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# ***INSTRUCTION MANUAL***

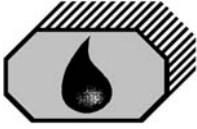
***Electric Sample and Fresh Water Valve for OMD-2008***

**EV-2008**

**DECKMA HAMBURG GmbH**

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## **IMPORTANT NOTICE**

### **Replacement components for 15ppm Bilge Alarms.**

#### **General**

All monitors in our range are inspected and tested to the related I.M.O. requirements at our factories prior to delivery.

In normal use the units should operate correctly and without fault over a long period of time requiring only small amounts of maintenance to be carried out as outlined in the instruction manuals.

#### **Service Exchange Units**

In the event of a monitor malfunction due to electrical or electronic component failure it is our recommendation that a service exchange unit be ordered.

The defective instrument should be returned to our works within 30 days of supplying the service exchange unit, then only the repair charge is payable. Otherwise the whole cost of a service exchange unit becomes payable.

This procedure is by far the easiest and most cost effective way of ensuring the monitor on board conforms to I.M.O. resolution MEPC.107 (49).

#### **Remark:**

*According the MEPC.107(49) § 4.2.11 the unit has to be checked at IOPP Certificate renewal survey by the manufacturer or persons authorized by the manufacturer. Alternatively the unit may be replaced by a calibrated 15 ppm Bilge Alarm. The OMD-2008 is designed in that way, that only the measuring cell needs to be changed, as this unit carry the calibration onboard. The Calibration Certificate with the date of the last calibration check should be retained onboard for inspection purposes.*

If for some reasons the computer unit needs to be changed, it has to make sure, that the memory card will remain on board for at least 18 month. The new computer unit will carry its own memory card. The old card can be insert into the new unit only for reading. Writing is only possible with the card delivered with the new computer unit. For details see section 13.1.

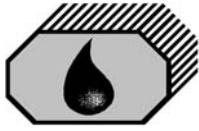
#### **Warranty**

Our warranty terms are 12 months after installation but maximal 18 months after delivery ex works. The maker undertakes to remedy any defect resulting from faulty materials of workmanship except wearing parts.

The maker's obligation is limited to the repairs or replacement of such defective parts by his own plant or one of his authorized service stations.

The purchaser shall bear the cost and risk of transport of defective parts and repaired parts supplied in replacement of such defective parts.

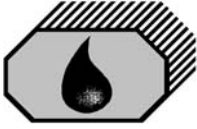
**ANY DISMANTLING OR BREAKING OF A SEAL WILL VOID THE WARRANTY**



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## 1.0 INTRODUCTION

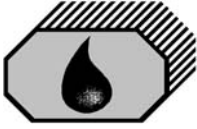
The Electric Switchover Valve for the OMD-2008 Bilge Alarm has been designed specifically for use in conjunction with the OMD-2008 Bilge Alarm Measuring Cell. The Electrical Valve allows to switch the instrument from the sample stream to a supply of clean, oilfree water. The fresh water can be used for cleaning and flushing the measuring cell. The instrument will switch over to alarm condition, but will also continue to display the measurement result. This allows a quick test for cleanliness and performance of the measuring cell.

The Electric Switchover Valve also allows remote control for flushing.

Please note that this manual does not describe the operation of the OMD-2008 Bilge Alarm itself. Within this document the differences to the standard OMD-2008 installation and operation are described. Refer to the OMD-2008 Manual wherever necessary.

## 2.0 IMPORTANT NOTES

- a) This equipment must be installed and operated in strict accordance with the instructions contained in this manual. Failure to do so will impair the protection provided.
- b) Installation and servicing must be undertaken by a competent and suitable skilled person.
- c) The equipment must be connected to the ground according relevant requirements.
- d) The unit must be isolated from the electrical supply before any maintenance of the equipment is attempted.
- e) All National or local codes of practice or regulations must be observed and, where applicable, are deemed to take precedence over any directive or information contained in this manual.
- f) In case of freezing conditions the device should be emptied complete.



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## 3.0 PRINCIPLE OF OPERATION

### 3.1 Operating Principle

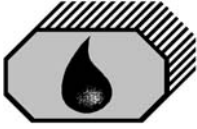
An electric valve, the EV-2008, is operated directly by the OMD-2008 Bilge Alarm. Whenever fresh water is allowed to flow to the measuring cell, the OMD-2008 will switch over to alarm condition as required by MEPC.107(49). The EV-2008 setup replaces the manual valve setup for the standard OMD-2008.

