The new generation of tool presetter and measuring machines

smile
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* SCHUNK TRIBOS is a registered trademark of SCHUNK GmbH & Co. KG
ZOLLER increases your productivity

ZOLLER helps companies to manufacture more efficiently by using tool presetters, tool inspection machines and tool management software. ZOLLER measures and presets tools to two-thousandths of a millimeter – quickly, simply, accurately and guaranteed! Accuracy means less waste, less CNC machine downtime and more profit. Put more precisely: You can improve your productivity by at least 20% with ZOLLER.

Trust in ZOLLER technology and profit from the highest quality and reliability, top-innovation and competence as well as user-friendliness and exceptional customer service and support.

- Tool presetters
- Tool measuring and inspection machines
- Heat shrink presetters
- Tool management software
- Consulting and service

Do you work with cutting tools?
If so, then ZOLLER is the right partner for you.
ZOLLER – for your success

»ZOLLER is today the global expert and market leader in the field of tool presetting, tool measurement and tool inspection for more precision and productivity in manufacturing companies. For more than 60 years, ZOLLER has developed innovative software as well as tool presetters and measuring machines to measure, inspect and manage cutting tools of all kinds. Our many years of experience and the close cooperation between our customers and partners give us the necessary expertise to deliver cutting-edge technology that is user-friendly and helps our customers to cope with the everyday manufacturing challenges. The family business is in its third generation. Its headquarters and manufacturing are based in Germany and it is committed to the highest quality standards for true precision and the longest product life. Our ZOLLER locations and business partners throughout the world guarantee customer proximity and dedicated service in local markets. And it is our top priority at ZOLLER that the products carrying our family name exceed your expectations and contribute to your success. In order to achieve this ZOLLER goes to great measures for you.«

The ZOLLER family
Christoph Zoller, Alexander Zoller, Eberhard Zoller
The ZOLLER »smile« product series

Simple to operate, equipped with all the standard measuring functions, at an attractive price. The ZOLLER »smile« universal tool presetter and measuring machine has been designed specifically for measuring tools for manufacturing production. It can save you up to $15,000 per shift and machine over a year.

Benefits for you:

- Simple to use thanks to intuitive ZOLLER software interface and ergonomic operating elements
- Fast & precise thanks to powerful ZOLLER image-processing technology
- Robust & able to withstand shop floor conditions owing to special alloy and thermally optimized design
- Process-reliable through intelligent software and the highest safety standards
- Ergonomic thanks to functional, tried and tested design
- Versatile due to modular construction and extensive software from ZOLLER
- Economical thanks to an excellent price-performance ratio
- Environmentally friendly through use of recyclable materials and compliance with ISO standards
With ZOLLER tool presetter and measuring machines, your tools are preset and measured before use. This means you can benefit in every aspect, thanks to less waste and fewer machine crashes, lower production costs and higher productivity. For you, this means: more efficiency and thus more turnover and profit.

Capitalize on ZOLLER: your results – greater profits!

- Less machine down-time
- Reduced scrap
- More efficient processes
- Higher process-reliability
- Better production quality
- Increased productivity
Your requirement: Measure and preset tools quickly, simply and accurately!

Our solution:
- ZOLLER «pilot 3.0» modular image processing software for every requirement
- ZOLLER «elephant» technology for measuring and presetting tools without data entry
- Special measuring programs with photorealistic input dialog for complex measurement tasks

Your requirement: Use only 100% perfect tools!

Our solution:
- Contactless inspection of metal cutting tools in incident light
- Measurement of tool geometries at the push of a button
- Extensive statistical and logging functions

Your requirement: Manage data optimally!

Our solution:
- Tool management systems for the office or directly on the tool presetter and measuring machine
- Central data storage in the ZOLLER system
- Interfaces to external systems
- Modular expansion options
- Perfect integration into the closed process chain

Your requirement: Reduce production costs!

Our solution:
- Less machine down-time by presetting the tools outside the machine
- Control-specific tool data from the measuring unit directly to the machine tool
- Prevention of machine crashes through process reliability, e.g. zero point monitoring
- Optimized magazine space allocation with ZOLLER «cetus» software
The right machine for your application

ZOLLER provides the optimum solution

ZOLLER tool presetter and measuring machines consist of hardware functions, e.g. the »smile« machine series, and are equipped with »pilot« image processing software. The world market leader ZOLLER can thus provide the optimum solution for all requirements. The following questions will help select the best one for you:

What are the maximum dimensions of your tools?
Determine the maximum length and diameter of the tools you need to measure. The measuring range of the tool presetter and measuring machine depends on this factor.

