## **Protector**<sup>®</sup> **Echo**<sup>®</sup> & **Airo**<sup>®</sup> Filtered Fume Hoods







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## Why Labconco?

### **Energy efficient.**

With the need for energy-efficiency ever increasing, finding a fume hood that meets your eco-friendly goals can be difficult. Why exhaust precious air when Labconco has the ideal ductless solution? With Labconco's filtered fume hoods, you get all the benefits of a ducted fume hood without the burden of high HVAC costs.

### **Eco-friendly.**

Labconco's Echo and Airo hoods utilize Neutrodine<sup>®</sup> Unisorb filtration technology from Erlab<sup>®</sup> to capture over 700 different chemicals. Harmful chemicals are captured in the filters, and clean air is the result. Safe for you, safe for the environment.

### Flexibility.

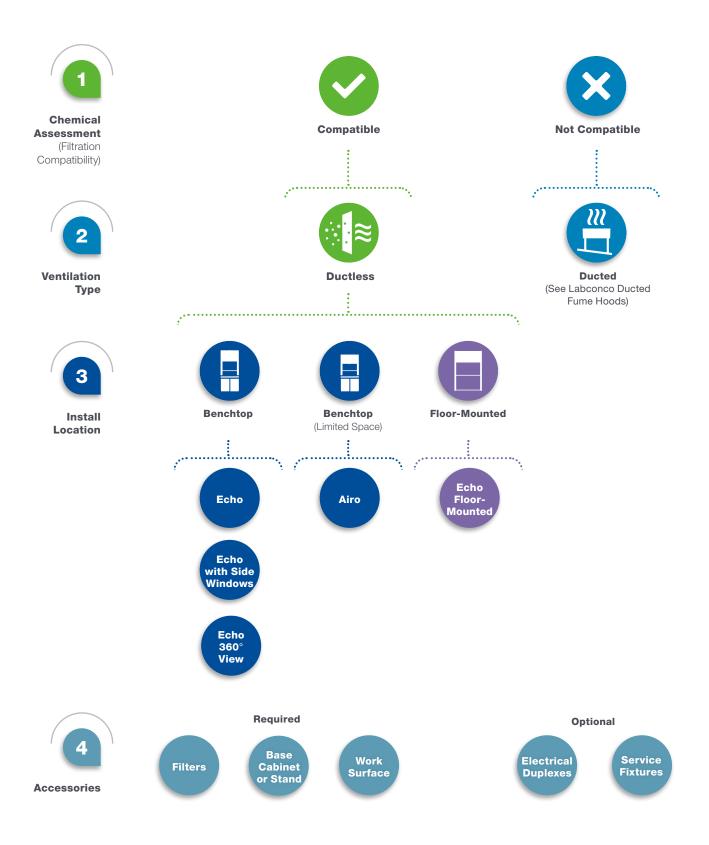
We make filtered hoods in a multitude of sizes. Fully-featured, containment-enhancing models in benchtop, floor-mounted and compact formats - all free of ductwork. With the Echo and Airo, gaining flexibility doesn't mean sacrificing safety, quality or performance.

### Labconco. No duct, no doubt.



## Labconco Fume Hoods

Steps to Selecting a Fume Hood



## Labconco Fume Hoods

## Labconco Product Lines

## **Ductless Filtered Fume Hoods**



DH III with Neutrodine® Unisorb Filter





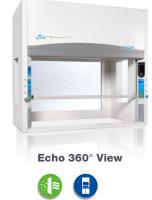
Airo DH III with Neutrodine<sup>®</sup> Unisorb Filter





