

Esco Formalin Dispensing Ductless Fume Hood, Model SPF-4A

Ascent™ Opti Formax

Formalin Dispensing Ductless Fume Hood

Introduction

Formalin is widely used as a disinfectant, antiseptic and a fixative for histology. Due to its high volatility, formalin has a strong, irritating odor that causes discomfort to the user. Laboratory applications involving this noxious chemical can now be accomplished safely and economically with Esco Ascent™ Opti Formax. This ductless fume hood is capable of removing noxious odor and has a built-in formalin dispensing unit.

Designed for Enhanced Usability and Efficiency

The Ascent™ Opti Formax is designed specifically to provide the operator with a high level of usability, comfort and visibility.

- 13° angled front sash ergonomically allows users to work further into the hood without strain, eliminating operator fatigue and increasing productivity.
- Transparent frameless acrylic front window and sides provide a high degree of visibility and operator comfort..
- Ergonomic oval-shaped apertures for hands in the front window allows for maximum reach within the work zone while providing the operator with extra protection from any possible chemical spillage.
- Curved front edge minimizes airflow turbulence and improves user comfort.
- Electronic ballast for the LED lighting provides zero-flicker with increased energy efficiency, reliability and service life with a lower heat output.
- Pass-through for electrical and service connections on the back wall of the unit provide convenient access to power sources and other fixtures.
- Built-in swan-neck formalin fixture that can be remotely controlled by a foot pedal.

Enhanced Filtration System

Esco's Nanocarb™ activated carbon filters are constructed in order to ensure maximum filter efficiency, retention capacity and operator protection. Esco's research scientists and engineers, working in consultation with world-leading authorities on adsorption science, have developed the

following set of unique technologies:

- Optimized retention capacity.
- Generously sized filters with more activated carbon by weight retain more chemicals and last longer.
- Proprietary computer modelling software to predict application suitability, filter saturation capacity, and efficiency for single and multiple compounds.
- Quick-change out filter clamping mechanism allows filter replacements to be carried out with minimal tools; even filter clamping (perimeter, not point force) prevents leaks from occurring.
- Diffusion technology to ensure even filter loading and better airflow uniformity.
- Optional sensing technology (VOC sensor) is available as an aid to predict filter breakthrough and warn the user to change the filters.

Highest Quality Construction

- Industrial-grade main body constructed of electro-galvanized steel: with an abrasion resistant white oven-baked powder-coated finish.
- Esco Isocide™ antimicrobial surface on all painted surfaces minimizes surface contamination.
- Permanently lubricated direct drive centrifugal fan(s); energy efficient external rotor motor type design reduces operating costs; extremely low noise and vibration levels due to proprietary construction and mounting technology.
- Industry exclusive baffle design for improved containment and efficient removal of chemical fumes from the work zone.

Options and Accessories

The Formax is available with a number of options and accessories to meet your needs. These include:

- Transparent rear wall
- Base Cabinet with caster wheels
- Volatile Organic Compounds (VOC) sensor
- Fixtures



Sentinel™ Silver Microprocessor Control, Alarm, Monitoring System

Esco's Sentinel™ Silver Microprocessor control systems supervises operation of all hood functions. The user-friendly microprocessor control system is fully configurable according to operator's requirements and comes equipped with a number of enhanced features to promote cabinet usability.

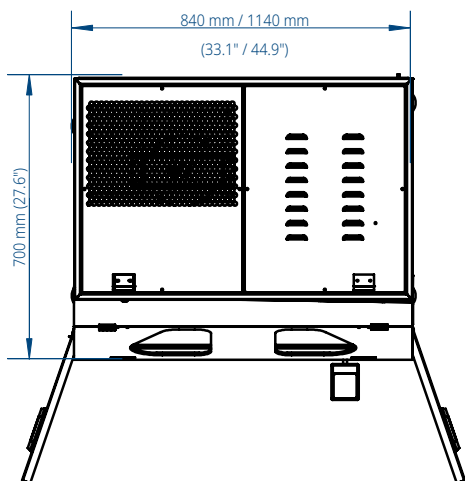
- Continuous monitoring of hood airflow is displayed on a bright, easy-to read LCD panel.
- Audible and visual alarms for low airflow.
- An integrated, temperature-compensated, true airflow velocity sensor provides an accurate airflow reading despite room temperature fluctuation.
- An administrator-controlled PIN (Personal Identification Number) can be set to restrict access to main menu.
- The airflow alarm can be activated or deactivated depending on user preference and nature of the work.

