

The Balancing System with the Most
Modern Technology and Ergonomic Design

ZOLLER
expect great measures

toolBalancer



Made by ZOLLER





We, the family-owned technology company, ZOLLER, focused our experience and competences for this new product development, as such, we are setting yet another milestone and rounding off the ZOLLER product portfolio.

Typical ZOLLER:
Everything from a single source.

CHRISTOPH ZOLLER, ALEXANDER ZOLLER
Management



We Stand for Smart Progress

ECONOMICS

With »toolBalancer« you increase your process reliability and the quality of your components, reduce machine maintenance costs and prevent machine failures. How does it work? It's simple: With optimally- and highly-precisely balanced tools, you achieve longer tool life, a longer spindle running time and a better surface quality of your components. With »toolBalancer«, not only do you get your tools but also your entire production into the perfect balance of sustainability, efficiency and progress.

The interaction of the components of this balancing system is one-of-a-kind: technologically leading and ergonomically unbeatable. Get to know the ZOLLER »toolBalancer« balancing system now, with our **strengths revolving around quality, precision, safety** and benefit right away from all advantages provided by this device.

solutions.zoller.info/en/toolbalancer



Certified safety

500 kg massive basis

Best balancing results: < 0.4 gmm



ZOLLER-Balancing Technology for Exact Balance

ZOLLER always goes further and stands for innovative developments. Our new »toolbalancer 550/750« series is an absolute highlight when it comes to balancing your tools. Experience the new series for yourself; you will not be disappointed. Benefit from high-quality manufactured components, reduced tool wear-and-tear and a longer life-time for your machine spindles.

With the »toolBalancer« balancing system, developed and produced by ZOLLER, you can balance your tool holders, complete tools and grinding wheels with high precision. Enjoy the advantages of state-of-the-art technology for a long-lasting, sustainable product designed to be ergonomic in every respect.



»toolBalancer 550«



»toolBalancer 750«

We Stand for Reliable Quality

PRODUCTION

100% made in Germany – that is our primary mission, and we work hard to ensure we achieve our goals. Thanks to an expansion of our production site in Pleidelsheim, Germany, our production is now even more efficient and economical.

The **ZOLLER assembly** – a team of specialized, competent employees from assembly and quality assurance ensure, day by day, that your »toolBalancer« reaches your production facility in a perfect condition. Your »toolBalancer« does not leave the assembly line until all our employees are 100% satisfied, and the machine has the ZOLLER seal of quality. We are proud of this.

We have stood for “Made in Germany” since 1945. We are very proud that 100% of our development and assembly is done in Pleidelsheim. We make sure that you receive a tested and certified ZOLLER product.

CHRISTIAN THEIL, GERMAN ZELMER
Part of the ZOLLER assembly team

Efficient line assembly

Production at a premium level

100% made by ZOLLER



We Stand for Passionated Precision

TECHNOLOGY

Those who know ZOLLER measuring technology, know: We are experts when it comes to highest precision. For decades, we have been developing measuring machines with which you can rely on the μm -accurate result with 100% certainty. ZOLLER has also set a new standard in balancing technology with the »toolBalancer«:

Spindle and measuring technology – represent the centrepiece of the »toolBalancer«. As core components, they stand for the high-precision results when balancing your tools. The entire system is based on them and meets your highest demands, both technically and ergonomically. By using world-leading measuring and safety components, ZOLLER has made good things even better. An innovative ZOLLER product you can rely on.

The bar is high for our new dimension in precision and safety: A balancing system with the spindle as its center, a look of unique design and functionality with the highest level of innovation – all of this is combined in the ZOLLER »toolBalancer«.

CHRISTIAN PFAU

Head of Research and Development

Innovative design

Pioneering overall concept

Certified safety and highest accuracy



The High-Performance Interaction



TÜV and UL/CSA Tested

ZOLLER »toolBalancer« certified according to:

- international standard IEC/EN 61010-1 and cNRTLus
- impact test, passed according to DIN ISO 21940-23 class C60

»twinPanel« safety cover – fulfills DIN ISO 21940-23 class C60 for maximum safety. The interior sacrificial disk eliminates the impact of contamination, for instance with rests of cooling lubricants and damage due to loose components. This helps compensate for the highly important, often neglected process of protective panel aging due to everyday use. The sacrificial disk is quick and inexpensive to exchange, allowing the ZOLLER »twinPanel« to guarantee the safety of your operators.

