

EXOCARB®-Diamond

OSG Patented Diamond Coated Carbide End Mills

- List 7020 Stub Length - 2 Flute
- List 7120 Regular Length - 2 Flute
- List 7040 Inch - Stub Length - 4 Flute
- List 7041 Long Length - 4 Flute
- List 7042 Stub Length - 4 Flute Long Shank
- List 7072 Inch, Stub Length - 4 Flute - Long Shank - Corner Radius
- List 7010 Long Length - 2 Flute
- List 7110 Ball End - Regular Length - 2 Flute
- List 7030 Ball End - Regular Length - 4 Flute
- List 7031 Ball End - Long Length - 4 Flute
- List 7032 Inch - Ball End - Stub Length - 4 Flute - Long Shank
- List 7173 Metric - Ball End - Stub Length - 4 Flute - Long Shank
- List 7132 Metric - Stub Length - 4 Flute - Long Shank - Corner Radius
- List 7140 Metric - Stub Length - 4 Flute

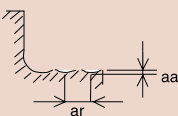
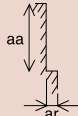
Standard

Work Material	Graphite		Green Ceramic Thermoset Plastic		Fiber Filler Plastics	
Cutting Speed	160~3,000 SFM		80~1,400 SFM		130~800 SFM	
Depth of Cut	Note 1: Please take light depth of cut when you run for High End Speed/Feed. Note 2: Please reduce speed and feed by 20% when L/D>3D. Note 3: Please reduce speed and feed by 30% when slotting > 0.5D.					
Mill Dia.	Speed RPM	Feed in/tooth	Speed RPM	Feed in/tooth	Speed RPM	Feed in/tooth
1/32	40,000	0.0005-0.0010	20,000	0.0005-0.0010	20,000	0.0004-0.0008
1/16	40,000	0.0010-0.0020	20,000	0.0010-0.0020	12,000	0.0010-0.0020
3/32	40,000	0.0010-0.0020	20,000	0.0010-0.0020	11,000	0.0010-0.0020
1/8	40,000	0.0010-0.0020	16,000	0.0010-0.0020	10,500	0.0010-0.0020
3/16	40,000	0.0010-0.0020	15,000	0.0010-0.0020	10,000	0.0010-0.0020
1/4	36,000	0.0020-0.0040	12,500	0.0020-0.0040	9,000	0.0015-0.0030
5/16	32,000	0.0020-0.0040	12,000	0.0020-0.0040	8,000	0.0020-0.0040
3/8	28,000	0.0030-0.0050	11,500	0.0030-0.0050	7,000	0.0030-0.0050
1/2	24,000	0.0030-0.0050	11,000	0.0030-0.0050	6,000	0.0030-0.0050



- List 7020 (continued) Stub Length - 2 Flute
- List 7120 (continued) Regular Length - 2 Flute
- List 7040 (continued) Inch - Stub Length - 4 Flute
- List 7041 (continued) Long Length - 4 Flute
- List 7042 (continued) Stub Length - 4 Flute Long Shank
- List 7072 (continued) Inch, Stub Length - 4 Flute - Long Shank - Corner Radius
- List 7010 (continued) Long Length - 2 Flute
- List 7110 (continued) Ball End - Regular Length - 2 Flute
- List 7030 (continued) Ball End - Regular Length - 4 Flute
- List 7031 (continued) Ball End - Long Length - 4 Flute
- List 7032 (continued) Inch - Ball End - Stub Length - 4 Flute - Long Shank
- List 7173 (continued) Metric - Ball End - Stub Length - 4 Flute - Long Shank
- List 7132 (continued) Metric - Stub Length - 4 Flute - Long Shank - Corner Radius
- List 7140 (continued) Metric - Stub Length - 4 Flute

Standard

Work Material	Aluminum Alloys		MMC*		Copper Alloys																				
Cutting Speed	160-8,000 SFM		100-750 SFM		328-6,490 SFM																				
Depth of Cut	<table border="1"> <tr><th></th><th>aa</th><th>ar</th></tr> <tr><th>D<1/8</th><td>0.02D</td><td>0.05D</td></tr> <tr><th>D>1/8</th><td>0.1D</td><td>0.2D</td></tr> </table>			aa	ar	D<1/8	0.02D	0.05D	D>1/8	0.1D	0.2D			<table border="1"> <tr><th>Dia</th><th>aa</th><th>ar</th></tr> <tr><th>D<1/8</th><td>0.5D</td><td>0.05D</td></tr> <tr><th>D>1/8</th><td>1D</td><td>0.1D</td></tr> </table>		Dia	aa	ar	D<1/8	0.5D	0.05D	D>1/8	1D	0.1D	
		aa	ar																						
D<1/8	0.02D	0.05D																							
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Mill Dia.	Speed RPM	Feed in/tooth	Speed RPM	Feed in/tooth	Speed RPM	Feed in/tooth																			
1/32	40,000	0.0004-0.0008	20,000	0.0004-0.0008	40,000	0.0004-0.0008																			
1/16	32,000	0.0010-0.0020	20,000	0.0010-0.0020	32,000	0.0010-0.0020																			
3/32	25,000	0.0010-0.0020	20,000	0.0010-0.0020	25,000	0.0010-0.0020																			
1/8	24,000	0.0010-0.0020	16,000	0.0010-0.0020	10,500	0.0010-0.0020																			
3/16	16,000	0.0010-0.0020	15,000	0.0010-0.0020	16,000	0.0010-0.0020																			
1/4	12,000	0.0015-0.0030	12,000	0.0015-0.0030	12,000	0.0015-0.0030																			
5/16	9,500	0.0020-0.0040	9,500	0.0020-0.0040	9,500	0.0020-0.0040																			
3/8	8,000	0.0030-0.0050	8,000	0.0030-0.0050	8,000	0.0030-0.0050																			
1/2	6,000	0.0030-0.0050	6,000	0.0030-0.0050	6,000	0.0030-0.0050																			

*Metal Matrix Composite (AISIc)