

[www.SuperAbrasives.com](http://www.SuperAbrasives.com)



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# PRODUCT CATALOG

ABOUT US

# SUPERABRASIVES, INC

## FOUNDED IN 1977



Founded in 1977, SuperAbrasives, Inc. specializes in the design, manufacture and application of diamond and CBN grinding and finishing products and services for a wide range of industries. These include: Automotive, Aerospace, Medical, Electronics, Energy, Agriculture, Heavy Equipment, Custom Job Production, Cutting Tool Fabrication, Wood Working, Bearing, Gear as well as many others.

Since our beginning we have prided ourselves on effectively providing our customers with the most cost-efficient superabrasive solution for the job. Today, our product line includes Vitrified Ceramic, Resin, Metal and Electroplated bond systems, along with accessory items like metal bond dressing wheels, wheel adapters, quills and dressing sticks all designed for both manual and CNC machines.

Our goal is to educate our customers on who we are, the services we offer and the products we manufacture. Our technical sales staff and application engineers all have years of hands on experience in all types of grinding applications and are available for consultation any time problems occur to ensure the solutions we provide meet all of your needs.

SuperAbrasives' main office and manufacturing facility are located in Wixom, Michigan and We support all of our customers within the United States and throughout the world from this location. Our direct link between sales and manufacturing enables us to have constant communication and provide up to date information to our customers. We work hard at providing timely delivery and responding quickly in emergencies. All of this plays a role in our total commitment to customer satisfaction. Although other companies also supply superabrasive products, we believe this commitment gives us the "Distinctive Edge."





# INDUSTRIES



**AUTOMOTIVE**



**HEAVY  
EQUIPMENT**



**ENERGY- OIL**



**AEROSPACE**



**AGRICULTURE**



**BEARINGS**



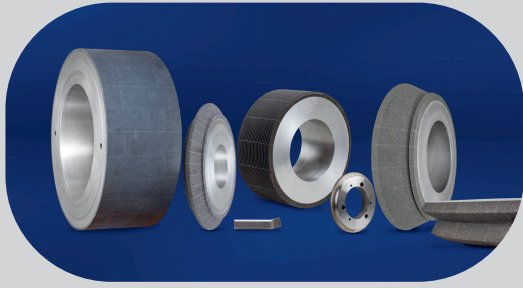
**MEDICAL**



**CUTTING TOOLS**



**GEARS**

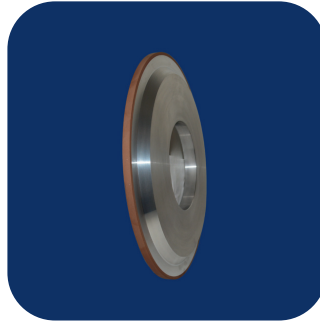


# BOND TYPES

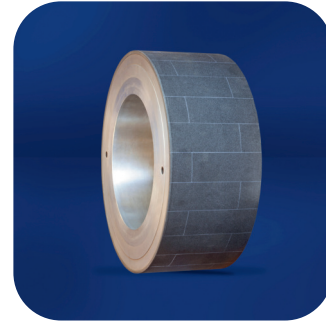
Products are Engineered and Manufactured to Specific Requirements of Individual applications



