SGS®

Solid Carbide Tools

An ISO 9001 Certified Company

CARB

Solid Carbide End Mills for Aluminum

2-Flute and 3-Flute End Mills for Aluminum, Non-Ferrous and Non-Metallic Materials Including Aluminum Alloys, Plastics, Copper, Brass and Bronze

www.sgstool.com

Let the Chips Fly.™

SERIES 43 3-Flute S-CARB End Mills for Aluminum

S-Carb Series 43 3-Flute Features and Benefits

Engineered Flute Design

- Effective chip removal at high feed rates
- Lower cutting forces than comparable products

Unique Symmetrical End Gashing

- Improved balance at high spindle speeds
- Improved workpiece finish through better balance
- More effective plunging vs. conventional designs

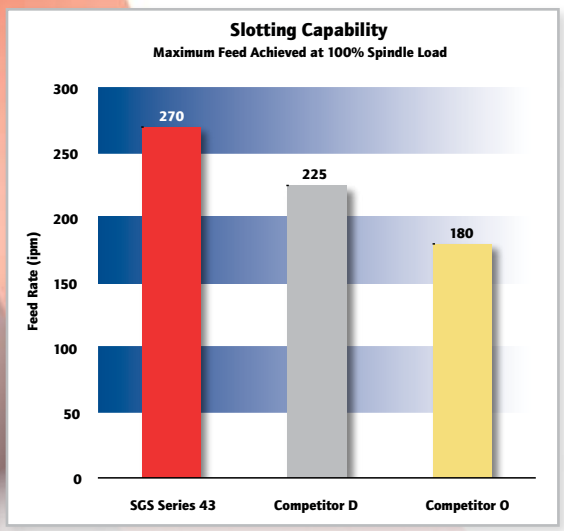
Selection of Popular Lengths and Corner Radii

- Available from stock
- CNC ground corner radii
- Resharpening service available

Ti-NAMITE-B®

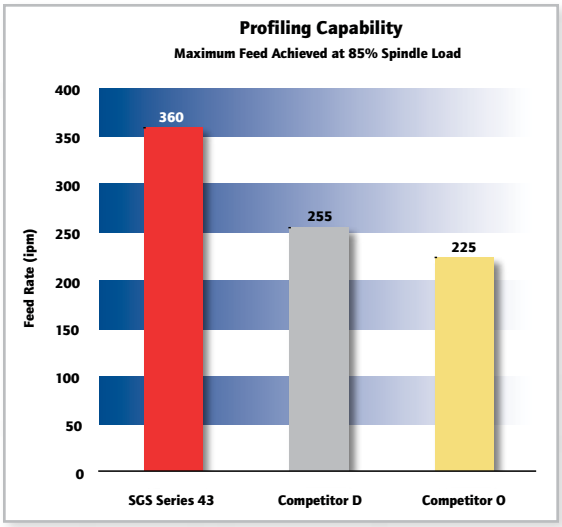
Available with TiB_2 coating (Titanium Diboride) for exceptional performance in a variety of aluminum and magnesium alloys.

Hardness: 4000HV
Oxidation Temperature: 850°C - 1562°F
Coefficient Of Friction: .45
Thickness: 1 - 2 Microns (based on tool diameter)



6061T6 Aluminum
10,000 rpm
Haas VM3 30 HP
Tool Diameter = 1/2″
Slot Depth = 1/2″
Water Soluble Oil

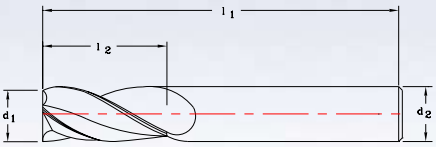
The SGS Series 43 was 20% more productive than Competitor D and 50% more than Competitor O.

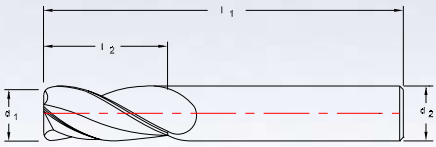


6061T6 Aluminum
10,000 rpm
Haas VM3 30 HP
Tool Diameter = 1/2″
Radial Width = 1/4″
Axial Depth = 3/4″
Water Soluble Oil

The SGS Series 43 was 41% more productive than competitor D and 60% more productive than Competitor O.

