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."

ENERGY STAR PARTNER

ISO 9001
ISO 14001
BUREAU VERITAS
Certification

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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.*

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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 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.

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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** displays the airflow and 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.

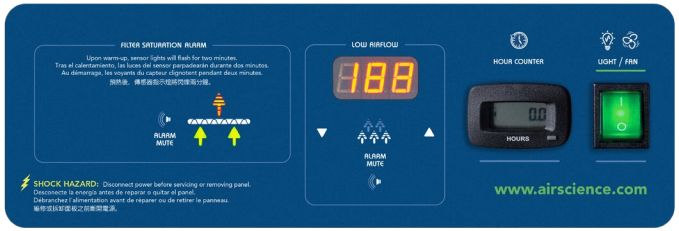
The **optional Autocal controller** displays the airflow. Audio and visual alarms alert users if the airflow reaches preset thresholds. An Hour Counter is also included.



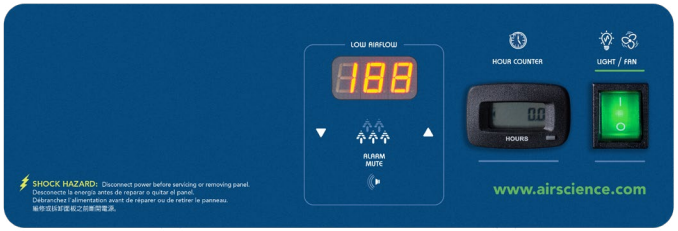
Basic Control Panel



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 99.995% 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

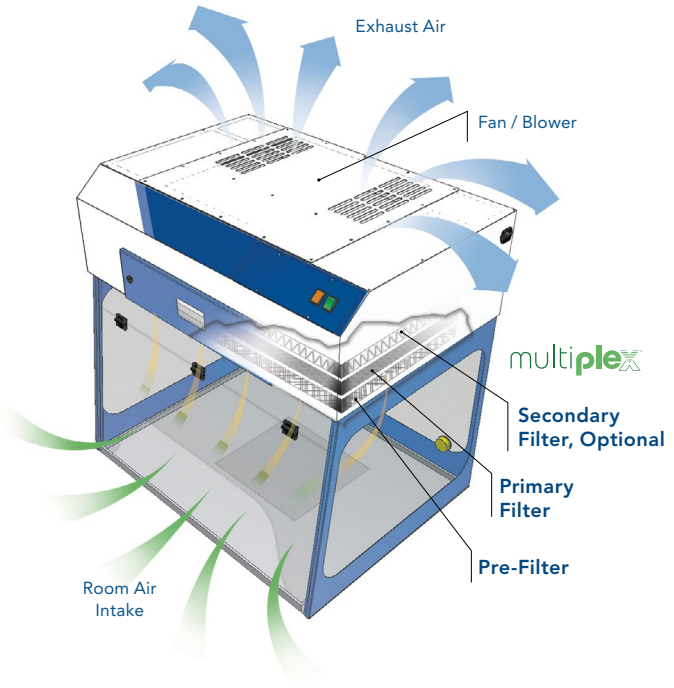
The system can be configured for the capture of acids, bases and particulates, such as biological aerosols.

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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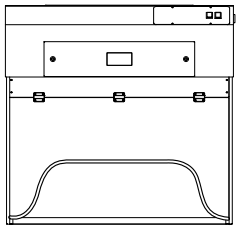
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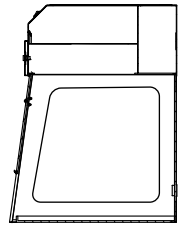
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P5-36-XT (CAGEX)



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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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!	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.

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

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