Guide to Models					
S P F - - - -					
External Width	Code	Back Wall Construction	Code	Electrical Rating	Code
33.1" (3 ft)	3	EG steel	A	220-240 VAC, 50 Hz	1
44.9" (4 ft)	4	Acrylic (transparent back wall)	B	115 VAC, 60 Hz	2
				220-240 VAC, 60 Hz	3

General Specifications					
Model	220-240 VAC, 50 Hz	SPF-3A1 2040217	SPF-3B1 2040219	SPF-4A1 2040221	SPF-4B1 2040223
	115 VAC, 60 Hz	SPF-3A2 2040218	SPF-3B2 2040220	SPF-4A2 2040222	SPF-4B2 2040224
	220-240 VAC, 60 Hz	SPF-3A3 2040276	SPF-3B3 2040277	SPF-4A3 2040278	SPF-4B3 2040279
Nominal Size	0.9 meter (3')		1.2 meter (4')		
External Dimensions* (W x D x H)	840 x 700 x 1125 mm (33.1" x 27.6" x 44.3")		1140 x 700 x 1125 mm (44.9" x 27.6" x 44.3")		
Internal Dimensions (W x D x H)	820 x 651 x 829 mm (32.3" x 25.6" x 32.6")		1116 x 651 x 829 mm (43.9" x 25.6" x 32.6")		
Cabinet Construction	Side Walls	9.5 mm Acrylic Glass			
	Rear Wall	Powder Coated EG Steel	Transparent Acrylic Glass	Powder Coated EG Steel	Transparent Acrylic Glass
	Main Body	1.2 mm 18 gauge electro-galvanized steel with white oven-baked epoxy-polyester Isocide™ antimicrobial powder coated finish			
Sash Specification	Work Top	1.5 mm 16 gauge stainless, type 304 with 4B finish			
	Sash Material	6 mm Acrylic Glass			
	Sash Configuration	Hinged, with arm ports			
	Sloping	13°			
Filtration System	Pre-filter	Disposable, non-washable polyester fiber, 85% arrestance, EU3 rated			
	Main Filter	Activated Carbon for Formalin and Aldehyde, Code F			
	Numbers of Filters	1		2	
Base Cabinet	Dimension (W x D x H)	840 x 700 x 860 mm (33.1" x 27.6" x 33.9")		1140 x 700 x 860 mm (44.9" x 27.6" x 33.9")	
	Main Body	Electro-galvanized steel with white oven-baked epoxy-polyester Isocide™ antimicrobial powder coated finish			
LED Light Intensity	350 Lux (28 foot-candles) at work surface level				
Pass-Through for Electrical Connections	2				
Control System	Esco Sentinel™ Silver Microprocessor Controller				
Net Weight	195 Kg (430 lbs)		253 Kg (558 lbs)		
Shipping Weight*	235 Kg (518 lbs)		275 Kg (606 lbs)		
Shipping Dimensions, Maximum (W x D x H)*	1050 x 1100 x 2170 mm (41.3" x 43.3" x 85.4")		1300 x 1100 x 2190 mm (51.2" x 43.3" x 86.2")		
Shipping Volume, Maximum*	2.5 m³ (88.3 ft³)		3.13 m³ (110.5 ft³)		

