MOUNTING AND OPERATING INSTRUCTIONS

EB 8048-2 EN

Translation of original instructions

Type 3349 Valve with Type 3277 Pneumatic Actuator and Type 3730 Positioner

Type 3349 Valve combined with Type 3379 Pneumatic Piston Actuator and Type 3724 Positioner

Type 3349 Aseptic Angle Valve with USP-VI diaphragm

In combination with an actuator, e.g. a SAMSON Type 3271 or Type 3277 Pneumatic Actuator or Type 3379 Pneumatic Actuator

Edition July 2023

53-07

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 (aftersalesservice@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

Intended use

The SAMSON Type 3349 Angle Valve in combination with an actuator (e.g. Type 3271, Type 3277 or Type 3379 Pneumatic Actuator) is designed to regulate the flow rate, pressure or temperature of liquids, gases or vapors. The angle valve is suitable for use in aseptic applications (e.g. in the pharmaceutical and food industries).

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

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
– Hard hat
– Safety harness, e.g. when working at height
– Safety footwear, if applicable ESD (electrostatic discharge) footwear

➔ Check with the plant operator for details on further protective equipment.

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

The fail-safe position of the control valve upon air supply or control signal failure depends on the actuator used (see associated actuator documentation). When the valve is combined with a SAMSON Type 3271 or Type 3277 Pneumatic Actuator or the Type 3379 Pneumatic Piston Actuator, the valve moves to a certain fail-safe position (see the 'Design and principle of operation' section) upon supply air or control signal failure. The fail-safe action of the actuator is the same as its direction of action and is specified on the nameplate of SAMSON actuators.

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, Machinery Directive 2006/42/EC, Directive 2016 No. 1105 Pressure Equipment (Safety) Regulations 2016 and Directive 2008 No. 1597 Supply of Machinery (Safety) Regulations 2008. Valves with a CE marking and/or UKCA marking have a declaration of conformity, which includes information about the applied conformity assessment procedure. The 'Certificates' section contains this declaration of conformity.

The 'Certificates' section also contains further declarations on the following topics:

- Regulations on food contact
- REACH Regulation
- RoHS Directive
- Canadian CRN certification
- Chinese regulations
- 3-A Sanitary Standard
- EHEDG

According to the ignition hazard assessment performed in accordance with Clause 5.2 of ISO 80079-36, the non-electrical control valves do not have their own potential ignition

source even in the rare incident of an operating fault. As a result, they do not fall within the scope of Directive 2014/34/EU.

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

Referenced documentation

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

– Mounting and operating instructions for mounted actuator, e.g. ▶ EB 8310-X for Type 3271 and Type 3277 Actuators or ▶ EB 8315 for Type 3379 Actuator
– Mounting and operating instructions for mounted valve accessories (positioner, solenoid valve etc.)
– Manual ▶ H 02: Appropriate Machinery Components for SAMSON Pneumatic Control Valves with a Declaration of Conformity of Final Machinery
– 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 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 all the plant sections concerned as well as the valve.

➔ Make sure that the valve body is drained over the lateral valve connection.

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.

⚠ WARNING

Risk of personal injury due to exhaust air being vented.

While the valve is operating, air is vented from the actuator, e.g. 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 protection when working in close proximity to the control valve.

Crush hazard arising from moving parts.

The pneumatic control valves with Type 3271 and Type 3277 Actuator contain moving parts (actuator and plug stem), 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 preloaded springs.

Valves in combination with pneumatic actuators with preloaded springs are under tension. These control valves with SAMSON Type 3271 or Type 3277 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 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.

➔ Make sure that the valve body is drained over the lateral valve connection.

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

➔ Do not loosen the screw of the test connection while the valve is pressurized.

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 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 (see the 'Tightening torques' section in Annex).

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 (see the 'Tools' section in Annex).

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.

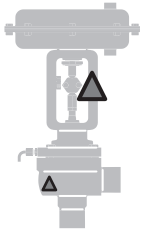
➔ Only use lubricants approved by SAMSON (see the 'Lubricants' section in Annex).

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

➔ If necessary (e.g. for oxygen service), keep the valve and the tools used free from solvents and grease.

➔ Make sure that only suitable lubricants are used.

1.4 Warnings on the device

Warning symbols	Meaning of the warning	Location on the device
	Warning against moving parts There is a risk of injury to hands or fingers due to the stroking movement of the actuator and plug stem if they are inserted into the yoke while the air supply is connected to the actuator.	

2 Markings on the device

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

2.1 Body inscription

The details on the valve version are lasered onto the front and back of the valve body (see Fig. 2-2). No nameplate is used.

2.2 Material identification number

The seat and plug of the valves have a material number written on them. Specifying this material number, you can contact us to find out which material is used.

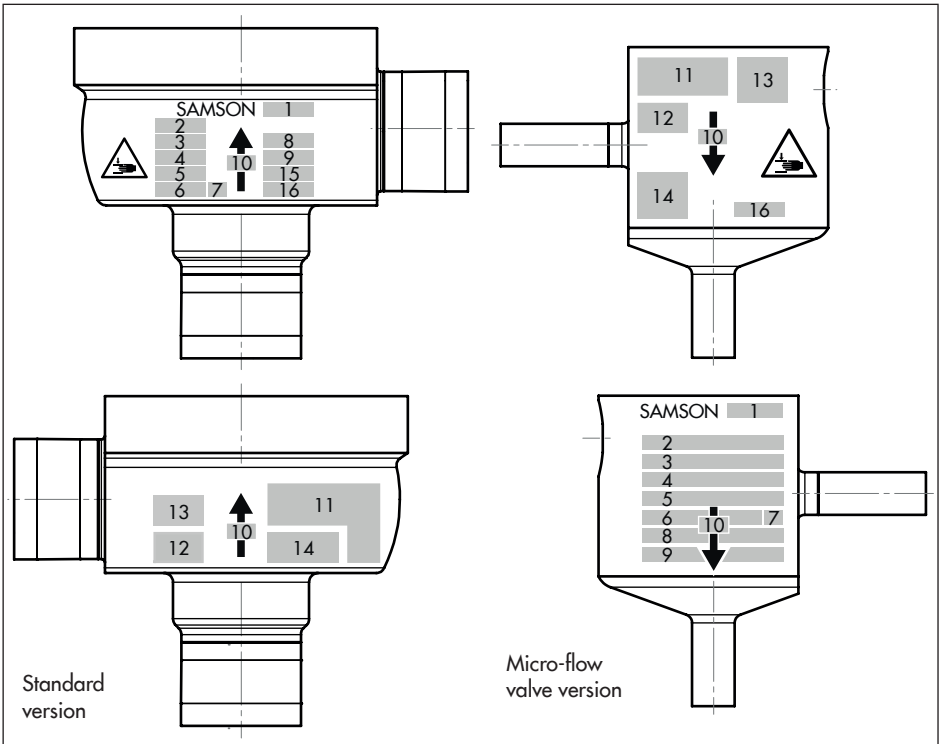
2.3 Actuator nameplate

See associated actuator documentation.

2.4 Label when an adjustable packing is installed

An instructional label is affixed to the valve when an adjustable packing is installed (see Fig. 2-1).

Fig. 2-1: *Label when an adjustable packing is installed*



1	Type
2	Valve size: DIN: **DN** · ANSI: **NPS**
3	Body material
4	Max. pressure at 20 °C in bar or at 70 °F in psi
5	Max. operating temperature °C/°F
6	Flow coefficient: K_V · C_V Characteristic: % = equal percentage · **LIN** = linear
7	Seat/plug seal: **ME**: metal · **PK**: soft PEEK seal · **PT**: soft PTFE seal · **STV**: solid Stellite® **ST**: metal base material w. Stellite® facing
8	Serial number
9	Configuration ID
10	Direction of flow ↑ flow-to-open (FTO) ↓ flow-to-close (FTC)
11	Compliance with food industry requirements
12	CE marking or "Art. 4, Abs. 3" (PED 2014/68/EU)
13	If applicable, EAC mark including month and year of production
14	SAMSON marking for material and heat number
15	Hardware version HV01
16	Country of origin

Fig. 2-2: *Information on the valve body*

3 Design and principle of operation

The Type 3349 Angle Valve is preferably combined with a SAMSON Type 3271 or Type 3277 Pneumatic Actuator (see Fig. 3-1) as well as the Type 3379 Pneumatic Piston Actuator (see Fig. 3-2). The valve comes with welding ends as standard. The valve is suitable for aseptic applications and is designed without any cavities.

The process medium preferably flows through the valve in the flow-to-open (FTO) direction [1]. The flow-to-close direction (FTC) [2] is possible. The process medium always flows through the micro-flow valve version in the flow-to-close (FTC) direction. The flow direction is indicated by an arrow on the valve body. The position of the valve plug determines the flow rate across the cross-sectional area of flow released between the plug and lathed seat. **In both flow directions, the valve body must be drained over the lateral valve connection.**

The plug stem is sealed by a full PTFE diaphragm that is USP Class VI certified. A packing can additionally be used in the micro-flow valve version.

The test connection allows the diaphragm to be monitored for leakage. In the version with backup packing, the test connection is sealed by a stopper. The stopper must be replaced with a suitable leakage indicator (e.g. a contact pressure gauge, an outlet to an open vessel or an inspection glass) when the valve is installed. The test connection of valves without a backup packing is fitted with a pipe elbow to allow the safe drainage of any medium that escapes.

When combined with the Type 3271 or Type 3277 Actuator, the actuator stem and plug stem are connected using stem connector clamps (A26/27). When combined with the Type 3379 Actuator, the actuator stem and plug stem are screwed together.

Tip

We recommend the use of positioners with integrated diagnostic firmware (see section 3.4) for valves used for on/off service. The partial stroke test included in this software helps prevent a shut-off valve normally in its end position from seizing up or getting jammed.

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1) FTO: Flow-to-open (flow under the plug)
2) FTC: Flow-to-close (flow over the plug)

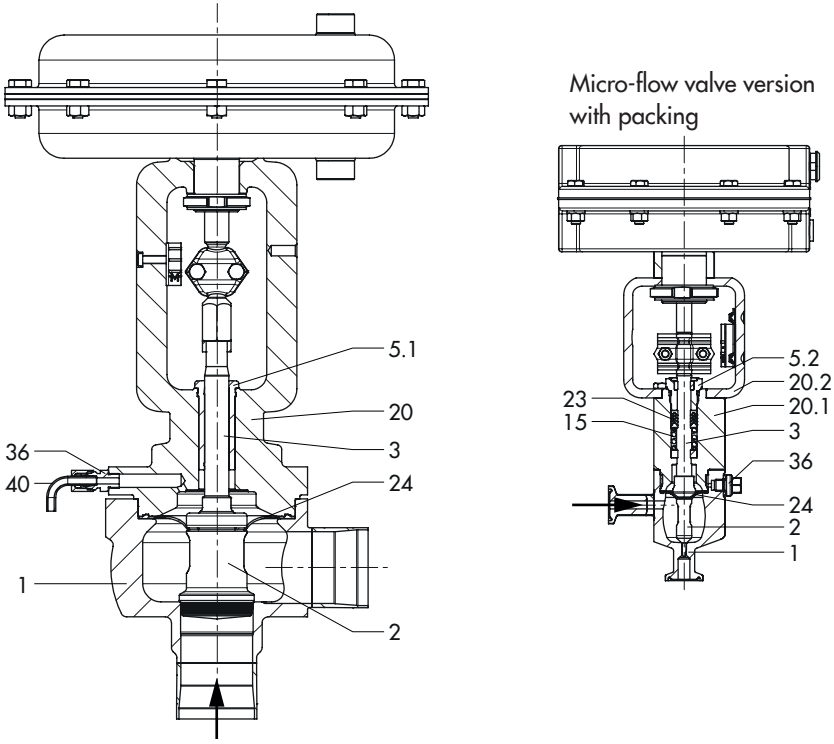

Fig. 3-1: *Type 3349 Valve with Type 3271 Pneumatic Actuator*

Legend for Fig. 3-1 and Fig. 3-2

1	Body
2	Plug
3	Plug stem
5.1	Stem seal
5.2	Threaded bushing
15	Spring
19	Washer
20	Standard yoke for Type 3271/3277 Actuator
20.1	Valve bonnet for micro-flow valve version with Type 3271/3277 Actuator
20.2	Yoke for micro-flow valve version with Type 3271/3277 Actuator
20.3	Valve bonnet for micro-flow valve version with Type 3379 Actuator
21	Standard valve bonnet with Type 3379 Actuator
23	Packing
24	Diaphragm
34	Screw
36	Screw plug or nipple
39	Seal
40	Pipe
41	Bearing
43	Snap ring

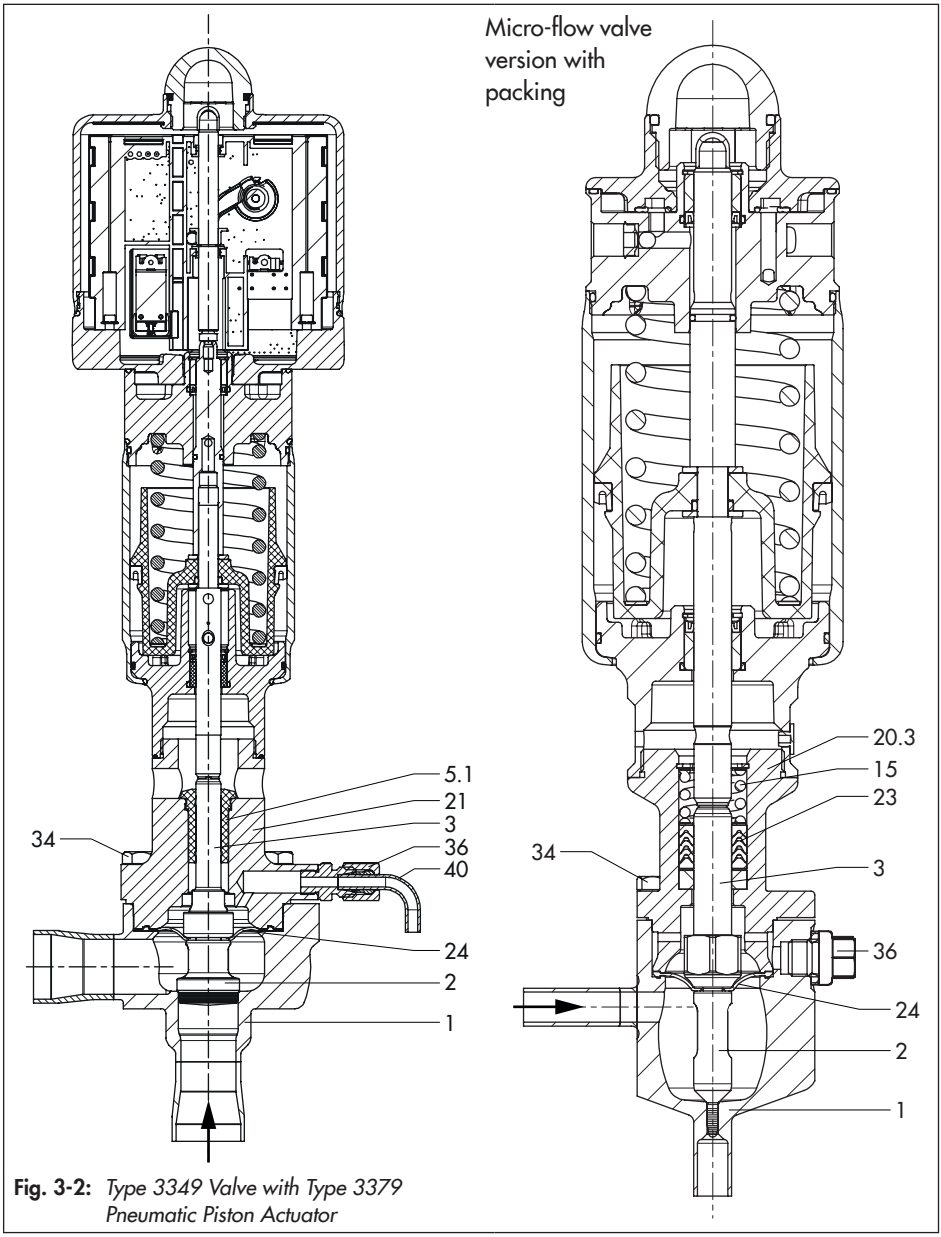

Fig. 3-2: *Type 3349 Valve with Type 3379 Pneumatic Piston Actuator*

3.1 Fail-safe action

The fail-safe position depends on the mounted actuator. Depending on how the compression springs are arranged in the pneumatic actuator, the valve has two different fail-safe positions:

– **Actuator stem extends (FA)**

  When the signal pressure is reduced or the air supply fails, the springs move the actuator stem downward and close the valve. The valve opens when the signal pressure is increased enough to overcome the force exerted by the springs.

– **Actuator stem retracts (FE)**

  When the signal pressure is reduced or the air supply fails, the springs move the actuator stem upwards and open the valve. The valve closes when the signal pressure is increased enough to overcome the force exerted by the springs.

Tip

The direction of action of the Type 3271 and Type 3277 Actuators can be reversed, if required. Refer to the operating and mounting instructions of the pneumatic actuator:
▶ EB 8310-X for Type 3271 and Type 3277.
Contact SAMSON to reverse the direction of action of the Type 3379 Actuator.

3.2 Versions

Micro-flow valve

The Type 3349 Valve is also available as a micro-flow valve for K_{VS} coefficients <0.4:

With actuator	Valve size		Flow coefficient	
	DN	NPS	K_{VS}	C_V
Type 3271 Type 3277	6 to 25	¼ to 1	0.01 to 0.25	0.012 to 0.3
Type 3379	6 to 25	¼ to 1	0.01 to 0.25	0.012 to 0.3

Actuators

In these instructions, the preferable combination with the Type 3271 and Type 3277 Pneumatic Actuators as well as the Type 3379 Pneumatic Piston Actuator is described. The Type 3271 and Type 3277 Pneumatic Actuators (with or without handwheel) can be replaced by another pneumatic actuator in a different size, but with the same travel.

➔ Observe the maximum permissible actuator force.

Note

If the travel range of the actuator is larger than the travel range of the valve, the spring assembly in the actuator must be preloaded so that the travel ranges match. See associated actuator documentation.

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.

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.

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 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 Valve accessories

Valve accessories

A Type 3724 Positioner is frequently used when the Type 3349 Angle Valve is combined with a Type 3379 Pneumatic Piston Actuator.

3.5 Technical data

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

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i ***Note***

More information is available in Data Sheet ▶ T 8048-2.

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.

Temperature range

Depending on the version, the control valve is designed for a temperature range from –10 to 160 °C (14 to 320 °F).

Table 3-1: *Technical data for Type 3349*

Version			DIN	ANSI
Body			Bar stock	
Valve size		Micro-flow valve version	DN 6 to 25	NPS ¼ to 1
		Standard version	DN 15 to 100	NPS ½ to 4
Maximum pressure	Without end connections	Micro-flow valve version	10 bar	145 psi
		Standard version	25 bar [3]	360 psi [3]
	With end connections		▶ T 8048-2	
Seat-plug seal		Leakage class according to	EN 60534-4	ANSI/FCI 70-2
		Metal seal	IV	
		PEEK soft seal [1]	VI	
Plug stem seal			PTFE diaphragm certified according to USP Class VI	
Characteristic			Equal percentage or linear	
Flow direction		Micro-flow valve version	FTC (flow-to-close)	
		Standard version	FTO (flow-to-open)/FTC (flow-to-close) [4]	
Flow coefficients		Micro-flow valve version	K_{VS}: 0.01 to 0.25/C_V: 0.012 to 0.3	
		Standard version	K_{VS}: 0.4 to 160/C_V: 0.5 to 190	
Rangeability			▶ T 8048-2	
Cleaning			CIP (cleaning in place) or SIP (sterilization in place)	
Actuators			▶ T 8048-2	
Permissible temperatures [2]		Operating temperature	–10 to 160 °C	14 to 320 °F
		Sterilization temperature	180 °C for up to 30 min	356 °F for up to 30 min

Version		DIN	ANSI
Peak-to-valley height and surface finish	External	Glass bead blasted	
		Ra ≤0.6 µm · Polished	
	Internal	Ra ≤0.8 µm · Fine machine finish	
		Ra ≤0.6 µm · Polished	
		Ra ≤0.4 µm · Satin finish	
		Ra ≤0.4 µm · Mirror finish	
Dimensions of end connections		▶ T 8048-2	
Certificates		CFR Title 21 FDA Regulation (EC) No. 1935/2004 Regulation (EU) No. 10/2011 Regulation (EC) No. 2023/2006 USP-VI 121 °C ADI free EHEDG and 3-A certification, standard 53-07 (▶ T 8048-2)	
Conformity		CE · UK CA · EAC	

1) Special version (not for micro-flow valve version)
2) Observe normative restrictions (see ▶ T 8048-2)
3) Mechanical design: 25 bar; functional design: 20 bar (▶ T 8048-2)
4) When the flow-to-close direction is used, the valve body must be drained over the lateral valve connection.

