## A.B. Tools, Inc.

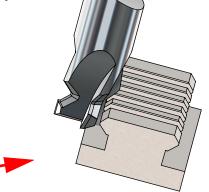


Made in the USA since 1977

New Products

1051 Aviation Blvd. Lincoln, CA 95648-9312 (916) 408-2442 FAX (916) 408-0740 Toll free phone (866) 440-8665 www.abtoolsinc.com

E-Mail: mail@abtoolsinc.com



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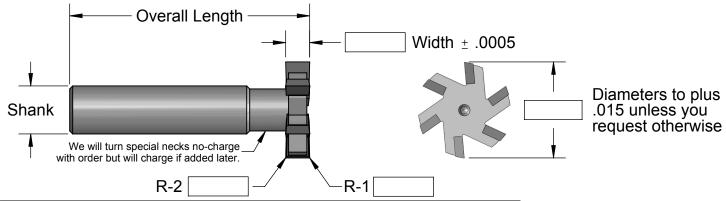


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A. B. TOOLS, INC. 1051 Aviation Blvd. Lincoln, CA, 95648-9312 If any product is not satisfactory we will modify, replace or refund.

## Carbide Tipped Keyseat Cutters with your decimal width in 4-6 working days

#### Machining what part material, please? \_\_\_\_\_



					•		
Diameter	Width		Basic Cutter Prices				
Plus .015	Range	For Alı	uminum	For Fo	Overall		
Minus Zero		Flutes	Price	Flutes	Price	Length	
5/8	.065/.190	2	\$90.	5	\$115.		
3/4	.065/.220	2	\$95.	5	\$115.		
7/8	.075/.255	2	\$105.	6	\$120.	1/2	
1	.085/.315	2	\$110.	6	\$125.	Shank	
1-1/8	.110/.315	2	\$110.	6	\$140.	2.5 OAL	
1-1/4	.110/.350	3	\$115.	8	\$155.		
1-3/8	.110/.380	3	\$125.	8	\$160.		

\$140.

\$175.

\$165.

\$190.

\$195.

\$235.

\$215.

\$250.

8

8

10

10

12

12

12

12

\$180.

\$215.

\$210.

\$235.

\$250.

\$285.

\$285.

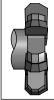
\$315.

3/4

Shank

3.5 OAL

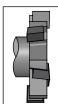
For Minor Modifications add to your basic price:



1 CHAMFER \$35. 2 CHAMFERS \$50.

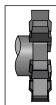


1 RADIUS \$40. 2 RADII \$60. FULL RADIUS \$60.



Staggered tooth cutters add 30% to basic price

(2) piece minimum



Slot plus topping chamfer

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Non-Ferrous 1K-3K SFM; .002/.006 IPT

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1-1/2

1-1/2

1 - 3/4

1 - 3/4

2

2

2-1/4

2-1/4

.110/.374

.375/.505

.120/.374

.375/.505

.120/.374

.375/.505

.120/.374

.375/.505

3

3

4

4

4

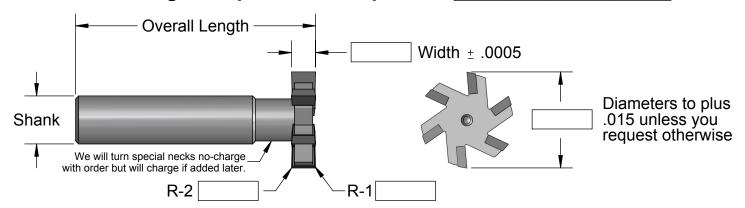
4

4

4

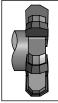
#### Extra Long Carbide Tipped Keyseat Cutters with your decimal width in 4-6 working days

Machining what part material, please? \_\_\_\_\_

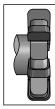


Diameter	Width	l l	Basic Cutter Prices					
Plus .015	Range	For Alu	ıminum	For F	Overall			
Minus Zero		Flutes	Price	Flutes	Price	Length		
5/8	.065/.190	2	\$145.	5	\$160.			
3/4	.065/.220	2	\$145.	5	\$160.			
7/8	.075/.255	2	\$155.	6	\$165.	1/2		
1	.085/.315	2	\$160.	6	\$175.	Shank		
1-1/8	.110/.315	2	\$160.	6	\$190.	4.5 OAL		
1-1/4	.110/.350	3	\$165.	8	\$200.			
1-3/8	.110/.380	3	\$175.	8	\$210.			

For Minor Modifications add to your basic price.

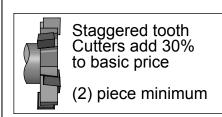


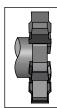
\$35. 1 CHAMFER 2 CHAMFERS \$50.



1 RADIUS \$40. 2 RADII \$60. FULL RADIUS \$60.

1-1/2	.110/.374	3	\$195.	8	\$235.	
1-1/2	.375/.505	3	\$230.	8	\$275.	
1-3/4	.120/.374	4	\$215.	10	\$270.	
1-3/4	.375/.505	4	\$250.	10	\$300.	
2	.120/.374	4	\$260.	12	\$310.	3/4 Shank
2	.375/.505	4	\$290.	12	\$360.	6.0 OAL
2-1/4	.120/.374	4	\$280.	12	\$360.	
2-1/4	.375/.505	4	\$320.	12	\$415.	
2-1/2	.120/.374	6	\$310.	12	\$400.	
2-1/2	.375/.505	6	\$325.	12	\$435.	



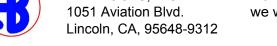


Slot plus topping chamfer

Suggested Starting Data: Ferrous 150-250 SFM; .001/.003 IPT Non-Ferrous 1K-3K SFM; .002/.006 IPT

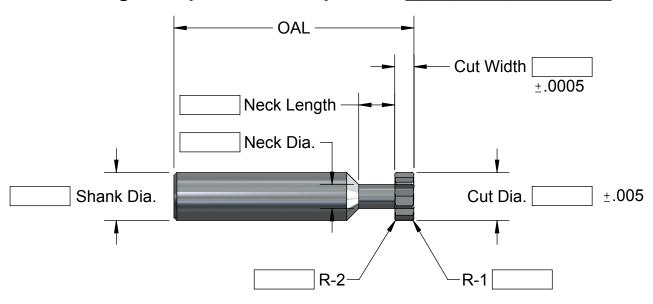


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# Solid Carbide Slotting (Keyseat) Cutters .625 diameter and smaller your decimal width in 4-6 working days

Machining what part material, please? \_\_\_\_\_



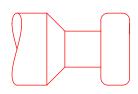
Suggested starting data: Ferrous 150 to 300 SFM; .001/.003 IPT Non-Ferrous 1K-3K SFM; .002/.006 IPT For thin or weak necked cutters, .0005 IPT

Number of flutes is your choice based on feasibility. We suggest coarse for non-ferrous, medium for titanium/stainless & maximum for cast iron and tough materials.

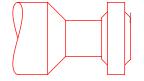
Cut Diameter	Shank & OAL	Basic Price
.030/.060	3/16 X 2	\$105.
.062/.186	3/16 X 2	\$90.
.188/.248	1/4 X 2	\$95.
.250/.390	3/8 X 2.5	\$105.
.400/.515	1/2 X 2.5	\$115.
.515/.625	5/8 X 3	\$135.



One Chamfer \$35. Two Chamfers \$50.



One Radius \$40. Two Radii \$60. Full Radius \$60.



Slot plus top Chamfers Upon Request

Add above prices to the basic price for minor modifications.

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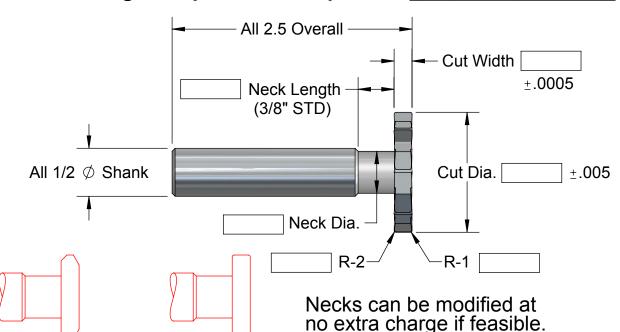
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Toll free phone 866 440-8665

### Solid Carbide Slotting (Keyseat) Cutters from .530 to 2.0 diameters

#### your decimal width in 4-6 working days

Machining what part material, please?



One Chamfer \$35. Two Chamfers \$50. One Radius \$40. Two Radii \$60. Full Radius \$60.

Suggested starting data: Ferrous 150 to 300 SFM; .001/.003 IPT Non-Ferrous 1K-3K SFM; .002/.006 IPT For thin or weak necked cutters. .0005 IPT

Slot plus top Chamfers Üpon Request

Number of flutes is your choice based on feasibility. We suggest coarse for non-ferrous, medium for titanium/stainless & maximum for cast iron and tough materials.

Cut Dia.	Max. no. of Flutes	As-Cast Neck Dia.	Basic Prices for .010 thru .135 Widths	Basic Prices for .136 thru .260 Widths	Basic Prices for .261 thru .374 Widths	Basic Prices for .375 thru .440 Widths
.625	8	3/8	\$160.	\$165.	\$170.	
.750	10	7/16	\$165.	\$170.	\$175.	
1.00	12	7/16	\$170.	\$180.	\$185.	
1.25	14	7/16	\$180.	\$190.	\$210.	\$265.
1.50	16	7/16	\$195.	\$215.	\$250.	\$285.
1.75	18	15/32	\$220.	\$240.	\$275.	\$325.
2.00	20	15/32	\$250.	\$265.	\$295.	\$345.

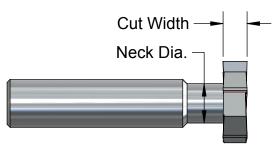
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Toll free phone 866 440-8665

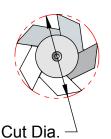


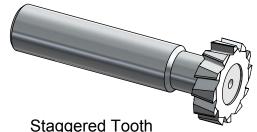
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Standard Keyway Cutters Solid Carbide Specials in 4-6 Working Days



Straight Tooth Shown Full Size (#807 Keyway Cutter)





Staggered Tooth Shown Full Size (#807 Keyway Cutter)

Ind.	Cut	Cut	Neck	Neck	No. of	No. of No. of		Pr	ice
Std.	Dia.	Width	Dia.	Length	Flutes	Flutes	Flutes	Straight	Staggered
#					Aluminum	Steel	Staggered	Tooth	Tooth
202	1/4	1/16	.064	.090	3	6	6	\$85.	\$100.
202.5	5/16	1/16	.065	.090	3	6	6	\$85.	\$100.
302.5	5/16	3/32	.096	.150	3	6	6	\$85.	\$100.
203	3/8	1/16	.209	.125	3	6	6	\$95.	\$110.
303	3/8	3/32	.146	.180	3	6	6	\$95.	\$110.
403	3/8	1/8	.090	.180	3	6	6	\$95.	\$110.
204	1/2	1/16	.140	.090	3	8	8	\$105.	\$120.
304	1/2	3/32	.160	.180	3	8	8	\$105.	\$120.
404	1/2	1/8	.190	.250	3	8	8	\$105.	\$120.
305	5/8	3/32	.190	.150	4	8	8	\$160.	\$176.
405	5/8	1/8	.220	.250	4	8	8	\$160.	\$176.
505	5/8	5/32	.250	.250	4	8	8	\$160.	\$176.
605	5/8	3/16	.280	.280	4	8	8	\$160.	\$176.
406	3/4	1/8	.220	.250	4	10	10	\$165.	\$182.
506	3/4	5/32	.250	.250	4	10	10	\$165.	\$182.
606	3/4	3/16	.280	.280	4	10	10	\$165.	\$182.
806	3/4	1/4	.340	.250	4	10	10	\$165.	\$182.
507	7/8	3/16	.250	.280	5	12	12	\$170.	\$187.
707	7/8	7/32	.310	.250	5	12	12	\$170.	\$187.
807	7/8	1/4	.340	.250	5	12	12	\$170.	\$187.



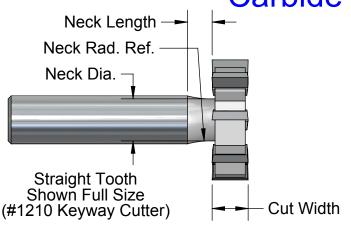
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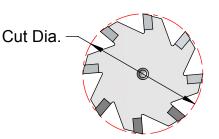
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Standard Keyway Cutters
Carbide Tipped

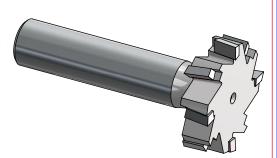
Specials in 4-6 Working Days



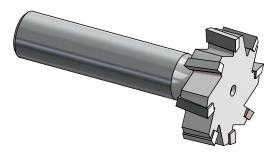


All shanks are 1/2" Dia. and 2-1/2" overall

7 iii onanio aro 172 Bia. ana 2 172 ovoran									
Ind.	Cut	Cut	Neck	Neck	Neck	No.	1500	Price	
Std.	Dia.	Width	Dia.	Length	Rad.	of	Straight	Staggered	
#					Ref.	Flts.	Tooth	Tooth	
608	1	3/16	.280	.440	.85				
708	1	7/32	.310	.415	.865				
808	1	1/4	.340	.385	.880	6	\$115.	\$150.	
1008	1	5/16	.375	.219	N/A				
1208	1	3/8	.410	.219	N/A				
609	1-1/8	3/16	.310	.410	.855				
709	1-1/8	7/32	.340	.380	.875	6	\$130.	<b>\$165</b> .	
809	1-1/8	1/4	.380	.346	.895	O	φ130.	φ100.	
1009	1-1/8	5/16	.435	.250	N/A				
610	1-1/4	3/16	.310	.410	.855				
710	1-1/4	7/32	.340	.380	.875				
810	1-1/4	1/4	.375	.350	.895	8	\$145.	\$185.	
1010	1-1/4	5/16	.485	.250	N/A				
1210	1-1/4	3/8	.485	.250	N/A				
811	1-3/8	1/4	.400	.310	.930				
1011	1-3/8	5/16	.485	.313	N/A	8	\$150.	\$190.	
1211	1-3/8	3/8	.485	.313	N/A				
812	1-1/2	1/4	.430	.310	N/A	_			
1012	1-1/2	5/16	.490	.250	N/A	8	\$170.	\$210.	
1212	1-1/2	3/8	.490	.250	N/A				



Staggered Tooth Shown Full Size (#1210 Keyway Cutter)



Staggered Tooth All Ends Cut Shown Full Size (#1210 Keyway Cutter)

Toll free phone 866 440-8665

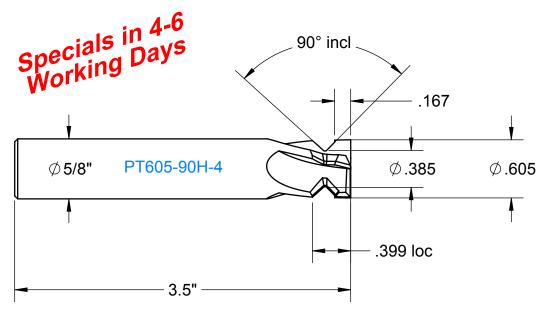
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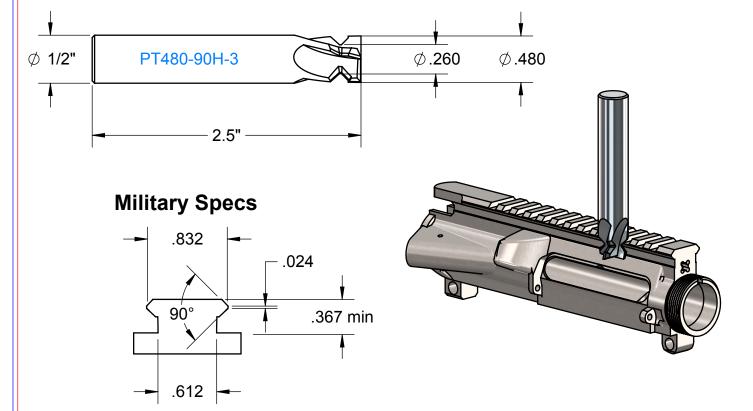


