

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.

- 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 Department (aftersaleservice@samson.de).



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.samson.de > **Service & Support** > **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

1	Safety instructions and measures	5
1.1	Notes on possible severe personal injury	7
1.2	Notes on possible personal injury	8
1.3	Notes on possible property damage	9
2	Markings on the device	10
2.1	Regulator nameplate	10
2.2	Material number	11
3	Design and principle of operation	12
3.1	Technical data	14
4	Measures for preparation	18
4.1	Unpacking	18
4.2	Transporting and lifting	18
4.3	Storage	18
4.4	Preparation for installation	19
5	Mounting and start-up	20
5.1	Mounting positions	20
5.2	Additional fittings	21
5.3	Start-up	22
5.4	Gases and liquids	22
6	Operation	22
6.1	Adjusting the set point	22
7	Servicing	23
7.1	Cleaning and replacing the seat and plug	24
7.2	Exchanging the operating diaphragm	26
7.3	Replacing the set point springs	28
7.4	Tightening torques and lubricant	29
7.5	Preparation for return shipment	30
7.6	Ordering spare parts and operating supplies	30
8	Malfunctions	30
9	Decommissioning and removal	33

Contents

9.1	Decommissioning.....	33
9.2	Disposal.....	33
10	Annex.....	34
10.1	After-sales service.....	34
10.2	Spare parts.....	34
10.3	Certificates.....	37

1 Safety instructions and measures

Intended use

The SAMSON Type 44-2, Type 44-3 and Type 44-9 Pressure Regulators are suitable for pressure control of liquids and gases. The regulators are designed to operate under exactly defined conditions (e.g. operating pressure, process medium, temperature). Therefore, operators must ensure that the regulators are only used in operating conditions that meet the specifications used for sizing the devices at the ordering stage. In case operators intend to use the regulators in other applications or conditions than 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 regulators are 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 accessories 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 in these instructions
- Changing parts, service or repair work on TÜV-tested Type 44-3 and Type 44-9

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 are to 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 substance database).

- Provide protective equipment (e.g. safety gloves, eye protection) appropriate for the process medium used.
- Wear hearing protection when working near the regulator.
- Check with the plant operator for details on further protective equipment.

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.

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, the signal pressure or by moving parts by taking appropriate precautions. They must observe all hazard statements, warning and caution notes in these mounting and operating instructions, especially for installation, start-up and service work.

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

▶ GESTIS (CLP) hazardous substance database).

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

Responsibilities of the operator

The operator is responsible for proper operation 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, the operator must ensure that operating personnel or third persons are not exposed to any danger.

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, the operating personnel must be familiar with the applicable health, safety and accident prevention regulations and comply with them.

Referenced standards and regulations

The regulators comply with the requirements of the European Pressure Equipment Directive 2014/68/EU. 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 Annex of these instructions (see section 10.3).

According to the ignition risk assessment performed in accordance with EN 13463-1:2009, section 5.2, 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 section 6.4 of EN 60079-14 (VDE 0165 Part 1).

1.1 Notes on possible severe personal injury

DANGER

Risk of bursting in pressure equipment.

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

- If necessary, a suitable overpressure protection must be installed on site in the plant section.
- Before starting any work on the regulator, depressurize all plant sections concerned.
- Drain the process medium from all the plant sections concerned as well as the regulator.
- 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.
- Only use the SAMSON disassembly tool (1 280-4052).

Crush hazard arising from moving parts.

The regulator contains moving parts (actuator and plug stems), 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 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 concerned and the regulator.
- Wear protective clothing, safety gloves and eyewear.

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 heat up.
- Wear protective clothing and safety gloves.

Damage to health relating to the REACH regulation.

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

- Information on safe use of the part affected, see ► www.samson.de/reach-en.html.

1.3 Notes on possible property damage

! NOTICE

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.
- Observe the maximum permissible pressure for regulator and plant.

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.

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 the surface.

- Only use lubricants approved by SAMSON.

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

Observe the specified torques on tightening regulator components. Excessively tightened torques lead to parts wearing out quicker. Parts that are too loose may cause leakage.

- Observe the specified tightening torques.

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

Certain tools are required to work on the regulator.

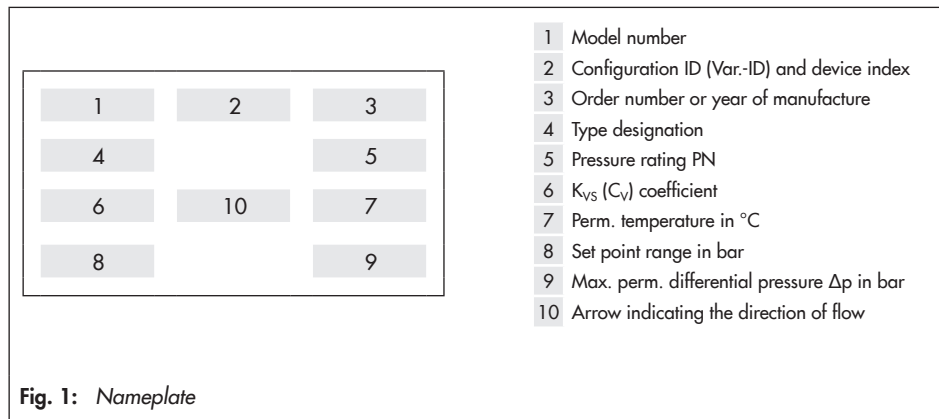
- Only use tools approved by SAMSON.

i Note

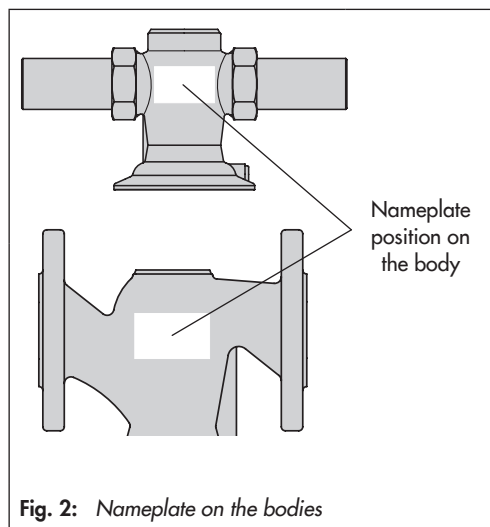
SAMSON's After-sales Service can support you concerning lubricant, tightening torques and tools approved by SAMSON.

2 Markings on the device

2.1 Regulator nameplate



The nameplate of all sizes is affixed to the body (see Fig. 2).



2.2 Material number

Specifying the configuration ID, you can contact us to find out which material is used. The configuration ID is specified on the nameplate (2 (configuration ID and device index)). For more details on the nameplate, see section 2.1.

3 Design and principle of operation

→ Refer to Fig. 3

The regulators are open when relieved of pressure.

They close when the downstream pressure rises above the adjusted set point.

The **Type 44-2, Type 44-3 and Type 44-9** Pressure Reducing Valves mainly consist of the valve body (30) with seat (35) and plug (2) as well as the actuator with operating diaphragm (125), set point springs (70...78) and set point adjuster (56).

