



CONTINENTAL DIAMOND TOOL CORPORATION

ELECTROPLATED | VITRIFIED | METAL BOND | RESIN BOND | HYBRID BOND | DRESSERS



Established in 1973, **Continental Diamond Tool** is a worldwide leader in the manufacturing of superabrasive products for a global market. Product lines include Electroless Plating, Electroplated, Metal Bond, Resin Bond, and Vitrified Diamond and CBN grinding wheels and tools, as well as diamond dressers and rolls. Our Rapid Response team of engineers is available to help with unique customer applications using our hybrid metal, vitrified, and resin bond technologies. CDT's quality craftsmen welcome the opportunity to meet your most complex and critical tooling needs. www.cdtusa.net

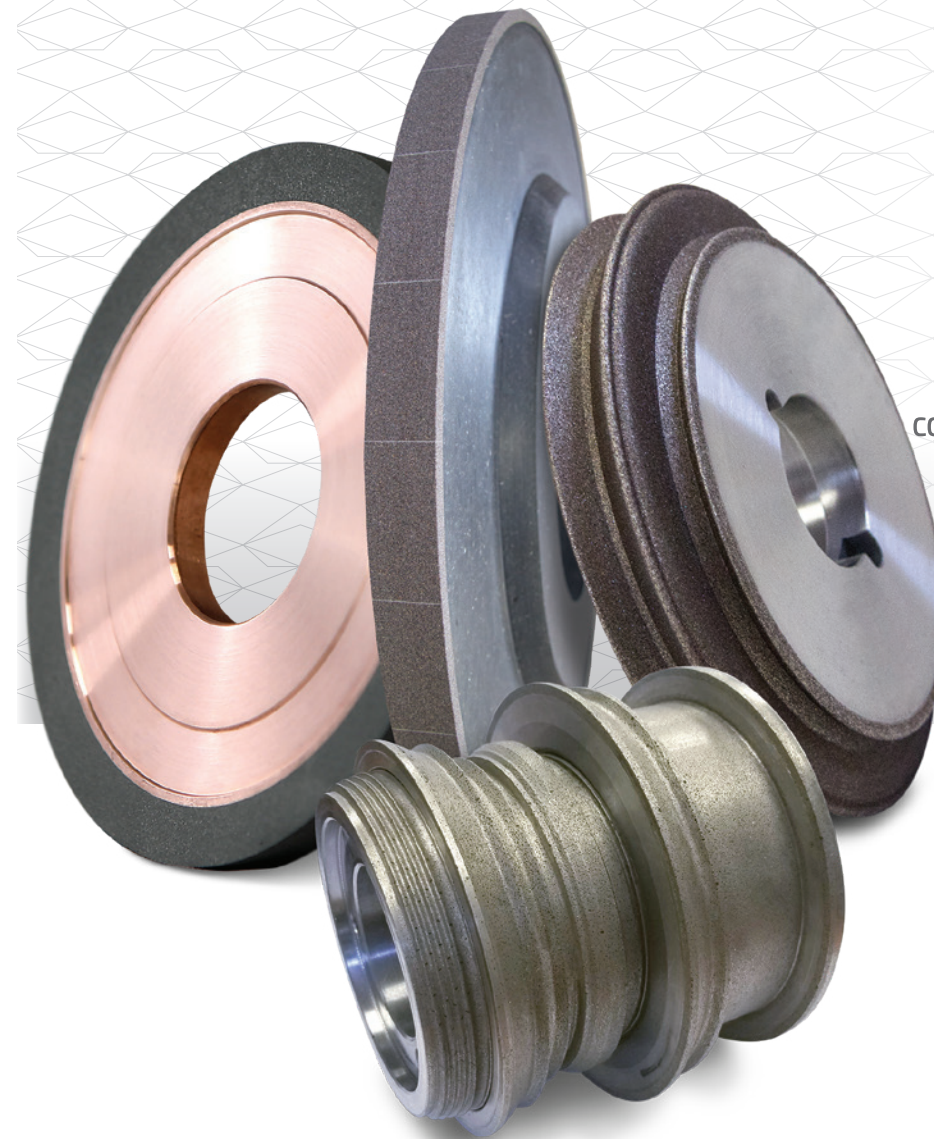
Established in 1984, **Consort Precision Diamond** joined CDT in 2018, and concentrates exclusively on design, development, manufacture, installation, and maintenance of rotary diamond dressers. If an application calls for a rotary diamond dresser, Consort Precision Diamond will provide the best tool for the job. www.consortprecision.co.uk

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CONTINENTAL DIAMOND TOOL CORPORATION



AEROSPACE

AUTOMOTIVE

CERAMICS

ELECTRONICS

COMPOSITES & FIBERGLASS

BLADE & KNIFE

POWER GENERATION

MEDICAL

OPTICS

PAPER/CARDBOARD

SEMICONDUCTOR

CUTTING TOOLS

SAW INDUSTRY

We're setting the new standard.

