



$$P = F/S$$

✓ **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 BH5**

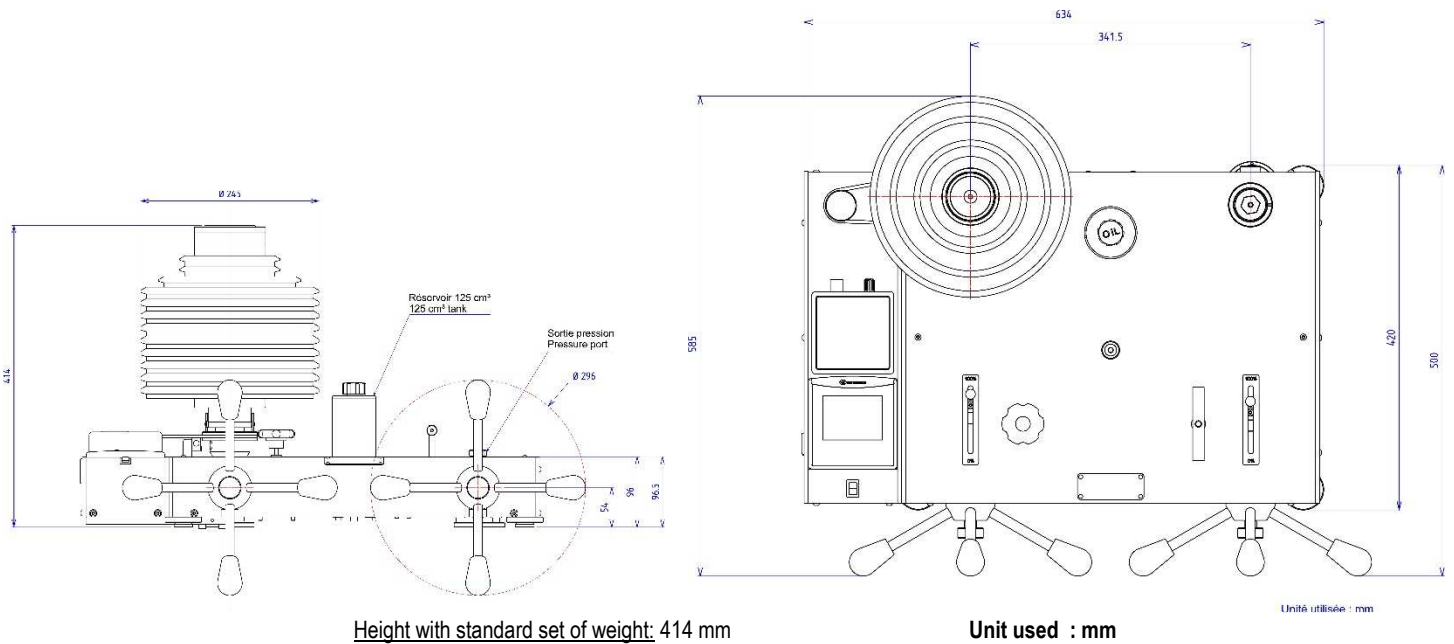
- **Calibration :** Our dead weight tester are calibrated under the following conditions of use :
Temperature 20°C - Pressure atmos. 1013.25 hPa - Humidity 50% - acceleration 9.80665 m/s²
In case you don't use it under the conditions mentioned above, it is necessary to recalculate the pressure generated by the dead weight according to the different variables.
- **Fluid :** Mineral or synthetic oil depending on model, colorless, compatible with medical or food uses – tank volume 125 cm³
- **Check/adjust the seat :** leveling bubble and adjustable feet
- **Connecting for the instrument to be tested :** connection M20x150
- **Motorization :** Manual rotation of weights (or motorized if option OP0004 or OP0301)
- **Measure of the temperature :** Precision ± 0.1°C
- **Measure of the atmospheric pressure :** Precision ± 1hPa / range 0 to 1600 mbar / resolution = 1mbar
- **Calculator RS232 /mains 220v, 50Hz:**
 - 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
- **Crankcase :** Light alloy aluminium AG3 + high-resistance paint
- **Capstan :** removable for transport
- **Piston/cylinder :** Single or twin piston tungsten carbide and/or treated steel
- **Weight :** stainless steel – **Total weight** of the set of weights from 25 kg to 100 kg depending on model – Ergonomic shape of the masses, easy loading of the masses on the bell - **Marking** corresponding with the measuring unit choose (bar, mbar, KPa, PSI etc..)
 - Gravity :** standard (9.80665 m/s²) or local gravity without supplement
- **Operating temperature:** 18 to 28°C – 64 to 82°F

✓ **Technical product specifications**

- **Model :** BH5-10000B - dead weight single piston
 - **Measuring range :** 200 to 10000 bar
 - **Uncertainty of the pressure measured by the DWT :** $5 \cdot 10^{-4} \times P$ (with P in bar)
 - **Accuracy :** 0.05% of the scale
 - **Weight dead weight without masses ::** 35 kg
 - **Base generator :** CH3-10000B
 - **Fluid :** Oil Sebacate - fluid density : 915 kg/m³
 - **Typical cross-section of the piston :** 0.5026 mm²
 - **Material Piston/Cylinder/ :** P = tungsten carbide / C = tungsten carbide
 - **Number of piston :** 1
- Unit supplied with : Operating instructions / AREMECA calibration certificate traceable to national standards / unit data sheet / 0.5 liter mineral oil / G1/2 outlet connector / tools

