Datasheet

BH3-600B dp

Dead weight tester Oil Hi-tech

(balance manométrique Haute performance à Huile)

✓ 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. 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/s²
- **Fluid** :	Mineral or synthetic oil depending on model, colorless, compatible with medical or food uses – tank volume 125 cm^3
- **Check/adjust the seat** :	leveling bubble and adjustable feet
- Connection for the instrument to be tested :	swivel G1/2 standard
- Motorization :	Driving of the rotating weight with display of the position of the piston leds luminous
- **Carter** :	Light alloy aluminium AG3 + high-resistance paint
- **Ratchet** :	removable for transport
- **Piston/cylinder** :	Single or twin piston tungsten carbide and/or treated steel - **Repeatability** : 2.10^{-5} - **Sensitivity** : 1.10^{-5} - **Precision dead weight** : 10^{-4}
- **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** :	BH3-600B dp – Dead weight tester double piston with motorization
- **Measuring range** :	1 to 600 bar / 10 to 10000 PSI / 100 to 60000 kPa
- **Accuracy dead weight :**	Piston BP (1-60 bar) = 0.0006 + $0.8x10^{-4}$ x P*/ Piston HP (60-600 bar) = 0.0015+$0.8x10^{-4}$ x P* (*avec P en bar)
- **Weight dead weight without masses** :	22 kg
- **Fluid** :	Oil H40 - fluid density : 860 kg/m^3
- **Typical cross-section of the piston** :	BP : 78.4472 mm² / HP : 7.84068 mm²
- **Material piston/cylinder** :	tungsten carbide
- **Number of piston** :	2

✓ 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.

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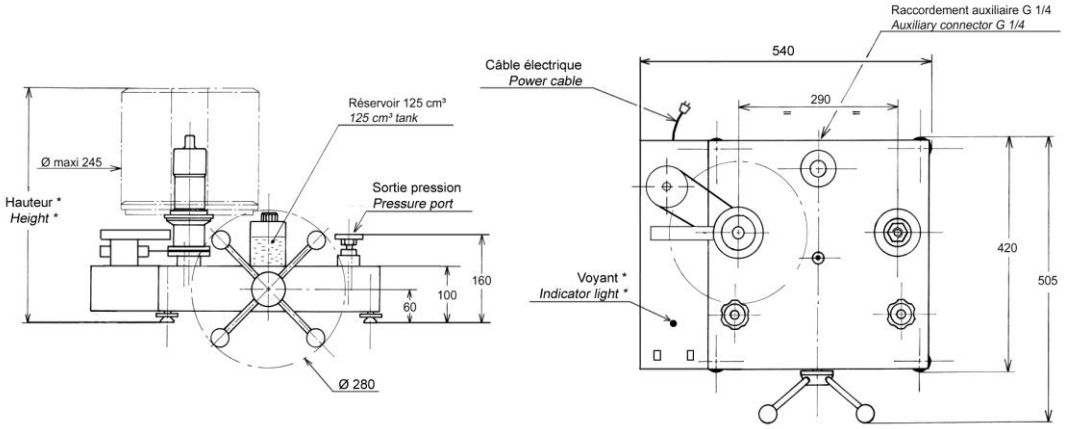
N° de TVA intracom : FR19 349237412 - IBAN : FR76 1870 7007 8900 9215 0743 004 - SWIFT (BIC) : CCBPFRPPUER

✓ Dimensions of device



Height with standard set of weight : (bar, KPa) : 410 mm (PSI) : 420 mm **Unit used : mm**

✓ Standard weight sets and intermediate

Standard set			
Unités : BAR (Ref. MB0001)	Pressure (bar) BP/HP	Total weight	Typical value (g)
	10/100	4	8000
	9/90	1	7200
	5/50	1	4000
	2/20	2	1600
	1/10	1	800
	0.5/5	1	400
Initial pressure BP bell	1	x	800
Initial pressure HP bell + weight 'adaptation	10	x	800
TOTAL	70.5/606	10	±50 kg

Intermediate set			
BAR (Ref. MB0002)	Pressure (bar) BP/HP	Total weight	Typical value (g)
	0.2/2	2	160
	0.1/1	1	80
	0.05/0.5	1	40
	0.02/0.2	2	16
	0.01/0.1	1	8
TOTAL	0.6/6	7	480 g

