

# Vent-Box™

## Modular Ventilation and Filtration System

"Modular Ventilation and Filtration Systems for all Chemical Safety Cabinets."



**DANGER**  
FLAMMABLE  
STORAGE

— Vent-Box  
VB24

*Shown on flammable safety cabinet; not included.*

Protection Against Chemical Inhalation Risks  
Without Expensive Energy Consuming Ductwork



**JUMP TO:**

- Features and Callouts (p.3)
- Airflow and Multiplex™ Filtration Technology (p.4)
- Specifications (p.5)
- Options and Accessories (p.6)



**Vent-Box™**  
Ductless Filtration Systems

- 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.
  - Meets or Exceeds OSHA, ANSI, and other International Standards.
- Vent-Box VB24. Shown on optional wall mount.



**APPLICATIONS**

Flexible cabinet ventilation for storage of:

- Flammable materials
- Acid / Corrosive chemicals
- Paints
- Pesticides
- Hazardous materials

**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.



**multiple**

**AIR SCIENCE MULTIPLEX FILTRATION TECHNOLOGY SYSTEM**

The Vent-Box utilizes the exclusive Air Science Multiplex filtration system, a unique configuration that includes a pre-filter and main filter to create a chemical, physical or combination architecture to adsorb, neutralize or trap the target chemicals or particulate. Fumes are pulled via a flexible hose connected to the cabinet and clean, filtered air is returned to the laboratory, eliminating the need for external ducting and minimizing loss of treated, conditioned air from the facility.

**MULTIPLEX SYSTEM FILTERS**

- **Pre-Filter.** The electrostatic pre-filter protects the main filters from aerosols, dust and particulates with filtration efficiency superior to 95.5% down to 0.5 microns.
- **Main Filter.** Activated Carbon FILTCO™ sourced. A single carbon filter containing chemically-formulated activated carbon granules is selected when ordering to accommodate a specific vapor or family of vapors.
- **HEPA Filter.** A self-contained Camfil-Farr HEPA filter is designed to physically capture particles larger than 0.3 microns.



This Product Exceeds OSHA, ANSI and Other International Standards.

**PRODUCT 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 1 meter PVC or metal flex hose with smooth inner surfaces to minimize pressure drop and friction loss.

**C. No-Tools Filter Access:** The filter is easy to replace, no tools required. Simply open the easy access lid and change the filters.

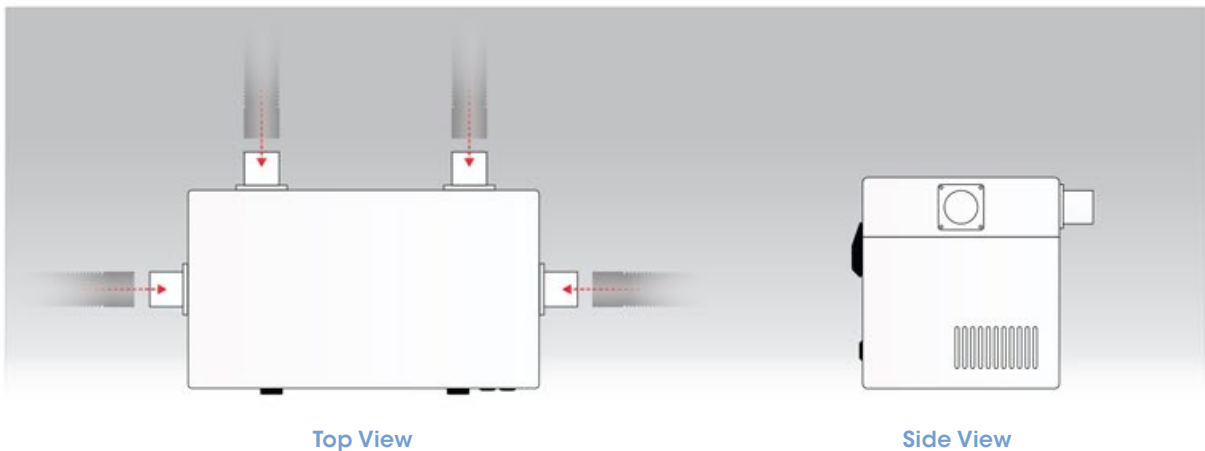
**D. Multiple Connection Configurations:** The Vent-Box comes equipped with four possible intake connections, allowing you to easily configure the unit to meet your space requirements.

