

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

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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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				
					Low Alloy Steel, Cast Steel 4130, 4140, 8620, 4330, 4340										
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	0.0008	0.0010	0.0012	0.0014	144	198	252	306	360			
5/32"	0.156		0.0006	0.0009	0.0011	0.0013	0.0016	152	209	266	323	380			
3/16"	0.187		0.0007	0.0010	0.0013	0.0015	0.0018	160	220	280	340	400			
7/32"	0.218		0.0009	0.0012	0.0015	0.0019	0.0022	168	231	294	357	420			
1/4"	0.250		0.0011	0.0015	0.0018	0.0022	0.0026	176	242	308	374	440			
9/32"	0.281		0.0012	0.0017	0.0021	0.0026	0.0030	184	253	322	391	460			
5/16"	0.312		0.0013	0.0018	0.0023	0.0028	0.0033	192	264	336	408	480			
11/32"	0.343		0.0014	0.0020	0.0025	0.0031	0.0036	200	275	350	425	500			
3/8"	0.375		0.0016	0.0021	0.0027	0.0033	0.0039	208	286	364	442	520			
7/16"	0.437		0.0016	0.0022	0.0029	0.0035	0.0041	216	297	378	459	540			
1/2"	0.500		0.0018	0.0024	0.0031	0.0037	0.0044	224	308	392	476	560			
5/8"	0.625		0.0021	0.0029	0.0036	0.0044	0.0052	224	308	392	476	560			
3/4"	0.750		0.0022	0.0031	0.0039	0.0048	0.0056	224	308	392	476	560			
7/8"	0.875		0.0024	0.0033	0.0042	0.0051	0.0060	224	308	392	476	560			
1"	1.000		0.0025	0.0035	0.0044	0.0054	0.0063	224	308	392	476	560			
1 1/4"	1.250		0.0026	0.0036	0.0046	0.0055	0.0065	224	308	392	476	560			

SS SM SF SD SH GM TM TB Series		ISO		SS, SM, SF, SD, SH, GM TM, TB Feeds and Speeds -AITiN Coated-							P	
		Die & Mold Steels P20, A-2, D-2, M2, M42, T15										
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	0.0005	0.0007	0.0008	0.0010	0.0012	120	165	210	255	300	
5/32"	0.156	0.0005	0.0007	0.0009	0.0011	0.0013	128	176	224	272	320	
3/16"	0.187	0.0006	0.0009	0.0011	0.0014	0.0016	136	187	238	289	340	
7/32"	0.218	0.0007	0.0010	0.0013	0.0015	0.0018	140	193	245	298	350	
1/4"	0.250	0.0010	0.0013	0.0017	0.0020	0.0024	144	198	252	306	360	
9/32"	0.281	0.0010	0.0014	0.0018	0.0022	0.0026	152	209	266	323	380	
5/16"	0.312	0.0011	0.0015	0.0020	0.0024	0.0028	156	215	273	332	390	
11/32"	0.343	0.0012	0.0016	0.0020	0.0025	0.0029	160	220	280	340	400	
3/8"	0.375	0.0012	0.0017	0.0021	0.0026	0.0030	164	226	287	349	410	
7/16"	0.437	0.0013	0.0018	0.0023	0.0028	0.0033	168	231	294	357	420	
1/2"	0.500	0.0014	0.0020	0.0025	0.0031	0.0036	176	242	308	374	440	
5/8"	0.625	0.0015	0.0021	0.0027	0.0032	0.0038	176	242	308	374	440	
3/4"	0.750	0.0017	0.0023	0.0029	0.0036	0.0042	176	242	308	374	440	
7/8"	0.875	0.0018	0.0024	0.0031	0.0037	0.0044	176	242	308	374	440	
1"	1.000	0.0018	0.0025	0.0032	0.0039	0.0046	176	242	308	374	440	
1 1/4"	1.250	0.0020	0.0028	0.0035	0.0043	0.0050	176	242	308	374	440	

