

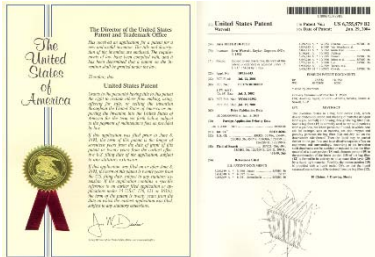


**Drop Safe
DS-M5**



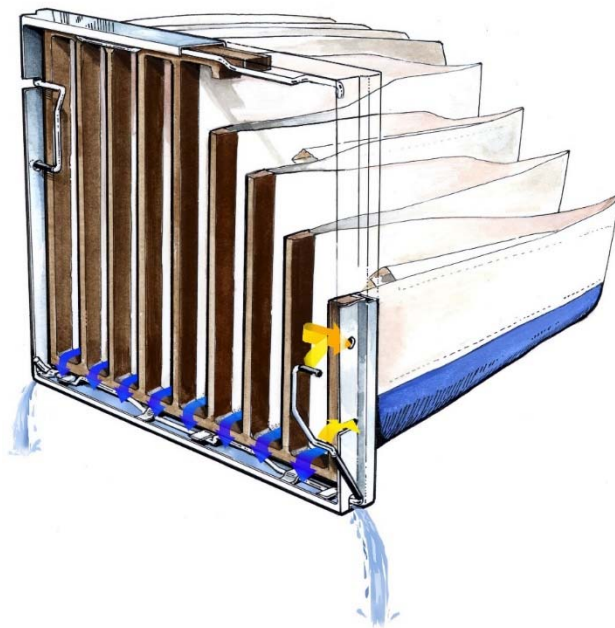
**Drop Safe
DS-M6**

Wide Drop Safe marine filter EN 779:2012: M-class filters



**Patented
Drop Safe
technology**





About the Drop Safe filter:

The Wide Drop Safe product range is a joint development effort by Filtrair and Wide to meet increasing market requirements for cost-effective solutions to salt and water ingress.

This forward-draining, non-reentrainment pocket filter provides highest quality air filtration and water separation in a single unit. In the patented DS filter, the very fine droplets entering the filter is not only coalesced, but also accumulated and drained into the water-sealed bottom of the pocket filter. From there the water is drained forward, and never enters the clean side. This eliminates the problem of saturated droplets entering the clean side and potentially contaminating clean-side air with salt and other water-soluble contaminants.

Filtration of particulate, water and salt contamination in offshore environments

Capacity up to 7 776 m³/hr for full size filter

The Wide water-tight filter Holding Frame, as shown in this illustration, is required for efficient salt removal.

Features:

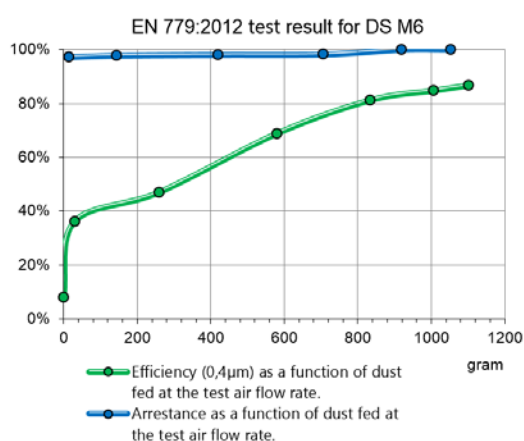
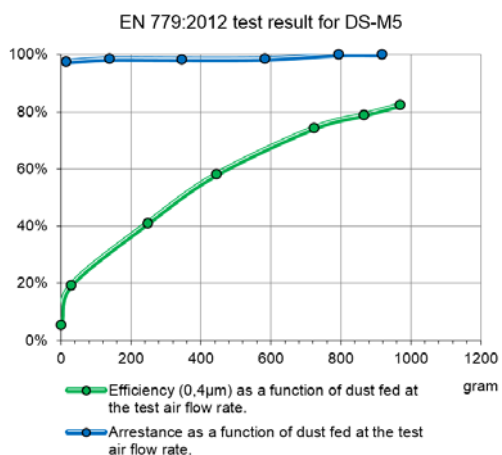
- Patented sealed boot design – coalesces water inside the pockets, and drains upstream of filter
- For extreme marine environments: High water mist, fog content – high velocity – offshore – marine.
- Combined particle filter, water coalescer and water/salt removal in one unit.
- Self-supporting, leak free welded pockets that keep the pocket shape under increasing pressure loss and also when wet and contaminated.
- Rigid filter pockets that keep the shape under all operating and non-operating conditions, eliminating shedding and reentrainment during stop and restart.
- Filter pockets are water tight integrated in injection molded, impact proof PU frame header. Burst strength > 6000 Pa
- Progressive water resilient filter media manufactured by Filtrair with proprietary hydrophobic treatment.
- Filter range tested as per EN779:2012, see next page.