#### Solid Carbide Picatinny Rail Cutters



ш	
ш	
ш	
ш	
ш	
ш	

Number	No. of flutes	Prices
PT605-90H	3	\$135.
PT605-90H-4	4	\$142.50
PT480-90H	2	\$125.
PT480-90H-3	3	\$132.50





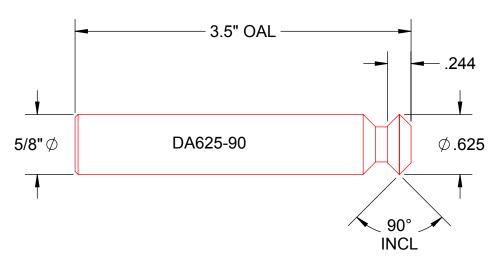
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#### Solid Carbide Male Picatinny (Fixture) Cutter

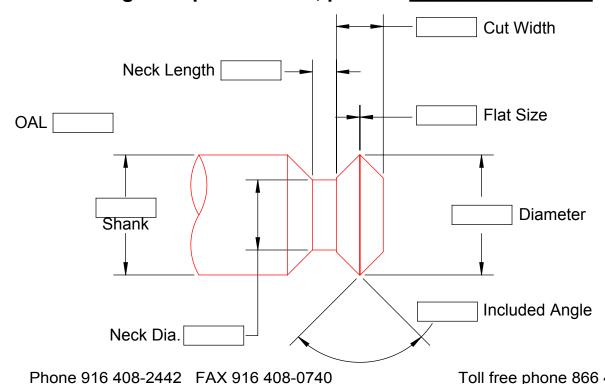


Number	Flutes	Price		
		No-Coat	AlTiN	
DA625-90	3	\$165.	\$177.	
DA625-90	4	\$172.50	\$184.50	



### Special Male Picatinny (Fixture) Cutters in 4-6 Working Days

Machining what part material, please? \_\_\_\_\_

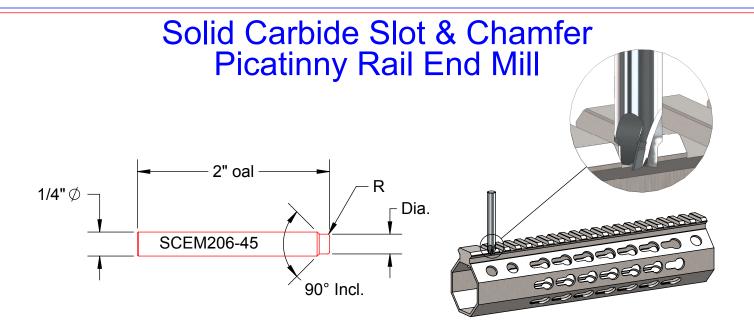




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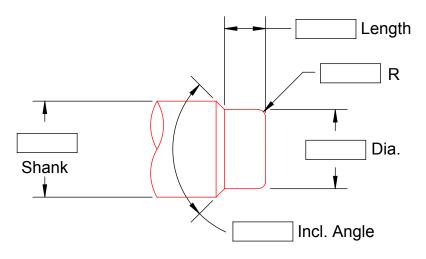
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Number	Dia.	Radius		Price				
			3 flutes	4 flutes	5 flutes	AlTiN add		
SCEM206-45	.206	None	\$55.	\$65.	\$76.	\$4.		
SCEM206-45-10R	.206	.010	\$65.	\$76.	\$86.	\$4.		
SCEM206-45-20R	.206	.020	\$65.	\$76.	\$86.	\$4.		
SCEM210-45	.210	None	\$55.	\$65.	\$76.	\$4.		
SCEM210-45-10R	.210	.010	\$65.	\$76.	\$86.	\$4.		
SCEM210-45-20R	.210	.020	\$65.	\$76.	\$86.	\$4.		

### Special Slot & Chamfer End Mills in 4-6 Working Days

Machining what part material, please? \_\_\_\_





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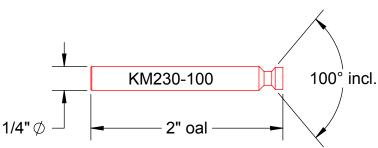
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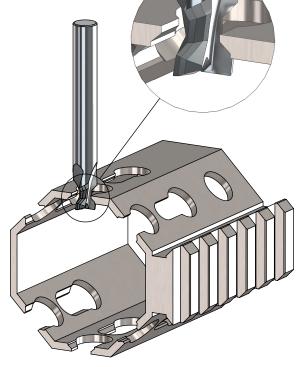
E-Mail: mail@abtoolsinc.com

#### Solid Carbide Keymod Cutter

(3) flutes

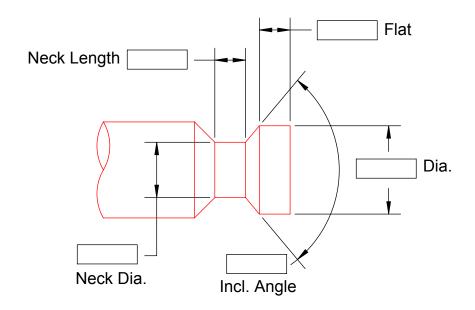


Number	Price				
	No-Coat	AlTiN			
KM230-100	\$90.	\$94.			



#### **Special Keymod Cutters in 4-6 Working Days**

Machining what part material, please? \_\_\_\_\_





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#### **Charging Handle Slot Cutter** R.005 typ R.009 typ Slot Width Minor **Channel Width** Major Channel Width **DETAIL A** SCALE 10:1 Shank Dia. Slot Dia. Minor Major Channel Dia. Channel Dia.

### Special Charging Handle Slot Cutters in 4-6 working days

Machining what part material, please? \_\_\_\_\_

Number	Slot Dia.	Slot Width	Helix	Shank Dia. & OAL	No. of Flutes	Pri No-Coat	ce AlTiN
CHSC-R15	.486	.127	15°	5/8 X 5	3	\$225.	\$240.
CHSC-R30	.486	.127	30°	5/8 X 5	3	\$225.	\$240.
CHSC-F15	.506	.127	15°	5/8 X 5	4	\$225.	\$240.
CHSC-F30	.506	.127	30°	5/8 X 5	4	\$225.	\$240.

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If any product is not satisfactory www.abtoo we will modify, replace or refund. E-Mail: ma

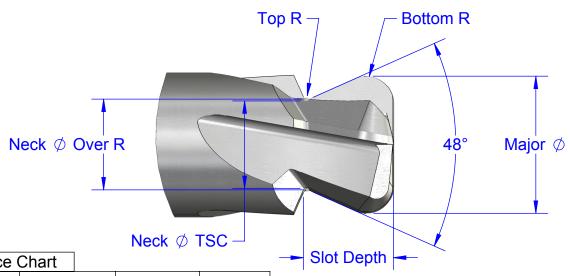


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Toll free phone 866 440-8665

#### Solid Carbide Dovetail Cutters for O-Ring Grooves

NUMBER	O-RING SIZE	NECK Ø TSC	NECK Ø OVER R	SLOT DEPTH	TOP RAD.	BOTTOM RAD.	MAJOR Ø	PRICE	AITiN
DT1/16 DT1/16-5	.070	.057 .052	.0624 .0574	.051	.005	.015	.0862 .0812	\$68.	<b>\$72</b> .
DT1/16-054	.070	.059	.064	.054	.005	.016	.090	\$68.	<b>\$72</b> .
DT3/32 DT3/32-8	.103	.085 .077	.0958 .0878	.082	.010	.015	.1418 .1338	\$68.	\$72.
DT1/8 DT1/8-10	.139	.115 .105	.1258 .1158	.112	.010	.031	.1812 .1712	<b>\$75</b> .	<b>\$79</b> .
DT3/16 DT3/16-12	.210	.173 .161	.1892 .1772	.172	.015	.031	.2927 .2807	\$85.	\$90.
DT1/4 DT1/4-15	.275	.233 .218	.2492 .2342	.232	.015	.062	.3726 .3576	\$95.	\$101.
DT3/8 DT3/8-15	.375	.317 .302	.3386 .3236	.317	.020	.094	.4978 .4828	\$122.	\$130.



Reference	Chart		
NUMBER	NO. OF FLUTES	SHANK Ø	OAL
DT1/16 DT1/16-5	1	3/16	2
DT1/16-054	2	3/16	2
DT3/32 DT3/32-8	2	3/16	2
DT1/8 DT1/8-10	2	1/4	2
DT3/16 DT3/16-12	3	5/16	2.5
DT1/4 DT1/4-15	3	3/8	2.5
DT3/8 DT3/8-15	4	1/2	2.5

Specials in 4-6 Working Days (See Page 18)



**B** 

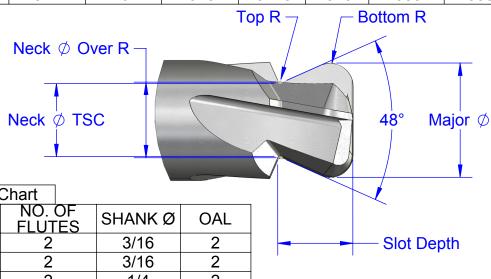
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Toll free phone 866 440-8665 www.abtoolsinc.com

E-Mail: mail@abtoolsinc.com

#### Solid Carbide Dovetail for O-Ring Grooves (Metric)

NUMBER	O-RING SIZE	NECK Ø TSC	NECK Ø OVER R	SLOT DEPTH	TOP RAD.	BOTTOM RAD.	MAJOR Ø	PRICE	AITiN
DT3MM	3MM	.096	.102	.094	.010	.016	.162	\$68.	<b>\$72</b> .
DT3.5MM	3.5MM	.110	.121	.110	.010	.031	.1745	\$68.	<b>\$72</b> .
DT4MM	4MM	.122	.133	.126	.010	.031	.201	<b>\$72</b> .	<b>\$76</b> .
DT4.5MM	4.5MM	.138	.149	.144	.010	.031	.232	<b>\$72</b> .	<b>\$76</b> .
DT5MM	5MM	.152	.162	.163	.010	.031	.264	\$85.	\$90.
DT5.5MM	5.5MM	.165	.183	.181	.016	.031	.293	\$85.	\$90.
DT6MM	6MM	.179	.196	.199	.016	.031	.323	\$95.	<b>\$</b> 101.
DT6.5MM	6.5MM	.193	.210	.2165	.016	.031	.352	\$95.	\$101.
DT7MM	7MM	.207	.224	.234	.016	.059	.352	\$95.	<b>\$</b> 101.
DT7.5MM	7.5MM	.2205	.238	.252	.016	.059	.381	\$122.	<b>\$</b> 130.
DT8MM	8MM	.236	.258	.270	.020	.059	.413	\$122.	<b>\$</b> 130.
DT8.5MM	8.5MM	.250	.272	.289	.020	.059	.444	\$122.	<b>\$</b> 130.
DT9MM	9MM	.264	.285	.307	.020	.059	.473	\$122.	\$130.
DT9.5MM	9.5MM	.278	.299	.323	.020	.059	.501	\$122.	<b>\$130</b> .
DT10MM	10MM	.291	.313	.3425	.020	.059	.533	\$155.	<b>\$</b> 165.



Reference Chart **NUMBER** DT3MM DT3.5MM DT4MM 2 1/4 DT4.5MM 2 1/4 2 3 DT5MM 5/16 2.5 DT5.5MM 3 5/16 2.5 DT6MM 3 3/8 2.5 3 DT6.5MM 3/8 2.5 DT7MM 3 3/8 2.5 DT7.5MM 3 2.5 1/2 DT8MM 3 1/2 2.5 DT8.5MM 3 2.5 1/2 DT9MM 3 1/2 2.5 DT9.5MM 3 1/2 2.5 DT10MM 3 5/8 3.5

Specials in 4-6 Working Days (See Page 18)

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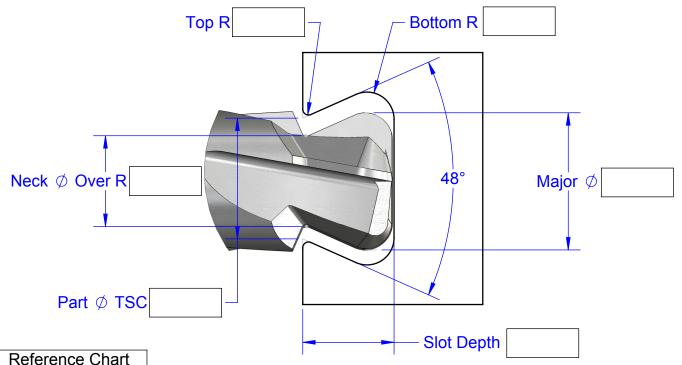
**B** 

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Toll free phone 866 440-8665

## Solid Carbide Dovetail Cutters for O-Ring Grooves WITHOUT Drop Hole Provision

NUMBER	O-RING SIZE	PART Ø TSC	NECK Ø OVER R	SLOT DEPTH	TOP RAD.	BOTTOM RAD.	NO. OF FLUTES	PRICE	AITiN
DTNDH1/16	.070	.057	.036	.051	.005	.015	1	\$68.	<b>\$72</b> .
DTNDH3/32	.103	.085	.048	.082	.010	.015	1	\$68.	<b>\$72</b> .
DTNDH1/8	.139	.115	.0685	.112	.010	.031	2	\$75.	<b>\$79</b> .
DTNDH3/16	.210	.173	.0835	.172	.015	.031	2	\$85.	\$90.
DTNDH1/4	.275	.233	.1235	.232	.015	.062	2	\$95.	\$101.
DTNDH3/8	.375	.317	.178	.317	.020	.094	3	\$122.	\$130.



Reference	unart		
NUMBER	MAJOR Ø	SHANK Ø	OAL
DTNDH1/16	.060	3/16	2
DTNDH3/32	.094	3/16	2
DTNDH1/8	.124	3/16	2
DTNDH3/16	.187	1/4	2
DTNDH1/4	.247	5/16	2.5
DTNDH3/8	.337	3/8	2.5





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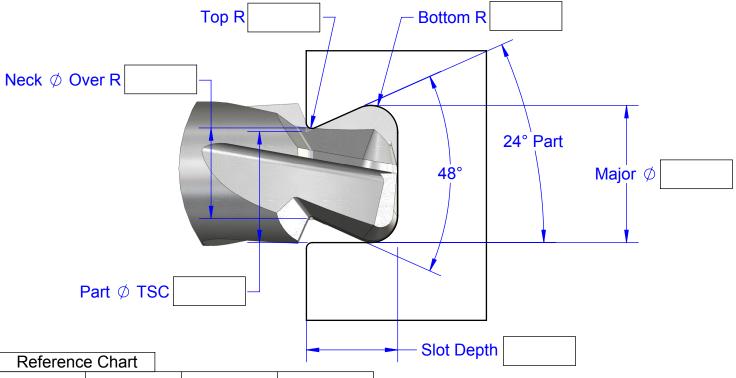
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Toll free phone 866 440-8665

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## Solid Carbide Dovetail Cutters for Half Dovetail O-Ring Grooves

NUMBER	O-RING SIZE	PART Ø TSC	NECK Ø OVER R	SLOT DEPTH	TOP RAD.	BOTTOM RAD.	NO. OF FLUTES	PRICE	AITiN
HDG1/16	.070	.065	.0545	.054	.005	.015	2	\$68.	\$72.
HDG3/32	.103	.096	.0775	.084	.010	.015	2	\$68.	\$72.
HDG1/8	.139	.126	.103	.114	.010	.031	2	\$75.	<b>\$79</b> .
HDG3/16	.210	.1915	.146	.1745	.015	.031	2	\$85.	\$90.
HDG1/4	.275	.256	.2005	.236	.015	.062	3	\$95.	\$101.
HDG3/8	.375	.354	.283	.321	.020	.093	4	\$122.	\$130.



