

SM-4-S-3800 SINGLE STAGE ENVIRONMENTAL TEST CHAMBER

- **Compact environmental test chamber**
- **Maximum temperature range from -40°C to +180°C**
- **Humidity range from 10% to 98% RH**
- **Access port in right side wall**
- **3800 Programmer Controller with ethernet interface**
- **CE Compatible and IEC 60068-3-5 Specification Conforming**

■ **A Compact Mainstay**

Thermotron's SM-4-S-3800 single stage humidity chamber is an ideal platform for temperature and humidity testing of small products, sub-assemblies, or components. Due to its compact size (only 790 mm wide), the SM-4-S occupies very little floor space while being able to provide superior performance over a variety of testing applications. Casters make the SM-4-S easy to move and maneuver through narrow halls and doorways.

■ **Wide Range of Temperature and Humidity Conditions**

The SM-4-S is capable of reaching temperatures ranging from -40°C to +180°C and humidity levels from 10% to 98% RH allowing for more variations in the environments being simulated. The SM-4-S is ideal for constant state and cyclic testing.

■ **Efficient Utility Consumption**

A single stage, hermetic compressor provides moderate temperature change rates while efficiently consuming less power. Advanced features such as a standard electronic humidity sensor and optional product temperature control help reduce maintenance and test time. The SM-4-S is CE Compatible and conforms with IEC Spec 60068-3-5 specifications.



■ **3800 Touch Sensitive Programmer Controller**

The 3800 programmer controller has been designed and refined specifically for environmental test chamber



applications. The interactive touch sensitive keypad and informative four line display with 20 characters per line makes program entry and monitoring easy. The 3800 offers up to three programmable channels, expandable to four. Built-in ethernet connection allows easy computer interface for PC control and recording test data, while the web server feature enables remote access.

■ **Functional Testing and Continuous Failure Monitoring – A Cornerstone Issue**

It is important to functionally test and continuously monitor the product(s) as environmental stresses are being applied. Thermotron can provide a turn-key test solution based on a user's unique set of test requirements. Thermotron's Product Test Solutions group is capable of meeting a variety of test equipment needs including test system integration, custom electronic systems, or Thermotron's exclusive Product Test System. All solutions provide data relating product performance parameters to stress conditions at time of failure. This information is vital to perform a proper analysis of the failure mode.

■ **Worldwide Service and Support**

Our worldwide service centers and technical support staff provide responsive service after the sale for the life of your chamber. Factory-trained field service engineers and a complete inventory of standard parts and components are all designed to keep your equipment running.

Single Stage Humidity Chamber Specifications

Temperature Range	-40°C to +180°C
Temperature Rate of Change*	
Cooling	9°C / min
Heating	11°C / min
Humidity Range**	10% to 98%
Cooling Range — Minutes	
+180°C to -35°C	40
+71°C to -35°C	28
+85°C to -20°C	14
Heating Range — Minutes	
-35°C to 180°C	22
-35°C to 71°C	8
-20°C to 85°C	8
Temperature Control Tolerance	± 0.3°C
Temperature Uniformity***	±0.7°C
Live Load Capacity — Watts, Temp, Mode	
+25°C	750
-20°C	750
Humidity Control Tolerance****	2.5% RH
Humidity Uniformity*****	1% RH
Volume — Liters	113
Weight — Kg	318
Workspace Dimensions — W x D x H	
Millimeters	510 x 510 x 510
Move-In Dimensions — W x D x H	
Millimeters	790 x 1070 x 1730
Electrical Service — Full Load Amps	
220/ 1/ 50	29
400/ 3/ 50	18

* Temperature change rate performance according to IEC 60068-3-5, paragraph 4.5.2

** Limited by a +7°C minimum dew point temperature and a maximum dry bulb temperature of +88°C. Relative humidity indication at or near the physical limits may be affected by sensor accuracy and control tolerance.

*** Standard deviation from mean, measured at -25°C or at +100°C.

**** At a dry bulb temperature above +20°C.

***** Based upon temperature uniformity specifications.

Performance is based upon 50 Hz and 23.9°C ambient air, and may vary slightly at other ambient temperatures. Chambers are designed for use under normal laboratory operating conditions. For other applications, please consult Thermotron.

SM-4-S Chamber Options

- 4- Channel Data Logger
- 300mm x 460mm Window
- Additional Access Ports
- Additional Auxiliary Event Relays
- Thermotrak II™ Software
- Chart Recorder
- Dry Air Purge System
- GPIB, RS-485 or RS-232 Computer Interface
- Humidity Water Purification and Recirculation System
- Interior Light
- Liquid Nitrogen or CO₂ Boost/Back-Up Cooling System
- Low Humidity System
- Product Temperature Control Software
- Shelving
- Special Voltage Configurations
- Therm Alarm™
- Water Cooled Condenser

THERMOTRON®

THERMOTRON INDUSTRIES

291 Kollen Park Drive
Holland, Michigan, USA 49423
Marketing: (616) 393-4580
Main: (616) 392-1491
Fax: (616) 392-5643
E-mail: info@thermotron.com

THERMOTRON INDUSTRIES, U.K.

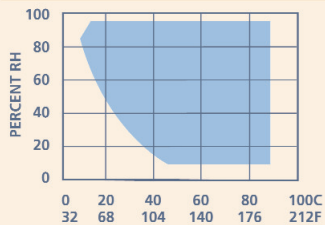
Newton House
Winch Road
Sittingbourne Research Centre
Sittingbourne, Kent
ME9 8EF England
Phone: 01795 436333
Fax: 01795 436777
Email: sales@thermotron.co.uk

Visit us on the Internet

www.thermotron.com

SM-3800 SERIES HUMIDITY RANGE

LOW TEMPERATURE / HUMIDITY CHAMBER



WITH OPTIONAL LOW HUMIDITY PACKAGE

