



*Scientifically Advanced Interiors*

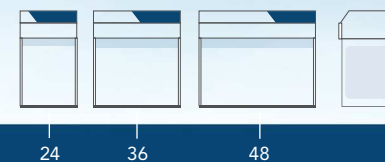
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BURNABY

TORONTO

HALIFAX



## Laminar Flow Cabinets

- Simple, Effective Protection for Samples and Work Processes
- Uncompromised Performance, Economical Price



34 watt<sup>1</sup> Purair FLOW-36.



22–50 watt<sup>1</sup>

The single EC blower motor assures lower cost of ownership in one of the world's most energy efficient laminar flow cabinets.

## CONTENTS:

- Product Overview (p.2)
- Design Features (p.3)
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**FLOW**

Laminar Flow Cabinets

24 • 36 • 48

PRODUCT OVERVIEW

## INTRODUCTION

Purair® FLOW Series laminar flow cabinets are designed to protect the interior work zone from particulate contamination.

The Purair FLOW Series product line employs the Air Science exclusive [Multiplex™ HEPA Filtration](#) technology to sustain a contamination-free environment.

HEPA filtered air passes uniformly through the cabinet interior via vertical laminar flow. The airflow is oriented to prevent introduction of airborne particulates during normal use.



**22–50 watt<sup>1</sup>**

*The single EC blower motor assures lower cost of ownership in one of the world's most energy efficient laminar flow cabinets.*

## APPLICATIONS

Vertical laminar flow cabinets are intended for use in non-hazardous applications where user protection from biologicals or biohazardous byproducts is not required.

Mycology and Food Microbiology \ Plant and Mammalian Cell Culture \ Clinical Pharmacies and Hospitals \ Cleanrooms \ Semiconductor Assembly \ Pharmaceutical Production \ Aerospace Contamination Control \ Medical Device Assembly \ General Research Protocols



## KEY FEATURES

- Provides sterile work zone for aseptic techniques.
- Air cleanliness meets ISO Class 5.
- Energy saving LED lighting.
- Vertical laminar flow with HEPA filtration.
- Large front opening provides unrestricted access to the work zone.

## FLOW SERIES

The Purair FLOW is designed to provide protection to the work surface from biological or particulate contamination. It is ideal for pharmacy compounding of non-toxic agents, assembly of finely tuned instrumentation, cell culture and other processes where protection of the user is not required but easy access to the work surface is important. ISO Class 5 air quality is maintained through a downward laminar flow that provides gentle airflow throughout the cabinet. The clean, simple, low maintenance design offers a comfortable workstation for a range of applications and may be bench mounted or positioned on a mobile bench.



*Purair FLOW-48 shown with optional spill tray and mobile cart.*



*Deep into its second generation, Air Science embraces the diversity and cultural heritage of the founders and co-workers who are continuing a tradition of excellence. Demonstrating a commitment to adaptation, inclusion and quality output from a United States-based company with a domestic and global reach.*

Specifications are subject to change without notice or obligation on the part of Air Science. For questions contact Air Science.

<sup>1)</sup> Energy consumption disclosure is based on internal testing with primary filters during normal operation. Power consumption published is nominal and dependent on cabinet size.

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**FLOW**

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DESIGN FEATURES



## DESIGN FEATURES

- A. Control Panel:** The control panel includes an On/Off switch for simple operation.
- B. Main Filter:** HEPA filter with 99.97% efficiency for 0.3 micron particulates (ULPA optional).
- C. Pre-Filter:** Disposable polyester fiber pre-filter with 85% arrestance.
- D. Blower Motor:** Centrifugal fan.
- E. Stand:** Optional base stand converts to mobile cart with optional locking casters.
- F. Lighting:** Compact LED cabinet lamp located away from laminar flow area.
- G. Pass Through Ports:** Convenient rear-wall pass through ports for safe routing of instrument cords, cables, and leads.
- H. Filter Door Lock:** Prevents unauthorized removal or accidental exposure to saturated filters.
- I. Filter Clamp:** Wide knob filter clamps are conveniently located forward of the assembly. The clamps secure the filter to the plenum with even pressure to assure a tight seal and to simplify filter removal and replacement when required.
- J. Work Surface:** Optional polypropylene spill tray, available in white or black, or optional stainless steel spill tray available.

## ADDITIONAL FEATURES

**360 Degree Visibility:** Clear back and side panels allow ambient illumination into the chamber and provide users with an unobstructed view of its contents.

**Construction:** All models are available in either metal or polypropylene construction, specify when ordering. Available in 120V, 60Hz or 230V, 50Hz models.

Purair FLOW-24, shown with optional spill tray and mobile cart.

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Air Science FLOW cabinets are expertly designed to meet specific applications and certified for quality construction. Standard features, options and accessories are developed purposefully to enhance user-friendliness.

## PERFORMANCE

The [Air Science Multiplex filter](#) offers a range of options for high performance protection.

**Multiplex filter** configuration permits a customized combination of filter media for a broad range of chemical families and biological agents if required.

Purair FLOW cabinets maintain an average airflow velocity of 0.30 m/s (60 fpm) at initial setpoint, measured 6" (150 mm) from the filter face.

The HEPA filters are easy to replace; no tools required.

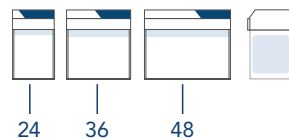
## DESIGN

Professional quality Air Science cabinets comply with current technical and safety regulations.

The cabinet frame and work surfaces, comprised of industrial components, are durable and chemically resistant with a microbial powder finish coating.

The Air Science filter assembly is easy to access, easy to change, plus a unique filter clamping design eliminates bypass leakage of the main filter.

Stackable sections make cabinets highly portable and enable quick setup.



## SELECTION

Purair FLOW cabinets are available in three model sizes with various options. Designed for desktop use, or for installation on an optional base stand or mobile cart.

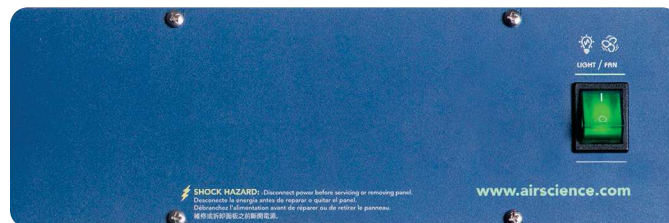
## RELIABILITY

Purair FLOW cabinets incorporate energy-efficient centrifugal blowers for maximum operational savings, low noise and minimal vibration.

Air Science uses long-life HEPA filters without aluminum separators to increase filter efficiency, minimize the potential for leakage and increase filter life.

## CONTROL

The **basic control panel** features an On/Off switch for simple operation of the blower and light.



Basic Control Panel

**FLOW**

Laminar Flow Cabinets

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PERFORMANCE & SELECTION



**Energy-efficient EC blowers** promote long life and dependable performance of Purair FLOW work stations.



Purair FLOW-36, shown with optional mobile cart.

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## FILTRATION

At the heart of the Purair product line is innovative filtration technology. **The Multiplex Filtration System** consists of a pre-filter and main filter. The mechanical design enhances safety, convenience and overall value.

- The disposable pre-filter is accessible from the exterior top of the cabinet.
- A filter clamping mechanism allows for the filter to be easily installed and ensures an even seal at the filter peripheral face at all times to prevent bypass leakage.
- The filter chamber prevents contaminated air from contacting internal cabinet mechanisms.



**SECUR.**  
safe disposal service



Filter disposal services are available in selected markets providing responsible destruction or recycling of used saturated filters in authorized facilities.



Through our partner company [Filtco Filters](#), Air Science is a single source supplier of all pre-filters, carbon filters and HEPA/ULPA filters used in our products.

## AIRFLOW

Room air enters from the top of the cabinet through the disposable pre-filter where larger particles are trapped, increasing the service life of the main HEPA filter.

Air is forced evenly across the HEPA filter to deliver a flow of pure air within the work zone to dilute and flush airborne contaminants from the work area. An average airflow velocity of 0.30 m/s (60 fpm) at initial setpoint ensures that there is a sufficient number of air changes within the work zone to eliminate cross contamination and to maintain optimum cleanliness.

