



✓ **Applications**

Range of Dead weight tester is designed to test, adjust and calibrate measuring instruments, mechanical or electronic pressure by comparison (pressure gauges, pressure transmitters or sensors or switches)

They consist of a pressure generator, a piston/cylinder unit, a set of weigh identified and of a computer on which is posted : the position of the piston and the value of pressure generated by the dead weight according to the various physical quantities.

The capstan is used to generate a pressure pushing the fluid through the piston. This pressure is balanced by the piston/cylinder assembly which allows to compare the instrument to be calibrated to the pressure values generated by the standard. These scales are intended for the calibration gauge.

The Dead weight are robust and easy to use and have a high long-term stability.

✓ **Technical specifications**

- **Calibration :** It is necessary to recalculate the pressure generated by the dead weight according to the different variables. Our dead weight are calibrated in the following terms of use :  
Temperature 20°C - Pressure atmos. 1013.25 hPa - Humidity 50% - acceleration 9.80665 m/s<sup>2</sup>
- **Fluid :** Mineral or synthetic oil depending on model, colorless, compatible with medical or food uses – tank volume 125 cm<sup>3</sup>
- **Check/adjust the seat :** leveling bubble and adjustable feet
- **Connection for the instrument to be tested :** swivel G1/2 standard
- **Motorization :** training the weight in rotation by electric engine
- **Measure of the temperature :** Precision  $\pm 0.1^{\circ}\text{C}$
- **Measure of the atmospheric pressure :** Precision  $\pm 1\text{HPa}$
- **Measure of the hygrometry :** Precision  $\pm 10\%$
- **Calculator :**
  - with dynamic display of the position of the piston
  - with automatic display of the pressure generated by the dead weight according to the temperature, the atmospheric pressure and the hygrometry
  - with a connection for the transfer of the data on computer, allowing a total traceability
- **Carter :** Light alloy aluminium AG3 + high-resistance paint
- **Ratchet :** removable for transport
- **Piston/cylinder :** Single piston treated stainless - **Répeatability** :  $1.10^{-5}$  - **Sensitivity** :  $3.10^{-5}$   
- **Precision dead weight** :  $5.10^{-5}$
- **Weight :** stainless steel - **Weight** of the set of weights from 25 kg to 100 kg depending on model – Shape masses ergonomic, easy loading of the masses on the bell - **Marking** corresponding with the measuring unit (bar, mbar, KPa, PSI etc..)