SS SM SF SD SH GM TM TB		Series	ISO	SS, SM, SF, SD, SH, GM TM, TB Feeds and Speeds -AITiN Coated-							K
				Nodular Cast Iron, Grey Cast Iron, Malleable Cast Iron							
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	192	264	336	408	480
5/32"	0.156	0.0007	0.0010	0.0013	0.0015	0.0018	196	270	343	417	490
3/16"	0.187	0.0008	0.0012	0.0015	0.0018	0.0021	200	275	350	425	500
7/32"	0.218	0.0010	0.0013	0.0017	0.0020	0.0024	204	281	357	434	510
1/4"	0.250	0.0011	0.0015	0.0018	0.0022	0.0026	208	286	364	442	520
9/32"	0.281	0.0012	0.0017	0.0021	0.0026	0.0030	212	292	371	451	530
5/16"	0.312	0.0013	0.0018	0.0022	0.0027	0.0032	216	297	378	459	540
11/32"	0.343	0.0014	0.0019	0.0024	0.0029	0.0034	220	303	385	468	550
3/8"	0.375	0.0014	0.0020	0.0025	0.0031	0.0036	224	308	392	476	560
7/16"	0.437	0.0016	0.0022	0.0028	0.0034	0.0040	228	314	399	485	570
1/2"	0.500	0.0018	0.0025	0.0032	0.0038	0.0045	240	330	420	510	600
5/8"	0.625	0.0022	0.0030	0.0039	0.0047	0.0055	240	330	420	510	600
3/4"	0.750	0.0024	0.0033	0.0042	0.0051	0.0060	240	330	420	510	600
7/8"	0.875	0.0026	0.0036	0.0046	0.0055	0.0065	240	330	420	510	600
1"	1.000	0.0028	0.0039	0.0049	0.0060	0.0070	240	330	420	510	600
1 1/4"	1.250	0.0030	0.0041	0.0052	0.0063	0.0074	240	330	420	510	600

SwiftCARB Speeds & Feeds for Industry Standard Tools AITiN Coated

SS SM SF SD SH GM TM TB		ISO					SS, SM, SF, SD, SH, GM TM, TB Feeds and Speeds -AITiN Coated-					M
		Stainless Steel (Precipitation) 15-5PH, 17-4PH										
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	0.0005	0.0007	0.0008	0.0010	0.0012	144	198	252	306	360	
5/32"	0.156	0.0005	0.0007	0.0009	0.0011	0.0013	149	205	260	316	372	
3/16"	0.187	0.0006	0.0009	0.0011	0.0014	0.0016	154	211	269	326	384	
7/32"	0.218	0.0008	0.0011	0.0014	0.0017	0.0020	158	218	277	337	396	
1/4"	0.250	0.0010	0.0013	0.0017	0.0020	0.0024	163	224	286	347	408	
9/32"	0.281	0.0011	0.0015	0.0020	0.0024	0.0028	168	231	294	357	420	
5/16"	0.312	0.0012	0.0017	0.0021	0.0026	0.0030	173	238	302	367	432	
11/32"	0.343	0.0013	0.0018	0.0022	0.0027	0.0032	178	244	311	377	444	
3/8"	0.375	0.0014	0.0019	0.0024	0.0029	0.0034	182	251	319	388	456	
7/16"	0.437	0.0015	0.0021	0.0027	0.0032	0.0038	187	257	328	398	468	
1/2"	0.500	0.0017	0.0023	0.0029	0.0036	0.0042	192	264	336	408	480	
5/8"	0.625	0.0019	0.0026	0.0034	0.0041	0.0048	192	264	336	408	480	
3/4"	0.750	0.0021	0.0029	0.0036	0.0044	0.0052	192	264	336	408	480	
7/8"	0.875	0.0022	0.0030	0.0038	0.0046	0.0054	192	264	336	408	480	
1"	1.000	0.0022	0.0031	0.0039	0.0048	0.0056	192	264	336	408	480	
1 1/4"	1.250	0.0023	0.0032	0.0041	0.0049	0.0058	192	264	336	408	480	