Echo with Side Windows







Echo Floor-Mounted



### Accessories



Filters

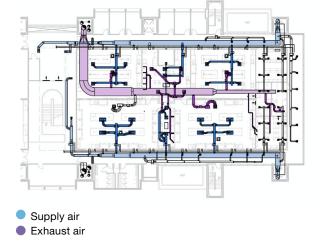


**Base Cabinet or Stand** 



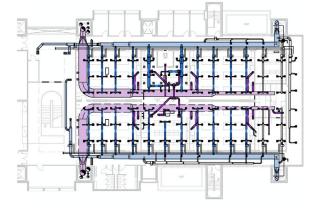
Work Surface

## Energy Footprint & Cost Savings Comparison



#### Filtered fume hood infrastructure

#### Traditional fume hood infrastructure



Filtered fume hoods do not exhaust air from the lab, which greatly simplifies the complexity of the HV/AC system required to support the lab space(s) where these hoods are placed. Eliminating supply/exhaust air requirements associated with traditional fume hoods drastically reduces the costs of the lab's mechanical system requirements, providing tremendous savings back to the lab. **Traditional fume hoods** require a complex HV/AC infrastructure comprised of supply and exhaust ductwork and expensive air handling systems. Buildings with multiple fume hoods 'ganged' together often utilize Variable Air Volume (VAV) airflow control systems, which have a high up-front cost along with yearly maintenance fees. The end result is a complex, expensive system required for the support of traditional fume hoods.

#### **Cost Comparison: Filtered vs. Traditional Ducted**

	Echo Filtered Fume Hood	Constant Volume By-Pass (CV)	Variable Air Volume (VAV)
6' Benchtop Fume Hood with vertical-rising sash	\$30,000	\$14,500	\$14,500
Building Infrastructure: M-E-P, Lab Services & Data	\$8,520	\$20,000	\$25,000
Total Initial, One-Time Costs	\$38,520	\$34,500	\$39,500
Exhaust Fans	\$293	\$1,367	\$911
Make-up Air (\$8/cfm)	\$0	\$9,600	\$6,400
Maintenance Costs/Year	\$1,800	\$1,200	\$1,500
Total Operating & Maintenance Costs/Year	\$2,093	\$12,167	\$8,811

\*Contact Labconco for a cost-savings analysis for your ventilation project.

## Echo" and Airo" Filtered Fume Hoods

## Features & Benefits





#### **Energy savings**

Reduces HVAC costs by eliminating need for make-up air.

#### Eco-friendly

Carbon filters trap chemicals from being exhausted into the atmosphere.

#### Easy to install

No ductwork is required. Quick start-up with simple 5-step install.

#### Maximum containment All the safety of a ducted hood without the ductwork.

#### **Flexible installation**

May be placed anywhere in a facility with minimal setup. Allows for installation in flex spaces or temporary labs. Restricted By-Pass Reduces energy usage and increases safety.

#### Small and large sizes

Fits any space or application needs. Floor-mounted hoods available for applications with a large apparatus.



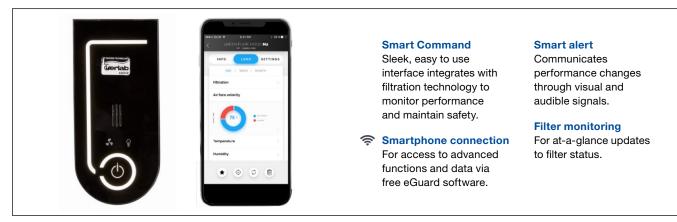
#### **DH III filtration setup**

For ensured safety, backup filter has the same retention potential as the main filter.

#### **High Heat Application**

Filtered hoods have shown robust heat tolerance from hot plates, ovens, or heatgenerating equipment up to 300-degrees C surface temperature.

#### **Smart Command Control Module**





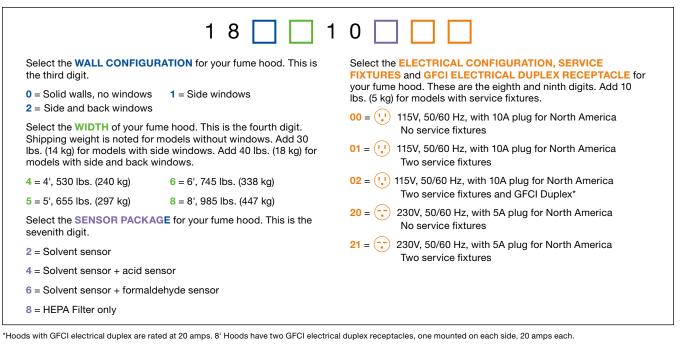
\*U.S. Patent No. 6,461,233

## Echo<sup>®</sup> Benchtop Filtered Fume Hoods

### **Ordering Information**



Catalog Number Configurator Use this key to configure the nine digit catalog number.