Table 3-2: *Dimensions and weights · Dimensions in mm · Weights in kg*

Table 3-2.1: *Dimensions of Type 3349 Angle Valve for mounting onto Type 3271 and Type 3277 Actuators*

DN	15	20	25	32	40	50	65	80	100
NPS	½	¾	1	1¼	1½	2	2½	3	4
Rated travel	7.5			15				30	
H1	234	231	228	262	260	271	271	336	348
L1 [1]	70	70	70	100	100	100	100	155	155
G	86	86	86	113	113	113	113	155	155
Valve weight (without actuator)	5			12		14		38	44

1) Dimensions for welding ends according to DIN 11866, Series A. Other end connections and standards ▶ T 8048-2.

Table 3-2.2: *Dimensions of Type 3349 Angle Valve for mounting onto Type 3379 Actuator*

DN	15	20	25	32	40	50
NPS	½	¾	1	1¼	1½	2
Rated travel	7.5			15		
H1	90			136		
L1 [1)]	70			100		
G	85			113		
Valve weight (without actuator)	#3			11		

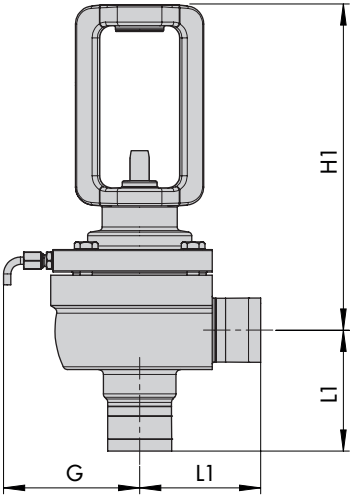
1) Dimensions for welding ends according to DIN 11866, Series A. Other end connections and standards ▶ T 8048-2.

Table 3-2.3: *Dimensions for micro-flow valve version of Type 3349 Valve for mounting on Type 3379 Actuator* [2)]

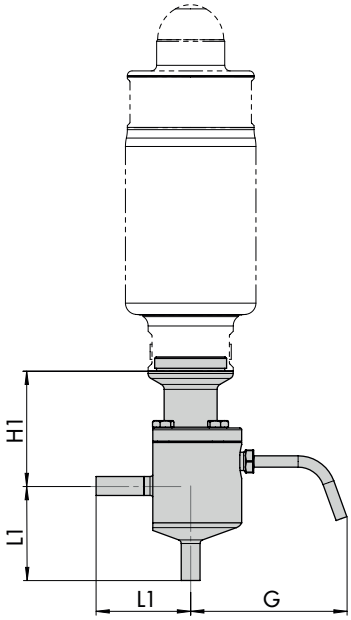
DN [3)]	8	10	15	20	25
NPS	¼	⅜	½	¾	1
Rated travel	7.5				
H1	61	61	65	65	70
L1 [1)]	50				
G	83				
Valve weight (without actuator)	1				

1) Dimensions for welding ends according to DIN 11866, Series A. Other end connections and standards ▶ T 8048-2.
2) Dimensions for micro-flow valve version of Type 3349 Valve with Type 3271/3277 Actuator on request
3) DN 6 on request

Dimensional drawings

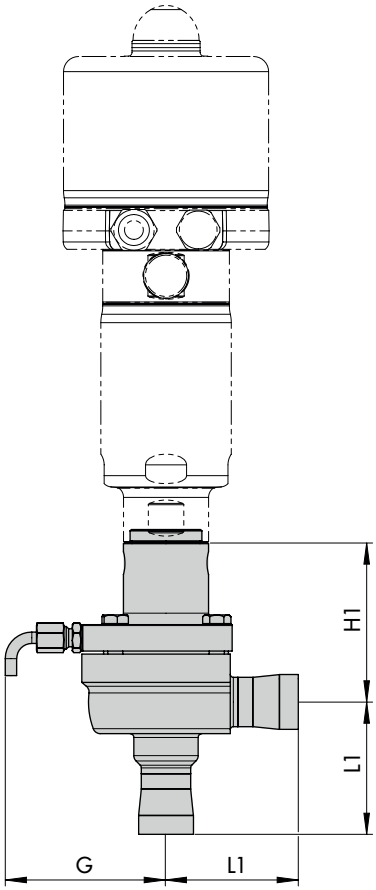


Type 3349 Angle Valve for mounting on Type 3271/3277 Actuator



Micro-flow valve version of Type 3349 Angle Valve

Dimensional drawings



Type 3349 Angle Valve for mounting on Type 3379 Actuator

Note

Refer to the following data sheet for more dimensions and weights ▶ T 8048-2.
The associated actuator documentation applies to actuators, e.g. SAMSON pneumatic actuators: ▶ T 8310-1 for Type 3271 or Type 3277 Pneumatic Actuators up to 750 cm² actuator area

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).
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, if required. Refer to the transport documents and the 'Technical data' section.

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.

➔ 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 lifting eyelet/eyebolt on SAMSON actuators is only intended for mounting and removing the actuator as well as lifting the actuator without valve. Do not use this lashing point 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.*

➔ *Do not attach load-bearing slings to any valve accessories.*

➔ *Observe lifting instructions (see section 4.3.2).*

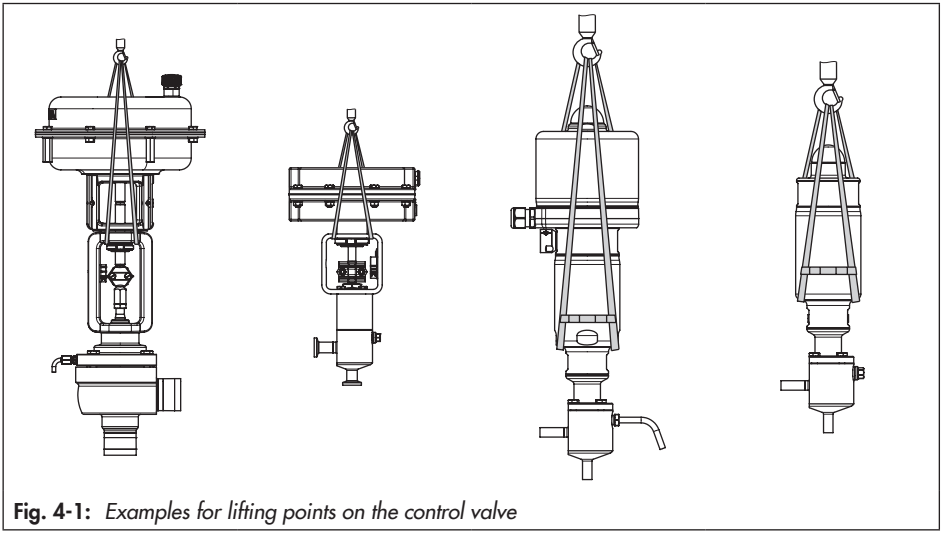


Fig. 4-1: *Examples for lifting points on the control valve*

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.
– Observe the permissible temperature range (see 'Technical data' in the 'Design and principle of operation' section).

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 lashing point on the actuator and rigging equipment (hook, shackle etc.) does not bear any load when lifting valves with an actuator that has a lifting eyelet/eyebolt on it. The sling only protects the control valve from tilting while being lifted. Before lifting the control valve, tighten the sling.

1. **With Type 3271 or 3277:** carefully guide two slings around the flange and attach them to the rigging equipment of the crane or forklift. Make sure that the actuator stem and valve accessories are not damaged.

   For actuator versions with lifting eyelet, attach an additional sling to the lifting eyelet of the actuator and to the rigging equipment of the crane or forklift.

   With Type 3379: carefully guide two slings around the actuator. Secure the

slings against slipping by using a connector.

2. Carefully lift the control valve. Check whether the lifting equipment and accessories can bear the weight.
3. Move the control valve at an even pace to the site of installation.
4. Install the valve into the pipeline (see the 'Installation' section).
5. After installation into the pipeline: depending on the type of connection (e.g. welding joint, flanged joint etc.) check whether the valve in the pipeline holds.
6. Remove slings.

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

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 temperature range (see 'Technical data' in the 'Design and principle of operation' section).

– Do not place any objects on the control valve.

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

SAMSON's 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.

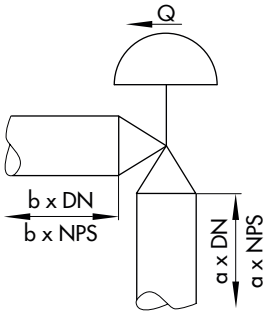
Pipeline routing

The inlet and outlet lengths (see Table 5-1) vary depending on several variables and process conditions and are intended as recommendations. Contact SAMSON if the lengths are significantly shorter than the recommended lengths.

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

➔ Observe the recommended inlet and outlet lengths (see Table 5-1). Contact SAMSON if the valve conditions or states of the medium process deviate.

Table 5-1: *Inlet and outlet lengths*



Q Flow rate
a Inlet length
b Outlet length

State of process medium	Valve conditions	Inlet length a	Outlet length b
Gas	Ma ≤ 0.3	2	4
Vapor	Ma ≤ 0.3 [1]	2	4
Liquid	Free of cavitation/w < 10 m/s	2	4
	Cavitation producing noise/w ≤ 3 m/s	2	4
	Cavitation producing noise/3 < w < 5 m/s	2	10

1) No wet steam

➔ Install the valve free of stress and with the least amount of vibrations as possible. Read information under "Mounting position" and "Versions with V-port plug" in this section.

➔ Install the valve allowing sufficient space to remove the actuator and valve or to perform service and repair work on them.

Mounting position

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

For valves that are intended to be free of cavities, the control valve **must** be installed with the actuator on top:

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

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 'Additional fittings' in the 'Design and principle of operation' section) have been installed or prepared as necessary before installing the valve.

Proceed as follows:

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

➔ Flush the pipelines.

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.

➔ When the valve and actuator are already assembled, check the tightening torques of the bolted joints (see the 'Tightening torques' section in Annex). 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.

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 'Tightening torques' in Annex).*

NOTICE

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

➔ *Only use tools approved by SAMSON (see the 'Tools' section in Annex).*

NOTICE

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

➔ *Keep the valve and the tools used free from solvents and grease.*

➔ *Make sure that only suitable lubricants are used.*

5.3.1 Mounting the actuator onto the valve

⚠ WARNING

Risk of personal injury due to preloaded springs.

Actuators with preloaded springs are under tension. This can be identified by the long bolts protruding from the bottom of the Type 3271 or Type 3277 Pneumatic Actuators.

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

Depending on the version, SAMSON control valves are either delivered with the actuator already mounted on the valve or the valve and actuator are delivered separately. When delivered separately, the valve and actuator must be assembled together on site.

Versions with V-port plug

To achieve the best flow conditions inside the valve, the V-port plug must always be installed with the port that releases the flow first when the valve opens facing toward the valve outlet. This is the largest of the three V-shaped ports (see Fig. 5-1).

➔ Before mounting the actuator, determine which V-shaped port is uncovered first when the plug is lifted out of the seat.

➔ On mounting the actuator, make sure that the V-shaped port uncovered first faces toward the valve outlet.

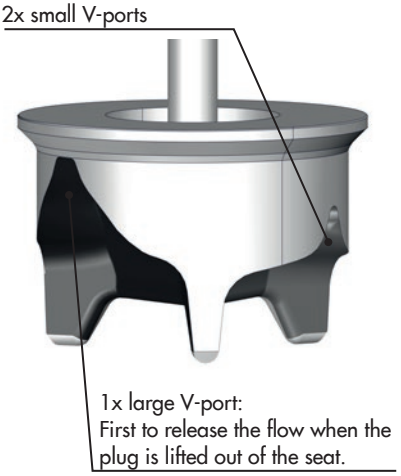


Fig. 5-1: *V-port plug*

a) Mounting a Type 3271 or Type 3277 Actuator

Refer to Fig. 5-2

➔ To mount the actuator, proceed as described in the associated actuator documentation.

➔ Make sure that the dimension x from the bottom of the actuator stem to the bottom of the actuator case is correctly adjusted (see Table 5-2).

Aligning the travel indicator scale

After mounting the actuator, the travel indicator scale must be aligned. To do so, align '0' on the travel indicator scale with the tip of the stem connector clamp.

1. Move the valve to the closed position.

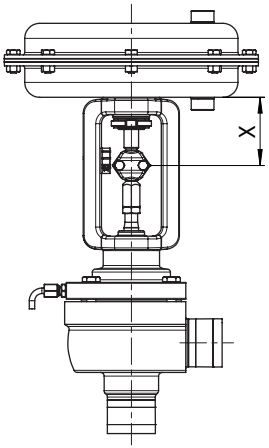


Table 5-2: *Dimension x*

Version	Valve size		Dimension x in mm
	DN	NPS	
Micro-flow valve	6 to 25	¼ to 1	67.5
Standard	15 to 25	½ to 1	67.5
	32 to 65	1¼ to 2½	75
	80 and 100	3 and 4	90

Fig. 5-2: *Dimension x for mounting Type 3271 or Type 3277 Actuator*

2. Loosen the screws on the travel indicator scale.
3. Align the travel indicator scale.
4. Fix the travel indicator scale into place by tightening the screws.

b) Mounting Type 3379 Actuator

Refer to Fig. 5-3

1. Undo the screws (34) on the valve bonnet (21).
2. Lift the valve bonnet (21) together with the plug (2), plug stem (3) and diaphragm (24) off the body (1).
3. Screw the actuator onto the valve bonnet (21).
4. Unscrew the plug stem (3) together with diaphragm (24) and plug (2) from the actuator stem.
5. Place the actuator and valve bonnet (21) together with the plug (2), plug stem (3) and diaphragm (24) onto the body (1).
6. Gradually tighten the screws (34) on the valve bonnet (21) in a crisscross pattern. Observe tightening torques.
7. For further instructions concerning Type 3379 Actuator (pneumatic connections, alignment of the actuator etc.) ▶ EB 8315.

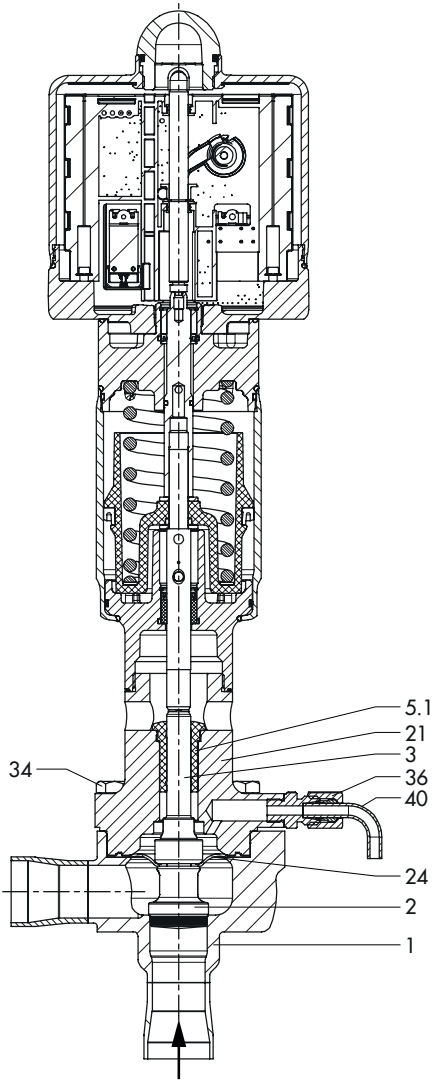


Fig. 5-3: *Assembling Type 3349 Valve and Type 3379 Actuator*

5.3.2 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.*
- ➔ *Before welding painted valves into the pipeline and/or subject them to heat in any way, observe the temperature resistance of the paint coating system.*
  The number of the coating system used can be found in the order documentation. The temperature resistance of all of our coating systems is specified in the Manual ▶ WA 268.

NOTICE

Premature wear and leakage due to insufficient support or suspension.

- ➔ *Support or suspend the valve sufficiently at suitable points.*

Note

To meet 3-A conformity requirements, a gasket recommended by 3-A Sanitary Standards Inc. (see website

▶ http://www.3-a.org) must be used for a Type 3349 Valve with threaded ends according to DIN 11851/DIN 11887.

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. Lift the valve using suitable lifting equipment to the site of installation (see information under 'Lifting the valve' in the 'Shipment and on-site transport' section). Observe the flow direction through the valve. The arrow on the valve indicates the direction of flow.
5. **With welding ends:** completely retract the actuator stem to protect the plug from sparks during welding.
   With threaded, clamp or flanged connections: make sure that the correct gaskets are used.
6. Bolt, weld or clamp the valve to the pipe free of stress.
7. Attach a support or suspension on the valve, if necessary.

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.*
- ➔ *Drain the process medium from all the plant sections concerned as well as the valve.*
- ➔ *Make sure that the valve body is drained over the lateral valve connection.*

⚠ WARNING

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

- ➔ *Do not loosen the screw of the test connection while the valve is pressurized.*

⚠ WARNING

Risk of hearing loss or deafness due to loud noise.

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

Crush hazard arising from actuator and plug stem moving in pneumatic control valves with Type 3271 or Type 3277 Actuator.

- ➔ *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.

While the valve is operating, air is vented from the actuator, e.g. 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.

Actuators with preloaded springs are under tension. This can be identified by the long bolts protruding from the bottom of the Type 3271 or Type 3277 Pneumatic Actuators.

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

❗ NOTICE

Diaphragm damage through the use of an incompressible medium.

Closing the valve when the shut-off valves upstream and downstream of the valve are closed may lead to the diaphragm rupturing in plants with liquid media flowing through them.

- ➔ *Only close the valve when the shut-off valves upstream and downstream of the valve are open.*

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. 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.

Adjusting the packing

A label on the yoke indicates whether an adjustable packing is installed (see the 'Markings on the device' section).

NOTICE

Impaired valve functioning due to increased friction as a result of the threaded bushing being tightened too far.

➔ *Make sure that the plug stem can still move smoothly after the threaded bushing has been tightened.*

1. Tighten the threaded bushing gradually (by turning it clockwise) until the packing seals the valve.
2. Open and close the valve several times.
3. Check the valve for leakage to the atmosphere.
4. Repeat steps 1 and 2 until the packing completely seals the valve.

➔ If the adjustable packing does not seal properly, contact our after-sales service.

5.4.2 Travel motion

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

➔ **With Type 3271 or Type 3277 Actuator:** 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

➔ Shut off the signal pressure line.

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

5.4.4 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 personal injury due to pressurized components and process medium being discharged.

➔ *Do not loosen the screw of the test connection while the valve is pressurized.*

⚠ WARNING

Risk of hearing loss or deafness due to loud noise.

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

Crush hazard arising from 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.

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 process medium escaping.

➔ *Align the pipe elbow to ensure that any escaping process medium does not hit operating personnel.*

➔ *Wear protective clothing (eye protection, safety gloves) when working in close proximity to the control valve.*

NOTICE

Risk of impairment of aseptic or hygienic service.

In the version with backup packing, the test connection is sealed by a stopper.

➔ *To guarantee aseptic or hygienic service, connect a leakage detection device to the test connection.*

NOTICE

Diaphragm damage through the use of an incompressible medium.

Closing the valve when the shut-off valves upstream and downstream of the valve are closed may lead to the diaphragm rupturing in plants with liquid media flowing through them.

➔ *Only close the valve when the shut-off valves upstream and downstream of the valve are open.*

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 '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 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 personal injury due to pressurized components and process medium being discharged.

- ➔ *Do not loosen the screw of the test connection while the valve is pressurized.*

⚠ WARNING

Risk of hearing loss or deafness due to loud noise.

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

Crush hazard arising from actuator and plug stem moving in pneumatic control valves with Type 3271 or Type 3277 Actuator.

- ➔ *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.

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 process medium escaping.

➔ *Align the pipe elbow to ensure that any escaping process medium does not hit operating personnel.*

➔ *Wear protective clothing (eye protection, safety gloves) when working in close proximity to the control valve.*

NOTICE

Diaphragm damage through the use of an incompressible medium.

Closing the valve when the shut-off valves upstream and downstream of the valve are closed may lead to the diaphragm rupturing in plants with liquid media flowing through them.

➔ *Only close the valve when the shut-off valves upstream and downstream of the valve are open.*

7.1 Normal operation

The handwheel of valves with actuators fitted with a handwheel must be in the neutral position during normal operation.

7.2 Manual operation

Valves with actuators fitted with a handwheel can be manually closed or opened in the event of failure of the auxiliary energy supply.

7.3 CIP (cleaning-in-place)

CIP can be performed with commonly used cleaning fluids.

➔ Observe the applicable hygiene regulations.

7.4 SIP (sterilization-in-place)

SIP can be performed using steam at a temperature up to 180 °C for a maximum of 30 minutes.

➔ Observe the applicable hygiene regulations.

