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Fig.8961E /8962E



Fig.8963E



Fig.8964E



Fig.8964EX

1. ERIKS operating companies

ECON Inverted Bucket 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.

2. Product description

The ECON Inverted Bucket Steam Traps are designed according 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. The Inverted Bucket Steam Traps are provided with a nameplate. The marking makes the identification of the Inverted Bucket Steam Traps easier and contains:

- Figure number
- Limiting pressure and temperature
- Limiting differential pressure
- ECON

3. Capacity & dimensions

Max. delta P :
EZ version 2 bar
ES version 9bar
E version 17bar
EL version 28bar

Capacity table figure no. 8961E (kg/h)																	
Model	Size	delta p max.	Pressure difference (bar)														
			0,3	0,5	1	2	3	5	7	9	11	13	14	17	20	24	28
8961EZ	1/2" - 3/4" BSPT	2	210	260	350	450											
8961ES	1/2" - 3/4" BSPT	9			150	220	275	350	375	400							
8961E	1/2" - 3/4" BSPT	17				25	60	120	160	200	240	280	300	350			
8961EL	1/2" - 3/4" BSPT	28							25	47	85	122	140	190	209	228	260

Capacity table figure no. 8962E (kg/h)																	
Model	Size	delta p max.	Pressure difference (bar)														
			0,3	0,5	1	2	3	5	7	9	11	13	14	17	20	24	28
8962EZ	1/2" - 3/4" SW	2	210	260	350	450											
8962ES	1/2" - 3/4" SW	9			150	220	275	350	375	400							
8962E	1/2" - 3/4" SW	17				25	60	120	160	200	240	280	300	350			
8962EL	1/2" - 3/4" SW	28							25	47	85	122	140	190	209	228	260

Capacity table figure no. 8963E (kg/h)																	
Model	Size	delta p max.	Pressure difference (bar)														
			0,3	0,5	1	2	3	5	7	9	11	13	14	17	20	24	28
8963EZ	dn 15 - 20 - 25 PN40	2	210	260	350	450											
8963ES	dn 15 - 20 - 25 PN40	9			150	220	275	350	375	400							
8963E	dn 15 - 20 - 25 PN40	17				25	60	120	160	200	240	280	300	350			
8963EL	dn 15 - 20 - 25 PN40	28							25	47	85	122	140	190	209	228	260

Capacity table figure no. 8964E (kg/h)																	
Model	Size	delta p max.	Pressure difference (bar)														
			0,3	0,5	1	2	3	5	7	9	11	13	14	17	20	24	28
8964EZ	Univ. Conn.	2	210	260	350	450											
8964ES	Univ. Conn.	9			150	220	275	350	375	400							
8964E	Univ. Conn.	17				25	60	120	160	200	240	280	300	350			
8964EL	Univ. Conn.	28							25	47	85	122	140	190	209	228	260

The dimensions of the ECON Inverted Bucket Steam Traps are shown below.

Fig.no. 8961E & 8962E					
DN	A (mm)	B (mm)	C (mm)	D (mm)	Weight (kg)
1/2"	110	17	147	64	1,7
3/4"	110	17	147	64	1,7

Fig.no. 8963E					
DN	A (mm)	B (mm)	C (mm)	D (mm)	Weight (kg)
15	150	48	147	64	2,7
20	150	53	147	64	3
25	160	58	147	64	3,4

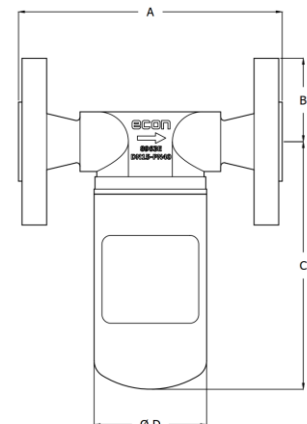
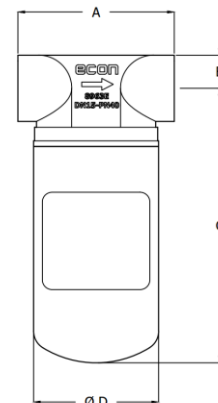


Fig.no. 8964E					
DN	A (mm)	B (mm)	C (mm)	D (mm)	Weight (kg)
Univ. Conn.	96	34	147	64	2

