

MOUNTING AND OPERATING INSTRUCTIONS



EB 8139 EN

Translation of original instructions



Type 3353 Angle Seat Valve

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).



Documents relating to the device, such as the mounting and operating instructions, are available on our website at www.samsongroup.com > **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	1-1
1.1	Notes on possible severe personal injury	1-4
1.2	Notes on possible personal injury	1-4
1.3	Notes on possible property damage	1-6
2	Markings on the device	2-1
2.1	Valve nameplate	2-1
3	Design and principle of operation	3-1
3.1	Fail-safe position	3-1
3.2	Versions	3-1
3.3	Additional fittings	3-1
3.4	Technical data	3-3
4	Shipment and on-site transport	4-1
4.1	Accepting the delivered goods	4-1
4.2	Removing the packaging from the valve	4-1
4.3	Transporting and lifting the valve	4-1
4.4	Storing the valve	4-1
5	Installation	5-1
5.1	Installation conditions	5-1
5.2	Preparation for installation	5-1
5.3	Installing the valve into the pipeline	5-2
5.4	Connecting the signal pressure	5-2
5.5	Testing the installed valve	5-3
5.5.1	Leak test	5-4
5.5.2	Fail-safe action	5-5
5.5.3	Pressure test	5-5
6	Start-up	6-1
7	Operation	7-1
8	Malfunctions	8-1
8.1	Troubleshooting	8-1
8.2	Emergency action	8-2

Contents

9	Servicing.....	9-1
9.1	Periodic testing	9-2
9.2	Preparing the valve for service work	9-2
9.3	Replacing the gaskets	9-2
9.4	Replacing the packing	9-4
9.5	Tightening torques.....	9-8
9.6	Ordering spare parts and operating supplies	9-8
10	Decommissioning	10-1
11	Removal	11-1
11.1	Removing the valve from the pipeline.....	11-1
12	Repairs	12-1
12.1	Returning devices to SAMSON	12-1
13	Disposal.....	13-1
14	Certificates.....	14-1
15	Annex.....	15-1
15.1	Spare parts	15-1
15.2	After-sales service	15-3

1 Safety instructions and measures

Intended use

The Type 3353 Angle Seat Valve is designed for on/off service in process engineering and plants with industrial requirements. The valve is suitable for liquids, vapors and gases at temperatures from -10 to $+180$ °C and a pressure rating of PN 40. The angle seat valve is combined with a pneumatic piston actuator.

The control valve is designed to operate under exactly defined conditions (e.g. operating pressure, process medium, temperature). Therefore, operators must ensure that the control valve is only used in operating conditions that meet the specifications used for sizing the valve at the ordering stage. In case operators intend to use the control valve 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 control valve 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 valve accessories connected to the valve

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

- Use of non-original spare parts
- Performing service and repair work not described

Qualifications of operating personnel

The control valve 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.

Welding operations must only be performed by personnel who has the necessary qualification to perform the applied welding procedure and handle the materials used.

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:

- Protective clothing, gloves, eye protection and respiratory protection in applications with hot, cold and/or corrosive media
- Wear hearing protection when working near the valve

➔ 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.

Safety features

Upon supply air or control signal failure, the valve moves to a certain fail-safe position (see 'Design and principle of operation' section).

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 control valve by the process medium, the operating pressure, the signal pressure or by moving parts by taking appropriate precautions. Plant operators and operating personnel must observe all hazard statements, warning and caution notes in these mounting and operating instructions.

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.

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 control valves comply with the requirements of the European Pressure Equipment Directive 2014/68/EU and the Machinery Directive 2006/42/EC. Valves with a CE marking have a declaration of conformity which includes information about the applied conformity assessment procedure. The 'Certificates' section contains this declaration of conformity.

Referenced documentation

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

- Mounting and operating instructions for mounted valve accessories (e.g. ► EB 8357 for Type 4740 Limit Switch)
- When a substance is used in the device, which is listed as being a substance of very high concern on the candidate list of the REACH regulation:
Information on safe use of the part affected

► www.samsongroup.com > About SAMSON > Material Compliance > REACH

If a 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.

1.1 Notes on possible severe personal injury

DANGER

Risk of bursting in pressure equipment.

Valves and pipelines are pressure equipment. Impermissible pressure or improper opening can lead to valve components bursting.

- Observe the maximum permissible pressure for valve and plant.
- Before starting any work on the control valve, depressurize all plant sections affected as well as the valve.
- Drain the process medium from all the plant sections concerned as well as the valve.

1.2 Notes on possible personal injury

WARNING

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

Depending on the process medium, valve 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.

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.

Risk of personal injury due to exhaust air being vented.

While the valve is operating, air is vented from the actuator, for example, during closed-loop operation or when the valve opens or closes.

- Install the control valve in such a way that vent openings are not located at eye level and the actuator does not vent at eye level in the work position.
- Use suitable silencers and vent plugs.
- Wear eye and hearing protection when working near the control valve.

⚠ WARNING

Risk of personal injury due to preloaded springs.

Control valves fitted with preloaded springs are under tension.

- Only open the valve body/actuator following the instructions in this document (see the 'Servicing' section > 'Replacing the gaskets' or 'Replacing the packing').

Risk of personal injury due to residual process medium in the valve.

While working on the valve, residual medium can flow out of the valve and, depending on its properties, cause personal injury, e.g. (chemical) burns.

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

Exposure to hazardous substances poses a serious risk to health.

Certain lubricants and cleaning agents are classified as hazardous substances. These substances have a special label and a material safety data sheet (MSDS) issued by the manufacturer.

- Make sure that an MSDS is available for any hazardous substance used. If necessary, contact the manufacturer to obtain an MSDS.
- Inform yourself about the hazardous substances and their correct handling.

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

Over time, markings, labels and nameplates on the valve 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.

1.1 Notes on possible property damage

⚠ NOTICE

Risk of valve 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 valve damage due to unsuitable medium properties.

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

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

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

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

→ Observe the specified tightening torques.

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

Certain tools are required to work on the valve.

→ Only use tools approved by SAMSON.

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

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

→ Only use lubricants approved by SAMSON.

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

→ If necessary, keep the valve and the tools used free from solvents and grease.

→ Make sure that only suitable lubricants are used.

2 Markings on the device

2.1 Valve nameplate

Antrieb Act. size		Stelldruck Supply (bar)	Max. Diff.druck/pressure Δp in bar	
			3	3
			3	3
1	2		4	4
1	2		4	4
			5	Made in Europe
6				7

SAMSON 3353 **CE**

- 1 Actuator area and number of actuator springs (I or II)
- 2 Required signal pressure in bar
- 3 Valve size (DN and G)
- 4 Max. perm. differential pressure in bar
- 5 Configuration ID
- 6 Max. permissible medium temperature
- 7 Year of manufacture

Fig. 2-1: Nameplate

The nameplate is stuck on the pneumatic actuator.

3 Design and principle of operation

The pneumatic control valve consists of an angle seat valve with a soft-seated plug and a pneumatic piston actuator. Depending on the version, the actuator can be equipped with a mechanical manual override or an electric limit switch.

The medium flows through the valve in the direction indicated by the arrow. The signal pressure applied to the piston actuator determines the position of the plug and thus the cross-sectional area of flow between the seat and plug.

The plug/actuator stem (14) is sealed by a self-adjusting PTFE V-ring packing (22) at the valve and by a radial shaft seal (25) at the actuator.

3.1 Fail-safe position

The fail-safe position of the valve upon supply air (signal pressure) failure is determined by how the piston and actuator spring are arranged in the pneumatic actuator.

Fail-close

The actuator spring closes the valve upon air supply failure. The valve opens when the signal pressure increases.

Fail-open

The actuator spring opens the valve upon air supply failure. The valve closes when the signal pressure increases.

3.2 Versions

Additional actuator spring (changing the spring force)

Fail-close (FA/NC/TS) valves with the valve sizes DN 40 and 50 (G 1½ and 2) and with 60 cm² actuators can be fitted with one or two actuator springs (marked on the name-plate with I or II). See the 'Markings on the device' section).

By adding a spring or removing the internal spring, the permissible differential pressure and associated signal pressure can be changed.

