3200, 2004 JIT GENERAL PURPOSE - IMPERIAL

FULLERTON®

SPEEDS / FEEDS

3200 Series 4-Flute End Mill is offered in an extensive variety of configurations.

Not Recommended for High Si Aluminum (>10%), Composites, Plastics, 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.

	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	(.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"	.0010	.0012	.0010	.0012	.0010	.0009	.0011	.0007	.0011	.0007	.0010	.0012	.0008	.0012	.0008
1/4"	.0030	.0034	.0030	.0034	.0030	.0013	.0014	.0009	.0015	.0009	.0014	.0015	.0010	.0015	.0010
3/8"	.0045	.0048	.0045	.0048	.0045	.0021	.0020	.0012	.0021	.0012	.0022	.0022	.0013	.0022	.0013
1/2"	.0060	.0063	.0060	.0063	.0060	.0025	.0028	.0025	.0028	.0025	.0025	.0030	.0025	.0030	.0025
3/4"	.0080	.0085	.0080	.0085	.0080	.0030	.0035	.0028	.0035	.0028	.0028	.0035	.0030	.0035	.0030
1"	.0100	.0114	.0100	.0114	.0100	.0040	.0045	.0035	.0040	.0035	.0035	.0045	.0040	.0045	.0040

	Hardened Steels > 48 RC (80-130) SFM (ft/min)					Steels (230-350) SFM (ft/min)					Stainless Steels (130-260) 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	(.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	.0008	.0009	.0008	.0006	.0008	.0006	.0008	.0006	.0006	.0008	.0006	.0008	.0006
1/4"	.0015	.0016	.0015	.0016	.0015	.0014	.0014	.0014	.0014	.0014	.0014	.0014	.0014	.0014	.0014
3/8"	.0020	.0022	.0020	.0022	.0020	.0022	.0022	.0022	.0022	.0022	.0022	.0022	.0022	.0022	.0022
1/2"	.0025	.0025	.0025	.0025	.0025	.0025	.0025	.0025	.0025	.0025	.0023	.0023	.0023	.0023	.0023
3/4"	.0028	.0030	.0028	.0030	.0028	.0028	.0028	.0028	.0028	.0028	.0025	.0025	.0025	.0025	.0025
1"	.0030	.0035	.0030	.0035	.0030	.0035	.0035	.0035	.0035	.0035	.0027	.0027	.0027	.0027	.0027

	Super Alloys (Nickel Based, Inconel) (80-120) SFM (ft/min)					Titanium (120-200) SFM (ft/min)				
	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)
Radial Width	full	full	(.3-.5)xD	(.010-.015)	(.3-.5)xD	full	full	(.3-.5)xD	(.010-.015)	(.3-.5)xD
1/8"	.0003	.0004	.0003	.0004	.0003	.0003	.0004	.0003	.0004	.0003
1/4"	.0007	.0010	.0008	.0010	.0008	.0007	.0007	.0007	.0007	.0007
3/8"	.0012	.0015	.0015	.0015	.0015	.0011	.0011	.0011	.0011	.0011
1/2"	.0018	.0020	.0020	.0020	.0020	.0014	.0014	.0014	.0014	.0014
3/4"	.0025	.0028	.0025	.0025	.0025	.0018	.0018	.0018	.0018	.0018
1"	.0030	.0035	.0030	.0030	.0030	.0025	.0025	.0025	.0025	.0025

IPT (in/tooth)

3200, 2004 JIT GENERAL PURPOSE - METRIC

3200 Series 4-Flute End Mill is offered in an extensive variety of configurations.

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FULLERTON®

SPEEDS / FEEDS

	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	(.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	.0254	.0305	.0254	.0305	.0254	.0229	.0279	.0178	.0279	.0178	.0254	.0305	.0203	.0305	.0203
6	.0762	.0864	.0762	.0864	.0762	.0330	.0356	.0229	.0381	.0229	.0356	.0381	.0254	.0381	.0254
10	.1143	.1219	.1143	.1219	.1143	.0533	.0508	.0305	.0533	.0305	.0559	.0559	.0330	.0559	.0330
12	.1524	.1600	.1524	.1600	.1524	.0635	.0711	.0635	.0711	.0635	.0635	.0762	.0635	.0762	.0635
20	.2032	.2159	.2032	.2159	.2032	.0762	.0889	.0711	.0889	.0711	.0711	.0889	.0762	.0889	.0762
25	.2540	.2896	.2540	.2896	.2540	.1016	.1143	.0889	.1016	.0889	.0889	.1143	.1016	.1143	.1016

	Hardened Steels > 48 RC (24-39) SMM (m/min)					Steels (70-106) SMM (m/min)					Stainless Steels (39-85) 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	(.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	.0203	.0229	.0203	.0152	.0203	.0152	.0203	.0152	.0152	.0203	.0152	.0203	.0152
6	.0381	.0406	.0381	.0406	.0381	.0356	.0356	.0356	.0356	.0356	.0356	.0356	.0356	.0356	.0356
10	.0508	.0559	.0508	.0559	.0508	.0559	.0559	.0559	.0559	.0559	.0559	.0559	.0559	.0559	.0559
12	.0635	.0635	.0635	.0635	.0635	.0635	.0635	.0635	.0635	.0635	.0584	.0584	.0584	.0584	.0584
20	.0711	.0762	.0711	.0762	.0711	.0711	.0711	.0711	.0711	.0711	.0635	.0635	.0635	.0635	.0635
25	.0762	.0889	.0762	.0889	.0762	.0889	.0889	.0889	.0889	.0889	.0686	.0686	.0686	.0686	.0686

	Super Alloys (Nickel Based, Inconel) (24-36) SMM (m/min)					Titanium (36-60) SMM (m/min)				
	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)
Radial Width	full	full	(.3-.5)xD	(.010-.015)	(.3-.5)xD	full	full	(.3-.5)xD	(.010-.015)	(.3-.5)xD
3	.0076	.0102	.0076	.0102	.0076	.0076	.0102	.0076	.0102	.0076
6	.0178	.0254	.0203	.0254	.0203	.0178	.0178	.0178	.0178	.0178
10	.0305	.0381	.0381	.0381	.0381	.0279	.0279	.0279	.0279	.0279
12	.0457	.0508	.0508	.0508	.0508	.0356	.0356	.0356	.0356	.0356
20	.0635	.0711	.0635	.0635	.0635	.0457	.0457	.0457	.0457	.0457
25	.0762	.0889	.0762	.0762	.0762	.0635	.0635	.0635	.0635	.0635

MMPT (mm/tooth)