

ZOLLER

# tool balancer

The Modular Balancing System



**ZOLLER**  
expect great measures®

toolBalancer

# Your Solution for Efficient Balancing – »toolBalancer«

Modern HSC machines work at high rotational speeds, so they need finely balanced tools. That's exactly what ZOLLER »toolBalancer« delivers – quickly, easily, and with outstanding precision.

And that's not all: With a ZOLLER »toolBalancer« in your production process, you can also balance your tool holders very economically, thanks to its self-explanatory operation and modular design.

## Your Advantages at a Glance:

- \_ Higher cutting power
- \_ Longer tool lives
- \_ Better component quality

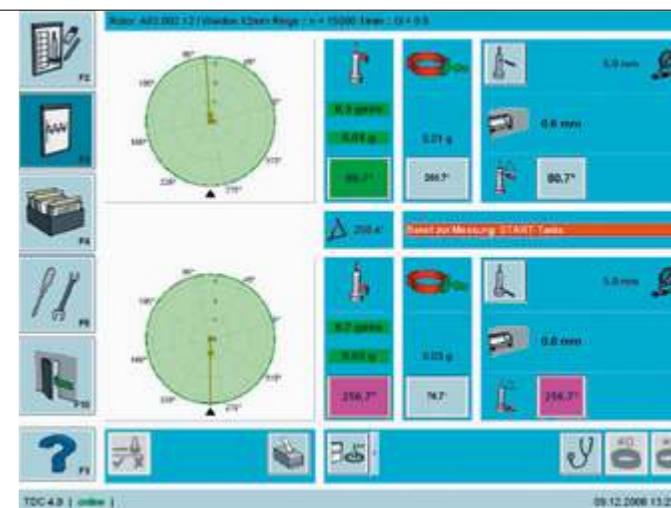


## It's so simple.

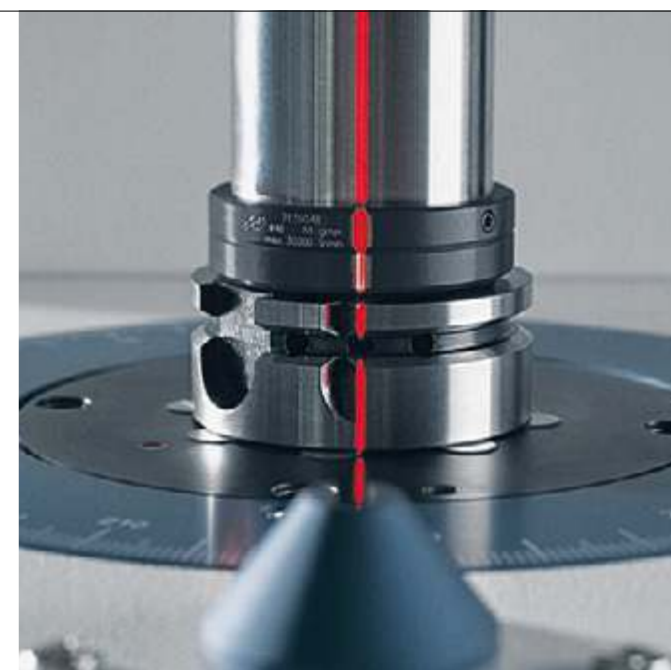
**1 | Insert and lock** the tool into the »toolBalancer« spindle. Start the automatic measuring procedure to determine imbalance.



**2 | The automatic measuring procedure** delivers results for the tool in one or two planes. After the measurement, click to rotate the tool to the right position and correct the imbalance.



**3 | A laser marking** displays the balancing point to identify the imbalance so it can be corrected. After the imbalance has been corrected by adding or removing mass, another measurement can be completed. The result and quality grade can be output as a protocol.



toolBalancer



### »toolBalancer« 1002

#### Balance on 1 and 2 planes (optional):

The tabletop and auxiliary machine for balancing tools, tool holders, and grinding discs.

- \_ Menu-guided operation using integrated control field and display
- \_ Specialized, high-precision spindle bearing
- \_ Ideal for mold makers, small series, and individual applications



### »toolBalancer« economic

#### Balance on 1 plane (static):

Perfectly suited for balancing shorter tools, since their torque imbalance is usually minor.

- \_ Menu-guided operation using integrated control field and display
- \_ Polymer concrete base for the best possible measuring accuracy
- \_ For tools up to 400 mm in length and/or 380 mm in diameter



### »toolBalancer« economic plus

#### Balance on 1 and 2 planes (dynamic):

For longer tools, when a torque imbalance needs to be corrected.