Fractional





Series 43 3-Flute Fractional Square End

Cutting Diameter d1	Length of Cut l2	Overall Length l1	Shank Diameter d2	Uncoated EDP Number	Ti-NAMITE-B (TiB_2) EDP Number
1/8	3/8	1-1/2	1/8	34701	34728
3/16	9/16	2	3/16	34702	34729
1/4	3/8	2	1/4	34703	34730
1/4	3/4	2-1/2	1/4	34704	34731
1/4	1-1/4	3-1/2	1/4	34705	34732
5/16	7/16	2	5/16	34706	34733
5/16	5/8	2-1/2	5/16	34707	34734
5/16	1-1/4	4	5/16	34708	34735
3/8	1/2	2	3/8	34709	34736
3/8	1	2-1/2	3/8	34710	34737
3/8	1-1/2	3-1/2	3/8	34711	34738
1/2	5/8	2-1/2	1/2	34712	34739
1/2	1-1/4	3-1/4	1/2	34713	34740
1/2	2	4	1/2	34714	34741
1/2	3-1/8	6	1/2	34715	34742
5/8	3/4	3	5/8	34716	34743
5/8	1-5/8	3-3/4	5/8	34717	34744
5/8	2-1/2	5	5/8	34718	34745
5/8	3-3/4	6	5/8	34719	34746
3/4	1	3	3/4	34720	34747
3/4	1-5/8	4	3/4	34721	34748
3/4	2-1/4	5	3/4	34722	34749
3/4	3-1/4	6	3/4	34723	34750
1	1-1/4	4	1	34724	34751
1	2	4-1/2	1	34725	34752
1	2-5/8	6	1	34726	34753
1	3-1/4	6	1	34727	34754

Series 43C 3-Flute Fractional Corner Radius

Cutting Diameter d1	Length of Cut l2	Overall Length l1	Shank Diameter d2	Corner Radius	Uncoated EDP Number	Ti-NAMITE-B (TiB_2) EDP Number
1/8	3/8	1-1/2	1/8	.010	34771	34793
3/16	9/16	2	3/16	.010	34772	34794
1/4	3/4	2-1/2	1/4	.010	34773	34795
1/4	3/4	2-1/2	1/4	.030	34774	34796
5/16	5/8	2-1/2	5/16	.030	34775	34797
3/8	1	2-1/2	3/8	.010	34776	34798
3/8	1	2-1/2	3/8	.030	34777	34799
1/2	1-1/4	3-1/4	1/2	.010	34778	34800
1/2	1-1/4	3-1/4	1/2	.030	34779	34801
1/2	1-1/4	3-1/4	1/2	.060	34780	34802
1/2	1-1/4	3-1/4	1/2	.090	34781	34803
5/8	1-5/8	3-3/4	5/8	.030	34782	34804
5/8	1-5/8	3-3/4	5/8	.060	34783	34805
5/8	1-5/8	3-3/4	5/8	.090	34784	34806
3/4	1-5/8	4	3/4	.030	34785	34807
3/4	1-5/8	4	3/4	.060	34786	34808
3/4	1-5/8	4	3/4	.090	34787	34809
3/4	1-5/8	4	3/4	.125	34788	34810
1	2	4-1/2	1	.030	34789	34811
1	2	4-1/2	1	.060	34790	34812
1	2	4-1/2	1	.090	34791	34813
1	2	4-1/2	1	.125	34792	34814

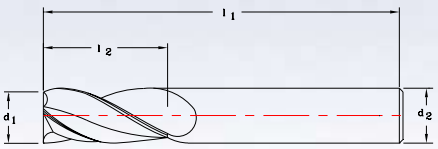
Tolerances (inch)

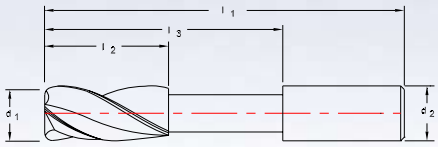
Diameter	d1	d2
1/8-1	-.0001/-.0004	-.0001/-.0004

