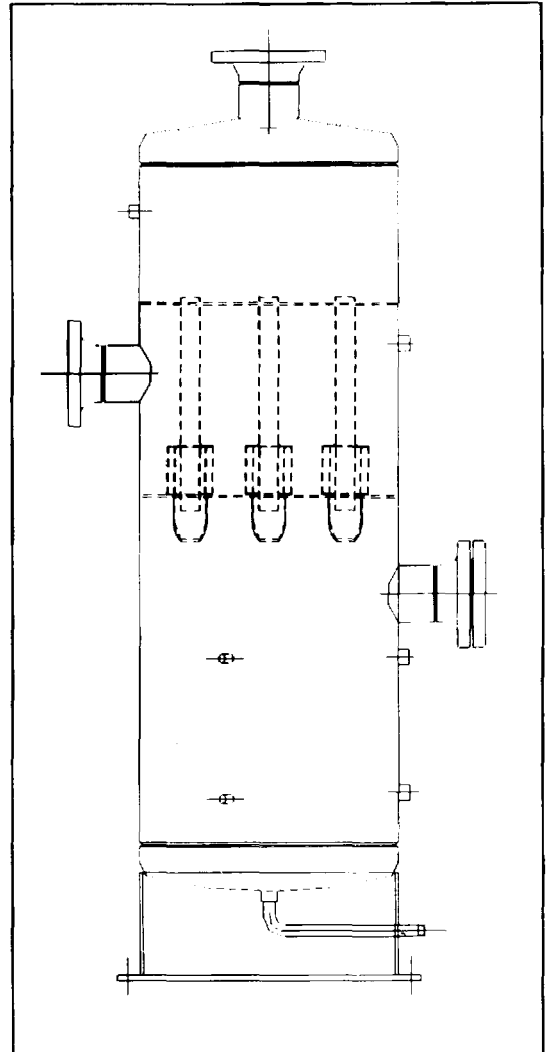


- High efficiency separation of entrained solid particulate and/or liquids & mists.
- 100% removal of 8 micron size liquid particles & larger.
- 100% removal of 5 micron size solid particles & larger.
- 99% removal of 5 to 8 micron size liquid particles.
- Capacity to handle heavy solid loadings or liquid slugging.
- Vertical or horizontal designs available.
- Self cleaning, low maintenance requirements.

### Design Features:

The Anderson Multi-Cyclone Scrubber has several features that make it an attractive alternative to our Hi-eF™ type centrifugal separators.

- No moving parts and wear resistant materials: Cyclones are constructed of ASTM B31.1 & B31.3 listed alloyed steel; Type 316 SS available.
- Low Maintenance cyclone elements are self cleaning; periodic blow down for removal of collected materials is all that is required.
- Uses no scrubbing oils or liquids.
- Wider flow range compared to centrifugal type separators.
- High capacities with each design arrangement; single stacked, double stacked, vertical gas, and horizontal. Two sizes of cyclone elements available.
- Sized per application for optimum flow per cyclone tube.
- Optional cyclone reduction device to keep internal velocities at factory specified levels. This allows for maximum efficiency over a wide range of process production volumes.



### Typical Applications:

Anderson Multi-Cyclone Separators are specified when the process gas contains dry particulate, liquid particulates, or a combination of both solids and liquids and efficiencies beyond Hi-eF™ centrifugal separators are required. They are ideal for applications where the expense and maintenance challenges of complex filter-separator setups is not desired, or as an effective pre-filter knockout unit to protect sensitive coalescing polishing filters.

- Removal of pipeline contaminants on the suction side of compressor stations.
- Protection of meter installations from fouling and inaccurate readings.
- Dry dust scrubbing where oil and liquid scrubbers are not operationally or economically justified.
- Ahead of gas storage fields to prevent injection and withdrawal of contaminants.
- Protection of gas turbine fuel combustion systems.
- Product recovery: contacting towers & dehydrating systems.
- Upstream of rotating equipment (prime movers) to prolong life and reduce maintenance requirements.

