

DIANAMIC® Abrasive Products, Inc.

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Toll free in North America 1 888 DIANAMIC (342 6264)

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**2001-2002 General Catalogue
Single Layer Superabrasive Products
North American, Asian and
European Edition**

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DIANAMIC® Abrasive Products, Inc.

2000-1 General Catalogue - Single Layer Superabrasive Products
North American, Asian & European Edition

Why choose DIANAMIC Single Layer Products?

DIANAMIC Abrasive Products, Inc. manufactures consistent **QUALITY ASSURED** single layer superabrasive products, (commonly known as electroplated or galvanic bond) and metal bond products using only **VIRGIN DIAMOND and cBN** (cubic boron nitride also known as BorazonJ™ GE). Our products are designed and manufactured employing state-of-the-art equipment and the finest quality materials. All manufacturing and coating processes are accomplished under the most stringent parameters. No products are shipped until they pass rigorous inspection in our quality assurance department.

DIANAMIC specializes in the design and manufacture of custom grinding products based upon individual requirements and specifications. For fast quotation on all your custom grinding products, either fax, call or write us with your requirements. A wide range of standard size grinding wheels is also in stock and ready for delivery to your facility. **Strip and recoating** service is available on all products.

DIANAMIC Quality and Efficiency

The **single layer superabrasive products** manufactured by **DIANAMIC** have many advantages over other abrasives. Due to their high quality, **DIANAMICS Single Layer Superabrasive products** offer extended wheel life with no truing or dressing, fast and immediate removal of stock and recoatable cores (which lower replacement costs).

Usage and Safety Recommendations

Optimum performance is achieved with flood coolant and filtration at 5 micron or finer. Care must be exercised in grinding, as with any other machining operation. Always wear NIOSHA approved safety glasses, use proper ventilation and follow each suppliers and manufacturer=s guidelines for safe operation. Prior to use, read applicable MSDS and follow ANSI B7.1-1988 standards. Adherence to all Federal, State and Local regulations regarding your particular industry is required.

What are SINGLE LAYER SUPERABRASIVES?

DIANAMIC® Single Layer Superabrasive (electroplated) grinding wheels and products consist of a single layer of either **Virgin Diamond** or **cBN** which is nickel bonded to a steel core. The exact form required is manufactured directly onto the steel core. Most larger OD form grinding wheels are manufactured with an indicating ring to align the wheel to individual spindle eccentricity and to minimize any possible run out. Our standard and custom ID grinding pins and mandrels have a maximum run out of .0002" between head and shank. Because the form holds true throughout the life of a **DIANAMIC** Single Layer Superabrasive product, reduced down time is experienced.

An advantage of **DIANAMIC Single Layer Superabrasive** is that the steel core(s) are recoatable if not damaged. In most cases damaged wheels can be repaired and requalified for a fraction of the original wheel blank cost. As the superabrasive (either Virgin Diamond or CBN) wears and becomes dull, the individual crystals micro fracture, thereby resharpening and exposing new cutting edges until their life is totally expended. Once the superabrasive is expended, grinding pressures sharply increase and the wheel has seen its total useful life. The wheel core can be returned to **DIANAMIC** for stripping and recoating with Virgin Superabrasive. The cost of recoating a **DIANAMIC Single Layer Superabrasive product** is considerably less than the original cost. Savings range anywhere from 20% to 50%, depending on the complexity of the wheel form in comparison to purchasing a new wheel.

DIANAMIC Single Layer Superabrasive products excel when used to remove stock quickly at high and immediate feed rates, such as creep feed operations, CNC grinding, jig grinding, etc. They also perform extremely well when precision form grinding is necessary such as carbide insert form grinding. **DIANAMIC Single Layer Superabrasive products** grind at a very fast rate and at a very cool temperature in comparison to other conventional abrasives and bonded superabrasives. Even with very high feed rates, there is very little heat build up. Using Virgin CBN on hardened steel of Rc 52+, under normal circumstances, will not cause burning or metallurgical damage.

DIANAMIC Single Layer Superabrasive products can be used to grind ferrous and non-ferrous materials. Exceptional results are received when grinding carbide, hardened steels and alloys, glass, glass reinforced plastics (GRP), composites, ceramics in the green and sintered state, epoxy resin composites and other hard to machine and exotic non ferrous materials.

The following are some of the possible processes where **DIANAMIC Single Layer Superabrasives** have been used successfully: OD-ID Grinding, Jig Grinding, Surface Grinding, CNC Form Grinding, Creep Feed Grinding, Flute Grinding, Honing, Single Pass Honing, Lapping, Sawing, etc.