Tolerances (mm)

Diameter	d1	d2
3-25	-0,0025/-0,010	-0,0025/-0,010

Metric





Series 43M 3-Flute Metric Square End

Cutting Diameter d1 mm	Length of Cut l2 mm	Overall Length l1 mm	Shank Diameter d2 mm	Uncoated EDP Number	Ti-NAMITE-B (TiB_2) EDP Number
6	13	57	6	44701	44715
6	13	72	6	44702	44716
8	19	63	8	44703	44717
10	22	72	10	44705	44719
12	26	83	12	44708	44722
16	32	92	16	44711	44725
20	38	104	20	44714	44728

Series 43MCR 3-Flute Metric Corner Radius

Cutting Diameter d1 mm	Length of Cut l2 mm	Overall Length l1 mm	Shank Diameter d2 mm	Reach l3 mm	Corner Radius	Uncoated EDP Number	Ti-NAMITE-B (TiB_2) EDP Number
6	10	63	6	20	.5	44769	44789
6	10	63	6	20	1	44770	44790
6	13	72	6	30	.5	44771	44791
6	13	72	6	30	1	44772	44792
8	12	75	8	25	.3	44773	44793
8	12	75	8	25	.5	44774	44794
8	12	75	8	25	1	44775	44795
8	12	75	8	25	1.5	44776	44796
10	14	100	10	35	.3	44777	44797
10	14	100	10	35	.5	44778	44798
10	14	100	10	35	1	44779	44799
10	14	100	10	35	1.5	44780	44800
12	16	100	12	40	.5	44781	44801
12	16	100	12	40	1	44782	44802
12	16	100	12	40	1.5	44783	44803
12	16	100	12	40	2	44784	44804
16	20	125	16	50	2	44785	44805
16	20	125	16	50	4	44786	44806
20	25	150	20	65	2	44787	44807
20	25	150	20	65	4	44788	44808

Tolerances (inch)

Diameter	d1	d2
1/8-1	-.0001/-.0004	-.0001/-.0004

Tolerances (mm)

Diameter	d1	d2
3-25	-0,0025/-0,010	-0,0025/-0,010

S-Carb Series 47 2-Flute Features & Benefits

Chatter Free Operation

- Improves Material Removal Rates
- Improves Surface Finishes

Low Cutting Force

- Permits Higher Feed Rates
- Increases Tool Life

Selection of Styles

- Regular Length, Square and Ball End
- Extended Reach, Square and Ball End
- Fractional and Metric Sizes

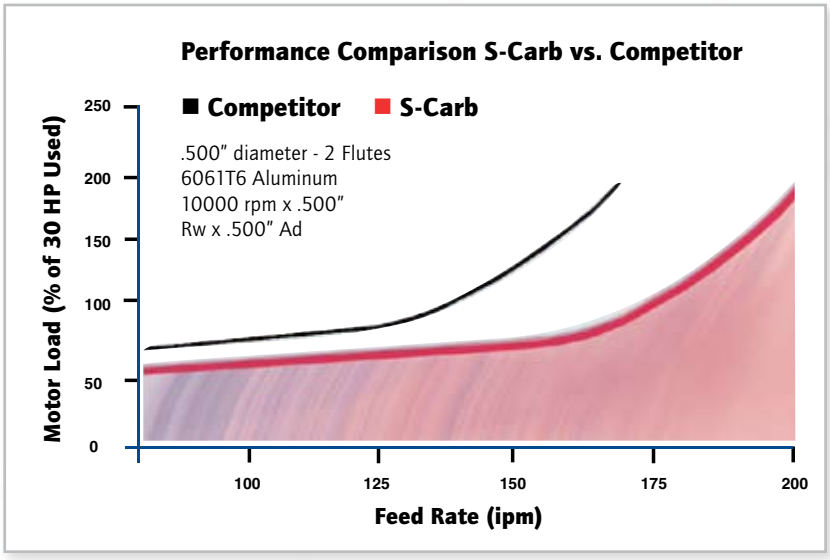
Suitable for Non-Ferrous / Non-Metallic Materials

- Aluminum Alloys
- Plastics
- Copper
- Brass / Bronze

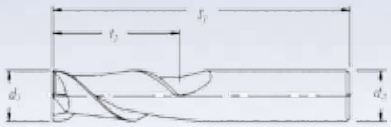
Ti-NAMITE-B®

Available with TiB_2 coating (Titanium Diboride) for exceptional performance in a variety of aluminum and magnesium alloys.

