

# Frontier•MONO®

## Laboratory Fume Hoods

### Introduction

Laboratory Fume Hoods are one of the most important devices used to protect laboratory personnel from exposure to hazardous chemicals and agents used in the laboratory. Esco Frontier Mono Fume Hoods are an effective primary containment device to protect laboratory workers from exposure to chemical fumes and vapors.

### Superstructure

- Industrial-grade support structure constructed of electro-galvanized steel and aluminum with a corrosion and abrasion resistant oven-baked powder-coated finish.
- Internal liner is constructed of Esco Resinate phenolic resin laminates; more corrosion-resistant and durable than other common internal liner materials.
- Epoxy-polyester hybrid Isocide™ antimicrobial powder coating provides long term chemical, abrasion and weathering resistance.
- State-of-the-art baffle system constructed of phenolic resin laminates delivers maximum containment by ensuring airflow uniformity throughout the main chamber.
- Stainless steel airfoil safely ventilates fumes generated towards the back of the hood for superior operator protection.
- Standard vertical rising fail safe counterbalanced sash constructed of tempered safety glass maximizes operator safety. The safety mechanism causes sash to tilt and lock if a cable snaps.
- Dished work top provides spill retention and is constructed of phenolic resin, a highly corrosion-resistant material.

### Aesthetics and Ergonomics Design

- Single wall design ensures the internal work zone width

is maximized.

- Complementary neutral white with blue accents blends the hood with any casework, metal or wood.
- Hood lighting is pre-wired. Lighting is electronically ballasted, energy efficient, instant start. Typical light intensity on work surface is >780 lux (>72 foot candles) in zero ambient conditions.
- Color temperature is tuned to provide a gentle, bright (but not harsh) and comfortable work environment for the user.

### Serviceability

- Removable baffles allow easy cleaning of baffle boards and internal liner material when routine cleaning is required.
- Esco Frontier Mono Fume Hoods can be shipped unassembled as an option to save freight costs, and for convenience during transport especially when the fume hood needs to be installed in a laboratory with a narrow door or hallway. 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 the requirement of the ANSI/ASHRAE 110-1995 Standard.
- Hoods are ASHRAE tested on the production line on a sampling basis (industry exclusive).
- Sash is clearly labeled with all operating instructions and illustrations.



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

## 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.
- 4 electrical socket outlets (total rating 5A) with splash-proof covers are provided standard with the base cabinet. (For alternative electrical outlet options contact Esco, specify amps required).
- 1 swan-neck remote control water faucet, 1 standard remote control fitting for gas. Fittings are BS 2874 / DIN Standard 12920 / DIN12898 compliant.
- High-quality built-in polypropylene drip cup is more durable and easy to clean than conventional plastic cupsinks.
- An opening with an access panel is provided at the backwall of the cabinet for convenient plumbing installation.
- Designed for ergonomics and operator comfort: the cabinet depth is 100mm 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	EFH-4A_	EFH-5A_	EFH-6A_	
Nominal size	1.2 meters (4')	1.5 meters (5')	1.8 meters (6')	
External Dimensions (W x D x H)	1200 x 873 x 1500 mm 47.2" x 34.4" x 59.0"	1500 x 873 x 1500 mm 59.0" x 34.4" x 59.0"	1800 x 873 x 1500 mm 70.9" x 34.4" x 59.0"	
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"	
Maximum Sash Opening	580 mm (22.8")			
Exhaust Volume / Static Pressure Required Face Velocity of 0.5m/s (100fpm) at Full Open Sash	1210 cmh @ 68 Pa 712 cfm @ 0.27" WG	1534 cmh @ 80 Pa 903 cfm @ 0.32" WG	1663 cmh @ 88 Pa 978 cfm @ 0.34" WG	
Exhaust Outlet Diameter	250 mm (10.0")	305 mm (12.0")	305 mm (12.0")	
Flourescent Light Intensity	780 Lux (72 foot candles)			
Construction	Main Body	Phenolic resin laminates		
	Support Frame	Aluminum extrusions with an oven-baked epoxy-polyester powder-coated finish		
	Interior Baffle System	Esco Resinate phenolic resin laminates		
	Airfoil	Stainless steel grade 304		
Power Consumption	25W (Fluourescent Lighting Only)			
Electrical*	220-240V, AC, 50Hz, 1Ø	EFH-4A1	EFH-5A1	EFH-6A1
	110-120V, AC, 60Hz, 1Ø	EFH-4A2	EFH-5A2	EFH-6A2
	220-240V, AC, 60Hz, 1Ø	EFH-4A3	EFH-5A3	EFH-6A3
	Cabinet Full Load Amps (FLA)	1 A	1 A	1 A
	Optional Outlets FLA	6 A	6 A	6 A
	Cabinet Nominal Power	60 W	100 W	100 W
	Cabinet BTU	205	341	341
Controller	Rocker Switches			
Net Weight	120 kg / 264 lbs	155 kg / 341 lbs	180 kg / 396 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.