Purified air travels across the work zone to the work surface in a vertical downflow stream and then exits the work zone across the open cabinet front.

## FILTER CONFIGURATION

**P.** ⚠️ **The pre-filter** may be replaced while unit is in operation.

**H.** **The main filter** is easy to replace; no tools required. The filter clamps tightly against the filter gasket to prevent filter bypass and to maintain filter integrity.

### MULTIPLEX FILTRATION SYSTEM, SUMMARY

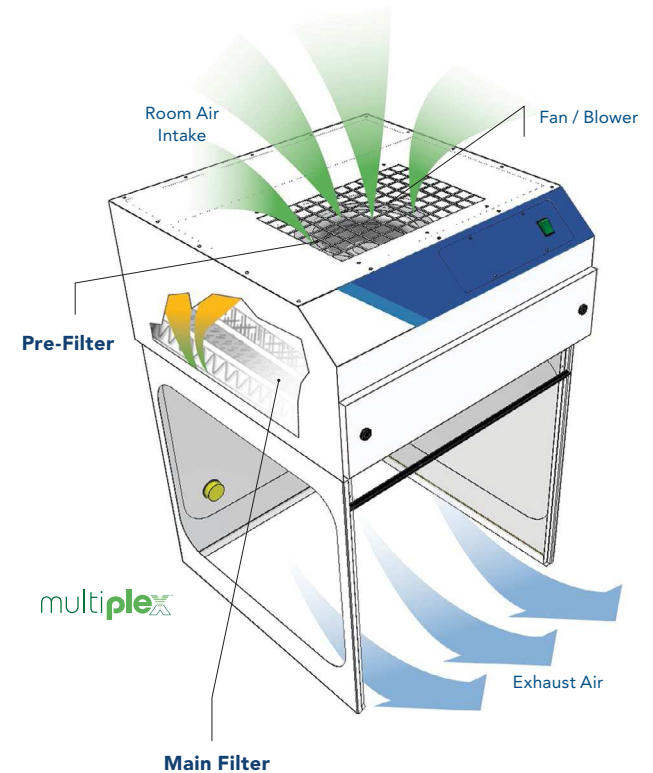
Pre-Filter	P	Disposable polyester fibers with 85% arrestance.
Main Filter	H	A self-contained filter designed to physically capture particles larger than 0.3 microns (HEPA) or 0.12 microns (ULPA).

**FLOW**

Laminar Flow Cabinets

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CONTAINMENT & FILTRATION



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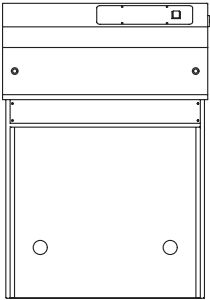
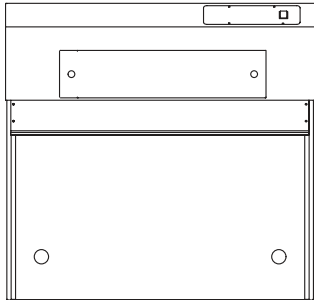
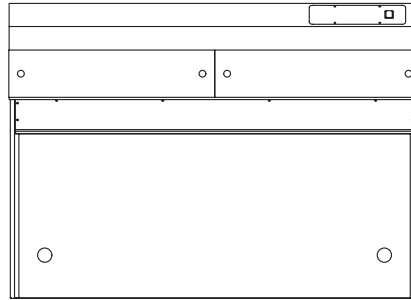
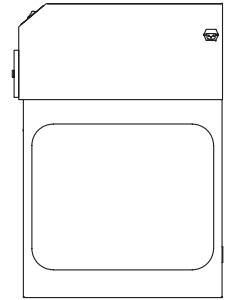
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**FLOW**

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SPECIFICATIONS

**Purair FLOW-24****Purair FLOW-36****Purair FLOW-48****Side View**

MODEL	DIMENSIONS					WEIGHT (LBS/KG)	
	Nominal Width	Internal Height	Internal Depth	External (W x D x H)	Shipping (W x D x H)	Net	Ship
FLOW-24	24" / 610 mm	23.5" / 596 mm	22.5" / 571 mm	24" x 24" x 35" / 610 x 610 x 889 mm	40" x 40" x 45" / 1016 x 1016 x 1143 mm	72 / 33	150 / 68
FLOW-36	36" / 914 mm	23.5" / 596 mm	22.5" / 571 mm	36" x 24" x 35" / 914 x 610 x 889 mm	48" x 40" x 45" / 1219 x 1016 x 1143 mm	99 / 45	175 / 79
FLOW-48	48" / 1219 mm	23.5" / 596 mm	22.5" / 571 mm	48" x 24" x 35" / 1219 x 610 x 889 mm	60" x 40" x 45" / 1524 x 1016 x 1143 mm	138 / 63	225 / 102

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**FLOW**

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SPECIFICATIONS

## PRODUCT SPECIFICATIONS

Filtration	FLOW-24	FLOW-36	FLOW-48
Airflow	<... Vertical downflow; 0.30 m/s (60 fpm). ...>		
Pre-Filter	<... Disposable polyester fibers with 85% arrestance. ...>		
Main Filter	<... HEPA efficiency, 99.97% at 0.3 µm. ...>		
Clamping	<... Screw compression clamp. ...>		
Construction	FLOW-24	FLOW-36	FLOW-48
Finish (exterior)	<... White epoxy-coated steel frame with white legs on cabinet sides. ...>		
Windows	<... Acrylic, transparent. ...>		
Blower	<... EC blower. ...>		
Controls	<... Main On/Off switch for fan and lighting. Solid-state fan speed control with RFI filter maintains blower uniformity. ...>		
Electrical	<... 120V, 60Hz or 230V, 50Hz voltages available. Specify when ordering. Other voltage options available. ...>		
Pass Through Ports	<... Two, standard, knock-out. ...>		
Efficiency	FLOW-24	FLOW-36	FLOW-48
Power Consumption <sup>1</sup>	22 watt	34 watt	50 watt
Lighting	<... LED. ...>		

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OPTIONS &amp; ACCESSORIES

## OPTIONS AND ACCESSORIES

Purair Model		FLOW-24	FLOW-36	FLOW-48
ULPA Filter	ULPA filter efficiency 99.999% at particle size 0.12 µm.	ASTS-030U	ASVLP536-030U	ASTS-030U (2)
Spill Tray (Polypropylene)	Removable for easy cleaning.	TRAY-P5-24S	TRAY-P5-36S	TRAY-P5-48S
Spill Tray (Stainless Steel)	Removable for easy cleaning.	TRAY-P5-24S-SS	TRAY-P5-36S-SS	TRAY-P5-48S-SS
Base Stand, Mobile, with Casters	Provides a lower storage shelf; accommodates wheelchair access. Locking casters fix the hood in place.	CART-25	CART-36	CART-50
Base Cabinet, Fixed (Metal)	Provides storage space below.	CART-MCC-25	CART-MCC-36	CART-MCC-50
Base Cabinet, Fixed (Polypropylene)	Provides storage space below.	CART-SSC-25	CART-SSC-36	CART-SSC-50
Fire Safety Cabinet Base	Flame resistant safe storage for combustible and flammable liquids	CART-FSC-25	CART-FSC-36	CART-FSC-50
Polypropylene Construction*	Cabinets are available in all polypropylene construction. Contact Air Science for information.	FLOW-24-PP	FLOW-36-PP	FLOW-48-PP

*Factory installed; specify when ordering.*

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WARRANTY

This product is protected by the Air Science Legacy Limited Lifetime Warranty™.

STANDARDS & COMPLIANCE

Quality Management Systems	ISO 9001:2015
Electrical Safety	UL-C-61010-1 CAN/CSA C22.2 61010-1-12 EN 61010-1:2010 CE Mark
Environment	ISO 14001:2015 ENERGY STAR® Partner

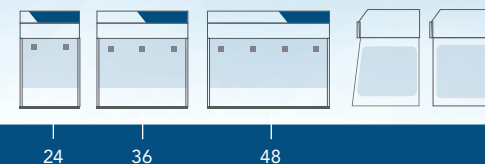


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Schedule  
Contract GS-07F5032P





## PCR Laminar Flow Cabinets

- Provides Contaminant-Free Interior for PCR Applications and Protects Against Cross-Contamination



50 watt<sup>1</sup> Purair model PCR-48.



