

PURCHASE SPECIFICATIONS FOR NUAIRE LABGARD NU-629 BIOLOGICAL SAFETY CABINET

The intent herein is to provide a concise statement of requirements for a quality Class II, Type A2 (Formerly Type A/B3) Laminar Airflow Biological Safety Cabinet, which may be used to augment your purchase request/order.

The LABGARD NU-629 meets the performance requirements of NSF/ANSI 49:2002. Your confidence is well placed in a Biological Safety Cabinet that meets NSF Standard.

NuAire sales representatives will be pleased to explain the importance of the performance and control affected by each of the following requirements. The NuAire LABGARD NU-629 meets all of the requirements in the following SPECIFICATION.

1. Dimensions Inches (mm)

Overall Dimensions - Inches (mm)	NU-629-400	NU-629-600
Width (W)	53 5/8 (1362)	77 5/8 (1892)
Depth (D) (Include Control Center)	32 7/8 (835)	32 7/8 (835)
Height: (H) (Restricted)	82 1/2 (2096)	82 1/2 (2096)
Height (H) (Extended)	95 1/2 (2426)	95 1/2 (2426)
 Interior Dimensions		
Width (W)	46 3/8 (1178)	70 3/8 (1788)
Depth (D)	23 1/2 (597)	23 1/2 (597)
Height (H)	28 1/2 (724)	28 1/2 (724)

2. Cabinet shall provide airflows & biological safety performance as specified.

- a. Cabinet shall provide biological containment protection for both operator and product proven by an actual test, (e.g. test conducted by NuAire) and routinely validated.
- *b. Cabinet shall be constructed from 16GA, Type 304 stainless and painted cold rolled steel to form a sealed structure.
- c. Cabinet shall be easily fumigated employing an established procedure such as that recommended by NSF.
- d. Supply HEPA filter shall be of full cabinet work zone width and depth; work zone below supply HEPA shall be of fixed cross-sectional area (sloping back wall or viewing window is unacceptable).
- *e. Supply HEPA filter shall be protected by a perforated metal diffuser covering the entire top of the work zone.
- *f. Air Velocity from the supply filter shall average 65 to 75 FPM (.32 to .38 m/s) with no single point outside the 20% of average range measured in a horizontal plane within the work zone.
- *g. Work access opening shall be 12 inches (305mm) high. Average inflow velocity shall nominally be 105 LFPM (.53 m/s).

- *3. The cabinet shall be ergonomically designed for maximum user comfort and adjustability to meet the requirements of the American Disabilities Act (ADA.)
- Standard non-metallic armrest/airfoil incorporating large 1.5 inch (38mm) forearm support area with 1/2 inch (12mm) recessed front grill designed for armrest comfort while maintaining containment performance.
 - Maximum visibility into cabinet workzone shall be at least 28-1/2 inches (724mm) from front access airfoil to exterior light housing.
 - Cabinet shall have a centrally located instrument panel within the control center that is easily serviced with quick disconnects.
 - Cabinet shall have the capability of incorporating a user adjustable base stand or base storage cabinet as an option.
 - The cabinet shall have a smooth operating sliding window from full closure to full opening at 19 1/2 inches (495mm).
 - Cabinet shall have a large flat removable worktray (18 7/8 inch (479mm) depth). Worktray may also be raised in place and held with hinged support rods.
- *4. The cabinet shall have all positive pressure plenums surrounded by a vacuum relative to the room (the LABGARD™ employs the HEPEX™ Zero Leak Airflow System).
5. Electrical power shall be supplied with a 12-foot (2.5m), 3-wire cord with molded plug. Electrical supply should be 115 VAC, 60 Hz (current rating varies per cabinet size, reference Electrical Requirements Page 4) protected with thermal circuit breaker from distribution panel.
6. The cabinet shall have two internal electrical circuits; one for blower/lights and one for the duplex outlets. Each circuit shall be protected with a circuit breaker located in the Control Center.
7. The cabinet shall be listed by Underwriters Laboratories to meet the requirements of both the U.S. and Canada for electrical/mechanical integrity.
8. Total cabinet airflow shall be controlled via a solid-state motor voltage regulator with adjustment available on the Control Center.
9. Balancing of cabinet workzone downflow (recycling flow) to exhaust flow shall be accomplished with an internal exhaust flow damper, externally adjustable.
10. The cabinet shall be easily transportable through a standard 36-inch (914mm) wide door without disassembly when in retracted position.
11. Sound level shall be no more than 67 dbA measured 15 inches (381mm) above the work tray and 12 inches (305mm) in front of viewing window.
12. Fluorescent lighting shall be internally mounted and provide 90 (968) to 120 (1291) foot-candles (LUX) on work surface. The ballast to be electronic containing thermal protection with automatic reset.
- *13. Cabinet shall have a minihelic gauge to display pressure drop over the supply HEPA filter.
- *14. Cabinet shall come standard with two outlets with a drip proof covers on back wall, and two service couplings on right side wall.

