

# AS Series Ammonia Scrubbers

## Eliminate Ammonium Salts in Analyzers and Sample Lines

Perma Pure AS Series ammonia scrubbers remove ammonia from a gas stream to protect analyzers and sample lines from clogging due to the formation of ammonium salts.

### Key Features

- Removes only ammonia
- Eliminates ammonium salts
- Accommodates all samples
- Exclusive, long-life media
- Easy media replacement
- No moving parts
- Excellent corrosion resistance
- Optional heater

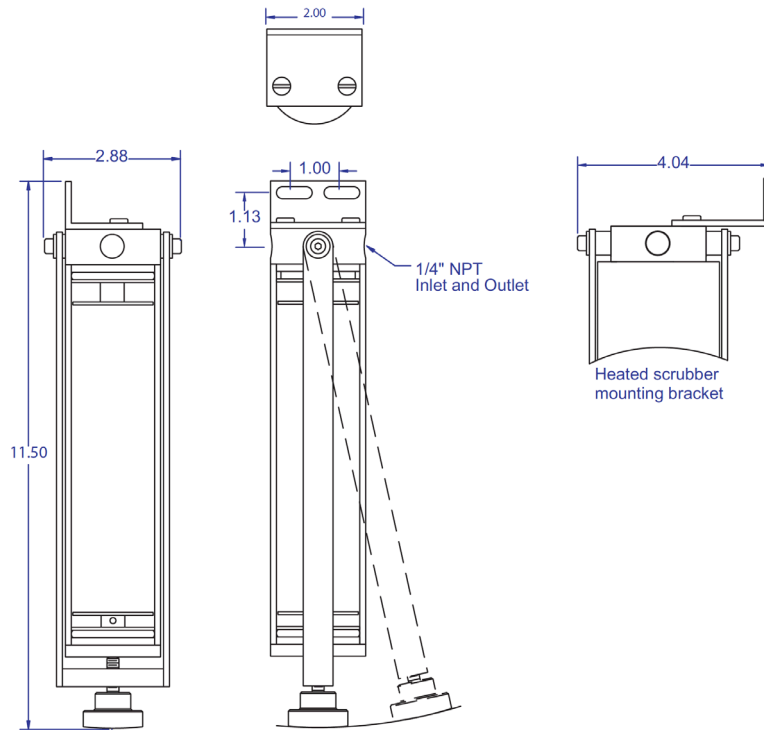
### Principle of Operation

AS Series ammonia scrubbers remove ammonia by reacting it with phosphoric acid, forming ammonium phosphate. This relatively high melting point salt immediately deposits inside the ammonia scrubber, removing it from the gas stream. The reaction is quite selective, and does not affect the concentrations of other gases in the stream.

Phosphoric acid is very hygroscopic so it will draw water from the gas stream, creating some liquid phosphoric acid solution in the bottom of the scrubber. To avoid excess liquid formation, the scrubber should be heated, either by installation in a heated enclosure or by using our heated scrubber pictured to the left with the red heater blanket.

The AS Series proprietary scrubber media has been formulated for continuous operation. Its life expectancy is dependent upon the sample flow rate and ammonia concentration in the gas stream. It is very selective in its reactions with the gas, removing only ammonia. It is also a very safe, stable chemical to handle and store.





AS Series media is a very concentrated material, so it lasts a relatively long time before requiring replacement. The length of time between refills will vary depending upon the concentration of ammonia and the gas flow rate. One filling of the scrubber lasts for about 40,000 liter-ppm-hours. For example, with a gas containing 1 ppm of ammonia at a flow of 1 lpm, the media would last 40,000 hours (4-1/2 years), while with a gas containing 10 ppm of ammonia at a flow rate of 5 lpm, the media would last 33 days.

### Replacement Media

AS-200-08-E Single refill

AS-200-08-EB Bulk filling, 5 refills

Model	AS-200-08-PS	AS-200-08-PSH	AS-200-08-SS	AS-200-08-SSH
Description	Polysulfone shell with stainless steel housing, unheated	Polysulfone shell with heater blanket	All 316 stainless steel construction, unheated	All 316 stainless steel with heater blanket
Maximum Pressure	30 psig	30 psig	100 psig	100 psig
Maximum Temperature	125°C	* See Note	130°C (200C with hex bolt replacing thumbscrew)	* See Note

NOTE: The heated ammonia scrubber is supplied with 2 leads. It can be purchased for 110 VAC or 220 VAC service. The high limit on the thermostat is 135°C. If connected to a controller, the 30 watt heater will provide up to a 100°C rise over ambient temperature.

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