DIAMETAL®

OVERVIEW ABRASIVES

EN

TOOL GRINDING

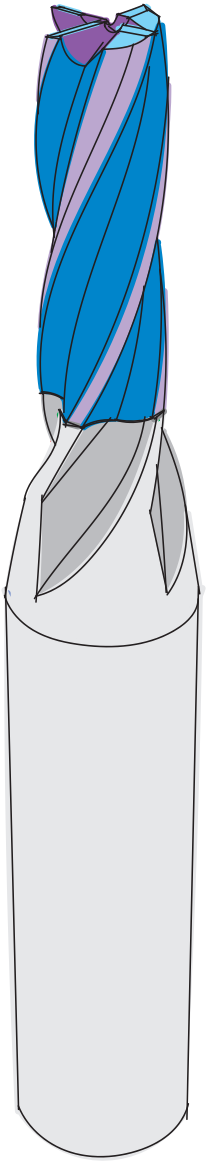
COMPLETE SUPERABRASIVE SOLUTIONS FOR CUTTING TOOL MANUFACTURING

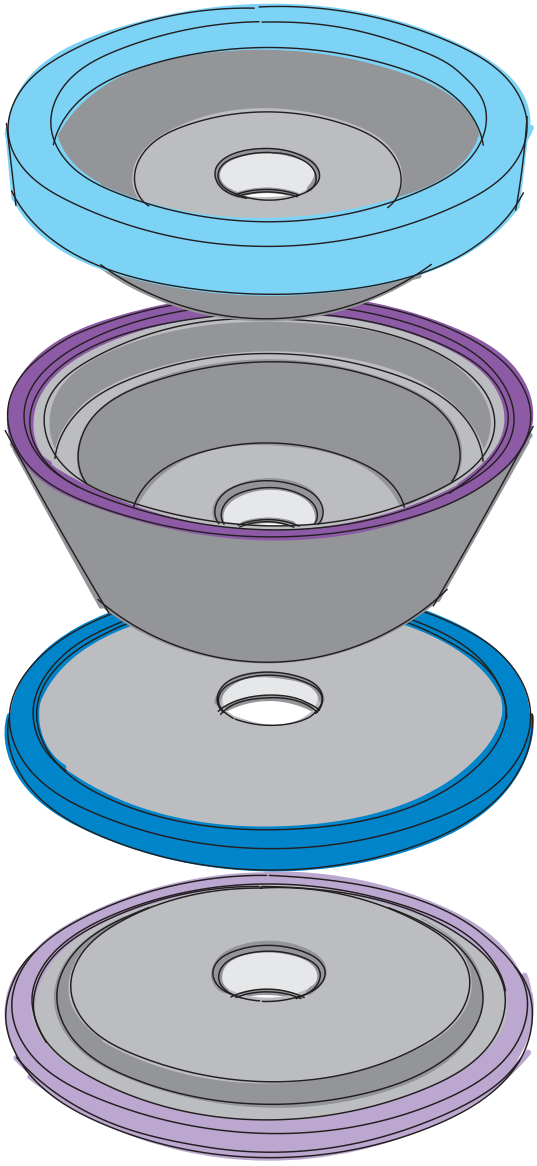
DIAMETAL offers a complete range of superabrasive grinding wheels covering the entire manufacturing process of cutting tools.

From blank preparation to flute grinding and complex profile finishing, each solution is engineered to deliver maximum performance, process stability and precision.

- Complete solution portfolio for all grinding steps
- Engineered specifications for each application
- High process stability and repeatability

From roughing to finishing. One partner for your entire tool grinding process!





TYP 12A2

Face grinding operations require bond systems with stable thermal behavior and uniform wear characteristics to ensure consistent surface quality and reliable process control.

TYP 11V9

Relief grinding requires bond systems that provide stable cutting behavior and support precise edge geometry. The focus lies on maintaining cutting edge integrity while achieving consistent clearance angles.

TYP 4A1

Flute grinding requires bond systems with high cutting ability and efficient chip clearance to ensure stable material removal and controlled thermal input. The bond must support consistent flute geometry while maintaining sufficient wear resistance.

TYP 14E1

Profile grinding demands bond systems with high stability and fine cutting characteristics to achieve precise geometries and superior cutting edge quality.