- *15. Integral auto-lift basestand shall be stainless steel construction with 5-inch (127mm) heavy-duty lockable castors.
- *16. Cabinet workzone shall be all 16 GA. stainless steel with integral prefilter in rear wall drawer design for easy removal and cleaning.
- 17. A 3/8-inch (10 mm) ball valve shall be provided in the drain trough beneath the work tray.
- *18. Cabinet shall have the capability of incorporating a permanent positive pressure plenum with quick release supply filter removal as an option.
- *19. Motor/blower shall be positioned so as to create an even filter loading, thereby prolonging the life of the supply HEPA filter, and shall deliver over 80% the initial HEPA filter static pressure with no more than a 10% decrease of CFM.
- *20. Cabinet shall be capable of front filter removal without disassembly of the control panel and sliding window tracks/hardware.
- 21. The following optional equipment shall be available to support installation and user requirements:
 - Ultraviolet Light
 - Ground Fault Interrupter for Electrical System
 - Additional Service Valves for Gas, Air, Vacuum
 - Remote Service Valves
 - Additional Outlet
 - Alarm Systems
 - Sinks with Hot/Cold or DI Water Faucets
 - Storage Pull-Out Trays
 - Lay in Sorbent Exhaust Filter
 - Decorative Side Panels (hides plumbing fixture connections)
 - Permanent Plenum w/Quick Release Supply Filter
 - Metal Framed HEPA Filters
 - HEPA Filters 99.999% @ 0.3 Micron
 - Stainless Steel Armrest
 - Exhaust Transitions

*Having all of these features is unique ONLY to NuAire cabinets.

**Labgard Class II, Type A2
Laminar Flow Biological Safety Cabinet
Models NU-629-400/600**

Catalog Number	Catalog Number	
	NU-629-400 Nominal 4 foot (1.2m)	NU-629-600 Nominal 6 foot (1.8m)
Performance Specifications 1. Personal Protection 2. Product Protection	NSF/ANSI 49:2002 NSF/ANSI 49:2002	NSF/ANSI 49:2002 NSF/ANSI 49:2002
NSF Std. No. 49 Class	Class 11, Type A2	Class 11, Type A2
Style of Cabinet	Bench top/console w/base stand/storage cabinet	Bench top/con sole w/base stand/storage cabinet
Cabinet Construction	All welded stainless steel 16GA, Type 304 pressure tight design	All welded stainless steel 16GA, Type 304 pressure tight design
Diffuser for Air Supply (Metal)	Non-flammable	Non-flammable
HEPA Filter Seal Type: Supply Filter-99.99% Eff. on 0.3 microns Exhaust Filter-99.99% Eff. on 0.3 microns	HEPEX Seal Neoprene, Springloaded	HEPEX Seal Neoprene, Springloaded
Fumigation per NIH/NSF Procedure	Yes	Yes
Standard Services: Service Coupling (3/8 inch NPT) Duplex Outlet	Two, Right Sidewall Two, Backwall	Two, Right Sidewall Two, Backwall
Optional Services: Gas Cocks 3/8" NPT Ultraviolet Light Standard/Cup Sinks	Up to 3 ea. Sidewall One, Backwall Left or Right Work Surface	Up to 3 ea. Sidewall One, Backwall Left or Right Work Surface
Cabinet Size Inches (mm): Height Maximum Height Minimum Width Depth (with Control Center)	96 1/4 (2445) 82 1/2 (2096) 53 5/8 (1362) 32 7/8 (835)	96 1/4 (2445) 82 1/2 (2096) 77 5/8 (1972) 32 7/8 (835)
Work Access Opening Inches (mm): Standard Opening Height/Optional Standard Inflow Velocity Worksurface Height Min/Max	12 (305) 105 FPM (.53 m/s) 26 (660) / 39 (991)	12 (305) 105 FPM (.53 m/s) 26 (660) / 39 (991)
Work Zone Inches (mm): Height Width Depth	28 1/2 (724) 46 3/8 (1178) 23 1/2 (597)	28 1/2 (724) 70 3/8 (1788) 23 1/2 (597)
Viewing Window Inches (mm): Standard is tempered sliding glass	Fully closed to 19 1/2 (495) open	Fully closed to 19 1/2 (495) open
Required Exhaust CFM/CMH Standard/ Optional: Gas-Tight (NU-916/919) Canopy (NU-918/917) Canopy (NU-916)	406 (609) 506 (860) 564 (958)	616 (1047) 750 (1274) 812 (1380)
Plant Duct Static Pressure Eng/Metric	0.05-0.1"/1.27-2.54mm	0.05-0.1"/1.27-2.54mm
Heat Rejected,BTU,Per Hour(non-vented) (vented)	2040 1162	2580 1460
Electrical: Volts, AC 60 Hz Amps: Blower/Lights/Autolift Amps: Duplex Amps: Total 12 ft. Power Cord (one)	115 11 3 14 14 GA - 3 Wire, 20A	115 13 3 16 14 GA-3 Wire, 20A
Crated Shipping Weight: Net Weight	800 lbs./249 kg. 750 lbs./227 kg.	830 lbs./331 kg. 880 lbs./308 kg.

Crated shipping weight does not include weight for accessories or options .