Standard set			
Unités : PSI (Ref. MB0013)	Pressure (PSI) BP/HP	Total weight	Typical value (g)
	100/1000	6	5520
	90/900	1	4968
	50/500	1	2760
	20/200	2	1104
	10/100	1	552
	5/50	1	276
Initial pressure BP bell	10	x	552
Initial pressure HP bell + weight 'adaptation	100	x	552
TOTAL	795/7950	12	±44 kg

Intermediate set			
PSI (Ref. MB0016)	Pressure (PSI) BP/HP	Total weight	Typical value (g)
	2/20	2	110.4
	1/10	1	55.2
	0.5/5	1	27.6
	0.2/2	2	11
	0.1/1	1	5.5
TOTAL	6/60	7	331.1 g

Standard set			
Unités : kPa	Pressure (Kpa) BP/HP	Total weight	Typical value (g)
	1000/10000	4	8000
	900/9000	1	7200
	500/5000	1	4000
	200/2000	2	1600
	100/1000	1	800
	50/500	1	400
Initial pressure BP bell	100	x	800
Initial pressure HP bell + weight 'adaptation	1000	x	800
TOTAL	7050/60600	10	±50 kg

Intermediate set			
kPa	Pressure (Kpa) BP/HP	Total weight	Typical value (g)
	20/200	2	160
	10/100	1	80
	5/50	1	40
	2/20	2	16
	1/10	1	8
TOTAL	60/600	7	480 g

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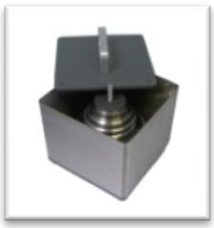
✓ Options for weight set



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 BH3-600B dp : Consult us !

✓ Options

- Intermediate weight set or Standard weight set additional for different units
- Adjust the dead weight with a different acceleration of 9.80665 m/s² 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)
Dead weight without weight	470 x 470 x 240 mm	Carton empty 1.5 kg Total weight ±24 kg
Standard weight set	300 x 300 x 170 mm	Carton empty 1.5 kg Total weight ±51 kg
Wood packaging SB0003	980 x 700 x 500 mm	Suitcase empty 20 kg Total weight ±95 kg (dead weight + weight set + packaging)

SB0003

- **Note** : shipping is extra.

✓ Other models available in the range BH3

(Datasheet is available on request)

Models single piston

		Measuring range		
Models	Accuracy	Bar or kg/cm²	PSI	kPa
BH3-5000B	10^{-4}	40 to 5000	600 to 72500	4000 to 500000
BH3-4000B	10^{-4}	40 to 4000	600 to 60000	4000 to 400000
BH3-3000B	10^{-4}	40 to 3000	600 to 44000	4000 to 300000
BH3-2500B	10^{-4}	40 to 2500	600 to 36200	4000 to 250000
BH3-2000B	10^{-4}	40 to 2000	600 to 30000	4000 to 200000
BH3-1200B sp	10^{-4}	2 to 1200	30 to 16000	200 to 120000
BH3-600B sp	10^{-4}	2 to 600	30 to 10000	200 to 60000
BH3-300B sp	10^{-4}	1 to 300	15 to 4000	100 to 30000
BH3-150B	10^{-4}	0.5 to 150	10 to 2000	50 to 15000
BH3-60B	10^{-4}	0.2 to 60	3 to 800	20 to 6000
BH3-30B	10^{-4}	0.1 to 30	2 to 400	10 to 3000

Models double piston : this dead weight tester including two piston can get two ranges from a single set of weight

		Measuring range		
Models	Accuracy	Bar ou kg/cm²	PSI	kPa
BH3-1200B dp	10^{-4}	1 to 60 + 20 to 1200	10 to 800 + 200 to 16000	100 to 6000 2000 to 120000
BH3-300B dp	10^{-4}	1 to 60 + 5 to 300	10 to 800 + 50 to 4000	100 to 6000 500 to 30000

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

- Accessory case (ref.OP0057)
- Setting gauge kit (ref.OP0125)
- Separator all fluids up to 800 bar (ref.OP0023)
- 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)

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