

MOBILE THREE-PHASE SCRUBBER SYSTEMS

APPLICATIONS

Evoqua's SCRUB systems are designed to absorb volatile organic compounds (VOCs) and hydrocarbons in vapors. The SCRUB units pose advantages in their inclusion of both wet scrubbing and adsorptive media polishing.

These systems are cost-effectively used to treat gases with highly soluble volatile organic compounds (VOCs) or sulfides, typically at low to moderate concentrations. Benzene, toluene, ethylbenzene, and xylene (BTEX), semi-volatile organic compounds (SVOCs), and diesel or gasoline fumes are common constituents of contaminated streams for which these units are typically used. Each SCRUB unit has removal efficiencies greater than 99% for many organic compounds, or sulfur-containing compounds such as hydrogen sulfide (H₂S). Common applications for SCRUB units include, but are not limited to the following:

- Tanker truck off-gas control
- Vacuum truck operation
- Vapor control from frac tanks or tank farms

APPLICATIONS

The SCRUB units require minimal field assembly and site connections. Each unit requires minimal preparation time, as vessels can be shipped pre-loaded with media and require no off-loading or start-up work beyond initial system monitoring and flow introduction.

Evoqua offers a total service package that includes using OSHA-trained personnel providing onsite bonding, vapor hose packages, operation and monitoring, compliance records, and reporting.



FEATURES

- Suitable for batch operation during contaminant removal
- Remove targeted compounds using contaminant-specific solutions tailored to each process stream's specific quality
- Media vessels filled with VOCarb granular activated carbon, KMN2000 zeolite, or Midas Odor Control Media
- Flexible operational rates to match a variety of process demands
- Access ports, drain valves, and/or manways for easy vessel extraction, slurry, and draining operations
- Ability to operate with variable contaminant streams

Specifications / Typical Properties	SCRUB 1K - ProAct	SCRUB 1K - VT	SCRUB 2K - ProAct	SCRUB 2K - VT
Liquid Vessel Diameter	3'2"	5'	3'2"	5'
Maximum Liquid Capacity (gal.)	100	400	200	400
Recommended Liquid Fill (gal.)	75	275	150	275
Flame Arrestor Rating	Group D	Group D	Group D	Group D
Media Vessels	2	2	2	2
Media Vessel Diameter	3'2"	4'	3'10"	5'
Media Capacity (lb.)	1,000	1,000	2,000	2,000
Media Capacity (cu.ft.)	33	33	67	67
Manway Location	Top & Side	Top & Side	Top & Side	Top & Side
Manway/Handway Size	8"	Top: 20" Side: 12"	8"	Top: 20" Side: 12"
Blower Rating	NA	200 cfm @ 60 inWC	900 cfm @ 15 inWC	200 cfm @ 60 inWC
Overall Height	8'	11'6"	12'3"	11'6"
Overall Width	8'	8'	8'	8'
Overall Length	26'	26'	29'	26'
Inlet Connection (Camlock)	4"	4"	4"	4"
Outlet (150# flange)	4"	4" with Distributor	4" with Optional Stack	4" with Distributor
Liquid Vessel Drain	2"	2"	1"	2"
Maximum Flow (scfm)	790	500	1000	1000
Minimum Flow (scfm)	200	325	290	490
Material of Construction (steel)	Stainless Steel	Liquid: Stainless Media: Carbon	Stainless Steel	Liquid: Stainless Media: Carbon
Maximum Pressure (psig)	7	8	7	8
Maximum Vacuum (inWC)	20	20	20	20
Maximum Temperature (deg.F)	140	140	140	140
Power Requirements	NA	460V, 3ph	480V, 3 ph	460V, 3ph
Electrical Rating	NA	Class 1 Div. 2	XP	Class 1 Div. 2
Additional Features	NA	Nitrogen Purge System, Quick Media Dump Valve	AA-1000 Heat Exchanger	Nitrogen Purge System, Quick Media Dump Valve

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Photo: An example of Evoqua's mobile scrubber system.

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