



KREBS & RIEDEL
Schleifscheibenfabrik GmbH & Co. KG

DIAMOND & CBN GRINDING & DRESSING TOOLS

Metal-, Resin-, Hybridbond & Electroplated



Electroplated - Diamond & CBN wheels

Single layer electroplated grinding wheels

- \varnothing up to 48" = 1200 mm
- Free cutting action and fast cycle times
- High removal rates
- No dressing
- Reusable with strip and replat
 - Savings of 40% over new plated products

Applications

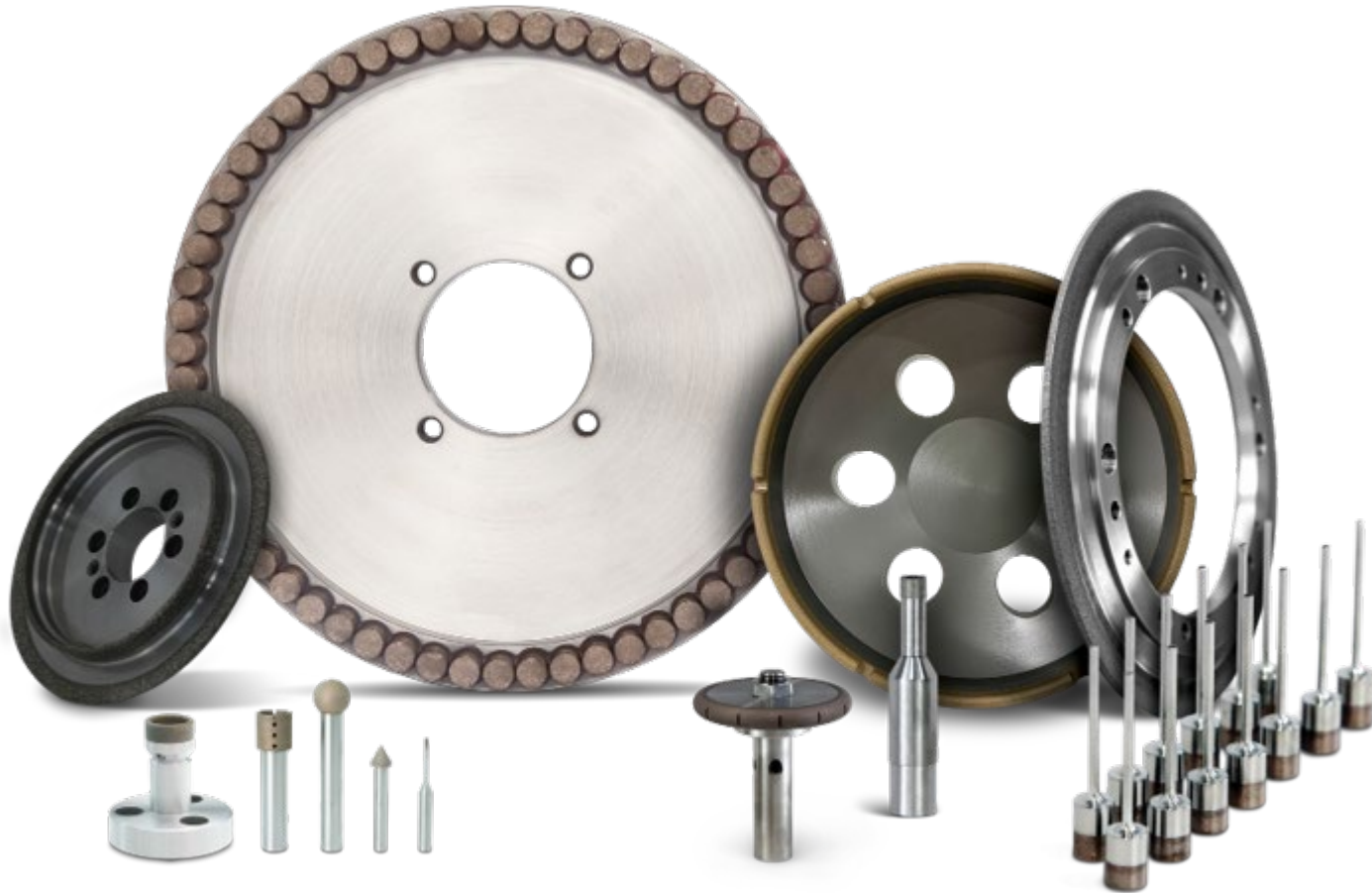
- Aerospace
- Automotive
- Construction
- Electronics
- Machinery
- Medical
- Oil & Gas
- Cutting Tools