Large work area – thanks to the safety cover which opens to the left side, the operator has 180° access to the spindle, making it much more convenient to work on the tools. Tools with a maximum length of 21.6 (550) or 29.5 inch (750 mm) and diameters of up to 18.9 inch (480 mm) can be balanced in the »toolBalancer«. The spindle is positioned a short distance from the front side, at an ideal working height relative to the operator's work area.

Solid base – specially designed to meet the requirements of balancing, of a stiff, vibration-dampened UHPC material. The solid 500 kg (1102.3 lbs) machine base gives the »toolBalancer« ideal stability, and therefore better precision. It guarantees long-term stability and precision during measuring and balancing. The environmentally-friendly UHPC material can be disposed of more easily at the end of its service life than cast iron, without creating any environmental impact from microplastics. Thanks to a lower energy usage and lower CO₂ emissions, manufacturing this material is also highly sustainable.

Adapter compartment with swiveling front flap – three storage places for quick, ergonomic adapter exchanges without bending knees and without placing strain on the back.

The cladding and housing – with integrated retaining frame are completely decoupled from the base body, serving as the foundation for an ergonomic device design.

Control panel – with active ventilation. All necessary electronic components are installed carefully and securely for defect-free operation. The positions of the control panel, drives and sensors ensure the best possible accessibility for maintenance and service work.

High-precision spindle – with a corresponding balancing adapter to mount almost any tool holder. The spindle rotates the tool depending on its weight with a variably adjustable speed of 400 up to max. 1200 revolutions per minute, and measures imbalances with a precision of < 0.4 gmm. When designing the high-precision spindle, ZOLLER focused specifically on creating a safe and certified adapter exchange process. A unique design element helps prevent accidents and damage caused by balancing adapters that are not screwed into the spindle.

ZOLLER Panel PC with TFT touch monitor suitable for industrial use – impresses with a high-resolution display and easy touch operation. The tilt of the monitor is adjustable, so it can easily be set to the desired position. Alternatively, it is also available as a separate »cockpit« control unit with keyboard and mouse.

Adapter storage compartment – for safely exchanging the adapter and conveniently switching between the adapter compartment and spindle.

Membrane keyboard – all important operating elements are ergonomically arranged. It is resistant to dirt and oil, is durable and has a pleasant feel. It features the controls for actuating the »twinPanel« safety hood, switching the position laser on and off, activating the measuring sequences, tool clamping, and the reset and stop function.



Complete Goals Quickly and Safely

»toolBalancer« makes tool balancing extremely simple: thanks to its ergonomically designed safety cover »twinPanel«, convenient membrane keypad, compartment for balancing adapter and storage in the large work area.

The ZOLLER operating software with its structured graphic display guides the operator intuitively through the measuring and balancing process. All balancing applications on 1 to 2 balancing levels are available for use via corresponding software options, such as fixed location compensation with balancing screws or the use of balancing rings or balancing by material removal such as drilling or milling.



The device interior – holds everything the operator needs to adjust screws or rings on the tool holder and quickly achieve the desired balancing result: Interior lighting, optional storage areas for tools and interim storage options for balancing adapters.

The separate »cockpit« control unit – offers height and position adjustment with tilt adjustment of the monitor, and is designed so that the software can be operated with maximum convenience. In addition to the TFT touch monitor, the »cockpit« offers space for keyboard and mouse and trays for label and laser printers, scanners and tools such as Allen keys.

The membrane keypad – is extremely durable and resistant to dirt and oil. It is used for tool clamping, starting the measuring procedures, stopping spindle rotation, activating the laser, and unlocking the »twinPanel« safety cover.

»toolBalancer 550«

01 - Open the cover - Insert and clamp the tool	02 Close the cover and start run 1	03 - Open the cover - Release the clamp - Turn tool by 180° and clamp	04 Close the cover and start run 2	05 - Open the cover - Correct imbalance (for instance by turning the balancing screw)	06 - Close the cover and start the control run - Measurement result test run

From the Center for the Highest Precision

For decades ZOLLER has been known worldwide for the highest innovative strength. Pioneering spirit and progress are our principles, which you will find in all ZOLLER products. The result is the »toolBalancer«, a masterpiece, whose special features cannot be surpassed.

