



Multi-Purpose Scrubbers

The Fisher-Klosterman Emtrol MPS Multi-Purpose Scrubber has a long and successful track record in many industrial applications. The scrubber is able to effectively cool gas streams, collect particulate, and absorb gaseous pollutants in a single package. The inlet section, which can include a quench section to handle gas temperatures of up to 2000 degrees F (1100 degrees C), utilizes a venturi throat to capture particles with water droplets and send them to the separator. The separator, or

tower, includes a packing section for gas absorption along with a mist eliminator to ensure a clean stack exhaust. The unique design utilizes an internal tray to separate the liquid loops of each section so that chemical usage is minimized.

Fisher-Klosterman Emtrol can design and supply a complete system from the scrubber inlet to the stack outlet. Scope of supply can include:

- Support steel
- Access platform & ladder
- Centrifugal Fan
- Exhaust stack
- Connecting ductwork
- Recycle pumps, piping, and valves
- Chemical addition and control system
- Instrumentation Control panel / PLC

We can provide system design from scrubber inlet to stack outlet.

Available Features

- High temperature quench section for up to 2000 degrees F (1100 degrees C)
- Vertical or horizontal gas entry
- Various venturi throat designs
- Variety of liquid injection methods
- Efficient removal of submicron particles
- 99+% gas absorption efficiency
- Multiple gas removal stages with separate liquid loops
- Integral or external recirculation tanks
- Mesh pad or chevron-style mist eliminators
- Various packing material choices
- Carbon, stainless, alloys, or FRP construction
- Performance warranty
- Complete system design and supply including: ductwork, pumps, piping, valves, instruments, controls, chemical feed, fans and stacks

How it Works:

When the gas temperature is more than 400 degrees F (200 degrees C), fresh water is injected into a quench section to take the gas to a near saturation condition. Scrubbing water is then introduced and forced through a venturi throat where it collides with and captures particulate. This slurry is removed in a separator section that includes a tank for water recycling. After particulate is removed from the gas, it enters a column of random packing where gaseous contaminants are absorbed by a chemical reagent solution that has been sprayed on top of the packed column using high pressure spray nozzles. This scrubbing solution is recycled separately so that chemical usage is minimized. The packed column's height and diameter are determined by the contaminants present and the required removal efficiencies. Finally, the gas passes through a chevron or mesh pad style mist eliminator to ensure that free water droplets are removed before it exits the scrubber tower.



Typical Applications:

- Boilers
- Kilns
- Incinerators
- Reactors
- Combustors
- Dryers
- Calciners
- Odor control
- Gasification
- Pyrolysis
- Acid gas removal
- Desulfurization
- Electronics (Chip manufacturing)
- Fertilizer
- Pulp and paper

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