

Digitalized Measurement Processes,
Efficient Production Flow, 100% Documentation

Measuring Technology 4.0



Data consistency for an optimal grinding and regrinding process

With measuring technology 4.0 solutions from ZOLLER, you are optimally positioned for the networked future, the Smart Factory. From incoming inspection to manufacturing and final inspection, ZOLLER offers the perfect solution for inspecting and measuring tools and grinding wheels for every process step, including storage systems and automation concepts – all networked via the central tool database z.One.

- The shopfloor-compatible compact solutions for universal tool inspection are easy to operate and adapted to your requirements.
- Grinding wheel management, easy measurement of grinding wheel packs, data transfer and inspection of initial grinding results are essential for the effective set-up of grinding machines.
- The Smart Cabinets from ZOLLER save you from the trouble of searching your grinding wheels and accessories. These storage cabinets with software connection create maximum transparency and order with minimum effort.
- Smart Automation Solutions not only ensure quality, but also deliver high efficiency.

For 100% flawless grinding wheels and tools as well as digitalized processes – measuring technology 4.0 from ZOLLER







Measuring Technology 4.0 in your Grinding Shop



The TMS Tool Management Solutions software is perfectly integrated into the overall process and offers everything for efficient tool manage: ment. This software solution can be networked



z.One is the central tool database. All steps of the manufacturing process access this database, as well as ERP and other software systems. Multiple data maintenance is not necessary.

Incoming Goods/ Wear Inspection

After delivery of the tools, you can import the tool data in DIN or ISO format into the **z.One database**. The incoming goods inspection, e.g. on »edgeControl 600«, provides not only actual geometry data but also measurement data on tool wear. The z.One database manages all data for the tool management

Production Planning

»caz« stands for computer aided ZOLLER and is a virtual measuring machine. With this software solution, you can generate and simulate measuring sequences on an external workstation. Tool management with **ZOLLER TMS Tool Management Solutions** provides interfaces to all major CAD/CAM and ERP systems..

3 Warehousing

The Smart Cabinets not only store grinding wheels, components and accessories safely and transparently, they also enable automatic stock control. TMS Tool Management Solutions supports you with a graphic display of the storage location so that you can find your work material quickly.

If you want to achieve the highest cutting edge quality, it is essential to balance the grinding wheels. »toolBalancer« from ZOLLER measures the unbalance with an accuracy of < 0.4 gmm.

4 Balancing

Measuring Grinding Wheels and Data Output

»smile« or optionally »venturion« measures the geometries of grinding wheels and tools quickly and precisely. Thanks to the **image** processing software »pilot 4.0« many things can be done at the click of a button – for example, processing the »caz« generated measurement sequences. The measurement data is stored in z.One and transferred directly to the grinding machine if required.

6 Manufacturing

The GDX data interface enables direct data exchange between the ZOLLER measuring machine, e.g. »genius« and the grinding machine. Measurement data is exchanged quickly, securely and without typing errors.



Process-Oriented Measurement

»pomBasic« is the compact solution for measuring tools process-orientedly next to the grinding machine. This determines the actual data and the wear parameters for resharpening the tools. The resharpening module »reGrind« transfers the data in controller format to the CNC grinding machine.

Tool Inspection

»roboSet 2« in conjunction with the universal measuring machine »genius« is the Automation Solution for the final **inspection** of ground tools. Every tool is 100% inspected before delivery.



100% Quality Delivered

The measured values are summarized in inspection reports and can be supplemented with additional parameters. All measurement and tool data are available in the z.One database.









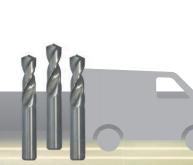














Scan the QR code and find out more about the smart set-up process from ZOLLER.



Generation of the measuring sequence at the external workstation using the software module »caz« which simulates a measuring machine.



Assembling the grinding wheels on the **»toolStation**«, supported by the Smart Cabinets »keeper« and »toolOrganizer«



With optimally and highly precisely balanced grinding wheels, you can achieve longer spindle running times.



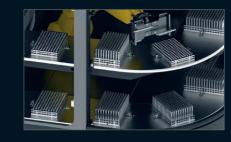
Measuring the grinding wheel pack with the ZOLLER measuring machine leads to µm-accurate, centrally stored data for the subsequent process.



The identification of the measured tools and grinding wheels with »zidCode« starts the automatic data transfer to the grinding machine.



The inspection machine »pomBasic« checks tools on up to 70 tool parameters in a matter of seconds. Insert, align, measure.



Take advantage of the significant relief of personnel thanks to the automated final inspection with »roboSet 2« and the universal measuring machine »genius«.



Create customized measurement reports quickly and easily and use numerous evaluation methods. This allows you to document tool quality and to ensure traceability.

simple. direct. online.



Solutions

More speed, higher quality, safe processes – with ZOLLER, you increase the efficiency of your production. ZOLLER offers you outstandingly precise devices for adjusting, measuring and testing cutting tools, software, interfaces, cloud services and solutions for the automation of tool processes. You can combine all of this to create your individual system solution – on your way to the smart factory.

Presetting & Measuring

Tool Management
Inspection & Measuring

Automation

Everything from a Single Source.
Everything for your Success.
Everything with ZOLLER Solutions.

