Elemental Scientific

VS Inline Wet Scrubber

The total solution for removing acids and gases from individual fume hood exhaust.



Highly Effective Removal of Acidic Fumes

- Lateral mixing and turbulent flow ensure clean air emissions
- No packing material means no channeling or performance drop-off
- Consistently high removal efficiency without clogging

Years of Maintenance-free Performance

- No moving parts extends system lifespan
- Minimal water use reduces cost and equipment use
- Supports hazardous waste minimization under RCRA

Quick and Easy Custom Installations

- Compact and lightweight for overhead or rooftop placement
- Installs easily above hoods or in ceilings without structural changes
- Inline setup avoids costly ductwork renovations

Proven Effectiveness		
Reagent	**% of Efficiency (min)**	**% of Efficiency (max)**
HF	95	100
HCl	91	92
HNO_3	69	78
H_2SO_4	87	91
$HClO_4$	50	57

Testing Parameters: For each test, a known volume aliquot of reagent was evaporated on a hotplate and drawn through the fume hood into the Inline Wet Scrubber. The effluent from the Inline Wet Scrubber was then analyzed and the quantity of reagent removed by the Inline Wet Scrubber determined.

Features Diagram

Directional Baffles

- Redirects, compresses, and accelerates airflow
- Increases removal rate of contaminants

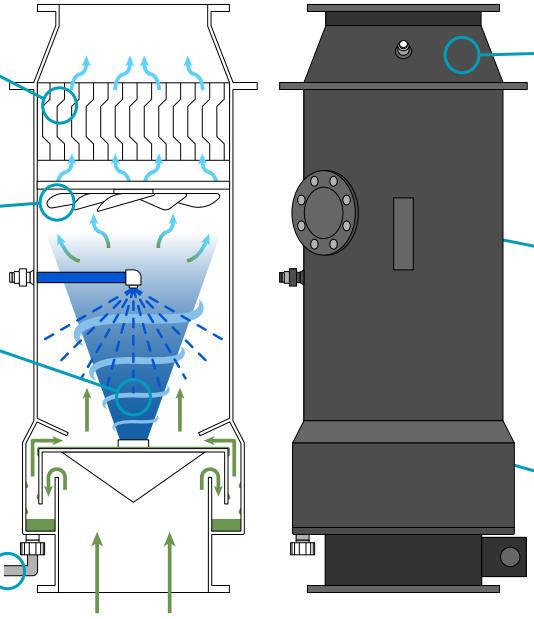
Serpentine Mist Emulator

- Captures final water droplets
- Begins to facilitate air acceleration

Suspended Water Column

- Vortex mixes clean water with contaminated fumes
- Directs droplets with captured contaminants into drain

Drain Line



Metal-free Construction

- Chemically inert to aggressive reagents
- Protects existing metal ductwork
- Polypropylene and PVC options

Static Operation

- No moving parts to replace
- No need to plug in
- Enjoys a long maintenance-free lifetime

Quick and Easy Installation

- Installs directly into existing ducting systems
- Two-hour average installation time
- Prevents a full renovation of building exhaust

Multiple configurations available, including large outdoor industrial scrubbers, inert ducting, exhaust fans, and more

	VS-8	VS-10-PP	VS-11-PP	VS-12-PP
Dimensions (H x W)	98.43 cm x 34.54 cm	113.72 cm x 43.18 cm	120.22 cm x 47.63 cm	128.91 cm x 51.82 cm
Inlet / Outlet	20.73 cm x 20.73 cm	25.91 cm x 25.91 cm	28.58 cm x 28.58 cm	31.09 cm x 31.09 cm
Operating Weight	12.25 kg	20.87 kg	26.31 kg	29.03 kg
Water Requirement	30.28 L/hr	30.28 L/hr	30.28 L/hr	30.28 L/hr
Water Pressure	Min 35 PSI	Min 35 PSI	Min 35 PSI	Min 35 PSI
Air Volume (min/max)	6.80 m³/min / 7.08 m³/min	16.42 m³/min / 20.39 m³/min	19.68 m³/min / 24.78 m³/min	25.20 m³/min / 28.32 m³/min
Operating Temp (min/max)	1.67 °C / 48.89 °C	1.67 °C / 48.89 °C	1.67 °C / 48.89 °C	1.67 °C / 48.89 °C

	VS-13-PP	VS-15-PP	VS-16-PP	VS-18-PP	VS-20-PP
Dimensions (H x W)	140.28 cm x 56.39 cm	156.85 cm x 64.77 cm	164.34 cm x 67.69 cm	181.69 cm x 76.20 cm	199.39 cm x 86.26 cm
Inlet / Outlet	33.83 cm x 33.83 cm	38.86 cm x 38.86 cm	40.64 cm x 40.64 cm	45.72 cm x 45.72 cm	51.82 cm x 51.82 cm
Operating Weight	31.30 kg	35.38 kg	45.36 kg	56.70 kg	58.97 kg
Water Requirement	30.28 L/hr	60.57 L/hr	60.57 L/hr	60.57 L/hr	60.57 L/hr
Water Pressure	Min 35 PSI	Min 35 PSI	Min 35 PSI	Min 35 PSI	Min 35 PSI
Air Volume (min/max)	32.00 m³/min / 40.07 m³/min	45.02 m³/min / 49.13 m³/min	48.85 m³/min / 55.21 m³/min	55.21 m³/min / 67.96 m³/min	67.96 m³/min / 86.40 m³/min
Operating Temp (min/max)	1.67 °C / 48.89 °C	1.67 °C / 48.89 °C	1.67 °C / 48.89 °C	1.67 °C / 48.89 °C	1.67 °C / 48.89 °C

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