1D

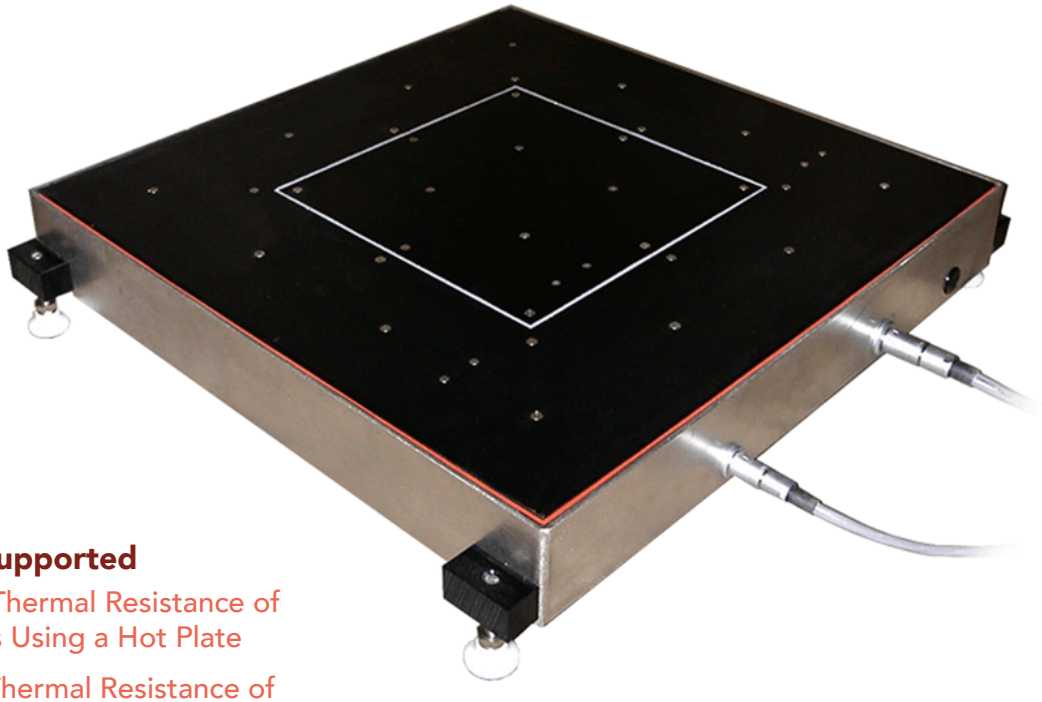
GUARDED HOTPLATE - DRY

The World's Most Advanced Instruments for Textile & Biophysical Testing

The Thermetrics Dry Guarded Hotplate system accurately measures the thermal resistance (Rct) of textile samples or insulation batting and camping mattresses based on the system options selected.

The base GHP-10.5 device can be fitted with a still air hood to comply with ASTM D1518 (Option I), adding an airflow hood with RH sensor and wind speed sensor is available for ASTM D1518 (Option II) and ASTM F1868 dry airflow testing. A cold plate and compression table are available to comply with ASTM F3340.

This device is designed to be placed in an existing climate chamber or other controlled environmental space to meet the designated standard.



Test Methods Supported

- **ASTM D1518:** Thermal Resistance of Batting Systems Using a Hot Plate
- **ASTM F3340:** Thermal Resistance of Camping Mattresses Using a Guarded Hot Plate Apparatus
- **ASTM F1868 Part A:** Thermal and Evaporative Resistance of Clothing Materials Using a Sweating Hot Plate

GHP Specifications

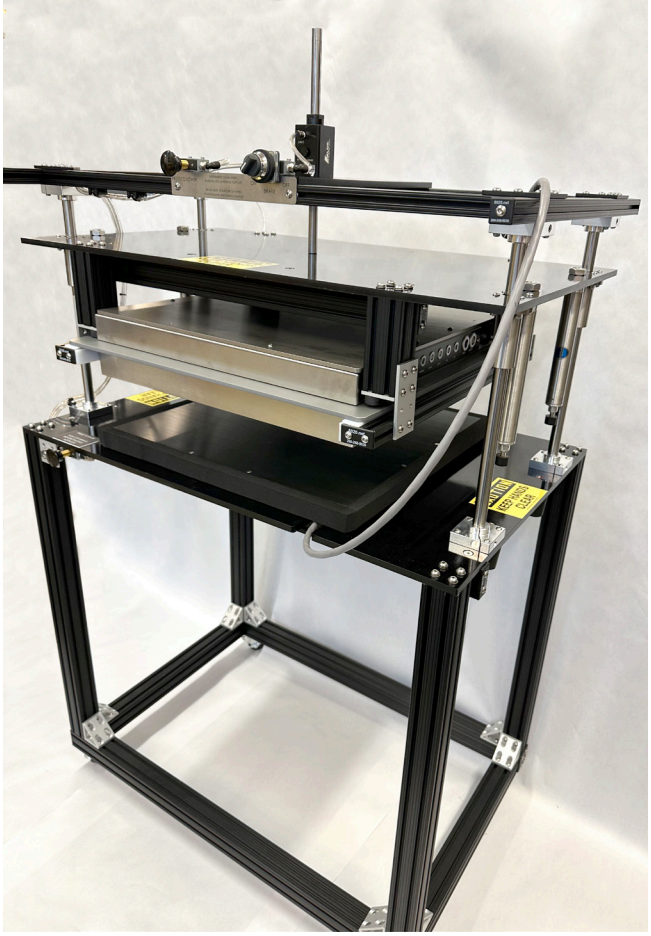
- Weight: 45 lbs. (20 kg)
- 10 in. square test plate with 5 in. guard ring (GHP-10.5)
- Specimen sample size 20 in. x 20 in.
- Electronics-grade copper test plate and guard ring
- Emissivity: 0.95 - to approximate human skin
- -20°C to +50°C operating range
- 0% to 100% R.H. range
- Intrinsic thermal resistance range 0.002 to 2.0 K•m2/W
- ± 0.1°C temperature measurement accuracy
- ± 3% Relative humidity accuracy
- ± 2% Air velocity accuracy
- ± 1% Power measurement accuracy
- Airflow hood option includes provides adjustable plate height, computer-controlled fans and an air velocity sensor
- Ultra-stable resistance wire heating
- Two ambient temperature sensors
- One RH sensor
- Power required: 85-265 VAC, 750 W
- Minimum required chamber size:
  - (With airflow hood) 32 x 28 x 30 in. (81 x 71 x 76 cm.)
  - (With cold plate and compression table) Nominal 79 x 79 x 79 in. (2 x 2 x 2 m)

