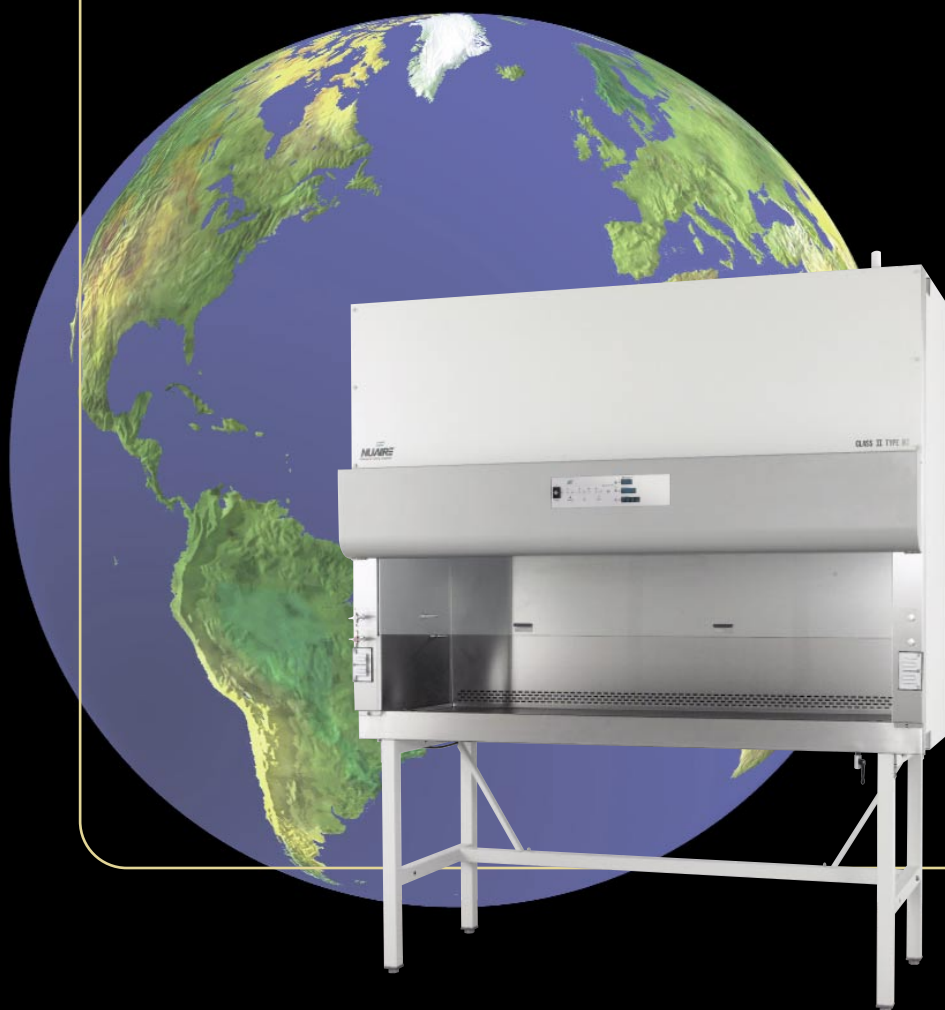




NUAIRE LABGARD 430





NEW ERGONOMIC DESIGN

The LabGard® 430/435 is ergonomically designed for maximum user comfort and adjustability to meet the requirements of the Americans with Disabilities Act (ADA). The work surface to cabinet bottom dimension has been reduced to allow for more knee space. The front Access Airfoil has been increased and recessed for armrest comfort while maintaining containment performance. Maximum visibility has been improved by increasing the viewing area and by providing an unobstructed view through the polished lower edge of the fully counterbalanced sliding or hinged tempered glass window. Internal service valves have been staggered on the work zone side walls making valves easier to reach. The Instrument Panel is now placed in the middle of the Control Panel. Optionally available are:

- A manual, adjustable base stand.
- An electronic, adjustable base stand.
- Either of the above with base storage cabinets.
- A front arm rest.
- A forearm rest.
- Remote controlled service valves.

The LabGard® 430/435 is a Class II, Type B2 Total Exhaust Laminar Flow Biological Safety Cabinet which features flow-through construction with no internal recirculation of air within the cabinet. The gastight 100% Total Exhaust Cabinet minimizes cross contamination of biologicals by providing uniform interior laminar down flow and protects the laboratory professional from exposure to biological and/or chemical agents within the work zone. The 430 B2 cabinet is UL Listed and may be used with agents assigned to biosafety levels 1, 2 or 3, that may have been treated with volatile toxic chemicals and radionuclides required as an adjunct to microbiological studies (limit use of flammables). The 435 B2 cabinet is UL Classified and has NO CHEMICAL USE restrictions.

BUILT TO LAST AND WORK QUIETLY

The LabGard® 430/435 is constructed from a 16 gauge, pressure tight, all welded, stainless steel shell. All welds are meticulously hand-finished and polished to be free of burrs. The shell is structurally reinforced to minimize vibration, noise levels and maintain a flat surface structure. The stainless steel is easily cleaned. All ducts, plenums and penetrations for utilities are sealed or surrounded by negative pressure to prevent the escape of contaminants into the laboratory. The entire cabinet operates at a slight negative pressure to the air pressure within the room.