Spindle, adapter and measuring technology are the heart of the »toolBalancer«. As core components, they stand for the high-precision balancing results of your tools. Imbalanced tools are caused by an asymmetrical design and the resulting asymmetrical mass distribution. The ZOLLER »toolBalancer« solves like with like and relies on a deliberate center offset in the balancing adapter when measuring and balancing your tools.

The balancing adapter with center offset is designed with a two-point contact and a pressure element. These features enable a large and more measurable sensor signal and guarantee highly precise balancing results.

01

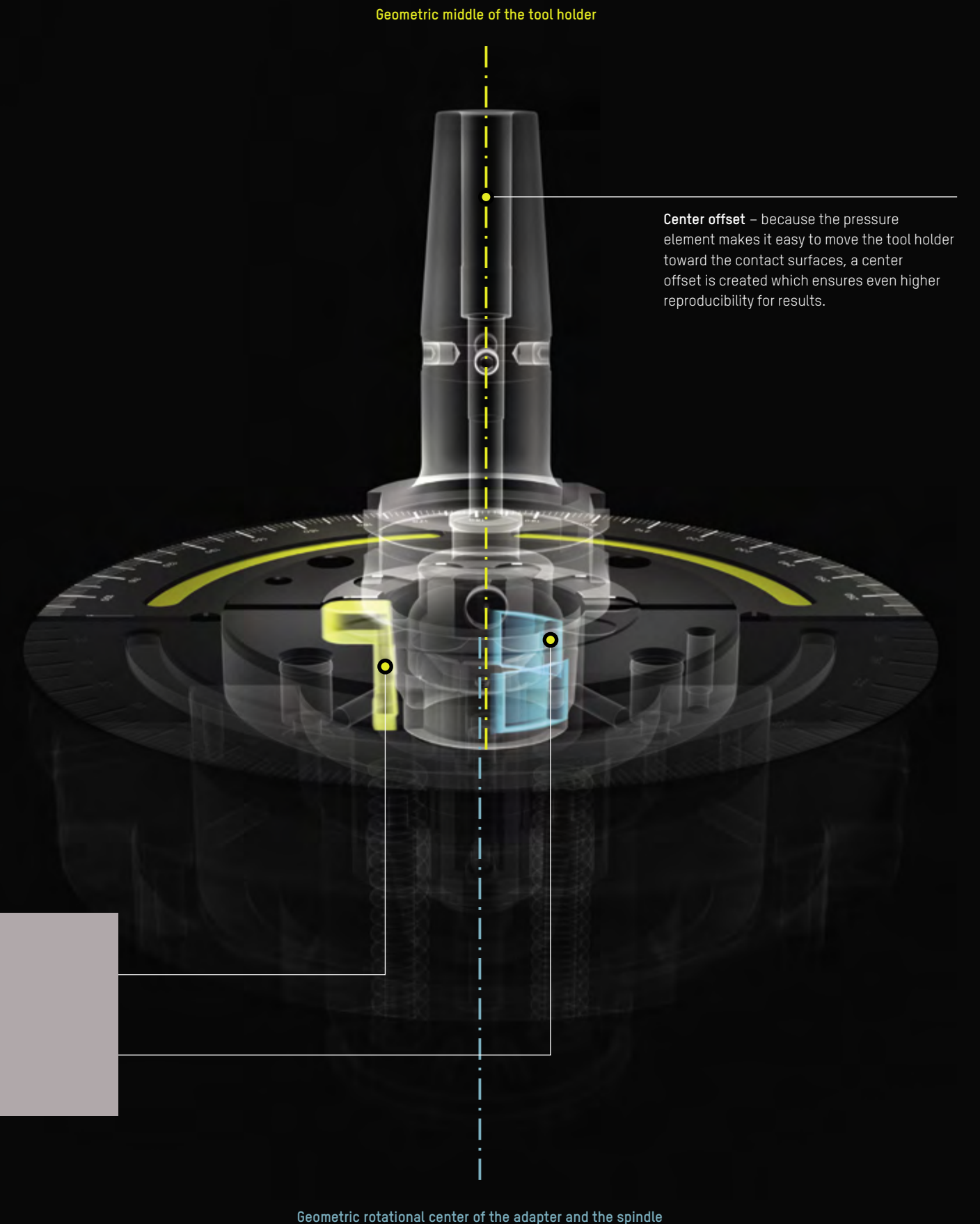
Pressure Element

The pressure element presses the taper of the tool holder against the contact surfaces of the balancing adapter with no clearance.

