

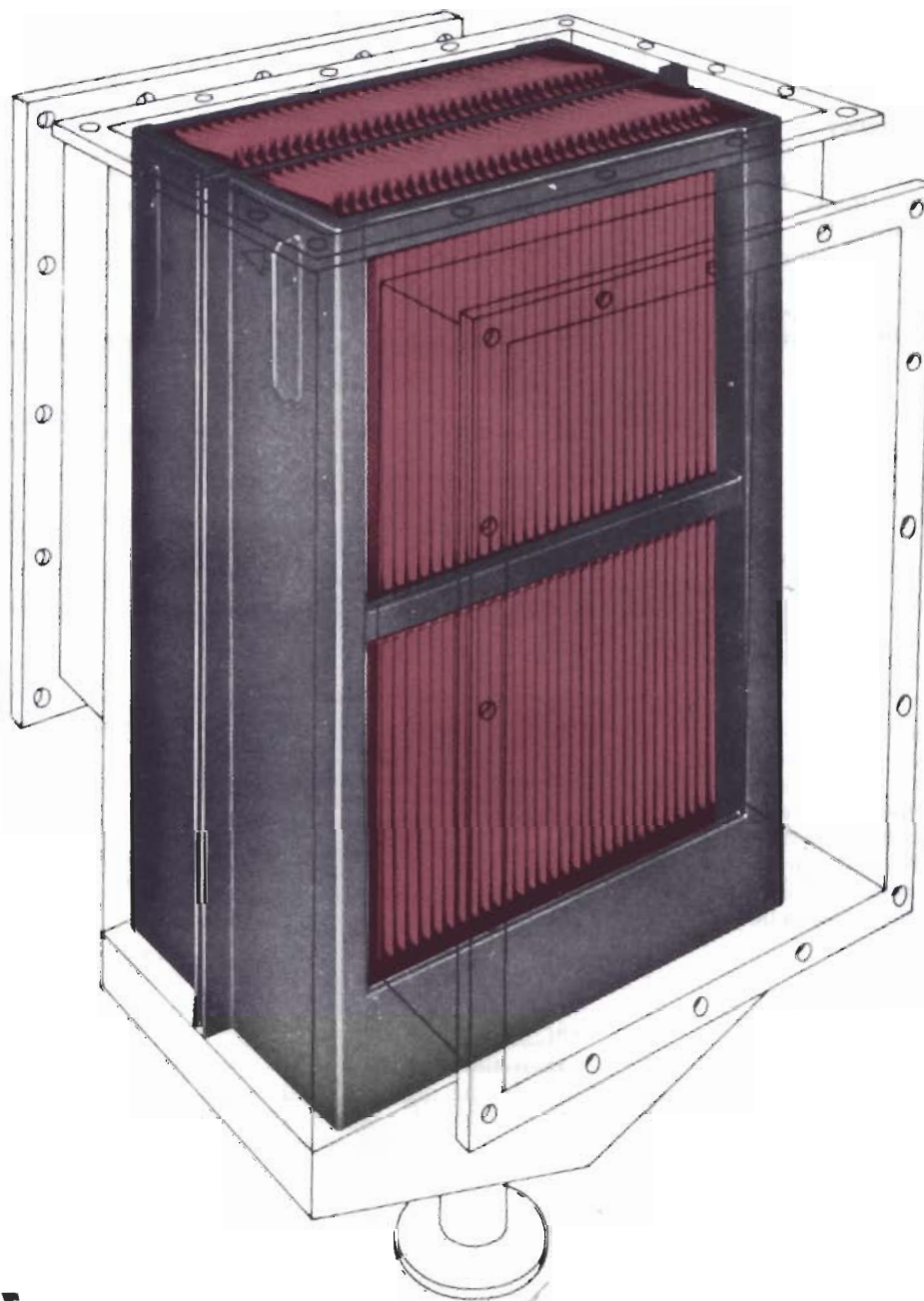
Powerful resistance to corrosion  
by the use of various plastics  
or aluminium.  
Low drop in pressure.

## EUROFORM Mist Eliminator

Mist Eliminator for meeting  
special requirements of gas  
purity.

For horizontal flow.

### T 100 Range



# Performance Data

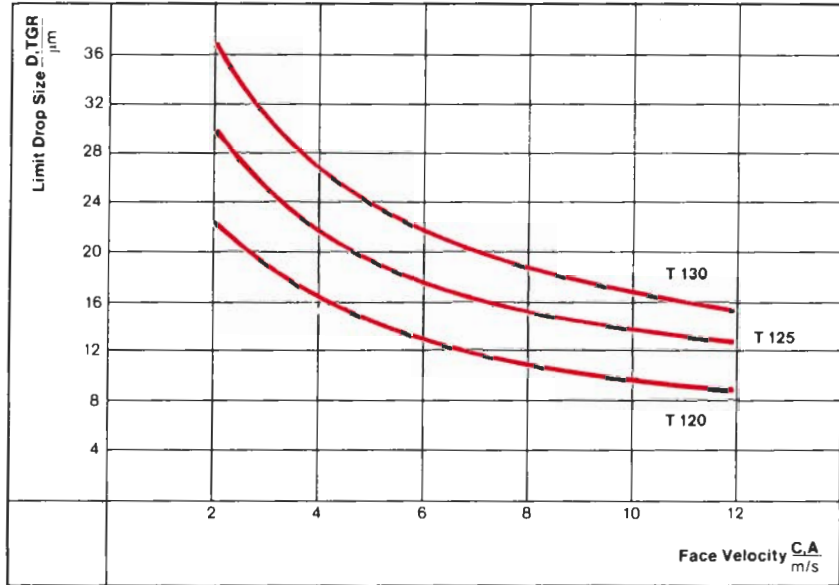
Efficiency in the main depends upon the size and concentration of the drops to be removed, on face velocity and viscosity of the gas as

