PPT14 AUTOMATIC PUMP TRAPS

INSTALLATION AND MAINTENANCE INSTRUCTIONS

IMI PPT14.040 E 00.25

GENERAL INFORMATION

- These instructions must be carefully read before performing any work involving VALSTEAM ADCA products. Failure to observe these instructions may result in hazardous situations.
- These instructions describe the entire life cycle of the product. Keep them in a location that is accessible to every user and make these instructions available to every new owner of the product.
- Current regional and plant safety regulations must be considered and followed during installation, operation, and maintenance work.
- The images shown in these instructions are for illustration purposes only.
- For problems that cannot be solved with the help of these instructions, please contact VALSTEAM ADCA or its representative.

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CONTENT

1. SAFETY INFORMATION

1.1. Explanation of symbols

DANGER

Hazardous situation which, if not avoided by applying the correct preventive measures, will result in fatal or serious injury and/or considerable damage to property.

WARNING

Hazardous situation which, if not avoided by applying the correct preventive measures, could result in fatal or serious injury and/or considerable damage to property.

CAUTION

Hazardous situation which, if not avoided by applying the correct preventive measures, could result in moderately severe or minor injury.

NOTICE

Situation which, if not avoided, can result in property damage or product malfunction.

NOTE

Indicates additional information, tips and recommendations.

1.2. Intended use

Refer to the markings on the device, such as nameplate and laser markings, Information Sheet (IS) and these Installation and Maintenance Instructions (IMI) to check that the product was designed for the intended use and meets the specifications used for sizing and selection. This includes checking application, material suitability, process medium, pressure and temperature as well as their respective limiting values.

VALSTEAM ADCA does not assume any responsibility for damage resulting from inappropriate use of the product, damage caused by external stresses or any other external factors. Correct installation of the product is the full responsibility of the contractor.

Inappropriate use of the product is any use other than the one described in this chapter. Inappropriate use also includes:

- Use of spare parts which are not genuine;
- Performance of maintenance work not described in these instructions;
- Use outside the limits defined by the accessories connected to the product.
- Unauthorized modifications to the product.

If the product is to be used for an application or with a fluid other than the one it was designed for, contact VALSTEAM ADCA.

1.3. Qualification of personnel

Handling, installation, operation and maintenance work must be carried out by fully trained and qualified personnel, capable of judging the work which they are assigned to perform and recognizing potentially hazardous situations. They should be trained to properly use this product according to these Installation and Maintenance Instructions.

Where a formal “Permits to Work” system is implemented in the plant it must be complied with.

1.4. Personal protective equipment

Personal protective equipment should always be worn during work in order to protect against hazards posed by e.g. the process medium, dangerous temperatures, noise, falling or projected objects and working at height. These equipment includes a helmet, safety glasses, safety harness, protective clothes, safety shoes, hearing protection, etc.

NOTE

Always assess whether you or others in your vicinity require any protective equipment. When in doubt check with the plant’s health & safety responsible personnel for details on required protective equipment.

1.5. The system

The complete system should be assessed as well as every action (e.g. closing of shut-off valves, disconnection of the power supply) to ensure this will not bring additional risk to personnel or property.

Dangerous actions that can result in a hazardous situation include isolation of protective devices such as safety valves, vents, vacuum relief valves, disconnection of electric safety devices, sensors and alarms.

1.6. ATEX

If the product is in the scope of the ATEX 2014/34/EU directive and as such bears the Ex marking, consult its specific Additional Instructions for use in Potentially Explosive Areas (IMI EX). In such cases, handling, installation, operation and maintenance work must only be performed by personnel qualified and authorized to work in potentially explosive areas.

1.7. General safety notes

DANGER

RISK OF BURSTING OR IMPLOSION IN PRESSURE EQUIPMENT

Valves, ancillaries, and pipelines are pressure equipment. Working outside their operating limits, improper opening, malfunction, or system operation failure may result in component bursting or implosion.

- Observe the maximum and minimum operating limits of the product and check if they are within those of the system in which it is being installed. If not, ensure a safety device is included in the system to prevent operation outside those limits. Check the product Information Sheet (IS).
- In case the malfunction of any equipment installed on the system or a system operation failure may result in a dangerous overpressure, overtemperature, or vacuum condition, ensure a safety device is included in the system to prevent such situation.
- Before starting any work on the product, depressurize it and cool or heat it to ambient temperature. This also applies to the line in which it is fitted.
- Drain the process medium from the product and all the relevant plant sections.