Hardness: 4000HV
Oxidation Temperature: 850°C - 1562°F
Coefficient Of Friction: .45
Thickness: 1 - 2 Microns (based on tool diameter)

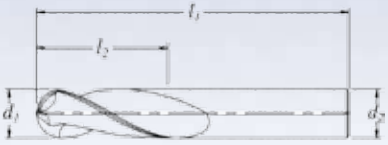


Fractional



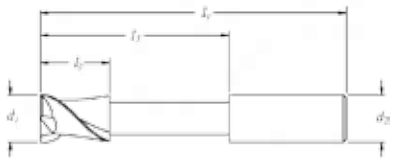
Series 47 2-Flute
Fractional Regular Length Square End

Cutting Diameter d1	Length of Cut l2	Overall Length l1	Shank Diameter d2	Uncoated EDP Number	Ti-NAMITE-B (TiB_2) EDP Number
1/8	3/8	1-1/2	1/8	34620	34660
3/16	9/16	2	3/16	34621	34661
1/4	3/4	2-1/2	1/4	34622	34662
5/16	13/16	2-1/2	5/16	34623	34663
3/8	1	2-1/2	3/8	34624	34664
1/2	1-1/4	3-1/4	1/2	34625	34665
5/8	1-5/8	3-3/4	5/8	34626	34666
3/4	1-5/8	4	3/4	34627	34667
1	2	4-1/2	1	34628	34668



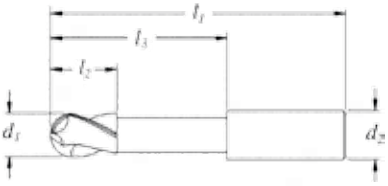
Series 47B 2-Flute
Fractional Regular Length Ball End

Cutting Diameter d1	Length of Cut l2	Overall Length l1	Shank Diameter d2	Uncoated EDP Number	Ti-NAMITE-B (TiB_2) EDP Number
1/8	3/8	1-1/2	1/8	34630	34669
3/16	9/16	2	3/16	34631	34670
1/4	3/4	2-1/2	1/4	34632	34671
5/16	13/16	2-1/2	5/16	34633	34672
3/8	1	2-1/2	3/8	34634	34673
1/2	1-1/4	3-1/4	1/2	34635	34674
5/8	1-5/8	3-3/4	5/8	34636	34675
3/4	1-5/8	4	3/4	34637	34676
1	2	4-1/2	1	34638	34677



Series 47E 2-Flute
Fractional Extended Reach Square End

Cutting Diameter d1	Length of Cut l2	Overall Length l1	Shank Diameter d2	Reach l3	Uncoated EDP Number	Ti-NAMITE-B (TiB_2) EDP Number
1/4	3/8	4	1/4	2-1/8	34640	34678
3/8	1/2	4	3/8	2-1/8	34641	34679
1/2	5/8	6	1/2	2-1/8	34642	34680
1/2	5/8	6	1/2	3-3/8	34643	34681
5/8	3/4	6	5/8	2-3/8	34644	34682
5/8	3/4	6	5/8	3-3/8	34645	34683
3/4	1	6	3/4	2-1/2	34646	34684
3/4	1	6	3/4	3-3/8	34647	34685



Series 47EB 2-Flute
Fractional Extended Reach Ball End

Cutting Diameter d1	Length of Cut l2	Overall Length l1	Shank Diameter d2	Reach l3	Uncoated EDP Number	Ti-NAMITE-B (TiB_2) EDP Number
1/4	3/8	4	1/4	2-1/8	34650	34686
3/8	1/2	4	3/8	2-1/8	34651	34687
1/2	5/8	6	1/2	2-1/8	34652	34688
1/2	5/8	6	1/2	3-3/8	34653	34689
5/8	3/4	6	5/8	2-3/8	34654	34690
5/8	3/4	6	5/8	3-3/8	34655	34691
3/4	1	6	3/4	2-1/2	34656	34692
3/4	1	6	3/4	3-3/8	34657	34693