22–50 watt<sup>1</sup>

The single EC blower motor assures lower cost of ownership in one of the world's most energy efficient laminar flow cabinets.

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PCR

Laminar Flow Cabinets

24 • 36 • 48

PRODUCT OVERVIEW

## INTRODUCTION

The Purair® PCR laminar flow cabinet employs the Air Science [Multiplex™ HEPA Filtration](#) technology to create a safe, energy-efficient, contaminant-free environment. It is ideally suited for use when flexible access to instrumentation inside the cabinet is required.



22–50 watt<sup>1</sup>

*The single EC blower motor assures lower cost of ownership in one of the world's most energy efficient laminar flow cabinets.*

## APPLICATIONS

PCR cabinets are intended for use in non-hazardous applications where biological or biohazard byproducts are not generated and user protection is not required.

PCR Laboratories \ Forensics \ Pharmaceutical \ Sample Preparation \ General Research Protocols



*Deep into its second generation, Air Science embraces the diversity and cultural heritage of the founders and co-workers who are continuing a tradition of excellence. Demonstrating a commitment to adaptation, inclusion and quality output from a United States-based company with a domestic and global reach.*



## KEY FEATURES

- Provides sterile work zone for aseptic techniques.
- Air cleanliness meets ISO Class 5.
- Energy saving LED lighting.
- Vertical laminar airflow with HEPA filtration.
- Equipped with germicidal UV lamp to create light emission conditions known to provide safe decontamination.
- 360 degree visibility with UV absorbing polycarbonate construction.

## PCR WORKSTATION

Polymerase chain reaction\* (PCR) is a simple and inexpensive technique to make multiple copies of a targeted nucleotide sequence from a DNA sample and to amplify sequences from small samples. This technique is widely used in genetics laboratories that work with DNA and RNA.

Because PCR amplification is extremely sensitive to contamination, prevention of contamination requires good laboratory practices to minimize external or cross-contamination during reagent preparation, sample preparation and sample amplification.

\* Polymerase chain reaction (PCR) is a patented process owned by Hoffman La Roche.



Purair PCR-48 shown with optional mobile cart.

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<sup>1</sup>) Energy consumption disclosure is based on internal testing with primary filters during normal operation. Power consumption published is nominal and dependent on cabinet size.

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PCR

Laminar Flow Cabinets

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DESIGN FEATURES

## DESIGN FEATURES

- A. Control Panel:** The integrated control panel features an On/Off switch for the fan, light and UV lamp timer.
- B. Main Filter:** Main HEPA filter with 99.97% efficiency for 0.3 micron particulates (ULPA optional).
- C. Pre-Filter:** The pre-filter can be changed while the unit is operating to prevent operator exposure to chemical vapors.
- D. Fan:** High-performance EC fan.
- E. Stand:** Optional base stand converts to mobile cart with optional locking casters.
- F. Lighting:** Compact LED cabinet lamp located away from laminar flow area.
- G. UV Lamp:** Built-in ultraviolet lamp with timer creates light emission conditions known to permit safe decontamination between PCR cycles. Includes a double-flap safety cover of 0.2" (5 mm) UV absorbing 254 nm beta radiation resistant polycarbonate; provides superior operator protection while allowing easy access to the work zone. Timer can be set over range of 0 to 60 minutes or set to HOLD.
- H. Pass Through Ports:** Convenient rear wall pass-through ports for safe routing of instrument cords, cables and leads.
- I. Filter Door Lock:** Prevents unauthorized removal or accidental exposure to dirty filters.
- J. Ergonomic Design:** Ergonomically angled front improves reach and user comfort.

- K. Work Surface:** Large polypropylene work surface, white or black standard with optional stainless steel work surface available.
- L. Decontamination Shelf:** Mounted on the back wall near the UV lamp for maximum exposure.
- M. Magnetic Door Latch:** Safety interlock prevents operator exposure to UVs when door is opened during decontamination cycle.
- N. Double-Hinged Self-Locking Front Sash:** The magnetic sash closure protects samples on the work surface from contamination with up to 90 fpm airflow.

## ADDITIONAL FEATURES

**360 Degree Visibility:** Clear back and side panels allow ambient light into the chamber and provide users with an unobstructed view of contents.

**Construction:** All models are available in either metal or polypropylene construction, specify when ordering. Available in 120V, 60Hz or 230V, 50Hz models.

Purair PCR-24, shown with optional stainless steel spill tray and mobile cart.

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Each Air Science PCR work station is expertly designed to meet specific applications and certified for quality construction. Standard features, options and accessories are developed purposefully to enhance user-friendliness.

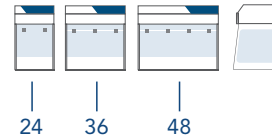
## PERFORMANCE

The Air Science **Multiplex Filtration System** offers a range of options for high performance protection.

Multiplex filter configuration permits a customized combination of filter media for a broad range of chemical families and biological agents if required.

PCR work stations maintain an average airflow velocity of 0.30 m/s (60 fpm) at initial setpoint, measured 6" (150 mm) from the filter face.

The HEPA filters are easy to replace; no tools required.



## SELECTION

Purair PCR cabinets are available in three model sizes with various options. Designed for desktop use or installation on an optional base stand or mobile cart.

## CONTROL

The **standard integrated control panel** features an On/Off switch for the fan, light and UV lamp timer.

The **optional Monitair microprocessor controller** monitors and displays cabinet operating parameters, airflow, containment and offers limited detection of low concentrations of hydrocarbon, some gases and organic acids. Audio and visual alerts if conditions become unsafe and are all displayed on a LCD screen.



Standard Controller



Monitair Control Panel



**Energy-efficient EC blowers** promote long life and dependable performance of Purair PCR work stations.

PCR

Laminar Flow Cabinets

24 • 36 • 48

PERFORMANCE & SELECTION

## DESIGN

Professional quality Air Science laminar flow hoods comply with current technical and safety regulations.

The cabinet frame and work surfaces, comprised of industrial components, are durable and chemically resistant.

The Air Science filter assembly is easy to access, easy to change, plus a unique filter clamping design eliminates bypass leakage of the main filter.

An optional stainless steel work surface includes lips on all four sides to contain spills.

Stackable sections make cabinets highly portable and enable quick setup.

## RELIABILITY

Air Science PCR work stations use an energy-efficient centrifugal blowers for long life and dependable performance.

Air Science uses long-life HEPA filters without aluminum separators to increase filter efficiency, minimize the potential for leakage and increase filter life.

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PCR

Laminar Flow Cabinets

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CONTAINMENT & FILTRATION



## FILTRATION

At the heart of the PCR work station is innovative filtration technology. **The Multiplex Filtration System** consists of a pre-filter and main filter. The mechanical design enhances safety, convenience and overall value.

- The disposable pre-filter is accessible from the exterior top of the cabinet.
- A filter clamping mechanism allows for the filter to be easily installed and ensures an even seal at the filter peripheral face at all times to prevent bypass leakage.
- The filter chamber prevents contaminated air from contacting internal cabinet mechanisms.



**SECUR.**  
safe disposal service



Filter disposal services are available in selected markets providing responsible destruction or recycling of used saturated filters in authorized facilities.

## AIRFLOW

Room air enters from the top of the cabinet through the disposable pre-filter where larger particles are trapped, increasing the service life of the main HEPA filter.

Air is forced across the HEPA filter to deliver a flow of pure air within the work zone to dilute and flush airborne contaminants from the work area. An average airflow velocity of 0.30 m/s (60 fpm) ensures that there is sufficient number of air changes within the work zone to eliminate cross-contamination and to maintain optimum cleanliness.

Purified air travels across the work zone to the work surface in a vertical downflow stream and then exits the work zone across the open cabinet front.