SS SM SF SD SH GM TM TB		ISO					SS, SM, SF, SD, SH, GM TM, TB Feeds and Speeds -AITiN Coated-					M
		Stainless Steels (Austenitic) 303, 304, 304L, 312, 316, 316L										
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	0.0005	0.0007	0.0008	0.0010	0.0012	86	119	151	184	216	
5/32"	0.156	0.0005	0.0007	0.0009	0.0011	0.0013	91	125	160	194	228	
3/16"	0.187	0.0006	0.0009	0.0011	0.0014	0.0016	96	132	168	204	240	
7/32"	0.218	0.0007	0.0010	0.0013	0.0015	0.0018	101	139	176	214	252	
1/4"	0.250	0.0010	0.0013	0.0017	0.0020	0.0024	106	145	185	224	264	
9/32"	0.281	0.0010	0.0014	0.0018	0.0022	0.0026	110	152	193	235	276	
5/16"	0.312	0.0011	0.0015	0.0020	0.0024	0.0028	115	158	201	245	288	
11/32"	0.343	0.0012	0.0016	0.0020	0.0025	0.0029	120	165	210	255	300	
3/8"	0.375	0.0012	0.0017	0.0021	0.0026	0.0030	125	172	218	265	312	
7/16"	0.437	0.0013	0.0018	0.0022	0.0027	0.0032	130	178	227	275	324	
1/2"	0.500	0.0014	0.0020	0.0025	0.0031	0.0036	134	185	235	286	336	
5/8"	0.625	0.0015	0.0020	0.0026	0.0032	0.0038	134	185	235	286	336	
3/4"	0.750	0.0017	0.0023	0.0029	0.0036	0.0042	134	185	235	286	336	
7/8"	0.875	0.0018	0.0024	0.0031	0.0037	0.0044	134	185	235	286	336	
1"	1.000	0.0018	0.0025	0.0032	0.0039	0.0046	134	185	235	286	336	
1 1/4"	1.250	0.0020	0.0028	0.0035	0.0043	0.0050	134	185	235	286	336	

SS SM SF SD SH GM TM TB		ISO					SS, SM, SF, SD, SH, GM TM, TB Feeds and Speeds -AITiN Coated-					S
		High Temp Alloys, Titanium Alloys Ti-6AL4V										
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	0.0005	0.0007	0.0008	0.0010	0.0012	58	79	101	122	144	
5/32"	0.156	0.0005	0.0007	0.0009	0.0011	0.0013	62	86	109	133	156	
3/16"	0.187	0.0006	0.0009	0.0011	0.0014	0.0016	67	92	118	143	168	
7/32"	0.218	0.0007	0.0010	0.0013	0.0015	0.0018	72	99	126	153	180	
1/4"	0.250	0.0010	0.0013	0.0017	0.0020	0.0024	77	106	134	163	192	
9/32"	0.281	0.0010	0.0014	0.0018	0.0022	0.0026	82	112	143	173	204	
5/16"	0.312	0.0011	0.0015	0.0020	0.0024	0.0028	86	119	151	184	216	
11/32"	0.343	0.0012	0.0016	0.0020	0.0025	0.0029	91	125	160	194	228	
3/8"	0.375	0.0012	0.0017	0.0021	0.0026	0.0030	96	132	168	204	240	
7/16"	0.437	0.0013	0.0018	0.0022	0.0027	0.0032	101	139	176	214	252	
1/2"	0.500	0.0014	0.0020	0.0025	0.0031	0.0036	106	145	185	224	264	
5/8"	0.625	0.0015	0.0020	0.0026	0.0032	0.0038	106	145	185	224	264	
3/4"	0.750	0.0017	0.0023	0.0029	0.0036	0.0042	106	145	185	224	264	
7/8"	0.875	0.0018	0.0024	0.0031	0.0037	0.0044	106	145	185	224	264	
1"	1.000	0.0018	0.0025	0.0032	0.0039	0.0046	106	145	185	224	264	
1 1/4"	1.250	0.0020	0.0028	0.0035	0.0043	0.0050	106	145	185	224	264	

