F.A.S.T.
Fullerton Advanced Solutions Team

SERIES 3000, 3000C, 3000R, 3090C
Intimidator

Four Uniquely Indexed RH Cut Flutes

INCH UNITS

Gray Cast Iron
(400 - 600) SFM

	Slotting		Side Milling (Profiling)		
	Rough	Finish	Heavy	Light	Finish
Axial Depth	(.5 - 1) x D	(.2 - .4) x D	1.5 x D		
Radial Width	full	full	(.3 - .5) x D	(.1 - .2) x D	(.03 - .06) x D
1/4	.0015	.0020	.0015	.0020	.0020
3/8	.0025	.0030	.0025	.0030	.0030
1/2	.0028	.0032	.0028	.0032	.0032
3/4	.0030	.0035	.0030	.0035	.0035
1	.0040	.0045	.0040	.0045	.0045
	FPT (in/tooth)				

Steel (Low and Medium Carbon)
(450 - 550) SFM

	Slotting		Side Milling (Profiling)		
	Rough	Finish	Heavy	Light	Finish
Axial Depth	(.5 - 1) x D	(.2 - .4) x D	1.5 x D		
Radial Width	full	full	(.3 - .5) x D	(.1 - .2) x D	(.03 - .06) x D
1/4	.0015	.0020	.0015	.0020	.0020
3/8	.0025	.0030	.0025	.0030	.0030
1/2	.0028	.0032	.0028	.0032	.0032
3/4	.0030	.0035	.0030	.0035	.0035
1	.0040	.0045	.0040	.0045	.0045
	FPT (in/tooth)				

Tool Steels
(200 - 300) SFM

	Slotting		Side Milling (Profiling)		
	Rough	Finish	Heavy	Light	Finish
Axial Depth	(.5 - 1) x D	(.2 - .4) x D	1.5 x D		
Radial Width	full	full	(.3 - .5) x D	(.1 - .2) x D	(.03 - .06) x D
1/4	.0015	.0020	.0015	.0020	.0020
3/8	.0025	.0030	.0025	.0030	.0030
1/2	.0028	.0032	.0028	.0032	.0032
3/4	.0030	.0035	.0030	.0035	.0035
1	.0040	.0045	.0040	.0045	.0045
	FPT (in/tooth)				

Stainless Steel - Free Machining (303)
(250 - 300) SFM

	Slotting		Side Milling (Profiling)		
	Rough	Finish	Heavy	Light	Finish
Axial Depth	(.5 - 1) x D	(.2 - .4) x D	1.5 x D		
Radial Width	full	full	(.3 - .5) x D	(.1 - .2) x D	(.03 - .06) x D
1/4	.0015	.0018	.0015	.0018	.0018
3/8	.0024	.0026	.0024	.0026	.0026
1/2	.0026	.0028	.0026	.0028	.0028
3/4	.0028	.0032	.0028	.0032	.0032
1	.0030	.0035	.0030	.0035	.0035
	FPT (in/tooth)				

Stainless Steel - Medium Machining (304, Kovar)
(200 - 250) SFM

	Slotting		Side Milling (Profiling)		
	Rough	Finish	Heavy	Light	Finish
Axial Depth	(.5 - 1) x D	(.2 - .4) x D	1.5 x D		
Radial Width	full	full	(.3 - .5) x D	(.1 - .2) x D	(.03 - .06) x D
1/4	.0015	.0018	.0015	.0018	.0018
3/8	.0020	.0022	.0020	.0022	.0022
1/2	.0022	.0024	.0022	.0024	.0024
3/4	.0026	.0028	.0026	.0028	.0028
1	.0028	.0030	.0028	.0030	.0030
	FPT (in/tooth)				

Stainless Steel - Hard Machining (L & PH Series)
(170 - 230) SFM

	Slotting		Side Milling (Profiling)		
	Rough	Finish	Heavy	Light	Finish
Axial Depth	(.5 - 1) x D	(.2 - .4) x D	1.5 x D		
Radial Width	full	full	(.3 - .5) x D	(.1 - .2) x D	(.03 - .06) x D
1/4	.0012	.0014	.0012	.0014	.0014
3/8	.0018	.0020	.0018	.0020	.0020
1/2	.0020	.0022	.0020	.0022	.0022
3/4	.0024	.0026	.0024	.0026	.0026
1	.0025	.0027	.0025	.0027	.0027

Titanium Alloys (6A14V)
(150 - 200) SFM

	Slotting		Side Milling (Profiling)		
	Rough	Finish	Heavy	Light	Finish
Axial Depth	(.5 - 1) x D	(.2 - .4) x D	1.5 x D		
Radial Width	full	full	(.3 - .5) x D	(.1 - .2) x D	(.03 - .06) x D
1/4	.0008	.0010	.0008	.0010	.0010
3/8	.0012	.0015	.0012	.0015	.0015
1/2	.0016	.0018	.0016	.0018	.0018
3/4	.0020	.0022	.0020	.0022	.0022
1	.0028	.0030	.0028	.0030	.0030
	FPT (in/tooth)				

High Temp Alloys (Inconel, Waspalloy)
(100-120) SFM

	Slotting		Side Milling (Profiling)		
	Rough	Finish	Heavy	Light	Finish
Axial Depth	(.5 - 1) x D	(.2 - .4) x D	1.5 x D		
Radial Width	full	full	(.3 - .5) x D	(.1 - .2) x D	(.03 - .06) x D
1/4	.0008	.0010	.0008	.0010	.0010
3/8	.0013	.0015	.0013	.0015	.0015
1/2	.0019	.0020	.0019	.0020	.0020
3/4	.0025	.0028	.0025	.0028	.0028
1	.0027	.0030	.0027	.0030	.0030
	FPT (in/tooth)				

Speeds and Feeds Formulas

D *cutter diameter (inches)*
T *tooth count (flutes)*
FPT *feed per tooth (in/tooth)*
SFM *surface speed(ft/min) = FPT x T x RPM*
RPM *spindle speed (rpm) = (SFM x 3.82) ÷ D*
IPM *feed rate (inch/min) = FPT x T x RPM*

** Recommendations are intended for starting parameters only.*