



The Thermal Conductivity Apparatus (DG-IS-TCA), is a microprocessor based instrument designed to measure and display the thermal conductivity of insulating materials using the **Guarded Hot Plate Method**. The equipment satisfies the latest guidelines of Indian **Standards IS-3346** & broadly conforms to **American standard ASTM177**. The instrument is automatic, programmable and designed with the latest **Integrated Circuit Technology**. The instrument displays the "K" value directly in engineering units. No expertise and adjustments are required for installation.

Windows based software is provided to display the temperature of thermocouples and power fed to the central heater. K-Value is automatically calculated and displayed as per sample parameters and temperature data.

Testing Procedure: The samples of the material to be tested are placed on either side of a horizontal guarded hot plate, consisting of a central heater surrounded by a separately controlled guard heater. Two auxiliary heater plates are provided on the other side of the two samples to produce a uniform and constant temperature on the other side of the sample. Two fluid-cooled cold plates are also provided. Fluid temperature control may be done externally. The guard and central plate heaters are fed through high performance, regulated D. C. power supplies, controlled by a differential temperature controller. The auxiliary heater plates are controlled by S. C. R. proportional temperature controller. Temperature measurement is done by embedded thermocouples in guarded hot and auxiliary plates.

SPECIFICATIONS

Guarded hot plate instrument is recommended for testing where ultimate accuracy is more important rather than speed. The thermal conductivity apparatus comprises a data logger-cum-differential temperature controller, High-performance D.C. power supplies, auxiliary cold plate temperature controller, cold plate, and guarded hot plate chamber.

Product Code	DG-IS-TCA
Equipment Category	Import Substitute
Mean Temperature Range	100 to 550 °C
Measurement Range	0 to 0.5 Watt/mK
Accuracy	5%
Sample Thickness	25 to 50 mm
Weight	100Kg
Usage Environment	20 to 30 deg.C
Applicable Standards	IS-3346, ASTM177
Applications	Determination of thermal conductivity of loss filled and solid insulating material.

Consumables

Accessories Required	Off-line UPS, circulating bath etc.
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Ordering Information

Item:

Thermal Conductivity Apparatus

Category:

Import Substitute

Unique Code:

DG-IS-TCA

Accessories:

- Battery Charger
- Operating Manual

Customization:

Any customisation request to be made at the time of placing the order

Order Placement:

- Via the Website
- Via E-mail
- Via Phone

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