

Tool inspection and measuring technology
smarTcheck



The universal measuring instrument for tool inspection

»smarTcheck«

Both the basic version, featuring manual positioning and focusing, and the fully-automatic CNC controlled version of the »smarTcheck« provide you with precise, repeatable measuring results easily and quickly.

By simply measuring your tools prior to re-sharpening, you can benefit from a 25% or more productivity gain from your CNC grinding machines.

»smarTcheck« is a high-performance universal measuring instrument specifically designed for measuring cutting tools.

It provides an extremely economical means of checking your tools before and after sharpening, and documenting them to comply with DIN EN ISO 9000 directives.

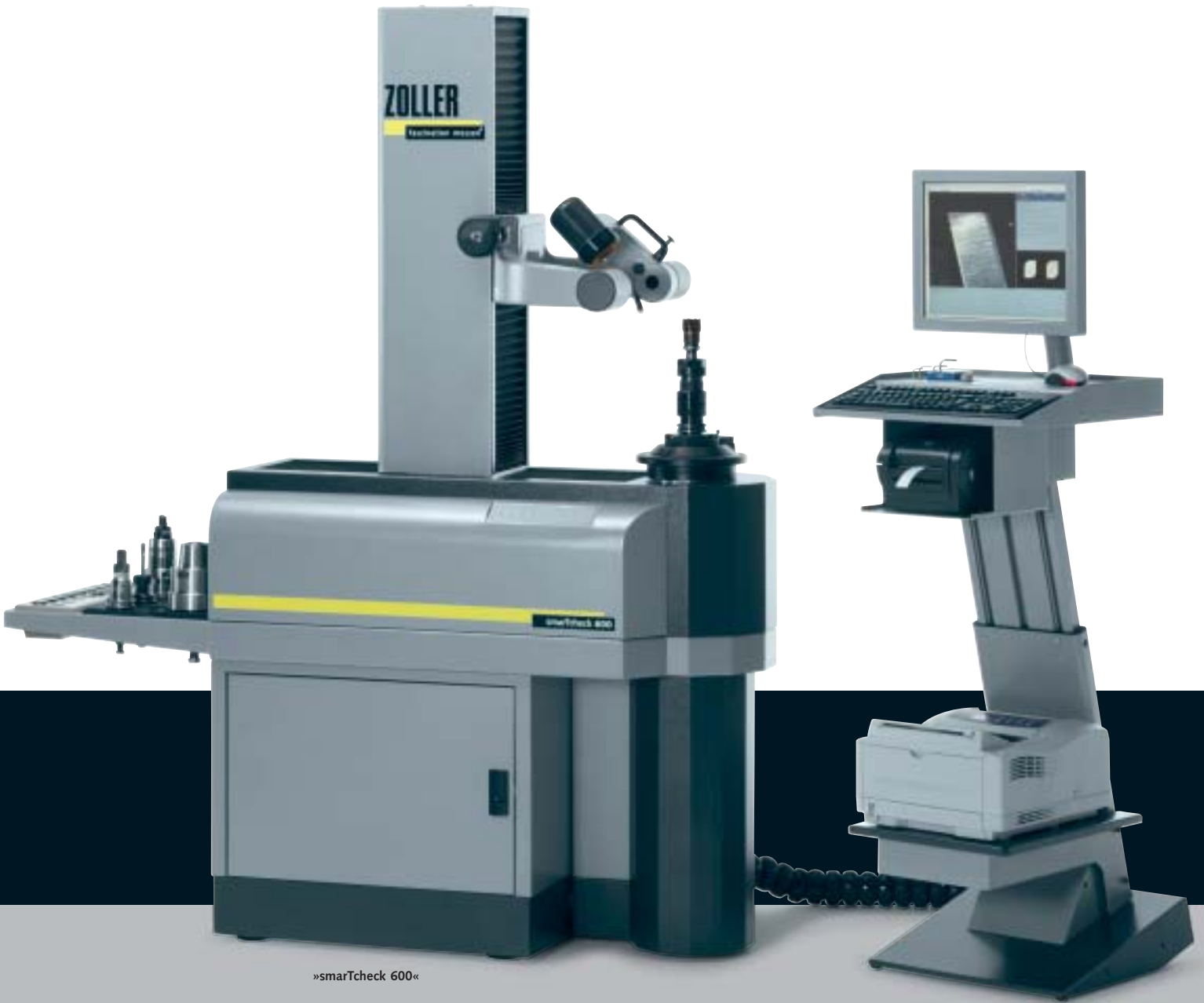
Also, the swiveling incident light camera allows you to check, measure and document the axial or radial geometries of your tools simply by using the mouse – no special skills are required to operate the »smarTcheck«.