Materials / Ideal for

- Carbides
- Cast Iron
- Ceramics & Glass
- Composites & Fiberglass
- Concrete & Stone
- High Strength Alloy Steels
- Inconel
- Nickel Based Alloys



Metal Bond - Diamond & CBN wheels



Extra endurance, long lasting utility

- \varnothing up to 14" = 355 mm
- For wet and dry grinding
- Long life span with less need dressing
- Dissipates heat quickly

Applications

- Aerospace
- Automotive
- Ceramics
- Electronics
- Medical
- Optics
- Stone

Materials / Ideal for

- Tungsten Carbide
- Titanium Graphite Composite
- Powdered Metals
- Ceramics & Glass
- Refractories
- Silicon
- Semi-Conductors
- Quartz
- Ferrites

Resin Bond - Diamond & CBN wheels

For high performance grinding with versatile capabilities

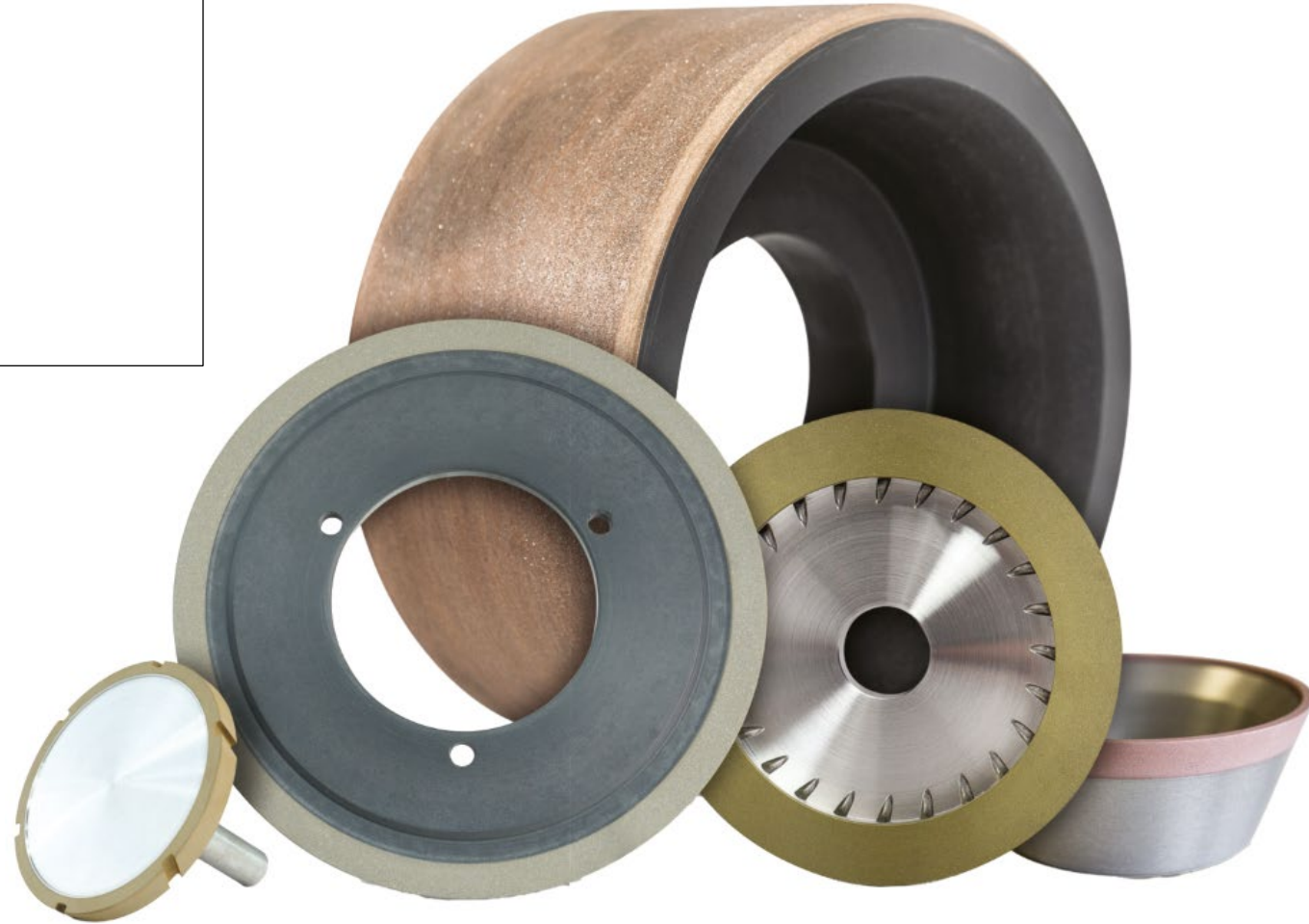
- \varnothing up to 24" = 609 mm
- Improved for cutting action, efficiency and longer life
- Convenient and easy to use / flexible
- Custom formulas for your application
- Low cost superabrasive
- For polishing, sharpening, light and heavy grinding