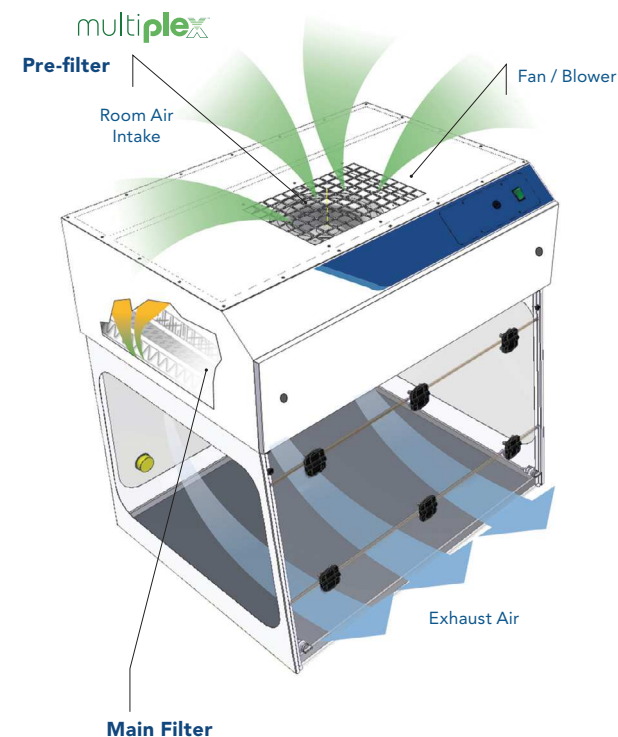
## FILTER CONFIGURATION

**P.** ⚠ The pre-filter may be replaced while unit is in operation.

**H.** The main filter is easy to replace; no tools required. The filter clamps tightly against the filter gasket to prevent filter bypass and to maintain filter integrity.

### MULTIPLEX FILTRATION SYSTEM, SUMMARY

Pre-Filter	P	Disposable polyester fibers with 85% arrestance.
Main Filter	H	A self-contained filter designed to physically capture particles larger than 0.3 microns (HEPA) or 0.12 microns (ULPA).



Through our partner company [Filtco Filters](#), Air Science is a single source supplier of all pre-filters, carbon filters and HEPA/ULPA filters used in our products.

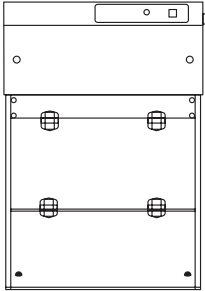
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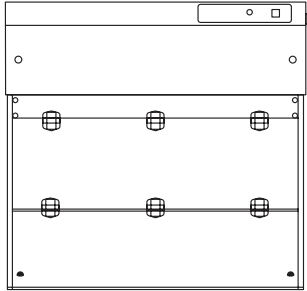
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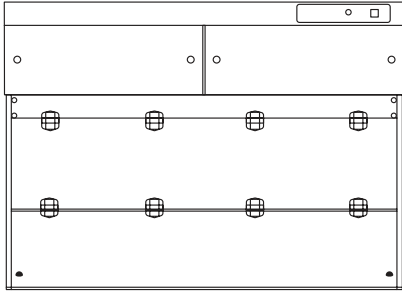
Purair PCR-24



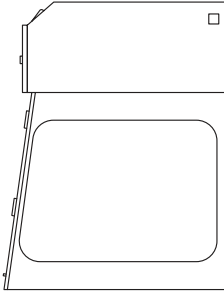
Purair PCR-36



Purair PCR-48



Side View



MODEL	DIMENSIONS					WEIGHT (LBS/KG)	
	Nominal Width	Internal Height	Internal Depth	External (W × D × H)	Shipping (W × D × H)	Net	Ship
PCR-24	24" / 610 mm	24" / 610 mm	26.75" / 679 mm	24" × 27" × 35" / 610 × 686 × 889 mm	48" × 40" × 45" / 1219 × 1016 × 1143 mm	72 / 33	150 / 68
PCR-36	36" / 914 mm	24" / 610 mm	26.75" / 679 mm	36" × 27" × 35" / 914 × 686 × 889 mm	48" × 40" × 45" / 1219 × 1016 × 1143 mm	99 / 45	175 / 79
PCR-48	48" / 1219 mm	24" / 610 mm	26.75" / 679 mm	48" × 27" × 35" / 1219 × 686 × 889 mm	60" × 40" × 45" / 1524 × 1016 × 1143 mm	138 / 63	225 / 102

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PCR

Laminar Flow Cabinets

24 • 36 • 48

SPECIFICATIONS

## PRODUCT SPECIFICATIONS

Filtration	PCR-24	PCR-36	PCR-48
Airflow	<... Vertical downflow; 0.30 m/s (60 fpm). ...>		
Pre-Filter	<... Disposable polyester fibers with 85% arrestance. ...>		
Main Filter	<... HEPA efficiency, 99.97% at 0.3 µm. ...>		
Clamping	<... Screw compression clamp. ...>		
Construction	PCR-24	PCR-36	PCR-48
Finish (exterior)	<... White epoxy-coated steel frame with white legs on cabinet sides. ...>		
Windows	<... Polycarbonate, transparent, UV absorbing. ...>		
Blower	<... EC blower. ...>		
Controls	<... Main On/Off switch for fan and lighting. Solid-state fan speed control with RFI filter maintains blower uniformity. UV timer, safety interlock shut-off. ...>		
Electrical	<... 120V, 60Hz or 230V, 50Hz voltages available. Specify when ordering. Other voltage options available. ...>		
Work Surface	<... Standard, black polypropylene. Optional, white polypropylene or stainless steel. Specify when ordering. ...>		
Pass Through Ports	<... Two standard, knockout. ...>		
Shelving	<... Decontamination shelf on rear wall. ...>		
Front Sash	<... Standard, hinged double with safety interlock. ...>		
Efficiency	PCR-24	PCR-36	PCR-48
Power Consumption <sup>1</sup>	22 watt	34 watt	50 watt
Lighting	<... LED lighting ...>		
UV Lamp	<... 1 × 253.7 nanometer 15 watt. ...>		

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PCR

Laminar Flow Cabinets

24 • 36 • 48

OPTIONS & ACCESSORIES

## OPTIONS AND ACCESSORIES

Purair Model		PCR-24	PCR-36	PCR-48
ULPA Filter	ULPA filter efficiency 99.999% at particle size 0.12 µm.	ASTS-030U	ASVLP536-030U	ASTS-030U (2)
Monitair Controller*	The optional microprocessor controller monitors and displays cabinet operating parameters, airflow, containment and offers limited detection of low concentrations of hydrocarbon, some gases and organic acids. Emits audio and visual alerts if conditions become unsafe and are all displayed on a LCD screen. Not TUV compliant.	MON-P	MON-P	MON-P
Spill Tray (Stainless Steel)	Removable for easy cleaning.	TRAY-P5-24-SS	TRAY-P5-36-SS	TRAY-P5-48-SS
Base Stand, Mobile, with Casters	Provides a lower storage shelf; accommodates wheelchair access. Locking casters fix the hood in place.	CART-25	CART-36	CART-50
Base Cabinet, Fixed (Metal)	Provides storage space below.	CART-MCC-25	CART-MCC-36	CART-MCC-50
Base Cabinet, Fixed (Polypropylene)	Provides storage space below.	CART-SSC-25	CART-SSC-36	CART-SSC-50
Fire Safety Cabinet Base	Flame resistant safe storage for combustible and flammable liquids.	CART-FSC-25	CART-FSC-36	CART-FSC-50
Polypropylene Construction*	Cabinets are available in all polypropylene construction.	PCR-24-PP	PCR-36-PP	PCR-48-PP

\* Factory installed; specify when ordering.

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PCR

Laminar Flow Cabinets

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WARRANTY

## WARRANTY

This product is protected by the Air Science Legacy Limited Lifetime Warranty™.