ELECTROPLATED CBN AND DIAMOND TOOLS

Abrasive tools produced by electroplating have a single layer of abrasive bonded to the surface by a strong, durable coating of nickel. Unlike metal and resin bonded tools, where the abrasives are mixed and held together in metal or resin, electroplated products have the best abrasive protrusion.

Electroplated abrasive tools offer:

- Provide free & faster cutting action
- Produce less heat
- Retain their original shape and dimensions throughout their working life

ABRASIVE UTILIZATION

Select Diamond or CBN superabrasives based upon the materials to be ground.

Diamond:

- Cemented carbide
- Composites
- Glass
- Abrasives
- Ceramics
- Stone
- Fiberglass
- Electronic components
- Plastics

CBN:

- High-speed tool steels
- Die steel
- Hardened carbon steels
- Hardened stainless steels
- Alloy steels
- Aerospace alloys
- Abrasion-resistant ferrous materials



ELECTROPLATED

STRIP & REPLATE PROGRAM

We work closely with our customers to develop customized, cost-effective programs to strip and replate their tools. Our technology removes the remaining abrasive without damaging the surface finish of the core, returning the tool to "like new" condition after replating.



VITRIFIED DIAMOND AND CBN GRINDING WHEELS

Vitrified Diamond and CBN grinding wheels combine the hardest known Superabrasives, held mechanically and chemically in glass or ceramic bonds, to form some of the most efficient grinding products available on the market. Vitrified grinding wheel compositions and structures are engineered with varying concentrations, porosity levels, and bond hardness to provide optimal performance specific to each customer's grinding process.

Vitrified superabrasive grinding wheels offer:

- Optimal heat removing characteristics*
- Considerably less burning and material effects*
- On-machine dressing and conditioning
- Elimination of hand sticking in many cases
- Extended Wheel Life*
- Significantly reduces cycle times*
- Optimal grinding process control and efficiencies*

* when compared with conventional grinding processes

Vitrified Diamond grinding wheels are custom designed for production grinding applications of super-hard materials such as:

- PCD/PCBN
- Aluminum Oxide
- Tungsten Carbide
- Ceramics
- Silicon Carbide
- Boron Carbide
- Abrasives
- Quartz

Vitrified CBN grinding wheels, with their hardness and high thermal conductivity, are purpose-specific for Production Grinding applications:

- High-speed tool steels
- Tool or mold & die steel
- Hardened carbon steels
- Hardened stainless steels
- Alloy steels
- Aerospace alloys
- Chilled cast iron
- Powdered metal



METAL BOND CBN AND DIAMOND TOOLS

Metal bond grinding tools offer the long life and low maintenance you need. Suitable for all levels of both wet and dry grinding, these tools are built for endurance and performance.

Metal bonded tools are created from the sintering of powdered metals and other materials with Diamond or Cubic Boron Nitride (CBN). This produces an extremely strong product that holds its shape. Metal Bond maintains a long tool life, with reduced need for frequent dressing. Metal Bond wheels have the hardest matrix, performing best in operations under flood coolant.

Unlike resin and vitrified wheels, metal bond material can't be removed to release dull grit and expose new edges.

Metal Bond CBN and Diamond Tools offer:

- Longer life
- Intricate designs and complex forms with lower wear rates
- Impervious to alkaline coolants
- Efficient heat dissipation for high material removal rate operations
- Superior form holding, impact resistance

Materials Processed:

Tungsten Carbide
Ceramics
Glass
Ferrites
Powdered metals
Titanium graphite composite

Applications:

Cylindrical
Surface
Cutoff
Tool & Cutter
OD & ID

Stationary Dressers:

Single Point
Multi Point
Grit
Blade
Cluster

Core Drills / Hole Saws / Single Points / Grit Dressers / Dressing Disks



RESIN BOND DIAMOND AND CBN

CDT’s Resin Bond Diamond and CBN wheels provide maximum longevity while standing up to the toughest and finest grinding applications. Diamond or CBN particles are embedded in phenolic resin or copper (along with other fillers), and combined in a hot-press process to create a variety of useful shapes and sizes. These are then cured and machined into tools that offer improved cutting action, productivity, and longer life for your industry or custom needs.

Whether you need polishing, sharpening, light or heavy grinding, our Resin Bond products will meet or exceed your expectations.

