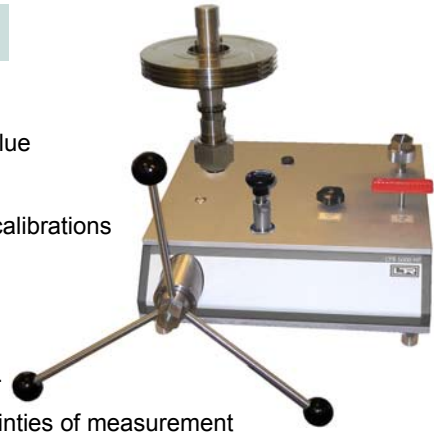


High Pressure Deadweight Tester CPB5000-HP High Pressure Balance - Primary Standard for High Pressure

- Hydraulic operated, incl. priming pump
- Ranges: 25 ... 2500 bar (40000 psi) and 25 ... 4000 bar (60000 psi)
- Accuracy (total uncertainty of measurement) up to $\pm 0.02\%$ of measured value
- High performance spindle pump for easy generation of high pressure
- Self-sustaining complete system, also suitable for on-site measurements / calibrations
- Including Certificate of Calibration, traceable to National Standard (optional: DKD certification)



Deadweight Tester (Pressure Balances) are the most accurate instruments for the calibration of electronic or mechanical pressure measuring instruments.

The direct measurement of pressure, according to its definition as a quotient of force and area, and the use of high-quality materials result in small uncertainties of measurement and an excellent long-term stability of five years. For these reasons, deadweight testers have already been used in calibration laboratories of industry, national institutes and research labs for many years.

Due to the integrated pressure generation and the purely mechanical measurement principle, the **CPB5000-HP** deadweight testers are ideally suited for on-site use as well as service and maintenance purposes.

The core of the **CPB5000-HP** is a piston-/cylinder system of tungsten carbide. Besides this high-quality material, which primarily stands out for its small temperature coefficient, the workmanship of the system is a measure of the final accuracy of the pressure balance. Several refinement processes ensure a high-quality and even surface with small grabs of only a few micrometer. In order to generate the individual test points, the piston-/cylinder system is weighted with mass-loads, which are also calibrated and specially adapted to the respective application.

The pressure is set via an integrated pump. For fine adjustment an adjustable volume with precision spindle is supplied. The weight applied is proportional to the desired pressure and provided by using optimally graduated weights. As soon as the measuring system reaches equilibrium, there is a balance of forces between pressure and wheel weights. Due to the excellent quality of the system this pressure remains stable over several minutes, so that for instance adjustments of your device under test can be carried out without any problems.

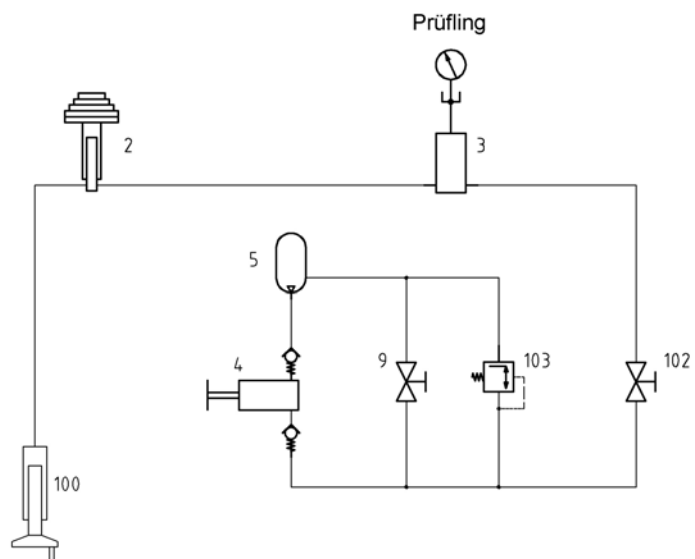
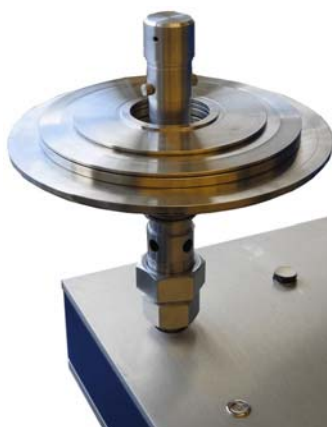
Optional Accessories:

- Intelligent Calibration Module IKM
Especially when highly accurate measuring values with uncertainties of measurement of less than 0.025% are required, complicated mathematic calculations and corrections used to be necessary. With this optional addition to the system all critical ambient parameters are registered and automatically corrected. Furthermore, a calibrator function for pressure transmitters is integrated, so that a voltage can be supplied to the sensor and the sensors signals can be measured without any problem. See *datasheet "IKM"*.
- Set of trim-masses for generating intermediate values (Weights 2 mg to 100 g)



