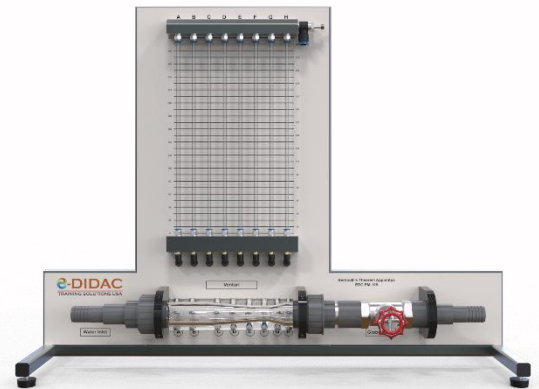


Bernoulli's Theorem Demonstration apparatus (EDC-FM-101)

EXPERIMENTAL DATA:

- Direct measurement of the static head distribution along a Venturi tube.
- Comparison of experimental results with theoretical predictions.
- Measurement of the meter coefficient of discharge at various flow rates.
- Determination of Flow coefficient



DESCRIPTION:

This experimental unit consists of a pipe section containing a venturi tube and a flow control valve downstream. Used to study Bernoulli's principle which describes the relationship between the flow velocity of a fluid and its pressure. All pressure tapings connect to manometers held on a vertical panel behind the pipe work. The manometers measure and show pressure distribution against a calibrated scale. To perform experiments, students connect the water supply and set a low, steady flow through the apparatus.

This unit can be used with EDC-FM-100 or can also be used with laboratory water supply. The on-board flow control valve allows students to observe the pressure losses at different flow rates.

To adjust the datum water level in the manometer tubes, students connect a hand-pump (included) to the valve above the manometer tubes.



TECHNICAL DATA:

Venturi Nozzle:

- Cross-sectional area (A): 84...338 mm²
- Inlet angle: 10.5°
- Outlet angle: 4°

Pitot Tube:

- Movable range: 0...200mm
- Inner diameter: Ø 1mm

Pipes & Pipe Connectors:

- Material: PVC

Measuring Ranges:

- Static pressure: 40...455 mmWC
- Total pressure: 90...455 mmWC

DIMENSIONS AND WEIGHT:

- Minimum dimensions: 1100 x 680 x 900 mm (L x W x H)
- Approximate weight: 28kg

SCOPE OF DELIVERY:

- 1 experimental unit
- 1 set of instructional material
- 1 online access to the Media Center