

# STABILIZER™

**PATENT #6,991,409**

**Available in  
TiAlN or AlCrN  
Coating**

- Chatter Reduction
- Increased Productivity
  - Greater depths-of-cut
  - Faster speeds
  - Heavier feeds
  - Better surface finish



**Niagara Cutter**

STB-8  
9-1-09

# Stabilizer™-HT (STR440 / STB440 / STRN440 / STBN440)

## Designed For:

- Stainless Steels
- High Temperature Alloys
- Nickel Based Alloys
- Titanium and Titanium Alloys

- Extra Fine Grade Carbide
- Unequal Flute Spacing
- Variable Helix
- Variable Radial Rake
- Weldon Flat on Shank
- Sizes 3/8" and larger



### AlCrN

- Highest hot hardness for high temperature wear resistance

### TiAlN

- High oxidation resistance
- Hardest nitride coating

Inch Series					Stabilizer™-HT						
Price Code E					STR440 with Radius				STB440 Ball-End		
Flute Dia	Shank Dia	LOC	OAL	# F	AlCrN EDP	TiAlN EDP	Corner Radius	List	AlCrN EDP	TiAlN EDP	List
1/8	1/8	1/8	1 1/2	4	68444	57453	0.010	\$14.43	68480	57489	\$14.93
1/8	1/8	3/8	1 1/2	4	68445	57454	0.010	\$16.15	68481	57490	\$16.66
5/32	3/16	3/16	2	4	68446	57455	0.010	\$20.35	68482	57491	\$20.84
5/32	3/16	7/16	2	4	68447	57456	0.010	\$23.93	68483	57492	\$24.67
3/16	3/16	3/16	2	4	68448	57457	0.010	\$19.50	68484	57493	\$19.98
3/16	3/16	7/16	2	4	68449	57458	0.010	\$22.45	68485	57494	\$23.07
7/32	1/4	1/4	2	4	68450	57459	0.020	\$24.81	68486	57495	\$25.53
7/32	1/4	7/16	2 1/2	4	68451	57460	0.020	\$29.98	68487	57496	\$30.84
1/4	1/4	1/4	2	4	68452	57461	0.020	\$25.67	68488	57497	\$26.77
1/4	1/4	1/2	2 1/2	4	68453	57462	0.020	\$28.62	68489	57498	\$29.85
9/32	5/16	5/8	2 1/2	4	68454	57463	0.020	\$39.61	68490	57499	\$41.33
5/16	5/16	5/16	2	4	68455	57464	0.020	\$32.32	68491	57500	\$33.79
5/16	5/16	13/16	2 1/2	4	68456	57465	0.020	\$35.91	68492	57501	\$37.49
11/32	3/8	13/16	2 1/2	4	68457	57466	0.020	\$48.97	68493	57502	\$51.07
3/8	3/8	3/8	2	4	68458	57467	0.020	\$39.97	68494	57503	\$41.70
3/8	3/8	7/8	2 1/2	4	68459	57468	0.020	\$44.53	68495	57504	\$46.50
13/32	7/16	15/16	2 3/4	4	68460	57469	0.020	\$47.36	68496	57505	\$49.48
7/16	7/16	7/16	2 1/2	4	68461	57470	0.020	\$50.21	68497	57506	\$52.43
7/16	7/16	1	2 3/4	4	68462	57471	0.020	\$55.75	68498	57507	\$58.22
15/32	1/2	1	3	4	68463	57472	0.030	\$58.73	68499	57508	\$61.30
1/2	1/2	1/2	2 1/2	4	68464	57473	0.030	\$61.68	68500	57509	\$64.39
1/2	1/2	1	3	4	68465	57474	0.030	\$68.47	68501	57510	\$71.55
1/2	1/2	1 1/4	3	4	68466	57475	0.030	\$74.64	68502	57511	\$77.76
9/16	9/16	1 1/8	3 1/2	4	68467	57476	0.030	\$110.17	68503	57512	\$114.97
5/8	5/8	5/8	3	4	68468	57477	0.030	\$129.77	68504	57513	\$135.46
5/8	5/8	1 1/4	3 1/2	4	68469	57478	0.030	\$144.33	68505	57514	\$150.50
11/16	3/4	1 3/8	4	4	68470	57479	0.030	\$176.55	68506	57515	\$184.18
3/4	3/4	3/4	3	4	68471	57480	0.030	\$168.14	68507	57516	\$175.41
3/4	3/4	1 1/2	4	4	68472	57481	0.030	\$186.89	68508	57517	\$194.91
13/16	7/8	1 5/8	4	4	68473	57482	0.030	\$220.42	68509	57518	\$229.93
7/8	7/8	1 3/4	4	4	68474	57483	0.030	\$227.23	68510	57519	\$237.04
15/16	1	1 7/8	4	4	68475	57484	0.030	\$280.94	68511	57520	\$293.13
1	1	1	4	4	68476	57485	0.030	\$267.58	68512	57521	\$279.17
1	1	1 1/2	4	4	68477	57486	0.030	\$297.31	68513	57522	\$310.25
1	1	2	5	4	68478	57487	0.030	\$490.22	68514	57523	\$511.30
1 1/4	1 1/4	2 1/4	5	4	68479	57488	0.030	\$670.85	68515	57524	\$699.68

