



$$P = F/S$$

#### ✓ Applications

This primary standard Range are designed to test, adjust and calibrate measuring instruments, mechanical or electronic pressure by comparison (pressure gauges, pressure transmitters or sensors or switches)

The dead weight tester consist of a pressure generator, a piston/cylinder unit, a set of weigh identified. 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.

This reference instrument are used in factory or calibration laboratory. They are robust and easy to use and have a high long-term stability

#### ✓ Technical specifications of the range BH1

- Calibration :	Our dead weight tester are calibrated under the following conditions of use : Temperature 20°C - Pressure atmos. 1013.25 hPa - Humidity 50% - acceleration 9.80665 m/s <sup>2</sup> In case you don't use it under the conditions mentioned above, it is necessary to recalculate the pressure generated by the dead weight according to the different variables.
- Fluid :	Mineral oil colorless, compatible with medical or food uses – tank volume 125 cm <sup>3</sup>
- Check/adjust the seat :	leveling bubble and adjustable feet
- Connecting for the instrument to be tested :	swivel G1/2 standard – other optional fittings
- Rotating weigh :	Training masses : manual rotation
- Crankcase :	Light alloy aluminium AG3 + high-resistance paint
- Capstan :	removable for transport
- Piston/cylinder :	Single piston hardened steel - <b>Repeatability</b> : 1.10 <sup>-4</sup> - <b>Sensitivity</b> : 5.10 <sup>-5</sup> - <b>Precision dead weight</b> : 10 <sup>-3</sup>
- Weight :	Corrosion treated steel – <b>total Weight</b> of the set of weights from 12 kg to 48 kg depending on model – Ergonomic shape of the masses, easy loading of the masses on the bell - <b>Marking</b> corresponding with the measuring unit choose (bar, mbar, KPa, PSI etc..) <b>Gravity</b> : standard (9.80665 m/s <sup>2</sup> or local gravity without supplement
- Operating temperature:	18 to 28°C – 64 to 82°F

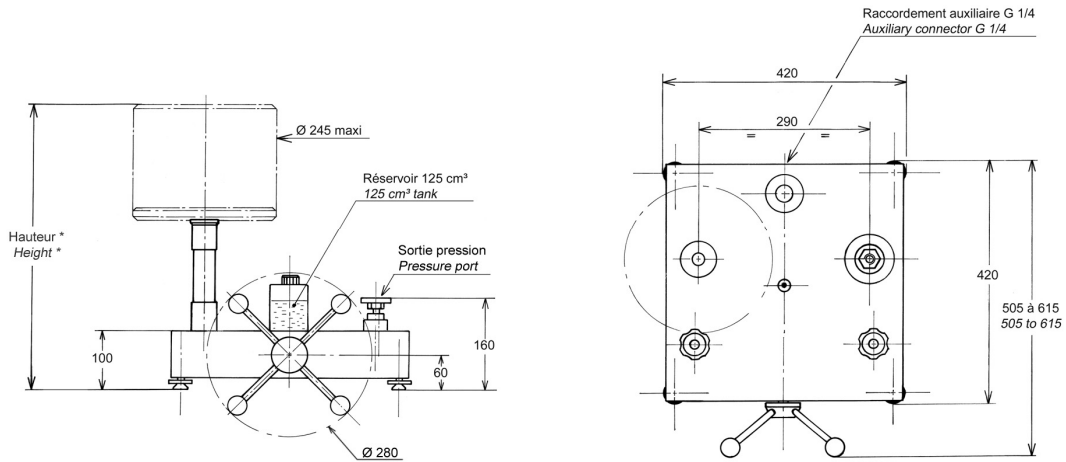
#### ✓ Technical product specifications

- Model :	BH1-1200B – dead weight single piston
- Measuring range :	5 to 1200 bar / 100 to 16000 PSI / 500 to 120000 kPa
- Uncertainty of the pressure measured by the DWT :	0.02 + (1.10 <sup>-3</sup> x P) (with P in bar)
- Accuracy :	0.1% of the scale
- weight dead weight without masses :	22 kg
- Base generator :	CH1-1250B
- Fluid :	Oil H40 – fluid density : 860 kg/m <sup>3</sup>
- Typical cross-section of the piston :	3.92450 mm <sup>2</sup>
- Material Piston/Cylinder :	P = treated steel / C = treated steel
- Number of piston :	1

✓ **Various**

- **Delivery details** : a manual are provided in English or French with the device + a factory calibration certificate traceable to the national standards + data sheet +Certificate + 0.5 liter of mineral Oil
- **Maintenance** : Our technical service department is at your disposition for the revision, calibration or service your unit – Calibration device recommended every 2 or 5 years depending on your use.

