LABGARD ES AIR

NU-543 CLASS II TYPE A2 BIOLOGICAL SAFETY CABINET

THE SAFER CHOICE FOR YOUR LABORATORY.



NuAire, Inc. | 2100 Fernbrook Lane | Plymouth, MN 55447 | U.S.A. | nuaire.com

Designed By You. Designed for your Application.

You deserve a quality and robust Biological Safety Cabinet every time you sit down to work. Every NuAire Biological Safety Cabinet goes through a series of quality assurance checks before it reaches your laboratory. As your product moves through the assembly plant, each work station double checks the work of the previous station, filters are triple-checked , and biological tests are constantly being performed under dynamic conditions to ensure maximum safety.

Each cabinet is built to order for your application. It is as simple as including an additional service valve or as complex as developing the interior to fit a specific piece of machinery.

Our local sales representatives are the best in the industry. They assist with product selection, review built-in options and accessories, discuss pricing, offer installation guidance, and provide support over the life of your NuAire product.

environmental,
product & personnel
protection

The LabGard® ES (Energy Saver) AIR model NU-543 is a Class II, Type A2 Biological Safety Cabinet offering Personnel, Product, and Environmental Protection through the use of quality design, an ultra high efficiency motor, and longer lasting filters all at an affordable price.



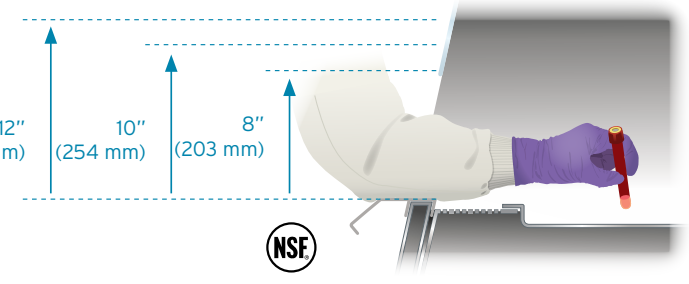
Flexibility and Innovative Design

Maximum Access Flexibility

Select from three window access opening options to meet the concerns of your facility and/or staff.

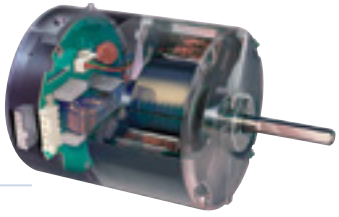
- **8"** (203 mm) lower operating cost *(NSF/ANSI 49)*
- **10"** (254 mm) lower costs and improved ergonomics *(NSF/ANSI 49, EN12469)*
- **12"** (305 mm) improved ergonomic reach by 40%* *(NSF/ANSI 49)*

* As compared to an 8" (203 mm) access opening.



Ultra High Efficiency Motor

A single ultra-high efficiency ECM motor with a properly sized fan blade minimizes energy usage while extending the life of filters. LabGard® offers the lowest total cost of ownership compared to other models.



Sizes to Fit Your Facility or Application



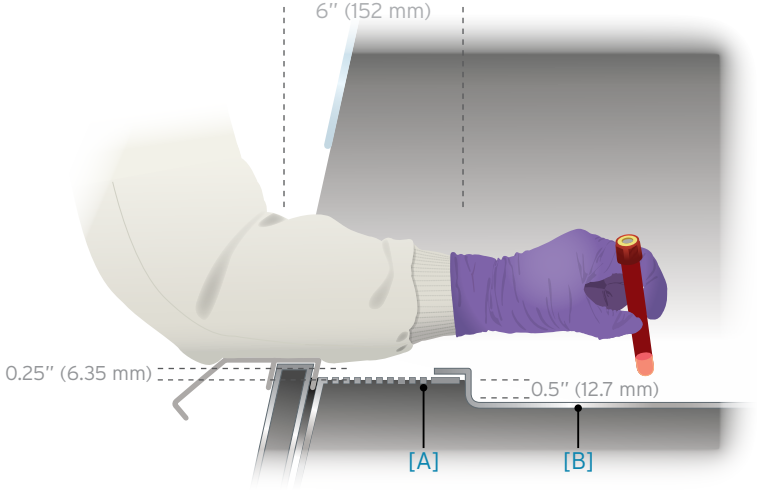
Ergonomic Design

NuAire designs equipment for you that provides improved safety conditions; improved productivity; improved quality and reliability; and reduction of arm, shoulder, and neck strain which can contribute to common work place injuries.