Note: All our documents are delivered in French + English

✓ **Standard device dimensions**



Height with standard set of weight: 414 mm

Unit used : mm

CHOOSING OPTIONS

- Gravitation option OFFERED** :: we will adjust your weight set to the standard or special G (give us the desired value).
- Intermediate weight set option** : the intermediate weight set is offered as an option, the unit will be the same as the one selected for the main weight set.
- Option OP237-200 weights adjustment with COFRAC certificate**





Standard set			
Unit : BAR or kg/cm ² (Ref. MBxxxx)	Pressure (bar)	Total weight	Typical value (g)
	1000	8	5125
	800	1	4100
	400	1	2050
	200	2	1025
	100	2	512
	50	1	256
Pressure Weight bell + adaptation weight	200		1025
TOTAL	10050	15	± 51 kg

Intermediate set in option			
BAR or kg/cm ² (Ref. MBxxxx)	Pressure (bar)	Total weight	Typical value (g)
	40	1	200
	20	1	100
	10	1	50
	4	2	20
	2	1	10
	1	1	5
TOTAL	81	7	420g

- In option : Set of weights adjustment from 1 mg to 50g with COFRAC certificat (Ref.OP237-200)

Optional COFRAC or DAKKS/DKD accredited calibration certificate. Note: an AREMECA factory certificate is delivered with the DWT. A COFRAC certificate will improve the results of your device (performed at the national laboratory).

Carrying case option :

		<p>Ref OP0101 - Metal box for mass transport Dimensions : 260 x 260 x 310 mm - unloaded weight : 6 kg 7 weights max per box</p>
		<p>Ref OP0257 – carrying case for the masses</p>
		<p>Workstation layout : large: 355 x 505 x 310 mm - empty weight: 13 kg small: 290 x 250 x 310 mm - empty weight: 5 kg 1 or more boxes will be necessary depending on your DWT – Consult us !</p>
		<p>Ref OP00xx - Transport case for the balance or comparison bench. (BH5 or CH3 models contact us !)</p>

✓ **Accessories**



- Ref OP0057 Accessories suitcase
- Ref OP0025 drain kit for oil
- Ref OP0062 Cleaning bench
- Ref OP0250 Suitcase with 5 adaptors HP in M20x150

✓ **Transport and packaging**

Designation/Reference	Dimension / carton or shipping crate	total weight (packaging + materiel)
Wooden over-wrapping DWT without options or accessories If option	79 x 48 x 34 cm 98 x 70 x 50 cm	(DWT + set of weights + cardboard packaging) Total weight ±110 kg Total weight ±to defined



- Note: Shipping is extra. Size may vary if accessories are purchased with the unit.

✓ **Other models available in the range BH2**

(Datasheet is available on request or on our website : www.aremeca-instrumentation.com)

Models single piston

Models	Accuracy	Measuring range		
		Bar ou kg/cm ²	PSI	kPa
BH2-7000B	10 ⁻⁴	200 to 7000	2000 to 100000	20000 to 700000
BH2-6000B	10 ⁻⁴	200 to 6000	2000 to 80000	20000 to 600000
BH2-5000B	10 ⁻⁴	40 to 5000	600 to 72000	4000 to 500000
BH2-4000B	10 ⁻⁴	40 to 4000	600 to 60000	4000 to 400000
BH2-3000B	10 ⁻⁴	40 to 3000	600 to 44000	4000 to 300000
BH2-2500B	10 ⁻⁴	40 to 2500	600 to 36200	4000 to 250000
BH2-2000B	10 ⁻⁴	40 to 2000	600 to 30000	4000 to 200000
BH2-1200B sp	10 ⁻⁴	2 to 1200	30 to 16000	200 to 120000
BH2-600B sp	10 ⁻⁴	2 to 600	30 to 10000	200 to 60000
BH2-300B sp	10 ⁻⁴	1 to 300	15 to 4000	100 to 30000
BH2-150B	10 ⁻⁴	0.5 to 150	10 to 2000	50 to 15000
BH2-60B	10 ⁻⁴	0.2 to 60	3 to 800	20 to 6000
BH2-30B	10 ⁻⁴	0.1 to 30	2 to 400	10 to 3000

Dual piston models : these dead weight tester integrating two pistons can get two ranges from a single set of weight

Models	Accuracy	Measuring range		
		Bar ou kg/cm ²	Models	Accuracy
BH2-1200B dp	10 ⁻⁴	1 to 60 + 20 to 1200	BH2-1200B dp	10 ⁻⁴
BH2-600B dp	10 ⁻⁴	1 to 60 + 10 to 600	BH2-600B dp	10 ⁻⁴
BH2-300B dp	10 ⁻⁴	1 to 60 + 5 to 300	BH2-300B dp	10 ⁻⁴

You'll find other devices and accessories on our website: www.aremeca-instrumentation.com