LORDERAN

TECHNICAL DATASHEET
DS-IIB2-PRO-EN · REV. B · NOV 2026

BIOLOGICAL SAFETY CABINET

Class II B2
Total-Exhaust Biosafety Cabinet

Nothing is recirculated — inflow at **0.53 m/s**, ULPA downflow at **0.33 m/s**, and **100 %** of the air ducted out of the lab.

MODELS

- 1100IIB2-PRO
- 1500IIB2-PRO
- 1800IIB2-PRO



100 % AIR EXHAUSTED	**0.53 m/s** INFLOW VELOCITY	**0.33 m/s** DOWNFLOW VELOCITY	**99.9995 %** ULPA AT 0.12 MM
3–5.2 ft THREE WIDTHS	**Φ300 mm** 4 M EXHAUST DUCT	**7-inch** TOUCH SCREEN	**3 years** WARRANTY

01 Safe with volatiles
No air returns to the work zone or the room.

02 Motorized front window
One-hand sash, remote control and foot switch.

03 Monitored in real time
Airflow sensor, filter pressure and life, alarms and interlocks.

APPLICATIONS

Volatile chemistry · Radiolabelled work · Microbiology · Pharmaceutical QC

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

Free DDP shipping
Duties paid, no surprise import charges.

30-day returns
Most new, unopened items.

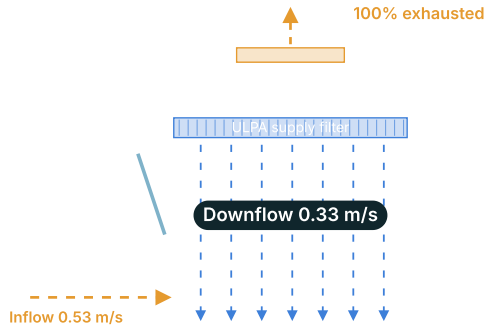
PRODUCT OVERVIEW

Total exhaust, zero recirculation

A Class II B2 total-exhaust biological safety cabinet. Every litre of air drawn into the cabinet is exhausted to the outside through a dedicated duct, which is why a B2 cabinet is the usual choice when biological work also involves volatile chemicals.

Room air enters at **0.53 m/s** and ULPA-filtered downflow protects the work at **0.33 m/s**. Two ULPA filters at 99.9995 % for 0.12 µm particles give an ISO Class 3 work zone, with filter life tracked by pressure sensors.

Airflow. All inflow and downflow air leaves through the exhaust; none is recirculated.



HOW IT WORKS

01 Inflow barrier
Room air enters the front opening at 0.53 ± 0.025 m/s.

02 ULPA downflow
0.33 ± 0.025 m/s over the work zone, ISO Class 3.

03 Total exhaust
100 % exhausted through the external blower and Φ300 mm duct.

04 Sensors
Inflow and downflow monitored in real time; filter life by pressure sensors.

05 Interlocks
UV with front window, UV with LED lamp, blower with front window.

INFLOW
0.53 m/s
± 0.025 m/s

DOWNFLOW
0.33 m/s
± 0.025 m/s

EXHAUST
1050–1800 m³/h
100 %, by width

NOISE
≤ 67 dB(A)
tested opening 200 mm

FILTRATION
99.9995 % at 0.12 µm
ULPA efficiency at the most penetrating particle size, about 10× fewer particles through than an H14 HEPA filter (99.995 %).

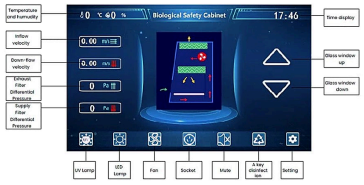
Work at the tested opening
The safety height of the sash is part of the certified configuration.

Keep the grilles clear
Front and rear grilles carry the inflow and the downflow return; never block them.

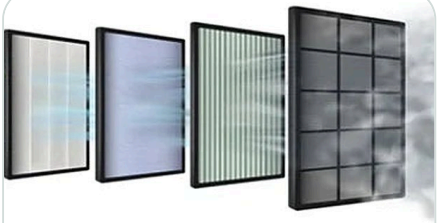
Certify on site
Verify inflow, downflow and filter integrity after installation, relocation and at least annually.

