

# XPert™ Balance Enclosures



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## XPert™ Line of Balance Enclosures

### OVERVIEW

**THE** patented\* XPert line of Balance Enclosures maximizes containment of toxic airborne powders and other particulates as well as fumes and vapors. XPert Enclosures are well suited for pharmaceutical research and other laboratory applications involving weighing of toxic substances. The innovative and aerodynamic designs of the air foil, upper sash foil, zone-perforated rear baffle and side-entry air foils work together to significantly reduce concentrations of contaminants in the operator's breathing zone. Labconco engineers carefully selected materials of construction and design details that support safe, energy-efficient weighing.



The XPert line of Balance Enclosures maximizes containment of hazardous particulates during weighing operations.

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\*U.S. Patent No. 6,461,233

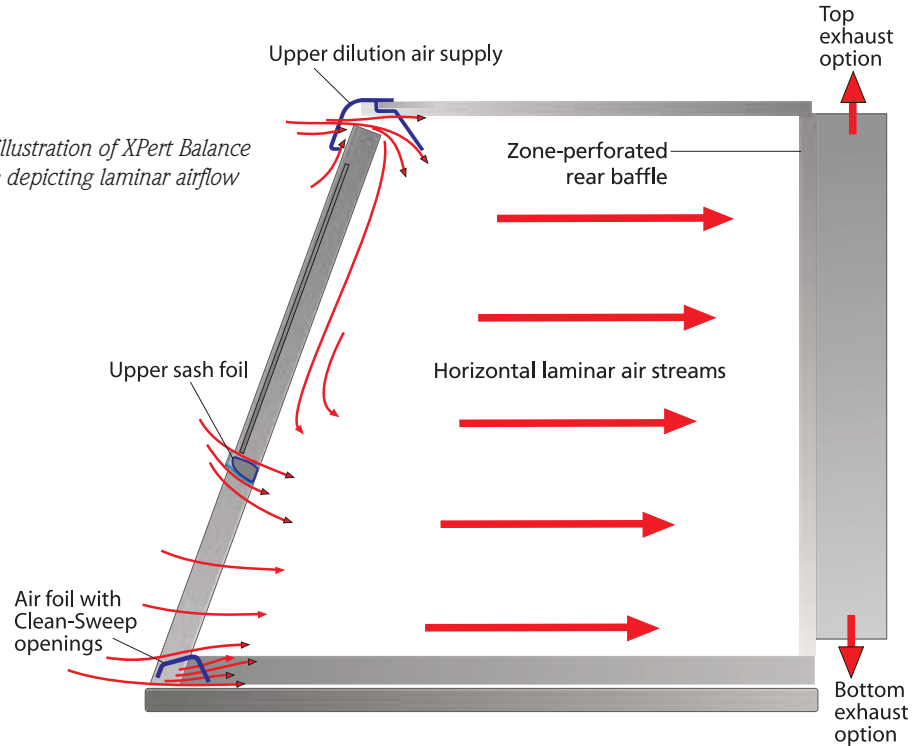


# XPert™ Line of Balance Enclosures

## OVERVIEW

### Containment-Enhancing Features

Side-view illustration of XPert Balance Enclosure depicting laminar airflow



#### Patented\* Aerodynamic Clean-Sweep™ Air Foil

The aerodynamic air foil allows air to sweep the work surface for maximum containment. Clean-Sweep openings pull inflow air from under the air foil so that clean air continually flows through the air foil creating a constant protective contaminant barrier. Should the operator inadvertently block the airflow, air continues to pass under the air foil and through the Clean-Sweep openings.

#### Side-Entry Air Foils

Aerodynamic air foils located on either side of the sash opening promote clean airflow into the chamber.



#### Upper Dilution Air Supply

The upper dilution air supply introduces air from above the work area, which bathes the back of the sash with clean air and directs concentrations away from the sash opening.



#### Upper Sash Foil

A small gap directly above the aerodynamic sash handle allows high velocity air to bleed into the chamber, reducing turbulence and directing concentrations away from the user's breathing zone

#### Patented\* Zone-Perforated Rear Baffle

The baffle with three zoned sections of perforations directs inflow air in non-turbulent laminar air streams from the sash opening to the baffle in a single pass. The lower section provides more airflow at the bottom to help minimize the potential for air to roll forward toward the sash opening.



#### Static-Dissipating Construction

Static charges can lead to errors in weighing and particulates being attracted to surfaces, resulting in greater potential for cross-contamination and containment loss. Unlike acrylic, which is highly insulative and has a strong affinity for charged particles, XPert Enclosures are constructed of static-dissipative tempered safety glass and epoxy-coated metal.

\*U.S. Patent No. 6,461,233



# XPert™ Line of Balance Enclosures

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### Surface Resistivity Table

Material	Surface Resistivity	Example
Conductive	0 – 10 <sup>5</sup> Ω per square	Skin, Metals
Static Dissipative	10 <sup>5</sup> – 10 <sup>9</sup> Ω per square	Glass
Antistatic	10 <sup>9</sup> – 10 <sup>12</sup> Ω per square	Polyethylene Bag
Insulative	≥10 <sup>12</sup> Ω per square	Acrylic Box, Packing Foam, Styrofoam

Since static electricity is a surface phenomenon, materials can be classified by their surface resistivity measured in ohms per square. The table above lists the surface resistivity of various classes of material. Glass and metal have less surface resistivity than acrylic.

### Verified Performance

Containment-enhancing features allow XPert Enclosures to operate at face velocities from 60 to 100 fpm. Independent testing confirms that the XPert Balance Enclosure contains both particulate and gaseous contaminants.

**SafeBridge Consultants, Incorporated**, Mountain View, CA, tested the XPert Balance Enclosure, confirming its ability to provide excellent containment of naproxen sodium, a non-potent active pharmaceutical ingredient. Naproxen sodium was selected for the study because it is safe to handle, readily detectable in air at low concentrations, has a high dustiness quotient and challenging electrostatic properties. The XPert Balance Enclosure demonstrated excellent containment (nondetectable amounts) when used by an operator using excellent technique and good containment (23 ng/m<sup>3</sup>) when used by an operator using poor technique. While no enclosure can compensate for improper technique, these tests confirm that the XPert Balance Enclosure provides a safe working environment.

**ECT, Incorporated**, Cary, NC, conducted modified ASHRAE 110-1995 testing on the XPert Balance Enclosure and concluded

that it maintained containment at face velocities greater than 50 fpm. Average concentrations during tracer gas tests were less than 0.05 ppm and no escape was observed during the smoke tests. Since Labconco recommends a minimum face velocity of 60 fpm, the acceptable containment at 50 fpm provides a margin of safety. The built-in airflow monitor, digital or analog depending on the model, alerts the user should velocity approach 50 fpm.

### Bag-In/Bag-Out HEPA Filter Disposal System

Unique to the XPert Filtered Balance Systems, XPert Filtered Balance Stations and FilterMate Portable Exhausters is the true bag-in/bag-out HEPA filter system. Using a built-in sealed bag with gloves, a technician can remove a contaminated



filter without exposing the filter to personnel or the environment. On XPert Filtered Balance Systems and Stations, the filter is accessible by removing the front panel. On FilterMate Portable Exhausters the filter is accessible from the back without detaching the FilterMate from the XPert Balance Enclosure.

### Select the Right XPert for Your Application

The XPert line of enclosures was designed to provide user protection during weighing operations that generate toxic airborne particulates. Interior dimensions of any XPert enclosure accommodate large micro or analytical balances. Selecting the right XPert enclosure depends on factors such as the user's fume removal needs, space limitations and ducting options.



The XPert Filtered Balance System is available in 2', 3' and 4' widths and does not require outside ducting.

**XPert Filtered Balance Systems** are self-contained enclosures with a built-in blower and HEPA filter mounted above the work area. Available in 2', 3' and 4' nominal widths, these enclosures are 28.6" deep and 37.1" high. Because a separate blower module is not required, these enclosures require less overall bench space than other models. Since HEPA filtered air may be returned to the laboratory, XPert Filtered Balance Systems are ideal for installations in basements or areas surrounded by interior walls where ducting is not feasible. Accessory Trace Odor Carbon Filters may be used with these enclosures to trap small amounts of gaseous contaminants from organic solvents, formaldehyde, ammonia or amines used as an adjunct to particulate-generating research.

**XPert Filtered Balance Stations** are designed to be connected to a remote blower and ducted to the outside. The remote blower, which is sold separately,



## XPert™ Line of Balance Enclosures

### OVERVIEW

must be sized to fit individual requirements for face velocity and duct run. A HEPA filter installed in these enclosures' upper plenum traps particulate contaminants in the exhaust air. Because exhaust air does not return to the room, XPert Filtered Balance Stations may be used to remove light acid fumes or to control nuisance odors. Available in 2', 3' and 4' nominal widths, these enclosures have the same compact footprint as XPert Filtered Balance Systems. Since they are ducted to the outside, they require a permanent location in the laboratory, or a flexible hose connected to a house exhaust.

**XPert Balance Enclosures** feature flexible ducting options. Collars on the top and bottom allow connection to ductwork and remote blower for exhausting to the outside. Use of the bottom exhaust collar hides the ductwork behind casework, enhancing visibility throughout the laboratory. Depending on the application, XPert

Balance Enclosures that are hard-ducted to the outside may require an in-line HEPA filter.

If outside ducting is not feasible, the XPert Balance Enclosure may be connected from the top or bottom to the FilterMate Portable Exhauster, which houses a HEPA filter, carbon filter or combination of both filters. The FilterMate provides up to 100 fpm face velocity for the XPert Enclosure and only one FilterMate is needed for any 2', 3' or 4' XPert. Since FilterMate Portable Exhausters accommodate large carbon filters with longer dwell times than the Trace Odor Filters used with the XPert Filtered Balance Systems, XPert Balance Enclosures connected to FilterMate Portable Exhausters may be used with a wide variety of applications involving organic solvents, formaldehyde, ammonia or amines. See page 23 for an Application Matrix. Labconco offers the **XPert Easy-Order** consisting of the XPert Balance

Enclosure, Black Solid Epoxy Work Surface and FilterMate Portable Exhauster with HEPA Filter. With just a supporting base, XPert Easy-Order has all the components necessary to make a complete system.



*The XPert Easy-Order includes the XPert Balance Enclosure, FilterMate Portable Exhauster and Black Solid Epoxy Work Surface. Supporting base is not included.*

## Selection Guide

The Selection Guide below provides at-a-glance descriptions of the various XPert enclosures offered in this catalog.

Selection Guide				
	XPert Filtered Balance System	XPert Filtered Balance Station with Remote Blower	XPert Balance Enclosure with FilterMate Portable Exhauster or XPert Easy-Order	XPert Balance Enclosure with Remote Blower
	Pages 6-9	Pages 10-13	Pages 14-19	Pages 14-17
Exhausts to:	Room or Outside*	Outside	Room or Outside**	Outside
Portable	•		•	
Small Footprint	•	•		•
Low Profile			•	•
<b>Applications:</b>				
Weighing potent powders	•	•	Requires HEPA Filter	•
Drug compounding/research		•	Requires Carbon Filter	•
Potent powders with trace chemicals	Requires Trace Odor Control Carbon Filter	•	Requires Carbon Filter	•
Nuisance odors including trace quantities of solvents, formaldehyde, ammonia or amines	Requires Trace Odor Control Carbon Filter	•	Requires Carbon Filter	•
Light-duty solvent, formaldehyde or ammonia use		•	Requires Carbon Filter	•
Light-duty liquid acid use		•		•

\* XPert Filtered Balance Systems may be thimble-ducted to the outside with the addition of a Canopy Connection, ductwork and connection to house exhaust or a remote blower.

