

Envirosafe

Fume Scrubber



Envirosafe Fume Scrubber

Introduction

A functioning fume hood exhausts hazardous gases, dusts, mists, and vapors from a confined location and helps protect workers from chemical exposure. To be able to provide the best fume exhaust system, Esco offers fume hood accessories such as: fume scrubbers, exhaust blowers, and airflow monitors.

Envirosafe Fume Scrubber provides excellent air pollution control for water soluble chemicals present in the fume hood's exhaust. Scrubbers are designed to enhance a fume hood's ability to provide operator and environment protection. EFS is compatible with most Esco Fume Hoods.

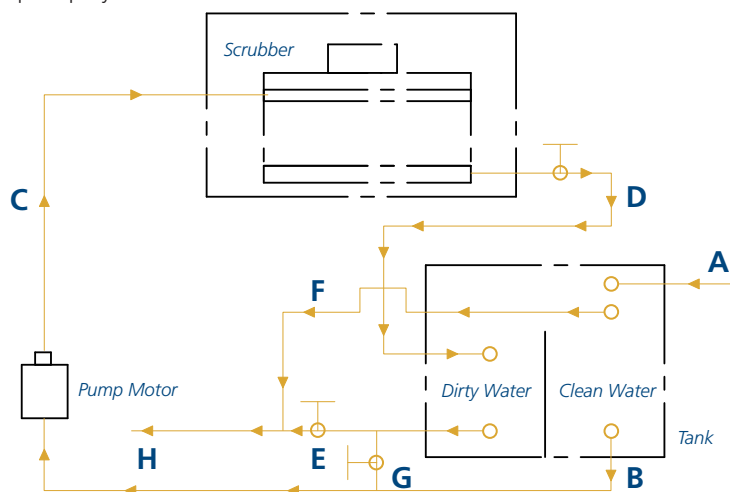
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Key Benefits

- **Excellent removal efficiency**
 - Counter-current/liquid contact results in 95-98% efficiency for most water-soluble acid and base airstreams.
- **Durability**
 - Main body is constructed from Polypropylene, which is chemical and corrosion resistant.
- **Compact**
 - The packing, spray manifold, and mist eliminator are placed on top of the fume hood, while the pump and reservoir are located inside the base cabinet. This arrangement ensures that minimal space is required for the scrubber system.