Are you looking for the maximum measuring performance at a reasonable price? If so, the ZOLLER »smarTcheck« universal measuring machine is the ideal choice for you.

The benefits speak for themselves –look into it and see for yourself!

- Modular system, can be individually adapted to your specific requirements
- Universal tool measuring machine for measuring in both transmitted and incident light
- Manual or fully-automatic CNC versions
- Intuitive, easy to use graphical interface
- Precision swiveling camera for radial and axial measurement with incident light
- Measuring programs with photo-realistic input dialog
- Intelligent software for measuring radius contours, tool steps, pitch, land widths, concentricity, wear, shapes, etc.
- High-resolution lenses and centered lighting for sharp display of cutting edges in incident light



»smarTcheck 600«

Measuring ranges				
Model	Length Z-axis	Radius X-axis	Diameter	Snap gage Ø
smarTcheck 450	17,7"/23,6"	6,8"	13,7"	1,3"
smarTcheck 600	23,6"/31,4"	6,8"	13,7"	3,1"
smarTcheck 800	23,6"/31,4"/39,3"	19,6"	39,3"	3,1"

ZOLLER »smarTcheck«

The highlights at a glance

Universal spindle



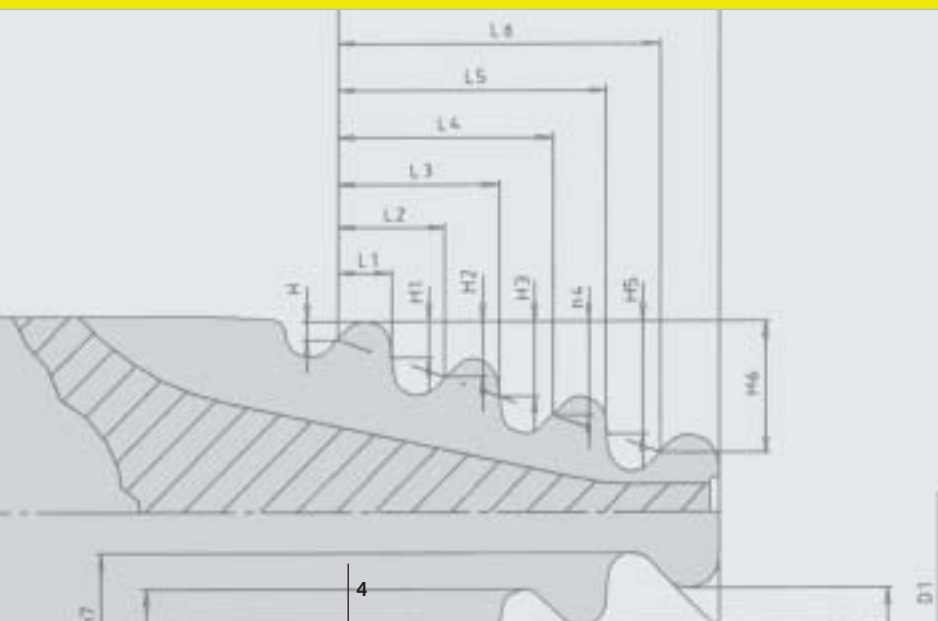
High-precision »A.C.E.« with a guaranteed concentricity accuracy of 0.002 mm. Universal, power-operated tool clamping for quick-release taper/ANSI/CAT/MAS-BT/HSK/Capto/KM.

