



**IN-STOCK** LABORATORY QUALITY DIAMOND PRODUCTS



**abrasive  
technology**

Setting the global standards for superabrasive tooling



## **Beginnings....**

Abrasive Technology(AT) was founded in 1971 with a primary goal of designing, developing, manufacturing and marketing state of the art superabrasive tooling.

From those beginnings, AT has grown into a multi-national corporation with facilities in five countries. Our high quality, technically superior solutions and professional staff have contributed to making AT a world leader in the superabrasive industry.



One of the most important solutions for the optical industry was Abrasive Technology's invention of the P.B.S.® brazing process, patented in the 1970's. This highly sophisticated system has revolutionized the ability of optical laboratories to process lens blanks. Generator rings and edging wheels using AT's patented brazing process are cool running, cut very aggressively and have long life.

Through internal research and company acquisitions, we are able to offer the broadest capabilities in the optical industry. Our new Integrated Ophthalmic System™ has "performance optimized" the widest range of optical products available today. This system incorporates brazed, metal and electroplated bonds into a complete product line that allows labs to specify the exact results they desire.

### **Custom Engineered Tooling**

We welcome the opportunity to quote on any special grinding tool requirement you may have. Please send complete drawings and specifications for quotation. Call for engineering assistance.

### **Redress**


Complete redress service available upon request.

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### **To Order**

In the United States call your Abrasive Technology distributor or visit us on the web at [www.abrasive-tech.com](http://www.abrasive-tech.com). Outside the United States please contact one of our facilities in Europe or Asia (*listed on the back*).

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P.B.S.®, Express Line® and  are registered trademarks of Abrasive Technology  
Diamondlite™ is a trademark of Abrasive Technology. Selected products manufactured under  
U.S. Patent Number 4,908,996.

## SURFACING

### INTEGRATED OPHTHALMIC SYSTEM™

This catalog has integrated the optimized diamond wheel and generator recommendations into an easy to use format. The practitioner can choose the desired results for each operation, material and machine.

#### Available bond types

##### FOR: Plastic, CR-39, Polycarbonate

###### **Brazed**

This bond is used for Plastic, CR-39, Polycarbonate and High Index lenses because of its aggressive cutting action, cooler cutting and longer life.



The P.B.S.® bond.

Using AT's patented process, diamond particles are brazed to the substrate and cannot pull out. The diamond exposure and concentration can be controlled, allowing greater cutting edge exposure and swarf clearance for cooler running and less loading.

##### FOR: Glass

###### **Metal Bond**

Metal bond is used for glass and general purpose with limited types of Plastic/CR-39.

A soft bond yields an aggressive, fast cutting wheel while a harder bond produces a longer lasting wheel that gives a finer finish.

Diamond metal bond generator rings and edging wheels are produced by combining diamonds with blends of different metals which have been optimized for specific cutting performance results.

##### FOR: Plastic, CR-39, Polycarbonate

###### **Electroplated**

Electroplated bond is used for Plastic, CR-39, Polycarbonate and High Index lenses.

By varying the diamond particle size, the wheel can be made more or less aggressive, creating a lens finish from medium to extra fine.

Electroplated bonds mechanically entrap the diamond particles with a layer of nickel bond material. Abrasive Technology uses electroplating as an excellent, low cost alternative to brazed, or for an extra fine finish.



## DIAMOND GENERATOR WHEELS

All AT generators are precisely manufactured to exacting specifications and each one is carefully hand inspected prior to shipping to ensure a smooth, trouble-free operation.

### DIAMOND GENERATOR CHART

	SIZE	CR-39	POLY & HIGH INDEX	GLASS	PLASTIC/GLASS
<b>COBURN, STRASBAUGH, FB SERIES, OPTEK</b>					
Fast cutting	3-1/2	C3470113030	C3470113230	C6470123001	C6470123002
Better finish	3-1/2	C3470113040	C3470113040	C6470123004	N/A
Fast cutting	4	C3470114030	C3470114030	C6470124001	C6470124002
Better finish	4	C3470114040	C3470114040	C6470124004	N/A
<b>COBURN "QUICK CHANGE"</b>					
Fast cutting	3-1/2	C3470612030	C3470614230	C6470323002	N/A
Better finish	3-1/2	C3470612040	C3470614240	C6470323001	N/A
Fast cutting	4	C3470613030	C3470613030	N/A	N/A
Better finish	4	C3470613040	C3470613030	N/A	N/A
<b>LOH</b>					
Fast cutting	90mm	C3470418030	N/A	C6470423001	C6470423002
Better finish	90mm	N/A	C3470418040	C6470423004	N/A
General purpose	90mm	N/A	N/A	N/A	C6470423005
Rebond	90mm	N/A	N/A	N/A	C6470423004R
<b>SHURON 290, 390, 490, 790</b>					
Fast cutting	3-1/2	C3470213030	N/A	C6470223001	C6470223002
Better finish	3-1/2	N/A	C3470213040	C6470223004	N/A

TO ORDER IN UNITED STATES: **1-800-342-9457** "Abrasive Technology - The name to remember"

COLOR CODES:  P.B.S.®  Metal Bond  Electroplated  \*ExpressLine™ in-stock item. \*Orders placed by 12:00 PM (Central Time) will be shipped the same day.