Resin Bond CBN and Diamond Tools offer:

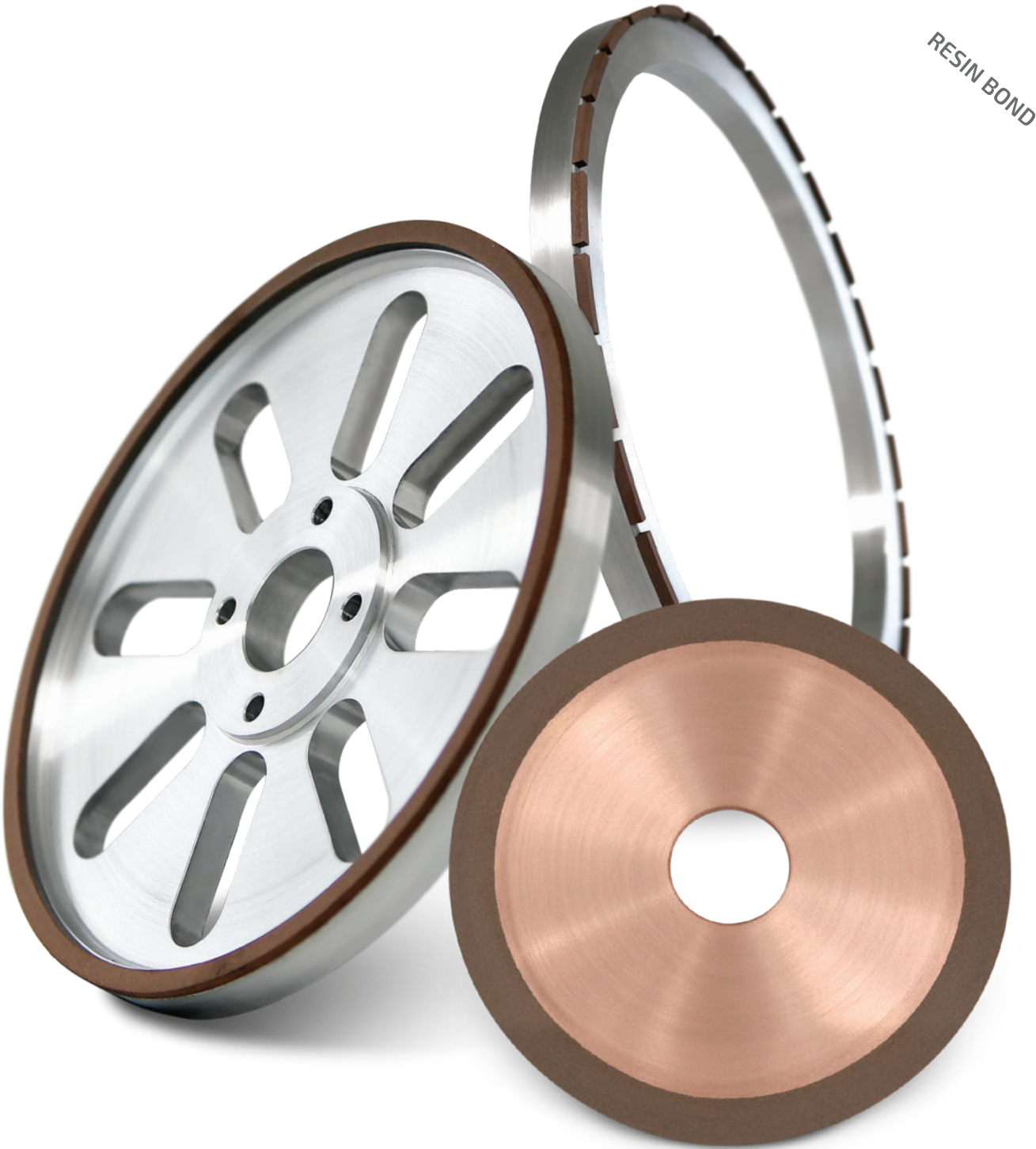
- Excellent grinding action
- Long life and self-sharpening
- Edge stability reduces cycle times
- Low temperatures under use
- Convenience and ease of use
- Pre-engineered bonds, optimized for higher performance
- Custom formulas for your application

Materials Processed

Tungsten Carbide
Ceramics
Stainless Steel
HS Steel
Titanium Nitride
Zirconia/Aluminum Oxide
Ferrites
Powdered Metals
Sintered Silicon Carbide
Titanium Graphite Composite

Applications

Centerless
Cylindrical
Surface
Creep Feed
Cutoff
Roll Grinding
Tool & Cutter
Saw & Knife Sharpening
PCD Grinding
Surgical Tool Blade Sharpening



**TAKE RESIN BOND A STEP FURTHER WITH ADVANCED BOND
TECHNOLOGY TAILORED TO YOUR SPECIFIC GRINDING APPLICATION**

Turn the page to learn more about our Hybrid Bond grinding wheels and tools.