Our recommendation:
For tools of up to 600 mm in length and 400 mm in diameter: ZOLLER »smile«.
For heavier and larger tools: The ZOLLER »venturion« product line.

What tool holders are you using?
This decides what spindle or adapter you should use in your tool presetter and measuring machine.

Our recommendation:
If ISO/HSK or VDI tool holders are used: ZOLLER »smile« standard equipment.
For work with shrink-clamping holders: ZOLLER »smile/shrink« or ZOLLER »redomatic«.
For the TRIBOS clamping system: ZOLLER »smile/tribos« or ZOLLER »tribos«.

What would you like to measure? (tools and parameters)
This is important to decide what ZOLLER software and measuring programs you need: ZOLLER »pilot 2.0« is our standard software with all the important functions. ZOLLER »pilot 3.0« has a modular construction, thus lets you decide what modules you need and allows you to retrofit additional features at any time.

Our recommendation:
For the most frequently needed measuring and inspection functions: ZOLLER »smile/pilot 2.0«.
For more demanding work and versatility in the future: ZOLLER »smile/pilot 3.0«.
For measuring electrodes: ZOLLER »smile/EDM«.
Many requirements. One goal:
The optimum ZOLLER tool presetter and measuring machine
for your company.

Use the navigator on the back fold-out page
to find the right tool presetter and measuring machine.

<table>
<thead>
<tr>
<th>Would you like to measure tools manually or automatically?</th>
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<tbody>
<tr>
<td>All ZOLLER machines, whether »pilot 2.0« or »pilot 3.0«, can output the measurement results automatically and independently of the operator. Investment in CNC control of the axes pays for itself with reliable measuring sequences, depending on the extent of presetting.</td>
</tr>
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<tr>
<th>How do you want to transfer the data?</th>
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<tr>
<td>Manually or electronically for integration into your network for error-free data communication? This decides the appropriate software.</td>
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</table>

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<tr>
<th>Do you want to manage tools?</th>
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<tbody>
<tr>
<td>With »pilot 2.0« you can add and save adapters and tools. The advantage for you: For recurring tools you can simply call them up, select the saved measuring sequence and thus get to the measurement result even more quickly. Furthermore, »pilot 3.0« provides you with comprehensive tool management, which can be extended as required.</td>
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<tr>
<th>Do you need interfaces, for example to machine tools or controls?</th>
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<tbody>
<tr>
<td>Do you want your tool presetter and measuring machine to communicate with other machine controls or tool management systems for highly effective networking?</td>
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</table>

<table>
<thead>
<tr>
<th>Our recommendation:</th>
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<tbody>
<tr>
<td>For measuring contours: ZOLLER tool presetter and measuring machines with CNC control of the axes provide the highest precision and automatic/operator-independent sequences.</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Our recommendation:</th>
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<tbody>
<tr>
<td>For manual data output: Tool presetter and measuring machines with ZOLLER »pilot 2.0«. For electronic data output: Tool presetter and measuring machines with ZOLLER »pilot 3.0«.</td>
</tr>
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<table>
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<tr>
<th>Our recommendation:</th>
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<tr>
<td>For optimum tool management: Tool presetter and measuring machines with ZOLLER »pilot 3.0« and ZOLLER tool management.</td>
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<tr>
<th>Our recommendation:</th>
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<tr>
<td>Tool presetter and measuring machines with ZOLLER »pilot 3.0« plus individual adaptation to your production process.</td>
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</table>
The universal tool presetter and measuring machine for any user

ZOLLER »smile«

Whether you use it as a universal tool presetter and measuring machine for your entire production facility or dedicate it to an individual machine tool, the automatic tool cutting edge detection and the »pilot« software make presetting and measuring your tools particularly precise, fast and simple.

The ZOLLER »smile« series can be equipped with the »pilot 2.0« or »pilot 3.0« software, plus different applications and options depending on your requirements. In any case – ZOLLER »smile«: Great performance at a small price.

All basic elements of the ZOLLER tool presetter and measuring machines are developed and designed in-house and manufactured in Germany and the USA. We only use renowned name-brand components noted for their precision, reliability and durability.