Our standardized product range ensures:

- Proven specifications
- Consistent quality
- Application-specific solutions

Available on all machines e.g.:

- Rollomatic
- ANCA
- TTB
- Strausak
- Also available for other machines

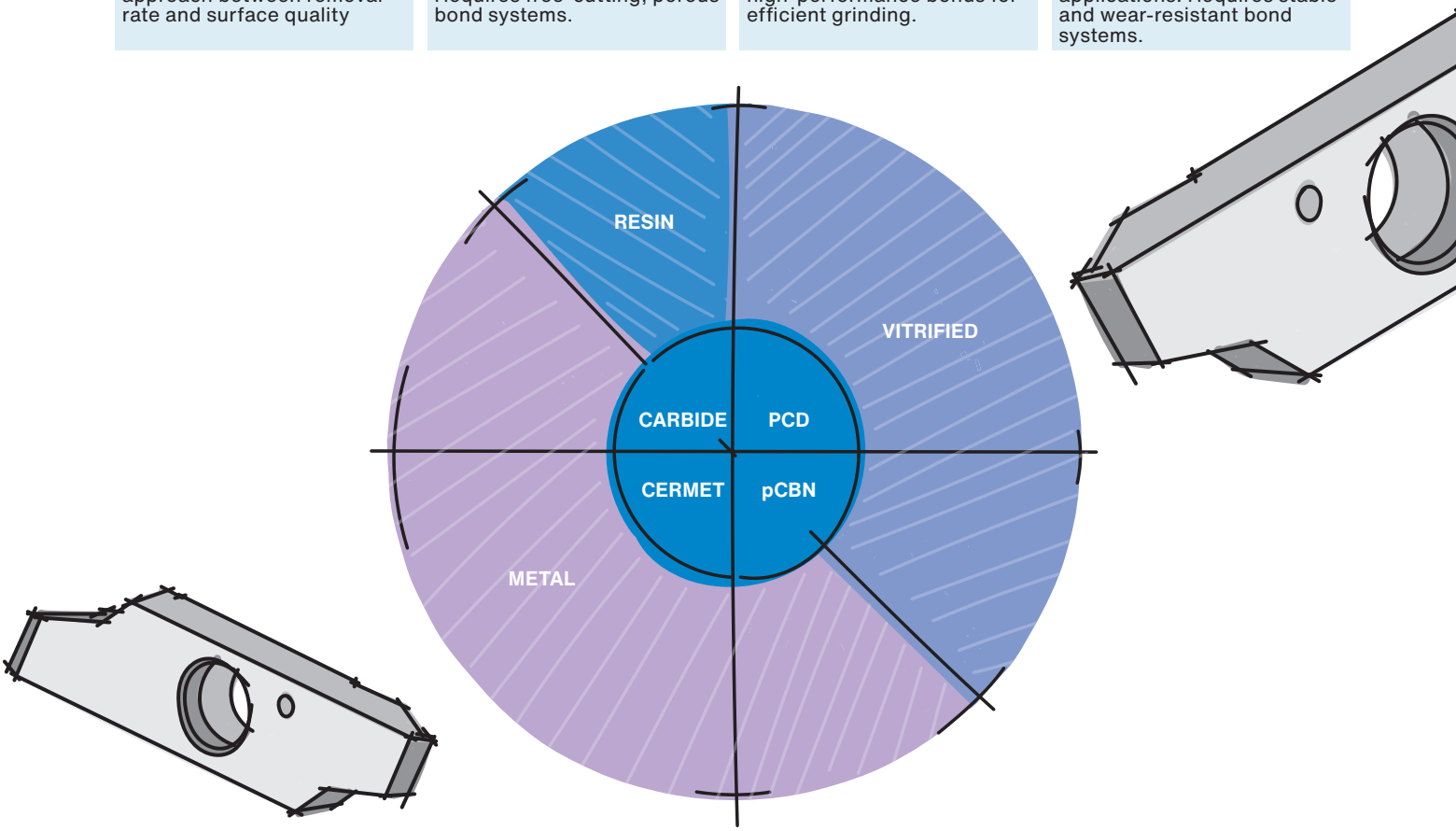
INSERTS GRINDING

OPTIMIZED SOLUTIONS FOR ADVANCED CUTTING MATERIALS

We provide high-performance grinding solutions for insert manufacturing across a wide range of advanced materials.

Each material requires a dedicated bond technology to achieve the optimal balance between removal rate, wear resistance and surface quality.