Applications

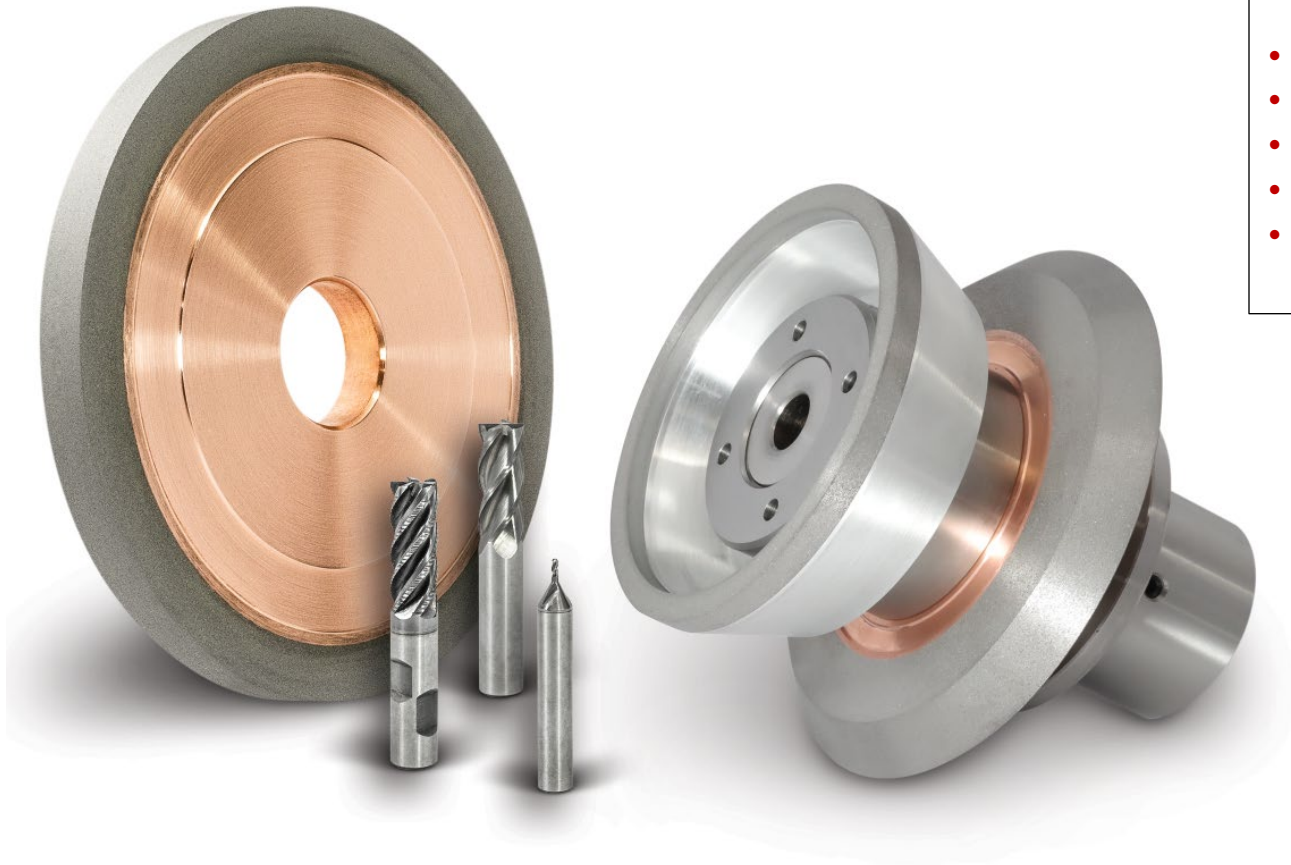
- Centerless, Cylindrical, Surface, Creep Feed, Cut Off, Roll Grinding
- PCD Cutters
- Cutting Tools
- Saw Blade & Knife
- Surgical Tools
- Optics