**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 low airflow alarm.

Vent-Box VB24.



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 rear portion of the frame. Cover plates are available for the unused connection ports.

**THE AIR SCIENCE PERFORMANCE ADVANTAGE**

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.

- **Professional Quality.** Air Science products comply with current technical and safety regulations.
- **Advanced Filtration.** Air Science Multiplex filtration provides high performance protection.
- **Industrial Components.** The Vent-Box frame and outer surfaces are durable and chemically resistant.
- **Reliability.** Internal systems are isolated from contamination, extending product life.



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

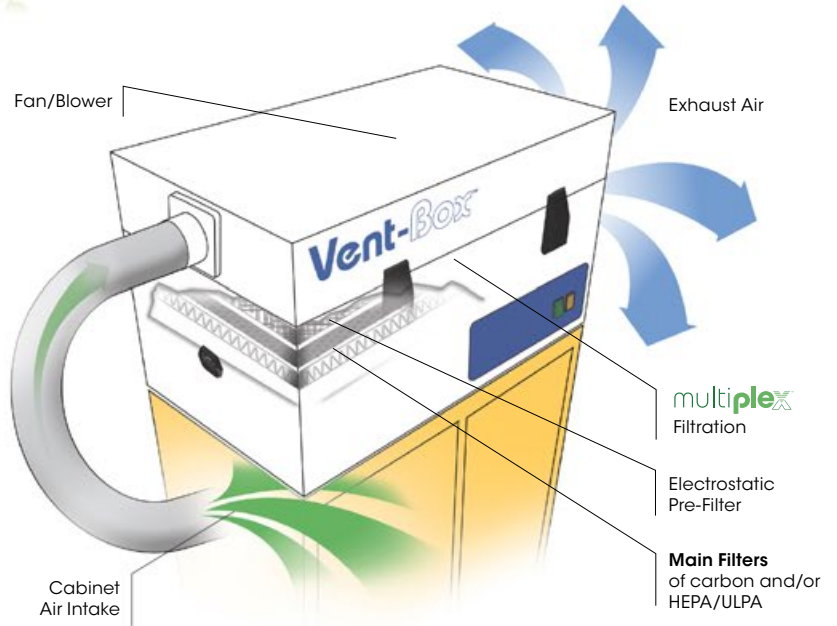
**AIR SCIENCE CARBON FILTRATION**

Air Science carbon filters are based on enhanced, activated carbon particle formulations from naturally occurring raw material superior to wood or other organic sources. Our carbon is treated to attain the proper porosity and aggregate surface area, while reacting with several ranges of aerosolized chemicals moved through the filter by an air handling blower.

The table below specifies the standard formulations of carbon available within our Multiplex Filtration Technology.



**VENT-BOX AIRFLOW PATTERN**



Vent-Box VB24 shown with Multiplex filtration system.

The Vent-Box maintains a constant low velocity airflow through the cabinet. 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.

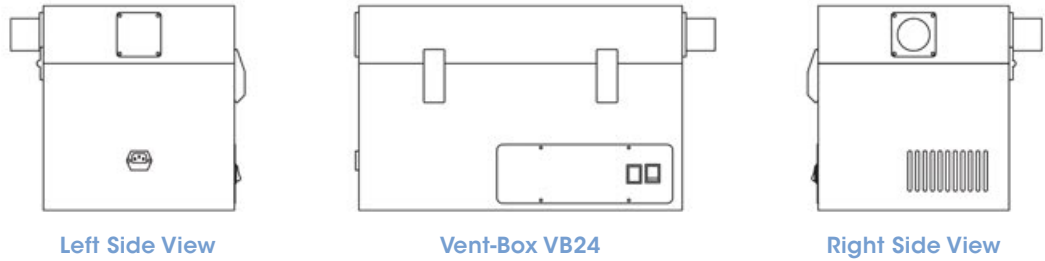
**FILTER SUMMARY**

Formula	Description
GP Plus!	The most widely used filter in the range, primarily for solvent, organic, and alcohol removal.
ACI Plus!	Designed to neutralize volatile inorganic acid vapors.
ACR	Iodine and methyl iodide vapors. It is frequently used for iodination reactions with lower 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 which acidifies, 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, the local head adsorption can reduce the capacity of the filter. Special impregnation allows a chemical reaction which increases the filter capacity.
EDU	Designed to handle chemicals normally used in a university level chemistry curriculum.
MIL	As the name implies, this filter is designed for military applications involving war gasses.
HEPA/UPLA	Powders and particulates

