Purair® BASIC

General Application Ductless Fume Hoods

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

24 • 36 • 48

— Purair® P5-24 shown with optional air velometer

Provides Feature-Rich Operator Safety for General Applications

Meets or Exceeds OSHA, ANSI and other International Standards

Air Science®

GSA Schedule Contract GS-07F5832P

JUMP TO:

Purair® BASIC Ductless Fume Hoods

- *Protects the operator from fume and particle hazards.*
- *Easy to change filters.*
- *Improved filter clamping eliminates by-pass leakage.*
- *Low airflow alarm.*

Purair P5-36, shown with optional Filter Saturation Alarm (FSA) and air velometer.

APPLICATIONS

- Compounding
- Enclosing balances, 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 and dental work

INTRODUCTION

The Purair® Basic ductless fume hoods are a series of high efficiency products designed to protect the user and the environment from hazardous vapors generated on the work surface. At the heart of the Purair fume hood product line is the innovative Air Science Multiplex™ Filtration Technology that creates a safe work environment over the widest range of applications in the industry.

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. The Multiplex Filter broadens the range of applications. Carbon filters are available in more than 14 configurations for use with vapors or organic solvents, acids, mercury and formaldehyde. HEPA/ULPA filters can add to 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 from one location to the next with minimal down-time 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 assures continuous safety. An electronic gas sensor monitors carbon filter performance.

Made in the U.S.A.

PRODUCT FEATURES:

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

B. **Air Velometer:** (Optional) An analog air velocity meter in the field of vision of the user.

C. **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.

D. **Control Panel:** Electronic controls and displays include switches for the blower and low airflow alarm.

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. **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.

G. **Pass Through Ports:** Electrical cords and cables are safely routed into the cabinet through ports on the back and side walls.

H. **Color:** The cabinet is white with blue trim; side and back panels are clear.

I. **Airflow Alarm:** A continuous air velocity monitoring system alerts the operator upon unacceptable values.

J. **Internal Manual Speed Controller:** Authorized personnel may set the centrifugal fan motor speed as desired.

K. **Stand:** Optional mobile cart with locking casters.

L. **Work Surface:** The internal work surface can be fitted with an optional polypropylene tray; see Accessories.

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

OTHER FEATURES:

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

Standards Compliant: Performance specifications and construction meet or exceed OSHA, ANSI and relevant international standards to assure operator safety.

Construction: All models are available in either metal or polypropylene construction. See selection chart for specifications and dimensions. Specify metal or polypropylene when ordering. Available in 110V, 60Hz or 220V, 50Hz models.

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

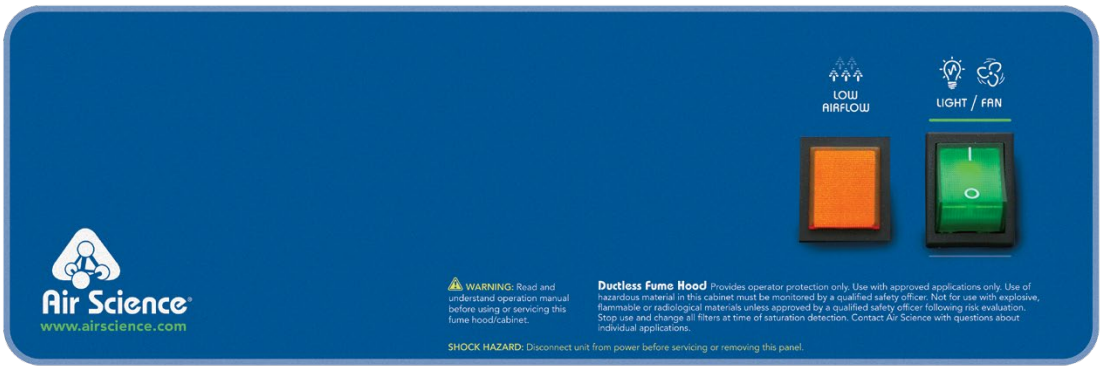
Purair P5-24, shown with optional mobile cart and spill tray.

THE AIR SCIENCE PERFORMANCE ADVANTAGE

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

- **Professional Quality.** Air Science fume hoods comply with current technical and safety regulations.
- **Multiplex Filtration.** The Air Science Multiplex™ Filter offers a range of options for high performance.
- **Industrial Components.** The cabinet frame and work surfaces are durable and chemically resistant.
- **Reliability.** Internal systems are isolated from fumes, extending product life.

Air Science fume hoods use energy-efficient ebmpapst™ brand centrifugal blowers for long life, and dependable performance.



