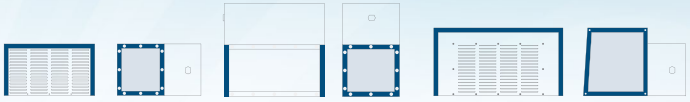
FumeBox™



Ductless Enclosures

- An Affordable, Effective Air Filtration System Solution
- Choose From Vertical or Low Profile Horizontal Design

Fume Box-AP60V

Air Science®

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

ENERGY STAR PARTNER

GSA Schedule Contract GS-07F5832P

ISO 9001
ISO 14001
BUREAU VERITAS Certification

CONTENTS:

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INTRODUCTION

Air Science® Fume Box ductless enclosures are designed to protect the user from chemicals, vapors or powders during low-volume chemical manipulations by effectively containing low concentrations of noxious fumes, vapors or powders.

APPLICATIONS

Soldering / Histology / Cover Slipping / Staining / Pathology / Graphic Arts, Sign Shops / Art Conservation / Electronics Assembly / Particulate Control / Manufacturing Processes / Air Purification

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

- Low-profile, completely portable, no ductwork required.
- Compact size, easily positioned on shallow countertops or counters with overhanging wall cabinets.
- Clear viewing enclosure prevents chemical splash.
- Modular design permits multiple configurations.

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.

Fume Box-AP60H-XL

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Fume Box-AP60H

DESIGN FEATURES

A. Main On/Off Switch: High quality rocker On/Off switch controls unit power.

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

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

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

E. Enclosed Filtration Chamber: Main filters can be carbon and/or HEPA/ULPA to fit a variety of containment needs.

ADDITIONAL FEATURES

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

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

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

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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.

PERFORMANCE

The Air Science Multiplex™ Filter offers a range of options for high performance protection.

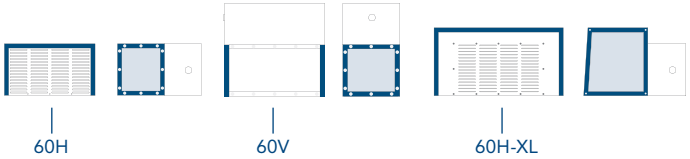
- Multiplex filter configuration permits a customized combination of filter media for a broad range of chemical families and biological agents if required.
- EFT™ filtration technology broadens the Air Science application for ductless fume hoods.

A high capacity air handling system delivers face velocity of 100 fpm.

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.



SELECTION

Fume Box ductless enclosures are available in 3 standard models, in metal or polypropylene construction, totaling 6 standard models.

CONTROL

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

Basic Control Panel

Fume Box-AP60V

The optional source capture hose converts the Fume Box to a fume extraction unit with a 6" diameter (152 mm) hose to capture pollutants at their source. Hose can attach to any vented enclosure, exhaust port on your equipment or desk mount scoop.

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multiplex™ LEARN MORE

FILTRATION

The Fume Box utilizes innovative filtration technology with the exclusive **Multiplex Filtration System**. The Multiplex Filtration System consists of a pre-filter, main activated carbon or HEPA/ULPA filter, and safety 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.

View available filters and descriptions on page 8.

FILTER CONFIGURATION

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

The Fume Box 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 99.995% 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
Primary Filter	C	H	H C	H C
Pre-FIlter	P	P	P	P

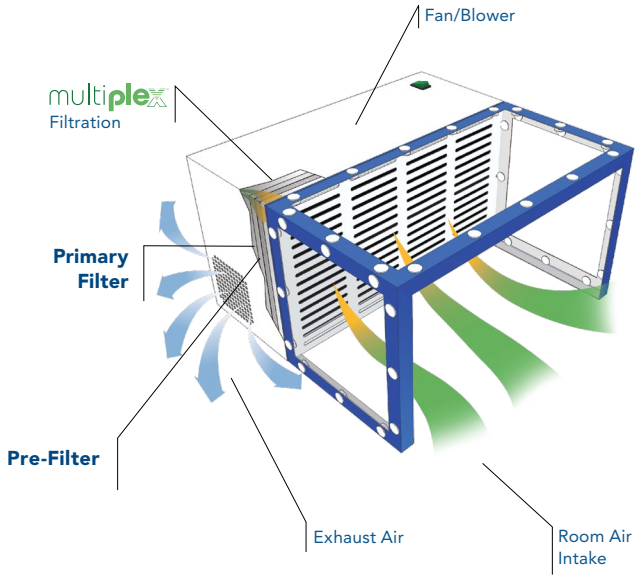
The system can be configured for the capture of acids, bases, and particulates, such as biological aerosols, when paired with HEPA or ULPA filters.

AIRFLOW

The Fume Box ductless 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.



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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ENHANCED FILTRATION

The Air Science Enhanced Filtration Technology (EFT) is a universal filtration system developed for use with a wide range of core chemical families. These include organic acids, alcohols, aliphatic hydrocarbons, aromatic hydrocarbons, esters, aldehydes, ketones, ethers, halogens and others. Although the EFT system is weighted to accommodate these families, it can handle inorganic acids as well.