Materials / Ideal for

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



Hybrid Bond - Diamond & CBN wheels



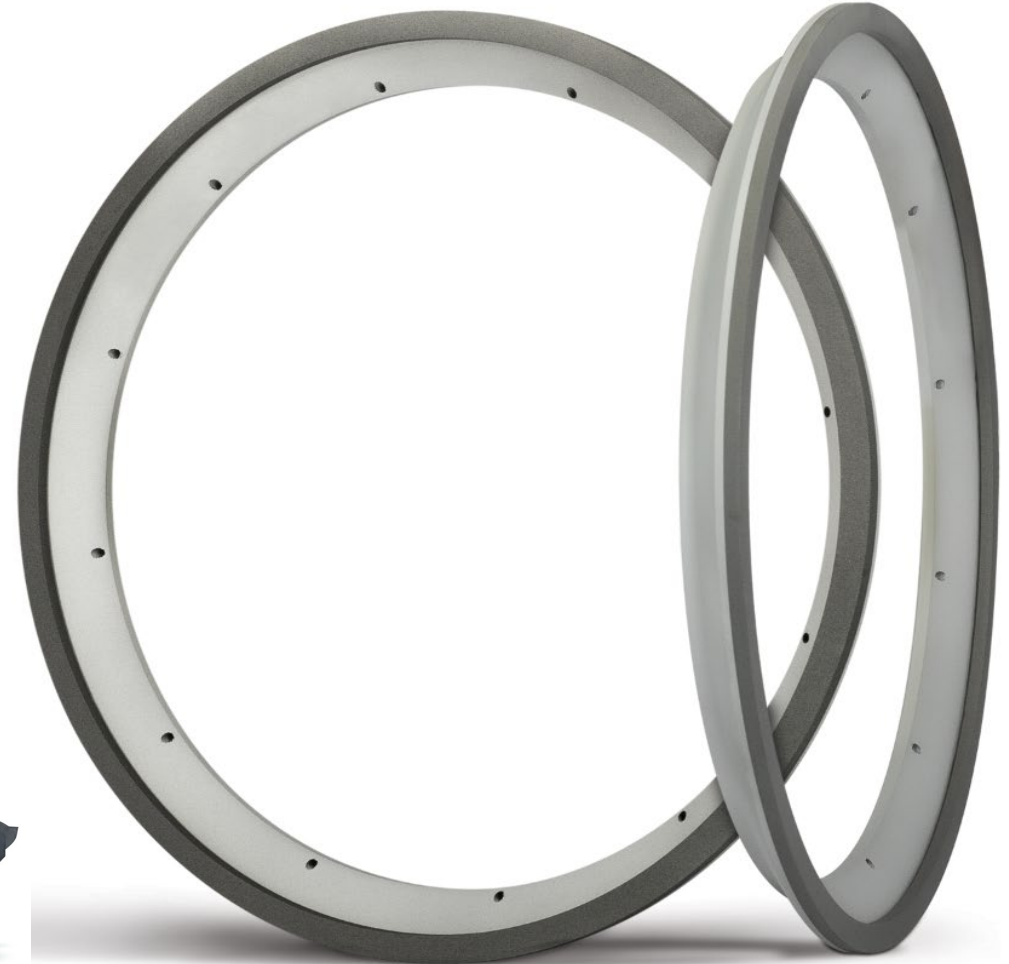
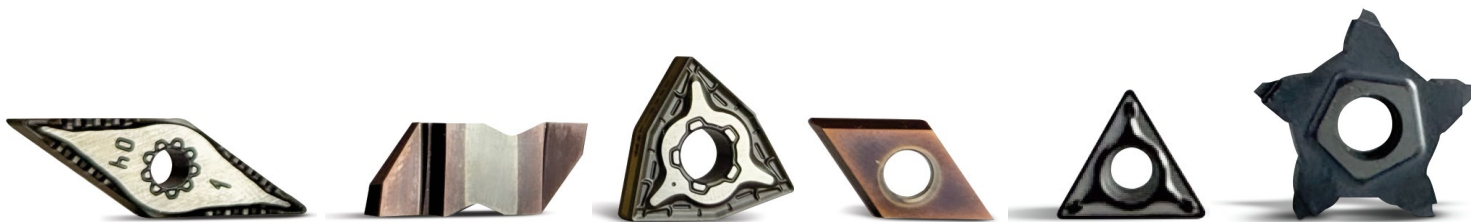
Designed for the cutting tool industry – Ultra high performance

