

Product Name :
Fluid Properties and Hydrostatics Bench

Product Code :
NLAB-MECHANICALAB230014



Description :

Fluid Properties and Hydrostatics Bench

Technical Specification :

The hydrostatics bench, numerous experiments on the topic of the hydrostatics of liquids and gases can be carried out. A pipe section and various pressure measuring devices are fitted to a laboratory trolley with a demonstration panel, working area and cabinet. Various measuring containers are integrated into the pipe section. The sealed water circuit and pump with supply tank permit experiments to be performed independent of a mains water connection. This feature makes the bench particularly suitable for use in seminars rooms and lecture theatres. Further experimental apparatus are included in the cabinet, e.g. a device for determining the center of pressure of a column of water. This enables the pressure on a weir to be determined, amongst other aspects.

Fluid Properties & Hydrostatics Bench

FETURES

Familiarization with different methods of measuring pressure

Familiarization with various items of pressure measuring equipment

Measurement of the static and dynamic pressure component in a fluid

Experiments on the Boyle-Marriott law

Determination of the buoyancy of various bodies

Investigations on the density of liquids

Determination of surface tension

Demonstration of capillary effects

Demonstration Pascal's law

Determination of the center of pressure

SPECIFICATIONS:

Submersible pump 0.22kW

Volumetric flow rate 95Ltr/min

Head: 12.5m

Hg U-tube manometer 270..0..270mbar

U-Tube manometer 0..500mmWC

3 Hydrometers of resolution 0.002oSG:

Hydrometer 0.8oSG – 1oSG Hydrometer 1oSG – 1.2oSG Hydrometer 1.2oSG – 1.4oSG

Two hydrometer jars of 450 x 50 mm.

Aneroid barometer, range: 973 – 1047 mbar.

Thermometer with a range between -10 and 50oC.

Pycnometer of 50 ml.

Parallel plates capillary module.

Capillary tubes module with tubes of different size: 5 mm, 4 mm, 3 mm, 2.2 mm, 1.7 mm and 1.2 mm.

Two falling sphere viscometer tubes of 300 x 40 mm, with marks at 0, 25, 175, 200 and 220.

Set of stainless steel balls of different sizes: 3.175 mm, 2.381 mm and 1.588 mm

Variable scale lever balance to be used with the Archimedes module, up to 310 gr.

Archimedes module: displacement vessel, bucket and cylinder. Graduated cylinder made of glass (250 ml.)

2 Beakers made of glass (600 ml.)

Digital chronometer

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