#### All models require (not included):

- Neutrodine® Unisorb filters (see pages 15-16)
- Work surface (see page 13)
- · Base cabinet or stand (contact Labconco)

Hood Width	Hood Depth		
	Interior	Exterior	
4'	31.3"	37.7"†	
5'	31.3"	37.7"†	
6'	31.3"	37.7"†	
8'	31.3"	37.7"†	

<sup>†</sup>38.1" depth on models with back window

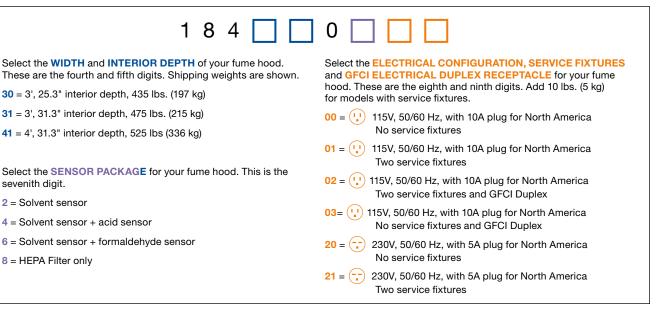
#### Catalog number may vary pending LPQ chemical assessment analysis.

## Airo<sup>®</sup> Benchtop Filtered Fume Hoods

### **Ordering Information**



Catalog Number Configurator Use this key to configure the nine digit catalog number.



	Hood Width	Hood Depth	
		Interior	Exterior
All models require (not included):	3'	25.3"	31.7"
eutrodine® Unisorb filters (see pages 15-16) /ork surface (see page 13)	3'	31.3"	37.7"
Base cabinet or stand (contact Labconco)	4'	31.3"	37.7"

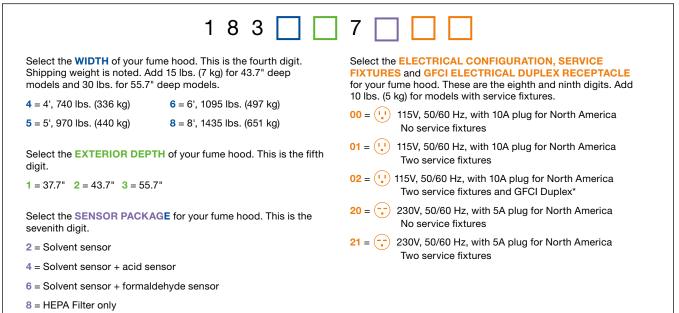
Catalog number may vary pending LPQ chemical assessment analysis.

## Echo<sup>™</sup> Floor-Mounted Filtered Fume Hoods

### **Ordering Information**



Catalog Number Configurator Use this key to configure the nine digit catalog number.



\*Hoods with GFCI electrical duplex are rated at 20 amps. 8' Hoods have two GFCI electrical duplex receptacles, one mounted on each side, 20 amps each.

#### All models require (not included):

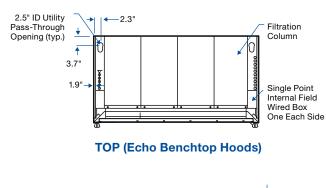
• Neutrodine® Unisorb filters (see pages 15-16)

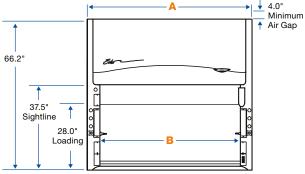
Exterior Depth	Interior Depth	
	Lower	Upper
37.7"	28.7"	29.7"
43.7"	34.7"	35.7"
55.7"	46.7"	47.7"

Contact Labconco for shipping dimensions for floor-mounted fume hoods.

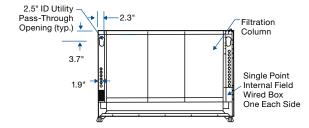
## **Echo**<sup>™</sup> and **Airo**<sup>™</sup> Benchtop Filtered Fume Hoods

## **Dimensional Data**

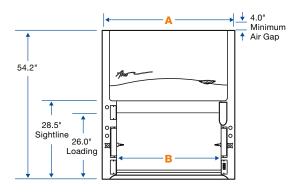




**FRONT (Echo Benchtop Hoods)** 



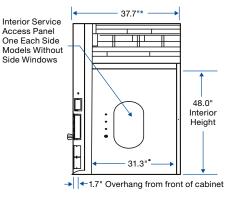
### **TOP (Airo Benchtop Hoods)**



FRONT (Airo Benchtop Hoods)

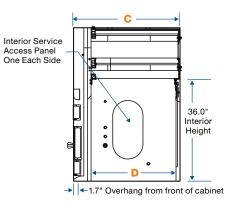
\*38.1" depth on models with back window **NOTE:** HEPA filters add 3.5" to overall height.