Basic *control panel. Standard on Purair Basic Models, Includes On/Off switch and low airflow alarm.*

Optional ***Advanced*** *control panel with hour meter to aid in determining available filter life and* ***Filter Saturation Alarm (FSA).*** *The* ***FSA*** *adds an electronic gas sensor and emits audio and visual alerts when the main filter needs to be changed.*

multiplex™

AIR SCIENCE MULTIPLEX FILTRATION TECHNOLOGY

Multiplex Filtration consists of a pre-filter and main filter to create a combination of chemical and physical architecture customized to each application. The mechanical design enhances safety, convenience and overall value.

- The electrostatic pre-filter is accessible from within the cabinet.
- A filter clamping mechanism allows for the filter to be easily installed and ensures an even seal at the filter peripheral face at all times to prevent bypass leakage.
- The filter chamber prevents contaminated air from contacting internal cabinet mechanisms.
- The main filter number and installation date are displayed in a front-access window.

The Air Science carbon filtration technique is based on enhanced, activated carbon particle formulations from specially selected, naturally occurring raw material 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.

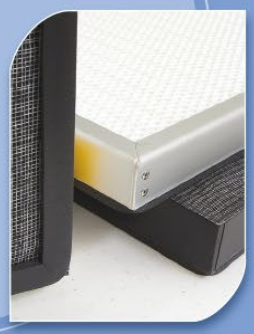
- The multiplex option permits one or more filtration options to be combined to meet a wider range of multiple-use applications. Multiplexing permits configuration for the capture of acids, bases and particulates such as biological aerosols when paired with HEPA or ULPA filters.
- The Air Science carbon filter is a self-contained assembly sized to fit the specified product model number, and configured to optimize airflow across 100% of the filter surface area for maximum efficiency, prolonged filter life, optimal diffusion and saturation capacity, and user safety.

Air Science is the single source supplier for all pre-filters and carbon filters used in its products, plus those of many other manufacturers.

PURAIR BASIC FEATURES & BENEFITS

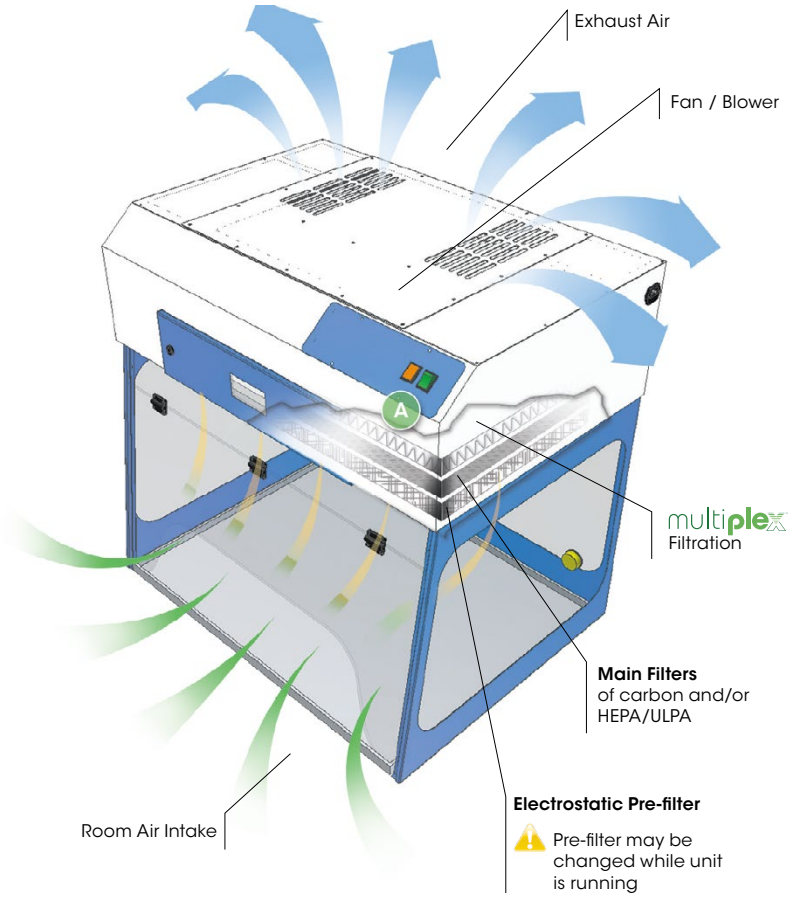
Purair Basic products are available in 3 standard sizes, each with 4 configuration options and metal or polypropylene construction, totaling 24 standard models.

- High capacity air handling system delivers face velocity of 100 FPM.
- A low airflow alarm warns of insufficient face velocity.
- The Air Science filter assembly is easy to access, easy to change.
- A unique filter clamping design eliminates bypass leakage outside the cabinet.
- Accessories include an optional filter saturation alarm.



