

# MOUNTING AND OPERATING INSTRUCTIONS



## EB 2546-3 EN

Translation of original instructions



**Type 36-4 Safety Shut-off Valve (SSV) with pressure reducing valve**  
Self-operated Regulators

Edition January 2024



## Note on these mounting and operating instructions

These mounting and operating instructions assist you in mounting and operating the device safely. The instructions are binding for handling SAMSON devices. The images shown in these instructions are for illustration purposes only. The actual product may vary.

- For the safe and proper use of these instructions, read them carefully and keep them for later reference.
- If you have any questions about these instructions, contact SAMSON's After-sales Service (aftersaleservice@samsongroup.com).



The mounting and operating instructions for the devices are included in the scope of delivery. The latest documentation is available on our website at [www.samsongroup.com](http://www.samsongroup.com) > **Downloads** > **Documentation**.

## Definition of signal words

### **DANGER**

*Hazardous situations which, if not avoided, will result in death or serious injury*

### **WARNING**

*Hazardous situations which, if not avoided, could result in death or serious injury*

### **NOTICE**

*Property damage message or malfunction*

### **Note**

*Additional information*

### **Tip**

*Recommended action*

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# 1 Safety instructions and measures

## Intended use

The SAMSON Type 36-4 Regulator is a safety shut-off valve (SSV) with pressure reducing valve.

The self-operated regulator is used to control the downstream pressure  $p_2$  in the pipeline to the adjusted set point. It controls liquids, such as treated circuit water, in process plants and district heating applications.

The regulator is designed to operate under exactly defined conditions (e.g. operating pressure, process medium, temperature). Therefore, operators must ensure that the regulator is only used in operating conditions that meet the specifications used for sizing the regulator at the ordering stage. In case operators intend to use the regulators in applications or conditions other than those specified, contact SAMSON.

SAMSON does not assume any liability for damage resulting from the failure to use the device for its intended purpose or for damage caused by external forces or any other external factors.

→ Refer to the technical data and nameplate for limits and fields of application as well as possible uses.

## Reasonably foreseeable misuse

The regulator is not suitable for the following applications:

- Use outside the limits defined during sizing and by the technical data
- Use outside the limits defined by the additional fittings mounted on the regulator

Furthermore, the following activities do not comply with the intended use:

- Use of non-original spare parts
- Performing service and repair work not described
- Modification of parts as well as service or repair work on the TÜV-tested Type 36-4

## Qualifications of operating personnel

The regulator must be mounted, started up, serviced and repaired by fully trained and qualified personnel only; the accepted industry codes and practices must be observed. According to these mounting and operating instructions, trained personnel refers to individuals who are able to judge the work they are assigned to and recognize possible hazards due to their specialized training, their knowledge and experience as well as their knowledge of the applicable standards.

## Safety instructions and measures

### Personal protective equipment

We recommend checking the hazards posed by the process medium being used (e.g.

▶ GESTIS (CLP) hazardous substances database). Depending on the process medium and/or the activity, the protective equipment required includes:

- Provide protective equipment (e.g. safety gloves, eye protection) appropriate for the process medium used.
- Wear hearing protection when working near the valve. Follow the instructions given by the plant operator.
- Safety harness, e.g. when working at height
- Safety footwear, if applicable ESD (electrostatic discharge) footwear
- Check with the plant operator for details on further protective equipment.

### Warning against residual hazards

To avoid personal injury or property damage, plant operators and operating personnel must prevent hazards that could be caused in the regulator by the process medium, the operating pressure or by moving parts by taking appropriate precautions. Plant operators and operating personnel must observe all hazard statements, warnings and caution notes in these mounting and operating instructions, especially for installation, start-up and service work. Hazards resulting from the special working conditions at the installation site of the regulator must be identified in a risk assessment and prevented through the corresponding safety instructions drawn up by the operator.

We also recommend checking the hazards posed by the process medium being used (e.g.

▶ GESTIS (CLP) hazardous substances database).

- Observe safety measures for handling the device as well as fire prevention and explosion protection measures.

These mounting and operating instructions deals with the standard version of the device. Components of the device that differ to those used for the standard version described in this document can be exchanged with other certain SAMSON components. The residual hazards of these components are described in the associated mounting and operating instructions (see documents listed under 'Referenced documentation').

### Revisions and other modifications

Revisions, conversions or other modifications of the product are not authorized by SAMSON. They are performed at the user's own risk and may lead to safety hazards, for example. Furthermore, the product may no longer meet the requirements for its intended use.

### Responsibilities of the operator

Operators are responsible for proper use and compliance with the safety regulations.

Operators are obliged to provide these mounting and operating instructions as well as the referenced documents to the operating personnel and to instruct them in proper operation.

Furthermore, operators must ensure that operating personnel or third parties are not exposed to any danger.

Operators are additionally responsible for ensuring that the limits for the product defined in the technical data are observed. This also applies to the start-up and shutdown procedures. Start-up and shutdown procedures fall within the scope of the operator's duties and, as such, are not part of these mounting and operating instructions. SAMSON is unable to make any statements about these procedures since the operative details (e.g. differential pressures and temperatures) vary in each individual case and are only known to the operator.

### Safety features

The Type 36-4 Regulator is a safety shut-off valve (SSV) with pressure reducing valve. A safety excess pressure valve (e.g. Type 44-4) must be used to protect the safety shut-off valve in district heating plants to meet DIN 4747 requirements. The device can also be protected by using a safety valve in other types of plants.

### Responsibilities of operating personnel

Operating personnel must read and understand these mounting and operating instructions as well as the referenced documents and observe the specified hazard statements, warnings and caution notes. Furthermore, operating personnel must be familiar with the applicable health, safety and accident prevention regulations and comply with them.

### Referenced standards, directives and regulations

The regulators comply with the requirements of the European Pressure Equipment Directive 2014/68/EU and the European Machinery Directive 2006/42/EC. Regulators with a CE marking have an EU declaration of conformity, which includes information about the applied conformity assessment procedure. This EU declaration of conformity is included in the 'Certificates' section.

The regulator is typetested as a safety shut-off valve with pressure reducing valve (based on AGFW worksheet FW 504).

## Safety instructions and measures

According to the ignition hazard assessment performed in accordance with Clause 5.2 of ISO 80079-36, the non-electrical regulators do not have their own potential ignition source even in the rare incident of an operating fault. As a result, they do not fall within the scope of Directive 2014/34/EU.

→ For connection to the equipotential bonding system, observe the requirements specified in Clause 6.4 of EN 60079-14 (VDE 0165-1).

### Referenced documentation

The following documents apply in addition to these mounting and operating instructions:

- Mounting and operating instructions for  
e.g. **Type 2 N or 2 NI Strainer** ▶ EB 1015
- Mounting and operating instructions as well as data sheets for additional fittings (e.g. shut-off valves, pressure gauges etc.).

## 1.1 Notes on possible severe personal injury

### DANGER

#### Risk of bursting in the regulator.

Regulators and pipelines are pressure equipment. Impermissible pressure or improper opening can lead to regulator components bursting.

- Observe the maximum permissible pressure for regulator and plant.
- Before starting any work on the regulator, depressurize all plant sections affected as well as the regulator.
- Drain the process medium from all the plant sections affected as well as the regulator.
- If necessary, a suitable overpressure protection must be installed in the plant section.
- Wear personal protective equipment.

## 1.2 Notes on possible personal injury

### WARNING

#### **Risk of personal injury due to preloaded springs.**

Regulators in combination with preloaded set point springs are under tension. These regulators can be identified by the red warning label on the actuator's set point springs.

- Before starting any work on the springs, relieve the compression from the preloaded springs.

#### **Crush hazard arising from moving parts.**

The regulator contains moving parts (actuator and plug stem), which can injure hands or fingers if inserted into the valve.

- Do not insert hands or fingers between the set point springs while the regulator is in operation.
- Before performing any work on the regulator, depressurize the plant. Disconnect or shut off the external control line.

