Scientifically Advanced Interiors

DUCTLESS FUME HOODS

Purair® CAGEX™

36

Purair® Ductless Fume Hoods for Animal Cage Changing

- Provides Operator and Environmental Safety for Animal Cage Changing Applications

34 watt[1] *Purair model P5-36-XT (CAGEX™), shown with optional velometer and mobile cart.*

34 watt[1]

The single EC blower motor assures lower cost of ownership in one of the world's most energy efficient ductless fume hoods.

Air Science®

"The World's Most Extensive Selection of Ductless Fume Hoods."

ISO 9001
ISO 14001
BUREAU VERITAS
Certification

INTRODUCTION

Deep into its second generation, Air Science® is introducing a new series of animal products engineered to meet the needs of the animal research laboratory. A member of the new product line, the Purair® CAGEX™, featuring high level performance at an affordable price, is designed to protect the user and the environment from hazardous vapors and particulates generated on the work surface. Carbon filters absorb odor while HEPA filtration protects from harmful particulates created during cage changing operations.

34 watt[1]

The single EC blower motor assures lower cost of ownership in one of the world's most energy efficient ductless fume hoods.

APPLICATIONS

Using innovative filtration technology, the Purair CAGEX creates a safe work environment over the widest range of applications in the animal research industry.

Cage Cleaning \ Bedding Changes \ Waste Disposal

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

- High efficiency EC blower.
- Energy saving LED lighting.
- Protects the operator from fume and particle hazards.
- Improved filter clamping eliminates bypass leakage.
- Easy to change filters.
- Low airflow alarm.

DUCTLESS TECHNOLOGY

The Eco-Friendly Choice

Advanced carbon filtration technology offers a safe, high performance alternative to conventional ducted fume hoods for a broad range of applications.

Environmental Benefits. Air Science ductless fume hoods isolate and trap chemical vapors to prevent ecological impact through release into the environment.

Versatile. Each filtration system is selected for its specific application. Carbon filters are available in more than 14 configurations for use with vapors of organic solvents, acids, mercury and formaldehyde. HEPA filters provide biological safety.

Easy to Install. The CAGEX ductless fume hood is self-contained and does not require venting to the outside. Many units are portable and may be moved with minimal downtime and without filter changes. Set-up, operation and filter maintenance are straightforward.

Energy Efficient. Because filtered air is returned to the room, no demands are required of the facility HVAC capacity for make-up air.

Cost Effective. Facility ductwork, HVAC and construction costs are eliminated.

Safe to Use. Cabinet airflow and face velocity protect users from incidental exposures to fumes.

Self-Testing. (select models) Electronic airflow monitoring assures continuous safety. An electronic gas sensor monitors carbon filter performance.

34 watt[1] *Purair P5-36-XT (CAGEX) shown with optional velometer, stainless steel spill tray and mobile cart.*

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

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

DESIGN FEATURES

A. Filter I.D. Window: A convenient, strategically placed front cover window shows the installed filter part number and installation date to encourage timely filter replacement.

B. Control Panel: Electronic controls and displays include switches for the blower and filter blockage alarm.

C. Filter Blockage Alarm: Continuously monitors filter loading and alerts user when service is needed.

D. Air Velometer: An optional analog air velocity meter is positioned in the user's field of vision.

E. Steel Support Frame: The chemical resistant epoxy coated steel frame adds mechanical strength.

F. Hinged Front Sash: When closed, the cabinet sash protects the contents from inadvertent external contact and better isolates the air within. The sash is easy to open and close.

G. Work Surface: The stainless steel surface includes a 10.25" × 10.25" opening with a removable grate with 5 bang-bars for easy waste disposal within the work zone and ease in cleaning.

H. Pass Through Ports: Electrical cords and cables are safely routed into the cabinet through ports on the back.

I. Electrostatic Pre-Filter: The electrostatic pre-filter is accessible from inside the chamber and 91% effective down to 1-3 microns.

J. Filter Door Key: Filter access keys prevent unauthorized removal or accidental exposure to dirty filters.

K. Dynamic Filtration Chamber: The dynamic filter chamber prevents any possible leakage of contaminated air by pressurizing the fan plenum (positive air) and depressuring the filter compartment (negative air).

L. Internal Manual Speed Controller: Authorized personnel may set the EC blower speed as desired.

M. Stand: Optional adjustable mobile cart with locking casters for ergonomic operator use and maximum flexibility. The cart is designed to confine a waste container and includes a hinged bar for easy removal.

N. Safety Filter: The optional carbon or HEPA/ULPA safety filter adds an additional layer of protection.

O. Mounted Waste Container: Allows for rapid disposal of waste within the work zone.

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.

34 watt[1] *Purair P5-36-XT (CAGEX), shown with optional velometer and mobile cart.*

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Air Science high-efficiency fume hoods 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 Purair CAGEX accommodates the full range of Multiplex™ Filtration System options.

The high capacity air handling system delivers face velocity of 100 fpm in compliance with US and international safety and performance standards.

DESIGN

Professional quality Air Science fume 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 and change. The unique filter clamping design eliminates bypass leakage outside the cabinet.

RELIABILITY

Internal systems are isolated from fumes, extending product life.

Energy-efficient *EC blowers promote long life and dependable performance of Purair CAGEX fume hoods.*

36 XT

SELECTION

The Purair CAGEX is available in a 36" wide standard depth model with a variety of customizable options and accessories.

CONTROL

The **basic control panel** is standard on Purair CAGEX models and includes an On/Off switch and filter blockage alarm.

The **optional FSA/Autocal** controller displays the airflow and offers limited detection of low concentrations of hydrocarbon, some gases and organic acids. Audio and visual alarms alert users to filter saturation and if the airflow reaches preset thresholds. An Hour Counter is also included.

The **optional FSA controller** offers limited detection of low concentrations of hydrocarbon, some gases and organic acids. Audio and visual alarms alert users if filter saturation reaches preset thresholds. An Hour Counter and Low Airflow alarm are also included.

The **optional Autocal controller** displays the airflow. Audio and visual alarms alert users if the airflow reaches preset thresholds. An Hour Counter is also included.

Basic Control Panel

FSA Control Panel

FSA/Autocal Control Panel

Autocal Control Panel

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multiplex™

FILTRATION

At the heart of the Purair product line is innovative filtration technology. **The Multiplex Filtration System** consists of a pre-filter, main activated carbon filter and HEPA filter. The system permits a customized combination of filter media and configuration for chemical and physical adsorption specific to each application need.

The Air Science **carbon filtration technique** is based on enhanced, activated carbon particle formulations from specially selected, naturally occurring raw material that is superior to wood or other organic sources. The carbon is treated to attain the proper porosity and aggregate surface area and to react with several ranges of aerosolized chemicals moved through the filter by an air handling blower.

View available filters and descriptions on page 7.

FILTER CONFIGURATION

The Multiplex feature permits one or more filtration options to be combined to meet a wider range of multiple-use applications.

The Purair CAGEX is equipped with a single carbon main filter, activated to adsorb one or more specific vapors or family of vapors. Additionally, a HEPA filter provides safety against particulates, permitting the CAGEX to be applied as a Class I Biological Safety Cabinet. Optional ULPA filtration may be added to increase particulate capture and efficiency.

The carbon filter is sized to fit the specified product model number and configured to optimize airflow across 100% of the filter surface area. The self-contained assembly maximizes filter efficiency, prolongs filter life, optimizes diffusion and saturation and improves user safety.

P. Electrostatic Pre-Filter: Protects the main filters from aerosols, mists, dust and particulates.

C. Activated Carbon Main Filter: A single or stacked filter configuration.

H. HEPA Filter/Optiona ULPA Filter: Both HEPA and ULPA filters use micro-glass fiber media designed to capture fine particles and biologicals. Both filters can capture particles smaller than the micron size for which they are tested. HEPA and ULPA filter efficiencies are 99.97% at 0.3 microns and 99.999% at 0.12 microns respectively.

MULTIPLEX FILTRATION SYSTEM, SUMMARY

Application	Chemical	Powder/ Biological	Chemical & Powder	Chemical within Cleanroom
Secondary/ Stacked Filter, Optional	C	H	C	H
Primary Filter	C	H	H	C
Pre-Filter	P	P	P	P

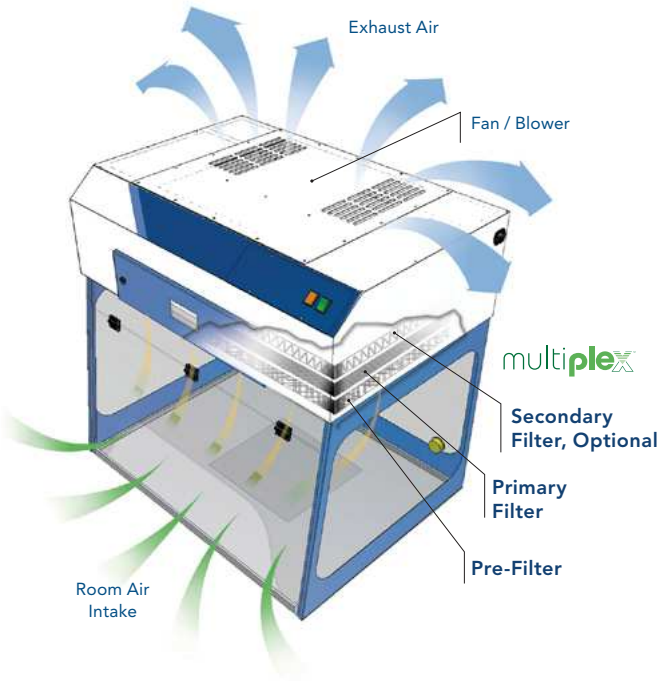
The system can be configured for the capture of acids, bases and particulates, such as biological aerosols.

