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**1. ERIKS operating companies**

ECON mud boxes are being delivered by several ERIKS operating companies on a worldwide basis. In this manual these will be referred to as 'ERIKS', the individual terms of delivery of the ERIKS operating company having executed the order are applicable.

**2. Product description**

The ECON mud boxes are designed according DIN 87.151 and information in our latest catalogue or see our website [www.eriks.com](http://www.eriks.com) and should be used in accordance with the applicable pressure-temperature rating. ECON mud boxes are provided with casted markings according to EN 19. The marking makes the identification of the mud boxes easier and contains:

- size (DN)
- pressure rating class
- body and cover material marking
- arrow, indicating the medium flow direction
- ECON logo

**3. Requirements for maintenance staff**

The staff assigned to assembly, operating and maintenance tasks should be qualified to carry out such jobs and in any circumstance, ensure personal safety

**4. Transport and storage**

During transport and storage the mud boxes should always be protected against external forces, influence and destruction of the painting layer as well. The purpose of the painting layer is to protect the mud box against rust, during transport and storage. The mud boxes should be stored in an unpolluted space and should also be protected against all atmospheric circumstances. There should be taken care of the temperature and humidity in the room, in order to prevent condensate formation. It is not permitted to use the drilling holes in the flange for lifting the mud box, for this purpose is mounted an eyebolt in the middle of the cover.

**5. Function**

ECON mud boxes are designed to filter the flow of a medium and are only suitable for use in horizontal placement.

**6. Application**

ECON mud boxes are for general use. Mud boxes are used for cleaning flowing mediums to protect the installation. The mud boxes are designed for standard operating conditions. For the use of extreme conditions e.g. aggressive or abrasive media, it is recommended to mention this at the ordering stage, to verify whether the mud box is suitable. The installation designer is responsible for the mud box selection, suitable for the working conditions. The mud boxes are unsuitable, without written permission of an ERIKS company, to apply for hazardous media as referred into Regulation (EC) No 1272/2008.

## 7. Installation

During the assembly of the ECON mud boxes, the following rules should be observed:

- the mud box should be checked before installation if they have not any defects caused by transport and/or storage.
- make sure that the applied mud boxes are suitable for the working conditions, medium used in the plant and the right system connections, according to pressure and temperature limits.
- make sure that the mud box will be installed with the correct and required screen perforation.
- protective hole plugs must be removed.
- the mud boxes can only be installed in a horizontal position.
- during fitting, the proper flow direction has to be considered.
- the mud box must be stress free mounted between the flanges, supports must be arranged to prevent any additional stress, caused by the weight of the mud box or the pipeline.
- the mud box must be installed, so that the cover easily can be removed and also the screen easily can get out of the mud box.
- bolted joints on the pipeline must not cause additional stress resulted from excessive tightening, user shall select proper bolts, gaskets according the working temperature, working pressure and medium.

## 8. Maintenance

Before starting any service jobs, make sure that the medium supply to the pipeline is cut off, pressure was decreased to ambient pressure, the pipeline is completely cleaned and ventilated and the plant is cooled down. Always keep safety instructions in mind and take all personal safety precautions.

During maintenance, the following rules should be observed:

- always keep personal safety precautions in mind and always use appropriate protection e.g. clothing, masks, gloves etc.
- be alert that the temperature still can be very high or low and can cause burns.
- check the mud box on all possible leaking possibilities.
- check if all bolts and nuts, are still fastened.
- the thickness of the body must be checked to ensure safety operation at an interval of at least three months.

## 9. Service and repair

All service and repair jobs should be carried out by authorized staff, using suitable tools and user shall use original gasket, bolt and nut of the same size and material as the original one.

- welding (repair) and drilling of the mud box is forbidden.
- it is forbidden to replace the bolt, nut or packing when the mud box is under pressure.
- tighten the hexagon nuts evenly crosswise in the there for standard order.
- after replacement of the gasket, bolts or nuts, it is necessary to check the mud box operation and tightness of all connections. A tightness test should be carried out.
- after installation, the mud box should be checked and maintained periodically at least every 3 months, depending on the medium.

**10. Troubleshooting**

It is essential that the safety regulations are observed when identifying the fault.

<b>Problem</b>	<b>Possible cause</b>	<b>Corrective measures</b>
No flow	Flange dust caps were not removed	Remove dust caps
Little flow	Mud box clogged	Clean/replace screen
	Piping system clogged	Check piping system
Leakage between body and cover	Cover nuts / bow nuts loose	Properly tighten cover nuts, or cover bow nuts
	Pressure too high for the valve	Check system pressure
	Cover gasket failure	Replace cover gasket
Body and/or cover broken and leaking	Pressure too high for the valve	Check system pressure
	Broken because of freezing	Drain the water in the winter when the valve is not used, or use proper isolation

**11. Removal**

All dismantled and rejected mud boxes cannot be disposed with household waste. The mud boxes are made of materials which can be re-used and should be delivered to designated recycling centres.

**General warning:**

**General note for products which may be used for seawater:**

Although our products can be used in seawater systems it should always be noted that, in case of installation in a piping system made of materials which are frequently used because of their excellent seawater resistance (e.g. Cunifer), large potential differences may occur possibly causing corrosion which could permanently damage the proper functioning and integrity of our product.

A combination of different materials should always be mentioned prior to the purchase of our products in order for us to give the best possible advice on a safe functioning.

**General note for cast iron products:**

Cast iron can be used for various applications, such as listed in our catalogue. It should however always be observed, that frost (in combination with non drained products) may permanently damage the proper functioning and integrity of our product.