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 (e.g. spring compression). See associated actuator documentation.
	Diaphragm in the actuator defective	See associated actuator documentation.
	Signal pressure too low	Check the signal pressure. Check the signal pressure line for leakage.
Jolting movement of the actuator and plug stem	Version with adjustable packing [1]: packing tightened too far	Tighten the packing correctly (see information under 'Adjusting the packing' in the 'Installation' section > 'Testing the installed valve').
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.
	Plug has become detached.	Fasten plug and plug stem together (see the 'Servicing' section).
	Incorrect setting of valve accessories	Check the settings of the valve accessories.
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, particularly with soft seat, is worn.	Replace plug (see the 'Servicing' section) or contact our after-sales service.

Malfunction	Possible reasons	Recommended action
The valve leaks to the atmosphere (fugitive emissions).	Diaphragm not correctly clamped into position.	Check that the diaphragm is correctly seated. If necessary, replace diaphragm (see the 'Servicing' section). Check the tightening torque of the joint between plug and plug stem. Check the tightening torque of the joint between body and bonnet/flange.
	Diaphragm damaged.	Replace diaphragm (see the 'Servicing' section).
	Defective packing	Replace packing (see the 'Servicing' section) or contact our after-sales service.
	Version with adjustable packing [1]: packing not tightened correctly	Adjust the packing (see information under 'Adjusting the packing' in the 'Installation' section > 'Testing the installed valve'). Contact our after-sales service when it continues to leak.
	Flanged/threaded/ clamped joint loose or gasket worn out	Check pipe connection. Replace gasket (see the 'Servicing' section) or contact our after-sales service.

[1] See the 'Markings on the device' section

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

The work can be performed after a malfunction and/or as servicing work.

The following documents are also required for servicing the valve:

– Mounting and operating instructions for the mounted actuator, e.g. ▶ EB 8310-X for Type 3271 or Type 3277 Pneumatic Actuator

⚠ 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.*

➔ *Make sure that the valve body is drained over the lateral valve connection.*

⚠ 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 pressurized components and process medium being discharged.

➔ *Do not loosen the screw of the test connection while the valve is pressurized.*

⚠ WARNING

Risk of hearing loss or deafness due to loud noise.

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

Crush hazard arising from actuator and plug stem moving in pneumatic control valves with Type 3271 or Type 3277 Actuator.

- ➔ *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.

While the valve is operating, air is vented from the actuator, e.g. 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.

Actuators with preloaded springs are under tension. This can be identified by the long bolts protruding from the bottom of the Type 3271 or Type 3277 Pneumatic Actuators.

- ➔ *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 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 'Tightening torques' in Annex).*

NOTICE

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

➔ *Only use tools approved by SAMSON (see the 'Tools' section in Annex).*

NOTICE

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

➔ *Only use lubricants approved by SAMSON (see the 'Lubricants' section in Annex).*

NOTICE

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

➔ *Keep the valve and the tools used free from solvents and grease.*

➔ *Make sure that only suitable lubricants are used.*

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 Checking the extent of servicing

➔ Check wear at seat and plug. Replace the damaged plug (see section 9.5.2 or 9.6.2).

➔ Check the diaphragm for damage (e.g. cracks, milky coloring at the bends). Replace the damaged diaphragm (see section 9.5.2 or 9.6.2).

➔ If the valve leaks even if the diaphragm is intact, check the tightening torque of the joint between plug and plug stem as well as body and bonnet/flange.

9.3 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).
3. Remove the valve from the pipeline (see the 'Removal' section).

9.4 Installing the valve after service work

1. Reinstall the valve into the pipeline (see the 'Installation' section).
2. Put the control valve back into operation (see the 'Start-up' section). Observe the requirements and conditions for start-up or putting the valve back into operation.

9.5 Service work for version with Type 3271 or Type 3277 Actuator

See Fig. 9-2

➔ Before performing any service work, preparations must be made to the control valve (see section 9.3).

➔ After all service work is completed, check the control valve before putting it back into operation (see 'Testing the installed valve' in the 'Installation' section).

i ***Note***

To remove an actuator with "stem extends" fail-safe action and/or with preloaded springs, a certain signal pressure must be applied to the actuator (see associated actuator documentation). Afterwards, the signal pressure must be removed and the air supply disconnected again and locked.

9.5.1 Replacing the packing (micro-flow valve version only)

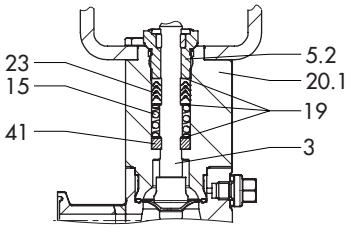


Fig. 9-1: *Packing (with Type 3271/3277 Actuator)*

1. Remove the actuator from the valve. See associated actuator documentation.
2. Undo the screws (34).
3. Lift the valve bonnet (20.1) together with the plug stem (3), plug (2) and diaphragm (24) off the body (1).
4. Unscrew the threaded bushing (5.2).
5. Pull the plug (2) with plug stem (3) and diaphragm (24) out of the valve bonnet (20.1).
6. Pull the entire packing parts (15, 19, 23) out of the packing chamber using a suitable tool. Renew the damaged parts and carefully clean the packing chamber.

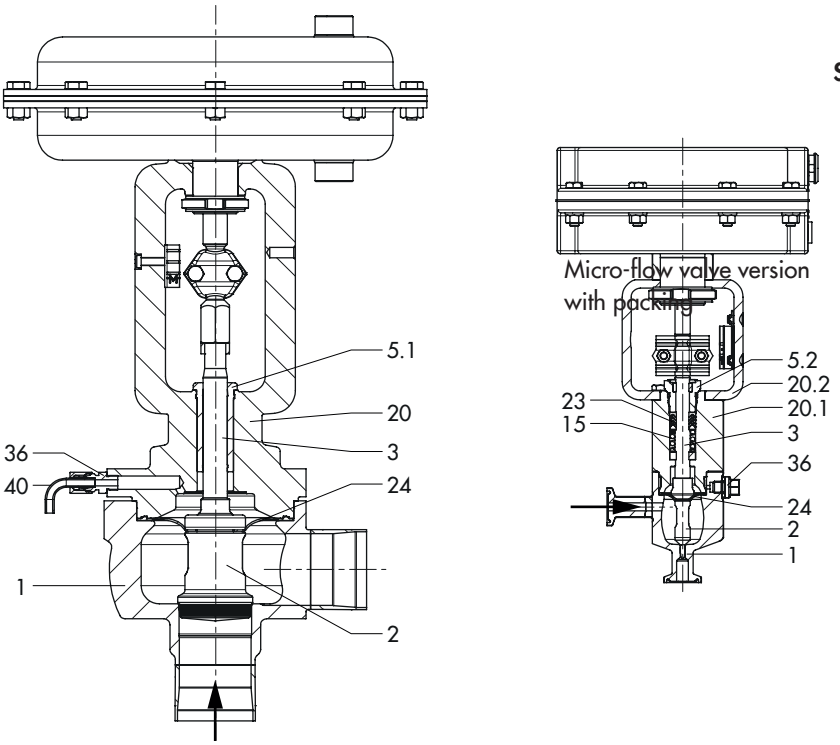


Fig. 9-2: *Type 3349 Valve with Type 3271 Pneumatic Actuator*

Legend for Fig. 9-1 to Fig. 9-4

1	Body
2	Plug
3	Plug stem
5.1	Stem seal
5.2	Threaded bushing
6.1	Threaded pin
6.2	Retaining washer
15	Spring
19	Washer
20	Standard yoke for Type 3271/3277 Actuator
20.1	Valve bonnet for micro-flow valve version with Type 3271/3277 Actuator
20.2	Yoke for micro-flow valve version with Type 3271/3277 Actuator
23	Packing
24	Diaphragm
34	Screw
36	Screw plug or nipple
39	Seal
40	Pipe
41	Bearing

7. Push the plug (2) together with plug stem (3) and diaphragm (24) into the valve bonnet (20.1).
8. Carefully slide the packing parts (15, 19, 23) over the plug stem into the packing chamber using a suitable tool.
9. Tighten the threaded bushing (5.2).
10. Place the valve bonnet (20.1) together with the plug stem (3), plug (2) and diaphragm (24) onto the body (1).
11. Apply a suitable lubricant to the bolts (34).
12. Gradually tighten the screws (34) on the valve bonnet (20.1, 20.2) in a crisscross pattern. Observe tightening torques.
13. Mount actuator. See associated actuator documentation and the 'Installation' section.
14. Adjust lower or upper signal bench range. See associated actuator documentation.

9.5.2 Replacing the diaphragm and plug

1. Remove the actuator from the valve. See associated actuator documentation.
2. Undo the screws (34).
3. Lift the standard yoke (20) together with the plug stem (3), plug (2) and diaphragm (24) off the body (1).
4. Pull the plug (2) together with plug stem (3) and diaphragm (24) out of the standard yoke (20).

   For version with packing (micro-flow valve version): replace the packing (see section 9.5.1).
5. **For micro-flow valve version:** unscrew threaded pin (6.1) (see Fig. 9-4).
6. Unscrew the plug stem (3) from the plug (2).
7. Remove diaphragm (24).
8. **For standard version:** remove retaining washers (6.2) (see Fig. 9-3).
9. Remove any excess lubricant or contamination that may still exists from previous use.
10. Apply a suitable lubricant to the thread of the plug stem (3).
11. Screw a new plug (2) onto the plug stem (3) using a suitable tool. Observe tightening torques.
12. Mark the side mounting position.
13. Unscrew the plug stem (3) from the plug (2).
14. **For standard version:** insert new retaining washers (6.2) inside the plug's threaded hole (they must be opposed to form an X shape) (see Fig. 9-3).
15. Insert a new diaphragm (24) into the new plug.
16. Screw the new plug (2) back onto the plug stem (3) again using a suitable tool. Align the plug stem with the mounted position mark made earlier. To do this, clamp the plug into a suitable clamping fixture (e.g. vise with soft protective jaws) and pull it with a suitable tool.
17. Remove the mounting position mark.

18. **For micro-flow valve version:** secure plug (2) with threaded pin (6.1) (see Fig. 9-4).
19. Check the concentricity of the plug (see section 9.7).
20. Clean the flange area that will be located above the diaphragm with detergent and a brush. Rinse it with water and apply a non-damaging mild sanitizer.
21. Push the plug (2) together with plug stem (3) and diaphragm (24) into the standard yoke (20).
22. Place the standard yoke (20) together with the plug stem (3), plug (2) and diaphragm (24) onto the body (1).
23. Apply a suitable lubricant to the bolts (34).
24. Tighten the screws (34) on the standard yoke (20) gradually in a crisscross pattern until the valve bonnet touches the body flange.

i ***Note***

Greater deformation forces are required for new diaphragms (in comparison to already installed diaphragms). We recommend shaping the new diaphragms beforehand using conventional hex screws:

– *Tighten the conventional hex screws as described in step 24.*
– *Replace the conventional hex screws with the existing screws (34).*
– *Tighten the screws (34) as described in step 24.*

25. Mount actuator. See associated actuator documentation and the 'Installation' section.
26. Adjust lower or upper signal bench range. See associated actuator documentation.

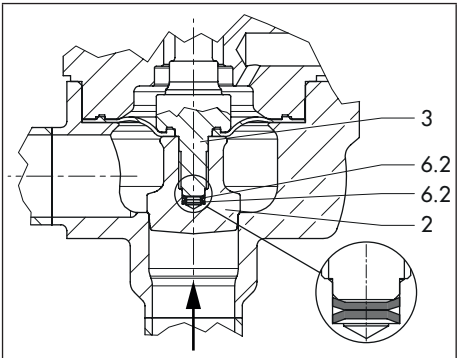


Fig. 9-3: *X shape of washers*

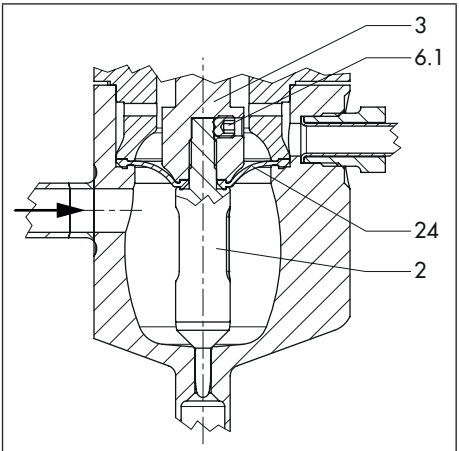


Fig. 9-4: *Threaded pin on the plug stem/plug*

9.6 Service work for version with Type 3379 Actuator

See Fig. 9-5

➔ Before performing any service work, preparations must be made to the control valve (see section 9.3).

➔ After all service work is completed, check the control valve before putting it back into operation (see 'Testing the installed valve' in the 'Installation' section).

Legend for Fig. 9-3 to Fig. 9-7

1	Body
2	Plug
3	Plug stem
5.1	Stem seal
5.2	Threaded bushing
6.1	Threaded pin
6.2	Retaining washer
15	Spring
19	Washer
20.3	Valve bonnet for micro-flow valve version with Type 3379 Actuator
21	Standard valve bonnet with Type 3379 Actuator
23	Packing
24	Diaphragm
34	Screw
36	Screw plug or nipple
39	Seal
40	Pipe
41	Bearing
42	Spacer of stem seal (micro-flow valve version only)
43	Snap ring

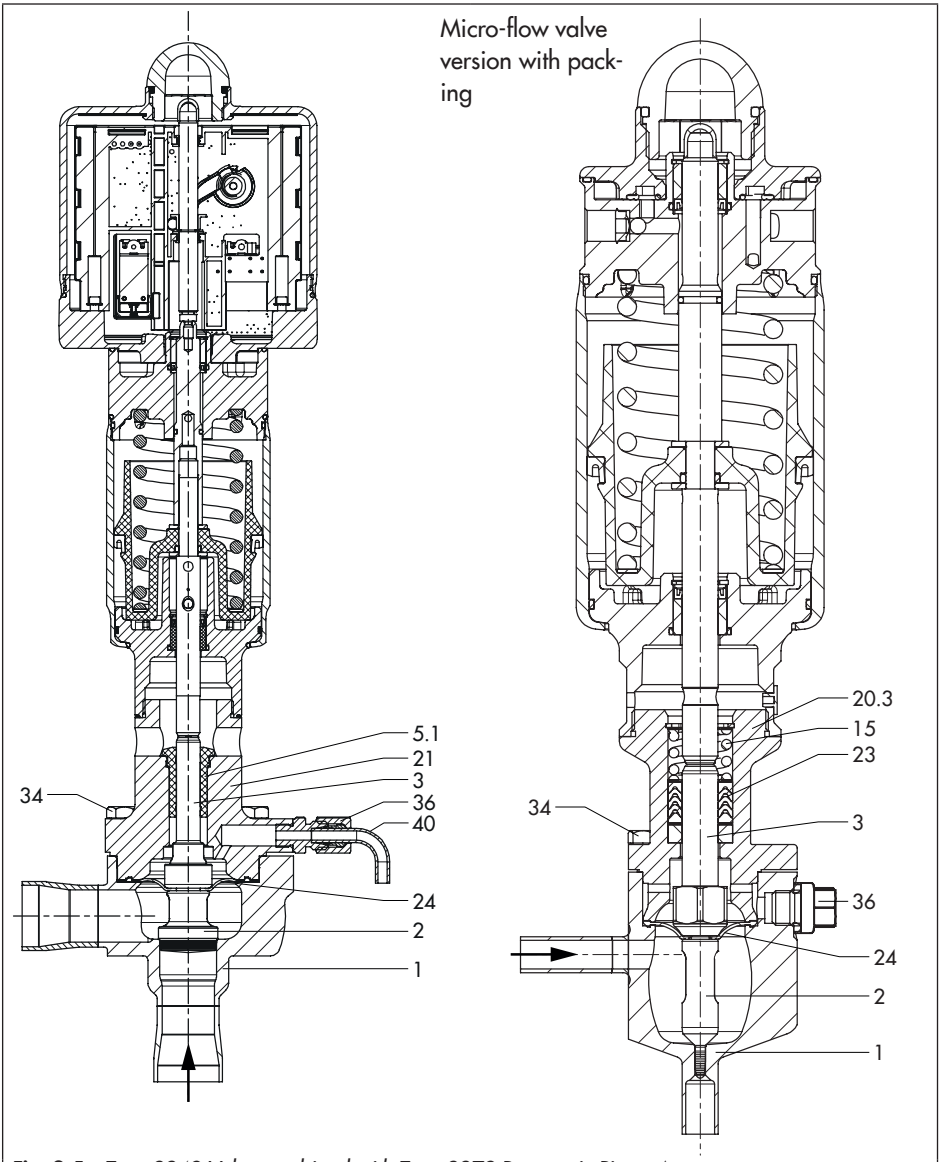


Fig. 9-5: *Type 3349 Valve combined with Type 3379 Pneumatic Piston Actuator with Type 3724 Positioner (left) · without positioner (right)*

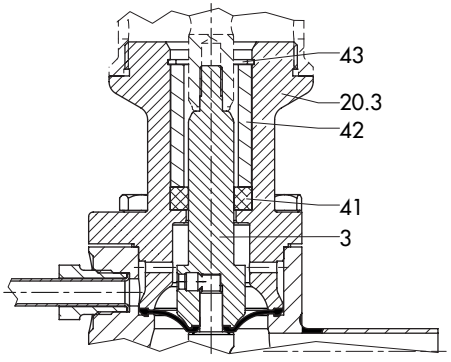


Fig. 9-6: *Stem seal (micro-flow valve version without packing)*

9.6.1 Replacing the packing (micro-flow valve version only)

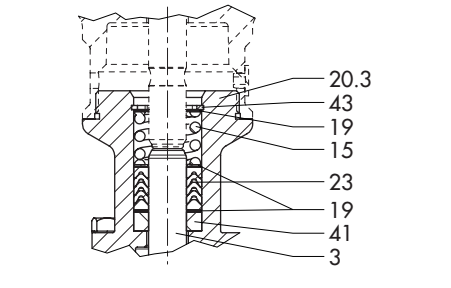


Fig. 9-7: *Packing (with Type 3379 Actuator)*

1. Undo the screws (34) on the valve bonnet (20.3).
2. Lift the actuator and valve bonnet (20.3) together with the plug stem (3), plug (2),and diaphragm (24) off the body (1).
3. Unscrew the plug stem (3) together with plug (2) and diaphragm (24) off the actuator stem and pull it out of the valve bonnet (20.3).
4. Unscrew the actuator onto the valve bonnet (20.3).
5. Compress the packing (15, 19, 23) using a suitable tool and remove the snap ring (43).
6. Pull the entire packing parts (15, 19, 23) out of the packing chamber using a suitable tool. Renew the damaged parts and carefully clean the packing chamber.
7. Check the plug (2) and diaphragm (24) for damage. Replace them, if necessary (see section 9.6.2).
8. Push the plug (2) together with plug stem (3) and diaphragm (24) into the valve bonnet (20.3).
9. Carefully slide the packing parts (15, 19, 23) over the plug stem (3) into the packing chamber using a suitable tool.
10. Compress the packing using a suitable tool and insert the snap ring (43).
11. Fasten the actuator onto the valve bonnet (20.3).
12. Apply a suitable lubricant to the actuator stem.
13. Screw the plug stem (3) together with plug (2) and diaphragm (24) onto the actuator stem. Observe tightening torques.
14. Place the actuator and valve bonnet (20.3) together with the plug stem (3), plug (2) and diaphragm (24) onto the body (1).

15. Apply a suitable lubricant to the bolts (34).
16. Gradually tighten the screws (34) on the valve bonnet (20.3) in a crisscross pattern. Observe tightening torques.
17. For version with Type 3724 Positioner: initialize the positioner (▶ EB 8395).

9.6.2 Replacing the diaphragm and plug

i ***Note***

Before replacing the diaphragm and plug, remove the valve from the plant.

1. Undo the screws (34) on the valve bonnet (21).
2. Lift the actuator and valve bonnet (21) together with the plug stem (3), plug (2),and diaphragm (24) off the body (1).
3. Unscrew the plug stem (3) together with plug (2) and diaphragm (24) off the actuator stem and pull it out of the valve bonnet (21).
4. Unscrew the actuator onto the valve bonnet (21).

   For version with packing (micro-flow valve version): replace the packing (see section 9.6.1).
5. **For micro-flow valve version:** unscrew threaded pin (6.1) (see Fig. 9-4).
6. Unscrew the plug stem (3) from the plug (2).
7. Remove diaphragm (24).
8. **For standard version:** remove retaining washers (6.2) (see Fig. 9-3).
9. Remove any excess lubricant or contamination that may still exists from previous use.
10. Apply a suitable lubricant to the thread of the plug stem (3).
11. Screw a new plug (2) onto the plug stem (3) using a suitable tool. Observe tightening torques.
12. Mark the side mounting position.
13. Unscrew the plug stem (3) from the plug (2).
14. **For standard version:** insert new retaining washers (6.2) inside the plug's threaded hole (they must be opposed to form an X shape) (see Fig. 9-3).
15. Insert a new diaphragm (24) into the new plug.
16. Screw the new plug (2) back onto the plug stem (3) again using a suitable tool. Align the plug stem with the mounted position mark made earlier. To do this, clamp the plug into a suitable clamping fixture (e.g. vise with soft protective jaws) and pull it with a suitable tool.
17. Remove the mounting position mark.
18. **For micro-flow valve version:** secure plug (2) with threaded pin (6.1) (see Fig. 9-4).
19. Check the concentricity of the plug (see section 9.7).
20. Clean the flange area that will be located above the diaphragm with detergent

and a brush. Rinse it with water and apply a non-damaging mild sanitizer.

