

P20P PRESSURE REDUCING VALVE

INSTALLATION AND MAINTENANCE INSTRUCTIONS



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.



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 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.



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 ADCA P20P series pressure reducing valves are direct acting, spring loaded, piston sensing balanced plug regulators designed for high pressure applications with mediums such as nitrogen, compressed air, water and other gases and liquids compatible with the materials of construction.

The regulator is available with options such as self-relieving, bottom mounting and panel mounting, gauge connection on the body, multiple soft valve sealing materials and top cap.

2.1. Principle of operation

The function of a pressure reducing valve is to reduce medium pressure from a higher upstream pressure to a lower downstream pressure, keeping it as stable as possible while other conditions such as flow demand vary.

During start-up, the valve is kept closed due to the force exerted by the upstream pressure (P_1) and valve spring (4) below the plug assembly (3, 3A, 5).

Clockwise rotation of the adjustment knob (18) compresses the adjustment spring (13)

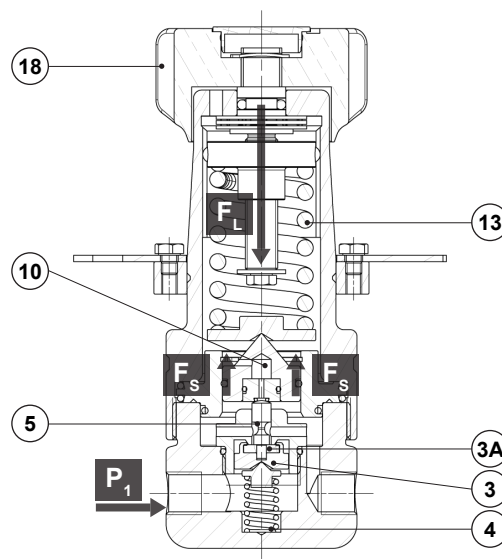


Fig. 1

and increases the loading force FL.

When the loading force FL is applied, the piston (10) and pushrod (5) move downwards, opening the valve and admitting process medium to the downstream pipework, in the direction indicated by the arrow, increasing downstream pressure. Downstream pressure acts below the piston (10), applying a force F_s that counteracts the loading force FL and eventually closes the valve when set pressure is reached. When system consumption increases, downstream pressure drops and so does the force it applies on the bottom side of the piston. As a result, the valve opens to try to reach the initial set pressure as long as the downstream system is demanding flow.

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 320	Category
1/4"	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. P20P)
- Pressure rating (e.g. PN320)
- Nominal size (e.g. 1/4")
- Max. operating temperature (e.g. $T_{max} = 80^{\circ}\text{C}$)
- 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.
- 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.
- Consider good hydraulic flow control to avoid pressure surges and avoid dead legs on pipeline branches.
- 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.
- A filter may be necessary to install upstream of the regulator in some applications, protecting it from solid particles.
- A safety valve must be installed downstream if the inlet pressure to the regulator can exceed its maximum downstream pressure rating or the pressure rating of any equipment installed downstream.
- A shut-off valve is installed upstream and downstream of the regulator to facilitate start-up, maintenance and troubleshooting. A bypass line is recommended as it additionally prevents system shutdown during maintenance procedures, in which case a manual valve should be fitted to allow regulation of downstream pressure.
- The pressure regulator will not be thermally insulated.
- A pressure gauge is installed both upstream and downstream of the regulator for monitorization, set point adjustment and troubleshooting. Make sure these function properly.



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 regulator is free from foreign matter.
2. The regulator can be installed in any position.
3. The regulator 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 steam trap causing malfunction. In case of flanged connections use appropriate flange gaskets.

4.3. Panel mounting

The pressure regulator can be panel mounted or bottom mounted when requested for that purpose.