- Grinding flute from solid, regrind, end work, gash, relief
- Superior wheel life and long dressing interval
- Increased productivity while lowering process costs
- Excellent precision at the highest feed rates
- Tailor made to fit your specific needs

Hybrid Bond - Diamond & CBN wheels

For Insert Form Grinding – Ultra high performance

- For highest quality cutting tools
- Designed for the cutting tool industry
- Self sharpening bond lengthens wheel life and dressing interval
- Free cutting action with superior form retention and surface finish
- High material removal rate with high temperature stability
- Maximum heat dissipation with low and constant power consumption



Diamond Rotary Dressers



For traverse dressing & plunge dressing

- High quality rotary diamond dressers from a radius as small as 0.100 mm and a profile of a line of 0.002 mm
- Disc dressers suitable for basic shaping intricate profiling
- Plunge dressers with very tight tolerances on form and profile line

Applications

- Aerospace
- Aircraft
- Automotive
- Blade & Knife
- Power Generation
- Medical
- Cutting Tools
- Tool & Die
- Saw & many others

Rotary Dresser Types

- Reverse plated dressing rolls
- CVD sintered dressing rolls
- CVD disc dressers
- CVD form dressers
- Handset sintered dressing rolls
- Random set sintered dressing rolls
- Plunge form rolls

Type 1 - Reverse Plated Dressing Roll

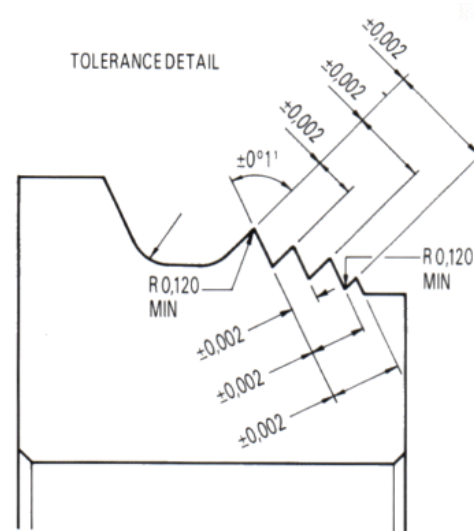
The high accuracy dresser

Reverse Plated Dressers are selected where high accuracy of profile detail is required together with a correspondingly high quality surface finish on the component. Accuracy is achieved by centrifugal dispersion of the specially selected diamonds onto the walls of a mould.

These are secured by our electro-deposition process that has won acclaim through the acquisition of industry awards, thereby achieving the short lead times so often required by customers. The electro-deposition process is stable and unaffected by shrinkage, which results in Rotary Diamond Dressers of exceptional accuracy.

Applications

- Turbine Blades
- Cam Grinding
- Bearing Industry
- Ball Joints
- Needle Injectors



Type 2 - Handset Sintered Dressers

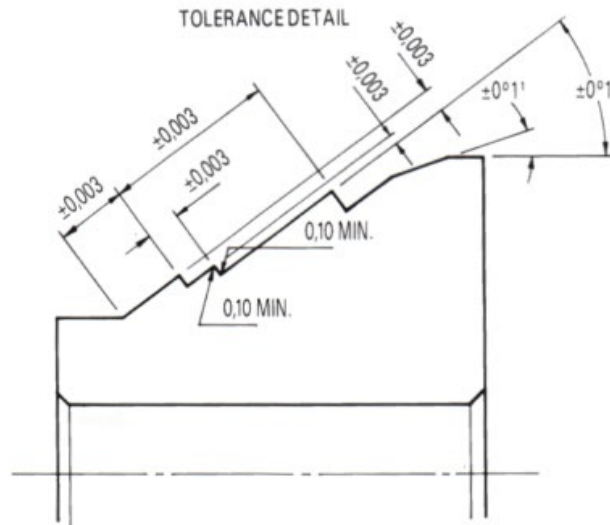
The robust dresser

Of all the rotary dressers handset sintered dressers are our most popular type. These custom diamond rotary dressers cover many applications where robustness is required and the general tolerance is open. As the name implies, diamonds are selected and set by hand in a mould, then secured in position by sintering in a tungsten based matrix.

