# Fluid Mechanics



## **Fluid Friction Measurement Apparatus**

## (EDC-FM-147)

### **EXPERIMENTAL DATA:**

- Pressure losses in pipes, piping elements and fittings.
- Opening features of angle seat valve and gate valve.
- Adjustment with various measuring objects for determining flow rate.
- Venturi nozzle.
- Orifice plate flow meter and measuring nozzle.



#### **DESCRIPTION:**

The unit contains different pipe segments accomplished of being shut-off separately. The pipe sections are equipped with piping elements such as bends, elbows and branches. In one pipe section, different shutoff strategies and measuring objects are fitted to determine the flow rate. The measuring objects are made of transparent material which provide excellent vision into the inner structure.

Pressure losses happen during the flow of real fluids due to friction and turbulence. Pressure losses occur in pipes, pipeline elements, fittings and measuring devices. These pressure losses must be taken into account when scheming piping systems.



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### **SPECIFICATIONS:**

- Water supply resolute by EDC-FM-100 base module.
- Self-contained flow meter to measure flow.
- Different pipe sections proficient of being separately shut off, with different piping elements: sudden contraction, sudden enlargement, Y-pieces, T-pieces, corners and bends.
- Study of pressure losses in piping elements.
- Different measurement items for defining flow rate rendering to the differential pressure method.
- Measuring objects finished of transparent material: Venturi nozzle, orifice plate flow meter and measuring nozzle.
- 2 identical tube manometers for measuring the pressure difference.

### **TECHNICAL DATA:**

- Smooth bore pipes of various diameters.
- An artificially roughened pipe.
- A 90° bend.
- A 90° elbow.
- A 45° elbow.
- A 45° "Y".
- A 90° "T".
- A sudden enlargement.
- A sudden contraction.
- A gate Valve.
- A globe valve.
- An in-line strainer.
- A venturi.
- An orifice meterPitot Static Tube.

#### **DIMENSIONS AND WEIGHT:**

- L x W x H (mm): 2450 X 600 X 2200 approx.
- Weight: 80 kg approx.

#### **SCOPE OF DELIVERY:**

- 1 x EDC-FM-147
- 1 x Instructional Manual

