

**DMA  
Sorp-Line™**

**DMA  
Part-Line™**

# DMA Bilge Water Filtration

- Fine filtration of oily water and upgrade of existing separator performance

- **New patented and well –proven filtration technology**
- **Certified by Lloyd’s Register**
- **Clean Bilge Particle System™**
- **Environmentally safe operation when discharging bilge or sludge water from ships, oil rigs and landbased industries.**
- **“Plug & Play”**
- **The most efficient and economical way to reach outlets below 5 ppm!**
- **Discharge with peace of mind any where in the world!**



**dma | sorption**

*- guiding you to  
clean water*

# Patented Filtration Technology — Meets And Exceeds IMO Rules

## DMA Sorp-Line™—Absorption Filter Systems

### Description

- Exceptionally clean water (below 5 ppm)
- No chemicals
- Almost no maintenance
- Discharge with peace of mind anywhere in the world
- Capacity range from 1-10 m<sup>3</sup> per hour
- Certified by Lloyd's Register

### Areas of Use

- Safe and fine polishing of any oil polluted water from e.g. bad performing separators down to 5 ppm
- Fine filtration of any oil polluted water e.g. cooling water
- Fine filtration of various chemically polluted water
- Works perfect in combination with particle filters where micro particles such as sots are present

### For All Type of Vessels and Operations

- Ideal for use on almost any size of vessel from leisure boats to large container carriers or ferries.
- The price of the system comprising of both hardware and filters is a very competitive solution compared to other complex and less efficient systems
- The system is tested and certified by Lloyd's Register and installed on more than 250 vessels world wide.

### Examples of references

A.P. Møller Maersk  
A/S Dampskibsselskabet Torm  
Tesma  
Dannebrog Rederi  
Royal Danish Navy  
CERES  
Wallem Shipmanagement  
Unicom Tankers  
Beltship  
EXMAR Shipmanagement  
Scorpio Shipmanagement  
Ugland Marine Services



### Function

The filter unit consists of a closed container holding the **DMA** filter inserts. The filter cartridges are mounted on a perforated pipes.

The water passes the filter cartridges and leaves the container through the perforated pipe.

The **DMA** Absorption Filters are delivered as stand alone or coupled units serving the required capacity for any size vessel or plant.

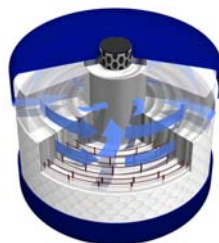
The system is type approved by Lloyd's Register and approved by Danish Maritime Authorities.



The system is mainly used for **bilge water polishing** onboard ships and oil rigs applied between the already existing oily water separator and the oil discharge monitor. However the **DMA** Absorption Filter™ can be applied to almost any off shore or industrial operation where oil polluted water is the problem.



### New Patented Filtration Technology



The filtration system is based on the newly developed filter principle — *Multiple Layer Cartridges™* (MLC) using a unique and compact design with an outstanding capacity compared to its size. This means that exchange of filters are limited to a minimum and much less than previously heard of.

*The combination of depth-flow and cross-flow filtration makes the DMA Absorption Filter™ able to absorb emulsified oil to values below 5 ppm.*

It is estimated that filter cartridges need to be changed every 3-4 months. The used cartridges can be burned in the incinerator or disposed on shore. Every cartridge is delivered with a plastic bag for disposal.





## Type Approved By Lloyd's Register—Ideal For Retrofitting



### Specifications

Our filter containers represent the latest state of the art design in stainless steel 316 L with small footprint and low weight as well as an easy lid opening without use of tools.

- Number of filter inserts:** 1-6
- Flow rates:** 1000—5000 l/hour
- Footprint:** 250x250—370x370 mm
- Material:** 316L stainless steel
- Temperature:** 110 degrees C maximum operation
- Liquid pressure:** 6-10 bar maximum operation
- Gas pressure:** N/A
- Closure:** Cast Vee clamp
- Finish:** Electro polished inside and out
- Gasket:** Ethylene Propylene

### Installation and Operation

The system is delivered as "plug & play" ready assembled and tested with filter cartridges installed inside and variable DIN flanges for easy connection to the on-board piping system.