AIRFLOW

Contaminated air is pulled through the Multiplex Filtration System. Activated carbon adsorbs chemical vapors and a HEPA filter captures particulates. Clean air is returned to the room.

The main filters are easy to replace with no tools required. The filter clamps tightly against the filter gasket to prevent filter bypass and maintain filter integrity.

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



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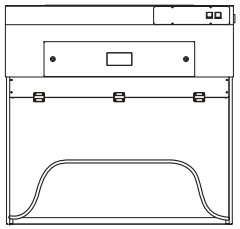
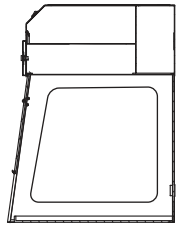
P5-36-XT (CAGEX)



Standard Depth (XT)



MODEL	DIMENSIONS			WEIGHT (LBS/KG)	
	Internal Height	External (W × D × H)	Shipping (W × D × H)	Net	Ship
Standard Depth Models (XT)					
P5-36-XT (CAGEX)	23.6" / 600 mm	36" × 27" × 35" / 914 × 676 × 889 mm	40" × 40" × 78" / 1016 × 1016 × 1981 mm	175 / 79	245 / 111

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[1] *Energy consumption disclosure is based on internal testing with primary filters during normal operation. Power consumption published is nominal and dependent on cabinet size.*

PRODUCT SPECIFICATIONS

Filtration	P5-36-XT (CAGEX)
Face Velocity	100 fpm

Construction	P5-36-XT (CAGEX)
Finish	<··· White epoxy coated steel frame and head unit. Clear sides and back panel. ···>
Blower	<··· EC blower. ···>
Controls	<··· Main On/Off. ···>
Electrical	<··· 120V, 60Hz or 230V, 50Hz voltages available. Specify when ordering. Other voltage options available. ···>
Monitoring	<··· Low airflow alarm, standard. ···>

Efficiency	P5-36-XT (CAGEX)
Power Consumption[1]	34 watt
Lighting	<··· LED ···>

[1] All measurements are with Filter Type ASTS-030.

FILTER SPECIFICATIONS

Purair Model	P5-36-XT (CAGEX)
Primary Filter*	<··· (1) ···>
Pre-Filter*	<··· (1) ···>

** For specific examples refer to Multiplex filtration system summary on page 5.*

FILTER SUMMARY*

Formula	Description
GP Plus!	The most widely used filter in the range, primarily for solvent, organic and alcohol removal.
ACI Plus!/ SUL	Designed to neutralize volatile inorganic acid vapors.
ACR	Iodine and methyl iodide vapors; It is frequently used for iodination reactions with lower level radioactive iodine.
ACM	Mercury vapor.
AMM	Removes vapors from dilute ammonia solutions and to remove low molecular weight amines.
FOR	Designed to oxidize formaldehyde and glutaraldehyde fumes; It is widely used in hospital pathology laboratories.
HEPA/UPLA	Powders and particulates.

**Other formulas may be available.*

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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OPTIONS & ACCESSORIES

Purair Model		P5-36-XT (CAGEX)
Safety Filter*	An additional carbon, HEPA or ULPA safety filter exceeding ANSI/AIHA Z9.5 requirements can be installed after the main filter.	<··· Safety filters for vapor or particulate protection are available for all models. ···> Contact Air Science for ordering information.
FSA/Autocal Controller*	The optional FSA/Autocal controller displays the airflow and offers limited detection of low concentrations of hydrocarbon, some gases and organic acids. Audio and visual alarms alert users to filter saturation and if the airflow reaches preset thresholds. An Hour Counter is also included.	ADV-P
FSA Controller*	The optional FSA controller offers limited detection of low concentrations of hydrocarbon, some gases and organic acids. Audio and visual alarms alert users if filter saturation reaches preset thresholds. An Hour Counter and Low Airflow alarm are also included.	FSA
Autocal Controller*	The optional Autocal controller displays the airflow. Audio and visual alarms alert users if the airflow reaches preset thresholds. An Hour Counter is also included.	AUTOCAL
Spill Tray (Stainless Steel)	Removable for easy cleaning.	TRAY-P5-36-SS
SafeSwitch HEPA Filter Shutter System	Minimizes exposure to filter contaminants when removing used carbon or HEPA filters for insertion of new filters.	ASTS-030-SS
Dwyer Airflow Meter	Continuous display of face velocity.	DWYER
Base Stand, Mobile, with Casters	Provides a lower storage shelf; accommodates wheelchair access. Locking casters fix the hood in place.	CART-36
Remote Control**	Wired controller, provides lower access height to comply with ADA requirements.	RC-P
Duplex Electrical Outlet*	Two NEMA-1420R receptacles with ground fault interrupter. 120V service standard; international fixtures available.	AS-GFI
Service Fitting*	Cabinets can be fitted with service fixtures in sidewall or on work surface.	<··· SF-X. Specify service fitting type (faucet, valve, petcock) and location when ordering. ···>
Stainless Steel Hanging Rod*	Hanging rod spans the width of the cabinet.	HANGR-P5-36
Cup Sink, Mounts into Tray*	Polyethylene cup sink (3" × 5" × 9") is fitted into the base tray. Other sizes and materials available. Contact Air Science for ordering information.	SINK
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-P5-36

* *Factory installed; specify when ordering.*

** *Handheld box connects via cable to head unit. Includes On/Off switch and blower speed control. Can be placed inside work zone.*

*** *Includes timer, door microswitch and fully closing front sash, all clear panels polycarbonate (UV filtering). Safety precautions need to be followed.*

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WARRANTY

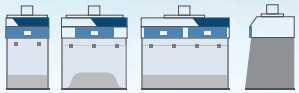
This product is protected by the Air Science Legacy Limited Lifetime Warranty™.

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
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

Air Science®

Purair® NANO



Ductless Nanoparticle Containment Enclosure

- Provides Personnel Protection from Engineered Nanoparticles, Fine Dusts and Aerosols

34 watt[1] *Purair model P5-36-XT (NANO), with powder scale.*

22–50 watt[1]

The single EC blower motor assures lower cost of ownership in one of the world's most energy efficient ductless fume hoods.

Air Science®

"The World's Most Extensive Selection of Ductless Fume Hoods."

INTRODUCTION

The Purair® NANO ductless enclosure is designed to contain nanoparticles and fine powders of <100 nm. The stainless steel infrastructure, powder-coated fan filtration unit and dual filtration options assure superior containment and maintenance of a safe work surface.

22–50 watt[1]

The single EC blower motor assures lower cost of ownership in one of the world's most energy efficient ductless fume hoods.

APPLICATIONS

Using innovative filtration technology, the Purair NANO creates a safe work environment over the widest range of applications in the industry.

Research \ Academic \ Pharmaceutical \ Aerospace

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

- High efficiency EC blower.
- Energy saving LED lighting.
- Protects the operator from nanomaterial particle hazards.
- Improved filter clamping eliminates bypass leakage.
- Filter blockage alarm.

DUCTLESS TECHNOLOGY

The Eco-Friendly Choice

Some sources indicate that due to their extremely small size, nanoparticles have characteristics more similar to a gas than a solid. As nanoparticles diffuse, they collide with air molecules and move in a random pattern. For this reason, diffusion filtering is most commonly recommended to capture nanoparticles and nanomaterial.

Because the Purair NANO uses a HEPA filter as the main filter, a supplemental carbon filter can be used to trap chemical vapors emitted from the work process. The carbon filter does not capture nanoparticles.

- **Environmental Benefits.** Air Science ductless enclosures isolate and trap powders and particulates to prevent ecological impact through release into the environment.
- **Versatile.** Each filtration system is selected for its specific application. Carbon filters are available in more than 14 configurations for use with vapors of organic solvents, acids, mercuryand formaldehyde. HEPA/ULPA filters can be added for biological safety.
- **Easy to Install.** The ductless nanomaterial enclosure is self-contained and does not require venting to the outside. The cabinet is portable and may be moved from one location to the next with minimal downtime and without filter changes. Set-up, operationand filter maintenance are straightforward.
- **Energy Efficient.** Because filtered air is returned to the room, no demands are required of the facility HVAC capacity for make-up air.
- **Cost Effective.** Facility ductwork, HVAC and construction costs are eliminated.
- **Safe to Use.** Cabinet airflow and face velocity protect users from incidental exposures to nanomaterial.
- **Self-Testing.** (selected models) Electronic airflow monitoring assures continuous safety. An electronic gas sensor monitors carbon filter performance.

