

SwiftCARB High Performance Speeds & Feeds for Aluminum Cutters -Uncoated-

AR3Series		ISO					AR3 Series Feeds and Speeds -Uncoated-					N
							Aluminum Wrought Alloy & Aluminum Cast Alloy < 12% Si 6061-T6, 7075, Plastic					
Axial Depth		1x DIA	1.5x DIA	2x DIA	2x DIA	2x DIA						
Radial Engagement		100-85%	85-50%	50-25%	25-10%	10-0%	100-85%	85-50%	50-25%	25-10%	10-0%	
Chip Load Range at TEA		Full	Heavy	Medium	Light	Light	Surface Feet Per Min					
Diameter		Slotting	Roughing	Roughing	Roughing	Finishing	MIN		MID		MAX	
1/4"	0.250	0.0024	0.0033	0.0042	0.0051	0.0060	640	880	1120	1360	1600	
5/16"	0.312	0.0028	0.0039	0.0049	0.0060	0.0070	720	990	1260	1530	1800	
3/8"	0.375	0.0032	0.0044	0.0056	0.0068	0.0080	740	1018	1295	1573	1850	
7/16"	0.437	0.0036	0.0050	0.0063	0.0077	0.0090	760	1045	1330	1615	1900	
1/2"	0.500	0.0048	0.0066	0.0084	0.0102	0.0120	800	1100	1400	1700	2000	
5/8"	0.625	0.0056	0.0077	0.0098	0.0119	0.0140	800	1100	1400	1700	2000	
3/4"	0.750	0.0064	0.0088	0.0112	0.0136	0.0160	800	1100	1400	1700	2000	
7/8"	0.875	0.0072	0.0099	0.0126	0.0153	0.0180	800	1100	1400	1700	2000	
1"	1.000	0.0080	0.0110	0.0140	0.0170	0.0200	800	1100	1400	1700	2000	
1-1/4"	1.250	0.0088	0.0121	0.0154	0.0187	0.0220	800	1100	1400	1700	2000	

AF4Series		ISO					AF4 Series Feeds and Speeds -Uncoated-					N
		Aluminum Wrought Alloy & Aluminum Cast Alloy < 12% Si 6061-T6, 7075, Plastic										
Axial Depth		1x DIA	1.5x DIA	2x DIA	2x DIA	2x DIA						
Radial Engagement		100-85%	85-50%	50-25%	25-10%	10-0%	100-85%	85-50%	50-25%	25-10%	10-0%	
Chip Load Range at TEA		Full	Heavy	Medium	Light	Light	Surface Feet Per Min					
Diameter		Slotting	Roughing	Roughing	Roughing	Finishing	MIN		MID		MAX	
1/4"	0.250	Not Advised	0.0022	0.0028	0.0034	0.0040	672	924	1176	1428	1680	
5/16"	0.312	Not Advised	0.0028	0.0035	0.0043	0.0050	720	990	1260	1530	1800	
3/8"	0.375	Not Advised	0.0033	0.0042	0.0051	0.0060	768	1056	1344	1632	1920	
7/16"	0.437	Not Advised	0.0044	0.0056	0.0068	0.0080	864	1188	1512	1836	2160	
1/2"	0.500	Not Advised	0.0055	0.0070	0.0085	0.0100	960	1320	1680	2040	2400	
5/8"	0.625	Not Advised	0.0061	0.0077	0.0094	0.0110	960	1320	1680	2040	2400	
3/4"	0.750	Not Advised	0.0066	0.0084	0.0102	0.0120	960	1320	1680	2040	2400	
7/8"	0.875	Not Advised	0.0072	0.0091	0.0111	0.0130	960	1320	1680	2040	2400	
1"	1.000	Not Advised	0.0077	0.0098	0.0119	0.0140	960	1320	1680	2040	2400	
1-1/4"	1.250	Not Advised	0.0088	0.0112	0.0136	0.0160	960	1320	1680	2040	2400	