**VITRIFIED  
CBN**



**VITRIFIED  
DIAMOND**



**MAXIMIZER**



**RESIN**



**HYBRID**



**METAL**

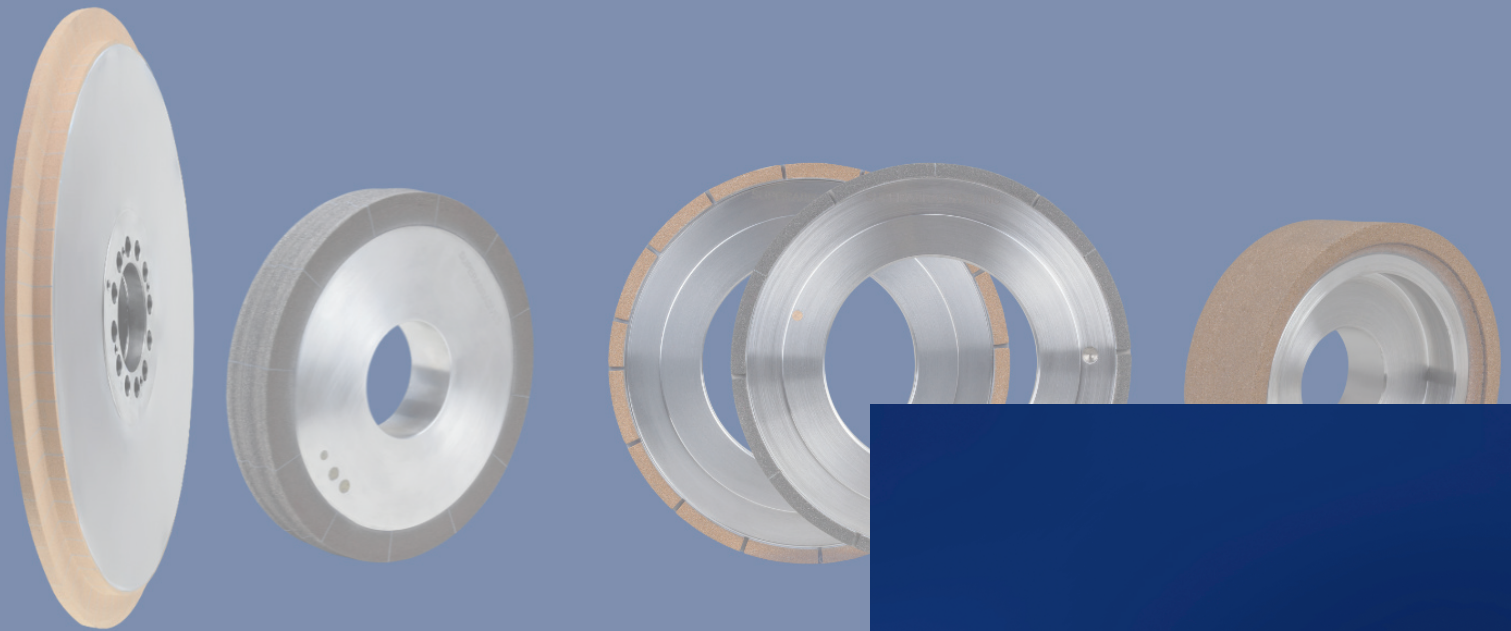


**DRESSERS**



**PLATED**

Learn more about the bond systems at [WWW.SUPERABRASIVES.COM](http://WWW.SUPERABRASIVES.COM)

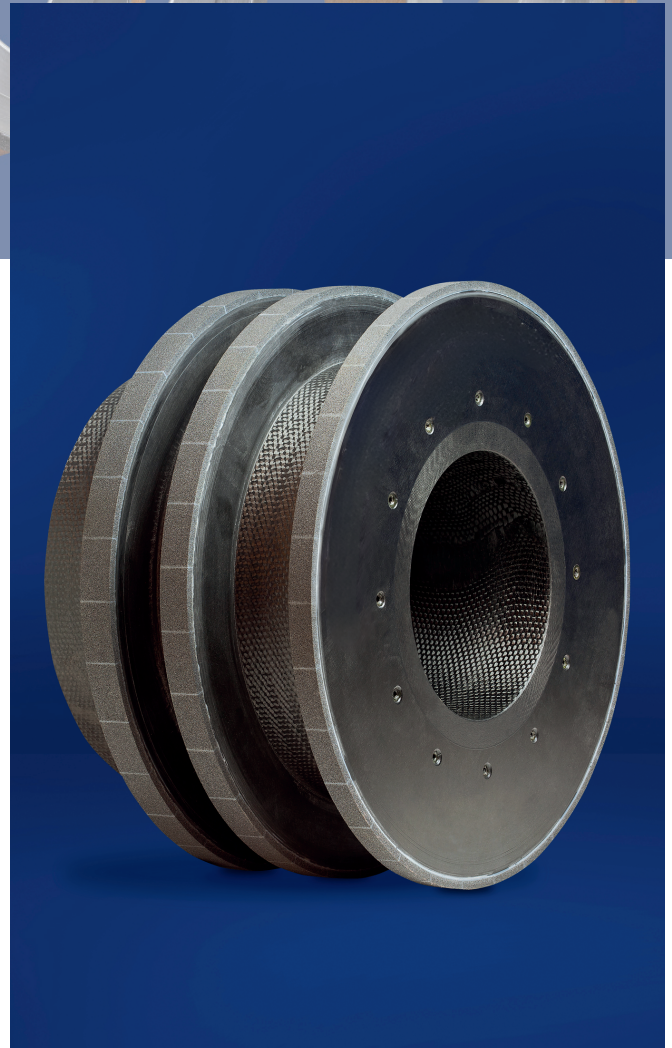


# VITRIFIED CBN

Precision Grind, Form  
Holding, Tool Life

Vitrified CBN and diamond bond wheels are a specialty at SuperAbrasives. We have developed numerous bond systems designed for precision applications of high performance materials. Whether it is in the Aerospace, Automotive, Bearing or Tool Fabrication industry, we have the experience and the products to help you.

Our high concentration Vitrified CBN grinding wheels are designed for use in high production settings where rotary dressing is utilized and have been successfully implemented into numerous production applications.



## VIT CBN Grinding Wheel

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For Cam Grinding Application



# VITRIFIED DIAMOND

STOCK REMOVAL, GRIND  
RATIOS, EDGE QUALITY

Our Vitrified Diamond grinding wheels are proven winners for grinding difficult materials in sensitive applications like flame sprayed materials and PCD & PCBN.

We divide our vitrified diamond product line into 2 categories: Ceramics and Diamond.

For ceramic based materials our HP bond system is the right choice. This bond system is rotary dressable, produces excellent stock removal rates, offers excellent grind ratios and is available in both our standard continuous rim and our segmented rim designs based upon the wheel diameter and style.

For diamond based materials we have too many options to list here. We've been manufacturing this product line including Vitrified Diamond grinding wheels with great success for over 20 years and our performance speaks for itself. No matter what your requirements is – superior edge quality, extended wheel life, fast stock removal rates – we have a bond that will meet your expectations.

