

MOUNTING AND OPERATING INSTRUCTIONS



EB 5861 EN

Translation of original instructions



Type 3260/... Electric and Pneumatic Control Valves

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 > Downloads > Documentation.**

Definition of signal words

DANGER

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

WARNING

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

NOTICE

Property damage message or malfunction

Note

Additional information

Tip

Recommended action

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1 Safety instructions and measures

Intended use

The SAMSON Type 3260 Valve is designed for use in temperature control circuits in HVAC plants. The valve is primarily combined with the following SAMSON actuators:

- As an electric control valve: Type 3260/5857, Type 3260/5827, Type 3260/3374, Type 3260/SAM, Type 3260/5757-7, Type 3260/5724-8 and Type 3260/5725-8
- As pneumatic control valve: Type 3260/2780, Type 3260/3372, Type 3260/3271 and Type 3260/3277

The valve with its actuator 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
- For pneumatic control valves: use outside the limits defined by the valve accessories mounted on the control 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.

Safety instructions and measures

Personal protective equipment

We recommend wearing the following protective equipment:

- Protective clothing, safety gloves and eye protection in applications with hot or cold media
- 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

In combination with the Type 5827-A, Type 5827-E, Type 3374-25 and Type 3374-35 Electric Actuators as well as with the TROVIS 5725-8 Electric Actuator with Process Controller, the following safety feature exists: upon failure of the supply voltage, the valve moves to a defined fail-safe position (see the 'Design and principle of operation' section). The direction of action of the fail-safe action is defined by the actuator version (see associated actuator documentation).

In combination with the Type 2780, Type 3372, Type 3271 and Type 3277 Pneumatic Actuator, the following safety feature exists: upon failure of the air supply, the valve moves to a certain fail-safe position (see the 'Design and principle of operation' section). The fail-safe action of the actuator is the same as its direction of action and is specified on the nameplate of SAMSON actuators (see associated actuator documentation).

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, warnings and caution notes in these mounting and operating instructions.

Hazards resulting from the special working conditions at the installation site of the valve must be identified in a risk assessment and prevented through the corresponding safety instructions drawn up by the operator.

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. 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.

The electric actuators are designed for use in low voltage installations. For wiring, maintenance and repair, observe the relevant safety regulations.

Referenced documentation

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

- Mounting and operating instructions for mounted actuator, e.g. SAMSON actuators:
 - ▶ EB 5857 for Type 5857
 - ▶ EB 5827-1/-2 for Type 5827
 - ▶ EB 8331-X for Type 3374
 - ▶ EB 8330 for Type SAM
 - ▶ EB 5757-7 for TROVIS 5757-7
 - ▶ EB 5724-8 for TROVIS 5724-8 and TROVIS 5725-8
 - ▶ EB 5840 for Type 2780
 - ▶ EB 8313-X for Type 3372
 - ▶ EB 8310-X for Type 3271 and Type 3277
- For pneumatic control valves: mounting and operating instructions for mounted valve accessories (positioner, solenoid valve etc.)
- 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 > REACHIf a device contains a substance listed as a substance of very high concern on the candidate list of the REACH regulation, this is indicated on the SAMSON delivery note.

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 the plant sections affected as well as from the valve.

Risk of fatal injury due to electric shock.

- Do not remove any covers to perform adjustment work on live parts.
- Before performing any work on the device and before opening the device, disconnect the supply voltage and protect it against unintentional reconnection.
- Only use power interruption devices that are protected against unintentional reconnection of the power supply.
- The electric actuators are protected against spray water (IP 54). Avoid jets of water.

1.2 Notes on possible personal injury

WARNING

Crush hazard arising from moving parts.

The Types 3260/2780, 3260/3372, 3260/3271 and 3260/3277 Pneumatic Control Valves contain moving parts (actuator and plug stems), which can injure hands or fingers if inserted into the valve.

- Do not insert hands or finger into the yoke while the air supply is connected to the actuator.
- Before working on the control valve, disconnect and lock the pneumatic air supply as well as the control signal.
- Do not impede the movement of the actuator and plug stem by inserting objects into the yoke.
- Before unblocking the actuator and plug stem after they have become blocked (e.g. due to seizing up after remaining in the same position for a long time), release any stored energy in the actuator (e.g. spring compression). See associated actuator documentation.

Risk of personal injury due to exhaust air being vented from pneumatic devices.

While the valve is operating, the Types 2780, 3372, 3271 and 3277 Pneumatic Actuators vent during closed-loop control 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 mufflers and vent plugs.
- Wear eye protection when working in close proximity to the control valve.

Risk of personal injury due to preloaded springs in pneumatic actuators.

Valves in combination with pneumatic actuators with preloaded springs are under tension. These control valves with SAMSON pneumatic actuators can be identified by the long bolts protruding from the bottom of the actuator.

- Before starting any work on the actuator, relieve the compression from the preloaded springs (see associated actuator documentation).

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

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

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

Risk of burn injuries due to hot components and pipelines.

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

- Allow components and pipelines to cool down.
- 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.

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 due to 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.

1.3 Notes on possible property damage

NOTICE

Risk of damage to the electric control valve due to the supply voltage exceeding the permissible tolerances.

The electric control valves are designed for use according to regulations for low-voltage installations.

→ Observe the permissible tolerances of the supply voltage. See associated actuator documentation.

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.

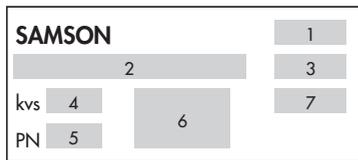
→ Only use the process medium specified for sizing the equipment.

2 Markings on the device

The nameplate shown was up to date at the time of publication of this document. The nameplate on the device may differ from the one shown.

2.1 Valve nameplate

It includes all details required to identify the device:



- 1 Type designation
- 2 Configuration ID
- 3 Date of manufacture
- 4 K_{VS} coefficient
- 5 Pressure rating
- 6 Version \rightarrow mixing valve, \leftarrow diverting valve
- 7 Max. permissible temperature

Tip

We recommend to include the device's configuration ID (item 2 on the nameplate) and/or its material number (as specified in the order confirmation) in the plant documentation for the associated tag number.

For example, you can use the associated information to order a new nameplate from our After-sales Service, if required.

2.2 Actuator nameplate

See associated actuator documentation.

3 Design and principle of operation

The three-way valve is primarily used as a mixing valve. The media to be mixed enter the valve at ports A and B. The combined flow exits the valve at port AB.

The medium in diverting valves enters the valve at port AB and the partial flows exit at ports A and B.

The cross-sectional area of flow between the seat (2) and plug (3) is determined by the position of the plug stem (6). The plug is moved by changing the control signal applied to the actuator.

The valve and actuator in sizes up to DN 50 have a force-locking connection. The valve and actuator in sizes DN 65 and larger have a force-fit connection.

3.1 Fail-safe action

When the Type 3260 Valve is combined with one of the following actuators, the valve moves to the fail-safe position upon failure of the air supply or supply voltage:

- Type 5827-A, Type 5827-E, Type 3374-25 and Type 3374-35 Electric Actuators
- TROVIS 5725-8 Electric Actuator with Process Controller
- Types 2780, 3372, 3271 and Type 3277 Pneumatic Actuators

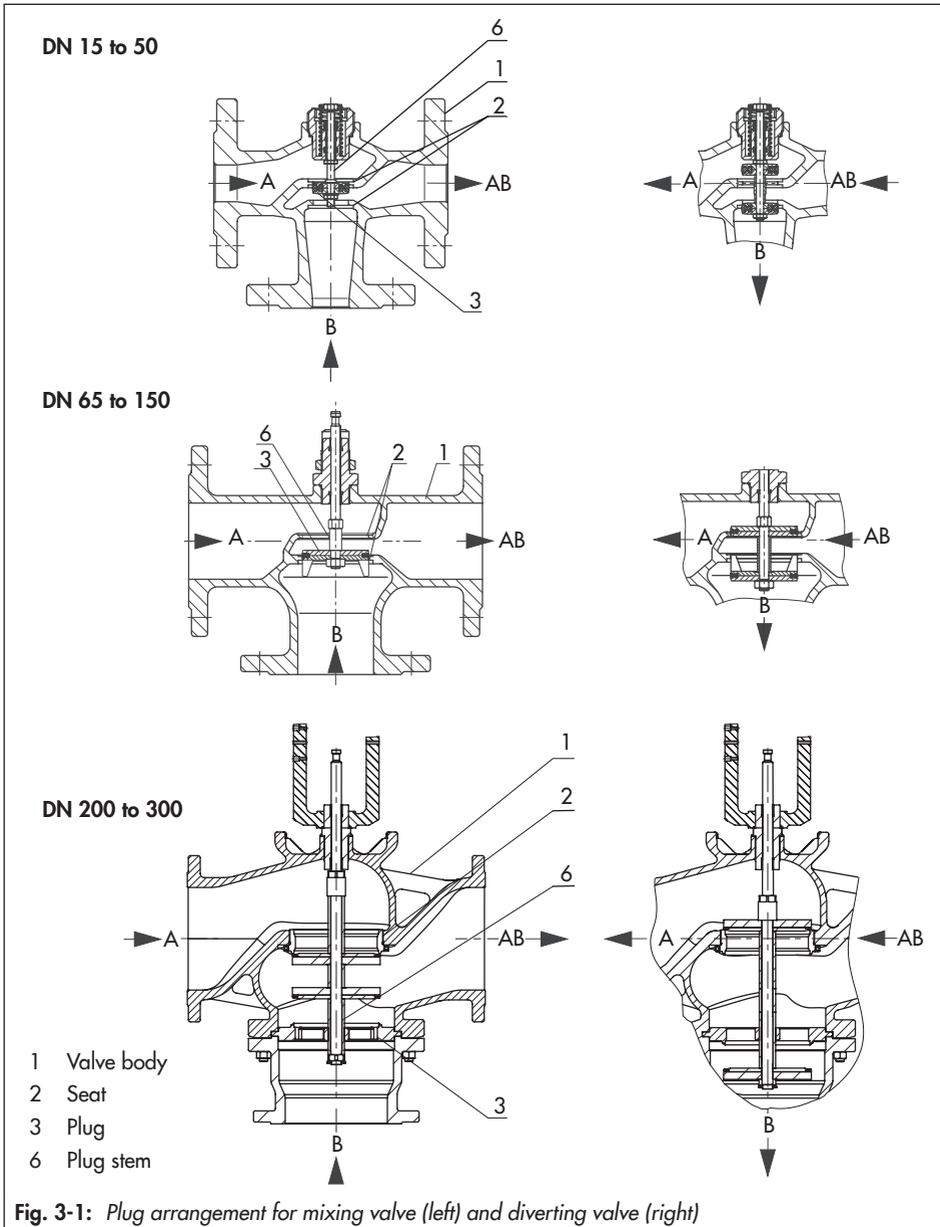
One of two different fail-safe positions can be assumed by the control valve:

- **Actuator stem extends:** upon supply voltage or air supply failure, the actuator stem extends. In mixing valves, port B is closed and in diverting valves, port A is closed.
- **Actuator stem retracts:** upon supply voltage or air supply failure, the actuator stem retracts. In mixing valves, port A is closed and in diverting valves, port B is closed.

i Note

The fail-safe action of pneumatic actuators can be reversed (see associated actuator documentation). The fail-safe action of electric actuators (with process controller) is already determined at the ordering stage.

