FULLERTON

SPEEDS & FEEDS - IMPERIAL UNITS
3000 Intimidator End Mill

INTIMIDATOR

3000 Series Intimidator End Mill is designed for tough-to-machine ferrous materials.

	High Si Aluminum (>10%) Recommended in Unique Situations					Low Si Aluminum (<10%) Recommended in Unique Situations					Brass & Copper				
	Slotting	Plunge	Rough	Finish	Pocket	Slotting	Plunge	Rough	Finish	Pocket	Slotting	Plunge	Rough	Finish	Pocket
SFM (ft/min)											400	400	400	600	600
Axial Depth	< (1xD)	< (1xD)	1.5xD	1xD	< (1xD)	< (1xD)	< (1xD)	1.5xD	1xD	< (1xD)	< (1xD)	< (1xD)	1.5xD	1xD	< (1xD)
Radial Width	full	full	(.3-.5)xD	(.010-.015)	(.3-.5)xD	full	full	(.3-.5)xD	(.010-.015)	(.3-.5)xD	full	full	(.3-.5)xD	(.010-.015)	(.3-.5)xD
1/8"	-	-	-	-	-	-	-	-	-	-	.0008	.0009	.0007	.0010	.0007
1/4"	-	-	-	-	-	-	-	-	-	-	.0015	.0020	.0015	.0020	.0015
3/8"	-	-	-	-	-	-	-	-	-	-	.0025	.0030	.0025	.0030	.0025
1/2"	-	-	-	-	-	-	-	-	-	-	.0028	.0032	.0028	.0032	.0028
3/4"	-	-	-	-	-	-	-	-	-	-	.0030	.0035	.0030	.0035	.0030
1"	-	-	-	-	-	-	-	-	-	-	.0040	.0045	.0040	.0045	.0040

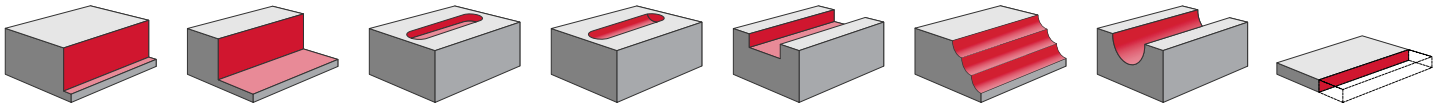
IPT (in/tooth)

	Cast Iron					Hardened Steels > 48 RC					Steels				
	Slotting	Plunge	Rough	Finish	Pocket	Slotting	Plunge	Rough	Finish	Pocket	Slotting	Plunge	Rough	Finish	Pocket
SFM (ft/min)	400	400	400	600	600	130	130	130	170	170	300	300	300	600	600
Axial Depth	< (1xD)	< (1xD)	1.5xD	1xD	< (1xD)	< (1xD)	< (1xD)	1.5xD	1xD	< (1xD)	< (1xD)	< (1xD)	1.5xD	1xD	< (1xD)
Radial Width	full	full	(.3-.5)xD	(.010-.015)	(.3-.5)xD	full	full	(.3-.5)xD	(.010-.015)	(.3-.5)xD	full	full	(.3-.5)xD	(.010-.015)	(.3-.5)xD
1/8"	.0008	.0010	.0007	.0010	.0007	.0006	.0007	.0006	.0007	.0006	.0007	.0009	.0007	.0009	.0007
1/4"	.0015	.0020	.0015	.0020	.0015	.0012	.0014	.0012	.0014	.0012	.0015	.0018	.0015	.0018	.0015
3/8"	.0025	.0030	.0025	.0030	.0025	.0018	.0020	.0018	.0020	.0018	.0020	.0022	.0020	.0022	.0020
1/2"	.0028	.0032	.0028	.0032	.0028	.0020	.0022	.0020	.0022	.0020	.0022	.0024	.0022	.0024	.0022
3/4"	.0030	.0035	.0030	.0035	.0030	.0024	.0026	.0024	.0026	.0024	.0026	.0028	.0026	.0028	.0026
1"	.0040	.0045	.0040	.0045	.0040	.0025	.0027	.0025	.0027	.0025	.0028	.0030	.0028	.0030	.0028

IPT (in/tooth)