#### **Risk of personal injury through incorrect operation, use or installation as a result of information on the regulator being illegible.**

Over time, markings, labels and nameplates on the regulator may become covered with dirt or become illegible in some other way. As a result, hazards may go unnoticed and the necessary instructions not followed. There is a risk of personal injury.

- Keep all relevant markings and inscriptions on the device in a constantly legible state.
- Immediately renew damaged, missing or incorrect nameplates or labels.

#### **Risk of hearing loss or deafness due to loud noise.**

The noise emissions depend on the valve version, plant facilities and process medium.

- Wear hearing protection when working near the valve.

### **⚠ WARNING**

#### **Risk of personal injury due to pressurized components and process medium being discharged.**

Incorrect opening of pressure equipment or mounting parts may lead to the process medium escaping to the atmosphere.

- Do not loosen the control line while the valve is pressurized.

#### **Risk of burn injuries due to hot or cold components and pipelines.**

Depending on the process medium, regulator components and pipelines may get very hot or cold and cause burn injuries.

- Allow components and pipelines to cool down or warm up to the ambient temperature.
- Wear protective clothing and safety gloves.

#### **Damage to health relating to the REACH regulation.**

If a SAMSON device contains a substance listed as a substance of very high concern on the candidate list of the REACH regulation, this is indicated on the SAMSON delivery note.

- Information on safe use of the part affected. ► [www.samsongroup.com/en/about-samson/material-compliance/reach-regulation/](http://www.samsongroup.com/en/about-samson/material-compliance/reach-regulation/)

#### **Risk of personal injury due to residual process medium in the regulator.**

While working on the regulator, residual process medium can escape and, depending on its properties, may lead to personal injury, e.g. (chemical) burns.

- If possible, drain the process medium from all the plant sections affected and the regulator.
- Wear protective clothing, safety gloves and eye protection.

## 1.3 Notes on possible property damage

### ! NOTICE

#### **Risk of regulator damage due to incorrectly attached slings.**

- Do not attach load-bearing slings to the actuator housing.

#### **Risk of regulator damage due to unsuitable medium properties.**

The regulator is designed for a process medium with defined properties.

- Only use the process medium specified for sizing the equipment.

#### **Risk of regulator damage due to contamination (e.g. solid particles) in the pipeline.**

The plant operator is responsible for cleaning the pipelines in the plant.

- Flush the pipelines before start-up.

#### **Risk of regulator damage due to the use of unsuitable lubricants.**

The lubricants to be used depend on the regulator material. Unsuitable lubricants may corrode and damage surfaces.

- Only use lubricants approved by SAMSON.  
When in doubt, consult SAMSON.

#### **Risk of leakage and regulator damage due to excessively high or low tightening torques.**

Observe the specified torques when tightening regulator components. Excessive tightening torques lead to parts wearing out more quickly. Parts that are too loose may cause leakage.

- Observe the specified tightening torques (see 'Tightening torques' in Annex).

#### **Risk of regulator damage due to the use of unsuitable tools.**

Certain tools are required to work on the regulator.

- Only use tools approved by SAMSON.  
When in doubt, consult SAMSON.

### **!** NOTICE

**Risk of the process medium being contaminated through the use of unsuitable lubricants and/or contaminated tools and components.**

- Keep the regulator and the tools used free from solvents and grease.
- Make sure that only suitable lubricants are used.

**Damage due to pressure peaks.**

If solenoid valves are installed downstream of the regulator when the regulator is used to control liquids, pressure peaks may occur when the solenoid valves close quickly. These pressure peaks may damage the regulator.

- The installation of solenoid valves is not permitted when the regulator is used to control liquids.

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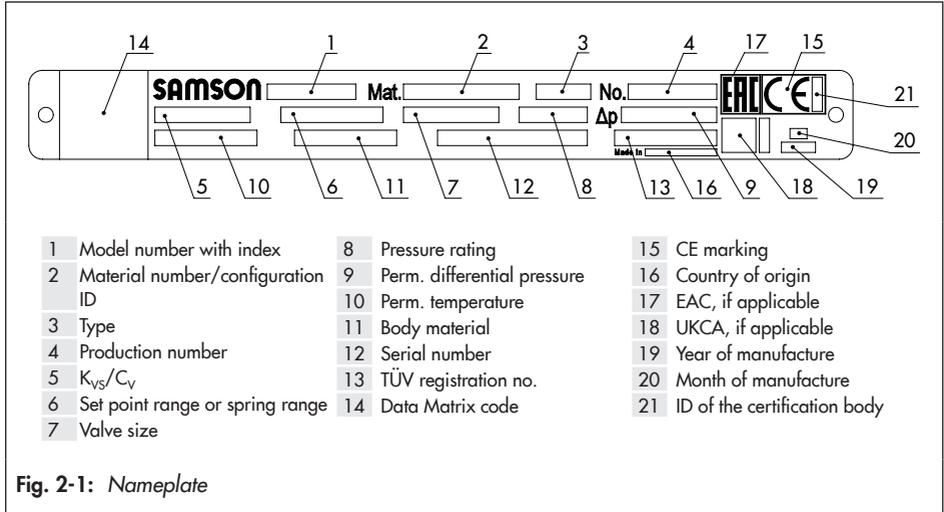
### **i** Note

*SAMSON's After-sales Service can support you concerning lubricant, tightening torques and tools approved by SAMSON.*

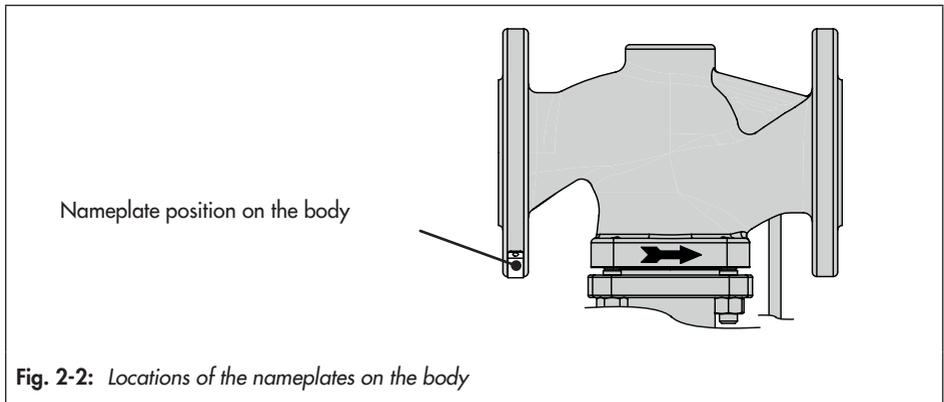
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## 2 Markings on the device

### 2.1 Regulator nameplate



### 2.2 Location of the nameplate



## **2.3 Material identification number**

The material is indicated on the body. Specifying the material number, you can contact us to find out more details. It is specified on the nameplate (item 2).

For more details on the nameplate, see section 2.1.

### 3 Design and principle of operation

→ See Fig. 3-1

The Type 36-4 Safety Shut-off Valve (SSV) with pressure reducing valve mainly consists of the spring-loaded globe valve with balanced plug and the actuator with one operating diaphragm and one backup diaphragm.

The pressure reducing valve is used to maintain the pressure downstream of the valve to an adjusted set point.

The valve closes when the downstream pressure rises or after the operating diaphragm has ruptured.

The process medium flows through the valve between seat (2) and plug (3) in the direction indicated by the arrow on the body. The position of the valve plug determines the flow rate and, as a result, the pressure ratio across the valve. The downstream pressure  $p_2$  to be controlled is transmitted over the control line (18) to the operating diaphragm (13.1) where it is converted into a positioning force. This force is used to move the valve plug depending on the force of the set point springs (20). A bellows seal (7) seals the valve stem to the atmosphere. The spring force can be adjusted at the set point adjuster (23). The valves are balanced by a piston (5). As a result, the forces produced by the upstream and downstream pressures acting on the plug are balanced out.

The regulator is equipped with two independent operating diaphragms: one operating diaphragm (13.1) and a backup diaphragm (13.2).