AF5 Series		ISO					AF5 Series Feeds and Speeds -Uncoated-					N
		Aluminum Wrought Alloy & Aluminum Cast Alloy < 12% Si 6061-T6, 7075, Plastic										
Axial Depth		1x DIA	1.5x DIA	2x DIA	2x DIA	2x DIA						
Radial Engagement		100-85%	85-50%	50-25%	25-10%	10-0%	100-85%	85-50%	50-25%	25-10%	10-0%	
Chip Load Range at TEA		Full	Heavy	Medium	Light	Light	Surface Feet Per Min					
Diameter		Slotting	Roughing	Roughing	Roughing	Finishing	MIN		MID		MAX	
1/4"	0.250	Not Advised	Not Advised	0.0028	0.0034	0.0040	672	924	1176	1428	1680	
5/16"	0.312	Not Advised	Not Advised	0.0035	0.0043	0.0050	720	990	1260	1530	1800	
3/8"	0.375	Not Advised	Not Advised	0.0042	0.0051	0.0060	768	1056	1344	1632	1920	
7/16"	0.437	Not Advised	Not Advised	0.0056	0.0068	0.0080	864	1188	1512	1836	2160	
1/2"	0.500	Not Advised	Not Advised	0.0070	0.0085	0.0100	960	1320	1680	2040	2400	
5/8"	0.625	Not Advised	Not Advised	0.0077	0.0094	0.0110	960	1320	1680	2040	2400	
3/4"	0.750	Not Advised	Not Advised	0.0084	0.0102	0.0120	960	1320	1680	2040	2400	
7/8"	0.875	Not Advised	Not Advised	0.0091	0.0111	0.0130	960	1320	1680	2040	2400	
1"	1.000	Not Advised	Not Advised	0.0098	0.0119	0.0140	960	1320	1680	2040	2400	
1-1/4"	1.250	Not Advised	Not Advised	0.0112	0.0136	0.0160	960	1320	1680	2040	2400	

AS3 Series		ISO					AS3 Series Feeds and Speeds -Uncoated-					N
		Aluminum Wrought Alloy & Aluminum Cast Alloy < 12% Si 6061-T6, 7075, Plastic										
Axial Depth		1x DIA	1.5x DIA	2x DIA	2x DIA	2x DIA						
Radial Engagement		100-85%	85-50%	50-25%	25-10%	10-0%	100-85%	85-50%	50-25%	25-10%	10-0%	
Chip Load Range at TEA		Full	Heavy	Medium	Light	Light	Surface Feet Per Min					
Diameter		Slotting	Roughing	Roughing	Roughing	Finishing	MIN	MID			MAX	
1/8"	0.125	0.0010	0.0014	0.0018	0.0021	0.0025	480	660	840	1020	1200	
3/16"	0.187	0.0012	0.0017	0.0021	0.0026	0.0030	576	792	1008	1224	1440	
1/4"	0.250	0.0020	0.0028	0.0035	0.0043	0.0050	640	880	1120	1360	1600	
5/16"	0.312	0.0026	0.0036	0.0046	0.0055	0.0065	720	990	1260	1530	1800	
3/8"	0.375	0.0030	0.0041	0.0053	0.0064	0.0075	760	1045	1330	1615	1900	
7/16"	0.437	0.0040	0.0055	0.0070	0.0085	0.0100	800	1100	1400	1700	2000	
1/2"	0.500	0.0048	0.0066	0.0084	0.0102	0.0120	880	1210	1540	1870	2200	
5/8"	0.625	0.0052	0.0072	0.0091	0.0111	0.0130	880	1210	1540	1870	2200	
3/4"	0.750	0.0056	0.0077	0.0098	0.0119	0.0140	880	1210	1540	1870	2200	
7/8"	0.875	0.0060	0.0083	0.0105	0.0128	0.0150	880	1210	1540	1870	2200	
1"	1.000	0.0064	0.0088	0.0112	0.0136	0.0160	880	1210	1540	1870	2200	
1 1/4"	1.250	0.0072	0.0099	0.0126	0.0153	0.0180	880	1210	1540	1870	2200	