21. Push the plug (2) together with plug stem (3) and diaphragm (24) into the valve bonnet (21).
22. Apply a suitable lubricant to the thread of the valve bonnet (20).
23. Screw the actuator onto the valve bonnet (21).
24. Apply a suitable lubricant to the actuator stem.
25. Screw the plug stem (3) together with plug (2) and diaphragm (24) onto the actuator stem. Observe tightening torques.
26. Place the actuator and valve bonnet (21) together with the plug stem (3), plug (2) and diaphragm (24) onto the body (1).
27. Apply a suitable lubricant to the bolts (34).
28. Tighten the screws (34) on the valve bonnet (21) gradually in a crisscross pattern until the valve bonnet touches the body flange.

Note

Greater deformation forces are required for new diaphragms (in comparison to already installed diaphragms). We recommend shaping the new diaphragms beforehand using conventional hex screws:

– *Tighten the conventional hex screws as described in step 28.*
– *Replace the conventional hex screws with the existing screws (34).*
– *Tighten the screws (34) as described in step 28.*

29. For version with Type 3724 Positioner: initialize the positioner (▶ EB 8395).

9.7 Checking the concentricity of the plug to the plug stem

Before mounting the plug, the concentricity of the plug to the plug stem must be checked.

1. Clamp the plug stem into a suitable chuck.
2. Check the concentricity of the plug to the plug stem. Observe the values listed in Table 9-1 and Table 9-2.
3. If the concentricity deviates, use a suitable tool (e.g. plastic hammer) and hit the plug until concentricity is achieved.

Tip

Instead of aligning the plug, the assembly (consisting of plug stem, diaphragm and plug) can be ordered from SAMSON.

Table 9-1: *Concentricity of the plug · Version with Type 3271/3277 Actuator*

Valve size		Max. deviation in mm
DN	NPS	
6 to 25	¼ to 1	0.01
15 to 25	½ to 1	0.01
32 to 65	1¼ to 2½	0.04
80 and 100	3 and 4	0.05

Table 9-2: *Concentricity of the plug · Version with Type 3379 Actuator*

Valve size		Max. deviation in mm
DN	NPS	
6 to 25	¼ to 1	0.01
15 to 25	½ to 1	0.01
32 to 50	1¼ to 2	0.04

9.8 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.

Spare parts

See Annex for details on spare parts.

Lubricant

See Annex for details on suitable lubricants.

Tools

See Annex for details on suitable 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 all the plant sections concerned as well as the valve.*
- ➔ *Make sure that the valve body is drained over the lateral valve connection.*

⚠ 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 pressurized components and process medium being discharged.

- ➔ *Do not loosen the screw of the test connection while the valve is pressurized.*

⚠ WARNING

Risk of hearing loss or deafness due to loud noise.

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

Crush hazard arising from actuator and plug stem moving in pneumatic control valves with Type 3271 or Type 3277 Actuator.

- ➔ *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.

While the valve is operating, air is vented from the actuator, e.g. 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 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*

Diaphragm damage through the use of an incompressible medium.

Closing the valve when the shut-off valves upstream and downstream of the valve are closed may lead to the diaphragm rupturing in plants with liquid media flowing through them.

➔ *Only close the valve when the shut-off valves upstream and downstream of the valve are open.*

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. Use the lateral valve connection to drain the 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

Crush hazard arising from actuator and plug stem moving in pneumatic control valves with Type 3271 or Type 3277 Actuator.

➔ *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 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.

Actuators with preloaded springs are under tension. This can be identified by the long bolts protruding from the bottom of the Type 3271 or Type 3277 Pneumatic Actuators.

➔ *Before starting any work on the actuator, relieve the compression from the preloaded springs.*

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

a) Version with threaded, clamp or flange connections

1. Support the valve to hold it in place when separated from the pipeline (see the 'Shipment and on-site transport' section).
2. Undo the threaded, clamp or flanged joint.
3. Remove the valve from the pipeline (see the 'Shipment and on-site transport' section).

b) Version with welding ends

1. Support the valve to hold it in place when separated from the pipeline (see the 'Shipment and on-site transport' section).
2. Cut the pipeline in front of the weld seam.
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 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:

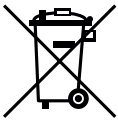
1. Exceptions apply concerning some special device models
   ▶ *www.samsongroup.com > Service & Support > After-sales Service.*
2. Send an e-mail
   ▶ returns-de@samsongroup.com to register the return shipment including the following information:
   – Type
   – Article number
   – Configuration ID
   – 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.

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 62194439/ FR 02566

➔ Observe local, national and international refuse regulations.

➔ Do not dispose of components, lubricants and hazardous substances together with your household waste.

Note

We can provide you with a recycling passport according to PAS 1049 [1] on request. Simply e-mail us at aftersalesservice@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 and valve accessories). This PAS specification does not apply to non-electrical equipment (e.g. fully pneumatically operated valves).

14 Certificates

These declarations and certificates are included on the next pages:

- Declaration of conformity in compliance with Pressure Equipment Directive 2014/68/EU on pages 14-2 to 14-3
- Declaration of conformity according to Machinery Directive 2006/42/EC on page 14-4
- Declaration of incorporation in compliance with Machinery Directive 2006/42/EC for Type 3349 Valve on page 14-5
- Declaration of conformity in compliance with the 2016 Regulations No. 1105 Pressure Equipment (Safety) Regulations 2016, see pages 14-6 to 14-9
- Declaration of conformity in compliance with the 2008 Regulations No. 1597 Supply of Machinery (Safety) Regulations 2008:
  - Final machinery, see page 14-10
  - Partly completed machinery, see page 14-11
- Canadian CRN certification for pressure equipment on page 14-12 to page 14-22
- Declaration of conformity to comply with regulations on food contact on page 14-23 to page 14-25
- REACH declaration of conformity in compliance with the Regulation (EC) No. 1907/2006 on page 14-26 to page 14-27
- RoHS declaration of conformity in compliance with Directive 2011/65/EU, 2015/863/EU on page 14-28
- Declaration of conformity in compliance with the requirements in TSG D7002-2006 for Chinese pressure equipment on page 14-29
- Declaration of conformity according to Regulation China RoHS 2.0, GB/T26572-2011 on page 14-30
- 3-A certificate (standard 53-06) on page 14-31
- EHEDG certificate on page 14-32

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 > 3349*

Other optional certificates are available on request.

SAMSON REGULATION S.A.S.

DECLARATION UE DE CONFORMITE
EU DECLARATION OF CONFORMITY

DC014
2022-05

Module A / Modul A

Par la présente, SAMSON REGULATION SAS déclare sous sa seule responsabilité pour les produits suivants :
For the following products, SAMSON REGULATION SAS hereby declares under its sole responsibility:

Appareils / Devices	Type	Exécution / Version	Matériel du corps / body Material	PN Class	DN NPS	Fluides / fluids
Vanne de décharge / Back pressure reducing valve	2371-0	DIN	Acier / steel	$P_{max\ T=20°C}$ 10 bar	DN 32 – 50	Tous fluides / all fluids
		ANSI		$P_{max\ T=70°F}$ 150 psi	NPS 1 ¼ – 2	
Détendeur alimentaire / Pressure reducing valve	2371-1	DIN		$P_{max\ T=20°C}$ 10 bar	DN 32 – 50	
		ANSI		$P_{max\ T=70°F}$ 150 psi	NPS 1 ¼ – 2	
Vanne de régulation passage droit / Globe valve	2423	à membrane with diaphragm	Fonte grise / cast iron	PN25	DN 65 - 125	G2 /L2 [1]
		à soufflet with bellow	Fonte sphéroïdale / spheroidal graphite iron	PN25	DN 50 - 125	
			Acier / steel	PN16 PN25 PN40	DN 65 – 100 DN 50 - 100 DN 40 - 100	
Vanne de régulation passage droit / Globe valve	3241	DIN	Fonte grise / cast iron	PN10	DN 125 – 150	G2, L1, L2 [1]
		DIN	Fonte grise & fonte sphéroïdale / cast iron & spheroidal graphite iron	PN16	DN 65 – 125	
		DIN	Fonte sphéroïdale / spheroidal graphite	PN 25	DN 50 - 80	
		ANSI	Fonte grise / cast iron	Cl 125 Cl 250	NPS 2 ½ - 4 NPS 1 ½ - 2	
		DIN	Acier / steel	PN10 PN16 PN25	DN 32 – 100 DN 32 – 50 DN 32 - 40	Tous fluides / all fluids
		ANSI		Cl 150	NPS 1 ¼ - 2	
Vanne de régulation 3 voies / 3-way Valve	3244	DIN	Fonte grise / cast iron	PN10 PN16	DN 125 – 150 DN 65 – 125	G2, L1, L2 [1]
		DIN	Acier / steel	PN10 PN16 PN25	DN 32 – 100 DN 32 – 50 DN 32 - 40	Tous fluides / all fluids
		ANSI		Cl 150	NPS 1 ¼ - 2	
Vanne de régulation passage droit / Globe valve	3251	DIN	Acier / steel	PN16 PN25	DN 32 – 50 DN 32 – 40	Tous fluides / all fluids
		ANSI		Cl 150	NPS 1 ¼ - 2	
Vanne équerre / Angle valve	3256	DIN	Acier / steel	PN16	DN 32 – 50	Tous fluides / all fluids
		ANSI		Cl 150	NPS 1 ¼ - 2	
Vanne à segment sphérique / Segment ball valve	3310	DIN	Acier / steel	PN10 PN16 PN25	DN 40 – 50 DN 80 – 100 DN 40	Tous fluides / all fluids
		ANSI		Cl 150	NPS 1 ½ – 2	
Vanne de régulation passage droit / Globe valve	3321	DIN	Fonte grise / cast iron	PN16	DN 65 – 100	G2, L1, L2 [1]
		ANSI		Cl 125	NPS 2 ½ - 4	
		DIN	Fonte sphéroïdale / spheroidal graphite iron	PN25	DN 50 – 80	
		ANSI	Acier / steel	Cl 150	NPS 1 ½ - 2	Tous fluides / all fluids
Vanne de régulation 3 voies / 3-way Valve	3323	DIN	Fonte grise / cast iron : GJL-250	PN16	DN 65 – 100	G2, L1, L2 [1]
		DIN	Fonte sphéroïdale / spheroidal graphite iron	PN25	DN 50 – 80	
Vanne papillon / Butterfly valve	3331	DIN	Acier / steel	PN10	DN 100	Tous fluides / all fluids
Vanne à membrane / Diaphragm valve	3345	DIN	Acier / steel	$P_{max\ T=20°C}$ 10 bar $P_{max\ T=20°C}$ 16 bar $P_{max\ T=70°F}$ 150 psi or 230 psi	DN 32 – 100 DN 32 – 50 NPS 1 ¼ – 2	Tous fluides / all fluids
		DIN	Fonte grise & fonte sphéroïdale / cast iron & spheroidal graphite iron	$P_{max\ T=20°C}$ 10 bar $P_{max\ T=20°C}$ 16 bar $P_{max\ T=20°C}$ 40 bar	DN 125 – 150 DN 65 – 125 DN 40 – 50	G2, L1, L2 [1]
		ANSI		$P_{max\ T=70°F}$ 150 psi $P_{max\ T=70°F}$ 230 psi $P_{max\ T=70°F}$ 580 psi	NPS 2 ½ – 4 NPS 2 ½ – 5 NPS 1 ½ – 2	

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SAMSON REGULATION S.A.S.

DECLARATION UE DE CONFORMITE
EU DECLARATION OF CONFORMITY

DC014
2022-05

Module A / Modul A

Appareils / Devices	Type	Exécution / Version	Matériel du corps / body Material	PN Class	DN NPS	Fluides / fluids
Vanne alimentaire / Sanitary valve	3347	DIN	Acier / steel	$P_{max\ T=20°C}$ 10 bar	DN 125 – 150	G2, L1, L2 [1]
		ANSI		$P_{max\ T=70°F}$ 150 psi	NPS 5 – 6	
Vanne aseptique / Aseptic valve	3349	DIN	Acier / steel	$P_{max\ T=20°C}$ 10 bar $P_{max\ T=20°C}$ 16 bar $P_{max\ T=20°C}$ 25 bar	DN 32 – 100 DN 32 – 50 DN 32 – 40	Tous fluides / all fluids
		ANSI		$P_{max\ T=70°F}$ 150 psi $P_{max\ T=70°F}$ 230 psi $P_{max\ T=70°F}$ 360 psi	NPS 1 ¼ – 4 NPS 1 ¼ – 2 NPS 1 ¼ – 1 ½	
Vanne Tout ou Rien / On-Off Valve	3351	DIN	Acier / steel	PN16 PN25	DN 32 – 50 DN 32 – 40	Tous fluides / all fluids
		ANSI		Cl 150	NPS 1 ¼ – 2	
		DIN	Fonte grise & fonte sphéroïdale / cast iron & spheroidal graphite iron	PN16	DN 65 – 100	G2, L1, L2 [1]
			Fonte sphéroïdale / spheroidal graphite iron	PN25	DN 50 – 80	
		ANSI	Fonte grise / cast iron	Cl 125	NPS 2 ½ – 4	
Bride de mesure / Measure flange	5090	DIN	Acier / steel	PN6 PN10 PN16 PN25 PN40	DN 200 – 500 DN 125 – 350 DN 65 – 200 DN 50 – 125 DN 40 – 100	G2, L2 [1]

[1] Gas selon l'article 4 § 1.c) i) / Gases Acc. to article 4 paragraphs 1.c) i)
Liquide selon l'article 4 § 1.c) ii) / Liquids Acc. to article 4 paragraphs 1.c) ii)

la conformité avec le règlement suivant : / the conformity with the following requirement :

La Directive du Parlement Européen et du Conseil d'harmonisation des lois des Etats Membres concernant la mise à disposition sur le marché d'équipements sous pression / Directive of the European Parliament and of the Council on the Harmonization of the laws of the Member States relating of the making available on the market of pressure equipment	**2014/68/UE 2014/68/EU**	**Du / of 15.05.2014**
Procédure d'évaluation de la conformité appliquée pour les fluides selon l'Article 4 § 1 Applied conformity assessment procedure for fluids according to Article 4 § 1	**Module A / Modul A**	

Normes techniques appliquées / Technical standards applied :
DIN EN 12516-2, DIN EN 12516-3, ASME B16.34, DIN-EN 60534-4, DIN-EN 1092-1

Fabricant / manufacturer : Samson Régulation SAS, 1, rue Jean Corona, FR-69120 VAULX-EN-VELIN

Vaulx-en-Velin, le 23/05/22

Bruno Soulas
Directeur Stratégie et Développement / Head of Strategy and Development

Joséphine Signoles-Fontaine
Responsable du service QSE / Head of QSE Department

EU DECLARATION OF CONFORMITY

DC033
2020-07

Declaration of Conformity of Final Machinery

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

For the following products:

Pneumatic Control & Aseptic Angle Valve Type 3349-1/-7 consisting of the type 3349 Valve and Type 3271/Type 3277 Pneumatic Actuator or Type 3349 with Type 3379 Pneumatic Actuator

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 and actuator, refer to:

- Type 3349 Valve: Mounting and Operating Instructions EB 8048-2/-3
- Types 3271 and 3277 Actuators: Mounting and Operating Instructions EB 8310-X
- Type 3379 Actuator: Mounting and Operating Instructions EB 8315

Valve accessories (e.g. positioners, limit switches, solenoid valves, lock-up valves, supply pressure regulators, volume boosters and quick exhaust valves) are classified as machinery components in this declaration of conformity and do not fall within the scope of the Machinery Directive as specified in § 35 and § 46 of the Guide to Application of the Machinery Directive 2006/42/EC issued by the European Commission. In the SAMSON Manual H 02 titled "Appropriate Machinery Components for SAMSON Pneumatic Control Valves with a Declaration of Conformity of Final Machinery", SAMSON defines the specifications and properties of appropriate machinery components that can be mounted onto the above specified final machinery.

Referenced technical standards and/or specifications:

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

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

Persons authorized to compile the technical file:
SAMSON REGULATION SAS – 1 rue Jean Corona – FR-69120 VAULX-EN-VELIN
Vaulx-en-Velin, 30 July 2020

Michael Lachenal-Chevallet
R&D Manager

Joséphine Signoles-Fontaine
QSE Manager

DECLARATION OF INCORPORATION

DC044
2022-12

Declaration of Incorporation in compliance with Machinery Directive 2006/42/EC

For the following products:
Type 3349 Pneumatic Control & Aseptic Angle Valve

We certify that the Type 3349 Pneumatic Control and aseptic angle valves are partly completed machinery as defined in the Machinery Directive 2006/42/EC and that the safety requirements stipulated in Annex I, 1.1.2, 1.1.3, 1.1.5, 1.3.2, 1.3.4 and 1.3.7 are observed. The relevant technical documentation described in Annex VII, part B has been compiled.

Products we supply must not be put into service until the final machinery into which it is to be incorporated has been declared in conformity with the provisions of the Machinery Directive 2006/42/EC.

Operators are obliged to install the products observing the accepted industry codes and practices (good engineering practice) as well as the mounting and operating instructions. Operators must take appropriate precautions to prevent hazards that could be caused by the process medium and operating pressure in the valve as well as by the signal pressure and moving parts.

The permissible limits of application and mounting instructions for the products are specified in the associated data sheets as well as the mounting and operating instructions; the documents are available in electronic form on the Internet at www.samsongroup.com.

For product descriptions of the valve, refer to Mounting and Operating Instructions EB 8048-2/-3.

Referenced technical standards and/or specifications:
- VCI, VDMA, VGB: "Leitfaden Maschinenrichtlinie (2006/42/EG) — Bedeutung für Armaturen, Mai 2018" [German only]
- VCI, VDMA, VGB: "Zusatzdokument zum „Leitfaden Maschinenrichtlinie (2006/42/EG) — Bedeutung für Armaturen vom Mai 2018" [German only], based on DIN EN ISO 12100:201 1-03

Comments:
- See mounting and operating instructions for residual hazards.
- Also observe the referenced documents listed in the mounting and operation instructions.

