AIR CHEM SYSTEMS, INC. manufactures an extensive line of air pollution control equipment for the electronic, metal finishing, plating, sewage treatment, and other industries that generate nonflammable corrosive fumes and odors.

ACSH Horizontal Scrubber

Phone: 562-598-7100
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Toll Free: 1-800-237-2865
Email: www.airchemsys@aol.com
Web Site: www.airchemsystems.com
ACS SCRUBBER DESIGN

Air Chem Systems Inc. manufactures an extensive line of scrubbers in both the horizontal and vertical arrangements.

The ACSH Series of horizontal scrubbers have a lower profile than vertical scrubbers and are well suited for roof mounted installations and when mounted on a common skid with the required fan makes a system that is easy to install and service.

This type of scrubber, with water only, functions as a fume scrubber to remove particulates, acid and caustic mist out of the influent air stream. With the addition of other reactive chemicals these scrubbers function as absorption scrubbers to neutralize other chemicals such as hydrochloric acid gasses, ammonia and odors.

Some absorption applications may require lower air velocity necessary to increase dwell time. For these systems the scrubber model selected will have a maximum CFM of less than that indicated on page 5.

The ACSH Series scrubbers are limited to six (6) feet of packing depth. If additional packing depth is required to meet a required efficiency, use of an ACS Vertical Scrubber is recommended.

STANDARD COMPONENTS

ACSH Horizontal Scrubbers are constructed of fiberglass-reinforced plastic (FRP) and include an interior lining of premium grade, vinyl ester resin for maximum corrosion resistance.

The ACS Horizontal Series Model Numbers H11 through H99 have an integral liquid reservoir and pump deck. The packing depth will vary from three (3) feet to six (6) feet depending on chemistry and removal efficiency requirements. All manifolds are constructed of Schedule 80 PVC.

The demister packing depth on ACS Models H45 and below will have a 12-inch packing depth of random type, polypropylene packing media. ACS Models H55 and above will have chevron type profile blades.
STANDARD COMPONENTS

- The recirculation manifold consists of an in-tank CPVC pump (voltage requirements are 230/460V – 60 Hz – 3-phase), flowmeter and a throttling gate valve to control the liquid flow rate. The distribution nozzles are of PVC or polypropylene, 120° full cone, non-clogging type with access ports or removable spray lines for serviceability. A pressure gauge is added where two or more pumps are required to maintain a pump pressure balance.

- A blowdown manifold is installed to provide a continuous bleed-off of solution to prevent the saturation of the recirculated liquid by the contaminants and chemical additives. This manifold is piped internally into the overflow/drain manifold system (provided by others) routed to your clarifier or other waste treatment system.

- The makeup water manifold consists of an adjustable float valve to maintain liquid level. The point of connection (P.O.C.) is a 1” PVC, plain end (PE) fitting.

- The 2” diameter drain and overflow P.O.C. are FRP threaded couplings for field plumbing to waste treatment.

- Level switch manifold is provided for pump shutdown at low liquid level.

- Hold down lugs.

The scrubber is the primary chemical treatment component for your ventilation system. Other components to an ACSH Scrubber System are fans, stacks, ductwork, hoods, etc. (See additional sections in this catalog for these optional components).
ACSH SERIES I HORIZONTAL SCRUBBER

STANDARD EQUIPMENT

R = RECIRCULATION MANIFOLD
W = CITY WATERFILL / BLOWDOWN MANIFOLD
All scrubbers come with tiedowns.

<table>
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<tr>
<th>ACSH MODE L #</th>
<th>PD (FT )</th>
<th>MAX. CFM</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
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NOTES:
1. The model number indicates the cross-sectional dimension of the scrubber in feet followed by the packing depth (PD) in feet required to achieve the removal efficiency desired.
2. The horizontal scrubbers can have the pump deck either on the left side (as shown) or on the right side when viewed from the discharge end.
3. AIR CHEM SYSTEMS will also custom fabricate if our standard scrubbers do not fit your application. Please contact Air Chem Systems, Inc. with your specific requirements.
ACSH SERIES II HORIZONTAL SCRUBBER
MODEL NUMBERS 44 THRU 99

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10539 Humboldt Street  Los Alamitos, CA  90720
Phone (562) 598-7100  Fax (562) 598-7115
ACSH HORIZONTAL SCRUBBERS SYSTEMS

Typical Series I system with fan and skid

Typical Series II system with fan and skid
OPTIONAL EQUIPMENT

- **Stand-by Pumps**: Provides back-up water flow in the event of pump failure.

- **pH, ORP, Conductivity Systems**: To include controller or monitor, sensors and inline sensor manifolds.

- **Magnehelic Gauge**: Measures pressure differential across the packing and/or demister to detect fouling of the packing.

- **Pressure Gauges**: Measures pump outlet pressure. Included if two or more pumps are required to maintain flow.

- **Control Panel**: A NEMA-4X plastic control panel with starters, controls, on/off switches, alarms, and alternate mounting location for pH/ORP controller and magnehelic gauges.

- **Flanged Connections**: Offered in lieu of plain end socket, PVC or threaded FRP points of connection (POC).

- **Mesh Pad Type Demisters**: Used for smaller particulate size removal efficiency.

- **Common Skid**: Common steel skid for scrubber and fan.
Air Chem Systems, Inc.
Manufacturer of Fiberglass Air Pollution Control & Industrial Equipment

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