\*\* Most FilterMate Portable Exhausters exhaust to the room. FilterMate Portable Exhausters #3970002 and #3970022 are designed to be exhausted to the outside.





# XPert™ Filtered Balance Systems

## FEATURES & BENEFITS

XPert Filtered Balance Systems provide user protection by keeping powders and particulates contained during weighing procedures. The built-in blower and exhaust HEPA filter mounted in the upper plenum take up less space than a separate exhauster would require while isolation supports minimize blower vibration. Since HEPA filtered air is returned to the laboratory, these

enclosures have the added benefits of low installation costs, portability and no required outside ducting. Interior dimensions accommodate large analytical and micro balances. Containment-enhancing features ensure that potent powders frequently found in pharmaceutical, dry chemical, mold and asbestos weighing operations are kept away from the operator.

**True bag-in/bag-out filter disposal system** allows the HEPA filter to be safely removed and replaced by a certified technician. The filter is easily accessed by removing the front panel.

**Built-in impeller has vibration-isolation supports** to minimize disturbance to sensitive balances.

**Built-in Guardian™ 1000 Digital or Guardian™ Airflow Monitor (not shown)** alerts the user to face velocities outside of preset range. The Guardian 1000 Digital Monitor has an RS232 port for connection to a user-supplied computer.

**Front-mounted Minihelic\*\* pressure gauge** monitors pressure differential across the HEPA filter to help determine filter loading.

**Tempered safety glass front sash and sides** offer excellent visibility and protection. Glass provides improved fire, scratch and chemical resistance than acrylic and dissipates static charge.

**Patented\* rear baffle** with zones of perforations promotes horizontal laminar airflow to maximize containment.

**Side-entry air foils** allow air to sweep across the interior glass surfaces to enhance containment.

**Deep 23" interior** easily accommodates large micro and analytical balances.

**Speed control** regulates speed of the built-in blower and may be used by a certified technician to adjust and verify inflow velocity.

**Space-saving design.** Impeller and HEPA filter are contained within the enclosure's upper plenum for a smaller overall footprint than a separate enclosure and exhauster can offer.

**Optional Trace Odor Carbon Filter** trap nuisance vapors from organic solvents, formaldehyde, ammonia or amines.

**Upper dilution air supply** introduces room air at the top of the sash to dilute contaminants in the upper chamber and bathes the back of the sash with clean air.

**Built-in exhaust HEPA filter,** 99.99% efficient on particles of 0.3 micron in size, can be easily validated by a certified technician.

**Intrinsically safe design.** The positive pressure impeller is surrounded by a negative pressure plenum so that if a leak should develop, the unfiltered air is captured and refiltered.

**Glare-free fluorescent lighting.**

**Sturdy glacier white and gray, dry powder epoxy-coated aluminum frame and steel rear plenum and baffle** dissipate static charge and provide durability and better chemical resistance compared to acrylic models. No unreliable plastic-to-plastic bonding is used.

**Ergonomic 10° angled sash** allows a closer view, reduces glare and provides a more comfortable operating position than vertical sashes. The hinged sash pivots upward and locks to a loading height of 20". A wiping seal helps to keep contaminants contained.

**Front-mounted light and blower switches.**

**Quiet operation** from 45 to 67 decibels depending on face velocity.

**Upper containment sash foil** bleeds air into the enclosure to direct concentrations of contaminants away from the operator's breathing zone.

**Validation package available at [www.labconco.com](http://www.labconco.com).** Contains SafeBridge Consultants, Inc. and modified ASHRAE 110-1995 Test Reports; Installation Qualification/Operation Qualification (IQ/OQ) Protocol; and Maintenance Log.

**9.4" sash opening**

**Patented\* Clean-Sweep™ air foil** allows air to sweep the work surface for maximum containment. Airflow openings pull inflow air from under the air foil so that clean air continually flows through the air foil creating a constant barrier of protection from contaminants. The air foil's ergonomic design provides a comfortable position for the operator's forearms.

**Modified ASHRAE 110-1995 conformity.**

**Two utility ports** allow passage of tubing, electrical cords and interface cables from inside to back exterior for connection to services.

**ETL-listed.** All 115 volt, 60 Hz models carry the ETL mark signifying that they are certified to UL 3101-1/61010-1 and CAN/CSA C22.2 No. 1010.1.

**Exclusive feature**

\*U.S. Patent No. 6,461,233

**Particulate containment** independently verified by SafeBridge Consultants, Inc.

**Upper diffuser screen** located above the work area provides protection for the HEPA filter.

**CE mark.** All 230 volt, 50 Hz models conform to the CE (European Community) requirements for electrical safety and electromagnetic compatibility.



\*\* Minihelic® is a registered trademark of Dwyer Instruments Incorporated.



# XPert™ Filtered Balance Systems

## SPECIFICATIONS



XPert Filtered Balance System 3950402 is shown with Black Solid Epoxy Dished Work Surface 3909902 and Protector Standard Storage Cabinets 9900300. Work surface and base cabinet must be ordered separately.



- Quiet operation (see chart below).
- Glacier white and gray, dry powder epoxy-coated aluminum frame and steel rear plenum and baffle. No unreliable plastic-to-plastic bonding is used.
- Pre-wired fluorescent lamp and switches for blower and light.
- Speed control.
- 1/4" thick tempered safety glass front sash and sides.
- 9.4" high sash opening.
- Ergonomic 10° angled and hinged sash pivots upward, locks to a loading height of 20" and has a wiping seal to contain contaminants.
- Two utility ports.
- Particulate containment independently verified by SafeBridge Consultants, Inc.
- Validation package available at [www.labconco.com](http://www.labconco.com) containing SafeBridge Consultants, Inc. and modified ASHRAE 110-1995 Test Reports; Installation Qualification/Operation Qualification (IQ/OQ) Protocol; and Maintenance Log.
- CE Conformity Marking (230 volt models)

### Models 3950201, 3950221, 3950301, 3950321, 3950401 and 3950421 include:

- Guardian Airflow Monitor that continuously monitors airflow and has two LED lights to indicate when airflow is within or outside set point range. The green LED glows when airflow is within set point range. The red LED glows and an audible alarm sounds when airflow is outside set point range.

### Models 3950202, 3950222, 3950302, 3950322, 3950402 and 3950422 include:

- Guardian 1000 Digital Airflow Monitor that continuously monitors airflow and provides a digital readout of actual face velocity. An audible/visual alarm alerts the operator when airflow is outside set point range. RS232 communications port allows connection to user-supplied computer and may be configured for external input connections such as night setback or external alarm and up to three output relays.

### All models feature:

- Deep 23" interior to accommodate large micro and analytical balances.
- Ergonomic air foil with aerodynamic Clean-Sweep\* airflow openings.
- Upper dilution air supply.
- Upper containment sash foil.
- Zone-perforated rear baffle.\*
- Side-entry air foils.
  - Exhaust HEPA filter, 99.99% efficient on particles 0.3 micron in size.
- True bag-in/bag-out filter disposal system.
  - Built-in blower with dynamically-balanced, vibration-isolated motorized impeller.
  - Intrinsically safe, negative pressure design.
  - Minihelic pressure gauge.
  - Space-saving design. No separate filtered exhauster is required.
  - Upper diffuser screen.

### All models conform to the following regulations and standards:

- SEFA 1-2002
- Modified ASHRAE 110-1995
- ANSI Z9.5-1993
- UL 3101-1/61010-1
- CAN/CSA C22.2 No. 1010.1

### All models require:

- Work surface. See page 24.
- Supporting base. See page 22.

### Optional accessories for on-site installation include:

- Trace Odor Carbon Filters. See page 24.
- Utility Shelves. See page 24.
- Canopy Connections. See page 26.
- Remote Blowers. See page 26.
- Ductwork. Contact Labconco.

Nominal Width	Total Exhaust CFM and Sound Pressure Levels					
	100 fpm	db(A)	80 fpm	db(A)	60 fpm	db(A)
2 Feet	145	53-58	115	50-55	85	48-53
3 Feet	220	58-61	175	53-58	130	48-53
4 Feet	295	62-66	235	58-63	175	49-54

Exclusive feature

\*U.S. Patent No. 6,461,233



## XPert™ Filtered Balance Systems

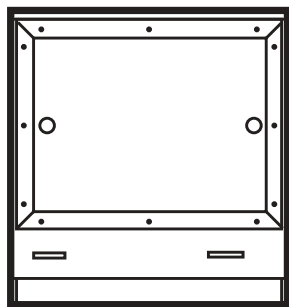
### ORDERING INFORMATION & DIMENSIONAL DATA

#### XPert Filtered Balance Systems

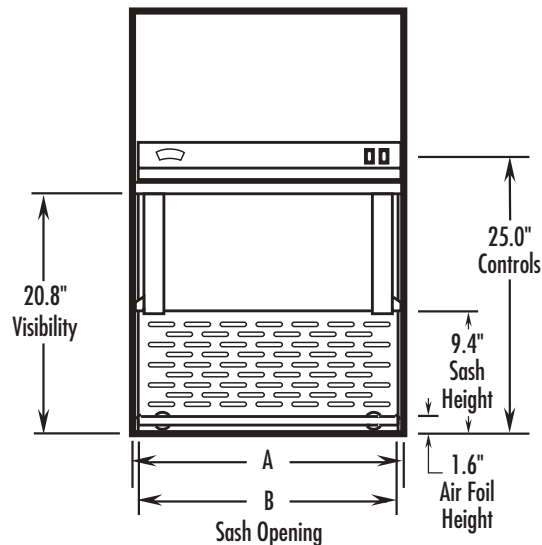
Nominal Width	Catalog Number	Overall Dimensions	Interior Dimensions	Electrical Requirements	Built-In Airflow Monitor	Shipping Weight lbs./kg
2'	<b>3950201</b>	24.0" w x 28.6" d x 37.1" h	21.6" w x 23.4" d x 22.7" h	115 volts, 60 Hz	Guardian	125/56.7
2'	<b>3950202</b>	24.0" w x 28.6" d x 37.1" h	21.6" w x 23.4" d x 22.7" h	115 volts, 60 Hz	Guardian 1000 Digital	125/56.7
2'	<b>3950221*</b>	24.0" w x 28.6" d x 37.1" h	21.6" w x 23.4" d x 22.7" h	230 volts, 50 Hz no plug	Guardian	125/56.7
2'	<b>3950222*</b>	24.0" w x 28.6" d x 37.1" h	21.6" w x 23.4" d x 22.7" h	230 volts, 50 Hz no plug	Guardian 1000 Digital	125/56.7
3'	<b>3950301</b>	36.0" w x 28.6" d x 37.1" h	33.6" w x 23.4" d x 22.7" h	115 volts, 60 Hz	Guardian	160/72.6
3'	<b>3950302</b>	36.0" w x 28.6" d x 37.1" h	33.6" w x 23.4" d x 22.7" h	115 volts, 60 Hz	Guardian 1000 Digital	160/72.6
3'	<b>3950321*</b>	36.0" w x 28.6" d x 37.1" h	33.6" w x 23.4" d x 22.7" h	230 volts, 50 Hz no plug	Guardian	160/72.6
3'	<b>3950322*</b>	36.0" w x 28.6" d x 37.1" h	33.6" w x 23.4" d x 22.7" h	230 volts, 50 Hz no plug	Guardian 1000 Digital	160/72.6
4'	<b>3950401</b>	48.0" w x 28.6" d x 37.1" h	45.6" w x 23.4" d x 22.7" h	115 volts, 60 Hz	Guardian	195/88.5
4'	<b>3950402</b>	48.0" w x 28.6" d x 37.1" h	45.6" w x 23.4" d x 22.7" h	115 volts, 60 Hz	Guardian 1000 Digital	195/88.5
4'	<b>3950421*</b>	48.0" w x 28.6" d x 37.1" h	45.6" w x 23.4" d x 22.7" h	230 volts, 50 Hz no plug	Guardian	195/88.5
4'	<b>3950422*</b>	48.0" w x 28.6" d x 37.1" h	45.6" w x 23.4" d x 22.7" h	230 volts, 50 Hz no plug	Guardian 1000 Digital	195/88.5