Referenc	e Chart		
NUMBER	MAJOR Ø	SHANK Ø	OAL
HDG1/16	.081	3/16	2
HDG3/32	.125	3/16	2
HDG1/8	.160	3/16	2
HDG3/16	.253	5/16	2.5
HDG1/4	.328	3/8	2.5
HDG3/8	.447	1/2	2.5





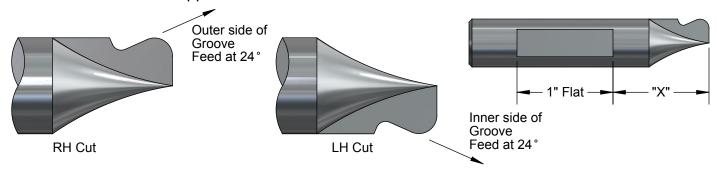
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#### Solid Carbide O-Ring Dovetails for Lathes

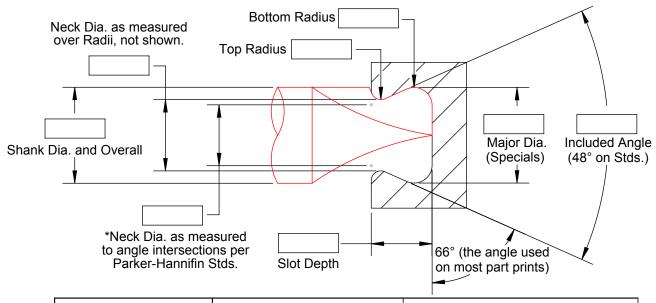
Single flute carbide O-Ring form tools for lathe applications that match Parker-Hannifin standards



NUM	IBER	O'RING	*NECK	SLOT	TOP	BOTT.	X	SHANK &	PRIC	ES
RH Cut	LH Cut	DIA.	DIA.	DEPTH	RAD.	RAD.		OAL	No Coat	AITiN
DTL1/16-R	DTL1/16-L	.070	.057	.051	.005	.015	1/2"	3/16 X 2	\$78.	\$81.
DTL1/16-054-R	DTL1/16-054-L	.070	.059	.054	.005	.016	1/2"	3/16 X 2	\$78.	\$81.
DTL3/32-R	DTL3/32-L	.103	.085	.082	.010	.015	1/2"	3/16 X 2	\$78.	\$81.
DTL1/8-R	DTL1/8-L	.139	.115	.112	.010	.031	5/8"	1/4 X 2	\$85.	\$89.
DTL3/16-R	DTL3/16-L	.210	.173	.172	.015	.031	3/4"	5/16 X 2.5	\$90.	\$97.
DTL1/4-R	DTL1/4-L	.275	.233	.232	.015	.062	7/8"	3/8 X 2.5	\$100.	\$107.
DTL3/8-R	DTL3/8-L	.375	.317	.317	.020	.094	1"	1/2 X 2.5	\$145.	\$154.

#### Specials in 4-6 working days

Machining what part material, please?



Special Carbide
Cutters for
O-Ring Grooves

To 1/4 Major Diameter
.251 thru .375 Major Dia.
.376 thru .500 Major Dia.

1 at \$175. and 2 at \$150. each
1 at \$210. and 2 at \$165. each
1 at \$250. and 2 at \$165. each

Phone 916 408-2442 FAX 916 408-0740

Toll free phone 866 440-8665

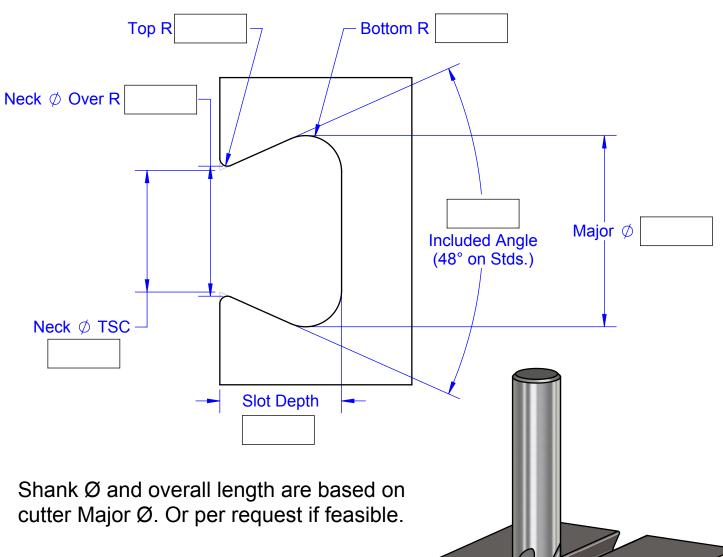


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#### Solid Carbide Dovetail Cutters for O-Ring Grooves Specials in 4-6 working days

Machining what part material, please? \_\_\_\_\_

Number of flutes is based on part material and Neck  $\emptyset$ .



Basic Prices									
Major Ø	1 tool	2 tools							
Up to .250	\$160.	\$135. ea							
.251 thru .375	\$195.	\$150. ea							
.376 thru .500	\$235.	\$165. ea							
.501 thru .625	\$325.	\$240. ea							
.626 thru .750	\$360.	\$265. ea							



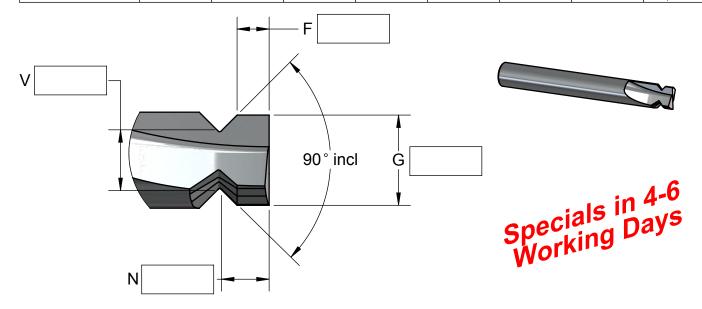
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## Solid Carbide DSP Cutters for protective cable grooves

Number	"G"	"N"	"F"	"V"	Shank Ø	OAL	Flutes	Price
DSP-02	.047	.023	.0125	.026	3/16	2	2	\$70.
DSP-03	.064	.036	.021	.034	3/16	2	2	\$70.
DSP-04B	.095	.045	.022	.049	3/16	2	2	\$75.
DSP-070	.095	.053	.0325	.054	3/16	2	2	\$75.
DSP-05B	.110	.059	.035	.062	3/16	2	2	<b>\$75</b> .
DSP-06	.126	.071	.0455	.075	3/16	2	2	\$80.
DSP-103	.142	.077	.048	.084	3/16	2	2	\$80.
DSP-07B	.157	.079	.0485	.094	3/16	2	2	\$80.
DSP-08	.172	.096	.060	.100	3/16	2	2	\$80.
DSP-139	.188	.113	.0715	.105	1/4	2	2	\$90.
DSP-09	.188	.105	.0705	.119	1/4	2	2	\$90.
DSP-11	.235	.129	.0835	.144	1/4	2	2	\$90.
DSP-12	.251	.147	.093	.144	3/8	2.5	2	\$100.
DSP-16	.344	.185	.128	.229	3/8	2.5	2	\$100.
DSP-20	.407	.233	.164	.269	1/2	2.5	3	\$110.
DSP-24	.501	.280	.196	.333	1/2	2.5	3	\$165.
DSP-32	.657	.377	.267	.437	3/4	3	4	\$225.



#### Multi Seal Solid Carbide DMSP Cutter

Number	"G"	"N"	"F"	"V"	Shank Ø	OAL	Flutes	Price
DMSP-04	.187	.051	.016	.117	3/16	2	2	\$80.
DMSP-06	.250	.074	.028	.159	3/8	2.5	2	\$90.
DMSP-08	.313	.086	.044	.229	3/8	2.5	3	\$100.
DMSP-12	.500	.145	.063	.336	1/2	2.5	3	\$165.
DMSP-16	.625	.192	.106	.454	5/8	3.5	4	\$195.

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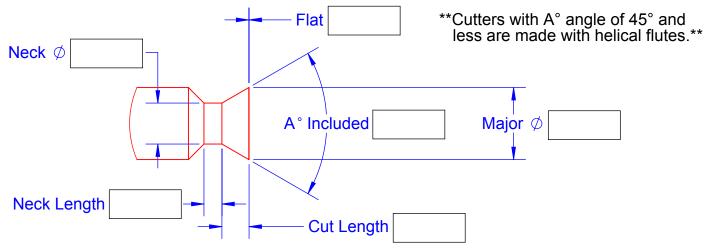
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#### Solid Carbide Dovetail Cutters

1/8" Major	Ø x 1.	.5" OAL. Wi	th 1/8" N	eck Ler	ngth. 3 F	lutes.			
Number	Α°	Cut Lngth	Neck Ø	Flat	Price	AlTiN			
DS1/8-10	10	.188	.090	.001	\$58.50	\$62.			
DS1/8-20	20	.125	.080	.001	\$58.50	<b>\$62</b> .			
DS1/8-30	30	.090	.075	.001	\$58.50	<b>\$62</b> .			
DS1/8-40	40	.080	.065	.001	\$58.50	<b>\$62</b> .			
DS1/8-45	45	.070	.065	.001	\$58.50	<b>\$62</b> .			
DS1/8-50	50	.065	.065	.002	\$58.50	<b>\$62</b> .			
DS1/8-60	60	.050	.065	.002	\$58.50	<b>\$62</b> .			
DS1/8-70	70	.040	.065	.002	\$58.50	<b>\$62</b> .			
DS1/8-80	80	.035	.065	.002	\$58.50	<b>\$62</b> .			
DS1/8-90	90	.030	.065	.002	\$58.50	<b>\$62</b> .			
DS1/8-100	100	.025	.065	.003	\$58.50	<b>\$62</b> .			
DS1/8-120	120	.020	.065	.003	\$58.50	<b>\$62</b> .			

3/16" Major	Ø x 2	" OAL. With	1/8" Ned	ck Leng	th. 3 Fl	utes.
Number	Α°	Cut Lngth	Neck Ø	Flat	Price	AITiN
DS3/16-10	10	.270	.140	.001	\$60.	<b>\$</b> 63.
DS3/16-20	20	.210	.110	.001	\$60.	<b>\$</b> 63.
DS3/16-30	30	.160	.100	.001	\$60.	<b>\$</b> 63.
DS3/16-40	40	.130	.090	.001	<b>\$</b> 60.	<b>\$</b> 63.
DS3/16-45	45	.115	.090	.001	<b>\$</b> 60.	<b>\$</b> 63.
DS3/16-50	50	.100	.090	.002	<b>\$</b> 60.	<b>\$</b> 63.
DS3/16-60	60	.080	.090	.002	<b>\$</b> 60.	<b>\$</b> 63.
DS3/16-70	70	.070	.090	.002	<b>\$</b> 60.	<b>\$</b> 63.
DS3/16-80	80	.055	.090	.002	<b>\$</b> 60.	<b>\$63</b> .
DS3/16-90	90	.050	.090	.002	\$60.	<b>\$63</b> .
DS3/16-100	100	.040	.090	.003	\$60.	<b>\$63</b> .
DS3/16-120	120	.030	.090	.003	\$60.	<b>\$63</b> .



1/4" Major	Øx2	" OAL. With	1/8" Ne	ck Leng	th. 3 FI	utes.			
Number	Α°	Cut Lngth	Neck Ø	Flat	Price	AITiN			
DS1/4-10	10	.320	.160	.001	\$62.	<b>\$67</b> .			
DS1/4-20	20	.300	.130	.001	\$62.	<b>\$67</b> .			
DS1/4-30	30	.250	.115	.001	\$62.	<b>\$67</b> .			
DS1/4-40	40	.190	.110	.001	\$62.	<b>\$67</b> .			
DS1/4-45	45	.165	.110	.001	\$62.	<b>\$67</b> .			
DS1/4-50	50	.150	.110	.002	\$62.	\$67.			
DS1/4-60	60	.120	.110	.002	\$62.	<b>\$67</b> .			
DS1/4-70	70	.100	.110	.002	\$62.	<b>\$67</b> .			
DS1/4-80	80	.085	.110	.002	\$62.	<b>\$67</b> .			
DS1/4-90	90	.075	.110	.002	\$62.	<b>\$67</b> .			
DS1/4-100	100	.060	.110	.003	\$62.	\$67.			
DS1/4-120	120	.045	.110	.003	\$62.	\$67.			



Specials in 4-6 Working Days

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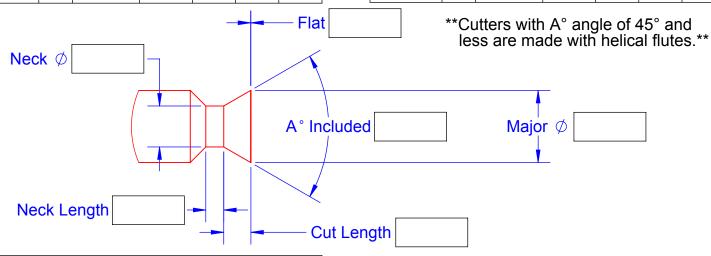
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E-Mail: mail@abtoolsinc.com

Toll free phone 866 440-8665

#### Solid Carbide Dovetail Cutters

3/8" Major Ø	x 2.5	" OAL. With 3	3/16" Neck	Length.	3 Flutes	3.
Number	Α°	Cut Lngth	Neck Ø	Flat	Price	AITiN
DS3/8-10	10	.370	.260	.001	<b>\$76</b> .	\$82.
DS3/8-20	20	.370	.230	.001	\$76.	\$82.
DS3/8-30	30	.370	.170	.001	\$76.	\$82.
DS3/8-40	40	.260	.170	.001	<b>\$76</b> .	\$82.
DS3/8-45	45	.235	.170	.001	<b>\$76</b> .	\$82.
DS3/8-50	50	.210	.170	.002	\$76.	\$82.
DS3/8-60	60	.180	.170	.002	<b>\$76</b> .	\$82.
DS3/8-70	70	.145	.170	.002	\$76.	\$82.
DS3/8-80	80	.130	.160	.002	<b>\$76</b> .	\$82.
DS3/8-90	90	.110	.160	.002	\$76.	\$82.
DS3/8-100	100	.090	.160	.003	<b>\$76</b> .	\$82.
DS3/8-120	120	.060	.160	.003	\$76.	\$82.

1/2" Majo	rØx2	2.5" OAL. Wit	h 3/16" Ne	ck Leng	th. 3 Flu	tes.
Number	Α°	Cut Lngth	Neck Ø	Flat	Price	AlTiN
DS1/2-10	10	.500	.360	.001	\$86.	\$94.
DS1/2-20	20	.400	.300	.001	\$86.	\$94.
DS1/2-30	30	.320	.200	.001	\$86.	\$94.
DS1/2-40	40	.320	.180	.001	\$86.	\$94.
DS1/2-45	45	.320	.180	.001	\$86.	\$94.
DS1/2-50	50	.320	.180	.002	\$86.	\$94.
DS1/2-60	60	.250	.180	.002	\$86.	\$94.
DS1/2-70	70	.210	.180	.002	\$86.	\$94.
DS1/2-80	80	.180	.180	.002	\$86.	\$94.
DS1/2-90	90	.140	.180	.002	\$86.	\$94.
DS1/2-100	100	.120	.180	.003	\$86.	\$94.
DS1/2-120	120	.090	.180	.003	\$86.	\$94.



5/8" Majo	or Ø x	3" OAL. With	3/16" Ned	k Lengt	h. 4 Flut	es.
Number	Α°	Cut Lngth	Neck Ø	Flat	Price	AlTiN
DS5/8-10	10	.600	.500	.001	\$125.	\$134.
DS5/8-20	20	.500	.440	.001	\$125.	\$134.
DS5/8-30	30	.450	.360	.001	\$125.	\$134.
DS5/8-40	40	.400	.330	.001	\$125.	\$134.
DS5/8-45	45	.350	.330	.001	\$125.	\$134.
DS5/8-50	50	.310	.330	.002	\$125.	\$134.
DS5/8-60	60	.250	.330	.002	\$125.	\$134.
DS5/8-70	70	.210	.330	.002	\$125.	\$134.
DS5/8-80	80	.185	.310	.002	\$125.	\$134.
DS5/8-90	90	.150	.310	.002	\$125.	\$134.
DS5/8-100	100	.130	.310	.003	\$125.	\$134.
DS5/8-120	120	.090	.310	.003	\$125.	\$134.



