

$$P = F/S$$

✓ 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/s ² 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. |
| - 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 Repeatability : 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/s ²) or local gravity without supplement |
| - Operating temperature: | 18 to 28°C – 64 to 82°F |

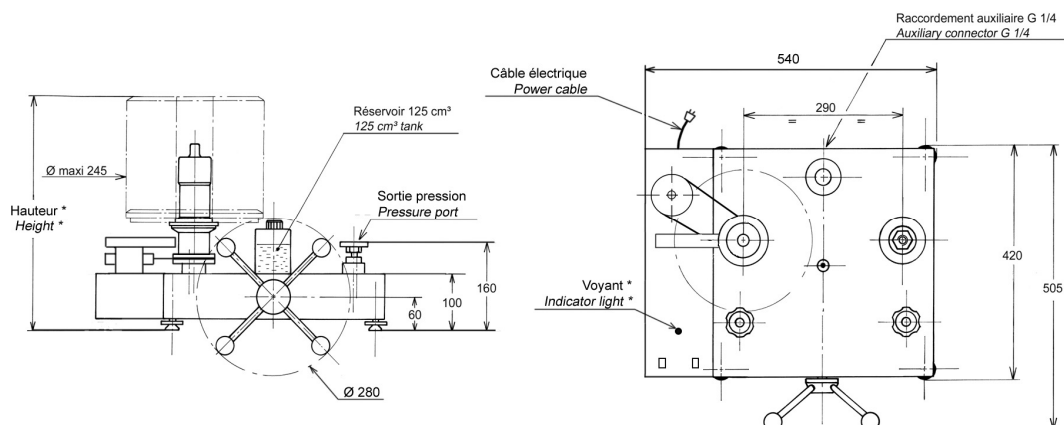
✓ Technical product specifications

- | | |
|--|---|
| - Model : | BA2-30B – dead weight single piston |
| - Measuring range : | 0.1 to 30 bar / 2 to 400 PSI / 10 to 3000 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 = stainless steel + hard chrome / 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) : 340 mm (PSI) : 350 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 | | | |
|---------------------------------------|---|--------------|-------------------|
| Unit : BAR or Kg/cm² (Ref. MB0024) | Pressure (bar) | Total weight | Typical value (g) |
| | 10 | 1 | 8000 |
| | 9 | 1 | 7200 |
| | 5 | 1 | 4000 |
| | 2 | 2 | 1600 |
| | 1 | 1 | 800 |
| | 0.5 | 1 | 400 |
| | 0.2 | 2 | 160 |
| | 0.1 | 1 | 80 |
| | 0.05 | 1 | 40 |
| | Initial Pressure Big bell | 1 | x 800 |
| | Initial Pressure bell + weight adaptation | 0.1 | x 800 |
| TOTAL | | 31.15 | 11 ±26 kg |

| Standard set | | | |
|-----------------------------|---------------------------|--------------|-------------------|
| Unit : PSI (Ref. MB0076) | Pressure (PSI) | Total weight | Typical value (g) |
| | 100 | 2 | 5520 |
| | 90 | 1 | 4968 |
| | 50 | 1 | 2760 |
| | 20 | 2 | 1104 |
| | 10 | 1 | 552 |
| | 5 | 1 | 276 |
| | 2 | 2 | 110.4 |
| | 1 | 1 | 55.2 |
| | 0.5 | 1 | 27.6 |
| | Initial Pressure Big bell | 5 | x 552 |
| | Initial Pressure bell | 2 | x 110 |
| OTAL | | 407.5 | 12 ±23 kg |

| Intermediate set | | | |
|----------------------|----------------|--------------|-------------------|
| BAR (Ref. MB0025) | Pressure (bar) | Total weight | Typical value (g) |
| | 0.02 | 2 | 16 |
| | 0.01 | 1 | 8 |
| | 0.004 | 1 | 3.2 |
| | 0.002 | 1 | 1.6 |
| TOTAL | | 0.056 | 5 45 g |

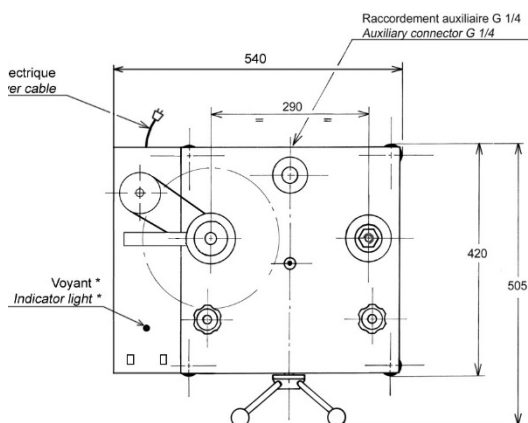
| Intermediate set | | | |
|----------------------|----------------|--------------|-------------------|
| PSI (Ref. MB0030) | Pressure (PSI) | Total weight | Typical value (g) |
| | 0.2 | 2 | 11 |
| | 0.1 | 1 | 5.5 |
| | 0.04 | 2 | 2.2 |
| | 0.02 | 1 | 1.1 |
| TOTAL | | 0.6 | 6 33 g |

Other units are available on request

☐ **Optional DAKS/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.

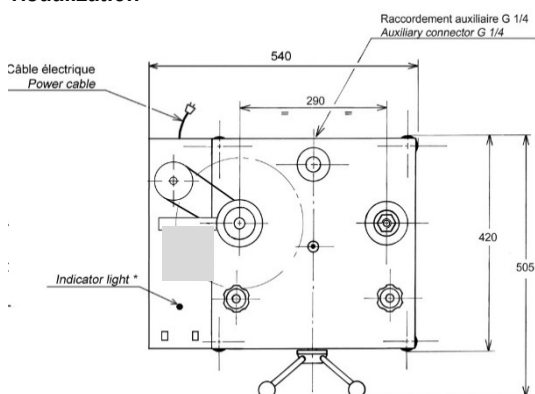
☐ Option OP0004 : Motorization / LED display kit



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 accessories | 79 x 48 x 34 cm | Total weight ± 72 kg |
| If option | 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 single 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 |
| BA2-120B | 0.01% | 1 to 120 | 10 to 1600 | 100 to 12000 |
| 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 |
| BA2-10B | 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 |