ZOLLER »smarTcheck« highlights:

- Available in three different machine sizes and variable measuring ranges
- Membrane keypad for power-operated clamping functions
- CNC fine tuning and virtual joystick*
- High-accuracy »A.C.E.« spindle*
- Electronic control unit and »pilot 3.0« software
- Bellows cover
- One-hand operating control
- Innovative ventilation system and safety concept
- 17" TFT industrial touchscreen
- Brand-name products such as Sony cameras, Bosch pneumatics, Heidenhain measuring system, THK guides, etc.
- Cutter inspection with centered LED illumination
- CCD cameras with telecentric lens
- Automatic zero point monitoring
- Camera swiveling device for axial and radial measurement with incident light
- Incident light image processing with adjustable LED illumination
- High-contrast cutting edge display for measuring in incident light
- Software with intelligent automatic functions

ZOLLER electronic control unit

»pilot 3.0«



- Automatically measure cutting edge radii, angles, length and diameter at the touch of a button.
- Quick and universal application for random inspection in setup mode
- Fully automatic measuring sequences which are repeated as often as necessary (with CNC version), including automatic inspection reporting
- Extensive statistical and logging functions
- Measurement of grinding wheel packs and tools of all kinds
- Designed for the shop floor, easiest possible operation combined with high performance and accuracy

* Available as an option



ZOLLER supplies the right holders for tools from all over the world, e.g. SK50 adapter for quick-release tapers and HSK, hydraulic, HSK and quick-release taper attachment holders for ZOLLER »A.C.E.« (from l. to r.)

High-precision camera swiveling device



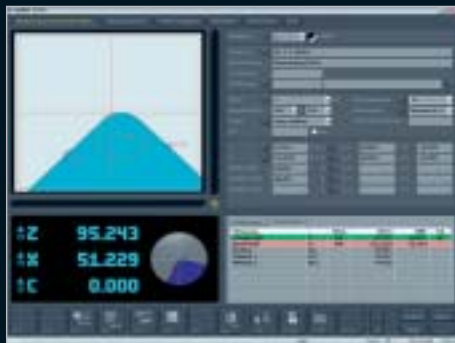
In the radial position for measuring in incident light on the circumference.



In any position for measuring along the plumb line on chamfers and corner radii.



In the axial position for measuring the face on drilling and milling tools.



»pilot 3.0« user interface
For quick and easy touch-screen operation. Large buttons make operation as easy as ABC.



»Fored Grind« photorealistic measuring programs
For straightforward measurement of even challenging tool geometries.



Excellent incident light image processing
For optimum monitoring of the ground or eroded cutting edges.

Measure grinding wheels

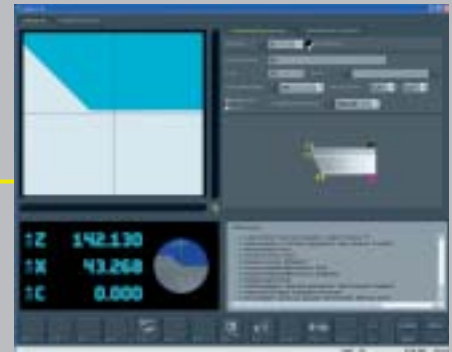
Automatic package with measuring templates



It couldn't be simpler: This automatic package contains measuring templates for 24 FEPA wheel types.

Combine the packages you require – the subsequent measurement is fully automatic.

Max. contour »C.R.I.S.«



ZOLLER »C.R.I.S.« makes it easy to accurately measure grinding wheels, grinding wheel packs, and tools – even in profile. If desired, the results are then conveniently transferred to the machine control at the touch of a button.

Inspection reports for seamless documentation



Graphical evaluation of concentricity and cutting edge radial runout with automatic cutting edge correction for tools with multiple cutting edges (saw blades, boring heads).

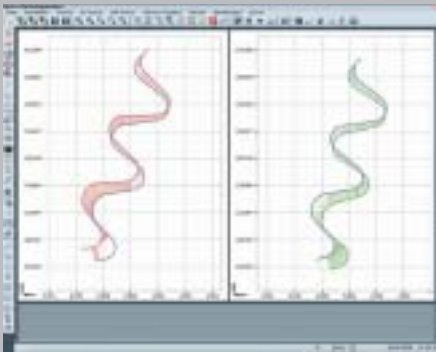


»apus« editable test log

For tailoring the names and values of the printed measurement values to match your terminology.