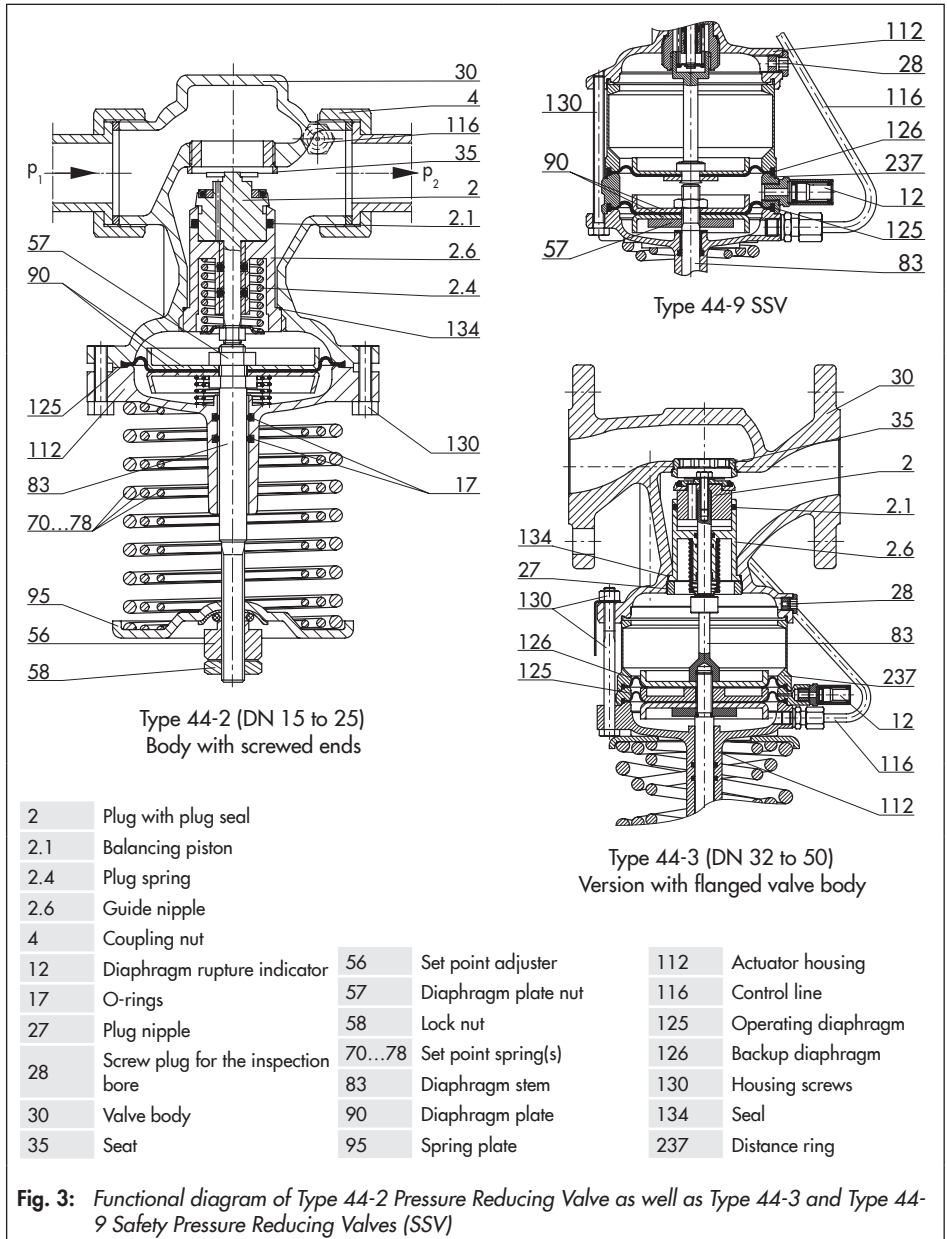
The pressure reducing valve is used to maintain the pressure downstream of the valve to an adjusted set point.

The process medium flows through the regulator between seat and plug 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 downstream pressure.

The downstream pressure p_2 to be controlled is transmitted over the control line (116) to the operating diaphragm (125) where it is converted into a positioning force. This force is used to move the valve plug according to the force of the set point springs (70...78). The spring force is adjustable at the set point adjuster (56).

The **Type 44-3 Safety Pressure Reducing Valve** additionally has a second backup diaphragm (126). Upon failure of the first operating diaphragm (125) the **regulator continues to function using the backup diaphragm (126)**. In this case, the regulator functions as a safety valve when the downstream pressure rises too far and closes the valve. Diaphragm failure is indicated by a red mark in the diaphragm rupture indicator (12) (point of response at approx. 1.5 bar) or medium escapes at the inspection bore.

The **Type 44-9 Safety Pressure Reducing Valve** additionally has a second backup diaphragm (126). Upon failure of the first operating diaphragm (125) the **regulator is completely closed**. Diaphragm failure is indicated by a red mark in the diaphragm rupture indicator (12) (point of response at approx. 1.5 bar) or medium escapes at the inspection bore.



3.1 Technical data

The regulator's nameplate contains information on the regulator version (see section 2.1).

Process medium and scope of application

The (safety) pressure reducing valves are designed to maintain pressure downstream of the regulator to the adjusted set point district heating systems or large heating networks.

Type 44-2, Type 44-3 and Type 44-9 are suitable for **controlling liquids and gases**.

- Max. permissible temperatures for gases up to **80 °C**
- Air/nitrogen up to **150 °C**¹⁾
- 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.

Type test

The Type 44-3 and Type 44-9 Regulators have been typetested as safety pressure reducing valves (SSV) by the German Technical Inspectorate (TÜV).

The test mark is available on request.

¹⁾ With seals made of FKM

Temperature range

The Type 44-2, Type 44-3 and Type 44-9 Regulators are designed for a temperature range from 0 to +150 °C.

Leakage class

All regulators have the leakage class I according to IEC 60534-4.

Noise emission

SAMSON is unable to make general statements about noise emission as it depends on the valve version, plant facilities and process medium.

WARNING



Risk of hearing loss or deafness due to loud noise.

Wear hearing protection when working near the regulator.

Dimensions and weights

Table 4 provides a summary of the dimensions and weights of the Type 44-2, Type 44-3 and Type 44-9 Regulators. The lengths and heights in the dimensional drawings are shown on page 17 onwards.

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

Regulator		Pressure reducing valve	
		44-2	44-3 (SSV) · 44-9 (SSV)
Connection	Red brass body	Male thread DN 15, 20, 25, 32, 40 and 50	
	Spheroidal graphite iron body	Flanges DN 32, 40 and 50	
Pressure rating		PN 25	
Max. permissible temperature	Liquids	150 °C	
	Non-flammable gases	80 °C	
	Air and nitrogen ¹⁾	150 °C	
Set point range (continuously adjustable)		1 to 4 bar ³⁾ · 2 to 4.2 bar 2.4 to 6.3 bar · 6 to 10.5 bar	
Leakage class according to IEC 60534-4		≤0.05 % of K _{VS} coefficient ²⁾	
Compliance		 · 	
Max. perm. ambient temperature		60 °C	

¹⁾ With seals made of FKM; without type test (Types 44-3 and 44-9)

²⁾ Leakage rate = 1/bubble-tight applies to EPDM/FKM soft seal.