Specials in 4-6 Working Days

Phone 916 408-2442 FAX 916 408-0740

(1)

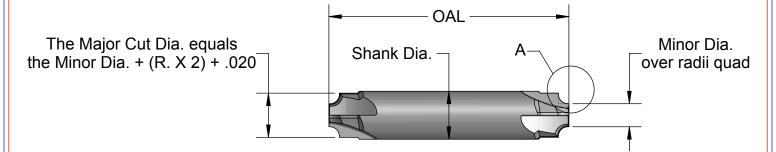
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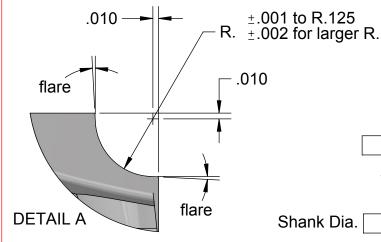
www.abtoolsinc.com
E-Mail: mail@abtoolsinc.com

Toll free phone 866 440-8665

#### Solid Carbide Corner Rounders

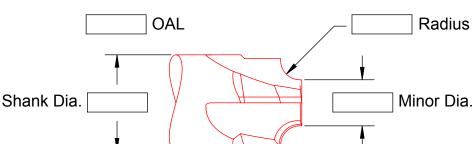
CNC Profile Ground, Double End





### Special Corner Rounders in 4-6 working days

Machining what part material, please?



All AB Tools corner rounders are made with these features to avoid gouging.

Tool No.			- 1	(add R	R. to pr	efix, ex	kample	CR12	2-031)				Minor	No.	Shank	Price	es
				•	Radiu	us Size	s Ava	ilable					Dia.	Flutes	& OAL	No-Coat	AITiN
CR1-	.010	.013	.015	.018	.020	.022	.025	.028	.031						3/8 x 2.5	\$90.	\$104.
	.035	.038	.040	.046	.048	.050	.055										
	.062	.070	.078	.080	.085	.093	.098	.100	.109	.118	.120	.125	.240	4	1/2 x 2.5	\$100.	\$118.
CR2	.140	.156	.170	.187	.197										5/8 x 3.5	\$170.	\$194.
	.203	.218	.234	.250											3/4 x 4.0	\$200.	\$228.
CR03	.010	.015	.020	.025	.031	.040	.046	.050	.055				.030	2	3/16 x 2	\$60.	\$67.
01100	.062	.070	.078										.030		5/ TO X Z	9	Ψ07.
CR06	.010	.013	.015	.018	.020	.022	.025	.028	.031	.035	.040		.060	2	2 3/16 x 2	\$60.	\$67.
O1100	.046	.048	.050	.055	.060								.000		OFFORE	ΨΟ.	
CR12	.010	.013	.015	.018	.020	.022	.025	.028	.031				.120	2	1/4 x 2	\$70.	\$78.
CICIZ	.035	.038	.040	.046	.048	.050	.055	.060					.120		1/4 / 2	Ψ10.	Ψ10.
	.015	.020	.031	.035	.046	.055	.062	.070	.078	.080					3/8 x 2.5	\$90.	\$104.
CR18-	.085	.093	.098	.109	.118	.120	.125	.130	.140	.150	.156		.180	3	1/2 x 2.5	\$100.	\$118.
CK10	.170	.180	.187	.197	.203	.218							.100	٦	5/8 x 3.5	\$170.	\$194.
	.234	.250												â	3/4 x 4.0	\$200.	\$228.



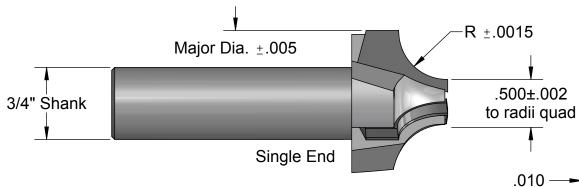
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Toll free phone 866 440-8665

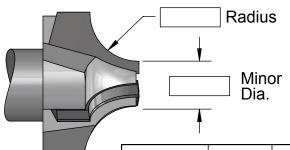
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#### Carbide Tipped Corner Rounders



### **Special Carbide Tipped Corner Rounders in 4-6 working days**

Machining what part material, please?



All AB Tools corner rounders are made with these features to avoid gouging.

End Cutting, also the major Dia. is cutting for 1/8 min.

Number	Radius	Major	OAL	Pric	e							
	Dia.			No-Coat	AITiN							
	3 Flutes, Positive Rake											
CR3-187	.187	.895	\$195.	\$215.								
CR3-203	.203	.926		\$205.	\$225.							
CR3-218	.218	.956		\$220.	\$240.							
CR3-250	.250	1.020		\$225.	\$248.							
CR3-281	.281	1.082		\$240.	\$263.							
CR3-312	.312	1.144	3.25	\$250.	\$273.							
CR3-343	.343	1.206	3.23	\$270.	\$293.							
CR3-375	.375	1.270		\$295.	\$320.							
CR3-406	.406	1.332		\$310.	\$335.							
CR3-437	.437	1.394		\$320.	\$345.							
CR3-468	.468	1.456		\$335.	\$360.							
CR3-500	.500	1.520		\$355.	\$386.							
CR3-562	.562	1.644	3.50	\$380.	\$411.							
CR3-625	.625	1.770	3.50	\$425.	\$521.							

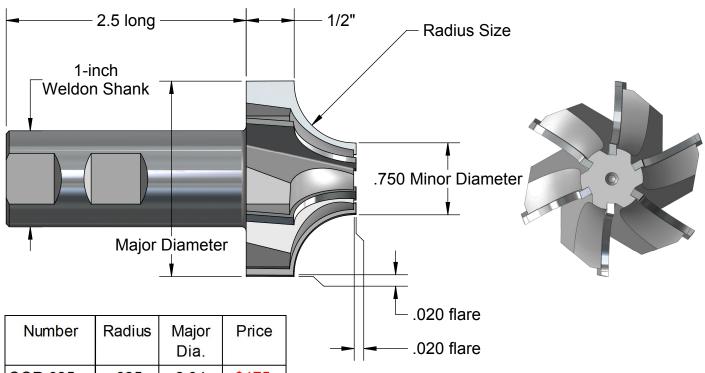
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E-Mail: mail@abtoolsinc.com

#### Large Radii M42 Cobalt Corner Rounders



CCR-625 .625 2.04 \$475. CCR-687 \$485. .687 2.16 CCR-719 .719 2.23 \$500. CCR-750 .750 2.29 \$525. CCR-787 .787 2.36 \$525. CCR-812 .812 2.41 \$550. CCR-875 .875 2.54 \$550. CCR-937 .937 2.66 \$575. CCR-984 .984 2.76 \$575. CCR-1000 1.000 2.79 \$595. CCR-1063 1.063 2.91 \$595. CCR-1125 1.125 3.04 \$615. CCR-1181 \$615. 1.181 3.15 CCR-1250 1.250 3.29 \$650. CCR-1312 1.312 3.41 \$695. CCR-1375 1.375 3.54 \$750. CCR-1437 1.437 3.66 \$815. CCR-1500 1.500 3.79 \$875.

We've milled full radius cuts with these Corner Rounders in M2 HSS at 90 SFM and .0015 Inch Per Tooth Chip Load with GREAT results

\*\*\*Coatings available upon request.

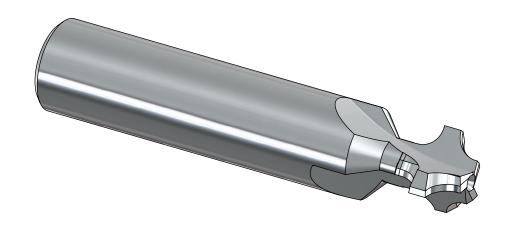


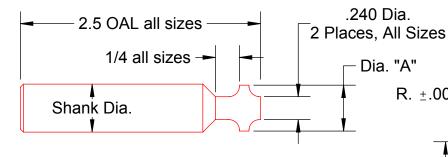
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#### Solid Carbide TOP & BOTTOM Corner Rounders





Single End, 3 Flutes, Micro-grain Carbide

, All C	1203	2°-3	° (4v)
a. "A'	,	2 - 3	( <del>4</del> X)
R.	±.001 TYP.		
.24	l0 Dia. Ref.		
	.100		
	on all sizes		
	"B" (R. plus .01	10) ——	<b>-</b>
ITiN	ا کا (۱۲. pid3 .0	10)	
142			

Tool	R.	Dia.	Lgth.	Shank	Pri	се
No.	Size	"A"	"B"	Dia.	No Coat	AlTiN
CRD-015	.015	.290	.025	3/8	\$135.	\$142.
CRD-020	.020	.300	.030	3/8	\$135.	\$142.
CRD-031	.031	.322	.041	3/8	\$135.	\$142.
CRD-040	.040	.340	.050	3/8	\$135.	\$142.
CRD-046	.046	.352	.056	3/8	\$135.	\$142.
CRD-062	.062	.384	.072	1/2	\$150.	\$159.
CRD-078	.078	.416	.088	1/2	\$150.	\$159.
CRD-093	.093	.446	.103	1/2	\$150.	\$159.
CRD-109	.109	.478	.119	1/2	\$150.	\$159.
CRD-125	.125	.510	.135	1/2	\$150.	\$159.



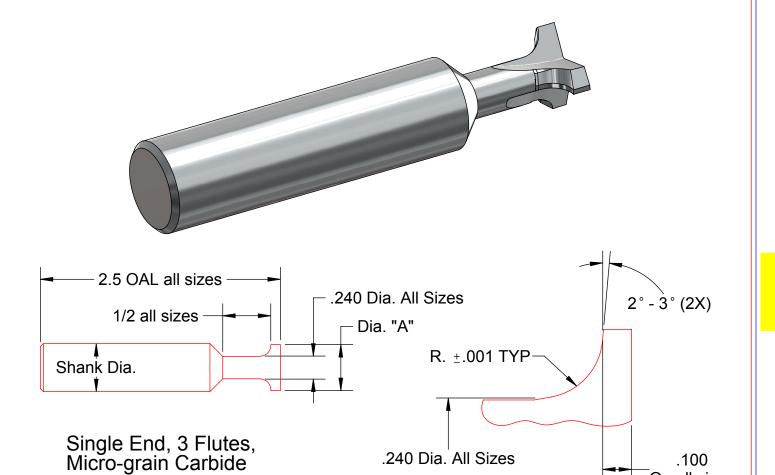


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Toll free phone 866 440-8665 www.abtoolsinc.com
E-Mail: mail@abtoolsinc.com

#### Solid Carbide BACK Corner Rounders



.240 Dia. All Sizes

Tool	R.	Dia.	Shank	Pri	ce
No.	Size	"A"	Dia.	No Coat	AlTiN
BCR-015	.015	.290	3/8	\$105.	\$112.
BCR-020	.020	.300	3/8	\$105.	\$112.
BCR-031	.031	.322	3/8	\$105.	\$112.
BCR-040	.040	.340	3/8	\$105.	\$112.
BCR-046	.046	.352	3/8	\$105.	\$112.
BCR-062	.062	.384	1/2	\$115.	\$124.
BCR-078	.078	.416	1/2	\$115.	\$124.
BCR-093	.093	.446	1/2	\$115.	\$124.
BCR-109	.109	.478	1/2	\$115.	\$124.
BCR-125	.125	.510	1/2	\$115.	\$124.



.100 On all sizes

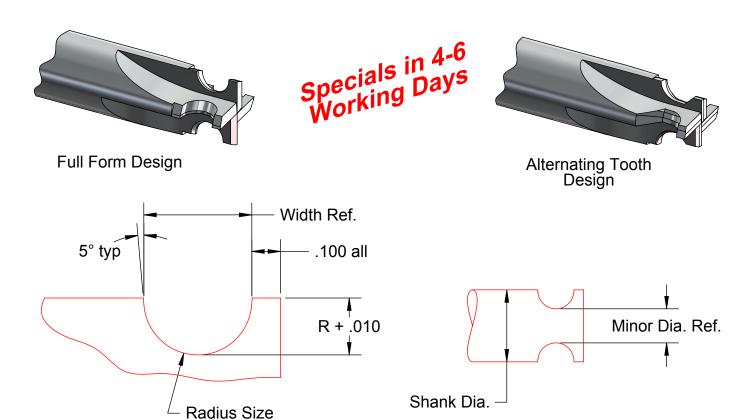


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#### Solid Carbide Full Concave Cutters



Profile ground (not formed) for rounder, more free cutting concave cutters.

Tool	Radius	Width	Shank	Number	Minor Dia.	Pri	ce
Number	Size	Ref.	X OAL	of Flutes	Ref.	No-Coat	AlTiN
FCR-031 *	.031	.062	1/2 X 2.5	6	.418	\$155.	\$164.
FCR-040 *	.040	.080	1/2 X 2.5	4	.400	\$155.	\$164.
FCR-046 *	.046	.092	1/2 X 2.5	4	.388	\$155.	\$164.
FCR-0625	.0625	.125	1/2 X 2.5	4	.355	\$165.	\$174.
FCR-079	.079	.158	1/2 X 2.5	4	.322	\$170.	\$179.
FCR-094	.094	.188	5/8 X 3.5	6	.417	\$195.	\$207.
FCR-100	.100	.200	5/8 X 3.5	4	.405	\$195.	\$207.
FCR-120	.120	.240	5/8 X 3.5	4	.365	\$200.	\$212.
FCR-125	.125	.250	5/8 X 3.5	4	.355	\$200.	\$212.
FCR-157	.157	.314	3/4 X 4.0	6	.416	\$215.	\$229.
FCR-1875	.1875	.375	3/4 X 4.0	4	.355	\$230.	\$244.
FCR-197	.197	.394	3/4 X 4.0	4	.336	\$230.	\$244.

<sup>\*</sup>Cutters with smaller radii are ground with alternating tooth design

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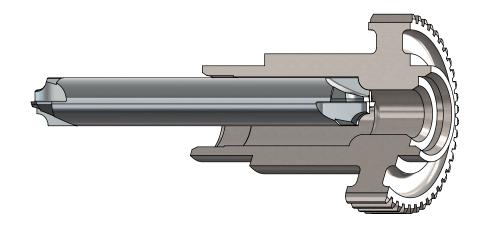
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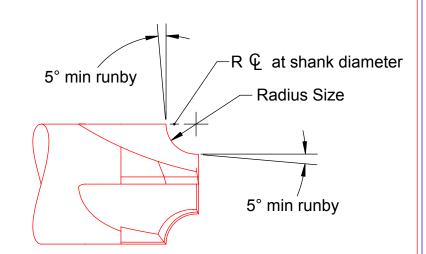
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### Extended Reach, Double End, Solid Carbide, Corner Rounders



Specials in 4-6 Working Days

Radius center at shank diameter allows machining close to other features.



Number	R	Radius sizes, add to prefix, example CRL1/2-062						Shank & OAL	Flutes	Price	
CRL1/4-	.010	.015	.020	.031	.046	.062			1/4 X 3	2 or 4	\$90.
CRL3/8-	.010	.015	.020	.031	.046	.062			3/8 X 4	2 or 4	C110
CRL3/0-	.093	.125							3/8 X 4	2 or 4	\$110.
CRL1/2-	.010	.015	.020	.031	.046	.062	.093	.125	1/2 X 4	2 or 4	\$125.
CRL 1/2-	.156	.187							1/2 X 4	2 or 4	φ125.