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

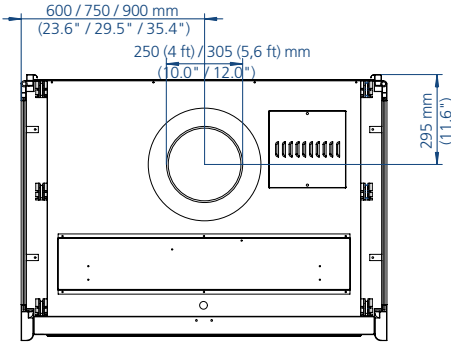
Model	EBC-4A_	EBC-5A_	EBC-6A_
Nominal size	1.2 meters (4')	1.5 meters (5')	1.8 meters (6')
External Dimensions (W x D x H)	1200 x 850 x 886 mm 47.2" x 33.5" x 34.9"	1500 x 850 x 886 mm 59.0" x 33.5" x 34.9"	1800 x 850 x 886 mm 70.9" x 33.5" x 34.9"
Net Weight	106 kg / 234 lbs	119 kg / 262 lbs	142 kg / 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

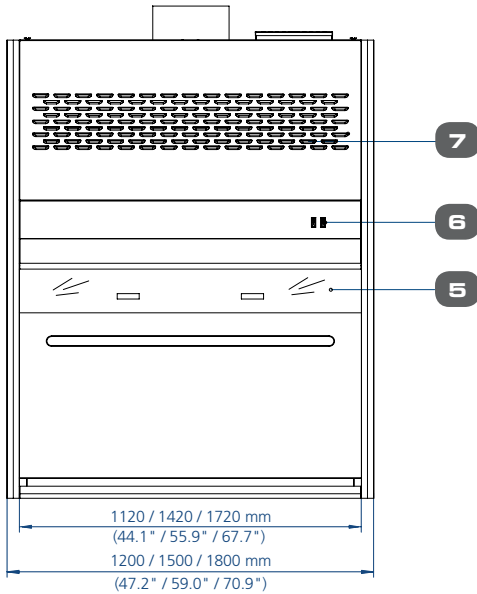
## Model EFH (A-Series) Frontier Mono Fume Hood Technical Specifications

### Top View

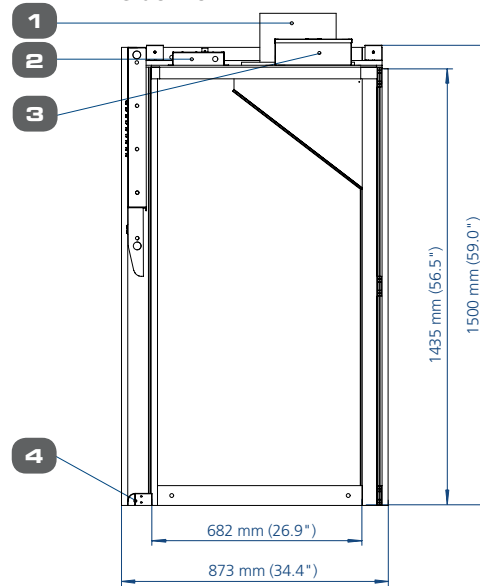


1. Exhaust collar
2. Fluorescent lamp
3. Electrical panel
4. Ergonomic airfoil
5. Sash window
6. Rocker switches
7. Bypass slots