STATE-OF-THE-ART ELECTRONIC AIRFLOW CONTROL SYSTEM

The state-of-the-art Electronic Airflow Control System is a micro-processor based module that establishes and maintains an optimum

balance between the supply air system and the exhaust air system through constant monitoring of airflow using two dual thermistor probes. The first probe monitors down flow air within the work zone and the second monitors the exhaust flow.

The information is received by the Electronic Control System to control the down flow and with the addition of our Motorized Butterfly Valve (model NU-952) control the exhaust flow according to calibrated set points established by the service technician, continually maintaining an optimum air balance.

The Electronic Airflow Control System also controls lights, outlets and a 24-hour clock with a special timer function. The system incorporates both audible and visual alarms for window height, airflow set points (high/low) for error conditions and power supply. The internal down flow supply blower is interlocked, such that if insufficient exhaust air is detected, the Electronic Airflow Control System will turn off the internal supply blower or prevent it from being energized.

ENERGY EFFICIENT SYSTEM

Direct Total Exhaust from the work area

CONVENIENCE AND SAFETY DESIGN

The LabGard® 430/435 is designed for safety and convenience.

- Centrally Located Electronic Airflow Control Panel
- High/Low Audible/Visual Warning System
- 105 LFPM Air Barrier at 8" Access Opening
- Ergonomic Design
- HEPEX™ Zero Leak Airflow System
- Large Work Space
- Stainless Steel Welded Construction
- Energy-Saving Use of Outside Air
- Sliding Glass Window Closes Completely
- All Front Maintenance
- Internationally Tested



CONFIGURATION FLEXIBILITY



The LabGard® product line is available in 4 or 6 foot nominal widths and can be configured and equipped to fulfill your specific needs.

is achieved by using a single pass, flow-through design. All work zone air (split approximately 50/50 on the work surface) and work access inflow air (with the air barrier rated at 105 LFPM, using an 8" access opening) is drawn through the cabinet's integral exhaust filter by the building exhaust system. This feature limits a buildup of hazardous concentrations of vapors, fumes, or odors in the work zone, which are not particulate in nature. The total exhaust volume is monitored and interlocked with the internal blower such that it will not permit the blower to energize unless the exhaust flow is sufficient to provide a safe minimum inflow velocity.

TRUE LAMINAR AIRFLOW

The LabGard® 430 creates True Laminar Airflow; uniform down flow velocity throughout the work zone. Complete air changes occur twenty-four times per minute. Aerosols generated within the work zone flow instantly into the front and back work surface grills with no lateral movement. Following good laboratory technique, cross contamination within the work zone is minimized and aerosols are completely contained within the system.

HEPA FILTERS

NuAire's exclusive High Efficiency Particulate Air (HEPA) filtration is used for both supply and exhaust air systems. The HEPA filters are constructed from non-woven fiberglass media and zero probed to achieve better than 99.99% efficiency on removal of all particulate matter 0.3 microns, with greater efficiency on larger or smaller particles.

LONGER FILTER LIFE

Filter Life is extended by:

1) having the motor/blower combination positioned to create an even filter loading, 2) using a single high capacity motor/blower for supply air, 3) use of the Electronic Airflow Control System that compensates for filter loading, and 4) use of a large, super-flow exhaust HEPA filter.

HEPEX™ ZERO LEAK AIRFLOW SYSTEM

This NuAire exclusive design results in a quiet, uniform down flow velocity over the sterile work zone. The HEPEX™ Zero Leak Airflow System prevents uneven particulate loading by eliminating direct blasts to the HEPA filter spreading a uniform static

pressure over 100% of the filter surface. The system surrounds all positive pressure airflow chambers and ducts with a vacuum or negative air pressure relative to the laboratory. This eliminates the possibility of cabinet or HEPA filter and access panel gasket leaks.

LOW MAINTENANCE — LOWER OPERATING COSTS

The LabGard® 430/435 is easy to maintain. The heavy gauge stainless steel work tray, all perforated grills, and the protective HEPA filter metal diffuser are all removable for easy cleaning. A stainless steel wire mesh acts as a paper catch to stop any cleaning (or other) materials from being drawn up into the exhaust system.

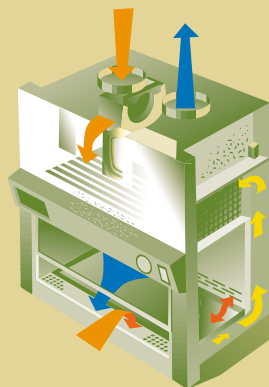
All maintenance is performed from the front of the cabinet. HEPA filter replacement can be completed without removal of the front view screen or disconnecting exhaust or plumbing connections. All electronic controls and adjustments are accessible from the front of the cabinet on the Electronic Airflow Control System for ease of calibration and certification.

