



# Niagara Cutter

**NEW Solid**

## Carbide End Mills for Aluminum Applications

- 3 flute design for smoother/quieter milling operations
- Both roughing and finishing capabilities
- Maximum 1XD axial depth of cut for HSM applications
- Wiper flat on end teeth for improved surface finish on the floor of part
- Cylindrical land to reduce chatter

**A340**  
**AN340**



Price Code E

Flute Diameter	Shank Diameter	LOC	Reach Length	Neck Dia	OAL	# F	Radius	Uncoated EDP	Uncoated List	TICN EDP	TiCN List
3/16	3/16	1/4	-	-	2	3	0.010	57880	\$20.64	57909	\$23.12
3/16	3/16	1/4	9/16	0.178	2	3	0.010	57881	\$20.97	57910	\$23.49
3/16	3/16	1/4	1 9/16	0.178	3	3	0.010	57882	\$23.46	57911	\$26.27
1/4	1/4	5/16	-	-	2 1/2	3	0.010	57883	\$28.09	57912	\$31.47
1/4	1/4	5/16	3/4	0.240	2 1/2	3	0.010	57884	\$28.49	57913	\$31.90
1/4	1/4	5/16	1 3/4	0.240	3 1/4	3	0.010	57885	\$30.58	57914	\$34.24
3/8	3/8	1/2	-	-	2 1/2	3	0.015	57886	\$44.89	57915	\$50.27
3/8	3/8	1/2	-	-	3	3	0.015	57887	\$47.95	57916	\$53.71
3/8	3/8	1/2	7/8	0.360	2 1/2	3	0.015	57888	\$45.54	57917	\$51.00
3/8	3/8	1/2	1 3/8	0.360	3	3	0.015	57889	\$48.67	57918	\$54.52
3/8	3/8	1/2	2 3/8	0.360	4	3	0.015	57890	\$53.12	57919	\$59.49
1/2	1/2	5/8	-	-	3	3	0.020	57891	\$69.25	57920	\$77.56
1/2	1/2	5/8	-	-	4	3	0.020	57892	\$80.36	57921	\$90.01
1/2	1/2	5/8	1 1/8	0.480	3	3	0.020	57893	\$70.36	57922	\$78.80
1/2	1/2	5/8	2 1/8	0.480	4	3	0.020	57894	\$81.53	57923	\$91.32
1/2	1/2	5/8	3 1/8	0.480	5	3	0.020	57895	\$86.76	57924	\$97.18
5/8	5/8	3/4	-	-	3 1/2	3	0.025	57896	\$115.64	57925	\$129.52
5/8	5/8	3/4	1 1/2	0.600	3 1/2	3	0.025	57897	\$117.60	57926	\$131.71
5/8	5/8	3/4	2 1/2	0.600	5	3	0.025	57898	\$130.01	57927	\$145.61
3/4	3/4	1	-	-	4	3	0.030	57899	\$185.55	57928	\$207.82
3/4	3/4	1	-	-	5	3	0.030	57900	\$206.45	57929	\$231.23
3/4	3/4	1	1 7/8	0.720	4	3	0.030	57901	\$189.47	57930	\$212.21
3/4	3/4	1	2 7/8	0.720	5	3	0.030	57902	\$209.72	57931	\$234.89
3/4	3/4	1	3 7/8	0.720	6	3	0.030	57903	\$220.17	57932	\$246.59
1	1	1 1/4	-	-	4	3	0.040	57904	\$280.93	57933	\$314.64
1	1	1 1/4	-	-	5	3	0.040	57905	\$309.68	57934	\$346.85
1	1	1 1/4	1 5/8	0.960	4	3	0.040	57906	\$286.16	57935	\$320.50
1	1	1 1/4	2 5/8	0.960	5	3	0.040	57907	\$314.91	57936	\$352.70
1	1	1 1/4	3 5/8	0.960	6	3	0.040	57908	\$329.28	57937	\$368.79

### A340 TiCN Coated Recommended Starting Point Speed and Feeds (Slotting 1XD)

Material	Diameter =	1/4			3/8			1/2			3/4			1		
		sfpm	rpm	cpt	ipm	rpm	cpt	ipm	rpm	cpt	ipm	rpm	cpt	ipm	rpm	cpt
Aluminum Alloys	1400	21,392	0.0060	385.1	14,261	0.0090	385.1	10,696	0.0120	385.1	7,131	0.0150	320.9	5,348	0.0180	288.8
7075-T6	1200	18,336	0.0060	330.0	12,224	0.0090	330.0	9,168	0.0120	330.0	6,112	0.0150	275.0	4,584	0.0180	247.5

