

# SUGGESTED CUTTING FEEDS & SPEEDS



**MINICUT** end mills are capable of higher speeds and feeds, removing more cubic inches/cm of material per minute. Therefore, it is important that sufficient power and rigidity of the set-up be maintained. Controlled power feed is recommended. The feeds and speeds suggested should be considered as starting points. They may be increased or decreased based on equipment, set-ups and finish desired.

MATERIALS	LOW CARBON STEELS		HIGH CARBON STEELS MEDIUM TENSILE		HIGH ALLOY STEELS STAINLESS STEELS INCONEL		HIGH STRENGTH TITANIUM ALLOYS		ALUMINUM		HIGH SPEED MACHINING OF ALUMINUM		
	240BHN - 80 Kg/mm <sup>2</sup>		240-300 BHN / 80-105 Kg/mm <sup>2</sup>		300-400 BHN / 105-140 Kg/mm <sup>2</sup>		30-55 SFM 9-17 M/min.		40-80 SFM 12-24 M/min.		1000-1500 SFM 300-450 M/min.		
SUGGESTED LIST N°	75-100 SFM 23-30 M/min.		60-75 SFM 18-23 M/min.		30-55 SFM 9-17 M/min.		40-80 SFM 12-24 M/min.		1000-1500 SFM 300-450 M/min.		2000-4000 SFM 605-1210 M/min.		
Tool Ø inches	905 / 910		905 / 910 / 985		985		995		930 / 930P / 940P		RPM		
Tool Ø mm	905M / 910M		905M / 910M / 985M		985M		995M		933 / 933P		930M / 930MP / 940MP		
Feeds & Speeds Inches													
Feeds & Speeds Metric													
3/8 10	RPM	800	800	640	640	400	400	525	525	10,185	10,185	20,950	20,950
	Feed inches	2.8	5.6	2.3	4.6	1.8	3.6	2.1	4.2	61	122	113	226
	Feed mm	70	140	55	110	45	90	53	106	1,455	2,910	2,870	5,740
1/2 12	RPM	600	600	480	480	300	300	392	392	7,640	7,640	20,350	20,350
	Feed inches	2.8	5.6	2.3	4.6	2	4	2.3	4.6	69	138	120	240
	Feed mm	70	140	58	116	51	102	56	112	1,700	3,400	3,048	6,096
5/8 16	RPM	480	480	384	384	240	240	315	315	6,110	6,110	20,300	20,300
	Feed inches	3.2	6.4	2.4	4.8	2	4	2.8	5.6	73	146	122	244
	Feed mm	80	160	60	120	51	102	71	142	1,830	3,660	3,098	6,196
3/4 20	RPM	400	400	320	320	200	200	266	266	5,090	5,090	19,900	19,900
	Feed inches	3.2	6.4	2.6	5.2	2.1	4.2	3.2	6.4	76	152	179	358
	Feed mm	80	160	66	132	54	108	81	162	1,940	3,880	4,545	9,090
1 25	RPM	300	300	240	240	150	150	196	196	3,820	3,820	15,114	15,114
	Feed inches	3.6	7.2	2.8	5.6	2.4	4.8	3.5	7.0	92	184	181	362
	Feed mm	91	182	73	146	60	120	88	176	2,330	4,660	4,600	9,200
1-1/4 32	RPM	240	240	192	192	156	156	155	155	3,060	3,060	11,863	11,863
	Feed inches	3.7	7.4	2.7	5.4	2.5	5.0	3.2	6.4	92	184	142	284
	Feed mm	93	186	70	140	61	122	81	162	2,330	4,660	3,606	7,212
1-1/2 40	RPM	200	200	160	160	130	130	135	135	2,550	2,550	9,759	9,759
	Feed inches	3.1	6.2	2.6	5.2	2.1	4.2	3.2	6.4	84	168	146	292
	Feed mm	80	160	67	134	52	104	81	162	2,185	4,370	3,708	7,416
2 50	RPM	150	150	120	120	98	98	100	100	1,910	1,910	7,200	7,200
	Feed inches	2.4	4.8	1.9	3.8	1.8	3.6	2.8	5.6	74	148	120	240
	Feed mm	60	120	48	96	45	90	71	142	1,860	3,720	3,048	6,096

- 6 FLUTES ARE RECOMMENDED ON 1" DIAMETER AND OVER FOR PROFILING.
- INCREASE FEEDS BY 30% ON TITANIUM COATED TOOLS.
- INCREASE SPEEDS 50% AND FEEDS BY 100% ON TiCN COATED TOOLS.

THE ABOVE CUTTING FEEDS AND SPEEDS APPLY TO SHORT SERIES ONLY. FOR LONG LENGTH TOOLS USE THE FOLLOWING REDUCTION FACTORS:

CUTTING LENGTH	REDUCTION FACTOR %
2 times dia.	100%
2.5 times dia.	85%
3 times dia.	75%
4 times dia.	45%
5 times dia.	35%
6 times dia.	25%

**WARNING:** Any cutting tool may break or shatter. The wearing of safety glasses is required by law. Grinding of this product may produce potentially hazardous dust. Use adequate ventilation.

**NOTE:** 1) For aluminum reduce RPM and Feed as per above chart. 2) For all other materials reduce Feed only, maintain same RPM.