

# CTS4U COMPACT TRAPPING STATION

## INSTALLATION AND MAINTENANCE INSTRUCTIONS

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## 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 the problems that cannot be solved with the help of these instructions, please contact VALSTEAM ADCA or its representative.

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We reserve the right to change the design and material of this product without notice.

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# 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, 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 valve, 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 IN PRESSURE EQUIPMENT

Valves, ancillaries and pipelines are pressure equipment. Working above their operating limits or improper opening can lead to component bursting.

- Observe the maximum operating limits of the product and check if they are lower than those of the system in which it is being installed. Check the product Information Sheet (IS).
- Install a safety device.
- Before starting any work on the product, depressurize it and cool or heat it up 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.

#### 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.



## WARNING

### **RISK OF INJURY CAUSED BY UNDER TIGHTENED PRODUCT OR ITS COMPONENTS**

Excessively low tightening torques may cause medium to escape or 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 screw 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.

### **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 UniADCA CTSU4 is a complete and compact steam trapping station designed to be used as an alternative to traditional multi-component trap stations, simplifying maintenance and reducing downtime and associated costs. The swivel connector allows steam trap replacement in only a few minutes without disturbing the pipeline and is compatible with “two-bolt” UniADCA universal steam traps and other universal steam traps with swivel connector.

### 2.1. Principle of operation

The UniADCA CTSU4 compact trapping station features upstream (single – CTS4U; double - CTS4UD) and downstream shut-off ball valves, universal connection flange for steam traps with swivel connector, strainer and check valve.

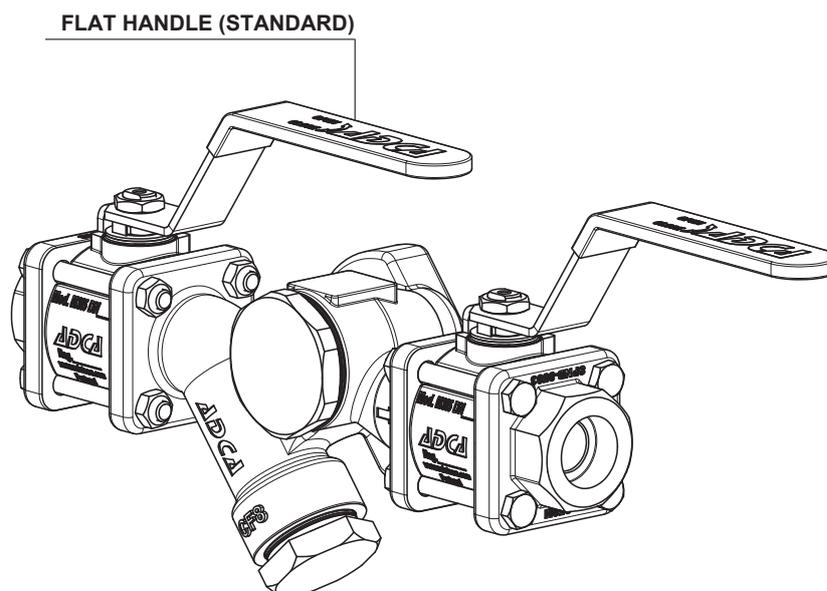


Fig. 1: CTS4U (with single upstream shut-off valve)