DIANAMIC® SUPERABRASIVE PARTICLE SIZE REFERENCE CHART			
MESH	SIZE	TOLERANCE	APPLICATION
20/30	.0330"	+-.0030"	Extra Heavy Stock Removal
30/40	.0230"	+-.0025"	Very Heavy Stock Removal
40/60	.0160"	+-.0016"	Heavy Stock Removal Saw Grit
60/80	.0100"	+-.0015"	Coarse Roughing
80/100	.0070"	+-.0013"	Standard Roughing
100/120	.0060"	+-.0012"	General Purpose
120/140	.0050"	+-.0010"	General Purpose
140/170	.0040"	+-.0010"	General Purpose
170/200	.0035"	+-.0010"	General Purpose
200/230	.0029"	+-.0010"	General Finishing
230/270	.0025"	+-.0009"	Finishing
270/325	.0021"	+-.0007"	Fine Finishing
325/400	.0017"	+-.0005"	Fine Finishing

DIANAMIC⁷ SUPERABRASIVE MICRON SIZE REFERENCE CHART			
MICRON	SIZE	TOLERANCE	APPLICATION
60	.0024"	+-.0009"	Finishing
45	.0018"	+-.0005"	Fine Finishing
30	.0012"	+-.0003"	Fine Finishing
15	.0006"	+-.0002"	Very Fine Finishing

The DIANAMIC Superabrasive (Diamond and cBN) Particle Size Chart should be used as a reference guide when manufacturing steel blanks for coating.

1. A MALE RADIUS should finish SMALLER than the required finish size. SUBTRACT the particle size from the finished size to achieve the correct pre coat dimension.
2. A FEMALE RADIUS should finish LARGER than the required finish size. ADD the particle size to the finished size to achieve the correct pre coat dimension.

DIANAMIC highly recommends that we are contacted for technical support and recommendations when manufacturing blanks.

Telephone 248 280 1185

Facsimile 248 280 2733

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PRICE LIST FOR
A & B SERIES ID MANDRELS
EFFECTIVE 01 MAY 1995

PART NUMBER A SERIES 3/8" SHANK ID MANDREL	PRICE EACH
A101	\$26.00
A102	30.75
A103	37.60
A104	41.70
A105	43.00
A106	47.65
A107	55.00
A108	\$63.00

PART NUMBER B SERIES 1/4" SHANK ID MANDREL	PRICE EACH
B101	\$18.85
B102	19.45
B103	20.70
B104	25.20
B105	\$28.00

**When placing an order, please specify Diamond or cBN and Mesh size.
Standard Mesh size is 80/100 Coarse and 140/170 Fine**

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**PRICE LIST FOR
A & B SERIES ID MANDRELS FOR VERY HEAVY STOCK
REMOVAL**

20/30, 30/40 and 40/60 MESH DIAMOND OR CBN

EFFECTIVE 01 MAY 1995

PART NUMBER A SERIES 3/8" SHANK ID MANDREL	PRICE EACH 20/30 MESH	PRICE EACH 30/40 OR 40/60 MESH
A101	\$51.00	\$33.00
A102	61.00	38.00
A103	75.00	45.00
A104	84.00	49.00
A105	87.00	53.00
A106	97.00	55.00
A107	112.00	62.00
A108	\$131.00	\$70.00

PART NUMBER B SERIES 1/4" SHANK ID MANDREL	PRICE EACH 20/30 MESH	PRICE EACH 30/40 OR 40/60 MESH
B101	N/A	\$26.00
B102	N/A	27.00
B103	N/A	28.00
B104	51.00	33.00
B105	\$58.00	\$35.00

**When placing an order, please specify Diamond or cBN and Mesh size.
MINIMUM ORDER IS 6 PIECES OF LIKE PART NUMBER, SUPERABRASIVE
AND MESH**

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STRIP AND RECOAT PRICE LIST FOR

A & B SERIES ID MANDRELS

**20/30, 30/40, 40/60 and 60/80 MESH OR FINER FOR
DIAMOND OR cBN**

EFFECTIVE 01 MAY 1995

PART NUMBER A SERIES 3/8" SHANK ID MANDREL	PRICE EACH 20/30 MESH	PRICE EACH 30/40 OR 40/60 MESH	PRICE EACH 60/80 MESH OR FINER
A101	\$43.00	\$25.00	\$18.00
A102	52.00	29.00	22.00
A103	65.00	35.00	28.00
A104	74.00	39.00	32.00
A105	76.00	42.00	35.00
A106	85.00	43.00	36.00
A107	103.00	50.00	43.00
A108	\$116.00	\$55.00	\$48.00

PART NUMBER B SERIES 1/4" SHANK ID MANDREL	PRICE EACH 20/30 MESH	PRICE EACH 30/40 OR 40/60 MESH	PRICE EACH 60/80 MESH OR FINER
B101	N/A	\$22.00	\$15.00
B102	N/A	23.00	16.00
B103	N/A	24.00	17.00
B104	43.00	25.00	18.00
B105	\$52.00	\$29.00	\$22.00