CARBIDE	CERMET	PCD	PCBN
The most common insert material. Requires a balanced approach between removal rate and surface quality	Advanced material with specific grinding behavior. Requires free-cutting, porous bond systems.	Extremely wear resistant material. Requires high-performance bonds for efficient grinding.	Designed for high thermal loads and demanding applications. Requires stable and wear-resistant bond systems.



RESIN	METAL	VITRIFIED
Resin bonds provide a free-cutting and flexible grinding behavior, making them ideal for carbide machining. Their ability to reduce grinding forces and thermal load ensures excellent surface quality and stable process conditions.	Metal bonds are characterized by their exceptional wear resistance and strong grain retention. They are ideally suited for demanding materials such as carbide, PCBN and cermet, where process stability and long tool life are critical.	Vitrified bonds offer a rigid structure with defined porosity, enabling highly controlled grinding conditions. They are particularly suitable for ultra-hard materials such as PCD and PCBN, where precision, thermal stability and consistent edge quality are essential.

Our insert grinding portfolio includes:

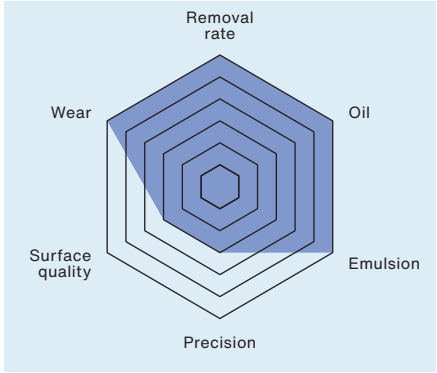
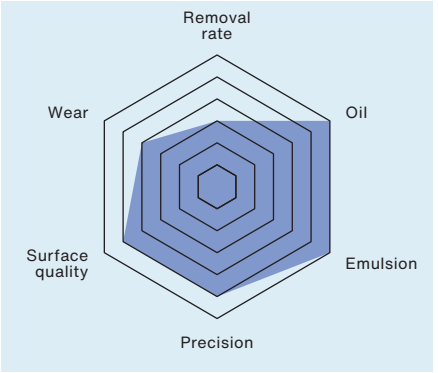
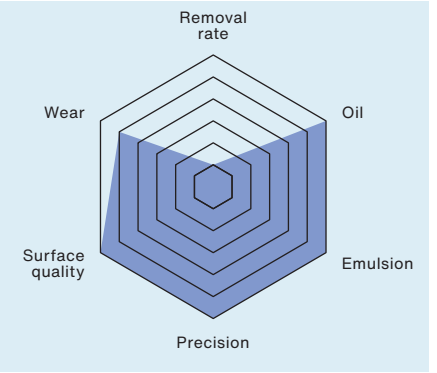
- Standard wheel specifications for major machine platforms (Agathon, Wendt, Ewag)
- Material-specific bond technologies
- Proven solutions for serial production
- High repeatability and process reliability

Tailored grinding solutions for every insert material. From standard to high-end applications.

