

Hydraulic pressure balance MP



MP-6...600



MP-6...600
special



MP-1000...2500

Intended use

Precision measurements and calibrating of:
pressure calibrators, pressure gauges, manometers,
pressure balances.

Highlights

It is possible to use water as a working fluid.

The tungsten carbide piston-cylinder assembly (PCA).

Stainless steel weights.

Inbuilt pressure pump up to 60 MPa (for models with upper measurement limit not more than 60 MPa) or 250 MPa (for models with upper measurement limit more than 60 MPa).

Ability to complete device with wide range of different PCA.

Reasonable sizes and weight.

A set of easy mounting “no wrench” fittings with modern o-ring seals up to 100 MPa included in standard package.

Main technical and operational characteristics

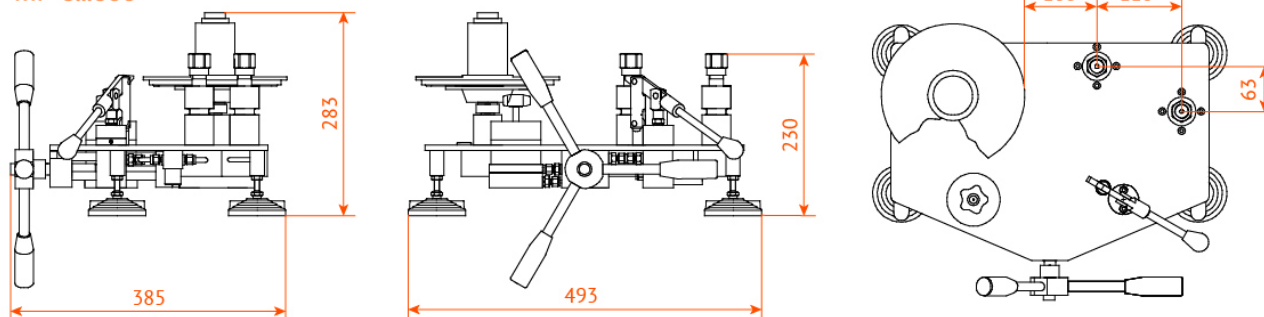
	MP-6	MP-60	MP-100	MP-250	MP-400	MP-600	MP-1000	MP-1600	MP-2500
Measuring range, MPa	0,04...0,6	0,02...6	0,02...10	0,1...25	0,1...40	0,2...60	0,2...100	2,5...160	2,5...250
Accuracy class ¹	0,005; 0,01; 0,02; 0,05							0,01; 0,02; 0,05	
Minimum pressure step with standard set of weights, MPa	0,01	0,01	0,01	0,05	0,05	0,1	0,1	0,25	0,25
Measuring pressure unit available for order ²	MPa, kgf/cm ² , bar							MPa, kgf/cm ² , bar	
Weight device, kg	18	18	18	18	18	18	35	35	35
Working medium ³	transformer oil or water (for order)							transformer oil	
Nominal area of piston, cm ²	1	0,5	0,5	0,1	0,1	0,05	0,05	0,02	0,02
Weights with nominal masses (standard set) and equivalent pressure, pcs									
0,05 kg	—	1 (0,01 MPa)	1 (0,01 MPa)	1 (0,05 MPa)	1 (0,05 MPa)	1 (0,1 MPa)	1 (0,1 MPa)	1 (0,25 MPa)	1 (0,25 MPa)
0,1 kg	6 (10 kPa)	2 (0,02 MPa)	2 (0,02 MPa)	2 (0,1 MPa)	2 (0,1 MPa)	2 (0,2 MPa)	2 (0,2 MPa)	1 (0,5 MPa)	1 (0,5 MPa)
0,2 kg	—	—	—	—	—	—	—	2 (1 MPa)	2 (1 MPa)
0,25 kg	—	1 (0,05 MPa)	1 (0,05 MPa)	1 (0,25 MPa)	1 (0,25 MPa)	1 (0,5 MPa)	1 (0,5 MPa)	—	—
0,5 kg	10 (50 kPa)	4 (0,1 MPa)	4 (0,1 MPa)	4 (0,5 MPa)	4 (0,5 MPa)	4 (1 MPa)	4 (1 MPa)	2 (2,5 MPa)	2 (2,5 MPa)
1,0 kg	—	—	—	—	—	—	—	1 (5 MPa)	1 (5 MPa)
2,0 kg	—	—	—	—	—	—	—	3 (10 MPa)	2 (10 MPa)
2,5 kg	—	11 (0,5 MPa)	19 (0,5 MPa)	9 (2,5 MPa)	15 (2,5 MPa)	11 (5 MPa)	2 (5 MPa)	—	—
5,0 kg	—	—	—	—	—	—	9 (10 MPa)	5 (25 MPa)	9 (25 MPa)
PCA	1 (40 kPa)	1 (0,02 MPa)	1 (0,02 MPa)	1 (0,1 MPa)	1 (100 kPa)	1 (0,2 MPa)	1 (0,2 MPa)	1 (2,5 MPa)	1 (2,5 MPa)
Bell	—	1 (0,18 MPa)	1 (0,18 MPa)	1 (0,9 MPa)	1 (900 kPa)	1 (1,8 MPa)	1 (1,8 MPa)	—	—
Plate	—	1 (0,01 MPa)	1 (0,01 MPa)	1 (0,05 MPa)	1 (50 kPa)	1 (0,1 MPa)	1 (0,1 MPa)	—	—