Actuator	Version	Spring force	Quantity of springs	Signal pressure
60 cm ²	FA/NC/TS	1440 N	1	3.8 bar
		2160 N	2	5.4 bar

3.3 Additional fittings

Strainers

We recommend installing a SAMSON strainer upstream of the valve. It prevents solid particles in the process medium from damaging the valve.

Design and principle of operation

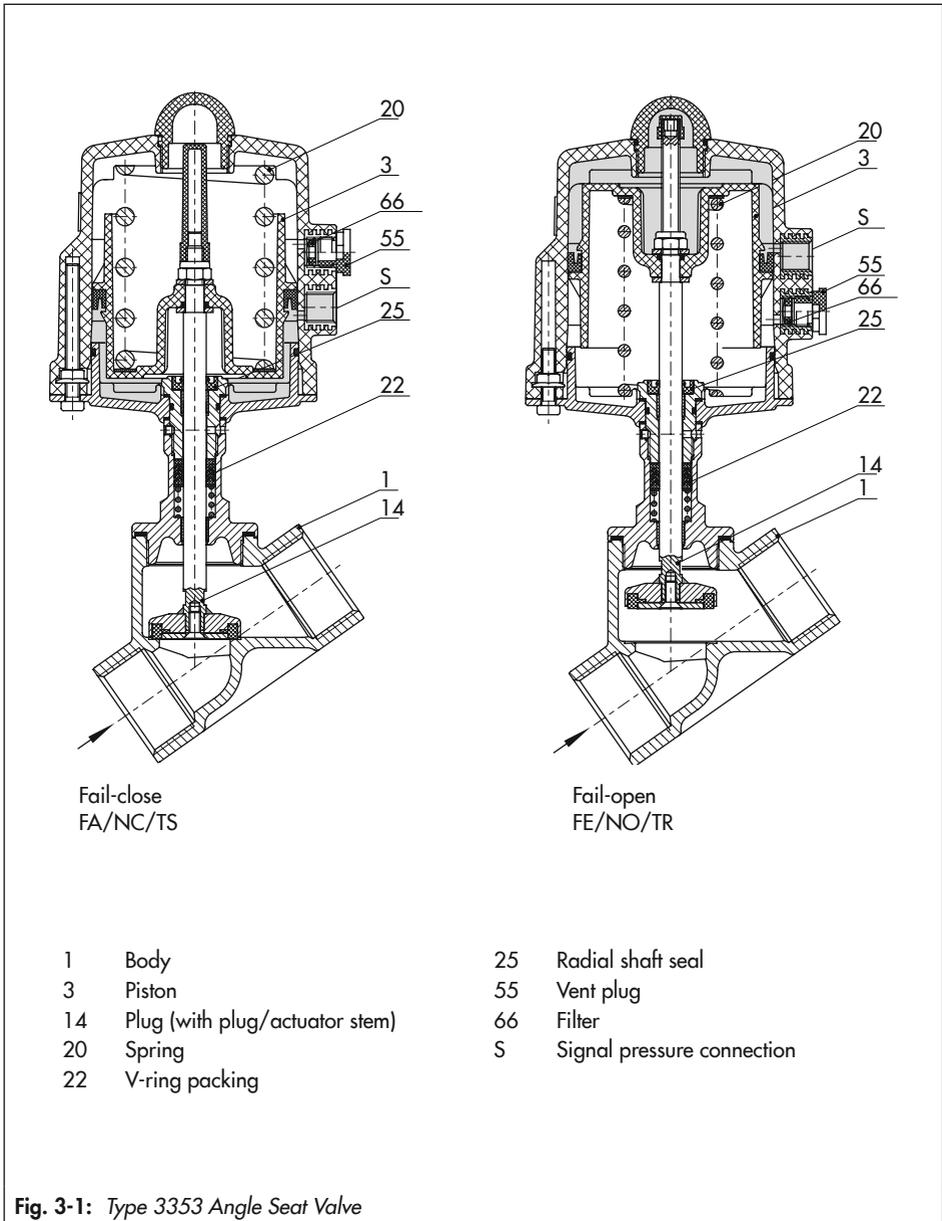


Fig. 3-1: Type 3353 Angle Seat Valve

3.4 Technical data

The nameplate provides information on the control valve version (see the 'Markings on the device' section). More information is available in Data Sheet ► T 8139.

Table 3-1: *Technical data*

Valve sizes	DN 15 to 50 · G ½ to 2
Material	1.4408
Type of connection	Welding ends · Threaded ends
Pressure rating	PN 40
Seat-plug seal	Soft seal
Characteristic	Open/Close
Conformity	CE · EAC
Actuator	30 cm ² (Ø = 63 mm) or 60 cm ² (Ø = 90 mm)
Permissible signal pressure	Minimum according to section Table 3-3 · Maximum 8 bar
Control pressure connection	G ¼
Temperature range	
Permissible medium temperature	-10 to +180 °C
Permissible ambient temperature	-10 to +60 °C
Permissible flow velocity	
Max. velocity at the valve outlet	Liquids: 3 m/s · Gases: 0.3 Mach

Design and principle of operation

Table 3-2: Dimensions and weights

Valve size	DN (G)	15 (1/2)	20 (3/4)	25 (1)	32 (1 1/4)	40 (1 1/2)	50 (2)
Face-to-face dimension L	mm	65	75	90	110	120	150
End-to-end length L1	mm	170	175	197	205	210	226
Height including actuator H	mm	193	194	211	212	224	226
Body connection	G	G 1/2	G 3/4	G	G 1 1/4	G 1 1/2	G 2
Thread length t	mm	15	16	19	22	22	26
Valve weight	kg	0.28	0.33	0.64	0.8	1.3	1.9
Version with welding ends							
Valve size	DN (G)	15 (1/2)	20 (3/4)	25 (1)	32 (1 1/4)	40 (1 1/2)	50 (2)
Face-to-face dimension L	mm	100	120	150	160	180	190
End-to-end length L1	mm	187	197	227	218	230	241
Height including actuator H	mm	197	199	214	223	230	229
Ød1 connection	mm	18.1	23.7	29.7	38.4	44.3	55.1
Wall thickness s	mm	1.6		2			2.6
Valve weight	kg	0.28	0.33	0.64	0.8	1.3	1.9
Pneumatic piston actuator							
Version	Actuator area/Ø	30 cm ² /Ø63		60 cm ² /Ø90 (one spring)		60 cm ² /Ø90 (two springs)	
Housing ØD	mm	100		127			
Control pressure connection		G 1/4					
Weight	kg	1.35		2.2		2.75	

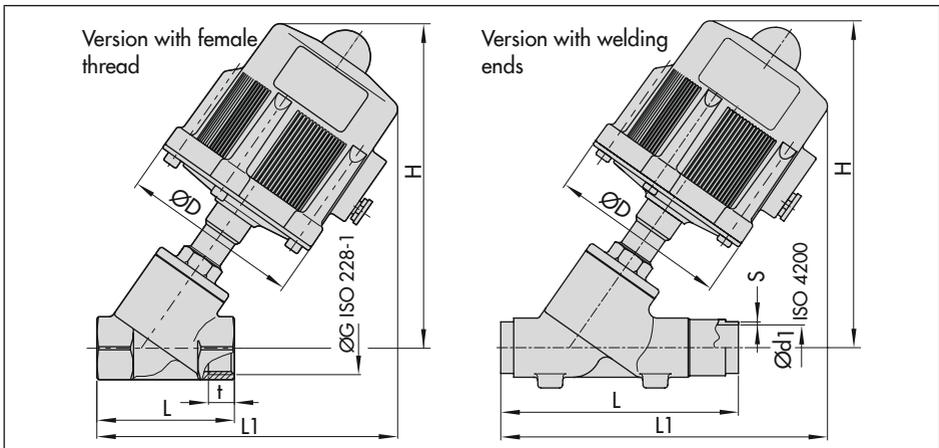


Table 3-3: Permissible differential pressures

The specifications for the standard version have a dark gray background.