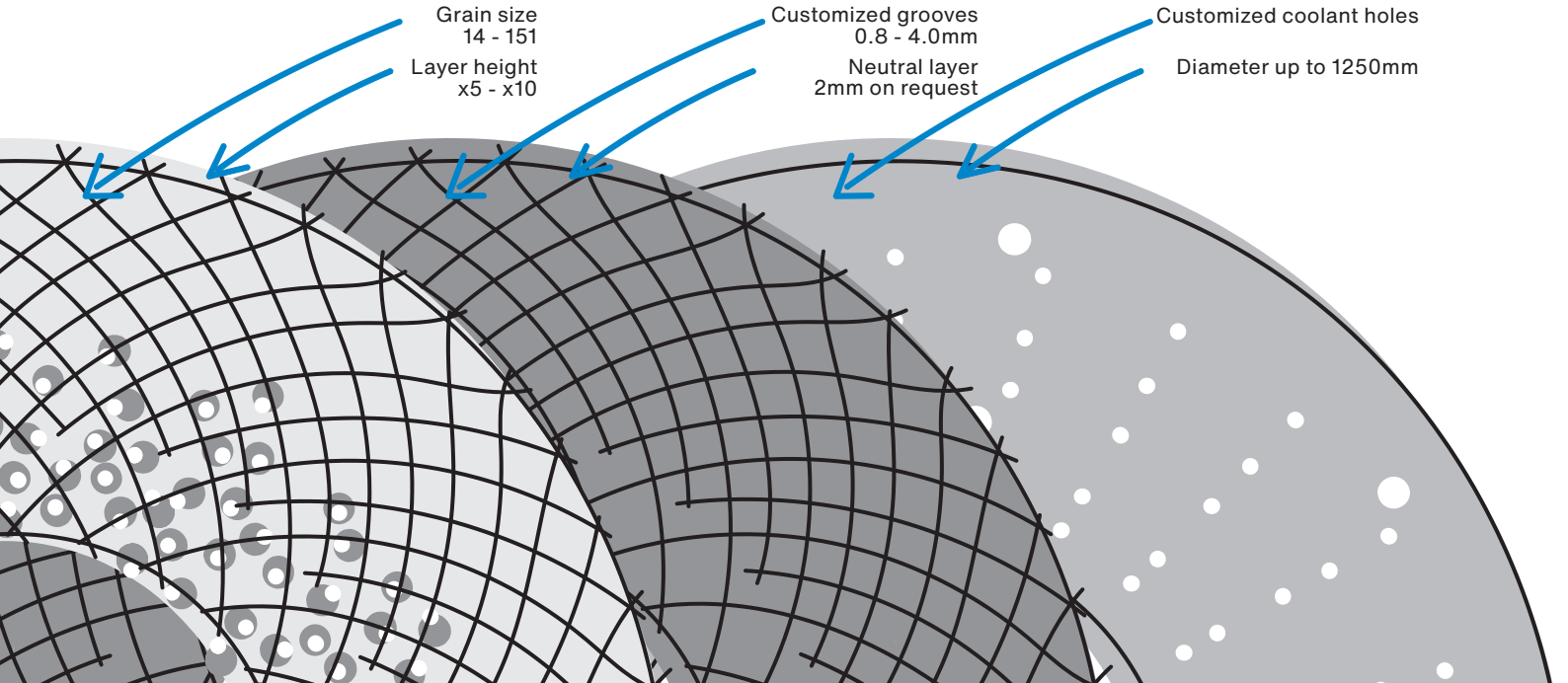
TOP AND BOTTOM

PERFORMANCE TAILORED TO YOUR PRODUCTION TARGETS

In double side grinding operations, the bond system defines the balance between removal rate, wear resistance and surface quality.

HIGH REMOVAL	ALLROUND	SURFACE FINISH
		
Designed for maximum productivity. High material removal rates with aggressive cutting behavior.	Balanced performance for a wide range of applications. Combines removal rate, surface quality and tool life.	Optimized for superior surface quality and tight tolerances. Ensures high precision and minimal subsurface damage.
Ideal for high-volume production and reduced cycle times.	Ideal for stable and versatile production processes.	Ideal for high-end finishing applications.
DCL and SPV are based on advanced cluster bond technology, where agglomerated abrasive structures are embedded in a resin matrix.	TBN and NBH represent classical resin bond technologies, offering a balanced combination of removal rate, surface quality and tool life.	B1 and B52 bond systems are designed for high-precision grinding and superior surface finishing.
This unique structure enables exceptionally high material removal rates combined with outstanding wear resistance.	Their homogeneous structure ensures stable grinding behavior, making them the preferred choice for reliable and versatile production processes.	Their fine structure enables controlled material removal, resulting in excellent surface quality, minimal subsurface damage and high dimensional accuracy.
The result is maximum productivity, reduced cycle times and consistent performance in demanding production environments.		

- Optimized for double side grinding machines such as Stähli, Wolters, Melchiorre,...
- Suitable for carbide, ceramics and advanced engineering materials.
- Enables reduced cycle times, improved part quality and stable serial production



ELECTROPLATED TOOLS

PRECISION FOR COMPLEX GEOMETRIES

Electroplated tools are designed for high-precision grinding applications requiring exact profile accuracy.

The single-layer abrasive coating ensures consistent geometry without the need for dressing.

