



$$P = F/S$$

✓ **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 connected to a compressed air source, a piston/cylinder unit, a set of weigh identified. The capstan can adjust the pressure by the gas through the piston. This pressure is balanced by the piston / cylinder which compares the instrument to calibrate the values of pressures 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 BA2**

- **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 :** The system of automatic lubrication integrated into the dead weight avoids the risks of contamination piston/cylinder. Colorless, compatible mineral oil with medical or food uses - volume of the reservoir 20 cm³
- **Source Pressure :** Dry air - gas connection ¼ cylindrical female
- **Check/adjust the seat :** leveling bubble and adjustable feet
- **Connecting for the instrument to be tested :** swivel G1/2 standard – other optional fittings
- **Rotating weight :** Manual rotation of weights (or motorized if option OP0004 or OP0301)
- **Crankcase :** Light alloy aluminium AG3 + high-resistance paint
- **Capstan :** removable for transport
- **Piston/cylinder :** Single piston treated steel or stainless steel + hard chrome depending on the model
Répeatability : 3.10⁻⁵ - **Sensitivity** : 1.10⁻⁵ - **Precision dead weight** : 10⁻⁴
- **Weight :** non magnetic stainless steel – **Total weight** of the set of weights from 4 kg to 48 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

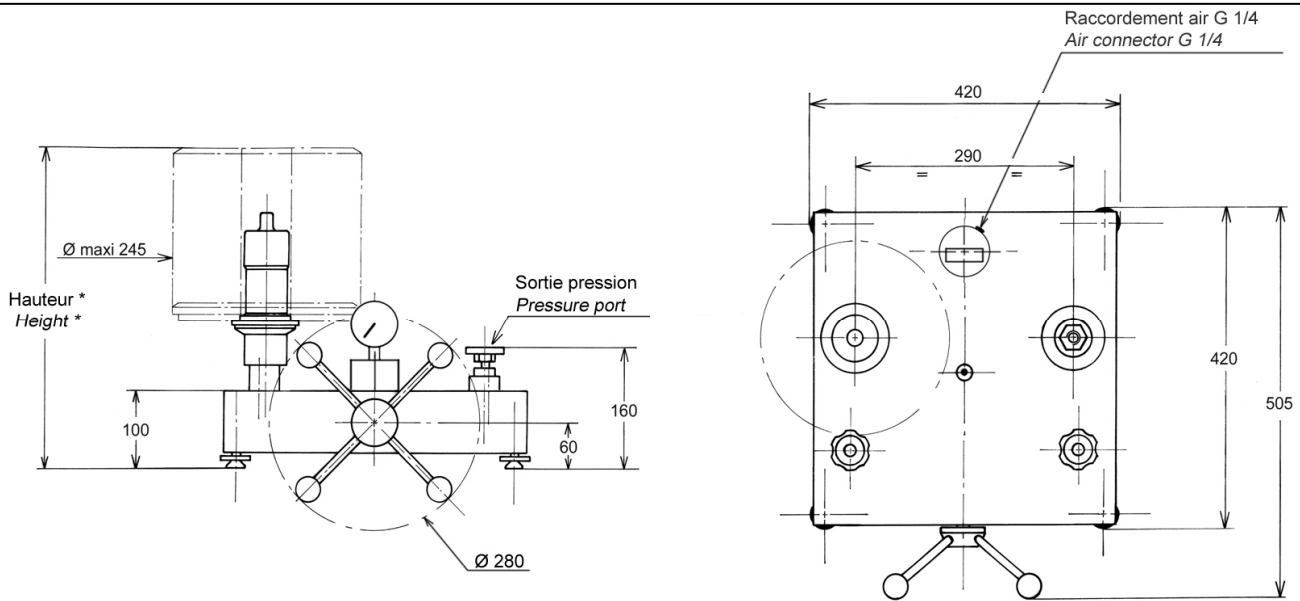
✓ **Technical product specifications**

- **Model :** BA2-120B - dead weight simple piston
- **Measuring range :** 1 to 120 bar / 10 to 1600 PSI / 100 to 12000 kPa
- **Accuracy :** 0.01% of reading up to 0.008% on request
- **Weight of device without weight :** 22 kg / 24 kg if option OP0004 or OP0301
- **Fluid :** This DWT needs to be connected to a pressure source.
- **Material Piston/Cylinder :** P = treated steel / C = treated steel
- **Number of piston :** 1

- **Device delivered with** : a user manual / an AREMECA calibration certificate traceable to national standards / a technical sheet of the device / 0.5 liter of mineral oil if lubrication system / G1/2 outlet fitting / tools

Note: All our documents can be delivered in English, French or German.

✓ **Standard device dimensions**



Height with standard set of weight : (bar, kPa) : 411 mm (PSI) : 386 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).

Unit option OFFERED : choose the unit of the main weight set (e.g. PSI, BAR, Kg/cm²...) delivered with the DWT

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.