HYBRID DIAMOND AND CBN WHEELS

Hybrid bond is ideal for grinding carbide and HSS tools. Whether you are making tools from solid or regrinding, Hybrid grinds fast, cool, and sharp. We know one size does not fit all; our Hybrid wheels are tailor made and manufactured to fit our customers' specific needs.

Hybrid Bond Grinding Tools offer:

- Free cutting action
- Good form holding
- Stable grinding
- Cool cutting body draws heat from the tool
- High feed rate
- Better wheel life
- Less wheel dressing

Materials Processed

Tungsten Carbide
Ceramics
Technical Ceramics
Non-Metallics
Aluminum Oxide
Silicon Carbide
Metal-Ceramic Composites

Applications

Cylindrical
Blanchard
Tool & Cutter
Carbide Inserts
PCD/CBN Inserts

Machine Types

Walter
ANCA
Rollomatic/Strausak
Star
Vollmer
Agathon
Waida
EWAG
Wendt

Engineered Specifically for the Cutting Tools Industry



FLUTING CYCLE REDUCED BY 80%
PRIMARY AND SECONDARY CYCLE TIMES REDUCED BY 70%

ROTARY DIAMOND DRESSERS

Grinding operations typically require some form of wheel dressing to re-establish the wheel profile and/or recondition the wheel face. Wheel conditioning typically involves the sharpening and opening of the wheel face, while also removing dull abrasives, excessive bond, and workpiece material (loading). A sharp and open wheel face will allow maximum possible material-removal rates and reduced thermal stress on the workpiece. CDT rotary dressers provide the ideal profile for your desired wheel topography, with superior materials and manufacturing technology. Because your dresser is custom manufactured, demanding and complex configurations are possible.

Traverse or Profile dressers offer:

- Quality from a radius as small as 0.100mm, with a profile of a line of 0.002mm
- CVD, Natural diamond, and combinations are used to maximize performance and roll life
- Flexibility to dress different forms with one roll
- Relapping to original tolerances, reducing the need for new dressers

Plunge Form Rotary Dressers:

- Offered in both Reverse Plated and Sintered manufacturing methods
- High accuracy profiles from simple to complex
- Controlled high-quality diamonds, random or pattern set, and varied concentrations to produce your required surface finish
- CVD and/or Natural diamond reinforcing used to ensure sharp corners and high wear areas hold up and extend roll life
- Sintered rolls offer shorter lead times and are a robust product

OUR OTHER DIAMOND DRESSERS ARE IDEAL FOR:

- Continuous Dressing (CD / non CD)
- High Speed Continuous Dressing (HSCD)
- In Process Dressing (IPD)
- High-speed pendulum grinding





WHY INDUSTRIES CHOOSE CDT:

- EXPERIENCE**
Since 1973, our family-owned company has built a reputation as a leading-edge manufacturer with a commitment to excellence.
- QUALITY**
Our engineers are highly specialized, and all of our products are produced under stringent quality control standards.
- CUSTOMIZATION**
We manufacture to your specific needs, providing you with specialized tools in a timely manner, with guaranteed satisfaction.
- PRECISION**
Our state-of-the-art equipment and expertise give our products some of the tightest tolerances in the industry.
- PERSONALIZED TECH SUPPORT**
From prototype to production, operations, or replacement tooling, our team works closely to get you the solutions you need.

PERFORMANCE PAYOFF GUARANTEE

CDT GUARANTEES your tooling will be manufactured to your requested dimensional and abrasive specifications.

YOU SPECIFY the application requirements, the definition of a successful test, and the length of time of the test.

PERFORMANCE PAYOFF: If we cannot match or exceed the quality of life of your current tooling, you will only be charged according to its value to you, based upon your current tooling cost.

For warranty questions, contact your CDT sales representative, call 800-443-6629, or email info@cdtusa.net

3 WAYS TO REQUEST AN ESTIMATE:

- | | | |
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| Submit your project specifications and upload large files through our website:
WWW.CDTUSA.NET/CONTACT | Email details of your project with small file attachments to:
INFO@CDTUSA.NET | Call our customer service team to talk through your project and discuss options:
800.443.6629 |
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SERVING LEADING GLOBAL INDUSTRIES FOR OVER 45 YEARS