Table 3-3.1: Fail-close (FA/NC) version

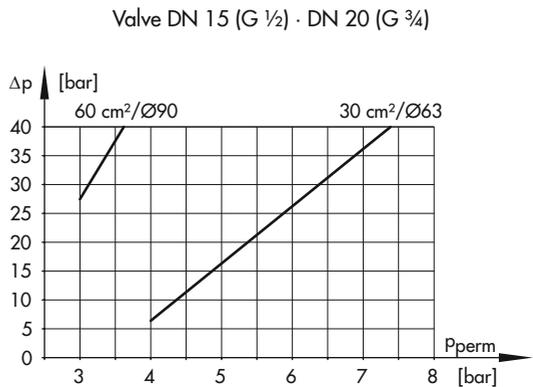
Pressure rating		DN	15 · 20	25 · 32	40 · 50
		G	½ · ¾	1 · 1¼	1½ · 2
Actuator		Signal pressure	Δp		
Actuator area	Thrust				
30 cm ²	720 N	5.0 bar	20	10	4
60 cm ²	1440 N (one spring)	3.8 bar	40	16	6
	2160 N (two springs)	5.4 bar	–	25	10

Table 3-3.2: Fail-open (FE/NO) version

Required actuators and signal pressures to close the valve at the specified differential pressure. Assigned according to valve size and actuator area.

Control valve DN 15 · DN 20

Pressure rating	DN	15 · 20
	G	½ · ¾
Actuator	Signal pressure	Δp
30 cm ² Ø = 63 mm	4 bar	6
	5 bar	16
	6 bar	26
	7 bar	36
	8 bar	40
60 cm ² Ø = 90 mm	3 bar	27
	4 bar	40

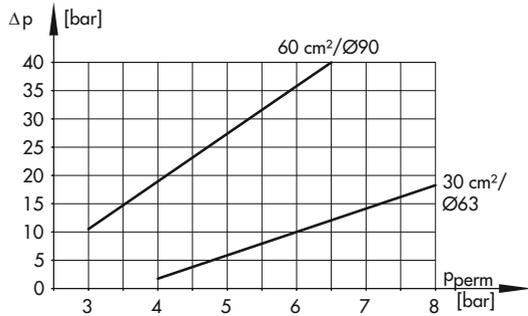


Design and principle of operation

Control valve DN 25 · DN 32

Pressure rating	DN	25 · 32
	G	1 · 1¼
Actuator	Signal pressure	Δp
30 cm ² Ø = 63 mm	5 bar	6
	6 bar	10
	7 bar	14
	8 bar	18
60 cm ² Ø = 90 mm	3 bar	11
	4 bar	19
	7 bar	40

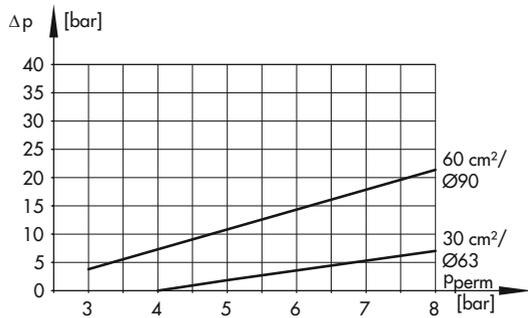
Valve DN 25 (G 1) · DN 32 (G 1¼)



Control valve DN 40 · DN 50

Pressure rating	DN	40 · 50
	G	1½ · 2
Actuator	Signal pressure	Δp
30 cm ² Ø = 63 mm	5	2
	6	4
	7	5
	8	7
60 cm ² Ø = 90 mm	3	4
	4	7
	5	11
	6	14
	7	18
	8	21

Valve DN 40 (G 1½) · DN 50 (G 2)



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 valve 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).

4.2 Removing the packaging from the valve

Observe the following sequence:

- Do not open or remove the packaging until immediately before lifting to install the valve into the pipeline.
- Dispose and recycle the packaging in accordance with the local regulations.

4.3 Transporting and lifting the valve

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

Transport instructions

- Protect the control valve against external influences (e.g. impact).
- Do not damage the corrosion protection (paint, surface coatings). Repair any damage immediately.
- Protect the control valve against moisture and dirt.
- Observe the permissible ambient temperature (see 'Technical data' in the 'Design and principle of operation' section).

4.4 Storing the valve

! NOTICE

Risk of valve 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.*
-

i Note

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

Shipment and on-site transport

Storage instructions

- Protect the control valve against external influences (e.g. impact).
- Secure the valve in the stored position against slipping or tipping over.
- Do not damage the corrosion protection (paint, surface coatings). Repair any damage immediately.
- Protect the control valve 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 temperature (see 'Technical data' in the 'Design and principle of operation' section).
- Do not place any objects on the control valve.

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

Mounting orientation

We recommend installing the control valve into the pipeline in the horizontal position with the actuator on top.

→ Contact SAMSON if the mounting position is not as specified above.

Work position

The work position for the control valve is the front view looking onto the operating controls (including valve accessories).

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.

Valve accessories

→ During connection of valve accessories, make sure that they are easily accessible and can be operated safely from the work position.

Vent plugs

Vent plugs are screwed into the exhaust air ports of pneumatic and electropneumatic devices. They ensure that any exhaust air that forms can be vented to the atmosphere (to avoid excess pressure in the device). Further-

more, the vent plugs allow air intake to prevent a vacuum from forming in the device.

→ Locate the vent plug on the opposite side to the work position of operating personnel.

5.2 Preparation for installation

The pneumatic control valve is delivered ready for use.

Before installation, make sure the following conditions are met:

- The valve is clean.
- The valve and all valve accessories (including piping) are not damaged.
- The valve data on the nameplate (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 pipe fittings (see 'Additional fittings' in the 'Design and principle of operation' section) have been installed or prepared as necessary before installing the valve.
- The permissible ambient temperature is in the permissible range (see 'Technical data' in the 'Design and principle of operation' section).

Proceed as follows:

- Lay out the necessary material and tools to have them ready during installation work.
- Flush the pipelines.

i Note

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

- ➔ For steam applications, dry the pipelines. Moisture will damage the inside of the valve.
- ➔ Check any mounted pressure gauges to make sure they function properly.

5.3 Installing the valve into the pipeline

! NOTICE

Risk of valve damage due to work being carried out by personnel not qualified for such tasks.

The plant operator or specialist company performing the welding is responsible for the selection of the welding procedure and the actual welding operations on the valve. This also applies to any required heat treatment to be performed on the valve.

- ➔ *Only allow qualified welding personnel to carry out welding operations.*
-

1. Close the shut-off valves in the pipeline at the inlet and outlet of the plant section while the valve is being installed.
2. Prepare the relevant section of the pipeline for installing the valve.
3. Remove the protective caps from the valve ports before installing the valve.
4. Install the valve into the pipeline. Observe the flow direction through the

valve. The arrow on the valve indicates the direction of flow.

5. Bolt or weld the valve to the pipe free of stress and with the least amount of vibrations as possible.

5.4 Connecting the signal pressure

! WARNING

Risk of personal injury due to exhaust air being vented.

While the valve is operating, air is vented from the actuator, for example, during closed-loop operation or when the valve opens or closes.

- ➔ *Wear eye and hearing protection when working near the control valve.*
-

Signal pressure connection and venting are designed as boreholes with a G ¼ female thread.

The venting hole is fitted with a replaceable filter (66) with order no. 0550-0213. This filter can be removed by first unscrewing the vent plug (55).

The signal pressure connection also allows an adapter plate to be attached that complies with VDI/VDE 3845 for mounting a solenoid valve.

- ➔ Turn the actuator as required to connect the signal pressure line.
- ➔ Use the customary fittings for metal or copper tubing or plastic hoses.

→ Blow through all air pipes and hoses thoroughly before connecting them.

Changing the spring force (additional actuator spring)

By adding a spring or removing the internal spring (see 'Versions' in the 'Design and principle of operation' section), the permissible differential pressure and associated signal pressure can be changed.

Actuator	Version	Spring force	Quantity of springs	Signal pressure
60 cm ²	FA/NC/TS	1440 N	1	3.8 bar
		2160 N	2	5.4 bar

5.5 Testing the installed valve

⚠ DANGER

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

Valves 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 control valve:

- Depressurize all plant sections affected and the valve (including the actuator). Release any stored energy.
- Drain the process medium from all the plant sections concerned as well as the valve.