## EDGING



### LIGHTWEIGHT EDGER WHEELS

All AT edging wheels are engineered to be compatible with machines that require lightweight wheels. Aluminum or other advanced materials are used to improve tracking, increase spindle life and to assist in rust reduction.

#### DIAMOND EDGER WHEEL CHART

	SIZE	CR-39	POLY & HIGH INDEX	GLASS	ALL PURPOSE
<b>AIT: MARK V, SUPER DYNA-MITE, XL</b>					
Roughing	15mm	C3511004060	C3511004060	C6511004002	C6511004007
Finishing	15mm	C6531004007	C6531004007	C6531004002	C6531004007
<b>AIT: MARK V DELUXE</b>					
Roughing	21mm	C3511005060	C3511005060	C6511005002	C6511005007
Finishing	21mm	C6531005007	C6531005007	C6531005002	C6531005007
<b>AIT: MARK VI</b>					
Roughing	21mm	C3511006060	C3511006060	C6511006002	C6511006007
Finishing, Hidden bevel	15mm	C6531006007	C6531006007	C6531006002	C6531006007
<b>AIT: GRAND MARK 660, 661</b>					
Roughing	21mm	C3511007060	C3511007060	C6511007002	C6511007007
Finishing	21mm	C6531007007	C6531007007	C6531007002	C6531007007
<b>AIT: DIMENSION ONE</b>					
Roughing	21mm	C3511008060	C3511008060	C6511008002	C6511008007
Finishing	21mm	C6531008007	C6531008007	C6531008002	C6531008007
<b>BRIOT: U2002, V2002, G2000, G3000</b>					
Roughing	15mm	C3511011060	C3511011060	C6511011002	C6511011007
Roughing	19mm	C3511111060	C3511111060	C6511111002	C6511111007
Roughing	21mm	C3511211060	C3511211060	C6511211002	C6511211007
Finishing	12mm	C6531011007	C6531011007	C6531011002	C6531011007
Finishing	15mm	C6531111007	C6531111007	C6531111002	C6531111007
Finishing	19mm	C6531211007	C6531211007	C6531211002	C6531211007
<b>BRIOT: U4000, G4000, 5000S, 6000</b>					
Roughing	15mm	C3511012060	C3511012060	C6511012002	C6511012007
Roughing	18mm	C3511112060	C3511112060	C6511112002	C6511112007
Roughing	22mm	C3511212060	C3511212060	C6511212002	C6511212007
Finishing	22mm	C6531012007	C6531012007	C6531012002	C6531012007
<b>ESSILOR: MBA, MBX, MBS, 120mm</b>					
Roughing	16mm	C3511015060	C3511015060	C6511015002	C6511015007
Roughing, X-Wide	20mm	C3511115060	C3511115060	C6511115002	C6511115007
Finishing, X-Wide	20mm	C6531015007	C6531015007	C6531015002	C6531015007
<b>ESSILOR: PROFILE S, M, DIG -SCAN, GAMMA, TRIUMPH, KAPPA, 900MX, TITAN</b>					
Roughing	15mm	C3511016060	C3511016060	C6511016002	C6511016007
Rougher (bonded)	15mm	C6511016007	C6511016007	C6511016002	C6511016007
Finishing	21mm	C6531116007	C6531116007	C6531116002	C6531116007
Roughing	22mm	C3511116060	C3511116060	C6511116002	C6511116007

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### DIAMOND EDGER WHEEL CHART (cont.)