Persons authorized to compile the technical file:
SAMSON REGULATION SAS – 1 rue Jean Corona – FR-69120 VAULX-EN-VELIN
Vaulx-en-Velin, 23rd December 2022

Bruno Soulas
General Director
Head of Strategy and Development

Joséphine Signoles-Fontaine
Head of QSE department

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WEEE N° FR025665

UK DECLARATION OF CONFORMITY

DC062
2022-12

The Pressure Equipment (Safety) Regulations 2016 Module A

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

Devices	Type	Version	Body Material	PN Class	DN NPS	Fluids
Back pressure reducing valve	2371-0	DIN	Steel	$P_{max\ T=20°C}$ 10 bar	DN 32 – 50	All fluids
		ANSI		$P_{max\ T=70°F}$ 150 psi	NPS 1 ¼ – 2	
Pressure reducing valve	2371-1	DIN		$P_{max\ T=20°C}$ 10 bar	DN 32 – 50	
		ANSI		$P_{max\ T=70°F}$ 150 psi	NPS 1 ¼ – 2	
Globe valve	2423	à membrane with diaphragm	Cast iron	PN25	DN 65 - 125	G2 /L2 [1]
		à soufflet with bellow	Spheroidal graphite iron	PN25	DN 50 - 125	
			Steel	PN16 PN25 PN40	DN 65 – 100 DN 50 - 100 DN 40 - 100	
Globe valve	3241	DIN	Cast iron	PN10	DN 125 – 150	G2, L1, L2 [1]
		DIN	Cast iron & spheroidal graphite iron	PN16	DN 65 – 125	
		DIN	Spheroidal graphite	PN 25	DN 50 - 80	
		ANSI	Cast iron	Cl 125 Cl 250	NPS 2 ½ - 4 NPS 1 ½ - 2	
		DIN	Steel	PN10 PN16 PN25	DN 32 – 100 DN 32 – 50 DN 32 - 40	All fluids
		ANSI		Cl 150	NPS 1 ¼ - 2	
3-way Valve	3244	DIN	Cast iron	PN10 PN16	DN 125 – 150 DN 65 – 125	G2, L1, L2 [1]
		DIN	Steel	PN10 PN16 PN25	DN 32 – 100 DN 32 – 50 DN 32 - 40	All fluids
		ANSI		Cl 150	NPS 1 ¼ - 2	
Globe valve	3251	DIN	Steel	PN16 PN25	DN 32 – 50 DN 32 – 40	All fluids
		ANSI		Cl 150	NPS 1 ¼ - 2	
Angle valve	3256	DIN	Steel	PN16	DN 32 – 50	All fluids
		ANSI		Cl 150	NPS 1 ¼ - 2	
Segment ball valve	3310	DIN	Steel	PN10 PN16 PN25	DN 40 – 50 DN 80 – 100 DN 40	All fluids
		ANSI		Cl 150	NPS 1 ½ – 2	
Globe valve	3321	DIN	Cast iron	PN16	DN 65 – 100	G2, L1, L2 [1]
		ANSI		Cl 125	NPS 2 ½ - 4	
		DIN	Spheroidal graphite iron	PN25	DN 50 – 80	
		ANSI	Steel	Cl 150	NPS 1 ½ - 2	All fluids
3-way Valve	3323	DIN	Cast iron : GJL-250	PN16	DN 65 – 100	G2, L1, L2 [1]
		DIN	Spheroidal graphite iron	PN25	DN 50 – 80	
Butterfly valve	3331	DIN	Steel	PN10	DN 100	All fluids
Diaphragm valve	3345	DIN	Steel	$P_{max\ T=20°C}$ 10 bar $P_{max\ T=20°C}$ 16 bar	DN 32 – 100 DN 32 – 50	All fluids
		ANSI		$P_{max\ T=70°F}$ 150 psi or 230 psi	NPS 1 ¼ – 2	
		DIN	Cast iron & spheroidal graphite iron	$P_{max\ T=20°C}$ 10 bar $P_{max\ T=20°C}$ 16 bar $P_{max\ T=20°C}$ 40 bar	DN 125 – 150 DN 65 – 125 DN 40 – 50	G2, L1, L2 [1]
		ANSI		$P_{max\ T=70°F}$ 150 psi $P_{max\ T=70°F}$ 230 psi $P_{max\ T=70°F}$ 580 psi	NPS 2 ½ – 4 NPS 2 ½ – 5 NPS 1 ½ – 2	

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WEEE N° FR023665

UK DECLARATION OF CONFORMITY

DC062
2022-12

Devices	Type	Version	Body Material	PN Class	DN NPS	Fluids
Sanitary valve	3347	DIN	Steel	$P_{max\ T = 20°C}$ 10 bar	DN 125 – 150	G2, L1, L2 [1]
		ANSI		$P_{max\ T = 70°F}$ 150 psi	NPS 5 – 6	
Aseptic valve	3349	DIN	Steel	$P_{max\ T = 20°C}$ 10 bar $P_{max\ T = 20°C}$ 16 bar $P_{max\ T = 20°C}$ 25 bar	DN 32 – 100 DN 32 – 50 DN 32 – 40	All fluids
		ANSI		$P_{max\ T = 70°F}$ 150 psi $P_{max\ T = 70°F}$ 230 psi $P_{max\ T = 70°F}$ 360 psi	NPS 1 ¼ – 4 NPS 1 ¼ – 2 NPS 1 ¼ – 1 ½	
On-Off Valve	3351	DIN	Steel	PN16 PN25	DN 32 – 50 DN 32 – 40	All fluids
		ANSI		Cl 150	NPS 1 ¼ – 2	
		DIN	Cast iron & spheroidal graphite iron	PN16	DN 65 – 100	G2, L1, L2 [1]
			Spheroidal graphite iron	PN25	DN 50 – 80	
		ANSI	Cast iron	Cl 125	NPS 2 ½ – 4	
Measure flange	5090	DIN	Steel	PN6 PN10 PN16 PN25 PN40	DN 200 – 500 DN 125 – 350 DN 65 – 200 DN 50 – 125 DN 40 – 100	G2, L2 [1]

[1] Gases Acc. to article 4 paragraphs 1.c) i)
Liquids Acc. to article 4 paragraphs 1.c) ii)

the conformity with the following Union harmonization legislation:

Legislation : STATUTORY INSTRUMENTS – 2016 No. 1105 – CONSUMER PROTECTION HEALTH AND SAFETY – The Pressure Equipment (Safety) Regulations 2016	**PE(S)R 2016**	**2022**
Applied conformity assessment procedure for fluids according to Article 4 § 1	**2014/68/UE Modul A**	

Applied designated standards and technical specifications: EN 12516-2, EN 12516-3, ASME B16.34, EN 60534-4, EN 1092-1

Manufacturer : Samson Régulation SAS, 1, rue Jean Corona, FR-69120 VAULX-EN-VELIN

Vaulx-en-Velin, 23rd December 2022

Bruno Soulas
General Director
Head of Strategy and Development

Joséphine Signoles-Fontaine
Head of QSE department

UK DECLARATION OF CONFORMITY

DC064
2022-12

The Pressure Equipment (Safety) Regulations 2016 Module H / N° CE-0062-PED-H-SAM 001-20-FRA-rev-A

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

Devices	Type	Version	Body Material	PN Class	DN NPS	Fluids
Globe valve	3241	DIN	Cast iron & spheroidal graphite iron	PN 16	DN 150	G2, L1, L2 [1]
		ANSI		Cl 125	NPS 6	
		DIN	Spheroidal graphite iron	PN 25	DN 100 – 150	
		DIN	Steel	PN10 PN16 PN25 PN40	DN 125 – 150 DN 65 – 150 DN 50 – 150 DN 32 – 150	All fluids
		ANSI		Cl 150 Cl 300	NPS 2 ½ - 6 NPS 1¼ – 6	
3-way Valve	3244	DIN	Cast iron	PN 16	DN 150	G2, L1, L2 [1]
		DIN	Steel	PN10 PN16 PN25 PN40	DN 125 – 150 DN 65 – 150 DN 50 – 150 DN 32 – 150	All fluids
		ANSI		Cl 150 Cl 300	NPS 2 ½ – 6 NPS 1¼ – 6	
Globe valve	3251	DIN	Steel	PN16 PN25 PN40 – 400	DN 65 – 150 DN 50 – 150 DN 32 – 150	All fluids
		ANSI		Cl 150 Cl 300 - 2500	NPS 2 ½ – 6 NPS 1 ¼ – 6	
High pressure valve	3252	DIN	Steel	PN40 – 400	DN 32 – 80	All fluids
		ANSI		Cl 300 - 2500	NPS 1 ¼ – 3	
Angle valve	3256	DIN	Steel	PN16 PN40 – 400	DN 65 – 150 DN 32 – 150	All fluids
		ANSI		Cl 150 Cl 300 - 2500	NPS 2 ½ – 6 NPS 1 ¼ – 6	
Segment ball valve	3310	DIN	Steel	PN10 PN16 PN25 PN40	DN 150 DN 80 – 150 DN 50 – 150 DN 40 – 150	All fluids
		ANSI		Cl 150 Cl 300	NPS 3 – 6 NPS 1 ½ – 6	
Globe valve	3321	DIN	Spheroidal graphite iron	PN 25	DN 100	G2, L1, L2 [1]
		DIN	Steel	PN16 PN40	DN 65 – 100 DN 32– 100	All fluids
		ANSI		Cl 150 Cl 300	NPS 2 ½ – 4 NPS 1½ – 4	
3-way Valve	3323	DIN	Spheroidal graphite iron	PN 25	DN 100	G2, L1, L2 [1]
		DIN	Steel	PN16 PN40	DN 65 – 100 DN 32 – 100	All fluids
		ANSI		Cl 150 Cl 300	NPS 2 ½ – 4 NPS 1¼ – 2	
Butterfly valve	3331	DIN	Steel	PN10 PN16 – 50	DN 150 – 400 DN 100 – 400	All fluids
		ANSI		Cl 150 – 300	NPS 4 – 16	
Diaphragm valve	3345	ANSI	Cast iron & spheroidal graphite iron	$P_{max\ T=70°F}$ 150 psi	NPS 5 – 6	G2, L1, L2 [1]
				$P_{max\ T=70°F}$ 230 psi	NPS 6	
			Steel	$P_{max\ T=70°F}$ 150 - 230 psi	NPS 2 ½ – 6	All fluids

SAMSON REGULATION SAS • 1 rue Jean Corona • 69120 Vaulx-en-Velin
Tel.: +33 (0)4 72 04 75 00 • E-mail: france@samsongroup.com • Internet: www.samson.fr

Société par actions simplifiée au capital de 10 000 000 € • Siège social : Vaulx-en-Velin
N° SIRET: RCS Lyon B 788 165 603 00127 • N° de TVA: FR 86 788 165 603 • Code APE 2814Z

BNP Paribas N° compte 0002200215245 • Banque 3000401857
IBAN FR7630004018570002200215245 • BIC (code SWIFT) BNPAFRPPVBE

Crédit Lyonnais N° compte 0000060035B41 • Banque 3000201936
IBAN FR9830002019360000060035B41 • BIC (code SWIFT) CRLYFRPP

WEEE N° FR025665

UK DECLARATION OF CONFORMITY

DC064
2022-12

Devices	Type	Version	Body Material	PN Class	DN NPS	Fluids
Sanitary valve	3347	DIN	Steel	$P_{max\ T=20°C}$ 16 bar $P_{max\ T=20°C}$ 40 bar $P_{max\ T=20°C}$ 63 bar	DN 150 DN 65 – 150 DN 32 – 150	G2, L1, L2 [1]
		ANSI		$P_{max\ T=70°F}$ 230 psi $P_{max\ T=70°F}$ 580 psi $P_{max\ T=70°F}$ 910 psi	NPS 6 NPS 2 ½ – 6 NPS 1 ¼ – 6	
Aseptic valve	3349	DIN	Steel	$P_{max\ T=20°C}$ 16 bar $P_{max\ T=20°C}$ 25 bar	DN 65 – 100 DN 50 – 100	All fluids
		ANSI		$P_{max\ T=70°F}$ 230 psi $P_{max\ T=70°F}$ 360 psi	NPS 2 ½ – 4 NPS 2 – 4	
On-Off Valve	3351	DIN	Spheroidal graphite iron	PN 25	DN 100	G2, L1, L2 [1]
		DIN	Steel	PN16 PN25 PN40	DN 65 – 100 DN 50 – 100 DN 32 – 100	All fluids
		ANSI		Cl 150 Cl 300	NPS 2 ½ – 4 NPS 1 ¼ – 4	
Measure flange	5090	DIN	Steel	PN10	DN 400 – 500	G2, L2 [1]
				PN16	DN 250 – 500	
				PN25	DN 150 – 500	
				PN40	DN 125 – 500	

[1] Gases Acc. to article 4 paragraphs 1.c) i)
Liquids Acc. to article 4 paragraphs 1.c) ii)

the conformity with the following Union harmonization legislation:

Legislation : STATUTORY INSTRUMENTS – 2016 No. 1105 – CONSUMER PROTECTION HEALTH AND SAFETY – The Pressure Equipment (Safety) Regulations 2016	**PE(S)R 2016**	**2022**
Applied conformity assessment procedure for fluids according to Article 4 § 1	**2014/68/UE Modul H**	**Certificate n° CE-0062-PED-H-SAM 001-20-FRA-rev-A**

Applied designated standards and technical specifications: EN 12516-2, EN 12516-3, ASME B16.34, EN 60534-4, EN 1092-1

The manufacturer's quality management system is monitored by the following notified body:
Bureau Veritas Services SAS N°/Nr 0062, 8 Cours du Triangle, 92800 PUTEAUX - LA DEFENSE

Manufacturer : Samson Régulation SAS, 1, rue Jean Corona, FR-69120 VAULX-EN-VELIN

Vaulx-en-Velin, 23rd December 2022

Bruno Soulas
General Director
Head of Strategy and Development

Joséphine Signoles-Fontaine
Head of QSE department

UK DECLARATION OF CONFORMITY

DC052
2022-12

Declaration of Conformity of Final Machinery

in accordance with Annex II, section 1. A. of the Machinery (Safety) Regulations 2008

For the following products:

Pneumatic Control & Aseptic Angle Valve Type 3349-1/-7 consisting of the type 3349 Valve and Type 3271/Type 3277 Pneumatic Actuator or Type 3349 with Type 3379 Pneumatic Actuator

We hereby declare that the machinery mentioned above complies with all applicable requirements stipulated in Machinery (Safety) Regulations 2008.

For product descriptions of the valve and actuator, refer to:

- Type 3349 Valve: Mounting and Operating Instructions EB 8048-2/-3
- Types 3271 and 3277 Actuators: Mounting and Operating Instructions EB 8310-X
- Type 3379 Actuator: Mounting and Operating Instructions EB 8315

Valve accessories (e.g. positioners, limit switches, solenoid valves, lock-up valves, supply pressure regulators, volume boosters and quick exhaust valves) are classified as machinery components in this declaration of conformity and do not fall within the scope of the Machinery Directive as specified in § 35 and § 46 of the Guide to Application of the Machinery (Safety) Regulations 2008. In the SAMSON Manual H 02 titled "Appropriate Machinery Components for SAMSON Pneumatic Control Valves with a Declaration of Conformity of Final Machinery", SAMSON defines the specifications and properties of appropriate machinery components that can be mounted onto the above specified final machinery.

Referenced technical standards and/or specifications:

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

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

Persons authorized to compile the technical file:
SAMSON REGULATION SAS – 1 rue Jean Corona – FR-69120 VAULX-EN-VELIN
Vaulx-en-Velin, 23rd December 2022

Bruno Soulas
General Director
Head of Strategy and Development

Joséphine Signoles-Fontaine
Head of QSE department

SAMSON REGULATION SAS • 1 rue Jean Corona • 69120 Vaulx-en-Velin
Tel.: +33 (0)4 72 04 75 00 • E-mail: france@samsongroup.com • Internet: www.samson.fr

Société par actions simplifiée au capital de 10 000 000 € • Siège social : Vaulx-en-Velin
N° SIRET: RCS Lyon B 788 165 603 00127 • N° de TVA: FR 86 788 165 603 • Code APE 2814Z

BNP Paribas N° compte 0002200215245 • Banque 3000401857
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Crédit Lyonnais N° compte 0000060035B41 • Banque 3000201936
IBAN FR9830002019360000060035B41 • BIC (code SWIFT) CRLYFRPP

WEEE N° FR023665

UK DECLARATION OF INCORPORATION

DC060
2022-12

Declaration of Incorporation of Partly Completed Machinery

In accordance with Schedule 2 Part 2 Annex II, section 1.B of the Directive 2008 No. 1597 Supply of Machinery (Safety) Regulations 2008

For the following products:
Type 3349 Pneumatic Control & Aseptic Angle Valve

We certify that the Type 3349 Pneumatic Control and aseptic angle valves are partly completed machinery as defined in the Directive 2008 No. 1597 Supply of Machinery (Safety) Regulations 2008 and that the safety requirements stipulated in Annex I, 1.1.2, 1.1.3, 1.1.5, 1.3.2, 1.3.4 and 1.3.7 are observed. The relevant technical documentation described in Annex VII, (Part 7 of Schedule 2) part B has been compiled.

Products we supply must not be put into service until the final machinery into which it is to be incorporated has been declared in conformity with the provisions of the Directive 2008 No. 1597 Supply of Machinery (Safety) Regulations 2008.

Operators are obliged to install the products observing the accepted industry codes and practices (good engineering practice) as well as the mounting and operating instructions. Operators must take appropriate precautions to prevent hazards that could be caused by the process medium and operating pressure in the valve as well as by the signal pressure and moving parts.

The permissible limits of application and mounting instructions for the products are specified in the associated data sheets as well as the mounting and operating instructions; the documents are available in electronic form on the Internet at www.samsongroup.com.

For product descriptions of the valve, refer to Mounting and Operating Instructions EB 8048-2/-3.

Referenced technical standards and/or specifications:
- VCI, VDMA, VGB: "Leitfaden Maschinenrichtlinie (2006/42/EG) — Bedeutung für Armaturen, Mai 2018" [German only]
- VCI, VDMA, VGB: "Zusatzdokument zum „Leitfaden Maschinenrichtlinie (2006/42/EG) — Bedeutung für Armaturen vom Mai 2018" [German only], based on DIN EN ISO 12100:201 1-03

Comments:
- See mounting and operating instructions for residual hazards.
- Also observe the referenced documents listed in the mounting and operation instructions.

Persons authorized to compile the technical file:
SAMSON REGULATION SAS – 1 rue Jean Corona – FR-69120 VAULX-EN-VELIN
Vaulx-en-Velin, 23rd December 2022

Bruno Soulas
General Director
Head of Strategy and Development

Joséphine Signoles-Fontaine
Head of QSE department

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Crédit Lyonnais N° compte 0000060035B41 • Banque 3000201936
IBAN FR9830002019360000060035B41 • BIC (code SWIFT) CRLYFRPP

WEEE N° FR023665

Technical Standards and Safety Authority
345 Carlingview Drive
Toronto, Ontario M9W 6N9
www.tssa.org

Show facsimile of manufacturer's logo or trademark, as it will appear on the fitting, in the space below

SAMSON

STATUTORY DECLARATION
Registration of Fittings

I, Bruno Soulas, Chief Administration Officer
(Name and Position, e.g. President, Plant Manager, Chief Engineer)

of SAMSON REGULATION SAS
(Name of Manufacturer)

Located at 1, RUE JEAN CORONA, FR-69120 VAULX-EN-VELIN +33 (4) 720475 - 87
(Plant Address) *(Telephone No.)* *(Fax No.)*

☑ do solemnly declare that the fittings listed hereunder, which are subject to the ***Technical Standards and Safety Act***, Boilers and Pressure Vessels Regulation, comply with all of the requirements of
ASME B16.34
(Title of recognized North American Standard)
which specifies the dimensions, materials of construction, pressure/temperature ratings, identification marking the fittings and service,

☐ or are not covered by the provisions of a recognized North American standard and are therefore manufactured to comply with _____ as supported by the attached data which identifies the dimensions, material of construction, pressure/temperature ratings and the basis for such ratings, the marking of the fitting for identification and service.

I further declare that the manufacture of these fittings is controlled by a quality system meeting the requirements of ISO 9001:2015 which has been verified by the following authority, AFNOR Certification
The items covered by this declaration, for which I seek registration, are category C type fittings. In support of this application, the following information and/or test data are attached as follows:
Type 3349, 1059-0040E-01
(drawings, calculations, test reports, etc.)

Declared before me at Vaulx En Velin in the State of FRANCE

the 13 day of February AD 2020.

Commissioner for Oaths
J.P. BROHASZKA, L. MONJEAUD, C. PRETET, B. DUMONTET, M. PIERSON
NOTAIRES ASSOCIÉS
(Printed name) B.P. 21013
69612 VILLEURBANNE CEDEX
(Signature)

SAMSON REGULATION
1, rue Jean Corona
69120 VAULX-EN-VELIN
SIREN 788 165 908 00127 / APE 2814Z
(Signature of Declarer)

FOR OFFICE USE ONLY

To the best of my knowledge and belief, the application meets the requirements of the ***Technical Standards and Safety Act***, Boilers and Pressure Vessels Regulation, and CSA Standard B51 and is accepted for registration in Category C

CRN: 0C22689.5

Registered by:

Dated: SEPT 17, 2020

NOTE: This registration expires on: SEPT 17, 2030

This Document has been digitally signed The stamp size has been optimized for 11 x 17 documents

Technical Standards and Safety Authority
Boilers and Pressure Vessels Safety Program

REGISTERED

C.R.N.: 0C22689.5
Signed:
Date: September 17, 2020.

**Information provided in this application is releasable under the Freedom of Information and Privacy Protection Act and may be disclosed upon request*

PV 09553 (04/17)

Scope of registration document no.: 3349:1059-0040E- 03

Technical Standards and Safety Authority
345 Carlingview Drive
Toronto, Ontario M9W 6N9
www.tssa.org

Show facsimile of manufacturer's logo or trademark, as it will appear on the fitting, in the space below

STATUTORY DECLARATION
Registration of Fittings

I, Bruno Soulas, Chief Administration Officer
(Name and Position, e.g. President, Plant Manager, Chief Engineer)

of SAMSON REGULATION SAS
(Name of Manufacturer)

Located at 1, RUE JEAN CORONA, FR-69120 VAULX-EN-VELIN +33 (4) 720475 - 87
(Plant Address) *(Telephone No.)* *(Fax No.)*

☑ do solemnly declare that the fittings listed hereunder, which are subject to the ***Technical Standards and Safety Act***, Boilers and Pressure Vessels Regulation, comply with all of the requirements of
ASME B16.34
(Title of recognized North American Standard)
which specifies the dimensions, materials of construction, pressure/temperature ratings, identification marking the fittings and service;

☐ or are not covered by the provisions of a recognized North American standard and are therefore manufactured to comply with _____ as supported by the attached data which identifies the dimensions, material of construction, pressure/temperature ratings and the basis for such ratings, the marking of the fitting for identification and service.

I further declare that the manufacture of these fittings is controlled by a quality system meeting the requirements of ISO 9001:2015 which has been verified by the following authority, AFNOR Certification.
The items covered by this declaration, for which I seek registration, are category C type fittings. In support of this application, the following information and/or test data are attached as follows:
Type 3349, 1059-0040E-01
(drawings, calculations, test reports, etc.)