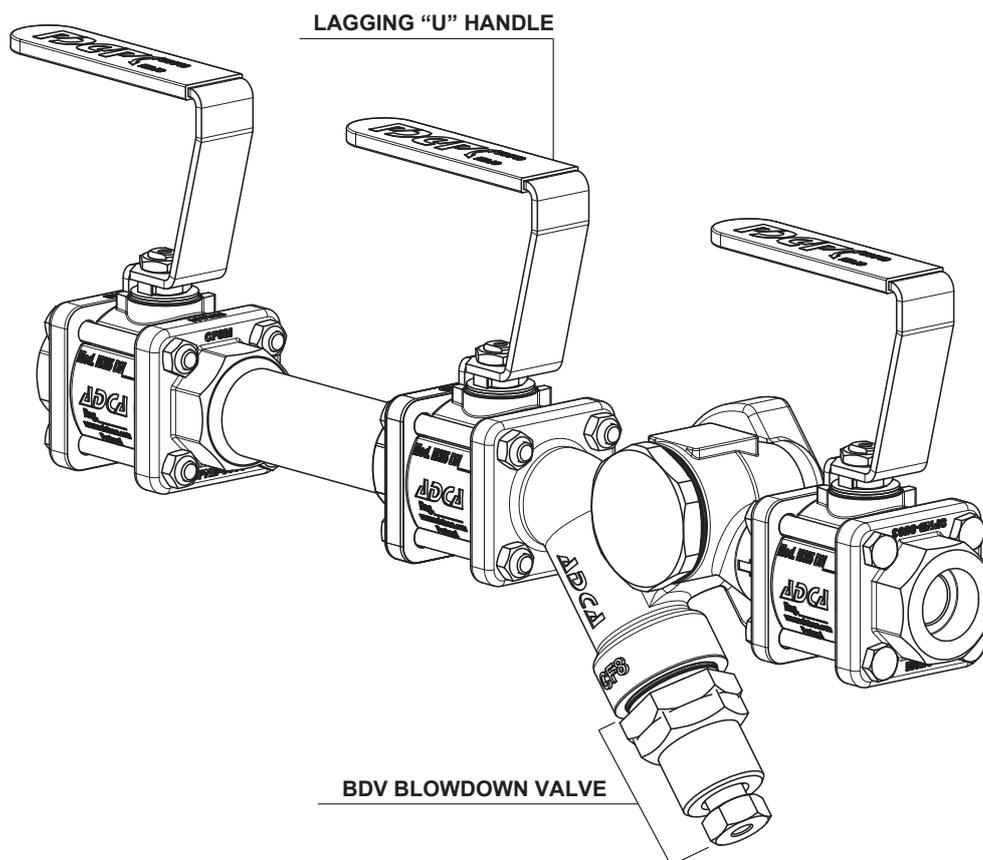


Fig. 2: CTS4UD (with double upstream shut-off valves)

The trapping station can only be successfully operated if a universal steam trap has been connected to it.

Opening of the upstream shut-off valve allows medium – steam and/or condensate - to flow through the strainer screen and into the connected steam trap. The steam trap opens to discharge condensate, which will then pass through the integrated check valve and out from downstream shut-off valve, if open. The check valve prevents back flow when discharging to a closed condensate return line or when there is a lift downstream.

Refer to the universal steam trap respective Installation and Maintenance Instructions (IMI) for information on its principle of operation.

## 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)	
PN40	Category
½" to 1" – DN 15 to DN 25	SEP

### 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. CTS4U)
- Pressure rating (e.g. PN 40)
- Nominal size (e.g. 1/2")
- Max. operating temperature (e.g. TMO = 230 °C)
- Max. operating pressure (e.g. PMO = 17,5 bar)
- Flow direction (indicated by an arrow)
- 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 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 induced 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.
- Ensure there is sufficient space to fit the universal steam trap into the connection flange.
- 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 this 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.



#### NOTE

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



#### WARNING

##### **RISK OF BURNS DUE TO CONDENSATE DISCHARGING TO ATMOSPHERE**

Steam trap discharge to the atmosphere may cause severe injury as the discharged medium may be at a temperature of 100°C.

- Ensure the steam trap is discharging to a safe place.

## 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 trapping station and universal steam trap is free from foreign matter.
2. The trapping station recommended installation position is horizontal with the filter element pointing downwards. Vertical installation is possible, granted that the flow direction is downwards and not upwards.
3. The trapping station has an arrow or inlet/outlet designations, be sure that it is installed in the appropriate direction according to fluid flow.
4. Take care with jointing materials and sealing compounds to ensure that none may be permitted to block or enter the trapping station and causing malfunction. In case of flanged connections use appropriate flange gaskets.
5. When a socket weld or butt weld version is being installed, the welding should be carried out by qualified personnel following an appropriate welding procedure.