\* International electrical configuration

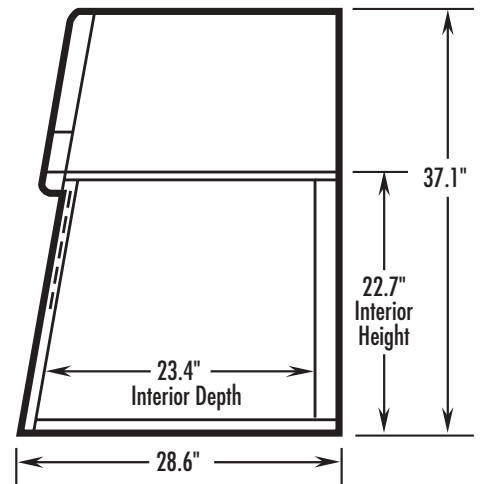
	2-Foot	3-Foot	4-Foot
<b>A</b>	24.0"	36.0"	48.0"
<b>B</b>	21.6"	33.6"	45.6"



TOP



FRONT



SIDE



Requires  
Ductwork  
and  
Blower



# XPert™ Filtered Balance Stations

## FEATURES & BENEFITS

XPert Filtered Balance Stations are designed to protect the user during powder weighing operations. The built-in HEPA filter, mounted in the upper plenum, removes particulates, so that clean air is exhausted to the atmosphere. As its name implies, **the XPert Filtered Balance Station is “stationary” because ducting to an outside blower is required.**

Powder weighing applications found in pharmaceutical research and other industries are ideal for these enclosures. Like all enclosures in the XPert line, interior dimensions accommodate large micro and analytical balances and containment-enhancing features ensure personnel safety.

**Deep 23" interior** easily accommodates large micro and analytical balances.

**True bag-in/bag-out filter disposal system** allows the HEPA filter to be safely removed and replaced by a certified technician. The HEPA filter and bag are easily accessed by removing the front panel.

**Built-in Guardian™ 1000 Digital or Guardian™ Airflow Monitor (not shown)** alerts the user to face velocities outside of preset range. The Guardian 1000 Digital Monitor has an RS232 port for connection to a user-supplied computer.

**Tempered safety glass front sash and sides** offer excellent visibility and protection. Glass provides improved fire, scratch and chemical resistance than acrylic and dissipates static charge.

**Patented\* rear baffle with zones of perforations** promotes horizontal laminar airflow to maximize containment.

**Side-entry air foils** allow air to sweep across the interior glass surfaces to enhance containment.

**Glare-free fluorescent lighting.**

**Built-in exhaust HEPA filter,** 99.99% efficient on particles 0.3 micron in size, can be easily verified by a certified technician.

**ETL-listed.** All 115 volt, 60 Hz models carry the ETL mark signifying that they are certified to UL 3101-1/61010-1 and CAN/CSA C22.2 No. 1010.1.

**Upper dilution air supply** introduces room air at the top of the sash to dilute contaminants in the upper chamber and bathes the back of the sash with clean air.

**Front-mounted Minihelic pressure gauge** monitors pressure differential across the HEPA filter to help determine filter loading.

**Validation package available at [www.labconco.com](http://www.labconco.com).** Contains SafeBridge Consultants, Inc. and modified ASHRAE 110-1995 Test Reports; Installation Qualification/Operation Qualification (IQ/OQ) Protocol; and Maintenance Log.

**Exhaust collar** allows connection to 6" diameter ductwork and remote blower.

**Sturdy glacier white and gray, dry powder epoxy-coated aluminum frame and steel rear plenum and baffle** dissipate static charge and provide durability and better chemical resistance compared to acrylic models. No unreliable plastic-to-plastic bonding is used.

**Ergonomic 10° angled sash** allows a closer view, reduces glare and provides a more comfortable operating position than vertical sashes. The hinged sash pivots upward and locks to a loading height of 20". A wiping seal helps to keep contaminants contained.

**Front-mounted light and blower switches.** Blower switch is connected to an electrical relay and junction box for easy installation.

**Upper containment sash foil** bleeds air into the enclosure to direct concentrations of contaminants away from the operator's breathing zone.

**Upper diffuser screen** located above the work area provides protection for the HEPA filter.

**9.4" high sash opening**

**Patented\* Clean-Sweep™ air foil** allows air to sweep the work surface for maximum containment. Airflow openings pull inflow air from under the air foil so that clean air continually flows through the air foil creating a constant barrier of protection from contaminants. The air foil's ergonomic design provides a comfortable position for the operator's forearms.

**Modified ASHRAE 110-1995 conformity.**

**Two utility ports** allow passage of tubing, electrical cords and interface cables from inside to back exterior for connection to services.

**Particulate containment** independently verified by SafeBridge Consultants, Inc.

**CE mark.** All 230 volt, 50 Hz models conform to the CE (European Community) requirements for electrical safety and electromagnetic compatibility.



 Exclusive feature

\*U.S. Patent No. 6,461,233





## XPert™ Filtered Balance Stations

### SPECIFICATIONS



XPert Filtered Balance Station 3940301 is shown with Black Solid Epoxy Dished Work Surface 3909902 and Protector Standard Storage Cabinets 9900300. Work surface, base cabinet, blower and ductwork must be ordered separately.



- Upper diffuser screen.
- Pre-wired fluorescent lamp and switches for remote blower and light. Blower switch is connected to an electrical relay and junction box behind the front panel.
- 1/4" thick tempered safety glass front sash and sides.
- 9.4" high sash opening.
- Ergonomic 10° angled and hinged sash pivots upward, locks to a loading height of 20" and has a wiping seal to contain contaminants.
- Two utility ports.
- Particulate containment independently verified by SafeBridge Consultants, Inc.
- Validation package available at [www.labconco.com](http://www.labconco.com) containing SafeBridge Consultants, Inc. and modified ASHRAE 110-1995 Test Reports; Installation Qualification/Operation Qualification (IQ/OQ) Protocol; and Maintenance Log.
- 6.06" ID exhaust collar.

**Models 3940201, 3940221, 3940301, 3940321, 3940401 and 3940421 include:**

- Guardian Airflow Monitor that continuously monitors airflow and has two LED lights to indicate when airflow is within or outside set point range. The green LED glows when airflow is within set point range. The red LED glows and an audible alarm sounds when airflow is outside set point range.

**Models 3940202, 3940222, 3940302, 3940322, 3940402 and 3940422 include:**

- Guardian 1000 Digital Airflow Monitor that continuously monitors airflow and provides a digital readout of actual face velocity. An audible/visual alarm alerts the operator when airflow is outside set point range. RS232 communications port allows connection to user-supplied computer and may be configured for external input connections such as night setback or external alarm and up to three output relays.

#### All models conform to the following regulations and standards:

- SEFA 1-2002
- Modified ASHRAE 110-1995
- ANSI Z9.5-1993
- UL 3101-1/61010-1
- CAN/CSA C22.2 No. 1010.1

#### All models feature:

- Deep 23" interior to accommodate large micro and analytical balances.
- Ergonomic air foil with aerodynamic Clean-Sweep\* airflow openings.
- Upper containment sash foil.
- Upper dilution air supply.
- Zone-perforated rear baffle.\*
- Side-entry air foils.
- Glacier white and gray, dry powder epoxy-coated aluminum frame and steel rear plenum and baffle. No unreliable plastic-to-plastic bonding is used.
- Exhaust HEPA filter, 99.99% efficient on particles 0.3 micron in size.
- True bag-in/bag-out filter disposal system.
- Minihelic pressure gauge.

#### All models require:

- Work surface. See page 24.
- Supporting base. See page 22.
- Remote blower. See page 26.
- Ductwork. See page 25.

#### Optional accessories for on-site installation include:

- Exhaust Dampers. See page 25.
- Utility Shelves. See page 24.

*Exclusive feature*

\*U.S. Patent No. 6,461,233

Nominal Width	Total Exhaust CFM and Initial Static Pressure (w.g.)**					
	100 fpm	S.P.	80 fpm	S.P.	60 fpm	S.P.
2 Feet	145	.62"-.72"	115	.48"-.57"	85	.35"-.41"
3 Feet	220	.68"-.79"	175	.53"-.62"	130	.37"-.43"
4 Feet	295	.76"-.87"	235	.57"-.66"	175	.40"-.46"

\*\* Static pressure loss through HEPA filter gradually increases as filter loads.