³⁾ Special version of Type 44-3 and Type 44-9, without type test

Table 2: *Materials · Material numbers according to DIN EN*

Enclosure	Red brass CC499K	Spheroidal graphite iron EN-GJS-400-18-LT
Seat	1.4305	
Plug ²⁾	Brass 2.0402 and stainless steel 1.4305 with EPDM soft seal ¹⁾	
Actuator housing/ intermediate ring	Red brass CC499K	
Set point spring	1.4310	
Operating diaphragm	EPDM with fabric reinforcement ¹⁾	
Seals	EPDM ¹⁾	

¹⁾ Special version, e.g. for mineral oils: FKM

²⁾ K_{VS} 0.4: stainless steel 1.4305

Design and principle of operation

Table 3: K_{VS} coefficients · X_{FZ} values · Max. permissible differential pressure Δp

Valve size	DN	15	20	25	32	40	50
Max. permissible differential pressure Δp		20 bar				12 bar	
x_{FZ} values		0.60		0.55		0.5	0.45
Body with screwed ends							
K_{VS} coefficients	Standard version	4.0	6.3	8.0	12.5	16.0	20.0
	Special version	0.4 ¹⁾ · 1.0 · 2.5			-		
Flanged body							
K_{VS} coefficients	Standard version	-			12.5	20.0	25.0

¹⁾ Special version of Type 44-2

Table 4: Dimensions · Weights

Valve size	DN	15	20	25	32	40	50
Length L	mm	65	70	75	100	110	130
Pipe $\varnothing d$	mm	21.3	26.9	33.7	42.4	48.3	60.3
Connection R		G 3/4	G 1	G 1 1/4	G 1 3/4	G 2	G 2 1/2
Width across flats SW	mm	30	36	46	59	65	82
Height H	Type 44-2	mm	230		250	380	
	Type 44-3	mm	285 ¹⁾		443		
	Type 44-9	mm	317 ²⁾		475	488	
Height H1	mm	34		43		45	
Actuator housing $\varnothing D$	mm	116				160	
Version with welding ends							
Length L1	mm	210	234	244	268	294	330
Weight	kg (approx.)	2.0	2.1	2.2	8.5	9.0	9.5
Version with threaded ends							
Length L2	mm	129	144	159	192	206	228
Male thread A		G 1/2	G 3/4	G 1	G 1 1/4	G 1 1/2	G 2
Weight	kg (approx.)	2.0	2.1	2.2	8.5	9.0	9.5
Version with screwed-on flanges or with flanged body (DN 32 to 50 only)							
Length L3	mm	-			180	200	230
Weight	kg (approx.)	-			11.7	13.0	14.5

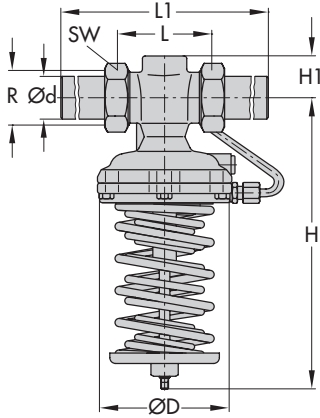
¹⁾ 310 mm with 6 to 10.5 bar set point range

²⁾ 355 mm with 6 to 10.5 bar set point range

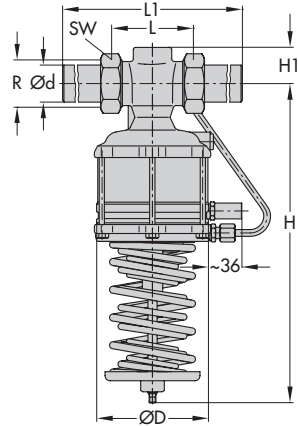
Dimensional drawings

Version with welding ends

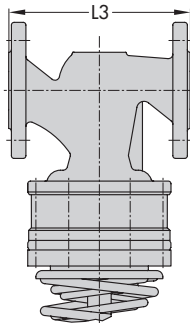
Type 44-2 · Body: CC499K



Type 44-3 · Type 44-9 · Body: CC499K



Version with flanged valve body
 Type 44-2, Type 44-3 and Type 44-9
 Body: spheroidal graphite iron ¹⁾



Version with threaded ends

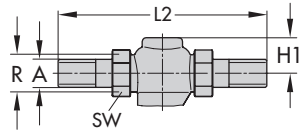


Fig. 4: Dimensions

¹⁾ DN 32, 40 and 50

4 Measures for preparation

After receiving the shipment, proceed as follows:

1. Check the scope of delivery. Compare the shipment received with the delivery note.
2. Check the shipment for transportation damage. Report any damage to SAMSON and the forwarding agent (refer to delivery note).

4.1 Unpacking

i Note

Do not remove the packaging until immediately before installing the valve into the pipeline.

4.2 Transporting and lifting

Due to the low service weight, lifting equipment is not required to lift and transport the regulator (e.g. to install it into the pipeline).

Transport instructions

- Protect the device against external influences (e.g. impact).
- Do not damage the corrosion protection (paint, surface coatings). Repair any damage immediately.
- Protect the device against moisture and dirt.
- Observe the permissible ambient temperatures (see section 3.1).

4.3 Storage

! NOTICE

Risk of regulator damage due to improper storage.

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

i Note

We recommend regularly checking the device and the prevailing storage conditions during long storage periods.

Storage instructions

- Protect the device against external influences (e.g. impact).
- Do not damage the corrosion protection (paint, surface coatings). Repair any damage immediately.
- Protect the device 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.
- Observe the permissible ambient temperatures (see section 3.1).
- Do not place any objects on the device.

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.
- We recommend a storage temperature of 15 °C for elastomers.
- Store elastomers away from lubricants, chemicals, solutions and fuels.

**Tip**

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

4.4 Preparation for installation

Proceed as follows:

- Flush the pipelines.

i Note

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

- Check the regulator to make sure it is clean.
- Check the regulator for damage.
- Check to make sure that the type designation, valve size, material, pressure rating and temperature range of the regulator match the plant conditions (size and pressure rating of the pipeline, medium temperature etc.).
- Check any mounted pressure gauges to make sure they function.

5 Mounting and start-up

NOTICE

Risk of overheating due to excessive ambient temperatures or insufficient heat dissipation when components are insulated.

– Do not include the regulator in the insulation of the pipeline.

NOTICE

Risk of impaired functioning of the regulator and leakage at the joint due to installation under tension.

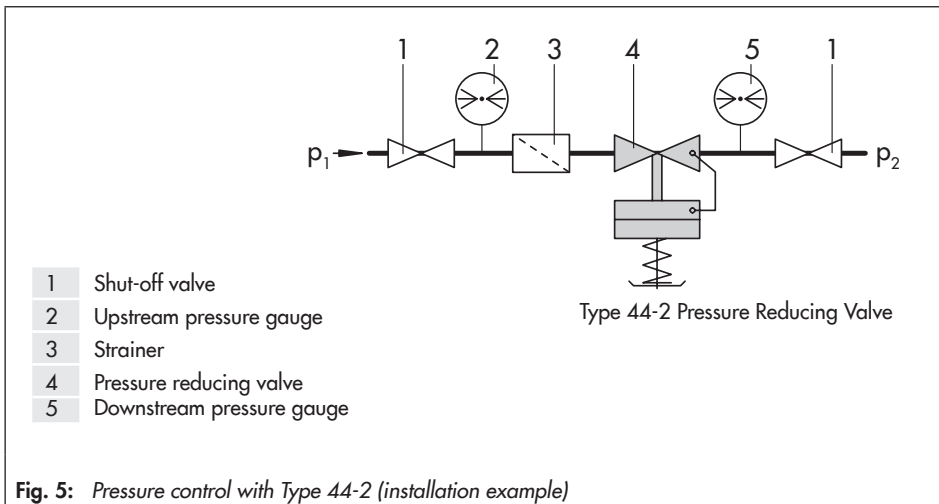
- Bolt the regulator to the pipeline free of stress.
- If necessary, support the pipelines near to the connections.
- Do not attach supports directly to the regulator.

5.1 Mounting positions

Install **Type 44-2**, **Type 44-3** and **Type 44-9** with the actuator housing suspended downward in horizontal pipelines.