### A340 TiCN Coated Recommended Starting Point Speed and Feeds (Profiling .25XD)

Material	Diameter =	1/4			3/8			1/2			3/4			1		
		sfpm	rpm	cpt	ipm	rpm	cpt	ipm	rpm	cpt	ipm	rpm	cpt	ipm	rpm	cpt
Aluminum Alloys	1400	21,392	0.0100	641.8	14,261	0.0150	641.8	10,696	0.0200	641.8	7,131	0.0250	534.8	5,348	0.0300	481.3
7075-T6	1200	18,336	0.0100	550.1	12,224	0.0150	550.1	9,168	0.0200	550.1	6,112	0.0250	458.4	4,584	0.0300	412.6

# A345R



- Full Radius Program
- 3 flute design for smoother/quieter milling operations
- Both roughing and finishing capabilities
- Wiper flat on end teeth for improved surface finish on the floor of part
- Cylindrical land to reduce chatter

Price Code E

Dia.	Shank	LOC	OAL	# F	.010 Radius		.020 Radius		.030 Radius		.045 Radius					
					TiCN EDP	TiCN List	TiCN EDP	TiCN List	TiCN EDP	TiCN List	TiCN EDP	TiCN List				
1/8	1/8	3/8	1 1/2	3	61627-010	\$23.84	61627-020	\$23.84	61627-030	\$23.84	-	-				
5/32	3/16	1/2	2	3	61629-010	\$27.48	61629-020	\$27.48	61629-030	\$27.48	-	-				
3/16	3/16	9/16	2	3	61631-010	\$36.18	61631-020	\$36.18	61631-030	\$36.18	-	-				
7/32	1/4	3/4	2 1/2	3	61633-010	\$34.42	61633-020	\$34.42	61633-030	\$34.42	-	-				
1/4	1/4	3/4	2 1/2	3	61635-010	\$37.24	61635-020	\$37.24	61635-030	\$37.24	61635-045	\$37.24				
9/32	5/16	13/16	2 1/2	3	61638-010	\$39.24	61638-020	\$39.24	61638-030	\$39.24	61638-045	\$39.24				
5/16	5/16	13/16	2 1/2	3	61640-010	\$42.65	61640-020	\$42.65	61640-030	\$42.65	61640-045	\$42.65				
5/16	5/16	2 1/4	4	3	61642-010	\$81.11	61642-020	\$81.11	61642-030	\$81.11	61642-045	\$81.11				
11/32	3/8	1	2 1/2	3	61644-010	\$46.65	61644-020	\$46.65	61644-030	\$46.65	61644-045	\$46.65				
3/8	3/8	1	2 1/2	3	61646-010	\$50.88	61646-020	\$50.88	61646-030	\$50.88	61646-045	\$50.88				
13/32	7/16	1	2 3/4	3	61649-010	\$55.59	61649-020	\$55.59	61649-030	\$55.59	61649-045	\$55.59				
7/16	7/16	1	2 3/4	3	61651-010	\$60.88	61651-020	\$60.88	61651-030	\$60.88	61651-045	\$60.88				
15/32	1/2	1 1/4	3	3	61653-010	\$66.76	61653-020	\$66.76	61653-030	\$66.76	61653-045	\$66.76				
1/2	1/2	5/8	3	3	61654-010	\$66.76	61654-020	\$66.76	61654-030	\$66.76	61654-045	\$66.76				
1/2	1/2	1 1/4	3	3	61655-010	\$73.34	61655-020	\$73.34	61655-030	\$73.34	61655-045	\$73.34				
1/2	1/2	2	4	3	61656-010	\$100.75	61656-020	\$100.75	61656-030	\$100.75	61656-045	\$100.75				
1/2	1/2	3 1/8	6	3	61657-010	\$169.43	61657-020	\$169.43	61657-030	\$169.43	61657-045	\$169.43				
5/8	5/8	1 5/8	3 1/2	3	61659-010	\$150.26	61659-020	\$150.26	61659-030	\$150.26	61659-045	\$150.26				
5/8	5/8	3 3/4	6	3	61661-010	\$258.22	61661-020	\$258.22	61661-030	\$258.22	61661-045	\$258.22				
3/4	3/4	1	3	3	61662-010	\$160.02	61662-020	\$160.02	61662-030	\$160.02	61662-045	\$160.02				
3/4	3/4	2 1/4	5	3	61664-010	\$209.76	61664-020	\$209.76	61664-030	\$209.76	61664-045	\$209.76				
3/4	3/4	4	6 1/2	3	61666-010	\$376.75	61666-020	\$376.75	61666-030	\$376.75	61666-045	\$376.75				
1	1	2 5/8	6	3	61669-010	\$306.32	61669-020	\$306.32	61669-030	\$306.32	61669-045	\$306.32				
1	1	4 1/8	7	3	61671-010	\$518.46	61671-020	\$518.46	61671-030	\$518.46	61671-045	\$518.46				
<b>Flute Dia.</b>		+0.000"		-0.002"		<b>Overall Length</b>				+/-0.060"				<b>Helix Angle</b>		45°
<b>Shank Dia.</b>		-0.0001"		-0.0004"		<b>Length of Cut</b>				1/16 to 5/16" +0.030/-0.000"				21/64 to 1" +0.060/-0.000"		