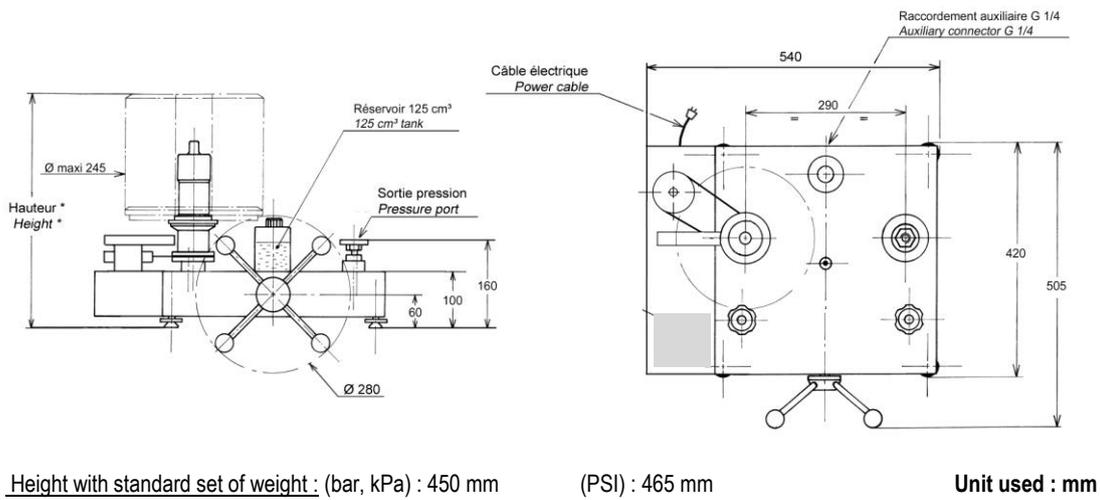
✓ **Specific Model**

- **Model :** BH4-120B - Dead weight tester single piston
- **Measuring range :** 1 to 120 bar / 10 to 1800 PSI / 100 to 12000 kPa
- **Accuracy dead weight :**  $0.0003 + (5 \cdot 10^{-5} \times P)$  (with P in bar)
- **Weight dead weight without masses :** 22 kg
- **Fluid :** Oil Sebacate - fluid density : 915 kg/m<sup>3</sup>
- **Typical cross-section of the piston :** 39.2280 mm<sup>2</sup>
- **Material piston/cylinder :** steel
- **Number of piston :** 1

✓ **Divers**

- **Manuel :** a detailed operating instructions supplied with the device + Certificate + 0.5 liter Oil
- **Maintenance :** Our technical department is at your disposition for the revision, calibration or service your unit – Calibration device recommended every 2 years.

✓ **Dimensions of device**



✓ **Standard weight sets** (for other units contact us)

| Standard set                       |                |              |                   |
|------------------------------------|----------------|--------------|-------------------|
|                                    | Pressure (bar) | Total weight | Typical value (g) |
| <b>Unit : BAR</b><br>(Ref. MB0024) | 20             | 4            | 8000              |
|                                    | 19             | 1            | 7200              |
|                                    | 10             | 1            | 4000              |
|                                    | 4              | 2            | 1600              |
|                                    | 2              | 1            | 800               |
|                                    | 1              | 1            | 400               |
|                                    | 0.4            | 2            | 160               |
|                                    | 0.2            | 1            | 80                |
| Initial pressure bell              | 1              | x            | 400               |
| <b>TOTAL</b>                       | <b>122</b>     | <b>13</b>    | <b>± 48 kg</b>    |

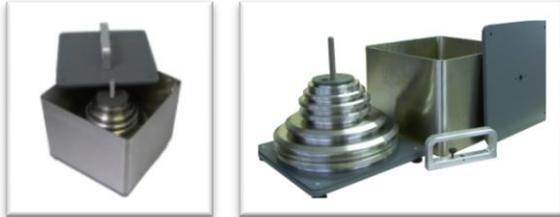
Optional :

- Set of weights adjustment from 1 mg to 50g with COFRAC certificat (Ref.OP237-200)
- COFRAC or DAkkS certificat confirming the accuracy until  $5 \cdot 10^{-5}$

| Standard set                       |                |              |                   |
|------------------------------------|----------------|--------------|-------------------|
|                                    | Pressure (PSI) | Total weight | Typical value (g) |
| <b>Unit : PSI</b><br>(Ref. MB0076) | 200            | 6            | 5520              |
|                                    | 190            | 1            | 5244              |
|                                    | 100            | 1            | 2760              |
|                                    | 40             | 2            | 1104              |
|                                    | 20             | 1            | 552               |
|                                    | 10             | 1            | 276               |
|                                    | 4              | 2            | 110.6             |
|                                    | 2              | 1            | 55.2              |
| Initial pressure bell              | 10             | x            | 278               |
| <b>TOTAL</b>                       | <b>1610</b>    | <b>15</b>    | <b>± 44 kg</b>    |

| Standard set |                       |              |                   |
|--------------|-----------------------|--------------|-------------------|
| Unit : kPa   | Pressure (kPa)        | Total weight | Typical value (g) |
|              | 2000                  | 4            | 8000              |
|              | 1900                  | 1            | 7200              |
|              | 1000                  | 1            | 4000              |
|              | 400                   | 2            | 1600              |
|              | 200                   | 1            | 800               |
|              | 100                   | 1            | 400               |
|              | 40                    | 2            | 160               |
|              | 20                    | 1            | 80                |
|              | Initial pressure bell | 100          | x                 |
| <b>TOTAL</b> | <b>12100</b>          | <b>13</b>    | <b>± 48 kg</b>    |