Installation conditions

- Make sure that the regulator remains freely accessible after the plant has been completed.
- Install a strainer upstream of the regulator (see section 5.2).
- Make sure the direction of flow matches the direction indicated by the arrow on the body.
- Install the regulator free of stress.
- The valves are connected to the pipeline using threaded ends, welding ends or flanged body.



! NOTICE

Possible malfunction and damage due to adverse weather conditions (temperature, humidity).

- *Do not install the device outdoors or in rooms prone to frost.*
- *Protect the regulator against frost if it is used to control freezing media.*
- *Either heat the regulator or remove it from the plant and completely drain the residual medium after a plant shutdown.*

Shut-off valve

Install a hand-operated shut-off valve both upstream of the strainer and downstream of the regulator (see Fig. 5). This allows the plant to be shut down for cleaning and maintenance, and when the plant is not used for longer periods of time.

Pressure gauges

Install a pressure gauge both upstream and downstream of the regulator to monitor the pressures prevailing in the plant (see Fig. 5).

5.2 Additional fittings

Strainer

A strainer installed upstream in the flow pipe holds back any dirt or other foreign particles carried along by the medium. For example, the SAMSON Type 1 NI Strainer is suitable (▶ T 1010).

The following points must be observed during installation of the strainer:

- Allow sufficient space to remove the filter.
- Observe the flow direction.
- In horizontal pipelines with gases or liquids, the filter element faces downward. The filter element faces sideways in applications with steam.
- Install strainers in vertical pipelines with the medium flowing upward with the drain plug facing upward.

i Note

Check the strainer at regular intervals and clean it, if necessary.

5.3 Start-up

⚠ DANGER

Risk of personal injury due to process medium escaping under pressure.

- First start up the regulator after mounting all parts.

ⓘ NOTICE

Risk of the operating diaphragm bursting due to excessive pressure during pressure testing.

- The pressure must not exceed the maximum permissible pressure by 1.5 times the pressure rating.
- Remove the control line from the regulator and seal the open connection with a blanking plug (accessories: blanking plug 8323-0030 and seal 8412-0771).

Once installed in the pipeline, the regulator can be put into operation.

5.4 Gases and liquids

- Open the shut-off valves slowly preferably starting from the downstream side.
- Avoid pressure surges.
- Make sure that the air contained in the plant (when liquids are used) escapes as quickly as possible.

6 Operation

6.1 Adjusting the set point

- Refer to Fig. 3

Adjust the required set point by turning the set point adjuster (56) with an open-end wrench.

ⓘ Note

The following open-end wrench sizes are required to adjust the set point:

- 19 mm for DN 15 to 32
- 27 mm for DN 40 and 50

Set point adjuster

- Undo the lock nut (58) (for 6 to 10.5 bar set point range only).
- Turn the set point screw clockwise (↻) to increase the pressure set point.
- Turn the set point screw counterclockwise (↺) to reduce the pressure set point.
- Tighten the lock nut (58) (for 6 to 10.5 bar set point range only).

The pressure gauge (Fig. 5) installed on the downstream side on site allows the adjusted set point to be monitored.

The set point range can be changed by exchanging the set point springs (70...78) (see section 7.3).

7 Servicing

The regulator does not require any maintenance. Nevertheless, it is subject to natural wear, particularly at the seat, plug 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 concerned as well as the regulator.
- Drain the process medium from all the plant sections concerned as well as the regulator.
- Wear personal protective equipment.

⚠ 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 eyewear.

⚠ 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 heat up.
- Wear protective clothing and safety gloves.

ⓘ NOTICE

Risk of regulator damage due to incorrect servicing or repair.

Service and repair work must be performed by trained staff only.

ⓘ NOTICE

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

Observe the specified torques on tightening regulator components. Excessively tightened torques lead to parts wearing out quicker. Parts that are too loose may cause leakage. Observe the specified tightening torques.

ⓘ NOTICE

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

Only use tools approved by SAMSON.

NOTICE

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

Only use lubricants approved by SAMSON.

Note

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

Note

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

- Certain test results (seat leakage and leak test) certified by SAMSON lose their validity when the valve body is opened.*
 - 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.

7.1 Cleaning and replacing the seat and plug

DANGER

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.*
 - Only use the SAMSON disassembly tool (1280-4052).*
-

NOTICE

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

Observe the specified torques on tightening regulator components. Excessively tightened torques lead to parts wearing out quicker. Parts that are too loose may cause leakage. Observe the specified tightening torques.

NOTICE

Risk of damage to the facing of the seat and plug due to incorrect service or repair. Always replace both the seat and plug.

NOTICE

Risk of TÜV approval (based on AGFW worksheet FW 504) for Types 44-3 and 44-9 becoming void.

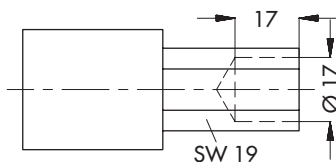
Consult SAMSON's After-sales Service before you change parts or perform service or repair work on TÜV-tested Type 44-3 and Type 44-9 Regulators.

Note

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

Note

The socket wrench for DN 15 to 25 can also be made, for example from a GEDORE screwdriver bit (IN 19-19) by drilling a 17-mm-deep hole (Ø17) into a 17 mm hexagon bit.



– SAMSON order no. 1280-3001

→ Refer to Fig. 3

Disassembly of Type 44-2

1. Put the regulator out of operation (see section 9.1).
2. Completely relieve the tension from the set point springs (70...78) by turning the set point adjuster (56) counterclockwise (↺).
3. Remove the device from the pipeline
4. Unscrew the control line (116).
5. Unscrew the body screws (130) and take off the actuator housing (112) together with the set point springs (70...78).
6. **DN 15 to 25:** unscrew and pull out the guide nipple (2.6) using a socket wrench.
DN 32 to 50: unscrew the plug nipple (27) and pull out the guide nipple (2.6).
7. Remove the seal (134).
8. Thoroughly clean the seat (35), plug (2) and balancing piston (2.1). Replace damaged parts with new ones.
9. Check the control line (116) for any blockages.
10. Unscrew the seat (35) using a seat wrench if the seat facing is damaged.

Assembly of Type 44-2

1. Screw in the seat (35) using a seat wrench. Observe the tightening torques specified in section 7.4.
2. Renew the seal (134) and insert it into the body.
3. **DN 15 to 25:** insert and screw in the guide nipple (2.6). Observe the tightening torques specified in section 7.4.
DN 32 to 50: insert the the guide nipple (2.6) and screw in the plug nipple (27). Observe the tightening torques specified in section 7.4.
4. Check the facings of the actuator housing (112) for dirt and clean them, if necessary.
5. Place the actuator housing (112) on the valve body (30) and screw tight the body screws (130). Observe the tightening torques specified in section 7.4.
6. Screw on the control line (116). Observe the tightening torques specified in section 7.4.
7. Put the regulator into operation (see section 5.3).

7.2 Exchanging the operating diaphragm

DANGER

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.
 - Only use the SAMSON disassembly tool (1280-4052).
-

NOTICE

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

Observe the specified torques on tightening regulator components. Excessively tightened torques lead to parts wearing out quicker. Parts that are too loose may cause leakage. Observe the specified tightening torques.

NOTICE

Risk of TÜV approval (based on AGFW worksheet FW 504) for Types 44-3 and 44-9 becoming void.

Consult SAMSON's After-sales Service before you change parts or perform service or repair work on TÜV-tested Type 44-3 and Type 44-9 Regulators.

i Note

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

i Note

The stem surface is roller-burnished. Do not reface the stem.

After replacing the diaphragm stem, the nipple (guide bushing) in the actuator case must be replaced as well.

**Tip**

The associated order number is written on the actual rolling diaphragm.

