LORDERAN

Constant Temperature & Humidity Test Chamber
0 °C to 100 °C

Water-recirculation humidity chamber for electronics, material testing and microbial culture — available from 150 L to 1000 L.



0 to 100 °C	20 – 98 % RH	150 – 1000 L	2 Years
TEMPERATURE RANGE	HUMIDITY RANGE	FOUR CAPACITIES	WARRANTY

Models: HWS150 · HWS250 · HWS500 · HWS1000

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PRODUCT OVERVIEW

Stable humidity, low energy use, unattended operation

The LORDERAN Constant Temperature and Humidity Test Chamber with Water Recirculation provides precise humidity control from 0 to 100 °C and 20 to 98 % RH. It is designed for electronics, material testing and microbial culture, and for bioproduct storage, stability testing, material (ageing) testing and shelf-life testing.

0 ~ 100 °C
TEMPERATURE RANGE

20 ~ 98 % RH
HUMIDITY RANGE

±0.5 °C
TEMPERATURE FLUCTUATION

Core energy-saving technologies

- **Lower power requirements** — low-power design for standard single-phase outlets (110 V or 220 V)
- **High-efficiency thermal insulation** — thicker, low-conductivity insulation reduces thermal load
- **Reduced operating costs**
- **Variable-frequency compressor** that adjusts output to the load

Water recirculation system

- Enables **unattended, continuous** high-humidity testing
- Condensate and unevaporated water are **collected and pumped back** to the humidification reservoir
- Drastically reduces DI / RO water consumption
- Water utilisation efficiency stated at **over 80 %**
- **Automatic water refill** system

Structure

- Interior: **SUS 304B stainless steel** — acid- and corrosion-resistant, easy to clean
- **Optimised air-duct system** for better temperature and humidity uniformity
- **Touch-screen** controller; **PT100** platinum-resistance temperature sensor
- **100 mm test hole** and 2 racks

Refrigeration

- High-efficiency **direct cooling**, air cooled
- **Hermetic compressor**
- Refrigerant **R290**

Safety features

- Compressor overload protection
- Humidification heater dry-burn protection
- Over-temperature protection (OTP)
- Electrical short-circuit protection

Typical applications

Electronics · Material testing · Microbial culture · Bioproduct storage · Stability testing · Shelf-life testing

SPECIFICATIONS

Technical specifications

Parameter	150 L HWS150	250 L HWS250	500 L HWS500	1000 L HWS1000
MODEL & SIZE				
SKU	HWS150	HWS250	HWS500	HWS1000
Inner size (W × D × H)	**600 × 405 × 620 mm**	**600 × 500 × 830 mm**	**800 × 700 × 900 mm**	**1000 × 1000 × 1000 mm**
External size (W × D × H)	**830 × 800 × 1500 mm**	**830 × 900 × 1700 mm**	**1030 × 960 × 1790 mm**	**1230 × 1400 × 1850 mm**
Weight	**170 kg**	**190 kg**	**320 kg**	**400 kg**
Racks	2	2	2	2
Test hole	100 mm × 1	100 mm × 1	100 mm × 1	100 mm × 1
PERFORMANCE				
Temperature range	0 ~ 100 °C	0 ~ 100 °C	0 ~ 100 °C	0 ~ 100 °C
Humidity range	20 ~ 98 % RH	20 ~ 98 % RH	20 ~ 98 % RH	20 ~ 98 % RH
Temperature fluctuation	±0.5 °C	±0.5 °C	±0.5 °C	±0.5 °C
Humidity fluctuation	±2 % RH	±2 % RH	±2 % RH	±2 % RH
Temperature deviation	±1.5 °C	±1.5 °C	±1.5 °C	±1.5 °C
Humidity deviation	±3.0 % RH	±3.0 % RH	±3.0 % RH	±3.0 % RH
SYSTEM				
Refrigeration method	High-efficiency direct cooling	High-efficiency direct cooling	High-efficiency direct cooling	High-efficiency direct cooling
Compressor	Hermetic compressor	Hermetic compressor	Hermetic compressor	Hermetic compressor
Cooling method	Air cooled	Air cooled	Air cooled	Air cooled
Refrigerant	R290	R290	R290	R290
Temperature sensor	Platinum resistance PT100	Platinum resistance PT100	Platinum resistance PT100	Platinum resistance PT100
Display	Touch screen	Touch screen	Touch screen	Touch screen

Dimensions are in millimetres. Conditions outside the stable working range should be confirmed with LORDERAN technical support.

SPECIFICATIONS

Dimensions, weight & power at a glance

Model	Inner size W × D × H	External size W × D × H	Weight	Power
150 L · HWS150	600 × 405 × 620 mm	830 × 800 × 1500 mm	**170 kg**	**1.5 kW**
250 L · HWS250	600 × 500 × 830 mm	830 × 900 × 1700 mm	**190 kg**	**1.5 kW**
500 L · HWS500	800 × 700 × 900 mm	1030 × 960 × 1790 mm	**320 kg**	**2.5 kW**
1000 L · HWS1000	1000 × 1000 × 1000 mm	1230 × 1400 × 1850 mm	**400 kg**	**2.5 kW**

Power & electrical current

Parameter	150 L HWS150	250 L HWS250	500 L HWS500	1000 L HWS1000
Power	**1.5 kW**	**1.5 kW**	**2.5 kW**	**2.5 kW**
Current at 220 V	**6.8 A**	**6.8 A**	**11.4 A**	**11.4 A**
Current at 110 V	**13 A**	**13 A**	**22 A**	**22 A**
Voltage variants	110 V or 208–240 V	110 V or 208–240 V	110 V or 208–240 V	110 V or 208–240 V

Models are offered in 110 V and 208–240 V versions; current values are listed at 220 V and 110 V. Please confirm the voltage configuration when ordering.

Working zone

- Stable damp-heat zone: **0 – 100 °C, 20 – 98 % RH**
- Temperature fluctuation ±0.5 °C, deviation ±1.5 °C
- Humidity fluctuation ±2 % RH, deviation ±3.0 % RH

Warranty & service

- **Two-year** warranty
- 30-day money-back guarantee on most new, unopened items
- Free door-to-door shipping; DDP terms available

Request a quotation

Contact LORDERAN for pricing, configuration and shipping details.

www.lorderan.com