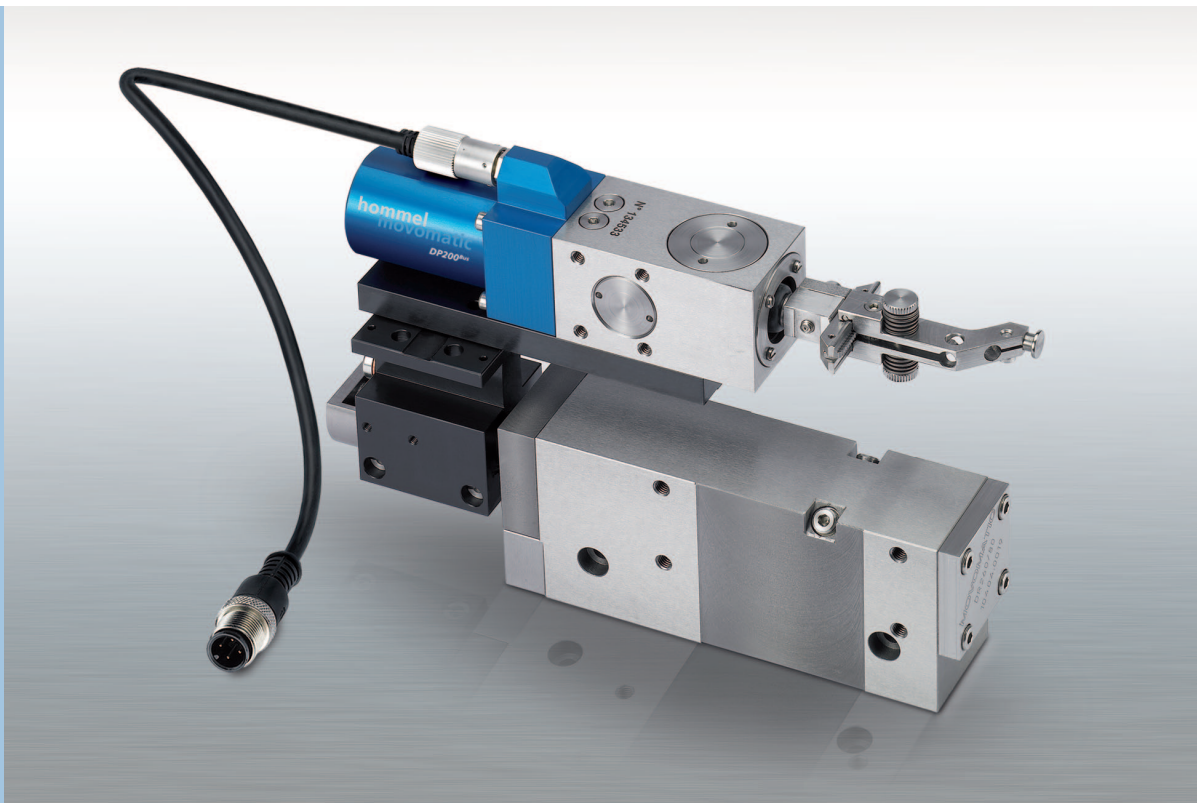




HOMMEL-MOVOMATIC DP200^{Bus}

Digital gauge head for locating axial position



Precision is our business.