22 watt[1] *Purair P5-24-XT (NANO)*

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[1] *Energy consumption disclosure is based on internal testing with primary filters during normal operation. Power consumption published is nominal and dependent on cabinet size.*

DESIGN FEATURES

A. Filter I.D. Window: A strategically placed front cover window shows the installed filter part number and installation date to encourage timely filter replacement.

B. Control Panel: Electronic controls and displays include switches for the blower and filter blockage alarm. Ergonomics, safety and aesthetics all come together with the 10° pitch of the face.

C. Filter Blockage: Continuously monitors filter loading and alerts user when service is needed.

D. Air Velometer: An optional analog air velocity meter is positioned in the user's field of vision.

E. Stainless Steel Support Frame: The 304 grade stainless steel provides excellent strength, chemical resistance and is cleanroom compatible. The satin finish enhances illumination.

F. Hinged Front Sash: When closed, the cabinet sash protects the contents from inadvertent external contact and better isolates the air within. The sash is easy to open and close and includes a self-locking feature.

G. Work Surface: The internal work surface can be fitted with an optional polypropylene (available in white and black) or stainless steel tray; see accessories.

H. Pass Through Ports: Electrical cords and cables are safely routed into the cabinet through ports on the back.

I. Electrostatic Pre-Filter: The electrostatic pre-filter is accessible from inside the chamber and 91% effective down to 1-3 microns.

J. Filter Door Key: Filter access keys prevent unauthorized removal or accidental exposure to dirty filters.

K. Internal Manual Speed Controller: Authorized personnel may set the EC blower speed as desired.

L. Stand: An optional mobile cart with locking casters is available.

M. Rear Internal Baffle: Rear baffle provides smooth horizontal airflow pattern. Removable for easy cleaning.

N. External Exhaust Connection: Removable 6" diameter exhaust connection port allows ducting to the outside and comes standard on every Purair NANO.

ADDITIONAL FEATURES

Construction: All models are available in either metal or polypropylene construction. Specify metal or polypropylene when ordering. See selection chart for specifications and dimensions. Available in 120V, 60Hz and 230V, 50Hz models.

34 watt[1] *Purair P5-36-XT, shown with optional velometer, stainless steel spill tray and mobile cart.*

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Each Air Science NANO hood is expertly designed and certified for quality construction. Standard features, options, and accessories are developed purposely to enhance user-friendliness.

PERFORMANCE

The Purair NANO accommodates the full range of Multiplex™ Filtration System options.

The high capacity air handling system delivers face velocity of 100 fpm in compliance with US and international safety and performance standards.

DESIGN

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

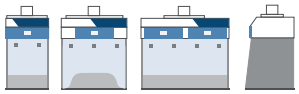
The cabinet frame and work surfaces, comprised of industrial components, are durable and chemically resistant.

The Air Science filter assembly is easy to access and change. The unique filter clamping design eliminates bypass leakage outside the cabinet.

RELIABILITY

Internal systems are isolated from fumes, extending product life.

Energy-efficient *EC blowers promote long life and dependable performance of Purair NANO fume hoods.*



SELECTION

Purair NANO hoods are available in 3 standard sizes.

CONTROL

The **basic control panel** is standard and includes an On/Off switch and Filter Blockage alarm.

The **optional FSA/Autocal controller** displays the airflow and offers limited detection of low concentrations of hydrocarbon, some gases and organic acids. Audio and visual alarms alert users to filter saturation and if the airflow reaches preset thresholds. An Hour Counter is also included.

The **optional FSA controller** offers limited detection of low concentrations of hydrocarbon, some gases and organic acids. Audio and visual alarms alert users if filter saturation reaches preset thresholds. An Hour Counter and Low Airflow alarm are also included.

The **optional Autocal controller** displays the airflow. Audio and visual alarms alert users if the airflow reaches preset thresholds. An Hour Counter is also included.

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.

Basic Control Panel

FSA/Autocal Control Panel

FSA Control Panel

Autocal Control Panel

Monitair Control Panel

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multiplex™

FILTRATION

At the heart of the Purair product line is innovative filtration technology. **The Multiplex Filtration System** in the NANO consists of a pre-filter, HEPA filter, with optional ULPA filter and/or supplemental carbon filter. HEPA/ULPA filtration combined with a supplemental activated carbon filter maximizes the number of particles captured through Brownian diffusion. The mechanical design enhances safety, convenience and overall value.

View available filters and descriptions on page 7.

safe SWITCH™

The optional SafeSwitch HEPA Filter Shutter system ensures that operators are safely separated from trapped contaminants during filter changes.

secur. safe disposal service

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

FILTER CONFIGURATION

The Multiplex feature permits configuration for the capture of ultra fines, when paired with ULPA filters and for the capture of acids, bases when paired with carbon filters.

The optional carbon filter is sized to fit the specified product model number and configured to optimize airflow across 100% of the filter surface area. The self-contained assembly maximizes filter efficiency, prolongs filter life, optimizes diffusion and saturation and improves user safety.

P. Electrostatic Pre-Filter: Protects the main filters from aerosols, mists, dust and particulates.

C. Activated Carbon Main Filter, Optional: A single or stacked filter configuration.

H. HEPA Filter (ULPA Optional): Both HEPA and ULPA filters use micro-glass fiber media designed to capture fine particles and biologicals. Both filters can capture particles smaller than the micron size for which they are tested. HEPA and ULPA filter efficiencies are 99.97% at 0.3 microns and 99.999% at 0.12 microns respectively.

MULTIPLEX FILTRATION SYSTEM, SUMMARY

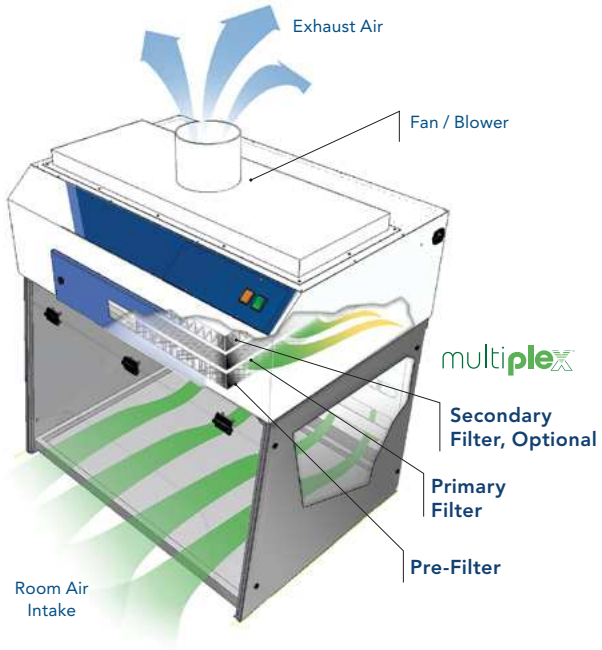
Application	Chemical	Powder/ Biological	Chemical & Powder	Chemical within Cleanroom
Secondary/ Stacked Filter, Optional	C	H	C	H
Primary Filter	C	H	H	C
Pre-Filter	P	P	P	P

AIRFLOW

The Purair NANO Series ductless nanoparticle enclosure maintains a constant face velocity of 100 FPM in compliance with USA and international standards for safety and performance. Contaminated air is pulled through the Multiplex filtration system and clean air is returned to the room.

The main filters are easy to replace with no tools required. The filter clamps tightly against the filter gasket to prevent filter bypass and maintain filter integrity.

