

Vent-Box



Modular Ventilation and Filtration System

- Protection Against Chemical Inhalation Risks
- Meets or Exceeds OSHA, ANSI and Other International Standards



Vent-Box VB60, shown with optional FSA controller on flammable safety cabinet, not included



"The World's Most Extensive Selection of Containment Solutions."



Schedule
Contract GS-07F5832P



CONTENTS:

- Product Overview (p.2)
- Design Features (p.3)
- Performance & Selection (p.4)
- Filtration Technology (p.5)
- Specifications (p.6)
- Options & Accessories (p.8)

Vent-Box

Modular Ventilation and Filtration System

60

PRODUCT OVERVIEW

2

INTRODUCTION

Air Science Vent-Box™ ductless filtration systems are designed to protect laboratory personnel from chemical vapors found inside of stand alone chemical safety cabinets. The Vent-Box serves as modular ventilation and a filtration system for all chemical safety cabinets.

APPLICATIONS

Using innovative filtration technology, the Vent-Box creates a safe work environment over the widest range of applications in the industry.

Flammable Materials \ Acid and Corrosive Chemicals \ Paints \ Pesticides \ Hazardous Materials



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 safety cabinets.
- Modular design permits multiple configurations.
- Universal connections allow retrofit to almost all available flammable and safety cabinets on the market.

FEATURES AND BENEFITS

The Vent-Box modular ventilation and filtration system is packed with features to make configuration and maintenance simple.

- The filter is easy to replace, no tools required. The filter clamps tightly against the filter gasket to maintain a positive seal and airtight connection.
- Ducting configuration is simple with locations for up to four input hose connections. The Vent-Box can be used as a ductless setup or can be ducted into an existing exhaust system with the optional ducting collar.
- The adjustable speed controller allows you to set the centrifugal fan motor speed as desired.
- Hose material options include PVC or metal for long lasting durability.
- Modular design permits multiple configurations.
- Universal connections allow retrofit to almost all available flammable and safety cabinets on the market.



Vent-Box VB60, shown on optional wall mount with optional FSA controller

CONTENTS:

- Product Overview (p.2)
- Design Features (p.3)
- Performance & Selection (p.4)
- Filtration Technology (p.5)
- Specifications (p.6)
- Options & Accessories (p.8)

Vent-Box

Modular Ventilation and Filtration System 60

DESIGN FEATURES

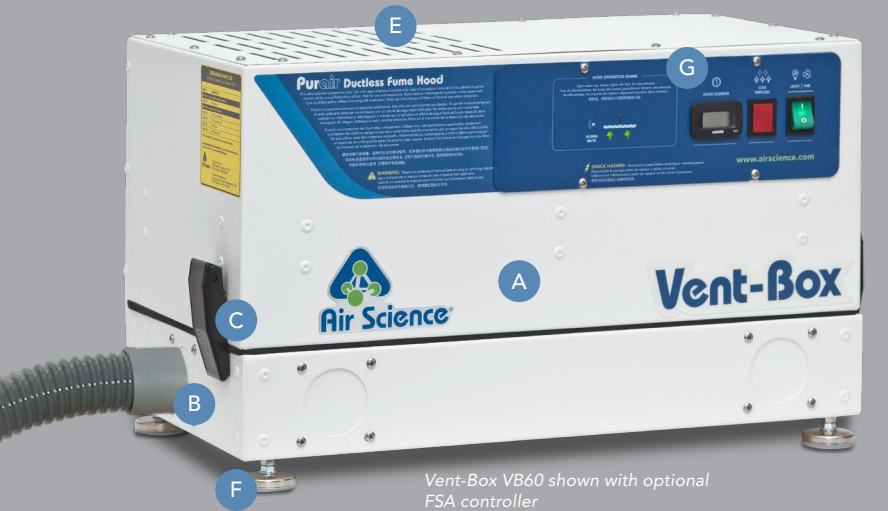
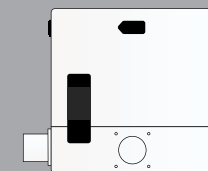
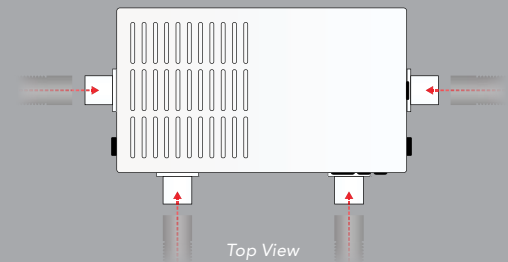
3