The Multiplex filter configuration permits a customized combination of filter media for a broad range of chemical families and biological agents if required. EFT Filtration Technology broadens the Air Science application for ductless fume hoods.

PURAIR® AIRFLOW PATTERN



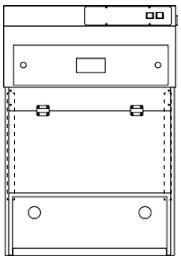
Purair P5-36, shown with Multiplex Filtration System.

The Purair Basic Series ductless fume hood 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 where activated carbon adsorbs chemical vapors and/or particulates if HEPA/ULPA filters are used. Clean air is returned to the room.

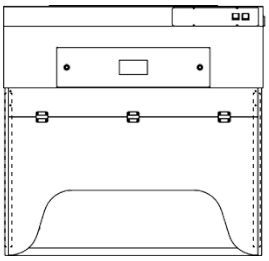
A. The main filter is easy to replace, no tools required. The filter clamps tightly against the filter gasket to prevent filter bypass and maintain filter integrity.

MULTIPLEX FILTRATION SYSTEM, SUMMARY

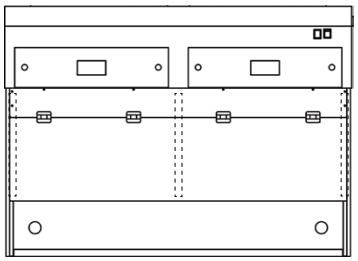
	Pre-Filter	Main Filter
Electrostatic	Protects the main filters from aerosols, mists, dust and particulates with filter efficiency superior to 95.5% down to 0.5 microns.	
	Standard	--
Activated Carbon	FILTCO™ Sourced. A single carbon filter containing activated carbon granules chemically formulated to capture one or more specific vapors or family of vapors.	
Single: One type of activated carbon.	--	Specify
Stacked: Two or more single filters each with a different type of carbon.	--	Specify
HEPA/ULPA	A self-contained filter designed to physically capture particles larger than 0.3 microns (HEPA) or 0.12 microns (ULPA). When used with a HEPA/ULPA filter the ductless fume hood may be applied as a Class I Biological Safety Cabinet.	
	--	Specify



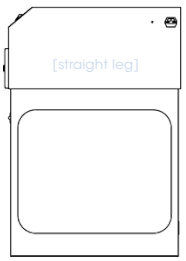
Purair® P5-24



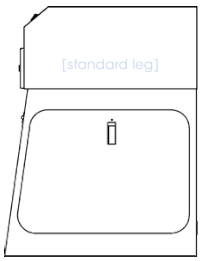
Purair® P5-36



Purair® P5-48



Side View



Side View

MODEL	DIMENSIONS			WEIGHT (lbs/Kg)	
	Internal Height	External (W x D x H)	Shipping (W x D x H)	Net	Ship
Standard Models					
P5-24	19" 484 mm	24" x 27" x 31" 610 x 676 x 781 mm	40" x 40" x 40" 1016 x 1016 x 1016 mm	68 / 31	125 / 57
P5-36	19" 484 mm	36" x 27" x 31" 914 x 676 x 781 mm	40" x 40" x 40" 1016 x 1016 x 1016 mm	95 / 43	152 / 69
P5-48	19" 484 mm	48" x 27" x 31" 1219 x 676 x 781 mm	45" x 55" x 40" 1143 x 1397 x 1016 mm	133 / 60	190 / 86
Models with Straight Legs (Reduced Depth)					
P5-24S	19" 484 mm	24" x 24" x 31" 610 x 610 x 781 mm	40" x 40" x 40" 1016 x 1016 x 1016 mm	65 / 29	110 / 50
P5-36S	19" 484 mm	36" x 24" x 31" 914 x 610 x 781 mm	40" x 40" x 40" 1016 x 1016 x 1016 mm	92 / 42	142 / 64
P5-48S	19" 484 mm	48" x 24" x 31" 1219 x 610 x 781 mm	45" x 55" x 40" 1143 x 1397 x 1016 mm	130 / 59	187 / 85
Standard Models with Extra Tall Legs					
P5-24-XT	23.6" 600 mm	24" x 27" x 35" 610 x 676 x 889 mm	40" x 40" x 40" 1016 x 1016 x 1016 mm	72 / 33	129 / 59
P5-36-XT	23.6" 600 mm	36" x 27" x 35" 914 x 676 x 889 mm	40" x 40" x 40" 1016 x 1016 x 1016 mm	99 / 45	157 / 71
P5-48-XT	23.6" 600 mm	48" x 27" x 35" 1219 x 676 x 889 mm	45" x 55" x 40" 1143 x 1397 x 1016 mm	138 / 63	195 / 88
Models with Extra Tall Straight Legs (Reduced Depth)					
P5-24-XTS	23.6" 600 mm	24" x 24" x 35" 610 x 610 x 889 mm	40" x 40" x 40" 1016 x 1016 x 1016 mm	72 / 33	129 / 59
P5-36-XTS	23.6" 600 mm	36" x 24" x 35" 914 x 610 x 889 mm	40" x 40" x 40" 1016 x 1016 x 1016 mm	99 / 45	157 / 71
P5-48-XTS	23.6" 600 mm	48" x 24" x 35" 1219 x 610 x 889 mm	45" x 55" x 40" 1143 x 1397 x 1016 mm	138 / 63	195 / 88

