LORDERAN

TECHNICAL DATASHEET
DS-DC-N-EN · REV. B · NOV 2026

DRY STORAGE CABINET

Nitrogen-Purged **Dry Cabinet**

Dry nitrogen displaces the moist air, driving humidity down to **1 % RH** and holding any set point from **1 to 60 % RH** — then purging stops by itself.

MODELS 320L 540L 870L 1436L





540 L



1436 L

1 % RH LOWEST HUMIDITY	**1–60** % RH SET RANGE	**N_2** INERT ATMOSPHERE	**Auto** PURGE STOP AT TARGET
±3 % RH HONEYWELL SENSOR	**320–1436** L FOUR SIZES	**› 80** kg PER SHELF	**2** years FULL WARRANTY

01 **Down to 1 % RH**
Fast, with an inert atmosphere against oxidation.

02 **Intelligent filling**
Purging stops at the target; flow regulated.

03 **Antistatic, lockable**
Protected from static, pollution and access.

APPLICATIONS
Semiconductors · Optics · Oxidation-sensitive parts · Lab samples

2-year warranty
Major defects: full refund or replacement.

Free DDP shipping
Duties paid, no surprise import charges.

30-day returns
Most new, unopened items.

PRODUCT OVERVIEW

Nitrogen in, moisture out

A nitrogen-purged dry cabinet for the most moisture- and oxidation-sensitive parts. **Dry nitrogen** continuously displaces the moist air inside, driving relative humidity down to as low as 1 %.

When the Honeywell hygrometer sees your target, **purging stops** and the flow is regulated for even distribution. Set any target from 1 to 60 % RH. Humidity control only, not temperature.

HOW IT WORKS

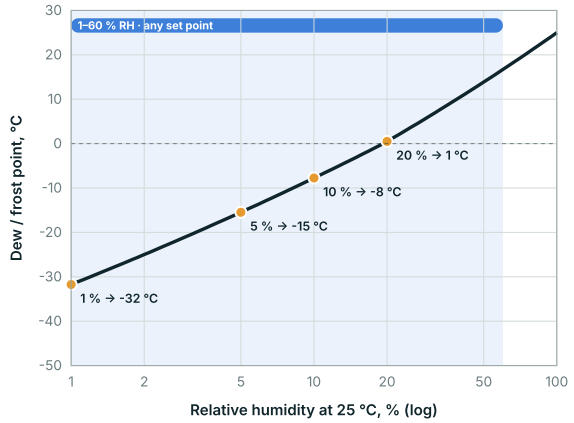
01 Connect
Dry nitrogen source to the cabinet; built-in flowmeter.

02 Purge
Nitrogen pushes the moist air out of the sealed cabinet.

03 Hold
Purging stops at the target; flow regulated.

04 Alarm
Flash and buzzer if humidity leaves the range.

How dry is 1 % RH? Dew or frost point of cabinet air at 25 °C across the 1–60 % RH set range. Calculated reference curve.



LOWEST
1 % RH
nitrogen purged

SET RANGE
1–60 % RH
any target

SENSOR
±3 % RH
Honeywell

SIZES
320–1436 L
11.3–50.7 cu ft

RELATIVE HUMIDITY

$$RH = p_w / p_{sat}(T) \times 100\ \%$$

Water vapour pressure over saturation pressure at the same temperature. At 25 °C, 1 % RH holds only 0.23 g of water per m³ of air.

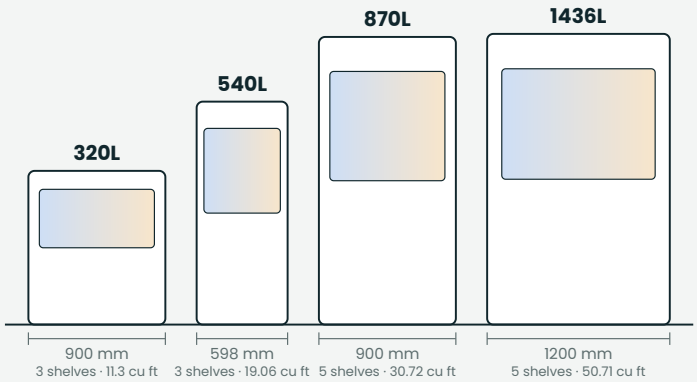
Use dry nitrogen
The cabinet can only be as dry as the gas you feed it.

Keep doors closed
Every opening lets room air in and costs gas to recover.

Mind the floor life
For moisture-sensitive devices, track exposure outside the cabinet per J-STD-033.