## DMA Part-Line™—Particle Filtration Systems

### DMA Particle Filtration

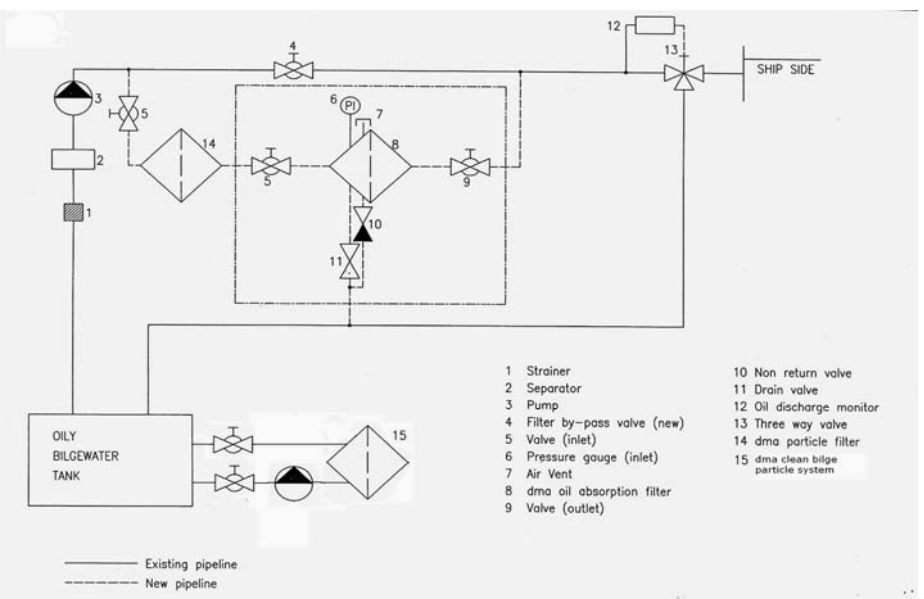
It is our experience that the bilge water on most vessels is heavily infused by particles. That is why we recommend that the DMA Absorption Filter is combined with a DMA Particle Filter to prolong the filter inserts' lifetime decreasing overall filter costs.

### DMA Clean Bilge Particle System

As an alternative DMA Sorption has introduced a new Clean Bilge Particle System in order to efficiently filtrate particles away before entering the IMO separator system. As can be seen in the P & ID the system is typically connected directly to the clean bilge tank with suction from the bottom of the tank and the clean bilge water returned in the top of the tank. If there is no pump available on the line DMA Sorption supplies a self priming pump including start-stop ready for connection to the pipes on-board. The DMA Absorption Filter is typically installed between the separator and the PPM monitor to ensure the effluent oil concentration stays below 5 ppm.



DMA Particle Filter & DMA Absorption Filter installed on-board vessel.



As can be seen there are two alternative installations of the DMA Particle Filter: between the separator and the DMA Absorption Filter or directly to the bilge tank.

# DMA Oil & Water Treatment Systems

DMA Sep-Line™ • DMA Sorp-Line™ • DMA Part-Line™ • DMA OFI-Line™ • DMA Clean-Line™



## DMA Sorp-Line™ & DMA Part-Line™: Oily Water Filtration

DMA Sorption was founded in 1991, with the aim to solve the environmental problems faced by the marine industry when handling bilge water. Today DMA Sorption has a reference list of more than 300 marine and industrial customers who all benefit from our products and services.

DMA Sorption offers filtration and separation solutions for oil and waste water purification. Our main focus is the filtration and separation of particles and hydrocarbons such as oil, for which we offer our **absorption filters**, **particle filters** and **matrix oily water separator**. Furthermore we offer solutions to **oil purification** and **oil discharge monitoring**. We provide carefully designed products for ships, off-shore and industrial installations putting the environment in focus at reasonable cost adding high returns to our customers.

**dma sorption**  
– *guiding you to clean water!*

**Represented by:**

**dma | sorption**

DMA Sorption ApS • Skelstedet 5 • DK-2950 Vedbæk • Denmark  
Phone +45 4566 2019 • Fax +45 4566 2014 • [www.dma-sorption.dk](http://www.dma-sorption.dk)