



## Workpiece Measurement



Modular System



Post-Process Measuring Technology



Low- & High-Volume Production



Temperature Measurement



Position Measurement



Diameter Measurement



Length Measurement



Roundness Measurement



Cylindricity Measurement



Concentricity Measurement



Angle Measurement



**FLEXIBLE 2D MEASURING MACHINES**  
FOR ROTATIONALLY SYMMETRICAL WORKPIECES

**BLUM**  
**NOVOTEST**



# FLEXIBLE 2D MEASURING MACHINES

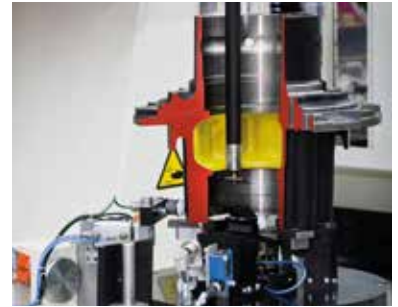
FOR ROTATIONALLY SYMMETRICAL WORKPIECES | VERTICAL DESIGN | HORIZONTAL DESIGN

## Robust and versatile solution for flexible tactile measurement of rotationally symmetric precision parts in production environment

Primarily integrated into production lines, but also when used on a stand-alone basis, the flexible 2D measuring machines in vertical or horizontal design perform highly accurate measurements right after the machining. Production-related quality assurance and maximum productivity are guaranteed by a correction interface to the tooling machine. The machines can either be equipped with standard NC swivel lever clamping chucks or special clamping devices. The flexible 2D measuring machines fit as an ideal measuring system for mid- and low-volume production and a workpiece range from solid truck wheel hubs down to thin lightweight workpieces.

### Your benefit:

- High availability thanks to extremely solid and durable design
- Automation by loading gantry (horizontal design) or robot (vertical design)
- Highly flexible due to software measuring sequence and NC clamping devices
- Outstanding precision also in harsh production environments
- Can be fully integrated as »end-of-line« or »post-process« system
- High availability based on concept without changeover requirements
- No calibration master required
- Manual or automatic loading/unloading



Dynamic measurement of truck wheel hubs in the production environment



Precise measurements using the compact BLUM touch probe with wear-free measuring mechanism

### Technical data\*

Dimensions (vertical design)	H = 2500 mm, D = 800 mm, W = 2400 mm
Dimensions (horizontal design)	H = 2700 mm, D = 1200 mm, W = 1400 mm
Measurement range X (diameter)	400 mm   optional 550 mm
Measurement range Z (length   height)	250 mm   optional 400 mm (vertical design only)
Workpiece weight	up to 100 kg
Measurement uncertainty	U1** = [2+L (mm)/250] µm – in X (diameter) U1** = [3+L (mm)/250] µm – in Y (length) U2** = [3+L (mm)/150] µm – two dimensional
Repeatability	1.5 µm (in X and Z)
Temperature compensation	integrated for machine frame   optional for workpiece
Sensor system	tactile
Measuring procedure	static   dynamic   combined
Workpiece rotation	High precision rotation table (C-axis)
Control panel	panel PC with measurement/evaluation software and HMI
Correction	optional correction interface
Level of automation	manual to fully automated
Application field	low-   mid-volume production
Temperature range   weight	0 °C to +45 °C   approx. 2500 kg (depending on version)



Vertical design



Horizontal design

\* Special versions on request \*\* Expanded standard measurement inaccuracy (95 %) U95 as per DIN EN ISO 14253-1