

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

AC2/3Series		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					

AR3Series		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		

AF4Series		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					

AF5Series		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				

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A53Series		ISO		A53 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	
1/8"	0.125	0.0010	0.0014	0.0018	0.0021	0.0025	240	330	420	510	600	
3/16"	0.187	0.0012	0.0017	0.0021	0.0026	0.0030	288	396	504	612	720	
1/4"	0.250	0.0020	0.0028	0.0035	0.0043	0.0050	336	462	588	714	840	
5/16"	0.312	0.0026	0.0036	0.0046	0.0055	0.0065	384	528	672	816	960	
3/8"	0.375	0.0030	0.0041	0.0053	0.0064	0.0075	432	594	756	918	1080	
7/16"	0.437	0.0040	0.0055	0.0070	0.0085	0.0100	440	605	770	935	1100	
1/2"	0.500	0.0048	0.0066	0.0084	0.0102	0.0120	480	660	840	1020	1200	
5/8"	0.625	0.0052	0.0072	0.0091	0.0111	0.0130	480	660	840	1020	1200	
3/4"	0.750	0.0056	0.0077	0.0098	0.0119	0.0140	480	660	840	1020	1200	
7/8"	0.875	0.0060	0.0083	0.0105	0.0128	0.0150	480	660	840	1020	1200	
1"	1.000	0.0064	0.0088	0.0112	0.0136	0.0160	480	660	840	1020	1200	
1 1/4"	1.250	0.0072	0.0099	0.0126	0.0153	0.0180	480	660	840	1020	1200	

AC2/3Series		ISO	AC2/ AC3 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
1/8"	0.125	0.0010	0.0014	0.0018	0.0021	0.0025	240	330	420	510	600
3/16"	0.187	0.0012	0.0017	0.0021	0.0026	0.0030	288	396	504	612	720
1/4"	0.250	0.0018	0.0025	0.0032	0.0038	0.0045	320	440	560	680	800
5/16"	0.312	0.0022	0.0030	0.0038	0.0047	0.0055	360	495	630	765	900
3/8"	0.375	0.0028	0.0039	0.0049	0.0060	0.0070	380	523	665	808	950
7/16"	0.437	0.0036	0.0050	0.0063	0.0077	0.0090	400	550	700	850	1000
1/2"	0.500	0.0040	0.0055	0.0070	0.0085	0.0100	440	605	770	935	1100
5/8"	0.625	0.0048	0.0066	0.0084	0.0102	0.0120	440	605	770	935	1100
3/4"	0.750	0.0052	0.0072	0.0091	0.0111	0.0130	440	605	770	935	1100
7/8"	0.875	0.0056	0.0077	0.0098	0.0119	0.0140	440	605	770	935	1100
1"	1.000	0.0060	0.0083	0.0105	0.0128	0.0150	440	605	770	935	1100
1 1/4"	1.250	0.0064	0.0088	0.0112	0.0136	0.0160	440	605	770	935	1100

SwiftCARB Speeds & Feeds for Industry Standard Tools AITiN Coated

SS SM SF SD SH GM TM TB		Series	ISO	SS, SM, SF, SD, SH, GM TM, TB Feeds and Speeds -AITiN Coated-					P		
				Non-Alloy Steel, Cast Steel, Free Cutting Steel 1018, 1020, A36, 8620							
Axial Depth		.5x DIA	.75x DIA	1.25x DIA	1.5x 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	0.0006	0.0009	0.0011	0.0014	0.0016	184	253	322	391	460
5/32"	0.156	0.0007	0.0010	0.0013	0.0015	0.0018	216	297	378	459	540
3/16"	0.187	0.0008	0.0012	0.0015	0.0018	0.0021	232	319	406	493	580
7/32"	0.218	0.0010	0.0013	0.0017	0.0020	0.0024	240	330	420	510	600
1/4"	0.250	0.0011	0.0015	0.0018	0.0022	0.0026	256	352	448	544	640
9/32"	0.281	0.0012	0.0017	0.0021	0.0026	0.0030	264	363	462	561	660
5/16"	0.312	0.0013	0.0018	0.0022	0.0027	0.0032	272	374	476	578	680
11/32"	0.343	0.0014	0.0019	0.0024	0.0029	0.0034	280	385	490	595	700
3/8"	0.375	0.0014	0.0020	0.0025	0.0031	0.0036	288	396	504	612	720
7/16"	0.437	0.0016	0.0022	0.0028	0.0034	0.0040	296	407	518	629	740
1/2"	0.500	0.0018	0.0025	0.0032	0.0038	0.0045	304	418	532	646	760
5/8"	0.625	0.0022	0.0030	0.0039	0.0047	0.0055	304	418	532	646	760
3/4"	0.750	0.0024	0.0033	0.0042	0.0051	0.0060	304	418	532	646	760
7/8"	0.875	0.0026	0.0036	0.0046	0.0055	0.0065	304	418	532	646	760
1"	1.000	0.0028	0.0039	0.0049	0.0060	0.0070	304	418	532	646	760
1 1/4"	1.250	0.0030	0.0041	0.0052	0.0063	0.0074	304	418	532	646	760

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100