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AC2/3 Series		ISO					AC2/ AC3 Series Feeds and Speeds -Uncoated-					N	
							Aluminum Wrought Alloy & Aluminum Cast Alloy < 12% Si 6061-T6, 7075, Plastic						
Axial Depth		1x DIA	1.5x DIA	2x DIA	2x DIA	2x DIA							
Radial Engagement		100-85%	85-50%	50-25%	25-10%	10-0%	100-85%	85-50%	50-25%	25-10%	10-0%		
Chip Load Range at TEA		Full	Heavy	Medium	Light	Light	Surface Feet Per Min						
Diameter		Slotting	Roughing	Roughing	Roughing	Finishing	MIN		MID		MAX		
1/8"	0.125	0.0010	0.0014	0.0018	0.0021	0.0025	480	660	840	1020	1200		
3/16"	0.187	0.0012	0.0017	0.0021	0.0026	0.0030	576	792	1008	1224	1440		
1/4"	0.250	0.0018	0.0025	0.0032	0.0038	0.0045	640	880	1120	1360	1600		
5/16"	0.312	0.0022	0.0030	0.0038	0.0047	0.0055	720	990	1260	1530	1800		
3/8"	0.375	0.0028	0.0039	0.0049	0.0060	0.0070	760	1045	1330	1615	1900		
7/16"	0.437	0.0036	0.0050	0.0063	0.0077	0.0090	800	1100	1400	1700	2000		
1/2"	0.500	0.0040	0.0055	0.0070	0.0085	0.0100	880	1210	1540	1870	2200		
5/8"	0.625	0.0048	0.0066	0.0084	0.0102	0.0120	880	1210	1540	1870	2200		
3/4"	0.750	0.0052	0.0072	0.0091	0.0111	0.0130	880	1210	1540	1870	2200		
7/8"	0.875	0.0056	0.0077	0.0098	0.0119	0.0140	880	1210	1540	1870	2200		
1"	1.000	0.0060	0.0083	0.0105	0.0128	0.0150	880	1210	1540	1870	2200		
1 1/4"	1.250	0.0064	0.0088	0.0112	0.0136	0.0160	880	1210	1540	1870	2200		

AR3 Series		ISO					AR3 Series Feeds and Speeds -Uncoated-					N	
							Aluminum > 12% Si and Copper Alloys, Brass & Bronze						
Axial Depth		1x DIA	1.5x DIA	2x DIA	2x DIA	2x DIA							
Radial Engagement		100-85%	85-50%	50-25%	25-10%	10-0%	100-85%	85-50%	50-25%	25-10%	10-0%		
Chip Load Range at TEA		Full	Heavy	Medium	Light	Light	Surface Feet Per Min						
Diameter		Slotting	Roughing	Roughing	Roughing	Finishing	MIN		MID		MAX		
1/4"	0.250	0.0024	0.0033	0.0042	0.0051	0.0060	320	440	560	680	800		
5/16"	0.312	0.0028	0.0039	0.0049	0.0060	0.0070	360	495	630	765	900		
3/8"	0.375	0.0032	0.0044	0.0056	0.0068	0.0080	370	509	648	786	925		
7/16"	0.437	0.0036	0.0050	0.0063	0.0077	0.0090	380	523	665	808	950		
1/2"	0.500	0.0048	0.0066	0.0084	0.0102	0.0120	400	550	700	850	1000		
5/8"	0.625	0.0056	0.0077	0.0098	0.0119	0.0140	400	550	700	850	1000		
3/4"	0.750	0.0064	0.0088	0.0112	0.0136	0.0160	400	550	700	850	1000		
7/8"	0.875	0.0072	0.0099	0.0126	0.0153	0.0180	400	550	700	850	1000		
1"	1.000	0.0080	0.0110	0.0140	0.0170	0.0200	400	550	700	850	1000		
1-1/4"	1.250	0.0088	0.0121	0.0154	0.0187	0.0220	400	550	700	850	1000		