### 3.2 Features

- Robust construction
- Low maintenance
- Easy installation
- Constant readiness
- Low spare part stock holding
- Easy settings via menu

### 3.3 Adjustment

No adjustment is required.



## 4.0 SPECIFICATION EV-2008

Sample pressure:	0 - 6 bar
Fresh Water pressure:	0 - 6 bar
Input connetions:	R ¼" Female
Operating Voltage:	24 V, supplied by OMD-2008
Consumption: (including OMD-2008)	< 15 VA
Dimensions (with Mesuring Cell):	140 mm W x 160 mm H x 120 mm D
Weight (with Measuring Cell):	1.5 kg
Distance (Computer Unit to Measuring Cell)	Up to 0.5m Option: up to 5m upon request
Degree of Protection:	IP 65
Ambient Temperature:	+ 1 to + 55° C
Sample Water Temperature:	+ 1 to + 65° C

Technical specifications are subject to change without notification

## 6.0 INSTALLATION (Refer to Fig. 2 and Fig. 3)

*See Section 2 for important notes concerning installation.*

The EV-2008 is mounted on a stainless steel support similar to the OMD-2008 measuring cell support, but with slightly different positions of the connction points for both the sample stream and the clean water stream. The outlet connection to the Measuring Cell is in the identical position. The very same considerations as for the standard OMD-2008 would have to be recognized.

Mount the EV-2008 with the Measuring Cell onto the OMD-2008 Backplane instead of the original Measuring Cell valve arrangement.

Care must be taken at mounting of the pipes connections to avoid any torsion of the housing and damage of the instrument.

The Connector on top of the valve must not be removed under any circumstances, as that requires the breaking of a seal.

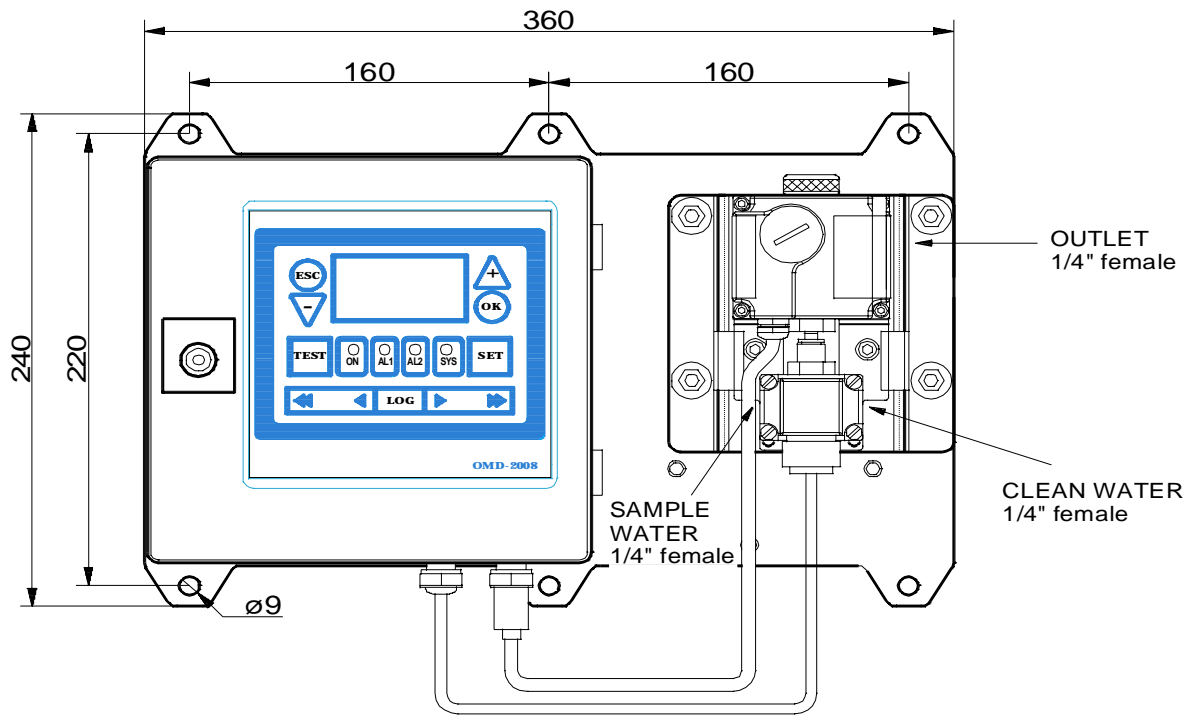
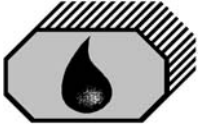
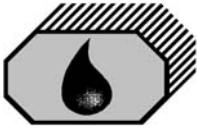