SwiftCARB Speeds & Feeds for Industry Standard Tools AITiN Coated

SS SM SF SD SH GM TM TB		ISO	SS, SM, SF, SD, SH, GM TM, TB Feeds and Speeds -AITiN Coated-					S			
			High Temp Alloys (Nickel and Cobalt Based) Monel 400, Hastelloy, Nimonic 75, Inconel 625, 718								
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	0.0005	0.0007	0.0008	0.0010	0.0012	17	23	29	36	42
5/32"	0.156	0.0005	0.0007	0.0009	0.0011	0.0013	17	23	29	36	42
3/16"	0.187	0.0006	0.0009	0.0011	0.0014	0.0016	17	23	29	36	42
7/32"	0.218	0.0007	0.0010	0.0013	0.0015	0.0018	19	26	34	41	48
1/4"	0.250	0.0010	0.0013	0.0017	0.0020	0.0024	19	26	34	41	48
9/32"	0.281	0.0010	0.0014	0.0018	0.0022	0.0026	19	26	34	41	48
5/16"	0.312	0.0011	0.0015	0.0020	0.0024	0.0028	24	33	42	51	60
11/32"	0.343	0.0012	0.0016	0.0020	0.0025	0.0029	24	33	42	51	60
3/8"	0.375	0.0012	0.0017	0.0021	0.0026	0.0030	24	33	42	51	60
7/16"	0.437	0.0013	0.0018	0.0022	0.0027	0.0032	24	33	42	51	60
1/2"	0.500	0.0014	0.0020	0.0025	0.0031	0.0036	29	40	50	61	72
5/8"	0.625	0.0015	0.0020	0.0026	0.0032	0.0038	29	40	50	61	72
3/4"	0.750	0.0017	0.0023	0.0029	0.0036	0.0042	29	40	50	61	72
7/8"	0.875	0.0018	0.0024	0.0031	0.0037	0.0044	29	40	50	61	72
1"	1.000	0.0018	0.0024	0.0031	0.0037	0.0044	29	40	50	61	72
1 1/4"	1.250	0.0020	0.0028	0.0035	0.0043	0.0050	29	40	50	61	72

SwiftCARB Speeds & Feeds for Premium Tools MDC Coated

SS SM SF SD SH GM TM TB		Series	ISO					SS, SM, SF, SD, SH, GM TM, TB Feeds and Speeds -MDC 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	212	291	370	450	529	
5/32"	0.156		0.0007	0.0010	0.0013	0.0015	0.0018	248	342	435	528	621	
3/16"	0.187		0.0008	0.0012	0.0015	0.0018	0.0021	267	367	467	567	667	
7/32"	0.218		0.0010	0.0013	0.0017	0.0020	0.0024	276	380	483	587	690	
1/4"	0.250		0.0011	0.0015	0.0018	0.0022	0.0026	294	405	515	626	736	
9/32"	0.281		0.0012	0.0017	0.0021	0.0026	0.0030	304	417	531	645	759	
5/16"	0.312		0.0013	0.0018	0.0022	0.0027	0.0032	313	430	547	665	782	
11/32"	0.343		0.0014	0.0019	0.0024	0.0029	0.0034	322	443	564	684	805	
3/8"	0.375		0.0014	0.0020	0.0025	0.0031	0.0036	331	455	580	704	828	
7/16"	0.437		0.0016	0.0022	0.0028	0.0034	0.0040	340	468	596	723	851	
1/2"	0.500		0.0018	0.0025	0.0032	0.0038	0.0045	350	481	612	743	874	
5/8"	0.625		0.0022	0.0030	0.0039	0.0047	0.0055	350	481	612	743	874	
3/4"	0.750		0.0024	0.0033	0.0042	0.0051	0.0060	350	481	612	743	874	
7/8"	0.875		0.0026	0.0036	0.0046	0.0055	0.0065	350	481	612	743	874	
1"	1.000		0.0028	0.0039	0.0049	0.0060	0.0070	350	481	612	743	874	
1 1/4"	1.250		0.0030	0.0041	0.0052	0.0063	0.0074	350	481	612	743	874	

SS SM SF SD SH GM TM TB		Series	ISO	SS, SM, SF, SD, SH, GM TM, TB Feeds and Speeds -MDC Coated-					P			
				Low Alloy Steel, Cast Steel 4130, 4140, 8620, 4330, 4340								
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	0.0008	0.0010	0.0012	0.0014	166	228	290	352	414
5/32"	0.156		0.0006	0.0009	0.0011	0.0013	0.0016	175	240	306	371	437
3/16"	0.187		0.0007	0.0010	0.0013	0.0015	0.0018	184	253	322	391	460
7/32"	0.218		0.0009	0.0012	0.0015	0.0019	0.0022	193	266	338	411	483
1/4"	0.250		0.0011	0.0015	0.0018	0.0022	0.0026	202	278	354	430	506
9/32"	0.281		0.0012	0.0017	0.0021	0.0026	0.0030	212	291	370	450	529
5/16"	0.312		0.0013	0.0018	0.0023	0.0028	0.0033	221	304	386	469	552
11/32"	0.343		0.0014	0.0020	0.0025	0.0031	0.0036	230	316	403	489	575
3/8"	0.375		0.0016	0.0021	0.0027	0.0033	0.0039	239	329	419	508	598
7/16"	0.437		0.0016	0.0022	0.0029	0.0035	0.0041	248	342	435	528	621
1/2"	0.500		0.0018	0.0024	0.0031	0.0037	0.0044	258	354	451	547	644
5/8"	0.625		0.0021	0.0029	0.0036	0.0044	0.0052	258	354	451	547	644
3/4"	0.750		0.0022	0.0031	0.0039	0.0048	0.0056	258	354	451	547	644
7/8"	0.875		0.0024	0.0033	0.0042	0.0051	0.0060	258	354	451	547	644
1"	1.000		0.0025	0.0035	0.0044	0.0054	0.0063	258	354	451	547	644
1 1/4"	1.250		0.0026	0.0036	0.0046	0.0055	0.0065	258	354	451	547	644

