LORDERAN

Dynamic Climate Chamber
-70 °C to 150 °C

Programmable temperature & humidity environmental test chamber with a water recirculation system — built for reliability testing from 100 L to 1000 L.



-70 to 150 °C	20 – 98 % RH	100 – 1000 L	3 Years
TEMPERATURE RANGE	HUMIDITY RANGE	FOUR CAPACITIES	WORLDWIDE WARRANTY

Models: JS6010 · JS6025 · JS6050 · JS6100

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PRODUCT OVERVIEW

Precise climate simulation for demanding reliability tests

The LORDERAN Dynamic Climate Chamber (constant climate chamber with water recirculation system) is an environmental simulation chamber used to test the heat resistance, cold resistance, dryness resistance and moisture resistance of products. It is suitable for electronics, electrical appliances, communications equipment, instruments and meters, vehicles, plastics and metals.

-70 ~ 150 °C
TEMPERATURE RANGE

20 ~ 98 % RH
HUMIDITY RANGE

±0.5 °C
TEMPERATURE FLUCTUATION

Key features

- **7.0-inch touchscreen controller** with time-segment and real-time programming
- **100 programs × 100 segments** with multiple cycles
- **Heating 2–3 °C/min**, cooling 0.7–1 °C/min
- **Air-cooled** compressor refrigeration
- **Visual and audible alarms**; USB data output and printing
- **PC remote control** over network cable

Water recirculation & anti-frost design

- Condensate is collected and **returned to the humidifier reservoir**
- Optional **automatic water replenishment** from an external source
- **Anti-condensation, frost-free** design
- Observation window with **built-in heating** to prevent fog and frost
- Delayed circulation-fan stop (0–50 min, default 5 min)

Construction

- Inner chamber: **SUS #304 stainless steel, 2 mm**
- Outer shell: stainless steel, **1.5 mm**
- Insulation: **polyurethane and rock wool**
- Test port: **100 mm cable port** with silicon plug, left side

Core components

- Compressors: **Tecumseh, Bitzer or GEA Bock**
- Solenoid valves: **Danfoss and Saginomiya**
- Electrical: **Schneider, Carlo Gavazzi, Mitsubishi, Rainbow**
- Circuits arranged to US standards, with diagrams

Typical applications

Electronics · Electrical appliances · Communications · Instruments & meters · Vehicles · Plastics · Metals

OPERATING MODES & WORKING ZONE

Three modes, one controlled envelope

1. **Single Temperature Mode**

   Holds a constant temperature until stopped.

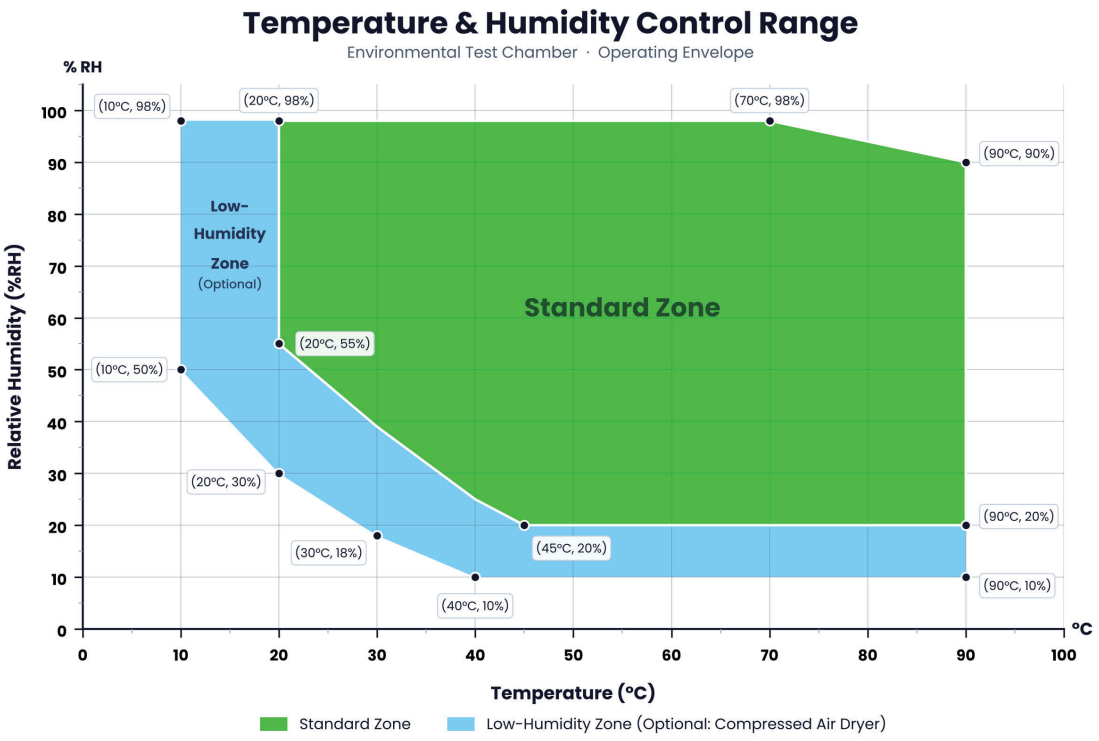
2. **Fixed Value Mode**

   Holds constant temperature and humidity (for example 85 °C / 85 % RH), commonly used for long-term stability tests.

