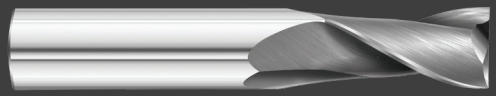
3215, 2002 JIT GENERAL PURPOSE - IMPERIAL



FULLERTON®

SPEEDS / FEEDS

3215 Series 2-Flute End Mill is offered in an extensive variety of configurations.

Not Recommended for High Si Aluminum (>10%), Composites, Plastics, Graphite, or Hardened Steels > 48RC. 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.

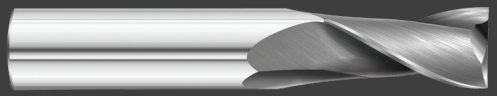
	Low Si Aluminum (<10%) (1100-1500) SFM (ft/min)					Brass & Copper (400-600) SFM (ft/min)					Cast Iron (250-400) SFM (ft/min)				
	Slotting	Plunge Ramp	Rough Profile	HEM	Finish	Slotting	Plunge Ramp	Rough Profile	HEM	Finish	Slotting	Plunge Ramp	Rough Profile	HEM	Finish
Axial Depth	< (1xD)	< (1xD)	1.5xD	1xD	< (1xD)	< (1xD)	< (1xD)	1.5xD	1xD	< (1xD)	< (1xD)	< (1xD)	1.5xD	1xD	< (1xD)
Radial Width	full	full	(.3-.5)xD	(.1-.15)xD	(.010-.015)	full	full	(.3-.5)xD	(.1-.15)xD	(.010-.015)	full	full	(.3-.5)xD	(.1-.15)xD	(.010-.015)
1/8"	.0039	.0051	.0039	.0051	.0039	.0004	.0006	.0004	.0006	.0004	.0004	.0008	.0004	.0008	.0004
1/4"	.0042	.0059	.0042	.0059	.0042	.0008	.0012	.0008	.0012	.0008	.0008	.0020	.0008	.0020	.0008
3/8"	.0046	.0068	.0046	.0068	.0046	.0020	.0025	.0020	.0025	.0020	.0018	.0036	.0018	.0036	.0018
1/2"	.0050	.0077	.0050	.0077	.0050	.0033	.0036	.0033	.0036	.0033	.0025	.0049	.0025	.0049	.0025
3/4"	.0055	.0088	.0055	.0088	.0055	.0045	.0049	.0045	.0049	.0045	.0033	.0060	.0033	.0060	.0033
1"	.0059	.0098	.0059	.0098	.0059	.0059	.0062	.0059	.0062	.0059	.0039	.0071	.0039	.0071	.0039

	Steels (230-350) SFM (ft/min)					Stainless Steels (130-260) SFM (ft/min)					Super Alloys (Nickel Based, Inconel) (80-120) SFM (ft/min)				
	Slotting	Plunge Ramp	Rough Profile	HEM	Finish	Slotting	Plunge Ramp	Rough Profile	HEM	Finish	Slotting	Plunge Ramp	Rough Profile	HEM	Finish
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	(.1-.15)xD	(.010-.015)	full	full	(.3-.5)xD	(.1-.15)xD	(.010-.015)	full	full	(.3-.5)xD	(.1-.15)xD	(.010-.015)
1/8"	.0004	.0006	.0004	.0006	.0004	.0002	.0004	.0002	.0004	.0002	.0002	.0004	.0002	.0004	.0002
1/4"	.0012	.0017	.0012	.0018	.0012	.0006	.0008	.0006	.0008	.0006	.0004	.0008	.0004	.0008	.0004
3/8"	.0022	.0030	.0022	.0030	.0022	.0010	.0012	.0010	.0012	.0010	.0006	.0011	.0006	.0011	.0006
1/2"	.0030	.0045	.0030	.0045	.0030	.0014	.0018	.0014	.0018	.0014	.0008	.0015	.0008	.0015	.0008
3/4"	.0039	.0060	.0039	.0060	.0039	.0017	.0024	.0017	.0024	.0017	.0010	.0018	.0010	.0018	.0010
1"	.0047	.0071	.0047	.0071	.0047	.0020	.0031	.0020	.0031	.0020	.0012	.0020	.0012	.0020	.0012