Prior to welding proceed according to the following steps:

- a. Place the upstream and downstream shut-off valves in their “fully open” position.
  - b. Remove the bolts (13) and separate the ball valve bodies (2) from the connection ends (12).
  - c. Remove the body seals (11) from the connection ends.
  - d. Protect the connection ends (12) faces from splatters and weld them to the pipeline.
  - e. When cool, thoroughly clean the valve connector ends.
  - f. Fit the trapping station assembly between the connection ends (12) and loosely tighten the bolts and nuts (13), (14) in place.
  - g. Gradually tighten the bolts (13), (14) in a crisscross pattern until the recommended torques are achieved – see section 9.6 – Tightening torques.
6. Fit the universal steam trap onto the trapping station, according to the following steps:
- a. Clean the sealing surface on the flange connection end of the trapping station and ensure the transfer holes on both trapping station and steam trap are clean.
  - b. Make sure the two spiral wound gaskets (B) are undamaged and clean and are placed on the steam trap grooves.
  - c. Place the steam trap body (C) against the face of the flange connection end.
  - d. Apply anti-seize lubricant on the two hexagonal bolts (A) and loosely tighten uniformly to secure the steam trap to the trapping station.
  - e. Ensure the steam trap is in the required position and tighten the bolts (A) with the recommended torque - see section 9.6 – Tightening torques.

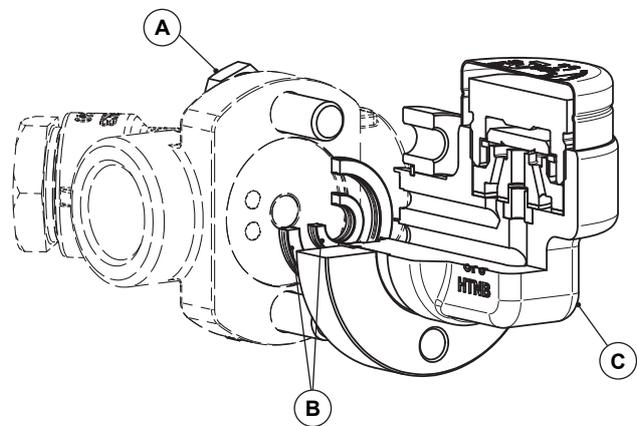


Fig. 3



#### NOTE

Refer to the universal steam trap respective Installation and Maintenance Instructions (IMI) for information about installation position and other system recommendations, such as e.g. installation of a noise diffuser or ensuring a preceding cooling leg, which depend on the type of steam trap installed – thermodynamic, float and thermostatic, inverted bucket, etc.

## 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.

### 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.



#### 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.

### 5.2. Start-up procedure

1. Fully open the downstream shut-off valve of the trapping station.
2. Open upstream shut-off valve(s) of the trapping station slowly, until normal operating conditions are achieved. This will prevent sudden surges of pressure that can damage the trapping station and universal steam trap.

**NOTE**

At this point all shut-off valves must be in the “fully open” position to prevent premature wear of the valve seats.

3. Check for any leaks.
4. Check the steam trap to ensure it is operating correctly.

## 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.

**NOTICE****RISK OF PRODUCT DAMAGE DUE TO INAPPROPRIATE OPERATION**

Leaving soft-seated ball valves in a partially open position may result in premature wear of the valve seats.

- Shut-off ball valves must not be used for flow control.
- Always set the valve in the “fully open” or “fully open” position.

Operation of the trapping station is performed by turning the shut-off valves handles by  $\frac{1}{4}$  turn between their “fully closed” or “fully opened” position. The valves are “fully open” or “fully closed” when their handles are parallel or perpendicular to the pipeline respectively, making it possible to see when the valves are open or closed depending on the position of the handle. If the handle is removed after operation, the flats of the stem (5) will also similarly indicate their position.

**NOTE**

When operating ball valves manually avoid applying excessive loads on the handle.

## 6.1. Operating the BDV blowdown valve

The BDV blowdown valve is an optional device, that can be fitted to any UniADCA CTS4U trapping station. The device is manually operated and uses internal pressure to discharge strainer screen contents such as scale, dirt and other debris. It can also be used as a depressurization valve.