Data transfer through to automatic correction

»CoCon« scanning software

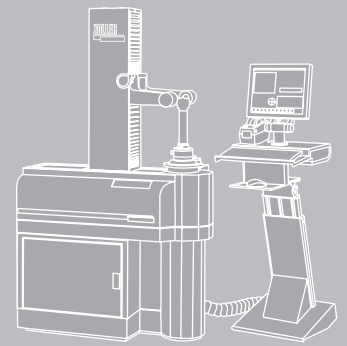


»CoCon« scans the outside contour of form tools (left) and automatically mirrors the deviations (right). The data is then used on the machine control or the programming system to correct the eroding or grinding path.

Interfaces



Your ZOLLER »smarTcheck« transfers the measured data over your network within a matter of seconds to the grinding machine control or the programming system – and back again. Because ZOLLER always has the appropriate interface!



Saving and export functions for all measuring and inspection reports in PDF on screen, via network or stored on USB stick.

Tested quality thanks to ZOLLER: Optimally tested

and checked tools are your guarantee for high quality,

maintaining delivery deadlines and cutting down the number of complaints

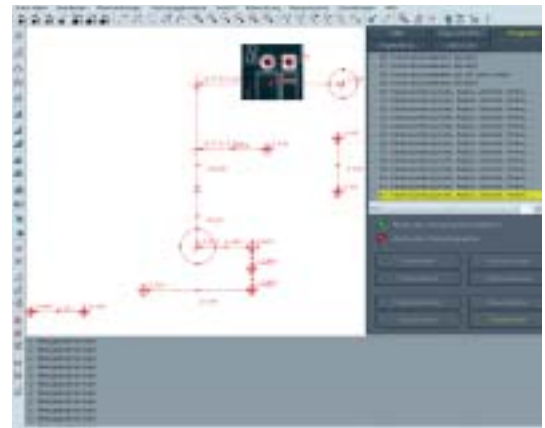


ZOLLER »smarTcheck« Sample applications

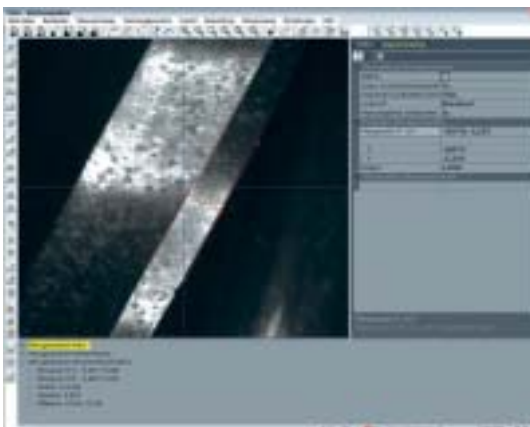
With a ZOLLER »smarTcheck«, you can measure all important parameters in incident or transmitted light – quickly and easily. The test does not take much time and is performed in parallel to measuring the tools, all in one clamping.



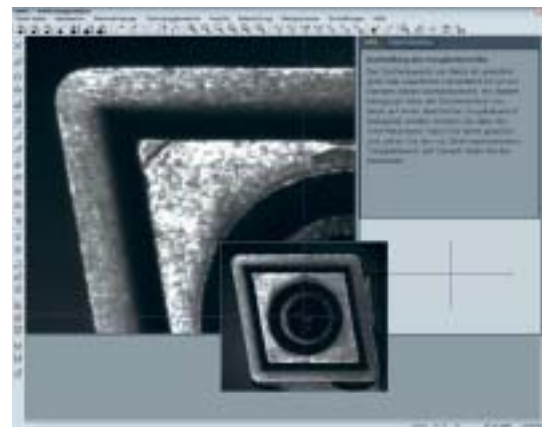
Axial incident light measurement with »metis« for any parameters on the end face geometry



»metis« generator for creating automatic measuring sequences for transmitted and incident light