	SIZE	CR-39	POLY & HIGH INDEX	GLASS	ALL PURPOSE
<b>TRIUMPH/KAPPA Polishing Set</b>					
Rougher (bonded)	22mm	N/A	N/A	C651001	N/A
Roughing	22mm	C351001	C351001	N/A	N/A
Finishing	22mm	C653001	C653001	N/A	N/A
Polishing	22mm	C657001	C657001	N/A	N/A
<b>GERBER COBURN: A.I.T. - INDO</b>					
Roughing	19mm	C3517001060	C3517001060	C6537001007	C6517001007
Roughing	21mm	C3517011060	C3517011060	C6517011002	C6517011002
Finishing	17mm	C6537001007	C6537001007	C6537001007	C6537001007
Polishing	17mm	C6577001007	C6577001007	N/A	C6577001007
<b>SANTINELLI (NIDEK) LE7070, LE900SX</b>					
Roughing	17mm	C3400214	C3400214	C651002	N/A
Roughing	22mm	C3400213	C3400213	N/A	N/A
Finishing	17.5mm	C653002	C653002	N/A	N/A
Polishing	17.5mm	C657002	C657002	N/A	N/A
<b>WECO: 88, 461, 486, 440, 480, 2440, C90, C91, ZET-90, ZET-91, 750</b>					
Roughing	15mm	C3512000060	C3512000060	C6512000002	N/A
Finishing	15mm	N/A	N/A	C6532000002	N/A
Polishing	15mm	C6572000007	C6572000007	N/A	C6572000007
Roughing	18mm	C3512001060	C3512001060	C6512001002	N/A
Finishing	18mm	N/A	N/A	C6530001002	N/A
Polishing	18mm	C6570001007	C6570001007	N/A	C6570001007
Roughing	20mm	C3512002060	C3512002060	C6512002002	N/A
Finishing	20mm	N/A	N/A	C6530002002	N/A
Polishing	20mm	C6570002007	C6570002007	N/A	C6570002007
Roughing	22mm	C3512003060	C3512003060	C6512003002	N/A
Finishing	22mm	N/A	N/A	C6530003002	N/A
Polishing	22mm	C6570003007	C6570003007	N/A	C6570003007
Finishing	25mm	C6530003	C653003	C653003	C653003
Roughing	25mm	C351003	C351003	C651003	C651003

### DIAMOND HAND EDGER WHEEL CHART

	SIZE	CR-39	POLY & HIGH INDEX	GLASS
<b>AIT: 307 ROUGHER</b>				
Shaping	7" X1"	C6511502200	C6511502200	C6511502300
Shaping & Pin beveling		C6511502400	N/A	C6511502400
Pin beveling only		C6511502500	N/A	C6511502500
Ultra Pin beveling		C6511502600	N/A	C6511502600
<b>AIT: 307 BEVEL-HIDDEN RIMLESS</b>				
Shaping	7" X 1"	C6521501200	C6521501200	C6521501300
Shaping & Pin beveling		C6521501400	N/A	C6521501400
Pin beveling only		C6521501500	N/A	C6521501500
Ultra Pin beveling		C6521501600	N/A	C6521501600

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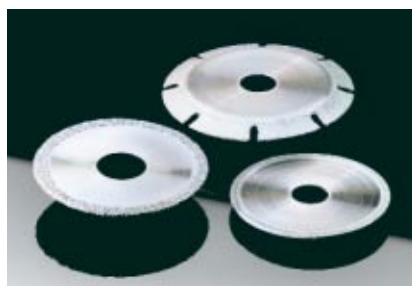
## EDGING

### DIAMOND HAND EDGER WHEEL CHART (cont.)

	SIZE	CR-39	POLY & HIGH INDEX	GLASS	ALL PURPOSE
<b>AIT: 325 KNOB TYPE</b>					
Ultra Pin beveling	2" X 1/2"	C3651501600	C3651501600	C3651501600	C3651501600
<b>COBURN R5D ROUGHER</b>					
Shaping	8" X 1"	C6513501200	C6513501200	C6513501300	C6513501300
Shaping & Pin beveling		C6513501400	N/A	C6513501400	C6513501400
Pin beveling only		C6513501500	N/A	C6513501500	C6513501500
Ultra Pin beveling		C6513501600	N/A	C6513501600	C6513501600
<b>COBURN R5D BEVEL-HIDDEN RIMLESS</b>					
Shaping	8" X 1"	C6523501200	C6523501200	C6523501300	C6523501300
Shaping & Pin beveling		C6523501400	C6523501400	C6523501400	C6523501400
Pin beveling only		C6523501500	C6523501500	C6523501500	C6523501500
Ultra Pin beveling		C6523501600	C6523501600	C6523501600	C6523501600

### Diamondlite™ Light Weight Hand Edging Wheel

TYPE	SIZE	GRIT	CATALOG NO.
Straight profile	6" x 1"	360	C2400601038
Straight profile	6" X 1"	600	C2400601039
Straight profile	6" X 1 1/2"	360	C2400602038
Straight profile	6" X 1 1/2"	600	C2400602039
Hidden bevel profile (0.187" offset)	6" X 1"	360	C2520002360
Hidden bevel profile (0.187" offset)	6" X 1"	600	C2520002600
Hidden bevel profile (0.187" offset)	6" X 1 1/2"	360	C2520004360
Hidden bevel profile (0.187" offset)	6" X 1 1/2"	600	C2520004600