www.wide.no

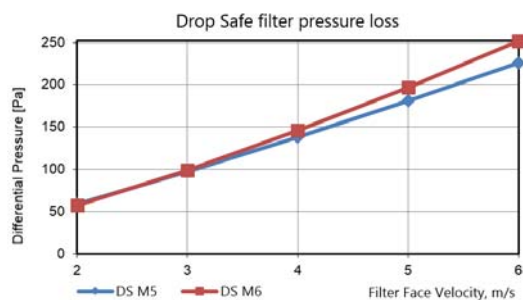


EN 779:2012 filter classification and performance data

Description	Unit	Drop Safe DS-M5	Drop Safe DS-M6
Filter class per EN 779:2012		M5	M6
Initial arrestance at 3400 m3/hr	% ASHRAE	97	97
Initial efficiency at 3400 m3/hr	% for 0,4 um	5	8
Final pressure drop	Pa	450	450
Final averaged arrestance	% ASHRAE	99	99
Final average efficiency	% for 0,4 um	56	64



Filter pressure loss, clean filter



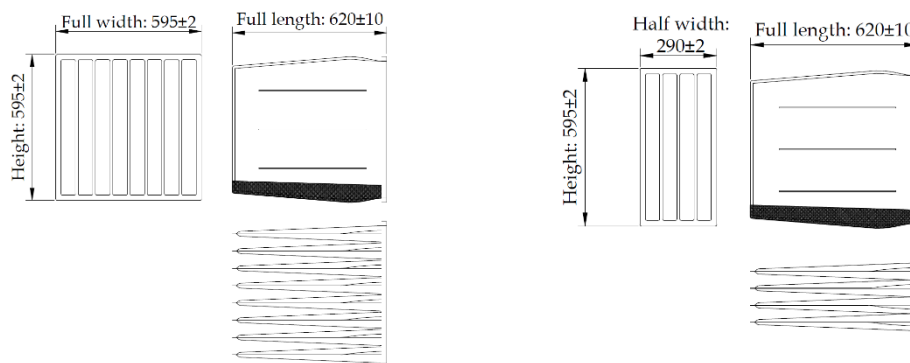
Pressure loss formulas:

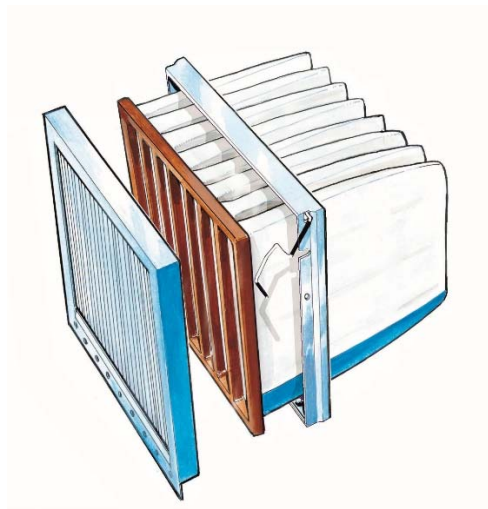
DS-M5: $25,34 \times v^{1,22}$ (Pa)

DS-M6: $22,39 \times v^{1,35}$ (Pa)

where v = Face Velocity m/s, calculated for filter face area of 0,36 m2

Filter dimensions: Full size filter and half size (half width) filter





Wide Drop Safe M-class filters for the Wide Infinidry air intake systems:

- 1. Wide ME High Efficiency Air Intake Demister**
- 2. Wide Drop Safe filter**
- 3. Wide IFD HF filter holding frame**
- 4. Drain arrangement (by customer)**

Drop Safe M5 filter for ISO 15138 Category I and Category II when used in the Wide Infinidry® air intake system, as described above, ref ISO 15138 Table A.1:

Table A.1 — Performance requirements

Intake category	Area/Room	Components (performance)
I	LQ, CCR and areas containing sensitive electrical/control equipment	<u>Louver/filter/coalescer assembly (salt content to $0,01 \times 10^{-6}$) plus</u> Filter (F7 to EN 779 [16]) Filter duct-mounted or located in air-handling unit
II	Workshops and stores, equipment rooms, switch rooms, emergency and temporary LQ and offices	<u>Louver (96 %) plus</u> <u>Filter (F5 to EN 779 [16])</u> Filter duct-mounted or located in air-handling unit
III	Generator rooms, fire pump rooms, process areas	Louver (96 %) Filter not required

Drop Safe M6 filter, when used in the Wide Infinidry® air intake system, as described above, meet the requirements of GE Marine Engine Installation Design Manual MID-IDM-2500:

For engines operating in a marine environment, sodium in the sea salts entering the gas turbine should not exceed 0.00045 ppm average or 0.003 ppm maximum. It is recognized that the average may be exceeded under rough sea conditions, and more frequent compressor cleaning may be required. With 0.00045 ppm sodium, it is estimated that compressor cleaning may be required every 400 to 450 hours; with 0.0018 ppm sodium, compressor cleaning may be required every 100 hours. These limits apply to both the main inlet air supply to the gas turbine and the cooling air supply. The inlet air temperature shall be in the range of -65° to 130°F. The maximum allowable liquid water content in the inlet air is 0.5% of the inlet airflow weight. At inlet temperatures of 42°F and below, no liquid water content is allowed.