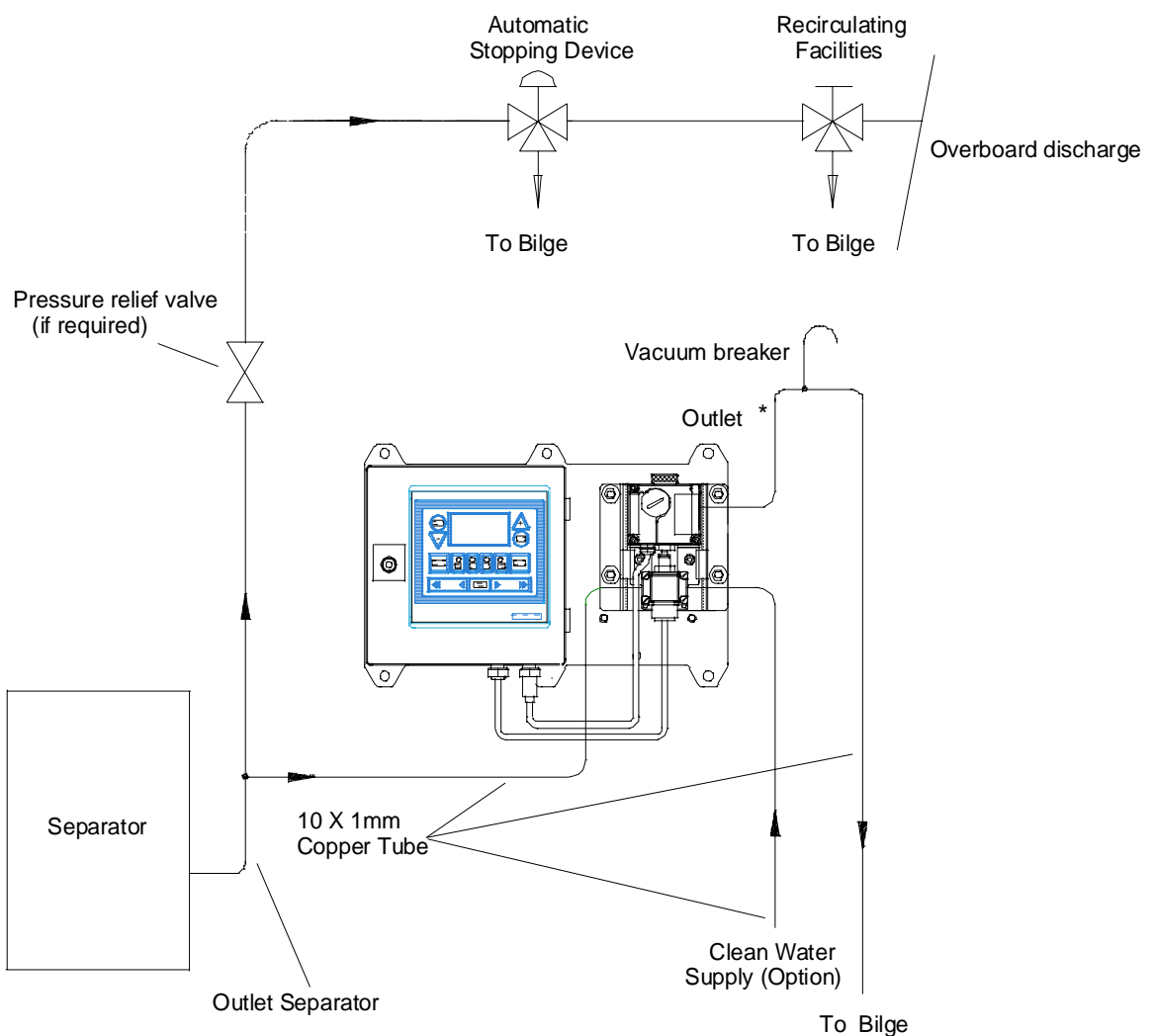
Fig. 2



## 7.0 PIPING (Refer to Fig. 3)

Connect the Sample line to the left side input of the EV-2008. Connect the clean water line to the right hand side input of the valve. Both inputs have 1/4" female threads. It is recommended to employ 10 mm OD copper or stainless steel pipe. If possible it is recommended to install a manual valve into the clean water line next to the OMD-2008. This allows to stop any water flow through the instrument for easy manual cleaning. No additional valve in the sample line can be allowed.