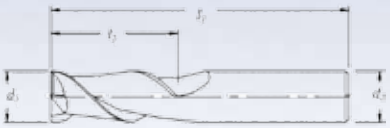
Tolerances (inch)

Diameter	d1	d2
1/8-1	-.0001/-.0004	-.0001/-.0004

Tolerances (mm)

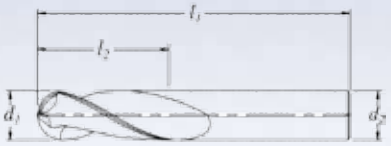
Diameter	d1	d2
3-25	-0,0025/-0,010	-0,0025/-0,010

Metric



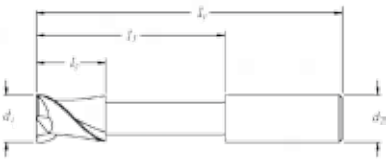
Series 47M 2-Flute
Metric Regular Length Square End

Cutting Diameter d1 mm	Length of Cut l2 mm	Overall Length l1 mm	Shank Diameter d2 mm	Uncoated EDP Number	Ti-NAMITE-B (TiB_2) EDP Number
3	8	38	3	44550	44587
4	11	50	4	44551	44588
5	13	50	5	44552	44589
6	13	57	6	44553	44590
8	19	63	8	44554	44591
10	22	72	10	44555	44592
12	26	83	12	44556	44593
14	26	83	14	44557	44594
16	32	92	16	44558	44595
20	38	104	20	44559	44596
25	44	104	25	44560	44597



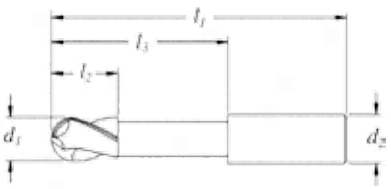
Series 47MB 2-Flute
Metric Regular Length Ball End

Cutting Diameter d1 mm	Length of Cut l2 mm	Overall Length l1 mm	Shank Diameter l2 mm	Uncoated EDP Number	Ti-NAMITE-B (TiB_2) EDP Number
3	8	38	3	44570	44598
4	11	50	4	44571	44599
5	13	50	5	44572	44600
6	13	57	6	44573	44601
8	19	63	8	44574	44602
10	22	72	10	44575	44603
12	26	83	12	44576	44604
14	26	83	14	44577	44605
16	32	92	16	44578	44606
20	38	104	20	44579	44607
25	44	104	25	44580	44608



Series 47MES 2-Flute
Metric Extended Reach Square End

Cutting Diameter d1 mm	Length of Cut l2 mm	Overall Length l1 mm	Shank Diameter d2 mm	Reach l3 mm	Uncoated EDP Number	Ti-NAMITE-B (TiB_2) EDP Number
6	10	100	6	54	44561	44609
8	12	100	8	54	44562	44610
10	12	100	10	54	44563	44611
12	16	150	12	80	44564	44612
16	20	150	16	80	44565	44613
20	25	150	20	80	44566	44614



Series 47MEB 2-Flute
Metric Extended Reach Ball End

Cutting Diameter d1 mm	Length of Cut l2 mm	Overall Length l1 mm	Shank Diameter d2 mm	Reach l3 mm	Uncoated EDP Number	Ti-NAMITE-B (TiB_2) EDP Number
6	10	100	6	54	44581	44615
8	12	100	8	54	44582	44616
10	12	100	10	54	44583	44617
12	16	150	12	80	44584	44618
16	20	150	16	80	44585	44619
20	25	150	20	80	44586	44620

Tolerances (inch)

Diameter	d1	d2
1/8-1	-.0001/-.0004	-.0001/-.0004

Tolerances (mm)