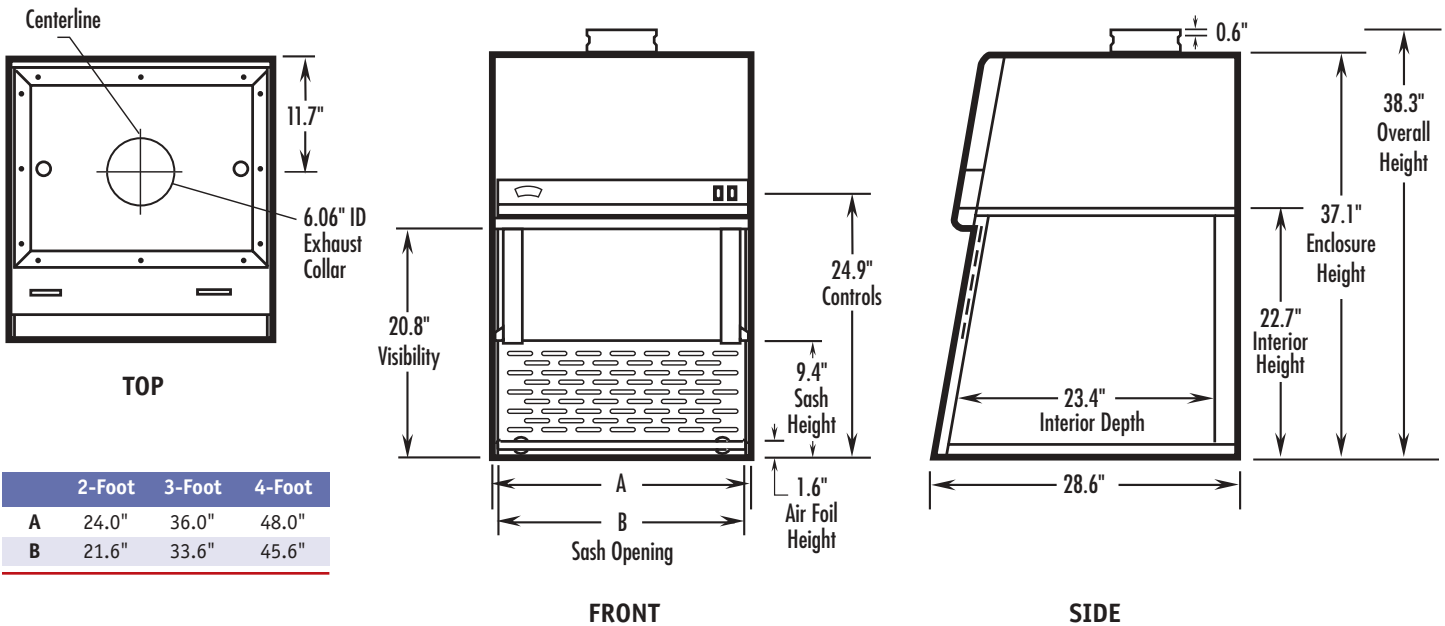
## XPert™ Filtered Balance Stations

### ORDERING INFORMATION & DIMENSIONAL DATA

#### XPert™ Filtered Balance Stations

Nominal Width	Catalog Number	Overall Dimensions	Interior Dimensions	Electrical Requirements	Built-In Airflow Monitor	Shipping Weight lbs./kg
2'	<b>3940201</b>	24.0" w x 28.6" d x 38.3" h	21.6" w x 23.4" d x 22.7" h	115 volts, 60 Hz	Guardian	115/52.2
2'	<b>3940202</b>	24.0" w x 28.6" d x 38.3" h	21.6" w x 23.4" d x 22.7" h	115 volts, 60 Hz	Guardian 1000 Digital	115/52.2
2'	<b>3940221*</b>	24.0" w x 28.6" d x 38.3" h	21.6" w x 23.4" d x 22.7" h	230 volts, 50 Hz no plug	Guardian	115/52.2
2'	<b>3940222*</b>	24.0" w x 28.6" d x 38.3" h	21.6" w x 23.4" d x 22.7" h	230 volts, 50 Hz no plug	Guardian 1000 Digital	115/52.2
3'	<b>3940301</b>	36.0" w x 28.6" d x 38.3" h	33.6" w x 23.4" d x 22.7" h	115 volts, 60 Hz	Guardian	150/68.0
3'	<b>3940302</b>	36.0" w x 28.6" d x 38.3" h	33.6" w x 23.4" d x 22.7" h	115 volts, 60 Hz	Guardian 1000 Digital	150/68.0
3'	<b>3940321*</b>	36.0" w x 28.6" d x 38.3" h	33.6" w x 23.4" d x 22.7" h	230 volts, 50 Hz no plug	Guardian	150/68.0
3'	<b>3940322*</b>	36.0" w x 28.6" d x 38.3" h	33.6" w x 23.4" d x 22.7" h	230 volts, 50 Hz no plug	Guardian 1000 Digital	150/68.0
4'	<b>3940401</b>	48.0" w x 28.6" d x 38.3" h	45.6" w x 23.4" d x 22.7" h	115 volts, 60 Hz	Guardian	185/83.9
4'	<b>3940402</b>	48.0" w x 28.6" d x 38.3" h	45.6" w x 23.4" d x 22.7" h	115 volts, 60 Hz	Guardian 1000 Digital	185/83.9
4'	<b>3940421*</b>	48.0" w x 28.6" d x 38.3" h	45.6" w x 23.4" d x 22.7" h	230 volts, 50 Hz no plug	Guardian	185/83.9
4'	<b>3940422*</b>	48.0" w x 28.6" d x 38.3" h	45.6" w x 23.4" d x 22.7" h	230 volts, 50 Hz no plug	Guardian 1000 Digital	185/83.9

\* International electrical configuration





Requires  
Ductwork  
and  
Blower



## XPert™ Balance Enclosures

### FEATURES & BENEFITS

XPert Balance Enclosures provide user protection by keeping powders, particulates and fumes contained during weighing procedures. Interior dimensions accommodate large micro and analytical balances. With their low profile and widths of 2', 3' and 4', these enclosures exhaust less tempered room air than traditional fume hoods, conserving energy. They have no switches, wiring or service fixtures that can add significant costs.

**XPert Balance Enclosures require venting.** They may be connected to a remote blower and exhausted to the outside. When connected to the XPert Balance Enclosure, FilterMate Portable Exhausters provide an alternative to outside ducting. With a HEPA and/or carbon filter installed, the FilterMate rids the work area of hazardous particulates and/or fumes and vapors. No outside ducting is required.

**Deep 23" interior** easily accommodates large micro and analytical balances.

**Patented\* rear baffle with zones of perforations** promotes horizontal laminar airflow to maximize containment.

**Sturdy glacier white and gray, dry powder epoxy-coated aluminum frame and steel rear plenum and baffle** dissipate static charge and provide durability and better chemical resistance compared to acrylic models. No unreliable plastic-to-plastic bonding is used.

**Tempered safety glass front sash, sides and top** offer excellent visibility, ambient light and protection. Glass provides improved fire, scratch and chemical resistance than acrylic and dissipates static charge. For additional illumination, the accessory Fluorescent Light may be mounted atop the enclosure (sold separately).

**Flexible exhaust options.** 2" x 10" rectangular exhaust openings on the top and bottom allow the XPert Balance Enclosure to be connected to ductwork for exhausting to the outside or to a FilterMate™ Portable Exhauster for filtered removal of powders, particulates or fumes. Using the bottom exhaust opening keeps ductwork hidden, maximizing room visibility.

**Upper dilution air supply** introduces room air at the top of the sash to dilute contaminants in the upper chamber and bathes the back of the sash with clean air.

**Ergonomic 20° angled sash** allows a closer view, reduces glare and provides a more comfortable operating position than vertical sashes. The hinged sash pivots upward and locks to a loading height of 20".

**Upper containment sash foil** bleeds air into the enclosure to direct concentrations of contaminants away from the operator's breathing zone.

**Side-entry air foils** allow air to sweep across the interior glass surfaces to enhance containment.

**8" high sash opening** limits exhaust demand, conserves costly tempered room air and requires a smaller remote blower than most fume hoods.



**Particulate containment** independently verified by SafeBridge Consultants, Inc.

**Validation package at [www.labconco.com](http://www.labconco.com) available.** Contains SafeBridge Consultants, Inc. and ECT, Inc. Test Reports; Installation Qualification/Operation Qualification (IQ/OQ) Protocol; and Maintenance Log.

**Two utility ports** allow passage of tubing, electrical cords and interface cables from inside to back exterior for connection to services.

**Modified ASHRAE 110-1995** conformity independently verified by ECT, Inc.

**Built-in Guardian™ 1000 Digital or Guardian™ Jr. Airflow Monitor** alerts the user to face velocities outside or preset range. The Guardian 1000 Digital Monitor has an RS232 port for connection to a user-supplied computer.

**Exclusive feature**

\*U.S. Patent No. 6,461,233

**Patented\* Clean-Sweep™ air foil** allows air to sweep the work surface for maximum containment. Airflow openings pull inflow air from under the air foil so that clean air continually flows through the air foil creating a constant barrier of protection from contaminants. The air foil's ergonomic design provides a comfortable position for the operator's forearms.



## XPert™ Balance Enclosures

### SPECIFICATIONS



*XPert Filtered Balance Enclosure 3930302 is shown with Black Solid Epoxy Work Surface 3908401 and Protector Standard Storage Cabinet 9900100. Work Surface, base cabinet, blower and ductwork or Filtermate Portable Exhauster must be ordered separately.*



**Requires Ductwork and Blower**

#### All models feature:

- Deep 23" interior to accommodate large micro and analytical balances.
- Ergonomic air foil with aerodynamic Clean-Sweep\* airflow openings.
- Upper dilution air supply.
- Upper containment sash foil.
- Zone-perforated rear baffle.\*
- Side-entry air foils.
- Glacier white and gray, dry powder epoxy-coated aluminum frame and steel rear plenum and baffle. No unreliable plastic-to-plastic bonding is used.
- Tempered safety glass front sash, sides and top.
  - 8" high sash opening.
  - Ergonomic 20° angled and hinged sash pivots upward and locks to a loading height of 20".
  - Two utility ports.
- 2" x 10" rectangular exhaust openings on the top and bottom.

- Particulate containment independently verified by SafeBridge Consultants, Inc.
- Modified ASHRAE 110-1995 conformity independently verified by ECT, Inc.
- Validation package available at [www.labconco.com](http://www.labconco.com) containing SafeBridge Consultants, Inc. and ECT, Inc. Test Reports; Installation Qualification/Operation Qualification (IQ/OQ) Protocol; and Maintenance Log.

#### All models conform to the following regulations and standards:

- SEFA 1-2002
- Modified ASHRAE 110-1995

- ANSI Z9.5-1993

#### Models 3930201, 3930221, 3930301, 3930321, 3930401 and 3930421 include:

- Guardian Jr. Airflow Monitor that continuously monitors airflow and has two LED lights to indicate when airflow is within or outside set point range. The green LED glows when airflow is within set point range. The red LED glows and an audible alarm sounds when airflow is outside set point range.

#### Models 3930202, 3930222, 3930302, 3930322, 3930402 and 3930422 include:

- Guardian 1000 Digital Airflow Monitor that continuously monitors airflow and provides a digital readout of actual face velocity. An audible/visual alarm alerts the operator when airflow is outside set point range. RS232 communications port allows connection to user-supplied computer and may be configured for external input connections such as night setback or external alarm and up to three output relays.

#### All models require:

- FilterMate Portable Exhauster or remote blower (each sold separately). See pages 20, 21 and 26.
- Work surface. See page 24.
- Supporting base. See page 22.

#### Optional accessories for on-site installation include:

- Fluorescent Lights. See page 25.
- Utility Shelves. See page 24.
- Transition Adapters. See page 25.
- Exhaust Dampers. See page 25.

Exclusive feature

\*U.S. Patent No. 6,461,233

Nominal Width	Total Exhaust CFM and Initial Static Pressure (w.g.)**					
	100 fpm	S.P.	80 fpm	S.P.	60 fpm	S.P.
2 Feet	120	.05"	95	.03"	70	.02"
3 Feet	185	.10"	145	.06"	110	.04"
4 Feet	250	.16"	200	.10"	150	.06"

\*\* Static pressure loss through HEPA filter gradually increases as filter loads.



# XPert™ Balance Enclosures

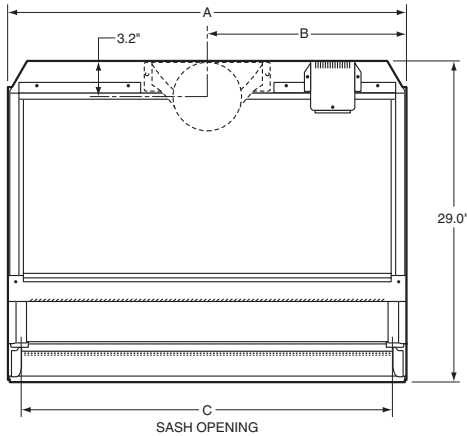
## ORDERING INFORMATION & DIMENSIONAL DATA

### XPert™ Balance Enclosures

Nominal Width	Catalog Number	Overall Dimensions*	Interior Dimensions	Electrical Requirements	Built-In Airflow Monitor*	Shipping Weight lbs./kg
2'	3930201	24.0" w x 29.0" d x 28.6" h	22.8" w x 23.0" d x 22.3" h	115 volts, 60 Hz	Guardian Jr.	50/22.7
2'	3930202	24.0" w x 29.0" d x 28.6" h	22.8" w x 23.0" d x 22.3" h	115 volts, 60 Hz	Guardian 1000 Digital	50/22.7
2'	3930221**	24.0" w x 29.0" d x 28.6" h	22.8" w x 23.0" d x 22.3" h	230 volts, 50 Hz	Guardian Jr.	50/22.7
2'	3930222**	24.0" w x 29.0" d x 28.6" h	22.8" w x 23.0" d x 22.3" h	230 volts, 50 Hz	Guardian 1000 Digital	50/22.7
3'	3930301	36.0" w x 29.0" d x 28.6" h	34.8" w x 23.0" d x 22.3" h	115 volts, 60 Hz	Guardian Jr.	70/31.8
3'	3930302	36.0" w x 29.0" d x 28.6" h	34.8" w x 23.0" d x 22.3" h	115 volts, 60 Hz	Guardian 1000 Digital	70/31.8
3'	3930321**	36.0" w x 29.0" d x 28.6" h	34.8" w x 23.0" d x 22.3" h	230 volts, 50 Hz	Guardian Jr.	70/31.8
3'	3930322**	36.0" w x 29.0" d x 28.6" h	34.8" w x 23.0" d x 22.3" h	230 volts, 50 Hz	Guardian 1000 Digital	70/31.8
4'	3930401	48.0" w x 29.0" d x 28.6" h	46.8" w x 23.0" d x 22.3" h	115 volts, 60 Hz	Guardian Jr.	90/40.8
4'	3930402	48.0" w x 29.0" d x 28.6" h	46.8" w x 23.0" d x 22.3" h	115 volts, 60 Hz	Guardian 1000 Digital	90/40.8
4'	3930421*	48.0" w x 29.0" d x 28.6" h	46.8" w x 23.0" d x 22.3" h	230 volts, 50 Hz	Guardian Jr.	90/40.8
4'	3930422*	48.0" w x 29.0" d x 28.6" h	46.8" w x 23.0" d x 22.3" h	230 volts, 50 Hz	Guardian 1000 Digital	90/40.8