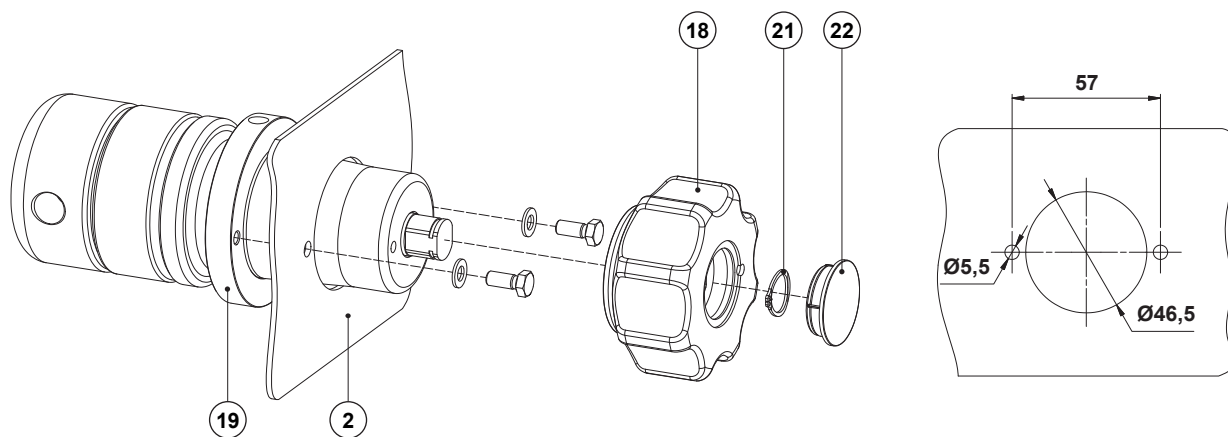


Fig. 2 - Panel mounting procedure

To mount the pressure regulator into a panel surface proceed according to the following steps:

1. Drill the panel surface according to Fig. 2.
2. Remove cover nut (22), shaft ring (21) and adjustment knob (18) from the regulator.
3. Insert the regulator cover (2) through the Ø46,5 mm cut-out, align the panel mounting ring (19) holes with the ones on the panel surface and secure the regulator using two M5 washers and screws (not supplied).
4. Install the adjustment knob (18), fit the shaft ring (21) and cover nut (22).

4.4. Bottom mounting

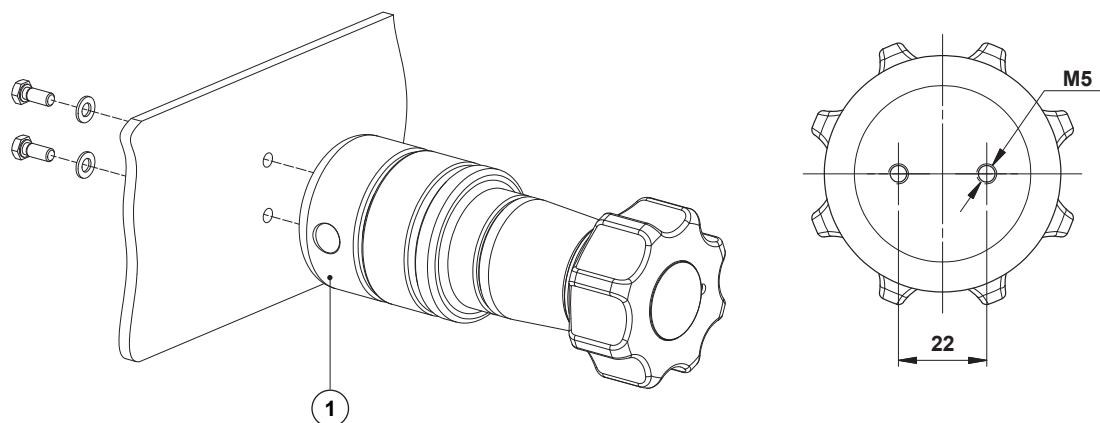


Fig. 3 - Bottom mounting procedure

To mount the pressure regulator using the optional bottom mounting holes, drill two Ø5,5 mm holes on the mounting surface 22 mm apart from each other. Secure the regulator body (1) to the surface using two M5 washers and screws (not supplied). See Fig. 3.

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.
- The adjustment spring is completely relaxed. If not, release tension by turning the adjustment knob (18) counterclockwise.



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. Partially open the downstream shut-off valve.
2. Slowly open the upstream shut-off valve to prevent sudden surges of pressure that can damage the regulator.
3. Operation is performed by turning the adjustment knob (18) clockwise to increase downstream pressure and counterclockwise to decrease downstream pressure. Turn the adjustment knob (18) clockwise until flow is allowed through the regulator, monitoring with the aid of the downstream pressure gauge.
4. Continue to slowly open the downstream shut-off valve, especially while the downstream system is not pressurized. This will allow pressure to build up slowly.
5. Operate the regulator until the desired set pressure is achieved. Make sure the final adjustment is made in the direction of increasing pressure (clockwise rotation of the adjustment knob) to obtain the most accurate set pressure.
6. Check for any leaks.
7. Check the pressure regulator to ensure it is operating correctly.



