	102.36	0.00394	0.01181	15,600	86.61	0.00394	0.01181	7,200	31.89	0.00315	0.00787	6,500	27.17	0.00315	0.00787	5,200	20.47	0.00315	0.00787
4	30	16,800	86.61	0.00394	0.00787	14,400	74.80	0.00394	0.00787	6,000	24.80	0.00315	0.00787	5,400	21.26	0.00315	0.00787	4,400	16.14	0.00315	0.00787
4	35	14,400	66.93	0.00394	0.00787	10,800	47.24	0.00394	0.00787	4,800	16.54	0.00315	0.00787	4,400	14.17	0.00315	0.00787	3,500	10.63	0.00315	0.00787
4	40	10,800	47.24	0.00197	0.00394	9,600	39.37	0.00197	0.00394	4,800	15.75	0.00197	0.00394	4,400	13.39	0.00197	0.00394	3,500	10.24	0.00197	0.00394
4	45	9,000	37.40	0.00197	0.00197	8,400	35.04	0.00197	0.00197	4,400	14.17	0.00197	0.00197	3,900	12.20	0.00197	0.00197	3,200	9.06	0.00197	0.00197
4	50	7,800	25.98	0.00079	0.00197	7,200	23.62	0.00079	0.00197	4,400	11.02	0.00079	0.00197	3,900	9.45	0.00079	0.00197	3,200	7.09	0.00079	0.00197
5	10	30,000	212.60	0.00984	0.01969	22,800	157.48	0.00984	0.01969	19,200	110.24	0.00394	0.00984	17,300	93.70	0.00394	0.00984	13,900	70.47	0.00394	0.00984
5	15	24,000	153.54	0.00984	0.01969	20,400	129.92	0.00984	0.01969	15,600	78.74	0.00394	0.00984	14,100	66.93	0.00394	0.00984	11,300	50.39	0.00394	0.00984
5	20	19,200	129.92	0.00984	0.01969	15,600	106.30	0.00984	0.01969	9,600	51.18	0.00394	0.00984	8,700	43.70	0.00394	0.00984	7,000	32.68	0.00394	0.00984
5	25	18,000	118.11	0.00787	0.01181	14,400	94.49	0.00787	0.01181	7,200	37.80	0.00394	0.00984	6,500	32.28	0.00394	0.00984	5,200	24.41	0.00394	0.00984
5	30	16,800	90.55	0.00394	0.01181	13,200	70.87	0.00394	0.01181	4,800	20.47	0.00394	0.00984	4,400	17.32	0.00394	0.00984	3,500	12.99	0.00394	0.00984
5	35	14,400	59.06	0.00394	0.01181	12,000	43.31	0.00394	0.01181	3,900	11.02	0.00394	0.00984	3,500	9.45	0.00394	0.00984	2,800	7.09	0.00394	0.00984
5	40	12,000	43.31	0.00394	0.00787	10,800	38.98	0.00394	0.00787	3,600	10.24	0.00394	0.00787	3,300	8.66	0.00394	0.00787	2,600	6.69	0.00394	0.00787
5	45	10,800	33.46	0.00394	0.00394	9,600	25.98	0.00394	0.00394	3,600	7.87	0.00394	0.00394	3,300	6.69	0.00394	0.00394	2,600	5.12	0.00394	0.00394
5	50	9,000	29.92	0.00394	0.00394	8,400	24.02	0.00394	0.00394	3,400	7.48	0.00394	0.00394	3,100	6.30	0.00394	0.00394	2,500	4.72	0.00394	0.00394
6	12	24,000	204.72	0.01181	0.01969	19,200	133.86	0.01181	0.01969	16,200	98.43	0.00394	0.00787	14,600	83.86	0.00394	0.00787	11,700	62.99	0.00394	0.00787
6	20	19,200	153.54	0.01181	0.01969	14,400	118.11	0.01181	0.01969	9,600	62.99	0.00394	0.00787	8,700	53.54	0.00394	0.00787	7,000	40.16	0.00394	0.00787
6	25	14,400	118.11	0.01181	0.01969	12,000	98.43	0.01181	0.01969	7,200	47.24	0.00394	0.00787	6,500	40.16	0.00394	0.00787	5,200	30.31	0.00394	0.00787
6	30	12,000	94.49	0.01181	0.01969	10,800	82.68	0.01181	0.01969	4,800	29.13	0.00394	0.00787	4,400	24.80	0.00394	0.00787	3,500	18.50	0.00394	0.00787
6	35	10,800	82.68	0.00787	0.01575	10,800	78.74	0.00787	0.01575	4,200	24.41	0.00394	0.00787	3,800	20.87	0.00394	0.00787	3,100	15.75	0.00394	0.00787
6	40	10,800	74.80	0.00787	0.01181	10,800	70.87	0.00787	0.01181	3,600	18.90	0.00394	0.00787	3,300	16.14	0.00394	0.00787	2,600	12.20	0.00394	0.00787
6	45	9,600	66.93	0.00787	0.01181	9,600	62.99	0.00787	0.01181	3,400	17.32	0.00394	0.00787	3,100	14.57	0.00394	0.00787	2,500	11.02	0.00394	0.00787
6	50	8,400	59.06	0.00787	0.01181	8,400	55.12	0.00787	0.01181	3,000	15.75	0.00394	0.00787	2,700	13.39	0.00394	0.00787	2,200	10.24	0.00394	0.00787

1. Use a rigid and precise machine and holder.
2. We suggest using air blow or MQL (mist).
3. Use air blow or a suitable cutting fluid with high smoke retardant properties.
4. The above parameters are for contouring operations with stable conditions and setup. Adjustment may be required in less optimal situations.
5. Please adjust parameters based on machine accuracy, part shape, and tool path.
6. When using a tool with diameter 0.5mm or below or when L/D ratio is above 10 unstable or aggressive milling may result in tool breakage. Please adjust parameters based on the machine setup.
7. If unable to achieve the recommended RPM above please reduce the speed and feed by the same proportion. Axial and radial depth may remain as specified in the table.