This is why ZOLLER tool presetter and measuring machines have become the benchmark of quality known around the world for their extremely high levels of accuracy, low maintenance costs and long service life.

Your benefits of a »smile« tool presetter and measuring machine with »pilot 2.0« or »pilot 3.0« software

- Available in up to seven selectable measuring ranges in Z and X axes
- ISO 50 high precision spindle with integrated calibration edges, 4 x 90° locking device, spindle brake
- Membrane keyboard for power-operated spindle clamping and spindle braking
- Electronic fine adjustment of X and Z axes
- Light metal construction with optimum heat-conducting properties for use on the shop floor
- Heidenhain glass scales for a high level of measuring accuracy
- CCD camera with telescentrical objective
- ZOLLER »pilot 2.0« or »pilot 3.0« image processing software (see pages 20–25 for range of functions)
- Dynamic cross-hairs in the entire measuring window
- Analog focusing display for focusing the tool cutting edges
- Automatic cutting edge recognition, including those greater than 90°
- Cutting edge inspection with 20 x magnification
- Manual projector function
- Adapter and tool management
- Zero point monitoring for process reliability
- Numerous measurement programs such as concentricity and run-out
- Machine table (standard for »smile/pilot 3.0«)

Technical information subject to change. All tool presetter and measuring machines shown can include options, accessories and control system variations.
### Measuring Ranges

<table>
<thead>
<tr>
<th>Model</th>
<th>Measuring Range Z</th>
<th>Measuring Range X</th>
<th>Diameter</th>
<th>Snap Gauge Ø</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>»smile 400«</code></td>
<td>400 mm/15.7&quot;</td>
<td>200 mm/7.8&quot;</td>
<td>400 mm/15.7&quot;</td>
<td>10 mm/3.9&quot;</td>
</tr>
<tr>
<td><code>»smile 400/6«</code></td>
<td>400 mm/15.7&quot;</td>
<td>300 mm/11.8&quot;</td>
<td>600 mm/23.6&quot;</td>
<td>140 mm/5.5&quot;</td>
</tr>
<tr>
<td><code>»smile 400 / RA 140«</code></td>
<td>400 mm/15.7&quot;</td>
<td>600 mm/23.6&quot;</td>
<td>100 mm/3.9&quot;</td>
<td>–</td>
</tr>
<tr>
<td><code>»smile 600«</code></td>
<td>600 mm/23.6&quot;</td>
<td>200 mm/7.8&quot;</td>
<td>600 mm/23.6&quot;</td>
<td>140 mm/5.5&quot;</td>
</tr>
<tr>
<td><code>»smile 600/4«</code></td>
<td>600 mm/23.6&quot;</td>
<td>300 mm/11.8&quot;</td>
<td>400 mm/15.7&quot;</td>
<td>100 mm/3.9&quot;</td>
</tr>
<tr>
<td><code>»smile 600/4 / RA 140«</code></td>
<td>600 mm/23.6&quot;</td>
<td>130 mm/5.1&quot;</td>
<td>260 mm/10.2&quot;</td>
<td>–</td>
</tr>
<tr>
<td><code>»smile 800«</code></td>
<td>800 mm/31.5&quot;</td>
<td>300 mm/11.8&quot;</td>
<td>600 mm/23.6&quot;</td>
<td>–</td>
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1) Machine table is a prerequisite (included as standard with »pilot 3.0«)

### Top Tip:
For larger measuring range requirements, we recommend ZOLLER »venturion«

---

**Uhung drive**

- High-precision and reliable axis adjustment, manual or CNC controlled.

**Heidenhain measuring system**

- Ultra-precise positioning in X and Z axes thanks to Heidenhain.

**THK linear guidance system with recirculating linear ball bearings**

- Super-light sliding with no stick/slip effect thanks to five THK guide systems.
The professional introductory package to get you started
ZOLLER »smile/pilot 2.0«

The basis for your work.
ZOLLER »pilot 2.0« software gives you all the measuring and presetting functions you need for your day-to-day work. With these basic functions you can measure and preset tools quickly and simply, it is designed ideally for use in job order production and for the tool requirements of small to medium batch sizes.