Declared before me at Vaulx En Velin in the State of FRANCE
the 13 day of February AD 2020.

Commissioner for Oaths: J.P. CHAMASZKA, L. MONJEAUD, C. PRETET, B. DUMONTET, M. PIERSON NOTAIRES ASSOCIÉS B.P. 21013 69612 VILLEURBANNE CEDEX
(Printed name)
(Signature)

SAMSON REGULATION
1, rue Jean Corona
69120 VAULX-EN-VELIN
SIREN 798 165 809 00127 - APE 2814Z
(Signature of Declarer)

FOR OFFICE USE ONLY

To the best of my knowledge and belief, the application meets the requirements of the ***Technical Standards and Safety Act***, Boilers and Pressure Vessels Regulation, and CSA Standard B51 and is accepted for registration in Category C.

CRN: 0C22689.5
Registered by:
Dated: SEPT 17, 2020

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NOTE: This registration expires on: SEPT 17, 2030

Technical Standards and Safety Authority — Boilers and Pressure Vessels Safety Program

REGISTERED

C.R.N.: 0C22689.5
Signed:
Date: September 17, 2020.

**Information provided in this application is releasable under the Freedom of Information and Privacy Protection Act and may be disclosed upon request.*

PV 09553 (04/17)

Scope of registration document no.: 3349:1059-0040E- 03

UNIFORM STATUTORY DECLARATION FORM FOR THE REGISTRATION OF FITTING DESIGNS

NEW BRUNSWICK NOVA SCOTIA PRINCE EDWARD ISLAND NEWFOUNDLAND AND LABRADOR
NUNAVUT YUKON NORTHWEST TERRITORIES

MANUFACTURERS NAME: SAMSON REGULATION SAS
MANUFACTURERS ADDRESS: 1, RUE JEAN CORONA, FR-69120 VAULX-EN-VELIN
PLANT LOCATIONS: 1, RUE JEAN CORONA, FR-69120 VAULX-EN-VELIN

CATEGORY OF FITTINGS TO BE REGISTERED. CIRCLE ONE CATEGORY ONLY

A Pipe fittings, including couplings, tees, elbows, Ys, plugs, unions, pipe caps, or reducers
B Flanges: all flanges
(C) Valves: all line valves
D Expansion joints, flexible connections, and hose assemblies: all types
E Strainers, filters, seperators, and steam traps
F Measuring devices, including pressure gauges, level gauges, sight glasses, levels, or pressure transmitters
G Certified capacity-rated pressure relief devices acceptable as primary over pressure protection on boilers, pressure vessels, piping and fusible plugs
H Pressure retaining components that do not fall into one of the above categories
N Nuclear components: Class 1 ☐ Class 2 ☐ Class 3 ☐, (Meeting AECB or ASME requirements)

TITLE OF THE STANDARD OF CONSTRUCTION: ASME B16.34

SHOW MANUFACTURERS NAME, TRADEMARK, OR LOGO AS IT WILL APPEAR ON THE PRODUCT

TYPE OF CONSTRUCTION
FORGED ☐ WELDED ☐ WROUGHT ☐
CAST ☐ OTHER ☐
DESCRIBE OTHER:

LIST OF SUPPORTING DOCUMENTATION AND IDENTIFICATION OF THE ACTUAL ITEMS TO BE REGISTERED:

Typ 3349, 1059-0040E-01

DECLARATION:
I Bruno Sau Ats (see note 3) employed by SAMSON RÉGULATION SAS and being the person having full authority and responsibility for the quality of the end product do solemnly declare that the information contained in this form is true and to the best of my knowledge represents the product for which registration is sought. The dimensions, materials of construction, pressure temperature ratings, and identification markings are in accordance with the herein named standards. I further declare that the manufacture of these fittings is regulated by a Quality Control Program which extends to each plant where fabrication occurs in whole or in part and has been verified by AFAQ - Bureau Veritas as being suitable for that purpose and I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath.

Signature of Declarer:
Declared before me at 1, RUE JEAN CORONA, FR-69120 VAULX-EN-VELIN (France)
This 13 day of February AD 2020
Commissioner of Oaths or Notary Public: (sign)
(Affix Official seal to the right)

J.P. PROHASZKA, L. MONJEAUD, F. BRETET, B. DUMONTET, M. PIERSON
NOTAIRES ASSOCIÉS
B.P. 21013
69612 VILLEURBANNE CEDEX

This space for Regulatory Authority use
This registration must be revalidated after ten (10) years from the date of acceptance.

CRN: 0C22689.5
FID#: 15930
Aseptic valve Type 3349.150psig @ 100F, 114psi @ 320F 32F MDMT; ASME B16.34; ASME BPE Section DT

Notes:
1. All fittings shall be registered in the name of the Manufacturer.
2. Each category shall be supported with two Statutory Declaration forms and one copy of supporting documentation.
3. The declaration shall be made by the person having full authority and responsibility for the quality of the end product.
4. Quality control programs shall be resubmitted for validation at a maximum interval of five (5) years.

CRN expires Sept.17, 2030 - DG

Newfoundland Labrador
Service NL
Registered 0C22689.5
Date 02/19/03
Engineering and Inspection Services
Registered by:
UNDER THE AUTHORITY OF THE PUBLIC SAFETY ACT AND THE BOILER, PRESSURE VESSEL AND COMPRESSED GAS REGULATIONS

Technical Standards and Safety Authority
345 Carlingview Drive
Toronto, Ontario M9W 6N9
www.tssa.org

Show facsimile of manufacturer's logo or trademark, as it will appear on the fitting, in the space below

SAMSON

STATUTORY DECLARATION
Registration of Fittings

I, Bruno Soulas, Chief Administration Officer
(Name and Position, e.g. President, Plant Manager, Chief Engineer)

of SAMSON RÉGULATION SAS
(Name of Manufacturer)

Located at 1, RUE JEAN CORONA, FR-69120 VAULX-EN-VELIN +33 (4) 720475 87
(Plant Address) *(Telephone No.)* *(Fax No.)*

☑ do solemnly declare that the fittings listed hereunder, which are subject to the ***Technical Standards and Safety Act***, Boilers and Pressure Vessels Regulation, comply with all of the requirements of ASME B16.34
(Title of recognized North American Standard)
which specifies the dimensions, materials of construction, pressure/temperature ratings, identification marking the fittings and service,

☐ or are not covered by the provisions of a recognized North American standard and are therefore manufactured to comply with _____ as supported by the attached data which identifies the dimensions, material of construction, pressure/temperature ratings and the basis for such ratings, the marking of the fitting for identification and service.

I further declare that the manufacture of these fittings is controlled by a quality system meeting the requirements of ISO 9001:2015 which has been verified by the following authority, AFNOR Certification
The items covered by this declaration, for which I seek registration, are category C type fittings. In support of this application, the following information and/or test data are attached as follows:
Type 3349, 1059-0040E-01
(drawings, calculations, test reports, etc.)

Declared before me at Vaulx En Velin in the State of FRANCE

the 13 day of February AD 2020.

Commissioner for Oaths: J.P. PROHASZKA, L. MONJEAUD, C. PRETET, B. DUMONTET, M. PIERSON NOTAIRES ASSOCIÉS B.P. 21013 69612 VILLEURBANNE CEDEX
(Printed name)
(Signature)

SAMSON REGULATION
1, rue Jean Corona
69120 VAULX-EN-VELIN
SIREN 788 165 809 00127 - APE 2814Z
(Signature of Declarer)

FOR OFFICE USE ONLY

To the best of my knowledge and belief, the application meets the requirements of the ***Technical Standards and Safety Act***, Boilers and Pressure Vessels Regulation, and CSA Standard B51 and is accepted for registration in Category C

CRN: 0C22689.5

Registered by:

Dated: SEPT 17, 2020

This Document has been digitally signed The stamp size has been optimized for 11 x 17 documents

NOTE: This registration expires on: SEPT 17, 2030

Technical Standards and Safety Authority
Boilers and Pressure Vessels Safety Program

REGISTERED

C.R.N.: 0C22689.5

Signed:

Date: September 17, 2020.

**Information provided in this application is releasable under the Freedom of Information and Privacy Protection Act and may be disclosed upon request*

PV 09553 (04/17)

Scope of registration document no.: 3349:1059-0040E- 03

Alberta Municipal Affairs

ABSA
the pressure equipment safety authority

AB-41 2016-01

STATUTORY DECLARATION
Registration of Fittings

In this space, show facsimile of manufacturer's logo or trademark as it will appear on the fitting.

SAMSON

I, Bruno Soulas, Chief Administration Officer
(name of applicant) (position title) (must be in a position of authority)

of SAMSON REGULATION SAS
(name of manufacturer)

located at 1, RUE JEAN CORONA, FR-69120 VAULX-EN-VELIN
(plant address)

do solemnly declare that the fittings listed hereunder, which are subject to the Safety Codes Act (check one)

☒ comply with the requirements of ASME B16.34 which specifies the dimensions,
(title of recognized North American Standard)
materials of construction, pressure/temperature ratings and identification marking of the fittings, or

☐ are not covered by the provisions of a recognized North American standard and are therefore manufactured to comply with ______ as supported by the attached
(title of code of construction or other applicable document)
data which identifies the dimensions, materials of construction, pressure/temperature ratings and the basis for such ratings, and the marking of the fittings for identification.

I further declare that the manufacture of these fittings is controlled by a quality control program which has been verified by the following authority, AFNOR Certification as being suitable for the manufacture of these fittings to the stated standard. The fittings covered by this declaration, for which I seek registration, are

Type C
(brief description of fittings)

In support of this application, the following information, calculations and/or test data are attached:

Type 3349, 1059-0040E-01

DECLARED before me at Vaulx En Velin in the State of France
(city) (province or state)

this 13 day of February, 2020
(Month) (Year)

(print) J.P. PROHÁSZKA, L. MONJEAUD, C. PRETET, NOTAIRES ASSOCIÉS B.P. 21013
(a Commissioner of Oaths or Notary Public)

(sign) ______
(a Commissioner of Oaths or Notary Public)

SAMSON REGULATION
1, rue Jean Corona
69120 VAULX-EN-VELIN

(signature of applicant)

For ABSA Office Use Only:

NOTES: ______

To the best of my knowledge and belief, the application meets the requirements of the Safety Codes Act and CSA Standard B51, Clause 4.2, and is accepted for registration in Category ______

Registration Number: ______ (Signature of the Administrator/SCO)

Date Registered: ______ Expiry Date: ______

2020-01794
ABSA
SAFETY CODES ACT - PROVINCE OF ALBERTA
ACCEPTED: 0C22689.52
See acceptance letter for conditions of registration.
Date: 2020-11-05 By: VINCE BARUT, P. Eng.

This stamp and signature have been affixed electronically to this registered design as required by Section 20(1) of the Pressure Equipment Safety Regulation, in accordance with the Electronic Transactions Act.

The information you provide is necessary only for the administration of the programs as required by the Alberta Safety Codes Act and regulations in the Pressure Equipment Discipline.

Technical Standards and Safety Authority
345 Carlingview Drive
Toronto, Ontario M9W 6N9
www.tssa.org

Show facsimile of manufacturer's logo or trademark, as it will appear on the fitting, in the space below

SAMSON

STATUTORY DECLARATION
Registration of Fittings

I, Bruno Soulas, Chief Administration Officer
(Name and Position, e.g. President, Plant Manager, Chief Engineer)

of SAMSON RÉGULATION SAS
(Name of Manufacturer)

Located at 1, RUE JEAN CORONA, FR-69120 VAULX-EN-VELIN +33 (4) 720475 87
(Plant Address) *(Telephone No.)* *(Fax No.)*

☑ do solemnly declare that the fittings listed hereunder, which are subject to the ***Technical Standards and Safety Act***, Boilers and Pressure Vessels Regulation, comply with all of the requirements of ASME B16.34
(Title of recognized North American Standard)
which specifies the dimensions, materials of construction, pressure/temperature ratings, identification marking the fittings and service;

☐ or are not covered by the provisions of a recognized North American standard and are therefore manufactured to comply with _____ as supported by the attached data which identifies the dimensions, material of construction, pressure/temperature ratings and the basis for such ratings, the marking of the fitting for identification and service.

I further declare that the manufacture of these fittings is controlled by a quality system meeting the requirements of ISO 9001:2015 which has been verified by the following authority, AFNOR Certification.
The items covered by this declaration, for which I seek registration, are category C type fittings. In support of this application, the following information and/or test data are attached as follows:
Type 3349, 1059-0040E-01
(drawings, calculations, test reports, etc.)

Declared before me at Vaulx En Velin in the State of FRANCE
the 13 day of February AD 2020.

Commissioner for Oaths: J.P. PROHÁSZKA, L. MONJEAUD, C. PRETET, B. DUMONTET, M. PIERSON NOTAIRES ASSOCIÉS B.P. 21013 69612 VILLEURBANNE CEDEX
(Printed name)
(Signature)

SAMSON REGULATION
1, rue Jean Corona
69120 VAULX-EN-VELIN
SIREN 798 165 809 00127 - APE 2314Z
(Signature of Declarer)

FOR OFFICE USE ONLY

To the best of my knowledge and belief, the application meets the requirements of the ***Technical Standards and Safety Act***, Boilers and Pressure Vessels Regulation, and CSA Standard B51 and is accepted for registration in Category C.

CRN: 0C22689.5
Registered by:
Dated: SEPT 17, 2020

This Document has been digitally signed The stamp size has been optimized for 11 x 17 documents

NOTE: This registration expires on: SEPT 17, 2030

Technical Standards and Safety Authority — Boilers and Pressure Vessels Safety Program

REGISTERED

C.R.N.: 0C22689.5
Signed:
Date: September 17, 2020.

**Information provided in this application is releasable under the Freedom of Information and Privacy Protection Act and may be disclosed upon request.*

PV 09553 (04/17)

Scope of registration document no.: 3349:1059-0040E- 03

UNIFORM STATUTORY DECLARATION FORM FOR THE REGISTRATION OF FITTING DESIGNS

NEW BRUNSWICK NOVA SCOTIA PRINCE EDWARD ISLAND NEWFOUNDLAND AND LABRADOR
NUNAVUT YUKON NORTHWEST TERRITORIES

MANUFACTURERS NAME: SAMSON REGULATION SAS

MANUFACTURERS ADDRESS: 1, RUE JEAN CORONA, FR-69120 VAULX-EN-VELIN

PLANT LOCATIONS: 1, RUE JEAN CORONA, FR-69120 VAULX-EN-VELIN

CATEGORY OF FITTINGS TO BE REGISTERED. CIRCLE ONE CATEGORY ONLY

A Pipe fittings, including couplings, tees, elbows, Ys, plugs, unions, pipe caps, or reducers
B Flanges: all flanges
(C) Valves: all line valves
D Expansion joints, flexible connections, and hose assemblies: all types
E Strainers, filters, separators, and steam traps
F Measuring devices, including pressure gauges, level gauges, sight glasses, levels, or pressure transmitters
G Certified capacity-rated pressure relief devices acceptable as primary over pressure protection on boilers, pressure vessels, piping and fusible plugs
H Pressure retaining components that do not fall into one of the above categories
N Nuclear components: Class 1 ☐ Class 2 ☐ Class 3 ☐, (Meeting AECB or ASME requirements)

TITLE OF THE STANDARD OF CONSTRUCTION: ASME B16.34

SHOW MANUFACTURERS NAME, TRADEMARK, OR LOGO AS IT WILL APPEAR ON THE PRODUCT

samson

TYPE OF CONSTRUCTION
FORGED ☒ WELDED ☐ WROUGHT ☐
CAST ☐ OTHER ☐
DESCRIBE OTHER:

LIST OF SUPPORTING DOCUMENTATION AND IDENTIFICATION OF THE ACTUAL ITEMS TO BE REGISTERED:

Type 3349, 1059-0040E-01

DECLARATION:

I Bruno Scalas (see note 3) employed by SAMSON REGULATION SAS and being the person having full authority and responsibility for the quality of the end product do solemnly declare that the information contained in this form is true and to the best of my knowledge represents the product for which registration is sought. The dimensions, materials of construction, pressure temperature ratings, and identification markings are in accordance with the herein named standards. I further declare that the manufacture of these fittings is regulated by a Quality Control Program which extends to each plant where fabrication occurs in whole or in part and has been verified by AENOR Certification as being suitable for that purpose and I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath.

Signature of Declarer:

Declared before me at Vaulx-en-Velin (France)

This 13 day of February AD 2020

Commissioner of Oaths or Notary Public: (sign)

(Affix Official seal to the right)

J.P. PROHASZKA, L. MONJEAUD, P. BRETET, B. DUMONTET, M. PIERSON
HUISSIERS ASSOCIES
B.P. 21013
69512 VILLEURBANNE CEDEX

This space for Regulatory Authority use

This registration must be revalidated after ten (10) years from the date of registration.

CRN: 0C22689.5

FID#: 15930

Aseptic valve Type 3349.150psig @ 100F, 114psi @ 320F 32F MDMT; ASME B16.34; ASME BPE Section DT

Notes:
1. All fittings shall be registered in the name of the Manufacturer.
2. Each category shall be supported with two Statutory Declaration forms and one copy of supporting documentation.
3. The declaration shall be made by the person having full authority and responsibility for the quality of the end product.
4. Quality control programs shall be resubmitted for validation at a maximum interval of five (5) years.

CRN expires Sept.17, 2030 - DG

New Nouveau Brunswick

DEPT OF JUSTICE PUBLIC SAFETY
BOILER & PRESSURE VESSEL ACT

REGISTRATION ONLY

CRN 0C22689.57

CHIEF BOILER INSPECTOR

DATE 9/25/20

☐ BLRs ☐ PVs
☑ FITTINGS ☐ NUCLEAR COMPONENTS

Technical Standards and Safety Authority
345 Carlingview Drive
Toronto, Ontario M9W 6N9
www.tssa.org

Show facsimile of manufacturer's logo or trademark, as it will appear on the fitting, in the space below

STATUTORY DECLARATION
Registration of Fittings

I, Bruno Soulas, Chief Administration Officer
(Name and Position, e.g. President, Plant Manager, Chief Engineer)

of SAMSON REGULATION SAS
(Name of Manufacturer)

Located at 1, RUE JEAN CORONA, FR-69120 VAULX-EN-VELIN +33 (4) 720475 - 87
(Plant Address) (Telephone No.) (Fax No.)

☑ do solemnly declare that the fittings listed hereunder, which are subject to the ***Technical Standards and Safety Act***, Boilers and Pressure Vessels Regulation, comply with all of the requirements of ASME B16.34
(Title of recognized North American Standard)
which specifies the dimensions, materials of construction, pressure/temperature ratings, identification marking the fittings and service,

☐ or are not covered by the provisions of a recognized North American standard and are therefore manufactured to comply with _____ as supported by the attached data which identifies the dimensions, material of construction, pressure/temperature ratings and the basis for such ratings, the marking of the fitting for identification and service.

I further declare that the manufacture of these fittings is controlled by a quality system meeting the requirements of ISO 9001:2015 which has been verified by the following authority, AFNOR Certification.
The items covered by this declaration, for which I seek registration, are category C type fittings. In support of this application, the following information and/or test data are attached as follows:
Type 3349, 1059-0040E-01
(drawings, calculations, test reports, etc.)

Declared before me at Vaulx En Velin in the State of FRANCE
the 13 day of February AD 2020.

Commissioner for Oaths: J.P. CHAMASZKA, L. MONJEAUD, C. PRETET, B. DUMONTET, M. PIERSON NOTAIRES ASSOCIÉS B.P. 21013 69612 VILLEURBANNE CEDEX
(Printed name)
(Signature)

SAMSON REGULATION
1, rue Jean Corona
69120 VAULX-EN-VELIN
SIREN 798 165 809 00127 - APE 2814Z
(Signature of Declarer)

FOR OFFICE USE ONLY

To the best of my knowledge and belief, the application meets the requirements of the ***Technical Standards and Safety Act***, Boilers and Pressure Vessels Regulation, and CSA Standard B51 and is accepted for registration in Category C.

CRN: 0C22689.5
Registered by:
Dated: SEPT 17, 2020

This Document has been digitally signed
The stamp size has been optimized for 11 x 17 documents

NOTE: This registration expires on: SEPT 17, 2030

Technical Standards and Safety Authority — Boilers and Pressure Vessels Safety Program

REGISTERED

C.R.N.: 0C22689.5
Signed:
Date: September 17, 2020.

*Information provided in this application is releasable under the Freedom of Information and Privacy Protection Act and may be disclosed upon request.

