

Product Name :
Orifice Apparatus

Product Code :
DM174



Description :

Orifice Apparatus

Technical Specification :

Orifice Apparatus

The present set-up is designed to study the flow through different orifices and mouthpieces. It consists of an inlet tank provided with diffuser and provision for fitting Orifice or Mouthpiece at the outlet which can be easily attached or detached without any tool. An overflow arrangement is done to vary head and keep it constant at desired level to conduct varieties of experiments. A pointer gauge for measuring X-Y co-ordinates of Jet is provided.

Centrifugal pump is used to re-circulate the water from sump tank to the inlet tank and test section and is return back to the sump tank. Flow diverter is provided to divert the flow either to measuring tank or sump tank.

Technical Details:

Set of Orifices: Material Acrylic, Dia. 10 mm and 15 mm, 2 Nos.

Set of Mouthpieces: Material Acrylic, 3 Nos.

Dia. 10 mm (L/D = 1)

Dia. 10 mm (L/D = 2.5)

Dia. 10 mm (L/D = 4)

Pointer Gauge: To measure X-Y co-ordinates of Jet.

Water Circulation: 0.5 HP Pump, Crompton/Standard make.

Inlet tank: 35 Ltrs. provided with variable head arrangement.

Measuring Tank: Capacity 25 Ltrs.

Sump Tank: Capacity 70 Ltrs.

Stop Watch: Electronic

Control Panel Comprises of Standard makes On/Off Switch, Mains Indicator, etc.

Tanks will be made of Stainless Steel 304 Grade.

An English instruction manual consisting of experimental procedures, block diagram etc. will be provided along with the Apparatus.

The whole set-up is well designed and arranged on a rigid structure painted with industrial PU Paint.

Experimentation/Learning Objectives:

To determine the co-efficient of discharge (Cd) for orifice and mouthpiece.

To determine the co-efficient of flow/velocity (Cv) for orifice and mouthpiece.

To determine the co-efficient of contraction (Cc) for orifice and mouthpiece.

Utilities Required

Electricity supply: Single Phase, 220 V AC, 50 Hz, 5-15 Amp.

Combined socket with earth connection.

Earth voltage is less than 5 volts.

Water Supply: Initial fill

Floor Drain.

Floor Area: 1.5 m x 0.75 m.

Naugralabequipments

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