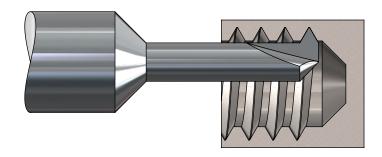


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#### Solid Carbide Thread Mills



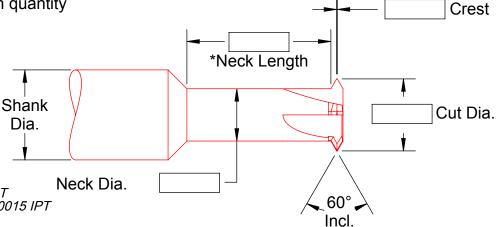
#### With these 11 cutters you can mill Coarse or Fine threads from No. 3 thru 3/4 and from 2MM thru 24MM

Number		Sizes & NF)	Cut Dia.	Crest	Neck Dia.	Neck* Length	Shank & OAL	No. of Flutes	Pri No-Coat	ce AlTiN
TM3	#3	2MM	.072	.001	.040	.160	3/16 X 2	1	\$65.	\$68.
TM4	#4	ЗММ	.083	.001	.045	.190	3/16 X 2	1	\$65.	\$68.
I IVI <del>4</del>	#5	3.5MM	.063	.001	.045	.190	3/10 / 2		Φ00.	φ00.
TM6	#6	4MM	.099	.0015	.055	.260	3/16 X 2	2	\$65.	\$68.
TM8	#8	4.5MM	.128	.002	.083	.320	3/16 X 2	3	\$70.	\$73.
TM10	#10	5MM	.139	.0025	.081	.380	3/16 X 2	3	\$70.	\$73.
TM1/4	1/4	6MM	.188	.003	.124	.400	1/4 X 2	4	\$75.	\$79.
TM5/16	5/16	8MM	.247	.003	.175	.500	3/8 X 2.5	4	\$80.	\$87.
TM3/8	3/8	10MM	.300	.003	.218	.600	3/8 X 2.5	4	\$85.	\$92.
TM1/2	1/2	16MM	.420	.0035	.300	.800	1/2 X 2.5	6	\$100.	\$109.
TM5/8	5/8	20MM	.500	.0026	.307	1.00	5/8 X 3.5	6	\$145.	\$157.
TM3/4	3/4	24MM	.625	.0026	.416	1.25	3/4 X 4	6	\$195.	\$209.

\*Necks ground longer on request with minimal charges based upon quantity

## **Special Thread Mills** in 4-6 Working Days

Machining what part material, please?



Suggested Starting Date: Ferrous 150/300 SFM; .0002/.001 IPT Non-Ferrous 500/1000 SFM; .0005/.0015 IPT Interpolate helix from bottom up.

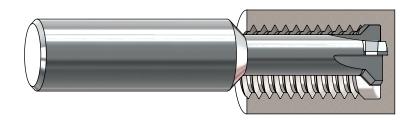
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#### Solid Carbide Internal Thread Relief Mills



Number	Dia.	Flat	Rad.	Neck	Neck	Shank	OAL	No. of	Pri	се
				Dia.	Length	Dia.		Flutes	No-Coat	AITiN
TR3-48	.072	.021	.005	.032	.180	3/16	2	2	\$65.	\$68.
TR4-40	.080	.025	.005	.032	.210	3/16	2	2	\$65.	\$68.
TR6-32	.099	.031	.010	.047	.290	3/16	2	2	\$65.	\$68.
TR8-32	.128	.031	.010	.076	.330	3/16	2	3	\$65.	\$68.
TR10-24	.139	.042	.012	.073	.410	3/16	2	3	\$65.	\$68.
TR1/4-20	.188	.050	.012	.108	.435	1/4	2	4	\$70.	\$74.
TR5/16-18	.247	.056	.012	.159	.538	3/8	2-1/2	4	\$75.	\$82.
TR3/8-16	.300	.063	.012	.202	.641	3/8	2-1/2	4	\$85.	\$92.
TR1/2-13	.420	.077	.012	.284	.848	1/2	2-1/2	6	\$95.	\$104.

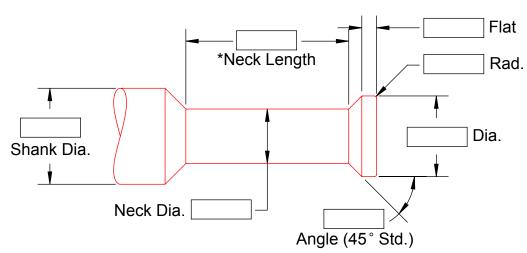
<sup>\*</sup>Necks ground longer on request with minimal charges based upon quantity

Undercut diameter:

Pitches finer than 20 TPI = thread basic major dia + .0075 Pitches of 20 TPI and courser = thread basic major dia + .0150

### **Special Thread Relief Mills Made in 4-6 Working Days**

#### Machining what part material, please? \_



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Toll free phone 866 440-8665

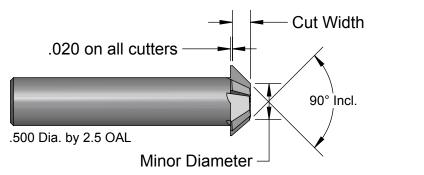


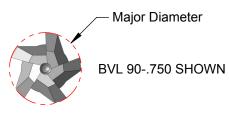
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#### Bevel Cutters, Solid Carbide, In Stock.



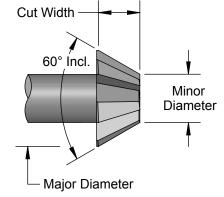


	90° Included Angles							
Number	Major	Minor	Cut	Number	Price			
	Diameter	Diameter	Width	of Flutes				
BVL 90500	.500	.250	.125	4	\$100.			
BVL 90750	.750	.375	.188	5	\$125.			
BVL 90-1.00	1.000	.375	.312	6	\$145.			
BVL 90-1.25	1.250	.500	.375	8	\$165.			
BVL 90-1.50*	1.500	.500	.500	10	\$195.			
				_				

Specials in 4-6 Working Days

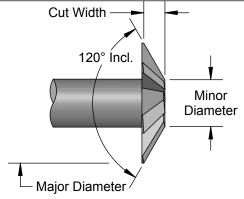
#### 60° Included Angles

Number	Major	Minor	Cut	Number	Price
	Diameter	Diameter	Width	of Flutes	
BVL 60500	.500	.246	.220	4	\$100.
BVL 60750	.750	.390	.312	5	\$125.
BVL 60-1.00	1.000	.503	.430	6	\$145.
BVL 60-1.25*	1.250	.673	.500	8	\$185.
BVL 60-1.50*	1.500	.778	.625	10	\$195.
7		·			7



120°	Includ	led A	Anal	es
120	IIIOIGG	icu /	1119	

	120 Illoluded Aligles							
Number	Major	Minor	Cut	Number	Price			
	Diameter	Diameter	Width	of Flutes				
BVL 120500	.500	.188	.090	4	\$100.			
BVL 120750	.750	.317	.125	5	\$125.			
BVL 120-1.00	1.000	.350	.188	6	\$145.			
BVL 120-1.25	1.250	.488	.220	8	\$165.			
BVL 120-1.50	1.500	.634	.250	10	\$195.			
	•	•	•		-			



\* These cutters are on 3/4" shanks and 2-3/4" OAL



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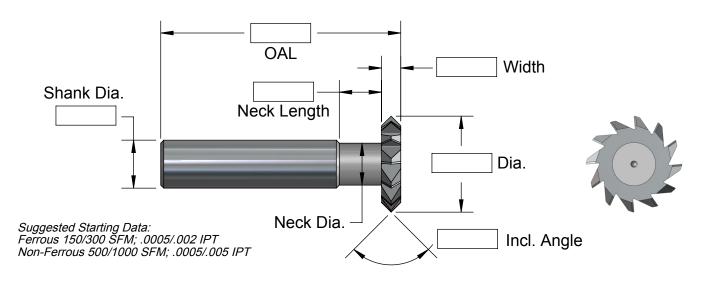
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Toll free phone 866 440-8665

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#### TOP & BOTTOM Chamfer Cutters Specials in 4-6 Working Days

Machining what part material, please? \_\_\_\_\_



Number	Dia.	Width	Neck	Neck	Incl.	Shank	No. of	Pri	ce
			Dia.	Length	Angle	& OAL	Flutes	No-Coat	AITIN
CCD-187-90	.187	.060	.115	.38	90	3/16-2	4	\$68.	\$71.
CCD-250-90	.250	.090	.150	.44	90	1/4-2	4	\$80.	\$84.
CCD-375-90	.375	.110	.250	.50	90	3/8-2.5	6	\$95.	\$102.
CCD-500-90	.500	.125	.350	.68	90	1/2-2.5	6	\$110.	\$119.
CCD-625-90	.625	.140	.440	.75	90	1/2-2.5	8	\$130.	\$140.
CCD-750-90	.750	.170	.440	1.0	90	1/2-2.5	10	\$145.	\$157.
CCD-100-90	1.00	.200	.440	1.2	90	1/2-2.5	12	\$170.	\$184.
CCD-187-60	.187	.030	.115	.38	60	3/16-2	4	\$68.	\$71.
CCD-250-60	.250	.045	.150	.44	60	1/4-2	4	\$80.	\$84.
CCD-375-60	.375	.060	.250	.50	60	3/8-2.5	6	\$95.	\$102.
CCD-500-60	.500	.075	.350	.68	60	1/2-2.5	6	\$110.	\$119.
CCD-625-60	.625	.090	.440	.75	60	1/2-2.5	8	\$130.	\$140.
CCD-750-60	.750	.150	.440	1.0	60	1/2-2.5	10	\$145.	\$157.
CCD-100-60	1.00	.200	.440	1.2	60	1/2-2.5	12	\$170.	\$184.
CCD-187-120	.187	.060	.115	.38	120	3/16-2	4	\$68.	\$71.
CCD-250-120	.250	.090	.150	.44	120	1/4-2	4	\$80.	\$84.
CCD-375-120	.375	.110	.250	.50	120	3/8-2.5	6	\$95.	\$102.
CCD-500-120	.500	.125	.350	.68	120	1/2-2.5	6	\$110.	\$119.
CCD-625-120	.625	.140	.440	.75	120	1/2-2.5	8	\$130.	\$140.
CCD-750-120	.750	.170	.440	1.0	120	1/2-2.5	10	\$145.	\$157.
CCD-100-120	1.00	.200	.440	1.2	120	1/2-2.5	12	\$170.	\$184.

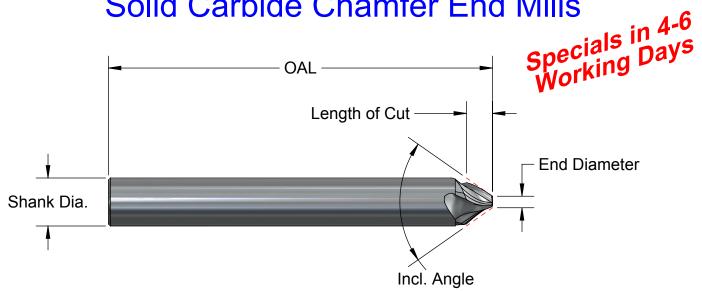


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#### Solid Carbide Chamfer End Mills



Number	End Dia.	Incl. Angle	Length of Cut	Shank X OAL	No. of Flutes	Pri No-Coat	
CEM060-70	.060	70°	.136	1/4 X 2.0	3	\$75.	\$79.
CEM060-74	.060	74°	.126	1/4 X 2.0	3	\$75.	\$79.
CEM060-80	.060	80°	.113	1/4 X 2.0	3	\$75.	\$79.
CEM060-82	.060	82°	.109	1/4 X 2.0	3	\$75.	\$79.
CEM060-90	.060	90°	.095	1/4 X 2.0	3	\$75.	\$79.
CEM060-100	.060	100°	.080	1/4 X 2.0	3	\$75.	\$79.
CEM060-120	.060	120°	.091	3/8 X 2.5	3	\$80.	\$87.
CEM120-70	.120	70°	.182	3/8 X 2.5	3	\$80.	\$87.
CEM120-74	.120	74°	.169	3/8 X 2.5	3	\$80.	\$87.
CEM120-80	.120	80°	.152	3/8 X 2.5	3	\$80.	\$87.
CEM120-82	.120	82°	.147	3/8 X 2.5	3	\$80.	\$87.
CEM120-90	.120	90°	.128	3/8 X 2.5	3	\$80.	\$87.
CEM120-100	.120	100°	.107	3/8 X 2.5	3	\$80.	\$87.
CEM120-120	.120	120°	.110	1/2 X 2.5	3	\$92.	\$101.
CEM180-70	.180	70°	.229	1/2 X 2.5	3	\$92.	\$101.
CEM180-74	.180	74°	.212	1/2 X 2.5	3	\$92.	\$101.
CEM180-80	.180	80°	.191	1/2 X 2.5	3	\$92.	\$101.
CEM180-82	.180	82°	.184	1/2 X 2.5	3	\$92.	\$101.
CEM180-90	.180	90°	.160	1/2 X 2.5	3	\$92.	\$101.
CEM180-100	.180	100°	.134	1/2 X 2.5	3	\$92.	\$101.
CEM180-120	.180	120°	.128	5/8 X 3.0	3	\$105.	\$117.

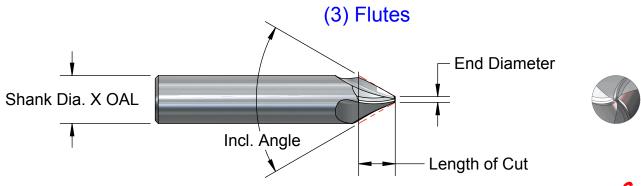


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#### Solid Carbide Taper End Mills



Number	End Dia.	Incl. Angle	Length of Cut	Shank X OAL
TEM060-10	.060	10°	.729	3/16 X 2.5
TEM060-12	.060	12°	.607	3/16 X 2.5
TEM060-15	.060	15°	.484	3/16 X 2.5
TEM060-20	.060	20°	.893	3/8 X 2.5
TEM060-25	.060	25°	.710	3/8 X 2.5
TEM060-30	.060	30°	.588	3/8 X 2.5
TEM060-35	.060	35°	.500	3/8 X 2.5
TEM060-40	.060	40°	.604	1/2 X 2.5
TEM060-45	.060	45°	.531	1/2 X 2.5
TEM060-50	.060	50°	.472	1/2 X 2.5
TEM060-60	.060	60°	.381	1/2 X 2.5

### Specials in 4-6 Working Days

Shank	Price			
X OAL	No-Coat	AlTiN		
3/16 X 2.5	\$75.	\$79.		
1/4 X 2.5	\$75.	\$80.		
3/8 X 2.5	\$85.	\$92.		
1/2 X 2.5	\$92.	\$101.		
1/2 X 3	\$95.	\$104.		
1/2 X 4	\$105.	\$116.		