Design and principle of operation



3.2 Versions

Intermediate insulating piece

An intermediate insulating piece is available for insulated pipes:

- For DN 15 to 50: 1990-1712
- For DN 65 to 150: 1991-4686

Electric actuators

The Types 5857, 5827, 3374 and SAM Electric Actuators can be controlled using a three-step signal. All electric actuators can also be controlled in the version with positioner by a 0/4 to 20 mA or 0/2 to 10 V signal. Various electrical accessories can be optionally installed. Types 5827-A, 5827-E, 3374-25 and 3374-35 Actuator are able to perform a fail-safe action (see Table 3-1).

Electric actuators with process controllers

Electric actuators with process controller are a combination of an electric actuator and a digital process controller. The TROVIS 5757-7, TROVIS 5724-8 and TROVIS 5725-8 Electric Actuators with Process Controller are suitable for heating and cooling applications.

TROVIS 5724-8 and TROVIS 5725-8 have two PID control modules and are ready-wired. The TROVIS 5725-8 Actuator is able to perform a fail-safe action. Refer to Table 3-1.

Pneumatic actuators

The Types 2780, 3271 and 3277 Pneumatic Actuators as well as the Type 3372 Electro-pneumatic Actuator work with various control signals. Types 2780, 3271 and 3277 Pneumatic Actuators require a supply pressure of at least 0.2 bar above the maximum bench range. A supply pressure of at least 3.7 bar is required for Type 3372.

Table 3-1: Available versions and possible combinations (Type 3260 Valve/actuator)

Type/TROVIS	Fail-safe action: actuator stem		Valve size DN														
	Extends	Retracts	15	20	25	32	40	50	65	80	100	125	150	200	250	300	
Electric actuators																	
5857 ¹⁾	-	-	•	•	•												
5827-N1 ²⁾	-	-	•	•	•												
5827-A1 ²⁾	•	-	•	•	•												
5827-E1 ²⁾	-	•	•	•	•												
5827-N2 ²⁾	-	-				•	•	•									
5827-A2 ²⁾	•	-				•	•	•									
5827-E2 ²⁾	-	•				•	•	•									
5827-N3 ^{2) 5)}	-	-								•	•						
3374-11	-	-								•	•						

Design and principle of operation

Type/TROVIS	Fail-safe action: actuator stem		Valve size DN														
	Extends	Retracts	15	20	25	32	40	50	65	80	100	125	150	200	250	300	
3374-10	–	–				–			•	•	•	•	•			–	
3374-25 ³⁾	•	–				–			•	•	•	•	•			–	
3374-35 ³⁾	–	•				–			•	•	•	•	•			–	
SAM-32 ⁴⁾	–	–						–							•	•	•
Electric actuators with process controller for heating and cooling applications																	
5757-7 ¹⁾	–	–	•	•	•											–	
5724-810	–	–	•	•	•											–	
5724-820	–	–				–	•	•	•							–	
5724-830 ^{2) 5)}	–	–				–			•	•						–	
5725-810	•	–	•	•	•											–	
5725-820	•	–				–	•	•	•							–	
Pneumatic actuators																	
2780-1	•	•	•	•	•	•	•	•	•							–	
2780-2	•	•	•	•	•	•	•	•	•							–	
3372 ⁶⁾	•	•				–			•	•	•	•	•			–	
3271 ^{3) 4)}	•	•				–			•	•				•	•	•	
3277 ³⁾	•	•				–			•	•						–	

1) Type 3260 Three-way Valve combined with this actuator as version with special spring

2) Versions with half transit time on request

3) Type 3260 Three-way Valve in combination with these actuators with rod-type yoke:

DN 65 to 80: order no. 1890-8696; for Type 3271 with 175v2 cm² actuator area additionally order no. 0250-1450

DN 100 to 150: order no. 1400-8822

4) DN 200 to 300: these valves do not need an extra rod-type yoke.

5) Type 3260 Three-way Valve in combination with this actuator with rod-type yoke, order no. 1400-7414

6) DN 65 to 80: with integrated i/p converter or with Type 3725 Positioner (direct attachment)

DN 100 to 150: with Type 3725 Positioner (direct attachment)

3.3 Additional fittings

Refer to the instructions in the 'Installation' section.

Strainers

We recommend installing a SAMSON Type 2 NI Strainer upstream of the valve. It prevents solid particles in the process medium from damaging the valve.

Bypass and shut-off valves

We recommend installing a shut-off valve both upstream of the strainer and downstream of the valve and installing a bypass line. The bypass ensures that the plant does not need to be shut down for service and repair work on the valve.

Intermediate insulating piece

An intermediate insulating piece must be used under the following conditions:

- For medium temperatures between -15 to $+5$ °C (actuators according to Table 3-1)
- In networks with a constant medium temperature >135 °C (TROVIS 5724-8, TROVIS 5725-8 and Type 5827 Actuators)
- For liquids >120 °C (TROVIS 5757-7 and Type 5857 Actuators)

The intermediate insulating piece (1990-1712) is used for DN 15 to 50 and the intermediate insulating piece (1991-4686) for DN 65 to 150.

Safety guard

For operating conditions that require increased safety (e.g. in cases where the valve is freely accessible to untrained staff), a safety guard must be installed on control valves with a yoke to rule out a crush hazard arising from moving parts (actuator and plug stem). Plant operators are responsible for deciding whether a guard is to be used. The decision is based on the risk posed by the plant and its operating conditions.

3.4 Technical data

The nameplates on the valve and actuator provide information on the control valve version. See the 'Markings on the device' section and the associated actuator documentation.

i Note

More information is available in Data Sheet ► T 5861.

Noise emissions

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

Design and principle of operation

Table 3-2: Technical data

Valve size	DN	15	20	25	32	40	50	65	80	100	125	150	200	250	300	
Pressure rating	PN	16														
Permissible temperature range	°C	5 ¹⁾ to 150 ¹⁾														
Seat-plug seal		Soft seal														
Rated travel	mm	6			12			15			30			60		
Mixing valve		•			•			•			•			•		
Diverting valve		•			•			•			•			•		
Leakage class according to IEC 60534-4		Class IV (≤ 0.01 % of K_{VS} coefficient)														
Conformity ²⁾																

¹⁾ Use an intermediate insulating piece (see section 3.3, “Intermediate insulating piece”)

²⁾ Field of applications are the control of Group II fluids according to Pressure Equipment Directive 2014/68/EU. However, it does not include steam and neutral vapors. The permissible temperature range and the corresponding safety statements according to section 3.3 (“Intermediate insulating piece”) must be observed.

Table 3-3: Materials · Material numbers according to DIN EN

Valve size	DN	15	20	25	32	40	50	65	80	100	125	150	200	250	300	
Valve body		Cast iron EN-GJL-250 (GG-25)														
Seat		Cast iron EN-GJL-250 (GG-25)											1.4006/ 1.0619	1.4301/ 1.0619		
Plug		Brass · CC754 · CW617											1.4404	1.4301		
Plug stem		Stainless steel · 1.4305											1.4305			
Seat-plug seal		EPDM (standard) · FKM (special version up to DN 125)														
Stem seal		EPDM seal ring														
Special version for oils		FKM seal											–			
Rod-type yoke		–							See actuator					–		

Table 3-4: Valve sizes, K_{VS} coefficients and seat diameters

Valve size	DN	15			20	25	32	40	50	65	80	100	125	150	200	250	300	
K_{VS} coefficient		1	1.6	2.5	4	6.3	10	16	25	40	60	80	160	250	$\frac{320}{250}$ ¹⁾	630	800	1200
Seat \varnothing	mm	16	16	16	16	20	24	32	40	40	70	70	100	130	130	207	207	276
Rated travel	mm	6	6	6	6	6	6	12	12	12	15	15	30	30	30	60	60	60

¹⁾ Direction of flow B \leftrightarrow AB with maximum K_{VS} coefficient, direction of flow A \leftrightarrow AB with reduced K_{VS} coefficient

Table 3-5: Permissible differential pressures · All pressures stated in bar

Table 3-5.1: Electric control valves

Type/TROVIS		5857 5757-7	5827 5724/5725	3374 -11 ³⁾ -10 ³⁾		3374 -25/-35	SAM -32
DN	K _{V5} coefficients	Δp when p ₂ = 0 bar					
15	1 · 1.6 · 2.5 · 4	4	4	-	-	-	-
20	6.3	2.6	4	-	-	-	-
25	10	1.8	4	-	-	-	-
32	16	-	1.7	-	-	-	-
40	25	-	1.1	-	-	-	-
50	40	-	1.1	-	-	-	-
65	60	-	1.3 ¹⁾	4	4	4	-
80	80	-	1.3 ¹⁾	4	4	4	-
100	160	-	-	-	2.8	1.9	-
125	250	-	-	-	1.7	1.1	-
150	250/320 ²⁾	-	-	-	1.7	1.1	-
200	630	-	-	-	-	-	3.1
250	800	-	-	-	-	-	3.1
300	1200	-	-	-	-	-	1.6

¹⁾ Only with Type 5827-N3 Electric Actuator

²⁾ Direction of flow B <-> AB with maximum K_{V5} coefficient, direction of flow A <-> AB with reduced K_{V5} coefficient

³⁾ The maximum differential pressure is reduced by 50 % when actuators with positioners in the version with faster motors are used.

