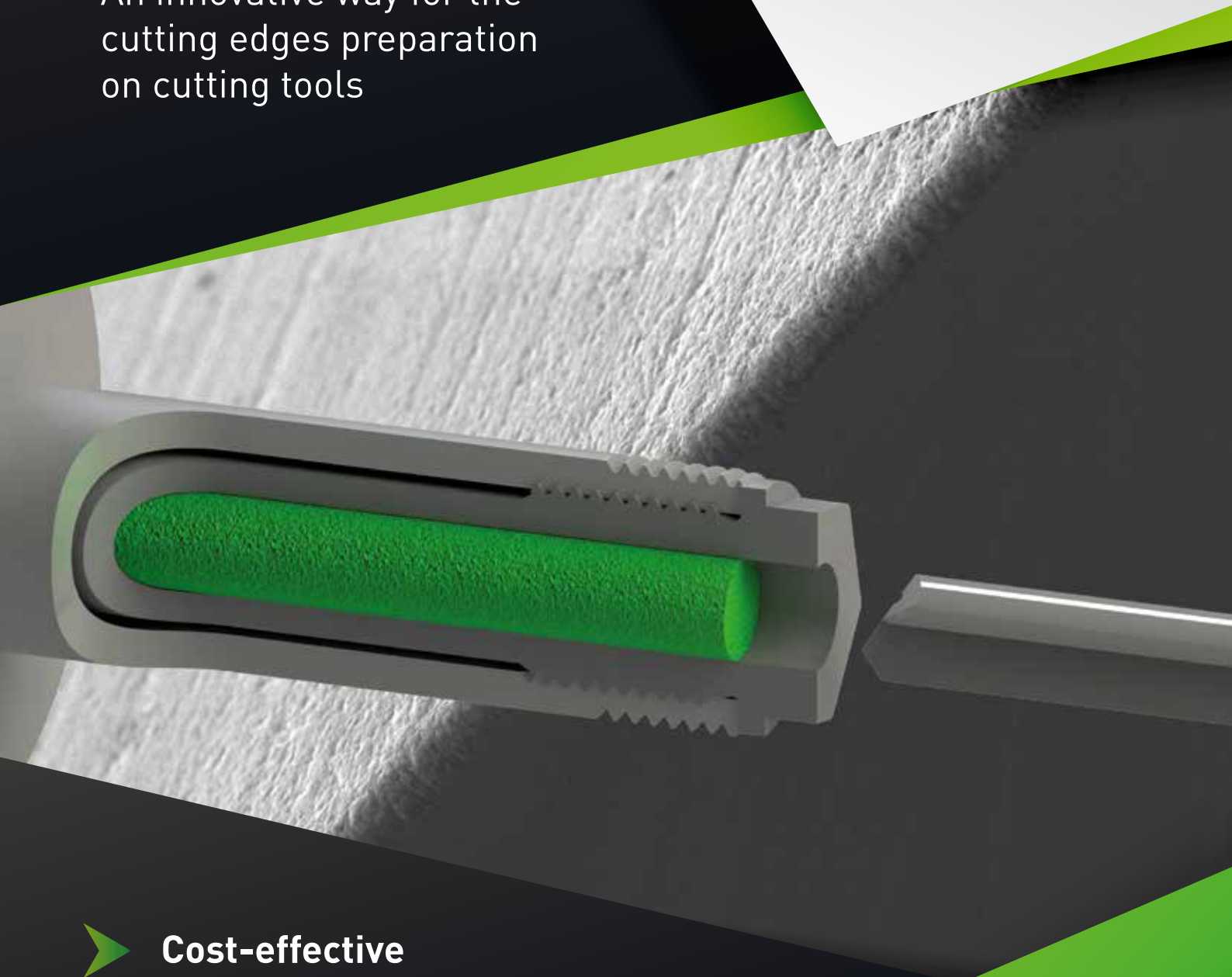


[TOOL]PREP

An innovative way for the
cutting edges preparation
on cutting tools



- **Cost-effective**
- **Adaptable to any machine**
- **Reproducible results**

grinding deserves SOLUTIONS

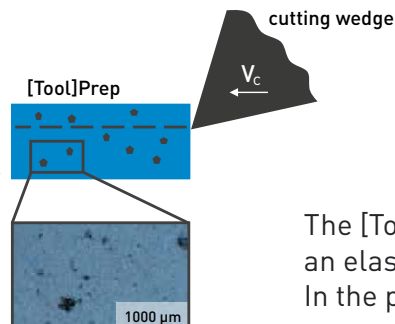
GDS[®]
Made in Germany

Cutting edge preparation by machining abrasive bodies within the arbor

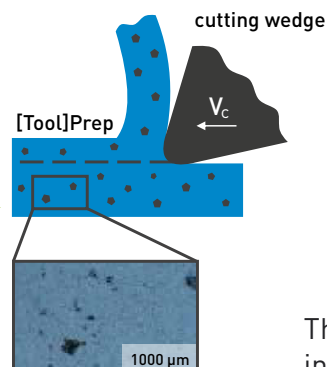
[Tool]Prep - cutting edge preparation on the tool grinding machine within one set-up

The [Tool]Prep process is a unique and innovative way of preparing the cutting edge of cutting tools in order to round them optimally and reliably. This cutting edge preparation is achieved by machining an elastically bonded abrasive body. The machining of this [Tool]Prep abrasive leads to a material removal at the cutting edge, which results in a defined and accurate rounding. The cutting edge rounding improves the tool life compared to ground tools. This rounding makes the [Tool]Prep process an alternative to classic drag finishing or brushing.

