# DH 5000 Droplet Separator (Mist Eliminator)



The DH 5000 *(TS-5 series)* droplet separator is a vane type separator for horizontal flow. The gas flow charged with liquid droplets is directed through eliminator chambers which are designed for maximum effect on the gas flow.

As a result of this configuration, inertial forces act on the droplets. The droplets impinge onto the profiles, where they form a liquid film which is subsequently drained off as a result of gravity. Specially shaped separating chambers ensure that the liquid is drained off in the correct manner while at the same time enhancing the separation of very fine droplets.

The requirements of specific applications are achieved by means of different profile spacing and the use of eliminator profiles with up to four deflection points.

# **Target applications**

- Evaporators
- Absorbers
- Gas scrubbers
- Desulphurization units
- Gas coolers
- Exhaust air treatment plants
- Chemical plant
- Natural gas processing plant

# DH 5000 (TS-5 series)

Aerodynamically Engineered

Profiles divide the gas flow into streams, which pass easily through the mist eliminator. Inertia forces liquid droplets to impact the profile wall, where they collect, agglomerate and drain in protected areas of low gas velocity called quiescent zones.

• Cross Flow Drainage

Collected liquid drains at 90° to the gas flow, to minimize reentrainment and allow higher operating velocities.

• Versatility

The DH 5000 mist eliminator is available in a variety of configurations to meet the specialized needs of various applications.

• Low Drag Coefficients

DH 5000 functions with greater overall efficiency at higher velocities, without excessive pressure drop.

## • Easy Upgrade

Replaces many original equipment mist eliminators easily.

Low Maintenance

Modules are easy to clean, even during system operation.

• Durability

The standard material for Munters' DH 5000 high- mist eliminator vanes is stainless steel DIN 1.4571 (316L). Special materials (e.g. nickel, Monel, etc.) are available upon request. Housings and vessels can be made of stainless and carbon steel and various alloys.



### Performance data

All technical performance data apply for a system air / water at 20 °C and 1 bar.

The limit drop size represents a performance characteristic of the profile. At the relevant velocity and operating conditions, it is the size of the smallest droplet that is completely separated.

The pressure loss of a mist eliminator should be as low as possible, in order to ensure favorable operating costs.

The separation efficiency specifies how much liquid the mist eliminator removes from the gas flow. It is customary to specify a maximum permissible inlet load and a guaranteed level of residual liquid content downstream of the eliminator.

#### Materials

- Stainless steel alloys ASTM 304, 316Ti, 316L, 321; DIN 1.4301, DIN 1.4404, DIN 1.4541, DIN 1.4571
- Special material available upon request



#### Scope of supply

The DH 5000 is available in different configurations:

- Eliminator packs
- Framed pack for installation as internal
- Eliminator together with casing or pressure vessel
- Framed packs including a support structure
- Cleaning systems



Material certificates can be delivered for most materials upon request. Pressure loss, limit drop sizes and fractional efficiency curves for given operating data are delivered upon request.





Principle illustration.

eliminator for condensate removal.



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