Design and principle of operation

Table 3-6: Type 3260/2780-1, Type 3260/2780-2 and Type 3260/3372 Pneumatic Control Valves

Type		2780-1	2780-2	3372				
Actuator area	cm ²	120	120	120	120 ³⁾	350 ³⁾	350 ⁴⁾	
Bench range	min. bar	0.4	0.4	1.4	2.1	0.8	0.9	
	max. bar	1.0	2.0	2.3	3.3	1.3	1.65	
Max. supply pressure		bar	1.4 ¹⁾	2.4 ¹⁾	4.0	5.0	2.3	2.5
DN	K _{V5} coefficients	Δp when p ₂ = 0 bar						
15	1 · 1.6 · 2.5 · 4	4.0	4.0	-	-	-	-	
20	6.3	4.0	4.0	-	-	-	-	
25	10	4.0	4.0	-	-	-	-	
32	16	1.7	1.7	-	-	-	-	
40	25	1.1	1.1	-	-	-	-	
50	40	1.1	1.1	-	-	-	-	
65	60	-	-	3.8	4.0	-	-	
80	80	-	-	3.8	4.0	-	-	
100	160	-	-	-	-	3.1	3.1	
125	250	-	-	-	-	1.8	1.8	
150	250/320 ²⁾	-	-	-	-	1.8	1.8	
200	630	-	-	-	-	-	-	
250	800	-	-	-	-	-	-	
300	1200	-	-	-	-	-	-	

¹⁾ Only with "actuator stem retracts" fail-safe action. Max. 4 bar with "actuator stem extends" fail-safe action.

²⁾ Direction of flow B <-> AB with maximum K_{V5} coefficient
Direction of flow A <-> AB with reduced K_{V5} coefficient

³⁾ Actuator stem extends

⁴⁾ Actuator stem retracts

Table 3-6.2: Type 3260/3271 and Type 3260/3277 Pneumatic Control Valves

Type		3271 and 3277				3271		
Actuator area ²⁾	cm ²	175v2	175v2	350	350	1000		1400-60
Bench range	min. bar	0.6	1.3	0.4	0.6	0.8	1.0 ³⁾	1.1
	max. bar	3.0	2.9	2.0	3.0	2.8	3.2	2.4
Max. supply pressure	bar	3.7	4.3	2.5	3.7	4.0	4.0	4.0
DN	K _{VS} coefficients	Δp when p ₂ = 0 bar						
15	1 · 1.6 · 2.5 · 4	-	-	-	-	-	-	-
20	6.3	-	-	-	-	-	-	-
25	10	-	-	-	-	-	-	-
32	16	-	-	-	-	-	-	-
40	25	-	-	-	-	-	-	-
50	40	-	-	-	-	-	-	-
65	60	2.1	4.0	3.0	4.0	-	-	-
80	80	2.1	4.0	3.0	4.0	-	-	-
100	160	-	-	-	-	-	-	-
125	250	-	-	-	-	-	-	-
150	250/320 ¹⁾	-	-	-	-	-	-	-
200	630	-	-	-	-	2.2	3.0	4.0
250	800	-	-	-	-	2.2	3.0	4.0
300	1200	-	-	-	-	1.2	1.7	2.2

¹⁾ Direction of flow B <-> AB with maximum K_{VS} coefficient

Direction of flow A <-> AB with reduced K_{VS} coefficient

²⁾ v2 is added to the actuator area (e.g. 175v2 cm²) to indicate that Type 3271 and Type 3277 Actuators have a full diaphragm

³⁾ Actuator stem extends

Design and principle of operation

Dimensions and weights

Table 3-7: *Dimensions and weights for electric control valves*

The lengths and heights in the dimensional drawings are shown on pages 3-11 and 3-12.

Table 3-7.1: *Type 3260 Three-way Valve · Face-to-face dimensions*

Valve size	DN	15	20	25	32	40	50	65	80	100	125	150	200	250	300
Overall length L1	mm	130	150	160	180	200	230	290	310	350	400	480	600	730	850
Overall length L2	mm	70	80	85	100	105	120	130	140	150	200	210	450	450	550

Table 3-7.2: *Type 3260 Three-way Valve · Overall height*

Valve size	DN	15	20	25	32	40	50	65	80	100	125	150	200	250	300		
Height H1 for Type/ TROVIS ...	5857, 5757-7	mm	131			-											
	5724-8, 5725-8	mm	158			168			-								
	5827	mm	161			171			-								
Actuator	5827-N3	mm	-					277			-						
	3374-10/-11	mm	-					365			406		-				
Height H2 for actuator	3374-25/-35	mm	-					265			306			-			
	SAM-32	mm	-													519	519

Table 3-7.3: *Type 3260 Three-way Valve · Weights*

Valve size	DN	15	20	25	32	40	50	65	80	100	125	150	200	250	300
Weight, approx.	kg	4.0	5.0	5.5	8.5	10	12	20	23	38	50	65	266	285	410

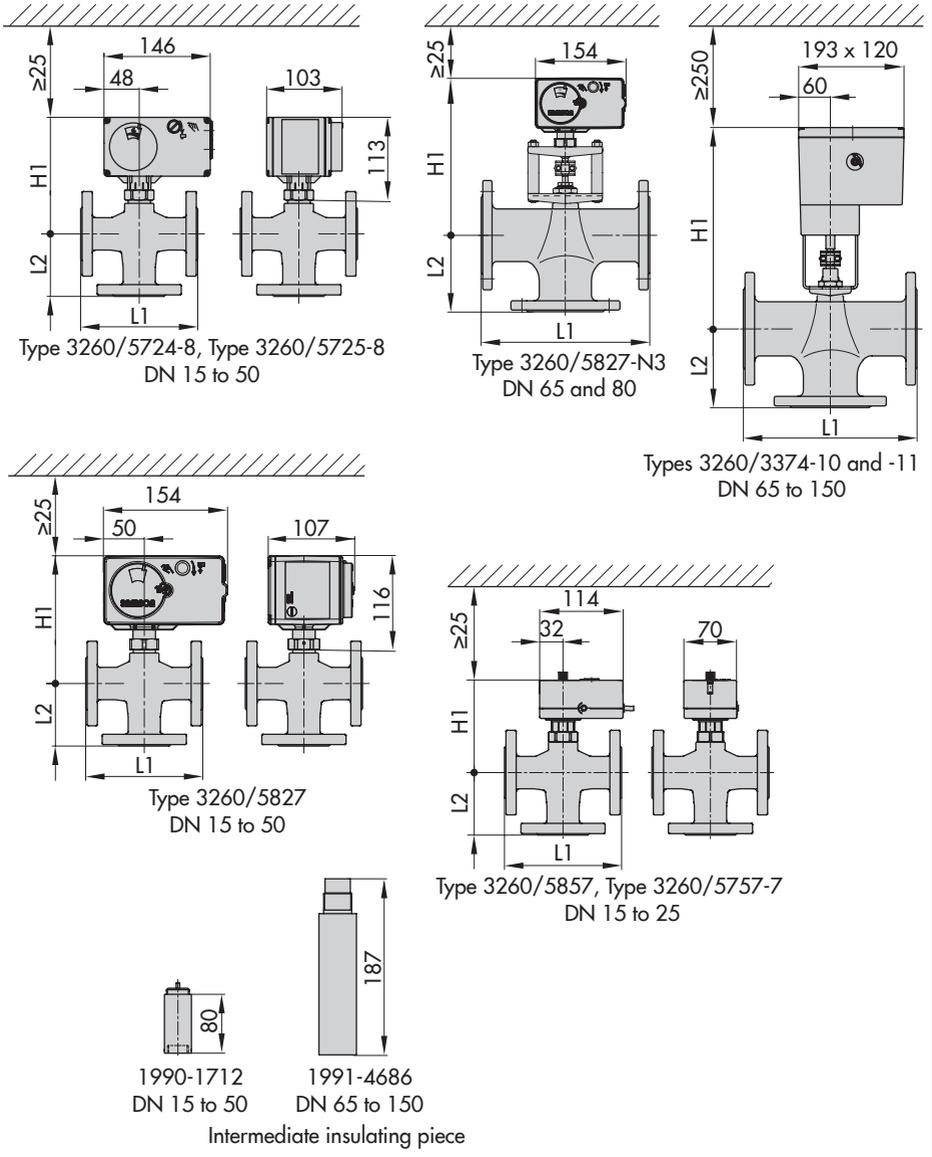
Table 3-7.4: *Electric actuators · Weights*

Type	5857	5827-N	5827-A/-E	3374-10/-11	3374-25/-35	SAM-32	
Weight, approx.	kg	0.7	0.75	1.0	3.2	6.2	13

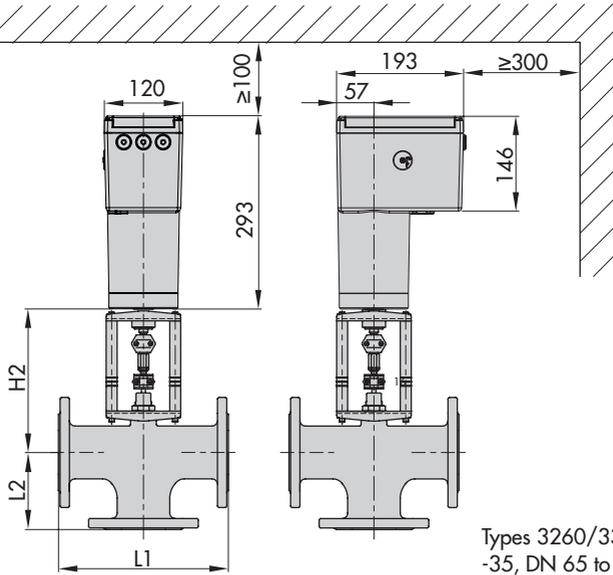
Table 3-7.5: *Electric actuators with process controller · Weights*

TROVIS	5757-7	5724-8	5725-8	
Weight, approx.	kg	0.7	1.1	1.3

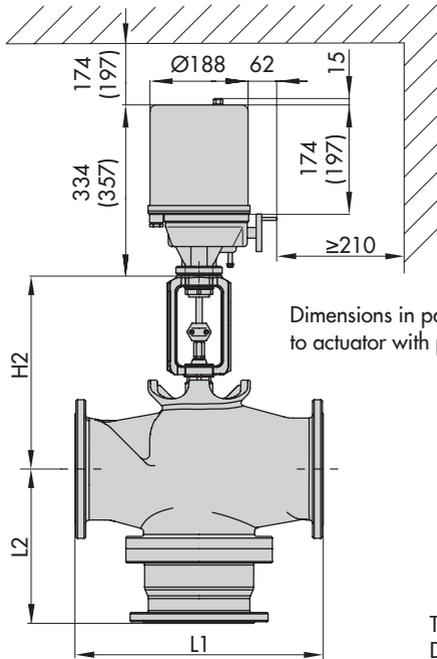
Electric control valves (part 1)



Electric control valves (part 2)



Types 3260/3374-25 and
-35, DN 65 to 150



Dimensions in parentheses apply
to actuator with positioner

Type 3260/SAM-32,
DN 200 to 300

Table 3-8: Dimensions and weights for pneumatic control valves

The lengths and heights in the dimensional drawings are shown on pages 3-14 and 3-15.