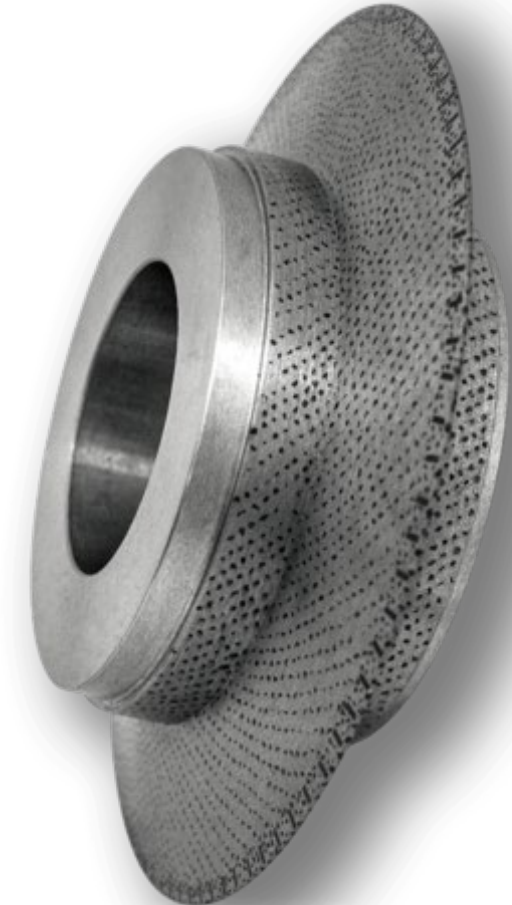
Allowances are made for consequential shrinkage to bring the finished dresser within specification tolerances.

Applications

- Turbine Blade
- Automotive Valves
- Crankshafts
- CNC dressing



General Surface Finish Produced: $0,8 \mu\text{m}$. 32 C.L.A.



Type 3 - CVD Sintered Dresser

The high performance dresser

Our CVD sintered rotary diamond dressers have very high thermal oxidation resistance and other excellent thermal properties. CVD is perfect for secure mounting with traditional non-ferrous metal sintering. CVD sintered rotary diamond dressers can also be brazed onto a dresser body using an active braze alloy in a non-oxidizing environment.

Dimensions

CVD diamond can be manufactured in a multitude of shapes, sizes, thicknesses and grades giving engineers great flexibility with this material's extreme properties.

Benefits

- Highly resistant to chipping & fracture
- Wears evenly over the dresser's entire length
- Performs regardless of dressing orientation
- Outstanding thermal stability

Applications

- Form dressing
- Also for CBN grinding wheels
- For good surface finishes



Type 4 – Random Set Sintered Dresser

The high performance dresser

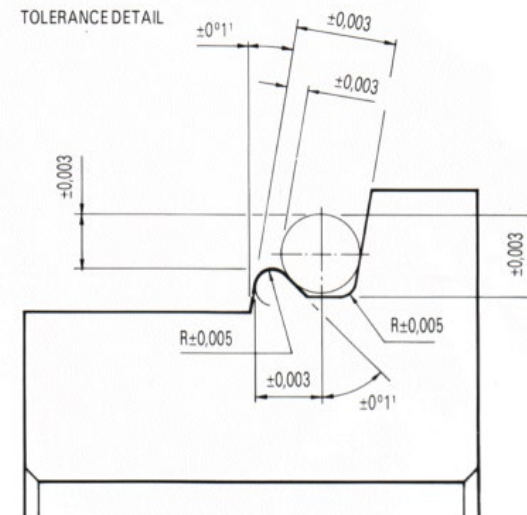
Random Set Sintered Dressers are most suitable where openness is required, coupled with a tight form and improved surface finish. Very often selected diamonds are strategically placed in the mould to support the form in vulnerable areas. The remaining area is then in-filled by centrifugal dispersion of diamonds and sintered. Random Set Sintered Dressers have the advantage that they can be delivered quickly to meet urgent customer requirements.

