



> LT & LH Series High-Low Temperature & Temperature/Humidity Laboratory Test Chambers



Shown with optional base frame

LT & LH Series

Compact, quiet, yet powerful units are required to tackle special laboratory conditions that include limited space, even smaller specimens and the need to conduct tests directly at the workplace. Temperature and climatic testing aims to prove the resistance capability of test specimens to the environmental influences of temperature and temperature, combined with humidity (climatic testing).

Many tests concentrate on the durability of materials and substances under extreme conditions, as well as on the malfunction of components. The LT & LH series of temperature and climatic test chambers are ideally suited to such applications. Reductions in the effectiveness of substances can be detected at an early stage and thus already eliminated in the development phase.

These systems have a volume of 34 L, 64 L and 100 L respectively and provide an optimum solution where space is limited. Please refer to the "Technical Data" table for the most important technical details.

Main Features

- Visually attractive with large windows
- Compact, with optimized test chamber volumes
- Powerful and quiet, suitable for a broad range of applications involving temperature and relative humidity
- Easy handling and a variety of options
- Equipped with the powerful SIMPAC, a 32 bit control and communication system

Standard Equipment

- 32-bit SIMPAC controller with touch panel
- Potential-free contact for switching-off of test specimens
- Independent adjustable temperature limiter t_{min}/t_{max}
- Psychrometric humidity measuring sensor (only LH)
- USB Interface
- Ethernet Interface
- Large observation window
- Test space illumination
- 1 Entry port 50 mm Ø (2 in.)
- 1 Shelf
- Air-cooled refrigeration unit
- Steam-humidification (only LH)
- Calibration of 2 temperature and 2 humidity values (only LH) with Certificate

Options

- Software SIMPATI*
- Temperature measuring on test specimen
- Capacitive humidity sensor
- Interface IEEE 488
- Networking (RS 485 interface)
- Interface RS 232
- Compressed air dryer
- Additional entry ports
- Additional shelves
- Mobile base
- Automatic water supply
- Demineralization unit (only LH)
- Special voltage
- LabVIEW Driver