## VIT DIAMOND Grinding Wheel

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PCD Drill/Reamer OD Application





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# MAXIMIZER

## FAMILY OF

## PRODUCTS

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## THE MAXIMIZER

, is for use in rotary dress applications where the need for a traditional high concentration vitrified CBN product isn't necessary but the end results are. Applicable in both standard and production grinding settings, The Maximizer can adapt too many grinding variables with minimal adjustments required to your operation. Because of the porous structure of The Maximizer, faster cutting speeds can be achieved while maintaining low grinding pressures. Perfect for lower horsepower machines! You'll increase productivity and save costs!

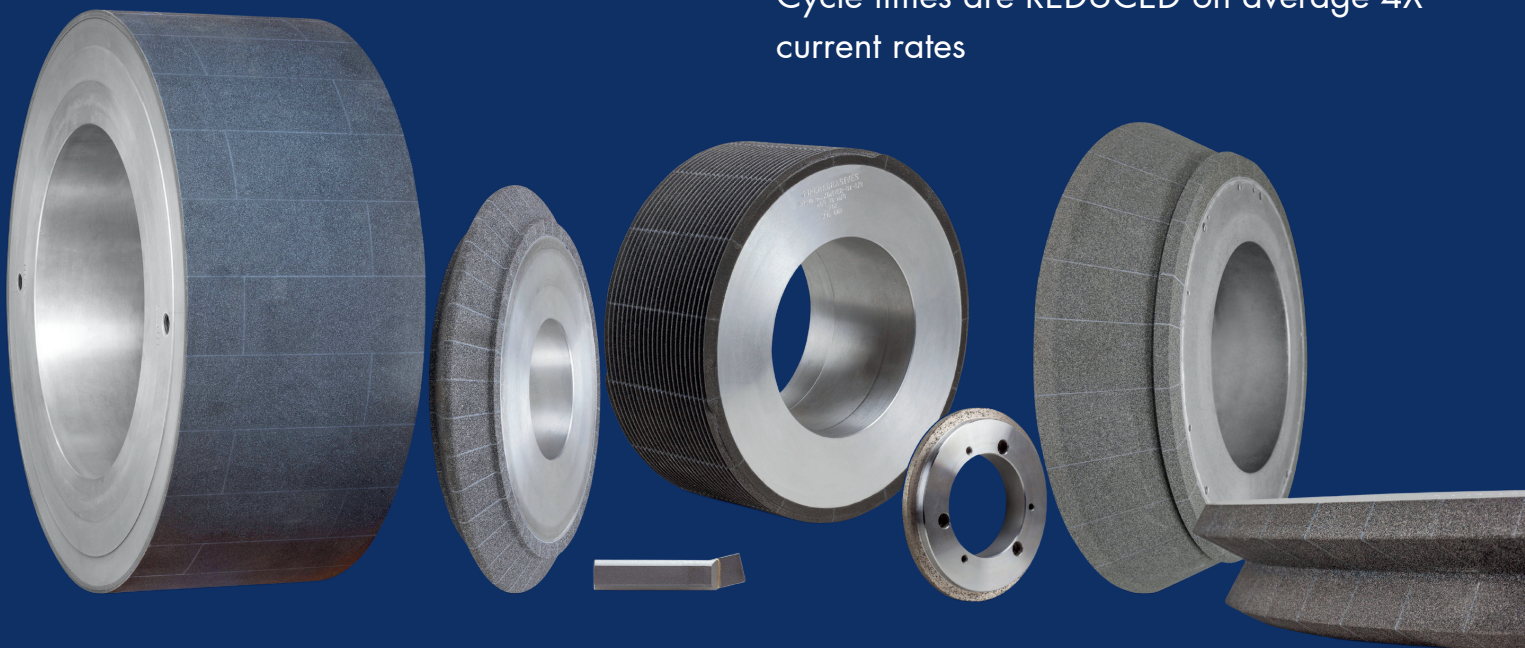
Dressing is REDUCED by at least 7.5 times  
Wheel life is INCREASED by 20-100 times  
Cycle Times are REDUCED by at least 50%

## THE MAXIMIZER ST

, can be dressed with single point technology or rotary dressed and used on both new and older machinery without requiring alterations to your current grinding conditions. Part finishes and tolerances are maintained while also providing a burn free part. The versatility of the MaximizerST allows for grinding of a vast variety of materials with one wheel specification — no need to change the wheel when you change the material being ground. This results in decreased down time, increased productivity and reduced cycle times.

Productivity is IMPROVED on average 200%.