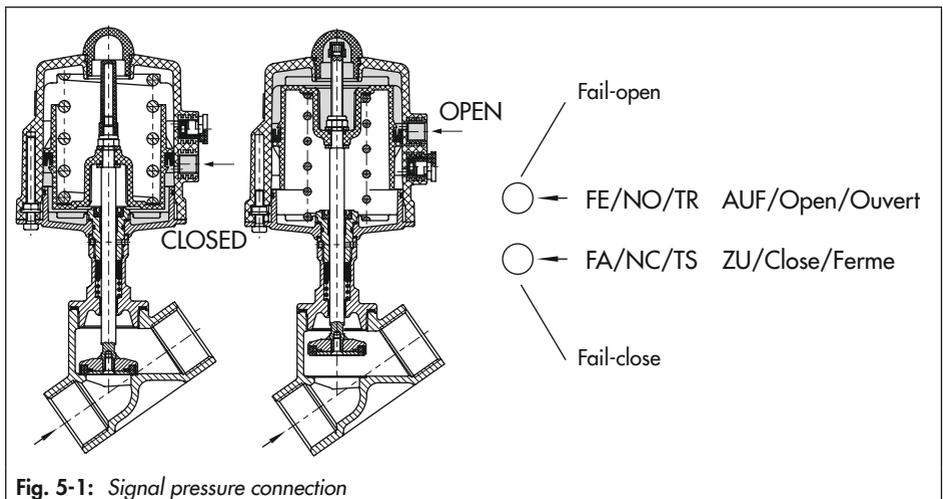


Fig. 5-1: Signal pressure connection

⚠ 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. Additionally, a loud noise may briefly occur through the sudden venting of the pneumatic actuator or pneumatic valve accessories not fitted with noise-reducing fittings. Both can damage hearing.

→ Wear hearing protection when working near the valve.

⚠ WARNING

Risk of personal injury due to exhaust air being vented.

While the valve is operating, air is vented from the actuator, for example, during closed-loop operation or when the valve opens or closes.

→ Wear eye protection when working in close proximity to the control valve.

⚠ WARNING

Risk of personal injury due to preloaded springs.

Control valves fitted with preloaded springs are under tension.

→ Only open the valve body/actuator following the instructions in this document (see the 'Servicing' section > 'Replacing the gaskets' or 'Replacing the packing').

To test the valve functioning before start-up or putting back the valve into operation, perform the following tests:

5.5.1 Leak test

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

Our after-sales service can support you to plan and perform a leak test for your plant.

1. Close the valve.
2. Slowly apply the test medium to the inlet space upstream of the valve. A sudden surge in pressure and resulting high flow velocities can damage the valve.
3. Open the valve.
4. Apply the required test pressure.
5. Check the valve for leakage to the atmosphere.
6. Depressurize the pipeline section and valve.
7. Rework any parts that leak and repeat the leak test, if necessary.

5.5.2 Fail-safe action

- Shut off the signal pressure line.
- Check whether the valve moves to the fail-safe position (see the 'Design and principle of operation' section).

5.5.3 Pressure test

The plant operator is responsible for performing the pressure test.

**Tip**

Our after-sales service can support you to plan and perform a pressure test for your plant.

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

- Retract the plug stem to open the valve.
- Observe the maximum permissible pressure for both the valve and plant.

6 Start-up

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.

Valve 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. Additionally, a loud noise may briefly occur through the sudden venting of the pneumatic actuator or pneumatic valve accessories not fitted with noise-reducing fittings. Both can damage hearing.

- Wear hearing protection when working near the valve.

⚠ WARNING

Risk of personal injury due to exhaust air being vented.

While the valve is operating, air is vented from the actuator, for example, during closed-loop operation or when the valve opens or closes.

- Wear eye and hearing protection when working near the control valve.

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

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

Start-up/putting the valve back into operation

1. Allow the valve to cool down or warm up to reach ambient temperature before start-up when the ambient temperature and process medium temperature differ greatly or the medium properties require such a measure.
2. Slowly open the shut-off valves in the pipeline. Slowly opening these valves

Start-up

prevents a sudden surge in pressure and high flow velocities which can damage the valve.

3. Check the valve to ensure it functions properly.

7 Operation

Immediately after completing start-up or putting the valve back into operation, the valve is ready for use.

⚠ WARNING

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

Valve 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. Additionally, a loud noise may briefly occur through the sudden venting of the pneumatic actuator or pneumatic valve accessories not fitted with noise-reducing fittings. Both can damage hearing.

- Wear hearing protection when working near the valve.
-

⚠ WARNING

Risk of personal injury due to exhaust air being vented.

While the valve is operating, air is vented from the actuator, for example, during closed-loop operation or when the valve opens or closes.

- Wear eye and hearing protection when working near the control valve.
-

8 Malfunctions

Read hazard statements, warnings and caution notes in the 'Safety instructions and measures' section.

8.1 Troubleshooting

Malfunction	Possible reasons	Recommended action
Actuator and plug stem does not move on demand.	Actuator is blocked.	Check attachment. Remove the blockage. WARNING! A blocked actuator or plug stem (e.g. due to seizing up after remaining in the same position for a long time) can suddenly start to move uncontrollably. Injury to hands or fingers is possible if they are inserted into the actuator or valve. Before trying to unblock the actuator or plug stem, disconnect and lock the pneumatic air supply as well as the control signal. Before unblocking the actuator, release any stored energy in the actuator. Only open the valve body/actuator following the instructions in this document (see the 'Servicing' section > 'Replacing the gaskets' or 'Replacing the packing').
	Signal pressure too low	Check the signal pressure. Check the signal pressure line for leakage.
Actuator and plug stem does not stroke through the entire range.	Signal pressure too low	Check the signal pressure. Check the signal pressure line for leakage.
Increased flow through closed valve (seat leakage)	Dirt or other foreign particles deposited between the seat and plug.	Shut off the section of the pipeline and flush the valve.
	Valve trim is worn out.	Contact our after-sales service.
The valve leaks to the atmosphere (fugitive emissions).	Defective packing	Replace packing (see the 'Servicing' section) or contact our after-sales service.

i Note

Contact our after-sales service for malfunctions not listed in the table.

8.2 Emergency action

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

In the event of a valve malfunction:

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

Putting the valve back into operation after a malfunction

See the 'Start-up' section.

9 Servicing

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.

Valves 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 control valve:

- Depressurize all plant sections affected and the valve (including the actuator). Release any stored energy.
- Drain the process medium from all the plant sections concerned as well as the valve.

⚠ WARNING

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

Valve 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. Additionally, a loud noise may briefly occur through the sudden venting of the pneumatic actuator or pneumatic valve accessories not fitted with noise-reducing fittings. Both can damage hearing.

- Wear hearing protection when working near the valve.

⚠ WARNING

Risk of personal injury due to exhaust air being vented.

While the valve is operating, air is vented from the actuator, for example, during closed-loop operation or when the valve opens or closes.

- Wear eye and hearing protection when working near the control valve.

⚠ WARNING

Risk of personal injury due to preloaded springs.

Control valves fitted with preloaded springs are under tension.

- Only open the valve body/actuator following the instructions in this document (see section 9.3 or 9.4).

WARNING

Risk of personal injury due to residual process medium in the valve.

While working on the valve, residual medium can flow out of the valve and, depending on its properties, cause personal injury, e.g. (chemical) burns.

→ Wear protective clothing, safety gloves, respiratory protection and eye protection.

NOTICE

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

Observe the specified torques when tightening control valve 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 section 9.5).

Note

The control valve was checked by SAMSON before delivery.

– Certain test results certified by SAMSON lose their validity when the valve 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.

9.1 Periodic testing

Depending on the operating conditions, check the valve at certain intervals to prevent possible failure before it can occur. Plant operators are responsible for drawing up an inspection and test plan.

Tip

Our after-sales service can support you in drawing up an inspection and test plan for your plant.

9.2 Preparing the valve for service work

1. Lay out the necessary material and tools to have them ready for the service work.
2. Put the control valve out of operation (see the 'Decommissioning' section).