AF4 Series		ISO					AF4 Series Feeds and Speeds -Uncoated-					N	
							Aluminum > 12% Si and Copper Alloys, Brass & Bronze						
Axial Depth		1x DIA	1.5x DIA	2x DIA	2x DIA	2x DIA							
Radial Engagement		100-85%	85-50%	50-25%	25-10%	10-0%	100-85%	85-50%	50-25%	25-10%	10-0%		
Chip Load Range at TEA		Full	Heavy	Medium	Light	Light	Surface Feet Per Min						
Diameter		Slotting	Roughing	Roughing	Roughing	Finishing	MIN		MID		MAX		
1/4"	0.250	Not Advised	0.0022	0.0028	0.0034	0.0040	336	462	588	714	840		
5/16"	0.312	Not Advised	0.0028	0.0035	0.0043	0.0050	384	528	672	816	960		
3/8"	0.375	Not Advised	0.0033	0.0042	0.0051	0.0060	432	594	756	918	1080		
7/16"	0.437	Not Advised	0.0044	0.0056	0.0068	0.0080	440	605	770	935	1100		
1/2"	0.500	Not Advised	0.0055	0.0070	0.0085	0.0100	480	660	840	1020	1200		
5/8"	0.625	Not Advised	0.0061	0.0077	0.0094	0.0110	480	660	840	1020	1200		
3/4"	0.750	Not Advised	0.0066	0.0084	0.0102	0.0120	480	660	840	1020	1200		
7/8"	0.875	Not Advised	0.0072	0.0091	0.0111	0.0130	480	660	840	1020	1200		
1"	1.000	Not Advised	0.0077	0.0098	0.0119	0.0140	480	660	840	1020	1200		
1-1/4"	1.250	Not Advised	0.0088	0.0112	0.0136	0.0160	480	660	840	1020	1200		

AF5 Series		ISO					AF5 Series Feeds and Speeds -Uncoated-					N	
							Aluminum > 12% Si and Copper Alloys, Brass & Bronze						
Axial Depth		1x DIA	1.5x DIA	2x DIA	2x DIA	2x DIA							
Radial Engagement		100-85%	85-50%	50-25%	25-10%	10-0%	100-85%	85-50%	50-25%	25-10%	10-0%		
Chip Load Range at TEA		Full	Heavy	Medium	Light	Light	Surface Feet Per Min						
Diameter		Slotting	Roughing	Roughing	Roughing	Finishing	MIN		MID		MAX		
1/4"	0.250	Not Advised	Not Advised	0.0028	0.0034	0.0040	336	462	588	714	840		
5/16"	0.312	Not Advised	Not Advised	0.0035	0.0043	0.0050	384	528	672	816	960		
3/8"	0.375	Not Advised	Not Advised	0.0042	0.0051	0.0060	432	594	756	918	1080		
7/16"	0.437	Not Advised	Not Advised	0.0056	0.0068	0.0080	440	605	770	935	1100		
1/2"	0.500	Not Advised	Not Advised	0.0070	0.0085	0.0100	480	660	840	1020	1200		
5/8"	0.625	Not Advised	Not Advised	0.0077	0.0094	0.0110	480	660	840	1020	1200		
3/4"	0.750	Not Advised	Not Advised	0.0084	0.0102	0.0120	480	660	840	1020	1200		
7/8"	0.875	Not Advised	Not Advised	0.0091	0.0111	0.0130	480	660	840	1020	1200		
1"	1.000	Not Advised	Not Advised	0.0098	0.0119	0.0140	480	660	840	1020	1200		
1-1/4"	1.250	Not Advised	Not Advised	0.0112	0.0136	0.0160	480	660	840	1020	1200		