experience ergonomics

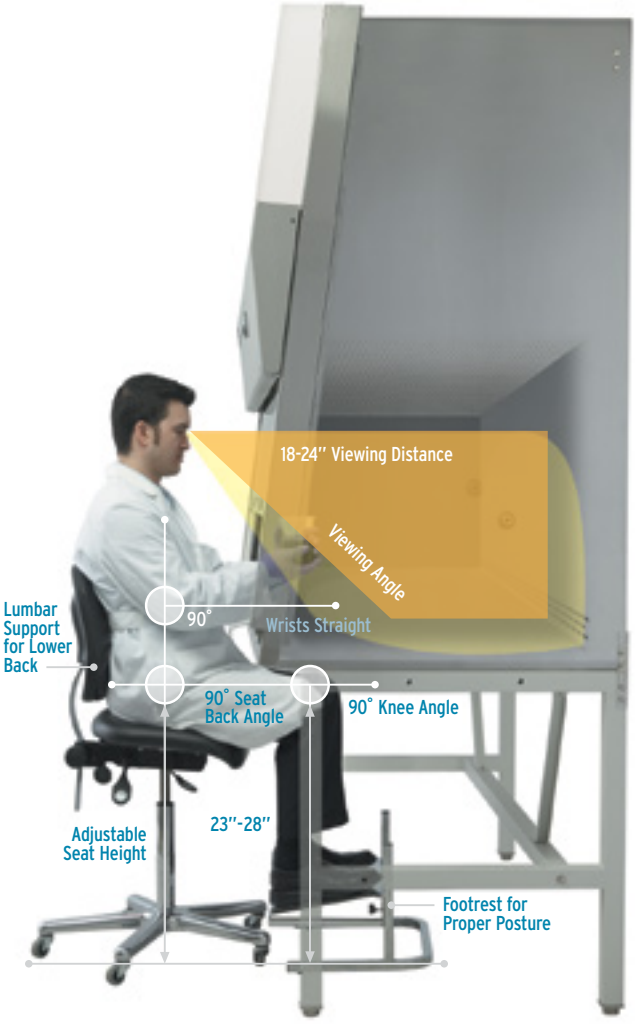
- ADA Compliant
- More Usable Work Area
- Shorter Reach Into Work Zone
- Recessed Air Foil
- Recessed Work Zone
- More Knee Room
- Ability to Sit or Stand at a Range of Heights
- 21" (533 mm) Frame-less Edge Window Sash Improves Vision/Sight Lines Into Work Zone
- Staggered Service Valves
- Accessories: Elbow rests, Armrest Foam Pads, Ergo chair, Adjustable Base Stand, Stainless Steel Turntable





A recessed airfoil grill **[A]** allows users to use the ergonomic armrest without blocking airflow compromising safety. A recessed work tray **[B]** provides users greater flexibility when working with bottles or pipettes. A shorter reach into the work zone allows users to bring work closer without sacrificing safety. These are just some of the user focused ergonomic designs NuAire® incorporates into all our laboratory products.

* As compared to an 8" (203 mm) access opening.

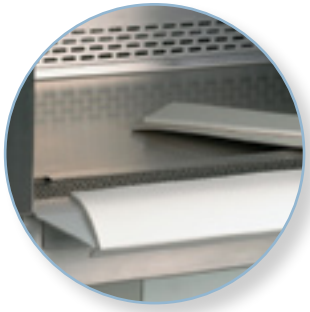




[Larger Work Area]



[Expanded Vision Zone]



[Disposable Arm Rest Pads]



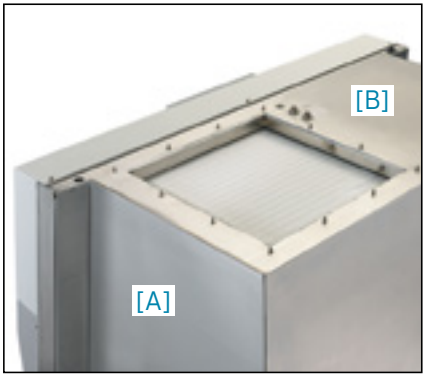
[Recessed Airfoil Grill and elbow rest accessory]

Quality - Nothing is Built like a NuAire

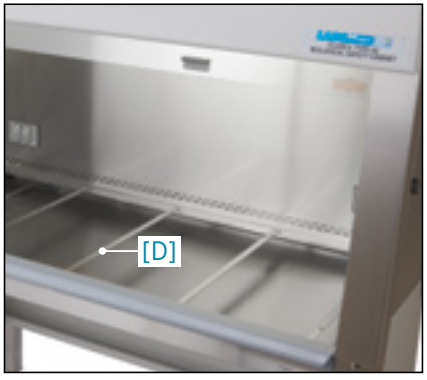
Monolithic Design. At core of any biosafety cabinet is its basic structure. NuAire has over 100,000 biological safety cabinets in the field; some of which have been running strong since the 1970's.