PV 09553 (04/17)

Scope of registration document no.: 3349:1059-0040E- 03

UNIFORM STATUTORY DECLARATION FORM FOR THE REGISTRATION OF FITTING DESIGNS

NEW BRUNSWICK NUNAVUT | NOVA SCOTIA YUKON | PRINCE EDWARD ISLAND NORTHWEST TERRITORIES | NEWFOUNDLAND AND LABRADOR

MANUFACTURERS NAME: SAMSON REGULATION SAS

MANUFACTURERS ADDRESS: 1, RUE JEAN CORONA, FR-69120 VAULX-EN-VELIN

PLANT LOCATIONS: 1, RUE JEAN CORONA, FR-69120 VAULX-EN-VELIN

CATEGORY OF FITTINGS TO BE REGISTERED, CIRCLE ONE CATEGORY ONLY

A Pipe fittings, including couplings, tees, elbows, Ys, plugs, unions, pipe caps, or reducers
B Flanges: all flanges
(C) Valves: all line valves
D Expansion joints, flexible connections, and hose assemblies: all types
E Strainers, filters, separators, and steam traps
F Measuring devices, including pressure gauges, level gauges, sight glasses, levels, or pressure transmitters
G Certified capacity-rated pressure relief devices acceptable as primary over pressure protection on boilers, pressure vessels, piping and fusible plugs
H Pressure retaining components that do not fall into one of the above categories
N Nuclear components: Class 1 ☐ Class 2 ☐ Class 3 ☐, (Meeting AECB or ASME requirements)

TYPE OF THE STANDARD OF CONSTRUCTION: ASME B16.34

SHOW MANUFACTURERS NAME, TRADEMARK, OR LOGO AS IT WILL APPEAR ON THE PRODUCT

TYPE OF CONSTRUCTION: FORGED OR WELDED ☐ WROUGHT ☐ CAST ☐ OTHER ☐ DESCRIBE OTHER:

LIST OF SUPPORTING DOCUMENTATION AND IDENTIFICATION OF THE ACTUAL ITEMS TO BE REGISTERED:

Type 3349, 1059-0040E-01

DECLARATION:

I Bruno Soulier (see note 3) employed by SAMSON REGULATION SAS and being the person having full authority and responsibility for the quality of the end product do solemnly declare that the information contained in this form is true and to the best of my knowledge represents the product for which registration is sought. The dimensions, materials of construction, pressure temperature ratings, and identification markings are in accordance with the herein named standards. I further declare that the manufacture of these fittings is regulated by a Quality Control Program which extends to each plant where fabrication occurs in whole or in part and has been verified by SAMSON REGULATION SAS as being suitable for that purpose and I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath.

Signature of Declarer: [signature]

Declared before me at Vaulx-en-Velin (France)

This 13 day of February AD 2020

Commissioner of Oaths or Notary Public: (sign) [signature]

(Affix Official seal to the right)

J.P. PROHASZKA, L. MONJEAUD, F. GRETET, H. E. DUMONTET, M. PIERSON
NOTAIRES ASSOCIÉS
B.P. 21013
69512 VILLEURBANNE CEDEX

USE THIS SPACE FOR NOTARIAL SEAL

This space for Regulatory Authority use

This registration must be revalidated after ten (10) years from the date of acceptance.

CRN: 0C22689.5

FID#: 15930

Aseptic valve Type 3349.150psig @ 100F, 114psi @ 320F 32F MDMT; ASME B16.34; ASME BPE Section DT

Notes:
1. All fittings shall be registered in the name of the Manufacturer.
2. Each category shall be supported with two Statutory Declaration forms and one copy of supporting documentation.
3. The declaration shall be made by the person having full authority and responsibility for the quality of the end product.
4. Quality control programs shall be resubmitted for validation at a maximum interval of five (5) years.

CRN expires Sept.17, 2030 - DG

BOILER & PRESSURE VESSEL ACT & REGULATIONS NOVA SCOTIA
Date Sept. 25/20
C.R.N. 0C22689.5
Dwg. as described
Signed [signature]
1 of 1 Part

Technical Standards and Safety Authority
345 Carlingview Drive
Toronto, Ontario M9W 6N9
www.tssa.org

Show facsimile of manufacturer's logo or trademark, as it will appear on the fitting, in the space below

STATUTORY DECLARATION
Registration of Fittings

I, Bruno Soulas, Chief Administration Officer
(Name and Position, e.g. President, Plant Manager, Chief Engineer)

of SAMSON REGULATION SAS
(Name of Manufacturer)

Located at 1, RUE JEAN CORONA, FR-69120 VAULX-EN-VELIN +33 (4) 720475 - 87
(Plant Address) *(Telephone No.)* *(Fax No.)*

☑ do solemnly declare that the fittings listed hereunder, which are subject to the ***Technical Standards and Safety Act***, Boilers and Pressure Vessels Regulation, comply with all of the requirements of ASME B16.34
(Title of recognized North American Standard)
which specifies the dimensions, materials of construction, pressure/temperature ratings, identification marking the fittings and service;

☐ or are not covered by the provisions of a recognized North American standard and are therefore manufactured to comply with _____ as supported by the attached data which identifies the dimensions, material of construction, pressure/temperature ratings and the basis for such ratings, the marking of the fitting for identification and service.

I further declare that the manufacture of these fittings is controlled by a quality system meeting the requirements of ISO 9001:2015 which has been verified by the following authority, AFNOR Certification.
The items covered by this declaration, for which I seek registration, are category C type fittings. In support of this application, the following information and/or test data are attached as follows:
Type 3349, 1059-0040E-01
(drawings, calculations, test reports, etc.)

Declared before me at Vaulx En Velin in the State of FRANCE
the 13 day of February AD 2020.

Commissioner for Oaths: J.P. PROVASZKA, L. MONJEAUD, C. PRETET, B. DUMONTET, M. PIERSON NOTAIRES ASSOCIÉS B.P. 21013 69612 VILLEURBANNE CEDEX
(Printed name)
(Signature)

SAMSON REGULATION
1, rue Jean Corona
69120 VAULX-EN-VELIN
SIREN 798 165 009 00127 - APE 2314Z
(Signature of Declarer)

FOR OFFICE USE ONLY

To the best of my knowledge and belief, the application meets the requirements of the ***Technical Standards and Safety Act***, Boilers and Pressure Vessels Regulation, and CSA Standard B51 and is accepted for registration in Category C.

CRN: 0C22689.5
Registered by:
Dated: SEPT 17, 2020

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NOTE: This registration expires on: SEPT 17, 2030

Technical Standards and Safety Authority
Boilers and Pressure Vessels Safety Program
REGISTERED
C.R.N.: 0C22689.5
Signed:
Date: September 17, 2020.

**Information provided in this application is releasable under the Freedom of Information and Privacy Protection Act and may be disclosed upon request.*

PV 09553 (04/17)

Scope of registration document no.: 3349:1059-0040E- 03

UNIFORM STATUTORY DECLARATION FORM FOR THE REGISTRATION OF FITTING DESIGNS

NEW BRUNSWICK · NOVA SCOTIA · PRINCE EDWARD ISLAND · NEWFOUNDLAND AND LABRADOR
NUNAVUT · YUKON · NORTHWEST TERRITORIES

MANUFACTURERS NAME: SAMSON RÉGULATION SAS

MANUFACTURERS ADDRESS: 1, RUE JEAN CORONA, FR-69120 VAULX-EN-VELIN

PLANT LOCATIONS: 1, RUE JEAN CORONA, FR-69120 VAULX-EN-VELIN

CATEGORY OF FITTINGS TO BE REGISTERED. CIRCLE ONE CATEGORY ONLY

A Pipe fittings, including couplings, tees, elbows, Ys, plugs, unions, pipe caps, or reducers
B Flanges: all flanges
(C) Valves: all line valves
D Expansion joints, flexible connections, and hose assemblies: all types
E Strainers, filters, separators, and steam traps
F Measuring devices, including pressure gauges, level gauges, sight glasses, levels, or pressure transmitters
G Certified capacity-rated pressure relief devices acceptable as primary over pressure protection on boilers, pressure vessels, piping and fusible plugs
H Pressure retaining components that do not fall into one of the above categories
N Nuclear components: Class 1 ☐ Class 2 ☐ Class 3 ☐, (Meeting AECB or ASME requirements)

TITLE OF THE STANDARD OF CONSTRUCTION: ASME B16.34

SHOW MANUFACTURERS NAME, TRADEMARK, OR LOGO AS IT WILL APPEAR ON THE PRODUCT

TYPE OF CONSTRUCTION
FORGED ☒ WELDED ☐ WROUGHT ☐
CAST ☐ OTHER ☐
DESCRIBE OTHER

LIST OF SUPPORTING DOCUMENTATION AND IDENTIFICATION OF THE ACTUAL ITEMS TO BE REGISTERED:

Type 3349, 1059-0040E-01

DECLARATION:

I, Bruno Sauvage (see note 3) employed by SAMSON RÉGULATION SAS and being the person having full authority and responsibility for the quality of the end product do solemnly declare that the information contained in this form is true and to the best of my knowledge represents the product for which registration is sought. The dimensions, materials of construction, pressure temperature ratings, and identification markings are in accordance with the herein named standards. I further declare that the manufacture of those fittings is regulated by a Quality Control Program which extends to each plant where fabrication occurs in whole or in part and has been verified by AFNOR CERTIFICATION as being suitable for that purpose and I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath.

Signature of Declarer: [signature]

Declared before me at 69120 VAULX-EN-VELIN (France)

This 13 day of February AD 2020

Commissioner of Oaths or Notary Public: (sign) [signature]

(Affix Official seal to the right)

J.P. PROHÁSZKA, I. MONJEAUD, F. BRETET, H E
B. DOMONTET, M. PIERSON
O F NOTAIRES ASSOCIÉS
B.P. 21013
69612 VILLEURBANNE CEDEX

This space for Regulatory Authority use

This registration must be revalidated after ten (10) years from the date of acceptance.

CRN: 0C22689.5

FID#: 15930

Aseptic valve Type 3349,150psig @ 100F, 114psi @ 320F 32F MDMT; ASME B16.34; ASME BPE Section DT

Notes:
1. All fittings shall be registered in the name of the Manufacturer.
2. Each category shall be supported with two Statutory Declaration forms and one copy of supporting documentation.
3. The declaration shall be made by the person having full authority and responsibility for the quality of the end product.
4. Quality control programs shall be resubmitted for validation at a maximum interval of five (5) years.

CRN expires Sept.17, 2030 - DG

ACCEPTED
PROVINCE OF PRINCE EDWARD ISLAND
COMMUNITIES, LAND & ENVIRONMENT

C.R.N. 0C22689.5

DATE: Sept 23 2020

INSPECTION SERVICES SECTION
BOILER/PRESSURE VESSEL BRANCH

DECLARATION OF CONFORMITY **DC005**

For the following product **2023-03**

Aseptic Angle Valve

Type 3349

European regulation
Food contact

The Aseptic Angle Valve Type 3349 meets the requirements of the food and pharmaceutical industry.

Manufacturing processes of Samson Regulation and those of its suppliers comply with the good manufacturing practices established by regulation (EC) No. 2023/2006[1].

The valve components in contact with foodstuffs meet the following requirements:

- the metal parts (valve body and plug) are made of forged stainless steel 1.4435/316L or 1.4404/316L in accordance with:
  - the regulations (EC) No. 1935/2004[2]
  - the Council of Europe Resolution CM/Res(2013)9 on metals and alloys used in food contact materials and articles;
  - the French decree of 13 January 1976 on stainless steel materials and objects in contact with foodstuffs;
  - the sheet published by the French authority DGCCRF: MCDA n°1 (V2 - 2017), Aptitude for food contact of metals and metal alloys intended to come into contact with foodstuffs.
- The diaphragm, which ensures the seal with the outside, is made of PTFE in accordance with :
  - the regulations (EC) No. 1935/2004[2] and (EU) No. 10/2011[3] as amended

    The conditions and results of the overall and specific migration tests are detailed on Annex 1.
  - with the recommendations LI (temperature resistant polymer coating systems…) & LII (fillers) published by BfR (Federal Institute for Risk Assessment).
- The optional valve seals, which provide the internal seal, are made of PEEK Natural Food & Life Science Grade and according to our supplier’s declaration of conformity comply with:
  - the Regulations (EC) No. 1935/2004[2] and (EU) No. 10/2011[3] as amended:

    The conditions and results of our supplier's global and specific migration tests are available on Annex 2.

According to the migration tests carried out on the plastic components in accordance with Regulation (EU) No 10/2011[3] as amended, the overall and specific migrations remain within the limits set by the above-mentioned

[1] Regulation (EC) No 2023/2006 on good manufacturing practice for materials and articles intended to come into contact with food

[2] Regulation (EC) No 1935/2004 on materials and articles intended to come into contact with food

[3] Regulation (EU) No 10/2011 on plastic materials and articles intended to come into contact with food, as last amended by Regulation (EU) No 2020/1245

Regulation when the complete apparatus is used under the conditions indicated below:

- repeated short-term and long-term contact with all kinds of foodstuffs in applications at room temperature up to 121 °C.

Environmental regulation and others

The Aseptic Angle Valve Type 3349 is compliant with

- Directive RoHS 2011/65/EU, 2015/863/EU
- Regulation REACH 1907/2006/EC

USA regulation

Food contact and pharmaceutical regulation

The Type 3349 Aseptic Angle Valve meets the requirements of the food and pharmaceutical industries according to the following parameters.

- The PTFE used in the manufacture of the diaphragm complies with :
  - FDA regulation 21 CFR §177.1550,
  - USP Class VI Chapter 88 -121°C (in vivo) and Chapter 87 (in vitro)
- The PEEK used for the manufactrure of the optional valve seals complies with:
  - FDA regulation 21 CFR §177.2415,
  - USP Class VI Chapter 88 -121°C (in vivo) and Chapter 87 (in vitro)
- The grease used for the assembly of parts in contact with the fluid, complies with :
  - the regulation FDA CFR 21 §178.3570,
  - NSF-H1 requirements.

Chinese regulation

Food contact

The Type 3349 Aseptic Angle Valve meets the requirements of the Chinese food and pharmaceutical industries.

The valve components that come into contact with foodstuffs meet the following requirements:

- the metal parts (valve body and plug) are made of forged stainless steel 1.4435/316L or 1.4404/316L in accordance with:
  - the regulations GB 4806.1-2016 [4] and GB 4806.9-2016[4]
  - The conditions and results of the overall and specific migration tests are detailed on Annex 3.
- The membrane, which seals to the outside, is made of PTFE:
  - Our supplier's declaration of conformity certifies that this material complies with regulations GB

[4] Regulation GB 4806.1-2016 on general safety requirements for materials and articles intended to come into contact with food; GB 4806.6-2016 for plastic resins, GB 4806.7-2016 for plastic materials, GB 4806.9-2016 for metal

4806.1-2016[5], GB 4806.6-2016[4] and GB 9685-2016[5] ;

- The conditions and results of the overall and specific migration tests are detailed on Annex 3.

- the optional plug seals, which provide the internal seal, are made of PEEK natural Food & Life Science Grade:
  - Our supplier's declaration of conformity certifies that this material complies with regulations GB 4806.1-2015[4], GB 4806.7-2016[4] and GB 9685-2016[5]
  - The conditions and results of our supplier's global and specific migration tests are available on Annex 2.

Environmental regulation and others

The Type 3349 Aseptic Angle Valve meets the requirements of :

- China RoHS 2.0 GB/T26572-2011

Other regulations

The composition of the plastical materials in contact with the fluid is:

- free of animal-derived ingredients (ADI free) and thus free of TSE/BFE
- free of human-derived ingredients,
- purely of synthetic origin.

SAMSON REGULATION S.A.S.

Bruno Soulas

General Director
Head of Strategy and Development

SAMSON REGULATION S.A.S.

Joséphine Signoles-Fontaine
Head of QSE Department

[5] Regulation GB 9685-2016 on the use of additives in materials intended to come into contact with food

DECLARATION OF CONFORMITY

DC007
2021-12

Regulation (EU) No. 1907/2006 (REACH, Registration, Evaluation, Authorisation and Restriction of Chemicals); United Nations Globally Harmonised System (UN GHS); and WFD, Waste Framework Directive (EU) 2008/98/EC, Article 9(1)(i) as amended by Directive (EU) 2018/851 of 30 May 2018, and their national implementations

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We hereby certify that we are well informed about the REACH regulation, which entered into force on 1 June 2007 and have determined the applicable consequences and obligations, especially pre-registration and registration of substances, notifications to public bodies, authorization, and restriction. We manufacture "articles" as defined in the REACH Regulation Article 2. As a result, we are a "downstream user" in most cases. We do not produce any substances or mixtures that we sell.

Concerning the registration of the relevant substances we use to manufacture our products, we can inform you based on REACH Article 10 that, on the basis of the information presently available to us, we do not currently reach the threshold of one ton per year. It is possible for us to provide more precise data if required.

Concentration of SVHC (substances of very high concern) in SAMSON Products

We have a duty to communicate information to our customers on substances contained in our products according to Article 33 of the REACH Regulation: SAMSON calculate the contents of the substances in every individual article (e.g. nuts, bolts etc.) included in a bill of materials separately, following the judgment by the Court of Justice of the European Union concerning case C-106/14 of 16 October 2015, "Once an article, always an article" (O5A). SAMSON refer to a Candidate List of SVHC, that lists up the substances that we report:

These substances are often determined based on the classification of chemical substances and mixtures in the United Nations Global Harmonized System (UN GHS). We implement these systematics in Europe by following the Regulation (EC) No. 1272/2008 (CLP) on classification, labeling and packaging of substances and mixtures, forming a unified approach with the REACH Regulation. Both Safety Data Sheets (SDS, MSDS) for chemicals and chemical mixtures as well as SAMSON Material Data Sheets (MDS) for declaring a material and its substance content are prescribed by these regulations, based on an official list:

Compliance with the Candidate List of SVHC for Authorisation

Should you need to make reference to the most recent list, kindly see to the version published on the Internet, with the latest SAMSON references. Go to the following website to check whether the duty to communicate information according to REACH Article 33 applies to a SAMSON product:
https://www.samsongroup.com/en/about-samson/material-compliance/reach-regulation/#c2723
Also, we frequently cite further SVHC details on the delivery papers.

The Candidate List according to Article 59 (1, 10) of Regulation (EC) No. 1907/2006 (REACH) was first published on 1 September 2008. Since then, it is constantly expanded every six months by the European Chemicals Agency (ECHA). The Candidate List is regularly updated around the middle and end of every year. It now comprises of over 200 substances:
https://www.echa.europa.eu/web/guest/candidate-list-table (in English).

As a result, it is an on-going process to check whether our products contain SVHC in a concentration greater than 0.1% (w/w). We are in close contact with our suppliers as part of this process and we will inform you if we discover that any changes apply to us.

SCIP Database, "Substances of Concern In articles as such or in complex objects (Products)"

As legally requested by the Waste Framework Directive (WFD) since 5 January 2021 and the respective national implementation, SAMSON AG input the necessary data into the European Chemical Agency's (ECHA) SCIP Database.

The REACH Candidate List is updated every six months. SAMSON will not issue, every half a year, any more statements or fill in specific, non-standardized documents of proof in over 20 different formats that our articles are not affected.

It is legally only required to communicate the affected articles and (if the need be) their sub-articles to customers if SVHC surpass 0.1 % weight of weight in in articles or in separate articles as a part of more complex articles., as specified in REACH Article 33. Also, protective measures against SVHC have to be stated where applicable.

SAMSON REGULATION SAS
Vaulx-en-Velin, 14 December 2021

Bruno Soulas
Director of Strategy and Development

Joséphine Signoles-Fontaine
Head of QSE Department

SAMSON REGULATION S.A.S.

DECLARATION UE DE CONFORMITE
EU DECLARATION OF CONFORMITY
EU KONFORMITÄTSERKLÄRUNG

DC008
2021-12

La présente déclaration de conformité est établie sous la seule responsabilité du fabricant.
This declaration of conformity is issued under the sole responsibility of the manufacturer.
Die alleinige Verantwortung für die Ausstellung dieser Konformitätserklärung trägt der Hersteller.

Nous certifions pour les produits suivants en exécution standard :
For the following products in standard execution:
Für die folgenden Produkte in Standard-Ausführung:

Type / type / Typ : 2371, 3252, 3310, 3331, 3347, 3349, 3351, 3710, 3711, 3776, 3777, 3812, 3963, 3964, 3967, 4708, 4746, 5090, Samstation

sont conformes à la législation applicable harmonisée de l'Union :
the conformity with the relevant Union harmonization legislation is declared with:
wird die Konformität mit den einschlägigen Harmonisierungsrechtsvorschriften der Union bestätigt:

RoHS 2011/65/EU, 2015/863/EU **EN 50581:2012, IEC 63000:2016**

Fabricant :
Manufacturer:
Hersteller:

SAMSON REGULATION S.A.S.
1, rue Jean Corona
69520 Vaulx-en-Velin
France

Vaulx-en-Velin, le 14/12/21

Au nom du fabricant,
On behalf of the Manufacturer,
Im Namen des Herstellers,

SAMSON REGULATION S.A.S.