Diameter	d1	d2
3-25	-0,0025/-0,010	-0,0025/-0,010

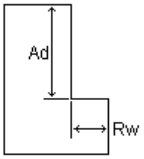
Fractional / Metric

Series 43 Speed and Feed Recommendations – Stub and Regular Length

		Aluminum Alloys 1600-2000 sfm 490-610 m/min		Plastics 1200-1600 sfm 365-490 m/min		Copper Alloys 800-1200 sfm 245-365 m/min		Brass / Bronze 800-1500 sfm 245-455 m/min	
Diameter (D)		Feed Rate Per Tooth							
in	mm	in	mm	in	mm	in	mm	in	mm
1/8	3	0.0015	0.04	0.0030	0.08	0.0015	0.04	0.0015	0.04
	4		0.05		0.10		0.05		0.05
3/16	5	0.0025	0.06	0.0050	0.12	0.0025	0.06	0.0025	0.06
1/4	6	0.0030	0.07	0.0060	0.14	0.0030	0.07	0.0030	0.07
5/16	8	0.0040	0.10	0.0080	0.20	0.0040	0.10	0.0040	0.10
3/8	10	0.0050	0.12	0.0100	0.24	0.0050	0.12	0.0050	0.12
1/2	12	0.0060	0.15	0.0120	0.30	0.0060	0.15	0.0060	0.15
	14		0.17		0.34		0.17		0.17
5/8	16	0.0070	0.18	0.0140	0.36	0.0070	0.18	0.0070	0.18
3/4	20	0.0080	0.22	0.0160	0.44	0.0080	0.22	0.0080	0.22
1	25	0.0100	0.25	0.0180	0.46	0.0100	0.25	0.0100	0.25

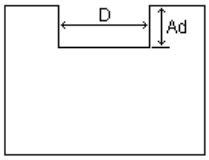
Feed rates shown are for slotting
Rates shown can be increased 40% when profile milling
When finish milling, reduce feed to obtain desired finish

rpm = sfm x 3.82 / tool diameter
rpm = (m/min x 1000) / (3.14 x tool diameter)
feed per minute = feed per tooth x no. of teeth x rpm



Axial Depth
(Ad) ≤ 1.5 x D

Radial Width
(Rw) ≤ .5 x D



Axial Depth
(Ad) ≤ 1 x D

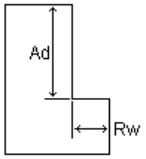
Fractional / Metric

Series 47 Speed and Feed Recommendations – Stub and Regular Length

		Aluminum Alloys 1600-2000 sfm 490-610 m/min		Plastics 1200-1600 sfm 365-490 m/min		Copper Alloys 800-1200 sfm 245-365 m/min		Brass / Bronze 800-1500 sfm 245-455 m/min	
Diameter (D)		Feed Rate Per Tooth							
in	mm	in	mm	in	mm	in	mm	in	mm
1/8	3	0.0015	0.04	0.0030	0.08	0.0015	0.04	0.0015	0.04
	4		0.05		0.10		0.05		0.05
3/16	5	0.0025	0.06	0.0050	0.12	0.0025	0.06	0.0025	0.06
1/4	6	0.0030	0.07	0.0060	0.14	0.0030	0.07	0.0030	0.07
5/16	8	0.0040	0.10	0.0080	0.20	0.0040	0.10	0.0040	0.10
3/8	10	0.0050	0.12	0.0100	0.24	0.0050	0.12	0.0050	0.12
1/2	12	0.0060	0.15	0.0120	0.30	0.0060	0.15	0.0060	0.15
	14		0.17		0.34		0.17		0.17
5/8	16	0.0070	0.18	0.0140	0.36	0.0070	0.18	0.0070	0.18
3/4	20	0.0080	0.22	0.0160	0.44	0.0080	0.22	0.0080	0.22
1	25	0.0100	0.25	0.0180	0.46	0.0100	0.25	0.0100	0.25

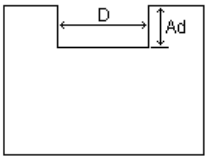
Feed rates shown are for slotting
Rates shown can be increased 40% when profile milling
When finish milling, reduce feed to obtain desired finish

rpm = sfm x 3.82 / tool diameter
rpm = (m/min x 1000) / (3.14 x tool diameter)
feed per minute = feed per tooth x no. of teeth x rpm