Inch Series							Stabilizer™-HT (Neck Style)						
Price Code E							STRN440 with Radius			STBN440 Ball-End			
Flute Dia.	Shank Dia	LOC	Reach	Neck Dia	OAL	# F	AlCrN EDP	TiAlN EDP	Corner Radius	List	AlCrN EDP	TiAlN EDP	List
1/4	1/4	3/8	2 1/8	0.240	4	4	68516	57525	0.020	\$52.29	68533	57542	\$54.89
5/16	5/16	7/16	2 1/8	0.300	4	4	68517	57526	0.020	\$84.75	68534	57543	\$88.94
3/8	3/8	1/2	2 1/8	0.360	4	4	68518	57527	0.020	\$75.74	68535	57544	\$79.57
3/8	3/8	1/2	4 1/8	0.360	6	4	68519	57528	0.020	\$113.63	68536	57545	\$119.29
7/16	7/16	9/16	2 1/8	0.420	4	4	68520	57529	0.020	\$102.26	68537	57546	\$107.32
7/16	7/16	9/16	4 1/8	0.420	6	4	68521	57530	0.020	\$138.16	68538	57547	\$145.08
1/2	1/2	5/8	2 1/8	0.480	4	4	68522	57531	0.030	\$107.56	68539	57548	\$113.00
1/2	1/2	5/8	3 1/8	0.480	5	4	68523	57532	0.030	\$138.16	68540	57549	\$145.08
1/2	1/2	5/8	4 1/8	0.480	6	4	68524	57533	0.030	\$168.88	68541	57550	\$177.27
5/8	5/8	3/4	2 1/8	0.600	4	4	68525	57534	0.030	\$165.44	68542	57551	\$173.70
5/8	5/8	3/4	3 1/8	0.600	5	4	68526	57535	0.030	\$213.80	68543	57552	\$224.52
5/8	5/8	3/4	4	0.600	6	4	68527	57536	0.030	\$263.51	68544	57553	\$276.71
3/4	3/4	1	2	0.720	4	4	68528	57537	0.030	\$194.67	68545	57554	\$204.41
3/4	3/4	1	3	0.720	5	4	68529	57538	0.030	\$234.77	68546	57555	\$246.48
3/4	3/4	1	4	0.720	6	4	68530	57539	0.030	\$266.09	68547	57556	\$279.41
1	1	1 1/4	3	0.960	5	4	68531	57540	0.030	\$287.81	68548	57557	\$302.24
1	1	1 1/4	4	0.960	6	4	68532	57541	0.030	\$383.66	68549	57558	\$402.90