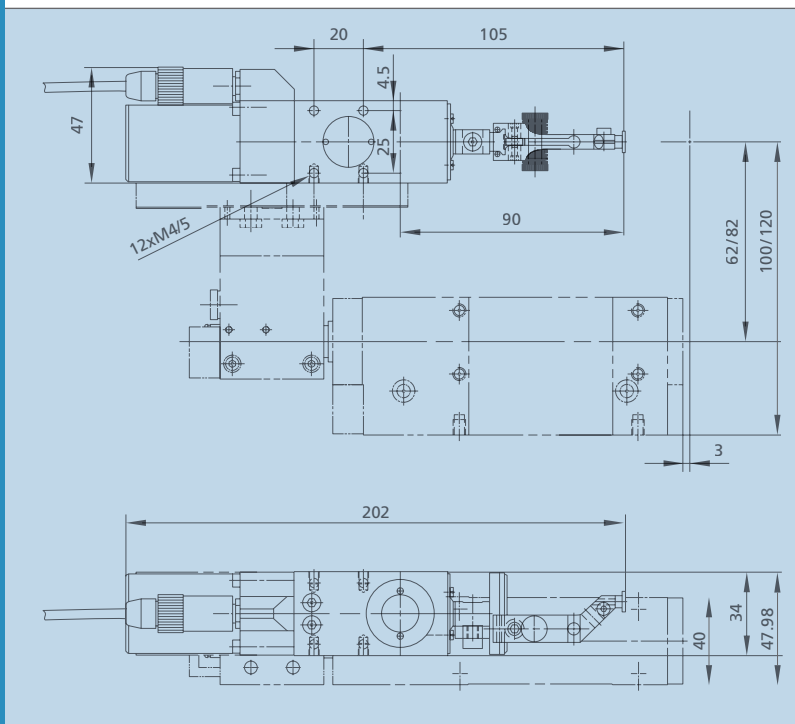
HOMMEL-MOVOMATIC DP200^{Bus}

Reliable and precise axial location of workpiece shoulders

- Gauging range without readjustment $\pm 2000 \mu\text{m}$
- For interrupted or uninterrupted surfaces
- Central position, measurement on the left or on the right without mechanical adjustment
- Quick adjustment, easy setting
- Break away gauge arm for crash prevention
- Integrated electronics and data transmission using Digital Bus

The DP200^{Bus} gauge head has been designed by Hommel-Movomatic to locate the axial position of a wide range of uninterrupted or interrupted workpieces as an integrated part of a production line (pre-process, in-process) or for downstream quality control (post-process). It has been developed for users who demand the best in terms of efficient metrology, ruggedness and ease of use. The DP200^{Bus} axial positioning head enables manufacturers to cut production times while improving the quality of their machined products and the consistency of their results by eliminating dimensional variations.

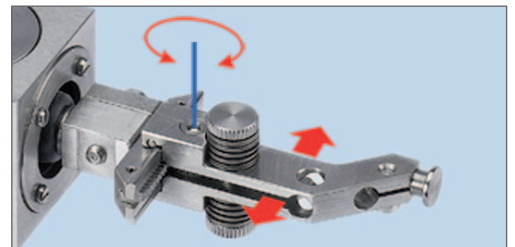
Main characteristics



Dimensions in mm

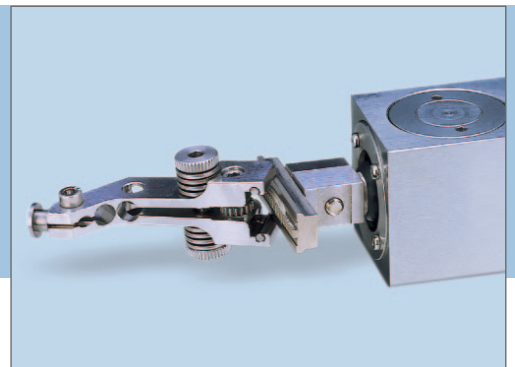
1. Quick adjustment, easy setting

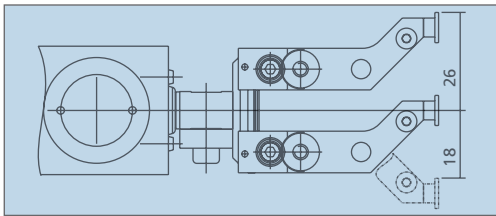
It is user friendly and quick setup using one single hex key.



2. Break away gauge arm for crash prevention

- Effective on impact from any direction.
- No damage to workpiece, gauge head or its arm.