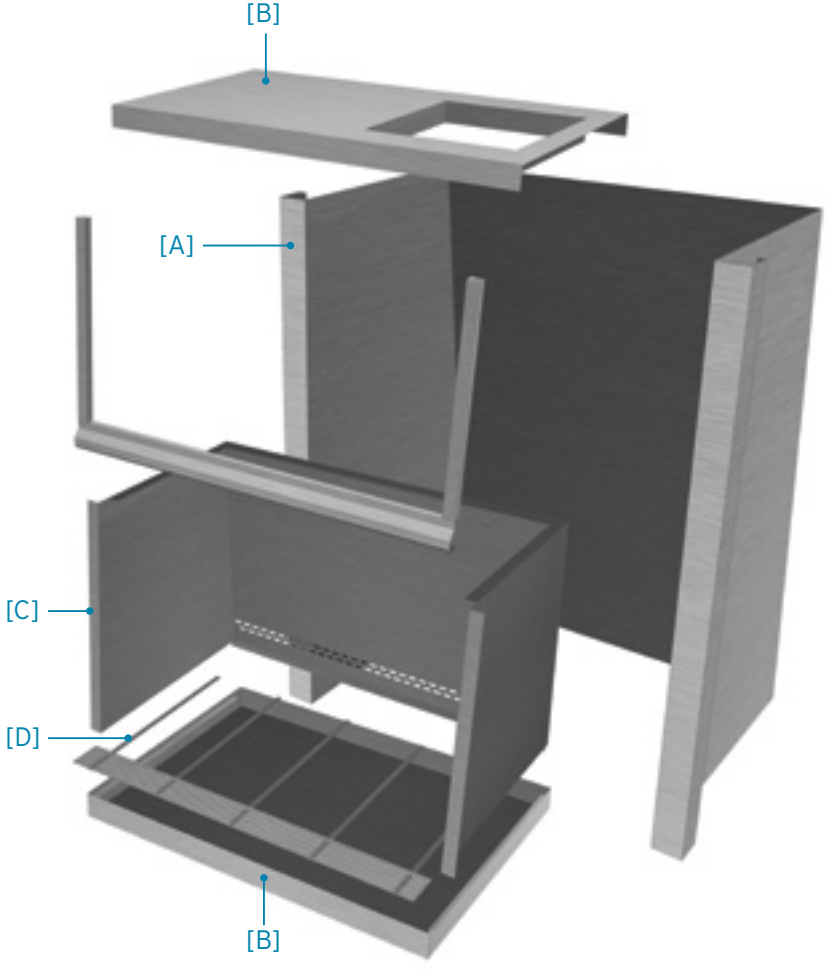
The NuAire design is a single piece of type 304 stainless steel. A stainless steel wrap **[A]** makes up the walls of the cabinet. Stainless steel sheets **[B]** are welded in place to make up the top and bottom of the cabinet. A smaller wrap **[C]** featuring coved interior corners is welded in place to make up the back wall of the cabinet. This improves the cabinet integrity by creating a double sidewall. New work tray supports **[D]** help minimize the vibration transfer from the shell of the cabinet to the work zone.

The end result is a monolithic shell of 100% stainless steel **[E]** without the use of silicone like many multi-piece cabinets. This provides you with a solid foundation for longer product life eliminating potential leaks.








[B]
[A]
[C]
[D]
[B]


[E]

Save More Money Over a Longer Period of Time

Ultra High Efficiency Motor. An ultra-high efficiency ECM motor combined with the properly sized fan blade lowers energy usage while extending the life of filters. LabGard® offers the lowest total cost of ownership compared to other models.

Total cost of ownership breakdown.

