

Type MSII Mini Scrubber

The Type MS II Mini-Scrubber is a second generation design based on the highly successful original MS Mini Scrubber that has been sold in the USA since 1979. This design is available in 2 sizes, 4000 and 6000 ACFM. Removal efficiency is in the range of 95-99% depending on emission specifications. The scrubber is simple in design, is fabricated in corrosion-resistant polypropylene, has no moving parts other than a built-in fan, and is easily serviced. The sparger type design eliminates the need for a liquid circulation pump and spray nozzles, which minimizes maintenance requirements.

Benefits

- Compact, fully pre-assembled unit saves installation time and cost.
- Ready for connection to gas ducting, water and reagent supplies.
- Minimal electrical wiring needed at installation. All scrubber mounted electrical components are pre-wired to a body mounted control panel.
- A supply of 3 phase power is the only electrical work required.
- The base functions as a skid that is used to move and locate the unit.

Applications

- Control of odor emissions
 - fumes from laboratory hoods
 - food preparation
 - paper coating
 - metal surface cleaning and treatment
 - plastics processing
 - foundry operations
 - chemical storage tanks
 - transfer operations
- Chlorine and HCL processing
- Scrubbing water soluble organic chemicals

Scrubbing Efficiency

The Type MS II Mini-Scrubber achieves very high scrubbing efficiency, which is comparable to 6 ft. of packing in a counter current packed bed scrubber. Typical number of transfer units (NTU) is 4 to 5, resulting in absorption efficiencies over 99% for HCl, ammonia and similar gas components. The high efficiency is due to a very high gas-liquid interface area produced in the sparger section.

Features

- Scrubber body fabricated in heavy gauge corrosion resistant polypropylene, which offers excellent UV light and weather resistance and has operating temperature capability to 150°F.
- Standard fan on MiniScrubber develops 7" S.P. and is flange mounted on top of the body to minimize the footprint while eliminating all fan mechanical and electrical installation cost.
- Body contains an integral liquid sump with visual liquid level site tube. The sump bottom is sloped towards the drain for easy cleanout.
- Components internal to the body include sparger tubes that are removable from outside the scrubber through two full width access ports. Also includes packing for gas scrubbing and mist elimination. Piping and manual drain valves are included.

- Low Cost
- High flow rates in a new compact design
- Outside access panels for easy maintenance
- Self supporting—eliminates need for a separate frame



- A pH monitoring and control system is standard. The pH sensor can be removed for calibration without interrupting operation.
- An automatic liquid level control system is standard. This system adds water to the scrubber to make up for loss due to evaporation.
- A fully functional electrical control panel including motor starters.

Optional Features

- Increased static pressure on fan to 10" S.P.
- Reagent pump and blowdown indicator
- Waste liquid transfer pump
- FRP fan for increased corrosion resistance for HCl and Chlorine
- Sump heaters for outdoor installation
- Exhaust gas noise control muffler

Custom Options

Ceilcote Air Pollution Control will custom build a scrubber to your specifications. These may include:

- Explosion proof components
- Additional instrumentation
- Reagent supply tank
- Particulate and sand separation equipment

Operating Principle

The gas to be cleaned is finely dispersed into the scrubbing liquid by sparger tubes immersed in the liquid. The mixture of liquid and gas bubbles is carried into the packed bed section, which serves first as gas-liquid contactor and in the upper zone as mist eliminator. The clean gas exits through the fan. The scrubbing liquid returns into the sump by gravity flow.

Different reagent solutions are used depending on type of absorption reaction. A pH sensor and controller regulate the desired pH of the scrubbing liquid by automatic addition of reagent solution. A liquid level controller and visual level indicator are provided to control the addition of water lost by evaporation. Exhausted scrubbing liquid is drained periodically by a manually operated valve, or optional transfer pump.

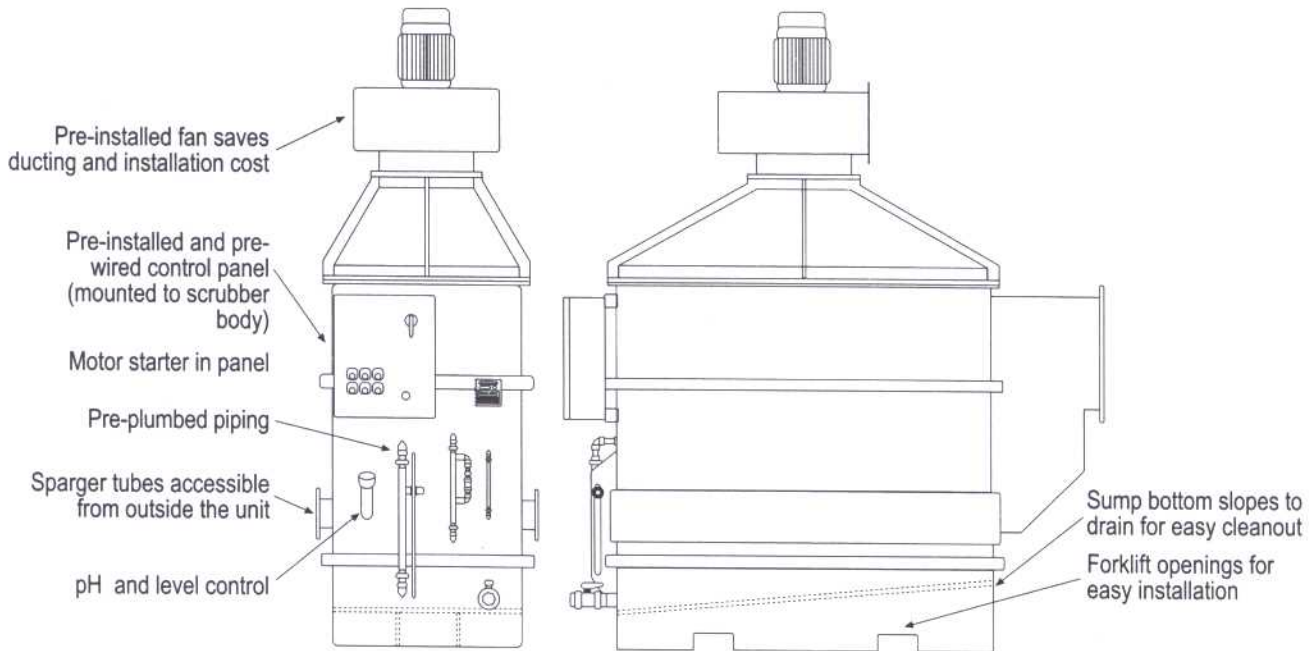
Features

- Corrosion resistant and cost-effective polypropylene.
- Pre-tested (before shipment).
- All components are factory mounted saving installation costs.
- Sparger tubes eliminate the need for a pump and spray nozzle.

Specifications

Model	Gas Vol. ACFM	Dim. ft.	Sump Cap. Gallons	Fan Motor HP	Shipping Wt. Lbs.	Operating Wt.
MSII 4000	4000	3x6x12	165	10	1,220	2,690
MSII 6000	6000	3x6x12	165	15	1,305	2,775

Specifications are subject to change without notice.



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