# Stabilizer™-HT METRIC (STR440M / STB440M)

AiCrN

- Highest hot hardness for high temperature wear resistance

AlTiN

- Highest oxidation resistance

Metric Series

Price Code E

					Stabilizer™-HT Metric						
					STR440M with Radius				STB440M Ball End		
Flute Dia	Shank Dia	LOC	OAL	# F	AiCrN EDP	AlTiN EDP	Corner Radius	List	AiCrN EDP	AlTiN EDP	List
3	6	3	58	4	68550	68665	0.25	\$31.10	68584	57593	\$32.51
3	6	6	58	4	68551	68666	0.25	\$34.71	68585	57594	\$36.27
4	6	4	58	4	68552	68667	0.25	\$28.27	68586	57595	\$29.55
4	6	8	58	4	68553	68668	0.25	\$31.54	68587	57596	\$32.97
5	6	5	58	4	68554	68669	0.25	\$24.81	68588	57597	\$25.53
5	6	10	58	4	68555	68670	0.25	\$29.98	68589	57598	\$30.84
6	6	6	58	4	68556	68671	0.50	\$25.67	68590	57599	\$26.77
6	6	12	58	4	68557	68672	0.50	\$28.62	68591	57600	\$29.85
7	8	7	64	4	68558	68673	0.50	\$34.10	68592	57601	\$35.63
7	8	14	64	4	68559	68674	0.50	\$39.61	68593	57602	\$41.33
8	8	8	64	4	68560	68675	0.50	\$32.32	68594	57603	\$33.79
8	8	16	64	4	68561	68676	0.50	\$35.91	68595	57604	\$37.49
9	10	9	63	4	68562	68677	0.50	\$38.04	68596	57605	\$39.74
9	10	18	73	4	68563	68678	0.50	\$42.25	68597	57606	\$44.14
10	10	10	63	4	68564	68679	0.50	\$40.03	68598	57607	\$41.82
10	10	20	73	4	68565	68680	0.50	\$44.54	68599	57608	\$46.50
11	12	11	74	4	68566	68681	0.50	\$51.63	68600	57609	\$53.96
11	12	22	84	4	68567	68682	0.50	\$58.73	68601	57610	\$61.30
12	12	12	74	4	68568	68683	0.75	\$63.63	68602	57611	\$66.50
12	12	24	84	4	68569	68684	0.75	\$68.47	68603	57612	\$71.55
13	14	13	76	4	68570	68685	0.75	\$94.13	68604	57613	\$98.38
13	14	26	84	4	68571	68686	0.75	\$104.59	68605	57614	\$109.28
14	14	14	76	4	68572	68687	0.75	\$99.09	68606	57615	\$103.54
14	14	28	84	4	68573	68688	0.75	\$110.17	68607	57616	\$114.97
15	16	15	83	4	68574	68689	0.75	\$123.32	68608	57617	\$128.87
15	16	30	93	4	68575	68690	0.75	\$137.04	68609	57618	\$143.20
16	16	16	83	4	68576	68691	0.75	\$129.77	68610	57619	\$135.46
16	16	32	93	4	68577	68692	0.75	\$144.33	68611	57620	\$150.50
18	18	18	85	4	68578	68693	0.75	\$152.20	68612	57621	\$159.05
18	18	36	93	4	68579	68694	0.75	\$160.16	68613	57622	\$167.37
20	20	20	93	4	68580	68695	0.75	\$168.11	68614	57623	\$175.67
20	20	40	105	4	68581	68696	0.75	\$186.89	68615	57624	\$194.91
25	25	25	115	4	68582	68697	0.75	\$267.57	68616	57625	\$279.17
25	25	50	115	4	68583	68698	0.75	\$297.31	68617	57626	\$310.25

## Stabilizer™ - HT Recommended Starting Point Speed and Feeds (Slotting)

Material	SFM	Diameter = 1/4			Diameter = 3/8			Diameter = 1/2			Diameter = 3/4			Diameter = 1		
		RPM	CPT	IPM	RPM	CPT	IPM	RPM	CPT	IPM	RPM	CPT	IPM	RPM	CPT	IPM
Inconel																
625	135	2063	0.0006	5.0	1375	0.0009	5.0	1031	0.0012	5.0	688	0.0015	4.1	516	0.0018	3.7
718	90	1375	0.0005	2.8	917	0.0008	2.8	688	0.0010	2.8	458	0.0013	2.3	344	0.0015	2.1
Other Nickel Based																
Waspalloy	90	1375	0.0005	2.8	917	0.0008	2.8	688	0.0010	2.8	458	0.0013	2.3	344	0.0015	2.1
Hastelloy	90	1375	0.0005	2.8	917	0.0008	2.8	688	0.0010	2.8	458	0.0013	2.3	344	0.0015	2.1
A-286	110	1681	0.0005	3.4	1121	0.0008	3.4	840	0.0010	3.4	560	0.0013	2.8	420	0.0015	2.5
Titanium																
6AL-4V / Comm. Pure	275	4202	0.0008	12.6	2801	0.0011	12.6	2101	0.0015	12.6	1401	0.0019	10.5	1051	0.0023	9.5
Stainless Steel																
303	400	6112	0.0009	20.8	4075	0.0013	20.8	3056	0.0017	20.8	2037	0.0021	17.3	1528	0.0026	15.6
304	400	6112	0.0009	20.8	4075	0.0013	20.8	3056	0.0017	20.8	2037	0.0021	17.3	1528	0.0026	15.6
316	400	6112	0.0009	20.8	4075	0.0013	20.8	3056	0.0017	20.8	2037	0.0021	17.3	1528	0.0026	15.6
15/5	350	5348	0.0009	18.2	3565	0.0013	18.2	2674	0.0017	18.2	1783	0.0021	15.2	1337	0.0026	13.6
17/4	350	5348	0.0009	18.2	3565	0.0013	18.2	2674	0.0017	18.2	1783	0.0021	15.2	1337	0.0026	13.6
416	350	5348	0.0009	18.2	3565	0.0013	18.2	2674	0.0017	18.2	1783	0.0021	15.2	1337	0.0026	13.6
Kovar / Invar	225	3438	0.0009	11.7	2292	0.0013	11.7	1719	0.0017	11.7	1146	0.0021	9.7	860	0.0026	8.8

- Speeds and Feeds are based upon: ADOC = 1 x Diameter, RDOC = 1 x Diameter
- Speed and Feed is for TiAlN. For AiCrN increase SFM by 10% and IPM by 10%