Motor Comparison	NuAire DC ECM	NuAire AC PSC	BSC with AC 3-Phase	BSC with DC
8 hrs per day / 5 days per week = 2,000 hrs per year				
KWH per year	598	1128	828	326
$0.09/kwh	$54	$102	$75	$29
24 hrs per day / 7 days per week = 8,736 hrs per year				
KWH per year	2612	4927	3617	1424
$0.09/kwh	$235	$443	$326	$128
15 Year Life Cycle Costs				
Avg. Filter Changes*	1 Set	2 Sets	1 Set	3 Sets
Estimated Cost of HEPA Filters	$715	$1,430	$715	$2.145
Total Cost of Decon/Certification	$450	$900	$450	$1,350
Motors to Replace**	1 Motor	1 Motor	1 Motor	2 Motors
Cost of Motors/ Power Supplies/ Fan Control	$650	$420	$725	$2,544
Utility Costs (2,000 hrs/yr over 15 years)	$810	$1,530	$1,125	$435
Total Cost of Ownership	**$2,625**	**$4,280**	**$3,015**	**$6,474**

* estimate based on Filter Load capacity
** estimate based on historical information.
Disclaimer: This example is for illustrative purposes only and should not be deemed a representation of future performance or a guarantee of any kind. Information is based on internal performance data obtained through NuAire® testing and information provided by motor, blower, HEPA filter manufacturers, and independent service technicians.

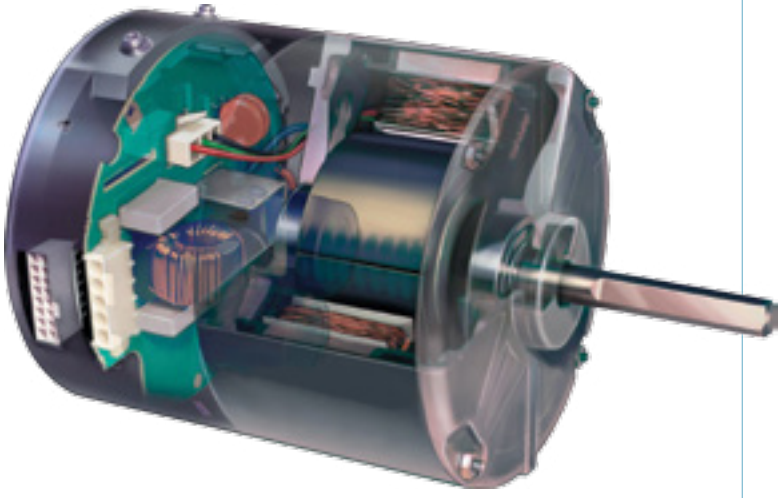
Efficient, Quiet, Powerful

The LabGard® AIR comes standard with an Ultra High Efficiency Motor. Each motor has a specifically designed blower fan to maximize energy efficiency and filter life. The more powerful motor in model NU-543 equates to longer filter life lowering your total cost of ownership.

Power Savings

Model	Nominal Width	Motor Power	Savings*
NU-543-300	3 ft (0.9 m)	¾ HP	59%
NU-543-400	4 ft (1.2 m)	¾ HP	
NU-543-500	5 ft (1.5 m)	1 HP	
NU-543-600	6 ft (1.8 m)	1 HP	

* Compares NuAire DC ECM motor technology and a BSC featuring DC motor technology. Information taken from page 7.



Your Safety is Our Number One Priority

NuAire's commitment to safety doesn't stop at meeting industry standards. NuAire continually performs dynamic tests to push the limits of our product's performance to ensure you and your laboratory personnel will remain safe.

Automatic Airflow Compensation - the Ultra High Efficiency motor will automatically increase or decrease speed to maintain proper airflow settings based on readings from FlowGard Electronic Control System.



True laminar (unidirectional) downward moving air flushes the work surface at 60 fpm (0.30 m/s) minimizing cross contamination.



A dynamic air barrier at the front of the cabinet separates the laboratory from the work zone environment at an air speed of 105 fpm (0.53 m/s).



The HEPEX™ Zero Leak Airflow system evenly disperses air over the supply and exhaust HEPA filters, minimizes vibration transfer, and eliminates potential leaks by surrounding positive pressure chambers with negative pressure.

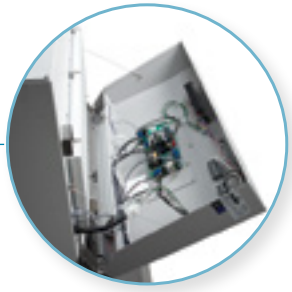
true laminar

dynamic air barrier

HEPEX™ zero·leak airflow

Make it Easier on your Service Personnel

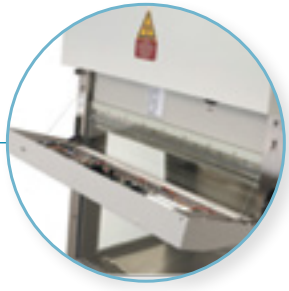
We at NuAire® have designed each LabGard® Biosafety Cabinet to be service friendly. **100%** of service functions can be performed at the front or top of the cabinet.