Specifications are subject to change without notice.

PRODUCT SPECIFICATIONS

Purair Model	P5-24 P5-24S P5-24-XT P5-24-XTS	P5-36 P5-36S P5-36-XT P5-36-XTS	P5-48 P5-48S P5-48-XT P5-48-XTS
Airflow CFM	135.9	206	281.25
Face Velocity FPM	100	100	100
Noise, dBA, 1 meter	< 50	< 50	< 53
Lighting	<··· Compact fluorescent lamp. ···>		
Construction	<··· White epoxy coated steel frame and head unit. Clear sides and back panel. ···>		
Blower	<··· ebmpapst™ centrifugal fan. ···>		
Electrical	<··· 120V, 60Hz or 220V, 50Hz voltages available. Specify when ordering. Other voltage options available. ···>		
Electrical Switches	<··· Main On/Off ···>		
Monitoring	<··· Low airflow alarm, standard. ···>		

Filter Specifications

Pre-Filter	Electrostatic, 1 lb / .45 kg (nominal)		
Main*	(1) 11 lbs / 5 kg	(1) 11 lbs / 5 kg	(2) 11 lbs / 5 kg

** Single stack; double stack doubles weight of all (i.e. 22, 22, 44).*

OPTIONS & ACCESSORIES

Purair Model		P5-24 P5-24S P5-24-XT P5-24-XTS	P5-36 P5-36S P5-36-XT P5-36-XTS	P5-48 P5-48S P5-48-XT P5-48-XTS
Advanced Control Panel*	Includes On/Off switch, low airflow alarm, and hour meter to aid in determining available filter life. Panel also comes equipped with a Filter Saturation Alarm with an electronic gas sensor that emits audio and visual alerts when the main filter needs to be changed.	ADV-P	ADV-P	ADV-P
Spill Tray	Polypropylene spillage tray, available in white or black, slides out for easy cleaning.	TRAY-P5 TRAY-P5-S TRAY-P5 TRAY-P5-S	TRAY-P5-36 TRAY-P5-36-S TRAY-P5-36 TRAY-P5-36-S	TRAY-P5-48 TRAY-P5-48-S TRAY-P5-48 TRAY-P5-48-S
Dwyer Air Flow 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.	P5-CART	P15-CART	P20-CART
Base Cabinet, Fixed	Provides storage space below and a cup sink, swan neck faucet, and service fixtures.	P5-ENCB	P15- ENCB	P20- ENCB
ADA Compliance*	Provides wheelchair access and lowered remote controls.	<··· All Purair Basic models are available in ADA compliant configurations. Contact Air Science for ordering information. ···>		
Polypropylene Construction*	Cabinets are available in all polypropylene construction. Contact Air Science for information.	P5-24-PP P5-24S-PP P5-24-XT-PP P5-24-XTS-PP	P5-36-PP P5-36S-PP P5-36-XT-PP P5-36-XTS-PP	P5-48-PP P5-48S-PP P5-48-XT-PP P5-48-XTS-PP
Duplex Electrical Outlet*	Two NEMA-1420R receptacles with ground fault interrupter. 110V service standard; international fixtures available.	AS-GFI	AS-GFI	AS-GFI
Service Valve*	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*	Cup sink is fitted into the base tray.	SINK	SINK	SINK
UV lamp**	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-P5	UV-P15	UV-P20

** Factory installed; specify when ordering.*

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

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-CC-0034.2 IEST-RP-CC007.1 IEST-RP-CC001-4 EN 1822
Electrical Safety	UL-C-61010-1 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

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. It is frequently used for iodination reactions with 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 sulfide 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.
ETH	Diethyl ether is adsorbed on activated carbon, but because of its low boiling point, local heat adsorption can reduce the capacity of the filter. Special impregnation allows a chemical reaction which increases the filter capacity.
HEPA/UPLA	Powders and particulates.

Air Science®

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ENERGY STAR PARTNER

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