

Thermotron SE Series Test Chamber Specs Actual Specs May Vary
Ask Our Experienced Technical Sales Engineers For Item Specific Information

Cascade Chamber Specifications

| | SE-300 | SE-600 | SE-1000 | SE-1200 |
|--------------------------------|---|--|--|--|
| Interior Dimensions | 61 cm x 67 cm x 71 cm (24" w x 26.25" d x 28" h) | 102 cm x 67 cm x 86 cm (40" w x 26.25" d x 34" h) | 102 cm x 100 cm x 97 cm (40" w x 39.25" d x 38.25" h) | 102 cm x 100 cm x 117 cm (40" w x 39.25" d x 46" h) |
| Volume | 289 liters (10.2 cu ft) | 586 liters (20.7 cu ft) | 986 liters (34.8 cu ft) | 1,184 liters (41.8 cu ft) |
| Exterior Dimensions | 86 cm x 155 cm x 196 cm (34" w x 61" d x 77" h) | 122 cm x 155 cm x 208 cm (48" w x 61" d x 82" h) | 122 cm x 188 cm x 218 cm (48" w x 74" d x 86" h) | 122 cm x 188 cm x 239 cm (48" w x 74" d x 94" h) |
| Window Size | 38 cm x 48 cm (15" w x 19" h) | 38 cm x 48 cm (15" w x 19" h) | 38 cm x 48 cm (15" w x 19" h) | 38 cm x 48 cm (15" w x 19" h) |
| Temperature Range | 170°C to -70°C (340°F to -94°F) | 170°C to -70°C (340°F to -94°F) | 170°C to -70°C (340°F to -94°F) | 170°C to -70°C (340°F to -94°F) |
| Temperature Control | ±0.3°C (±0.5°F) | ±0.3°C (±0.5°F) | ±0.3°C (±0.5°F) | ±0.3°C (±0.5°F) |
| Temperature Uniformity* | ±0.5°C (±0.9°F) | ±0.5°C (±0.9°F) | ±0.5°C (±0.9°F) | ±0.5°C (±0.9°F) |
| Airflow | 14,158 liters/minute (500 cfm) | 28,316 liters/minute (1,000 cfm) | 28,316 liters/minute (1,000 cfm) | 28,316 liters/minute (1,000 cfm) |

| | SE-300 | SE-600 | SE-1000 | SE-1200 | | | |
|---|---------|---------|---------|---------|---------|---------|---------|
| Compressor Size | 2-2 Hp | 3-3 Hp | 5-5 Hp | 3-3 Hp | 5-5 Hp | 3-3 Hp | 5-5 Hp |
| Performance Capacity | | | | | | | |
| Cooling (Minutes) Air Temperature with Empty Chamber | | | | | | | |
| 180°C to -65°C (355°F to -85°F) | 75 | 66 | 51 | 74 | 58 | 82 | 63 |
| 71°C to -65°C (160°F to -85°F) | 48 | 36 | 30 | 41 | 36 | 46 | 40 |
| 85°C to -40°C (185°F to -40°F) | 35 | 25 | 22 | 32 | 26 | 37 | 30 |
| Product Temperature with 23 kg (50 lbs) of Aluminum** | | | | | | | |
| 71°C to -65°C (160°F to -85°F) | 90 | 56 | 48 | 60 | 53 | 62 | 56 |
| 85°C to -40°C (185°F to -40°F) | 72 | 48 | 40 | 53 | 46 | 55 | 49 |
| Heating (Minutes) Air Temperature with Empty Chamber | | | | | | | |
| -65°C to 180°C (-85°F to 355°F) | 38 | 37 | 37 | 43 | 43 | 47 | 47 |
| -40°C to 85°C (-40°F to 185°F) | 16 | 16 | 16 | 19 | 19 | 21 | 21 |
| -65°C to 71°C (-85°F to 160°F) | 17 | 17 | 17 | 20 | 20 | 22 | 22 |
| Product Temperature with 23 kg (50 lbs) of Aluminum** | | | | | | | |
| -40°C to 85°C (-40°F to 185°F) | 38 | 38 | 38 | 41 | 41 | 44 | 44 |
| -65°C to 71°C (-85°F to 160°F) | 40 | 40 | 40 | 44 | 44 | 48 | 48 |
| Live Load Capacity (Watts) | | | | | | | |
| 0°C (+32°F) | 1,250 | 2,500 | 3,000 | 2,500 | 3,000 | 2,500 | 3,000 |
| -54°C (-65°F) | 750 | 1,500 | 2,000 | 1,500 | 2,000 | 1,500 | 2,000 |
| Electrical Voltage (Full Load Amps with Humidity / without Humidity) | | | | | | | |
| 208 Volts / 3-Phase / 60 Hertz | 45 / 34 | 55 / 37 | 67 / 58 | 55 / 37 | 67 / 58 | 55 / 37 | 67 / 58 |
| 230 Volts / 3-Phase / 60 Hertz | 39 / 39 | 55 / 35 | 61 / 52 | 55 / 35 | 61 / 52 | 55 / 35 | 61 / 52 |
| 460 Volts / 3-Phase / 60 Hertz | 19 / 28 | 27 / 17 | 31 / 26 | 27 / 17 | 31 / 26 | 27 / 17 | 31 / 26 |
| 400 Volts / 3-Phase / 50 Hertz | 23 / 17 | 30 / 20 | 35 / 30 | 30 / 20 | 35 / 30 | 30 / 20 | 35 / 30 |
| Noise Level*** (dBA) | | | | | | | |
| Heating | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| Cooling | 68 | 74 | 76 | 74 | 76 | 74 | 76 |
| Approximate Shipping Weight | | | | | | | |
| Kilograms | 603 | 762 | 789 | 834 | 862 | 875 | 902 |
| Pounds | 1,330 | 1,680 | 1,740 | 1,840 | 1,900 | 1,930 | 1,990 |