02

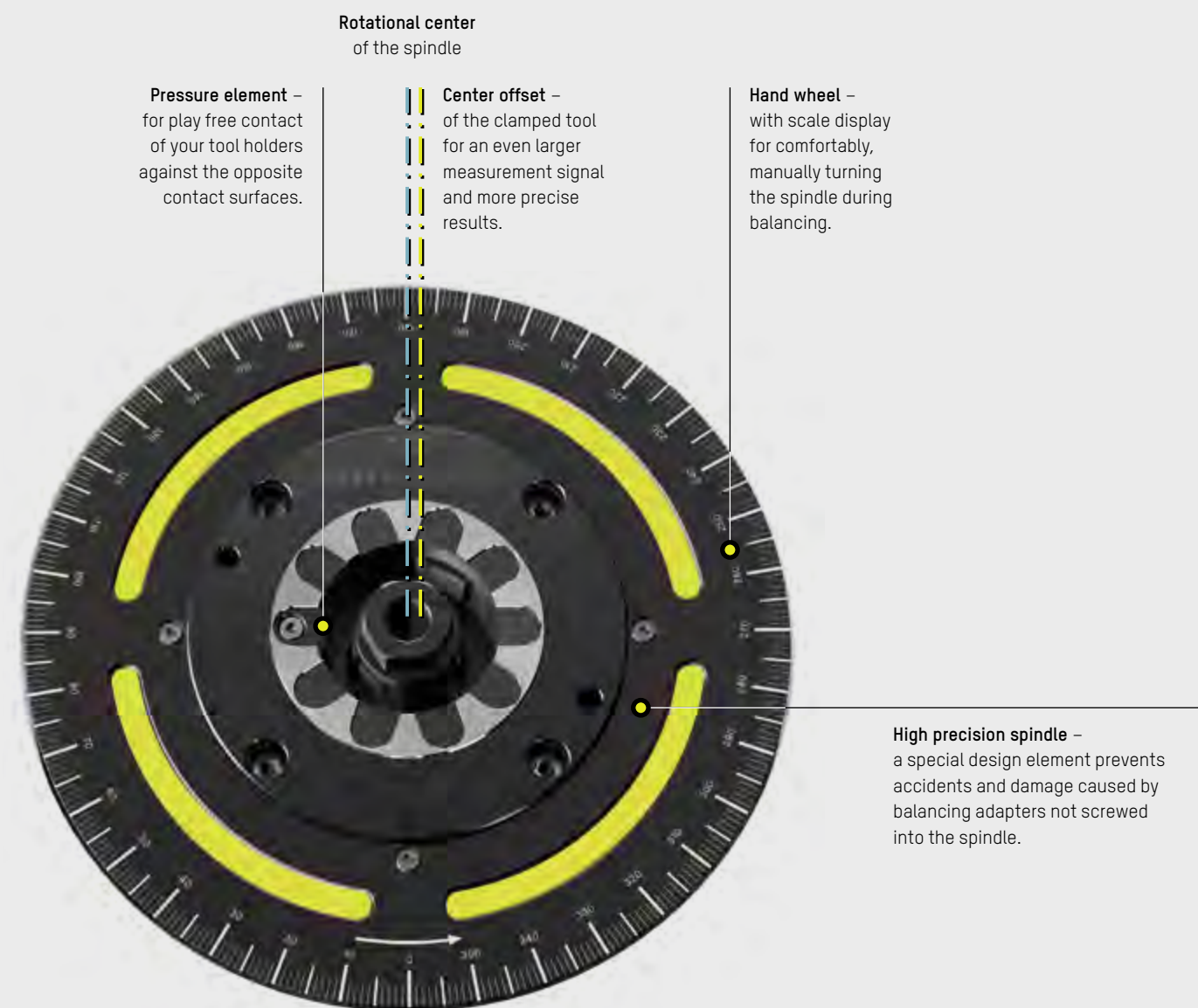
Anchor Contact

For higher reproducibility: The tool holders are firmly affixed to the contact surfaces of the balancing adapter.