well as on the eliminator design.



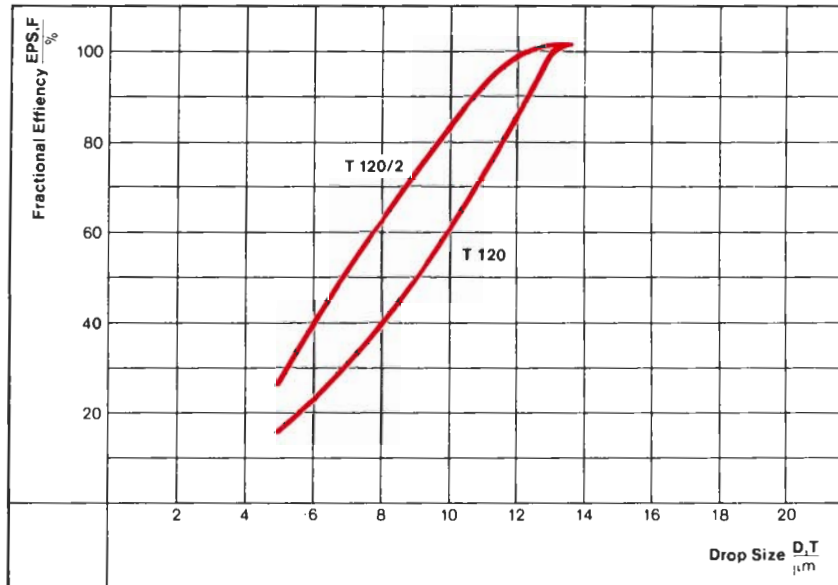
## 1. Limit Drop Size

The smallest drop which, under given fluid and gas conditions, is still completely removed is called the limit drop size  $D_{TGR}$  of the mist eliminator. The chart opposite shows the dependence of the limit drop size  $D_{TGR}$  on the face velocity  $C_A$  with the pitch  $T$  as parameter.



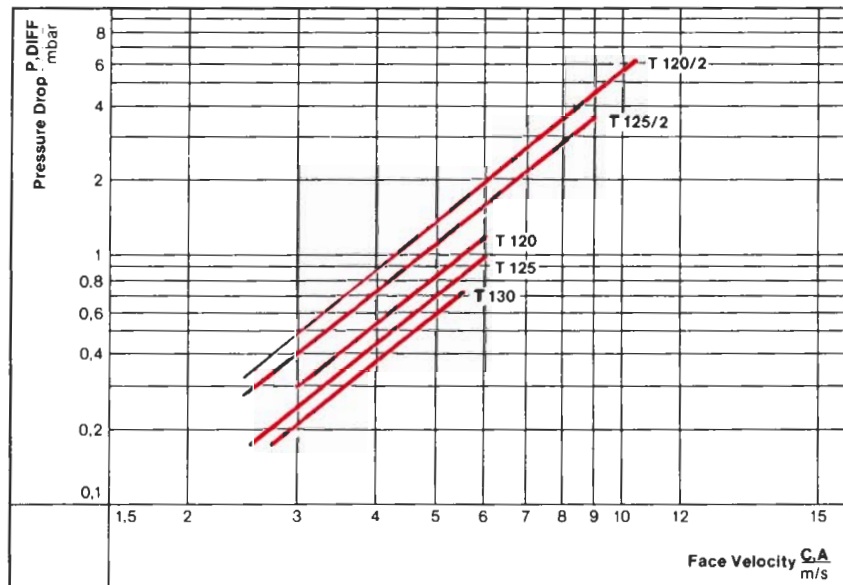
## 2. Fractional Efficiency

Drops smaller in size than the limit drop  $D_{TGR}$  can only be eliminated to a certain extent, the so-called fractional efficiency  $EPS,F$ . The chart opposite shows the fractional efficiency  $EPS,F$  as function of the drop size  $D,T$  at a face velocity  $C_A = 6 \text{ m/s}$  for the T 120 resp. T 120/2 type.



## 3. Pressure Drop

The accompanying diagram shows the pressure drop  $P_{DIFF}$  for the various types dependent on face velocity. Allowance for resistances resulting from changes made in the cross-section, direction of the feed tubes or within the vessel is not included.



All data apply to the air/water system at 20°C and 1 bar.