WARNING

RISK OF BURNS

Depending on the operating conditions, products and pipelines may get very hot or cold and cause burn injuries.

- Do not touch the product while it is hot or cold, allowing it firstly to cool down or heat up.
- Wear protective clothing and safety gloves during working operation.
- Thermally insulate tubes and product's as a preventive measure.

WARNING

RISK OF INJURY CAUSED BY FLUID ATTACK ON PRODUCTS MATERIALS

The product must only be used with mediums that do not attack the materials of the product (body, gaskets, seals). Otherwise, leaks may occur, and hot and/or hazardous fluid can escape.

- Do not use the product with mediums other than the ones it was designed for. Check section 1.2 - Intended Use.
- Prevent medium contamination.

RISK OF INJURY CAUSED BY UNDER TIGHTENED PRODUCT OR ITS COMPONENTS

Excessively low tightening torques may cause medium to escape and/or components to be projected at high speed, which may result in a hazardous situation depending on the medium, chemical properties and/or its operating conditions.

- Do not loosen any screws while the equipment is pressurized.
- Observe the specified tightening torques on these Installation and Maintenance Instructions. If the relevant torque value is not mentioned contact VALSTEAM ADCA.

RISK OF HEARING LOSS

Depending on the operating conditions, the product may generate loud noises.

- Wear hearing protection when in the vicinity of the product.

RISK OF INJURY AS A RESULT OF ILLEGIBLE INFORMATION

Important information written in the product nameplate, markings and warning signs may wear overtime or get illegible due to e.g. dirt accumulation, resulting in hazardous situations and personal injury or property damage.

- Keep nameplates, markings and warning signs in a legible state, replacing when illegible, missing or damaged.

CAUTION

RISK OF INJURY DUE TO RESIDUAL PROCESS MEDIUM

Direct contact with dangerous process medium may lead to personal injury, e.g. smoke inhalation and chemical burns.

- Drain the process medium from the product and all the relevant plant sections.
- Wear protective clothing, safety gloves, mask, and eye protection.

CAUTION

RISK OF INJURY DUE TO IMPROPER HANDLING

Manual handling (e.g. lifting, carrying, pushing, pulling) of large and/or heavy products may result in personal injury.

- Assess the risk associated with the handling task.
- Use adequate handling methods and appropriate auxiliary handling equipment.

NOTICE

RISK OF PRODUCT DAMAGE DUE TO EXCESSIVELY HIGH TIGHTENING TORQUES

High tightening torques may lead to premature wearing of product components.

- Observe the specified tightening torques on these Installation and Maintenance Instructions. If the relevant torque value is not mentioned contact VALSTEAM ADCA.

2. PRODUCT INFORMATION

The ADCAMat PPT14 automatic pump trap is especially recommended where stall condition may occur due to poor steam trap condensate discharge capacity, caused by temporary insufficient pressure drop.

The equipment combines the features of a float steam trap and a pressure operated pump, in one single unit.

Whenever the steam trap function is incapable of draining condensate, the pump function is activated (using external steam pressure). The pump replaces the necessary positive pressure to lift the condensate to the return system, before water logging occurs, avoiding water hammer and consequent noise, equipment damage, corrosion, unstable temperature control, etc.

