The apparatus consists of a channel in which the pin fin is tested in both natural as well as forced convection. The channel is connected to the suction of blower. The blower is operated to touch the pin fin in forced convection only. In natural convection, the window above the pin fin is kept open to the atmosphere. Five thermocouple tapings are given along the length of the fin. Thus the temperature distribution along the length can be distinguished. Also natural and forced heat transfer co-efficient, effectiveness, etc. can be found out.

Specifications:

1. Three pin fins-
   a) M. S.
   b) Brass
   c) Al
2. Channel- 150mm x 100mm x 1000mm
3. Blower - run by f.h.p. motor.
4. Orifice meter along with water manometer to measure airflow.
5. Voltmeter and ammeter to measure power input.
6. Cr- Al thermocouple with 6 tapings along with temperature indicator.
7. Dimmerstat to control power input.
8. A band heater to heat the pin fin.
   A technical manual accompanies the unit.

Services required:

1. 220v, stabilized single phase supply along with earthing Connection.
2. Floor area 2m x 1m x 1m height.

Note: Specifications are subject to change.

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