Cammach DCF – Draw-works & Mud Pump Motors

Air Intake Systems Two-Stage

Cammach DCF is a series of advanced tailor made ready-to-install air intake systems that may be used in many offshore applications. They provide excellent protection against all types of liquid droplet as well as providing particulate filtration across a range of face velocities.

Cammach DCF is manufactured from a series of mist elimination profiles and filters, that allows tailoring to each application and give optimum efficiency, water loading, capacity, pressure drop and air balance through the module and in the system.

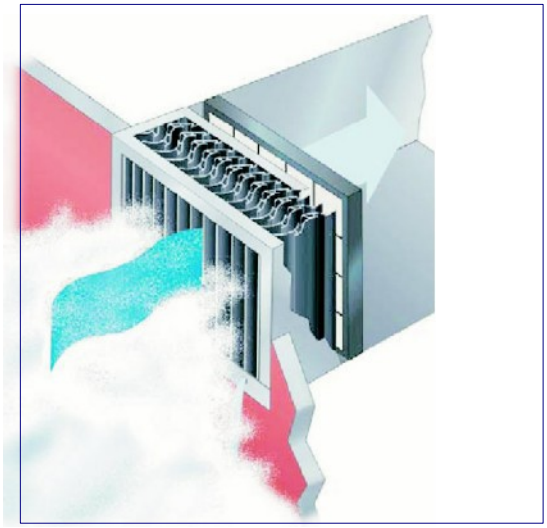
The **Cammach DCF** is particularly efficient at removing the small and harmful droplets that are not removed by a single stage mist removal systems. The efficiency of the Cammach DCF is fully independant of wind direction and second droplet occurrence.

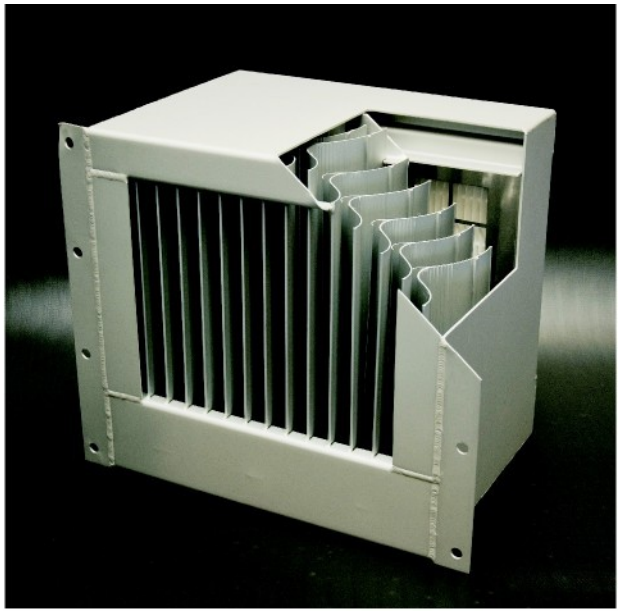
Cammach DCF intake systems are the only choice when attempting to keep marine and offshore ventilation systems protected against rain, fog, splash water and harmful sea salt spray. They may also be used in ventilation systems found in normal buildings and ones in coastal locations.

Cammach DCF modules reduce moisture and corrosion throughout the entire ventilation system, improving the internal climate for people and equipment, extending the lifespan of interior furnishing and allowing the safe storage of sensitive equipment.

Cammach DCF modules can be tailored to the system they have to match and can be manufactured from a range of marine grade materials, with varying flange positions, drainage systems, in a range of colours.

Cammach DCF two-stage, principle illustration





EQUIPMENT

Cammach DCF

High separation efficiency; removes heavy rain, fog and sea spray.

Anti-icing Device

Wide face velocity range

Marine grade materials

Easy maintenance; only cleaning or exchange of filters/coalescers with no special tools required.

High corrosion resistance.

Tailor made sizes and designs.

Manufactured inhouse in a ISO 9001 facility

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Technology

Cammach DCF air intake systems are two stage separation systems. High performance vane type mist eliminators are used in the first stage. Various types of filter/coalescer are used in the second stage. The first stage removes the majority of entrained liquid droplets. A high efficiency in the first stage protects the filter/coalescer in the second and thereby prolongs its lifetime. The second stage filters solid particles and eliminates mist particles that have passed through the first stage.

Performance

Cammach DCF air intake systems are characterised by the following key performance criteria:

1. Liquid Load

Liquid load is an air intake systems capacity to eliminate liquid from the air stream. It is stated in litre per square meter per hour. The liquid load varies with application, from a few litres to several hundred litres/m^2/hour. The liquid load capacity is specified for each Cammach DCF Design.

