

**THERMOTRON®**

**S-3800 SERIES TEST CHAMBERS**

A Tradition in Testing Excellence.

# THERMOTRON®

## The international standard for high quality test equipment.



### Powerful Yet Versatile Chambers

Thermotron's S-3800 Series Chambers deliver the quality and accuracy you expect from the leader in test equipment. Featuring the 3800 touch sensitive programmer controller, wide temperature and humidity ranges and multiple chamber sizes to choose from, the S-3800 is the intelligent choice for simulated environment testing.

Smaller, hermetically sealed compressors provide moderate temperature change rates while consuming less power than comparable chambers. Advanced features such as an electronic humidity sensor and optional product temperature control help reduce maintenance and test time.

### 3800 Touch Sensitive Programmer Controller

The new 3800 programmer controller has been designed and refined specifically for environmental test chamber applications. The interactive touch-sensitive keypad and informative four line display makes program entry and monitoring easy. Built-in ethernet connection allows easy computer interface for PC control and recording test data, while the web server features enables remote access.



## S-3800 SERIES Chambers

### Features and Benefits



### S-3800 Chamber Options

- 4-Channel Data Logger.
- Additional Access Ports.
- Additional Auxiliary Event Relays.
- Thermotrak II™ and Directlink Software.
- Cable Notch In Door Frame For Easy Access Wire Routing.
- CE Compliant.
- Chart Recorder.
- Dry Air Purge System.
- Glove Ports.
- GPIB, RS-485 or RS-232 Computer Interface.
- Humidity Water Purification and Recirculation System.
- Liquid Nitrogen Or Co<sup>2</sup> Boost/ Back-Up Cooling System.
- Low Humidity System.
- Product Temperature Control Software.
- Shelving.
- Special Voltage Configurations.
- Therm Alarm™.
- Water-Cooled Condenser.

*Specifications subject to change.*

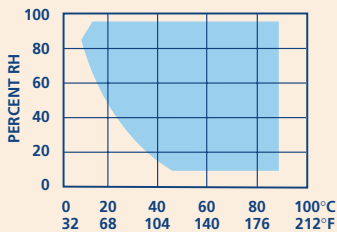
*The addition of accessories may impact performance.*

*Certain options may increase move-in dimensions. Contact Thermotron if dimensions are critical.*

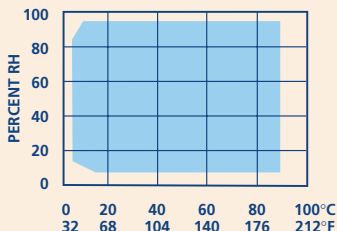
*Special order options are available, please check with Thermotron.*

## SM-3800 SERIES HUMIDITY RANGE

### ULTRA LOW TEMPERATURE / HUMIDITY CHAMBER



### WITH OPTIONAL LOW HUMIDITY PACKAGE



#### THERMOTRON INDUSTRIES

291 Kollen Park Drive  
Holland, Michigan, USA 49423  
Mktg: (616) 393-4580  
Main: (616) 392-1491  
Fax: (616) 392-5643

#### 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  
E-mail: info@thermotron.com

## S-3800 SERIES TEMPERATURE CHAMBER SPECIFICATIONS

Model	S-4 3800	S-8 3800	S-16 3800	S-27 3800	S-32 3800
Temperature Range	All Models <b>-70° to +180°C (-94° to +356°F)</b>				
Cooling Change Rate — Min					
+180° to -65°C (+356° to -85°F)	<b>50</b>	<b>75</b>	<b>75</b>	<b>95</b>	<b>70</b>
+71° to -65°C (+160° to -85°F)	<b>35</b>	<b>52</b>	<b>55</b>	<b>70</b>	<b>48</b>
+85° to -40°C (+185° to -40°F)	<b>24</b>	<b>36</b>	<b>38</b>	<b>50</b>	<b>30</b>
Heating Change Rate — Min					
-65° to +180°C (-85° to +356°F)	<b>36</b>	<b>42</b>	<b>54</b>	<b>73</b>	<b>46</b>
-65° to +71°C (-85° to +160°F)	<b>15</b>	<b>17</b>	<b>22</b>	<b>31</b>	<b>20</b>
-40° to +85°C (-40° to +185°F)	<b>13</b>	<b>16</b>	<b>21</b>	<b>30</b>	<b>18</b>
Temperature Control Tolerance**	All Models <b>±0.3°C (±0.5°F)</b>				
Live Load Capacity — Watts					
-18°C (0°F)	<b>600</b>	<b>550</b>	<b>1000</b>	<b>1000</b>	<b>1000</b>
-40°C (-40°F)	<b>400</b>	<b>350</b>	<b>700</b>	<b>700</b>	<b>700</b>
-54°C (-65°F)	<b>300</b>	<b>200</b>	<b>400</b>	<b>400</b>	<b>400</b>
Temperature Uniformity**	All Models <b>±0.7°C (±1.1°F)</b>				
Window — In/Cm	<b>12x12/30x30</b>	<b>13x19/33x48</b>	<b>17x23/43x58</b>	<b>12x12/30x30</b>	<b>17x23/43x58</b>
Cubic Volume — Ft/Liters	<b>4/113</b>	<b>8/227</b>	<b>16/453</b>	<b>27/764</b>	<b>32/906</b>
Weight — Lbs/Kg	<b>700/318</b>	<b>800/363</b>	<b>1320/599</b>	<b>1800/817</b>	<b>1800/817</b>
Workspace — WxDxH					
Inches	<b>20x20x20</b>	<b>24x24x24</b>	<b>30x30x30</b>	<b>36x36x36</b>	<b>38x38x38</b>
Centimeters	<b>51x51x51</b>	<b>61x61x61</b>	<b>76x76x76</b>	<b>91x91x91</b>	<b>97x97x97</b>
Move-in — WxDxH					
Inches	<b>31x42x68</b>	<b>35x49x73</b>	<b>45x59x81</b>	<b>51x65x88</b>	<b>53x68x90</b>
Centimeters	<b>79x107x173</b>	<b>89x124x185</b>	<b>114x150x206</b>	<b>130x166x224</b>	<b>135x173x229</b>
Electrical Service — Amps	(full load)	(full load)	(full load)	(full load)	(full load)
230/1/60	<b>25</b>	<b>25</b>	<b>47</b>	<b>47</b>	<b>47</b>
230/3/60	<b>20</b>	<b>20</b>	<b>36</b>	<b>36</b>	<b>36</b>
220/1/50	—	<b>28</b>	—	—	—
400/3/50	<b>17</b>	<b>17</b>	<b>18</b>	<b>18</b>	<b>18</b>
Noise Level† — dBA					
Heating/Cooling†	<b>60/68</b>	<b>60/68</b>	<b>60/70</b>	<b>60/70</b>	<b>60/70</b>