1. Open the blowdown valve by slowly unscrewing the valve screw (24). Be careful to avoid contact with the hot medium which will be discharged through the valve's whole as it opens.
2. Close the valve by tightening the valve screw (24) to a torque of 20-25 Nm confirming that there is no leakage.
3. Periodical operation of the blowdown valve is recommended to ensure correct working.

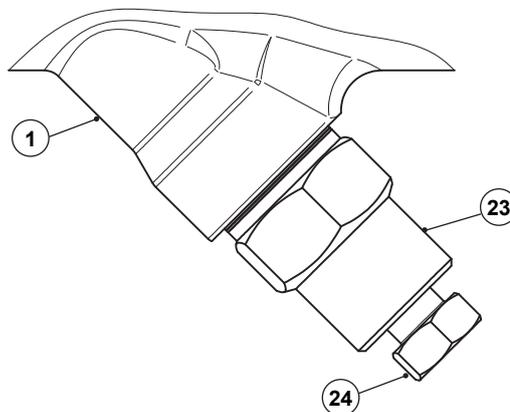


Fig. 4



### WARNING

#### RISK OF BURNS FROM BLOWDOWN OPERATION

Operation of the BDV blowdown discharges hot medium to the atmosphere which may cause burn injuries.

- Wear protective clothing, safety glasses and heat-resistant gloves during operation.
- When operating the valve stand to the side well clear of its outlet.

#### RISK OF INJURY DUE TO EXCESSIVELY LOOSENING BLOWDOWN VALVE SCREW

Excessively loosening the blowdown valve screw (24) while operating it may cause the retainer to break or come loose. This may result in the screw blowing off leading to personal injury and product malfunction.

- Loosen the valve screw slowly and do not unscrew it excessively.

## 7. SHUTDOWN

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

### 7.1. Shutdown procedure

1. Switch off the system and secure it so it cannot be turned on by unauthorized personnel.
2. Fully close the trapping station upstream shut-off valve, to stop the process medium from flowing through the steam trap. If the trapping station is to be removed from the pipeline then another valve, upstream of the trapping station, must be closed.
3. Allow medium to cool down and completely drain it from the trapping station.
4. Make sure trapping station is not under pressure and is at a safe temperature.
5. Fully close the downstream shut-off valve.
6. If the steam trap is to be removed from the pipeline – see section 3 - Transport, storage and packaging.

