

INNOVATION



Koch-Glitsch CYCLONE mist eliminators

YOU CAN RELY ON US.

Cyclone mist eliminators consist of multiple cyclone tube elements mounted into a housing. The units are provided in easily handled subassemblies, which are installed through vessel manways.

Extremely high gas capacity

Cyclone mist eliminators deliver very high gas handling capacity combined with excellent droplet removal efficiency even at elevated pressures.

New construction

In new construction of high pressure separators, cyclone mist eliminators often provide the lowest overall cost solution by minimizing the diameter and height requirements of the vessel.

These significant vessel size and weight reductions may lead to faster vessel delivery, lower transportation costs, simplified installation and lower overall vessel costs.

Retrofits

In retrofits, where significant additional capacity is required, cyclone mist eliminators extend the gas capacity well beyond any other mist elimination technology.

Benefits

- Minimizes new vessel diameter and weight, which is particularly important in high pressure applications
- Ideal for debottlenecking existing separators for capacity upgrades
- High gas turndown
- Easily installed through vessel manways

Materials of construction

- All common metal alloys

Design Parameters

The design and selection of cyclone mist eliminators are based on:

- Gas and liquid properties
- Liquid loadings
- Desired efficiency and pressure drop

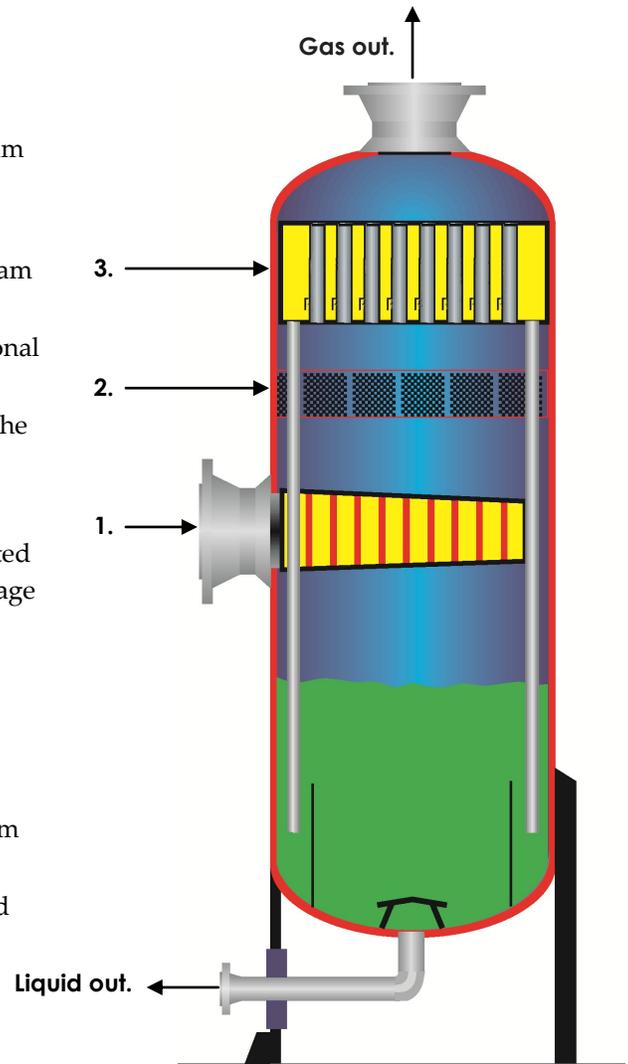
Computer simulations can provide reliable models at other process conditions.

DEMISTER-PLUS type MC-V mist eliminators

The advanced design DEMISTER-PLUS mist eliminator can achieve even greater increases in capacity over conventional mist elimination equipment. The well proven DEMISTER-PLUS mist eliminator design features a feed inlet device and a one or two-stage mist eliminator, combining the efficiency of the DEMISTER® mist eliminator with the high throughput capacity of the cyclone mist eliminator.

Function of cyclone separators

1. Gas and liquid enter the feed nozzle of the separator.
A YORK-EVENFLOW vane inlet device decreases the momentum of the inlet feed stream in a controlled manner that:
 - facilitates removal of bulk liquids and solids
 - provides even distribution of the gas flow over the downstream mist elimination devices
 - minimizes droplet shatter, which prevents creation of additional fine entrainment
 - reduces gas velocities flowing over the liquid surface below the feed point, which prevents re-entrainment of previously collected liquid caused by shear on the liquid surface
2. The mist-laden vapor then passes through a horizontally-mounted YORKMESH knitted wire mesh agglomerator with liquid drainage system. The agglomerator enlarges the entrained droplets such that they are easier to remove by the downstream mist eliminator.
3. The vapor and remaining mist enter the cyclone inlet.
 - a. The gas and mist enter the cyclone inlet and flow through a swirl element that imparts a very high centrifugal force. The droplets are flung outward and are coalesced into a liquid film on the cyclone inner wall.
 - b. The liquid film and a small portion of the gas flow are purged out of the cyclone through slits in the wall into an outer chamber where the gas and liquid separate.
 - c. The gas is discharged from the top.
 - d. The liquid drains from the bottom.



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For a list of all of our offices and locations, visit our Web site.

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Patents

This product is protected by one or more of the following United States Patents, 5762834, and may be covered by patents in other jurisdictions.

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