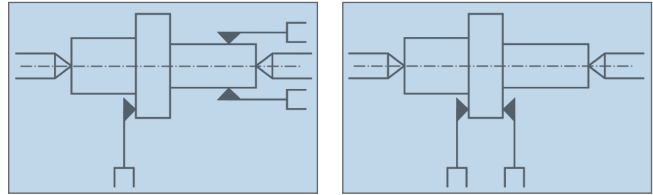




Dimensions in mm

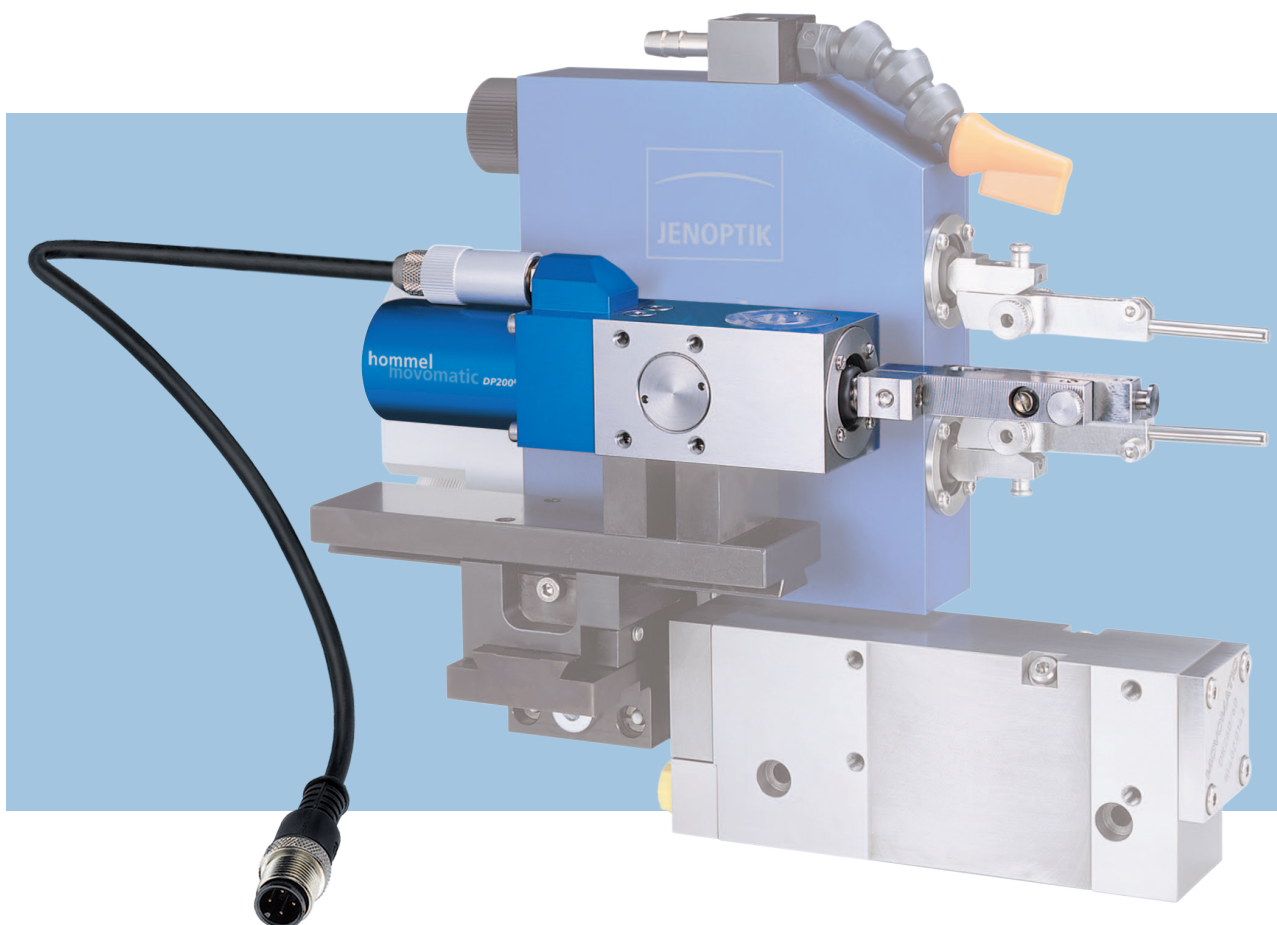
3. Excellent metrological performances

The DP200^{BUS} is capable of detecting the axial position of uninterrupted or interrupted surface shoulders with a measurement range of $\pm 2000 \mu\text{m}$. The 6σ repeatability error under standard conditions is less than $0.3 \mu\text{m}$.



4. Integrated electronics and data transmission using Digital Bus

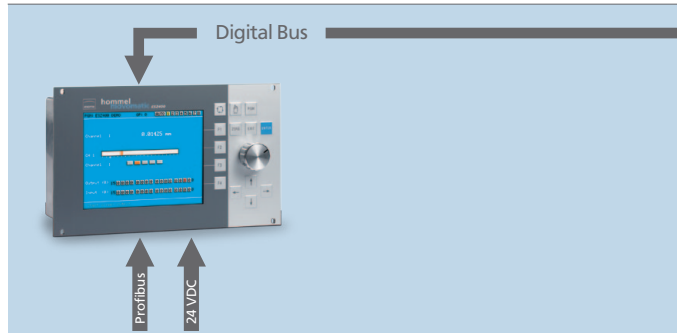
- One single transmission cable utilizing a standard connector for all measurement functions, including: electronic data acquisition and engagement/disengagement of gauge arm.