2.1. Principle of operation

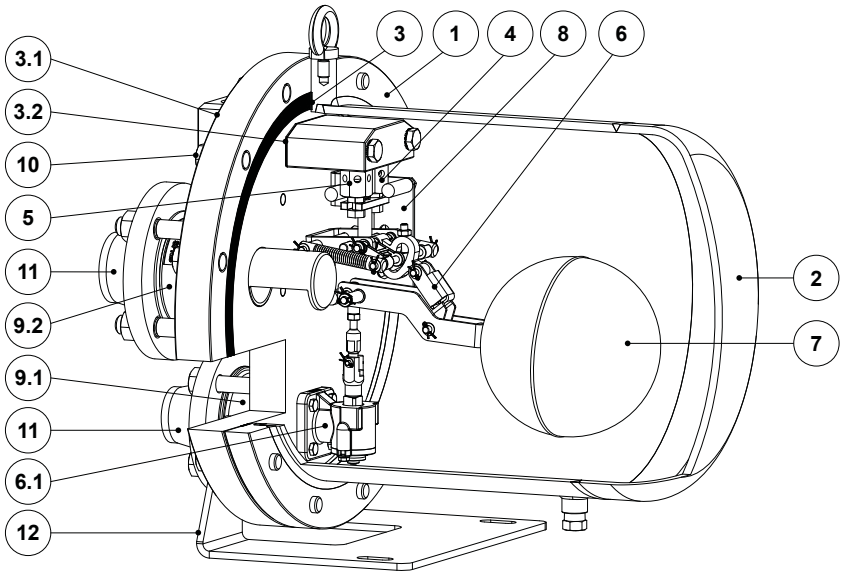

Fig. 1

In the first instance, the steam intake valve (4) is closed, while the vent valve (5) is open. As condensate flows into the body through the inlet check valve (9.1) the PPT14 can operate in a closed loop application, in one of two ways (as a steam trap or pressure operated pump).

If the inlet pressure is greater than the back pressure, the PPT14 works as a steam trap (6.1), continuously discharging condensate by differential pressure. In this case the float (7) opens or closes the valve seat, by moving a plug via a simple lever mechanism according with the condensate level inside the pump body, changing its position in relation to the seat. As the float rises, so does the discharge capacity. At this point the steam intake valve remains closed and the vent valve open.

As soon as, e.g., the equipment control valve starts to modulate, the steam pressure will decrease. The lower differential pressure decreases the PPT14's ability to discharge as a steam trap causing the condensate level to rise inside the body. Vacuum may even occur at this stage.

If this situation would persist, the condensate would eventually flood the equipment, causing problems. However, by using a PPT14, as the float reaches its highest position, the snap action mechanism actuates, closing the vent valve and opening the steam intake valve. Steam will then replace the necessary positive pressure to pump out the condensate through the steam trap mechanism. At this point the PPT14 works as a pressure operated pump.

The float starts to fall as the condensate level inside the body drops and is discharged to the return system. When the float reaches its lowest position, the snap action mechanism resets.

As the motive steam valve closes and the vent valve opens, equalizing the body pressure with the upstream pressure, the condensate is allowed to flow once again into the PPT14. The cycle then repeats itself and, with enough differential pressure, the PPT14 resumes as a steam trap or, otherwise, as a pump.

NOTE

All ADCAMat automatic pump traps feature two mechanisms, combining the characteristics of a float steam trap and a pressure operated pump.

When certain that the system backpressure is always superior to the equipment upstream pressure then an ADCAMat pressure operated pump (without steam trap) is the ideal solution as long as it is installed in a closed loop.

In extreme cases, where the system condensate load is above the discharge capacity of all ADCAMat automatic pump trap models, it is recommended to install an ADCAMat pressure operated pump in combination with a high capacity FLT series steam trap.

In such scenarios, please consult the manufacturer.

2.2. Certification

This product has been specifically designed for use with liquids and gases which are in Group 2 of the European PED – 2014/68/EU Pressure Equipment Directive and it complies with its requirements.

CE MARKING – GROUP 2 (PED – European Directive)	
PN 16	**Category**
All sizes	2 (CE Marked)

NOTE

If the product falls within category SEP it must not be CE marked, unless other directives are applicable.

This product is not in the scope of the ATEX 2014/34/EU directive as it does not have its own potential ignition source. Personnel responsible for the plant installation must assess the risks caused by static electricity and take the necessary precautionary measures to prevent static charge. These measures include e.g. connection of the product to the equipotential bonding system.

2.3. Product identification

The following items are indicated on the product nameplate or directly on its body:

- Manufacturer
- Product model (e.g. PPT14S)
- Pressure / temperature rating (e.g. 16 bar @ 50ºC; 12 bar @ 150ºC)
- Nominal size (e.g. DN 40 x DN 25)
- Maximum motive pressure (e.g. 10 bar)
- Volume (e.g. 25L)
- Minimum operating temperature (e.g. Tmin = -10ºC)
- Flow direction (indicated by designations at the connections)
- Serial number and year of manufacturing (e.g. Reg.:17483/19)
- CE Marking (when applicable – see section 2.2 – Certification)
- EX Marking (when applicable e.g. EX h IIB T6…T3 Gb – see section 2.2 – Certification)

2.4. Technical data

For technical data including dimensions, materials, limiting conditions and versions refer to the product's respective Information Sheet (IS).