## Stabilizer™ - HT Recommended Starting Point Speed and Feeds (Profiling)

Material	SFM	Diameter = 1/4			Diameter = 3/8			Diameter = 1/2			Diameter = 3/4			Diameter = 1		
		RPM	CPT	IPM	RPM	CPT	IPM	RPM	CPT	IPM	RPM	CPT	IPM	RPM	CPT	IPM
Inconel																
625	155.3	2372	0.0008	7.1	1581	0.0011	7.1	1186	0.0015	7.1	791	0.0019	5.9	593	0.0023	5.3
718	103.5	1581	0.0006	4.0	1054	0.0009	4.0	791	0.0013	4.0	527	0.0016	3.3	395	0.0019	3.0
Other Nickel Based																
Waspalloy	103.5	1581	0.0006	4.0	1054	0.0009	4.0	791	0.0013	4.0	527	0.0016	3.3	395	0.0019	3.0
Hastelloy	103.5	1581	0.0006	4.0	1054	0.0009	4.0	791	0.0013	4.0	527	0.0016	3.3	395	0.0019	3.0
A-286	126.5	1933	0.0006	4.8	1289	0.0009	4.8	966	0.0013	4.8	644	0.0016	4.0	483	0.0019	3.6
Titanium																
6AL-4V / Comm. Pure	316.3	4832	0.0009	18.1	3222	0.0014	18.1	2416	0.0019	18.1	1611	0.0023	15.1	1208	0.0028	13.6
Stainless Steel																
303	460	7029	0.0011	29.9	4686	0.0016	29.9	3514	0.0021	29.9	2343	0.0027	24.9	1757	0.0032	22.4
304	460	7029	0.0011	29.9	4686	0.0016	29.9	3514	0.0021	29.9	2343	0.0027	24.9	1757	0.0032	22.4
316	460	7029	0.0011	29.9	4686	0.0016	29.9	3514	0.0021	29.9	2343	0.0027	24.9	1757	0.0032	22.4
15/5	402.5	6150	0.0011	26.1	4100	0.0016	26.1	3075	0.0021	26.1	2050	0.0027	21.8	1538	0.0032	19.6
17/4	402.5	6150	0.0011	26.1	4100	0.0016	26.1	3075	0.0021	26.1	2050	0.0027	21.8	1538	0.0032	19.6
416	402.5	6150	0.0011	26.1	4100	0.0016	26.1	3075	0.0021	26.1	2050	0.0027	21.8	1538	0.0032	19.6
Kovar / Invar	258.8	3954	0.0011	16.8	2636	0.0016	16.8	1977	0.0021	16.8	1318	0.0027	14.0	988	0.0032	12.6

- Speeds and Feeds are based upon: ADOC = 1 x Diameter, RDOC = 0.25 x Diameter
- Speed and Feed is for TiAlN. For AiCrN increase SFM by 10% and IPM by 10%



# Stabilizer™-GP (ST5430 / STR430 / STB430 / STRN430 / STBN430)

**Designed For:**

- Carbon Steels
- Tool Steels
- Alloy Steels
- Cast Irons

- Extra Fine Grade Carbide
- Unequal Flute Spacing
- Variable Helix
- Variable Radial Rake
- Weldon Flat on Shank  
Sizes 3/8" and larger