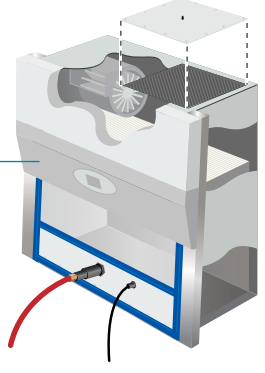
Drop Down Control Panel
A flip down control panel creates a workable tray for service technicians.



Exhaust Choke
Easy access to exhaust choke to certify airflows.



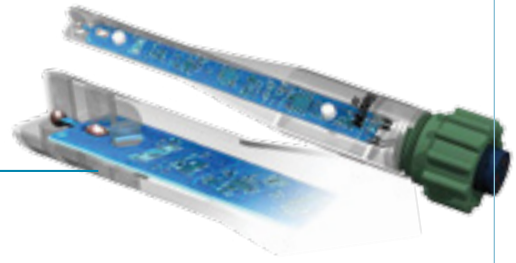
Front Filter Access
Access filters and the motor blower from the front of the cabinet with the removal of a safety panel.

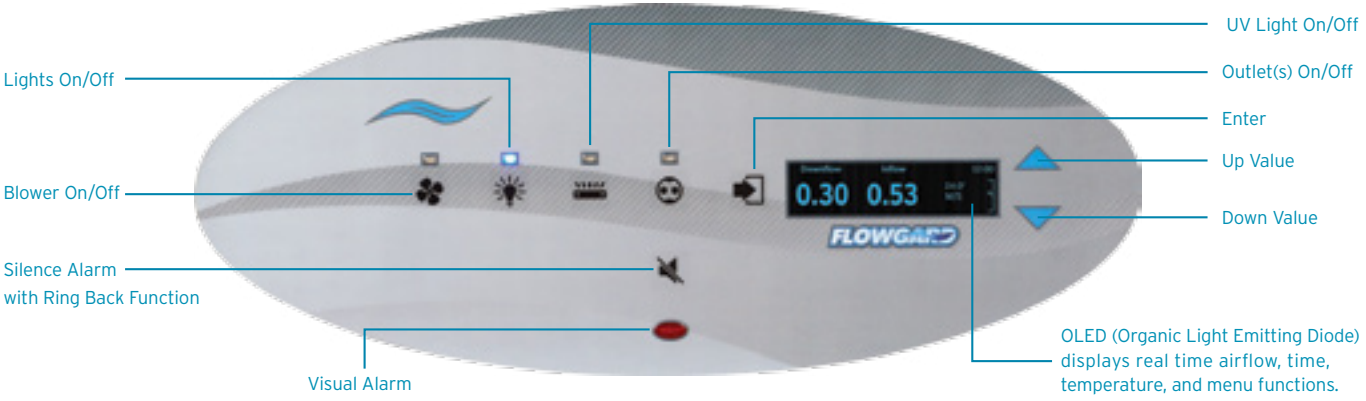


DECON101 System
Easily connect to a variety of decontamination systems that use Formaldehyde, Chlorine Dioxide or Vapor Phase Hydrogen Peroxide

Controlled Safety - FLOWGARD Electronic Control System

The LabGard® AIR offers the latest digital microprocessor design technology for improved cabinet performance and safety. The FlowGard™ control system integrates a dual thermistor airflow sensor (*intelliflow*™) to monitor the cabinet's airflow performance. The FlowGard™ control system also integrates an ultra high efficiency motor / blower that provides automatic compensation for both filter loading and line voltage variances. The FlowGard™ also controls the motor / blower, visible light, UV light (optional), outlet(s), alarms, and the sliding window position via micro switches.