»smile 400/pilot 2.0«

»smile/pilot 2.0« (specific | hardware)
- Image processing system with telecentrical objective
- 32 Bit ARM9 processor
- 4 USB 2.0 interfaces
- RJ45 network connection
- 12.1" TFT color display with touch-screen
- 800 x 600 pixel screen resolution
- Linux operating system
- 256 MByte working memory
- Memory for at least 3,000 adapters and tool steps
- Virtual keyboard

»smile/pilot 2.0« options
- ISO 30, ISO 40, HSK, KM high precision spindle
- Vacuum spindle
- Manual length adjustment, linear or rotary, to adjust the length of tools
- Center height measuring device
- List and label printer
- Electronic data output
The solution for every challenge

ZOLLER »smile/pilot 3.0«

Made to measure for your requirements.

»pilot 3.0« allows you to select from the software modules and the ZOLLER image processing technology, exactly those components which are best suited to your production processes.

»pilot 3.0« thus stays lean and easy-to-use, and you only invest in the functions you actually need.

»smile/pilot 3.0« options

- CNC controlled X and Z axes
- Autofocus and/or rotary encoder for tool holding fixture spindle (C axis)
- ISO 30, ISO 40, HSK, KM high precision spindle
- Vacuum clamping
- Manual length adjustment, linear or rotary, to adjust the length of tools
- Center height measuring device
- List and label printers
- Electronic data output
- Tool identification
- Special measuring programs such as reamers, grinding wheels
- Tool management

»smile/pilot 3.0« (specific | hardware)

- Image processing system with telecentrical objective
- IPC computer with Intel® Core™ TM 2 Duo 1.80 GHz
- 2 GByte main memory
- 17” TFT color display with touch-screen
- 1,280 x 1,024 pixel screen resolution
- Windows XP Professional for Embedded Systems operating system
- 6 serial interfaces
- 2 parallel interfaces
- 12 USB 2.0 interfaces
- 2 RJ45 network connections
- Hard disk with at least 80 GByte
- DVD-RW burner for data backup
- Integrated hard disk monitoring – detects the first signs of a possible hard disk crash
- Flexible operation using keyboard, mouse and touch-screen
ZOLLER tool presetter and measuring machines set high standards, such as ergonomic design, cutting edge inspection or machine table, for efficient and healthy working. Added to this are numerous options such as adapters, printers or data communication, with which you can match your ZOLLER tool presetter and measuring machine optimally to the requirements of your production process.

So you are best-equipped for any task and still remain versatile.
»smile 400/pilot 3.0«

- Shelf for label printer - optional
- Adapter shelf and shelf for list printer - optional
- Data communication - optional

Center height measuring device – optional
For measuring the center height of turning tools.

Tool identification – optional for »pilot 3.0«
Separate read/write station for manually reading and writing the tool ID chip.

Tool length adjustment – optional
Manual adjustment device for setting the length of tools either by using the stop pin or rotating the setting screw.

Shelf for label printer, fixed in place.
Shelf for adapters, for up to nine ISO 50 holders. Shelf for list printer, with anti-slip coating.

Data communication from the tool presetter and measuring machine to the machine tool for data transfer without errors. With »pilot 2.0« and »pilot 3.0«.
The fully automatic version
ZOLLER »smile/CNC«

In combination with »pilot 3.0«

For milling and turning machines.
Speed and precision with ease of use and maximum process reliability are standard in the ZOLLER »smile/CNC«.
A special, tried and tested drive design allows rapid, operator-independent and micron-precise positioning of all axes.
The decisive advantage of the »smile/CNC« with autofocus is: You can create your repeat orders, define measuring sequences and call them up again and again.

For you, this means:
Producing each batch efficiently, profitably, on time and with perfect quality.

»smile/CNC« options

- Autofocus and/or rotary encoder for tool holding fixture spindle (C axis)
- For further options, see p. 11 ZOLLER »pilot 3.0«

»smile/CNC« (specific | hardware)

- CNC control in linear axes Z and X
- Optional autofocus in the C axis for fast and precise measurement results
- ZOLLER USB Motion »CoNCept« drive for fast and process-reliable tool measurement
- Uhing drive with sliding clutch for micron-precise positioning and user safety – the user can stop the CNC controlled axes manually at any time
One workstation for all tasks.
Universal tool presetter and measuring machines for all kinds of tools are one thing, those for the SCHUNK TRIBOS system are something else. Really? Not at ZOLLER! Because with ZOLLER »smile/tribos« you have a high precision tool presetter and measuring machine for absolutely any kind of tool – including SCHUNK TRIBOS chucks. The integrated device for presetting, measuring and clamping SCHUNK TRIBOS tools means that you only need one workstation for all the tasks in your company and you can benefit from the exceptional efficiency of this ZOLLER tool presetter and measuring machine.