Table 3-8.1: Type 3260 Three-way Valve · Face-to-face dimensions

Valve size	DN	15	20	25	32	40	50	65	80	100	125	150	200	250	300
Overall length L1	mm	130	150	160	180	200	230	290	310	350	400	480	600	730	850
Overall length L2	mm	70	80	85	100	105	120	130	140	150	200	210	450	450	550

Table 3-8.2: Type 3260 Three-way Valve · Overall height

Valve size	DN	15	20	25	32	40	50	65	80	100	125	150	200	250	300
Height H1 for actuator	2780-1	mm	161		171		-								
	2780-2	mm	261		271		-								
	3372 (120 cm ²)	mm	-				307			-					
	3372 (350 cm ²)	mm	-				-			382		-			
Height H2 for actuator	3271	mm	-				265			-		519		519	556
	3277	mm	-				265			-		-			

Table 3-8.3: Type 3260 Three-way Valve · Weights

Valve size	DN	15	20	25	32	40	50	65	80	100	125	150	200	250	300
Weight, approx.	kg	4.0	5.0	5.5	8.5	10	12	20	23	38	50	65	266	285	410

Table 3-8.4: Pneumatic actuators · Dimensions and weights

	Type	2780	3372		3271				3277	
Actuator area ³⁾	cm ²	120	120	350	175v2	350	1000	1400-60	175v2	350
Height H	mm	-	-	-	78	82	313	197 ¹⁾	78	82
Height H7	mm	-	-	-	-	-	90 ²⁾	90 ²⁾	-	-
Height H3 ⁴⁾	mm	110	110	110	110	110	610	610	110	110
Diaphragm ØD	mm	168	168	280	215	280	462	530	215	280
Supply air port	a	G 1/8	G 3/8	G 1/4	G 1/4	G 3/8	G 3/4	G 3/4	G 1/4	G 3/8
Weight, approx.	kg	2	3.7	15	6	8	80	70	10	12

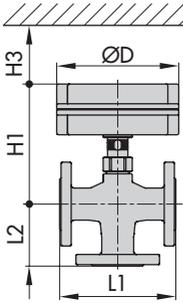
¹⁾ Height H increases to 243 mm for special version with female thread.

²⁾ Height with welded-on lifting eyelet or height of eyebolt according to DIN 580. Further information on lifting eyelets can be found in Data Sheets ► T 8310-1, ► T 8310-2 and ► T 8310-3

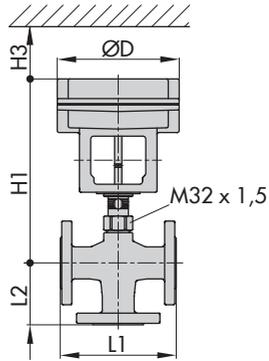
³⁾ v2 is added to the actuator area (e.g. 175v2 cm²) to indicate that Type 3271 and Type 3277 Actuators have a full diaphragm

⁴⁾ Minimum clearance required to remove the actuator

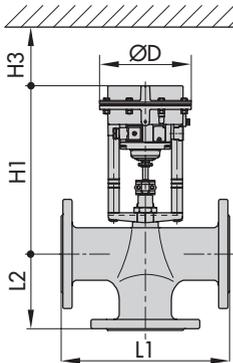
Pneumatic control valves (part 1)



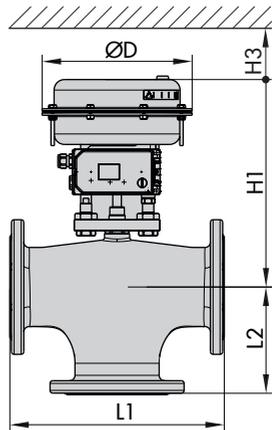
Type 3260/2780-1, DN 15 to 50



Type 3260/2780-2, DN 15 to 50

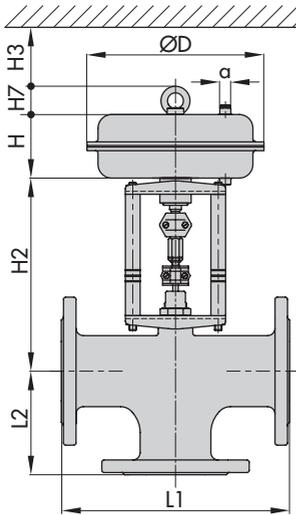


Type 3260/3372 (120 cm²), DN 65 to 80

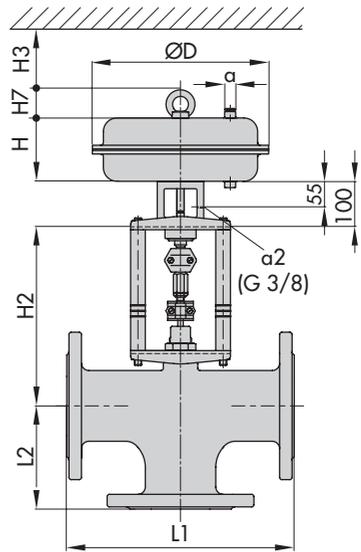


Type 3260/3372 (350 cm²),
DN 100 to 150

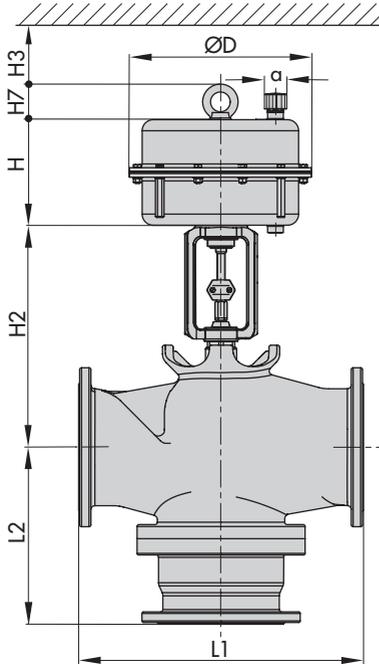
Pneumatic control valves (part 2)



Type 3260/3271, DN 65 to 80



Type 3260/3277, DN 65 to 80



Type 3260/3271, DN 200 to 300

4 Shipment and on-site transport

The work described in this section is to be performed only 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).
3. Determine the weight and dimensions of the units to be lifted and transported in order to select the appropriate lifting equipment and lifting accessories. Refer to the transport documents and the 'Technical data' section.

4.2 Removing the packaging from the valve

Observe the following sequence:

- Do not remove the packaging until immediately before installation.
- Leave the control valve in its transport container or on the pallet to transport it on site.

- Do not remove the protective caps from the inlet and outlet until immediately before installing the valve into the pipeline. They prevent foreign particles from entering the valve.
- Dispose and recycle the packaging in accordance with the local regulations.

4.3 Transporting and lifting the valve

⚠ DANGER

Danger due to suspended loads falling.

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

⚠ WARNING

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

- *Only use approved lifting equipment and accessories whose minimum lifting capacity is higher than the weight of the valve (including actuator and packaging, if applicable).*
-

⚠ WARNING

Risk of personal injury due to the control valve tipping over.

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

WARNING

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

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

→ Observe the occupational health and safety regulations valid in the country of use.

NOTICE

Risk of valve damage due to incorrectly attached slings.

The welded-on lifting eyelet on SAMSON actuators is only intended for mounting and removing the actuator as well as lifting the actuator without valve. Do not use this lifting eyelet to lift the entire control valve assembly.

→ When lifting the control valve, make sure that the slings attached to the valve body bear the entire load.

→ Observe lifting instructions (see section 4.3.2).

Tip

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

4.3.1 Transporting the valve

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

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

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 piping and any mounted valve accessories against damage.
- Protect the control valve against moisture and dirt.
- The permissible transportation temperature is between -20 and $+65$ °C.

4.3.2 Lifting the valve

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

Lifting instructions

- Use a hook with safety latch (see Fig. 4-1) to secure the slings from slipping off the hook during lifting and transporting.
- Secure slings against slipping.
- Make sure the slings can be removed from the valve once it has been installed into the pipeline.

- Prevent the control valve from tilting or tipping over.
 - Do not leave loads suspended when interrupting work for longer periods of time.
 - Make sure that the axis of the pipeline is always horizontal during lifting and the axis of the plug stem is always vertical.
 - Make sure that the additional sling between the lifting eyelet and rigging equipment (hook, shackle etc.) does not bear any load when lifting valves. The sling only protects the control valve from tilting while being lifted. Before lifting the control valve, tighten the sling.
6. After installation in the pipeline, check whether the flanges are bolted tight and the valve in the pipeline holds.
 7. Remove slings.

Lifting the control valve

1. Attach one sling to each flange of the body and to the rigging equipment (e.g. hook) of the crane or forklift (see Fig. 4-1).
2. If necessary, attach another sling to the lifting eyelet on the actuator or to the valve yoke and to the rigging equipment. Make sure that the actuator stem is not damaged.
3. Carefully lift the control valve. Check whether the lifting equipment and accessories can bear the weight.
4. Move the control valve at an even pace to the site of installation.
5. Install the valve into the pipeline (see the 'Installation' section).

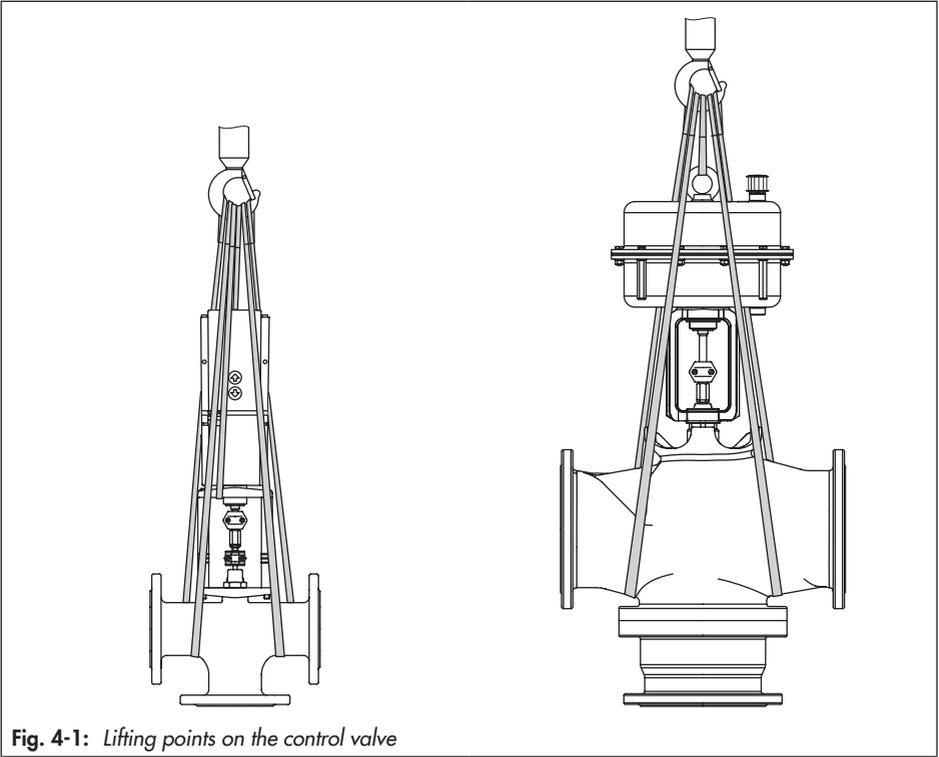


Fig. 4-1: *Lifting points on the control valve*

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.