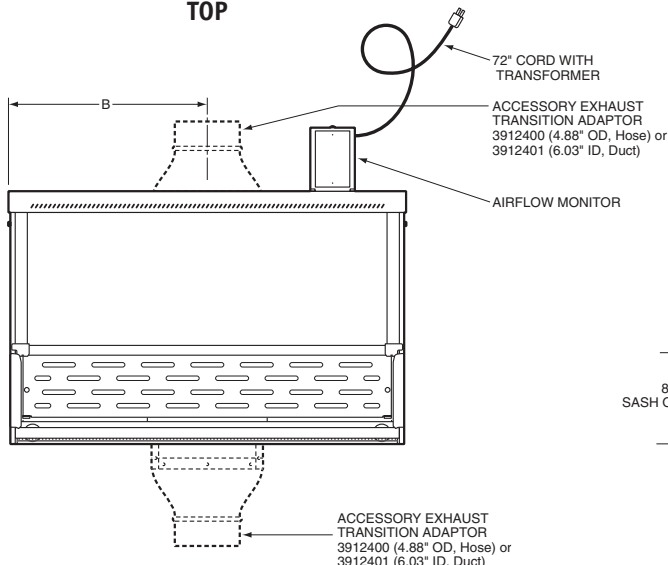
\* Contact Labconco for ordering information on XPert Balance Enclosures with 32" overall height or without airflow monitors.

\*\*International electrical configuration

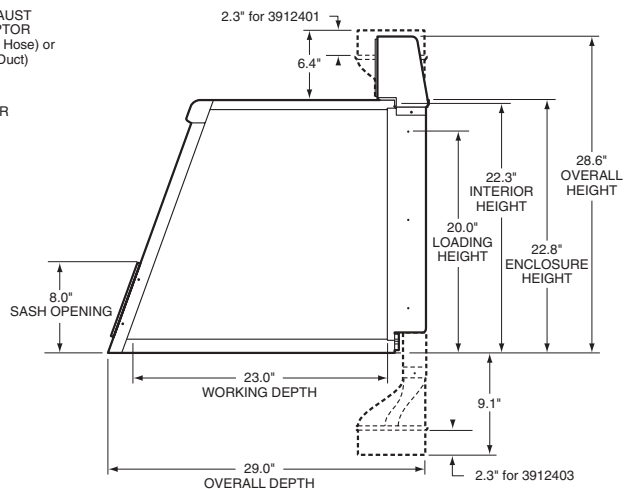


**TOP**

	2-Foot	3-Foot	4-Foot
<b>A</b>	24.0"	36.0"	48.0"
<b>B</b>	12.0"	18.0"	24.0"
<b>C</b>	21.6"	33.6"	45.6"



**FRONT**



**SIDE**



## Xpert™ Easy-Order SPECIFICATIONS



*Xpert Easy-Order 3960302 is shown with Protector Standard Storage Cabinet 9900100. Base Cabinet must be ordered separately.*



- Modified ASHRAE 110-1995 conformity independently verified by ECT, Inc.
- Validation package available at [www.labconco.com](http://www.labconco.com) containing SafeBridge Consultants, Inc. and ECT, Inc. Test Reports; Installation Qualification/Operation Qualification (IQ/OQ) Protocol; and Maintenance Log.

### Models 3960201, 3960301 and 3960401 include:

- Guardian Jr. Airflow Monitor that continuously monitors airflow and has two LED lights to indicate when airflow is within or outside set point range. The green LED glows when airflow is within set point range. The red LED glows and an audible alarm sounds when airflow is outside set point range.

### Models 3960202, 3960302 and 3960422 include:

- Guardian 1000 Digital Airflow Monitor that continuously monitors airflow and provides a digital readout of actual face velocity. An audible/visual alarm alerts the operator when airflow is outside set point range. RS232 communications port allows connection to user-supplied computer and may be configured for external input connections such as night setback or external alarm and up to three output relays.

### Features of the FilterMate Portable Exhauster 3970000:

- Compact, corrosion-resistant housing of glacier white and light gray, dry powder, epoxy-coated steel with vibration-isolated rubber feet.
- Variable-speed, non-sparking motorized impeller.
- Quiet operation. Oversized HEPA filter, efficient impeller and perforated exhaust cover work together to provide lower system exhaust velocity and noise pressure levels.

Exhaust CFM	Noise Pressure dB(A)
100	45-47
150	51-54
200	56-61
250	63-65

- Inherently safe design. A negative pressure plenum surrounds the positive pressure impeller so that if a leak occurs, the unfiltered air is captured and refiltered.
- Capable of efficiently filtering up to 250 CFM for HEPA filtration.
  - Front-mounted rocker switch to control power to the blower.
- Rear-mounted, auxiliary electrical outlet that may be connected to an airflow monitor or other user-supplied accessories.
- Provides 100 fpm face velocity for 2', 3' or 4' enclosure.
  - HEPA filter, 99.99% efficient on particulates 0.3 micron in size.
- True bag-in/bag-out filter disposal system for safely removing and replacing the filter without detaching the hose. The HEPA filter may be easily accessed by removing the exhaust cover for field leak testing by a certified technician.
  - Included: 8 feet of 5" ID flexible, chemical-resistant polypropylene gray hose; two clamps and a 4.88" OD Upper Transition Adapter for connection to XPert Balance Enclosure or Protector XVS Ventilation Station.
  - IEC 3-wire electrical cord with plug.

### All models conform to the following regulations and standards:

- SEFA 1-2002
- Modified ASHRAE 110-1995
- ANSI Z9.5-1993
- UL 3101-1/61010-1
- CAN/CSA C22.2 No. 1010.1

### All models require:

- Supporting base. See page 22.

### Optional accessories for on-site installation include:

- Fluorescent Lights. See page 25.
- Utility Shelves. See page 24.
- Transitions Adapters. See page 25.
- Exhaust Dampers. See page 25.
- Replacement HEPA Filter. See page 23.
- Replacement Bag for HEPA Filter Bag-In/Bag-Out. See page 23.

### All models include:

- XPert Balance Enclosure
- FilterMate Portable Exhauster 3970000
- Black Solid Epoxy Dished Work Surface

### Features of the XPert Balance Enclosure:

- Deep 23" interior to accommodate large micro and analytical balances.
- Ergonomic air foil with aerodynamic Clean-Sweep\* airflow openings.
- Upper containment sash foil.
- Upper dilution air supply.
- Zone-perforated rear baffle.\*
- Side-entry air foils.
- Glacier white and gray, dry powder epoxy-coated aluminum frame and steel rear plenum and baffle. No unreliable plastic-to-plastic bonding is used.
- Tempered safety glass front sash, sides and top.
  - 8" high sash opening.
  - Ergonomic 20° angled and hinged sash pivots upward and locks to a loading height of 20".
  - Two utility ports.
- 2" x 10" rectangular exhaust openings on the top and bottom.
- Particulate containment independently verified by SafeBridge Consultants, Inc.

Exclusive feature

\*U.S. Patent No. 6,461,233



## XPert™ Easy-Order ORDERING INFORMATION

Nominal Width	Total Exhaust CFM and Initial Static Pressure (w.g.)*					
	100 fpm	S.P.	80 fpm	S.P.	60 fpm	S.P.
2 Feet	120	.05"	95	.03"	70	.02"
3 Feet	185	.10"	145	.06"	110	.04"
4 Feet	250	.16"	200	.10"	150	.06"

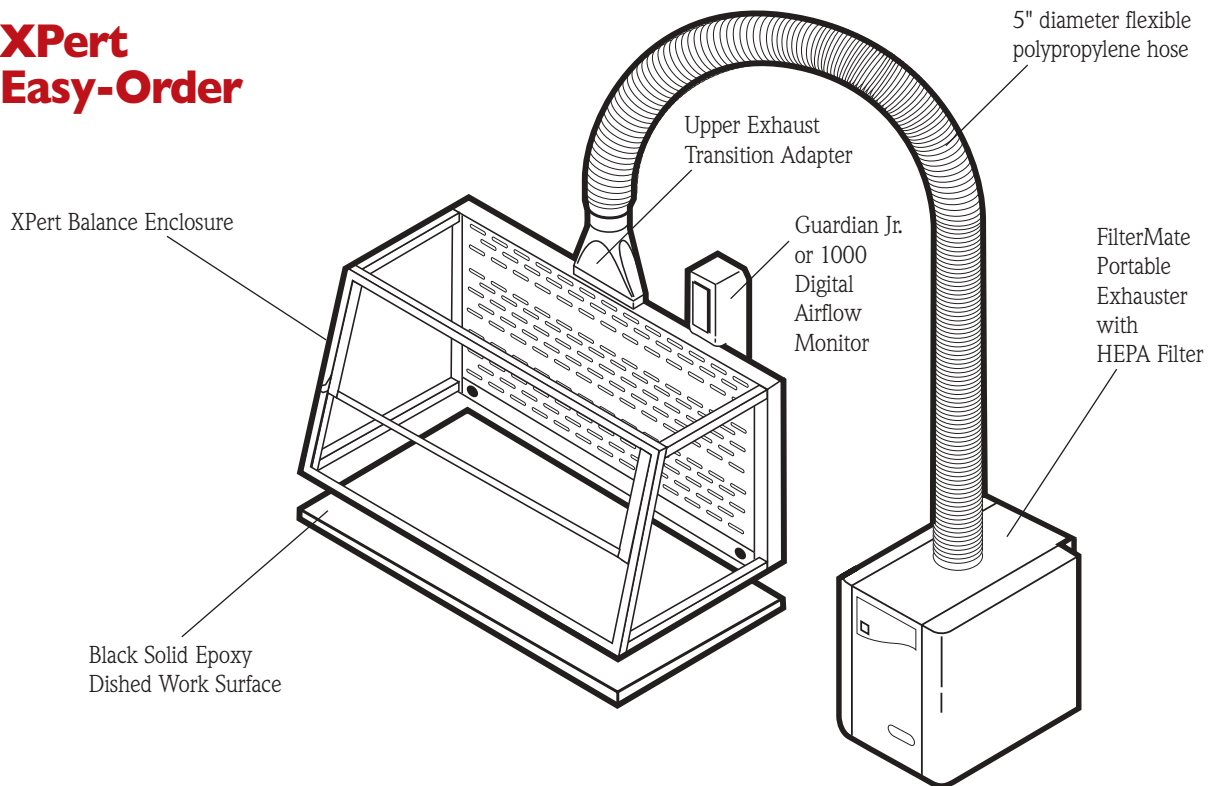
\* Static pressure loss through HEPA filter gradually increases as filter loads.

