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1. ERIKS operating companies

ECON Thermodynamic Steam Traps 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.

Figure 1054E



Figure 1062E



Figure 8954E





2. <u>Product description</u>

The ECON Thermodynamic Steam Traps are designed according the information on our website, <u>www.eriks.com</u> and should be used in accordance with the applicable pressure-temperature rating as stated on this website. Thermodynamic Steam Traps are provided with a nameplate. The marking makes the identification of the Thermodynamic Steam Traps easier and contains:

- Figure number
- Limiting pressure and temperature
- ECON

Dimensions ECON Fig.1054E-1062E Thermodynamic Steam Trap are shown below.



Dimensions (mm)							
Screwed and SW* Flanged EN PN16					N PN16/40		
Size DN	A (mm)	B (mm)	C (mm)	D (mm)	Weight Kg	E	Weight Kg
15-1/2"	95	60	50	109	1,3	150	3.7
20-3/4"	95	60	50	109	1,2	150	5,2
25-1"	95	66	50	115	1,5	160	6,7

Dimensions ECON Fig.8954E Thermodynamic Steam Trap are shown below





Dimensions (mm)						
Model	A (mm)	B (mm)	C (mm)	D (mm)	E	Weight Kg
8954 ^E	78	35	67	50	49	1,1

3. <u>Requirements for maintenance staff</u>

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. <u>Transport and storage</u>

During transport and storage, the Thermodynamic Steam Traps should be protected against external forces and influence. The Thermodynamic Steam Traps 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, to prevent condensate formation.

5. Function

ECON Thermodynamic Steam Traps are designed to discharge condensate with a blast type action at a few degrees below steam saturation temperature. If the outlet is atmospheric, please take care that discharge of hot condensate and flash steam is in a safe zone and cannot cause accidents.

6. Application

The ECON Thermodynamic Steam Traps are used for the removal of condensate in steam systems. The Thermodynamic Steam Traps are designed for standard operating conditions. The Thermodynamic Steam Traps ECON Fig.8954E are excellent for steam tracing applications and are also suitable for applications where the weather conditions, such as rain and wind, may affect the normal 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 Thermodynamic Steam Trap is suitable. The installation designer is responsible for the Thermodynamic Steam Traps selection, suitable for the working conditions. The Thermodynamic Steam Traps 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 Thermodynamic Steam Traps, the following rules should be observed:

- make sure, before assembly, that the Thermodynamic Steam Traps were not damaged during the transport or storage, are according request and are suitable for the job.
- make sure that the plastic covers placed on the connection ends are removed before installing the steam trap.
- make sure that the thread or flange on the pipe are from the same standard as the Thermodynamic Steam Traps and free from pollution.
- check materials, pressure and temperature and their maximum values.
- the equipment has an arrow or inlet/outlet designations. Be sure that it will be installed in the appropriate direction.
- the Thermodynamic Steam Trap must be stress-free to be mounted in the pipeline, supports need to be made in order to avoid tensions, which are caused by the weight of the Thermodynamic Steam Trap and the pipeline.
- the Thermodynamic Steam Trap should preferably be installed in the horizontal plane, with a small drop leg preceding it. Suitable isolation valves should be installed to allow for safe maintenance and trap replacement. Consideration should be given to a suitable method for testing the correct operation of the trap. This may be a sight glass; sight glasses must be positioned a minimum of 1 meter downstream of any blast-action traps. Where the trap discharges into a closed return system, a non-return valve should be fitted downstream to prevent return flow.



- the installation area should have easy access and provide enough space for maintenance and removing operations.
- the installation area should have the necessary fire extinguishing systems to prevent damage of the equipment due to over temperature/pressure caused by fire.
- The Thermodynamic Steam Trap ECON Fig.8954E is for use with universal pipeline connectors, stainless steel angled pattern PN40, with universal swivelling flange for simple and quick installation. Installation upright in inclined or vertical pipelines.



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.
- there are no internal components that require maintenance.
- check the Thermodynamic Steam Traps on all possible leaking possibilities.
- we recommend that Thermodynamic Steam Traps are serviced as necessary. Steam traps should be checked periodically (at least yearly), to verify that they are operating correctly and to clean the internal parts and strainer screen.

Fig.1054E



MATERIALS				
POS.Nr.	DESIGNATION	MATERIAL		
1	Body	P250GH / 1.0460		
2	Cover	AISI 304 / 1.4301		
3	*Gasket	StainlessSt./Graphite		
4	*Seat	Hardened St.Steel		
5	*Valve disc	Hardened St.Steel		
6	*Bimetal ring	Bimetal		
7	*Washer support	AISI 304 / 1.4301		
8	*Tube	AISI 304 / 1.4301		
9	*Strainer screen	AISI 304 / 1.4301		
10	*Gasket	StainlessSt./Graphite		
11	Plug	A105 / 1.0432		
12	Insulation cover	AISI 304 / 1.4301		
*Available spare parts.				





MATERIALS				
POS. Nº	DESIGNATION	MATERIAL		
1	Body	CF8 / 1.4308		
2	Cover	AISI 304 / 1.4301 AISI 303 / 1.4305		
3	Valve seat	Hardened stainless steel		
4	Valve disc	Hardened stainless steel		
5	Washer support	AISI 304 / 1.4301		
6	Bimetallic ring	Bimetal		
7	* Gasket	Stainless steel / Graphite		
8	* Tube	AISI 304 / 1.4301		
9	* Inlet gasket	Stainless steel / Graphite		
10	* Outlet gasket	Stainless steel / Graphite		
11	Flange	AISI 316 / 1.4401		
12	Retainer ring	Steel		
13	Bolts	ASTM A193 Gr. B7		
14	Insulation cover	AISI 304 / 1.4301		
* Avail	able spare parts.	-		

9. Service and repair

All service and repair jobs should be carried out by authorized staff, using suitable tools and user shall use genuine valve parts.

- welding repair and drilling of the Thermodynamic Steam Traps is forbidden.
- it is forbidden to replace the bolt, nut or packing when the Thermodynamic Steam Traps is under pressure.
- Because of replaceable disc and seat is 'inline" revision possible.

10. Safety notes

Allow time for temperature to normalize after isolation to avoid danger of burns.

11. Troubleshooting

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

Problem	Possible cause	Corrective measures
No water separation	Dust caps were not removed	Remove dust caps
The Thermodynamic Steam Trap is continuously blowing	The Thermodynamic Steam Trap is broken	Replace the Thermodynamic Steam Trap
The Thermodynamic Steam trap is not blowing	The pressure in the condensate net is higher than the pressure in the steam net	Find and fix the reason of the high condensate pressure

12. <u>Removal</u>

Dismantled and rejected valves cannot be disposed with household waste. The Thermodynamic Steam Traps are made of materials which can be re-used and should be delivered to designated recycling centres.