Frontier® MONO™

General Purpose Laboratory Fume Hoods

*Esco Frontier® Mono™ Laboratory Fume Hood, Model EFH-4A_.
(Shown with optional base cabinet)*

Introduction

Laboratory fume hoods are essential equipment used to protect operators against exposure to hazardous chemicals and gases. The Frontier® Mono™ fume hood is the most basic of all Esco ducted fume hoods with a single wall construction designed for a fully maximized internal work zone. This hood is generally applicable for common laboratory applications such as boiling, evaporation, drying and other applications that emits noxious fumes and vapors.

Superstructure

- Main body is constructed of electrogalvanized steel and aluminum with oven-baked electrogalvanized hybrid Isocide™ powder coating for long-term chemical abrasion and weathering resistance.
- Durable and corrosion resistant internal liner made of Esco Resinate Phenolic Resin laminates.
- Esco Isocide™ powder coating prevents surface contamination and inhibits bacterial growth.
- State-of-the-art baffle system constructed of phenolic resin laminate delivers maximum containment by ensuring airflow uniformity throughout the main chamber.
- Grade 304 Stainless steel airfoil safely ventilates fumes generated towards the back of the hood for superior operator protection.
- Has a vertical-rising sash constructed of tempered laminated glass with fail-safe counterbalanced mechanism.
- Aerodynamic design eliminates air turbulence, minimizes noise levels and static pressure losses.
- Progressive Bypass Airflow System redistributes air intake when sash is closed, maintaining optimum face velocity inside the hood.

Aesthetics and Ergonomics Design

- Single wall design provides a fully maximized internal work zone.
- Complementary neutral white with blue accent blends the hood with any casework, metal or wood.
- Energy-efficient hood lighting through a pre-wired, electronic ballast. Typical light intensity on work surface is 791 lux in zero ambient conditions.
- Color temperature is tuned to provide a gentle and comfortable work environment for the user.

Serviceability

- Removable baffles allow easy cleaning of baffle boards and internal liner material.
- Esco Frontier® Mono™ can be shipped unassembled to save freight costs and to provide convenience during transport. Easy-to-follow assembly instructions are provided.

Safety Certified and Tested

All Esco fume hoods are manufactured for the most demanding laboratory applications.

- Independently tested and certified by Invent-UK to meet and exceed the requirements of ANSI/ ASHRAE 110-1995 standard, assuring you of a safe and reliable laboratory fume hood.
- Sash is clearly labeled with all operating instructions and illustrations.

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Base Cabinet for Frontier® Mono™ Fume Hoods

- Built-in dished black phenolic resin laminate tabletop; highly resistant to a wide variety of common laboratory acids, solvents and chemicals; phenolic resin is easy-to-clean, will not discolor, and will not corrode.

- Four (4) electrical socket outlets (total rating: 5 A) with splash-proof covers are provided with the base cabinet (for alternative electrical outlet options contact Esco, specify amps required).

- Service fixtures include: 1 swan-neck remote control water faucet and 1 standard remote control fitting for gas. Fixtures are BS 2874 / DIN Standard and 12920 / DIN12898 compliant.

- Has a built-in high quality polypropylene drip cup that is durable and easy to clean.

- Accessible panel is provided at the backwall of the cabinet for convenient plumbing installation.

- Designed for ergonomics and operator comfort: the cabinet depth is 100 mm less than the fume hood, providing the operator with more leg room.

- Each cabinet includes an adjustable white powder-coated steel shelf for storage purposes. Cabinet door is lockable.

- Additional / customized fixture arrays are available. Please contact Esco or your local distributor for details.