3. **Programmed / Cyclic Mode**

   Multi-segment profiles with defined temperature, humidity and hold times.

Humidity working zone



Working-zone notes

- Achievable humidity is limited by dew point; **below 20 °C**, the upper humidity limit decreases to prevent frost.
- **98 % RH** is generally sustainable only up to about **90 °C**; above that the limit drops to 95 % RH or lower.
- Very low humidity (20 % RH) at high temperatures (e.g. 100 °C) requires an **optional dry-air purging system**.
- For tests outside the guaranteed range, contact technical support.

SPECIFICATIONS

Technical specifications

Parameter	100 L	250 L	500 L	1000 L
MODEL & SIZE				
SKU	JS6010	JS6025	JS6050	JS6100
Inner size, W × D × H (mm)	**500 × 400 × 500**	**600 × 600 × 700**	**800 × 700 × 900**	**1000 × 1000 × 1000**
External size, W × D × H (mm)	**780 × 1130 × 1580**	**960 × 1500 × 1760**	**1130 × 1550 × 1950**	**1320 × 1890 × 2050**
Weight	**250 kg**	**320 kg**	**500 kg**	**680 kg**
Shelves	2	2	3	3
PERFORMANCE				
Temperature range	-70 ~ 150 °C	-70 ~ 150 °C	-70 ~ 150 °C	-70 ~ 150 °C
Humidity range	20 ~ 98 % RH	20 ~ 98 % RH	20 ~ 98 % RH	20 ~ 98 % RH
Heating rate	2 ~ 3 °C/min	2 ~ 3 °C/min	2 ~ 3 °C/min	2 ~ 3 °C/min
Cooling rate	0.7 ~ 1 °C/min	0.7 ~ 1 °C/min	0.7 ~ 1 °C/min	0.7 ~ 1 °C/min
Heating-up time	20 °C to +150 °C ≤ 60 min	20 °C to +150 °C ≤ 60 min	20 °C to +150 °C ≤ 60 min	20 °C to +150 °C ≤ 60 min
Cooling-down time	+20 °C to -40 °C ≤ 70 min	+20 °C to -40 °C ≤ 70 min	+20 °C to -40 °C ≤ 70 min	+20 °C to -40 °C ≤ 70 min
Temperature fluctuation	±0.5 °C	±0.5 °C	±0.5 °C	±0.5 °C
Temperature accuracy	±0.1 °C	±0.1 °C	±0.1 °C	±0.1 °C
Humidity fluctuation	±2 ~ 3 % RH	±2 ~ 3 % RH	±2 ~ 3 % RH	±2 ~ 3 % RH
Humidity deviation	±2.0 % RH (>75 %) ±3.0 % RH (≤75 %)	±2.0 % RH (>75 %) ±3.0 % RH (≤75 %)	±2.0 % RH (>75 %) ±3.0 % RH (≤75 %)	±2.0 % RH (>75 %) ±3.0 % RH (≤75 %)
SYSTEM				
Refrigeration method	Air cooled	Air cooled	Air cooled	Air cooled
Refrigerant	R23A	R23A	R23A	R23A
Display	7.0-inch touch screen	7.0-inch touch screen	7.0-inch touch screen	7.0-inch touch screen
Noise level	60 ~ 65 dB	60 ~ 65 dB	65 ~ 70 dB	65 ~ 70 dB

SPECIFICATIONS

Electrical requirements, power & current

Parameter	100 L JS6010	250 L JS6025	500 L JS6050	1000 L JS6100
Power supply	220 V, 50/60 Hz, 1-phase	220 V, 50/60 Hz, 1-phase	220 V, 50/60 Hz, 3-phase	220 V or 480 V, 50/60 Hz, 3-phase
Power	**7 kW**	**8 kW**	**11 kW**	**14 kW**
Current	**32 A**	**36 A**	**34 A (220 V) 15.6 A (480 V) 20 A (380 V)**	**36.7 A (220 V) 16.8 A (480 V) 21 A (380 V)**

Dimensions & weight at a glance

Model	Inner size W × D × H	External size W × D × H	Weight
100 L · JS6010	500 × 400 × 500 mm	780 × 1130 × 1580 mm	**250 kg**
250 L · JS6025	600 × 600 × 700 mm	960 × 1500 × 1760 mm	**320 kg**
500 L · JS6050	800 × 700 × 900 mm	1130 × 1550 × 1950 mm	**500 kg**
1000 L · JS6100	1000 × 1000 × 1000 mm	1320 × 1890 × 2050 mm	**680 kg**

All dimensions are in millimetres. Please confirm the electrical configuration (voltage and phase) with LORDERAN when ordering.

Safety protection

- Sample over-temperature protection
- Compressor / motor overload and overpressure protection
- Dry-burn protection for heater and humidifier
- Water-shortage protection
- Phase-loss and reverse-phase protection
- Electrical leakage protection
- Three-colour alarm light
- Flame-retardant non-metallic materials

Standards referenced

- IEC 60068-2-1 and 2-2
- GB/T 2423 series
- GB/T 10586
- GB 10589, 10592 and 11158
- GJB 150.3, 150.4 and 150.9

Warranty

Three years worldwide warranty.

Request a quotation

Contact LORDERAN for pricing, configuration and shipping details.

www.lorderan.com