**When placing an order, please specify Diamond or CBN and Mesh size.
MINIMUM ORDER IS 6 PCS OF LIKE PART NUMBER, SUPERABRASIVE
AND MESH**

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PRICE LIST FOR C, D & F SERIES OD WHEELS

EFFECTIVE 01 MAY 1995

PART NUMBER	PRICE EACH DIAMOND	PRICE EACH cBN
C101	\$61.00	\$73.00
C102	69.00	83.00
C103	79.00	95.00
C104	89.00	106.00
C105	98.00	118.00
D101	93.00	112.00
D102	106.00	127.00
D103	136.00	163.00
D104	169.00	203.00
D105	241.00	290.00
D106	197.00	237.00
D107	286.00	343.00
D108	375.00	450.00
D109	340.00	408.00
D110	375.00	450.00
D111	442.00	530.00
F101	289.00	347.00
F102	341.00	409.00
F103	426.00	511.00
F104	\$511.00	\$613.00

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**PRICE LIST FOR S SERIES ID PIN 1/8" SHANK X 2" OAL
EFFECTIVE 01 MAY 1995**

PART NUMBER	HEAD DIAMETER +.007" -.000"	HEAD LENGTH	NECK LENGTH	PRICE EACH
S101	.020"	.09"	1/4"	\$12.00
S102	.030"	.09"	1/4"	9.00
S103	.040"	.09"	1/4"	9.00
S104	.050"	.09"	1/4"	9.00
S105	.060"	.11"	1/4"	9.00
S106	.070"	.11"	1/4"	9.00
S107	.080"	.11"	2"	10.00
S108	.090"	.11"	2"	10.00
S109	.100"	.15"	2"	10.00
S110	.110"	.15"	2"	10.00
S111	.120"	.24"	2"	11.00
S112	.125"	.24"	2"	11.00
S113	.130"	.24"	----	13.00
S114	.140"	.24"	----	13.00
S115	.155"	.31"	----	13.00
S116	.170"	.31"	----	14.00
S117	.195"	.31"	----	15.00
S118	.210"	.31"	----	16.00
S119	.225"	.31"	----	16.00
S120	.250"	.31"	----	\$16.00

Special head diameters or lengths are available upon request

Standard Mesh size is 100 Rough and 200 Finish

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**PRICE LIST FOR G SERIES ID PIN 1/4" SHANK X 3" OAL
EFFECTIVE 01 JANUARY 1996**

PART NUMBER	HEAD DIAMETER +.007" -.000"	HEAD LENGTH	NECK LENGTH	PRICE EACH
G103	.040"	.09"	1/4"	\$12.00
G104	.050"	.09"	1/4"	12.00
G105	.060"	.11"	1/4"	12.00
G106	.070"	.11"	1/4"	13.00
G107	.080"	.11"	2"	13.00
G108	.090"	.11"	2"	13.00
G109	.100"	.15"	2"	13.00
G110	.110"	.15"	2"	13.00
G111	.120"	.24"	2"	14.00
G112	.125"	.24"	2"	14.00
G113	.130"	.24"	2"	14.00
G114	.140"	.24"	2"	16.00
G115	.155"	.31"	2"	16.00
G116	.170"	.31"	2"	17.00
G117	.195"	.31"	2"	18.00
G118	.210"	.31"	2"	19.00
G119	.225"	.31"	2"	19.00
G120	.250"	.31"	2"	\$19.00

Special head diameters and lengths are available upon request

Standard Mesh size is 100 Rough and 200 Finish

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MISSION STATEMENT

DIANAMIC® Abrasive Products, Inc. is focused to provide the finest, consistent quality assured single layer and bonded superabrasive products manufactured and available in the global marketplace. We strive to deliver our products in a timely method and with cost awareness geared around the needs and production requirements of our individual customers. We are committed to remain technologically abreast and to maintain the highest of ethical business standards and practices.

ORDERING INFORMATION

Purchase Orders may be placed by mail, fax or telephone. Include on the purchase order the ship to and attention of information, part number for stock items, Diamond or cBN, Mesh and quantity. Stock items normally ship within 24 hours of receipt of hard copy purchase order. Delivery for non-stock items is on a quoted basis.

SHIPMENT and TERMS

Our terms are NET 30 Days F.O.B. Troy Michigan. Orders may be shipped via open account, pre payment, Visa or MasterCard. Our standard and quoted prices do not include transportation costs, which are added to your invoice. Shipments outside the continental USA are made via air courier by letter of credit, prepayment or credit card.

SPECIAL APPLICATIONS

DIANAMIC will meet ALL your special Diamond and cBN requirements. Our sales and engineering staff work closely with our customers to develop
“OPTIMIZED SOLUTIONS for GRINDING PROBLEMS”

For FAST, RELIABLE and PERSONAL SERVICE meeting ALL your single layer and bonded Diamond and cBN needs, call **DIANAMIC**

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