Echo	А	В
4'	48.0"	38.2"
5'	60.0"	50.2"
6'	72.0"	62.2"
8'	96.0"	86.2"



#### SIDE (Echo Benchtop Hoods)

Airo	Α	В	С	D
3'	36.0"	26.2"	31.7"	25.3"
3'	36.0"	26.2"	37.7"	31.3"
4'	48.0"	38.2"	37.7"	31.3"

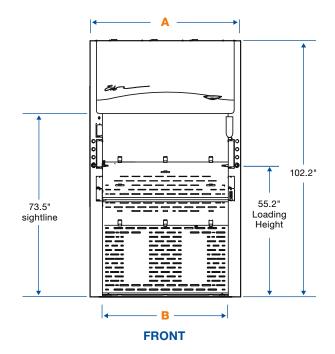


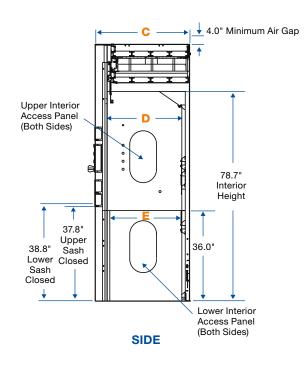
**SIDE (Airo Benchtop Hoods)** 

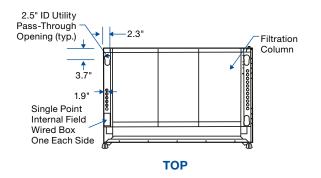


## Echo<sup>®</sup> Floor-Mounted Fume Hoods

### **Dimensional Data**







	А	В
4'	48.0"	38.2"
5'	60.0"	50.2"
6'	72.0"	62.2"
8'	96.0"	86.2"

C*	D	E
Exterior Depth	Upper Working Depth	Lower Working Depth
37.7"	29.7"	28.7"
43.7"	35.7"	34.7"
55.7"	47.7"	46.7"

\*8' Vertical sash models will have an additional 0.63" of exterior depth.

Floor-mounted fume hoods are shipped partially unassembled (on 2-3 pallets) and require some field assembly (not provided by Labconco). Detailed instructions are available in the user's manual and upon request.

## SpillStopper<sup>™</sup> Work Surfaces

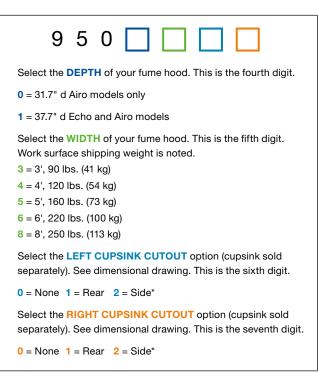
## **Ordering Information & Dimensional Data**

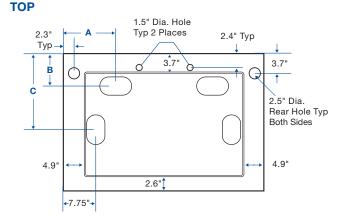


- Corrosion-resistant epoxy
- Dished and contoured
- Directs airflow into hood

#### **Catalog Number Configurator**

Use this key to configure the seven digit catalog number.





#### FRONT

Hood Depth	Work Surface Depth	Α	В	С
31.7" depth	30.0"	9.5"	4.6"	18.8"
37.7" depth	36.0"	12.5"	7.3"	19.0"



**4005200—Oval Polypropylene Cupsink.** Mounts in work surface with cutout, 3.0" x 6.0". 1.5" National Pipe Straight Mechanical (NPSM) thread. Shipping weight 4 lbs. (2 kg)

\*Not compatible with Protector Solvent Storage Cabinets.

## GreenFumeHood® Technology by Erlab®

### **Features & Benefits**



#### Neutrodine® Unisorb

Filtration technology for general chemistry, with large retention capability.