Number	End Dia.	Incl. Angle	Length of Cut	Shank X OAL
TEM120-10	.120	10°	.743	1/4 X 2.5
TEM120-12	.120	12°	.618	1/4 X 2.5
TEM120-15	.120	15°	.494	1/4 X 2.5
TEM120-20	.120	20°	.723	3/8 X 2.5
TEM120-25	.120	25°	.575	3/8 X 2.5
TEM120-30	.120	30°	.476	3/8 X 2.5
TEM120-35	.120	35°	.404	3/8 X 2.5
TEM120-40	.120	40°	.522	1/2 X 2.5
TEM120-45	.120	45°	.459	1/2 X 2.5
TEM120-50	.120	50°	.407	1/2 X 2.5
TEM120-60	.120	60°	.329	1/2 X 2.5

Number	End Dia.	Incl. Angle	Length of Cut	Shank X OAL
TEM180-10	.180	10°	1.829	1/2 X 4
TEM180-12	.180	12°	1.522	1/2 X 4
TEM180-15	.180	15°	1.215	1/2 X 3
TEM180-20	.180	20°	.907	1/2 X 3
TEM180-25	.180	25°	.722	1/2 X 3
TEM180-30	.180	30°	.597	1/2 X 3
TEM180-35	.180	35°	.507	1/2 X 2.5
TEM180-40	.180	40°	.440	1/2 X 2.5
TEM180-45	.180	45°	.386	1/2 X 2.5
TEM180-50	.180	50°	.343	1/2 X 2.5
TEM180-60	.180	60°	.277	1/2 X 2.5

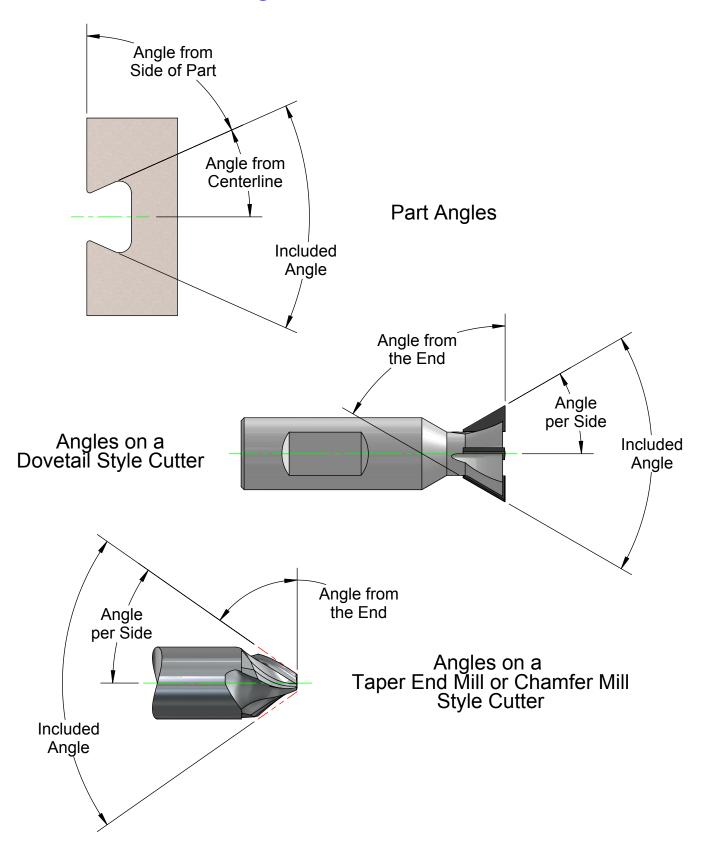
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**B** 

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#### Angle Reference





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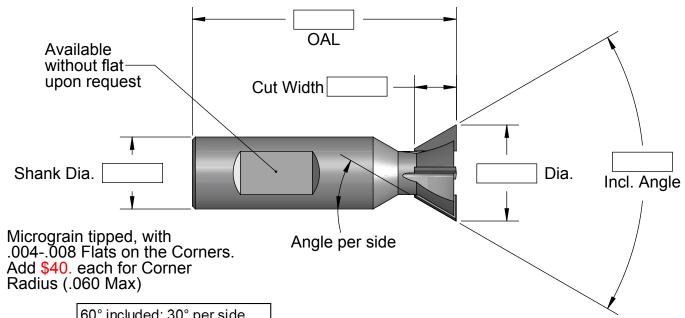
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# Carbide Tipped Dovetail Cutters Specials in 4-6 Working Days

Machining what part material, please? \_\_\_\_\_



60 Include	a, 30 per	side						
Number	Incl.	Dia.	Cut	Shank	OAL	N	Pri	ce
	Angle		Width	Dia.			No-Coat	AITIN
D6075	60°	3/4	5/16	3/4	2-3/4	3	\$180.	\$192.
D60-1.0	60°	1.00	7/16	3/4	2-3/4	4	\$190.	\$206.
D60-1.25	60°	1.25	1/2	3/4	3	5	\$200.	\$220.
D60-1.38	60°	1.38	1/2	3/4	3	6	\$200.	\$223.
D60-1.5	60°	1.50	5/8	3/4	3-1/2	6	\$255.	\$280.
D60-2.0	60°	2.00	7/8	1.0	3-3/4	8	\$290.	\$386.
D60-2.5	60°	2.50	7/8	1.0	3-3/4	8	\$370.	\$482.

90° included; 45° per side						1	N = numbe	r of flutes
Number	Incl. Angle	Dia.	Cut Width	Shank Dia.	OAL	N	Pri No-Coat	ce AlTiN
D9075	90°	3/4	3/16	1/2	2-1/4	3	\$185.	\$197.
D90-1.0	90°	1.00	1/4	1/2	2-1/2	5	\$195.	\$211.
D90-1.25	90°	1.25	5/16	5/8	2-3/4	5	\$255.	\$275.
D90-1.5	90°	1.50	7/16	3/4	3-1/4	6	\$310.	\$335.
D90-1.75	90°	1.75	1/2	3/4	3-3/4	6	\$350.	\$381.
D90-2.0	90°	2.00	9/16	1.0	4	6	\$380.	\$476.
D90-2.5	90°	2.50	3/4	1.0	4-1/2	6	\$440.	\$552.

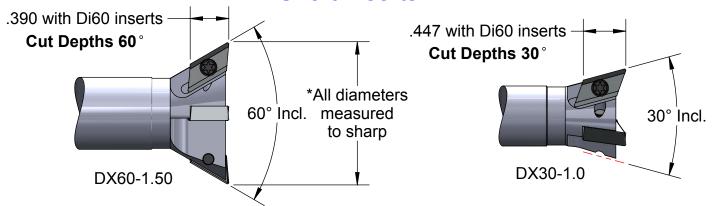
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# The Dexi-Dovetail Short Inserts



Cutter Number	*Dia.	Cut Depth	Incl. Angle	Shank & Overall	Flutes	Price
DX10-1.25	1-1/4	.440	10°	3/4 X 3.5	4	\$205.
DX20-1.0	1.0	.430	20°	3/4 X 3.5	3	\$185.
DX20-1.25	1-1/4	.430	20°	3/4 X 3.25	3	\$195.
DX20-1.50	1-1/2	.430	20°	3/4 x 3.25	4	\$215.
DX30-1.0	1.0	.420	30°	5/8 X 3.5	3	\$195.
DX30-1.25	1-1/4	.420	30°	3/4 X 3.5	3	\$195.
DX40-1.25	1-1/4	.410	40°	3/4 X 3.5	3	\$195.
DX45-1.25	1-1/4	.405	45°	3/4 X 3.25	3	\$195.
DX50-1.25	1-1/4	.400	50°	3/4 X 3.25	3	\$195.
DX60-1.25	1-1/4	.390	60°	1/2 X 3.0	3	\$195.
DX60-1.38	1-3/8	.390	60°	5/8 X 3.5	3	\$205.
DX60-1.50	1-1/2	.390	60°	3/4 X 3.5	4	\$230.
DX60-8	1-1/4	.390	60°	1-1/4 X 8.0	3	\$275.

Short Insert	Insert	Radius	Price	
	Number		No-Coat	AlTiN
	Di60-0078	.0078		
	Di60-1	.015	\$10.25	\$13.00
	Di60-2	.030		

Screw & Key	Number	Price
	DX-3MM	\$2.00
	Т8	\$5.50

We use all these cutters in production, milling (38Rc) 4340 at 1100 to 1800 RPM and .001 to .002 IPT.

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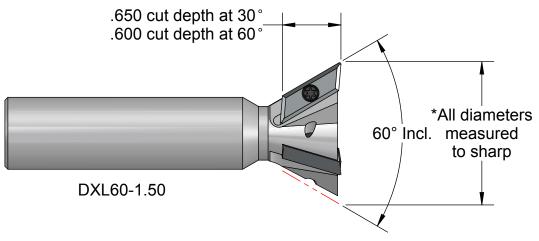
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E-Mail: mail@abtoolsinc.com

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# The Dexi-Dovetail Long Inserts



Number	*Dia.	Cut Depth	Incl. Angle	Shank & Overall	Flutes	Price
DXL20-1.25	1-1/4	.650	20°	3/4 X 3.5	3	\$245.
DXL30-1.25	1-1/4	.640	30°	3/4 X 3.5	3	\$245.
DXL30-1.312	1-5/16	.640	30°	3/4 X 3.5	3	\$250.
DXL30-1.37	1-3/8	.640	30°	3/4 X 3.5	3	\$255.
DXL30-2.0	2.0	.640	30°	1 X 3.88	5	\$375.
DXL40-1.50	1-1/2	.650	40°	3/4 X 3.5	3	\$265.
DXL50-1.50	1-1/2	.620	50°	3/4 X 3.5	3	\$265.
DXL50-2.0	2.0	.620	50°	1 X 4.0	4	\$355.
DXL60-1.50	1-1/2	.600	60°	3/4 X 3.5	3	\$265.
DXL60-1.62	1-5/8	.600	60°	3/4 X 3.5	3	\$280.
DXL60-2.0	2.0	.600	60°	1 X 3.88	4	\$375.
DXL60-3.0	3.0	.600	60°	1-1/4 X 4.5	6	\$490.

Long Insert	Insert Number	Radius	Price No-Coat AlTiN		
	Di60L-1	.015			
	Di60L-2	.030	\$12.50	\$15.50	
	Di60L-3	.046			

Screw & Key	Number	Price	
	DX-3MM	\$2.00	
	Т8	\$5.50	

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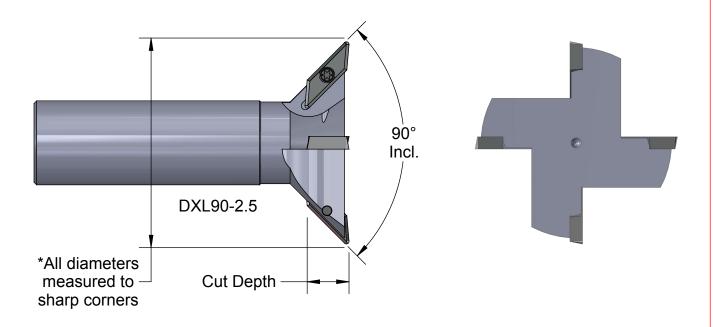
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#### 70° to 90° Dexi-Dovetail Original Width Inserts



Number	*Dia.	Cut Depth	Incl. Angle	Shank & OAL	Flutes	Price
DXL70-1.75	1.750	.560	70°	3/4 X 3.75	3	\$345.
DXL70-2.0	2.000	.560	70°	1 X 3.75	3	\$355.
DXL75-2.0	2.000	.550	75°	1 X 3.75	3	\$355.
DXL80-2.0	2.000	.530	80°	1 X 3.75	3	\$355.
DXL90-2.0	2.000	.490	90°	3/4 X 3.75	3	\$355.
DXL90-2.5	2.500	.490	90°	1 X 3.75	4	\$440.
DXL90-3.0	3.000	.490	90°	1 X 3.75	5	\$505.

Original Long Insert	Insert Number	Radius	Pri No-Coat	
	Di90L-1	.015		
	Di90L-2	.030	\$12.50	\$15.00
	Di90L-3	.046		

Screw & Key	Number	Price
	DX-3MM	\$2.00
	Т8	\$5.50



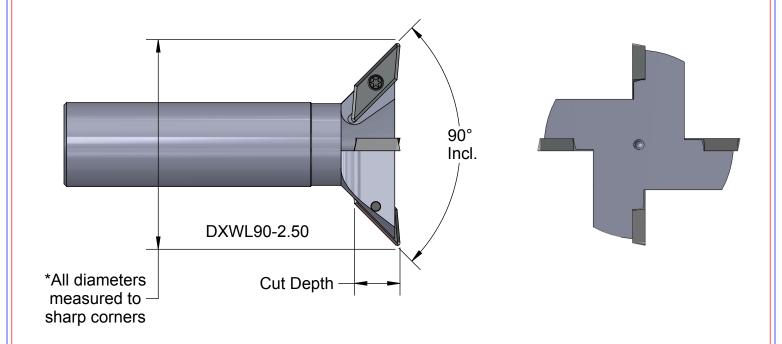
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### **NEW !!!** 70° to 90° Dexi-Dovetails **NEW !!!** wider, stronger inserts





Number	*Dia.	Cut Depth	Incl. Angle	Shank & OAL	Flutes	Price
DXWL70-2.0	2.000	.560	70°	1 X 4	3	\$370.
DXWL80-2.25	2.250	.530	80°	1 X 4	3	\$405.
DXWL90-2.25	2.250	.490	90°	1 X 4	3	\$405.
DXWL90-2.50	2.500	.490	90°	1 X 4	4	\$460.
DXWL90-3.0	3.000	.490	90°	1 X 4	5	\$515.

Wide Insert						
	Insert	Radius	Pri	ce		
	Number		No-Coat	AlTiN		
	Di90WL-1	.015	\$13.75	¢16.25		
	Di90WL-2	.030	φ13.75	φ10.25		

Screw & Key	Number	Price
	DX-3MM	\$2.00
	Т8	\$5.50

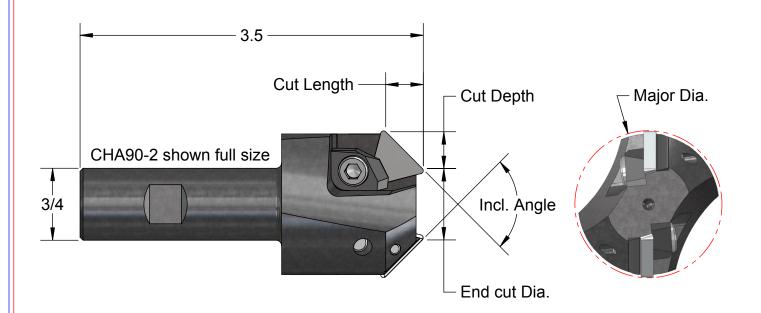


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### Positive Rake Chamfer-Hogs



All Positive Chamfer-Hogs use Insert TPU322 and Shim SM41 For Ferrous or Non-Ferrous

Number	Included Angle	No. of Flutes	End Dia.	Major Dia.	Cut Lgth.	Cut Depth	Clamp No.	Price Incl. Inserts
CHA90-2	90°	2	3/4	1.5	.37	.37	CL2	\$295.
CHA120-2	120°	2	5/8	1.6	.19	.42	CL2	\$295.
CHA60-3P	60°	3	1.1	1.6	.42	.19	CL5	\$385.
CHA150-2	150°	2	.47	1.56	.14	.52	CL2	\$295.

Insert	Price	Clamps	Price	Shims		Screws at no charge with each
TPU322 C5	\$11.	CL2 CL5	\$15. \$20.	SM41 Modified	\$15	purchase of Clamps & Shims. Ind. Standard 10-32 & 1/4-20 Socket Head, and 5-40 Flat Head.



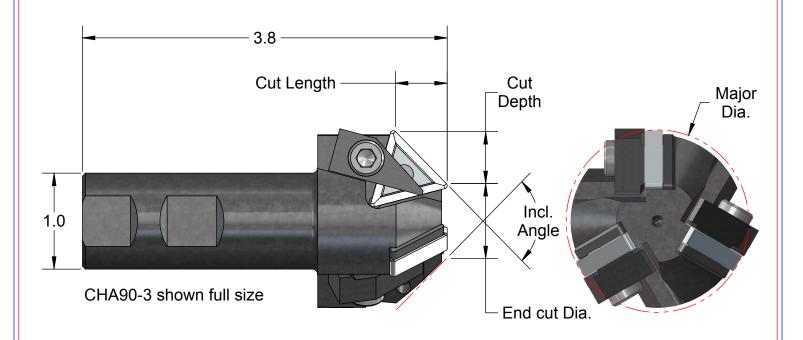
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## Negative Rake Chamfer-Hogs (Ferrous Only)



Number	Included Angle	No. of Flutes	End Dia.	Major Dia.	Cut Lgth.	Cut Depth	Clamp No.	Price Incl. Inserts
CHA30-3	30°	3	1.75	2.16	.73	.25	CL5	\$435.
CHA60-3N	60°	3	1.40	1.60	.65	.45	CL5	\$435.
CHA70-3	70°	3	1.25	2.14	.62	.44	CL5	\$435.
CHA82-3	82°	3	1.0	2.02	.57	.50	CL5	\$435.
CHA90-3	90°	3	.75	1.90	.52	.52	CL5	\$435.
CHA90-4	90°	4	1.76	2.85	.52	.52	CL5	\$495.
CHA100-3	100°	3	.82	1.99	.49	.58	CL5	\$435.
CHA110-3	110°	3	.75	2.02	.43	.62	CL5	\$435.
CHA120-3	120°	3	.75	2.10	.29	.62	CL5	\$435.
CHA130-3	130°	3	.77	2.16	.32	.67	CL5	\$435.
CHA140-3	140°	3	.75	2.20	.25	.70	CL5	\$435.