## STANDARDS & COMPLIANCE

Quality Management Systems	ISO 9001:2015
Electrical Safety	UL-C-61010-1 CAN/CSA C22.2 61010-1-12 EN 61010-1:2010 CE Mark
Environment	ISO 14001:2015 ENERGY STAR® Partner

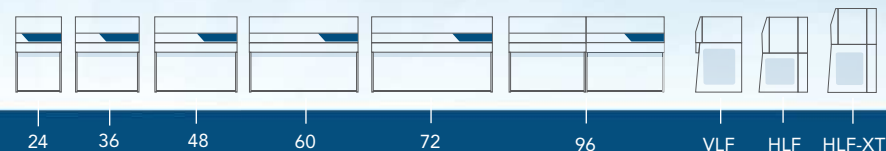


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Schedule  
Contract GS-07F5032P





## General Purpose Laminar Flow Cabinets

- Horizontal and Vertical
- Provides Reliable Protection for Samples and Work Processes for Numerous Applications



LF Series model VLF-48

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## LF Series

Laminar Flow Cabinets

24 • 36 • 48 • 60 • 72 • 96

PRODUCT OVERVIEW

## INTRODUCTION

Air Science® Purair® Laminar Flow cabinets are designed to protect equipment and other contents of the work zone from particulates.

The series includes Vertical Laminar Flow (VLF) cabinets and Horizontal Laminar Flow (HLF) cabinets and is ideally suited for use with non-hazardous contaminants when flexible access to equipment in the work zone is desired.

At the heart of the Purair Laminar Flow cabinet product line is the Air Science [Multiplex™ ULPA Filtration](#) technology which creates a clean work environment over a wide range of applications.

## APPLICATIONS

Purair Laminar Flow cabinets are suitable for applications that generate no biohazardous materials and do not require operator protection. Mycology and Food Microbiology \ Plant and Mammalian Cell Culture \ Clinical Pharmacy and Hospitals \ Cleanrooms \ Semiconductor Assembly \ Pharmaceutical \ Aerospace \ Medical Device Assembly \ Research Laboratories



## KEY FEATURES

- Provides sterile work zone for aseptic techniques.
- Air cleanliness meets and exceeds ISO Class 4.
- All models use ULPA filters (99.999% efficient at particle size 0.12 µm).
- Available in horizontal or vertical flow configurations.
- All models equipped with a stainless steel work surface.

## PERFORMANCE ADVANTAGE

Each Air Science Purair Laminar Flow cabinet includes features expressed through sound design and certified quality construction.

**Professional Quality.** Air Science cabinets comply with current technical and safety regulations.

**Advanced Filtration.** Air Science Multiplex ULPA Filtration provides high performance protection.

**Industrial Components.** The cabinet frame and work surfaces are durable and chemically resistant for long service life. All cabinet components are cleanroom compatible.



LF Series HLF-48



Deep into its second generation, Air Science embraces the diversity and cultural heritage of the founders and co-workers who are continuing a tradition of excellence. Demonstrating a commitment to adaptation, inclusion and quality output from a United States-based company with a domestic and global reach.

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## CONTENTS:

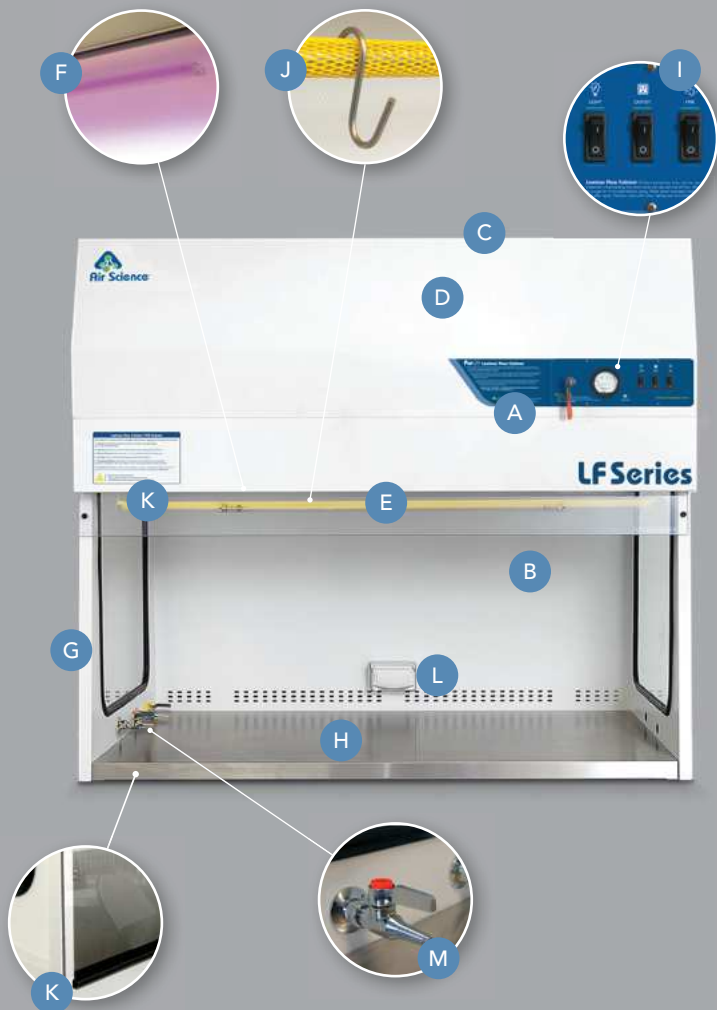
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## LF Series

Laminar Flow Cabinets

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DESIGN FEATURES



## DESIGN FEATURES

- A. Control Panel:** The control panel includes On/Off switch for fan, lighting, GFCI outlets, Minihelic ULPA pressure gauge to measure filter condition, UV lamp key switch.
- B. Main Filter:** Long-life Camfil Farr ULPA main filter with efficiency of 99.999% at particle size 0.12  $\mu\text{m}$ .
- C. Pre-Filter:** Disposable polyester fiber pre-filter with 85% arrestance.
- D. Blower Motor:** External rotor blower.
- E. Lighting:** Compact LED cabinet lamp located away from laminar flow area.
- F. UV Lamp:** Optional ultraviolet (UV) lamp to create light emission conditions known to safely sterilize and decontaminate work zone and cabinet contents between operating periods.
- G. Ergonomic Design:** Ergonomically angled front improves reach and comfort.
- H. Work Surface:** Stainless steel work surface with no spill retention.
- I. Fan Control:** Recessed fan speed control.
- J. IV Bar:** Optional IV bar with "S" hooks.
- K. Night Door:** Optional night door/cover to protect cabinet interior when blowers are off. Contains UV radiation when UV activated.
- L. Power Supply:** GFCI outlet to power equipment in cabinet.
- M. Service Fixtures:** Optional petcock service fixture (maximum 4 per unit).

## ADDITIONAL FEATURES

**Visibility:** Side windows allow ambient light into the chamber and provide users with three points of visibility for an unobstructed view of contents. (Not available on stainless steel models.)

**USP Sterile Compounding Compliant:** When used according to best practices, the LF Series cabinet **797** encourages compliance with criteria set forth by USP 797 for sterile preparation in pharmaceutical compounding of nonhazardous agents.

These include injectables, IV admixtures, pastes and ointments and irrigating solutions which are protected by filtered air blown over the work surface in a laminar flow.

**Construction:** Choose from standard powder coated interior with stainless steel work surface and side windows or optional stainless steel interior (-SS model). Available in 120V, 60Hz and 230V, 50Hz models.

VLF-48, shown with optional mobile base stand and other selected options.

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## LF Series

Laminar Flow Cabinets

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PERFORMANCE & SELECTION

Options and accessories add functional performance to meet specific applications. Accessories include an IV bar, service fixtures, base stand, UV lamp and front door/cover.

## PERFORMANCE

Air Science [Multiplex ULPA Filtration](#) provides high performance protection.

The main filter gasket evenly seals the filter face to prevent bypass air leakage. Our pour-in-place silicone gasket out performs traditional style stick-on "dove-tail" gasketing.

The high capacity air handling system delivers an average airflow velocity of 0.45 m/s (90 fpm) at initial setpoint.

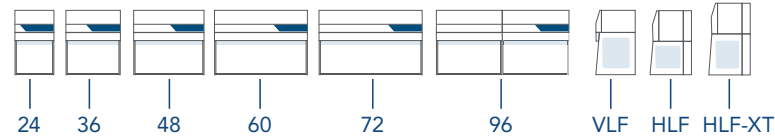
Purair VLF and HLF cabinets have an ULPA filter pressure gauge to measure filter performance.

