



General Application Ductless Fume Hoods

- Provides Operator Safety and Numerous Features for General Applications
- Meets or Exceeds OSHA, ANSI, and Other International Standards



34 watt¹ Purair model P5-36-XTS, with optional velometer.



22–50 watt¹

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

CONTENTS:

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- Design Features (p.3)
- Performance & Selection (p.4)
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BASIC

Ductless Fume Hoods

24 • 36 • 48

PRODUCT OVERVIEW

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INTRODUCTION

Purair® Basic ductless fume hoods are designed to protect the user and the environment from hazardous vapors generated on the work surface.



22–50 watt¹

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

APPLICATIONS

Compounding \ Balance Enclosures, Microscopes, and Robotic Equipment \ Forensics \ Histology \ Educational \ Microscopy \ Mobile and Classroom Demonstrations \ Pharmaceutical \ Powder Fingerprinting \ Powder Weighing \ Sample Prep Work \ Soldering \ Solvent Cleaning and Welding \ Veterinary \ Dental



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 ebm-papst EC blower.
- Energy saving LED lighting.
- Protects the operator from fume and (with added HEPA/ULPA filter) particle hazards.
- Improved filter clamping eliminates bypass leakage.
- 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/ULPA filters can be added for biological safety.

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 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.



50 watt¹ Purair P5-48-XT shown with new optional FSA/Autocal controller, polypropylene spill tray and mobile cart.

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DESIGN FEATURES

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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 low airflow alarm.
- C. Airflow Alarm:** Low airflow 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. Optional all polypropylene construction is available if desired; see accessories.
- 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 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. 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 mobile cart with locking casters.
- N. Safety Filter:** The optional carbon or HEPA/ULPA safety filter adds an additional layer of protection.

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 watt¹ Purair P5-24-XT, shown with optional velometer, stainless steel spill tray, and mobile cart.

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PERFORMANCE & SELECTION

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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 Basic 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.

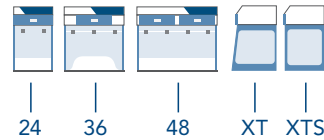
The Air Science filter assembly is easy to access and change. The unique filter clamping design eliminates bypass leakage outside the cabinet.

RELIABILITY

Internal systems are isolated from fumes, extending product life.



Energy-efficient ebm-papst brand EC blowers promote long life and dependable performance of Purair Basic fume hoods.



SELECTION

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

CONTROL

The **basic control panel** is standard on Purair Basic models and includes an On/Off switch and low airflow alarm.

The optional **FSA/Autocal control panel** displays the airflow and uses an electronic gas sensor to detect when the filter needs changed. Audio and visual alarms alert users to filter saturation and attainment of preset airflow thresholds.



Basic Control Panel



FSA/Autocal Control Panel



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

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FILTRATION TECHNOLOGY

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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, main activated carbon filter, and optional 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.

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 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 Basic 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 filter 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 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 99.995% at 0.3 microns and 99.9995% 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

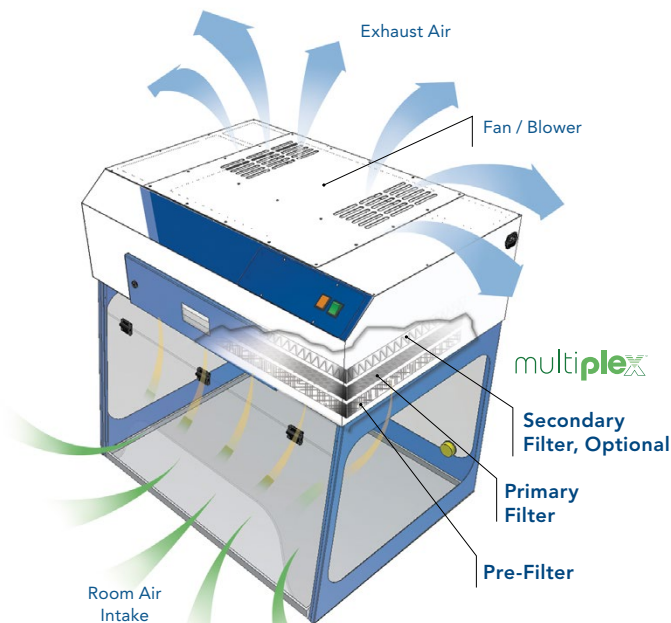
The system can be configured for the capture of acids, bases, and particulates, such as biological aerosols, when paired with HEPA or ULPA filters.

AIRFLOW

Contaminated air is pulled through the Multiplex Filtration System. Activated carbon adsorbs chemical vapors and optional HEPA/ULPA filters capture particulates. Clean air is returned to the room.

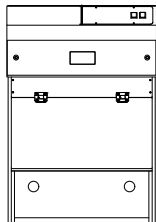
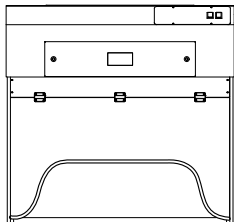
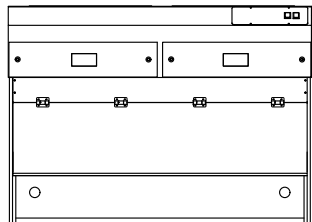
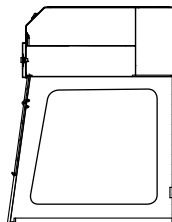
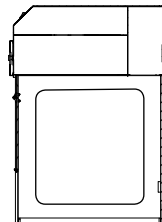
The main filters are easy to replace with no tools required. The filter clamps tightly against the filter gasket to prevent filter bypass and maintain filter integrity.