Our Adapters, Reliable and Precise

The selection of high-precision ZOLLER balancing adapters with a unique design facilitate power-activated and safe clamping of SK, HSK, polygonal shank coupling adapters and more, with even better repeat precision than ever before.



SK Adapter – SK 30/40/50

- **Pneumatic clamping principle** with power spring package
- **High reproducibility** and repeatability
- **Centering pins with ejector** to easily change the tool holder
- **Maximum repeatability** thanks to a chuck holder without radial or axial clearance
- **5-point system** for backlash-free pick-up of the steep taper
- **Certified safety** at adapter change
- SK holders can be balanced without clamping bolts



HSK Adapter – HSK 32/40/50/63/80/100 A/C/E-B/D/F

- **Pneumatic clamping principle** with power spring package
- **High reproducibility** and repeatability
- **Centering pins with ejector** to easily change the tool holder
- **Maximum repeatability** thanks to a chuck holder without radial or axial clearance
- **Certified safety** at adapter change



Polygonal Shank Coupling Adapter – C 32/40/50/63/80

- **Pneumatic clamping principle** with power spring package
- **High reproducibility** and repeatability
- **Centering pins with ejector** to easily change the tool holder
- **Maximum repeatability** thanks to a chuck holder without radial or axial clearance
- **Certified safety** at adapter change



Further adapters available on request.

We Stand for Certified Safety

ERGONOMICS

Comfort in the workplace generates motivation and commitment among employees. We are convinced of this. Thus, ZOLLER has been constructing its products ergonomically and safely, enjoying world-wide market acceptance for more than 75 years. ZOLLER's research and development team has developed a special masterpiece with the »toolBalancer«:

»twinPanel« – the technologically-perfected ZOLLER protective hood. It passes the impact test according to DIN ISO 21940-23 protection class C60 100% to protect against possible injuries. With the design, we have gone one step further: The hood consists of an outer Plexiglas pane and an inner sacrificial disk made of polycarbonate. In the event of damage or long-term pollution and aging, you can simply reorder the inner pane and exchange it yourself on site. This saves you plenty of money in the long run and keeps your employees safe.

We give our products 100% radiance. The protective hood was of special importance to us – and the end result is something we are proud of.

STEFANIE BIAS, FRANK HARTSTEIN

Part of the »toolBalancer« product development team

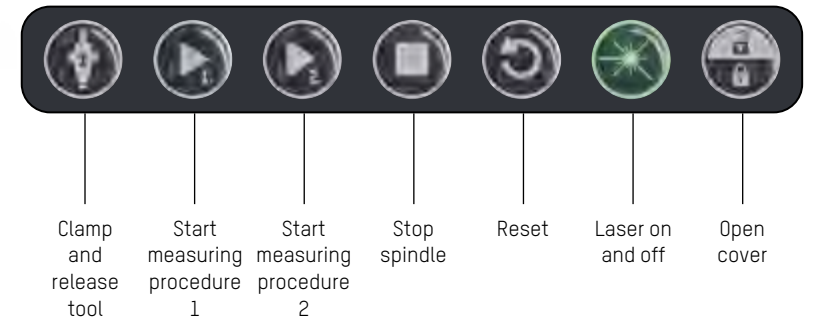
Double pane for certified safety

Comfortable, generously-dimensioned working space

Smooth, horizontal hood movement



Groundbreaking Concept





Typical for us Zollers – clear objectives for global success

CHRISTOPH ZOLLER, EBERHARD ZOLLER, ALEXANDER ZOLLER
Management



Quickly Select your Desired Model

Two models, with lots of features and practical options: Choose between two different tool lengths and accessories for optimal everyday use. For highly customized workflows and circumstances in your production. **Make your choice easily with clear and complete information, or contact us:** We are happy to assist you in selecting your model, as well as a variety of innovative options.