Insert	Price	Clamp	Price	Shim	Price	Screws at no charge with each
TNMG432 C5	\$16.	CL5	\$20.	SM26 Ind. Std.	\$10.	purchase of Clamps & Shims. Ind. Standard 10-32 & 1/4-20 Socket Head and 5-40 Flat Head.



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### The Single Flute Chamfer Hogs



This cutter was developed in 1982 for spot drilling and chamfer milling small slots in non-ferrous part materials. If used prior to drilling in non-ferrous materials it performs well. If used as a countersink after the hole is drilled it is chatter prone.

It is not for use as a rotating cutter in ferrous materials since the (25°) relief angle is too weak. However, in the more rigid lathe environment it can be used successfully to spot drill holes in ferrous materials. We spot drill our Accu-Holds (4340) in CNC lathes at 900 RPM and .0005 IPR, with tool life of 200 holes per insert corner.

It should never be used in a drill press.

All five cutters have 3/4 shanks and are 5" overall.

All Single Flute Chamfer-Hogs, including inserts, are \$190. ea.

Number	Included Angle	Maximum Chamfer Diameter	Insert	Clamp
CHA90-1	90°	.800	TFG32-90	CL-4
CHA82-1	82°	.730	TFG32-90	CL-4
CHA100-1	100°	.940	TFG32-90	CL-4
CHA120-1	120°	1.00	TD6P-120	5-40
CHA60-1*	60°	1.00	TFG32-90	CL-4

Insert Prices				
TFG32-90	\$12.50			
TFG32-90T (TiN Coated)	\$14.75			
TD6P-120	\$14.00			

\* Note: CHA60-1 is **not** center cut; it has .200 end cut diameter.

The CL-4 Clamps are \$15. each, includes screw.

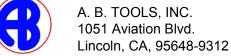
The 10-32 Socket Head Cap Screw is Industry Standard.

TFG-322 and TD-6P are Industry Standard Inserts modified with a secondary facet near the point to prevent "heeling".

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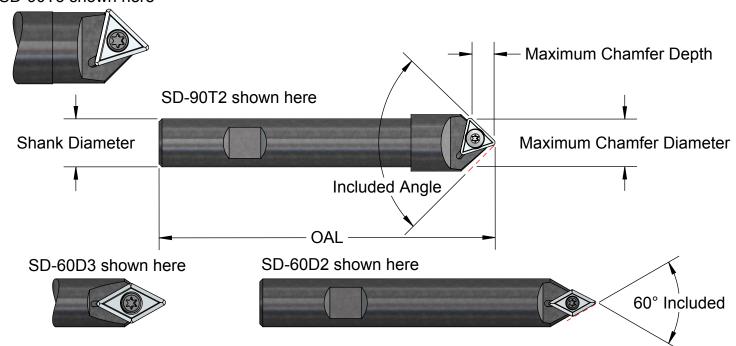
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### Spot-Dex Tools (for all part materials)

SD-90T3 shown here



\*These all use Industry Standard inserts with secondary clearance facets ground to avoid dragging on the small cut diameters.\*

We've spot drilled to .190 depth with the SD-60D2 in mild steel at 4000 RPM and 1 IPM, and milled grooves in X-Y at 10 IPM.

Number	Included	Max	Max	*Insert No.	Screw	Shank	Price including
	Angle	Chamfer	Chamfer	(modified)	Size	and	Wrench &
		Dia.	Depth			OAL	Screw
SD-60D2	60°	.310	.240	DPMT-21.51	2.5MM		\$175.
SD-60D3	60°	.480	.380	DPMT-32.52	4MM	1/2 X 3.5	\$195.
SD-70D2	70°	.350	.230	DPMT-21.51	2.5MM	1/2 \(\Lambda\) 3.5	\$175.
SD-70D3	70°	.530	.340	DPMT-32.52	4MM		\$195.
SD-82T2	82°	.530	.290	TPMT2-2	4-40	1/2 X 3.5	\$175.
SD-82T3	82°	.770	.410	TPMT322	4MM	3/4 X 5.0	\$195.
SD-90T2	90°	.570	.270	TPMT2-2	4-40	1/2 X 3.5	\$175.
SD-90T3	90°	.820	.390	TPMT322	4MM	3/4 X 5.0	\$195.
SD-100T2	100°	.610	.240	TPMT2-2	4-40	1/2 X 3.5	\$175.
SD-100T3	100°	.890	.350	TPMT322	4MM	3/4 X 5.0	\$195.
SD-120T2	120°	.680	.190	TPMT2-2	4-40	1/2 X 3.5	\$175.
SD-120T3	120°	.990	.270	TPMT322	4MM	3/4 X 5.0	\$195.

Insert Number	R. Size	Price
DPMT-21.51	.015	\$16.25
TPMT2-2	.031	\$13.50
DPMT-32.52	.031	\$17.50
TPMT322	.031	\$16.25

Screw	Price
2.5 MM	\$3.75
4-40	\$4.25
4 MM	\$4.50
4 MM	\$4.50

Wrench	Price
Torxit-7	\$5.00
Torxit-7	\$5.00
Torxit-15	\$7.50
Torxit-15	\$7.50

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**B** 

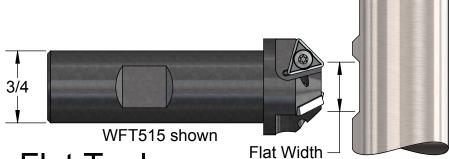
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Toll free phone 866 440-8665

Are you tired of hand ground screw flats on your tool and cutter shanks?

See page 49 for the USCTI Weldon Flat specifications

# Mill precise flats with our Weldon Flat Tools.

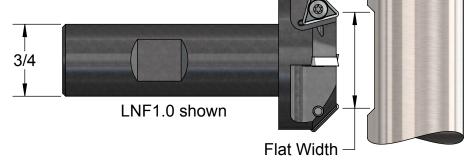


#### Weldon Flat Tools

Number	Flat Width	For these Shank sizes	Number of Flutes	Price
WFT280	.280	.375	1	\$185.
WFT330	.330	.500	2	\$200.
WFT400	.400	.625	2	\$215.
WFT455	.455	.750 & .875	3	\$245.
WFT515	.515	1.0, 1.25, 1.5	3	\$260.
WFT700	.700	2.0	3	\$310.

We mill Weldon Flats with the WFT515 in 4340 alloy steel hardened to Rc 46 @ 1500 RPM and .002 IPT. These cutters will also mill the shanks on standard HSS end mills which are drawn to Rc 55.

Would you prefer linear flats for easy "Z" Axis adjustment?



### Linear Flat Tools for any Shank size

Number	Flat Width	Number of Flutes	Price
LNF750	.750	4	\$315.
LNF1.0	1.000	4	\$335.
LNF1125	1.125	4	\$365.
LNF1250	1.250	5	\$410.

Insert	Price
TPMT2-2	\$13.50

Screw	Price
SR 14-505	\$4.25

Wrench	Price
Torxit-7	\$5.00

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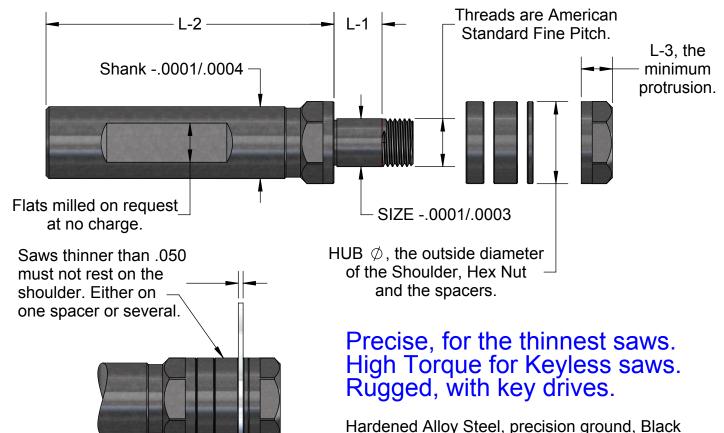
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E-Mail: mail@abtoolsinc.com



# SAW ARBORS for Carbide or HSS Saws with key drives for 5/8 and larger arbors



Oxide coated.

Shim Style spacers in sets from .001 thru .015 are available from your Industrial Distributor.

The spacer assortments will accommodate most saws and spacers that will fit in the L-1 Length. \*Spacers ordered with Keyed Arbors will also have keyways.

Number	Size	Shank	L-1	L-2	L-3	Hub	Spacers with each Arbor	Price	
SA250	.250	.500	.350	2.13	.250	.570	.0625 .125 .1875	\$205.	No Keys
SA375	.375	.625	.375	2.40	.280	.710	.0025 .125 .1075	\$225.	in these
SA500	.500	.750	.500	3.00	.325	.855		\$245.	3 sizes
SA625	.625	.875	.500	3.15	.390	1.000		\$310.	
SA750	.750	1.00	.500	3.40	.440	1.215	.0625 .1875 .250	\$325.	
SA875	.875	1.00	.500	3.40	.440	1.434	.0025 .1875 .230	\$335.	
SA100	1.00	1.00	.500	3.50	.440	1.480		\$375.	
SA125	1.25	1.25	.500	3.50	.440	2.000		\$445.	

\*Sorry, unable to manufacture precise spacers thinner than .0625 in steel; suggest Robb-Jack's Solid Carbide spacers for thinner sizes.

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Toll free phone 866 440-8665



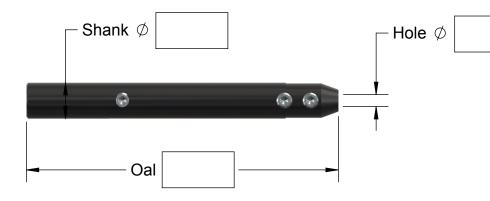
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# The Accu-Hold

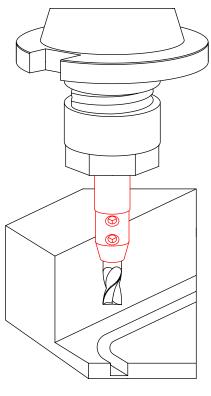
The MOST precise extension holder you have ever used.

Concentric within .0003; Hole size is plus .00015 and minus Zero.

Improves rigidity, concentricity, and coolant effectiveness.



Number	Hole size Ø	Decimal Equiv.	Shank size Ø	Overall Length	Screw Size	Price
ACH3/32	3/32	.0937	3/8	2-1/4	5-40	\$165.
ACH1/8	1/8	.125	3/8	3-1/4	8-32	\$175.
ACH1/8-6	1/8	.125	3/8	6	8-32	\$250.
ACH5/32	5/32	.1562	1/2	3-1/2	8-32	\$150.
ACH3/16	3/16	.1875	1/2	3-1/2	8-32	\$150.
ACH3/16-5	3/16	.1875	1/2	5	8-32	\$185.
ACH1/4	1/4	.250	5/8	4-1/4	10-32	<b>\$160</b> .
ACH1/4-6	1/4	.250	5/8	6	10-32	\$190.
ACH5/16	5/16	.3125	3/4	4-1/2	1/4-28	\$175.
ACH3/8	3/8	.375	3/4	4-1/2	5/16-24	\$185.
ACH3/8-6	3/8	.375	3/4	6	5/16-24	\$215.
ACH7/16	7/16	.4375	3/4	4-1/2	5/16-24	\$200.
ACH1/2*	1/2	.500	3/4	4-3/4	3/8-24	\$235.
ACH1/2-1	1/2	.500	1	4-3/4	3/8-24	\$250.
ACH1/2-6	1/2	.500	1	6	3/8-24	\$275.
ACH9/16	9/16	.5625	1	5-1/4	3/8-24	\$275.
ACH5/8	5/8	.625	1	5-1/2	3/8-24	\$275.
ACH3/4**	3/4	.750	1	5-1/4	7/16-20	\$310.
ACH3/4-1.25	3/4	.750	1-1/4	6	7/16-20	\$315.
ACH1.0**	1	1.000	1	5-1/2	7/16-20	\$445.



\*The ACH1/2 has a 1 Dia. x 1.5 long head.

\*\*The ACH3/4 and ACH1.0 have a 1-1/4 Dia. x 2-1/4 long head and the holes are only 2" deep.



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# The Metric Accu-Hold

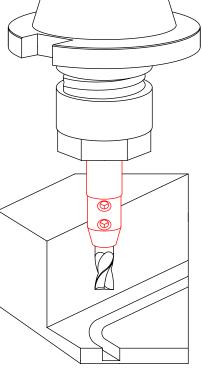
The MOST precise extension holder you have ever used.

Concentric within .0003; Hole size is plus .00015 and minus Zero.

Improves rigidity, concentricity, and coolant effectiveness.



Number	Hole size Ø	Decimal Equiv.	Shank size Ø	Overall Length	Screw Size	Price
ACH3MM	3MM	.1181	3/8	3-1/4	6-32	\$175.
ACH4MM	4MM	.1575	1/2	3-1/2	8-32	\$160.
ACH5MM	5MM	.1968	1/2	3-1/2	10-32	<b>\$</b> 160.
ACH6MM	6MM	.2362	5/8	4-1/4	10-32	\$165.
ACH7MM	7MM	.2756	5/8	4-1/4	10-32	\$215.
ACH8MM	8MM	.3149	3/4	4-1/2	1/4-28	\$175.
ACH9MM	9MM	.3543	3/4	4-1/2	5/16-24	\$225.
ACH10MM	10MM	.3937	3/4	4-1/2	5/16-24	\$205.
ACH11MM	11MM	.4331	3/4	4-1/2	5/16-24	\$245.
ACH12MM*	12MM	.4724	3/4	4-3/4	3/8-24	\$230.
ACH12MM-1	12MM	.4724	1	4-3/4	3/8-24	\$240.
ACH13MM	13MM	.5118	1	4-3/4	3/8-24	\$260.
ACH14MM	14MM	.5512	1	5-1/2	3/8-24	\$260.
ACH15MM	15MM	.5905	1	5-1/2	3/8-24	\$285.
ACH16MM	16MM	.6299	1	5-1/2	3/8-24	\$280.
ACH18MM**	18MM	.7086	1	5-1/4	7/16-20	\$295.
ACH20MM-1	20MM	.7874	1	6	7/16-20	\$315.
ACH20MM	20MM	.7874	1-1/4	6	7/16-20	\$315.
ACH25MM**	25MM	.9842	1	6-1/2	7/16-20	\$445.



\*The ACH12MM has a 1" Dia. x 1.5" long head.

\*\*The ACH18MM and ACH25MM have a 1-1/4" Dia. x 2-1/4" long head and the holes are only 2" deep.



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#### Speed/Feed Formulas, and Shank Flat Data

SFM = RPM X .262 X Tool Diameter RPM = SFM X 3.82 / Tool Diameter IPM = RPM X IPT X Number of Flutes

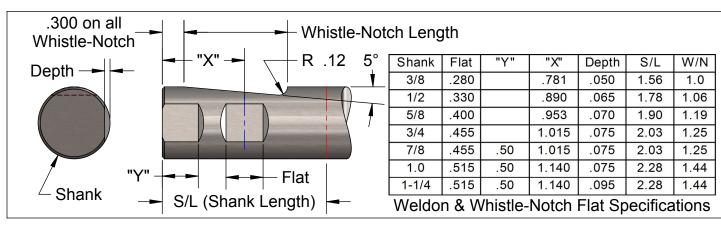
IPT = IPM / (RPM X Number of Flutes) CIM = Width X Depth X IPM

HP = KW X 1.341

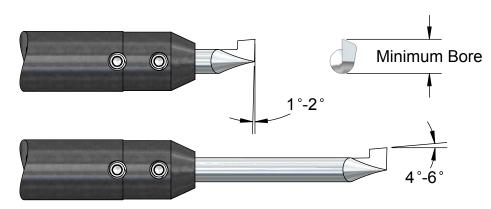
Comparative Estimates of CIM per HP for various part materials, (using carbide);

Inconel and other High Temperature Alloys.................... .2 to .4 CIM per HP

Suggested SFM and IPT are shown in *Italics* on each page with each Cutter Style.