**AICrN**

- Highest hot hardness for high temperature wear resistance

**TiAIN**

- High oxidation resistance
- Hardest nitride coating

Inch Series						Stabilizer™-GP									
Price Code E						STS430 Square Corner			STR430 with Radius			STB430 Ball-End			
Flute Dia	Shank Dia	LOC	OAL	# F		AICrN EDP	TiAIN EDP	List	AICrN EDP	TiAIN EDP	Corner Radius	List	AICrN EDP	TiAIN EDP	List
1/8	1/8	1/8	1 1/2	4		68200	60650	\$14.07	68236	60679	0.010	\$14.43	68272	60708	\$14.93
1/8	1/8	3/8	1 1/2	4		68201	60651	\$15.80	68237	60680	0.010	\$16.15	68273	60709	\$16.66
5/32	3/16	3/16	2	4		68202	60652	\$19.74	68238	60681	0.010	\$20.35	68274	60710	\$20.85
5/32	3/16	7/16	2	4		68203	60653	\$23.32	68239	60682	0.010	\$23.94	68275	60711	\$24.67
3/16	3/16	3/16	2	4		68204	60654	\$18.88	68240	60683	0.010	\$19.50	68276	60712	\$19.98
3/16	3/16	7/16	2	4		68205	60655	\$21.83	68241	60684	0.010	\$22.45	68277	60713	\$23.07
7/32	1/4	1/4	2	4		68206	60656	\$24.18	68242	60685	0.020	\$24.80	68278	60714	\$25.53
7/32	1/4	7/16	2 1/2	4		68207	60657	\$29.11	68243	60686	0.020	\$29.98	68279	60715	\$30.84
1/4	1/4	1/4	2	4		68208	60658	\$24.55	68244	60687	0.020	\$25.67	68280	60716	\$26.77
1/4	1/4	1/2	2 1/2	4		68209	60659	\$27.38	68245	60688	0.020	\$28.62	68281	60717	\$29.85
9/32	5/16	5/8	2 1/2	4		68210	60660	\$37.87	68246	60689	0.020	\$39.60	68282	60718	\$41.33
5/16	5/16	5/16	2	4		68211	60661	\$30.97	68247	60690	0.020	\$32.32	68283	60719	\$33.80
5/16	5/16	13/16	2 1/2	4		68212	60662	\$34.30	68248	60691	0.020	\$35.90	68284	60720	\$37.50
11/32	3/8	13/16	2 1/2	4		68213	60663	\$46.88	68249	60692	0.020	\$48.97	68285	60721	\$51.08
3/8	3/8	3/8	2	4		68214	60664	\$38.25	68250	60693	0.020	\$39.97	68286	60722	\$41.70
3/8	3/8	7/8	2 1/2	4		68215	60665	\$42.56	68251	60694	0.020	\$44.53	68287	60723	\$46.50
13/32	7/16	15/16	2 3/4	4		68216	60666	\$45.27	68252	60695	0.020	\$47.37	68288	60724	\$49.47
7/16	7/16	7/16	2 1/2	4		68217	60667	\$47.99	68253	60696	0.020	\$50.21	68289	60725	\$52.43
7/16	7/16	1	2 3/4	4		68218	60668	\$53.29	68254	60697	0.020	\$55.75	68290	60726	\$58.22
15/32	1/2	1	3	4		68219	60669	\$56.25	68255	60698	0.030	\$58.72	68291	60727	\$61.30
1/2	1/2	1/2	2 1/2	4		68220	60670	\$59.09	68256	60699	0.030	\$61.68	68292	60728	\$64.39
1/2	1/2	1	3	4		68221	60671	\$65.50	68257	60700	0.030	\$68.47	68293	60729	\$71.55
1/2	1/2	1 1/4	3	4		68222	57330	\$71.67	68258	57337	0.030	\$74.64	68294	57344	\$77.76
9/16	9/16	1 1/8	3 1/2	4		68223	60672	\$105.35	68259	60701	0.030	\$110.17	68295	60730	\$114.97
5/8	5/8	5/8	3	4		68224	60673	\$124.22	68260	60702	0.030	\$129.77	68296	60731	\$135.46
5/8	5/8	1 1/4	3 1/2	4		68225	60674	\$138.08	68261	60703	0.030	\$144.33	68297	60732	\$150.50
11/16	3/4	1 3/8	4	4		68226	57331	\$168.91	68262	57338	0.030	\$176.55	68298	57345	\$184.19
3/4	3/4	3/4	3	4		68227	60675	\$160.86	68263	60704	0.030	\$168.14	68299	60733	\$175.41
3/4	3/4	1 1/2	4	4		68228	60676	\$178.75	68264	60705	0.030	\$186.89	68300	60734	\$194.91
13/16	7/8	1 5/8	4	4		68229	57332	\$210.84	68265	57339	0.030	\$220.42	68301	57346	\$229.93
7/8	7/8	1 3/4	4	4		68230	57333	\$217.36	68266	57340	0.030	\$227.23	68302	57347	\$237.04
15/16	1	1 7/8	4	4		68231	57334	\$268.77	68267	57341	0.030	\$280.94	68303	57348	\$293.13
1	1	1	4	4		68232	60677	\$255.98	68268	60706	0.030	\$267.58	68304	60735	\$279.17
1	1	1 1/2	4	4		68233	60678	\$284.47	68269	60707	0.030	\$297.31	68305	60736	\$310.25
1	1	2	5	4		68234	57335	\$470.01	68270	57342	0.030	\$490.22	68306	57349	\$511.30
1 1/4	1 1/4	2 1/4	5	4		68235	57336	\$641.99	68271	57343	0.030	\$670.85	68307	57350	\$699.68

