

Product Name :
PIN-FIN APPARATUS**Product Code :**
Heat and Mass0010**Description :**

PIN-FIN APPARATUS

Technical Specification :

The unit consists of a brass or aluminium fin of a circular cross section fitted across at one end of a long rectangular duct. The other end of the duct is connected to suction side of the blower and the air flows past the fin perpendicular to its axis. One end of the fin projects outside the duct & is heated by an electric heater. Temperature at five points along the length of the fin is measured by thermocouples. The blower is not run in natural convection condition while it is run in forced convection conditions. The air flow rate can be varied by control valve on delivery side of the blower.

SPECIFICATION:-

- Material of Fin - Brass
- Length of the Fin (L) - 150 mm
- Diameter of Fin (D) - 12.5 mm
- Diameter of Orificemeter - 14 mm
- Diameter of Delivery Pipe - 38 mm
- Coefficient Discharge of Orifice meter(Cd) - 0.65
- No. of thermocouples mounted on the Fin - 5
- No. of thermocouples in the Duct (Ambient) - 1
- Heater - Band type
- No. of thermocouples - 6
- Position 1 to 5 - on the Fin
- Position 6 - in the Duct

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- Dimmerstat - 1000 watt
 - Voltmeter - 0 - 300 volt
 - Ammeter - 0 - 5 amp
 - Temperature Indicator - 0 – 3000 C
 - Manometer - Water Manometer
 - Thermocouples - Cromel-Alumel

RANGE OF EXPERIMENTS:-

- To study the temperature distribution along with the length of fin in Forced convection and Natural Convection

SERVICE REQUIRED:-

- Suitable floor space.
- 15 amps, Single Phase A. C. supply with earthing connection.

 **LAB ENGINEERING**

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