

# DF 2100

## Droplet Separator



DF 2100 is a ready-to-install droplet separator for use in many application areas. It is available in various material combinations and configurations to fit a wide range of operating conditions.

DF 2100 droplet separator provides high efficiency droplet separation and low pressure drop even at high face velocity giving energy saving operation.

The droplet separator can be configured to most individual performance and installation situations, providing a cost effective solution. Alternative material choices and drainage systems, as well as add-on features like flanges and protection mesh are just some of the configuration options.

DF 2100 droplet separator is an excellent choice for keeping rain, mist and larger fog water droplets out of a building or marine ventilation system. This helps to reduce corrosion, to increase filter lifetime and to reduce moisture throughout the system. DF 2100 droplet separator is designed for use in many applications, for example: air intakes, condensate removal behind cooling coils, as an air straightener before spray humidifiers, in air washers etc. The unit is suitable for use at face velocities between 2 and 6 m/s.

### Separation technology

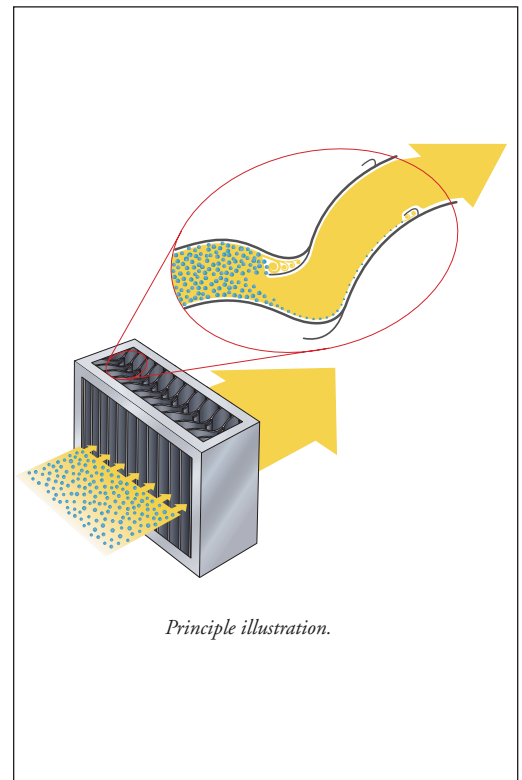
The streamlined separator deflects the droplet laden gas stream, as a result the momentum of the droplets causes them to impinge onto the profile surface. The droplets coalesce together and form a liquid film, the influence of gravity causes the liquid to drain to the bottom of the profiles. Specially shaped separation chambers improve performance by enhancing the separation of finer droplets and ensuring problem free discharge of liquid.

To avoid “flooding” of the profiles and the possibility of re-entrainment of the separated liquid, the height of the profile sections, droplet separators is normally limited to 2,500 mm.

### EQUIPMENT

## DF 2100

- High separation efficiency
- Very low pressure drop leading to lower operating costs
- Corrosion resistant
- Simple installation
- Low maintenance cost due to simple operating principle and long lifetime
- Wide face velocity range
- Tailor made sizes and designs
- Hygienic design
- Wide range of highest quality material
- In house ISO 9001 certified manufacturing



## Performance

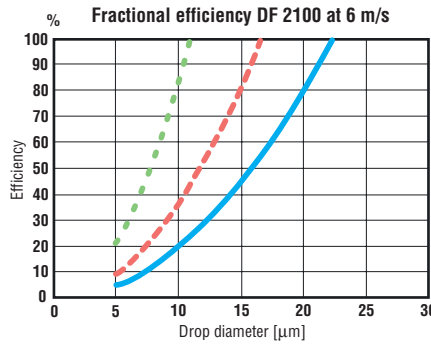
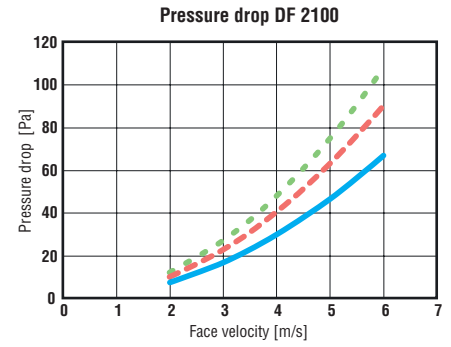
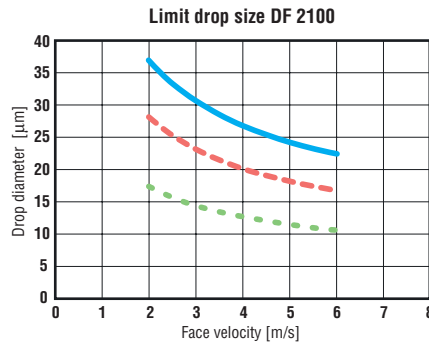
The limit drop size represents a performance characteristic of the profile, at the relevant velocity and operating conditions it is the size of the smallest droplet that is completely separated. The diagram showing limit drop size has been calculated for an air/water system at 20 °C and 1 bar.

