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Products  
Products range  
Units  
8.- Fluid Mechanics & Aerodynamics

### DESCRIPTION

This unit enables a wide range of investigations and studies into pressure measurement techniques, using Bourdon type vacuum and pressure gauges and different U-tube manometers, to understand the operation the characteristic of the devices, and to study the principles of calibration and to do practical exercises and experiments about it.

The unit consists of two modules:

A "U" manometers and Bourdon type gauges module.

A Bourdon gauge with dead-weight calibrator module.

The unit enables comparison of pressure measurement methods by manometer and Bourdon gauges.



**ISO 9000: Quality Management**  
(for Design, Manufacturing,  
Commercialization and After-sales service)



**European Union Certificate**  
(total safety)



**Certificates ISO 14000 and  
ECO-Management and Audit Scheme**  
(environmental management)



**Worlddidac Quality Charter  
Certificate**  
(Worlddidac Member)

## SPECIFICATIONS

Bench-top unit consists of two modules:

**"U" manometers and Bourdon type gauges module:**

Anodized aluminum structure and panel in painted steel (epoxy paint), and main metallic elements in stainless steel.

Diagram in the front panel with similar distribution to the elements in the real unit.

Bourdon gauge for measuring vacuums.

Bourdon gauge for measuring positive pressure.

Vertical U-tube manometer, with scale in mm.

Inclined U-tube manometer, with scale in mm.

Syringe for pressurising and reducing the pressure in the measurement devices.

The module can be levelled with the help of adjustable feet.

**Bourdon gauge with dead-weight calibrator module:**

Anodized aluminum structure and panel in painted steel (epoxy paint), and main metallic elements in stainless steel.

Diagram in the panel with similar distribution to the elements in the real unit.

Dead-weight calibrator consists of a piston, with is free to move vertically, in cylinder. Flexible hose connects the cylinder with the Bourdon pressure gauge. A set of weights are included.

Bourdon type gauge with internal mechanism clearly visible through the transparent dial.

The module can be levelled with the help of adjustable feet.

**Accessories included:**

A set of weights for the dead-weight calibrator. "T" pieces. Artery clamps. Funnel. Nylon tubes.

**Manuals:**

This unit is supplied **with the following manuals:** Required Services, Assembly and Installation, Starting-up, Safety, Maintenance & Practices Manuals.

## EXERCISES AND PRACTICAL POSSIBILITIES

Some Practical Possibilities of the Unit:

- |  |   |
|--|---|
| 1.- Familiarisation with different pressure measurement methods. | 7.- Comparison of different pressure measurement methods. |
| 2.- Function and characteristics of a Bourdon type gauge.        | 8.- Calibration of a pressure gauge.                      |
| 3.- Function and characteristics of a "U" tube manometers.       | 9.- Determination of gauge errors.                        |
| 4.- Pressure measurements with U-tube manometers.                |   |
| 5.- Pressure measurements with Bourdon type manometers.          |   |
| 6.- Comparison of different types of pressure measurement.       |   |

## REQUIRED SERVICES

-Water supply.

## DIMENSIONS & WEIGHTS

HEMP Unit:

- "U" manometers and Bourdon type gauges module:

Dimensions: 780 x 600 x 780 mm. approx.

Weight: 20 Kg. approx.

- Bourdon gauge with dead-weight calibrator module:

Dimensions: 500 x 350 x 350 mm. approx.

Weight: 10 Kg. approx.

\*Specifications subject to change without previous notice, due to the convenience of improvements of the product.



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