## Principle of Operation

The success of the Anderson Multi-Cyclone Separator lies within the principals of physics: Centrifugal force, impingement, and gravity. The construction of the AMCS employs each of these principles through the use of carefully designed stages of separation regions.

The saturated gas enters the first stage inlet plenum of the separator, which contains the cyclone support risers arranged in a parallel construction. The gas stream velocity is significantly reduced in this chamber, and the bulk liquids and solids quickly fall to the bottom of the tube sheet containing the cyclones. Further separation occurs as a result of the riser support tubes. As the liquid negotiates this maze of tubes, impinging upon the risers, the 5-10 micron particles sheet and coalesce onto the risers, draining down towards the cyclone tube sheet.

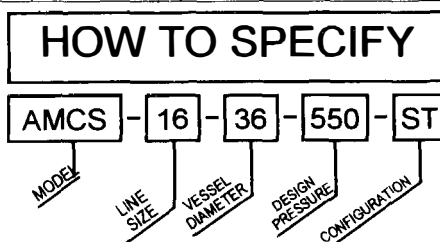
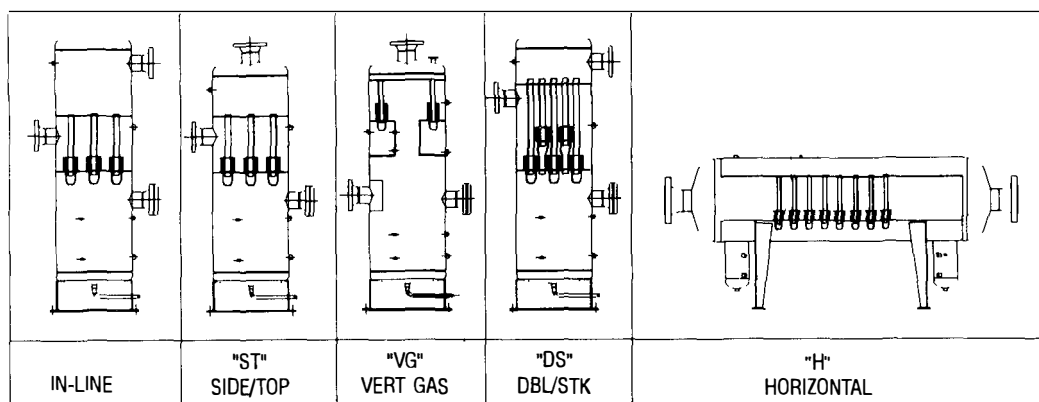
The gas then enters an arrangement of multiple cyclone tubes arranged on the bottom tube sheet. Each cyclone has two tangential entrance points that force the gas into a counter-clockwise downwards direction, increasing the flow velocity and imparting a small radiused centrifugal force upon the solid and liquid particulate. The particulate are then thrown downwards past the vortex of the cyclone tube into the collection sump, the scrubbed gas then rises upwards through a precisely engineered riser tube to the vessel outlet.

## Efficiency:

Anderson Multi-Cyclone Scrubbers will remove 100% of all liquid particles 8.0 microns and larger, 100% of all solid particles and larger, and 99% of all 5 to 8 micron and liquid particles when operating at design conditions. The AMCS will carry over no more than 1/10 U.S. Gallon liquids per MMSCF when operating at factory specified pressure and flow parameters.

## Design Features/Options:

Anderson Multi-Cyclone Separators are available in configurations other than the standard inline configuration. The optional configurations are as shown below:



Available Gauge Glass/Float Trap/Sight Flow Indicator/Liquid Level Controller/Dump Valve upon request. Cyclones available in 316L stainless steel; special alloys upon request.

- Custom engineered, designed and fabricated.
- Optional dry dust collection cone.
- ASME code constructed
- Optional removable cyclone module.

# ANDERSON™ SEPARATOR COMPANY

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ASME CODE STAMPS