➔ Refer to Fig. 3

Disassembly of Type 44-2

1. Put the regulator out of operation (see section 9.1).
2. Completely relieve the tension from the set point springs (70...78) by turning the set point adjuster (56) counterclockwise (↺).
3. Remove the device from the pipeline
4. Unscrew the control line (116).
5. Use the SAMSON disassembly tool to unscrew the set point adjuster (56) from the diaphragm stem (83).
6. Lift off the spring plate (95) and the set point springs (70...78).
7. Unscrew the body screws (130) and take off the actuator housing (112).

8. Unscrew the diaphragm plate nut (57) from the diaphragm stem (83).
9. Take off the diaphragm plate (90) and operating diaphragm (125).
10. Examine the diaphragm stem (83) for score marks. Replace, if necessary.

Assembly of Type 44-2

1. Place the operating diaphragm (125) together with the diaphragm plate (90) onto the diaphragm stem (83) and tighten the nut (57). Observe the tightening torques specified in section 7.4.
2. Apply lubricant to the diaphragm stem (83). See section 7.4.
3. Insert the diaphragm stem (83) together with the operating diaphragm (125) into the actuator housing (112).
4. Check the facings of the actuator housing (112) for dirt and clean them, if necessary.
5. Place the actuator housing (112) on the valve body (30) and tighten the screws (130) evenly. Observe tightening torque specified in section 7.4.
6. Use the SAMSON disassembly tool to screw the valve body (30) together with spring plate (95) and the set point springs (70...78).
7. Screw the set point adjuster (56) onto the diaphragm stem (83).
8. Screw on the control line (116). Observe tightening torque specified in section 7.4.
9. Put the regulator into operation (see section 5.3).

7.3 Replacing the set point springs

⚠ DANGER

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.
- Only use the SAMSON disassembly tool (1280-4052).

ⓘ NOTICE

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

Observe the specified torques on tightening regulator components. Excessively tightened torques lead to parts wearing out quicker. Parts that are too loose may cause leakage. Observe the specified tightening torques.

ⓘ NOTICE

Risk of TÜV approval (based on AGFW worksheet FW 504) for Types 44-3 and 44-9 becoming void.

Consult SAMSON's After-sales Service before you change parts or perform service or repair work on TÜV-tested Type 44-3 and Type 44-9 Regulators.

ⓘ Note

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

Refer to Fig. 3

Disassembly of Type 44-2

1. Put the regulator out of operation (see section 9.1).
2. Completely relieve the tension from the set point springs (70...78) by turning the set point adjuster (56) counterclockwise (↺).
3. Remove the device from the pipeline
4. Unscrew the control line (116).
5. Use the SAMSON disassembly tool to unscrew the set point adjuster (56) from the diaphragm stem (83).
6. Lift off the spring plate (95) and the set point springs (70...78).
7. Examine the diaphragm stem (83) for score marks. Replace, if necessary. Proceed as described in section 7.2.

Assembly of Type 44-2

1. Use the SAMSON disassembly tool to screw the valve body (30) together with spring plate (95) and the set point springs (70...78).
2. Screw the set point adjuster (56) onto the diaphragm stem (83).
3. Screw on the control line (116). Observe tightening torque specified in section 7.4.
4. Put the regulator into operation (see section 5.3).

i Note

Change the nameplate and configuration ID after changing the set point range.

7.4 Tightening torques and lubricant

→ Refer to Fig. 3

Component	Valve size	Tightening torque in Nm
Guide nipple (2.6)	DN 15 to 25	70
Coupling nut (4)	DN 15	80
	DN 20	95
	DN 25	110
	DN 32	130
	DN 40	160
	DN 50	180
Plug nipple (27)	DN 32 to 50	110
Screw plug (28)	All	5
Seat (35)	DN 15 to 25	45
	DN 32 to 50	110
Diaphragm plate nut (57)	DN 15 to 25	40
	DN 32 to 50	80
Lock nut (58)	DN 15 to 32	4
	DN 40 and 50	8
Control line connection (116)	DN 15 to 50	22
Body screws (130)	DN 15 to 32	8
	DN 40 to 50	18

Lubricants	Item no.
Gleitmo 591	8150-0111

7.5 Preparation for return shipment

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 section 9.1).
2. Decontaminate the regulator. 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 > Service & Support > After-sales Service.
4. Continue as described on our website at
▶ www.samsongroup.com > Service & Support > After-sales Service > Returning goods.

7.6 Ordering spare parts and operating supplies

Contact your nearest SAMSON subsidiary or the SAMSON After-sales Service for information on spare parts, lubricants and tools.

Spare parts

See section 10.2 for details on spare parts.

Lubricants

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

Tools

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

8 Malfunctions

The malfunctions listed in Table 5 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 for repair work.

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.

SAMSON's After-sales Service can help during troubleshooting. Further information is available in section 10.1.

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

Tip

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

Note

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

Table 5: 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"> → Connect the control line on site for regulators with external control line. → Clean the control line and screw fittings. → Draw up an energy balance.
	Pressure tapped at the wrong place (regulator with external control line).	<ul style="list-style-type: none"> → Reconnect the control line at another point. → Do not connect the control line at pipe bends or necks.
	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"> → Check the sizing. → Change K_{VS}/C_V coefficient, if necessary or install a different sized regulator.
	Foreign particles blocking the plug	<ul style="list-style-type: none"> → Remove foreign particles. → Replace damaged parts.
	Safety device, e.g. pressure limiter, has been triggered	→ Check plant. Unlock safety device.
	Strainer blocked.	→ Clean strainer.
Downstream pressure exceeds the adjusted set point.	Foreign particles blocking the plug	<ul style="list-style-type: none"> → Remove foreign particles. → Replace damaged parts.
	Seat and plug are worn or leak.	<ul style="list-style-type: none"> → Clean the seat and plug. → Replace the damaged seat and plug.
	Pressure tapped at the wrong place (regulator with external control line).	<ul style="list-style-type: none"> → Reconnect the control line at another point. → Do not connect the control line at pipe bends or necks.
	Seal the inspection borehole.	→ Open the inspection borehole.
	Regulator or K_{VS}/C_V coefficient too large	<ul style="list-style-type: none"> → Check the sizing. → Change K_{VS}/C_V coefficient, if necessary or install a different sized regulator.
	Control line blocked	→ Clean the control line and screw fittings.
	Defective operating diaphragm	→ Replace damaged diaphragm.

Malfunctions

Table 5: Troubleshooting

Malfunction	Possible reasons	Recommended action
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"> ➔ Remove foreign particles. ➔ Replace damaged parts.
Slow control response	Control line blocked by dirt causing the flow through it to be restricted.	<ul style="list-style-type: none"> ➔ Clean the control line.
Downstream pressure hunts	Regulator too large	<ul style="list-style-type: none"> ➔ Check the sizing. ➔ Change K_{VS}/C_V coefficient, if necessary or install a different sized regulator.
	Pressure tapped at the wrong place (regulator with external control line).	<ul style="list-style-type: none"> ➔ Reconnect the control line at another point. ➔ Do not connect the control line at pipe bends or necks.
	The restriction in the control line for pressure tapping is missing.	<ul style="list-style-type: none"> ➔ Install a restriction.
Loud noises	High flow velocity, cavitation.	<ul style="list-style-type: none"> ➔ Check the sizing. ➔ Install larger regulator, if necessary.
Leakage at the inspection bore	Defective operating diaphragm	<ul style="list-style-type: none"> ➔ Replace damaged diaphragm.
Leakage at the diaphragm stem	Dirt in the seal of the actuator casing and diaphragm stem	<ul style="list-style-type: none"> ➔ Replace the diaphragm stem and actuator casing.
Red mark appears at the diaphragm rupture indicator.	Defective operating diaphragm	<ul style="list-style-type: none"> ➔ Replace damaged diaphragm.