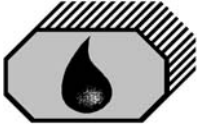
For details concerning the sampling point refer to the OMD-2008 manual.



\* Inlet & Outlet connections R1/4" Female

Fig. 3





## 8.0 WIRING (Refer to Fig. 4 + 5)

See Section 2 for important notes concerning wiring.

The EV-2008 should be connected to the OMD-2008 via the free M16 opening. In the case that this opening is already occupied any of the M20 openings should be used.

### Measuring Cell Connector

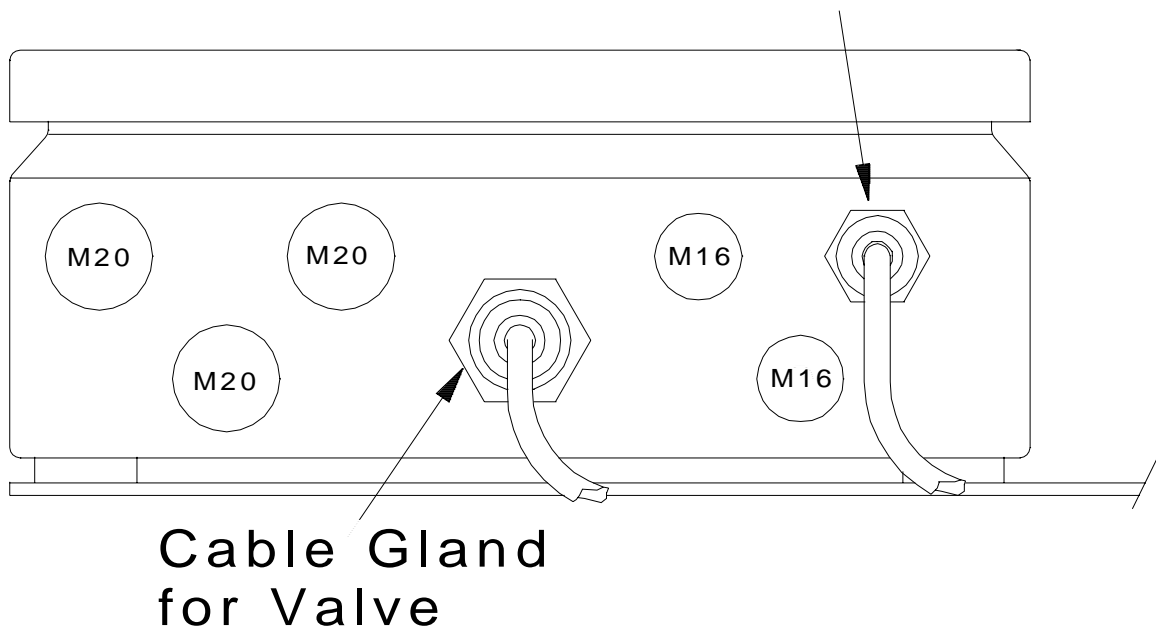
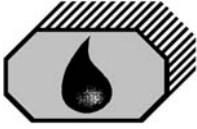
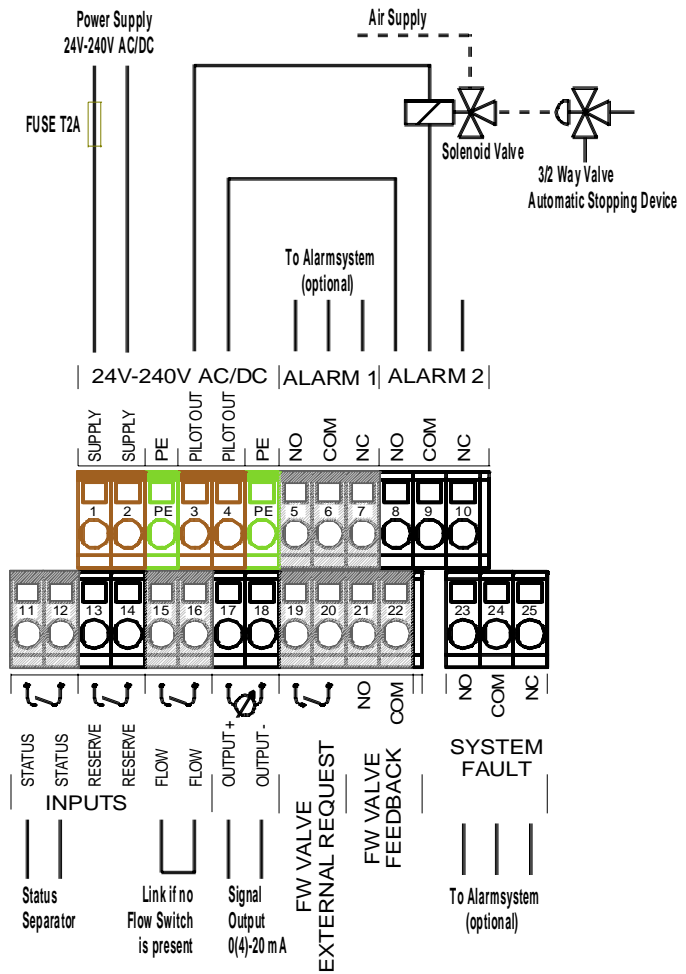