Base Products Include:

- Dry guarded hot plate with heaters and sensors
- Control electronics
- Two ambient temperature sensors
- Laptop loaded with ThermDAC control software
- Power and control cabling
- One relative humidity sensor
- Standard one-year warranty

GHP Feature Highlights & Benefits

- Standard 10 in. square hotplate with lateral and lower thermal guards
- Electronics grade copper test plate and guard ring with ultra-stable heaters to ensure uniform heat flux
- Two options available for airflow control: Mesh fabric still air hood or computerized airflow hood
- Compression table and cold plate accessory available for mattress pad testing
- Two ambient temperature sensors. Optional relative humidity & windspeed sensors
- Automatic or manual test operation
- Complete, ready-to-use GHP system includes a laptop PC with our exclusive ThermDAC control software



ThermDAC Control Software

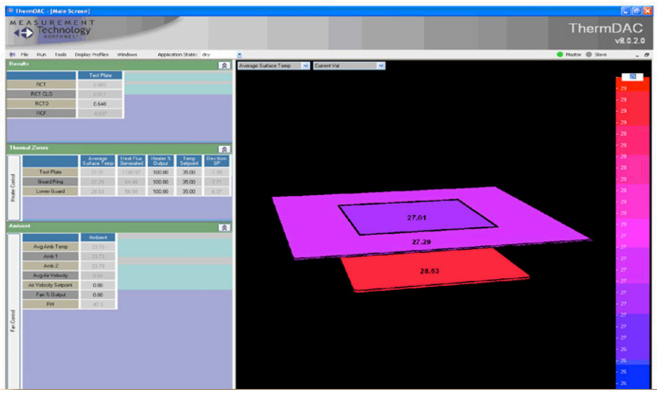
ThermDAC is an engineered user interface for thermal manikin systems providing real-time device control, automated testing, and flexible display and logging capabilities, including:

- Real-time display of instrument data and user control of device outputs
- User-programmable test configurations, tolerances, and stability criteria
- Automatic steady-state detection
- Zoomable time-history graph of multiple device and ambient variables
- Real-time statistical analysis over any user-selected time range
- Logging of raw data, statistical analysis, integrated report generation
- Device calibration and fault detection

Service

All systems come with a one year warranty. Please ask about these service options:

- Startup installation and training
- Extended warranty
- Annual Service Care Plan - a periodic maintenance and service contract designed to keep your Thermetrics equipment calibrated and in top operating condition



Guarded Hotplate - Dry	Description	Product Name	Item #
Base Products	**Guarded Hotplate 10.5 w/o compression**	**306-GHP.10.5**	**19-30602**
Standard Option	Reference Fabric 10.5, Calibrated, ASTM 1868 Part C (requires 20-XX-XXXX)	–	20-00453
	Plenum (ASTM D-1518 Airflow Method & F1868 Dry Airflow Testing)	–	XX-XXXX
Custom Option	Cold Plate, 10.5	–	XX-XXXX

Hotplate Mattress Sleeping Pad Tester	Description	Product Name	Item #
Base Products	**Guarded Hotplate 10.5 with compression (For ASTM 3340 mattress pad testing)**	**306-GHP.10.5 (ASTM 3340)**	**19-30601**
Standard Option	Plenum (ASTM D-1518 Airflow Method & F1868 Dry Airflow Testing)	–	XX-XXXX
	Reference Fabric 10.5, Calibrated, ASTM 1868 Part C (requires 20-XX-XXXX)	–	20-00453

Don't see what you need above? Contact Thermetrics to customize your perfect system.

Keep your guarded hotplate-dry in tip-top shape. Discuss service plan options and point-of-sale discounts with us at sales@thermetrics.com.