### XPert Balance Easy-Order (all include FilterMate Portable Exhauster with HEPA Filter #3970000)

Nominal Width**	Catalog Number	Includes	Electrical Requirements	Built-In Airflow Monitor	Shipping Weight lbs./kg
2'	<b>3960201</b>	2' XPert Enclosure #3930201, FilterMate #3970000, 2' Black Work Surface #3908400	115 volts, 60 Hz	Guardian Jr.	138/62.6
2'	<b>3960202</b>	2' XPert Enclosure #3930202, FilterMate #3970000, 2' Black Work Surface #3908400	115 volts, 60 Hz	Guardian 1000 Digital	138/62.6
3'	<b>3960301</b>	3' XPert Enclosure #3930301, FilterMate #3970000, 3' Black Work Surface #3908401	115 volts, 60 Hz	Guardian Jr.	182/82.6
3'	<b>3960302</b>	3' XPert Enclosure #3930302, FilterMate #3970000, 3' Black Work Surface #3908401	115 volts, 60 Hz	Guardian 1000 Digital	182/82.6
4'	<b>3960401</b>	4' XPert Enclosure #3930401, FilterMate #3970000, 4' Black Work Surface #3908402	115 volts, 60 Hz	Guardian Jr.	226/102.5
4'	<b>3960402</b>	4' XPert Enclosure #3930402, FilterMate #3970000, 4' Black Work Surface #3908402	115 volts, 60 Hz	Guardian 1000 Digital	226/102.5

\*\* See Dimensional Data on XPert Balance Enclosures on page 17 and on FilterMate Portable Exhausters on page 21.

## XPert Easy-Order





# FilterMate™ Portable Exhausters

## SPECIFICATIONS



FilterMate Portable Exhauster #3970000. Includes HEPA filter.



FilterMate Portable Exhauster #3970001. Requires carbon filter (not included).



FilterMate Portable Exhauster #3970002. Includes HEPA filter and thimble connection. Requires ducting to outside.



FilterMate Portable Exhauster #3970003. Includes HEPA filter. Requires carbon filter (not included).

An accessory for the XPert™ Balance Enclosure or Protector® XVS Ventilation Station, the FilterMate uses a HEPA filter, carbon filter or a combination of both filters to remove hazardous powders, particulates or vapors from the exhaust air stream, returning filtered air to the environment.

### All models feature:

- Compact, corrosion-resistant housing of glacier white and light gray, dry powder, epoxy-coated steel with rubber feet.
- Variable-speed, non-sparking motorized impeller.
- ☒ Quiet operation. Oversized HEPA filter, efficient impeller and perforated exhaust cover work together to provide lower system exhaust velocity and noise pressure levels.

Exhaust CFM	Noise Pressure dB(A)
100	45-47
150	51-54
200	56-61
250	63-65

- ☒ Inherently safe design. A negative pressure plenum surrounds the positive pressure impeller so that if a leak occurs, the unfiltered air is captured and refiltered.
- ☒ Sized for XPert Balance Enclosures and Protector XVS Ventilation Stations. Capable of efficiently filtering up to 250 CFM for HEPA or carbon filtration; up to 200 CFM for combination HEPA/carbon filtration (60-100 fpm depending on enclosure model).
- Front-mounted rocker switch to control power to the blower.
- ☒ Rear-mounted, auxiliary electrical outlet that may be connected to an airflow monitor or other user-supplied accessories.

☒ Only one FilterMate is required for all 2', 3' and 4' wide x 22.75" high enclosures. Each FilterMate provides up to 100 fpm face velocity for 2', 3' or 4' enclosure.

- Included: 8 feet of 5" ID flexible gray polypropylene hose, two clamps and a 4.88" OD Upper Transition Adapter for connection to the top of the XPert Balance Enclosure or Protector XVS Ventilation Station.
- IEC 3-wire electrical cord with plug.

### All models conform to the following regulations and standards:

- UL 3101-1/61010-1
- CAN/CSA C22.2 No. 1010.1
- CE Conformity Marking (230 volt models)

### Models 3970000, 3970020, 3970002, 3970022, 3970003 and 3970023 feature:

- HEPA filter, 99.99% efficient on particulates 0.3 micron in size.
- ☒ \* True bag-in/bag-out filter disposal system for safely removing and replacing the filter without detaching the hose. The HEPA filter may be easily accessed by removing the exhaust cover for field leak testing by a certified technician.

### Models 3970002 and 3970022 feature:

- 6.06" ID thimble connection from the FilterMate to an existing house exhaust system for added safety.

### Models 3970001, 3970021, 3970003 and 3970023 require (not included):

- Carbon Filter. Organic Vapor, Formaldehyde or Ammonia Filters are offered. See page 23.

### Optional Accessories

- Replacement HEPA Filter. See page 23.
- Replacement Bag for Bag-In/Bag-Out HEPA Filter. See page 23.



☒ Exclusive feature



# FilterMate™ Portable Exhausters

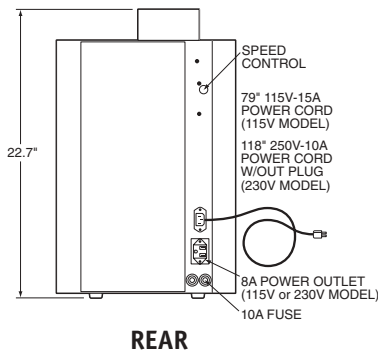
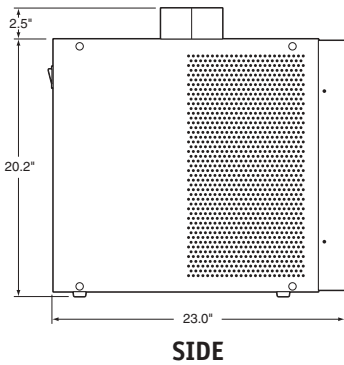
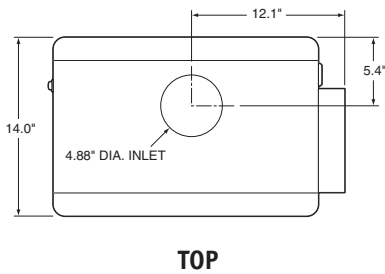
## ORDERING INFORMATION & DIMENSIONAL DATA

### FilterMate™ Portable Exhausters

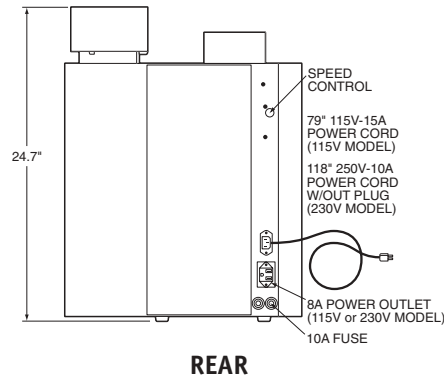
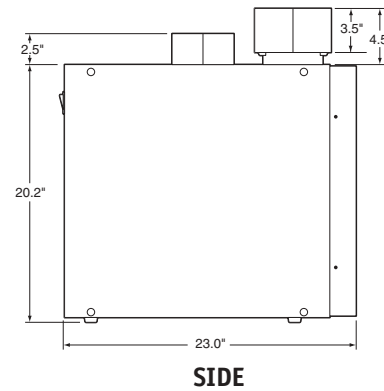
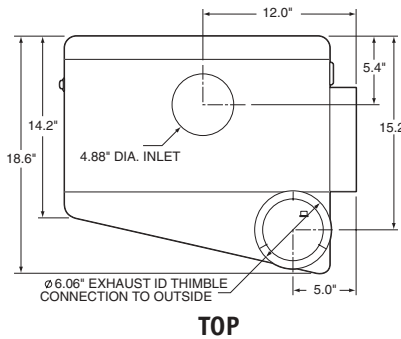
Catalog Number	Filter Usage	Overall Dimensions	Electrical Requirements	Airflow Potential	Exhaust Connection	Shipping Weight lbs./kg
3970000	HEPA included	14.0" w x 23.0" d x 22.7" h	115 volts, 60 Hz	250 CFM (60-100 fpm)	None. Room exhaust.	50/22.7
3970020*	HEPA included	14.0" w x 23.0" d x 22.7" h	230 volts, 50 Hz	250 CFM (60-100 fpm)	None. Room exhaust.	50/22.7
3970001	Carbon required†	14.0" w x 23.0" d x 22.7" h	115 volts, 60 Hz	250 CFM (60-100 fpm)	None. Room exhaust.	48/21.8
3970021*	Carbon required†	14.0" w x 23.0" d x 22.7" h	230 volts, 50 Hz	250 CFM (60-100 fpm)	None. Room exhaust.	48/21.8
3970002	HEPA included	18.6" w x 23.0" d x 24.7" h	115 volts, 60 Hz	250 CFM (60-100 fpm)	6.06" ID Thimble to outside	54/24.5
3970022*	HEPA included	18.6" w x 23.0" d x 24.7" h	230 volts, 50 Hz	250 CFM (60-100 fpm)	6.06" ID Thimble to outside	54/24.5
3970003	HEPA included†† Carbon required†	14.9" w x 23.0" d x 22.7" h	115 volts, 60 Hz	200 CFM (60-100 fpm)**	None. Room Exhaust.	52/23.6
3970023*	HEPA included†† Carbon required†	14.9" w x 23.0" d x 22.7" h	230 volts, 50 Hz	200 CFM (60-100 fpm)**	None. Room Exhaust.	52/23.6

\* International electrical configuration † Carbon Filter is not included. †† HEPA filter may be removed and substituted with a second carbon filter. \*\* 60-80 fpm on 4' enclosure.

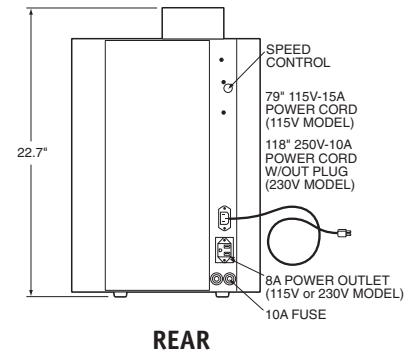
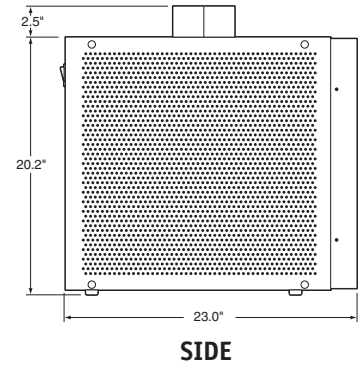
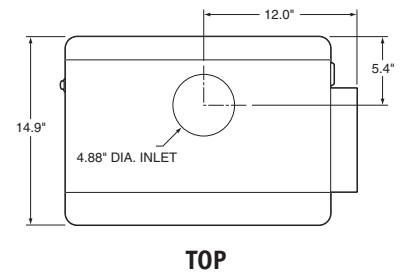
#### Models 3970000, 3970001, 3970020 & 3970021



#### Models 3970002 & 3970021



#### Models 3970003 & 3970023





## Protector® Standard Storage Cabinets



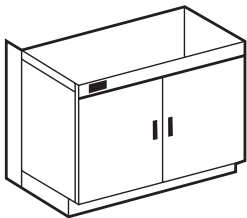
Protector Standard Storage Cabinet 9900000, 48" wide, with dual doors.

Protector Standard Storage Cabinets support XPert Enclosures and may be used for storage of supplies and small laboratory instruments.