Two cool white fluorescent lamps, placed external to the cabinets' work



◀ The Airflow Control System establishes and maintains an optimum balance between the recirculated air system and the exhaust system through constant monitoring of airflow by using 2 dual thermistor airflow monitor probes. The first monitors and controls down flow air in the work zone to an established calibrated set point. The second probe monitors exhaust flow. The system then controls inflow and exhaust according to set points, continually maintaining an optimum air balance.

HEPEX™ ZERO LEAK AIRFLOW SYSTEM



◀ This airflow schematic illustrates the patented HEPEX™ Zero Leak Airflow System. Supply filter air velocity (blue) averages 45-65 LFPM. Minimum air inflow velocity (red) is 100 LFPM through the spacious work opening.

▶ The heavy gauge stainless steel work tray and all perforated grills are removable for easy cleaning.



zone, provide excellent interior lighting and eliminate heat build-up within the work zone. A durable electronic ballast provides flicker-free lighting and minimizes the BTUs rejected into the laboratory.

of dependability, performance, safety, and service. In addition, cabinets are routinely subjected to extensive biological aerosol testing and electrical integrity testing in NuAire's Biological and Electrical laboratories.

WORLDWIDE PERFORMANCE

Quality Assurance is literally built into every NuAire product. NuAire conducts 15 separate tests on each biological safety cabinet prior to shipment, and a complete report of those tests accompanies the cabinet to assure the very best in terms

SPECIFICATIONS

Performance Specifications NSF Std. No. 49 U.L./U.L.-C Listed

Airflow Control System

Electronic Airflow Control System

Microprocessor module that establishes and maintains airflow, lights, outlets, window height, 24-clock, timer and various other functions.

Motor Speed Controller

Blower speed is regulated by a solid state triac motor speed controller.

HEPA Filter

Two (exhaust and supply) disposable extended media dry type filter at rated airflow capacity in accordance with specification MILF-51068.

Butterfly Valves

Butterfly Valve may be used to modulate exhaust flow manually or automatically.

Utility Connections / Installations

Service Valves

Two standard, right side wall. Up to three can be installed in either or both side walls. Remote control service valves available.

Duplex Outlet

One standard, left airfoil. Additional duplex can be added to right airfoil.

Plant Duct Static Pressure

2.0" w.g. H₂O Vacuum / 50.8 mm w.g.

Electrical Requirements

115 VAC, 60 Hz, 15 Amp single phase, optional 220 VAC, 50 Hz.

Dimensions NU-430-400

Interior Dimensions:

25½" (648) height x 46¾" (1178) width x 23½" (597) depth

Exterior Dimensions:

60" (1524) height x 53¾" (1362) width x 32¾" (835) depth

Net Weight:

520 lbs. / 236 kg.

Crated Shipping Wt:

570 lbs. / 259 kg.

Exhaust Flow:

8" opening = 754 cfm / 1281 CMH

Work Access Opening, Inflow Velocity:

8" opening = 105 LFPM

NU-430-600

Interior Dimensions:

25½" (648) height x 70¾" (1788) width x 23½" (597) depth

Exterior Dimensions:

60" (1524) height x 77¾" (1972) width x 32¾" (835) depth

Net Weight:

710 lbs. / 322 kg.

Crated Shipping Wt:

760 lbs. / 345 kg.

Heat Rejected:

1937 BTUs per hour

Exhaust Flow:

8" opening = 1100-1150 cfm / 1869 CMH

Work Access Opening :

8" opening = 105 LFPM

Standard Features

- Electronic Airflow Control System
- HEPEX™ Zero Leak Airflow System
- Large HEPA Filters: 99.99% efficiency rated
- External Fluorescent Lighting
- Front Filter Removal
- Sliding Glass View Screen
- Removable Work Tray
- Metal Diffuser over Supply Filter

- Tempered Glass Window
- Spill Trough with Drain Valve

Optional Features and Accessories

- Germicidal Ultraviolet Lamp (not permitted for use in NU-435)
- Ground Fault Interrupter
- IV Bar with Six Hooks
- Base Support Stand
- Base Storage Cabinet
- Footrest
- Hinged Viewing Window
- Microscope Viewing Window
- Additional Service Valves for Gas, Air or Vacuum
- HEPA Filters 99.999% at 0.3 microns
- Metal Framed HEPA Filters
- Storage Pull-Out Trays
- Permanent Plenum with Quick Release Supply Filter
- Remote Service Valves
- Additional Duplex Outlets
- Armrest
- Decorative Side Panels
- Sinks with Hot/Cold or DI Water Faucets
- Bag In/Bag Out of Exhaust HEPA
- Gastight Butterfly Valves (Manual or Automatic)
- Roof Exhaust Blower Modules





Process 9-1056P Rev. 3 12/99

D E P E N D A B I L I T Y I N A C H A N G I N G W O R L D



2100 Fernbrook Lane
Plymouth, MN 55447
U.S.A.
Phone: 612.553.1270
Fax: 612.553.0459
www.nuaire.com



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1.800.328.3352