2. Efficiency

The limit drop size defines the liquid separation efficiency. It Is the smallest droplet that is completely removed. Fractional efficiency indicates the percentage removal of droplets smaller than the limit drop size from an air stream. Cammach DCF removes droplets larger than 5pm completely and provides an excellent fractional efficiency level for droplets down to 1pm. Average particle filtration efficiency is defined in EN779. The efficiency is specified for each Cammach DCF Design.

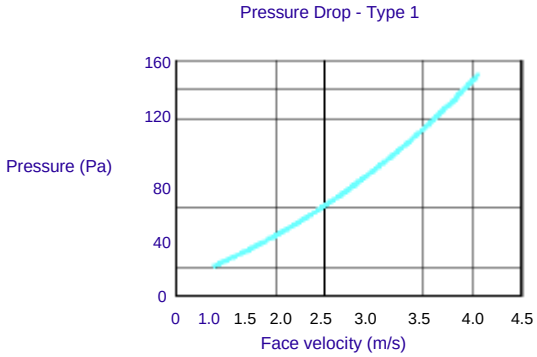
Cammach DCF Designs

All Cammach DCF air intake systems are designed to meet individual environmental and application requirements. Therefore, the information concerning design given below should only be seen as typical of standard designs.

Basic Types

Type 1

For low to medium air volumes and limited installation depth. Vane type seperator followed by extended surface panel filter/coalescers. Filter/coalescers are available in classes from G2 to F5 as defined in EN779.



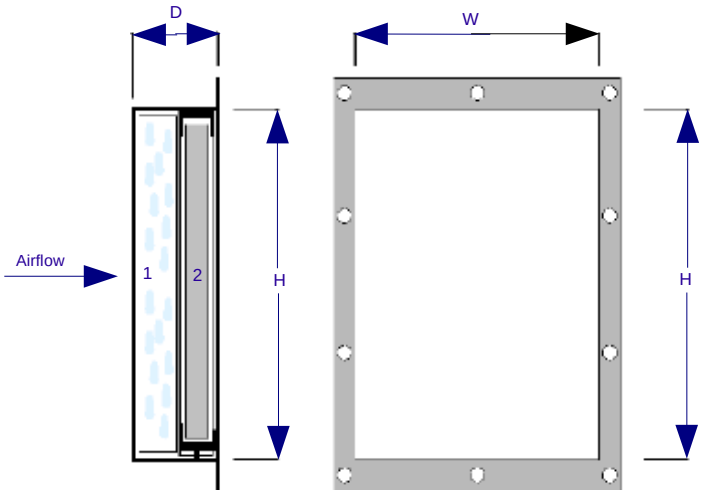
Typical pressure drop of a two-stage system type 1

3. Pressure Drop

Pressure drop is defined as the resistance to airflow measured in Pa. The lower the pressure drop, the lower the energy consumed. A typical pressure drop curve is shown in the diagram in the section; Cammach DCF designs. The pressure drop is given for each individual Cammach DCF design.

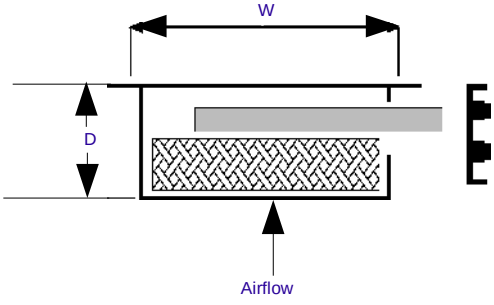
Tested

Cammach' air intake systems are tested under conditions of 100% relative humidity and charged with multiple liquid loads similar to those experienced under operating conditions



1. First stage mist eliminator
2. Second stage filter/coalescer

Side panel removable (example)



