



Product Code . JL-HTL-10046

Natural Convection Apparatus

Description

Natural Convection Apparatus

The unit consists of a vertical brass pipe heated by a cartridge heater inside it.

The pipe loses heat to atmosphere by natural convection.

It is fitted in an enclosure to provide undisturbed natural convection currents.

Thermocouples are attached on the pipe to measure local temperatures.

Heater input is measured on voltmeter and ammeter.

Thus students can determine overall heat transfer coefficient and local transfer coefficients in natural convection at various heat transfer rates.

Specifications:-

1. Pipe – Brass pipe, 38mm. dia. (OD) 500mm. long, fitted with cartridge heater inside.
2. Thermocouples are fitted along with the length of pipe for Temperature measurement – 7 nos.
3. Enclosure 200mm. x 200mm. x 800mm. size, with one side of Perspex sheet.
4. Measurements & Controls
 - a) A Dimmerstat for heater input control.

b) Voltmeter and Ammeter for heater input measurement.

c) Multichannel digital temperature indicator.

A technical manual accompanies the unit:-

Services Required:-

1. Bench area of 1.5m x 0,75m. at working height.

2. 230v, 5A, AC, electric supply with earthing connection.