Upon failure of the first operating diaphragm (13.1) the regulator is closed. To indicate the diaphragm failure, a diaphragm rupture indicator (13.3) is installed in the intermediate ring (13.4). After a diaphragm rupture, a red pin is pushed outwards to indicate the diaphragm rupture (response pressure max. 1.5 bar).

The valve closes as the controlled variable rises.

## Design and principle of operation

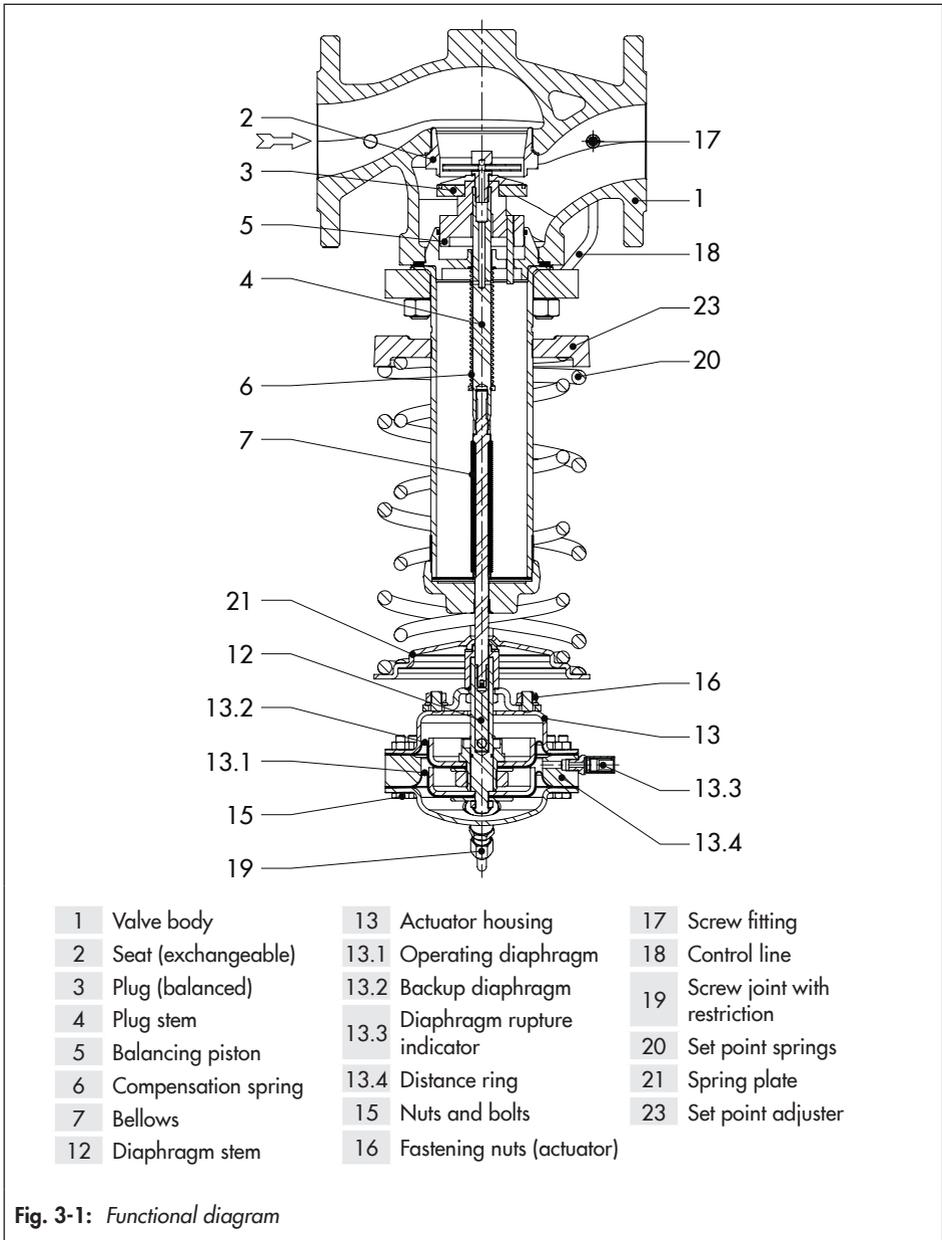


Fig. 3-1: Functional diagram

### 3.1 Additional fittings

→ See Fig. 3-2

#### Shut-off valves

We recommend installing a shut-off valve (1) both upstream of the strainer and downstream of the regulator. This ensures that the plant does not need to be shut down for service and repair work on the regulator (see Fig. 3-2).

#### Pressure gauges

Install a pressure gauge at a suitable point to monitor the pressures prevailing in the plant (2 and 5; see Fig. 3-2).

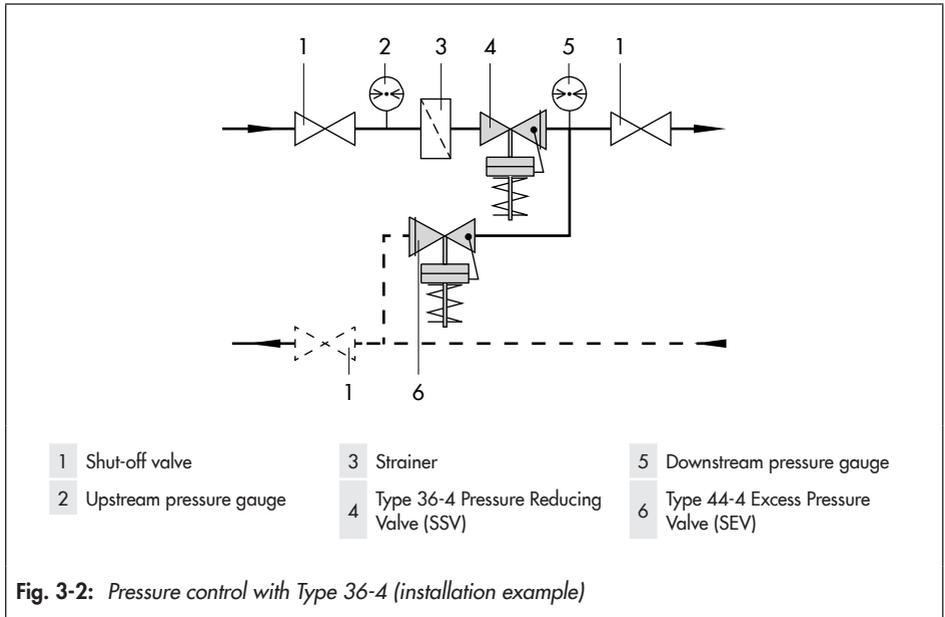
#### Strainers

We recommend installing a SAMSON strainer (3) upstream of the valve. It prevents solid particles in the process medium from damaging the regulator (see Fig. 3-2).

- Do not use the strainer to permanently filter the process medium.
- Select a strainer (mesh size) suitable for the process medium.

#### **i** Note

*Any impurities carried along by the process medium may impair the proper functioning of the regulator. We recommend installing a strainer (e.g. SAMSON Type 2 NI) upstream of the pressure reducing valve (► EB 1015).*



### Insulation

Regulators can be insulated to reduce heat energy transfer.

Refer to the instructions in the 'Installation' section.

## 3.2 Technical data

The regulator nameplate provides information on the regulator version (see the 'Markings on the device' section).

### **i** Note

More information is available in Data Sheet  
▶ T 2546-3.

### Conformity

The Type 36-4 Regulator bears the CE mark of conformity.



### Process medium and scope of application

The Type 36-4 Safety Pressure Reducing Valve is designed to maintain the pressure downstream of the regulator to the adjusted set point in district heating systems or large heating networks.

The regulator is suitable for controlling liquids.

- Liquids up to **150 °C**

The regulator is open when relieved of pressure. It closes when the downstream pressure rises above the adjusted set point or after an operating diaphragm has ruptured.

### Type test

The device has been type tested as a safety shut-off valve (SSV) by the German technical surveillance association TÜV according to the requirements stipulated in the AGFW (German District Heating Association) document FW 504.

The test mark is available on request.