### Front View

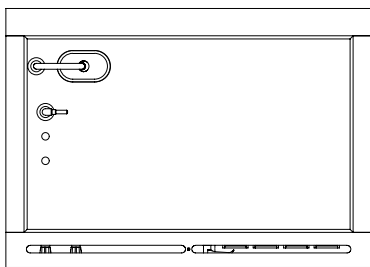


### Side View

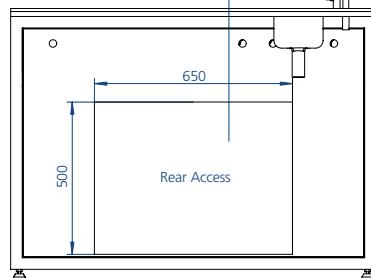


## Model EBC Base Cabinet for Frontier Mono Fume Hood Technical Specifications

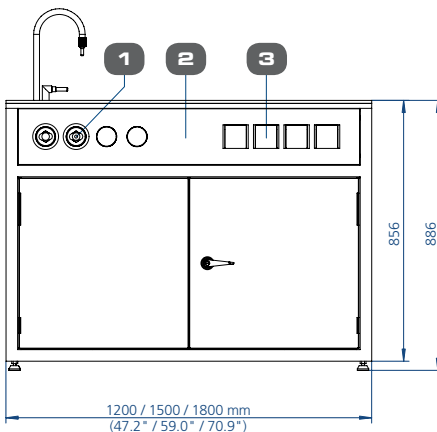
### Top View



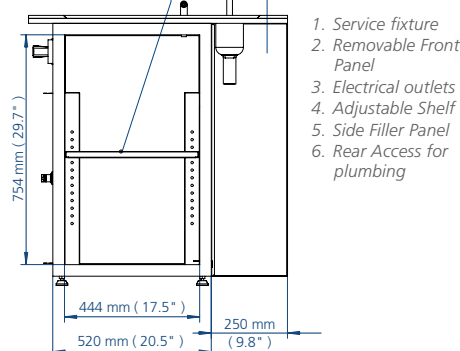
### Rear View



### Front View



### Side View



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)
  - Contactor (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



- Biological Safety Products
- Containment / Pharma Products
- Ductless Fume Hoods / Carbon Filtration
- General Purpose Scientific Equipment
- Industrial Lab Equipment
- In-Vitro Fertilization Products
- PCR Products
- Pharmacy Products
- Lab Animal Research Products
- Lab Thermostatics Products
- Lab Ventilation / Chemical Fume Products / Lab Furniture
- Powder Handling Products

*Since 1978, Esco has emerged as a leader in the development of controlled environment, laboratory and pharmaceutical equipment solutions. Products sold in more than 100 countries include biological safety cabinets, compounding pharmacy equipment, containment / pharma products, ductless fume hoods, in vitro fertilization workstations, lab animal research products, laboratory fume hoods, laboratory ovens and incubators, laminar flow clean benches and PCR products and instrumentation. With the most extensive product line in the industry, Esco has passed more tests, in more languages, for more certifications, throughout more countries than any biosafety cabinet manufacturer in the world. Esco remains dedicated to delivering innovative solutions for the clinical, life science, research and industrial laboratory community. [www.escoglobal.com](http://www.escoglobal.com).*

Airflow Alarms and Monitors • Biological Safety Cabinets • Exhaust Blowers  
 Benchtop Laboratory Fume Hoods • High Performance Low Flow Fume Hoods

# ESCO

WORLD CLASS. WORLDWIDE.

Esco Technologies, Inc. • 2940 Turnpike Drive, Units 15-16 • Hatboro, PA 19040, USA  
 Toll-Free USA and Canada 877-479-3726 • Tel 215-441-9661 • Fax 215-441-9660  
[us.escoglobal.com](http://us.escoglobal.com) • [usa@escoglobal.com](mailto:usa@escoglobal.com)

Esco Micro Pte. Ltd. • 21 Changi South Street 1 • Singapore 486 777  
 Tel +65 6542 0833 • Fax +65 6542 6920 • [mail@escoglobal.com](mailto:mail@escoglobal.com)  
[www.escoglobal.com](http://www.escoglobal.com)

**Esco Global Offices** | Beijing, China | Kuala Lumpur, Malaysia | Manama, Bahrain | Guangzhou, China | Hanoi, Vietnam | Melaka, Malaysia | Mumbai, India | Philadelphia, PA, USA | Salisbury, UK | Shanghai, China | Seoul, Korea | Delhi, India | Osaka, Japan | Manila, Philippines | Midrand, South Africa | Jakarta, Indonesia | Singapore