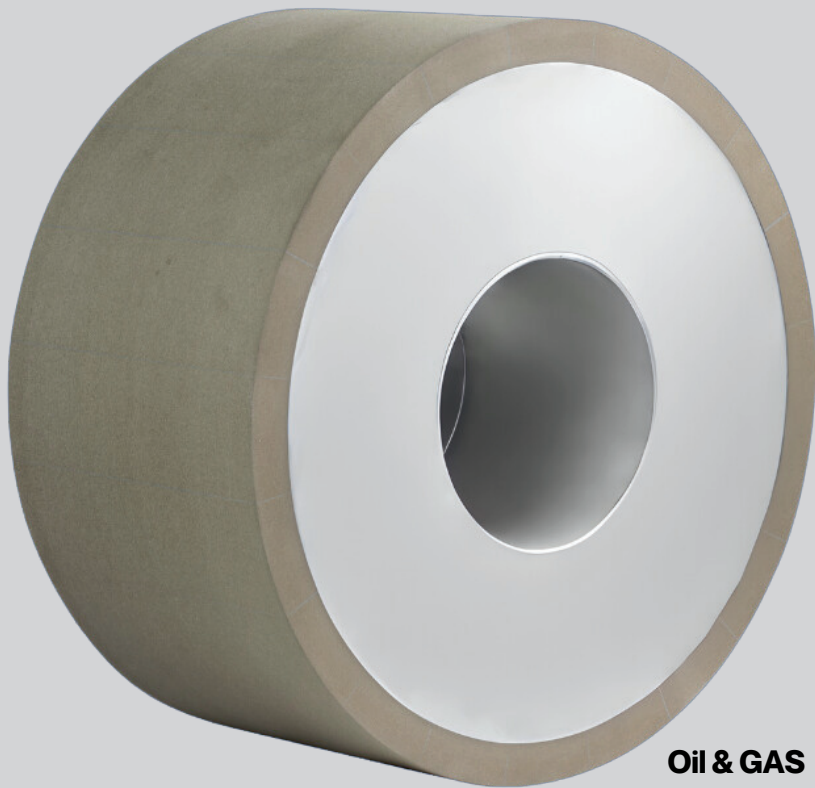
Cycle times are REDUCED on average 4X current rates



# RESIN OIL & GAS



SA is a premier supplier in the oil and gas market. Our product and support are unmatched as we work closely with our customers to better understand their needs and goals and keep a close relationship to help them excel. We have internal abilities to work with proprietary materials in house to come up with new ideas on how to continue to both improve their products or work to increase efficiencies.



**Oil & GAS**

Centerless Wheel

## UPSTREAM

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PDC

Centerless Grinding-  
PDC/Carbide

Chamfer Grinding-  
Diamond/Carbide

Height Grinding -  
Carbide Substrate

Polish Face Grind

ID/OD-PDC Bearings

## DOWNSTREAM

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Bit Manufacturing

Fixed Cutter Grind-  
PDC/Tungsten  
Carbide / Diamond  
grit embedded  
Tungsten

Roller Cone Grinding-  
Carbide  
cutters/Bearing  
Surface

Diameters up to 36"

## STABILIZER

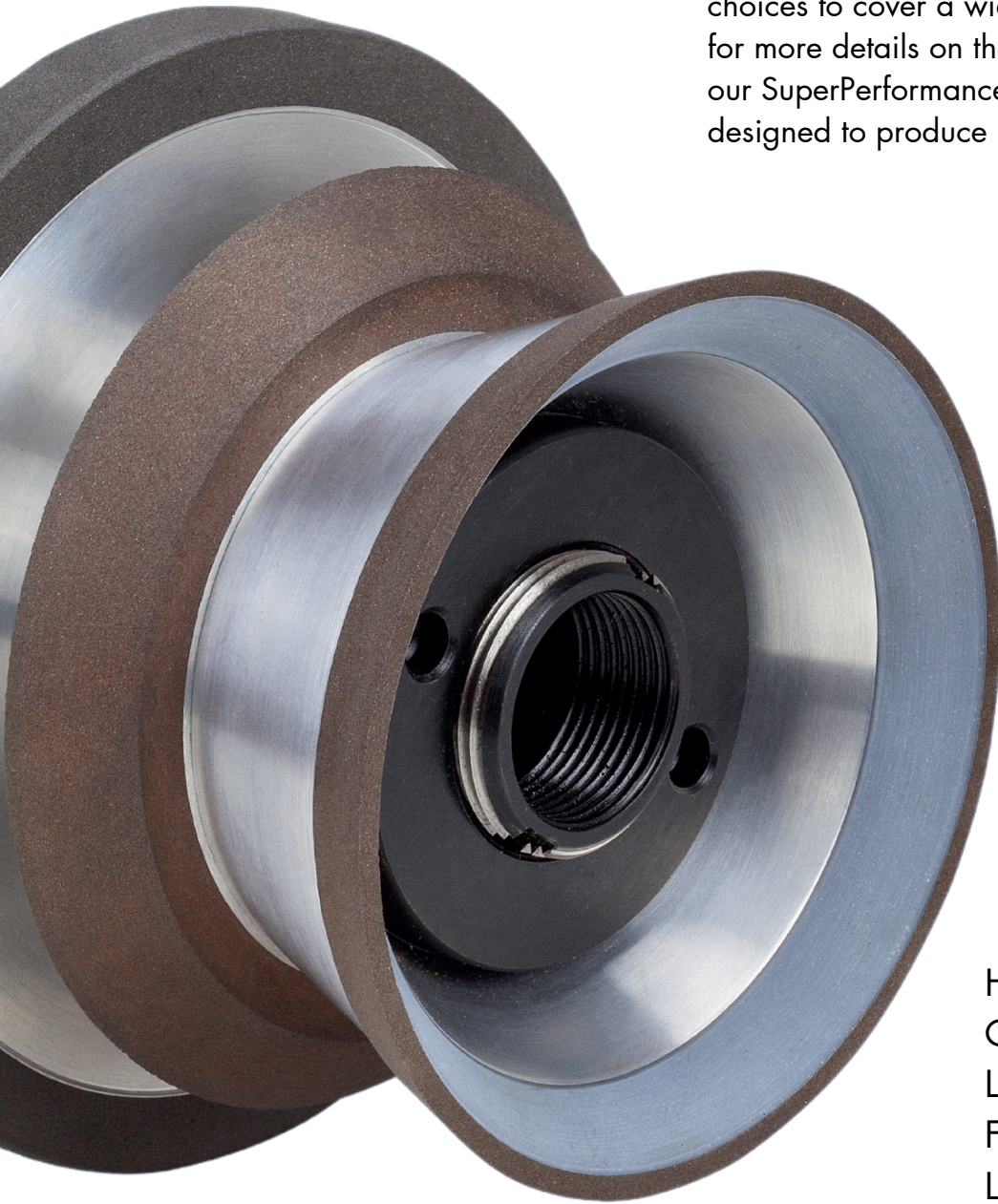
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We have systems in place that withstand the harsh grinding environment encountered during the target stock removal and combinations of wear resistant materials used. Our wheel production technology allows for best quality control as well as the safest product during use. It gives more strength and resilience during impact and heavy downfeeds resulting in your best choice of manufacturers for your job!