#### Finergy savings

Reduces energy costs by 96% and operating costs by 70%.

#### Cost savings

Reduces installation costs and infrastructure costs for HVAC.



Optimized lab design Streamlined infrastructure for a dynamic sustainable building plan.

## Smart communication technology

Built-in connectivity with access to real-time safety settings via smartphone.

#### Adaptable design

Filtration columns are quick and simple to reconfigure to meet requirement changes.

#### Quick and simple relocation Ductless design allows for maximum flexibility.

#### Adaptable modular filtration columns



#### **Chemical vapors**

- Neutrodine<sup>®</sup> Unisorb
- Fan
- Neutrodine<sup>®</sup> Unisorb
  - Light



#### **Chemical vapors with particulates**

- Neutrodine<sup>®</sup> Unisorb
  - Fan

Airflow

- Neutrodine<sup>®</sup> Unisorb
- HEPA H14
- Light



**Chemical vapors for cleanrooms** 

- HEPA H14
- Neutrodine<sup>®</sup> Unisorb
- Fan

Airflow

- Neutrodine<sup>®</sup> Unisorb
- Light



Airflow

#### NOTE: HEPA filters add 3.5" to overall height.

## Neutrodine<sup>®</sup> Unisorb Filters



### **GreenFumeHood®** Technology

#### **Neutrodine® Unisorb Modules**

Unique formulation allows for simultaneous capture of solvents, acids, and bases. A secondary module provides an additional level of safety and prevents release of pollutants into the lab

#### **Ventilation Module**

Maintains safe airflow while reducing energy consumption and noise output

#### **Optional HEPA Module**

99.995% (H14) high efficiency particulate air filter for use with particulate-containing applications or when installed in cleanrooms (adds 3.5" to overall height)

#### **LED Lighting Module**

Also holds the prefilter

#### **Filter Installation Requirements: New & Replacement**

Hood Width	Filter Columns	Neutrodine Unisorb (New Hood)	Neutrodine Unisorb (Replacement)	Total Neutrodine Unisorb Filter Media Weight**	Optional HEPA Filters	Total HEPA Filter Weight
3'	1	2	1	50 lbs.	1	10 lbs.
4'	2	4	2	100 lbs.	2	20 lbs.
5'	3	6	3	150 lbs.	3	30 lbs.
6'	3 or 4*	8	4	200 lbs.	4	40 lbs.
8'	5	10	5	250 lbs.	5	50 lbs.
		Initial quantity order of 9577420	Replacement order quantity of 9577420		Initial and replacement order quantity of 9577421	

\*6' Floor-Mounted Filtered Fume Hood uses 3 filter columns.

\*\*Filter media is the total number of filters required for operation per hood width.

## Accessories & Filters



9577420-Neutrodine<sup>®</sup> Unisorb Filter. Molecular carbon, 1 each. Shipping weight 50 lbs. (22 kg)



9577421—HEPA Filter. 99.995% efficient, H14 type, 1 each. Adds 3.5" to overall height. Shipping weight 25 lbs. (11 kg)



9577422-Standard.

Replacement Prefilters. Shipping weight 5 lbs. (2 kg)

9577423—Acid. 9577424—Ammonia.



Replacement Sensors. Replacement required approximately every two years.

9577433—Acid. 9577434—Formaldehyde.



Sash Opening Reduction Wing Kits. Wings reduce sash opening area to increase face velocity to 100 FPM at the 16" sash stop position. Hinged with detents to maintain open position for loading and closed position for normal operation. For use with Echo Benchtop Filtered Fume Hoods. Shipping weight 5 lbs. (2 kg)

9584904—For 4' Echo. Sash opening (w x h): 18" x 16". 100 fpm. Sash wing width: 10" 9584905—For 5' Echo. Sash opening (w x h): 26" x 16". 100 fpm. Sash wing width: 12" 9584906—For 6' Echo. Sash opening (w x h): 34" x 16". 100 fpm. Sash wing width: 14" 9584908—For 8' Echo. Sash opening (w x h): 48" x 16". 100 fpm. Sash wing width: 19"

Contact Labconco for ordering information on electrical duplex receptacles, service fixtures and other accessories.