Fig. 4



- 1-2 Power Supply
- 3-4 Pilot Voltage Output (Same as Power Supply)
- 5-7 Potential free Output Alarm 1 (Change over contact)
- 8-10 Potential free Output Alarm 2 (Change over contact)
- 11-12 Input Status Switch from Separator (Close when running)
- 13-14 Input Reserved for future use
- 15-16 Input Flow Direction Switch (Deckma Delivery)
- 17-18 (Optional) Signal Output 0(4) to 20 mA
- 19-20 Input External Fresh Water Usage Request
- 21-22 Output External Fresh Water Usage Feedback
- 23-25 Potential free Output System Fault (Change over contact)



POWER SUPPLY MUST HAVE FUSE T2A

POWER SUPPLY 24V-240V AC/DC

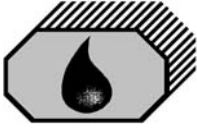
LINK TERMINALS 15&16 IF NO FLOW SWITCH IS PRESENT

## EXAMPLE

Connections may vary with different separator control boxes

Fig. 5

*Close front cover completely after electrical installation. Water inside the instrument may result in corrosion and malfunction.*



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## 8.1 Remote fresh water switching

The EV-2008 allows to remotely control the valve operation. To switch the EV-2008 to clean water terminals 19&20 have to be linked. The OMD-2008 will switch as requested within 20 seconds.. The EV-2008 will stay in clean water condition, and the OMD-2008 will remain in alarm condition, as long as the link (terminals 19&20) is present. It is recommended to use a potential free relay switch for the link to electrically insulate the OMD-2008 from any external voltages.

The OMD-2008 will close the FW-Valve Feedback contact (Terminals 21&22) whenever the FW valve is set to clean water usage. The Feedback contact will remain open (deenergized) in Sysfault conditions.

## 9.0 POWER SUPPLY

*See Section 2 for important notes.*

The EV-2008 is fully supplied from the OMD-2008.

The OMD-2008 is designed for a power supply of 24 V – 240V AC or DC. The power supply must have a fuse rated no more than 2A.

## 10.0 COMMISSIONING

*See Section 2 for important notes.*

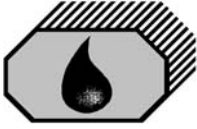
On completion of the installation, wiring and piping carry out the following checks:

### 10.1 Electrical

- a) Check that the grounding has been made according to the relevant regulations.
- b) Check that the connector on top of the valve is firmly in place. Tampering with this connector may be interpreted as an attempt for willfull manipulation of the 15ppm Bilge Alarm.

### 10.2 Piping

- a) Check all piping connections for leaks and rectify as appropriate.