## 8. PARTS LIST

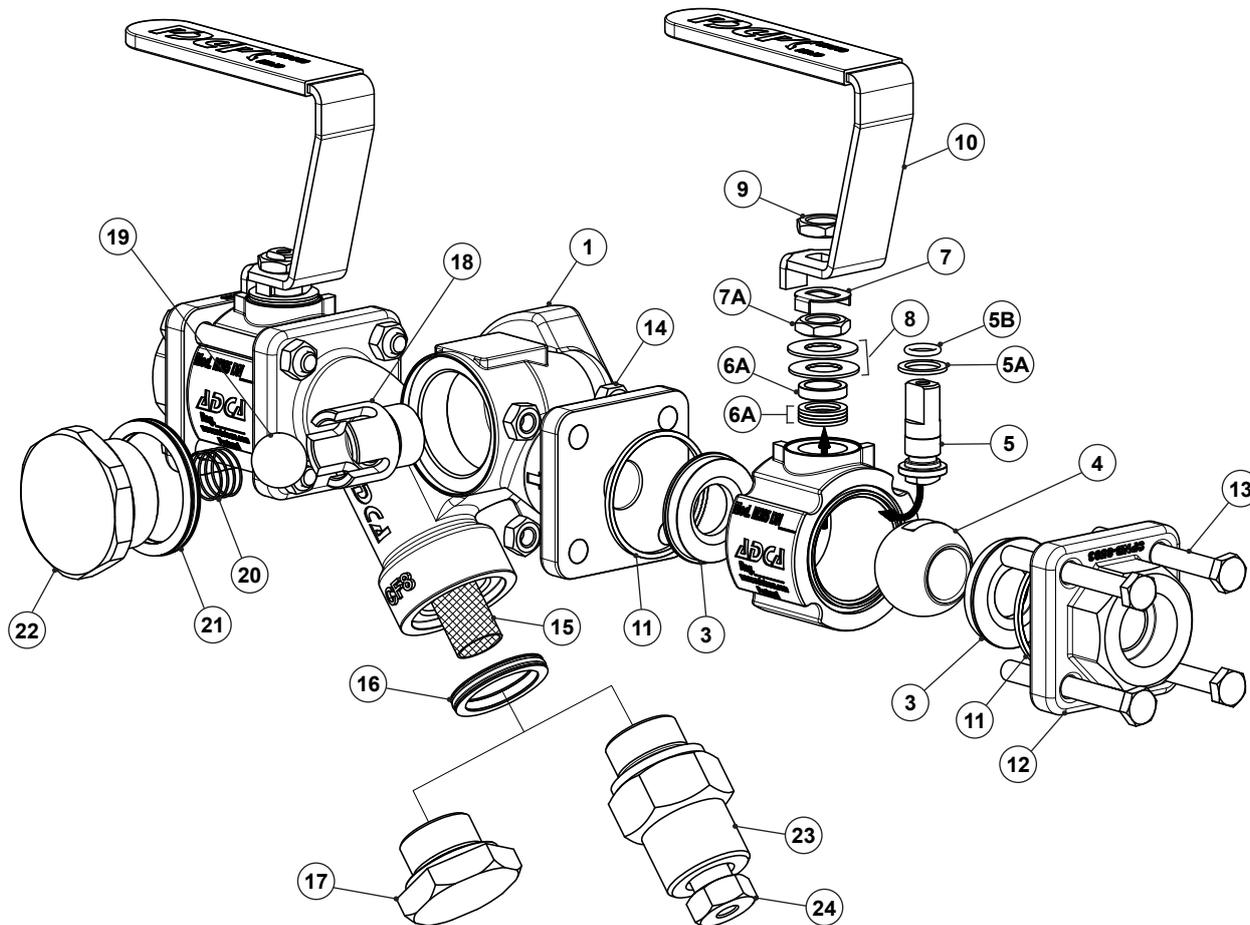


Fig. 5

POS. N°	DESIGNATION	SPARE PARTS
1	Main valve body	
2	Ball valve body	
3	Seat	X
4	Valve ball	X
5	Stem	X
5A	Stem thrust seals	X
5B	O-ring	X
6	Stem seals	X
6A	Compression washer	
7	Lock washers	X
7A	Compression nut	
8	Spring washers	X
9	Stem nut	
10	Handle	
11	Body seals	X

POS. N°	DESIGNATION	SPARE PARTS
12	Threaded cap	X
12	Flanged cap	X
13	Bolts	
14	Nuts	
15	Strainer screen	X
16	Gasket	X
17	Strainer plug	
18	Check valve seat	X
19	Check valve ball	X
20	Spring	X
21	Gasket	X
22	Check valve cover	
23	* BDV blowdown valve	
24	* Valve screw	

\* Optional

## 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. Cleaning or replacing the strainer screen

1. Unscrew the plug (17) and remove the strainer screen (15) and gasket (16).
2. Fit a new or clean strainer screen (15) into the plug (17) groove.
3. Apply anti-seize lubricant on the plug (17) thread. Fit a new gasket (16) and screw the plug (17) with the strainer screen (15) into the body (1), tightening with the recommended torque – see section 9.6 – Tightening torques.

### 9.3. Replacing the check valve assembly

1. Unscrew the check valve cover (22).
2. Remove the spring (20), check valve ball (19) and unscrew the check valve seat (18) using a suitable tool.
3. Apply a small amount high temperature silicone sealant on the new seat (18) thread, screw and tighten in place with the recommended torque – see section 9.6 – Tightening torques.
4. Replace and install the ball (19) and spring (20) and screw the check valve cover (22), tightening with the recommended torque – see section 9.6 – Tightening torques.