3. TRANSPORT, STORAGE, AND PACKAGING

WARNING

RISK DUE TO FALLING LOADS

Loads may tip or fall over resulting in damage to property, serious injury or death.

- Use suitable equipment when moving or lifting suspended loads.
- Make sure no one is standing below the suspended load.

CAUTION

RISK OF INJURY DUE TO IMPROPER HANDLING

Manual handling (e.g. lifting, carrying, pushing, pulling) of large and/or heavy products may result in personal injury such as back injury.

- Assess the risk associated with the handling task.
- Use adequate handling methods and appropriate auxiliary handling equipment.

NOTICE

RISK OF PRODUCT DAMAGE DUE TO IMPROPER STORAGE

- Do not remove any packaging or protective covers until immediately before installation at the site.
- Store the product in a solid base in a dry, cool and dust-free environment.
- Until its installation, protect it from the weather, dirt, corrosive atmospheres and other harmful influences.

RISK OF PRODUCT DAMAGE DUE TO LONG TERM STORAGE

Some product components may deteriorate with time (e.g. valve packings, seals).

- Do not store the product for more than 12 months.
- If for any reason the product must be stored for longer periods of time contact VALSTEAM ADCA.

Products are individually wrapped in plastic film, thermo shrinkable plastic and/or stored in a cardboard box as they leave VALSTEAM ADCA. Avoid removing packaging and any protective cover until immediately before installing the product at the site.

NOTE

If the transport packaging has any shipping damage contact VALSTEAM ADCA or its representative.

Before storing and transporting the product protect it from impacts and mechanical damage, paying special care with sealing surfaces and other fragile parts.

NOTE

If the corrosion protection (paint and other surface coatings) of the product is damaged during transport or other handling procedures repair it immediately.

4. INSTALLATION

Before performing any installation work, refer to section 1 – Safety information.

WARNING

RISK OF INJURY DUE TO INSUFFICIENT SUPPORT DURING INSTALLATION

Insufficient support of the product during installation may cause it to fall and cause personal injury.

- Ensure the product is safely held in place during installation.
- Wear protective safety shoes.

NOTICE

RISK OF PRODUCT DAMAGE DUE TO STRESS

The product is not intended to withstand external stresses that may be inducted by the system to which it is being connected to.

- Make sure that the connected pipe does not subject the body to any stress (forces or torques) during installation and operation.
- Do not use the product as an elevation point.

4.1. Preparation for installation

Before installation, make sure the following conditions are met:

- The installation area has easy access and the device is to be installed in a position where operation and maintenance work can be performed safely.
- The product will be installed with proper support and free of any stresses that can be induced by the system due to e.g. pipe expansions. The necessary precautions are recommended during system design.
- The pipeline where the product will be installed is designed in such a way that it takes into account the weight of the product. The pipeline may require support on both sides next to the product, particularly if its size and weight are considerable and especially if vibrations are to be expected in the system.
- The product is not damaged.
- Make sure all the necessary materials and tools are readily available during installation work.
- Referring to these Installation and Maintenance Instructions (IMI), Information Sheet (IS) and nameplate, check that the product is suitable for the intended installation: temperature, medium, pressure, temperature, etc. – see section 1.2 – Intended use.

- Check that there are no foreign bodies inside the pipelines and ancillaries, flushing may be necessary. These should be thoroughly cleaned.
- Check any mounted pressure gauges and make sure they function properly. It is recommended that a pressure gauge is installed on the motive steam supply, condensate inlet (e.g. at the receiver) and condensate outlet.
- An additional ADCA pipeline strainer or filter may be necessary to install upstream of the pump trap in some applications, preventing solid particles in the process medium from damaging it.
- A receiver is recommended to temporarily hold the liquid and prevent any flooding of the equipment, while the pump trap is performing a pumping cycle. A definable length of large diameter pipe can be used. Refer to the receiver sizing table on the Information Sheet (IS PPT14.040).
- The motive steam supply pressure should be at least 1 bar above and 4 bar below the expected backpressure.
- In case the motive steam supply pressure is greater than the maximum operating pressure of the pump trap, install an ADCA pressure reducing valve and an adequately sized safety valve. Make sure the steam pressure is lower than the maximum operating pressure of the pump trap.
- Ensure the motive steam supply line is drained of condensate at all times using an ADCA steam trap. A strainer should be fitted upstream to prevent debris to enter the steam trap and pump trap mechanisms.
- In case a high limit shut off valve is installed to protect a heat exchanger from excess temperature, then the motive steam supply line should have its take-off point between the steam control valve and the high limit valve.
- An ADCA air eliminator (for steam) should be installed in the high point of the vent connection in order to discharge the initial air from the system. A check valve should be fitted immediately upstream to prevent air from being sucked in via the outlet of the vent pipe.
- A filling head (H) of 300 mm is recommended. This measurement is taken from from the bottom of the receiver to the steam and vent connection block at the pump cover. A lower filling head will decrease the pumping capacity (minimum recommended is 150 mm). Maximum of 900 mm.
- The condensate return line should be adequately sized to prevent excessive backpressure on the pump trap, taking into account the effects of flash steam at the heat exchanger’s maximum load. The effect of other equipments discharging into the return line must also be considered.
- A typical installation example is shown in Figure 2.