### Temperature range

The Type 36-4 Regulator is designed for a temperature range from 5 to 150 °C.

### Leakage class

The regulator has the leakage class IV according to IEC 60534-4.

### Noise emissions

SAMSON is unable to make general statements about noise emissions. The noise emissions depend on the regulator version, plant facilities, process medium and operating conditions.

### Dimensions and weights

Table 3-3 provides a summary of the dimensions and weights. The lengths and heights in the dimensional drawings are shown on page 3-6.

**Table 3-1: Technical data · Valve · All pressures in bar (gauge)**

Valve size	DN 40	DN 50	DN 65	DN 80
$K_{VS}$ coefficient	20	32	50	80
$x_{FZ}$ value	0.50	0.45	0.40	0.35
Pressure rating	PN 16, 25 or 40			
Max. permissible differential pressure $\Delta p$ across the valve	25 bar		20 bar	16 bar
Max. permissible temperature	150 °C			
Max. permissible ambient temperature	80 °C			
Set point ranges	2.4 to 6.3 bar · 6.0 to 10.0 bar			
Minimum downstream pressure $p_2$ to close the backup diaphragm	2.4 to 6.3 bar	0.6 bar	0.8 bar	
	6.0 to 10.0 bar	1.0 bar	1.5 bar	
Leakage class according to IEC 60534-4	Class IV ( $\leq 0.01$ % of $K_{VS}$ coefficient)			
Conformity				

**Table 3-2: Materials · Material number according to DIN EN**

Valve			
Body	Cast iron EN-GJL-250	Spheroidal graphite iron EN-GJS-400-18-LT	Cast steel 1.0619
Pressure rating	PN 16	PN 25	PN 40
Seat	Stainless steel		
Plug with PTFE soft seal	Stainless steel		
Actuator			
Diaphragm cases	Sheet steel S235JR (St 37-2)		
Diaphragm	EPDM with fabric reinforcement		

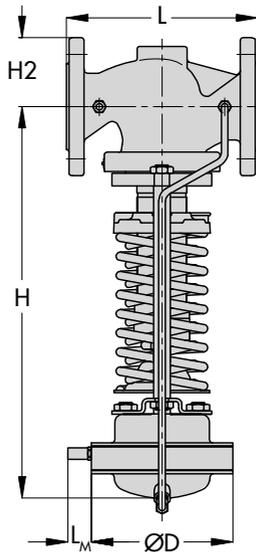
## Design and principle of operation

**Table 3-3:** Dimensions in mm · Weights in kg

Valve size		DN 40	DN 50	DN 65	DN 80
Length	L	200	230	290	310
Height	Set point 2.4 to 6.3 bar	495		607	
	Set point 6.0 to 10.0 bar	520		632	
Height	Forged steel	92	98	–	128
	Other materials	72		98	
Diaphragm housing	ØD	170 mm, A = 80 cm <sup>2</sup>			
Length	L <sub>M</sub>	40 mm			
Weight for PN 16 <sup>1)</sup> in kg (approx.)		26.5	30.0	43.0	50.0

<sup>1)</sup> +10 % for spheroidal graphite iron EN-GJS-400-18-LT (PN 25) and cast steel 1.0619 (PN 40)

## Dimensional drawings



**Fig. 3-3:** Dimensions

## 4 Shipment and on-site transport

The work described in this section is only to be performed by personnel appropriately qualified to carry out such tasks.

### 4.1 Accepting the delivered goods

After receiving the shipment, proceed as follows:

1. Check the scope of delivery. Check that the specifications on the regulator nameplate match the specifications in the delivery note. See the 'Markings on the device' section for nameplate details.
2. Check the shipment for transportation damage. Report any damage to SAMSON and the forwarding agent (refer to delivery note).
3. Determine the weight and dimensions of the units to be lifted and transported in order to select the appropriate lifting equipment and lifting accessories. Refer to the transport documents and the 'Design and principle of operation' section.

### 4.2 Removing the packaging from the regulator

The tested regulator is delivered as an assembled unit.

Proceed as follows to lift and install the valve:

- Do not open or remove the packaging until immediately before lifting to install the regulator into the pipeline.
- Do not use the mounted control line to lift or transport the regulator.
- Leave the regulator components in its transport container or on the pallet to transport it on site.
- Do not remove the protective caps from the inlet and outlet until immediately before installing the valve into the pipeline. They prevent foreign particles from entering the valve.
- Dispose and recycle the packaging in accordance with the local regulations.

## 4.3 Transporting and lifting the regulator

### **⚠ DANGER**

#### ***Danger due to suspended loads falling.***

- Stay clear of suspended or moving loads.
- Close off and secure the transport paths.

### **⚠ WARNING**

#### ***Risk of lifting equipment tipping over and risk of damage to lifting accessories due to exceeding the rated lifting capacity.***

- Only use approved lifting equipment and accessories whose minimum lifting capacity is higher than the weight of the valve (including actuator and packaging, if applicable).
- Refer to the 'Design and principle of operation' section for the weights.

### **⚠ WARNING**

#### ***Risk of injury due to incorrect lifting without the use of lifting equipment.***

*Lifting the regulator without the use of lifting equipment may lead to injuries (back injury in particular) depending on the weight of the regulator.*

- Observe the guideline weight for manual handling: 15 to max. 55 kg taking into account age, gender and physical fitness
- Observe the occupational health and safety regulations valid in the country of use.

### **⚠ WARNING**

#### ***Risk of personal injury due to the regulator tipping.***

- Observe the regulator's center of gravity.
- Secure the regulator against tipping over or turning.

### **💡 Tip**

*Our after-sales service can provide more detailed transport and lifting instructions on request.*

### 4.3.1 Transporting the regulator

The regulator can be transported using lifting equipment (e.g. crane or forklift).

- Leave the regulator in its transport container or on the pallet to transport it.
- Observe the transport instructions.

#### **Transport instructions**

- Protect the regulator against external influences (e.g. impact).
- Do not use the mounted control line to lift or transport the regulator.
- Do not damage the corrosion protection (paint, surface coatings). Repair any damage immediately.
- Protect the piping and any mounted valve accessories against damage.
- Protect the regulator against moisture and dirt.
- The permissible ambient temperature of standard regulators is -20 to +80 °C.

### 4.3.2 Lifting the regulator

To install a large regulator into the pipeline, use lifting equipment (e.g. crane or forklift) to lift it.

#### Lifting instructions

- Do not use the mounted control line to lift or transport the regulator.
- Use a hook with safety latch to secure the slings from slipping off the hook during lifting and transporting (see Fig. 4-1).
- Secure slings against slipping.
- Make sure the slings can be removed after installation.
- Prevent the regulator from tilting or tipping.
- Do not leave loads suspended when interrupting work for longer periods of time.
- Make sure that the axis of the pipeline is always horizontal during lifting and the axis of the plug stem is always vertical.

#### Lifting

1. Attach one sling to the flange of the body and to the rigging equipment (e.g. hook) of the crane or forklift (see Fig. 4-1).
2. Carefully lift the regulator. Check whether the lifting equipment and accessories can bear the weight.
3. Move the regulator at an even pace to the site of installation.

4. Install the regulator into the pipeline (see the 'Installation' section).
5. After installation in the pipeline, check whether the regulator flanges are bolted tight.
6. Remove slings.