Inch Series						Stabilizer™-GP (Neck Style)								
Price Code E						STRN430 with Radius			STBN430 Ball-End					
Flute Dia.	Shank Dia	LOC	Reach	Neck Dia	OAL	# F	AICrN EDP	TiAIN EDP	Corner Radius	List	AICrN EDP	TiAIN EDP	List	
1/4	1/4	3/8	2 1/8	0.240	4	4	68308	60737	0.020	\$52.30	68325	60754	\$54.89	
5/16	5/16	7/16	2 1/8	0.300	4	4	68309	60738	0.020	\$84.75	68326	60755	\$88.94	
3/8	3/8	1/2	2 1/8	0.360	4	4	68310	60739	0.020	\$75.75	68327	60756	\$79.57	
3/8	3/8	1/2	4 1/8	0.360	6	4	68311	60740	0.020	\$113.62	68328	60757	\$119.29	
7/16	7/16	9/16	2 1/8	0.420	4	4	68312	60741	0.020	\$102.27	68329	60758	\$107.32	
7/16	7/16	9/16	4 1/8	0.420	6	4	68313	60742	0.020	\$138.16	68330	60759	\$145.08	
1/2	1/2	5/8	2 1/8	0.480	4	4	68314	60743	0.030	\$107.56	68331	60760	\$113.00	
1/2	1/2	5/8	3 1/8	0.480	5	4	68315	60744	0.030	\$138.16	68332	60761	\$145.08	
1/2	1/2	5/8	4 1/8	0.480	6	4	68316	60745	0.030	\$168.89	68333	60762	\$177.27	
5/8	5/8	3/4	2 1/8	0.600	4	4	68317	60746	0.030	\$165.43	68334	60763	\$173.70	
5/8	5/8	3/4	3 1/8	0.600	5	4	68318	60747	0.030	\$213.80	68335	60764	\$224.52	
5/8	5/8	3/4	4	0.600	6	4	68319	60748	0.030	\$263.50	68336	60765	\$276.71	
3/4	3/4	1	2	0.720	4	4	68320	60749	0.030	\$194.67	68337	60766	\$204.41	
3/4	3/4	1	3	0.720	5	4	68321	60750	0.030	\$234.77	68338	60767	\$246.48	
3/4	3/4	1	4	0.720	6	4	68322	60751	0.030	\$266.09	68339	60768	\$279.41	
1	1	1 1/4	3	0.960	5	4	68323	60752	0.030	\$287.81	68340	60769	\$302.24	
1	1	1 1/4	4	0.960	6	4	68324	60753	0.030	\$383.66	68341	60770	\$402.90	

# Stabilizer™-GP METRIC (STS430M / STR430M / STB430M)

AiCrN

- Highest hot hardness for high temperature wear resistance

AlTiN

- Highest oxidation resistance

Metric Series

Price Code E

					Stabilizer™-GP Metric									
					STS430M Square Corner			STR430M with Radius			STB430M Ball-End			
Flute Dia	Shank Dia	LOC	OAL	# F	AiCrN EDP	AlTiN EDP	List	AiCrN EDP	AlTiN EDP	Corner Radius	List	AiCrN EDP	AlTiN EDP	List
3	6	3	58	4	68342	57351	\$29.76	68376	57385	0.25	\$31.10	68410	57419	\$32.51
3	6	6	58	4	68343	57352	\$33.21	68377	57386	0.25	\$34.71	68411	57420	\$36.27
4	6	4	58	4	68344	57353	\$27.06	68378	57387	0.25	\$28.27	68412	57421	\$29.55
4	6	8	58	4	68345	57354	\$30.19	68379	57388	0.25	\$31.54	68413	57422	\$32.97
5	6	5	58	4	68346	57355	\$25.77	68380	57389	0.25	\$24.81	68414	57423	\$25.53
5	6	10	58	4	68347	57356	\$28.75	68381	57390	0.25	\$29.98	68415	57424	\$30.84
6	6	6	58	4	68348	57357	\$24.54	68382	57391	0.50	\$25.67	68416	57425	\$26.77
6	6	12	58	4	68349	57358	\$27.38	68383	57392	0.50	\$28.62	68417	57426	\$29.85
7	8	7	64	4	68350	57359	\$32.63	68384	57393	0.50	\$34.10	68418	57427	\$35.63
7	8	14	64	4	68351	57360	\$37.87	68385	57394	0.50	\$39.61	68419	57428	\$41.33
8	8	8	64	4	68352	57361	\$30.98	68386	57395	0.50	\$32.32	68420	57429	\$33.79
8	8	16	64	4	68353	57362	\$34.30	68387	57396	0.50	\$35.91	68421	57430	\$37.49
9	10	9	63	4	68354	57363	\$36.39	68388	57397	0.50	\$38.04	68422	57431	\$39.74
9	10	18	73	4	68355	57364	\$40.44	68389	57398	0.50	\$42.25	68423	57432	\$44.14
10	10	10	63	4	68356	57365	\$38.30	68390	57399	0.50	\$40.03	68424	57433	\$41.82
10	10	20	73	4	68357	57366	\$42.56	68391	57400	0.50	\$44.54	68425	57434	\$46.50
11	12	11	74	4	68358	57367	\$49.41	68392	57401	0.50	\$51.63	68426	57435	\$53.96
11	12	22	84	4	68359	57368	\$56.26	68393	57402	0.50	\$58.73	68427	57436	\$61.30
12	12	12	74	4	68360	57369	\$60.88	68394	57403	0.75	\$63.63	68428	57437	\$66.50
12	12	24	84	4	68361	57370	\$65.51	68395	57404	0.75	\$68.47	68429	57438	\$71.55
13	14	13	76	4	68362	57371	\$90.08	68396	57405	0.75	\$94.13	68430	57439	\$98.38
13	14	26	84	4	68363	57372	\$100.07	68397	57406	0.75	\$104.59	68431	57440	\$109.28
14	14	14	76	4	68364	57373	\$94.81	68398	57407	0.75	\$99.09	68432	57441	\$103.54
14	14	28	84	4	68365	57374	\$105.34	68399	57408	0.75	\$110.17	68433	57442	\$114.97
15	16	15	83	4	68366	57375	\$118.01	68400	57409	0.75	\$123.32	68434	57443	\$128.87
15	16	30	93	4	68367	57376	\$131.14	68401	57410	0.75	\$137.04	68435	57444	\$143.20
16	16	16	83	4	68368	57377	\$124.22	68402	57411	0.75	\$129.77	68436	57445	\$135.46
16	16	32	93	4	68369	57378	\$138.04	68403	57412	0.75	\$144.33	68437	57446	\$150.50
18	18	18	85	4	68370	57379	\$145.64	68404	57413	0.75	\$152.20	68438	57447	\$159.05
18	18	36	93	4	68371	57380	\$153.26	68405	57414	0.75	\$160.16	68439	57448	\$167.37
20	20	20	93	4	68372	57381	\$160.86	68406	57415	0.75	\$168.11	68440	57449	\$175.67
20	20	40	105	4	68373	57382	\$178.74	68407	57416	0.75	\$186.89	68441	57450	\$194.91
25	25	25	115	4	68374	57383	\$255.98	68408	57417	0.75	\$267.57	68442	57451	\$279.17
25	25	50	115	4	68375	57384	\$284.48	68409	57418	0.75	\$297.31	68443	57452	\$310.25

