INSTRUMENTS FOR TEXTILE AND BIOPHYSICAL TESTING

GUARDED HOTPLATE - SWEATING

1D

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

The Integrated Sweating Guarded Hotplate (iSGHP), or "Skin Model," is used to produce accurate, repeatable measurements of thermal resistance (Rct) and vapor permeability (Ret) for textiles. The system includes hotplate with integral sweating surface, computer controlled variable airflow rates, gravity fed fluid supply system, and ambient temperature and humidity probes.

The system's integrated chamber features an insulated stainless steel interior and a compact, space-efficient design. Its ergonomic layout yields a comfortable working height of approximately 42 in. (107cm) above the floor, and other thoughtful touches include a high intensity LED cabinet light, a removable top shelf for the preconditioning of fabric samples, and a large insulated door with viewing window.

For sweating tests the iSGHP hotplate utilizes the chamber's water source, and a unique porous wicking assembly on both hotplate and guard ring ensures a uniform wetted surface. Adjustable (motorized) plate height easily accommodates a variety of sample thicknesses, and our ThermDAC control and data logging software makes testing as simple as clicking the mouse and walking away.

All iSGHP systems are complete, ready-to-use instruments including hotplate, chamber, laptop PC, and exclusive ThermDAC control software.

Test Methods Supported

- ISO 11092
- ISO 13029
- ASTM F1868
- ASTM D1518 (Option II). Mesh fabric hood is available for Option I method.
- GB/T 11048
- CEN/TR 16422:2012

iSGHP Specifications

- Internal Dimensions:
  30 in. W x 31 in. D x 25 in. H
  (76 cm x 79 cm x 63.5 cm)
- External Dimensions:
  36 in. W x 39 in. D x 70 in. H
  (91 cm x 99 cm x 178 cm)
- Weight: 985 lbs. (448 kg)
- 8 in. square test plate with 2 in. guard ring (SGHP-8.2)
- Specimen sample size 12 in. x12 in.
- 10 in. square test plate with 5 in. guard ring (SGHP-10.5)
- Specimen sample size 20 in. x 20 in.
- Electronics-grade copper test plate and guard ring
- Operating range: 15°C to 55°C, stable to 0.1°C.
- 30% to 70% R.H. range (limited by dewpoint temperature).
- Intrinsic thermal resistance range 0.002 to 2.0 K•m²/W
- Intrinsic evaporative resistance range 0 to 1000 Pa•m²/W
- ± 0.1°C temperature measurement accuracy
- ± 3% Relative humidity accuracy
- ± 2% Air velocity accuracy
- ± 1% Power measurement accuracy
- Airflow hood with variable speed fan control
- Adjustable plate height accommodates a variety of sample thicknesses
- Ultra-stable resistance wire heating
- Two ambient temperature sensors
- One RH sensor; one air velocity sensor
- Gravity-fed reservoir and fluid supply system
- Water Supply: Deionized or distilled water (plumbed or reservoir models available)
- Includes insulated door window and LED light
- Power Required: 220/240 VAC, 1 Phase 50/60 Hz at 30 Amps (Standard model)

iSGHP Feature Highlights & Benefits

- Electronics-grade copper test plate and guard ring with ultra-stable resistance wire heating for uniform heat flux.
- Systems include two ambient temperature sensors, one RH sensor, and one air velocity sensor. Gravity fed fluid supply regulates flow volume for any sample.
- Hotplate is available in both standard sizes: SGHP-8.2 or SGHP-10.5 hotplate
- An optional de-ionizing water cartridge system allows chamber to use local tap water supply.
- Systems include a new laptop PC with exclusive ThermDAC control software.

Base Products Include:

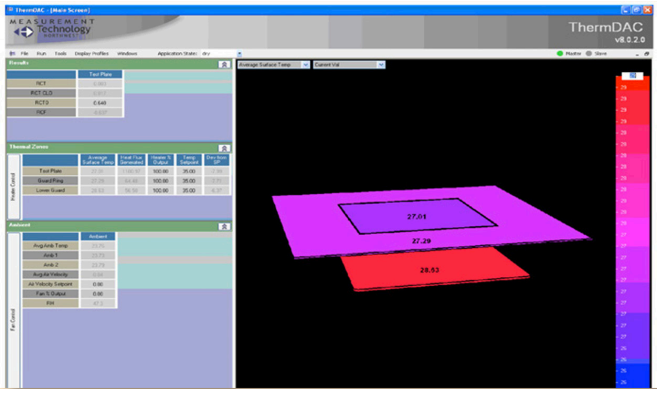
- Sweating guarded hot plate with heaters and sensors
- Integrated environmental chamber
- Control electronics
- Two ambient temperature sensors
- Computer controlled air flow plenum
- Laptop loaded with ThermDAC control software
- Air velocity sensor
- Gravity-fed sweating system
- Power and control cabling
- One relative humidity sensor
- Standard one-year warranty


Complete SGHP System

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



Hotplate Integrated Sweating	Description	Product Name	Item #
Base Products	**Integrated Sweating Guarded Hotplate 10.5**	**431-iSGHP.10.5**	**19-43102**
	Integrated Sweating Guarded Hotplate 8.2	**431-iSGHP.8.2**	**19-43101**
Standard Options	Reference Fabric 8.2, Calibrated, ASTM 1868 Part C	–	20-00452
	Reference Fabric 10.5, Calibrated, ASTM 1868 Part C	–	20-00453
	Hotplate Accessory,Version 2.0 ASTM D-1518 Hood, 10.5	–	20-00925
	DI Filtration System	–	20-00878
	Chamber Recirculation Kit, Standalone, 220V	–	20-01263
	Chamber Recirculation Kit, Standalone, 120V	–	20-01184
Custom Options	Integrated Cold Plate, 8.2	–	XX-XXXX
	Integrated Cold Plate, 10.5	–	XX-XXXX
	Swappable sDHP 8.2	–	XX-XXXX
	Water Cooled Refrigeration	–	XX-XXXX

Hotplate Standalone Sweating	Description	Product Name	Item #
Base Products	**Sweating Guarded Hotplate 8.2**	**306C-SGHP.8.2**	**TBD**
	Sweating Guarded Hotplate 10.5	**306C-SGHP.10.5**	**TBD**
Standard Options	Cold Plate, 8.2	–	XX-XXXX
	Cold Plate, 10.5	–	20-00430
	Reference Fabric 8.2, Calibrated, ASTM 1868 Part C	–	20-00452
	Reference Fabric 10.5, Calibrated, ASTM 1868 Part C	–	20-00453
	Hotplate Accessory, Version 2.0 ASTM D-1518 Hood, 10.5	–	20-00925
Custom Options	Cold Capable	–	XX-XXXX

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

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