General Specifications, Frontier® Mono™ Fume Hoods

Model	220-240 VAC, 50/60 Hz, 1Ø	EFH-4A8 2090135	EFH-5A8 2090142	EFH-6A8 2090148
	110-120 VAC, 50/60 Hz, 1Ø	EFH-4A9 2090314	EFH-5A9 2090315	EFH-6A9 2090147
Nominal size		1.2 meter (4')	1.5 meter (5')	1.8 meter (6')
External Dimensions (W x D x H)		1200 x 873 x 1500 mm (47.2" x 34.4" x 59.1")	1500 x 873 x 1500 mm (59.0" x 34.4" x 59.1")	1800 x 873 x 1500 mm (70.9" x 34.4" x 59.1")
Internal Work Area, Dimensions (W x D x H)		1120 x 682 x 1435 mm (44.1" x 26.9" x 56.5")	1420 x 682 x 1435 mm (55.9" x 26.9" x 56.5")	1720 x 682 x 1435 mm (67.7" x 26.9" x 56.5")
Exhaust Volume / Static Pressure Required Face Velocity of 0.5 m/s (100 fpm) at Full Open Sash		1109 cmh at 68 Pa (653 cfm at 0.27" WG)	1406 cmh at 80 Pa (827 cfm at 0.32" WG)	1703 cmh at 88 Pa (1002 cfm at 0.34" WG)
Exhaust Outlet Diameter		250 mm (10.0")	250 mm (10.0")	305 mm (12.0")
Fluorescent Light Intensity		791 lux (73.5 foot-candles)	1011 lux (94 foot-candles)	1231 lux (114 foot-candles)
Construction	Main Body	EG steel with aluminum and oven-baked Epoxy-polyester hybrid Isocide™ powder coating		
	Internal Liner	Esco Resinate™ Phenolic Resin laminates		
	Interior Baffle System	Esco Resinate™ Phenolic Resin laminates		
	Airfoil	Stainless Steel grade 304		
	Work Top	No built-in worktop for the fume hood unit. The phenolic dished work top is included with the base cabinet		
Sash Specification	Sash Material	Tempered Laminated and Framed Sash Glass		
	Sash Configuration	Vertical		
	Sloping	No sloping		
	Maximum Sash Opening	550 mm (21.7")		
Power Consumption		25 W (Fluorescent Lighting Only)		
Electrical*	Cabinet Full Loads Amps (FLA)	7 A		
	Optional Outlets (FLA)	6 A		
	Cabinet Nominal Power	60 W	100 W	
	Cabinet BTU/Hr	205	341	
Controller		Rocker Switches		
Net Weight**		120 Kg (264 lbs)	155 Kg (342 lbs)	180 Kg (397 lbs)
Shipping Weight**		199.0 Kg (439 lbs)	210.0 Kg (463 lbs)	226.3 Kg (499 lbs)
Shipping Dimensions, Maximum** (W x D x H)		1300 x 950 x 1940 mm (51.2" x 37.4" x 76.4")	1650 x 950 x 1940 mm (65.0" x 37.4" x 76.4")	1950 x 950 x 1940 mm (76.8" x 37.4" x 76.4")

*The maximum rating of all the electrical outlets combined is 5 Amp. Please contact Esco if you need electrical outlets with higher capacity.

**Fume hood unit only. Excludes base cabinet / optional stand.

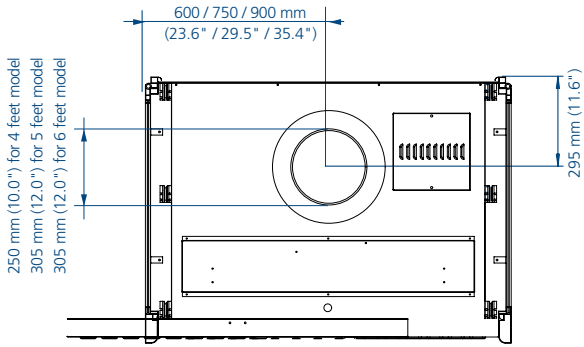### General Specifications, Base Cabinet for Frontier® Mono™ Fume Hoods

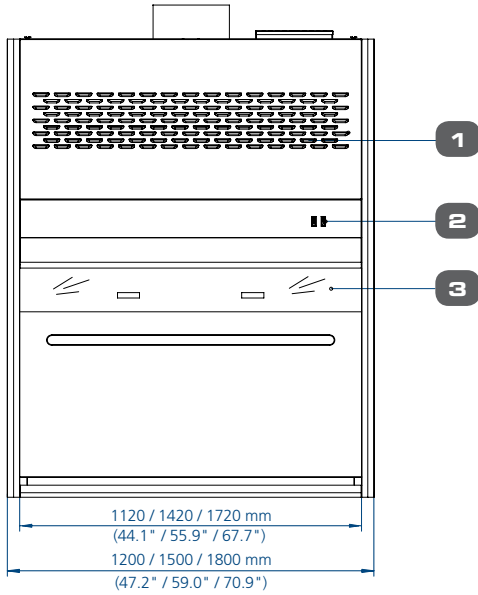| Model	EBC-4A0 2090049	EBC-5A0 2090053	EBC-6A0 2090522
Nominal size	1.2 meter (4')	1.5 meter (5')	1.8 meter (6')
External Dimensions (W x D x H)	1200 x 850 x 886 mm (47.2" x 33.5" x 34.9")	1500 x 850 x 886 mm (59.0" x 33.5" x 34.9")	1800 x 850 x 886 mm (70.9" x 33.5" x 34.9")
Net Weight	106 Kg (234 lbs)	119 Kg (262 lbs)	142 Kg (313 lbs)
Shipping Weight	158.8 Kg (350 lbs)	200.0 Kg (441 lbs)	231.5 Kg (510 lbs)
Shipping Dimensions, Maximum (W x D x H)	1300 x 950 x 1940 mm (51.2" x 37.4" x 76.4")	1650 x 950 x 1940 mm (65.0" x 37.4" x 76.4")	1950 x 950 x 1940 mm (76.8" x 37.4" x 76.4")