NOTE

If the regulator is fitted with an integrated downstream pressure gauge, the displayed pressure may be slightly higher compared to a separate gauge installed further downstream.



NOTE

24 hours after system start-up, it is recommended to check 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.



WARNING

RISK OF INJURY DUE TO VENTING IN SPRING LOADED REGULATORS

Spring loaded regulators with self-relieving option and without captured vent will vent the medium to the atmosphere through the cover.

- When working with hazardous fluids in regulators with self-relieving option make sure it is also fitted with captured vent/leakage line connection directed to a safe place.

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 upstream shut-off valve, to stop the process medium from flowing through the pressure regulator.
3. Allow medium to cool down and completely drain it from the pipeline and pressure regulator.
4. Make sure the pipeline and the pressure regulator are not under pressure and are at a safe temperature.
5. Fully close the downstream shut-off valve.
6. If the pressure regulator won't be put back in operation for a long period of time relax the regulating spring or disconnect the loading control pressure supply.
7. If the pressure regulator is to be removed from the pipeline – see section 3 – Transport, storage and packaging.

8. PARTS LIST

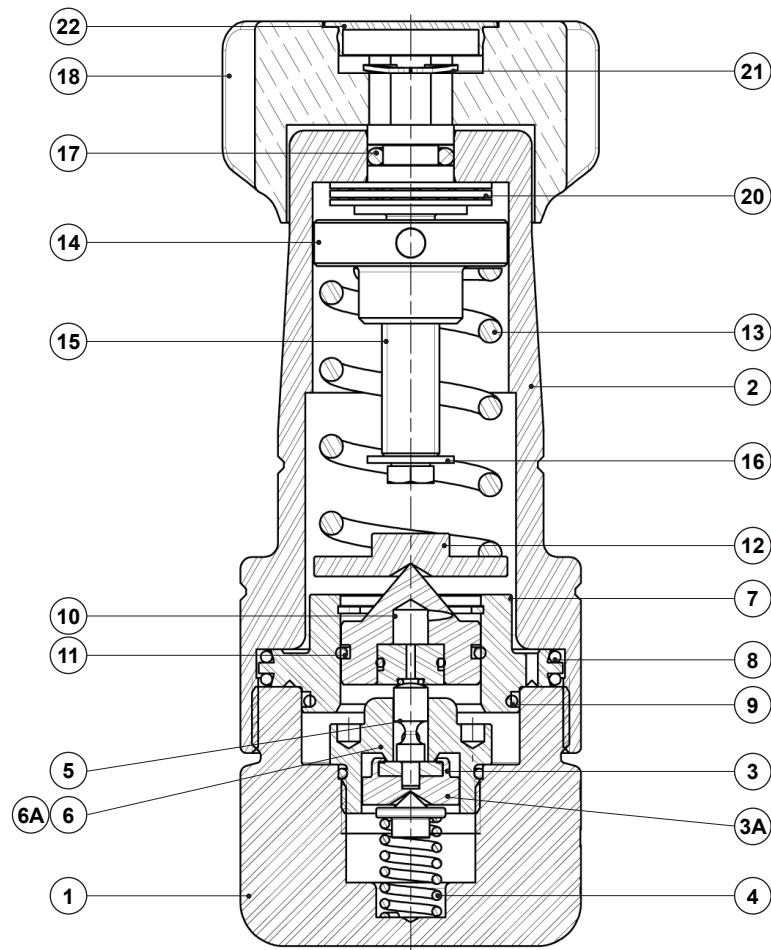


Fig. 4

POS. N°	DESIGNATION	SPARE PARTS
1	Valve body	
2	Cover	
3	Plug	X
3A	Valve head	X
4	Valve spring	X
5	Pushrod	X
6	Seat	X
6A	O-ring	X
7	Piston sleeve	
8	O-ring	X
9	O-ring	X
10	Piston	

POS. N°	DESIGNATION	SPARE PARTS
11	O-ring	X
12	Plate	
13	Adjustment spring	X
14	Spring guide	
15	Adjustment screw	
16	Retaining washer	
17	O-ring	X
18	Adjustment knob	
19	Panel mounting ring	X
20	Bearing	
21	Shaft ring	
22	Cover nut	

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 pressure regulator back into operation – see section 5 – Start-up.