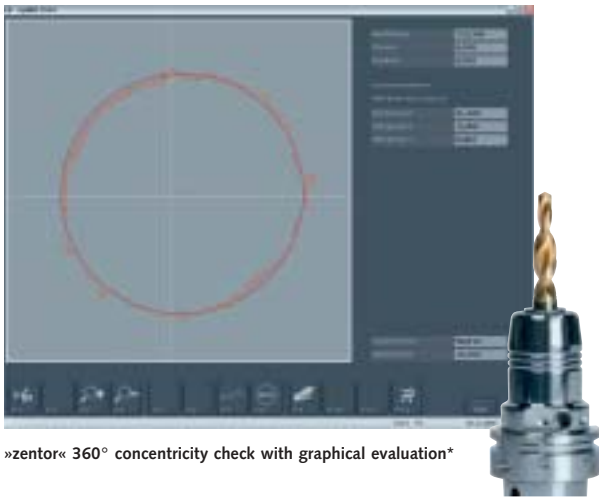


Radial incident light measurement with »metis« for any parameters on the circumference

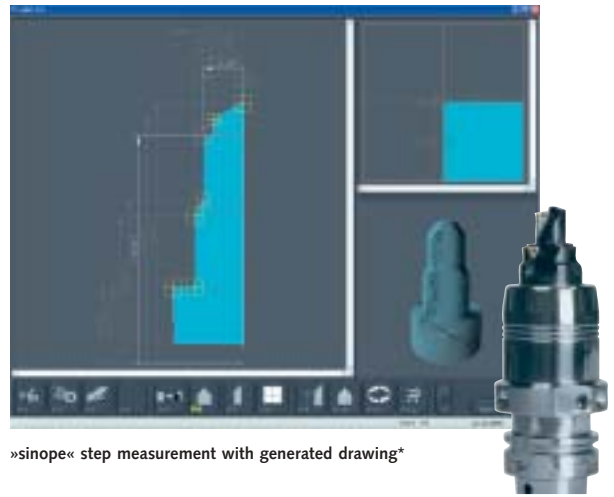


Incident light measurement at chip space and inspection with »metis«, 1:1 magnification and zoom.

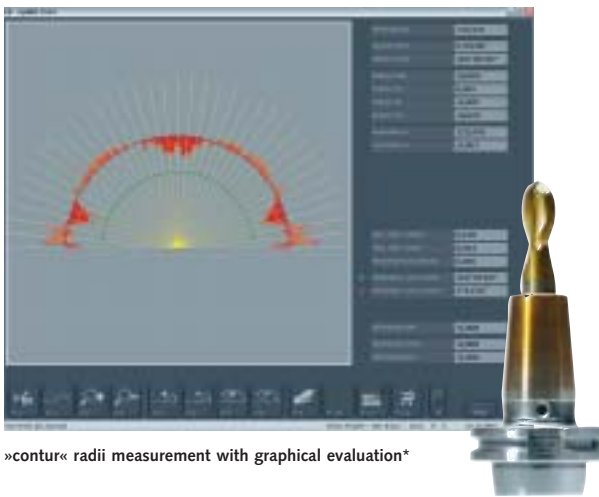




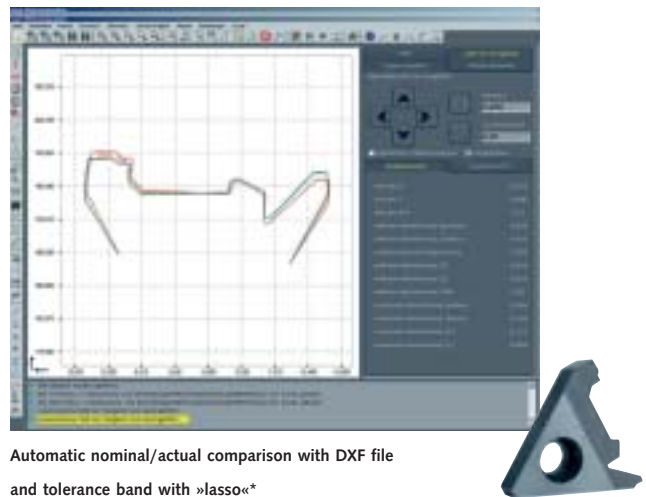
»zentor« 360° concentricity check with graphical evaluation*