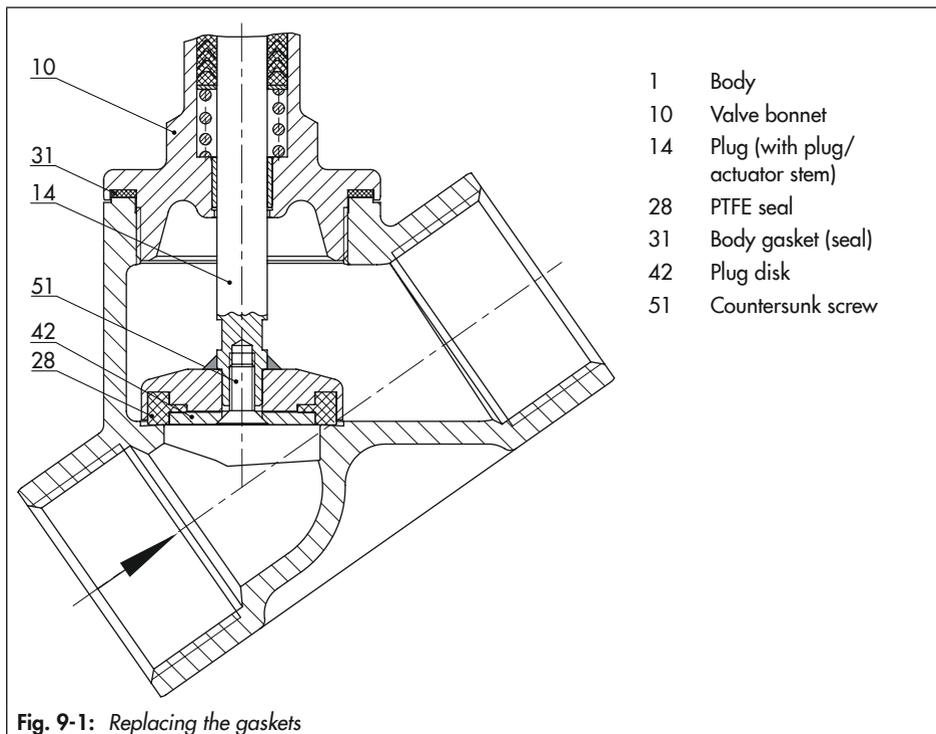
The following service work can be performed after preparation is completed:

- Replace the gaskets (see section 9.3)
- Replace the packing (see section 9.4)

9.3 Replacing the gaskets

1. Position a 26 mm open-end wrench on the valve bonnet (10) and unscrew the entire actuator including the valve bonnet from the body (1).

2. Remove the body gasket (31). Carefully clean the sealing faces in the valve body (1) and seat bore.
3. Unscrew countersunk screw (51) using a 3 mm screwdriver, while holding the plug/actuator stem (14) stationary at the flattened part with an 8 mm open-end wrench.
4. Remove the plug disk (42) and PTFE seal (28). Thoroughly clean the plug disk.
5. Insert a new PTFE seal (28).
6. Insert the plug disk (42).
7. Tighten countersunk screw (51) using a 3 mm screwdriver, while holding the plug/actuator stem (14) stationary at the flattened part with an 8 mm open-end wrench.
8. Insert a new body gasket (31).
9. Screw the valve bonnet (10) with actuator onto the body (1). Observe tightening torques.



9.4 Replacing the packing

a) Fail-close (FA)

1. Position a 26 mm open-end wrench on the valve bonnet (10) and unscrew the entire actuator including the valve bonnet from the body (1).
2. Undo the screws (47) gradually in a crisscross pattern.
3. Lift off the actuator housing (2).
4. Lift off the spring (20).
5. Unscrew nut (49) from the plug/actuator stem using a socket wrench, while holding the plug/actuator stem (14) stationary at the flattened part with an 8 mm open-end wrench.
6. Remove washer (43), piston (3) together with the piston ring (23) and washer (46).
7. Remove O-ring (33) and washer (43) from the plug/actuator stem (14).
8. Unscrew the retaining screw (60) at the side using a 2 mm hex screwdriver.
9. Unscrew the threaded bushing (11) together with the actuator base (6) from the valve bonnet (10) using an 24 mm open-end wrench.
10. Press the threaded bushing (11) out of the actuator base (6). Replace the slip washers (38) with new ones.
11. Pull the actuator/plug stem (14) down out of the valve bonnet (10).
12. Pull the entire packing out of the packing chamber using a suitable tool. Clean the packing chamber thoroughly. Renew the packing.
13. Slide the plug/actuator stem (14) into the valve bonnet (10).
14. Carefully slide the packing parts over the plug/actuator stem into the packing chamber using a suitable tool. Observe the correct sequence:
 - Spring (21)
 - Washer (44)
 - V-ring packing (22)
15. Place the top slip washer (38) into the actuator base.
16. Push the threaded bushing (11) into the actuator base (6). Make sure that the O-ring (36) is correctly seated in the threaded bushing.
17. Place the bottom slip washer (38) on the valve bonnet (10).
18. Screw the threaded bushing (11) together with the actuator base (6) over the plug/actuator stem (14) onto the valve bonnet (10).

Tighten the threaded bushing only to the point where the actuator base (6) can still rotate on the slip washers (38).
19. Screw tight the retaining screw (60) at the side to fix the threaded bushing in place.
20. Slide the washer (43) and O-ring (33) onto the plug/actuator stem (14).
21. Place on the piston (3) with piston ring (23) and shim (43).

22. Insert the washer (46) and spring (20) into the piston (3).
23. Tighten nut (49) intended for fastening the piston, while holding the plug/actuator stem (14) stationary at the flattened part with an 8 mm open-end wrench.
24. Put on actuator housing (2) and fasten it tight onto the actuator base (6) by tightening the screws (47) gradually in a crisscross pattern.
25. Replace the body gasket (31). See section 9.3.
26. Screw the valve bonnet (10) with actuator onto the body (1). Observe tightening torques.
7. Unscrew the retaining screw (60) at the side using a 2 mm hex screwdriver.
8. Unscrew the threaded bushing (11) together with the actuator base (6) from the valve bonnet (10) using an 24 mm open-end wrench.
9. Press the threaded bushing (11) out of the actuator base (6). Replace the slip washers (38) with new ones.
10. Pull the actuator/plug stem (14) down out of the valve bonnet (10).
11. Pull the entire packing out of the packing chamber using a suitable tool. Clean the packing chamber thoroughly. Renew the packing.

b) Fail-open (FE)

1. Position a 26 mm open-end wrench on the valve bonnet (10) and unscrew the entire actuator including the valve bonnet from the body (1).
2. Undo the screws (47) gradually in a crisscross pattern.
3. Lift off the actuator housing (2).
4. Unscrew nut (49) from the plug/actuator stem using a socket wrench, while holding the plug/actuator stem (14) stationary at the flattened part with an 8 mm open-end wrench.
5. Remove washer (43), piston (3) together with the piston ring (23), O-ring (33) and washer (46).
6. Remove the springs (20).
12. Slide the plug/actuator stem into the valve bonnet (10).
13. Carefully slide the packing parts over the plug/actuator stem into the packing chamber using a suitable tool. Observe the correct sequence:
 - Spring (21)
 - Washer (44)
 - V-ring packing (22)
14. Place the top slip washer (38) into the actuator base.
15. Push the threaded bushing (11) into the actuator base (6). Make sure that the O-ring (36) is correctly seated in the threaded bushing.
16. Place the bottom slip washer (38) on the valve bonnet (10).
17. Screw the threaded bushing (11) together with the actuator base (6) over the