Note

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

Storage instructions

- The control valves can be stored horizontally. Secure the valve in the stored position against slipping or tipping over.
- 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. Store it at a relative humidity of less than 75 %. In damp spaces, prevent condensation. If necessary, use a drying agent or heating.
- Make sure that the ambient air is free of acids or other corrosive media.
- The permissible storage temperature is between -20 and $+65$ °C.

- Do not place any objects on the control valve.
- For storage periods longer than 4 months, we recommend storing the control valves in valve sizes DN 150/NPS 6 or larger upright with the actuator on top.

Special storage instructions for elastomers

Elastomer, e.g. actuator 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

Our after-sales service can provide more detailed storage instructions on request.

5 Installation

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

5.1 Installation conditions

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.

Mounting position

Generally, we recommend installing the valve with the actuator upright and on top of the valve.

For versions with electric actuators (with process controller), the actuator must not be suspended downwards (see Fig. 5-1).

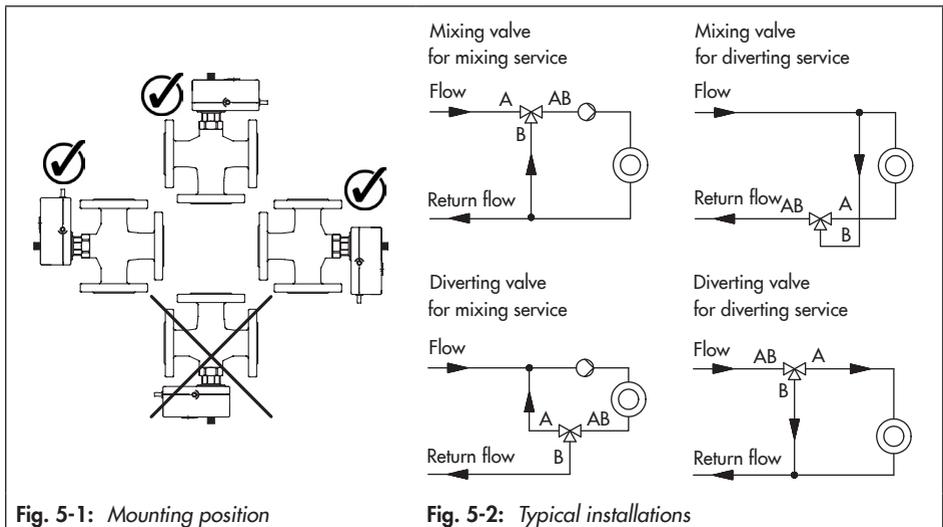
➔ Contact SAMSON if the mounting position is not as specified above.

Pipeline routing

The valves are supplied as either mixing or diverting valves. They can be used for both mixing as well as diverting service (see Fig. 5-2).

To ensure the control valve functions properly, follow the installation instructions given below:

➔ Make sure that the plant-related arrangement of inlet and outlet located at the



Installation

ports **A**, **B** and **AB** comply with the symbols on the body nameplate. Fig. 5-2 shows examples of installation in the pipeline.

- Do not exceed the maximum permissible flow velocity.

i Note

The plant operator is responsible for determining the maximum permissible flow velocity. Our after-sales service can support you to determine the flow velocity for your plant.

- Install the valve free of stress and with the least amount of vibrations as possible. Read information under "Mounting position" and "Support or suspension" in this section.
- Install the valve allowing sufficient space to remove the actuator and valve or to perform service work on them.

Support or suspension

i Note

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

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

Valves, which are not installed in the pipeline in the upright position with the actuator on top, must be supported or suspended.

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). Furthermore, 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

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 the 'Additional fittings' section) have been installed or prepared as necessary before installing the valve.

Proceed as follows:

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

i Note

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

- ➔ Check any mounted pressure gauges to make sure they function properly.
- ➔ When the valve and actuator are already assembled, check the bolted joints. Components may loosen during transport.

5.3 Mounting the device

The activities listed below are necessary to install the valve and before it can be started up.

We recommend first installing the valve into the pipeline and mounting the actuator afterwards.

! 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.
-

5.3.1 Installing the control valve into the pipeline

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.

Strainer:

- ➔ Make sure the direction of flow of the strainer and valve are identical.
 - ➔ Install the strainer with the filter element facing downwards.
 - ➔ Allow sufficient space to remove the filter.
3. Remove the protective caps from the valve ports before installing the valve.

Installation

4. Lift the valve using suitable lifting equipment to the site of installation (see the 'Lifting the valve' section). Observe the flow direction through the valve. The arrow on the valve indicates the direction of flow.
5. Make sure that the correct flange gaskets are used.
6. Bolt the pipe to the valve free of stress.
7. Attach a support or suspension on the valve, if necessary.

Intermediate insulating piece

- Do not insulate the actuator and the coupling nut as well.
- Only insulate the intermediate insulating piece up to 25 mm at the maximum.

5.3.2 Mounting actuators

- **DN 65 and larger:** remove the transport protection before mounting the actuator.
- Before mounting the actuator on the valve, unthread and remove the hex nut (8) on the valve. The stem connector (7) acts as the travel stop.

As described in the associated actuator documentation, the actuators are mounted using the mounting parts (if required) listed in the 'Mounting parts' section in the Annex and additionally according to the description on page 5-5 for Type 3271 (175v2 to 350 cm²) and Type 3277 Actuators.

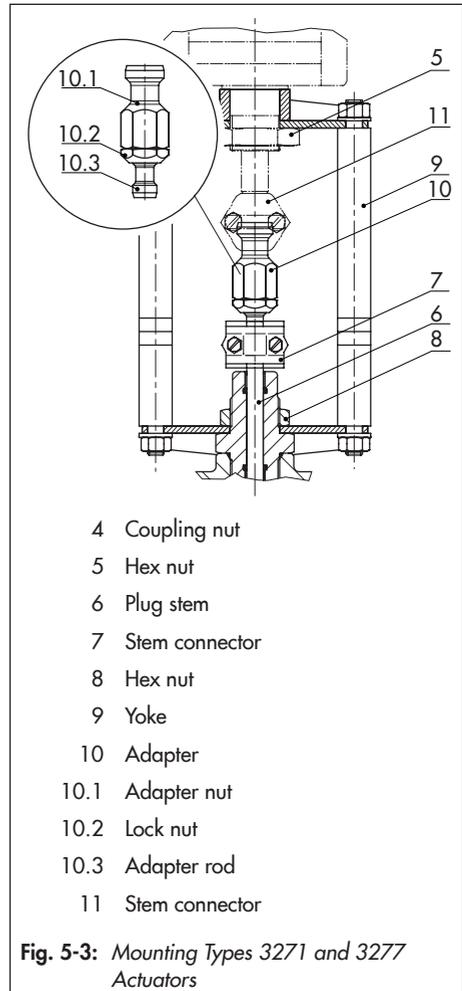
- Type 5857 Electric Actuator ▶ EB 5857
- Type 5827 Electric Actuator ▶ EB 5827-1/-2
- Type 3374 Electric Actuator ▶ EB 8331-X
- TROVIS 5757-7 Electric Actuator with Process Controller ▶ EB 5757-7
- TROVIS 5724-8 Electric Actuator with Process Controller ▶ EB 5724-8
- TROVIS 5725-8 Electric Actuator with Process Controller ▶ EB 5724-8
- Type 2780 Pneumatic Actuator ▶ EB 5840
- Type 3372 Pneumatic Actuator ▶ EB 8313-X
- Type 3271 Pneumatic Actuator (1000 cm²) ▶ EB 8310-2
- Type 3271 Pneumatic Actuator (1400-60 cm²) ▶ EB 8310-3
- Type SAM Electric Actuator ▶ EB 8330
- Type 3271 and Type 3277 (175v2 to 350 cm²) Pneumatic Actuators ▶ EB 8310-5 and ▶ EB 8310-6

**Mounting Type 3271 and Type 3277
(175v2 ¹⁾ to 350 cm²) Actuators**

1. Place the yoke (9) on valve and fasten tight with hex nut (min. 100 Nm).
2. **Type 3271 and Type 3277 Actuator (350 cm²):** fasten the adapter (10) together with the two stem connector clamps (7) to the plug stem (6).

Type 3271 and Type 3277 Actuator (175v2 cm² ¹⁾): replace the top adapter nut (10.1) on the adapter (10) with the nut (0250-1450). Fasten the reassembled adapter with the two stem connector clamps (7) to the plug stem (6).

3. **Actuators with "actuator stem extends" fail-safe action:** apply air pressure slightly higher than the final value of the bench range to the signal pressure connection.
4. Place actuator on yoke (9) and fasten using hex nut (5).
5. Position the two stem connector parts (11) and fasten tight.



¹⁾ v2 is added to the actuator area (e.g. 175v2 cm²) to indicate that Type 3271 and Type 3277 Actuators have a full diaphragm

5.3.3 Connecting the actuator

Perform the electrical or pneumatic connection of the actuator as described in the associated actuator documentation.

5.3.4 Configuring the actuator

The electric actuator versions with positioner as well as electric actuators with process controller can be adapted to the control task. Configure the actuator as described in the associated actuator documentation.

Note

For electric control valves with positioner, an initialization needs to be performed after the initial start-up (see associated documentation).

- Drain the process medium from the plant sections affected as well as from the valve.

DANGER

Risk of fatal injury due to electric shock.

- Do not remove any covers to perform adjustment work on live parts.
- Before performing any work on the device and before opening the device, disconnect the supply voltage and protect it against unintentional reconnection.
- Only use power interruption devices that are protected against unintentional reconnection of the power supply.
- The electric actuators are protected against spray water (IP 54). Avoid jets of water.

5.4 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.

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 burn injuries due to hot components and pipeline.**

Valve components and the pipeline may become very hot. Risk of burn injuries.