FEATURES

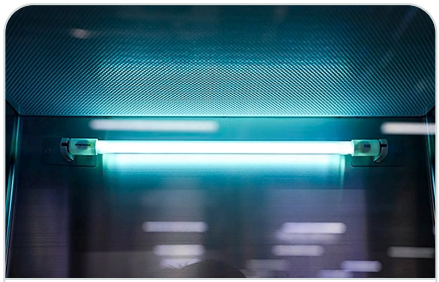
Built for safe, comfortable daily work



Touch-screen control panel



ULPA filtration



UV lamp

01 Airflow & filtration

- **100 % total exhaust** — no recirculation
- Two **ULPA filters**, 99.9995 % at 0.12 µm, ISO Class 3 work zone
- 4 m PVC exhaust duct, Φ300 mm, and exhaust blower

02 7-inch touch screen

- Inflow and downflow velocity, temperature and humidity
- Filter pressure, UV and filter run time, filter life
- Remote control from up to 6 m

03 Motorized front window

- Raise and lower the sash with one hand
- **Foot switch** adjusts window height hands-free
- Easy cleaning of the upper glass

04 Alarms & interlocks

- Audible and visual alarms: abnormal airflow, filter change, unsafe window height
- Interlocks: UV–window, UV–LED lamp, blower–window

TECHNICAL SPECIFICATIONS

Technical specifications

Parameter	1100IIB2-PRO	1500IIB2-PRO	1800IIB2-PRO
DIMENSIONS			
External Dims(W*D*H)	1100*750*2255mm	1500*770*2290mm	1873*795*2280mm
Internal Dims(W*D*H)	940*600*660mm	1350*670*630mm	1600*670*630mm
Tested Opening	Safety Height 200mm(8')	200mm(8')	200mm(8')
Max Opening	420mm (17'')	500mm (20'')	500mm (20'')
Work Surface Height	750mm		
Gross Weight	315kg	381Kg	460Kg
Package (Main Body)	1250*990*1770mm	1650*990*1820mm	2000*1075*1910mm
Package (Exhaust Blower)	930*800*690mm	930*800*710mm	920*710*680mm
AIRFLOW AND FILTRATION			
Inflow Velocity	0.53±0.025 m/s		
Down Flow Velocity	0.33±0.025 m/s		
CFM	100%, 1050m3/h	100%, 1270m3/h	100%, 1800m3/h
Airflow System	0% air recirculation, 100% air exhaust		
Exhaust Duct	4 meters PVC duct, Dia 300mm		
ULPA Filter	Two, 99.9995% efficient at 0.12μm. Filter life indicator.	ULPA Filter	ULPA Filter
CABINET AND ELECTRICAL			
Front Window	Motorized, Anti UV		
Noise	≤67dB(A)		
Consumption	600W	800W	1300W
Socket	Two, total load: 500W		
Standard Accessory	LED lamp*2, UV lamp*2, base stand, remote control, foot switch, exhaust blower, exhaust duct, drain valve, waterproof sockets*2, pipe strap*2		

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

CLASS II TYPES COMPARED

	Class II A2	Class II B2
Air recirculated in the cabinet	about 70 %	0 %
Air exhausted	about 30 %	100 %
Exhaust connection	room, or canopy (thimble) connection	hard-ducted, dedicated exhaust blower
Minimum average inflow, NSF/ANSI 49	0.51 m/s (100 fpm)	0.51 m/s (100 fpm)
Typical use	biological agents, non-volatile work	biological agents with volatile chemicals

Summary of NSF/ANSI 49 cabinet types; reference values for selection.

AIR CLEANLINESS · ISO 14644-1 LIMITS, PARTICLES PER M³

Class	≥ 0.1 µm	≥ 0.2 µm	≥ 0.3 µm	≥ 0.5 µm	≥ 1 µm
ISO 3	1,000	237	102	35	8
ISO 5	100,000	23,700	10,200	3,520	832

Maximum permitted concentration of particles equal to or larger than each size (ISO 14644-1:2015). Reference values.

APPLICATIONS & SERVICE

Where it works, and what comes with it

Volatile chemistry
Biological work that also uses volatile toxic chemicals.

Radiolabelled work
Total exhaust keeps vapours out of the room.

Microbiology
Personnel, product and environmental protection.

Pharmaceutical QC
ISO Class 3 ULPA-clean work zone.

INSTALLATION

Exhaust
Dedicated duct to the outside; Φ300 mm, 4 m PVC duct and blower supplied.

Supply
110 V and 220 V versions for every model.

Room
Make-up air must replace the exhausted volume (1050–1800 m³/h).

WARRANTY & SERVICE

3-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.

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Laboratory and environmental test equipment