Included in standard Supply:

- Basement with adjustable feet and water level
- Inlet pressure priming pump and spindle pump
- Pressure port for specimens
- Piston-/cylinder system
- Set of st.st. weights in carrying case
- 1 liter special oil
- Operating manual
- Calibration Certificate (optional: DKD)



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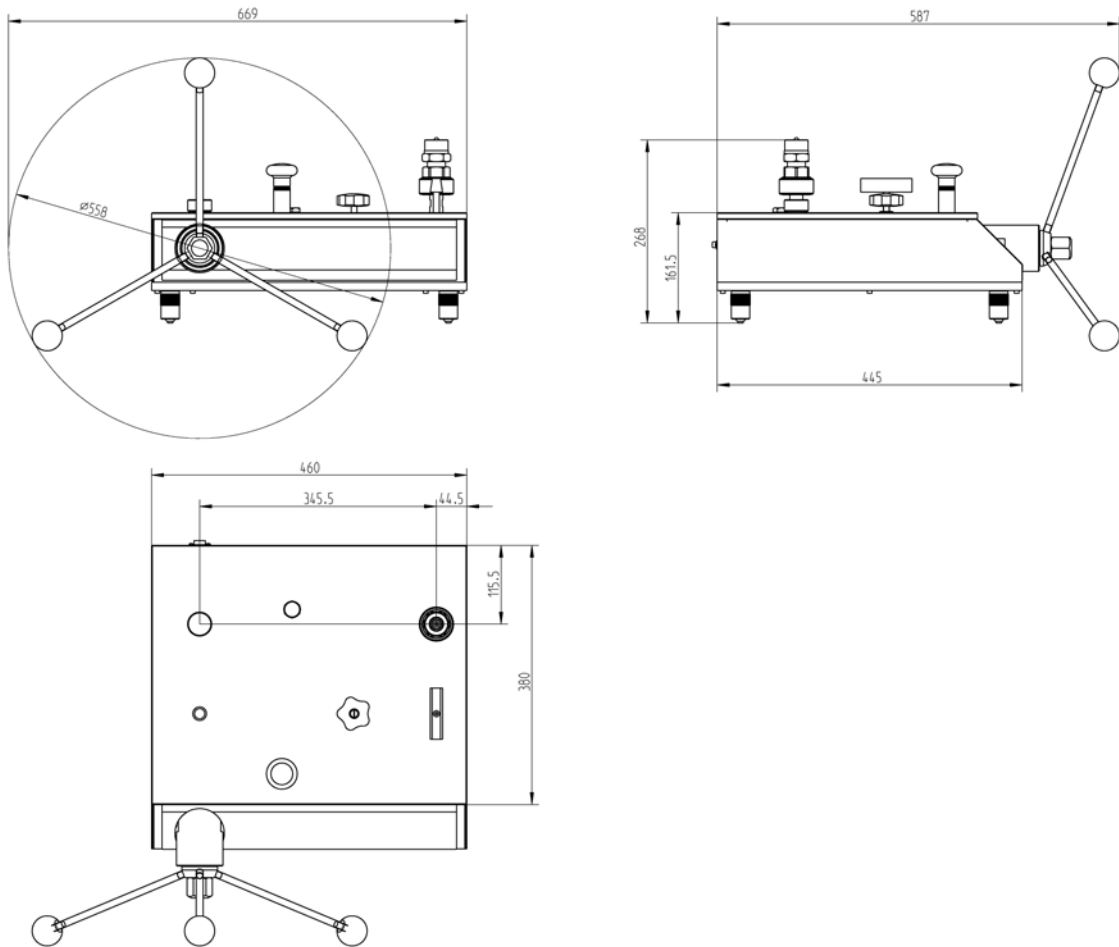
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Dimensions in mm

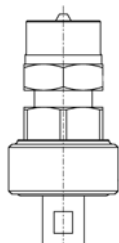


Available Pressure Ranges:

Range [bar]	Range [psi]
20 ... 2500	290 ... 40000
20 ... 4000	290 ... 60000

Accuracy (uncertainty): Two versions available: $\pm 0.025\%$ or $\pm 0.020\%$ of measured value. The accuracy is characterized by the deviation span, which is the sum of the systematic error and the uncertainties of measurement. Long-term stability is not taken into account. Please note that corrections might be required if the instrument is used without the optional Intelligent Calibration Module IKM - see operating manual.

Pressure port for test specimen:



Three adapters are included in standard supply:

- 1 x M16x1.5
 - 1 x M20x1.5
 - 1 x 9/16-18 UNF
- (each adapter with sealing cone)

Other Models:

For normal pressure up to 100 bar (1500 psi) pneumatic and 1000 bar (15000 psi) hydraulic: see *datasheet CPB5000*
For differential pressure calibration: see *datasheet CPB5000-DP*



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