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



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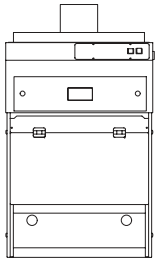
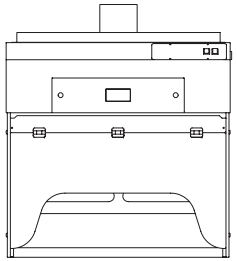
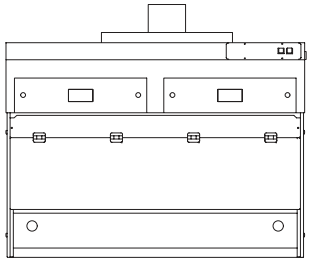
Purair P5-24-XT (NANO)



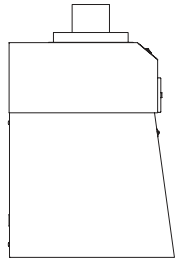
Purair P5-36-XT (NANO)



Purair P5-48-XT (NANO)



Side View



MODEL	DIMENSIONS			WEIGHT (LBS/KG)	
	Internal Height	External (W × D × H)	Shipping (W × D × H)	Net	Ship
Standard Models					
P5-24-XT (NANO)	23.6" / 600 mm	24" × 27" × 35" / 610 × 676 × 889 mm	40" × 40" × 40" / 1016 × 1016 × 1016 mm	72 / 33	150 / 68
P5-36-XT (NANO)	23.6" / 600 mm	36" × 27" × 35" / 914 × 676 × 889 mm	40" × 40" × 40" / 1016 × 1016 × 1016 mm	99 / 45	170 / 77
P5-48-XT (NANO)	23.6" / 600 mm	48" × 27" × 35" / 1219 × 676 × 889 mm	45" × 55" × 40" / 1143 × 1397 × 1016 mm	138 / 63	230 / 104

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

[1] *Energy consumption disclosure is based on internal testing with primary filters during normal operation. Power consumption published is nominal and dependent on cabinet size.*

PRODUCT SPECIFICATIONS

Filtration	P5-24-XT (NANO)	P5-36-XT (NANO)	P5-48-XT (NANO)
Face Velocity	100 fpm	100 fpm	100 fpm

Construction	P5-24-XT (NANO)	P5-36-XT (NANO)	P5-48-XT (NANO)
Finish	<··· Stainless steel frame and head unit. ···>		
Blower	<··· EC blower. ···>		
Controls	<··· Main On/Off. ···>		
Electrical	<··· 120V, 60Hz or 230V, 50Hz voltages available. Specify when ordering. Other voltage options available. ···>		
Monitoring	<··· Filter blockage alarm, standard. ···>		

Efficiency	P5-24-XT (NANO)	P5-36-XT (NANO)	P5-48-XT (NANO)
Power Consumption[1]	22 watt	34 watt	50 watt
Lighting	<··· LED. ···>		

[1] *All measurements are with Filter Type ASTS-030.*

FILTER SPECIFICATIONS

Purair Model	P5-24-XT (NANO)	P5-36-XT (NANO)	P5-48-XT (NANO)
Secondary/Stacked Filter, Optional*	(1)	(1)	(2)
Primary Filter*	(1)	(1)	(2)
Pre-Filter*	(1)	(1)	(2)

** For specific examples refer to Multiplex filtration system summary on page 5.*

FILTER SUMMARY*

Formula	Description
GP Plus!	The most widely used filter in the range, primarily for solvent, organic and alcohol removal.
ACI Plus!/ SUL	Designed to neutralize volatile inorganic acid vapors.
ACR	Iodine and methyl iodide vapors; It is frequently used for iodination reactions with lower level radioactive iodine.
ACM	Mercury vapor.
AMM	Removes vapors from dilute ammonia solutions and to remove low molecular weight amines.
FOR	Designed to oxidize formaldehyde and glutaraldehyde fumes; It is widely used in hospital pathology laboratories.
HEPA/UPLA	Powders and particulates.

**Other formulas may be available.*

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.

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

[1] *Energy consumption disclosure is based on internal testing with primary filters during normal operation. Power consumption published is nominal and dependent on cabinet size.*

OPTIONS & ACCESSORIES

Purair Model		P5-24-XT (NANO)	P5-36-XT (NANO)	P5-48-XT (NANO)
Safety Filter*	An additional carbon, HEPA or ULPA safety filter exceeding ANSI/AIHA Z9.5 requirements can be installed after the main filter.	<··· Safety filters for vapor or particulate protection are available for all models. ···> Contact Air Science for ordering information.		
FSA/Autocal Controller*	The optional FSA/Autocal controller displays the airflow and offers limited detection of low concentrations of hydrocarbon, some gases and organic acids. Audio and visual alarms alert users to filter saturation and if the airflow reaches preset thresholds. An Hour Counter is also included.	ADV-P	ADV-P	ADV-P
FSA Controller*	The optional FSA controller offers limited detection of low concentrations of hydrocarbon, some gases and organic acids. Audio and visual alarms alert users if filter saturation reaches preset thresholds. An Hour Counter and Low Airflow alarm are also included.	FSA	FSA	FSA
Autocal Controller*	The optional Autocal controller displays the airflow. Audio and visual alarms alert users if the airflow reaches preset thresholds. An Hour Counter is also included.	AUTOCAL	AUTOCAL	AUTOCAL
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 (Polypropylene)	Removable for easy cleaning.	TRAY-P5-24	TRAY-P5-36	TRAY-P5-48
Spill Tray (Stainless Steel)	Removable for easy cleaning.	TRAY-P5-24-SS	TRAY-P5-36-SS	TRAY-P5-48-SS
SafeSwitch HEPA Filter Shutter System	Minimizes exposure to filter contaminants when removing used carbon or HEPA filters for insertion of new filters.	ASTS-030-SS	ASTS-030-SS	ASTS-030-SS(2)
Dwyer Airflow Meter	Continuous display of face velocity.	DWYER	DWYER	DWYER
Base Stand, Mobile, with Casters	Provides a lower storage shelf; accommodates wheelchair access. Locking casters fix the hood in place.	CART-24	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
Remote Control**	Wired controller, provides lower access height to comply with ADA requirements.	RC-P	RC-P	RC-P
Duplex Electrical Outlet*	Two NEMA-1420R receptacles with ground fault interrupter. 120V service standard; international fixtures available.	AS-GFI	AS-GFI	AS-GFI
Stainless Steel Hanging Rod*	Hanging rod spans the width of the cabinet.	HANGR-P5-24	HANGR-P5-36	HANGR-P5-48

* *Factory installed; specify when ordering.*

** *Handheld box connects via cable to head unit. Includes On/Off switch and blower speed control. Can be placed inside work zone.*

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

[1] *Energy consumption disclosure is based on internal testing with primary filters during normal operation. Power consumption published is nominal and dependent on cabinet size.*

WARRANTY

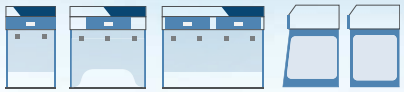
This product is protected by the Air Science Legacy Limited Lifetime Warranty™.

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. Please consult your Safety Officer and/or Industrial Hygienist.
Environment	ISO 14001: 2015 ENERGY STAR® Partner

Air Science®

Purair® SafeSEARCH



Package and Mail Inspection Workstation

- Provides Added Protection from Vapors and Particulates During Package Inspection

34 watt[1] *Purair P5-36-XTS SafeSEARCH shown with optional air velometer.*

22–50 watt[1]

The single EC blower motor assures lower cost of ownership in one of the world's most energy efficient ductless fume hoods.

Air Science®

"The World's Most Extensive Selection of Ductless Fume Hoods."

ISO 9001 ISO 14001 BUREAU VERITAS Certification

INTRODUCTION

Purair® SafeSEARCH ductless fume hoods are a series of high efficiency workstations designed to increase protection from drugs, chemical vapors and particulates during the packaging examination process. The innovative Multiplex™ Filtration Technology combines a broad spectrum, general purpose carbon filter with a HEPA filter to protect the investigator and the environment.

APPLICATIONS

Using innovative filtration technology, the Purair SafeSEARCH creates a safe work environment over the widest range of applications in the industry.

Routine or Suspicious Envelope and Package Inspection \ Forensics \ Evidence Examination \ Mailrooms \ Airports \ Bus Terminals \ Vendor Receiving Bays \ Government Offices \ Law Enforcement \ Correctional Facilities

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

- Protects the investigator from hazardous drugs, chemicals and particulates.
- Easy to change filters.
- High efficiency EC blower.
- Improved filter clamping eliminates bypass leakage.
- Filter blockage alarm.

DUCTLESS TECHNOLOGY

The Eco-Friendly Choice

Advanced carbon filtration technology offers a safe, high performance alternative to conventional ducted fume hoods for a broad range of applications.

Environmental Benefits. Air Science® ductless fume hoods isolate and trap chemical vapors to prevent ecological impact through release into the environment.

Versatile. Each workstation includes a broad spectrum multi-chemical carbon filter combined with a HEPA filter. A range of carbon filter chemical families can be specified depending on the type of contamination that may be expected in a particular facility.

Easy to Install. The ductless fume hood is self-contained and does not require venting to the outside. Many units are portable and may be moved from one location to the next with minimal downtime and without filter changes. Set-up, operation and filter maintenance are straightforward.

Energy Efficient. Because filtered air is returned to the room, no demands are required of the facility HVAC capacity for make-up air.

Cost Effective. Facility ductwork, HVAC and construction costs are eliminated.

Safe to Use. Cabinet airflow and face velocity protect users from incidental exposures to fumes.

Self-Testing. (selected models) Electronic airflow monitoring ensures continuous safety. An electronic gas sensor monitors carbon filter performance.

50 watt[1] *Purair P5-48-XT SafeSEARCH shown with optional FSA/Autocal controller and mobile cart.*

22–50 watt[1]

The single EC blower motor assures lower cost of ownership in one of the world's most energy efficient ductless fume hoods.

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

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

DESIGN FEATURES

A. Filter I.D. Window: A convenient, strategically placed front cover window shows the installed filter part number and installation date to encourage timely filter replacement.