## Echo" and Airo" Benchtop Filtered Fume Hoods

### **Specifications**

#### All models feature:

- Seco-Foil™ air foil with aerodynamic Clean-Sweep™ airflow openings\*
- \* Cord-Keeper<sup>™</sup> Slots on left and right side of air foil
- Removable front and side panels, and front and interior service access panels (except side window models) for access to plumbing and electrical wiring
- By-pass airflow design
- · Glacier white powder-coated steel exterior
- Chemical-resistant, fiberglass-reinforced, composite panel liner
- Pre-wired vapor-proof LED lights for up to 63 footcandles rated for 50,000 hours
  - 2 lights per 4' model
  - 3 lights per 5' model
  - 4 lights per 6' model
  - 5 lights per 8' model
- eGuard software communication
- Smart control command module with wifi, bluetooth and ethernet connectivity
- Neutrodine® Unisorb Filters compatible with over 700 chemicals
- Factory-installed command module, fan button and light button
- Roughing prefilter, 2 each per 4' model, 3 each per 5' model, 4 each per 6' model, and 5 each per 8' model
- Built-in exhaust fans: 2 each per 4' model, 3 each per 5' model, 4 each per 6' model, and 5 each per 8' model, to maintain 60 fpm face velocity at 16" sash opening height\*
- Sound pressure of <60 dB(A) with sash at operating height and <48 dB(A) with sash closed
- Sensor package for primary filter breakthrough of solvent fumes (acid/formaldehyde optional), face velocity, temperature and RH
- Audible/visual alarms for breakthrough detection, temperature ≥40° C (104° F), fan failure and low face velocity, high RH. At ≥60° C (140° F), all fans stop
- Power cord with plug to power the Smart control command module, fans and lights. Included junction box to route wiring for any additional electrical such as duplexes

#### Airo models also feature:

- Single piece, tempered safety glass vertical-rising sash with cable pulley, sash weight and powder-coated aluminum sash handle and tracks with airflow openings. Sash stop at 13" sash opening height on 3' models and 16" sash opening height on 4' models. Sash opens to 26" high for loading
- Factory-prepared for up to two electrical duplex receptacles and six service fixtures
- 28.5" high sightline between the work surface and header panel

#### Echo models also feature:

- Single piece, tempered safety glass vertical-rising sash with cable pulley, sash weight and powder-coated aluminum sash handle and tracks with airflow openings. Sash stop at 16" sash opening height. Sash opens to 28" high for loading
- Factory-prepared for up to four electrical duplex receptacles and eight service fixtures
- 37.5" high sightline between the work surface and header panel

#### Side and back window Echo models may also feature:

- Right and left side-mounted tempered safety glass windows, 15.0" wide x 26.5" high
- Rear tempered safety glass window, 32.4" high
  - 4' model: 27.9" wide
  - 5' model: 36.9" wide
  - 6' model: 49.9" wide
- 8' model: 66.9" wide

#### Fixtured models may also feature:

- Two pre-plumbed service fixtures with forged brass valves, lower right side with brass tubing for gas and lower left side with copper tubing for cold water. Components for converting either or both fixtures to air and vacuum are provided. Inlet tubing is not provided
- One pre-wired GFCI electrical duplex receptacle on lower right side and, on 8' models only, one additional pre-wired GFCI electrical duplex receptacle on the lower left side

#### Standards conformance & regulations:

- SEFA 9, DH III
- SEFA 8, Cabinet Surface Finish Tests
- Modified ASHRAE 110
- ANSI Z9.5
- AFNOR NF-X 15-211
- ASTM E84-09C
- UL Standard 61010-1
- CAN/CSA C22.2 No. 61010-1
- ▲ WARNING: Cancer P65Warnings.ca.gov (California only)

#### **Options include:**

- HEPA filter (adds 3.5" to overall height)
- · Sash opening wing reduction kits. See page 16
- · Region-specific electrical plug configurations
- Service fixtures

#### All models require (not included):

- Neutrodine<sup>®</sup> Unisorb, or HEPA Filters on HEPA-only models. See pages 15-16
- Work surface. See page 13
- Base cabinet or stand. Contact Labconco