Standard set			
	Pressure (bar)	Total weight	Typical value (g)
Unit : BAR or Kg/cm² (Ref. MB0001)	20	4	8000
	18	1	7600
	10	1	4000
	4	2	1600
	2	1	800
	1	1	400
	Initial Pressure bell + weight adaptation	1	
TOTAL	120	10	±48 kg

Intermediate set			
	Pressure (bar)	Total weight	Typical value (g)
BAR (Ref. MB0002)	0.4	2	160
	0.2	1	80
	0.1	1	40
	0.04	2	16
	0.02	1	8
	TOTAL	1.2	7

Standard set			
	Pressure (PSI)	Total weight	Typical value (g)
Unit : PSI (Ref. MB0013)	200	6	5520
	190	1	5244
	100	1	2760
	40	2	1104
	20	1	552
	10	1	276
	Initial Pressure bell	10	
TOTAL	1600	12	±44 kg

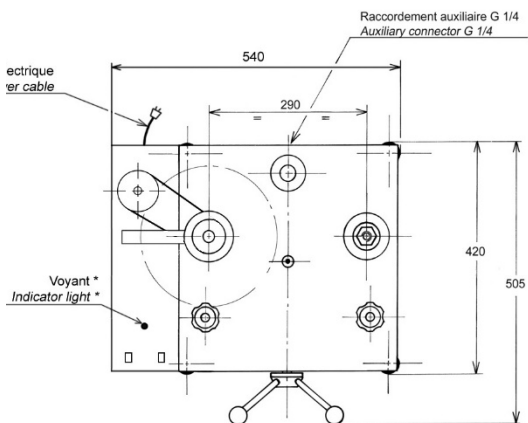
Intermediate set			
	Pressure (PSI)	Total weight	Typical value (g)
PSI (Ref. MB0016)	4	2	110.6
	2	1	55.2
	1	1	27.6
	0.04	2	11
	0.02	1	5.5
	TOTAL	12	7

Other units are available on request

Optional DAkkS/DKD accredited calibration certificate. Note: an AREMECA factory certificate is delivered with the dead weight tester. A DKD certificate will improve the results of your device

Maintenance option : Our technical department is at your disposal to set up a maintenance contract for your device, as well as to schedule a calibration service - Calibration of the device is recommended every 2 years, depending on your use.

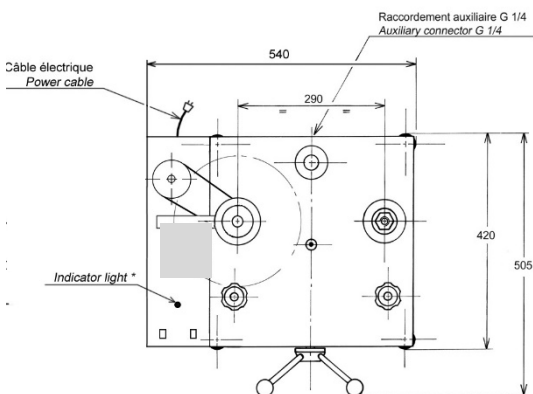
Option OP0004 : Motorization / LED display kit



This option enhances the scale's functionality with :

- an automatic weight set motorization, which ensures regular rotation of the weights, avoids jolts on the piston, limits operator handling and improves scale stability during measurements
- a position sensor that displays the position of the piston. The operator can easily check that the balance is in equilibrium simply by checking the LED display, and no longer needs to check that the DWT is floating under the weight pan.

Option OP0301 : calculator + sensors + motorization / visualization



This option ensures traceability of your measurements and integrates numerous functions::

- automatic display of pressures generated by the DWT as a function of temperature and atmospheric pressure
- weight set motorization
- bargraph display of piston position
- unit conversion capability
- operator assistance in the measurement process
- data transfer to computer for full traceability and calibration certificate.

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</p> <p>1 or more boxes will be necessary depending on your DWT – Consult us !</p>
	<p>Ref OP0002 - 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 OP0037 Suitcase with 17 adaptors type M + G + NPT + BSP-TR / Pressure max 1200 bar

Ref OP0062 Cleaning bench

Ref OP0171 Suitcase adaptors type G / Ref OP0172 Suitcase adaptors type NPT / Ref OP0173 Suitcase adaptors type BSP-TR / Ref OP0174 Suitcase adaptors type M

You will find other accessories on our website: www.aremeca-instrumentation.com

✓ **Shipping and packaging**

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

Designation/Reference	Dimension / carton or shipping crate	Weight empty / total weight (packaging + materiel)
Wood packaging		(dead weight + weight set + packaging)
DWT without options or accessories	79 x 48 x 34 cm	Total weight ± 90 kg
If options	98 x 70 x 50 cm	Total weight to be defined



- **Note** : shipping is extra.

✓ **Other models available in the range BA2**

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

Models simple piston

Models	Accuracy	Measuring range		
		Bar or kg/cm ²	PSI	kPa
BA2-200B	0.01%	2.5 to 200	25 to 3000	250 to 20000
BA2-60B	0.01%	0.5 to 60	5 to 800	50 to 6000
BA2-30B	0.01%	0.1 to 30	2 to 400	10 to 3000
BA2-20B	0.01%	0.15 to 20		
BA2-10B	0.01%	0.15 to 10	2.5 to 150	15 to 1000
BA2-1B	0.03%	15 mbar to 1 bar		1.5 to 100
BA2-1VB (vacuum)	0.03%	-15 mbar to -900mbar		-1.5 to -90