B. Control Panel: Electronic controls and displays include switches for the blower and filter blockage alarm.

C. Filter Blockage Alarm: Continuously monitors filter loading and alerts the user when service is needed.

D. Air Velometer: An optional analog air velocity meter is positioned in the user's field of vision.

E. Steel Support Frame: The chemical resistant epoxy coated steel frame adds mechanical strength. Optional all polypropylene construction is available if desired, see accessories.

F. Hinged Front Sash: The sash is easy to open and close. When closed, the cabinet sash protects the contents from inadvertent external contact and better isolates the air within.

G. Work Surface: The internal work surface includes a black, polypropylene work tray to improve visibility of white powders such as illegal drugs.

H. Pass Through Ports: Electrical cords and cables are safely routed into the cabinet through ports on the back.

I. Electrostatic Pre-Filter: The 99.5% effective electrostatic pre-filter is accessible from inside the chamber to contain the release of any particulates that it traps. The pre-filter can be changed while the unit is operating to prevent operator exposure to chemical vapors.

J. Filter Door Key: Filter access keys prevent unauthorized removal or accidental exposure to dirty filters.

K. Internal Manual Speed Controller: Authorized personnel may set the EC blower speed as desired.

L. Stand: Optional mobile cart with locking casters.

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.

Standards Compliant: Performance specifications and construction meet or exceed relevant standards to ensure operator safety.

Construction: All models are available in either metal or polypropylene construction. Specify metal or polypropylene when ordering. See selection chart for specifications and dimensions. Available in 120V, 60Hz and 230V, 50Hz models.

22 watt[1] *Purair P5-24-XT SafeSEARCH, shown with optional velometer and mobile cart. Ductless filtration permits easy relocation from one mailroom or processing facility to another.*

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

[1] *Energy consumption disclosure is based on internal testing with primary filters during normal operation. Power consumption published is nominal and dependent on cabinet size.*

Air Science high-efficiency fume hoods 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 Purair SafeSEARCH accommodates the full range of Multiplex Filtration System options.

The high capacity air handling system delivers face velocity of 100 fpm in compliance with US and international safety and performance standards.

DESIGN

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

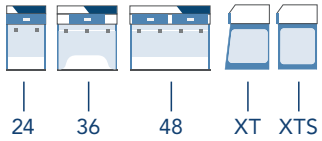
The cabinet frame and work surfaces, comprised of industrial components, are durable and chemically resistant.

The Air Science filter assembly is easy to access and change.

RELIABILITY

Internal systems are isolated from fumes, extending product life.

Energy-efficient *EC blowers promote long life and dependable performance of Purair SafeSEARCH fume hoods.*



SELECTION

Purair SafeSEARCH products are available in 3 standard widths, 2 depth options, in metal or polypropylene construction, totaling 12 standard models.

Custom manufacturing capabilities permit adaptations of standard cabinets such as polypropylene construction shown here with mobile base cabinet.

CONTROL

The **basic control panel** is standard on Purair SafeSEARCH models and includes an On/Off switch and filter blockage alarm.

The **optional FSA/Autocal controller** displays the airflow and offers limited detection of low concentrations of hydrocarbon, some gases and organic acids. Audio and visual alarms alert users to filter saturation and if the airflow reaches preset thresholds. An Hour Counter is also included.

The **optional FSA controller** offers limited detection of low concentrations of hydrocarbon, some gases and organic acids. Audio and visual alarms alert users if filter saturation reaches preset thresholds. An Hour Counter and Low Airflow alarm are also included.

The **optional Autocal controller** displays the airflow. Audio and visual alarms alert users if the airflow reaches preset thresholds. An Hour Counter is also included.

Basic Control Panel

FSA Control Panel

FSA/Autocal Control Panel

Autocal Control Panel

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[1] *Energy consumption disclosure is based on internal testing with primary filters during normal operation. Power consumption published is nominal and dependent on cabinet size.*

multiplex™

FILTRATION

At the heart of the Purair product line is innovative filtration technology. **The Multiplex Filtration System** consists of a pre-filter and main carbon and HEPA filters. The system permits a customized combination of filter media and configuration for chemical and physical adsorption specific to each application need.

The carbon filter media is treated to attain the proper porosity and aggregate surface area and to react with several ranges of aerosolized chemicals while the integrated HEPA filter captures particulates, powders, or biological contaminants. The mechanical design enhances safety, convenience and overall value.

View available filters and descriptions on page 7.

secur.
safe disposal service

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

FILTER CONFIGURATION

The Multiplex feature permits one or more filtration options to be combined to meet a wider range of multiple-use applications. The Purair SafeSEARCH can be equipped with a single activated carbon main filter or with a stacked configuration which combines two main filters.

The carbon filter is sized to fit the specified product model number and configured to optimize airflow across 100% of the filter surface area. The self-contained assembly maximizes filter efficiency, prolongs filter life, optimizes diffusion and saturation and improves user safety.

P. Electrostatic Pre-Filter: Protects the main filters from aerosols, mists, dust and particulates.

C. Activated Carbon Main Filter:
A single or stacked filter configuration.

H. HEPA/ULPA Filter: Both HEPA and optional ULPA filters use micro-glass fiber media designed to capture fine particles and biologicals. Both filters can capture particles smaller than the micron size for which they are tested. HEPA and ULPA filter efficiencies are 99.97% at 0.3 microns and 99.999% at 0.12 microns respectively.

MULTIPLEX FILTRATION SYSTEM, SUMMARY

Application	Chemical	Powder/ Biological	Chemical & Powder	Chemical within Cleanroom
Secondary/ Stacked Filter, Optional	C	H	C	H
Primary Filter	C	H	H	C
Pre-Filter	P	P	P	P

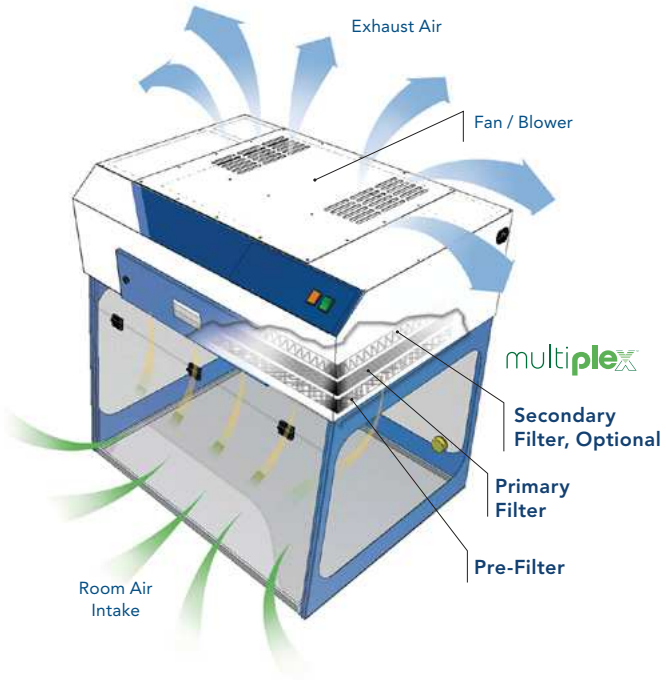
The system can be configured for the capture of acids, bases and particulates, such as biological aerosols, when paired with HEPA or ULPA filters.

AIRFLOW

Contaminated air is pulled through the Multiplex Filtration System where activated carbon adsorbs chemical vapors and the HEPA filter captures particulates. Clean air is returned to the room.

The main filters are easy to replace, no tools required. The filter clamps tightly against the filter gasket to prevent filter bypass and maintain filter integrity.

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



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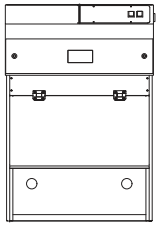
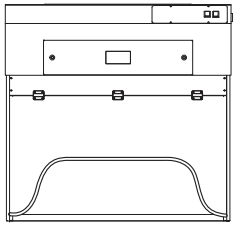
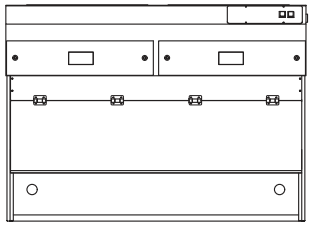
P5-24-XT SafeSEARCH



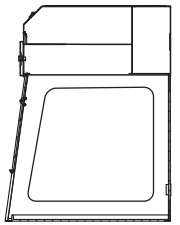
P5-36-XT SafeSEARCH



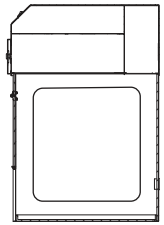
P5-48-XT SafeSEARCH



Standard Depth (XT)



Reduced Depth (XTS)