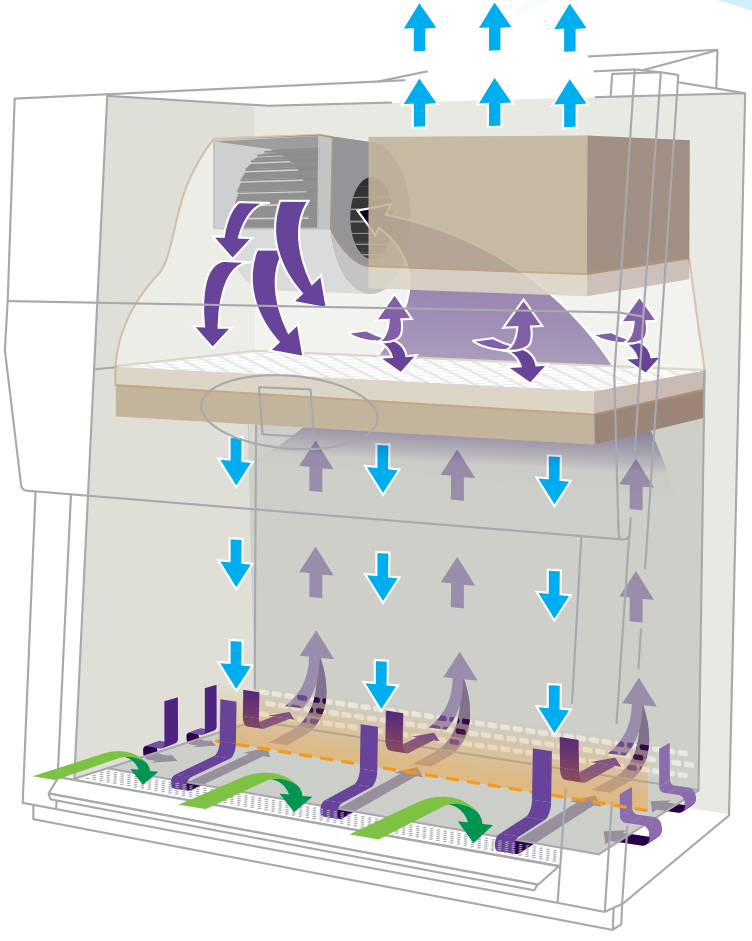
nitecare

Night Setback Mode - Upon sliding the window sash into the closed position, the motor blower will continue to operate at a lower rate to save energy and maintain interior clean air conditions ready for use upon window sash opening.

Perfectly Designed for You and Your Safety

Airflow Protects Personnel and Product

LabGard® AIR utilizes a single motor blower system to maintain airflow performance. The single motor blower system is inherently balanced. As particulates load the HEPA filters between certifications, NuAire's single motor/blower system maintains a consistent ratio of down flow to inflow, preventing uneven filter loading. This maintains a safer environment for you and your laboratory as well as maintains the proper down flow to minimize cross contamination within the work zone.



The LabGard NU-543 AIR is a Class II Type A2 Biological Safety Cabinet that can be either exhausted back into the room or connected to a facility HVAC system. The cabinet's airflow is 30% exhausted / 70% recirculated to minimize cross-contamination of low to moderate risk biologicals in the absence of volatile toxic chemicals.

Specifications

Model	Width Size (nominal)	Electrical (all sizes)	Interior Dimensions (W x D x H) in [mm]	Exterior Dimensions (W x D x H) in [mm]	Net Weight
NU-543-300	3 ft [0.9 m]	115 VAC 60 Hz E: 230 VAC 50/60 Hz	34 3/8 x 25 3/4 x 28 1/2 [873 x 654 x 724]	41 5/8 x 31 7/16 x 61 7/8 [1057 x 799 x 1572]	400 lbs [181 kg]
NU-543-400	4 ft [1.2 m]		46 3/8 x 25 3/4 x 28 1/2 [1178 x 654 x 724]	53 5/8 x 31 7/16 x 61 7/8 [1362 x 799 x 1572]	465 lbs [211 kg]
NU-543-500	5 ft [1.5 m]		58 3/8 x 25 3/4 x 28 1/2 [1483 x 654 x 724]	65 5/8 x 31 7/16 x 61 7/8 [1669 x 799 x 1572]	550 lbs [249 kg]
NU-543-600	6 ft [1.8 m]		70 3/8 x 25 3/4 x 28 1/2 [1788 x 654 x 724]	77 5/8 x 31 7/16 x 61 7/8 [1972 x 799 x 1572]	620 lbs [281 kg]

* Specify models with appropriate letter suffix for electrical specifications. "NU-543-400E" for 230 VAC 50/60 Hz