Scrubbing Process

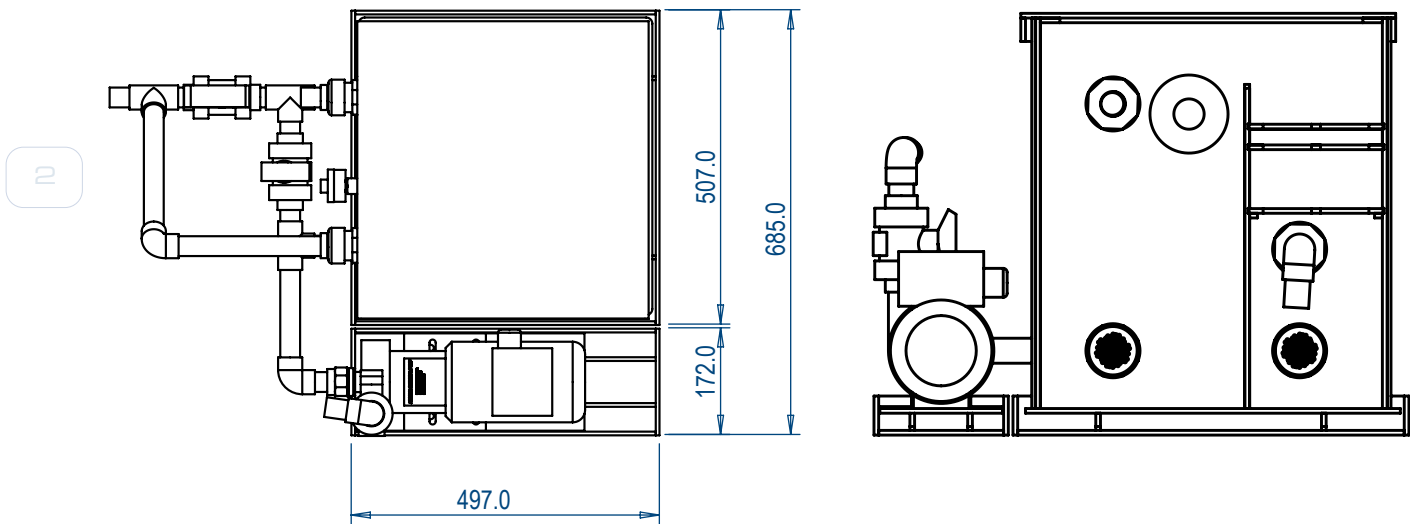
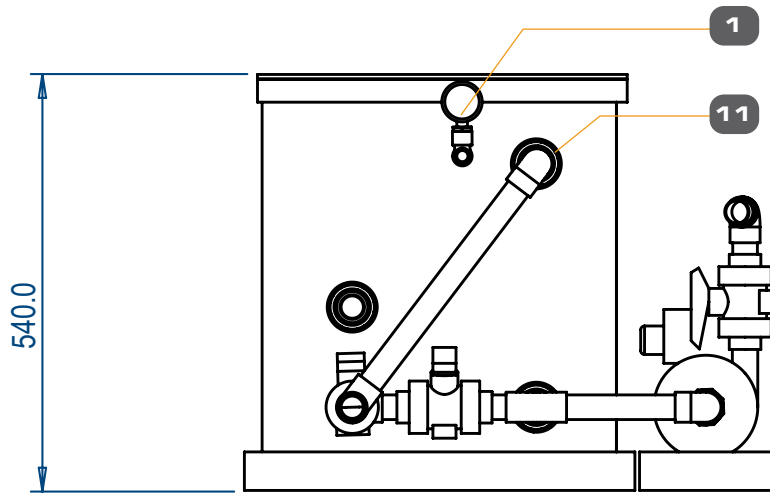
- Contaminated exhaust fumes from the fume hood enters the scrubber and passes through the packed bed (bottom filter) then through the liquid spray section.
- The contaminants then pass through the mist eliminator (top filter), then into the exhaust system to be released into the building's exterior.
- The scrubbing liquor is collected in the reservoir (located inside the base cabinet) and is recirculated by the pump to be used in the liquid spray section.



