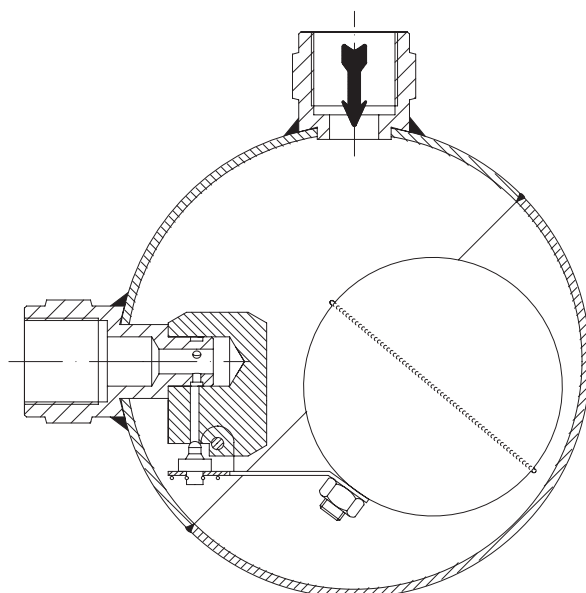


Operating and installation instructions

Ball float steam traps

CONA[®]S (PN16)



PN16
- with screwed sockets (series 629....2)

Contents

1.0 General information on operating instructions.....	2	5.5 Installation position.....	6
2.0 Notes on possible dangers.....	2	6.0 Putting the valve into operation	6
2.1 Significance of symbols	2	7.0 Care and maintenance	6
2.2 Explanatory notes on safety information	2	7.1 Cleaning / replacing controller assembly.....	6
3.0 Storage and transport	2	8.0 Troubleshooting	7
4.0 Description.....	3	9.0 Troubleshooting table	7
4.1 Scope of application.....	3	10.0 Dismantling the valve or the body	8
4.2 Operating principles	3	11.0 Warranty / Guarantee	8
4.3 Schaubild	4	12.0 EC declaration of conformity	9
4.4 Technical data - remarks	4		
4.5 Marking	4		
5.0 Installation.....	5		
5.1 General notes on installation.....	5		
5.2 Installation instructions for welding	5		
5.3 Controller adjustment	5		
5.4 Steam trap testing through ultrasonic measurement.....	5		

1.0 General information on operating instructions

These operating instructions provide information on mounting and maintaining the fittings. Please contact the supplier or the manufacturer in case of problems which cannot be solved by reference to the operating instructions.

They are binding on the transport, storage, installation, start-up, operation, maintenance and repair.

The notes and warnings must be observed and adhered to.

- Handling and all work must be carried out by expert personnel or all activities must be supervised and checked.

It is the owner's responsibility to define areas of responsibility and competence and to monitor the personnel.

- In addition, current regional safety requirements must be applied and observed when taking the fittings out of service as well as when maintaining and repairing them.

The manufacturer reserves the right to introduce technical modifications at any time.

These Operating Instructions comply with the requirements of EU Directives.

2.0 Notes on possible dangers

2.1 Significance of symbols



Warning of general danger.


2.2 Explanatory notes on safety information

In these Operating and Installation Instructions dangers, risks and items of safety information are highlighted to attract special attention.

Information marked with the above symbol and "**ATTENTION!**" describe practices, a failure to comply with which can result in serious injury or danger of death for users or third parties or in material damage to the system or the environment. It is vital to comply with these practices and to monitor compliance.

All other information not specifically emphasised such as transport, installation, operating and maintenance instructions as well as technical data (in the operating instructions, product documentation and on the device itself) must also be complied with to the fullest extent in order to avoid faults which in turn can cause serious injury to persons or damage to property.

3.0 Storage and transport

	<p>ATTENTION !</p> <ul style="list-style-type: none">- <i>Protect against external force (like impact, vibration, etc.).</i>- <i>Valves must not be used to take external forces, e.g. they are not designed for use as climbing aids, or as connecting points for lifting gear.</i>- <i>Suitable materials handling and lifting equipment should be used.</i> <p><i>See catalog sheet for weights.</i></p>
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- At -20°C to +65°C.

4.0 Description

4.1 Scope of application

Float-type steam traps with level control and thermal regulation are used for „drainage of steam facilities or other gases of fluid group 2“ .



ATTENTION !

- *Refer to the data sheet for applications, limits on use and possibilities.*
- *Certain media require or preclude the use of special materials.*
- *The valves are designed for standard operating conditions. If conditions exceed these requirements, e.g. aggressive or abrasive media, the operator should state the higher requirements when ordering.*
- *Valves made from grey cast iron are not authorised for use in systems subject to TRD 110.*

The information complies to the Pressure Equipment Directive 97/23/EC.