Price Code E

Dia.	Shank	LOC	OAL	# F	.060 Radius		.090 Radius		.125 Radius		.190 Radius					
					TiCN EDP	TiCN List	TiCN EDP	TiCN List	TiCN EDP	TiCN List	TiCN EDP	TiCN List				
1/4	1/4	3/4	2 1/2	3	61635-060	\$37.24	-	-	-	-	-	-				
9/32	5/16	13/16	2 1/2	3	61638-060	\$39.24	-	-	-	-	-	-				
5/16	5/16	13/16	2 1/2	3	61640-060	\$42.65	-	-	-	-	-	-				
5/16	5/16	2 1/4	4	3	61642-060	\$81.11	-	-	-	-	-	-				
11/32	3/8	1	2 1/2	3	61644-060	\$46.65	-	-	-	-	-	-				
3/8	3/8	1	2 1/2	3	61646-060	\$50.88	-	-	-	-	-	-				
13/32	7/16	1	2 3/4	3	61649-060	\$55.59	-	-	-	-	-	-				
7/16	7/16	1	2 3/4	3	61651-060	\$60.88	61651-090	\$62.43	61651-125	\$62.43	-	-				
15/32	1/2	1 1/4	3	3	61653-060	\$66.76	61653-090	\$68.31	61653-125	\$68.31	-	-				
1/2	1/2	5/8	3	3	61654-060	\$66.76	61654-090	\$68.31	61654-125	\$68.31	-	-				
1/2	1/2	1 1/4	3	3	61655-060	\$73.34	61655-090	\$74.90	61655-125	\$74.90	-	-				
1/2	1/2	2	4	3	61656-060	\$100.75	61656-090	\$102.30	61656-125	\$102.30	-	-				
1/2	1/2	3 1/8	6	3	61657-060	\$169.43	61657-090	\$170.98	61657-125	\$170.98	-	-				
5/8	5/8	1 5/8	3 1/2	3	61659-060	\$150.26	61659-090	\$151.81	61659-125	\$151.81	-	-				
5/8	5/8	3 3/4	6	3	61661-060	\$258.22	61661-090	\$259.77	61661-125	\$259.77	-	-				
3/4	3/4	1	3	3	61662-060	\$160.02	61662-090	\$161.57	61662-125	\$161.57	61662-190	\$163.23				
3/4	3/4	2 1/4	5	3	61664-060	\$209.76	61664-090	\$211.31	61664-125	\$211.31	61664-190	\$212.98				
3/4	3/4	4	6 1/2	3	61666-060	\$376.75	61666-090	\$378.30	61666-125	\$378.30	61666-190	\$379.97				
1	1	2 5/8	6	3	61669-060	\$306.32	61669-090	\$307.87	61669-125	\$307.87	61669-190	\$309.53				
1	1	4 1/8	7	3	61671-060	\$518.46	61671-090	\$520.01	61671-125	\$520.01	61671-190	\$521.68				
<b>Flute Dia.</b>		+0.000"		-0.002"		<b>Overall Length</b>				+/-0.060"				<b>Helix Angle</b>		45°
<b>Shank Dia.</b>		-0.0001"		-0.0004"		<b>Length of Cut</b>				1/16 to 5/16" +0.030/-0.000"				21/64 to 1" +0.060/-0.000"		

### A345R TiCN Coated Recommended Starting Point Speed and Feeds (Slotting 1XD)

Material	Diameter =	1/4			3/8			1/2			3/4			1		
		sfpm	rpm	cpt	ipm	rpm	cpt	ipm	rpm	cpt	ipm	rpm	cpt	ipm	rpm	cpt
6061-T6	1400	21,392	0.0045	288.8	14,261	0.0068	288.8	10,696	0.0090	288.8	7,131	0.0113	240.7	5,348	0.0135	216.6
7075-T6	1200	18,336	0.0045	247.5	12,224	0.0068	247.5	9,168	0.0090	247.5	6,112	0.0113	206.3	4,584	0.0135	185.7

### A345R TiCN Coated Recommended Starting Point Speed and Feeds (Profiling .25XD)

Material	Diameter =	1/4			3/8			1/2			3/4			1		
		sfpm	rpm	cpt	ipm	rpm	cpt	ipm	rpm	cpt	ipm	rpm	cpt	ipm	rpm	cpt
6061-T6	1400	21,392	0.0075	481.3	14,261	0.0113	481.3	10,696	0.0150	481.3	7,131	0.0188	401.1	5,348	0.0225	361.0
7075-T6	1200	18,336	0.0075	412.6	12,224	0.0113	412.6	9,168	0.0150	412.6	6,112	0.0188	343.8	4,584	0.0225	309.4

pricing  
revised  
12/3/07