»smile/tribos« options

- Digital print display
- Wooden shelf for »tribos« inserts
- »ASZM« tool length adjustment or »ASZR« rotary tool adjustment
- For further options, see p. 11 ZOLLER »pilot 3.0«

»smile/tribos« (specific | hardware)

- Clamping, presetting and measuring SCHUNK TRIBOS chucks
- Swiveling and lowerable SCHUNK clamping unit
- Analog print display
- Tool diameter: 6–32 mm
- Hydraulic clamping pressure: max. 400 bar
With integrated shrink device

ZOLLER »smile/shrink«

Manual – in combination with ZOLLER »pilot 2.0« or »pilot 3.0«

All in one machine: the ZOLLER »smile/shrink« tool presetter, measuring and shrink machine is specifically designed for shrinking, presetting and measuring all kinds of tools.

With »smile/shrink« ZOLLER provides a cost-effective combination machine, its purchase price being much lower than that of two individual machines. Based on the »smile«, a shrink device has been integrated with an induction coil and a water cooling system.

Get your hands on a »smile/shrink« for easy presetting, measuring and shrinking – all in one machine.

Shrink tools to a desired length

1. Insert the shrink-fit chuck into the tool holding fixture
2. Insert the adapter into the shrink-fit chuck
3. Insert the tool into the adapter
4. Adjust the tool to desired length (optional)
5. Remove adapter and tool
6. Swivel in shrink unit
7. Heat the shrink-fit chuck
8. Move the optic carrier to the safety position
9. Insert the tool into the shrink-fit chuck
10. Cool the shrink tool in the »showerCooler«

Result
Detailed overview of measurement results with tolerance check
»smile 400/shrink/pilot 3.0«

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<th></th>
<th>»smile 400/shrink«</th>
<th>»smile 600/4/shrink«</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measuring range L</td>
<td>400 mm/15.7&quot;</td>
<td>600 mm/23.6&quot;</td>
</tr>
<tr>
<td>Measuring range X</td>
<td>200 mm/7.8&quot;</td>
<td>200 mm/7.8&quot;</td>
</tr>
<tr>
<td>Diameter</td>
<td>400 mm/15.7&quot;</td>
<td>400 mm/15.7&quot;</td>
</tr>
</tbody>
</table>

Your benefits

- Optional tool re-adjustment to shrink tools to desired length
- Low temperature due to short heating time and induction energy over a wide area. This prevents structural changes in the shrink-clamping fixture and protects your tools for a longer service life
- The »showerCooler« cooling unit cools the shrink tools rapidly using water/emulsion
- Integrated swiveling shrink unit
- Safety standard met: Optional integrated fume extraction provides protection from vapors and gases
- Short cycle times for efficient working
- Ergonomic design for convenient operation and ideal storage options for »showerCooler« and shrink-fit accessories

»smile/shrink« options

- »showerCooler«
- Fume extraction
- »ASZM« linear tool readjustment or »ASZR« rotary tool readjustment
- For further options, see p. 11 ZOLLER »pilot 3.0«
Measure electrodes

ZOLLER »smile/EDM«

Manual or CNC controlled – in combination with ZOLLER »pilot 3.0«

Measures your electrodes before use in the erosion machine:

no waste, more production precision. And it’s the same for your metal-cutting tools such as drills, reamers and milling machines.

ZOLLER – the perfect result in a flash.

The solution for die and mold-making tools: The ZOLLER »smile/EDM« tool presetter and measuring machine for measuring electrodes and metal-cutting tools. Where several machines would have been used previously, the ZOLLER »smile/EDM« now carries out all measuring tasks: precise measurement results in the shortest possible time.

For all those who want to measure EDM electrodes and metal-cutting tools quickly and simply.