✓ **Options for weight set**



transport metal boxes

(OP0101) : 260 x 260 x 310 mm - weight empty : 6 kg



Suitcase for post planning and transportation

(OP0095) small : 280 x 250 x 280 mm weight empty : 5 kg

(OP0099) large : 500 x 350 x 280 mm - weight empty : 11 kg

Useful for BH4-120B : Consult us (depending on the unit)

✓ **Options**

- Standard weight set additional for different units
- Adjust the dead weight with a different acceleration of  $9.80665 \text{ m/s}^2$  on request
- Calibration of the instrument : Points statement AREMECA or certificate of calibration DAkKS or COFRAC
- Tin oil : 1 liter, 2 liters or 5 liters of oil

✓ **Transport and packaging**

- **Packaging** : woodpack is provided for the shipping

| Designation/Reference             | Dimension / carton or shipping crate | Weight empty / total weight (packaging + materiel)                                    |
|-----------------------------------|--------------------------------------|---|
| <b>Dead weight without weight</b> | 470 x 470 x 240 mm                   | Carton empty 1.5 kg<br>Total weight ±24 kg  |
| <b>Standard weight set</b>        | 300 x 300 x 170 mm                   | Carton empty 1.5 kg<br>Total weight ±50 kg  |
| <b>Wood packaging</b><br>SB0003   | 980 x 700 x 500 mm                   | Suitcase empty 20 kg<br>Total weight ±92 kg<br>(dead weight + weight set + packaging) |



SB0003

- **Note** : shipping is extra.

✓ **Other models available in the range BH4**

(Datasheet is available on request)

Models single piston

| Models       | Accuracy         | Measuring range           |              |                |
|--------------|------------------|---------------------------|--------------|----------------|
|              |                  | Bar or kg/cm <sup>2</sup> | PSI          | kPa            |
| BH4-5000B    | 10 <sup>-5</sup> | 40 to 5000                | 600 to 72500 | 4000 to 500000 |
| BH4-4000B    | 10 <sup>-5</sup> | 40 to 4000                | 600 to 60000 | 4000 to 400000 |
| BH4-3000B    | 10 <sup>-5</sup> | 40 to 3000                | 600 to 44000 | 4000 to 300000 |
| BH4-2500B    | 10 <sup>-5</sup> | 40 to 2500                | 600 to 36200 | 4000 to 250000 |
| BH4-2000B    | 10 <sup>-5</sup> | 40 to 2000                | 600 to 30000 | 4000 to 200000 |
| BH4-1200B sp | 10 <sup>-5</sup> | 2 to 1200                 | 30 to 16000  | 200 to 120000  |
| BH4-600B sp  | 10 <sup>-5</sup> | 2 to 600                  | 30 to 10000  | 200 to 60000   |
| BH4-300B sp  | 10 <sup>-5</sup> | 1 to 300                  | 15 to 4000   | 100 to 30000   |
| BH4-60B      | 10 <sup>-5</sup> | 0.2 to 60                 | 3 to 800     | 20 to 6000     |
| BH4-30B      | 10 <sup>-5</sup> | 1 to 30                   | 10 to 400    | 100 to 3000    |

✓ **Accessories** (Ask for our specific documentation)

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- Accessory case (ref.OP0057)
- Setting gauge kit (ref.OP0125)
- Case connectors M (ref.OP0174) – Case connectors G (ref.OP0171) - Case connectors NPT (ref.OP0172) - Case connectors BSP-TR (ref.OP0173) - Case with 17 connectors M + G + NPT + BSP-TR (ref.OP0037) – unit connector (consult us)
- Kit drain tank (ref.OP0025)
- Bench cleaning (ref.OP0062)
- Carrying case (ref.OP0002)