# RESIN - HYBRID BOND

At SuperAbrasives, we've been manufacturing and developing resin bond grinding wheels for use in many industries and applications since we opened our doors in 1977 and today we continue this tradition by expanding our product line to include a cost effective bond system – our SuperSaver line of diamond and the Best CBN Grinding Wheels Ohio. These wheels are available in an assortment of sizes and combination of mesh & bond choices to cover a wide variety of applications. Read on for more details on these wheels as well as to learn about our SuperPerformance wheels – our premium bonds designed to produce superior results.



## Hybrid Bond

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Fluting/Gashing/Relief Angle  
Wheel Pack

## WHY HYBRID BOND

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High Performance Fluting,  
Gashing and OD/End Face  
Large stock Removal  
Faster Cycle Times  
Longer Wheel life  
Less white sticking and  
retruing

# METAL BOND



- HIGH** ABRASION
- HEAT** RESISTANCE
- LONG** WHEEL LIFE
- FORM** HOLDING
- BURR FREE** PARTS

Our experience and success with our metal bond products is an area of great pride for us. Over the years we have worked jointly with several machine builders to design bond systems centered around specific applications. Our standard metal bond systems are excellent; our application engineered systems are superior. Form holding grinding applications are extremely precise and require a high degree of attention to the part finish. We understand this requirement and have engineered unique metal bond systems specifically for these types of applications. Recognizing that part contamination is a critical concern and depending upon the sensitivity of the material you're grinding we have an option that will provide a contamination free grind.