Joséphine SIGNOLES-FONTAINE
Responsable QSE

KONFORMITÄTSERKLÄRUNG

DC016

2019-08

Für folgende Produkte

Stellventile Typ 3241, 3244, 3249, 3251, 3252, 3256, 3347, 3321, 3349

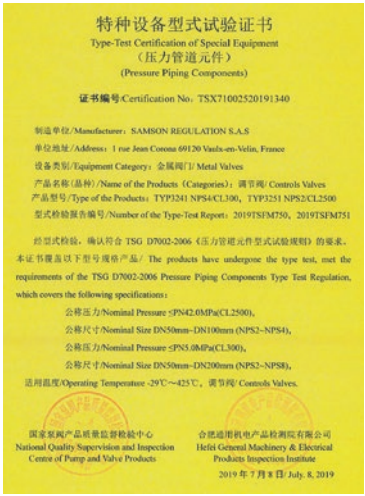
Zeugnis Nr°: TSX71002520191340

Bewertungsberichte N r°: 2019TSFM750-TYP3241 und 2019TSFM751-TYP3251

Die Ventile 3241 und 3251 haben die Bewertungstests gemäß den Anforderungen der chinesischen Druckgeräte TSG D7002-2006 bestanden.

Infolgedessen erfüllen alle oben genannten Rückschlagventile die Anforderungen der TSG D7002-2006 für chinesische Druckgeräte gemäß den folgenden Merkmalen:

- DN 50 bis 200 PN ≤ 5 MPa (50 bar) oder NPS 2 bis NPS 8 Class ≤ 300,
- DN 50 bis 100 PN ≤ 42 MPa (420 bar) oder NPS 2 bis NPS 4 Class ≤ 2500,
- Betriebstemperatur: -29℃ ≤ T ≤ 425℃.



特种设备型式试验证书

Type-Test Certification of Special Equipment

（压力管道元件）

(Pressure Piping Components)

证书编号/Certification No.: TSX71002520191340

制造单位/Manufacturer：SAMSON REGULATION S.A.S

单位地址/Address：1 rue Jean Corona 69120 Vaulx-en-Velin, France

设备类别/Equipment Category：金属阀门/ Metal Valves

产品名称（品种）/Name of the Products（Categories）：调节阀/ Controls Valves

产品型号/Type of the Products：TYP3241 NPS4/CL300，TYP3251 NPS2/CL2500

型式检验报告编号/Number of the Type-Test Report：2019TSFM750、2019TSFM751

经型式检验，确认符合 TSG D7002-2006《压力管道元件型式试验规则》的要求，本证书覆盖以下型号规格产品/ The products have undergone the type test, met the requirements of the TSG D7002-2006 Pressure Piping Components Type Test Regulation, which covers the following specifications：

公称压力/Nominal Pressure ≤PN42.0MPa(CL2500)，

公称尺寸/Nominal Size DN50mm~DN100mm (NPS2~NPS4)，

公称压力/Nominal Pressure ≤PN5.0MPa(CL300)，

公称尺寸/Nominal Size DN50mm~DN200mm (NPS2~NPS8)，

适用温度/Operating Temperature -29℃~425℃，调节阀/ Controls Valves.

国家泵阀产品质量监督检验中心
National Quality Supervision and Inspection Centre of Pump and Valve Products

合肥通用机电产品检测院有限公司
Hefei General Machinery & Electrical Products Inspection Institute

2019 年 7 月 8 日/ July. 8, 2019

SAMSON REGULATION S.A.

Bruno Soulas
Leiter Verwaltung

SAMSON REGULATION S.A.

Joséphine Signoles-Fontaine
Qualitätsmanager

SAMSON REGULATION S.A.S.

DECLARATION DE CONFORMITE **DC027**
DECLARATION OF CONFORMITY **2020-04**
符合性声明

La présente déclaration de conformité est établie sous la seule responsabilité du fabricant.
This declaration of conformity is issued under the sole responsibility of the manufacturer.
制造商对发布的符合性声明全权负责。

Nous certifions que les produits suivants en exécution standard :
For the following products in standard execution:
适用于下述型号的产品：

Type / type / 型号 : 2371, 3249, 3252, 3310, 3331, 3347, 3349, 3351, 3710, 3711, 5090, Samstation

sont conformes à la législation applicable :
the conformity with the relevant legislation is declared with:
声明符合相关法规：

China RoHS 2.0 GB/T26572-2011

Fabricant :
Manufacturer :
制造商

SAMSON REGULATION S.A.S.
1, rue Jean Corona
69120 Vaulx-en-Velin
France

Vaulx-en-Velin, le 20/04/2020

Au nom du fabricant,
On behalf of the Manufacturer,
制造商的代表人

SAMSON REGULATION S.A.S.

Joséphine SIGNOLES-FONTAINE
Responsable QSE
QSE Manager
QSE 负责人

ISSUE DATE: January 26, 2009 CERTIFICATE AUTHORIZATION NUMBER: 1494

THIS IS TO CERTIFY THAT

Samson Regulation S.A.S.

1, rue Jean Corona - BP 140, Vaulx -e n-Ve lin 69120 , France

is hereby authorized to continue to apply the
3-A Symbol to the models of equipment, conforming to 3-A Sanitary Standards for:

Number 53-07
53-07 (Compression-Type Valves)

set forth below

CIP Models: 3347 Series with Var-ID codes xxxxxxx-HY and 3349 Series with Var-ID codes xxxxxxx-HY all fitted with actuator 3277 or 3379. Optional accessories include positioners 3724, 3730 or 3760, limit indicator 3776, pressure reducer 4708 and solenoid valves 3967 or 3963.

VALID THROUGH: **December 31, 2023**

Timothy R. Rugh
Executive Director
3-A Sanitary Standards, Inc.

The issuance of this authorization for the use of the 3-A Symbol is based upon the voluntary certification, by the applicant for it, that the equipment listed above complies fully with the 3-A Sanitary Standard(s) designated. Legal responsibility for compliance is solely that of the holder of this Certificate of Authorization, and 3-A Sanitary Standards, Inc. does not warrant that the holder of an authorization at all times complies with the provisions of the said 3-A Sanitary Standards. This in no way affects the responsibility of 3-A Sanitary Standards, Inc. to take appropriate action in such cases in which evidence of nonconformance has been established.

NEXT TPV INSPECTION/REPORT DUE: **November 2023**

CERTIFICATE OF COMPLIANCE

Date of issue: 18 December 2020

Valid until: 17 December 2025

EL Class I

EHEDG hereby declares that the product

Aseptic control angle valve Type 3349 DN15 to 100 with PTFE diaphragm

from

SAMSON REGULATION SAS, 1 rue Jean Corona BP 140 , 69512 Vaulx-en-Velin, France

has/have been evaluated for compliance and meets/meet the current criteria for Hygienic Equipment Design of the EHEDG

Certificate No. EHEDG-C2000048

Signed _____ *President EHEDG*
Ludvig Josefsberg

Signed _____ *EHEDG Certification Officer*
Mirjam Steenaard

EHEDG Secretariat
Lyoner Straße 18
60528 Frankfurt am Main
Germany

15 Annex

15.1 Tightening torques

15.1.1 Tightening torques for Type 3349 Valve with Type 3271 or Type 3277 Actuator

Table 15-1: *Tightening torques for connection of plug and plug stem*

Valve size		Tightening torque for plug (2) and plug stem (3) in Nm
DN	NPS	
6 to 25 (micro-flow valve)	¼ to 1 (micro-flow valve)	4
15 to 25	½ to 1	16
32 to 65	1¼ to 2½	135
80 to 100	3 to 4	230

Table 15-2: *Tightening torques for connection of valve body and bonnet*

Valve size		Tightening torque for screws (34) in Nm
DN	NPS	
6 to 25 (micro-flow valve)	¼ to 1 (micro-flow valve)	4
15 to 25	½ to 1	16
32 to 65	1¼ to 2½	40
80 to 100	3 to 4	135

NOTICE

Risk of damage to the body screws due to excessively high tightening torques.

Older valve versions have body screws that are no longer suitable for the specified tightening torques.

➔ *Make sure that the new screws are used for all versions.*

➔ *Contact our after-sales service for further information.*

15.1.2 Tightening torques for Type 3349 Valve with Type 3379 Actuator

Table 15-3: *Tightening torques for connection of plug and plug stem*

Valve size		Tightening torque for plug (2) and plug stem (3) in Nm
DN	NPS	
6 to 25 (micro-flow valve)	¼ to 1 (micro-flow valve)	4
15 to 25	½ to 1	16
32 to 50	1¼ to 2	135

Table 15-4: *Tightening torques for connection of valve body and bonnet*

Valve size		Tightening torque for screws (34) in Nm
DN	NPS	
6 to 25 (micro-flow valve)	¼ to 1 (micro-flow valve)	7
15 to 25	½ to 1	16
32 to 50	1¼ to 2	40

Table 15-5: *Tightening torque for connection of actuator stem and plug stem*

Valve size		Tightening torque for connection of actuator stem and plug stem (3) in Nm
DN	NPS	
6 to 50	¼ to 1 (micro-flow valve)	4

15.2 Tools

In addition to the standard tool, special tools are required to assemble and remove some parts. The required special tools can be purchased from SAMSON. Contact our after-sales service.

Table 15-6: *Tools*

Valve size		Tool	Material no.	Image
DN	NPS			
6 to 25 (micro-flow valve)	¼ to 1 (micro-flow valve)	Set of tools consisting of clamping rings to clamp the plug stem in a vise	1281-0035	
15 to 25	½ to 1			
32 to 50	1¼ to 2			

15.3 Lubricants

⚠ WARNING

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.*

Table 15-7: *Recommended lubricant*

Application	Temperature range in °C	Color	Micro-flow valve version
Valves for food processing	–50 to +150	White	8150-9002

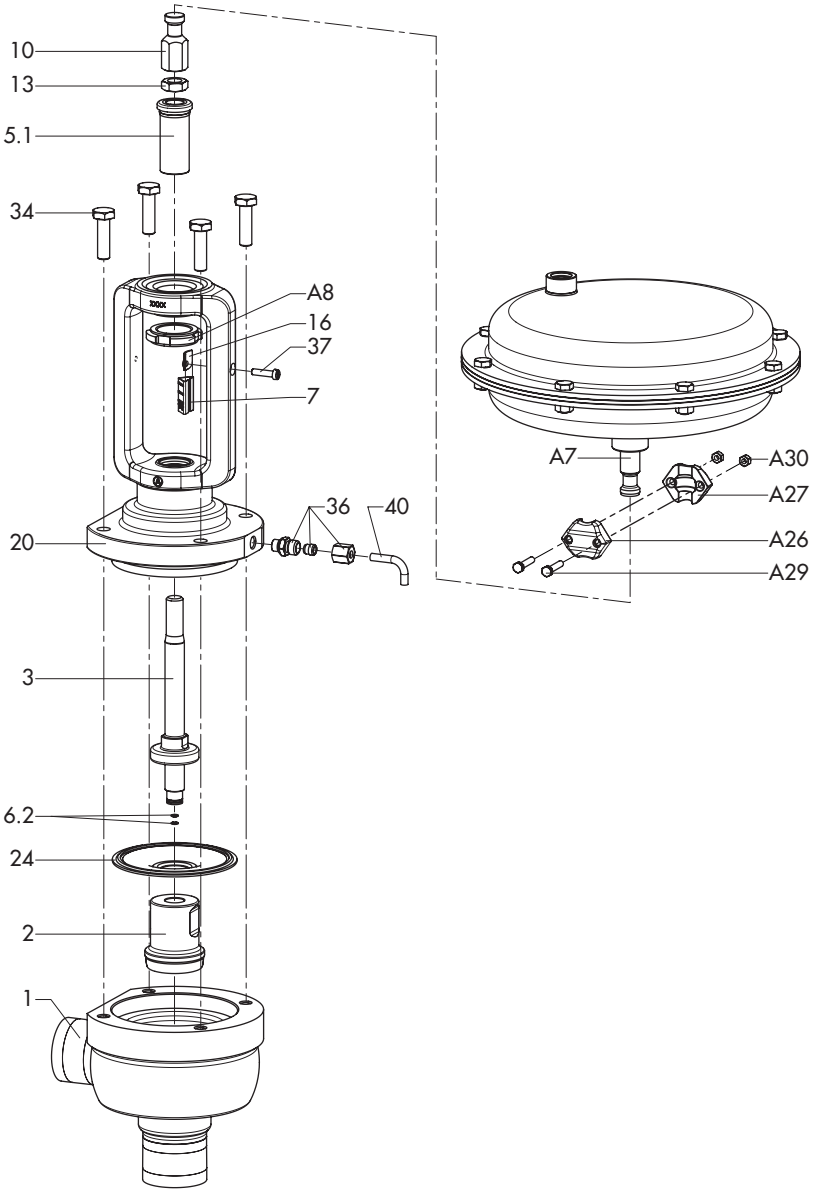
Table 15-8: *Lubricant sorted by parts*

Part (pos.)	Standard version	Micro-flow valve version
Plug (2)	8150-9002	8150-9002
Plug stem (3)	8150-9002	8150-9002
Threaded pin (6.1)	8150-9002	–
Bearing (41)	8150-9002	8150-9002
Packing (15, 23)	–	8150-9002
Valve bonnet (20, 20.1, 20.3, 21)	8150-9002	–
Screws (34)	–	–

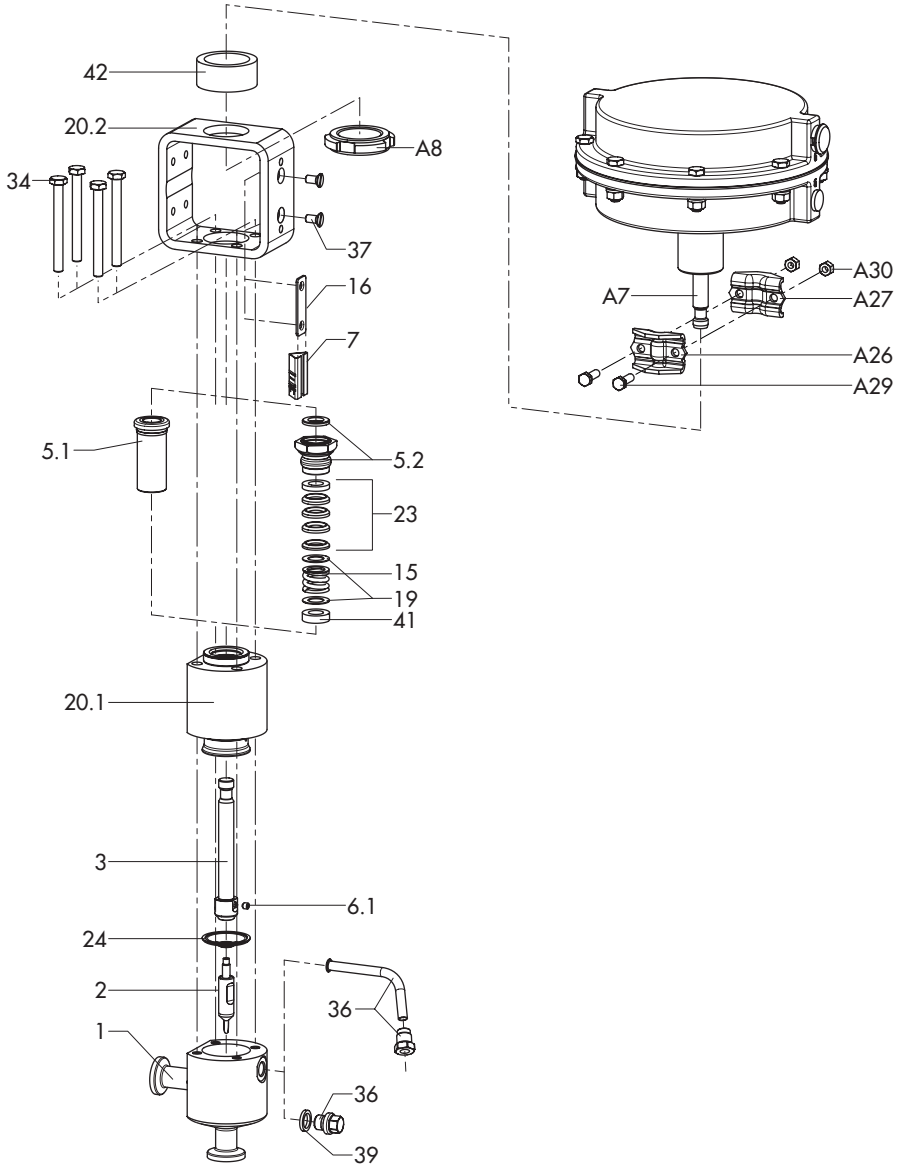
15.4 Spare parts

1 Body
2 Plug
3 Plug stem
4 Diaphragm plate
5 Plug stem seal
5.1 Stem seal
5.2 Threaded bushing
6 Securing fixture (plug/plug stem connection)
6.1 Threaded pin
6.2 Retaining washer
7 Travel indicator scale
10 Stem connector nut
13 Lock nut
15 Spring
16 Hanger
19 Washers
20 Standard yoke for Type 3271/3277 Actuator
20.1 Valve bonnet for micro-flow valve version with Type 3271/3277 Actuator
20.2 Yoke for micro-flow valve version with Type 3271/3277 Actuator
20.3 Valve bonnet for micro-flow valve version with Type 3379 Actuator
21 Standard valve bonnet with Type 3379 Actuator
23 Packing
24 Diaphragm
34 Screw
36 Screw plug or nipple
37 Screws
39 Gasket
40 Pipe
41 Bearing
42 Spacer
43 Snap ring
A7 Actuator stem
A8 Ring nut
A26 Clamp
A27 Clamp
A29 Screw
A30 Nut

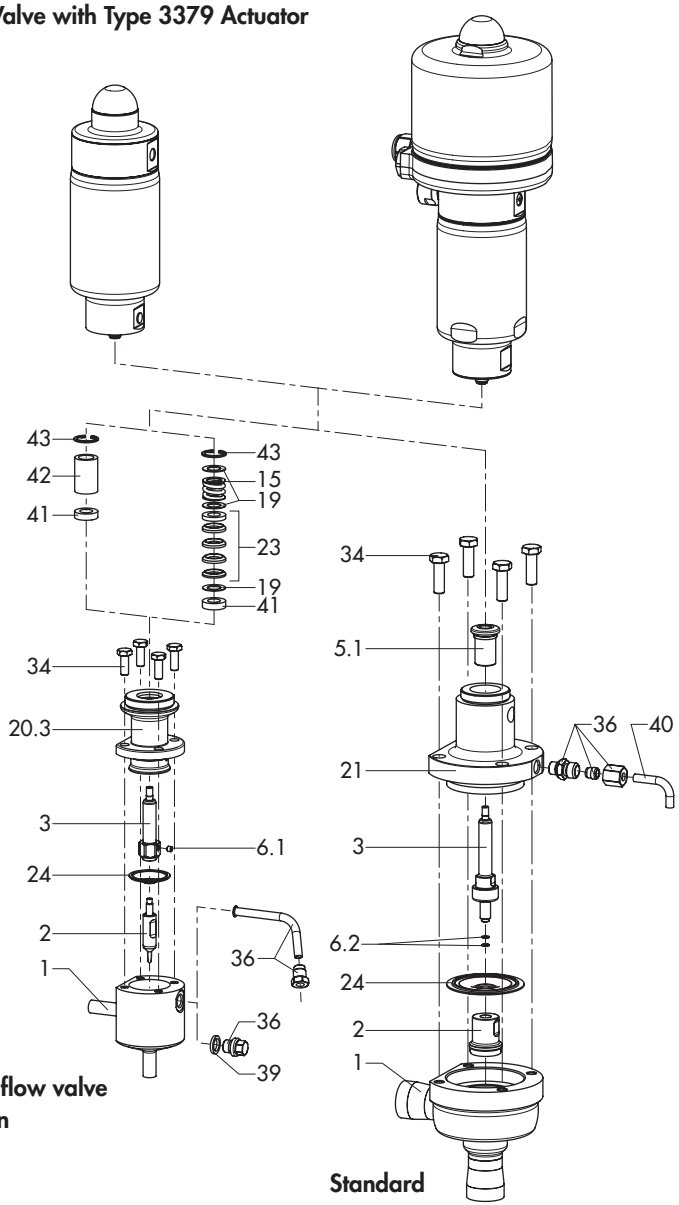
Type 3349 Valve with Type 3271/3277 Actuator · Standard version



Type 3349 Valve with Type 3271/3277 Actuator · Micro-flow valve version



Type 3349 Valve with Type 3379 Actuator



Micro-flow valve version

Standard version

15.5 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 m^3/h
- Direction of flow
- Bench range of the actuator (e.g. 0.2 to 1 bar)
- Is a strainer installed?
- Installation drawing

15.6 Information on the UK sales region

The following information corresponds to the 2016 Regulations No. 1105 Pressure Equipment (Safety) Regulations 2016, STATUTORY INSTRUMENTS, 2016 No. 1105 (UKCA marking). It does not apply to Northern Ireland.

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SAMSON Controls Ltd
Perrywood Business Park
Honeycrock Lane
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Phone: +44 1737 766391
E-mail: sales-uk@samsongroup.com
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