## DESIGN

Air Science Laminar Flow cabinets incorporate an external rotor blowers. The energy efficient design reduces operating costs and has low noise and vibration levels.

Products are designed for desktop use or installation on the optional mobile base stand.

The rear wall of **vertical flow cabinets** is perforated to reduce work surface turbulence by removing some of the airflow to the rear.



## SELECTION

Purair Laminar Flow cabinets are available in vertical and horizontal configurations with various sizes and options for a total of 36 models to choose from in 6 different widths. Select from standard powder coated interior or stainless steel interior (-SS models).

## CONTROL

The **standard control panel** features On/Off switches for blower, lighting, GFCI outlets, in addition to a Minihelic ULPA pressure gauge to measure filter performance.

The **standard UV control panel** includes the same features as the standard control panel with the addition of a UV lamp key.



Standard Controller



UV Controller

## RELIABILITY

Each cabinet is factory tested for safety and performance in accordance with international standards.

Purair Laminar Flow cabinets are shipped fully assembled. No installation is required; just plug them in and use them.



Through our partner company [Filtco Filters](#), Air Science is a single source supplier of all pre-filters, carbon filters and HEPA/ULPA filters used in our products.

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AIRFLOW TECHNOLOGY

## AIRFLOW

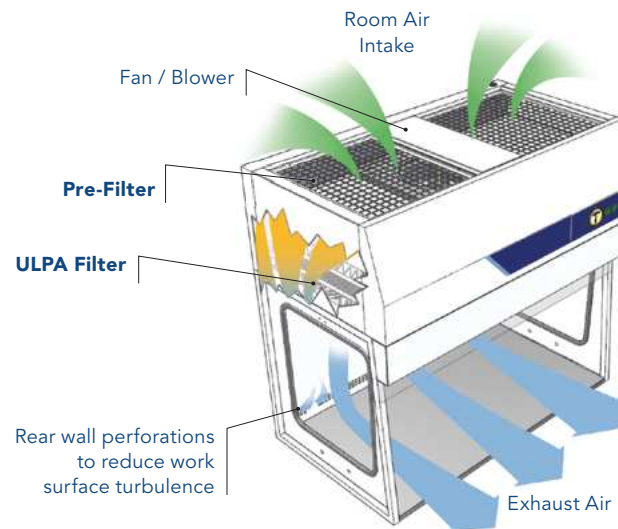
Both VLF and HLF Purair Laminar Flow cabinets offer the same level of quality and performance. When deciding between a VLF or HLF cabinet the differences come down to personal preference for your specific application.

### Vertical Airflow

- The airflow on the Purair LF Series vertical flow cabinets directly strikes the work surface.
- Vertical laminar flow cabinets are manufactured with rear wall perforations that remove a small amount of air at the rear of the cabinet to reduce turbulence.
- In vertical flow cabinets, the ULPA filter is mounted above the work surface which provides a taller and deeper work space. This allows for larger equipment in the work zone without interrupted airflow.
- Vertical flow cabinets are more easily customized to specific applications.

### Horizontal Airflow

- In horizontal flow cabinets the airflow does not directly impinge on the work surface but rather is smoothly drawn across it. This creates less turbulence.
- Airflow in a horizontal flow cabinet exits directly towards the user.
- Large or tall equipment in a horizontal flow cabinet can interrupt airflow more than in a vertical flow cabinet. This may create more turbulence and possible "dead" spots where airflow is lower.

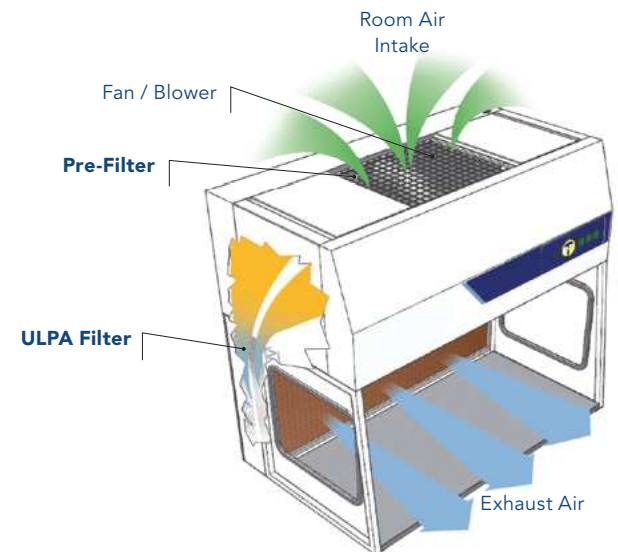


#### Vertical Airflow:

**1.** Room air enters from the top of the cabinet through a disposable pre-filter; this traps larger particles and increases filter life. **2.** Air is forced evenly across the ULPA filter in a stream of clean, uniform air within the work zone. This dilutes and flushes airborne contaminants from the interior. **3.** An average airflow velocity of 0.45 m/s (90 fpm) at initial setpoint ensures a sufficient number of air changes to maintain cleanliness within the work zone. **4.** The purified air travels down to the work zone in a vertical, unidirectional downflow stream, exiting the work zone across the entire open cabinet front area after deflecting off the work surface. Rear wall perforations are designed to reduce work surface turbulence and minimize the possibility of dead air corners in the work zone.



Air Science Purair Laminar Flow cabinets use energy efficient blowers for long life, dependable performance.



#### Horizontal Airflow:

**1.** Purair Laminar Flow cabinets maintain an average airflow velocity of 0.45 m/s (90 fpm) at initial setpoint measured 6"/150 mm from the filter. This face velocity is in compliance with USA and international standards for safety and performance. The ULPA filters are easy to replace with common tools. **2.** Room air enters from the top of the cabinet through a disposable pre-filter; this traps larger particles and increases filter life. **3.** Air is forced evenly across the ULPA filter in a stream of clean, uniform air within the work zone. This dilutes and flushes airborne contaminants from the interior. **4.** An average airflow velocity of 0.45 m/s (90 fpm) at initial setpoint ensures a sufficient number of air changes to maintain cleanliness within the work zone. **5.** The purified air travels across the work zone in a horizontal, unidirectional stream and exits the work zone across the entire open cabinet front.

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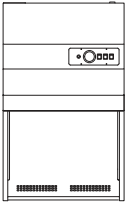
## LF Series

Laminar Flow Cabinets

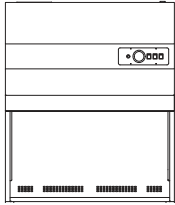
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## SPECIFICATIONS

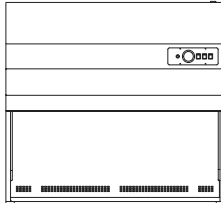
VLF-24



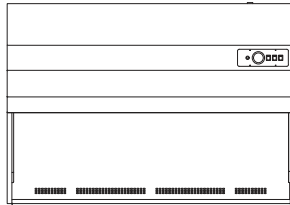
VLF-36



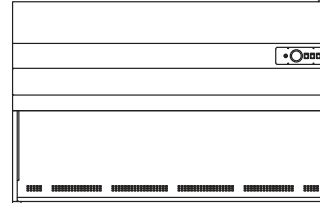
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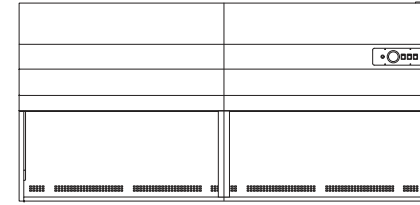
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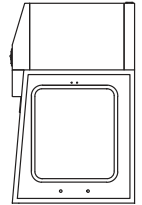
VLF-72



VLF-96



VLF  
(side view)