- ➔ Allow components and pipelines to cool down.
- ➔ Wear protective clothing and safety gloves.

⚠ WARNING**Types 3260/2780, 3260/3372, 3260/3271 and 3260/3277: crush hazard arising from the actuator and plug stem moving.**

- ➔ Do not insert hands or finger into the yoke while the air supply is connected to the actuator.
- ➔ Before working on the control valve, disconnect and lock the pneumatic air supply as well as the control signal.
- ➔ Do not impede the movement of the actuator and plug stem by inserting objects into the yoke.
- ➔ Before unblocking the actuator and plug stem after they have become blocked (e.g. due to seizing up after remaining in the same position for a long time), release any stored energy in the actuator (e.g. spring compression). See associated actuator documentation.

⚠ WARNING**Risk of personal injury due to exhaust air being vented from pneumatic devices.**

While the valve is operating, the Types 2780, 3372, 3271 and 3277 Pneumatic Actuators vent during closed-loop control 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 in pneumatic actuators.**

Actuators with preloaded springs are under tension. They can be identified by the long bolts protruding from the bottom of the actuator.

- ➔ Before starting any work on the actuator, relieve the compression from the preloaded springs (see associated actuator documentation).

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

5.4.1 Leakage

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



Tip

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

1. Slowly apply the test medium to the valve until the test pressure is reached. Avoid sudden surges in pressure since the resulting high velocities may damage the valve.
2. Check the valve for leakage to the atmosphere.
3. Depressurize the pipeline section and valve.
4. Rework any parts that leak and repeat the leak test.

5.4.2 Travel motion

The movement of the actuator stem must be linear and smooth.

- Apply the maximum and minimum control signals to check the end positions of the valve while observing the movement of the actuator stem.
- Check the travel reading at the travel indicator scale.

5.4.3 Fail-safe position

Fail-safe position with pneumatic actuators

- Shut off the signal pressure line.

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

Fail-safe position for electric actuators and electric actuators with process controller with fail-safe action

- Switch off the supply voltage.
- Check whether the valve moves to the fail-safe position (see the 'Design and principle of operation' section).

5.4.4 Pressure test

The plant operator is responsible for performing the pressure test.

i Note

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 to be performed only by personnel appropriately qualified to carry out such tasks.

⚠ 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 burn injuries due to hot components and pipeline.

Valve components and the pipeline may become very hot. Risk of burn injuries.

- Allow components and pipelines to cool down.
- Wear protective clothing and safety gloves.

⚠ WARNING

Types 3260/2780, 3260/3372, 3260/3271 and 3260/3277: crush hazard arising from the actuator and plug stem moving.

- Do not insert hands or finger into the yoke while the air supply is connected to the actuator.
- Before working on the control valve, disconnect and lock the pneumatic air supply as well as the control signal.
- Do not impede the movement of the actuator and plug stem by inserting objects into the yoke.
- Before unblocking the actuator and plug stem after they have become blocked (e.g. due to seizing up after remaining in the same position for a long time), release any stored energy in the actuator (e.g. spring compression). See associated actuator documentation.

⚠ WARNING

Risk of personal injury due to exhaust air being vented from pneumatic devices.

While the valve is operating, the Types 2780, 3372, 3271 and 3277 Pneumatic Actuators vent during closed-loop control or when the valve opens or closes.

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

Start-up

Before start-up or putting the valve 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 the 'Testing the installed valve' 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 device back into operation

1. Allow the valve to 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 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 (see the 'Start-up' section), the valve is ready for use.

⚠ 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 burn injuries due to hot components and pipeline.

Valve components and the pipeline may become very hot. Risk of burn injuries.

→ Allow components and pipelines to cool down.

→ Wear protective clothing and safety gloves.

⚠ WARNING

Types 3260/2780, 3260/3372, 3260/3271 and 3260/3277: crush hazard arising from the actuator and plug stem moving.

- Do not insert hands or finger into the yoke while the air supply is connected to the actuator.
- Before working on the control valve, disconnect and lock the pneumatic air supply as well as the control signal.
- Do not impede the movement of the actuator and plug stem by inserting objects into the yoke.
- Before unblocking the actuator and plug stem after they have become blocked (e.g. due to seizing up after remaining in the same position for a long time), release any stored energy in the actuator (e.g. spring compression). See associated actuator documentation.

⚠ WARNING

Risk of personal injury due to exhaust air being vented from pneumatic devices.

While the valve is operating, the Types 2780, 3372, 3271 and 3277 Pneumatic Actuators vent during closed-loop control or when the valve opens or closes.

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

8 Malfunctions

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

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.

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. Types 3260/2780, 3260/3372, 3260/3271 and 3260/3277: 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 (e.g. spring compression). See associated actuator documentation.
	Pneumatic actuators: diaphragm in the actuator defective	See associated actuator documentation.
	Electric actuators: no or incorrect supply voltage connected	Check the supply voltage and connections.
	Pneumatic actuators: signal pressure too low	Check the signal pressure. Check the signal pressure line for leakage.

Malfunctions

Malfunction	Possible reasons	Recommended action
Actuator and plug stem does not stroke through the full range.	Pneumatic actuators: signal pressure too low	Check the signal pressure. Check the signal pressure line for leakage.
	Electric actuators: no or incorrect supply voltage connected	Check the supply voltage and connections.
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).	Plug stem seal defective	Contact our after-sales service.
	Flanged joint loose or gasket worn out	Check the flanged joint.

i Note

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

8.2 Emergency action

The valve, on which the actuator with fail-safe action is mounted, is moved to its fail-safe position upon failure of the supply voltage or signal pressure (see the 'Design and principle of operation' section).

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 device back into operation after a malfunction

See the 'Start-up' section.

9 Servicing

i Note

The control valve was checked by SAMSON before it left the factory.

- 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.*
-

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 to be performed only 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 the plant sections affected as well as from the valve.

⚠ DANGER

Risk of fatal injury due to electric shock.

- Do not remove any covers to perform adjustment work on live parts.
- Before performing any work on the device and before opening the device, disconnect the supply voltage and protect it against unintentional reconnection.
- Only use power interruption devices that are protected against unintentional reconnection of the power supply.
- The electric actuators are protected against spray water (IP 54). Avoid jets of water.

⚠ 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 burn injuries due to hot components and pipeline.

Valve components and the pipeline may become very hot. Risk of burn injuries.

- Allow components and pipelines to cool down.
- Wear protective clothing and safety gloves.

⚠ WARNING

Types 3260/2780, 3260/3372, 3260/3271 and 3260/3277: crush hazard arising from the actuator and plug stem moving.

- Do not insert hands or finger into the yoke while the air supply is connected to the actuator.
- Before working on the control valve, disconnect and lock the pneumatic air supply as well as the control signal.

Decommissioning

- Do not impede the movement of the actuator and plug stem by inserting objects into the yoke.
 - Before unblocking the actuator and plug stem after they have become blocked (e.g. due to seizing up after remaining in the same position for a long time), release any stored energy in the actuator (e.g. spring compression). See associated actuator documentation.
-

WARNING

Risk of personal injury due to exhaust air being vented from pneumatic devices.

While the valve is operating, the Types 2780, 3372, 3271 and 3277 Pneumatic Actuators vent during closed-loop control 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 residual process medium in the valve.

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

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

To decommission the control valve for disassembly, 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 or supply voltage to depressurize or de-energize the actuator.
4. Release any stored energy.
5. If necessary, allow the pipeline and valve components to cool down.

11 Removal

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

⚠ WARNING

Risk of burn injuries due to hot components and pipeline.

Valve components and the pipeline may become very hot. Risk of burn injuries.

- Allow components and pipelines to cool down.
- Wear protective clothing and safety gloves.

⚠ WARNING

Types 3260/2780, 3260/3372, 3260/3271 and 3260/3277: crush hazard arising from the actuator and plug stem moving.

- Do not insert hands or finger into the yoke while the air supply is connected to the actuator.
- Before working on the control valve, disconnect and lock the pneumatic air supply as well as the control signal.
- Do not impede the movement of the actuator and plug stem by inserting objects into the yoke.
- Before unblocking the actuator and plug stem after they have become blocked (e.g. due to seizing up after remaining in the same position for a long time), release any stored energy in the actuator (e.g. spring compression). See associated actuator documentation.

⚠ WARNING

Risk of personal injury due to preloaded springs in pneumatic actuators.

Actuators with preloaded springs are under tension. They can be identified by the long bolts protruding from the bottom of the actuator.

- Before starting any work on the actuator, relieve the compression from the preloaded springs (see associated actuator documentation).

⚠ WARNING

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

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

- Wear protective clothing, safety gloves and eye protection.

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

Removal

3. Remove the valve from the pipeline (see the 'Shipment and on-site transport' section).

11.2 Removing the actuator from the valve

See associated actuator documentation.

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 repair work.

- ➔ Do not perform any repair work on your own.
- ➔ Contact SAMSON's After-sales Service for 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 no.
 - 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



SAMSON is a producer registered at the following European institution
 ► <https://www.ewrn.org/national-registers/national-registers>.
 WEEE reg. no.: DE 621 94439/
 FR 02566

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

i Note

We can provide you with a recycling passport according to PAS 1049¹⁾ on request. Simply e-mail us at offersaleservice@samsongroup.com giving details of your company address.

Tip

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

¹⁾ PAS 1049 is relevant to electrical and electronic equipment (e.g. electric actuators). This PAS specification does not apply to non-electrical equipment.

14 Certificates

The following declarations and certificates are available:

- Declaration of conformity in compliance with Pressure Equipment Directive 2014/68/EU on pages 14-2 to 14-7

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* > *3260*

Other optional certificates are available on request.