* **Temperature Uniformity:** Standard deviation from the mean, measured at either -25°C (-13°F) or 100°C (212°F).
 ** **Description of Standard Test Load:** 23 kg (50 lbs) comprised of ten 12-gauge aluminum sheets, 52 cm x 52 cm (20.5" w x 20.5" h), in a vertical orientation, spaced 5 cm (2") apart, with the Product Temperature Control thermocouple on the center sheet.
 *** **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.

Thermotron SE Series Test Chamber Specs

Single Stage Chamber Specifications

| | SE-300 | SE-600 | SE-1000 | SE-1200 |
|--------------------------------|---|--|--|--|
| Interior Dimensions | 61 cm x 67 cm x 71 cm (24" w x 26.25" d x 28" h) | 102 cm x 67 cm x 86 cm (40" w x 26.25" d x 34" h) | 102 cm x 100 cm x 97 cm (40" w x 39.25" d x 38.25" h) | 102 cm x 100 cm x 117 cm (40" w x 39.25" d x 46" h) |
| Volume | 289 liters (10.2 cu ft) | 586 liters (20.7 cu ft) | 986 liters (34.8 cu ft) | 1,184 liters (41.8 cu ft) |
| Exterior Dimensions | 86 cm x 155 cm x 196 cm (34" w x 61" d x 77" h) | 122 cm x 155 cm x 208 cm (48" w x 61" d x 82" h) | 122 cm x 188 cm x 218 cm (48" w x 74" d x 86" h) | 122 cm x 188 cm x 239 cm (48" w x 74" d x 94" h) |
| Window Size | 38 cm x 48 cm (15" w x 19" h) | 38 cm x 48 cm (15" w x 19" h) | 38 cm x 48 cm (15" w x 19" h) | 38 cm x 48 cm (15" w x 19" h) |
| Temperature Range | 170°C to -40°C | 170°C to -40°C | 170°C to -40°C | 170°C to -40°C |
| Temperature Control | ±0.3°C (±0.5°F) | ±0.3°C (±0.5°F) | ±0.3°C (±0.5°F) | ±0.3°C (±0.5°F) |
| Temperature Uniformity* | ±0.5°C (±0.9°F) | ±0.5°C (±0.9°F) | ±0.5°C (±0.9°F) | ±0.5°C (±0.9°F) |
| Airflow | 14,158 liters/minute (500 cfm) | 28,316 liters/minute (1,000 cfm) | 28,316 liters/minute (1,000 cfm) | 28,316 liters/minute (1,000 cfm) |