MODEL	DIMENSIONS			WEIGHT (LBS/KG)	
	Internal Height	External (W × D × H)	Shipping (W × D × H)	Net	Ship
Standard Depth Models (XT)					
P5-24-XT SafeSEARCH	23.6" / 600 mm	24" × 27" × 35" / 610 × 676 × 889 mm	40" × 40" × 40" / 1016 × 1016 × 1016 mm	72 / 33	150 / 68
P5-36-XT SafeSEARCH	23.6" / 600 mm	36" × 27" × 35" / 914 × 676 × 889 mm	40" × 40" × 40" / 1016 × 1016 × 1016 mm	99 / 45	170 / 77
P5-48-XT SafeSEARCH	23.6" / 600 mm	48" × 27" × 35" / 1219 × 676 × 889 mm	55" × 40" × 45" / 1397 x 1016 x 1143 mm	138 / 63	230 / 104
Reduced Depth Models (XTS) for countertops 24" or less					
P5-24-XTS SafeSEARCH	23.6" / 600 mm	24" × 24" × 35" / 610 × 610 × 889 mm	40" × 40" × 40" / 1016 × 1016 × 1016 mm	72 / 33	150 / 68
P5-36-XTS SafeSEARCH	23.6" / 600 mm	36" × 24" × 35" / 914 × 610 × 889 mm	40" × 40" × 40" / 1016 × 1016 × 1016 mm	99 / 45	170 / 77
P5-48-XTS SafeSEARCH	23.6" / 600 mm	48" × 24" × 35" / 1219 × 610 × 889 mm	55" × 40" × 45" / 1397 x 1016 x 1143 mm	138 / 63	230 / 104

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

[1] *Energy consumption disclosure is based on internal testing with primary filters during normal operation. Power consumption published is nominal and dependent on cabinet size.*

PRODUCT SPECIFICATIONS

Filtration	P5-24-XT SafeSEARCH P5-24-XTS SafeSEARCH	P5-36-XT SafeSEARCH P5-36-XTS SafeSEARCH	P5-48-XT SafeSEARCH P5-48-XTS SafeSEARCH
Face Velocity	100 fpm	100 fpm	100 fpm

Construction	P5-24-XT SafeSEARCH P5-24-XTS SafeSEARCH	P5-36-XT SafeSEARCH P5-36-XTS SafeSEARCH	P5-48-XT SafeSEARCH P5-48-XTS SafeSEARCH
Finish	<··· White epoxy coated steel frame and head unit. Clear sides and back panel. ···>		
Blower	<··· EC blower. ···>		
Controls	<··· Main On/Off. ···>		
Electrical	<··· 120V, 60Hz or 230V, 50Hz voltages available. Specify when ordering. Other voltage options available. ···>		
Monitoring	<··· Filter blockage alarm, standard. ···>		

Efficiency	P5-24-XT SafeSEARCH P5-24-XTS SafeSEARCH	P5-36-XT SafeSEARCH P5-36-XTS SafeSEARCH	P5-48-XT SafeSEARCH P5-48-XTS SafeSEARCH
Power Consumption[1]	22 watt	34 watt	50 watt
Lighting	<··· LED. ···>		

[1] *All measurements are with Filter Type ASTS-001 and ASTS-030.*
[2] *Measured 12" (30 cm) from the cabinet front and 15" (38 cm) above the work surface plane.*

FILTER SPECIFICATIONS

Purair Model	P5-24-XT SafeSEARCH P5-24-XTS SafeSEARCH	P5-36-XT SafeSEARCH P5-36-XTS SafeSEARCH	P5-48-XT SafeSEARCH P5-48-XTS SafeSEARCH
Secondary/Stacked Filter, Optional*	(1)	(1)	(2)
Primary Filter*	(1)	(1)	(2)
Pre-Filter*	(1)	(1)	(2)

** For specific examples refer to Multiplex filtration system summary on page 5.*

FILTER SUMMARY

Formula	Description
GP Plus!	The most widely used filter in the range, primarily for solvent, organic and alcohol removal.
HEPA	Powders and particulates.

View additional information on the Multiplex Filtration System on page 5.

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.

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

[1] *Energy consumption disclosure is based on internal testing with primary filters during normal operation. Power consumption published is nominal and dependent on cabinet size.*

OPTIONS & ACCESSORIES

Purair Model		P5-24-XT SafeSEARCH P5-24-XTS SafeSEARCH	P5-36-XT SafeSEARCH P5-36-XTS SafeSEARCH	P5-48-XT SafeSEARCH P5-48-XTS SafeSEARCH
FSA/Autocal Controller*	The optional FSA/Autocal controller displays the airflow and offers limited detection of low concentrations of hydrocarbon, some gases and organic acids. Audio and visual alarms alert users to filter saturation and if the airflow reaches preset thresholds. An Hour Counter is also included.	ADV-P	ADV-P	ADV-P
FSA Controller*	The optional FSA controller offers limited detection of low concentrations of hydrocarbon, some gases and organic acids. Audio and visual alarms alert users if filter saturation reaches preset thresholds. An Hour Counter and Low Airflow alarm are also included.	FSA	FSA	FSA
Autocal Controller*	The optional Autocal controller displays the airflow. Audio and visual alarms alert users if the airflow reaches preset thresholds. An Hour Counter is also included.	AUTOCAL	AUTOCAL	AUTOCAL
Spill Tray (White)	Removable for easy cleaning. (Black polypropylene spill tray standard.)	TRAY-P5-24-WHITE TRAY-P5-24S-WHITE	TRAY-P5-36-WHITE TRAY-P5-36S-WHITE	TRAY-P5-48-WHITE TRAY-P5-48S-WHITE
Dwyer Airflow Meter	Continuous display of face velocity.	DWYER	DWYER	DWYER
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
Remote Control**	Wired controller, provides lower access height to comply with ADA requirements.	RC-P	RC-P	RC-P
Polypropylene Construction*	Ductless fume hoods are available in all polypropylene construction.	P5-24-XT-PP P5-24-XTS-PP	P5-36-XT-PP P5-36-XTS-PP	P5-48-XT-PP P5-48-XTS-PP
Duplex Electrical Outlet*	Two NEMA-1420R receptacles with ground fault interrupter. 120V service standard; international fixtures available.	AS-GFI	AS-GFI	AS-GFI
Service Fitting*	Cabinets can be fitted with service fixtures in sidewall or on work surface.	<… SF-X. Specify service fitting type (faucet, valve, petcock) and location when ordering. …>		
Stainless Steel Hanging Rod*	Hanging rod spans the width of the cabinet.	HANGR-P5-24	HANGR-P5-36	HANGR-P5-48
Cup Sink, Mounts into Tray*	Polyethylene cup sink (3" × 5" × 9") is fitted into the base tray. Other sizes and materials available. Contact Air Science for ordering information.	SINK	SINK	SINK
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-P5-24	UV-P5-36	UV-P5-48
Full Front Closure*	Fully closing front sash.	FSASH-25	FSASH-36	FSASH-48

* *Factory installed; specify when ordering.*

** *Handheld box connects via cable to head unit. Includes On/Off switch and blower speed control. Can be placed inside work zone.*

*** *Includes timer, door microswitch and fully closing front sash, all clear panels polycarbonate (UV filtering). Safety precautions need to be followed.*

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

[1] *Energy consumption disclosure is based on internal testing with primary filters during normal operation. Power consumption published is nominal and dependent on cabinet size.*

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 CRF, 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

Air Science®

Rotary Evaporator Enclosure

Laboratory Safety While Using a Rotary Evaporator

In the laboratory, a rotary evaporator (rotovap) is employed to remove volatile solvents or isolate components of reaction mixtures by evaporation. This may be done following a separation or extraction process. During rotary evaporation, the solvent is removed under vacuum and is subsequently trapped by the condenser and collected.

Although a rotovap is designed to condense and collect evaporated solvents, the possibility exists for small amounts of volatiles to escape the apparatus, posing potential risks of chemical fume exposure, explosion or implosion. These applications warrant additional protection for laboratory personnel by placing the unit in a fume hood or enclosure, minimizing potential risks associated with inhalation of noxious fumes and guarding against injury from exploding or imploding glassware. Since safety is critical to a successful laboratory outcome, ensuring the correct equipment is in use is vital to that success.

Air Science® **Rotovap Custom Enclosures** and Purair® **Basic** and **Advanced** ductless fume hoods are engineered to provide protection and containment during rotary evaporation applications in the laboratory. These units provide containment for the rotovap while permitting operator access and visibility of the enclosed operation. From customizable Rotovap Enclosures to affordable ductless fume hoods, Air Science protects your personnel during rotary evaporation procedures.

Learn more about our products or **contact us** for information on addressing your specific needs.

ROTARY EVAPORATION SAFETY CONSIDERATIONS

Use of a rotovap in a fume hood or enclosure minimizes the risk associated with hazardous fume inhalation and protects from injury resulting from exploding or imploding glassware. Necessary personal protective equipment includes lab coats, eye protection, close-toed shoes and appropriate gloves.

- Processes using solvents generating noxious vapors that may escape the unit should be conducted in a fume hood or enclosure.
- Explosion may occur when using chemicals or mixtures that can be explosive under certain conditions, creating the risk of the operator or others in the area being injured by projectile glass or chemical exposure. A fume hood with the sash lowered serves to reduce the risk of injuries.
- Implosion can occur if glassware being utilized carries an undetected deformity, causing failure once it is placed under vacuum pressure, resulting in the potential for injury. Operation in a fume hood provides operator protection, particularly when maintaining a lowered sash during applications.
- When performing a high temperature evaporation process requiring the use of a heated oil bath, setting up under a fume hood makes the process less likely to be disturbed or pose a burn injury risk to others in the area.
- In order to facilitate operation of a rotary evaporator under a fume hood, a diagonal set up is preferred since a vertical condenser may be too tall to fit in the fume hood.