By adding the [Tool]Prep process to your production procedure, your tools are ready for coating or sale directly after the grinding procedure without additional treatments.



The [Tool]Prep abrasive body consists of an elastic bonding with abrasive particles. In the preparation process, these particles cause a defined material removal at the cutting edge, which results in optimal rounding for machining processes.

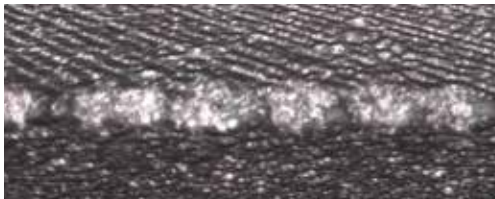


The cutting of the [Tool]Prep abrasive results in a defined rounding of the cutting edge. This affects the tool life by stabilizing the reliability as well as the produced quality.

[TOOL]PREP - the innovation of cutting edge preparation

Advantages of [Tool]Prep compared to conventional preparation methods

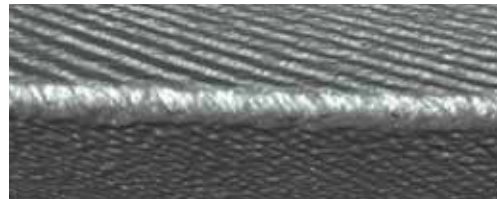
Uncoated / without rounding



- Non-uniform grinding pattern
- Chipping on the cutting edge
- Short tool life

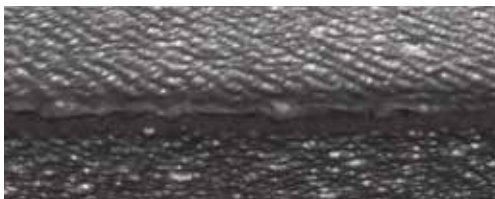
Preparation using
[TOOL]PREP

[TOOL]PREP-Process



- Uniform rounding
- No negative influence on the surface finish
- Good surface finish on the flank face close to the cutting edge

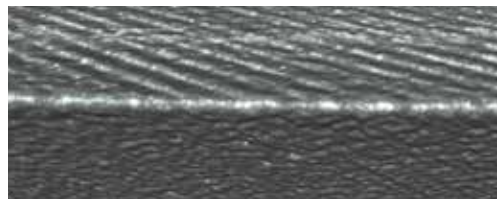
Coated / without rounding



- Layer defects
- Poor surface quality of the flank face
- Short tool life

Preparation using
[TOOL]PREP

[TOOL]PREP-Process



- Improved coating adhesion
- Long tool life

Process-integrated: Cutting edge preparation within the tool grinding machine

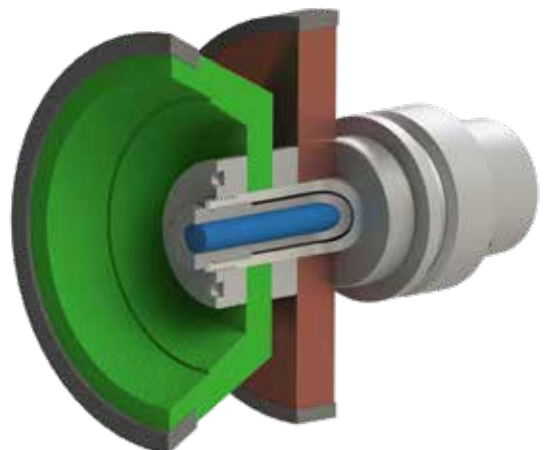
Reproducible: Always new abrasive particles in use & simple process control