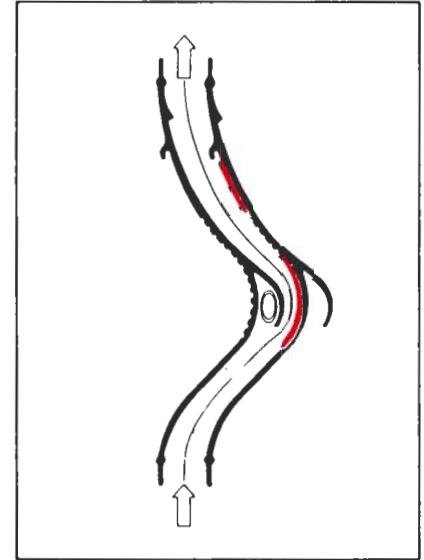
# Function

The EUROFORM mist eliminator T 100 is an impingement separator designed for horizontal gas flow.

It is composed of sine shaped baffles assembled with phase separating chambers. The baffles are manufactured by an extrusion process: this enables their surfaces to be adapted to the particular separation problem. They are mounted on a frame with a sump and form a separation unit.

The baffles split the gas flow into single streams. This change of direction produces inertia in the droplets and they strike the corrugations – thus impingement separation. As the forces of inertia

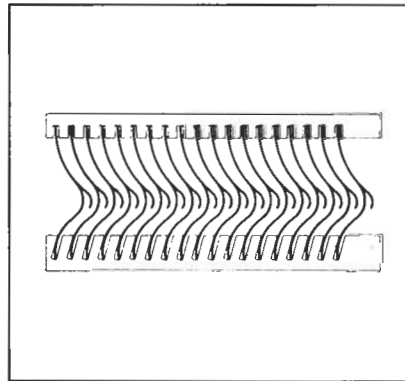
act most strongly on bigger drops, these are driven by the gas flow on to the wall of the phase separating chamber. There gravity causes the film of moisture to fall into the sump. The construction of the phase separating chamber facilitates the flow and cuts out waste and eddying. By this means low energy is expended at high face velocities.



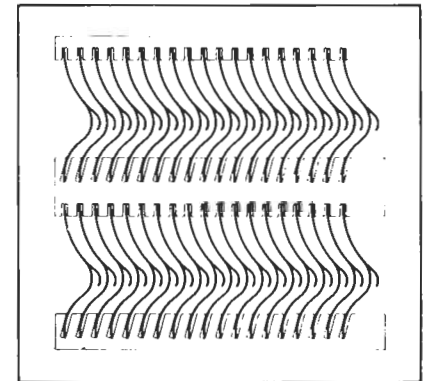
# Types

The EUROFORM mist eliminator profiles T 100 can be assembled to cope with special requirements. All types of operating conditions can be met by changing the spacing of the baffles, by arranging two layers

of baffles and by selecting the most suitable material.



Type T 120, T 125, resp. T 130  
Mist eliminator unit with a pitch of 20 mm (T 120) or 25 mm (T 125) or 30 mm (T 130) used when favourable flow conditions and low liquid load prevail.



Type T 120/2 resp. T 125/2  
Mist eliminator unit similar to T 120 or T 125 but of doubled layer construction used for high face velocities in all kinds of chemical plants.

# Use

The T 100 profiles can be arranged to obtain the most suitable separation unit, with regard to pressure drop, separation efficiency and material in many fields of application.

**So far, it has proved satisfactory in:**

- Moistening and air conditioning plants
- Removal by suction in acid baths (e. g. chromic acid)

- Ventilation plants
- Behind scrubbers and washers (e. g. venturi and spray washers)
- Drying plants (e. g. behind coolers)
- Flue gas purifying plants
- Air intake stacks (e. g. gas turbines)
- Flue gas desulfurization plants.

# Special Design with Coalescer

In especially difficult cases it is possible that a great number of small droplets are contained in the gas in the form of mist. Unless extra steps are taken, these could pass the mist eliminator untouched. In such cases, experience shows that a coalescer, in the form of a wire

mesh, installed in front of the mist eliminator, causes the droplets to form larger drops, which can then be separated in the eliminator.

## Materials

The EUROFORM mist eliminator profiles T 100 are made of the

following materials:

	Polystyrene	PVC	Poly-propylene	Aluminium
<b>Continuous operating temperature</b>	75°C	55°C	85°C	—

Further materials upon request, e.g. Noryl, PVDF  
Frames and casings can be made

of the same materials or, if necessary, of carbon steel and stainless steel.

## Delivery Method and Basic Installation

The mist eliminators are supplied as units ready for installation with frame, or complete with casing.



## Notes on Operating Data

The EUROFORM mist eliminators are designed following special calculation methods, the limit drop size D,TGR is determined by computer. The operating principle remains effective for all densities. The eliminator can therefore, when properly designed, be used for any operating pressures and temperatures. Under normal conditions (20°C and 1 bar) we recommend for the T 120/2 type a face velocity of 6 to 8 m/s. Higher or lower face velocities are possible after checking the operating conditions (liquid load, overall height, distribution of velocity, etc). Under normal flow conditions EUROFORM guarantees a separation efficiency of 99,9% for drops larger in size than the limit drop D,TGR.