AIR SCIENCE DUCTLESS ROTOVAP ENCLOSURES AND FUME HOODS

While performing rotary evaporation, the cost-effective protection delivered by ductless units also provides maximum safety and flexibility to the laboratory. Ductless technology offers a host of benefits and features designed to help save money and provide enhanced protection to operators and the environment. No ductwork installation costs are incurred, and no demands are required of the facility HVAC capacity for make-up air since filtered, conditioned air is returned to the room. These Air Science products incorporate exclusive **Multiplex™ Filtration Technology**, customizable to meet a wide range of multiple-use applications. Product installation and maintenance are straightforward, and units are easily transported to accommodate changing operations with a minimum amount of downtime.

ROTOVAP ENCLOSURE P5-36 ROTARY

The ductless **Rotovap Custom Enclosure** offers increased internal height, featuring a spacious interior, customizable for a larger rotovap apparatus with a taller condenser column. A horizontal sliding or hinged door(s) provides for greater access to the interior, while built in air slots allow bypass when closed, maximizing operator safety and process accessibility.

Model	Internal Dimensions (W x D x H)
P5-36 ROTARY	38" x 24" x 50" / 965 mm x 610 mm x 1270 mm

Purair® BASIC

The **Purair Basic** series of ductless fume hoods is designed to provide high level protection for the user and the environment at an affordable price. Featuring Multiplex Filtration Technology, the Purair Basic creates a safe work environment over a wide range of applications. Choose from 12 standard and shallow depth models in metal or polypropylene construction, available in 24", 36" and 48" widths.

Purair® ADVANCED

Purair Advanced series ductless fume hoods are designed to protect the user and the environment from hazardous vapors generated on the work surface, incorporating high capacity filters and Multiplex Filtration Technology to meet demanding applications. Purair Advanced products are available in 7 sizes, in metal or polypropylene construction, totaling 14 standard models.

Air Science®

ENERGY STAR PARTNER

ISO 9001
ISO 14001
BUREAU VERITAS
Certification
N° US010998 / N° US010999

CustomEnclosure™ SERIES

Custom Enclosures

- Customized Containment Cabinets and Enclosures

Custom designed aluminum frame enclosure.

Air Science®

"The World's Most Extensive Selection of Ductless Fume Hoods."

ISO 9001
ISO 14001
BUREAU VERITAS
Certification

INTRODUCTION

Setting up new operations or developing new processes can be difficult when limited to existing models of vented and ductless enclosures. Air Science® understands that your needs are unique and we can help you find the configuration that is best for you. Get the customized enclosures you need, while we guide you on the best options.

We build custom enclosures for specific customer requirements and applications. Each unit is designed to maximize operator safety and accessibility and is tested and certified to factory specifications and industry standards.

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.

APPLICATIONS

Air Science manufactures enclosures to meet any specialized filtration need. Common applications for our products include:

State and Federal Crime Laboratories \ Law Enforcement Agencies \ Compounding \ Enclosing Balances, Microscopes and Robotic Equipment \ Forensics \ Histology \ Educational \ Microscopy \ Mobile and Classroom Demonstrations \ Pharmaceutical \ Powder Weighing \ Sample Prep Work \ Soldering \ Solvent Cleaning and Welding \ Veterinary \ Dental

PRODUCT FEATURES

- Custom enclosures can be designed to protect the process, operator or both from particulates, fumes and vapors.
- Air Science has developed enclosures to accommodate many of the most commonly used robotic systems.
- Customization can range from small modifications of existing standard Air Science models, to completely custom, application-specific enclosures.

Total Exhaust, bench top Custom Enclosure.

Extra Deep VLF Custom Enclosure.

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

CUSTOMIZABLE CHOICES FOR ANY APPLICATION:

The Air Science staff works closely with you to provide high quality enclosures built to your specifications, providing consultation on optimum materials and dimensional layouts to achieve the best results.

Our process is completely customized, delivering a host of options including custom sizes, construction materials, door types, airflow patterns, filtration and accessories.

- **Construction.** We can build enclosures to any dimension and from a wide array of materials. We offer construction in epoxy-coated sheet metal, stainless steel, aluminum extrusion, polypropylene, acrylic, polycarbonate as well as tempered glass.
- **Filtration.** Custom enclosures can be designed to utilize carbon filtration to trap a host of chemical vapors utilizing the Multiplex™ Filtration System. We can provide HEPA/ULPA filtration to trap particulates or design without filtration if the enclosures are to be connected to a filtered in-house HVAC system.
- **Airflow Patterns.** We offer positive pressure enclosures to protect the process in both vertical downflow and horizontal airflow configurations. Negative pressure systems, designed to protect the operator from harmful particulates and vapors, can be configured in vertical upflow or horizontal flow patterns. Air Science is also able to incorporate crossflow and multi-directional airflow to ensure both process and operator are protected. Dead air systems are available as well.
- **Doors and Openings.** Each enclosure can be fitted with your choice of door type. Common selections include overlapping sliding doors (horizontal or vertical), hinged horizontal upward swing doors, or vertical outward swing doors. We also can include vinyl strip doors and glove port openings.
- **Accessories.** In addition to our construction, filtration and airflow options, we can offer a variety of optional accessories to meet your needs as well. Cable ports, fan speed controllers, lighting, airflow and filter alarms, as well as sinks and service outlets can be installed in any of our custom enclosures.
- **Standard Compliant.** Air Science enclosures' performance specifications and construction meet or exceed OSHA, ANSI and relevant international standards to assure operator safety.

THE BENEFITS OF CUSTOM DESIGN:

Custom enclosures are designed to incorporate as seamlessly as possible into your current operation. We can build enclosures to be ducted directly into your existing HVAC system or create a ductless design that can fit anywhere. Ductless technology offers a host of benefits and features designed to help you save money and offer enhanced protection to operators, processes and the environment.

- **Environmental Benefits.** Ductless chambers capture vapors and particles to prevent operator exposure and eliminate ecological impact.
- **Energy Efficient.** Because filtered air is returned to the room, no demands are required of the facility HVAC capacity for make-up air.
- **Cost Effective.** Facility duct work, HVAC and construction costs are eliminated.
- **Safe to Use.** Cabinet isolation and filtration protects users from incidental exposures to harmful fumes.
- **Versatile.** The filtration system uses the exclusive Air Science Multiplex filtration technology.
- **Easy to Install.** Air Science ductless chambers are self-contained. Set-up, operation and filter maintenance are straightforward.

Custom Enclosure with vertical rise door.

Custom Microscope Enclosure with cut-out.

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Each Air Science custom enclosure includes features expressed through sound design and certified quality construction. Options and accessories add functional performance to meet specific applications.

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.

DESIGN

Professional quality Air Science fume 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 outside the cabinet.

RELIABILITY

Internal systems are isolated from fumes, extending product life.

Drum Enclosure

Rotovap Enclosure

Tablet Press Enclosure

multiplex™ LEARN MORE

FILTRATION

At the heart of the custom enclosure product line is innovative filtration technology. **The Multiplex Filtration System** consists of a pre-filter and main activated carbon or HEPA/ULPA filter. The system permits a customized combination of filter media and configuration for chemical and physical adsorption specific to each application need.

The Air Science carbon filtration technique is based on enhanced, activated carbon particle formulations from specially selected, naturally occurring raw material that is superior to wood or other organic sources. The carbon is treated to attain the proper porosity and aggregate surface area and to react with several ranges of aerosolized chemicals moved through the filter by an air handling blower.

FILTER CONFIGURATION

The Multiplex feature permits one or more filtration options to be combined to meet a wider range of multiple-use applications.

Custom enclosures can be equipped with a single activated carbon main filter or with a stacked configuration which combines two main filters, each activated to adsorb one or more specific vapors or family of vapors. For safety against particulates, an optional HEPA or ULPA can also be added. When used with a HEPA/ULPA filter, the ductless fume hood may be applied as a Class I Biological Safety Cabinet.

The carbon filter is sized to fit the specified product model number and configured to optimize airflow across 100% of the filter surface area. The self-contained assembly maximizes filter efficiency, prolongs filter life, optimizes diffusion and saturation and improves user safety.

P. Electrostatic Pre-Filter: Protects the main filters from aerosols, mists, dust and particulates.

C. Activated Carbon Main Filter: A single, blended or stacked filter configuration.

H. HEPA/ULPA Filter, Optional: Both HEPA and ULPA filters use micro-glass fiber media designed to capture fine particles and biologicals. Both filters can capture particles smaller than the micron size for which they are tested. HEPA and ULPA filter efficiencies are 99.97% at 0.3 microns and 99.999% at 0.12 microns respectively.