	Stainless Steels					Super Alloys (Nickel Based, Inconel)					Titanium				
	Slotting	Plunge	Rough	Finish	Pocket	Slotting	Plunge	Rough	Finish	Pocket	Slotting	Plunge	Rough	Finish	Pocket
SFM (ft/min)	250	250	250	300	300	90	90	90	120	120	90	90	120	150	
Axial Depth	< (1xD)	< (1xD)	1.5xD	1xD	< (1xD)	< (1xD)	< (1xD)	1.5xD	1xD	< (1xD)	< (1xD)	< (1xD)	1.5xD	1xD	< (1xD)
Radial Width	full	full	(.3-.5)xD	(.010-.015)	(.3-.5)xD	full	full	(.3-.5)xD	(.010-.015)	(.3-.5)xD	full	full	(.3-.5)xD	(.010-.015)	(.3-.5)xD
1/8"	.0007	.0009	.0007	.0009	.0007	.0004	.0005	.0004	.0005	.0004	.0004	.0005	.0004	.0005	.0004
1/4"	.0015	.0018	.0015	.0018	.0015	.0008	.0010	.0008	.0010	.0008	.0008	.0010	.0008	.0010	.0008
3/8"	.0024	.0026	.0024	.0026	.0024	.0013	.0015	.0013	.0015	.0013	.0012	.0015	.0012	.0015	.0012
1/2"	.0026	.0028	.0026	.0028	.0026	.0019	.0020	.0019	.0020	.0019	.0016	.0018	.0016	.0018	.0016
3/4"	.0028	.0032	.0028	.0032	.0028	.0025	.0028	.0025	.0028	.0025	.0020	.0022	.0020	.0022	.0020
1"	.0030	.0035	.0030	.0035	.0030	.0027	.0030	.0027	.0030	.0027	.0028	.0030	.0028	.0030	.0028

IPT (in/tooth)



PROFILING / FINISHING CUT
USE 4 OR 5 FLUTES

PROFILING / ROUGHING CUT
USE ROUGHING MILL FOR RAPID MATERIAL REMOVAL

PLUNGE / SLOT
USE 3+FLUTE TO RESIST CHATTER
USE 2+FLUTE FOR MAXIMUM CHIP REMOVAL

PLUNGE / SLOT CONTOURING
USE 3+FLUTE BALL END FOR MAXIMUM CHIP REMOVAL, USE 3+FLUTE BALL END FOR IMPROVED SURFACE FINISH

SLOTTING
USE 3+FLUTE TO RESIST CHATTER
USE 2+FLUTE OR ROUGHING MILL FOR MAXIMUM CHIP REMOVAL

COUNTOUR FINISHING
USE 3 OR 4 FLUTE BALL END

COUNTOUR SLOTTING
USE 3+FLUTE BALL END TO RESIST CHATTER
USE 3+FLUTE BALL END FOR MAXIMUM CHIP REMOVAL

PROFILING / TIN MATERIAL
USE 3+FLUTE BALL END TO RESIST CHATTER
USE 2 OR 4 STRAIGHT FLUTES

Not Recommended for Composites, Plastics, or Graphite. High Si Aluminum and Low Si Aluminum Recommended in Unique Situations.

The parameters listed for tool series that are stocked uncoated are based on running an uncoated tool.
If a coating is applied to the tools, the SFM can be increased by approximately 25%. All speed and feed recommendations should be considered only as a starting point. Start with conservative speeds and feeds while analyizing the rigidity of the process. Then cautiously progress incrementally to achieve optimum performance.

Contact Engineering at 800.248.8315 or engineering@fullertontool.com

FULLERTON

SPEEDS & FEEDS - METRIC UNITS
3000 Intimidator End Mill

INTIMIDATOR

3000 Series Intimidator End Mill is designed for tough-to-machine ferrous materials.

	High Si Aluminum (>10%) Recommended in Unique Situations					Low Si Aluminum (<10%) Recommended in Unique Situations					Brass & Copper (121-182) SMM (m/min)				
	Slotting	Plunge	Rough	Finish	Pocket	Slotting	Plunge	Rough	Finish	Pocket	Slotting	Plunge	Rough	Finish	Pocket
SMM (m/min)											121	121	121	182	182
Axial Depth	< (1xD)	< (1xD)	1.5xD	1xD	< (1xD)	< (1xD)	< (1xD)	1.5xD	1xD	< (1xD)	< (1xD)	< (1xD)	1.5xD	1xD	< (1xD)
Radial Width	full	full	(.3-.5)xD	(.010-.015)	(.3-.5)xD	full	full	(.3-.5)xD	(.010-.015)	(.3-.5)xD	full	full	(.3-.5)xD	(.010-.015)	(.3-.5)xD
3	-	-	-	-	-	-	-	-	-	-	.0203	.0229	.0178	.0254	.0178
6	-	-	-	-	-	-	-	-	-	-	.0381	.0508	.0381	.0508	.0381
10	-	-	-	-	-	-	-	-	-	-	.0635	.0762	.0635	.0762	.0635
12	-	-	-	-	-	-	-	-	-	-	.0711	.0813	.0711	.0813	.0711
20	-	-	-	-	-	-	-	-	-	-	.0762	.0889	.0762	.0889	.0762
25	-	-	-	-	-	-	-	-	-	-	.1016	.1143	.1016	.1143	.1016