EU DECLARATION OF CONFORMITY TRANSLATION



Module A

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

Devices	Series	Type	Version
Self-operated Regulators	43	2432	DIN EN, body, CC499K and EN-GJS-400-18-LT, DN 50, PN 25, fluids G2, L2, L1 ¹⁾
	43	2436	DIN EN, body, CC499K and EN-GJS-400-18-LT, DN 50, PN 25, fluids G2, L2, L1 ¹⁾
	43	2437	DIN EN, body, CC499K and EN-GJS-400-18-LT, DN 50, PN 25, fluids G2, L2, L1 ¹⁾
	---	2111	DIN EN, body, EN-GJS-400-18-LT, DN 50, PN 25, fluids G2, L2, L1 ¹⁾
			DIN EN, body, 1.0619 and 1.4408, DN 40-50, PN 40, fluids G2, L2, L1 ¹⁾
			ANSI, body, A216 WCC and A351 CF8M, NPS 1½-2, Class 300, fluids G2, L2, L1 ¹⁾
Three-way valve	---	2119	DIN EN, body, EN-GJL-250 and 1.0619, DN 65-125, PN 16, fluids G2, L2, L1 ¹⁾
			DIN EN, body, 1.0619, DN 50-80, PN 25, fluids G2, L2, L1 ¹⁾
			DIN EN, body, 1.0619 and 1.4408, DN 40-50, PN 40, fluids G2, L2, L1 ¹⁾
			ANSI, body, A216 WCC and A351 CF8M, NPS 2½-4, Class 150, fluids G2, L2, L1 ¹⁾
			ANSI, body, A216 WCC and A351 CF8M, NPS 1½, Class 300, fluids G2, L2, L1 ¹⁾
Control valve	---	3222	DIN EN, body, EN-GJS-400-18-LT, DN 50, PN 25, fluids G2, L2, L1 ¹⁾
Three-way valve	---	3226	DIN EN, body, CC499K, DN 32-40, PN 25, all fluids
Three-way valve	---	3260	DIN EN, body, CC499K, DN 50, PN 25, fluids G2, L2 ²⁾
Globe valve Three-way valve	V2001	3531 3535	DIN EN, body, EN-GJL-250, DN 65-200, PN 16, fluids G2, L2 ²⁾
			DIN EN, body, EN-GJS-400-18-LT, DN 50-80, PN 25, fluids G2, L2, L1 ¹⁾
			DIN EN, body, 1.0619 and 1.4408, DN 32-40, PN 25, all fluids
Control valve	---	3214	ANSI, body, A216 WCC and A351 CF8M, NPS 1½-2, Class 150, all fluids
			DIN EN, body, EN-GJL-250, DN 65-125, PN 16, fluids G2, L2, L1 ¹⁾
			DIN EN, body, EN-GJS-400-18-LT, DN 50-80, PN 25, fluids G2, L2, L1 ¹⁾
			ANSI, body, A126 B, NPS 3-4, Class 125, fluids G2, L2, L1 ¹⁾
Self-operated Regulators	42	2423	ANSI, body, A216 WCC and A351 CF8M, NPS 1½-2, Class 150, all fluids
			DIN EN, body, EN-GJL-250, DN 65-125, PN 16, fluids G2, L2, L1 ¹⁾
			DIN EN, body, EN-GJS-400-18-LT, DN 50-80, PN 25, fluids G2, L2, L1 ¹⁾
			DIN EN, body, 1.0619 and 1.4408, DN 32-50, PN 16, all fluids
			DIN EN, body, 1.0619 and 1.4408, DN 32-40, PN 25, all fluids
	42	2422	ANSI, body, A126 B, NPS 3-4, Class 125, fluids G2, L2, L1 ¹⁾
			ANSI, body, A216 WCC and A351 CF8M, NPS 1½-2, Class 150, all fluids
			DIN EN, body, EN-GJL-250 and EN-GJS-400-18-LT, DN 65-125, PN 16, fluids G2, L2, L1 ¹⁾
			DIN EN, body, EN-GJS-400-18-LT, DN 50-80, PN 25, fluids G2, L2, L1 ¹⁾
			DIN EN, body, 1.0619, 1.4408 and 1.6220+QT, DN 32-50, PN 16, all fluids
Strainers	1N/1NI	2601	ANSI, body, A126 B, NPS 3-4, Class 125, fluids G2, L2, L1 ¹⁾
Strainers	2N/2NI	2602	DIN EN, body, CB752S, G 2 (DN50), PN25, fluids G2, L2 ²⁾
			DIN EN, body, EN-GJL-250, DN 200-250, PN 10, fluids G2, L2, L1 ¹⁾
			DIN EN, body, EN-GJL-250, DN 65-125, PN 16, fluids G2, L2, L1 ¹⁾
			DIN EN, body, EN-GJS-400-18-LT, DN 100-125, PN 16, fluids G2, L2, L1 ¹⁾
			DIN EN, body, EN-GJS-400-18-LT, DN 50-80, PN 25, fluids G2, L2, L1 ¹⁾
Self-operated Regulators	---	2373/2375	DIN EN, body, 1.4408, DN 32-50, PN 16, all fluids
	44	2440 (44-0B) 2441 (44-1B) 2446 (44-6B)	ANSI, body, A995 4A and A995 5A, NPS 1½-2, Class 150, all fluids
		2442 (44-2) 2443 (44-3) 2444 (44-4) 2447 (44-7) 2448 (44-8) 2449 (44-9)	DIN EN, body, EN-GJS-400-18-LT, DN 50, PN 25, fluids G2, L2, L1 ¹⁾
			DIN EN, body, EN-GJS-400-18-LT and CC499K, DN 50, PN 25, fluids G2, L2, L1 ¹⁾

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Devices	Series	Type	Version
Self-operated Regulators	45	2451 (45-1)	DIN EN, body, EN-GJS-400-18-LT and CC499K, DN 50, PN 25, fluids G2, L2, L1 ¹⁾
		2452 (45-2)	
		2453 (45-3)	
		2454 (45-4)	
		2459 (45-9)	
	46	2465 (46-5)	DIN EN, body, EN-GJS-400-18-LT and CC499K, DN 50, PN 25, fluids G2, L2, L1 ¹⁾
		2466 (46-6)	
		2467 (46-7)	
		2469 (46-9)	
	47	2471 (47-1)	DIN EN, body, EN-GJS-400-18-LT and CC499K, DN 50, PN 25, fluids G2, L2, L1 ¹⁾
		2474 (47-4)	
		2475 (47-5)	
		2479 (47-9)	
	48	2488	DIN EN, body, EN-GJS-400-18-LT and CC499K, DN 50, PN 25, fluids G2, L2, L1 ¹⁾
		2489	
	40	2405	DIN EN, body, EN-GJS-400-18-LT, DN 50, PN 25, fluids G2, L2, L1 ¹⁾
			ANSI, body, A216 WCC and A351 CF8M, NPS 1½-2, Class 150, all fluids
		2406	DIN EN, body, EN-GJL-250, DN 65-125, PN 16, fluids G2, L2, L1 ¹⁾
			DIN EN, body, EN-GJS-400-18-LT, DN 50, PN 25, fluids G2, L2, L1 ¹⁾
			ANSI, body, A126 B, NPS 3-4, Class 125, fluids G2, L2, L1 ¹⁾
			ANSI, body, A216 WCC and A351 CF8M, NPS 1½-2, Class 150, all fluids
	41	2412	DIN EN, body, EN-GJL-250, DN 65-100, PN 16, fluids G2, L2, L1 ¹⁾
			DIN EN, body, EN-GJS-400-18-LT, DN 50-80, PN 25, fluids G2, L2, L1 ¹⁾
		2417	ANSI body, A126 B, NPS 3-4, Class 125, fluids G2, L2, L1 ¹⁾
			ANSI, body, A216 WCC and A351 CF8M, NPS 1½-2, Class 150, all fluids
	42	2421 RS	DIN EN, body, 1.0619, 1.4408, 1.4571 and 1.4401/1.4404, DN 32-50, PN 16, all fluids
			DIN EN, body, 1.0619, 1.4408, 1.4571 and 1.4401/1.4404, DN 32-40, PN 25, all fluids
ANSI, body, A216 WCC, A351 CF8M and A182 F316/A182 F316L, NPS 1½-2, Class 150, all fluids			
---	2331 2337	DIN EN, body, EN-GJL-250, DN 65-200, PN 16, fluids G2, L2 ²⁾	
		DIN EN, body, EN-GJS-400-18-LT, DN 65-150, PN 16, fluids G2, L2 ²⁾	
		DIN EN, body, EN-GJS-400-18-LT, DN 65-125, PN 25, fluids G2, L2 ²⁾	
		DIN EN, body 1.0619, DN 65-200, PN 16, fluids G2, L2 ²⁾	
		DIN EN, body 1.0619, DN 65-100, PN 40, fluids G2, L2 ²⁾	
---	2333 2335	DIN EN, body, EN-GJL-250, DN 65-125, PN 16, fluids G2, L2, L1 ¹⁾	
		DIN EN, body, EN-GJS-400-18-LT, DN 65-80, PN 25, fluids G2, L2, L1 ¹⁾	
		ANSI body, A126 B, NPS 3-4, Class 125, fluids G2, L2, L1 ¹⁾	
---	2334	DIN EN, body, EN-GJL-250, DN 65-125, PN 16, fluids G2, L2, L1 ¹⁾	
		DIN EN, body, EN-GJS-400-18-LT, DN 65-125, PN 16, fluids G2, L2, L1 ¹⁾	
		DIN EN, body, EN-GJS-400-18-LT, DN 65-80, PN 25, fluids G2, L2, L1 ¹⁾	
		ANSI, body, A126 B, NPS 3-4, Class 125, fluids G2, L2, L1 ¹⁾	
---	2404-1	DIN EN, body, EN-GJL-250, DN 65-125, PN16, fluids G2, L2, L1 ¹⁾	
		ANSI body, A126 B, NPS 3-4, Class 125, fluids G2, L2, L1 ¹⁾	
---	2404-2	ANSI, body, A216 WCC und A351 CF8M, NPS 1½-2, Class 150, all fluids	
		DIN EN, body, EN-GJL-250, DN 65-125, PN 16, fluids G2, L2, L1 ¹⁾	
		ANSI, body, A126 B, NPS 3-4, Class 125, fluids G2, L2, L1 ¹⁾	

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

²⁾ Gases according to Article 4(1)(c.i), second indent
Liquids according to Article 4(1)(c.ii), second indent