## 10.3 Functional Tests

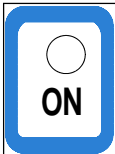
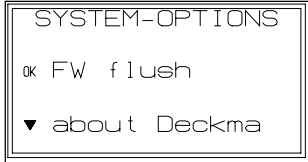
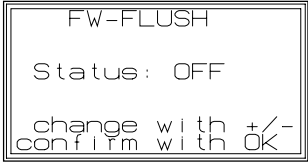
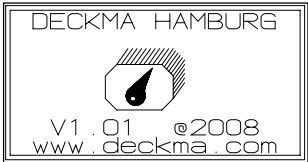
- Check sample flow with EV-2008 in sample condition. Refer to the OMD-2008 manual for details.
- Check if there is sufficient flow in fresh water condition. If the clean water supply is obtained from a high pressure source, the flow rate will be higher than from the sample point.
- During oil free water is running through the monitor check the Zero adjustment. The display should be "0" to "2" and the status will show "FW". If the display varies by greater amounts, it may be that air entrainment is present. If this is the case, the cause must be located and rectified.
- If the Zero need to be adjusted, this can be done in the programming mode as described in OMD-2008 manual, section 10.4. (Settings – Offset)

## 10.4 Programming Mode

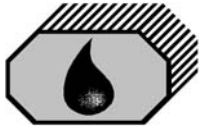
When operated via the front panel the EV-2008 will automatically be set back to normal operation (sample measurement) after 2 minutes of clean water flushing.

For operating the Electric FW valve press the "ON" button, select "FW FLUSH", change the Status to "ON". The EV-2008 will switch over to fresh water immediately, and remain in fresh water setting for 2 minutes before switching back to normal operation. If a prolonged flushing is desired, it can be retrigged within the 2 minutes, or repeated afterwards.

Anytime the EV-2008 is switched to fresh water, the OMD-2008 will be in alarm condition, as required by IMO MEPC.107(49).

 <p>Pressing the ON button directly leads into the SYSTEM-OPTIONS menu.</p>	 <p>Select "FW flush" if you want to activate the (optional) clean water valve or if additional information should be displayed.</p>	 <p>To change to "ON", press the "+" button. Confirm with "OK" to activate the optional clean water valve for a limited time (2 min).</p>  <p>Exit from information display by pressing the ESC button.</p>
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**NB:** Changed values have to be confirmed by pressing the "OK" button. Otherwise the existing values remain valid.



## 11.0 OPERATING INSTRUCTIONS

Instead of the manual valve for sample and clean water at the standard OMD-2008, an OMD-2008 with EV-2008 has no manually operable valve handles. Any operation is triggered via the front panel, or triggered remotely. The OMD-2008 will only allow overboard discharge in Normal Operation setting of the EV-2008.

## 12.0 Operator maintenance

See Section 2 for important notes.

The EV-2008 requires no additional operator maintenance. For OMD-2008 operator maintenance refer to the OMD-2008 manual.

## 13.0 Fault finding

The OMD-2008 will indicate several malfunctions in the status line of the display. Pressing the "OK" button will lead into an information window, similar to the items listed in the table below. For OMD-2008 error messages check the OMD-2008 manual.

The EV-2008 operation may introduce one additional error condition, a persistent "FW!" status message with OMD-2008 Alarm condition.

Status	Reading	System-Alarm-LED	Alarm-circuit 1,2	Reason	Servicing
FW!	0..49 / EE	Green / Blinking	Alarm	remote freshwater input is linked (Terminals 19&20)	remove/check external wiring
EVALVE?	any	red	Alarm	FW valve position not detected	check connectors and wiring

## 15.0 spare parts

When ordering spares, it is important to supply details of the type of monitor, part number of each spare required, its description and any relevant serial number.

The EV-2008 should not be dismantled, in case of any malfunction it should be replaced.

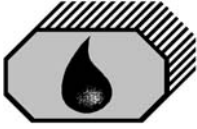
DESCRIPTION	ART-NUMBER
Electric Valve for OMD-2008 EV-2008	13218

### 15.1 Recommended On Board Spares

The EV-2008 should not be dismantled. In case of any malfunction it should be replaced.

DESCRIPTION	ART-NUMBER
Electric Valve for OMD-2008 EV-2008	13218

## 16.0 REMARKS



# DECKMA HAMBURG GmbH

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All the modifications and deviations from the standard form, which have to be carried out in the supply, should be attached at this paragraph.

Commissioned on: .....

Date

by: .....

Firm's Name

Remarks:

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