



Alfa Laval BlueBox SA

Stand-alone oil content monitor and data recorder



The BlueBox SA is an advanced, tamper-proof oil content monitor (OCM) and data recorder that regulates overboard water discharge and supports the management of a vessel's Oil Record Book. Based on the proven BlueBox technology developed for Alfa Laval PureBilge, the BlueBox SA is a stand-alone unit that can be used with any oily water separation solution. It can thus be used to upgrade an existing oily water setup for greater discharge security.

Applications

The BlueBox SA monitors the oil content of water for overboard discharge, ensuring that no discharge can occur unless the oil content is below the set limit (5 or 15 ppm). The unit can be used for:

- **Clean water tanks (legislated)**
For clean water tanks, the MEPC requires a stand-alone OCM to verify water cleanliness before discharge.
- **Clean drain tanks (optional)**
An OCM is optional for clean drain tanks that collect steam condensate, boiler drainage, cooler air drainage, etc., as these may contain oil.

- **Upgrading an existing oily water separator**

Installing the BlueBox SA to work with an existing oily water separation system can minimize the risk of oily water discharge.

Benefits

- **Tamper-proof security**
All components are housed in a locked metal box and overboard discharge is prevented when the box is open. Opening and closing of the box is logged.
- **Full availability of data**
All key operational data, including GPS position and alarms, is logged and stored for 18 months. The data can be exported in PDF format, enabling the crew to present it to coast guard or Port State Control authorities.
- **Lower oily water separator OPEX (clean drains)**
Water from clean drains is often treated by an oily water separator. When the clean drain content is monitored and within set limits, it does not have to be processed by the oily water separation system.

Design

The BlueBox SA houses the following in a lockable metal box:

- Oil content monitor
- Automatic three-way overboard valve with position switch
- Flowmeter
- Overboard (harbour control) manual valve
- GPS receiver
- Data recorder
- Control box with HMI
- Cover switch

Working principle

The BlueBox SA prevents the discharge valve from being changed to overboard position unless specific conditions are fulfilled:

- PPM at set level (<15 or <5 ppm)
- OCM running without alarm
- BlueBox SA cover closed
- Sample flow directed through OCM
- Permission granted by all remote signals governing overboard operations

When the door of the BlueBox SA is opened, the event is logged and the three-way valve automatically switches to recirculation.

Operational data is recorded and stored for 18 months. The data can be downloaded to a USB memory stick as an Excel file.

Operational data recorded

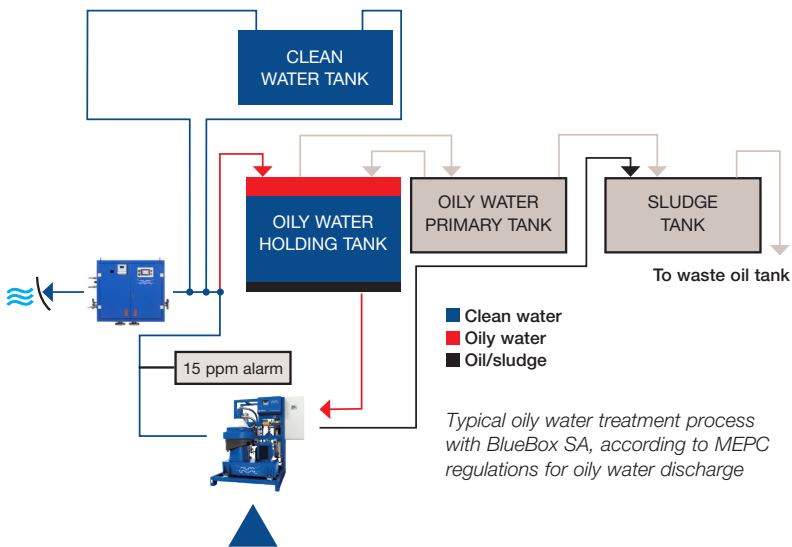
- Total water volume discharged overboard
- Current flow rate
- Overboard valve position
- GPS position of vessel
- Date and time
- Oil-in-water content (ppm)
- Active alarms
- Cover switch (open/closed)

Technical data

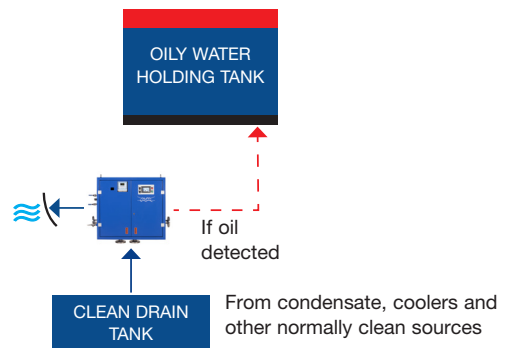
Dimensions (L x W x H): 1200 x 410 x 1040 mm

Weight (approximate): 170 kg

Oily water setup with BlueBox SA



Clean drain setup with BlueBox SA



Optional connection of clean drain tank (not mandated by MEPC) to safeguard against accidental oil ingress without unnecessary separator use

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How to contact Alfa Laval

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