### Diamond Lens Grooving Wheel

Style	Dimension	300 Diamond Mesh	
		Continuous	Slotted
Angled	20mm	C3669001300	C3669501300
Angled	25mm	C3669002300	C3669502300
Straight	20mm	C2669003300	N/A
Straight	25mm	C2669004300	N/A

## LENS MANUFACTURING / ACCESSORIES

### LENS MANUFACTURING TOOLS

#### Diamond Generators

These metal bond diamond generator wheels by Abrasive Technology are available in a wide range of standard sizes and specifications to suit various application requirements. Special sizes and specifications are available upon request.

Diameter:	1/4" to 12"
Diamond depth:	1/8", 1/16" and 1/4"
Wall thickness:	1/16", 1/8", 3/16", 1/4", 3/8" and 1/2"
Radius:	To suit
Diamond size:	60 to 1200 mesh
Concentration:	35, 50, 75, 100 and 150

Specific concentration recommendations are dependent upon application parameters.

Abrasive Technology can fabricate complete generator wheels, recondition used hubs or bond the diamond section onto customer supplied hubs.

Generator wheel adapters are available for the following machines and mounting tapers:

- Rogers & Clarke
- Bothner
- Strausbaugh
- Loh
- CMV
- Morse #2 and #3
- Jacobs #2 and #3

#### Diamond Spherical Laps

Abrasive Technology offers a wide range of solid or slotted face, type D2PP4 and D2PP5 spherical and type D2A2 plano laps.

Diameter:	1" to 10" standard. 6" and larger can be supplied with an undercut to reduce weight.
Diamond depth:	1/8" and 1/4"
Radius of curvature:	To suit
Slotting:	Various patterns available to improve coolant flow and swarf control. 1/8" slot width.
Diamond size:	Roughing - typically 100 to 220 mesh. Fining - typically 12 to 40 micron or 850 mesh. Pre-polish - typically 12 micron or 1000 mesh.

#### Custom Engineered Tooling

We welcome the opportunity to quote on any special grinding tool requirement you may have. Please send complete drawings and specifications for quotation. Call for engineering assistance.

#### Redress

Complete redress service available upon request.

### ACCESSORIES



#### Liquid Ice™ Coolant

Size	Catalog No.
1 case (24 6oz bottles)	C6341477024
1 gallon	C6341477001
5 gallon	C6341477005

#### Aluminum Oxide Dressing Stick

120 grit for roughing wheels, 220 grit for finishing wheels and for dressing super-abrasive grinding wheels. Sold in boxes of 25.

Grit	Dimension	Catalog No.
220	3/4" x 3/4" x 4"	C6330010001
120	3/4" x 3/4" x 4"	C6330010000
150	1/2" x 1/2" x 6"	C633XP-150C
150	1/2" x 1/2" x 6"	C633XP-150F
100	1/2" x 1/2" x 6"	C633XP-100C
100	1/2" x 1/2" x 6"	C633XP-100F

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World headquarters in Lewis Center, Ohio USA

#### **ADDITIONAL PRODUCTS**

We manufacture diamond and CBN, electroplated, brazed, metal, resin, and vitrified bonded grinding wheels, as well as single-point diamond and PCD/PCBN tools.

#### **CUSTOM ENGINEERED TOOLING**

We welcome the opportunity to quote on any special grinding tools you may need. Please send complete drawings and tool specifications when requesting a quote.

#### **DELIVERY**

Highlighted items in this catalog are in stock and available for same day shipment. Orders received by 12:00 PM CENTRAL TIME can be shipped the same day.

#### **TERMS**

Mastercard, Visa, Discover, American Express, C.O.D. or net 30 days from the date of invoice with approved credit. Shipping and related charges will be added to the invoice.



**abrasive technology** 10 LOCATIONS WORLDWIDE

#### **WORLD HEADQUARTERS**

8400 Green Meadows Dr.  
P.O. Box 545  
Lewis Center, Ohio 43035 USA  
Ph: 740 548-4100  
Fax: 740 548-7617

#### **EUROPEAN HEADQUARTERS**

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SW6 1RT United Kingdom  
Ph: 44 20 7471 0200  
Fax: 44 20 7471 0202

#### **ASIAN HEADQUARTERS**

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Singapore 169204  
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**[www.abrasive-tech.com](http://www.abrasive-tech.com)**