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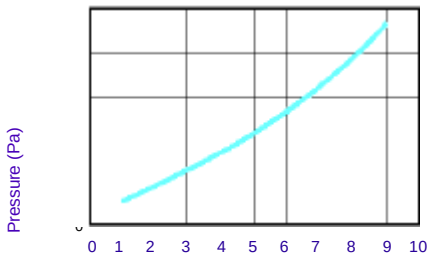
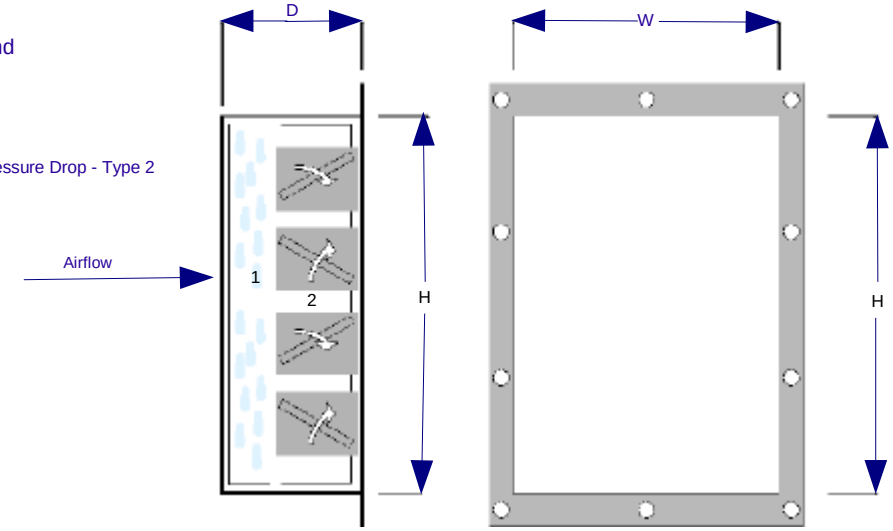
Type 2

For low to high air volumes.
Vane type separator followed by zig zag panels as second stage. Filter/coalescers are available in classes from G2 to F5 as defined by EN779.



Typical pressure drop of a two-stage system type 2. Figures are valid for face velocity at operating point and for clean filters.

Pressure Drop - Type 2

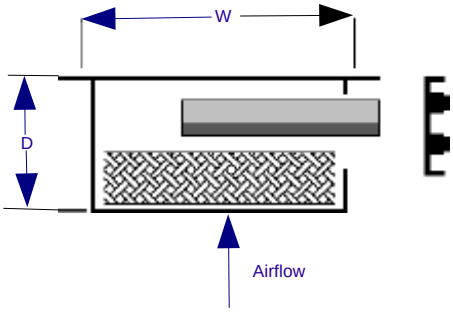


1. First stage mist eliminator
2. Second stage filter/coalescer

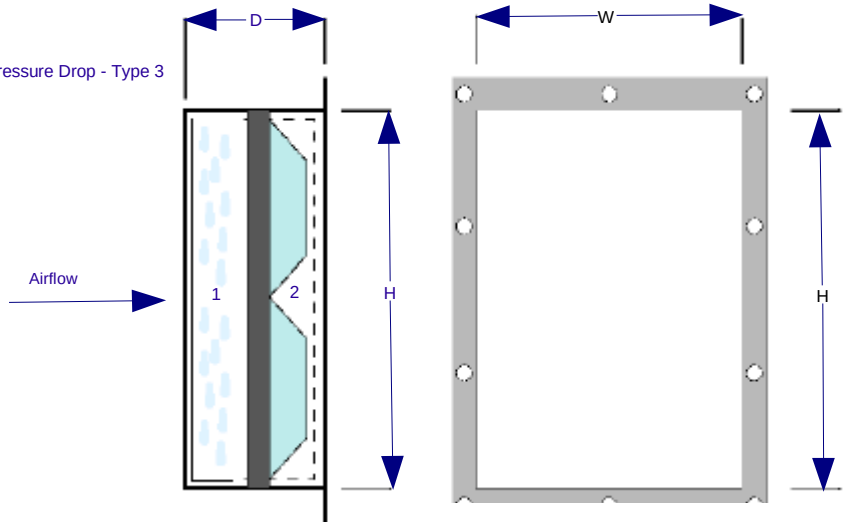
Side panel removable (example)

Type 3

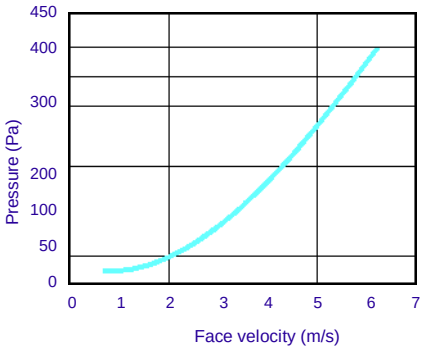
For low to high air volumes.
Vane type separator followed by a compact air filter section.
Filter/coalescers are available in classes from F6 to F9.



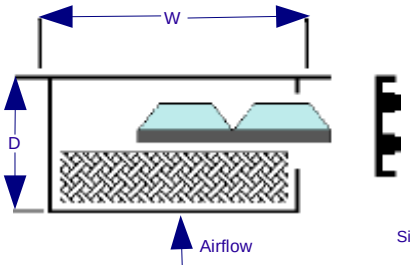
Pressure Drop - Type 3



1. First stage mist eliminator
2. Second stage filter/coalescer



Typical pressure drop of a two-stage system type 3.



Side panel removable (example)

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