SwiftCARB Speeds & Feeds for Premium Tools MDC Coated

SS SM SF SD SH GM TM TB Series		ISO SS, SM, SF, SD, SH, GM TM, TB Feeds and Speeds -MDC Coated-					P				
		Die & Mold Steels P20, A-2, D-2, M2, M42, T15									
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	0.0005	0.0007	0.0008	0.0010	0.0012	138	190	242	293	345
5/32"	0.156	0.0005	0.0007	0.0009	0.0011	0.0013	147	202	258	313	368
3/16"	0.187	0.0006	0.0009	0.0011	0.0014	0.0016	156	215	274	332	391
7/32"	0.218	0.0007	0.0010	0.0013	0.0015	0.0018	161	221	282	342	403
1/4"	0.250	0.0010	0.0013	0.0017	0.0020	0.0024	166	228	290	352	414
9/32"	0.281	0.0010	0.0014	0.0018	0.0022	0.0026	175	240	306	371	437
5/16"	0.312	0.0011	0.0015	0.0020	0.0024	0.0028	179	247	314	381	449
11/32"	0.343	0.0012	0.0016	0.0020	0.0025	0.0029	184	253	322	391	460
3/8"	0.375	0.0012	0.0017	0.0021	0.0026	0.0030	189	259	330	401	472
7/16"	0.437	0.0013	0.0018	0.0022	0.0027	0.0032	193	266	338	411	483
1/2"	0.500	0.0014	0.0020	0.0025	0.0031	0.0036	202	278	354	430	506
5/8"	0.625	0.0015	0.0020	0.0026	0.0032	0.0038	202	278	354	430	506
3/4"	0.750	0.0017	0.0023	0.0029	0.0036	0.0042	202	278	354	430	506
7/8"	0.875	0.0018	0.0024	0.0031	0.0037	0.0044	202	278	354	430	506
1"	1.000	0.0018	0.0024	0.0031	0.0037	0.0044	202	278	354	430	506
1 1/4"	1.250	0.0020	0.0028	0.0035	0.0043	0.0050	202	278	354	430	506

SS SM SF SD SH GM TM TB Series		ISO SS, SM, SF, SD, SH, GM TM, TB Feeds and Speeds -MDC Coated-					K				
		Nodular Cast Iron, Grey Cast Iron, Malleable Cast Iron									
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	221	304	386	469	552
5/32"	0.156	0.0007	0.0010	0.0013	0.0015	0.0018	225	310	394	479	564
3/16"	0.187	0.0008	0.0012	0.0015	0.0018	0.0021	230	316	403	489	575
7/32"	0.218	0.0010	0.0013	0.0017	0.0020	0.0024	235	323	411	499	587
1/4"	0.250	0.0011	0.0015	0.0018	0.0022	0.0026	239	329	419	508	598
9/32"	0.281	0.0012	0.0017	0.0021	0.0026	0.0030	244	335	427	518	610
5/16"	0.312	0.0013	0.0018	0.0022	0.0027	0.0032	248	342	435	528	621
11/32"	0.343	0.0014	0.0019	0.0024	0.0029	0.0034	253	348	443	538	633
3/8"	0.375	0.0014	0.0020	0.0025	0.0031	0.0036	258	354	451	547	644
7/16"	0.437	0.0016	0.0022	0.0028	0.0034	0.0040	262	361	459	557	656
1/2"	0.500	0.0018	0.0025	0.0032	0.0038	0.0045	276	380	483	587	690
5/8"	0.625	0.0022	0.0030	0.0039	0.0047	0.0055	276	380	483	587	690
3/4"	0.750	0.0024	0.0033	0.0042	0.0051	0.0060	276	380	483	587	690
7/8"	0.875	0.0026	0.0036	0.0046	0.0055	0.0065	276	380	483	587	690
1"	1.000	0.0028	0.0039	0.0049	0.0060	0.0070	276	380	483	587	690
1 1/4"	1.250	0.0030	0.0041	0.0052	0.0063	0.0074	276	380	483	587	690