Frontier® MONO™
Fume Hoods • Laboratory Fume Hoods

Model EFH Frontier® Mono™ Fume Hood Engineering Drawing

Top View

600 / 750 / 900 mm
(23.6" / 29.5" / 35.4")

250 mm (10.0") for 4 feet model
305 mm (12.0") for 5 feet model
305 mm (12.0") for 6 feet model

295 mm (11.6")
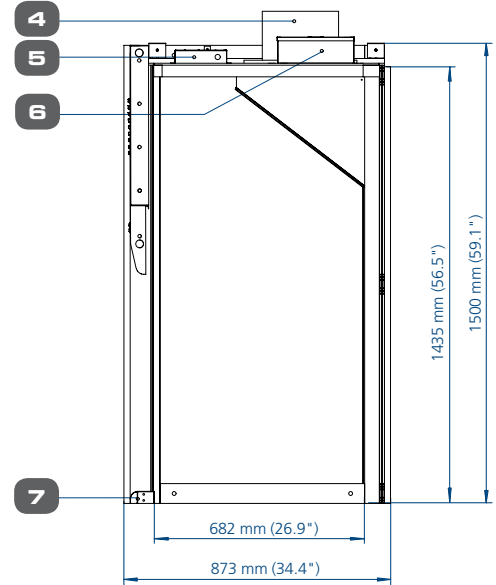
1. Bypass Slots
2. Rocker Switches
3. Sash Window
4. Exhaust Collar
5. Fluorescent Lamp
6. Electrical Panel
7. Ergonomic Airfoil

Front View

1
2
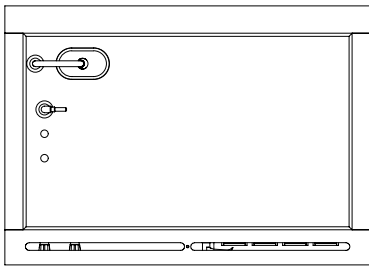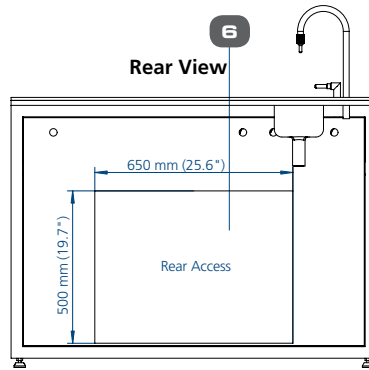3

1120 / 1420 / 1720 mm
(44.1" / 55.9" / 67.7")

1200 / 1500 / 1800 mm
(47.2" / 59.0" / 70.9")

Side View

4
5
6

7

1435 mm (56.5")
1500 mm (59.1")

682 mm (26.9")

873 mm (34.4")

3

Model EBC Base Cabinet for Frontier® Mono™ Fume Hood Engineering Drawing

Top View

Rear View

6

650 mm (25.6")

500 mm (19.7")

Rear Access

Front View

1
2
3

856 mm (33.7")
886 mm (34.9")

1200 / 1500 / 1800 mm
(47.2" / 59.0" / 70.9")

Side View

4
5

754 mm (29.7")

444 mm (17.5")
250 mm (9.8")
520 mm (20.5")

850 mm (33.5")
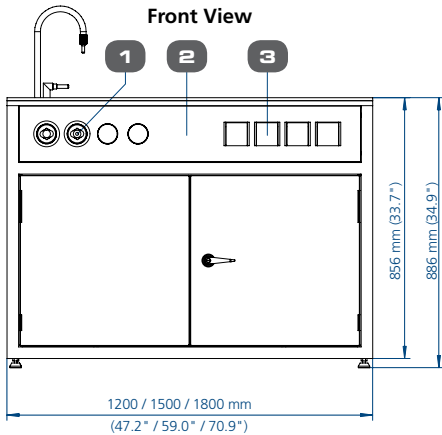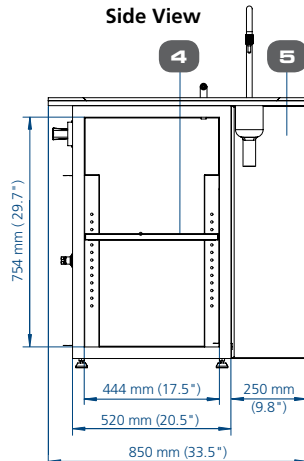
1. Service fixture
2. Removable Front Panel
3. Electrical outlets
4. Adjustable Shelf
5. Side Filler Panel
6. Rear Access for plumbing