### Features:

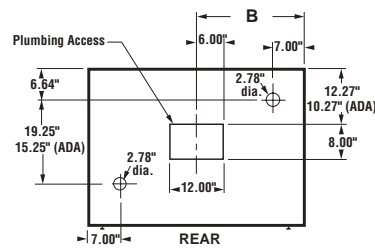
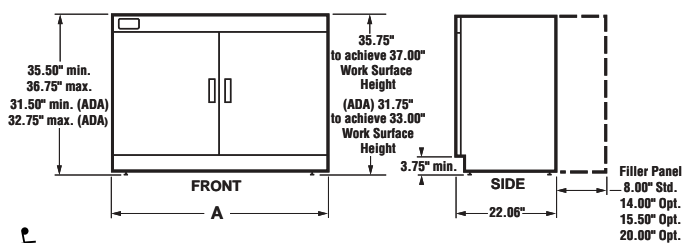
- Support XPert Filtered Balance Systems, Filtered Balance Stations and Balance Enclosures.
- Durable epoxy-coated steel construction.
- Attractive glacier white exterior complements laboratory casework and XPert Enclosures.
- Manual-closing, non-locking door(s).
- Include four leveling feet and one 8" filler panel to increase cabinet depth from 22" to 30".
- **Work surface is required** (sold separately). See page 24.

### Ordering Information



Catalog #	Cabinet Dimensions (w x d x h)	Depth with standard filler panel	Door(s)	Shipping Wt. lbs./kg
9900000	48" x 22" x 35.5" to 36.75" (122 x 56 x 90 to 93 cm)	30" (76 cm)	Dual	260/118
9900100	36" x 22" x 35.5" to 36.75" (91 x 56 x 90 to 93 cm)	30" (76 cm)	Dual	180/82
9900300	24" x 22" x 35.5" to 36.75" (61 x 56 x 90 to 93 cm)	30" (76 cm)	Single Right Hinge	130/59
9900500	12" x 22" x 35.5" to 36.75" (30 x 56 x 90 to 93 cm)	30" (76 cm)	Single Right Hinge	65/29
9900600	24" x 22" x 35.5" to 36.75" (61 x 56 x 90 to 93 cm)	30" (76 cm)	Single Left Hinge	130/59
9900800	12" x 22" x 35.5" to 36.75" (30 x 56 x 90 to 93 cm)	30" (76 cm)	Single Left Hinge	65/29
9904000	24" x 22" x 31.5" to 32.75" (61 x 56 x 80 to 83 cm)	30" (76 cm)	Single Right Hinge	120/54
9904200	12" x 22" x 31.5" to 32.75" (30 x 56 x 80 to 83 cm)	30" (76 cm)	Single Right Hinge	60/27
9904300	24" x 22" x 31.5" to 32.75" (61 x 56 x 80 to 83 cm)	30" (76 cm)	Single Left Hinge	120/54
9904500	12" x 22" x 31.5" to 32.75" (30 x 56 x 80 to 83 cm)	30" (76 cm)	Single Left Hinge	60/27

### Dimensional Data



Model	A	B
48"	48"	24"
36"	36"	18"
24"	24"	12"
12"	12"	—
24" ADA	24"	12"
12" ADA	12"	—

Cabinet height meets requirements of the Americans with Disabilities Act.



## FilterMate™ Carbon and HEPA Filters



Organic Carbon Filter  
3923400.



Replacement HEPA Filter  
3707900.

Below is an Application Matrix that provides examples of appropriate uses for Filters expended in the FilterMate Portable Exhauster. Whether or not the FilterMate would be appropriate for your application requires consideration of factors such as the time-weighted exposure limits of your materials. Using Labconco's exclusive Chemical Assessment Program, our technical specialists can help you determine if the XPert Balance Enclosure with FilterMate Portable Exhauster is the right ventilation product for your application and, if so, estimate filter life. To begin the process, please complete the Chemical Usage Assessment Form available

### Ordering Information

Catalog Number	Description	Shipping Weight lbs./kg
3923400	Organic Carbon Filter, Type AC. Contains 12 pounds of granular activated carbon media suitable for organic solvents including acetone, ethyl acetate, toluene and xylene.	13/5.9
3923401	Formaldehyde Carbon Filter, Type CI. Contains 14 pounds of impregnated carbon media suitable for vapors from formaldehyde.	17/7.7
3923402	Ammonia Carbon Filter, Type CX. Contains 16 pounds of impregnated carbon media suitable for ammonia and low molecular weight amines.	21/9.5
6924900	Syringe Kit for carbon saturation detection. Contaminant detector tubes sold separately.*	1/.45
6926000	Formaldehyde Detector Tubes, package of 3.	1/.45
6925700	Ammonia Detector Tubes, package of 3.	1/.45
3707900	Replacement HEPA Filter, 99.99% efficient on particles 0.3 micron in size. It should not be used to capture biohazardous materials or volatile organic material.	10/4.5
3776002	Replacement HEPA Filter Bag-In/Bag-Out Bag to ensure containment of particulate matter during filter changing.	1/.45

### Application Matrix

For FilterMate Models:	3970001 & 3970021			3970003 & 3970023	3970000, 3970020, 3970002, & 3970022 HEPA
	Type/Configuration:	Organic	Ammonia	Formaldehyde	
Asbestos handling					•
Combination dry and liquid chemicals				•	
Drug compounding/research				•	•
Endoscopy instrument cleaning			•		
Histology/cytology tissue staining, coverslipping	•				
Histology/pathology				•	
Hormone research				•	•
Non-biohazardous microbiological samples with trace chemicals				•	
Particulates in conjunction with chemical agents				•	
Pathology/tissue grossing			•	•	
Photo-engraving		•			
Plastics production		•			
Pollen handling					•
Soldering				•	•
Solvent cleaning	•				
Solvent welding/gluing	•				
Weighing chemical powders				•	•

\* Contaminant detector tubes indicate the presence of a specific set of contaminants with a color change. Labconco offers Formaldehyde and Ammonia Detector Tubes. Detector tubes for organic vapors may be ordered from your laboratory supply distributor.

\*\* Carbon filter type varies based on application.

† HEPA filter is placed above the carbon filter on the FilterMate so that particulate contaminants are removed first.



## XPert™ Line of Balance Enclosures

### ACCESSORIES



#### Trace Odor Carbon Filters for XPert Filtered Balance Systems

For easy installation atop the XPert Filtered Balance System. Filters trap non-volatile nuisance odors and vapors from samples or minute quantities of chemicals. Whether or not a Trace Odor Carbon Filter would be appropriate for your application requires consideration of factors such as the time-weighted exposure limits of organic solvents, formaldehyde, ammonia or amines. Using Labconco's exclusive chemical assessment program, our technical specialists can help you determine if the XPert Filtered Balance System with Trace Odor Carbon Filter is right for your applications and, if so, estimate filter life. To begin the process, please complete the Chemical Usage Assessment Form available on our website

Catalog #	Description	For use with:	Shipping Wt. lbs./kg
3937200	Organic, 5.5 lbs. activated carbon	2-Ft XPert System	6/2.7
3937300	Organic, 9.2 lbs. activated carbon	3-Ft XPert System	10/4.5
3937400	Organic, 12.9 lbs. activated carbon	4-Ft XPert System	13/5.9
3937201	Formaldehyde, 7.0 lbs. impregnated carbon	2-Ft XPert System	7.5/3.4
3937301	Formaldehyde, 12.0 lbs. impregnated carbon	3-Ft XPert System	12.5/5.7
3937401	Formaldehyde, 16.8 lbs. impregnated carbon	4-Ft XPert System	17/7.7
3937202	Ammonia & Amines, 8.0 lbs. impregnated carbon	2-Ft XPert System	8.5/3.9
3937302	Ammonia & Amines, 13.5 lbs. impregnated carbon	3-Ft XPert System	14/3.9
3937402	Ammonia & Amines, 18.9 lbs. impregnated carbon	4-Ft XPert System	19/8.6



#### Solid Epoxy Work Surfaces

Black chemical-resistant work surfaces are dished to contain spills and contoured to fit the dimensions of XPert Balance Enclosures, Systems and Stations. Contact Labconco for ordering information on gray work surfaces.

Catalog #	Nominal Width	For use with:	Dimensions	Shipping Wt. lbs./kg
3909900	2'	XPert Systems, Stations	24" w x 29" d x 1" thick	50/23
3909901	3'	XPert Systems, Stations	36" w x 29" d x 1" thick	75/34
3909902	4'	XPert Systems, Stations	48" w x 29" d x 1" thick	100/45
3908400	2'	XPert Enclosures	24" w x 26.66" d x 1" thick	48/22
3908401	3'	XPert Enclosures	36" w x 26.66" d x 1" thick	72/33
3908402	4'	XPert Enclosures	48" w x 26.66" d x 1" thick	96/44



#### 3925000 Utility Shelves

For use with any XPert Balance Enclosure, Station or System. Three epoxy-coated steel shelves attach to the rear baffle perforations to hold a printer, utensils and other miscellaneous weighing supplies. The utensil shelf has a scalloped front edge to support spatulas, brushes and other items. Shipping weight 5.0 lbs. (2.2 kg)



#### 3744000 Ergonomic Chair with Armrests

Chair has 6-way articulating seat and back control for personalized adjustment. Pneumatic mechanism adjusts seat height from 18.25" to 25.75". Five-leg black reinforced composite base rests on 2" ball-bearing casters. Aluminum support ring. Removable arm rests. Black vinyl upholstery. Shipping weight 35.0 lbs. (15.9 kg)



## XPert™ Line of Balance Enclosures

### ACCESSORIES



#### 3746000 Adjustable Footrest

Elevates feet and permits angle repositioning while in use. 18.5" w x 11.5" d x 8" high. Shipping weight 6.0 lbs. (2.7 kg)



#### Fluorescent Lights for XPert Balance Enclosures

Rest atop XPert Balance Enclosures for enhanced illumination of the interior. Include auxiliary electrical receptacle with switch for connection of accessories such as a printer.

Catalog #	Description	Shipping Wt. lbs./kg
3909200	115 volts, 60 Hz, 10 amps. Includes IEC, three-wire cord with plug.	15/6.8
3909201*	230 volts, 50 Hz, 10 amps. Includes IEC, three-wire cord. Plug is required (not included).	15/6.8

#### Transition Adapters for XPert Balance Enclosures



Ductwork Catalog #	Description	Shipping Wt. lbs./kg
3912400	Upper Exhaust Transition Adapter, epoxy-coated steel, 2" x 10" rectangular to 5" diameter round for connection to 5" ID hose (included with FilterMate)	5/2.2
3912401	Upper Exhaust Transition Adapter, epoxy-coated steel, 2" x 10" rectangular to 6" diameter round for connection to 6" OD duct	5/2.2
3912402	Lower Exhaust Transition Adapter, epoxy-coated steel, 2" x 10" rectangular to 5" diameter round for connection to 5" ID hose	5/2.2
3912403	Lower Exhaust Transition Adapter, epoxy-coated steel, 2" x 10" rectangular to 6" diameter round for connection to 6" OD duct	5/2.2

See Outside Ducting Options on page 27.