SS SM SF SD SH GM TM TB Series		ISO SS, SM, SF, SD, SH, GM TM, TB Feeds and Speeds -MDC Coated-					M				
		Stainless Steel (Precipitation) 15-5PH, 17-4PH									
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	0.0005	0.0007	0.0008	0.0010	0.0012	166	228	290	352	414
5/32"	0.156	0.0005	0.0007	0.0009	0.0011	0.0013	171	235	299	364	428
3/16"	0.187	0.0006	0.0009	0.0011	0.0014	0.0016	177	243	309	375	442
7/32"	0.218	0.0008	0.0011	0.0014	0.0017	0.0020	182	250	319	387	455
1/4"	0.250	0.0010	0.0013	0.0017	0.0020	0.0024	188	258	328	399	469
9/32"	0.281	0.0011	0.0015	0.0020	0.0024	0.0028	193	266	338	411	483
5/16"	0.312	0.0012	0.0017	0.0021	0.0026	0.0030	199	273	348	422	497
11/32"	0.343	0.0013	0.0018	0.0022	0.0027	0.0032	204	281	357	434	511
3/8"	0.375	0.0014	0.0019	0.0024	0.0029	0.0034	210	288	367	446	524
7/16"	0.437	0.0015	0.0021	0.0027	0.0032	0.0038	215	296	377	457	538
1/2"	0.500	0.0017	0.0023	0.0029	0.0036	0.0042	221	304	386	469	552
5/8"	0.625	0.0019	0.0026	0.0034	0.0041	0.0048	221	304	386	469	552
3/4"	0.750	0.0021	0.0029	0.0036	0.0044	0.0052	221	304	386	469	552
7/8"	0.875	0.0022	0.0030	0.0038	0.0046	0.0054	221	304	386	469	552
1"	1.000	0.0022	0.0031	0.0039	0.0048	0.0056	221	304	386	469	552
1 1/4"	1.250	0.0023	0.0032	0.0041	0.0049	0.0058	221	304	386	469	552

SwiftCARB Speeds & Feeds for Premium Tools MDC Coated

SS SM SF SD SH GM TM TB Series		ISO SS, SM, SF, SD, SH, GM TM, TB Feeds and Speeds -MDC Coated-					M				
		Stainless Steels (Austenitic) 303, 304, 304L, 312, 316, 316L									
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	0.0005	0.0007	0.0008	0.0010	0.0012	99	137	174	211	248
5/32"	0.156	0.0005	0.0007	0.0009	0.0011	0.0013	105	144	184	223	262
3/16"	0.187	0.0006	0.0009	0.0011	0.0014	0.0016	110	152	193	235	276
7/32"	0.218	0.0007	0.0010	0.0013	0.0015	0.0018	116	159	203	246	290
1/4"	0.250	0.0010	0.0013	0.0017	0.0020	0.0024	121	167	213	258	304
9/32"	0.281	0.0010	0.0014	0.0018	0.0022	0.0026	127	175	222	270	317
5/16"	0.312	0.0011	0.0015	0.0020	0.0024	0.0028	132	182	232	282	331
11/32"	0.343	0.0012	0.0016	0.0020	0.0025	0.0029	138	190	242	293	345
3/8"	0.375	0.0012	0.0017	0.0021	0.0026	0.0030	144	197	251	305	359
7/16"	0.437	0.0013	0.0018	0.0022	0.0027	0.0032	149	205	261	317	373
1/2"	0.500	0.0014	0.0020	0.0025	0.0031	0.0036	155	213	270	328	386
5/8"	0.625	0.0015	0.0020	0.0026	0.0032	0.0038	155	213	270	328	386
3/4"	0.750	0.0017	0.0023	0.0029	0.0036	0.0042	155	213	270	328	386
7/8"	0.875	0.0018	0.0024	0.0031	0.0037	0.0044	155	213	270	328	386
1"	1.000	0.0018	0.0024	0.0031	0.0037	0.0044	155	213	270	328	386
1 1/4"	1.250	0.0020	0.0028	0.0035	0.0043	0.0050	155	213	270	328	386