FEATURES

Built to protect what you store



01 Nitrogen

- **Nitrogen displacement** drying
- **Intelligent filling**: stops at the target
- Regulated flow for even distribution
- Any set point **1–60 % RH**

02 Monitoring

- **Honeywell** humidity sensor, ±3 % RH
- **Dual LED display**: humidity and temperature side by side
- **Abnormal-humidity alarm**: flash and buzzer

03 Security & finish

- Zinc alloy press lock and **cylinder locks**
- **Antistatic** RoHS powder coating with DuPont powder
- **13-step** electrostatic coating, built to last 15+ years

04 Storage

- Airtight construction
- Adjustable shelves, **> 80 kg** each
- Extra shelves available separately
- Conforms to J-STD-033C · CE · RoHS

TECHNICAL SPECIFICATIONS

Technical specifications

Parameter	320L	540L	870L	1436L
CAPACITY AND SIZE				
Capacity	11.3 cu ft	19.06 cu ft	30.72 cu ft	50.71 cu ft
External Size (W*D*H)	900*450*1010mm	598*710*1465mm	900*600*1890mm	1200*710*1910mm
Internal Size (W*D*H)	898*422*848mm	596*682*1298mm	898*572*1698mm	1198*682*1723mm
Shelves	3, adjustable	3, adjustable	5, adjustable	5, adjustable
CONTROL				
Humidity Range	1%–60% RH			
Drying Method	Nitrogen displacement			
Display Precision	±3% RH, ±1°C			
AC Power	110V or 220V, 50/60Hz			
Antistatic	Yes			

Specifications from the LORDERAN product documentation. Subject to change without notice for product improvement.

AT A GLANCE

MODEL
320L
Capacity
11.3 cu ft
External W×D×H
900*450*1010mm
Internal W×D×H
898*422*848mm
Shelves
3, adjustable

MODEL
540L
Capacity
19.06 cu ft
External W×D×H
598*710*1465mm
Internal W×D×H
596*682*1298mm
Shelves
3, adjustable

MODEL
870L
Capacity
30.72 cu ft
External W×D×H
900*600*1890mm
Internal W×D×H
898*572*1698mm
Shelves
5, adjustable

MODEL
1436L
Capacity
50.71 cu ft
External W×D×H
1200*710*1910mm
Internal W×D×H
1198*682*1723mm
Shelves
5, adjustable

ELECTRONIC OR NITROGEN? · SAME FOUR SIZES · THIS MODEL HIGHLIGHTED

Cabinet	Drying method	Humidity	Supply	Best for
Electronic dry cabinet	Electronic dehumidification	20–60, 10–20, 1–10 or 1–5 % RH, chosen at order	Mains power only; no gas, no desiccant	Everyday dry storage
Nitrogen-purged dry cabinet	**Nitrogen displacement**	**Any set point 1–60 % RH**	**Dry nitrogen source; auto-stop purging**	**Lowest humidity fast; inert atmosphere**

HOW DRY IS DRY? · AIR AT 25 °C

Relative humidity	Water vapour	Dew / frost point
1 % RH	0.23 g/m³	-32 °C (frost)
5 % RH	1.15 g/m³	-15 °C (frost)
10 % RH	2.30 g/m³	-8 °C (frost)
20 % RH	4.61 g/m³	1 °C
40 % RH	9.21 g/m³	10 °C
60 % RH	13.82 g/m³	17 °C

Calculated reference values (Hyland–Wexler over water, Murphy–Koop over ice). Typical room air is 40–60 % RH.

STORAGE NOTES

Topic	Note
Moisture-sensitive devices	IPC/JEDEC J-STD-033 describes dry storage in cabinets at ≤ 10 % RH or ≤ 5 % RH; follow the standard for floor-life rules.
Conformity	Conforms to IPC/JEDEC J-STD-033C; CE and RoHS certified.
Temperature	Humidity control only. Temperature is displayed to ±1 °C, not controlled.

APPLICATIONS & SERVICE

Where it works, and what comes with it

Semiconductors
Wafers, dies and moisture-sensitive devices.

Optics
Coated lenses and laser components.

Oxidation-sensitive parts
Inert nitrogen protects metal surfaces.

Lab samples
Hygroscopic materials and standards.

INSTALLATION

Supply
110 V or 220 V, 50/60 Hz, chosen at order.

Nitrogen
Dry nitrogen source connected to the cabinet.

Space
From 900 × 450 × 1010 mm (320 L) to 1200 × 710 × 1910 mm (1436 L).

WARRANTY & SERVICE

2-year warranty
Major defects under warranty: full refund or replacement.

30-day returns
Return most new, unopened items within 30 days.

Free DDP shipping
Delivered duty paid, no surprise import charges.

Formal quotation
PDF quote on request, with a confirmed ship date.

Request a quotation

Send your application, model and quantity through www.lorderan.com and we will reply with a formal PDF quotation.

DS-DC-N-EN · Rev. B · Nov 2026 · Calculated values are reference figures.
Specifications may change without notice for product improvement.

LORDERAN
www.lorderan.com
Laboratory and environmental test equipment