DESIGN FEATURES

- A. Filtration:** Available with Multiplex™ filtration technology, a unique configuration that includes a pre-filter and main carbon filter. HEPA/ULPA filtration is also available.
- B. Hose:** Each unit is provided with a PVC or metal flex hose with smooth inner surfaces to minimize pressure drop and friction loss. The vent hose is connected to the cabinet via a metal adapter.
- C. No-Tools Filter Access:** The filter is easy to replace, no tools required. Simply open the easy access lid and change the filters.
- D. Multiple Connection Configurations:** The Vent-Box comes equipped with four possible intake connections, allowing you to easily configure the unit to meet your space requirements.
- E. Exhaust Port:** Slotted exhaust port allows for an optional bolt-on ducting collar that allows connection to existing in-house ductwork.
- F. Leveling Feet:** Equipped with adjustable leveling feet that ensure solid placement on a variety of surfaces.
- G. Control Panel:** Electronic controls and displays include switches for the blower and a filter blockage alarm.

ADDITIONAL FEATURES

The Vent-Box is equipped with four intake hose connections, allowing for multiple configurations based on your space and layout requirements. One intake hose connection is located on either side of the Vent-Box top frame, with two connections located on the front portion of the frame. Cover plates are available for the unused connection ports.



CONTENTS:

- Product Overview (p.2)
- Design Features (p.3)
- Performance & Selection (p.4)
- Filtration Technology (p.5)
- Specifications (p.6)
- Options & Accessories (p.8)

Vent-Box

Modular Ventilation and Filtration System

60

PERFORMANCE & SELECTION

4

Each Air Science Vent-Box 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 Filtration System](#) 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 vent boxes 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.



The Vent-Box uses energy efficient ebm-papst™ brand centrifugal blowers for long life and dependable performance.

RELIABILITY

Internal systems are isolated from fumes, extending product life.

SELECTION

The Air Science Vent-Box is available in one standard size and five color choices: white, blue, green, red and yellow.

CONTROL

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

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.



VB60



VB60-BE



VB60-GN



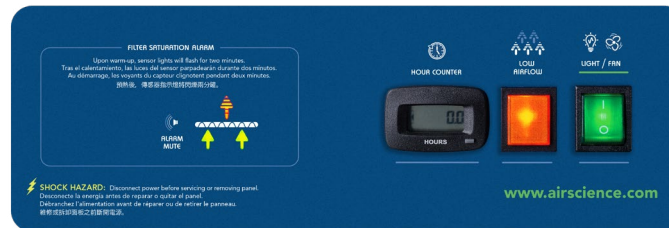
VB60-RD



VB60-YW



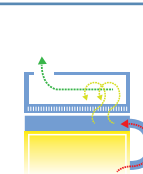
Basic Control Panel



FSA Control Panel

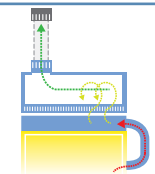
OPERATION MODES

Mode 1:



ductless/filtered

Mode 2:



ductless/filtered with connection to in-house exhaust

CONTENTS:

- Product Overview (p.2)
- Design Features (p.3)
- Performance & Selection (p.4)
- Filtration Technology (p.5)**
- Specifications (p.6)
- Options & Accessories (p.8)



FILTRATION

At the heart of the Air Science Vent-Box 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 6](#).



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 Vent-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.

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
Secondary/ Stacked Filter, Optional	C	H	C	H
Primary Filter	C	H	H	C
Pre-Filter	P	P	P	P