Dimensions

CVD diamond can be manufactured in a multitude of shapes, sizes, thicknesses and grades giving engineers great flexibility with this material's extreme properties. Non-standard custom dimensions upon request.

Applications

- Automatic Valves
- Turbine Root Forms
- Flute Grinding
- Turbine Blades
- Cutting Tools



General Surface Finish Produced: 0,4 µm. 16 C.L.A.

Diamond stationary dressers

Extra endurance, long lasting utility

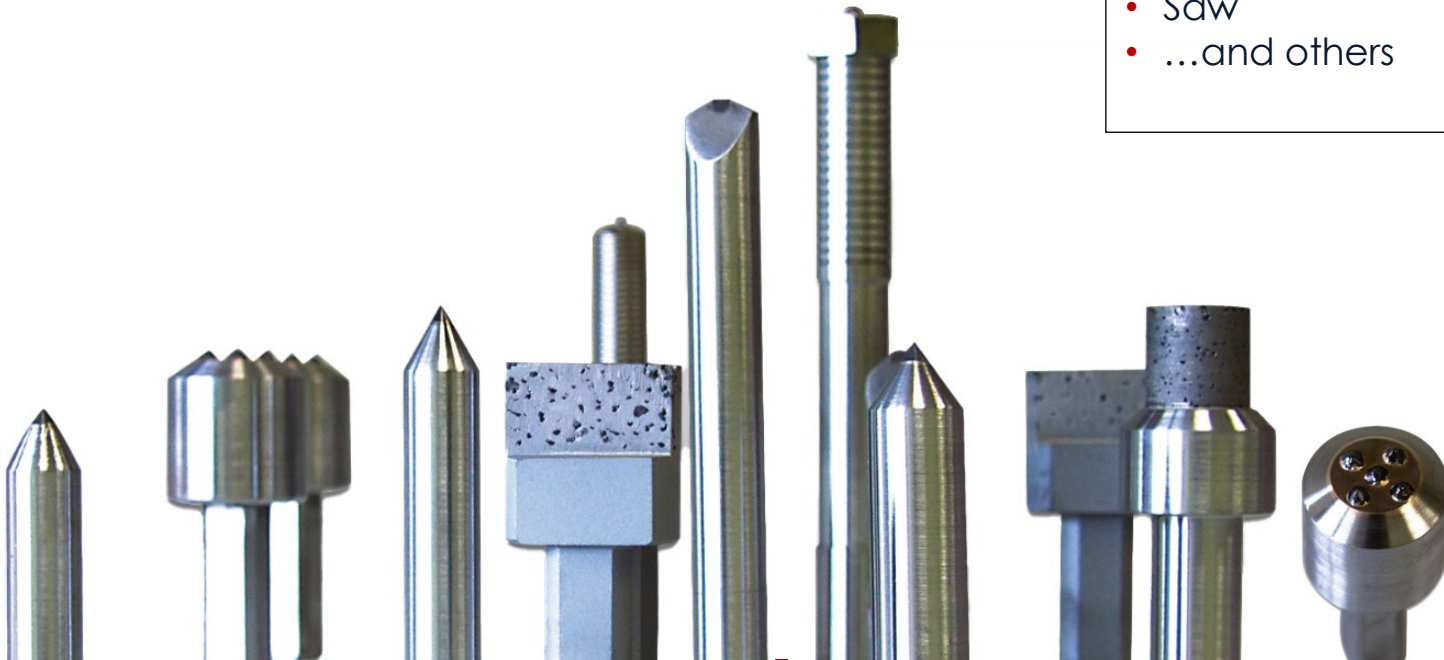
- \varnothing up to 14" = 355 mm
- For wet and dry grinding
- Long life span with less need dressing
- Dissipates heat quickly

Applications

- Aerospace
- Aircraft
- Blade & Knife
- Power Generation
- Medical
- Cutting Tools
- Tool & Die
- Saw
- ...and others

Stationary Dresser Types

- Multi-Point dressers
- Single Point dressers
- Blade Type Dressers
- Diaforms
- Hardness Testers
- Thread Grinding Dressers





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KREBS & RIEDEL
Schleifscheibenfabrik
GmbH & Co. KG

Bremer Straße 44
34385 Bad Karlshafen
Telefon: +49 5672 184-0
mail@krebs-riedel.de
www.krebs-riedel.de