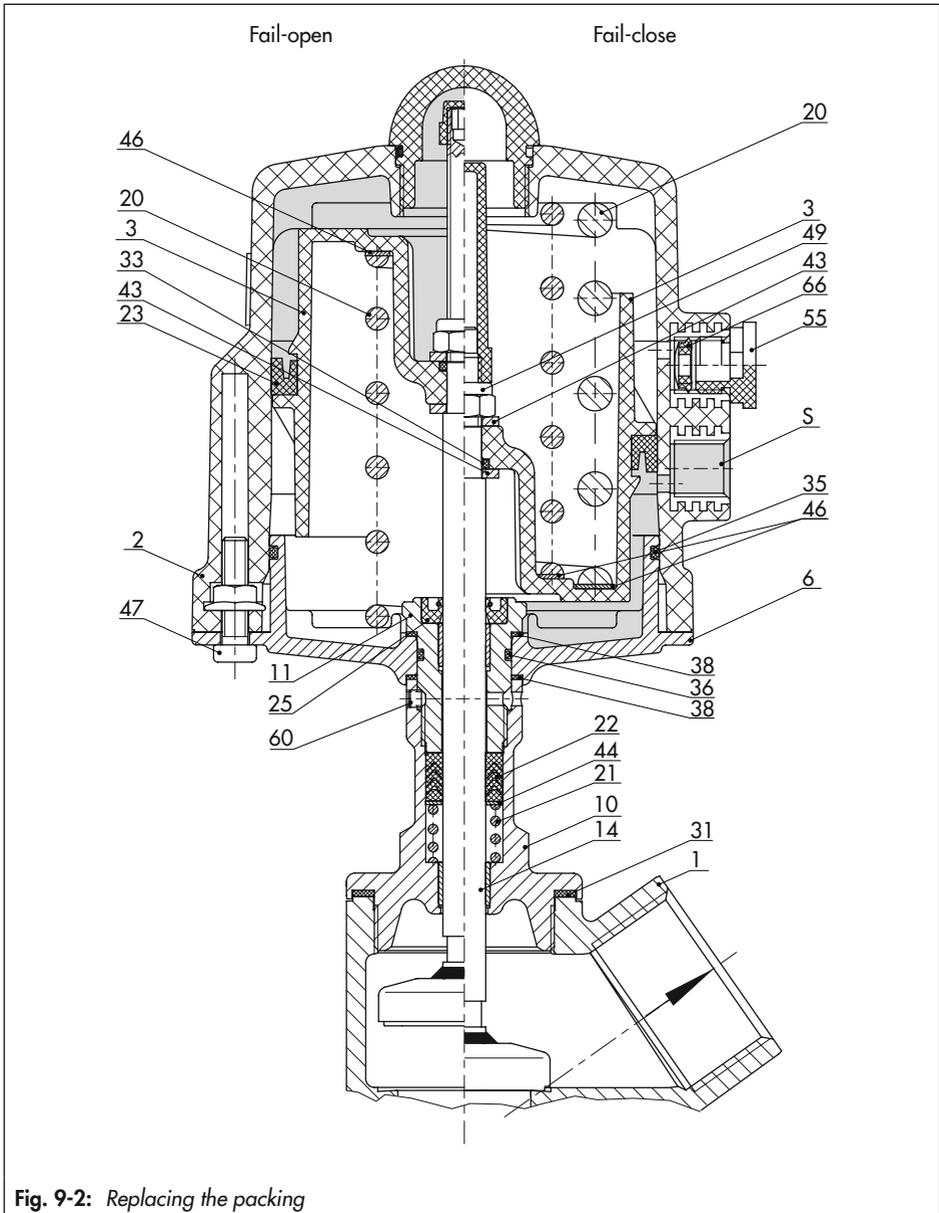


Fig. 9-2: Replacing the packing

Legend for Fig. 9-2

1	Body	22	V-ring packing	44	Washer
2	Actuator housing	23	Piston ring	46	Spring washer
3	Piston	25	Radial shaft seal	47	Cap screw
6	Actuator base	31	Body gasket (seal)	49	Hex nut
10	Valve bonnet	33	O-ring	55	Vent plug
11	Threaded bushing	35	O-ring	60	Retaining screw (threaded pin)
14	Plug (with plug/actuator stem)	36	O-ring	66	Filter
20	Spring	38	Sliding washer	S	Signal pressure connection
21	Compression spring	43	Washer		

plug/actuator stem (14) onto the valve bonnet (10).

Tighten the threaded bushing only to the point where the actuator base (6) can still rotate on the slip washers (38).

18. Screw tight the retaining screw (60) at the side to fix the threaded bushing in place.
19. Slide the washer (43) onto the plug/actuator stem (14).
20. Place the spring (20) together with the washer (46) onto the actuator base (6).
21. Slide the piston (3) with piston ring (23) over the plug/actuator stem (14).
22. Place on the O-ring (33) and washer (43).
23. Tighten nut (49) intended for fastening the piston, while holding the plug/actuator stem (14) stationary at the flattened part with an 8 mm open-end wrench.
24. Put on actuator housing (2) and fasten it tight onto the actuator base (5) by tightening the screws (47) gradually in a crisscross pattern.
25. Replace the body gasket (31). See section 9.3.
26. Screw the valve bonnet (10) with actuator onto the body (1). Observe tightening torques.

9.5 Tightening torques

Table 9-4: *Tightening torques
for the valve bonnet (10)*

Valve size	Tightening torque
G ½ to G ¾ DN 15 to 20	40 Nm
G 1 to G 1¼ DN 25 to 32	80 Nm
G 1½ to G 2 DN 40 to 50	160 Nm

9.6 Ordering spare parts and operating supplies

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

Valves 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 control valve:

- Depressurize all plant sections affected and the valve (including the actuator). Release any stored energy.
- Drain the process medium from all the plant sections concerned as well as the valve.

⚠ WARNING

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

Valve 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. Additionally, a loud noise may briefly occur through the sudden venting of the pneumatic actuator or pneumatic valve accessories not fitted with noise-reducing fittings. Both can damage hearing.

- Wear hearing protection when working near the valve.

⚠ WARNING

Risk of personal injury due to exhaust air being vented.

While the valve is operating, air is vented from the actuator, for example, during closed-loop operation or when the valve opens or closes.

- Wear eye and hearing protection when working near the control valve.

⚠ WARNING

Risk of personal injury due to residual process medium in the valve.

While working on the valve, residual medium can flow out of the valve and, depending on its properties, cause personal injury, e.g. (chemical) burns.

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

Decommissioning

To decommission the control valve for service work or to remove it from the pipeline, proceed as follows:

1. Close the shut-off valves upstream and downstream of the control valve to stop the process medium from flowing through the valve.
2. Completely drain the pipelines and valve.
3. Disconnect and lock the pneumatic air supply to depressurize the actuator.
4. Release any stored energy.
5. If necessary, allow the pipeline and valve 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.

Valve 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 valve.

While working on the valve, residual medium can flow out of the valve and, depending on its properties, cause personal injury, e.g. (chemical) burns.

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

⚠ WARNING

Risk of personal injury due to preloaded springs.

Control valves fitted with preloaded springs are under tension.

- Only open the valve body/actuator following the instructions in this document (see the 'Servicing' section > 'Replacing the gaskets' or 'Replacing the packing').

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

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

11.1 Removing the valve from the pipeline

1. **Version with welding ends:** cut the pipeline in front of the weld seam.
Version with female thread: undo the screw connection.
2. Remove the valve from the pipeline.

12 Repairs

If the valve 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 valve 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:

1. Exceptions apply concerning some special device models
 - ▶ www.samsongroup.com > Service & Support > After-sales Service.
2. Send an e-mail ▶ retouren@samsongroup.com to register the return shipment including the following information:
 - Type
 - Article number
 - Configuration ID
 - Original order
 - Completed Declaration on Contamination, which can be downloaded from our website at
 - ▶ www.samsongroup.com > Service & Support > After-sales Service.

After checking your registration, we will send you a return merchandise authorization (RMA).

3. Attach the RMA (together with the Declaration on Decontamination) to the outside of your shipment so that the documents are clearly visible.
4. Send the shipment to the address given on the RMA.

i Note

Further information on returned devices and how they are handled can be found at
 ▶ www.samsongroup.com > Service & Support > After-sales Service.

13 Disposal

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

14 Certificates

These declarations are included on the next pages:

- Declaration of conformity in compliance with Pressure Equipment Directive 2014/68/EU:
 - Country of origin: Germany, see page 14-2 to page 14-3
 - Country of origin: Turkey, see page 14-4
- Declaration of conformity in compliance with Machinery Directive 2006/42/EC for Types 3353 Control Valves on page 14-5

The certificates shown were up to date at the time of publishing. The latest certificates can be found on our website:

▶ www.samsongroup.com > *Products & Applications* > *Product selector* > *Valves* > 3353

Other optional certificates are available on request.