6 YEAR WARRANTY PARTS + LABOR + FILTERS United States, Canada

6 YEAR WARRANTY PARTS + FILTERS Worldwide

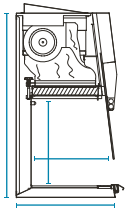
biological test assurance

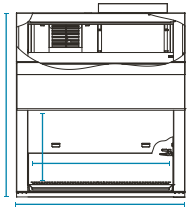
energy saver

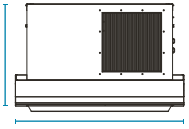
RoHS COMPLIANT

NSF

c UL us







Performance Specifications:

Airflow 30% exhausted / 70% recirculated

105 fpm (0.53 m/s) Inflow

60 fpm (0.30 m/s) Down Flow

Filter Load Capacity 300% Plus

Filter Life +/- 10 Years

Efficiency Features:

Ultra High Efficiency ECM Eon™ Motor

Auto Filter Loading Compensation

Motor Speed Controller

Internal Exhaust Damper

nitecare Night Setback

Superior Construction Features:

Monolithic 16/18 Gauge, Type 304 Stainless Steel Welded Pressure Tight Construction (Silicone Free)

Removable Control Center

Removable Stainless Steel Coved Work Tray

Recessed and Removable Front Intake Grill

Stainless Steel Spill Trough with Drain Valve

Vibration Reducing Work Surface Support System

External Non-Glare 100 lm/ft^2 Fluorescent Lighting

Safety Features:

3" (76 mm) Supply HEPA Filter, 99.99 @ 0.3 Micron Efficiency Rating

12" (305 mm) Exhaust HEPA filter, 99.99 @ 0.3 Micron Efficiency Rating

Airflow / Window Alarms with Ring Back Function

Security Password Protection

HEPEX Zero Leak Airflow System

NSF/ANSI 49, EN12469 , UL Listed

Standard Features:

Energy Saver (ES) DC/ECM Motor

Motor Speed Control

Internal Exhaust Dampener

Monolithic Pressure Tight Design (Silicone Free)

HEPEX Zero Leak Airflow

Front Filter Removal

Permanent Plenum with Quick Release Supply Filter

Metal Frame Supply HEPA Filter 99.99% @ 0.3 Microns

Metal Frame Exhaust HEPA Filter 99.99% @ 0.3 Microns

10" [254 mm] Access Opening (NSF/ANSI 49, EN12469)

Frame-less Sliding Tempered Glass View Screen

External Fluorescent Lighting

Plastic Armrest

Removable Work Tray

Work Surface Support System

Metal Diffuser Over Supply Filter

Spill Trough with Drain Valve

Two Duplex Outlet Back-wall

One Service Valve Right Side Wall

One Service Coupling Right Side Wall

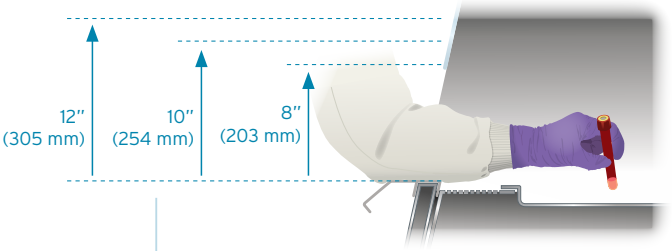
Two Service Couplings Left Side Wall

12 ft [2.5 m] Power Cord

Optional Features and Accessories*:

12" [305 mm] Access Opening (NSF/ANSI 49)

8" [203 mm] Access Opening (NSF/ANSI 49)



Stainless Steel Armrest

LED Lighting

Germicidal UV Light

Ground Fault Interrupter

Additional Duplex Outlet

IV Bar with Six Hooks

Base Support Stand

Base Storage Cabinet

Auto Lift Base Stand

Microscope Window

Additional Service Valves

Exhaust Transitions

Storage Pull-Out Trays

Decorative Side Panels

Pre-piped Plumbing

Sinks with Hot/Cold or DI water Faucets

Heated Work-surface

Adjustable Footrest

Elbow Rests

Custom Solutions

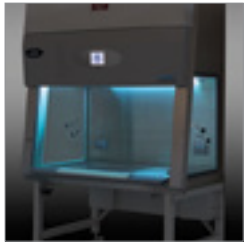
**Note: some optional features are not approved by 3rd party listings. Please contact NuAire information.*

Design Your Very Own

Each laboratory is unique and every protocol can differ. Set your laboratory up for success by designing your own NuAire Biological Safety Cabinet. It can be as simple as adding a service valve or as involved as customizing the height of the work zone. NuAire can do it all. Invest in a product that lasts and is designed for your needs.