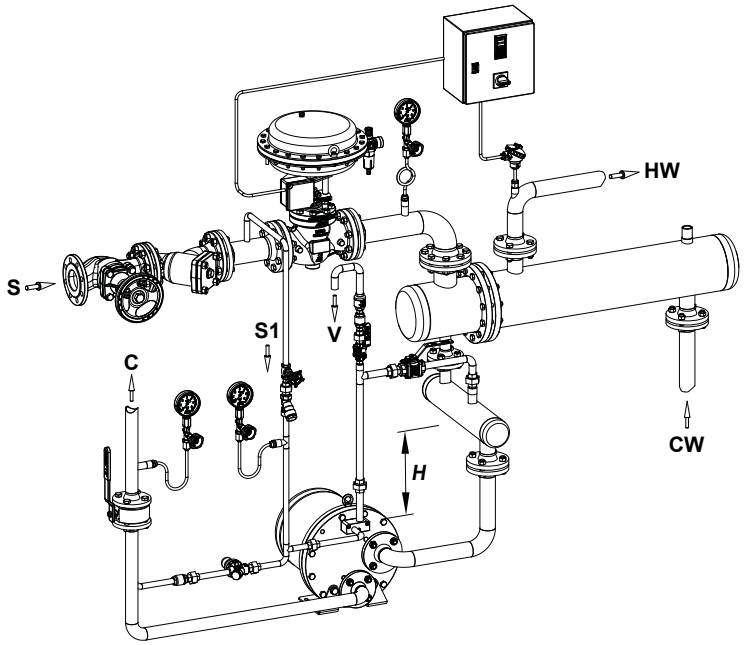

Fig. 2

H – Filling head
S – Process steam supply
S1 – Motive steam
C – Condensate return
V – Automatic air venting
CW – Cold water inlet
HW – Hot water outlet

NOTE

Assembly Drawings (AD) with assembly details and parts lists are available on request.

4.2. Installation procedure

1. Remove plastic film and other packaging, as well as the protective covers which are placed on flanges or connection ends. Make sure the pump trap is free from foreign matter.
2. Take care with jointing materials and sealing compounds to ensure that none may be permitted to block or enter the pump trap, causing malfunction. In case of flanged connections use appropriate flange gaskets.
3. The pump trap has four connections. Arrows or inlet/outlet designations indicate the correct orientation.
   a. The inlet connection, where the inlet check valve (9.2) is located, should be connected to the outlet of the equipment being drained.
   b. The outlet connection, where the outlet check valve (9.2) is located, should be connected to the condensate return line.

NOTE

The nuts securing the welding neck counter flanges to the inlet and outlet connections are provided loose, as these must be removed for proper welding.

c. The screwed 3/4" vent connection should be connected to the top of the receiver.

d. The screwed 1/2" motive supply connection should be connected to the motive steam supply line.

4. The welding of the counter flanges to the pipelines should be carried out by qualifed personnel following an appropriate welding procedure. Do not weld on top of the corrosion protection (paint, surface coatings). If there is corrosion protection on the welding ends remove it before welding. After welding the flanges to the pipeline repair the corrosion protection.

5. START-UP

Before performing the start-up procedure, refer to section 1 – Safety Information.

The start-up procedure must be followed every time the product is put back into service.

NOTICE

RISK OF PRODUCT DAMAGE DUE TO CONTAMINATION

The plant operator is responsible for cleaning the pipelines in the plant as well as keeping the product well-maintained. At start-up, the presence of small particles in the medium (dirt, scale, weld splatters, etc.) may damage the product or cause malfunction.