The pressure drop is measured at ambient conditions (20 °C and 1 bar) through a number of assembled profiles at various pitches/spacing and under ideal conditions.

The fractional efficiency indicates the percentage of droplets, removed from an airstream, that are smaller than the limit drop size.

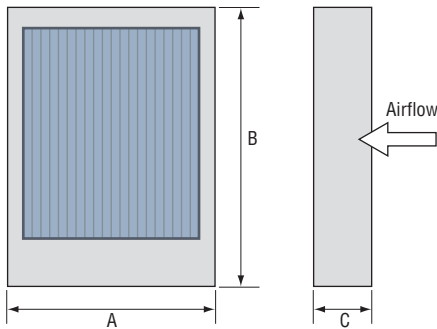
## Liquid load

Maximum liquid load; 200 gram water/kg air, measured under ideal conditions at 20 °C, 1 bar and a face velocity of 4.5 m/s with a pitch/spacing of 20 mm between the profiles.



For any data outside the specified range, please contact your nearest Munters representative.

## Type, material and dimension specifications



- \* Anodised or coloured material on request.
- \*\* All frames can be painted on request (specify RAL code). All frames powder coated on request. Aluminium frames of other aluminium alloys on request. All frames can be brushed to give a frosted appearance, stainless steel can be obtained polished.
- \*\*\* Standard tolerance on width and height: +0, -5 mm.
- \*\*\*\* Special polypropylene compound for min operating temperature -40 °C on request.

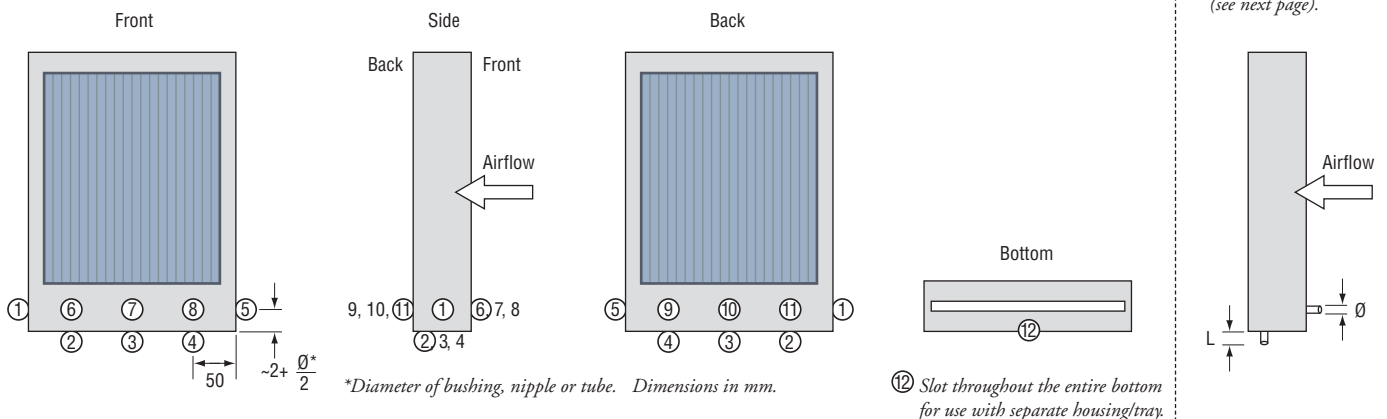
Type code	Material		Pitch/spacing between profiles mm	Width*** A mm min-max	Height*** B mm min-max	Depth C mm	Operating temp °C min-max
	Frame**	Profile					
1b	304	PPTVb****	20, 25, 30	300-2,500	300-2,500	206	+5 - +100
1w	304	PPTVw	20, 25, 30	300-2,500	300-2,500	206	+5 - +100
2b	316L	PPTVb****	20, 25, 30	300-2,500	300-2,500	206	+5 - +100
2w	316L	PPTVw	20, 25, 30	300-2,500	300-2,500	206	+5 - +100
3b	316Ti	PPTVb****	20, 25, 30	300-2,500	300-2,500	206	+5 - +100
3w	316Ti	PPTVw	20, 25, 30	300-2,500	300-2,500	206	+5 - +100
4b	AlMg3*	PPTVb****	20, 25, 30	300-2,500	300-2,500	206	+5 - +100
4w	AlMg3*	PPTVw	20, 25, 30	300-2,500	300-2,500	206	+5 - +100
5p	AlMg3*	PVC	20, 25, 30	300-2,500	300-2,500	206	-10 - +60
6p	316L	PVC	20, 25, 30	300-2,500	300-2,500	206	-10 - +60
7a	AlMg3*	AlMgSi0.5*	20, 25, 30	300-2,500	300-2,500	206 <sup>1)</sup>	-
8a	AlMg3*	AlMgSi0.5*	20, 25, 30	300-2,500	300-2,500	190 <sup>2)</sup>	-
9s	316Ti	316Ti	20, 25, 30	300-2,500	300-2,500	190	-

