



Fluid Mechanics

H40

Flow Meter Calibration

A compact unit that compares and shows the accuracy, losses and use of fundamental flow meters



Shown with the optional Pitot Tube Flow Meter fitted

- Cost-effective and simple to use
- Unique 'quick-change' flow meter adaptors and pressure connections
- Multi-tube manometer to show flow meter and overall pressure changes
- Nozzle flow meter included. Optional flow meters available for comparison include: Venturi, orifice and Pitot tube
- Shows the boundary layer effect and the fluid velocity profile – needs Pitot tube (H40a)
- Includes hand-pump and manifold with air valve for increased measurement range
- Works with TecEquipment's Gravimetric or Volumetric Hydraulic Benches for easy installation

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- An ISO 9001 certified company

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Flow Meter Calibration

Description

For use by all kinds of engineering students, the Flow Meter Calibration apparatus compares and shows the accuracy and use of fundamental flow meters.

The nozzle flow meter (included) or any of the optional flow meters quickly and easily fit into place between the adaptors in the base unit of the apparatus. Four water-filled manometers show the pressure differences at the flow meter and across the overall flow meter assembly. The manometers have a common manifold fitted with an air valve. Students use the hand-pump (included) to increase the air pressure in the manifold. This 'offsets' the manometer measurement (adjusts the datum).

The straight pipe (included) gives a comparison of the true pressure losses caused by the flow meters.

The optional Pitot Tube Flow Meter (H40a) will also show the velocity profile in a pipe. This helps to explain the 'boundary layer' and surface friction in pipes and flow channels.

Standard Features

- Supplied with a comprehensive user guide
- Five-year warranty
- Manufactured in accordance with the latest European Union directives

Experiments

- Accuracy of nozzle flow meters
- Losses and k value
- Calculation of the coefficient of discharge

Available Experiment Modules

- Pitot Tube (H40a)
- Venturi Flowmeter (H40b)
- Orifice Flowmeter (H40c)

Essential Base Unit

- Gravimetric Hydraulic Bench (H1)
or
- Volumetric Hydraulic Bench (H1D)

Essential Services

Water supply:

From the hydraulic bench (H1 or H1D)

Operating Conditions

Operating environment:

Laboratory

Storage temperature range:

-25°C to +55°C (when packed for transport)

Operating temperature range:

+5°C to +40°C

Operating relative humidity range:

80% at temperatures < 31°C decreasing linearly to 50% at 40°C

Specifications

Nett dimensions and weight:

750 mm x 900 mm x 300 mm and 9 kg (including Nozzle Flow Meter)

Approximate packed volume and weight:

0.4 m³ and 16 kg

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TecQuipment is one of the global leaders in technical teaching equipment for engineering. If you are interested in one of TecQuipment's products feel free to contact us at:



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