Note: We suggest using the depths shown as minimums to avoid screw damage.



#### **Accu-Bores**

Solid Carbide boring tools. (Micro-grain Heads silver soldered on Solid Carbide Shanks). They can be set to any bore depth with maximum rigidity.

#### Not intended for boring head use.

Number	Min.	Shank	OAL	Price	
	Bore			No-Coat	AITIN
ACB-130	.130	3/32	2.06	\$50.	\$53.
ACB-180	.180	1/8	2.12	\$55.	\$59.
ACB-245	.245	3/16	2.62	\$60.	\$64.
ACB-355	.355	1/4	3.18	\$65.	\$71.

Number	Min.	Shank	OAL	Price	
	Bore			No-Coat	AITIN
ACB-480	.480	3/8	3.68	\$75.	\$84.
ACB-630	.630	1/2	4.18	\$105.	\$118.
ACB630-6	.630	1/2	6.18	\$125.	\$142.

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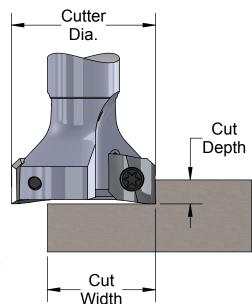
### **Aluminum Milling Tests**

Faster CIM metal removal rates in aluminum depend more on IPM feed rates, horsepower and the cutter geometry than RPM.

You'll get higher CIM with smaller cutters, (assuming you're rough milling with cutters about one inch in diameter and larger). On tests 5, 6 and 8, with full diameter cuts, the one inch gets 46 CIM, the 1-1/4 gets 42 CIM and the two inch gets 37 CIM.

You'll get higher CIM with a cut width that is about 3/4 of the cutter diameter than with a full diameter cut width, (a long accepted machinist's rule).

Compare Tests 1 versus 3 and 6 versus 7. You can get the same CIM with fewer flutes, plus reduced insert costs; see Test 8.



See inside back cover for SH750 along with back cover for all shank style Shear-Hogs.

Test No.	Cutter	Cutter Dia.	RPM	Cut Width	Cut Depth	IPM Feed	No. Flutes	IPT Chip	CIM
1.	SH750	.750	7500	.750	.375	150	1	.020	42
2.	*below	.750	7500	.750	.375	130	2	.008	36
3.	SH750	.750	7500	.600	.250	315	1	.042	46
4.	*below	.750	7500	.600	.250	275	2	.018	41
5.	SH100	1.0	6500	1.0	.125	370	1	.057	46
6.	SH125	1.25	6500	1.25	.125	275	2	.027	42
7.	SH125	1.25	6500	1.0	.250	375	2	.037	47
8.	SH200	2.0	6500	2.0	.250	75	2 & 3	.006/.004	37

<sup>\*</sup> A major brand solid carbide, 2 flute end mill, with High Rake for aluminum.

All tests were run on a recent model Haas VF1 based on the highest Inches **P**er **M**inute possible with the load meter showing 100%. Haas estimates 7.5 actual spindle HP at 6500 RPM.

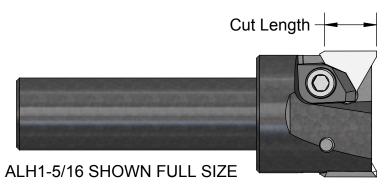


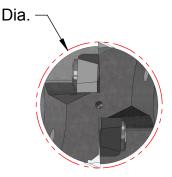
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#### The Aluma-Hogs





We started making ALUMA-HOGS in 1982. In 1997 we introduced the SHEAR-HOG; see back cover. With its high shear inserts, and no top clamps, the SHEAR-HOG outperforms the ALUMA-HOGS by 50% in Metal Removal rates. We will stock Aluma-Hogs, inserts, and parts as long as needed.



NUMBER	Dia.	Shank Dia.	OAL	Cut Length	Insert & Qty.	Clamp	Shim	Price Incl. Inserts
ALH1A	1.0	3/4	3.75	1/4	TEG2.522 (2)	CL1		\$195.
ALH1B	1.0	1.0	3.75	1/4	TEG2.522 (2)	CL1		\$195.
ALH1-5/16	1.312	3/4	3.75	1/2	TEG32MF (2)	CL2		\$245.
ALH1-7/8A	1.875	3/4	3.87	3/4	TEG42MF (2)	CL3		\$260.
ALH1-7/8B	1.875	1.0	4.12	3/4	TEG42MF (2)	CL3		\$260.
ALH2	2.0	1.0	4.12	3/4	TEG42MF (2)	CL3		\$295.
ALH3S	3.0	1.0	4.12	3/4	TEG42MF (3)	CL3	SM37	\$380.
ALH4S	4.0	1.0	4.25	3/4	TEG42MF (4)	CL3	SM37	\$495.

Inserts/H	Relief Angle	Price	
TEG2.522	(.031 R)	20°	\$11.00
TEG2.52MF	(Mill Flat)	20°	\$12.50
TFG322	(.031 R)	25°	\$11.00
TFG32MF	(Mill Flat)	25°	\$12.50
TEG422	(.031 R)	20°	\$13.25
TEG42MF	(Mill Flat)	20°	\$15.50
CL1 or CL2 C	lamp		\$15.00
CL3 Clamp			\$20.00
SM37 Shim, N	/lodified		\$15.00

Suggested Starting Data: Non-Ferrous ONLY 500/10,000 SFM; .002/.010 IPT

See back cover, inside back cover and page 50 for information on the SHEAR-HOG, whichwill rough mill Aluminum at 6 CIM per HP.

Screws included with any Clamp/Shim orders.

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**B** 

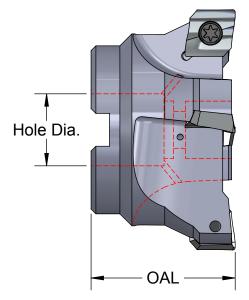
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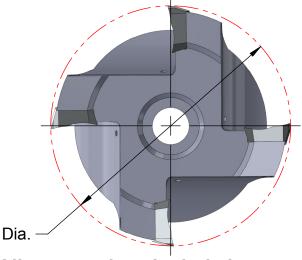
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Shell Shear-Hogs®





All cutter prices include inserts, insert screws, coolant screw and wrench

Number	Dia.	Hole	OAL	No. of	Price Incl.	
		Dia.		Flutes	Inserts	
SHELL 200	2.0	.500	1.25	2 or 3	\$395.	
SHELL 250	2.5	.750	1.50	4	\$435.	
SHELL 300	3.0	1.00	1.75	4	\$495.	
SHELL 400	4.0	1.25	1.87	4	\$575.	
SHELL 500	5.0	1.50	2.25	5	\$725.	
SHELL 600	6.0	1.50	2.25	6	\$950.	
SHELL 700	7.0	1.50	2.25	8	\$1500.	

Coolant Screws				
Size	Price			
1/4-28	\$7.50			
3/8-24	\$7.50			
1/2-20	\$8.75			
5/8-18	\$11.00			
3/4-16	\$12.50			
3/4-16	\$12.50			
3/4-16	\$12.50			

You may use Std. Socket Head screws without thru-tool coolant. Or, use our modified screws with coolant holes

Shear-Hog Inserts	Corner	Price
ADEH-431	.010 R	\$18.75 ea.
ADEH-432	.030 R	\$18.75 ea.
ADEH-434	.060 R	\$18.75 ea.
ADEH-436	.090 R	\$20.50 ea.
ADEH-438	.120 R	\$20.50 ea.
ADEH-45	.015 x 45°	\$20.50 ea.



Extra Insert Features	Add to Price		
.002 Honed Edge	\$3.00		
AITiN Coat	\$4.00		
DLC Coat	\$5.50		
Honed Edge & AlTiN Coat	\$7.00		
Insert Screws and Wr	ench		
3.5mm-SH (2012 and newer)	\$1.75 ea.		
8-32-SH (Older than 2012)	\$1.75 ea.		
T15 Wrench	\$7.50 ea.		

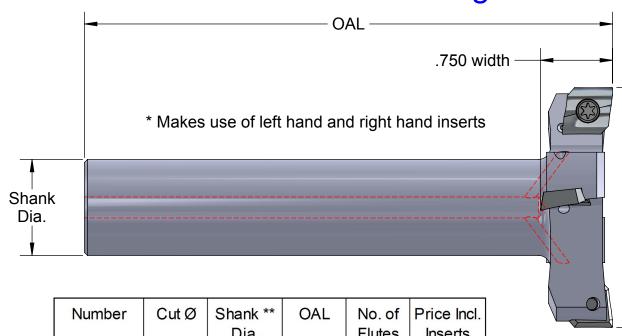
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## T-Slot Shear-Hogs®



Number	Cut Ø	Shank ** Dia.	OAL	No. of Flutes	Price Incl. Inserts
TS 150	1.50	3/4	4.5	2	\$425.
TS 175	1.75	3/4	5.5	2	\$450.
TS 200	2.00	1.0	6	2	\$495.
TS 250	2.50	1.0	5.5	4	\$525.
TS 325	3.25	1-1/4	6	4	\$650.
TS 400	4.00	1-1/4	7	4	\$745.
TS 450	4.50	1-1/4	7	6	\$795.

Cutting diameters are not for finish profiling with T-Slot Shear-Hogs.

Cut Ø

Inserts can be spun ground in T-Slot Shear-Hogs to cut straight in that tool only at an additional charge.

T15

#### LH/RH Inserts same price

Shear-Hog Inserts	Corner	Price
ADEH-431	.010 R	\$18.75 ea.
ADEH-432	.030 R	\$18.75 ea.
ADEH-434	.060 R	\$18.75 ea.
ADEH-436	.090 R	\$20.50 ea.
ADEH-438	.120 R	\$20.50 ea.
ADEH-45	.015 x 45°	\$20.50 ea.

Add to Price
\$3.00
\$4.00
\$5.50
\$7.00
ich
\$1.75 ea.
\$1.75 ea.
\$7.50 ea.



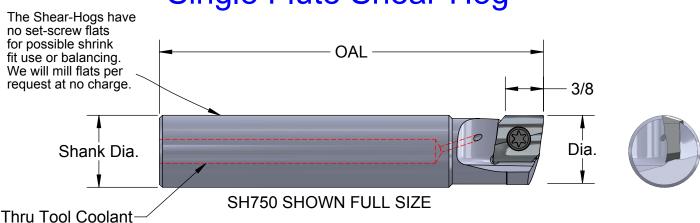
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<sup>\*\*</sup> We can modify shanks to smaller sizes. Price & lead time based on specific request.

# Single Flute Shear-Hog®



Number	Dia.	Shank Dia.	OAL	No. of Flutes	Ramp Angle	Price
SH750	.750	3/4	4.0	1	Drills in Z!	\$195.
SH750-6	.750	3/4	6.0	1	Drills in Z!	\$240.
SH750-9	.750	3/4	9.0	1	Drills in Z!	\$300.
SH787	.787 20MM	3/4	4.0	1	Drills in Z!	\$195.
SH787-6	.787 20MM	3/4	6.0	1	Drills in Z!	\$240.
SH875	.875	3/4	4.0	1	Drills in Z!	\$195.
SH875-6	.875	3/4	6.0	1	Drills in Z!	\$240.
SH984	.984 25MM	3/4	4.0	1	Drills in Z!	\$195.
SH984-6	.984 25MM	3/4	6.0	1	Drills in Z!	\$240.
SH100	1.0	3/4	4.0	1	Drills in Z!	\$195.
SH100-6	1.0	3/4	6.0	1	Drills in Z!	\$240.
SH100-9	1.0	3/4	9.0	1	Drills in Z!	\$300.

All cutter prices include Inserts, Screws, and Wrench, assembled and ready to cut.

See page 50 for recent test results on a HAAS VF1

Shear-Hog Inserts	Corner	Price
ADEH-431	.010 R	\$18.75 ea.
ADEH-432	.030 R	\$18.75 ea.
ADEH-434	.060 R	\$18.75 ea.
ADEH-436	.090 R	\$20.50 ea.
ADEH-438	.120 R	\$20.50 ea.
ADEH-45	.015 x 45°	\$20.50 ea.

Extra Insert Features	Add to Price			
.002 Honed Edge	\$3.00			
AITiN Coat	\$4.00			
DLC Coat	\$5.50			
Honed Edge & AlTiN Coat	\$7.00			
Insert Screws and Wrench				
3.5mm-SH (2012 and newer)	\$1.75 ea.			
8-32-SH (Older than 2012)	\$1.75 ea.			
T15 Wrench	\$7.50 ea.			

## Are you rough milling aluminum at 6 CIM per HP?

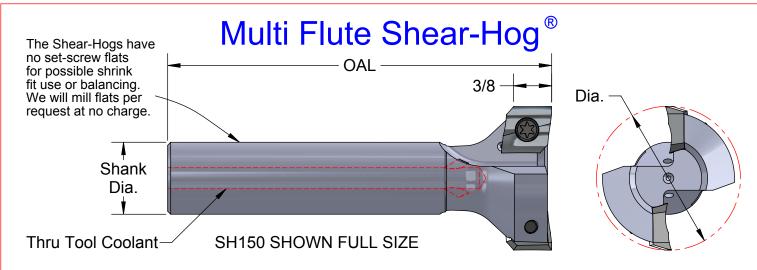


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A. B. TOOLS, INC. If a 1051 Aviation Blvd. we Lincoln, CA, 95648-9312

If any product is not satisfactory we will modify, replace or refund.

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## Are you rough milling aluminum at 6 CIM per HP?

' "	<b>J G</b> , 1 <b>G</b>	49		9				· · · · P · · ·	
Number	Dia.	Shank Dia.	OAL	No. of Flutes	Ramp Angle	Price	Shear-Hog Inserts	Corner	Price
SH125	1-1/4	3/4	4.0	2	8°	\$225.	ADEH-431	.010 R	\$18.75 ea
SH125-1	1-1/4	1.0	4.0	2	8°	\$235.	ADEH-432	.030 R	\$18.75 ea
SH125-6	1-1/4	1.0	6.0	2	8°	\$300.	ADEH-434	.060 R	\$18.75 ea
SH125-9	1-1/4	1.0	9.0	2	8°	\$395.	ADEH-436	.090 R	\$20.50 ea
SH150	1-1/2	3/4	4.0	2	5°	\$260.	ADEH-438	.120 R	\$20.50 ea
SH150-1	1-1/2	1.0	4.5	2	5°	\$270.	ADEH-45	.015 x 45°	\$20.50 ea
SH150-7	1-1/2	1-1/4	7.0	2	5°	\$335.	Extra Insert Features Ac		Add to Pric
SH150-8	1-1/2	1.0	8.0	2	5°	\$365.	.002 Honed Edge		\$3.00
SH200-3/4	2.0	3/4	4.5	3	4°	\$310.			\$4.00
SH200-1	2.0	1.0	5.0	3	4°	\$310.	DLC Coat		\$5.50
SH200-7	2.0	1-1/4	7.0	3	4°	\$375.	Honed Edge & Al7	iN Coat	\$7.00
SH200-9	2.0	1-1/4	9.0	3	4°	\$425.	Insert Scr	ews and Wr	ench
SH300-3/4	3.0	3/4	5.0	4	None	\$415.	3.5mm-SH (2012	and newer)	\$1.75 ea
SH300-1	3.0	1.0	5.0	4	None	\$415.	8-32-SH (Older	than 2012)	\$1.75 ea
SH300-1.25	3.0	1-1/4	5.0	4	None	\$415.	T15 Wre	nch	\$7.50 ea
SH400-1.25	4.0	1-1/4	5.0	4	None	\$550.			
SH450	4-1/2	1-1/4	5.5	5	None	\$625.			

All cutter prices include Inserts, Screws, and Wrench, assembled and ready to cut.

# See page 50 for recent test results on a HAAS VF1

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**Prices Effective 1/1/2018**