- Programmable parameters for optimizing measurements (can be saved in the gauge head).
- Connection of two or more gauge heads in parallel, using only one input connector on the control electronics.



5. Compatibility with a range of electronic gauging and control systems

The DP200^{Bus} gauge head is compatible with each of the following gauging and control electronics.

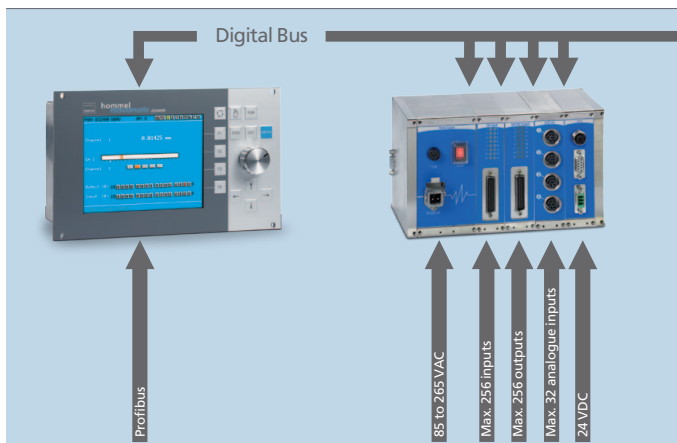
ESZ400



Basic system

Main module with Profibus and a maximum of 2 digital gauge heads.

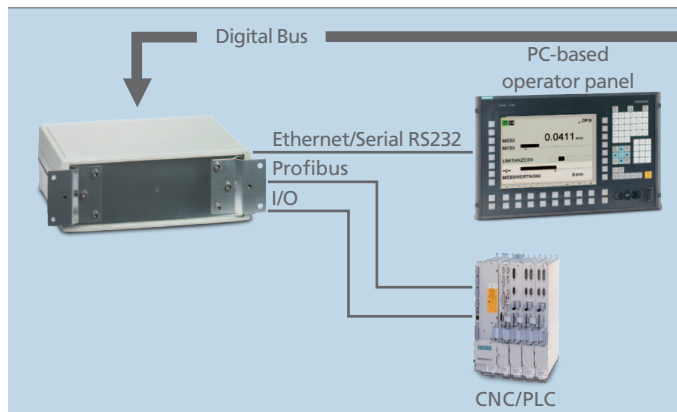
ESZ400



Extended system

Main module with Profibus, a maximum of 16 digital gauge heads, input/output modules and input modules for analogue sensor channels.