## SM-3800 SERIES TEMPERATURE / HUMIDITY CHAMBER SPECIFICATIONS

Model	SM-8 3800	SM-16 3800	SM-27 3800	SM-32 3800
Temperature Range	All Models <b>-68° to +180°C (-90° to +356°F)</b>			
Humidity Range*	All Models <b>10% to 98% RH</b>			
Cooling Change Rate — Min				
+180° to -65°C (+356° to -85°F)	<b>78</b>	<b>85</b>	<b>102</b>	<b>74</b>
+71° to -65°C (+160° to -85°F)	<b>54</b>	<b>59</b>	<b>76</b>	<b>51</b>
+85° to -40°C (+185° to -40°F)	<b>38</b>	<b>41</b>	<b>53</b>	<b>31</b>
Heating Change Rate — Min				
-65° to +180°C (-85° to +356°F)	<b>43</b>	<b>56</b>	<b>76</b>	<b>48</b>
-65° to +71°C (-85° to +160°F)	<b>17</b>	<b>22</b>	<b>33</b>	<b>20</b>
-40° to +85°C (-40° to +185°F)	<b>16</b>	<b>21</b>	<b>31</b>	<b>18</b>
Temperature Control Tolerance**	All Models <b>±0.3°C (±0.5°F)</b>			
Live Load Capacity — Watts				
-18°C (0°F)	<b>550</b>	<b>1000</b>	<b>1000</b>	<b>1000</b>
-40°C (-40°F)	<b>350</b>	<b>700</b>	<b>700</b>	<b>700</b>
-54°C (-65°F)	<b>200</b>	<b>400</b>	<b>400</b>	<b>400</b>
Temperature Uniformity**	All Models <b>±0.7°C (±1.1°F)</b>			
Humidity Control Tolerance***	All Models <b>2.5% RH</b>			
Humidity Uniformity****	All Models <b>±1% RH</b>			
Window — In/Cm	<b>13x19/33x48</b>	<b>17x23/43x58</b>	<b>12x12/30x30</b>	<b>17x23/43x58</b>
Cubic Volume — Ft/Liters	<b>8/227</b>	<b>16/453</b>	<b>27/764</b>	<b>32/906</b>
Weight — Lbs/Kg	<b>875/397</b>	<b>1395/633</b>	<b>1875/851</b>	<b>1875/851</b>
Workspace — WxDxH				
Inches	<b>24x24x24</b>	<b>30x30x30</b>	<b>36x36x36</b>	<b>38x38x38</b>
Centimeters	<b>61x61x61</b>	<b>76x76x76</b>	<b>91x91x91</b>	<b>97x97x97</b>
Move-in — WxDxH				
Inches	<b>35x49x73</b>	<b>45x59x81</b>	<b>51x65x88</b>	<b>53x68x90</b>
Centimeters	<b>89x124x185</b>	<b>114x150x206</b>	<b>130x166x224</b>	<b>135x173x229</b>
Electrical Service — Amps	(full load)	(full load)	(full load)	(full load)
230/1/60	<b>25</b>	<b>50</b>	<b>50</b>	<b>50</b>
230/3/60	<b>20</b>	<b>37</b>	<b>37</b>	<b>37</b>
220/1/50	<b>28</b>	—	—	—
400/3/50	<b>17</b>	<b>29</b>	<b>29</b>	<b>29</b>
Noise Level† — dBA				
Heating/Cooling†	<b>60/68</b>	<b>60/70</b>	<b>60/70</b>	<b>60/70</b>

\* Limited by a +7°C (+45°F) minimum dew point temperature and a maximum dry bulb temperature of +8°C (+190°F). 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 (-13°F) or at +100°C (+212°F).

\*\*\* At a dry bulb temperature above +20°C (+68°F).

\*\*\*\* Based upon temperature uniformity specifications.

† Noise Level: A-weighted sound pressure level measured at a distance of 1.0 meter (39.4 inches) from the surface of the equipment at a height of 1.6 meters (63 inches) from the floor in free-field conditions, using a calibrated instrument.

Performance is based upon 60 Hz and 23.9°C (75°F) 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.