Axial Depth
(Ad) ≤ 1.5 x D

Radial Width
(Rw) ≤ .5 x D



Axial Depth
(Ad) ≤ 1 x D

Fractional

Speed and Feed Recommendations – Long Reach

Aluminum

	Slotting		Peripheral		Contouring	
	Roughing	Finishing	Roughing	Finishing	Roughing	Finishing
Radial Width (Rw)	1xD	1xD	.25xD	.05xD	.3xD	.04xD
Axial Depth (Ad)	.5xD	.05xD	1xD	.8xD	.3xD	.05xD
Speed (sfm)	2000	2000	2000	2000	2000	2000

Feed / Tooth by Diameter (inch)

	1/4		3/8		1/2-5/8		3/4	
Operation	Roughing	Finishing	Roughing	Finishing	Roughing	Finishing	Roughing	Finishing
Slotting	.0016	.0020	.0035	.0040	.0045	.0055	.0070	.0085
Peripheral	.0020	.0028	.0040	.0045	.0055	.0070	.0085	.0100
Contouring	.0024	.0040	.0045	.0060	.0070	.0080	.0100	.0120

Copper Alloys

	Slotting		Peripheral		Contouring	
	Roughing	Finishing	Roughing	Finishing	Roughing	Finishing
Radial Width (Rw)	1xD	1xD	.25xD	.05xD	.1xD	.04xD
Axial Depth (Ad)	.1xD	.05xD	1xD	.8xD	.2xD	.05xD
Speed (sfm)	400	400	400	400	600	600

Feed / Tooth by Diameter (inch)

	1/4		3/8		1/2-5/8		3/4	
Operation	Roughing	Finishing	Roughing	Finishing	Roughing	Finishing	Roughing	Finishing
Slotting	.0010	.0015	.0016	.0020	.0035	.0040	.0045	.0055
Peripheral	.0015	.0020	.0020	.0028	.0040	.0045	.0055	.0070
Contouring	.0020	.0025	.0024	.0040	.0045	.0060	.0070	.0080

Plastics

	Slotting		Peripheral		Contouring	
	Roughing	Finishing	Roughing	Finishing	Roughing	Finishing
Radial Width (Rw)	1xD	1xD	.25xD	.05xD	.3xD	.04xD
Axial Depth (Ad)	.5xD	.05xD	1xD	.8xD	.3xD	.05xD
Speed (sfm)	280	325	350	400	400	450

Feed / Tooth by Diameter (inch)

	1/4		3/8		1/2-5/8		3/4	
Operation	Roughing	Finishing	Roughing	Finishing	Roughing	Finishing	Roughing	Finishing
Slotting	.0010	.0015	.0016	.0020	.0035	.0040	.0045	.0055
Peripheral	.0015	.0020	.0020	.0028	.0040	.0045	.0055	.0070
Contouring	.0020	.0025	.0024	.0040	.0045	.0060	.0070	.0080

rpm = sfm x 3.82 / tool diameter
rpm = (m/min x 1000) / (3.14 x tool diameter)
feed per minute = feed per tooth x no. of teeth x rpm

Metric

Speed and Feed Recommendations - Long Reach

Aluminum

	Slotting		Peripheral		Contouring	
	Roughing	Finishing	Roughing	Finishing	Roughing	Finishing
Radial Width (Rw)	1xD	1xD	.25xD	.05xD	.3xD	.04xD
Axial Depth (Ad)	.5xD	.05xD	1xD	.8xD	.3xD	.05xD
Speed (m/min)	610	610	610	610	610	610

Feed / Tooth by Diameter (mm)

	6		8-10		12-16		20	
Operation	Roughing	Finishing	Roughing	Finishing	Roughing	Finishing	Roughing	Finishing
Slotting	0.040	0.050	0.090	0.100	0.110	0.140	0.180	0.215
Peripheral	0.050	0.070	0.100	0.110	0.140	0.180	0.215	0.250
Contouring	0.060	0.100	0.110	0.150	0.180	0.200	0.250	0.300