NOTICE

Risk of TÜV approval (based on AGFW worksheet FW 504) for Types 44-3 and 44-9 becoming void.

Consult SAMSON's After-sales Service before you change parts or perform service or repair work on TÜV-tested Type 44-3 and Type 44-9 Regulators.

9 Decommissioning and removal

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 concerned as well as the regulator.*
- *Drain the process medium from all the plant sections concerned as well as the regulator.*
- *Wear personal protective equipment.*

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 eyewear.

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 heat up.*
- *Wear protective clothing and safety gloves.*

9.1 Decommissioning

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

1. Close the shut-off valve on the upstream side of the regulator.
2. Close the shut-off valve on the downstream side of the regulator.
3. Completely drain the pipelines and regulator.
4. Depressurize the plant. Shut off or disconnect the control line, if installed.
5. If necessary, allow the pipeline and device to cool down or heat up.
6. Remove the regulator from the pipeline.

9.2 Disposal

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

10 Annex

10.1 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 the After-sales Service at aftersalesservice@samson.de.

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.samson.de) or in all SAMSON product catalogs.

To assist diagnosis and in case of an unclear mounting situation, specify the following details (so far as possible). See section 2:

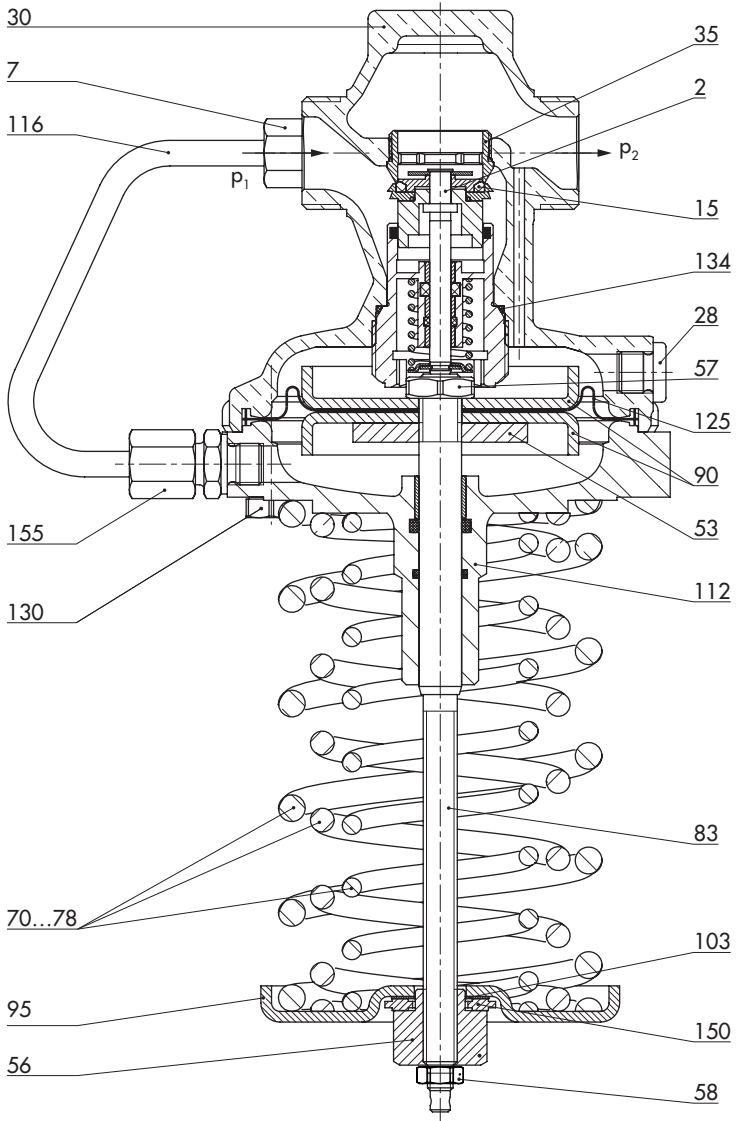
- Device type and nominal size
- Model number and configuration ID
- Upstream and downstream pressure
- Temperature and process medium
- Min. and max. flow rate
- Is a strainer installed?
- Installation drawing showing the exact location of the regulator and all the additionally installed components (shut-off valves, pressure gauge etc.)

10.2 Spare parts

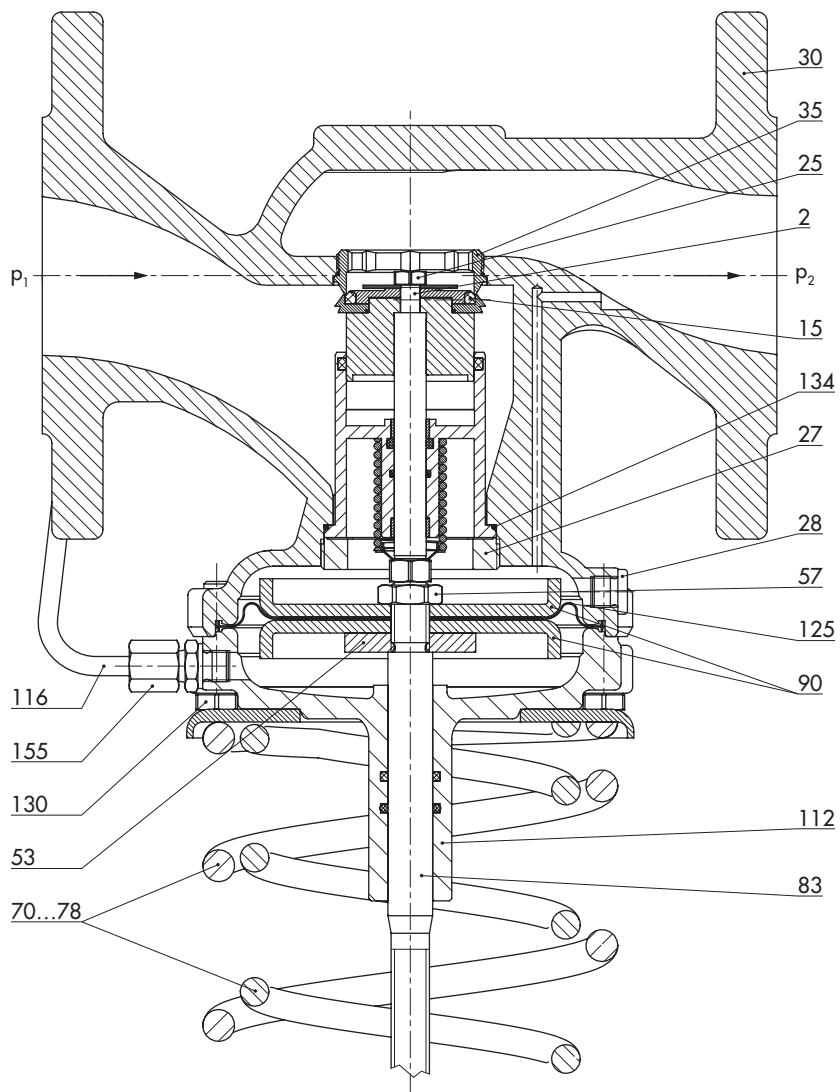
Position numbers

2	Plug
7	Restriction assembly
15	O-ring
28	Screw plug
30	Body
35	Threaded seat
53	Nut
56	Nut
57	Nut
58	Lock nut
70...78	Compression spring
83	Diaphragm stem
90	Diaphragm plate
95	Spring plate
103	Washer
112	Diaphragm case assembly
116	Pipe
125	Diaphragm
130	Screw
134	O-ring
150	Axial needle bearing
155	Screw fitting