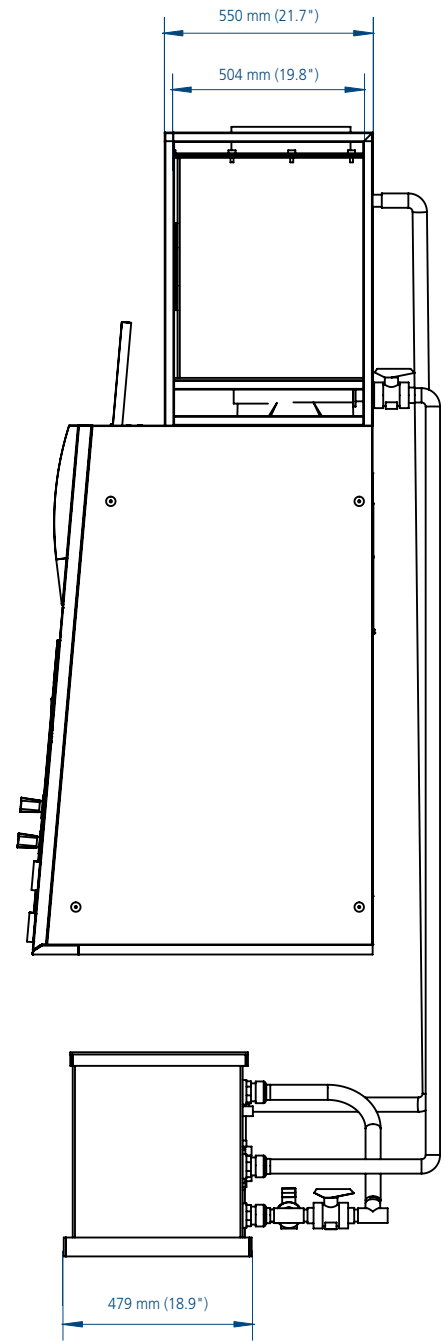
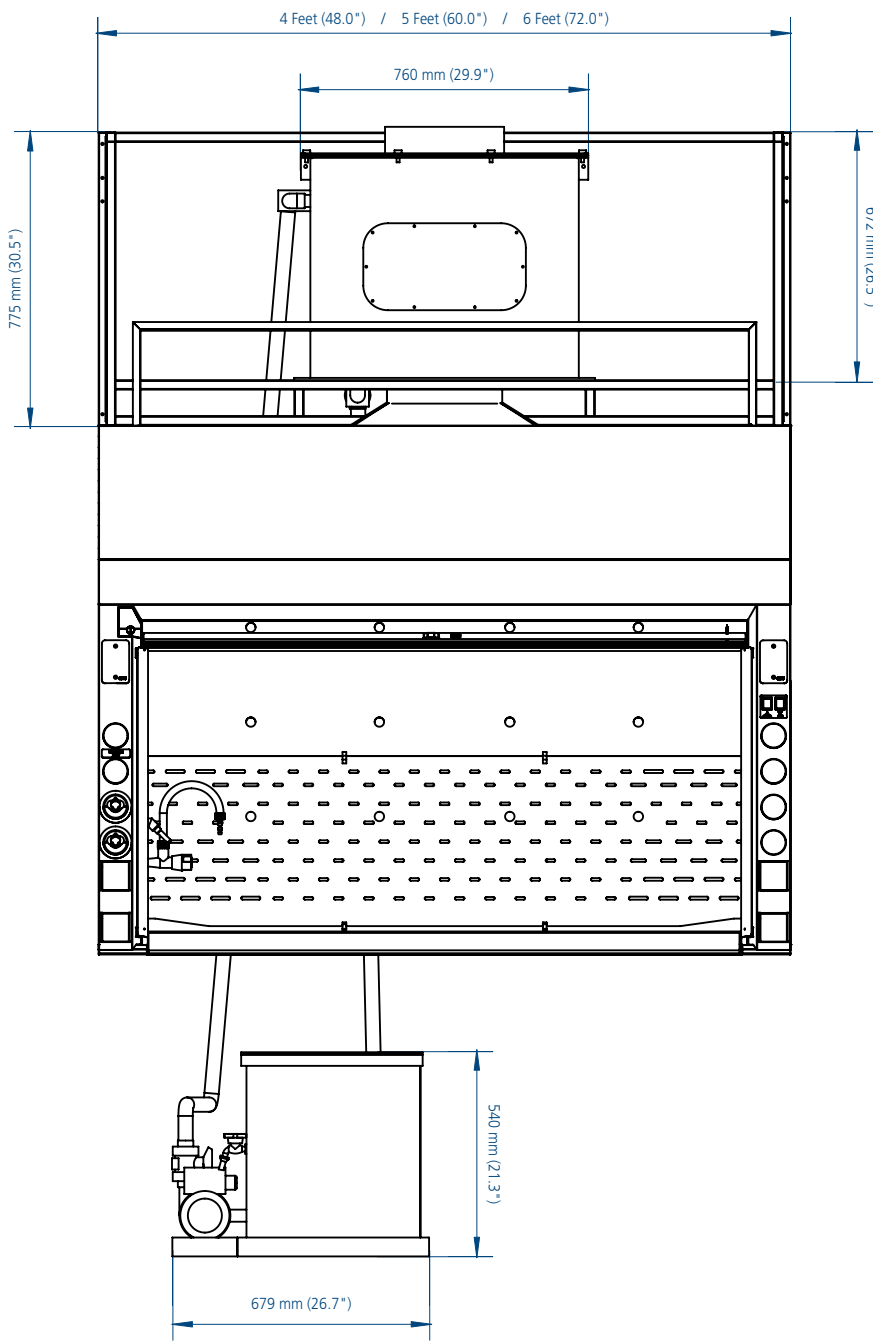
Piping and Instrumentation Diagram (P&ID)