»toolBalancer 550«

Monitor bracket

Label printer



»toolBalancer 750«

»cockpit«

Handheld scanner

Label printer

Laser printer



Shelf for label printer directly at the »toolBalancer« with monitor holder



Tool scale, precision scale, and balancing screw set on a practical stand



Ergonomic storage for handheld tools

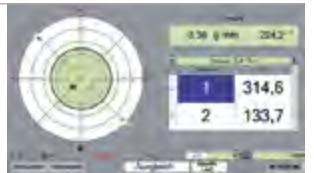


Tool identification via scanner on the »cockpit« extension unit

Features

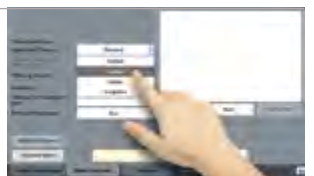
»toolBalancer« Operating Software available in 25 languages

Intuitive software with graphical user interface for fast and simple balancing in 1 or 2 planes, including comprehensive standard functions.



Touchscreen

Convenient software operation using the touchscreen.



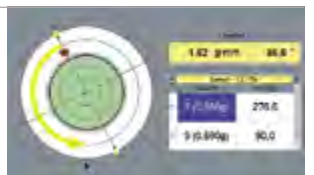
Visual insertion aid

Angular position of the spindle shown on the monitor.



Automatic rotation aid

The spindle automatically turns to the balancing position after the balancing run has been completed, simplifying exact positioning.



Laser marking

Displays imbalance and corrective position on the tool holder using a laser beam.



Balancing in one plane

For measuring and compensating for imbalance in one plane (static).



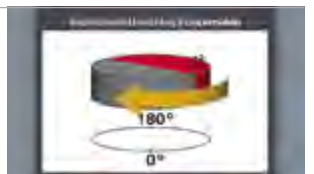
Balancing in two planes

For measuring and compensating for imbalance in two planes (dynamic imbalance).

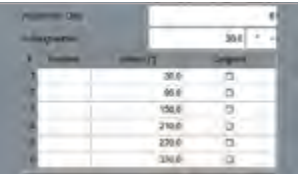
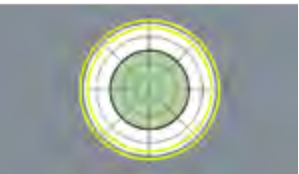
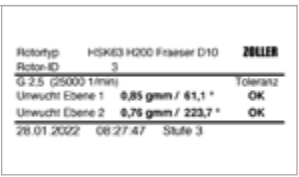


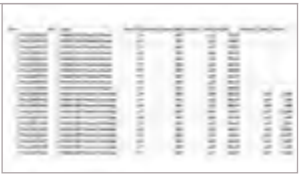
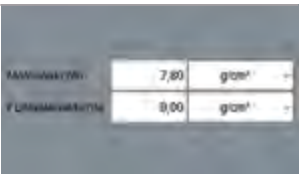
Handling Balancing

Compensate for measuring errors with handling balancing (2 measurement processes, handling angle 180° (adjustable)).



Features

Type-Specific handling balancing Handling values are stored for subsequent measurement. Quickly and precisely balance repeat parts (1 measuring run).	
“Fixed locations” balancing position Correction of the imbalance at specified positions (e.g., using balancing screws). Position specified symmetrically or user-defined.	
“Polar distribution” balancing position Correction of the imbalance possible over the entire circumference.	
“Various weights” balancing correction Correction of the imbalance by attaching or removing weights (e.g., balancing screws). Including ability to specify existing weight sets.	
“Move weights” balancing correction Correction of the imbalance by turning the balancing rings or slot nuts.	
“Radial drilling” balancing correction Correct imbalance through radial drilling. Automatic calculation of the number, angular position, and depth of the drill holes.	
“Milling” balancing correction Correction of the imbalance through radial, tangential, or axial milling.	
Label printer Output the measurement results in 1 or 2 levels on the ZOLLER thermal label printer.	

Protocol printing Output the measurement report as a printout on a laser printer, or as a .pdf file. Including editing function.	
Measurement data export User administration including 3 user levels with assignment of individual access rights.	
User administration Correction of the unbalance by axial drilling. Automatic calculation of the number, angular position, and depth of the drill holes.	
“Axial drilling” balancing correction Correction of the imbalance by axial drilling. Automatic calculation of the number, angular position, and depth of the drill holes.	
Handling weights PSC holders Handling balancing of PSC tool-holding fixtures and tools via 3 measurements, default handling angle 120°/240° (adjustable).	
Density function Ability to input the specific weight for the object to be balanced, if it deviates from steel.	
Blocked areas Ability to specify angular ranges that cannot be used to correct the imbalance.	
Variable measurement time In addition to the default, the user can select from 2 predefined measurement times, or adjust the measurement time individually (such as shortening the measurement time).	