- \_ Menu-guided operation using integrated control field and display
- \_ Polymer concrete base for the best possible measuring accuracy
- \_ Includes cabinet with drawers for accessories
- \_ Fixed position compensation allows for balancing with balancing screws in rotors with threaded bore holes

## Technical Data

	»toolBalancer« 1002	»toolBalancer« economic	»toolBalancer« economic plus
Dimensions	500 × 680 × 820 mm	500 × 1500 × 820 mm	500 × 1500 × 820 mm
Maximum Tool Length	360 mm	400 mm   700 mm upon request	400 mm   700 mm upon request
Maximum Tool Diameter	340 mm	380 mm   425 mm upon request	380 mm   425 mm upon request
Maximum Tool Weight	15 kg	30 kg	30 kg
Weight	200 kg	450 kg	450 kg
Spindle Speed	300 – 1100 min <sup>-1</sup>	300 – 1100 min <sup>-1</sup>	300 – 1100 min <sup>-1</sup>
Measuring Accuracy for Smallest Measurable Imbalance	<1	<0.5	<0.5
Power Supply	230 V 50 – 60 HZ	230 V 50 – 60 HZ	230 V 50 – 60 HZ
Power Intake	0.4 kW	0.4 kW	0.4 kW
Compressed Air	6 bar	6 bar	6 bar

toolBalancer



#### »toolBalancer« comfort

##### Balance on 1 and 2 planes with PC:

The fast solution with a convenient overview, thanks to a large screen and fast keyboard and mouse input.

- \_ Correct imbalance through milling
- \_ Convenient operation via TFT monitor, keyboard, and mouse
- \_ Polymer concrete base for the best possible measuring accuracy



#### »toolBalancer« comfort plus

##### Balance on 1 and 2 planes with control terminal:

Maximum comfort with simple touchscreen operation, integrated PC, and accessory shelf.

- \_ Correct imbalance through milling
- \_ Simple, convenient operation via touchscreen or keyboard and mouse
- \_ Polymer concrete base for the best possible measuring accuracy



#### »toolBalancer« TD800

##### Balance large rotors up to Ø 800 mm in 1 and 2 planes with control terminal:

Rotors are balanced quickly and easily with customized clamping adapters.

- \_ Divided protective hood – Rotors up to Ø 800 mm can be inserted from above
- \_ Simple, convenient operation via touchscreen or keyboard and mouse
- \_ Polymer concrete base for the best possible measuring accuracy

### Technical Data

	»toolBalancer« comfort	»toolBalancer« comfort plus	»toolBalancer« TD800
Dimensions	1100 × 1500 × 820 mm	1100 × 1500 × 820 mm	1500 × 1910 × 900 mm
Maximum Tool Length	400 mm   700 mm upon request	400 mm   700 mm upon request	750 mm
Maximum Tool Diameter	380 mm   425 mm upon request	380 mm   425 mm upon request	800 mm
Maximum Tool Weight	30 kg	30 kg	110 kg
Weight	450 kg	450 kg	550 kg
Spindle Speed	300 – 1100 min <sup>-1</sup>	300 – 1100 min <sup>-1</sup>	200 – 1100 min <sup>-1</sup>
Measuring Accuracy for Smallest Measurable Imbalance	<0.5	<0.5	<0.5
Power Supply	230 V 50 – 60 HZ	230 V 50 – 60 HZ	230 V 50 – 60 HZ
Power Intake	0.4 kW	0.4 kW	1 kW
Compressed Air	6 bar	6 bar	5 – 6 bar

Options

Symbol	Item Designation	Description	toolBalancer					
			1002	economic	economic Plus	comfort	comfort plus	TD 800
	Vibration Optimized Base	Table adapted for optimized vibration behavior	●	-	-	-	-	-
	Base Made of Polymer Concrete	Best possible measuring accuracy thanks to heavy base	-	●	●	●	●	●
	Operation	Menu-guided operation through a user-friendly display	●	●	●	●	●	●
	Visual Insertion Aid	Angular position of the spindle shown on the display	●	●	●	●	●	●
	Laser Marking	Displays imbalance and corrective position using a laser	●	●	●	●	●	●
	Print Label	Print balancing result on adhesive label	-	-	-	●	●	●
	Radial Drilling	Correct imbalance through radial drilling	●	●	●	●	●	●
	Software for Compensate with Balancing Rings	Balance using rotating rings or slot nuts	●	●	●	●	●	●
	Handling Balancing	Compensate for measuring errors with handling balancing (2 measurement processes, handling angle 180°)	●	●	●	●	●	●
	Balance with Spindle Compensation	Quickly and precisely balance repeat parts (1 measuring run)	●	●	●	●	●	●
	Balance on 1 Plane	For measuring and compensating for imbalance in 1 plane (static)	●	●	●	●	●	●
	Balance in 2 Planes	For measuring and compensating for imbalance in 2 planes (dynamic imbalance)	⊙	⊙	●	●	●	●
	Fixed Position Compensation	Facilitates balancing at specified locations, i.e. with the help of balancing screws	⊙	⊙	●	●	●	●