- Flush pipelines before start-up.
- Clean protection varnishes from pipes and flanges, leftover paint, graphite, grease, etc.
- Use a pipeline strainer or a filter.

5.1. Preparation for start-up

Before starting up, make sure the following conditions are met:

- All works on the system have been completed.
- All the necessary safety devices have been installed.
- When required, warning notices are used to alert others that the system is starting up.
- The product is correctly installed – see section 4 – Installation.
- Referring to these Installation and Maintenance Instructions (IMI), Information Sheet

(IS) and nameplate, check that the product is suitable for the intended installation: temperature, medium, pressure, temperature, etc. – see section 1.2 – Intended use.

- A safety check was performed by qualified personnel. Checking for leaks, structural damage and integrity of system components.

5.2. Start-up procedure

1. Ensure the vent line is neither closed or restricted.
2. Slowly open the motive steam inlet line in order to supply pressure to the pump trap.
3. Slowly open the isolation valves in the condensate inlet and discharge lines, allowing condensate to flow into the pump trap.
4. Check for any leaks.
5. Check the pump trap to ensure it is operating correctly.

NOTE

24 hours after system start-up, it is recommended to check the pipe connection for leaks and retighten when necessary. Clean strainers/filters to avoid blocking.

6. OPERATION

Before operating the product refer to section 1 – Safety Information.

Immediately after completing the start-up procedure, the product is ready for operation.

7. SHUTDOWN

Before performing the shutdown procedure, refer to section 1 – Safety information.

7.1. Shutdown procedure

1. Switch of the system and secure it so it cannot be turned on by unauthorized personnel.
2. Fully close the upstream shut-off valve, to stop the process medium from flowing through the pump trap.
3. Make sure the pipeline and pump trap are not under pressure and are at a safe

temperature.

4. Allow medium to cool down and completely drain it from the pipeline and pump trap.
5. Fully close the downstream shut-off valve.
6. If the pump trap is to be removed from the pipeline – see section 3 – Transport, storage and packaging.