It is the responsibility of the machine planner to ensure compliance.

The special markings on the valve must be taken into account.

Refer to the catalogue sheet to see which materials are used in standard versions.

Please contact the supplier or the manufacturer if you have any questions.

4.2 Operating principles

The steam trap is controlled by a swivel-mounted ball float.

The air in the pipe line system resp. container will not be derived.

As long as no liquid flows into the steam trap, the float controller stays closed, and air is discharged upwards.

If liquid enters the steam trap, the ball float rises with the liquid level and the valve plug opens.

If the liquid in the steam trap falls, the ball float drops down and the controller orifice is closed.

4.3 Schaubild

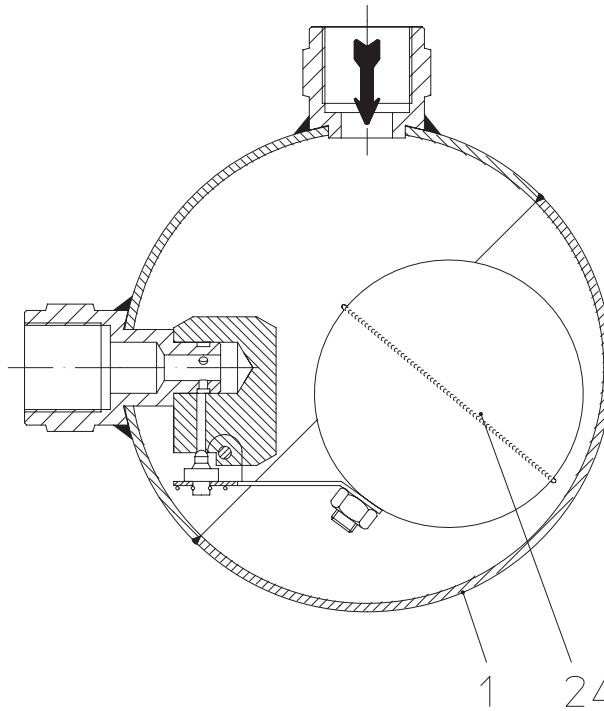


Fig. 1: Ball float steam trap - series 629 PN16

Refer to the data sheet for information about materials with designations and figure numbers.

4.4 Technical data - remarks

for

- Principal dimensions,
- Pressure-temperature-ratings, operating limits,
- Valves with different types of connection, etc.
refer to datasheet.

4.5 Marking

AWH Manufacturer	Address of manufacturer:
Typ Type	refer to item 11.0 Warranty / Guarantee
Bj. Year of	

According to the Pressure Equipment Directive appendix 2 diagram 7 valves acc. to article 1 paragraph 2.1.2 (pipes) only show the CE-marking from DN40 onwards.

5.0 Installation

5.1 General notes on installation

The following points should be taken into account besides the general principles governing installation work:



ATTENTION !

- Remove flange covers if present.
- The interior of valve and pipeline must be free from foreign particles.
- Installation at the lowest point of the pipeline system, media inlet is always on top. Note installation position with reference to flow, see mark on valve.
- Steam line systems should be designed to prevent water accumulation.
- Lay pipelines so that damaging transverse, bending and torsional forces are avoided.
- Protect valves from dirt during construction work.
- Connections must mate exactly.
- Valves must not be used to take external forces, e.g. they are not designed for use as climbing aids, or as connecting points for lifting gear.
- Suitable materials handling and lifting equipment should be used.
See data sheet for weights.
- Precautions against freezing should be taken as a matter of course in any facilities susceptible to frost.

- Planners / construction companies or operators are responsible for positioning and installing products.
- The valves are designed for application, not influenced from weather.
- For application outside or in adverse environments like corrosion-promoting conditions (sea water, chemical vapours, etc.), special constructions or protective measures are recommended.

5.2 Installation instructions for welding

Please note that only qualified persons using appropriate equipment and working in accordance with technical rules are allowed to install fittings by welding.

The responsibility for this lies with the system owner.

5.3 Controller adjustment

The controller is designed by the manufacturer for the relevant maximum operating pressure 5bar or 13bar and does not need changing.

5.4 Steam trap testing through ultrasonic measurement

Testing the operation of the steam trap in the installed state is straightforward with the "ARImetec[®]-S" multifunctional testing device.

Refer to data sheet "ARImetec[®]-S".

5.5 Installation position

(refer to Fig. 1)

The steam trap can be installed for vertical flow (inlet directly from above).
The arrow on the side indicates the direction of flow.