MODEL		DIMENSIONS					WEIGHT (LBS/KG)	
Metal Interior	Stainless Interior	Nominal Width	Internal Height	Internal Depth	External (W × D × H)	Shipping (W × D × H) without base stand	Net	Ship
<b>Vertical Laminar Flow Cabinets</b>								
VLF-24	VLF-24-SS	24" / 610 mm	28.25" / 718 mm	28.25" / 718 mm	28.4" × 29.25" × 47.25" / 721 × 743 × 1200 mm	40" × 44" × 54" / 1016 × 1118 × 1372 mm	181 / 82	288 / 131
VLF-36	VLF-36-SS	36" / 914 mm	28.25" / 718 mm	28.25" / 718 mm	40.4" × 29.25" × 47.25" / 1026 × 743 × 1200 mm	45" × 44" × 54" / 1143 × 1118 × 1372 mm	268 / 122	371 / 168
VLF-48	VLF-48-SS	48" / 1219 mm	28.25" / 718 mm	28.25" / 718 mm	52.4" × 29.25" × 47.25" / 1331 × 743 × 1200 mm	60" × 44" × 54" / 1524 × 1118 × 1372 mm	322 / 146	478 / 217
VLF-60	VLF-60-SS	60" / 1524 mm	28.25" / 718 mm	28.25" / 718 mm	64.4" × 29.25" × 47.25" / 1636 × 743 × 1200 mm	70" × 44" × 54" / 1778 × 1118 × 1372 mm	401 / 182	525 / 238
VLF-72	VLF-72-SS	72" / 1829 mm	28.25" / 718 mm	28.25" / 718 mm	76.4" × 29.25" × 47.25" / 1941 × 743 × 1200 mm	91" × 44" × 54" / 2311 × 1118 × 1372 mm	478 / 217	595 / 270
VLF-96	VLF-96-SS	96" / 2438 mm	28.25" / 718 mm	28.25" / 718 mm	100.4" × 29.25" × 47.25" / 2550 × 743 × 1200 mm	110" × 44" × 54" / 2794 × 1118 × 1372 mm	620 / 281	745 / 338

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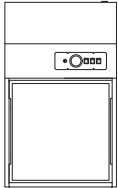
## LF Series

Laminar Flow Cabinets

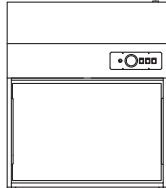
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## SPECIFICATIONS

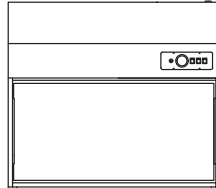
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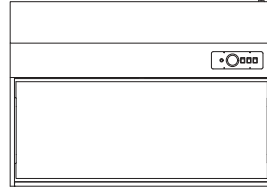
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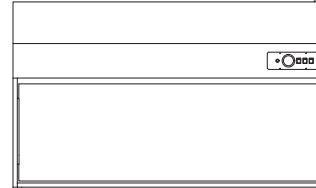
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HLF-60



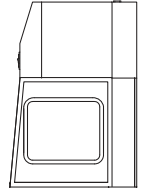
HLF-72



HLF-96



HLF  
(side view)



MODEL		DIMENSIONS					WEIGHT (LBS/KG)	
Metal Interior	Stainless Interior	Nominal Width	Internal Height	Internal Depth	External (W × D × H)	Shipping (W × D × H)	Net	Ship

### Horizontal Laminar Flow Cabinets

HLF-24	HLF-24-SS	24" / 610 mm	23.75" / 603 mm	23.75" / 603 mm	25.25" × 29.5" × 42.75" / 641 × 749 × 1086 mm	40" × 44" × 54" / 1016 × 1118 × 1372 mm	170 / 77	280 / 127
HLF-36	HLF-36-SS	36" / 914 mm	23.75" / 603 mm	23.75" / 603 mm	37.25" × 29.5" × 42.75" / 946 × 749 × 1086 mm	45" × 44" × 54" / 1143 × 1118 × 1372 mm	246 / 112	371 / 168
HLF-48	HLF-48-SS	48" / 1219 mm	23.75" / 603 mm	23.75" / 603 mm	49.25" × 29.5" × 42.75" / 1251 × 749 × 1086 mm	60" × 44" × 54" / 1524 × 1118 × 1372 mm	289 / 131	478 / 217
HLF-60	HLF-60-SS	60" / 1524 mm	23.75" / 603 mm	23.75" / 603 mm	61.25" × 29.5" × 42.75" / 1556 × 749 × 1086 mm	70" × 44" × 54" / 1778 × 1118 × 1372 mm	344 / 156	494 / 224
HLF-72	HLF-72-SS	72" / 1829 mm	23.75" / 603 mm	23.75" / 603 mm	73.25" × 29.5" × 42.75" / 1861 × 749 × 1086 mm	91" × 44" × 54" / 2311 × 1118 × 1372 mm	439 / 199	595 / 270
HLF-96	HLF-96-SS	96" / 2438 mm	23.75" / 603 mm	23.75" / 603 mm	98.5" × 29.5" × 42.75" / 2502 × 749 × 1086 mm	110" × 44" × 54" / 2794 × 1118 × 1372 mm	725 / 329	878 / 398

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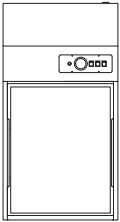
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Laminar Flow Cabinets

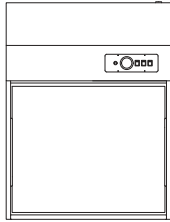
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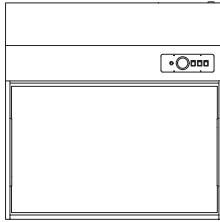
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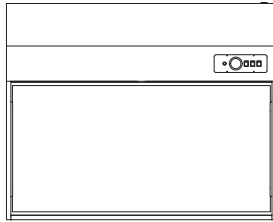
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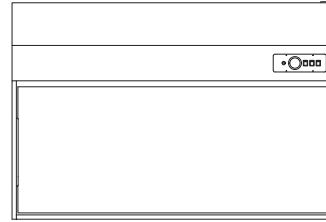
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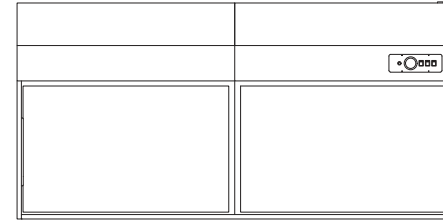
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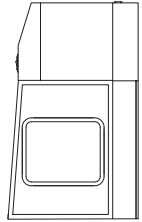
HLF-72XT



HLF-96XT



HLF-XT  
(side view)



MODEL		DIMENSIONS					WEIGHT (LBS/KG)	
Metal Interior	Stainless Interior	Nominal Width	Internal Height	Internal Depth	External (W × D × H)	Shipping (W × D × H)	Net	Ship

### Horizontal Laminar Flow Cabinets with Extra Tall Option

HLF-24XT	HLF-24XT-SS	24" / 610 mm	29.5" / 749 mm	23.75" / 603 mm	25.25" × 29.5" × 48.75" / 641 × 749 × 1238 mm	40" × 44" × 60" / 1016 × 1118 × 1524 mm	191 / 87	295 / 134
HLF-36XT	HLF-36XT-SS	36" / 914 mm	29.5" / 749 mm	23.75" / 603 mm	37.25" × 29.5" × 48.75" / 946 × 749 × 1238 mm	45" × 44" × 60" / 1143 × 1118 × 1524 mm	266 / 121	391 / 177
HLF-48XT	HLF-48XT-SS	48" / 1219 mm	29.5" / 749 mm	23.75" / 603 mm	49.25" × 29.5" × 48.75" / 1251 × 749 × 1238 mm	60" × 44" × 60" / 1524 × 1118 × 1524 mm	319 / 145	508 / 230
HLF-60XT	HLF-60XT-SS	60" / 1524 mm	29.5" / 749 mm	23.75" / 603 mm	61.25" × 29.5" × 48.75" / 1556 × 749 × 1238 mm	70" × 44" × 60" / 1778 × 1118 × 1524 mm	375 / 170	525 / 238
HLF-72XT	HLF-72XT-SS	72" / 1829 mm	29.5" / 749 mm	23.75" / 603 mm	73.25" × 29.5" × 48.75" / 1861 × 749 × 1238 mm	91" × 44" × 60" / 2311 × 1118 × 1524 mm	479 / 217	635 / 288
HLF-96XT	HLF-96XT-SS	96" / 2438 mm	29.5" / 749 mm	23.75" / 603 mm	98.5" × 29.5" × 48.75" / 2502 × 749 × 1238 mm	110" × 44" × 60" / 2794 × 1118 × 1524 mm	585 / 265	746 / 338

Specifications are subject to change without notice.