8. PARTS LIST

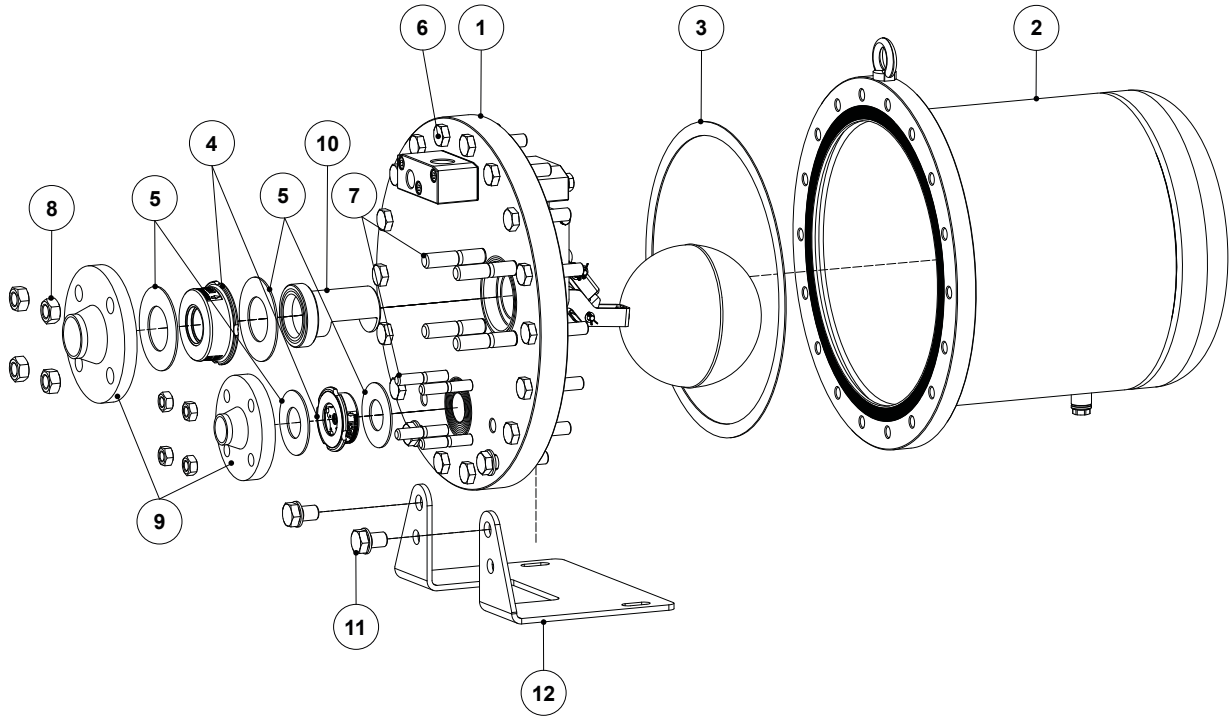

Fig. 3

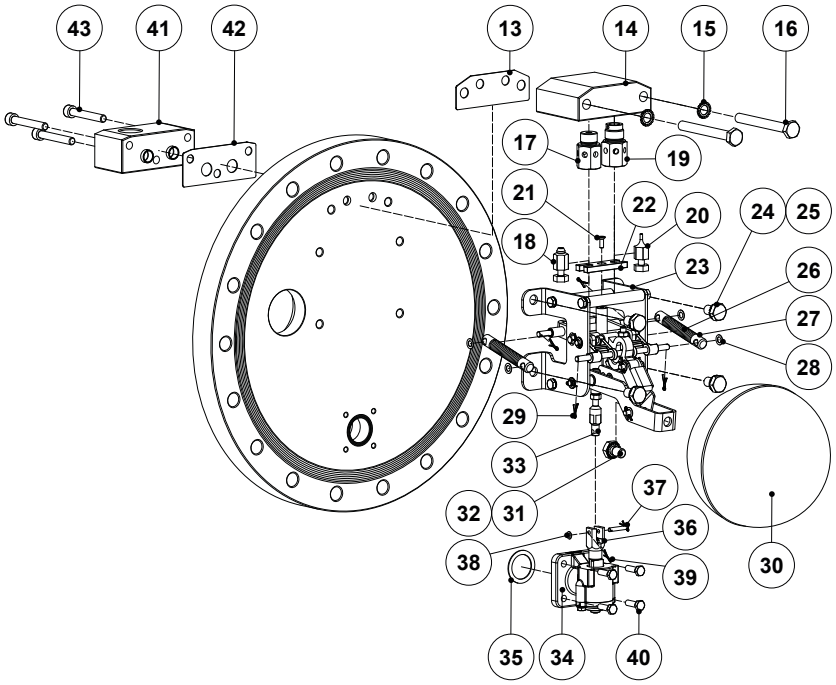

Fig. 4

POS. Nº	DESIGNATION	SPARE PARTS
1	Body	
2	Cover	
3	Gasket	X
4	Check valve	X
5	Gasket	X
6	Bolts	
7	Studs	
8	Nuts	
9	Counter flanges	
10	Deflector	
11	Bolts	
12	Supporting frame	
13	Gasket	X
14	Manifold	
15	Serrated washer	
16	Bolts	
17	Vent valve seat	X
18	Vent valve	X
19	Intake valve seat	X
20	Intake valve	X
21	Bolt	
22	Valve bracket	

POS. Nº	DESIGNATION	SPARE PARTS
23	Pump mechanism	X
24	Serrated washers	
25	Bolts	
26	Springs	X
27	Spring cap	X
28	Washer	
29	Split pin	
30	Float	X
31	Bolt	
32	Serrated washers	
33	Stem extension	
34	Steam trap mechanism	X
35	Gasket	X
36	Stem adaptor	
37	Fixing stem	
38	Washer	
39	Split pin	
40	Bolts	
41	Manifold	
42	Gasket	
43	Bolts	

NOTE

Parts list numbers may not match those in the product information sheet (IS).

9. MAINTENANCE

Before performing a maintenance procedure, refer to section 1 – Safety information.

The product requires maintenance to ensure that it operates correctly and safely throughout its lifetime. Maintenance work should be performed in a planned manner at periodic intervals. These intervals must be defined by the operator according to the service conditions.

9.1. Maintenance procedure

1. Make sure all the necessary materials and tools are readily available during maintenance work.
2. Perform the shutdown procedure – see section 7 – Shutdown.

3. Perform the maintenance procedure – see the following sections.
4. Put the product back into operation – see section 5 – Start-up.