#### Ductwork for XPert Balance Enclosures and XPert Filtered Balance Stations

Catalog #	Description	Equivalent Resistance**	Shipping Wt. lbs./kg
4708600	Thermoplastic Duct, 6.625" OD, 6.250" ID, 10' length	10'	25/11.3
4708900	Female PVC Duct Coupling, 6" nominal diameter, connects two sections of Thermoplastic Duct	0'	4/1.8
4708700	90° PVC Elbow, 6" nominal diameter, has belled end connections to directly receive Thermoplastic Duct or Male Duct Coupling	12'	8/3.6
4861800	Flexible Duct Connection, 7" diameter for use with 6" diameter duct. Includes two hose clamps.	1'	8/3.6
3924000	Exhaust Damper, powder-coated steel, 6" nominal diameter	1'	1/45
4724200	Exhaust Damper, PVC, 6" nominal diameter	1'	1/45
3927500	Flexible Hose, 5" ID, clear urethane, smooth bore with white helix, static dissipative, suitable for pharmaceutical and clean room applications. 8' length. Includes two clamps. For use with FilterMate Portable Exhauster.	8'	3/1.4
3927600	Flexible Hose, 6" ID, black thermoplastic rubber hose with 6.09" ID cuffs, suitable for pharmaceutical and clean room applications. 8' length. Includes two hose clamps. For connecting XPert Balance Enclosure or XPert Filtered Balance Station to house exhaust.	8'	3/1.4
4861700	Blower Transition Adapter, 4.25" x 7.75" rectangle to 6" diameter round	1'	3/1.4
4722200	Zero Pressure PVC Weathercap, 6" nominal diameter, fits atop Thermoplastic duct, permits vertical discharge of effluent air for dispersion away from the building.	5'	20/9.1

See Ductwork Components illustrations on page 27.

\* International electrical configuration

\*\*Equivalent resistance is measured in feet of straight duct.



## XPert™ Line of Balance Enclosures

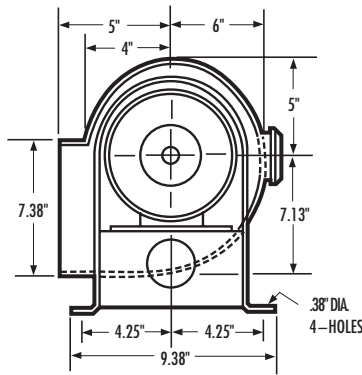
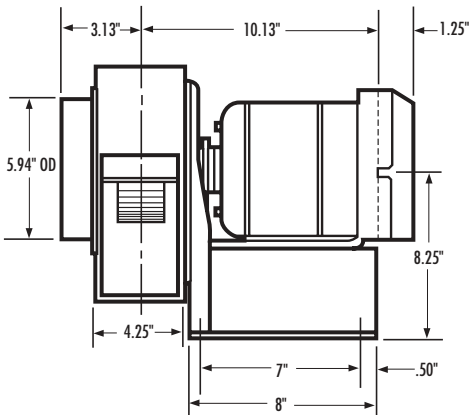
### ACCESSORIES



#### Remote Blowers for Ducted XPert Balance Stations and Enclosures

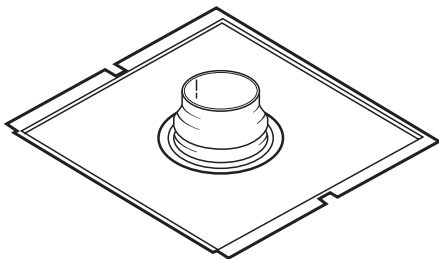
A remote blower is required when ducting the XPert Balance Station or XPert Balance Enclosure (unless connected to the FilterMate Portable Exhauster). The direct drive blower has a 1/4 hp TEFC-type motor and overcomes external static pressure of 0.5" at 420 CFM. Housing and impeller are corrosion-resistant phenolic-coated steel. Blower inlet is 5.94" OD and is sized to accept 6" nominal diameter PVC duct. Blower outlet is 4.25" x 7.38" OD. Dimensions: 14.6" w x 13.5" d x 13.25" high (37.1 x 34.3 x 33.6 cm).

Catalog #	For use with:	Electrical Requirements	Shipping Wt. lbs./kg
4863500	3930201, 3930202, 3930301, 3930302, 3930401, 3930402, 3940201, 3940202, 3940301, 3940302 3940401, 3940402	115 volts, 60 Hz, 4.4 amps	35.0 lbs. (15.9 kg)
7053501*	3930201, 3930202, 3930301, 3930302, 3930401, 3930402, 3940201, 3940202, 3940301, 3940302 3940401, 3940402	115 volts, 60 Hz, 4.4 amps	40.0 lbs. (18 kg)
4863501**	3930221, 3930222, 3930321, 3930322, 3930421, 3930422, 3940221, 3940222, 3940321, 3940322, 3940421, 3940422	115/230 volts, 50 Hz, 5.6/2.8 amps	35.0 lbs. (15.9 kg)



CFM @ Static Pressure – Inches of H <sub>2</sub> O						
S.P.	0.0"	0.125"	0.25"	0.50"	0.75"	0.87"
CFM	595	560	515	420	300	167

\* Explosion-proof    \*\*International electrical configuration



#### Canopy Connections for XPert Filtered Balance Systems

Allow the XPert Filtered Balance Systems to be thimble-ducted to the outside for additional protection. The canopy's air gap provides a means of balancing air by allowing room air to enter the ductwork and mix with the filtered air being exhausted from the XPert System. Outlet is 6.06" ID and 6.19" OD and accepts 6" nominal diameter ductwork. **House exhaust or Remote Blower 4863500, 7053501 or 4863501 is required (not included).**

Catalog #	Description	For use with:	Shipping Weight
3924400	2-Ft Canopy Connection	2-Ft XPert System	15 lbs. (6.8 kg)
3924401	3-Ft Canopy Connection	3-Ft XPert System	18 lbs. (8.2 kg)
3924402	4-Ft Canopy Connection	4-Ft XPert System	21 lbs. (9.5 kg)

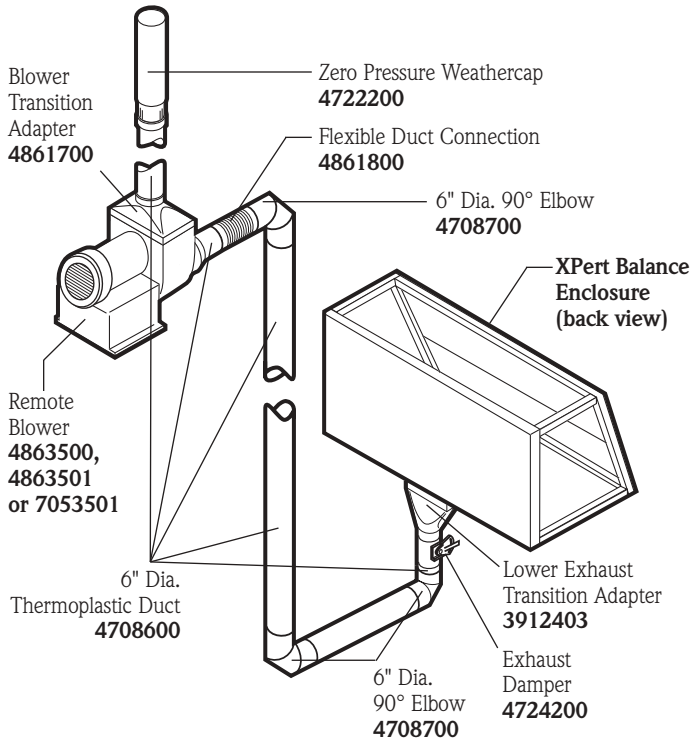


# XPert™ Line of Balance Enclosures

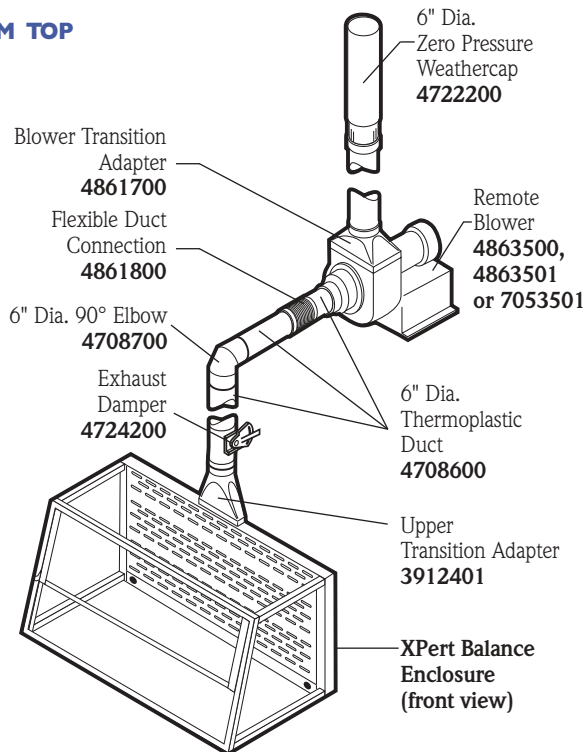
## DUCTWORK COMPONENTS

### XPert Balance Enclosures Outside Ducting Options

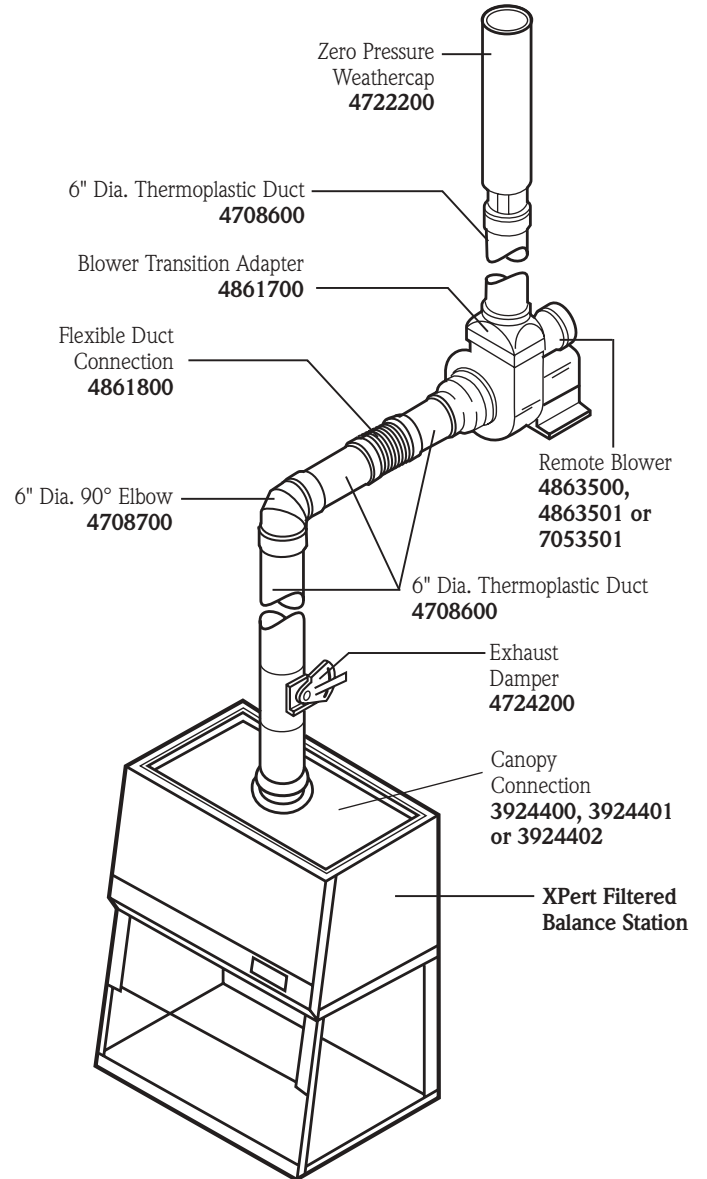
FROM BOTTOM



FROM TOP



### XPert Filtered Balance Station Typical Exhaust System



**Contact Labconco for more information about these quality products for your laboratory.**



Fume Hoods and Carbon-Filtered Enclosures



HEPA-Filtered Safety Cabinets, Clean Benches and Enclosures



Glove Boxes



Laboratory Animal Research Stations



Water Purification Systems



Freeze Dry Systems



Centrifugal Concentrators and Cold Traps



Multiple Sample Evaporation Systems



Agricultural Chemistry Products



Laboratory Carts and Benches



Blood Drawing Chairs



Digital Chloridometer



Vacuum Desiccator

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