Options

Symbol	Item Designation	Description	toolBalancer					
			1002	economic	economic plus	comfort	comfort plus	TD 800
	Automatic Insertion	Turns the spindle to the desired angular position at the push of a button making it easier to precisely position the spindle	⊙	⊙	●	●	●	●
	Cabinet with Drawers for Accessories	Storage with two pull-out drawers for balancing adapters and other accessories	-	⊙	●	●	●	●
	Milling Program	The milling program allows users to correct imbalances through milling	⊙	⊙	⊙	●	●	●
	Balancing Software TD 4.0	New software with optimized user interface and touchscreen operation	-	⊙	⊙	●	●	●
	Monitor Mount	Convenient mount to house PC monitor and keyboard	-	⊙	⊙	●	-	-
	Printer Shelf	Optional shelf for printer (monitor mount required)	-	⊙	⊙	⊙	-	-
	PC Mount	Optional mount for external PC (monitor mount required)	-	⊙	⊙	⊙	-	-
	Control Terminal incl. Touchscreen	Control console for housing touchscreen, keyboard, mouse, printer, and other accessories (only in conjunction with TD 4.0 balancing software)	-	⊙	⊙	⊙	●	●
	Touchscreen	TFT monitor with touchscreen operation	-	-	-	⊙	●	●
	TFT monitor	Convenient keyboard operation for integrated PC (includes TFT monitor, keyboard, mouse). Only in conjunction with TD 4.0 balancing software	-	⊙	⊙	●	-	-
	Touchscreen	Convenient touchscreen operation for integrated PC (includes high-quality 19" touchscreen, keyboard, mouse). Only in conjunction with TD 4.0 balancing software	-	⊙	⊙	-	●	●

Options

Symbol	Item Designation	Description	toolBalancer					
			1002	economic	economic plus	comfort	comfort plus	TD 800
	Density Function	Allows input of the specific weight of the object to be balanced, if deviating from steel	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Axial Drilling	Allows for rotor balancing through axial drilling, i.e. for grinding discs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Handling Balancing at any Angle	Handling balancing of rotors for which a 180° handling angle is not possible (i.e. Capto mounts)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Software for Protocol Printing	Prints a detailed measuring protocol (balancing certificate)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	DE   EN   FR   IT   ES	Languages for user interface for internal display	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
	User Administration	User administration with assignment of individual access rights	-	-	-	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Prohibited Areas	Definition of angular sections that cannot be used to correct the imbalance	-	-	-	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Alternative Compensation Positions	Calculation of alternative compensation positions, if suggested position is not possible	-	-	-	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Optimized Measurement Time	Abbreviated measurement process, if measuring accuracy sufficient	-	-	-	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Special Hood Type 3	Protective hood for extra long tools with max. 700 mm length and Ø 400 mm (optional with second laser marking from top)	-	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	-
	Special Hood Type 4	Protective hood for extra long tools with max. 700 mm length and Ø 425 mm (optional with second laser marking from top)	-	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	-
	Concentricity Measurement Device	Simple and reliable testing of concentricity and axial run-out for grinding discs	<input type="radio"/>	-	-	-	-	-

Options

Symbol	Item Designation	Description	toolBalancer					
			1002	economic	economic plus	comfort	comfort plus	TD 800
	Balancing Screw Assortment	Set consisting of 11 x 10 specialized screws for fine balancing of tool holders with M6 balancing threads (i.e. HAIMER shrink fit chucks)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Balancing Rings	For fine balancing of tool holders with cylindrical exterior diameters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Precision Scale	For highly precise weighing of balancing weights	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Software Scale Connection	Automatic adoption of rotor weight from a scale	-	-	-	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Tool Scale	Determines the weight of the tool holder, optional direct adoption of weight into the balancing software	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Laser Printer for Protocol Printing	Laser printer with measuring machine control to print out a detailed balancing protocol	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Set of Calibration Magnets	Magnets for testing, training, and demonstration purposes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Training	Training is required to preserve any future warranty claims	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Calibrator	For calibrating and testing the balancing machine using a defined mass	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Label Printer "Dymo"	Print an adhesive label with measuring results (short protocol); connection via USB interface	-	-	-	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Additional Options:  
Support arm for tool scale  
Eccentric balancing

ZOLLER

# solutions

More speed, high quality, safer processes – ZOLLER system solutions allow you to achieve more from all aspects of production. To do so, we combine hardware, software and services for our customers to create optimal system solutions for presetting, measuring, inspection and management of tools. Everything from a single supplier. Everything for your success. Everything with ZOLLER solutions.

Outstanding service included: If you have any questions, please contact us at:  
**+49 7144 8970-137**



## ZOLLER Solutions

Presetting & Measuring  
Inspection & Measuring  
Tool Management  
Automation  
Service