9.2. Removing the cover and inspecting

1. Undo the bolts (6) in a crisscross pattern and seperate the cover (2) from the body (1).
2. Remove the body gasket (3) and clean surfaces thoroughly, leaving no remaining graphite leftovers.
3. Visually inspect the mechanism assemblies for obvious damage. Check that they are free from foreign matter. Move the float (30) up and down, checking if the mechanism operates freely.
4. Inspect the float to ensure it is not damaged or waterlogged.
5. Inspect the springs (26) for any damage.
6. Check the steam trap mechanism (34) inspecting inside for any presence of dirt and debris. The plug stem must slide smoothly without friction when the float is moved up and down.

9.2. Replacement of spare parts

For instructions on how to replace spare parts contact VALSTEAM ADCA.

9.3. Tightening torques

POS. Nº	DESIGNATION	TORQUE (Nm)
6	Bolts	85
16	Bolts	35
17	Intake valve seat	130
19	Vent valve seat	130
24	Bolts	35
31	Bolts	35
40	Bolts	20
43	Bolts	35

10. TROUBLESHOOTING

Before applying any corrective measure, refer to section 1 – Safety information.

If the malfunction cannot be solved with the help of the following table, contact VALSTEAM ADCA or its representative.

Malfunction	Possible cause	Corrective measure
The equipment is flooded but the pump trap appears to cycle normally.	The pump trap is undersized.	• Check system parameters and compare with the sizing information on the pump trap IS information sheet. • Check system filling head and receiver sizing. • If necessary install a second unit in parallel or change to another one with a higher capacity (e.g., ADCAMat APST).
The equipment is flooded and the pump trap is not cycling.	The shut-off valves for condensate inlet and outlet are closed.	• Open shut-off valves.
	Foreign matter is stuck on the inlet or outlet connections, inside the check valves or upstream strainer.	• Check for blockages. • Clean pipes, check valves and strainers. • Verify the integrity of the check valve disc and spring.
	Blocked vent line.	• Ensure the vent line is free from any obstruction and is not water logged.
	No motive steam available.	• Ensure any upstream shut-off valve is open in order to supply motive steam to the pump trap. • Check the motive steam pressure. It must be at least 1 bar above the maximum system backpressure.
	The float is damaged (ruptured or imploded).	• Replace the float. Assess possible risk of water hammer.
	Faulty mechanism.	• If the pump trap body is cold it generally means that the mechanism is stuck with the motive steam valve closed. • Check for excessive friction on the mechanism, spring and overall mechanical integrity. • Replace necessary parts or contact Valsteam ADCA or its representative.
Chattering noises coming from the pump trap or downstream pipeline.	Hydraulic pulsing of the inlet check valve.	• Reduce the filling head or slightly close the throttling valve upstream of the pump trap.
	Live steam is entering the discharge line and causing thermal hammer.	• Ensure the condensate return line is adequately sized. • Pipe the steam trap which drains the motive steam line back to the inlet receiver instead of the downstream condensate line.
	Motive steam is flowing to the downstream pipeline.	• If the motive steam pressure is twice the backpressure or greater, residual pressure from the end of the pump discharge cycle may flow to the downstream pipeline. • Reduce the motive steam supply pressure.

11. DISPOSAL

Once the product has reached the end of its working life, it should be sent for disposal in accordance with the prevailing national and local regulations.

Before disposal make sure that the product is clean and free from fluid residues.

During its disposal, pay special attention to rubbers, resins and polymer components (PVC, PTFE, PP, PVDF, FKM, NBR, etc.).

Do not dispose of components and hazardous substances together with household waste.

12. RETURNING PRODUCTS

Information regarding hazards and precautionary measures to be considered due to contaminating fluids and residues or mechanical damage that may represent a health, safety or environmental risk, must be provided in writing when returning products to VALSTEAM ADCA.

WARNING

RISK DUE TO THE PRESENCE OF HAZARDOUS RESIDUES ON RETURNED PRODUCTS

Contaminated fluids and residues may represent an environmental risk, or risk to VALSTEAM ADCA personnel.

- Information regarding any hazards or precautionary measures to be considered must be provided in writing when returning products to VALSTEAM ADCA.
- Health and Safety information sheets relating to any substances identified as hazardous or potentially hazardous must be provided outside the packaging.
- Use Hazmat labels on the packaging.

IMPORTANT NOTE

Total or partial disregard of these Installation and Maintenance Instructions involves loss of any right to warranty.

The extent and warranty period are specified in the “General sales conditions”.