## Stabilizer™ - GP Recommended Starting Point Speed and Feeds (Slotting)

Material	SFM	Diameter = 1/4			Diameter = 3/8			Diameter = 1/2			Diameter = 3/4			Diameter = 1		
		RPM	CPT	IPM	RPM	CPT	IPM	RPM	CPT	IPM	RPM	CPT	IPM	RPM	CPT	IPM
1018/1020	600	9168	0.0008	27.5	6112	0.0011	27.5	4584	0.0015	27.5	3056	0.0019	22.9	2292	0.0023	20.6
1045	550	8404	0.0005	16.8	5603	0.0008	16.8	4202	0.0010	16.8	2801	0.0013	14.0	2101	0.0015	12.6
4140	500	7640	0.0005	15.3	5093	0.0008	15.3	3820	0.0010	15.3	2547	0.0013	12.7	1910	0.0015	11.5
4340	475	7258	0.0005	14.5	4839	0.0008	14.5	3629	0.0010	14.5	2419	0.0013	12.1	1815	0.0015	10.9
Cast Iron																
Ductile	425	6494	0.0008	19.5	4329	0.0011	19.5	3247	0.0015	19.5	2165	0.0019	16.2	1624	0.0023	14.6
Gray	550	8404	0.0008	25.2	5603	0.0011	25.2	4202	0.0015	25.2	2801	0.0019	21.0	2101	0.0023	18.9
Tool Steel																
A2	425	6494	0.0005	13.0	4329	0.0008	13.0	3247	0.0010	13.0	2165	0.0013	10.8	1624	0.0015	9.7
D2	350	5348	0.0005	10.7	3565	0.0008	10.7	2674	0.0010	10.7	1783	0.0013	8.9	1337	0.0015	8.0
H13	425	6494	0.0005	13.0	4329	0.0008	13.0	3247	0.0010	13.0	2165	0.0013	10.8	1624	0.0015	9.7
P20	375	5730	0.0008	17.2	3820	0.0011	17.2	2865	0.0015	17.2	1910	0.0019	14.3	1433	0.0023	12.9
S7	400	6112	0.0005	12.2	4075	0.0008	12.2	3056	0.0010	12.2	2037	0.0013	10.2	1528	0.0015	9.2

- Speeds and Feeds are based upon: ADOC = 1 x Diameter, RDOC = 1 x Diameter
- Speed and Feed is for TiAlN. For AiCrN increase SFM by 10% and IPM by 10%