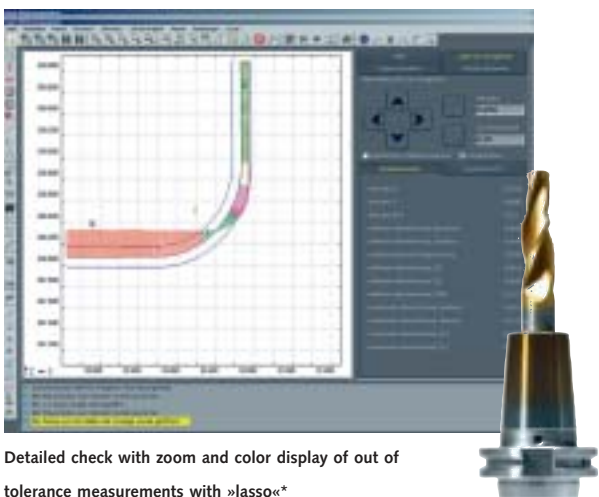
»sinope« step measurement with generated drawing*



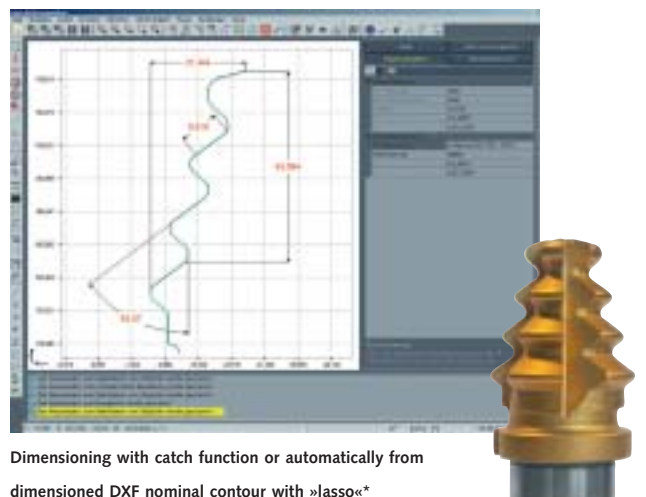
»contur« radii measurement with graphical evaluation*



Automatic nominal/actual comparison with DXF file and tolerance band with »lasso«*



Detailed check with zoom and color display of out of tolerance measurements with »lasso«*



Dimensioning with catch function or automatically from dimensioned DXF nominal contour with »lasso«*

* Available as an option

Measuring and presetting with ZOLLER is easier, safer and more precise than with any other presetting and measuring machine.

- ZOLLER one-hand operating control with automatic slide clamping that is quick and easy to control. No separate mechanical axis clamping lever.
- Membrane keyboard for CNC-controlled functions of the tool holding spindle, tool clamping, spindle brake and 4 x 90° spindle indexing mechanism.
- Brand-name products – including Heidenhain measuring systems, Sony cameras, Intel/Motorola processors, THK guides, NTN bearings and Bosch pneumatics - ensure long service life, high reliability, high precision and low maintenance costs.
- Easy slide adjustment, with no stick-slip effect.
- High-precision and universal tool holding spindles.
- ZOLLER »compass« makes navigating to the cutting edge as easy as possible.
- Unique automation and safety packages.

Simply unrivalled. ZOLLER's unique approach

- ZOLLER »pilot 3.0« image processing technology with 17" TFT monitor and touch-screen operation.
- Automatic cutting edge detection in all four quadrants – even for tool cutting edges > 90°.
- Dynamic crosshairs.
- Operator interface with user-friendly design.
- Uncompromising and unique ergonomics.
- Measuring programs for measuring tools of all types.
- ZOLLER »A.E.C.« for automatic cutting edge inspection.
- and many more

» ZOLLER sets the bar higher.

- A financially secure, independent family enterprise in its third generation with subsidiaries worldwide.
- ZOLLER has the expertise in development, sales and service.
- More than 25,000 presetting and measuring machines have been sold worldwide since 1968.

» ZOLLER is there for you – worldwide.

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