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## LF Series

Laminar Flow Cabinets

24 • 36 • 48 • 60 • 72 • 96

## SPECIFICATIONS

### PRODUCT SPECIFICATIONS

Airflow Pattern	Vertical	Horizontal
	VLF-24   VLF-36 VLF-48   VLF-60 VLF-72   VLF-96	HLF-24   HLF-36 HLF-48   HLF-60 HLF-72   HLF-96  HLF-24XT   HLF-36XT HLF-48XT   HLF-60XT HLF-96XT  HLF-72XT
<b>Filtration</b>		
Airflow <sup>1</sup>	<... 0.45 m/s (90 fpm). ...>	
Pre-Filter	<... Disposable polyester fibers with 85% arrestance. ...>	
Main Filter	<... ULPA, 99.999% efficient at particle size 0.12 µm. ...>	
Clamping	<... Spring loaded, adjustable tension adjusts for gasket aging. ...>	
<b>Construction</b>		
Finish (exterior)	<... White epoxy coated steel frame. ...>	
Finish (interior)	<... Standard models, powder coated interior. -SS models, stainless steel interior. ...>	
Windows	<... Tempered glass, transparant, not available on SS models. ...>	
Blower	<... External rotor motor, permanently lubricated, low noise and vibration levels. ...>	
Controls	<... Main On/Off switch; Solid state fan speed control with RFI filter; UV timer and key switch if included, specify when ordering. ...>	
Electrical	<... 120V, 60Hz or 230V, 50Hz voltages available. Specify when ordering. Other voltage options available. ...>	
Work Surface	<... Stainless steel. ...>	
GFCI outlet	<... Standard, 5A maximum. ...>	
Monitoring	<... Minihelic ULPA pressure gauge. ...>	
<b>Efficiency</b>		
Lighting	<... LED. ...>	

<sup>1</sup> Average airflow measured 6"/150 mm from filter face.

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OPTIONS & ACCESSORIES

### OPTIONS & ACCESSORIES

		Vertical		Horizontal		Horizontal, Tall	
		VLF-24 VLF-48 VLF-72	VLF-36 VLF-60 VLF-96	HLF-24 HLF-48 HLF-72	HLF-36 HLF-60 HLF-96	HLF-24XT HLF-48XT HLF-72XT	HLF-36XT HLF-60XT HLF-96XT
<b>Air Science Model</b>							
Work Surface (Static Dissipative)	Work surface composite resists and dissipates static charges to protect sensitive work product.	TRAY-VLF-24-SDW TRAY-VLF-48-SDW TRAY-VLF-72-SDW	TRAY-VLF-36-SDW TRAY-VLF-60-SDW TRAY-VLF-96-SDW	TRAY-HLF-24-SDW TRAY-HLF-48-SDW TRAY-HLF-72-SDW	TRAY-HLF-36-SDW TRAY-HLF-60-SDW TRAY-HLF-96-SDW	TRAY-HLF-24-SDW TRAY-HLF-48-SDW TRAY-HLF-72-SDW	TRAY-HLF-36-SDW TRAY-HLF-60-SDW TRAY-HLF-96-SDW
Base Stand, Mobile, with Casters	Floor-standing base for cabinet with locking castors 860 mm (34") height.	CART-VLF-BW-24 CART-VLF-BW-48 CART-VLF-BW-72	CART-VLF-BW-36 CART-VLF-BW-60 CART-VLF-BW-96	CART-HLF-BW-24 CART-HLF-BW-48 CART-HLF-BW-72	CART-HLF-BW-36 CART-HLF-BW-60 CART-HLF-BW-96	CART-HLF-BW-24 CART-HLF-BW-48 CART-HLF-BW-72	CART-HLF-BW-36 CART-HLF-BW-60 CART-HLF-BW-96
Base Stand, Mobile, with Leveling Feet	Floor-standing base for cabinet with leveling feet 860 mm (34") height.	CART-VLF-BL-24 CART-VLF-BL-48 CART-VLF-BL-72	CART-VLF-BL-36 CART-VLF-BL-60 CART-VLF-BL-96	CART-HLF-BL-24 CART-HLF-BL-48 CART-HLF-BL-72	CART-HLF-BL-36 CART-HLF-BL-60 CART-HLF-BL-96	CART-HLF-BL-24 CART-HLF-BL-48 CART-HLF-BL-72	CART-HLF-BL-36 CART-HLF-BL-60 CART-HLF-BL-96
Base Stand, Mobile, Motorized	Floor-standing base for cabinet with motorized height adjustment and leveling feet.	CART-VLF-BM-24 CART-VLF-BM-48 CART-VLF-BM-72	CART-VLF-BM-36 CART-VLF-BM-60 CART-VLF-BM-96	CART-HLF-BM-24 CART-HLF-BM-48 CART-HLF-BM-72	CART-HLF-BM-36 CART-HLF-BM-60 CART-HLF-BM-96	CART-HLF-BM-24 CART-HLF-BM-48 CART-HLF-BM-72	CART-HLF-BM-36 CART-HLF-BM-60 CART-HLF-BM-96
Service Fitting	Sidewall mounting for service fixture. Available for petcocks, faucets and valves. Retrofit Kit. Maximum of 4 per cabinet.	SF-WALL		SF-WALL		SF-WALL	
IV Bar and "S" Hooks	Interior bar spanning the width of the cabinet to hang IV bags and other equipment using "S" hooks. Retrofit Kit.	IV-VLF-24 IV-VLF-48 IV-VLF-72	IV-VLF-36 IV-VLF-60 IV-VLF-96	IV-HLF-24 IV-HLF-48 IV-HLF-72	IV-HLF-36 IV-HLF-60 IV-HLF-96	IV-HLF-24 IV-HLF-48 IV-HLF-72	IV-HLF-36 IV-HLF-60 IV-HLF-96
Ionization Bar	Generates a continuous flow of positive and negative ions balanced to neutralize surface static charges and to protect sensitive work product.	ION-24 ION-48 ION-72	ION-36 ION-48 ION-96	ION-24 ION-48 ION-72	ION-36 ION-48 ION-96	ION-24 ION-48X ION-72	ION-36 ION-60 ION-96
UV Lamp*	Creates light emission conditions know to safely decontaminate interior surfaces. Includes a timer, door microswitch, fully closing front sash and UV filtering clear polycarbonate panels. The UV operation must comply with local codes and facility safety practices.	UV-24 UV-48 UV-72	UV-36 UV-60 UV-96	UV-24 UV-48 UV-72	UV-36 UV-60 UV-96	UV-24 UV-48 UV-72	UV-36 UV-60 UV-96
Removable Front Cover	To enclose work zone when unit is not in operation.	FCOVER-VLF-24 FCOVER-VLF-48 FCOVER-VLF-72	FCOVER-VLF-36 FCOVER-VLF-60 FCOVER-VLF-96	FCOVER-HLF-24 FCOVER-HLF-48 FCOVER-HLF-72	FCOVER-HLF-36 FCOVER-HLF-60 FCOVER-HLF-96	FCOVER-HLF-24XT FCOVER-HLF-48XT FCOVER-HLF-72XT	FCOVER-HLF-36XT FCOVER-HLF-60XT FCOVER-HLF-96XT

\*Sold together; safety precautions must be followed. Factory installed; specify when ordering.

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OPTIONS & ACCESSORIES

## WARRANTY

This product is protected by the Air Science Legacy Limited Lifetime Warranty™.

## STANDARDS & COMPLIANCE

Quality Management Systems	ISO 9001 : 2015
Electrical Safety	UL-C-61010-1 CAN/CSA C22.2 61010-1-12 EN 61010-1:2010 CE Mark
OSHA, Occupational Safety and Health Administration	OSHA Standard -29 CFR, Safety and Health Regulations for General Industry, 1910.1450: Occupational exposure to hazardous chemicals in laboratories. Part B, definition, laboratory type hood. This product may assist you with compliance or as part of your chemical hygiene plan. Please consult your Safety Officer and/or Industrial Hygienist.
Environment	ISO 14001:2015 ENERGY STAR® Partner



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Schedule  
Contract GS-07F5032P





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