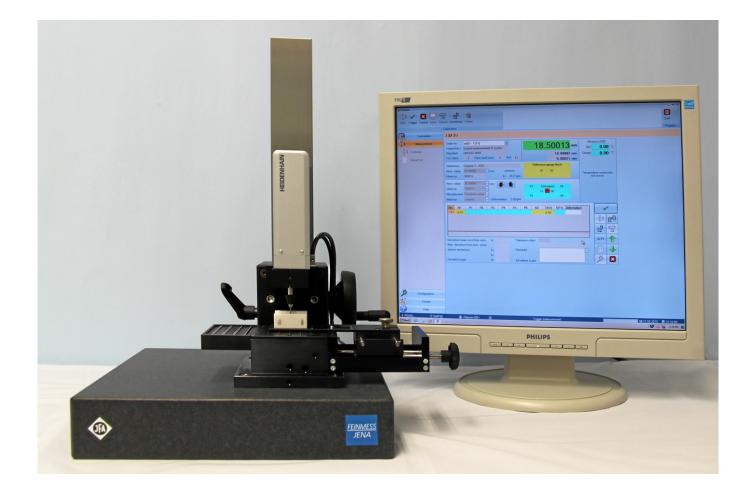
EMP 25 Gauge Block Tester



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- Adds efficiency to your gauge block testing and in-plant calibration processes
- DAkkS- and factory calibration
- Rectangular and square gauge blocks
- Determines DIN ISO 3650 characteristics
- Save considerable time and cost



General	EMP 25
Application	The EMP25 is used for calibrating parallel-faced end standards of rectangular and square cross section (gauge blocks) with gauge lengths from 0.5 to 100 (500) mm
Measuring method	Direct measurement
Measuring set-up	An inductive probe and an high-resolution incremental probe (with a direct measuring range of 25 mm) are connected in a summation circuit to measure gauge length and range of error
Software	Powerful measurement and data handling software for efficient, economic gauge block calibration

Advantages

- •Enormous saving on recalibration cost:
- Only 11 reference standards needed for zero adjustment up to 100 mm
- •About 50% less measuring time:
- Upper probe needs no adjustment over 25 mm few reference standards to be used
- •Single measuring range fits any gauge block up to 100 (500) mm
- •Partly automatic measurement procedure
- •Extensive PC software running under Windows 10
- •National and company standards can be created



Concept

The conventional comparative measurement of gauge blocks involves high recalibration costs, as you need to have a large stock of calibrated standards. Above all, it is extremely time-consuming. The innovative technique using a long range probe does away with these drawbacks, simply by increasing the measuring range of the upper probe from $\pm 20 \mu$ m to 25 mm, while retaining the resolution of 0.01 (0.001) μ m. This makes it possible to measure all gauge blocks in a single 25 mm measuring range relative to a reference position. The reference position can be defined, e.g., by measuring a standard and setting the display to the measured length of the standard. To minimize linear errors of the instrument as a whole (aligning error, probe non-perpendicularity, temperature influences), the system uses a calibration method which registers and compensates detectable systematic measuring errors.

Specifications

Incremental Probe Type Direct measuring range Measuring system Resolution Uncertainty of measurement Measuring pressure Thread for screw-in stylus Contact tip

EMP25 Resolution Uncertainty of measurement Repeatability

Ambient temperature for ensuring the specified length measuring uncertainty CT2501 25 mm DIADUR-transmitted-light scale and encoder Zerodur Ceramic $a=(0\pm0.1)*10-6K-1$ 0.01 (0.001) µm (0.03+L/1000) µm 1 N M 2.5 Contact tip with spherical section R=20

0.01 (0.001) μm (0.05+L/1000) μm 0.03 μm

Temperature 20°C \pm 0.5K Δ T=0.2 K/h



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