Measure electrodes in less than 1 minute

1. Determine reference measurement for adapter
2. Determine offset angle
3. Determine X/Y mismatch
4. Determine length: Sample highest measurement point

Result
Detailed overview of measuring results with tolerance check
Your benefits

- Simple, fast and accurate measurement of electrodes and metal-cutting tools
- All the important parameters of an electrode can be measured in less than 1 minute
- The following electrode parameters can be measured, regardless of shape and application:
  - Offset angle
  - Mismatch in X and Y axes
  - Length in Z axis
  - Renishaw measuring sensor for measuring electrode parameters
- Photorealistic measuring programs for measuring electrodes
- Graphical instructions guide the user step-by-step through the electrode-measuring process

»smile/EDM« options

- Electrode adapter available for all EDM holding fixture systems, e.g. Erowa, System 3R, Hirschmann, etc.
- Autofocus for C axis
- Control-specific measurement data output for the CNC erosion machine
- For further options, see p. 11 ZOLLER »pilot 3.0«
As much as necessary, as little as possible

ZOLLER »pilot 2.0« software

Behind ZOLLER's software development are people whose declared goal is simple and practical operation and the long-term sustainability of ZOLLER tool presetter and measuring machines.

ZOLLER »pilot 2.0« software is a cost-effective solution, which has been developed specifically for the shop floor.

True to the motto: as much technology as necessary, but as little as possible.

For the highest quality at an excellent price-performance ratio.

»pilot 2.0« standard functions

- Graphical user interface – intuitive and clear, with self-explanatory symbols for the easiest operation
- »compass« navigation system for simple positioning (Fig. 1)
- Presetting and measuring without manual fine adjustment – quickly and precisely
- Fine adjustment of axes not necessary thanks to »pilot« intelligent image processing. The dynamic cross-hairs follow the cutting edge and the current measurement is continuously displayed
- Automatic detection of cutting edge shape and measuring area of tool cutting edges – fully automatically and in seconds (Fig. 2)
- Analog focusing display – a colored bar indicates to the user when the cutting edge is focused and thus ready for measurement or presetting
- Five automatic measurement results: tool length, diameter, cutting edge radius and two cutting edge angles (Fig. 3)
- Operator-independent measurement results – repeating accuracy with tolerance check (Fig. 4)
- Automatic zero point monitoring to prevent machine crashes (Fig. 5)
- Cutting edge inspection – 20 x magnification in a live image for checking cutting edge quality (Fig. 6)
- Measurement programs and »C.R.I.S.« measurement function (Figs. 7–8)
- Counter switchover to X and Z axes as required: radius/diameter absolute measure, difference dimension, incremental dimension and counter stop. In particular for measuring step drills, distances, etc.
- Unit switchover – e.g. degrees/rad/mm/inch
- Tool step management – create and manage several steps for fast measurement of complex tools
- »libra« help system – sophisticated help system supports the user step-by-step in up to 14 languages

The ZOLLER »smile« product series can be equipped with the »pilot 2.0« software. You will then have dynamic cross-hairs for automatically measuring and manually presetting tools.

»pilot 2.0« also has the most frequently needed measuring functions.
User-friendly operation

- Developed for the shop floor
- Simple, efficient working

1. «compass» navigation system – a convenient navigation system, which makes positioning the axes on the cutting edge a child’s play.

2. Automatic measurement of cutting edge geometries of all kinds – even cutting edges of > 90° are measured automatically in all 4 quadrants.

3. Dynamic cross-hairs – the dynamic cross-hairs are used to measure cutting edges automatically without time-consuming fine adjustment of the axes.

4. Tolerance check – when the predefined tolerance is exceeded, a message appears after the measurement.

5. Automatic zero point monitoring – the current zero point is indicated before each measurement. To prevent machine crashes, tool breakage and scrap parts.

6. Cutting edge inspection – indentations and wear marks can be detected for right-hand cutting tools in a live image.

7. System-controlled measurement programs with photo-realistic input dialog, e.g. largest cutting edge on milling heads, concentricity and runout, theoretical point on drills, etc.

8. «C.R.I.S.» function – measurement of the effective cutting area of rotationally symmetrical tools. Corresponds to the distortion-free dimensions, which the tool creates in the material during production.

9. Center height measuring device – the center height is measured without contact, and the offset of the cutting edges in the Y direction is determined using an additional incident light camera (optional).
ZOLLER »pilot 3.0« software

»pilot 3.0« image processing software sets standards:

The design of the input menu follows the tasks, which the user has to complete.

The benefit to you: Simple orientation and use of the software according to the functional area and its requirements.

Thanks to the modular construction, you can grow with your future needs.

»pilot 3.0« meets all production demands with its comprehensive functionality and yet remains user-friendly.