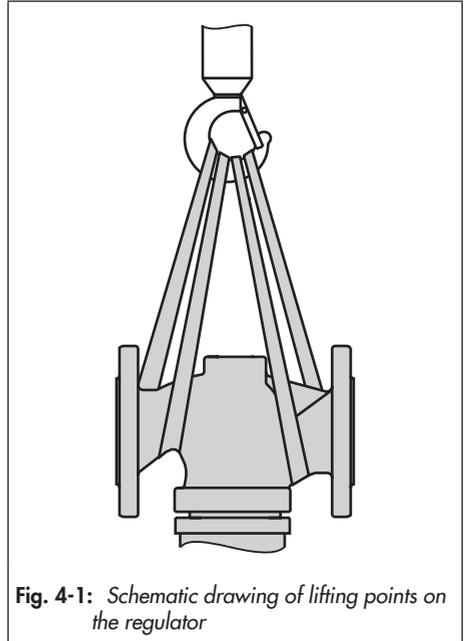


Fig. 4-1: Schematic drawing of lifting points on the regulator

## 4.4 Storing the regulator

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### NOTICE

#### ***Risk of regulator damage due to improper storage.***

- *Observe the storage instructions.*
  - *Avoid long storage times.*
  - *Contact SAMSON in case of different storage conditions or longer storage times.*
- 

### Note

*We recommend to regularly check the regulator and the prevailing storage conditions during long storage periods.*

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### **Storage instructions**

- Protect the regulator against external influences (e.g. impact).
- Secure the regulator in the stored position against slipping or tipping over.
- Do not damage the corrosion protection (paint, surface coatings). Repair any damage immediately.
- Protect the regulator against moisture and dirt. Store it at a relative humidity of less than 75 %. In damp spaces, prevent condensation. If necessary, use a drying agent or heating.
- Make sure that the ambient air is free of acids or other corrosive media.
- The permissible storage temperature is between  $-20$  and  $+65$  °C.

- Do not place any objects on the regulator.

### **Special storage instructions for elastomers**

Elastomer, e.g. operating diaphragm

- To keep elastomers in shape and to prevent cracking, do not bend them or hang them up.
  - Store elastomers away from lubricants, chemicals, solutions and fuels.
  - We recommend a storage temperature of  $15$  °C for elastomers.
- 

### Tip

*SAMSON's After-sales Service can provide more detailed storage instructions on request.*

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## 5 Installation

The work described in this section is only to be performed by personnel appropriately qualified to carry out such tasks.

### 5.1 Installation conditions

#### ⓘ NOTICE

#### **Damage due to pressure peaks.**

*If solenoid valves are installed downstream of the regulator when the regulator is used to control liquids, pressure peaks may occur when the solenoid valves close quickly. The installation of solenoid valves is not permitted when the regulator is used to control liquids.*

#### **Work position**

The work position for the regulator is the front view onto all operating controls on the regulator (including any additional fittings) seen from the position of operating personnel.

Plant operators must ensure that, after installation of the device, the operating personnel can perform all necessary work safely and easily access the device from the work position.

#### **Pipeline routing**

The inlet and outlet lengths vary depending on several variables and process conditions and are intended as recommendations. Contact SAMSON if the lengths are significantly shorter than the recommended lengths.

To ensure that the regulator functions properly, proceed as follows:

- ➔ Observe the inlet and outlet lengths (see Table 5-4). Contact SAMSON if the regulator conditions or state of the medium process deviate.
- ➔ Install the regulator free of stress and with the least amount of vibrations as possible. Read information under 'Mounting position' and 'Support or suspension' in this section.
- ➔ Install the regulator allowing sufficient space to remove the actuator and valve or to perform service work on them.

#### **Mounting position**

To ensure that the regulator functions properly, proceed as follows:

- ➔ Install the actuator housing with the set point springs suspended downward in horizontal pipelines (see Fig. 5-1).
- ➔ Make sure the direction of flow matches the direction indicated by the arrow on the body.
- ➔ Install the regulator free of stress.
- ➔ Contact SAMSON if the mounting position is not as specified above.

#### ⓘ NOTICE

#### **Damage due to freezing.**

*Protect the regulator from icing up when controlling media that can freeze. Unless the regulator is installed in locations where no frost occurs, remove the regulator from the pipeline when the plant is shut down.*

### Support or suspension

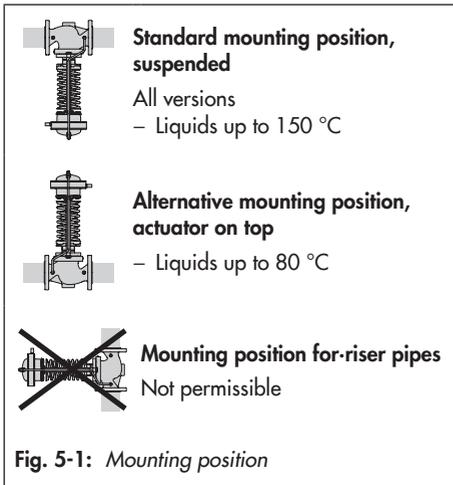
#### **i Note**

The plant engineering company is responsible for selecting and implementing a suitable support or suspension of the installed regulator and the pipeline.

Depending on the regulator version and mounting position, the valve, actuator and pipeline must be supported or suspended.

#### **! NOTICE**

Do not attach supports directly to the regulator.



## 5.2 Preparation for installation

Before installation, make sure the following conditions are met:

- The valve is clean.
- The valve, actuator and all piping are not damaged.
- Install a strainer upstream of the regulator.
- The valve data on the nameplates (type designation, valve size, material, pressure rating and temperature range) match the plant conditions (size and pressure rating of the pipeline, medium temperature etc.). See the 'Markings on the device' section for nameplate details.
- The requested or required additional fittings (see the 'Design and principle of operation' section) have been installed or prepared as necessary before installing the valve.

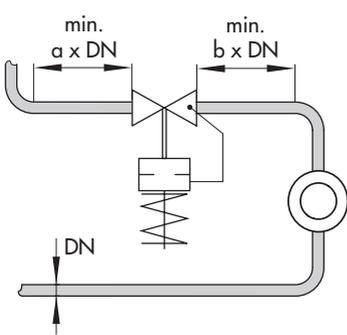
Proceed as follows:

- ➔ Lay out the necessary material and tools to have them ready during installation work.
- ➔ Flush the pipeline **before** installing the regulator.  
The plant operator is responsible for cleaning the pipelines in the plant.
- ➔ Check any mounted pressure gauges to make sure they function properly.

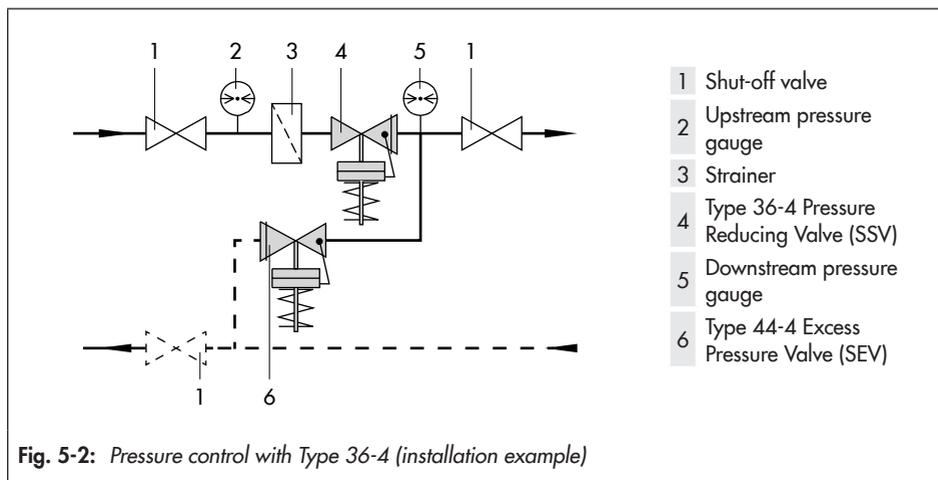
#### **i Note**

The plant operator is responsible for cleaning the pipelines in the plant.

**Table 5-4:** Inlet and outlet lengths



State of process medium	Valve conditions	Inlet length a	Outlet length b
Liquid	Free of cavitation/ $w < 3 \text{ m/s}$	2	4



**Fig. 5-2:** Pressure control with Type 36-4 (installation example)

### 5.3 Installation

The tested SAMSON regulator is delivered as an assembled unit. The activities listed below are necessary for installation and before start-up of the regulator.

