

3410 FANTOM - IMPERIAL



3410 Series Fantom End Mill designed to excel in difficult to machine materials.

Not Recommended for High Si Aluminum (>10%), Low Si Aluminum (<10%), Composites, Plastics, Brass & Copper, or Graphite.

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 analyzing the rigidity of the process. Then cautiously progress incrementally to achieve optimum performance.

FULLERTON®
SPEEDS / FEEDS

	Cast Iron					Hardened Steels > 48 RC					Steels				
	Slotting	Plunge/Ramp	Rough/Profile	HEM	Finish	Slotting	Plunge/Ramp	Rough/Profile	HEM	Finish	Slotting	Plunge/Ramp	Rough/Profile	HEM	Finish
SFM (ft/min)	300	300	400	520	520	150	150	200	300	300	250	250	350	650	650
Axial Depth	< (1xD)	full	< (2xD)	< (2xD)	< (2xD)	< (1xD)	full	< (2xD)	< (2xD)	< (2xD)	< (1xD)	full	< (2xD)	< (2xD)	< (2xD)
Radial Width	full	full	(.25-.3)xD	(.1-.25)xD	(.05-.08)xD	full	full	(.25-.3)xD	(.1-.25)xD	(.05-.08)xD	full	full	(.25-.3)xD	(.1-.25)xD	(.05-.08)xD
1/8"	.0010	.0012	.0010	.0010	.0012	.0007	.0008	.0005	.0005	.0010	.0010	.0012	.0010	.0010	.0012
1/4"	.0018	.0018	.0018	.0018	.0018	.0014	.0014	.0010	.0010	.0015	.0018	.0018	.0018	.0018	.0018
3/8"	.0027	.0027	.0027	.0027	.0027	.0020	.0026	.0020	.0020	.0026	.0027	.0035	.0035	.0035	.0035
1/2"	.0035	.0035	.0035	.0035	.0035	.0026	.0030	.0025	.0025	.0030	.0035	.0039	.0039	.0039	.0039
3/4"	.0043	.0043	.0043	.0043	.0043	.0033	.0033	.0030	.0030	.0033	.0043	.0043	.0043	.0043	.0043
1"	.0050	.0050	.0050	.0050	.0050	.0039	.0039	.0040	.0040	.0045	.0050	.0050	.0050	.0050	.0050
	Stainless Steels					Super Alloys (Nickel Based, Inconel)					Titanium				
	Slotting	Plunge/Ramp	Rough/Profile	HEM	Finish	Slotting	Plunge/Ramp	Rough/Profile	HEM	Finish	Slotting	Plunge/Ramp	Rough/Profile	HEM	Finish
SFM (ft/min)	200	200	225	300	300	75	75	90	125	125	100	100	150	275	275
Axial Depth	< (1xD)	full	< (2xD)	< (2xD)	< (2xD)	< (1xD)	full	< (2xD)	< (2xD)	< (2xD)	< (1xD)	full	< (2xD)	< (2xD)	< (2xD)
Radial Width	full	full	(.25-.3)xD	(.1-.25)xD	(.05-.08)xD	full	full	(.25-.3)xD	(.1-.25)xD	(.05-.08)xD	full	full	(.25-.3)xD	(.1-.25)xD	(.05-.08)xD
1/8"	.0004	.0008	.0004	.0004	.0008	.0006	.0007	.0006	.0006	.0007	.0003	.0004	.0003	.0003	.0004
1/4"	.0010	.0014	.0010	.0010	.0014	.0008	.0010	.0008	.0008	.0010	.0008	.0010	.0008	.0008	.0010
3/8"	.0012	.0022	.0012	.0012	.0022	.0010	.0015	.0010	.0010	.0015	.0010	.0015	.0010	.0010	.0015
1/2"	.0015	.0030	.0015	.0015	.0030	.0015	.0020	.0015	.0015	.0020	.0015	.0020	.0015	.0015	.0020
3/4"	.0030	.0035	.0030	.0030	.0035	.0025	.0030	.0025	.0025	.0030	.0020	.0025	.0020	.0020	.0025
1"	.0040	.0045	.0040	.0040	.0045	.0035	.0040	.0035	.0035	.0040	.0032	.0035	.0032	.0032	.0035

IPT (in/tooth)

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3410 FANTOM - METRIC



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The parameters listed for tool series that are starting 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 analyzing the rigidity of the process. Then cautiously progress incrementally to achieve optimum performance.