¹ Maximum permissible error in main measurement range from 0,1·Pmax to Pmax — % of reading, in additional measurement range from Pmin to 0,1·Pmax — % of 0,1·Pmax (were Pmax — upper measurement limit, Pmax — lower measurement limit).

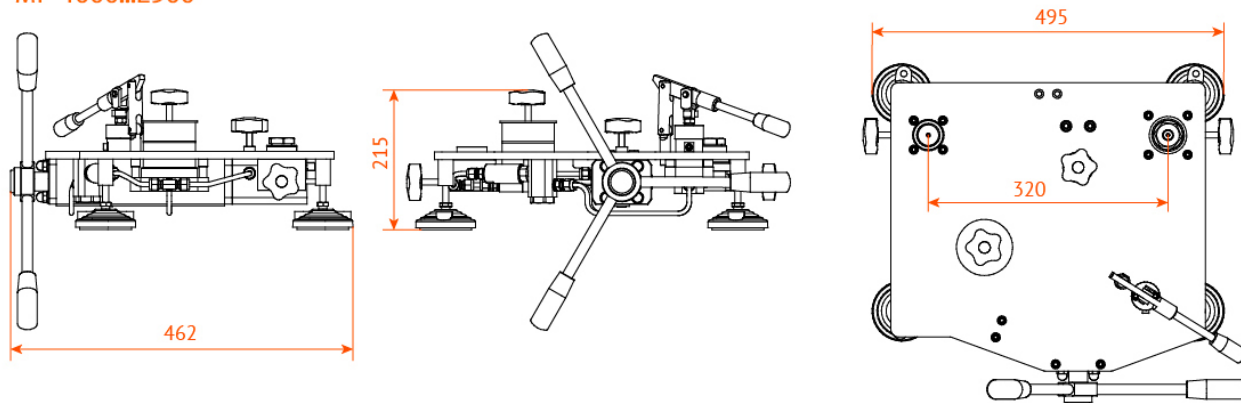
² It is possible to order pressure balance with several set of weights in different units.

³ For models with upper measurement limit more than 60 MPa order modification to work on castor oil.

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Options

As an option, hydraulic pressure balances can be supplied with automated pressure pump up to 60 MPa (GSKA), liquid to liquid separators up to 70 MPa (RGB), liquid to gas separators up to 40 MPa (RPG), pressure hoses, additional fittings and more.



Certificate of approval

Calibrating procedures according to OIML R-110.

Standard package

- basement with pressure pump;
- PCA in the case;
- one standard set of weights in storage case;
- set of fittings for units under test:
M20×1,5 — 2 pcs; M12×1,5 — 2 pcs; G ½ — 2 pcs; G ¼ — 2 pcs¹;
- o-rings set;
- repair set;
- user manual;
- calibrating certificate;
- special software for weight calculating and precision measurements.

Options

- additional PCA to wide up the measurement range;
- device for automated piston rotation;
- automated pressure pump up to 60 MPa;
- additional standard set of weights in another units;
- additional special set of weights;
- special fittings for unit under test;
- medium separator..

Sample of order

MP-100/0,02/MPa/9,8145 — Hydraulic pressure balance, upper measurement limit 10 MPa, maximum permissible error 0,02, set of weights in «MPa», local gravity 9,8145 m/s².

¹—1 piece of each fitting for MP with upper measurement limit more than 100 MPa.