LAB ENGINEERING

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Product Name :	**Product Code :**
THERMAL CONDUCTIVITY OF INSULATING POWDER	Heat and Mass0012

Description :

THERMAL CONDUCTIVITY OF INSULATING POWDER

Technical Specification :

The unit consists of two thin wall concentric copper spheres. The inner sphere houses the heating coil. Heating coil is made up of nichrome wire wound on mica sheet. The insulating powder packed between two shells. Power supply to the heater is given through a dimmerstat & is measured by voltmeter & an ammeter. Temperature can be measured with the help of thermocouples. Four thermocouple are embedded on inner sphere and six thermocouples are embedded on outer sphere. The entire ten temperature indicator, these reading enable of insulating powder.

SPECIFICATION:-

- Radius of the inner copper sphere - ri - 50mm
- Radius of the outer copper sphere - ro - 100 mm
- Voltmeter - 0 - 300 V
- Ammeter - 0 - 5 A
- Dimmerstat - 1000 watt
- Heater - Mica Type.
- Temperature indicator - 0 - 300 0C
- Thermocouple - No. 1 to 4 on inner sphere to measure Ti
- Thermocouple - No. 5 to 10 on outer sphere to measure T0
- Insulating powder Asbestos magnesia commercially available powder and
- Packed between the two spheres.

FEATURES:-
• Thermal conductivity of insulating powder can be calculated.
• Wide range of experiments can be performed to find value over a range of temperatures.
• Ideal for group studies & demonstration.
• Panelised instruments mounted on a control panel.
• Easy to operate.
• Useful for institutions, research laboratories & insulating powder manufactures

EXPERIMENTS:-
• To find out the thermal conductivity of the Insulating powder packed between the two spheres.

SERVICE REQUIRED:-
• 15 amps, Single Phase A. C. supply with earthing connection.
• Suitable bench area to mount the instrument.