



Balance Systems

Top Gauge 200

Wide Range Gauging Head for Grinding Machines

Compatibility

Solves the majority of in-process grinding applications:

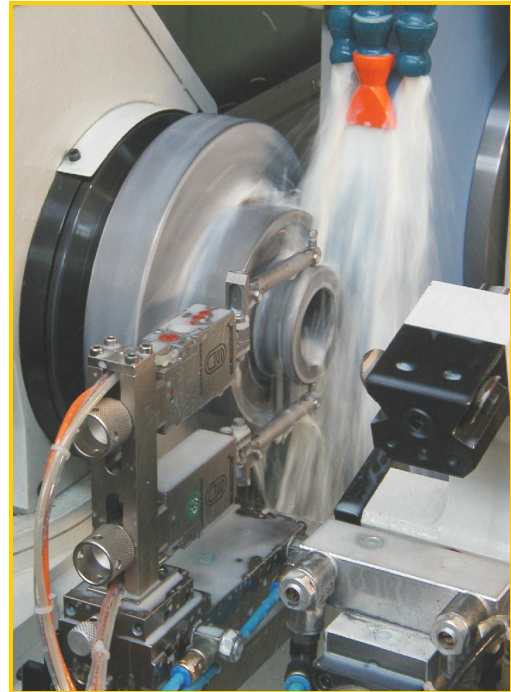
- part diameter
- part positioning
- continuous or interrupted surfaces

Applicable on new or machines currently in operation (retrofitting)

Precision

Over the full wide range:

- sub-micron precision when automatic calibration is executed (relative to a master part) for each diameter to be checked
- micron precision when automatic calibration is executed (relative to a master part) for multiple diameters to be checked is executed



Productivity

- No additional set-up required within the gage range
- Fast part (diameter) change over
- The gauge finger mechanical fuse, dramatically reduces machine downtime in case of accidental collision

Flexibility

TOP GAUGE 200 is managed by the VM20 System, suitable for:

- In-Process / Post-Process diameters check
- Active / Passive part flagging
- Roundness check
- Taper check

Connectivity

The signals interface can be:

- Digital I/O
- RS232 / 422
- Parallel Interface: BCD or Binary (8 bit)
- Profibus DP

TOP GAUGE 200 is connected to the VM20 System by special cables and the interface is designed to be independent by the length of the extensions.

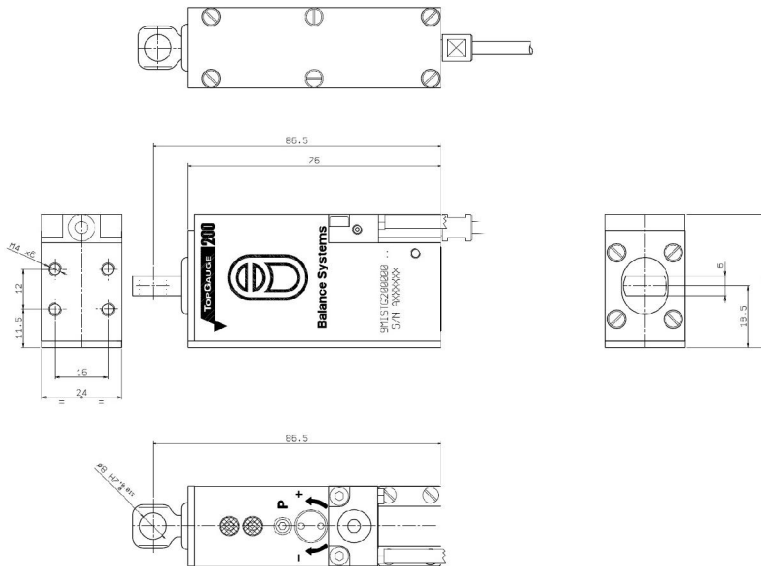


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Mechanical dimensions



The TOP GAUGE 200 heads can be equipped with a large range of accessories:

- supports,
- slides (hydraulic and pneumatic)
- fingers
- tips

to satisfy every possible application and process.