Popular Built-in Options & Accessories

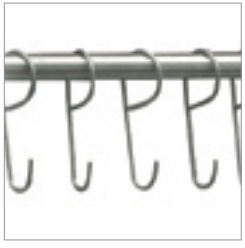

Prop Up Work Surface

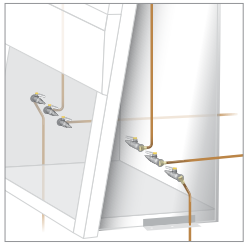

Ultraviolet (UV) Light


Cord Pass-thru (NSF)


LED Lighting (Replaces Florescent Lighting)


Duplex and/or GFI Outlets


IV Bar and SST Hooks


Pre-Piped Plumbing


Service Valves/Couplings [Gas, Air, Vac]


Microscope Window


Ergotron® Arm for Monitor and Keyboard / Mouse



Arm Rest Pads



Elbow Rest



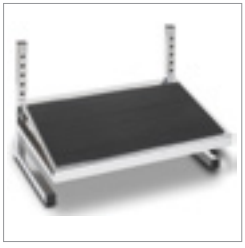
Motorized Base Stand



Telescoping Leg Leveler
or Castor Base Stand



Base Stand Shelf



Adjustable Foot Rest



Stainless Steel Turntable



Fixed Exhaust Canopy
Transition w/ Alarm



Flex Duct



Manual and Automatic
Butterfly Valves



8" (204 mm) to 10" (254 mm)
Round Transition



Variable Flow Control (VFC)
Exhaust Transition w/ Alarm



Airflow Alarms



Laboratory Cart



Silicone Connection Kit

Complete your Laboratory

NuAire offers a variety of Laboratory Equipment to meet the needs of the research, vivarium, pharmacy, environmental laboratory and more. Join the NuAire family and complete your laboratory with complementary NuAire Quality products.



LABGARD
Biological Safety Cabinets



IN-VITROCELL ES
CO_2 Incubators



NUAIRE
Centrifuges



Hitachi Koki
CENTRIFUGES



BREEZE
Microcentrifuges



Mini-Centrifuges



GLACIER ES
Ultralow Freezers



AIREGARD ES
Laminar Airflow Workstations



PHARMAGARD ES
Compounding Isolators



ALLERGARD ES
Animal Laboratory Products



Polypropylene Fume Hoods and Casework



Custom Solutions

Delivering product to the customer that is cost effective, exceeds their requirements, delivers product on-time, and increases productivity and profitability.

In every NuAire product you'll find brilliant but practical design, keen attention to detail in every phase of the fabrication and assembly process, thoroughly tested, outstanding value, and dependable service. These are the foundation for NuAire's international reputation, and practical reasons why NuAire is universally recognized as the finest. NuAire's Quality Policy to Satisfy Customers, Comply with Quality System Requirements and Continually Improve.

Sales and Service Like No Other NuAire employs a network of knowledgable sales and service individuals some of which have been selling and servicing NuAire Laboratory Products since our inception in 1971.

Working Safely Video Series. Learn how to work safely in your NuAire Biological Safety Cabinet with this 7 Chapter online video series.



Our Sales Representatives are located throughout the globe providing you with a local individual who can assist product selection, pricing, installation, training, and service throughout the life of your product. Once you buy a NuAire you're a part of our family and we'll work hard to satisfy your needs.

NuAire offers service-training classes and individualize assistance to service professionals in the laboratory community. These NuAire certified companies are located throughout the world allowing NuAire to provide service and assistance to the farthest corners of the earth. Have the option to select from multiple service vendors in your area to find a company that fits your needs.

Contracts, GPO's and many more! NuAire has a variety of Contracts set up through Group Purchasing Organizations, Government Associations, Health Systems, Universities and many more.

ISO 9001:2008 Certificate
ISO 13485 Certificate

GSA Advantage!® www.gsaadvantage.gov

MedAssets Contracted Supplier

PREMIER CONTRACTED SUPPLIER

Contracted supplier of Amerinet

vizient Awarded Supplier

Your Local NuAire Partner

For more information please visit
www.nuaire.com or call **1.800.328.3352**

SHARE A PICTURE AND TAG YOUR NUAIRE BIOSAFETY CABINET USING #MYNUAIRE

Request Your Quote Online

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