SS SM SF SD SH GM TM TB Series		ISO SS, SM, SF, SD, SH, GM TM, TB Feeds and Speeds -MDC Coated-					S				
		High Temp Alloys, Titanium Alloys Ti-6AL4V									
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	0.0005	0.0007	0.0008	0.0010	0.0012	66	91	116	141	166
5/32"	0.156	0.0005	0.0007	0.0009	0.0011	0.0013	72	99	126	152	179
3/16"	0.187	0.0006	0.0009	0.0011	0.0014	0.0016	77	106	135	164	193
7/32"	0.218	0.0007	0.0010	0.0013	0.0015	0.0018	83	114	145	176	207
1/4"	0.250	0.0010	0.0013	0.0017	0.0020	0.0024	88	121	155	188	221
9/32"	0.281	0.0010	0.0014	0.0018	0.0022	0.0026	94	129	164	199	235
5/16"	0.312	0.0011	0.0015	0.0020	0.0024	0.0028	99	137	174	211	248
11/32"	0.343	0.0012	0.0016	0.0020	0.0025	0.0029	105	144	184	223	262
3/8"	0.375	0.0012	0.0017	0.0021	0.0026	0.0030	110	152	193	235	276
7/16"	0.437	0.0013	0.0018	0.0022	0.0027	0.0032	116	159	203	246	290
1/2"	0.500	0.0014	0.0020	0.0025	0.0031	0.0036	121	167	213	258	304
5/8"	0.625	0.0015	0.0020	0.0026	0.0032	0.0038	121	167	213	258	304
3/4"	0.750	0.0017	0.0023	0.0029	0.0036	0.0042	121	167	213	258	304
7/8"	0.875	0.0018	0.0024	0.0031	0.0037	0.0044	121	167	213	258	304
1"	1.000	0.0018	0.0025	0.0032	0.0039	0.0046	121	167	213	258	304
1 1/4"	1.250	0.0020	0.0028	0.0035	0.0043	0.0050	121	167	213	258	304

SS SM SF SD SH GM TM TB Series		ISO SS, SM, SF, SD, SH, GM TM, TB Feeds and Speeds -MDC Coated-					S				
		High Temp Alloys (Nickel and Cobalt Based) Monel 400, Hastelloy, Nimonic 75, Inconel 625, 718									
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	0.0005	0.0007	0.0008	0.0010	0.0012	19	27	34	41	48
5/32"	0.156	0.0005	0.0007	0.0009	0.0011	0.0013	19	27	34	41	48
3/16"	0.187	0.0006	0.0009	0.0011	0.0014	0.0016	19	27	34	41	48
7/32"	0.218	0.0007	0.0010	0.0013	0.0017	0.0018	22	30	39	47	55
1/4"	0.250	0.0010	0.0013	0.0017	0.0020	0.0024	22	30	39	47	55
9/32"	0.281	0.0010	0.0014	0.0018	0.0024	0.0026	22	30	39	47	55
5/16"	0.312	0.0011	0.0015	0.0020	0.0026	0.0028	28	38	48	59	69
11/32"	0.343	0.0012	0.0016	0.0020	0.0027	0.0029	28	38	48	59	69
3/8"	0.375	0.0012	0.0017	0.0021	0.0029	0.0030	28	38	48	59	69
7/16"	0.437	0.0013	0.0018	0.0022	0.0032	0.0032	28	38	48	59	69
1/2"	0.500	0.0014	0.0020	0.0025	0.0036	0.0036	33	46	58	70	83
5/8"	0.625	0.0015	0.0020	0.0026	0.0041	0.0038	33	46	58	70	83
3/4"	0.750	0.0017	0.0023	0.0029	0.0044	0.0042	33	46	58	70	83
7/8"	0.875	0.0018	0.0024	0.0031	0.0046	0.0044	33	46	58	70	83
1"	1.000	0.0018	0.0024	0.0031	0.0048	0.0044	33	46	58	70	83
1 1/4"	1.250	0.0020	0.0028	0.0035	0.0049	0.0050	33	46	58	70	83