**VENT-BOX DUCTLESS FILTRATION SYSTEMS FEATURES & 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.
- 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.
- Meets or Exceeds OSHA, ANSI and other International Standards.



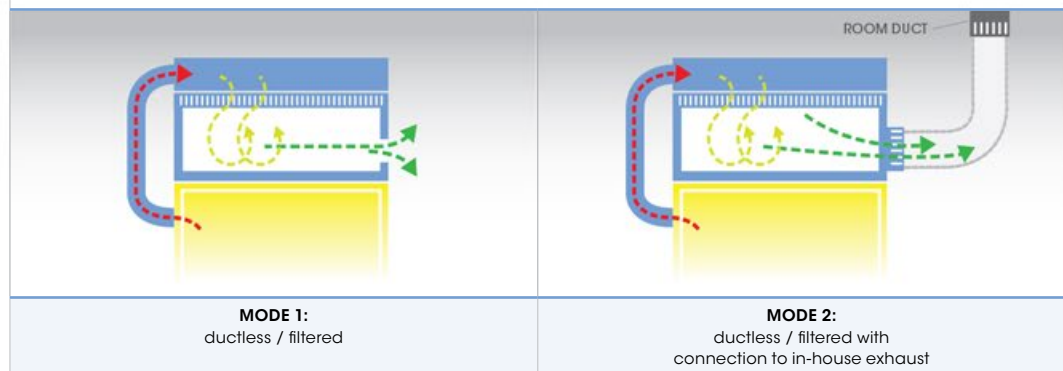
MODEL	DIMENSIONS		WEIGHT (lbs/Kg)	
	(W x D x H)	Shipping (W x D x H)	Net	Ship
<b>Vent-Box</b>				
<b>VB24</b>	21.25" x 12" x 13" 540 x 305 x 330 mm	24" x 22" x 18" 610 x 559 x 457 mm	32 / 14	34 / 15

**PRODUCT SPECIFICATIONS**

Vent-Box Model	VB24
Filter Weight	3 lbs/1.5 kg
Pre-filter Weight	1 lb/0.4 kg
Airflow	3 CFM
Noise	<45 dBa
Construction	White epoxy coated steel
Electrical	120v 60hz; 220v 50hz available, specify when ordering
Electrical Switches	Main On/Off
Monitoring	Low airflow alarm, standard
Hose length	1 meter, PVC or metal, flexible
Air Sampling Port	Air sampling port allows manual filter monitoring

*Specifications are subject to change without notice.*

**OPERATION MODES**



**MODE 1:**  
ductless / filtered

**MODE 2:**  
ductless / filtered with  
connection to in-house exhaust



VB24



VB24-BE



VB24-GN



VB24-RD



VB24-YW

**OPTIONS AND ACCESSORIES**

Filter Saturation Alarm and Electronic Hour Counter*	An electronic gas sensor emits audio and visual alerts when the main filter needs to be changed. The option also includes an electronic hour counter to track unit run time.	FSA
Polypropylene Construction	Units available in all polypropylene construction.	VB24-PP
Color Match	Match the color of the Vent-Box unit to any type of chemical storage cabinet (Blue, Green, Red, Yellow).	VB24-BE VB24-GN VB24-RD VB24-YW
Ducting Collar	For connecting the Vent-Box to building exhaust for outside ducting.	VB24-EXH
Variable Speed Controller	Adjustable speed controller to set the centrifugal fan motor speed as desired.	VB24-SPDC
Wall Mount	White epoxy coated steel shelf, specifically sized to hold the Vent-Box modular ventilation system. Mounting hardware not included.	VB24-WM

\* Factory installed. Specify when ordering.



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