---

**! NOTICE*****Risk of regulator damage due to excessively high or low tightening torques.***

*Observe the specified torques when tightening regulator components. Excessive tightening torques lead to parts wearing out more quickly. Parts that are too loose may cause leakage.*

→ *Observe the specified tightening torques (see 'Tightening torques' in Annex).*

---

**! NOTICE*****Risk of regulator damage due to the use of unsuitable tools.***

→ *Only use tools approved by SAMSON (see 'Tools' in Annex).*

---

**! NOTICE*****Risk of regulator damage due to the use of unsuitable lubricants.***

→ *Only use lubricants approved by SAMSON (see 'Lubricants' in Annex).*

---

#### 5.3.1 Installing the regulator

1. Close the shut-off valves upstream and downstream of the regulator while the regulator is being installed.
2. Remove the protective caps from the valve ports before installing the valve.
3. Lift the valve using suitable lifting equipment to the site of installation. Observe the flow direction through the valve. The arrow on the valve indicates the direction of flow.
4. Make sure that the correct flange gaskets are used.
5. Bolt the pipe to the valve free of stress.
6. Slowly open the shut-off valves in the pipeline after the valve has been installed.

### 5.3.2 Cleaning the pipeline

We recommend additionally flushing the pipeline without the installed regulator before start-up. In this case, install a suitable length of pipe into the pipeline in place of the regulator.

- Observe the mesh size of the upstream strainer for the maximum particle size. Use strainers to suit the process medium.
- Check the strainer for dirt each time the pipeline is flushed and clean it, if necessary.

### 5.4 Testing the regulator

---

#### **⚠ DANGER**

***Risk of bursting due to incorrect opening of pressurized equipment or components.***

*Regulators and pipelines are pressure equipment that may burst when handled incorrectly. Flying projectile fragments or the release of process medium under pressure can cause serious injury or even death.*

*Before working on the regulator:*

- *Depressurize all plant sections concerned and the regulator.*
  - *Disconnect the control line.*
  - *Drain the process medium from all the plant sections concerned as well as the valve.*
- 

#### **⚠ DANGER**

***Risk of personal injury due to process medium escaping.***

- *Do not start up the regulator until all parts have been mounted.*
- 

#### **⚠ WARNING**

***Risk of hearing loss or deafness due to loud noise.***

*Noise emission (e.g. cavitation or flashing) may occur during operation caused by the process medium and the operating conditions.*

- *Wear hearing protection when working near the regulator.*
-

---

### **⚠ WARNING**

**Crush hazard arising from moving parts.**

- ➔ Do not insert hands or fingers between the set point springs while the regulator is in operation.
  - ➔ Before starting any work on the regulator, depressurize plant sections as well as the regulator.
- 

### **⚠ WARNING**

**Risk of burn injuries due to hot or very cold components and pipelines.**

Depending on the process medium, valve components and pipelines may get very hot or cold and cause burn injuries.

- ➔ Wear protective clothing and safety gloves.
- 

SAMSON regulators are delivered ready for use. To test the regulator functioning before start-up or putting back the regulator into operation, perform the following tests:

## 5.4.1 Leakage

The plant operator is responsible for performing the leak test and selecting the test method. The leak test must comply with the requirements of the national and international standards that apply at the site of installation.

---

### **💡 Tip**

SAMSON's After-sales Service can support you to plan and perform a leak test for your plant.

---

1. Slowly open the shut-off valve (1) installed upstream of the regulator.
2. Apply the required test pressure.
3. Check the regulator for leakage to the atmosphere.
4. Depressurize the pipeline section and valve.
5. Rework any parts that leak and repeat the leak test.

## 5.4.2 Pressure test

### **i** Note

The plant operator is responsible for performing the pressure test. SAMSON's After-sales Service can support you to plan and perform a pressure test for your plant.

### **!** NOTICE

**Risk of valve damage due to a sudden pressure increase and resulting high flow velocities.**

– Slowly open the shut-off valves.

During the pressure test, make sure the following conditions are met:

- Do not allow the pressure to exceed the **1.5 times the pressure rating** of the valve body.
- **Remove the control line.**  
Seal the opening on the valve body with G ¼ stopper (accessories: stopper 8323-0030 and seal 8412-0771).
- Make sure that the pressure rises simultaneously upstream and downstream of the regulator to avoid damaging the plug balancing mechanism.

## 5.5 Insulation

Only the valve body is to be insulated up to the set point springs at the most for medium temperatures above 80 °C.

### **!** NOTICE

**Risk of regulator damage due to incorrect insulation.**

Only insulate the regulator up to the set point springs at the most for medium temperatures above 80 °C.

- Do not insulate the control lines, compensation chambers or diaphragm actuator.

### **!** NOTICE

**Risk of regulator damage due to incorrect insulation.**

- Insulate the regulator according to common practice when the medium temperature is below the dew point of the ambient air.
- Install the regulator with the actuator in the upright position above the valve.
- If the valve has an external spring, it must be protected by a sleeve that does not touch it. The spring-loaded actuator stem must not come into contact with the cold insulation.
- An installed diaphragm rupture indicator must remain visible after insulation.



## 6 Start-up

The work described in this section is only to be performed by personnel appropriately qualified to carry out such tasks.

### **⚠ DANGER**

**Risk of personal injury due to process medium escaping.**

→ Do not start up the regulator until all parts have been mounted.

### **⚠ WARNING**

**Risk of burn injuries due to hot or cold components and pipeline.**

Regulator components and the pipeline may become very hot or cold. Risk of burn injuries.

- Allow components and pipelines to cool down or warm up to the ambient temperature.
- Wear protective clothing and safety gloves.

### **⚠ WARNING**

**Risk of hearing loss or deafness due to loud noise.**

Noise emission (e.g. cavitation or flashing) may occur during operation caused by the process medium and the operating conditions.

- Wear hearing protection when working near the valve.

### **⚠ WARNING**

**Crush hazard arising from moving parts.**

- Do not insert hands or fingers between the set point springs while the regulator is in operation.
- Before starting any work on the regulator, depressurize plant sections as well as the regulator.

### **⚠ WARNING**

**Risk of personal injury due to pressurized components and process medium being discharged.**

- Do not loosen the control line while the valve is pressurized.

Before start-up or putting the device back into service, make sure the following conditions are met:

- The regulator is properly installed into the pipeline (see the 'Installation' section).
- The leak and function tests have been completed successfully (see the 'Testing the regulator' section).
- The prevailing conditions in the plant section concerned meet the regulator sizing requirements (see information under 'Intended use' in the 'Safety instructions and measures' section).

### 6.1 Start-up and putting the device back into operation

1. Depending on the field of application, allow the regulator to cool down or warm up to reach ambient temperature before start up.
2. Slowly open the shut-off valves in the pipeline. Slowly opening these valves prevents a sudden surge in pressure and high flow velocities which can damage the valve.
3. Check the regulator to ensure it functions properly.

### 6.2 Starting up the plant

1. Open the shut-off valves slowly preferably starting from the upstream pressure side. Afterwards, open all the valves on the consumer side (downstream of the regulator).
2. Fill the plant **slowly** with the process medium. Avoid pressure surges.
3. Make sure that the pressure rises simultaneously upstream and downstream of the regulator to avoid damaging the balancing plug.

## 7 Operation

Immediately after completing start-up or placing the regulator back into service (see the 'Start-up' section), the regulator is ready for use.

### **⚠ WARNING**

**Risk of burn injuries due to hot or cold components and pipeline.**

Regulator components and the pipeline may become very hot or cold. Risk of burn injuries.

- Allow components and pipelines to cool down or warm up to the ambient temperature.
- Wear protective clothing and safety gloves.

### **⚠ WARNING**

**Risk of personal injury due to pressurized components and process medium being discharged.**

- Do not loosen the control line while the valve is pressurized.

### **⚠ WARNING**

**Risk of hearing loss or deafness due to loud noise.**

Noise emission (e.g. cavitation or flashing) may occur during operation caused by the process medium and the operating conditions.

- Wear hearing protection when working near the valve.

### **⚠ WARNING**

**Crush hazard arising from moving parts.**

- Do not insert hands or fingers between the set point springs while the regulator is in operation.
- Before starting any work on the regulator, depressurize plant sections as well as the regulator.