| | SE-300 | SE-600 | SE-1000 | SE-1200 |
|---|---------|---------|---------|---------|
| Compressor Size | 2 Hp | 3 Hp | 5 Hp | 3 Hp |
| Performance Capacity | | | | |
| Cooling (Minutes) Air Temperature with Empty Chamber | | | | |
| 180°C to -35°C (355°F to -31°F) | 54 | 54 | 43 | 74 |
| 71°C to -35°C (160°F to -31°F) | 33 | 35 | 26 | 46 |
| 85°C to -20°C (185°F to -4°F) | 22 | 23 | 18 | 32 |
| Product Temperature with 23 kg (50 lbs) of Aluminum** | | | | |
| 71°C to -35°C (160°F to -31°F) | 60 | 56 | 44 | 66 |
| 85°C to -20°C (185°F to -4°F) | 46 | 39 | 33 | 48 |
| Heating (Minutes) Air Temperature with Empty Chamber | | | | |
| -35°C to 180°C (-31°F to 355°F) | 32 | 31 | 31 | 36 |
| -20°C to 85°C (-4°F to 185°F) | 13 | 13 | 13 | 15 |
| -35°C to 71°C (-31°F to 160°F) | 13 | 13 | 13 | 15 |
| Product Temperature with 23 kg (50 lbs) of Aluminum** | | | | |
| -20°C to 85°C (-4°F to 185°F) | 30 | 31 | 31 | 33 |
| -35°C to 71°C (-31°F to 160°F) | 30 | 31 | 31 | 33 |
| Live Load Capacity (Watts) | | | | |
| 0°C (+32°F) | 1,250 | 2,500 | 3,000 | 2,500 |
| -20°C (-4°F) | 500 | 1,500 | 2,000 | 1,500 |
| Electrical Voltage (Full Load Amps with Humidity / without Humidity) | | | | |
| 208 Volts / 3-Phase / 60 Hertz | 41 / 41 | 55 / 37 | 67 / 58 | 55 / 37 |
| 230 Volts / 3-Phase / 60 Hertz | 38 / 38 | 55 / 35 | 61 / 52 | 55 / 35 |
| 460 Volts / 3-Phase / 60 Hertz | 26 / 17 | 27 / 17 | 31 / 26 | 27 / 17 |
| 400 Volts / 3-Phase / 50 Hertz | 23 / 14 | 30 / 20 | 35 / 30 | 30 / 20 |
| Noise Level*** (dBA) | | | | |
| Heating | 60 | 60 | 60 | 60 |
| Cooling | 68 | 74 | 76 | 74 |
| Approximate Shipping Weight | | | | |
| Kilograms | 617 | 680 | 771 | 753 |
| Pounds | 1,360 | 1,500 | 1,700 | 1,660 |

* Temperature Uniformity: Standard deviation from the mean, measured at either -25°C (-13°F) or 100°C (212°F).

** Description of Standard Test Load: 23 kg (50 lbs) comprised of ten 12-gauge aluminum sheets, 52 cm x 52 cm (20.5" w x 20.5" h), in a vertical orientation, spaced 5 cm (2") apart, with the Product Temperature Control thermocouple on the center sheet.