Copper Alloys

	Slotting		Peripheral		Contouring	
	Roughing	Finishing	Roughing	Finishing	Roughing	Finishing
Radial Width (Rw)	1xD	1xD	.25xD	.05xD	.1xD	.04xD
Axial Depth (Ad)	.1xD	.05xD	1xD	.8xD	.2xD	.05xD
Speed (m/min)	125	125	125	125	185	185

Feed / Tooth by Diameter (mm)

	6		8-10		12-16		20	
Operation	Roughing	Finishing	Roughing	Finishing	Roughing	Finishing	Roughing	Finishing
Slotting	0.025	0.035	0.040	0.050	0.090	0.100	0.110	0.140
Peripheral	0.035	0.050	0.050	0.070	0.100	0.110	0.140	0.170
Contouring	0.050	0.065	0.060	0.100	0.110	0.150	0.170	0.200

Plastics

	Slotting		Peripheral		Contouring	
	Roughing	Finishing	Roughing	Finishing	Roughing	Finishing
Radial Width (Rw)	1xD	1xD	.25xD	.05xD	.3xD	.04xD
Axial Depth (Ad)	.5xD	.05xD	1xD	.8xD	.3xD	.05xD
Speed (m/min)	85	100	110	125	125	135

Feed / Tooth by Diameter (mm)

	6		8-10		12-16		20	
Operation	Roughing	Finishing	Roughing	Finishing	Roughing	Finishing	Roughing	Finishing
Slotting	0.025	0.035	0.040	0.050	0.090	0.100	0.110	0.140
Peripheral	0.035	0.050	0.050	0.070	0.100	0.110	0.140	0.170
Contouring	0.050	0.065	0.060	0.100	0.110	0.150	0.170	0.200

rpm = sfm x 3.82 / tool diameter
rpm = (m/min x 1000) / (3.14 x tool diameter)
feed per minute = feed per tooth x no. of teeth x rpm

SGS®
Solid Carbide Tools
An ISO 9001 Certified Company

CARB
Solid Carbide End Mills for Aluminum

Sold in Over 60 Countries

UNTED STATES OF AMERICA
SGS TOOL COMPANY
World Headquarters
P.O. Box 187
55 South Main Street
Munroe Falls, Ohio 44262 U.S.A.
Phone: (330) 688-6667
Customer Service -
US and Canada: (330) 686-5700
Fax - US & Canada: (800) 447-4017
International Fax: (330) 686-2146
E-mail: webmaster@sgstool.com

CANADA
SGS TOOL CANADA
171 Northport Road, Unit #3
Port Perry, ON L9L 1B2
Phone: 905/982-0888
Fax: 905/982-0488
E-mail: sgstool@bellnet.ca

UNITED KINGDOM
SGS CARBIDE TOOL (UK) LTD.
Unit 1, The Metro Centre
Toutley Road
Wokingham, Berkshire
RG41 1QW England
Phone: (44) 1189-795-200
Fax: (44) 1189-795-295
E-mail: sales@sgstool.co.uk

FRANCE
SGS - PROMECA
36, Rue Des Landes
Chatou F78400
Phone: (33) 13952-8280
Fax: (33) 1305-34919
E-mail: sgspromeca@sgstool.fr

GERMANY
SGS TOOL EUROPE GmbH
Hitdorfer Strasse 10C
Langenfeld D40764
Phone: (49) 2173-9100-91
Fax: (49) 2173-9100-99
E-mail: info@sgs-tool.de

EASTERN EUROPE
SINTCOM
Phone: (359) 283-64421
Fax: (359) 283-64421
E-mail: sintcom@cablebg.net

RUSSIA
HALTEC
Phone: (7) 842-241-4717
Fax: (7) 842-241-7619
E-mail: info@haltec.ru

CHINA
SGS TOOL SHANGHAI
Phone: (86) 21-58682809-107
Fax: (86) 21-58682803
E-mail: sgsshanghai@126.com

Catalog EDP No. 00045 Rev. 09/2006

www.sgstool.com