✓ **Dimensions of device**



Height with standard set of weight : (bar) : 480 mm (PSI) : 450 mm

Unit used : mm

✓ **Standard weight sets and intermediate**

Standard set			
	Pressure (bar)	Total weight	Typical value (g)
<b>Unit : BAR or kg/cm²</b> (Ref. MB0003)	200	5	8000
	95	1	3800
	50	1	2000
	25	1	1000
	10	2	400
	5	1	200
Initial Pressure bell + weight adaptation	5		200
<b>TOTAL</b>	<b>1200</b>	<b>11</b>	<b>±48 kg</b>

Intermediate set			
	Pressure (bar)	Total weight	Typical value (g)
<b>BAR</b>	No set of intermediate weight		
<b>TOTAL</b>			

Standard set			
	Pressure (PSI)	Total weight	Typical value (g)
<b>Unit : PSI</b> (Ref. MB0009)	2000	6	5520
	1900	1	5244
	1000	1	2760
	400	2	1104
	200	1	552
	100	1	276
Initial Pressure bell + weight adaptation	100		276
<b>TOTAL</b>	<b>16100</b>	<b>12</b>	<b>±44 kg</b>

Intermediate set			
	Pressure (PSI)	Total weight	Typical value (g)
<b>PSI</b>	No set of intermediate weight		
<b>TOTAL</b>			

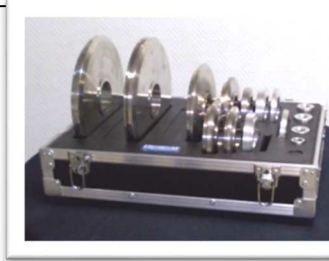
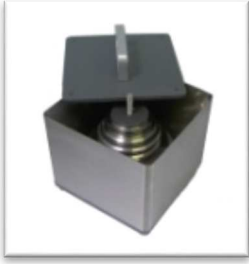
Standard set			
	Pressure (Kpa)	Total weight	Typical value (g)
<b>Unit : kPa</b>	20000	5	8000
	9500	1	3800
	5000	1	2000
	2500	1	1000
	1000	2	400
	500	1	200
Initial Pressure bell + weight adaptation	500		200
<b>TOTAL</b>	<b>120000</b>	<b>11</b>	<b>±48 kg</b>

Intermediate set			
	Pressure (Kpa)	Total weight	Typical value (g)
<b>kPa</b>	No set of intermediate weight		
<b>TOTAL</b>			

✓ **Options of the dead weight tester**

- Standard weight set additional for different units
- Certificate of calibration DAKkS or COFRAC
- Tin oil : 1 liter, 2 liters or 5 liters of oil

✓ **Suitcase for set of weight**



transport metal boxes

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

Suitcase for post planning and transportation

(OPxxxx) large : 355 x 505 x 310 mm - weight empty : 13 kg

+ (OPxxxx) small : 290 x 250 x 310 mm - weight empty : 5 kg

- **Suitcase for the dead weight (ref.OP0002) :**



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

- Accessory case (ref.OP0057)
- Setting gauge kit (ref.OP0125)
- Kit drain tank (ref.OP0025)
- Separator all fluids up to 800 bar (ref.OP0023)
- Bench cleaning (ref.OP0062)
- Suitcase with pear + needle up (OP0228)



- **Connectors up to 1200 bar** : suitcase connectors M (ref.OP0174) – suitcase connectors G (ref.OP0171) - suitcase connectors NPT (ref.OP0172) - suitcase connectors BSP-TR (ref.OP0173) - suitcase with 17 connectors M + G + NPT + BSP-TR (ref.OP0037) – unit connector



✓ **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 Total weight ±24 kg
<b>Standard weight set</b>	300 x 300 x 170 mm	Carton empty 1.5 kg Total weight ±51 kg
<b>Wood packaging</b> SB0002	790 x 480 x 340 mm	Suitcase empty 20 kg Total weight ±95 kg (dead weight + weight set + packaging)



SB0002

- **Note** : shipping is extra.

✓ **Other models available in the range BH1**

(Datasheet are available on request or on our website : [www.aremeca-instrumentation.com](http://www.aremeca-instrumentation.com))

Models single piston

Models	Accuracy	Measuring range		
		Bar or kg/cm <sup>2</sup>	PSI	kPa
BH1-600B	10 <sup>-3</sup>	5 to 600	100 to 8000	500 to 60000
BH1-300B	10 <sup>-3</sup>	5 to 300	100 to 4000	500 to 30000
BH1-120B	10 <sup>-3</sup>	0.5 to 120	10 to 1600	50 to 12000
BH1-60B	10 <sup>-3</sup>	0.5 to 60	10 to 800	50 to 6000
BH1-30B	10 <sup>-3</sup>	0.5 to 30	10 to 400	50 to 3000