VITRIFIED DIAMOND AND CBN PRODUCTS

CONTINENTAL DIAMOND TOOL CORPORATION

We're setting the new standard.
Vitrified Diamond and Vitrified CBN grinding wheels combine the hardest known superabrasives held mechanically and chemically in glass (ceramic bond) to form some of the most highly efficient grinding products available on the market. The combination of the vitrified bond’s high thermal stability and its ability to control wheel structures allows for more effective coolant delivery to the grinding zone, resulting in minimization of thermal damage to the work piece.

Most commonly employed in the grinding of PCD and PCBN tools, Vitrified Diamond grinding wheels have enabled polycrystalline tool fabricators to obtain excellent surface finishes, quickly and productively. Vitrified grinding wheels can also be used in the fabrication of natural diamond, as well as many dense ceramic materials.

The very nature of vitrified bonds allows for the custom tailoring of a grinding wheel structure specific to a customer’s material and grinding process, resulting in an efficient grinding process where wheel life and cycle times are optimized for lowest costs and highest work piece quality.

**Grit Sizes**
CDT stocks vitrified grit sizes from 80-8000.

Contact us if you need help identifying if vitrified grinding wheels are right for your applications.

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**Superabrasives vs. Conventional Abrasives**

Each wheel type has a place in manufacturing: there are softer materials that superabrasive wheels will not grind that conventional wheels can. But for materials harder than 30’s HrC, a superabrasive wheel is the most cost effective option. Superabrasive wheels do not wear away like conventional wheels do, therefore grinding waste is greatly reduced.

**Abrasive Utilization**

Although Diamond and CBN (Cubic Boron Nitride) are both superabrasives, the use of Diamond and CBN varies, depending upon the materials to be ground.

**Diamond Grinds:**
- PCD/PCBN
- Diamond and Diamond-like Materials
- Carbide
- Ceramics
- Composites
- Abrasives

**CBN Grinds:**
- High-speed tool steels
- Tool or Mold & Die steel
- Hardened carbon steels
- Hardened stainless steels
- Alloy steels
- Aerospace alloys
- Chilled Cast Iron
- Powdered Metal
100-300 Times the Life of conventional grinding wheels in comparable applications.

Efficient Heat Removal with open structures that carry coolants into the work zone resulting in less thermal damage to metals when compared with other bond systems.

Improved Cycle Times Decreased down time, wheel dressing and/or wheel changes when compared with conventional and resin bonded superabrasive applications.

Adaptable Aggressive, free cutting bond adapts to various spindle speeds.

Lights Out Operation is possible with dressable structures as layer depths allow for continual renewing of the grinding layer.

Re-Truing of Formed Profiles and formed structures are possible using Diamond tools and rotary dressers.

Customization of grinding wheel specifications for specific customer applications.
Founded in 1973 by Ray Viggiano, Continental Diamond Tool took shape with just 2 employees and 4,500 sq. ft. in New Haven, Indiana. CDT has been providing technically superior precision tooling to a number of industries ever since. After multiple expansions to meet product and customer demand, CDT has set the groundwork with a 180,000 sq. ft. manufacturing facility that will accommodate new product releases and future customer needs. With a motto of "Small Company Values, Large Company Capabilities" CDT has become a worldwide manufacturer of superabrasive grinding wheels and tools. We welcome the opportunity to meet your most critical tooling requirements.

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