MULTIPLEX FILTRATION SYSTEM, SUMMARY

Application	Chemical	Powder/ Biological	Chemical & Powder	Chemical within Cleanroom
Primary Filter	C	H	H C	H C
Pre-FIlter	P	P	P	P

The system can be configured for the capture of acids, bases and particulates, such as biological aerosols, when paired with HEPA or ULPA filters.

AIRFLOW

The custom enclosures maintain a constant face velocity of 100 fpm in compliance with USA and international standards for safety and performance. Contaminated air is pulled through the Multiplex filtration system; clean air is returned to the room.

The main filters are easy to replace and install. The filter clamps tightly against the filter gasket to prevent filter bypass and maintain filter integrity.

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

secur. safe disposal service

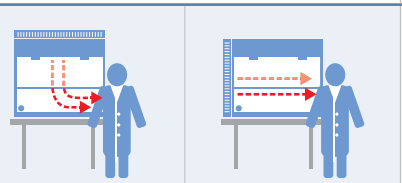
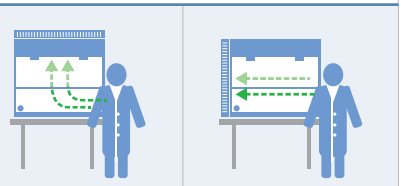
LEARN MORE

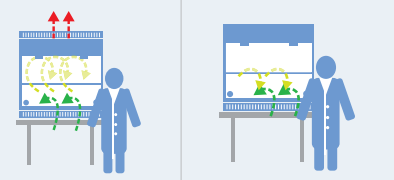
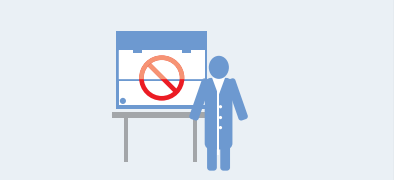
Filter disposal services are available in selected markets providing responsible destruction or recycling of saturated filters in authorized facilities.

filtco

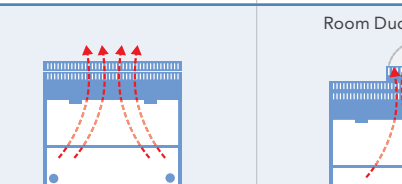
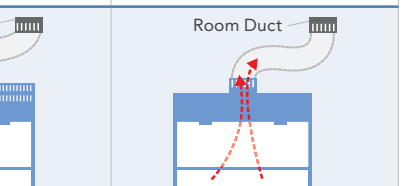
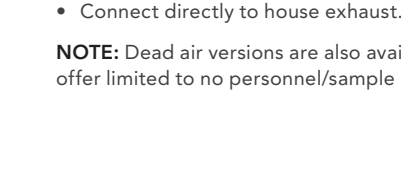
Through our partner company Filtco Filters, Air Science is a single source supplier of all pre-filters, carbon filters and HEPA/ULPA filters used in our products.

AIRFLOW PATTERNS & PROTECTION CONFIGURATIONS

Product Protection	Personnel Protection
	
POSITIVE: vertical downflow/horizontal airflow pattern	**NEGATIVE:** vertical upflow/horizontal airflow pattern

Dual Protection	Minimal Protection
	
POSITIVE & NEGATIVE: lateral airflow pattern	**DEAD AIR:** no airflow pattern

FILTRATION MODES/VENTING OPTIONS

Mode 1:	Mode 2:	Mode 3:
		
ductless/filtered	ductless/filtered with connection to in-house exhaust	direct connection to in-house exhaust

TYPES OF AIRFLOW:

Vertical Airflow. Well suited for enclosing tall equipment that may disrupt airflow or create dead spots in horizontal airflow settings

Horizontal Airflow. Recommended for shorter equipment types, such as balances, that are susceptible to turbulence at the work surface in vertical airflow settings.

Lateral Airflow. Offers flexibility when dual protection is required on equipment that is too large or long to be housed in a traditional Class II biological safety cabinet. Lateral airflow combined with dual filtration provides a high level of containment.

VENTING OPTIONS:

There are three venting options available for custom enclosures:

- Vent to Fan Filter System, top mount or remote connection with flex hose, with the Multiplex HEPA and/or carbon filtration for recirculation into the room.
- Vent to Fan Filter System with Bag Multiplex HEPA and/or carbon filtration and connect to house exhaust.
- Connect directly to house exhaust.

NOTE: Dead air versions are also available, but offer limited to no personnel/sample protection.

SUPERIOR PROTECTION:

Enclosures are designed to protect the process, the operator, or both through airflow pattern design and filtration type. We offer a number of configurations to fit the needs of any industry.

Personnel/Operator Protection. Vented enclosures with face openings and negative pressure allow particles and vapors to be drawn out of the enclosure and into a HEPA filtration unit or existing house exhaust. These enclosures are designed to provide protection for operators with low flow and turbulence free containment providing a safe work environment.

Product/Equipment Protection. Enclosures with positive pressure prevent particles and other contaminants from entering the work zone. Typically, these enclosures utilize HEPA filters with class 100 clean air.

Dual (Personnel and Product) Protection. Enclosures are designed to protect the internal work zone from particulates and other contaminants with filtered air, while maintaining negative pressure to protect the work environment and lab personnel. Dual filtration provides the highest level of containment available.

** This is an interactive form. Fill in the desired dimensions for the custom enclosure and then mark the options for construction. Mark the additional accessories that you would like to add to the order. Complete the contact information and save the file. Email, fax or print and mail the form to Air Science for your custom quote.*

Company _____ Name _____

Mailing Address _____ City _____

State _____ Zip _____

SPECIFY YOUR OWN CUSTOM ENCLOSURE

Set Your Dimensions:

◯ Internal ◯ External | Height: _____" Depth: _____" Width: _____"

Step 1: Choose the type of protection you need.

(negative pressure)	*(positive pressure)*	*(positive & negative pressure)*	*(no pressure)*
◯ Operator	◯ Product/Process	◯ Both	◯ Dead Air

Step 2: Choose your filtration type. (see chart on page 5)

◯ Carbon ◯ HEPA/ULPA ◯ NONE/Connect to in-house

Step 3: Choose your construction options.

Orientation:	◯ Horizontal	◯ Vertical		
Frame:	◯ Polypropylene	◯ Metal	◯ Aluminum Extrusion	◯ Stainless Steel
Window & Sidewall:	◯ Metal	◯ Acrylic	◯ Polycarbonate	◯ Tempered Glass
Tray:	◯ Polypropylene	◯ Epoxy Resin	◯ Stainless Steel	

Step 4: Pick your preferred door type.

◯ Upward Hinged ◯ Vertical Swinging ◯ Vertical Sliding ◯ Horizontal Sliding ◯ French ◯ Vinyl Strips

Step 5: Select additional options and accessories.

Tray Color	◯ White	◯ Black
Shelving	◯ Fixed	◯ Repositionable

OPTIONS TABLE

Cable Ports	Electrical cords and cables are safely routed into the cabinet through pass through ports; located only on the side panels.	TE-CPRH	◯
Trash Chute	Side mounted trash chute. Bags not included.	TRASH	◯
Speed Controllers	The operator may set the centrifugal fan motor speed as desired.	SPDC	◯
Bag-In / Bag-Out Filters	Our HEPA filters are fitted with a "bag-out" system to completely protect operators during filter changes.	HEPA-BO	◯
UV Lamps	A UV lamp is available for overnight decontamination of interior surfaces. The UV kit 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	◯
Base Stands	Provides a lower storage half shelf; accommodates wheelchair access. Available with locking casters or leveling feet. Adjustable height.	CART	◯
Airflow and Filter Alarms	Alarms to identify low airflow or clogged filters help keep operators and processes safe.	EAFA	◯
Fluorescent Lighting	Lamp in vapor proof housing.	FLUOR	◯
Glove Ports	Ports to incorporate Polyurethane Tapered Sleeves with Double O-ring Cuffs.	GLOVE	◯
Hanging Rods	Versatile stainless steel hanging rods are removable and adjustable for proper orientation of items being processed.	HANGR	◯
Humidifier System	Programmable to achieve preset humidity conditions quickly and accurately.	DHUM	◯
Cup Sink	Chemically-resistant optional polypropylene sink cup integrated into the work surface.	SINK	◯
Service Fitting	Petcocks are available for gas and water. Specify service fitting type (faucet, valve, or petcock) and location below. Fitting Type: _____ Location: _____	SF-X	◯
Electrical Outlets	Duplex power outlets can be mounted on any area of the cabinet surface.	ELOU	◯
Other	_____		◯

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STANDARDS & COMPLIANCE

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Electrical Safety	UL-C-61010-1 CAN/CSA C22.2 61010-1-12 EN 61010-1:2010 CE Mark
OSHA, Occupational Safety and Health Information	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

Air Science®

ENERGY STAR PARTNER

ISO 9001
ISO 14001
BUREAU VERITAS
Certification
N° US010998 / N° US010999

SAI SYSTEMS

Scientifically Advanced Interiors

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