## Echo<sup>™</sup> Floor-Mounted Filtered Fume Hoods

### **Specifications**

#### All models feature:

- Single piece, tempered safety glass vertical-rising sashes with cable pulley, sash weight and powder-coated aluminum sash handle and tracks with Clean-Sweep<sup>™</sup> airflow openings. Upper sash stop at 52" sash open height from floor. Upper sash chemical loading opening of 25.2". Lower sash opens up from floor to 55.2" for transporting carts, drums and apparatus
- Removable front and side panels, and front and interior service access panels for access to plumbing and electrical wiring
- · eGuard software communication
- Smart control command module with wifi, bluetooth and ethernet connectivity
- Neutrodine<sup>®</sup> Unisorb Filters compatible with over 700 chemicals
- Factory-installed command module, fan button and light button
- Rear baffle
- By-pass airflow design
- · Glacier white powder-coated steel exterior
- · Chemical-resistant, fiberglass-reinforced, composite panel liner
- Pre-wired vapor-proof LED lights for up to 63 footcandles rated for 50,000 hours
  - 2 lights per 4' model
  - 3 lights per 5' and 6' model
  - 5 lights per 8' model
- Factory-prepared for up to four electrical duplex receptacles and eight service fixtures
- Roughing prefilter, 2 each per 4' model, 3 each per 5' and 6' models, and 5 each per 8' model
- Built-in exhaust fan(s) to maintain 60 fpm face velocity with only an upper sash working opening of 13.2"
  - 4' models: 2 each
  - 5' and 6' models: 3 each
  - 8' models: 5 each
- Sound pressure of <60 dB(A) with sash at operating height and <48 dB(A) with sash closed
- Sensor package for primary filter breakthrough of solvent fumes (acid/formaldehyde optional), face velocity, temperature and RH
- Audible/visual alarms for breakthrough detection, temperature ≥40° C (104° F), fan failure and low face velocity, high RH. At ≥60° C (140° F), all fans stop
- Power cord with plug to power the Smart control command module, fans and lights. Included junction box to route wiring for any additional electrical such as duplexes

#### Fixtured models may also feature:

- Two pre-plumbed service fixtures with forged brass valves, lower right side with brass tubing for gas and lower left side with copper tubing for cold water. Components for converting either or both fixtures to air and vacuum are provided. Inlet tubing is not provided
- One pre-wired GFCI electrical duplex receptacle on lower right side and, on 8' models only, one additional pre-wired GFCI electrical duplex receptacle on the lower left side

#### Standards conformance & regulations:

- SEFA 9, DH III
- SEFA 8, Cabinet Surface Finish Tests
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- AFNOR NF-X 15-211
- ASTM E84-09C
- UL Standard 61010-1
- CAN/CSA C22.2 No. 61010-1
- ▲ WARNING: Cancer P65Warnings.ca.gov (California only)

#### **Options include:**

- HEPA filter (adds 3.5" to overall height)
- Region-specific electrical plug configurations
- Service fixtures

#### All models require (not included):

 Neutrodine<sup>®</sup> Unisorb, or HEPA Filters on HEPA-only models. See pages 15-16

Contact Labconco for ordering information on electrical duplex receptacles, service fixtures and other accessories.



## **Everything you need to succeed.**

### **Chemical Ventilation**

Fume Hoods Filtered Fume Hoods Ductless Enclosures

## **Biological Ventilation**

Biosafety Cabinets Clean Benches PCR Enclosures Lab Animal Enclosures

## **Particulate Enclosures**

Powder Containment Nanotechnology Glove Boxes

### **Sample Preparation**

Freeze Dryers Evaporators Concentrators Cold Traps

### **Washers & Water**

Glassware Washers Water Purification Systems

### **Forensics**

Fuming Chambers Drying Cabinets Downdraft Powder Stations

### **Specialized Solutions**

Kjeldahl, Fat & Crude Fiber Instruments Blood Drawing Chairs Vacuum Desiccators

### Lab Accessories & Parts

Vacuum Pumps Remote Blowers & Exhausters Filters & Pre-Filters Glassware Carts, Tables & Benches Base Stands, Cabinets & Work Surfaces

## Our promise.

You can expect straight talk from us. A fair and honest approach to doing business. And people you can trust to do the right thing.

When you buy equipment from us, it should work the way you need it to, and if it doesn't, we will take care of it.

Taking care of people is how we take care of business.



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