EU DECLARATION OF CONFORMITY

TRANSLATION



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 A	

Technical standards applied: DIN EN 12516-2, DIN EN 12516-3, ASME B16.34

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

Frankfurt am Main, 26. August 2022

ppa. Norbert Tollas
Senior Vice President
Global Operations

i.V. Peter Scheermesser
Director
Product Maintenance & Engineered Products

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EU DECLARATION OF CONFORMITY TRANSLATION



Module H / N° CE-0062-PED-H-SAM 001-22-DEU

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

Devices	Series	Type	Version
Three-way valve	---	2119	DIN EN, body, EN-GJL-250 and 1.0619, DN 150, PN 16, fluids G2, L2, L1 ¹⁾
			DIN EN, body, 1.0619, DN 100-150, PN 25, fluids G2, L2, L1 ¹⁾
			DIN EN, body, 1.0619 and 1.4408, DN 65-150, PN 40, fluids G2, L2, L1 ¹⁾
			ANSI, body, A216 WCC and A351 CF8M, NPS 6, Class 150, fluids G2, L2, L1 ¹⁾
			ANSI, body, A216 WCC and A351 CF8M, NPS 2-6, Class 300, fluids G2, L2, L1 ¹⁾
Self-operated Regulators	---	3222	DIN EN, body, CC499K, DN 50, PN 25, all fluids
Three-way valve	---	3260	DIN EN, body, EN-GJL-250, DN 250-300, PN 16, fluids G2, L2 ¹⁾
Globe valve	V2001	3531	DIN EN, body, 1.0619 and 1.4408, DN 50-80, PN 25, all fluids
			ANSI, body, A216 WCC and A351 CF8M, NPS 2½-3, Class 150, all fluids
Three-way valve		3535	DIN EN, body, EN-GJL-250, DN 150-400, PN 16, fluids G2, L2, L1 ¹⁾
Control valve	---	3214	DIN EN, body, EN-GJS-400-18-LT, DN 100-150, PN 25, fluids G2, L2, L1 ¹⁾
			DIN EN, body, 1.0619, DN 32-400, PN 40, all fluids
			ANSI, body, A126 B, NPS 6-10, Class 125, fluids G2, L2, L1 ¹⁾
			ANSI, body, A216 WCC, NPS 2½-10, Class 150, all fluids
			ANSI, body, A216 WCC, NPS 1½-10, Class 300, all fluids
			DIN EN, body, EN-GJL-250, DN 150-250, PN 16, fluids G2, L2, L1 ¹⁾
Self-operated Regulators	42	2423	DIN EN, body, EN-GJS-400-18-LT, DN 150, PN 16, fluids G2, L2, L1 ¹⁾
			DIN EN, body, EN-GJS-400-18-LT, DN 100-150, PN 25, fluids G2, L2, L1 ¹⁾
			DIN EN, body, EN-GJS-400-18-LT, DN 100-150, PN 25, fluids G2, L2, L1 ¹⁾
			DIN EN, body, 1.0619 and 1.4408, DN 65-250, PN 16, all fluids
			DIN EN, body, 1.0619 and 1.4408, DN 50-250, PN 25, all fluids
			DIN EN, body, 1.0619 and 1.4408, DN 32-250, PN 40, all fluids
			ANSI, body, A126 B, NPS 6-10, Class 125, fluids G2, L2, L1 ¹⁾
			ANSI, body, A216 WCC and A351 CF8M, NPS 2½-10, Class 150, all fluids
			ANSI, body, A216 WCC and A351 CF8M, NPS 1½-10, Class 300, all fluids
			DIN EN, body, EN-GJL-250, DN 150-400, PN 16, fluids G2, L2, L1 ¹⁾
	DIN EN, body, EN-GJS-400-18-LT, DN 100-150, PN 25, fluids G2, L2, L1 ¹⁾		
	DIN EN, body, 1.0619 and 1.4408, DN 65-400, PN 16, all fluids		
	DIN EN, body, 1.0619 and 1.4408, DN 200-400, PN 25, all fluids		
	DIN EN, body, 1.0619 and 1.4408, DN 32-400, PN 40, all fluids		
	DIN EN, body, 1.0460, DN 40-50, PN 40, all Fluids		
	DIN EN, body, 1.6220+QT, DN 65-250, PN 16, all fluids		
	DIN EN, body, 1.6220+QT, DN 200-250, PN 25, all fluids		
	DIN EN, body, 1.6220+QT, DN 32-250, PN 40, all fluids		
	ANSI, body, A126 B, NPS 6-16, Class 125, fluids G2, L2, L1 ¹⁾		
	ANSI, body, A216 WCC and A351CF8M, NPS 2½-16, Class 150, all fluids		
ANSI, body, A216 WCC and A351CF8M, NPS 1½-16, Class 300, all fluids			
ANSI, body, A105, NPS 1½-2, Class 300, all fluids			
ANSI, body, A352 LCC, NPS 2½-10, Class 150, all fluids			
ANSI, body, A352 LCC, NPS 1½-10, Class 300, all fluids			
DIN EN, body, 1.0619 and 1.4408, DN 65-150, PN 16, all fluids			
DIN EN, body, 1.0619 and 1.4408, DN 50-150, PN 25, all fluids			
DIN EN, body, 1.0619 and 1.4408, DN 32-150, PN 40, all fluids			
DIN EN, body, 1.4571 and 1.4401/1.4404, DN 50, PN 25, all fluids			
DIN EN, body, 1.4571 and 1.4401/1.4404, DN 32-50, PN 40, all fluids			
ANSI, body, A216 WCC and A351 CF8M, NPS 2½-6, Class 150, all fluids			
ANSI, body, A216 WCC and A351 CF8M, NPS 1½-6, Class 300, all fluids			

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Devices	Series	Type	Version		
Self-operated Regulators	40	2405	DIN EN, body, 1.0619, 1.4571, 1.4404, 1.4408, 1.0460, DN 32-50, PN40, all fluids		
			ANSI, body, A105, A182 F316L, A351 CF8M, A216 WCC, NPS 1½-2, Class 300, all fluids		
			DIN EN, body, EN-GJL-250, DN 150, PN 16, fluids G2, L2, L1 ¹⁾		
		2406	DIN EN, body, 1.0619 and 1.4408, DN 32-150, PN 40, all fluids	DIN EN, body, 1.0460 and 1.4404, DN 32-50, PN 40, all fluids	
				ANSI, body, A126 B, NPS 6, Class 125, fluids G2, L2, L1 ¹⁾	
				ANSI, body, A216 WCC and A351 CF8M, NPS 2½-6, Class 150, all fluids	
	41		2412 2417	ANSI, body, A216 WCC and A351 CF8M, NPS 1½-6, Class 300, all fluids	
				ANSI, body, A105 and A182 F316L, NPS 1½-2, Class 300, all fluids	
				DIN EN, body, EN-GJS-400-18-LT, DN 100, PN25, fluids G2, L2, L1 ¹⁾	
		---	2404-1	DIN EN, body, 1.0619 und 1.4408, DN 32-100, PN 40, all fluids	
				DIN EN, body, 1.0460, 1.4571 and 1.4404, DN 32-80, PN 40, all fluids	
				ANSI, body, A216 WCC und A351 CF8M, NPS 2½-4, Class 150, all fluids	
	---		2404-2	ANSI, body, A216 WCC und A351 CF8M, NPS 1½-4, Class 300, all fluids	
				ANSI, body, A105 und A182 F316L, NPS 1½-3, Class 300, all fluids	
				DIN EN, body, EN-GJL-250, DN 150, PN16, fluids G2, L2, L1 ¹⁾	
		---	2331 2337	DIN EN, body, 1.0619 und 1.4408, DN 32-150, PN 40, all fluids	
				ANSI, body, A126 B, NPS 6, Class 125, fluids G2, L2, L1 ¹⁾	
				ANSI, body, A216 WCC und A351 CF8M, NPS 2½-6, Class 150, all fluids	
	---		2333 2335	ANSI, body, A216 WCC und A351 CF8M, NPS 1½-6, Class 300, all fluids	
				DIN EN, body, EN-GJL-250, DN 150-400, PN 16, fluids G2, L2, L1 ¹⁾	
				DIN EN, body, 1.0619 und 1.4408, DN 65-400, PN 16, all fluids	
		---	2334	DIN EN, body, 1.0619 und 1.4408, DN 65-400, PN 40, all fluids	
				ANSI, body, A126 B, NPS 6-16, Class 125, fluids G2, L2, L1 ¹⁾	
				ANSI, body, A216 WCC und A351 CF8M, NPS 2½-16, Class 150, all fluids	
	---		2373 2375	ANSI, body, A216 WCC und A351 CF8M, NPS 2½-16, Class 300, all fluids	
				DIN EN, body, EN-GJL-250, DN 150-400, PN 16, fluids G2, L2, L1 ¹⁾	
				DIN EN, body, EN-GJS-400-18-LT, DN 150, PN 16, fluids G2, L2, L1 ¹⁾	
		Strainers	2N/2NI	2602	DIN EN, body, EN-GJS-400-18-LT, DN 100-150, PN 25, fluids G2, L2, L1 ¹⁾
				DIN EN, body, EN-GJL-250, DN 150-250, PN 16, fluids G2, L2, L1 ¹⁾	
				DIN EN, body, EN-GJS-400-18-LT, DN 150, PN 16, fluids G2, L2, L1 ¹⁾	
	DIN EN, body, EN-GJS-400-18-LT, DN 100-150, PN 25, fluids G2, L2, L1 ¹⁾				
	DIN EN, body, 1.0619, DN 100-250, PN 16, all fluids				
DIN EN, body, A995 5A and A995 4A, NPS 1½-2, Class 300, all fluids					

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Devices	Series	Type	Version
Strainers	2N/2NI	2602	DIN EN, body, 1.0619, DN 200-250, PN 25, all fluids
			DIN EN, body, 1.0619, DN 32-250, PN 40, all fluids
			DIN EN, body, 1.4408, DN 65-100, PN 16, all fluids
			DIN EN, body, 1.4408, DN 32-100, PN 40, 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, FRANCE
Technical standards applied: DIN EN 12516-2, DIN EN 12516-3, ASME B16.34

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

Frankfurt am Main, 14. October 2022

ppa. Norbert Tollas
Senior Vice President
Global Operations

i.V. Peter Scheermesser
Director
Product Maintenance & Engineered Products

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15 Annex

15.1 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
- Bench range (e.g. 0.2 to 1 bar) or input signal of the actuator (e.g. 0 to 20 mA or 0 to 10 V)
- Is a strainer installed?
- Installation drawing

15.2 Mounting parts

Type/TROVIS	DN 15 to 25	DN 32 to 50	DN 65, 80	DN 100 to 150	DN 200 to 300
5857	None	-	-	-	-
5827-N1/-N2	None		-	-	-
5827-N3	-	-	Yoke (1400-7414)	-	-
5827-A1/-E1/-A2/-E2	None		-	-	-
3374-10/11	-	-	None	None	-
3374-25/-35	-	-	Yoke (1890-8696)	Yoke (1400-8822)	-
SAM-32	-	-	-	-	1400-9565
5757-7	None	-	-	-	-
5724-810/5724-820	None		-	-	-
5725-810/5725-820	None		-	-	-
3372	-	-	None	-	-
2780-1/-2	None		-	-	-
3372	None		-	-	-
3271, 175v2 cm ²	-	-	Yoke (1890-8696) and nut (0250-1450)	-	-
3271, 350 cm ²	-	-	Yoke (1890-8696)	-	-
3271, 1000/1400 cm ²	-	-	-	-	None
3277, 175v2 cm ²	-	-	Yoke (1890-8696)	-	-
3277, 350 cm ²	-	-	Yoke (1890-8696)	-	-

EB 5861 EN



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