9.2. Replacing seat and plug assembly

1. Completely relax the adjustment spring (13). If the valve is removed from the line, fix the valve body (1) in a vise with soft jaws.
2. Unscrew the cover (2) and remove O-rings (8, 9).
3. Unscrew the seat (6) and remove the O-ring (6A), plug assembly (3, 3A, 5) and valve spring (4).
4. Fit a new valve spring (4), plug assembly (3, 3A, 5) and O-ring (6A).
5. Align the seat (6) around the plug (3) and screw it into the valve body (1) tightening with the recommended torque – see section 9.4 – Tightening torques.
6. Replace the O-rings (8, 9), screw the body (1) onto the cover (2) tightening with the recommended torque – see section 9.4 – Tightening torques.

9.3. Replacing piston O-ring and adjustment spring

1. Completely relax the adjustment spring (13). If the valve is removed from the line, fix the valve body (1) in a vise with soft jaws.
2. Unscrew the cover (2), separate piston sleeve (7) from cover (2), remove plate (12) and adjustment spring (13).
3. Pull the piston (10) out of the sleeve, clean and replace the piston O-ring (11).
4. Apply a suitable lubricant on the piston (10) and insert it inside the sleeve (7).
5. Replace the O-rings (8, 9) and adjustment spring (13).
6. Fit the plate (12) below the adjustment spring (13) securing by joining piston sleeve (7) and cover (2).

7. Screw the body (1) onto the cover (2) tightening with the recommended torque – see section 9.4 – Tightening torques.

9.4. Tightening torques

POS. N°	DESIGNATION	TORQUE (Nm)
2	Cover	120
6	Seat	75

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
Downstream pressure rises above the adjusted set pressure.	Seat and/or plug is worn or damaged.	<ul style="list-style-type: none"> Replace plug and/or seat – see section 9.2 – Replacing seat and plug assembly.
	Foreign matter is stuck between seat and plug.	<ul style="list-style-type: none"> Remove foreign matter and replace seat and plug if necessary – see section 9.2 – Replacing seat and plug assembly. Consider installing a filter upstream of the regulator.
	Bypass valve is leaking.	<ul style="list-style-type: none"> Check, clean and replace the bypass valve if necessary.
Downstream pressure does not reach the required set pressure.	The adjustment spring regulating range is incorrect.	<ul style="list-style-type: none"> Replace the adjustment spring.
	The inlet upstream pressure to the regulator is too low or there is insufficient flow rate to meet the system consumption.	<ul style="list-style-type: none"> Ensure that the upstream pressure to the regulator is equal or greater than the required set pressure at minimum and maximum consumption scenarios.
	Foreign matter is blocking the valve or flow restriction is limiting flow through the valve.	<ul style="list-style-type: none"> Remove foreign matter and consider installing a filter upstream of the regulator. Check and solve flow restrictions (e.g. fully opening a partially open shut-off valve, cleaning clogged filter elements, etc.).
	The regulator is undersized.	<ul style="list-style-type: none"> Check valve sizing and if necessary, install a different sized regulator. Contact VALSTEAM ADCA.
Leakage between body and cover or through the adjustment knob or screw.	Piston O-ring (13) is damaged.	<ul style="list-style-type: none"> Replace damaged piston O-ring – see sections 9.3 – Replacing piston O-ring and adjustment spring.
	Cover (2) tightening torque is too low.	<ul style="list-style-type: none"> Tighten cover (2) with the recommended torque – see sections 9.4 – Tightening torques.
	The regulator has a self-relieving option and the O-ring is damaged.	<ul style="list-style-type: none"> Replace the self-relieving O-ring seal.
The regulator is hunting or chattering.	The flow rate through the regulator is too low. The regulator is oversized.	<ul style="list-style-type: none"> Check valve sizing and if necessary, install a smaller regulator. Contact VALSTEAM ADCA.
	The reducing ratio is too high.	<ul style="list-style-type: none"> Install a second regulator in series (two-stage reduction). Contact VALSTEAM ADCA.
The downstream pressure rises too much when flow rate reduces to a static condition (no consumption).	Flow rate through the regulator is too high.	<ul style="list-style-type: none"> When occurring during start-up, allow downstream system to pressurize slowly to prevent damage to the regulator. Check valve sizing and if necessary, install a larger regulator or a second regulator in parallel. Contact VALSTEAM ADCA.

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 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”.