	Titanium (120-200) SFM (ft/min)				
	Slotting	Plunge Ramp	Rough Profile	HEM	Finish
Axial Depth	< (1xD)	< (1xD)	1.5xD	1xD	< (1xD)
Radial Width	full	full	(.3-.5)xD	(.1-.15)xD	(.010-.015)
1/8"	.0002	.0004	.0002	.0004	.0002
1/4"	.0006	.0010	.0006	.0010	.0006
3/8"	.0010	.0016	.0010	.0016	.0010
1/2"	.0014	.0022	.0014	.0022	.0014
3/4"	.0017	.0026	.0017	.0026	.0017
1"	.0020	.0031	.0020	.0031	.0020

IPT (in/tooth)

3215, 2002 JIT GENERAL PURPOSE - METRIC



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SPEEDS / FEEDS

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	Low Si Aluminum (<10%) (335-457) SMM (m/min)					Brass & Copper (121-182) SMM (m/min)					Cast Iron (76-121)SMM (m/min)				
	Slotting	Plunge Ramp	Rough Profile	HEM	Finish	Slotting	Plunge Ramp	Rough Profile	HEM	Finish	Slotting	Plunge Ramp	Rough Profile	HEM	Finish
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	(.1-.15)xD	(.25-.40)	full	full	(.3-.5)xD	(.1-.15)xD	(.25-.40)	full	full	(.3-.5)xD	(.1-.15)xD	(.25-.40)
3	.0991	.1295	.0991	.1295	.0991	.0102	.0152	.0102	.0152	.0102	.0102	.0203	.0102	.0203	.0102
6	.1067	.1499	.1067	.1499	.1067	.0203	.0305	.0203	.0305	.0203	.0203	.0508	.0203	.0508	.0203
10	.1168	.1727	.1168	.1727	.1168	.0508	.0635	.0508	.0635	.0508	.0457	.0914	.0457	.0914	.0457
12	.1270	.1956	.1270	.1956	.1270	.0838	.0914	.0838	.0914	.0838	.0635	.1245	.0635	.1245	.0635
20	.1397	.2235	.1397	.2235	.1397	.1143	.1245	.1143	.1245	.1143	.0838	.1524	.0838	.1524	.0838
25	.1499	.2489	.1499	.2489	.1499	.1499	.1575	.1499	.1575	.1499	.0991	.1803	.0991	.1803	.0991

	Steels (70-106) SMM (m/min)					Stainless Steels (39-85) SMM (m/min)					Super Alloys (Nickel Based, Inconel) (24-36) SMM (m/min)				
	Slotting	Plunge Ramp	Rough Profile	HEM	Finish	Slotting	Plunge Ramp	Rough Profile	HEM	Finish	Slotting	Plunge Ramp	Rough Profile	HEM	Finish
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	(.1-.15)xD	(.25-.40)	full	full	(.3-.5)xD	(.1-.15)xD	(.25-.40)	full	full	(.3-.5)xD	(.1-.15)xD	(.25-.40)
3	.0102	.0152	.0102	.0152	.0102	.0051	.0102	.0051	.0102	.0051	.0051	.0102	.0051	.0102	.0051
6	.0305	.0432	.0305	.0457	.0305	.0152	.0203	.0152	.0203	.0152	.0102	.0203	.0102	.0203	.0102
10	.0559	.0762	.0559	.0762	.0559	.0254	.0305	.0254	.0305	.0254	.0152	.0279	.0152	.0279	.0152
12	.0762	.1143	.0762	.1143	.0762	.0356	.0457	.0356	.0457	.0356	.0203	.0381	.0203	.0381	.0203
20	.0991	.1524	.0991	.1524	.0991	.0432	.0610	.0432	.0610	.0432	.0254	.0457	.0254	.0457	.0254
25	.1194	.1803	.1194	.1803	.1194	.0508	.0787	.0508	.0787	.0508	.0305	.0508	.0305	.0508	.0305

	Titanium (36-60) SMM (m/min)				
	Slotting	Plunge Ramp	Rough Profile	HEM	Finish
Axial Depth	< (1xD)	< (1xD)	1.5xD	1xD	< (1xD)
Radial Width	full	full	(.3-.5)xD	(.1-.15)xD	(.25-.40)
3	.0051	.0102	.0051	.0102	.0051
6	.0152	.0254	.0152	.0254	.0152
10	.0254	.0406	.0254	.0406	.0254
12	.0356	.0559	.0356	.0559	.0356
20	.0432	.0660	.0432	.0660	.0432
25	.0508	.0787	.0508	.0787	.0508

MMPT (mm/tooth)