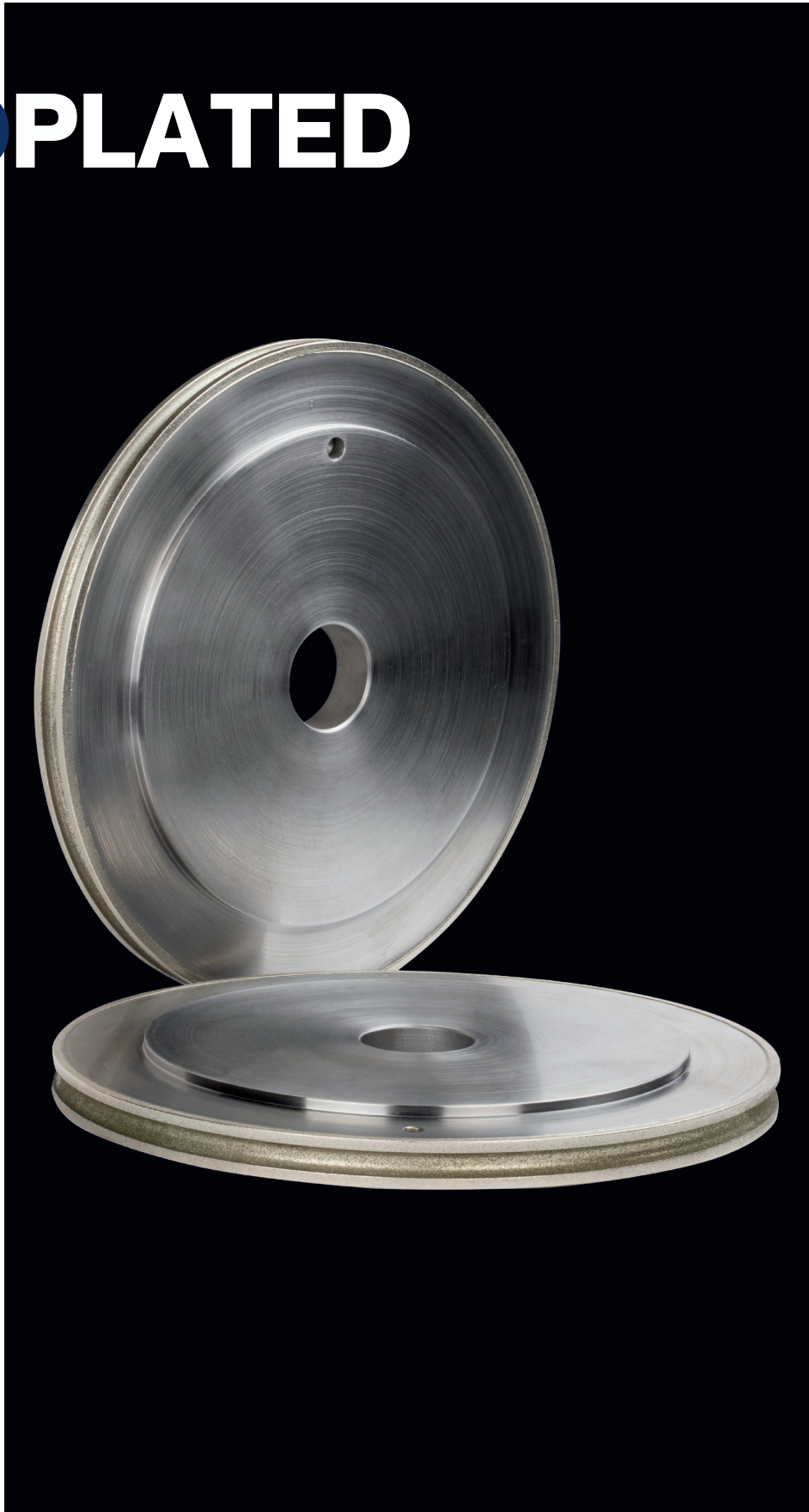
# ELECTROPLATED

Our diamond and CBN single layer abrasive electroplated products are used in a variety of applications – like broach, drill form, slotting, cut-off, chain saw, sharpening, hob, and all production grinding. All of these products are unique and each has specific requirements and tolerances that must be held in order to achieve accurate and consistent part geometry.

Our Diamond and CBN Electroplated Products are available ranging from small I.D. mandrels to large face style wheels up to 24" in diameter. And our strip and replate service is proven to provide fast turn-around times when the need to keep production running becomes the most critical part of your project.

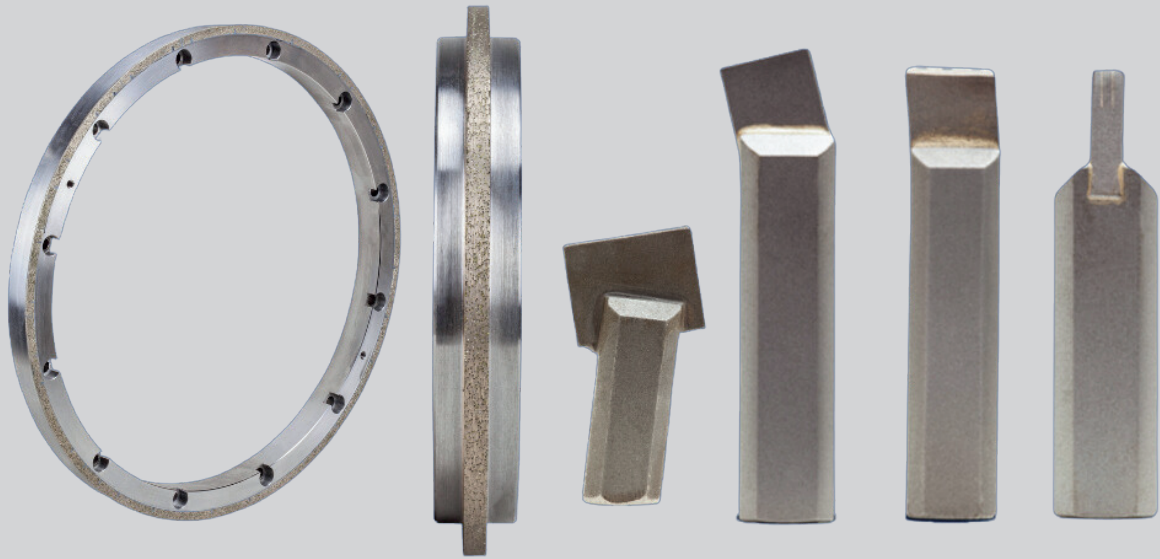
**TIGHT FORM  
TOLERANCES**

**STRIP & REPLATE  
SERVICE**



## DRESSERS & DRESSING TOOLS

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We have a line of **Metal Bond Rotary Diamond Dressing Wheels** that are designed specifically for dressing vitrified CBN and Diamond wheels. These products are available in most industry standard shaped and sizes and provide a cost effective solution to your dressing needs

We also offer numerous single point type dressing tools and nibs that are ideal for multiple bond types and dressing applications. These tools come in standard industry shapes and sizes and like our metal bond dressing wheels are engineered specifically to dress our vitrified CBN and Diamond wheels.