## 7.1 Adjusting the set points

- The required downstream pressure is set by turning the set point adjuster (6) using an open-end wrench:
  - DN 40 to 50 with width across flats SW 19
  - DN 65 and 80 with width across flats SW 24
- Turn the set point adjuster clockwise (↻) to increase the pressure set point.
- Turn the set point adjuster counterclockwise (↺) to reduce the pressure set point.
  - The pressure gauge located on the downstream pressure side of the plant allows the adjusted set point to be monitored.



## 8 Malfunctions

### 8.1 Troubleshooting

Malfunction	Possible reasons	Recommended action
Downstream pressure drops below the adjusted set point.	Insufficient pressure pulses on the operating diaphragm	<ul style="list-style-type: none"> <li>→ Clean the control line and screw fittings.</li> <li>→ Draw up an energy balance.</li> </ul>
	Regulator installed against the flow	→ Install the regulator so that the direction of flow matches the direction indicated by the arrow on the body.
	Regulator or $K_{VS}/C_V$ coefficient too small	<ul style="list-style-type: none"> <li>→ Check the sizing.</li> <li>→ Change <math>K_{VS}/C_V</math> coefficient, if necessary or install a different sized regulator.</li> </ul>
	Foreign particles blocking the plug	<ul style="list-style-type: none"> <li>→ Remove foreign particles.</li> <li>→ Contact SAMSON's After-sales Service.</li> </ul>
	Safety device, e.g. pressure limiter, has been triggered	→ Check plant. Unlock safety device.
	Strainer blocked	→ Clean the strainer.
Downstream pressure exceeds the adjusted set point.	Foreign particles blocking the plug	<ul style="list-style-type: none"> <li>→ Remove foreign particles.</li> <li>→ Contact SAMSON's After-sales Service.</li> </ul>
	Seat and plug are worn or leak	<ul style="list-style-type: none"> <li>→ Clean the seat and plug.</li> <li>→ Contact SAMSON's After-sales Service.</li> </ul>
	Regulator or $K_{VS}/C_V$ coefficient too large	<ul style="list-style-type: none"> <li>→ Check the sizing.</li> <li>→ Change <math>K_{VS}/C_V</math> coefficient, if necessary or install a different sized regulator.</li> </ul>
	Control line, restriction or screw fitting blocked	→ Clean the control line, restriction and screw fitting.
Downstream pressure hunts	Regulator too large	<ul style="list-style-type: none"> <li>→ Check the sizing.</li> <li>→ Change <math>K_{VS}/C_V</math> coefficient, if necessary or install a different sized regulator.</li> </ul>
Jerky control response	Increased friction, e.g. due to foreign particles between seat and plug or in the stem guide on the bonnet	<ul style="list-style-type: none"> <li>→ Remove foreign particles.</li> <li>→ Contact SAMSON's After-sales Service.</li> </ul>
Slow control response	Control line blocked by dirt causing the flow through it to be restricted	→ Clean the control line.

## Malfunctions

Malfunction	Possible reasons	Recommended action
Loud noises	High flow velocity, cavitation	→ Check the sizing. → Install larger regulator, if necessary.
Leakage at the actuator	Defective operating diaphragm and backup diaphragm	→ Contact SAMSON's After-sales Service.
Leakage at the diaphragm stem	Packing around the diaphragm stem in the actuator defective	→ Contact SAMSON's After-sales Service.
Red mark appears at the diaphragm rupture indicator	Defective operating diaphragm	→ Contact SAMSON's After-sales Service.

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### NOTICE

*Risk of TÜV approval (based on AGFW worksheet FW 504) for Type 36-4 becoming void. Consult SAMSON's After-sales Service before you change parts or perform service or repair work on TÜV-tested Type 36-4 Regulators.*

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**i Note**

Contact SAMSON's After-sales Service for malfunctions not listed in the table.

---

The malfunctions listed in section 8.1 are caused by mechanical faults and incorrect regulator sizing. In the simplest case, the functioning can be restored following the recommended action. Special tools may be required to rectify the fault.

Exceptional operating and installation conditions may lead to changed situations that may affect the control response and lead to malfunctions. For troubleshooting, the conditions, such as installation, process medium, temperature and pressure conditions, must be taken into account.

---

**💡 Tip**

SAMSON's After-sales Service can support you in drawing up an inspection and test plan for your plant.

---

## 8.2 Emergency action

Plant operators are responsible for emergency action to be taken in the plant.

We recommend removing the regulator from the pipeline before repairing it.

In the event of a regulator malfunction:

1. Close the shut-off valves upstream and downstream of the regulator to stop the process medium from flowing through the regulator.
2. Perform troubleshooting (see section 8.1).
3. Rectify those malfunctions that can be remedied based on the instructions provided here. Contact SAMSON's After-sales Service in all other cases.

### Putting the device back into operation after a malfunction

See the 'Start-up' section.



## 9 Servicing

The regulators do not require much maintenance. Nevertheless, it is subject to natural wear, particularly at the seat, plug, bellows seal and operating diaphragm. Depending on the operating conditions, check the regulator at regular intervals to avoid possible malfunctions.

### **⚠ DANGER**

#### **Risk of bursting in pressure equipment.**

Regulators and pipelines are pressure equipment. Improper opening can lead to bursting of the regulator.

- Before starting any work on the regulator, depressurize all plant sections affected as well as the regulator.
- Drain the process medium from all the plant sections affected as well as the regulator.
- Wear personal protective equipment.

### **⚠ WARNING**

#### **Risk of burn injuries due to hot or cold components and pipeline.**

Regulator components and the pipeline may become very hot or cold. Risk of burn injuries.

- Allow components and pipelines to cool down or warm up to the ambient temperature.
- Wear protective clothing and safety gloves.

### **⚠ WARNING**

#### **Risk of personal injury due to residual process medium in the regulator.**

While working on the regulator, residual process medium can escape and, depending on its properties, may lead to personal injury, e.g. (chemical) burns.

- Wear protective clothing, safety gloves and eye protection.

### **⚠ NOTICE**

#### **Risk of regulator damage due to excessively high or low tightening torques.**

Observe the specified torques when tightening regulator components. Excessive tightening torques lead to parts wearing out more quickly. Parts that are too loose may cause leakage.

- Observe the specified tightening torques (see 'Tightening torques' in Annex).

### **⚠ NOTICE**

#### **Risk of regulator damage due to the use of unsuitable tools.**

- Only use tools approved by SAMSON (see 'Tools' in Annex).

### **⚠ NOTICE**

#### **Risk of regulator damage due to the use of unsuitable lubricants.**

- Only use lubricants approved by SAMSON (see 'Lubricants' in Annex).

---

### Note

**The regulator was checked by SAMSON before it left the factory.**

- *Certain test results certified by SAMSON lose their validity when the regulator is opened. Such testing includes seat leakage and leak tests.*
  - *The product warranty becomes void if service or repair work not described in these instructions is performed without prior agreement by SAMSON's After-sales Service.*
  - *Only use original spare parts by SAMSON, which comply with the original specifications.*
- 

### Tip

*SAMSON's After-sales Service can support you in drawing up an inspection and test plan for your plant.*

---

## 9.1 Ordering spare parts and operating supplies

Contact your nearest SAMSON subsidiary or the SAMSON's After-sales Service for information on lubricants and tools.

### Spare parts

There are no spare parts available for the Type 36-4 Regulator tested by TÜV. Service and repair work must only be performed by a SAMSON representative or SAMSON's After-sales Service. Otherwise, the certified test results will lose their validity.

### Lubricant

Contact SAMSON's After-sales Service for more information on suitable lubricants.

### Tools

Contact SAMSON's After-sales Service for more information on tools.

## 10 Decommissioning

The work described in this section is only to be performed by personnel appropriately qualified to carry out such tasks.

### **⚠ DANGER**

#### **Risk of bursting due to incorrect opening of pressurized equipment or components.**

Regulators and pipelines are pressure equipment that may burst when handled incorrectly. Flying projectile fragments or the release of process medium under pressure can cause serious injury or even death.