EU-KONFORMITÄTSERKLÄRUNG EU DECLARATION OF CONFORMITY

Modul A/Module A

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

Geräte/Devices	Bauart/Series	Typ/Type	Ausführung/Version
Durchgangsventil/Globe valve	240	3241	DIN, Gehäuse GG, DN 65-125, Gehäuse GGG, DN 50-80, Fluide G2, L1, L2 ¹⁾ DIN, body of cast iron, DN 65-125, body of spheroidal-graphite iron, DN 50-80, fluids G2, L1, L2 ¹⁾
Durchgangsventil/Globe valve	240	3241	DIN, Gehäuse Stahl u.a., DN 40-100, Fluide G2, L2 ²⁾ DIN, body of steel, etc., DN 40-100, fluids G2, L2 ²⁾
Durchgangsventil/Globe valve	240	3241	ANSI, Gehäuse GG, Class 250, NPS 1 1/2 bis NPS 2, Class 125, NPS 2 1/2 bis NPS 4, Fluide G2, L1, L2 ¹⁾ ANSI, body of cast iron, Class 250, NPS 1 1/2 to NPS 2, Class 125, NPS 2 1/2 to NPS 4, fluids G2, L1, L2 ¹⁾
Dreieiventil/Three-way valve	240	3244	DIN, Gehäuse GG, DN 65-125, Gehäuse GGG, DN 50-80, Fluide G2, L1, L2 ¹⁾ DIN, body of cast iron, DN 65-125, body of spheroidal-graphite iron, DN 50-80, fluids G2, L1, L2 ¹⁾
Dreieiventil/Three-way valve	240	3244	DIN, Gehäuse Stahl u.a., DN 40-100, Fluide G2, L2 ²⁾ DIN, body of steel, etc., DN 40-100, fluids G2, L2 ²⁾
Schrägsitzventil/Angle seat valve	---	3353	DIN, Rotgussgehäuse, alle Fluide DIN, red brass body, all fluids
Schrägsitzventil/Angle seat valve	---	3353	DIN, Gehäuse Stahl, Fluide G2, L1, L2 ¹⁾ DIN, body of steel, fluids G2, L1, L2 ¹⁾
Durchgangsventil/Globe valve	V2001	3321	DIN, Gehäuse GG, DN 65-100, Fluide G2, L1, L2 ¹⁾ DIN, body of cast iron, DN 65-100, fluids G2, L1, L2 ¹⁾
Durchgangsventil/Globe valve	V2001	3321	ANSI, Gehäuse GG, NPS 2 1/2 bis NPS 4, Fluide G2, L1, L2 ¹⁾ ANSI, body of cast iron, NPS 2 1/2 to NPS 4, fluids G2, L1, L2 ¹⁾
Dreieiventil/Three-way valve	V2001	3323	DIN, Gehäuse GG, DN 65-100, Fluide G2, L1, L2 ¹⁾ DIN, body of cast iron, DN 65-100, fluids G2, L1, L2 ¹⁾
Dreieiventil/Three-way valve	V2001	3323	ANSI, Gehäuse GG, NPS 2 1/2 bis NPS 4, Fluide G2, L1, L2 ¹⁾ ANSI, body of cast iron, NPS 2 1/2 to NPS 4, fluids G2, L1, L2 ¹⁾
Dreieiventil/Three-way valve	250	3253	DIN, Gehäuse GG, DN 200 PN 10, Fluide G2, L1, L2 ¹⁾ DIN, body of cast iron, DN 200 PN 10, fluids G2, L1, L2 ¹⁾

¹⁾ Gase nach Art. 4 Abs.1 Pkt. c.i zweiter Gedankenstrich/Gases according to Article 4(1)(c.i), second indent
Flüssigkeiten nach Art. 4 Abs.1 Pkt. c.ii//Liquids according to Article 4(1)(c.ii)

²⁾ Gase nach Art. 4 Abs.1 Pkt. c.i zweiter Gedankenstrich/Gases according to Article 4(1)(c.i), second indent
Flüssigkeiten nach Art. 4 Abs.1 Pkt. c.ii zweiter Gedankenstrich/Liquids according to Article 4(1)(c.ii), second indent

die Konformität mit nachfolgender Anforderung./that the products mentioned above comply with the requirements of the following standards:

Richtlinie des Europäischen Parlaments und des Rates zur Harmonisierung der Rechtsvorschriften der Mitgliedstaaten über die Bereitstellung von Druckgeräten auf dem Markt/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	vom 15. Mai 2014/ of 15 May 2014
Angewandtes Konformitätsbewertungsverfahren für Fluide nach Art. 4 Abs. 1/ Applied conformity assessment procedure for fluids according to Article 4(1)	Modul A/Module A	

Angewandte technische Spezifikation/Technical standards applied: DIN EN 12516-2, DIN EN 12516-3, ASME B16.34

Hersteller/Manufacturer: **SAMSON AG, Weismüllerstraße 3, 60314 Frankfurt am Main, Germany**

Frankfurt am Main, 23. Februar 2017/23 February 2017

i.v. Klaus Rütke

Klaus Hörschken
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

es_modul_a_de_en_rev02.docx

SAMSON AKTIENGESELLSCHAFT
Weismüllerstraße 3 · 60314 Frankfurt am Main
Telefon: 069 4009-0 · Telefax: 069 4009-1507
E-Mail: samson@samson.de

SAMSON AKTIENGESELLSCHAFT
Weismüllerstrasse 3 · 60314 Frankfurt am Main, Germany
Phone: +49 69 4009-0 · Fax: +49 69 4009-1507
E-mail: samson@samson.de

Revision 02

EU DECLARATION OF CONFORMITY TRANSLATION



Module H / N° CE-0062-PED-H-SAM 001-20-DEU-rev-A

For the following products, SAMSON hereby declares under its sole responsibility:

Devices	Series	Type	Version
Globe valve	240	3241	DIN, body of cast iron from DN 150, body of spheroidal-graphite iron, from DN 100, fluids G2, L1, L2 ¹⁾ DIN/ANSI, body of steel, etc., all fluids
Three-way valve	240	3244	DIN, body of cast iron from DN 150, body of spheroidal-graphite iron, from DN 100, fluids G2, L1, L2 ¹⁾ DIN/ANSI, body of steel, etc., all fluids
Cryogenic valve	240	3248	DIN/ANSI, all fluids
Globe valve	250	3251	DIN/ANSI, all fluids
Globe valve	250	3251-E	DIN/ANSI, all fluids
Three-way valve	250	3253	DIN/ANSI, body of steel, etc., all fluids
Globe valve	250	3254	DIN/ANSI, all fluids
Angle valve	250	3256	DIN/ANSI, all fluids
Split-body valve	250	3258	DIN, all fluids
Angle valve (IG standards)	250	3259	DIN, all fluids
Steam-converting valve	280	3281	DIN/ANSI, all fluids
		3284	DIN/ANSI, all fluids
		3286	DIN/ANSI, all fluids
		3288	DIN, all fluids
Globe valve	V2001	3321	DIN, body of steel, etc., all fluids ANSI, all fluids
Three-way valve	V2001	3323	DIN, body of steel, etc., all fluids ANSI, all fluids
Angle seat valve	---	3353	DIN, body of steel, etc., all fluids
Silencer	3381	3381-1	DIN/ANSI, single attenuation plate with welding ends, all fluids
		3381-3	DIN/ANSI, all fluids
		3381-4	DIN/ANSI, single attenuation plate multi-stage with welding ends, all fluids
		3381-2	DIN/ANSI, all fluids
Globe valve	240	3241	ANSI, body of cast iron, Class 125, from NPS 5, fluids G2, L1, L2 ¹⁾
Cryogenic valve	240	3246	DIN/ANSI, all fluids
Three-way valve	250	3253	DIN, body of cast iron from DN200 PN16, fluids G2, L1, L2 ¹⁾
Globe valve	290	3291	ANSI, all fluids
Angle valve	290	3296	ANSI, all fluids
Globe valve	590	3591	ANSI, all fluids
Angle valve	590	3596	ANSI, all fluids
Cryogenic valve	590	3598	ANSI, NPS 3 to NPS 8, Class 900, all fluids
Control valve	---	3595	ANSI, all fluids

¹⁾ Gases according to Article 4(1)(c.i), second indent
Liquids according to Article 4(1)(c.ii)

that the products mentioned above comply with the requirements of the following standards:

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
Applied conformity assessment procedure for fluids according to Article 4(1)	Module H	by Bureau Veritas 0062

The manufacturer's quality management system is monitored by the following notified body:
Bureau Veritas Services SAS, 8 Cours du Triangle, 92800 PUTEAUX – LA DEFENSE
Technical standards applied: DIN EN12516-2, DIN EN12516-3, ASME B16.34

Manufacturer: SAMSON AG, Weismuellerstrasse 3, 60314 Frankfurt am Main, Germany
Frankfurt am Main, 7 April 2021



Dr. Andreas Widl
Chief Executive Officer (CEO)



Dr. Thomas Steckenreiter
Chief Technology Officer (CTO)

Revision 08

Classification: Public · SAMSON AKTIENGESELLSCHAFT · Weismuellerstrasse 3 · 60314 Frankfurt am Main, Germany Page 1 of 1



EU DECLARATION OF CONFORMITY Module H, Nr./No. / N° CE- 0035

Type 3353 Angle Seat Valve

The conformity with the following requirement.