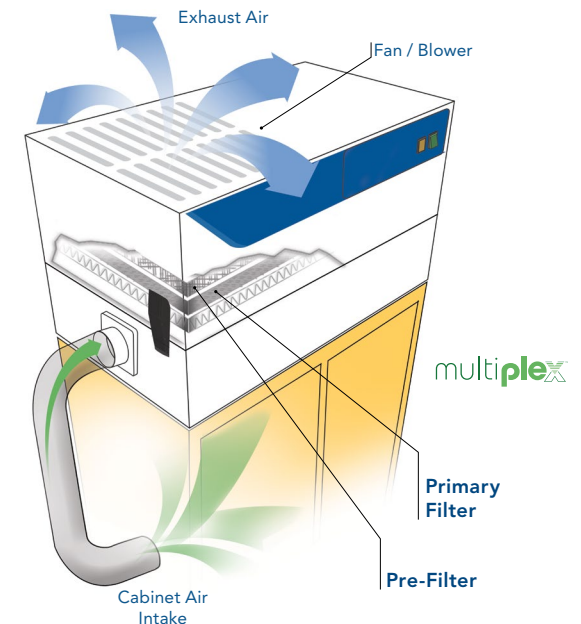
The system can be configured for the capture of acids, bases, and particulates, such as biological aerosols, when paired with HEPA or ULPA filters.

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.

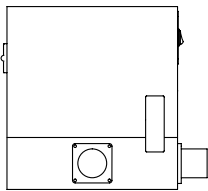
⚠️ The pre-filter may be replaced while unit is in operation.



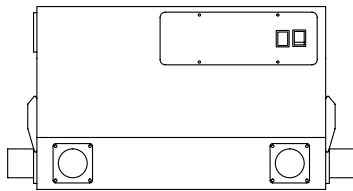
CONTENTS:

- Product Overview (p.2)
- Design Features (p.3)
- Performance & Selection (p.4)
- Filtration Technology (p.5)
- Specifications (p.6)
- Options & Accessories (p.8)

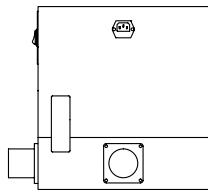
Left Side View



Vent-Box VB60



Right Side View



MODEL	DIMENSIONS		WEIGHT (LBS/KG)	
	External (W × D × H)	Shipping (W × D × H)	Net	Ship
VB60	21.25" × 12" × 13" / 540 × 305 × 330 mm	24" × 22" × 18" / 610 × 559 × 457 mm	32 / 14	34 / 15

PRODUCT SPECIFICATIONS

Filtration	VB60
Airflow	<... 100 cfm; internally adjustable to 200 cfm. ...>
Construction	VB60
Finish	<... White epoxy coated steel. ...>
Blower	<... ebm-papst centrifugal. ...>
Controls	<... Main On/Off. ...>
Electrical	<... 120V, 60Hz or 230V, 50Hz voltages available. Specify when ordering. Other voltage options available. ...>
Monitoring	<... Filter blockage alarm, standard. ...>
Hose	<... PVC or metal, flexible. The vent hose is connected to the cabinet via a threaded 2" diameter (50.8 mm) metal bung adapter. The discharge end accommodates a 1.5" diameter (38.1 mm) metal or PVC hose. ...>
Efficiency	VB60
Noise, dBA ¹	< 45

¹ Measured 12" (30 cm) from the cabinet front and 15" (38 cm) above the work surface plane.

FILTER SPECIFICATIONS

Purair Model	VB60
Primary Filter(s)*	(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](#).

CONTENTS:

- Product Overview (p.2)
- Design Features (p.3)
- Performance & Selection (p.4)
- Filtration Technology (p.5)
- Specifications (p.6)
- Options & Accessories (p.8)

OPTIONS & ACCESSORIES

Model		VB60
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
Polypropylene Construction*	Units available in all polypropylene construction.	VB60-PP
Wall Mount	White epoxy coated steel shelf, specifically sized to hold the Vent-Box modular ventilation system. Mounting hardware not included.	WALLMOUNT-VB
Ducting Collar	For connecting the Vent-Box to building exhaust for outside ducting.	EXCOLLAR-VB
Color Match	Match the color of the Vent-Box unit to any type of chemical storage cabinet (Blue, Green, Red, Yellow).	BLUE GREEN RED YELLOW

* Factory installed; specify when ordering.



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.

CONTENTS:

- Product Overview (p.2)
- Design Features (p.3)
- Performance & Selection (p.4)
- Filtration Technology (p.5)
- Specifications (p.6)
- Options & Accessories (p.8)

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
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 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



120 6th Street \ Fort Myers, FL 33907
T. 239-489-0024 \ Toll Free. 800-306-0656 \ F. 800-306-0677
www.airscience.com

The information contained in this manual and the accompanying product are copyrighted and all rights are reserved by Air Science. Air Science reserves the right to make periodic minor design changes without obligation to notify any person or entity of such change.