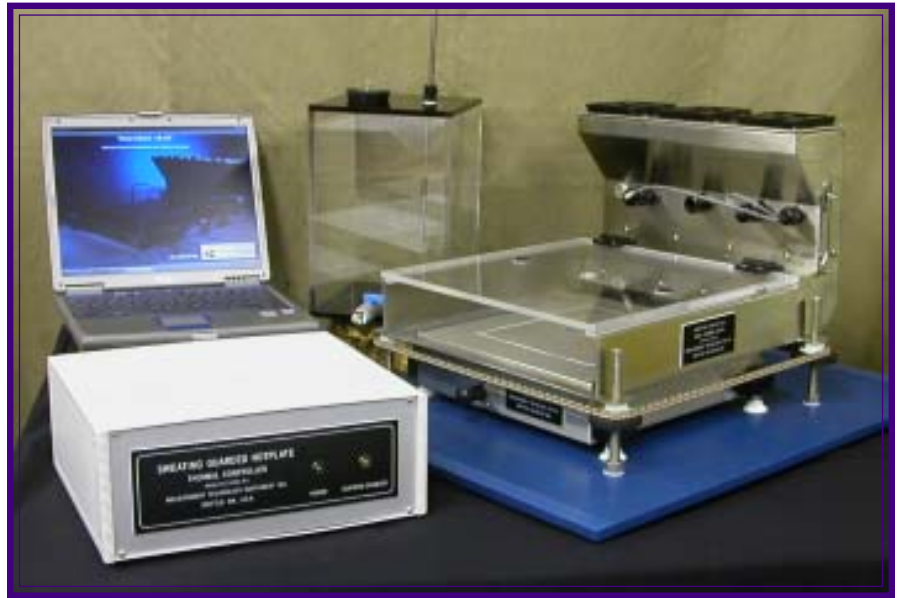


# Sweating Guarded Hotplate

- Square sweating hotplate (two standard sizes) with lateral and lower thermal guards. Call for custom sizes and geometries.
- Copper test plate and guards with ultra-stable resistance wire heating for uniform heat flux.
- Height adjustable airflow hood, variable speed fans and air velocity sensor.
- System includes two ambient temperature sensors and one relative humidity sensor.
- Gravity fed fluid supply regulates flow volume for any sample.
- System includes a new Dell PC computer and monitor with exclusive ThermDAC control software. This intuitive, user-friendly, Windows-based application provides full thermal control, fault detection, system configuration and calibration, real-time data display, and data logging capabilities.

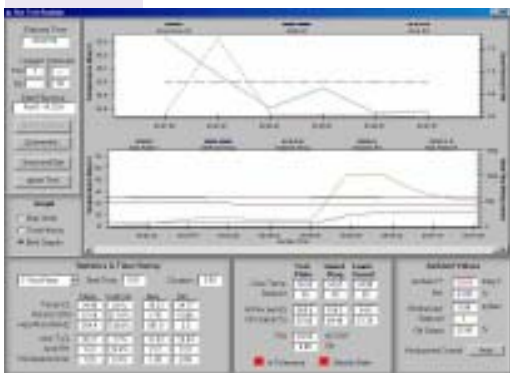


The Sweating Guarded Hotplate, often referred to as the “skin model”, produces accurate, repeatable measurements of the thermal resistance and vapor permeability of textiles.

This system was designed in accordance with ISO 11092 and ASTM F1868 to measure both  $R_{ct}$  (thermal) and  $R_{et}$  (vapor) characteristics. Its compact design easily fits into existing climate-controlled chambers, if available, or a new chamber can be supplied as an option. Sweating capability is achieved through a unique porous wicking assembly on the surface of the test plate and its outer guard ring.

The Sweating Guarded Hotplate system includes hotplate with integral sweating surface, variable speed airflow hood, gravity fed fluid supply system, and ambient temperature and humidity probes. An adjustable height airflow hood easily accommodates a variety of sample thicknesses, and our ThermDAC control and data logging system that makes testing as simple as clicking the mouse and walking away.

Two hotplate sizes are available: an 8” (20.3 cm) square plate with 2” (5 cm) guard, or a 10” (25.4 cm) square plate with 5” (12.7 cm) guard. Call us for custom sizes and geometries.



## Instruments for Textile and Biophysical Testing

# Sweating Guarded Hotplate (SGHP)

## Standard Specifications

Copper test plate, ring, and lower guards  
Zone heaters and sensors - installed  
Variable height acrylic airflow hood and fan plenum  
Variable speed fans  
Pentium PC control computer and monitor  
ThermDAC control software  
Ultra-stable resistance wire heating  
Two ambient temperature sensors  
One relative humidity sensor  
One air velocity sensor  
Gravity-fed reservoir and fluid supply system  
Signal conditioning electronics  
Power and control cabling  
Operators manual  
One year warranty

## Measurement Range and Accuracy

Rct (thermal resistance) range 0.002 to 2.0m<sup>2</sup> K/W  
Ret (evaporative resistance) range 5 to 1000m<sup>2</sup> Pa/W  
± 0.1°C temperature measurement  
± 3% Relative humidity  
± 2% Air velocity  
± 1% Power measurement

## Model Information

### Model SGHP-8.2

8" (20.3cm) square test plate  
2" (5cm) guard ring  
Sample size: 12.2" ± 0.2" (31 ± 0.5cm)  
Minimum chamber size: 26"x24"x24" (66x61x61cm)

### Model SGHP-10.5

10" (25.4cm) square test plate  
5" (12.7cm) guard ring  
Sample size: 20.2" ± 0.5" (51.3 ± 1.3cm)  
Minimum chamber size: 32"x28"x30" (81x71x76cm)

## ThermDAC™ Control Software

ThermDAC was developed by Measurement Technology Northwest specifically for manikin and hotplate systems. It is a user-friendly, intuitive, Windows-based application providing full thermal control, fault detection, and data logging capabilities. System configuration and calibration are also carried out within ThermDAC.

Several specific software features are included for our hotplate systems. User-defined tests allow operators to define non-standard test conditions and custom tolerance criteria. Red and green lights on the screen indicate steady state and in-tolerance conditions. Multiple graph displays can be viewed, with zooming to view device or ambient conditions in detail. Real-time statistical functions can be applied to the test data over any user-selected time range.

## Certification

Both models comply with ISO 11092 and ASTM F-1868 (factory calibration with ISO 11092 Rct reference standard and ASTM F1868 Part 'C' reference fabric). Operator training is available from Measurement Technology NW engineers or regional sales representatives to certify technicians in the use of this device.



4211- 24th Avenue West  
Seattle, WA 98199

Phone/206-634-1308  
Fax/206-634-1309

[www.mtnw-usa.com](http://www.mtnw-usa.com)