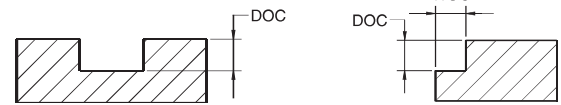


# Recommended Starting Speed and Feeds



## End Mill Series – F4AS..ADL38, HPHV...

- 1) Starting parameters are based on using stub-length tools.
- 2) For side milling with regular- and long-length tools, reduce feed per tooth by 30%.
- 3) For slotting with regular- and long-length tools, reduce DOC to 25% of the cutting diameter.
- 4) These guidelines may require possible variations to achieve optimum results.



Inserts

Face Mills

End Mills

Die and Mold

Slotting

Thread Milling

Widia Cutters

Vintage Cutters

Accessories

Technical Data

Mat'l Database

Index

### Low Carbon Steels (<228 HB) <20 HRC

AISI: 1008, 1010, 1018, 1020, 1108, 1117, 1141, 1151, 12L13, 12L14

application	maximum cutting parameters		cutting speed	feed per tooth						
	DOC	WOC		SFM	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"
			6 mm		8 mm	10 mm	12 mm	16 mm	20 mm	25 mm
profiling	1 x dia.	.5 x dia.	500-600	.0019	.0025	.0030	.0037	.0040	.0043	.0060
slotting	1 x dia.	-	400-500	.0016	.0021	.0026	.0031	.0034	.0036	.0050

### 400 Series Stainless Steels

AISI: 416, 416F, 416Se, 420F,

application	maximum cutting parameters		cutting speed	feed per tooth						
	DOC	WOC		SFM	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"
			6 mm		8 mm	10 mm	12 mm	16 mm	20 mm	25 mm
profiling	1 x dia.	.5 x dia.	300-375	.0019	.0025	.0031	.0035	.0040	.0043	.0048
slotting	1 x dia.	-	275-325	.0016	.0021	.0026	.0031	.0034	.0036	.0040

### 200 & 300 Series Stainless Steels

AISI: 201, 209, 219, 302, 303, 304, 316, 321, 347, 329

application	maximum cutting parameters		cutting speed	feed per tooth						
	DOC	WOC		SFM	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"
			6 mm		8 mm	10 mm	12 mm	16 mm	20 mm	25 mm
profiling	1 x dia.	.5 x dia.	260-290	.0017	.0023	.0024	.0030	.0037	.0039	.0040
slotting	1 x dia.	-	225-275	.0014	.0019	.0020	.0025	.0031	.0032	.0034

### PH Stainless Steels

15-5 PH, 17-4 H, 17-7 PH

application	maximum cutting parameters		cutting speed	feed per tooth						
	DOC	WOC		SFM	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"
			6 mm		8 mm	10 mm	12 mm	16 mm	20 mm	25 mm
profiling	1 x dia.	.5 x dia.	250-280	.0014	.0019	.0020	.0024	.0030	.0033	.0036
slotting	1 x dia.	-	200-250	.0012	.0016	.0017	.0020	.0026	.0028	.0030

### Gray Cast Iron

application	maximum cutting parameters		cutting speed	feed per tooth						
	DOC	WOC		SFM	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"
			6 mm		8 mm	10 mm	12 mm	16 mm	20 mm	25 mm
profiling	1 x dia.	.5 x dia.	450-550	.0020	.0026	.0034	.0040	.0043	.0047	.0060
slotting	1 x dia.	-	425-525	.0017	.0022	.0028	.0034	.0036	.0039	.0050

### Titanium Alloys, Nickel Base

Inconel: 601, 617, 625, 718, X-750, 901, Waspaloy, Hastelloy

application	maximum cutting parameters		cutting speed	feed per tooth						
	DOC	WOC		SFM	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"
			6 mm		8 mm	10 mm	12 mm	16 mm	20 mm	25 mm
profiling	1 x dia.	.2 x dia.	80-100	.0012	.0014	.0015	.0019	.0024	.0026	.0028
slotting	.3 x dia.	-	65-90	.0010	.0012	.0013	.0016	.0020	.0022	.0024

### Titanium Alloys

Commercially pure: Ti98.8, Alpha: TiSa12.5SN, Alpha/Beta: Ti-6Al-4V

application	maximum cutting parameters		cutting speed	feed per tooth						
	DOC	WOC		SFM	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"
			6 mm		8 mm	10 mm	12 mm	16 mm	20 mm	25 mm
profiling	1 x dia.	.3 x dia.	160-190	.0016	.0021	.0024	.0035	.0037	.0040	.0048
slotting	1 x dia.	-	140-175	.0014	.0018	.0020	.0029	.0031	.0034	.0040