Experience new ease of use

- »elephant« technology for measuring and presetting without any data entry or prior knowledge
- Measurement programs with photorealistic input dialog for measurement of complex tool geometries
- Over 200 cutter shapes to measure any cutting edge geometry
- Automatic cutting edge shape recognition for fast and precise measurement results

Define production processes efficiently

Here you can find all the functions of the tool presetter and measuring machine to make your production process more efficient:

- Measure lists of tools at the push of a button and transfer them directly to the machine tool
- »cetus« tool exchange list for calculating the tool requirement on the machine tool and for determining the tools to be exchanged on the machine tools
Advantages of the new menu interface
- Extremely simple operation
- Get started quickly
- Direct access to numerous functions

---

**Inspection**

*Trust is good, control is better*

- Adjustable intensity LED lighting for brilliant cutting edge display and inspection
- Inspect and measure tools in transmitted and incident light with »metis« tool inspection and measurement
- Simple creation of test reports for detailed documentation

---

**Manage**

*Create order by organization*

Management of:
- Individual components
- Tools
- Tool lists
- Graphics
- DIN 4000 subject characteristics
- NC programs
- Storage
- Ordering systems (suppliers, currencies, etc.)

---

**System**

*The correct setting*

Here you can carry out system settings and find useful information:
- User settings
- User rights management
- Data import/export settings
- Parameter settings for special functions
- Information on servicing and maintenance
»sinope«

»sinope« drawing generator

■ For automatically generating tool drawings from the measured actual values and steps

»compass«

»compass« navigation system

■ For fast and safe manual axis adjustment to the nominal position of the tool cutting edge

»cetus«

»cetus« tool exchange list

■ For calculating the tool requirement on the machine tool and for determining the tools to be exchanged on the machine tools
■ Tool net requirement calculation saves approx. 50% on tools

Data output

Control-specific data output

■ From individual tools or complete tool lists via DNC, network or USB stick to the machine tool for fast, error-free data communication
It's as simple as this:

All measuring sequences can be saved, adapted as required and repeated. The figures show a CNC controlled measuring sequence.

Select tool type from the overview on screen.

Image catalogue of standard tools – two-flute cutter selected.

Selection of measuring task.

Detailed overview of measurement results.

Presetting and measuring at the push of a button

Ingeniously simple! Insert tool. Press start button. The »elephant« technology will do the rest:

- Simple measurement and presetting without data entry
- Intelligent measuring tasks
- Can be operated without prior knowledge

ZOLLER »pilot 3.0«

»elephant« technology
High concentricity – short change-over times

ZOLLER tool holding fixtures

ZOLLER tool holding fixture spindles are suitable for all the usual tool shanks and allow rapid tool changeovers while maintaining a high level of accuracy.

Standard: ISO 50 high precision spindle

ISO 50 high precision spindle with integrated calibration edge, so that separate zero gauges are not necessary.

Membrane keyboard for all power-operated functions of the tool holding fixture. Spindle brake, vacuum clamping (optional), 4 x 90° lock.

ZOLLER standard – ISO 50 high precision spindle

The pneumatic 4 x 90° lock for turning tools and the spindle clamping for tool presetting are actuated using the membrane keyboard. 0.002 mm concentricity, easily turned, ergonomic hand wheel.

Optional – vacuum clamping device:
The high precision spindle is available with a vacuum clamping device. The vacuum clamping device is conveniently actuated using the membrane keyboard.

Optional: Adapter

Steep taper adapter
ISO 10 to ISO 60.

HSK hollow shank taper adapter
HSK 25 to HSK 125.

VDI straight shank adapter
VDI 16 to VDI 80.

The right adapter for every tool shank
All our adapters are case-hardened, bronzied, ground and, where technically possible, equipped with an integrated calibration edge.

Optional: Spindle with manual front clamping

ISO front clamping spindle.

HSK front clamping spindle.

KM front clamping spindle.

Optional – manual tool clamping directly on the spindle
Do you continuously use one tool holder shank size, e.g. only ISO 40 in your production process? Then ZOLLER also has the right solution for this: direct manual clamping of your tools to the spindle. This spindle version is available for the most common holding fixture systems and guarantees you all the advantages of the standard tool holding fixture.
Quality in every detail
ZOLLER precision

Length measurement systems by Heidenhain

Cable carrier elements for ideal cable routing and a long service life

Transmitted light with centered cold light source and automatic regulation

CCD camera with telecentrical objective and multi LED ring light

Ideal linear behavior of the X and Z axes according to thermal analysis due to special light metal alloy. Tensile strength: 32kg/mm²

ZOLLER high precision spindle with pneumatic clamping and 4 x 90° lock

The highest quality marks every detail. Which means: Micron-precise results every time. For motivated employees, efficient working and increased productivity. All benefits to you.
There for you around the world

ZOLLER locations

ZOLLER branches all around the world

bring our knowledge and expertise to where you are.