Before working on the regulator:

- Depressurize all plant sections concerned and the regulator.
- Drain the process medium from all the plant sections concerned as well as the valve.

### **⚠ WARNING**

#### **Crush hazard arising from moving parts.**

- Do not insert hands or fingers between the set point springs while the regulator is in operation.
- Before starting any work on the regulator, depressurize plant sections as well as the regulator.

### **⚠ WARNING**

#### **Risk of personal injury due to pressurized components and process medium being discharged.**

- Do not loosen the control line while the valve is pressurized.

### **⚠ WARNING**

#### **Risk of burn injuries due to hot or cold components and pipeline.**

Regulator components and the pipeline may become very hot or cold. Risk of burn injuries.

- Allow components and pipelines to cool down or warm up to the ambient temperature.
- Wear protective clothing and safety gloves.

### **⚠ WARNING**

#### **Risk of hearing loss or deafness due to loud noise.**

Noise emission (e.g. cavitation or flashing) may occur during operation caused by the process medium and the operating conditions.

- Wear hearing protection when working near the regulator.

### **⚠ WARNING**

#### **Risk of personal injury due to residual process medium in the regulator.**

While working on the regulator, residual process medium can escape and, depending on its properties, may lead to personal injury, e.g. (chemical) burns.

- Wear protective clothing, safety gloves and eye protection.

## Decommissioning

To decommission the regulator for service work or disassembly, proceed as follows:

1. Close the shut-off valve (1) on the upstream side of the regulator.
2. Close the shut-off valve (6) on the downstream side of the regulator.
3. Completely drain the pipelines and valve.
4. Depressurize the plant.
5. If necessary, allow the pipeline and regulator components to cool down or warm up to the ambient temperature.

## 11 Removal

The work described in this section is only to be performed by personnel appropriately qualified to carry out such tasks.

### **⚠ WARNING**

#### ***Risk of burn injuries due to hot or cold components and pipeline.***

*Regulator components and the pipeline may become very hot or cold. Risk of burn injuries.*

- *Allow components and pipelines to cool down or warm up to the ambient temperature.*
- *Wear protective clothing and safety gloves.*

### **⚠ WARNING**

#### ***Risk of personal injury due to residual process medium in the regulator.***

*While working on the regulator, residual process medium can escape and, depending on its properties, may lead to personal injury, e.g. (chemical) burns.*

- *Wear protective clothing, safety gloves and eye protection.*

Before removing the valve, make sure the following conditions are met:

- The regulator is put out of operation (see the 'Decommissioning' section).

### 11.1 Removing the regulator from the pipeline

1. Support the regulator to hold it in place when separated from the pipeline (see the 'Shipment and on-site transport' section).
2. Unbolt the flanged joint.
3. Remove the regulator from the pipeline (see the 'Shipment and on-site transport' section).



## 12 Repairs

If the regulator does not function properly according to how it was originally sized or does not function at all, it is defective and must be repaired or exchanged.

---

**! NOTICE**

***Risk of regulator damage due to incorrect service or repair work.***

- *Do not perform any repair work on your own.*
  - *Contact SAMSON's After-sales Service for service and repair work.*
- 

### 12.1 Returning devices to SAMSON

Defective devices can be returned to SAMSON for repair. Proceed as follows to return devices to SAMSON:

1. Put the regulator out of operation (see the 'Decommissioning' section).
2. Decontaminate the valve. Remove any residual process medium.
3. Fill in the Declaration on Contamination. The declaration form can be downloaded from our website at  
▶ [www.samsongroup.com](http://www.samsongroup.com) > SERVICE & SUPPORT > After-sales Service.
4. Continue as described on our website at  
▶ [www.samsongroup.com](http://www.samsongroup.com) > SERVICE & SUPPORT > After Sales Service > Returning goods.



## 13 Disposal



SAMSON is a producer registered at the following European institution  
▶ <https://www.ewrn.org/national-registers/national-registers>.  
WEEE reg. no.:  
DE 62194439/FR 025665

- Observe local, national and international refuse regulations.
- Do not dispose of components, lubricants and hazardous substances together with your other household waste.

---

### **i** Note

*We can provide you with a recycling passport according to PAS 1049 on request. Simply e-mail us at [aftersaleservice@samsongroup.com](mailto:aftersaleservice@samsongroup.com) giving details of your company address.*

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### Tip

*On request, we can appoint a service provider to dismantle and recycle the product as part of a distributor take-back scheme.*

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## 14 Certificates

The EU declarations of conformity are included on the next pages:

- EU declaration of conformity in compliance with Pressure Equipment Directive 2014/68/EU on page 14-2.
- EU declaration of conformity in compliance with Machinery Directive 2006/42/EC on page 14-3.



EU DECLARATION OF CONFORMITY  
TRANSLATION



**Declaration of Conformity of Final Machinery**

in accordance with Annex II, section 1.A. of the Directive 2006/42/EC

For the following products:

**Type 36-4 Safety Shut-off Valve (SSV) with Pressure Reducing Valve**

We hereby declare that the machinery mentioned above complies with all applicable requirements stipulated in Machinery Directive 2006/42/EC.

For product descriptions refer to:

- Safety Shut-off Valve (SSV) with pressure reducing valve Type 36-4:  
Mounting and Operating Instructions EB 2546-3

Referenced technical standards and/or specifications:

- VCI, VDMA, VGB: "Leitfaden Maschinenrichtlinie (2006/42/EG) – Bedeutung für Armaturen, Mai 2018" [German only]
- VCI, VDMA, VGB: "Zusatzdokument zum Leitfaden Maschinenrichtlinie (2006/42/EG) – Bedeutung für Armaturen vom Mai 2018" [German only], based on  
DIN EN ISO 12100:2011-03

Comment:

Information on residual risks of the machinery can be found in the mounting and operating instructions as well as in the referenced documents listed in the mounting and operating instructions.

Persons authorized to compile the technical file:

SAMSON AG, Weismüllerstraße 3, 60314 Frankfurt am Main, Germany  
Frankfurt am Main, 19 May 2023

Norbert Tollas  
Senior Vice President  
Global Operations

Peter Scheermesser  
Director  
Product Maintenance & Engineered Products

Revision no. 00

Classification: Public - SAMSON AKTIENGESELLSCHAFT - Weismüllerstraße 3 - 60314 Frankfurt, Germany

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## 15 Annex

### 15.1 Tightening torques

**Table 15-1:** *Tightening torque*

Component	Width across flats	Valve size/actuator area	Tightening torque in Nm
Control line connection (11)	15	All	22

### 15.2 Lubricant

SAMSON's After-sales Service can support you concerning lubricants and sealants approved by SAMSON.

### 15.3 Tools

SAMSON's After-sales Service can support you concerning tools approved by SAMSON.

### 15.4 Accessories

SAMSON's After-sales Service can support you concerning accessories approved by SAMSON.

## 15.5 Spare parts

There are no spare parts available for the Type 36-4 Regulator tested by TÜV. Service and repair work must only be performed by a SAMSON representative or SAMSON's After-sales Service. Otherwise, the certified test results will lose their validity.

- Contact SAMSON's After-sales Service for service and repair work.

## 15.6 After-sales service

Contact SAMSON's After-sales Service for support concerning service or repair work or when malfunctions or defects arise.

### E-mail address

You can reach our after-sales service at [aftersalesservice@samsongroup.com](mailto:aftersalesservice@samsongroup.com).

### Addresses of SAMSON AG and its subsidiaries

The addresses of SAMSON, its subsidiaries, representatives and service facilities worldwide can be found on our website (▶ [www.samsongroup.com](http://www.samsongroup.com)) or in all SAMSON product catalogs.

### Required specifications

Please submit the following details:

- Device type and valve size
- Model number or material number
- Upstream and downstream pressure
- Temperature and process medium
- Min. and max. flow rate in m<sup>3</sup>/h
- Is a strainer installed?
- Installation drawing showing the exact location of the regulator and all the additionally installed components (shut-off valves, pressure gauge etc.)







**EB 2546-3 EN**



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