Independent Test Results Independent testing confirms that the Air Science EFT system is superior in critical areas to other "green" fume hood systems recently introduced to the industry. AFNOR NFX 15-211 requires that three chemicals (isoproponal, cyclohexane, and hydrochloric acid) be tested under very precise conditions to ascertain and establish retention capacity at 1% of the threshold limit value (TLV) for each chemical.

Retention capacity (grams) for a single module at 1% of the TLV (Threshold Limit Value)

Specification	**AFNOR NFX 15-211**	
Testing Laboratory	**IBR**	**Intertek**
Product Manufacturer	Air Science	Brand E
Filter Type		Green
Test Results	EFT	
Isopropanol (alcohol)	2052	673
Cyclohexane (aliphatic hydrocarbon)	1531	914
Hydrochloric acid (inorganic acid)*	1205	2729*

**Based on "core" chemical families typically used in ductless fume hood applications, the Air Science EFT filter offers significant advantages over filters marketed as "universal" filters. With moderate to heavy acid applications, all ductless fume hoods made of metal are subject to corrosion and rust. On inorganic acids, the EFT filter provides a lesser, but more realistic, usable capacity.*

secur. safe disposal service

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

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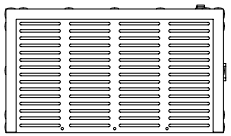
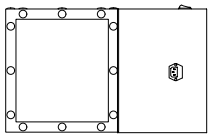
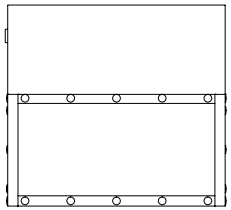
Fume Box-AP60H



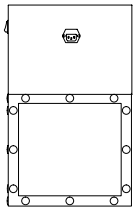
Side View



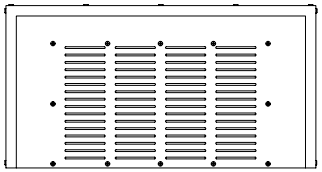
Fume Box-AP60V



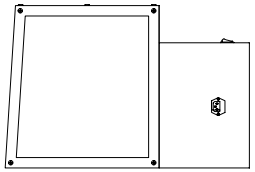
Side View



Fume Box-AP60H-XL



Side View



MODEL					WEIGHT (LBS/KG)	
Metal	Polypropylene	Internal (W x D x H)	External (W x D x H)	Shipping (W x D x H)	Net	Ship
AP60H	**AP60H-PP**	20.65" x 10.70" x 11.73" / 525 x 272 x 298 mm	21.25" x 12" x 19.75" / 540 x 305 x 502 mm	24" x 22" x 14" / 610 x 559 x 356 mm	27 / 12	30 / 14
AP60V	**AP60V-PP**	20.65" x 11.50" x 10.88" / 525 x 292 x 276 mm	21.25" x 12" x 19.75" / 540 x 305 x 502 mm	24" x 22" x 14" / 610 x 559 x 356 mm	29 / 13	30 / 14
AP60H-XL	**AP60H-XL-PP**	29.22" x 14.82" x 15.32" / 742 x 376 x 389 mm	29.85" x 23.25" x 15.65" / 758 x 591 x 398 mm	36" x 20" x 36" / 914 x 508 x 914 mm	45 / 20	70 / 32

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PRODUCT SPECIFICATIONS

Filtration	AP60H	AP60V	AP60H-XL
Airflow	<··· 135.9 cfm ···>		
Face Velocity	<··· 100 fpm ···>		

Construction	AP60H	AP60V	AP60H-XL
Finish	<··· White epoxy-coated steel filtration unit with blue enclosure. Clear sides and top panels. ···>		
Blower	<··· AC blower. ···>		
Controls	<··· Main On/Off. ···>		
Electrical	<··· 120V, 60Hz or 230V, 50Hz voltages available. Specify when ordering. Other voltage options available. ···>		
Pre-Filter Weight	<··· 1 lb / 0.4 kg. ···>		
Filter Weight	<··· 7 lbs / 3.5 kg. ···>		

FILTER SPECIFICATIONS

Fume Box	AP60H	AP60V	AP60H-XL
Primary Filter(s)*	(1)	(1)	(1)
Pre-Filter*	(1)	(1)	(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 glutaralde-hyde 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.
ePTFE	Universal filtration.

OPTIONS AND ACCESSORIES

Fume Box		**AP60H**	**AP60V**	**AP60H-XL**
Spill Tray (Polypropylene)	Removable for easy cleaning.	TRAY-AP60	TRAY-AP60	TRAY-AP60-XL

Fume Extraction Unit		**AP60EX**
Source Capture Hose*	Converts the Fume Box to a fume extraction unit with a 6" diameter (152 mm) hose to capture pollutants at their source. Hose can attach to any, exhaust port on your equipment or desk mount scoop.	AP60EX

**Factory installed; specify when ordering.*

STANDARDS & COMPLIANCE

Quality Management Systems	ISO 9001:2015
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 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 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. All Air Science products meet this definition.
Environment	ISO 14001:2015 Energy Star® Partner

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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.

LEARN MORE

For details visit the Service section of our website at www.airscience.com.

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