

Product Name :
FORCED CONVECTION APPARATUS**Product Code :**
Heat and Mass0005**Description :**

FORCED CONVECTION APPARATUS

Technical Specification :

The unit consists of mainly a centrifugal blower, electrically heated test section, control valve to regulate the air flow and an orifice-meter and U-tube water manometer for flow measurement. Thermocouples are used to measure the pipe wall temperature and also the air temperature at inlet and exit. The apparatus mainly designed to find out the value of heat transfer coefficient under the air different conditions.

SPECIFICATION:-

- Temperature indicator = 0 –300 0C
- Ammeter = 0 - 5 A
- Voltmeter = 0 – 300 V
- Dimmerstate = 1000 watt
- Heater = Mica Covered Type
- Delivery Pipe Diameter (d_i) = 0.032 m
- Length of test Section (L) = 0.44 m
- Orificemeter Diameter (d_o) = 0.014 m
- Blower = 1/3 H.P. Single Phase with Motor
- Manometer = Water Manometer
- Test Section Insulation = Asbestos Rope
- Thermocouple - No. 1 to 6 on the Test Section
- Thermocouple - No. 7 Inlet Temperature of Air to Test Section
- Thermocouple - No. 8 Exit Temperature of Air From Test Section

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- Thermocouples = Cromel-Alumel

FEATURES:-

- Heat transfer in forced convection can be studied well.
- The value of heat transfer coefficient is calculated under various fluid flow conditions.
- Ideal for group studies & demonstration.

RANGE OF EXPERIMENTS:-

- To study the temperature distribution along the length of test section by -Forced convection

SERVICE REQUIRED:-

- Suitable bench area to mount the instrument.
- 15 amp single Phase A. C. supply with earthing connection.

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