## Stabilizer™ - GP Recommended Starting Point Speed and Feeds (Profiling)

Material	SFM	Diameter = 1/4			Diameter = 3/8			Diameter = 1/2			Diameter = 3/4			Diameter = 1		
		RPM	CPT	IPM	RPM	CPT	IPM	RPM	CPT	IPM	RPM	CPT	IPM	RPM	CPT	IPM
1018/1020	750	11460	0.0009	43.0	7640	0.0014	43.0	5730	0.0019	43.0	3820	0.0023	35.8	2865	0.0028	32.2
1045	688	10505	0.0006	26.3	7003	0.0009	26.3	5253	0.0013	26.3	3502	0.0016	21.9	2626	0.0019	19.7
4140	625	9550	0.0006	23.9	6367	0.0009	23.9	4775	0.0013	23.9	3183	0.0016	19.9	2388	0.0019	17.9
4340	594	9073	0.0006	22.7	6048	0.0009	22.7	4536	0.0013	22.7	3024	0.0016	18.9	2268	0.0019	17.0
Cast Iron																
Ductile	489	7468	0.0009	25.8	4979	0.0013	25.8	3734	0.0017	25.8	2489	0.0022	21.5	1867	0.0026	19.3
Gray	633	9665	0.0009	33.3	6443	0.0013	33.3	4832	0.0017	33.3	3222	0.0022	27.8	2416	0.0026	25.0
Tool Steel																
A2	531	8118	0.0006	20.3	5412	0.0009	20.3	4059	0.0013	20.3	2706	0.0016	16.9	2029	0.0019	15.2
D2	438	6685	0.0006	16.7	4457	0.0009	16.7	3343	0.0013	16.7	2228	0.0016	13.9	1671	0.0019	12.5
H13	531	8118	0.0006	20.3	5412	0.0009	20.3	4059	0.0013	20.3	2706	0.0016	16.9	2029	0.0019	15.2
P20	469	7163	0.0008	22.9	4775	0.0012	22.9	3581	0.0016	22.9	2388	0.0020	19.1	1791	0.0024	17.2
S7	500	7640	0.0006	19.1	5093	0.0009	19.1	3820	0.0013	19.1	2547	0.0016	15.9	1910	0.0019	14.3

- Speeds and Feeds are based upon: ADOC = 1 x Diameter, RDOC = 1 x Diameter
- Speed and Feed is for TiAlN. For AiCrN increase SFM by 10% and IPM by 10%

# STABILIZER™

**ASYMMETRICAL CUTTING EDGES** DESIGNED TO **ELIMINATE HARMONICS**

EVEN IN DEEP SLOTING CUTS AT **HIGH FEED RATES**. AVAILABLE IN

TWO STYLES: **GP-SERIES** FOR CARBON AND ALLOY STEELS

**HT-SERIES** FOR STAINLESS, TITANIUM

AND HIGH TEMP ALLOYS

■ STANDARD SQUARE-END, CORNER RADIUS

AND BALL-END STYLES (INCH & METRIC AVAILABLE)

■ EXTRA-FINE GRAIN CARBIDE

■ HIGH PERFORMANCE TiAIN COATING

■ U.S. PATENT #6,991,409

## CHIPS PRODUCED AFTER 1 MINUTE

### GENERAL PURPOSE

4 flute carbide end mill

**0.57** (cu in/min)



### HIGH PERFORMANCE

3 flute carbide end mill

**1.72** (cu in/min)



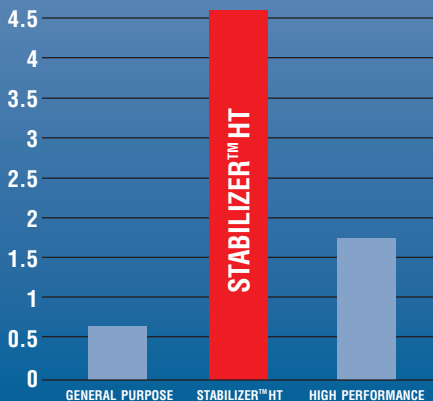
### STABILIZER™ HT

4 flute carbide end mill

**4.58** (cu in/min)



### METAL REMOVAL RATE (CUBIC INCHES/MIN)



### CUTTING PERFORMANCE IN 304 STAINLESS 185 Bhn

	GENERAL PURPOSE 4 FLUTE CARBIDE	STABILIZER™ HT 4 FLUTE CARBIDE	HIGH PERFORMANCE 3 FLUTE CARBIDE
CUTTING DIAMETER (IN.)	0.5	0.5	0.5
AXIAL DOC (IN.)	0.5	0.5	0.5
RADIAL DOC (IN.)	0.5	0.5	0.5
SFM	150	400	300
RPM	1146	3056	2292
CPT (IN.)	0.0005	0.0015	0.001
IPM	2.3	18.3	6.9
MRR	0.57	4.58	1.72

Increased metal removal rates with STABILIZER™ HT require adequate fixturing, clamping and coolant.



# Niagara Cutter