# SUCCESS STORIES



## Cam Grind-Lobe

Increased tool life by 45%  
Reduced wheel change Down Time  
Reduction in CPU by 70%



## Crank Grind - Multi Wheel

Increased tool life by 400%  
Reduction in CPU by 60%



## Centerless Through feed

Increased tool life by 10 times  
Increased Daily Production by 40%  
Reduced \$250,000 cycle scrap Annually



## Chamfer Grind - PDC

Increased tool life by 15%  
Reduction in CPU by 14%  
Improved Part Quality



## Double Disc

Reduced cycle time by 30 Sec/part  
Increased Tool life by 30 Times  
Increased Daily Production by 10 times



## Punch Grinding



Increased tool life by 30 times  
Increased Daily Production by 40%  
Improved Part Quality



## Gear Grinding - Combo Wheel

1 Million USD - Annual Savings  
60 % increase in PPD

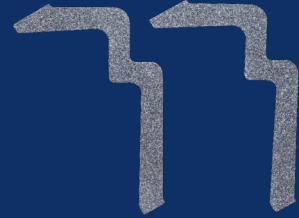


# UNIQUE FORMS

## catalog



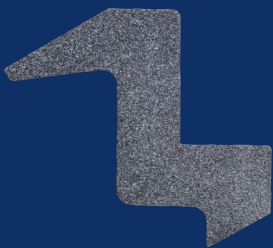
GEAR FORM SEGMENTS



ANGLE HEAD FORMED SEGMENT



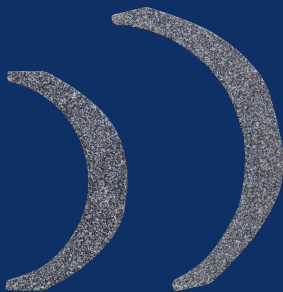
FORMED SEGMENT WITH BACKING



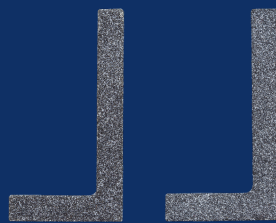
ANGLE HEAD SEGMENT



SEGMENT WITH BACKING



RADIUS SEGMENT



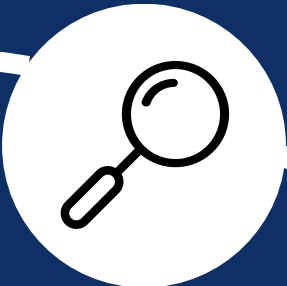
FLANGE SEGMENT



MULTI FACED SEGMENT

# IDENTIFY

Understanding your Needs, Preferences, Pain points and Tailor product the product to meet your Requirements