- A. Water inlet to keep circulation of process
- B. Water supply to Pump Motor
- C. Water supply to Scrubber
- D. Water return from Scrubber
- E. Drainage of Dirty Water
- F. Drainage to Overflow of tank
- G. Drainage of Clean Water
- H. Dirty Water goes to Drainage of facility

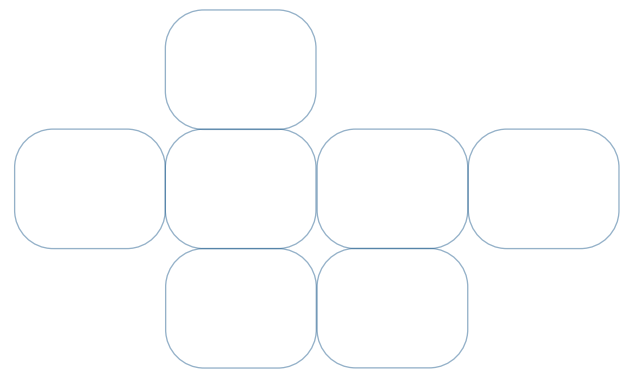
Neutralizing Tank for Esco Fume Scrubber (NT-EFS) Diagram



Envirosafe Fume Scrubber Engineering Drawing



Size	A
4 Feet	1220 mm (48.0")
5 Feet	1525 mm (60.0")
6 Feet	1830 mm (72.0")



General Specifications, Envirosafe Fume Scrubber

Model		EFS-001-4 2090240	EFS-001-5 2090250	EFS-001-6 2090251
		EFS-002-4 2090168	EFS-002-5 2090782	EFS-002-6 2090783
External Dimensions (W x D x H)	Housing	1220 x 580 x 775 mm (48.0" x 22.8" x 30.5")	1525 x 580 x 775 mm (60.0" x 22.8" x 30.5")	1830 x 580 x 775 mm (72.0" x 22.8" x 30.5")
	Fume Scrubber	760 x 550 x 672 mm (29.9" x 21.7" x 26.5")		
	Neutralizing Tank	679 x 497 x 540 mm (26.7" x 19.6" x 21.3")		
Construction	Main Body	Polypropylene		
	Internal Liner	Polypropylene		
	Fume Scrubber Window	Acrylic Glass		
Pipe Diameter	Water Inlet	12.7 mm		
	Tank Drain	25.4 mm		
	Exhaust Collar	315 mm (OD) / 305 mm (ID)		
Accessories (Optional)	Neutralizing Filter	Carbon Filter (Standard) 5080214		
Motor Pump	Chemical Pump Rate Capacity	80 l/min (max) Rate head: 6 m Connection: Ø1" Motor: 0.3kW, 220V / 1ph / 50 Hz / , 2 Pole TEFC		
Net Weight		113 Kg (249.1 lbs)	118 Kg (260.1 lbs)	127 Kg (280.0 lbs)
Shipping Weight		128 Kg (282.2 lbs)	131 Kg (288.8 lbs)	147 Kg (324.1 lbs)
Shipping Dimensions (W x D x H)		1320 x 820 x 1600 mm (52.0" x 32.3" x 63.0")	1750 x 820 x 1600 mm (69.0" x 32.3" x 63.0")	1950 x 820 x 1600 mm (77.0" x 32.3" x 63.0")
Shipping Volume, Maximum		1.73 m ³ (61.1 ft ³)	2.30 m ³ (81.2 ft ³)	2.56 m ³ (90.4 ft ³)

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