Overview of all options

	»toolBalancer 550«	»toolBalancer 750«
Device equipment		
Integrated control unit (monitor holder) with 17 inch touch monitor and ZOLLER operating software	⊙	⊙
Separate »cockpit« control unit with 17 inch touch monitor and ZOLLER operating software, including keyboard, mouse and shelves for printer and other accessories	⊙	⊙
»twinPanel« safety cover for maximum safety during balancing	●	●
Control cabinet for securely holding all electronic components	●	●
Membrane keypad for operating the spindle and cover lock	●	●
“EMERGENCY STOP” SWITCH	●	●
Storage compartment for balancing adapter	●	●
Accessories		
Tool identification via handheld scanner with holder	⊙	⊙
Precision scale (optionally with DAkkS certification)/tool scale	⊙	⊙
Column storage for scale and balancing screw set	⊙	⊙
Laser printer/label printer	⊙	⊙
Shelves for label printer, laser printer, tools	⊙	⊙
Test rotor	⊙	⊙
Calibration magnets	⊙	⊙
Balancing putty	⊙	⊙
Balancing screw set/balancing rings	⊙	⊙
UPS unit 230 V/750 VA	⊙	⊙
Floor attachment set	⊙	⊙
Balance adapter (others available on request)		
Balance adapter SK 30/40/50	⊙	⊙
Balance adapter HSK 32/40/50/63/80/100 A/C/E-B/D/F	⊙	⊙
Balance adapter PSC C 32/40/50/63/80	⊙	⊙

	»toolBalancer 550«	»toolBalancer 750«
Features		
»toolBalancer« Operating Software in 25 Languages	●	●
Touchscreen	●	●
Visual insertion aid	●	●
Automatic rotation aid	●	●
Laser marking	●	●
Balancing in one plane	●	●
Balancing in two planes	●	●
Handling Balancing	●	●
Type-specific handling balancing	●	●
“Fixed locations” balancing position	●	●
“Polar distribution” balancing position	●	●
“Various weights” balancing correction	●	●
“Move weights” balancing correction	●	●
“Radial drilling” balancing correction	●	●
“Milling” balancing correction	●	●
Label printer	●	●
Protocol printing	⊙	⊙
Measurement data export	⊙	⊙
User administration	⊙	⊙
“Axial drilling” balancing correction	⊙	⊙
Turnover weights PSC holders	⊙	⊙
Density function	⊙	⊙
Blocked areas	⊙	⊙
Variable measurement time	⊙	⊙
Technical Data		
Dimensions with integrated control unit (monitor holder)	973 x 806 x 1725 mm	973 x 806 x 1957 mm
Dimensions with separate »cockpit« control unit	1518 x 1300 x 1725 mm	1518 x 1300 x 1957 mm
Weight of standard version	740/730 kg*	755/745 kg*
Maximum tool diameter / maximum tool length	480 mm/550 mm	480 mm/750 mm
Maximum tool weight / maximum spindle speed	30 kg/1200 U/min	30 kg/1200 U/min
Measuring accuracy	< 0.4 gmm	< 0.4 gmm

● Base model
⊙ optional

* with integrated control unit (monitor holder)/with »cockpit« (separate weight approx. 60 kg)

ZOLLER Smart Factory – Everything from a Single Source

ZOLLER Solutions stand for your future – we make you more successful. Because if you manufacture faster and more efficiently, you work more economically in order to be able to invest in the future. If economic progress is your goal, then ZOLLER is your partner.



In Germany at Home – Around the World for You

ZOLLER quality is “made in Germany” – and there for you, anywhere in the world.

Our company has its own locations and branches at 85 sites in 62 countries, guaranteeing we are close to customers and can provide first-class, personal customer service in local markets.

- Parent company
- Headquarters
- Branch office
- Representative

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ZOLLER

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.

ZOLLER
expect great measures

Headquarters in Pleidelsheim

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