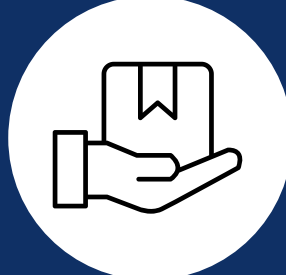
# ENGAGE

Building Relationships by being Transparent, Reliable and Responsive



# DELIVER

Delivering Value through High-Quality Product and Customer Support



# EVALUATE

Measuring Customer Satisfaction through Feedback, Key Performance Metrics

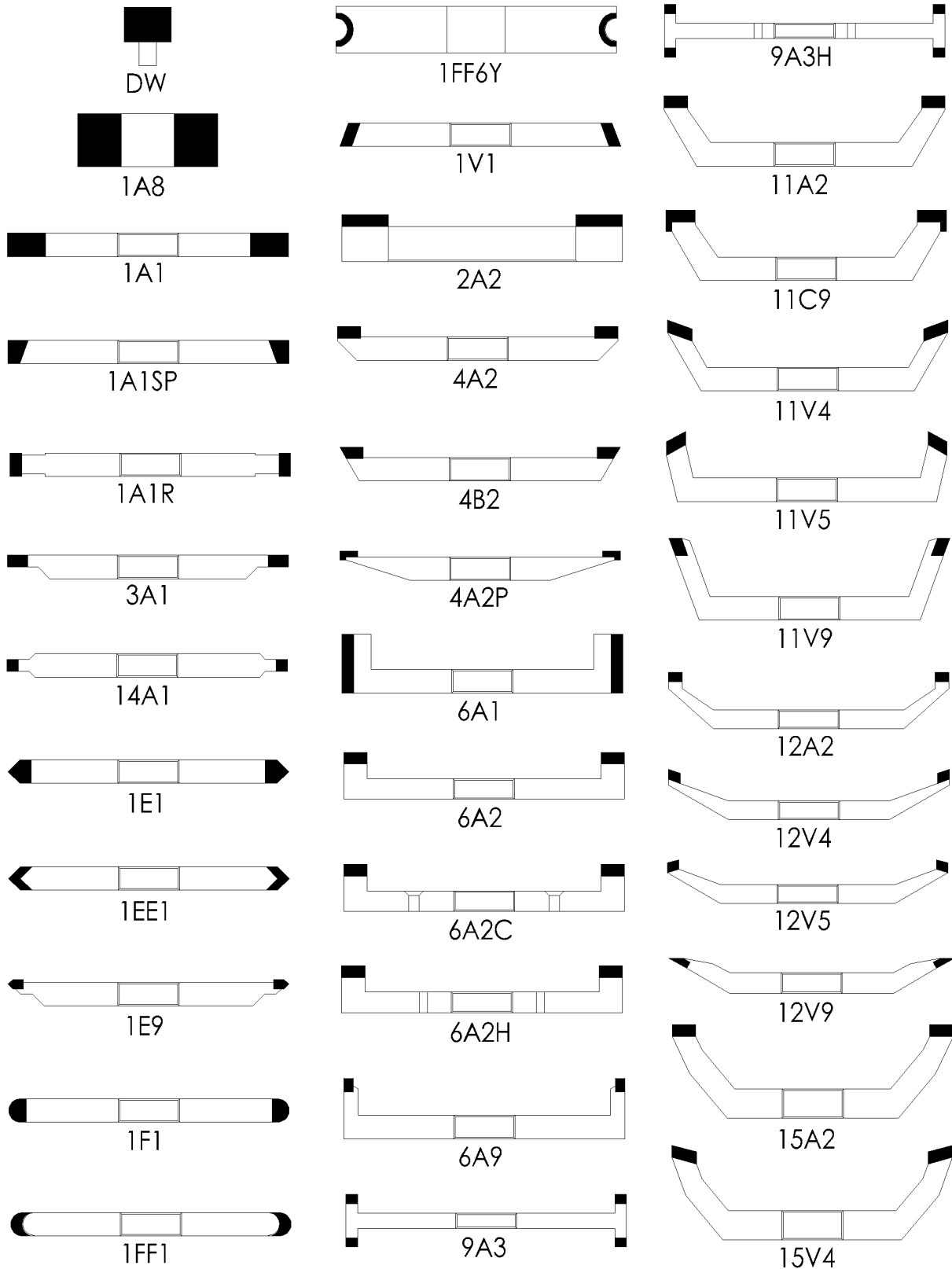


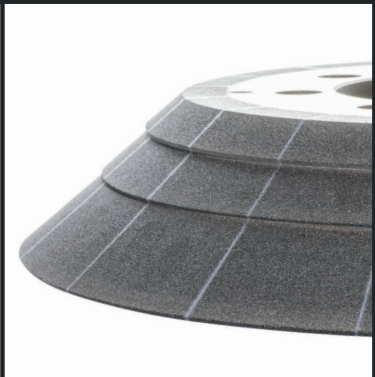
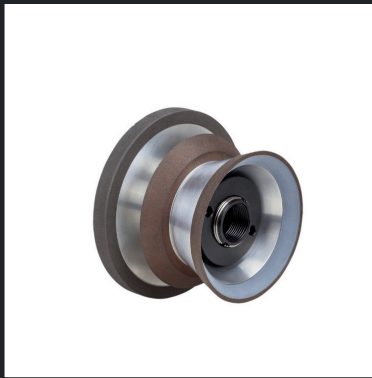
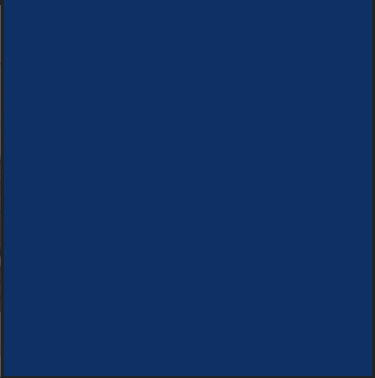
# OPTIMIZE

Continuous Improvements & adaptation to optimize Customer Experience. Stay ahead by Innovating and anticipating future customer needs.

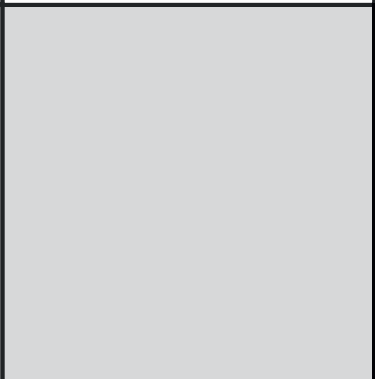
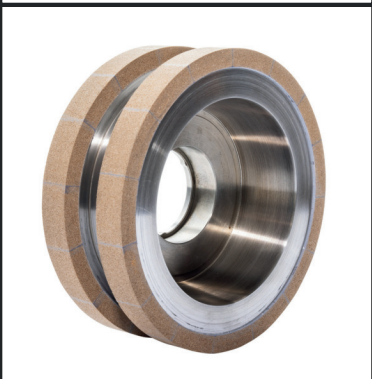


# STANDARD GRINDING WHEEL SHAPES

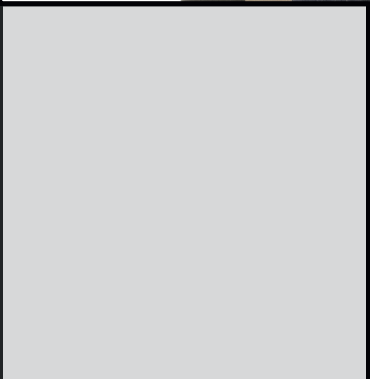




**SUPERABRASIVES**



**SUPERABRASIVES**



**CBN &  
DIAMOND**

**PRODUCT  
PHOTOS**



THE DISTINCTIVE EDGE TECHNOLOGY

## CBN AND DIAMOND PRODUCTS



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