ESi400



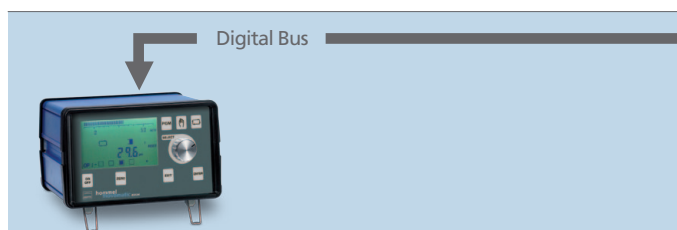
Maximum 8 digital gauge heads with HMI interface.

ES400



Maximum of 8 digital gauge heads.

ES124



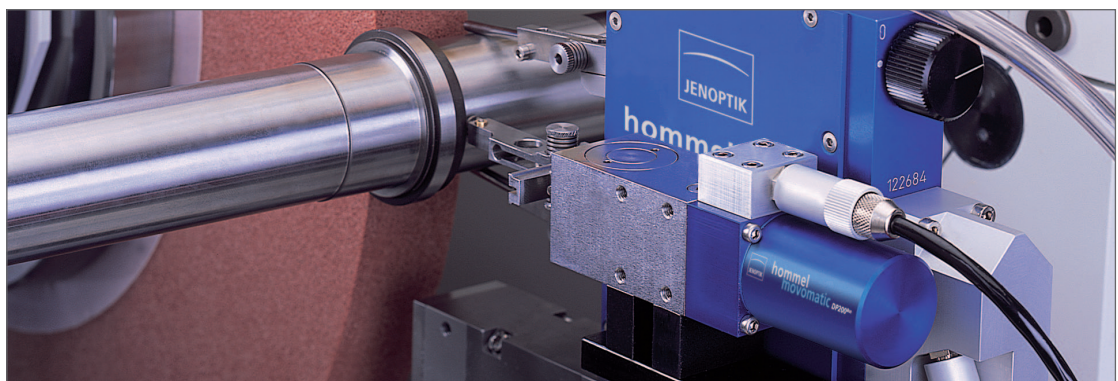
Maximum of 2 digital gauge heads.

Mechanical and metrological characteristics

Gauging range without readjustment	± 2000 µm
6σ repeatability error under standard conditions	< 0.3 µm
Thermal drift for steel (coefficient of linear expansion 11x10 ⁻⁶ /°K)	< 0.1 µm/°K
Gauging force on tip contact: - Over half-range of ± 1000 µm - Over full range of ± 2000 µm	1.5 N ±10% 1.5 N ±20%
Vibration absorption	Viscous type
Two mechanical stops	Adjustable (over entire range)
Gauge arm mechanical adjustment system	Quick-acting
Crash-safety feature	Break away gauge arm on impact with no mechanical damage
Gauge arm electrical engagement / disengagement and reversing feature	Motorized - Central position, measurement on the left or on the right
Ingress protection	IP65

Electrical/electronic features

Number of sensors	1
Type of sensor	Inductive LVDT
Functions of onboard circuitry	- Sensor power supply - Analogue/Digital "A/D" conversion - Transmission of gauging value - Activation of gauge arms engagement / disengagement and reversal status feedback - Command transfer - Programmable parameters - SECTO memories
Transmission mode of the gauging signal	Digital serial Bus
Number of connecting cables	One single cable for: - Gauge head power supply - Transmission of measurement data - Command transfer/configuration
Type of cable connection	By standard watertight connector
Cable type	Heavy duty PUR





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