Technical specifications

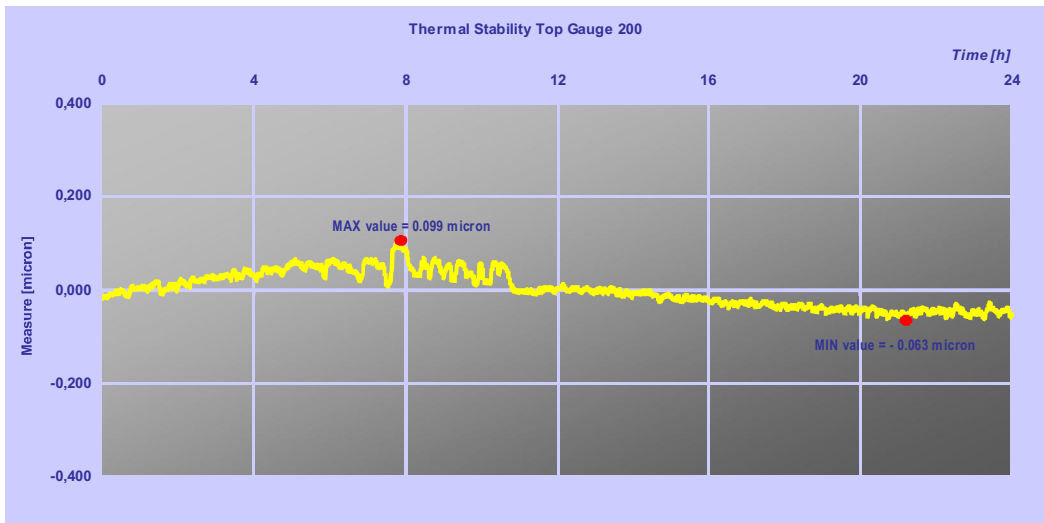
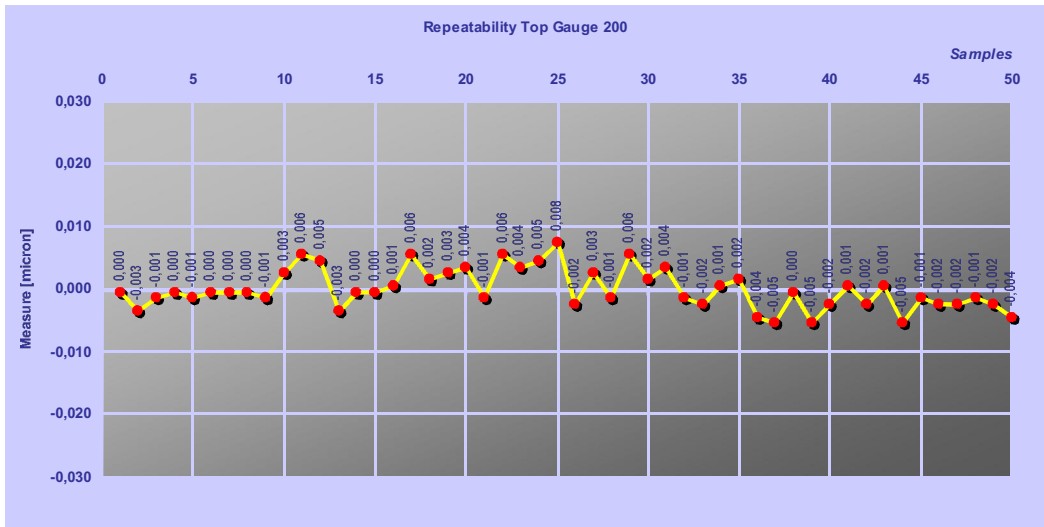
Sensor linearity and sensitivity	± 2.5 mm
Sensitivity error	$\pm 2\%$
Repeatability	0.1 μm
Accuracy	0.1 μm
Displayed resolution	0.1 μm
Thermal drift	$< 0.1 \mu\text{m}/^\circ\text{C}$
Thermal stability	$< 0.2 \mu\text{m}/24\text{h}$
Measuring range (with 120 mm fingers)	± 6.25 mm
Finger length	Min 30 mm – Max 130 mm
Finger offset	Max 40 mm
Retraction type	Pneumatic 4-7 bar
Retraction stroke	Adjustable by user Max 16.5 mm
Measuring force	Adjustable by user Min 80 gr – Max 200 gr
Prestroke	Adjustable by user
Overstroke	Adjustable by user
Damping	Oil and software
Extension cable	30 m



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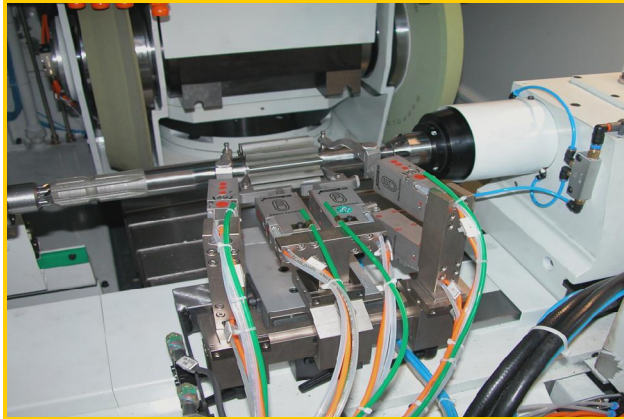




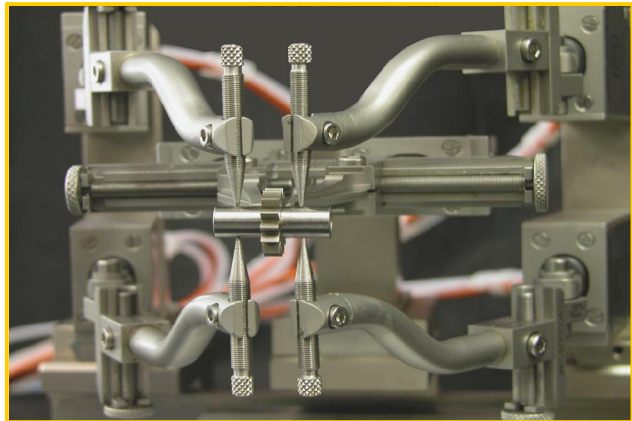
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- The electronic board manages up to 4 gauge head simultaneously
- Auto-zero function
- Real time offset correction
- Simple programming by formulas which combines the gauge heads
- Up to 32 resident part-program
- Digital and analog display
- Transducer position display
- Synchronized gauging by accurate algorithm for discontinuous surfaces
- In-Process and Post-Process roundness analysis



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