

SWEATING GUARDED HOTPLATE

**** code 3123_ ****

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 UNI EN 31092, 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, code 3123, or a 10” (25.4 cm) square plate with 5” (12.7 cm) guard, code 3123_.



International standards / Norme internazionali

ISO 11092, UNI EN 31092, ASTM F1868, ASTM D1518, NFPA 1971, GB/T 11048

Standard Specifications

- 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, Windowsbased application provides full thermal control, fault detection, system configuration and calibration, real-time data display, and data logging capabilities.

*Photographs and descriptions of the present leaflet have to be considered as purely indicative and not binding.
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- Copper test plate, ring, and lower guards.
- Zone heaters and sensors – installed.
- Variable height acrylic airflow hood and fan plenum.
- Variable speed fans
- 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.

- Mesh hood accessory for ASTM D1518 testing.
- Signal conditioning electronics.
- Power and control cabling.
- Operators manual.

Measurement Range and Accuracy

Rct (thermal resistance) range 0.002 to 2.0m² K/W

Ret (evaporative resistance) range 5 to 1000m² Pa/W

± 0.1°C temperature measurement.

± 3% Relative humidity.

± 1% Air velocity.

± 0.5% Power measurement.



Model 3123 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)

SGHP-8.2 has available the **Climatest** code **1722S** to conduct test under environmental controlled conditions, request by standards, or other conditions and when is not available a environmental conditioned laboratory.

Model 3123_ 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)

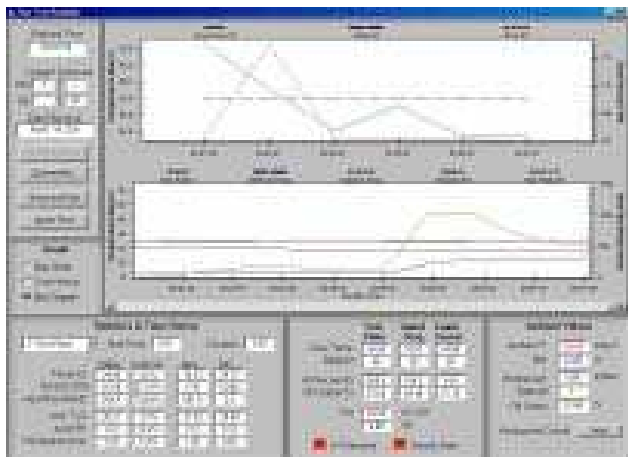


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ThermDAC™ Control Software



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. Operator training is available from Mesdan spa engineers or regional sales representatives to certify technicians in the use of this device.

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). ASTM D1518 compliance when used with mesh fabric hood.

Operator training is available from Measurement Technology NW engineers or regional sales representatives to certify technicians in the use of this device.

OPTIONAL	OPTIONAL
Sistema di deionizzazione acqua code 3123.2	Inline de-ionized cartridge system for supply water code 3123.2
Climatest per modello SGHP-8.2 code 1722S	Climatest for model SGHP-8.2 code 1722S
Set 100 fogli membrana semipermeabile per modello 3123, code 3123.4	Set of 100 semipermeable sheets for SGHP 3123, code 3123.4
Guarnizione 122 cm per modello 3123, code 3123.6	122 cm sealing gasket for SGHP 3123, code 3123.6
Stampante getto d'inchiostro code 250.4	Ink jet printer, code 250.4
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