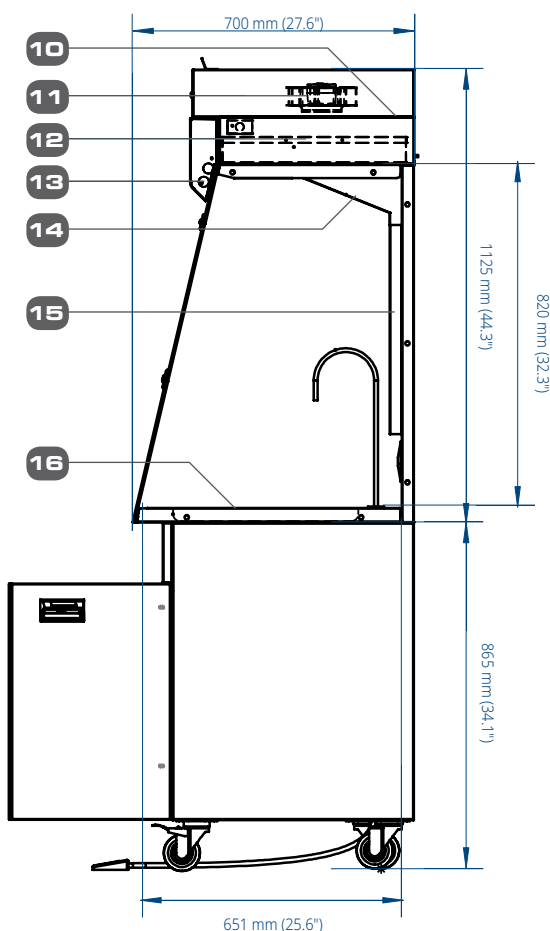
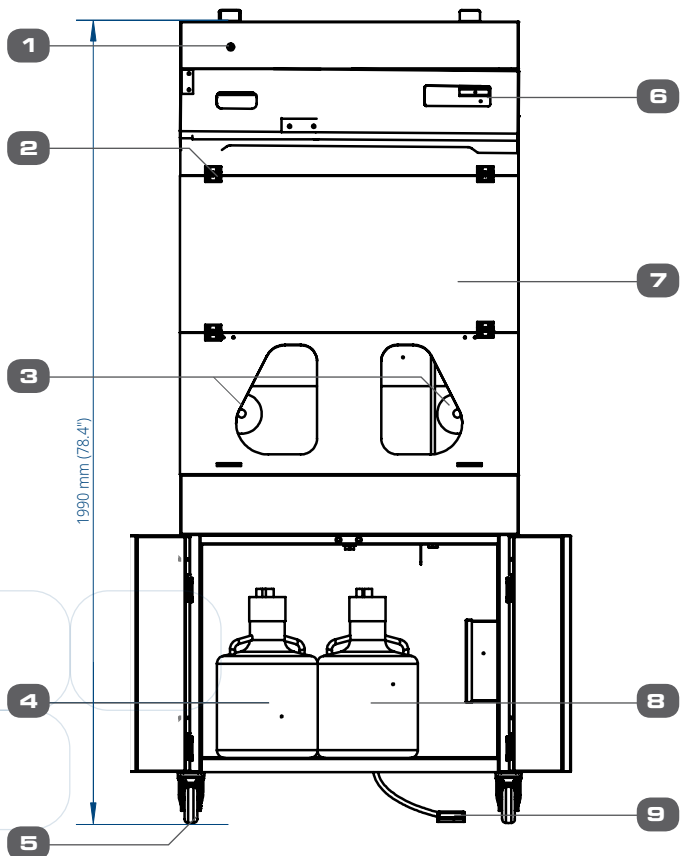
*Ductless fume hood includes base cabinet

Model SPF, Ascent™ Opti Formax Ductless Fume Hood Engineering Drawing, 0.9 to 1.2 m (3 ft to 4 ft width models)



- 1. Sample Port
- 2. Spring-loaded Hinge
- 3. Pass-through Ports
(for electrical connections)
- 4. Waste Formalin Container
- 5. Caster Wheel
- 6. Sentinel™ Silver Microprocessor Control System
- 7. E.G. Steel Back Wall (SPF-A_model)
Transparent Back Wall (SPF-B_model)

- 8. Fresh Formalin Container
- 9. Foot Switch
- 10. Electrical Panel
- 11. Fan
- 12. Activated Carbon Filter
- 13. LED Lamp
- 14. Baffle
- 15. Stainless Steel Work Top



Formaldehyde 10%

LDPE / HDPE at 20°C-50°C show little or no damage after 30 days of constant exposure.

Formaldehyde 40%

LDPE / HDPE at 20°C-50°C show little or no damage after 30 days of constant exposure.

Source: <http://www.calpaclab.com/chemical-compatibility-charts/>

ESCO LIFESCIENCES GROUP

42 LOCATIONS IN 21 COUNTRIES ALL OVER THE WORLD



- 📍 Global Offices
- Distributors
- Factories
- R&D Centers
- Regional Distribution Centers

Follow us on social media, download our apps,
and scan the QR code for more info.



@EscoLifesciences



@EscoLifesciences



@EscoLifesci



@Esco



@EscoLifesciences



@EscoLifesciences



Esco Lifesciences



Esco Lifesciences

ESCO

LIFESCIENCES GROUP

Esco Micro Pte. Ltd. • 19 Changi South Street 1 • Singapore 486 779
Tel +65 6542 0833 • mail@escolifesciences.com
www.escolifesciences.com

Esco Technologies, Inc. • 903 Sheehy Drive, Suite F, Horsham, PA 19044, USA
Tel: +1 215-441-9661 • Fax 484-698-7757
eti.admin@escolifesciences.com

Esco Lifesciences Group Offices: Bangladesh | China | Denmark | Germany | HongKong | India | Indonesia | Italy | Japan | Lithuania | Malaysia | Myanmar | Philippines | Russia | Singapore | South Africa | South Korea | Taiwan | Thailand | UAE | UK | USA | Vietnam