MMPT (mm/tooth)

	Cast Iron					Hardened Steels > 48 RC					Steels				
	Slotting	Plunge	Rough	Finish	Pocket	Slotting	Plunge	Rough	Finish	Pocket	Slotting	Plunge	Rough	Finish	Pocket
SMM (m/min)	121	121	121	182	182	39	39	39	51	51	91	91	91	182	182
Axial Depth	< (1xD)	< (1xD)	1.5xD	1xD	< (1xD)	< (1xD)	< (1xD)	1.5xD	1xD	< (1xD)	< (1xD)	< (1xD)	1.5xD	1xD	< (1xD)
Radial Width	full	full	(.3-.5)xD	(.010-.015)	(.3-.5)xD	full	full	(.3-.5)xD	(.010-.015)	(.3-.5)xD	full	full	(.3-.5)xD	(.010-.015)	(.3-.5)xD
3	.0203	.0254	.0178	.0254	.0178	.0152	.0178	.0152	.0178	.0152	.0178	.0229	.0178	.0229	.0178
6	.0381	.0508	.0381	.0508	.0381	.0305	.0356	.0305	.0356	.0305	.0381	.0457	.0381	.0457	.0381
10	.0635	.0762	.0635	.0762	.0635	.0457	.0508	.0457	.0508	.0457	.0508	.0559	.0508	.0559	.0508
12	.0711	.0813	.0711	.0813	.0711	.0508	.0559	.0508	.0559	.0508	.0559	.0610	.0559	.0610	.0559
20	.0762	.0889	.0762	.0889	.0762	.0610	.0660	.0610	.0660	.0610	.0660	.0711	.0660	.0711	.0660
25	.1016	.1143	.1016	.1143	.1016	.0635	.0686	.0635	.0686	.0635	.0711	.0762	.0711	.0762	.0711

MMPT (mm/tooth)

	Stainless Steels					Super Alloys (Nickel Based, Inconel)					Titanium				
	Slotting	Plunge	Rough	Finish	Pocket	Slotting	Plunge	Rough	Finish	Pocket	Slotting	Plunge	Rough	Finish	Pocket
SMM (m/min)	76	76	76	91	91	27	27	27	36	36	27	27	36	45	.0000
Axial Depth	< (1xD)	< (1xD)	1.5xD	1xD	< (1xD)	< (1xD)	< (1xD)	1.5xD	1xD	< (1xD)	< (1xD)	< (1xD)	1.5xD	1xD	< (1xD)
Radial Width	full	full	(.3-.5)xD	(.010-.015)	(.3-.5)xD	full	full	(.3-.5)xD	(.010-.015)	(.3-.5)xD	full	full	(.3-.5)xD	(.010-.015)	(.3-.5)xD
1/8"	.0007	.0009	.0007	.0009	.0007	.0004	.0005	.0004	.0005	.0004	.0004	.0005	.0004	.0005	.0004
1/4"	.0015	.0018	.0015	.0018	.0015	.0008	.0010	.0008	.0010	.0008	.0008	.0010	.0008	.0010	.0008
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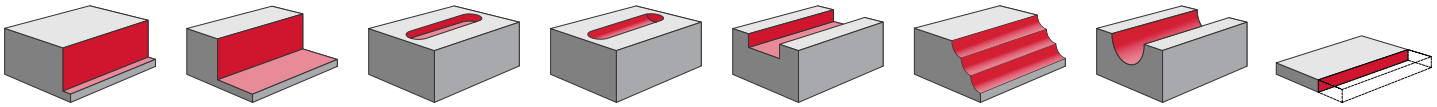
3/4"	.0028	.0032	.0028	.0032	.0028	.0025	.0028	.0025	.0028	.0025	.0020	.0022	.0020	.0022	.0020
1"	.0030	.0035	.0030	.0035	.0030	.0027	.0030	.0027	.0030	.0027	.0028	.0030	.0028	.0030	.0028

MMPT (mm/tooth)



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