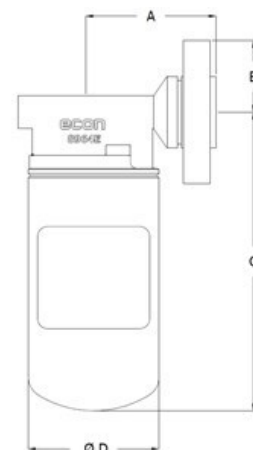
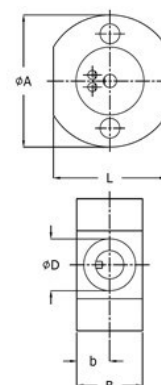


Fig.no. 8964EX						
Conn.	A (mm)	B (mm)	b (mm)	H (mm)	L (mm)	Weight (kg)
1/2"	70	35	17.5		60	0.8
3/4"	70	35	17.5		60	0.8
DN15	95			45	150	3.8
DN20	105			45	150	3.8
DN25	115			45	160	4



4. 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

5. Transport and storage

During transport and storage the Inverted Bucket Steam Traps should be protected against external forces. The Inverted Bucket Steam Traps should be stored in an unpolluted space and should also be protected against all atmospheric circumstances. The temperature and humidity in the room should be taken care of, in order to prevent condensate formation.

6. Function

ECON Inverted Bucket Steam Traps are designed to discharge condensate, they operate intermittently, either wide open or tightly closed. The operation of the Inverted Bucket Steam Trap is based on the buoyancy of the bucket as the steam trap fills with steam. The buoyancy created by the steam closes the steam trap. After the steam cools down and condenses the bucket loses buoyancy and opens the steam trap.

Any air or other incondensable gasses trapped in the Inverted Bucket Steam Trap can escape through the small vent hole in the top of the inverted bucket.

7. Application

The ECON Inverted Bucket Steam Traps are used for the removal of condensate in steam systems. The Inverted Bucket Steam Traps 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 Inverted Bucket Steam Traps is suitable. The installation designer is responsible for the Inverted Bucket Steam Traps selection, suitable for the working conditions. The Inverted Bucket Steam Traps are unsuitable, without written permission of an ERIKS company, to apply for hazardous media as referred into Regulation (EC) No 1272/2008.

8. Installation

During the assembly of the Inverted Bucket Steam Traps, the following rules should be observed:

- make sure, before assembly, that the Inverted Bucket Steam Traps were not damaged during the transport or storage, are according request and are suitable for the job.
- make sure the plastic covers placed on flanges or connection ends are removed before installing.
- make sure that the thread or flange on the pipe are from the same standard as the Inverted Bucket Steam Traps and free from pollution.
- check materials, pressure and temperature and their maximum values.
- make sure the inverted bucket is installed with the internal bucket facing down. For use with ECON Fig.8964E, universal swivel connector, use connector 8964EX. It can be used horizontally, vertical or in inclining lines. For vertical or inclining lines, the flow must be downwards.
- 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 bolts are to be tightened crosswise mixed evenly.

9. 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 Inverted Bucket Steam Traps on all possible leaking possibilities.
- check if all bolts and nuts, are still fastened.
- we recommend that Inverted Bucket Steam Traps are serviced as necessary. Steam traps should be checked periodically (at least yearly), to verify that they are operating correctly.
- when reassembling makes sure that all gasket faces are clean and always use a new gasket.

10. Service and repair

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

- welding repair and drilling of the Inverted Bucket Steam Traps is forbidden.
- it is forbidden to replace the bolt, nut or packing when the Inverted Bucket Steam Traps is under pressure.

There are no spare parts available for the Inverted Bucket Steam Trap.

11. Safety notes

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

12. Troubleshooting

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

Problem	Possible cause	Corrective measures
The Inverted Bucket Steam Trap is draining continuously but the condensate is building up	Steam trap capacity is too small	Change the steam trap to one with a higher capacity
Blowing a lot of steam	There is no condensate in the Inverted Bucket Steam Trap	Close the inlet valve to build up condensate. After a few minutes reopen the inlet valve to fill the Steam Trap
No discharge	The steam trap or the system is blocked	Find the blockage and remove it
No discharge	The pressure on the condensate side is higher than the pressure on the steam side	Find the reason for the higher pressure (e.g. leaking steam trap) and fix it
No discharge	The differential pressure is higher than the maximal differential pressure for which the steam trap is designed causing it to stay closed	Change the Inverted Bucket Steam Trap to one with a higher maximal differential pressure

13. Removal

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