DN 15 to 25



DN 32 to 50



10.3 Certificates

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

Position numbers

2	Plug
7	Restriction assembly ¹⁾
15	O-ring
25	Screw (plug)
27	Plug nipple
28	Screw plug
30	Body
35	Threaded seat
53	Nut
56	Nut ¹⁾
57	Nut
58	Lock nut ¹⁾
70...78	Compression spring
83	Diaphragm stem
90	Diaphragm plate
95	Spring plate ¹⁾
103	Washer ¹⁾
112	Diaphragm case assembly
116	Pipe
125	Diaphragm
130	Screw
134	O-ring
150	Axial needle bearing ¹⁾
155	Screw fitting

¹⁾ Shown in drawing for DN 15 to 25 version



**EU-KONFORMITÄTserklärung
EU DECLARATION OF CONFORMITY**

Modul H/Module H, Nr./No. / N° CE-PED-H-SAM 001-13-DEU-rev-A

SAMSON erklärt in alleiniger Verantwortung für folgende Produkte:/For the following products, SAMSON hereby declares under its sole responsibility:

Ventile für Druck-, Differenzdruck-, Temperatur- und Volumenstromregler/Valves for pressure, temperature, flowregulators and differential pressure regulators

Typ 2336, 2373, 2375, 44-1B, 44-2, 44-3, 44-4, 44-6B, 44-9, 45-1, 45-2, 45-3, 45-4, 45-6, (Erz.-Nr. 2720), 45-9, 47-4, 2488, 2489, (2730), 2405, 2406, 2421 (2811), 2412 (2812), 2417 (2817), 2422 (2814), 2423 (2823), 2423E (2823)

die Konformität mit nachfolgender Anforderung/the conformity with the following requirement

Richtlinie des Europäischen Parlaments und des Rates zur Harmonisierung der Rechtsvorschriften der Mitgliedstaaten über die Bereitstellung von Druckgeräten auf dem Markt. 2014/68/EU vom 15.05.2014

Directive of the European Parliament and of the Council on the harmonization of the laws of the Member States relating of the making available on the market of pressure equipment (see also Articles 41 and 48). 2014/68/EU of 15 May 2014

Angeordnetes Konformitätsbewertungsverfahren für Fluide nach Art. 4(1)(c.i) erster Gedankenstrich. Modul siehe Tabelle durch certified by Bureau Veritas S. A. (0062)
 Conformity assessment procedure applied for fluids according to Article 4(1)(c.i), first indent See table for module Bureau Veritas S. A. (0062)

Druck- Pressure rating	DN NPS	15 3/4	20 3/4	25 1	32 1 1/4	40 1 1/2	50 2	65 2 1/2	80 3	100 4	125 5	150 6	200 8	250 10	300 12	400 16	
PN 16		ohne/without (1)				A (2)(3)		-	-	-	-	-	-	-	-	-	-
PN 25		ohne/without (1)				A (2)(3)		H									
PN 40		ohne/without (1)				A (2)(3)		H									
PN 100 und PN 160		ohne/without (1)				A (2)(3)		H									
Class 150		ohne/without (1)				A (2)(3)		H									
Class 300		ohne/without (1)				A (2)(3)		H									
Class 600 und Class 900		ohne/without (1)				A (2)(3)		H									

- Das auf dem Stellgerät aufgebrachte CE-Zeichen hat keine Gültigkeit im Sinne der Druckgeräterichtlinie. The CE marking affixed to the control valve is not valid in the sense of the Pressure Equipment Directive.
- Das auf dem Stellgerät aufgebrachte CE-Zeichen gilt ohne Bezeichnung der benannten Stelle (Kenn-Nr. 0062). The CE marking affixed to the control valve is valid without specifying the notified body (ID number 0062).
- Die Identifikationsnummer 0062 von Bureau Veritas S.A. gilt nicht für Modul A. The identification number 0062 of Bureau Veritas S.A. is not valid for Modul A.

Geräte, denen laut Tabelle das Konformitätsbewertungsverfahren Modul H zugrunde liegt, beziehen sich auf die „Zulassungsbescheinigung eines Qualitätssicherungsystems“ ausgestellt durch die benannte Stelle. Devices whose conformity has been assessed based on Module H refer to the certificate of approval for the quality management system issued by the notified body.

Dem Entwurf zu Grunde gelegt sind Verfahren aus:/The design is based on the methods of: DIN EN 12516-2, DIN EN 12516-3 bzw./or ASME B16.1, ASME B16.24, ASME B16.34, ASME B16.42

Das Qualitätssicherungssystem des Herstellers wird von folgender benannter Stelle überwacht: The manufacturer's quality management system is monitored by the following notified body:

**Bureau Veritas S.A. Nr./No. 0062, Newtime, 52 Boulevard du Parc, Ile de la Jatte, 92200 Neuilly sur Seine, France
 Hersteller:/Manufacturer: SAMSON AG, Weismüllerstraße 3, 60314 Frankfurt am Main, Germany**

Frankfurt am Main, 08. Februar 2017/08 February 2017

Klaus Hörschken
 Zentralabteilungsleiter / Head of Central Department
 Entwicklung Ventile und Antriebe / R&D, Valves and Actuators

Dr. Michael Heß
 Zentralabteilungsleiter / Head of Central Department
 Product Management & Technical Sales

EU-Konformitätserklärung, Blatt 08, Modul A, Modul H, DE-EN, Rev.03, 2017-02-08.doc



**EU-KONFORMITÄTSERKLÄRUNG
EU DECLARATION OF CONFORMITY**

Modul H/Module H, Nr./No. / N° CE-0062-PED-H-SAM 001-16-DEU-rev-A

SAMSON erklärt in alleiniger Verantwortung für folgende Produkte:/For the following products, SAMSON hereby declares under its sole responsibility:

Ventile für Druck- Differenzdruck-, Volumenstrom- und Temperaturregler/Valves for pressure, differential pressure, volume flow and temperature regulators

2333 (Erz.-Nr./Model No. 2333), 2334 (2334), 2335 (2335), 2336, 2373, 2375, 44-0B, 44-1B, 44-2, 44-3, 44-6B, 44-7, 44-8, 45-1, 45-2, 45-3, 45-4, 45-5, 45-6, 2468, 2478 (2720), 45-9, 46-5, 46-6, 46-7, 46-9, 47-1, 47-4, 47-5, 47-9, 2487, 2488, 2489, 2491, 2494, 2495 (2730), 2405, 2406, 2421 (2811), 2392, 2412 (2812), 2114 (2814), 2417 (2817), 2422 (2814), 2423 (2823)

die Konformität mit nachfolgender Anforderung/the conformity with the following requirement.