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



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P5-24-XT			P5-36-XT			P5-48-XT			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			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			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			23.6" / 600 mm		48" × 27" × 35" / 1219 × 676 × 889 mm		45" × 55" × 40" / 1143 × 1397 × 1016 mm		138 / 63		230 / 104	
Reduced Depth Models (XTS) for countertops 24" or less												
P5-24-XTS			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			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			23.6" / 600 mm		48" × 24" × 35" / 1219 × 610 × 889 mm		45" × 55" × 40" / 1143 × 1397 × 1016 mm		138 / 63		230 / 104	

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SPECIFICATIONS

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PRODUCT SPECIFICATIONS

Filtration	P5-24-XT P5-24-XTS	P5-36-XT P5-36-XTS	P5-48-XT P5-48-XTS
Airflow	135.9 cfm	206 cfm	281.25 cfm
Face Velocity	100 fpm	100 fpm	100 fpm
Construction	P5-24-XT P5-24-XTS	P5-36-XT P5-36-XTS	P5-48-XT P5-48-XTS
Finish	<... White epoxy coated steel frame and head unit. Clear sides and back panel. ...>		
Blower	<... ebm-papst 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	P5-24-XT P5-24-XTS	P5-36-XT P5-36-XTS	P5-48-XT P5-48-XTS
Power Consumption ¹	22 watt	34 watt	50 watt
Lighting	<... LED. ...>		
Noise, dBA ²	< 54	< 55	< 60

¹ All measurements are with Filter Type 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 P5-24-XTS	P5-36-XT P5-36-XTS	P5-48-XT P5-48-XTS
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!	Neutralizes volatile inorganic acid vapors.
ACR	Iodine and methyl iodide vapors as well as low level radioactive iodine.
ACM	Mercury vapor.
AMM	Removes vapors from dilute ammonia solutions and to remove low molecular weight amines.
SUL	Designed to remove hydrogen sulphide and low molecular weight mercaptans.
CYN	Removal of hydrogen cyanide. Many cyanide compounds will evolve HCN gas if acidified, so this filter is normally specified if working with any cyanide compound.
FOR	Designed to oxidize formaldehyde and glutaraldehyde fumes. It is widely used in hospital pathology laboratories.
EDU	Designed to handle chemicals normally used in a university level chemistry curriculum.
MIL	Designed for military applications involving war gasses.
HEPA/UPLA	Powders, particulates, and biologicals.

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 and those of many other manufacturers.

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OPTIONS & ACCESSORIES

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OPTIONS & ACCESSORIES

Purair Model		P5-24-XT P5-24-XTS	P5-36-XT P5-36-XTS	P5-48-XT P5-48-XTS
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 Control Panel*	Includes blower and light On/Off switch, hour counter, and low airflow and filter saturation alarms.	ADV-P	ADV-P	ADV-P
Spill Tray (Polypropylene)	Removable for easy cleaning.	TRAY-P5-24 TRAY-P5-24S	TRAY-P5-36 TRAY-P5-36S	TRAY-P5-48 TRAY-P5-48S
Spill Tray (Stainless Steel)	Removable for easy cleaning.	SS-TRAY-P5-24 SS-TRAY-P5-24S	SS-TRAY-P5-36 SS-TRAY-P5-36S	SS-TRAY-P5-48 SS-TRAY-P5-48S
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
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-24	CART-MCC-36	CART-MCC-50
Base Cabinet, Fixed (Polypropylene)	Provides storage space below.	CART-SSC-24	CART-SSC-36	CART-SSC-50
Fire Safety Cabinet Base	Flame resistant safe storage for combustible and flammable liquids.	CART-FSC-24	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 such as petcocks, faucets or valves.	<... 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" x 5" x 9") is fitted into the base tray. Other sizes and materials available. Contact Air Science for ordering information.	SINK	SINK	SINK
UV Lamp***	For decontamination of 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

* 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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OPTIONS & ACCESSORIES

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WARRANTY

This product is protected by the Air Science **Legacy Lifetime Warranty™** which starts on the date of shipment from our factory. This limited warranty is the result of thousands of successful Air Science production applications in pharmaceutical, laboratory, forensic, industrial, and educational applications.

This warranty covers defects in materials and workmanship. Our liability under the Legacy Lifetime Warranty is, at our option, to repair or replace any defective parts of this equipment if you document that these parts were defective at the time we sold the product to you. Normal conditions apply.



For details visit the [Service section](#) of our website at www.airscience.com.

STANDARDS & COMPLIANCE

Quality Management Systems	ISO 9001
Chemical Fume Containment	ANSI/ASHRAE 110 1995
Carbon Filter Efficiency	BS 7989-2001 AFNOR NFX 15-211
Biological Safety Filter Efficiency HEPA and ULPA	IEST-RP-CC007.1 IEST-RP-CC001-4 EN 1822
Electrical Safety	UL-C-61010-1 CAN/CSA C22.2 61010-1-12 EN 61010-1:2010 CE Mark ROHS Exempt under EEE Category 9
Product Design	ANSI Z 9.5-2003 ANSI Z 9.7-1998
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. All Air Science products meet this definition.
Environment	ISO 14001 ENERGY STAR® Partner



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Schedule
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