However the steam trap must always be installed so that the ball float can work in a vertical plane.

6.0 Putting the valve into operation



ATTENTION !

- Before putting the valve into operation, check material, pressure, temperature and direction of flow.
 - Regional safety instructions must be adhered to.
 - Residues in piping and valves (dirt, weld beads, etc.) inevitably lead to leakage.
 - Touching the valve when it is operating at high ($> 50\text{ °C}$) or low ($< 0\text{ °C}$) media temperatures can cause injury.
Affix warning notice or protective insulation as appropriate!
- Before putting a new plant into operation or restarting a plant after repairs or modification, always make sure that:
- All works has been completed!
 - The valve is in the correct position for its function.
 - Safety devices have been attached.

7.0 Care and maintenance

Maintenance and maintenance-intervals have to be defined by the operator according to the requirements.



ATTENTION !

- refer to item 10.0 and 11.0 prior to dismantling and repair work!
- refer to item 6.0 before restarting the plant!

Prior to installation, threads and seal faces should be coated with temperature-stable lubricant (e.g. "OKS Anti-Seize Paste" white/metal-free).

7.1 Cleaning / replacing controller assembly

- The steam trap is completely welded and can not be disassembled.
- Cleaning is by means of compressed air from both sides at various installation positions.

8.0 Troubleshooting

In the event of malfunction or faulty operating performance check that the installation and adjustment work has been carried out and completed in accordance with these Operating Instructions.



ATTENTION !

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

If malfunctions cannot be eliminated with the help of the following table "9.0 Troubleshooting table", the supplier or manufacturer should be consulted.

9.0 Troubleshooting table



ATTENTION !

*- refer to item 10.0 and 11.0 prior to dismantling and repair work!
- refer to item 6.0 before restarting the plant!*

Fault	Possible cause	Corrective measures
No flow	Installed in wrong flow direction	Fit valve in direction of flow arrow. Note installation position Check lifting force; refer to item 5.5!
	Ball float defective	Replace steam trap
	Controller operated above safe operating pressure	Observe operating limits as per data sheet, i.e. possibly select different controller
Reduced flow	Wrong installation position	Note installation position; refer to item 5.5. Correct installation position.
	Piping system clogged	Check piping system
	Wrong controller size chosen	Correct selection acc. to flow diagram
No closure, or internal leakage	Controller clogged	Clean controller; refer to item 7.1
	Controller worn out	Replace steam trap
External leakage	Body not properly tightened	Replace steam trap

10.0 Dismantling the valve or the body



ATTENTION !

The following points must be observed:

- *Pressureless pipe system.*
- *Medium must be cool.*
- *Plant must be drained.*

11.0 Warranty / Guarantee

The extent and period of warranty cover are specified in the "Standard Terms and Conditions of Albert Richter GmbH & Co. KG" valid at the time of delivery or, by way of departure, in the contract of sale itself.

We guarantee freedom of faults in compliance with state-of-the-art technology and the confirmed application.

No warranty claims can be made for any damage caused as the result of incorrect handling or disregard of operating and installation instructions, datasheets and relevant regulations.

This warranty also does not cover any damage which occurs during operation under conditions deviating from those laid down by specifications or other agreements.

Justified complaints will be eliminated by repair carried out by us or by a specialist appointed by us.

No claims will be accepted beyond the scope of this warranty. The right to replacement delivery is excluded.

The warranty shall not cover maintenance work, installation of external parts, design modifications or natural wear.

Any damage incurred during transport should not be reported to us but *rather* to the competent cargo-handling depot, the railway company or carrier company immediately or else claims for replacements from these companies will be invalidated.



Technology for the Future.

GERMAN QUALITY VALVES

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12.0 EC declaration of conformity



**AWH Armaturenwerk Halle GmbH,
Turmstrasse 118, D-06110 Halle/Saale**

EC declaration of conformity

as defined by
the Pressure Equipment Directive 97/23/EC

We hereby declare

that pursuant to the aforementioned Pressure Equipment Directive the products listed below were executed and classified in accordance with Directive 97/23/EC (Article 3, paragraph 3).

Pursuant to Article 3, paragraph 3 these products need not carry a CE mark.

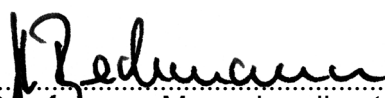
Ball float steam traps

Series	Nom. press.	Material body	NPS
629	PN 16	1.4301	1/2"

Applied standards:

DIN 3840
AD 2000-leaflet
ASME VIII/1

Halle/Saale, 31.10.2007


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(Brechmann, Managing director)