

PowerGrind



Outstanding conditioning process for revolutionary increase of productivity

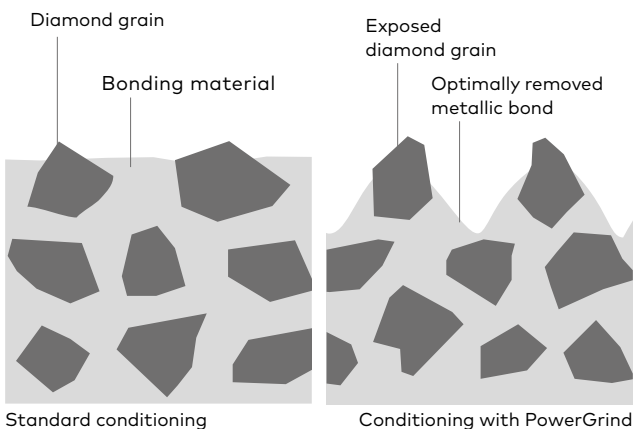
AGATHON

The concept

PowerGrind technology ensures that metal bonded diamond grinding rims are always kept clean, sharp and flat. PowerGrind is suitable for machining carbide, cermet, ceramics, pCBN and PCD. Compared to the conventional process, twice the metal removal rates are continuously achieved. At the same time, the surface finish is increased while edge chipping is significantly reduced.

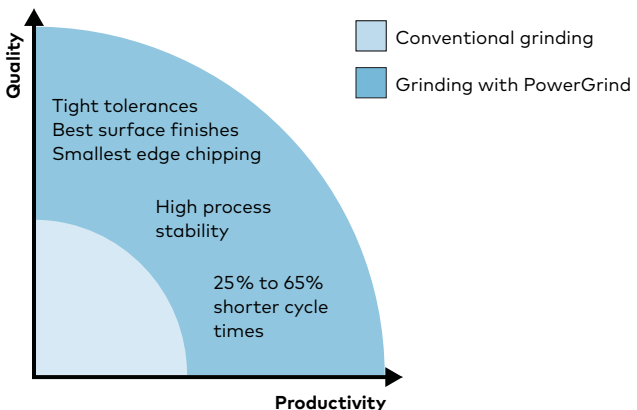
Features

- Electro-erosion conditioning (cleaning, sharpening and shaping) of metal bonded diamond grinding rims
- A rotating electrode keeps the grinding rim permanently flat
- Electrical discharge sharpening provides selective recessing of the metal bond and thus ensures an outstanding grain protrusion
- Stable physical process
- Contact-free and without force application
- Well-engineered, proved and tested low-maintenance and safe system technology
- Available for Evo Combi and Evo Penta



The advantages

- A constantly high grain protrusion ensures continuous contact between the workpiece and a free-cutting grinding rim
- The effective sharpening capacity allows the use of finest diamond grit sizes which produce optimum surface finish with minimum edge chipping
- The advantages of metal bonded diamond grinding tools (high geometric accuracy, good heat conduction, high thermal stability, good grain binding) can be utilized economically without compromising process stability
- Unlike mechanical dressing processes, the contact-free PowerGrind process does not damage the diamond grains
- Dressing without force application is performed during the machining process. This in-process operation completely eliminates downtimes that are normally needed for dressing



The benefit

- Maximum machine productivity due to revolutionary cycle time reduction - irrespective of the material
- Nonexistence of downtimes for dressing enable an even higher machine productivity
- Stable process is ideal for autonomous operation
- Easily manageable process minimizes rim wear and thus reduces the cost for consumables
- Excellent process stability with consistently low process forces reduces maintenance and ensures a longer service life of the machine
- Easy handling with one adjustable parameter only ensures minimum set-up work
- Reduced surface roughness and reduced edge chipping for maximum quality of the end product
- Unrestricted flexibility: Grinding rims and cooling lubricants are available from various manufacturers

Your productivity gains

Reduction of grinding time under real production conditions



up to 48%
for Cermet



up to 58%
for Carbide



up to 62%
for Full-CBN

Awarded

PowerGrind – patented innovation

As a technical innovation, PowerGrind is protected under international patent rights. As Agathon customer, you exclusively benefit from the advantages of the new process.

(19)		(11)		EP 2 072 182 B1
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(54)	Schleifmaschine mit einer Vorrichtung zum Konditionieren einer Schleifscheibe und Verfahren dazu Grinding machine with a device for conditioning a grinding machine and procedure for it Ponceuse dotée d'un dispositif de conditionnement d'une meule et son procédé			
(84)	Berechnete Vertragsstaaten CH DE LI		• Pfluger, Walter H., Dr. 4515 Oberdorf (CH)	
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(72)	Erfinder • Altpeter, Friedhelm 3952 Susten (CH)			

Extract of the European Patent

PowerGrind wins the MM Award at the EMO 2013

From a variety of new products at the EMO Hannover 2013 PowerGrind was awarded as the best innovation in the grinding field.





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