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1. ERIKS operating companies

ECON storm valves 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 storm valves are designed according to the information on our website www.eriks.com and should be used in accordance with the applicable pressure-temperature rating as stated on this website. ECON storm valves are provided with casted markings according to EN 19. The marking makes the identification of the valve easier and contains:

- size (DN)
- pressure rating class
- body material marking
- arrow, indicating the medium flow direction
- charge number
- 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

Transport and storage should always be carried out with the discs completely closed and the valve should be protected against external forces, influence and destruction. The valves 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.

5. Function

ECON storm valves also known as scupper valves are provided in angle and straight type and without or with locking device. The storm valves are self-closing valves under the waterline of ships. Important is their non-return function, allowing the media to be discharged but at the same time preventing seawater from entering the system.

6. Application

ECON storm valves are used aboard ships for discharge of sanitary pipelines, grey water and septic tanks and usually placed on the ship hull.

The installation designer is responsible for the storm valve selection, suitable for the working conditions. The valves 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 storm valves, the following rules should be observed:

- make sure before an assembly that the valves were not damaged during the transport or storage.
- make sure that the applied valves are suitable for the working conditions, medium used in the system and the right system connections, according to pressure and temperature limits.
- the angle type storm valve Fig.1205 and straight type storm valve Fig.1208 are standard without locking device. The storm valve with locking device is Fig.1207 angle type and Fig. 1209 straight type. Storm valves can only be installed with the discharge medium form above. The storm valves Fig.1205 and 1207 must be installed underneath a vertical pipeline with the flow from above. Fig.1208 and 1209 can only be installed in a vertical position with the flow from above. (See photo's)
- by turning the locking device down you can block the disc from getting open, this can be useful when the ship is in dock or when there is a heavy storm. The locking device can be suited with a handwheel or a rod system for remote manual operation.
- during fitting, the proper flow direction has to be considered, the arrow on the valve body, must point in the same direction as the medium flow.
- the interior of the valve and pipeline must be free from foreign particles.
- the valve should be assembled in the pipeline in closed position, for a correct functioning, the valve must be stress free mounted between the flanges, supports must be arranged to prevent any additional stress, caused by the weight of the valve or the pipeline.
- bolted joints on the pipeline must not cause additional stress resulted from excessive tightening, user shall select proper bolts and gaskets according the working temperature, working pressure and medium.
- before startup, especially after repairs carried out, flash out the pipeline.
- after installation it is necessary to check the valve operation and tightness of all connections. A tightness test should be carried out.



Fig. 1205



Fig.1207



Fig. 1208



Fig. 1209

- The locking device can be mounted when the storm valve has already been installed with Fig. 1217 for storm valve Fig. 1205 and with Fig. 1219 for storm valve Fig. 1208.



Fig. 1217



Fig. 1219

- for pneumatic or hydraulic emergency operating on distance a Hydraulic/Pneumatic SOS actuator can be used Fig.1215



Fig.1215

Important remark:

When applying the above accessories to storm valves that are already in use, a new and old version of the valves must be taken into account.

The above accessories are intended for storm valves supplied from end 2020 / early 2021. For accessories on storm valves delivered before this period: please contact ERIKS.

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 valve on all possible leaking possibilities.
- check if all bolts and nuts, are still fastened.
- check if the discs still open and close in a proper manner.
- 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 valve gasket, bolt and nut of the same size and material as the original one.

- weld repair and drilling of the valve is forbidden.
- it is forbidden to replace the bolt, nut or packing when the valve is under pressure.
- tighten the hexagon nut in the therefor standard order.
- after replacement of the gasket, bolts or nuts, it is necessary to check the valve operation and tightness of all connections. A tightness test should be carried out.
- after installation, the valve 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.

Problem	Possible cause	Corrective measures
No flow	Valve is installed in the wrong way	Arrow of flow direction has to run in the same direction as the flow itself
Little flow	Discs do not completely open	Check discs opening function
	Piping system clogged	Check piping system
Leakage across valve seat	Discs not properly closed	Check discs opening function
	Seat damaged by foreign particles	Replace the disc or the complete valve
Rattling/banging of the discs	Nominal diameter of the valve in compliance to the flow rate is too big.	Choose smaller nominal diameter
	High flow speed	Change the system
	After a 90° bend in the pipe	
Body broken and leaking	Broken because of freezing	Replace the valve and drain the water in the winter when the valve is not used

11. Removal

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

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 advise on a safe functioning.