Fume Hood Installation Requirements

- Proper location (refer to Esco recommendations)
- Exhaust system capable of delivering airflow and pressure drop requirements
  - Exhaust ductwork and connection accessories
  - Exhaust blower (or building exhaust system)
  - Contractor (if applicable)
  - Means of adjusting exhaust flow (damper or frequency inverter)
- Sufficient laboratory supply air
- Base cabinet or other means of support
- Plumbing and electrical hook-up
- Unless otherwise specified, items and services specified above are not provided by Esco

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ESCO GLOBAL NETWORK

4
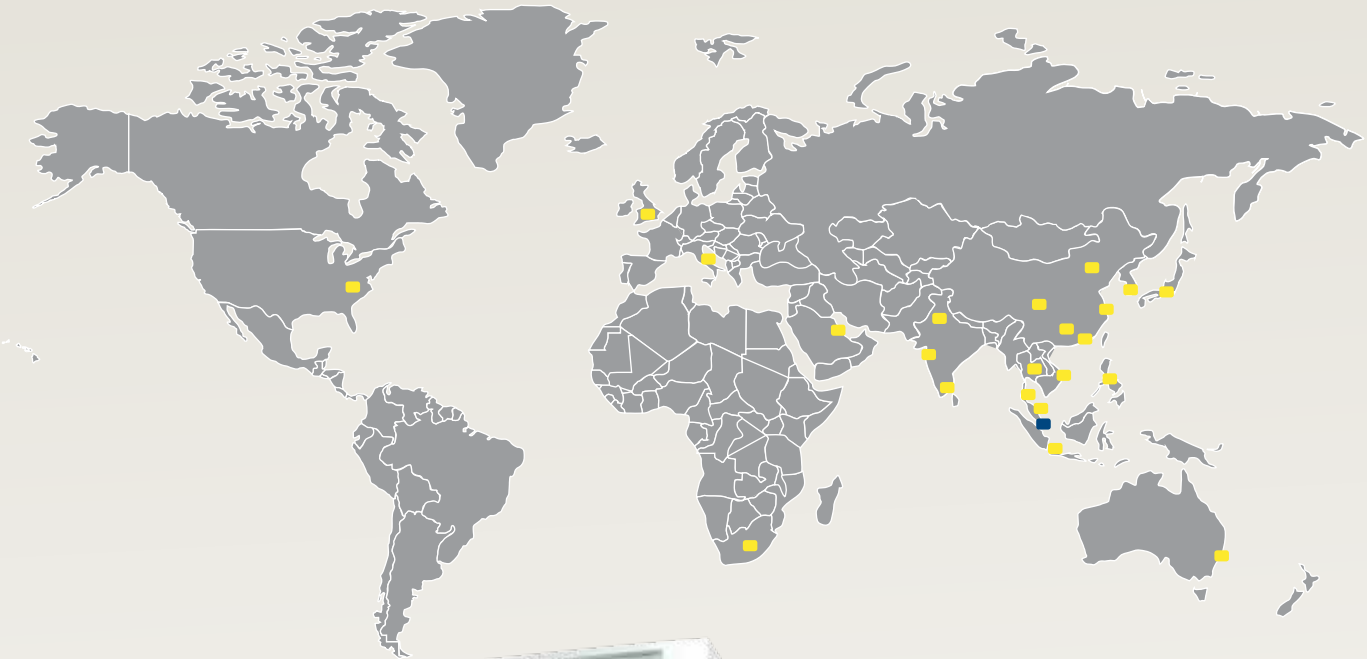
ART Equipment
Biological Safety Cabinets
CO_2 Incubators
Compounding Pharmacy Equipment
Containment / Pharma Products
Ductless Fume Hoods
Freeze Dryer
Lab Animal Research Products
Laboratory Fume Hoods
Laboratory Ovens and Incubators
Laminar Flow Clean Benches
PCR Cabinets
PCR Thermal Cyclers
Powder Weighing Balance Enclosures
Ultra-low Freezers

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