Richtlinie des Europäischen Parlaments und des Rates zur Harmonisierung der Rechtsvorschriften der Mitgliedstaaten über die Bereitstellung von Druckgeräten auf dem Markt.	2014/68/EU	vom 15.05.2014
Directive of the European Parliament and of the Council on the harmonization of the laws of the Member States relating of the making available on the market of pressure equipment.	2014/68/EU	of 15 May 2014
Angewandtes Konformitätsbewertungsverfahren für Fluide nach Art. 4(1)(c.ii) und (c.i) zweiter Gedankenstrich.	Modul siehe Tabelle	durch certified by Bureau Veritas S. A. (0062)
Conformity assessment procedure applied for fluids according to Article 4(1)(c.ii) and (c.i), second indent	See table for module	

DN	15	20	25	32	40	50	65	80	100	125	150	200	250	300	400
Pressure rating	NPS	½	¾	1	1¼	1½	2	3	4	6	8	10	12	16	
PN 16	ohne/without (1)														
PN 25	ohne/without (1)														
PN 40	ohne/without (1)														
PN 100 und PN 160	ohne/without (1)														
Class 150	ohne/without (1)														
Class 300	ohne/without (1)														
Class 600 und Class 900	ohne/without (1)														

- (1) Das auf dem Stellgerät aufgebrachte CE-Zeichen hat keine Gültigkeit im Sinne der Druckgeräterichtlinie.
The CE marking affixed to the control valve is not valid in the sense of the Pressure Equipment Directive.
- (2) Das auf dem Stellgerät aufgebrachte CE-Zeichen gilt ohne Bezeichnung der benannten Stelle (Kenn-Nr. 0062).
The CE marking affixed to the control valve is valid without specifying the notified body (ID number 0062).
- (3) Die Identifikationsnummer 0062 von Bureau Veritas S.A. gilt nicht für Modul A.
The identification number 0062 of Bureau Veritas S.A. is not valid for Modul A.

Geräte, denen laut Tabelle das Konformitätsbewertungsverfahren Modul H zugrunde liegt, beziehen sich auf die „Zulassungsbescheinigung eines Qualitätssicherungssystems“ ausgestellt durch die benannte Stelle.
Devices whose conformity has been assessed based on Module H refer to the certificate of approval for the quality management system issued by the notified body.

Dem Entwurf zu Grunde gelegt sind Verfahren aus:/The design is based on the procedures specified in the following standards:
DIN EN 12516-2, DIN EN 12516-3 bzw./or ASME B16.1, ASME B16.24, ASME B16.34, ASME B16.42
Das Qualitätssicherungssystem des Herstellers wird von folgender benannter Stelle überwacht:
The manufacturer's quality management system is monitored by the following notified body:

**Bureau Veritas S.A. Nr./No. 0062, Newtime, 52 Boulevard du Parc, Ile de la Jatte, 92200 Neuilly sur Seine, France
Hersteller/Manufacturer: SAMSON AG, Weismüllerstraße 3, 60314 Frankfurt am Main, Germany**

Frankfurt am Main, 08. Februar 2017/08 February 2017

Klaus Hörschen
Klaus Hörschen
Zentralabteilungsleiter/Head of Central Department
Entwicklung Ventile und Antriebe/R&D, Valves and Actuators

Dr. Michael Heß
Dr. Michael Heß
Zentralabteilungsleiter/Head of Central Department
Product Management & Technical Sales



**EU-KONFORMITÄTSERKLÄRUNG
EU DECLARATION OF CONFORMITY**

Modul D/Module D, Nr./No. / N° CE-0062-PED-D-SAM 001-16-DEU-rev-A

SAMSON erklärt in alleiniger Verantwortung für folgende Produkte:/For the following products, SAMSON hereby declares under its sole responsibility:

Sicherheitsabsperrentil SAV 44-3 (2720-12)/Safety Shut-off Valve SSV 44-3 (2720-12)

die Konformität mit nachfolgender Anforderung/the conformity with the following requirement.

Richtlinie des Europäischen Parlaments und des Rates zur Harmonisierung der Rechtsvorschriften der Mitgliedstaaten über die Bereitstellung von Druckgeräten auf dem Markt. 2014/68/EU vom 15.05.2014

Directive of the European Parliament and of the Council on the harmonization of the laws of the Member States relating to the making available on the market of pressure equipment. 2014/68/EU of 15 May 2014

EG-Baumusterprüfbescheinigung EC Type Examination Certificate Modul B Zertifikat-Nr./Certificate no. 01 202 931-B-13-0019

Angewandtes Konformitätsbewertungsverfahren Conformity assessment procedure applied Modul D Zertifikat-Nr./Certificate no. CE-0062-PED-D-SAM-001-16-DEU-rev-A

Dem Entwurf zu Grunde gelegt sind Verfahren aus/The design is based on the procedures specified in the following standards:
DIN EN 12516-2, DIN EN 12516-3 bzw./or ASME B16.24, ASME B16.42

Das Qualitätssicherungssystem des Herstellers wird von folgender benannter Stelle überwacht:
The manufacturer's quality management system is monitored by the following notified body:

**Bureau Veritas S.A. Nr./No. 0062, Newtime, 52 Boulevard du Parc, Ile de la Jatte, 92200 Neuilly sur Seine, France
Hersteller:/Manufacturer: SAMSON AG, Weismüllerstraße 3, 60314 Frankfurt am Main, Germany**

Frankfurt am Main, 08. Februar 2017/08 February 2017

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Dr. Michael Heß
Zentralabteilungsleiter/Head of Central Department
Product Management & Technical Sales

EU-Konformitätserklärung_Blatt 21_Modul A und Modul D_DE-EN Rev03_2017-02-08.doc



**EU-KONFORMITÄTSERKLÄRUNG
EU DECLARATION OF CONFORMITY**

Modul D/Module D, Nr./No. / N° CE-0062-PED-D-SAM 001-16-DEU-rev-A

SAMSON erklärt in alleiniger Verantwortung für folgende Produkte:/For the following products, SAMSON hereby declares under its sole responsibility:

Sicherheitsabsperventil SAV 44-9 (2720-13)/Safety Shut-off Valve SSV 44-9 (2720-13)

die Konformität mit nachfolgender Anforderung/the conformity with the following requirement.


Richtlinie des Europäischen Parlaments und des Rates zur Harmonisierung der Rechtsvorschriften der Mitgliedstaaten über die Bereitstellung von Druckgeräten auf dem Markt.	2014/68/EU	vom 15.05.2014
Directive of the European Parliament and of the Council on the harmonization of the laws of the Member States relating to the making available on the market of pressure equipment.	2014/68/EU	of 15 May 2014
EG-Baumusterprüfbescheinigung EC Type Examination Certificate	Modul B Module B	Zertifikat-Nr./Certificate no. 01 202 931-B-13-0013
Angewandtes Konformitätsbewertungsverfahren Conformity assessment procedure applied	Modul D Module D	Zertifikat-Nr./Certificate no. CE-0062-PED-D-SAM-001-16-DEU-rev-A

Dem Entwurf zu Grunde gelegt sind Verfahren aus/The design is based on the procedures specified in the following standards:
DIN EN 12516-2, DIN EN 12516-3 bzw./or ASME B16.24, ASME B16.42

Das Qualitätssicherungssystem des Herstellers wird von folgender benannter Stelle überwacht:
The manufacturer's quality management system is monitored by the following notified body:

**Bureau Veritas S.A. Nr./No. 0062, Newtime, 52 Boulevard du Parc, Ile de la Jatte, 92200 Neuilly sur Seine, France
Hersteller:/Manufacturer: SAMSON AG, Weismüllerstraße 3, 60314 Frankfurt am Main, Germany**

Frankfurt am Main, 08. Februar 2017/08 February 2017


Klaus Hörschken
Zentralabteilungsleiter/Head of Central Department
Entwicklung Ventile und Antriebe/R&D, Valves and Actuators


Dr. Michael Heß
Zentralabteilungsleiter/Head of Central Department
Product Management & Technical Sales

EU-Konformitätsbescheinigung, Blatt: 27, Modul B und Modul D, DE-EN, Rev.03, 2017-02-08.docx

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