>LT & LH Laboratory Test Chambers Technical Data

| Type | LT Temperature LH Temp/Humidity | | LT | LT | LT | LT | LT | LT | LT | LT |
|--|------------------------------------|--------------|------------------------|------------------------|-------------|------------------------|------------------------|-------------|-------------------------|-------------------------|
| | | | LH | LH | LH | LH | LH | LH | LH | LH |
| | 0003 | 4003 | 7003 | 0006 | 4006 | 7006 | 0010 | 4010 | 7010 | |
| Test space volume | Liters/cu ft | 34/1.2 | 34/1.2 | 34/1.2 | 64/2.2 | 64/2.2 | 64/2.2 | 100/3.5 | 100/3.5 | 100/3.5 |
| Performance for temperature tests | | | | | | | | | | |
| Temperature range | °C | +10 to +180 | -40 to +180 | -70 to +180 | +10 to +180 | -40 to +180 | -70 to +180 | +10 to +180 | -40 to +180 | -70 to +180 |
| Temperature deviation in time | °C | ±0.3 to ±1 | | | | | | | | |
| Temperature deviation in space | °C | ±0.5 to ±2.0 | | | | | | | | |
| Temperature gradient ¹⁾ | °C | 1 to 4 | | | | | | | | |
| Temperature rate of change ¹⁾ | | | | | | | | | | |
| Heating | °C/min | 2.0 | 4.0 | 4.0 | 2.0 | 3.5 | 3.5 | 2.0 | 3.5 | 3.5 |
| Cooling | °C/min | 3.0 | 6.0 | 3.0 | 3.0 | 5.0 | 2.5 | 3.0 | 5.0 | 3.5 |
| Heat compensation max. | W | -- | 800 | 550 | -- | 800 | 550 | -- | 1100 | 700 |
| Calibrated values +23 °C and +80 °C | | | | | | | | | | |
| Performance for temp/humidity tests - LH models only | | | | | | | | | | |
| Temperature range | °C | +10 to +95 | | | | | | | | |
| Humidity range | % | 10 to 98 | | | | | | | | |
| Humidity deviation in time | % | ±1 to ±3 | | | | | | | | |
| Temperature deviation in time | °C | ±0.1 to ±0.5 | | | | | | | | |
| Temperature deviation in space | °C | ±0.5 to ±1.5 | | | | | | | | |
| Temperature gradient ¹⁾ | °C | 1 to 3 | | | | | | | | |
| Calibrated values +23 °C / 50% RH and +95 °C / 50% RH | | | | | | | | | | |
| Test space dimensions | Width | mm in | 350 13.8 | 350 13.8 | 350 13.8 | 470 18.5 | 470 18.5 | 470 18.5 | 490 19.3 | 490 19.3 |
| | Depth | mm in | 300 11.8 | 300 11.8 | 300 11.8 | 345 13.6 | 345 13.6 | 345 13.6 | 400 15.7 | 400 15.7 |
| | Height | mm in | 310 12.2 | 310 12.2 | 310 12.2 | 400 15.7 | 400 15.7 | 400 15.7 | 540 21.3 | 540 21.3 |
| External dimensions | Width | mm in | 630 24.8 | 630 24.8 | 630* 24.8 | 750 29.5 | 750 29.5 | 750 29.5 | 770 30.3 | 770 30.3 |
| | Depth LT models | mm in | -- | 750 29.5 | 750 29.5 | -- | 800 31.5 | 800 31.5 | -- | 930 36.6 |
| | Depth LH models | mm in | 930 ²⁾ 36.6 | 930 ²⁾ 36.6 | 750 29.5 | 980 ³⁾ 38.6 | 980 ³⁾ 38.6 | 800 31.5 | 1105 ⁴⁾ 43.5 | 1105 ⁴⁾ 43.5 |
| | Height | mm in | 980 38.6 | 980 38.6 | 1730 68.1 | 1070 42.1 | 1070 42.1 | 1780 70.1 | 1190 46.8 | 1190 46.8 |
| With optional base frame | Height | mm in | 1730 68.1 | 1730 68.1 | Standard | 1780 70.1 | 1780 70.1 | Standard | 1880 74.0 | 1880 74.0 |
| With optional base frame | Depth | mm in | 750 29.5 | 750 29.5 | Standard | 800 31.5 | 800 31.5 | Standard | 930 36.6 | 930 36.6 |
| Sound pressure level ⁵⁾ | dB(A) | 56 | 56 | 59 | 56 | 56 | 59 | 56 | 56 | 59 |
| Weight | kg/lbs | 110/242 | 110/242 | 130/286 | 120/264 | 120/264 | 140/308 | 170/374 | 190/418 | 210/462 |
| Rated power | kW | 1.8 | 1.8 | 2.5 | 1.8 | 1.8 | 2.5 | 2.7 | 3.0 | 3.5 |
| Electrical connection 1/N/PE AC 230 V ±10%, 50/60 HZ, 16 A | | | | | | | | | | |

The performance values refer to +25 °C ambient temperature.

Specifications subject to change without notice.
Some of the illustrated systems contain optional extras.

¹⁾ in accordance with IEC 60068-3-5

²⁾ with optional base frame the depth will be reduced to 790 mm/31.1 in. Weight will increase by approximately 90 kg/198 lbs.

³⁾ with optional base frame the depth will be reduced to 800 mm/31.4 in. Weight will increase by approximately 90 kg/198 lbs.

⁴⁾ with optional base frame the depth will be reduced to 960 mm/37.7 in. Weight will increase by approximately 90 kg/198 lbs.

⁵⁾ 1 m distance from the front at free field measuring according to DIN 45635, part 1, accuracy class 2.

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