Universal: Easy implementation in any GDS grinding wheel arbor

Fast: Process time < 12 seconds incl. positioning movement

Plannable: Reliable prediction of costs and process times

Cost-effective: Low investment costs

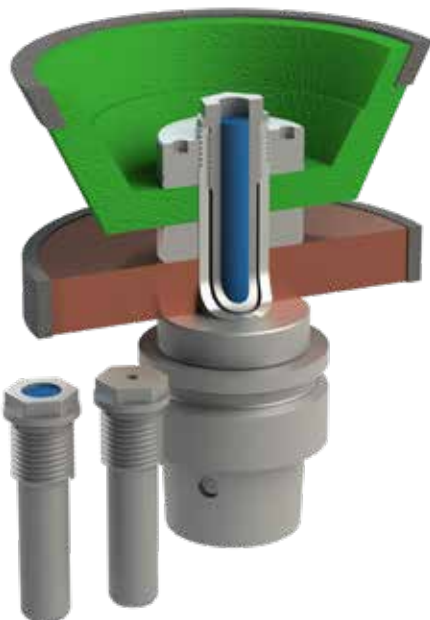


Integrated cutting edge preparation on the company's own tool grinding machine

With [Tool]Prep there is no need of additional machines for rounding and honing the cutting edges of cutting tools since [Tool]Prep is directly integrated into the grinding process. By using the functionalised arbor with the mounted [Tool]Prep cartridge the edge honing can be made immediately after finalising the grinding process with in the grinding machine. Therefore, a "ready for [Tool]Prep" grinding wheel arbor from GDS equipped with a [Tool]Prep cartridge is everything that is necessary for the cutting edge preparation by your own. No special knowledge is required since we are providing the most relevant parameters to fulfill your requirements. For the machine user in production, [Tool]Prep is simply another operation that he selects in the software. The [Tool]Prep method is process-safe, easy to realise and uncomplicated to handle.



[Tool]Prep - the advantages at a glance

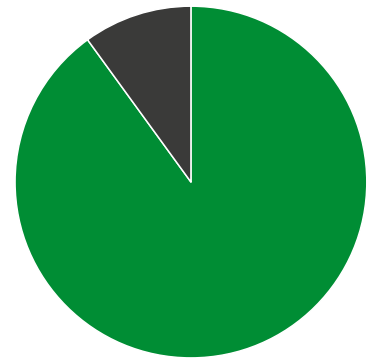


- No need of additional machines for cutting edge preparation
- No time-consuming transport within your production site necessary.
- After the grinding process, the tool is ready for coating or sale.
- From now on, all GDS grinding wheel arbors are "ready for [Tool]Prep".
- Your existing grinding wheel arbors can also be converted for the process.

[TOOL]PREP - Cutting edge preparation - profitable also in small and medium batch production

Cutting edge preparation in industrial applications

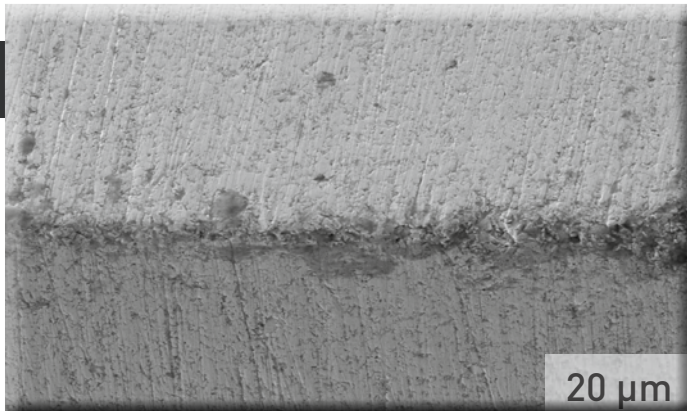
The most global tool manufacturers are already using the cutting edge preparation by rounding and honing the cutting edges. Up to 90% of their cutting tools are rounded and honed. Beside to this, in small and medium-sized companies however, the cutting edge preparation is rarely profitable. Investments in additional machines with the only purpose of edge preparation can cost between € 30,000 and € 50,000 easily, excluding operating and maintenance costs. For small series, this investment is simply unprofitable. Especially in those cases [Tool]Prep offers the possibility of rounding cutting edges cost-effectiv and optimal for your use case. Even when you are already cost-effectivly using well-known optimally machines. [Tool]Prep offers the opportunity to enlarge the productivity at low costs.



- Rounded: 90%
- Sharp: 10%

Use of cutting edge preparation at the 15 largest tool manufacturers.

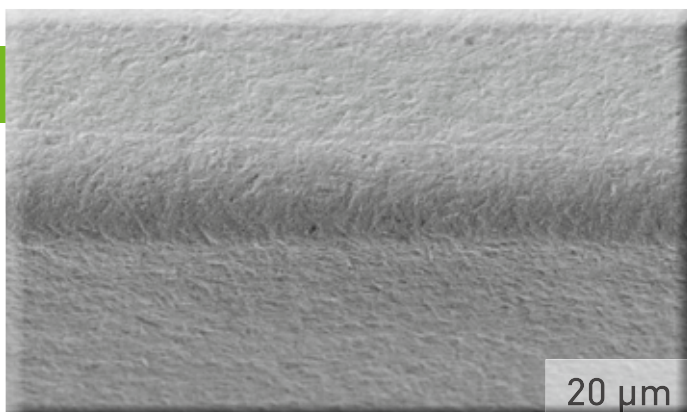
Wear behaviour regarding different cutting edge conditions



Ground cutting edge

- high grade of chipping
- low stability when machining
- poor coating adhesion capability

Reduced tool life due to non-uniform wear development



Rounded with [Tool]Prep

- defect-free cutting edge
- high stability when machining
- improved coating adhesion capability

Increase of tool life by the application of [Tool]Prep

[TOOL]PREP - the optimal solution for cutting edge preparation.



Do you have any questions?

If you need more information about the [Tool]Prep-process
then please contact our trained service staff today.

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