*** 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.

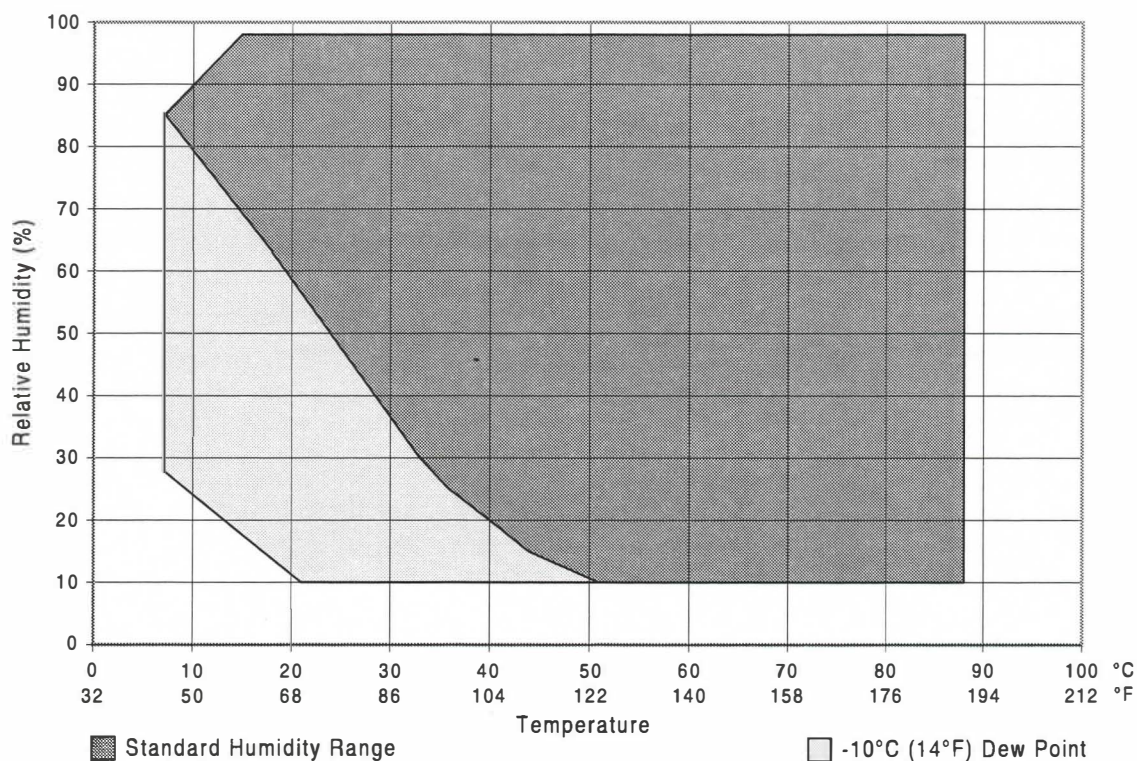
Thermotron SE Series Test Chamber Specs

Humidity System Specifications

| Full Range Humidity Specifications* | |
|-------------------------------------|-----------------------------|
| Humidity Range | 10% RH to 98% RH |
| Dry Bulb Temperature Range | 7°C to 88°C (45°F to 190°F) |
| Dew Point Temperature Range | 7°C to 87°C (45°F to 188°F) |
| Extended Dew Point Condition | -10°C (14°F) |
| Humidity Control | ±2.5% RH |
| Humidity Uniformity** | ±1.0% RH |

* **Full Range Humidity Specifications:** The optional low humidity package provides humidity levels lower than those covered by the full range humidity system.

** **Humidity Uniformity:** Standard deviation from the mean, measured at either 85°C (185°F) @ 85% RH, or 50°C (122°F) @ 20% RH.



NOTE: The performance specifications on pages iii-v are based on operation at 24°C (75°F) ambient air and may vary slightly at other ambient temperatures. Voltages below those specified may affect performance. Chambers are designed for use under normal laboratory conditions. Specifications are subject to change. (The addition of optional accessories may affect performance.)

Thermotron SE Series Test Chamber Specs

Chamber Capacity

CAUTION: To prevent damage to the sloped liner floor, protect any sharp corners or edges.

| | SE-300 | SE-600 | SE-1000 | SE-1200 |
|--|---|-------------------------------|-------------------------------|-------------------------------|
| Maximum Floor Capacity <i>(See note 1 below)</i> | Not applicable <i>(See note 2 below)</i> | 114 kilograms (250 pounds) | 114 kilograms (250 pounds) | 114 kilograms (250 pounds) |
| Standard Shelf Capacity | 23 kilograms (50 pounds) | 23 kilograms (50 pounds) | 23 kilograms (50 pounds) | 23 kilograms (50 pounds) |
| Heavy Duty Shelf Capacity | 68 kilograms (150 pounds) | 68 kilograms (150 pounds) | 68 kilograms (150 pounds) | 68 kilograms (150 pounds) |
| Total Maximum Capacity <i>(See note 3 below)</i> | 182 kilograms (400 pounds) | 182 kilograms (400 pounds) | 182 kilograms (400 pounds) | 182 kilograms (400 pounds) |

NOTES

1. All load capacities are specified as static loads. Load capacities cannot be guaranteed if a load is dropped on the floor or a shelf, or if the chamber is moved or transported while loaded.
2. The floor of the SE-300 is a return air baffle that cannot withstand loads for product testing. Floor capacity is 114 kilograms (250 pounds) with the baffle removed, although doing so will affect chamber performance.
3. The floor capacity can be increased to 182 kilograms (400 pounds) if your chamber was engineered to include a spreader plate or load bar.