	Cast Iron					Hardened Steels > 48 RC					Steels				
	Slotting	Plunge/Ramp	Rough/Profile	HEM	Finish	Slotting	Plunge/Ramp	Rough/Profile	HEM	Finish	Slotting	Plunge/Ramp	Rough/Profile	HEM	Finish
SMM (m/min)	91	91	121	158	158	45	45	60	91	91	76	76	106	198	198
Axial Depth	< (1xD)	full	< (2xD)	< (2xD)	< (2xD)	< (1xD)	full	< (2xD)	< (2xD)	< (2xD)	< (1xD)	full	< (2xD)	< (2xD)	< (2xD)
Radial Width	full	full	(.25-.3)xD	(.1-.25)xD	(.05-.08)xD	full	full	(.25-.3)xD	(.1-.25)xD	(.05-.08)xD	full	full	(.25-.3)xD	(.1-.25)xD	(.05-.08)xD
3	.0254	.0305	.0254	.0254	.0305	.0178	.0203	.0127	.0127	.0254	.0254	.0305	.0254	.0254	.0305
6	.0457	.0457	.0457	.0457	.0457	.0356	.0356	.0254	.0254	.0381	.0457	.0457	.0457	.0457	.0457
10	.0686	.0686	.0686	.0686	.0686	.0508	.0660	.0508	.0508	.0660	.0686	.0889	.0889	.0889	.0889
12	.0889	.0889	.0889	.0889	.0889	.0660	.0762	.0635	.0635	.0762	.0889	.0991	.0991	.0991	.0991
20	.1092	.1092	.1092	.1092	.1092	.0838	.0838	.0762	.0762	.0838	.1092	.1092	.1092	.1092	.1092
25	.1270	.1270	.1270	.1270	.1270	.0991	.0991	.1016	.1016	.1143	.1270	.1270	.1270	.1270	.1270
	Stainless Steels					Super Alloys (Nickel Based, Inconel)					Titanium				
	Slotting	Plunge/Ramp	Rough/Profile	HEM	Finish	Slotting	Plunge/Ramp	Rough/Profile	HEM	Finish	Slotting	Plunge/Ramp	Rough/Profile	HEM	Finish
SMM (m/min)	60	60	68	91	91	22	22	27	38	38	30	30	45	83	83
Axial Depth	< (1xD)	full	< (2xD)	< (2xD)	< (2xD)	< (1xD)	full	< (2xD)	< (2xD)	< (2xD)	< (1xD)	full	< (2xD)	< (2xD)	< (2xD)
Radial Width	full	full	(.25-.3)xD	(.1-.25)xD	(.05-.08)xD	full	full	(.25-.3)xD	(.1-.25)xD	(.05-.08)xD	full	full	(.25-.3)xD	(.1-.25)xD	(.05-.08)xD
3	.0102	.0203	.0102	.0102	.0203	.0152	.0178	.0152	.0152	.0178	.0076	.0102	.0076	.0076	.0102
6	.0254	.0356	.0254	.0254	.0356	.0203	.0254	.0203	.0203	.0254	.0203	.0254	.0203	.0203	.0254
10	.0305	.0559	.0305	.0305	.0559	.0254	.0381	.0254	.0254	.0381	.0254	.0381	.0254	.0254	.0381
12	.0381	.0762	.0381	.0381	.0762	.0381	.0508	.0381	.0381	.0508	.0381	.0508	.0381	.0381	.0508
20	.0762	.0889	.0762	.0762	.0889	.0635	.0762	.0635	.0635	.0762	.0508	.0635	.0508	.0508	.0635
25	.1016	.1143	.1016	.1016	.1143	.0889	.1016	.0889	.0889	.1016	.0813	.0889	.0813	.0813	.0889

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SPEEDS / FEEDS