PPTV = Talcum reinforced polypropylene (b = black, w = white)  
 PVC = Polyvinyl chloride (colour: grey)  
 AlMgSi0.5 = Aluminium alloy  
 AlMg3 = Aluminium alloy

304 = Stainless steel (AISI 304, DIN 1.4301)  
 316L = Stainless steel (AISI 316L, DIN 1.4404)  
 316Ti = Stainless steel (AISI 316Ti, DIN 1.4571)  
<sup>1)</sup> Design type one, with PPTV spacers.  
<sup>2)</sup> Design type two, all aluminium.

## Drainage positions

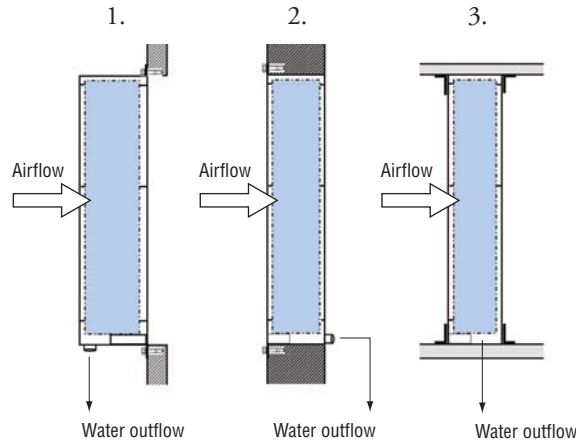
Code for drainage position, put P before the position number, e.g., P9 or P6,8,9,10 if more outlets are to be used.



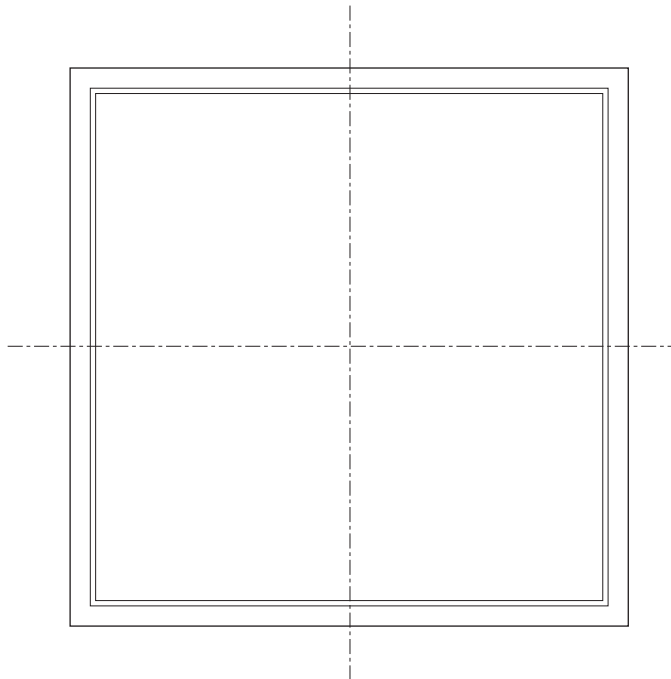


## Examples of installation

1. The droplet separator is flanged onto a wall opening and the water drains vertically outside of the wall.
2. The droplet separator is flanged into a wall opening and the water drains controlled into an internal tray (not shown in the drawing)
3. The droplet separator is installed in an air duct and stands in between angled profiles that are connected to the air duct. The water drains through the bottom into a tray that is below the air duct.



## Drill pattern sketch



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