## 9.4. Replacing the ball valve seats, body seals and stem seals

1. Ensure the trapping station, as well as the pipeline immediately upstream and downstream, are not under pressure and are at a safe temperature.
2. Place the valve in its “fully open” position to prevent the ball from protruding out of the body assembly and fouling the connection ends.
3. Remove the body bolts and nuts (13, 14) and carefully separate the valve body assembly from the connection ends (12).
4. With the body removed, remove the seats (3) and body seals (11).
5. Turn the stem (5) to place the valve in the “fully open” position and carefully tap out the ball (4).
6. Remove the handle fixing nut (9), handle (10), lock washer (7) and compression nut (7A) fixing the stem (5) to prevent it from turning.
7. Remove the stem (5) and stem thrust seals (5A) through the inside of the body (2).
8. Remove the O-ring (5B) from the stem groove.
9. Remove the spring washers (8), compression washer (6A) and stem seals (6) with a suitable tool, pulling from the inside of the packing box.
10. Thoroughly clean the inside of the packing box and stem.
11. Fit the new stem thrust seals (5A) and O-ring (5B) on the stem (5) and insert the stem in place through the inside of the valve body.
12. Carefully slide the new stem seals (6), compression washer (6A) and spring washers (8) into the packing box.
13. Screw the compression nut (7A) with the recommended tightening torque while fixing the stem (5) with a suitable wrench to prevent it from turning – see section 9.6 – Tightening torques.
14. Refit the manual lever assembly and turn the stem (5) to the valve “fully open” position.
15. Clean the ball (4) and the surfaces on the inside of the valve body (2) thoroughly. Renew ball if necessary.
16. Orient the ball into its “fully closed” position and carefully position and slide it inside the valve body. Rotate the valve stem to place the ball in the “fully open” position.
17. Fit new seats (3) and body seals (11) on the valve body assembly.
18. Clean the sealing faces on the connection ends (12) and valve body (2).
19. Join the valve body assembly with the connection ends (12), fit the bolts and nuts (13, 14) and gradually tighten in a crisscross pattern until the recommended torques are achieved - see section 9.6 – Tightening torques.

## 9.5. Fitting the retrofit BDV blowdown valve

1. Unscrew the plug (17) and remove the strainer screen (15) and gasket (16).
2. Fit a new or clean strainer screen (15) into the BDV blowdown valve's body (23) groove.
3. Apply anti-seize lubricant on the BDV blowdown valve (A) thread. Fit the gasket (16) supplied with the retrofit kit and screw the BDV blowdown valve (23) with the strainer screen (15) into the body (1), tightening with the recommended torque – see section 9.6 – Tightening torques.
4. Make sure the valve is closed when not in use by tightening the valve screw (24) to a torque of 20-25 Nm, confirming that there is no leakage.

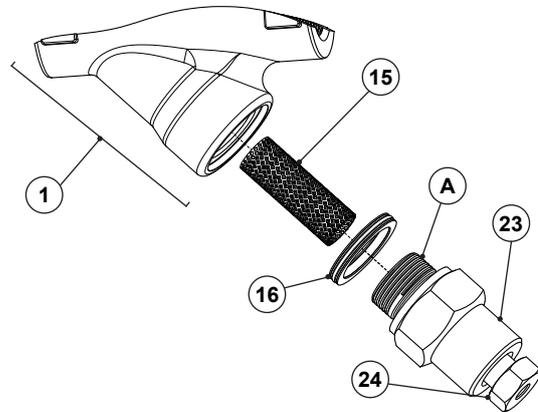


Fig. 6: BDV blowdown valve.

## 9.6. Tightening torques

POS. N°	DESIGNATION	TORQUE (Nm)
		All sizes
13, 14	Bolts and nuts	15 - 20
17	Strainer plug	50
18	Check valve seat	50 - 70
22	Check valve cover	70 - 90
23	Blowdown valve body	50
24	Blowdown valve screw	20 – 25

## 10. 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.

## 11. 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 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.