Therefore, accessibility is not just a promise, but a reality.

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UK
At ZOLLER, delivering quality means being there for you after the purchase, too. With personal advice and high-quality maintenance programs for your ZOLLER tool presetter and measuring machines. The ZOLLER service team is always on standby for you with technicians who have been trained in-house at ZOLLER. For low downtime and first-class service.

- Testing of every ZOLLER tool presetter and measuring machine with certified test bars and gauges traceable to national measurement standards. Proof of geometries, measurement reliability and performance are also part of the inspections.
- Quality-critical parts are purchased from the best manufacturers on the world market, such as Bosch, Heidenhain or Sony
- Full service maintenance contract
- ISO 9000 check with calibration certificate
- Measuring machine performance capability test to Cg/Cgk, CMR, R & R and proof of accuracy
- Machine calibration with laser interferometer and ZOLLER FKM gauge
- Software updates and hardware upgrades
- Conversion and retrofitting of mechanical, optical and electronic components
- Training in different fields of application
- ZOLLER TMC Tool Management Consulting for lean, efficient production processes

ZOLLER application solutions. At ZOLLER you will find the best tool presetter and measuring machine for every requirement. With versatile equipment, matched to your needs. You can find a complete overview on the right.

More information on ZOLLER tool presetter and measuring machines is available at www.zoller-usa.com

We would be glad to send you more detailed information on maintenance programs and prices or to answer any of your questions.

Just call us:

Phone: +1-734-332-4851

You can rely on ZOLLER! We keep our promises. Find out for yourself – and arrange a personal conversation with us.
More products at a glance

ZOLLER tool presetter and measuring machines

»venturion 450«
Vertical tool presetter and measuring machine series 3 axis manual/CNC

»smarTcheck«
Measuring machine for the most demanding requirements with 2D measurements: 4 axis manual/CNC

»genius 3« & »genius 3 micro«
Universal measuring machine for fully automatic complete tool measurement. 5 axis CNC

»venturion 600/800«
Vertical machine series for large, heavy tools: 3 axis manual/CNC

»hyperion 250/400/700«
Horizontal machine series for turning and milling tools: 4 axis manual/CNC

»powerShrinkset«
Manual shrinking machine with length adjustment

»redomatic«
Presetting, shrinking and measuring combination: 4 axis manual/CNC

»tribos«
Vertical universal tool presetter and measuring machine series with 1KBoDs clamping system: 4 axis manual/CNC

»gemini«
CNC tool presetter/measuring machine for crankshaft cutters and turning/boring tools

»zenit«
CNC tool presetter/measuring machine for milling heads and shafts

»phoenix«
1 coil presetter/measuring machine for measuring tools between points: 3 axis manual/CNC
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Our duty: Customer satisfaction

ZOLLER Quality

Continuous and consistent quality management at ZOLLER guarantees mechanically, electrically and electronically convincing product quality. The exclusive use of brand name components makes ZOLLER tool presetter and measuring machines virtually maintenance-free in use throughout their long service life.

Satisfied customers around the globe benefit from the highest manufacturing quality, saving not only time, but also money. And ZOLLER quality does not stop at the product, but continues with the service. You can rely on our quality and expertise!

»The bitterness of poor quality lingers long after the sweetness of low price is forgotten.« John Ruskin
» With ZOLLER you lead the way.

» A thriving, independent, family business in its third generation with locations worldwide.

» ZOLLER has the know-how in development, sales and service.

» More than 25,000 tool presetter and measuring machines have been sold worldwide since 1968.

» ZOLLER is there for you – all over the world.

» With ZOLLER you set the standard.

The ZOLLER seal of quality guarantees precision and quality, reliability and efficiency. That’s what ZOLLER stands for.

The ZOLLER seal of technology stands for the highest level of innovation: ZOLLER is developing the technologies today that you will need tomorrow.

» ZOLLER has the best solution.

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