



CARFIL QUALITY
YOUR SUPPLIER FOR ALL LABORATORY NEEDS

Labculture Reliant

Features



Class II, Type A2 and B2 Biological Safety Cabinets

The Most Certified Energy-Efficient, Safe, and Ergonomic Biosafety Cabinet in the World

- RS 232 Port and Zero Volt Relay Contact
- Airflow Sensor
- Sentinel™ Gold Microprocessor Controller
- Energy Efficient DC ECM Motor
- ULPA Filter
- Dynamic Chamber
- ISOCIDE Powder Coat

Labculture Reliant Class II, Type A2 (LA2) and B2 (LB2) Biological Safety Cabinets

RS 232 Port and Zero Volt Relay Contact

- RS 232 Port to send operational information to Building Management System (BMS)
- Zero Volt Relay Contact to turn ON/OFF exhaust blower and signal the building alarm

Airflow Sensor

- Monitors real-time airflow for safety
- Alert the user if airflow is insufficient

Sentinel™ Gold Microprocessor Controller

- Displays all safety information on one screen
- Centered and angled down for easy reach & viewing
- Selectable Quickstart mode for fast operation

Single Piece Wall

- Large radius for easy cleaning
- Side-mounted electrical outlets and staggered service fixtures, for easy reach

Single Piece Work Tray



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- Recessed to contain spillage
- Curved grill to prevent blockage

Raised Arm Rest

- Helps prevent grille blocking
- Comfortable working posture

Angled Drain Pan

- Easy to clean
- Does not harbor contaminants

Energy Efficient DC ECM Motor

- Powered by latest generation DC ECM motor, that is more efficient than legacy ECM and VFD motors
- 70% Energy savings compared to AC motor
- Stable airflow, despite building voltage fluctuations & filter loading
- Night Setback mode to further reduce power consumption by 60%

Pressure Switch (LB2 only)

- Temperature independent
- Fast response

ULPA Filter

- 10x Filtration efficiency of HEPA filter
- Creates ISO Class 3 work zone instead of industry-standard ISO Class 5

Dynamic Chamber

- Blower plenum and side walls are surrounded by negative pressure
- Prevent contaminants from escaping outside

ISOCIDE Powder Coat

- Silver-ion impregnated powder coat
- Inhibit microbial growth to improve safety

Rocker Switches and Pressure Gauge

- Easy to use switches
- Displays filter loading status
- Manually adjustable UV timer



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LA2 and LR2 CLASS II TYPE A2 BIOSAFETY CABINETS

Cabinet Filtration System

- Ambient air is pulled through front grille to create inflow, without going into the work surface. Inflow is joined by half of the downflow, to create front air curtain that is fine tuned to create a large performance envelope. The combined air stream travels through the back air column towards the blower.
- Approximately 70% of the air in the common plenum is exhausted through the ULPA filter to the room. The remaining 30% of the air is passed through the downflow ULPA filter and into the work area as a vertical laminar flow air to create ISO Class 3 work surface and prevents cross contamination.
- Near the work surface, the downflow splits. About half goes to the front grille, and half goes to the rear grille. A small portion enters the side capture zones to prevent dead air corners (small blue arrows).
- The design was optimized to give large performance envelope, that provides operator and product protection at wide Inflow and Downflow variation from the Nominal point.

LB2 CLASS II TYPE B2 BIOSAFETY CABINET

Cabinet Filtration System

- Ambient air is pulled through the front grille to prevent contamination of the work surface and work product. The inflow does not mix with the clean air within the cabinet work zone.
- Ambient air is taken in through a pre-filter at the top of the cabinet, and passes through the downflow ULPA filter, entering the work zone as laminar flow. The uniform, nonturbulent air stream protects against cross contamination within and throughout the work area.
- Near the work surface, the downflow air stream splits with a portion moving toward the front air grille, and the remainder moving to the rear air grille. A small portion of the ULPA filtered downflow enters the intake perforations at the side capture zones at a higher velocity (small blue arrows).
- A combination of inflow and downflow air streams forms an air barrier that prevents contaminated room air from entering the work zone, and prevents work surface emissions from escaping the work zone. The downflow combined with the inflow air enters the common air plenum.
- All air in the common plenum is HEPA-filtered and exhausted via a dedicated ducting system to the external environment.



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