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

Machinery Directive of the European Parliament and of the Council on the harmonization 2006/42/EC of 17 May 2006 of the laws of the Member States relating of the making available on the market of machinery..

Conformity assessment procedure applied for fluids according to Article 4(1)(c.ii) and (c.i) second indent.

certified by
TÜV Rheinland
Industrie Service GmbH
(0035)

For type of module, see table;

Nenndruck Pressure rating	DN NPS	15	20	25	32	40	50
		½	¾	1	1¼	1½	2
PN 40		Without(1)					A

(1) The CE marking affixed to the control valve is not permitted in the sense of the 2014/68/EU.

(2) The identification number 0035 of TÜV Rheinland. Industrie Service GmbH Am Grauen Stein 51105 Köln is not affixed for those products.

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.

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

The manufacturer's quality management system is monitored by the following notified body:
TÜV Rheinland. Industrie Service GmbH Am Grauen Stein 51105 Köln , Certificate CE-0035-01 202 TR/Q-19-2022 covers only products of Category II and III under Module H
Manufacturer: SAMSON A.Ş / Hadımköy Mah. Alparslan Cad. Niyaz sok.No:16-18 34212 Arnavutköy / İSTANBUL - TÜRKİYE. www.samson.com.tr
İSTANBUL / 04.11.2019

Orkan ARIKAN
Factory Manager

Sakine YILMAZ
Sales Manager

SAMSON ÖLÇÜ ve OTOMATİK KONTROL SİSTEMLERİ SANAYİ ve TİCARET A.Ş.
Merkez adresi:Hadımköy Mahallesi,Alparslan Caddesi,Niyaz Sokak No:16-18 34555 Arnavutköy/İstanbul , TÜRKİYE
Ticaret Sicil No : 210522
Tel.:+90 212 651 87 46 (Pbx) , Fax:+90 212 651 87 50 , e-mail:samson@samson.com.tr , web :www.samson.com.tr



Declaration of Conformity of Final Machinery

2020-01

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

For the following products:

Type 3353 Angle Seat Valve

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

For product descriptions of the valve refer to:

- Type 3353 Valve: Mounting and Operating Instructions EB 8139

Referenced technical standards and/or specifications:

- VCI, VDMA, VGB: "Leitfaden Maschinenrichtlinie (2006/42/EG) — Bedeutung für Armaturen, Mai 2018"
- VCI, VDMA, VGB: "Zusatzdokument zum „Leitfaden Maschinenrichtlinie (2006/42/EG) — Bedeutung für Armaturen vom Mai 2018", based on DIN EN ISO 12100:201 1-03

Comment:

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

Persons authorized to compile the technical file:

**SAMSON A.Ş / Hadımköy Mah. Alparslan Cad. Niyaz sok.No:16-18 34212 Arnavutköy
İSTANBUL – TÜRKİYE**

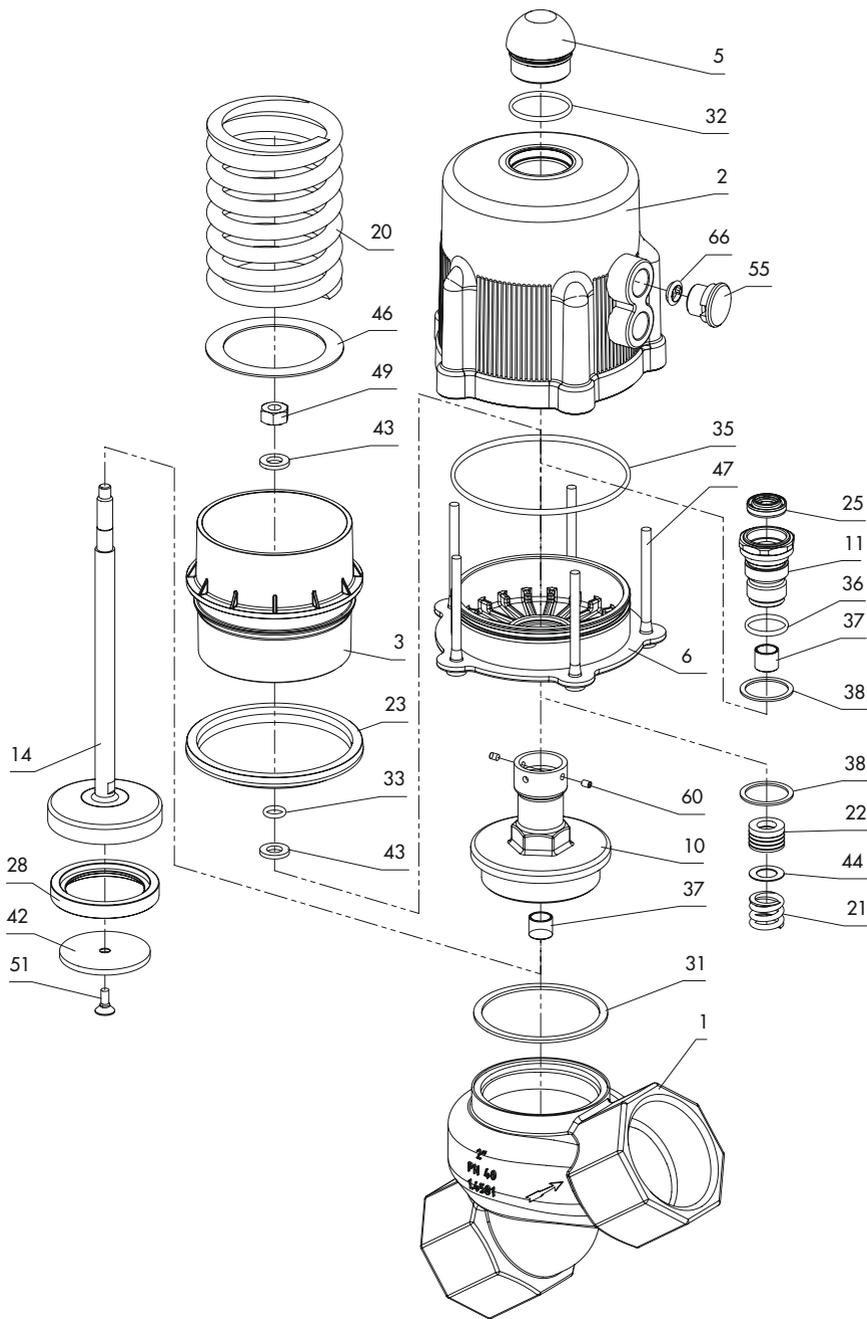
Orkan ARIKAN
Factory Manager

Sakine YILMAZ
Sales Manager

15 Annex

15.1 Spare parts

1	Body	43	Washer
2	Actuator housing	44	Washer
3	Piston	46	Spring washer
5	Dome	47	Cap screw
6	Actuator base	49	Hex nut
10	Valve bonnet	51	Countersunk screw
11	Threaded bushing	55	Vent plug
14	Plug (with plug/actuator stem)	60	Retaining screw (threaded pin)
20	Spring	66	Filter
21	Compression spring		
22	V-ring packing		
23	Piston ring		
25	Radial shaft seal		
28	PTFE seal		
31	Body gasket (seal)		
32	O-ring		
33	O-ring		
35	O-ring		
36	O-ring		
37	Dry bearing		
38	Sliding washer		
42	Plug disk		



15.2 After-sales service

Contact our 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.

Addresses of SAMSON AG and its subsidiaries

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

Required specifications

Please submit the following details:

- Order number and position number in the order
- Type, model number, valve size and valve version
- Pressure and temperature of the process medium
- Flow rate in m³/h
- Supply pressure of the actuator
- Is a strainer installed?
- Installation drawing

EB 8139 EN



SAMSON AKTIENGESELLSCHAFT
Weismüllerstraße 3 · 60314 Frankfurt am Main, Germany
Phone: +49 69 4009-0 · Fax: +49 69 4009-1507
samson@samsongroup.com · www.samsongroup.com