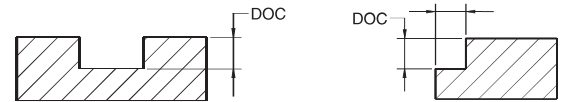


Recommended Starting Speed and Feeds



End Mill Series – HPRSS..S3., F3BS..BD.35

- 1) Starting parameters are based on using regular-length tools; for stub-length tools, increase feed by 20%.
- 2) For DOC equal to .05 x diameter on slotting applications, increase feed by 20%.
- 3) 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 & Plain Carbon Steels, Alloy & Tool Steels (<286 HB) <30 HRC

AISI: 1008, 1010, 1018, 1141, 12L13, 12L14, 1045, 1335, 4140, 4340, 5120, 8620, P20

application	maximum cutting parameters		cutting speed	feed per tooth						
	DOC	WOC		1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"
			SFM	6 mm	8 mm	10 mm	12 mm	16 mm	20 mm	25 mm
profiling	1 x dia.	.4 x dia.	450-550	.0014	.0016	.0019	.0029	.0029	.0032	.0034
slotting	1 x dia.	-	400-500	.0012	.0014	.0016	.0024	.0024	.0026	.0028

Austenitic Stainless Steels (200 & 300 Series) Including Duplex (135-275 HB) <28 HRC

AISI: 201, 209, 219, 302, 303, 304, 316, 321, 347, 329, ASTM: XM-1, XM-7, XM-21, CF-8M

application	maximum cutting parameters		cutting speed	feed per tooth						
	DOC	WOC		1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"
			SFM	6 mm	8 mm	10 mm	12 mm	16 mm	20 mm	25 mm
profiling	1 x dia.	.4 x dia.	300-425	.0012	.0015	.0018	.0024	.0030	.0035	.0040
slotting	1 x dia.	-	270-350	.0010	.0012	.0014	.0020	.0022	.0024	.0026

Cast Iron (<220 HB) <18 HRC

Gray: Class 20, 25; Ductile: Grades 60-40-18, 65-45-12; Malleable: 32510, 35018, M3210

application	maximum cutting parameters		cutting speed	feed per tooth						
	DOC	WOC		1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"
			SFM	6 mm	8 mm	10 mm	12 mm	16 mm	20 mm	25 mm
profiling	1 x dia.	.4 x dia.	450-550	.0015	.0018	.0020	.0025	.0030	.0045	.0050
slotting	1 x dia.	-	400-500	.0008	.0012	.0015	.0022	.0025	.0030	.0035

Aluminum and Other Free-Machining, Non-Ferrous Materials, Low Silicon

Aluminum, 6061-T6, 7075-T6

application	maximum cutting parameters		cutting speed	feed per tooth						
	DOC	WOC		1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"
			SFM	6 mm	8 mm	10 mm	12 mm	16 mm	20 mm	25 mm
profiling	1 x dia.	.4 x dia.	2000-5500	.0026	.0028	.0036	.0048	.0056	.0070	.0080
slotting	1 x dia.	-	1600-5000	.0022	.0024	.0030	.0040	.0047	.0060	.0070

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		1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"
			SFM	6 mm	8 mm	10 mm	12 mm	16 mm	20 mm	25 mm
profiling	1 x dia.	.4 x dia.	85-110	.0007	.0009	.0011	.0014	.0018	.0024	.0029
slotting	1 x dia.	-	75-90	.0006	.0008	.0009	.0012	.0015	.0020	.0024

NOTE: For cast iron >18 HRC (Gray: class 45, 55; Ductile: grades 80-55-06, 120-90-02, D5506; Malleable: 70003, 80002, 90001), reduce SFM by 20% and maintain chiploads.