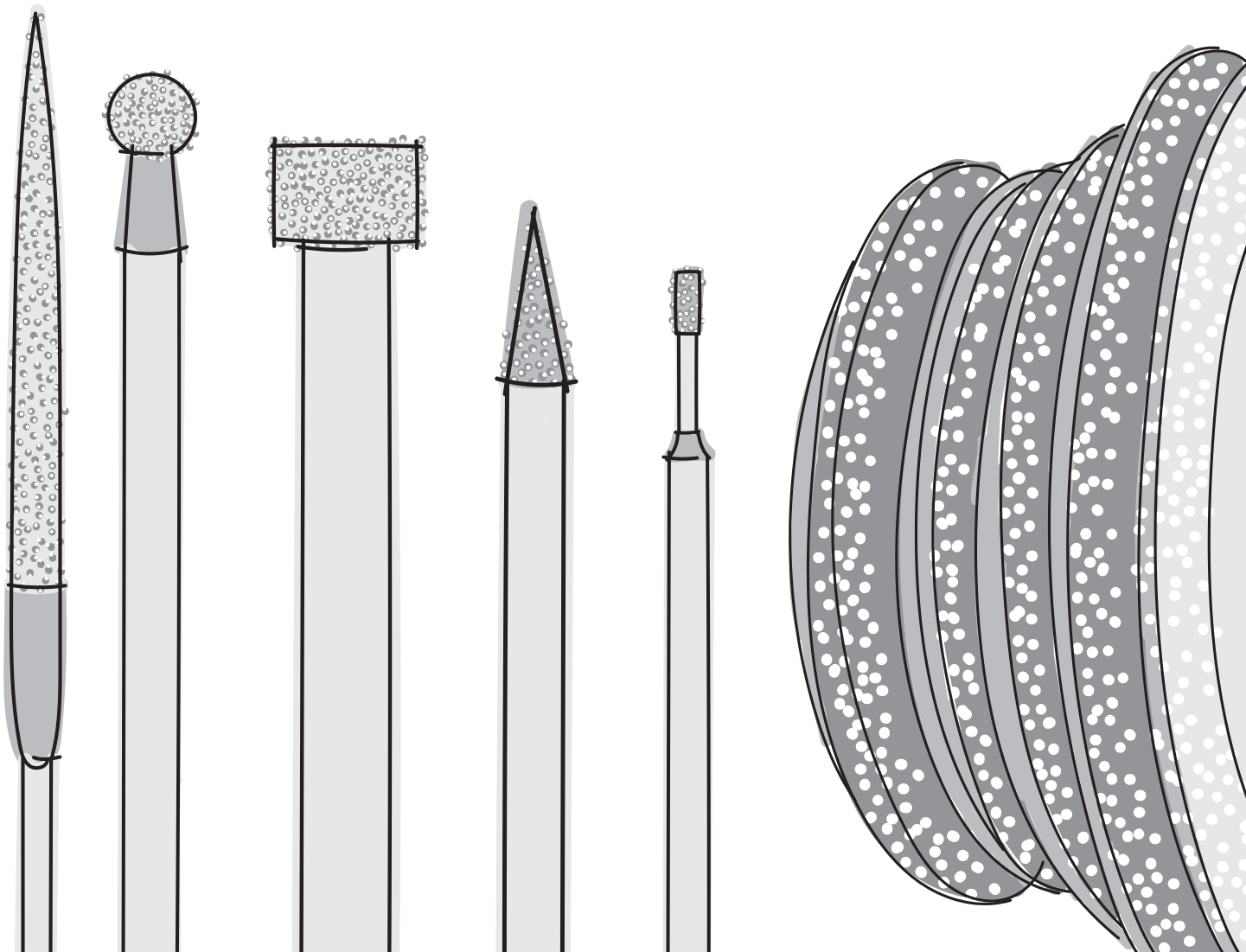
- No dressing required
- High cutting ability
- Defined grain protrusion
- Ideal for small tools and complex profiles

Unlike conventional bonded tools, the grinding behavior of electroplated tools is defined by the tool geometry itself. This enables precise profile transfer and consistent results, especially in applications where dimensional accuracy is critical.

Electroplated tools are not designed for flexibility, but for precision and repeatability in clearly defined applications.

Industries:

- Medical and Dental
- Aerospace
- Automotive and E-Mobility
- Tool manufacturing
- Precision engineering and micro machining



DIAMETAL ENGINEERING

THE GUARANTEE OF AN OPTIMAL EXPERTISE

With the brand new application center, Diametal offers its customers complete machining processes and develops new, increasingly optimised applications, taking market requirements into account.

- Free up your internal resources by letting us take care of the whole development process, from design to testing and prototyping. Find „your“ best solution, whichallows you to optimise your production process while ensuring a sustainable and profitable solution in the long term.
- You get privileged access to the application and development group, which uses machining simulations to define the necessary tools and to produce prototypes for your testing.
- To suit your specific needs, we combine several tools into one to maximise your production efficiency.

- *Reduction of the cycle times*
- *Improvement of the surface finish of your parts*
- *Manufacture of all cutting tools required for the production of the final piece.*
- *Technology transfer to the customer*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